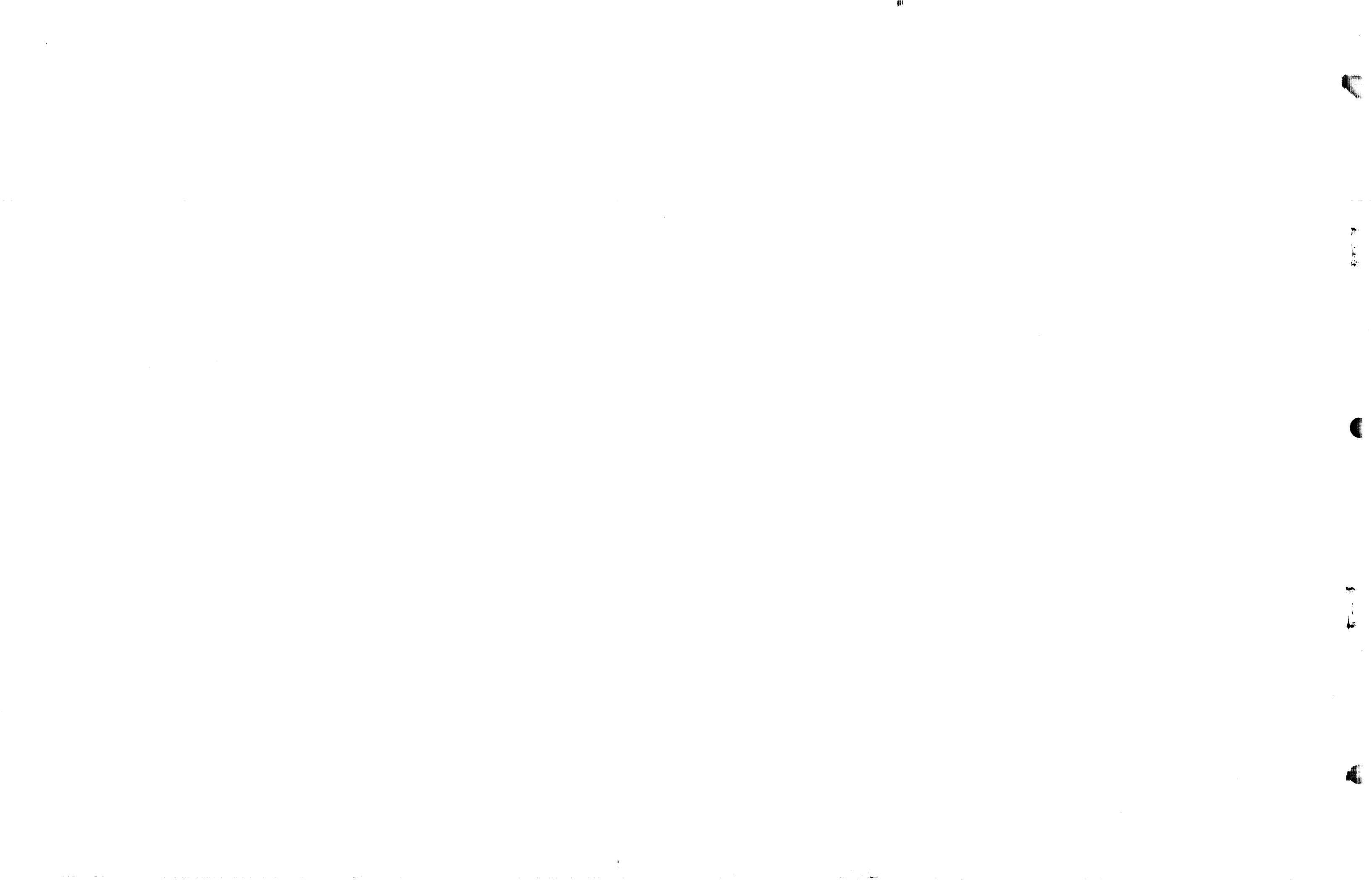


**PDP-11/40 system
engineering drawings**



DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

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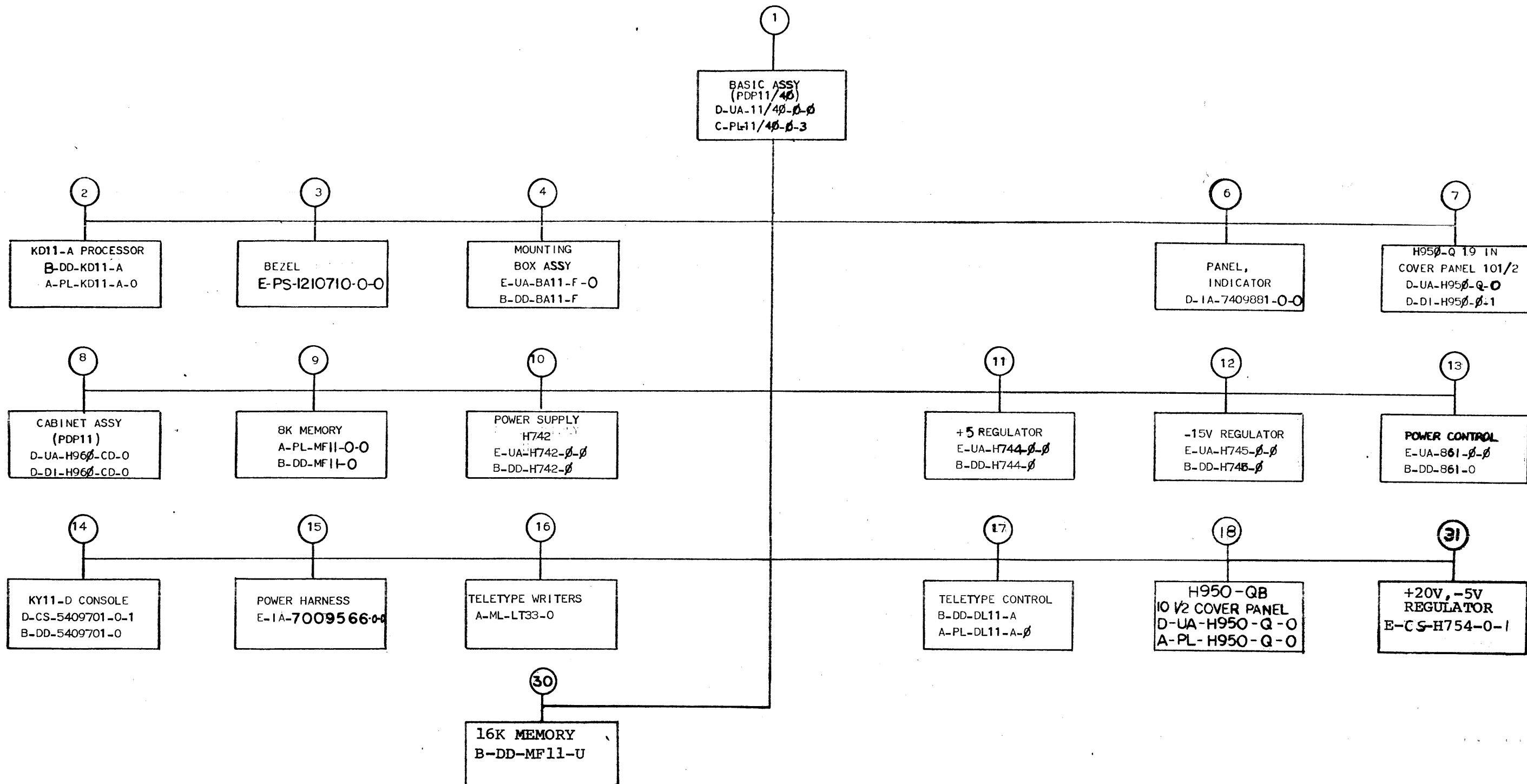
SEQUENCE	SEQUENCE
DRAWING DIRECTORY	B-DD-11/40-0
KD11-A PROCESSOR	B-DD-KD11-A
MF11-L MEMORY	B-DD-MF11-L
KY11-D CONSOLE	B-DD-KY11-D
PARTS LIST (11/40)	A-PL-11/40-0-0
BASIC ASSY (11/40)	D-UA-11/40-0-0
MOUNTING BOX ASSY	E-UA-BALL-F-0
AC DISTRIBUTION (11/40)	D-IC-11/40-0-1
	KD11-A POWER HARNESS
	MF11-L/LP FIRST MEMORY POWER HARNESS
	6-PIN JUMPER HARNESS
	G772 SYSTEM UNIT POWER HARNESS
	MF11-U MEMORY +20V, -5V REGULATOR

861 CONSOLE TO POWER CONTROL HARNESS	C-IA-70099053-0-0
POWER DISTRIBUTION CABLE	D-IA-7009177-0-0
861 POWER CONTROL CHASSIS ASSY H742	B-DD-861-0
+5V REGULATOR	B-DD-H742-0
-15V REGULATOR	B-DD-H744-0
ASYNCHRONOUS LINE INTERFACE	B-DD-H745-0
TELETYPEWRITERS LT33	B-DD-DL11-A
ACCESSORY LIST	A-ML-LT33-0
SOFTWARE LIST	A-AL-11/40-0-4
ASSEMBLY CONFIGURATION	A-SL-11/40-0-5
	C-PL-11/40-0-3
EXPANDER BOX, POWER HARNESS (H742 to 11/40)	D-IC-7009566-0-1
WIRELIST (PWR HARNESS)	K-WL-7009566-0-2
POWER HARNESS-OLD (H742 to 11/40)	D-IC-7008754-0-3

VARIATION	TITLE	PRINT SET TYPE				
		11/40-1				
PDP-11/40-CA	BASIC ASSY (11/40), 115V	X				
PDP-11/40-CB	BASIC ASSY (11/40), 230V	X				
PDP-11/40-CS	BASIC ASSY (11/40) 115V	X				
PDP-11/40-CT	BASIC ASSY (11/40) 230V	X				

REVISONS	CHG. NO.	A	B	C	D	E	F	H	J	K	L	M	N	P
	DATE	11/40-2	11/40-3	11/40-4	11/40-5	11/40-7	11/40-8	11/40-9	11/40-10	11/40-11	11/40-12	11/40-13	11/40-14	11/40-15
	11/72													
	4/73													
	6/73													
	7/73													
	10/73													
	11/73													
	1/74													
	3/74													
	3/74													
	3/74													
	6-74													

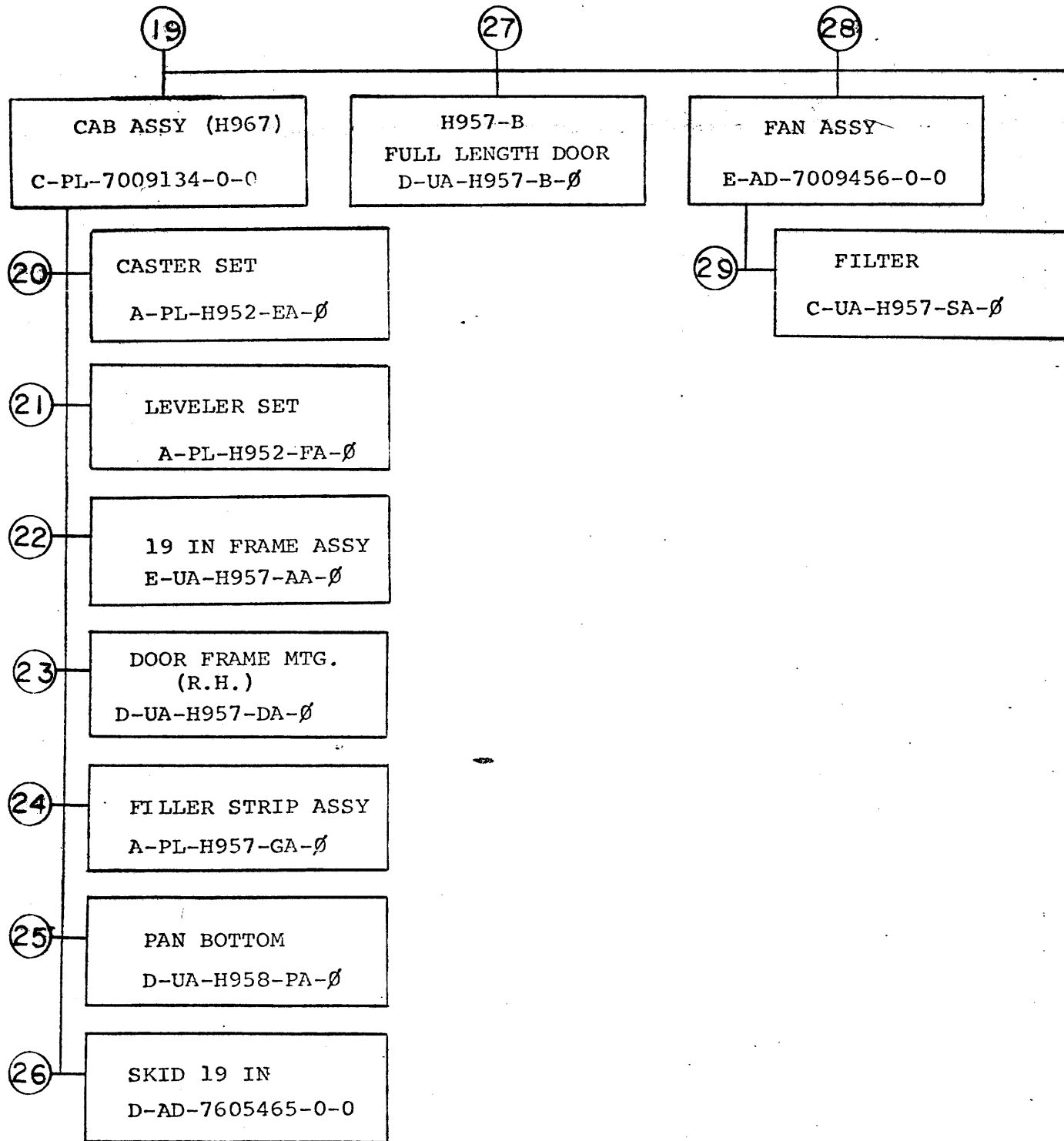
USED ON OPTION/MODEL	DRN	DATE	TITLE
PDP11/40	<i>Handwritten</i>	8/20/72	BASIC ASSY (11/40)
	CHK'D	9/7/72	
	PROJ. ENG.	9/2/72	
	PROD.	9/2/72	
	FIELD SERV.	9/2/72	
SHEET 10 OF 6		DIST	6



TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
BASIC ASSY (PDP 11/40)	2	6	B	DD	11/40-0	P

Center Line

Used for 11/40-^{CS}_{CT} Only



TITLE	BASIC ASSY (PDP 11/40)	SIZE CODE	NUMBER	REV
	SHEET 3 OF 6	B DD	11/40-Ø	B

CUSTOMER PRINT SET		ELECTRICAL					CUSTOMER PRINT SET		ELECTRICAL						
		MFG. SET	FIND NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.			MFG. SET	FIND NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X	11/40-1		1		6	BASIC ASSY (11/40)		C			12B-DD-H745-0	#	3	-15V REGULATOR DRAWING DIRECTORY	
X				L	4	BASIC ASSY (11/40) P.L.									
X				L	1	A.C. DISTRIBUTION (11/40)									
X				A	1										
X				C	2	ASSY CONFIGURATION (11/40)									
X				B	1	ACCESSORY LIST (11/40)		C			13B-DD-861-0	#	2	POWER CONTROL DRAWING DIRECTORY	
X				*	1	SOFTWARE LIST (11/40)									
X				*	1	861 CONSOLE TO PWR CONTROL HARNESS									
		X			23	PDP11/35E11/40 BASIC BUILD AND ACCEPTANCE PROCEDURE		C			14 B-DD-KY11-D	#	2	DRAWING DIRECTORY	
		X			49	PDP11/35E11/40 SYSTEM BUILD AND ACCEPTANCE PROCEDURE		X			D-CS-5409701-0-1	#	3	KY11-D CONSOLE	
X					1	EXPANDER BOX POWER HARNESS									
X					1	POWER HANRESS									
X					1	KD11-A POWER HARNESS									
X					1	6-PIN JUMPER HARNESS		X			15 E-IA-7009566-0-0	#	1	EXPANDER POWER HARNESS	
C					2	KD11-A PROCESSOR DRAWING DIRECTORY		C			K-WL-7009566-0-2	#	1	WIRE LIST	
		X	4		3	MOUNTING BOX ASSY DRAWING DIRECTORY		C			16A-ML-LT33-0	#	2	TELETYPE WRITERS	
X					1	MOUNTING BOX ASSY									
X					1	POWER DISTRIBUTION CABLE									
								C			17 B-DD-DL11-A	#	3	ASYNCHRONOUS LINE INTERFACE	
								C			30 B-DD-MF11-U			16K MEMORY DRAWING DIRECTORY	
C			9		3	8K MEMORY DRAWING DIRECTORY		X			31 E-CS-H754-0-1	#		+20V, -5V REGULATOR	
X						MF11-L/LP FIRST MEMORY POWER HARNESS									
C			10		3	H742 POWER SUPPLY DRAWING DIRECTORY									
C			11		3	+5 REGULATOR DRAWING DIRECTORY									

TITLE	BASIC ASSY (11/40)	SIZE CODE	B DD	NUMBER	11/40-0	REV	P
		SHEET	4 OF 6				

CUSTOMER PRINT SET			MFG. SET	MECHANICAL				CUSTOMER PRINT SET			MFG. SET	MECHANICAL							
11/40-1				FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	11/40-1				FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
				1	D-UA-11/40-0-0	L	6	BASIC ASSY (11/40)											
					A-PL-11/40-0-0	L	4	BASIC ASSY (11/40) P.L.					9	B-DD-MF11-L	#	3	8K MEMORY DRAWING DIRECTORY		
					D-IC-11/40-0-1	A	1	A.C. DISTRIBUTION (11/40)											
					C-PL-11/40-0-3	C	2	ASSY CONFIGURATION (11/40)											
					A-AL-11/40-0-4	B	1	ACCESSORY LIST (11/40)						D-IA-7009565-0-0		1	MF11-L/LP FIRST MEMORY		
					A-SL-11/40-0-5	*	1	SOFTWARE LIST (11/40)											
					C-IA-7009053-0-0	#	1	86R CONSOLE TO PWR CONTROL HARNESS						10B-DD-H742-0	#	3	H742 POWER SUPPLY DRAWING DIRECTORY		
					A-DG-7409478-0-0		1	DECAL PATENT											
			X		C-MD-7409312-0-0	#	1	BRACKET, SHIPPING											
			X		D-IA-7409289-0-0	#	1	MTG BRACKET 10½ PANEL											
			X		D-MD-7409445-0-0	#	1	BRACKET, HARNESS SUPPORT											
			X		B-MD-7409447-0-0	#	1	PLATE, SUPPORT						11B-DD-H744-0	#	3	+5 REGULATOR DRAWING DIRECTORY		
			X		D-MD-7409446-0-0	#	1	SUPPORT, HARNESS											
			X		C-IA-740581-0-0	#	1	BRKT. CABLE HOLDDOWN											
			X		D-PS-1211215-0-0	#	1	CABLE CLAMP & STRAP											
					C-SC-1209224-0-0		1	LATCH MOLDING											
					A-SP-11/40-0-6		23	PDP11/35 11/40 BASIC BUILD AND ACCEPTANCE PROCEDURE						12B-DD-H745-0	#	3	-15V REGULATOR DRAWING DIRECTORY		
					A-SP-11/40-0-7		49	PDP11/35 11/40 SYSTEM BUILD AND ACCEPTANCE PROCEDURE											
					D-IA-7009994-0-0		1	KDII-A POWER HARNESS											
					D-IA-7009573-0-0		1	6 PIN JUMPER HARNESS											
				2	B-DD-KDII-A	#	2	KDII A PROCESSOR DRAWING DIRECTORY											
				3	E-PS-1210710-0-0		1	BEZEL											
					C-PS-1210270-0-0		1	NAME PLATE											
				4	B-DD-BA11-F		3	MOUNTING BOX ASSY DRAWING DIRECTORY											
			X	6	D-IA-7409881-0-0	#	1	PANEL, INDICATOR						15	E-IA-7009566-0-0		1	EXPANDER BOX POWER HARNESS	
					C-SS-7409881-0-1		1	SILK SCREEN (GRAPE)							K-WL-7009566-0-2		1	WIRE LIST	
					C-SS-7409881-0-2		1	SILK SCREEN (MAGENTIA)							D-IC-7009566-0-1			EXPANDER BOX POWER HARNESS	
					C-SS-7409881-0-3		1	SILK SCREEN (BRITE ROSE)							D-IC-7008754-0-3			POWER HARNESS (M742 to 11/40-old)	
					C-SS-7409881-0-5		1	SILK SCREEN (BLACK)							16A-ML-LT33-0	#	2	TELETYPE WRITERS	
					C-SS-7409881-0-6		1	SILK SCREEN (WHITE)											
			X	7	D-UA-H950-Q-0	#	1	H950-Q 19 IN COVER PANEL 10½							17B-DD-DL11-A	#	3	ASYNCHRONOUS LINE INTERFACE	
			X		A-PL-H950-Q-0	#	1	H950-Q 19 IN COVER PANEL 10½											
			X		D-DI-H950-0-1	#	1	DRAWING INDEX											
			X	8	D-UA-H960-C-0	#	1	CABINET ASSY (PDP-11)							18	D-UA-H950-QB-0		1	10 1/2 COVER PANEL
			X		A-PL-H960-C-0	#	1	CABINET ASSY (PDP-11)								A-PL-H950-Q-0		1	" " "
			X		D-DI-H960-C-1	#	1	DRAWING INDEX								D-DI-H950-0-1		1	DRAWING INDEX

TITLE	SIZE	CODE	NUMBER	REV
BASIC ASSY (11/40)	B	DD	11/40-0	P
SHEET 5 OF 6				

CUSTOMER PRINT SET		MACHANICAL					CUSTOMER PRINT SET		MACHANICAL						
	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE		MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		19	C-PL-7009134-0-0		1	CAB ASSY (H967)									
			A-PS-1211442-0-0		1	COUNTER-WEIGHT									
			B-DD-MF11-U			16K MEMORY DRAWING DIRECTORY									
		20	A-PL-H952-EA-Ø		1	CASTER SET									
			B-DD-H754-0			+20V; -5V REGULATOR DRAWING DIRECTORY									
		21	A-PL-H952-FA-Ø		1	LEVELER SET									
		22	E-UA-H957-AA-Ø		4	19 IN FRAME ASSY									
		23	D-UA-H957-DA-Ø		1	DOOR FRAME MTG (R.H.)									
		24	A-PL-H957-CA-Ø		1	FILLER STRIP ASSY									
		25	D-UA-H958-PA-Ø		1	PAN BOTTOM									
		26	D-AD-7605465-0-0		1	SKID 19 IN									
		27	D-UA-H957-B-Ø		1	FULL LENGTH DOOR									
		28	D-AD-7009456-0-0		1	FAN ASSY									
			D-IA-7409126-0-0		1	PANEL FAN									
			A-PS-1210165-0-0		1	FAN (115V)									
			A-PS-1209175-0-0		1	FINGER GUARD									
			A-PS-1209798-0-0		1	FAN CARAVEL (230V)									
		29	C-UA-H957-SA-Ø		1	FILTER									
		#30	B-DD-MF11-U			16K MEMORY DRAWING DIRECTORY									
		#31	E-CS-H754-0-1			+20V, -5V REGULATOR									

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: BASIC ASSY (11/4Ø)
SHEET 6 OF 6
SIZE CODE: B DD
NUMBER: 11/4Ø-Ø
REV: P

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

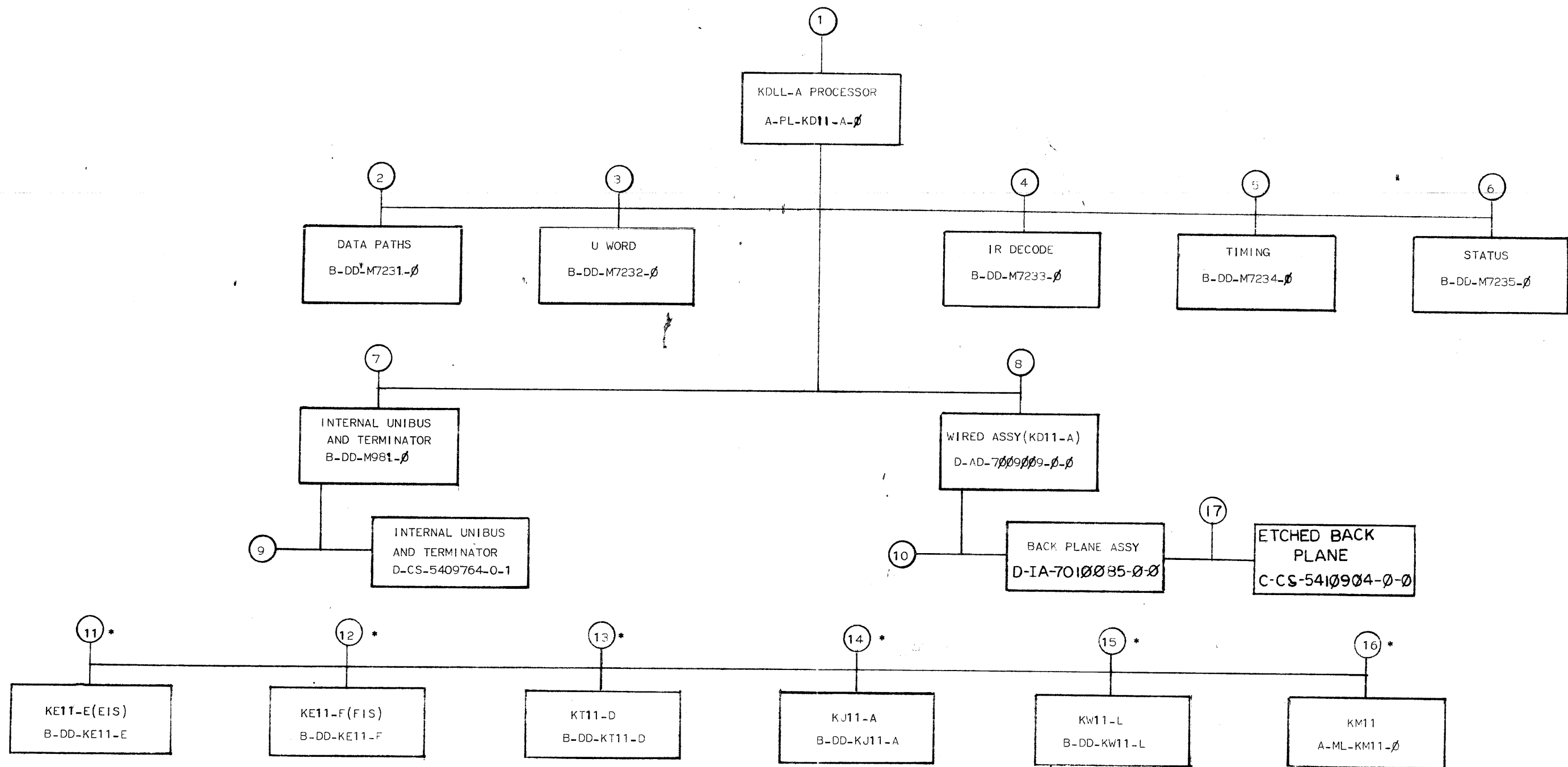
THIS IS PRINT SET [] [] [] []

SEQUENCE		SEQUENCE
DRAWING DIRECTORY	B-DD-KD11-A	
KD11-A PROCESSOR (BLOCK DIAGRAM U WORD & TABLES)	D-BD-KD11-A-BD	
FLOW DIAGRAM	D-FD-KD11-A-FD	
PARTS LIST	A-PL-KD11-A- \emptyset	
MODULE UTILIZATION	D-MU-KD11-A-MU	
DATA PATHS	D-CS-M7231- \emptyset -1	
U WORD	D-CS-M7232- \emptyset -1	
IR DECODE	D-CS-M7233- \emptyset -1	
TIMING	D-CS-M7234- \emptyset -1	
STATUS	D-CS-M7235- \emptyset -1	
INTERNAL UNIBUS AND TERMINATOR (M981)	D-CS-5409764- \emptyset -1	
CIRCUIT SCHEMATIC BACK PLANE	C-CS-5410904 - \emptyset -1	
BACK PANEL (WIRE & ETCH LIST)	K-WL-KD11-A-WL (COMPLETE)	
AWT REVISION STATUS	A-WT-7009009-0	
STACK LIMIT REGISTER	B-DD-KJ11-A	
LINE FREQUENCY CLOCK	B-DD-KW11-L	
MAINTENANCE BOARD (1&2)	D-BS-KM11- \emptyset -MB	
SILK SCREEN (KD11-A)	A-SS-5509081-0-12	
SILK SCREEN (KT11-D, Kell-E, F)	A-SS-5509081-0-13	

UNIT VARIATIONS		PRINT SET TYPE			
VARIATION	TITLE	KD11-			
KD11-A	KD11-A PROCESSOR	X			

DATE	REV	REVISIONS						
		CHG. NO.	A	B	C	D	E	F
10-72		KD11A-00003						
		7/28/72						
2-73		KD11A-00005						
		7/28/73						
6-73		KD11A-6						
		7/28/73						
11-73		KD11A-00007						
		7/28/73						
5-74		KD11A-00008						
6-74		KD11A-00009						

USED ON OPTION/MODEL	DRN.	DATE	TITLE	SIZE CODE	NUMBER	REV
	7/28/72	9/21/72	KD11-A PROCESSOR			
	CHK'D. 7/28/72	DATE 9/27/72				
	PRJ. ENG. 7/28/72	DATE 9/27/72				
	PROD. 7/28/72	DATE 9-28-72				
	FIELD SERV. 7-27-72	DATE 7-27-72				
	SHEET 4 OF 3					



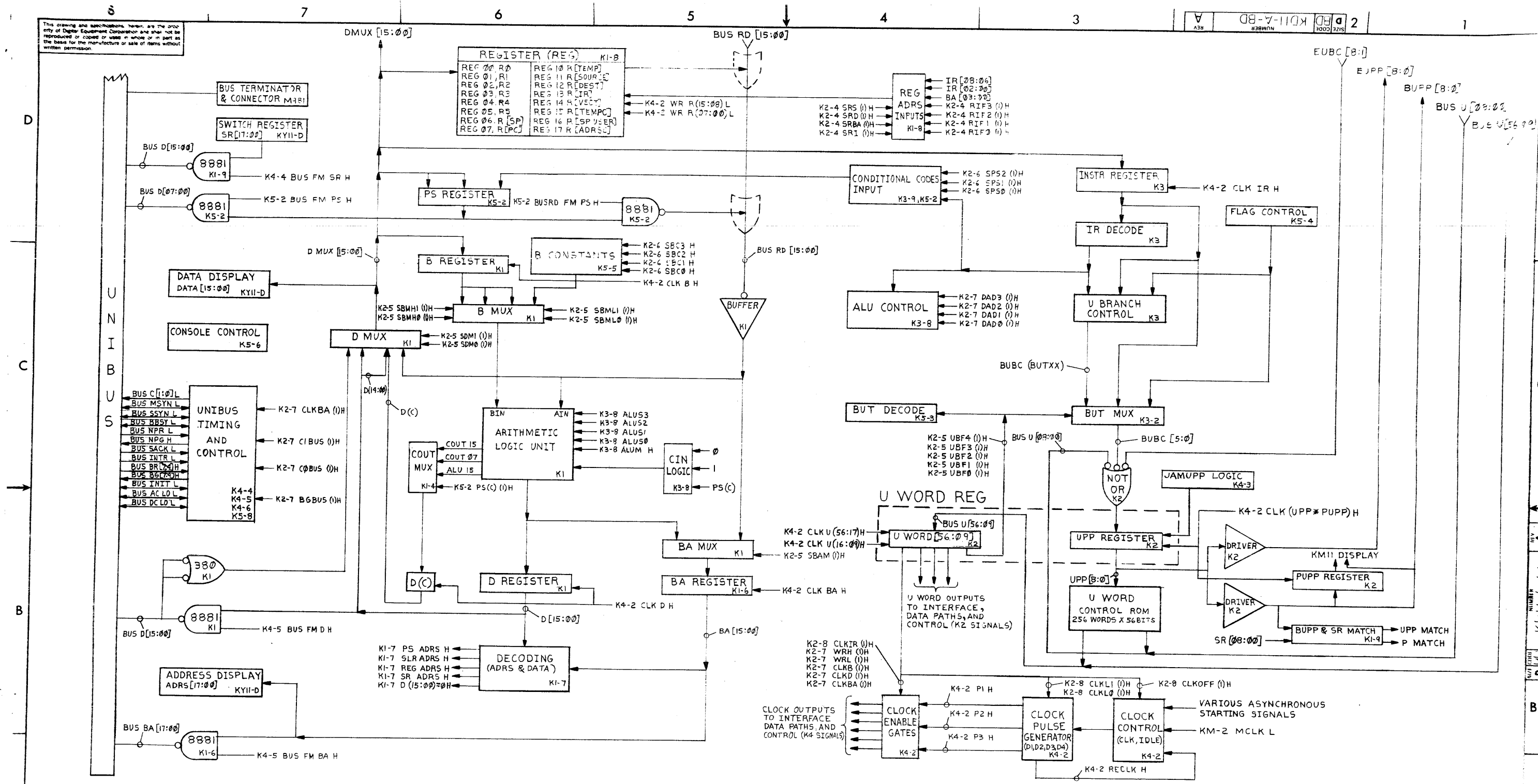
* OPTIONS TO KD11-A PROCESSOR

TITLE	SIZE	CODE	NUMBER	REV
KD11-A PROCESSOR	B	DD	KD11-A	F

CUSTOMER PRINT SET					ELECTRICAL					CUSTOMER PRINT SET					MECHANICAL								
KD11-A					MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	KD11-A					MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X						1	D-BD-KD11-A-BD	A	2	BLOCK DIAGRAM, U WORD&TABLES		X						1	A-PL-KD11-A-Ø	*	1	PARTS LIST	
X							D-FD-KD11-A-FD	B	12	FLOW DIAGRAM		X						9	A-WT-7009009-0	#	1	AWT REVISION STATUS	
X							D-MU-KD11-A-MU	A	1	MODULE UTILIZATION									D-AD-7ØØ9ØØ9-Ø-Ø	#	1	WIRED ASSY (KD11-A)	
C							K-WL-KD11-A-WL	F	33	WIRE & ETCH LIST (COMPLETE)									D-IA-7010085-0-0		1	BACK PLANE ASSY	
X						17	C-CS-541Ø9Ø4-Ø-1	#	1	CIRCUIT SCHEMATIC BACK PLANE									B-DD-2338-0		4	XOR TESTERS	
						2	B-DD-M7231-Ø		2	DATA PATHS													
X							D-CS-M7231-Ø-1	#	9	DATA PATHS CIRCUIT SCHEMATIC													
						3	B-DD-M7232-Ø		2	U WORD													
X							D-CS-M7232-Ø-1	#	12	U WORD CIRCUIT SCHEMATIC													
						4	B-DD-M7233-Ø		2	IR DECODE													
X							D-CS-M7233-Ø-1	#	9	IR DECODE CIRCUIT SCHEMATIC													
						5	B-DD-M7234-Ø		2	TIMING													
X							D-CS-M7234-Ø-1	#	6	TIMING CIRCUIT SCHEMATIC													
						6	B-DD-M7235-Ø		2	STATUS													
X							D-CS-M7235-Ø-1	#	8	STATUS CIRCUIT SCHEMATIC													
						7	B-DD-M981-Ø		2	INTERNAL UNIBUS AND TERMINATOR													
X						8	D-CS-54Ø9764-Ø-1	#	2	INTERNAL UNIBUS AND TERMINATOR CIRCUIT SCHEMATIC													
							B-DD-KY11-D	REF	2	KY11-D CONSOLE													
							11B-DD-KE11-E	REF	2	KE11-E (EIS)													
							12B-DD-KE11-F	REF	2	KE11-F (FIS)													
							13B-DD-KT11-D	REF	2	MEMORY MANAGEMENT													
C							14B-DD-KJ11-A	#	2	STACK LIMIT REGISTER													
C							15B-DD-KW11-L	#		LINE FREQUENCY CLOCK													
							16A-MI-KM11-Ø	REF	1	MAINTENANCE PANEL(W130,W131)													
X							D-BS-KM11-Ø-MB	#	3	MAINTENANCE BOARD (1&2)													
X							A-SS-5509081-0-12	#	1	SILK SCREEN (KD11-A)													
X							A-SS-5509081-0-13	#	1	SILK SCREEN (KT11-D, KE11-E, F)													

TITLE	KD11-A PROCESSOR	SHEET 3 OF 3	SIZE	CODE	NUMBER	REV
		B	DD	KD11-A	F	

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REV	CHANGE NO	DATE
1	1	2-14-73
2	1	2-14-73

DESIGNED BY: O'LOUGHLIN
 CHECKED BY: [Signature]
 DRAWN BY: [Signature]

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PPPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	ANGLES			
.XXX - .005	± 0° 30'			
.XX - .02				
.X - .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASSY.				
FINISH				

DATE: 7-21-72
 DATE: 9-25-72
 DATE: 9-25-72
 DATE: 9-25-72

TITLE: KDI11-A PROCESSOR (BUS SYSTEM)

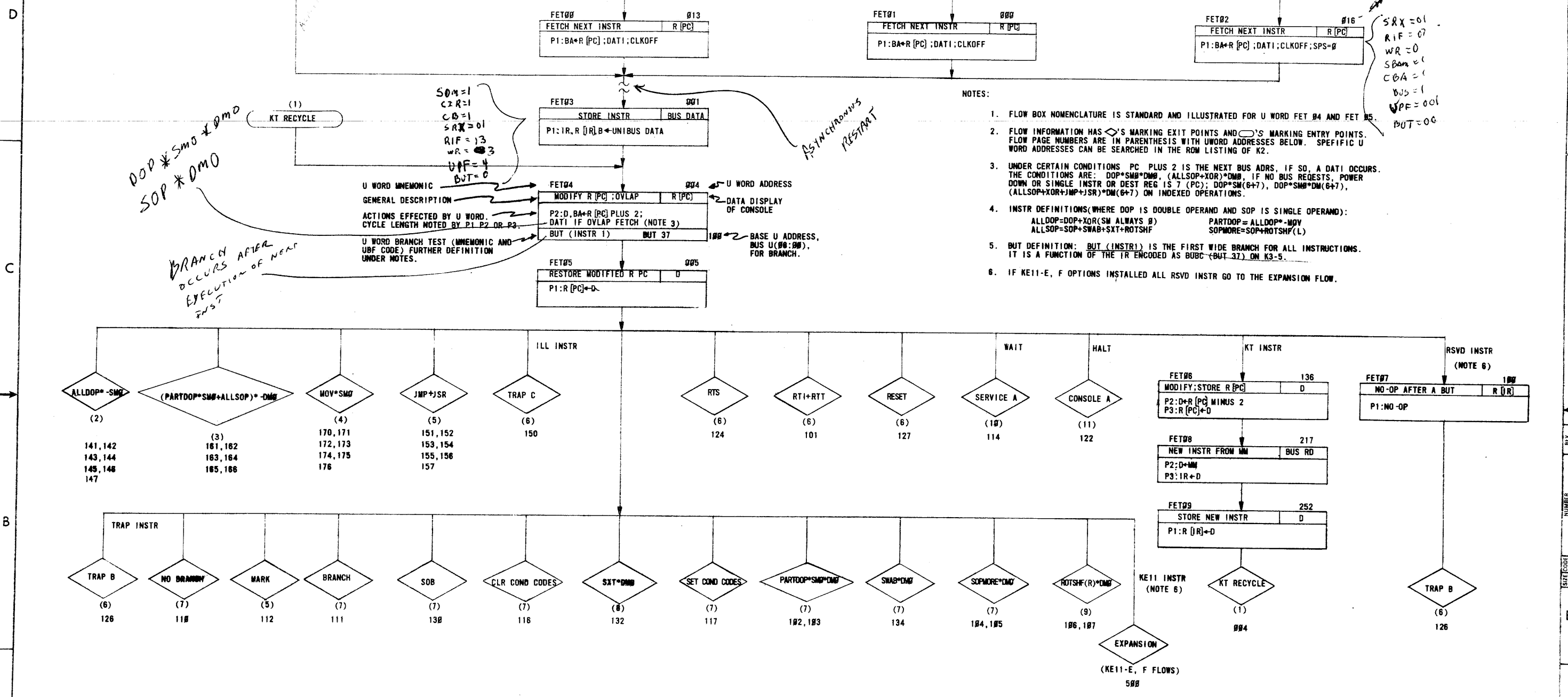
MATERIAL: NEXT HIGHER ASSY.

FINISH: ---

SCALE: 1:1

SHEET 2 OF 2

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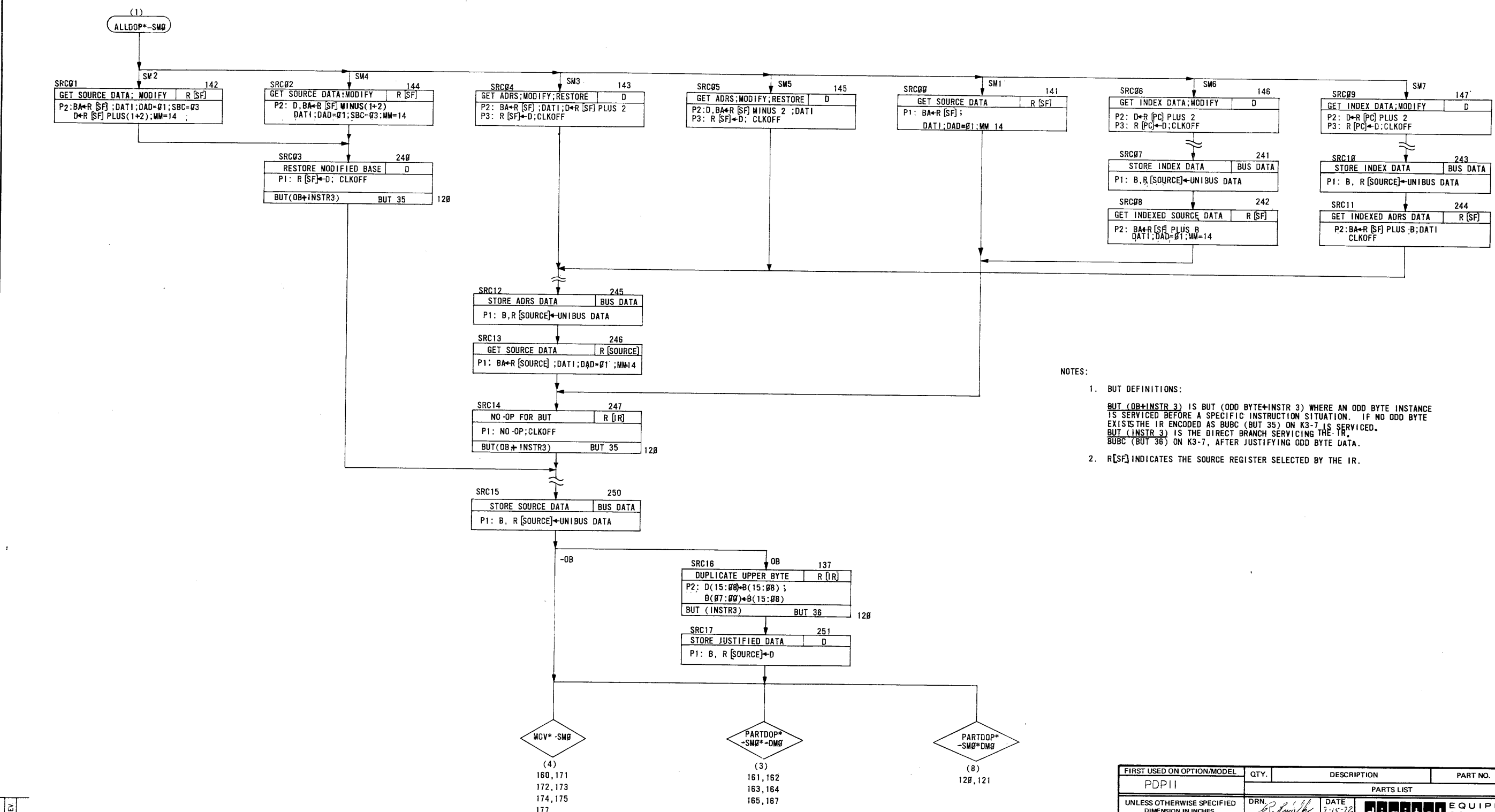


BRUNING 40322 1584C

CHK	REVISIONS	CHANGE NO	REV
✓	1	KD11A-00005	A
✓	2	O'LOUGHLIN	B
✓	3	2-15-73	B
✓	4	5-27-74	B
✓	5	J. SOFIO	B

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	TITLE		
XXX = .005	± 0° 30'	FLOW DIAGRAM (FETCH)		
XX = .02		DATE 9/25/72		
X = .1		DATE 9/25/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL NEXT HIGHER ASSY.				
FINISH				
SCALE		SIZE CODE	NUMBER	REV
SHEET 1 OF 12		DFD	KD11-A-FD	B

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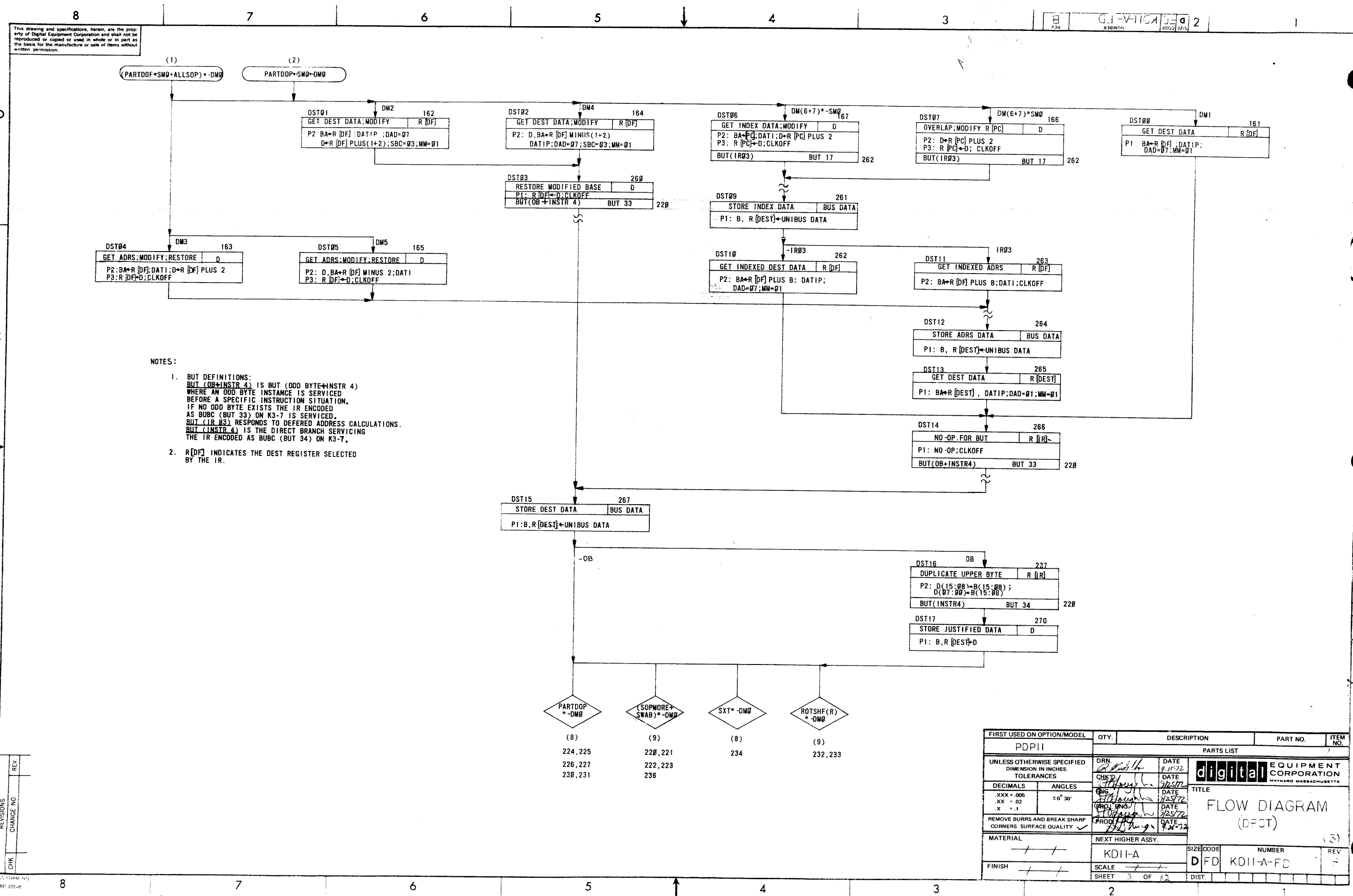
NOTES:

- BUT DEFINITIONS:
 BUT (OB+INSTR 3) IS BUT (ODD BYTE+INSTR 3) WHERE AN ODD BYTE INSTANCE IS SERVICED BEFORE A SPECIFIC INSTRUCTION SITUATION. IF NO ODD BYTE EXISTS THE IR ENCODED AS BUBC (BUT 35) ON K3-7 IS SERVICED. BUT (INSTR 3) IS THE DIRECT BRANCH SERVICING THE IR. BUBC (BUT 36) ON K3-7, AFTER JUSTIFYING ODD BYTE DATA.
- R[SF] INDICATES THE SOURCE REGISTER SELECTED BY THE IR.

REV	
CHANGE NO	
CHK	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>R. Smith</i>	DATE 7-15-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	CHK'D <i>[Signature]</i>	DATE 9/23/72	TITLE FLOW DIAGRAM (SOURCE)	
ANGLES ±0° 30'	ENG. <i>[Signature]</i>	DATE 1/23/72	REMOVED BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	
MATERIAL	PROJ. ENG. <i>[Signature]</i>	DATE 7/21/72	NEXT HIGHER ASSY.	
FINISH	PROJ. <i>[Signature]</i>	DATE 9-20-72	B-DD-PDII-A	
			SCALE	SIZE CODE
				D FD K011-A-FD
			SHEET 2 OF 12	NUMBER
				REV. B

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NOTES:

- BUT DEFINITIONS:
 BUT (OB+INSTR 4) IS BUT (ODD BYTE+INSTR 4) WHERE AN ODD BYTE INSTANCE IS SERVICED BEFORE A SPECIFIC INSTRUCTION SITUATION. IF NO ODD BYTE EXISTS THE IR ENCODED AS BUBC (BUT 33) ON K3-7 IS SERVICED. BUT (IR 03) RESPONDS TO DEFERRED ADDRESS CALCULATIONS. BUT (INSTR 4) IS THE DIRECT BRANCH SERVICING THE IR ENCODED AS BUBC (BUT 34) ON K3-7.
- R [DF] INDICATES THE DEST REGISTER SELECTED BY THE IR.

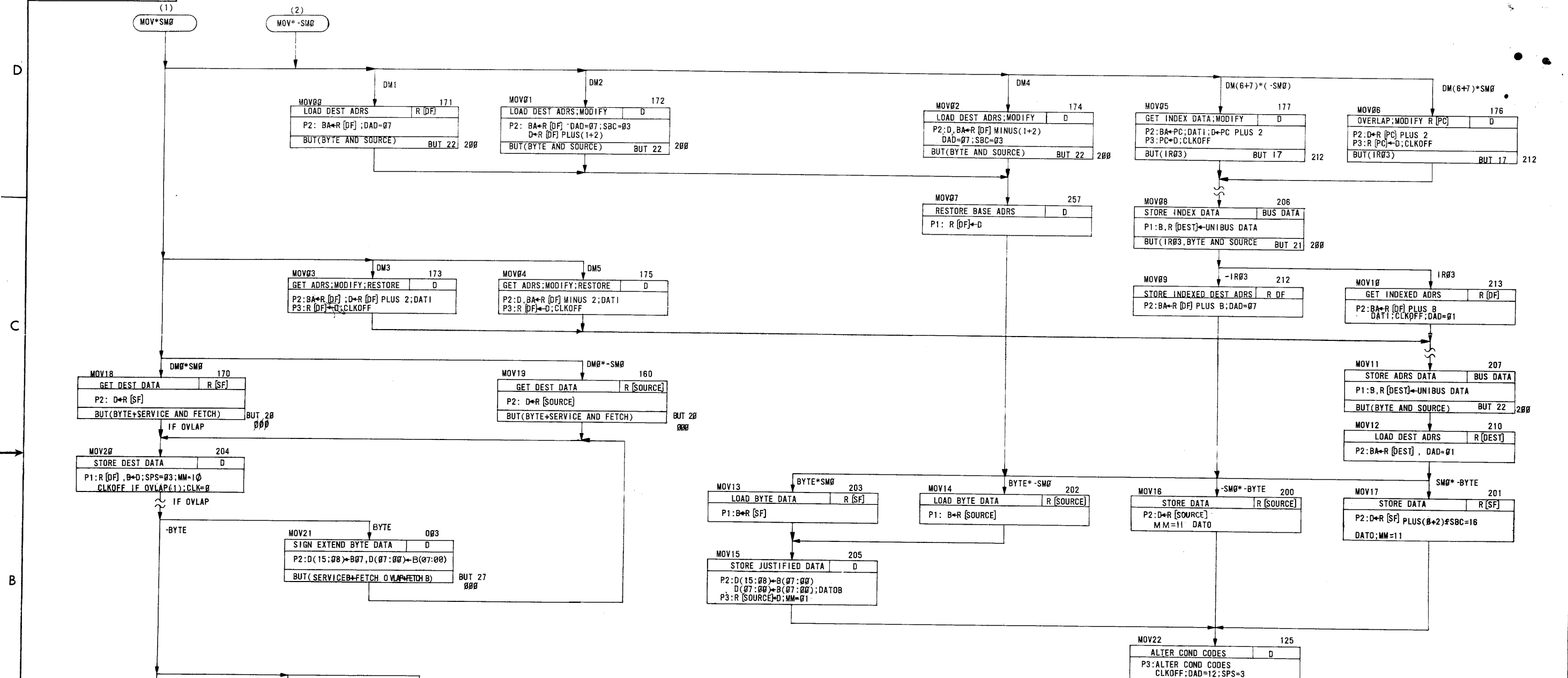
(8)	(9)	(8)	(9)
224, 225	220, 221	234	232, 233
226, 227	222, 223		
230, 231	236		

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.	DRN	DATE	digital EQUIPMENT CORPORATION	
TOLERANCES	CHK'D	DATE	MAYNARD MASSACHUSETTS	
DECIMALS	ENG	DATE	TITLE	
ANGLES	PROJ	DATE	FLOW DIAGRAM	
.XXX = .005		DATE	(DFCT)	
.XX = .02		DATE		
.X = .1		DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE		
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH			DFD	KDII-A-FD
			SCALE	SHEET 3 OF 12
			DIST	

REVISIONS	REV
CHANGE NO.	
CHK	

DEC FORM 102-10
 APR 1972

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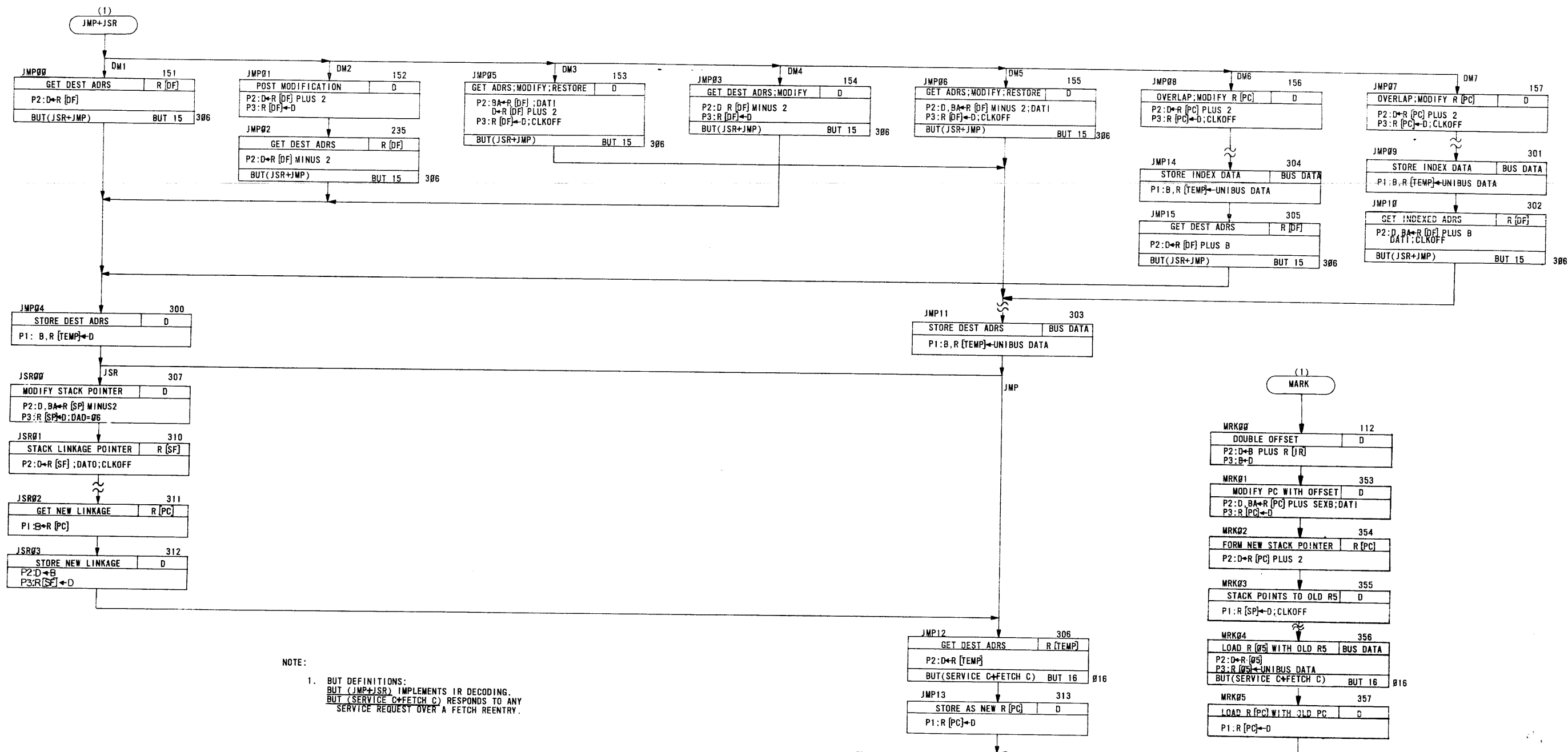


NOTE:
 1. BUT DEFINITIONS:
 BUT (BYTE AND SOURCE) = BUT (BYTE*(SM0+-SM0)+-BYTE(SM0+-SM0)) WITH THE BYTE AND SOURCE MODE INTERACTING TO PROVIDE A FOUR WAY BRANCH.
 BUT (IR 03) RESPONDS TO DEFERED ADDRESS CALCULATIONS.
 BUT (IR 03, BYTE AND SOURCE) COMBINES ABOVE BUTS AS BUT(C(BUT21) ON K3-7
 BUT (SERVICE B+FETCH OVLAP+FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVERLAP OVER A USUAL FETCH CYCLE REENTRY.
 BUT (BYTE+SERVICE+FETCH) WILL JUSTIFY BYTE DATA PRIOR TO THE SERVICE OR FETCH BUT NOTED ABOVE.

REV	CHANGE NO

FIRST USED ON OPTION/MODEL PDI11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN GJKD	DATE 3/15/72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	ENG PROJ. ENG.	DATE 7/25/72	TITLE FLCW DIAGRAM (MOV)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROB K. Blum	DATE 9-25-72	REV. B	
MATERIAL	NEXT HIGHER ASSY.	SCALE	SIZE CODE D FD	NUMBER KDI1-A-FD
FINISH		SHEET 4 OF 12	DIST.	(4)

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NOTE: 1. BUT DEFINITIONS: BUT (JMP+JSR) IMPLEMENTS IR DECODING. BUT (SERVICE C+FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.

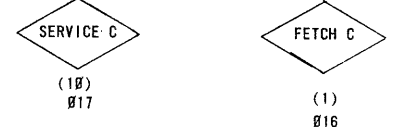


Table with columns: REVISIONS, CHANGE NO, REV.

DEC FORM NO: JRD 102-B

Table with columns: FIRST USED ON OPTION/MODEL, QTY., DESCRIPTION, PART NO., ITEM NO. Includes a parts list section for PDP11.

