PDP-11/05-S, 11/10-S systems engineering drawings

digital equipment corporation • maynard, massachusetts

DRAWING DIRECTORY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

CUSTOMER PRINT SET INDEX

	SEQUENCE
DRAWING DIRECTORY 11/Ø5-S	B-DD-11/Ø5-S
UNIT ASSY 11/Ø5-S	E-UA-11/Ø5-S-Ø
UNIT ASSY 11/Ø5-S PL	A-PL-11/Ø5-S-Ø
MODULE UTILAZATION	D-MU-11/Ø5-S-MU
16 BIT PROCESSOR	B-DD-KD11-B
MF11-U TIMING DIAGRAM	D-TD-MF11-U-1
16K UNIBUS TIMING	D-CS-M8293-Ø-1
16K X-Y DRIVE	D-CS-G235-Ø-1
16K SENSE INHIBIT	D-CS-G114-Ø-1
STACK BOARD	D-CS-H217-Ø-1
BUS TERMINATOR	D-CS-M930-Ø-1
BERG BACKPLANE CONN	D-CS-M997 -Ø-1
GRANT CONTINUITY	B-CS-G727-Ø-1
CABLE TTY	D-IA-7008360-Ø-Ø
11/Ø5-S BACKPLANE	D-CS-5410972-Ø-1
DRAWING DIRECTORY KY11-J	B-DD-KY11-J
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SILK SCREEN, PANEL LIGHT	A-SS-5509081-0-10
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POWER HARNESS 3.5 IN.	D-IA-7010113-0-0
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WIRED ASSY	D-AD-7009922-0-0
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ACCESSORIES LIST	A-AL-11/05-0-4

MFG. PRINT SET	SEQUENCE
11/05 ACCEPTANCE PROCEDURE	A-SP-11/05-0-9
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BACKPLANE ASSY	D-AD-7009921-0-0
CABLE FOLDING DIAGRAM	D-MD-7412357-0-0
IN-PLANT PACKAGE INSTRUCTIONS	A-SP-3700168-0-0
SKID LOAD PACKAGE INSTRUCTIONS	A-SP-3700165-0-0
CUSTOMER CUSHIONED PACKAGE INSTRUCTIONS	A-SP-3700169-0-0
HEAT BOX ASSY	E-IA-9305950-0
HEAT BOX DETAILS	E-IA-9606267-0

THIS IS PRINT SET

UNIT VARIATIONS

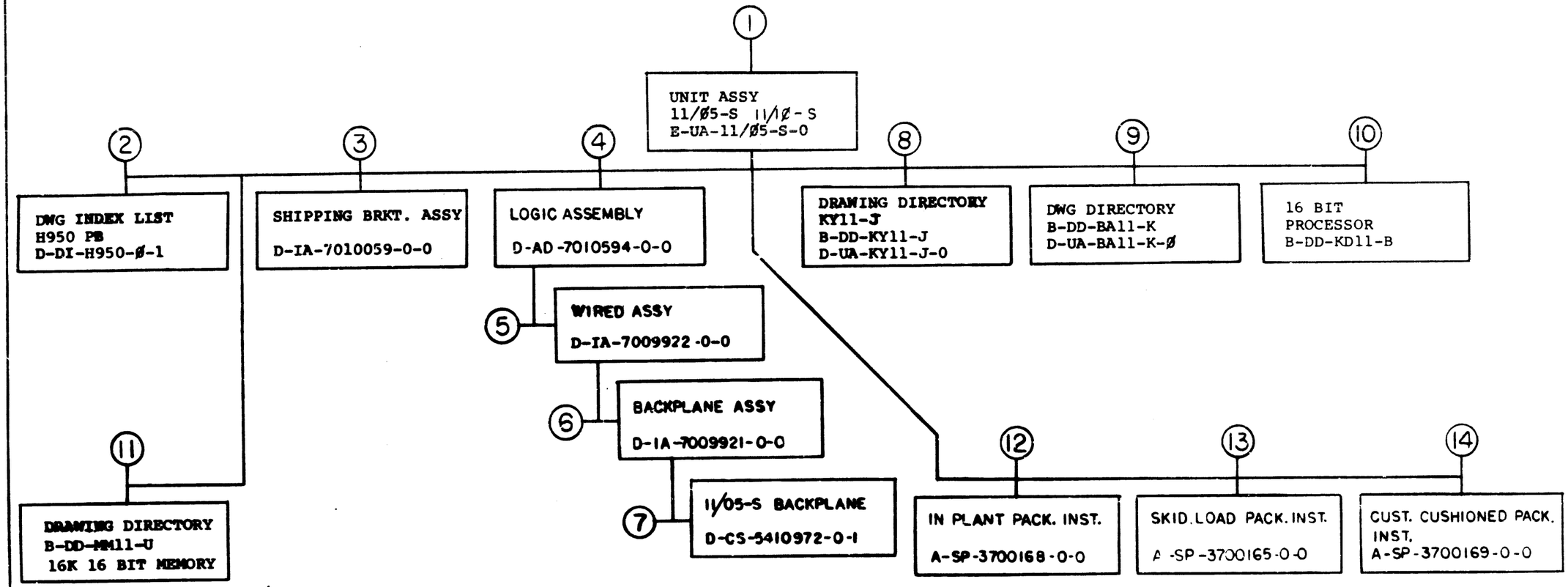
VAR	TITLE	PRINT SET 1
11/Ø5-SC	115 VAC 50/60 HZ	X
11/Ø5-SD	230 VAC 50/60 HZ	X
11/10-SC	115 VAC 50/60 HZ	X
11/10-SD	230 VAC 50/60 HZ	X

NOTE: THIS PRINT SET IS ALSO APPLICABLE TO THE PDP 11/10-S COMPUTER.

REVISIONS

REV	CHG. NO.	DATE
A	11/Ø5-S-1	E.A.
B	11/Ø5-S-2	E.A.
C	11/Ø5-S-3	CN
D	11/Ø5-S-4	CN

USED ON OPTION/MODEL		
SHEET 1 OF 4		
DRN. J. FERGUSON	DATE 7/12/74	TITLE DRAWING DIRECTORY 11/Ø5-S
CHK'D. D. HEALY	DATE 7/12/74	
PROJ ENG. Ed. Anton	DATE 9/4/74	
PROD. R.K. Peterson	DATE 10/1/74	SIZE B · CODE DD · NUMBER 11/Ø5-S · REV D
FIELD SERV. R. L. Gates	DATE 9/13/74	DIST



TITLE		SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY 11/Ø5-S	SHEET 2 OF 4	B	DD	11/Ø5-S	D

CUSTOMER PRINT SET 1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	E-UA-11/Ø5-S-Ø	A	1	UNIT ASSY 11/Ø5-S	
X			A-PL-11/Ø5-S-Ø	A	2	UNIT ASSY 11/Ø5-S-PL	
X			D-BS-KM11-Ø-MB	#	3	MAINTENANCE BOARD	
X			A-SS-5509081-0-9	#	1	SILK SCREEN, MAINT. BD.	
X			A-SS-5509081-0-10	#	1	SILK SCREEN, MAINT. BD.	
X			D-MU-11/05-S-MU		1	MODULE ULTILIZATION	
X			D-CS-M930-Ø-1	#	1	BUS TERMINATOR M930	
X			D-CS-M997 -0-1	#	1	BERG BACKPLANE CONN	
X			B-CS-G727-Ø-1	#	1	GRANT CONTINUITY	
X			A-SL-11/Ø5-Ø-5	#	1	11/05 SOFTWARE LIST	
	K		A-SP-11/Ø5-Ø-9	#		11/05 ACCEPTANCE PROCEDURE	
			A-SP-11/Ø5-S-1			11/05-S ASSEMBLY PROCEDURE	
X			A-AL-11/05-0-4	B	1	11/05 ACCESSORY LIST	
X		4	D-IA-7010594-0-0	#	1	LOGIC ASSY	
X		5	D-AD-7009922-0-0	#	1	WIRED ASSY	
C			K-WL-7009922-0-1	#	1	WIRE LIST	
	K		A-MT-7009922-0	#	1	AMT REVISION STATUS	
X			A-SP-MF11-U-3	#	2	MF11-U/UP ACCEPTANCE PROCEDURE	
	K	6	D-IA-7009921-0-0	#	1	BACKPLANE ASSY	
X		7	D-CS-5410972-0-1	#	1	11/Ø5-S BACKPLANE	
C		8	F-DD-KY11-J	#	3	DRAWING DIRECTORY KY11-JA	
C		9	B-DD-BA11-K	#	4	DWG DIR (BOX + P.S.)	
C		10	B-DD-KD11-B	#	3	16 BIT PROCESSOR	

CUSTOMER PRINT SET 1	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
		11	B-DD-MM11-U		1	DRAWING DIRECTORY, MM11-U	
X			D-CS-G114-0-1	#	9	16 K SENSE INHIBIT	
X			D-CS-M8293-0-1	#	10	16 K UNIBUS TIMING	
X			D-CS-G235-0-1	#	6	16 K X/Y DRIVE	
X			D-CS-H217-0-1	#	3	STACK	
X			D-TD-MF11-U-1	#	1	MF11-U TIMING DIAGRAM	

CUSTOMER PRINT SET CODES	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT $ = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED	TITLE: DRAWING DIRECTORY 11/Ø5-S	SHEET 3 OF 4	SIZE: B	CODE: DD	NUMBER: 11/Ø5-S	REV: D

CUSTOMER PRINT SET						MECHANICAL						
1				SET MFG.	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
				X	1	E-UA-11/Ø5-S-Ø	A	1	UNIT ASSY 11/Ø5-S	
				X		A-PL-11/Ø5-S-Ø	A	2	UNIT ASSY 11/Ø5-S PL	
						C-MD-7411701-0-0		1	SPACER, CHASSIS FRONT	
						D-PS-1211474-0-0		1	STRIP, FILLER 1.75	
						B-MD-7412341-0-0		1	STRIP, FILTER	
~~X~~				~~X~~		~~D-IA-7010113-0-0~~		~~1~~	~~POWER HARNESS 3.5 IN~~	
X						D-IA-7009908-0-0	#	1	CONSOLE PWR HARNESS	
				X		D-MD-7412357-0-0		1	CABLE FOLDING DIAGRAM	
						A-DC-7412302-0-0		1	DECAL 11/Ø5-S	
						D-MD-7412184-0-0		1	CABLE TROUGH, CHASSIS	
X						D-IA-7008360-0-0	#	1	CABLE, TTY	
						D-SP-1211825-0-0			SLIDE, 3 POS. TILT	
						A-DC-5309414-0		1	DECAL, UL	
						A-DC-5309413-0		1	DECAL, NFPA	
					2	D-DI-H950-Ø-1			DRAWING INDEX LIST	
						D-UA-H95Ø-P-Ø			COVER PANEL 5'4" BEZEL H950-PB	
					3	D-IA-7010059-0-0		1	SHIPPING BRKT. ASSY	
						C-MD-7412190-0-0		1	SHIPPING BRKT. PT. 1	
						D-MD-7412191-0-0		1	SHIPPING BRKT. PT. 2	
				X	4	D-AD-7010594-0-0	#	1	LOGIC ASSEMBLY	
X						D-IA-7010113-0-0	#	1	POWER HARNESS 3.5IN.	
				X	5	D-AD-7009922-0-0	#	1	WIRED ASSY	
						C-PS-1210698-0-0		1	GUIDE, CARD CENTER	
						B-DC-5308753-0-0		1	DECAL, 21 POINT (LTR)	
						A-DC-7410881-0-0		1	LABEL, REV STATUS	
				X		K-WL-7009922-0-1	#		WIRE LIST	
				X		A-WT-7009922-0	#	1	AWT REVISION STATUS	

CUSTOMER PRINT SET						MECHANICAL						
1				SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
				X	6	D-IA-7009921-0-0	#	1	BACK PLANE ASSY	
					7	D-CS-5410972-0-1		1	11/Ø5-S BACKPLANE	
						K-CO-5410972-0-4			X-Y COORDINATE HOLE LOC.	
						D-AH-5410972-0-5		1	ASSY/DRILLING HOLE LAYOUT	
						B-MH-5410972-0-6			MODULE ECO HISTORY	
						5010973			ETCH BOARD	
				X	8	B-DD-KY11-J	#	3	DRAWING DIRECTORY KY11-JA	
				X		D-UA-KY11-J-0	#	1	CONSOLE ASSY	
				X	9	B-DD-BA11-K	#	4	DWG. DIR. BASIC BOX + P.S.	
				X		D-UA-BA11-K-Ø	#	2	UNIT ASSY (BA11-K)	
				X		A-PL-BA11-K-Ø	#	1	UNIT ASSY BA11-K (PL)	
				X	10	B-DD-KD11-B	#	3	16 BIT PROCESSOR	
				X		A-PL-KD11-B	#		16 BIT PROCESSOR	
				X	11	B-DD-MM11-U	#		16K 16 BIT MEMORY	
				X	12	A-SP-3700168-0-0		3	IN PLANT PACK. INST.	
						A-PS-9905350-0-0		2	REGULAR SLOTTED CARTON	
						A-PS-9905335-0-0		2	BEZEL PROTECTOR	
						A-PS-9905644-0-0		2	REAR PAD	
						A-PS-9905323-0-0		2	LAMINATED SADDLE	
						A-PS-9905129-0-0		4	POLY BAG	
				X	13	A-SP-3700165-0-0		4	SKID LOAD PACK. INST.	
						A-PS-1210568-01-0		2	CUSHIONED SKID	
						A-PS-9905445-0-0		2	HALF OVERLAP SLOTTED CARTON (TOP)	
						A-PS-9905419-0-0		2	FLANGED TUBE (BOTTOM	
				X	14	A-SP-3700169-0-0		2	CUST. CUSHIONED PACK. INST.	
						A-PS-9905645-0-0		2	FULL TELESCOPE CAP.	
						A-PS-9905642-0-0		2	FOAM PAD	
						A-PS-9905643-0-0		2	FOAM WITH CORRUGATED SIDE WALL ASSEMBLY	

CUSTOMER PRINT SET CODES

X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

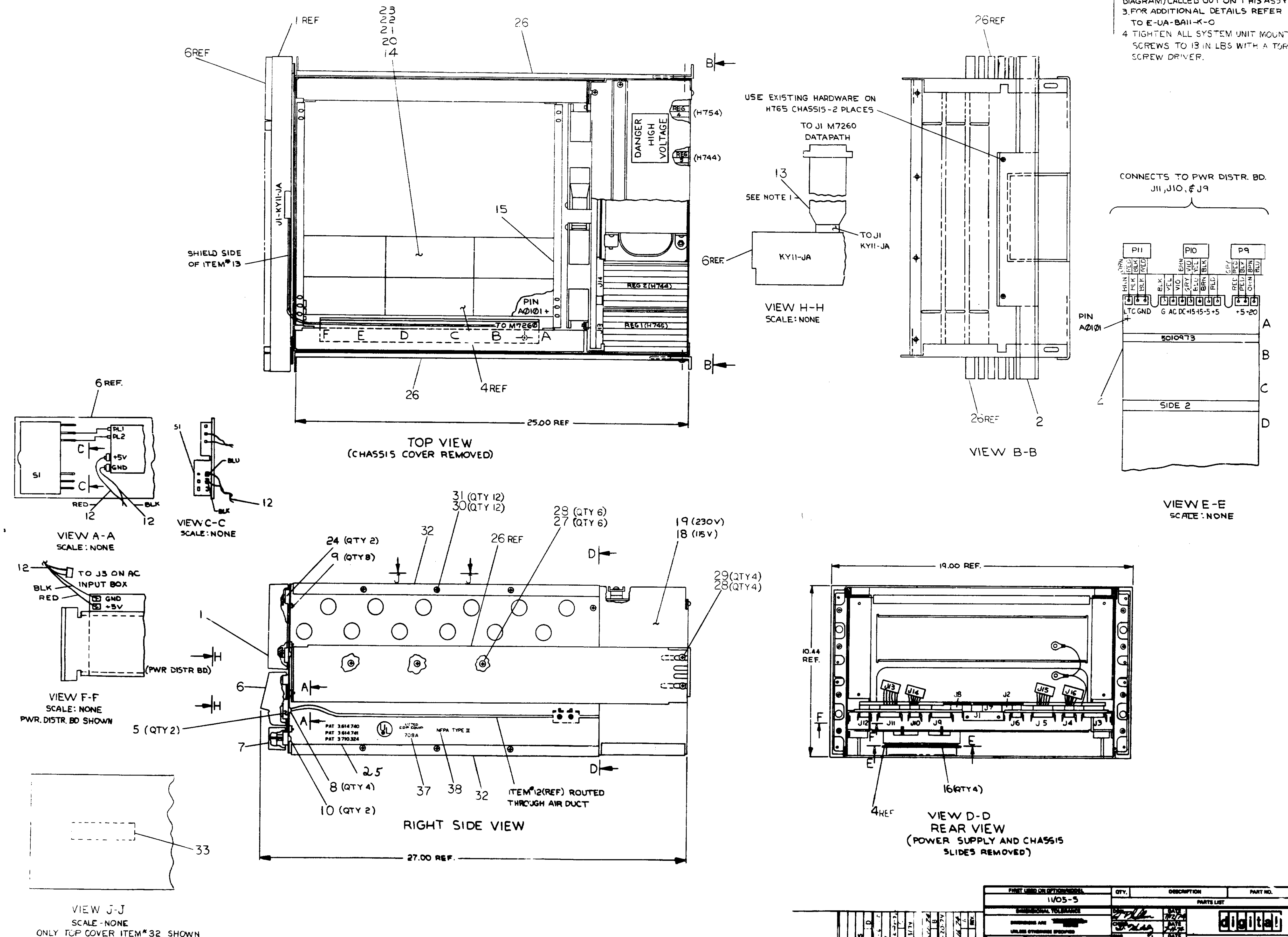
TITLE		SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY 11/Ø5-S	SHEET 4 OF 4	B	DD	11/Ø5-S	D

DRB 108

LEGEND

NUMBER	VARIATION
11/Ø5-SC	115VAC 50/60HZ
11/Ø5-SD	230VAC 50/60HZ

NOTES:
1. CAUTION: OFF SHEET PARTS LISTS EXISTS SEE A-PL-11/05-S-Ø
2. USE ITEM# 17 3FT. LG. CABLE ON KY11-J & FOLD PER ITEM# 13 (CABLE FOLDING DIAGRAM) CALLED OUT ON THIS ASSY.
3. FOR ADDITIONAL DETAILS REFER TO E-UA-BA11-K-O
4. TIGHTEN ALL SYSTEM UNIT MOUNTING SCREWS TO 13 IN. LBS WITH A TORQUE SCREW DRIVER.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/05-S	PARTS LIST			

digital

TITLE: UNIT ASSY 11/Ø5-S

B-DD-11/Ø5-S

SCALE 1/2

SIZE	CODE	NUMBER	REV.
E	UA	11/Ø5-S-Ø	D

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BILL BLODGET	CHECKED D. HEALY	SECTION 1	
DATE 7/3/74	DATE 7/10/74		
ENG T E Dawson	PROD Whittaker	ISSUED SECT. 1	
DATE 8-23-74	DATE 8/23/74		

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION 11/05-SC (115V 16K)	11/05-SD (230V 16K)	11/10-SC (115V 16K)	11/10-SD (230V 16K)
1	D-UA-H950-PB-0	COVER, PANEL 5 ¼ BEZEL (SNAP-ON)	1	1	1	1
2	D-IA-7010059-0-0 *	SHIPPING BRKT. ASSY	1	1	1	1
3	D-IA-7008360-0-0	CABLE TTY	1	1	1	1
4	D-IA-7010594-0-0	LOGIC ASSEMBLY	1	1	1	1
5	C-MD-7411701-0-0	SPACER, CHASSIS FRONT	2	2	2	2
6	B-DD-KY?1-JA	CONSOLE ASSY	1	1	-	-
7	D-PS-1211474-0-0	STRIP, FILLER 1.75	1	1	1	1
8	9006074-3	SCR, PHL HD TRUSS #10-32 x .68	4	4	4	4
9	9006070-2	SCR, PHL HD FLAT #10-32 x .31	8	8	8	8
10	9009653-1	SCR, PH HD PAN THD CUT #10-16 x 1.0	2	2	2	2
~~11~~	~~D-IA-7010113-0-0~~	~~POWER HARNESS 3.5 IN.~~	~~1~~	~~1~~		
12	D-IA-7009908-0-0	CONSOLE PWR HARNESS	1	1	1	1
13	D-MD-7412357-0-0	CABLE FOLDING DIAGRAM	REF	REF	REF	REF
14	MM11-U	16K 16 BIT MEMORY	1	1	1	1
15	A-DC-7412302-0-0	DECAL 11/05-S	1	1	1	1
16	9006043-1	SCR, PH PAN HD #8-32 x 1.0	4	4	4	4
17	D-MU-11/05-S-MU	MODULE UTILIZATION	REF	REF	REF	REF
18	B-DD-BA11-KH	BASIC BOX +P.S. 115V	1	-	1	-
19	B-DD-BA11-KJ	BASIC BOX +P.S. 230V	-	1	-	1
20	B-DD-KD11-B	16 BIT PROCESSOR	1	1	1	1
21	D-CS-M930-0-1	BUS TERMINATOR M930	2	2	2	2
22	D-CS-M997 -0-1	BERG BACKPLANE CONN	1	1	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO
UNIT ASSY 11/05-S	E-UA-11/05-S-0	A	PL	11/05-S-0	D	11/05-S-00004
	SHEET 1 OF 2	DIST.				

DEC FORM DRA 110 DEC 16-(325)-1031-N870

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

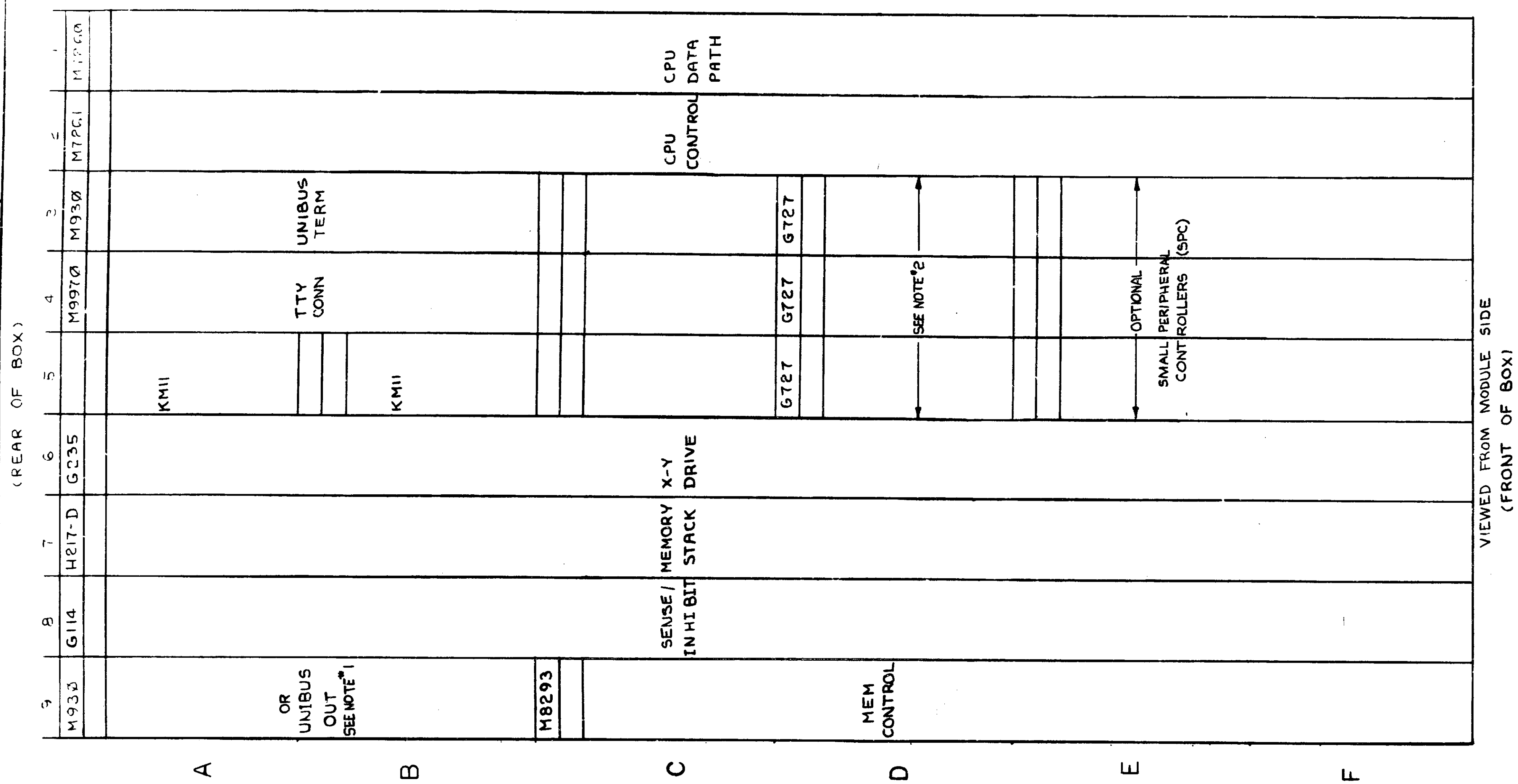
PARTS LIST

MADE BY B. BLODGET	CHECKED D. HEALY	SECTION 1	
DATE 7/4/74	DATE 7/10/74		
ENG T E Dawson	PROD Whittaker	ISSUED SECT. 1	
DATE 8-23-74	DATE 8/23/74		

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION 11/05-SC (115V 16K)	11/05-SD (230V 16K)	11/10-SC (115V 16K)	11/10-SD (230V 16K)
23	B-CS-G727-0-1	GRANT CONTNUITY	3	3	3	3
24	1209224	LATCH MOLDING	2	2	2	2
25	A-DC-7409478-0-0	DECAL, PATENT	1	1	1	1
26	* D-PS-1211825-0-0 *	SLIDE, 3 POS TILT	1pr	1pr	1PR	1PR
27	9007651	WASHER EXTERNAL TOOTH #10	6	6	6	6
28	9006071-3	SCREW, PHL TRUSS HD #10-32x.38	10	10	10	10
29	9006565	NUT, KEPS, #10-32	4	4	4	4
30	9006020-3	SCREW, PHL. TRUSS HD. #6/32x.25	12	12	12	12
31	9006633	WASHER INTERNAL TOOTH LOCK #6	12	12	12	12
32	D-IA-7009768-0-0	COVER, CHASSIS	2	2	2	2
33	DEC-3-(374)-1825-N1174	STICKER, "CONFIGURATION"	1	1	1	1
34	A-SP-3700168-0-0	IN PLANT PACK. INST.	REF	REF	REF	REF
35	A-SP-3700165-0-0	SKID LOAD PACK. INST.	REF	REF	REF	REF
36	A-SP-3700169-0-0	CUST. CUSHIONED PACK. INST.	REF	REF	REF	REF
37	A-DC-5309414-0	DECAL, UL	1	1	1	1
38	A-DC-5309413-0	DECAL, NFPA	1	1	1	1
39	A-SP-11/05-S-1	11/05-S ASSEMBLY PROCEDURE	REF	REF	REF	REF
40	B-DD-KY11-JB	CONSOLE ASSEMBLY	-	-	1	1
*	TO BE MOUNTED IN SYSTEM ASSEMBLY AREA					

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO
UNIT ASSY 11/05-S	E-UA- 11/05-S-0	A	PL	11/05-S-0	D	
	SHEET 2 OF 2	DIST				

DEC FORM DRA 110 DEC 16-(325)-1031-N870



NOTES

1. BEFORE THE 11/Ø5 IS CONNECTED TO OTHER SYSTEM OPTIONS, THE M930 BUS TERMINATOR IS IN LOCATION A,BØ9. THIS TERMINATOR IS MOVED TO THE END SYSTEM OPTION UPON INTERCONNECTION.
2. PREWIRED MODULE SLOTS FOR SMALL PERIPHERAL OPTIONS. WITH NO OPTIONS INSTALLED, BUS GRANT CONTINUITY IS PROVIDED BY G727 MODULE IN LOCATION DØ3, DØ4 & DØ5. THE G727 IS REMOVED WHEN A SMALL PERIPHERAL OPTION IS INSTALLED.

FIRST USED ON OPTION/MODEL	11/Ø5-S
DIMENSIONAL TOLERANCE	DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED
MILLIMETERS	.XXX = ±0.10, .XX = ±0.5, .X = ±2
INCHES	.XXX = ±.005, .XX = ±.02, .X = ±.1
ANGLES	±0° 30'
THIRD ANGLE PROJECTION	REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL	-// -
FINISH	-// -
DRN.	DATE 7/25/74
CHK'D	DATE 7-29-74
ENG.	DATE 5-23-74
	DATE 5-27-74
PROD.	DATE
NEXT HIGHER ASSY.	A-PL-11/Ø5-S-Ø
TITLE	MODULE UTILIZATION
SIZE / CODE / NUMBER	D MU 11/Ø5-S-MU
SCALE	
SHEET	1 OF 1

digital

DMU 11/Ø5-S-MU

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET [X]

SEQUENCE		SEQUENCE	
16 BIT PROCESSOR KD11-B	B-DD-KD11-B		
MICROPROGRAM FLOW	K-MP-KD11-B-1		
MICROPROGRAM SYMBOLIC LISTING	K-MP-KD11-B-2		
MICROPROGRAM BINARY LISTING	K-MP-KD11-B-3		
MICROPROGRAM CROSS REF. LISTING	K-MP-KD11-B-4		
DATA PATHS	E-CS-M726Ø-Ø-1		
DATA PATH ROM PATTERNS	K-RL-M726Ø-Ø-8		
CONTROL LOGIC & MICROPROGRAMS	E-CS-M7261-Ø-1		
CONTROL LOGIC ROM PATTERNS	K-RL-M7261-Ø-8		

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE: KD11-B
KD11-B	16 BIT PROCESSOR	

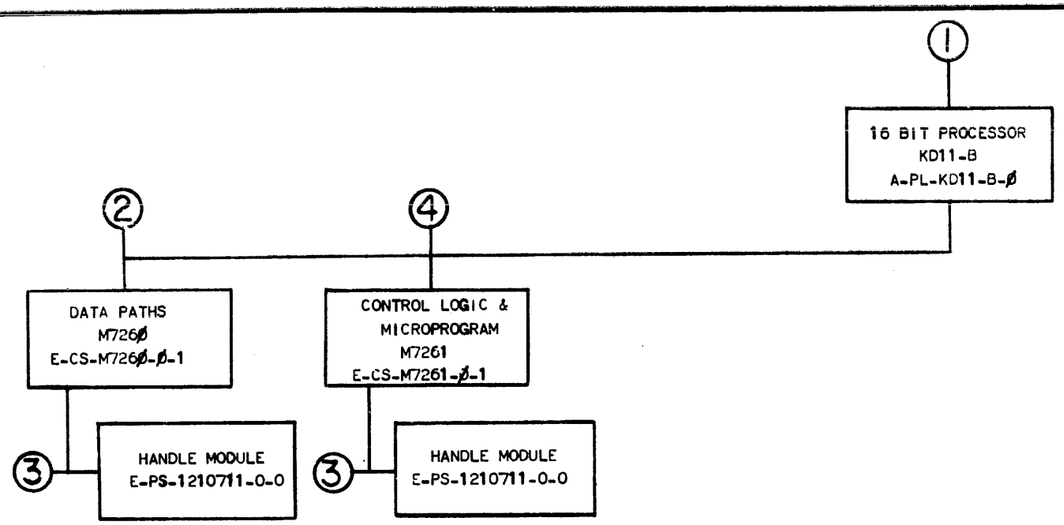
REVISIONS	REV	CHG. NO.	DATE
	A	KD11B-00002	
	B	KD11B-00003	MT
	C	KD11B-4	M.T.
	D	KD11B-5	D.R.
	E	KD11B-6	D.R.

USED ON OPTION/MODEL

DRN. J.CAHILL	DATE 4/21/72	TITLE: 16 BIT PROCESSOR KD11-B
CHK'D. C.Teschner	DATE 6-5-72	
PROJ ENG. R. Taylor	DATE 5-16-72	
PROD. R.V. Peters	DATE 5/16/72	SIZE B · CODE DD · NUMBER KD11-B · REV E
FIELD SERV. D. Beckhart	DATE	
SHEET 1 OF 3		DIST

DRB 106

DEC 16-(325)-1062-1-M871



TITLE		SIZE	CODE	NUMBER	REV
16 BIT PROCESSOR KD11-B	SHEET 2 OF 3	B	DD	KD11-B	E

ELECTRICAL

CUSTOMER PRINT SET KD11-B						MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
							1.	A-PL-KD11-B-Ø		1	16 BIT PROCESSOR (KD11-B)	
C								K-MP-KD11-B-1	C	22	MICOPROGRAM FLOW	
C								K-MP-KD11-B-2	E	6	MICROPROGRAM SYMBOLIC LISTING	
C								K-MP-KD11-B-3	E	7	MICROPROGRAM BINARY LISTING	
C								K-MP-KD11-B-4		3	MICROGROGRAM CROSS REF. LISTING	
X							2.	E-CS-M726Ø-Ø-1	#	10	DATA PATHS (M726Ø)	
								B-MH-M726Ø-Ø-6		1	MODULE ECO HISTORY	
								K-CO-M726Ø-Ø-4		1	X-Y CO-ORDINATE HOLE LOCATION	
								B-AH-M726Ø-Ø-5		1	ASSY/DRILLING HOLE	
X								K-RL-M726Ø-Ø-8	#	15	DATA PATH ROM PATTERNS	
X							4.	E-CS-M7261-Ø-1	#	13	CONTROL LOGIC & MICROPROGRAM	
								B-MH-M7261-Ø-6		1	MODULE ECO HISTORY	
								K-CO-M7261-Ø-4		1	X-Y CO-ORDINATE HOLE LOCATION	
								B-AH-M7261-Ø-5		1	ASSY/DRILLING HOLE	
X								K-RL-M7261-Ø-8	#	57	CONTROL LOGIC ROM PATTERNS	

MECHANICAL

CUSTOMER PRINT SET KD11-B						MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
							1.	A-PL-KD11-B-Ø		1	16 BIT PROCESSOR (KD11-B)	
							2.	E-CS-M726Ø-Ø-1		10	DATA PATHS (M726Ø)	
								B-MH-M726Ø-Ø-6		1	MODULE ECO HISTORY	
								K-CO-M726Ø-Ø-4		1	X-Y CO-ORDINATE HOLE HISTORY	
								B-AH-M726Ø-Ø-5		1	ASSY/DRILLING HOLE	
							3.	C-PS-1210711-0-0		1	HANDLE MODULE	
							4.	E-CS-M7261-Ø-1		13	CONTROL LOGIC & MICROPROGRAM	
								B-MH-M7261-Ø-6		1	MODULE ECO HISTORY	
								K-CO-M7261-Ø-4		1	X-Y CO-ORDINATE HOLE LOCATION	
								B-AH-M7261-Ø-5		1	ASSY/DRILLING HOLE	

TITLE	SHEET	SIZE	CODE	NUMBER	REV
16 BIT PROCESSOR KD11-B	3 OF	B	DD	KD11-B	E

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS			REMARKS
1	A	B	C	
2	A	A	A	
3	A	A	A	
4	A	A	A	
5	A	A	A	
6	A	A	B	
7	A	B	B	
8	A	A	A	
9	A	A	B	
10	A	A	B	
11	A	A	A	
12	A	A	B	
13	A	A	B	
14	A	A	A	
15	A	A	A	
16	A	A	A	
17	A	A	A	
18	A	A	A	
19	A	A	A	
20	A	A	A	
21	A	A	A	
22	A	A	A	
ECO NO.	KD112-2	KD112-3	KD112-6	
ETCH REV.				
ENG.	BA	MT	D.R.	
DATE	8-28-72	9-21-72	6-14-74	

FIRST USED ON OPTION/MODEL: KD11-B

DRN.	G. TOWNE	DATE 8-21-72
CHK'D.	J McCullough	DATE 8-21-72
ENG.	Bob Armstrong	DATE 8-29-72
PROJ. ENG.	Bob Armstrong	DATE 8-29-72
PROD.		DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: MICROPROGRAM FLOW

NEXT HIGHER ASSY.: B-DD-KD11-B

SCALE: 11

SHEET 1 OF 22

SIZE	CODE	NUMBER	REV.
K	MP	KD11-B-1	C

DIST.

NOTES ON NOTATION:

1. MICROROUTINES BEGIN WITH A COMMENT THE FIRST CHARACTER OF WHICH IS '*'.

2. ALL OTHER COMMENTS BEGIN WITH '/'.

3. R[N] REFERRS SCRATCH PAD REGISTER N. R[7] IS ALSO REFERRED TO AS 'PC'.

4. R[S] REFERRS TO THAT REGISTER SPECIFIED IN THE SOURCE PORTION OF THE CURRENT INST. (IR<11:9>). LIKEWISE, R[D] REFERRS TO THAT REG SPECIFIED IN THE DESTINATION PORTION OF THE CURRENT INST. (IR<2:0>).

5. K[N] REFERRS TO THAT LOCATION OF THE CONSTANTS CHIP CONTAINING THE CONSTANT N.

6. 'BUT' STANDS FOR 'BRANCH ON MICRO TEST'.

```
LOC  NXT  * INSTRUCTION FETCH
002  053  F=1   SA=PC; DATI
053  365  F=2   B=PC+2
365  364  F=3   PC=B; CKOFF
364  061  F=4   B;IR=UNIBUS DATA
061  001  F=9   B=B SEX; BUT IR DECODE
          / IF DOUBLE OP INST GOTO S0=1 THRU S7=1 DEPENDING ON SOURCE MODE
          / IF SINGLE OP INST GOTO D0=1 THRU D7=1 DEPENDING ON DEST MODE (INCLUDING JSR)
          / IF BRANCH, CHANGE PC GOTO B=1
          / IF BRANCH, PC UNCHANGED GOTO B2=2
          / IF CLEAR OR SET COND CODE(S) GOTO CCM=1
          / IF INST=RTS GOTO R1=1
          / IF INST=RTI GOTO R2=1
          / IF INST=WAIT GOTO W=1
          / IF INST=HALT GOTO W=1
          / IF INST=RESET GOTO RST=1
          / IF INST=EMT GOTO E7=1
          / IF INST=BREAKPOINT TRAP GOTO B7=1
          / IF INST=IOT GOTO I7=1
          / IF INST=TRAP GOTO T=1
          / IF RESERVED INST (NONE OF THE ABOVE) GOTO RT=1
```

```
LOC  NXT  * SOURCE MODE 0 (REGISTER), GET SOURCE DATA
          / GET TO S0=1 FROM F=5 VIA BUT IR DECODE IR<11:9>=0
201  007  S0=1  B=R[S]; BUT BYTE
          / IF BYTE INST GOTO SBE=1 (MUST BE EVEN BYTE)
000  001  S0=2  R[10]=B; BUT DESTINATION
          / IF IR<5:3>  =0 GOTO D0=1
          /             =1      D1=1
          /             =2      D2=1
          /             =3      D3=1
          /             =4      D4=1
          /             =5      D5=1
          /             =6      D6=1
          /             =7      D7=1
```

```
LOC  NXT  * SOURCE MODE 1 (REG, DEFERRED) GET SOURCE DATA
          / GET TO S1=1 FROM F=5 VIA BUT IR DECODE IR<11:9>
203  244  S1=1  BA=R[S]; DAT!; CKOFF; ALBYT
          / GET TO S1=2 FROM S2=3 VIA GOTO
          /          "        S3=5    "
244  007  S1=2  B=UNIBUS DATA; BUT BYTE; GOTO S0=2
          / IF ODD BYTE GOTO SBO=1
          / IF EVEN BYTE GOTO SBE=1
          / IF NOT BYTE FALL THROUGH TO S0=2
```

```
LOC  NXT  * SOURCE MODE 2 (AUTO=INC,) GET SOURCE DATA
          / GET TO S2=1 FROM F=5 VIA BUT IR DECODE IR<11:9>=2
205  301  S2=1  BA=R[S]; DAT!; ALBYT
301  014  S2=2  B=R[S]+1+BYTE;BAR
          / GET TO S2=3 FROM S4=1 VIA GOTO
014  244  S2=3  R[S]=B; CKOFF; GOTO S1=2
```

```
LOC  NXT  *SOURCE MODE 3 (AUTO=INC DEFERRED) GET SOURCE DATA
          / GET TO S3=1 FROM F=5 VIA BUT IR DECODE IR<11:9>=3
207  016  S3=1  BA=R[S]; DAT! (MUST BE AN EVEN ADDRESS HERE)
016  017  S3=2  B=R[S]+2
```

```
                / GET TO S3.3 FROM S5.1 VIA GOTO
217  134  S3.3  R[S]-B; CKOFF
                / GET TO S3.4 FROM S7.5 VIA GOTO
134  274  S3.4  B-UNIBUS DATA
274  244  S3.5  BA-B; DATI; CKOFF; GOTO S1.2; ALBYT
```

```
LOC  NXT  * SOURCE MODE 4 (AUTO-DEC) GET SOURCE DATA
                / GET TO S4.1 FROM F.5 VIA BUT IR DECODE IR<11:9>.4
211  014  S4.1  B,BA-R[S].1-BYTE,BAR; DATI; ENABOVER; GOTO S2.3; ALBYT
```

```
LOC  NXT  * SOURCE MODE 5 (AUTO-DEC DEFERRED) GET SOURCE DATA
                / GET TO S5.1 FROM F.5 VIA BUT IR DECODE IR<11:9>.5
213  017  S5.1  B,BA-R[S].2; DATI(MUST BE AN EVEN ADDRESS HERE); ENABOVER; GOTO S3.3
```

```
LOC  NXT  * SOURCE MODE 6 (INDEXED) GET SOURCE DATA
                / GET TO S6.1 FROM F.5 VIA BUT IR DECODE IR<11:9>.6
215  025  S6.1  BA-PC; DATI(MUST BE EVEN ADDRESS HERE)
025  026  S6.2  B-PC+2
026  027  S6.3  PC-B; CKOFF
027  030  S6.4  B-UNIBUS DATA
030  244  S6.5  BA-B+R[S]; DATI; CKOFF; GOTO S1.2; ALBYT
```

```
LOC  NXT  * SOURCE MODE 7 (INDEXED DEFERRED) GET SOURCE DATA
                / GET TO S7.1 FROM F.5 VIA BUT IR DECODE IR<11:9>.7
217  032  S7.1  BA-PC; DATI(MUST BE AN  EVEN ADDRESS HERE)
032  033  S7.2  B-PC+2
033  034  S7.3  PC-B; CKOFF
034  035  S7.4  B-UNIBUS DATA
035  134  S7.5  BA-B+R[S]; DATI(MUST BE AN EVEN ADDRES) ; CKOFF; GOTO S3.4
```

```
LOC  NXT  * SOURCE BYTE ODD
          / GETE TO SBO=1 FROM S1=2 VIA BUT BYTE (BYTE INST, AND SOURCE DATA ODD ADDR)
267  346  SBO=1 SHIFT B RIGHT; F SHIFT
346  324  SBO=2 SHIFT B RIGHT; F SHIFT
324  340  SBO=3 SHIFT B RIGHT; F SHIFT
340  361  SBO=4 SHIFT B RIGHT; F SHIFT
361  050  SBO=5 SHIFT B RIGHT; F SHIFT
050  020  SBO=6 SHFIT B RIGHT; F SHIFT
020  052  SBO=7 SHIFT B RIGHT; F SHIFT
052  047  SBO=8 SHIFT B RIGHT; GOTO SBE=1
```

```
LOC  NXT  * SOURCE EVEN BYTE
          / GET TO SBE=1 FROM SBO=8 VIA GOTO
          / GET TO SBE=1 FROM S1=2 VIA BUT BYTE, (BYTE INST AND SOURCE DATA EVEN ADDR)
          / GET TO SBE=1 FROM S0=1 VIA BUT BYTE, (BYTE INST,)
247  001  SBE=1 R[10]=B SEX; BUT DESTINATION
          / IF IR<5:3>  =0 GOTO D0=1
          /    "                =1   "   D1=1
          /    "                =2   "   D2=1
          /    "                =3   "   D3=1
          /    "                =4   "   D4=1
          /    "                =5   "   D5=1
          /    "                =6   "   D6=1
          /    "                =7   "   D7=1
```

```
LOC  NXT  * DEST, MODE 0 (REGISTER), GET DEST DATA, OP, AND REPLACE
          / GET TO D0=1 FROM S0=2 VIA BUT DESTINATION (IR<5:3>=0)
          / GET TO D0=1 FROM SBE=1 VIA BUT DESTINATION (IR<5:3>=0)
101  154  D0=1  B=R[D]; BUT MOVE
          / IF INST=MOVE,BAR (OTHER THAN MOVE) AND BYTE GOTO DB0=1
          / IF INST=MOVE AND BYTE GOTO MB=0
          / IF INST=MOVE AND BYTE,BAR GOTO D0=3A
          / IF INST=MOVE,BAR AND BYTE,BAR FALL THROUGH TO D0=2
157  142  D0=2  R[11]=B; BUT UNARY
          / IF INST=JMP OR JSR GOTO ERT=1 (ILLEGAL INST, TRAP)
          / IF INST=SWAB GOTO SB1=1
          / IF INST=OTHER UNARY(CLR,COM,INC,DEC,NEG,ADC,SBC,TST,ROR,ROL,ASR,ASL) GOTO U1=1
          / GET TO D0=3 FROM U1=1 VIA GOTO
          / GET TO D0=3 FROM D0=1 VIA BUT BYTE (INST=MOVE AND BYTE',BAR)
```

```
162  332  D0=3  B_R[10] OP B; BUT NONMOD
          / THERE EXISTS A D03=A WHICH IS IDENTICAL TO D0=3 EXCEPT LOC=155
          / GET TO D0=3A FROM SR1=A VIA GOTO
          / IF NONMOD GOTO B2=2 (BUT SERVICE)
          / IF NOT NONMOD FALL THROUGH TO D0=4
          / GET TO D0=4 FROM R1=6 VIA GOTO
332  040  D0=4  R[D]_B; BUT SERVICE
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT TRAP GOTO BT=1
          / IF STACK OVERFLOW GOTO ERT1A
          / IF POWERFAIL GOTO PF=1
          / IF BR7 GOTO BG=1
          / IF BR6 GOTO BG=1
          / IF INTERNAL LINE CLOCK GOTO LC=1
          / IF BR5 GOTO BG=1
          / IF BR4 GOTO BG=1
          / IF UATR RECEIVE GOTO URTR
          / IF UART TRANSMIT GOTO URTX
          / IF CONSOLE STOP GOTO H=1
          / IF NONE OF THE ABOVE GOTO F=1

LOC  NXT  * DEST, MODE 1 (REG,DEFERRED) GET DEST DATA, OP, AND REPLACE
          / GET TO D1=1 FROM S0=2 VIA BUT DESTINATION (IR<5:3>=1)
          / GET TO D1=1 FROM SBE=1 VIA BUT DESTINATION (IR<5:3>=1)
103  200  D1=1  B,BA_R[D]; DATIP; BUT JSRMP; ALBT; CKOFF
          / NOTE DATA IN PAUSE HERE
          / IF INST=JMP GOTO J1=1
          / IF INST=JSR GOTO J2=1
          / IF INST NOT JMP OR JSR FALL THROUGH TO D1=2
          / GET DO D1=2 FROM D2=3 VIA GOTO
          / GET TO D1=2 FROM D3=5 VIA GOTO
          / GET TO D1=2 FROM D4=5 VIA GOTO
200  210  D1=2  B_UNIBUS DATA; BUT BYTE
          / IF ODD BYTE GOTO DO=1
          / IF EVEN BYTE GO TO DE=1
          / IF NOT BYTE FALL THROUGH TO D1=3
210  143  D1=3  R[11]_B; BUT UNARY
          / IF INST=SWAB GOTO SB2=1
          / IF INST=OTHER UNARY (CLR, COM,INC,DEC,NEG,ADC, SBC,TST,ROR,ROL,ASR,ASL) GOTO U2=1
          / GET TO D1=4 FROM DE=1 VIA BUT UNARY (NON UNARY)
          / GET TO D1=4 FROM U2=1 VIA GOTO
          / GET TO D1=4 FROM SB2=8 VIA GOTO
161  114  D1=4  B_R[10] OP B; BUT NONMOD
          / IF NONMOD GOTO B2=2 (BUT SERVICE)
          / IF NOT NONMOD FALL THROUGH TO D1=5
334  065  D1=5  DATO; ALBYT; CKOFF
          / GET TO D1=6 FROM DO=18 VIA GOTO
```

```
        / IF NONMOD GOTO B2-2 (BUT SERVICE)
        / IF NOT NONMOD FALL THROUGH TO D1-5
334 065 D1-5  DATO; ALBYT; CKOFF
        / GET TO D1-6 FROM DO-18 VIA GOTO
065 305 D1-6  DRIVERS-B; GOTO B2-2 (BUT SERVICE)
```

```
LOC NXT * DEST MODE 2 (AUTO-INC) GET DEST DATA, OP AND REPLACE
        / GET TO D2-1 FROM SO-2 VIA BUT DESTINATION (IR<5:3>=2)
        / GET TO D2-1 FROM SBE-1 VIA BUT DESTINATION (IR<5:3>=2)
105 331 D2-1  BA=R[D]; DATIP; ALBYT
        / NOTE DATA IN PAUSE HERE
331 341 D2-2  B=R[D]+1+BYTE.BAR
        / GET TO D2-3 FROM D4-1 VIA GOTO
341 200 D2-3  R[D]=B; BUT JSRMP; GOTO D1-2; CKOFF
        / IF INST=JMP GOTO J1-1
        / IF INST=JSR GOTO J2-1
        / IF INST NOT JMP OR JSR FALL THROUGH TO D1-2
```

```
LOC NXT * DEST MODE 3 (AUTO-INC DEFERRED) GET DEST DATA, OP AND REPLACE
        / GET TO D3-1 FROM SO-2 VIA BUT DESDTINATION (IR<5:3>=3)
        / GET TO D3-1 FROM SBE-1 VIA BUT DESTINATION (IR<5:3>=3)
107 160 D3-1  BA=R[D]; DATI
160 070 D3-2  B=R[D]+2
        / GET TO D3-3 FROM D5-1 VIA GOTO
070 071 D3-3  R[D]=B; CKOFF
        / GET TO D3-4 FROM D7-5 VIA GOTO
071 072 D3-4  B=UNIBUS DATA
072 200 D3-5  BA=B; DATIP; BUT JSRMP; GOTO D1-2; ALBYT; CKOFF
        / NOTE DATA IN PAUSE HERE
        / IF INST=JMP GOTO J1-1
        / IF INST=JSR GOTO J2-1
        / IF INST NOT JMP OR JSR FALL THROUGH TO D1-2
```

```
LOC NXT * DEST MODE 4(AUTO-DEC) GET DEST DATA, OP AND REPLACE
        / GET TO S4-1 FROM SO-2 VIA BUT DESTINATRON (IR<5:3>=4)
        / GET TO S4-1 FROM SBE-1 VIA BUT DESTINATION (IR<5:3>=4)
111 341 D4-1  B,BA=R[D]-1-BYTE.BAR; DATIP; ENABOVER; GOTO D2=3; ALBYT
```

```
LOC  NXT  * DEST MODE 5 (AUTO-DEC DEFERRED) GET DEST DATA, OP, AND REPLACE
          / GET TO D5-1 FROM S0-2 VIA BUT DESTINATION (IR<5:3>=5)
          / GET TO D5-1 FROM SBE-1 VIA BUT DESTINATION (IR<5:3>=5)
113  070  D5-1  B,BA-RED]-2! DATI! ENABOVER! GOTO D3-3
```

```
LOC  NXT  * DEST MODE 6 (INDEXED) GET DTA,OP, AND REPLACE
          / GET TO D6-1 FROM S0-2 VIA BUT DESTINATION (IR<5:3>=6)
          / GET TO D6-1 FROM SBE-1 VIA BUT DESTINAITON (IR<5:2>=6)
115  075  D6-1  BA-PC! DATI
075  077  D6-2  B-PC-2
077  057  D6-3  PC-B! CKOFF
057  300  D6-4  B-UNIBUS DATA
300  200  D6-5  B,BA-B-RED]! DATIP! BUT JSRMP! GOTO D1-2! ALBYT! CKOFF
          / NOTE DATA IN PHASE HERE
          / IF INST-JMP GOTO J1-1
          / IF INST-JSR GOTO J2-1
          / IF INST NOT JMP OR JSR FALL THROUGH TO D1-2
```

```
LOC  NXT  * DEST MODE 7 (INDEXED DEFERRED) GET DEST DATA,OP, AND REPLACE
          / GET TO D7-1 FROM S0-2 VIA BUT DESTINATION (IR<5:3>=7)
          / GET TO D7-1 FROM SBE-1 VIA BUT DESTINATION (IR<5:3>=7)
117  310  D7-1  BA-PC! DATI
310  104  D7-2  B-PC-2
104  320  D7-3  PC-B! CKOFF
320  106  D7-4  B-UNIBUS DATA
106  071  D7-5  BA-B-RED]! DATI! CKOFF! GOTO D3-4
```

```
LOC  NXT  * DESTINATION MODE 0, BYTE
          / GET TO D00-1 FROM D0-1 VIA BUT BYTE (BYTE INST AND MOVE,BAR)
134  144  D00-1 R[11],0-0 SEX! BUT UNARY
          / IF UNARY OTHER THAN JSR, JMP, OR SWAB (CLR,COM,INC,DEC,NEG,ADC,SBC,TST,ROR,ROL,ASR,ASL) GOTO U3-1
```

```
304  340  DBU=1 R[D]<7:0>_B; BUT SERVICE; GOTO F=1
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT TRAP GOTO BT=1
          / IF STACK OVERFLOW GOTO ERT1A
          / IF POWER FAIL GOTO PF=1
          / IF BR7 GOTO BG=1
          / IF BR6 GOTO BG=1
          / IF INTERNAL LINE CLOCK GOTO LC=1
          / IF BR5 GOTO BG=1
          / IF BR4 GOTO BG=1
          / IF UART RECEIVE GOTO URTR
          / IF UART TRANSMIT GOTO URTX
          / IF CONSOLE STOP GOTO H=1
          / IF NONE OF THE ABOVE GOTO F=1
```

```
LOC  NXT  * DESTINATION ODD BYTE
          / GET TO DO=1 FROM D1=2 VIA BUT BYTE (BYTE INST AND ODD ADDR)
270  123  DO=1  SHIFT B RIGHT; F SHIFT
123  124  DO=2  SHIFT B RIGHT; F SHIFT
124  125  DO=3  SHIFT B RIGHT; F SHIFT
125  126  DO=4  SHIFT B RIGHT; F SHIFT
126  127  DO=5  SHIFT B RIGHT; F SHIFT
127  130  DO=6  SHIFT B RIGHT; F SHIFT
130  131  DO=7  SHIFT B RIGHT; F SHIFT
131  132  DO=8  SHIFT B RIGHT
132  165  DO=9  R[11],B_B SEX; BUT UNARY
          / IF UNARY OTHER THAN JSR, JMP, OR SWAB (CLR,COM,INC,DEC,NEG,ADC,SBC,TST,ROR,ROL,ASR,ASL) GOTO U4=1
          / IF NOT UNARY FALL THROUGH TO DO=10
165  342  DO=10 B_R[10] OP B; BUT NONMOD
          / IF NONMOD GOTO B2=2 (BUT SERVICE)
          / IF NOT NONMOD FALL THROUGH TO DO=11
342  135  DO=11 SHIFT B LEFT; F SHIFT
135  136  DO=12 SHIFT B LEFT; F SHIFT
136  137  DO=13 SHIFT B LEFT; F SHIFT
137  140  DO=14 SHIFT B LEFT; F SHIFT
140  141  DO=15 SHIFT B LEFT; F SHIFT
141  142  DO=16 SHIFT B LEFT; F SHIFT
142  143  DO=17 SHIFT B LEFT; F SHIFT
143  065  DO=18 SHIFT B LEFT; DATO; CKOFF; GOTO D1=6; ALBYT
```

```
LOC  NXT  * DESTINATION EVEN BYTE
          / GET TO DE=1 FROM D1=2 VIA BUT BYTE (BYTE INST AND EVEN ADDR)
```

```
250  163  DE=1  R[111_B SEX; GOTO D1=4; BUT UNARY
             / IF UNARY OTHER THAN JSR,JMP, OR SWAB (CLR,COM,INC,DEC,ADC,SBC,TST,ROR,ASR,ASL) GOTO U5=1
             / IF NOT UNARY FALL THROUGH TO D1=4



LOC  NXT  * UNARY OPERATORS GET SINGLE OPERAND IN B AND R[10]
             / GET TO U1=1 FROM D0=2 VIA BUT UNARY (INST=CLR,COM,INC,DEC,NEG,ADC,SBC,TST,ROR,ROL,ASR,ASL)
352  162  U1=1  R[10]_B; PRE AUX; GOTO D0=3
             / GET TO U2=1 FROM D1=3 VIA BUT UNARY (INST=CLR,COM,...ASL) SEE U1=1
353  163  U2=1  R[10]_B; PRE AUX; GOTO D1=4
             / GET TO U3=1 FROM DB0=1 VIA BUT UNARY (INST=CLR,COM,...ASL) SEE U1=1
354  164  U3=1  R[10]_B; PRE AUX; GOTO DB0=2
             / GET TO U4=1 FROM D0=9 VIA BUT UNARY (INST=CLR,COM,...ASL) SEE U1=1
355  165  U4=1  R[10]_B; PRE AUX; GOTO D0=10
             / GET TO U5=1 FROM DE=1 VIA BUT UNARY (INST=CLR,COM,...ASL) SEE U1=1
373  163  U5=1  R[10]_B; PRE AUX; GOTO D1=4



LOC  NXT  * MOVB INST
             / GET TO MB=0 FROM D0=1 VIA BUT MOVE (INST=MOVE AND BYTE)
154  240  MB=0  PRE AUX
240  152  MB=1  B_R[10] OP B
152  040  MB=2  R[D]_B SEX; BUT SERVICE
             / PRIORITIES ARE LISTED HIGHEST TO LOWEST
             / IF T BIT TRAP GOTO BT=1
             / IF STACK OVERFLOW GOTO ERT1A
             / IF POWER FAIL GOTO PF=1
             / IF BR7 GOTO BG=1
             / IF BR6 GOTO BG=1
             / IF INTERNAL LINE CLOCK GOTO LC=1
             / IF BR5 GOTO BG=1
             / IF BG4 GOTO BG=1
             / IF UART RECEIVE GOTO URTR
             / IF UART TRANSMIT GOTO URTX
             / IF CONSOLE STOP GOTO H=1
             / IF NONE OF THE ABOVE GOTO F=1



LOC  NXT  * BRANCH, CHANGE PC
015  147  B=1   SHIFT B LEFT
```

```
        / IF BR7 GOTO BG=1
        / IF BR6 GOTO BG=1
        / IF INTERNAL LINE CLOCK GOTO LC=1
        / IF BR5 GOTO BG=1
        / IF BG4 GOTO BG=1
        / IF UART RECEIVE GOTO URTR
        / IF UART TRANSMIT GOTO URTX
        / IF CONSOLE STOP GOTO H=1
        / IF NONE OF THE ABOVE GOTO P=1
```

```
LOC  NXT  * BRANCH, CHANGE PC
015  147  B=1   SHIFT B LEFT
147  146  B=2   B=PC+B
146  040  B=3   PC=BI BUT SERVICE
        / PRIORITIES ARE LISTED HIGHEST TO LOWEST
        / IF T BIT TRAP GOTO BT=1
        / IF STACK OVERFLOW GOTO ERT1A
        / IF POWER FAIL GOTO  PF=1
        / IF BR7 GOTO BG=1
        / IF BR6  GOTO BG=1
        / IF INTERNAL LINE CLOCK GOT LC=1
        / IF BR5 GOTO BG=1
        / IF BR4 GOTO BG=1
        / IF UART RECEIVE GOTO URTR
        / IF UART TRANSMIT GOTO URTX
        / IF CONSOLE STOP GOTO H=1
        / IF NONE OF THE ABOVE GOTO P=1
```

```
LOC  NXT  * CONDITION CODE MASK (FOR BOTH SET AND CLEAR)
151  350  CCM=1 B=B AND K[17]
350  112  CCM=2 BUT DEST
        / IF INST= SET, GO TO SC=1
        / IF INST= CLEAR, GOTO CC=1
```

```
LOC  NXT  * CLEAR CONDITION CODES
112  040  CC=1  PSW=PSW AND (B',BAR)) BUT SERVICE
        / THIS EFFECTIVELY CLEARS THOSE BITS OF THE PSW WHICH ARE SET
```

```
LOC  NXT  * SET CONDITION CODES
116  040  SC=1  PSW_PSW OR BI BUT SERVICE
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT TRAP GOTO BT=1
          / IF STACK OVERFLOW GOTO ERT1A
          / IF POWER FAIL GOTO PF=1
          / IF BR7 GOTO BG=1
          / IF BR6 GOTO BG=1
          / IF INTERNAL LINE CLOCK GOTO LC=1
          / IF BR5 GOTO BG=1
          / IF BR4 GOTO BG=1
          / IF UART RECEIVE GOTO URTR
          / IF UART TRANSMIT GOTO URTX
          / IF CONSOLE STOP GOTO H=1
          / IF NONE OF THE ABOVE GOTO F=1
```

```
LOC  NXT  * SWAB, MODE 0
          / GET TO SB1=1 FROM D0=2 VIA BUT UNARY (INST=SWAB AND MODE=0)
          / ROTATE LEFT ACCOMPLISHED VIA ASR
166  172  SB1=1 ROTATE B LEFT; F SHIFT
172  173  SB1=2 ROTATE B LEFT; F SHIFT
173  174  SB1=3 ROTATE B LEFT; F SHIFT
174  144  SB1=4 ROTATE B LEFT; F SHIFT
144  176  SB1=5 ROTATE B LEFT; F SHIFT
176  177  SB1=6 ROTATE B LEFT; F SHIFT
177  006  SB1=7 ROTATE B LEFT; F SHIFT
006  155  SB1=8 ROTATE B LEFT; PRE AUX; GOTO D0=3A
```

```
LOC  NXT  * SWAB, NOT MODE 0
          / GET TO SB2=1 FROM D1=3 VIA BUT UNARY (INST=SWAB)
          / ROTATE LEFT ACCOMPLISHED VIA ASR
167  012  SB2=1 ROTATE B LEFT; F SHIFT
012  220  SB2=2 ROTATE B LEFT; F SHIFT
220  022  SB2=3 ROTATE B LEFT; F SHIFT
022  023  SB2=4 ROTATE B LEFT; F SHIFT
023  024  SB2=5 ROTATE B LEFT; F SHIFT
024  031  SB2=6 ROTATE B LEFT; F SHIFT
031  330  SB2=7 ROTATE B LEFT; F SHIFT
330  163  SB2=8 ROTATE B LEFT; PRE AUX; GOTO D1=4
```

```
LOC  NXT  * JMP
          / GET TO J1=1 FROM D1=1 VIA BUT JSRMP (INST=JMP)
          / GET TO J1=1 FROM D2=3 VIA BUT JSRMP (INST=JMP)
          / GET TO J1=1 FROM D3=5 VIA BUT JSRMP (INST=JMP)
          / GET TO J1=1 FROM D6=5 VIA BUT JSRMP (INST=JMP)
204  260  J1=1  NOP
          / J1=1 MUST BE A NOP BECAUSE FOLLOWING A CKOFF, THE AMX WILL
          / BE FORCED TO TAKE DATA FROM THE UNIBUS.
260  040  J1=2  PC_B; BUT SERVICE
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT TRAP GOTO BT=1
          / IF STACK OVERFLOW GOTO ERT1A
          / IF POWER FAIL GOTO PF=1
          / IF BR7 GOTO BG=1
          / IF BR6 GOTO BG=1
          / IF INTERNAL LINE CLOCK GOTO LC=1
          / IF BR5 GOTO BG=1
          / IF BR4 GOTO BG=1
          / IF UART RECEIVE GOTO URTR
          / IF UART TRANSMIT GOTO URTX
          / IF CONSOLE STOP GOTO H=1
          / IF NONE OF THE ABOVE GOTO F=1
```

```
LOC  NXT  * JSR
          / GET TO J2=1 FROM D1=1 VIA BUT JSRMP (INST=JSR)
          / GET TO J2=1 FROM D2=3 VIA BUT JSRMP (INST=JSR)
          / GET TO J2=1 FROM D3=5 VIA BUT JSRMP (INST=JSR)
          / GET TO J2=1 FROM D6=5 VIA BUT JSRMP (INST=JSR)
212  261  J2=1  NOP
          / J2=1 MUST BE A NOP BECAUSE FOLLOWING A CKOFF, THE AMX WILL BE
          / FORCED TO TAKE DATA FROM THE UNIBUS.
261  262  J2=1A R[11]_B
262  214  J2=2  B,BA_R[6]=2; ENABOVER
214  206  J2=3  R[6]_B; CKOFF; DATO
206  216  J2=4  DRIVERS_R[8]
216  263  J2=5  B_PC
263  264  J2=6  R[8]_B
264  265  J2=7  B_R[11]
265  040  J2=8  PC_B; BUT SERVICE
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT TRAP GOTO BT=1
```

```
LOC  NXT  * JSR
          / GET TO J2.1 FROM D1.1 VIA BUT JSRMP (INST.JSR)
          / GET TO J2.1 FROM D2.3 VIA BUT JSRMP (INST.JSR)
          / GET TO J2.1 FROM D3.5 VIA BUT JSRMP (INST.JSR)
          / GET TO J2.1 FROM D6.4 VIA BUT JSRMP (INST.JSR)
212  261  J2.1  NOP
          / J2.1 MUST BE A NOP BECAUSE FOLLOWING A CKOFF, THE AMX WILL BE
          / FORCED TO TAKE DATA FROM THE UNIBUS.
261  262  J2.1A R[11]-B
262  214  J2.2  B,BA-R[6]-8) ENABOVER
214  256  J2.3  R[6]-B( CKOFF) DATO
256  216  J2.4  DRIVERS-R[5]
216  263  J2.5  B-PC
263  264  J2.6  R[5]-B
264  265  J2.7  B-R[11]
265  048  J2.8  PC-B) BUT SERVICE
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT TRAP GOTO BT.1
          / IF STACK OVERFLOW GOT ERT1A
          / IF POWER FAIL GOTO PF.1
          / IF BR7 GOTO BG.1
          / IF BR6 GOTO BG.1
          / IF INTERNAL LINE CLOCK GOTO LC.1
          / IF BR5 GOTO BG.1
          / IF BR4 GOTO BG.1
          / IF UART RECEIVE GOTO URTR
          / IF UART TRANSMIT GOTO URTX
          / IF CONSOLE STOP GOTO H.1
          / IF NONE OF THE ABOVE GOTO F.1
```

```
LOC  NXT  * RTS
          / GET TO R1.1 FROM F.5 VIA BUT IR DECODE (INST.RTS)
965  221  R1.1  BA-R[6]) DAT1
221  222  R1.2  B-R[6]+2
222  223  R1.3  R[6]-B
223  224  R1.4  B-R[0]
224  225  R1.5  PC-B) CKOFF
225  332  R1.6  B-UNIBUS DATA) GOTO DB.4
```

```
LOC  NXT  * RTI
          / GET TO R2.2 FROM F.5 VIA BUT IR DECODE (INST.RTI)
227  230  R2.1  BA-R[6]) DAT1
230  231  R2.2  B-R[6]+2
```

```
231  232  R2=3   "[6]=B[ CKOFF
232  234  R2=4   PC=UNIBUS DATA
             / THERE IS NO R2=5 (ANY MORE)
234  235  R2=6   BA=R[6]; DATI
235  236  R2=7   B=R[6]+2
236  237  R2=8   R[6]=B[ CKOFF
237  385  R2=9   PS=UNIBUS DATA[ GOTO B2=2 (BUT SERVICE)



LOC  NXT  * WAIT
             / GET TO W=1 FROM P=5 VIA BUT IR DECODE (INST=WAIT)
             / GET TO W=1 FROM W=1 VIA GOTO IF BUT SERVICE IS FALSE
843  848  W=1    BUT SERVICE
             / THE MICRO PROGRAM WILL LOOP ON W=1 UNTIL SOME HIGHER
             / PRIORITY CONDITION IS RECOGNIZED BY THE 'BUT SERVICE' ROM SEE P1A1 ON
             / THE CONE PRINT.
             / PRIORITIES ARE LISTED HIGHEST TO LOWEST
             / IF T BIT TRAP GOTO BT=1
             / IF STACK OVERFLOW GOTO ERTSA
             / IF POWER FAIL GOT PF=1
             / IF BR7 GOTO BG=1
             / IF BR6 GOTO BG=1
             / IF BR5 GOTO BG=1
             / IF BR4 GOTO BG=1
             / IF UART RECEIVE URYR
             / IF UART TRANSMIT TOTO URTX
             / IF CONSOLE STOP GOTO W=1
             / IF NONE OF THE ABOVE TOTO P=1



LOC  NXT  * HALT
             / GET TO W=1 FROM P=5 VIA BUT IR DECODE (INST=HALT)
             / GET TO W=1 FROM BUT SERVICE
041  382  W=1    B=PC
             / DISPLAY PC IN LIGHTS BY PUTTING IT INTO B
             / GET TO W=2 FROM CEI=3 VIA GOTO
             / GET TO W=2 FROM CDI=5 VIA GOTO
             / GET TO W=2 FROM CL=3 VIA GOTO
382  388  W=2    BA=R[17]; BUT SWITCH
             / THE BA IS LOADED HERE SO THAT THE ADDRESS WILL BE INCREMENTED BY +1 WHEN EXAMINING (DEPOSITING INT
             / AND BY +2 WHEN EXAMINING (DEPOSITING INTO) SUCCESSIVE CORE MEMORY.
             / IF START DEPRESSED GOTO CS=1
             / IF CONTINUE DEPRESSED GOTO CCS=1
```

```
        / IF EXAMINE (1 ST) GOTO CE1=1

        / IF EXAMINE (NOT 1 ST) GOTO CE2=1
        / IF DEPOSIT (1 ST) GOTO CD1=1
        / IF DEPOSIT (NOT 1 ST) GOT CD2=1
        / IF LOAD GOTO CL=1
        / IF NO SWITCHES ARE DEPRESSED LOOP ON H=2



LOC  NXT  * EMT TRAP (VECTOR LOC=30)
          / GET TO ET=1 FROM F=5 VIA BUT IR DECODE (INST=EMT)
011  245  ET=1  B=K[30]
          / GET TO ET=2 FROM BT=1 VIA GOTO
          / GET TO ET=2 FROM IT=1 VIA GOTO
          / GET TO ET=2 FROM TP1 VIA GOTO
          / GET TO ET=1 FROM RT=1 VIA GOTO
          / GET TO ET=2 FROM ERT=1 VIA GOTO
          / GET TO ET=2 FROM PF=1 VIA GOTO
245  246  ET=2  R[12]=B
246  247  ET=3  B,BA=R[6]=2; ENABOVER
          / ET=4 HAS BEEN ELIMINATED
247  226  ET=5  R[6]=B; CKOFF; DATO
226  251  ET=6  DIRVERS=PS
251  252  ET=7  B,BA=R[6]=2; ENABOVER
252  253  ET=8  R[6]=B; CKOFF; DATO
253  254  ET=9  DIRVERS=PC
254  255  ET=10 BA=R[12]; DATI; CKOFF
255  256  ET=11 PC=UNIBUS DATA
256  257  ET=12 BA=R[12]=2; DATI; CKOFF
257  385  ET=13 PS=UNIBUS DATA;  GOTO B2=2 (SERVICE)



LOC  NXT  * BREAKPOINT TRAP (VECTOR LOC=14) AND T BIT TRACE TRAP
          / GET TO BT=1 FROM ALL BUT SERVICE
          / GET TO BT=1 FROM F=5 VIA BUT IR DECODE (INST=BREAKPOINT)
845  245  BT=1  B=K[14]; GOTO ET=2



LOC  NXT  * IOT (VECTOR LOC=20)
          / GET TO IT=1 FROM F=5 VIA BUT IR DECODE (INST=IOT
273  245  IT=1  B=K[20]; GOTO ET=2
```

```
LOC  NXT  * TRAP (VECTOR LOC=34)
          / GET TO T=1 FROM F=5 VIA BUT IR DECODE (INST=TRAP)
021  245  T=1   B=K[34]; GOTO ET=2



LOC  NXT  * RESERVED INST TRAP (VECTOR LOC=10)
          / GET TO RT=1 FROM F=5 VIA BUT IR DECODE (INST=NON VALID)
001  245  RT=1  B=K[10]; GOTO ET=2



LOC  NXT  * ERROR TRAP (BUS ERROR, STACK OVERFLOW, ILLEGAL INST) VECTOR LOC=4
          / THERE EXISTS ERT=1 (LOC=10) FOR BUS ERROR
          / THERE ALSO EXISTS ERT1A (LOC=46) FOR STACK OVERFLOW
          / ERT1A GOES TO ET2=2, A SEQUENCE WHICH DOESN'T HAVE THE
          / ENABOVER,  WE DON'T WANT TO LOOK FOR STACK OVERFLOW WHILE
          / DOING THE STACK OVERFLOW TRAP;  THE ET2=2 SEQUENCE REJOINS THE ET SEQUENCE AT ET=8
          / THERE ALSO EXISTS ERT1B (LOC=153) FOR ILLEGAL INST (JSR OR JMP, MODE 0)
010  245  ERT=1 B=K[4]; GOTO ET=2



LOC  NXT  * CONSOLE START SWITCH
          / GET TO CS=1 FOLLOWING RELEASE OF START SWITCH,
100  322  CS=1  IR=ZERO
          / CLOCKING THE IR TURNS ON THE RUN LIGHT
322  321  CS=2  BA,B=R[17]
321  040  CS=3  PC=B; BUT SERVICE
          / PRIORITIES ARE LISTED HIGHEST TO LOWEST
          / IF T BIT BRAP GOTO BT=1
          / IF STACK OVERFLOW GOTO ERT1A
          / IF POWER FAIL GOTO PF=1
          / IF BR7 GOTO BG=1
          / IF BR6 GOTO BG=1
          / IF INTERNAL LINE CLOCK GOTO LC=1
          / IF BR5 GOTO BG=1
```

```
        IF S=4 GOTO BG=1
      / IF UART RECEIVE GOTO URTR
      / IF UART TRANSMIT GOTO URTX
      / IF CONSOLE STOP GOTO H=1
      / IF NONE OF THE ABOVE GOTO F=1



LOC   NXT   * CONSOLE EXAMINE SWITCH= FIRST TIME IN SEQUENCE (DON'T INC R[17])
            / GET TO CE1=1 FROM H=2 VIA BUT SWITCH
            / GET TO CE1=1 FROM CE2=2 VIA GOTO
317   387   CE1=1 BA,B=R[17]; BUT SWITCH
            / DISPLAY ADDRESS BY PUTTING INTO THE B REGISTER WHILE EXAMINE IS DOWN
            / LOOP ON CE1=1 UNTIL SWITCH IS RELEASED
387   326   CE1=2 DATI; CKOFF
326   382   CE1=3 B=UNIBUS DATA; GOTO H=2



LOC   NXT   * CONSOLE EXAMINE SWITCH = OTHER THAN FIRST IN SEQUENCE (INC R[17])
            / GET TO CE2=1 FROM H=2 VIA BUT SWITCH
315   371   CE2=1 B=R[17]+2
            / R[17] IS IN BA FROM H=2, THIS WILL CAUSE +2 TO BECOME +1 WHEN EXAMINING REGISTERS,
371   317   CE2=2 R[17]=B; GOTO CE1=1



LOC   NXT   * CONSOLE DEPOSIT SWITCH = FIRST TIME IN SEQUENCE (DON'T INC R[17])
            / GET TO CD1=1 FROM H=2 VIA BUT SWITCH
            / GET TO CD1=1 FROM CD2=2 VIA GOTO
313   383   CD1=1 B=R[17]; BUT SWITCH
            / LOOP ON CD1=1 UNTIL DEPOSIT SWITCH IS RELEASED
383   374   CD1=2 BA=K[2877],BAR; DATI; CKOFF
            / COMPLEMENT OF 287 = 177570 = SWITCH REGISTER ADDRESS
374   314   CD1=3 B=UNIBUS DATA
314   372   CD1=4 BA=R[17]; DATO; CKOFF
372   382   CD1=5 DRIVERS=B; GOTO H=2
```

```
LOC  NXT  * CONSOLE DEPOSIT SWITCH = OTHER THAN FIRST IN SEQENCE (INC R[17])
          / SET TO CD2=1 FROM M=3) VIA BUT SWITCH
312  337  CD2=1 B=R[17]+2
          / R[17] IS IN BA, THIS WILL CAUSE +2 TO BECOME +1 WHEN DEPOSITING INTO REGISTERS
337  313  CD2=2 R[17]=B; GOTO CD1=1
```

```
LOC  NXT  * CONSOLE CONTINUE SWITCH
          / SET TO CCS=1 FROM M=2 VIA BUT SWITCH
314  276  CCS=1 B=PC
276  278  CCS=2 BUT SWITCH
272  862  CCS=3 IR=ZERO; GOTO P=1
          / CLOCKING THE IR TURNS ON THE RUN LIGHT
```

```
LOC  NXT  * CONSOLE LOAD SWITCH
          / SET TO CL=1 FROM M=2 VIA BUT SWITCH
311  375  CL=1  BA=K[287],BAR; DATI; CKOFF
          / COMPLEMENT OF 287 = 177578 = SWITCH REGISTER ADDRSS
375  367  CL=2  B=UNIBUS DATA
367  382  CL=3  R[17]=B; GOTO M=2
          / CL=3 GOES TO M=2 VIA GOTO; IF LOAD IS STILL DEPRESSED, THE BUT
          / SWITCH IN M=2 WILL TAKE US BACK TO CL=1.  THUS, AS LONG AS LOAD IS
          / DEPPRESSED, CHANGES IN THE SWITCHES WILL SHOW UP IN THE B REG (LIGHTS) AND IN R[17].
```

```
LOC  NXT  * POWER FAIL (VECTOR LOC=24)
          / SET TO PF=1 FROM SERVICE
243  245  PF=1  B=K[24]; GOTO ET=2
```

```
LOC  NXT  * RESTART FROM POWER FAIL (VECTOR LOC=24)
          / SET TO RS=1 MYSTERIOUSLY AS POWER COMES UP ( NXT CHIPS, F892 AND F893 SHOWN ON THE CONF PRINT,
          / ARE DISABLED FORCING THE MICROPROGRAM TO RS=1 IN LOC 0.
000  241  RS=1  BA=K[24]; DATI
241  347  RS=1A CKOFF
```

```
                / MUST DO CKOFF IN RS-1A BECAUSE OF CONFLICT BETWEEN
                / CKOFF AND INIT CREATED BY CKOFF ASSOCIATED WITH AUX CONTROL
  347  074      RS-2  PC-UNIBUS DATA
  074  351      RS-3  BA-K[24]-2[ DATI] CKOFF
  351  385      RS-4  PS-UNIBUS DATA[  GOTO B2-2 (SERVICE)



LOC   NXT       * INTERRUPT SERVICING
                / GET TO INT-1 FROM BG-2 VIA BUT INT (TRUE)
  325  246      INT-1 R[12]-UNIBUS DATA[ SET SLAVESYNC] GOTO ET-3


LOC   NXT       * BUS GRANT SERVICE
                / GET TO BG-1 FROM BUT SERVICE
  848  385      BG-1  BUT INTERRUPT] GOTO B2-2 (BUT SERVICE)
                / IF INTERRUPT GOTO INT-1
                / IF NO INTERRUPT FALL THROUGH TO B2-2


LOC   NXT       * NOP - BRANCH CONDITION NOT TRUE (PC UNCHANGED)
                / B2-1 HAS BEEN ELIMINATED BECAUSE NEWI IS NO LONGER
                / GET TO B2-2A FROM D8-3 VIA BUT NONMOD (TRUE)
                / GET TO B2-2B FROM D1-4 VIA BUT NONMOD (TRUE)
                / GET TO B2-2C FROM D0-10 VIA BUT NONMOD (TRUE)
                / GET TO B2-2D FROM F-5 VIA BUT IR DECODE, BRANCH INST, CONDITION NOT TRUE
                / GET TO B2-2 FROM RST-1 VIA GOTO
                / GET TO B2-2 FROM D8-4 VIA GOTO
                / GET TO B2-2 FROM D88-2  VIA BUT NONMOD (TRUE)
                / GET TO B2-2 FROM MB-2 VIA GOTO
                / GET TO B2-2 FROM CC-1 VIA GOTO
                / GET TO B2-2 FROM SC-1 VIA GOTO
                / GET TO B2-2 FROM J2-8 VIA GOTO
                / GET TO B2-2 FROM RS-10 VIA GOTO
                / GET TO B2-2 FROM ET-13 VIA GOTO
  385  848      B2-2  BUT SERVICE
                / PRIORITIES ARE LISTED HIGHEST TO LOWEST
                / IF T BIT TRAP GOTO BT-1
                / IF STACK OVERFLOW GOTO ERTIA
                / IF POWER FAIL GOTO PF-1
                / IF BR7 GOTO BG-1
```

```
        / IF BR6 GOTO BG=1
        / IF INTERNAL LINE CLOCK GOTO LC=1
        / IF BR5 GOTO BG=1
        / IF BR4 GOTO BG=1
        / IF UART RECEIVE GOTO URTR
        / IF UART TRANSMIT GOTO URTX
        / IF CONSOLE STOP GOTO H=1
        / IF NONE OF THE ABOVE GOTO F=1


LOC  NXT  * RESET
          / GET TO RST=1 FROM F=5 VIA BUT IR DECODE (INST=RESET)
357  305  RST=1 BUT INIT; CKOFF; GOTO B2=2 (BUT SERVICE)


LOC  NXT  * DOUBLE BUS ERROR, GOTO HALT
110  041  DBE=1 NOP; GOTO H=1


LOC  NXT  * UART XMIT (VECTOR LOC 64)
040  245  URTX  B=K[64]; GOTO ET=2


LOC  NXT  * UART RECEIVE (VECTOR LOC 60)
044  245  URTR  B=K[60]; GOTO ET=2


LOC  NXT  * LINE CLOCK (VECTOR LOC 100)
042  245  LC=1  B=K[100]; GOTO ET=2
```

ERT1A NOT EXPLICITLY SHOWN IN FLOW
D8-3A NOT EXPLICITLY SHOWN IN FLOW
A149 NOT EXPLICITLY SHOWN IN FLOW
ET2-2 NOT EXPLICITLY SHOWN IN FLOW
ET2-3 NOT EXPLICITLY SHOWN IN FLOW
ET2-5 NOT EXPLICITLY SHOWN IN FLOW
ET2-6 NOT EXPLICITLY SHOWN IN FLOW
ET2-7 NOT EXPLICITLY SHOWN IN FLOW
ERT1B NOT EXPLICITLY SHOWN IN FLOW
B2-2A NOT EXPLICITLY SHOWN IN FLOW
B2-2B NOT EXPLICITLY SHOWN IN FLOW
B2-2C NOT EXPLICITLY SHOWN IN FLOW
B2-2D NOT EXPLICITLY SHOWN IN FLOW

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS	REMARKS
1	A B C D E	
2	A A A A B	
3	A B B B C	
4	A A B C D	
5	A A A B B	
6	A A A A B	

ECO NO.	00002	KD11B 00003	KD11B 00004	KD1B - 00005	KD11B - 00006	
ETCH REV.						
ENG.	BA	MT	MT	DR	DR	
DATE	8-21-72	9-24-72	10-30-72	8-15-73	6-14-74	

FIRST USED ON OPTION/MODEL

KD11-B

DRN. A. Towne	DATE 8-21-72	
CHK'D. D McCallum	DATE 8-21-72	
ENG. B. ARMSTRONG	DATE 8-29-72	
PROJ. ENG. B. ARMSTRONG	DATE 8-29-72	
PROD.	DATE	

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
MICROPROGRAM
SYMBOLIC
LISTING

NEXT HIGHER ASSY.
B-DD-KD11-B

SCALE —

SHEET 1 OF 6

SIZE	CODE	NUMBER	REV.
K	MP	KD11-B-2	E

DIST.

NAME	LOC	ABT	ALG	ALU	AUX	BAR	BLG	BRG	BUT	CON	CKO	CRI	FSH	PSW	SAM	SPA	SPF	TNS	NXT
A145	145	YES	PSW	AA	ON	L	+1	H	MOV	NON	ON	OFF	OFF	L	ROM	R0	WRI	ZRO	
B=1	015	NO	SP	ASL	OFF	H	BRG	SL	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	B=2
B=2	147	NO	SP	A+B	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	NON	B=3
B=3	146	NO	SP	BL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R7	WRI	NON	BG=1
B2=2	305	NO	SP	AL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	BG=1
B2=2A	331	NO	SP	AL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	BG=1
B2=2B	335	NO	SP	AL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	BG=1
B2=2C	343	NO	SP	AL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	BG=1
B2=2D	011	NO	SP	AL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	BG=1
BG=1	040	NO	SP	AL	OFF	H	BRG	H	INT	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	B2=2
BI=1	045	NO	NUL	AL	OFF	H	BRG	L	CON	14	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
CC=1	112	NO	PSW	ABRAR	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	L	ROM	R0	REA	NON	BG=1
CCM=1	151	NO	NUL	AAMDB	OFF	H	BRG	L	CON	360	OFF	OFF	OFF	H	ROM	R0	WRI	NON	CCM=2
CCM=2	350	NO	SP	AL	OFF	H	BRG	H	DST	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	CC=1
CCS=1	316	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	NON	CCS=2
CCS=2	276	NO	SP	AL	OFF	H	BRG	H	SW	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	DO=1
CCS=3	272	NO	SP	ZERO	OFF	H	BRG	H	IRC	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	F=1
CD1=1	313	NO	SP	AL	OFF	H	BRG	L	SW	NON	OFF	OFF	OFF	H	ROM	R17	REA	NON	CD1=2
CD1=2	303	NO	NUL	ABAR	OFF	L	BRG	H	CON	207	ON	OFF	OFF	H	ROM	R0	WRI	I	CD1=3
CD1=3	174	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	CD1=4
CD1=4	314	NO	SP	AL	OFF	L	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R17	REA	0	CD1=5
CD1=5	372	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	H=2
CD2=1	312	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R17	REA	NON	CD2=2
CD2=2	337	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R17	WRI	NON	CD1=1
CE1=1	317	NO	SP	AL	OFF	L	BRG	L	SW	NON	OFF	OFF	OFF	H	ROM	R17	REA	NON	CE1=2
CE1=2	307	NO	SP	AL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R0	REA	I	CE1=3
CE1=3	326	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	H=2
CE2=1	315	NO	SP	A+B	OFF	L	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R17	REA	NON	CE2=2
CE2=2	371	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R17	WRI	NON	CE1=1
CL=1	311	NO	NUL	ABAR	OFF	L	BRG	H	CON	207	ON	OFF	OFF	H	ROM	R0	WRI	I	CL=2
CL=2	375	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	CL=3
CL=3	367	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R17	WRI	NON	H=2
CS=1	100	NO	SP	ZERO	OFF	H	BRG	H	IRC	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	CS=2
CS=2	322	NO	SP	AL	OFF	L	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R17	REA	NON	CS=3
CS=3	321	NO	SP	BL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R7	WRI	NON	BG=1
DO=1	101	NO	SP	AL	OFF	H	BRG	L	MOV	NON	OFF	OFF	OFF	H	IRD	R0	REA	NON	MB=0
DO=2	157	NO	SP	BL	OFF	H	BRG	H	UNY	NON	OFF	OFF	OFF	H	ROM	R11	WRI	NON	DO=17
DO=3	162	NO	SP	ABAR	OFF	H	BRG	L	NMD	NON	OFF	ON	OFF	H	ROM	R10	REA	NON	DO=4
DO=3A	155	NO	SP	ABAR	OFF	H	BRG	L	NMD	NON	OFF	ON	OFF	H	ROM	R10	REA	NON	DO=4
DO=4	332	NO	SP	BL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	IRD	R0	WRI	NON	BG=1
D1=1	103	YES	SP	AL	OFF	L	BRG	L	JOM	NON	ON	OFF	OFF	H	IRD	R0	REA	IP	D1=2
D1=2	200	NO	NUL	AL	OFF	H	BRG	L	BYT	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	D1=3
D1=3	210	NO	SP	BL	OFF	H	BRG	H	UNY	NON	OFF	OFF	OFF	H	ROM	R11	WRI	NON	DO=18
D1=4	163	NO	SP	ABAR	OFF	H	BRG	L	NMD	NON	OFF	ON	OFF	H	ROM	R10	REA	NON	D1=5

NAME	LOC	ABT	ALG	ALU	AUX	BAR	BLG	BRG	BUT	CON	CKO	CRI	FSH	PSW	SAM	SPA	SPF	TNS	NXT
D1-5	334	YES	SP	AL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R0	REA	D	D1-6
D1-6	065	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	D2-2
D2-1	105	YES	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	IRD	R0	REA	IP	D2-2
D2-2	331	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	IRD	R0	REA	NON	D2-3
D2-3	341	NO	SP	BL	OFF	H	BRG	H	JOJ	NON	ON	OFF	OFF	H	IRD	R0	WRI	NON	D1-2
D3-1	107	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	IRD	R0	REA	I	D3-2
D3-2	160	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	IRD	R0	REA	NON	D3-3
D3-3	070	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	IRD	R0	WRI	NON	D3-4
D3-4	071	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	D3-5
D3-5	072	YES	SP	BL	OFF	L	BRG	H	JOJ	NON	ON	OFF	OFF	H	ROM	R0	REA	IP	D1-2
D4-1	111	YES	SP	A-B-1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	IRD	R0	REA	IP	D2-3
D5-1	113	NO	SP	A-B-1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	IRD	R0	REA	I	D3-3
D6-1	115	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	I	D6-2
D6-2	075	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R7	REA	NON	D6-3
D6-3	077	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R7	WRI	NON	D6-4
D6-4	057	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	D6-5
D6-5	100	YES	SP	A+B	OFF	L	BRG	L	JOJ	NON	ON	OFF	OFF	H	IRD	R0	REA	IP	D1-2
D7-1	117	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	I	D7-2
D7-2	310	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R7	REA	NON	D7-3
D7-3	104	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R7	WRI	NON	D7-4
D7-4	320	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	D7-5
D7-5	106	NO	SP	A+B	OFF	L	BRG	H	NON	NON	ON	OFF	OFF	H	IRD	R0	REA	I	D3-4
DB0-1	156	NO	SP	BL	OFF	H	SEX	L	UNY	NON	OFF	OFF	OFF	H	ROM	R11	WRI	NON	SB1-5
DB0-2	164	NO	SP	ABAR	OFF	H	BRG	L	NMD	NON	OFF	ON	OFF	H	ROM	R10	REA	NON	DB0-3
DB0-3	304	NO	SPR	BL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	IRD	R0	WRI	NON	BG-1
DBE-1	110	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	H-1
DE-1	250	NO	SP	BL	OFF	H	SEX	L	UNY	NON	OFF	OFF	OFF	H	ROM	R11	WRI	NON	D1-4
DO-1	270	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-2
DO-10	165	NO	SP	ABAR	OFF	H	BRG	L	NMD	NON	OFF	ON	OFF	H	ROM	R10	REA	NON	DO-11
DO-11	142	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-12
DO-12	135	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-13
DO-13	136	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-14
DO-14	137	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-15
DO-15	140	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-16
DO-16	141	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-17
DO-17	142	NO	SP	AL	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-18
DO-18	143	YES	SP	AL	OFF	H	BRG	SL	NON	NON	ON	OFF	OFF	H	ROM	R0	REA	D	D1-6
DO-2	121	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-3
DO-3	124	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-4
DO-4	125	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-5
DO-5	126	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-6
DO-6	127	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-7
DO-7	130	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	DO-8
DO-8	131	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	DO-9

NAME	LOC	ABT	ALG	ALU	AUX	BAR	BLG	BRG	BUT	CON	CKO	CRI	FSH	PSW	SAM	SPA	SPF	TNS	NXT
DO=9	132	NO	SP	BL	OFF	H	SEX	L	UNY	NON	OFF	OFF	OFF	H	ROM	R11	WRI	NON	A145
ERT=1	010	NO	NUL	AL	OFF	H	BRG	L	CON	4	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
ERT1A	046	NO	NUL	AL	OFF	H	BRG	L	CON	4	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET2=2
ERT1B	153	NO	NUL	AL	OFF	H	BRG	L	CON	4	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
ET=1	011	NO	NUL	AL	OFF	H	BRG	L	CON	30	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
ET=10	254	NO	SP	AL	OFF	L	BRG	H	IRC	NON	ON	OFF	OFF	H	ROM	R12	REA	T	ET=11
ET=11	255	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R7	WRI	NON	ET=12
ET=12	256	NO	SP	A+B	OFF	L	+1	L	NON	NON	ON	ON	OFF	H	ROM	R12	REA	T	ET=13
ET=13	257	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	L	ROM	R0	REA	NON	R2=2
ET=2	245	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R12	WRI	NON	ET=3
ET=3	246	NO	SP	A=B=1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	ROM	R6	REA	NON	ET=5
ET=5	247	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R6	WRI	0	ET=6
ET=6	226	NO	PSW	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	ET=7
ET=7	251	NO	SP	A=B=1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	ROM	R6	REA	NON	ET=8
ET=8	252	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R6	WRI	0	ET=9
ET=9	253	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	NON	ET=10
ET2=2	003	NO	SP	BL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R12	WRI	NON	ET2=3
ET2=3	004	NO	SP	A=B=1	OFF	L	+1	L	NON	NON	OFF	OFF	OFF	H	ROM	R6	REA	NON	ET2=5
ET2=5	036	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R6	WRI	0	ET2=6
ET2=6	037	NO	PSW	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	ET2=7
ET2=7	051	NO	SP	A=B=1	OFF	L	+1	L	NON	NON	OFF	OFF	OFF	H	ROM	R6	REA	NON	ET=8
F=1	062	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	T	F=2
F=2	053	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R7	REA	NON	F=3
F=3	365	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R7	WRI	NON	F=4
F=4	364	NO	NUL	AL	OFF	H	BRG	L	IRC	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	F=5
F=5	061	NO	SP	BL	OFF	H	SEX	L	IRD	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	RT=1
H=1	041	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	NON	H=2
H=2	302	NO	SP	AL	OFF	L	BRG	H	SW	NON	OFF	OFF	OFF	H	ROM	R17	REA	NON	D6=5
INT=1	325	NO	SP	AL	OFF	H	BRG	H	SVS	NON	OFF	OFF	OFF	H	ROM	R12	WRI	NON	ET=3
IT=1	273	NO	NUL	AL	OFF	H	BRG	L	CON	20	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
J1=1	204	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	J1=2
J1=2	260	NO	SP	BL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R7	WRT	NON	BG=1
J2=1	212	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	J2=1A
J2=1A	261	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R11	WRI	NON	J2=2
J2=2	262	NO	SP	A=B=1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	ROM	R6	REA	NON	J2=3
J2=3	214	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R6	WRI	0	J2=4
J2=4	206	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	IRS	R0	REA	NON	J2=5
J2=5	216	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	NON	J2=6
J2=6	263	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	IRS	R0	WRI	NON	J2=7
J2=7	264	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R11	REA	NON	J2=8
J2=8	265	NO	SP	BL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R7	WRI	NON	BG=1
LC=1	042	NO	NUL	AL	OFF	H	BRG	L	CON	100	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
MB=0	154	NO	SP	AL	ON	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	MB=1
MB=1	240	NO	SP	ABAR	OFF	H	BRG	L	NON	NON	OFF	ON	OFF	H	ROM	R10	REA	NON	MB=2

NAME	LOC	ABT	ALG	ALU	AUX	BAR	BLG	BRG	BUT	CON	CKO	CRI	FSH	PSW	SAM	SPA	SPF	TNS	NXT
MB-2	152	NO	SP	BL	OFF	H	SEQ	H	SRV	NON	OFF	OFF	OFF	H	IRD	R0	WRI	NON	BG-1
PF-1	243	NO	NUL	AL	OFF	H	BRG	L	CON	24	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET-2
R1-1	305	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R6	REA	I	R1-2
R1-2	221	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R6	REA	NON	R1-3
R1-3	222	NO	SP	BL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R6	WRI	NON	R1-4
R1-4	223	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	IRD	R0	REA	NON	R1-5
R1-5	224	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R7	WRI	NON	R1-6
R1-6	225	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	D0-4
R2-1	227	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R6	REA	I	R2-2
R2-2	230	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R6	REA	NON	R2-3
R2-3	231	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R6	WRI	NON	R2-4
R2-4	232	NO	SP	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	ROM	R7	WRI	NON	R2-6
R2-6	234	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R6	REA	I	R2-7
R2-7	235	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R6	REA	NON	R2-8
R2-8	236	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R6	WRI	NON	R2-9
R2-9	237	NO	NUL	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	L	ROM	R0	REA	NON	R2-2
RS-1	320	NO	NUL	AL	OFF	L	BRG	H	CON	24	OFF	OFF	OFF	H	ROM	R0	WRI	I	RS-1A
RS-1A	241	NO	SP	AL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R0	REA	NON	RS-2
RS-2	347	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	WRI	NON	RS-3
RS-3	274	NO	NUL	A+B	OFF	L	+1	H	CON	24	ON	ON	OFF	H	ROM	R0	WRI	I	RS-4
RS-4	351	NO	SP	AL	OFF	H	BRG	H	NON	NON	OFF	OFF	OFF	L	ROM	R0	REA	NON	B2-2
RST-1	357	NO	SP	AL	OFF	H	BRG	H	INI	NON	ON	OFF	OFF	H	ROM	R0	REA	NON	B2-2
RT-1	201	NO	NUL	AL	OFF	H	BRG	L	CON	10	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET-2
S0-1	261	NO	SP	AL	OFF	H	BRG	L	BYT	NON	OFF	OFF	OFF	H	IRS	R0	REA	NON	S0-2
S0-2	207	NO	SP	BL	OFF	H	BRG	H	DST	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	RT-1
S1-1	203	YES	SP	AL	OFF	L	BRG	H	NON	NON	ON	OFF	OFF	H	IRS	R0	REA	I	S1-2
S1-2	244	NO	NUL	AL	OFF	H	BRG	L	BYT	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	S0-2
S2-1	205	YES	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	IRS	R0	REA	I	S2-2
S2-2	301	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	IRS	R0	REA	NON	S2-3
S2-3	314	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	IRS	R0	WRI	NON	S1-2
S3-1	207	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	IRS	R0	REA	I	S3-2
S3-2	216	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	IRS	R0	REA	NON	S3-3
S3-3	217	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	IRS	R0	WRI	NON	S3-4
S3-4	134	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	S3-5
S3-5	274	YES	SP	BL	OFF	L	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R0	REA	I	S1-2
S4-1	211	YES	SP	A-B-1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	IRS	R0	REA	I	S2-3
S5-1	213	NO	SP	A-B-1	OFF	L	+1	L	ENO	NON	OFF	OFF	OFF	H	IRS	R0	REA	I	S3-3
S6-1	215	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	I	S6-2
S6-2	225	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R7	REA	NON	S6-3
S6-3	226	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R7	WRI	NON	S6-4
S6-4	227	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	S6-5
S6-5	237	YES	SP	A+B	OFF	L	BRG	H	NON	NON	ON	OFF	OFF	H	IRS	R0	REA	I	S1-2
S7-1	217	NO	SP	AL	OFF	L	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R7	REA	I	S7-2
S7-2	232	NO	SP	A+B	OFF	H	+1	L	NON	NON	OFF	ON	OFF	H	ROM	R7	REA	NON	S7-3

NAME	LOC	ABT	ALG	ALU	AUX	BAR	BLG	BRG	BUT	CON	CKO	CRI	FSH	PSW	SAM	SPA	SPF	TNS	NXT
S7=3	031	NO	SP	BL	OFF	H	BRG	H	NON	NON	ON	OFF	OFF	H	ROM	R7	WRI	NON	S7=4
S7=4	034	NO	NUL	AL	OFF	H	BRG	L	NON	NON	OFF	OFF	OFF	H	BAR	R0	REA	NON	S7=5
S7=5	035	NO	SP	A+B	OFF	L	BRG	H	NON	NON	ON	OFF	OFF	H	IRS	R0	REA	J	S3=4
SB1=1	166	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=2
SB1=2	172	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=3
SB1=3	173	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=4
SB1=4	174	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=5
SB1=5	144	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=6
SB1=6	176	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=7
SB1=7	177	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB1=8
SB1=8	006	NO	SP	ASR	ON	H	BRG	SL	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	D0=3A
SB2=1	167	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=2
SB2=2	012	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=3
SB2=3	220	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=4
SB2=4	022	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=5
SB2=5	023	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=6
SB2=6	024	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=7
SB2=7	031	NO	SP	ASR	OFF	H	BRG	SL	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB2=8
SB2=8	330	NO	SP	ASR	ON	H	BRG	SL	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	D1=4
SBE=1	047	NO	SP	BL	OFF	H	SEX	H	DST	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	RT=1
SB0=1	067	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=2
SB0=2	346	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=3
SB0=3	324	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=4
SB0=4	340	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=5
SB0=5	361	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=6
SB0=6	050	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=7
SB0=7	020	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	ON	H	ROM	R0	REA	NON	SB0=8
SB0=8	052	NO	SP	AL	OFF	H	BRG	SR	NON	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	SBE=1
SC=1	116	NO	PSW	AORB	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	L	ROM	R0	REA	NON	BG=1
T=1	021	NO	NUL	AL	OFF	H	BRG	L	CON	34	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
U1=1	352	NO	SP	BL	ON	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	D0=3
U2=1	353	NO	SP	BL	ON	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	D1=4
U3=1	354	NO	SP	BL	ON	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	DB0=2
U4=1	355	NO	SP	BL	ON	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	D0=10
U5=1	371	NO	SP	BL	ON	H	BRG	H	NON	NON	OFF	OFF	OFF	H	ROM	R10	WRI	NON	D1=4
URTR	064	NO	NUL	AL	OFF	H	BRG	L	CON	60	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
URTX	060	NO	NUL	AL	OFF	H	BRG	L	CON	64	OFF	OFF	OFF	H	ROM	R0	WRI	NON	ET=2
W=1	063	NO	SP	AL	OFF	H	BRG	H	SRV	NON	OFF	OFF	OFF	H	ROM	R0	REA	NON	BG=1

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS	REMARKS
1	A B C D E	
2	A A A A B	
3	A B B B C	
4	A A B B B	
5	A A A B C	
6	A A A B C	
7	A A A A B	

	1	2	3	4	5	6
ECO NO.	00002	KD11B 00003	KD11B 00004	KD11B-00005	KD11B-00006	
ETCH REV.						
ENG.	BA	MT	MT	DR	D.R.	
DATE	8-21-72	9-24-72	10-20-72	8-15-73	5-30-74	

FIRST USED ON OPTION/MODEL

KD11-B

DRN. M. Towe	DATE 8-21-72	
CHK'D. R McCarthy	DATE 8-21-72	
ENG. B. ARMSTRONG	DATE 8-29-72	
PROJ. ENG. B. ARMSTRONG	DATE 8-29-72	
PROD.	DATE	

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE

MICROPROGRAM BINARY LISTING

NEXT HIGHER ASSY.