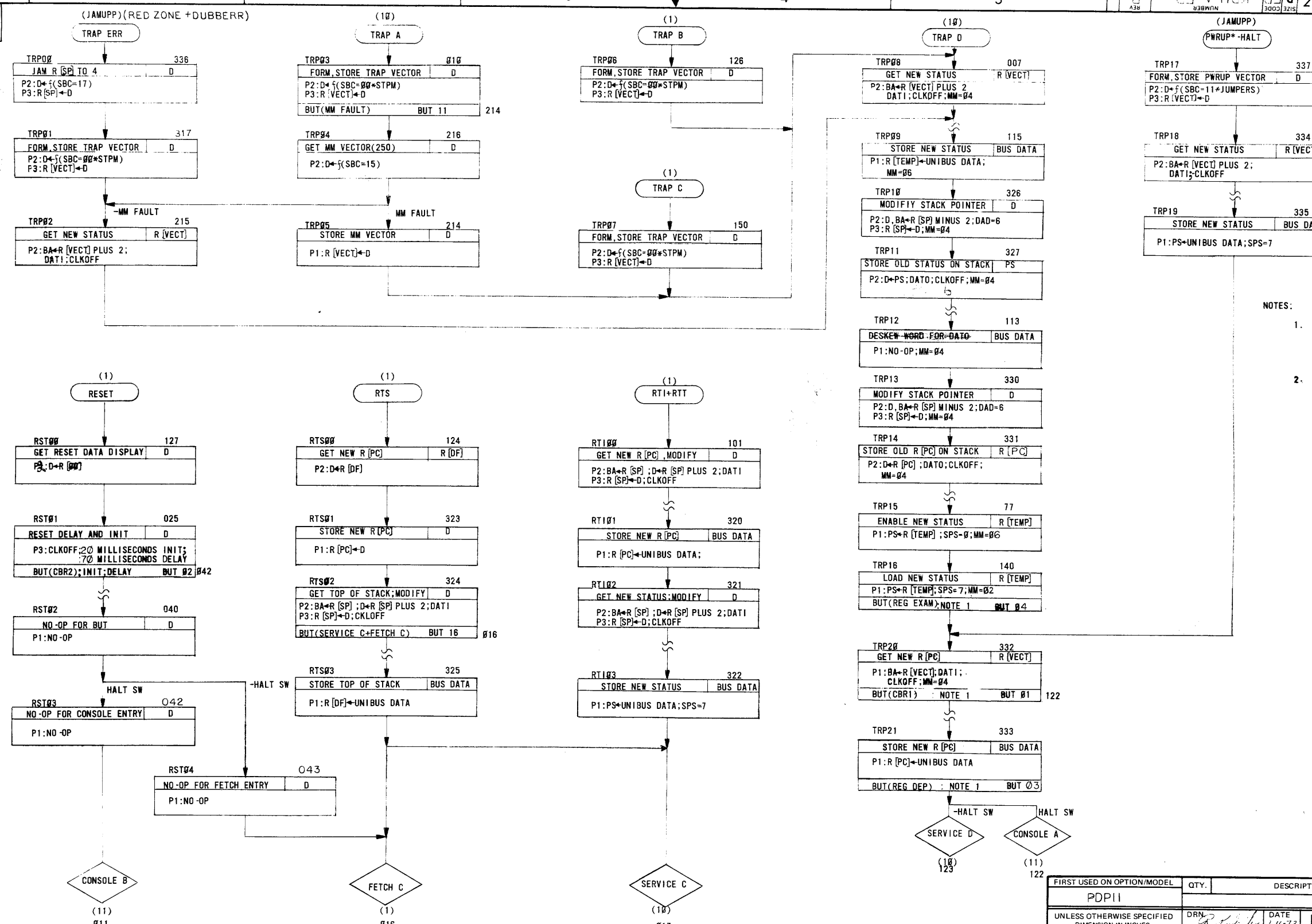


TITLE: FLOW DIAGRAM (JMP, JSR, MARK)

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

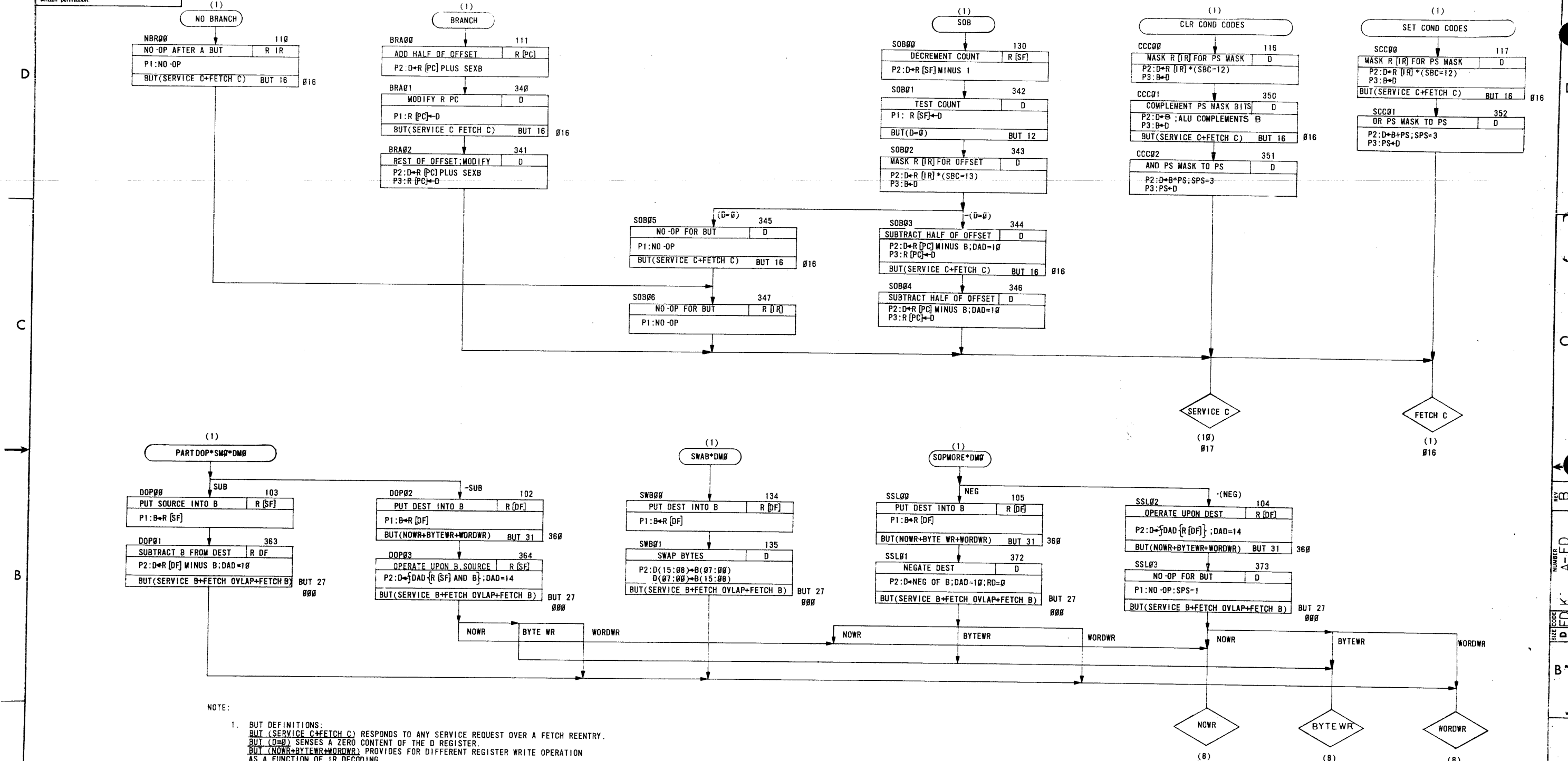
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REV	CHANGE NO

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>[Signature]</i> DATE 1-16-72	CHK'D. <i>[Signature]</i> DATE 2/25/72	digital EQUIPMENT CORPORATION <small>WATYARD MASSACHUSETTS</small> TITLE FLOW DIAGRAM (TRAPS, PWRUP RESET, RTI, RTS, RTT) (6)	
DECIMALS .005	ENG. <i>[Signature]</i> DATE 2/25/72	PROJ. ENGR. <i>[Signature]</i> DATE 2/25/72		
ANGLES ±0° 30'	PROJ. <i>[Signature]</i> DATE 2/25/72	DATE 2/25/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE	SIZE CODE	NUMBER	REV.
	SHEET 6 OF 12	DFD	KDII-A-FD	B

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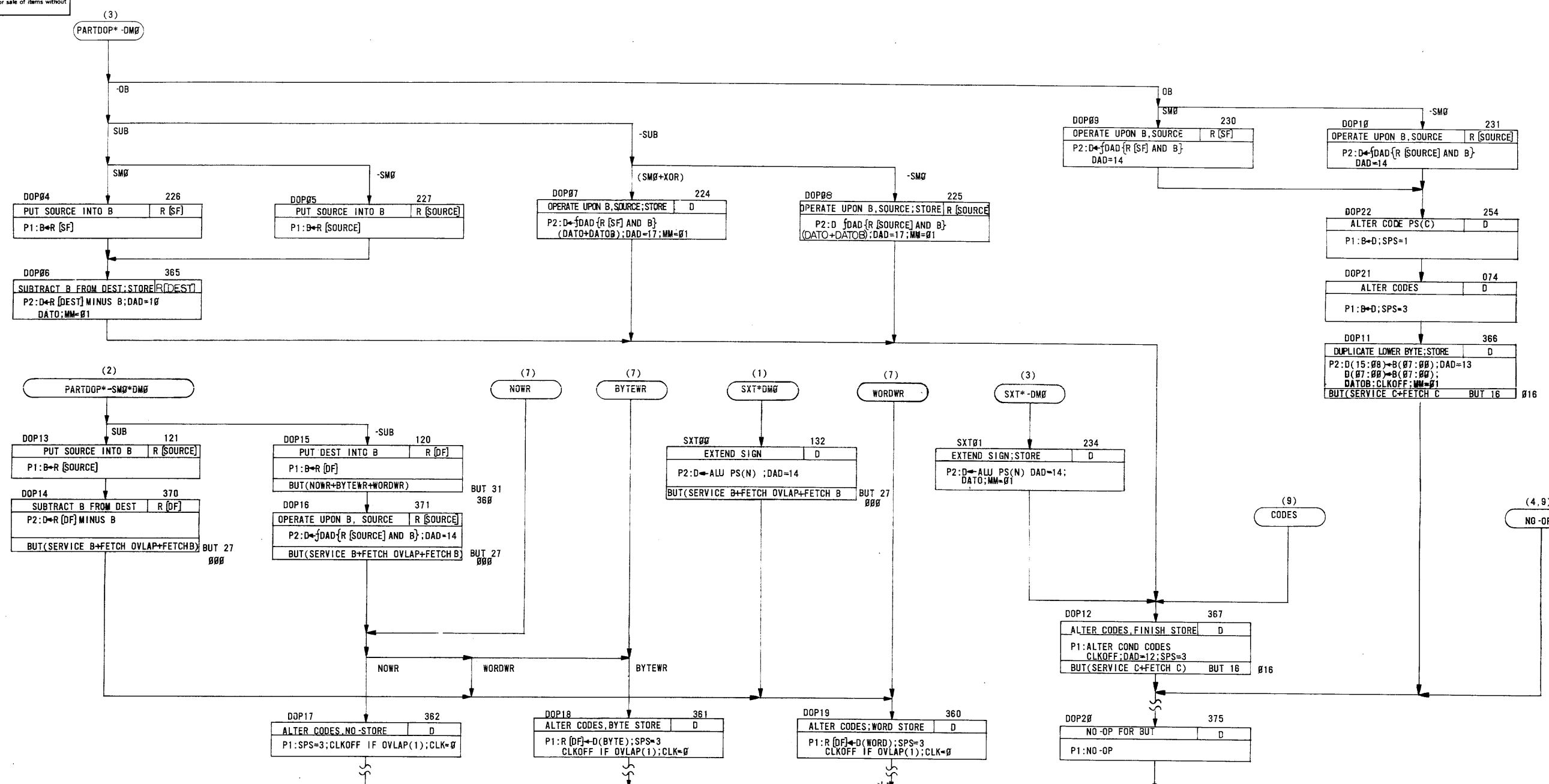


NOTE:
 1. BUT DEFINITIONS:
 BUT (SERVICE C+FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.
 BUT (D=0) SENSES A ZERO CONTENT OF THE D REGISTER.
 BUT (NOWR+BYTEWR+WORDWR) PROVIDES FOR DIFFERENT REGISTER WRITE OPERATION AS A FUNCTION OF IR DECODING.
 BUT (SERVICE B+FETCH OVLAP+FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVLAP OVER A USUAL FETCH REENTRY.

REV	NO
CHK	NO

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TOLERANCES	CHK'D	DATE	TITLE	
DECIMALS	ENG	DATE	FLOW DIAGRAM	
ANGLES	PROJ. ENG.	DATE	(BR, SOE, CODES, PARTDOP, SWAB, SCMPMORE) DMQ (7)	
.XXX = .005	PROJ. MGR.	DATE	MATERIAL	
.XX = .02		DATE	NEXT HIGHER ASSY.	
.X = .1		DATE	B-DD-KC11-A	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE	SCALE	
		DATE	SHEET 7 OF 13	
		DATE	DIST.	

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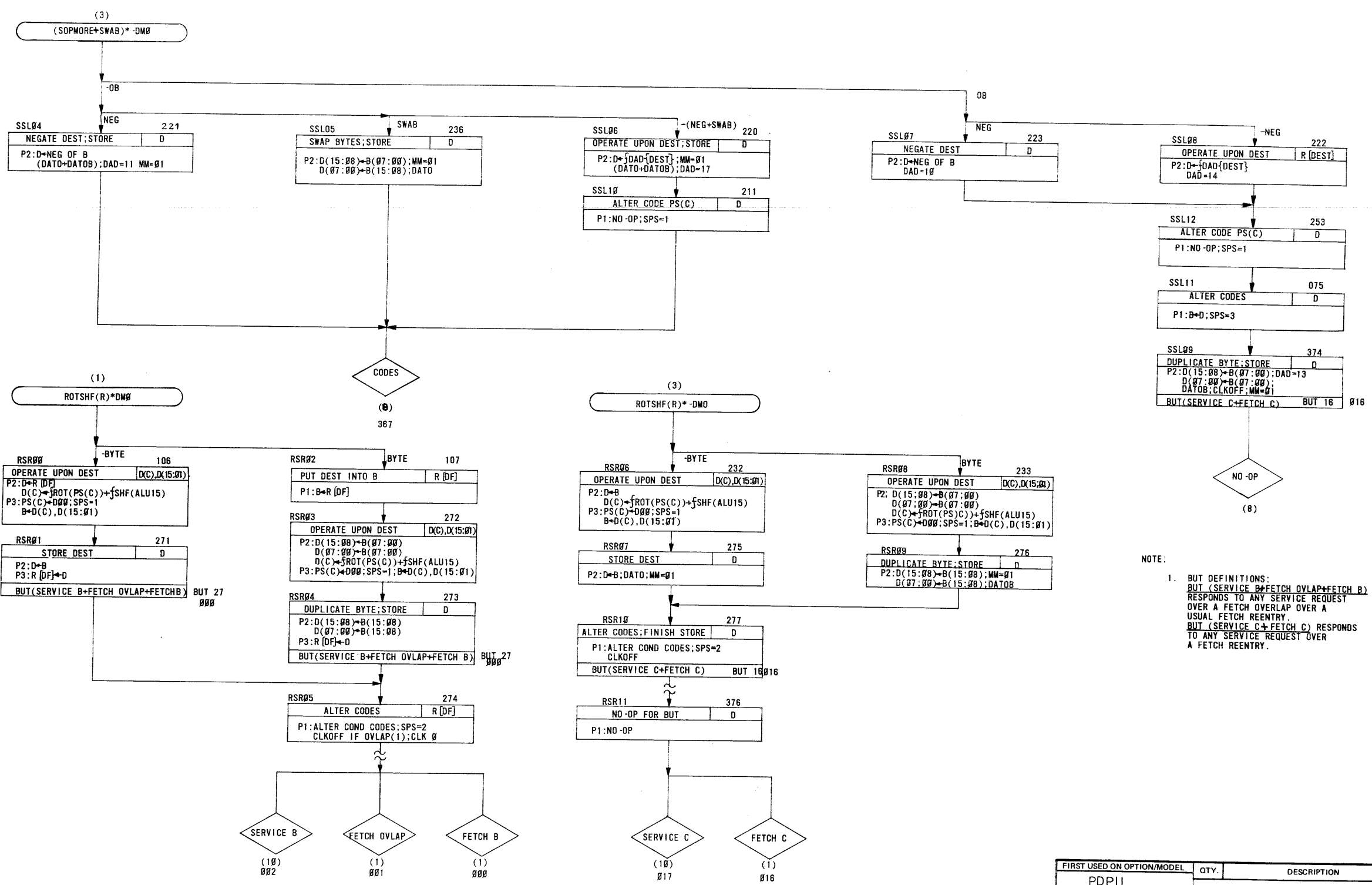


NOTE:
 1. BUT DEFINITIONS:
 BUT (SERVICE C+FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.
 BUT (SERVICE B+FETCH OVLAP+FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVLAP OVER A USUAL FETCH REENTRY.
 BUT (NOWR+BYTEWR+WORDWR) PROVIDES FOR DIFFERENT REGISTER WRITE OPERATION AS A FUNCTION OF IR DECODING.

REV	CHANGE NO

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN	DATE	digital EQUIPMENT CORPORATION	
DECIMALS	ANGLES	CHKD	DATE	MAYNARD, MASSACHUSETTS	
.xxx = .005	±0° 30'	ENG	DATE	TITLE	
.xx = .02		PBOL ENG	DATE	FLOW DIAGRAM	
.x = .1		PROD	DATE	(PARTDOP, SXT)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY					
MATERIAL		NEXT HIGHER ASSY.		(8)	
FINISH		B-DD-KDII-A	SIZE CODE	NUMBER	REV.
		D FD	KDII-A-FD		B
		SHEET 8 OF 12	DIST.		

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NOTE:
 1. BUT DEFINITIONS:
 BUT (SERVICE B+FETCH OVLAP+FETCH B) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH OVERLAP OR A USUAL FETCH REENTRY.
 BUT (SERVICE C+FETCH C) RESPONDS TO ANY SERVICE REQUEST OVER A FETCH REENTRY.

REV	CHANGE NO	CHK

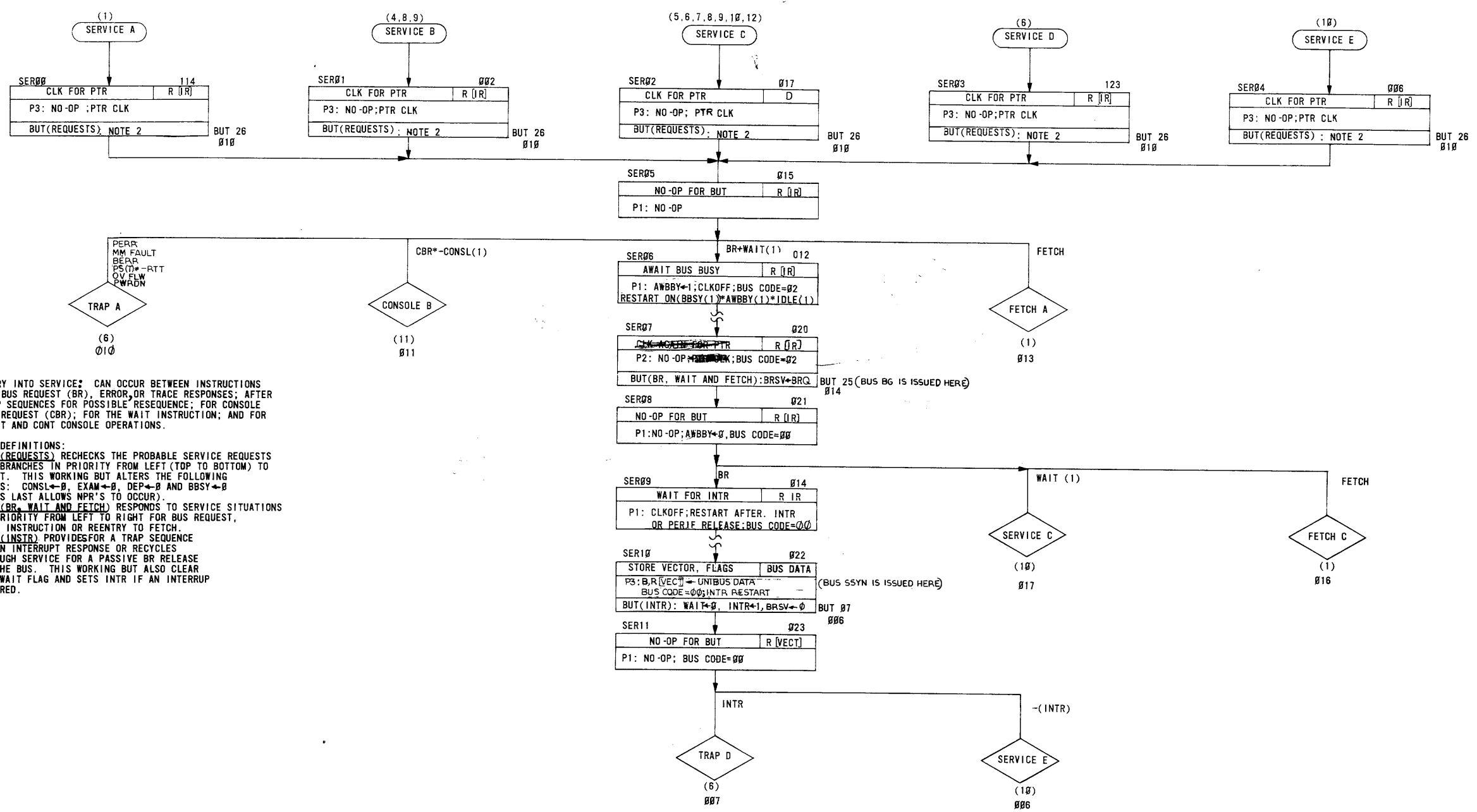
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DECIMALS	ANGLES	CHK'D	DATE	
.xxx = .005	±0° 30'	ENG	DATE	
.xx = .02		PROJ ENGR	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROD ENGR	DATE	
MATERIAL		NEXT HIGHER ASSY.		
FINISH		SCALE	SIZE CODE	NUMBER
		SHEET 9 OF 12	DFDI	KDII-A-FD
			DIST	

TITLE
 FLOW DIAGRAM
 (SOPMORE+SWAB)*-DMO
 (ROTSHF(R))

(9)

REV. B

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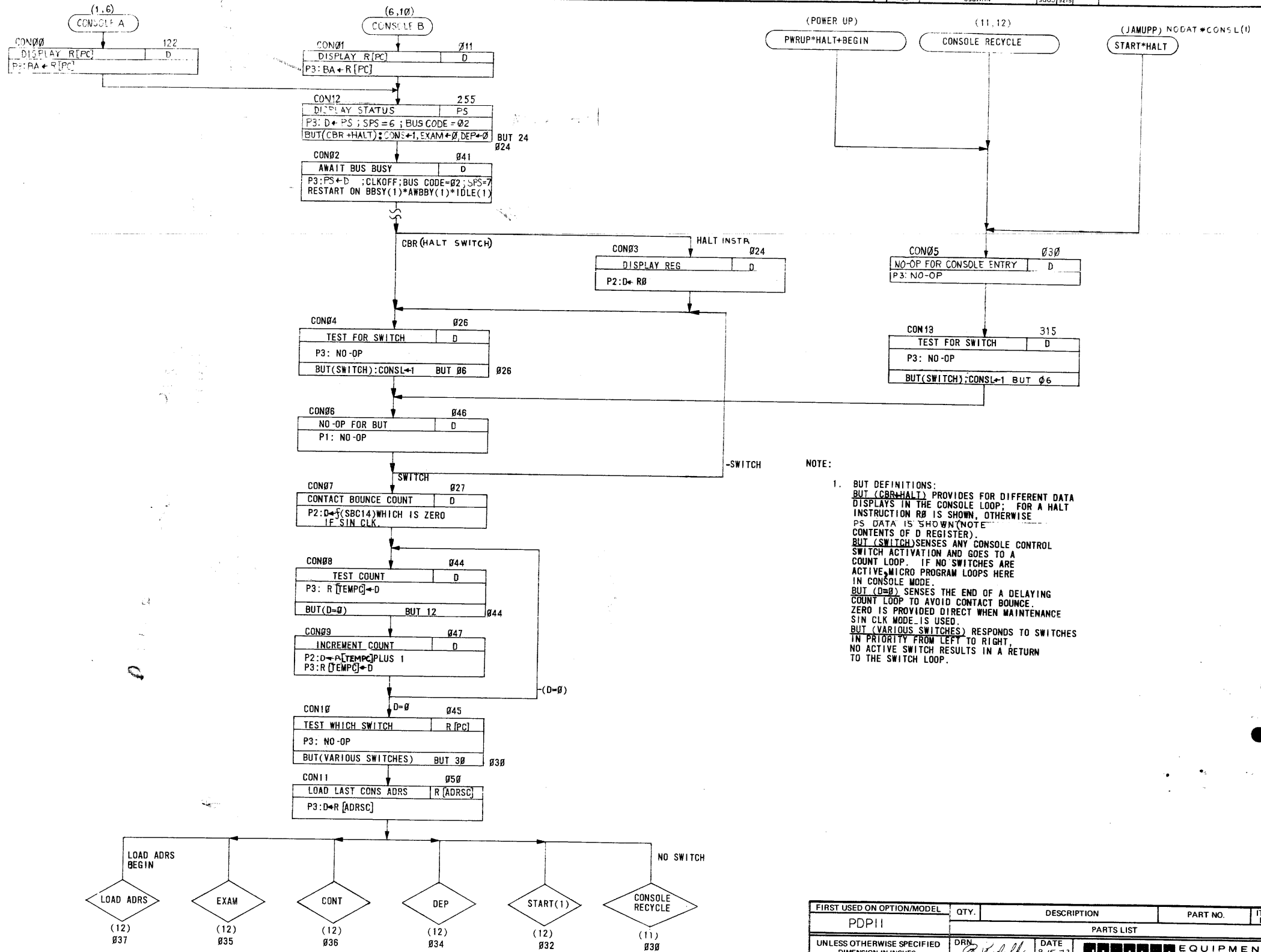


- NOTES:
1. ENTRY INTO SERVICE: CAN OCCUR BETWEEN INSTRUCTIONS FOR BUS REQUEST (BR), ERROR OR TRACE RESPONSES; AFTER TRAP SEQUENCES FOR POSSIBLE RESEQUENCE; FOR CONSOLE BUS REQUEST (CBR); FOR THE WAIT INSTRUCTION; AND FOR START AND CONT CONSOLE OPERATIONS.
 2. BUT DEFINITIONS:
BUT (REQUESTS) RECHECKS THE PROBABLE SERVICE REQUESTS AND BRANCHES IN PRIORITY FROM LEFT (TOP TO BOTTOM) TO RIGHT. THIS WORKING BUT ALTERS THE FOLLOWING FLAGS: CONSL←0, EXAM←0, DEP←0 AND BBSY←0 (THIS LAST ALLOWS NPR'S TO OCCUR).
BUT (BR, WAIT AND FETCH) RESPONDS TO SERVICE SITUATIONS IN PRIORITY FROM LEFT TO RIGHT FOR BUS REQUEST, WAIT INSTRUCTION OR REENTRY TO FETCH.
BUT (INSTR) PROVIDES FOR A TRAP SEQUENCE AS AN INTERRUPT RESPONSE OR RECYCLES THROUGH SERVICE FOR A PASSIVE BR RELEASE OF THE BUS. THIS WORKING BUT ALSO CLEAR THE WAIT FLAG AND SETS INTR IF AN INTERRUPT OCCURED.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TOLERANCES	CHKD	DATE	TITLE	
DECIMALS	ENG	DATE	FLOW DIAGRAM	
ANGLES	PROJ ENG	DATE	(SERVICE)	
.XXX = .005	PROB	DATE	(10)	
.XX = .02		DATE		
.X = .1		DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE		
MATERIAL	NEXT HIGHER ASSY.			
FINISH	B-DD-KDII-A	SCALE	SIZE CODE	NUMBER
			D FD	KDII-A-FD
	SHEET 10 OF 12	DIST.		REV. B

REV	CHANGE NO	BY	CHK

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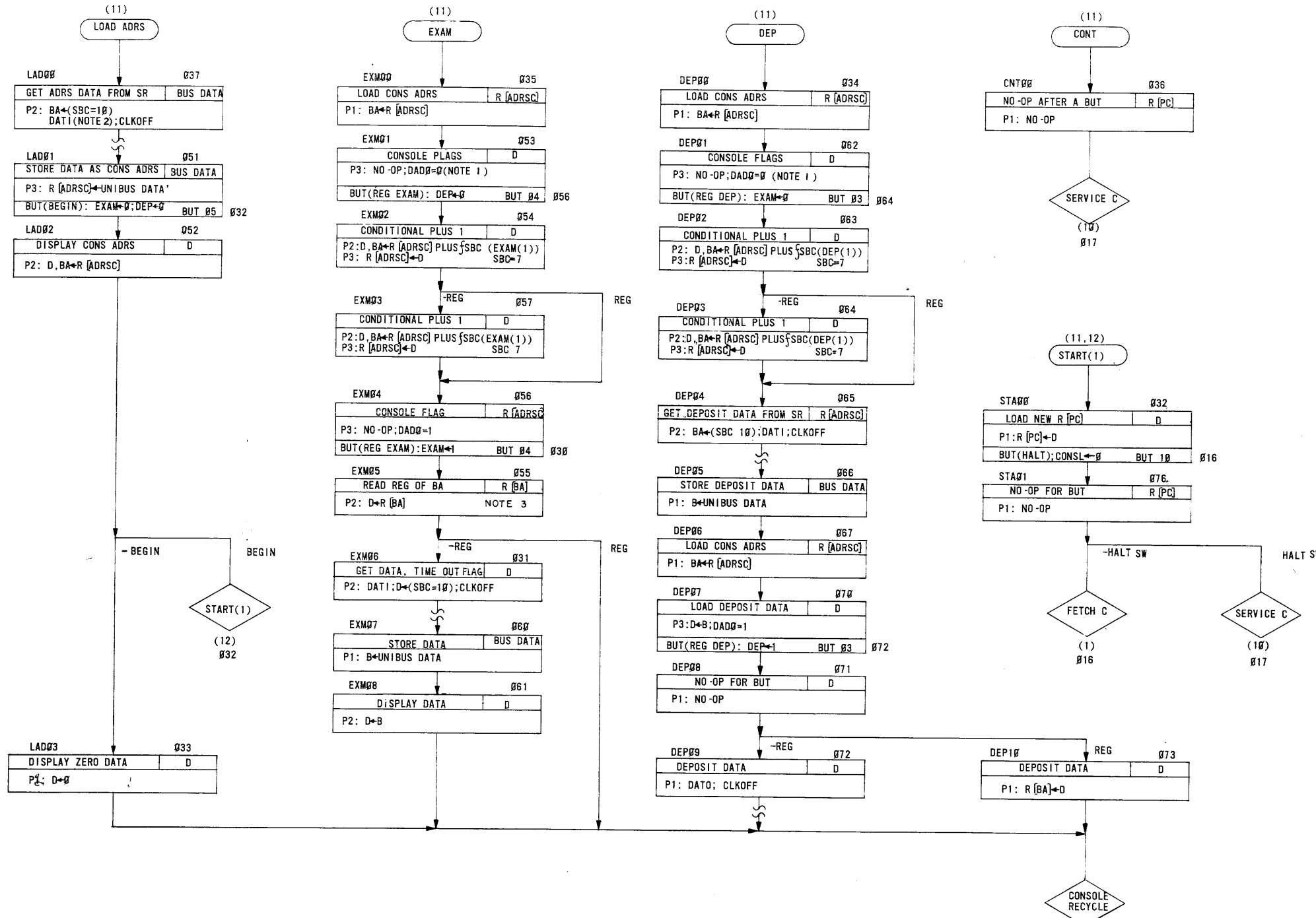


NOTE:
 1. BUT DEFINITIONS:
 BUT (CBR-HALT) PROVIDES FOR DIFFERENT DATA DISPLAYS IN THE CONSOLE LOOP; FOR A HALT INSTRUCTION RB IS SHOWN, OTHERWISE PS DATA IS SHOWN (NOTE CONTENTS OF D REGISTER).
 BUT (SWITCH) SENSES ANY CONSOLE CONTROL SWITCH ACTIVATION AND GOES TO A COUNT LOOP. IF NO SWITCHES ARE ACTIVE, MICRO PROGRAM LOOPS HERE IN CONSOLE MODE.
 BUT (D=0) SENSES THE END OF A DELAYING COUNT LOOP TO AVOID CONTACT BOUNCE. ZERO IS PROVIDED DIRECT WHEN MAINTENANCE SIN CLK MODE IS USED.
 BUT (VARIOUS SWITCHES) RESPONDS TO SWITCHES IN PRIORITY FROM LEFT TO RIGHT, NO ACTIVE SWITCH RESULTS IN A RETURN TO THE SWITCH LOOP.

REV	CHANGE NO

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPII				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN: <i>[Signature]</i>	DATE: 9-15-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS: .XXX = .005	CHK'D: <i>[Signature]</i>	DATE: 9/25/72	TITLE: FLOW DIAGRAM (CONSOLE LOOP) (11)	
ANGLES: ±0° 30'	ENG: <i>[Signature]</i>	DATE: 9/25/72	MATERIAL: NEXT HIGHER ASSY.	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PRO'D: <i>[Signature]</i>	DATE: 9-25-72	FINISH: <i>[Signature]</i>	
	SCALE: 1/2" = 1"	SHEET: 11 OF 12	SIZE CODE: DFD	NUMBER: KD11-A-FD
			DIST:	REV. B

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- NOTES:
- BUT DEFINITIONS:
 BUT (BEGIN) IS A WORKING BUT THAT CLEARS THE EXAM AND DEP FLAGS AND REACTS TO A BEGIN SWITCH BY SEQUENCING A START OPERATION.
 BUT (REG EXAM) RESPONDES TO REG CONSOLE OPERATION FOR PROPER INCREMENTATION AND DATA DISPLAY, THIS WORKING BUT ALSO ORDERS INCREMENTING FLAGS.
 BUT (REG DEP) RESPONDES TO REG CONSOLE OPERATION FOR PROPER INCREMENTATION AND DATA STORAGE. THIS WORKING BUT ALSO ORDERS INCREMENTING FLAGS.
 BUT (HALT) SENSES THE HALT SWITCH AND EITHER GOES TO FETCH (ENABLE POSITION) OR THROUGH SERVICE TO CONSOLE (HALT POSITION).
 - PROCESSOR RESPONDES TO SR ADDRESS (PROVIDED BY SBC=10) UNLESS BEGIN SWITCH INPUT IS ACTIVE.
 - REGISTER SELECTION AS A FUNCTION OF BA [03=00].

REV	
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.		DRN	DATE	
TOLERANCES		CHKD	DATE	
DECIMALS	ANGLES	ENG	DATE	
.XXX = .005	±0° 30'	PROJ. ENG.	DATE	
.XX = .02		PROD.	DATE	
.X = .1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓				
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE			

digital EQUIPMENT CORPORATION
 MAYNARD MASSACHUSETTS
 TITLE
 FLOW DIAGRAM
 (CONSOLE SWITCHES)
 SIZE CODE
 PDP KDI1-A
 SCALE
 12:12

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

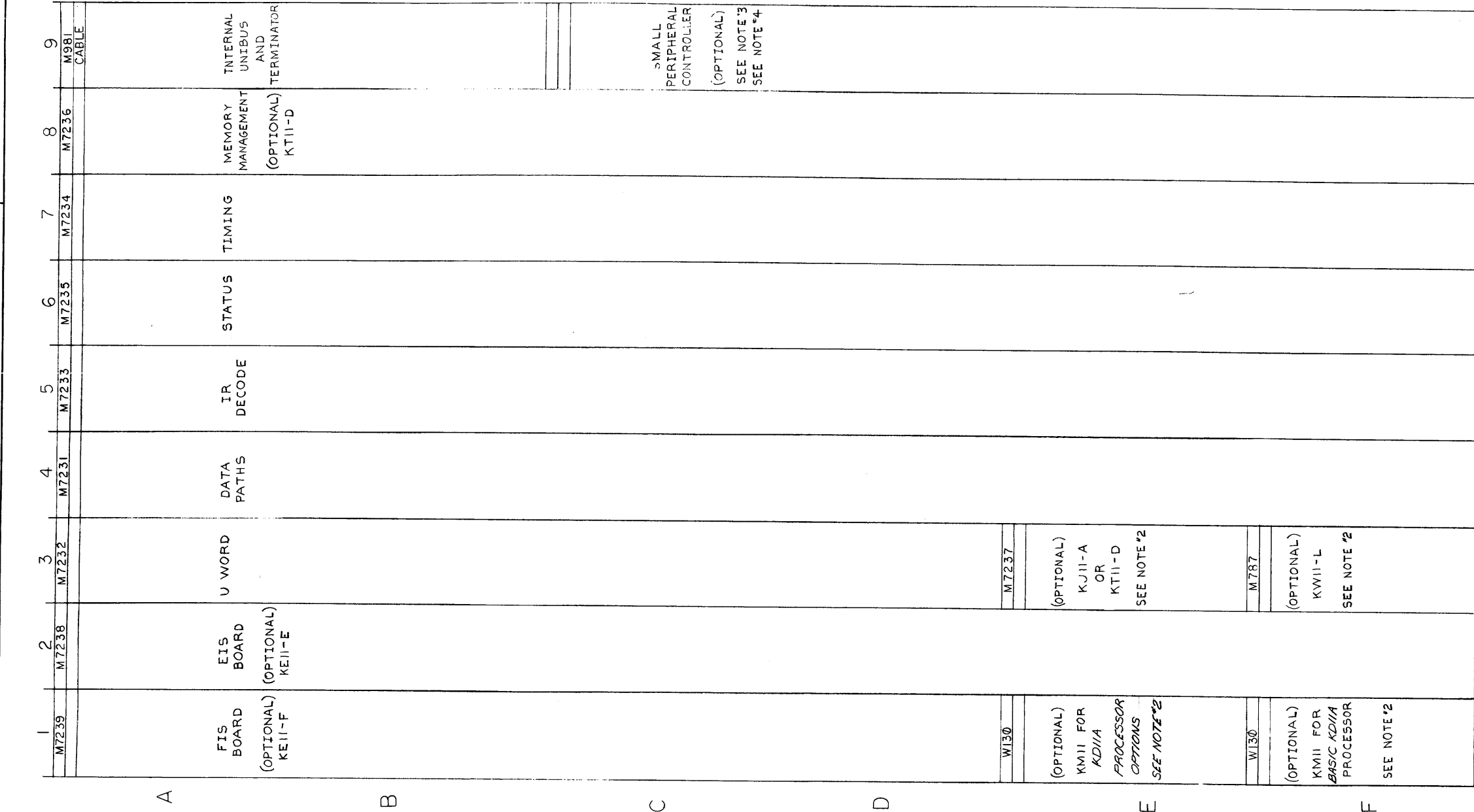
PARTS LIST

MADE BY R. PUDELKO	CHECKED <i>J. J. Loughlin</i>	SECTION
DATE 9/15/72	DATE 9/27/72	
ENG <i>J. J. Loughlin</i>	PROD <i>J. J. Loughlin</i>	ISSUED SECT.
DATE 9/27/72	DATE 9/28/72	

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	KD11-A															
1	D-AD-7009009-0-0	WIRED ASSY (KD11-A)	1															
2	D-CS-M7231-0-1	DATA PATHS	1															
3	D-CS-M7232-0-1	U WORD	1															
4	D-CS-M7233-0-1	IR DECODE	1															
5	D-CS-M7234-0-1	TIMING	1															
6	D-CS-M7235-0-1	STATUS	1															
7	D-UA-M981-0-0	INTERNAL UNIBUS ASSY	1															
8	D-MU-KD11-A-MU	MODULE UTILIZATION	REF															
9	A-PL-KT11-D-0	MEMORY MANAGEMENT	REF															
10	A-PL-KJ11-A-0	STACK LIMIT REGISTER	REF															
11	D-UA-KE11-E-0	KE11-E ASSY	REF															
12	D-PL-KE11-F-0	KE11-F ASSY	REF															
13	A-PL-KW11-L-0	LINE FREQUENCY CLOCK	REF															
14	A-PL-KM11-0-0	MAINTENANCE PANEL (W130, W131)	REF															
15	A-SS-5509081-0-12	SILK SCREEN (KD11-A)	REF															
16	A-SS-5509081-0-13	SILK SCREEN (KT11-D, KE11-E, F)	REF															
17	A-PL-KY11-D-0	KY11-D CONSOLE	REF															
18	C-CS-M930-0-1	BUS TERMINATOR M930	1															
TITLE		ASSY NO.	SIZE	CODE	NUMBER		REV.	ECO NO.										
KD11-A PROCESSOR		<i>11</i>	A	PL	KD11-A-0													
		SHEET 1 OF 1	DIST.															

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VIEW FROM WIRING SIDE

NOTES:

- VIEW OF LOGIC PANEL IS FROM WIRING SIDE.
- PREWIRED MODULE SLOTS FOR NOTED OPTIONS.
- THE SMALL PERIPHERAL CONTROLLER SLOT (SLOT 09, SECTIONS C,D,E AND F) MAY CONTAIN A VARIETY OF PDP11 OPTIONS. THE OPTION USUALLY CONSIST OF A SINGLE QUAD MODULE BOARD (SECTION C,D,E AND F). IT MAY CONSIST OF A DOUBLE HEIGHT CONTROLLER BOARD (SECTIONS C AND D) WITH A M105 ADDRESS SELECTOR MODULE (SECTION E) AND A M7821 INTERRUPT CONTROL MODULE (SECTION F).
- IF NO OPTION IS PRESENT IN THE SMALL PERIPHERAL CONTROLLER SLOT, A G727 GRANT CONTINUITY MODULE MUST BE INSERTED INTO SECTION D.

CHK	CHANGE NO.	REV.
1	KD11A-00005	A
O'LOUGHLIN 2-15-73		

FIRST USED ON OPTION / MODEL
PDP 11

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

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
DRN. <i>R. Smith</i> DATE 7-5-72		digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHKD. <i>[Signature]</i> DATE 9-29-72			
ENGR. <i>[Signature]</i> DATE 9/28/72		MODULE UTILIZATION	
PRJ. ENG. <i>[Signature]</i> DATE 9/28/72			
PROD. <i>[Signature]</i> DATE 9-28-72		NEXT HIGHER ASSY	
A-F-L-KD11-A-0		SCALE NONE	
SHEET 1 OF 1		DIST.	

REV. A
NUMBER KD11-A-MU
SIZE CODE D MU

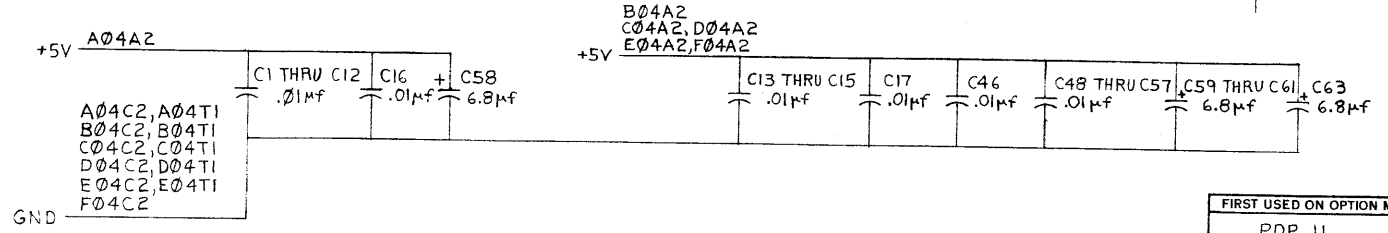
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NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE K11-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
- PROCESSOR SIGNAL PREFIX NOTATION (K2-I FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



IC TYPE	GND	+5V
DEC 74157	8	16
DEC 3101A	8	16
DEC 74174	8	16
DEC 74182	8	16
DEC 74181	12	24
DEC 74153	8	16
DEC 380	1	8
IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.		
IC PIN LOCATIONS		



AR	DESCRIPTION	QTY	ITEM NO.
15	INSULATED JUMPER	9009185	30
12	SPLIT LUG	9006735	29
	EYELET	9006732	28
4	E6, E28, E49, E81	IC DEC 74157	1910655
4	E3, E25, E47, E92	IC DEC 3101A	1910653
12	E2, E8, E9, E30, E31, E33, E46, E54, E56, E73, E77, E86	IC DEC 74174	1910652
1	E39	IC DEC 74182	1910019
4	E18, E43, E68, E74	IC DEC 74181	1909982
17	E11, E12, E13, E17, E23, E34, E35, E37, E38, E51, E55, E60, E61, E72, E78, E82, E83	IC DEC 74153	1909937
4	E7, E29, E50, E87	IC DEC 74H04	1909931
9	E16, E24, E53, E58, E59, E63, E67, E70, E75	IC DEC 8815	1909713
3	E41, E69, E79	IC DEC 8242	1909712
13	E1, E10, E15, E19, E32, E40, E44, E45, E57, E64, E88, E89, E91	IC DEC 8881	1909705
1	E21	IC DEC 74H74	1909667
8	E4, E14, E26, E36, E52, E62, E84, E93	IC DEC 380	1909485
1	E5	IC DEC 74H11	1909267
1	E71	IC DEC 74H60	1909064
4	E80, E85, E90, E76	IC DEC 74H53	1909062
1	E20	IC DEC 74H30	1909059
2	E27, E66	IC DEC 74H10	1909057
2	E22, E65	IC DEC 74H00	1909056
2	E42, E48	IC DEC 74H20	1905635
16	R17 THRU R32	RES 620 1/4W ±5%	1303178
16	R1 THRU R16	RES 300 1/4W ±5%	1301425
5	R33, R34, R35, R36, R37	RES 1K 1/4W ±5%	1300365
1		HANDLE MODULE	1210711-02
1	J1	CONN 40 PIN	1209941
6	C58 THRU C63	CAP 6.8µf 35V ±10% TANT	1005306
56	C1 THRU C46, C48 THRU C57	CAP .01µf 100V ±20% DISC	1001610
1		ETCHED CIRCUIT BOARD	5009980
QTY	REF DESIGNATION	DESCRIPTION	PART NO. ITEM NO.

SEMICONDUCTOR CONVERSION CHART

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

REVISIONS

CHK	CHANGE NO.	REV

DATE: 7-6-72
 DATE: 7/31/72
 DATE: 7/31/72
 DATE: 7/31/72
 DATE: 8-7-72

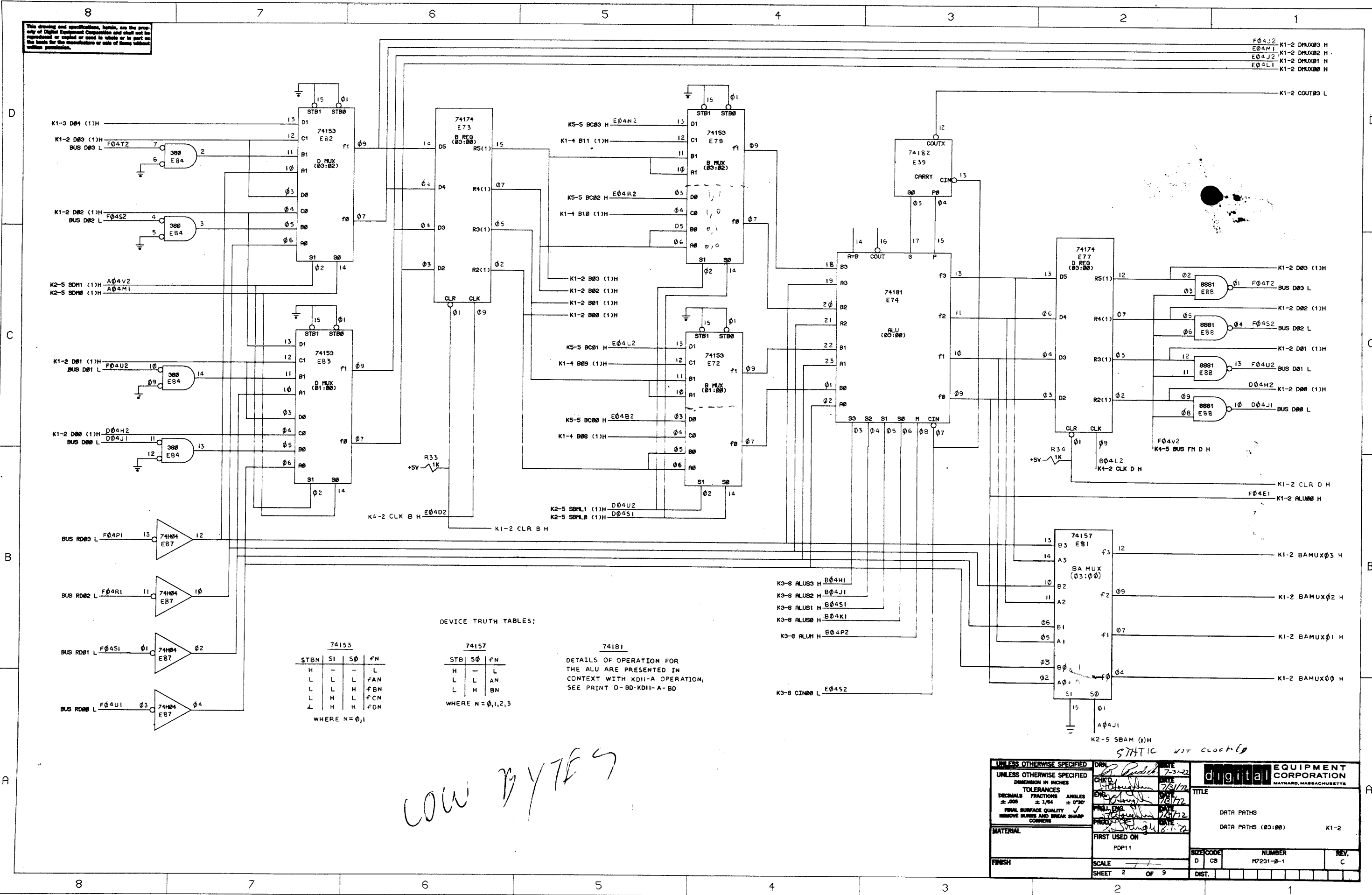
digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

DATA PATHS

SIZE CODE: DCS M7231-0-1
 NUMBER: 1
 REV: C

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F04J2 K1-2 DMUX03 H
 E04M1 K1-2 DMUX02 H
 E04J2 K1-2 DMUX01 H
 E04L1 K1-2 DMUX00 H



DEVICE TRUTH TABLES:

74153			
STBN	SI	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FBN
L	H	L	FCN
L	H	H	FDN

WHERE N = 0,1

74157		
STB	S0	FN
H	L	L
L	L	AN
L	H	BN

WHERE N = 0,1,2,3

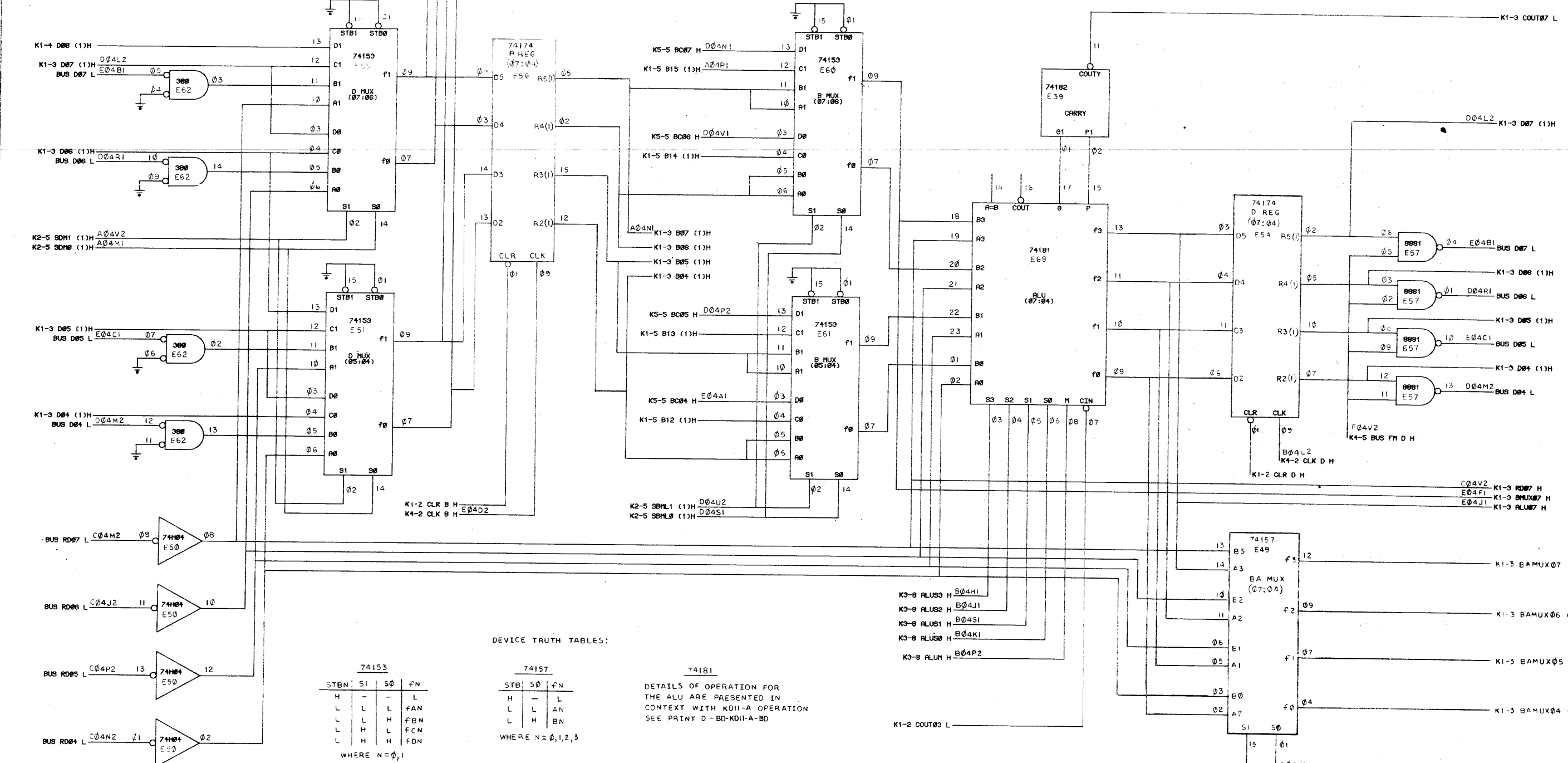
74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH KD11-A OPERATION, SEE PRINT D-BD-KD11-A-BD

LOW BYTES

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ±.005 ±.004 ±0°30'	DATE 7-31-72 7/31/72 7/31/72 7/31/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
TITLE DATA PATHS	DATE 7/31/72	
MATERIAL	DATE 7/31/72	
FINISH	DATE 7/31/72	
SCALE SHEET 2 OF 9	NUMBER H7231-B-1	REV. C

STATIC NOT CLIPPED

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DEVICE TRUTH TABLES:

74153

STB1	S1	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FBN
L	H	L	FCN
L	H	H	FDN

WHERE N = 0, 1

74157

STB1	S0	FN
H	-	L
L	L	AN
L	H	BN

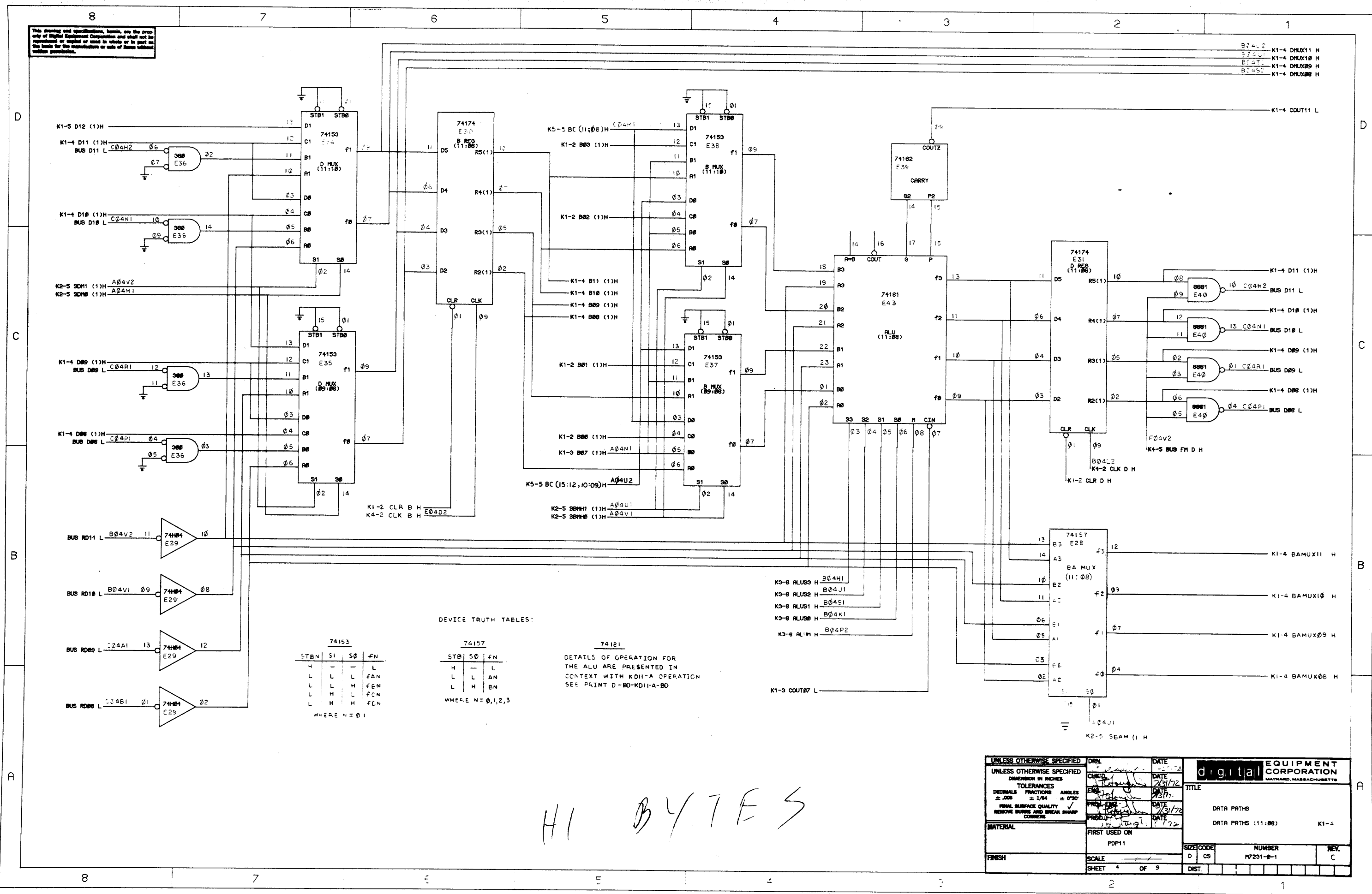
WHERE N = 0, 1, 2, 3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH K011-A OPERATION SEE PRINT D-BD-K011-A-BD

UNLESS OTHERWISE SPECIFIED	DRN	DATE	digital EQUIPMENT CORPORATION MAYFARL, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED	CHKD	DATE	
DIMENSION IN INCHES	ENG	DATE	TITLE
TOLERANCES	DATE	DATE	DATA PATHS
DECIMALS FRACTIONS ANGLES	DATE	DATE	DATA PATHS (07:04) K1-3
± .005 ± 1/64 ± 0°30'	DATE	DATE	
FINISH SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DATE	DATE	
MATERIAL	FIRST USED ON	DATE	
	PDP11		
FINISH	SCALE	SIZE CODE	NUMBER
	SHEET 3 OF 9	DIST.	REV. C

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B74L2 K1-4 DMUX11 H
 E75U1 K1-4 DMUX10 H
 B04T K1-4 DMUX09 H
 B04S2 K1-4 DMUX08 H



DEVICE TRUTH TABLES:

74153			
STB	S1	S0	FN
H	-	-	L
L	L	L	FAN
L	L	H	FEN
L	H	L	FCN
L	H	H	FDN

WHERE N = 0,1

74157		
STB	S0	FN
H	-	L
L	L	AN
L	H	BN

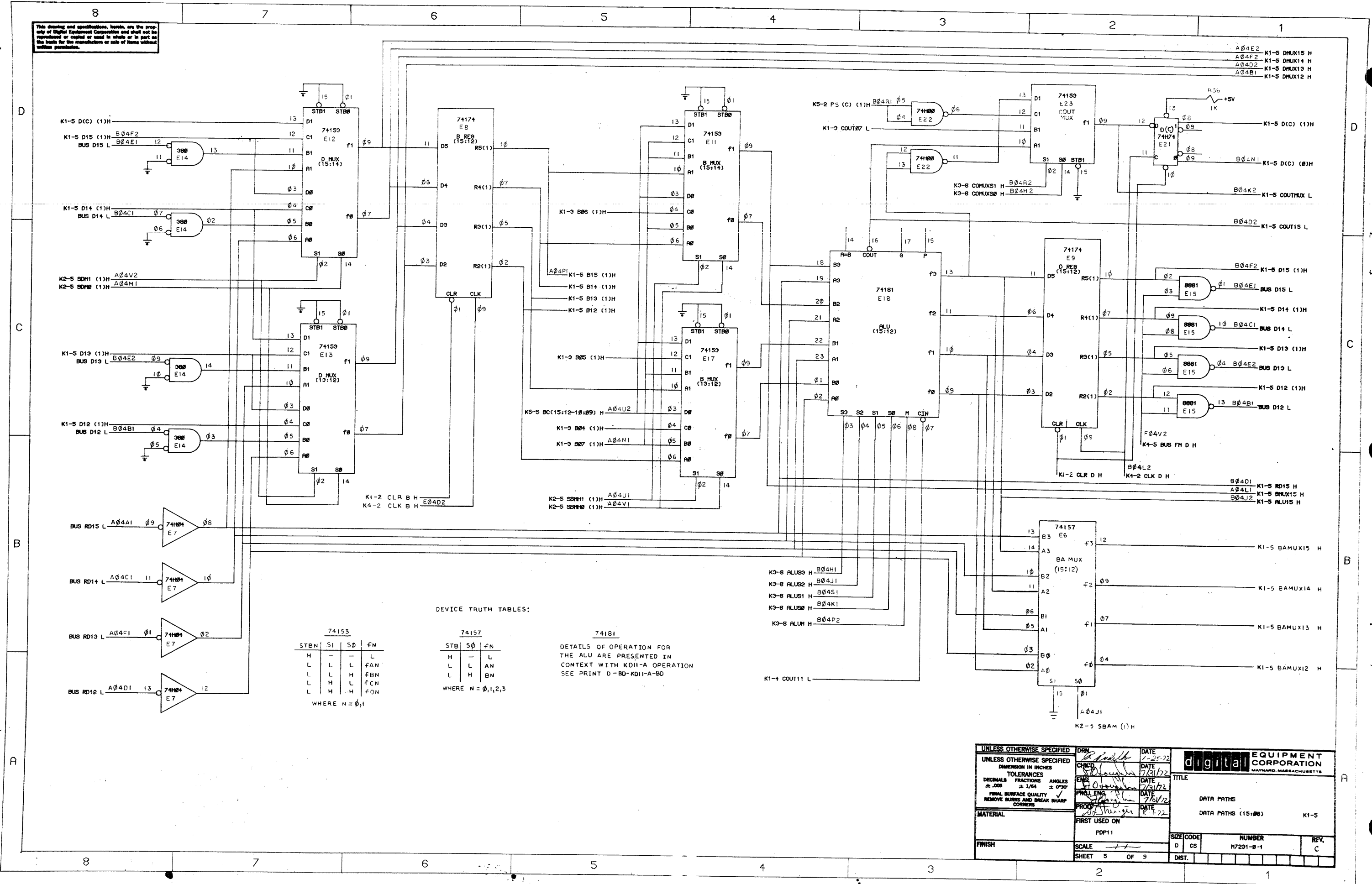
WHERE N = 0,1,2,3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH K011-A OPERATION SEE PRINT D-B0-K011-A-B0

H1 BYTES

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRAWN DATE 7/31/72	DATE 7/31/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
TOLERANCES DECIMALS FRACTIONS ANGLES ± .005 ± 1/64 ± 0°30'	ENG. DATE 7/31/72	DATE 7/31/72	
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	PROD. ENG. DATE 7/31/72	DATE 7/31/72	TITLE DATA PATHS DATA PATHS (11:00) K1-4
MATERIAL	FIRST USED ON POP11	SIZE CODE D CS	NUMBER 17231-B-1
FINISH	SCALE SHEET 4 OF 9	DIST.	REV. C

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DEVICE TRUTH TABLES:

74153			
STB _N	S ₁	S ₀	f _N
H	-	-	L
L	L	L	f _{AN}
L	L	H	f _{BN}
L	H	L	f _{CN}
L	H	H	f _{DN}

WHERE N = 0,1

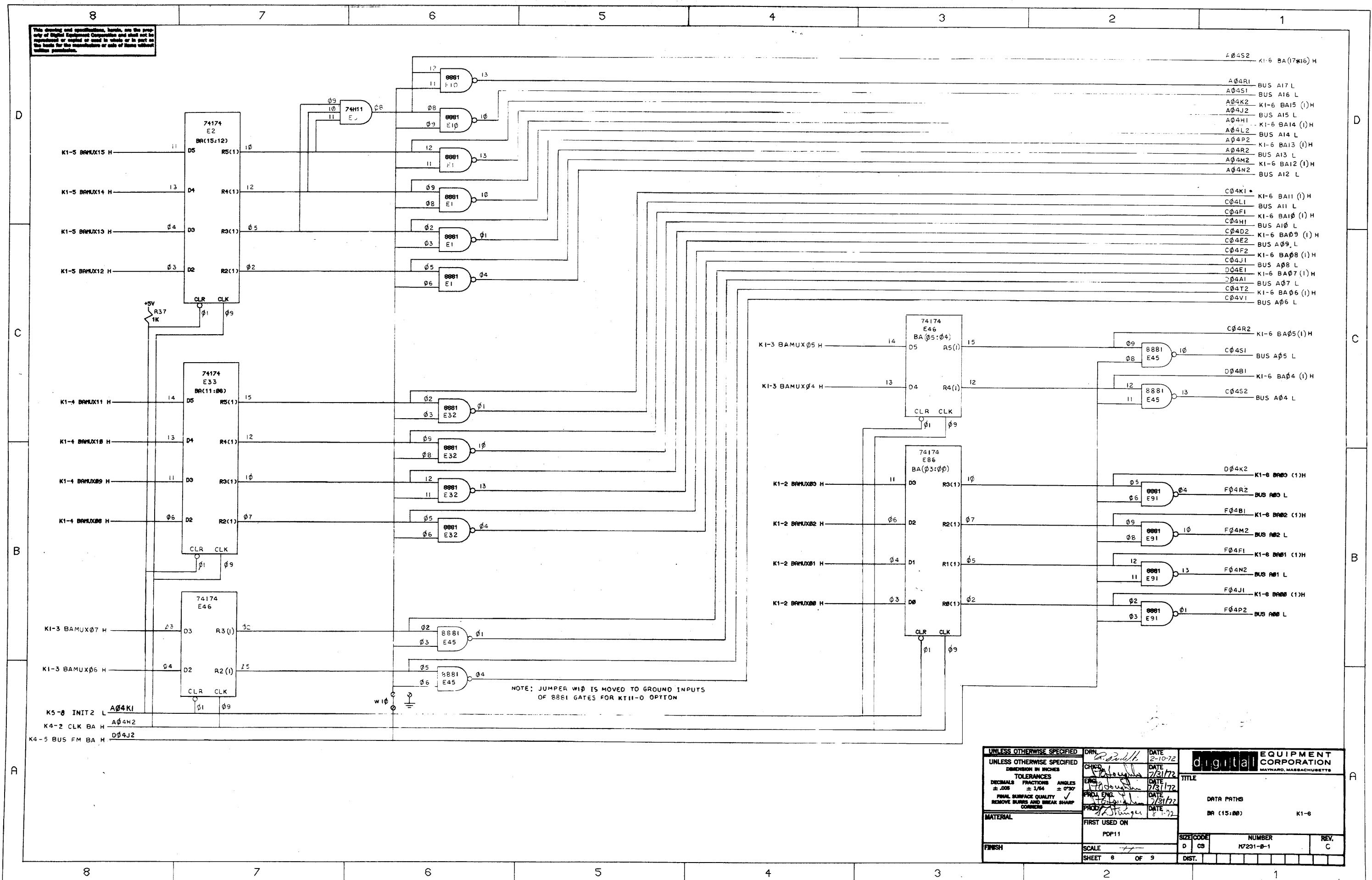
74157		
STB	S ₀	f _N
H	-	L
L	L	f _{AN}
L	H	f _{BN}

WHERE N = 0,1,2,3

74181
 DETAILS OF OPERATION FOR THE ALU ARE PRESENTED IN CONTEXT WITH K011-A OPERATION SEE PRINT D-BD-K011-A-BD

UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHD	DATE	
TOLERANCES		ENG	DATE	TITLE
DECIMALS	FRACTIONS	PROJ. ENG.	DATE	
±.005	± 1/64	DATE	DATE	DATA PATHS DATA PATHS (15:100) K1-5
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		PROC.	DATE	
MATERIAL	FIRST USED ON	SCALE	NUMBER	REV. C
FINISH	POP11	SHEET 5 OF 9	DIST.	

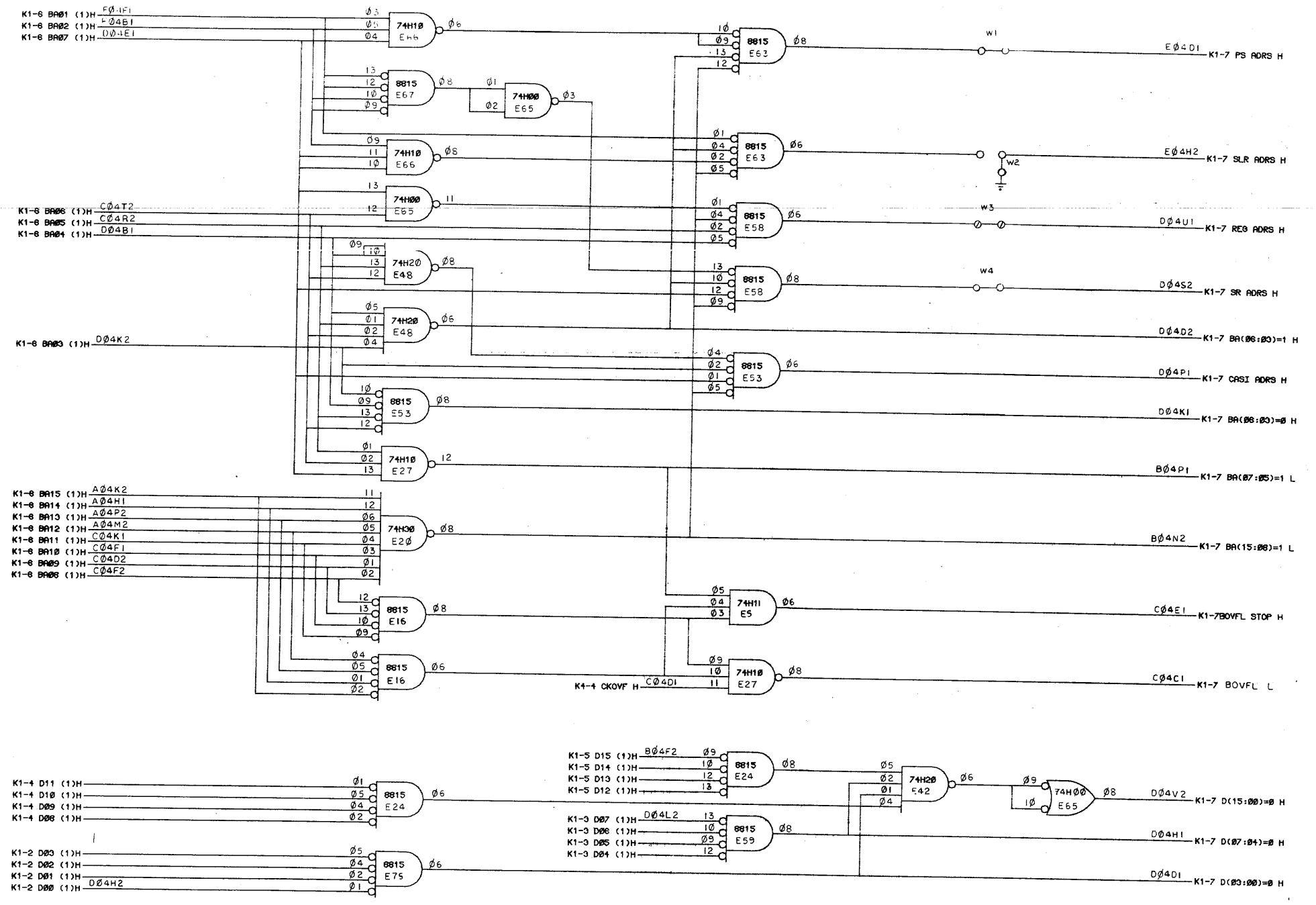
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NOTE: JUMPER W10 IS MOVED TO GROUND INPUTS OF 8881 GATES FOR K111-0 OPTION

UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHKD	DATE	
TOLERANCES		ENG	DATE	TITLE DATA PATHS BA (15:00) K1-6
DECIMALS	FRACTIONS	ANGLES	DATE	
± .005	± 1/64	± 0°30'	DATE	
FINAL SURFACE QUALITY		PRG. ENG.	DATE	SIZE CODE D CS NUMBER H7201-B-1 REV. C
REMOVE BURRS AND BREAK SHARP CORNERS		PRG. ENGR.	DATE	
MATERIAL		PRG. ENGR.	DATE	FIRST USED ON PDP11
FINISH		PRG. ENGR.	DATE	
SCALE		SHEET 8 OF 9		DIST.
SHEET 8 OF 9		DIST.		

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PROCESSOR ADDRESSES			
NAME & MNEMONICS	(ADDR)8		
PROCESSOR STATUS	PS	777776	
STACK LIMIT REGISTER	SLR	777774	
GENERAL REGISTERS			
R [ADRS]	REG 17	777717	
R [SP USE]	REG 16	777716	
R [TEMPC]	REG 15	777715	
R [VECT]	REG 14	777714	
R [IR]	REG 13	777713	
R [DEST]	REG 12	777712	
R [SOURCE]	REG 11	777711	
R [TEMP]	REG 10	777710	
R [PC], R7	REG 07	777707	
R [SP], R6	REG 06	777706	
R5	REG 05	777705	
R4	REG 04	777704	
R3	REG 03	777703	
R2	REG 02	777702	
R1	REG 01	777701	
R0	REG 00	777700	
CONSOLE SWITCH REGISTER	SR	777570	

- NOTES:
- JUMPERS W1, W3 AND W4 ARE REMOVED FOR KTII-D OPTION.
 - JUMPER W2 IS MOVED TO CONNECT E63 PIN 06 TO E04H2 FOR KJII-A OPTION ALONE. JUMPER IS COMPLETELY REMOVED FOR KTII-D OPTION.

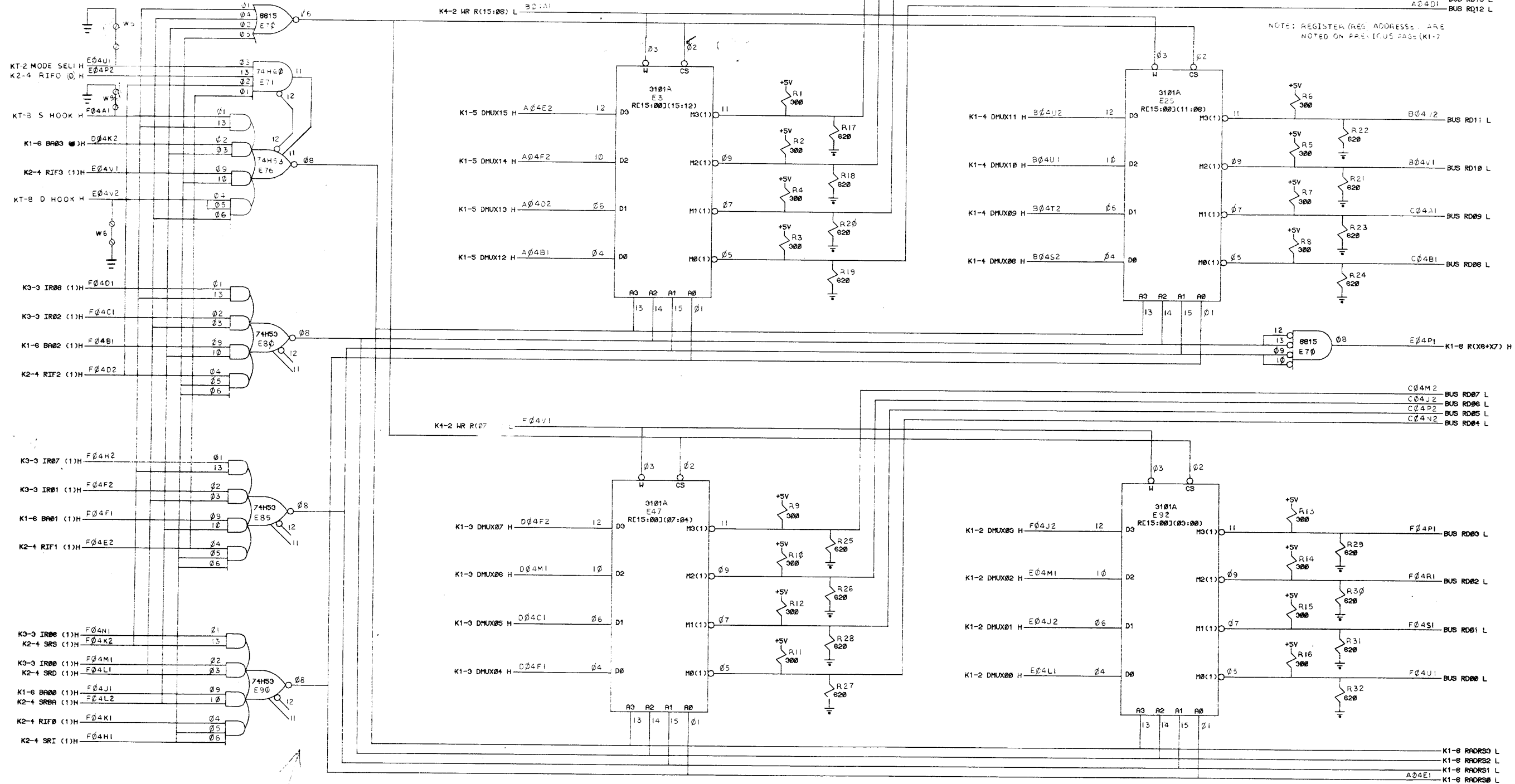
UNLESS OTHERWISE SPECIFIED	DRY	DATE	7/26/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED	DATE	7/31/72	TITLE	
DIMENSION IN INCHES	DATE	7/31/72	DATA PATH	ADRS DECODE K1-7
TOLERANCES	DATE	7/31/72	NUMBER	
DECIMALS ± .005	DATE	7/31/72	M7231-0-1	REV
FRACTIONS ± 1/64	DATE	7/31/72	C	
ANGLES ± 0°30'	DATE	7/31/72		
FINAL SURFACE QUALITY	DATE	7/31/72		
REMOVE BURRS AND BREAK SHARP CORNERS	DATE	7/31/72		
MATERIAL	FIRST USED ON			
	PDP11			
FINISH	SCALE			
	1/1			
	SHEET	7	OF 9	

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NOTE: JUMPERS W5, W6 AND W9 ARE REMOVED FOR K111-D OPTION

A24A1 BUS RD15 L
A24C1 BUS RD14 L
A24F1 BUS RD13 L
A24D1 BUS RD12 L

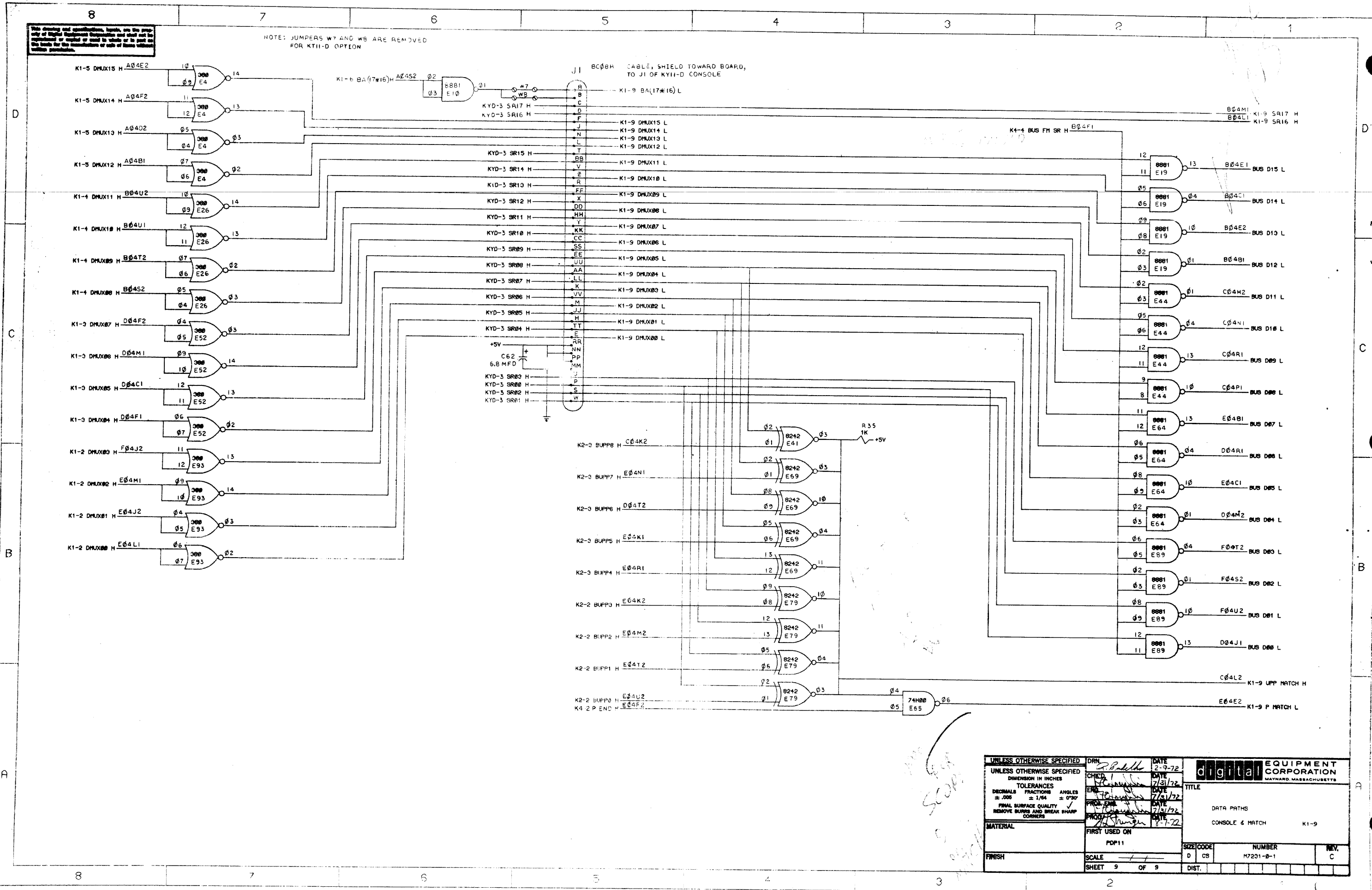
NOTE: REGISTER (REG. ADDRESS) ARE NOTED ON PREVIOUS PAGE (K1-7)



UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DRN <i>[Signature]</i>	DATE 1-21-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
TOLERANCES		CHK'D <i>[Signature]</i>	DATE 7/31/72	
DECIMALS ± .005	FRACTIONS ± 1/64	ENG <i>[Signature]</i>	DATE 7/31/72	TITLE DATA PATHS
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		PROJ. ENG. <i>[Signature]</i>	DATE 7/31/72	REG15:00 K1-8
MATERIAL		PROD. ENG. <i>[Signature]</i>	DATE 8/1/72	
FIRST USED ON POP11		SIZE CODE D CS		NUMBER M7231-B-1
FINISH		SCALE SHEET 8 OF 9		REV. C

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NOTE: JUMPERS W7 AND W8 ARE REMOVED FOR K111-D OPTION



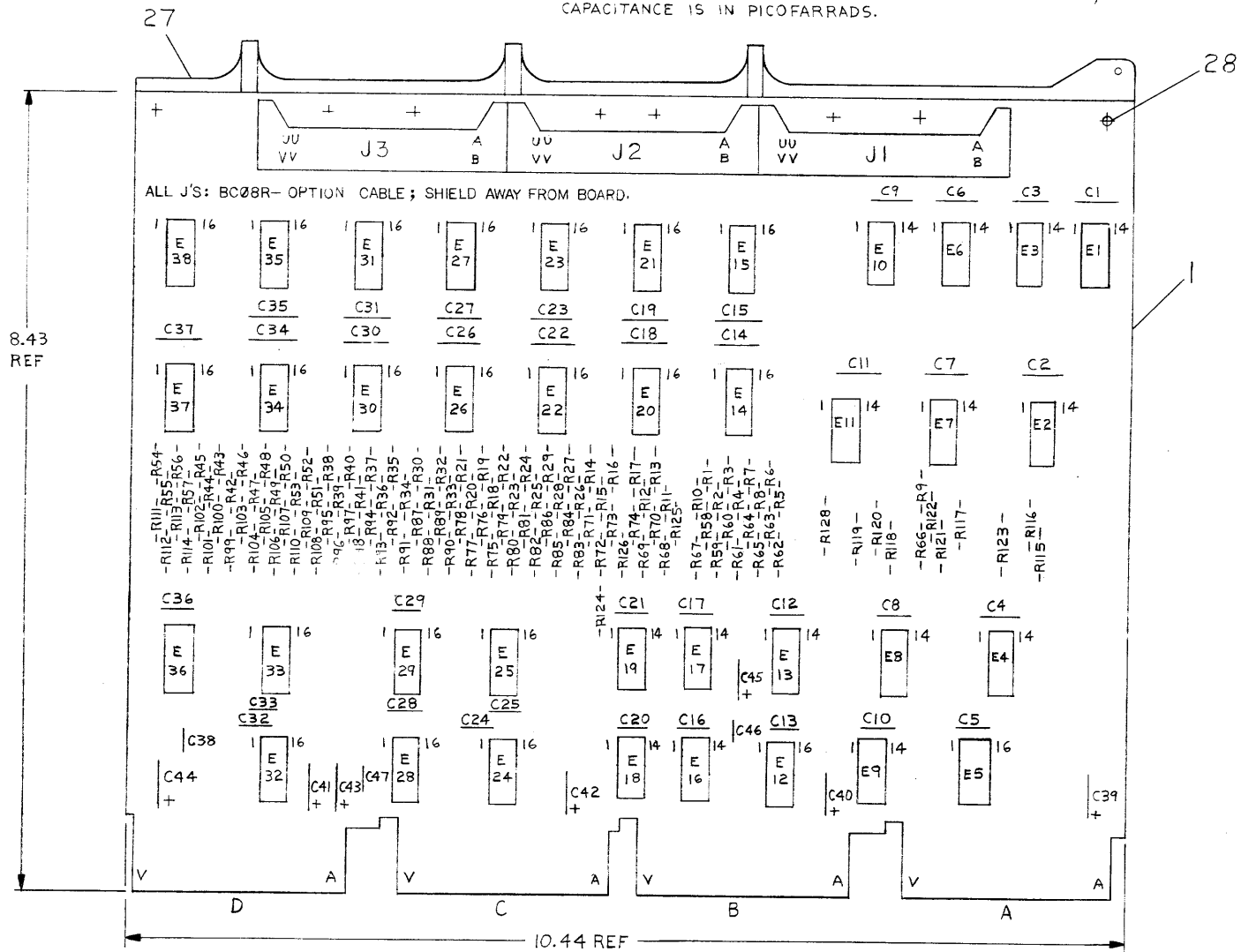
UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHKD	DATE	
TOLERANCES		ENG	DATE	TITLE
DECIMALS	FRACTIONS	ANGLES	DATE	
±.005	± 1/64	± 0°30'	7/31/72	DATA PATHS CONSOLE & MATCH K1-9
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		PROJ. ENGR.	DATE	
MATERIAL		PROJ. MGR.	DATE	FIRST USED ON
FINISH		POP11		
SCALE		SHEET 9 OF 9		SIZE CODE
DIST.		NUMBER		REV.
		M7231-0-1		C

Handwritten notes and signatures in the bottom right corner, including a signature and the word 'SCOPE'.

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NOTES:

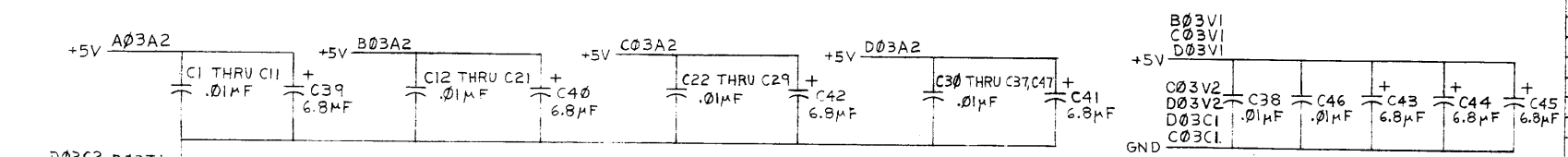
1. PIN NOTATION THROUGHOUT IS ORDERED PER MODULE PLACEMENT IN THE KDH-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
2. ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
3. PROCESSOR SIGNAL PREFIX NOTATION (K2-1 FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A 'BUS' PREFIX REPRESENT A "WIRED OR" SITUATION AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
4. UNLESS OTHERWISE NOTED; RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
8		EYELET	9006732	28
1		HANDLE	7479871	27
1	E38	I.C. DEC 23B40A2	23B40A2	26
1	E34	I.C. DEC 23B12A2	23B12A2	25
1	E35	I.C. DEC 23B11A2	23B11A2	24
1	E37	I.C. DEC 23B10A2	23B10A2	23
1	E31	I.C. DEC 23B35A2	23B35A2	22
1	E30	I.C. DEC 23B08A2	23B08A2	21
1	E27	I.C. DEC 23B07A2	23B07A2	20
1	E22	I.C. DEC 23B06A2	23B06A2	19
1	E23	I.C. DEC 23B42A2	23B42A2	18
1	E26	I.C. DEC 23B41A2	23B41A2	17
1	E21	I.C. DEC 23B03A2	23B03A2	16
1	E20	I.C. DEC 23B02A2	23B02A2	15
1	E14	I.C. DEC 23B01A2	23B01A2	14
1	E15	I.C. DEC 23B00A2	23B00A2	13
1	E36	I.C. DEC 74175	1910651	12
8	E5, E12, E24, E25, E28, E29, E32, E33	I.C. DEC 74174	1910652	11
3	E4, E8, E13	I.C. DEC 74H04	1909931	10
9	E1, E3, E6, E9, E10, E18, E19, E16, E17	I.C. DEC 74H74	1909667	9
3	E2, E7, E11	I.C. DEC 74H10	1909057	8
13	R115 THRU R126, R128	RES. 1K 1/4W ±5%	1300365	7
57	R1 THRU R57	RES. 680 1/4W ±5%	1301424	6
57	R58 THRU R114	RES. 390 1/4W ±5%	1300309	5
3	J1, J2, J3	CONN. 40 PIN	1209941	4
7	C39 THRU C45	CAP. 6.8MF 35V ±10% TANT	1005306	3
40	C1 THRU C38, C46, C47	CAP. .01MF 100V ±20% DISC	1001610	2
1		ETCHED CIRCUIT BOARD	5009961	1

IC TYPE	QTY	LOCATIONS
23B00A2 THRU 23B13A2	8	16
DEC 74174	8	16
DEC 74175	8	16
IC TYPE	GND	+5V

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



REV	DATE	BY	CHK
1	8-10-73	J. BUZYNSKI	
2	11-14-73	J. LOUGHLIN	
3	11-14-73	J. LOUGHLIN	
4	11-14-73	J. LOUGHLIN	
5	11-14-73	J. LOUGHLIN	
6	11-14-73	J. LOUGHLIN	
7	11-14-73	J. LOUGHLIN	
8	11-14-73	J. LOUGHLIN	

DEC FORM NO. DRD-135A

PDP II PARTS LIST

ETCH BOARD REV: E

DRN. [Signature]	DATE 6-22-72
CHKD. [Signature]	DATE 6/16/72
ENG. [Signature]	DATE 6/16/72
PROB. [Signature]	DATE 6/16/72

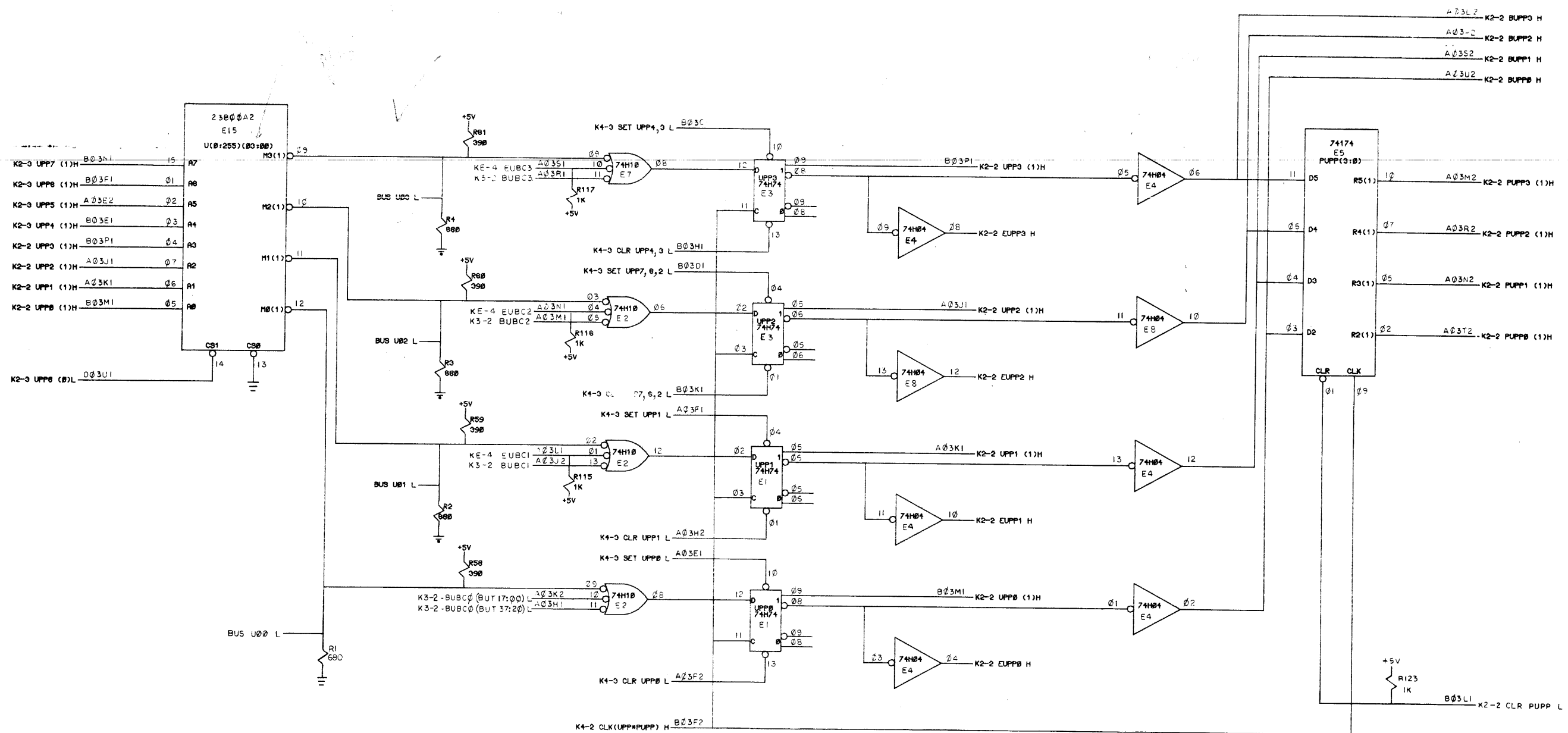
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: U 10000

SCALE: 1:1

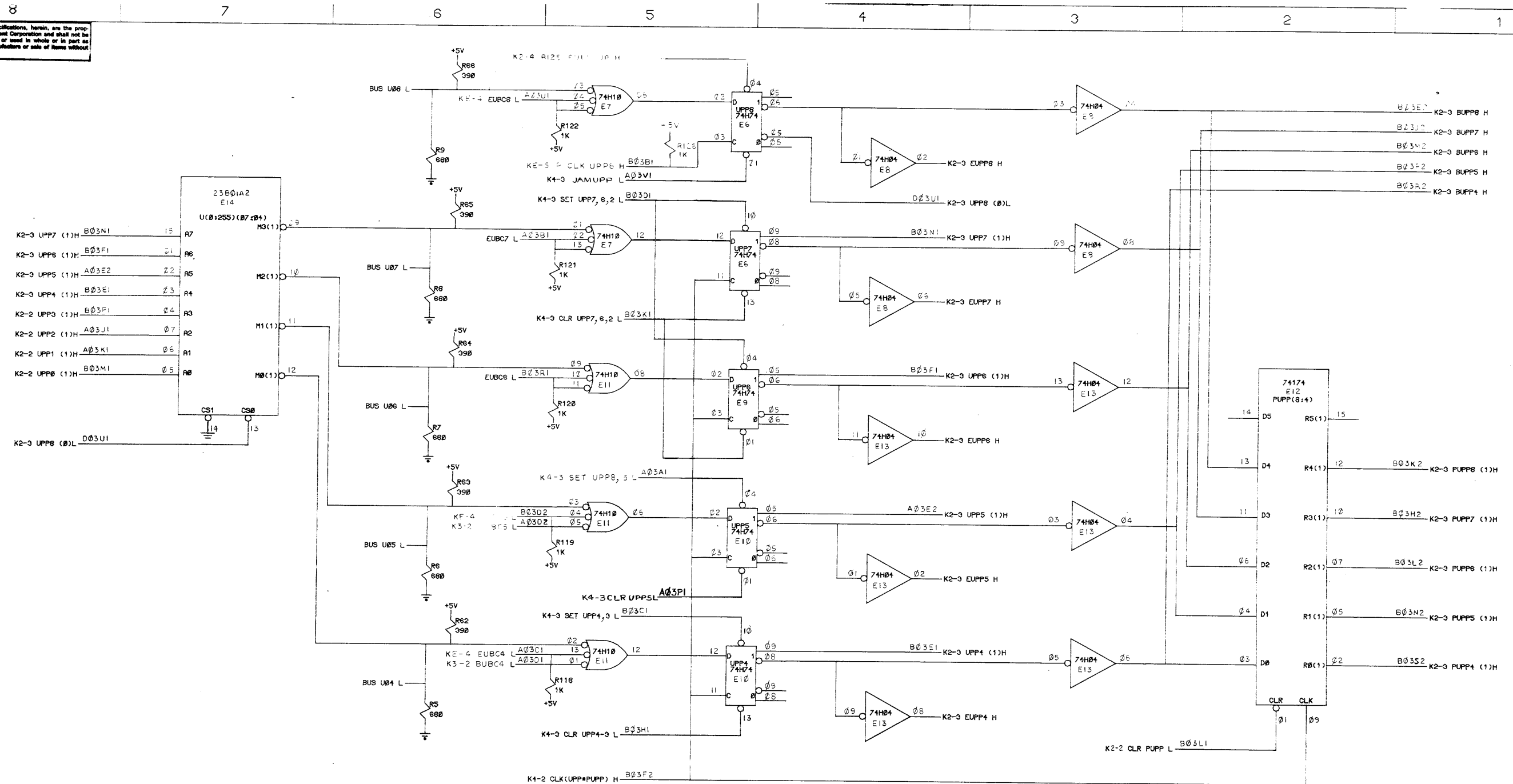
SEMICONDUCTOR CONVERSION CHART

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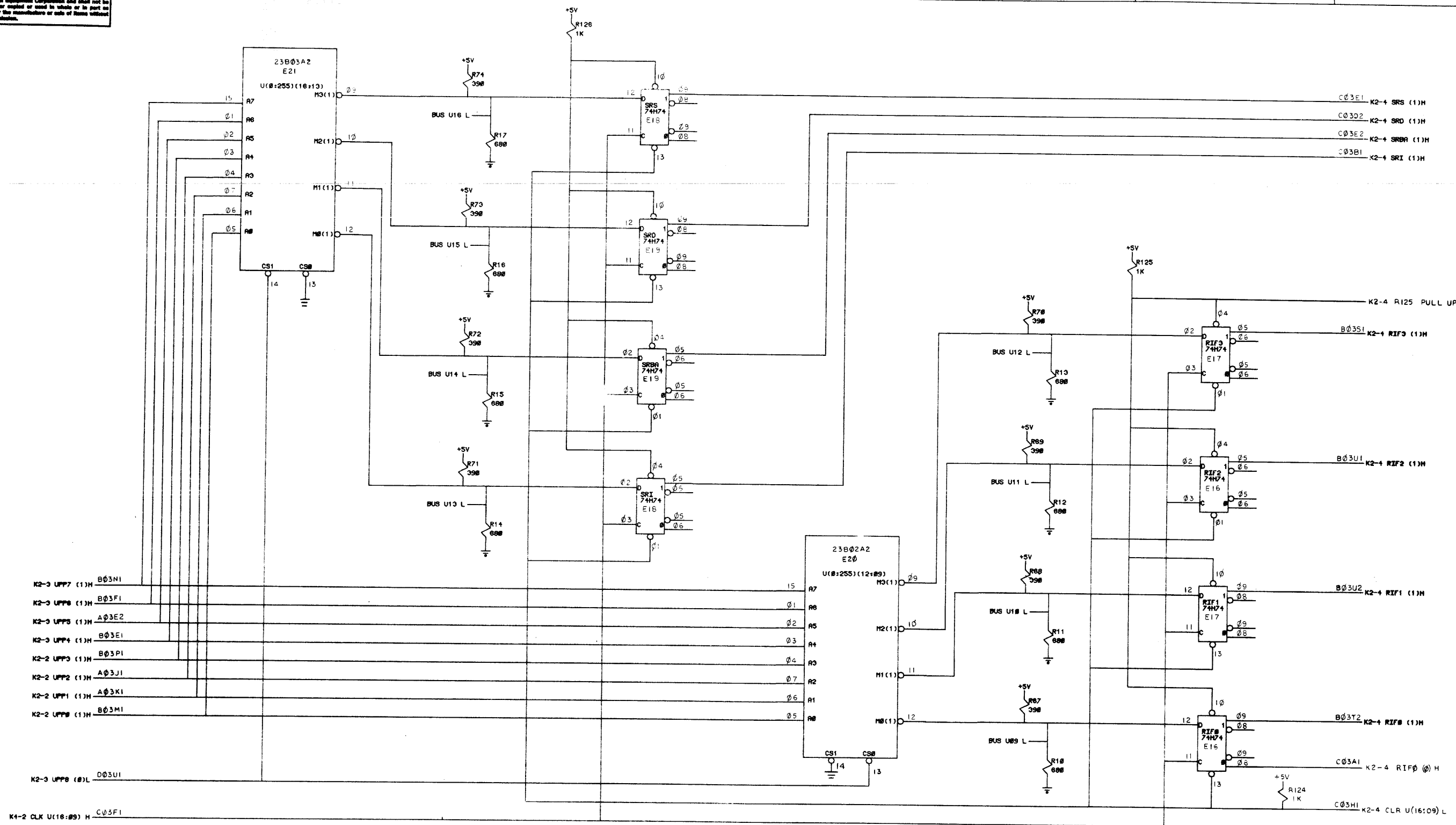
UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		<i>R. G. ...</i>	1-27-72	
TOLERANCES		CHK'D	DATE	TITLE
DECIMALS FRACTIONS ANGLES		<i>R. G. ...</i>	6/16/72	
±.005 ± 1/64 ± 0°30'		ENG.	DATE	U HORD U(03:00) K2-2
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		PROJ. ENG.	6/16/72	
MATERIAL		PRD.	DATE	SIZE CODE NUMBER REV. D CS H7232-B-1 F
FINISH		FIRST USED ON	6-20-72	
SCALE		PDP11		SHEET 2 OF 12
DIST.				

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UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHK'D	DATE	
TOLERANCES		ENG	DATE	TITLE
DECIMALS ± .005	FRACTIONS ± 1/64	PROL ENG	DATE	U WORD
ANGLES ± 0°30'		PROB	DATE	U(B7:B4)
FINISH		FIRST USED ON		NUMBER
SCALE		PDP11		M7232-B-1
SHEET 3 OF 12		DIST.		REV. F

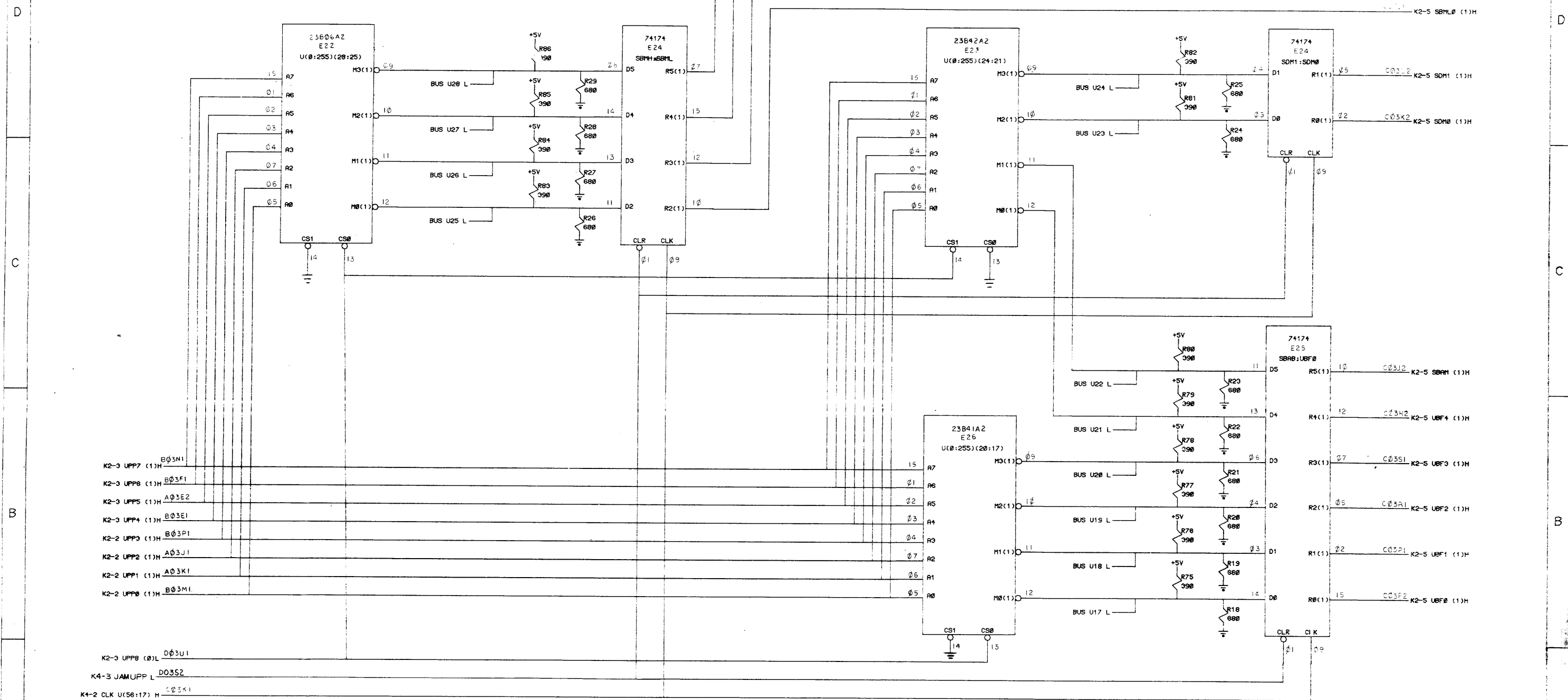
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UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS
DIMENSION IN INCHES		CHKD	DATE	
TOLERANCES		ENG	DATE	TITLE
DECIMALS FRACTIONS ANGLES		PRG	DATE	
±.005 ±.010 ±.020		PROB	DATE	U WORD U(16:09) K2-4
FIRST SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL	FIRST USED ON	POP11	SIZE CODE	NUMBER
FINISH	SCALE	SHEET 4 OF 12	DIST.	REV. F

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8 7 6 5 4 3 2 1



- K2-3 UPP7 (1)H B03M1
- K2-3 UPP8 (1)H B03F1
- K2-3 UPP5 (1)H A03E2
- K2-3 UPP4 (1)H B03E1
- K2-2 UPP3 (1)H B03P1
- K2-2 UPP2 (1)H A03J1
- K2-2 UPP1 (1)H A03K1
- K2-2 UPP0 (1)H B03M1
- K2-3 UPP8 (0)L D03U1
- K4-3 JAMUPP L D03S2
- K4-2 CLK U(56:17) H C03K1

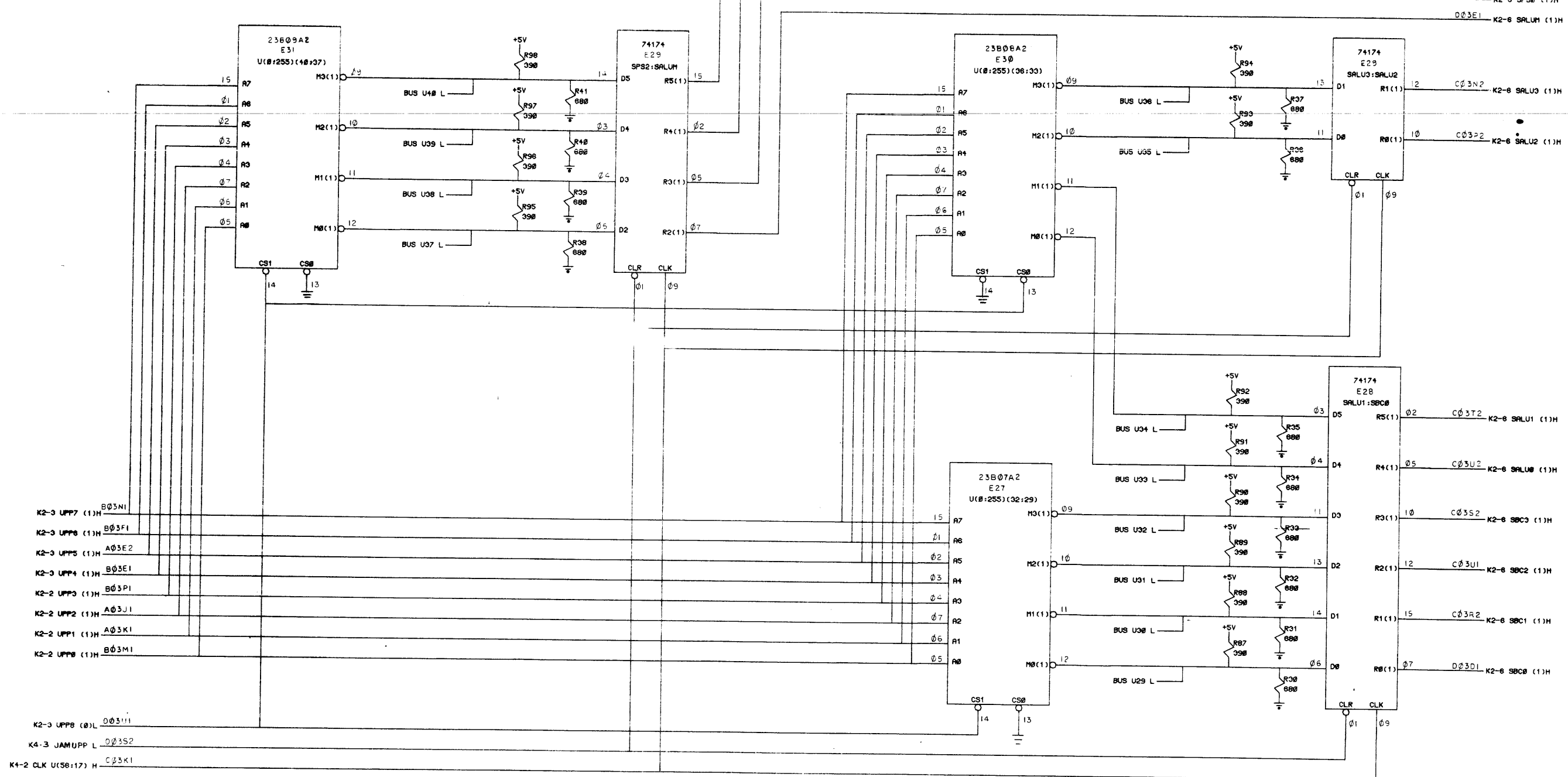
UNLESS OTHERWISE SPECIFIED		DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHK'D.	DATE	
TOLERANCES		ENG.	DATE	TITLE U WORD U(28:17) K2-5
DECIMALS	FRACTIONS	ANGLES	DATE	
± .005	± 1/64	± 0°30'	DATE	MATERIAL
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		PRD.	DATE	
FINISH		FIRST USED ON		SIZE/CODE D CS
POP11		POP11		
SCALE		SHEET		NUMBER M7202-0-1
5 OF 12		SHEET		
REV. F		DIST.		REV. F

8 7 6 5 4 3 2 1

1 8-12-71

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8 7 6 5 4 3 2 1



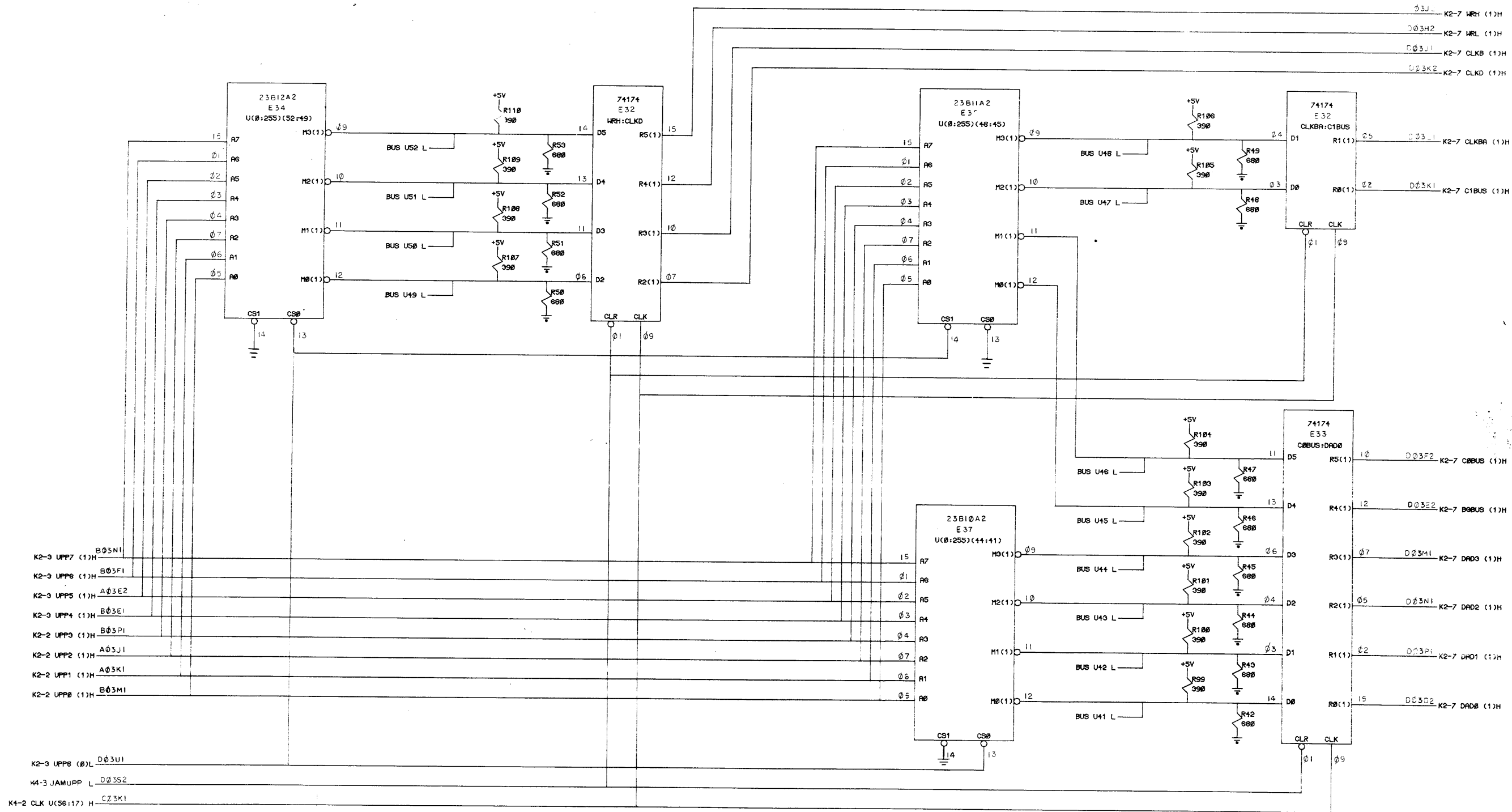
K2-3 UPP7 (1)H B03N1
 K2-3 UPP8 (1)H B03F1
 K2-3 UPP5 (1)H A03E2
 K2-3 UPP4 (1)H B03E1
 K2-2 UPP3 (1)H B03P1
 K2-2 UPP2 (1)H A03J1
 K2-2 UPP1 (1)H A03K1
 K2-2 UPP8 (1)H B03M1
 K2-3 UPP8 (0)L D03111
 K4-3 JAMUPP L D03S2
 K4-2 CLK U(58:17) H C03K1

UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED		CHKD	DATE	
DIMENSION IN INCHES		ENG	DATE	TITLE U WORD U(48:29) K2-8
TOLERANCES		PRG L ENG	DATE	
DECIMALS	FRACTIONS	PROG	DATE	
±.005	± 1/64			
ANGLES		FIRST USED ON		SIZE CODE D CS
± 0°30'		PDP11		
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		SCALE		NUMBER M7232-8-1
		SHEET 8 OF 12		REV. F

8 7 6 5 4 3 2 1

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8 7 6 5 4 3 2 1

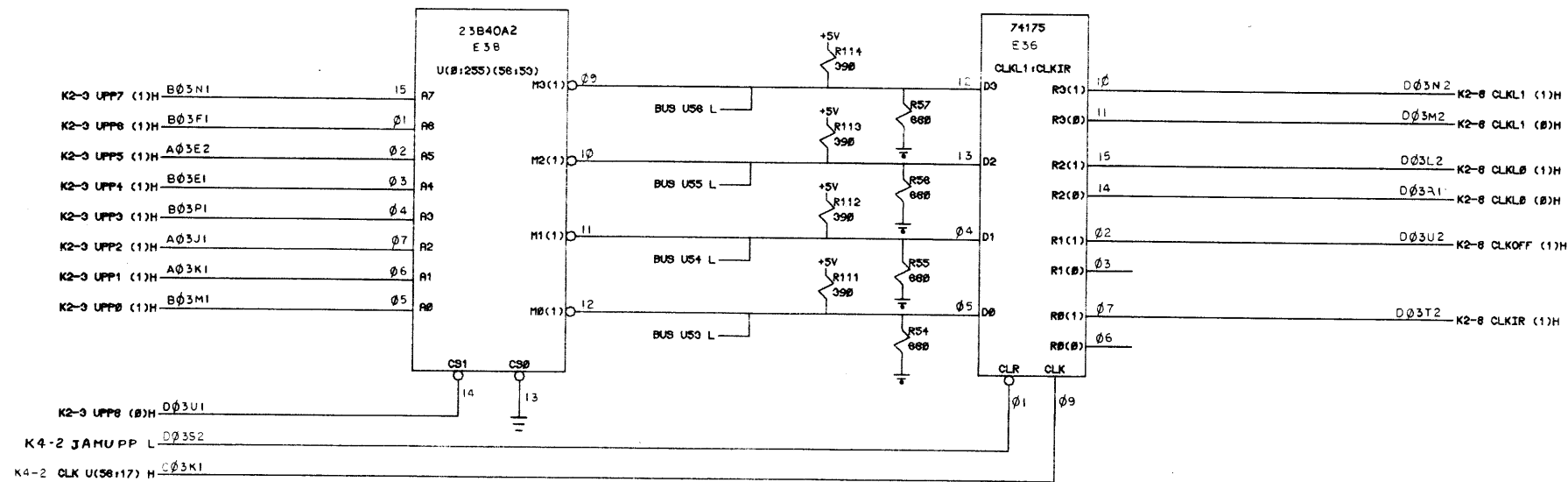
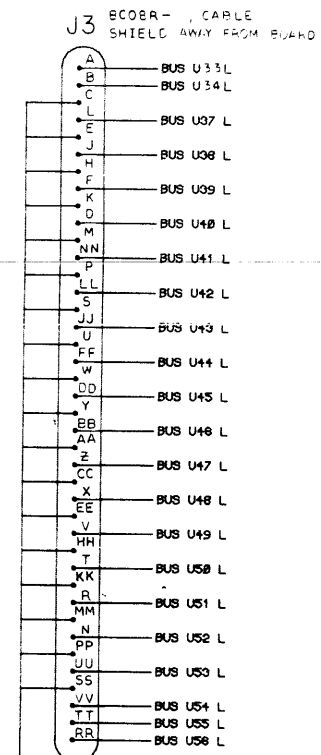
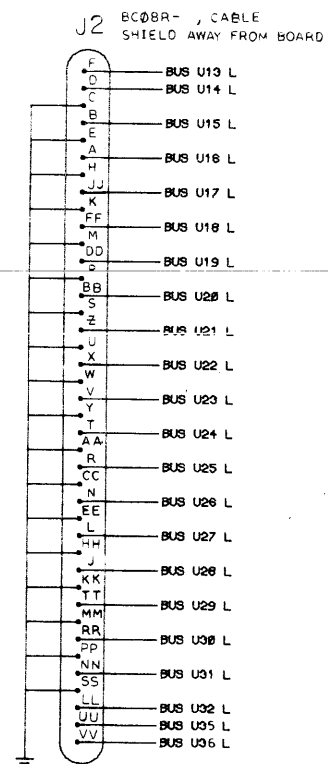
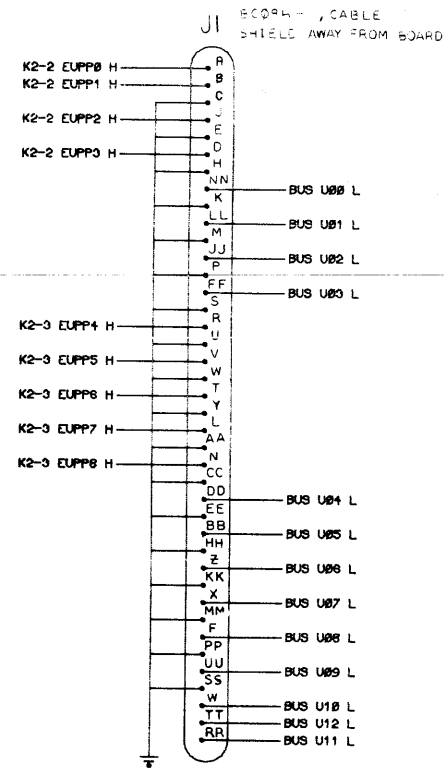


K2-3 UPP7 (1)H B03N1
 K2-3 UPP8 (1)H B03F1
 K2-3 UPP5 (1)H A03E2
 K2-3 UPP4 (1)H B03E1
 K2-2 UPP3 (1)H B03P1
 K2-2 UPP2 (1)H A03J1
 K2-2 UPP1 (1)H A03K1
 K2-2 UPP0 (1)H B03M1
 K2-3 UPP8 (0)L D03U1
 K4-3 JAMUPP L D03S2
 K4-2 CLK U(56:17) H C23K1

8 7 6 5 4 3 2 1

UNLESS OTHERWISE SPECIFIED		DRN. <i>[Signature]</i>	DATE 1-29-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED		CHCKD. <i>[Signature]</i>	DATE 6/1/72	
DIMENSION IN INCHES		ENG. <i>[Signature]</i>	DATE 6/16/72	TITLE
TOLERANCES		PRD. ENG. <i>[Signature]</i>	DATE 6/16/72	U WORD
DECIMALS ±.005	FRACTIONS ± 1/64	PROJ. <i>[Signature]</i>	DATE 6/16/72	U(S2:41) K2-7
ANGLES ± 0°30'		PROD. <i>[Signature]</i>	DATE 6/16/72	
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		FIRST USED ON		
MATERIAL		PDP11		
FINISH		SCALE 1:1		SIZE CODE D CS
		SHEET 7 OF 12		NUMBER M7232-B-1
				REV. F

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UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED		CHKD	DATE	
DIMENSION IN INCHES		ENG	DATE	TITLE U WORD U(56150) & CONNECTORS K2-8
TOLERANCES		PROD	DATE	
DECIMALS ± .005	FRACTIONS ± 1/64	FIRST USED ON		SIZE CODE D CS
ANGLES ± 0°30'		PDP11		
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		SCALE		REV. F
		SHEET 8 OF 12		

FLOWS STATE ADR CLK CIR WR CB CD CBA BUS DAD SPS ALU SBC SBM SDM SBA UBF SRX RIF UPF
 04 MOV10 200 4 0 0 0 0 1 0 5 00 0 00 00 00 0 0 00 01 11 125
 04 MOV17 201 4 0 0 0 0 1 0 5 00 0 11 16 17 00 0 0 00 10 00 125
 04 MOV14 202 2 0 0 0 1 0 0 0 00 0 00 00 00 0 0 00 01 11 205
 04 MOV13 203 2 0 0 0 1 0 0 0 00 0 00 00 00 0 0 00 10 00 205
 04 MOV20 204 0 0 0 3 1 0 0 0 00 3 00 00 00 2 0 00 04 00 000
 04 MOV15 205 6 0 0 3 0 0 1 0 7 00 0 32 00 10 2 0 00 01 11 125
 04 MOV08 206 2 0 0 3 1 0 0 0 00 0 00 00 00 1 0 21 01 12 212
 04 MOV11 207 2 0 0 3 1 0 0 0 00 0 00 00 00 1 0 22 01 12 210
 04 MOV12 210 2 0 0 0 0 0 1 0 01 0 00 00 00 0 1 00 01 12 200
 09 SSL10 211 2 0 0 0 0 0 0 0 00 1 00 00 00 2 0 00 00 00 367
 04 MOV09 212 4 0 0 0 0 0 1 0 07 0 11 00 00 0 0 00 04 00 200
 04 MOV10 213 5 0 0 0 0 0 0 1 01 0 11 00 00 0 0 00 04 00 207
 06 TRP02 214 2 0 0 3 0 0 0 0 00 0 00 00 00 2 0 00 01 14 007
 06 TRP02 215 5 0 0 0 0 0 1 0 00 0 11 02 17 00 0 00 01 14 115
 06 TRP04 216 4 0 0 0 0 0 1 0 00 0 00 00 00 2 0 00 00 00 214
 01 FET08 217 6 1 0 0 0 0 1 0 00 0 00 00 00 0 0 00 00 00 292
 09 SSL06 220 4 0 0 0 0 0 1 0 5 17 0 00 00 00 2 0 00 01 12 211
 09 SSL04 221 4 0 0 0 0 0 1 0 5 11 0 06 00 00 2 0 00 00 12 367
 09 SSL08 222 4 0 0 0 0 0 1 0 0 14 0 00 00 00 0 0 00 01 12 253
 09 SSL07 223 4 0 0 0 0 0 1 0 0 10 0 06 00 00 2 0 00 00 00 293
 08 DOP07 224 4 0 0 0 0 0 1 0 5 17 0 00 00 00 0 0 00 10 00 367
 08 DOP03 225 4 0 0 0 0 0 1 0 5 17 0 00 00 00 0 0 00 01 11 367
 08 DOP04 226 2 0 0 0 1 0 0 0 0 00 0 00 00 00 0 0 00 10 00 365
 08 DOP05 227 2 0 0 0 1 0 0 0 0 00 0 00 00 00 0 0 00 01 11 365
 08 DOP09 230 4 0 0 0 0 0 1 0 0 14 0 00 00 00 0 0 00 10 00 254
 08 DOP10 231 4 0 0 0 0 0 1 0 0 14 0 00 00 00 0 0 00 01 11 254
 09 RSR06 232 6 0 0 0 1 0 0 0 00 1 32 00 00 3 0 00 00 00 275
 09 RSR05 233 6 0 0 0 1 0 0 0 00 1 32 00 10 3 0 00 00 00 276
 08 SXT01 234 4 0 0 0 0 0 1 0 5 14 0 03 00 00 2 0 00 00 00 367
 05 JMP02 235 4 0 0 0 0 0 1 0 0 00 0 06 01 17 00 0 15 04 00 300
 09 SSL05 236 4 0 0 0 0 0 1 0 5 00 0 32 00 12 2 0 00 00 00 367
 03 DST16 237 4 0 0 0 0 0 1 0 0 00 0 32 00 00 2 0 00 00 00 376

NOTE: THE COMPLEMENT OF THE ACTUAL
 ROM OUTPUT FOR THE UPF FIELD
 IS LISTED FOR CLARITY.