B-DD-KD11-B

SCALE --

SHEET 1 OF 7

SIZE	CODE	NUMBER	REV.
K	MP	KD11-B-3	E

DIST.

NAM	LOC	NXT		ALU	CRI	FSH	AUX	PSW	SP1	SP2	DI	SMP0	SMP1	SBT	BAR	BTP	SF	SP2	CKO	ATBT	NS	ALG	BRG	BUT
A145	145	0000	0000	0000	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	00	00	00	0101
B=1	015	1001	1000	1100	0	0	1	1	1	0	0	1	1	1	1	0	1	1	1	1	11	11	01	1111
B=2	147	1001	1001	0110	0	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	11	11	11	1111
B=3	146	1101	1111	0101	1	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	11	11	00	1100
B2=2	305	1101	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	1100
B2=2A	333	1101	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	1100
B2=2B	335	1101	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	1100
B2=2C	341	1101	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	1100
B2=2D	017	1101	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	1100
BG=1	040	0011	1010	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	0001
BT=1	045	0101	1010	0000	1	0	1	1	1	1	0	1	1	0	1	1	1	0	0	1	11	11	10	1101
CC=1	112	1101	1111	0010	1	0	1	1	0	0	0	1	1	0	1	1	1	1	0	1	11	11	00	1100
CCM=1	151	0001	0111	0001	1	0	1	1	1	0	0	1	1	1	1	1	1	1	0	0	1	1	11	10	11	1101
CCM=2	350	1011	0101	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1	11	11	00	1001
CCS=1	316	0100	0001	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	11	11	11	1111
CCS=2	276	0100	0111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1	11	11	00	0110
CCS=3	272	1100	1101	0011	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1	11	11	00	0000
CD1=1	313	0011	1100	0000	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	11	11	11	0110
CD1=2	303	0000	0011	1111	1	0	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0	1	10	10	00	1101
CD1=3	374	0011	0011	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
CD1=4	314	0000	0101	0000	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	01	11	00	1111
CD1=5	372	0011	1101	0101	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	11	00	1111
CD2=1	312	0010	0000	0110	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	11	11	11	1111
CD2=2	337	0011	0100	0101	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	11	11	00	1111
CE1=1	317	0011	1000	0000	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	11	11	11	0110
CE1=2	307	0010	1001	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	1	1	10	11	00	1111
CE1=3	326	0011	1101	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
CE2=1	315	0000	0110	0110	0	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	11	11	11	1111
CE2=2	371	0011	0000	0101	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	11	11	00	1111
CL=1	311	0000	0010	1111	1	0	1	1	1	0	0	1	1	0	1	1	0	1	0	0	0	1	10	10	00	1101
CL=2	375	0000	1000	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
CL=3	367	0011	1101	0101	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	11	11	00	1111
CS=1	100	0010	1101	0011	1	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	1	11	11	00	0000
CS=2	322	0010	1110	0000	1	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	11	11	11	1111
CS=3	321	1101	1111	0101	1	0	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	11	11	00	1100
D0=1	101	1001	0011	0000	1	0	1	1	0	0	1	0	0	1	1	1	1	1	0	1	1	1	11	11	11	0101
D0=2	157	1001	1101	0101	1	0	1	1	1	0	1	1	1	1	1	1	1	0	0	1	1	1	11	11	00	1010
D0=3	162	0010	0101	1111	1	1	1	1	1	0	1	1	0	1	1	1	1	1	0	1	1	1	11	11	11	0010
D0=3A	155	0010	0101	1111	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	1	1	1	11	11	11	0010
D0=4	332	1101	1111	0101	1	0	1	1	1	0	0	1	0	0	1	1	1	1	0	0	1	1	11	11	00	1100

NAM	LOC	NXT	ALU	CRI	FSH	AUX	PSW	SPP1	SPP3	DIP	SMO	SPO	SM1	BBT	BAR	BTP	BF	SSP2	CKD	ATB	TNS	AL G	BR G	BUT
D1=1	101	0111	1111	0000	1	0	1	1	1	0	0	0	0	1	1	0	1	1	0	0	10	11	11	1011
D1=2	200	0111	0111	0000	1	0	1	1	1	0	0	0	0	1	1	1	1	0	1	1	11	10	11	0011
D1=3	210	1001	1100	0101	1	0	1	1	1	0	1	1	1	1	1	1	0	0	1	1	11	11	00	1010
D1=4	163	0010	0011	1111	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	11	11	11	0010
D1=5	334	1100	1010	0000	1	0	1	1	1	0	0	1	1	1	1	1	1	0	0	0	01	11	00	1111
D1=6	365	0011	1010	0101	1	0	1	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	00	1111
D2=1	105	0010	0110	0000	1	0	1	1	1	0	0	0	1	1	1	1	1	0	1	0	10	11	00	1111
D2=2	331	0001	1110	0110	0	1	1	1	1	0	0	1	1	0	0	0	1	0	1	1	11	11	11	1111
D2=3	341	0111	1111	0101	1	0	1	1	1	0	0	1	1	1	1	0	0	0	0	1	11	11	00	1011
D3=1	107	1000	1111	0000	1	0	1	1	1	0	0	1	1	1	0	1	1	0	1	1	10	11	00	1111
D3=2	160	1100	0111	0110	0	1	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	11	1111
D3=3	079	1100	0110	0101	1	0	1	1	1	0	0	1	1	1	1	0	0	0	0	1	11	11	00	1111
D3=4	071	1100	0101	0000	1	0	1	1	1	0	0	1	1	0	0	0	1	1	1	1	0	11	10	11	1111
D3=5	072	0111	1111	0101	1	0	1	1	1	0	0	0	1	1	0	1	1	0	0	0	10	11	00	1011
D4=1	111	0001	1110	1001	0	0	1	1	1	0	0	0	1	0	0	1	1	0	0	1	10	11	11	0100
D5=1	113	1100	0111	1001	0	0	1	1	1	0	0	1	1	0	0	1	1	0	0	1	10	11	11	0100
D6=1	115	1100	0010	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	10	11	00	1111
D6=2	075	1100	0000	0110	0	1	1	1	1	1	0	1	1	1	0	1	1	1	1	1	11	11	11	1111
D6=3	077	1101	0000	0101	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	0	11	11	00	1111
D6=4	057	0011	1111	0000	1	0	1	1	1	0	0	1	1	0	0	0	1	1	1	1	0	11	11	11	1111
D6=5	300	0111	1111	0110	0	0	1	1	1	0	0	0	0	1	1	0	1	1	0	0	10	11	11	1011
D7=1	117	0011	0111	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	10	11	00	1111
D7=2	310	1011	1011	0110	0	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	11	11	11	1111
D7=3	104	0010	1111	0101	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	0	11	11	00	1111
D7=4	320	1011	1001	0000	1	0	1	1	1	0	0	1	1	0	0	0	1	1	1	1	0	11	10	11	1111
D7=5	106	1100	0110	0110	0	0	1	1	1	0	0	1	1	0	1	1	1	0	0	1	10	11	00	1111
DB0=1	156	1001	1011	0101	1	0	1	1	1	0	1	1	1	1	1	1	1	0	1	0	00	11	11	1010
DB0=2	164	0011	1011	1111	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	11	11	11	0010
DB0=3	304	1101	1111	0101	1	0	1	1	1	0	0	1	1	1	1	0	0	0	1	1	11	01	00	1100
DBE=1	110	1101	1110	0000	1	0	1	1	1	0	0	1	1	1	1	1	0	0	1	1	11	11	00	1111
DE=1	250	1000	1100	0101	1	0	1	1	1	0	1	1	1	1	1	1	0	0	0	1	1	11	11	1010
DO=1	270	1010	1100	0000	1	0	0	1	1	0	0	1	1	1	0	1	1	1	0	1	1	11	10	1111
DO=10	165	0001	1101	1111	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	11	11	11	0010
DO=11	342	1010	0010	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111
DO=12	135	1010	0001	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111
DO=13	136	1010	0000	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111
DO=14	137	1001	1111	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111
DO=15	140	1001	1110	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111
DO=16	141	1001	1101	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111
DO=17	142	1001	1100	0000	1	0	0	1	1	0	0	1	1	1	1	1	1	0	1	1	11	11	01	1111

NAM	LOC	NXT	ALU	CRI	FSH	AUX	PSW	SPP1	SPP3	DIF	SMØ	SPØ	SM1	BBT	BAR	BTP	BFP	SP2	CKØ	ATB	TNS	ALG	BRG	BUT
DO-18	143	1100	1010	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	0	01	11	01	1111
DO-2	123	1010	1011	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-3	124	1010	1010	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-4	123	1010	1001	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-5	126	1010	1000	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-6	127	1010	0111	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-7	132	1010	0110	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-8	131	1010	0101	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	10	1111
DO-9	132	1001	1010	0101	1	0	1	1	1	0	1	1	1	1	1	1	0	0	0	1	1	11	11	11	1010
ERT-1	010	0101	1010	0000	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	11	10	11	1101
ERT1A	046	1111	1100	0000	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	11	10	11	1101
ERT1B	153	0101	1010	0000	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	1	1	11	10	11	1101
ET-1	011	0101	1010	0000	1	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	11	10	11	1101
ET-10	254	0101	0010	0000	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	0	1	10	11	00	0000
ET-11	255	0101	0001	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	11	11	11	1111
ET-12	256	0101	0000	0110	0	1	1	1	1	1	1	1	1	0	1	0	0	1	0	0	1	10	11	11	1111
ET-13	257	0011	1010	0000	1	0	1	1	0	0	0	1	1	0	1	1	1	1	0	1	1	11	11	11	1111
ET-2	245	0101	1001	0101	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
ET-3	246	0101	1000	1001	0	0	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	11	11	11	0100
ET-5	247	0110	1001	0101	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	0	1	01	11	00	1111
ET-6	226	0101	0110	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	00	00	1111
ET-7	251	0101	0101	1001	0	0	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	11	11	11	0100
ET-8	252	0101	0100	0101	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	0	1	01	11	00	1111
ET-9	253	0101	0011	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	11	11	00	1111
ET2-2	003	1111	1011	0101	1	0	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	11	11	1111
ET2-3	004	1110	0001	1001	0	0	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	11	11	11	1111
ET2-5	036	1110	0000	0101	1	0	1	1	1	1	0	1	1	0	1	1	1	0	1	0	1	01	11	00	1111
ET2-6	037	1101	0110	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	00	00	1111
ET2-7	051	0101	0101	1001	0	0	1	1	1	1	0	1	1	0	1	0	0	1	1	1	1	11	11	11	1111
F-1	062	1101	0100	0000	1	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	10	11	00	1111
F-2	053	0000	1010	0110	0	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	11	11	11	1111
F-3	365	0000	1011	0101	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	0	1	11	11	00	1111
F-4	364	1100	1110	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	0	1	1	11	10	11	0000
F-5	061	1111	1110	0101	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	1	11	11	11	0111
H-1	041	0011	1101	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	11	11	11	1111
H-2	302	0011	1111	0000	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	11	11	00	0110
INT-1	325	0101	1001	0000	1	0	1	1	1	1	1	1	1	0	1	1	1	0	0	1	1	11	11	00	1000
IT-1	273	0101	1010	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	1	1	1	11	10	11	1101
J1-1	204	0100	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
J1-2	260	1101	1111	0101	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	11	11	00	1100

NAM	LOC	NXT	ALU	CRI	FSH	AUX	PSW	SP1	SP3	DIP	SM0	SP0	SM1	BBT	RAR	ATP	SPF	SP2	CK0	AT0	TNS	ALG	BRG	BUT
J2•1	212	0100	1110	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	0	1	1	11	11	00	1111
J2•1A	261	0100	1101	0101	1	0	1	1	1	0	1	1	1	1	1	1	0	0	1	1	11	11	00	1111
J2•2	262	0111	0011	1001	0	0	1	1	1	1	0	1	1	0	0	1	1	1	1	1	11	11	11	0100
J2•3	214	0111	1001	0101	1	0	1	1	1	1	0	1	1	1	1	1	0	1	0	1	01	11	00	1111
J2•4	206	0111	0001	0000	1	0	1	1	1	0	0	1	1	0	0	1	1	1	1	0	1	1	11	00	1111
J2•5	216	0100	1100	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	1	1	1	11	11	11	1111
J2•6	263	0100	1011	0101	1	0	1	1	1	0	0	1	1	0	0	1	1	1	0	0	1	1	11	00	1111
J2•7	264	0100	1010	0000	1	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	1	1	11	11	1111
J2•8	265	1101	1111	0101	1	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	11	11	00	1100
LC•1	042	0101	1010	0000	1	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	11	10	11	1101
MB•0	154	0101	1111	0000	1	0	1	0	1	0	0	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
MB•1	240	1001	0101	1111	1	1	1	1	1	0	1	1	1	0	1	1	1	1	0	1	1	11	11	11	1111
MB•2	152	1101	1111	0101	1	0	1	1	1	0	0	1	0	0	1	1	1	0	0	1	1	11	11	00	1100
PF•1	043	0101	1010	0000	1	0	1	1	1	0	1	1	1	0	1	1	1	1	0	1	1	11	10	11	1101
R1•1	005	0110	1110	0000	1	0	1	1	1	0	1	1	1	0	1	1	0	1	1	1	1	10	11	00	1111
R1•2	221	0110	1101	0110	0	1	1	1	1	0	1	1	1	0	1	0	1	1	1	1	1	11	11	11	1111
R1•3	222	0110	1100	0101	1	0	1	1	1	0	1	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
R1•4	223	0110	1011	0000	1	0	1	1	1	0	0	1	1	0	0	1	1	1	0	1	1	11	11	11	1111
R1•5	224	0110	1010	0101	1	0	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1	11	11	00	1111
R1•6	225	0010	0101	0000	1	0	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
R2•1	227	0110	0111	0000	1	0	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	10	11	00	1111
R2•2	230	0110	0110	0110	0	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	11	11	11	1111
R2•3	231	0110	0101	0101	1	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
R2•4	232	0110	0011	0000	1	0	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1	11	11	00	1111
R2•6	234	0110	0010	0000	1	0	1	1	1	1	0	1	1	0	1	1	0	1	1	1	1	10	11	00	1111
R2•7	235	0110	0001	0110	0	1	1	1	1	1	0	1	1	0	1	0	1	1	1	1	1	11	11	11	1111
R2•8	236	0110	0000	0101	1	0	1	1	1	1	0	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
R2•9	237	0011	1010	0000	1	0	1	0	0	0	1	1	0	1	1	1	1	1	0	1	1	11	10	00	1111
RS•1	000	0101	1110	0000	1	0	1	1	1	0	1	1	1	0	1	1	0	1	1	0	1	1	10	00	1101
RS•1A	241	0001	1000	0000	1	0	1	1	0	0	1	1	0	1	1	1	1	1	0	0	1	1	11	00	1111
RS•2	147	1100	0011	0000	1	0	1	1	1	0	1	1	1	1	1	1	1	0	1	1	1	11	11	00	1111
RS•3	074	0001	0110	0110	0	1	1	1	0	1	1	1	0	1	0	0	1	1	0	0	1	10	10	00	1101
RS•4	351	0011	1010	0000	1	0	1	1	0	0	0	1	1	0	1	1	1	1	0	1	1	11	11	00	1111
RST•1	357	0011	1010	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	0	1	11	11	00	1110
RT•1	001	0101	1010	0000	1	0	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	11	10	11	1101
S0•1	201	1111	1000	0000	1	0	1	1	0	0	1	1	0	0	1	1	1	1	0	1	1	11	11	11	0011
S0•2	007	1111	1110	0101	1	0	1	1	0	1	1	1	0	1	1	1	0	0	1	1	11	11	00	1001
S1•1	203	0101	1011	0000	1	0	1	1	0	0	1	1	0	0	1	0	1	1	0	0	0	10	11	00	1111
S1•2	244	1111	1000	0000	1	0	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	0011
S2•1	205	0011	1110	0000	1	0	1	1	0	0	1	1	0	0	1	0	1	1	0	1	0	10	11	00	1111

NAM	LOC	NXT	ALU	CRI	FSH	AUX	PSW	SP1	SP3	DIP	SM0	SP0	SM1	BBT	RAR	BTP	SPF	SP2	CKD	ATBT	TNS	ALG	BRG	BUT
S2=2	301	1111	0011	0110	0	1	1	1	1	0	0	1	1	0	0	0	1	1	1	0	1	1	11	11	11	1111
S2=3	014	0101	1011	0101	1	0	1	1	1	0	0	1	1	0	0	1	1	1	0	0	0	1	11	11	00	1111
S3=1	207	1111	0001	0000	1	0	1	1	1	0	0	1	1	0	0	1	0	1	1	0	1	1	10	11	00	1111
S3=2	016	1111	0000	0110	0	1	1	1	1	0	0	1	1	0	0	0	1	1	1	0	1	1	11	11	11	1111
S3=3	017	1010	0011	0101	1	0	1	1	1	0	0	1	1	0	0	1	1	1	0	0	0	1	11	11	00	1111
S3=4	134	0100	0011	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
S3=5	274	0101	1011	0101	1	0	1	1	1	0	0	1	1	0	1	1	0	1	1	0	0	0	10	11	00	1111
S4=1	211	1111	0011	1001	0	0	1	1	1	0	0	1	1	0	0	0	0	1	1	0	1	0	10	11	11	0100
S5=1	213	1111	0000	1001	0	0	1	1	1	0	0	1	1	0	0	0	0	1	1	0	1	1	10	11	11	0100
S6=1	215	1110	1010	0000	1	0	1	1	1	1	0	1	1	1	1	1	0	1	1	1	1	1	10	11	00	1111
S6=2	025	1110	1001	0110	0	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	11	11	11	1111
S6=3	026	1110	1000	0101	1	0	1	1	1	1	0	1	1	1	1	1	1	1	0	1	0	1	11	11	00	1111
S6=4	027	1110	0111	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
S6=5	030	0101	1011	0110	0	0	1	1	1	0	0	1	1	0	0	1	0	1	1	0	0	0	10	11	00	1111
S7=1	217	1110	0101	0000	1	0	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	10	11	00	1111
S7=2	032	1110	0100	0110	0	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	1	1	11	11	11	1111
S7=3	033	1110	0011	0101	1	0	1	1	1	0	1	1	1	1	1	1	1	0	1	0	1	1	11	11	00	1111
S7=4	034	1110	0010	0000	1	0	1	1	1	0	0	1	0	0	0	1	1	1	1	0	1	1	11	10	11	1111
S7=5	035	1010	0011	0110	0	0	1	1	1	0	0	1	1	0	0	1	0	1	1	0	0	1	10	11	00	1111
SB1=1	166	1000	0101	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=2	172	1000	0100	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=3	173	1000	0011	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=4	174	1001	1011	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=5	144	1000	0001	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=6	176	1000	0000	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=7	177	1111	1001	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB1=8	006	1001	0010	1110	0	0	1	0	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=1	167	1111	0101	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=2	012	0110	1111	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=3	220	1110	1101	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=4	022	1110	1100	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=5	023	1110	1011	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=6	024	1110	0110	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=7	031	0010	0111	1110	0	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SB2=8	330	1000	1100	1110	0	0	1	0	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	01	1111
SBE=1	047	1111	1110	0101	1	0	1	1	1	0	1	1	1	0	1	1	1	0	0	0	1	1	11	11	00	1001
SB0=1	067	0001	1001	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SB0=2	346	0010	1011	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SB0=3	324	0001	1111	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SB0=4	340	0000	1110	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111

NAM	LOC	NXT		ALU		CRI	FSH	AUX	PSW	SP1	SP3	DIP	SMO	SPO	SM1	BBT	BAR	BTP	SPF	SP2	CKO	ABT	TNS	ALG	BRG	BUT
SBO-5	361	1101	0111	0000	1	0	0	1	1	0	0		1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SBO-6	050	1110	1111	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SBO-7	020	1101	0101	0000	1	0	0	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SBO-8	052	1101	1000	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	10	1111
SC-1	116	1101	1111	0100	1	0	1	1	0	0	0	1	1	0	1	1	1	1	1	0	1	1	11	00	00	1100
T-1	021	0101	1010	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	0	1	1	1	11	10	11	1101
U1-1	352	1000	1101	0101	1	0	1	0	1	0	1	1	1	0	1	1	1	1	0	0	1	1	11	11	00	1111
U2-1	353	1000	1100	0101	1	0	1	0	1	0	1	1	1	0	1	1	1	1	0	0	1	1	11	11	00	1111
U3-1	354	1000	1011	0101	1	0	1	0	1	0	1	1	1	0	1	1	1	1	0	0	1	1	11	11	00	1111
U4-1	355	1000	1010	0101	1	0	1	0	1	0	1	1	1	0	1	1	1	1	0	0	1	1	11	11	00	1111
U5-1	373	1000	1100	0101	1	0	1	0	1	0	1	1	1	0	1	1	1	1	0	0	1	1	11	11	00	1111
URTR	064	0101	1010	0000	1	0	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	11	10	11	1101
URTX	060	0101	1010	0000	1	0	1	1	1	0	0	1	1	1	1	1	1	1	1	0	1	1	11	10	11	1101
W-1	063	1101	1111	0000	1	0	1	1	1	0	0	1	1	0	1	1	1	1	1	0	1	1	11	11	00	1100

SIZE	CODE	NUMBER	REV.
K	MP	KD11-B-4	

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KD11-B		PARTS LIST		

DRN. J. Madden	DATE 4-21-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. R. L. Krisik	DATE 5-2-72	
ENG. R. L. Krisik	DATE 5-2-72	TITLE MICROPROGRAM CROSS REFFERENCE LISTING (KD11-B)
PROJ. ENG. R. L. Krisik	DATE 5-2-72	
PROD. K K Peterson	DATE 5/2/72	
NEXT HIGHER ASSEMBLY B-DD-KD11-B		SIZE K, CODE MP, NUMBER KD11-B-4, REV.
SCALE 11		
SHEET 1 OF 3		DIST.

REVISIONS

REV.	CHANGE NO.	CHK

DEC FORM NO DRB 109

000	RS-1	001	RT-1	002	•••••	003	ET2-2	004	ET2-3	005	R1-1	006	SB1-8	007	S0-2
010	ERT-1	011	ET-1	012	SB2-2	013	B2-2D	014	S2-3	015	B-1	016	S3-2	017	S3-3
020	SBO-7	021	T-1	022	SB2-4	023	SB2-5	024	SB2-6	025	S6-2	026	S6-3	027	S6-4
030	S6-5	031	SB2-7	032	S7-2	033	S7-3	034	S7-4	035	S7-5	036	ET2-5	037	ET2-6
040	BG-1	041	H-1	042	LC-1	043	PF-1	044	•••••	045	BT-1	046	ERT1A	047	SBE-1
050	SBO-6	051	ET2-7	052	SBO-8	053	F-2	054	•••••	055	•••••	056	•••••	057	D6-4
060	URTX	061	F-5	062	F-1	063	W-1	064	URTR	065	D1-6	066	•••••	067	SBO-1
070	D3-3	071	D3-4	072	D3-5	073	•••••	074	RS-3	075	D6-2	076	•••••	077	D6-3
100	CS-1	101	D0-1	102	•••••	103	D1-1	104	D7-3	105	D2-1	106	D7-5	107	D3-1
110	DBE-1	111	D4-1	112	CC-1	113	D5-1	114	•••••	115	D6-1	116	SC-1	117	D7-1
120	•••••	121	•••••	122	•••••	123	DO-2	124	DO-3	125	DO-4	126	DO-5	127	DO-6
130	DO-7	131	DO-8	132	DO-9	133	•••••	134	S3-4	135	DO-12	136	DO-13	137	DO-14
140	DO-15	141	DO-16	142	DO-17	143	DO-18	144	SB1-5	145	A145	146	B-3	147	B-2
150	•••••	151	CCM-1	152	MB-2	153	ERT1B	154	MB-0	155	D0-3A	156	DB0-1	157	D0-2
160	D3-2	161	•••••	162	D0-3	163	D1-4	164	DB0-2	165	DO-10	166	SB1-1	167	SB2-1
170	•••••	171	•••••	172	SB1-2	173	SB1-3	174	SB1-4	175	•••••	176	SB1-6	177	SB1-7
200	D1-2	201	S0-1	202	•••••	203	S1-1	204	J1-1	205	S2-1	206	J2-4	207	S3-1
210	D1-3	211	S4-1	212	J2-1	213	S5-1	214	J2-3	215	S6-1	216	J2-5	217	S7-1
220	SB2-3	221	R1-2	222	R1-3	223	R1-4	224	R1-5	225	R1-6	226	ET-6	227	R2-1
230	R2-2	231	R2-3	232	R2-4	233	•••••	234	R2-6	235	R2-7	236	R2-8	237	R2-9
240	MB-1	241	RS-1A	242	•••••	243	•••••	244	S1-2	245	ET-2	246	ET-3	247	ET-5
250	DE-1	251	ET-7	252	ET-8	253	ET-9	254	ET-10	255	ET-11	256	ET-12	257	ET-13
260	J1-2	261	J2-1A	262	J2-2	263	J2-6	264	J2-7	265	J2-8	266	•••••	267	•••••
270	DO-1	271	•••••	272	CCS-3	273	IT-1	274	S3-5	275	•••••	276	CCS-2	277	•••••
300	D6-5	301	S2-2	302	H-2	303	CD1-2	304	DB0-3	305	B2-2	306	•••••	307	CE1-2
310	D7-2	311	CL-1	312	CD2-1	313	CD1-1	314	CD1-4	315	CE2-1	316	CCS-1	317	CE1-1
320	D7-4	321	CS-3	322	CS-2	323	•••••	324	SBO-3	325	INT-1	326	CE1-3	327	•••••
330	SB2-8	331	D2-2	332	D0-4	333	B2-2A	334	D1-5	335	B2-2B	336	•••••	337	CD2-2
340	SBO-4	341	D2-3	342	DO-11	343	B2-2C	344	•••••	345	•••••	346	SBO-2	347	RS-2
350	CCM-2	351	RS-4	352	U1-1	353	U2-1	354	U3-1	355	U4-1	356	•••••	357	RST-1
360	•••••	361	SBO-5	362	•••••	363	•••••	364	F-4	365	F-3	366	•••••	367	CL-3
370	•••••	371	CE2-2	372	CD1-5	373	U5-1	374	CD1-3	375	CL-2	376	•••••	377	•••••

A145	145	D6-1	115	F-4	364	S5-1	213
B-1	015	D6-2	075	F-5	061	S6-1	215
B-2	147	D6-3	077	H-1	041	S6-2	025
B-3	146	D6-4	057	H-2	302	S6-3	026
B2-2	305	D6-5	300	INT-1	325	S6-4	027
B2-2A	333	D7-1	117	IT-1	273	S6-5	030
B2-2B	335	D7-2	310	J1-1	204	S7-1	217
B2-2C	343	D7-3	104	J1-2	260	S7-2	032
B2-2D	013	D7-4	320	J2-1	212	S7-3	033
BG-1	040	D7-5	106	J2-1A	261	S7-4	034
BT-1	045	DB0-1	156	J2-2	262	S7-5	035
CC-1	112	DB0-2	164	J2-3	214	SB1-1	166
CCM-1	151	DB0-3	304	J2-4	206	SB1-2	172
CCM-2	350	DBE-1	110	J2-5	216	SB1-3	173
CCS-1	316	DE-1	250	J2-6	263	SB1-4	174
CCS-2	276	DO-1	270	J2-7	264	SB1-5	144
CCS-3	272	DO-10	165	J2-8	265	SB1-6	176
CD1-1	313	DO-11	342	[illegible]-1	042	SB1-7	177
CD1-2	303	DO-12	135	MB-0	154	SB1-8	006
CD1-3	374	DO-13	136	MB-1	240	SB2-1	167
CD1-4	314	DO-14	137	MB-2	152	SB2-2	012
CD1-5	372	DO-15	140	PF-1	043	SB2-3	220
CD2-1	312	DO-16	141	R1-1	005	SB2-4	022
CD2-2	337	DO-17	142	R1-2	221	SB2-5	023
CE1-1	317	DO-18	143	R1-3	222	SB2-6	024
CE1-2	307	DO-2	123	R1-4	223	SB2-7	031
CE1-3	326	DO-3	124	R1-5	224	SB2-8	330
CE2-1	315	DO-4	125	R1-6	225	SBE-1	047
CE2-2	371	DO-5	126	R2-1	227	SBO-1	067
CL-1	311	DO-6	127	R2-2	230	SBO-2	346
CL-2	375	DO-7	130	R2-3	231	SBO-3	324
CL-3	367	DO-8	131	R2-4	232	SBO-4	340
CS-1	100	DO-9	132	R2-6	234	SBO-5	361
CS-2	322	ERT-1	010	R2-7	235	SBO-6	050
CS-3	321	ERT1A	046	R2-8	236	SBO-7	020
D0-1	101	ERT1B	153	R2-9	237	SBO-8	052
D0-2	157	ET-1	011	RS-1	000	SC-1	116
D0-3	162	ET-10	254	RS-1A	241	T-1	021
D0-3A	155	ET-11	255	RS-2	347	U1-1	352
D0-4	332	ET-12	256	RS-3	074	U2-1	353
D1-1	103	ET-13	257	RS-4	351	U3-1	354
D1-2	200	ET-2	245	RST-1	357	U4-1	355
D1-3	210	ET-3	246	RT-1	001	U5-1	373
D1-4	163	ET-5	247	S0-1	201	URTR	064
D1-5	334	ET-6	226	S0-2	007	URTX	060
D1-6	065	ET-7	251	S1-1	203	W-1	063
D2-1	105	ET-8	252	S1-2	244		000
D2-2	331	ET-9	253	S2-1	205		000
D2-3	341	ET2-2	003	S2-2	301		000
D3-1	107	ET2-3	004	S2-3	014		000
D3-2	160	ET2-5	036	S3-1	207		000
D3-3	070	ET2-6	037	S3-2	016		000
D3-4	071	ET2-7	051	S3-3	017		000
D3-5	072	F-1	062	S3-4	134		000
D4-1	111	F-2	053	S3-5	274		000
D5-1	113	F-3	365	S4-1	211		000

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS					
1	J	K	L	M	N	P
2	J	K	L	M	N	N
3	J	J	J	M	N	N
4	J	J	J	M	N	N
5	J	J	J	M	M	M
6	J	J	J	M	M	M
7	J	J	J	M	M	N
8	J	J	J	M	N	N
9	J	J	J	M	M	N
10	J	K	L	M	M	N
11	J	J	J	M	M	M
12	-	-	-	M	M	N
ECO NO.	00007	00008	00009	00010C 10A	00012	00014
ETCH REV.	B	B	B	C	C	C
ENG.	M.T.	B.A.	M.T.	B.H	M.T.	R.K.
DATE	10-11-72	10-30-72	11-27-72	2-23-73	6-19-73	8-20-75

REMARKS

FIRST USED ON OPTION/MODEL: KL11-B

DRN. [illegible]	DATE [illegible]	
CHK'D. M. Titelbaum	DATE 10/26/72	
ENG. M. Titelbaum	DATE 10/26/72	
PROJ. ENG. M. Titelbaum	DATE	
PROD.	DATE	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DATA PATHS

NEXT HIGHER ASSY.: B-DD-KL11-B

SIZE	CODE	NUMBER	REV.
B	CS	M7260-0-1	P

SCALE: —

SHEET 1 OF 12

DIST.

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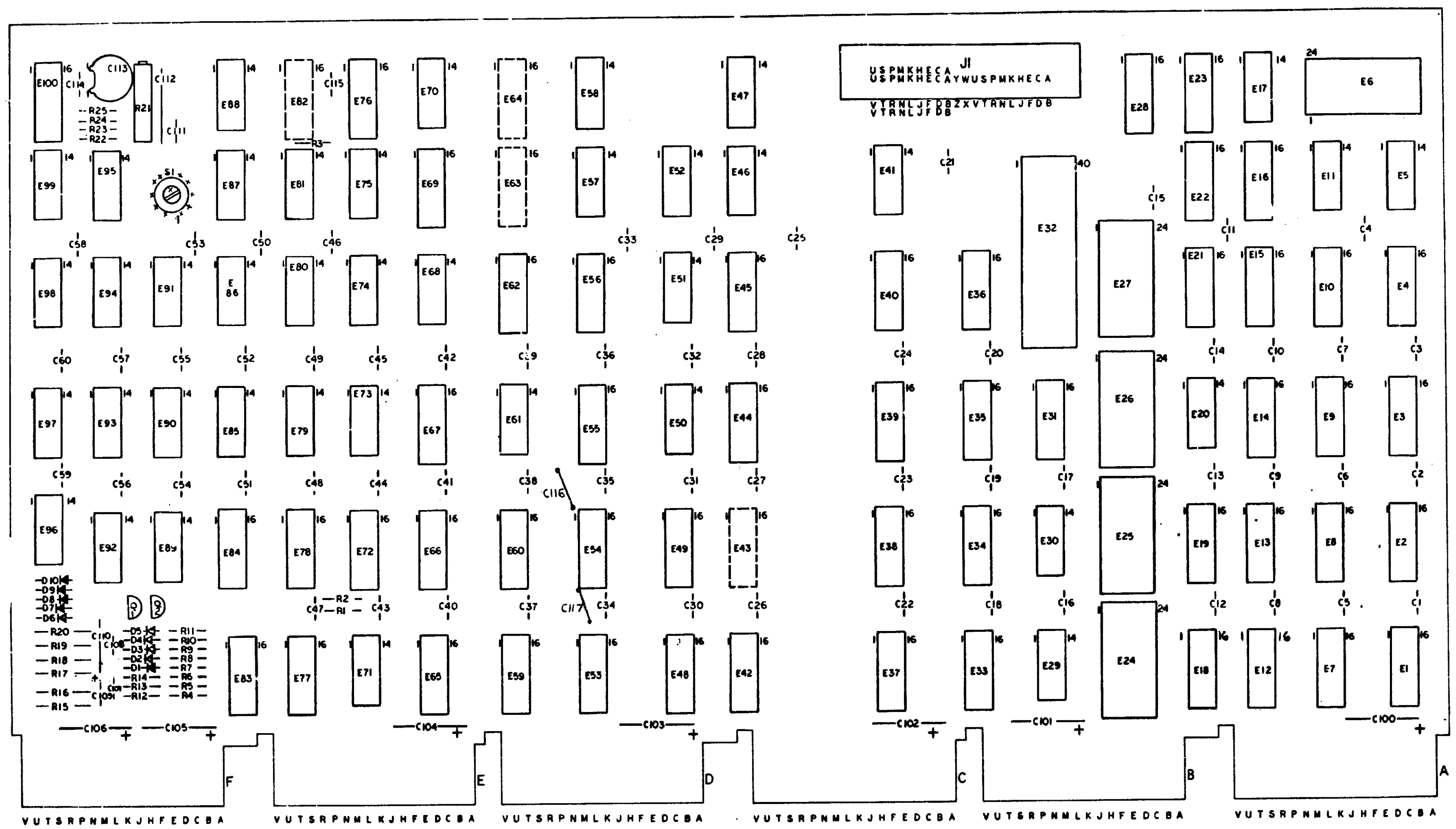
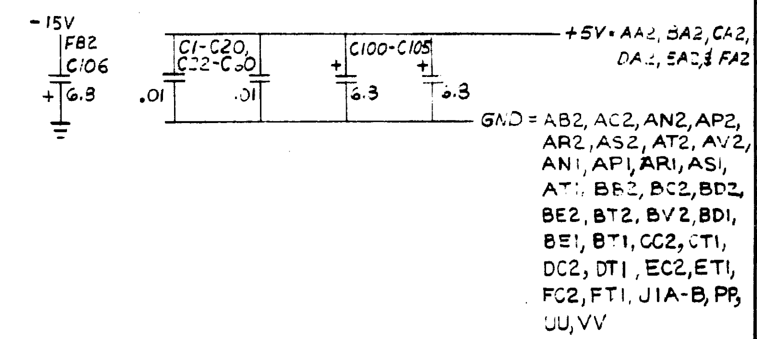
NOTES:





IC TYPE	GND	+ 5V
DEC 74174	8	16
DEC 74 75	8	16
DEC 7499	8	16
DEC 1808	3	1
DEC 74182	8	16
DEC 74181	12	24
DEC 74157	8	16
DEC 74S158	8	16
DEC 74 53	8	16
DEC 74194	8	16
DEC 74150	12	24
DEC 8838	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

BRUNING 40-522 16699

DEC FORM NO DRD 135A

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION MODEL

ETCH BOARD REV C

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.

REV / CHANGE NO. / REVISIONS / CHK

DRN 1/22/73
CHK'D 2/23/73
ENG 2/23/73
PROJ. ENG 2/23/73
PROD. 2/23/73

NEXT HIGHER ASSY B-DD-KD11-B

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DATA PATHS

SIZE D CODE CS NUMBER M7260-0-1 REV. N

SCALE —

SHEET 2 OF

DIST.

D CS M7260-0-1 N

NOTES:

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		ETCH CIRCUIT BOARD		1
REF		X-Y COORDINATE HOLE/LAYOUT	M7260-0-4	2
REF		DATA PATH ASSY HOLE/LAYOUT	M7260-0-5	3
REF		MODULE ECO HISTORY	M7260-0-6	4
63	C1-60,108,109,111	CAP .01 MFD,100V, 20% DISC	1001610	5
1	C110	CAP .47 MFD, 35V, 10%	1005965	6
3	C107,114,116	CAP 1000.0 MMF, 100V 5%	1000042	7
1	C113	CAP 4700 MMF, 100V, 5%	1002895	8
1	C112	CAP 39 MFD. 10V 10%	1000076	9
7	C100-106	CAP 6.8 MFD. 35V. 10%	1005306	10
1	C115	CAP 120.0 MMF. 100V, 5%	1000018	11
10	D1-10	DIODE D664	1100114	12
4	E1-4	IC DEC 8838	1911117	13
2	E5,11	IC DEC 7430	1905578	14
1	E6	IC DEC 74150	1910153	15
8	E7-10,33-36	IC DEC 8266	1909534	16
4	E12-15	IC DEC 74194	1910623	17
3	E16,22,28	IC DEC 74153	1909937	18
5	E17,75,79,85,91	IC DEC 7402	1909004	19
3	E18,19,21	IC DEC 74S158	1910549	20
7	E20,29,57,74,96,98,99	IC DEC 7400	1905575	21
2	E23,62	IC DEC 74157	1910655	22
4	E24-27	IC DEC 74181	1909982	23
2	E30,89	IC DEC 7437	1910091	24
1	E31	IC DEC 74182	1910019	25
1	E32	IC DEC 1808 UART	1910459	26
4	E37-40	IC DEC 7489	1910396	27
9	E41,46,50,51,70,71,73,80, 81	IC DEC 74H01-1	1909849	28
4	E42,45,60,84	IC RES NETWORK	1311003-02	29
1	E47	IC DEC 7408	1910155	30
3	E48,55,56	IC DEC 74175	1910651	31
2	E49,67	IC DEC 74174	1910652	32
1	E44	IC ROM (CONSTANTS)	23A01A1	33
5	E52,86,90,93,97	IC DEC 7474	1905547	34
1	E53	IC ROM (DOP AUX)	23A02A1	35
1	E54	IC ROM (SOP AUX #1)	23A03A1	36
2	E58,87	IC DEC 7404	1909686	37
1	E59	IC ROM (DOP 1R)	23A05A1	38
1	E61	IC DEC 7410	1905576	39
1	E65	IC ROM (CC OR OP)	23A04A1	40
1	E66	IC ROM (SOP AUX #2)	23A06A1	41
1	E68	IC DEC 7486	1910011	42
1	E69	IC ROM (C + V - BIT)	23A12A1	43
1	E72	IC ROM (BRANCH)	23A03A2	44
2	E76,100	IC DEC 9602	1910951	45
1	E77	IC ROM (ENB UNARY)	23A10A1	46
1	E78	IC ROM (NOT DOP)	23A08A1	47
1	E83	IC ROM (ODD BYTE EQ 0)	23A11A1	48
2	E88,95	IC DEC 74197	1910035	49
1	E92	IC DEC 7413	1909989	50
1	E94	IC DEC 7473	1905587	51

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	J1	CONNECTOR, BERG	1209941	52
1	R5	RES 1.5K 1/4W 5%	1300391	53
2	R13,14	RES 470 1/4w 5%	1300316	54
2	R19,20	RES 12K 1/2W 5%	1300487	55
2	R15,16	RES 1.5K 1/2W 5%	1300394	56
1	R22	RES 10 1/4W 5%	1301317	57
2	R3,25	RES 30K 1/4W 5%	1302394	58
1	R10	RES 150 1/4W 5%	1300250	59
1	R17	RES 68 1/2W 10%	1300220	60
1	R2	RES 2K 1/4W 5%	1302388	61
1	R21	RES 20K 3/4W 10% POT	1309143-11	62
6	R1,6-9,23	RES 1K 1/4W 5%	1300365	63
1	R4	RES 750 1/4W 5%	1301401	64
1	R12	RES 82 1/4W 5%	1301477	65
1	R18	RES 560 1/2W 5%	1300338	66
2	R11,24	RES 10K 1/4W 5%	1300479	67
2	Q1,2	TRANS DEC 6534D PNP	1503409	68
12		EYELETS	9006732	69
1		MODULE HANDLE	1210711-2	70
1	S1	SWITCH,ROT 1 POLE 10 POSITION DRY	1210042-1	71
1		HEX NUT NYLON	9007992	72
1	C117	CAP 120MMF 100V 5%	1000021	73

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION MODEL: 11/05

ETCH BOARD REV: C

IC TYPE	GND	+ 5V
DE 9602	8	16
ROM 23AXXA1	8	16
ROM 23AXXA2	8	16
DEC 7473	4	11
DEC 9602	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

REV | CHANGE NO. | REVISIONS | CHK

DRN: [signature] DATE 1/12/73
CHK'D: [signature] DATE 2/23/73
ENG: [signature] DATE 2/23/73
PROJ. ENG: [signature] DATE 2/23/73
PROD. DATE 2/2/73

NEXT HIGHER ASSY: B-DD-KD11-B

SCALE: —

SHEET 3 OF

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DATA PATHS

SIZE: D CODE: CS NUMBER: M7260-0-1 REV.: N

DIST.

DEC FORM NO DRC 135A

BRUNING 40.522 16699

CONG SP WRITE H FC1 — 7400 E029 — CONE ALLOW CONST ANTS L / CONE ENAB SWITCH REG L EV1 — DPA ENAB SWITCH REG H — DPA SP WRITE H — DPA SP WRITE L — CONV PROC CLOCK H

EXTA SWITCH REG Ø3 H BERG CC
EXTA SWITCH REG Ø2 H BERG AA
EXTA SWITCH REG Ø1 H BERG Y
EXTA SWITCH REG Ø0 H BERG W

DPE NEG (1) H — DPE ZERO (1) H — DPE VBIT (1) H — CONG ENAB PSN H CE2 — DPE COUT (1) H — 74H01 E051 — E045 +5V 12 6 10 7

CONG ENAB SPR L CE2
DPA SP WRITE L

7489 E040 SPM — DPA AMUX Ø3 H CP1 — DPA AMUX Ø2 H CP2 — DPA AMUX Ø1 H CP1 — DPA AMUX Ø0 H CN2 — M3(1) M2(1) M1(1) M0(1) — A3 A2 A1 A0

CONB SPA Ø3 H CA1
CONB SPA Ø2 H CA0
CONB SPA Ø1 H CC1
CONB SPA Ø0 H CC0

DPB BREG Ø4 (1) H
CONG BMODE Ø0 H CV1
CONG BMODE Ø1 H DB1

74194 E015 BREG — DPA AMUX Ø3 H — DPA AMUX Ø2 H — DPA AMUX Ø1 H — DPA AMUX Ø0 H — CLR CLK SL — DPA BREG Ø3(1) H — DPA BREG Ø0(1) H — +3V E42 15 — DPA PROC CLOCK L — DPE SERIAL SHFT H — CONB INH +1 L EK1 — CONG BBOT H EB1

795158 E021 BLEG MUX — DPA BLEG Ø3 L — DPA BLEG Ø2 L — DPA BLEG Ø1 L — DPA BLEG Ø0 L — 7404 E033 — DPA H1 H

8266 E036 SWITCH REG MUX — DPA ALEG Ø3 L — DPA ALEG Ø2 L — DPA ALEG Ø1 L — DPA ALEG Ø0 L — DPA SP WRITE H — DPA ENAB SWITCH REG H

CONF CIN H EI2 — DPF COP L — DPE COUT (1) L — 7402 E017 — 74S86 E026 — CARRY 74182 E031 — DPA ALU CIN Ø1 H — DPA ALU CIN Ø0 H — DPA Ø-7=Ø H

74/81 E027 ALU — A=B COUT G P — B3 A3 B2 A2 B1 A1 B0 A0 — f3 f2 f1 f0 — S3 S2 S1 S0 M CIN — DPA ALU S3 H — DPA ALU S2 H — DPA ALU S1 H — DPA ALU S0 H — CONF ALU MODE H DB1 — DPA ALU CIN Ø0 H

745158

E	S	Fn
H	—	Fn = Ø
L	L	Fn = An
L	H	Fn = Bn

74194

S1	S0	fn
L	L	HOLD
L	H	SR
H	L	SL
H	H	LOAD

BUS Ø03 L AE1 — BUS Ø02 L AD1 — BUS Ø01 L AD2 — BUS Ø00 L AC1 — 8838 E004 — CONC DAT ENAB L EV2

8266 E010 — DPA AMUX Ø3 H — DPA AMUX Ø2 H — DPA AMUX Ø1 H — DPA AMUX Ø0 H — CONA ENAB ALU H EQ2

S1	S0	fn
L	L	Bn
L	H	An
H	L	Bn
H	H	Ø

CONF ALU S3 L DN1 — 7437 E030 — DPA ALU S3 H
CONF ALU S2 L DP2 — 7437 E030 — DPA ALU S2 H
CONF ALU S1 L DP1 — 7437 E030 — DPA ALU S1 H
CONF ALU S0 L DP2 — 7437 E030 — DPA ALU S0 H
CONV PROC CLOCK H DU — 7437 E089 — DPA PROC CLOCK L
C117 220 MMF

DATA PATH <03:00>

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS: .XXX = .005, .XX = .02, .X = .1 — ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN. M. Price — DATE 12/2/72
CHK'D. — DATE 2/2/73
ENG. — DATE 2/13/73
PROJ. ENG. — DATE 2/13/73
PROD. — DATE 2/23/73

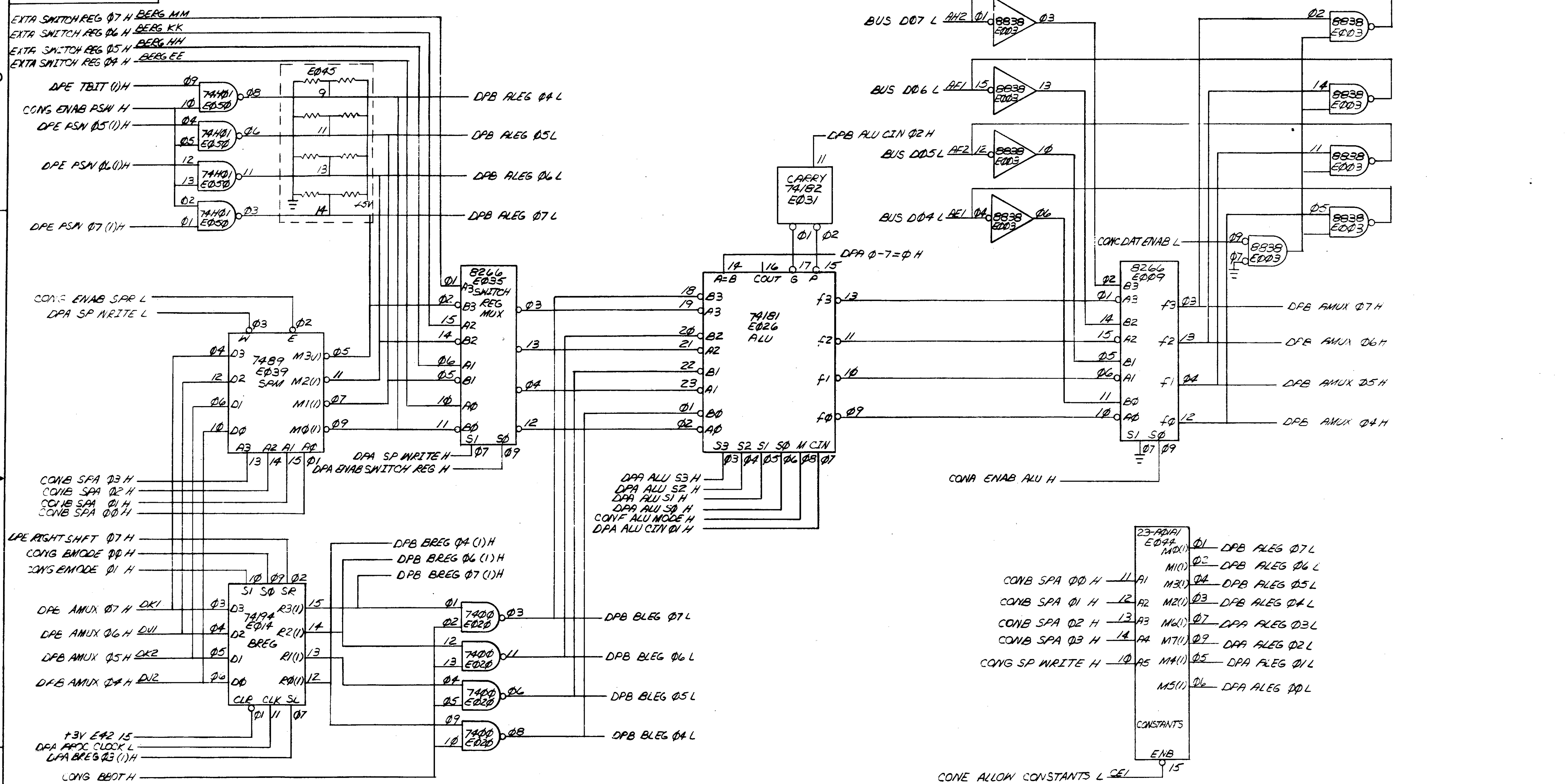
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DATA PATH (DPA)

NEXT HIGHER ASSY. 8-DD-KD11-B
SCALE
SHEET 4 OF
SIZE D | CODE CS | NUMBER M7260-Ø-1 | REV N
DIST.

REVISIONS: REV. | CHANGE NO | CHK.

BRUNING 40-522 15840


EXTA SWITCH REG Ø7 H BERG MM
EXTA SWITCH REG Ø6 H BERG KK
EXTA SWITCH REG Ø5 H BERG HH
EXTA SWITCH REG Ø4 H BERG EE
DPE TBIT (1) H
CONG ENAB PSW H
DPE PSW Ø5 (1) H
DPE PSW Ø6 (1) H
DPE PSW Ø7 (1) H
74H01 EØ5Ø
EØ45
DPB ALEG Ø4 L
DPB ALEG Ø5 L
DPB ALEG Ø6 L
DPB ALEG Ø7 L
CONG ENAB SPR L
DPA SP WRITE L
7489 EØ39 SPM
8266 EØ35 SWITCH REG MUX
DPA SP WRITE H
DPA ENAB SWITCH REG H
CONB SPA Ø3 H
CONB SPA Ø2 H
CONB SPA Ø1 H
CONB SPA ØØ H
DPE RIGHT SHFT Ø7 H
CONG BMODE ØØ H
CONG BMODE Ø1 H
DPE AMUX Ø7 H
DPE AMUX Ø6 H
DPE AMUX Ø5 H
DPE AMUX Ø4 H
74194 EØ14 BREG
+3V E42 15
DPA PROC CLOCK L
DPA BREG Ø3 (1) H
CONG BOOT H
DPB BREG Ø4 (1) H
DPB BREG Ø6 (1) H
DPB BREG Ø7 (1) H
7400 EØ20
DPB BLEG Ø7 L
DPB BLEG Ø6 L
DPB BLEG Ø5 L
DPB BLEG Ø4 L
DPB ALU CIN Ø2 H
CARRY 74182 EØ31
DPA Ø-7=Ø H
74181 EØ26 ALU
DPA ALU S3 H
DPA ALU S2 H
DPA ALU S1 H
DPA ALU SØ H
CONF ALU MODE H
DPA ALU CIN Ø1 H
BUS DØ7 L
BUS DØ6 L
BUS DØ5 L
BUS DØ4 L
8838 EØØ3
CONC DAT ENAB L
8266 EØØ9
DPB AMUX Ø7 H
DPB AMUX Ø6 H
DPB AMUX Ø5 H
DPB AMUX Ø4 H
CONA ENAB ALU H
23-A01A1 EØ44
CONB SPA ØØ H
CONB SPA Ø1 H
CONB SPA Ø2 H
CONB SPA Ø3 H
CONG SP WRITE H
DPB ALEG Ø7 L
DPB ALEG Ø6 L
DPB ALEG Ø5 L
DPB ALEG Ø4 L
DPA ALEG Ø3 L
DPA ALEG Ø2 L
DPA ALEG Ø1 L
DPA ALEG ØØ L
CONSTANTS
ENB
CONE ALLOW CONSTANTS L

DATA PATH < Ø7:Ø4 >

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/Ø5		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS .XXX = .005 .XX = .02 .X = .1 — ANGLES ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL —
FINISH —

DRN. M. Rice DATE 12/5/72
CHK'D. DATE 2/23/73
ENG. DATE
PROJ. ENG. DATE 2/23/73
PROD. DATE 2/23/73
NEXT HIGHER ASSY B-DD-KD11-B
SCALE —
SHEET 5 OF

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE DATA PATHS (DPB)

SIZE D CODE CS NUMBER M726Ø-Ø-1 REV. M

EXTA SWITCH REG 11 H BERG K
EXTA SWITCH REG 10 H BERG H
EXTA SWITCH REG 09 H BERG E
EXTRA SWITCH REG 08 H BERG C

E042 +5V
DPC ALEG 11 L
DPC ALEG 10 L
DPC ALEG 09 L
DPC ALEG 08 L

DPC ALU CIN 03 H
CARRY 74182 E031
BUS D11 L
BUS D10 L
BUS D09 L
BUS D08 L
8838 E002
8838 E003
DPC B-15=0 H
74181 E025 ALU
8266 E038 SWITCH REG MUX
8266 E008
CONC DAT ENAB L
DPC AMUX 11 H
DPC AMUX 10 H
DPC AMUX 09 H
DPC AMUX 08 H
CONA ENAB ALU H

CONG ENAB SPL L CF2
DPA SP WRITE L
7489 E038 SPM
CONB SPA 03 H
CONB SPA 02 H
CONE SPA 01 H
CONE SPA 00 H
DPA SP WRITE H
DPA ENAB SWITCH REG H
DPA ALU S3 H
DPA ALU S2 H
DPA ALU S1 H
DPA ALU S0 H
CONF ALU MODE H
DPB ALU CIN 02 H

DPD BREG 12 (1) H
CONG BMODE 00 H
CONG BMODE 01 H
DPC BREG 08 (1) H
DPC BREG 11 0) H
74S194 E013 BREG
74S158 E019 BLEG MUX
DPC AMUX 11 H CK1
DPC AMUX 10 H CK2
DPC AMUX 09 H CK1
DPC AMUX 08 H CK2
+3V E42 15
DPA PROC CLOCK L
DPB BREG 07 (1) H
DPA +1 H
CONG BTOP H CL2
DPC BLEG 11 L
DPC BLEG 10 L
DPC BLEG 09 L
DPC BLEG 08 L

E043 CONSTANTS
CONB SPA 00 H
CONB SPA 01 H
CONB SPA 02 H
CONB SPA 03 H
CONG SP WRITE H
DPD ALEG 15 L
DPD ALEG 14 L
DPD ALEG 13 L
DPD ALEG 12 L
DPD ALEG 11 L
DPD ALEG 10 L
DPD ALEG 09 L
DPD ALEG 08 L
ENB
CONE ALLOW CONSTANTS L

DATA PATH <11:08>

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS .XXX = .005 .XX = .02 .X = .1 ANGLES ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

	NAME	DATE
DRN.	M. Reiss	12/5/72
CHK'D.		2/24/73
ENG.		2/23/73
PROJ. ENG.		2/23/73
PROD.		2/23/73

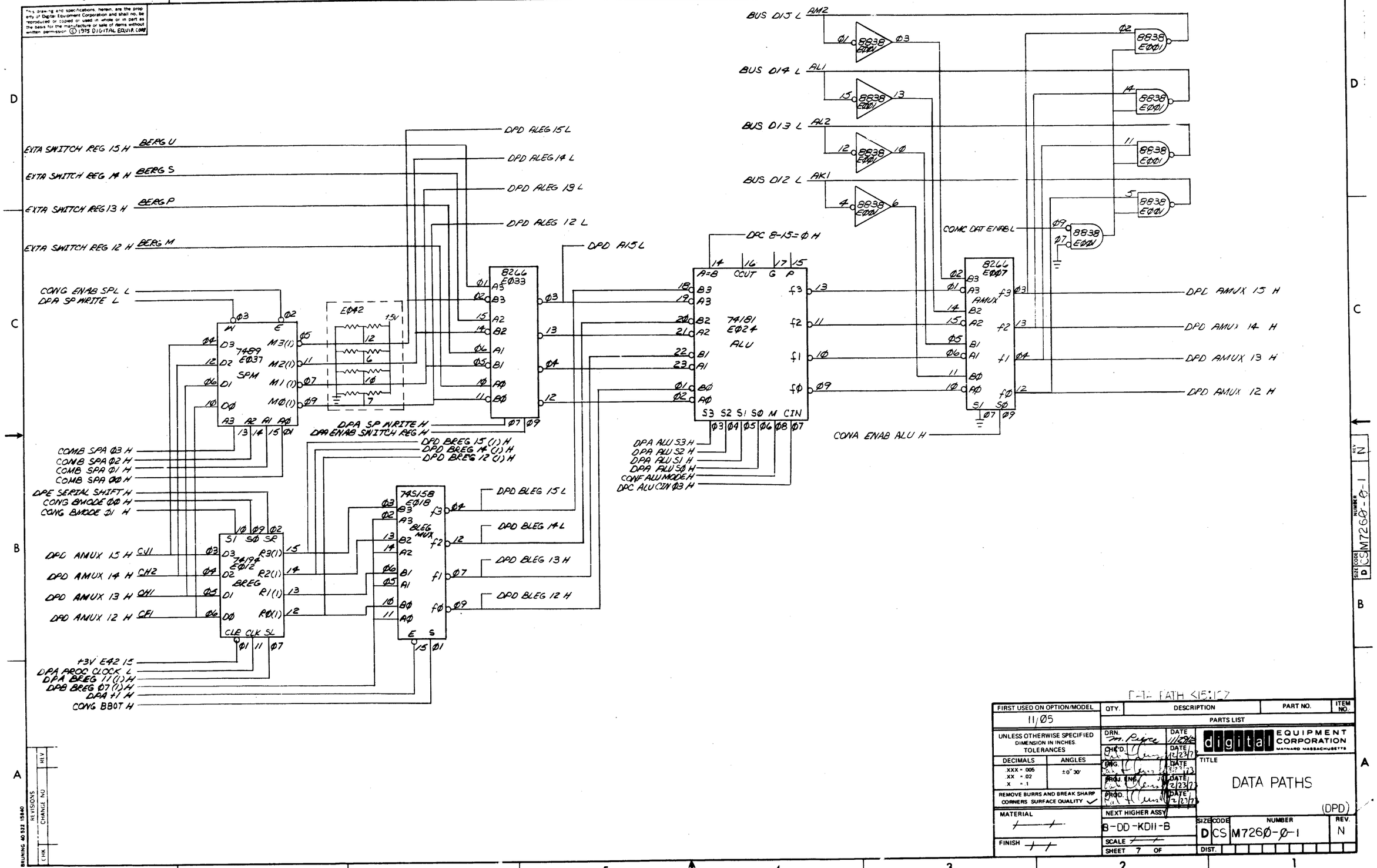
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DATA PATHS (DPC)

NEXT HIGHER ASSY: B-DD-KD11-B
SIZE D CODE CS NUMBER M7260-0-1 REV. M
SCALE
SHEET 6 OF
DIST.

REVISIONS: LTR | CHANGE NO | REV
BRUNING 40 522 15840
SIZE FORM NO DRD 102-B

SIZE D CODE CS NUMBER M7260-0-1 REV M



DATE PATH <15:12>

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
XXX = .005 XX = .02 X = .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

	NAME	DATE
DRN.	M. Pierce	11/5/72
CHK'D.		12/23/72
ENG.		2/23/73
PROJ. ENG.		2/23/73
PROD.		2/23/73

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DATA PATHS (DPD)

NEXT HIGHER ASSY: B-DD-KD11-B

SIZE D | CODE CS | NUMBER M7260-0-1 | REV. N

SCALE —

SHEET 7 OF

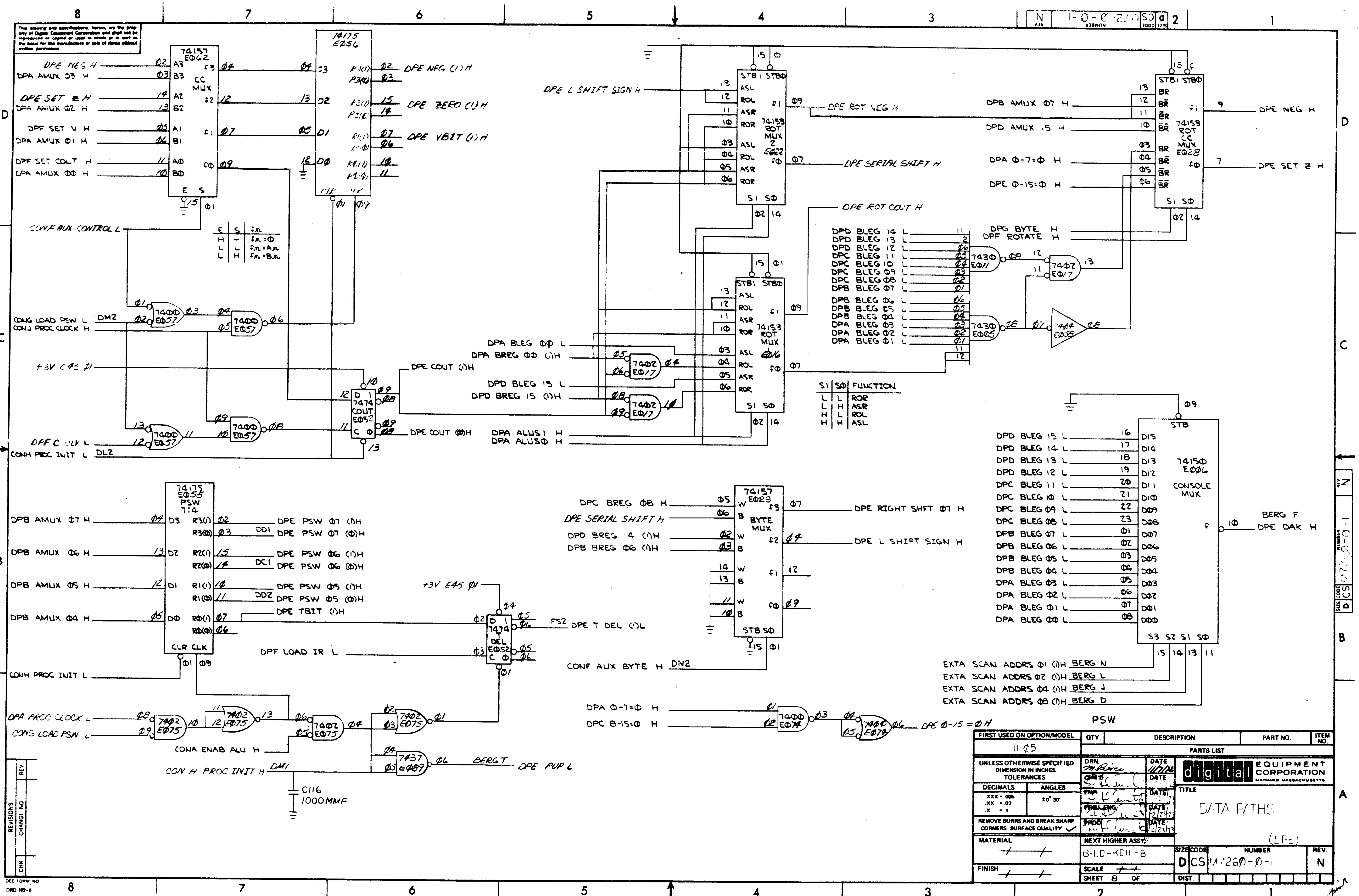
DIST.

REVISIONS			
REV	CHANGE NO	CHK	

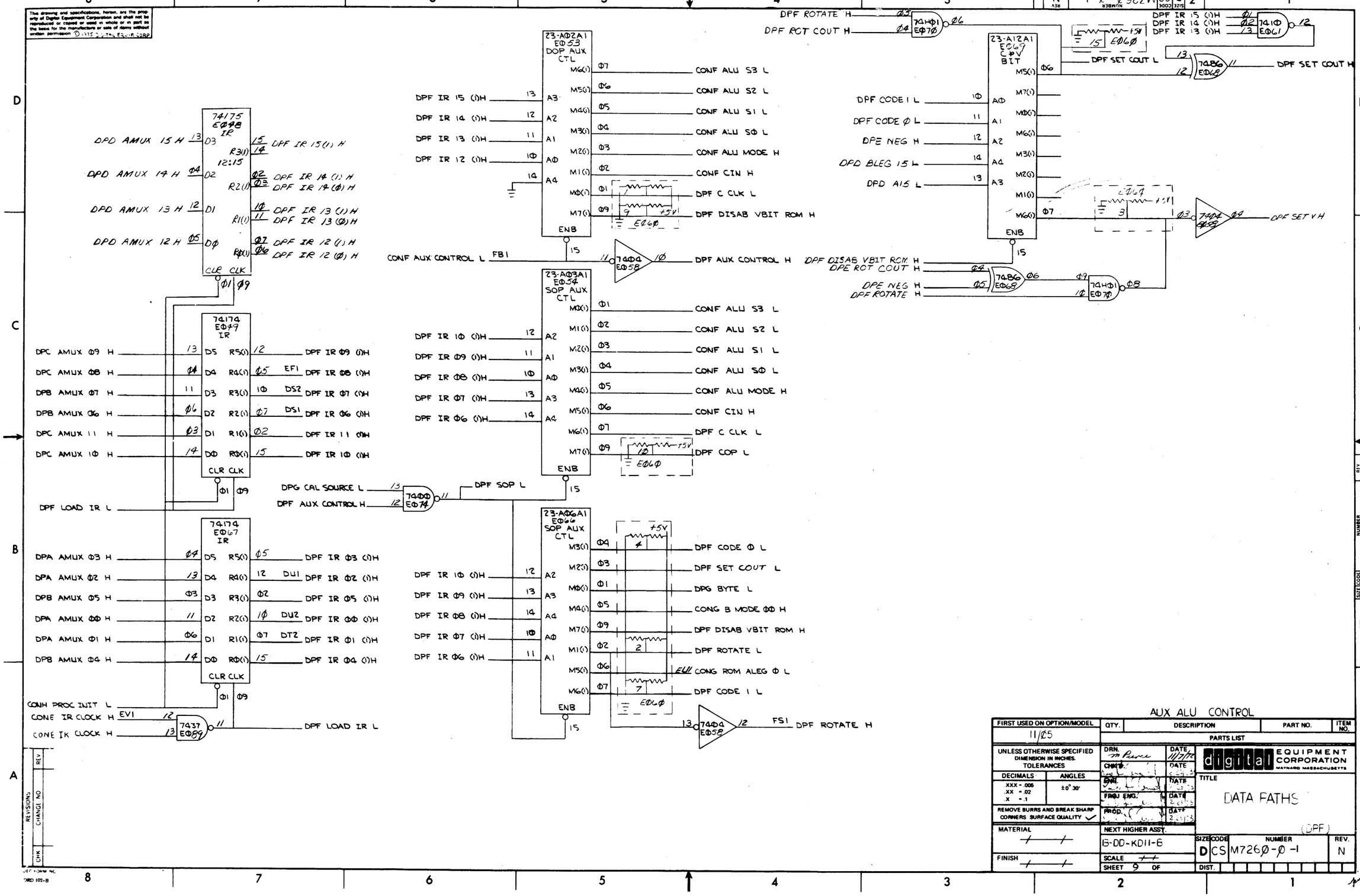
BRUNING 40 522 15840

ORD 102-B

SIZE D | CODE CS | NUMBER M7260-0-1



74157 E062 CC MUX
74175 E056
74153 ROT MUX 2 E022
74153 ROT CC MUX E028
74153 ROT MUX E016
74174 COUT E052
7474 T DEL E052
74175 E055 PSW 7:4
74157 E023 BYTE MUX
74150 E006 CONSOLE MUX
DPE NEG (1) H
DPE ZERO (1) H
DPE VBIT (1) H
DPE L SHIFT SIGN H
DPE ROT NEG H
DPE SERIAL SHIFT H
DPE ROT COUT H
DPE NEG H
DPE SET Z H
DPE COUT (1)H
DPE COUT (0)H
DPE RIGHT SHFT 07 H
DPE L SHIFT SIGN H
BERG F DPE DAK H
DPE PSW 07 (1)H
DPE PSW 07 (0)H
DPE PSW 06 (1)H
DPE PSW 06 (0)H
DPE PSW 05 (1)H
DPE PSW 05 (0)H
DPE TBIT (1)H
DPE T DEL (1)L
DPE 0-15=0 H
BERG T DPE PUP L
CONF AUX CONTROL L
CONG LOAD PSW L
CONJ PROC CLOCK H
CONH PROC INIT L
CONF AUX BYTE H
CONA ENAB ALU H
CON H PROC INIT H
C116 1000MMF
S1 S0 FUNCTION
L L ROR
L H ASR
H L ROL
H H ASL
E S fn
H - fn=0
L L fn=An
L H fn=Bn
EXTA SCAN ADDRS 01 (1)H BERG N
EXTA SCAN ADDRS 02 (1)H BERG L
EXTA SCAN ADDRS 04 (1)H BERG J
EXTA SCAN ADDRS 08 (1)H BERG D
PSW
FIRST USED ON OPTION/MODEL 1105
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS .XXX = .005 .XX = .02 .X = .1
ANGLES ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH
NEXT HIGHER ASSY B-LD-KD11-B
SCALE
SHEET 8 OF
DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
TITLE DATA PATHS (DPE)
SIZE D CODE CS NUMBER M7260-0-1 REV. N
PARTS LIST
QTY. DESCRIPTION PART NO. ITEM NO.



REVISIONS			
REV	CHANGE NO	DATE	CHK

AUX ALU CONTROL

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/Ø5		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS: .XXX ± .005, .XX ± .02, .X ± .1 — ANGLES: ±Ø° 3Ø'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

	NAME	DATE
DRN.	M Pierce	11/7/75
CHK'D.		DATE
ENG.		DATE
PROJ ENG.		DATE
PROD.		DATE

NEXT HIGHER ASSY. 6-DD-KD11-B

SCALE —

SHEET 9 OF

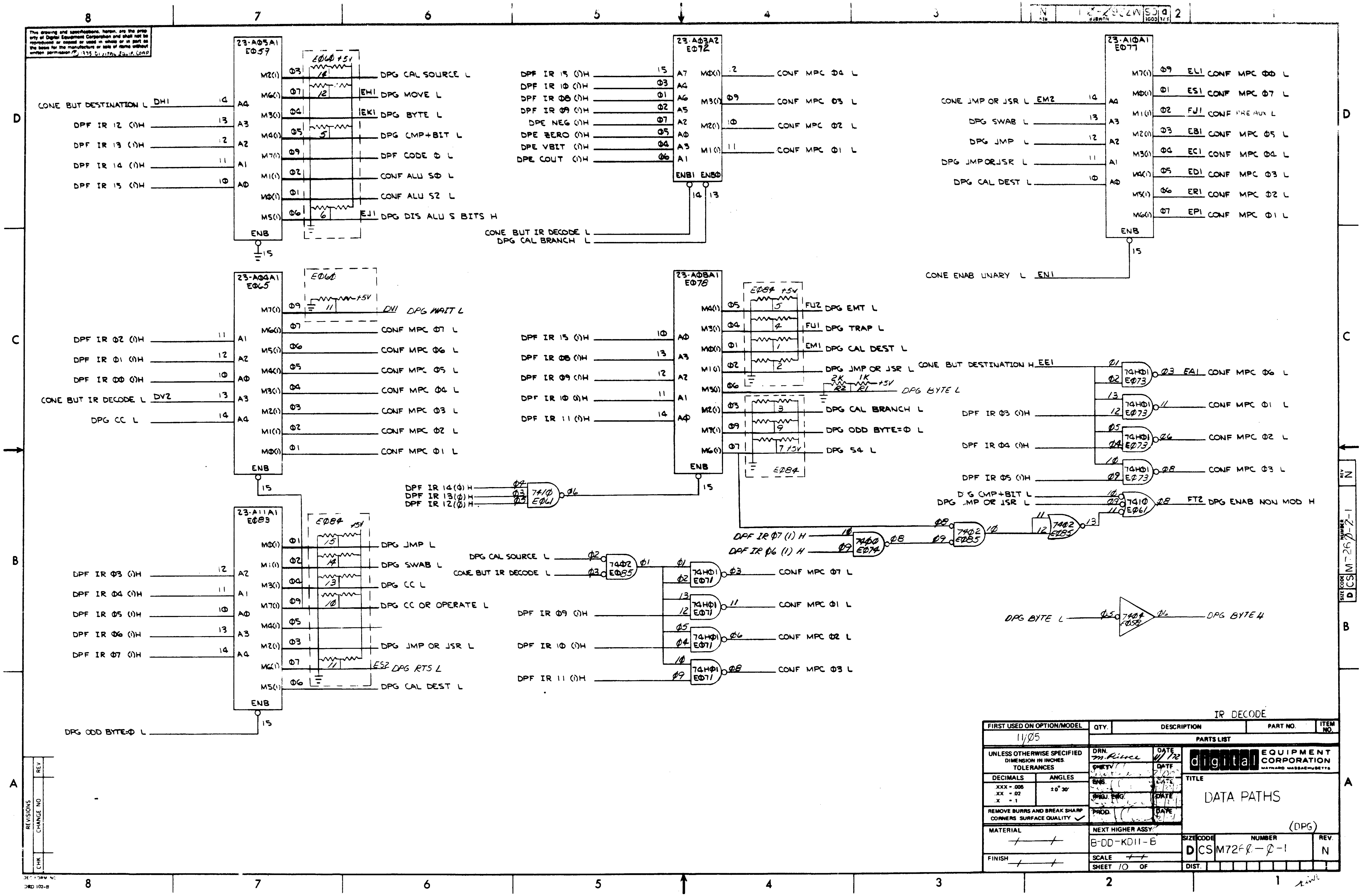
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DATA PATHS (DPF)

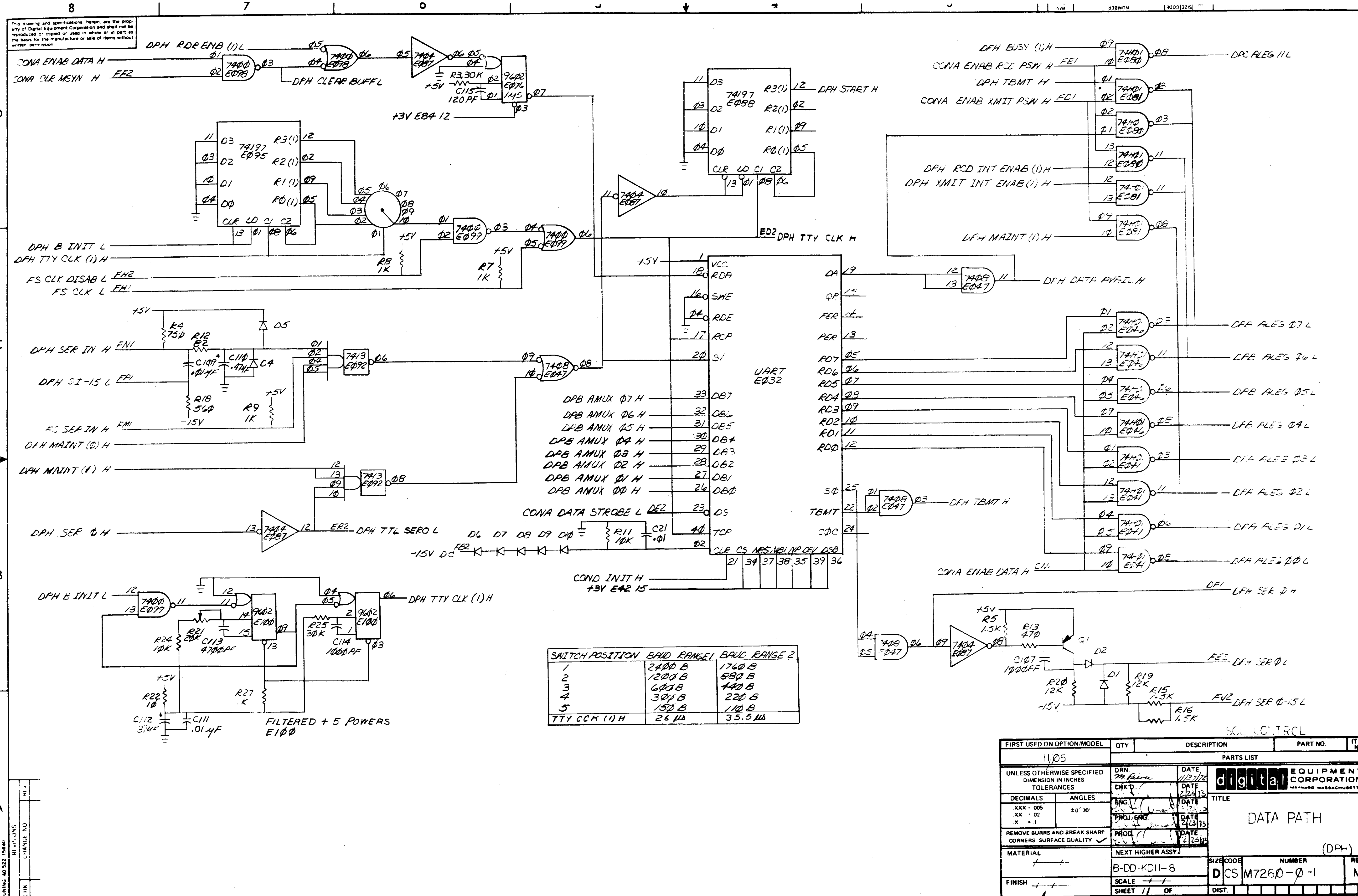
SIZE	CODE	NUMBER	REV.
D	CS	M726Ø-Ø-1	N

DIST.

DEC FORM NO. ORD 102-B



23-A05A1 E057
CONF BUT DESTINATION L DH1
DPF IR 12 (1)H
DPF IR 13 (1)H
DPF IR 14 (1)H
DPF IR 15 (1)H
DPG CAL SOURCE L
DPG MOVE L
DPG BYTE L
DPG CMP+BIT L
DPF CODE 0 L
CONF ALU S0 L
CONF ALU S2 L
DPG DIS ALU S BITS H
23-A03A2 E072
DPF IR 15 (1)H
DPF IR 10 (1)H
DPF IR 08 (1)H
DPF IR 09 (1)H
DPE NEG (1)H
DPE ZERO (1)H
DPE VBIT (1)H
DPE COUT (1)H
CONF MPC 04 L
CONF MPC 03 L
CONF MPC 02 L
CONF MPC 01 L
CONF BUT IR DECODE L
DPG CAL BRANCH L
23-A10A1 E077
CONF JMP OR JSR L EM2
DPG SWAB L
DPG JMP L
DPG JMP OR JSR L
DPG CAL DEST L
CONF MPC 00 L
CONF MPC 07 L
CONF PRE AUX L
CONF MPC 05 L
CONF MPC 04 L
CONF MPC 03 L
CONF MPC 02 L
CONF MPC 01 L
CONF ENAB UNARY L EN1
23-A04A1 E065
DPF IR 02 (1)H
DPF IR 01 (1)H
DPF IR 00 (1)H
CONF BUT IR DECODE L DV2
DPG CC L
DPG WAIT L
CONF MPC 07 L
CONF MPC 06 L
CONF MPC 05 L
CONF MPC 04 L
CONF MPC 03 L
CONF MPC 02 L
CONF MPC 01 L
23-A08A1 E078
DPF IR 15 (1)H
DPF IR 08 (1)H
DPF IR 09 (1)H
DPF IR 10 (1)H
DPF IR 11 (1)H
DPG EMT L
DPG TRAP L
DPG CAL DEST L
DPG JMP OR JSR L
DPG BYTE L
DPG CAL BRANCH L
DPG ODD BYTE=0 L
DPG S4 L
CONF BUT DESTINATION H EE1
DPF IR 03 (1)H
DPF IR 04 (1)H
DPF IR 05 (1)H
CONF MPC 06 L
CONF MPC 01 L
CONF MPC 02 L
CONF MPC 03 L
DPG CMP+BIT L
DPG JMP OR JSR L
DPG ENAB NON MOD H
DPF IR 14(0)H
DPF IR 13(0)H
DPF IR 12(0)H
23-A11A1 E083
DPF IR 03 (1)H
DPF IR 04 (1)H
DPF IR 05 (1)H
DPF IR 06 (1)H
DPF IR 07 (1)H
DPG JMP L
DPG SWAB L
DPG CC L
DPG CC OR OPERATE L
DPG JMP OR JSR L
DPG RTS L
DPG CAL DEST L
DPG ODD BYTE=0 L
DPF IR 07 (1) H
DPF IR 06 (1) H
DPG CAL SOURCE L
CONF BUT IR DECODE L
DPF IR 09 (1)H
DPF IR 10 (1)H
DPF IR 11 (1)H
CONF MPC 07 L
CONF MPC 01 L
CONF MPC 02 L
CONF MPC 03 L
DPG BYTE L
DPG BYTE H
IR DECODE
FIRST USED ON OPTION/MODEL 11/05
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS .XXX = .005 .XX = .02 .X = .1
ANGLES ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH
NEXT HIGHER ASSY B-DD-KD11-B
SCALE
SHEET 10 OF
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
TITLE DATA PATHS (DPG)
SIZE D CODE CS NUMBER M7260-0-1 REV. N


DPH RDR ENB (1) L
CONA ENAB DATA H
CONA CLR MSYN H
DPH CLEAR BUFF L
+3V E84 12
74197 EØ95
74197 EØ88
DPH START H
DPH B INIT L
DPH TTY CLK (1) H
FS CLK DISAB L
FS CLK L
DPH TTY CLK H
DPH SER IN H
DPH SI-15 L
FS SER IN H
DPH MAINT (0) H
DPH MAINT (1) H
DPH SER Ø H
DPH TTL SERO L
UART EØ32
DPB AMUX Ø7 H
DPB AMUX Ø6 H
DPB AMUX Ø5 H
DPB AMUX Ø4 H
DPB AMUX Ø3 H
DPB AMUX Ø2 H
DPB AMUX Ø1 H
DPB AMUX ØØ H
CONA DATA STROBE L
-15V DC
COND INIT H
+3V E42 15
DPH BUSY (1) H
DPC ALEG 11 L
CONA ENAB RCD PSW H
DPH TBMT H
CONA ENAB XMIT PSW H
DPH RCD INT ENAB (1) H
DPH XMIT INT ENAB (1) H
DPH MAINT (1) H
DPH DATA AVAIL H
DPB ALEG Ø7 L
DPB ALEG Ø6 L
DPB ALEG Ø5 L
DPB ALEG Ø4 L
DPB ALEG Ø3 L
DPB ALEG Ø2 L
DPB ALEG Ø1 L
DPB ALEG ØØ L
CONA ENAB DATA H
DPH SER Ø H
DPH SER Ø L
DPH SER Ø-15 L
DPH TTY CLK (1) H
FILTERED +5 POWERS E1ØØ
SCL CONTROL

SWITCH POSITION	BAUD RANGE 1	BAUD RANGE 2
1	2400 B	1760 B
2	1200 B	880 B
3	600 B	440 B
4	300 B	220 B
5	150 B	110 B
TTY CCK (1) H	26 µs	35.5 µs

FIRST USED ON OPTION/MODEL: 11/05

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES

DECIMALS .XXX ± .005 .XX ± .02 .X ± .1 — ANGLES ± 0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

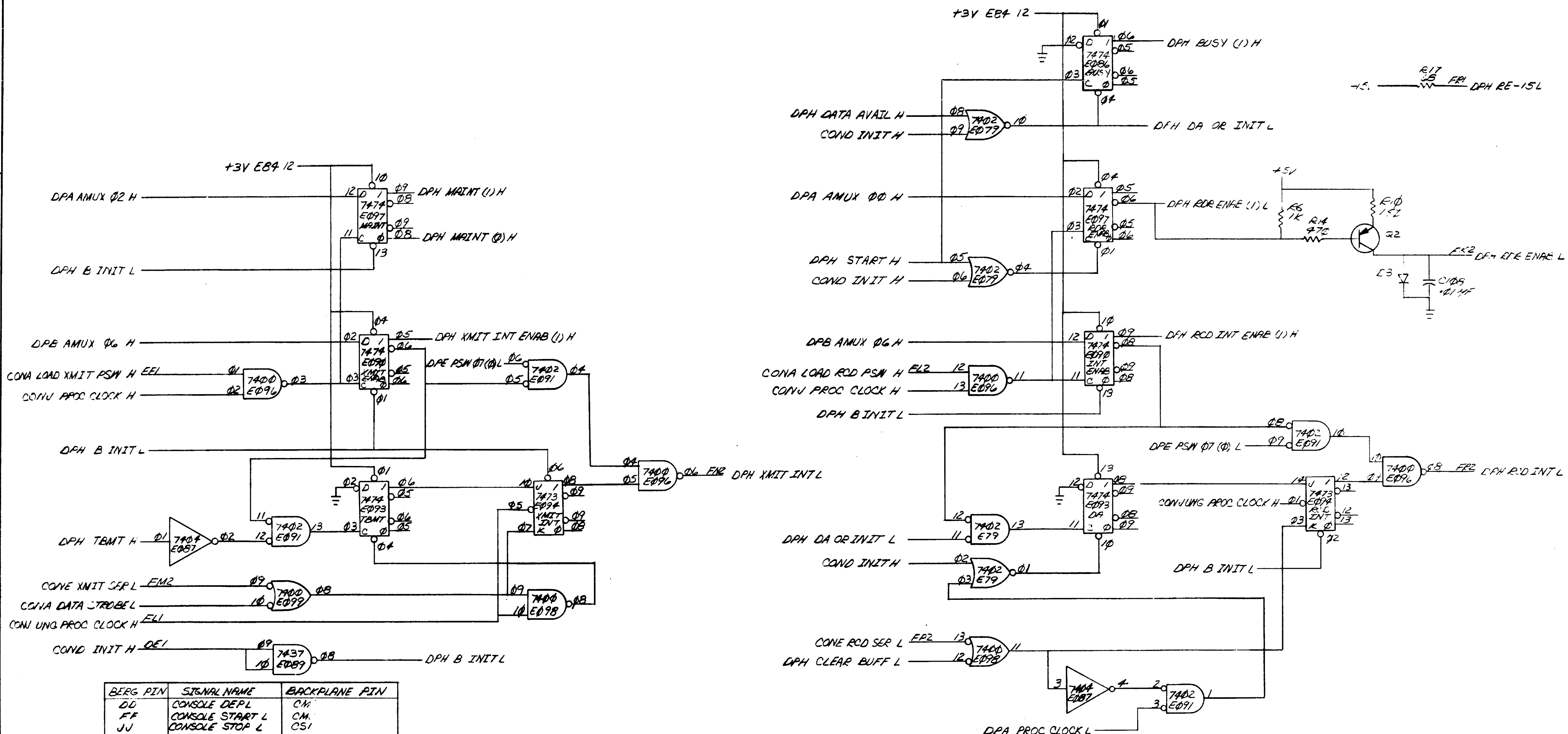
NEXT HIGHER ASSY: B-DD-KD11-8

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DATA PATH (DPH)

SIZE D CODE CS NUMBER M7260-0-1 REV. M

SHEET 11 OF



BERG PIN	SIGNAL NAME	BACKPLANE PIN
DD	CONSOLE DEP L	CM
FF	CONSOLE START L	CM
JJ	CONSOLE STOP L	CS1
LL	CONSOLE CONT L	CS2
NN	CONSOLE EXAM L	CT2
RR	CONSOLE LOAD L	CU2
TT	COMB RUN LAMP L	CU1

CONTROL

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
11C		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
.XXX = .005 .XX = .02 .X = .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

DRN. DATE 11/30/72 — CHK'D. DATE — ENG. DATE 2/23/73 — PROJ. ENG. DATE 2/23/73 — PROD. DATE 2/23/73

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DATA PATH (DPHI)

MATERIAL — NEXT HIGHER ASSY. B-DE-KI11-B — FINISH — SCALE — SHEET 12 OF

SIZE	CODE	NUMBER	REV.
D	CS	M7260-0-1	N

DIST.