FLOWS STATE ADR CLK CIR WR CB CD CBA BUS DAD SPS ALU SBC SBM SDM SBA UBF SRX RIF UPF
 02 SRC03 240 3 0 0 0 0 0 0 0 00 0 00 00 00 2 0 35 10 00 290
 02 SRC07 241 2 0 0 3 1 0 0 0 00 0 00 00 00 1 0 00 01 11 242
 02 SRC08 242 4 0 0 0 0 0 1 0 01 0 11 00 00 0 0 00 10 00 247
 02 SRC10 243 2 0 0 3 1 0 0 0 00 0 00 00 00 1 0 00 01 11 244
 02 SRC11 244 5 0 0 0 0 0 0 1 0 00 0 11 00 00 0 0 00 10 00 245
 02 SRC12 245 2 0 0 3 1 0 0 0 0 00 0 00 00 00 1 0 00 01 11 246
 02 SRC13 246 2 0 0 0 0 0 1 0 01 0 00 00 00 0 1 00 01 11 247
 02 SRC14 247 3 0 0 0 0 0 0 0 00 0 00 00 00 0 0 35 01 13 250
 02 SRC12 250 2 0 0 0 0 0 0 0 00 0 00 00 00 1 0 00 01 11 120
 02 SRC17 251 2 0 0 3 1 0 0 0 0 00 0 00 00 00 2 0 00 01 11 120
 01 FET09 252 2 0 0 3 1 0 0 0 0 00 0 00 00 00 2 0 00 01 13 004
 09 SSL12 253 2 0 0 0 0 0 0 0 00 0 00 00 00 2 0 00 00 00 075
 08 DOP22 254 2 0 0 0 0 0 0 0 00 0 00 00 00 2 0 00 00 00 074
 11 CON12 255 6 0 0 0 0 0 1 0 02 0 00 00 00 0 0 24 00 00 041
 08 MOV07 256 0 0 0 0 0 0 0 0 00 0 00 00 00 0 0 00 00 00 000
 08 MOV07 257 2 0 0 3 0 0 0 0 00 0 00 00 16 00 2 0 00 04 00 200
 03 DST03 260 3 0 0 0 0 0 0 0 00 0 00 00 00 2 0 33 04 00 267
 03 DST09 261 2 0 0 3 1 0 0 0 0 00 0 00 00 00 1 0 00 01 12 262
 03 DST10 262 4 0 0 0 0 0 0 1 0 07 0 11 00 00 0 0 00 04 00 266
 03 DST11 263 5 0 0 0 0 0 0 1 0 00 0 11 00 00 0 0 00 04 00 264
 03 DST12 264 2 0 0 0 0 0 0 0 00 0 00 00 00 1 0 00 01 12 265
 03 DST13 265 2 0 0 0 0 0 0 1 0 3 01 0 00 00 00 0 1 00 01 12 266
 03 DST14 266 3 0 0 0 0 0 0 0 00 0 00 00 00 0 0 33 01 13 267
 03 DST15 267 2 0 0 3 1 0 0 0 0 00 0 00 00 00 1 0 00 01 12 220
 03 DST17 270 2 0 0 3 1 0 0 0 0 00 0 00 00 00 2 0 00 01 12 220
 09 RSR01 271 6 0 0 3 0 0 1 0 00 0 32 00 00 2 0 27 04 00 274
 09 RSR03 272 6 0 0 0 1 0 0 0 00 1 32 00 10 3 0 00 00 00 273
 09 RSR04 273 6 0 0 1 0 0 0 0 00 0 32 00 02 2 0 27 04 00 274
 09 RSR05 274 0 0 0 0 0 0 0 0 00 2 00 00 00 0 0 00 04 00 000
 09 RSR07 275 4 0 0 0 0 0 1 0 5 00 0 32 00 00 2 0 00 00 00 277
 09 RSR09 276 4 0 0 0 0 0 1 0 7 00 0 32 00 02 2 0 00 00 00 277
 09 RSR10 277 3 0 0 0 0 0 0 0 0 00 2 00 00 00 2 0 16 00 00 376

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ORN	DATE	6-15-72
CHKD	DATE	6/16/72
ENG	DATE	6/16/72
PROJ ENGR	DATE	6/16/72
BOD	DATE	6/16/72
SHEET 11 OF 12		
TITLE		
U WORD		
SIZE CODE	NUMBER	REV.
KCS	M7232-0-1	F
(ADR 200-277)		
DIST.		

```

FLOWS STATE  ADR  CLK  CIR  WR  CB  CD  CBA  BUS  DAD  SPS  ALU  SBC  SBM  SDM  SBA  UBF  SRX  RIF  UPF
05 JMP04  300  2  0  3  1  0  0  0  0  0  0  0  0  2  0  0  0  01  10  306
05 JMP05  301  2  0  3  1  0  0  0  0  0  0  0  0  1  0  0  0  01  10  306
05 JMP10  302  5  0  0  0  1  1  0  0  0  11  00  00  0  0  0  15  04  00  303
5  JMP11  303  2  0  3  1  0  0  0  0  0  0  0  0  1  0  0  0  01  10  306

05 JMP14  304  2  0  3  1  0  0  0  0  0  0  0  0  1  0  0  0  01  10  305
05 JMP15  305  4  0  0  0  1  0  0  0  0  11  00  00  0  0  0  15  04  00  300
05 JMP12  306  4  0  0  0  1  0  0  0  0  32  00  00  2  0  0  10  00  306
05 JSR00  307  6  0  3  0  1  1  0  0  0  0  0  0  2  0  0  0  01  07  016

05 JSR01  310  5  0  0  0  1  0  5  0  0  0  0  0  0  0  0  0  0  00  00  000
05 JSR02  311  2  0  0  0  1  0  0  0  0  0  0  0  0  0  0  0  0  01  07  312
05 JSRMJ  312  6  0  3  0  0  1  0  0  0  0  0  0  2  0  0  0  10  00  306
05 JMP13  313  2  0  3  0  0  0  0  0  0  0  0  0  2  0  0  0  01  07  016

314  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  00  00  000
315  2  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  06  00  046
316  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  00  00  000
06 TRP01  317  6  0  3  0  1  0  0  0  0  32  00  17  2  0  0  0  01  14  215

06 RTI01  320  2  0  3  0  0  0  0  0  0  0  0  0  0  1  0  0  0  01  07  321
06 RTI02  321  7  0  3  0  1  1  0  0  0  11  02  17  2  1  0  0  01  06  322
06 RTI03  322  2  0  0  0  0  0  0  0  7  00  00  00  1  0  0  0  00  00  017
06 RTS01  323  2  0  3  0  0  0  0  0  0  0  0  0  0  2  0  0  0  01  07  324

06 RTS02  324  7  0  3  0  1  1  0  0  0  11  02  17  2  1  16  01  06  325
06 RTS03  325  2  0  3  0  0  0  0  0  0  0  0  0  0  1  0  0  0  04  00  016
06 TRP10  326  6  0  3  0  1  1  0  0  0  06  01  17  2  0  0  0  01  06  327
06 TRP11  327  5  0  0  0  1  0  5  0  0  6  00  00  0  0  0  0  00  00  113

06 TRP13  330  6  0  3  0  1  1  0  0  0  06  01  17  2  0  0  0  01  06  331
06 TRP14  331  5  0  0  0  1  0  5  0  0  0  0  0  0  0  0  0  0  01  07  077
06 TRP20  332  3  0  0  0  1  1  0  0  0  0  0  0  0  0  1  0  1  01  14  333
06 TRP21  333  2  0  3  0  0  0  0  0  0  0  0  0  0  1  0  03  01  07  102

06 TRP19  334  5  0  0  0  0  0  1  1  0  0  0  11  02  17  0  0  0  01  14  335
06 TRP18  335  2  0  0  0  0  0  0  0  7  00  00  00  1  0  0  0  00  00  332
06 TRP00  336  6  0  3  0  1  0  0  0  0  32  17  17  2  2  0  0  0  01  06  317
06 TRP17  337  6  0  3  0  1  0  0  0  0  32  11  17  2  2  0  0  0  01  14  334

```

NOTE: THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF FIELD IS LISTED FOR CLARITY.

```

FLOWS STATE  ADR  CLK  CIR  WR  CB  CD  CBA  BUS  DAD  SPS  ALU  SBC  SBM  SDM  SBA  UBF  SRX  RIF  UPF
07 BRA01  340  2  0  3  0  0  0  0  0  0  0  0  0  0  2  0  16  01  07  341
07 BRA02  341  6  0  3  0  1  0  0  0  0  11  00  05  2  0  0  0  01  07  016
07 SOB01  342  2  0  3  0  0  0  0  0  0  0  0  0  0  2  0  12  10  00  343
07 SOB02  343  6  0  3  0  1  1  0  0  0  33  13  17  2  0  0  0  01  13  344

07 SOB05  344  6  0  3  0  1  0  0  0  0  06  00  00  2  0  16  00  01  07  346
07 SOB03  345  2  0  0  0  0  0  0  0  0  0  0  0  0  2  0  16  00  00  347
07 SOB04  346  6  0  3  0  1  0  0  0  0  06  00  00  2  0  0  0  01  07  016
07 SOB06  347  2  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  0  01  13  016

07 CCC01  350  6  0  0  0  1  1  0  0  0  25  00  00  2  0  16  00  00  351
07 CCC02  351  6  0  0  0  1  0  0  0  0  33  00  00  2  0  0  0  00  00  016
07 SCC01  352  6  0  0  0  1  0  0  0  3  36  00  00  2  0  0  0  00  00  016
05 MRK01  353  6  0  3  0  1  1  0  0  0  11  00  05  2  0  0  0  01  07  354

05 MRK02  354  4  0  0  0  0  1  0  0  0  11  02  17  0  0  0  0  01  07  355
05 MRK03  355  3  0  3  0  0  0  0  0  0  0  0  0  0  2  0  0  0  01  06  356
05 MRK04  356  6  0  3  0  1  0  0  0  0  0  0  0  0  1  0  16  01  05  357
05 MRK05  357  2  0  3  0  0  0  0  0  0  0  0  0  0  2  0  0  0  01  07  016

08 DOP19  360  0  0  0  0  0  0  0  0  3  00  00  00  2  0  0  0  04  00  000
08 DOP18  361  0  0  1  0  0  0  0  0  0  3  00  00  00  2  0  0  0  04  00  000
08 DOP17  362  0  0  0  0  0  0  0  0  3  00  00  00  2  0  0  0  04  00  000
07 DOP01  363  4  0  0  0  0  1  0  0  0  06  00  00  0  0  27  04  00  360

08 DOP03  364  4  0  0  0  0  1  0  0  0  14  0  0  00  0  0  27  10  00  360
08 DOP05  365  4  0  0  0  0  1  0  5  10  0  06  00  00  0  0  0  01  12  367
08 DOP11  366  5  0  0  0  0  1  0  7  13  0  0  32  00  10  2  16  00  00  375
08 DOP12  367  3  0  0  0  0  0  0  0  12  3  00  00  00  2  0  16  00  00  395

08 DOP14  370  4  0  0  0  0  1  0  0  0  06  00  00  0  0  27  04  00  360
08 DOP16  371  4  0  0  0  0  1  0  0  0  14  0  00  00  00  0  0  27  01  11  360
07 SSL01  372  4  0  0  0  0  1  0  0  0  0  06  00  00  2  0  25  00  00  360
07 SSL03  373  2  0  0  0  0  0  0  0  1  00  00  00  2  0  27  00  00  360

09 SSL09  374  5  0  0  0  0  1  0  7  13  0  32  00  10  2  16  00  00  375
08 DOP20  375  2  0  0  0  0  0  0  0  0  0  00  00  2  0  0  0  00  00  016
09 RSR11  376  2  0  0  0  0  0  0  0  0  0  00  00  2  0  0  0  00  00  016
377  0  0  0  0  0  0  0  0  0  0  0  00  00  0  0  0  0  00  00  000

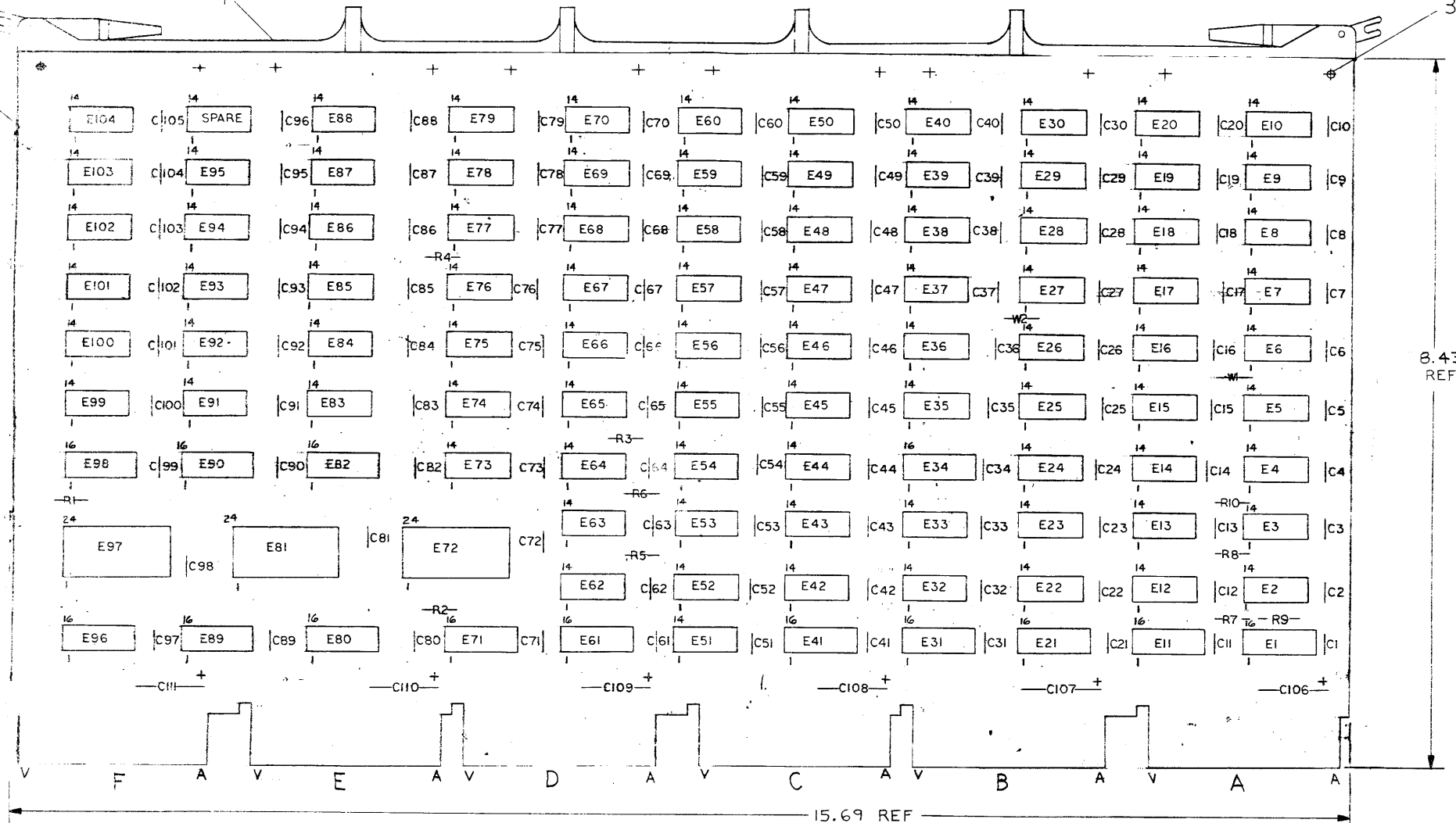
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DRN	DATE	TITLE	REV.
6-15-72	6-15-72	U WORD	F
6-16-72	6-16-72		
6-16-72	6-16-72		
6-16-72	6-16-72		
6-16-72	6-16-72		
6-16-72	6-16-72		
NUMBER	SIZECODE	NUMBER	REV.
M 7232-0-1	K CS	M 7232-0-1	F
(ADR 300-377)			

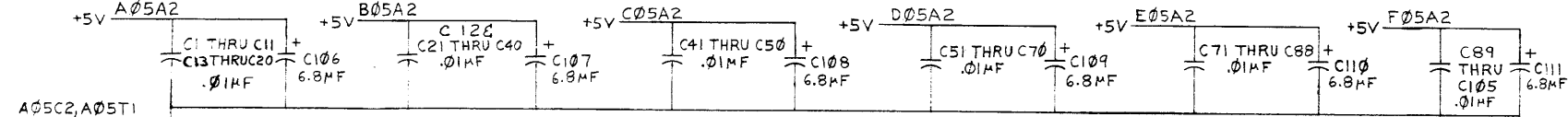
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NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED IPON MODULE PLACEMENT IN THE KDI-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
- PROCESSOR SIGNAL PREFIX NOTATION (K2-1 FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



2	W1,W2	INSULATED JUMPER	9009185	32
12		EYELET	9006732	31
1	E1	I.C. DEC 74157	1910655	30
4	E21,E71,E96,E41	I.C. DEC 74175	1910651	29
3	E81,E97,E72	I.C. DEC 74150	1910153	28
1	E82	I.C. DEC 74153	1909937	27
2	E90,E98	I.C. DEC 74151	1909936	26
11	E5,E8,E29,E33,E37,E45,E62,E75,E86,E92,E95	I.C. DEC 74H04	1909931	25
6	E11,E31,E34,E61,E80,E89	I.C. DEC 8251	1909594	24
6	E20,E22,E23,E27,E32,E56	I.C. DEC 8815	1909713	23
7	E14,E36,E51,E79,E83,E84,E59	I.C. DEC 74H11	1909267	22
1	E26	I.C. DEC 74H61	1909065	21
2	E6,E7	I.C. DEC 74H60	1909064	20
3	E39,E17,E57	I.C. DEC 74H53	1909062	19
5	E4,E28,E52,E53,E54	I.C. DEC 74H52	1909061	18
3	E87,E49,E19	I.C. DEC 74H50	1909060	17
5	E24,E67,E68,E69,E70	I.C. DEC 74H30	1909059	16
4	E12,E13,E38,E102	I.C. DEC 74H21	1909058	15
8	E15,E40,E42,E64,E77,E104,E47,E101	I.C. DEC 74H10	1909057	14
14	E2,E3,E18,E35,E43,E48,E58,E73,E76,E78,E85,E88,E93,E99	I.C. DEC 74H00	1909056	13
7	E9,E10,E16,E44,E60,E100,E103	I.C. DEC 7402	1909004	12
7	E25,E30,E46,E55,E65,E66,E94	I.C. DEC 74H20	1905635	11
1	E50	I.C. DEC 74H40	1905556	10
3	E63,E74,E91	I.C. DEC 7400	1905575	6
10	R1 THRU R10	RES. 1K 1/4W ±5%	1300365	5
1		HANDLE MODULE	1210711-02	4
105	C1 THRU C105	CAP .01MF 100V ±20% DISC	1001610	3
6	C106 THRU C111	CAP 6.8MF 35V ±20% STANT	1000067	2
1		ETCHED CIRCUIT BOARD	5009982	1



DEC 74157	8	16
DEC 74175	8	16
DEC 74150	12	24
DEC 74153	8	16
DEC 74151	8	8
DEC 8251	8	16
IC TYPE	GND	+5V

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

- A05C2, A05T1
- B05C2, B05T1
- C05C2, C05T1
- D05C2, D05T1
- E05C2, E05T1
- F05C2, F05T1

J. SOFIO
 J. O'LOUGHLIN
 J. O'LOUGHLIN
 J. O'LOUGHLIN
 J. O'LOUGHLIN
 J. O'LOUGHLIN
 J. O'LOUGHLIN
 J. O'LOUGHLIN
 J. O'LOUGHLIN

digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

IR DECODE

SEMICONDUCTOR CONVERSION CHART

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

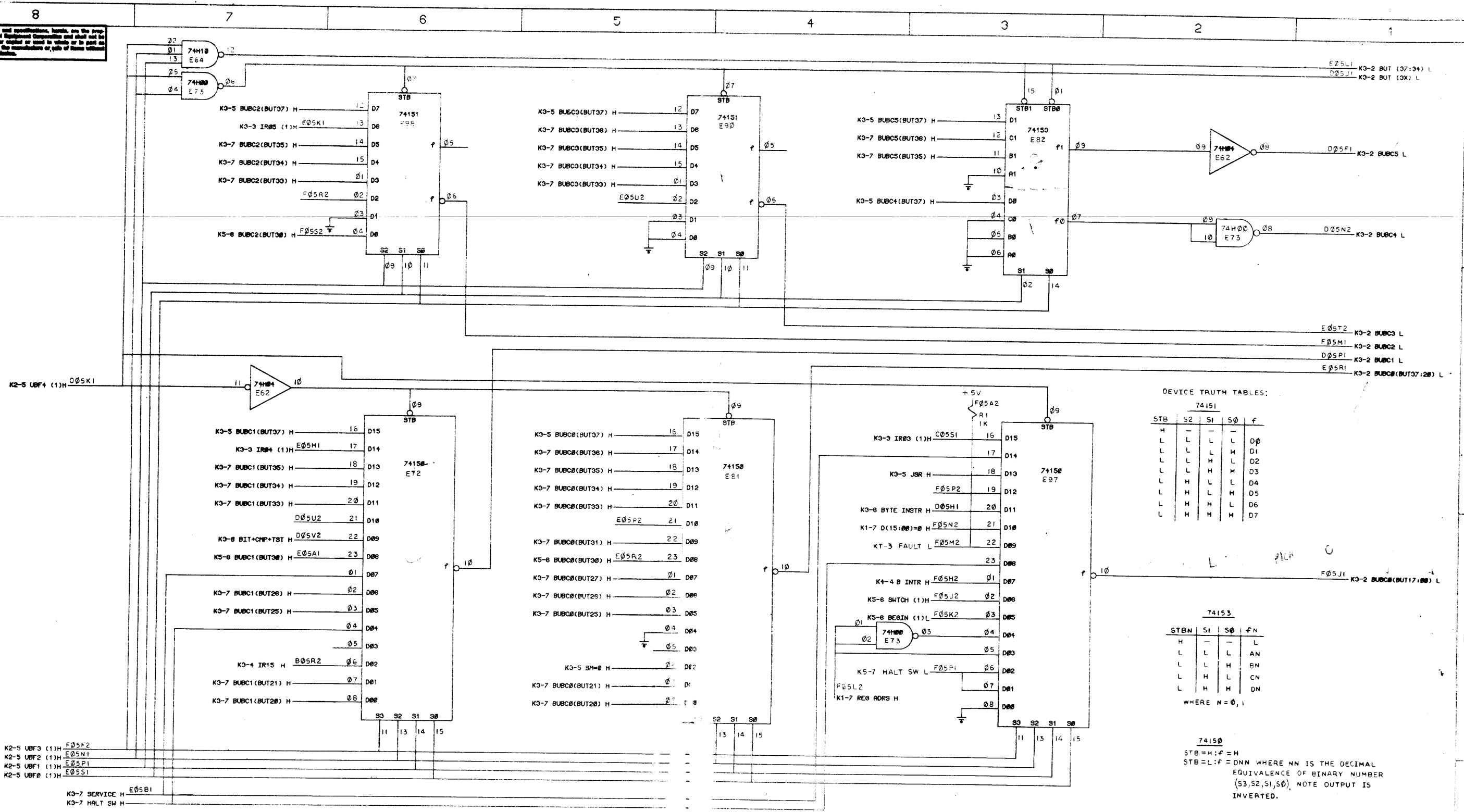
SCALE: 1 OF 9

SHEET: 1 OF 9

SIZE: DCS NUMBER: M7233-0-1

REV. E

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DEVICE TRUTH TABLES:

74151

STB	S2	S1	S0	f
H	-	-	-	D0
L	L	L	L	D1
L	L	L	H	D2
L	L	H	L	D3
L	L	H	H	D4
L	H	L	L	D5
L	H	L	H	D6
L	H	H	L	D7
L	H	H	H	D7

74153

STEN	SI	S0	FN
H	-	-	L
L	L	L	AN
L	L	H	BN
L	H	L	CN
L	H	H	DN

WHERE N = 0, 1

74150
 STB=H; f=H
 STB=L; f=DN WHERE NN IS THE DECIMAL EQUIVALENCE OF BINARY NUMBER (S3,S2,S1,S0). NOTE OUTPUT IS INVERTED.

- K2-5 UBF3 (1)H E05F2
- K2-5 UBF2 (1)H E05N1
- K2-5 UBF1 (1)H E05P1
- K2-5 UBF0 (1)H E05S1

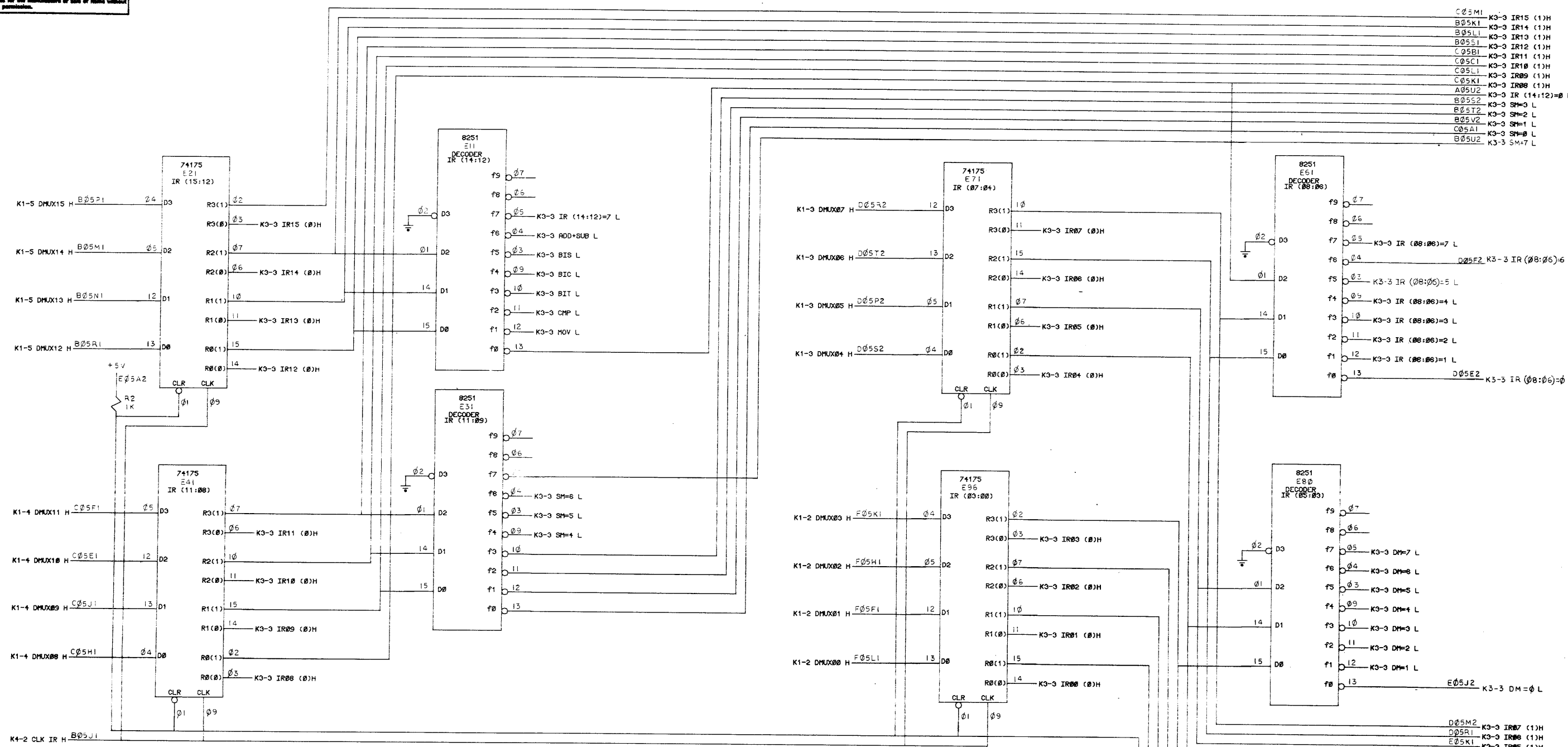
- K3-7 SERVICE H E05B1
- K3-7 HALT SW H

-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED	CHKD	DATE	
DIMENSION IN INCHES	ENG	DATE	TITLE
TOLERANCES	APP	DATE	
DECIMALS FRACTIONS ANGLES	DES	DATE	IR DECODE BUT MUX K3-2
±.005 ± 1/64 ± 0°30'	APP	DATE	
FINISH SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	APP	DATE	MATERIAL
	APP	DATE	
	FIRST USED ON		SIZE CODE NUMBER REV.
	PDP11		
	SCALE		SHEET 2 OF 9
	DIST		

AUG 25 1977

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DEVICE TRUTH TABLE:
 8251
 FOR THE DECIMAL EQUIVALENCE, N, OF THE BINARY NUMBER (D3,D2,D1,D0), ONLY OUTPUT -FN IS ACTIVE (-LOW) FOR 0 ≤ N < 10

- C05M1 K3-3 IR15 (1)H
- B05K1 K3-3 IR14 (1)H
- B05L1 K3-3 IR13 (1)H
- B05J1 K3-3 IR12 (1)H
- C05B1 K3-3 IR11 (1)H
- C05C1 K3-3 IR10 (1)H
- C05L1 K3-3 IR09 (1)H
- C05K1 K3-3 IR08 (1)H
- A05U2 K3-3 IR (14:12)=0 L
- B05V2 K3-3 SM=3 L
- B05T2 K3-3 SM=2 L
- B05V2 K3-3 SM=1 L
- C05A1 K3-3 SM=0 L
- B05U2 K3-3 SM=7 L

- D05M2 K3-3 IR07 (1)H
- D05R1 K3-3 IR06 (1)H
- E05K1 K3-3 IR05 (1)H
- E05H1 K3-3 IR04 (1)H
- C05S1 K3-3 IR03 (1)H
- F05D1 K3-3 IR02 (1)H
- F05E1 K3-3 IR01 (1)H
- F05N1 K3-3 IR00 (1)H
- B05H2 K3-3 CLR IR L

-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED	DATE	2-2-72	
UNLESS OTHERWISE SPECIFIED	DATE	6/29/72	
DIMENSION IN INCHES	DATE	6/23/72	TITLE
TOLERANCES	DATE	6/23/72	IR DECODE
DECIMALS FRACTIONS ANGLES	DATE	6/23/72	IR & DECODE K3-3
± .005 ± 1/64 ± 0°30'	DATE	6/23/72	
FINAL SURFACE QUALITY	DATE	6/23/72	
REMOVE BURRS AND BREAK SHARP CORNERS	DATE	6/23/72	
MATERIAL	FIRST USED ON		
	POP11		
FINISH	SCALE	1:1	SIZE CODE
	SHEET	3 OF 9	D CS
			NUMBER
			M7233-0-1
			REV
			E

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K3-3 IR14 (1)H B05K1
 K3-3 IR13 (1)H B05L1
 K3-3 IR12 (1)H B05S1
 K3-3 IR10 (1)H C05C1
 K3-3 IR11 (1)H C05B1
 K3-3 IR09 (1)H C05L1
 K3-3 IR08 (1)H C05K1

K3-3 IR07 (1)H D05M2

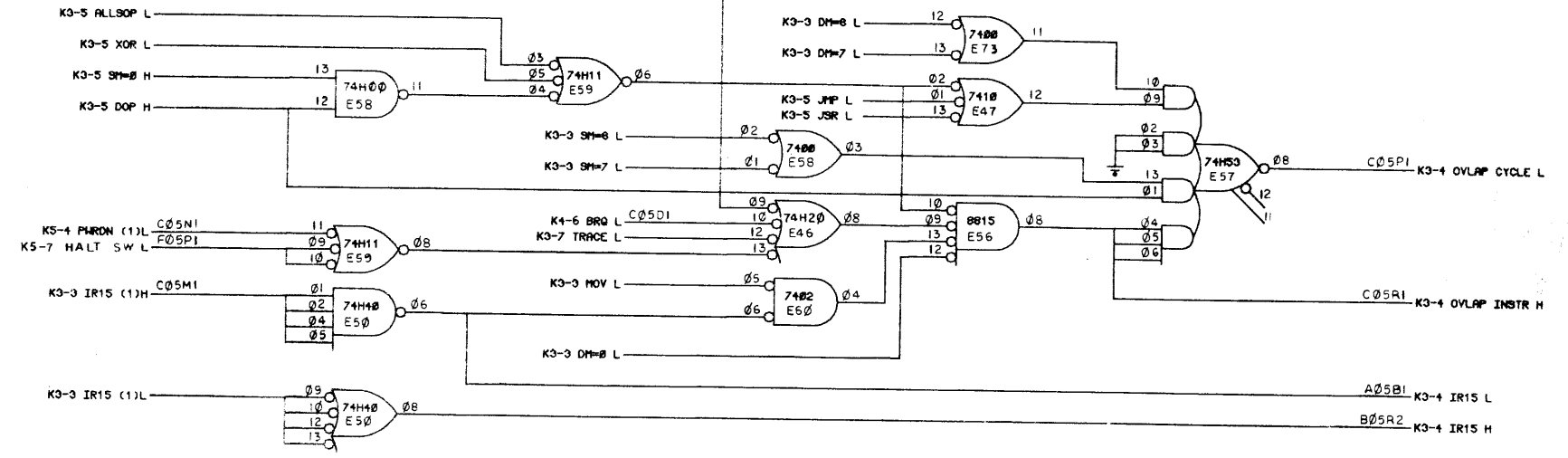
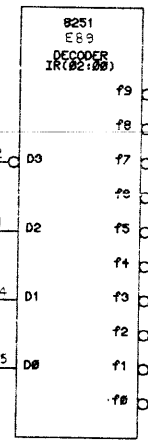
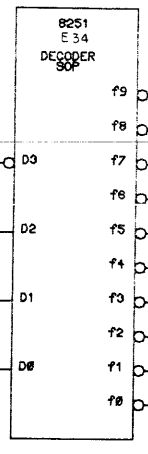
K3-3 IR06 (1)H D05R1

K3-3 IR02 (1)H F05D1

K3-3 IR01 (1)H F05E1

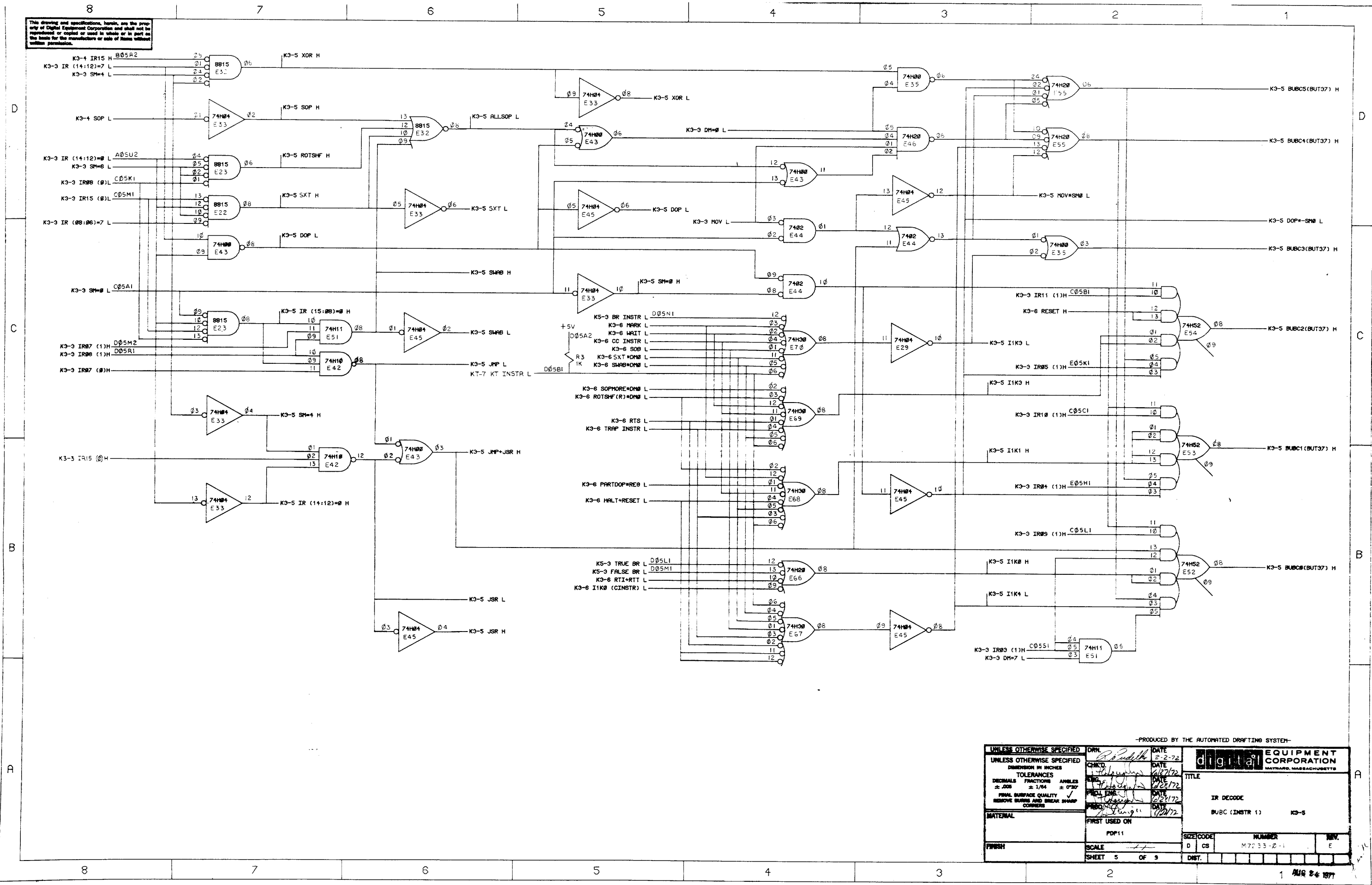
K3-3 IR00 (1)H F05N1

DEVICE TRUTH TABLE:
 B251
 FOR THE DECIMAL EQUIVALENCE, N, OF THE
 BINARY NUMBER (D3, D2, D1, D0), ONLY OUTPUT
 N IS ACTIVE (LOW) FOR 0 ≤ N < 10



UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED		CHKD	DATE	TITLE	
DIMENSION IN INCHES		ENG	DATE	IR DECODE	
TOLERANCES		PROJ ENGR	DATE	IRD & OVLAP	
DECIMALS FRACTIONS ANGLES		PROD	DATE	K3-4	
±.005 ± 1/64 ± 0°30'					
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS					
MATERIAL	FIRST USED ON	SIZE CODE NUMBER REV			
	PDP11	D CS M7253-0-1 E			
FINISH	SCALE	DIST.			
	1-1	SHEET 4 OF 9			

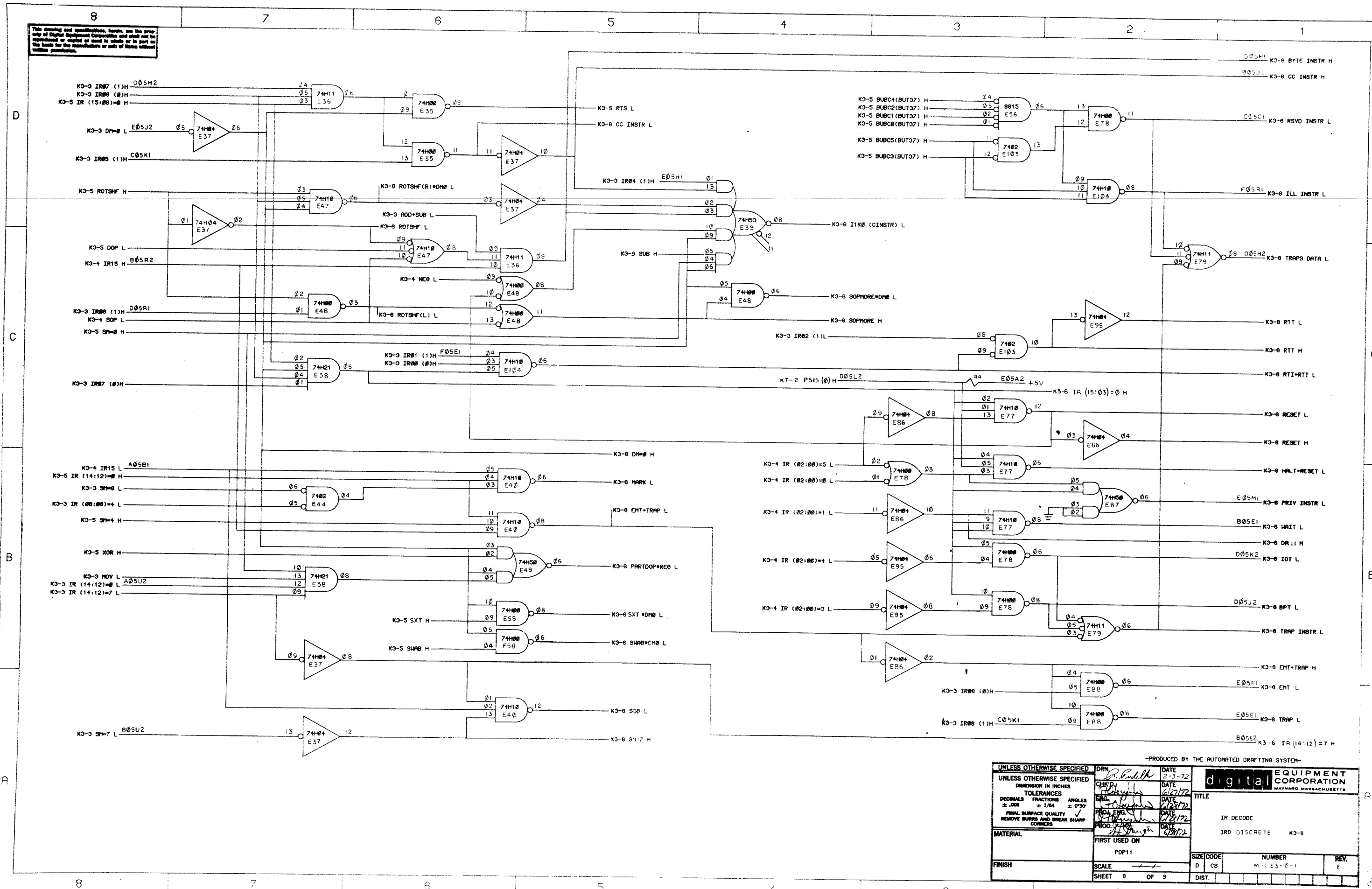
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UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN R. P. P. P.	DATE 2-2-72	digital EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS
TOLERANCES DECIMALS FRACTIONS ANGLES ±.005 ± 1/64 ± 0°30'	CHKD J. P. P.	DATE 2/2/72	
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DATE 2/2/72	DATE 2/2/72	TITLE IR DECODE
MATERIAL	FIRST USED ON PDP11	SIZE CODE D CS	NUMBER M7233-2-1
FINISH	SCALE SHEET 5 OF 9	DIST.	REV. E

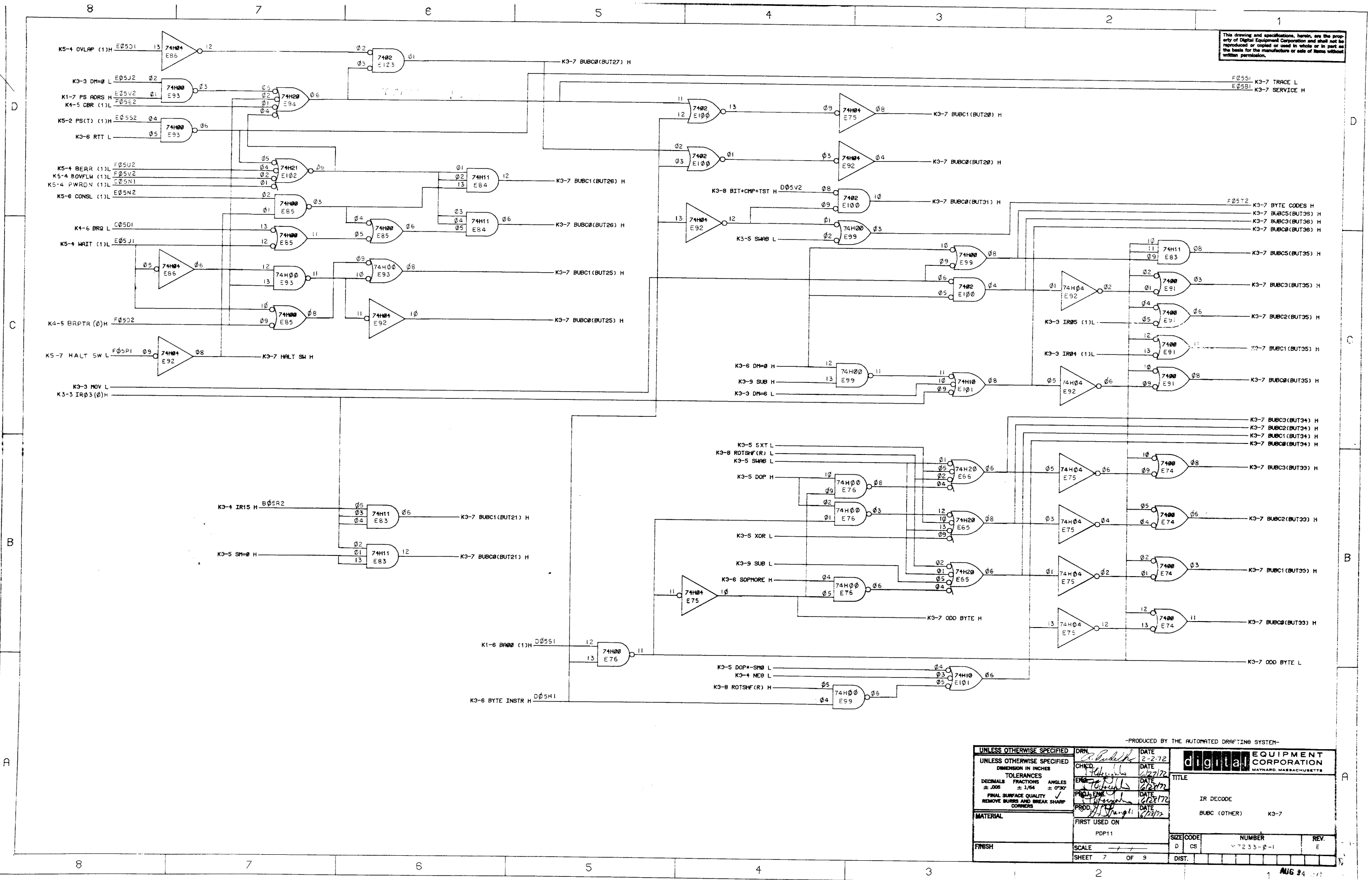
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UNLESS OTHERWISE SPECIFIED		DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHK'D	DATE	
TOLERANCES		ENG	DATE	TITLE
DECIMALS	FRACTIONS	ANGLES	DATE	
± .005	± 1/64	± 0°30'	DATE	IR DECODE
FINAL SURFACE QUALITY		PROJ. ENG.	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS		PROD. ENGR.	DATE	IRD DISCRETE K3-8
MATERIAL		FIRST USED ON		
FINISH		PDP11		SIZE CODE
SCALE				NUMBER
SHEET 8 OF 9				M 7033-0-1
				REV.
				E

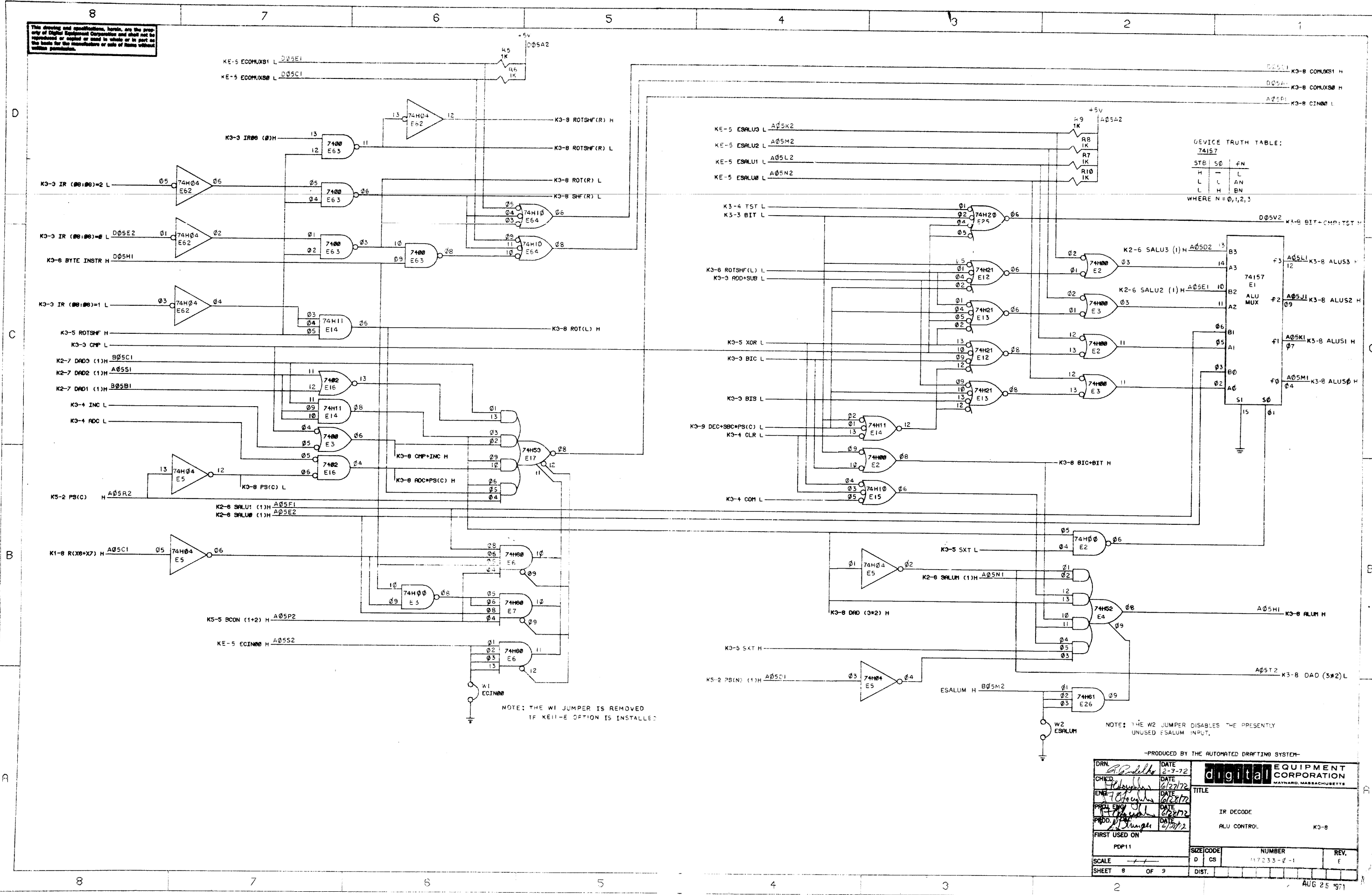
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UNLESS OTHERWISE SPECIFIED		DRN	DATE	 digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		CHKD	DATE	
TOLERANCES		ENG	DATE	TITLE IR DECODE BUBC (OTHER) K3-7
DECIMALS	FRACTIONS	DATE	DATE	
± .005	± 1/64	± 0°30'		
FINAL SURFACE QUALITY		DATE	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE	DATE	
MATERIAL		DATE	DATE	
FIRST USED ON		DATE	DATE	
PDP11		DATE	DATE	
FINISH		SCALE	SIZE CODE	NUMBER
		SHEET 7 OF 9	D	CS
		DIST.		REV. E

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DEVICE TRUTH TABLE:
74157

STB	S0	FN
H	-	L
L	L	AN
L	H	BN

WHERE N = 0, 1, 2, 3

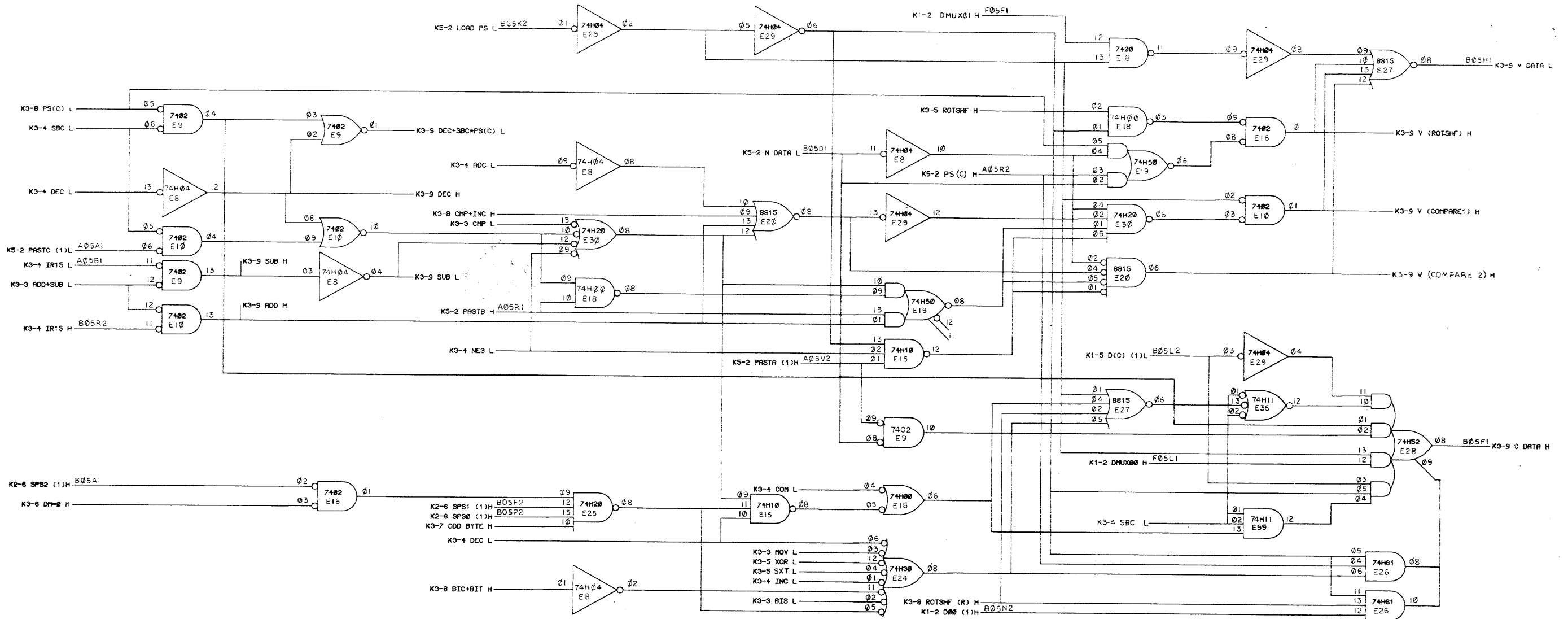
NOTE: THE W1 JUMPER IS REMOVED IF KE11-E OPTION IS INSTALLED.

NOTE: THE W2 JUMPER DISABLES THE PRESENTLY UNUSED ESALUM INPUT.

-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

DRN. <i>R. P. Decker</i>	DATE 2-3-72	digital EQUIPMENT CORPORATION WAYNARD, MASSACHUSETTS
CHKD. <i>H. ...</i>	DATE 6/27/72	
ENGR. <i>J. ...</i>	DATE 6/28/72	TITLE
PRD. ENGR. <i>J. ...</i>	DATE 6/28/72	IR DECODE
PRD. <i>J. ...</i>	DATE 6/28/72	ALU CONTROL
FIRST USED ON		K3-8
PDP11		
SCALE	SIZE CODE	NUMBER
SHEET 8 OF 9	D. CS	117233-2-1
	DIST.	REV. E

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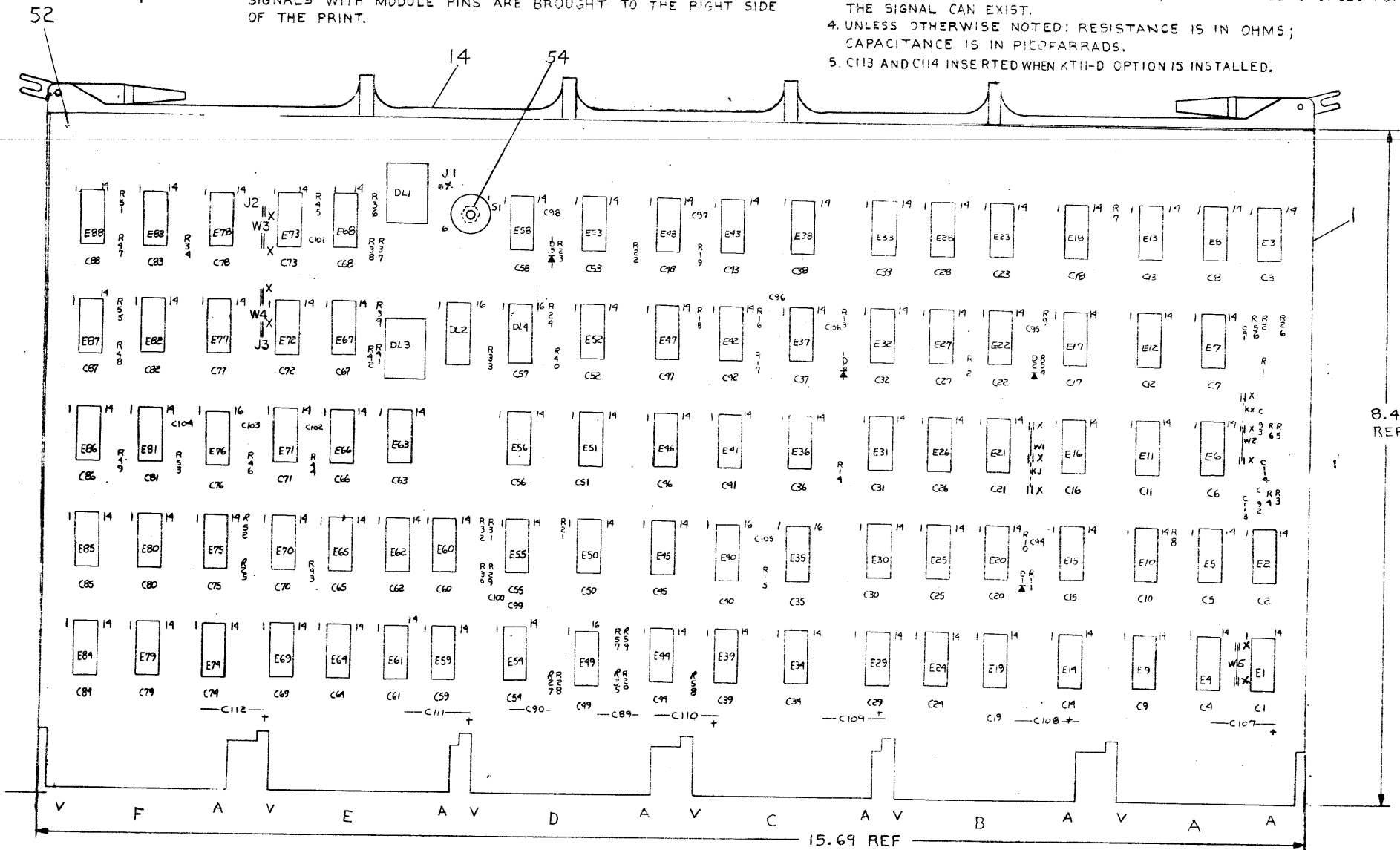
-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED		DATE	2-3-72		
UNLESS OTHERWISE SPECIFIED		DATE	2-27-72		
DIMENSION IN INCHES		DATE	6-27-72	TITLE	
TOLERANCES		DATE	6-27-72		
DECIMALS	FRACTIONS	ANGLES		IR DECODE	
± .005	± 1/64	± 0°30'			
FINAL SURFACE QUALITY		DATE	6-27-72	CODES C,V K3-9	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE	6-27-72		
MATERIAL		DATE		FIRST USED ON	
				PDP11	
FINISH		SCALE	1-1	SIZE CODE	
		SHEET 9	OF 9	DIST.	NUMBER M 7233-0-1
					REV. E

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NOTES:

- PIN NOTATION THROUGHOUT IS ORDER UPON MODULE PLACEMENT IN THE K11-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
- PROCESSOR SIGNAL PREFIX NOTATION (K2-1 FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A 'BUS' PREFIX REPRESENTS A 'WIRED OR' SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.
- C113 AND C114 INSERTED WHEN K11-D OPTION IS INSTALLED.

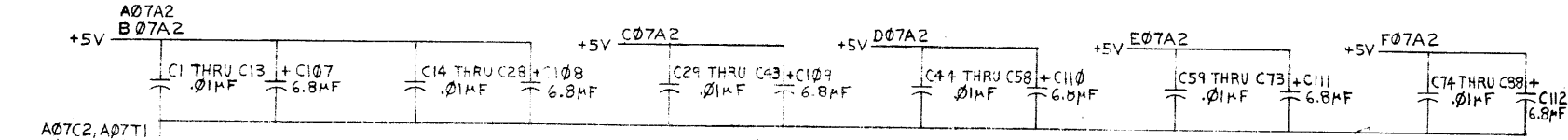


QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO.
5	W1, W2, W3, W4, W5	INSULATED JUMPER	3002142	15
1	USED AS A SPACER	HEX NYLON NUT, # 4-40	3007992	15
12		SPLIT LEADS	3007992	15
12		EYELET	3007992	15
1	E40	I.C. DEC 74175	410251	51
3	E35, E41, E76	I.C. DEC 74123	410235	52
4	E26, E30, E56, E19	I.C. DEC 8815	1909713	48
6	E2, E3, E42, E44, E55, E70	I.C. DEC 8831	1909705	47
7	E7, E15, E29, E32, E53, E75, E98	I.C. DEC 7404	1909686	46
5	E10, E27, E78, E83, E12	I.C. DEC 74174	1909667	45
4	E1, E3, E37, E39	I.C. DEC 380	1909485	44
7	E14, E33, E46, E47, E60, E71, E5	I.C. DEC 74H11	1909237	43
1	E88	I.C. DEC 74H55	1909263	42
3	E77, E82, E6	I.C. DEC 74H53	1909062	41
4	E16, E23, E65, E31	I.C. DEC 74H50	1909060	40
2	E34, E51	I.C. DEC 74H21	1909058	39
4	E17, E4, E41, E69	I.C. DEC 74H10	1909057	38
6	E21, E63, E64, E66, E72, E73	I.C. DEC 74H00	1909056	37
3	E22, E43, E86	I.C. DEC 7402	1909004	36
5	E62, E87, E9, E80, E48	I.C. DEC 74H20	1905635	35
5	E59, E67, E68, E61, E25	I.C. DEC 74H40	1905586	34
				33
				32
				31
				30
10	E18, E20, E28, E36, E45, E52, E74, E79, E84, E85	I.C. DEC 7400	1905575	29
7	E11, E13, E38, E50, E54, E81	I.C. DEC 7474	1905547	28
				27
2	DL2, DL4	DELAY LINE 100NS	1610033	26
1	DL3	DELAY LINE 50NS	1601428	25
1	DL1	DELAY LINE 30NS	1601427	25
2	R20, R28	RES 39K 1/4W ±5%	1302514	24
3	R15, R46, R53	RES 5.6K 1/4W ±5%	1301874	23
23	R1, R2, R3, R5, R7, R8, R12, R18, R21, R22, R25, R26, R27, R31, R32, R34, R43, R47, R48, R49, R51, R52, R55	RES 1K 1/4W ±5%	1300365	22
4	R35, R57, R58, R59	RES 180 1/4W ±5%	1301522	21
5	R9, R10, R14, R17, R24	RES 470 1/4W ±5%	1300316	20
2	R39, R37	RES 330 1/4W ±5%	1300295	19
6	R11, R13, R23, R33, R40, R54	RES 220 1/4W ±5%	1300271	18
2	R38, R41	RES 150 1/4W ±5%	1300250	17
3	R36, R42, R45	RES 100 1/4W ±5%	1300229	16
8	R4, R6, R16, R19, R29, R30, R44, R56	RES 47 1/4W ±5%	1300202	15
				14
1	S1	HANDLE, MODULE SWITCH, 10 POS	1210711-02	13
				12
4	D1, D2, D5, D6	DIODE D664	1100114	12
				11
6	C107 THRU C112	CAP 6.8MF 35V ±10% TANT	1005306	11
3	C89, C90, C91	CAP 1200PF 100V ±5% D.M.	1002619	10
2	C104, C105	CAP 27PF 100V ±5% D.M.	1001739	9
88	C1 THRU C88	CAP .01MF 100V ±20% DISC	1001610	8
3	C97, C101, C103	CAP 1000PF 100V ±5% D.M.	1000042	7
				6
3	C92, C99, C100	CAP 470PF 100V ±5% D.M.	1000024	5
5	C94, C96, C98, C102, C106	CAP 330PF 100V ±5% D.M.	1000023	4
2	C93, C95	CAP 220PF 100V ±5% D.M.	1000021	3
				2
1		ETCH CIRCUIT BOARD	5009983	1

IC TYPE	GND	+5V
DEC 74175	8	16
DEC 74123	8	16
DEC 380	1	8

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

IC PIN LOCATIONS



REVISIONS

CHK	CHANGE NO.	REV
	1	A
	2	B
	3	C
	4	D
	5	E
	6	F
	7	G
	8	H
	9	I
	10	J
	11	K
	12	L
	13	M
	14	N
	15	O
	16	P
	17	Q
	18	R
	19	S
	20	T
	21	U
	22	V
	23	W
	24	X
	25	Y
	26	Z

FIRST USED ON OPTION MODEL
PDP 11

ETCH BOARD REV D

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

SEMICONDUCTOR CONVERSION CHART

DRN [Signature] DATE 6-23-72

CHKD [Signature] DATE 7/14/72

DESIGNED [Signature] DATE 7/18/72

PROBING [Signature] DATE 7/19/72

PROD. [Signature] DATE 7/19/72

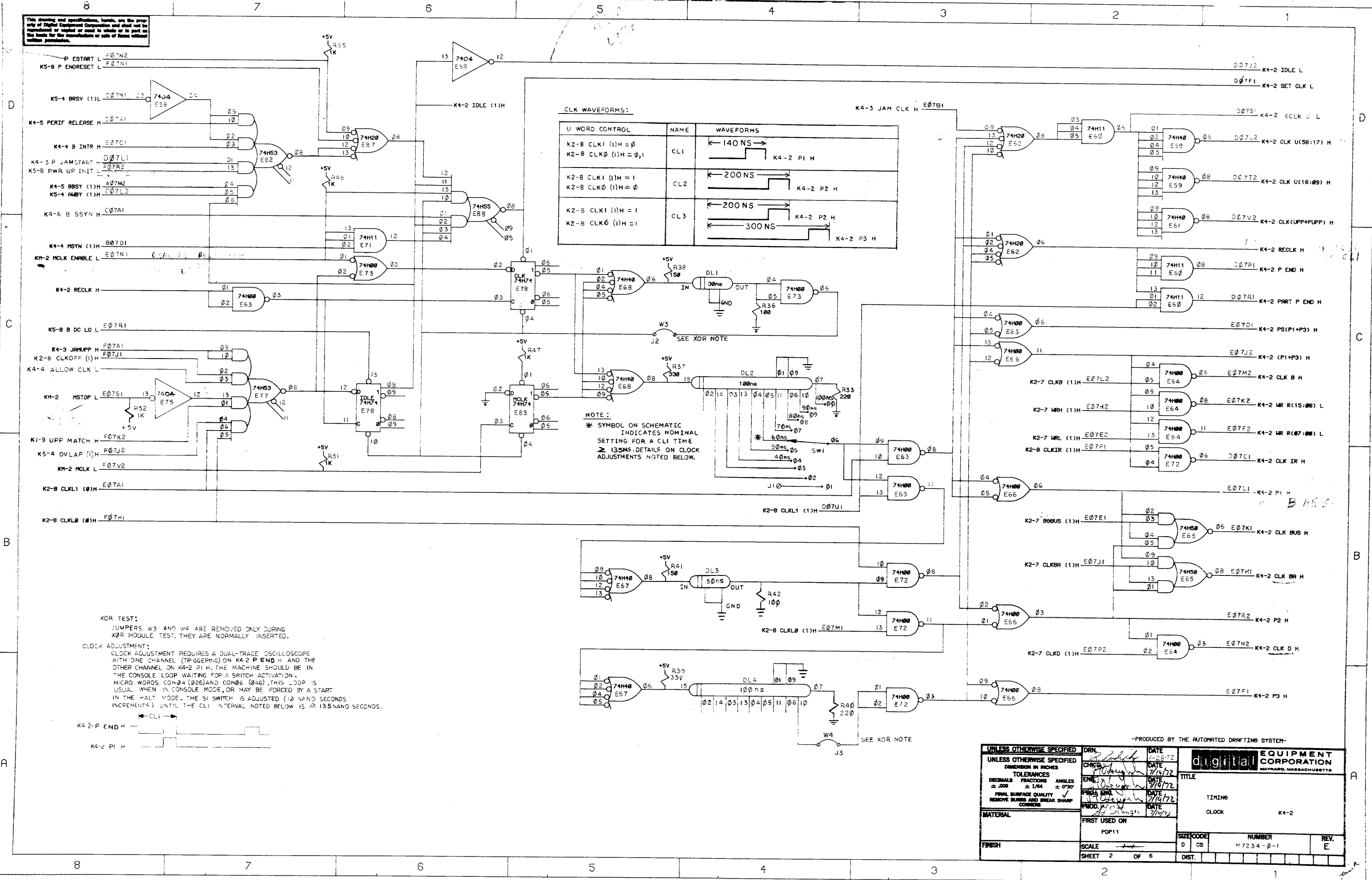
NEXT HIGHER ASSY: PDI1-A

SCALE: SHEET 1 OF 1

DRIVING 40-522 16609

M7234-01

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CLK WAVEFORMS:

U WORD CONTROL	NAME	WAVEFORMS
K2-8 CLK1 (1)H = 0 K2-8 CLK0 (1)H = 0,1	CL1	140 NS K4-2 PI H
K2-8 CLK1 (1)H = 1 K2-8 CLK0 (1)H = 0	CL2	200 NS K4-2 P2 H
K2-8 CLK1 (1)H = 1 K2-8 CLK0 (1)H = 1	CL3	200 NS 300 NS K4-2 P2 H

NOTE:
* SYMBOL ON SCHEMATIC INDICATES NOMINAL SETTING FOR A CLI TIME ≥ 135 NS. DETAILS ON CLOCK ADJUSTMENTS NOTED BELOW.

XOR TEST:
JUMPERS W3 AND W4 ARE REMOVED ONLY DURING XOR MODULE TEST. THEY ARE NORMALLY INSERTED.

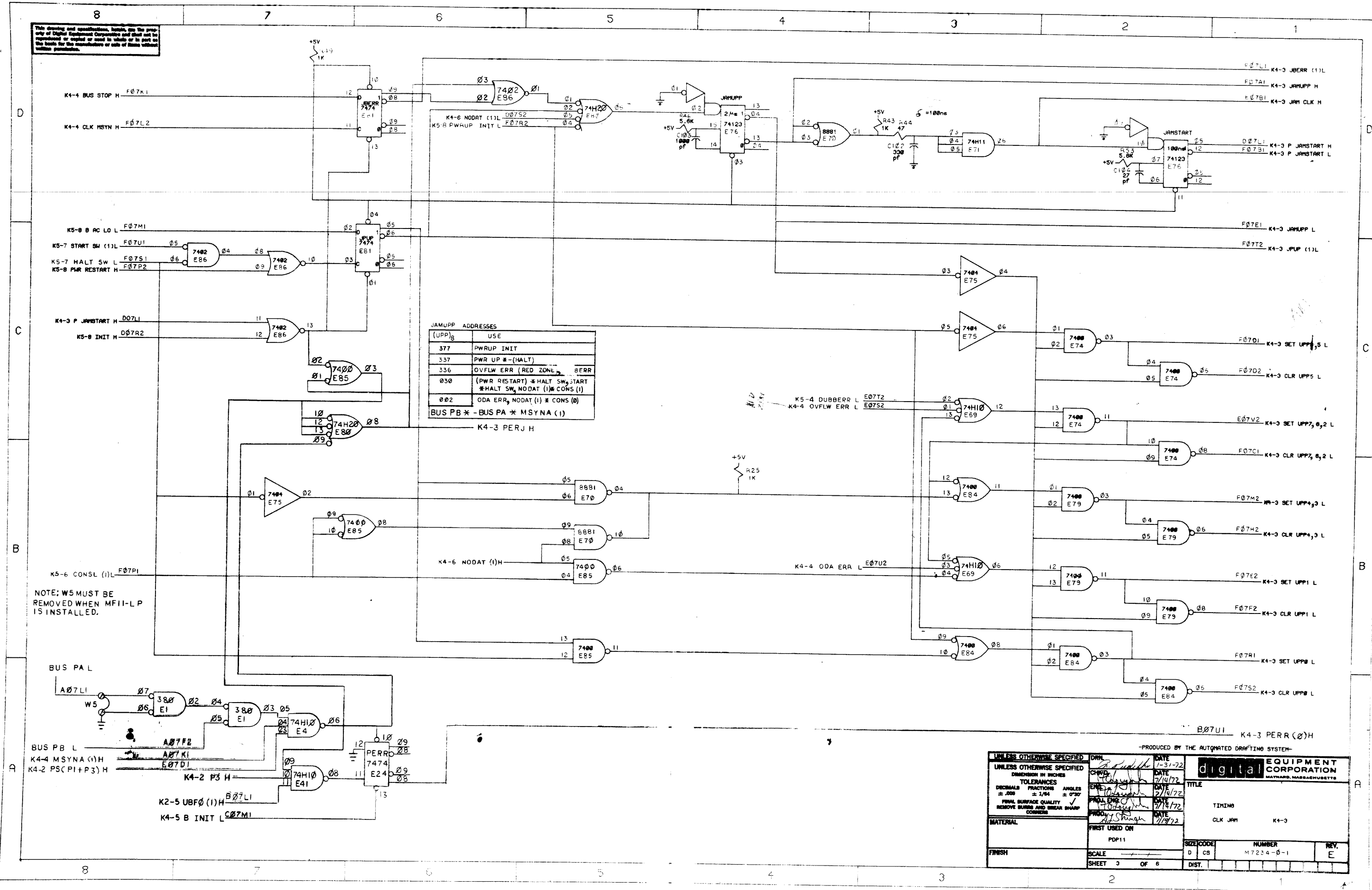
CLOCK ADJUSTMENT:
CLOCK ADJUSTMENT REQUIRES A DUAL-TRACE OSCILLOSCOPE WITH ONE CHANNEL (TRIGGERING) ON K4-2 P END H AND THE OTHER CHANNEL ON K4-2 PI H. THE MACHINE SHOULD BE IN THE CONSOLE LOOP WAITING FOR A SWITCH ACTIVATION. MICRO WORDS CON04 (026) AND CON06 (046). THIS LOOP IS USUAL WHEN IN CONSOLE MODE, OR MAY BE FORCED BY A START IN THE HALT MODE. THE S1 SWITCH IS ADJUSTED (10 NANO SECONDS INCREMENTS) UNTIL THE CL1 INTERVAL NOTED BELOW IS ≥ 135 NANO SECONDS.



-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DATE 1/28/72	DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
TOLERANCES DECIMALS FRACTIONS ANGLES $\pm .005$ $\pm 1/64$ $\pm 0/30$	DATE 7/15/72	
FINISH	DATE 7/15/72	TITLE TIMING CLOCK K4-2
MATERIAL	DATE 7/14/72	SIZE CODE D CS
FINISH	DATE 7/14/72	NUMBER M7234-0-1
SCALE SHEET 2 OF 6	DATE 7/14/72	REV. E
		DIST.

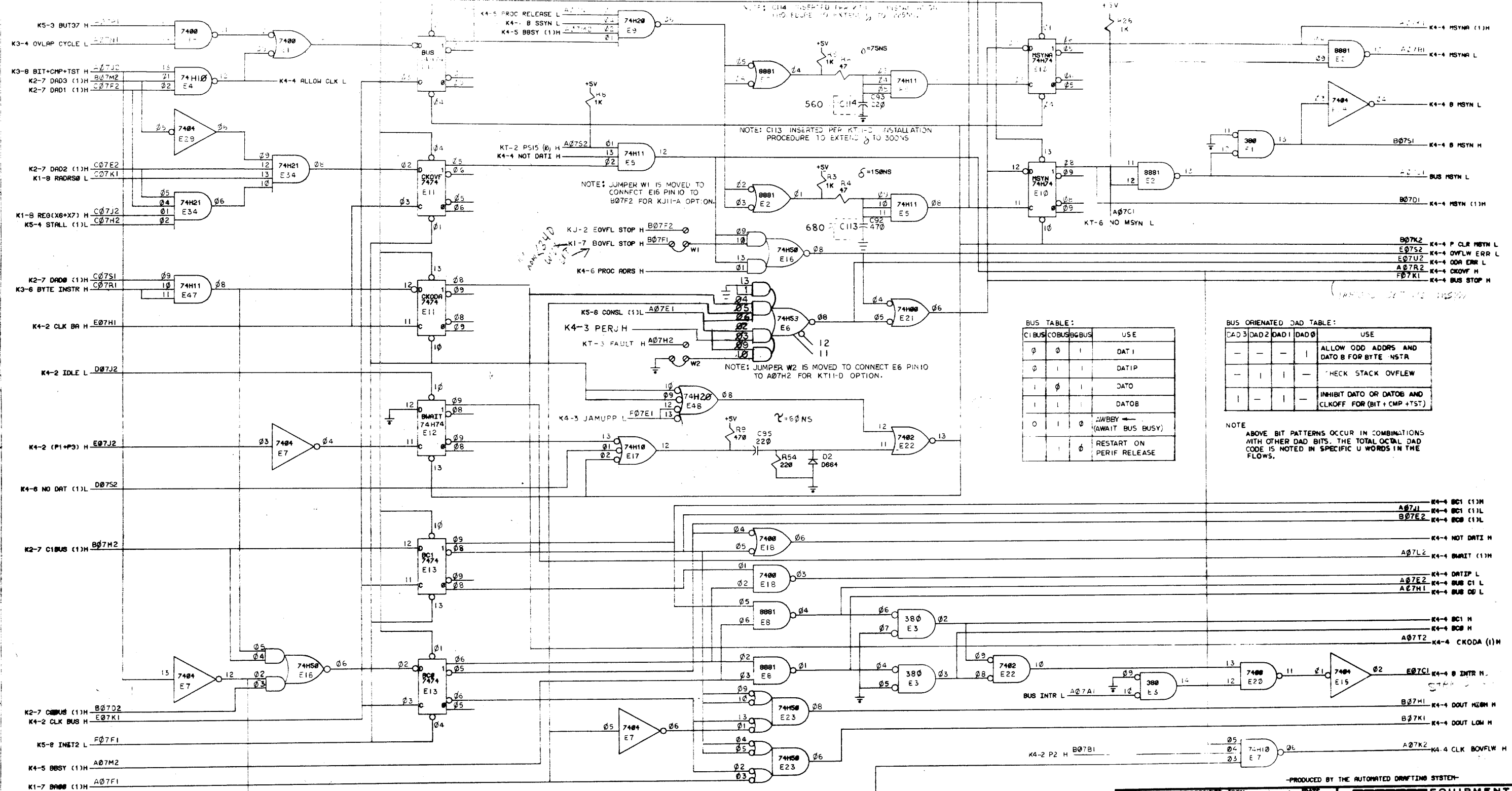
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-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED	DATE	1-31-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES	DATE	7/14/72	
TOLERANCES	DATE	7/14/72	
DIGITALS FRACTIONS ANGLES	DATE	7/14/72	
±.008 ±.004 ±.030	DATE	7/14/72	TITLE
FINAL SURFACE QUALITY	DATE	7/14/72	TIMING
REMOVE BURRS AND BREAK SHARP CORNERS	DATE	7/14/72	CLK JAM K4-3
MATERIAL	FIRST USED ON		
	PDP11		
FINISH	SCALE		SIZE CODE
	SHEET 3 OF 6		D
			NUMBER
			M7234-0-1
			REV.
			E

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BUS TABLE:

CIBUS	COBUS	BGBUS	USE
0	0	1	DAT I
0	1	1	DATIP
1	0	1	DATO
1	1	1	DATOB
0	1	0	AWBBY (AWAIT BUS BUSY)
1	1	0	RESTART ON PERIF RELEASE

BUS ORIENTED DAD TABLE:

DAD3	DAD2	DAD1	DAD0	USE
-	-	-	1	ALLOW ODD ADDRS AND DATO B FOR BYTE INSTR
-	1	1	-	CHECK STACK OVFLW
1	-	1	-	INHIBIT DATO OR DATOB AND CKLOFF FOR (BIT + CMP + TST)

NOTE
ABOVE BIT PATTERNS OCCUR IN COMBINATIONS WITH OTHER DAD BITS. THE TOTAL OCTAL DAD CODE IS NOTED IN SPECIFIC U WORDS IN THE FLOWS.

UNLESS OTHERWISE SPECIFIED

DRAWN	DATE	1-3-72
CHECKED	DATE	7-14-72
ENG	DATE	7-18-72
PROOF	DATE	7-18-72
FIRST USED ON		
PDP11		
SCALE		
SHEET	4	OF 6
DISTR.		
REV.		E

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
BUS DATA CNTRL K4-4

SIZE CODE
D CS

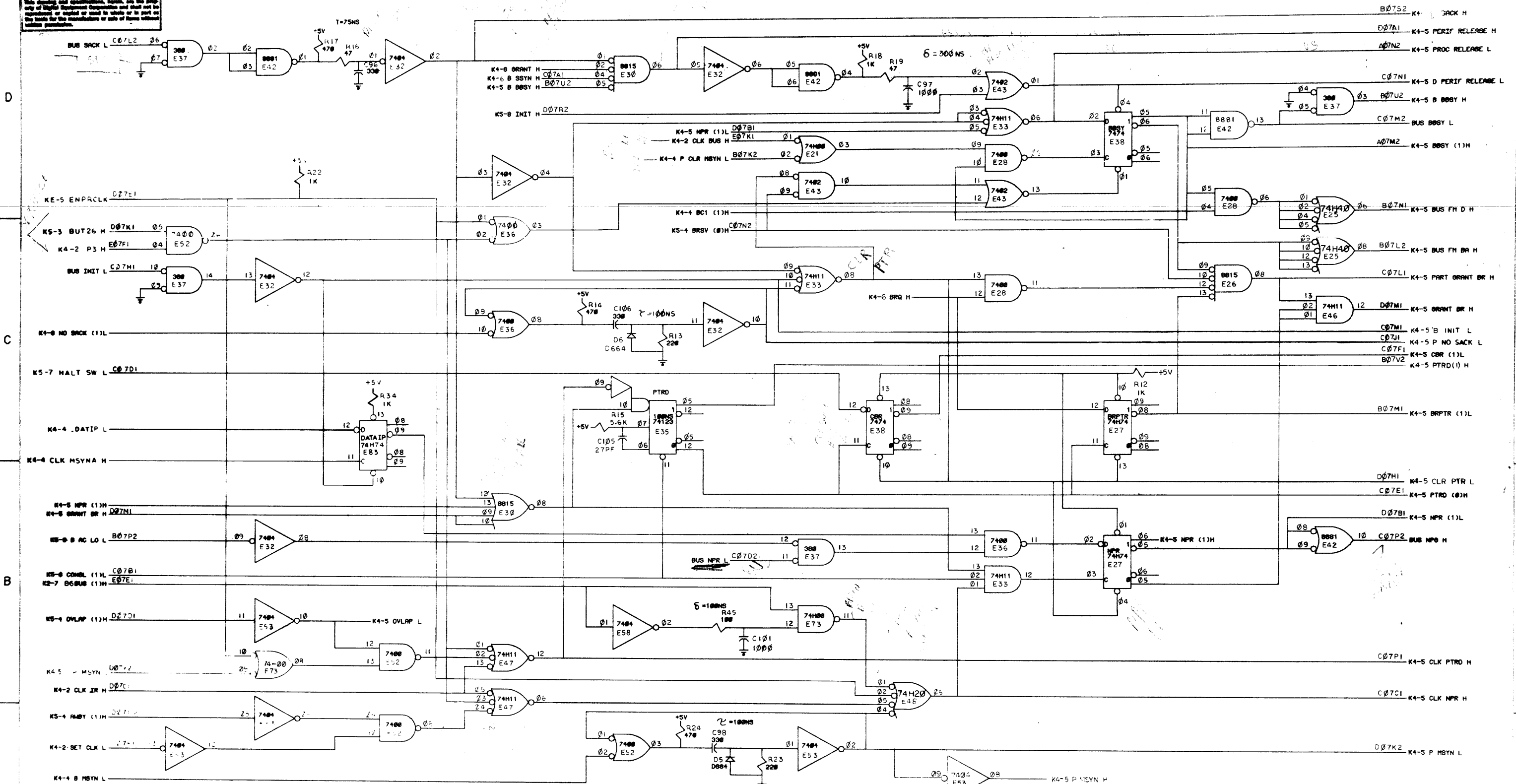
NUMBER
M7234-0-1

MATERIAL
PDP11

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS FRACTIONS ANGLES
±.005 ± 1/64 ± 0°30'

FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

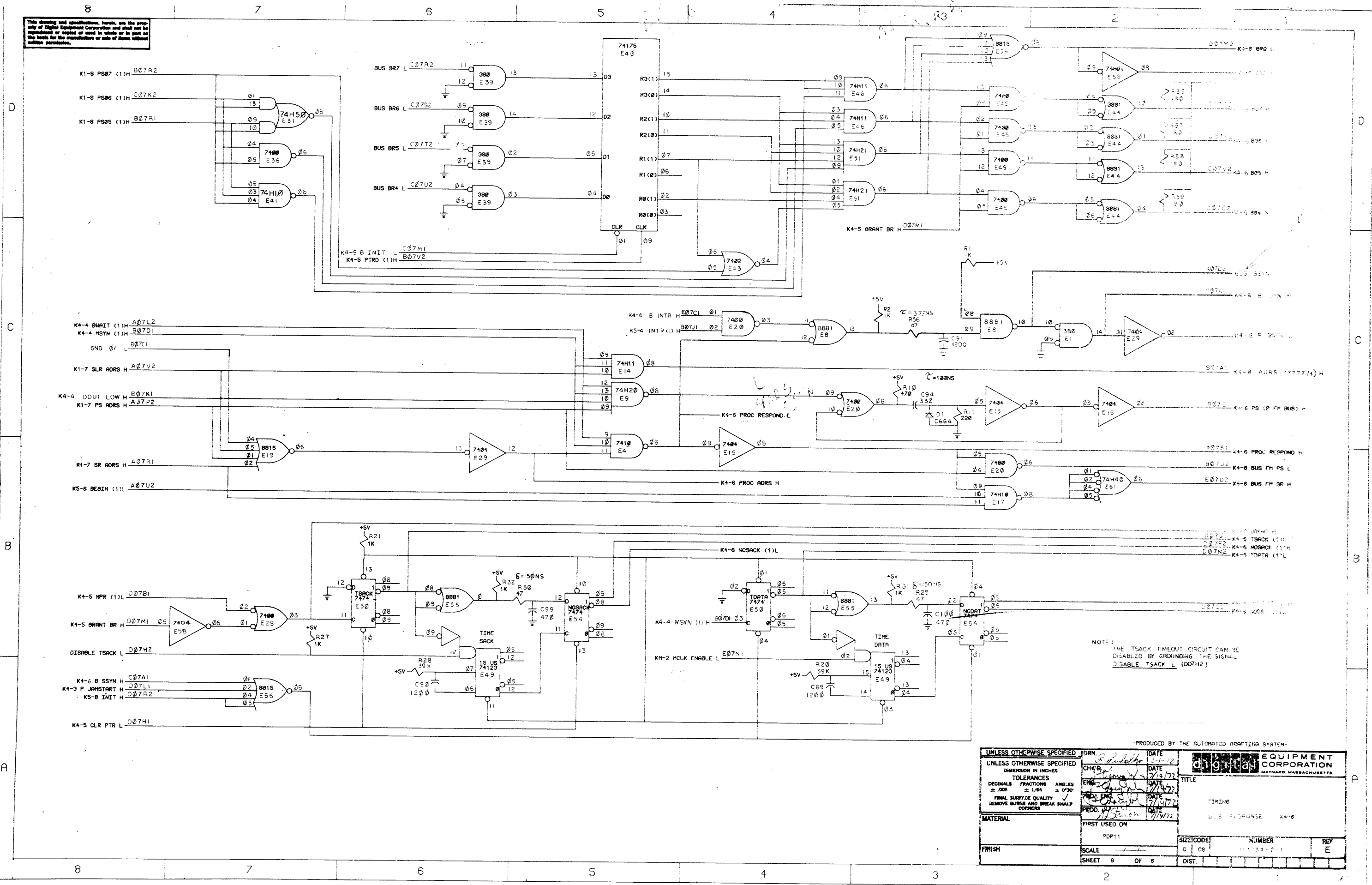
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-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED		DATE	EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DIMENSIONS IN INCHES		2-1-72	TITLE	
TOLERANCES		7/4/72	BUS OWNERSHIP K4-5	
DECIMALS FRACTIONS ANGLES		7/4/72	REV.	
± .005 ± 1/64 ± 0°30'		7/4/72	D	
PRIMAL SURFACE QUALITY		7/4/72	NUMBER	
REMOVE BURRS AND BREAK SHARP CORNERS		7/4/72	REV.	
MATERIAL		7/4/72	D	
FIRST USED ON		7/4/72	CS	
PDP-11		7/4/72	NUMBER	
FINISH		7/4/72	REV.	
SCALE		7/4/72	D	
SHEET 5 OF 8		7/4/72	CS	

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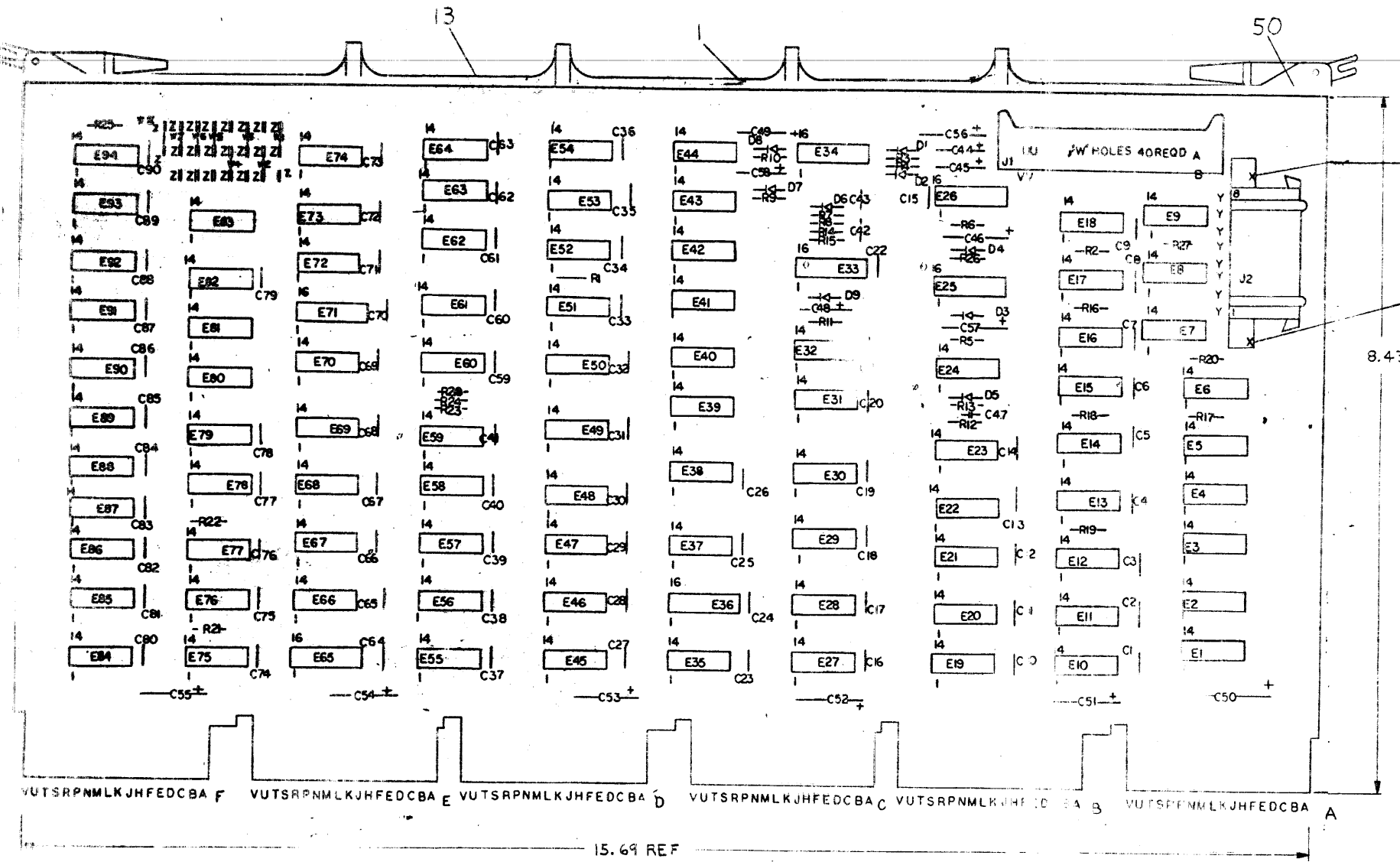
NOTE: THE TSACK TIMEOUT CIRCUIT CAN BE DISABLED BY GROUNDING THE SIGNAL DISABLE TSACK L (D07H2)

-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

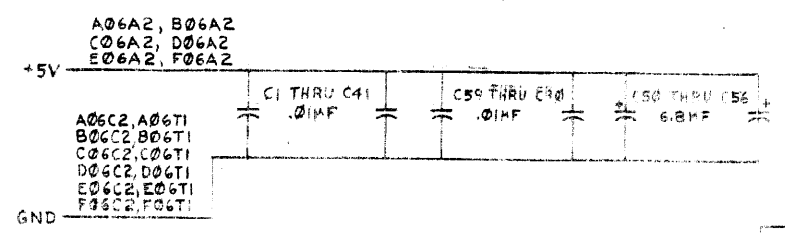
UNLESS OTHERWISE SPECIFIED		DRN. <i>R. S. ...</i>	DATE <i>1/15/72</i>	DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED		CHK'D <i>R. S. ...</i>	DATE <i>7/15/72</i>	
DIMENSION IN INCHES		ENG. <i>R. S. ...</i>	DATE <i>7/15/72</i>	TITLE
TOLERANCES		PRD. ENG. <i>R. S. ...</i>	DATE <i>7/15/72</i>	BUS RESPONSE K4-6
DECIMALS ± .005		PROD. <i>R. S. ...</i>	DATE <i>7/15/72</i>	
FRACTIONS ± 1/64				
ANGLES ± 0°30'				
FINAL SURFACE QUALITY				
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL	FIRST USED ON			
FINISH	POP11	SIZE/SCALE	NUMBER	REV
	SCALE	D. C8	11234-001	E
	SHEET 8 OF 6	DIST.		

NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KRM-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
- PROCESSOR SIGNAL PREFIX NOTATION (K24, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATED THE SHEET WITHIN THE SET. SIGNALS WITH A 'BUS' PREFIX REPRESENT A WIRED OR SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.



QTY	REF DESIGNATION	DESCRIPTION	DATE
8		INSULATED JUMPER L-277	1905185
2		HEX NUT NYLON	1905185
23		SPLIT LUG	1905238
12		EYELET	1905312
2		SHOULDER WASHER FIBER (BLK)	1905313
2		SCREW NYLON	1905401-4
1	E65	I.C. DEC 74157	1905458
4	E25, E26, E33, E34	I.C. DEC 74123	1905439
4	E24, E45, E60, E82	I.C. DEC 74H04	1905441
5	E13, E37, E58, E70, E81	I.C. DEC 88B15	1905443
5	E16, E84, E85, E88, E89	I.C. DEC 88B1	1905443
7	E1 THRU E4, E20, E29, E41	I.C. DEC 7404	1905446
1	E52	I.C. DEC 74H74	1905447
2	E36, E71	I.C. DEC 8251	1905494
1	E15	I.C. DEC 390	1905485
4	E14, E40, E48, E72	I.C. DEC 74H11	1905487
1	E55	I.C. DEC 74H61	1905487
1	E66	I.C. DEC 74H60	1905487
1	E59	I.C. DEC 74H35	1905487
2	E91, E92	I.C. DEC 74H53	1905487
2	E63, E67	I.C. DEC 74H52	1905487
4	E47, E56, E69, E87	I.C. DEC 74H50	1905487
1	E62	I.C. DEC 74H21	1905487
4	E7, E68, E80, E83	I.C. DEC 74H10	1905487
2	E57, E90	I.C. DEC 74H00	1905487
7	E5, E27, E28, E35, E39, E49, E54	I.C. DEC 7402	1905487
1	E46	I.C. DEC 74H20	1905487
3	E17, E18, E86	I.C. DEC 74H40	1905487
2	E31, E64	I.C. DEC 7450	1905487
2	E9, E94	I.C. DEC 7430	1905487
4	E8, E19, E43, E93	I.C. DEC 7420	1905487
3	E38, E51, E53	I.C. DEC 7410	1905487
7	E11, E21, E22, E23, E30, E73, E74	I.C. DEC 7400	1905487
13	E6, E10, E12, E32, E42, E44, E50, E61, E75 THRU E79	I.C. DEC 7474	1905447
4	R3, R4, R5, R6	RES 18K 1/4W ±5%	1905448
4	R9, R10, R11, R15	RES 12K 1/4W ±5%	1905448
16	R1, R2, R14, R16 THRU R28	RES 1K 1/4W ±5%	1905448
2	R8, R12	RES 470 Ω 1/4W ±5%	1905448
2	R7, R13	RES 220 Ω 1/4W ±5%	1905448
1		HANDLE MODULE	1201711-02
8		PINS SOCKET AMP	1201430
1	J1	CONN RIGHT ANGLE HEADER	1201441
1	J2	CONN PIN HOUSING	1201340
9	D1 THRU D9	DIODE D664	1905448
7	C50 THRU C56	CAP 6.8MF 35V ±10% TANT	1005304
2	C46, C57	CAP 15MF 20V ±10% TANT	1005304
1	C48	CAP 2.2MF 20V ±10% TANT	1005304
1	C58	CAP 1MF 35V ±10% TANT	1005304
73	C1 THRU C41, C59 THRU C90	CAP .01MF 100V ±20% DISC	1005310
3	C44, C45, C49	CAP 3.9MF 10V ±10% TANT	1000060
3	C42, C43, C47	CAP 680 PF 100V ±5% D.M.	1005302
1		ETCH CIRCUIT BOARD	5000000



QTY	REF DESIGNATION	DESCRIPTION	DATE
8		ETCH CIRCUIT BOARD	5000000
8		PINS SOCKET AMP	1201430
8		CONN RIGHT ANGLE HEADER	1201441
8		CONN PIN HOUSING	1201340
1		HANDLE MODULE	1201711-02
1		ETCH CIRCUIT BOARD	5000000

REVISIONS

REV	DESCRIPTION	DATE
1	INITIAL	7/25/72
2	CHANGED	7/26/72
3	CHANGED	7/27/72

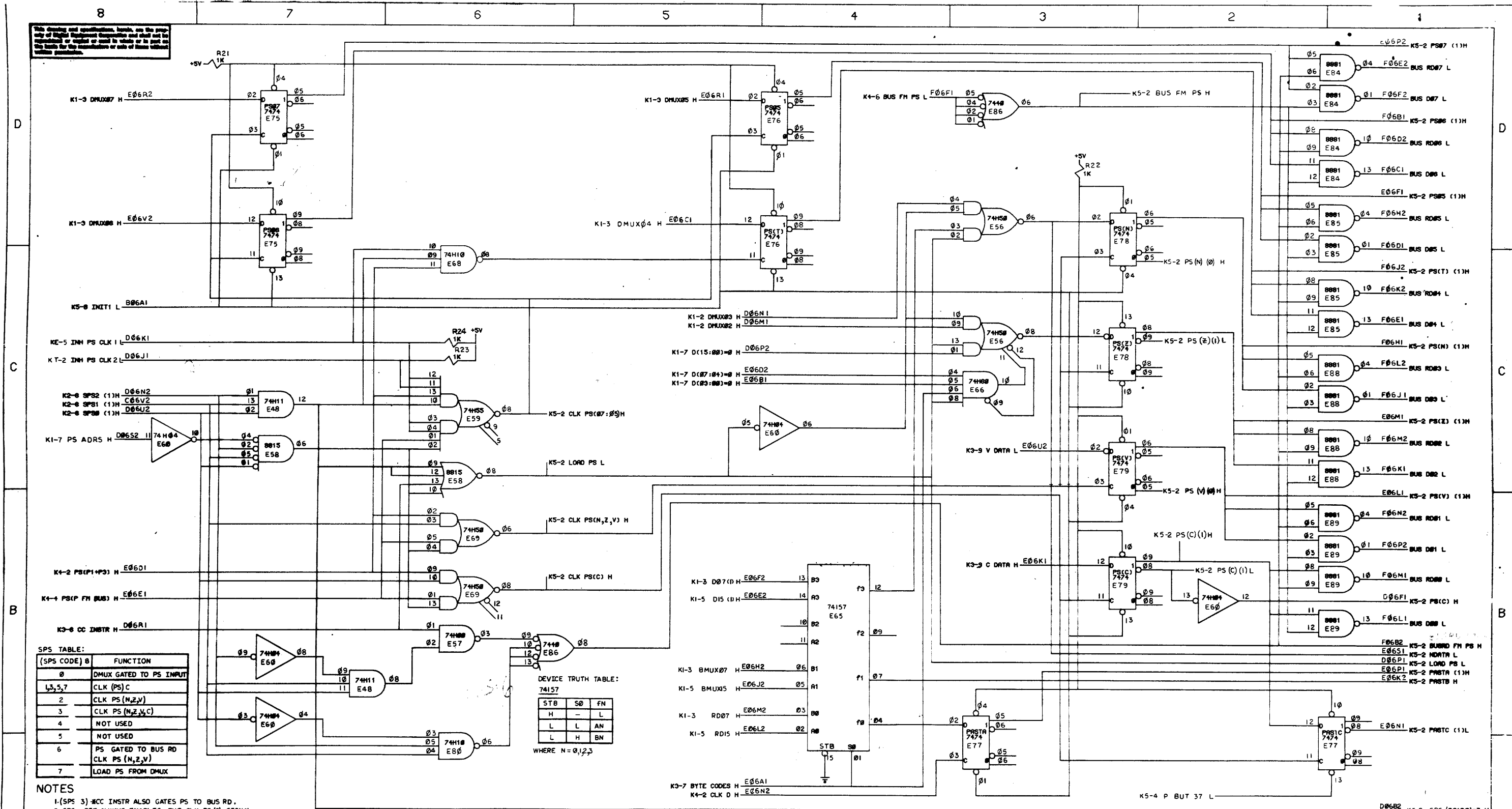
PARTS LIST

QTY	REF DESIGNATION	DESCRIPTION	DATE
1		ETCH CIRCUIT BOARD	5000000

ETCH BOARD REV D E

DRN 7-25-72
CHKD [Signature]
DATE 7/26/72
EMP [Signature]
DATE 7/27/72
PREP [Signature]
DATE 7/27/72

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SPS TABLE:

(SPS CODE) S	FUNCTION
0	DMUX GATED TO PS INPUT
1,3,5,7	CLK (PS)C
2	CLK PS (N,Z,V)
3	CLK PS (N,Z,V,C)
4	NOT USED
5	NOT USED
6	PS GATED TO BUS RD
7	CLK PS (N,Z,V)
	LOAD PS FROM DMUX

DEVICE TRUTH TABLE:
74157

STB	S0	FN
H	-	L
L	L	AN
L	H	BN

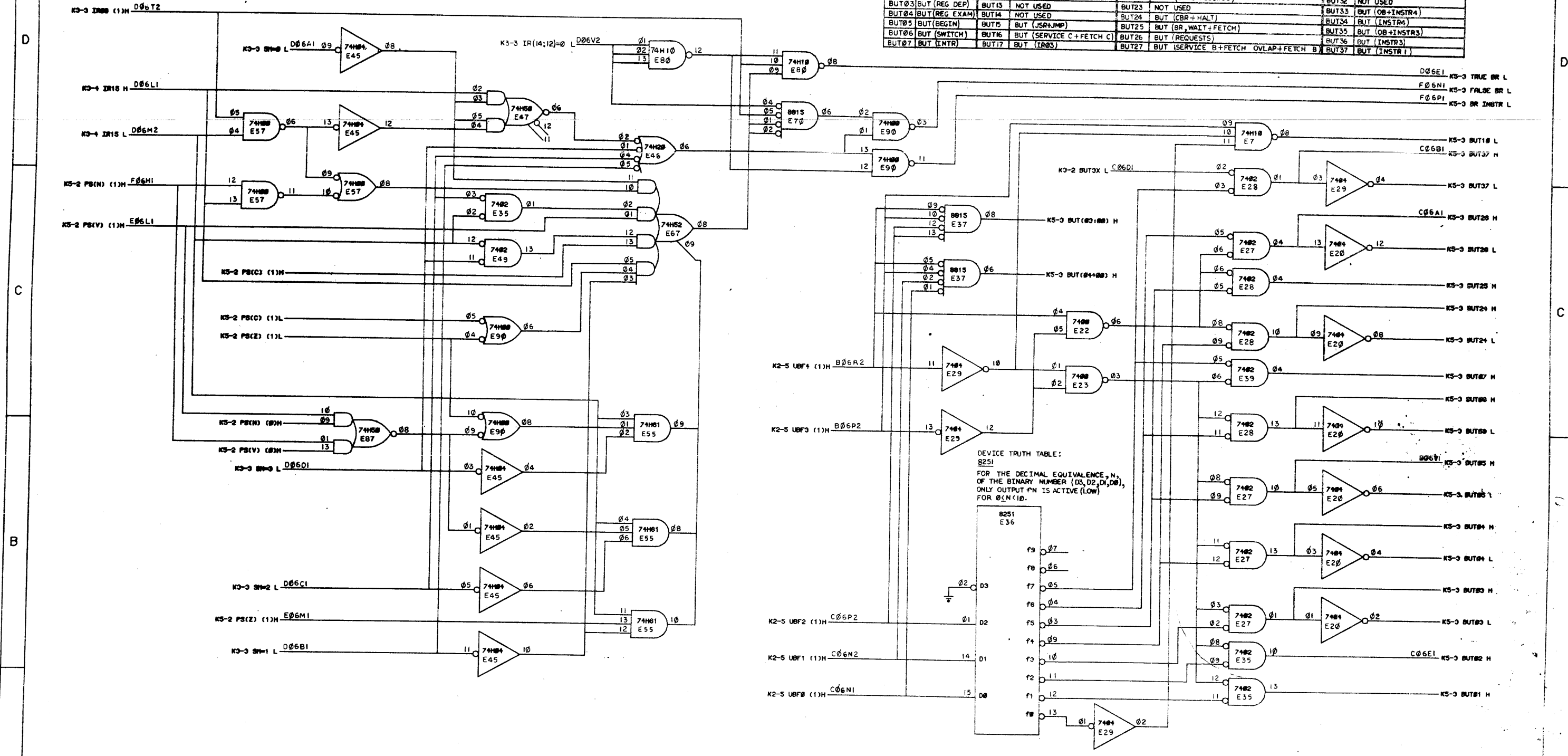
WHERE N = 0,1,2,3

- NOTES
- (SPS 3) *CC INSTR ALSO GATES PS TO BUS RD.
 - SPS. BIT ALWAYS ENABLES THE CLK PS (C) SIGNAL.
 - SPS. BIT ALWAYS ENABLES THE CLK PS (N,Z,V) SIGNAL.

UNLESS OTHERWISE SPECIFIED		DRN	DATE	EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DIMENSION IN INCHES		DATE	DATE	
TOLERANCES		DATE	DATE	TITLE
DECIMALS FRACTIONS ANGLES		DATE	DATE	
±.005 ±.004 ±.000		DATE	DATE	STATUS
FINAL SURFACE QUALITY		DATE	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE	DATE	PS (#7:00) K5-2
MATERIAL		DATE	DATE	
FINISH		DATE	DATE	SIZE CODE
SHEET 2 OF 8		DATE	DATE	
FIRST USED ON		DATE	DATE	NUMBER
POP11		DATE	DATE	
SCALE		DATE	DATE	REV.
D		DATE	DATE	
DST.		DATE	DATE	M 7235-0-1

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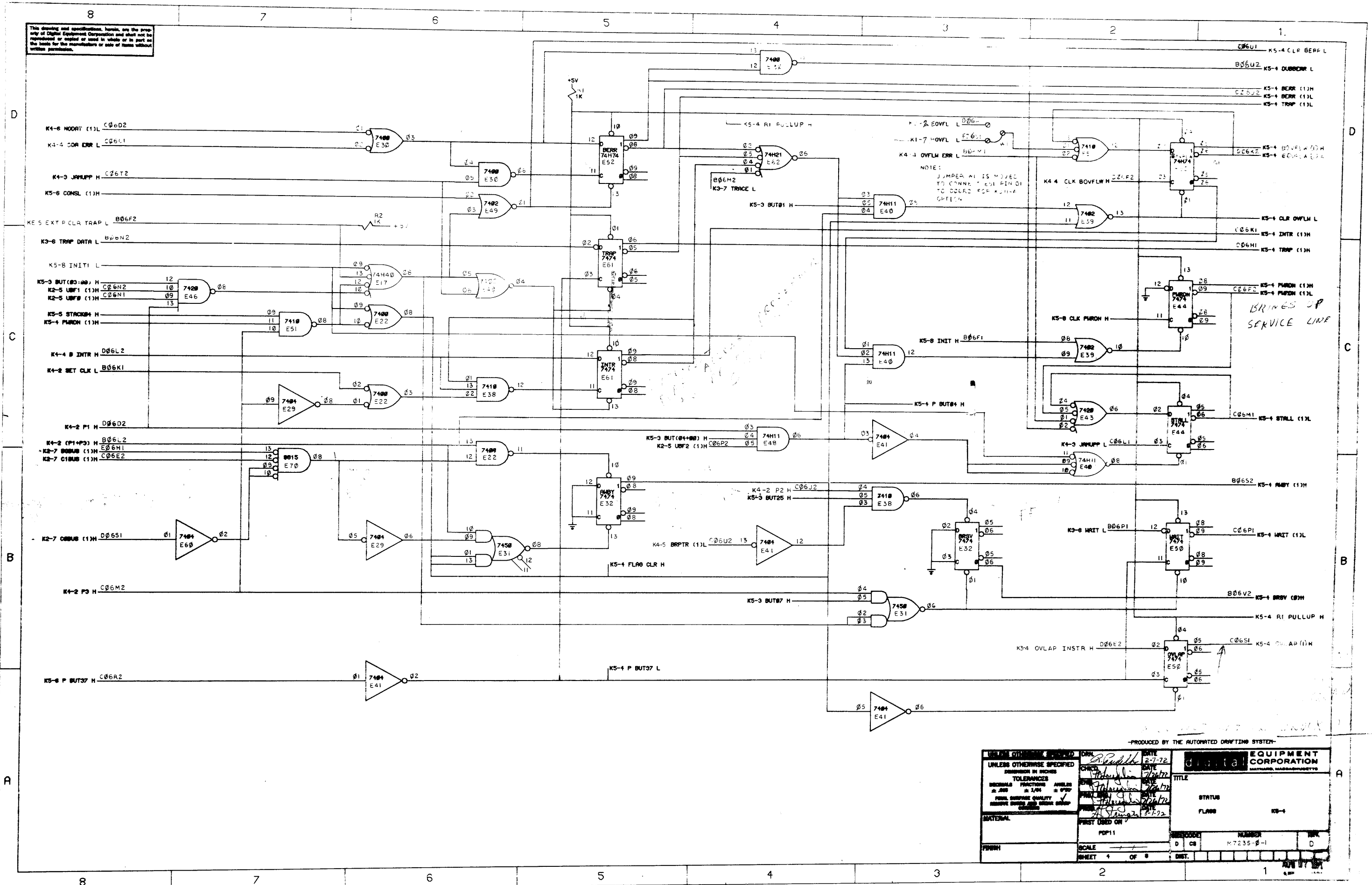
BUT TABLE (NUMERICAL & MNEMONIC CORRESPONDANCE):							
BUT00	NO OP	BUT10	BUT (HALT)	BUT20	BUT (BYTE + SERVICE + FETCH)	BUT30	BUT (VARIOUS SWITCHES)
BUT01	BUT (CBR1)	BUT11	BUT (MM FAULT)	BUT21	BUT (IR03, BYTE + SOURCE)	BUT31	BUT (NWR+BYTEWR+WORDWR)
BUT02	BUT (CBR2)	BUT12	BUT (D=0)	BUT22	BUT (BYTE + SOURCE)	BUT32	NOT USED
BUT03	BUT (REG DEP)	BUT13	NOT USED	BUT23	NOT USED	BUT33	BUT (OB+INSTR4)
BUT04	BUT (REG EXAM)	BUT14	NOT USED	BUT24	BUT (CBR+HALT)	BUT34	BUT (INSTRM)
BUT05	BUT (BEGIN)	BUT15	BUT (JSR+JMP)	BUT25	BUT (BR WAIT+FETCH)	BUT35	BUT (OB+INSTR3)
BUT06	BUT (SWITCH)	BUT16	BUT (SERVICE C + FETCH C)	BUT26	BUT (REQUESTS)	BUT36	BUT (INSTR3)
BUT07	BUT (INTR)	BUT17	BUT (IR03)	BUT27	BUT (SERVICE B+FETCH OVLAP+FETCH B)	BUT37	BUT (INSTR1)



-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES	DRN	DATE	EQUIPMENT CORPORATION MAYHARD, MASSACHUSETTS
	CHK'D	DATE	
TOLERANCES	ENGL	DATE	TITLE
DECIMALS ± .005	PROJ. ENG.	DATE	STATUS
FRACTIONS ± 1/64	PROD. ENGR.	DATE	
ANGLES ± 0'30"	FINISH	DATE	BUT & BRANCH KS-3
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	MATERIAL	FIRST USED ON	
	FINISH	SCALE	NUMBER M7235-0-1
		SHEET 3 OF 6	DIST.

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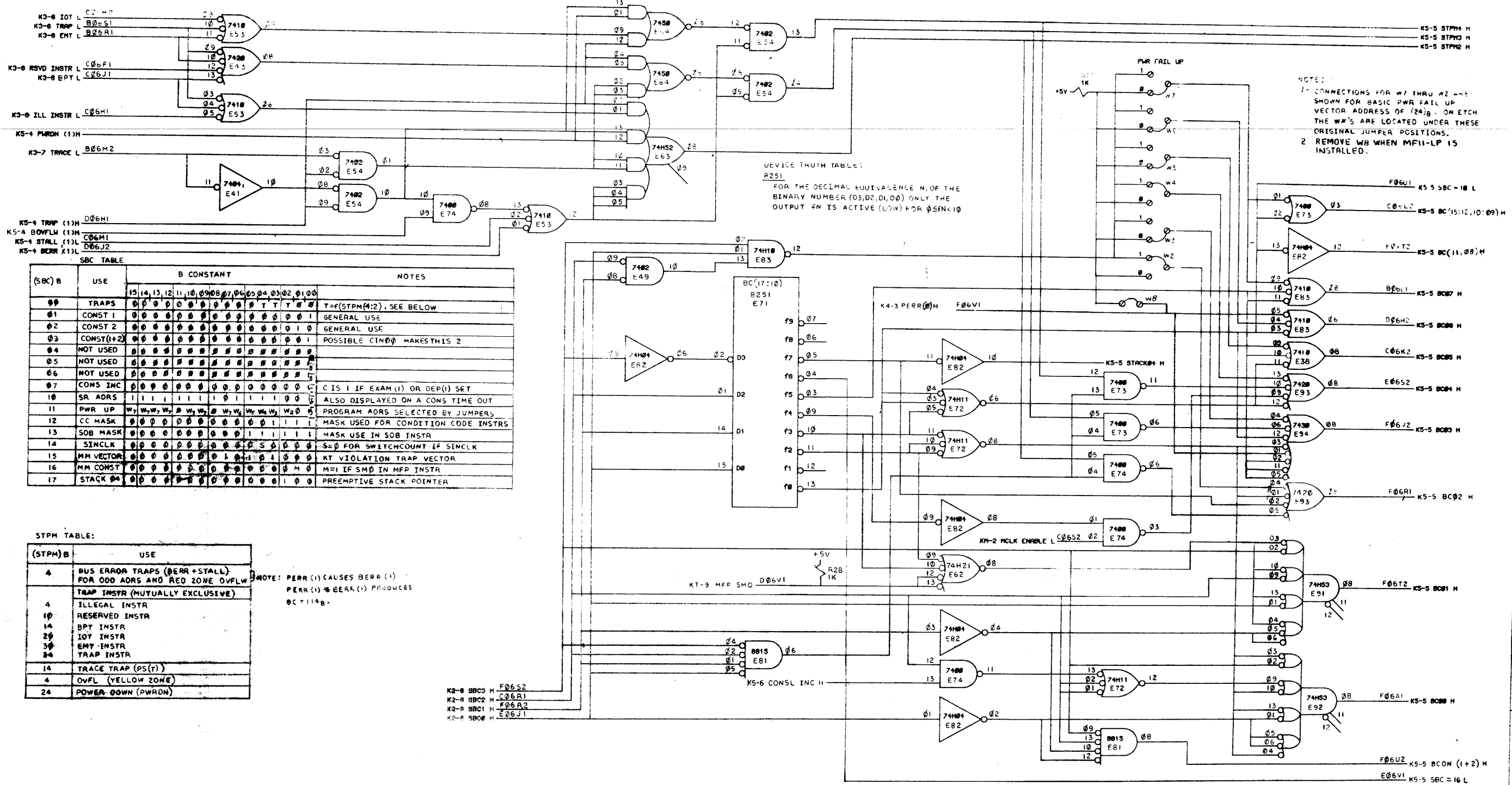


-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES	CHECKED DATE	DATE 2-7-72	DIGITAL EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS
TOLERANCES DECIMALS FRACTIONS ANGLES ± .005 ± 1/32 ± 1/16 ± 1/32	DESIGNED BY DATE	TITLE	
FULL SURFACE QUALITY REMOVE BURRS AND SHARP EDGES	FIRST USED ON DATE	STATUS	FLANG KS-4
MATERIAL	POP11	NUMBER M7235-β-1	
FORM	SCALE	DIST.	REV. BY
SHEET 4 OF 8			

FINAL

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DEVICE TRUTH TABLE:
R251
FOR THE DECIMAL EQUIVALENCE N, OF THE BINARY NUMBER (D3,D2,D1,D0) ONLY THE OUTPUT FN IS ACTIVE (LOW) FOR 0 ≤ FN ≤ 10

(SBC) B	USE	B CONSTANT	NOTES
00	TRAPS	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	T=(STPM(4:2), SEE BELOW)
01	CONST 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GENERAL USE
02	CONST 2	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GENERAL USE
03	CONST (1+2)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	POSSIBLE CIND0 MAKES THIS 2
04	NOT USED	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
05	NOT USED	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
06	NOT USED	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
07	CONS INC	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	C IS 1 IF EXAM (1) OR DEP (1) SET
10	SR ADRS	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ALSO DISPLAYED ON A CONS TIME OUT
11	PWR UP	W ₇ W ₆ W ₅ W ₄ W ₃ W ₂ W ₁ W ₀ 0 0	PROGRAM ADRS SELECTED BY JUMPERS
12	CC MASK	0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1	MASK USED FOR CONDITION CODE INSTRS
13	SOB MASK	0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1	MASK USE IN SOB INSTR
14	SINCLK	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	S=0 FOR SWITCHCOUNT IF SINCLK
15	MM VECTOR	0 0 0 0 0 0 0 0 1 0 1 1 0 0 0 0	KT VIOLATION TRAP VECTOR
16	MM CONST	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	M=1 IF SM0 IN MFP INSTR
17	STACK	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PREEMPTIVE STACK POINTER

(STPM) B	USE
4	BUS ERROR TRAPS (BERR+STALL) FOR ODD ADRS AND RED ZONE OVFLW
4	TRAP INSTR (MUTUALLY EXCLUSIVE)
10	ILLEGAL INSTR
14	BPT INSTR
20	IOT INSTR
30	EMT INSTR
24	TRAP INSTR
14	TRACE TRAP (PS(r))
4	OVFL (YELLOW ZONE)
24	POWER DOWN (PWRDN)

NOTE: PERR (1) CAUSES BERR (1)
PERR (1) * BERR (1) PRODUCES BC(11)00

NOTE:
1. CONNECTIONS FOR W7 THRU W2 ARE SHOWN FOR BASIC PWR FAIL UP VECTOR ADDRESS OF (24)8 ON ETCH THE W'S ARE LOCATED UNDER THESE ORIGINAL JUMPER POSITIONS.
2. REMOVE W8 WHEN MF11-LP IS INSTALLED.

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES

TOLERANCES:
DECIMAL FRACTIONS: ANGLES ± .000 ± 1.00 ± .000
FULL SURFACE QUALITY
RESISTIVE SURFACE AND FINISH GROUP CODES

DATE: 2-7-72
DRAWN: [Signature]
CHECKED: [Signature]
DATE: 7/26/72
DATE: 7/27/72
DATE: 7/27/72

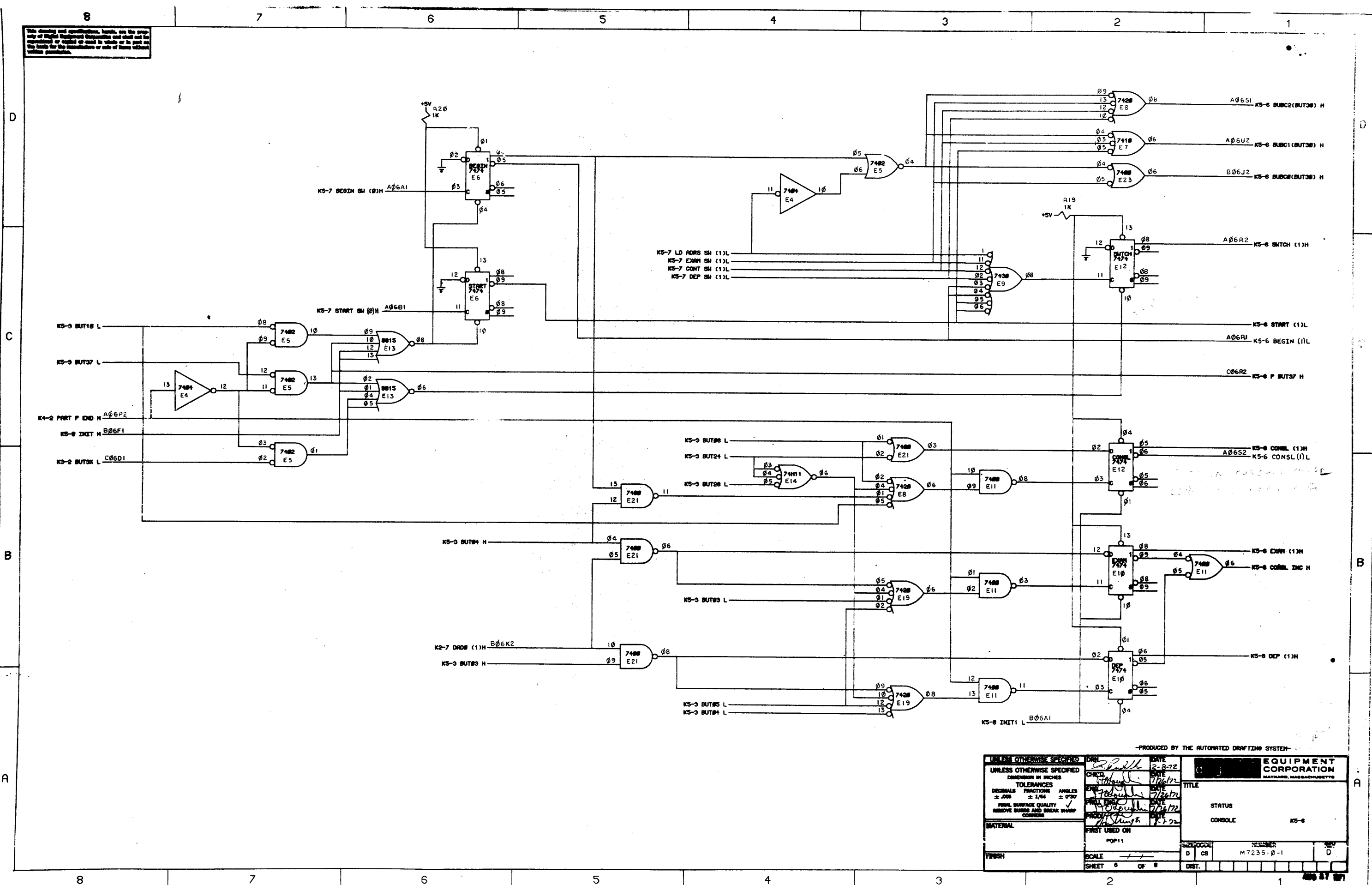
STATUS: CONSTANTS
NUMBER: M7235-0-1
REV: D

SCALE: 1/1
SHEET 5 OF 8

PRODUCED BY THE AUTOMATED DRAFTING SYSTEM

8 AUG 87 8PT