REVISIONS: REV | CHANGE NO | CHK

THIS FACE SHEET CONTAINS THE FOLLOWING CHIP PART NUMBERS

PART NUMBER
23-AØ1A1
23-AØ2A1
23-AØ3A1
23-AØ4A1
23-AØ5A1
23-AØ6A1
23-AØ8A1
23-A1ØA1
23-A11A1
23-A12A1
23-AØ3A2

FIRST USED ON OPTION MODEL
KDII-B

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

REVISIONS	REV.	CHANGE NO.	CHK

DEC FORM NO. DRB 109

DRN. C. Teschner	DATE 5-8-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. M. Tibbetts	DATE 5-15-72	
ENG. M. Tibbetts	DATE 5-15-72	
PROJ. ENG. M. Tibbetts	DATE 5-15-72	
PROD. R.K. Peterson	DATE 5/16/72	

NEXT HIGHER ASSEMBLY: B-DD-KDII-B

SCALE: — —

SHEET 1 OF 15

TITLE: DATA PATH ROM PATTERNS

SIZE	CODE	NUMBER	REV.
K	RL	M726Ø-Ø-8	

DIST.

```
                    /( #Y8 (PIN #9) DPA ALEG 02 L
                    +/( #Y7 (PIN #7) DPA ALEG 03 L
                    ++/( #Y6 (PIN #6) DPA ALEG 00 L
                    +++/( #Y5 (PIN #5) DPA ALEG 01 L
                    ++++/( #Y4 (PIN #4) DPB ALEG 05 L
                    +++++/( #Y3 (PIN #3) DBP ALEG 04 L
                    ++++++/( #Y2 (PIN #2) DPB ALEG 06 L
                    +++++++/( #Y1 (PIN #1) DPB ALEG 07 L
  OCTAL DECIMAL                 ++++++++        OCTAL
ADDRESS ADDRESS   EDCBA         ++++++++        DATA
    000       0   00000   11111111        377
    001       1   00001   01001110        116     K=207 SWR ADDRESS 1,E; 177570=000207,BAR
    002       2   00010   01110011        163     K=04 RECVR VECTOR
    003       3   00011   00001111        017     K=360 CONDITION CODE MASK (CCM=1)
    004       4   00100   10111011        273     K=60 CMT VECTOR
    005       5   00101   00111111        077     K=14 T BIT VECTOR
    006       6   00110   11111111        377
    007       7   00111   11111111        377
    010       8   01000   11111011        373     K=20 IOT VECTOR
    011       9   01001   00111011        073     K=34 TRAP VECTOR
    012      10   01010   11111111        377
    013      11   01011   11111111        377
    014      12   01100   10111111        277     K=10 RESERVED (ILLEGAL) INSTRUCTION VECTOR
    015      13   01101   01111111        177     K=4 BUS ERROR OR STACK OVERFLOW ERROR
    016      14   01110   11111111        377
    017      15   01111   11111111        377
    020      16   10000   01111011        173     K=24 PWR FAIL VECTOR
    021      17   10001   11111111        377
    022      18   10010   11111101        375     K=100 LCLK INT VECTOR
    023      19   10011   11111111        377
    024      20   10100   11111111        377
    025      21   10101   11111111        377
    026      22   10110   11111111        377
    027      23   10111   11111111        377
    030      24   11000   11111111        377
    031      25   11001   11111111        377
    032      26   11010   11111111        377
    033      27   11011   11111111        377
    034      28   11100   11111111        377
    035      29   11101   11110011        363     K=60 TRANSMIT VECTOR
    036      30   11110   11111111        377
    037      31   11111   11111111        377
                    +++++
                    ++++/( A(PIN #10) IS  CONG SP WRITE H
                    +++/( B(PIN #11) IS  CONG ROM SPA 00 H
                    ++/( C(PIN #12) IS  CONG ROM SPA 01 H
                    +/( D(PIN #13) IS  CONG ROM SPA 02 H
                    /( E(PIN #14) IS  CONG ROM SPA 03 H
```



```
                    /( #Y8 (PIN #9) DPF DISAB V BIT ROM H
                    +/( #Y  (PIN #7) CONF ALU S3 L
                    ++/( #Y6 (PIN #6) CONF ALU S2 L
                    +++/( #Y5 (PIN #5) CONF ALU S1 L
                    ++++/( #Y4 (PIN #4) CONF ALU S0 L
                    +++++/( #Y3 (PIN #3) CONF ALU MODE H
                    ++++++/( #Y2 (PIN #2) CONF CIN H
                    +++++++/( #Y1 (PIN #1) DPF C CLK L
  OCTAL DECIMAL                 ++++++++        OCTAL
ADDRESS ADDRESS   EDCBA         ++++++++        DATA
    000       0   00000   11111111        377
    001       1   00001   10000101        205     MOV F=A
    002       2   00010   01001010        112     CMP F=A MINUS B MINUS 1
    003       3   00011   10001101        215     BIT F=AB
    004       4   00100   10111101        275     BIC F=A,BARB
    005       5   00101   10100101        245     BIS F=A+B
    006       6   00110   00110000        060     ADD F=A PLUS B
    007       7   00111   11111111        377     RI (RESERVED INSTRUCTION)
    010       8   01000   11111111        377     RI
    011       9   01001   10000101        205     MOV(B)
    012      10   01010   01001010        112     CMP(B)
    013      11   01011   10001101        215     BIT(B)
    014      12   01100   10111101        275     BIC(B)
    015      13   01101   10100101        245     BIS(B)
    016      14   01110   00110010        062     SUB F=A PLUS B
    017      15   01111   11111111        377     RI
    020      16   10000   00000000        000     NOT ACCESSED
    021      17   10001   00000000        000     MOV = NOT ACCESSED
    022      18   10010   00000000        000     CMP = NOT ACCESSED
    023      19   10011   00000000        000     BIT = NOT ACCESSED
    024      20   10100   00000000        000     BIC = NOT ACCESSED
    025      21   10101   00000000        000     BIS = NOT ACCESSED
    026      22   10110   00000000        000     ADD = NOT ACCESSED
    027      23   10111   00000000        000     RI = NOT ACCESSED
    030      24   11000   00000000        000     RI = NOT ACCESSED
    031      25   11001   00000000        000     MOV(B) = NOT ACCESSED
    032      26   11010   00000000        000     CMP(B) = NOT ACCESSED
    033      27   11011   00000000        000     BIT(B) = NOT ACCESSED
    034      28   11100   00000000        000     BIC(B) = NOT ACCESSED
    035      29   11101   00000000        000     BIS(B) = NOT ACCESSED
    036      30   11110   00000000        000     SUB = NOT ACCESSED
    037      31   11111   00000000        000     RI = NOT ACCESSED
                    +++++
                    ++++/( A(PIN #10) IS  DPF IR 12 (1)H
                    +++/( B(PIN #11) IS  DPF IR 13 (1)H
                    ++/( C(PIN #12) IS  DPF IR 14 (1)H
                    +/( D(PIN #13) IS  DPF IR 15 (1)H
                    /( E(PIN #14) IS  DPA RUN GND L
```

```
                        /( #Y8 (PIN #9) DPF COP L
                        +/( #Y7 (PIN #7) DPF C CLK L
                        ++/( #Y6 (PIN #6) CONF CIN H
                        +++/( #Y5 (PIN #5) CONF ALU MODE H
                        ++++/( #Y4 (PIN #4) CONF ALU S0 L
                        +++++/( #Y3 (PIN #3) CONF ALU S1 L
                        ++++++/( #Y2 (PIN #2) CONF ALU S2 L
                        +++++++/( #Y1 (PIN #1) CONF ALU S3 L
  OCTAL  DECIMAL                +++++++          OCTAL
ADDRESS  ADDRESS    EDCBA       ++++++++         DATA
    000        0    00000     11111111           377
    001        1    00001     11111111           377
    002        2    00010     10011100           234       CLR ALUF=ZERO
    003        3    00011     10101001           251       NEG CIN ALUF=A MINUS B MINUS 1
    004        4    00100     10111111           277       ROR
    005        5    00101     11111111           377
    006        6    00110     11111111           377
    007        7    00111     11111111           377
    010        8    01000     11111111           377
    011        9    01001     11111111           377
    012       10    01010     11100000           340       INC CIN ALUF=A ARITH
    013       11    01011     00101111           057       SBC CIN ALUF=A MINUS 1
    014       12    01100     10110111           267       ASR
    015       13    01101     11111111           377
    016       14    01110     11111111           377
    017       15    01111     11111111           377
    020       16    10000     11111111           377
    021       17    10001     11111111           377
    022       18    10010     10010101           225       COM ALUF=NOT B
    023       19    10011     00000000           000       ADC CIN ALUF=A ARITH
    024       20    10100     10111011           273       ROL
    025       21    10101     11111111           377
    026       22    10110     11111111           377
    027       23    10111     11111111           377
    030       24    11000     10011010           232       SWAB NOT B CLOCK LOW
    031       25    11001     11111111           377
    032       26    11010     11001111           317       DEC CIN ALUF=A MINUS 1
    033       27    11011     10010000           220       TST ALUF=AL
    034       28    11100     10110011           263       ASL
    035       29    11101     11111111           377
    036       30    11110     11111111           377
    037       31    11111     11111111           377
                        +++++
                        ++++/( A(PIN #10) IS  DPF IR 08 (1)H
                        +++/( B(PIN #11) IS  DPR IR 09 (1)H
                        ++/( C(PIN #12) IS  DPF IR 10 (1)H
                        +/( D(PIN #13) IS  DPF IR 07 (1)H
                        /( E(PIN #14) IS  DPF IR 06 (1)H
```



```
                        /( #Y8 (PIN #9) DPG WAIT L
                        +/( #Y7 (PIN #7) CONF MPC 07 L
                        ++/( #Y6 (PIN #6) CONF MPC 06 L
                        +++/( #Y5 (PIN #5) CONF MPC 05 L
                        ++++/( #Y4 (PIN #4) CONF MPC 04 L
                        +++++/( #Y3 (PIN #3) CONF MPC 03 L
                        ++++++/( #Y2 (PIN #2) CONF MPC 02 L
                        +++++++/( #Y1 (PIN #1) CONF MPC 01 L
  OCTAL  DECIMAL                +++++++          OCTAL
ADDRESS  ADDRESS    EDCBA       ++++++++         DATA
    000        0    00000     11001011           313       CC OPR
    001        1    00001     11001011           313       CC OPR
    002        2    00010     11001011           313       CC OPR
    003        3    00011     11001011           313       CC OPR
    004        4    00100     11001011           313       CC OPR
    005        5    00101     11001011           313       CC OPR
    006        6    00110     11001011           313       CC OPR
    007        7    00111     11001011           313       CC OPR
    010        8    01000     11111111           377       RI (RESERVED INSTRUCTION)
    011        9    01001     11111111           377       NOT ACCESSED FOR NOT IR DECODE
    012       10    01010     11111111           377       RI
    013       11    01011     11111111           377       RI
    014       12    01100     11111111           377       RI
    015       13    01101     11111111           377       RI
    016       14    01110     11111111           377       RI
    017       15    01111     11111111           377       RI
    020       16    10000     11101111           357       HALT,BUT IR DEC
    021       17    10001     01100110           146       WAIT,BUT IR DEC
    022       18    10010     10100010           242       IOT
    023       19    10011     10001000           210       RESET
    024       20    10100     10110100           264       RTI
    025       21    10101     11101101           355       BREAKPOINT TRAP DECODE
    026       22    10110     11111111           377       RI
    027       23    10111     11111111           377       RI
    030       24    11000     11111111           377       RI
    031       25    11001     01111111           177       WAIT,BUT IR DEC,BAR
    032       26    11010     11111111           377       RI
    033       27    11011     11111111           377       RI
    034       28    11100     11111111           377       RI
    035       29    11101     11111111           377       RI
    036       30    11110     11111111           377       RI
    037       31    11111     11111111           377       RI
                        +++++
                        ++++/( A(PIN #10) IS  DPF IR 00 (1)H
                        +++/( B(PIN #11) IS  DPF IR 02 (1)H
                        ++/( C(PIN #12) IS  DPF IR 01 (1)H
                        +/( D(PIN #13) IS  CONE BUT IR DECODE L
                        /( E(PIN #14) IS  DPG CC L
```

```
                        /( *Y8 (PIN #9) DPF CODE 8 L
                        +/( *Y7 (PIN #7) DPG MOVE L
                        ++/( *Y6 (PIN #6) DPG DIS ALU S BITS H
                        +++/( *Y5 (PIN #5) DPG CMP OR BIT L
                        ++++/( *Y4 (PIN #4) DPG BYTE L
                        +++++/( *Y3 (PIN #3) DPG CAL SOURCE L
                        ++++++/( *Y2 (PIN #2) CONF ALU S0 L
                        +++++++/( *Y1 (PIN #1) CONF ALU S2 L
 OCTAL  DECIMAL         ++++++++        OCTAL
ADDRESS ADDRESS  EDCBA  ++++++++        DATA
   000      0    00000  11011111        337     BR/CC (BRANCH OR CC OPERATOR)
   001      1    00001  11011111        337     BR/CC
   002      2    00010  11011011        333     BIC
   003      3    00011  11010011        323     BIC(B)
   004      4    00100  11001011        313     CMP
   005      5    00101  11000011        303     CMP(B)
   006      6    00110  01011011        133     ADD
   007      7    00111  01111000        170     SUB DIS ALU BITS H
   010      8    01000  10011011        233     MOV
   011      9    01001  10010011        223     MOV(B)
   012     10    01010  11011011        333     BIS
   013     11    01011  11010011        323     BIS(B)
   014     12    01100  11001011        313     BIT
   015     13    01101  11000011        303     BIT(B)
   016     14    01110  11011111        337     RI TRAP
   017     15    01111  11011111        337     RI TRAP
   020     16    10000  11011111        337     BR/CC
   021     17    10001  11011111        337     BR/CC
   022     18    10010  11011011        333     BIC
   023     19    10011  11010011        323     BIC(B)
   024     20    10100  11001011        313     CMP
   025     21    10101  11000011        303     CMP(B)
   026     22    10110  01011011        133     ADD
   027     23    10111  01011011        133     ADD
   030     24    11000  10011011        233     MOV
   031     25    11001  10010011        223     MOV(B)
   032     26    11010  11011011        333     BIS
   033     27    11011  11010011        323     BIS(B)
   034     28    11100  11001011        313     BIT
   035     29    11101  11000011        303     BIT(B)
   036     30    11110  11011111        337     RI TRAP
   037     31    11111  11011111        337     RI TRAP
                        +++++
                        ++++/( A(PIN #10) IS  DPF IR 15 (1)H
                        +++/( B(PIN #11) IS  DPF IR 14 (1)H
                        ++/( C(PIN #12) IS  DPF IR 13 (1)H
                        +/( D(PIN #13) IS  DPF IR 12 (1)H
                        /( E(PIN #14) IS  CONF BUT DESTINATION L
```



```
                        /( *Y8 (PIN #9) DPF DISAB V BIT ROM H
                        +/( *Y7 (PIN #7) DPF CODE 1 L
                        ++/( *Y6 (PIN #6) CONG ROM ALEG 8 L
                        +++/( *Y5 (PIN #5) CONG B MODE 00 H
                        ++++/( *Y4 (PIN #4) DPF CODE 0 L
                        +++++/( *Y3 (PIN #3) DPF SET CARRY L
                        ++++++/( *Y2 (PIN #2) DPF ROTATE L
                        +++++++/( *Y1 (PIN #1) DPG BYTE L
 OCTAL  DECIMAL         ++++++++        OCTAL
ADDRESS ADDRESS  EDCBA  ++++++++        DATA
   000      0    00000  11111111        377
   001      1    00001  11111111        377
   002      2    00010  11111111        377
   003      3    00011  10110110        266     SWAB DISAB V BIT ROM
   004      4    00100  11110101        365     ROR
   005      5    00101  11110101        365     ASR
   006      6    00110  11100101        345     ROL
   007      7    00111  11100101        345     ASL
   010      8    01000  10110111        267     CLR
   011      9    01001  00110111        067     INC
   012     10    01010  11110011        363     COM
   013     11    01011  00111111        077     DEC
   014     12    01100  00000001        001     BCC
   015     13    01101  11111111        377
   016     14    01110  11111111        377
   017     15    01111  11111111        377
   020     16    10000  00000001        001     BMI
   021     17    10001  11111111        377
   022     18    10010  11111111        377
   023     19    10011  11111111        377
   024     20    10100  00000001        001     BVS
   025     21    10101  11111111        377
   026     22    10110  11111111        377
   027     23    10111  11111111        377
   030     24    11000  01011111        137     NEG
   031     25    11001  00111111        077     SBC
   032     26    11010  00110111        067     ADC
   033     27    11011  11110111        367     TST
   034     28    11100  11111111        377
   035     29    11101  11111111        377
   036     30    11110  11111111        377
   037     31    11111  11111111        377
                        +++++
                        ++++/( A(PIN #10) IS  DPF IR 07 (1)H
                        +++/( B(PIN #11) IS  DPF IR 06 (1)H
                        ++/( C(PIN #12) IS  DPF IR 10 (1)H
                        +/( D(PIN #13) IS  DPF IR 09 (1)H
                        /( E(PIN #14) IS  DPF IR 08 (1)H
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                        /( *Y8 (PIN #9) DPG ODD BYTE *  0L
                        */( *Y7 (PIN #7) DPG 54 L
                        **/( *Y6 (PIN #6) DPG BYTE L
                        ***/( *Y5 (PIN #5) DPG EMT L
                        ****/( *Y4 (PIN #4) DPG TRAP L
                        *****/( *Y3 (PIN #3) DPG CAL BRANCH L
                        ******/( *Y2 (PIN #2) DPG JSR L
                        *******/( *Y1 (PIN #1) DPG CAL DEST L
  OCTAL  DECIMAL        ********        OCTAL
 ADDRESS ADDRESS EDCBA  ********        DATA
    000      0  00000  01111111        177
    001      1  00001  11111011        373     BPL
    002      2  00010  11111011        373     BGE
    003      3  00011  11111011        373     BVC
    004      4  00100  11111011        373     BNE
    005      5  00101  11111011        373     BHI
    006      6  00110  11111011        373     BGT
    007      7  00111  11111011        373     BCC
    010      8  01000  11111011        373     BR
    011      9  01001  11111011        373     BMI
    012     10  01010  11111011        373     BLT
    013     11  01011  11111011        373     BVS
    014     12  01100  11111011        373     BEQ
    015     13  01101  11111011        373     BLOS
    016     14  01110  11111011        373     BLE
    017     15  01111  11111011        373     BCS
    020     16  10000  11111100        374     JSR
    021     17  10001  11101111        357     EMT
    022     18  10010  11111110        376     SOP (CC) ROR/ROL/ASR/ASL
    023     19  10011  11011110        336     OPR (DST) ROR(B)/ROL(B)/ASR(B)/ASL(B)
    024     20  10100  11111110        376     SOP (CC) CLR/COM/INC/DEC
    025     21  10101  11011110        336     OPR(DST) CLR(B)/COM(B)/INC(B)/DEC(B)
    026     22  10110  11111111        377     RI RESERVED INST
    027     23  10111  11111111        377     RI RESERVED INST
    030     24  11000  11111100        374     JSR
    031     25  11001  11110111        367     TRAP
    032     26  11010  11111111        377     RI RESERVED INST
    033     27  11011  11111111        377     RI RESERVED INST
    034     28  11100  10111110        276     SOP NEG/ADC/SBC/TST
    035     29  11101  10011110        236     OPR(DST) NEG(B)/ADC(B)/SBC(B)/TST(B)
    036     30  11110  11111111        377     RI RESERVED INST
    037     31  11111  11111111        377     RI RESERVED INST
                        *****
                        ****/( A(PIN #10) IS  DPF IR 15 (1)H
                        ***/( B(PIN #11) IS  DPF IR 10 (1)H
                        **/( C(PIN #12) IS  DPF IR 09 (1)H
                        */( D(PIN #13) IS  DPF IR 08 (1)H
                        /( E(PIN #14) IS  DPF IR 11 (1)H
```



```
                        /( *Y8 (PIN #9) CONF MPC 00 L
                        *( *Y7 (PIN #7) CONF MPC 01 L
                        **/( *Y6 (PIN #6) CONF MPC 02 L
                        ***/( *Y5 (PIN #5) CONF MPC 03 L
                        ****/( *Y4 (PIN #4) CONF MPC 04 L
                        *****/( *Y3 (PIN #3) CONF MPC 05 L
                        ******/( *Y2 (PIN #2) CONG CKOFF L
                        *******/( *Y1 (PIN #1) CONF MPC 07 L
  OCTAL  DECIMAL        ********        OCTAL
 ADDRESS ADDRESS EDCBA  ********        DATA
    000      0  00000  11111111        377
    001      1  00001  11111111        377
    002      2  00010  11111111        377
    003      3  00011  11111111        377
    004      4  00100  11111111        377
    005      5  00101  11111111        377
    006      6  00110  11111111        377
    007      7  00111  11111111        377
    010      8  01000  11011111        337     JMP BADR TO J=1 @204
    011      9  01001  11111111        377
    012     10  01010  11011111        337     JMP BADR TO J=1 @204
    013     11  01011  11111111        377
    014     12  01100  10101111        257     JSR BADR TO J2=1 @ 212
    015     13  01101  11111111        377
    016     14  01110  11111111        377     NOT JMP OR JSR FALL THRU TO D1=2 @ 200
    017     15  01111  11111111        377
    020     16  10000  11111111        377
    021     17  10001  11111111        377
    022     18  10010  11111111        377
    023     19  10011  11111111        377
    024     20  10100  11111111        377
    025     21  10101  11111111        377
    026     22  10110  11010111        327     SWAB BADR 024 INOR NEXT
    027     23  10111  11111111        377
    030     24  11000  01101111        157     JMP BADR 011 INOR NEXT
    031     25  11001  11111111        377
    032     26  11010  01101111        157     JMP BADR 011 INOR NEXT
    033     27  11011  11111111        377
    034     28  11100  01101111        157     JSR BADR 011 INOR NEXT
    035     29  11101  11111111        377
    036     30  11110  11101110        356     SOP BADR 210 INOR NXT
    037     31  11111  11110101        365     UNARY AND NOT JMP,JSR,SWAB
                        *****
                        ****/( A(PIN #10) IS  DPG CAL DEST L
                        ***/( B(PIN #11) IS  DPG JMP L OR JSR L
                        **/( C(PIN #12) IS  DPG JMP L
                        */( D(PIN #13) IS  DPG SWAB L
                        /( E(PIN #14) IS  CONG JMP OR JSR L
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A11A1      19-MAY-72      23-A11A1                          ROM LISTING M7260      REV. 0

                                 /( *Y8 (PIN #9) DPG CC OR OPERATE L
                                 */( *Y7 (PIN #7) DPG RTS L
                                 **/( *Y6 (PIN #6) DPG CAL DEST L
                                 ***/( *Y5 (PIN #5)
                                 ****/( *Y4 (PIN #4) DPG CC L
                                 *****/( *Y3 (PIN #3) DPG JMP L OR JSR L
                                 ******/( *Y2 (PIN #2) DPG SWAB L
                                 *******/( *Y1 (PIN #1) DPG JMP L
  OCTAL  DECIMAL                 ********         OCTAL
ADDRESS  ADDRESS     EDCBA       ********         DATA
  000       0        00000       01111111         177        OPR(HALT/WAIT/RTI/BK/IOT/TR)
  001       1        00001       11111111         377        RI
  002       2        00010       11111111         377        RI
  003       3        00011       11111111         377        RI
  004       4        00100       11111111         377        RI
  005       5        00101       11111111         377        RI
  006       6        00110       11111111         377        RI
  007       7        00111       11111111         377        RI
  010       8        01000       11011010         332        JMP MODE 0
  011       9        01001       11011010         332        JMP MODE 4
  012      10        01010       11011010         332        JMP MODE 2
  013      11        01011       11011010         332        JMP MODE 6
  014      12        01100       11011010         332        JMP MODE 1
  015      13        01101       11011010         332        JMP MODE 5
  016      14        01110       11011010         332        JMP MODE 3
  017      15        01111       11011010         332        JMP MODE 7
  020      16        10000       10111111         277        RTS NOT DPG CC OR OPR L
  021      17        10001       01110111         167        CC OPR 240
  022      18        10010       11111111         377        RI
  023      19        10011       01110111         167        CC OPR 260
  024      20        10100       11111111         377        RI
  025      21        10101       01110111         167        CC OPR 240
  026      22        10110       11111111         377        RI
  027      23        10111       01110111         167        CC OPR 260
  030      24        11000       11011101         335        SWAB MODE 0
  031      25        11001       11011101         335        SWAB MODE 4
  032      26        11010       11011101         335        SWAB MODE 2
  033      27        11011       11011101         335        SWAB MODE 6
  034      28        11100       11011101         335        SWAB MODE 1
  035      29        11101       11011101         335        SWAB MODE 5
  036      30        11110       11011101         335        SWAB MODE 3
  037      31        11111       11011101         335        SWAB MODE 7
                     *****
                     ****/( A(PIN #10) IS  DPF IR 05 (1)H
                     ***/( B(PIN #11) IS  DPF IR 04 (1)H
                     **/( C(PIN #12) IS  DPF IR 03 (1)H
                     */( D(PIN #13) IS  DPF IR 06 (1)H
                     /( E(PIN #14) IS  DPF IR 07 (1)H
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A12A1      19-MAY-72      23-A12A1                          ROM LISTING M7260      REV. 0

                                 /( *Y8 (PIN #9)
                                 */( *Y7 (PIN #7) DPF SET V L
                                 **/( *Y6 (PIN #6) DPF SET COUT L
                                 ***/( *Y5 (PIN #5)
                                 ****/( *Y4 (PIN #4)
                                 *****/( *Y3 (PIN #3)
                                 ******/( *Y2 (PIN #2)
                                 *******/( *Y1 (PIN #1)
  OCTAL  DECIMAL                 ********         OCTAL
ADDRESS  ADDRESS     EDCBA       ********         DATA
  000       0        00000       11011111         337        INC OR ADC
  001       1        00001       10011111         237        ADD OR SUB
  002       2        00010       10111111         277        DEC OR SBC
  003       3        00011       11111111         377        CMP OR NEG
  004       4        00100       11111111         377        INC OR ADC
  005       5        00101       11011111         337        ADD OR SUB
  006       6        00110       11111111         377        DEC OR SBC
  007       7        00111       11011111         337        CMP OR NEG
  010       8        01000       11111111         377        INC OR ADC
  011       9        01001       11011111         337        ADD OR SUB
  012      10        01010       11111111         377        DEC OR SBC
  013      11        01011       11011111         337        CMP OR NEG
  014      12        01100       10111111         277        INC OR ADC
  015      13        01101       11111111         377        ADD OR SUB
  016      14        01110       11011111         337        DEC OR SBC
  017      15        01111       10011111         237        CMP OR NEG
  020      16        10000       11011111         337        INC OR ADC
  021      17        10001       11011111         337        ADD OR SUB
  022      18        10010       10111111         277        DEC OR SBC
  023      19        10011       10111111         277        CMP OR NEG
  024      20        10100       11111111         377        INC OR ADC
  025      21        10101       11111111         377        ADD OR SUB
  026      22        10110       11111111         377        DEC OR SBC
  027      23        10111       11111111         377        CMP OR NEG
  030      24        11000       11111111         377        INC OR ADC
  031      25        11001       11111111         377        ADD OR SUB
  032      26        11010       11111111         377        DEC OR SBC
  033      27        11011       11111111         377        CMP OR NEG
  034      28        11100       10111111         277        INC OR ADC
  035      29        11101       10111111         277        ADD OR SUB
  036      30        11110       11011111         337        DEC OR SBC
  037      31        11111       11011111         337        CMP OR NEG
                     *****
                     ****/( A(PIN #10) IS  DPF CODE 1 DEL (1)L
                     ***/( B(PIN #11) IS  DPF CODE 0 DEL (1)L
                     **/( C(PIN #12) IS  DPE NEG DEL (1)H
                     */( D(PIN #13) IS  DPD ALEG 15 DEL (1)L
                     /( E(PIN #14) IS  DPD BLEG 15 DEL (1)L
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```
                                        /( #Y4 (PIN # 9) CONF MPC #3 L
                                        +/( #Y3 (PIN #10) CONF MPC #2 L
                                        ++/( #Y2 (PIN #11) CONF MPC #1 L
                                        +++/( #Y1 (PIN #12) CONF MPC #4 L
                                        ++++          OCTAL
 OCTAL DECIMAL                          ++++          DATA
ADDRESS ADDRESS   HGFEDCBA              1111          #17
   000       0   00000000              1111          #17
   001       1   00000001              1111          #17
   002       2   00000010              1111          #17
   003       3   00000011              1111          #17
   004       4   00000100              1111          #17
   005       5   00000101              1111          #17
   006       6   00000110              1111          #17
   007       7   00000111              1111          #17
   010       8   00001000              1111          #17
   011       9   00001001              1111          #17
   012      10   00001010              1111          #17
   013      11   00001011              1111          #17
   014      12   00001100              1111          #17
   015      13   00001101              1111          #17      NOT ACCESSED
   016      14   00001110              1111          #17
   017      15   00001111              1111          #17      ************
   020      16   00010000              0011          #03
   021      17   00010001              0011          #03
   022      18   00010010              0011          #03
   023      19   00010011              0011          #03
   024      20   00010100              0101          #05
   025      21   00010101              0101          #05
   026      22   00010110              0101          #05
   027      23   00010111              0101          #05
   030      24   00011000              0101          #05
   031      25   00011001              0101          #05
   032      26   00011010              0101          #05
   033      27   00011011              0101          #05
   034      28   00011100              0011          #03
   035      29   00011101              0011          #03      BGE
   036      30   00011110              0011          #03
   037      31   00011111              0011          #03      ************

   040      32   00100000              0011          #03
   041      33   00100001              0101          #05
   042      34   00100010              0011          #03
   043      35   00100011              0101          #05
   044      36   00100100              0011          #03
   045      37   00100101              0101          #05
   046      38   00100110              0011          #03
   047      39   00100111              0101          #05
   050      40   00101000              0011          #03
   051      41   00101001              0101          #05
   052      42   00101010              0011          #03
   053      43   00101011              0101          #05
   054      44   00101100              0011          #03
   055      45   00101101              0101          #05      BNE
   056      46   00101110              0011          #03
   057      47   00101111              0101          #05      ************
   060      48   00110000              0011          #03
   061      49   00110001              0101          #05
   062      50   00110010              0011          #03
   063      51   00110011              0101          #05
   064      52   00110100              0101          #05
   065      53   00110101              0101          #05
   066      54   00110110              0101          #05
   067      55   00110111              0101          #05
   070      56   00111000              0101          #05
   071      57   00111001              0101          #05
   072      58   00111010              0101          #05
   073      59   00111011              0101          #05
   074      60   00111100              0011          #03
   075      61   00111101              0101          #05      BGT
   076      62   00111110              0011          #03
   077      63   00111111              0101          #05      ************
                 ++++++++
                 ++++++++/( A(PIN #05) IS  DPE CC ZERO (1)H
                 +++++++/( B(PIN #06) IS  DPE CC COUT (1)H
                 ++++++/( C(PIN #07) IS  DPE CC NEG (1)H
                 +++++/( D(PIN #04) IS  DPE CC VBIT (1)H
                 ++++/( E(PIN #03) IS  DPF IR 10 (1)H
                 +++/( F(PIN #02) IS  DPF IR 09 (1)H
                 ++/( G(PIN #01) IS  DPF IR 08 (1)H
                 +/( H(PIN #15) IS  DPF IR 15 (1)H
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```
                                        /( *Y4 (PIN # 9) CONF MPC 83 L
                                        +/( *Y3 (PIN #10) CONF MPC 82 L
                                        ++/( *Y2 (PIN #11) CONF MPC 81 L
                                        +++/( *Y1 (PIN #12) CONF MPC 84 L
 OCTAL DECIMAL                          ++++          OCTAL
ADDRESS ADDRESS   HGFEDCBA              ++++          DATA
    100      64   01000000              0011          003
    101      65   01000001              0011          003
    102      66   01000010              0011          003
    103      67   01000011              0011          003
    104      68   01000100              0011          003
    105      69   01000101              0011          003
    106      70   01000110              0011          003
    107      71   01000111              0011          003
    110      72   01001000              0011          003
    111      73   01001001              0011          003
    112      74   01001010              0011          003
    113      75   01001011              0011          003
    114      76   01001100              0011          003
    115      77   01001101              0011          003       BR (ALWAYS)
    116      78   01001110              0011          003
    117      79   01001111              0011          003       ************
    120      80   01010000              0101          005
    121      81   01010001              0101          005
    122      82   01010010              0101          005
    123      83   01010011              0101          005
    124      84   01010100              0011          003
    125      85   01010101              0011          003
    126      86   01010110              0011          003
    127      87   01010111              0011          003
    130      88   01011000              0011          003
    131      89   01011001              0011          003
    132      90   01011010              0011          003
    133      91   01011011              0011          003
    134      92   01011100              0101          005
    135      93   01011101              0101          005       BLT
    136      94   01011110              0101          005
    137      95   01011111              0101          005       ************

    140      96   01100000              0101          005
    141      97   01100001              0011          003
    142      98   01100010              0101          005
    143      99   01100011              0011          003
    144     100   01100100              0101          005
    145     101   01100101              0011          003
    146     102   01100110              0101          005
    147     103   01100111              0011          003
    150     104   01101000              0101          005
    151     105   01101001              0011          003
    152     106   01101010              0101          005
    153     107   01101011              0011          003
    154     108   01101100              0101          005
    155     109   01101101              0011          003       BEQ
    156     110   01101110              0101          005
    157     111   01101111              0011          003       ************
    160     112   01110000              0101          005
    161     113   01110001              0011          003
    162     114   01110010              0101          005
    163     115   01110011              0011          003
    164     116   01110100              0011          003
    165     117   01110101              0011          003
    166     118   01110110              0011          003
    167     119   01110111              0011          003
    170     120   01111000              0011          003
    171     121   01111001              0011          003
    172     122   01111010              0011          003
    173     123   01111011              0011          003
    174     124   01111100              0101          005
    175     125   01111101              0011          003       BLE
    176     126   01111110              0101          005
    177     127   01111111              0011          003       ************
                  ++++++++
                  ++++++++/( A(PIN #05) IS  DPE CC ZERO (1)H
                  +++++++/( B(PIN #06) IS  DPE CC COUT (1)H
                  ++++++/( C(PIN #07) IS  DPE CC NEG (1)H
                  +++++/( D(PIN #04) IS  DPE CC VBIT (1)H
                  ++++/( E(PIN #03) IS  DPF IR 10 (1)H
                  +++/( F(PIN #02) IS  DPF IR 09 (1)H
                  ++/( G(PIN #01) IS  DPF IR 08 (1)H
                  +/( H(PIN #15) IS  DPF IR 15 (1)H
```

```
                                        /( *Y4 (PIN # 9) CONF MPC 03 L
                                        */( *Y3 (PIN #10) CONF MPC 02 L
                                        **/( *Y2 (PIN #11) CONF MPC 01 L
                                        ***/( *Y1 (PIN #12) CONF MPC 04 L
  OCTAL  DECIMAL                        ****      OCTAL
ADDRESS ADDRESS    HGFEDCBA             ****      DATA
    200     128    10000000             0011      003
    201     129    10000001             0011      003
    202     130    10000010             0011      003
    203     131    10000011             0011      003
    204     132    10000100             0101      005
    205     133    10000101             0101      005
    206     134    10000110             0101      005
    207     135    10000111             0101      005
    210     136    10001000             0011      003
    211     137    10001001             0011      003
    212     138    10001010             0011      003
    213     139    10001011             0011      003
    214     140    10001100             0101      005
    215     141    10001101             0101      005       BPL
    216     142    10001110             0101      005       ************
    217     143    10001111             0101      005
    220     144    10010000             0011      003
    221     145    10010001             0011      003
    222     146    10010010             0011      003
    223     147    10010011             0011      003
    224     148    10010100             0011      003
    225     149    10010101             0011      003
    226     150    10010110             0011      003
    227     151    10010111             0011      003
    230     152    10011000             0101      005
    231     153    10011001             0101      005
    232     154    10011010             0101      005
    233     155    10011011             0101      005
    234     156    10011100             0101      005
    235     157    10011101             0101      005       BVC
    236     158    10011110             0101      005
    237     159    10011111             0101      005       ************

    240     160    10100000             0011      003
    241     161    10100001             0101      005
    242     162    10100010             0101      005
    243     163    10100011             0101      005
    244     164    10100100             0011      003
    245     165    10100101             0101      005
    246     166    10100110             0101      005
    247     167    10100111             0101      005
    250     168    10101000             0011      003
    251     169    10101001             0101      005
    252     170    10101010             0101      005
    253     171    10101011             0101      005
    254     172    10101100             0011      003
    255     173    10101101             0101      005       BHI
    256     174    10101110             0101      005
    257     175    10101111             0101      005       ************
    260     176    10110000             0011      003
    261     177    10110001             0011      003
    262     178    10110010             0101      005
    263     179    10110011             0101      005
    264     180    10110100             0011      003
    265     181    10110101             0011      003
    266     182    10110110             0101      005
    267     183    10110111             0101      005
    270     184    10111000             0011      003
    271     185    10111001             0011      003
    272     186    10111010             0101      005
    273     187    10111011             0101      005
    274     188    10111100             0011      003
    275     189    10111101             0011      003       BCC
    276     190    10111110             0101      005
    277     191    10111111             0101      005       ************
                   ********
                   *******/( A(PIN #05) IS  DPE CC ZERO (1)H
                   ******/( B(PIN #06) IS  DPE CC COUT (1)H
                   *****/( C(PIN #07) IS  DPE CC NEG (1)H
                   ****/( D(PIN #04) IS  DPE CC VBIT (1)H
                   ***/( E(PIN #03) IS  DPF IR 10 (1)H
                   **/( F(PIN #02) IS  DPF IR 09 (1)H
                   */( G(PIN #01) IS  DPF IR 08 (1)H
                   /( H(PIN #15) IS  DPF IR 15 (1)H
```

```
                                    /( *Y4 (PIN # 9) CONF MPC 03 L
                                    */( *Y3 (PIN #10) CONF MPC 02 L
                                    **/( *Y2 (PIN #11) CONF MPC 01 L
                                    ***/( *Y1 (PIN #12) CONF MPC 04 L
  OCTAL  DECIMAL                    ****      OCTAL
ADDRESS ADDRESS    HGFEDCBA         ****      DATA
    300     192    11000000         0101      005
    301     193    11000001         0101      005
    302     194    11000010         0101      005
    303     195    11000011         0101      005
    304     196    11000100         0011      003
    305     197    11000101         0011      003
    306     198    11000110         0011      003
    307     199    11000111         0011      003
    310     200    11001000         0101      005
    311     201    11001001         0101      005
    312     202    11001010         0101      005
    313     203    11001011         0101      005
    314     204    11001100         0011      003
    315     205    11001101         0011      003       BMI
    316     206    11001110         0011      003
    317     207    11001111         0011      003       ************
    320     208    11010000         0101      005
    321     209    11010001         0101      005
    322     210    11010010         0101      005
    323     211    11010011         0101      005
    324     212    11010100         0101      005
    325     213    11010101         0101      005
    326     214    11010110         0101      005
    327     215    11010111         0101      005
    330     216    11011000         0011      003
    331     217    11011001         0011      003
    332     218    11011010         0011      003
    333     219    11011011         0011      003
    334     220    11011100         0011      003
    335     221    11011101         0011      003       BVS
    336     222    11011110         0011      003
    337     223    11011111         0011      003       ************

    340     224    11100000         0101      005
    341     225    11100001         0011      003
    342     226    11100010         0011      003
    343     227    11100011         0011      003
    344     228    11100100         0101      005
    345     229    11100101         0011      003
    346     230    11100110         0011      003
    347     231    11100111         0011      003
    350     232    11101000         0101      005
    351     233    11101001         0011      003
    352     234    11101010         0011      003
    353     235    11101011         0011      003
    354     236    11101100         0101      005
    355     237    11101101         0011      003       BLOS
    356     238    11101110         0011      003
    357     239    11101111         0011      003       ************
    360     240    11110000         0101      005
    361     241    11110001         0101      005
    362     242    11110010         0011      003
    363     243    11110011         0011      003
    364     244    11110100         0101      005
    365     245    11110101         0101      005
    366     246    11110110         0011      003
    367     247    11110111         0011      003
    370     248    11111000         0101      005
    371     249    11111001         0101      005
    372     250    11111010         0011      003
    373     251    11111011         0011      003
    374     252    11111100         0101      005
    375     253    11111101         0101      005       BCS
    376     254    11111110         0011      003
    377     255    11111111         0011      003       ************
                   ********
                   *******/( A(PIN #05) IS  DPE CC ZERO (1)H
                   ******/( B(PIN #06) IS  DPE CC COUT (1)H
                   *****/( C(PIN #07) IS  DPE CC NEG (1)H
                   ****/( D(PIN #04) IS  DPE CC VBIT (1)H
                   ***/( E(PIN #03) IS  DPF IR 10 (1)H
                   **/( F(PIN #02) IS  DPF IR 09 (1)H
                   */( G(PIN #01) IS  DPF IR 08 (1)H
                   /( H(PIN #15) IS  DPF IR 15 (1)H
```

PAGE REVISION CONTROL SHEET

SH NO	PAGE REVISIONS													REMARKS
1	H	J	K	L	M	N	P	R	S	T	U	V		*ETCH REV'D NOT TO BE USED PER ORDER D.E.
4	H	J	K	L	M	M	M	R	S	T	U	U		
3	H	H	H	H	H	H	M	R	R	R	R	S		
5	H	H	H	H	H	H	M	R	R	R	R	S		
6	H	H	H	H	J	K	M	R	R	R	R	S		
7	H	H	H	H	J	K	M	R	R	S	R	S		
8	H	H	H	H	H	H	M	R	R	R	R	S		
9	H	H	H	H	H	H	M	R	R	R	R	S		
10	H	H	K	K	K	K	M	R	R	R	R	T		
11	H	H	H	K	K	K	K	R	R	R	R	T		
12	H	H	H	H	K	K	K	R	R	R	R	S		
13	H	H	H	H	H	H	K	R	S	S	R	S		
14	H	H	H	H	H	H	M	R	R	R	R	R		

ETCH REV	C	C	E*	E	E	E	E	F	F	F	F	F												
ECO NO.	5	6	7	8	9	10	11	12	13	15	16	17												

** ECO #14 APPLIED TO ETCH REV C AND E BOARDS ONLY.

FIRST USED ON OPTION/MODEL

DRN.	DATE	8/16/72
CHK'D.	DATE	8/21/72
ENG.	DATE	5/17/72
PROJ. ENG.	DATE	5/17/72
PROD.	DATE	8/21/72

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE CONTROL LOGIC AND MICROPROGRAM

NEXT HIGHER ASSY.

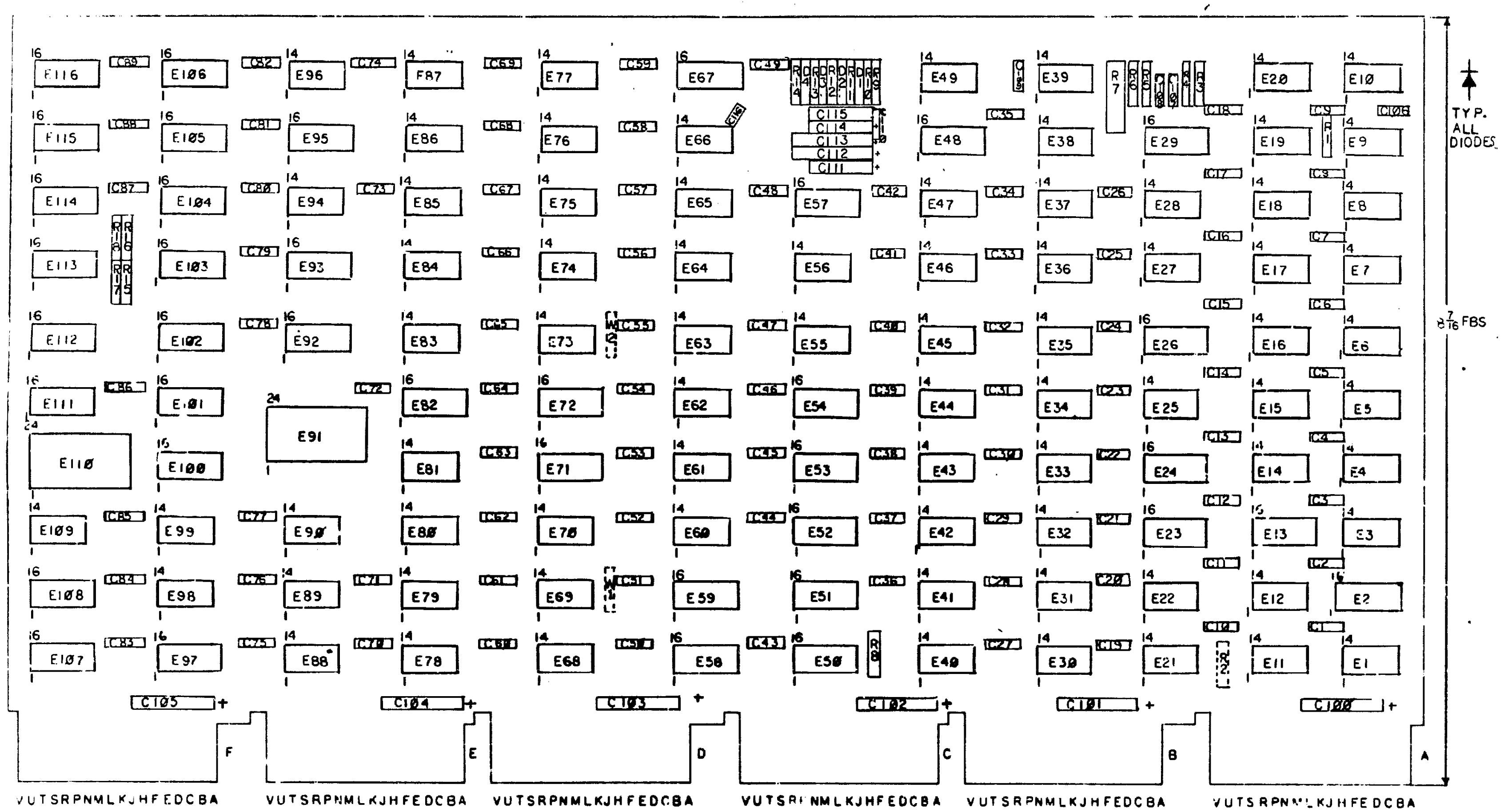
SCALE

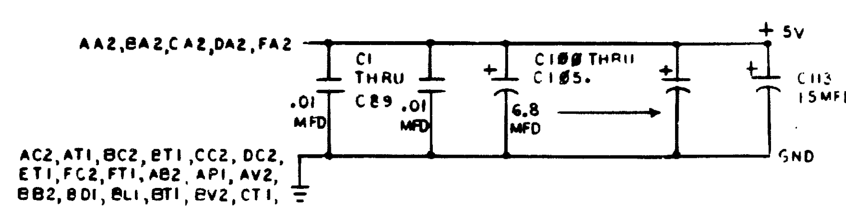
SHEET 1 OF 14

SIZE	CODE	NUMBER	REV.
B	CS	M7261-0-1	V

DIST.

NOTE: UNLESS OTHERWISE NOTED, RESISTANCE IS IN OHMS.
CAPACITANCE IS IN PICOFARADS.
* DEC 8640'S WERE PHASED IN AS 380 REPLACEMENTS.
ANY 380 FAILURES SHOULD BE REPLACED BY 8640'S.





QTY.	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
6	C1ØØ THRU C1Ø5	CAPACITOR, 6.8 MFD, 35V, 10%, S.TA	1005306	69
89	C1 THRU C89	CAPACITOR, .01 MFD, 1ØØV, 2Ø%, DISC	1001610	68
2	C114, 115	CAPACITOR, .68 MFD, 35V, 10%, S.TA.	1009964	67
1	C113	CAPACITOR, 15MFD, 2ØV, 10%, S.TA	1004812	66
1	C112	CAPACITOR, 1ØMFD, 2ØV, 1Ø%, S.TA.	1004813	65
1	C111	CAPACITOR, 2.2MFD, 2ØV, 1Ø%, S.TA.	1002627	64
1	C11Ø	CAPACITOR, 22Ø PF, 1ØØV, 5%, DM	1000021	63
1	C1Ø9	CAPACITOR, 12Ø PF, 1ØØV, 5%, DM.	1000018	62
2	C1Ø8, C116	CAPACITOR, 1ØØØ PF 1ØØV, 5%, DM	1000042	61
1	C1Ø7	CAPACITOR, 22ØØ PF, 25ØV, 2Ø%, DISC	1000055	60
1	C1Ø6	CAPACITOR, 47Ø PF, 1ØØV, D.M.	1000024	59
4	D1, 2, 3, 4.	DIODE D664	1100114	58
2	R6, R8	RESISTOR, 390, 1/4W, 5%	1300309	57
1	R14	RESISTOR, 5.6K, 1/4W, 5%	1301874	56
1	R11	RESISTOR, 1ØK, 1/4 W, 5%	1300479	55
1	R7	RESISTOR, 1K, 3/4 W, 10%, POT.	1309143-07	54
6	R4, 5, 9, 10, 12, 13	RESISTOR, 3ØK, 1/4W, 5%	1302394	53
3	R3, 16, 18.	RESISTOR, 1K, 1/4W, 5%	1300365	52
6	E54, 82, 92, 93, 95, 100.	RESISTOR NETWORK	1311003-02	51
1	R1	RESISTOR, 150, 1/4W, 5%	1300250	50
				49
2	R15, 17	RESISTOR, 2K, 1/4W, 5%	1302388	48
				47
				46
1	E24	IC AØ1A2	23AØ1A2	45
1	E116	IC A19A2	23A19A2	44
1	E115	IC A13A2	23A13A2	43
1	E114	IC A11A2	23A11A2	42
1	E113	IC A18A2	23A18A2	41
1	E112	IC A1ØA2	23A1ØA2	40
1	E1Ø8	IC A14A1	23A14A1	39
1	E1Ø7	IC AØ9A2	23AØ9A2	38
1	E1Ø6	IC A17A2	23A17A2	37
1	E1Ø5	IC A16A2	23A16A2	36
1	E1Ø4	IC AØ5A2	23AØ5A2	35
1	E1Ø3	IC A2ØA2	23A2ØA2	34
1	E1Ø2	IC AØ4A2	23AØ4A2	33
1	E[illegible]	IC AØ9A1	23AØ9A1	32
1	E[illegible]	IC AØ7A1	23AØ7A1	31
1	E[illegible]3	IC AØ2A2	23AØ2A2	30
2	E91, 110.	IC DEC 74154	1909701	29
1	E89	IC DEC 7405	1909930	28
1	E61	IC DEC 7410	1905576	27
1	E6Ø	IC DEC 7430	1905578	26
2	E58, 59.	IC DEC 74153	1909937	25
3	E5Ø, 51, 97.	IC DEC 74174	1910652	24
3	E49, 78, 109	IC DEC 74HØ1-1	1909849	23
2	E46, 62.	IC DEC 7427	1910878	22
2	E45, 69.	IC DEC 8815	1909713	21
1	E39	IC DEC 7413	1909989	20
2	E34, 75.	IC DEC 7420	1905577	19
4	E29, 48, 57, 67	IC DEC 9602	1910951	18
4	E25, 63, 83, 90.	IC DEC 7404	1909686	17
7	E2Ø, 28, 36, 73, 76, 87, 96.	IC DEC 7474	1905547	16
1	E17	IC DEC 7437	1910091	15
* 3	E12, 22, 32.	IC DEC 8640	1911469	14
4	E1Ø, 64, 81, 84.	IC DEC 74H4Ø	1905586	13
10	E9, 27, 37, 47, 55, 66, 80, 85, 96, 99	IC DEC 7400	1905575	12
13	E6, 14, 18, 19, 33, 35, 38, 68, 70, 74, 77, 88, 94.	IC DEC 7402	1909004	11
9	E4, 7, 8, 15, 16, 44, 56, 65, 86.	IC DEC 7473	1905587	10
3	E3, 5, 79.	IC DEC 7408	1910155	9
7	E2, 13, 23, 26, 52, 101, 111.	IC DEC 74175	1910651	8
9	E1, 11, 21, 30, 31, 40 THRU 43.	IC DEC 8881	1909705	7
12		EYELET	9006732	6
1		HANDLE, MODULE	E-PS-121Ø711-02	5
1		ETCHED CIRCUIT BOARD	5009745	4
REF		MODULE ECO HISTORY	B-MH-M7261-Ø-6	3
REF		ASSY/DRILL HOLE LAYOUT	D-AH-M7261-Ø-5	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M7261-Ø-4	1

PARTS LIST

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
D664	1N3606		

DRN Simmons DATE 9-5-73
CHK'D DATE 10-3-73
DATE 10-30-73
DATE 11-20-73

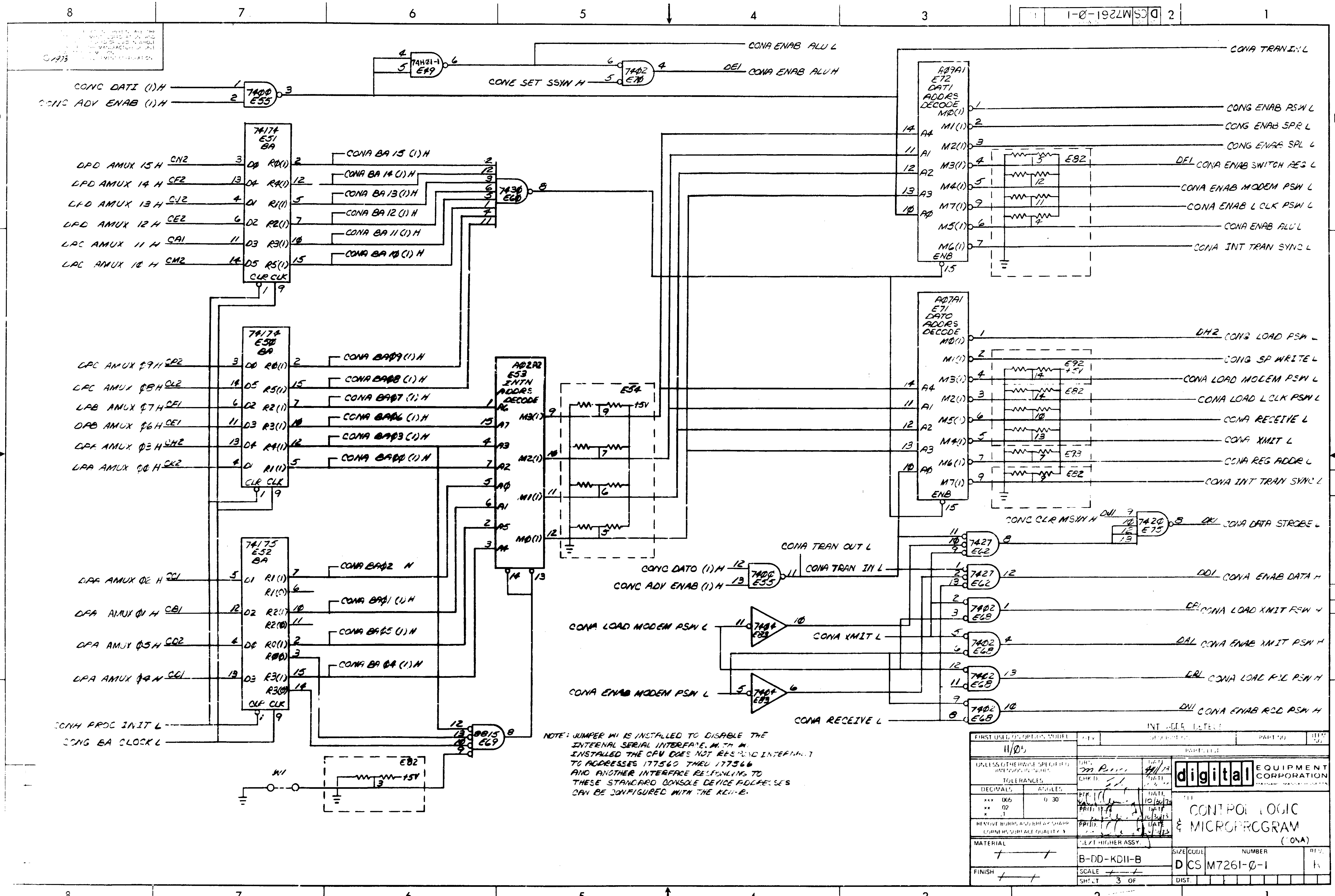
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE CONTROL LOGIC & MICROPROGRAM

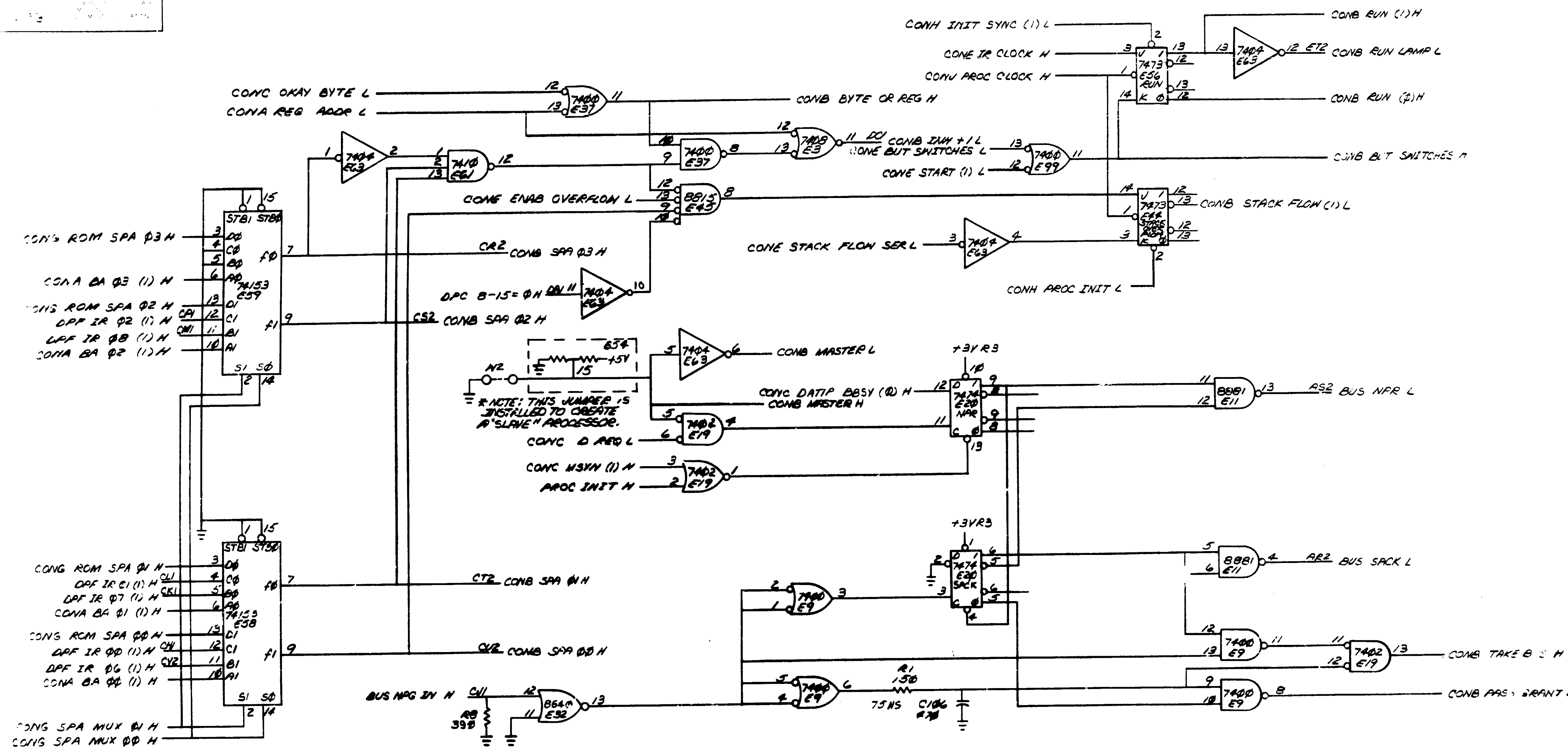
SIZE D CODE CS NUMBER M7261-Ø-1 REV U

PRINTED CIRCUIT REV F

SHEET 2 OF



CONA ENAB ALU L
CONA ENAB ALU H
CONE SET SSYN H
CONC DATI (1) H
CONC ADV ENAB (1) H
CONA TRAN IN L
A07A1 E72 DATI ADDRS DECODE
CONG ENAB PSW L
CONG ENAB SPR L
CONG ENAB SPL L
CONA ENAB SWITCH REG L
CONA ENAB MODEM PSW L
CONA ENAB L CLK PSW L
CONA ENAB ALU L
CONA INT TRAN SYNC L
74174 E51 BA
DPD AMUX 15 H
DPD AMUX 14 H
DPD AMUX 13 H
DPD AMUX 12 H
DPC AMUX 11 H
DPC AMUX 10 H
CONA BA 15 (1) H
CONA BA 14 (1) H
CONA BA 13 (1) H
CONA BA 12 (1) H
CONA BA 11 (1) H
CONA BA 10 (1) H
7430 E60
74174 E50 BA
DPC AMUX 09 H
DPC AMUX 08 H
DPB AMUX 07 H
DPB AMUX 06 H
DPA AMUX 03 H
DPA AMUX 00 H
CONA BA09 (1) H
CONA BA08 (1) H
CONA BA07 (1) H
CONA BA06 (1) H
CONA BA03 (1) H
CONA BA00 (1) H
A02A2 E53 INTN ADDRS DECODE
E54
+5V
A07A1 E71 DATO ADDRS DECODE
CONG LOAD PSW L
CONG SP WRITE L
CONA LOAD MODEM PSW L
CONA LOAD L CLK PSW L
CONA RECEIVE L
CONA XMIT L
CONA REG ADDR L
CONA INT TRAN SYNC L
CONC CLR MSYN H
7420 E75
CONA DATA STROBE L
74175 E52 BA
DPA AMUX 02 H
DPA AMUX 01 H
DPA AMUX 05 H
DPA AMUX 04 H
CONA BA02 H
CONA BA01 (1) H
CONA BA05 (1) H
CONA BA 04 (1) H
CONH PROC INIT L
CONG BA CLOCK L
8815 E69
W1
E82
CONA TRAN OUT L
CONC DATO (1) H
CONC ADV ENAB (1) H
CONA TRAN IN L
CONA LOAD MODEM PSW L
CONA XMIT L
CONA ENAB MODEM PSW L
CONA RECEIVE L
7427 E62
CONA ENAB DATA H
7402 E68
CONA LOAD XMIT PSW H
CONA ENAB XMIT PSW H
CONA LOAD RCV PSW H
CONA ENAB RCV PSW H
NOTE: JUMPER W1 IS INSTALLED TO DISABLE THE INTERNAL SERIAL INTERFACE. WITH W1 INSTALLED THE CPU DOES NOT RESPOND INTERNALLY TO ADDRESSES 177560 THRU 177566 AND ANOTHER INTERFACE RESPONDING TO THESE STANDARD CONSOLE DEVICE ADDRESSES CAN BE CONFIGURED WITH THE KD11-B.
digital EQUIPMENT CORPORATION
CONTROL LOGIC & MICROPROGRAM (CONA)
B-DD-KD11-B
D CS M7261-0-1
SHEET 3


CONH INIT SYNC (1) L
CONE IR CLOCK H
CONU PROC CLOCK H
CONB RUN (1) H
CONB RUN LAMP L
CONB RUN (Ø) H
CONC OKAY BYTE L
CONA REG ADDR L
CONB BYTE OR REG H
CONB INH +1 L
CONE BUT SWITCHES L
CONE START (1) L
CONB BUT SWITCHES H
CONE ENAB OVERFLOW L
CONB STACK FLOW (1) L
CONE STACK FLOW SER L
CONH PROC INIT L
CONG ROM SPA Ø3 H
CONA BA Ø3 (1) H
CONG ROM SPA Ø2 H
DPF IR Ø2 (1) H
DPF IR Ø8 (1) H
CONA BA Ø2 (1) H
CONB SPA Ø3 H
CONB SPA Ø2 H
DPC B-15=Ø H
CONB MASTER L
*NOTE: THIS JUMPER IS INSTALLED TO CREATE A "SLAVE" PROCESSOR.
CONC DATIP BBSY (1) H
CONB MASTER H
CONC D REQ L
CONC MSYN (1) H
PROC INIT H
BUS NPR L
BUS SACK L
CONG ROM SPA Ø1 H
DPF IR Ø1 (1) H
DPF IR Ø7 (1) H
CONA BA Ø1 (1) H
CONG ROM SPA ØØ H
DPF IR ØØ (1) H
DPF IR Ø6 (1) H
CONA BA ØØ (1) H
CONB SPA Ø1 H
CONB SPA ØØ H
CONG SPA MUX Ø1 H
CONG SPA MUX ØØ H
BUS NPG IN H
CONB TAKE B S H
CONB PASS GRANT L

FIRST USED ON OPTION MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
11/Ø5		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES
TOLERANCES
DECIMALS: .xxx ±.005, .xx ±.02, .x ±.1 — ANGLES: ±0 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH

DRN: DATE 4/13/73
CHKD: DATE
ENG: DATE
PROJ ENG: DATE
PROD: DATE

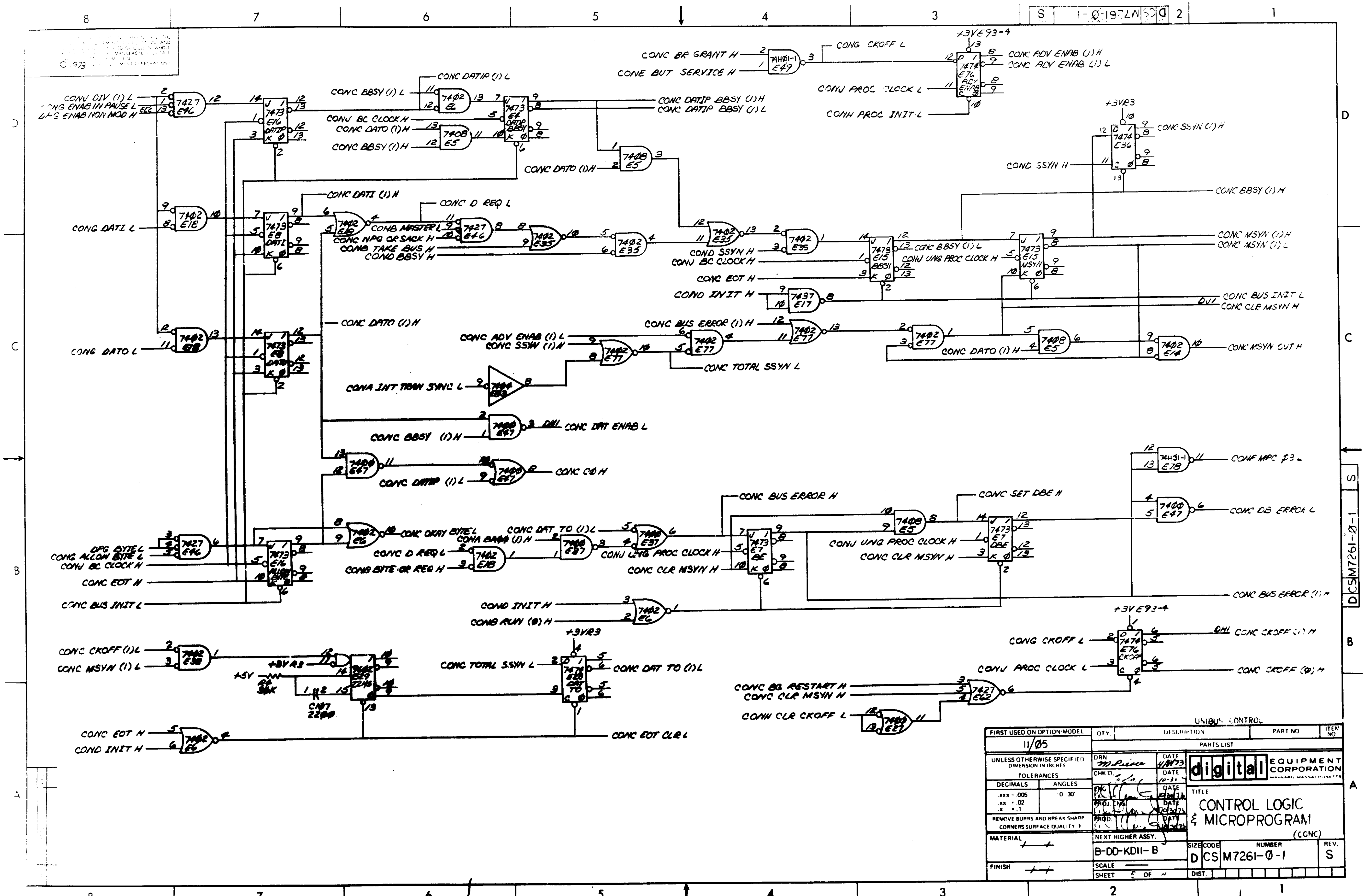
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

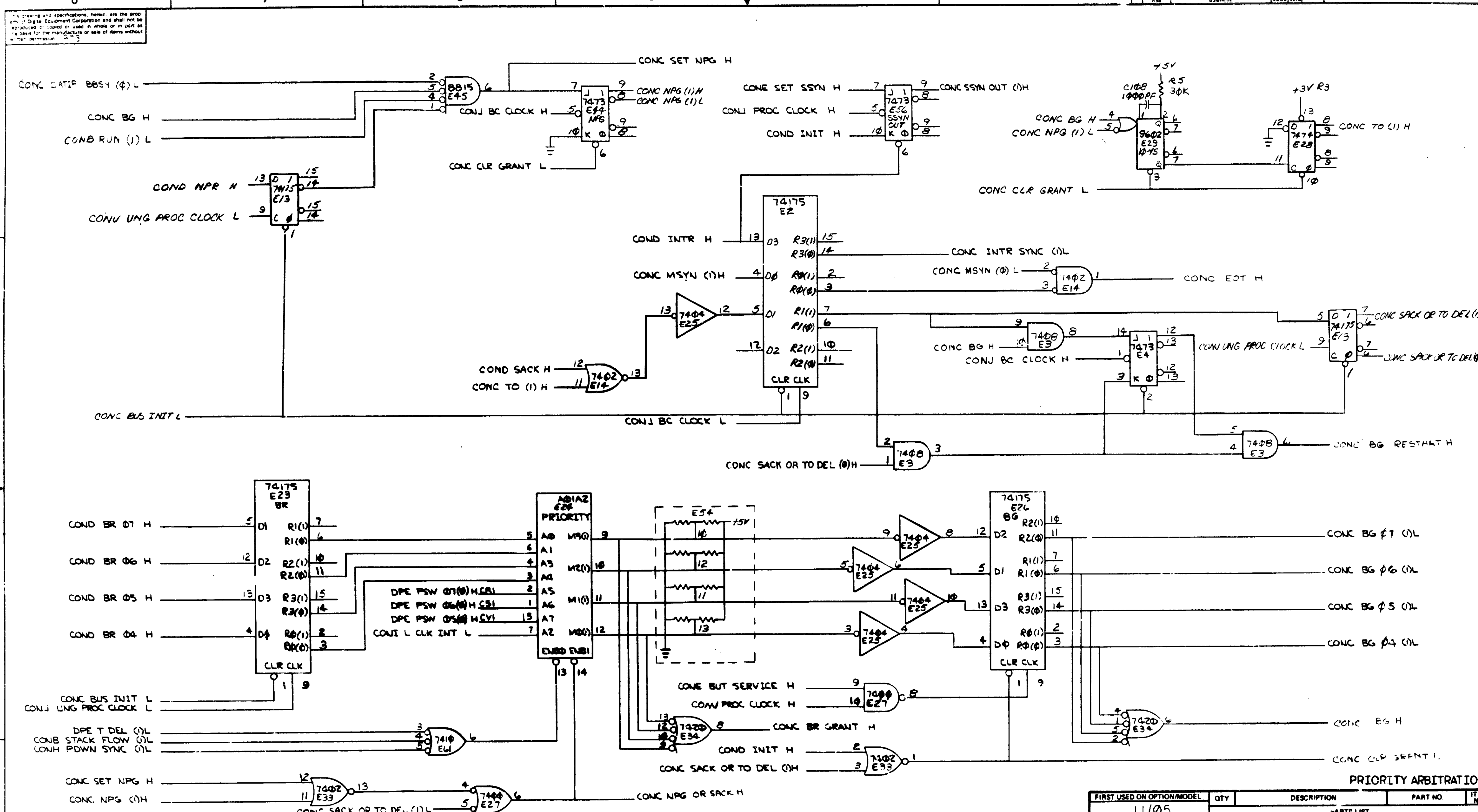
TITLE: CONTROL LOGIC & MICROPROGRAM (CONB)

NEXT HIGHER ASSY: B-DD-KD11-B

SIZE: D | CODE: CS | NUMBER: M7261-Ø-1 | REV: S

SCALE —
SHEET 4 OF
DIST.


UNIBUS CONTROL
FIRST USED ON OPTION-MODEL
11/05
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS
ANGLES
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH
QTY
DESCRIPTION
PART NO
ITEM NO
PARTS LIST
NEXT HIGHER ASSY.
B-DD-KD11-B
SCALE
SHEET
digital EQUIPMENT CORPORATION
TITLE
CONTROL LOGIC & MICROPROGRAM
(CONC)
SIZE CODE NUMBER REV.
D CS M7261-Ø-1 S
DIST.



CONC SET NPG H
CONC NPG (1) H
CONC NPG (1) L
CONC BG H
CONB RUN (1) L
CONC BC CLOCK H
CONC CLR GRANT L
COND NPR H
CONU UNG PROC CLOCK L
CONC SET SSYN H
CONC SSYN OUT (1) H
CONJ PROC CLOCK H
COND INIT H
CONC NPG (1) L
CONC TO (1) H
CONC CLR GRANT L
COND INTR H
CONC INTR SYNC (1) L
CONC MSYN (1) H
CONC MSYN (Ø) L
CONC EOT H
COND SACK H
CONC TO (1) H
CONC SACK OR TO DEL (1) H
CONC SACK OR TO DEL (Ø) H
CONC BG H
CONJ BC CLOCK H
CONC BUS INIT L
CONJ BC CLOCK L
CONC BG RESTART H
COND BR Ø7 H
COND BR Ø6 H
COND BR Ø5 H
COND BR Ø4 H
DPE PSW Ø7(Ø) H
DPE PSW Ø6(Ø) H
DPE PSW Ø5(Ø) H
COUT L CLK INT L
PRIORITY
CONC BG Ø7 (1) L
CONC BG Ø6 (1) L
CONC BG Ø5 (1) L
CONC BG Ø4 (1) L
CONC BUT SERVICE H
CONU PROC CLOCK H
CONC BR GRANT H
COND INIT H
CONC SACK OR TO DEL (1) H
CONC BG H
CONC CLR GRANT L
CONC BUS INIT L
CONJ UNG PROC CLOCK L
DPE T DEL (1) L
CONB STACK FLOW (1) L
CONH PDWN SYNC (1) L
CONC SET NPG H
CONC NPG (1) H
CONC SACK OR TO DEL (1) L
CONC NPG OR SACK H

PRIORITY ARBITRATION

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS: .XXX ± .005, .XX ± .02, .X ± .1 — ANGLES: ±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN M. Pahl — CHKD Costa — ENG — PROJ ENG — PROD

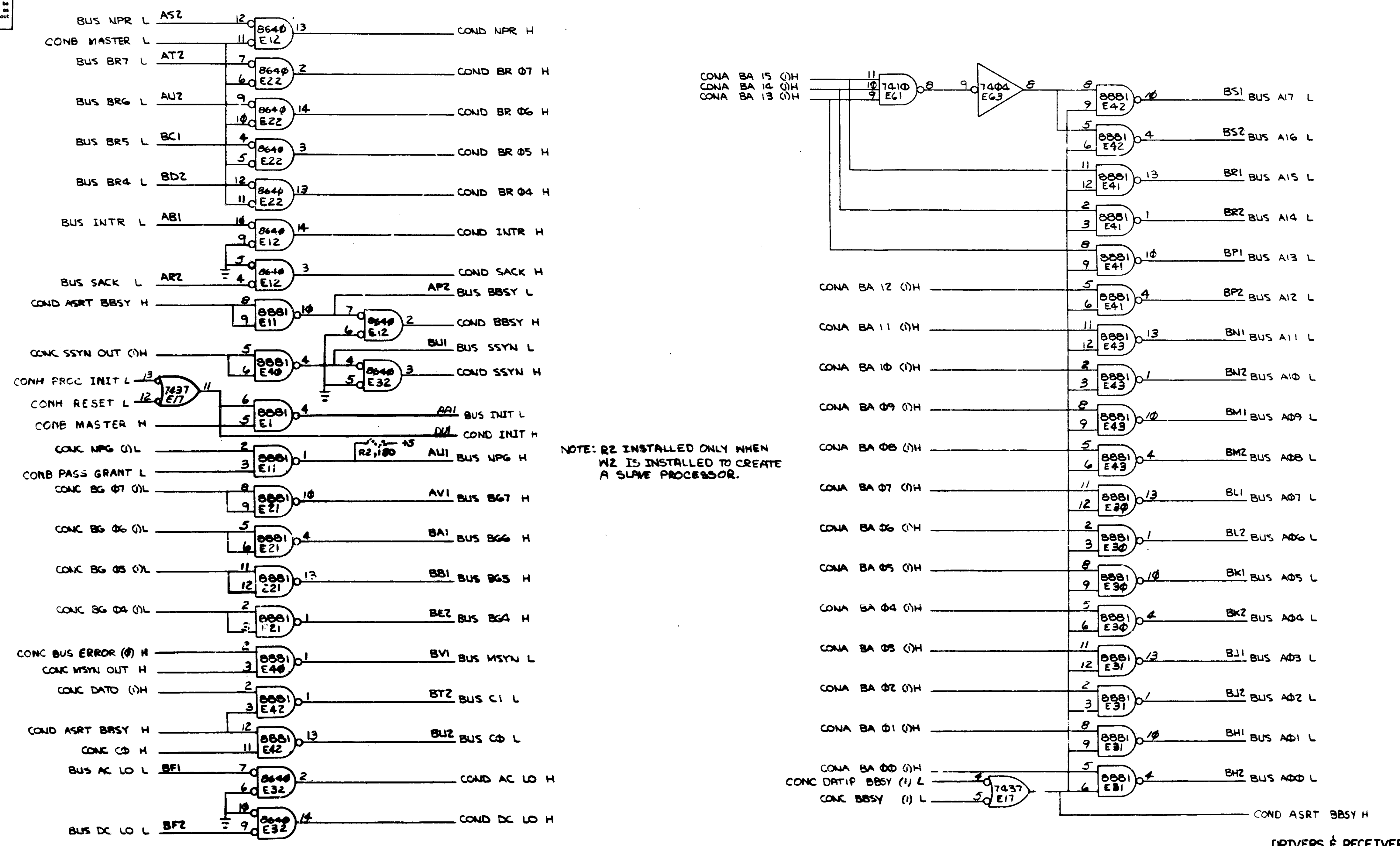
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL LOGIC & MICROPROGRAM (CONC1)

NEXT HIGHER ASSY: B-DD-KD11-B

SIZE D CODE CS NUMBER M7261-Ø-1 REV. R

SCALE — SHEET 6 OF


BUS NPR L
CONB MASTER L
BUS BR7 L
BUS BR6 L
BUS BR5 L
BUS BR4 L
BUS INTR L
BUS SACK L
COND ASRT BBSY H
CONC SSYN OUT (1)H
CONH PROC INIT L
CONH RESET L
CONB MASTER H
CONC NPG (1)L
CONB PASS GRANT L
CONC BG Ø7 (1)L
CONC BG Ø6 (1)L
CONC BG Ø5 (1)L
CONC BG Ø4 (1)L
CONC BUS ERROR (Ø) H
CONC MSYN OUT H
CONC DATO (1)H
COND ASRT BBSY H
CONC CØ H
BUS AC LO L
BUS DC LO L
COND NPR H
COND BR Ø7 H
COND BR Ø6 H
COND BR Ø5 H
COND BR Ø4 H
COND INTR H
COND SACK H
BUS BBSY L
COND BBSY H
BUS SSYN L
COND SSYN H
BUS INIT L
COND INIT H
BUS NPG H
BUS BG7 H
BUS BG6 H
BUS BG5 H
BUS BG4 H
BUS MSYN L
BUS C1 L
BUS CØ L
COND AC LO H
COND DC LO H
NOTE: R2 INSTALLED ONLY WHEN W2 IS INSTALLED TO CREATE A SLAVE PROCESSOR.
CONA BA 15 (1)H
CONA BA 14 (1)H
CONA BA 13 (1)H
CONA BA 12 (1)H
CONA BA 11 (1)H
CONA BA 1Ø (1)H
CONA BA Ø9 (1)H
CONA BA Ø8 (1)H
CONA BA Ø7 (1)H
CONA BA Ø6 (1)H
CONA BA Ø5 (1)H
CONA BA Ø4 (1)H
CONA BA Ø3 (1)H
CONA BA Ø2 (1)H
CONA BA Ø1 (1)H
CONA BA ØØ (1)H
CONC DATIP BBSY (1) L
CONC BBSY (1) L
BUS A17 L
BUS A16 L
BUS A15 L
BUS A14 L
BUS A13 L
BUS A12 L
BUS A11 L
BUS A1Ø L
BUS AØ9 L
BUS AØ8 L
BUS AØ7 L
BUS AØ6 L
BUS AØ5 L
BUS AØ4 L
BUS AØ3 L
BUS AØ2 L
BUS AØ1 L
BUS AØØ L
COND ASRT BBSY H
DRIVERS & RECEIVERS

FIRST USED ON OPTION/MODEL: 11/Ø5

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES: DECIMALS .XXX ± .005, .XX ± .02, .X ± .1; ANGLES ±0° 30'

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL LOGIC & MICROPROGRAM (COND)

NEXT HIGHER ASSY: B-DD-KD11-B

SIZE D CODE CS NUMBER M7261-Ø-1 REV S

SHEET 7 OF

CONE SET SSYN H

CONC DB ERROR L

CONF MPC Φ6 L

CONE EXAM SW L

CONF MPC Φ5 L

CONF MPC ΦΦ L

CONF MPC Φ4 L

CONF MPC Φ2 L

CONF MPC Φ3 L

CONE DEP SW L

CONF MPC Φ1 L

CONE JMP OR JSR L

CONE BUT IR DECODE L

CONE BUT BYTE L

CONE ALLOW CONSTANTS L

CONE BUT DESTINATION L

CONE BUT MOVE L

CONE BUT INTERRUPT L

CONE BUT UNARY L

CONE BUT SWITCHES L

CONE BUT NON MOD L

CONE BUT SERVICE L

CONE ENAB OVERFLOW L

CONJ UNG PROC CLOCK L

CONE START (I)L

CONE LOAD (I)L

CONE EXAM (I)L

CONE CONT (I)L

CONE STOP (I)L

CONE DEP (I)L

CONE IR CLOCK H

CONE BUT INIT H

CONE ENAB UNARY L

CONE IST EXAM (I)H

CONE IST DEP (I)H

CONB BUT SWITCHES H

CONJ PROC CLOCK H

CONH PROC INIT L

CONC BUS ERROR (I)H

CONG BUT Φ3 L

CONG BUT Φ2 L

CONG BUT Φ1 L

CONG BUT ΦΦ L

DPE T DEL (I)L

DPG WAIT L

DPH XMIT INT L

DPH RCD INT L

CONE STOP (I)L

CONI L CLK INT L

CONH PDWN SYNC (I)L

CONB STACKFLOW (I)L

CONF MPC ΦΦ L

CONF MPC Φ2 L

CONF MPC Φ1 L

CONF MPC ΦΦ L

CONE L CLK SER L

CONE PWR FAIL SER L

CONE STACK FLOW SER L

CONE XMIT SER L

CONE RCD SER L

FN1 BR GRANT H

CONE BUT SERVICE H

CONE BUT SERVICE L

DPG CAL DEST L

CONE BUT IR DECODE L

CONE BUT DESTINATION L

DPG BYTE L

CONE BUT BYTE L

CONA BA ΦΦ (I)H

CONE BUT INTERRUPT L

CONC INTR SYNC (I) L

DPG TRAP L

CONE BUT IR DECODE L

DPG EMT L

DPG RTS L

DPG MOVE L

CONE BUT MOVE L

DPG BYTE L

DPG ENAB NON MOD H

CONE BUT NON MOD L

CONE BUT MOVE H

CONF MPC Φ5 L

CONF MPC Φ4 L

CONF MPC Φ3 L

CONF MPC Φ2 L

CONF MPC Φ1 L

CONF MPC ΦΦ L

MICRO BRANCH LOGIC

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS: XXX ± .005, XX ± .01, X ± .1
ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN. [illegible] DATE 12/17-
CHK'D DATE
ENG. DATE
APPD. ENG DATE
PROD. DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL LOGIC & MICROPROGRAM (CONE)

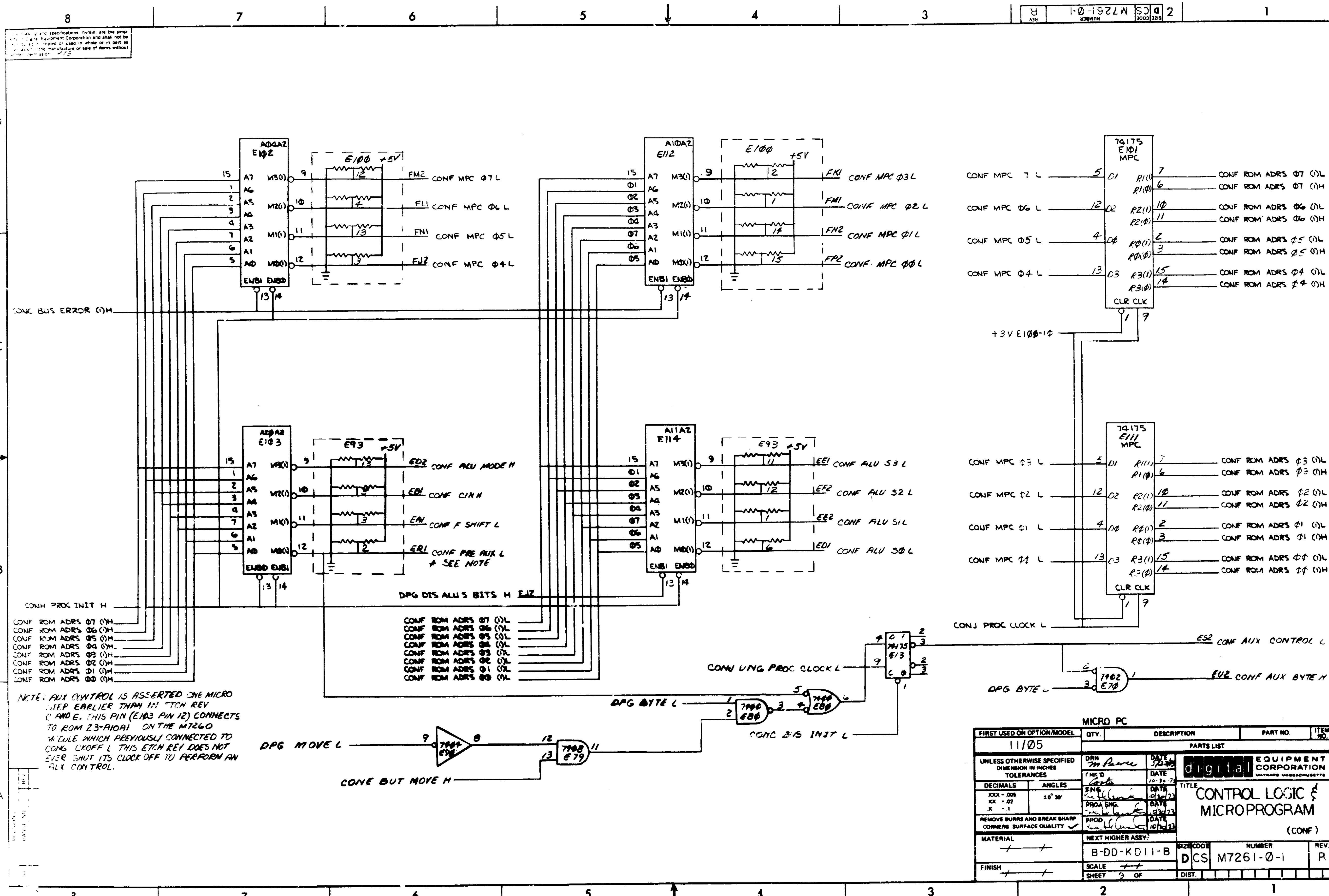
NEXT HIGHER ASSY: B-DD-KD11-B

SIZE D | CODE CS | NUMBER M7261-Ø-1 | REV R

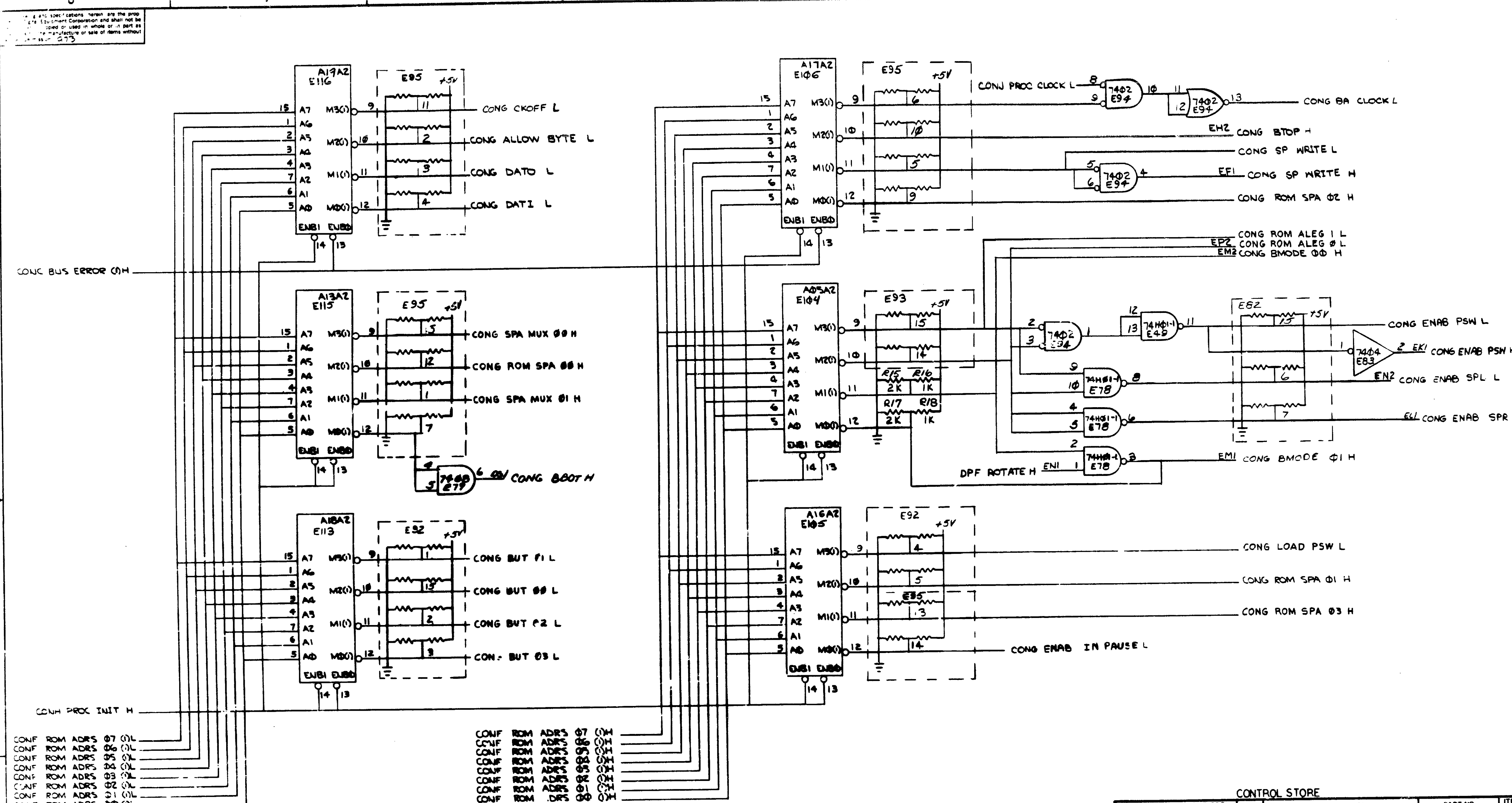
SCALE
SHEET 8 OF

DIST

M7261-Ø-1



CONTROL LOGIC & MICROPROGRAM
(CONF)
D CS M7261-Ø-1 R
MICRO PC
FIRST USED ON OPTION/MODEL 11/05
NEXT HIGHER ASSY. B-DD-KD11-B
SHEET 3 OF
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS .XXX = .005 .XX = .02 .X = .1
ANGLES ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH
QTY. DESCRIPTION PART NO. ITEM NO.
PARTS LIST
DRN CHK'D ENG. PROJ. ENG. PROD. DATE
NOTE: AUX CONTROL IS ASSERTED ONE MICRO STEP EARLIER THAN IN ETCH REV C AND E. THIS PIN (E1Ø3 PIN 12) CONNECTS TO ROM 23-A1ØA1 ON THE M7260 MODULE WHICH PREVIOUSLY CONNECTED TO CONG CKOFF L. THIS ETCH REV DOES NOT EVER SHUT ITS CLOCK OFF TO PERFORM AN AUX CONTROL.
AØØA2 E1Ø2
A1ØA2 E112
A2ØA2 E1Ø3
A11A2 E114
E1ØØ +5V
E93 +5V
74175 E1Ø1 MPC
74175 E111 MPC
CONF MPC Ø7 L
CONF MPC Ø6 L
CONF MPC Ø5 L
CONF MPC Ø4 L
CONF MPC Ø3 L
CONF MPC Ø2 L
CONF MPC Ø1 L
CONF MPC ØØ L
CONF ALU MODE H
CONF CIN H
CONF F SHIFT L
CONF PRE AUX L * SEE NOTE
CONF ALU S3 L
CONF ALU S2 L
CONF ALU S1 L
CONF ALU SØ L
CONC BUS ERROR (1)H
CONH PROC INIT H
DPG DIS ALUS BITS H
CONF ROM ADRS Ø7 (1)H
CONF ROM ADRS Ø7 (1)L
CONF ROM ADRS ØØ (1)L
CONF ROM ADRS ØØ (1)H
+3V E1ØØ-1Ø
CONJ PROC CLOCK L
CONW UNG PROC CLOCK L
CONF AUX CONTROL L
CONF AUX BYTE H
DPG BYTE L
DPG MOVE L
CONF BUT MOVE H
CONC 2/5 INIT L
7474 E13
74Ø2 E7Ø
74ØØ E8Ø
74Ø4 E94
74Ø8 E79



A19A2 E116
A17A2 E106
A13A2 E115
A05A2 E104
A18A2 E113
A16A2 E105
E95
E93
E92
E62
+5V
CONG CKOFF L
CONG ALLOW BYTE L
CONG DATO L
CONG DATI L
CONG BUS ERROR (1)H
CONG SPA MUX 00 H
CONG ROM SPA 00 H
CONG SPA MUX 01 H
CONG BOOT H
CONG BUT F1 L
CONG BUT 00 L
CONG BUT F2 L
CONG BUT 03 L
CONH PROC INIT H
CONF ROM ADRS 07 (1)L
CONF ROM ADRS 06 (1)L
CONF ROM ADRS 05 (1)L
CONF ROM ADRS 04 (1)L
CONF ROM ADRS 03 (1)L
CONF ROM ADRS 02 (1)L
CONF ROM ADRS 01 (1)L
CONF ROM ADRS 00 (1)L
CONF ROM ADRS 07 (1)H
CONF ROM ADRS 06 (1)H
CONF ROM ADRS 05 (1)H
CONF ROM ADRS 04 (1)H
CONF ROM ADRS 03 (1)H
CONF ROM ADRS 02 (1)H
CONF ROM ADRS 01 (1)H
CONF ROM ADRS 00 (1)H
CONJ PROC CLOCK L
CONG BA CLOCK L
CONG BTOP H
CONG SP WRITE L
CONG SP WRITE H
CONG ROM SPA 02 H
CONG ROM ALEG 1 L
CONG ROM ALEG 0 L
CONG BMODE 00 H
CONG ENAB PSW L
CONG ENAB PSW H
CONG ENAB SPL L
CONG ENAB SPR L
CONG BMODE 01 H
DPF ROTATE H
CONG LOAD PSW L
CONG ROM SPA 01 H
CONG ROM SPA 03 H
CONG ENAB IN PAUSE L

CONTROL STORE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO	ITEM NO.
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS XXX ± .005, XX ± .02, X ± .1; ANGLES ±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

NEXT HIGHER ASSY: B-DD-KD11-B

SCALE —

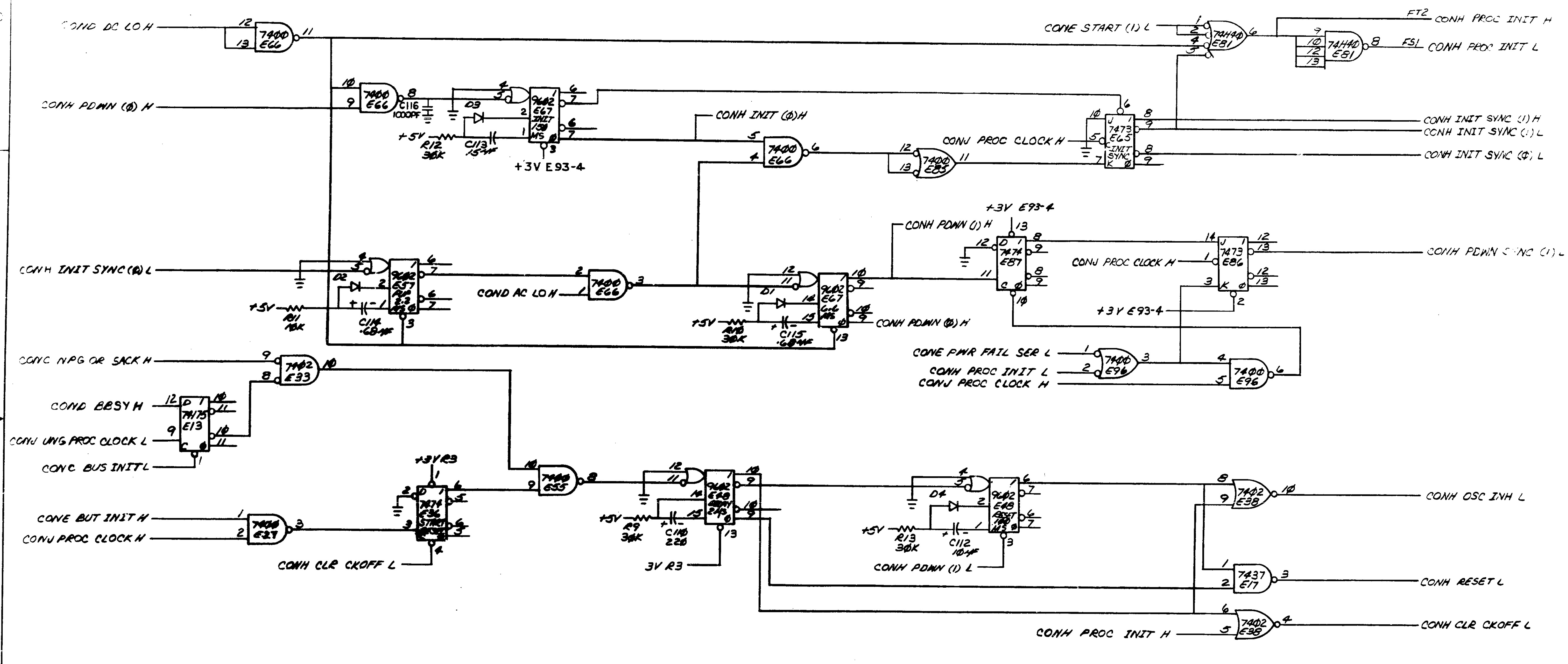
SHEET 10 OF

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL LOGIC & MICROPROGRAM (CONG)

SIZE	CODE	NUMBER	REV.
D	CS	M7261-0-1	R

DIST.