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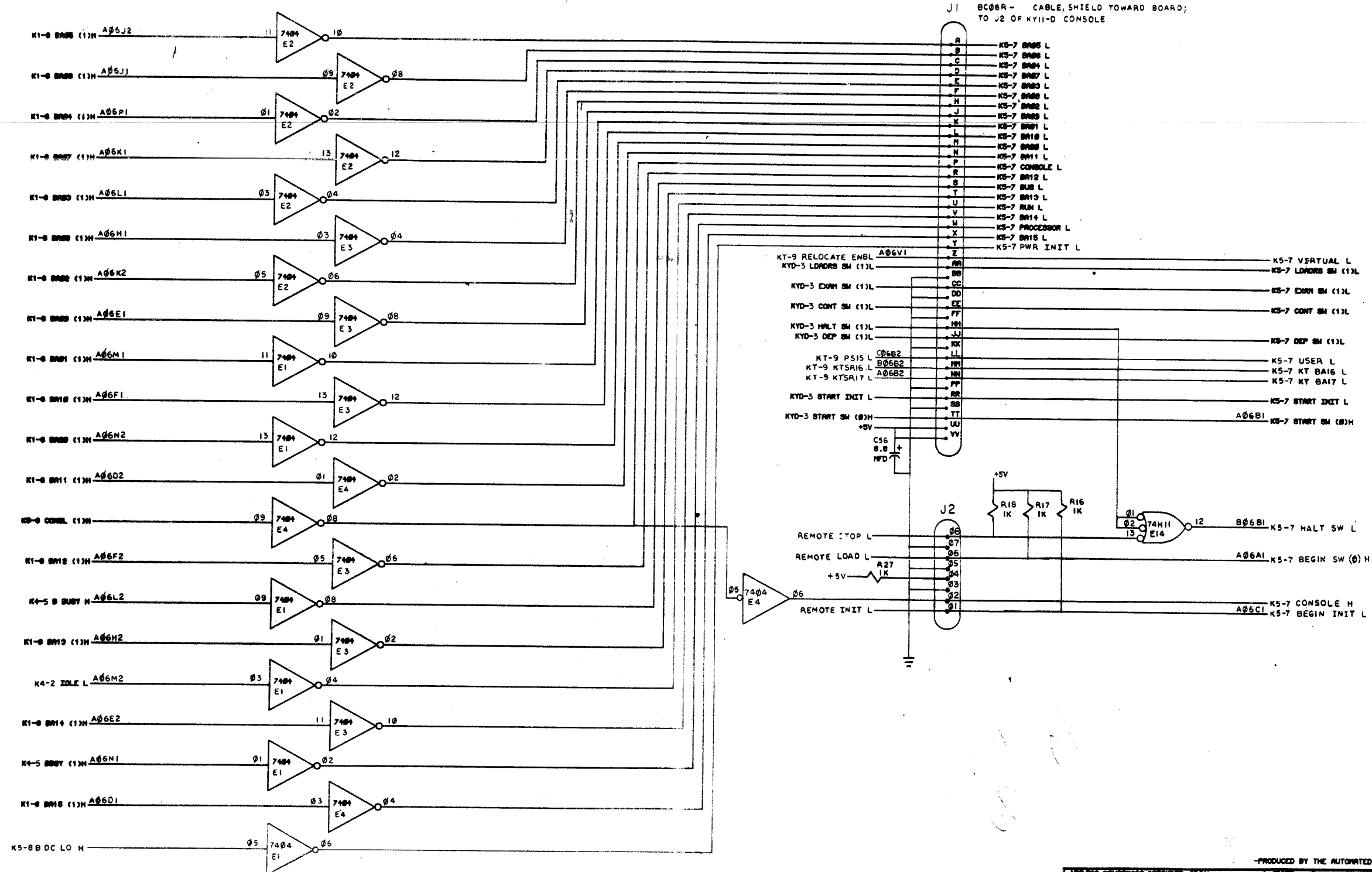


-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED		DATE	2-8-72	EQUIPMENT CORPORATION MAYFIELD, MASSACHUSETTS
DIMENSION IN INCHES		DATE	7/26/72	
TOLERANCES		DATE	7/26/72	TITLE
DECIMALS FRACTIONS		DATE	7/26/72	
± .005 ± 1/64 ± 0.007		DATE	7/26/72	STATUS
FINAL SURFACE QUALITY		DATE	7/26/72	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE	7/26/72	CONSOLE
MATERIAL		DATE	7/26/72	
FINISH		DATE	7/26/72	NUMBER
SCALE		DATE	7/26/72	
SHEET 6 OF 8		DATE	7/26/72	M7235-0-1
DIST.		DATE	7/26/72	

400 BT 071

See drawing and specifications herein, on the part of the user of this drawing. The user shall be responsible for the interpretation of any symbols or abbreviations used herein, and for the interpretation of any dimensions or tolerances shown on this drawing. The user shall be responsible for the interpretation of any dimensions or tolerances shown on this drawing.



J1 BC08A - CABLE, SHIELD TOWARD BOARD;
TO J2 OF KY11-D CONSOLE

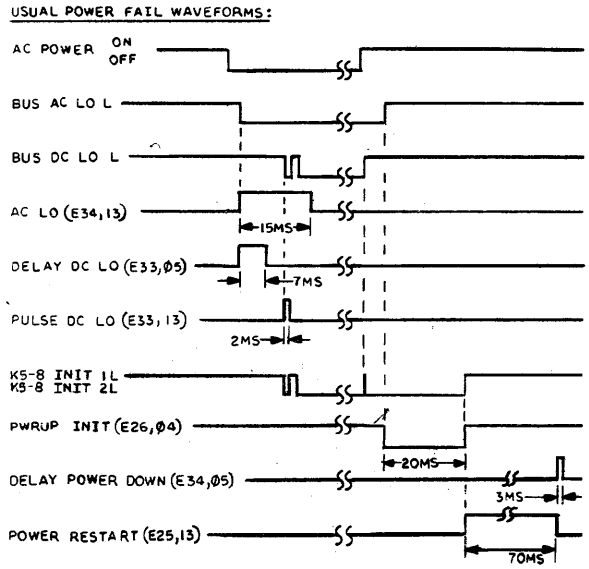
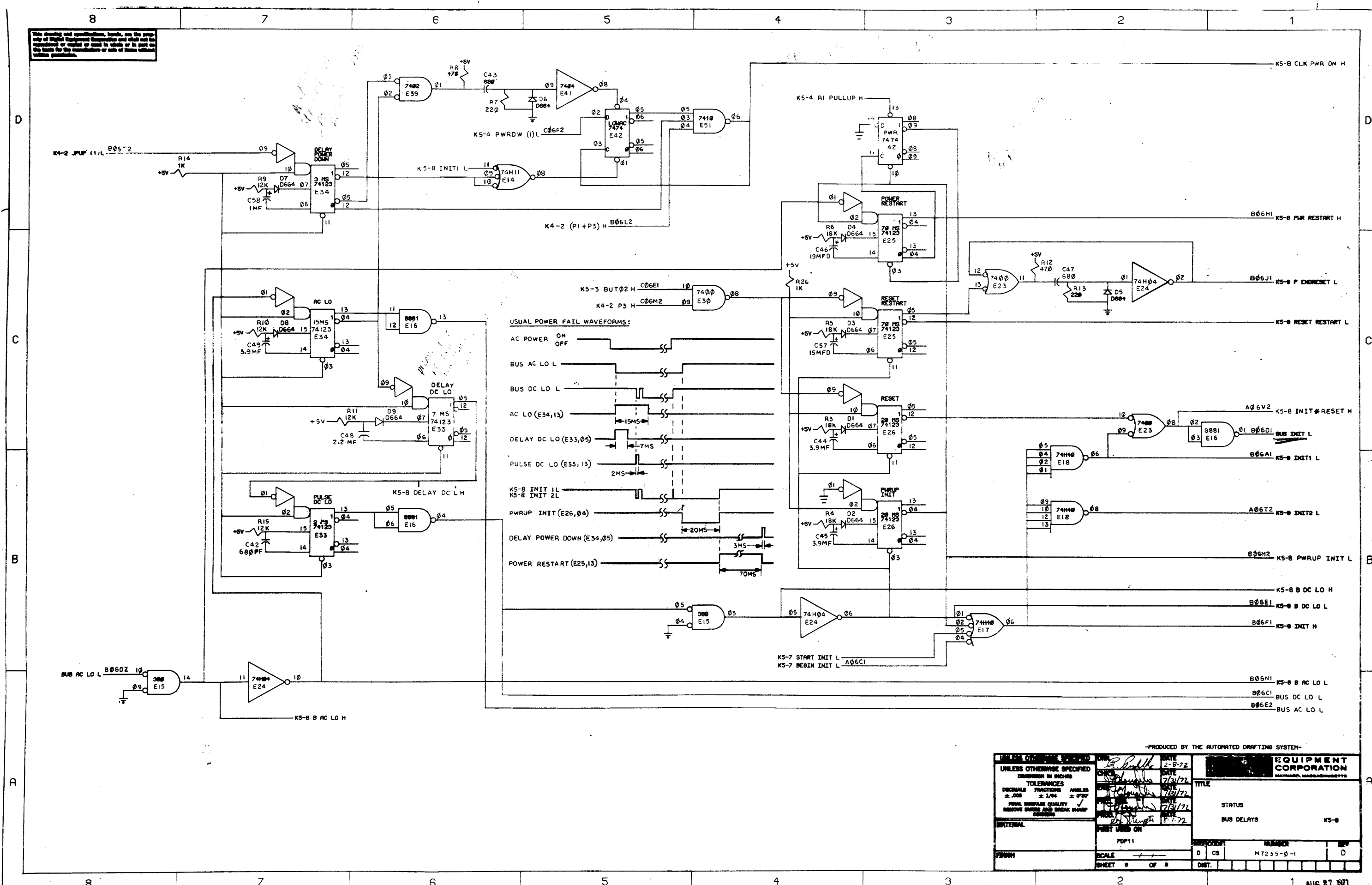
- A K5-7 BR08 L
- B K5-7 BR08 L
- C K5-7 BR04 L
- D K5-7 BR07 L
- E K5-7 BR08 L
- F K5-7 BR08 L
- G K5-7 BR08 L
- H K5-7 BR08 L
- I K5-7 BR08 L
- J K5-7 BR08 L
- K K5-7 BR08 L
- L K5-7 BR08 L
- M K5-7 BR08 L
- N K5-7 BR08 L
- P K5-7 BR08 L
- R K5-7 BR08 L
- S K5-7 BR08 L
- T K5-7 BR08 L
- U K5-7 BR08 L
- V K5-7 BR08 L
- W K5-7 BR08 L
- X K5-7 BR08 L
- Y K5-7 BR08 L
- Z K5-7 PWR INIT L

- A06V1 KT-9 RELOCATE ENBL
- BB KYD-3 LOADS SW (13L)
- CC KYD-3 EXRN SW (13L)
- DD KYD-3 CONT SW (13L)
- EE KYD-3 HALT SW (13L)
- FF KYD-3 DEP SW (13L)
- GG KYD-3 DEP SW (13L)
- HH KT-9 PS15 L
- II KT-9 KTSR16 L
- JJ KT-9 KTSR17 L
- KK KYD-3 START INIT L
- LL KYD-3 START SW (0)H
- MM +5V
- NN C56 0.8 MFD
- OO +5V
- PP R18 1K
- QQ R17 1K
- RR R16 1K
- SS 74H11
- TT B06B1 K5-7 HALT SW L
- UU A06A1 K5-7 BEGIN SW (0) H
- VV A06C1 K5-7 CONSOLE H
- WW K5-7 BEGIN INIT L

-PRODUCED BY THE AUTOMATED DRAWING SYSTEM-

UNLESS OTHERWISE SPECIFIED	CHKD	DATE	EQUIPMENT CORPORATION MILFORD, MASSACHUSETTS
UNLESS OTHERWISE SPECIFIED	DATE	2-8-72	
DIMENSIONS IN INCHES	CHKD	DATE	TITLE
TOLERANCES	DATE	7/26/72	
DECIMALS FRACTIONS ANGLES	ENR	DATE	STATUS
±.008 ±.004 ±.020	DATE	7/26/72	
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DATE	7/26/72	CABLES
MATERIAL	DATE	8-1-72	
FINISH	FIRST USED ON	POP11	NUMBER
SCALE	SHEET	7 OF 8	M7235-0-1
DIST			D

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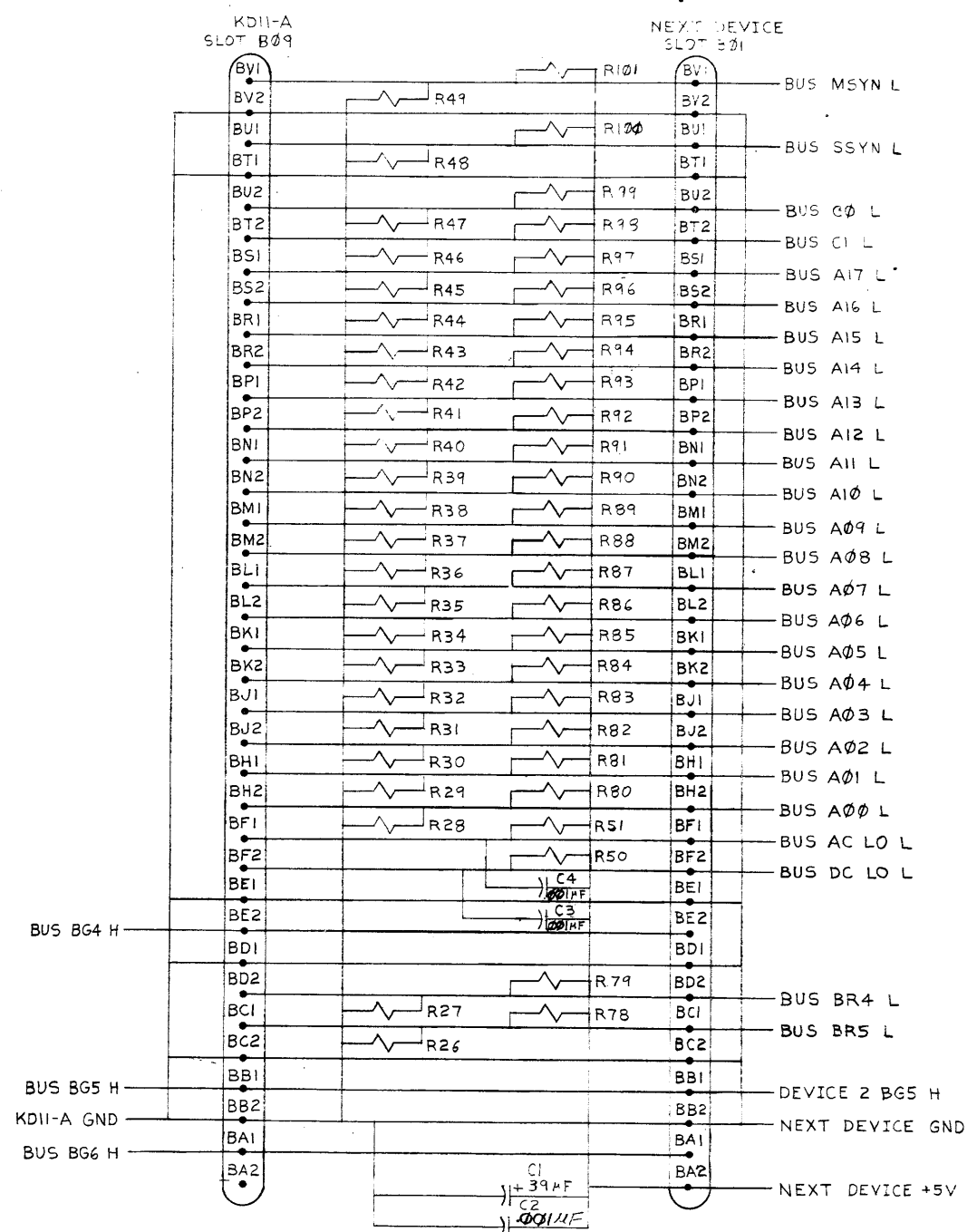
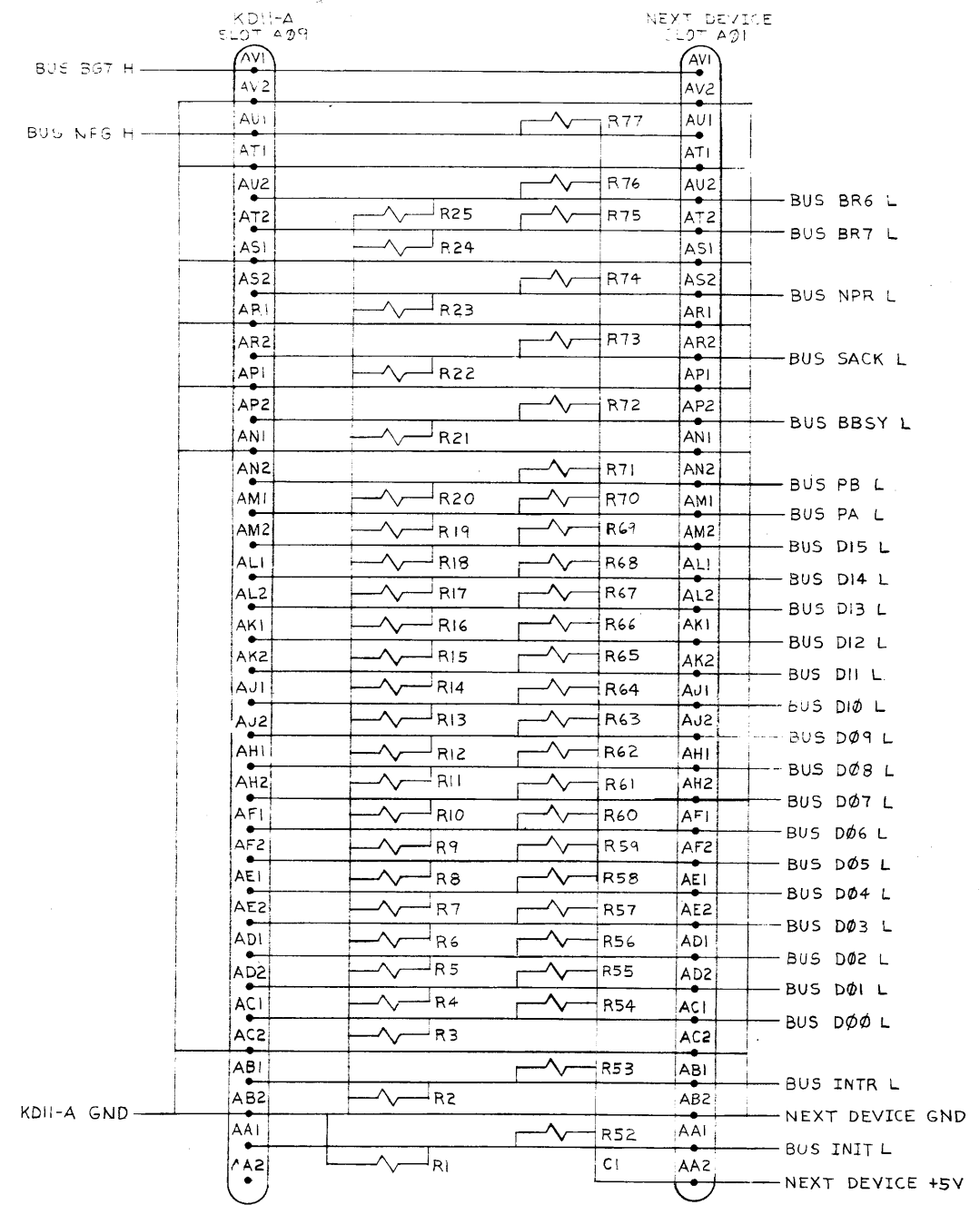


-PRODUCED BY THE AUTOMATED DRAFTING SYSTEM-

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ±.008 ±.004 ±.030 FINISH SURFACE QUALITY REMOVE BURRS AND BEVEL SWAMP CORNERS	DATE 2-8-72	EQUIPMENT CORPORATION MAYFIELD, MISSOURI 64578
	DESIGNED BY R. B. BULLOCK	
MATERIAL	DATE 7/31/72	TITLE BUS DELAYS KS-8
FRONT VIEW OR POP11	DATE 7/31/72	STATUS
SCALE SHEET 8 OF 8	DATE 8/27/71	BUS DELAYS KS-8
DIST.	NUMBER M7235-0-1	REV D

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H 1-0-7920073 2



NOTE:
RESISTOR VALUES ARE:
R1 THRU R51 ARE 383Ω
R52 THRU R101 ARE 178Ω

BRUNING 40-522 15840
REV
CHANGE NO
CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KDI-A		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN 6-12-72	DATE 6-12-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHKD 7/18/72	DATE 7/18/72	TITLE INTERNAL UNIBUS AND TERMINATOR	
.XXX = .005	ENG 7/19/72	DATE 7/19/72	REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	
.XX = .02	PROD 7/19/72	DATE 7/19/72	MATERIAL	
.X = .1			NEXT HIGHER ASSY.	
			D-UA-M981-0-0	SIZE CODE
			SCALE NONE	NUMBER
			SHEET 2 OF 2	DCS 5409764-0-1
				REV. H


REV
NUMBER
DCS 5409764-0-1



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WIRE LIST CHARACTERISTICS:

1. SIGNAL NAMES ARE LISTED WITHOUT THEIR PRINT SOURCE PREFIX. THIS AIDS ALPHABETICAL SEARCHES.
2. THE PRINT OR PRINTS UPON WHICH A GIVEN PIN ENTRY APPEARS IS NOTED IN THE "DRAW" COLUMN. MULTIPLE SHEET ENTRIES ARE NOTED WITHOUT COMMA'S WITH THE PRINT DESIGNATORS. FOR EXAMPLE "K4-235" INDICATES ENTRIES ON SHEETS 2, 3 and 5 IN THE K4 MODULE PRINTS, NO PRINT SETS HAVE MORE THAN NINE PAGES.
3. THE PRINT PREFIX AND THE ORIGIN OF THE SIGNAL CAN BE DETERMINED BY THE SOURCE NOTATION IN THE "REMARK" COLUMN. THIS SOURCE ENTRY, PRINT PREFIX IS USED BEFORE THE SIGNAL NAME ON ALL DRAWINGS. MULTIPLE SHEET ENTRIES HAVE THE SPECIFIC PRINT NOTED.
4. BUS SIGNALS WHICH OFTEN HAVE MULTIPLE (WIRED OR) SOURCES DO NOT HAVE PRINT PREFIXES. THE USE OF "BUS" IN THE NAME IDENTIFIES THESE SIGNALS, SIGNALS FOR +5V AND GND ALSO HAVE NO PRINT PREFIX.
5. THE WIRE LIST CONTAINS ETCH BACKPANEL CONNECTIONS AS WELL AS WIRE WRAP CONNECTIONS. ETCH IS IDENTIFIED BY AN "H" IN THE "Q" COLUMN AND A "P" IN THE "REMARK" COLUMN. "EXCEPTION" COLUMN NOTATIONS FOR ETCH CONNECTIONS SHOULD BE IGNORED.

REVOLUTIONS		CHANGE NO.	REV.	FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.																				
CHK	871	KDIIA-0000Z	A	PDP 11																								
	A. Torrey 9-27-72																											
	O'LOUGHLIN																											
	J. F. O'Loughlin 10/12/72																											
	871	KDIIA-00003	B																									
	A. Torrey 10-25-72																											
	O'LOUGHLIN																											
	J. F. O'Loughlin 11/7/72																											
	871	KDIIA-00005	C																									
	Dennis M. McWhorter 2-8-73																											
	O'LOUGHLIN																											
	J. F. O'Loughlin 2-15-73																											
	874	KDIIA-00006	D																									
	J. F. O'Loughlin 6-14-73																											
	O'LOUGHLIN																											
	J. F. O'Loughlin 6/14/73																											
	874	KDIIA-00007	E																									
	G. Nowles 12-18-73																											
	O'LOUGHLIN																											
	J. F. O'Loughlin 1-14-74																											
	878	KDIIA-00009	F																									
	J. Chartier 6-27-74																											
	SOFIO																											
	RE CORN 7-3-74																											
				PARTS LIST		<div style="text-align: center;">  <p>digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS</p> </div>																						
				<table border="1"> <tr> <td>DRN</td> <td>J. F. O'Loughlin</td> <td>DATE</td> <td>7/31/72</td> </tr> <tr> <td>CHKD.</td> <td>J. F. O'Loughlin</td> <td>DATE</td> <td>7/31/72</td> </tr> <tr> <td>ENG.</td> <td>J. F. O'Loughlin</td> <td>DATE</td> <td>7/31/72</td> </tr> <tr> <td>PRO. ENG.</td> <td>J. F. O'Loughlin</td> <td>DATE</td> <td>7/31/72</td> </tr> <tr> <td>PRD.</td> <td>A. Stimpert</td> <td>DATE</td> <td>8-2-72</td> </tr> </table>		DRN	J. F. O'Loughlin	DATE	7/31/72	CHKD.	J. F. O'Loughlin	DATE	7/31/72	ENG.	J. F. O'Loughlin	DATE	7/31/72	PRO. ENG.	J. F. O'Loughlin	DATE	7/31/72	PRD.	A. Stimpert	DATE	8-2-72	TITLE		
DRN	J. F. O'Loughlin	DATE	7/31/72																									
CHKD.	J. F. O'Loughlin	DATE	7/31/72																									
ENG.	J. F. O'Loughlin	DATE	7/31/72																									
PRO. ENG.	J. F. O'Loughlin	DATE	7/31/72																									
PRD.	A. Stimpert	DATE	8-2-72																									
				NEXT HIGHER ASSEMBLY		BACK PLANE																						
				D-AD-7009009-0-0		(KDII-A PROCESSOR)																						
				SCALE		SIZE CODE																						
						K WL		NUMBER																				
						KDII-A-WL		REV.																				
				SHEET 1 OF 1				F																				
						DIST.																						

KD11A-F
RUN NAME

A/P PIN NAME
HND288.V22(22) 11/06/73

3-JUL-74 23:55 PAGE 3
LENGTH EXCEPTIONS RUN NUMBER

A/P	PIN NAME	ORDER	BAY	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	23:55	PAGE 3
		PTN	ORDER									LENGTH	EXCEPTIONS	RUN
														NUMBER
H	A05K1		1-01 *		K3-8					1	SOURCE			13
H	B04S1		1-02 *		K1-2345							6-0/8		13
H	A05J1		1-01 *		K3-8					1	SOURCE			14
H	B04J1		1-02 *		K1-2345							5-2/8		14
H	A05L1		1-01 *		K3-8					1	SOURCE			15
H	B04H1		1-02 *		K1-2345							5-0/8		15
H	A01K1		1-01 *		KF-4					1	SOURCE			16
H	D02L1		1-02 *		KE-9							10-6/8		16
L	A02P2				KE-4						SOURCE		1-PIN RUN	17
L	A02R2				KE-24						SOURCE (KE=4)		1-PIN RUN	18
H	B06S2		1-01 *		K5-4					1	SOURCE			19
H	D07L2		1-02 *		K4-25							7-2/8		19
L	B06N1		1-01 *		K5-8					2	SOURCE			20
L	B07P2		1-02 *		K4-5					1				20
L	F07M1		1-03 *		K4-3							15-6/8		20
H	A06L2		1-01 *		K5-7					1	SOURCE			21
H	B07U2		1-02 *		K4-5							6-2/8		21
L	B06E1		1-01 *		K5-8					1	SOURCE			22
L	E07R1		1-02 *		K4-2							11-4/8		22
H	C02R2				KE-4								1-PIN RUN	23
H	D02D2		1-01 *	1						1				24
H	C01H1		1-02 *		KF-4							5-0/8		24
L	C08T2		1-01 *		KT-2					2				25
L	C07M1		1-02 *		K4-6					1	SOURCE			25
L	E03L1		1-03 *		KJ-2							11-6/8		25

TELETYPE CORPORATION

KD11A-F
RUN NAME

A/P PIN NAME
HND288.V22(22) 11/06/73

3-JUL-74 23:55 PAGE 4
LENGTH EXCEPTIONS RUN NUMBER

A/P	PIN NAME	ORDER	BAY	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	23:55	PAGE 4
		PTN	ORDER									LENGTH	EXCEPTIONS	RUN
														NUMBER
H	D06L2		1-01 *		K5-4					2				26
H	E07C1		1-02 *		K4-24					1	SOURCE (K4=4)			26
H	F05H2		1-03 *		KJ-2							10-0/8		26
H	F09M2		1-01 *		DD					1	SOURCE			27
H	F09S1		1-02 *		DD							3-0/8		27
L	F09P2		1-01 *		DD					1	SOURCE			28
L	F09S2		1-02 *		DD							2-4/8		28
H	B07S1		1-01 *		K4-4					1	SOURCE			29
H	F01E1		1-02 *		KN-2							12-6/8		29
H	C07A1		1-01 *		K4-256					1	SOURCE (K4=6)			30
H	F01M1		1-02 *		KN-2							12-6/8		30
H	A07L2				K4-4						SOURCE		1-PIN RUN	31
H	A04N1				K1-345						SOURCE (K1=3)		1-PIN RUN	32
H	A04P1		1-01 *		K1-35					2	SOURCE (K1=5)			33
H	B02M2		1-02 *		KE-45					1				33
H	D01E2		1-03 *		KF-4					2				33
H	E01S1		1-04 *		KN-2							18-4/8		33
H	D04K1				K1-7						SOURCE		1-PIN RUN	34
H	D04D2				K1-7						SOURCE		1-PIN RUN	35
L	B04P1		1-01 *		K1-7					1	SOURCE			36
L	E03M1		1-02 *		KJ-2							8-6/8		36
L	B04N2				K1-7						SOURCE		1-PIN RUN	37
H	A04S2		1-01 *		K1-69					1	SOURCE (K1=6)			38
H	C08K2		1-02 *		KT-9							7-6/8		38

TELETYPE CORPORATION

KD11A.F
RUN NAME:

HN0288.V22(22) 11/06/73
A/P PIN ORDER BAY -
NAME PIN ORDER

23:55
EXCEPTIONS

3-JUL-74
LENGTH

REMARKS

U DRAW RV PG Y X Z

ORDER

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LENGTH

23:55
EXCEPTIONS

PAGE 5
RUN
NUMBER

Run Name	Order	Bay	Draw	RV	PG	Y	X	Z	Remarks	Length	Exceptions	Page
BA00 (1)	A08F2	I-01 *										39
BA00 (1)	A07F1	I-02 *										39
BA00 (1)	A06N2	I-03 *										39
BA00 (1)	D05S1	I-04 *										39
BA00 (1)	F04J1	I-05 *							SOURCE (K1=6)	24=2/8		39
BA01 (1)	A08E2	I-01 *										40
BA01 (1)	A06M1	I-02 *										40
BA01 (1)	F04F1	I-03 *							SOURCE (K1=6)	19=2/8		40
BA01 (1)												40
BA02 (1)	A08H2	I-01 *										41
BA02 (1)	A06K2	I-02 *										41
BA02 (1)	F04B1	I-03 *							SOURCE (K1=6)	18=6/8		41
BA02 (1)												41
BA03 (1)	A08D2	I-01 *										42
BA03 (1)	A06L1	I-02 *										42
BA03 (1)	D04K2	I-03 *							SOURCE (K1=6)	14=4/8		42
BA03 (1)												42
BA04 (1)	A08K2	I-01 *										43
BA04 (1)	A06P1	I-02 *										43
BA04 (1)	D04B1	I-03 *							SOURCE (K1=6)	13=0/8		43
BA04 (1)												43
BA05 (1)	A08A1	I-01 *										44
BA05 (1)	A06J2	I-02 *										44
BA05 (1)	C04R2	I-03 *							SOURCE (K1=6)	12=2/8		44
BA05 (1)												44
BA06 (1)	A08J2	I-01 *										45
BA06 (1)	A06J1	I-02 *										45
BA06 (1)	C04T2	I-03 *							SOURCE (K1=6)	12=4/8		45
BA06 (1)												45
BA07 (1)	A08B1	I-01 *										46
BA07 (1)	A06K1	I-02 *										46
BA07 (1)	D04F1	I-03 *							SOURCE (K1=6)	14=0/8		46
BA07 (1)												46
BA08 (1)	A06H1	I-01 *										47
BA08 (1)	B08E1	I-02 *										47
BA08 (1)	C04F2	I-03 *							SOURCE (K1=6)	18=6/8		47
BA08 (1)	E03D1	I-04 *										47
BA08 (1)												47

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KD11A.F
RUN NAME:

HN0288.V22(22) 11/06/73
A/P PIN ORDER BAY -
NAME PIN ORDER

23:55
EXCEPTIONS

3-JUL-74
LENGTH

REMARKS

U DRAW RV PG Y X Z

ORDER

3-JUL-74
LENGTH

23:55
EXCEPTIONS

PAGE 6
RUN
NUMBER

Run Name	Order	Bay	Draw	RV	PG	Y	X	Z	Remarks	Length	Exceptions	Page
BA09 (1)	A06E1	I-01 *										48
BA09 (1)	B08E2	I-02 *										48
BA09 (1)	C04D2	I-03 *							SOURCE (K1=6)			48
BA09 (1)	E03C1	I-04 *										48
BA09 (1)												48
BA10 (1)	A06F1	I-01 *										49
BA10 (1)	B08M2	I-02 *										49
BA10 (1)	C04F1	I-03 *							SOURCE (K1=6)	19=0/8		49
BA10 (1)	E03B1	I-04 *										49
BA10 (1)												49
BA11 (1)	A06D2	I-01 *										50
BA11 (1)	B08K1	I-02 *										50
BA11 (1)	C04K1	I-03 *							SOURCE (K1=6)	18=6/8		50
BA11 (1)	E03D2	I-04 *										50
BA11 (1)												50
BA12 (1)	A06G2	I-01 *										51
BA12 (1)	A04M2	I-02 *							SOURCE (K1=67)3=0			51
BA12 (1)	B08N2	I-03 *										51
BA12 (1)	E03M2	I-04 *										51
BA12 (1)												51
BA13 (1)	A06H2	I-01 *										52
BA13 (1)	A04P2	I-02 *							SOURCE (K1=6) 2=6			52
BA13 (1)	B08L1	I-03 *										52
BA13 (1)	E03M2	I-04 *										52
BA13 (1)												52
BA14 (1)	A04H1	I-01 *							SOURCE (K1=6)	21=1/8		53
BA14 (1)	A06E2	I-02 *										53
BA14 (1)	C08F1	I-03 *										53
BA14 (1)	E03L2	I-04 *										53
BA14 (1)												53
BA15 (1)	A04K2	I-01 *							SOURCE (K1=6)	20=6/8		54
BA15 (1)	A06D1	I-02 *										54
BA15 (1)	C08D2	I-03 *										54
BA15 (1)	E03E2	I-04 *										54
BA15 (1)												54
BBSY (1)	A06N1	I-01 *							SOURCE (K4=5)	20=4/8		55
BBSY (1)	A07M2	I-02 *										55
BBSY (1)												55

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KD11A.F
RUN NAME

A/P PIN ORDER PTN BAY -
HND288.V22(22) 11/06/73

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23:55 RUN NUMBER

Q	U	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74 LENGTH	EXCEPTIONS	PAGE 9 RUN NUMBER
H		D07D2		K4=6			1	SOURCE	3=4/8		79
H		D09K2		DD							79
H		D03E2	2	K2=7			2				80
H		E06H1		K5=4			1				80
H		E07E1		K4=25							80
H		A07J2		K4=4			1	SOURCE (K3=8)	12=0/8		81
H		D05V2		K3=278							81
H		E04F1		K1=3			1	SOURCE	3=4/8		82
H		E06H2		K5=2							82
H		A04L1		K1=5			1	SOURCE	13=2/8		83
H		E06J2		K5=2							83
L		C04C1		K1=7			1	SOURCE	12=2/8		84
L		F06S1		K5=4							84
H		B07F1		K4=4			1	SOURCE	5=4/8		85
H		C04E1		K1=7							85
H		D06K2		K5=4			1	SOURCE	9=0/8		86
H		F05V2		K3=7							86
L		C06J1		K5=5			1	SOURCE	2=4		87
L		D05J2		K3=6							87
L		D05N1		K3=5			1	SOURCE	5=5/8		88
L		F06P1		K5=3							88
H		D01A1		KF=2			1	SOURCE (KE=2)	8=0/8		89
H		D02J1		KE=2346							89
H		D01A1		KF=2			1	SOURCE (KE=2)	3=4/8		89
H		D02J1		KE=2346							89

CGI CORPORATION

KD11A.F
RUN NAME

A/P PIN ORDER PTN BAY -
HND288.V22(22) 11/06/73

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23:55 RUN NUMBER

Q	U	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74 LENGTH	EXCEPTIONS	PAGE 10 RUN NUMBER
H		D01B1		KF=2			1	SOURCE (KE=2)	3=6/8		90
H		D02M2		KE=2346							90
H		D01C1		KF=2			1	SOURCE (KE=2)	3=4/8		91
H		D02K2		KE=2346							91
H		D01D1		KF=2			1	SOURCE (KE=2)	3=4/8		92
H		D02L2		KE=2346							92
H		B01J1		KF=2			1	SOURCE (KE=2)	9=0/8		93
H		D02U1		KE=2346							93
H		B01K1		KF=2			1	SOURCE (KE=2)	3=2/8		94
H		B02P2		KE=2346							94
H		B01L2		KF=2			1	SOURCE (KE=2)	9=2/8		95
H		E02B1		KE=236							95
H		B01M1		KF=2			1	SOURCE (KE=2)	13=4/8		96
H		F02P2		KE=236							96
H		D01E1		KF=2			1	SOURCE (KE=2)	8=4/8		97
H		F02L2		KE=23							97
H		D01F1		KF=2			1	SOURCE (KE=2)	8=2/8		98
H		F02L1		KE=23							98
H		D01H1		KF=2			1	SOURCE (KE=2)	8=2/8		99
H		F02M1		KE=23							99
H		D01J1		KF=2			1	SOURCE (KE=2)	8=4/8		100
H		F02P1		KE=23							100
H		B01M2		KF=2			1	SOURCE (KE=2)	11=0/8		101
H		E02U2		KE=23							101

CGI CORPORATION

KD11A-F RUN NAME	HND288, V22(22) 11/06/73		3-JUL-74		23:55		PAGE 11			
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG Y X Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
BR13 (1)	H	B01M1	I-01 *	I-01 *		KF-2				102
BR13 (1)	H	E02U1	I-02 *	I-02 *		KE-23	1			102
BR13 (1)								11-0/8		102
BR14 (1)	H	B01N1	I-01 *	I-01 *		KF-2	1			103
BR14 (1)	H	C02T2	I-02 *	I-02 *		KE-236	1			103
BR14 (1)								5-6/8		103
BR15 (1)	H	B01P1	I-01 *	I-01 *		KF-2	1			104
BR15 (1)	H	C02S2	I-02 *	I-02 *		KE-2346	1			104
BR15 (1)								5-4/8		104
BRPTR (0)	H	B07M1	I-01 *	I-01 *		K4-5	2			105
BRPTR (0)	H	C06U2	I-02 *	I-02 *		K5-4	1			105
BRPTR (0)	H	F05D2	I-03 *	I-03 *		K3-7	1			105
BRPTR (0)								14-6/8		105
BRQ	L	A01S2	I-01 *	I-01 *		KF-4	1			106
BRQ	L	C05D1	I-02 *	I-02 *		K3-47	2			106
BRQ	L	D07M2	I-03 *	I-03 *		K4-6	1			106
BRQ								13-4/8		106
BRSV (0)	H	B05V2	I-01 *	I-01 *		K5-4	2			107
BRSV (0)	H	C07N2	I-02 *	I-02 *		K4-5	1			107
BRSV (0)	H	D07N1	I-03 *	I-03 *		K4-2	1			107
BRSV (0)								9-4/8		107
BURC0 (BUT30)	H	B05J2	I-01 *	I-01 *		K5-6	1			108
BURC0 (BUT30)	H	E05R2	I-02 *	I-02 *		K3-2	1			108
BURC0 (BUT30)								11-0/8		108
BURC1	L	A03J2	I-01 *	I-01 *		K2-2	1			109
BURC1	L	D05P1	I-02 *	I-02 *		K3-2	1			109
BURC1								11-2/8		109
BURC1 (BUT30)	H	A06U2	I-01 *	I-01 *		K5-6	1			110
BURC1 (BUT30)	H	E05A1	I-02 *	I-02 *		K3-2	1			110
BURC1 (BUT30)								11-2/8		110
BURC2	L	A03M1	I-01 *	I-01 *		K2-2	1			111
BURC2	L	F05M1	I-02 *	I-02 *		K3-2	1			111
BURC2								16-0/8		111
BURC2 (BUT30)	H	A06S1	I-01 *	I-01 *		K5-6	1			112
BURC2 (BUT30)	H	F05S2	I-02 *	I-02 *		K3-2	1			112
BURC2 (BUT30)								15-6/8		112

KD11A-F RUN NAME	HND288, V22(22) 11/06/73		3-JUL-74		23:55		PAGE 12			
	A/P	PIN NAME	ORDER PIN	BAY - ORDER	Q	DRAW RV PG Y X Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
BURC3	L	A03R1	I-01 *	I-01 *		K2-2	1			113
BURC3	L	E05T2	I-02 *	I-02 *		K3-2	1			113
BURC3								13-6/8		113
BURC4	L	A03D1	I-01 *	I-01 *		K2-3	1			114
BURC4	L	D05N2	I-02 *	I-02 *		K3-2	1			114
BURC4								12-0/8		114
BURC5	L	A03D2	I-01 *	I-01 *		K2-3	1			115
BURC5	L	D05F1	I-02 *	I-02 *		K3-2	1			115
BURC5								11-0/8		115
BURCO (BUT17-00)	L	A03K2	I-01 *	I-01 *		K2-2	1			116
BURCO (BUT17-00)	L	F05J1	I-02 *	I-02 *		K3-2	1			116
BURCO (BUT17-00)								10-0		116
BURCO (BUT37-00)	L	A03H1	I-01 *	I-01 *		K2-2	1			117
BURCO (BUT37-00)	L	E05R1	I-02 *	I-02 *		K3-2	1			117
BURCO (BUT37-00)								7-0		117
BURPU	H	C02M1	I-01 *	I-01 *		KE-789	2			118
BURPU	H	A03U2	I-02 *	I-02 *		K2-2	1			118
BURPU	H	C01K2	I-03 *	I-03 *		KF-4	2			118
BURPU	H	D08J2	I-04 *	I-04 *		KT-2	1			118
BURPU	H	E04U2	I-05 *	I-05 *		K1-9	2			118
BURPU	H	F01N2	I-06 *	I-06 *		KM-2	2			118
BURPU								33-2/8		118
BURP1	H	C02E1	I-01 *	I-01 *		KE-789	2			119
BURP1	H	A03S2	I-02 *	I-02 *		K2-2	1			119
BURP1	H	C01M1	I-03 *	I-03 *		KF-4	2			119
BURP1	H	D08H2	I-04 *	I-04 *		KT-2	1			119
BURP1	H	F04T2	I-05 *	I-05 *		K1-9	2			119
BURP1	H	F01D2	I-06 *	I-06 *		KM-2	2			119
BURP1								32-6/8		119
BURP2	H	B02S1	I-01 *	I-01 *		KE-789	2			120
BURP2	H	A03P2	I-02 *	I-02 *		K2-2	1			120
BURP2	H	C01L1	I-03 *	I-03 *		KF-4	2			120
BURP2	H	D08P2	I-04 *	I-04 *		KT-2	1			120
BURP2	H	E04M2	I-05 *	I-05 *		K1-9	2			120
BURP2	H	F01H2	I-06 *	I-06 *		KM-2	2			120
BURP2								32-2/8		120

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RUN NAME:

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LENGTH EXCEPTIONS RUN
NUMBER

A/P	PIN	NAME	ORDER	PIN	BAY	ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN
L	A08R2				1-01 *												
L	B09L1				1-02 *												135
L	D04A1				1-03 *												135
L	F03K2				1-04 *												135
L	E09P2				1-05 *												135
L	A08P1				1-01 *										27=2/8		136
L	B09M2				1-02 *												136
L	C04J1	E09N2			1-03 *												136
L	E09N2				1-04 *										3=3		136
L	F03L1				1-05 *												136
L	A08N2				1-01 *										27=7/8		137
L	B09M1				1-02 *												137
L	C04E2	E09R1			1-03 *												137
L	E09R1				1-04 *										3=1		137
L	F03M2				1-05 *												137
L	B09N2				1-01 *										26=7/8		137
L	B08D2				1-02 *												138
L	C04H1				1-03 *												138
L	F03A1				1-04 *												138
L	E09P1				1-05 *												138
L	B08C1				1-01 *										25=4/8		138
L	B09N1				1-02 *												139
L	C04L1				1-03 *												139
L	F03B1				1-04 *												139
L	E09L1				1-05 *												139
L	A04N2				1-01 *										25=0/8		139
L	A08U1				1-02 *												140
L	B09P2				1-03 *												140
L	E09C1				1-04 *												140
L	F03C1				1-05 *										24=6/8		140

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RUN NAME:

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LENGTH EXCEPTIONS RUN
NUMBER

A/P	PIN	NAME	ORDER	PIN	BAY	ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN
L	A04R2				1-01 *												
L	B08A1				1-02 *												141
L	B09P1				1-03 *										2=2		141
L	E09K2				1-04 *												141
L	F03D1				1-05 *												141
L	A04L2				1-01 *										25=3/8		141
L	B09R2				1-02 *												142
L	B08T2	E09K1			1-03 *												142
L	E09K1				1-04 *										2=7		142
L	F03E2				1-05 *												142
L	A04J2				1-01 *										25=3/8		142
L	B09R1				1-02 *												143
L	C08B1	E09D2			1-03 *												143
L	E09D2				1-04 *										3=2		143
L	F03F2				1-05 *												143
L	A04S1				1-01 *										25=5/8		143
L	B09S2				1-02 *												144
L	B08V2	E09E2			1-03 *										3=3		144
L	E09E2				1-04 *												144
L	F03H2				1-05 *										3=4		144
L	A04R1				1-01 *										26=6/8		144
L	B08P1				1-02 *												145
L	B09S1				1-03 *										3=1		145
L	E09D1				1-04 *												145
L	F03D2				1-05 *												145
L	B06D2				1-01 *										24=7/8		145
L	B06E2				1-02 *												146
L	B09F1				1-03 *												146
L	A09P2	C07M2			1-01 *										6=2/8		146
L	C07M2				1-02 *												147
L	F09D1				1-03 *										4=7		147
L	F03T2				1-04 *												147

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A/P	PIN	ORDER	PIN	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN
BUS D06	L	A09F1	1-01 *							2	SOURCE			164
BUS D06	L	B08J2	1-02 *		KT-8					2	SOURCE			164
BUS D06	L	C09V2	1-03 *		DD					1	SOURCE			164
BUS D06	L	D04R1	1-04 *		K1-39					1	SOURCE (K1-39)			164
BUS D06	L	F03P1	1-05 *		KW-2					2	SOURCE			164
BUS D06	L	F06C1	1-06 *		K5-2					1	SOURCE			164
BUS D06	L	F09F2	1-07 *		DD					1	SOURCE	34=4/8		164
BUS D07	L	A09H2	1-01 *							1	SOURCE			165
BUS D07	L	B08H2	1-02 *		KT-8					2	SOURCE			165
BUS D07	L	C09M2	1-03 *		DD					1	SOURCE			165
BUS D07	L	E04B1	1-04 *		K1-39					2	SOURCE (K1-39)			165
BUS D07	L	F03S1	1-05 *		KW-2					1	SOURCE			165
BUS D07	L	F06F2	1-06 *		K5-2					2	SOURCE			165
BUS D07	L	F09H1	1-07 *		DD					1	SOURCE	33=4/8		165
BUS D08	L	A09H1	1-01 *							1	SOURCE			166
BUS D08	L	C08D1	1-02 *		KT-9					2	SOURCE			166
BUS D08	L	C09L2	1-03 *		DD					1	SOURCE			166
BUS D08	L	C04P1	1-04 *		K1-49					2	SOURCE (K1-49)			166
BUS D08	L	E03E1	1-05 *		KJ-2					1	SOURCE			166
BUS D08	L	F09K1	1-06 *		DD					1	SOURCE			166
BUS D09	L	A09J2	1-01 *							2	SOURCE			167
BUS D09	L	B08P2	1-02 *		KT-9					1	SOURCE			167
BUS D09	L	C09K2	1-03 *		DD					2	SOURCE			167
BUS D09	L	C04R1	1-04 *		K1-49					1	SOURCE (K1-49)			167
BUS D09	L	E03F1	1-05 *		KJ-2					1	SOURCE			167
BUS D10	L	A09J1	1-01 *							2	SOURCE			168
BUS D10	L	B08M1	1-02 *		KT-9					1	SOURCE			168
BUS D10	L	C09J2	1-03 *		DD					2	SOURCE			168
BUS D10	L	C04N1	1-04 *		K1-49					1	SOURCE (K1-49)			168
BUS D10	L	E03J2	1-05 *		KJ-2					1	SOURCE			168
BUS D11	L	A09K2	1-01 *							2	SOURCE			169
BUS D11	L	B08R1	1-02 *		KT-9					1	SOURCE			169
BUS D11	L	C09H1	1-03 *		DD					2	SOURCE			169
BUS D11	L	C04H2	1-04 *		K1-49					1	SOURCE (K1-49)			169
BUS D11	L	E03H2	1-05 *		KJ-2					1	SOURCE			169

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A/P	PIN	ORDER	PIN	Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN
BUS D12	L	A09K1	1-01 *							2	SOURCE			170
BUS D12	L	B04B1	1-02 *		K1-59					1	SOURCE (K1-59)			170
BUS D12	L	C09H2	1-03 *		DD					2	SOURCE			170
BUS D12	L	C08P1	1-04 *		KT-29					1	SOURCE			170
BUS D12	L	E03P2	1-05 *		KJ-2					1	SOURCE			170
BUS D13	L	A09L2	1-01 *							2	SOURCE			171
BUS D13	L	B04E2	1-02 *		K1-59					1	SOURCE (K1-59)			171
BUS D13	L	C09F2	1-03 *		DD					2	SOURCE			171
BUS D13	L	C08H1	1-04 *		KT-29					1	SOURCE			171
BUS D13	L	E03K2	1-05 *		KJ-2					1	SOURCE			171
BUS D14	L	A09L1	1-01 *							2	SOURCE			172
BUS D14	L	B04C1	1-02 *		K1-59					1	SOURCE (K1-59)			172
BUS D14	L	C09E2	1-03 *		DD					2	SOURCE			172
BUS D14	L	C08C1	1-04 *		KT-29					1	SOURCE			172
BUS D14	L	E03S2	1-05 *		KJ-2					1	SOURCE			172
BUS D15	L	A09M2	1-01 *							2	SOURCE			173
BUS D15	L	B04E1	1-02 *		K1-59					1	SOURCE (K1-59)			173
BUS D15	L	C09D2	1-03 *		DD					2	SOURCE			173
BUS D15	L	C08E1	1-04 *		KT-29					1	SOURCE			173
BUS D15	L	E04R2	1-05 *		KJ-2					1	SOURCE			173
BUS DC L0	L	H06C1	1-01 *							1	SOURCE			174
BUS DC L0	L	B09F2	1-02 *		K5-8					1	SOURCE			174
BUS FM BA	H	A08S2	1-01 *							2	SOURCE			175
BUS FM BA	H	B07L2	1-02 *		KT-4					1	SOURCE			175
BUS FM BA	H	U04J2	1-03 *		K4-5					1	SOURCE			175
BUS FM D	H	B07N1	1-01 *							1	SOURCE			176
BUS FM D	H	F04V2	1-02 *		K4-5					1	SOURCE			176
BUS FM PS	L	B07J2	1-01 *							2	SOURCE			177
BUS FM PS	L	D08D1	1-02 *		KT-2					1	SOURCE			177
BUS FM PS	L	F06F1	1-03 *		K5-2					1	SOURCE			177

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RUN NAME

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A/P PIN ORDER BAY -
NAME ORDER PIN

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Q	U	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	PAGE	RUN
H	H	K1=9 K4=6				1	SOURCE	10=4/8		178	
L	L	K5=8 K4=5 DD KW=2				2 1 2 1	SOURCE			179 179 179 179	
L	L	K4=4				2	SOURCE	26=6/8		180	
L	L	DD KW=2				2	SOURCE	10=2		180	
L	L	K4=4				2	SOURCE	26=1/8		180	
L	L	DD KW=2				2	SOURCE	4=1		181	
L	L	K4=4				2	SOURCE	22=5/8		181	
H	H	K4=5				1	SOURCE			182	
L	L	K4=5 DD				2 1	SOURCE			182 183	
L	L	K4=3				1	SOURCE	17=6/8		183	
L	L	K4=3				1	SOURCE	3=2/8		184	
H	H	KT=2 K5=2				1	SOURCE	3=6/8		185	
L	L	K4=3				1	SOURCE	10=2/8		185	

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RUN NAME

HND288.V22(22) 11/06/73
A/P PIN ORDER BAY -
NAME ORDER PIN

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LENGTH EXCEPTIONS
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RUN NUMBER

Q	U	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	PAGE	RUN
L	L	KF=3 KE=3 K1=28 K5=2 KT=7				1 2 1 2	SOURCE	21=6/8		187	
L	L	KF=3 KE=3 K1=28 K5=2 KT=7				1 2 1 2	SOURCE			187 187 187 187	
L	L	KF=3				1	SOURCE	21=2/8		188	
L	L	KE=3 K1=28 K5=2 KT=7				2 1 2	SOURCE			188 188 188	
L	L	KF=3				1	SOURCE	23=0/8		188	
L	L	KE=3 K1=28 K5=2 KT=7				2 1 2	SOURCE			189 189 189	
L	L	KF=3				1	SOURCE	23=2/8		189	
L	L	KE=3 K1=28 K5=2 KT=7				2 1 2	SOURCE			190 190 190	
L	L	KF=3				1	SOURCE	25=4/8		191	
L	L	K1=38 KE=3 KT=7 K5=2				2 1 2 1	SOURCE			191 191 191 191	
L	L	KF=3				2	SOURCE	26=0/8		192	
L	L	K1=38 KE=3 K5=2 KT=7				1 2 1	SOURCE			192 192 192	

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RD11A.F RUN NAME	A/P PIN	HND288.V22(22) PIN	11/06/73 ORDER	BAY PTN	Q DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74 LENGTH	23:55 EXCEPTIONS	PAGE 23 RUN NUMBER
BUS RD05	L	A01E2	1-01 *			KF=3				2	SOURCE			193
BUS RD06	L	C04J2	1-02 *			K1=38				1	SOURCE (K1=8)			193
BUS RD06	L	F08B1	1-03 *			KT=7				2	SOURCE			193
BUS RD06	L	F06D2	1-04 *			K5=2				1	SOURCE			193
BUS RD06	L	F02H1	1-05 *			KE=3				1	SOURCE	27=2/8		193
BUS RD07	L	A01B1	1-01 *			KP=3				2	SOURCE			194
BUS RD07	L	C04M2	1-02 *			K1=38				1	SOURCE (K1=8)			194
BUS RD07	L	F02F2	1-03 *			KE=3				2	SOURCE			194
BUS RD07	L	F06E2	1-04 *			K5=2				1	SOURCE			194
BUS RD07	L	F08K2	1-05 *			KT=7				1	SOURCE	27=2/8		194
BUS RD08	L	C04B1	1-01 *			K1=48				2	SOURCE (K1=8)			195
BUS RD08	L	C01M2	1-02 *			KP=3				1	SOURCE			195
BUS RD08	L	F02S1	1-03 *			KP=3				2	SOURCE			195
BUS RD08	L	F08C1	1-04 *			KT=7				2	SOURCE			195
BUS RD09	L	C04A1	1-01 *			K1=48				2	SOURCE (K1=8)			196
BUS RD09	L	C01K1	1-02 *			KP=3				1	SOURCE			196
BUS RD09	L	F02R2	1-03 *			KE=3				2	SOURCE			196
BUS RD09	L	F08D1	1-04 *			KT=7				2	SOURCE	21=2/8		196
BUS RD10	L	B01V1	1-01 *			KP=3				2	SOURCE			197
BUS RD10	L	B04V1	1-02 *			K1=48				1	SOURCE (K1=8)			197
BUS RD10	L	E08R1	1-03 *			KT=7				2	SOURCE			197
BUS RD10	L	F02D1	1-04 *			KE=3				2	SOURCE	21=2/8		197
BUS RD11	L	B01N2	1-01 *			KP=3				2	SOURCE			198
BUS RD11	L	H04V2	1-02 *			K1=48				1	SOURCE (K1=8)			198
BUS RD11	L	F08H1	1-03 *			KT=7				2	SOURCE			198
BUS RD11	L	F02D2	1-04 *			KE=3				2	SOURCE	22=2/8		198
BUS RD12	L	A04D1	1-01 *			K1=58				2	SOURCE (K1=8)			199
BUS RD12	L	B01B1	1-02 *			KP=3				1	SOURCE			199
BUS RD12	L	F02R1	1-03 *			KE=3				2	SOURCE			199
BUS RD12	L	E08P1	1-04 *			KT=27				2	SOURCE (KT=27)	26=4/8		199

RD11A.F RUN NAME	A/P PIN	HND288.V22(22) PIN	11/06/73 ORDER	BAY PTN	Q DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74 LENGTH	23:55 EXCEPTIONS	PAGE 24 RUN NUMBER
BUS RD13	L	A04F1	1-01 *			K1=58				1	SOURCE (K1=8)			200
BUS RD13	L	A01S1	1-02 *			KP=3				2	SOURCE			200
BUS RD13	L	C08H2	1-03 *			KT=2				1	SOURCE			200
BUS RD13	L	F02S2	1-04 *			KE=3				1	SOURCE	25=2/8		200
BUS RD14	L	A01F1	1-01 *			KP=3				2	SOURCE			201
BUS RD14	L	A04C1	1-02 *			K1=58				1	SOURCE (K1=8)			201
BUS RD14	L	C08R2	1-03 *			KT=2				2	SOURCE			201
BUS RD14	L	F02V2	1-04 *			KE=3				2	SOURCE	26=0/8		201
BUS RD15	L	A01A1	1-01 *			KP=3				2	SOURCE			202
BUS RD15	L	A04A1	1-02 *			K1=58				1	SOURCE (K1=8)			202
BUS RD15	L	C08S2	1-03 *			KT=2				2	SOURCE			202
BUS RD15	L	F02V1	1-04 *			KE=3				2	SOURCE	26=0/8		202
BUS REQUEST	L	D09J2	1-01 *			DD				1	SOURCE			203
BUS REQUEST	L	F09P1	1-02 *			DD				2	SOURCE			203
BUS REQUEST	L	F09U2	1-03 *			DD				1	SOURCE	11=4/8		203
BUS SACK	L	A09R2	1-01 *			K4=5				2	SOURCE			204
BUS SACK	L	C07L2	1-02 *			DD				1	SOURCE			204
BUS SACK	L	F09T2	1-03 *			KW=2				2	SOURCE	24=4/8		204
BUS SACK	L	F03S2	1-04 *							1	SOURCE			204
BUS SSSYN	L	A07D2	1-01 *			K4=4				2	SOURCE			205
BUS SSSYN	L	B09U1	1-02 *			KT=6				1	SOURCE			205
BUS SSSYN	L	E08C1	1-03 *			DD				2	SOURCE			205
BUS SSSYN	L	E09J1	1-04 *			DD				1	SOURCE			205
BUS SSSYN	L	F09C1	1-05 *			DD				2	SOURCE			205
BUS SSSYN	L	F03N2	1-06 *			KW=2				1	SOURCE	28=6/8		205
BUS STOP	H	F07K1				K4=34				1	SOURCE (K4=4)			206
BUT (37:14)	L	E05L1				K3=2					SOURCE		1-PIN RUN	207
BUT (3X)	L	C06D1	1-01 *			K5=36				1	SOURCE			208
BUT (3X)	L	D05J1	1-02 *			K3=2					SOURCE	5=6/8		208
BUT 02	H	C06E1				K5=38					SOURCE (K5=3)		1-PIN RUN	209

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RUN NAME

A/P PIN ORDER BAY - ORDER
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Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	PAGE	RUN
H	R06V1	K5=3			1		SOURCE	4=6/8		210	
H	C08N2	KT=9								210	
H	C06A1	K5=3			2		SOURCE			211	
H	C08J1	KT=9			1					211	
H	D07K1	K4=5								211	
H	A07P1	K4=4			1					212	
H	C06B1	K5=3			2		SOURCE			212	
H	C02V2	KE=5								212	
H	E06A1	K5=2			1		SOURCE			213	
H	F05T2	K3=7								213	
H	C07R1	K4=4			1		SOURCE (K3=6)			214	
H	D05H1	K3=2678								214	
H	B05F1	K3=9			1		SOURCE			215	
H	E06K1	K5=2								215	
H	B07D2	K4=4			1		SOURCE			216	
H	D06S1	K5=4			2					216	
H	D03P2	K2=7								216	
H	B07H2	K4=4			2					217	
H	C06E2	K5=4			1		SOURCE			217	
H	D03K1	K2=7								217	
H	D08P1	K1=7					SOURCE			217	
H	C07F1	K4=5			1		SOURCE			219	
H	F05E2	K3=7								219	
H	B05J2	K3=6			1		SOURCE			220	
H	D06R1	K5=2								220	

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RUN NAME

A/P PIN ORDER BAY - ORDER
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RUN NUMBER

Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	PAGE	RUN
L	A05P1	K3=8			1		SOURCE	13=2/8		221	
L	E04S2	K1=2								221	
H	A07T2	K4=4			1					222	
H	F08V2	KT=3								222	
H	A07R2	K4=4			2		SOURCE			223	
H	C04D1	K1=7			1					223	
H	E03U2	KJ=2								223	
H	B03P2	K2=23			1		SOURCE			224	
H	D07V2	K4=2								224	
H	E04D2	K1=2345			1		SOURCE			225	
H	E07H2	K4=2								225	
H	D03J1	K2=7			1		SOURCE			226	
H	E07L2	K4=2								226	
H	A04H2	K1=6			1		SOURCE (K4=2)			227	
H	E07H1	K4=24								227	
H	B08U1	KT=9			2					228	
H	D03U1	K2=7			1		SOURCE			228	
H	E07J1	K4=2								228	
H	A07K2	K4=4			1		SOURCE			229	
H	D06P2	K5=4								229	
H	D08H1	KT=3			1		SOURCE (K4=2)			230	
H	E07K1	K4=245								230	
H	B04L2	K1=2345			1					231	
H	E06N2	K5=2			2		SOURCE			231	
H	E07N2	K4=2								231	

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RUN NAME:

HND288.V22(22) 11/06/73

Q DRAW RV PG Y X Z REMARKS

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LENGTH EXCEPTIONS

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RUN NUMBER

A/P	PIN NAME	ORDER PIN	BAY ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	LENGTH	EXCEPTIONS	23:55	PAGE 27	RUN NUMBER
H	A01K2		1-01 *		KF=4					1							232
H	D03K2		1-02 *		K2=7					2	SOURCE						232
H	E07P2		1-03 *		K4=2							17=0/8					232
H	B02S2				KE=5						SOURCE				1=PIN RUN		233
H	A01D2		1-01 *		KF=4					1							234
H	D02N1		1-02 *		KE=5						SOURCE						234
H	C02L2				KE=6										1=PIN RUN		234
H	C01U2		1-01 *		KF=4					1							235
H	C02N2		1-02 *		KE=457						SOURCE (KE=5)						236
H	B05J1		1-01 *		K3=3					2							237
H	D07C1		1-02 *		K4=25					1	SOURCE						237
H	F08R2		1-03 *		KT=78							16=4/8					237
H	E08M1		1-01 *		KT=56					1							237
H	F07L2		1-02 *		K4=34						SOURCE (K4=4)						238
H	C07C1				K4=5						SOURCE				1=PIN RUN		239
H	C07P1				K4=5						SOURCE				1=PIN RUN		240
H	C03F1		1-01 *		K2=4					1							241
H	D07T2		1-02 *		K4=2						SOURCE						241
H	C03K1		1-01 *		K2=5678					1							242
H	D08K1		1-02 *		KT=2					2							242
H	D07U2		1-03 *		K4=2						SOURCE						242
H	D03T2		1-01 *		K2=8					1	SOURCE						243
H	E07P1		1-02 *		K4=2					2							243
H	F08K1		1-03 *		KT=7												243
H	D03M2		1-01 *		K2=8					1	SOURCE						244
H	E07A1		1-02 *		K4=2							4=6/8					244

3M Corporation
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RUN NAME:

HND288.V22(22) 11/06/73

Q DRAW RV PG Y X Z REMARKS

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A/P	PIN NAME	ORDER PIN	BAY ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	LENGTH	EXCEPTIONS	23:55	PAGE 28	RUN NUMBER
H	D03N2		1-01 *		K2=8					1	SOURCE						245
H	D07U1		1-02 *		K4=2							4=2/8					245
H	D03R1		1-01 *		K2=8					1	SOURCE						246
H	F07H1		1-02 *		K4=2							7=4/8					246
H	D03L2		1-01 *		K2=8					1	SOURCE						247
H	E07M1		1-02 *		K4=2							5=6/8					247
H	D03U2		1-01 *		K5=8					1	SOURCE						248
H	F07J1		1-02 *		K4=2							7=2/8					248
L	C06U1				K5=4						SOURCE				1=PIN RUN		249
L	B05H2				K3=3						SOURCE				1=PIN RUN		250
L	D07H1				K4=56						SOURCE (K4=5)				1=PIN RUN		251
L	B03U1				K2=23						SOURCE (K2=2)				1=PIN RUN		252
L	C03H1				K2=4						SOURCE				1=PIN RUN		253
L	A03F2		1-01 *		K2=2					1							254
L	F07S2		1-02 *		K4=3						SOURCE				10=6		254
L	A03H2		1-01 *		K2=2					1					18=1/8		254
L	F07H2		1-02 *		K4=3						SOURCE						255
L	B03K1		1-01 *		K2=23					1							255
L	F07C1		1-02 *		K4=3						SOURCE						255
L	A03P1		1-01 *		K2=3					1							256
L	F07D2		1-02 *		K4=3						SOURCE				13=6/8		256
L	A03P1		1-01 *		K2=3					1							257
L	F07D2		1-02 *		K4=3						SOURCE				13=0/8		257
L	A03P1		1-01 *		K2=3					1							258
L	F07D2		1-02 *		K4=3						SOURCE				15=4/8		258

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RUN NAME:	A/P PIN ORDER PIN	Q DRAW RV PG Y X Z	REMARKS	LENGTH EXCEPTIONS	RUN NUMBER
DR05 (1)	H A01N1	1-01 *	KF-3		316
DR05 (1)	H E02R1	1-02 *	KE-23	SOURCE (KE-2)	316
DR05 (1)				13-2/8	316
DR06 (1)	H A01F2	1-01 *	KF-3		317
DR06 (1)	H E02R2	1-02 *	KE-23	SOURCE (KE-2)	317
DR06 (1)				14-0/8	317
DR07 (1)	H E02P1		KE-23	SOURCE (KE-2)	318
DR08 (1)	H A01P2	1-01 *	KF-4		319
DR08 (1)	H E02V1	1-02 *	KE-23	SOURCE (KE-2)	319
DR08 (1)				13-6/8	319
DR09 (1)	H A01R2	1-01 *	KF-4		320
DR09 (1)	H E01D2	1-02 *	KM-2		320
DR09 (1)	H F02J1	1-03 *	KE-23	SOURCE (KE-2)	320
DR09 (1)				17-2/8	320
DR10 (1)	H F02H2		KE-23	SOURCE (KE-2)	321
DR11 (1)	H E02T2		KE-23	SOURCE (KE-2)	322
DR12 (1)	H E02P2		KE-23	SOURCE (KE-2)	323
DR13 (1)	H E02S1		KE-23	SOURCE (KE-2)	324
DR14 (1)	H E02N1		KE-23	SOURCE (KE-2)	325
DR15 (1)	H G02F1		KE-2345	SOURCE (KE-2)	326
DUBERR	L B06U2	1-01 *	K5-4		327
DUBERR	L E07T2	1-02 *	K4-3		327
DUBERR				10-2/8	327
E(P1+P2)	H A01H2	1-01 *	KF-2		328
E(P1+P2)	H E02S2	1-02 *	KE-25	SOURCE (KE-5)	328
E(P1+P2)				14-0/8	328
ECIN00	H A05S2	1-01 *	K3-8		329
ECIN00	H B02F2	1-02 *	KE-5		329
ECIN00	H E01M2	1-03 *	KM-2		329
ECIN00				15-4/8	329
ECLK U	L C02M2	1-01 *	KE-5		330
ECLK U	L D07S1	1-02 *	K4-		330
ECLK U				6-4/8	330

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RUN NAME:	A/P PIN ORDER PIN	Q DRAW RV PG Y X Z	REMARKS	LENGTH EXCEPTIONS	RUN NUMBER
ECOMUXS0	L D02H2	1-01 *	KE-5		331
ECOMUXS0	L D05C1	1-02 *	K3-8	SOURCE	331
ECOMUXS0				3-6/8	331
ECOMUXS1	L D02F2	1-01 *	KE-5		332
ECOMUXS1	L D05E1	1-02 *	K3-8	SOURCE	332
ECOMUXS1				3-4/8	332
EMT	L B06R1	1-01 *	K5-5		333
EMT	L E05F1	1-02 *	K3-6	SOURCE	333
EMT				9-2/8	333
ENPR CLK	L A02M2	1-01 *	KE-9		334
ENPR CLK	L D07E1	1-02 *	K4-5	SOURCE	334
ENPR CLK				10-4/8	334
EOVFL STOP	H B07F2	1-01 *	K4-4		335
EOVFL STOP	H E03F2	1-02 *	KJ-2	SOURCE	335
EOVFL STOP				11-0/8	335
EOVFLW	L D06R2	1-01 *	K5-4		336
EOVFLW	L E03T2	1-02 *	KJ-2	SOURCE	336
EOVFLW				5-6/8	336
EPS(C) (1)	H C01J1	1-01 *	KF-2		337
EPS(C) (1)	H D02V1	1-02 *	KE-356	SOURCE (KE-6)	337
EPS(C) (1)	H E01R2	1-03 *	KM-2		337
EPS(C) (1)				11-0/8	337
EPS(N) (1)	H A01D1	1-01 *	KF-3		338
EPS(N) (1)	H C02K2	1-02 *	KE-346	SOURCE (KE-6)	338
EPS(N) (1)	H E01L2	1-03 *	KM-2		338
EPS(N) (1)				16-4/8	338
EPS(V) (1)	H C02L1	1-01 *	KE-36		339
EPS(V) (1)	H E01E2	1-02 *	KM-2	SOURCE (KE-6)	339
EPS(V) (1)				7-2/8	339
EPS(Z) (0)	H A01M2	1-01 *	KF-4		340
EPS(Z) (0)	H D02J2	1-02 *	KE-6	SOURCE	340
EPS(Z) (0)				10-2/8	340
EPS(Z) (1)	H D02F1	1-01 *	KE-3		341
EPS(Z) (1)	H E01H1	1-02 *	KM-2		341
EPS(Z) (1)				5-2/8	341

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Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	LENGTH	EXCEPTIONS	PAGE 37	RUN
												NUMBER
ESALU0	L	A02C1				1=01 *	KE=5					342
ESALU0	L	A05W2				1=02 *	K3=8					342
ESALU0	L	A05W2							4=6/8			342
ESALU1	L	A05L2				1=01 *	K3=8					343
ESALU1	L	B02E2				1=02 *	KE=5					343
ESALU1	L	B02E2							5=2/8			343
ESALU2	L	A02F1				1=01 *	KE=5					344
ESALU2	L	A05M2				1=02 *	K3=8					344
ESALU2	L	A05M2							4=2/8			344
ESALU3	L	A02D1				1=01 *	KE=5					345
ESALU3	L	A05K2				1=02 *	K3=8					345
ESALU3	L	A05K2							4=2/8			345
ESALUM	H	B05M2					K3=8					346
EUBC1	L	A03L1				1=01 *	K2=2			1-PIN RUN		347
EUBC1	L	B02F1				1=02 *	KE=4					347
EUBC1	L	B02F1							4=6/8			347
EUBC2	L	A02S2				1=01 *	KE=4					348
EUBC2	L	A03N1				1=02 *	K2=2					348
EUBC2	L	A03N1							3=0/8			348
EUBC3	L	A03S1				1=01 *	K2=2					349
EUBC3	L	C02B1				1=02 *	KE=4					349
EUBC3	L	C02B1							6=2/8			349
EUBC4	L	A03C1				1=01 *	K2=3					350
EUBC4	L	B02T2				1=02 *	KE=4					350
EUBC4	L	B02T2							6=6/8			350
EUBC5	L	B03D2				1=01 *	K2=3					351
EUBC5	L	C01F2				1=02 *	KF=42					351
EUBC5	L	C01F2							5=4/8			351
EUBC6	L	B03R1					K2=3			1-PIN RUN		352
EUBC7	L	A03B1					K2=3					353
EUBCH	L	A03U1				1=01 *	K2=3			1-PIN RUN		354
EUBCH	L	B02R1				1=02 *	KE=5					354
EUBCH	L	B02R1							5=0/8			354

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Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	LENGTH	EXCEPTIONS	PAGE 38	RUN
												NUMBER
EUBF0 (1)	H	A01T2				1=01 *	KF=4					355
EUBF0 (1)	H	B02L1				1=02 *	KE=457					355
EUBF0 (1)	H	B02L1							4=4/8			355
EUBF1 (1)	H	A01U2				1=01 *	KF=4					356
EUBF1 (1)	H	B02D1				1=02 *	KE=457					356
EUBF1 (1)	H	B02D1							3=6/8			356
EUBF2 (1)	H	A01V2				1=01 *	KF=4					357
EUBF2 (1)	H	A02N1				1=02 *	KE=47					357
EUBF2 (1)	H	A02N1							3=2/8			357
EUBF3 (1)	H	C02E2					KE=7			1-PIN RUN		358
EUBF4 (0)	H	D01D2				1=01 *	KF=4					359
EUBF4 (0)	H	D02B1				1=02 *	KE=4					359
EUBF4 (0)	H	D02B1							2=6/8			359
EUPPB	H	D02S2					KE=35			1-PIN RUN		360
EXT P CLR TRAP	L	B02D2				1=01 *	KE=5					361
EXT P CLR TRAP	L	B06F2				1=02 *	K5=4					361
EXT P CLR TRAP	L	B06F2							4=4/8			361
FALSE HR	L	D05M1				1=01 *	K3=5					362
FALSE HR	L	F06N1				1=02 *	K5=3					362
FALSE HR	L	F06N1							8=0/8			362
FAULT	H	A07H2				1=01 *	K4=4					363
FAULT	H	C08S1				1=02 *	KT=3					363
FAULT	H	C08S1							8=6/8			363
FAULT	L	C08R1				1=01 *	KT=3					364
FAULT	L	F05M2				1=02 *	K3=2					364
FAULT	L	F05M2							10=4/8			364
FAUX ALU	H	A02B1				1=01 *	KE=5					365
FAUX ALU	H	D01P1				1=02 *	KF=4					365
FAUX ALU	H	D01P1							12=0/8			365
FCIBUS (1)	H	B02A1				1=01 *	KE=9					366
FCIBUS (1)	H	D01M2				1=02 *	KF=4					366
FCIBUS (1)	H	D01M2							9=0/8			366
FDIV	H	C02F2				1=01 *	KE=2					367
FDIV	H	D01L2				1=02 *	KF=4					367
FDIV	H	D01L2							5=6/8			367

Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
H	B01E2	KF=2					SOURCE		1-PIN RUN	393
H	B01D2	KF=2					SOURCE		1-PIN RUN	394
L	A01H1	KF=2				1	SOURCE			395
L	C02A1	KE=2				1	SOURCE	7=0/8		395
H	B01E1	KF=2					SOURCE		1-PIN RUN	396
L	A06M2	K5=7				1	SOURCE (K4=2)			397
L	D07J2	K4=24					SOURCE	10=2/8		397
L	C06H1	K5=5				1	SOURCE			398
L	F05R1	K3=6					SOURCE	11=4/8		398
H	D09H1	DD				1	SOURCE			399
H	E09M1	DD					SOURCE			399
L	D02F2	KE=5				2	SOURCE			400
L	D06K1	KT=2				1	SOURCE			400
L	E08R2						SOURCE	10=2/8		400
L	C08M2	KT=2				1	SOURCE			401
L	D06J1						SOURCE	5=2/8		401
H	B06F1	K5=468				1	SOURCE (K5=8)			402
H	D07R2	K4=35					SOURCE			402
H	A06V2	K5=8					SOURCE	9=0/8		402
L	B06A1	K5=2468					SOURCE		1-PIN RUN	403
L	A04K1	K4=3				2	SOURCE			405
L	A06T2	K5=8				1	SOURCE	7=2		405
L	F07F1	K4=4					SOURCE	19=1/8		405
H	B07J1	K4=4				1	SOURCE			406
H	C06K1	K5=4					SOURCE	5=2/8		406

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Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
H	D09N1	DD				1	SOURCE			407
H	F09U1	DD					SOURCE	8=2/8		407
H	C09J1	DD				1	SOURCE			408
H	F09K2	DD					SOURCE	10=4/8		408
H	D09M1	DD				1	SOURCE			409
H	F09V1	DD					SOURCE	8=4/8		409
H	C09L1	DD				1	SOURCE			410
H	F09H2	DD					SOURCE	10=0/8		410
L	C06H2	K5=5				1	SOURCE			411
L	D05K2	K3=6					SOURCE	5=4/8		411
L	E05M2	K3=4				1	SOURCE			412
L	E08L1	KT=9					SOURCE	3=6/8		412
L	C01C1	KF=4				1	SOURCE			413
L	D05E2	K3=3					SOURCE	6=2/8		413
L	D05F2	K3=3				1	SOURCE			414
L	E08H1	KT=9					SOURCE	5=4/8		414
L	A05U2	K3=356				1	SOURCE			415
L	D06V2	K5=3					SOURCE	10=6/8		415
H	B05E2	K3=6				1	SOURCE			416
H	C02H1	KE=4					SOURCE	5=6/8		416
H	F04M1	K1=8				2	SOURCE			417
H	F05N1	K3=34				1	SOURCE			417
H	F08L2	KT=7					SOURCE	7=2/8		417
H						1				417

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Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	LENGTH	EXCEPTIONS	PAGE 45	RUN	NUMBER
HND288.V22(22) 11/06/73													
IR01 (1)	H	F04F2											
IR01 (1)	H	F05E1	K1=8			1							418
IR01 (1)	H	F08E1	K3=346			2	SOURCE						418
IR01 (1)	H		KT=7					6=2/8					418
IR02 (1)	H	F04C1	K1=8			2							419
IR02 (1)	H	F05D1	K3=34			1	SOURCE						419
IR02 (1)	H	F08E2	KT=7					7=0/8					419
IR03 (1)	H	C02J2	KE=4			1							420
IR03 (1)	H	C05S1	K3=235			2	SOURCE (K3=3)						420
IR03 (1)	H	D01K2	KF=4			1							420
IR03 (1)	H	F08H2	KT=7										420
IR04 (1)	H	H02J2	KE=4			1							421
IR04 (1)	H	D01J2	KF=4			2							421
IR04 (1)	H	E05H1	K3=2356			1	SOURCE (K3=3)						421
IR04 (1)	H	F08M2	KT=7					17=4/8					421
IR05 (1)	H	B02J1	KE=4			1							422
IR05 (1)	H	D01K1	KF=4			2							422
IR05 (1)	H	E05K1	K3=2356			1	SOURCE (K3=3)						422
IR05 (1)	H	F08J1	KT=7					19=4/8					422
IR06 (1)	H	D05R1	K3=3456			1	SOURCE (K3=3)						423
IR06 (1)	H	F04N1	K1=8			2							423
IR06 (1)	H	F08N1	KT=7										423
IR07 (1)	H	D05M2	K3=3456			1	SOURCE (K3=3)						424
IR07 (1)	H	F04H2	K1=8			2							424
IR07 (1)	H	F08M1	KT=7										424
IR08 (1)	H	C05K1	K3=3456			2	SOURCE (K3=3)						425
IR08 (1)	H	D06T2	K5=3			1							425
IR08 (1)	H	F04D1	K1=8			2							425
IR08 (1)	H	F08S2	KT=7					11=6/8					425
IR08 (1)	H												425

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Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	LENGTH	EXCEPTIONS	PAGE 46	RUN	NUMBER
HND288.V22(22) 11/06/73													
IR09 (1)	H	B02L2	KE=4			2							426
IR09 (1)	H	C05L1	K3=345			1	SOURCE (K3=3)						426
IR09 (1)	H	F08L1	KT=7					16=4/8					426
IR10 (1)	H	A02N2	KE=4			2							427
IR10 (1)	H	C05C1	K3=345			1	SOURCE (K3=3)						427
IR10 (1)	H	F08T2	KT=7					19=6/8					427
IR11 (1)	H	A02T2	KE=4			2							428
IR11 (1)	H	C05B1	K3=345			1	SOURCE (K3=3)						428
IR11 (1)	H	F08U2	KT=7					19=4/8					428
IR12 (1)	H	B05S1	K3=34			1	SOURCE (K3=3) 6=4						429
IR12 (1)	H	F08W2	KT=7					13=5/8					429
IR13 (1)	H	B05L1	K3=34			1	SOURCE (K3=3)						430
IR13 (1)	H	F08P2	KT=7					14=0/8					430
IR14 (1)	H	B05K1	K3=34			1	SOURCE (K3=3)						431
IR14 (1)	H	F08V2	KT=7					12=0/8					431
IR15	H	B05R2	K3=2479			1	SOURCE (K3=4)						432
IR15	H	D06L1	K5=3					7=2/8					432
IR15	L	A05B1	K3=469			1	SOURCE (K3=4)						433
IR15	L	C02H2	KE=4			2							433
IR15	L	D06M2	K5=3					15=2/8					433
IR15 (1)	H	C05M1	K3=345				SOURCE (K3=3)						434
IR=075XXX	L	A02U2	KE=4			1	SOURCE						435
IR=075XXX	L	D01L1	KF=4					9=6/8					435
IR=075XXX	H	E07B1	K4=23				SOURCE (K4=3)						436
JAM CLK	H	C06T2	K5=4			1							437
JAMUPP	H	F07A1	K4=23				SOURCE (K4=3)						437

Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
L	D03S2	A03V1	1=01 *	1						438
L	A03V1		1=02 *							438
L	C06L1		1=03 *							438
L	F07E1		1=04 *				SOURCE			438
H	F07L1							27=2/8		438
H	B06T2		1=01 *							439
H	F07T2		1=02 *							440
L	D05B1		1=01 *							441
L	E08N1		1=02 *							441
L	B06B2		1=01 *							442
L	C08K1		1=02 *							442
L	A06B2		1=01 *							443
L	C08L2		1=02 *							443
L	B05K2		1=01 *							444
L	D06P1		1=02 *							444
L	F03R1	C09D1	1=01 *	1						445
L	C09D1		1=02 *							445
L	F01U1		1=01 *							446
L	F01V2		1=02 *							446
L	C06S2	E07N1	1=01 *							447
L	E07N1		1=02 *							447
L	F01V2		1=03 *							447
L	D06V1		1=01 *							448
L	D08C1		1=02 *							448
H	E08U2									449

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Q	DRAW	RV	PG	Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	RUN NUMBER
H	E04U1		1=01 *	1						450
H	E08A1		1=02 *							450
L	A02L2		1=01 *							451
L	D01N2		1=02 *							451
H	A02F2		1=01 *							452
H	D01P2		1=02 *							452
H	E01H2		1=03 *							452
H	B01K2		1=01 *							453
H	E01J2		1=02 *							453
H	B07D1		1=01 *							454
H	E08P2		1=02 *							454
H	E08N2		1=03 *							454
L	A07B1									455
H	A07K1									456
H	E08T2									457
L	C02D1									458
L	B07D1		1=01 *							459
L	E06S1		1=02 *							459
L	E07S1		1=01 *							460
L	F01B2		1=02 *							460
L	A07C1		1=01 *							461
L	D08R2		1=02 *							461
H	C06D2		1=01 *							462
H	D07S2		1=02 *							462

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RUN NAME:

A/P PIN NAME HND288.V22(22) 11/06/73
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LENGTH RUN NUMBER

DESCRIPTION	A/P	PIN NAME	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	23:55	EXCEPTIONS	PAGE 49
											LENGTH			RUN NUMBER
NOSAC (1)	H	D07P2												
NPR (0)	H	D07B1												
ODA ERR	L	C06C1												
ODA ERR	L	E07D2												
OUT HIGH	H	D09K1												
OUT HIGH	H	E09M2												
OUT LOW	H	D09D1												
OUT LOW	H	E09N1												
OVFL	H	A02Y2												
OVFL	H	D01H2												
OVFL	H	E01E1												
OVFLW ERR	L	B06M1												
OVFLW ERR	L	E07S2												
OVFLW INH	L	E03B2												
OVLAP (1)	H	C06S1												
OVLAP (1)	H	D07D1												
OVLAP (1)	H	E05D1												
OVLAP (1)	H	F07J2												
OVLAP CYCLE	L	A07N1												
OVLAP CYCLE	L	C05P1												
OVLAP INSTR	H	C05R1												
OVLAP INSTR	H	D06E2												
OVLAP INSTR	H	C06R2												
P BUT 37	H	B03B1												
P CLK UPP8	H	C02V1												
P CLK UPP8	H	C02V1												
P CLK UPP8	H	C02V1												

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KD11A.F
RUN NAME:

A/P PIN NAME HND288.V22(22) 11/06/73
ORDER BAY -
PIN ORDER

Q DRAW RV PG Y X Z REMARKS 3-JUL-74 23:55 EXCEPTIONS PAGE 50
LENGTH RUN NUMBER

DESCRIPTION	A/P	PIN NAME	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74	23:55	EXCEPTIONS	PAGE 50
											LENGTH			RUN NUMBER
P CLR MSYN	L	B07K2												
P CLR MSYN	L	D08V1												
P CLR MSYN	H	C02R1												
P END	H	D07P1												
P END	H	E04F2												
P END	H	E04F2												
P ENDRESET	L	B06J1												
P ENDRESET	L	F07N1												
P ENDRESET	L	F07N2												
P ESTART	H	D07L1												
P JANSTART	L	F07B1												
P JANSTART	L	E04E2												
P MATCH	L	D07K2												
P MSYN	L	C07J1												
P NO SACK	H	A01J2												
P1	H	B02V2												
P1	H	D06D2												
P1	H	E07L1												
P1	H	B02V1												
P2	H	C06J2												
P2	H	E07R2												
P2	H	B07B1												
P2	H	D08U1												
P2	H	D08U1												
P3	H	C02C1												
P3	H	C06M2												
P3	H	E07F1												
P3	H	E07F1												
PART GRANT BR	H	C07L1												

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RUN NAME	PIN NAME	ORDER PIN	HAY - ORDER	Q	DRAW RV PG Y	X	Z	REMARKS	LENGTH EXCEPTIONS	RUN NUMBER
PART P END	H A06P2		1-01 *		K5-6		1			489
PART P END	H C02U2		1-02 *		KE-5		2	SOURCE		489
PART P END	H D07R1		1-03 *		K4-2				14-6/8	489
PASTA (1)	H A05V2		1-01 *		K3-9		1	SOURCE		490
PASTA (1)	H E06P1		1-02 *		K5-2				12-2/8	490
PASTB	H A05R1		1-01 *		K3-9		1	SOURCE		491
PASTB	H E06K2		1-02 *		K5-2				12-4/8	491
PASTC (0)	H A05A1		1-01 *		K3-9		1	SOURCE		492
PASTC (0)	H E06N1		1-02 *		K5-2				12-4/8	492
PBA06	H A08R1		1-01 *		KT-4		1	SOURCE		493
PBA06	H E08E2		1-02 *		KT-6		2			493
PBA06	H E01R1		1-03 *		KM-2				18-2/8	493
PBA07	H A08P2		1-01 *	1	KT-4		1	SOURCE		494
PBA07	H E08L2		1-02 *		KT-6		2		6-2	494
PBA07	H E01K1		1-03 *		KM-2				19-3/8	494
PBA08	H A08N1		1-01 *	1	KT-4		1	SOURCE		495
PBA08	H E08D2		1-02 *		KT-6		2		5-7	495
PBA08	H E01S2		1-03 *		KM-2				18-7/8	495
PBA09	H A08M2		1-01 *	1	KT-4		1	SOURCE		496
PBA09	H D08V2		1-02 *		KT-6		2		5-4	496
PBA09	H E01P1		1-03 *		KM-2				18-5/8	496
PBA10	H B08B1		1-01 *		KT-4		1	SOURCE		497
PBA10	H E01L1		1-02 *		KM-2				12-4/8	497
PBA11	H A08V2		1-01 *		KT-4		1	SOURCE		498
PBA11	H D08U2		1-02 *		KT-6		2			498
PBA11	H E01F1		1-03 *		KM-2				16-6/8	498

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RUN NAME	PIN NAME	ORDER PIN	HAY - ORDER	Q	DRAW RV PG Y	X	Z	REMARKS	LENGTH EXCEPTIONS	RUN NUMBER
PBA12	H A08T2		1-01 *		KT-4		1	SOURCE		499
PBA12	H E01J1		1-02 *		KM-2				13-4/8	499
PBA13	H A08U2		1-01 *		KT-4		1	SOURCE		500
PBA13	H E01C1		1-02 *		KM-2				12-6/8	500
PBA14	H B08S1		1-01 *		KT-4		1	SOURCE		501
PBA14	H E01T2		1-02 *		KM-2				11-4/8	501
PBA15	H C08A1		1-01 *		KT-4		1	SOURCE		502
PBA15	H E01K2		1-02 *		KM-2				10-0/8	502
PBA16	H B08U2		1-01 *		KT-4		1	SOURCE		503
PBA16	H E01N1		1-02 *		KM-2				11-0/8	503
PBA17	H B08S2		1-01 *		KT-4		1	SOURCE		504
PBA17	H E01V1		1-02 *		KM-2				12-0/8	504
PERIF RELEASE	H D07A1				K4-25			SOURCE (K4-5)		505
PERR (0)	H B07U1		1-01 *		K4-3		1	SOURCE		506
PERR (0)	H F06V1		1-02 *		K5-5				13-2/8	506
PRIV INSTR	L E05M1		1-01 *		K3-6		1	SOURCE		507
PRIV INSTR	L F08P1		1-02 *		KT-7				6-0/8	507
PROC RELEASE	L A07N2				K4-45			SOURCE (K4-5)		508
PROC RESPOND	H A07S1				K4-6			SOURCE		509
PS ADDR	H A07P2		1-01 *		K4-6		1			510
PS ADDR	H D06S2		1-02 *		K5-2		2			510
PS ADDR	H F04D1		1-03 *		K1-7		1	SOURCE		510
PS ADDR	H E08F2		1-04 *		KT-6		2	SOURCE		510
PS ADDR	H E05V2		1-05 *		K3-7				24-0/8	510

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RUN NAME

A/P PIN NAME HND288,V22(22) 11/06/73
ORDER BAY -
ORDER PIN ORDER

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LENGTH EXCEPTIONS RUN
NUMBER

A/P	PIN NAME	HND288,V22(22) 11/06/73	Q	DRAW RV PG Y X Z	REMARKS	3-JUL-74	23:55	PAGE 57
ORDER	ORDER	ORDER				LENGTH	EXCEPTIONS	RUN
	PIN	PIN						NUMBER
H	A05E2			K3=8				
H	C03U2			K2=6	1	9-4/8		557
								557
								557
H	A05F1			K3=8	1			558
H	C03T2			K2=6	1	9-2/8		558
								558
H	A05E1			K3=8	1			559
H	C03P2			K2=6	1	9-0/8		559
								559
H	A05D2			K3=8	1			560
H	C03N2			K2=6	1	9-0/8		560
								560
H	A05N1			K3=8	1			561
H	D03E1			K2=6	1	10=0/8		561
								561
H	A04J1			K1-2345	1			562
H	C03J2			K2=5	1	7=6/8		562
								562
H	D03D1			K2=6	1			563
H	E06J1			K5=5	1	6=0/8		563
								563
H	C03R2			K2=6	1			564
H	F06R2			K5=5	1	11=0/8		564
								564
H	C03U1			K2=6	1			565
H	C06R1			K5=5	1	4=2/8		565
								565
H	C0382			K2=6	1			566
H	F0652			K5=5	1	11=0/8		566
								566
L	F06U1			K5=5	1			567
L	C08V1			KT=9	1	10=6/8		567
								567
L	E06V1			K5=5	1			568
L	E08J1			KT=9	1	4=0/8		568
								568

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RUN NAME

A/P PIN NAME HND288,V22(22) 11/06/73
ORDER BAY -
ORDER PIN ORDER

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LENGTH EXCEPTIONS RUN
NUMBER

A/P	PIN NAME	HND288,V22(22) 11/06/73	Q	DRAW RV PG Y X Z	REMARKS	3-JUL-74	23:55	PAGE 58
ORDER	ORDER	ORDER				LENGTH	EXCEPTIONS	RUN
	PIN	PIN						NUMBER
H	A04V1			K1-45	1			569
H	C03M1			K2=5	1	7=0/8		569
								569
H	A04U1			K1-45	1			570
H	C03N1			K2=5	1	7=2/8		570
								570
H	C03J1			K2=5	1			571
H	D04S1			K1-23	1	6=2/8		571
								571
H	C03L1			K2=5	1			572
H	D04U2			K1=23	1	6=2/8		572
								572
H	A04M1			K1-2345	1			573
H	C03K2			K2=5	1	7=4/8		573
								573
H	A04V2			K1-2345	1			574
H	C03L2			K2=5	1	6=5/8		574
								574
H	D09F1			DD	1			575
H	E09S2			DD	1	6=0/8		575
								575
H	D09J1			DD	1			576
H	E09T2			DD	1	6=0/8		576
								576
H	D09E1			DD	1			577
H	E09R2			DD	1	6=2/8		577
								577
H	D09C1			DD	1			578
H	E09S1			DD	1	6=2/8		578
								578
H	E05B1			K3-27	1			579
L	B06K1			K5=4	1			580
L	D07F1			K4=25	1	7=4/8		580
								580

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KD11A.F
 RUN NAME: HND288.V22(22) 11/06/73
 A/P PIN ORDER BAY - ORDER
 NAME PIN
 L A03E1 1-01 * 1 K2=2 SOURCE 11=0 581
 L F07R1 1-02 * 1 K4=3 SOURCE 18=5/8 581
 L A03F1 1-01 * 1 K2=2 SOURCE 16=4/8 582
 L F07E2 1-02 * 1 K4=3 SOURCE 14=6/8 583
 L B03C1 1-01 * 1 K2=23 SOURCE 12=6/8 584
 L F07M2 1-02 * 1 K4=3 SOURCE 17=0/8 585
 L B03D1 1-01 * 1 K2=3 SOURCE 15=2/8 586
 L E07V2 1-02 * 1 K4=3 SOURCE 11=4/8 587
 L A03A1 1-01 * 1 K3=35 SOURCE (K3=3) 5-6/8 588
 L F07D1 1-02 * 1 K4=3 SOURCE 6=0/8 589
 L B03V2 1-01 * 1 K3=3 SOURCE 6=4/8 590
 L D06B1 1-02 * 1 K5=3 SOURCE 1=PIN RUN 591
 L B03T2 1-01 * 1 K3=3 SOURCE 6=2/8 592
 L D06C1 1-02 * 1 K5=3 SOURCE 592
 L B05S2 1-01 * 1 D3=3 SOURCE 590
 L D06D1 1-02 * 1 K5=3 SOURCE 590
 L B05U2 1-01 * 1 K3=36 SOURCE (K3=3) 591
 H D06B2 1-01 * 1 K5=8 SOURCE 592
 H E08M2 1-02 * 1 KT=2 SOURCE 592

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KD11A.F
 RUN NAME: HND288.V22(22) 11/06/73
 A/P PIN ORDER BAY - ORDER
 NAME PIN
 H B05P2 1-01 * 1 K3=9 SOURCE 593
 H D03F1 1-02 * 2 K2=6 SOURCE 593
 H D06U2 1-03 * 2 K5=2 SOURCE 593
 H B05F2 1-01 * 1 K3=9 SOURCE 11=6/8 594
 H C06V2 1-02 * 2 K5=2 SOURCE 2=2 594
 H D03H1 1-03 * 2 K2=6 SOURCE 11=5/8 594
 H B05A1 1-01 * 2 K3=9 SOURCE 595
 H C03M2 1-02 * 1 K2=6 SOURCE 3=0 595
 H D06N2 1-03 * 1 K5=2 SOURCE 13=1/8 595
 H A07R1 1-01 * 1 K4=6 SOURCE 596
 H D08P2 1-02 * 2 KT=6 SOURCE 596
 H D04S2 1-03 * 2 K1=7 SOURCE 15=0/8 596
 H B04L1 1-01 * 1 K1=9 SOURCE 597
 H C08E2 1-02 * 1 KT=9 SOURCE 597
 H B04M1 1-01 * 1 K1=9 SOURCE 598
 H C08M1 1-02 * 1 KT=9 SOURCE 598
 H C03E2 1-01 * 1 K2=4 SOURCE 599
 H F04L2 1-02 * 1 K1=8 SOURCE 599
 H C03D2 1-01 * 1 K2=4 SOURCE 600
 H F04L1 1-02 * 1 K1=8 SOURCE 600
 H D01V2 1-01 * 1 KF=3 SOURCE (KE=7) 601
 H E02E1 1-02 * 1 KE=37 SOURCE 3=2/8 601
 H D01U2 1-01 * 1 KF=3 SOURCE (KE=7) 602
 H D02T2 1-02 * 1 KE=37 SOURCE 3=0/8 602
 H C03H1 1-01 * 1 K2=4 SOURCE 603
 H F04H1 1-02 * 1 K1=8 SOURCE 11=2/8 603

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KD11A.F
RUN NAME

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LENGTH EXCEPTIONS RUN NUMBER

A/P	PIN NAME	ORDER PIN	BAY ORDER	Q	DRAW RV PG Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	PAGE RUN NUMBER