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/Ø5		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS .xxx ± .005 .xx ± .02 .x ± .1
ANGLES ± 0 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH

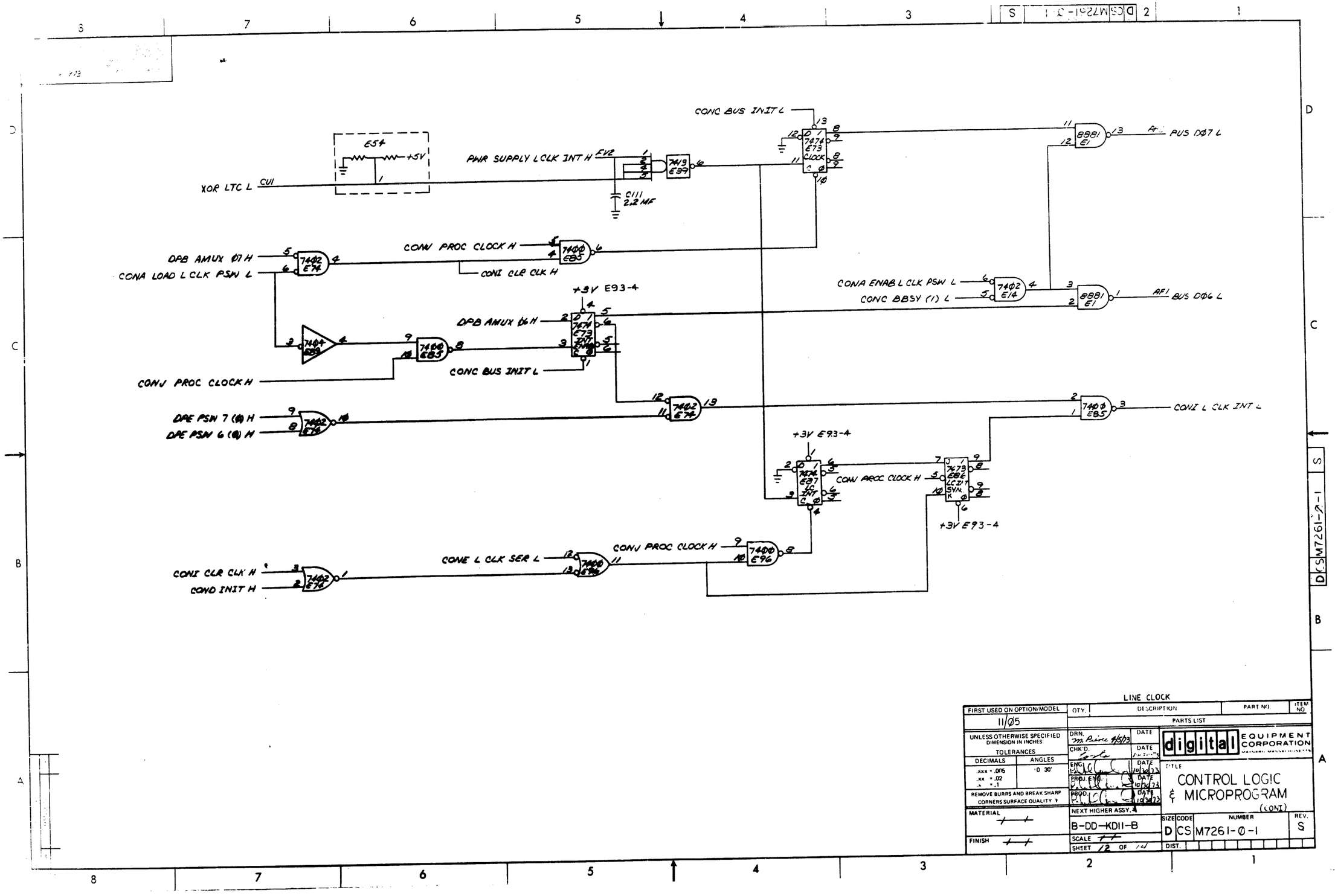
NEXT HIGHER ASSY: B-DD-KD11-B
SCALE
SHEET 11 OF 14

digital EQUIPMENT CORPORATION

TITLE: CONTROL LOGIC & MICROPROGRAM (CONH)

POWER FAIL

SIZE D CODE CS NUMBER M7261-Ø-1 REV. T



LINE CLOCK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/05		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS: .xxx ± .005, .xx ± .02, .x ± .1 — ANGLES: ±0 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH

DRN. M Price 4/5/73 DATE
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE

digital EQUIPMENT CORPORATION

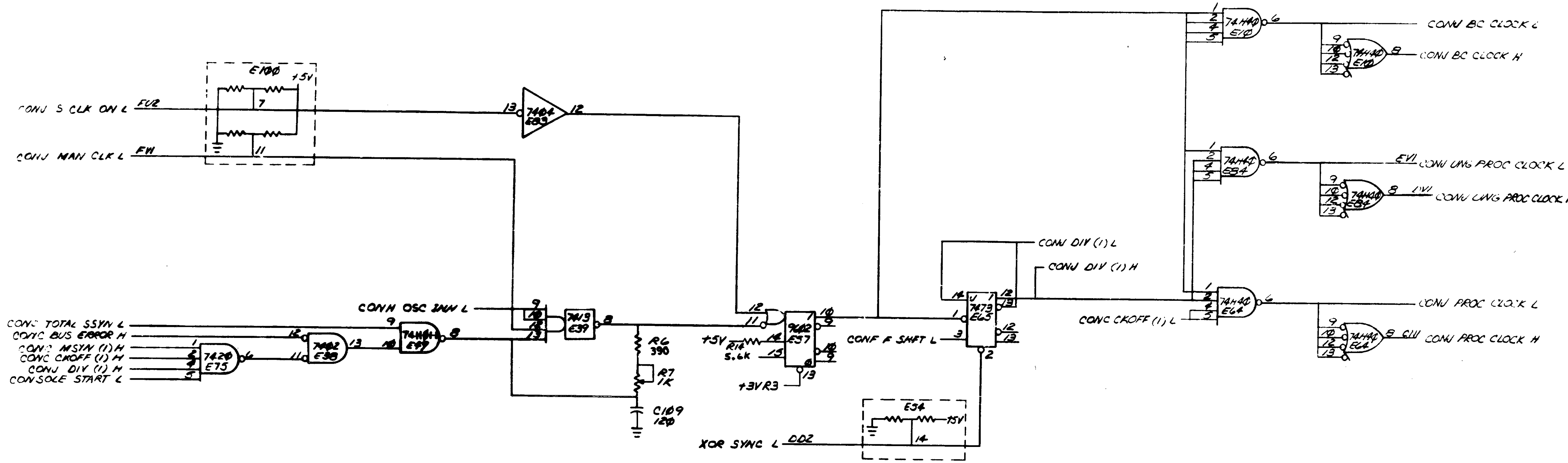
TITLE: CONTROL LOGIC & MICROPROGRAM (CONT)

NEXT HIGHER ASSY. B-DD-KDII-B
SCALE
SHEET 12 OF 14

SIZE	CODE	NUMBER	REV.
D	CS	M7261-0-1	S

DIST.

D CS M7261-0-1 S



FIRST USED ON	11/75
DRN	M. Pierce 4/5/73
SIZE	D
CODE	CS
NUMBER	M7261-Ø-1
REV	S
NEXT HIGHER ASSY	B-DD-KD11-B
SHEET	13

digital EQUIPMENT CORPORATION

CONTROL LOGIC & MICROPROGRAM (CONJ)

D CS M7261-Ø-1 S

39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	09	08	07	06	05	04	03	02	01	00
CONF MPC Ø7 L	CONF MPC Ø6 L	CONF MPC Ø5 L	CONF MPC Ø4 L	CONF MPC Ø3 L	CONF MPC Ø2 L	CONF MPC Ø1 L	CONF MPC ØØ L	CONF ALU S3 L	CONF ALU S2 L	CONF ALU S1 L	CONF ALU S0 L	CONF ALU MODE H	CONF CIN H	CONF F SHIFT L	CONF AUX CONTROL L	CONG LOAD PSW L	CONG ROM SPA Ø1 H	CONG ROM SPA Ø3 H	CONG ENAB IN PAUSE L	CONG SPA MUX ØØ H	CONG ROM SPA Ø0 H	CONG SPA MUX Ø1 H	CONG BBOT H	CONG BA CLOCK L	CONG BTOP H	CONG SP WRITE L	CONG ROM SPA Ø2 H	CONG CKOFF L	CONG ALLOW BYTE L	CONG DATO L	CONG DATI L	CONG ROM ALEG I L	CONG ROM ALEG Ø L	CONG BMODE ØØ H	CONG BMODE Ø1 H	CONG BUT Ø1 L	CONG BUT ØØ L	CONG BUT Ø2 L	CONG BUT Ø3 L
			NXT						ALU				CRI	FSH	AUX	PSW	SPI	SP3	DIP	SMØ	SPØ	SMI	BBT	BAR	BTP	SPF	SP2	CKO	ABT	TNS		ALG		BRG		BUT			
A04A2			A10A2					A11A2				A20A2				A06A2			A13A2				A17A2				A19A2					A05A2				A18A2			

31	30	29	28	27
ALU				
AL	L	L	L	H
AA	L	L	L	L
AB	L	L	H	H
AB̄	L	L	H	L
Ø	L	H	L	H
A OR B	L	H	H	H
BL	L	H	H	L
A PLUS B	L	H	L	H
A XOR B	L	H	L	L
A-B-1	L	H	L	H
B	H	L	H	H
-1	H	L	H	L
A-1	H	L	L	H
Ā	H	L	L	L
ASL	H	H	H	H
ROL	H	H	H	L
ASR	H	H	L	H
ROR	H	H	L	L

26 CRI	
OFF	L
ON	H

23 PSW	
HOLD	H
LOAD	L

14 BTP	
BREG SEX +1	H
	L

10 ABT	
NO	H
YES	L

05	04
BRG	
L	L
H	L
L	H
H	H

LOAD SLEFT
SRIGHT
HOLD

03	02	01	00
BUT			
H	H	H	H
H	L	H	H
L	L	H	H
L	H	L	L
H	H	L	L
L	H	L	L
H	L	H	L
L	L	H	L
H	L	L	L
L	H	H	L
H	H	H	L
L	L	L	L
H	L	L	L
L	H	L	L
H	H	L	L

NON
JMP/JSR
IR DECODE
BYTE
CONST
DEST
MOV
INTR
INIT
UNARY
SWITCHES
NON MOD
SERVICE
SSYNC
ENOVFLO
IR CLK

25 FSM	
OFF H	
ON L	

20 DIP	
OFF	H
ON	L

16 BBT	
BRG SEX +1	H
	L

13 SPF	
READ	H
WRITE	L

09	08
TNS	
H	H
H	L
L	H

NONE
DATI
DATO

24 AUX	
OFF	H
ON	L

19 SMØ	17 SMI
H	H
H	L
L	H
L	L

ROM
IRS
IRD
BA

15 BAR	
HOLD	H
LOAD	L

11 CKO	
OFF	H
ON	L

07	06
ALG	
H	H
H	L
L	H
L	L

SP
NULL
SPR
PSW

CONTROL STORE WORD FORMAT

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
11/05	PARTS LIST			

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS: XXX ± .005, XX ± .02, X ± .1 — ANGLES: ± 0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN	M.P.L.	DATE 5/20/73
CHK'D		DATE
ENG		DATE
PROJ ENG		DATE
PROD		DATE

NEXT HIGHER ASSY: B-DD-KD11-B
SCALE
SHEET 1A OF

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL LOGIC & MICROPROGRAM

SIZE	CODE	NUMBER	REV
D	CS	M7261-Ø-1	R

DIST

M7261-Ø-1 R

PAGE REVISION CONTROL SHEET

SH NO	PAGE REVISIONS	REMARKS
1	A	
2	A	
3	A	
4	A	
5	A	
6	A	
7	A	
8	A	
9	A	
10	A	
11	A	
12	A	
13	A	
14	A	
15	A	
16	A	
17	A	
ETCH REV	C	
ECO NO.	5	

FIRST USED ON OPTION/MODEL

DRN.		DATE
CHK'D	M. T. Hallowell	DATE 8/21/72
ENG.		DATE 8/17/72
PROJ. ENG.		DATE 8/17/72
PROD.	M. T. Hallowell	DATE 8/21/72
NEXT HIGHER ASSY.		
SCALE		
SHEET 1 OF 17		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: CONTROL LOGIC ROM PATTERNS

SIZE	CODE	NUMBER	REV.
B	RL	M7261-0-8	A

DIST.

```
                        /( #Y8 (PIN #9) CONA INT TRAN SYNC L
                        */( #Y7 (PIN #7) CONA REG ADDR L
                        **/( #Y6 (PIN #6) CONA RECEIVE L
                        ***/( #Y5 (PIN #5) CONA TRANSMIT L
                        ****/( #Y4 (PIN #4) CONA LOAD MODEM PSW L
                        *****/( #Y3 (PIN #3) CONA LOAD L CLK PSW L
                        ******/( #Y2 (PIN #2) CONG SP WRITE L
                        *******/( #Y1 (PIN #1) CONG LOAD PSW L
                        ********          OCTAL
 OCTAL DECIMAL          ********          DATA
ADDRESS ADDRESS  EDCBA  ********
   000     0    00000  11111111          377
   001     1    00001  11111111          377
   002     2    00010  11111111          377
   003     3    00011  11111111          377
   004     4    00100  01111110          176       PSW ,TRAN OUT BA=177776
   005     5    00101  11111111          377       PSW ,TRAN OUT,BAR
   006     6    00110  01111011          173       LCLK ,TRANOUT
   007     7    00111  11111111          377       LCLK ,TRANOUT,BAR
   010     8    01000  00111101          075       GR<R0|R17> ,TRANOUT BA=1777XX
   011     9    01001  10111111          277       GR<R0|R17> ,TRANOUT,BAR
   012    10    01010  01111111          177       ODD BYTE (LCLK/TK/TP)
   013    11    01011  11111111          377
   014    12    01100  11111111          377
   015    13    01101  11111111          377
   016    14    01110  01111111          177       SWR ,TRANOUT BA=177570
   017    15    01111  11111111          377       SWR ,TRANOUT,BAR
   020    16    10000  01010111          127       TKS ,TRANOUT BA=177560
   021    17    10001  11011111          337       TKS ,TRANOUT,BAR
   022    18    10010  01100111          147       TPS ,TRANOUT BA=177564
   023    19    10011  11101111          357       TPS ,TRANOUT,BAR
   024    20    10100  01011111          137       TKB ,TRANOUT BA=177562
   025    21    10101  11011111          337       TKB ,TRANOUT,BAR
   026    22    10110  01101111          157       TPB ,TRANOUT BA=177566
   027    23    10111  11101111          357       TPB ,TRANOUT,BAR
   030    24    11000  11111111          377
   031    25    11001  11111111          377
   032    26    11010  11111111          377
   033    27    11011  11111111          377
   034    28    11100  11111111          377
   035    29    11101  11111111          377
   036    30    11110  11111111          377
   037    31    11111  11111111          377
                        *****
                        *****/( A(PIN #10) IS  CONA TRAN OUT L
                        ****/( B(PIN #11) IS  Y3 OF F825
                        ***/( C(PIN #12) IS  Y2 OF F825
                        **/( D(PIN #13) IS  Y1 OF F825
                        */( E(PIN #14) IS  Y4 OF F825
```

```
                        /( *Y8 (PIN #9) CONA ENAB L CLK PSW L
                        */( *Y7 (PIN #7) CONA INT TRAN SYNC L
                        **/( *Y6 (PIN #6) CONA ENAB ALU L
                        ***/( *Y5 (PIN #5) CONA ENAB MODEM PSW L
                        ****/( *Y4 (PIN #4) CONA ENAB SWITCH REG L
                        *****/( *Y3 (PIN #3) CONG ENAB SPL L
                        ******/( *Y2 (PIN #2) CONG ENAB SPR L
                        *******/( *Y1 (PIN #1) CONG ENAB PSW L
  OCTAL DECIMAL         ********        OCTAL
ADDRESS ADDRESS  EDCBA  ********        DATA
   000      0   00000  11111111        377
   001      1   00001  11111111        377
   002      2   00010  11111111        377
   003      3   00011  11111111        377
   004      4   00100  10011110        236     PSW ,TRANIN BA=177776
   005      5   00101  11111111        377     PSW ,TRANIN,BAR
   006      6   00110  00111111        077     LCLK ,TRANIN BA=177546
   007      7   00111  11111111        377     LCLK ,TRANIN,BAR
   010      8   01000  10011001        231     GEN REG, ,TRANIN BA=1777XX
   011      9   01001  11111111        377     GEN REG ,TRANIN,BAR
   012     10   01010  10111111        277     ODD BYTE ADDRESS (LCLK?TK/TP)
   013     11   01011  11111111        377
   014     12   01100  11111111        377
   015     13   01101  11111111        377
   016     14   01110  10010111        227     SWR ,TRANIN BA=177570
   017     15   01111  11111111        377     SWR ,TRANIN,BAR
   020     16   10000  10001111        217     TKS ,TRANIN BA=177560
   021     17   10001  11111111        377     TKS ,TRANIN,BAR
   022     18   10010  10001111        217     TPS ,TRANIN BA=177564
   023     19   10011  11111111        377     TPS ,TRANIN,BAR
   024     20   10100  10011111        237     TKB ,TRANIN BA=177562
   025     21   10101  11111111        377     TKB ,TRANIN,BAR
   026     22   10110  10011111        237     TPB ,TRANIN BA=177566
   027     23   10111  11111111        377     TPB ,TRANIN,BAR
   030     24   11000  11111111        377
   031     25   11001  11111111        377
   032     26   11010  11111111        377
   033     27   11011  11111111        377
   034     28   11100  11111111        377
   035     29   11101  11111111        377
   036     30   11110  11111111        377
   037     31   11111  11111111        377
                        *****
                        *****/( A(PIN #10) IS  CONA TRAN IN L
                        ***/( B(PIN #11) IS  Y3 OF F825
                        **/( C(PIN #12) IS  Y2 OF F825
                        */( D(PIN #13) IS  Y1 OF F825
                        /( E(PIN #14) IS  Y4 OF F825
```

```
                                /( #Y8 (PIN #9)
                                */( #Y7 (PIN #7) CONE LINE CLOCK SER L
                                **/( #Y6 (PIN #6) CONE STACK FLOW L
                                ***/( #Y5 (PIN #5) CONE PWR FAIL SER L
                                ****/( #Y4 (PIN #4) CONE RCD SER L
                                *****/( #Y3 (PIN #3) CONE XMIT SER L
                                *******/( #Y2 (PIN #2)
                                *********/( #Y1 (PIN #1)
 OCTAL  DECIMAL                 ********          OCTAL
ADDRESS ADDRESS    EDCBA        ********          DATA
   000       0     00000        11111111          377
   001       1     00001        11111111          377
   002       2     00010        11111111          377
   003       3     00011        11111111          377
   004       4     00100        11111111          377
   005       5     00101        11111111          377
   006       6     00110        11111111          377
   007       7     00111        11111111          377
   010       8     01000        11111111          377
   011       9     01001        11111111          377
   012      10     01010        11110111          367       UART RCD INT MPC=64
   013      11     01011        11111111          377
   014      12     01100        11111111          377
   015      13     01101        11111111          377
   016      14     01110        11111011          373       UART XMIT INT MPC=60
   017      15     01111        11111111          377
   020      16     10000        11111111          377
   021      17     10001        11111111          377
   022      18     10010        11011111          337       ERT=1A STACK FLOW MPC=46
   023      19     10011        11111111          377
   024      20     10100        11101111          357       PWR FAIL MPC=43
   025      21     10101        11111111          377
   026      22     10110        10111111          277       LINE CLK INT MPC=42
   027      23     10111        11111111          377
   030      24     11000        11111111          377
   031      25     11001        11111111          377
   032      26     11010        11111111          377
   033      27     11011        11111111          377
   034      28     11100        11111111          377
   035      29     11101        11111111          377
   036      30     11110        11111111          377
   037      31     11111        11111111          377
                                *****
                                *****/( A(PIN #10) IS  CONN RUN GND L
                                ****/( B(PIN #11) IS  CONF MPC 00 L
                                ***/( C(PIN #12) IS  CONF MPC 02 L
                                **/( D(PIN #13) IS  CONF MPC 01 L
                                */ E(PIN #14) IS  CONF MPC 04 L
```

```
                        /( =Y8 (PIN #9) CONF MPC 05 L
                        */( =Y7 (PIN #7) CONE EXAM SW L
                        **/( =Y6 (PIN #6) CONE DEP SW L
                        ***/( =Y5 (PIN #5) CONF MPC 00 L
                        ****/( =Y4 (PIN #4) CONF MPC 04 L
                        *****/( =Y3 (PIN #3) CONF MPC 01 L
                        ******/( =Y2 (PIN #2) CONF MPC 02 L
                        *******/( =Y1 (PIN #1) CONF MPC 03 L
  OCTAL DECIMAL         ********        OCTAL
ADDRESS ADDRESS  EDCBA  ********        DATA
    000       0  00000  11I1I000        370     CONTINUE
    001       1  00001  11I1I011        373     TWO SW =CONT,DEP
    002       2  00010  11I1I011        373     TWO SW EXAM,CONT
    003       3  00011  11I1I011        373     TWO SW LOAD,CONT
    004       4  00100  11I1I011        373     NO SW
    005       5  00101  1100I010        312     DEP SW1 GOTO 313
    006       6  00110  1010I000        250     EXAM GOTO TO 317
    007       7  00111  1110I110        356     LOAD  GOTO TO 311
    010       8  01000  11I1I000        370     CONT=CLR EXAM
    011       9  01001  11I1I011        373     TWO SW =CONT,DEP
    012      10  01010  1110I011        353     TWO SW EXAM,CONT
    013      11  01011  1110I011        353     TWO SW LOAD,CONT
    014      12  01100  1011I011        273     NO SW 1ST EXAM
    015      13  01101  1100I010        312     DEP SW1
    016      14  01110  1010I100        254     EXAM AND 1ST EXAM 323
    017      15  01111  1110I110        356     LOAD GOTO 311
    020      16  10000  11I1I000        370     CONT=CLR DEP
    021      17  10001  11I1I011        373     TWO SW =CONT,DEP
    022      18  10010  11I1I011        373     TWO SW EXAM,CONT
    023      19  10011  1101I011        333     TWO SW LOAD,CONT
    024      20  10100  1101I011        333     NO SW 1ST DEP
    025      21  10101  1101I010        332     DEP SW2 GOTO 312
    026      22  10110  1010I000        250     EXAM,1ST DEP 317
    027      23  10111  1110I110        356     LOAD GOTO 311
    030      24  11000  00000100        004
    031      25  11001  00000000        000
    032      26  11010  00000000        000
    033      27  11011  00000000        000
    034      28  11100  00000000        000
    035      29  11101  00000000        000
    036      30  11110  00000000        000
    037      31  11111  00000000        000
                        *****
                        ****/( A(PIN #10) IS  CONE LOAD (1)L ,AND, DEP (1)L ;BAR
                        ***/( B(PIN #11) IS  CONE LOAD (1)L ;AND, EXAM (1)L ;BAR
                        **/( C(PIN #12) IS  CONE CONT (1)L
                        */( D(PIN #13) IS  CONE 1ST EXAM (1)H
                        /( E(PIN #14) IS  CONE 1ST DEP (1)H
```

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```
                                        /( BY4 (PIN # 9) CONC SET BG 07 L
                                        +/( BY3 (PIN #10) CONC SET BG 06 L
                                        ++/( BY2 (PIN #11) CONC SET BG 05 L
                                        +++/( BY1 (PIN #12) CONC SET BG 04 L
  OCTAL DECIMAL                         ++++          OCTAL
ADDRESS ADDRESS   HGFEDCBA              ++++          DATA
    000       0   00000000              1111          017
    001       1   00000001              1111          017
    002       2   00000010              1111          017
    003       3   00000011              1111          017
    004       4   00000100              1111          017
    005       5   00000101              1111          017
    006       6   00000110              1111          017
    007       7   00000111              1111          017
    010       8   00001000              1111          017
    011       9   00001001              1111          017
    012      10   00001010              1111          017
    013      11   00001011              1111          017
    014      12   00001100              1111          017
    015      13   00001101              1111          017
    016      14   00001110              1111          017
    017      15   00001111              1111          017
    020      16   00010000              1111          017
    021      17   00010001              1111          017
    022      18   00010010              1111          017
    023      19   00010011              1111          017
    024      20   00010100              1111          017
    025      21   00010101              1111          017
    026      22   00010110              1111          017
    027      23   00010111              1111          017
    030      24   00011000              1111          017
    031      25   00011001              1111          017
    032      26   00011010              1111          017
    033      27   00011011              1111          017
    034      28   00011100              1111          017
    035      29   00011101              1111          017
    036      30   00011110              1111          017
    037      31   00011111              1111          017
```

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Cont

```
    040      32   00100000              0111          007
    041      33   00100001              1011          013
    042      34   00100010              0111          007
    043      35   00100011              1111          017       LCLK
    044      36   00100100              0111          007
    045      37   00100101              1011          013
    046      38   00100110              0111          007
    047      39   00100111              1101          015
    050      40   00101000              0111          007
    051      41   00101001              1011          013
    052      42   00101010              0111          007
    053      43   00101011              1111          017
    054      44   00101100              0111          007
    055      45   00101101              1011          013
    056      46   00101110              0111          007
    057      47   00101111              1110          016
    060      48   00110000              0111          007
    061      49   00110001              1011          013
    062      50   00110010              0111          007
    063      51   00110011              1111          017       LCLK
    064      52   00110100              0111          007
    065      53   00110101              1011          013
    066      54   00110110              0111          007
    067      55   00110111              1101          015
    070      56   00111000              0111          007
    071      57   00111001              1011          013
    072      58   00111010              0111          007
    073      59   00111011              1111          017
    074      60   00111100              0111          007
    075      61   00111101              1011          013
    076      62   00111110              0111          007
    077      63   00111111              1111          017
                  ++++++++
                  ++++++++/( A(PIN #05) IS  CONC BR 07 (1)L
                  +++++++/( B(PIN #06) IS  CONC BR 06 (1)L
                  ++++++/( C(PIN #07) IS  CONI LCLK INT L
                  +++++/( D(PIN #04) IS  CONC BR 05 (1)L
                  ++++/( E(PIN #03) IS  CONC BR 04 (1)L
                  +++/( F(PIN #02) IS  DPE PSW 07 (0)H
                  ++/( G(PIN #01) IS  DPE PSW 06 (0)H
                  +/( H(PIN #15) IS  DPE PSW 05 (0)H
```

```
                                    /( BV4 (PIN # 9) CONC SET BG 07 L
                                    */( BV8 (PIN #10) CONC SET BG 06 L
                                    **/( BV2 (PIN #11) CONC SET BG 05 L
                                    ***/( BV1 (PIN #12) CONC SET BG 04 L
 OCTAL  DECIMAL                     ****          OCTAL
ADDRESS ADDRESS  HGFEDCBA           ****          DATA
    100      64  01000000          0111          007
    101      65  01000001          1011          013
    102      66  01000010          0111          007
    103      67  01000011          1111          017
    104      68  01000100          0111          007
    105      69  01000101          1011          013
    106      70  01000110          0111          007
    107      71  01000111          1111          017
    110      72  01001000          0111          007
    111      73  01001001          1011          013
    112      74  01001010          0111          007
    113      75  01001011          1111          017
    114      76  01001100          0111          007
    115      77  01001101          1011          013
    116      78  01001110          0111          007
    117      79  01001111          1111          017
    120      80  01010000          0111          007
    121      81  01010001          1011          013
    122      82  01010010          0111          007
    123      83  01010011          1111          017
    124      84  01010100          0111          007
    125      85  01010101          1011          013
    126      86  01010110          0111          007
    127      87  01010111          1111          017
    130      88  01011000          0111          007
    131      89  01011001          1011          013
    132      9A  01011010          0111          007
    133      91  01011011          1111          017
    134      92  01011100          0111          007
    135      93  01011101          1011          013
    136      94  01011110          0111          007
    137      95  01011111          1111          017
```

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```
    140      96  01100000          0111          007
    141      97  01100001          1011          013
    142      98  01100010          0111          007
    143      99  01100011          1111          017       LCLK
    144     100  01100100          0111          007
    145     101  01100101          1011          013
    146     102  01100110          0111          007
    147     103  01100111          1101          015
    150     104  01101000          0111          007
    151     105  01101001          1111          017
    152     106  01101010          0111          007
    153     107  01101011          1111          017       LCLK
    154     108  01101100          0111          007
    155     109  01101101          1011          013
    156     110  01101110          0111          007
    157     111  01101111          1110          016
    160     112  01110000          0111          007
    161     113  01110001          1011          013
    162     114  01110010          0111          007
    163     115  01110011          1111          017       LCLK
    164     116  01110100          0111          007
    165     117  01110101          1011          013
    166     118  01110110          0111          007
    167     119  01110111          1101          015
    170     120  01111000          0111          007
    171     121  01111001          1011          013
    172     122  01111010          0111          007
    173     123  01111011          1111          017
    174     124  01111100          0111          007
    175     125  01111101          1011          013
    176     126  01111110          0111          007
    177     127  01111111          1111          017
                 ********
                 *******/( A(PIN #05) IS  CONC BR 07 (1)L
                 *******/( B(PIN #06) IS  CONC BR 06 (1)L
                 *****/( C(PIN #07) IS  CONI LCLK INT L
                 ****/( D(PIN #04) IS  CONC BR 05 (1)L
                 ***/( E(PIN #03) IS  CONC BR 04 (1)L
                 **/( F(PIN #02) IS  DPE PSW 07 (0)H
                 */( G(PIN #01) IS  DPE PSW 06 (0)H
                 /( H(PIN #15) IS  DPE PSW 05 (0)H
```

AB1A2   27 JUL 72   23=AB1A2   ROM LISTING M7261 -8 REV, A

```
/( #Y4 (PIN # 9) CONC SET BG 07 L
*/( #Y3 (PIN #10) CONC SET BG 06 L
**/( #Y2 (PIN #11) CONC SET BG 05 L
***/( #Y1 (PIN #12) CONC SET BG 04 L
```

OCTAL ADDRESS	DECIMAL ADDRESS	HGFEDCBA	**** ****	OCTAL DATA
200	128	10000000	0111	007
201	129	10000001	1111	017
202	130	10000010	0111	007
203	131	10000011	1111	017
204	132	10000100	0111	007
205	133	10000101	1111	017
206	134	10000110	0111	007
207	135	10000111	1111	017
210	136	10001000	0111	007
211	137	10001001	1111	017
212	138	10001010	0111	007
213	139	10001011	1111	017
214	140	10001100	0111	007
215	141	10001101	1111	017
216	142	10001110	0111	007
217	143	10001111	1111	017
220	144	10010000	0111	007
221	145	10010001	1111	017
222	146	10010010	0111	007
223	147	10010011	1111	017
224	148	10010100	0111	007
225	149	10010101	1111	017
226	150	10010110	0111	007
227	151	10010111	1111	017
230	152	10011000	0111	007
231	153	10011001	1111	017
232	154	10011010	0111	007
233	155	10011011	1111	017
234	156	10011100	0111	007
235	157	10011101	1111	017
236	158	10011110	0111	007
237	159	10011111	1111	017

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240	160	10100000	0111	007	
241	161	10100001	1011	013	
242	162	10100010	0111	007	
243	163	10100011	1111	017	LCLK
244	164	10100100	0111	007	
245	165	10100101	1011	013	
246	166	10100110	0111	007	
247	167	10100111	1101	015	
250	168	10101000	0111	007	
251	169	10101001	1011	013	
252	170	10101010	0111	007	
253	171	10101011	1111	017	LCLK
254	172	10101100	0111	007	
255	173	10101101	1011	013	
256	174	10101110	0111	007	
257	175	10101111	1110	016	
260	176	10110000	0111	007	
261	177	10110001	1011	013	
262	178	10110010	0111	007	
263	179	10110011	1111	017	LCLK
264	180	10110100	0111	007	
265	181	10110101	1011	013	
266	182	10110110	0111	007	
267	183	10110111	1101	015	
270	184	10111000	0111	007	
271	185	10111001	1011	013	
272	186	10111010	0111	007	
273	187	10111011	1111	017	
274	188	10111100	0111	007	
275	189	10111101	1011	013	
276	190	10111110	0111	007	
277	191	10111111	1111	017	

```
********
*******/( A(PIN #05) IS  CONC BR 07 (1)L
******/( B(PIN #06) IS  CONC BR 06 (1)L
*****/( C(PIN #07) IS  CONI LCLK INT L
****/( D(PIN #04) IS  CONC BR 05 (1)L
***/( E(PIN #03) IS  CONC BR 04 (1)L
**/( F(PIN #02) IS  DPE PSW 07 (0)H
*/( G(PIN #01) IS  DPE PSW 06 (0)H
/( H(PIN #15) IS  DPE PSW 05 (0)H
```

of — 9

```
                                /( #Y4 (PIN # 9) CONC SET 00 07 L
                                */( #Y3 (PIN #10) CONC SET 00 06 L
                                **/( #Y2 (PIN #11) CONC SET 00 05 L
                                ***/( #Y1 (PIN #12) CONC SET 00 04 L
 OCTAL  DECIMAL                 ****          OCTAL
ADDRESS ADDRESS   HGFEDCBA      ****          DATA
   300     192    11000000      0111          007
   301     193    11000001      1011          013
   302     194    11000010      0111          007
   303     195    11000011      1111          017        LCLK
   304     196    11000100      0111          007
   305     197    11000101      1011          013
   306     198    11000110      0111          007
   307     199    11000111      1101          015
   310     200    11001000      0111          007
   311     201    11001001      1011          013
   312     202    11001010      0111          007
   313     203    11001011      1111          017        LCLK
   314     204    11001100      0111          007
   315     205    11001101      1011          013
   316     206    11001110      0111          007
   317     207    11001111      1111          017
   320     208    11010000      0111          007
   321     209    11010001      1011          013
   322     210    11010010      0111          007
   323     211    11010011      1111          017        LCLK
   324     212    11010100      0111          007
   325     213    11010101      1011          013
   326     214    11010110      0111          007
   327     215    11010111      1101          015
   330     216    11011000      0111          007
   331     217    11011001      1011          013
   332     218    11011010      0111          007
   333     219    11011011      1111          017
   334     220    11011100      0111          007
   335     221    11011101      1011          013
   336     222    11011110      0111          007
   337     223    11011111      1111          017
```

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of — 9 cont

```
   340     224    11100000      0111          007
   341     225    11100001      1011          013
   342     226    11100010      0111          007
   343     227    11100011      1111          017        LCLK
   344     228    11100100      0111          007
   345     229    11100101      1011          013
   346     230    11100110      0111          007
   347     231    11100111      1101          015
   350     232    11101000      0111          007
   351     233    11101001      1011          013
   352     234    11101010      0111          007
   353     235    11101011      1111          017        LCLK
   354     236    11101100      0111          007
   355     237    11101101      1011          013
   356     238    11101110      0111          007
   357     239    11101111      1110          016
   360     240    11110000      0111          007
   361     241    11110001      1011          013
   362     242    11110010      0111          007
   363     243    11110011      1111          017        LCLK
   364     244    11110100      0111          007
   365     245    11110101      1011          013
   366     246    11110110      0111          007
   367     247    11110111      1101          015
   370     248    11111000      0111          007
   371     249    11111001      1011          013
   372     250    11111010      0111          007
   373     251    11111011      1111          017
   374     252    11111100      0111          007
   375     253    11111101      1011          013
   376     254    11111110      0111          007
   377     255    11111111      1111          017
                  ********
                  *******/( A(PIN #05) IS  CONC BR 07 (1)L
                  ******/( B(PIN #06) IS  CONC BR 06 (1)L
                  *****/( C(PIN #07) IS  CONT LCLK INT L
                  ****/( D(PIN #04) IS  CONC BR 05 (1)L
                  ***/( E(PIN #03) IS  CONC BR 04 (1)L
                  **/( F(PIN #02) IS  DPE PSW 07 (0)H
                  */( G(PIN #01) IS  DPE PSW 06 (0)H
                  /( H(PIN #15) IS  DPE PSW 05 (0)H
```

```
                                        /( #Y4 (PIN # 9) Y4
                                        +/( #Y3 (PIN #10) Y3
                                        ++/( #Y2 (PIN #11) Y2
                                        +++/( #Y1 (PIN #12) Y1
                                        ++++        OCTAL
 OCTAL DECIMAL                          ++++        DATA
ADDRESS ADDRESS   HGFEDCBA              ++++
   000       0   00000000              0000        000
   001       1   00000001              0000        000
   002       2   00000010              0000        000
   003       3   00000011              0000        000
   004       4   00000100              0000        000
   005       5   00000101              0000        000
   006       6   00000110              0000        000
   007       7   00000111              0000        000
   010       8   00001000              0000        000
   011       9   00001001              0000        000
   012      10   00001010              0000        000
   013      11   00001011              0000        000
   014      12   00001100              0000        000
   015      13   00001101              0000        000
   016      14   00001110              0000        000
   017      15   00001111              0000        000
   020      16   00010000              0000        000
   021      17   00010001              0000        000
   022      18   00010010              0000        000
   023      19   00010011              0000        000
   024      20   00010100              0000        000
   025      21   00010101              0000        000
   026      22   00010110              0000        000
   027      23   00010111              0000        000
   030      24   00011000              0000        000
   031      25   00011001              0000        000
   032      26   00011010              0000        000
   033      27   00011011              0000        000
   034      28   00011100              0000        000
   035      29   00011101              0000        000
   036      30   00011110              0000        000
   037      31   00011111              0000        000
```

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```
   040      32   00100000              0000        000
   041      33   00100001              0000        000
   042      34   00100010              0000        000
   043      35   00100011              0000        000
   044      36   00100100              0000        000
   045      37   00100101              0000        000
   046      38   00100110              0000        000
   047      39   00100111              0000        003
   050      40   00101000              0000        000
   051      41   00101001              0000        000
   052      42   00101010              0000        000
   053      43   00101011              0000        000
   054      44   00101100              0000        000
   055      45   00101101              0000        000
   056      46   00101110              0000        000
   057      47   00101111              0000        000
   060      48   00110000              0000        000
   061      49   00110001              0000        000
   062      50   00110010              0000        000
   063      51   00110011              0000        000
   064      52   00110100              0000        000
   065      53   00110101              0000        000
   066      54   00110110              0000        000
   067      55   00110111              0000        000
   070      56   00111000              0000        000
   071      57   00111001              0000        000
   072      58   00111010              0000        000
   073      59   00111011              0000        000
   074      60   00111100              0000        000
   075      61   00111101              0000        000
   076      62   00111110              0000        000
   077      63   00111111              0000        000
                 ++++++++
                 +++++++/( A(PIN #05) IS  CONA BA 02 (1)H
                 ++++++/( B(PIN #06) IS  CONA BA 01 (1)H
                 +++++/( C(PIN #07) IS  CONA BA 00 (1)H
                 ++++/( D(PIN #04) IS  CONA BA 03 (1)H
                 +++/( E(PIN #03) IS  CONA BA 04 (1)H
                 ++/( F(PIN #02) IS  CONA BA 05 (1)H
                 +/( G(PIN #01) IS  CONA BA 07 (1)H
                 /( H(PIN #15) IS  CONA BA 06 (1)H
```

```
                                        /( #Y4 (PIN # 9) Y4
                                        +/( #Y3 (PIN #10) Y3
                                        ++/' #Y2 (PIN #11) Y2
                                        +++/( #Y1 (PIN #12) Y1
 OCTAL  DECIMAL                         ++++          OCTAL
ADDRESS ADDRESS   HGFEDCBA              ++++          DATA
    100      64   01000000              0000          000
    101      65   01000001              0000          000
    102      66   01000010              0000          000
    103      67   01000011              0000          000
    104      68   01000100              0000          000
    105      69   01000101              0000          000
    106      70   01000110              0000          000
    107      71   01000111              0000          000
    110      72   01001000              0000          000
    111      73   01001001              0000          000
    112      74   01001010              0000          000
    113      75   01001011              0000          000
    114      76   01001100              0000          000
    115      77   01001101              0000          000
    116      78   01001110              0000          000
    117      79   01001111              0000          000
    120      80   01010000              0000          000
    121      81   01010001              0000          000
    122      82   01010010              0000          000
    123      83   01010011              0000          000
    124      84   01010100              0000          000
    125      85   01010101              0000          000
    126      86   01010110              0000          000
    127      87   01010111              0000          000
    130      88   01011000              0000          000
    131      89   01011001              0000          000
    132      90   01011010              0000          000
    133      91   01011011              0000          000
    134      92   01011100              0000          000
    135      93   01011101              0000          000
    136      94   01011110              0000          000
    137      95   01011111              0000          000
```

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```
    140      96   01100000              0000          000
    141      97   01100001              0000          000
    142      98   01100010              0000          000
    143      99   01100011              0000          000
    144     100   01100100              0000          000
    145     101   01100101              0000          000
    146     102   01100110              0000          000
    147     103   01100111              0000          000
    150     104   01101000              0000          000
    151     105   01101001              0000          000
    152     106   01101010              0000          000
    153     107   01101011              0000          000
    154     108   01101100              0000          000
    155     109   01101101              0000          000
    156     110   01101110              0000          000
    157     111   01101111              0000          000
    160     112   01110000              0000          000
    161     113   01110001              0000          000
    162     114   01110010              0000          000
    163     115   01110011              0000          000
    164     116   01110100              0000          000
    165     117   01110101              0000          000
    166     118   01110110              0000          000
    167     119   01110111              0000          000
    170     120   01111000              0000          000
    171     121   01111001              0000          000
    172     122   01111010              0000          000
    173     123   01111011              0000          000
    174     124   01111100              0000          000
    175     125   01111101              0000          000
    176     126   01111110              0000          000
    177     127   01111111              0000          000
                  ++++++++
                  +++++++/( A(PIN #05) IS  CONA BA 02 (1)H
                  ++++++/( B(PIN #06) IS  CONA BA 01 (1)H
                  +++++/( C(PIN #07) IS  CONA BA 00 (1)H
                  ++++/( D(PIN #04) IS  CONA BA 03 (1)H
                  +++/( E(PIN #03) IS  CONA BA 04 (1)H
                  ++/( F(PIN #02) IS  CONA BA 05 (1)H
                  +/( G(PIN #01) IS  CONA BA 07 (1)H
                  /( H(PIN #15) IS  CONA BA 06 (1)H
```

```
                                        /( #Y4 (PIN # 9) Y4
                                        +/( #Y3 (PIN #10) Y3
                                        ++/( #Y2 (PIN #11) Y2
                                        +++/( #Y1 (PIN #12) Y1
 OCTAL DECIMAL                          ++++          OCTAL
ADDRESS ADDRESS   HGFEDCBA              ++++          DATA
    200     128   10000000              0000          000
    201     129   10000001              0000          000
    202     130   10000010              0000          000
    203     131   10000011              0000          000
    204     132   10000100              0000          000
    205     133   10000101              0000          000
    206     134   10000110              0000          000
    207     135   10000111              0000          000
    210     136   10001000              0000          000
    211     137   10001001              0000          000
    212     138   10001010              0000          000
    213     139   10001011              0000          000
    214     140   10001100              0000          000
    215     141   10001101              0000          000
    216     142   10001110              0000          000
    217     143   10001111              0000          000
    220     144   10010000              0000          000
    221     145   10010001              0000          000
    222     146   10010010              0000          000
    223     147   10010011              0000          000
    224     148   10010100              0000          000
    225     149   10010101              0000          000
    226     150   10010110              0000          000
    227     151   10010111              0000          000
    230     152   10011000              0000          000
    231     153   10011001              0000          000
    232     154   10011010              0000          000
    233     155   10011011              0000          000
    234     156   10011100              0000          000
    235     157   10011101              0000          000
    236     158   10011110              0000          000
    237     159   10011111              0000          000
```

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```
    240     160   10100000              0000          000
    241     161   10100001              0000          000
    242     162   10100010              0000          000
    243     163   10100011              0110          006       KW11-L LINE CLK CSR
    244     164   10100100              0000          000
    245     165   10100101              0000          000
    246     166   10100110              0000          000
    247     167   10100111              0101          005       KW11-L (ODD BYTE)
    250     168   10101000              0000          000
    251     169   10101001              0000          000
    252     170   10101010              0000          000
    253     171   10101011              0000          000
    254     172   10101100              0000          000
    255     173   10101101              0000          000
    256     174   10101110              0000          000
    257     175   10101111              0000          000
    260     176   10110000              1000          010       TKS TTY KEYBOARD CSR
    261     177   10110001              1100          014       TPS PRINTER CSR
    262     178   10110010              1010          012       TKB TTY KEYBOARD  DBR
    263     179   10110011              1110          016       TPB TTY PRINTER DBR
    264     180   10110100              0101          005       TKS (ODD BYTE)
    265     181   10110101              0101          005       TPS (ODD BYTE)
    266     182   10110110              0101          005       TKB (ODD BYTE)
    267     183   10110111              0101          005       TPB (ODD BYTE)
    270     184   10111000              0111          007       SWITCH REGISTER
    271     185   10111001              0000          000
    272     186   10111010              0000          000
    273     187   10111011              0000          000
    274     188   10111100              0111          007       CONSOLE SW REG, (ODD BYTE)
    275     189   10111101              0000          000
    276     190   10111110              0000          000
    277     191   10111111              0000          000
                  ++++++++
                  +++++++/( A(PIN #09) IS  CONA BA 02 (1)H
                  ++++++/( B(PIN #06) IS  CONA BA 01 (1)H
                  +++++/( C(PIN #07) IS  CONA BA 00 (1)H
                  ++++/( D(PIN #04) IS  CONA BA 03 (1)H
                  +++/( E(PIN #03) IS  CONA BA 04 (1)H
                  ++/( F(PIN #02) IS  CONA BA 05 (1)H
                  +/( G(PIN #01) IS  CONA BA 07 (1)H
                  /( H(PIN #15) IS  CONA BA 06 (1)H
```

```
                                    /( 8Y5 (PIN # 9) Y4
                                    +/( 8Y8 (PIN #10) Y3
                                    ++/( 8Y2 (PIN #11) Y2
                                    +++/( 8Y1 (PIN #12) Y1
                                    ++++        OCTAL
 OCTAL DECIMAL                                  DATA
ADDRESS ADDRESS   HGFEDCBA          ++++        000
    300     192   11000000          0001        001       REG R0
    301     193   11000001          0001        001       REG R4
    302     194   11000010          0001        001       REG R2
    303     195   11000011          0001        001       REG R6
    304     196   11000100          0001        001       REG R1
    305     197   11000101          0001        001       REG R5
    306     198   11000110          0001        001       REG R3
    307     199   11000111          0001        001       REG R7
    310     200   11001000          0001        001       REG R10
    311     201   11001001          0001        001       REG R14
    312     202   11001010          0001        001       REG R12
    313     203   11001011          0001        001       REG R16
    314     204   11001100          0001        001       REG R11
    315     205   11001101          0001        001       REG R15
    316     206   11001110          0001        001       REG R13
    317     207   11001111          0001        001       REG R17
    320     208   11010000          0000        000
    321     209   11010001          0000        000
    322     210   11010010          0000        000
    323     211   11010011          0000        000
    324     212   11010100          0000        000
    325     213   11010101          0000        000
    326     214   11010110          0000        000
    327     215   11010111          0000        000
    330     216   11011000          0000        000
    331     217   11011001          0000        000
    332     218   11011010          0000        000
    333     219   11011011          0000        000
    334     220   11011100          0000        000
    335     221   11011101          0000        000
    336     222   11011110          0000        000
    337     223   11011111          0000        000
```

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```
    340     224   11100000          0000        000
    341     225   11100001          0000        000
    342     226   11100010          0000        000
    343     227   11100011          0000        000
    344     228   11100100          0000        000
    345     229   11100101          0000        000
    346     230   11100110          0000        000
    347     231   11100111          0000        000
    350     232   11101000          0000        000
    351     233   11101001          0000        000
    352     234   11101010          0000        000
    353     235   11101011          0000        000
    354     236   11101100          0000        000
    355     237   11101101          0000        000
    356     238   11101110          0000        000
    357     239   11101111          0000        000
    360     240   11110000          0000        000
    361     241   11110001          0000        000
    362     242   11110010          0000        000
    363     243   11110011          0000        000
    364     244   11110100          0000        000
    365     245   11110101          0000        000
    366     246   11110110          0000        000
    367     247   11110111          0000        000
    370     248   11111000          0000        000
    371     249   11111001          0000        000
    372     250   11111010          0000        000
    373     251   11111011          0010        002       PSW
    374     252   11111100          0000        000
    375     253   11111101          0000        000
    376     254   11111110          0000        000
    377     255   11111111          0010        002       PSW (ODD BYTE)
                  ++++++++
                  ++++++++/( A(PIN #05) IS  CONA BA 02 (1)H
                  +++++++/( B(PIN #06) IS  CONA BA 01 (1)H
                  ++++++/( C(PIN #07) IS  CONA BA 00 (1)H
                  +++++/( D(PIN #04) IS  CONA BA 03 (1)H
                  ++++/( E(PIN #03) IS  CONA BA 04 (1)H
                  +++/( F(PIN #02) IS  CONA BA 05 (1)H
                  ++/( G(PIN #01) IS  CONA    07 (1)H
                  +/( H(PIN #15) IS  CONA BA 06 (1)H
```

```
                                  /( 8Y4 (PIN # 9) CONF MPC 04 L
                                  */( 8Y3 (PIN #10) CONF MPC 01 L
                                  **/( 8Y2 (PIN #11) CONF MPC 02 L
                                  ***/( 8Y1 (PIN #12) CONF MPC 08 L
 OCTAL DECIMAL                    ****              OCTAL
ADDRESS ADDRESS   HGFEDCBA        ****              DATA
   000       0   00000000        1100              014       T
   001       1   00000001        1100              014       T
   002       2   00000010        1100              014       T
   003       3   00000011        1100              014       T
   004       4   00000100        1100              014       T
   005       5   00000101        1100              014       T
   006       6   00000110        1100              014       T
   007       7   00000111        1100              014       T
   010       8   00001000        1100              014       T
   011       9   00001001        1100              014       T
   012      10   00001010        1100              014       T
   013      11   00001011        1100              014       T
   014      12   00001100        1100              014       T
   015      13   00001101        1100              014       T
   016      14   00001110        1100              014       T
   017      15   00001111        1100              014       T
   020      16   00010000        1100              014       T
   021      17   00010001        1100              014       T
   022      18   00010010        1100              014       T
   023      19   00010011        1100              014       T
   024      20   00010100        1100              014       T
   025      21   00010101        1100              014       T
   026      22   00010110        1100              014       T
   027      23   00010111        1100              014       T
   030      24   00011000        1100              014       T
   031      25   00011001        1100              014       T
   032      26   00011010        1100              014       T
   033      27   00011011        1100              014       T
   034      28   00011100        1100              014       T
   035      29   00011101        1100              014       T
   036      30   00011110        1100              014       T
   037      31   00011111        1100              014       T
```

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```
   040      32   00100000        1100              014       T
   041      33   00100001        1100              014       T
   042      34   00100010        1100              014       T
   043      35   00100011        1100              014       T
   044      36   00100100        1100              014       T
   045      37   00100101        1100              014       T
   046      38   00100110        1100              014       T
   047      39   00100111        1100              014       T
   050      40   00101000        1100              014       T
   051      41   00101001        1100              014       T
   052      42   00101010        1100              014       T
   053      43   00101011        1100              014       T
   054      44   00101100        1100              014       T
   055      45   00101101        1100              014       T
   056      46   00101110        1100              014       T
   057      47   00101111        1100              014       T
   060      48   00110000        1100              014       T
   061      49   00110001        1100              014       T
   062      50   00110010        1100              014       T
   063      51   00110011        1100              014       T
   064      52   00110100        1100              014       T
   065      53   00110101        1100              014       T
   066      54   00110110        1100              014       T
   067      55   00110111        1100              014       T
   070      56   00111000        1100              014       T
   071      57   00111001        1100              014       T
   072      58   00111010        1100              014       T
   073      59   00111011        1100              014       T
   074      60   00111100        1100              014       T
   075      61   00111101        1100              014       T
   076      62   00111110        1100              014       T
   077      63   00111111        1100              014       T
                 ********
                 *******/( A(PIN #05) IS  CONB STACKFLOW (1)L
                 ******/( B(PIN #06) IS  CONH DOWN SYNC (1)L
                 *****/( C(PIN #07) IS  CONI LCLK INT (1)L
                 ****/( D(PIN #04) IS  CONE STOP (1)L
                 ***/( E(PIN #03) IS  DPH RCD INT (1)L
                 **/( F(PIN #02) IS  DPH XMIT INT (1)L
                 */( G(PIN #01) IS  DPG WAIT L
                 /( H(PIN #15) IS  DPF T DEL (1)L
```

```
                                        /( #Y4 (PIN # 9) CONF MPC 04 L
                                        +/( #Y8 (PIN #10) CONF MPC 01 L
                                        **/( #Y2 (PIN #11) CONF MPC 02 L
                                        ***/( #Y1 (PIN #12) CONF MPC 00 L
  OCTAL DECIMAL                         ****      OCTAL
ADDRESS ADDRESS    HGFEDCBA             ****      DATA
    100      64    01000000             1100      014       T
    101      65    01000001             1100      014       T
    102      66    01000010             1100      014       T
    103      67    01000011             1100      014       T
    104      68    01000100             1100      014       T
    105      69    01000101             1100      014       T
    106      70    01000110             1100      014       T
    107      71    01000111             1100      014       T
    110      72    01001000             1100      014       T
    111      73    01001001             1100      014       T
    112      74    01001010             1100      014       T
    113      75    01001011             1100      014       T
    114      76    01001100             1100      014       T
    115      77    01001101             1100      014       T
    116      78    01001110             1100      014       T
    117      79    01001111             1100      014       T
    120      80    01010000             1100      014       T
    121      81    01010001             1100      014       T
    122      82    01010010             1100      014       T
    123      83    01010011             1100      014       T
    124      84    01010100             1100      014       T
    125      85    01010101             1100      014       T
    126      86    01010110             1100      014       T
    127      87    01010111             1100      014       T
    130      88    01011000             1100      014       T
    131      89    01011001             1100      014       T
    132      90    01011010             1100      014       T
    133      91    01011011             1100      014       T
    134      92    01011100             1100      014       T
    135      93    01011101             1100      014       T
    136      94    01011110             1100      014       T
    137      95    01011111             1100      014       T
```

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```
    140      96    01100000             1100      014       T
    141      97    01100001             1100      014       T
    142      98    01100010             1100      014       T
    143      99    01100011             1100      014       T
    144     100    01100100             1100      014       T
    145     101    01100101             1100      014       T
    146     102    01100110             1100      014       T
    147     103    01100111             1100      014       T
    150     104    01101000             1100      014       T
    151     105    01101001             1100      014       T
    152     106    01101010             1100      014       T
    153     107    01101011             1100      014       T
    154     108    01101100             1100      014       T
    155     109    01101101             1100      014       T
    156     110    01101110             1100      014       T
    157     111    01101111             1100      014       T
    160     112    01110000             1100      014       T
    161     113    01110001             1100      014       T
    162     114    01110010             1100      014       T
    163     115    01110011             1100      014       T
    164     116    01110100             1100      014       T
    165     117    01110101             1100      014       T
    166     118    01110110             1100      014       T
    167     119    01110111             1100      014       T
    170     120    01111000             1100      014       T
    171     121    01111001             1100      014       T
    172     122    01111010             1100      014       T
    173     123    01111011             1100      014       T
    174     124    01111100             1100      014       T
    175     125    01111101             1100      014       T
    176     126    01111110             1100      014       T
    177     127    01111111             1100      014       T
                   ********
                   ********/( A(PIN #05) IS  CONB STACKFLOW (1)L
                   *******/( B(PIN #06) IS  CONH PDWN SYNC (1)L
                   ******/( C(PIN #07) IS  CONI LCLK INT (1)L
                   *****/( D(PIN #04) IS  CONE STOP (1)L
                   ****/( E(PIN #03) IS  DPH RCD INT (1)L
                   ***/( F(PIN #02) IS  DPH XMIT INT (1)L
                   **/( G(PIN #01) IS  DPG WAIT L
                   /( H(PIN #15) IS  DPE T DEL (1)L
```

```
                                        /( BY4 (PIN # 9) CONF MPC B4 L
                                        */( BY8 (PIN #10) CONF MPC B1 L
                                        **/( BY2 (PIN #11) CONF MPC B2 L
                                        ***/( BY1 (PIN #12) CONF MPC B8 L
                                        ****        OCTAL
 OCTAL DECIMAL                          ****        DATA
ADDRESS ADDRESS   HGFEDCBA              ****
    200     128   10000000              1001        B11     STKFL
    201     129   10000001              1010        B12     PWRF
    202     130   10000010              1001        B11     STKFL
    203     131   10000011              1011        B13     LCLK
    204     132   10000100              1001        B11     STKFL
    205     133   10000101              1010        B12     PWRF
    206     134   10000110              1001        B11     STKFL
    207     135   10000111              0101        B05     RCD
    210     136   10001000              1001        B11     STKFL
    211     137   10001001              1010        B12     PWRF
    212     138   10001010              1001        B11     STKFL
    213     139   10001011              1011        B13     LCLK
    214     140   10001100              1001        B11     STKFL
    215     141   10001101              1010        B12     PWRF
    216     142   10001110              1001        B11     STKFL
    217     143   10001111              0101        B05     RCD
    220     144   10010000              1001        B11     STKFL
    221     145   10010001              1010        B12     PWRF
    222     146   10010010              1001        B11     STKFL
    223     147   10010011              1011        B13     LCLK
    224     148   10010100              1001        B11     STKFL
    225     149   10010101              1010        B12     PWRF
    226     150   10010110              1001        B11     STKFL
    227     151   10010111              0111        B07     XMIT
    230     152   10011000              1001        B11     STKFL
    231     153   10011001              1010        B12     PWRF
    232     154   10011010              1001        B11     STKFL
    233     155   10011011              1011        B13     LCLK
    234     156   10011100              1001        B11     STKFL
    235     157   10011101              1010        B12     PWRF
    236     158   10011110              1001        B11     STKFL
    237     159   10011111              0111        B07     XMIT
```

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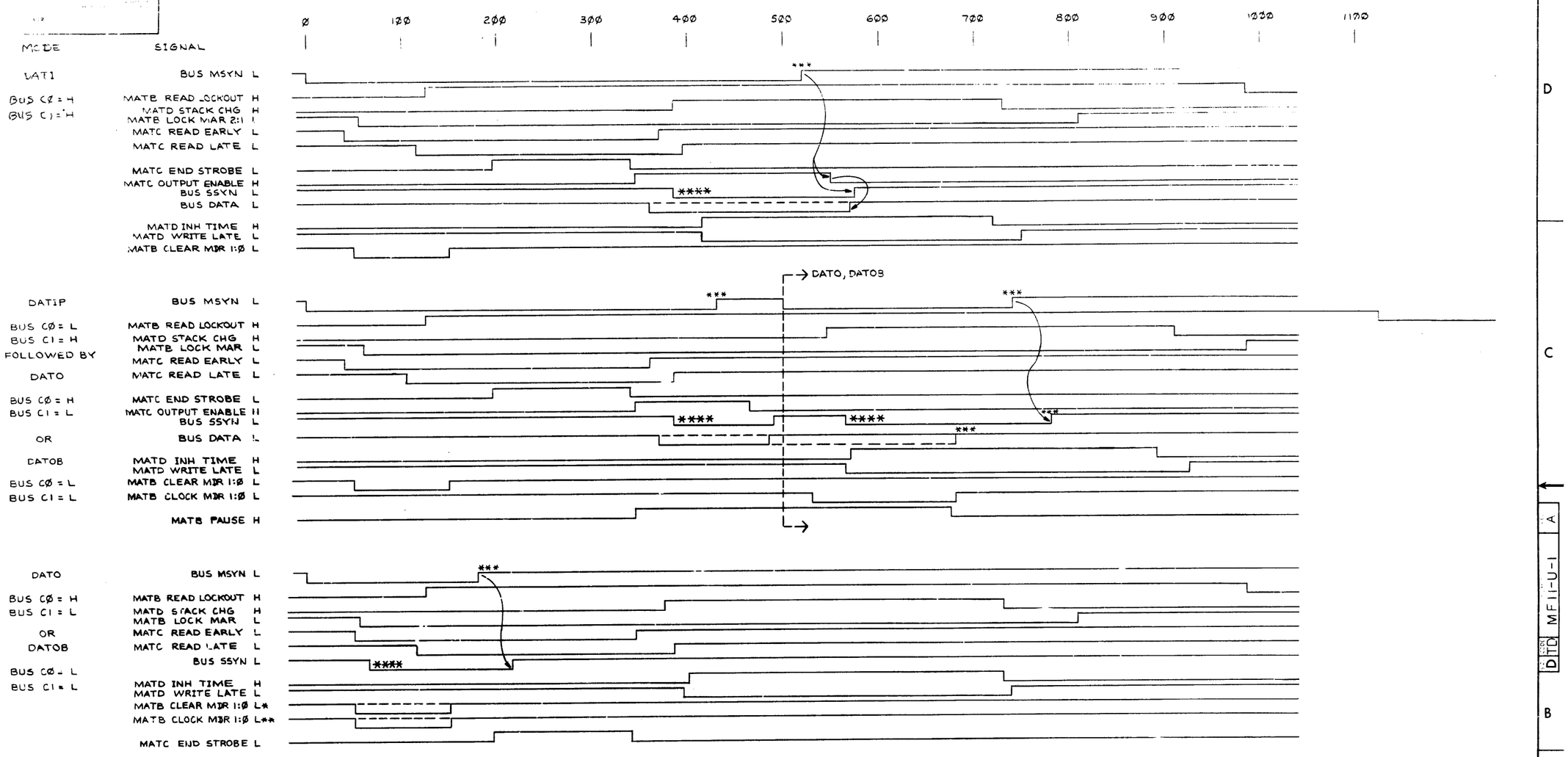
```
    240     160   10100000              1001        B11     STKFL
    241     161   10100001              1010        B12     PWRF
    242     162   10100010              1001        B11     STKFL
    243     163   10100011              1011        B13     LCLK
    244     164   10100100              1001        B11     STKFL
    245     165   10100101              1010        B12     PWRF
    246     166   10100110              1001        B11     STKFL
    247     167   10100111              0101        B05     RCD
    250     168   10101000              1001        B11     STKFL
    251     169   10101001              1010        B12     PWRF
    252     170   10101010              1001        B11     STKFL
    253     171   10101011              1011        B13     LCLK
    254     172   10101100              1001        B11     STKFL
    255     173   10101101              1010        B12     PWRF
    256     174   10101110              1001        B11     STKFL
    257     175   10101111              0101        B05     RCD
    260     176   10110000              1001        B11     STKFL
    261     177   10110001              1010        B12     PWRF
    262     178   10110010              1001        B11     STKFL
    263     179   10110011              1011        B13     LCLK
    264     180   10110100              1001        B11     STKFL
    265     181   10110101              1010        B12     PWRF
    266     182   10110110              1001        B11     STKFL
    267     183   10110111              1110        B16     STOP
    270     184   10111000              1001        B11     STKFL
    271     185   10111001              1010        B12     PWRF
    272     186   10111010              1001        B11     STKFL
    273     187   10111011              1011        B13     LCLK
    274     188   10111100              1001        B11     STKFL
    275     189   10111101              1010        B12     PWRF
    276     190   10111110              1001        B11     STKFL
    277     191   10111111              0010        B02     WAIT
                  ********
                  ********/( A(PIN #05) IS  CONB STACKFLOW (1)L
                  *******/( B(PIN #06) IS  CONH PDWN SYNC (1)L
                  ******/( C(PIN #07) IS  CONI LCLK INT (1)L
                  *****/( D(PIN #04) IS  CONE STOP (1)L
                  ****/( E(PIN #03) IS  DPH RCD INT (1)L
                  ***/( F(PIN #02) IS  DPH XMIT INT (1)L
                  **/( G(PIN #01) IS  DPG WAIT L
                  */( H(PIN #15) IS  DPF T DEL (1)L
```

```
                                  /( BY4 (PIN # 9) CONF MPC 04 L
                                  */( BY3 (PIN #10) CONF MPC 01 L
                                  **/( BY2 (PIN #11) CONF MPC 02 L
                                  ***/( BY1 (PIN #12) CONF MPC 08 L
  OCTAL  DECIMAL                  ****          OCTAL
ADDRESS ADDRESS    HGFEDCBA       ****          DATA
    300     192    11000000       1001          011       STKFL
    301     193    11000001       1010          012       PWRF
    302     194    11000010       1001          011       STKFL
    303     195    11000011       1011          013       LCLK
    304     196    11000100       1001          011       STKFL
    305     197    11000101       1010          012       PWRF
    306     198    11000110       1001          011       STKFL
    307     199    11000111       0101          005       RCD
    310     200    11001000       1001          011       STKFL
    311     201    11001001       1010          012       PWRF
    312     202    11001010       1001          011       STKFL
    313     203    11001011       1011          013       LCLK
    314     204    11001100       1001          011       STKFL
    315     205    11001101       1010          012       PWRF
    316     206    11001110       1001          011       STKFL
    317     207    11001111       0101          005       RCD
    320     208    11010000       1001          011       STKFL
    321     209    11010001       1010          012       PWRF
    322     210    11010010       1001          011       STKFL
    323     211    11010011       1011          013       LCLK
    324     212    11010100       1001          011       STKFL
    325     213    11010101       1010          012       PWRF
    326     214    11010110       1001          011       STKFL
    327     215    11010111       0111          007       XMIT
    330     216    11011000       1001          011       STKFL
    331     217    11011001       1010          012       PWRF
    332     218    11011010       1001          011       STKFL
    333     219    11011011       1011          013       LCLK
    334     220    11011100       1001          011       STKFL
    335     221    11011101       1010          012       PWRF
    336     222    11011110       1001          011       STKFL
    337     223    11011111       0111          007       XMIT
```

M7261-8 REV .A

```
    340     224    11100000       1001          011       STKFL
    341     225    11100001       1010          012       PWRF
    342     226    11100010       1001          011       STKFL
    343     227    11100011       1011          013       LCLK
    344     228    11100100       1001          011       STKFL
    345     229    11100101       1010          012       PWRF
    346     230    11100110       1001          011       STKFL
    347     231    11100111       0101          005       RCD
    350     232    11101000       1001          011       STKFL
    351     233    11101001       1010          012       PWRF
    352     234    11101010       1001          011       STKFL
    353     235    11101011       1011          013       LCLK
    354     236    11101100       1001          011       STKFL
    355     237    11101101       1010          012       PWRF
    356     238    11101110       1001          011       STKFL
    357     239    11101111       0101          005       RCD
    360     240    11110000       1001          011       STKFL
    361     241    11110001       1010          012       PWRF
    362     242    11110010       1001          011       STKFL
    363     243    11110011       1011          013       LCLK
    364     244    11110100       1001          011       STKFL
    365     245    11110101       1010          012       PWRF
    366     246    11110110       1001          011       STKFL
    367     247    11110111       1110          016       STOP
    370     248    11111000       1001          011       STKFL
    371     249    11111001
```



NOTES:

1. * IN THE DATOB MODE CLEAR MBRL ONLY OCCURS IN THE BYTE NOT BEING ADDRESSED.
2. ** IN THE DATOB MODE CLOCK MBRL ONLY OCCURS IN THE BYTE BEING ADDRESSED
3. *** ACTUAL TIME DEPENDS ON BUS AND PROCESSOR DELAYS.
4. **** IN PARITY SYSTEMS BUS SSYNL WILL BE 20 NS LATER THAN SHOWN FOR DATO-DATOB BUSS MODES AND 150 NS LATER FOR DATI-DATIP MODES.

FIRST USED ON OPTION/MODEL: MFII-U	QTY.	DESCRIPTION: PARTS LIST	PART NO. / ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES: DECIMALS .xxx = .005, .xx = .02, .x = .1; ANGLES ±0 30'. REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	DRN.	DATE 4-19-73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
	CHK'D.	DATE 4/30/73	
	ENG.	DATE 5/29/73	TITLE: MFII-U TIMING DIAGRAM (UNIBUS INTERFACE)
	PROJ. ENG.	DATE 5/29/73	
	PROD.	DATE 6/11/73	
MATERIAL	NEXT HIGHER ASSY.	B-DD-MFII-U	SIZE D, CODE TD, NUMBER MFII-U-1, REV. A
FINISH	SCALE		
	SHEET 1 OF 1		DIST.

DTD MFII-U-1 A

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS					REMARKS
1	A	B	C	D	E	
2	A	B	C	D	E	
3	A	B	C	D	E	
4	A	B	C	D	E	
5	A	B	C	D	E	
6	A	B	C	D	E	
7	A	B	C	D	E	
8	A	B	C	D	E	
9	A	B	C	D	E	
10	A	B	C	D	E	

ECO NO.	ORIG.	00001	00002	00003	00004
ETCH REV.	B	B	B	C	C
ENG.		R.O.D.	R.O.D.	[illegible]	[illegible]
DATE		9/27/73	11/16/73	11-4-74	4-6-75

FIRST USED ON OPTION/MODEL

MM11-U

DRN. W. MAJOR	DATE 5/10/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. W. Major	DATE 5/10/73	
ENG. D. [illegible]	DATE 5/14/73	TITLE 16K UNIBUS TIMING
PROJ. ENG. D. [illegible]	DATE 5/14/73	
PROD. R. [illegible]	DATE 5/10/73	

NEXT HIGHER ASSY. B-DD-MM-11-U

SCALE

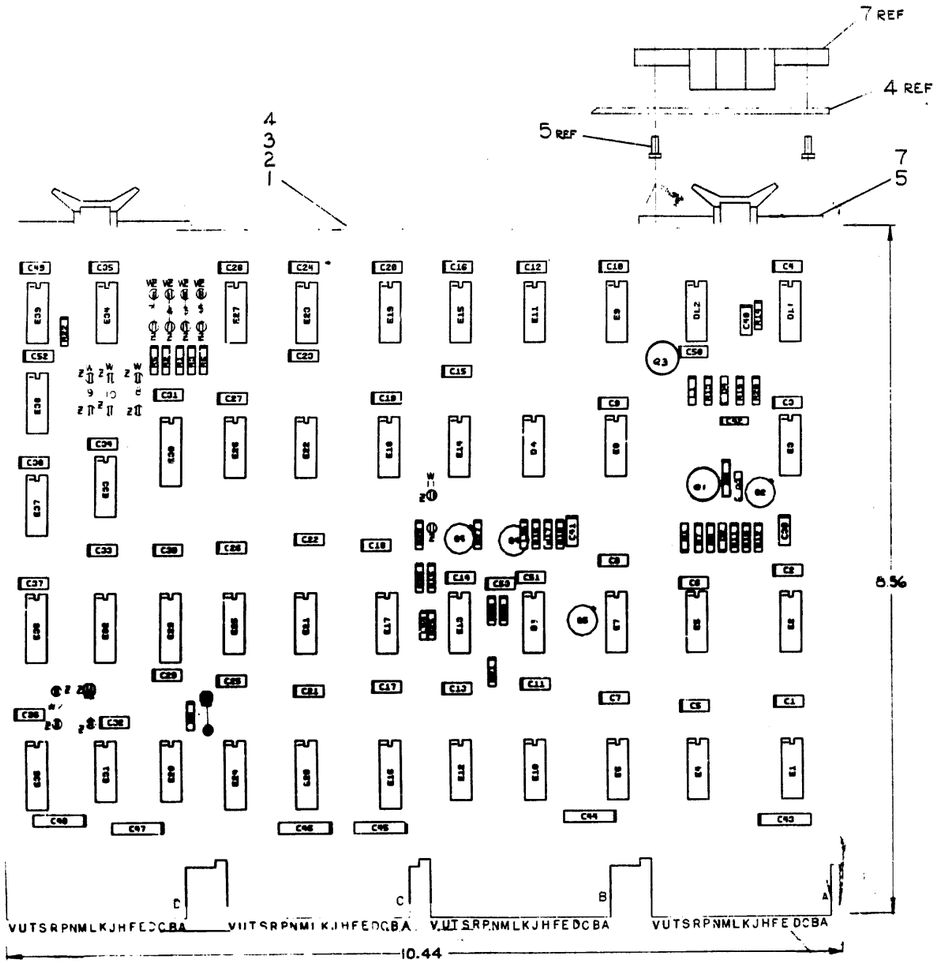
SHEET 1 OF 10

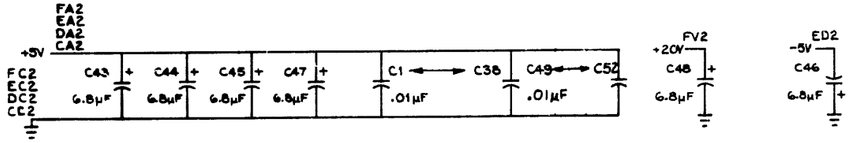
SIZE	CODE	NUMBER	REV.
B	CS	M8293-Ø-1	E

DIST.

DRB NO

NOTES: 1 UNLESS OTHERWISE SPECIFIED :
RESISTANCE IS IN OHMS,
CAPACITANCE IS IN MICROFARADS.





7483	12	5
7485	8	16
380	1	8
7475	12	5
IC TYPE	GND	+ 5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

REF				
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8293-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8293-0-5	2
REF		MODULE ECO HISTORY	B-MH-M8293-0-6	3
1		ETCHED CIRCUIT BOARD	5010473	4
8		EYELET GS-4-7	9006732	5
22		SPLIT LUGS	9006735	6
4		HANDLE FLIP-CHIP MAGENTA	9008337-6	7
2	C40, C41	CAP 82 PF .00V ±5% DM	1000015	8
1	C39	CAP 1000 PF 100V ±5% DM	1000042	9
43	C1 → 38, 42, 48-52	CAP .01µF 50V ±20%	1001610	10
6	C43 → 48	CAP 6.8 µF 35V ±10% S, TANT	1005306	11
1	D3	DIODE IN746A 3.6V ±5% ZENER	1104860	12
3	D1, 2, 4	DIODE D672	1105275	13
3	R13, 14, 18	RES 100 1/4 W 5%	1300229	14
1	R17	RES 120 1/4W 5%	1300247	15
1	R9	RES 750 1/2W 5%	1300356	16
3	R16, R25, R27	RES 1K 1/4W 5%	1300365	17
10	R1 → 6, 10, 21, 15, 22	RES 2K 1/4W 5%	1302398	18
3	R7, 11, 8	RES 20K 1/4W 5%	1302391	19
2	R19, 12	RES 560 1/4W 5%	1301830	20
1	R20	RES 33K 1/4W 10%	1300510	21
1	Q1	TRANSISTOR DEC 6534 D	1503409	22
5	Q2, 3, 4, 5, 6	TRANSISTOR DEC 3003 B	1503100	23
2	L1, 2	INDUCTOR 00µH	1610662	24
4	DL1, 2, 3, 4	DELAY LINE 250 NS, TAPPED	1611243	25
1	E28	IC DEC 74H40	1905536	26
5	E20, 24, 16, 36, 35	IC DEC 7475	1909050	27
5	E15, 8, 26, 37, 38	IC DEC 74H00	1909056	28
5	E14, 19, 1, 39, 6	IC DEC 74H10	1909057	29
2	E21, 33	IC DEC 74H50	1909060	30
2	E11, 25	IC DEC 74H53	1909062	31
2	E23, 27	IC DEC 74H55	1909063	32
6	E31, 4, 6, 17, 7, 5	IC DEC 3640	1909?	33
4	E9, 22, 13, 34	IC DEC 74H04	909?3	34
1	E30	IC DEC 7483	1909932	35
2	E29, 32	IC DEC 7485	910224	36
2	E3, 10	IC DEC 8885	1910649	37
2	E2, 12	IC DEC 7427	1908?9	38
2	R23, 24	RES 330 /4W 5%	1300295	39
1	C53	CAP 120 PF 100V ±5% D M.	1000018	40
1	C54	CAP 220 PF 100V ± 5% D M.	1000021	41
1	R 26	RES 24K 1/4 W 5%	1303177	42
1	R 28	RES 511 1/4 W 1%	1302411	43
6	W1, W3 → W7	WIRE JUMPER	3107560-01	44

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION MODEL: MM11-U

ETCH BOARD REV: C

CHANGE NO.	REVISIONS	REV

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

DRN. B. VALENTINE 11-29-73
CHK'D. W. Major 12/9/73
ENG. [redacted] 12/14/73
PROJ. ENG. [redacted] 12/14/73
MGR. [redacted] 12/14/73

NEXT HIGHER ASSY: B-DD-MM11-U

SCALE:

SHEET 2 OF 10

[redacted] EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

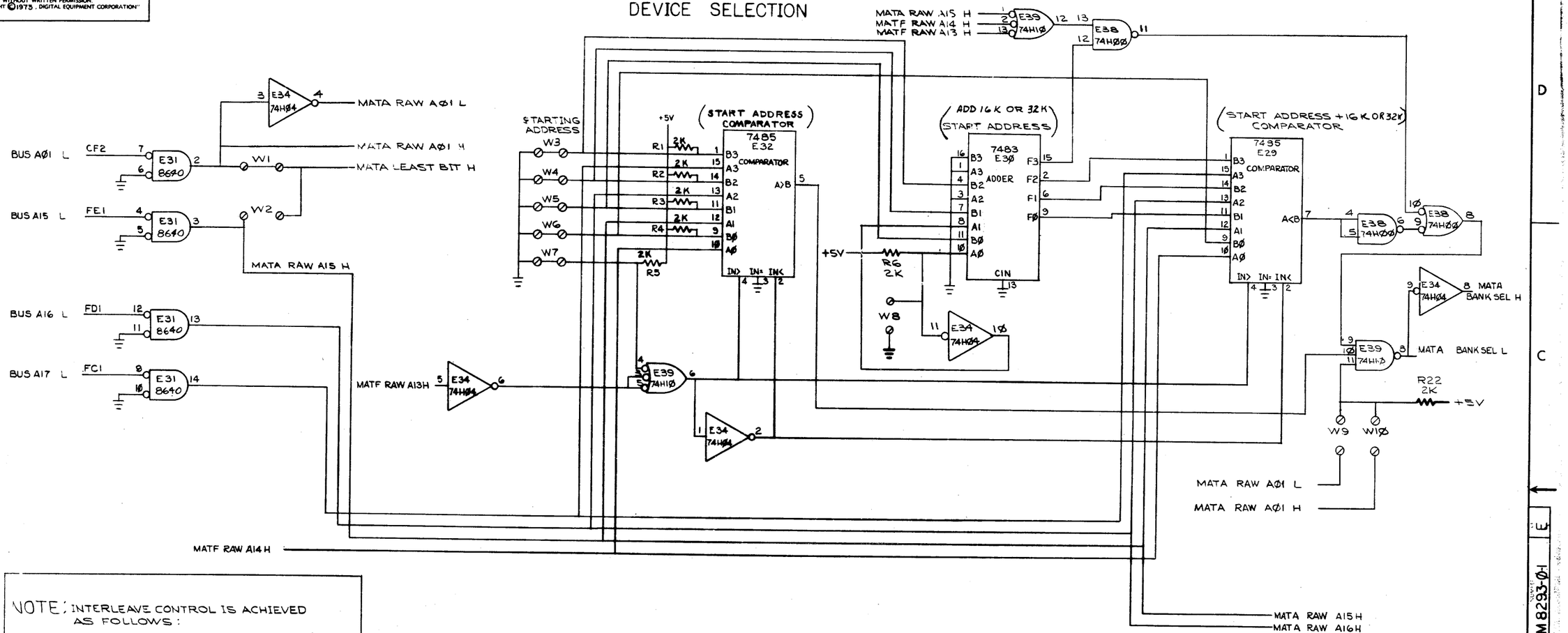
TITLE: 16K UNIBUS TIMING

SIZE: D | CODE: CS | NUMBER: M8293-Ø-1 | REV: E

DIST.

M8293-Ø-1 REV E

DEVICE SELECTION



NOTE: INTERLEAVE CONTROL IS ACHIEVED AS FOLLOWS:

a) NON-INTERLEAVED

W1 IN
W2, W8, W9 & W10 OUT

b) INTERLEAVED

W1 OUT
W2 & W8 IN

W9 IN } ONE MEMORY
W10 OUT }

W9 OUT } THE OTHER MEMORY
W10 IN }

STARTING ADDRESS FOR THE COMBINED INTERLEAVED MEMORY IS THE SAME AS FOR THE NON-INTERLEAVED CASE (W3 THRU W7 MUST BE CUT THE SAME FOR BOTH INTERLEAVED MEMORIES) BUT THE INTERLEAVED MAX ADDRESS IS INCREASED BY 16K (100000 8)

Ø = IN 1 = OUT

NON-INTERLEAVED START ADDRESS	W3	W4	W5	W6	W7	NON-INTERLEAVED MAX ADDRESS
000000 (8K)	Ø IN	Ø IN	Ø IN	Ø IN	Ø IN	077776
020000 (4K)	Ø IN	Ø IN	Ø IN	Ø IN	1 OUT	117776
040000 (8K)	Ø	Ø	Ø	1	Ø	137776
060000 (12K)	Ø	Ø	Ø	1	1	157776
100000 (16K)	Ø	Ø	1	Ø	Ø	177776
120000 (20K)	Ø	Ø	1	Ø	1	217776
140000 (24K)	Ø	Ø	1	1	Ø	237776
160000 (28K)	Ø	Ø	1	1	1	257776
200000 (32K)	Ø	1	Ø	Ø	Ø	277776
220000 (36K)	Ø	1	Ø	Ø	1	317776
240000 (40K)	Ø	1	Ø	1	Ø	337776
260000 (44K)	Ø	1	Ø	1	1	357776
300000 (48K)	Ø	1	1	Ø	Ø	377776
320000 (52K)	Ø	1	1	Ø	1	417776
340000 (56K)	Ø	1	1	1	Ø	437776
360000 (60K)	Ø	1	1	1	1	457776
400000 (64K)	1	Ø	Ø	Ø	Ø	477776

* THE MEMORY WILL NOT RESPOND TO BUS ADDRESSES BETWEEN 124-128K

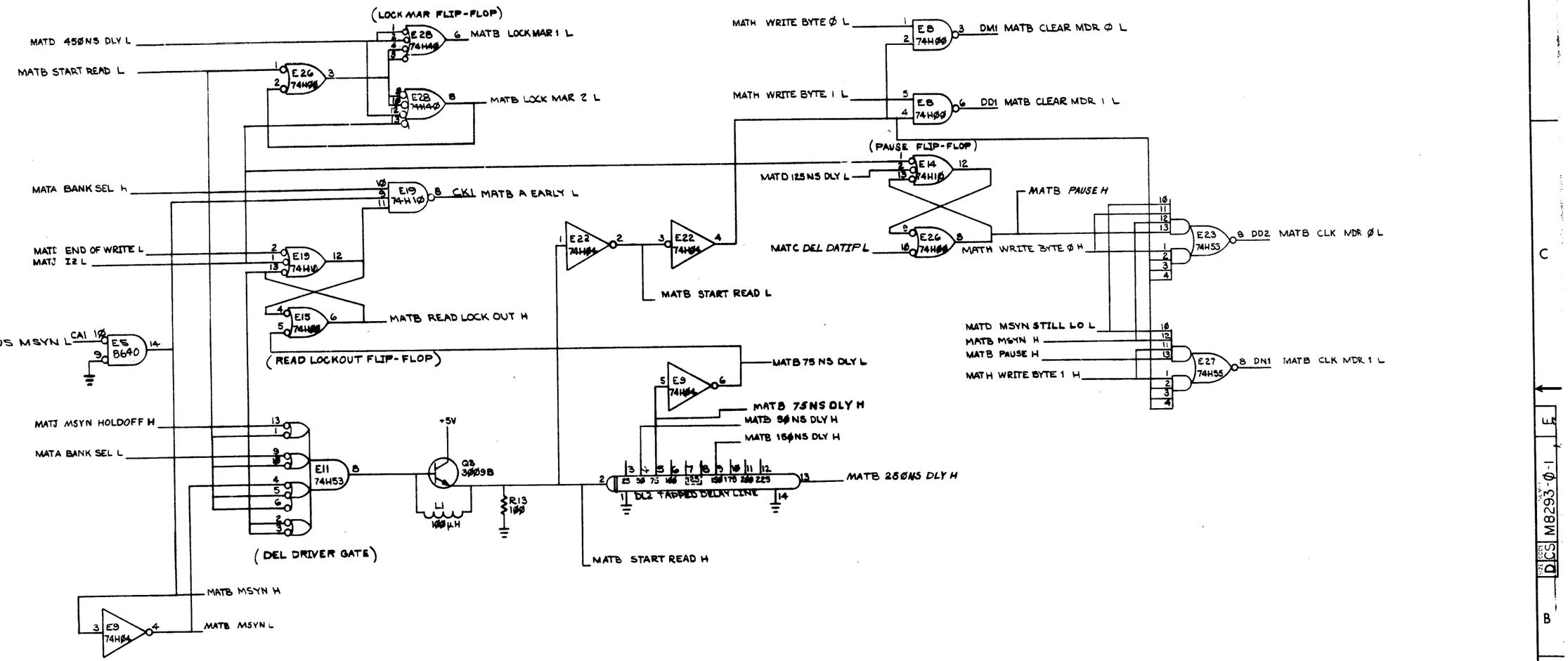
	W3	W4	W5	W6	W7	
420000 (68K)	1	Ø	Ø	Ø	1	517776
440000 (72K)	1	Ø	Ø	1	Ø	537776
460000 (76K)	1	Ø	Ø	1	1	557776
500000 (80K)	1	Ø	1	Ø	Ø	577776
520000 (84K)	1	Ø	1	Ø	1	617776
540000 (88K)	1	Ø	1	1	Ø	637776
560000 (92K)	1	Ø	1	1	1	657776
600000 (96K)	1	1	Ø	Ø	Ø	677776
620000 (100K)	1	1	Ø	Ø	1	717776
640000 (104K)	1	1	Ø	1	Ø	737776
660000 (108K)	1	1	Ø	1	1	757776
700000 (112K)	1	1	1	Ø	Ø	757776 *
720000 (116K)	1	1	1	Ø	1	757776 *
740000 (120K)	1	1	1	1	Ø	757776 *

DEVICE SELECTION LOGIC

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
16K UNIBUS TIMING (MATA)	D	CS	M8293-Ø-1	E
SCALE —	SHEET 3 OF 10	DIST.		

M8293-Ø-1 E
M8293-Ø-H E



READ START TIMING

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
16K UNIBUS TIMING (MATB)	D	DCS	M8293-Ø-1	E
SCALE —/—	SHEET 4 OF 1Ø	DIST.		

M8293-Ø-1

MATC 300 NS DLY H
MATC 325NS DLY H
MATB START READ H
E2 7427
E3 8885
CJ1 MATC READ EARLY L
(READ EARLY FLIP-FLOP)

MATH C1 L
E1 74H10
E1 74H10
DE2 MATC OUTPUT ENABLE H
+5V
R21 2K
PCL MSYN DISABLE L DT2
MATB MSYN H
E1 74H10
(OUTPUT ENABLE FLIP-FLOP)

MATB 150 NS DLY H
E2 7427
E3 8885
CD1 MATC END STROBE L
(END STROBE FLIP-FLOP)

MATH C0 H
MATH C1 L
E26 74H00
MATC DATIP CYCLE L
E22 74H64
E26 74H00
MATC DEL DATIP L

MATH C1 L
MATB MSYN H
E21 74H50
MATC SSYN L
+5V
R23 330
C53 120 PF
R24 330
MATB CLK MDR 0 L
MATB CLK MDR 1 L
E14 74H10
(SSYN FLIP-FLOP)
CB2
BUS SSYN L *
Q5 3800B

MATJ IZ H
MATC 350NS DLY H
E2 7427
E3 8885
CM1 MATC READ LATE L
MATB 75 NS DLY H
(READ LATE FLIP-FLOP)

MATC 300NS DLY H
MATC 325 NS DLY H
MATB 250NS DLY H
275 300 325 350 375 400 425 450 475
(DL1 TAPPED DELAY LINE)
R14 100
C40 82 pf

* THIS SIGNAL IS CALLED
'BUS SSYN L' FOR MF11-U
'SSYN INT BUS L' FOR MF11-UP

REVISIONS		
CHK	CHANGE NO.	REV.

READ TIMING

TITLE	SIZE	CODE	NUMBER	REV.
16K UNIBUS TIMING (MATC)	D	CS	M8293-0-1	E
SCALE	SHEET 5 OF 10	DIST.		

(WRITE DEL DRIVER GATING)

MATC 385 NS DLY H
MATC DATI P CYCLE L
MATB PAUSE H
MATB MSYN H
MATB START READ L
E25 75H53
E8 74H08
E8 74H08
+5V
R15 2K
E13 74H04
MATD MSYN STILL LO L
E13 74H04
MATD WRITE Ø DLY L
E21 74H50
MATD WRITE START L
MATD WRITE LOCKOUT H
PC2 DATIP CLR PAUSE 1 L
CE2
ORIGINATES FROM M7259 PARITY CONTROL MODULE (SHEET 3) VIA MFII-UP BACKPLANE

(INH FLIP-FLOP)

MATD 25 NS DLY H
E10 8885
E12 7427
DK2 MATD INH TIME H
MATJ IZ H
E10 8885
E12 7427
MATD 400 NS DLY H
(WRITE LATE FLIP-FLOP)
DP1 MATD WRITE LATE L
MATD 125 NS DLY L
MATJ IZ L
E13 74H04
E15 74H08
E19 74H10
(WRITE LOCKOUT FLIP-FLOP)
MATD 125 NS DLY H
MATD 350 NS DLY H
MATD 450 NS DLY H
MATD WRITE END DLY H

+5V
R16 1K
Q4 3009B
L2 100µH
R17 120
(WRITE DEL DRIVER)

MATD WRITE Ø DLY H
25 50 75 100 125 150 175 200 225 NS
(DL4 TAPPED DELAY LINE)
275 300 325 350 375 400 425 450 475 NS
(DL3 TAPPED DELAY LINE)
R18 100
C41 82 PF

MATJ IZ H
E10 8885
E12 7427
DB2 MATD STACK CHG H
CM2 MATD WRITE EARLY L
(STACK CHG FLIP-FLOP)

+5V
R25 1K
R26 2.4K
W11
R27 1K
R28 511 1%
C54 220 PF
Q6 3009B

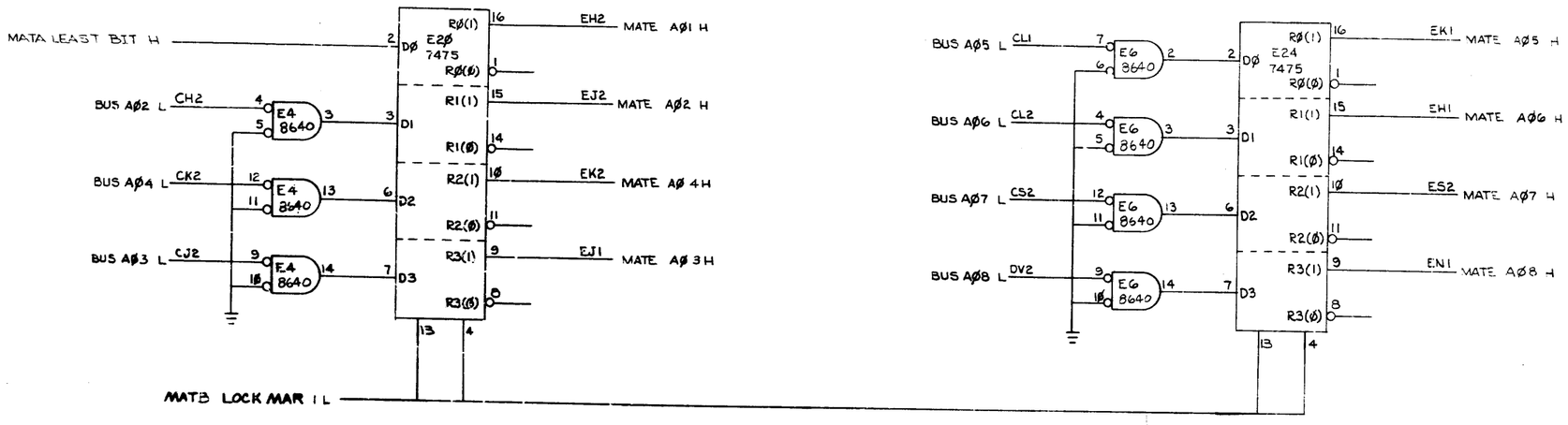
E13 74H04
MATD 450 NS DLY L
E13 74H04
E13 74H04
E15 74H10
MATB START READ L
E18 74H10
MATC SSYN L
E18 74H10
MATD END OF WRITE L

REVISIONS		
CHK	CHANGE NO	REV

WRITE TIMING

TITLE	SIZE	CODE	NUMBER	REV.
16K UNIBUS TIMING (MATD)	D	CS	M8293-Ø-1	E
SCALE —	SHEET 6 OF 10	DIST.		

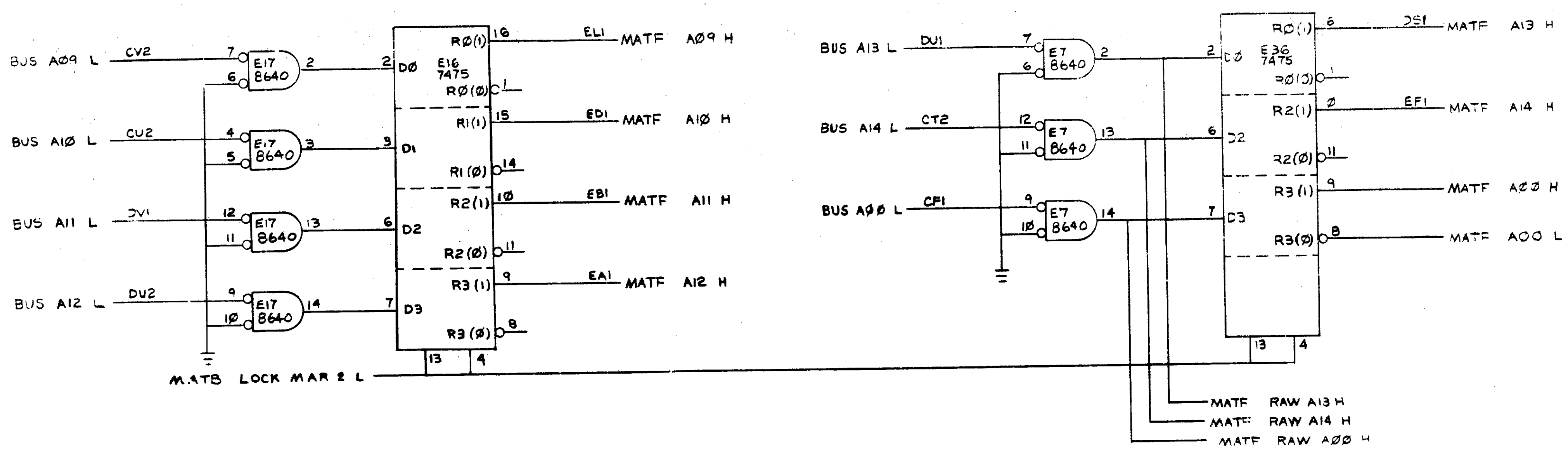
DCS M8293-Ø-1



AØ1-AØ8 LATCHES

TITLE 16K UNIBUS TIMING (MATE)			SIZE	CODE	NUMBER	REV.
SCALE -	SHEET 7 OF 12		D	CS	M8293-Ø-1	E
DIST						

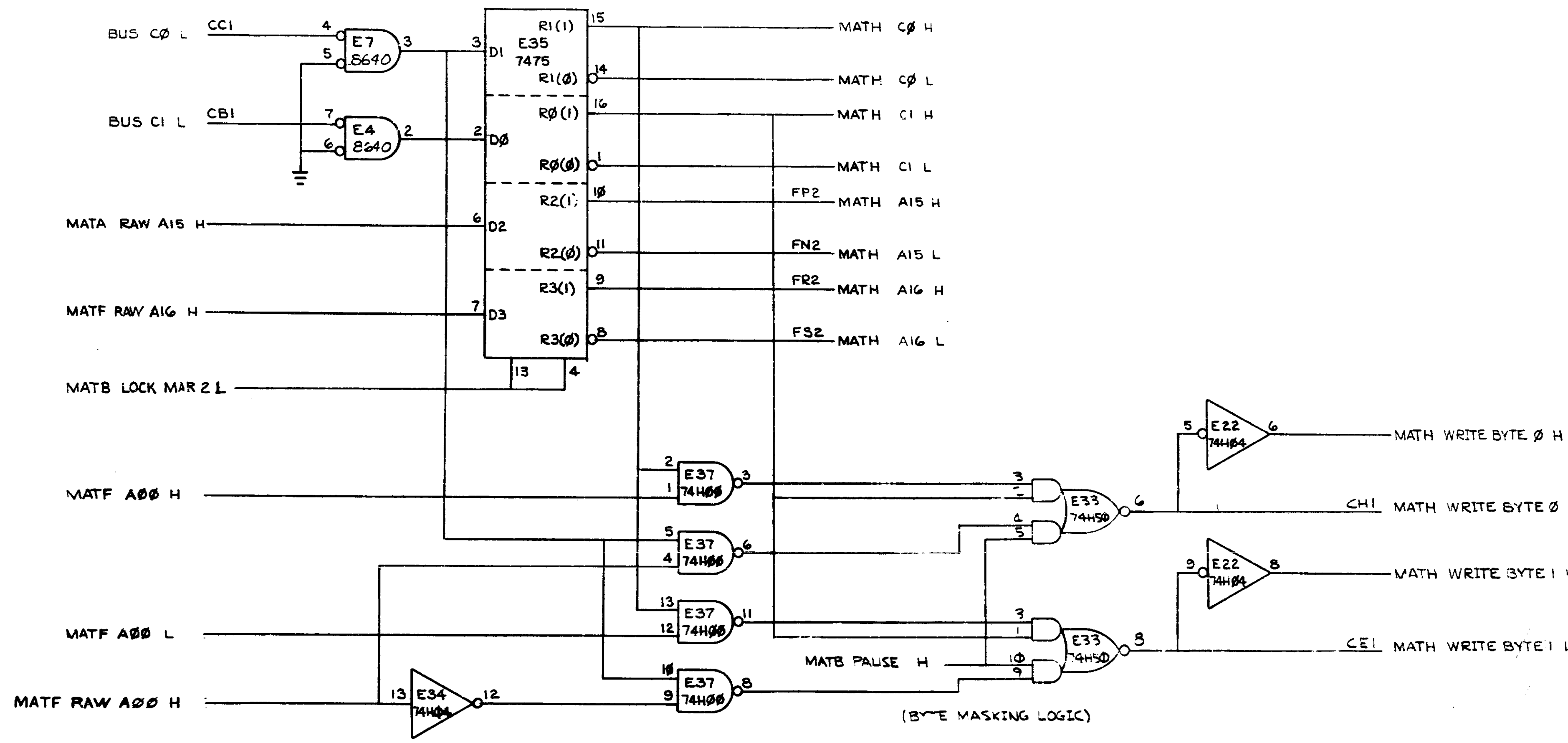
DCS M8293-Ø-1



A00 A09 → A13 LATCHES

D CS M8293-0-1

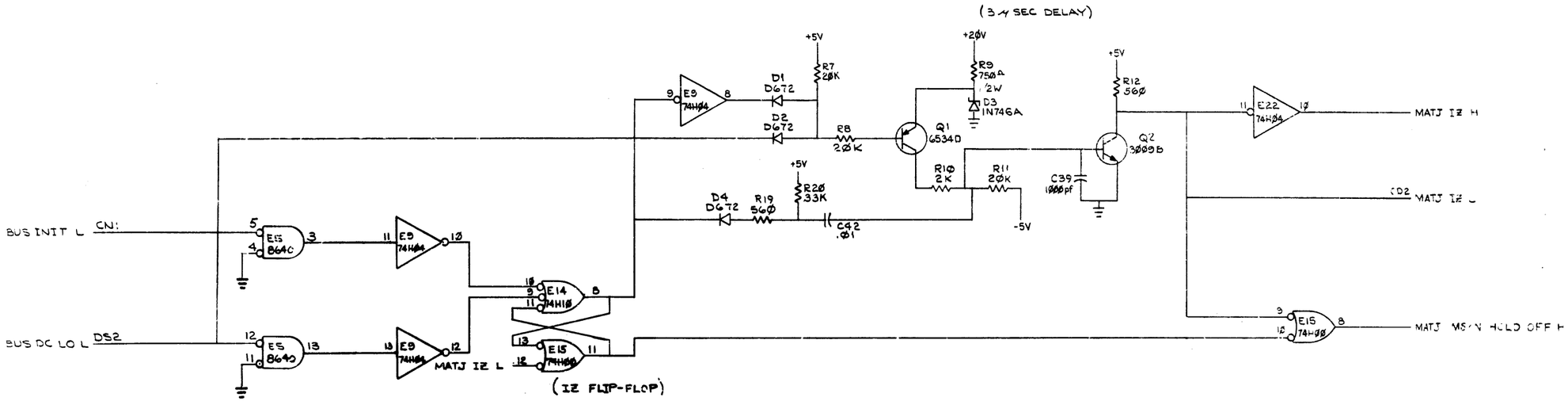
SHEET 3



LATCHES & BYTE MASKING

TITLE	SIZE	CODE	NUMBER	REV
16K UNIBUS TIMING (MATH)	D	CS	M8293-Ø-1	E

SCALE — SHEET 9 OF 1Ø



INIT & DCLO INITIALIZING

REV	TITLE	SIZE	CODE	NUMBER	REV
	16K UNIBUS TIMING (MATJ)	D	CS	M8293-0-1	E
	SCALE — SHEET 10 OF 10	DIST			

D8293-0-1

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS										REMARKS
1	C	D	E	F	H	J	K	L	M		
2	C	D	E	F	H	J	K	L	M		
3	C	D	E	F	H	J	K	L	M		
4	C	D	E	F	H	J	K	L	M		
5	C	D	E	F	H	J	K	L	M		
6	C	D	E	F	H	J	K	L	M		

ECO NO.	-	1	2	3	4	5	6	7	8	
ETCH REV.	D	D	D	D	D	D	D	D	D	
ENG.	-	[illegible]	[illegible]	[illegible]	PVO [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
DATE	-	7/23/73	8-15-73	11-16-73	12-19-73	3/13/74	9-11-74	11-23-75	5-12-75	

FIRST USED ON OPTION/MODEL

MF11U & MF11-UP

DRN.	B BUENTING	DATE 2 8 73
CHK'D.	MARCHAND	DATE 4 4 73
ENG.	[signature]	DATE 4/4/73
PROJ. ENG.	[signature]	DATE 4/4/73
PROD.	[signature]	DATE 4/4/73

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE

16K X-Y DRIVE

NEXT HIGHER ASSY.

SCALE -+-

SHEET 1 OF 6

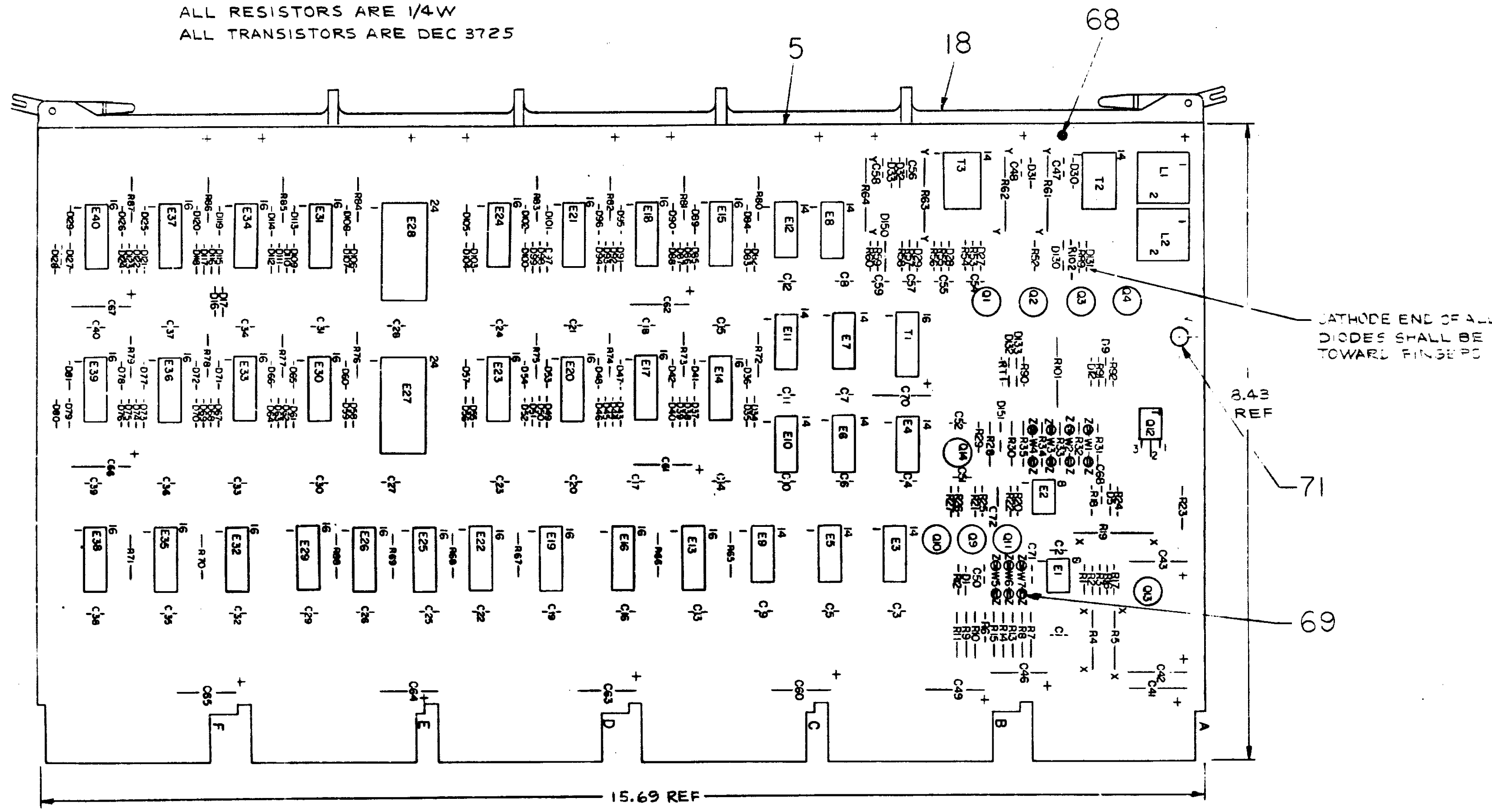
SIZE	CODE	NUMBER	REV.
B	CS	G235-0-1	M

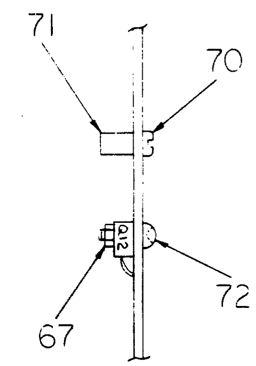
DIST.

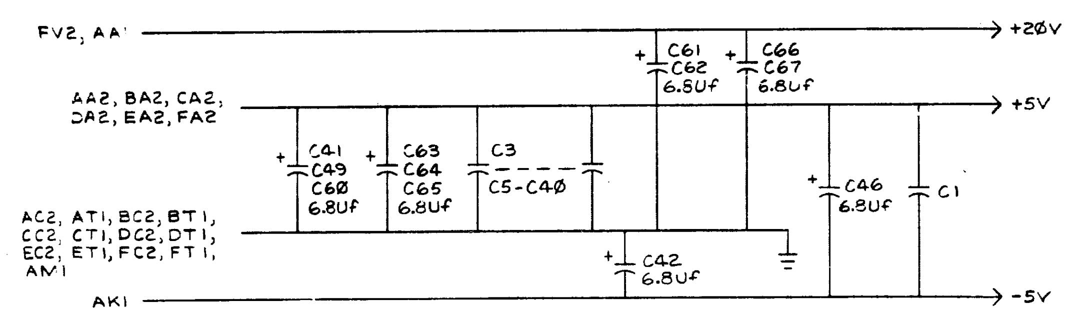
8	7	6	5	4	3	2	1

NOTES:

1. * INDICATES NOT USED ON MF11-U & MF11-UP (2 PLACES).
2. ** INDICATES NOT USED ON MF11-U & MF11-UP, BUT ARE TIED TO UNUSED TERMINATORS ON THE G114 MODULE, WHICH FORCES THEM TO +3V (5 PLACES).
3. 1 THERMISTOR LOCATED ON H217 STACK MODULE, 1 ON 6235
4. UNLESS OTHERWISE INDICATED;
   ALL DIODES ARE D672
   ALL CAPACITORS ARE .01 UF
   ALL RESISTORS ARE 1/4W
   ALL TRANSISTORS ARE DEC 3725







IC TYPE	GND	+ 5V	+20V
74 2	7	—	—
41	—	—	—
325	—	9	16
442	8	16	—
74 54	12	24	—

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO

PARTS LIST

FIRST USED ON OPTION MODEL: MF11-U & MF11-UP

ETCH BOARD REV: D

DEC NO	EIA NO.	DEC NO	EIA NO.

SEMICONDUCTOR CONVERSION CHART

CHK | CHANGE NO. | REV | REVISIONS

DRN. | DATE
CHK'D. | DATE
ENG. | DATE
PROJ. ENG. | DATE
PROD. | DATE

NEXT HIGHER ASSY

SCALE

SHEET 2 OF 6

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: 16K X-Y DRIVE

SIZE	CODE	NUMBER	REV.
D	CS	6235-Ø-1	M

DIST

8	7	6	5	4	3	2	1

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
				1
REF		X-Y- COORDINATE HOLE LOCATION	K-CO-G235-0-4	2
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-G235-0-5	3
REF		ECO MODULE HISTORY	B-MH-G235-0-6	4
1		ETCHED CIRCUIT BD.	5010145	5
1	C71	CAP 47 PF 100V 5% D.M.	1000011	6
46	C1-C40, C48, C50, C52, C58, C68, C72	CAP .01UF 50V 20%	1001610	7
4	C59, C54, C55, C57	CAP .005 UF 100V 20% DISC	1001765	8
1	C51	CAP 18 PF 100V 5% D.M.	1002608	9
1	C43,	CAP 47 UF 20V 10% S. TANT	1004814	10
13	C41, C42, C46, C49, C60-C67, C70	CAP 6.8UF 35V 10% S. TANT	1005306	11
1	D1	DIODE ZENER IN753A 6.2V ± 5%	1102421	12
109	D9, D12, , D17 , D27-D130, D132, D150	DIODE D672	1105275	13
1	D16	DIODE ZENER IN5248B 18V ± 10%	1110766	14
1	D5	DIODE ZENER IN749A 4.3V ± 5%	1109977	15
1	D131,	DIODE ZENER IN754A 6.8V ± 5%	1109991	16
1	D151	DIODE ZENER IN750A 4.7V ± 5%	1100124	17
1		HANDLE ASSY	1210711-2	18
2	R18, R24	RES 100 1/4W 5%	1300229	19
12	R69-R71, R76-R79, R84-R88	RES 220 1/2W 5%	1300274	20
1	R101	RES 220 2W 10%	1300278	21
12	R65-R68, R72-R75, R80-R83	RES 270 1/2W 5%	1300285	22
2	R21, R27	RES 470 1/4W 5%	1300316	23
2	R3, R16,	RES 1K 1/4W 5%	1300365	24
1	R23	RES 1K 1/2W 5%	1300364	25
1	R2	RES 4.7K 1/4W 5%	1300447	26
1	R17	RES 10 1/4W 5%	1301317	27
1	R89	RES 82Ω 1/4W 5%	1301477	28
4	R61-R64	RES 10Ω 2W 10%	1300172	29
1	R22	RES 22K 1/4W 5%	1301808	30
1	R12	RES 270 1/4W 5%	1301972	31
4	R54, R56, R58, R60	RES 18 1/4W 5%	1302124	32
4	R53, R55, R57, R59	RES 75 1/4W 5%	1302379	33
4	R25, R26, R52, R2Ø	RES 2K 1/4W 5%	1302388	34
2	R1, R6	RES 470K 1/4W 5%	1302398	35
1	R29	RES 120K 1/4W 5%	1300539	36
2	R32, R8	RES 10K 1/8W 1%	1302886	37
2	R28, R30	RES 14.7K 1/8W 1%	1302941	38
1	R9	RES 287 1/8W 1%	1305124	39
1	R10	RES 196 1/8W 1%	1302956	40
1	R35	RES 3.16K 1/8W 1%	1303045	41
1	R34	RES 34.8K 1/8W 1%	1303156	42
1	R14,	RES 243K 1/8W 1%	1304843	43
1	R11	RES 2.61K 1/8W 1%	1303303	44
2	R15, R33,	RES 68.1K 1/8W 1%	1305252	45
1	R13	RES 121K 1/8W 1%	1305255	46
2	R4, R5	RES .25 3W 1%	1310219	47
1	R19	RES .05 5W 3%	1310983	48
1	R90	RES 56Ω 1/4W 5%	1302602	49
1	Q14	TRANS DEC 2904A	1501913	50
1	Q13	TRANS DEC 6534B	1503409-1	51
1	Q12	TRANS DEC 4920	1509605	52
6	Q1-Q4, Q9, Q10	TRANS DEC 3725	1510959	53
1	T1	PULSE TRANSFORMER (DIP)	1609651	54
2	T2, T3	SATURATING TRANSFORMER-XY	1610962	55
2	L1, L2	CHOKE 400 UH	1610963	56
2	E27, E28	IC DEC 74154	1909701	57
2	E19, E32	IC DEC 7442	1910046	58
1	E4	IC DEC 74121	1910230	59
2	E1, E2	IC DEC 741	1910298	60
2	E5, E8	IC DEC 74H00	1909056	61
1	E6	IC DEC 74H04	1909931	62
1	E10	IC DEC 74H10	1909057	63
2	E7, E11	IC DEC 74H40	1905586	64
24	E13-E18, E20-E26, E29-E31, E33-E40	IC DEC 75325	1910960	65
2	E9, E12	IC DEC 74H50	1909060	66
1		KEPNUT 4-40	9006557	67
12		EYELET HANDLE	9006732	68
14		SPLIT LUGS	9006735	69
1		SCREW NYLON 6-32	9008212-1	70
1		STAND OFF 1/4 X 3/8	9008213	71
1		SCREW (PHILLIPS PAN HEAD) 4-40 X 5/16	9006010-1	72
1	R31	RES 19.6K 1/8W 1%	1309419	73
AR	W1-W7	WIRE #22 AWG (SOLID)	9107560-1	74
1	R91,	RES 180Ω 1/4W 5%	1301322	75
1	D133	DIODE ZENER IN752A 5.6V 5%	1102808	76
1	R92	RES 150Ω 1/4W 5%	1300250	77
2	C47, C56	CAP. .022UF 50V	1011683	78
1	RT1	THERMISTER 300Ω 2%	1309785	79
1	R102	RES 330Ω 1/4W 5%	1300295	80
1	Q11	TRANS. DEC 4258	1505321	81
1	E3	I.C. DEC 74H2Ø	1905635	82
1	R7	RES. 9.09K 1/8W 1%	1304855	83

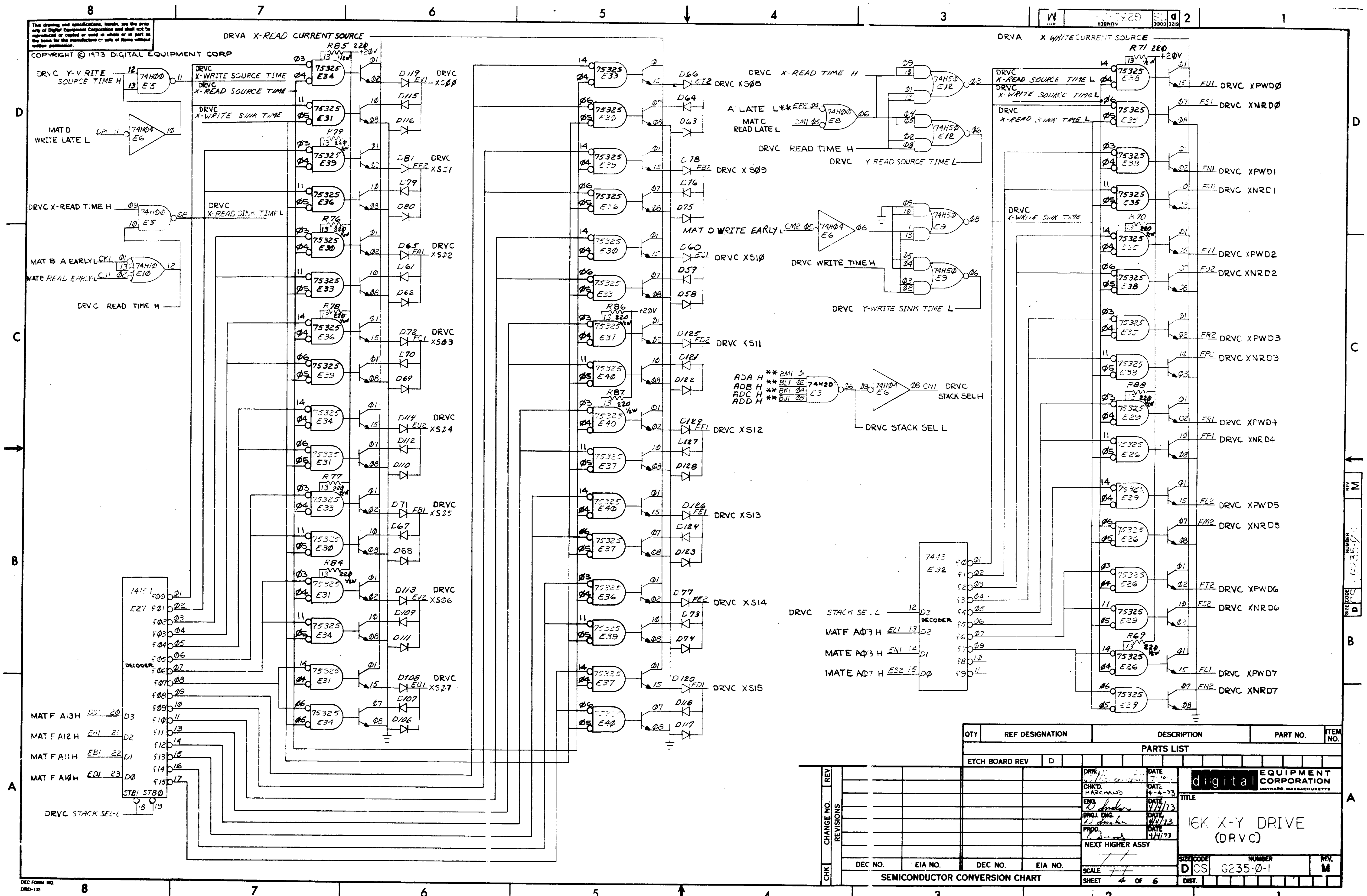
REVISIONS

CHK	CHANGE NO	REV

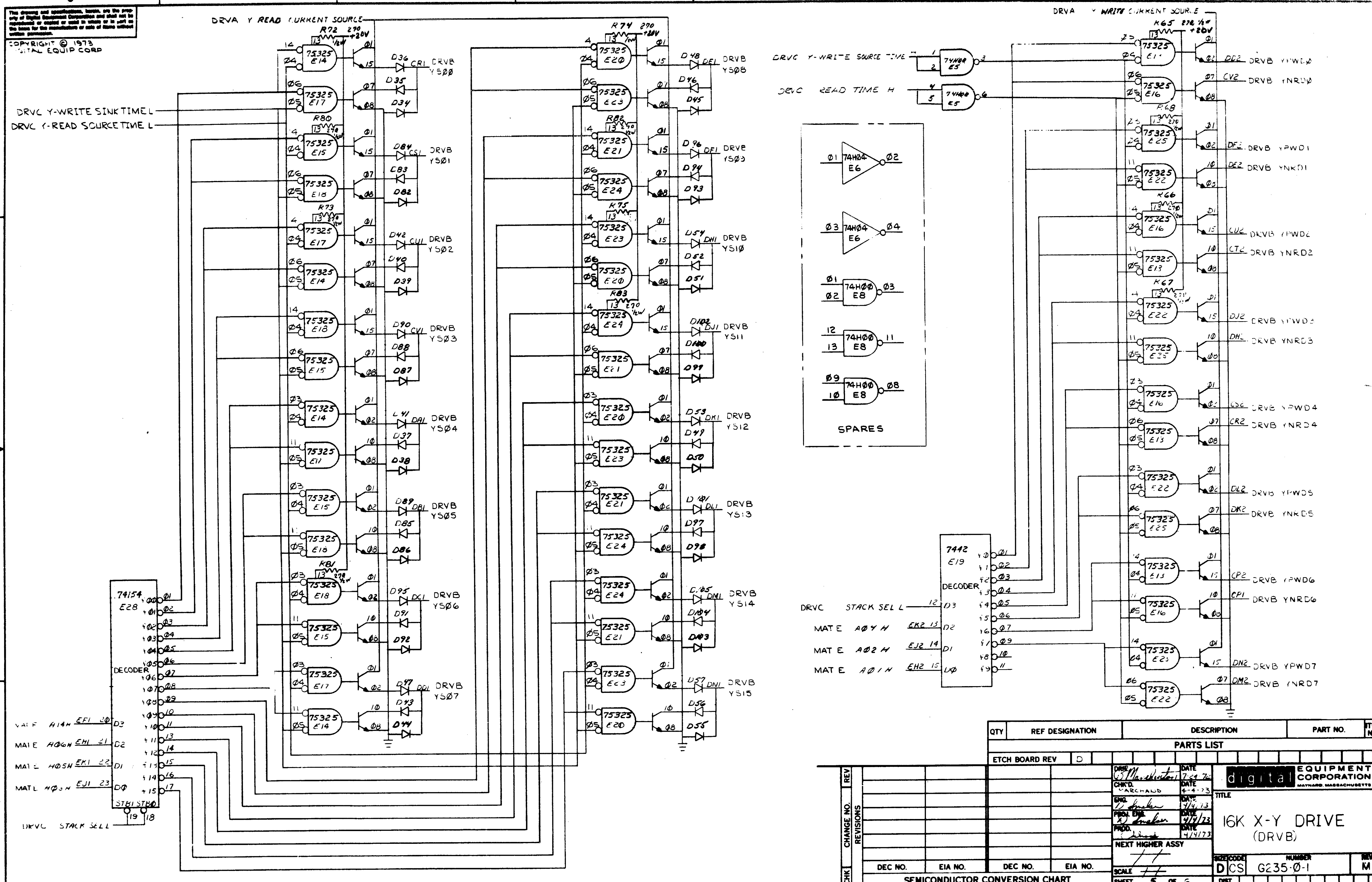
TITLE: 16K X-Y DRIVE

SIZE: D | CODE: CS | NUMBER: G235-Ø-1 | REV.: M

SCALE: — | SHEET 3 OF 6 | DIST.



COPYRIGHT © 1973 DIGITAL EQUIPMENT CORP
DRVA X-READ CURRENT SOURCE
DRVA X WRITE CURRENT SOURCE
DRVC Y-WRITE SOURCE TIME H
MAT D WRITE LATE L
DRVC X-READ TIME H
MAT B A EARLY L
MATE READ EARLY L
DRVC READ TIME H
DRVC X-WRITE SOURCE TIME
DRVC X-READ SOURCE TIME
DRVC X-WRITE SINK TIME
DRVC X-READ SINK TIME L
DRVC XS00
DRVC XS01
DRVC XS02
DRVC XS03
DRVC XS04
DRVC XS05
DRVC XS06
DRVC XS07
DRVC XS08
DRVC XS09
DRVC XS10
DRVC XS11
DRVC XS12
DRVC XS13
DRVC XS14
DRVC XS15
A LATE L
MAT C READ LATE L
DRVC READ TIME H
DRVC Y READ SOURCE TIME L
MAT D WRITE EARLY L
DRVC WRITE TIME H
DRVC Y-WRITE SINK TIME L
ADA H
ADB H
ADC H
ADD H
DRVC STACK SEL H
DRVC STACK SEL L
DRVC X-READ SOURCE TIME L
DRVC X-WRITE SOURCE TIME L
DRVC X-READ SINK TIME L
DRVC X-WRITE SINK TIME
DRVC XPWD0
DRVC XNRD0
DRVC XPWD1
DRVC XNRD1
DRVC XPWD2
DRVC XNRD2
DRVC XPWD3
DRVC XNRD3
DRVC XPWD4
DRVC XNRD4
DRVC XPWD5
DRVC XNRD5
DRVC XPWD6
DRVC XNRD6
DRVC XPWD7
DRVC XNRD7
DRVC STACK SEL L
MATF A03 H
MATE A03 H
MATE A07 H
MAT F A13H
MAT F A12 H
MAT F A11 H
MAT F A10 H
DRVC STACK SEL-L
DECODER
QTY
REF DESIGNATION
DESCRIPTION
PART NO.
ITEM NO.
PARTS LIST
ETCH BOARD REV D
SEMICONDUCTOR CONVERSION CHART
DEC NO.
EIA NO.
CHANGE NO.
REVISIONS
REV
CHK
DRN
CHK'D. MARCHAND
DATE 4-4-73
ENG.
PROJ. ENG.
PROD.
NEXT HIGHER ASSY
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
TITLE
16K X-Y DRIVE (DRVC)
SIZE D
CODE CS
NUMBER G235-0-1
REV. M
SCALE
SHEET 4 OF 6
DIST.
DEC FORM NO DRD-135



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QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV D

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

REV / CHANGE NO. / REVISIONS / CHK

DRN: [signature] DATE 7-24-72
CHK'D: MARCHAND DATE 4-4-73
ENG: [signature] DATE 4/4/73
PROJ. ENG: [signature] DATE 4/4/73
PROD: [signature] DATE 4/4/73

NEXT HIGHER ASSY

SCALE
SHEET 5 OF 6

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: 16K X-Y DRIVE (DRVB)

SIZE: D CODE: CS NUMBER: G235-0-1 REV: M

DIST.

DEC FORM NO DRD-135

BIAS CURRENT GENERATOR

X & Y CURRENT SOURCES

SENSE STROBE CONTROL

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
		ETCH BOARD REV D		

CHANGE NO. REVISIONS	DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

DRN. W. Blanchette DATE 7-31-72
CHK'D. MARC HAND DATE 4-4-73
ENG. D. Anderson DATE 4/9/73
PROJ. ENG. D. Anderson DATE 4/9/73
PROD. R. Mack DATE 4/9/73
NEXT HIGHER ASSY —
SCALE —
SHEET 6 OF 6

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: 16K X-Y DRIVE (DRVA)

SIZE D CODE CS NUMBER G235-0-1 REV M

DIST.

DEC FORM NO. DBD-135

PAGE REVISION CONTROL SHEET

SH NO.	PAGE REVISIONS	REMARKS
1	A B C D E F	
2	A B C D E F	
3	A B C D E F	
4	A B C D E F	
5	A B C D E F	
6	A B C D E F	
7	A B C D E F	
8	A B C D E F	
9	A B C D E F	

ECO NO.	—	—	G114-00002	G114-00003	G114-00004	G114-00005	
ETCH REV.	B	B	B	C	C	C	
ENG.	—	PWD	PWD	[illegible]	[illegible]	[illegible]	
DATE	—	9-4-73	10-29-73	10-23-74	11-23-74	4-29-75	

FIRST USED ON OPTION/MODEL

MF11-U

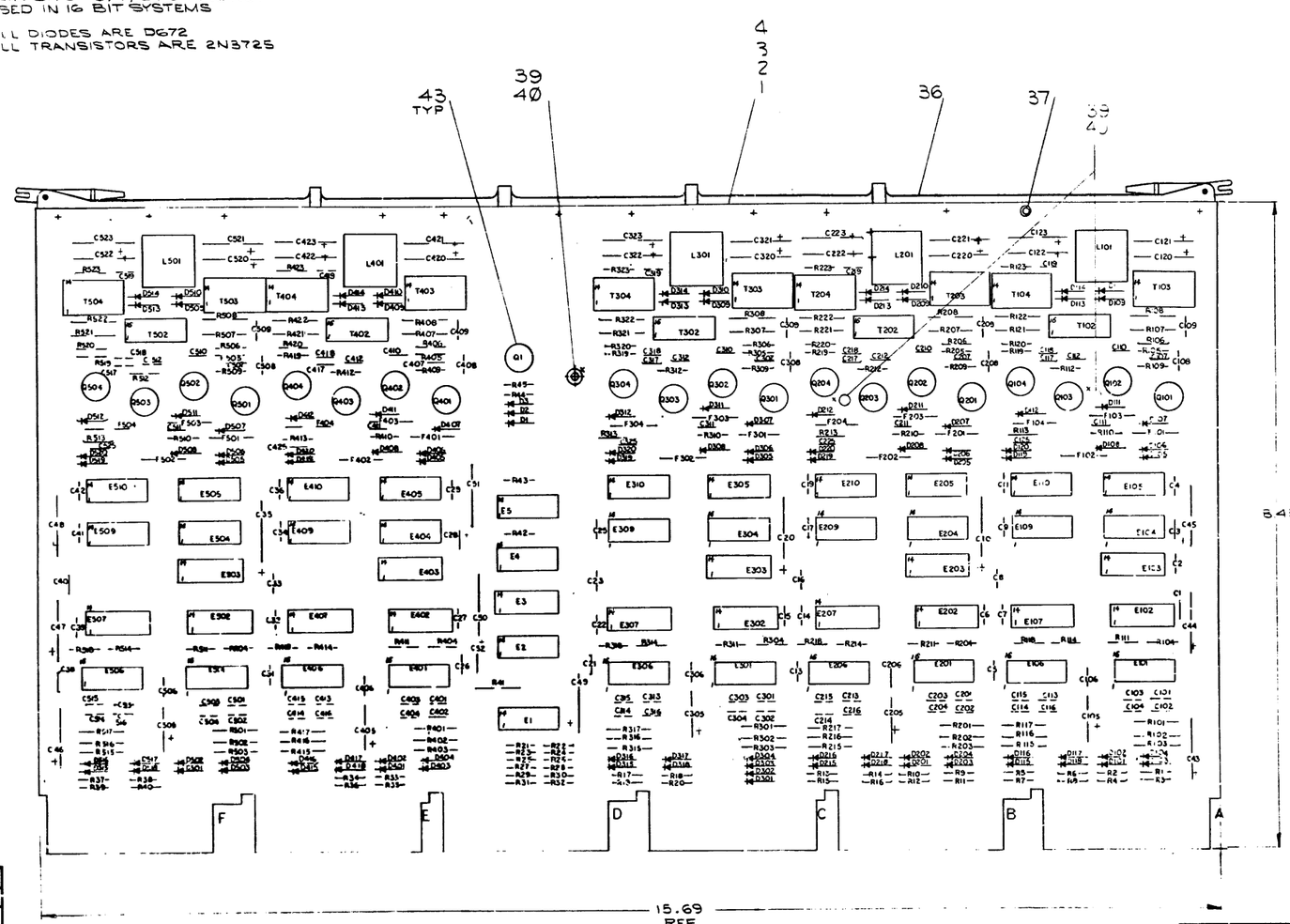
DRN. W. Mayor	DATE 4/13/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. W Plaster	DATE 4/13/73	
ENG. [illegible]	DATE 4/13/73	TITLE 16K SENSE/INHIBIT
PROJ. ENG. [illegible]	DATE 4/13/73	
PROD. [illegible]	DATE 4/13/73	

NEXT HIGHER ASSY.	SIZE	CODE	NUMBER	REV.
B-DD-MM11-U	B	CS	G114-0-1	F
SCALE				
SHEET 1 OF 9	DIST.			

DRB 110

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL RESISTORS ARE IN OHMS 1/4W
2. ALL CAPACITANCE'S IN MICROFARADS
3. DATA BITS 17 & 18 ARE NOT USED IN 18 BIT SYSTEMS
4. DATA BIT 18 IS NOT USED IN 19 BIT SYSTEMS
5. DATA BITS 16,17,18 & 19 ARE NOT USED IN 16 BIT SYSTEMS
6. ALL DIODES ARE D672
7. ALL TRANSISTORS ARE 2N3725



IC TYPE	GND	+ 5V	-5V
DEC 7380	1	8	-
DEC 7400	1	8	-
DEC 7828	9	16	8

+ AND 5V ARE USUALLY PIN 7 AND 14
RWISE EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO

PARTS LIST

FIRST USED ON OPTION MODEL: MF 11-U & MF 11-UP

ETCH BOARD REV: C

REV	CHANGE NO	DEC NO.	EIA NO.	DEC NO.	EIA NO.
CHK	REVISIONS	SEMICONDUCTOR CONVERSION CHART			

DRN. [illegible] DATE 4-3-73
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
NEXT HIGHER ASSY
SCALE
SHEET 2 OF 9

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: 16 K SENSE/INHIBIT

SIZE D | CODE CS | NUMBER G114-0-1 | REV. F

DIST.

SIZE D | CODE CS | NUMBER G114-0-1

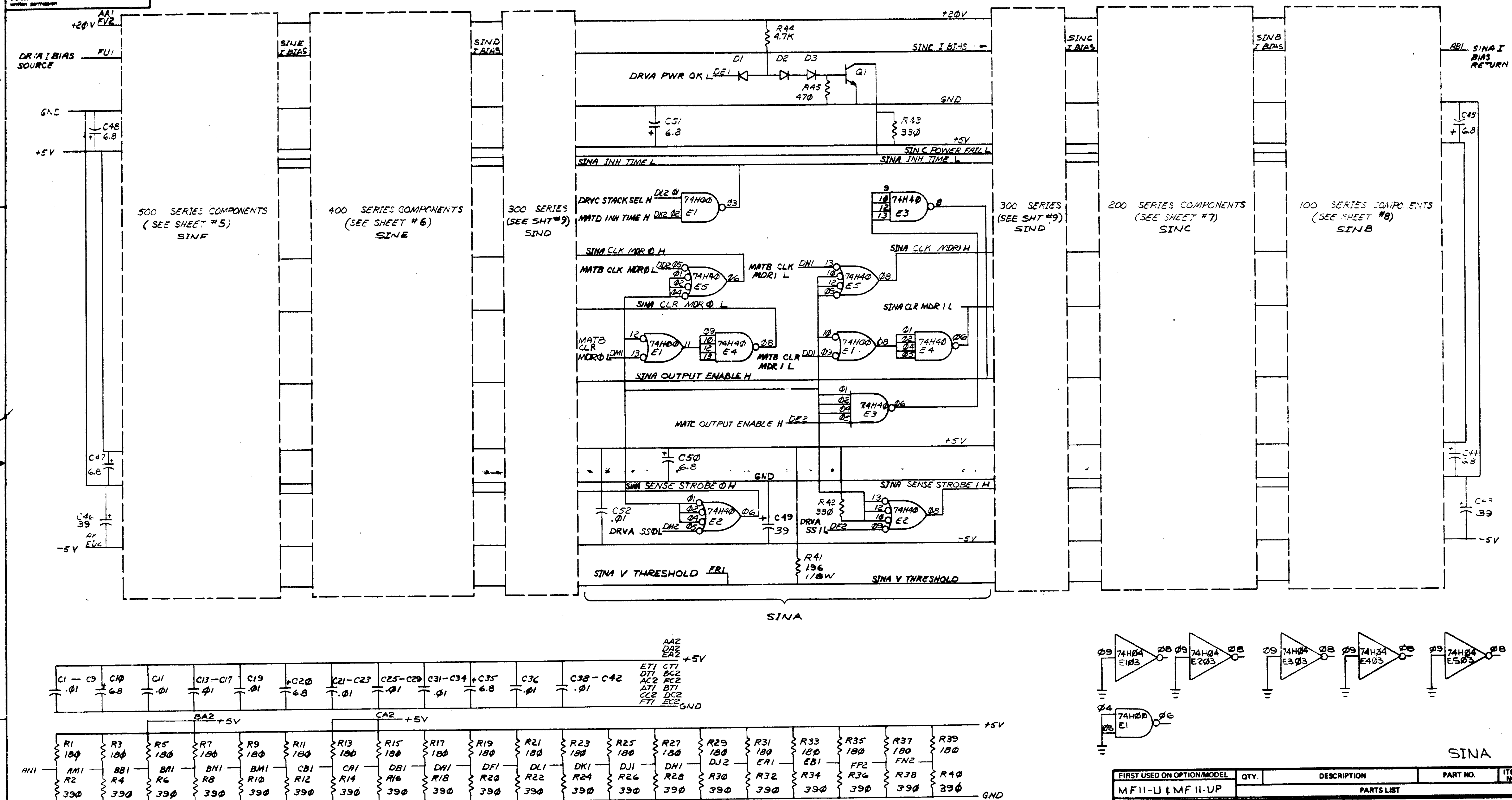
QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		ETCHED CIRCUIT BOARD	5010478	1
REF		X-Y COORDINATE HOLE LOCATION	K-CO-G114-0-4	2
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-G114-0-5	3
REF		MODULE ECO HISTORY	B-MH-G114-0-6	4
55	C1 THRU C9, C11, C13 THRU C17 C19, C21, C22, C23, C25 THRU C29, C31, C32, C33 C34, C36 C38 THRU C42, C52, C104, C106 C108, C114, C204, C206, C208, C214, C304, C306, C308, C314 C404, C406, C408, C414, C504 C506, C508, C514	CAP .01UF 50V, 20% CER	1001610	5
29	C10, C20, C35, C120 THRU C123, C220 THRU C223, C320 THRU C323 C420 THRU C423, C520 THRU C523, C44, C45, C47 C48, C50, C51	CAP 6.8UF 35V 10% TANT	1005306	6
30	C101, C103, C113, C115, C201, C203 C213, C215, C301, C303, C313 C315, C401, C403, C413, C415, C501, C503, C513, C515 C102, C116, C202, C216, C302 C316, C402, C416, C502, C516	CAP 82 PF 100V 5% D.M.	1000015	7
5	C105, C205, C305, C405, C505	CAP 3.9MF 10V, ±10% TANT	1000064	8
3	C43, C46 & C49	CAP 39MF 10V ±10% TANT	1000076	9
20	C107, C111, C112, C125, C207, C211, C212, C225, C307, C311, C312, C325, C407, C411, C412 C425, C507, C511, C512, C525	CAP 560 PF, 100V, 5% D.M.	1000025	10
20	C109, C110, C117, C118, C209 C210, C217, C218, C309, C310 C317, C318, C409, C410, C417 C418, C509, C510, C517, C518	CAP .005UF 100V, 20%, DISC	1001765	11
5	C119, C219, C319, C419, C519	CAP .22 UF 50V +80% -20% CER	1010274-0	12
103	D1, D2, D3, D101 THRU D120 D201 THRU D220, D301 THRU D320, D401 THRU D420 D501 THRU D520	DIODE D672	1107275	13
20	R1, R3, R5, R7, R9, R11, R13, R15 R17, R19, R21, R23, R25, R27 R29, R31, R33, R35, R37, R39	RES. 180 1/4W, 5%	1301322	14
1	R4;	RES. 196, 1/8W, 1% MF	1302956	15
20	R2, R4, R6, R8, R10, R12, R14, R16 R18, R20, R22, R24, R26, R28, R30 R32, R34, R36, R38, R40	RES. 390, 1/4W, 5%	1300309	16
2	R42, R43	RES. 330, 1/4W, 5%	1300295	17
1	R44	RES. 4.7K, 1/4W, 5%	1300447	18
20	R101, R102, R116, R117, R201, R202 R216, R217, R301, R302, R316 R317, R401, R402, R416, R417 R501, R502, R516, R517	RES. 19.6, 1/8W, 1% MF	1303110	19
10	R103, R115, R203, R215, R303 R315, R403, R415, R503, R515	RES. 1K 1/8W 1% MF	1303114	20
20	R104, R111, R114, R118, R204 R211, R214, R218, R304, R311 R314, R318, R404, R411, R414 R418, R504, R511, R514, R518	RES. 1K, 1/4W, 5%	1300365	21
20	R109, R110, R112, R113, R209, R210, R212, R213, R309, R310 R312, R313, R409, R410, R412 R413, R509, R510, R512, R513	RES 100 1/4W 5%	1300229	22
20	R105, R106, R119, R120, R205, R206, R219, R220, R305, R306 R319, R320, R405, R406, R419 R420, R505, R506, R519, R520	RES 5.1 1/4W 5%	1303422	23
1	R45	RES 470 1/4W 5%	1300316	24
5	R123, R223, R323, R423, R523	RES 150 1/4W 5%	1300250	25
20	R107, R108, R121, R122, R207, R208, R221, R222, R307, R308 R321, R322, R407, R408, R421 R422, R507, R508, R521, R522	RES 56 1/2W 5%	1309995	26
21	Q1, Q101 THRU Q104, Q201 THRU Q204 Q301 THRU Q304, Q401 THRU Q404 Q501 THRU Q504	TRANS 2N3725 (TO5)	1510959	27
10	T103, T104, T203, T204, T303 T304, T403, T404, T503, T504	TRANSFORMER SATURATING INHIBIT	1610961	28
5	T102, T202, T302, T402, T502	TRANSFORMER, PULSE (DIP)	1609996	29
1	E1	IC DEC 74H00	1909056	30
14	E2 THRU E5, E105, E110 E205, E210 E305, E310, C405, E410 E505, E510	IC DEC 74H40	1905586	31
10	E101 E106, E201, E206 E301, E306, E401, E406, E501, E506	IC DEC 7528 SENSE AMP	1910687	32
5	E107, E207 E307 E407 E507	IC DEC 8881	1909705	33
10	C104 E109, E204, E209, E304 E309, E404, E409, E504, E509	IC DEC 74H74	1909667	34
5	L101, L201, L301, L401, L501	CHOKE 400 UH	1610963	35
1		HANDLE ASSY	12107/1-2	36
12		EYELET GS-4-7	9006732	37
20	F101 THRU F104 F201 THRU F204 F301 THRU F304 F401 THRU F404, B01 THRU B504	FUSE PICOFUSE 3/4A	1210929-3	38
3		STANDOFF 1/4 x 3/8 #6-32 THRU	9008213	39
3		SCREW, NYLON 6/32 x 1/4 LG	9007471-1	40
5	E103, E203, E303, E403 E503	IC DEC 74H04	1909931	41
5	E102, E202, E302, E402 E502	IC DEC 8640	1911469	42
21		TRANSIPAD	9007201	43
				44
A/R		24 AWG WIRE	9107470	45

PARTS LIST

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
16K SENSE/INHIBIT	D	CS	G114-0-1	F
SCALE —	SHEET 3 OF 9		DIST.	

SIZE CODE DCS G114-0-1 REV F



SINA

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MF11-U & MF11-UP		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES
DECIMALS: .XXX ± .005, .XX ± .02, .X ± .1 — ANGLES: ± 0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓

DRN. DATE 6-20-73 — CHK'D. DATE 4-13-73 — ENG. DATE 4/13/73 — PROJ. ENG. DATE 4/13/73 — PROD. DATE 4/13/73

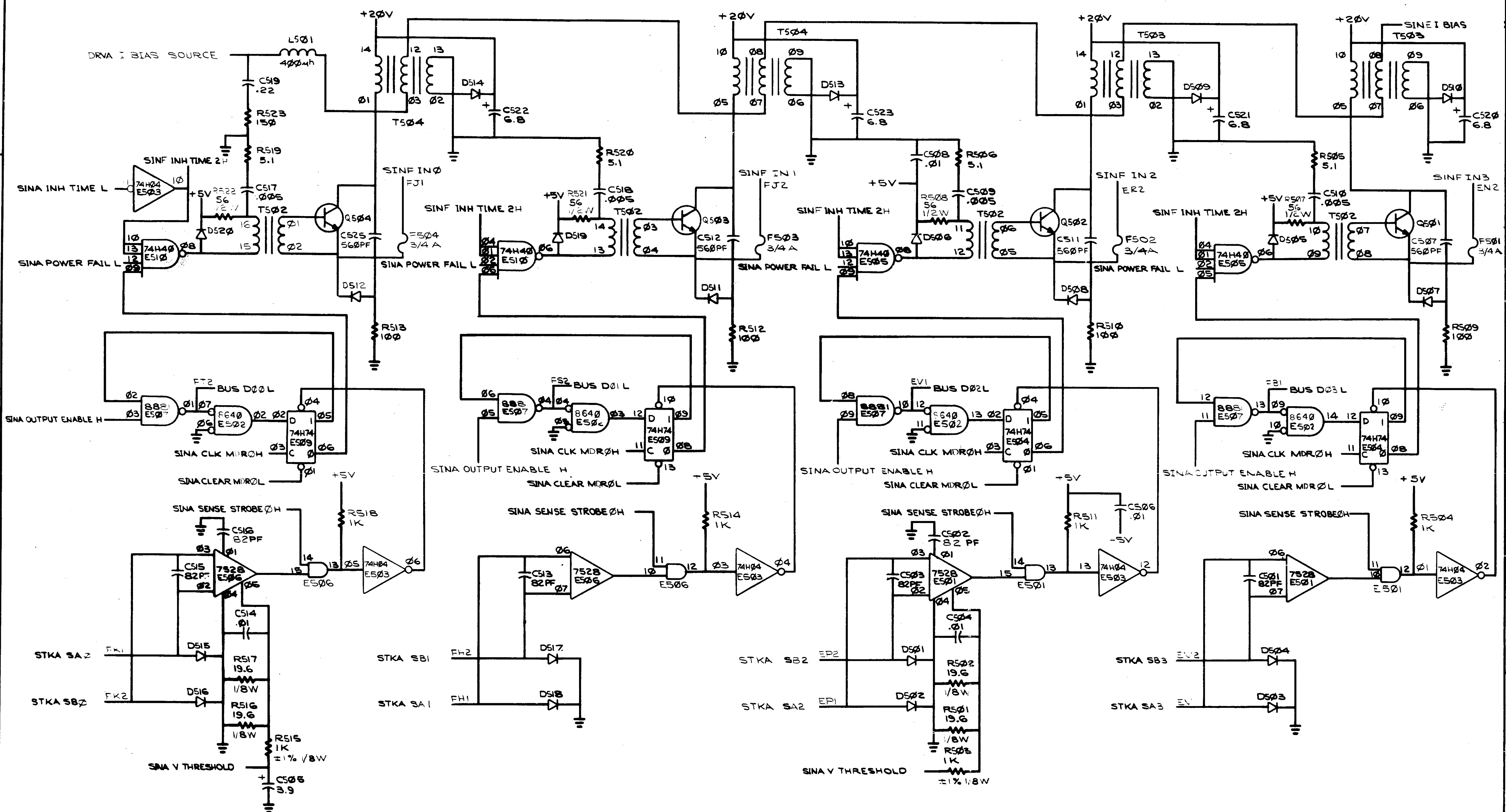
MATERIAL — FINISH — NEXT HIGHER ASSY.

DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: 16K SENSE/INHIBIT (SINA)

SIZE D — CODE CS — NUMBER G114-0-1 — REV. E

SCALE — SHEET 4 OF 9


+20V
DRVA I BIAS SOURCE
L501 400uh
C519 .22
R523 150
R519 5.1
T504
D514
C522 6.8
SINF INH TIME 2H
SINA INH TIME L
74H04 E503
R522 56
C517 .005
T502
Q504
C525 560PF
SINF IN0 FJ1
F504 3/4 A
D520
74H40 E510
SINA POWER FAIL L
D512
R513 100
R520 5.1
C518 .005
R521 56 1/2W
D519
Q503
C512 560PF
SINF IN1 FJ2
F503 3/4 A
D511
R512 100
D513
C523 6.8
C508 .01
R506 5.1
C509 .005
R508 56 1/2W
D506
74H40 E505
Q502
C511 560PF
SINF IN2 ER2
F502 3/4A
D508
R510 100
T503
D509
C521 6.8
R505 5.1
C510 .005
R507 56 1/2W
D505
SINE I BIAS
D510
C520 6.8
Q501
C507 560PF
SINF IN3 EN2
F501 3/4A
D507
R509 100
BUS D00 L
BUS D01 L
BUS D02L
BUS D03 L
SINA OUTPUT ENABLE H
8881 E507
8640 E502
74H74 E509
74H74 E504
SINA CLK MDR0H
SINA CLEAR MDR0L
SINA SENSE STROBE0H
+5V
R518 1K
R514 1K
R511 1K
R504 1K
C506 .01
-5V
C516 82PF
C515 82PF
7528 E506
7528 E501
C513 82PF
C503 82PF
C502 82 PF
C501 82PF
E506
E501
74H04 E503
C514 .01
C504 .01
D515
D516
D517
D518
D501
D502
D503
D504
STKA SA0
STKA SB0
STKA SB1
STKA SA1
STKA SB2
STKA SA2
STKA SB3
STKA SA3
R517 19.6 1/8W
R516 19.6 1/8W
R515 1K ±1% 1/8W
R502 19.6 1/8W
R501 19.6 1/8W
R503 1K ±1% 1/8W
SINA V THRESHOLD
C505 3.9

500 SERIES SINF

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
16K SENSE/INHIBIT (SINF)	D	CS	G114-0-1	F
SCALE —	SHEET 5 OF 9	DIST.		

SINE I BIAS
L4Ø1 ~ØØ4H
C419 .22
R423 15Ø
R419 5.1
SINE INH TIME 2-
SINA INH TIME L
74H24 E4Ø3
+5V
C417 .ØØ5
D42Ø
T4Ø2
Q4Ø4
C425 56ØPF
F4Ø4 3/4A
SINA POWER FAIL L
74H4Ø E41Ø
D412
R413 1ØØ
+2ØV
T4Ø4
D414
C422 6.8
SINE IN4 EJ2
R42Ø 5.1
SINE INH TIME 2H
R421 56 1W
C418 .ØØ5
D419
Q4Ø3
C412 56ØPF
F4Ø3 3/4A
D411
R412 1ØØ
T4Ø4
D413
C423 6.8
SINE IN5 EE2
C4ØB .Ø1
R4ØB 5.1
R4Ø8 56 1W
D4ØB
C4Ø9 .ØØ5
Q4Ø2
C411 56ØPF
F4Ø2 3/4A
D4Ø8
R41Ø 1ØØ
T4Ø3
D4Ø9
C421 6.8
SINE IN6 DT2
R4Ø5 5.1
D4Ø5
C41Ø .ØØ5
Q4Ø1
C4Ø7 56ØPF
F4Ø1 3/4A
D4Ø7
R4Ø9 1ØØ
SINE I BIAS
T4Ø3
D41Ø
C42Ø 6.8
SINE IN7 DR2

BUS DØ4 L
SINA OUTPUT ENABLE H
SINA CLK MDRØH
SINA CLEAR MDRØL
SINA SENSE STROBEØH
C416 22 PF
C415 82 PF
7528 E4Ø6
C414 .Ø1
D415
R417 19.6 1/8W
D416
R416 19.6 1/8W
R415 1K ±1% .8W
SINA V THRESHOLD
C4Ø5 3.9
R418 1K
E4Ø6
74H4Ø4 E4Ø3
STKA SA4
STKA SB4

BUS DØ5 L
C413 82 PF
D417
D418
R414 1K
STKA SA5
STKA SB5

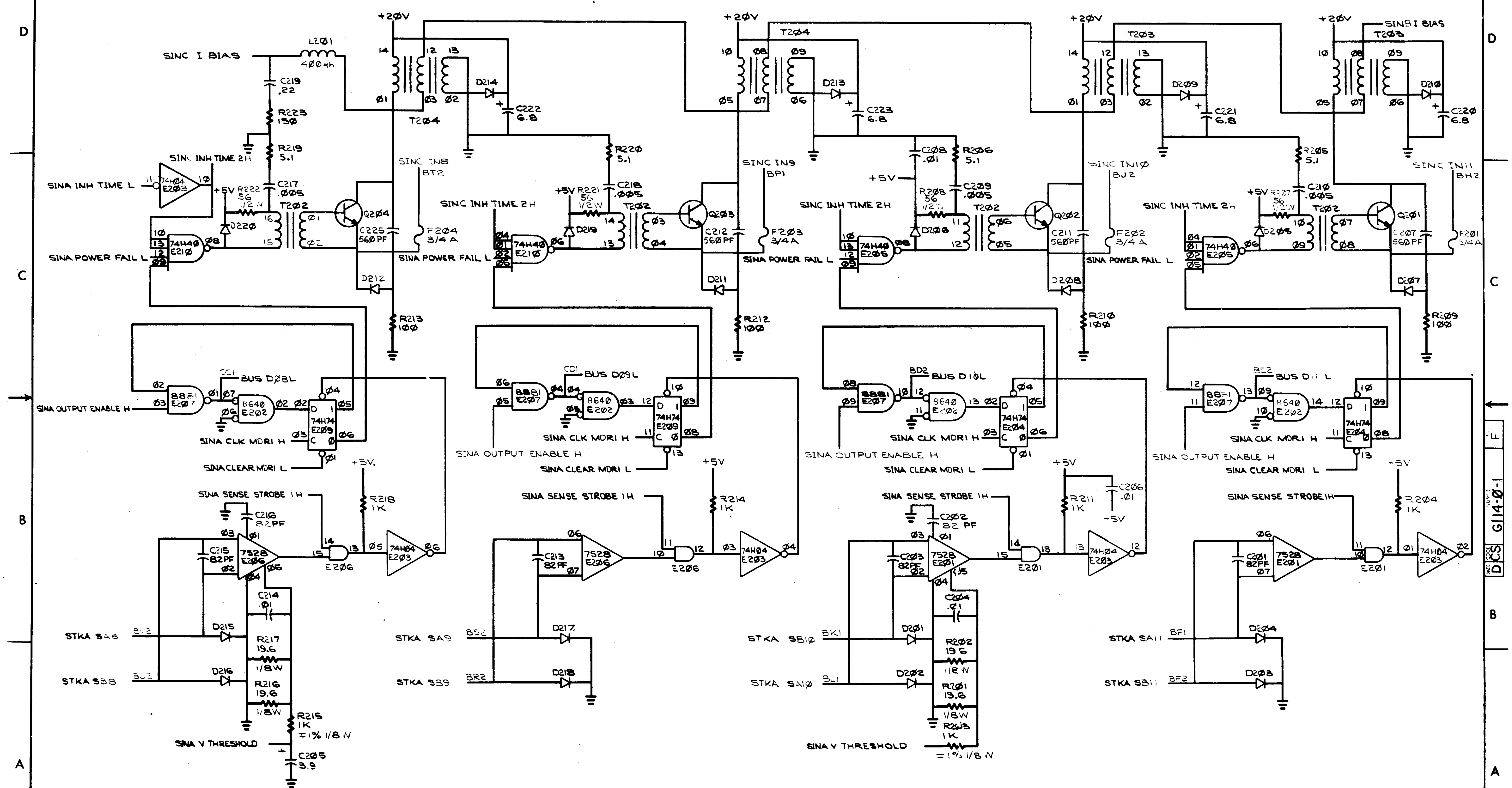
BUS DØ6 L
C4Ø2 82 PF
C4Ø3 82PF
C4Ø4 .Ø1
D4Ø1
R4Ø2 19.6 1/8W
D4Ø2
R4Ø1 19.6 1/8W
R4Ø3 1K ±1% 1/8W
R411 1K
C4Ø6 .Ø1
E4Ø1
STKA SA6
STKA SB6

BUS DØ7 L
C4Ø1 82PF
D4Ø4
D4Ø3
STKA SA7
STKA SB7

400 SERIES SINE

REVISIONS		
CHK	CHANGE NO	REV

TITLE: 16K SENSE/INHIBIT (SINE)
SIZE D CODE DCS NUMBER G114-Ø-1 REV F
SCALE — SHEET 6 OF 9 DIST.



200 SERIES SINC

TITLE	SIZE	CODE	NUMBER	REV.
16K SENSE/INHIBIT (SINC)	D	CS	G114-0-1	F

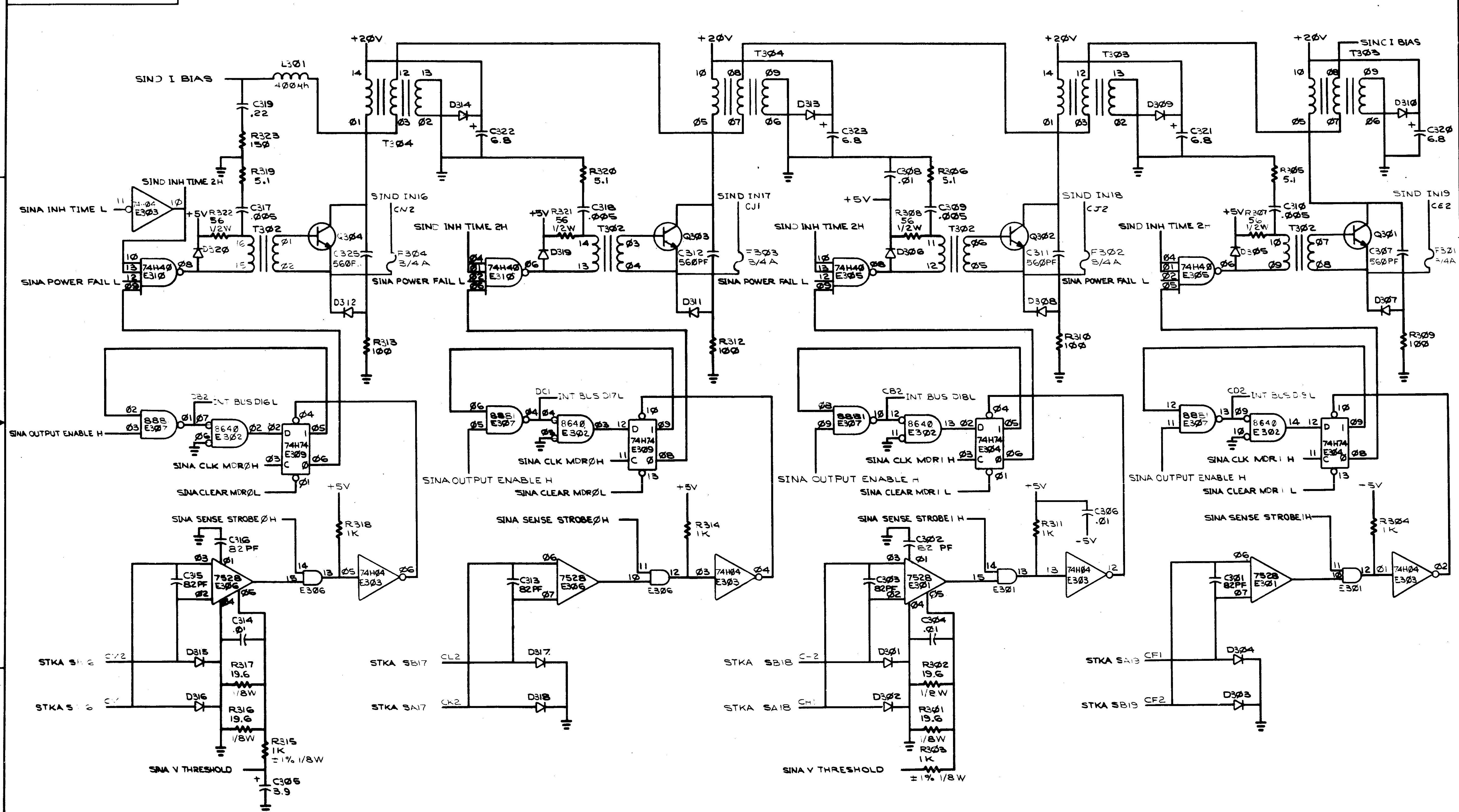
SCALE — SHEET 7 OF 9

SINB I BIAS
L101 400uh
C119 .22
R123 150
R119 5.1
SINB INH TIME 2H
SINA INH TIME L
74H04 E103
R122 56 1/2W
C117 .005
D120
T102
Q104
C125 560PF
F104 3/4A
SINA POWER FAIL L
74H40 E110
D112
R113 100
+20V
T104
D114
C122 6.8
R120 5.1
SINB IN12 AU2
R121 56 1/2W
C118 .005
D119
Q103
C112 560PF
F103 3/4 A
D111
R112 100
T103
D109
C121 6.8
R105 5.1
SINB IN14 AL2
C111 560PF
F102 3/4 A
D108
R110 100
SINA I BIAS RETURN
D110
C120 6.8
SINB IN15 AH2
C107 560PF
F101 3/4A
D107
R109 100
C108 .01
R106 5.1
C109 .005
R108 56 1/2W
D106
SINB IN13 AP2
+5V
SINA OUTPUT ENABLE H
SINA CLK MDR1 H
SINA CLEAR MDR1 L
BC1 BUS D12 L
BD1 BUS D13 L
AD2 BUS D14 L
AE2 BUS D15 L
8881 E107
8640 E102
74H74 E109
74H74 E104
SINA SENSE STROBE 1H
7528 E106
C116 82 PF
C115 82PF
C114 .01
R117 19.6 1/8W
R116 19.6 1/8W
R115 1K ±1% 1/8W
C105 3.9
SINA V THRESHOLD
R118 1K
C113 82 PF
C102 82 PF
C103 82PF
C104 .01
R102 19.6 1/8W
R101 19.6 1/8W
R103 1K ±1% 1/8W
R114 1K
R111 1K
C106 .01
-5V
C101 82PF
R104 1K
STKA SA12 AV1
STKA SB12 AV2
STKA SA13 AS2
STKA SB13 AR2
STKA SB14 AJ1
STKA SA14 AH1
STKA SA15 AF1
STKA SB15 AF2
D115
D116
D117
D118
D101
D102
D104
D103

100 SERIES SINB

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
16K SENSE/INHIBIT (SINB)	D	CS	G114-0-1	E
SCALE	SHEET 8 OF 9	DIST.		



300 SERIES SIND

REVISIONS		
CHK	CHANGE NO	REV

TITLE: 16K SENSE/INHIBIT (SIND)

SIZE: D | CODE: CS | NUMBER: G114-Ø-1 | REV.: F

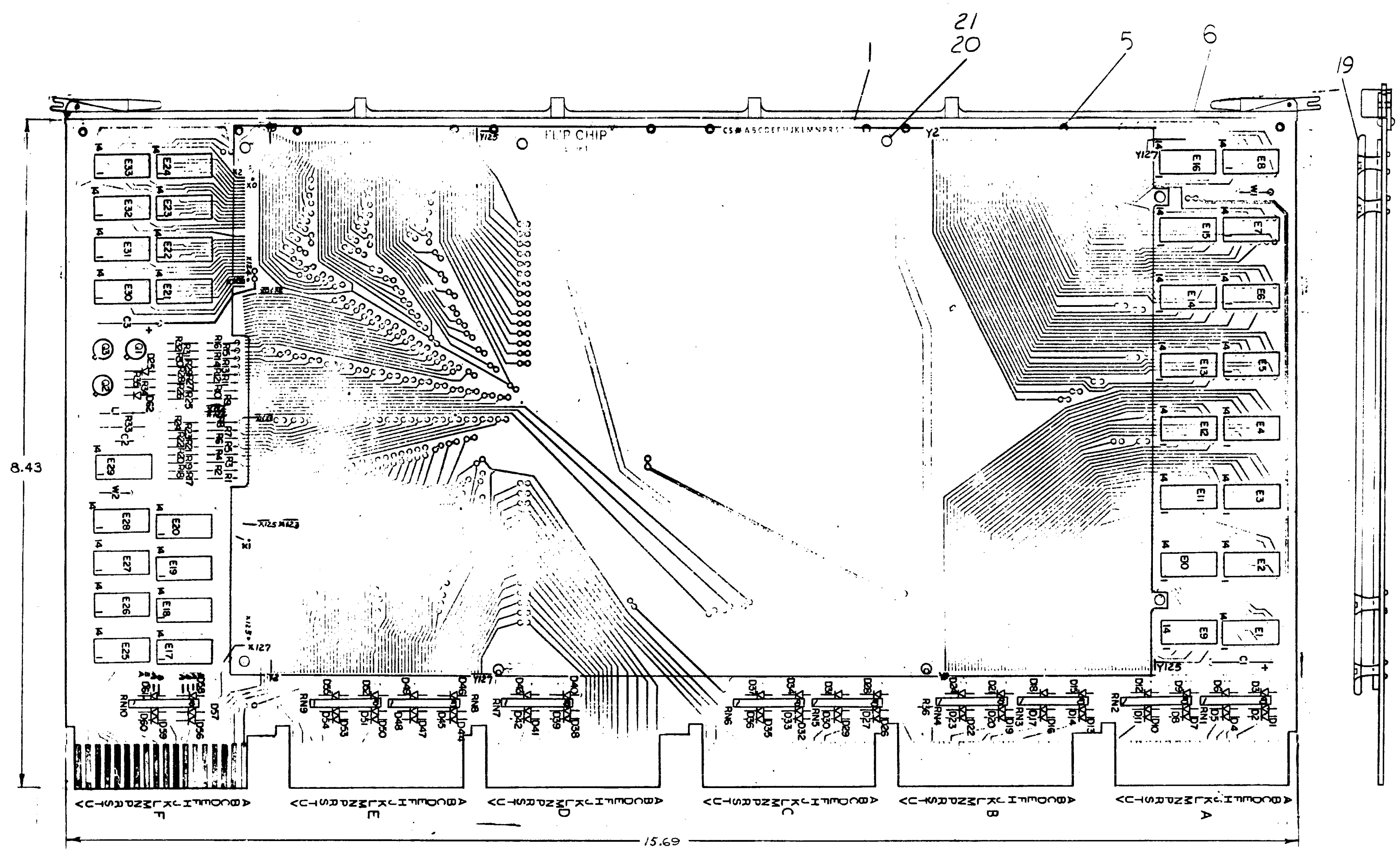
SCALE: — | SHEET 9 OF 9

NOTES:

1. —o X0 THRU X127 o— & —o Y0 THRU Y127 o— INDICATES MAGNET WIRE TERMINATION (SOLDERED TO PRINTED CIRCUIT PAD).
2. FOR ASSEMBLY INFORMATION & PART NO'S. OF ITEMS NOT CALLED OUT ON THIS DRAWING REFER TO E-AD-9305680-0-0 (MEMORY STACK ASS'Y).

LEGEND

NUMBER	DEC PURCHASE SPEC	DEC PART NO.	STACK CONFIGURATION
9305680-1		H217-A	16K X 20
9305680-2		H217-B	16K X 19
9305680-3		H217-C	16K X 18
9305680-4		H217-D	16K X 16



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		MEMORY STACK ASSY	9305680	24
3		TRANSIPADS	9007200	23
2	W1, W2	WIRE, BUS #22 AWG	9107560-1	22
				21
				20
				19
1	R36	RES 300 2% THERMAL DISC	1309735	18
1	L1	CHOKE 100 μh 10%	16 10662	17
3	Q1, Q2, Q3	TRANSISTOR DEC 3734	15 10062	16
32	R1 THRU R32	RES. 220, 1/4W, 5%	13 00271	15
2	R34, R35	RES. 68, 1/4W 5%	13 00219	14
1	R33	RES. 39, 1/2W 5%	13 02336	13
10	RN1 THRU RN10	RES NETWORK 2-.5K, 4-.1K	13 10964	12
1	E29	IC DEC. 74H40	19 05586	11
32	E1 THRU E28, E30 THRU E33	IC DEC. 2501 (16 DIODE)	19 10010	10
62	D1 THRU D62	DIODE D672	11 05275	9
2	C1, C3	CAP. 6.8 μF. 35V 10% S. TANT	10 05305	8
1	C2	CAP. .01 μF 50 V. 20%	10 01610-00	7
				6
				5
				4
				3
REF		X-Y COORDINATE HOLE LOCATION	K-CO-H217-0-4	2
1		ETCH CKT BOARD (G647)	5010023	1

PARTS LIST

IC TYPE	GND	+ 5V
DEC 2501	N/A	N/A

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		DEC 3734	NONE
		D672	1N3653

SEMICONDUCTOR CONVERSION CHART

REV	CHANGE NO.		CHK
B	H217-00003	D. SMELSER	

REVISIONS

FIRST USED ON OPTION MODEL: MF11-U/UP

ETCH BOARD REV: E

DRN. B. Ma... DATE 7-11-72
CHK'D. ... LeBlanc DATE 2 Jan 73
ENG. D. Smelser DATE 1/10/73
PROJ. ENG. D. Smelser DATE 1/10/73
PROD. ... DATE 5/16/73

NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

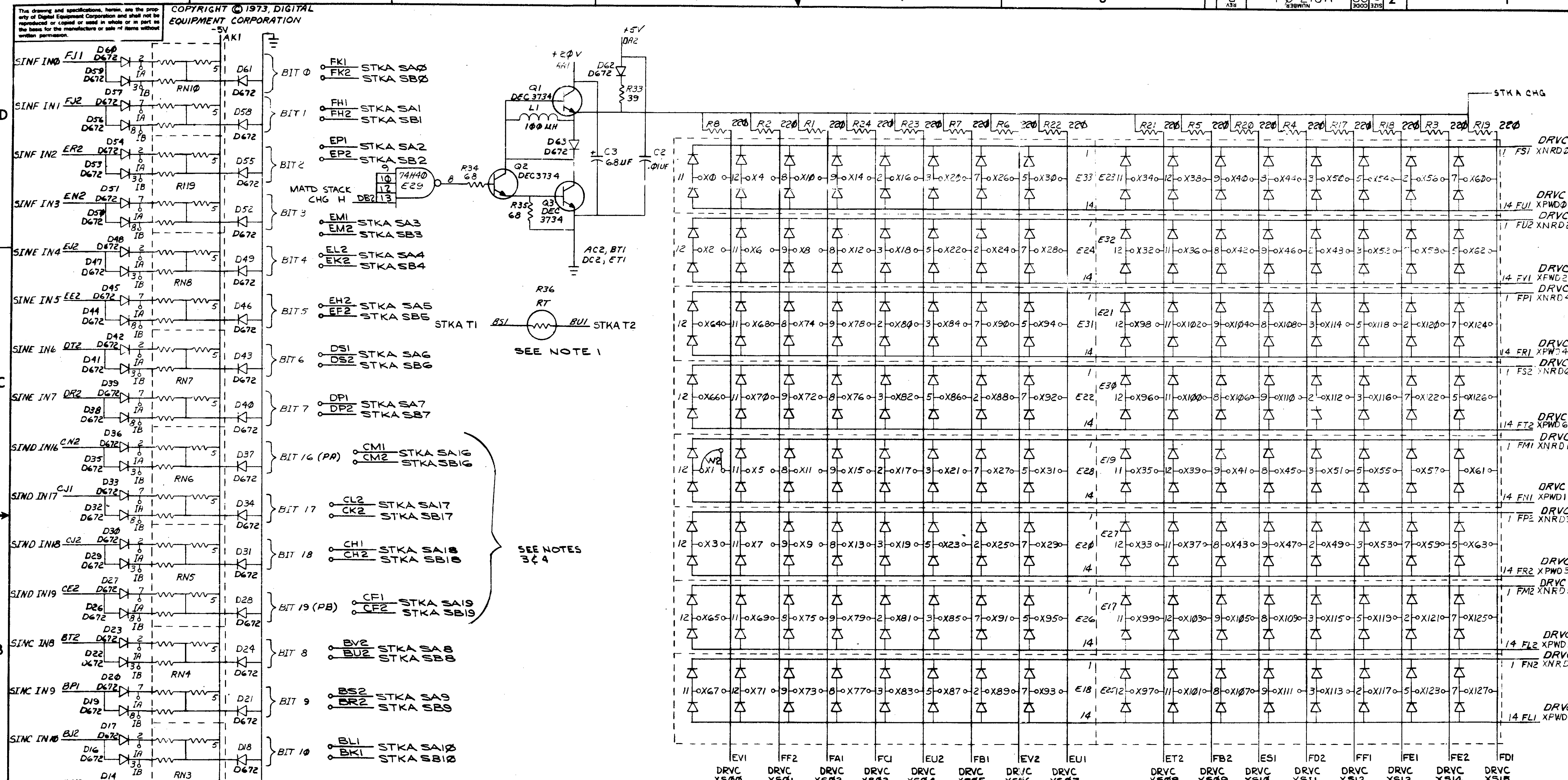
TITLE: STACK BOARD

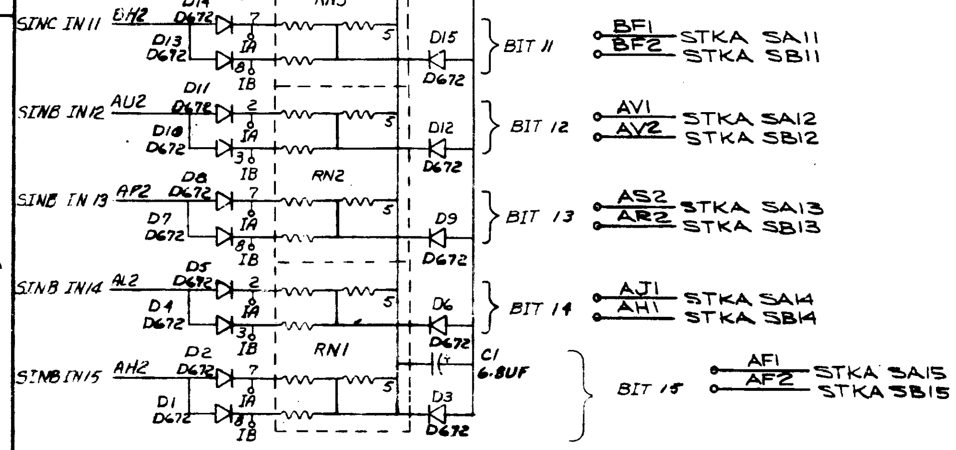
SIZE: D CODE: CS NUMBER: H217 0-1 REV. B

SCALE

SHEET 1 OF 3

DIST.





NOTES:

1. THERMISTOR FOR TEMPERATURE COMPENSATION
2. JUMPER W2 IS A CURRENT LOOP FOR TEST USE ONLY
3. FOR H217-D (16 BIT STACK) THE FOLLOWING COMPONENTS MUST BE DELETED; RN5, RN6, D26 THRU D37
4. FOR H217C (18 BIT STACK) THE FOLLOWING COMPONENTS MUST BE DELETED; D29, D30, D32, D33. FOR THE UNUSED BITS, THE FOUR MAGNET WIRE TERMINATION PADS (IA, IB, SA, SB) MUST BE SHORTED TOGETHER

   FOR H217B (19 BIT STACK) THE FOLLOWING COMPONENTS MUST BE DELETED; D29, D30. FOR THE UNUSED BIT, THE FOUR MAGNET WIRE TERMINATION PADS (IA, IB, SA, SB) MUST BE SHORTED TOGETHER

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV E

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: STACK BOARD (STKA)

DATE 7-7-72; 11/6/73

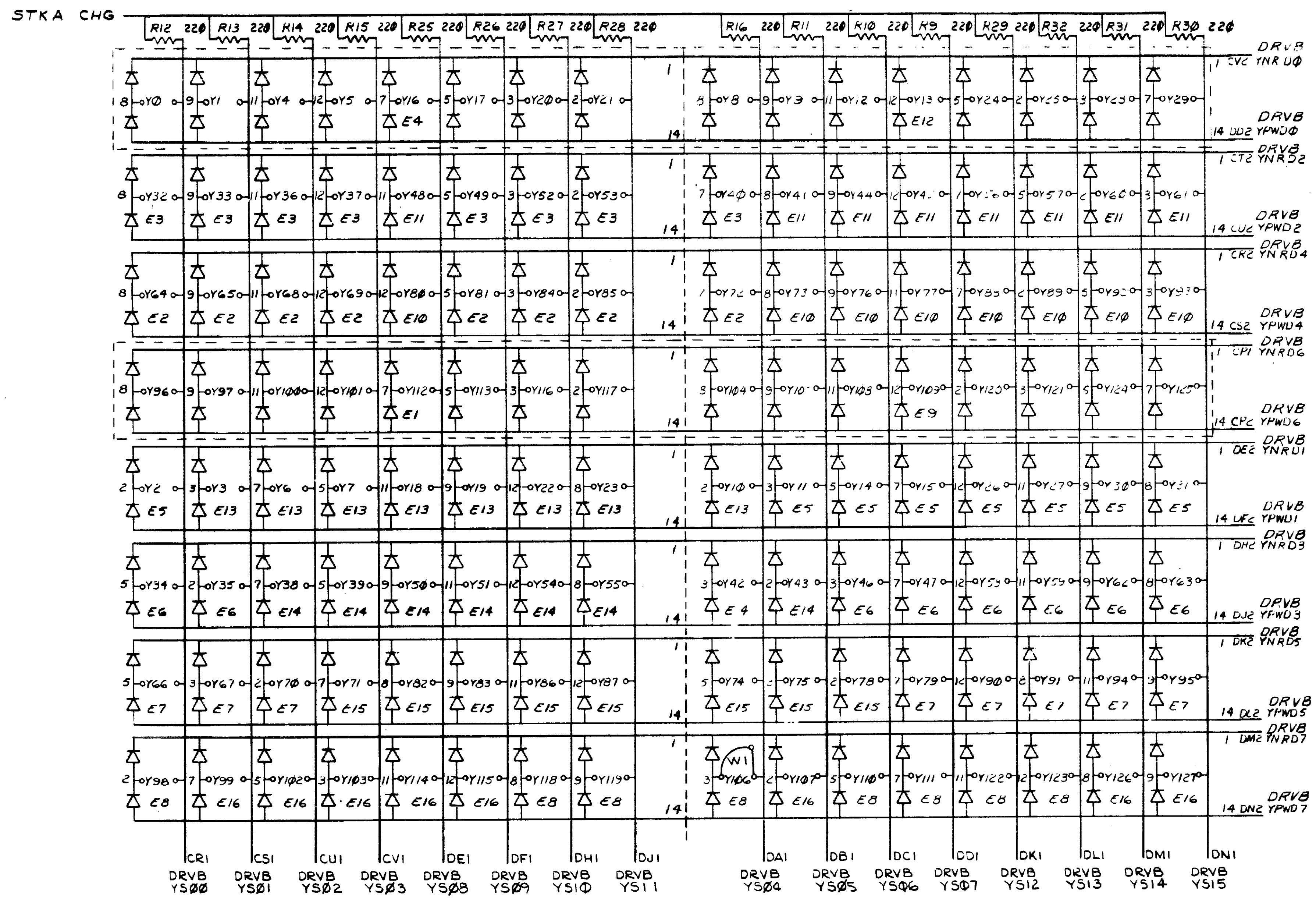
NEXT HIGHER ASSY

SIZE D | CODE CS | NUMBER H217-0-1 | REV. B

SCALE

SHEET 2 OF 3

DEC FORM NO DRD-115



Y AXIS

NOTE: JUMPER W1 IS A CURRENT LOOP FOR TEST USE ONLY

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV	E			

DRN.	DATE 7-10-72
CHK'D	DATE
ENG.	DATE 1/10/73
PROJ. ENG.	DATE 1/10/73
PROD.	DATE 5/16/73
NEXT HIGHER ASSY	
SCALE	
SHEET	3 OF 3

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE

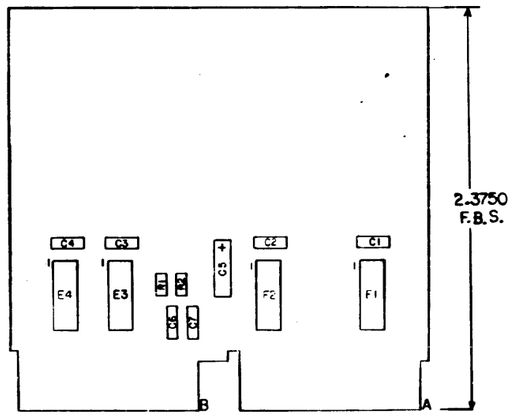
STACK BOARD (STKB)

SIZE	CODE	NUMBER	REV.
D	CS	H217-Ø-1	B

DIST.

NOTES:

REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M930-0-5	2
REF		MODULE ECO HISTORY	B-MH-M930-0-6	3
1		ETCHED CIRCUIT BOARD	50Ø3696	4
4	C1 THRU C4	CAP .22 μF 50V CER	1010274-01	5
2	C6,C7	CAP 1000pF 250V 20% DISC	1000343	6
1	C5	CAP 39μF 10V 10% TANT	1000076	7
2	R1, R2	RES 383Ω 1/4W 1%	1305125	8
2	E1, E4	28 RES DIVIDER NETWORK	1312228-00	9
2	E2, E3	25 RES DIVIDER NETWORK	1312623-01	10



IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION MODEL: M930

ETCH BOARD REV. E-P3

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

K. SARGENT 7.11.75 ORIGINATED

REV.	CHANGE NO.	REVISIONS
E		

DRN. J. CARTER DATE 7.9.75
DES. DATE 7-16-75
ENG. DATE
PROJ. DATE
PROD. DATE
NEXT HIGHER ASSY
SCALE —
SHEET 1 OF 2

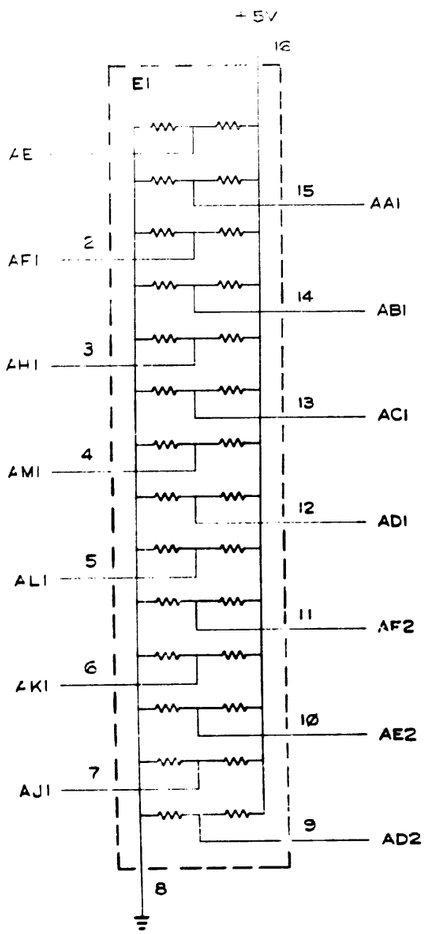
digital

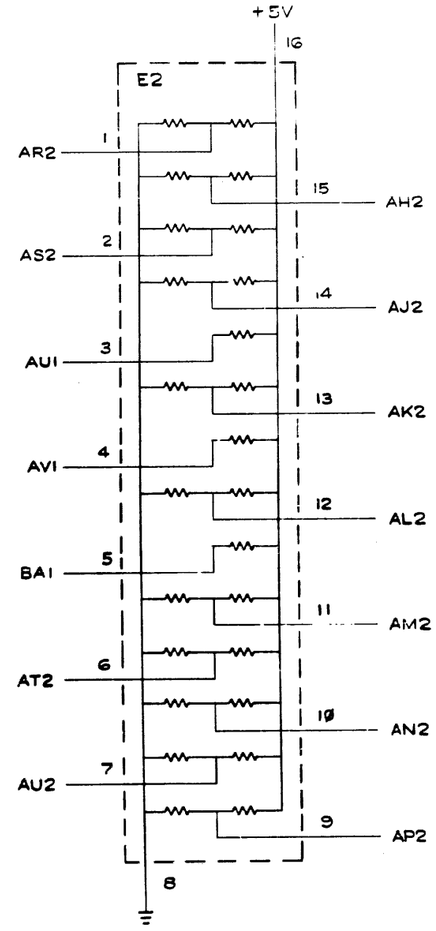
TITLE: BUS TERMINATOR

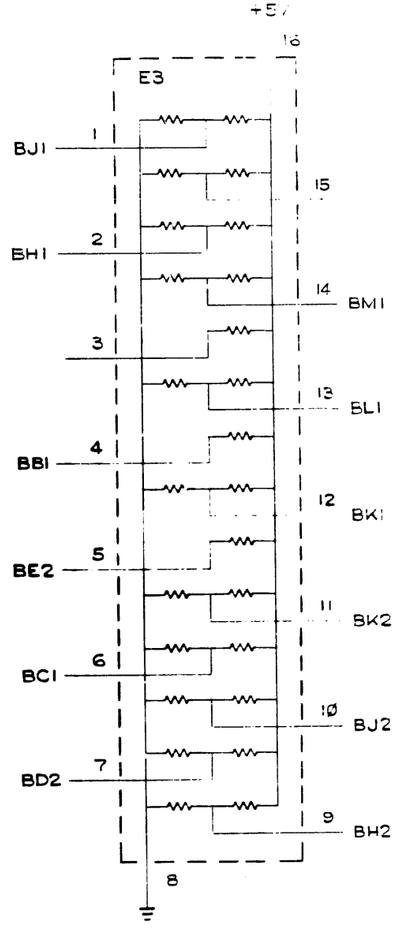
SIZE D | CODE CS | NUMBER M930-0-1 | REV. E

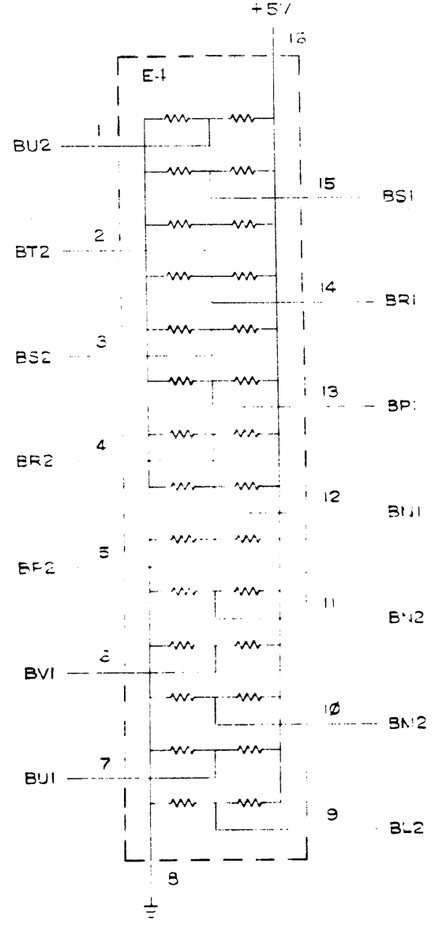
DIST.

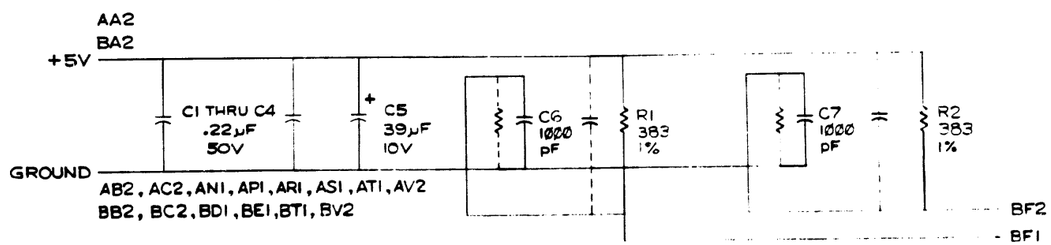
SIZE D | CODE CS | NUMBER M930-0-1 | REV. E







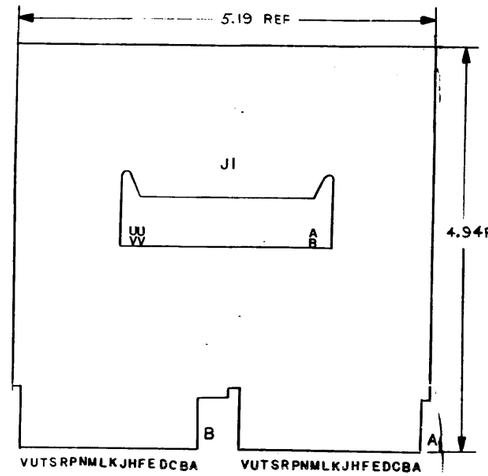


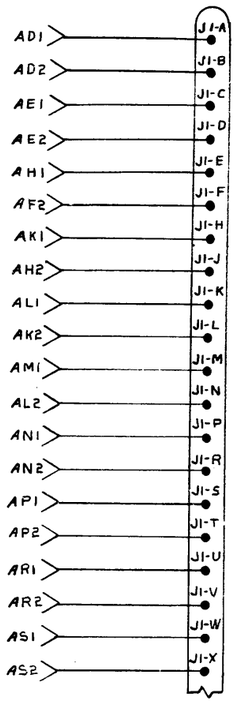


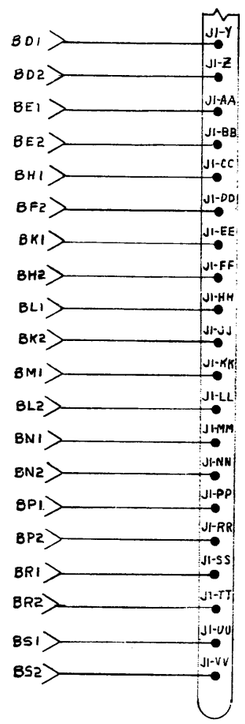
REVISIONS	
CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
BUS TERMINATOR	D	CS	M830-3-1	E
SCALE	SHEET 2 OF 2	DIST		

NOTES:







REF			
		X-Y COORDINATE HOLE LOCATION	H-CO-M997-0-4	1
		ASSY/DRILLING HOLE LAYOUT	D-AH-M997-0-5	2
REF		MODULE ECO HISTORY	B-AH-M997-0-G	3
1		ETCHED CIRCUIT BOARD	50.0338	4
1	J1	CONN., RT. ANGLE HEADER	12-09941	5

IC TYPE	GND	+ 5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

REV	CHANGE NO.	CHK	DEC NO.	EIA NO.	DEC NO.	EIA NO.

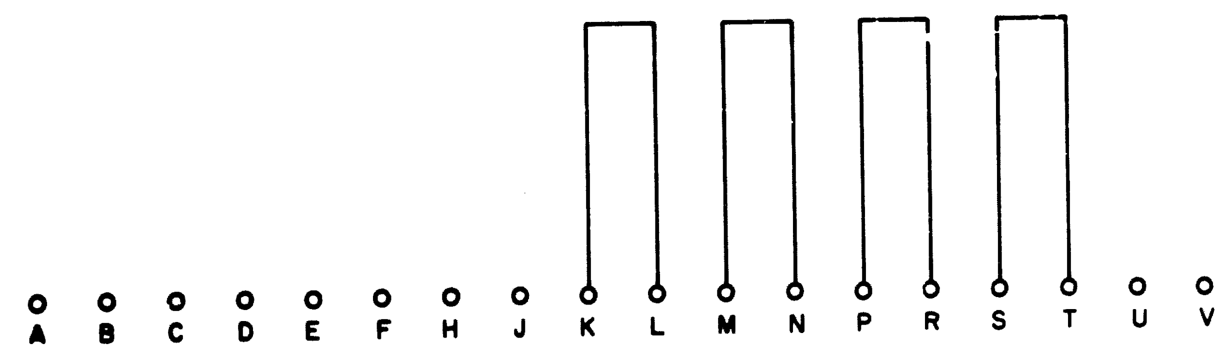
SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPTION MODEL

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
		ETCH BOARD REV B		

DRN. Silvia	DATE 3-22-74	digital EQUIPMENT CORPORATION
CHK'D. [illegible]	DATE 3/25/74	
ENG. C. Schnur	DATE 3/25/74	TITLE
PROJ. ENG. C. Schnur	DATE 3/25/74	CABLE ADAPTER
PROD. C. Schnur	DATE 3/25/74	
NEXT HIGHER ASSY		SIZE D CODE CS NUMBER M997-0-1 REV. A
SCALE NONE		DIST.
SHEET 1 OF 1		

D CS M997-0-1 A



REVISIONS				
REV.	CHG NO.	CHK		
DRN	BUTLER	DATE	11-19-69	
CHK'D		DATE		
ENG		DATE	1/28/70	
PROD		DATE		

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
GRANT CONTINUITY G727

SIZE	CODE	NUMBER	REV
B	CS	G727-0-1	

PRINTED CIRCUIT REV A

DEC FORM NO.
DRB 102

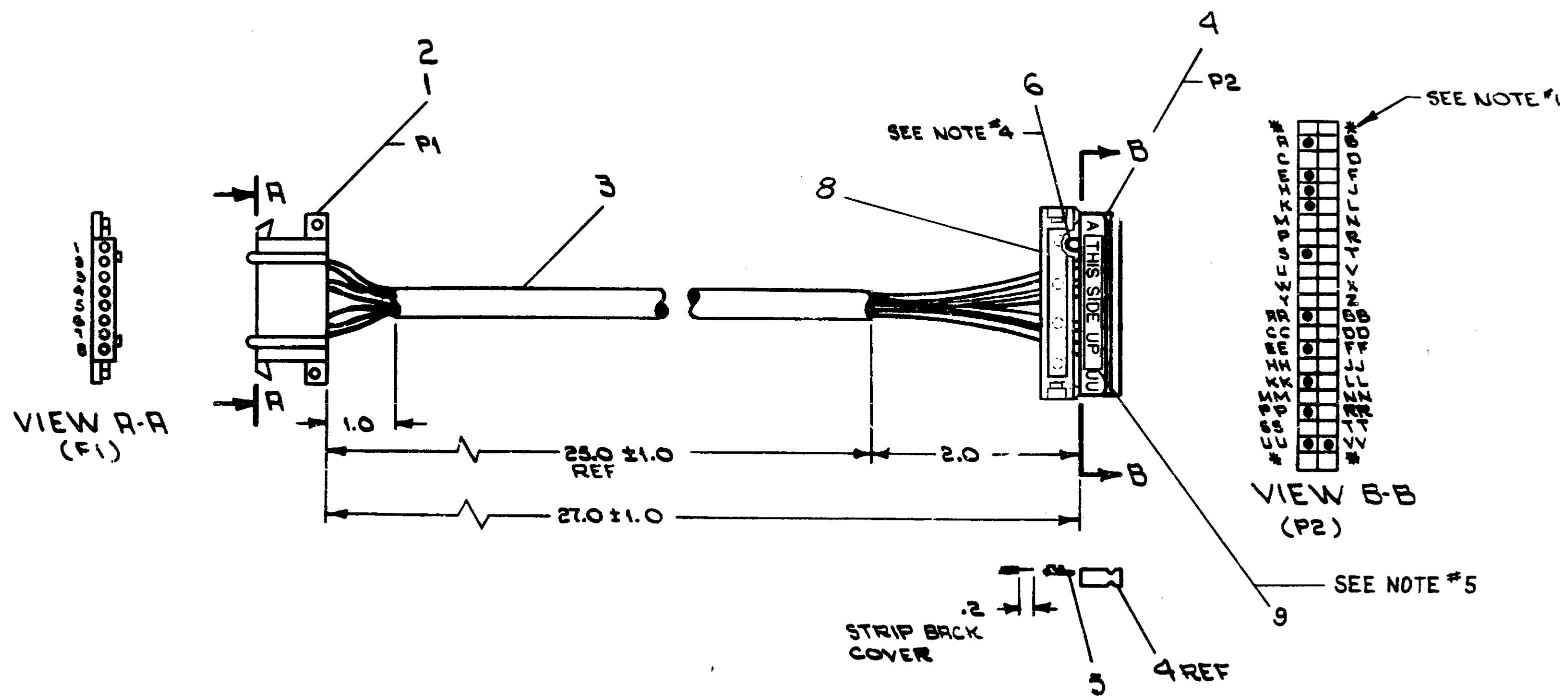
E Pink DIST 21 434 435 3

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	PAIR NO.	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH
3	22	BLK	1	P1-2	2	P2-KK	5
3	↑	RED	1	P1-3	2	P2-S	↑
3,7		SHIELD	1	SEE NOTE #2	—	P2-A(NOTE #3)	
3		BLK	2	P1-4	2	P2-EE	
3		WHT	2	P1-5	2	P2-AA	
3,7		SHIELD	2	SEE NOTE #2	—	P2-UU(NOTE #3)	
3		BLK	3	P1-6	2	P2-PP	
3		GRN	3	P1-7	2	P2-K	
3,7	↓	SHIELD	3	SEE NOTE #2	—	P2-VV(NOTE #3)	↓
6	22	BLK	—	P2-E	5	P2-H	5

NOTES:

1. * ASTERISKS INDICATE CAVITIES NOT USED OR DESIGNATED BY LETTERS.
2. DRAIN WIRES TO BE CUT BACK TO OUTER INSULATION ON P1 END OF CABLE ONLY. SHIELDS TO BE CUT BACK TO OUTER INSULATION ON BOTH ENDS OF CABLES.
3. DRAIN WIRES ON P2 END OF CABLE TO BE EACH ENCLOSED WITH ITEM #7 (TUBING) FROM END OF CABLE JACKET TO POINT WHERE THEY ENTER P2 CONNECTOR.
4. ITEM #6 (WIRE) TO BE APPROXIMATELY ONE (1) INCH LONG.
5. PLACE ITEM #9 ("THIS SIDE UP" STICKER) ON LETTERED SIDE OF ITEM #4 (BERG HOUSING) AS SHOWN.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
	LABEL, THIS SIDE UP	361567	9
	STRAIN RELIEF	[illegible]2.1166	8
A/R	TUB. #18 TEF. THINWALL NAT	9107278-11	7
A/R	WIRE #22 AWG STRD TEF BLK	9107350-00	6
11	SOCKET, CRIMP # 47216	1210089-07	5
1	HOUSING BERG #650-13-15	[illegible]5	4
A/R	CABLE, BELDEN #8777-3PR SHLD	9107723-0	3
6	CONTACT MATE-N-LOCK (FEMALE)	1209379-[illegible]	2
1	CONN. MATE-N-LOCK (FEMALE)	1209340-00	1

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP-8E

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES
TOLERANCES
ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: SEE PARTS LIST
FINISH: —

DRN. DATE 7 APR 71
CHK'D. DATE 4-8-71
ENG. DATE 4-8-71
PROJ. ENG. DATE 4-8-71
PROD. DATE 4/8/71

NEXT HIGHER ASSY: A ML-KL8-E-0

SCALE: NONE
SHEET OF

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

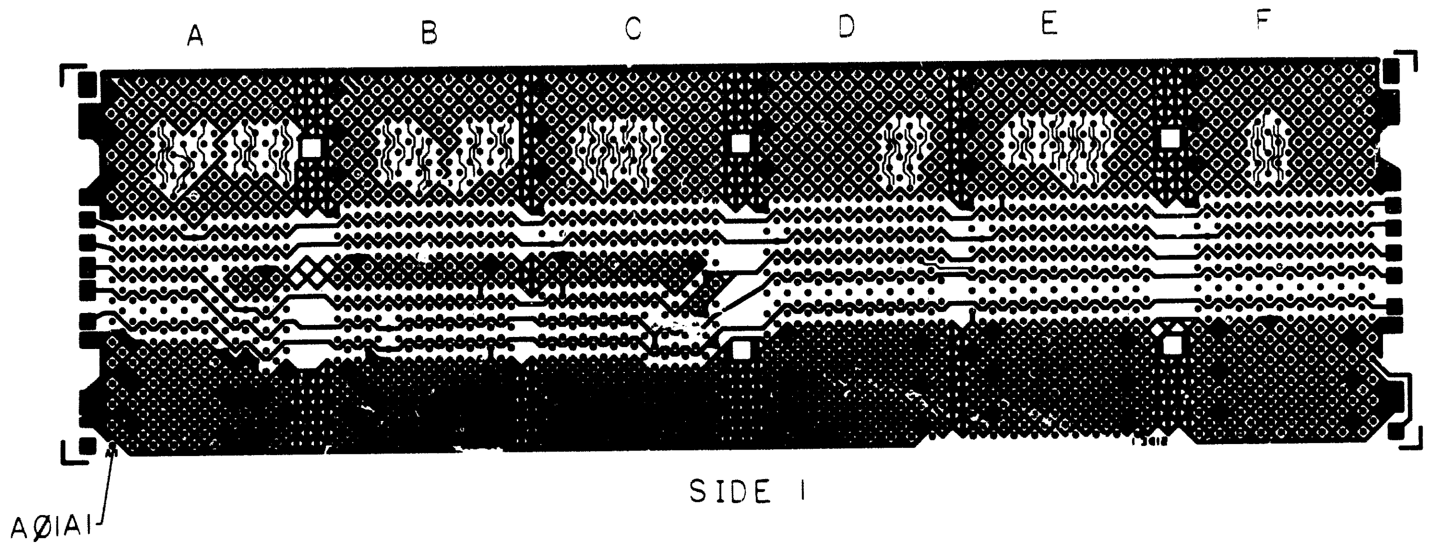
TITLE: CABLE ASSEMBLY (KL8E)

SIZE: D | CODE: IA | NUMBER: 7008360-0-0 | REV: E

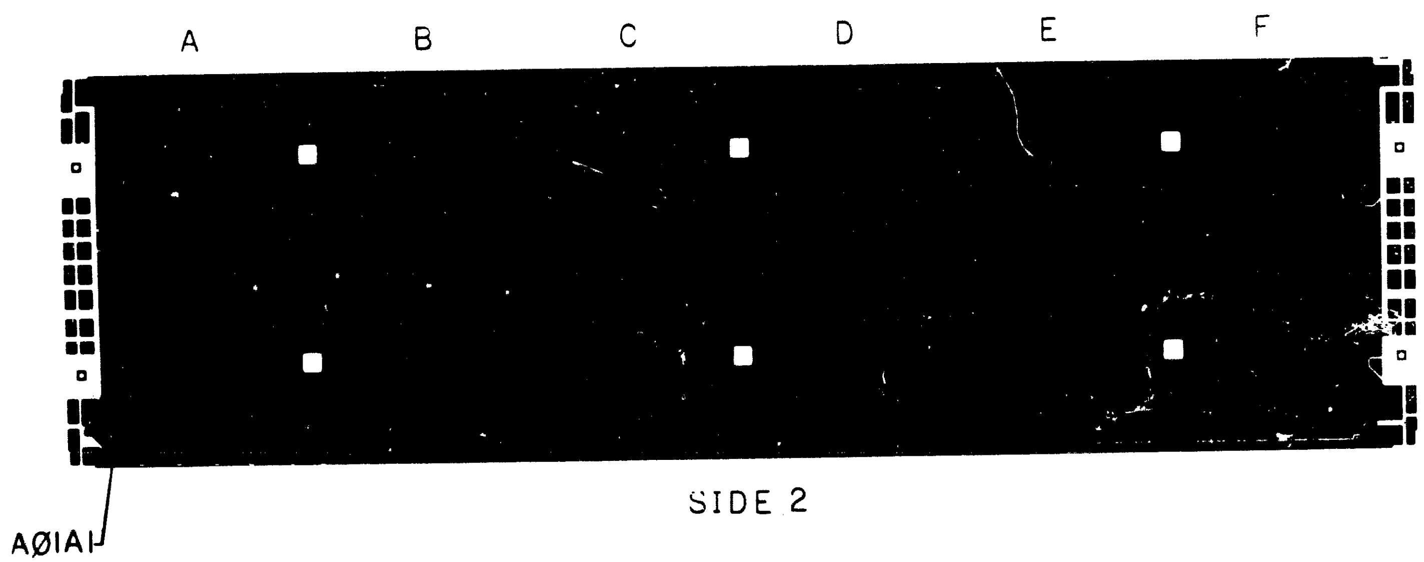
D IA 7008360-0-0 E

C	7008360-00001 10-29-73 B. REGAN
D	7008360-00002 3/2/74 REGAN
E	7008360-00003 10/4/74 R. REGAN

NOTES:



SIDE 1



SIDE 2

IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		AWT REV STATUS	A-WT-7009922-0	5
REF		MODULE ECO HISTORY	B-MH-5410972 0-6	4
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5410972-0-5	3
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5410972-0-4	2
1		ETCHED CIRCUIT BOARD	5016973	1

PARTS LIST

FIRST USED ON OPTION MODEL: 11/Ø5-S

ETCH BOARD REV. B

REV. B — CHANGE NO. 5410972-00001 — P. JANSON

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

NEXT HIGHER ASSY: D-IA-7009921-0-0

SCALE 1/1 SHEET 1 OF 1

digital

TITLE: CIRCUIT SCHEMATIC

SIZE D CODE CS NUMBER 5410972-0-1 REV. B

DIST.

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE	SEQUENCE
CONSOLE ASSY	D-UA-KY11-J-Ø	
CONSOLE ASSY (PL)	A-PL-KY11-J-Ø	
JUMPER POWER	B-IA-7409730-0-0	
I/O CABLE	C-UA-BCØ8R-Ø3-Ø	
CIRCUIT SCHEMATIC	D-CS-5409766-Ø-1	
ETCH BOARD ASSY	E-IA-5409766-0-0	

UNIT VARIATIONS

VAR	TITLE	PRINT SET KY11-J
KY11-JA	CONSOLE ASSY 11/Ø5	X
KY11-JB	CONSOLE ASSY 11/1Ø	X
KY11-JC	CONSOLE ASSY GT4Ø	X
KY11-JF	CONSOLE ASSY UNICHANNEL 15	X
KY11-JD	CONSOLE ASSY 11/Ø5 (10.5)	X
KY11-JE	CONSOLE ASSY 11/1Ø (10.5)	X

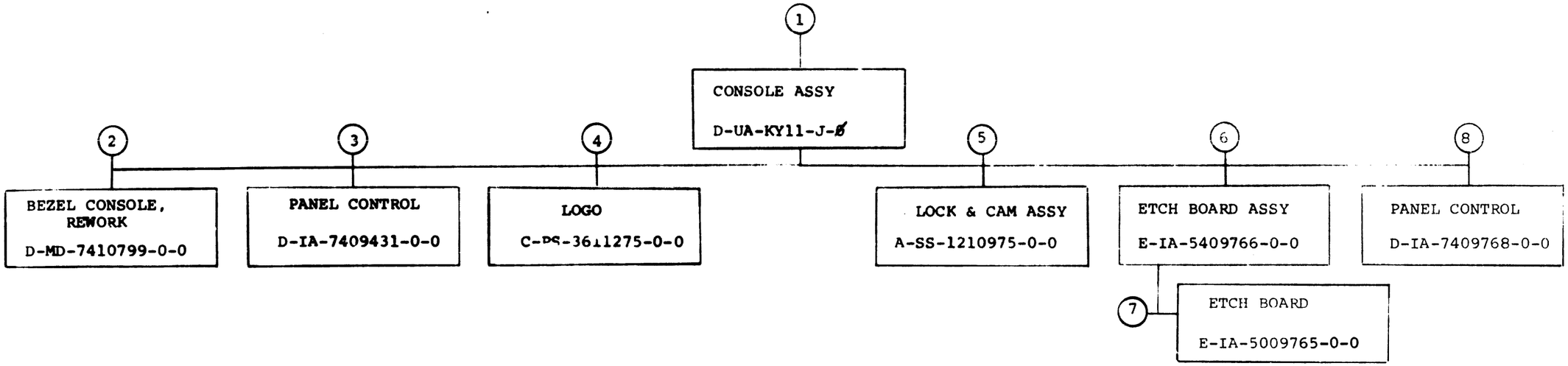
REVISIONS	DATE	CHG. NO.	REV
	2/74	KY11J-00004	A
	3/74	KY11J-00005	B
	3/74	KY11J-00006	C
	3/74	KY11J-00007	D

USED ON OPTION/MODEL	
11/Ø5	

SHEET 1 OF 3

DRN. J.CAHILL	DATE 4-23-3	TITLE: CONSOLE ASSY
CHK'D. J.CAHILL	DATE 4-23-3	
PROJ ENG.	DATE 8-29-73	
PROD.	DATE 8-29-73	SIZE B / CODE DD / NUMBER KY11-J / REV D
FIELD SERV.	DATE 9-26-73	DIST

DRB 106
DEC 16-(325)-1062-1A-R972



TITLE		SIZE	CODE	NUMBER	REV
CONSOLE ASSY	SHEET 2 OF 3	B	DO	KY11-J	D

DRB 107
DEC 16-(325)-1062-3-N871

ELECTRICAL

CUSTOMER PRINT SET KY11-J	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
X		1	D-UA-KY11-J-Ø	N	1	CONSOLE ASSY	
X			A-PL-KY11-J-Ø	N	2	CONSOLE ASSY (PL)	
X			B-IA-7409730-0-0	#	1	JUMPER POWER	
X			C-UA-BCØ8R-Ø3-Ø	#	1	I/O CABLE	
X		6	E-IA-5409766-0-0	#	1	ETCH BOARD ASSY	
X			D-CS-5409766-Ø-1	#	1	CIRCUIT SCHEMATIC	
			B-MH-5409766-Ø-6		1	MODULE ECO HISTORY	
		7	E-IA-5009765-0-0		1	ETCH BOARD	

MECHANICAL

CUSTOMER PRINT SET KY11-J	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
		1	D-UA-KY11-J-Ø	N	1	CONSOLE ASSY	
			A-PL-KY11-J-Ø	N	2	CONSOLE ASSY (PL)	
			C-MD-7409534-0-0		1	ACTUATOR (REWORK)	
			B-IA-7409444-0-0		1	DETENT	
			C-UA-BCØ8R-Ø3-Ø		1	I/O CABLE	
			B-MD-7409867-0-0		1	EXTENDED LEAF REWORK (ACTUATOR)	
			B-MD-7409868-0-0		1	SWITCH ADAPTER PLATE	
			C-MD-7411728-0-0		1	KEY LOCK SWITCH, REWORK	
		2	D-MD-7410799-0-0		1	BEZEL CONSOLE REWORK	
			J-PS-1210922-0-0		1	BEZEL CONSOLE CASTING	
		3	D-IA-7409431-0-0		1	PANEL CONTROL	
			C-SS-7409431-0-1		1	SILK SCREEN (MAGENTA)	
			C-SS-7409431-0-2		1	SILK SCREEN (BLK) REAR	
			C-SS-7409431-0-3		1	SILK SCREEN (11Ø5) VERMILLION	
		4	C-PS-3611275-0-0		1	LOGO	
			A-SS-3611275-0-1		1	SILK SCREEN	
			A-SS-3611275-0-2		1	SILK SCREEN	
			A-SS-3611275-0-3		1	SILK SCREEN	
			A-SS-3611275-0-4		1	SILK SCREEN	
			A-SS-3611275-0-5		1	SILK SCREEN	
		5	A-PS-1210975-0-0		1	LOCK & CAM ASSY	
		6	E-IA-5409766-0-0		1	ETCH BOARD ASSY	
		7	E-IA-5009765-0-0		1	ETCH BOARD	
		8	D-IA-7409768-0-0		1	PANEL CONTROL	
			C-SS-7409768-0-1		1	SILK SCREEN	
			C-SS-7409768-0-2		1	SILK SCREEN	
			C-SS-7409768-0-3		1	SILK SCREEN	

CUSTOMER PRINT SET CODES

X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
$ = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

TITLE	SHEET	SIZE	CODE	NUMBER	REV
CONSOLE ASSY	3 OF 3	B	DD	KY11-J	D

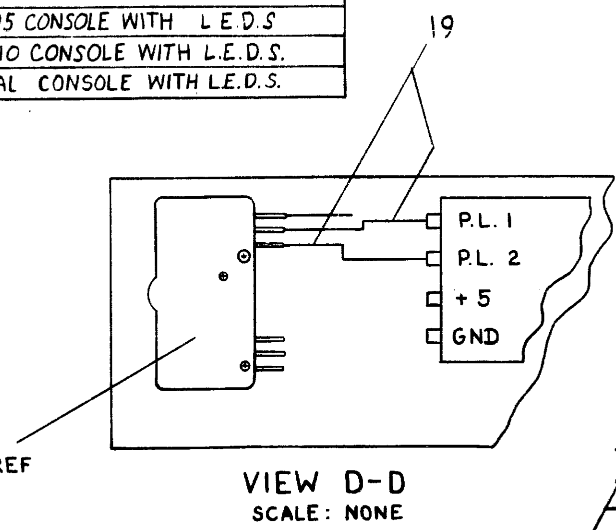
DRB 108

DEC 16-(3251)-1062-2D-M972

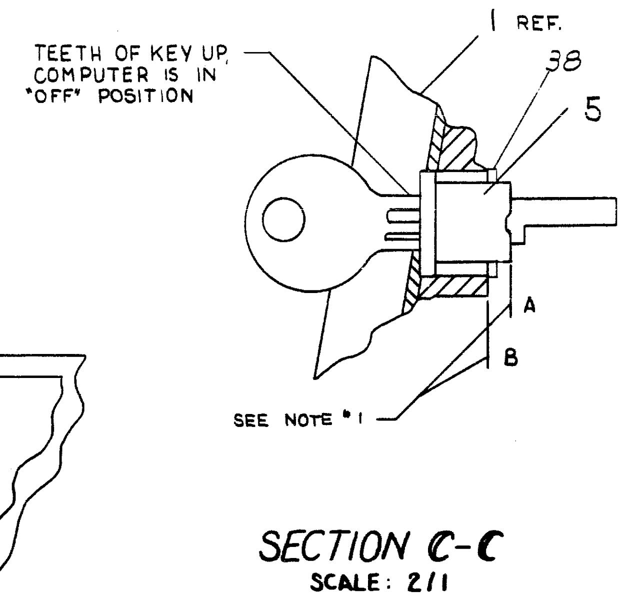
PART NO.	VARIATION
KY11-JA	11Ø5 CONSOLE WITH L.E.D.S.
KY11-JB	11I0 CONSOLE WITH L.E.D.S.
KY11-JC	VT4Ø CONSOLE WITH L.E.D.S.
KY11-JF	UC15 CONSOLE WITH L.E.D.S.
KY11-JD	10½" 1105 CONSOLE WITH L.E.D.S
KY11-JE	10½" 1110 CONSOLE WITH L.E.D.S.
KY11-J[illegible]	INDUSTIAL CONSOLE WITH L.E.D.S.

NOTES:

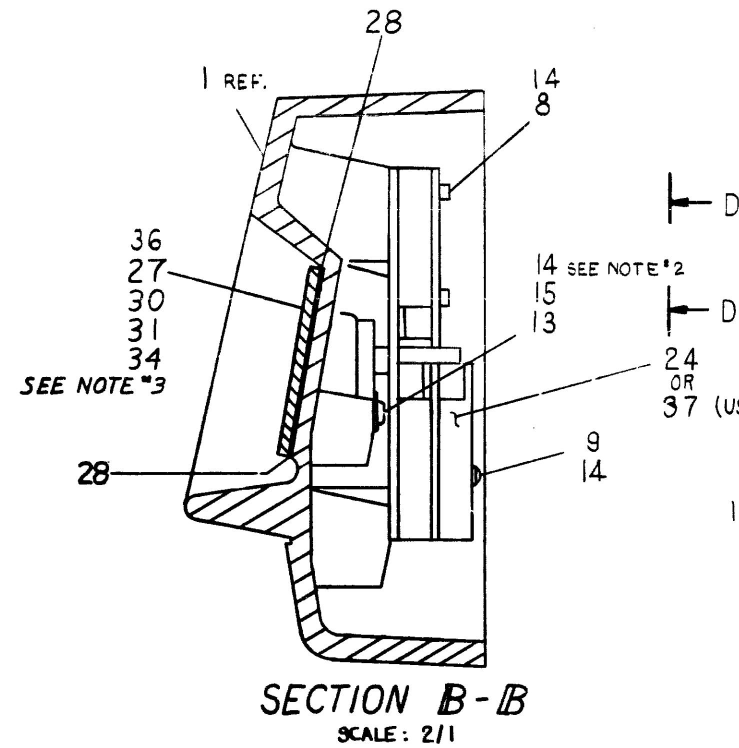
1. CASTING KEY HOLE, SURFACES A & B TO BE COATED WITH LUBE (ITEM #18)
2. LOCK WASHER IS NOT USED ON SCREW UNDER SWITCH.
3. INSERT CONTROL PANEL (ITEM #27,30,31 OR 34) USING ADHESIVE TRANSFER TAPE (ITEM #29) ON REAR SURFACE & PRESS FIRMLY IN PLACE.
4. INSTALL 18 INCHES OF TAPE (ITEM #39) ON UNSHIELDED SIDE OF I/O CABLE BEGINNING AT FAR END OF CABLE FROM CONSOLE. ALL VARIATIONS EXCEPT JD AND JE.



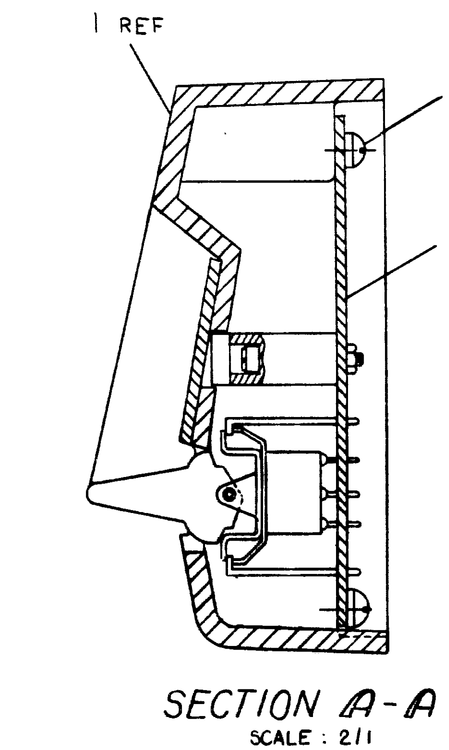
VIEW D-D
SCALE: NONE



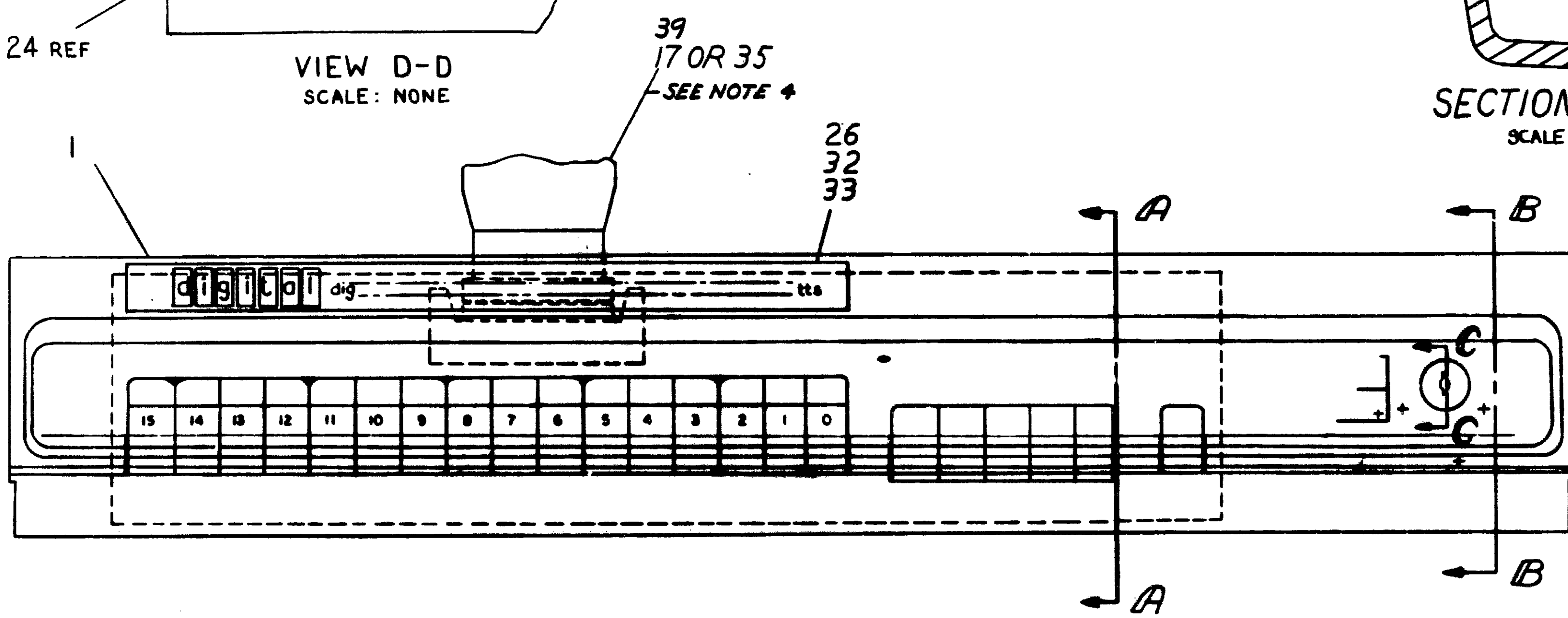
SECTION C-C
SCALE: 2/1



SECTION B-B
SCALE: 2/1



SECTION A-A
SCALE: 2/1



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP 11Ø5

DO NOT SCALE DRAWING. UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES. TOLERANCES: DECIMALS ±.005, FRACTIONS ±1/64, ANGLES ±0°30'. FINAL SURFACE QUALITY. REMOVE BURRS AND BREAK SHARP CORNERS.

MATERIAL: —

FINISH: —

DRN.	CAHILL	DATE 11-16-71
CHK'D	TESCHNER	DATE 4-14-72
ENG.	GRAHAM	DATE 4-5-72
PROJ. ENG.	WEEKS	DATE 4-5-72
PROD.	PETERSON	DATE 5-10-72

NEXT HIGHER ASSY: D-UA-1105-Ø-Ø

SCALE 1/1 — SHEET 1 OF 1

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: CONSOLE ASSY (PDP 11/Ø5)

SIZE	CODE	NUMBER	REV
D	UA	KY11-J-Ø	N

REVISIONS (CHK / CHANGE NO. / REV.): KY11-00001 REVISED & REDRAWN (D); G. GRAHAM; 11/05-00040 (E); M. TITELBAUM; DWG NO. WAS KY11-Ø-Ø (F); G. GRAHAM; KY11J-00001 (G); KY11J-00002 (H); RANDALL; KY11J-00003 (J); F. ELI; KY11J-00004 (K); L. MINOR; KY11J-00005 (L); G. GRAHAM; KY11J-00006 (M); GRAHAM; KY11J-00007 (N); P. RANDALL

DEC FORM NO DRL 100

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY	R. ROBICHAUD	CHECKED	C. TESCHNER	SECTION 1
DATE	12-8-71	DATE	5-1-72	
ENG	G. Graham	PROD	R. K. PETERSON	ISSUED SECT. 1
DATE	4-5-72	DATE	5-10-72	

ITEM NO	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION KY11-JA	KY11-JB	KY11-JC	KY11-JF	KY11-JD	KY11-JE	KY11-JJ
1	D-MD-7410799-0-0	CONSOLE BEZEL REWORK	1	1	1	1	1	1	1
~~2~~	~~E-IA-7409374-2-0~~	~~BEZEL CONSOLE (11/24)~~	~~X~~	~~X~~	~~X~~	~~X~~			—
3	E-IA-5409766-0-0	CONSOLE ETCH BOARD ASSY	1	1	1	1	1	1	1
~~4~~	~~E-IA-5409766-2-0~~	~~CONSOLE ETCH BOARD ASSY (PDP11)~~	~~X~~	~~X~~	~~X~~				—
5	A-PS-1210975-0-0	LOCK & CAM ASS'Y	1	1	1	1	1	1	1
6	9006020-1	SCR, PHL PAN HD. #6-32 X 1/4 LG	6	6	6	6	6	6	6
7	9006633	WASH INT TOOTH LOCK #6	6	6	6	6	6	6	6
8	9006003-1	SCR PHL PAN HD ** 2-56 X 3/8 LG	2	2	2	2	2	2	2
9	9008025-1	SCR PHL PAN HD #2-56 X 5/8 LG	2	2	2	2	2	2	2
10	~~1210790-0-0~~	~~SWITCH DPDT N.O.~~	~~1~~	~~1~~	~~1~~				—
11	~~C-MD-7409534-0-0~~	~~ACTUATOR RE-WORK~~	~~1~~	~~1~~	~~1~~				—
12	~~1210905-1~~	~~INSULATOR~~	~~2~~	~~2~~	~~2~~				—
13	B-IA-7409444-0-0	DETENT	1	1	1	1	1	1	1
14	9006686	WASH #2 SPLIT LOCK	5	5	5	6	5	5	5
15	9006000-4	SCR BINDER HD #2-56 X3/16 LG	2	2	2	2	2	2	2
16	~~1210904-1~~	~~SWITCH SPDT 5204 (GOLD CONTACT 291-8204-00)~~	~~1~~	~~1~~	~~1~~				—
17	C-UA-BC08R-Ø3	I/O CABLE (3'-0" LG)	1	1	1	1	X	X	1
18	4901077	LUBE (FOR CAM LOCK)	A/R	A/R	A/R	A/R			A/R
19	B-IA-7409730-0-0	JUMPER, POWER	2	2	2	2	2	2	2
20	~~B-MD-7409868-0-0~~	~~SWITCH ADAPTER PLATE~~	~~1~~	~~1~~	~~1~~				—
21	~~B-MD-7409867-0-0~~	~~EXTENDER LEAF REWORK (ACTUATOR)~~	~~1~~	~~1~~	~~1~~				—
22	~~9000449-8~~	~~SCR PHL FLAT HD #2-56 X 1/4 LG.~~	~~2~~	~~2~~	~~2~~				—

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
CONSOLE ASSY (PDP11/05)	D-UA-KY11-J-Ø	A	PL	KY11-J-Ø	N	KY11J-00007
	SHEET 1 OF 2	DIST.	G			

DEC FORM DEC 16 (325) 1031 N870
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY	R. ROBICHAUD	CHECKED	C. TESCHNER	SECTION 1
DATE	12-8-71	DATE	5-1-72	
ENG	G. GRAHAM	PROD	R. K. PETERSON	ISSUED SECT. 1
DATE	4-5-72	DATE	5-10-72	

ITEM NO	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION KY11-JA	KY11-JB	KY11-JC	KY11-JF	KY11-JD	KY11-JE	KY11-JJ
23	~~E-IA-7409374-4-0~~	~~BEZEL CONSOLE (VT40)~~	~~X~~	~~X~~	~~1~~	~~X~~			—
24	A-PS-1210982-0-0	KEY LOCK SWITCH	1	1	1	1		1	1
25	~~E-IA-7409374-5-0~~	~~BEZEL CONSOLE (UC15)~~	~~X~~	~~X~~	~~X~~	~~1~~			—
26	C-PS-3611275-0-0	LOGO (PDP-1105) NOTE VARIATIONS	1	1	X	X	1	1	1
27	D-IA-7409431-1-0	PANEL CONTROL (1105)	1	X	X	X	1	X	X
28	9009210-1	ADHESIVE TRANSFER TAPE ½ WIDE	A/R	A/R	A/R	A/R	A/R	A/R	A/R
~~29~~	~~1211052~~	~~CONSOLE PROTECTIVE COVER~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~
30	D-IA-7409431-3-0	PANEL CONTROL (1110)	X	1	X	X	X	1	X
31	D-IA-7409768-0-0	PANEL CONTROL (GT40)	X	X	1	X	X	X	X
32	C-PS-3611275-4-0	LOGO (DEC GRAPHIC)	X	X	1	X	X	X	X
33	C-PS-3611275-5-0	LOGO (UC15)	X	X	X	1	X	X	X
34	D-IA-7409431-4-0	PANEL CONTROL (UC15)	X	X	X	1	X	X	X
35	C-UA-BC08R-64	IØ CABLE (4'-0"LG)	X	X	X	X	1	1	X
36	D-IA-7411393-Ø-Ø	INDICATOR PANEL (INDUSTRIAL)	X	X	X	X	X	X	1
37	C-MD-7411728-0-0	KEY LOCK SWITCH, REWORK	X	X	X	X	1	X	X
38	9009589	RETAINING RING .025 THK	1	1	1	1	1	1	1
39	9009339	TAPE CLOTH WATERPROOF 2" WIDE GRAY	A/R	A/R	A/R	A/R	X	X	A/R

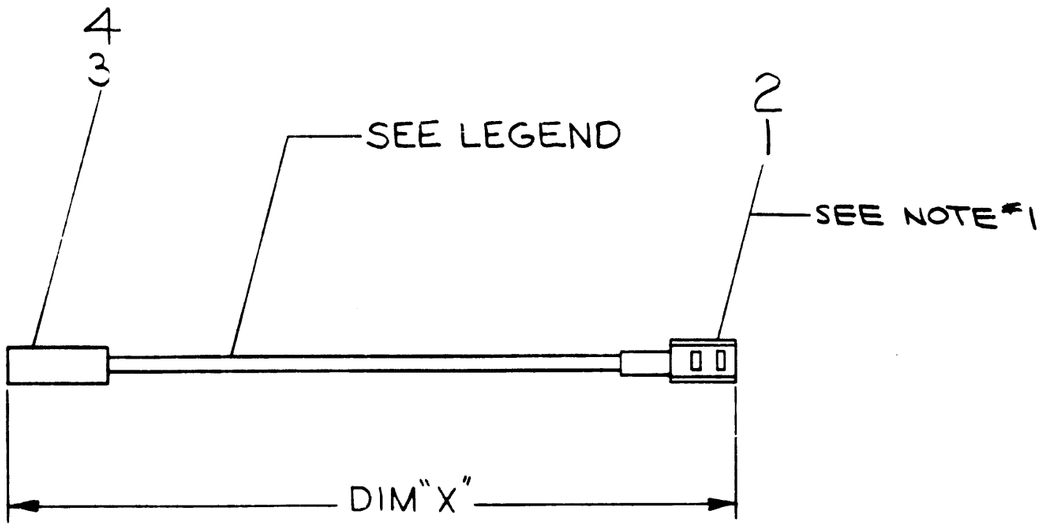
TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
CONSOLE ASSY (PDP11/05)	D-UA-KY11-J-Ø	A	PL	KY11-J-Ø	N	
	SHEET 2 OF 2	DIST.	G			

C. C FORM DEC 16 (325) 1031 N870
DRA 110

REV.	NUMBER	SIZE	CODE
	0-0-0X760F2	B	IA

LEGEND

NUMBER	DIM "X"	COLOR	ITEM
7409730-01	5 1/2"	BLACK	5



NOTES:

1. ITEM #2 (SHRINK TUBING) TO COVER CONTACT AREA OF ITEM #1 (SOLDERLESS CONN.)

QTY.	DESCRIPTION	PART NO.	ITEM NO.
A/R	WIRE, #18 AWG, BLK	9107278-[illegible]	5
1	MINI FASTAB #60291-1	1210820-2	4
1	HOUSING, 1-480417-C	1210820-1	3
1	TUBING, SHRINK (WHITE)	9107252	2
1	SOLDERLESS CONN.-50902	9007917	1

PARTS LIST

FIRST USED ON OPTION MODEL: PDP-1105

DRN. LBMcCoy	DATE 4-1-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. C.Teschner	DATE 4-19-72	
ENG. [illegible]	DATE 4-19-72	TITLE: JUMPER, POWER
PROJ. ENG. [illegible]	DATE 4-28-72	
PROD. [illegible]	DATE [illegible]	
NEXT HIGHER ASSEMBLY: —		SIZE B / CODE IA / NUMBER 7409730-0-C / REV
SCALE NONE		
SHEET 1 OF		DIST.

REVISIONS: REV. / CHANGE NO. / CHK

DEC FORM NO. DRB 109

WIRE TABLE

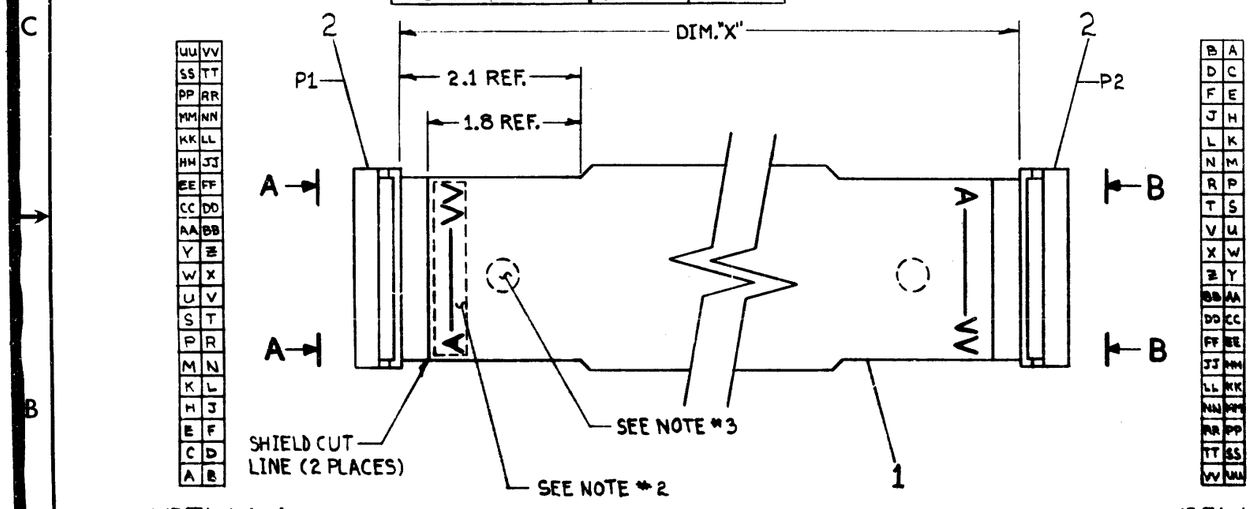
FROM	TO	FROM	TO
P1-A	P2-VV	P1-Y	P2-X
P1-B	P2-UU	P1-Z	P2-W
P1-C	P2-TT	P1-AA	P2-V
P1-D	P2-SS	P1-BB	P2-U
P1-E	P2-RR	P1-CC	P2-T
P1-F	P2-PP	P1-DD	P2-S
P1-H	P2-NN	P1-EE	P2-R
P1-J	P2-MM	P1-FF	P2-P
P1-K	P2-LL	P1-HH	P2-N
P1-L	P2-KK	P1-JJ	P2-M
P1-M	P2-JJ	P1-KK	P2-L
P1-N	P2-HH	P1-LL	P2-K
P1-P	P2-FF	P1-MM	P2-J
P1-R	P2-EE	P1-NN	P2-H
P1-S	P2-DD	P1-PP	P2-F
P1-T	P2-CC	P1-RR	P2-E
P1-U	P2-BB	P1-SS	P2-D
P1-V	P2-AA	P1-TT	P2-C
P1-W	P2-Z	P1-UU	P2-B
P1-X	P2-Y	P1-VV	P2-A

LEGEND

NUMBER	DIM "X"	PRECUT LENGTH
BCØ8R-Ø1	1FT	1FT 1.5IN ±1IN
BCØ8R-Ø2	2FT	2FT 1.5IN ±1IN
BCØ8R-Ø3	3FT	3FT 1.5IN ±1IN
BCØ8R-Ø4	4FT	4FT 1.5IN ±1IN
BCØ8R-Ø6	6FT	6FT 1.5IN ±2IN
BCØ8R-Ø8	8FT	8FT 1.5IN ±2IN
BCØ8R-1Ø	1ØFT	1ØFT 1.5IN ±2IN
BCØ8R-12	12FT	12FT 1.5IN ±3IN
BCØ8R-2Ø	2ØFT	2ØFT 1.5IN ±3IN
BCØ8R-25	25FT	25FT 1.5IN ±3IN
BCØ8R-3Ø	3ØFT	3ØFT 1.5IN ±.6FT
BCØ8R-5Ø	5ØFT	5ØFT 1.5IN ±1FT
BCØ8R-6Ø	6ØFT	6ØFT 1.5IN ±1.2FT
BCØ8R-75	75FT	75FT 1.5IN ±1.5FT
BCØ8R-AØ	1ØØFT	1ØØFT 1.5IN ±2FT
BCØ8R-A3	13ØFT	13ØFT 1.5IN ±2.6FT
BCØ8R-A6	16ØFT	16ØFT 1.5IN ±3.2FT

NOTES:

1. ASSEMBLE THIS CABLE PER PROCESS SPEC #7606485-0-0.
2. CONNECTOR LEGEND IDENTIFICATION TO BE PLACED ON SHIELD SIDE OF CABLE IN THIS AREA AS SHOWN.
3. INSPECTION & TEST STAMPS TO BE PLACED AT EACH END OF THE CABLE ASSEMBLY.



VIEW A-A
CONN. LEGEND REF.

VIEW B-B
CONN. LEGEND REF.

QTY.	DESCRIPTION	PART NO.	ITEM NO.
2	CONNECTOR, 40 SOCKET	1211206	2
A/R	CABLE, 40 COND. FLAT W/SHIELD	1700004	1

PARTS LIST

FIRST USED ON OPTION/MODEL

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS: .xxx = .005, .xx = .02, .x = .1
ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY √
MATERIAL
FINISH

		DATE
DRN.	D.FONTAINE	8-28-70
CHK'D.	J.FLEMING	8-28-70
ENG.	P.GARDNER	9-3-70
PROJ. ENG.	P.GARDNER	9-3-70
PROD.	DONALD	9-4-70

NEXT HIGHER ASSY.
SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

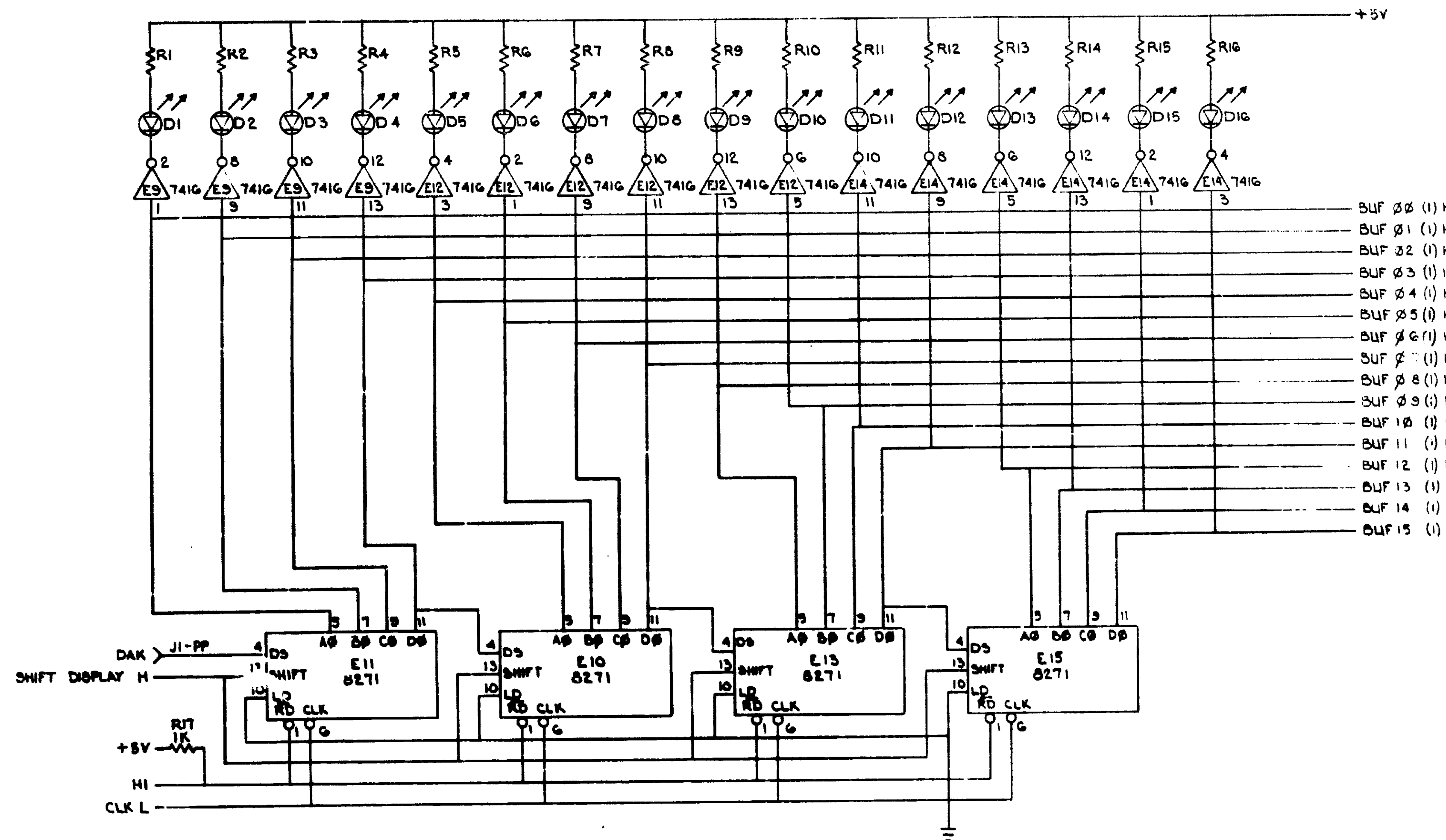
TITLE
BCØ8R
I/O CABLE

SIZE	CODE	NUMBER	REV.
C	UA	BCØ8R-0-0	J

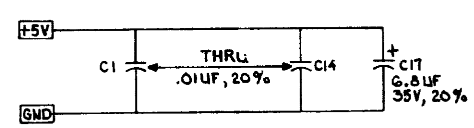
DIST.

REVISIONS			
CHK	CHANGE NO	REV	
PG	BCØ8R-00004	J	REVISED & REDRAWN
			P.GARDNER 9-16-73
			P.GARDNER 9-17-73

SIZE C | CODE UA | NUMBER BCØ8R-0-0 | REV J



UNLESS OTHERWISE INDICATED:
RESISTORS = 1/4W, 5%
CAPACITORS = 100V, 5%
DIODES ARE LIGHT EMITTING
PIN 14 = +5V, PIN7 = GND ON DEC 7404, 7416, 7417
PIN 16 = +5V, PIN8 = GND ON DEC 8271, 74123, 74193



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV E

REV	CHANGE NO.
J	5409766-00007
H	5409766-00006
F	5409766-00005
E	5409766-00004
D	5409766-00003
C	5409766-00002
B	5409766-00001

DEC NO. | EIA NO. | DEC NO. | EIA NO.

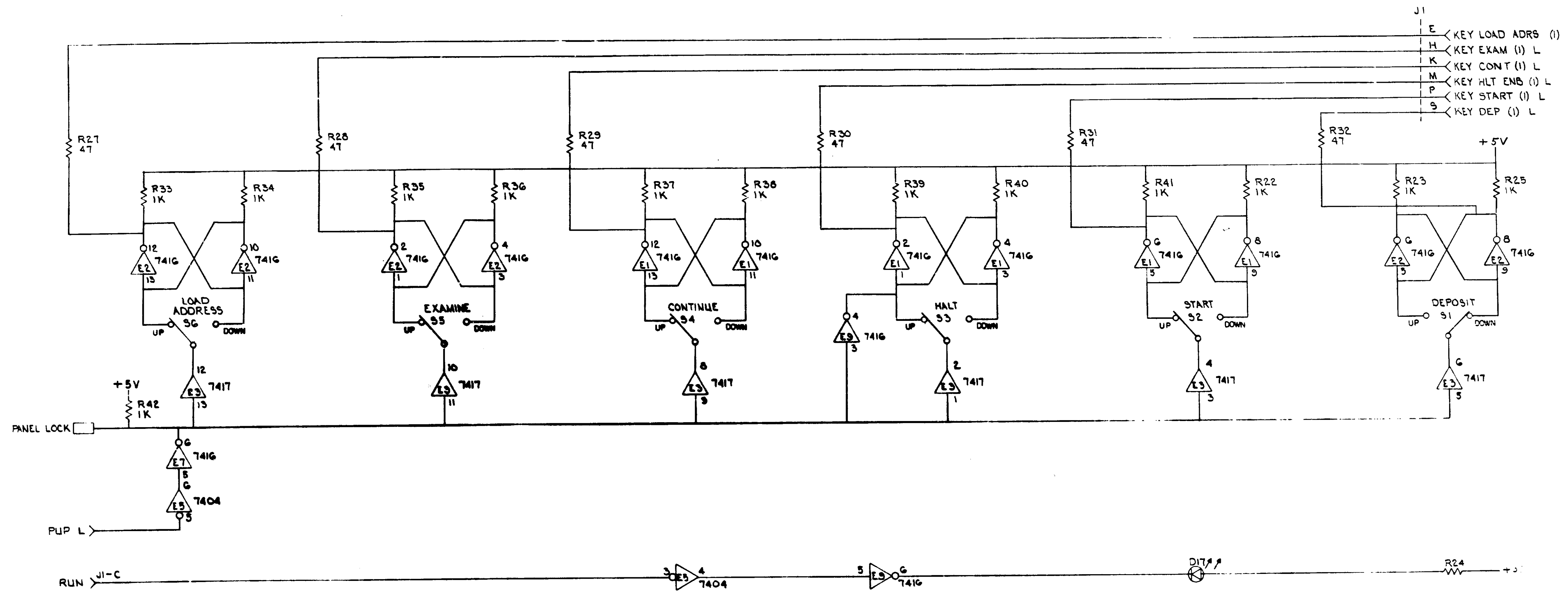
SEMICONDUCTOR CONVERSION CHART

DRN. Roger J. Doucette — DATE 18 Jan 72
CHK'D. — DATE 26 Jan 72
ENG. — DATE 2-10-72
PROJ. ENG. — DATE 2-10-72
PROD. — DATE 2-10-72
NEXT HIGHER ASSY E-IA-BAC9766-0-0
SCALE
SHEET 1 OF 3

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE 11/05 CONSOLE

SIZE D CODE CS NUMBER 5409766-0-1 REV. J



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV E

DEC NO	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

CHANGE NO. REVISIONS REV

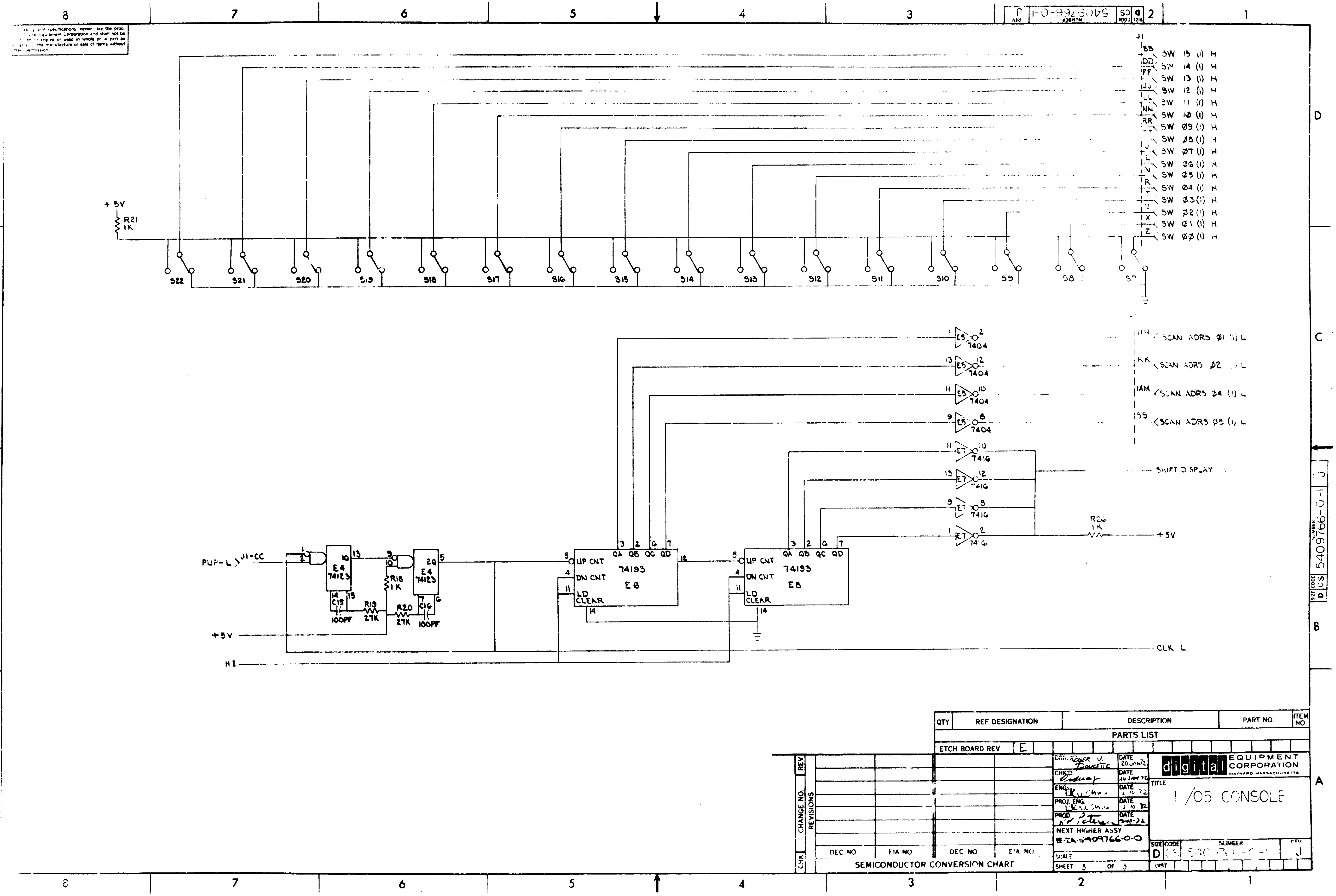
DRN. Roger J Doucette DATE 13 Jan 72
CHK'D. DATE 26 Jan 72
ENG. DATE 2-10-72
PROJ. ENG. DATE 2-10-72
PROD. R.K. Peterson DATE 2-10-72
NEXT HIGHER ASSY E-IA-5409566-0-0
SCALE
SHEET 2 OF 3

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE 11/05 CONSOLE

SIZE D CODE CS NUMBER 5409766-0-1 REV J

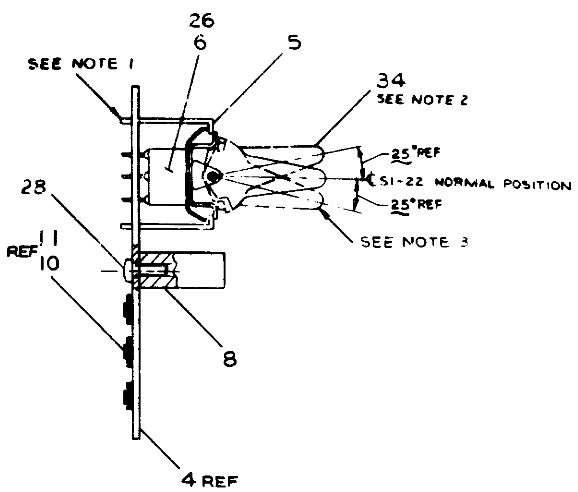
DIST



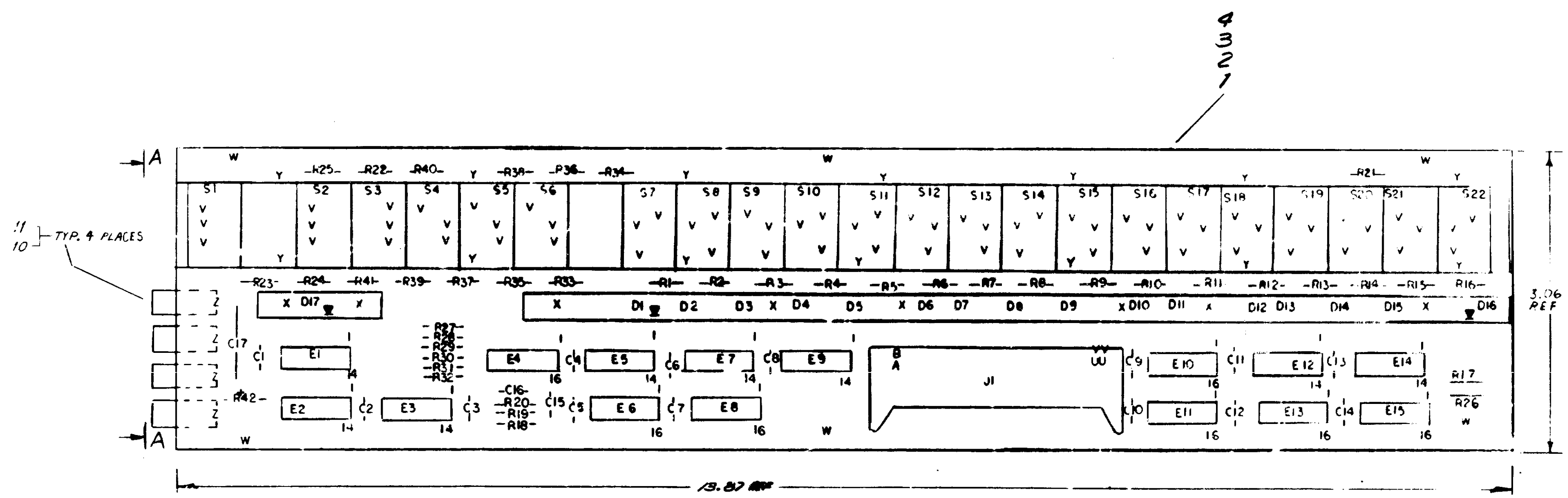
SW 15 (1) H
SW 14 (1) H
SW 13 (1) H
SW 12 (1) H
SW 11 (1) H
SW 10 (1) H
SW 09 (1) H
SW 08 (1) H
SW 07 (1) H
SW 06 (1) H
SW 05 (1) H
SW 04 (1) H
SW 03 (1) H
SW 02 (1) H
SW 01 (1) H
SW 00 (1) H
+5V
R21 1K
S22 S21 S20 S19 S18 S17 S16 S15 S14 S13 S12 S11 S10 S9 S8 S7
SCAN ADRS 01 (1) L
SCAN ADRS 02 (1) L
SCAN ADRS 04 (1) L
SCAN ADRS 08 (1) L
7404
7416
SHIFT DISPLAY
R26 1K
+5V
PUP-L
J1-CC
E4 74123
R18 1K
C15 100PF
R19 27K
R20 27K
C16 100PF
UP CNT
DN CNT
LD
CLEAR
74193
E6
E8
QA QB QC QD
+5V
H1
CLK L
QTY
REF DESIGNATION
DESCRIPTION
PART NO.
ITEM NO.
PARTS LIST
ETCH BOARD REV E
REV
CHANGE NO.
REVISIONS
CHK
DEC NO
EIA NO
SEMICONDUCTOR CONVERSION CHART
DRN. Roger J. Doucette
DATE 20 Jan 72
CHKD.
ENG.
PROJ. ENG.
PROD.
NEXT HIGHER ASSY B-IA-5409766-0-0
SCALE
SHEET 3 OF 3
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
TITLE
11/05 CONSOLE
SIZE D
CODE CS
NUMBER 5409766-0-1
REV J

NOTES:

1. ATTACH SWITCH BRACKET (ITEM #5) TO ETCH BOARD (ITEM #4) BY TURNING TABS ... BRACKET USING TWISTING TOOL # B-MD-7606203 (14 PLACES)
2. ASSEMBLE S2, 3, 4, 5 & 6 AS SHOWN
3. ASSEMBLE S1 & S7 THRU S22 AS SHOWN



VIEW A-A



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO
				35
22		KNOB	PS-1210736-0-0	34
				33
				32
				31
				30
				29
8		POZI-DRIVE TYPE F 4-40-5/16	9009236	28
				27
5	S1, S2, S4, S5, S6	SWITCHES, MOMENTARY	1210841	26
1	E3	I.C. DEC 7417	1909929	25
	E4	I.C. DEC 74123	1910436	24
2	E6, E8	I.C. DEC 74193	1910018	23
6	E9, E12, E14, E7, E1, E2	I.C. DEC 7416	1909928	22
1	E5	I.C. DEC 7409	1909686	21
4	E10, E11, E13, E15	I.C. DEC 8271	1909615	20
2	R19-R20	RES. 27K 1/4W 5%	1305346	19
17	R1-R16 R29	RES. 180 OHM 5%	1301322	18
17	R17-18, 21-23, 25, 26, 33-42	RES. 1K 1/4W 5%	1300365	17
6	R27-R32	RES. 47 1/4W 5%	1300202	16
14	C1-C14	CAP. .01 MF 100V 20%	1001610	15
1	C17	CAP 6.8 MF 35V 20%	1000067	14
2	C15, C16	CAP. 100PF 100V 5%	1000016	13
17	D1-D17	DIODE, LIGHT EMITTING (B.E.)	1110864	12
4		EYELET #GS4-4 STIMPSON	9007837	11
4		FASTON TAB	9007112	10
3		LED HOLDER (B.E.)	1210795-2	9
1		SINGLE L.E.D. HOLDER (B.E.)	1210848-2	8
1	J1	CONNECTOR	1209941	7
17	S7-S22, S3	SWITCHES TOGGLE	1210840	6
1		SUPPORT, SWITCHES	D-MD-7409270-2-0	5
1		ETCH CIRCUIT BOARD	E-IA-5009765-0-0	4
REF		MODULE ECO HISTORY	B-MW-5409766-0-6	3
REF		CIRCUIT SCHEMATIC	D-CS-5409766-0-1	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5409766-0-4	1

PARTS LIST

ETCH BOARD REV E

	DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

JUMPER LIST

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

DATE 12-15-71
DATE 2-10-72
DATE 2-10-72
DATE 2-10-72

NEXT HIGHER ASSY D-UA-K...

TITLE ETCH BOARD ASSY. (1105 CONSOLE)

SCALE 2/1

SHEET 1 OF 1

SIZE E CODE IA NUMBER 5409766-0-0

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

SEQUENCE	
DRAWING DIRECTORY BA11-K	B-DD-BA11-K
UNIT ASSY BA11-K	E-UA-BA11-K-Ø
UNIT ASSY BA11-K P.L.	A-PL-BA11-K-Ø
DRAWING DIRECTORY H765	B-DD-H765-Ø
UNIT ASSY BC11A	D-UA-BC11A-1Ø-Ø
BC11A UNIBUS CABLE, M919	B-CS-M919-0-1
BC11A UNIBUS CABLE, M929	B-CS-M929-0-1

SEQUENCE	
MFG. PRINT SET	
IN PLANT PACK. INST.	A-SP-3700167-0-0
SKID LOAD PACK. INST.	A-SP-3700165-0-0
CUST. CUSHIONED PACK. INST.	A-SP-3700169-0-0

THIS IS PRINT SET ☐☐☐☐

UNIT VARIATIONS

VAR	TITLE	PRINT SET 1
BA11-KE	115 VAC 50/60 HZ	X
BA11-KF	230 VAC 50/60 HZ	X
BA11-KH	115 VAC 50/60 HZ (MANUF. ONLY)	X
BA11-KJ	230 VAC 50/60 HZ (MANUF. ONLY)	X

REVISIONS			
REV	CHG. NO.	DATE	
A	BA11K-4	E.A.	
B	BA11K-5	E.A.	
C	BA11K-7	WRH	
D	BA11K-8	B.M.	
E	BA11K-9		

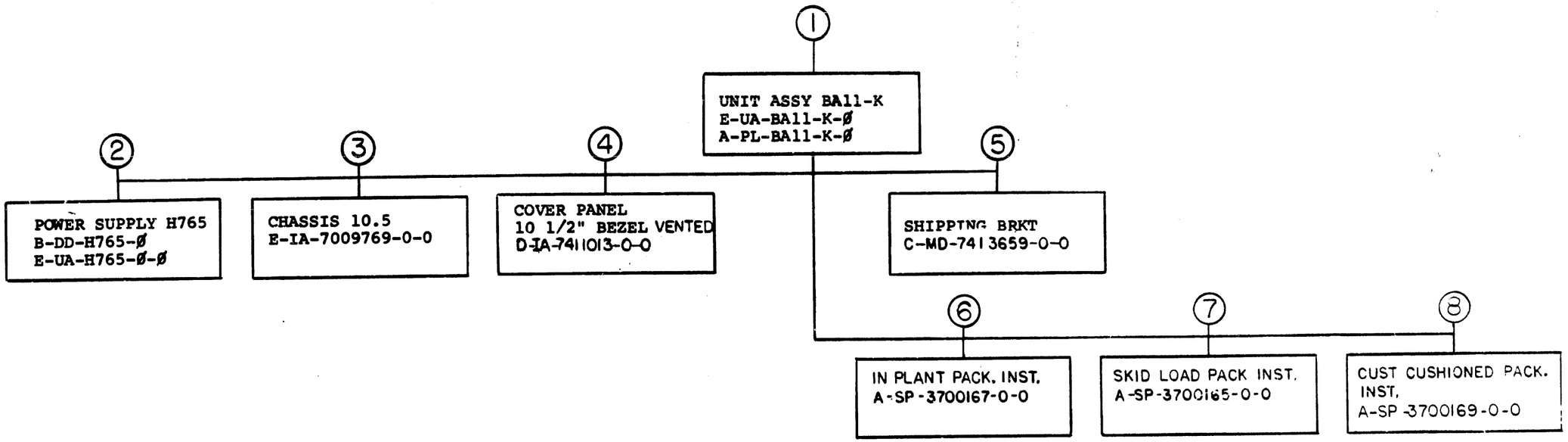
DEC 16-12251-1062-1A-8912

DRB 106

USED ON OPTION/MODEL	
11/05-S	
11/35-S	

SHEET 1 OF 4

DRN. J. FERGUSEN	DATE 6/22/74	TITLE DRAWING DIRECTORY BA11-K
CHK'D. D. HEALY	DATE 7/3/74	
PROJ ENG. E. Anton	DATE 9/4/74	
PROD. R.H. Peterson	DATE 10/1/74	SIZE B / CODE DD / NUMBER BA11-K / REV E
FIELD SERV. R.L. Gates	DATE 9/13/74	DIST



TITLE		SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY BA11-K	SHEET 2 OF 4	B	DD	BA11-K	E

CUSTOMER PRINT SET 1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			ELECTRICAL				
X		1	E-UA-BA11-K-Ø	E	2	UNIT ASSY BA11-K	
X			A-PL-BA11-K-Ø	E	1	UNIT ASSY BA11-K PL	
			A-SP-BA11-K-6		8	BA11-K BASIC CHECKOUT AND ACCEPTANCE PROCEDURE	
			A-SP-BA11-K-7		10	BA11-K BASIC ASSEMBLY PROCEDURE	
C		2	B-DD-H765-Ø	X	5	POWER SUPPLY H765	

CUSTOMER PRINT SET 1	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
			ELECTRICAL				

CUSTOMER PRINT SET CODES	
	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
	C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
	$ = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

TITLE	SHEET	SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY BA11-K	3 OF 4	B	DD	BA11-K	E

CUSTOMER PRINT SET 1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
		1	E-UA-BA11-K-Ø	E	2	UNIT ASSY BA11-K	
			A-PL-BA11-K-Ø	E	2	UNIT ASSY BA11-K PL	
			D-IA-7009768-0-0		1	COVER, CHASSIS	
			D-PS-1211825-0-0		3	SLIDE, 3 POS TILT	
			D-MD-7412184-0-0		1	CABLE, TROUGH CHASSIS	
X			D-UA-BC11A-1Ø-Ø		1	UNIBUS, CABLE, 10 FT	
X			B-CS-M919-Ø-1	#	1	BUS CONNECTOR M919	
X			B-CS-M929-0-1	#	1	BUS CONNECTOR M929	
			D-PS-1211630-00		1	CARD GUIDE	
			A-DC-5309414-0		1	DECAL UL	
			A-DC-5309413-0		1	DECAL NFPA	
		2	B-DD-H765-Ø		5	DWG DIRECTORY H765	
			E-UA-H765-Ø-Ø		2	POWER SUPPLY H765	
		3	E-IA-7009769-0-0		1	CHASSIS, 10.5	
			E-IA-7411703-0-0		1	CHASSIS, FRONT	
			E-IA-7411707-0-0		1	CHASSIS, SIDE	
			D-MD-7411706-0-0		1	BRACKET, HAT	
			D-MD-7411705-0-0		1	BRACKET, CARD GUIDE	
			C-MD-7412185-0-0		1	PLATE CABLE	
		4	D-IA-7411013-0-0		1	COVER PANEL 10 1/2 BEZEL	
		5	C-MD-7413659-0-0		1	SHIPPING BRKT	

CUSTOMER PRINT SET 1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
	X	6	A-SP-3700167-0-0	-	3	IN PLANT PACK. INST.	
			A-PS-9905650-0-0	-	2	REGULAR SLOTTED CARTON	
			A-PS-9905335-0-0	-	2	BEZEL PROTECTOR	
			A-PS-9905644-0-0	-	2	REAR PROTECTOR	
			A-PS-9905323-0-0	A	2	SIDE PROTECTOR	
			A-PS-9905129-0-0	A	4	POLY BAG 20 x 13 x 40in 1-1/2 mil.	
	X	7	A-SP-3700165-0-0	-	4	SKID LOAD PACK. INST.	
			A-PS-1210568-0-0	-	2	CUSHIONED SKID	
			A-PS-9905445-0-0	-	2	HALF OVERLAP SLOTTED CARTON (TOP)	
			A-PS-9905419-0-0	-	2	FLANGED TUBE (BOTTOM)	
	X	8	A-SP-3700169-0-0	-	2	CUST. CUSHIONED PACK. INST.	
			A-PS-9905645-0-0	-	2	FULL TELESCOPE CAP	
			A-PS-9905642-0-0	-	2	FOAM PAD	
			A-PS-9905643-0-0	-	2	FOAM WITH CORRUGATED SIDE WALL ASSEMBLY	

MECHANICAL

CUSTOMER PRINT SET CODES	
	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
	C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
	S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

TITLE		SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY BA11-K	SHEET 4 OF 4	B	DD	BA11-K	E

DRB 108

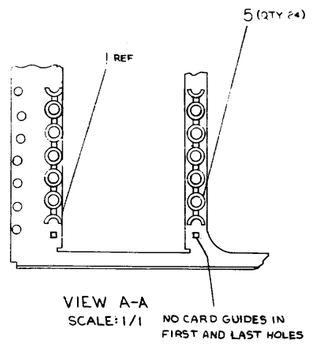
DEC 16-(325)-1062-2B-R972

LEGEND	
NUMBER	VARIATION
BA11-KE	115V 50/60HZ
BA11-KF	230V 50/60HZ
BA11-KH *	115 V 50/60HZ
BA11-KJ *	230V 50/60HZ

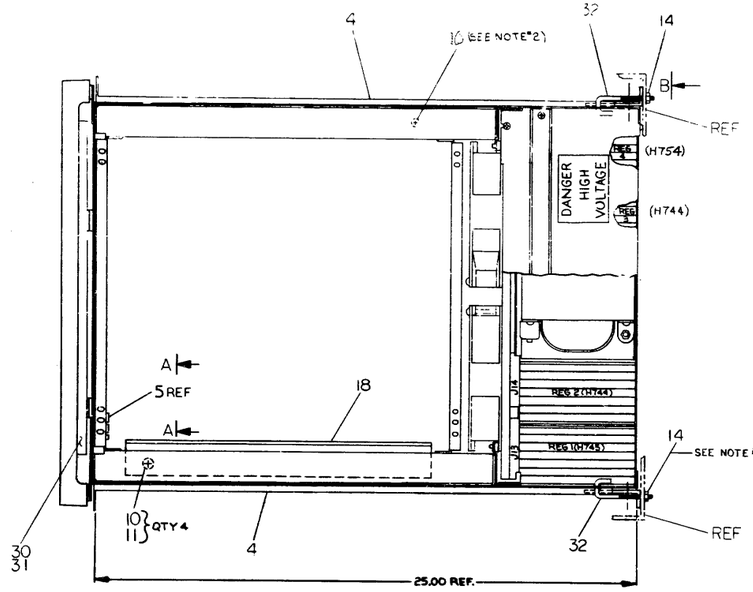
* FOR MFG. USE ONLY

NOTES:

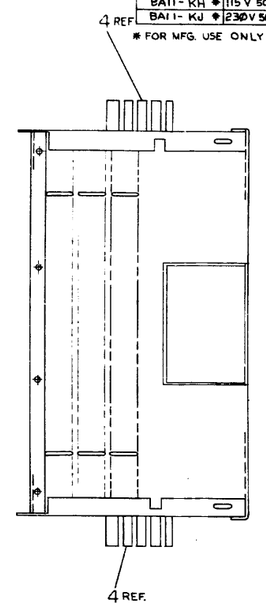
1. CAUTION: OFF SHEEET PARTS LISTS EXISTS SEE A-PL-BA11-K-Ø
2. GROUND LUG OF PWR DISTRIBUTION BD. ATTACHES TO SCREW ON CHASSIS
3. TIGHTEN ALL SYSTEM UNIT MOUNTING SCREWS TO 13 IN.-LBS WITH A TORQUE SCREW DRIVER
4. ATTACH SHIPPING BRACKETS TO POWER SUPPLY AND BOLT THROUGH HOLE IN CABINET RAILS.



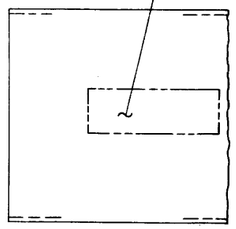
VIEW A-A
SCALE: 1/1



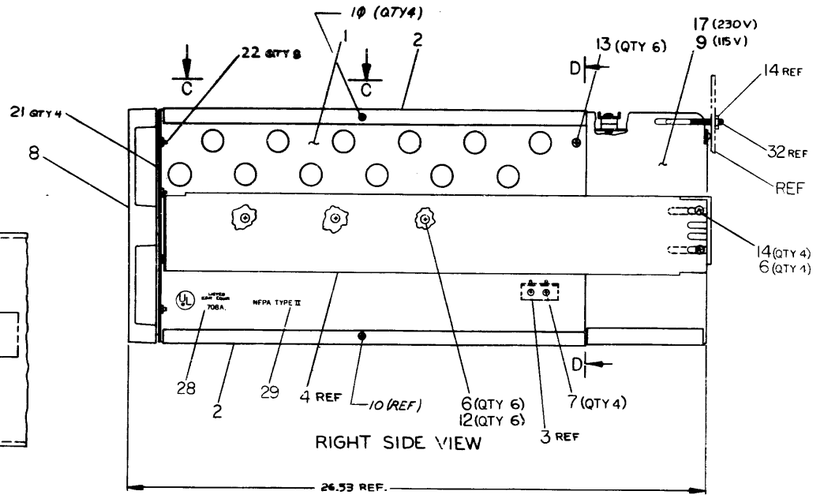
TOP VIEW
(CHASSIS COVER REMOVED)



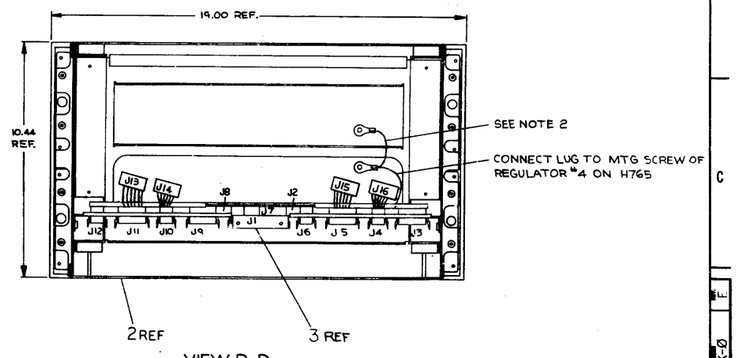
VIEW B-B



VIEW C-C
SCALE: NONE
ONLY TOP COVER ITEM #2 SHOWN



RIGHT SIDE VIEW



VIEW D-D
REAR VIEW
(POWER SUPPLY AND CHASSIS SLIDES REMOVED)

FIRST USED ON (ITEM/MODEL)	QTY.	DESCRIPTION	PART NO.	ITEM NO.
BA11-K		PARTS LIST		

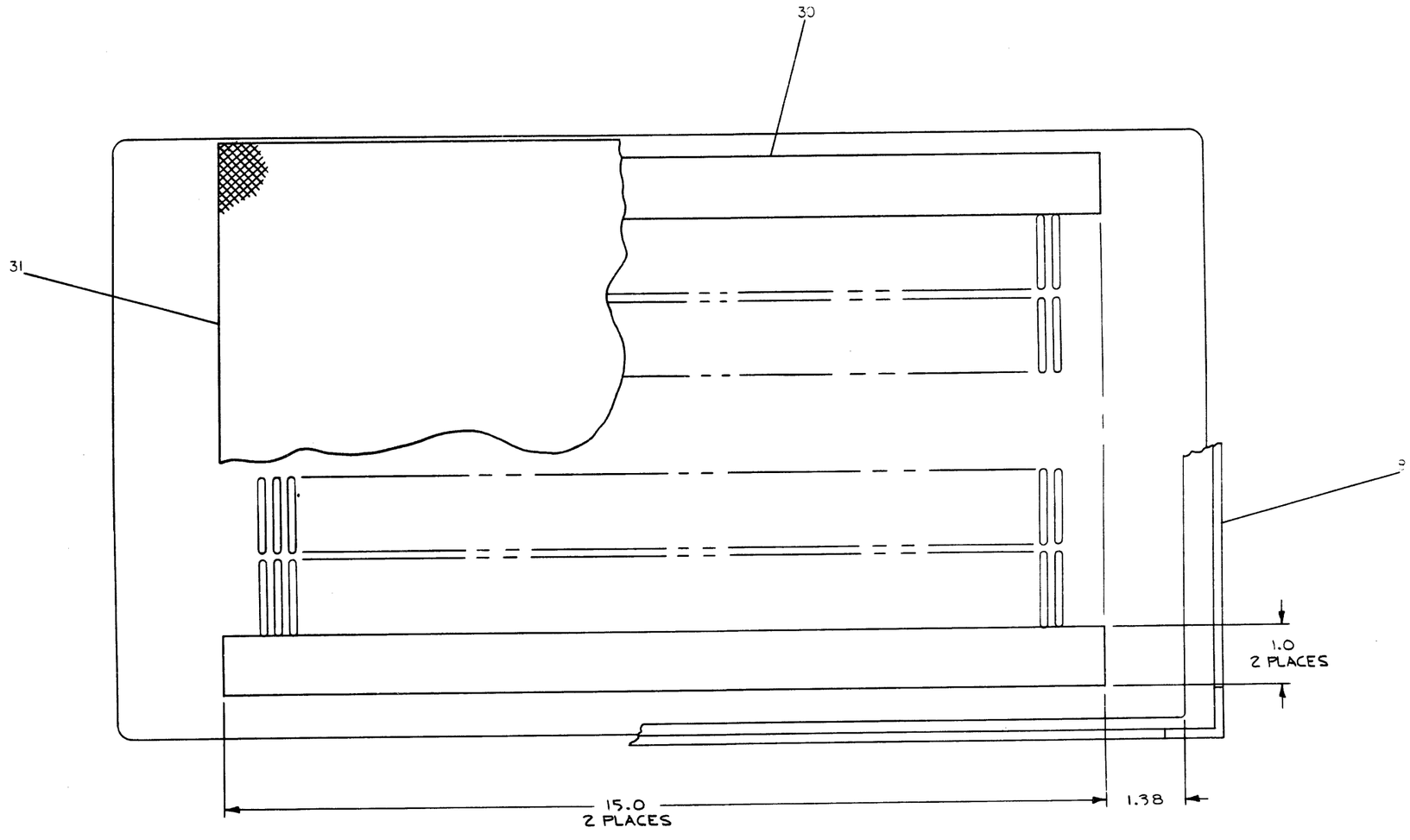
digital

TITLE: UNIT ASS'Y BA11-K

SIZE	DRAWING NO.	REV.
E	UA BA11-K-Ø	-

8-DD-BA11-K

BA11-K-Ø



REAR VIEW

REVISIONS	
CHANGE NO	REV.

TITLE: UNIT ASSY BA11-K-Ø	SIZE/CODE: E UA	NUMBER: BA11-K-0	REV: E
SCALE: —	SHEET 2 OF 2	DIST.	

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BILL BLODGET	CHECKED D. HEALY	SECTION 1
DATE 6/26/74	DATE 6/27/74	
ENG P. E. Jonson	PROD Almost Lucas	ISSUED SECT. 1
DATE 8-23-74	DATE 8/23/74	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION BA11-KE	BA11-KF	BA11-KH	BA11-KJ
1	E-IA-7009769-0-0	CHASSIS 10.5	1	1	1	1
2	D-IA-7009768-0-0	COVER, CHASSIS	2	2	–	–
3	D-CS-5410864-0-1	POWER DISTRIBUTION BOARD	REF	REF	REF	REF
4	D-PS-1211825-0-0	SLIDE, 3 POS TILT	1pr	1pr	–	–
5	D-PS-1211630-0-0	CARD GUIDE	24	24	24	24
6	9006071-3	SCREW, PHL TRUSS HD #10-32 X .38	10	10	4	4
7	9006020-2	SCREW, PHL FLAT HD #6-32 X .25	4	4	4	4
8	D-IA-7411013-0-0	COVER, PANEL 10 1/2 BEZEL (SNAP-ON VENTED)	1	1	–	–
9	B-DD-H765-A	POWER SUPPLY H765-A 115V 50/60 HZ	1	–	1	–
10	9006020-3	SCREW, PHL. TRUSS HD #6-32 X .25	5	5	5	5
~~11~~	~~9006633~~	~~WASHER INTERNAL TOOTH LOCK #6~~	~~4~~	~~4~~	~~4~~	~~4~~
12	9007651	WASHER EXTERNAL TOOTH #10	6	6	–	–
13	9009599	SCREW, PHL FLAT HD (SPECIAL)	6	6	6	6
14	9006565	NUT, KEPS, #10-32	6	6	–	–
15	DEC-3-(374)-1825-N1174	STICKER, "CONFIGURATION"	1	1	–	–
~~16~~	~~D-IA-7010959-0-0~~	~~SHIPPING BRKT, ASSY~~	~~1~~	~~1~~	~~–~~	~~–~~
17	B-DD-H765-B	POWER SUPPLY H765-B, 230V 50/60 HZ	–	1	–	1
18	D-MD-7412184-0-0	CABLE TROUGH CHASSIS	–	–	1	1
~~19~~	~~9008408-1~~	~~SCR, PH, HD SELF TAP #6-32 X .25~~	~~1~~	~~1~~	~~3~~	~~3~~
20	D-UA-BC11A-10-0	UNIBUS CABLE, 10 FT	1	1	–	–
21	1209224	LATCH MOLDING	4	4	–	–
22	9008007-2	SCR PH HD FLT #10-32 X .25	8	8	–	–

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO
UNIT ASSY BA11-K	E-UA-BA11-K-0	A	PL	BA11-K-0	E	BA11 K-0006
	SHEET 1 OF 2	DIST.				

DEC FORM DEC 16 (325) 1031-N870
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BILL BLODGET	CHECKED D. HEALY	SECTION 1
DATE 6/26/74	DATE 6/27/74	
ENG P. E. JANSON	PROD W. LUCAS	ISSUED SECT. 1
DATE 8-23-74	DATE 8-23-74	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION BA11-KE	BA11-KF	BA11-KH	BA11-KJ
23	A-SP-3700167-0-0	IN PLANT PACK. INST.	REF	REF	REF	REF
24	A-SP-3700165-0-0	SKID LOAD PACK INST.	REF	REF	REF	REF
25	A-SP-3700169-0-0	CUST. CUSHIONED PACK. INST.	REF	REF	REF	REF
26	A-SP-BA11-K-6	BA11-K BASIC CHECKOUT AND ACCEPTANCE PROCEDURE	REF	REF	REF	REF
27	A-SP-BA11-K-7	BA11-K BASIC ASSEMBLY PROCEDURE	REF	REF	REF	REF
28	A-DC-5309414-0	DECAL, UL	1	1	–	–
29	A-DC-5309413-0	DECAL, NFPA	1	1	–	–
30	121336-02	TAPE	A/R	A/R	–	–
31	1211255-0-0	PRE FILTER	1	1	–	–
32	C-MD-7413659-0-0	SHIPPING BRACKET	2	2	–	–

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO
UNIT ASSY BA11-K	E-UA-BA11-K-0	A	PL	BA11-K-0	F	
	SHEET 2 OF 2	DIST.				

DEC FORM DEC 16 (325) 1031 N870
DRA 110

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

SEQUENCE		SEQUENCE	
DRAWING DIRECTORY H765	B-DD-H765-Ø	MFG. PRINT SET	
UNIT ASSY H765	E-UA-H765-Ø-Ø	PACKAGING INSTRUCTIONS	A-SP-3700174-0-0
AC INPUT BOX ASSY	D-AD-7009811-0-Ø		
AC PWR CONTROL BOARD	D-CS-5410993-0-1		
DRAWING DIRECTORY H744	B-DD-H744-Ø		
DRAWING DIRECTORY H745	B-DD-H745-Ø		
DRAWING DIRECTORY H754	B-DD-H754-Ø		
PWR DISTRIBUTION BOARD	D-CS-5410864-0-1		
AC POWER CORD	D-AD-7010131-0-0		
PWR LINE MONITOR/15V REG	D-CS-5411086-0-1		
TRANSFORMER ASSEMBLY	E-AD-7011486-0-0		

THIS IS PRINT SET

UNIT VARIATIONS		PRINT SET
VAR	TITLE	1
H765-A	120V 50/60 HZ	X
H765-B	240V 50/60 HZ	X

REVISIONS			
REV	CHG. NO.	DATE	
A	H765-3	CN	
B	H765 4	CN	
C	H765 - 6	SL	
D	H765- 7	SL	
E	H765- 8	RK	

USED ON OPTION/MODEL	
BA11-[illegible]	
11/35-S	

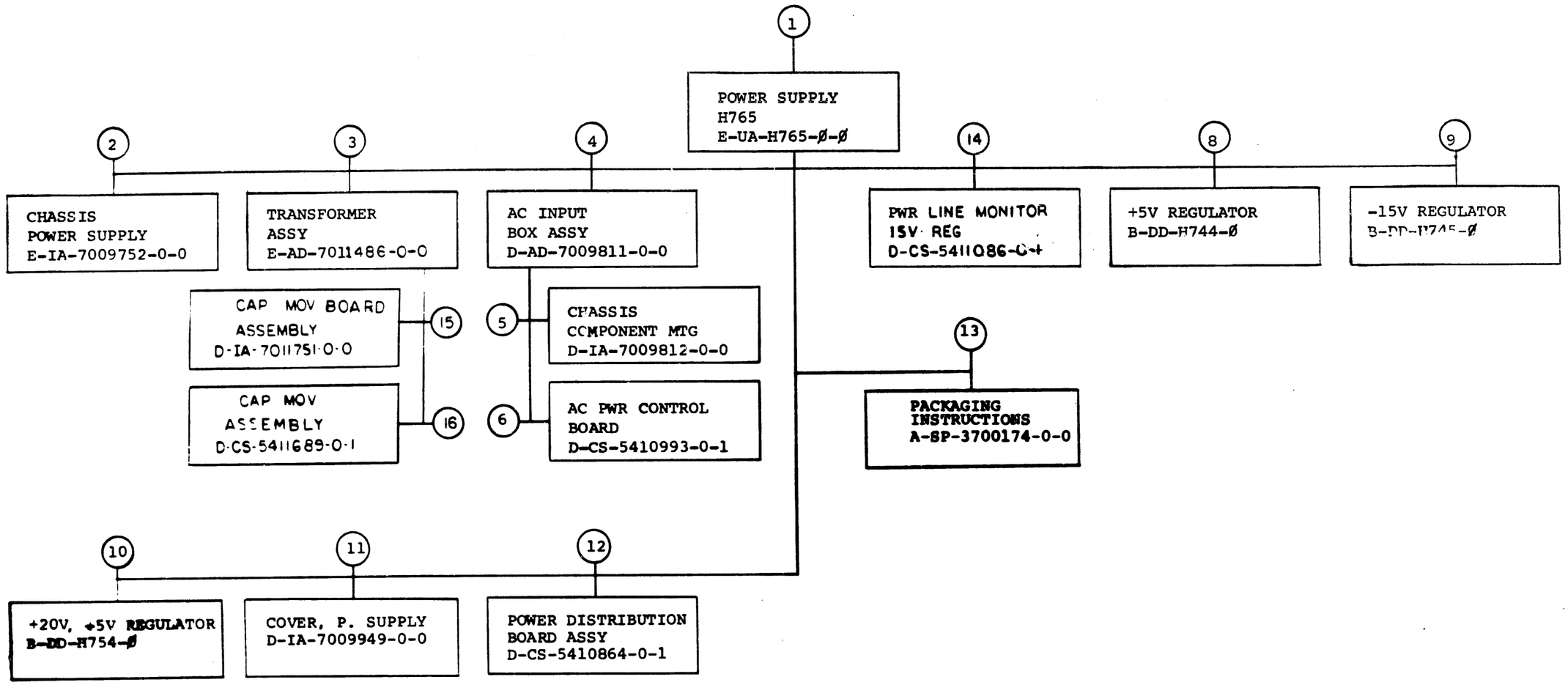
SHEET 1 OF 5

DRN. J. FERGUSON	DATE 6/25/74	TITLE: DRAWING DIRECTORY POWER SUPPLY H765
CHK'D. D. HEALY	DATE 7/3/74	
PROJ ENG. E. Dalton	DATE 9/4/74	
PROD. R.K. Peterson	DATE 9/11/74	
FIELD SERV R. L. Gates	DATE 9/13/74	

SIZE	CODE	NUMBER	REV
B	DD	H765-Ø	E

DIST

DRB 106



TITLE			SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY POWER SUPPLY H765	SHEET 2 OF 5		B	DD	H765-Ø	E

CUSTOMER PRINT SET 1	MFG SET	FIND NO	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			ELECTRICAL				
X		1	E-UA-H765-Ø	H	2	POWER SUPPLY H765	
			A-SP-H765-0-9			H765 POWER SUPPLY ASSEMBLY PROCEDURE	
X		3	E-AD-7011486-0-0	#		TRANSFORMER ASSY	
			A-SP-7010014-0-8	A		TEST PROCEDURE	
			A-CS-7010014-TA-1	A		TESTER C.S.	
			A-UA-7010014-TA-0			TESTER U.A.	
			A-PL-7010014-TA-0	A		TESTER P.L.	
			A-SP-7011486-0-9			TRANSFORMER ASSY PROCEDURE	
X		4	D-AD-7009811-0-0	#	2	AC INPUT BOX ASSY	
			A-SP-7009811-0-8			TEST PROCEDURE	
			A-CS-7009811-TA-1			TESTER C.S.	
			A-UA-7009811-TA-0			TESTER U. A.	
			A-PL-7009811-TA-0			TESTER P.L.	
			A-SP-7009811-0-9			AC INPUT BOX ASSY PROCEDURE	
X		6	D-CS-5410993-0-1	#	1	AC POWER CONTROL BD	
			A-SP-5410993-0-8			TEST PROCEDURE	
			A-CS-5410993-TA-1			TESTER C. S.	
			A-UA-5410993-TA-0			TESTER U.A.	
			A-PL-5410993-TA-0			TESTER P.L.	
C		8	B-DD-H744-0	#	2	DRAWING DIRECTORY H744	
C		9	B-DD-H745-0	#	2	DRAWING DIRECTORY H745	
C		10	B-DD-H754-0	#	3	DRAWING DIRECTORY H754	

CUSTOMER PRINT SET 1	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
			ELECTRICAL				
X		12	D-CS-5410864-0-1	#	3	POWER DIST. BD. ASSY	
			D-IA-5010863-0-0	#	1	ETCHED CIRCUIT BOARD	
			A-SP-5410864-0-8			TEST PROCEDURE	
			A-SP-5410864-0-9			ASSEMBLY PROCEDURE	
X		14	D-CS-5411086-0-1	#	4	PWR LINE MONITOR/15V REG	
			A-SP-11/45-TA-2			TEST PROCEDURE	
			A-SP-5411086-0-3			ENGINEERING SPECIFICATION	
			D-IA-7010138-0-0			HARNESS INTERCONNECTION	
		15	D-IA-7011751-0-0			CAP MOV BOARD ASSY	
		16	D-CS-5411689-0-1			CAP MOV ASSY	

CUSTOMER PRINT SET CODES	
	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
	C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
	S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

TITLE	SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY POWER SUPPLY H765	B	DD	H765-Ø	E

SHEET 3 OF 5

DPB 10A

DEC 16 (325) 1062 2B R972

CUSTOMER PRINT SET	SET	MECHANICAL					
1	MFG.	FIND NO	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
		1	E-UA-H765-Ø-Ø	H	2	POWER SUPPLY H765	
			D-IA-7009950-0-0		1	THROUGH WIRE	
		2	E-IA-7009752-0-0		1	CHASSIS, POWER SUPPLY	
			E-IA-7411682-0-0		1	CHASSIS, POWER SUPPLY	
			D-MD-7411685-0-0		1	SIDE, POWER SUPPLY	
			D-MD-7411684-0-0		1	HOUSING COMP. CHASSIS	
		3	E-AD-7011486-0-0		2	TRANSFORMER ASSY	
			C-MD-7414301-0-0		1	COVER	
		4	D-AD-7009811-0-0		2	AC INPUT BOX ASSY	
			A-DC-7412303-0-0		1	DECAL 115V	
			D-AD-7010131-0-0		1	POWER CORD	
			A-DC-7412380-0-0		1	DECAL 230V	
			D-IA-7010302-0-0		1	POWER CONTROL HARN.	
			D-IA-7010301-0-0		1	POWER JUMPER	
			C-IA-7010300-0-0		1	VARISTOR ASSY	
			A-DC-7409873-0-0		1	DECAL (PLUG NUMBERS)	
		5	D-IA-7009812-0-0	A	1	CHASSIS COMPONENT MTG.	
			D-IA-7411765-0-0		1	PLATE SWITCH	
			D-IA-7411766-0-0	B	1	PLATE COMPONENT MTG.	

CUSTOMER PRINT SET	SET	MECHANICAL				
1	MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO / FILE DATE
		6	D-CS-5410993-0-1		1	AC PWR CONTROL BD.	
			K-CO-5410993-0-4		1	X-Y COORDINATE HOLE LOC.	
			D-AH-5410993-0-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-5410993-0-6		1	MODULE ECO HISTORY	
			5010992		REF	ETCH CIRCUIT BOARD	
		8	B-DD-H744-Ø		2	DRAWING DIRECTORY H744	
		9	B-DD-H745-Ø		2	DRAWING DIRECTORY H745	
		10	B-DD-H754-Ø		3	DRAWING DIRECTORY H754	
		11	D-IA-7009949-0-0		1	COVER, POWER SUPPLY	
			C-MD-7412473-0-0		1	STRIP, CLAMP	

CUSTOMER PRINT SET CODES

X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

TITLE	SHEET	SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY POWER SUPPLY H765	SHEET 4 OF 5	B	DD	H765-Ø	E

MECHANICAL

CUSTOMER PRINT SET 1	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		12	D-CS-5410864-0-1		3	POWER DIST. BD. ASSY	
			C-MD-7412192-0-0		1	SHIELD	
			D-MD-7411704-0-0		1	BRACKET, CONN. MTG.	
			C-IA-9305937-0-0			MATE-N-LOK FIXTURES	
			D-IA-5010863-0-0		1	ETCHED CIRCUIT BD.	
			K-CO-5410864-0-4			X-Y COORDINATE HOLE LOC.	
			D-AH-5410864-0-5		1	ASSY DRILLING HOLE LAYOUT	
			B-MH-5410864-0-6		1	MODULE ECO HISTORY	
			5010863		REF	ETCH CIRCUIT BOARD	
	X	13	A-SP-3700174-0-0	-	2	PACKAGING INSTRUCTIONS	
			A-PS-9905664-0-0	-	2	REGULAR SLOTTED CARTON	
			A-PS-9905665-0-0	-	2	LAMINATED BUILDUP	
		14	D-AH-5411086-0-5		1	ASSY DRILLING HOLE LAYOUT	
			B-MH-5411086-0-6		1	MODULE ECO HISTORY	
		15	D-AD-7011486-0-0		1	ASSEMBLY DRAWING	
		16	D-AH-5411689-0-5		1	ASSY DRILLING HOLE LAYOUT	
			D-MH-5411689-0-6		1	MODULE ECO HISTORY	

CUSTOMER PRINT SET	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE

CUSTOMER PRINT SET CODES

X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
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TITLE: DRAWING DIRECTORY
POWER SUPPLY H765

SHEET 5 OF 5 | SIZE: B | CODE: DD | NUMBER: H765-Ø | REV: E

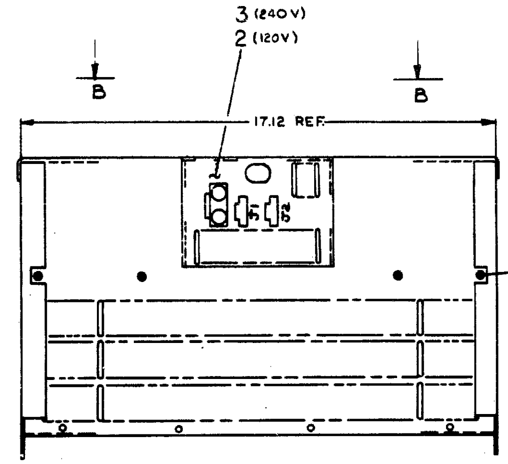
DPB 108

LEGEND

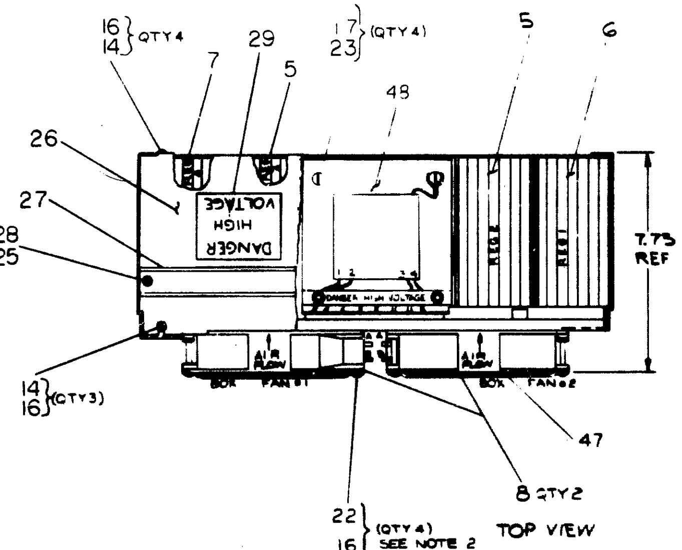
NUMBER	VARIATION
H765-A	120 V 50/60 HZ
H765-B	240 V 50/60 HZ

NOTES

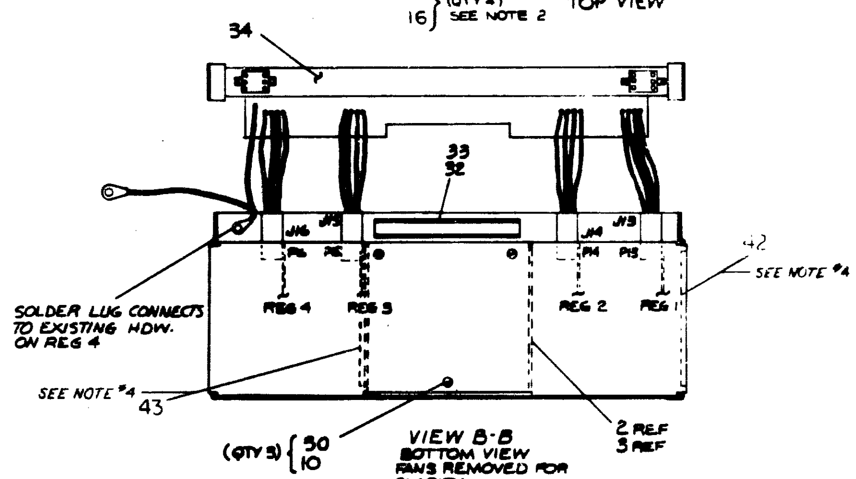
1. SEE TRANSFORMER ASSY E-AD-7010014 SHEET 2 FOR ISOMETRIC ORIENTATION OF CLAMP & PLUG WIRES.
2. TIGHTEN FAN SCREWS TO 10 IN-LBS WITH A TORQUE SCREW DRIVER.
3. ~~USE ITEM #41 IN PLACE OF ITEM #22 WHEN USING ROTRON FANS.~~
4. INSTALL A.B.S VINYL, VIEW B-B ITEM #42 AND #43. CENTER 1/4 INCH FROM BOTTOM AND SIDES ON INSIDE WALL.
5. ~~USE EXTERNAL TOOTH WASHER UNDER MOUNTING SCREW HEAD OF REXO TRANSFORMERS ONLY.~~
6. *GREEN, YEL GROUND WIRE FROM TRANSFORMERS TO BE FASTENED UNDER REGULATOR MOUNTING SCREW.*
7. *IN EARLIER VERSIONS OF THE TRANSFORMER ASSEMBLY A CABLE CLAMP WAS USED IN PLACE OF THE 5 TIE WRAPS TO DRESS THE TRANSFORMER WIRES ALONG THE TRANSFORMER BODY.*



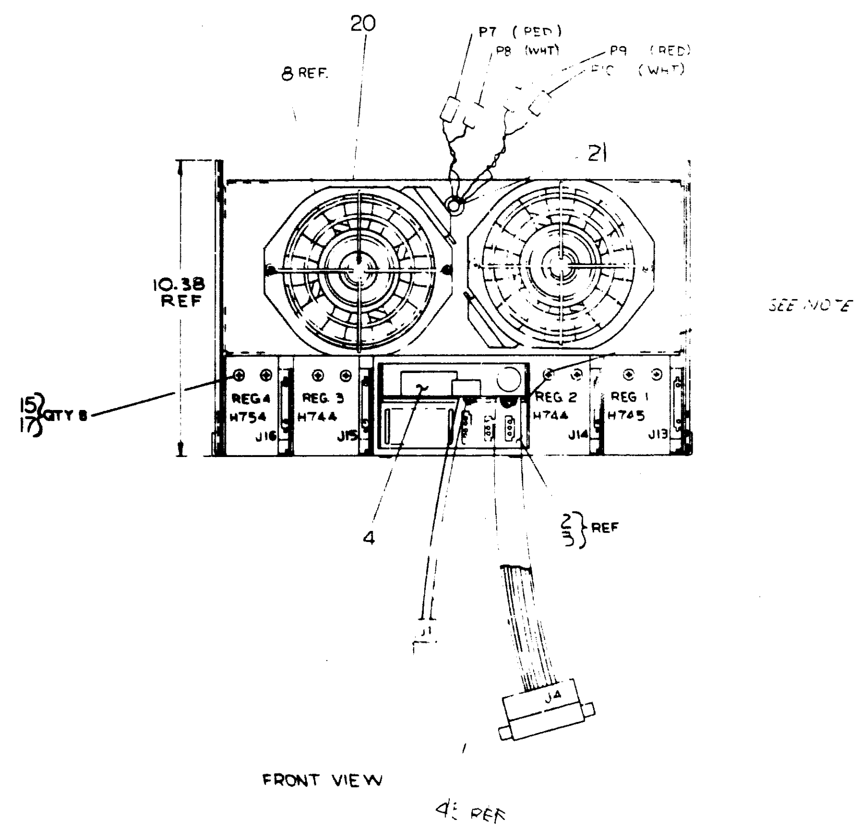
REAR VIEW



TOP VIEW



VIEW B-B
BOTTOM VIEW
FANS REMOVED FOR CLARITY



FRONT VIEW

H765-B QTY.	H765-A QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	1	TRANSFORMER ASSEMBLY E-A...	[illegible]	47
2	2	FAN GUARD		
~~4~~	~~4~~	~~KEPS NUTS #10-32~~	~~9006565~~	~~46~~
	1	HARNESS INTERCONN	D-IA-701...	45
~~REF~~	~~REF~~	~~WASH EXT TOOTH #10~~	~~9007651~~	~~44~~
	1	ABS VINYL 4.75 X 5.5	1210964-03	43
1		ABS VINYL 4.75 X 6	1210964-04	42
~~REF~~	~~REF~~	~~SCR ... #6-32 X .65~~	~~9007818-1~~	~~41~~
REF	REF	TEST PROCEDURE	A-SP-H765-0-1	40
REF	REF	TESTER C.S.	A-CS-H765-TA-1	39
REF	REF	TESTER U.A.	E-UA-H765-TA-1	38
REF	REF	TESTER P.L.	A-PL-H765-TA-0	37
REF	REF	H765 POWER SUPPLY ASSEMBLY PROCEDURE	A-SP-H765-0-9	36
REF	REF	PACKAGING INSTRUCTIONS	A-SP-3700174-0-0	35
1		PWR DISTRIBUTION BD	D-CS-5410864-0-1	34
A/R	A/R	PERMA BOND	9009157	33
10"	10"	GROMMET STRIP	9008291	32
4	4	TIE WRAP 18 W	9007880	31
3	3	WASH. C'SK #6	9008270	30
1	1	STICKER DANGER HIGH VOLTAGE	3610267	29
4	4	WASH. INT TOOTHLOCK #8	9006634	28
1	1	TROUGH, WIRE	D-IA-7002350-0-0	27
1	1	COVER, POWER SUPPLY	D-IA-7009449-0-0	26
4	4	SCR PH HD TRUSS #8-32 X .62	9006040-3	25
~~4~~	~~4~~	~~KEPS NUTS #10-32~~	~~9006565~~	~~24~~
4	4	SCR PH HD TRUSS 10-32 X .50	9006073-3	23
4	4	SCR PH HD TRUSS 6-32 X .75	9006031-3	22
1	1	GROMMET .50 I D	9007016	21
1	1	CHASSIS POWER SUPPLY	E-IA-7009752-0-0	20
~~REF~~	~~REF~~	~~CLAMP CABLE~~	~~[illegible]~~	~~19~~
~~2~~	~~2~~	~~[illegible]~~	~~9006013-2~~	~~18~~
12	12	WASH INT TOOTH #10	9006635	17
13	13	WASH INT TOOTH #6	9006633	16
8	8	SCR PH HD TRUSS 10-32 X .5	9008007-3	15
11	11	SCR PH HD TRUSS 6-32 X .25	9006020-3	14
~~1~~	~~1~~	~~DECAL NEMA~~	~~[illegible]~~	~~13~~
~~1~~	~~1~~	~~[illegible]~~	~~[illegible]~~	~~12~~
~~2~~	~~2~~	~~[illegible]~~	~~[illegible]~~	~~11~~
3	3	SCR, PHL FLT HD 6-32 X .31	9008404-2	10
~~1~~	~~1~~	~~[illegible] CLIP~~	~~[illegible]~~	~~9~~
2	2	FAN, 115 V AC 50/60 HZ	1211714	8
1	1	+20V REGULATOR (H754)	B-DD-H754-Ø	7
1	1	-15 V REGULATOR (H745)	B-DD-H745-Ø	6
2	2	+5 V REGULATOR (H744)	B-DD-H744-Ø	5
1	1	PWR. BD 11/45 (+15V REG)	E-IA-5411086	4
1	—	AC INPUT BOX ASSY 230V	D-AD-7009811-2-0	3
—	1	AC INPUT BOX ASSY 115V	D-AD-7009811-1-0	2
~~1~~	~~1~~	~~TRANSFORMER ASSY~~	~~[illegible]~~	~~1~~

PARTS LIST

FIRST USED ON OPTION/MODEL: BA11-K

DIMENSIONAL TOLERANCE

MATERIAL: SEE PARTS LIST

B-DD-H765-0

digital

TITLE: POWER SUPPLY, H765

E UA H765-Ø-Ø

CONNECTION TABLE		
FROM CONNECTION	TO CONNECTION	SIGNALS
P2 FROM TRANS. ASSY	J2 FROM +15V REG.	28 VAC
J16 FROM PWR. DIST. BD.	P16 LOCATED ON REG.#4 (H754)	GND, -5V, +20V 28 VAC
J15 FROM PWR. DIST. BD	P15 LOCATED ON REG.#3 (H744)	GND +5V, 28VAC
J14 FROM PWR DIST. BD	P14 LOCATED ON REG.#2 (H744)	GND, +5V, 28VAC
J13 FROM PWR DIST. BD	P13 LOCATED ON REG.#1 (H745)	GND, +15V, -15V -28 VAC
GND LUG LOCATED ON PWR. DIST. BD.	REG. #4 MOUNTING SCREW	GROUND CHASSIS
P1 FROM TRANS ASSY	J1 LOCATED ON PWR. DIST. BD	28 VAC

CONNECTION TABLE		
FROM CONNECTION	TO CONNECTION	SIGNALS
P4 FROM +15V REG.	J2 LOCATED ON PWR DIST BD	-15 V, LTC L, AC LO L, DC LO L, GND
P5 FROM TRANS. ASSY	J5 LOCATED ON AC INPUT BOX	120/240 VAC
P7 (RED)	FAN #1-A	120 VAC - HOT
P8 (WHT)	FAN #1-B	120 VAC - NEUTRAL
P9 (RED)	FAN #2-A	120 VAC - HOT
P10 (WHT)	FAN #2-B	120 VAC - NEUTRAL
+1 #14 GRN/YEL WIRE	SEE NOTE 6	CHASSIS GROUND

240 V
7009811-2
AC INPUT BOX

FASTON TABS LOCATED ON 5410993

120 V
7009811-1
AC INPUT BOX

7011751
CAP MOV BOARD ASSY

TRANS ASSY
7011486

5411639
CAP MOV ASSEMBLY

AC POWER CONTROL
5410993

REMOTE POWER CONTROL
1-3 : ON
8-3 : OFF

CPU CONSOLE POWER SWITCH
1-3 ON

POWER DISTRIBUTION BOARD
5410864

REG #4 H754

REG #3 H744

REG #2 H744

REG #1 H745

7C10138 HARNESS

+15V DC REGULATOR 5411086

11/05-S CONSOLE PWR.

COMMON SIGNAL NAMES FOR 6 PIN AND 15-PIN MATE-N-LOKS ON POWER DISTRIBUTION BOARD

6-PIN	15 PIN
1 - GND	1 - +5V
2 - LTC L	2 - +15V
3 - DC LO L	3 - +20V
4 - AC LO L	4 - +5V
5 - SPARE 4	5 - GND
6 - SPARE 5	6 - SPARE 1
	7 - GND
	8 - GND
	9 - GND
	10 - SPARE 2
	11 - GND
	12 - SPARE 3
	13 - -15V
	14 - -5V
	15 - SPARE 3

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		NUMBER	REV.
POWER SUPPLY H765	E UA	H765-0-0	J
SCALE	SHEET 2 OF 2	SIZE	

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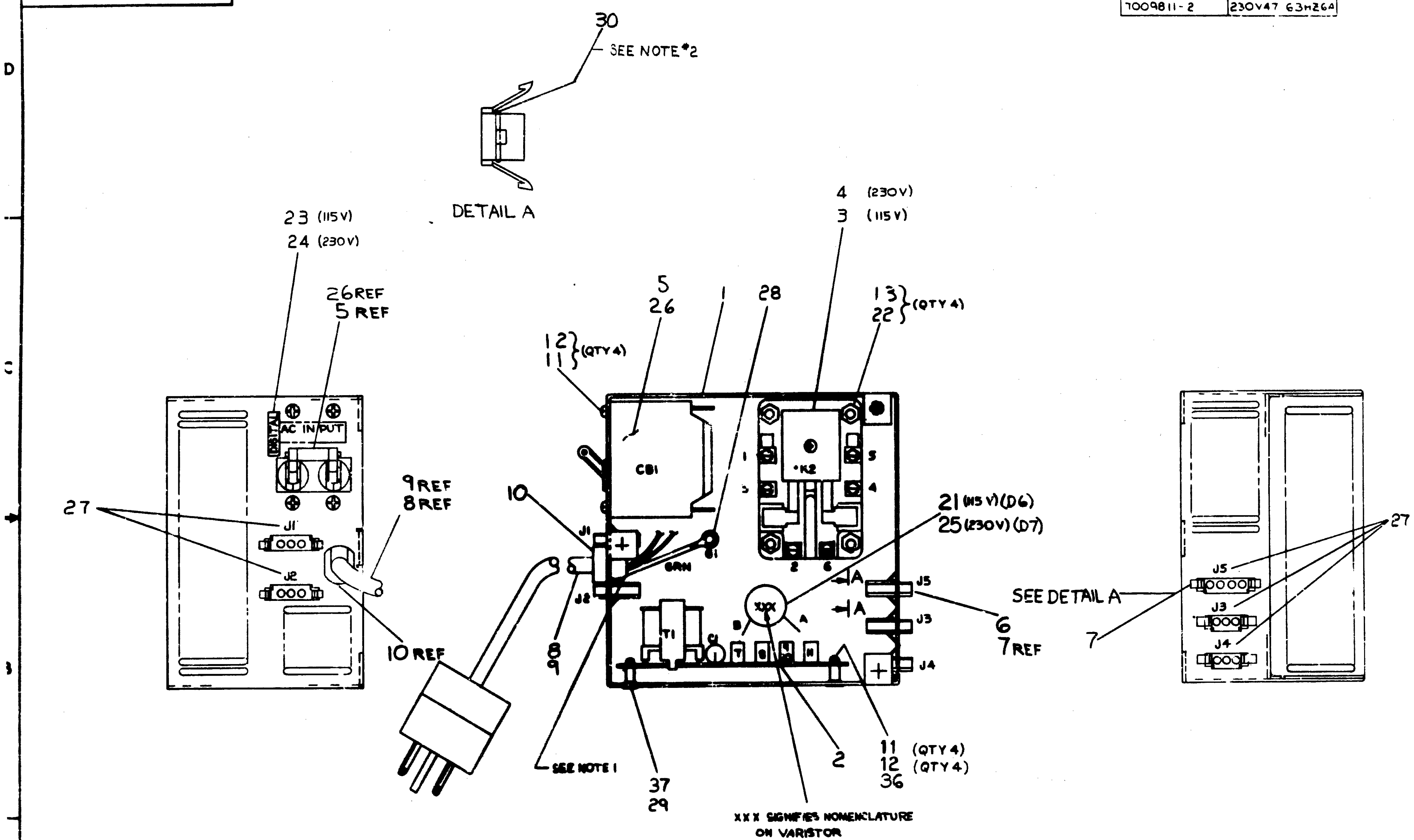
LEGEND	
NUMBER	VARIATION
7009811-1	115V 47-63HZ 12A
7009811-2	230V 47-63HZ 6A

NOTES:
1. LEAVE .5 IN. ± 2 IN. OF OUTER INSULATION OF LINE CORD INSIDE BOX.
2. USE O-RINGS (ITEM 30) ONLY AS REQUIRED TO KEEP MATE-N-LOCK CONNECTORS SECURED INTO SHEET METAL.



7009811-2	7009811-1	DESCRIPTION	PART NO.	ITEM NO.
4	4	SCR. PH. FL HD. 6-32X3/16	9008020-02	37
4	4	WASHER, FLAT	9006653	36
REF	REF	A.C. INPUT BOX ASSEMBLY PROCEDURE	A-SP-7009811-0-9	35
REF	REF	TESTER PARTS LIST	A-PL-7009811-TA-0	34
REF	REF	TESTER TEST PROCEDURE	A-SP-7009811-0-8	33
REF	REF	TESTER U.A.	A-UA-7009811-0-8	32
REF	REF	TESTER C.S.	A-CS-7009811-0-8	31
5	5	O-RING .62	9009640	30
4	4	SPACER 6-32X 3/8"	9006844	29
1	1	NUT, KEPS #8-32	9006563	28
1	1	DECAL	A-DC-7409873-0-0	27
1	–	CIRCUIT BRK 10A	1210191-0	26
1	–	VARISTOR (D7) ASSY	C-IA-7010300-2-0	25
1	–	DECAL 230V 47-63 HZ 6A	A-DC-7412380-0-0	24
–	1	DECAL 115V 47-63 HZ 12A	A-DC-7412303-0-0	23
4	4	SCR PH FL HD #6-32 X.50	9006024-2	22
–	1	VARISTOR (D6) ASSY	C-IA-7010300-1-0	21
2	–	POWER JUMPER (BLK)	D-IA-7010301-2-0	20
1	1	POWER JUMPER (BLK)	D-IA-7010301-3-0	19
-	2	POWER JUMPER (BLK)	D-IA-7010301-4-0	18
-	1	POWER JUMPER (WHT)	D-IA-7010301-5-0	17
2	–	POWER JUMPER (WHT)	D-IA-7010301-6-0	16
1	1	POWER JUMPER (BRN)	D-IA-7010301-7-0	15
1	1	POWER JUMPER (BLK)	D-IA-7010301-1-0	14
4	4	NUT KEPS #6-32	9008186	13
8	8	WASHER, INT TOOTH #6	9006633	12
8	8	SCR PHL PAN HD #6-32X.25	9006020-1	11
1	1	STRAIN RELIEF	9008509	10
1	–	POWER CORD 230V	D-AD-7010131-2-0	9
–	1	POWER CORD 115V	D-AD-7010131-1-0	8
1	–	PWR CONTROL HARN. 230V	D-IA-7010302-2-0	7
–	1	PWR CONTROL HARN 110V	D-IA-7010302-1-0	6
–	1	CIRCUIT BREAK 20A	1210191-06	5
1	–	RELAY 230V	1211222-02	4
–	1	RELAY 115V	1211222-01	3
1	1	AC PWR CONTR BOARD	D-CS-5410993-0-1	2
1	1	CHASSIS, COMP. MTG.	D-IA-7009812-0-0	1

PARTS LIST

REV.	CHANGE NO.	
A	H765-00003	E. CZERNIAWSKI 12-9-74, C. NAVEDONSKY
B	7009811-00001	G. Vergilio 1-10-75, R. WOLF 1-10-75
C	7009811-00002	E. CZERNIAWSKI 2-6-75, R. WOLF 2-10-75

FIRST USED ON OPTION/MODEL: BA11-K

DIMENSIONAL TOLERANCE — DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED

THIRD ANGLE PROJECTION

MATERIAL: SEE PARTS LIST

FINISH

DRN. J. Ferguson, DATE 6-16-74
CHKD. D. Mann, DATE 6-27-74
ENG. Robert Wolf, DATE 7-11-74
PROD. ENG. Robert Wolf, DATE 9-11-74
PROD., DATE

NEXT HIGHER ASSY. E-UA-H765-0-0

SCALE NONE

SHEET 1 OF 2

digital

TITLE: AC INPUT BOX ASS'Y

SIZE D, CODE AD, NUMBER 7009811-0-0, REV. C

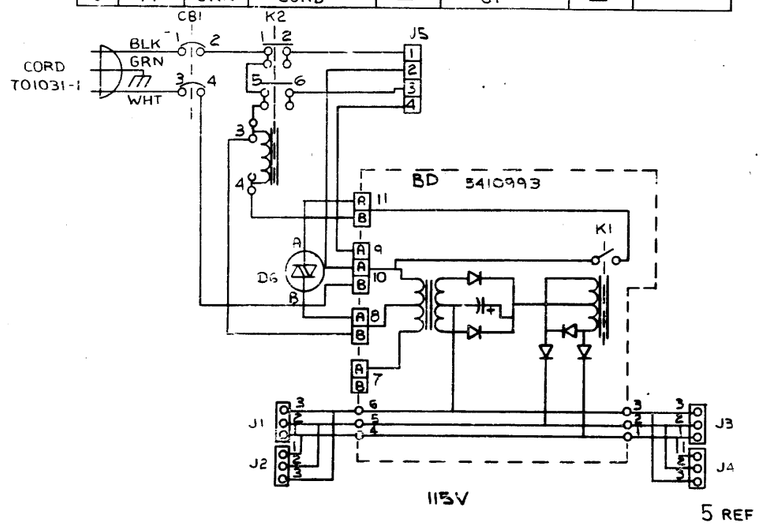
D AD 7009811-0-0 C

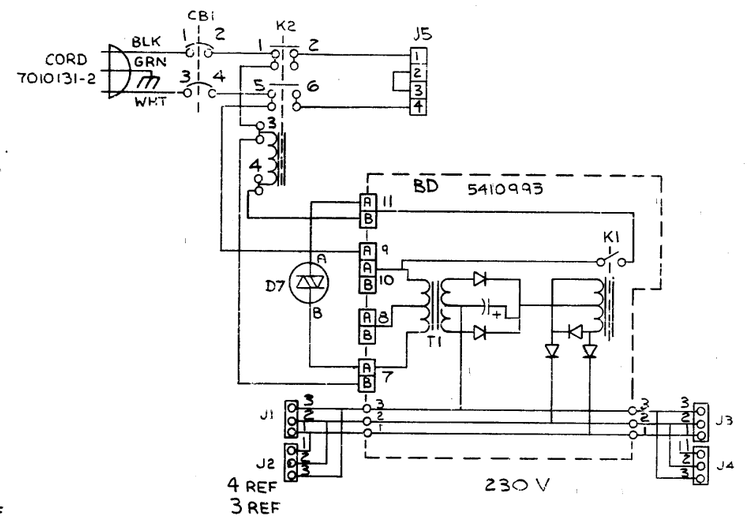
WIRE TABLE (115V)

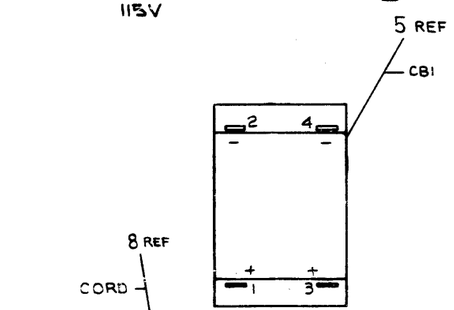
ITEM NO	DESCRIPTION AWG	COLOR	CONNECTION FROM	WITH	CONNECTION TO	WITH	REMARKS
8	14	BLK	CORD	—	CB1-1 (+)	—	
8		WHT	CORD	—	CB1-3 (+)	—	
14		BLK	CB1-2 (-)	—	K2-1	—	
18		BLK	K2-5	—		—	
18		BLK		—	K2-3	—	
19		BLK	BD-8B	—		—	
17		WHT	CB1-4 (-)	—	BD-10B	—	
6		WHT	BD-10A	—	J5-2 (REF)	—	
6		WHT	BD-9A	—	J5-4 (REF)	—	
15		BRN	K2-4	—	BD-11B	—	
6		BLK	K2-6	—	J5-3 (REF)	—	
6	14	BLK	K2-2	—	J5-1 (REF)	—	
21	22	RED	D6-A	—	BD-11A	—	
21	22	RED	D6-B	—	BD-8A	—	
8	14	GRN	CORD	—	G1	—	

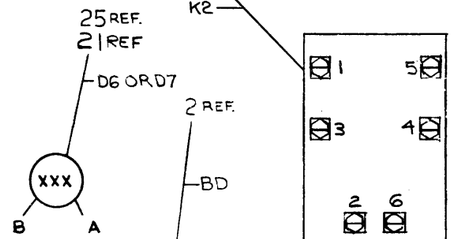
WIRE TABLE (230V)

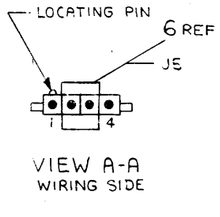
ITEM NO.	DESCRIPTION AWG.	COLOR	CONNECTION FROM	WITH	CONNECTION TO	WITH	REMARKS
8	14	BLK	CORD	—	CB1-1 (+)	—	
8		WHT	CORD	—	CB1-3 (+)	—	
14		BLK	CB1-2	—	K2-1	—	
20		BLK	K2-3	—		—	
19		BLK		—	BD-7B	—	
16		WHT	K2-5	—	CB1-4 (-)	—	
16		WHT		—	BD-9A	—	
15		BRN	K2-4	—	BD-11B	—	
7		BLK	K2-2	—	J5-1 (REF)	—	
7		BLK	J5-2 (REF)	—	J5-3 (REF)	—	
7	14	WHT	K2-6	—	J5-4 (REF)	—	
25	22	RED	D7-A	—	BD-11A	—	
25	22	RED	D7-B	—	BD-7A	—	
8	14	GRN	CORD	—	G1	—	









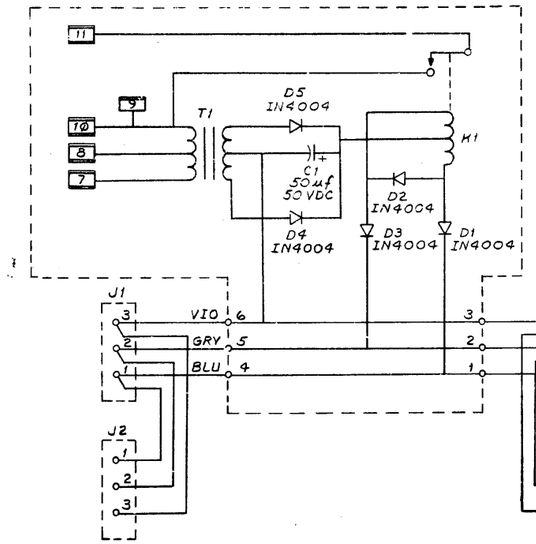


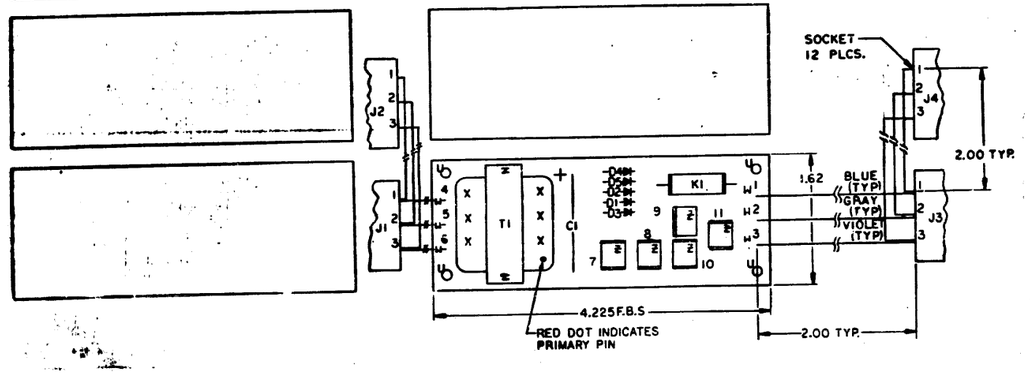
REVISIONS		
SYM	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
AC INPUT BOX ASS'Y	D	AD	7009811-0-0	C
SCALE NONE SHEET 2 OF 2	DIST.			

DAU 7009811-0-0

NOTES:





IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

QT	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5410993-J-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-JH-5410993-0-5	2
REF		MODULE ECO HISTORY	B-MH-5410993-J-6	3
1		ETCHED CIRCUIT BOARD	5010992	4
1	C1	CAP. 50 uf 50 VDC	1020080	5
5	D1 THRU D5	DIODE IN4004	1105796	6
1	K1	REED RELAY	1211179	7
4	J1 THRU J4	CONNECTOR, MATE-N-LOCK, 3 SKT	1209350-03	8
12		PIN, MATE-N-LOCK SKT, FEMALE	1209379-00	9
1	T1	TRANSFORMER	1611178	10
4	7, 8, 10, 11	FASTON TAB, DUEL	9007118	11
1	9	FASTON TAB, SINGLE	9007219	12
5		EYELET	9009000	13
				14
A/R		WIRE, #18 AWG, BLUE	9107360-06	15
A/R		WIRE, #18 AWG, VIOLET	9107360-17	16
A/R		WIRE, #18 AWG, GRAY	9107360-38	17

PARTS LIST

FIRST USED ON OPTION MODEL: H765

ETCH BOARD REV. C

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

REVISIONS	CHNG.	CHANGE NO.	REV.
ORIGINATED 5410993-00001			B
			A

B. KENNEDY 1-23-75

DRN. J. Vincent 2-20-74
CHK. Raymond 2/20/74
ENGR. Robert Wolf 2/19/74
PROJ. ENGR. Robert Wolf 2/19/74
PROD. ENGR. Dick Peterson 2/21/74
NEXT HIGHER ASSY D-AD-7009811-0-0
SCALE NONE
SHEET 1 OF 1

digital

TITLE: AC POWER CONTROL BOARD

SIZE D | CODE CS | NUMBER 5410993-0-1 | REV. B

DIST.

SIZE D | CODE CS | NUMBER 5410993-0-1 | REV. B

DRAWING DIRECTORY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE
DRAWING DIRECTORY	B-DD-H744-Ø
CIRCUIT SCHEMATIC	D-CS-H744-Ø-1
UNIT ASS'Y	E-UA-H744-0-0

MFG. SET

	SEQUENCE
TEST PROCEDURE	A-SP-H744-Ø-3
MFG. SPE	A-SP-H744-Ø-2
PACKAGING INSTRUCTIONS	A-PI-3700074-0-0

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE: H744-1
H744	+5V REGULATOR	X

REVISIONS

REV	CHG. NO.	DATE
A	00005	10-?-72
B	00007	4-11-74
C	00008	4-?-74
D	00009	10/14/74
E	00010	1-7-75
F	00011	
H	00012	
J	00013	7-16-75
K	00014	

Names: J. W. LAWRENCE, R. WOLF, D. MARTEL, D. MARTEL, D. MARTEL, A. BARON

DRB 106

DEC 16-(325)-1062-1-N871

USED ON OPTION/MODEL	
11/45	

DRN. D FONTAINE	DATE 2-4-72
CHK'D. D FONTAINE	DATE 2-4-72
PROJ ENG.	DATE 2-25-72
PROD	DATE 2-24-72
FIELD SERV.	DATE 2-25-72
SHEET 1 OF 2	

TITLE: +5V REGULATOR

SIZE	CODE	NUMBER	REV
B	DD	H744-Ø	K

DIST

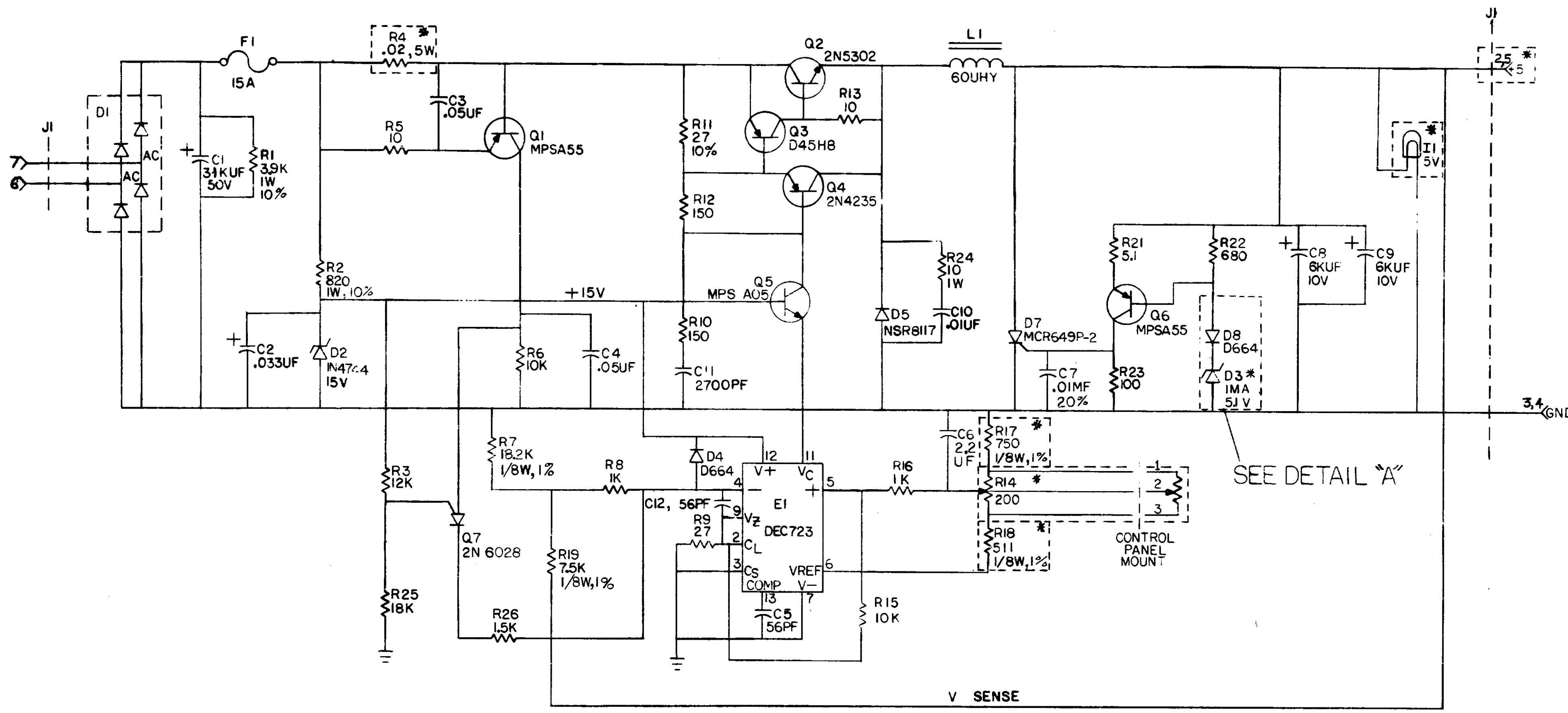
ELECTRICAL

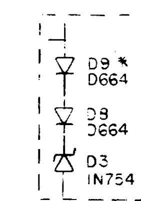
CUSTOMER PRINT SET H744-1	SET MFG	FIND NO	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X		1	D-CS-H744-Ø-1	L	1	CIRCUIT SCHEMATIC	H744
	X		A-SP-H744-Ø-3			TEST PROCEDURE	H744
	X		A-SP-H744-Ø-8			MFG. SPEC	H744

MECHANICAL

CUSTOMER PRINT SET H744-1	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO
X		1	E-UA-H744-Ø-Ø	LL	1	UNIT ASSY	H744
			D-PS-1210737-0-0		1	HEAT SINK	H744
			D-IA-5309756-0-0		1	REGULATOR BRKT	H744
			C-IA-5309760-0-0		1	COMPONENT COVER	H744
			C-MD-5309759-0-0		1	CAPACITOR STRAP	H744
		2	A-PI-3700074-0-0	-	2	PACKAGING INSTRUCTION	H744
			A-PS-9905211-0-0	-	2	OUTER CARTON	
			A-PS-9905212-C-0	-	2	INNER PACKAGE	
			C-IA-7412388-0			2.5 CAP -CLDER	H744

TITLE		SIZE	CODE	NUMBER	REV
+60V REGULATOR	SHEET 2 OF 2	B	DD	H744-Ø	K





DETAIL A
FOR YA VARIATION ONLY

[*] FOR YA VARIATION COMPONENT VALUES ARE AS FOLLOWS:
R4 - .06 5W
R14 - 1K 10 TURN
R17 - 300 1/8W 1%
R18 - 150 1/4W 5%
D3 - IN754
I1 - 15V
J1-2,5 - +2.0-8.0V

* D9 - D664 ADDED FOR YA VARIATION ONLY

UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV F H

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
IN964A	SAME	MPSA55	
D664	IN3606	2N5302	
MCR649P-2		D45H8	
IN751A	SAME	MPSA05	
IN4744	SAME		
NSR8117			
2N6028			

REVISIONS

CHANGE NO.	REV
H744-00014	U
H744-00013	T
H744-00012	S
H744-00011	R
H744-00010	P
H744-00009	N
	M
	L
H744-00006	
H744-00005	K
H744-00004	J
H744-00003	H
H744-00002	F
H744-00001	E

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

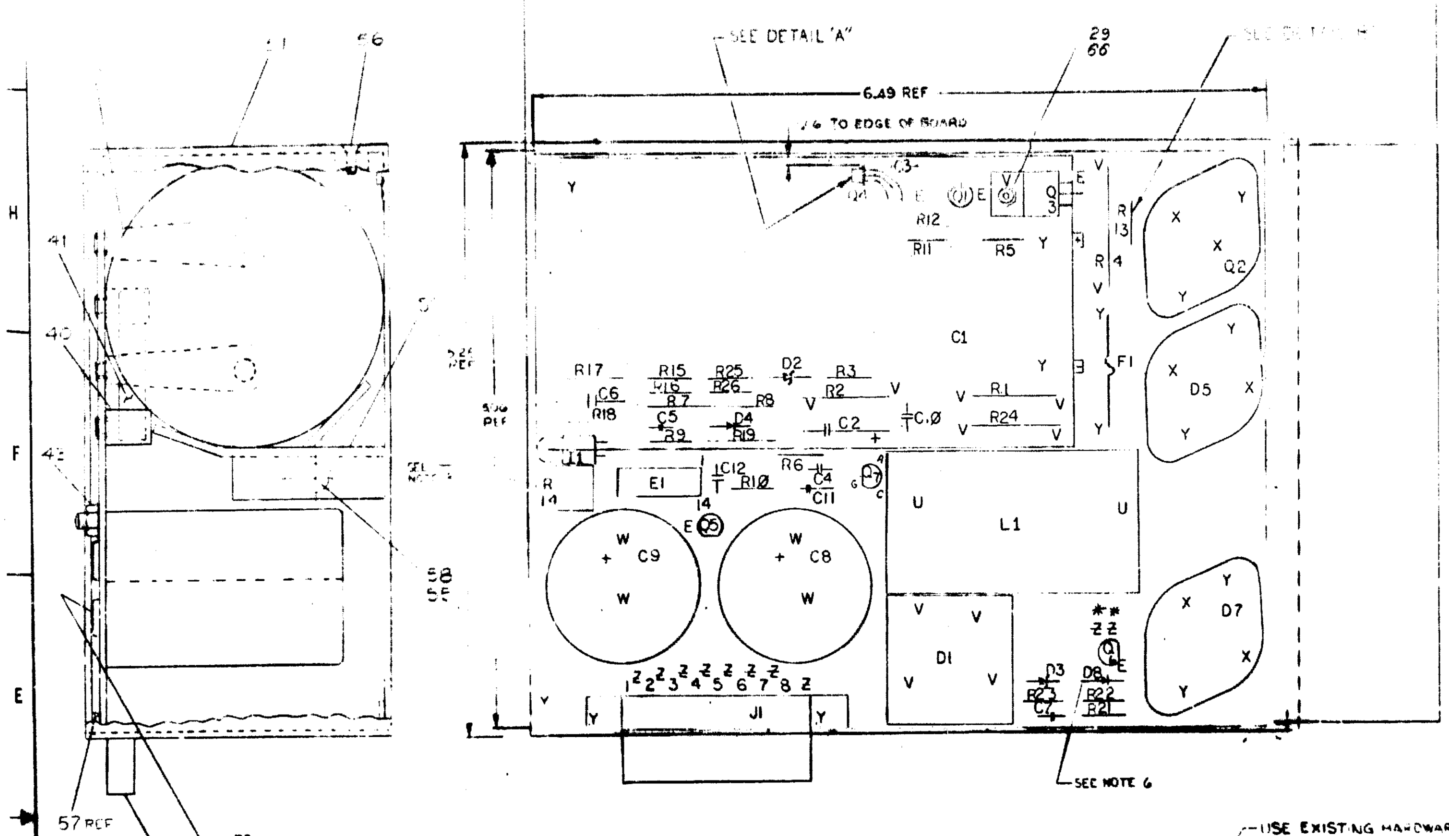
TITLE: 5V REGULATOR

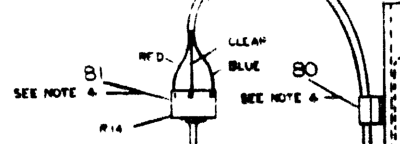
NEXT HIGHER ASSY

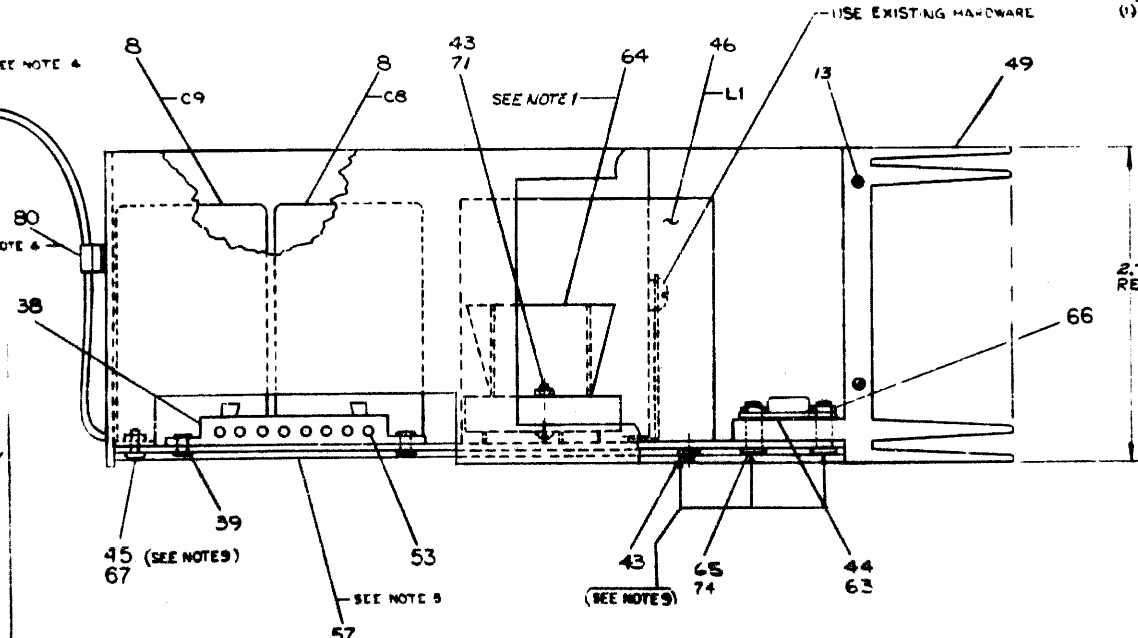
SIZE D CODE CS NUMBER H744-0-1 REV U

SCALE
SHEET 1 OF 1

DEC FORM NO. DRD-135

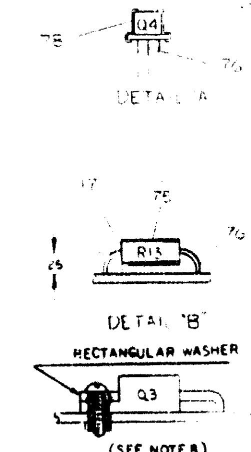






NOTES:

3. R14-200Ω VARIABLE IN THIS LOCATION DELETED ONLY FOR YA VARIATION.
4. ITEMS #79,80,81 ADDED ONLY FOR YA VARIATION.
5. ITEM #57A ADDED ONLY FOR YA VARIATION.
6. RELOCATING D8 AND ADDITION OF D9 ONLY FOR YA VARIATION.
7. USE D9 IN YA VARIATION ONLY.



NOTE 8:
(1) Q3 SCREW HEAD SHOULD BE ON TOP OF FLAT RECTANGULAR WASHER AS SHOWN. APPLY 6 INCH LBS. OF TORQUE WHEN SECURING Q3 TO CKT. BOARD BEFORE SOLDERING.

NOTE 9: TORQUE APPLICATION
(1) APPLY 12 INCH LBS. OF TORQUE TO ALL #4 HARDWARE EXCEPT Q3.
(2) APPLY 16 INCH LBS. OF TORQUE TO ALL #6 AND #10 HARDWARE.
(3) ALL HARDWARE TO BE TORQUED BEFORE SOLDERING.

APPLY ITEM #63 (COMPOUND) BETWEEN TRANSISTORS, DIODES (D5, D7) AND ITEM #44 (WASHER) ALSO BETWEEN ITEM #44 (WASHER) AND HEAT SINK (ITEM # ALSO APPLY ITEM #63 (COMPOUND) BETWEEN ITEM # (DIODE BRIDGE) AND ITEM #64 (HEAT SINK BRIDGE)

QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM
		R2#	RES 680 1/4W 5%	[illegible]	
1			[illegible]	[illegible]	
1	1		[illegible] PAN HD #6-32 × 5/16 LG	[illegible]	
	Ø	Z1	[illegible] LAMP	[illegible]	
4	4		LOCKWASHER #10 INT	[illegible]	
A/R	A/R		[illegible] CEMENT	[illegible]	
A/R	A/R		[illegible]	[illegible]	
A/R	A/R		[illegible]	[illegible]	
1	1	Q4	TRANSISTOR 2N4231	[illegible]	
A/R	A/R		[illegible] SLEEVING	[illegible]	
1	Ø	12 IN	WIRE, MICRODOT	[illegible]	
1	Ø		CLAMP, CABLE	[illegible]	
1	Ø	R14	POT, 10 TURN, 1KΩ	[illegible]	81
1	Ø	R1	RES, 300Ω 1/4W 5%	[illegible]	82
1	Ø	R18	RES, 150Ω 1/4W 5%	1300250	83
1	Ø	R4	RES, .06Ω 5W 3%	[illegible]	84
1	Ø	D3	DIODE ZENER IN754	1109991	85

QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM
	2		WASHER #4	9006672	
7	7		[illegible]	9006557	66
6	6		SCR [illegible] #4-40 [illegible]	9008033-1	65
1	1		HEAT SINK BRIDGE	1210907	64
A/R	A/R		COMPOUND THERMAL JOINT	9008268	63
		R26	RESISTOR 15K 1/4W 5%	1300391	62
	1	R25	RESISTOR 7.5K [illegible]	[illegible]	61
1	1	R5	RESISTOR 12K 1/4W 5%	1300488	60
1	1	Q7	TRANSISTOR, UNIJUNCTION 2N6028	1510877	57
	1		SCR [illegible] #6-32 1/4 LG	9006020-1	58
2			COVER	[illegible]-5309760-0	57
1	1		[illegible] FLT HD #6-32, 3/16 LG	9008020-2	56
	1		[illegible] #6	[illegible]	55
4	4		SCR [illegible] FLT HD #4-40 × 1/4 LG	[illegible]	54
			[illegible] FEMALE	1209456	53
2	2		STRAP, CAPACITOR	C-MD-5309759-0	52
1	1		BRACKET, REGULATOR	D-IA-5309756-0	51
1			HOLDER, CAPACITOR 2.5	C-IA-[illegible]	50
1			HEAT SINK REGULATOR	D-PS-[illegible]	49
2	2	C3, C12	CAP 56 PF	1000012	48
1	1	R24	RESISTOR 10 1W	1300171	47
1	1	L1	REACTOR 60 μHY MM14347	1610850	46
2	2		SCR, PHL PAN HD #4-40 1/4 LG	9008301-1	45
3	3		WASHER, INSULATOR	9006721	44
3	3		NUT KEPS #6-32	9008185	43
4	4		SCR #10-32 X 3/8 SLOTTED PAN HD	3009669-01	42
1	1	F1	FUSE 15 AMP	9007226	41
2	2		FUSE CLIP	9007203	40
6	6		EYELET 25-4-5	900[illegible]00	39
1	1	J1	MATE N LOK CONN, 8 PIN	1209340	38
1	1	E1	INTEGRATED CIRCUIT DEC 723C	1910415	37
1	1	Q5	TRANSISTOR A05	1510705	36
1	1	Q3	TRANSISTOR D45H8	1510708-1	35
2	2	Q1, Q6	TRANSISTOR MPSA55 MOT	1510706	34
1	1	Q2	TRANSISTOR 2N5302	1510196	33
Ø	1	R14	RES VARIABLE 200	[illegible]	32
1	1	R21	RES 5.1 1/4W 5%	1309422	31
1	1	R23	RES 100 1/4W 5%	1300229	30
1	1		SCR [illegible]	9006011-1	29
1	1	R11	RES 27 1/4W 10%	1301420	28
Ø	1	R17	RES 750 1/8W, 1%	1308955	27
1	1	R9	RES 27 1/4W 5%	1301522	26
1	1	R7	RES 18.2K 1/8W, 1%	[illegible]	25
2	2	R8, R16	RES 1K 1/4W 5%	1300365	24
Ø	1	R18	RES 511 1/8W 1%	1302411	23
1	1	R25	RES 18K 1/4W 5%	1302465	22
2	2	R6, R15	RES 10K 1/4W 5%	1300479	21
Ø	1	R4	RES .02 5W 3%	1310876	20
1	1	R2	RES 820 1W 10%	1300358	19
1	1	R1	RES 3.9K 1W 10%	1302927	18
2	2	R3, R13	RES 10 1/4W 5%	1301317	17
2	2	R12, R10	RES 150 1/4W 5%	1300250	16
Ø	1	D3	DIODE ZENER 1 MA. 5.1V	1110925	15
1	1	D7	SCR MCR 649P-2	1109465	14
4	4		SCR, PFH #4 X 5/16 LG	9009142	13
1	1	D5	DIODE PWR MSR 8117	1110715	12
3	2	D4, D8, D9*	DIODE PWR D664	1100114	11
1	1	D2	DIODE ZENER IN4744	1105648	10
1	1	D1	DIODE BRIDGE	1110714	9
2	2	C8, C9	CAP 6KMF 10V	1010704	8
1	1	C1	CAP 91KMF 50V	1010858	7
2	2	C4, C5	CAP [illegible] 25V	1001774	6
1	1	C2	CAP .033 MF 100V 10%	1000050	5
1	1	C11	CAP 2700PF 100V 5% DM	1001987	4
2	2	C7, C10	CAP .01 MF 100V 20% DISC	1001910	3
1	1	C6	CAP 2.2 UF, 20V, 10%	1002627	2
1	1		ETCHED CIRCUIT BOARD	5008[illegible]	1
			ASSY/DRILLING HOLE LAYOUT	D-AH-[illegible]-0-5	
			X-Y COORDINATE HOLE LOCATION	[illegible]	REF
			MODULE ECO HISTORY	[illegible]	REF
			CIRCUIT SCHEMATIC	[illegible]	REF

QTY	QTY	REF DESIGNATION	DESIGNATION	PART NO.	
6	6		FLAT WASHER #4	9006655	

FIRST USED ON OPTION D-UA-H742A-0-0

D664 IN3606
IN4744

MA 723C 7 12

DIGITAL EQUIPMENT CORPORATION

5V REGULATOR

H744

DRAWING DIRECTORY

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE	
DRAWING DIRECTORY		B-DD-H745-Ø
CIRCUIT SCHEMATIC		D-CS-H745-Ø-1
UNIT ASS'Y		E-UA-H745-Ø-Ø

MFG. SET

	SEQUENCE	
TEST PROCEDURE		A-SP-11/45 TA 2
MFG. SPEC.		A-SP-H745-Ø 8
PACKAGING INSTRUCTION		A-PI-3700074-0-0

UNIT VARIATIONS

VAR	TITLE	PRINT SET H745-1			
H745	-15V REGULATOR	X			

REVISIONS		
REV	K	
CHG. NO.	H745-16	
DATE		

USED ON OPTION/MODEL	
11/45	
SHEET 1	OF 2

		DATE
DRN.	D. FONTAINE	2-7-72
CHK'D.	J GAUDETTE	2-17-72
PROJ ENG.	G. POTTER	2 25 72
PROD.	A. HUSCH	2-25 72
FIELD SERV.	A. ZINS	2 25 72

TITLE -15V REGULATOR

SIZE	CODE	NUMBER	REV
B	DD	H745 Ø	K

DIST

DRB 106

DEC 18-(1380)-1045-16-R072

ELECTRICAL

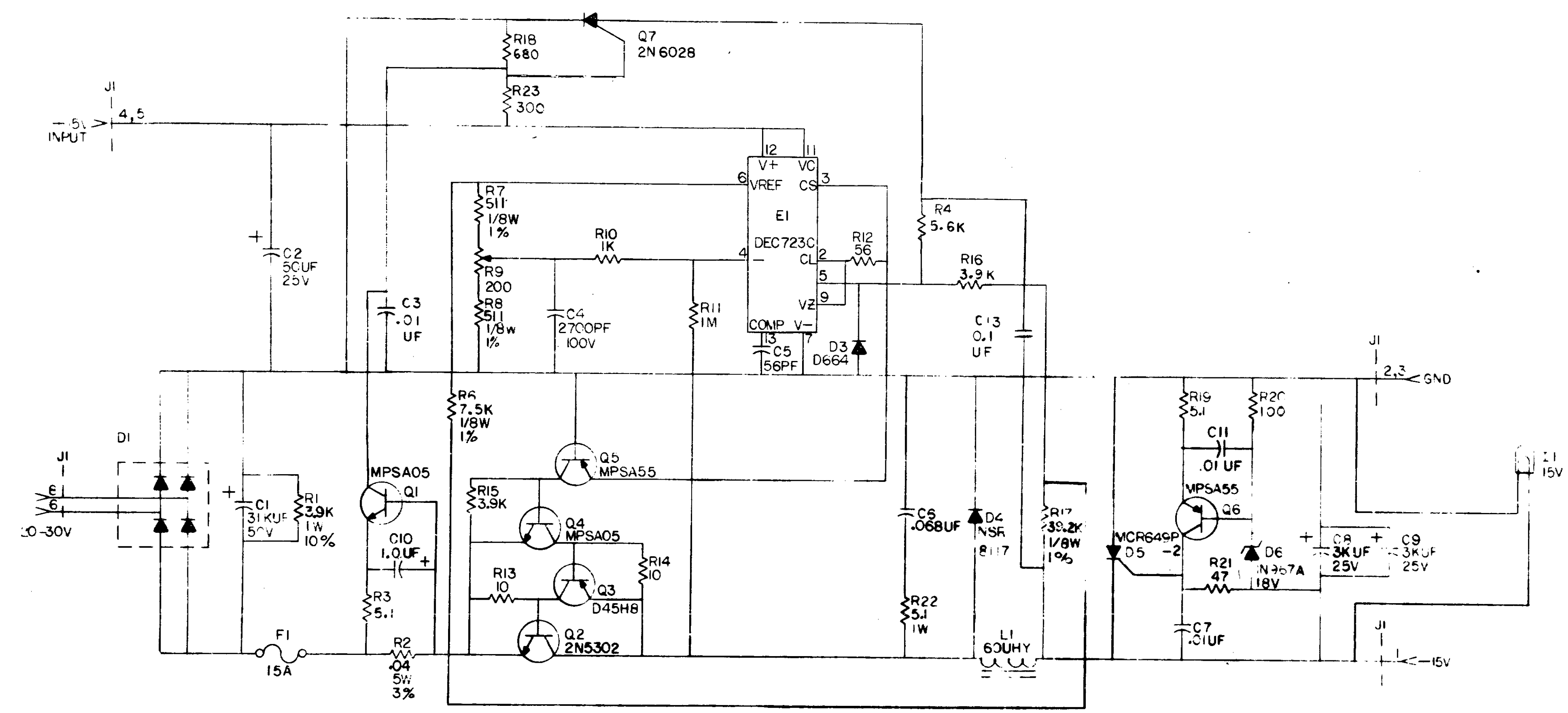
CUSTOMER PRINT SET H745-1	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X		1	D-CS-H745-Ø-1	T	1	CIRCUIT SCHEMATIC	H745
	X		A-SP-11/45-TA-2			TEST PROCEDURE	H745
	X		A-SP-H745-Ø-8			MFG SPEC	H745

MECHANICAL

CUSTOMER PRINT SET H745-1	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X		1	C-UA-H745-Ø-Ø	T	1	UNIT ASSY	H745
			D-PS-1210737-0-0		1	HEAT SINK	H745
			D-IA-5309756-0-0		1	REGULATOR BRKT	H745
			C-IA-5309761-0-0		1	2 - 5 CAP BRKT	H745
			C-MD-5309759-0-0		1	CAPACITOR STRAP	H745
		2	A-PI-3700074-0-0	-	2	PACKAGING INSTRUCTIONS	H745
			A-PS-9905211-0-0	-	2	OUTER CARTON	H745
			A-PS-9905212-0-0	-	2	INNER PACKAGE	H745

TITLE		SIZE	CODE	NUMBER	REV
-15V REGULATOR	SHEET 2 OF 2	B	DD	H745-Ø	4K

DRB 108



UNLESS OTHERWISE INDICATED:
RESISTORS = 1/4W, 5%

REV	CHANGE NO
T	H745-00016
S	H745-00015
R	H745-00014
P	H745-00013
N	H745-00012
M	H745-00011
L	H745-00009
K	H745-00007
J	H745-00006
H	H745-00005
F	H745-00004
E	H745-00003A
D	H745-00002 2A
C	H745-00001

REVISIONS

DEC NO	EIA NO	DEC NO	EIA NO
D664	1N 3606	D45H8	
NSR 8117		2N 6028	
MCR 649P – 2			
1N 967A	SAME		
2N 5302			
MPS A05			
MPS A55			

SEMICONDUCTOR CONVERSION CHART

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV E

DRN. / CHK'D. / ENG. / PROD. ENG. / PROJ. — DATE 11-4-71, 1-9-71

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE

—15V REG.

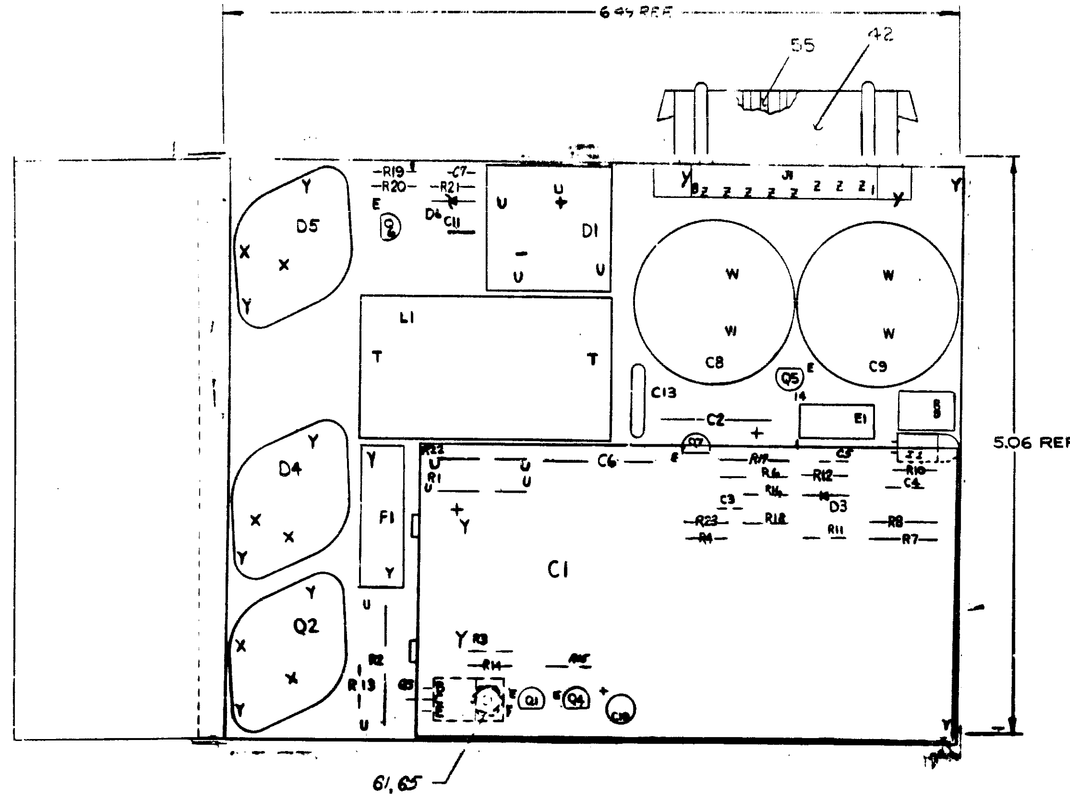
NEXT HIGHER ASSY

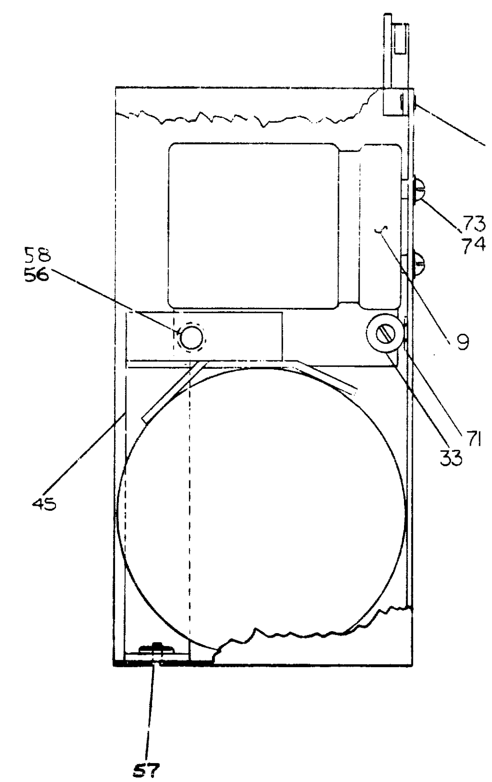
SIZE D | CODE CS | NUMBER H745-Ø-1 | REV. T

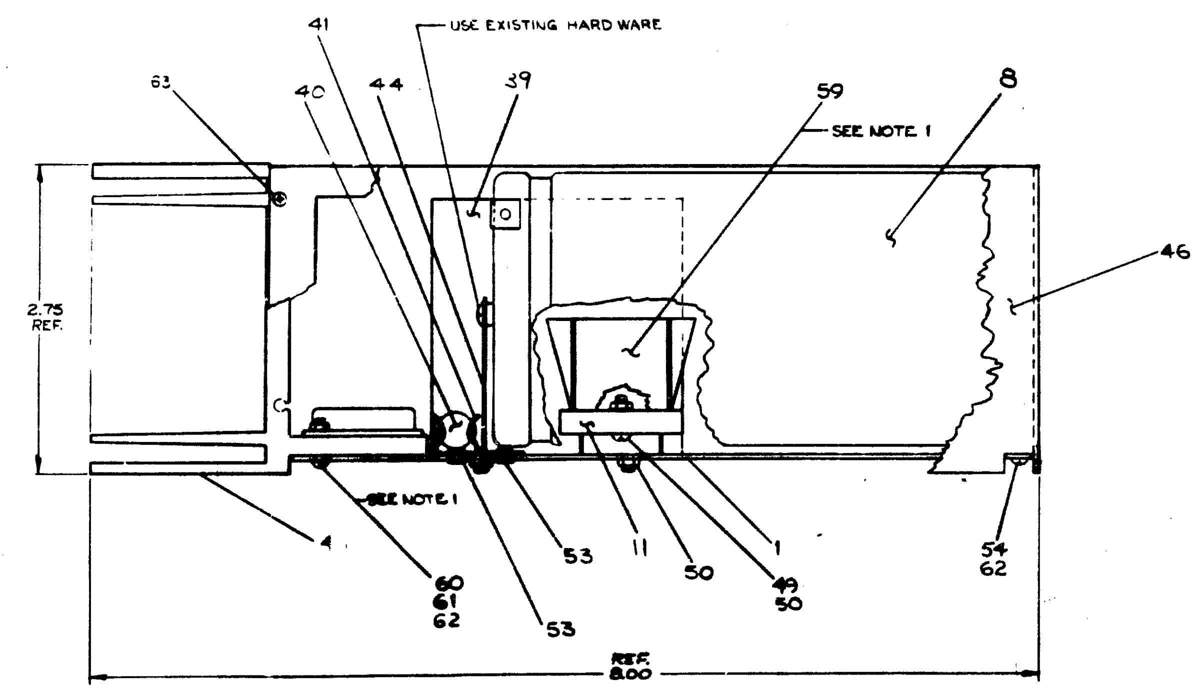
SCALE | SHEET 1 OF 1 | DIST.

NOTE:

1. APPLY ITEM #51 (THERMAL COMPOUND) BETWEEN TRANSISTOR AND INSULATOR, WASHER (ITEM #52 ALSO BETWEEN WASHER & HEAT SINK FOR Q2 Q4 & D5 ALSO APPLY ITEM #51 (COMPOUND) BETWEEN ITEM #11 (D1) BRIDGE AND ITEM #59 (HEAT SINK).
2. 1010621 MAY BE SUBSTITUTED FOR C13 (1000030).







QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		ASSY/DRILLING HOLE LAYOUT	D-AH-H745-0-5	70
1		PACKING INSTRUCTIONS	API-3700074-0-0	69
1	R18	RES. 680 ¼W 5%	1301424	68
1	R23	RES. 300 ¼W 5%	1301425	67
1	C13 (SEE NOTE 2)	CAP. 0.1 UF 100V 20%	1000030	66
1		SCR PH #4-40 X 5/16 LG	9006010-1	65
1	I1	LAMP 15V	1209169	64
4		SCR, PFH #4 X 5/16 LG, SELF TAPPING	9009142	63
8		L WASHER #4	9006632	62
7		NUT KEPS #4-40	9006657	61
6		SCR PHL PAN HD #4-40 X [illegible] LG	9006073-1	60
1		HEAT SINK BRIDGE RECT	1210807	59
1		SCR PHL PAN HD #6-32 X ¼ LG	9006020-1	58
1		SCR PHL FLT HD #6-32 X 3/16 LG	9008020-2	57
1		WASHER LOCK #6	9006633	56
8		CONTACT FEMALE	1208456	55
2		SCR PHL PAN HD #4-40 X ¼ LG	9006301-1	54
6		EYELET GS-4-[illegible]	9009000	53
3		INSULATOR WASHER	9008721	52
A/R		THERMAL COMPOUND	9008268	51
3		NUT KEPS 6-32	9006185	50
1		SCREW PHL PAN HD 6-32 X ½ LG	9006084-1	49
4		SCREW PHL FLT HD [illegible]	9006008-2	48
[illegible]		[illegible]	[illegible]	47
1		REGULATOR BRKT	D-IA-5300758-0-2	46
1		2.5 HOLDER CAPACITOR	C-IA-7412389-0-0	45
2		STRAP CAPACITOR	C-MD-5300758-0-0	44
1		HEAT SINK	D-PS-1210737-0-0	43
1	J1	CONN. MATE-N-LOCK 8 PIN	[illegible]	42
2		FUSE CLIP	[illegible]	41
1	F1	FUSE AGC 15	[illegible]	40
1	L1	REACTOR 80 UHY	1610050	39
1	E1	INTERGRATED CIRCUIT UA723C	1910415	38
1	Q3	TRANSISTOR [illegible]	1510700	37
2	Q5 Q6	TRANSISTOR A65	1510708	36
2	Q1 Q4	TRANSISTOR A65	1510706	35
1	Q2	TRANSISTOR 2N5302	[illegible]	34
1	R9	RES VARIABLE 250 Ω 20%	[illegible]	33
1	R20	RES 100 ¼W 5%	[illegible]229	32
1	R11	RES 1 MEG ¼W 5%	[illegible]595	31
1	R4	RES. 5.6K ¼W 5%	1301874	30
2	R15, R16	RES 3.9K ¼W 5%	[illegible]	29
2	R18, R3	RES 5.1 ¼W 5%	[illegible]	28
1	R12	RES 56 ¼W 5%	[illegible]	27
1	R21	RES 47 ¼W 5%	[illegible]	26
1	R17	RES 38.2K ⅛W 1%	[illegible]	25
1	R10	RES 1K ¼W 5%	[illegible]	24
2	R13, R14	RES 10 ¼W 5%	[illegible]	23
1	R6	RES 7.5K 1/8W 1%	[illegible]	22
2	R7 R8	RES [illegible] 1/8W 1%	[illegible]	21
1	R22	RES 5.1 1W 5%	[illegible]	20
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	R2	RES [illegible] 3%	1311362-00	[illegible]
1	R1	RES 3.0K 1W 10%	[illegible]	17
1	D6	DIODE [illegible]	[illegible]	[illegible]
1	D5	SCR [illegible]	[illegible]	15
1	D4	DIODE [illegible]	[illegible]	14
2	D3	DIODE D664	[illegible]	13
1	Q7	TRANSISTOR UNI JUNCTION [illegible]	[illegible]	12
1	D1	DIODE BRIDGE	1110714	11
[illegible]	C12	CAP [illegible]	[illegible]	10
2	C8 C9	CAP 3.0K UF 25V	1010703	9
1	C1	CAP 31K UF 50V	1010850	8
1	C10	CAP 1.0 UF 25V	1010866-01	7
1	C2	CAP 50 UF 25V -10 +75%	1001296	6
1	C6	CAP .068 UF 100V 10%	1000052	5
1	C4	CAP 2700PF 100V 5%	1001837	4
3	C7 C11 C3	CAP .01UF 100V 20%	1001610	3
1	C5	CAP [illegible] 100V 5%	[illegible]	2
1		ETCHED CIRCUIT BOARD	[illegible]	1
		[illegible]	[illegible]	REF
		CIRCUIT SCHEMATIC	[illegible]	REF
		X-Y COORDINATE HOLE LOCATION	[illegible]	REF

PARTS LIST

ETCH BOARD REV E

IN3606

SEMICONDUCTOR CONVERSION CHART

IC TYPE

IC PIN LOCATIONS

EQUIPMENT CORPORATION.

TITLE

-15 REGULATOR

E UA H745-0-0

DRAWING DIRECTORY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE
DRAWING DIRECTORY	B-DD-H754-Ø
+20 VOLT REGULATOR	E-CS-H754-0-1

UNIT VARIATIONS

VAR	TITLE	PRINT SET 1
H754-0	+20 VOLT REGULATOR	X

REVISIONS

REV	CHG. NO.	DATE
A	H754-9	10-75
B	H754-10	11-3

USED ON OPTION/MODEL

DRN. J.Fleming	DATE 2/21/74	TITLE +20 VOLT REGULATOR
CHK'D. J.Fleming	DATE 2/21/74	
PROJ ENG. E. [illegible]	DATE 3-13-74	
PROD. Jack [illegible]	DATE 3-14-74	SIZE B · CODE DD · NUMBER H754-Ø · REV B
FIELD SERV. Walt [illegible]	DATE 7/25/74	DIST

SHEET 1 OF 3

DRB 106

DEC 16-(321)-1062-1A-R672

ELECTRICAL

CUSTOMER PRINT SET 1	SET MFG.	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	B-DD-H754-Ø	#	3	DRAWING DIRECTORY	
X			E-CS-H754-Ø-1	#	2	+20 VOLT REGULATOR	
			K-CO-H754-Ø-4		-	X-Y COORDINATE HOLE LOCATION	
			D-AH-H754-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-H754-Ø-6		1	MODULE ECO HISTORY	
			5010531		-	ETCHED CIRCUIT BOARD	
			A-SP-H754-Ø-8		3	MANUFACTURING SPEC	

MECHANICAL

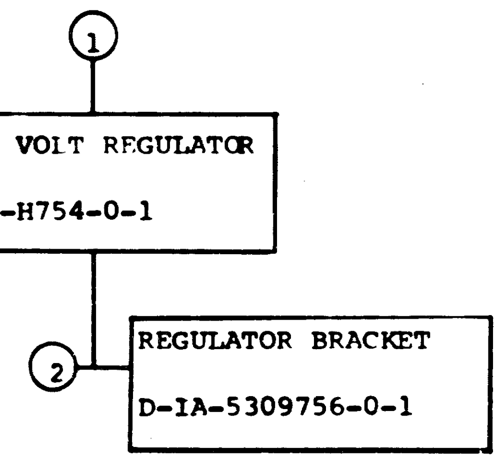
CUSTOMER PRINT SET 1	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	E-CS-H754-0-1	#	2	+20 VOLT REGULATOR	
			D-PS-1210737-0-0		1	HEAT SINK REGULATOR	
			C-IA-5309758-0-0		1	CAPACITOR BRACKET	
		2	D-IA-5409756-0-0		1	BRACKET REGULATOR	
			A-SS-5309756-0-1		1	SILK SCREEN	
			A-SS-5309756-0-2		1	SILK SCREEN	
			A-SS-5309756-0-3		1	SILK SCREEN	

CUSTOMER PRINT SET CODES	
	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET
	C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT
	$ = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED

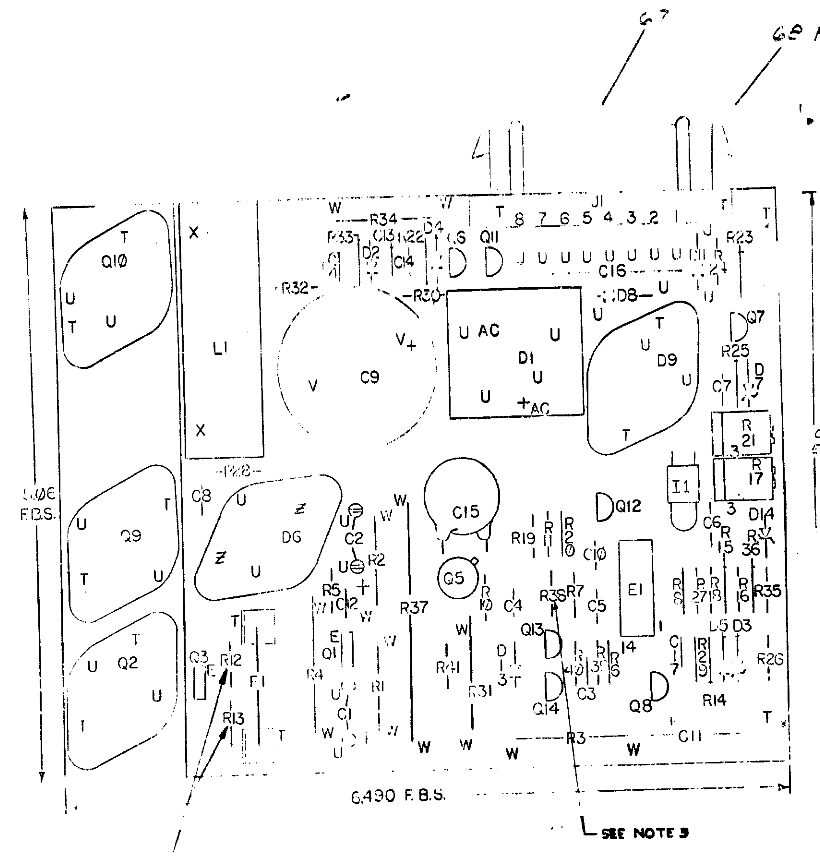
TITLE		SIZE	CODE	NUMBER	REV
+20 VOLT REGULATOR	SHEET 2 OF 3	B	DD	H754-Ø	B

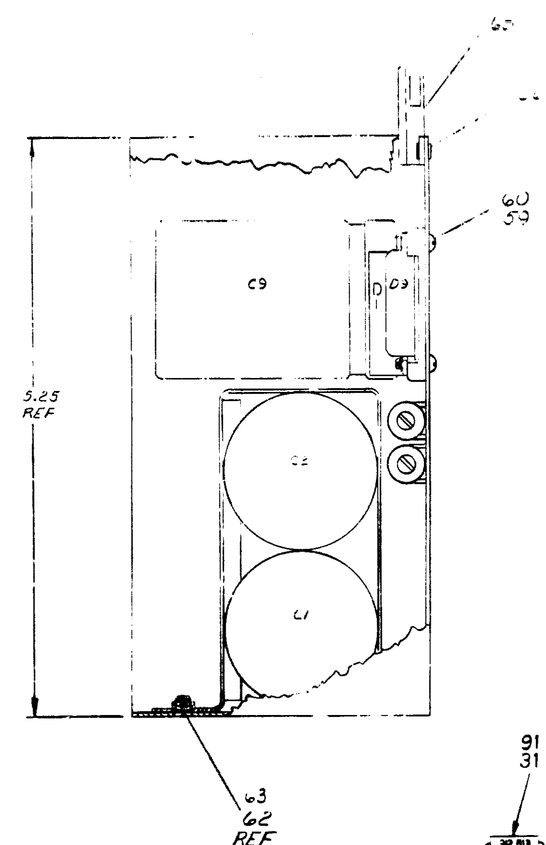
DPB 108

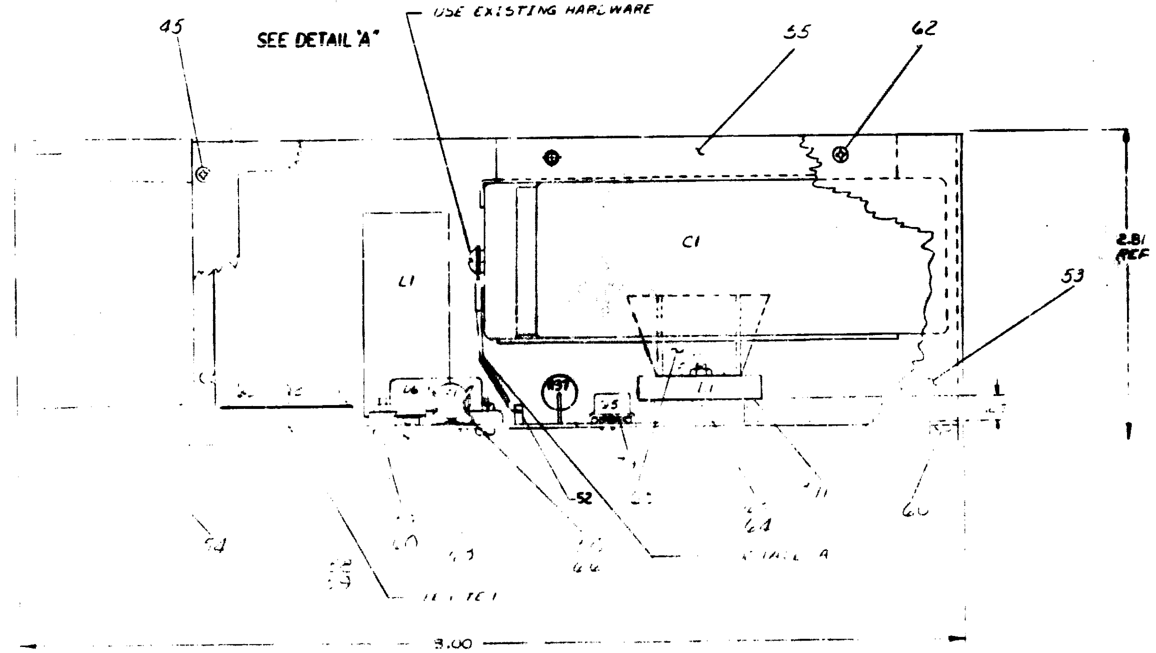
DEC 16-(325)-1062-2B-R972

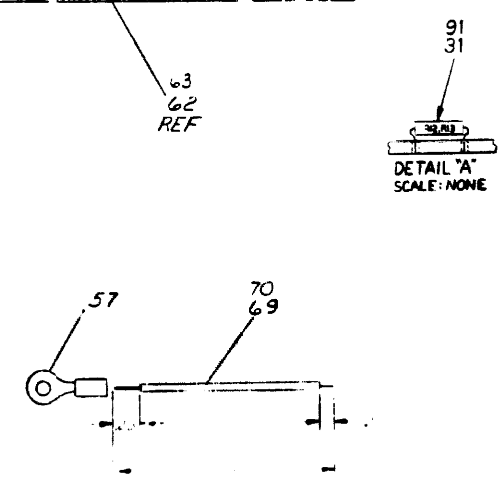


TITLE	SHEET	SIZE	CODE	NUMBER	REV
+20 VOLT REGULATOR	3 OF 3	B	DD	H754-Ø	









NOTES:

1. APPLY ITEM #71 (COMPOUND) ON BOTH SIDES OF ITEM #72 (INSULATOR WASHER) FOR Q8, Q9, Q10. ALSO APPLY BETWEEN ITEM #11 (DIODE BRIDGE D1). AND ITEM #65 (HEAT SINK, BRIDGE RECT.).
2. UNLESS OTHERWISE INDICATED: RESISTORS ARE 1/4W, ±5%. CAPACITORS ARE 100V, ±5%.
3. ADD INSULATION (9107256-11) TO BOTH LEADS OF R38 TO AVOID SHORT TO ETCH.

DETAIL "A"
SCALE: NONE
RED WIRE GOES TO POSITIVE TERMINAL
BLK WIRE GOES TO NEGATIVE TERMINAL

DELETED COMPONENTS	
RESISTORS	R9
DIODES	D10, D12

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	R13	RES. 27Ω 1/2W 5% FUSIBLE	1312496-01	91
A/R		INSULATION	9107256-11	90
1	R39	RES 220 1/4W 5%	1300271	89
1	R37	RES. .1 10W 1%	1309108	88
1	R38	RES. 1K 1% THERMISTOR	1310071	87
1	C16	CAP. 100µF 25V	1002781	86
1	Q10	TRANSISTOR MJ900	1510712	85
1	Q9	TRANSISTOR MJ3001	1511349	84
1	C13	CAP. 100 [illegible] 5% DM	1000016	83
				82
2	Q4, Q14	TRANSISTOR MPS A05	1510705	81
1	D2	DIODE [illegible]	1100100	80
2	(UNDER Q5 & R21)	TRANSIPAD	9007223	79
1	R31	RES .15Ω 2W 10%	1310147	78
2	C14, C17	CAP, 1000 PF, 100V, ±5% DM	1000042	77
1	R22	RES [illegible] 1/8W ±1%	1305125	76
2	R33, R8	RES 1.78K 1/8W ±1%	1302612	75
1	R11	RES 15K 1/4W ±5%	1300496	74
1	R20	RES 470Ω 1/4W ±5%	1300316	73
3		WASHER INSULATOR	9006721	72
A/R		COMPOUND, THERMAL	9006288	71
A/R		WIRE, #18 AWG, STR. PVC INS (BLK)	9107360-00	70
A/R		WIRE #18 AWG, STR. PVC INS (RED)	9107360-22	69
1	J1	MATE-N-LOCK CONN 8 PIN	1209340	68
8		PIN, SOCKET, MATE-N-LOCK	1209458	67
4		EYELET GS-4-7	9006732	66
1		HEAT SINK BRIDGE RECTIFIER	1210807	65
1		SCR PHL PAN HD 6-32 X ½	9006024-1	64
5		KEPS NUT 6-32	9006185	63
2		SCR PHL FLAT HD 6-32 X 5/16	9006021-2	62
3		SCR PHL FLAT HD 4-40 X [illegible]	9006020-3	61
6		SCR PHL PAN HD 4-40 X 3/8	9006011-1	60
10		KEPS NUT 4-40	9006557	59
8		SCR PHL PAN HD 4-40 X ½	9006013-1	58
4		TERMINAL SOLDERLESS [illegible]	9007930	57
1		COVER [illegible]	[illegible]	56
1		1.5 CAP BRKT	C-IA-5309759-0-0	55
1		HEAT SINK REGULATOR	D-PS-1210737-0-0	54
1		BRACKET REG	D-IA-5309758-4-0	53
4		SPLIT LUG	9006735	52
1	Q8	TRANSISTOR 2N3028	15-10877	51
2		FUSE CLIP	9007203	50
1	F1	FUSE 10 AMP	90-08830	49
1	L1	REACTOR 170 µHY	16-10849	48
1	E1	INTEGRATED CIRCUIT 723	19-10415	47
6	Q7, Q6, Q11, Q12, Q13	TRANSISTOR MPS A55	15-10700	46
4		SCR PHL FLAT HD [illegible] TAPPING	9006142-02	45
1	Q5	TRANSISTOR DEC3000	15-03200	44
1	Q2	TRANSISTOR 2N3030	15-10889	43
	Q1, Q3	TRANSISTOR 2N4028	15-08805	42
	R17, R21	RES VARIABLE 200 ±20% POT	13-10252	41
2	R23, R36	RES 5.1 1/4 5%	13-00927	40
1	R18	RES 297 1/8W 1%	1304857	39
				38
2	R14, R5	RES 1/4 5% 27	13-01922	37
1	R10	RES 150 1/4 5%	13-00000	36
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-H754-0-5	35
2	R7, R40	RES 2K 1/4W 5%	1302368	34
2	R6, R19	RES 12K 1/4 5%	13-00400	33
6	R15 R25 R30 R24 R35 R41	RES 100 1/4 5%	13 00225	32
1	R12	RES 2.87Ω 2W 5% FUSIBLE	1312495-02	31
				30
1	R27	RES 10K 1/8W 1%	1302712	29
1	R32	RES 35K 1/4 5	13 00 [illegible]	28
1	R16	RES 2.87K 1/8W 1%	1305124	27
	R23	RES 10K 1/4 5%	13 02465	26
	[illegible]	CAP 2.2 UF 35V 10% TANT	10 02431	25
1	R4	RES 50 3 .04	1311362	24
1	R3	RES 1.5K 5W 5%	13 01897	23
1	R34	RES 47 2W 5%	13 0 [illegible] 6	22
1	R28	RES 1.5K 1/4 5%	13 00301	21
2	R1, R2	RES 3.9K 10 10%	13 02927	20
1	R26	RES 10Ω 1/4W 5%	1301317	19
2	D11, D8	DIODE 1N5624	1110420	18
				17
1	D14	DIODE 752A ZENER	1102808	16
1	D9	DIODE MCR 649 P 2	11 00405	15
1	D7	DIODE 1N970B 24V	11-10856	14
1	D6	DIODE 20 AMP FAST REC	11-10715	13
1	D3	DIODE 1N4744 ZENER, 15V	11 05940	12
1	D1	DIODE MDS 3514	11 10714	11
3	D5 D13 D4	DIODE D664	11 20114	10
1	C15	CAP .1UF 100V 20% DISC	1000030	9
1	C9	CAP 2.2K UF 30V G% AL. EL.	10-10858	8
5	C7 C8 C4 C10 C3	CAP .01UF 50V 20% DISC.	10-01610-01	7
1	C6	CAP 2700PF 100V 5% DM	10 01637	6
1	C5	CAP 560PF 100V 5% DM	10 00612	5
1	I1	LAMP, 28V, 40 MA	12-11239	4
1	C12	CAP .01UF 25V DISC	10-01774	3
2	C1 C2	CAP 5.8K UF 50V G% AL. EL.	10-11363	2
1		ETCHED CIRCUIT BOARD	5010531	1
		MODULE ECO HISTORY	B-MH-H754-0-6	REF
		X-Y COORDINATE HOLE LOCATION	K-CO-H754-0-4	REF

PARTS LIST

ETCH BOARD REV H

[redacted] EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
+ 20 VOLT REGULATOR

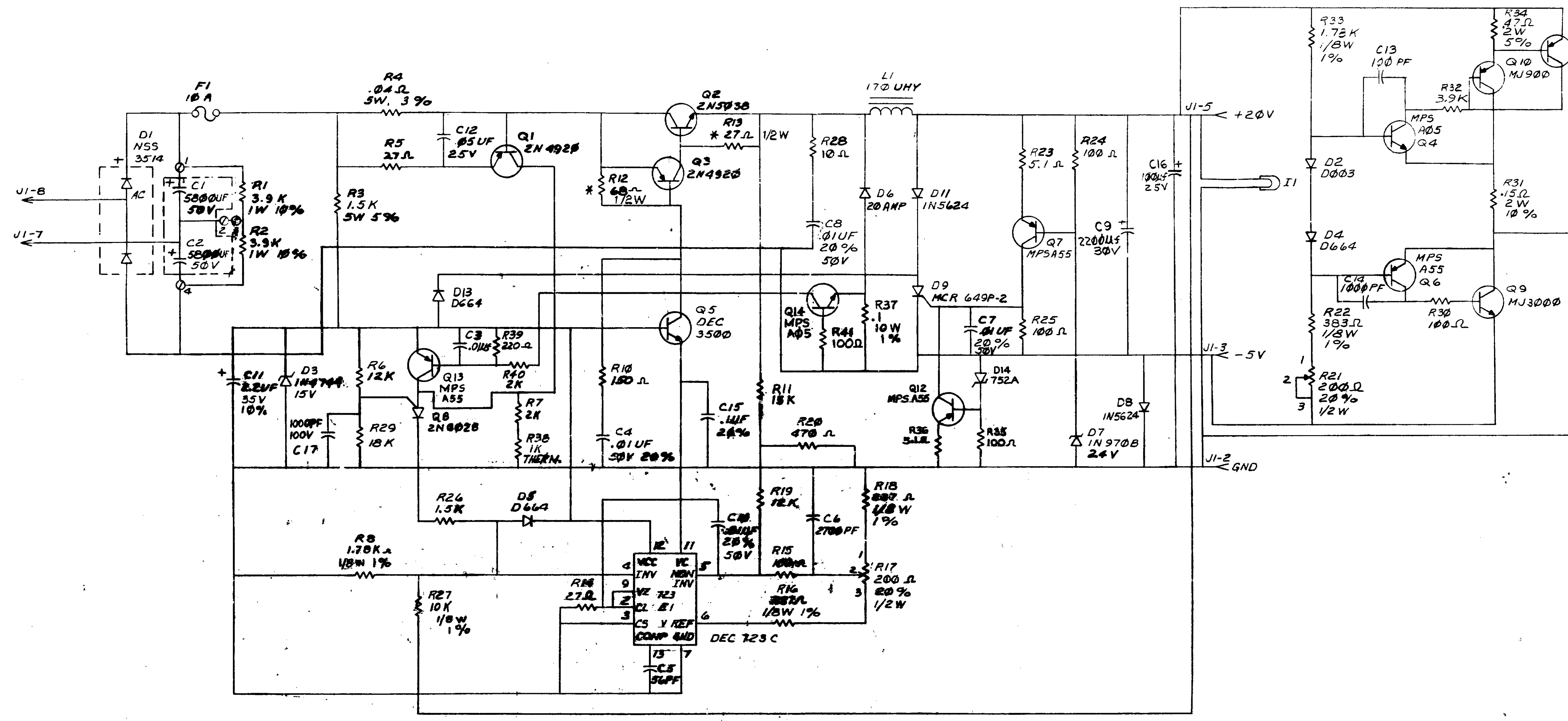
CS H754-0-1

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.

GND	+5V			
	ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST


F1 10 A
R4 .04 Ω 5W, 3%
Q2 2N5038
L1 170 UHY
J1-5 +20V
J1-8
J1-7
D1 NSS 3514
AC
C1 5800UF 50V
C2 5800UF 50V
R1 3.9 K 1W 10%
R2 3.9K 1W 10%
R5 27 Ω
C12 .05 UF 25V
Q1 2N 4920
R13 * 27 Ω 1/2W
Q3 2N4920
R12 * 68 Ω 1/2W
R3 1.5 K 5W 5%
R28 10 Ω
C8 .01UF 20% 50V
D6 20 AMP
D11 1N5624
R23 5.1 Ω
R24 100 Ω
C16 100UF 25V
I1
C9 2200UF 30V
Q7 MPSA55
D13 D664
Q5 DEC 3500
Q14 MPS A05
R41 100Ω
R37 .1 10W 1%
D9 MCR 649P-2
C7 .01 UF 20% 30V
R25 100 Ω
J1-3 -5V
C3 .01UF
R39 220 Ω
C11 2.2UF 35V 10%
D3 1N4744 15V
R6 12K
Q13 MPS A55
R40 2K
R7 2K
R10 150 Ω
C15 .1UF 20%
R11 15K
Q12 MPS A55
D14 752A
D8 1N5624
1000PF 100V C17
R29 18K
Q8 2N6028
R38 1K THERM.
C4 .01 UF 50V 20%
R20 470 Ω
R36
R35 100Ω
D7 1N 970B 24V
J1-2 GND
R26 1.5K
D5 D664
R19 12K
C6 2700PF
R18 887 Ω 1/8W 1%
R8 1.78K Ω 1/8W 1%
C10 .001UF 20% 50V
R15
R17 200 Ω 20% 1/2W
R27 10K 1/8W 1%
R16 1/8W 1%
VCC INV VZ CL CS COMP VC NON INV E1 REF GND 723
DEC 723 C
C5 56PF
R33 1.78K 1/8W 1%
C13 100 PF
R34 47 Ω 2W 5%
Q11 MPS A55
Q10 MJ900
R32 3.9K
MPS A05 Q4
D2 D003
R31 .15 Ω 2W 10%
D4 D664
MPS A55 Q6
C14 1000PF
Q9 MJ3000
R22 383 Ω 1/8W 1%
R30 100 Ω
R21 200 Ω 20% 1/2W

* FUSIBLE RESISTOR

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
H754				
	PARTS LIST			

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES

DECIMALS	ANGLES
.XXX ± .005 .XX ± .02 .X ± .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY

MATERIAL

FINISH

EQUIPMENT CORPORATION

TITLE

+20 VOLT REGULATOR

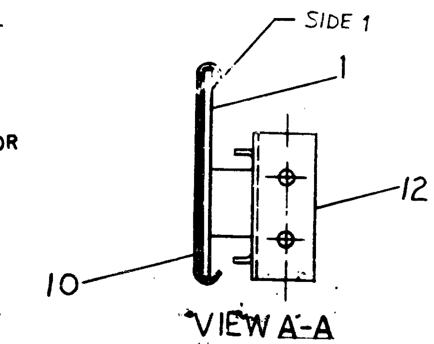
SIZE D CODE CS NUMBER H754-0-1 REV. L

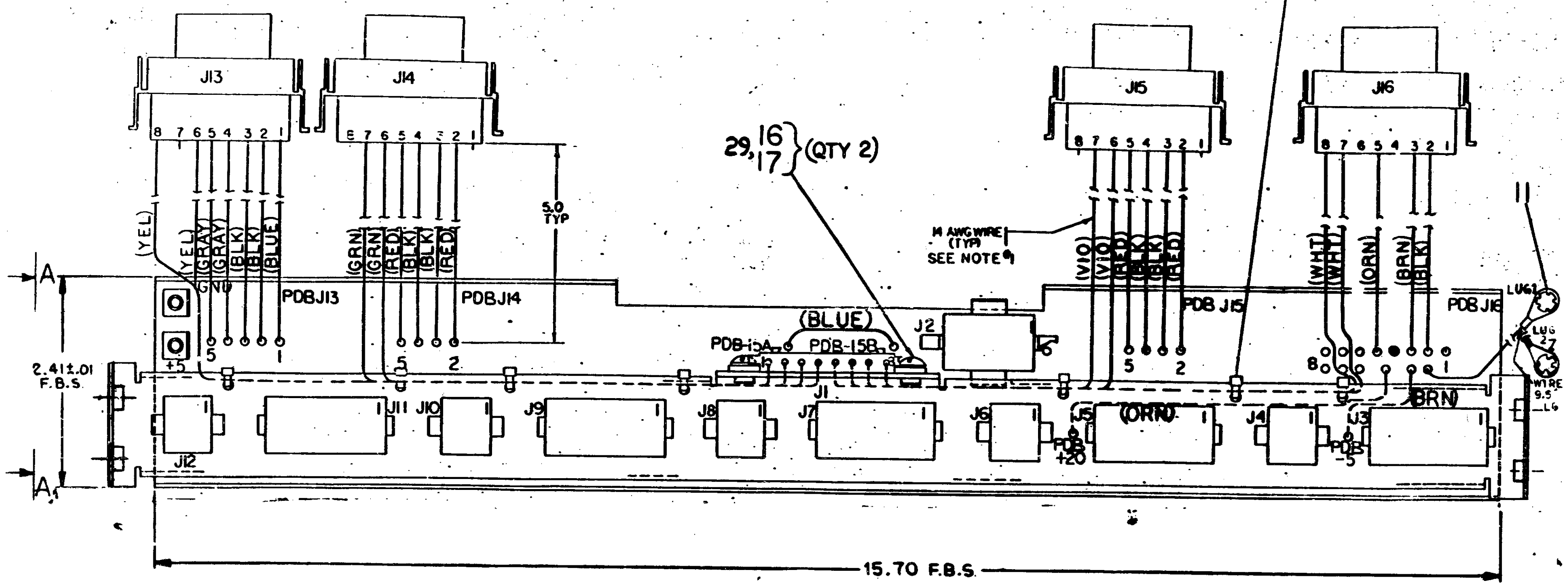
SHEET 2 OF 2

D CS 5410864-0-1 F

NOTES:

1. FOR HAND WIRING INFORMATION SEE WIRE TABLE ON SHEET 3.
2. MATE-N-LOK FIXTURES (ITEM 28) MUST BE USED DURING WAVE SOLDERING OF J2, J3-J12
3. WIRE JUMPERS ON CIRCUIT BOARD ARE PART OF SIGNAL PATHS. THEY ARE NOT FOR OPTIONS





QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		ETCHED CIRCUIT BOARD	D-UA-5010963-0-0	1
5	J4, J6, J8, J10, J12	CONN, 6 PIN MATE-N-LOK (FEMALE)	1209350-06	2
1	J1	CONN, 8 PIN MATE-N-LOK (FEMALE)	1209340-00	3
5	J3, J5, J7, J9, J11	CONN, 15 PIN MATE-N-LOK (FEMALE)	1209350-15	4
1	J2	CONN, 12 PIN MATE-N-LOK (FEMALE)	1209350-12	5
4	J13 THRU J16	CONN, 8 PIN MATE-N-LOK (MALE)	1209340-01	6
24	(J13 THRU J16)	PIN, MATE-N-LOK	1209378-01	7
8	(J1)	PIN, MATE-N-LOK	1209379-01	8
117		PIN, MATE-N-LOK PC MOUNT	1209456	9
1		SHIELD	C-MD-7412192-0-0	10
2		GROUND LUG	9008150	11
1		BRACKET, CONN MTG	D-MD-7411704-0-0	12
2		EYELET	9009000	13
2		FASTON TAB	9008219-0	14
7		CABLE TIE .12 WIDE	9007880	15
2		SCREW, PHHD TRUSS 6-32 x .375	9006022-3	16
2		WASHER, INT TOOTH #6	9006633	17
1FT		WIRE # 14 AWG STRD (ORN)	9107370-33	18
1FT		WIRE # 14 AWG STRD (BRN)	9107370-11	19
2FT		WIRE # 14 AWG STRD (RED)	9107370-22	20
1FT		WIRE # 14 AWG STRD (GRY)	9107370-88	21
4FT		WIRE # 14 AWG STRD (BLK)	9107370-00	22
1FT		WIRE # 14 AWG STRD (BLU)	9107370-66	23
3FT		WIRE # 14 AWG STRD (YEL)	9107370-44	24
2FT		WIRE # 14 AWG STRD (GRN)	9107370-55	25
2FT		WIRE # 14 AWG STRD (VIO)	9107370-77	26
2FT		WIRE # 14 AWG STRD (WHT)	9107370-99	27
REF		MATE-N-LOK FIXTURES	C-IA-9305937-0-0	28
2		FLAT WASHER #6	9006656	29

PARTS LIST

IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

FIRST USED ON OPTION MODEL: BA11-K

ETCH BOARD REV. D

SEMICONDUCTOR CONVERSION CHART

DRN. P. Beasley 6/14/74

NEXT HIGHER ASSY: D-UA-BA11-K-0

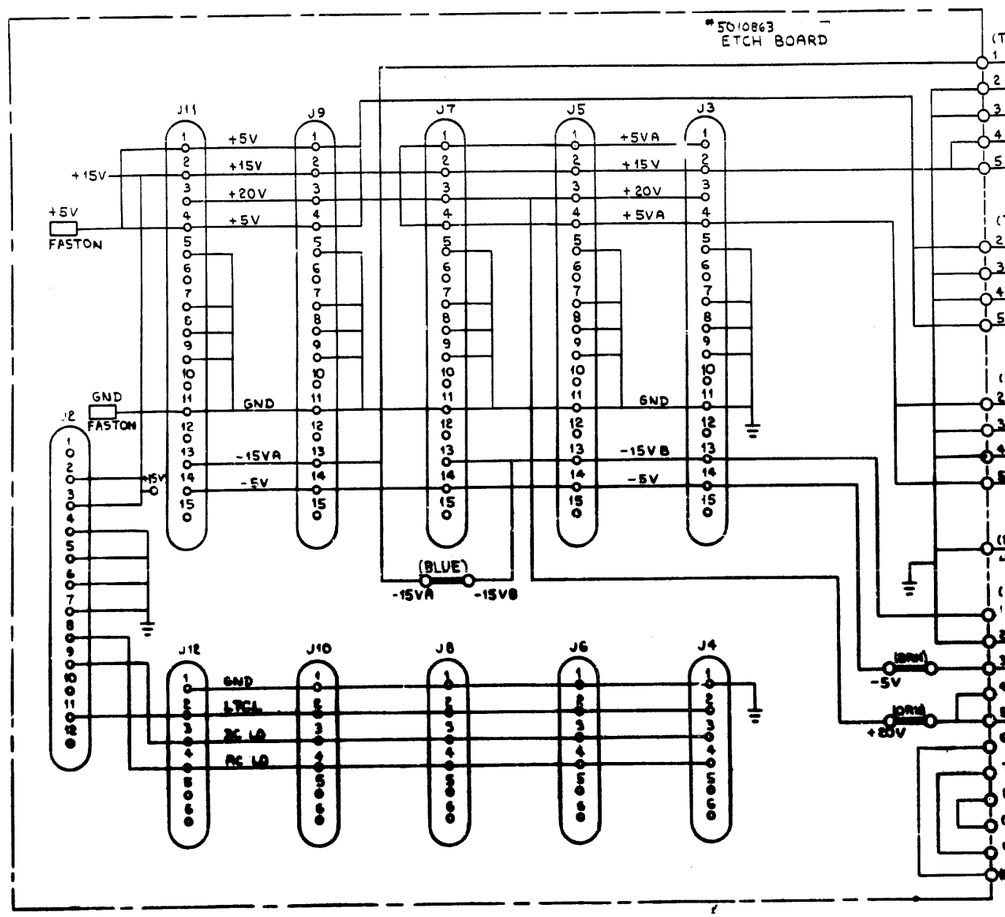
SCALE: NONE

SHEET 1 OF 3

digital

TITLE: POWER DISTRIBUTION BOARD

D CS 5410864-0-1 F



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PWR DIST BOARD	SIZE/CODE	NUMBER / REV.
SCALE	NONE	SHEET 2 OF 3	DCS 5410864-0-1 / F
DIST.			

WIRE TABLE

ITEM NO	DESCRIPTION AWG	COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH	LENGTH	SIGNAL NAME
24	14	YEL	J1-1	8	J13-8	7	12.5"	AC/H745
24		YEL	J1-2		J13-6		12.5"	AC/H745
25		GRN	J1-3		J14-7		11"	AC/H744-1
25		GRN	J1-4		J14-6		11"	AC/H744-1
26		VIO	J1-5		J15-7		0"	AC/H744-2
26		VIO	J1-6		J15-6		10"	AC/H744-2
27		WHT	J1-7		J16-8		11.25"	AC/H754
27		WHT	J1-8	8	J16-7		11.25"	AC/H754
25		BLU	PDB J13-1	SOLDER	J13-1		5"	-15V
26		BLK	PDB J13-2		J13-2			GND
22		BLK	PDB J13-3		J13-3			GND
2		GRY	PDB J13-4		J13-4			+15V
21		GRY	PDB J13-5		J13-5			+15V
20		RED	PDB J14-2		J14-2			+5V
22		BLK	PDB J14-3		J14-3			GND
22		BLK	PDB J14-4		J14-4			GND
20		RED	PDB J14-5		J14-5			+5V
20		RED	PDB J15-2		J15-2			+5V
22		BLK	PDB J15-3		J15-3			GND
22		BLK	PDB J15-4		J15-4			GND
20		RED	PDB J15-5		J15-5			+5V
22		BLK	PDB J16-2		J16-2			GND
19		BRN	PDB J16-3		J16-3			-5V
18		ORN	PDB J16-5		J16-5	7	5"	+20V
23		BLU	PDP-15A		PDB-15B	SOLDER	1.75	-15V
18		ORN	PDB J16-5		PDB +20V		5"	+20V
19		BRN	PDB J16-3		PDB -5V		2"	-5V
22	14	BLK	LUG 1	SOLDER	PDB J16-2	SOLDER	6"	GND
22	14	BLK	LUG 1	SOLDER	LUG 2	SOLDER	9.5"	GND

REVISIONS

ZONE	CHANGE NO	REV

TITLE: PWR DIST BOARD
SIZE: D | CODE: CS | NUMBER: 5410864-0-1 | REV: F
SCALE: NONE | SHEET 3 OF 3 | DIST

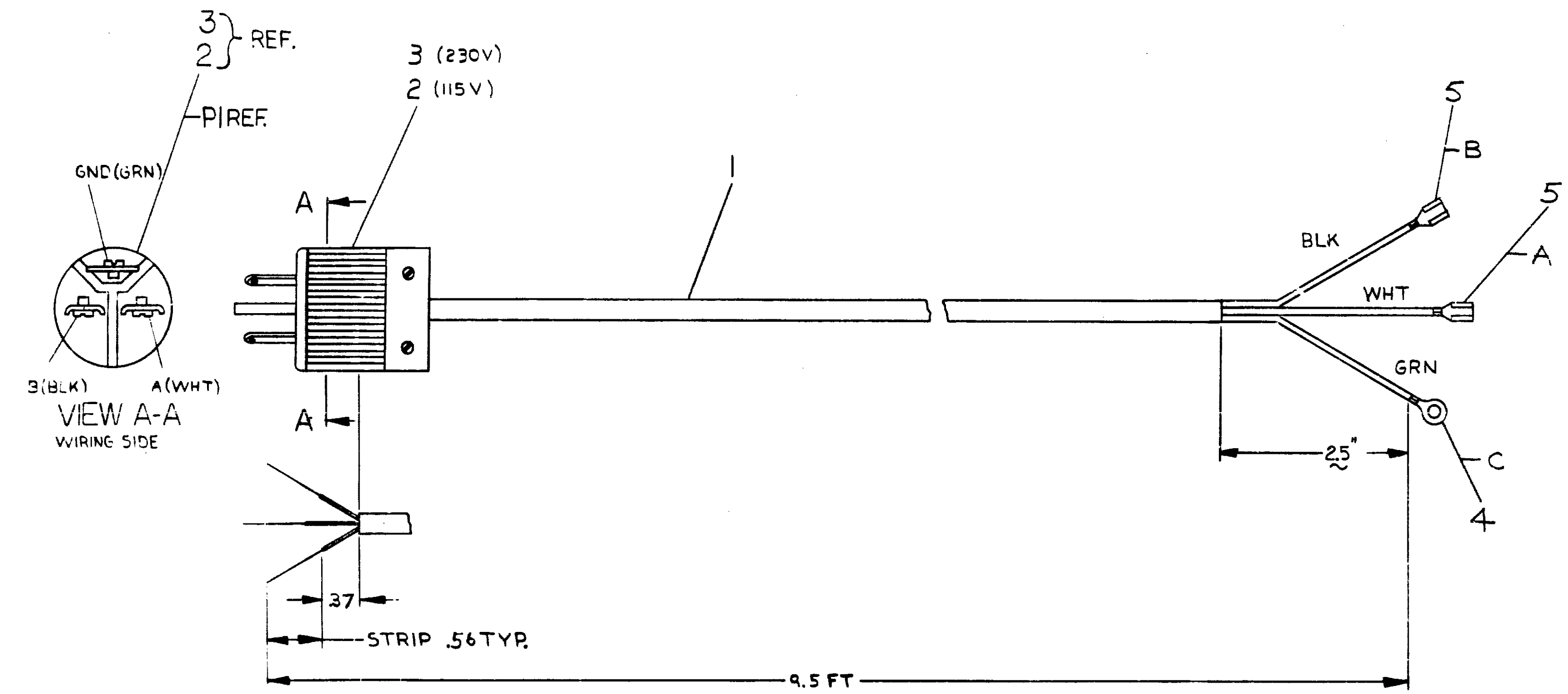
D CS 5410864-0-1 F

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONN	FROM WITH	TO CONN	TO WITH	REMARKS
1	14	BLK	P1-B	—	B	5	
1	14	WHT	P1-A	—	A	5	
1	14	GRN	P1-GND	—	C	4	

LEGEND

NUMBER	VARIATION
7010131-1	115 V
7010131-2	230 V



7010131-1	7010131-2	DESCRIPTION	PART NO.	ITEM NO.
2	2	CONN SOLD BLU	9007919-0	5
1	1	CONN SOLD BLU	9007928	4
—	1	PLUG. MALE 230 V	9004353	3
1	—	PLUG, MALE 5 V	9003938	2
9.5'	9.5'	CABLE	1700027	1
	QTY.			

PARTS LIST

FIRST USED ON OPTION/MODEL: BA11-K

DIMENSIONAL TOLERANCE — DIMENSIONS ARE INCHES UNLESS OTHERWISE SPECIFIED

INCHES: .XXX = ±.005, .XX = ±.02, .X = ±.1; ANGLES ±0° 30'

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL: SEE PARTS LIST

FINISH

DRN. DATE 6/25/74 — CHK'D. DATE 6/26/74 — ENG. DATE 8/7/74 — PROJ. ENG. DATE 8/7/74 — PROD. DATE

NEXT HIGHER ASSY. D-AD-7009811-0-0

SCALE 1/1 — SHEET OF

digital

TITLE: POWER CORD 115 & 230 V

SIZE D — CODE IA — NUMBER 7010131-0-0 — REV. A

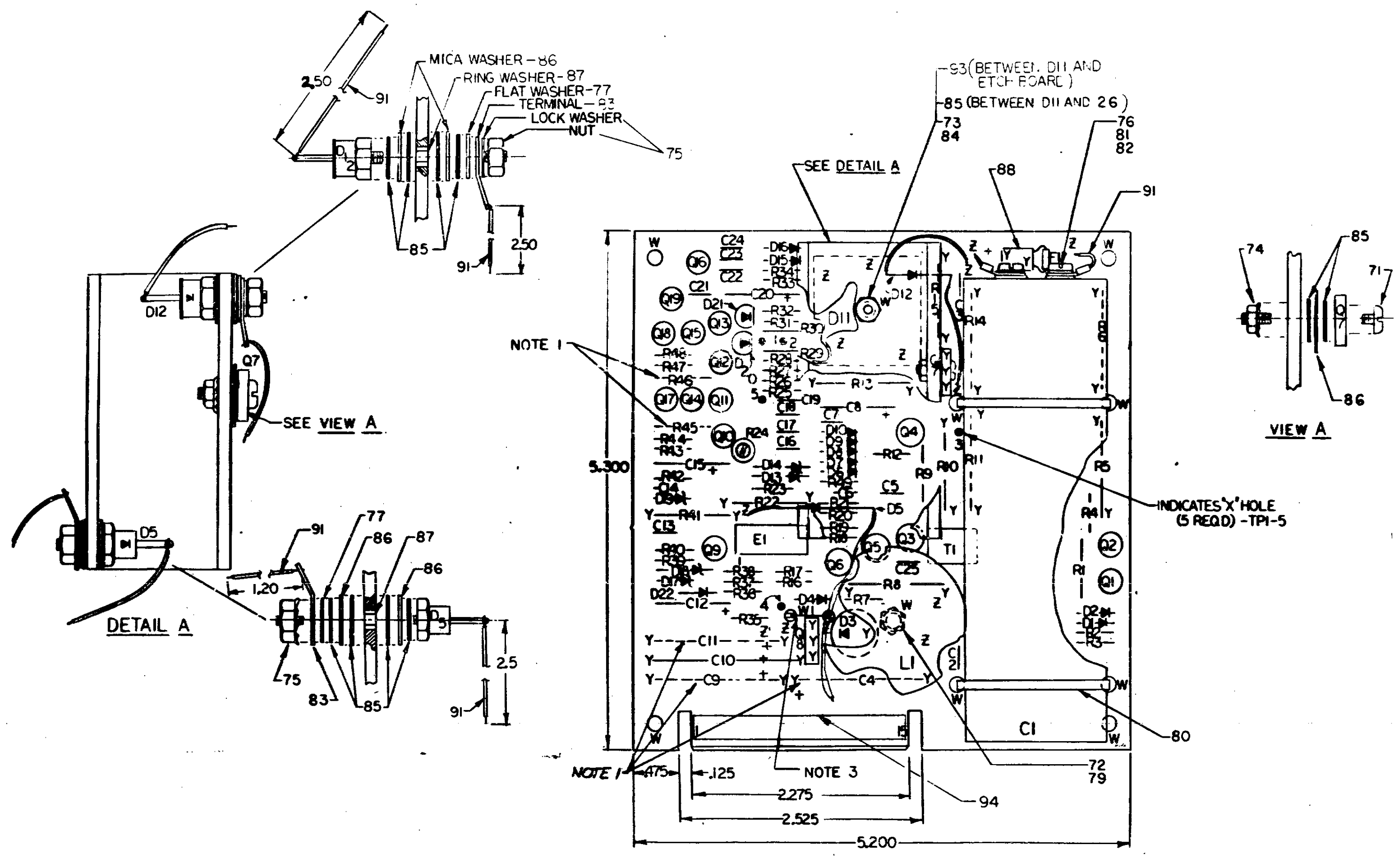
DIST.

REVISIONS: REV. A — CHANGE NO. 7010131-00001 — B. WOLF — 9-10-74 — 9-17-74

NOTES:

1. R45, R46, C4, C9, & C11 ARE NOT USED ON BASIC 5411086 BUT ARE RESERVED FOR PLANNED FUTURE MODULE VARIATIONS.
2. ** TOTAL +15V AND +8V CURRENT NOT TO EXCEED 40 AMPERES.
3. W1 (TEST JUMPER) MAYBE TEMPORARILY REMOVED WHILE TROUBLE-SHOOTING TO DETERMINE IF LOSS OF 15V IS DUE TO CROW-BAR CIRCUITRY. BUT MUST BE IN THE BOARD FOR NORMAL OPERATION.
4. ~~NON-ITEMIZED PARTS SUPPLIED WITH D12.~~
4. YA VERSION DOES NOT CONTAIN +15VDC RES.
5. A) FOR STANDARD VERSION USE SHEETS 1,2,3 & 4 OF THIS DWG.
   B) FOR YA VERSION USE SHEETS 1,2, & 3 OF THIS DWG.

SEE COMPONENT CHART FOR YA VERSION REF DESIGNATIONS



YA	QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF	REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411086-0-4	1
REF	REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5411086-0-5	2
REF	REF		MODULE ECO HISTORY	B-MH-5411086-0-6	3
1	1		ETCHED CIRCUIT BOARD	5011085	4
0	1	C2	CAPACITOR 56PF 100V 5%	1000012	5
4	4	C16,C17,C18,C21	CAPACITOR 330PF 100V 5%	1000023	6
3	5	C3,C13,C19,C22,C23	CAPACITOR .01uf 100V 20%	1001610-01	7
1	3	C8,C12,C15	CAPACITOR 2.2uf 35V 10%	1002431	8
2	2	C6,C25	CAPACITOR 18PF 100V 5%	1002608	9
1	1	C20	CAPACITOR 1.5uf 35V 10%	1009725	10
4	4	C5,C7,C14,C24	CAPACITOR .22uf 50V -20% +80%	1010274-01	11
0	1	C10	CAPACITOR 500uf 25V -10% +75%	1010509-01	12
1	1	C1	CAPACITOR 8400uf 50V -10% +75%	1010851	13
1	2	D2,D19	DIODE IN748A	1100122	14
0	1	D5	DIODE IN2970B	1100134	15
0	1	D3	DIODE MR1033B	1103341	16
7	8	D1,D6,D7,D8,D9,D15,D16,D22	DIODE D672	1105275	17
1	2	D10,D17	DIODE IN4744	1105648	18
0	1	D4	DIODE IN4004	1105796	19
0	1	D12	DIODE IN3880	1109440	20
0	1	D18	DIODE IN967A	1110068	21
2	2	D20,D21	DIODE MV5054-1 (LIGHT EMITTING)	1110324	22
1	1	D11	DIODE BRIDGE 200V 20A	1110714	23
2	2	D13.D14	DIODE ITTZ429	1110925	24
0	1	F1	FUSE PICO 5A	1205747	25
0	1		HEAT SINK	1211986	26
0	1	R23	RESISTOR 47 1/4W 5%	1300202	27
0	2	R7,R40	RESISTOR 100 1/4W 5%	1300229	28
0	1	R41	RESISTOR 100 1W 5%	1300232	29
1	3	R4,R12,R49	RESISTOR 220 1/4W 5%	1300271	30
0	1	R14	RESISTOR 220 2W 10%	1300278	31
0	1	R11	RESISTOR 680 2W 5%	1300348	32
2	2	R18,R20	RESISTOR 1K 1/4W 5%	1300365	33
0	1	R1	RESISTOR 1.5K 1/2W 5%	1300394	34
0	1	R10	RESISTOR 2.2K 1W 10%	1300420	35
1	1	R15,	RESISTOR 3.3K 1W 10%	1300437	36
0	1	R3	RESISTOR 3.3K 1/4W 5%	1300439	37
2	2	R43,R47	RESISTOR 10K 1/4W 5%	1300479	38
0	1	R37	RESISTOR 10 1/4W 5%	1301317	39
2	3	R2,R44,R48	RESISTOR 750 1/4W 5%	1301401	40
0	1	R38	RESISTOR 680 1/4W 5%	1301424	41
0	1	R16	RESISTOR 22K 1/4W 5%	1301808	42
1	1	R13	RESISTOR 1K 2W 5%	1301952	43
0	1	R9	RESISTOR 27 1/2W 5%	1302253	44
2	2	R19,R21	RESISTOR 30K 1/4W 5%	1302394	45
0	1	R36	RESISTOR 511 1/4W 1%	1302411	46
0	1	R39	RESISTOR 909 1/4W 1%	1302685	47
1	1	R25	RESISTOR 3.16K 1/4W 1%	1303045	48
1	1	R8	RESISTOR 470 2W 5%	1303082	49
1	2	R17,R28	RESISTOR 1K 1/4W 1%	1303114	50
1	1	R31	RESISTOR 2.6?K 1/4W 1%	1303303	51
0	1	R42	RESISTOR 10K 1/4W 1%	1303312	52
2	2	R33,R34	RESISTOR 5.11K 1/4W 1%	1304054	53
1	1	R30	RESISTOR 9.09K 1/4W 1%	1304855	54

PARTS LIST

ETCH BOARD REV. D

FIRST USED ON OPTION MODEL

COMPONENT CHART - YA VERSION

QTY	REF. DESIGNATION	ITEM
3	C19, C22, C23	7
1	C8	8
1	D19	14
7	D6, D7, D8, D9, D15, D16, D22	17
1	D10	18
1	R49	30
2	R44, R48	40
1	R28	50
4	Q3, Q5, Q10, Q19	63
4	Q11, Q12, Q13, Q16	66

IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

REV.	CHANGE NO.	
H	5411086-00004	V. BOAEN 5-28-75
F	5411086-00003	V BOAEN 4-16-75
E	5411086-00002	V BOAEN 5-19-75
D	5411086-00001	V BOAEN 2-6-75
C	ORIGINATED	

REVISIONS

DRN. J. Vincent DATE 10-9-74

NEXT HIGHER ASSY

digital

TITLE PWR. LINE MONITOR/15V RES.

D CS 5411086-0-1 REV. H

SHEET 1 OF

NOTES:

YA	QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO
1	1	R29	RESISTOR 3 48K 1 4W 1	1305114	55
1	1	R26	RESISTOR 5 62K 1 4W 1	1305128	56
1	1	R27	RESISTOR 4 99K 1 4W 1	1305324	57
0	1	R35	RESISTOR 24.9K 1 4W 1	1305405	58
0	1	R24	RESISTOR 200 20% 62PR	1309150-10	59
1	1	R32	RESISTOR 18 2K 1 4W 1	1309412	60
0	2	R5,R6	RESISTOR .2 5W 5 WW	1309884	61
0	1	Q7	TRANSISTOR MJE3055	1510555	62
4	6	Q2,Q3,Q5,Q6,Q10,Q19	TRANSISTOR MPSA05	1510705	63
0	2	Q4,Q9	TRANSISTOR MPS A55	1510706	64
0	1	Q8	TRANSISTOR 2N 4441	1505867	65
4	5	Q1,Q11,Q12,Q13,Q16	TRANSISTOR 2N 4250	1509142	66
4	4	Q14,Q15,Q17,Q18	TRANSISTOR 2N 5433	1511686	67
0	1	L1	INDUCTOR, 500 μh	1611869	68
1	1	T1	TRANSFORMER	1612026	69
0	1	E1	I.C. DEC 723	1910415	70
0	1		SCREW, PHM #4-40 X 7/16 LG	9006012-1	71
0	1		SCREW, PHM #6-32 X 1/4 LG	9006020-1	72
0	1		SCREW, PHM #6-32 X 7/8 LG	900602[illegible]	73
0	1		KEP NUT #4-40	9006557	74
0	2		KEP NUT #10-32	9006565	75
2	2		WASHER, ITTLKWR #10	9006635	76
0	2		WASHER, FLAT	9006668	77
0	2	(W1)	SPLIT LUG	900[illegible]	78
0	1		SPACER, 1/4AF X 1/2	9006844	79
4	4		CABLE TIE	9007880	80
2	2		TERMINAL	9007330	81
2	2		SCREW, PHM #10-32 X 1 4 LG.	9008007-1	82
0	2		TERMINAL	9008150	83
0	1		KEP NUT #6-32	9008185	84
0	A/R		COMPOUND, THERMAL JOINT	9008268	85
0	5		WASHER, MICA	9008424	86
0	2		WASHER, RING	9008440	87
0	1		FUSE HOLDER	9009141	88
1	1	R22	RESISTOR, 390, 2W 10%	1301880	89
0	1	W1	JUMPER	9009185	90
2	12		WIRE #18 STRANDED BLK	9107550-0-0	91
REF	REF		MODULE TEST PROCEDURE	A-SP-11/45-TA-2	92
1	1		WASHER, RING	9006713	93
1	1		.010 INCH SHIM	7413721-0-0	94
REF	REF		ENG. SPEC-AND TEST PROC.	A-SP-5411086-[illegible]	95

PARTS LIST

FIRST USED ON OPTION MODEL

ETCH BOARD REV D

IC TYPE	GND	+ 5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

CHANGE NO / REV / REVISIONS / CHK

DEC NO	EIA NO	DEC NO	EIA NO

SEMICONDUCTOR CONVERSION CHART

DRN. Vincent DATE 6-9-74
CHK'D DATE
ENG. Verell Bowen DATE 10/2/74
PROJ ENG. Verell Bowen DATE 10/2/74
PROD. K Klose DATE 11/4/74
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION

TITLE: PWR. LINE MONITOR/15V REG.

SIZE	CODE	NUMBER	REV.
D	CS	5411086-0-1	H

SCALE —

SHEET 2 OF 4

DIST

D CS 5411086-0-1

+25 TO +45 VDC

R8 470 2W

R13 1K 2W

TP3

C25 18pf

R21 30K

R20 1K

R18 1K

R19 30K

C6 18pf

Q3 MPS A05

Q5 MPS A05

C5 .22uf 50V

T1

C8 2.2uf 35V

D22 D672

D8 D672

D9 D672

D6 D672

D7 D672

C7 .22uf 50V

D10 IN4744 15V

R48 750

Q19 MPS A05

5 -10V TO -15V (TEST POINT)

(ENG OPTION SEE NOTE 1) R46 1/2W

S15 2N5433

Q18 2N5433

3 AC LO 1

8 AC LO 2

4 LO GND

R47 10K

R43 10K

R45 220

D15 D672 AC-2

D16 D672 AC-1

20V TO 33V RMS AC INPUT

R34 5.11K 1%

R33 5.11K 1%

C24 .22uf 50V

C22 1.5uf 35V

F32 18.2K 1%

TP1

TP2

R31 2.61K 1%

R30 5.89K 1%

Q6 2N4250

Q13 2N4250

Q12 2N4250

Q11 2N4250

R23 3.65K 1%

R26 5.62K 1%

TP5

R27 4.99K 1%

C21 330pf

C18 330pf

C17 330pf

C16 330pf

R25 3.16K 1%

ACOK

D20 MV5054-1

D21 MV5054-1

DCOK

D14 ITTZ429 5.1V

D13 ITTZ429 5.1V

C22 .01uf 100V

C23 .01uf 100V

R28 1K 1%

C19 .01uf 100V

RETURN

R44 750

Q10 MPS A05

Q14 2N5433

Q17 2N5433

i DC LO 2

2 DC LO 1

R45 1/2W (SEE NOTE 1 ENG. OPTION)

+25 TO +45VDC

TO 20V TO 33V RMS AC INPUT

AC-1 15

AC-2 16

C1 .1 MFD 100V

R15 3.3K 1W

D11

6 LINE CLK L

R22 390Ω 2W

D19 3.3V 1N748A

C14 .22uF 50V

POWER FAIL CIRCUIT

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE PWR. LINE MONITOR/15V REG.

SIZE D CODE CS NUMBER 5411086-0-1 REV H

SCALE — SHEET 3 OF 4 DIST.

+25 TO +45 VDC

F1

25 - 45 VDC

C3 .01uf

R14 220 2W, 10%

D12 IN3880

L1 500.uH

Q7 MJE 3055

R9 27 1/2W

Q4 MPS A55

R12 220

R10 2.2K 1W, 10%

R11 680 2W

TP4

+15V

4.28V

D4 IN4004

R35 24.9K 1%

D3 MR1030B

D5 IN2970B 6.8V

9 10 +15VDC ± 5% @ 4A MAX (SEE NOTE 2)

7 +8VDC ± 10% @ 1A MAX (SEE NOTE 2)

R41 120 1W

D17 IN4794 15V ± 10%

C12 2.2uf 35V

1/2 723C E1

REF

R36 511 1%

R24 200 4.28V

R17 1K 1%

R39 909 1%

C15 2.2uf 35V

R16 22K 1%

1/2 723C E1

COMP

R23 47

Q6 MPS A05

R7 100

D1 D672

C2 56pf

R2 750

D2 IN748A 3.9V

R3 3.3K

Q1 2N4250

R1 1.5K 1/2W

R42 10K 1%

W1 (SEE NOTE 3)

R38 680

R37 10

Q9 MPS A55

Q8 2N4441

C13 .01uf

R40 100

D18 IN3674A 18V

C10 500uf 25V

C7 50uf 50V

C9 50uf 50V

C11 50uf 50V

SEE NOTE #1

Q2 MPS A05

R4 220

R6 .2 5W

R5 .2 5W

11 GND
12 GND
13 GND

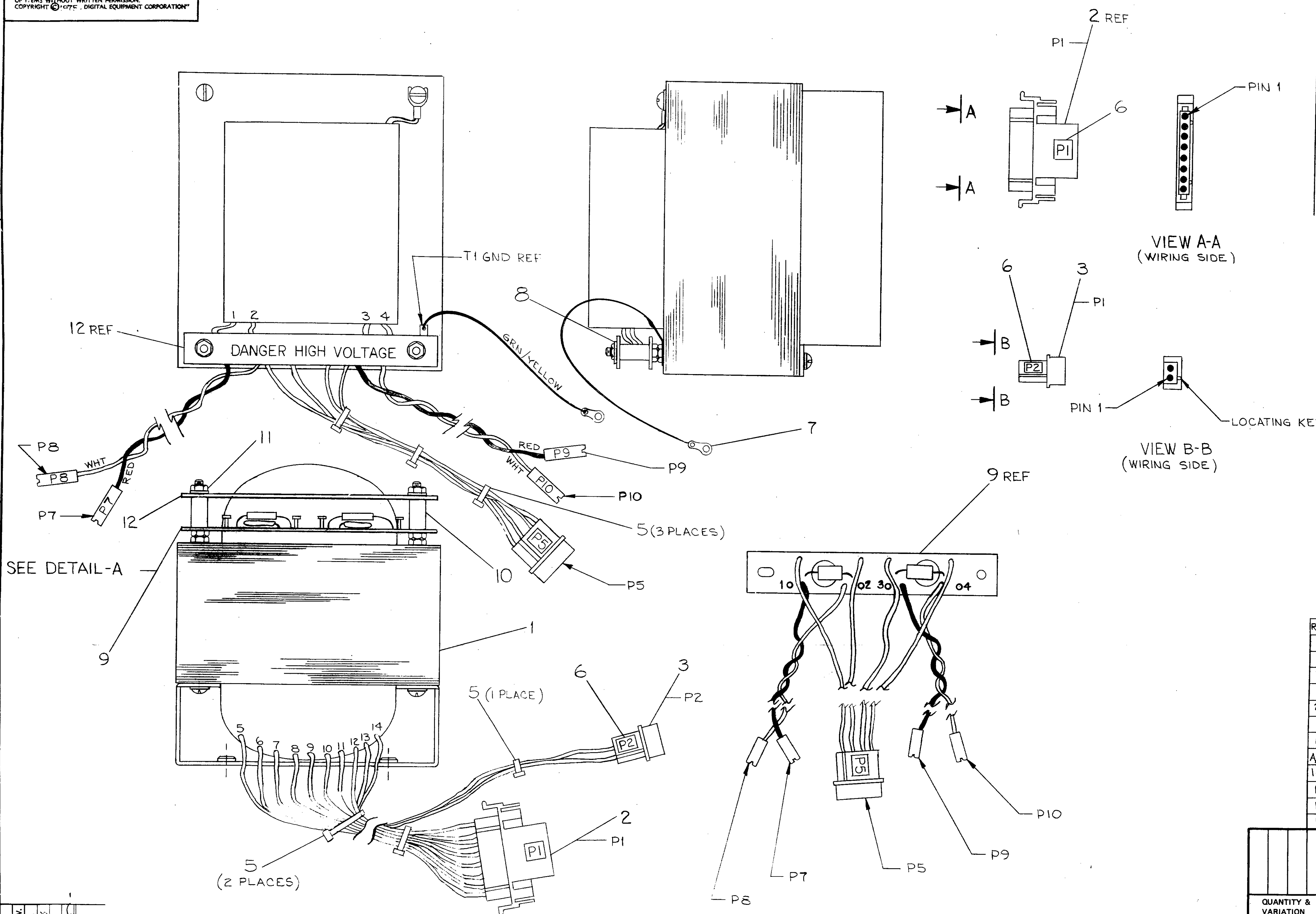
RETURN

15V REGULATOR
(SEE NOTE #4)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PWR. LINE MONITOR/15V REG.	D	CS	5411086-0-1	H

SCALE — SHEET 4 OF 4 DIST.



REF	TRANSFORMER ASSY PROCEDURE	A-SP-7011486-0-9	13
1	COVER	C-IA-7414301-0-0	12
2	NUT, KEP #10-32	9006565	11
2	SPACER, 3/8 OD. X 1/2 LG	9007831	10
1	CAP MOV BOARD ASSY	D-IA-7011751-0-0	9
2	WASHER, FLAT .437 X .218 ID	9006664	8
1	GROUND LUG	9008150	7
1	DECAL	A-DC-7409872-0-0	6
A/R	CABLE TIES 5 1/4 L X 1/8 W	9007880	5
10	PIN, MALE	1209378-1	4
1	CONN., 2 PIN	1210822-2	3
1	CONN., 8 PIN	1209340-01	2
1	TRANSFORMER	1612524	1
QUANTITY & VARIATION	DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'

SURFACE QUALITY IN MICROINCHES

CLASS OF ACCURACY (CHECK ONE)	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 40.00 TO 80.00
MEDIUM	±.004	±.008	±.012	±.016	±.024	±.04
PREFERRED	±.012	±.016	±.025	±.04	±.063	±.01

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH —/—/—

DRN. T. Quillin
CHK'D [signature] 18 SEPT. 75
ENG. Robert Kennedy 15 SEP 75
PROJ. ENG. R. J. Wolf 18 SEP 75
PROD. Jim Bornstein 18 SEPT. 75

NEXT HIGHER ASSY. D-UA-H782-Ø-Ø

SCALE 1/1

SHEET 1 OF 2

FIRST USED ON H782

digital

TITLE TRANSFORMER ASS'Y

SIZE D | CODE AD | NUMBER 7011486-0-0 | REV. A

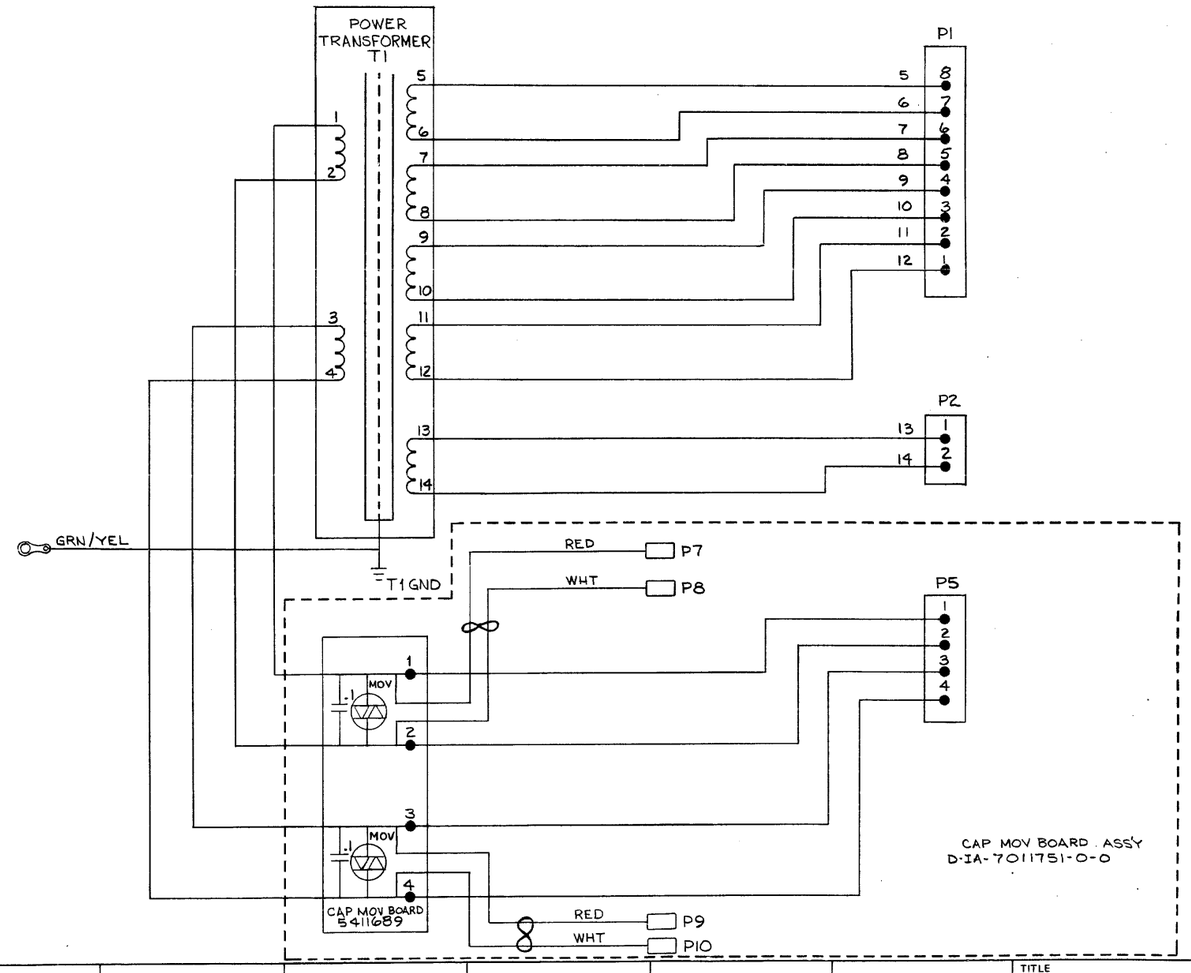
DIST.

REVISIONS: REV. A — CHANGE NO. 7011486-00001 — B. WOLF

DEC FORM NO. DRD 100-C

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH	WIRE LENGTH
1	14	BLK	T1-1	—	CAP MOV BD-1	SOLDER	1.5 IN
〃	〃	〃	T1-2	—	CAP MOV BD-2	SOLDER	2.0 IN
			T1-3	—	CAP MOV BD-3	SOLDER	2.0 IN
			T1-4	—	CAP MOV BD-4	SOLDER	1.5 IN
			T1-5	—	P1-8	ITEM 4	12.0 IN
			T1-6	—	P1-7	〃	〃
			T1-7	—	P1-6		
			T1-8	—	P1-5		
			T1-9	—	P1-4		
			T1-10	—	P1-3		
			T1-11	—	P1-2		
			T1-12	—	P1-1	ITEM 4	
〃	〃	〃	T1-13	—	P2-1	ITEM 4	〃
1	14	BLK	T1-14	—	P2-2	ITEM 4	12.0 IN
1	14	GRN/YEL	T1-GND	—	GND LUG (ITEM 7)	SOLDER	14.0 IN



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
TRANSFORMER ASSY	D	AD	7011486-0-0	A
SCALE — SHEET 2 OF 2	DIST.			

SIZE D CODE AD NUMBER 7011486-0-0 REV A

DEC FORM NO DRD 131

NOTES:

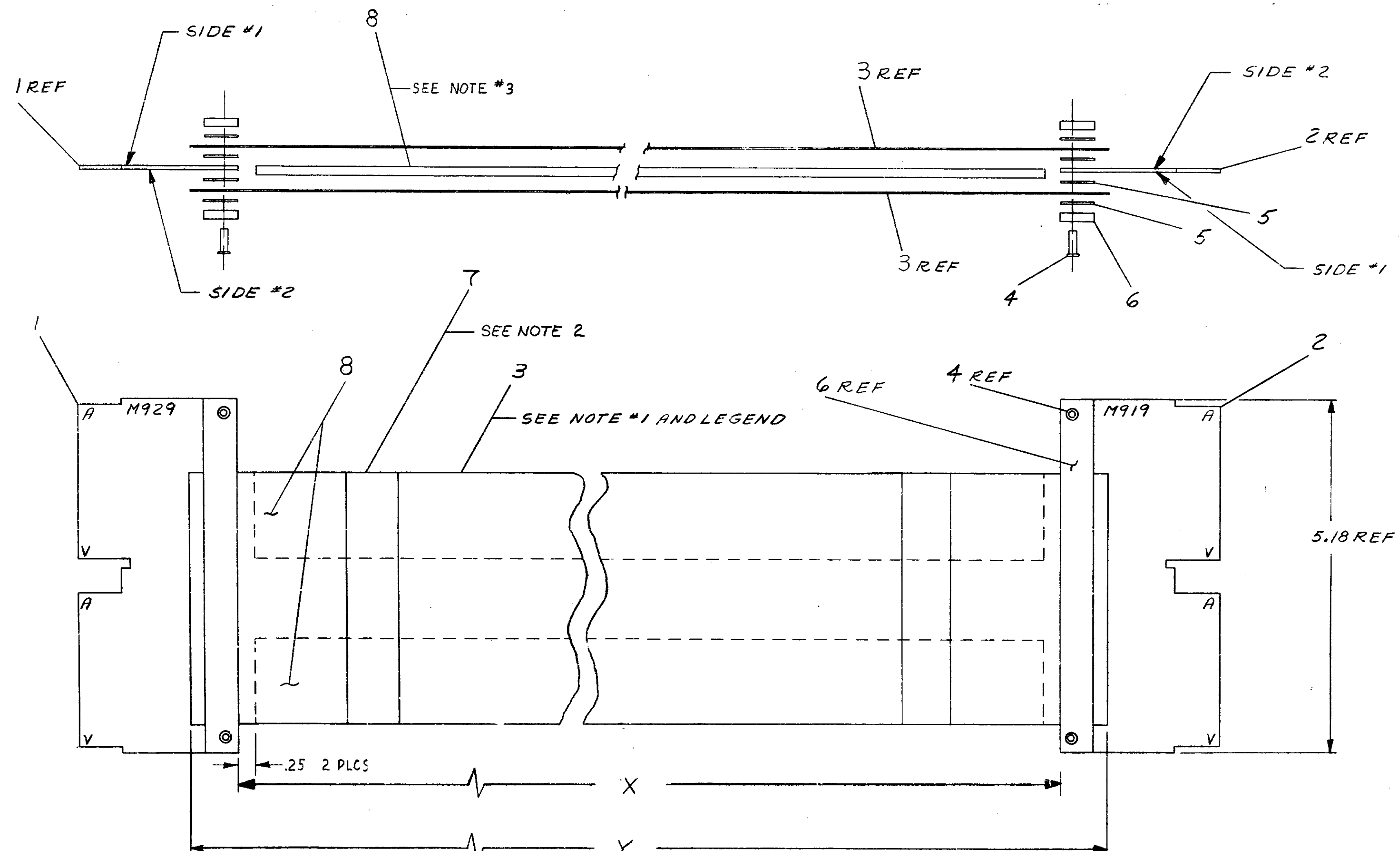
1. VARIATIONS AND LENGTHS SHOWN IN LEGEND ARE STANDARD. OTHER THAN STANDARD VARIATIONS WILL BE SPECIFIED BY ALPHANUMERIC DESIGNATION. FOR LENGTHS OTHER THAN FOOT INCREMENTS FROM ONE (1) FOOT THRU NINE (9) FEET, ELEVEN (11) INCHES.

A = 1"	G = 7"
B = 2"	H = 8"
C = 3"	J = 9"
D = 4"	K = 10"
E = 5"	L = 11"
F = 6"	

EXAMPLE: BC11A - 3D = 3'4".
LENGTHS WILL BE IN FOOT INCREMENTS FROM TEN (10) FEET ON, AND WILL BE SPECIFIED BY THE CORRESPONDING NUMERICAL DESIGNATION.
EXAMPLE: BC11A - 11 = 11 FEET.
THE TOLERANCE ON DIMENSION "A" WILL BE 2% OF THE FOOT INCREMENT.

2. FLEXPRINTS TO BE BOUND TOGETHER BY WRAPPING WITH BLACK ELECTRICAL TAPE (ITEM 7) EVERY 18 INCHES.

3. INSTALL 2 PIECES OF FOAM TAPE (ITEM 8) BETWEEN FLEX PRINT CABLES AS SHOWN.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
A/R	GRAY FOAM	9008881	8
A/R	BLK ELECTRICAL TAPE	9009260	7
4	CLAMP, CABLE	C-SC-1209764-0-0	6
A/R	TAPE #4032 1/2 W X 3 11/16 LG	9007834	5
4	EYELET GS-4-11 STIMSON	9006750	4
2	CABLE, "FLEXPRINT"	1700002-01	3
1	EXT. BUS CONN	A-PL-M919-0-0	2
1	BUS CONN	A-PL-M929-0-0	1

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP11

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES: DECIMALS ± .005; FRACTIONS ± 1/64; ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

DRN. DATE 11/14/69
CHK'D R. Buss DATE 11/19/69
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
NEXT HIGHER ASSY D-UA-11/20-0-0
SCALE 1/1
SHEET 1 OF 2

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: CABLE ASSY (BC11A)

SIZE D CODE UA NUMBER BC11A-0-0 REV. F

CHANGE NO. / REV.: BC11A-00001 A; BC11A-00002 B; BC11A-00003 C; BC11A-00004 D; BC11A-00005 E; BC11A-00006 F

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LEGEND

NUMBER	DIM "X" VARIATION	DIM "Y" (PRECUT) REF.
BC11A-Ø2	2'Ø" ± 0.5"	2'1.5"
BC11A-Ø3	3'Ø" ± 1.Ø"	3'1.5"
BC11A-Ø4	4'Ø" ± 1.Ø"	4'1.5"
BC11A-Ø5	5'Ø" ± 1.Ø"	5'1.5"
BC11A-Ø6	6'Ø" ± 1.Ø"	6'1.5"
BC11A-Ø7	7'Ø" ± 2.Ø"	7'1.5"
BC11A-Ø8	8'Ø" ± 2.Ø"	8'1.5"
BC11A-Ø9	9.Ø" ± 2.Ø"	9'1.5"
BC11A-1Ø	1Ø.Ø" ± 2.Ø"	1Ø'1.5"
BC11A-11	11'Ø" ± 3.Ø"	11'1.5"
BC11A-12	12'Ø" ± 3.Ø"	12'1.5"
BC11A-13	13'Ø" ± 3.Ø"	13'1.5"
BC11A-14	14'Ø" ± 3.Ø"	14'1.5"
BC11A-15	15'Ø" ± 4.Ø"	15'1.5"
BC11A-16	16'Ø" ± 4.Ø"	16'1.5"
BC11A-17	17'Ø" ± 4.Ø"	17'1.5"
BC11A-18	18'Ø" ± 4.Ø"	18'1.5"
BC11A-19	19'Ø" ± 5.Ø"	19'1.5"
BC11A-2Ø	2Ø'Ø" ± 5.Ø"	2Ø'1.5"
BC11A-21	21'Ø" ± 5.Ø"	21'1.5"
BC11A-22	22'Ø" ± 5.Ø"	22'1.5"
BC11A-23	23'Ø" ± 6.Ø"	23'1.5"
BC11A-24	24'Ø" ± 6.Ø"	24'1.5"
BC11A-25	25'Ø" ± 6.Ø"	25'1.5"
BC11A-ØF	Ø'6" ± 0.5"	0'7.5"
BC11A-8F	8'6" ± 2.Ø"	8'7.5"

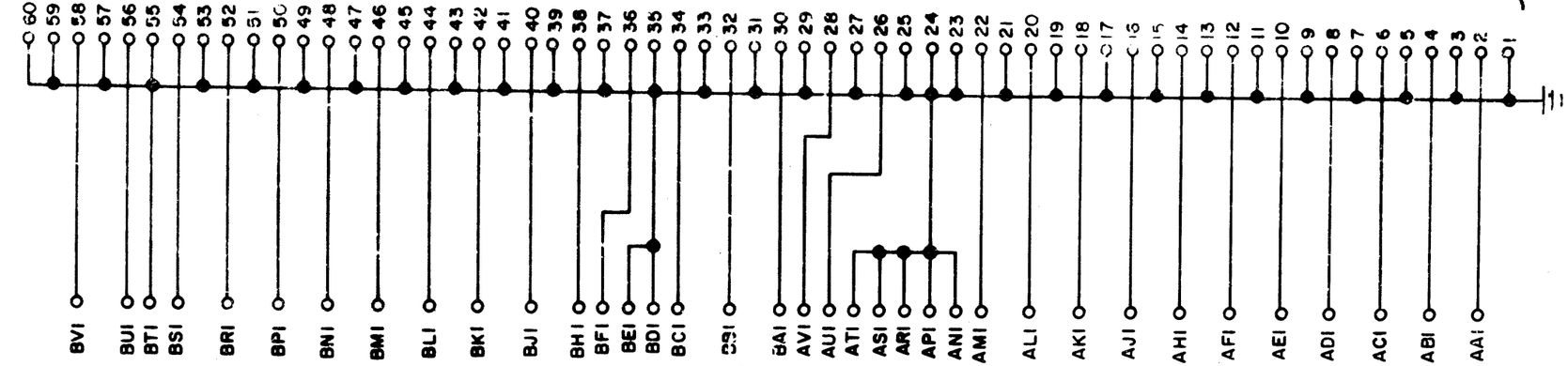
REVISIONS
CHANGE NO | REV

TITLE	SIZE	CODE	NUMBER	REV.
CABLE ASSY (BC11A)	D	UA	BC11A-Ø-Ø	F

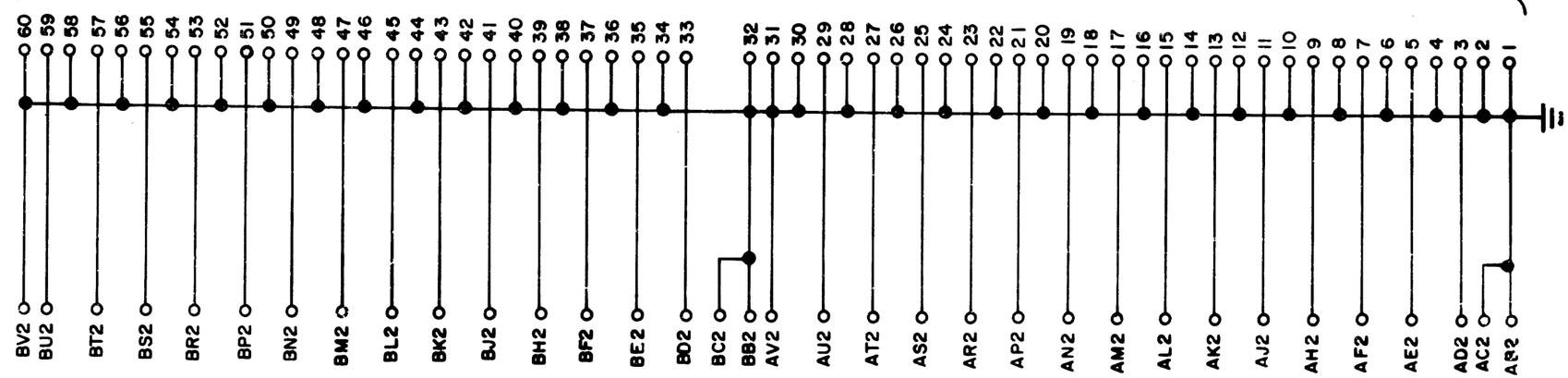
SCALE —/— SHEET 2 OF 2
DIST

SIZE B | CODE CS | NUMBER M919-0-1 | REV A

FLEXPRINT CONNECTOR #1



FLEXPRINT CONNECTOR #2



REVISIONS			
CHK	CHG NO	REV	A
	00001		

DRN	BUTLER	DATE 10-20-69
CHK'D	G. Hourigan	DATE 10-20-69
ENG	[illegible]	DATE 11-7-69
PROD		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

[redacted] EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: BUS CONNECTOR M919

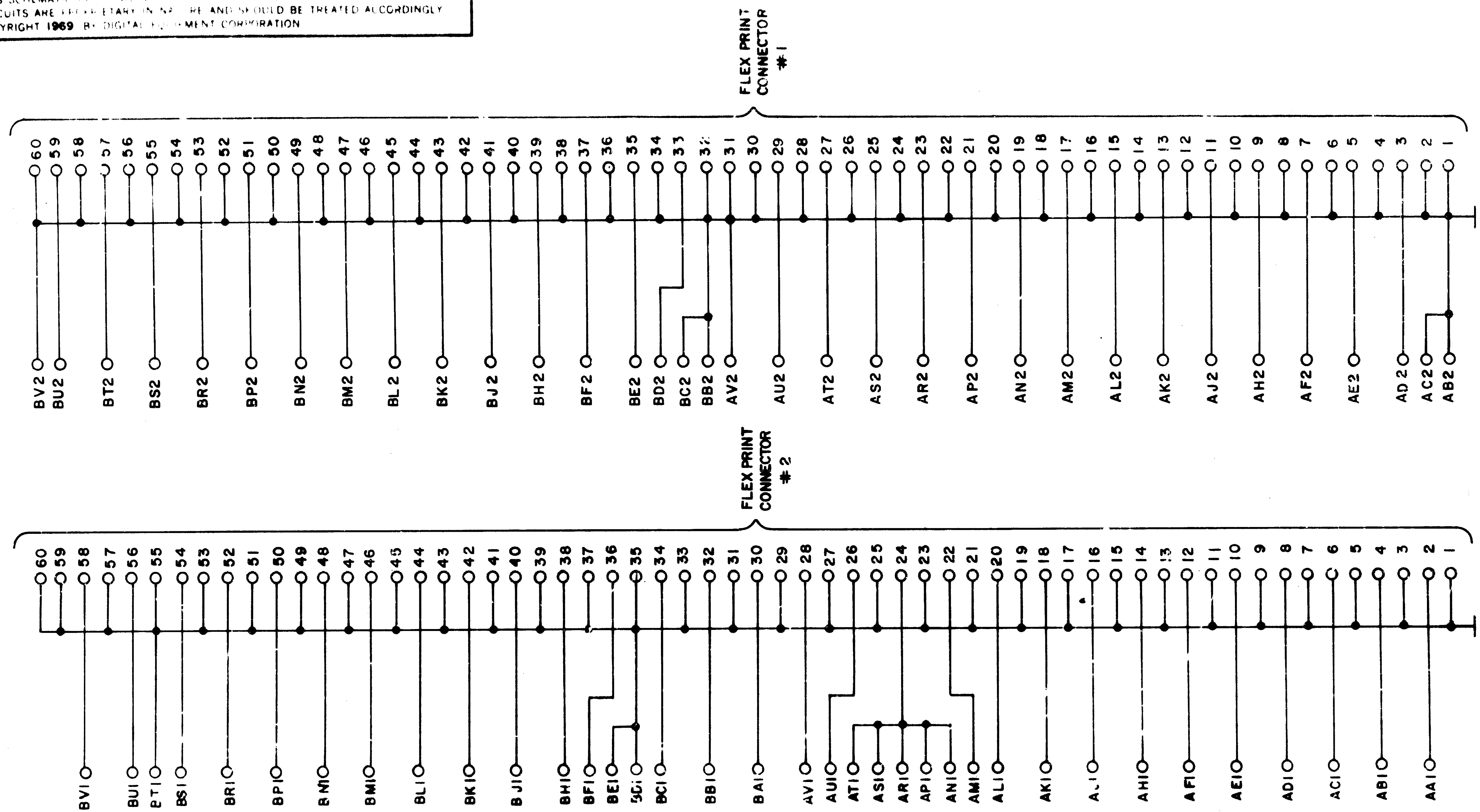
SIZE	CODE	NUMBER	REV.
B	CS	M919-0-1	A

PRINTED CIRCUIT REV: B

DEC FORM NO
DRB 102

TWIST 324.434 435 3

PINK


FLEX PRINT CONNECTOR #1
60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
BV2 BU2 BT2 BS2 BR2 BP2 BN2 BM2 BL2 BK2 BJ2 BH2 BF2 BE2 BD2 BC2 BB2 AV2 AU2 AT2 AS2 AR2 AP2 AN2 AM2 AL2 AK2 AJ2 AH2 AF2 AE2 AD2 AC2 AB2
FLEX PRINT CONNECTOR #2
60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
BV1 BU1 BT1 BS1 BR1 BP1 BN1 BM1 BL1 BK1 BJ1 BH1 BF1 BE1 BD1 BC1 BB1 BA1 AV1 AU1 AT1 AS1 AR1 AP1 AN1 AM1 AL1 AK1 AJ1 AH1 AF1 AE1 AD1 AC1 AB1 AA1

REVISIONS			
CHK	CHG NO	REV	

DRN	[signature]	DATE 10-14-69
CHK'D	[signature]	DATE 10-20-69
ENG	[signature]	DATE 11/8/69
PROD		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
BUS CONNECTOR M929

SIZE	CODE	NUMBER	REV.
B	CS	M929-0-1	

PRINTED CIRCUIT REV B

DEC FORM NO
DRB 102

434, 4353

W130 PARTS REFERENCE

ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	R1,R3,R5,R7,R9,R11,R13,R15,R17,R19,R21,R23, R25,R27,R29,R31,R33,R35,R37,R39,R41,R43, R45,R47,R49,R51,R53,R55	15K, 1/4W, 5% RES.	1300496	28
2	R2,R4,R6,R8,R10,R12,R14,R16,R18,R20,R22, R24,R26,R28,R30,R32,R34,R36,R38,R40, R42,R44,R46,R48,R50,R52,R54,R56	470, 1/4W, 5% RES.	1300316	28
3	Q1-Q56	DEC 3009B TRANSISTOR	1503100	56
4	P1	H807 BLOCK, CONNECTOR	1209123	1

W131 PARTS REFERENCE

ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	E1	DEC 7400N I.C.	1905575	1
2	C1	.01 MFD, 100V, 20% DC CAP.	1001610	1
3	C2	6.8 MFD, 35V, 20% ST CAP.	1000067	1
4	R1,R2,R3,R4,R5	3K, 1/4W, 5% RES.	1300432	5
5	R6	330, 1/4W, 5% RES.	1300295	1
6	Q1	DEC 3009B TRANSISTOR	1503100	1
7	I1-I28	LAMP, HUDSON, BLUE *2309G	1209219	28
8	S1-S4	SWITCH, TOGGLE, SPST, 6AT1-T2	1201168	4

NOTES:

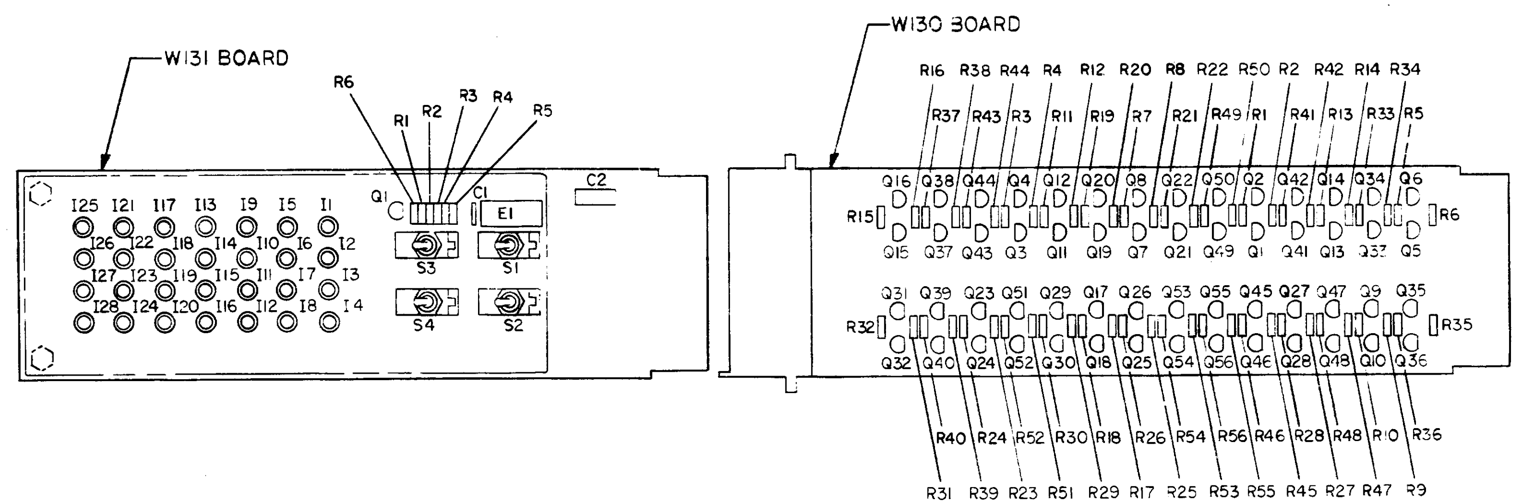
1. THE KM11 IS A TWO MODULE (W130, W131) OPTION TO THE KA11 TO AID MAINTENANCE. THIS PREWIRED OPTION IS INSTALLED BY INSERTING THE W130 MODULE INTO LOCATION B02 AND INSERTING THE W131 MODULE INTO THE W130. NOTE THAT THE SWITCHES AND LIGHTS FACE TOWARD AND EXTEND BELOW THE CONSOLE. THE BOTTON COVER MUST BE REMOVED WITH THE CHASSIS EXTERNAL TO THE CABINET.

2. LABELS FOR THE INTERNAL MACHINE STATES LAMPS ARE NOTED ON THE W131 ETCH BOARD. SWITCHES PROVIDE A MANUAL CLOCK AND BUS RESPONSE AND ARE ACTIVE WHEN THE TOGGLE IS TOWARD THE NAME. NORMAL MACHINE OPERATION REQUIRES THAT ALL SWITCHES BE IN THE OFF POSITION.

3. "M CLK ENABLE" AND "M CLK" PROVIDE A MANUAL CLOCK FOR THE KA11. "M CLK ENABLE" IS ACTIVATED WHILE THE PROCESSOR IS HALTED. EACH TOGGLE OF "M CLK" THEN STEPS THE PROCESSOR THROUGH THE SMALLEST PROCESSOR CLOCK INTERVALS, THE R/W STATES. THE NEXT HIGHEST CLOCK INTERVAL (S CLK) IS PROVIDED BY FOUR TOGGLES (2 COMPLETE SWITCH CYCLES) AND INDICATED BY THE R/W2 LAMP. R/W2 IS THE LAST (OR REST) R/W STATE IN A "S CLK" INTERVAL. NORMAL OPERATION IS RESUMED WHEN "M CLK" AND THEN "M CLK ENABLE" ARE RETURNED TO OFF.

4. "NO TIME OUT" AND "SSYN" PROVIDE A MANUAL BUS RESPONSE TO THE PROCESSOR. IT IS USED WHEN OTHER DEVICES ARE NOT AVAILABLE. NO TIME OUT IS ACTIVATED, WHILE THE PROCESSOR IS HALTED, TO ELIMINATE AN ERROR TRAP ON MANUAL "SSYN". AT THE APPROPRIATE TIMES IN A BUS TRANSFER "SSYN" IS ACTIVATED AND DEACTIVATED.

COMPONENT PLACEMENT



PIN NOMENCLATURE

MODULE	PROCESSOR
A	B

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP11

DO NOT SCALE DRAWING. UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES: DECIMALS ±.005, FRACTIONS ±1/64, ANGLES ±0°30'. FINAL SURFACE QUALITY. REMOVE BURRS AND BREAK SHARP CORNERS.

MATERIAL —

FINISH —

DRN. / CHK'D. / ENG. / PROD. ENG. / DATE 5/4/70

NEXT HIGHER ASSY: A-ML-KM11-0

SCALE 1/1 — SHEET 1 OF 3

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: MAINTENANCE BOARD (1 & 2) KM-1

SIZE D, CODE BS, NUMBER KM11-0-MB

REVISIONS: REV / CHANGE NO. / CHK

DEC FORM NO DRD 100

CONNECTOR AT REAR OF MODULE TO EXTEND MAINTENANCE BOARD 2, W131 (KM-3).

+5V — BØ2A2 — A2 — +5V
+8V — BØ2B1 — B1 — +8V
KM-3 M CLK ENABLE L — BØ2V2 — V2 — KM-2 M CLK ENABLE L
KM-3 M CLK L — BØ2U1 — U1 — KM-2 M CLK L
KI3-2 TIME OUT (1) — BØ2B2 — B2 — KM-2 TIME OUT (1)H
BUS SSYN L — BØ2A1 — A1 — BUS SSYN L

KI-3 BSR Ø H — BØ2R2 — R29 15K — Q29 Q30 — R30 470Ω
KI-3 BSR 1 H — BØ2E2 — R21 15K — Q21 Q22 — R22 470Ω
KI-3 BSR 3 H — BØ2H1 — R1 15K — Q1 Q2 — R2 470Ω
KI-3 BSR 7 H — BØ2L2 — R43 15K — Q43 Q44 — R44 470Ω

U1 — KM-2 LAMP BSRØ L
T1 — KM-2 LAMP BSR 1 L
R2 — KM-2 LAMP BSR 3 L
— KM-2 LAMP BSR 7 L
C2 — GND
GND — C2, T1
R1 — KM-2 LAMP BSR 15 L
E1 — KM-2 LAMP BSR 14 L
H2 — KM-2 LAMP BSR 12 L
— KM-2 LAMP BSR 8 L

KI-3 BSR 15 H — BØ2W2 — R39 15K — Q39 Q40 — R40 470Ω
KI-3 BSR 14 H — BØ2D2 — R49 15K — Q49 Q50 — R50 470Ω
KI-3 BSR 12 H — BØ2H2 — R19 15K — Q19 Q20 — R20 470Ω
KI-3 BSR 8 H — BØ2J2 — R11 15K — Q11 Q12 — R12 470Ω

D1 — KM-2 LAMP ISR Ø L
E2 — KM-2 LAMP ISR 1 L
J2 — KM-2 LAMP ISR 3 L
— KM-2 LAMP ISR 7 L

KI-3 ISR Ø H — BØ2S1 — R55 15K — Q55 Q56 — R56 470Ω
KI-3 ISR 1 H — BØ2M2 — R37 15K — Q37 Q38 — R38 470Ω
KI-3 ISR 3 H — BØ2F2 — R7 15K — Q7 Q8 — R8 470Ω
KI-3 ISR 7 H — BØ2E1 — R33 15K — Q33 Q34 — R34 470Ω

N1 — KM-2 LAMP ISR 15 L
K2 — KM-2 LAMP ISR 14 L
— KM-2 LAMP ISR 12 L
— KM-2 LAMP ISR 8 L

KI-3 ISR 15 H — BØ2R1 — R45 15K — Q45 Q46 — R46 470Ω
KI-3 ISR 14 H — BØ2K1 — R31 15K — Q31 Q32 — R32 470Ω
KI-3 ISR 12 H — BØ2S2 — R17 15K — Q17 Q18 — R18 470Ω
KI-3 ISR 8 H — BØ2M1 — R9 15K — Q9 Q10 — R10 470Ω

M — KM-2 LAMP N (1) L
S1 — KM-2 LAMP E (1) L
L2 — KM-2 LAMP V (1) L
M2 — KM-2 LAMP C (1) L

K9-5 N (1)H — BØ2P1 — R27 15K — Q27 Q28 — R28 470Ω
K9-5 E (1)H — BØ2L1 — R51 15K — Q51 Q52 — R52 470Ω
K9-5 V (1)H — BØ2F1 — R5 15K — Q5 Q6 — R6 470Ω
K9-5 C (1)H — BØ2D1 — R13 15K — Q13 Q14 — R14 470Ω

E1 — KM-2 LAMP T (1) L
K1 — KM-2 LAMP TRAPS L
N2 — KM-2 LAMP B MSYN L
— KM-2 LAMP B SSYN L

K9-4 T (1)H — BØ2J1 — R15 15K — Q15 Q16 — R16 470Ω
KI2-3 TRAPS H — BØ2C1 — R41 15K — Q41 Q42 — R42 470Ω
KI3-3 B MSYN H — BØ2T2 — R35 15K — Q35 Q36 — R36 470Ω
KI3-3 B SSYN H — BØ2U2 — R53 15K — Q53 Q54 — R54 470Ω

D1 — KM-2 LAMP R/W 2 L
L1 — KM-2 LAMP TST1 L
K2 — KM-2 LAMP TST2 L
— KM-2 LAMP ISR 2 L

KI-2 R/W2 H — BØ2K2 — R3 15K — Q3 Q4 — R4 470Ω
KM-2 TST1 H — BØ2N1 — R47 15K — Q47 Q48 — R48 470Ω
KM-2 TST2 H — BØ2V1 — R25 15K — Q25 Q26 — R26 470Ω
KI-3 ISR 2 H — BØ2P2 — R23 15K — Q23 Q24 — R24 470Ω

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 11		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
FINISH

DRN. R. Bellows — DATE 12-18-69
CHK'D — DATE 1/25/70
ENG. — DATE 3-6-70
PROJ. ENG. — DATE 3-6-70
PROD. — DATE 3/5/70
NEXT HIGHER ASSY A-ML-KM11-Ø
SCALE NONE
SHEET 2 OF 3

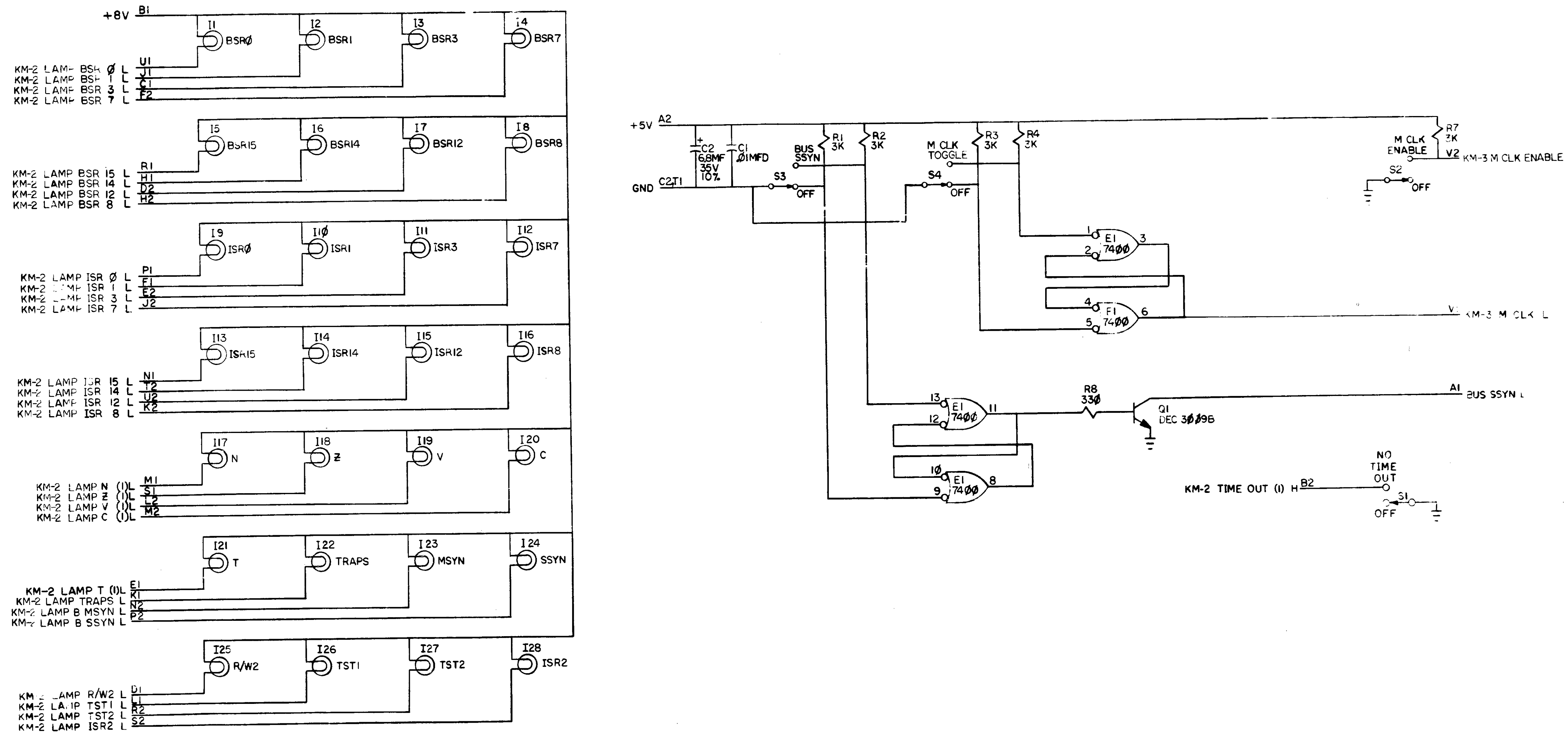
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
MAINTENANCE BOARD (1)
W13Ø KM-2

SIZE D | CODE BS | NUMBER KM11-Ø-MB | REV.
DIST.

REVISIONS | REV | CHANGE NO. | CHK

DEC FORM NO DEC 102A


+8V B1
I1 BSRØ
I2 BSR1
I3 BSR3
I4 BSR7
KM-2 LAMP BSR Ø L U1
KM-2 LAMP BSR 1 L J1
KM-2 LAMP BSR 3 L C1
KM-2 LAMP BSR 7 L F2
I5 BSR15
I6 BSR14
I7 BSR12
I8 BSR8
KM-2 LAMP BSR 15 L R1
KM-2 LAMP BSR 14 L H1
KM-2 LAMP BSR 12 L D2
KM-2 LAMP BSR 8 L H2
I9 ISRØ
I1Ø ISR1
I11 ISR3
I12 ISR7
KM-2 LAMP ISR Ø L P1
KM-2 LAMP ISR 1 L F1
KM-2 LAMP ISR 3 L E2
KM-2 LAMP ISR 7 L J2
I13 ISR15
I14 ISR14
I15 ISR12
I16 ISR8
KM-2 LAMP ISR 15 L N1
KM-2 LAMP ISR 14 L T2
KM-2 LAMP ISR 12 L V2
KM-2 LAMP ISR 8 L K2
I17 N
I18 Z
I19 V
I20 C
KM-2 LAMP N (1)L M1
KM-2 LAMP Z (1)L S1
KM-2 LAMP V (1)L L2
KM-2 LAMP C (1)L M2
I21 T
I22 TRAPS
I23 MSYN
I24 SSYN
KM-2 LAMP T (1)L E1
KM-2 LAMP TRAPS L K1
KM-2 LAMP B MSYN L N2
KM-2 LAMP B SSYN L P2
I25 R/W2
I26 TST1
I27 TST2
I28 ISR2
KM-2 LAMP R/W2 L D1
KM-2 LAMP TST1 L L1
KM-2 LAMP TST2 L R2
KM-2 LAMP ISR2 L S2
+5V A2
GND C2T1
C2 6.8MF 35V 10%
C1 .Ø1MFD
BUS SSYN
S3 OFF
R1 3K
R2 3K
M CLK TOGGLE
S4 OFF
R3 3K
R4 3K
E1 7400
F1 7400
R7 3K
M CLK ENABLE
V2 KM-3 M CLK ENABLE L
S2 OFF
V1 KM-3 M CLK L
R8 330
Q1 DEC 3009B
A1 BUS SSYN L
NO TIME OUT
KM-2 TIME OUT (1) H B2
S1 OFF

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 11		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY √
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
FINISH

DRN. A. Sudia DATE 12-17-69
CHKD. DATE 4/29/70
ENG. DATE 3-6-70
PROJ. ENG. DATE 3-6-70
PROD. Macdonald DATE 3/9/70

NEXT HIGHER ASSEMBLY A-ML-KM11-Ø
SCALE NONE
SHEET 2 OF 3

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE MAINTENANCE BOARD(2)
W131 KM-3

SIZE D CODE BS NUMBER KM11-Ø-MB REV.

DIST.

REVISIONS | REV | CHANGE NO | CHK

DEC FORM 10 DPC 102A

3 D	7 D	3 B	7 B	11 B	15 B	BUT IR D
2 D	6 D	2 B	6 B	10 B	14 B	BUSY D
1 D	5 D	1 B	5 B	9 B	13 B	SSYN D
0 D	4 D	0 B	4 B	8 B	12 B	MSYN D

BUS SSYN →	AC LO →
M CLK PULSE →	M CLK EN ⇒

KD11-B KM1

D-DIM WHEN ASSERTED
B-BRIGHT WHEN ASSERTED

5509081-0-9

FIRST USED ON DRT, MIDR
11/05

REVISIONS | REV. | CHANGE NO. | CHK

SPEC# 9200100-94 (BLACK)

DRN. D Matteson	DATE 5-11-72
CHK'D. [illegible]	DATE 5-[illegible]-72
ENG.	DATE [illegible]/2
PROJ. ENG. [illegible]	DATE 5-22-72
PROD. RK Peterson	DATE 5/24/72
NEXT HIGHER ASSY C-IN-5509081-0-0	
SCALE	
SHEET OF	

Digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
MAINT MODULE OVERLAY
(11/05 - KM1)

SIZE	CODE	NUMBER	REV.
A	55	5509081 0-9	

DIST

3 D	7 D	03 B	S3 D	ALU M B	AUXC D	MSYN D
2 D	6 D	02 B	S2 D	CIN B	BUT JJ D	SSYN D
1 D	5 D	01 B	S1 D	EALU B	BUT UN D	C1 D
0 D	4 D	00 B	S0 D	SPWR B	CNST D	C0 D

D-DIM WHEN ASSERTED
B-BRIGHT WHEN ASSERTED

BUS SSYN →	AC LO →
M CLK PULSE →	M CLK EN →

KD11 B KM2

5509081-0-10

FIRST USED ON OPT/MOD
11/05

REVISIONS

REV.	CHANGE NO.	CHK

SPEC# 9200160-94 (BLACK)

DRN. D. Matson	DATE 5/11/72
CHK'D. [illegible]	DATE [illegible]
ENG. [illegible]	DATE [illegible]
PROJ. ENG. [illegible]	DATE 5-23-72
PROD. R.V. Peterson	DATE 5/24/72
NEXT B ASSY C-IA-5509081-0-0	
SCALE	
SHEET OF	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
MAINT MODULE OVERLAY
(11/05 - KM2)

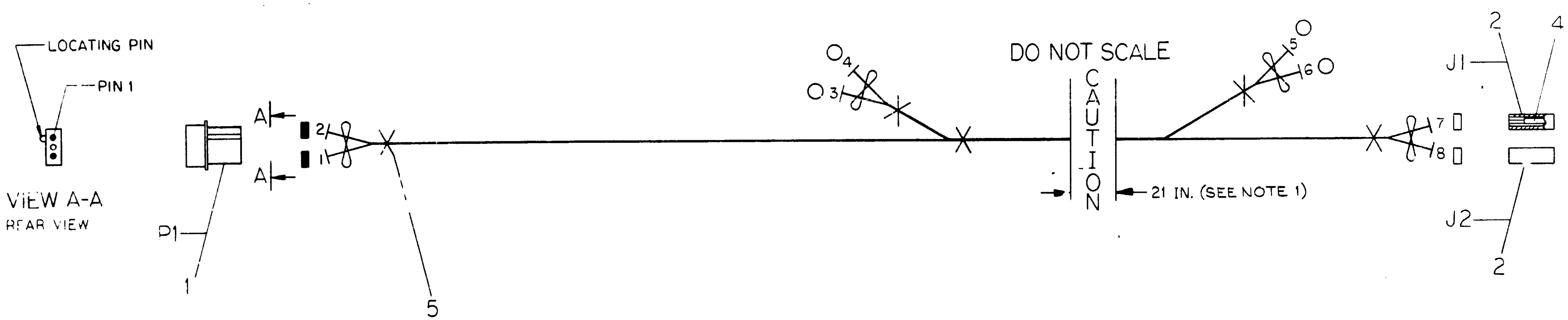
SIZE	CODE	NUMBER	REV.
A	SS	5509081-0-10	

DIST. C

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	FROM POINT	FROM CONNECTION	FROM WITH	TO POINT	TO CONNECTION	TO WITH	SIGNAL
7	*18 TWP	BLU	2	P3 -1	3	7	J1 -1	4	KEY SW
		BLK	1	P3 -3	3	8	J2 -1	4	KEY SW
8	*18 TWP	RED	3	—	6	6	—	6	+5
		BLK	4	—	6	5	—	6	GND

NOTES:
1. APPLY TIE WRAP (ITEM * 5) EVERY 4 IN..



PARTS LIST

SYM.	QTY.	DESCRIPTION	PART NO.	ITEM NO.
	28"	WIRE, *18 TWP RED/BLK	9107430-02	8
	38"	WIRE, *18 TWP BLU/BLK	9107430-06	7
○	4	CONN., SOLDERLESS RED	9007917	6
×	2	TIE WRAP 1 M	9007031	5
▯	2	FASTAB, SOCKET	1210820-2	4
▮	2	PIN, MALE	1209378-1	3
	2	HOUSING, FASTAB SKT	1210820-1	2
	1	HOUSING, 3 PIN	1209351-03	1

FIRST USED ON OPTION/MODEL: 11/05-S

DIMENSIONAL TOLERANCE
DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
X.XX ± 0,10	.XXX = ± .005	±0° 30'
X.X ± 0,5	.XX = ± .02	
X ± 2	.X = ± .1	

THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL: SEE PARTS LIST
FINISH: —//—

DRN.	Carl McCoy	DATE 4-16-74
CHK'D.	[signature]	DATE 5-14-74
ENG.	[signature]	DATE
PROJ. ENG.	[signature]	DATE
PROD.	[signature]	DATE 8/7/74

NEXT HIGHER ASSY.: D-UA-11/05-?

SCALE 1/1 SHEET 1 OF 1

digital

TITLE: CONSOLE POWER HARNESS

SIZE	CODE	NUMBER	REV.
D	IA	7009908-0-0	

DIST.

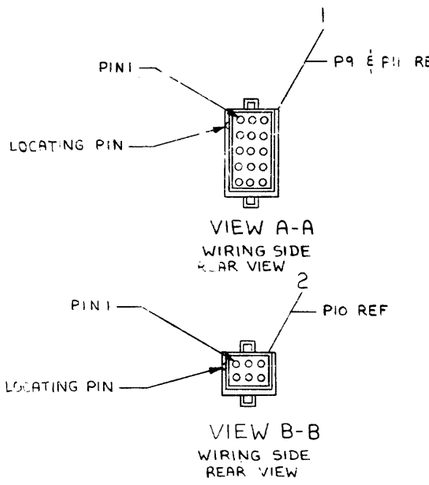
WIRING TABLE

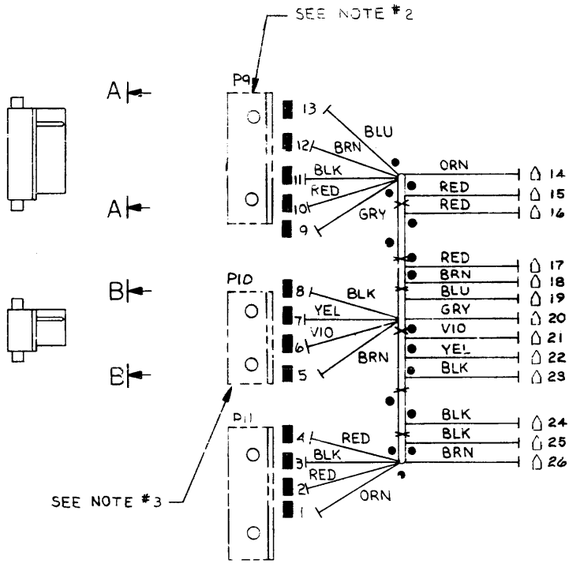
ITEM NO	DESCRIPTION AWG	COLOR	FROM POINT	FROM CONNECTION	FROM WITH	TO POINT	TO CONNECTION	TO WITH	SIGNAL	LENGTH
7	#14	GRN	1	P11 - 3	3	14	———	—	+20V	7½
5	#14	RED	2	P11 - 1		17	———	—	+5V	6
6	#14	BLK	3	P11 - 8		23	———	—	GND	4¼
4	#14	RED	4	P11 - 4		15	———	—	+5V	7⅛
10	#18	BRN	5	P10 - 2		26	———	—	LTC	5½
12	#18	YEL	7	P10 - 4		22	———	—	AC LO	3¾
11	#18	VIO	6	P10 - 3		21	———	—	DC LO	3¾
3	#14	BLK	8	P11 - 1		24	———	—	GND	4⅞
8	#18	GRY	9	P9 - 2		20	———	—	+15V	7¼
5	#14	RED	10	P9 - 1		16	———	—	+5V	3½
6	#14	BLK	11	P9 - 8		25	———	—	GND	7¼
10	#18	BRN	12	P9 - 14		18	———	—	-15V	4¾
9	#18	BLU	13	P9 - 13	3	19	———	—	-15V	5⅛

SEE NOTE #6

NOTES:

1. USE TIE WRAPS (X) ITEM #4 AT BREAK-OUT POINTS SHOWN
2. USE CONN. BRKT. #C-MD-9305761-H15-Ø, MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-15.
3. USE CONN. BRKT. #C-MD-9305761-H6-Ø, MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-06.
4. DOT (●) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.
5. COMPONENTS TO BE LABELED WITH COMPONENT IDENTIFIERS USING DECALS ITEM #13.
6. WIRE LENGTH TOLERANCES WILL BE +⅛ INCHES, -0





	AR	DECALS, CABLE	A-DC-7409872-0-0	13
	4"	WIRE #18 AWG YEL	9107360-44	12
	4"	WIRE #18 AWG VIO	9107360-77	11
	12"	WIRE #18 AWG BRN	9107360-11	10
	6"	WIRE #18 AWG BLU	9107360-66	9
	8"	WIRE #13 AWG GRY	9107360-88	8
	8"	WIRE #14 AWG ORN	9107370-33	7
	19	WIRE #14 AWG BLK	9107370-00	6
	19	WIRE #14 AWG RED	9107370-22	5
X	6	TIE, WRAP	9007031	4
■	13	PIN, MALE	1209378-01	3
	1	CONN. 6 PIN HOUSING	1209351-06	2
	2	CONN. 15 PIN HOUSING	1209351-15	1

PARTS LIST

FIRST USED ON OPTION/MODEL	SYM.	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/05-					

DIMENSIONAL TOLERANCE
DIMENSIONS ARE ~~MILLIMETERS~~ INCHES
UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
XXX ± 0.10	XXX ± .005	±0° 30'
XX ± 0.5	XX ± .02	
X ± 2.5	X ± .1	

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

THIRD ANGLE PROJECTION

MATERIAL SEE PARTS LIST
FINISH

		DATE
DRN.	[illegible]	6/26/74
CHK'D.	[illegible]	6/26/74
ENG.	[illegible]	7/12/74
PROJ. ENG.	C. Hilton	7/12/74
PROD.	[illegible]	8/7/74

NEXT HIGHER ASSY. D-AD-7010594-0-0
SCALE 1/1
SHEET 1 OF 1

digital

TITLE
POWER HARNESS
3.5 IN

SIZE	CODE	NUMBER	REV.
D	IA	7010113-0-0	A

DIST.

SIZE D CODE IA NUMBER 7010113-0-0 REV. A

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

MADE BY E. Pellegrini	CHECKED C. Teschner	SECTION
DATE 5/30/72	DATE 5-31-72	
ENG B.D. Wiebe	PRODR K. Peterson	ISSUED SECT.
DATE 5-31-72	DATE 5/31/72	

LEGEND

D	DOCUMENT
DN	DOCUMENT CHANGE NOTICE
PA	PAPER TAPE ASCII
PB	PAPER TAPE BINARY
PM	PAPER TAPE READ-IN-MODE

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY VARIATION: ALL MODELS
1	LIBKIT 11/05 BASEA-A-K	BASIC DIAGNOSTIC KIT	*
2	LIBKIT 11/05 XBASA-A-K	SYSTEM SOFTWARE KIT	*
		NOTE: THESE ITEMS ARE TO BE SHIPPED ONLY	
		WHEN SHOWN ON THE CONSTRUCTION REQ.	

QUANTITY VARIATION — KIT CHECK BY ____ DATE ____ — INSTALLATION CHECK BY ____ DATE ____

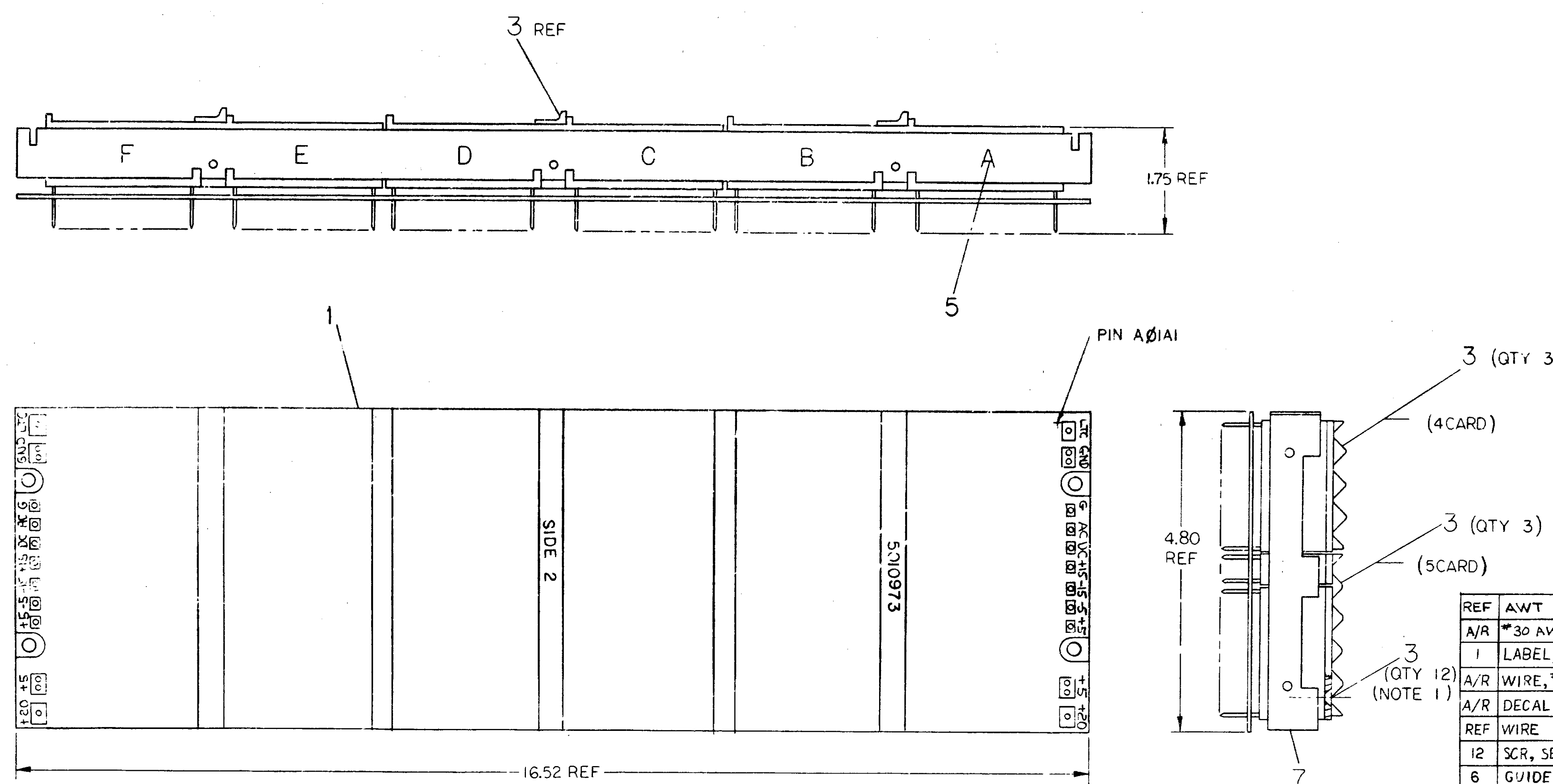
TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
PDP-11/05 SOFTWARE LIST	11/05-0-0	A	SL	11/05-0-05		
	SHEET OF	DIST.				

DEC FORM NO [illegible]
DRA 120

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	COLOR	FROM CONN	FROM WITH	TO CONN	TO WITH	SIGNAL NAME
8	#30 TWP	BLK	AØ4L1	SELF	FØ1N1	SELF	DPH SER IN L
		WHT	AØ4P1		FØ1P1		DPH SI -15 L
8	#30 TWP	BLK	BØ4E1		FØ1E2		DPH SER O L
		WHT	BØ4M1		FØ1J2		DPH SO-15 L
8	#30 TWP	BLK	BØ4P1		FØ1K2		DPH RDR ENB L
		WHT	BØ4K1	SELF	FØ1R1	SELF	DPH RE-15 L

NOTES:
1. REPLACE SCREW IN PRINTED CIRCUIT BLOCK WITH ITEM #3 12 PLACES.
2. FOR 11/05-S, POWER HARNESS IS SOLDERED TO SLOT A END.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
REF	AWT REV STATUS	A-WT-7009922-0	9
A/R	#30 AWG TWP (BLK/WHT)	9107720-09	8
1	LABEL, AWT REV STATUS	A-DC-7411881-0-0	7
A/R	WIRE, #30 AWG (YEL)	9105740-44	6
A/R	DECAL, 21 POINT (LTR)	B-DC-5308753-0-0	5
REF	WIRE LIST	K-WL-7009922-0-1	4
12	SCR, SELF TAP #8-32 X .81	9009070	3
6	GUIDE, CARD CENTER	C-PS-1210698-0-0	2
1	BACK PLANE ASSY	D-IA-7009921-0-0	1

PARTS LIST

FIRST USED ON OPTION/MODEL: 11/Ø5-S

DIMENSIONAL TOLERANCE
DIMENSIONS ARE ~~MILLIMETERS~~ INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
X.XX = ±0.10 X.X = ±0.5 X = ±2	.XXX = ±.005 .XX = ±.02 .X = ±.1	±0° 30'

THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL: SEE PARTS LIST
FINISH: —

		DATE
DRN.	Carl McCoy	5-7-74
CHK'D	D. Maly	7-29-74
ENG	D. E. Janson	8-20-74
PROJ ENG.	D. E. Janson	8-20-74
PROD.	R. Peterson	8/21/74

NEXT HIGHER ASSY. D-AD-7010594-0-0
SCALE 1/1
SHEET 1 OF 1

digital

TITLE: WIRED ASS'Y

SIZE	CODE	NUMBER	REV.
D	AD	7009922-0-0	A

DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DATE 9/7/73

TITLE MF11-U/UP CUSTOMER ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG P. Durant	APPD D. Shannon 12-5-73	SIZE A	CODE SP	NUMBER MF11-U-3	REV

DEC FORM NO. DRA 107A

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE MF11-U/UP CUSTOMER ACCEPTANCE PROCEDURE

1.0 Overview

1.1 This procedure contains directions pertaining to field assurance of the correct operation of an MF11-U/UP.

1.2 Prior to this acceptance, the option will have been installed, inspected, and connected and have power applied. Generally the memories shipped as add ons will have been configured and tested at the factory with their addresses beginning at 000000. Prior to running diagnostics, these memories must be re-configured for the customers system, as directed in the MF11-U/UP Customer Print Set. (See M8293 MAT A)

1.3 If this option is part of a PDP-11/40-11/45 installation, as opposed to an add on, then the system acceptance procedures provided with those systems should be utilized in place of this procedure.

2.0 Inspection

2.1 Assure presence of the following documentation:

2.1.1 Customer Acceptance Form

2.1.2 Key sheets (2)

2.1.3 Accessory Checklist

2.1.4 LIBKIT list for MF11-U/UP

2.1.5 ECO Status Sticker (for mounting in expansion box)

2.1.6 Waiver Sheet (if applicable)

2.177 Documentation Update Card (if applicable).

2.2 Utilize the accessory checklist, and LIBKIT list to verify that all items are present.

3.0 Diagnostic Testing:

3.1 The following tests must be run without error for the times specified:

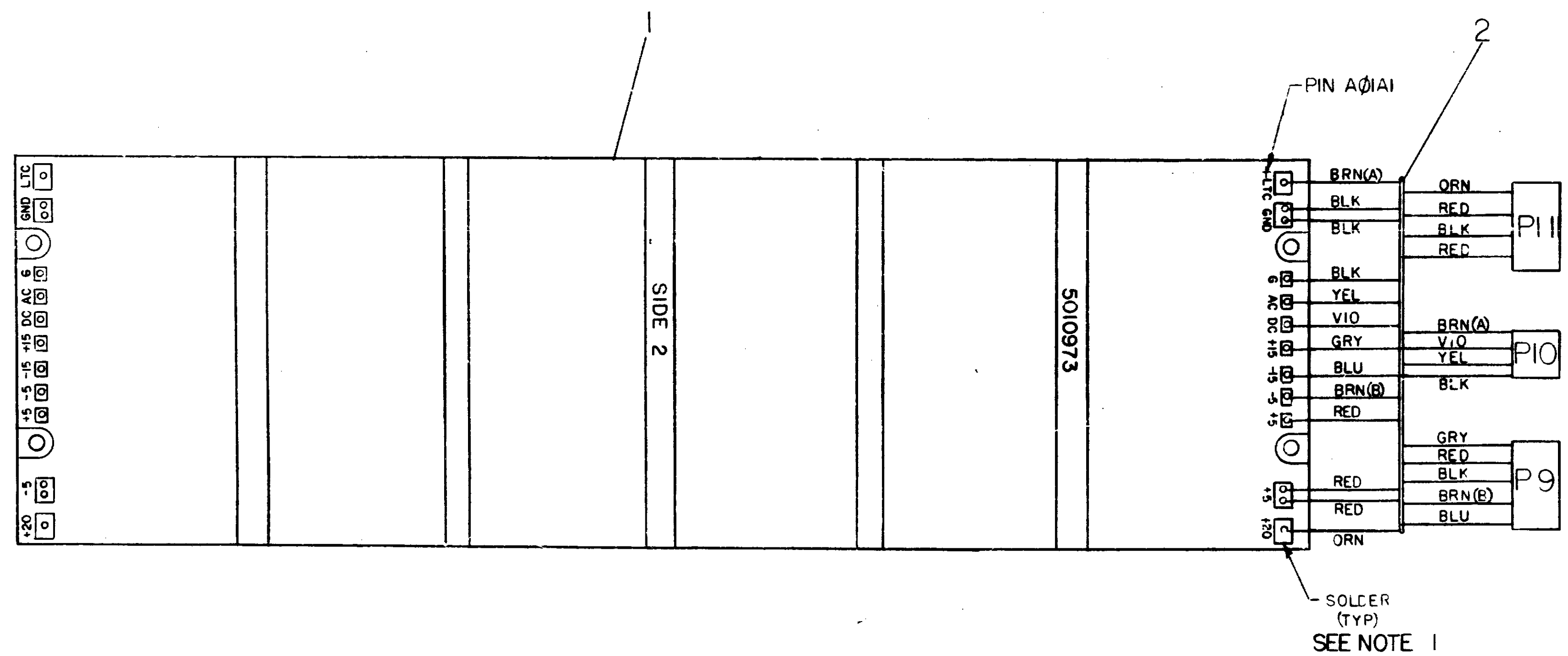
*Maindec-11-DZQMA Memory I/O	5 min/MF11-U/UP
Maindec-11-DZQMB Memory Exerciser	5 min/MF11-U/UP
Maindec-11-DCMFA Parity Test (MF11-UP Memory Only)	2 passes/MF11-U/UP

*Only for add-on memories in systems with NPR devices.

	SIZE A	CODE SP	NUMBER MF11-U-3	REV

DEC FORM NO DEC 16-(381)-1022-N370
DRA 108

NOTES:
1. REMOVE EXCESS SOLDER FROM EYELETS PRIOR TO HARNESS INSTALLATION.
2. THE WIRES WHICH TERMINATE ON BACK PANELS MUST BE STRIPPED APPROXIMATELY 3/16 INCHES.



REF	DESCRIPTION	DWG./PART NO.	ITEM NO.
REF	AWT REV. STATUS	A-WT-7009922-0	3
1	PWR. HARNESS 3.5"	D-IA-7010113-0-0	2
1	WIRED ASS'Y	D-AD-7009922-0-0	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'

SURFACE QUALITY IN MICROINCHES

CLASS OF ACCURACY (CHECK ONE)	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
MEDIUM	±.004	±.008	±.012	±.016	±.024	±.04
PREFERRED	±.012	±.016	±.025	±.04	±.063	±0.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL: SEE PARTS LIST
FINISH: —

DRN. 12-17-74
CHK'D 12-18-74
ENG. 12-20-74
PROJ. ENG. E. Anton 12-20-74
PROD. 12/20/74

NEXT HIGHER ASSY. E-UA-11/Ø5-S-Ø
SCALE 1/1
SHEET 1 OF 1

FIRST USED ON 11/Ø5-S

digital

TITLE
LOGIC ASSEMBLY

SIZE D | CODE AD | NUMBER 7010594-0-0 | REV. A

DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY E. Pellegrini DATE 5/26/72	CHECKED C. Teschner DATE 5-31-72	SECTION
ENG R D Weeks DATE 5-31-72	PROD R K. Peterson DATE 5/31/72	ISSUED SECT.

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

ITEM NO	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION 11/05	11/10	11/05-S	11/10-S				KIT CHECK BY ___ DATE ___	INSTALLATION CHECK BY ___ DATE ___
1	7008360-0-0	CABLE ASSEMBLY	1	1	-	-					
2	11/05-0	CUSTOMER PRINT SET	1	1	-	-					
3	DEC-11-H05AA-A-D	MAINTENANCE MANUAL	*	*	-	-					
4	LIBKIT 11/05 BASEA-A-K	BASIC DIAGNOSTIC KIT	*	*	*	1					
5	LIBKIT 11/05 XBASA-A-K	SYSTEM SOFTWARE KIT	*	*	*	*					
6	DEC-11/05 (5.25) IPB	ILLUSTRATED PARTS BREAKDOWN FOR 11/05 5.25"	1	1	-	-					
		16 BIT COMPUTER									
7	B-DD-11/05	PDP 11/05 PRINT SET	1	1	-	-					
8	B-DD-11/05-S	PDP 11/05-S. 11/10-S PRINT SET	-	-	1	1					
		*NOTE: THESE ITEMS ARE TO BE SHIPPED ONLY									
		WHEN SHOWN ON THE CONSTRUCTION REQ.									
9	DEC-11-HKDBB-A-D	KD11-B PROCESSOR MANUAL	-	-	*	1					
10	DEC-11-HØ5SS-A-D	PDP-11/Ø5-S. 11/10-S SYSTEMS MANUAL	-	-	*	1					
11	DEC-11-HBKEF-A-D	BA11-K MOUNTING BOX MANUAL	-	-	*	1					
12	DEC-11-HMFMA-B-D	MF11-U/UP CORE MEMORY MANUAL	-	-	*	1					
13	DEC-11-H55-PK-A-D	PDP-11/05 OEM MANUALS PACKAGE	*	*	*	*					

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV	ECO NO
PDP-11/05 ACCESSORY LIST	11/05-0-0 SHEET 1 OF 1	A	AL	11/05-0-4	B	11/05-S 00003

DIST