H	C03E1		1-01 *		K2-4		1	SOURCE	11-2/8		604
H	F04K2		1-02 *		K1-8						604
L	D09V1		1-01 *		DD		1	SOURCE			605
L	E09B1		1-02 *		DD				2-6/8		605
H	C06M1		1-01 *		K5-4		2	SOURCE			606
H	C07H2		1-02 *		K4-4		1				606
H	D08F1		1-03 *		KT-3				8-4/8		606
H	A06B1		1-01 *		K5-7		1	SOURCE			607
H	F07U1		1-02 *		K4-3				17-6/8		607
H	A06R2		1-01 *		K5-6		1	SOURCE			608
H	F05J2		1-02 *		K3-2				15-0/8		608
H	D08A1				KT-2			SOURCE		1-PIN RUN	609
H	D08B1				KT-2			SOURCE		1-PIN RUN	610
H	D07N2				K4-6			SOURCE		1-PIN RUN	611
L	H06M2		1-01 *		K5-45		1				612
L	F05S1		1-02 *		K3-7			SOURCE	13-6/8		612
L	B06S1		1-01 *		K5-5		1				613
L	E05E1		1-02 *		K3-6			SOURCE	9-0/8		613
H	D06H1		1-01 *		K5-4		1	SOURCE			614
H	F01D1		1-02 *		KM-2				8-2/8		614
L	B06N2		1-01 *		K5-4		1				615
L	D05H2		1-02 *		K3-6			SOURCE	7-2/8		615
L	D05L1		1-01 *		K3-5		1				616
L	D06E1		1-02 *		K5-3			SOURCE	3-2/8		616

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RUN NAME

HND288.V22(22) 11/06/73

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LENGTH EXCEPTIONS RUN NUMBER

A/P	PIN NAME	ORDER PIN	BAY ORDER	Q	DRAW RV PG Y	X	Z	REMARKS	LENGTH	EXCEPTIONS	PAGE RUN NUMBER
H	D07J1				K4-6			SOURCE		1-PIN RUN	617
H	C03F2		1-01 *		K2-5		2	SOURCE			618
H	C06N1		1-02 *		K5-34		1				618
H	F05S1	B07L1	1-03 *		K3-2		2				618
H	H07L1		1-04 *		K4-3				23-4/8		618
H	C03P1		1-01 *		K2-5		2	SOURCE			619
H	C06N2		1-02 *		K5-34		1				619
H	E05P1		1-03 *		K3-2				12-2/8		619
H	C03R1		1-01 *		K2-5		2	SOURCE			620
H	C06P2		1-02 *		K5-34		1				620
H	F05M1		1-03 *		K3-2				11-6/8		620
H	H06P2		1-01 *		K5/3		2				621
H	C03S1		1-02 *		K2-5		1	SOURCE			621
H	F05P2		1-03 *		K3-2				15-4/8		621
H	B06R2		1-01 *		K5-3		2				622
H	C03H2		1-02 *		K2-5		1	SOURCE			622
H	D05K1		1-03 *		K3-2				10-4/8		622
H	A01L2		1-01 *		KF-4		1	SOURCE			623
H	B02N2	E01F2	1-02 *		KE-4		2				623
H	E01F2		1-03 *		KM-2				15-0/8		623
H	C04L2		1-01 *		K1-9		1	SOURCE			624
H	F07K2		1-02 *		K4-2				10-6/8		624
L	B05H1		1-01 *		K3-9		1	SOURCE			625
L	E06U2		1-02 *		K5-2				11-6/8		625
L	B05E1		1-01 *		K3-6		1	SOURCE			626
L	B06P1		1-02 *		K5-4				3-4/8		626

ORACLE CORPORATION
EQUIPMENT


RD11A.F RUN NAME:	A/P	DIN NAME	HM0288.V22(22)	11/06/73	ORDER PIN	BAY - ORDER	Q	DRAW	RV	PG	Y	X	Z	REMARKS	3-JUL-74 LENGTH	23:55 EXCEPTIONS	PAGE 63 RUN NUMBER
WAIT (0)	H	C06P1			1=01 *					K5=4			1	SOURCE			627
WAIT (0)	H	E05J1			1=02 *					K3=7					7=2/8		627
WAIT (0)																	627
WR R(07:00)	L	E07F2			1=01 *					K4=2			1	SOURCE			628
WR R(07:00)	L	F04V1			1=02 *					K1=8					7=2/8		628
WR R(07:00)																	628
WR R(15:08)	L	B04A1			1=01 *					K1=8			1	SOURCE			629
WR R(15:08)	L	E07K2			1=02 *					K4=2					11=6/8		629
WR R(15:08)																	629
WRH (1)	H	D03J2			1=01 *					K2=7			1	SOURCE			630
WRH (1)	H	E07H2			1=02 *					K4=2					5=4/8		630
WRH (1)																	630
WRL (1)	H	D03H2			1=01 *					K2=7			1	SOURCE			631
WRL (1)	H	E07E2			1=02 *					K4=2					5=4/8		631
WRL (1)																	631
ZB (1)	H	A01E1			1=01 *					KF=4			1	SOURCE			632
ZB (1)	H	A02H1			1=02 *					KE=4					3=2/8		632
ZB (1)																	632
ZB+EPS(Z)	H	A01J1			1=01 *					KF=4			1	SOURCE			633
ZB+EPS(Z)	H	B02K2			1=02 *					KE=4					5=4/8		633
ZB+EPS(Z)																	633

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DRAWING NUMBER	INIT REL	AUTOMATIC WIRE TESTER (AWT) REVISION STATUS																REV. F
		TIO	F															
K-WL-KDII-A-WL	E	F																
D-AD-7009009-0-0	B	C																

REV. F
 NUMBER 7009009-0
 SIZE CODE A WT

REVISIONS	REV.	—
	CHANGE NO.	KDIIA-00009
CHK	—	ORIGINATED

DRN. <i>J. Chartier</i>	DATE <i>6-26-74</i>	 EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS								
CHK'D. <i>L. Helbert</i>	DATE <i>6-28-74</i>									
ENG. <i>L. Chartier</i>	DATE <i>7-1-74</i>									
PROJ. ENG. <i>L. Chartier</i>	DATE <i>7-1-74</i>									
PROD. <i>L. Chartier</i>	DATE <i>7-1-74</i>									
TITLE		KDII-A AWT REVISION STATUS								
FIRST USED ON	KDII-A									
SCALE	1/1									
SHEET	1 OF 1	<table border="1"> <tr> <td>SIZE</td> <td>CODE</td> <td>NUMBER</td> <td>REV.</td> </tr> <tr> <td>A</td> <td>WT</td> <td>7009009-0</td> <td>F</td> </tr> </table>	SIZE	CODE	NUMBER	REV.	A	WT	7009009-0	F
SIZE	CODE	NUMBER	REV.							
A	WT	7009009-0	F							

DRA 123

DEC 16-(325)-1097-N174

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

X

SEQUENCE	SEQUENCE
DRAWING DIRECTORY	B-DD-KJ11-A (SHEET1 ONLY)
PARTS LIST	A-PL-KJ11-A-Ø
STACK LIMIT REGISTER	D-CS-M7237-Ø-1
SOFTWARE LIST	A-SL-KJ11-A-SL

UNIT VARIATIONS		PRINT SET TYPE	
VARIATION	TITLE	X	KJ11-A
KJ11-A	STACK LIMIT REGISTER	X	

REVISIONS	CHG. NO.	REV	USED ON OPTION/MODEL	DRN.	DATE	TITLE	SIZE	CODE	NUMBER	REV
	DATE									
			KD11-A	<i>J. F. Doughty</i>	9/26/72	STACK LIMIT REGISTER	B	DD	KJ11-A	
				<i>J. F. Doughty</i>	9/27/72					
				<i>J. F. Doughty</i>	9/27/72					
				<i>J. F. Doughty</i>	9-28-72					
				<i>J. F. Doughty</i>						

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				QUANTITY / VARIATION																		
PARTS LIST																						
MADE BY <i>J.F. O'Rourke</i>		CHECKED <i>J.F. O'Rourke</i>		SECTION																		
DATE <i>9/26/72</i>		DATE <i>9/27/72</i>																				
ENG <i>J.F. O'Rourke</i>		PROD <i>J. Stanger</i>		ISSUED SECT.																		
DATE <i>9/27/72</i>		DATE <i>9-28-72</i>																				
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION		KJ11-A																		
1	D-CS-M7237-0-1	STACK LIMIT REGISTER		1																		
2	D-MU-KJ11-A-MU	MODULE UTILIZATION		REF																		
TITLE STACK LIMIT REGISTER (PL)				ASSY NO. <i>H</i>	SIZE A	CODE PL	NUMBER KJ11-A-0				REV.	ECO NO.										
				SHEET 1 OF 1	DIST.	C																

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

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PARTS REFERENCE

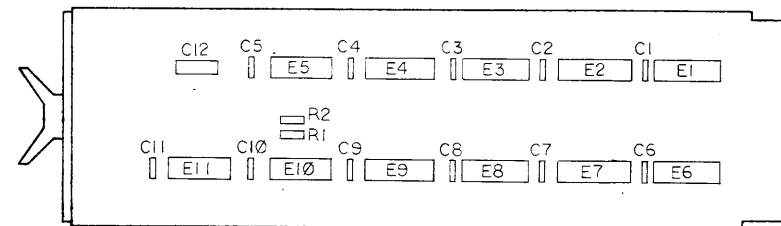
ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	E1, E6	DEC 5384	IC 1910394	2
2	E2, E7	DEC 74175	IC 1910651	2
3	E3, E8	DEC 8881	IC 1909705	2
4	E4, E9	DEC 7485	IC 1910224	2
5	E5	DEC 74H00	IC 1909056	1
6	E10	DEC 74H20	IC 1905635	1
7	E11	DEC 7408	IC 1910155	1
8	CT THRU C11	.01 MFD 100V 20% CAP	1001610	11
9	C12	6.8 MFD 35V 20% CAP	1000067	1
10	R1, R2	1K 1/4W 5% RES	1300365	2
REF		STACK LIMIT REGISTER	APL-M7237-0-0	

NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER, AND CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED; MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPERATE PINS ARE USED; MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
- KJ11 SIGNAL SOURCE NOTATION (K1-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE FROM THE PROCESSOR. FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THESE SIGNALS CAN EXIST.
- UNLESS OTHERWISE SPECIFIED: RESISTANCE IS IN OHMS.
- DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE, PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM. CAPACITORS WITHOUT NOTED VALUES ARE .01 MFD.
- GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY. EXCEPTIONS ARE:

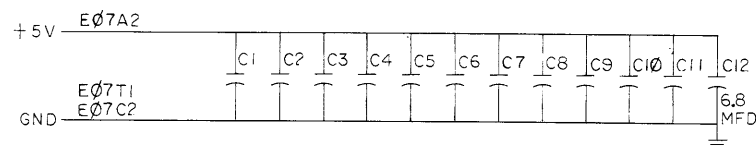
IC TYPE	GND	+5V
DEC 5384	PIN 1	PIN 8
DEC 74175	PIN 8	PIN 16

COMPONENT PLACEMENT



PIN NOMENCLATURE

MODULE	PROCESSOR
A	E07



FIRST USED ON OPTION / MODEL PDP 11/25	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN. W. MAJOR	DATE 9/22/71	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHK'D. [Signature]	DATE 5/7/72	TITLE	
DIMENSION IN INCHES	ENG. [Signature]	DATE 5-23-72	STACK LIMIT REGISTER	
TOLERANCES	PROD. ENG. [Signature]	DATE 5-23-72	M7237	
DECIMALS FRACTIONS ANGLES	PROD. [Signature]	DATE 5/25/72	A-ML-KJ11-A	
± .005 ± 1/64 ± 0°30'	NEXT HIGHER ASSY			
FINAL SURFACE QUALITY	A-ML-KJ11-A			
REMOVE BURRS AND BREAK SHARP CORNERS	SCALE			
MATERIAL	SHEET 1 OF 2			
FINISH	DNT.			
SIZE CODE		NUMBER		REV.
D CS M7237-0-1		M7237-0-1		A

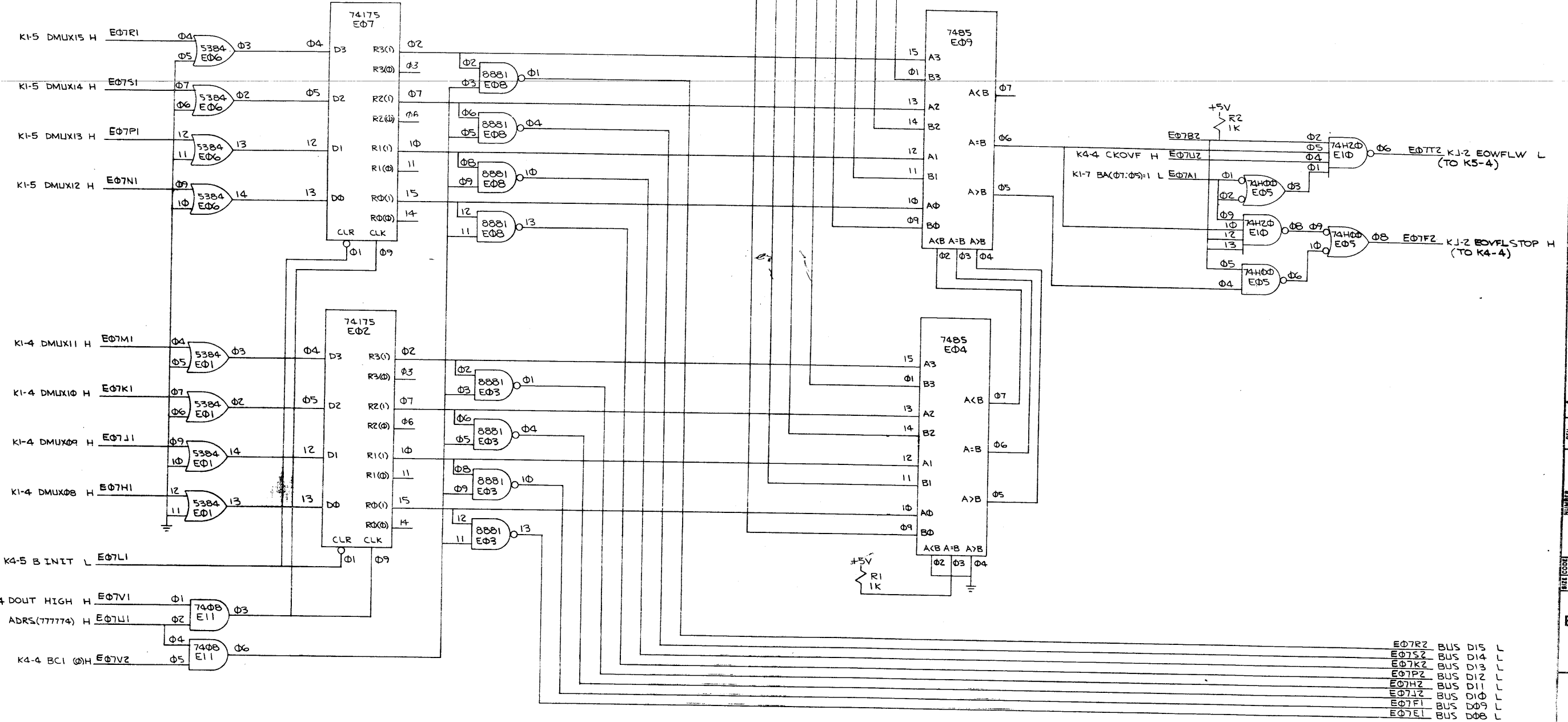
REVISIONS	REV.
CHANGE NO.	
CHK	

FILE CODE D CS M7237-0-1

REV. A

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- K1-6 BA15 (NH) E07E2
- K1-6 BA14 (NH) E07L2
- K1-6 BA13 (NH) E07M2
- K1-6 BA12 (NH) E07N2
- K1-6 BA11 (NH) E07D2
- K1-6 BA10 (NH) E07B1
- K1-6 BA09 (NH) E07C1
- K1-6 BA08 (NH) E07D1



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 11/25				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. W. MAJOR	DATE 7/22/71	 digital EQUIPMENT CORPORATION <small>MAYFORD, MASSACHUSETTS</small>	
DECIMALS ANGLES	CHKD. <i>[Signature]</i>	DATE 2-7-72		
.XXX = .005	ENGR. <i>[Signature]</i>	DATE 5-23-73		
.XX = .02	PROB. ENG. <i>[Signature]</i>	DATE 5-23-73		
.X = .1	PROD. <i>[Signature]</i>	DATE 3/29/72	TITLE STACK LIMIT REGISTER	
MATERIAL	NEXT HIGHER ASSY.	M7237 KJ-2		
FINISH	A-ML-KJ11-A	SIZE CODE	NUMBER	REV.
	SCALE	D CS	M7237-0-1	A
	SHEET 2 OF 2	DIST.		

REV.	CHANGE NO.	CHK.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

MADE BY *J. J. Dougherty*
DATE *9/26/72*
ENG *J. J. Dougherty*
DATE *9/27/72*

CHECKED BY *J. J. Dougherty*
DATE *9/27/72*
PROD. BY *J. J. Dougherty*
DATE *7-28-72*

SECTION
ISSUED SECT.

DN DOCUMENT CHANGE NOTICE
PA PAPER TAPE ASCII
PB PAPER TAPE
PC PAPER TAPE
PD PAPER TAPE

KIT CHECK BY DATE
INSTALLATION CHECK BY DATE

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QTY	UNIT	REV.	ECO NO.
1	MAINDEC-11-DCKBF-A-D	STACK LIMIT TEST	1			
2	MAINDEC-11-DCKBF-A-PB	STACK LIMIT TEST	1			

TITLE	ASSY. NO.	SIZE CODE	NUMBER	REV.	ECO NO.
STACK LIMIT REGISTER	<i>H</i>	A SL	KJ11-A-SL		
SHEET 1 OF 1		DIST.			



DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

	SEQUENCE		SEQUENCE	
TIMING DIAGRAM			D-TD-KW11-L-02	
LINE FREQUENCY CLOCK			D-BS-KW11-L-01	
LINE CLOCK			D-CS-M787-0-1	
LINE FREQUENCY CLOCK			A-PL-KW11-L-0	
SOFTWARE LIST			A-SL-KW11-L-28	
MFG PRINTS				
TEST PROCEDURE			A-SP-KW11-L-03	

THIS IS PRINT SET

UNIT VARIATIONS		PRINT SET TYPE				
VARIATION	TITLE	KW11-L				
KW11-L	LINE FREQUENCY CLOCK	X				

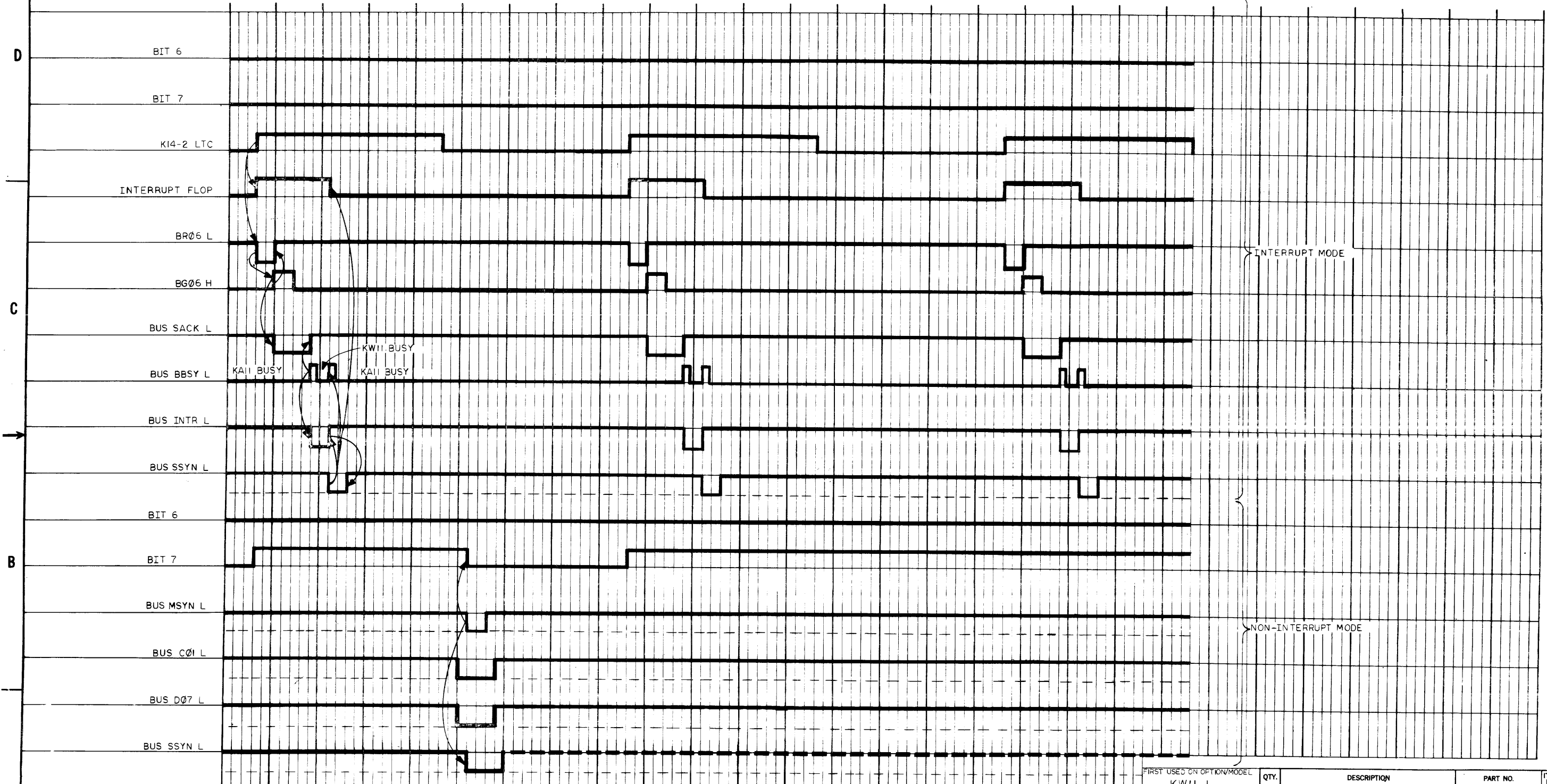
REVISIONS	DATE	CHG. NO.	REV		
				USED ON OPTION/MODEL	
				DRN. <i>S. ROTHMAN</i> DATE <i>2-14-72</i>	
				CHK'D. <i>M. Buzandis</i> DATE <i>6-13-72</i>	
				PROLEN. <i>M. Buzandis</i> DATE <i>6-14-72</i>	
				PRO. <i>J.P. Stinger</i> DATE <i>6/14/72</i>	
				FIELD SERV. <i>J.P. Stinger</i> DATE <i>6-14-72</i>	
				SHEET <i>1</i> OF 2	
		TITLE	LINE FREQUENCY CLOCK (KW11-L)		
		SIZE	B DD		
		CODE			
		NUMBER	KW11-L-0		
		REV	*		
		DIST			

CUSTOMER PRINT SET							CUSTOMER PRINT SET							
KW11-L	DEPOT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	DEPOT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X	X		D-BS-KW11-L-01	A	2	LINE FREQUENCY INTERNAL CLOCK								
X	X		A-SP-KW11-L-03	*	3	TEST PROCEDURE								
X	X		D-CS-M787-0-1	#	2	LINE CLOCK								
X	X		A-PL-KW11-L-0	*	1	LINE FREQUENCY CLOCK								
X	X		A SL KW11 L 28	*	1	SOFTWARE LIST								

TITLE	SIZE	CODE	NUMBER	REV
LINE FREQUENCY CLOCK (KW11-L)	B	DD	KW11-L-0	*
SHEET 2 OF 2				

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REV. 20-111WK-01 D 2 1



A	REV. CHANGE NO.	CHK	DEC FORM NO. ahp 101	8	7	6	5	4	3	2	1	ahp	REV.	D TD KWII-L-02	REV.	ITEM NO.	PART NO.	DESCRIPTION	QTY.	FIRST USED ON OPTION/MODEL
																				KWII-L
DO NOT SCALE DRAWING																				
UNLESS OTHERWISE SPECIFIED																				
DIMENSION IN INCHES																				
TOLERANCES																				
DECIMALS FRACTIONS ANGLES																				
± .005 ± 1/64 ± 0°30'																				
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS																				
MATERIAL																				
FINISH																				
SCALE																				
SHEET 1 OF 1																				
DIST.																				
PARTS LIST																				
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS																				
TITLE																				
TIMING DIAGRAM (KWII-L)																				
SIZE/CODE																				
D TD KWII-L-02																				
NUMBER																				
REV.																				

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PARTS REFERENCE

ITEM NO.	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	R1, R3	390 1/4 W 5% CC	1300309	2
2	R2, R6 - R11	1K 1/4 W 5% CC	1300365	7
3	R4, R5	180 1/4 W 5% CC	1301322	2
4	R12	2.4K 1/4 W 5% CC	1303177	1
5	C1 - C15, C18, C19	.01 MFD 100V 20% DISC	1001610	17
6	C16, C17	560 MMF 100V 5% D.M.	1000025	2
7	Q1, Q2	TRANSISTOR DEC 3009 B.S.	1503100	2
8	E1, E5, E8, E9, E10	I.C. DEC 380	1909485	5
9	E2	I.C. DEC 7430	1905578	1
10	E3	I.C. DEC 8815	1908713	1
11	E4	I.C. DEC 7400	1905575	1
12	E6, E7, E13	I.C. DEC 7474	1905547	3
13	E11	I.C. DEC 7404	1909686	1
14	E12, E14, E15	I.C. DEC 8881	1909705	3

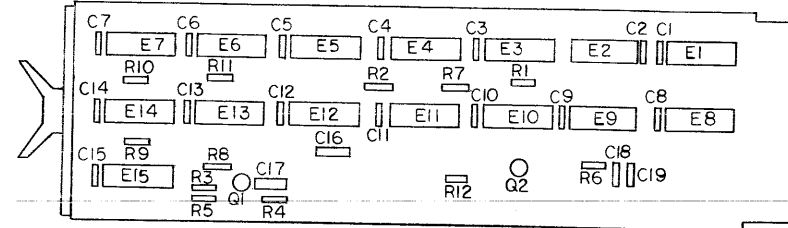
NOTES

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE K111 PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER, AND CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED: MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPERATE PINS ARE USED: MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
- PROCESSOR SIGNAL SOURCE NOTATION (K10-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET. WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. IF ON A PRINT, THE FIRST NUMBER OF THE K PREFIXES COINCIDE FOR A SIGNAL NAME AND THE PRINT (SEE TITLE BLOCK). THE SIGNAL IS GENERATED ON THE MODULE. A DIFFERENCE IN THE FIRST NUMBER OF THE K PREFIXES INDICATES A SIGNAL GENERATED OFF THE MODULE. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATIONS AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE, PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM.
- GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY. EXCEPTIONS ARE:

IC TYPE	GND	+5V
DEC 7481	PIN 10	PIN 4
DEC 7482	PIN 11	PIN 4
DEC 8251	PIN 8	PIN 16
DEC 8271	PIN 8	PIN 16
DEC 380	PIN 1	PIN 8
DEC 384	PIN 1	PIN 8

- UNLESS OTHERWISE NOTED - RESISTANCE IS IN OHMS; CAPACITANCE IS IN MICRO MICRO FARADS, CAPACITORS WITHOUT ANY NOTED VALUES ARE .01 MFD.

COMPONENT PLACEMENT



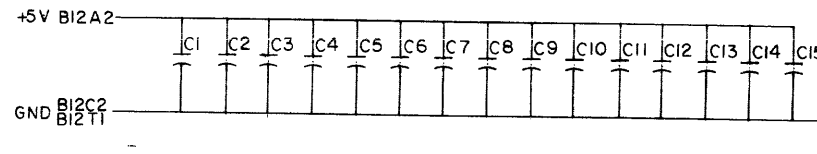
PIN NOMENCLATURE

MODULE PROCESSOR

A B

INSTALLATION PROCEDURE

- REMOVE JUMPER FROM B12V2 TO B12R2
- INSTALL M787 LINE FREQUENCY CLOCK MODULE IN K111 SLOT B12
- RUN MAINDEC DEC-11-D2DA LINE FREQUENCY CLOCK TEST



REV.	CHANGE NO.	DATE
A	KW11-L-0001	8-2-70
	M. FRITZ	7-24-70
	M. 7	

FIRST USED ON OPTION / MODEL
KW11-L

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

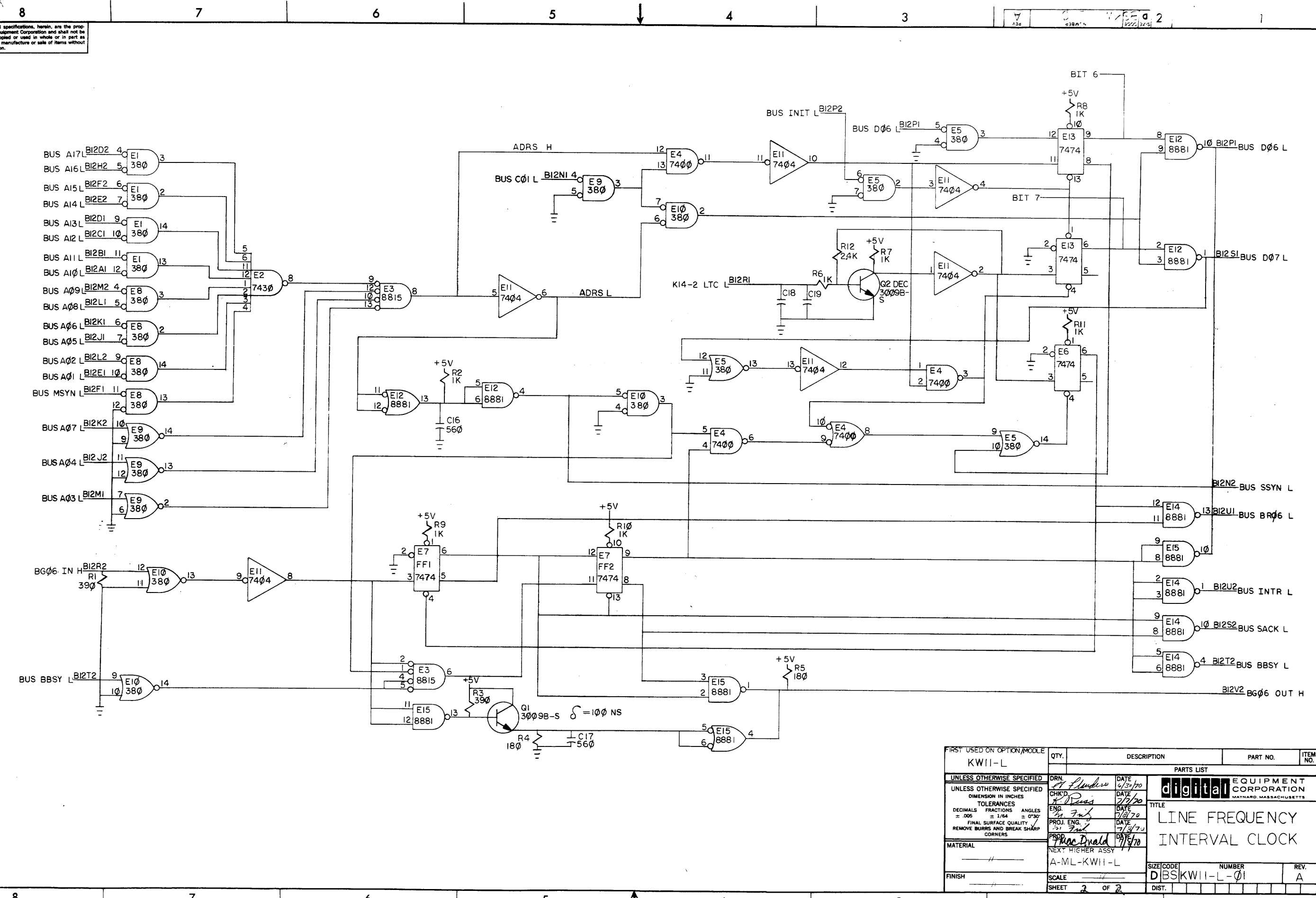
DRN: J. Linder DATE: 6/29/70
CHK'D: R. Pines DATE: 7/2/70
ENG: M. Fritz DATE: 7/14/70
PROJ. ENG: M. Fritz DATE: 7/13/70
PROD: Marc Donald DATE: 7/13/70
NEXT HIGHER ASSY: A-ML-KW11-L

PARTS LIST
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
TITLE: LINE FREQUENCY INTERVAL CLOCK
SIZE CODE: D
NUMBER: BSKW11-L-01
REV. A

SCALE: 1 OF 2
SHEET 1 OF 2
DIST.

REV. A
NUMBER 11-01
BSKW

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REV.	CHANGE NO.

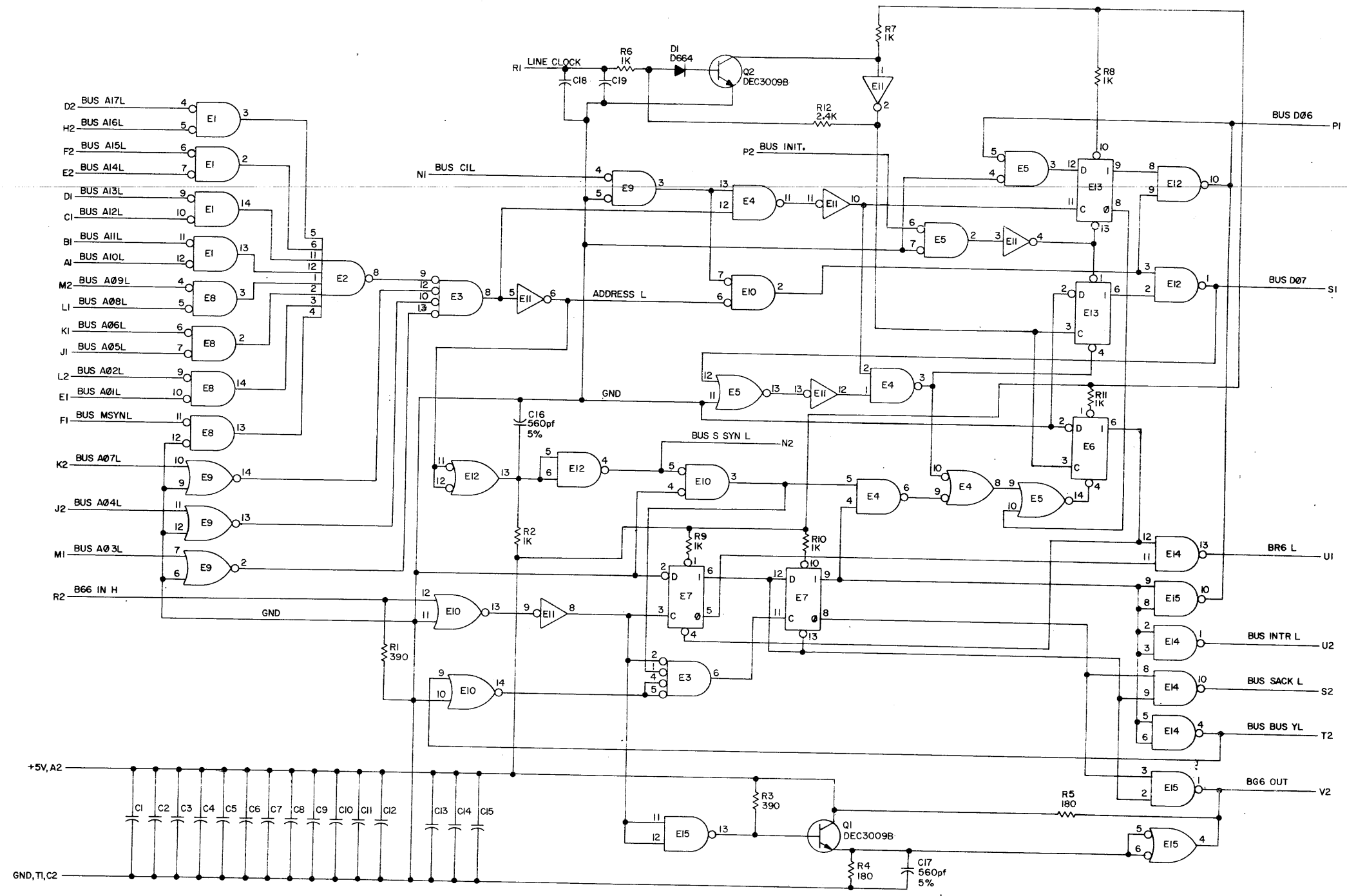
DEC FORM NO. DRD 102A

FIRST USED ON OPTION/MODULE	QTY.	DESCRIPTION	PART NO.	ITEM NO.
KW11-L				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHK'D	DATE		
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS FRACTIONS ANGLES				
± .005 ± 1/64 ± 0°30'			TITLE LINE FREQUENCY INTERVAL CLOCK	
FINAL SURFACE QUALITY				
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL				
FINISH				
NEXT HIGHER ASSY		A-ML-KW11-L	SIZE CODE	NUMBER
SCALE		D BSKW11-L-01	DIST.	REV.
SHEET 2 OF 2				A

REV. A
 NUMBER
 D BSKW11-L-01
 SIZE CODE

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1-0-181W
#38000
3000 3215



UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%
CAPACITORS ARE .01uf, 100V, 20%
DEC380 = E1, E5, E8, E10, E9
DEC7430 = E2
DEC8815 = E3
DEC7400 = E4
DEC7404 = E11
DEC8881 = E12, E14
DEC7474 = E6, E7, E13

PIN 1 = GND
PIN 8 = +5V ON E1, E8, E9, E10, E5

PIN 7 = GND
PIN 14 = +5V ON E2, E3, E4, E11, E12, E14, E13, E7, E15, E6

REVISIONS CHG NO. REV 00001 A 00002 B 00003 C	DATE 4-2-70	TRANSISTOR & DIODE CONVERSION CHART				TITLE LINE TIME CLOCK INTERRUPT M787
	DATE 7-2-70	DEC DEC3009B	EIA 2N3009B	DEC D664	EIA IN3506	
DRN BUTLER		DATE 7-2-70		EQUIPMENT CORPORATION MAYFORD, MASSACHUSETTS		NUMBER M787-0-1
CHG DATE 7/2/70		DATE 7/2/70		PRINTED CIRCUIT REV.		REV C

DIGITAL EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY M. Buczynski DATE 6-15-72	CHECKED <i>[Signature]</i> DATE <i>7/15/72</i>	SECTION
ENG M. Buczynski DATE 6-15-72	PROD <i>Hz String</i> DATE <i>6/15/72</i>	ISSUED SECT.

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION
1	M787	LINE TIME CLOCK INTERRUPT

KW11-L												
	X											

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
LINE FREQUENCY CLOCK (KW11-L)		A	PL	KW11-L-0	*	
	SHEET 1 OF 1	DIST.				

DEC FORM NO.16-1031
 DRA 110

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			LEGEND D DOCUMENT DN DOCUMENT CHANGE NOTICE PA PAPER TAPE ASCII PB PAPER TAPE BINARY PM PAPER TAPE READ-IN-MODE			QUANTITY / VARIATION							
SOFTWARE LIST			MADE BY M. Buczynski DATE 6-15-72			CHECKED <i>[Signature]</i> DATE 7/29/72		SECTION					
ENG M. Buczynski DATE 6-15-72			PROD <i>[Signature]</i> DATE 6/15/72		ISSUED SECT.								
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION			QUANTITY			KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
1	MAINDEC 11-DZDA-PB	LINE FREQUENCY CLOCK TEST			1								
2	MAINDEC 11-D2DA-D	LINE FREQUENCY CLOCK TEST			1								
TITLE				ASSY. NO.		SIZE CODE		NUMBER		REV.		ECO NO	
LINE FREQUENCY CLOCK (KW11-L)						A SL		KW11-L-28		*			
SHEET 1 OF 1				DIST.									

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REV. 2
 SIZE CODE D
 NUMBER BS KM11-Ø-MB

W130 PARTS REFERENCE

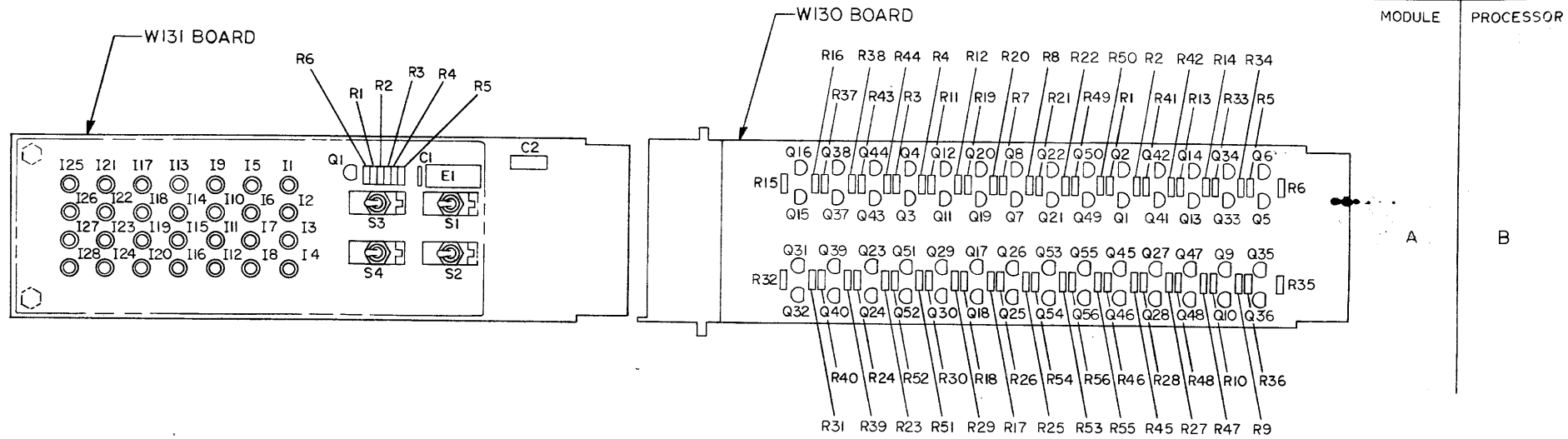
ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	R1,R3,R5,R7,R9,R11,R13,R15,R17,R19,R21,R23, R25,R27,R29,R31,R33,R35,R37,R39,R41,R43, R45,R47,R49,R51,R53,R55	15K, 1/4W, 5% RES.	1300496	28
2	R2,R4,R6,R8,R10,R12,R14,R16,R18,R20,R22, R24,R26,R28,R30,R32,R34,R36,R38,R40, R42,R44,R46,R48,R50,R52,R54,R56	47Ø, 1/4W, 5% RES.	1300316	28
3	Q1-Q56	DEC 3ØØ9B TRANSISTOR	1503100	56
4	P1	HØØ7 BLOCK, CONNECTOR	1209123	1

W131 PARTS REFERENCE

ITEM NO	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	E1	DEC 74ØØN I.C.	1905575	1
2	C1	.Ø1 MFD, 1ØØV, 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	33Ø, 1/4W, 5% RES.	1300295	1
6	Q1	DEC 3ØØ9B TRANSISTOR	1503100	1
7	I1-I28	LAMP, HUDSON, BLUE *23Ø9G	1209219	28
8	S1-S4	SWITCH, TOGGLE, SPST, 6AT-1Z	1201168	4

COMPONENT PLACEMENT

PIN NOMENCLATURE



- NOTES:
- 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 BØ2 AND INSERTING THE W131 MODULE INTO THE W130. NOTE THAT THE SWITCHES AND LIGHTS FACE TOWARD AND EXTEND BELOW THE CONSOLE. THE BOTTOM COVER MUST BE REMOVED WITH THE CHASSIS EXTERNAL TO THE CABINET.
 - 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.
 - "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.
 - "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.

FIRST USED ON OPTION/MODEL
 PDPII

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

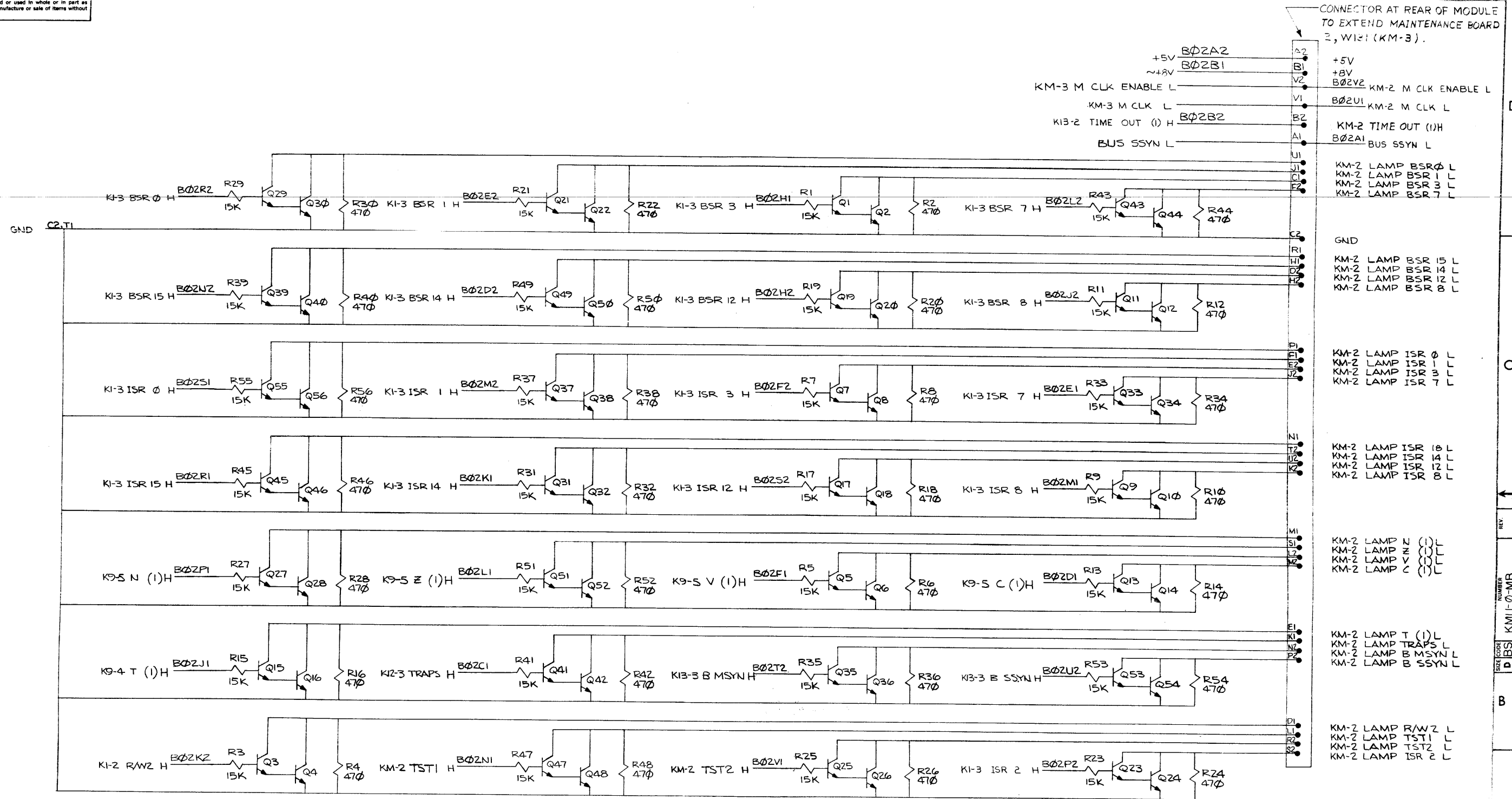
QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
TITLE MAINTENANCE BOARD (1Ø2) KM-1			
SCALE 1/1		SIZE CODE D	NUMBER BS KM11-Ø-MB
SHEET 1 OF 3		DIST.	REV.

REV.	CHANGE NO.

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8
7
6
5
4
3
2
1

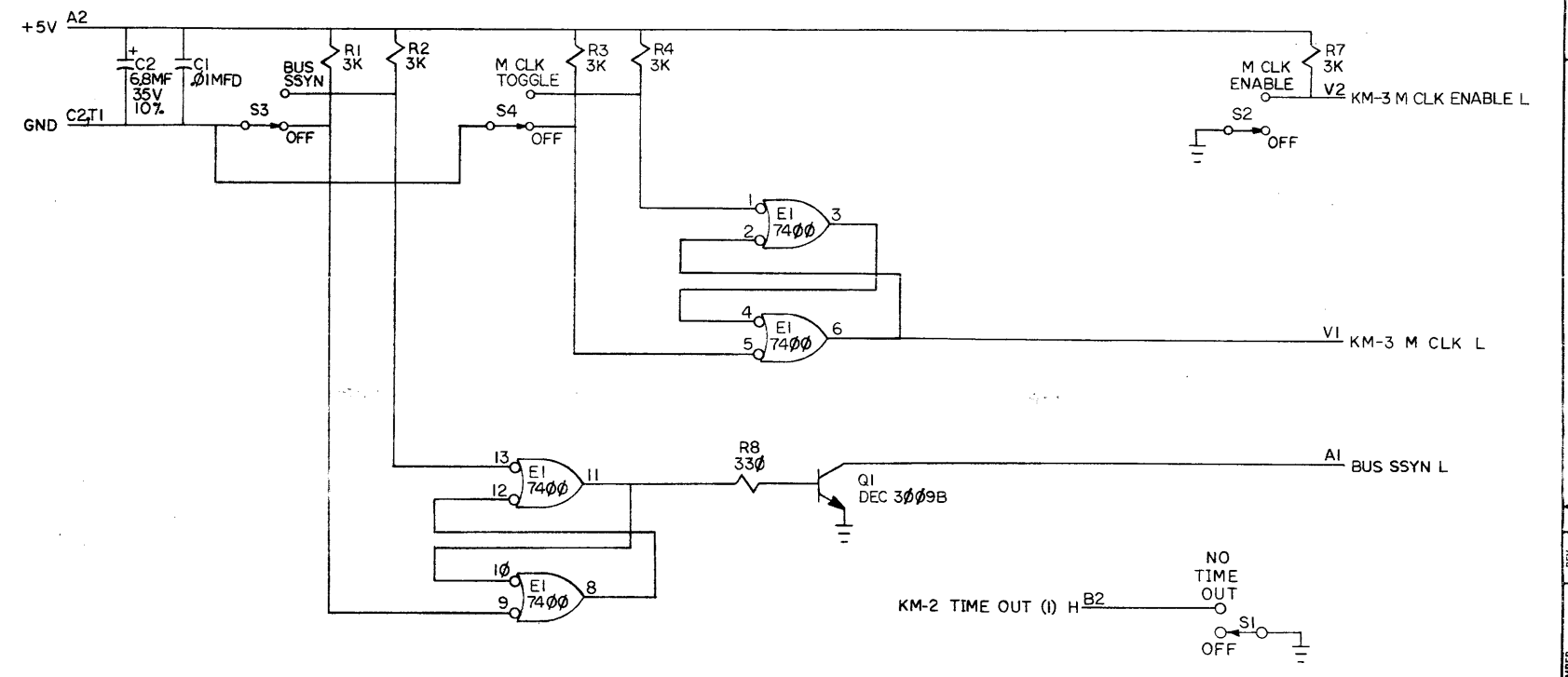
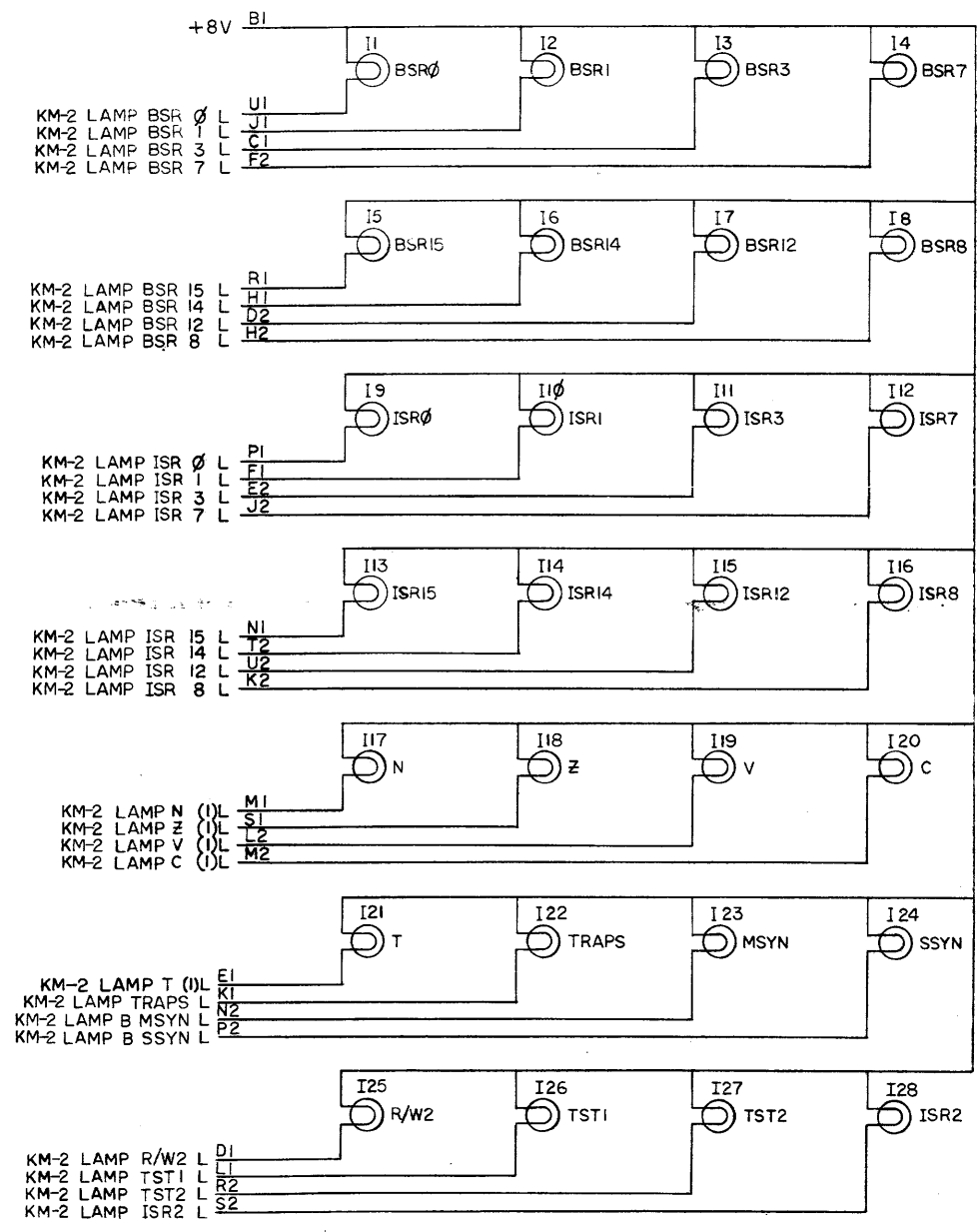
CONNECTOR AT REAR OF MODULE TO EXTEND MAINTENANCE BOARD 2, W131 (KM-3).



REV.	CHANGE NO.

FIRST USED ON OPTION/MODEL PDP 11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES = .005 ± 1/64 ± 0°30' FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DRN <i>V. Williams</i>	DATE 12-18-69	PARTS LIST digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
MATERIAL	PROJ. ENG. <i>W. Williams</i>	DATE 3-6-70	TITLE MAINTENANCE BOARD (1)	
FINISH	PROJ. <i>W. Williams</i>	DATE 3-5-70	NUMBER W130 KM-2	
SCALE NONE	NEXT HIGHER ASSY A-ML-KM11-0	SIZE CODE D B S	NUMBER KM11-0-MB	
SHEET 2 OF 3	DIST.	REV.		

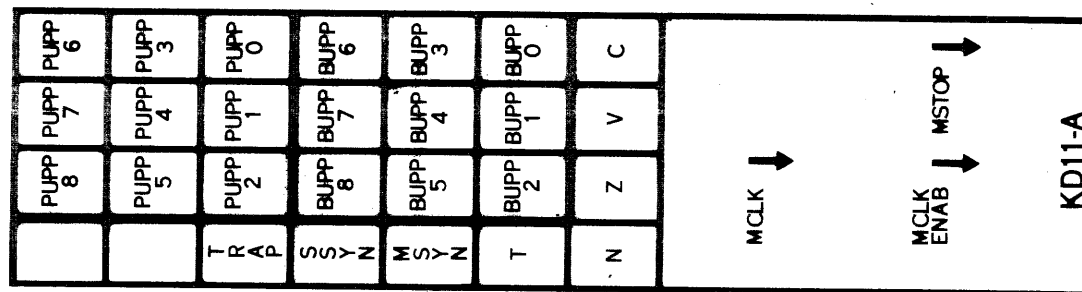
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REVISIONS	NO.	REV.
CHK		

FIRST USED ON OPTION/MODEL PDP 11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED				
DIMENSION IN INCHES				
TOLERANCES				
DECIMALS	FRACTIONS	ANGLES		
± .005	± 1/64	± 0°30'		
FINAL SURFACE QUALITY				
REMOVE BURRS AND BREAK SHARP CORNERS				
MATERIAL	NEXT HIGHER ASSEMBLY			
+	A-ME-KM11-0			
FINISH	SCALE NONE			
+	SHEET 3 OF 3			
PARTS LIST		TITLE		
DRN J. Rudis DATE 12-17-69		digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS		
CHKD [Signature] DATE 4/21/72		WI31 KM-3		
ENG [Signature] DATE 3-6-70		MAINTENANCE BOARD(2)		
PROJ ENG [Signature] DATE 3-6-70		SIZE CODE D		
PROD [Signature] DATE 5/5/70		NUMBER BS KM11-0-MB		
		REV.		

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FIRST USED ON OPT/MOD
KD11-A

REVISIONS	CHANGE NO.	REV.
CHK		

SPEC # 9200100-94 (BLACK)

DRN	D. Mattson	DATE	6-9-72	 digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>			
CHK'D.	Bul	DATE	7/7/72				
ENG.	S.E. Frasier	DATE	7/7/72	TITLE MAINT. MODULE OVERLAY (KD11-A)			
PROL ENG.	J. F. Goughlin	DATE	7/7/72				
PROD.	A. Stinger	DATE	7/31/72				
NEXT HIGHER ASSY							
C.MD-5509081-0-0				SIZE	CODE	NUMBER	REV.
SCALE				A	SS	5509081-0-12	
SHEET 1 OF 2				DIST. <input type="checkbox"/>			


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KE11-E.F				KT11-D			
KT11-D KE11-E.F	EPS (N)	MSR 01	EXP OVFL	ROM D	ROM C	ROM B	ROM A
	EPS (Z)	MSR 00	EXP UNFL	PBA 08	PBA 11	PBA 14	PBA 17
	EPS (V)	DR09	ECON 00	PBA 07	PBA 10	PBA 13	PBA 16
	EPS (C)	DR00	B 15	PBA 06	PBA 09	PBA 12	PBA 15

First used on opt/mod
KT11-D
KE11-E.F

REVISIONS	CHANGE NO.	REV.
CHK		

SPEC # 9200101-94 (Black)

DRN. <i>J. Daniels</i>	DATE 7-12-72	 DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. <i>BW</i>	DATE 7-12-72	
ENG. <i>F. Blauvelt</i>	DATE 7/25/72	
PROJ. ENG. <i>[Signature]</i>	DATE 7/25/72	
PROOF. <i>[Signature]</i>	DATE 7/31/72	
NEXT HIGHER ASSY.		TITLE
C-MD-5509081-0-0		MAINT. MODULE OVERLAY (KT11-D) (KE11-E.F)
SCALE	SIZE CODE A SS	NUMBER 5509081-0-13
SHEET OF	DIST. 6	REV.



DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

	SEQUENCE	SEQUENCE
DRAWING DIRECTORY	B-DD-MF11-L	
MODULE UTILIZATION	D-MU-MF11-L-MU	
16 BIT 18 MIL MEMORY	A-DD-MM11-L	
CIRCUIT SCHEMATIC	C-CS-5409959-0-1	
PARTS LIST	A-PL-MF11-L-0	
MF11-L/LP OPTION HARNESS	D-IA-7009560-0-0	
UNIT ASSEMBLY	D-UA-MF11-L-0	

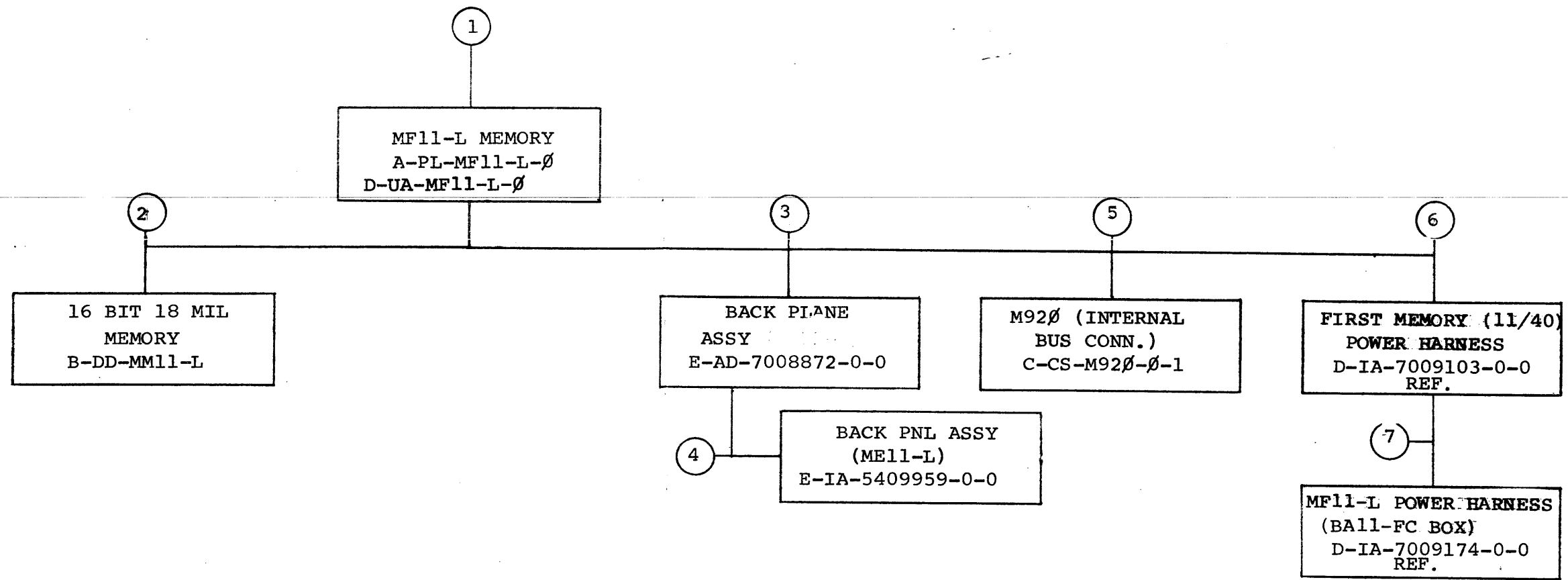
THIS IS PRINT SET

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UNIT VARIATIONS		PRINT SET TYPE			
VARIATION	TITLE	MF11-L			
MF11-L	MF11-L MEMORY (8K TO 24K, 16 BIT)	X			

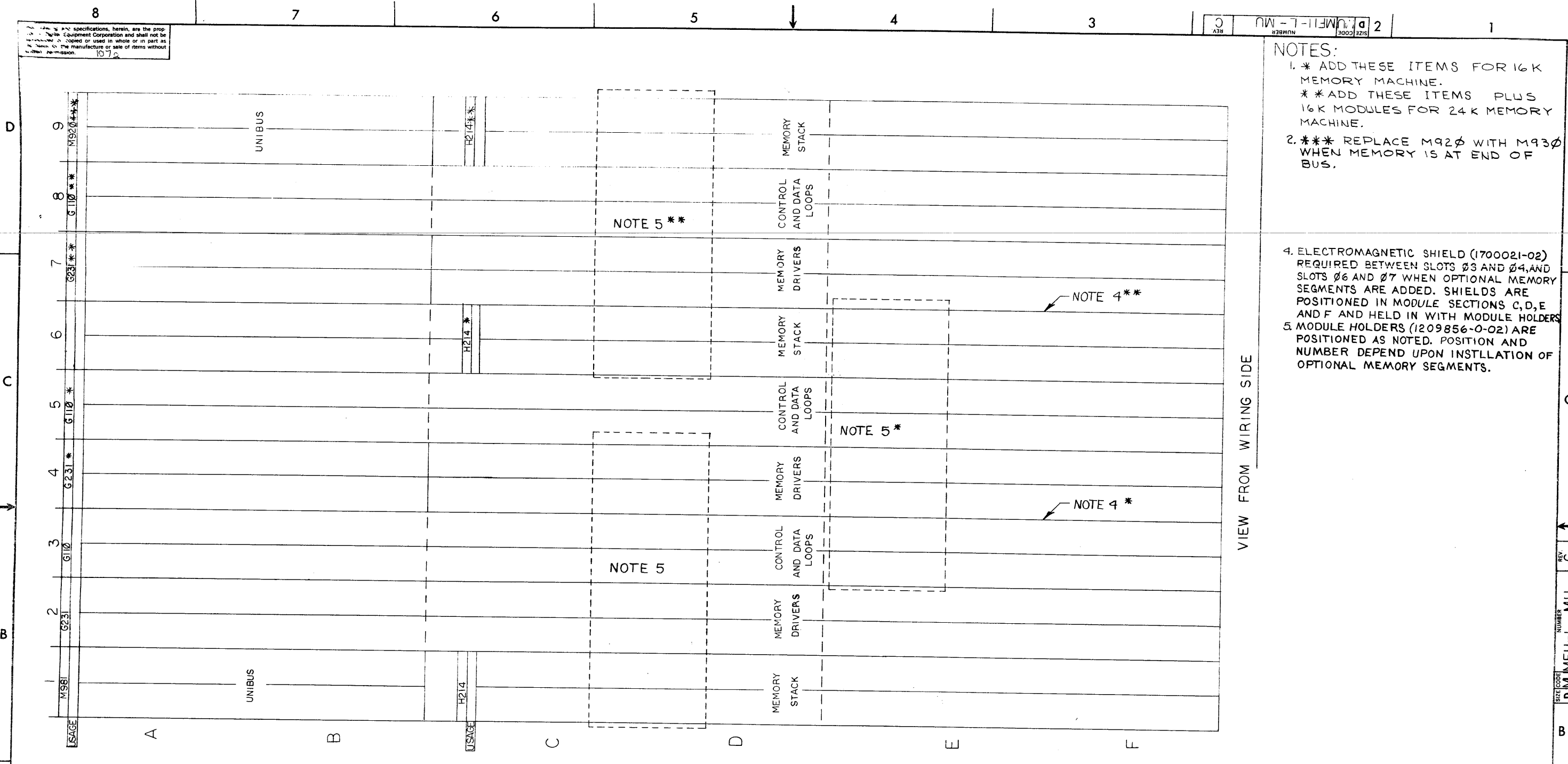
REVISIONS	CHG. NO.		REV
	DATE		
	11/1/72	11-10 2	A
	12/5/72	MF11L-1	B
	12/14/73	MF11L-2	C
	3/7/73	MF11L-3	D
	4/73	MF11L-4	E
	5/73	MF11L-5	F
	11-73	MF11L-6	H
	12-73	MF11L-7	J

USED ON OPTION/MODEL	DRN	DATE	TITLE
PDP-11/40	8-106...	9/23/72	MF11-L MEMORY (8K TO 24K, 16 BIT)
	CHK'D	9/2/72	
	PROJ ENG	8/22/72	
	PROD	9/27/72	
	FIELD SERV	9-9-72	
SHEET 1 OF 3			SIZE CODE
		B DD	NUMBER
			MF11-L
		DIST	REV
			J



TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
BACK PLANE MF11-L	2	3	B	DD	MF11-L	J

CUSTOMER PRINT SET				ELECTRICAL				CUSTOMER PRINT SET				MECHANICAL									
MF11-L		MFG. SET		FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	MF11-L		MFG. SET		FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.		
X				1	A-PL-MF11-L-0	D	1	MF11-L MEMORY (PL)						1	A-PL-MF11-L-0	D	1	MF11-L MEMORY (PL)			
X					D-UA-MF11-L-0	D	1	MF11-L MEMORY							D-UA-MF11-L-0	D	1	MF11-L MEMORY			
X					D-MU-MF11-L-MU	C	1	MODULE UTILIZATION							C-PS-1210698-0-0		1	GUIDE, CARD CENTER			
X					D-IA-7009560-0-0	#	1	MF11-L/LP OPTION HARNESS							D-IA-7009560-0-0	#	1	MF11-L/LP OPTION HARNESS			
														2	B-DD-MM11-L	#	3	16 BIT 18 MIL MEMORY			
C				2	B-DD-MM11-L	#	3	16 BIT 18 MIL MEMORY						3	E-AD-7008872-0-0		1	BACK PLANE ASSY (ME11-L)			
															E-PS-1210258-0-0		1	288 PIN CONN (H863)			
															D-SC-1210834-0-0		1	360 PIN CONN			
															E-PS-1211459-0-0		1	LOGIC FRAME			
				3	E-AD-7008872-0-0		1	BACK PLANE ASSY						4	E-IA-5409959-0-0		1	BACK PANEL ASSY (ME11-L)			
															E-CS-5409959-0-1	#	1	CIRCUIT SCHEMATIC			
X															K-WL-7008872-0-1		1	ETCH/WIRE LIST (ME11-L)			
															5409959-0-5		1	ASSY/DRILLING HOLE			
															5409959-0-4		1	X-Y COORDINATE HOLE LOCATION			
															5409959-0-6		1	MODULE ECO HISTORY			
				4	E-IA-5409959-0-0		1	BACK PANEL ASSY (ME11-L)						5	C-CS-M920-0-1		1	CIRCUIT SCHEMATIC (INTERNAL BUS CONN)			
															C-CS-M920-0-1		1	CIRCUIT SCHEMATIC			
				5	C-CS-M920-0-1		1	CIRCUIT SCHEMATIC (INTERNAL BUS CONN)						6	D-IA-7009103-0-0	#	1	FIRST MEMORY (11/40) POWER HARNESS (OLD-REF.)			
															D-IA-7009174-0-0	#	1	MF11-L POWER HARNESS (BALL-FC BOX) (OLD-REF)			
				6	D-IA-7009103-0-0	#	1	FIRST MEMORY (11/40) POWER HARNESS (OLD-REF.)													
				7	D-IA-7009174-0-0	#	1	MF11-L POWER HARNESS (BALL-FC BOX) (OLD-REF)													
				8	D-IA-7009565-0-0	#	1	FIRST MEMORY - 11/40 HARNESS (REF.)													
										TITLE				SIZE CODE		NUMBER		REV			
										MF11-L MEMORY (8K TO 24K, 16 BIT)				SHEET 3 OF 3		B DD		MF11-L		J	



NOTES:
 1. * ADD THESE ITEMS FOR 16 K MEMORY MACHINE.
 ** ADD THESE ITEMS PLUS 16 K MODULES FOR 24 K MEMORY MACHINE.
 2. *** REPLACE M92Ø WITH M93Ø WHEN MEMORY IS AT END OF BUS.

4. ELECTROMAGNETIC SHIELD (1700021-02) REQUIRED BETWEEN SLOTS Ø3 AND Ø4, AND SLOTS Ø6 AND Ø7 WHEN OPTIONAL MEMORY SEGMENTS ARE ADDED. SHIELDS ARE POSITIONED IN MODULE SECTIONS C, D, E AND F AND HELD IN WITH MODULE HOLDERS
 5. MODULE HOLDERS (1209856-0-02) ARE POSITIONED AS NOTED. POSITION AND NUMBER DEPEND UPON INSTLLATION OF OPTIONAL MEMORY SEGMENTS.

REV.	CHANGE NO.	DESCRIPTION
A	1	MF11-L-00001
B	1	MF11-L-00003
C	1	MF11-L-00005

FIRST USED ON OPTION / MODEL MF11-L		DO NOT SCALE DRAWING		DRN: <i>[Signature]</i> DATE: 8/14/72	
UNLESS OTHERWISE SPECIFIED		DIMENSION IN INCHES		CHKD: <i>[Signature]</i> DATE: 8/29/72	
TOLERANCES		DECIMALS FRACTIONS ANGLES		ENG: <i>[Signature]</i> DATE: 8/29/72	
± .005 ± 1/64 ± 0'30"		FINAL SURFACE QUALITY		PART: <i>[Signature]</i> DATE: 8/29/72	
REMOVE BURRS AND BREAK SHARP CORNERS		MATERIAL		NEXT HIGHER ASSY	
FINISH		SCALE		A-PL-MF11-Ø-Ø	
SHEET OF		SIZE CODE		DMMF11-L-MU	
		NUMBER		REV. C	

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 1972

SIZE CODE: DMMF11-L-MU NUMBER: 2

D
C
B
A

D
C
B
A

VIEW FROM WIRING SIDE

8 7 6 5 4 3 2 1

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

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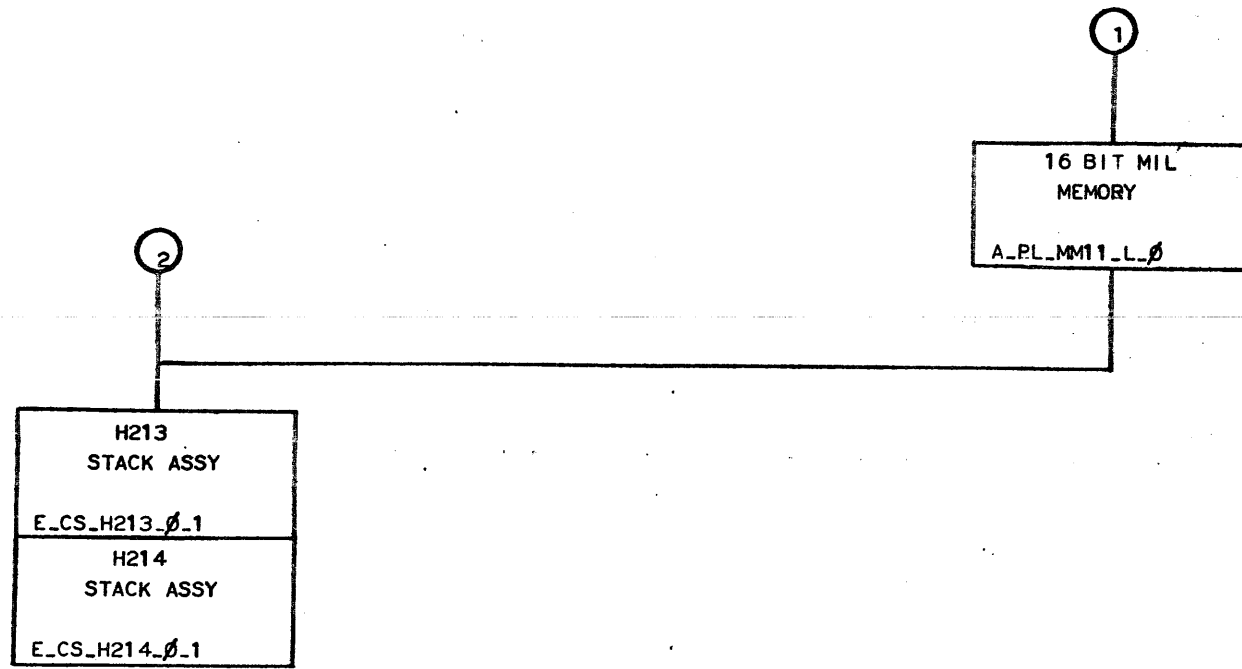
- | SEQUENCE | SEQUENCE |
|-----------------------|---------------|
| MODULE UTILIZATION | D_MU_MM11_L-1 |
| BLOCK DIAGRAM | D_BD_MM11_L-2 |
| TIMING DIAGRAM | D_TD_MM11_L-3 |
| *MEMORY DRIVERS | E_SC_G231_0-1 |
| *CONTROL & DATA LOOPS | E_CS_G110_0-1 |
| STACK SCHEMATIC | E_CS_H213_0-1 |
| STACK SCHEMATIC | E_CS_H214_0-1 |
| BLOCK DIAGRAM | D_BD_MM11_S-2 |
| 8K MEMORY | A_PL_MM11_L-0 |

MFG. PRINT SET
MFG. TEST PRO. FOR MM11/K,L,M,S&SP
ASP-MM11-L-5

UNIT VARIATIONS		PRINT SET TYPE			
VARIATION	TITLE	MM11_L			
MM11_K	4K 16 BIT 18 MIL MEMORY	X			
MM11_L	8K 16 BIT 18 MIL MEMORY	X			

* SPECIAL REVISION PRINTS ARE AVAILABLE ON 'C' ETCH REV. MODULES.
CARE SHOULD BE TAKEN TO INSURE THAT PROPER PRINTS ARE ORDERED.

REVISIONS	DATE	CHG. NO.	REV	USED ON OPTION/MODEL	DRN.	DATE	TITLE	SIZE	CODE	NUMBER	REV
	9/72	MM11L-00001	A		1-25-72	X. Kalayhan					
	1-72	MM11L00002	B		CHK'D.	1-25-72					
	1-73	MISC-00107	C		X. Kalayhan	1-25-72					
	2-73	MISC-00111	D		PROJ ENG.	1-25-72					
	2-73	MISC-00112	E		P. Duvalet	1-25-72					
	2-73	MISC-00113	F		PROD. & FIELD SERV.	1-26-72					
	1-74	MM11L-3	H		R. K. Tolson	1-26-72					



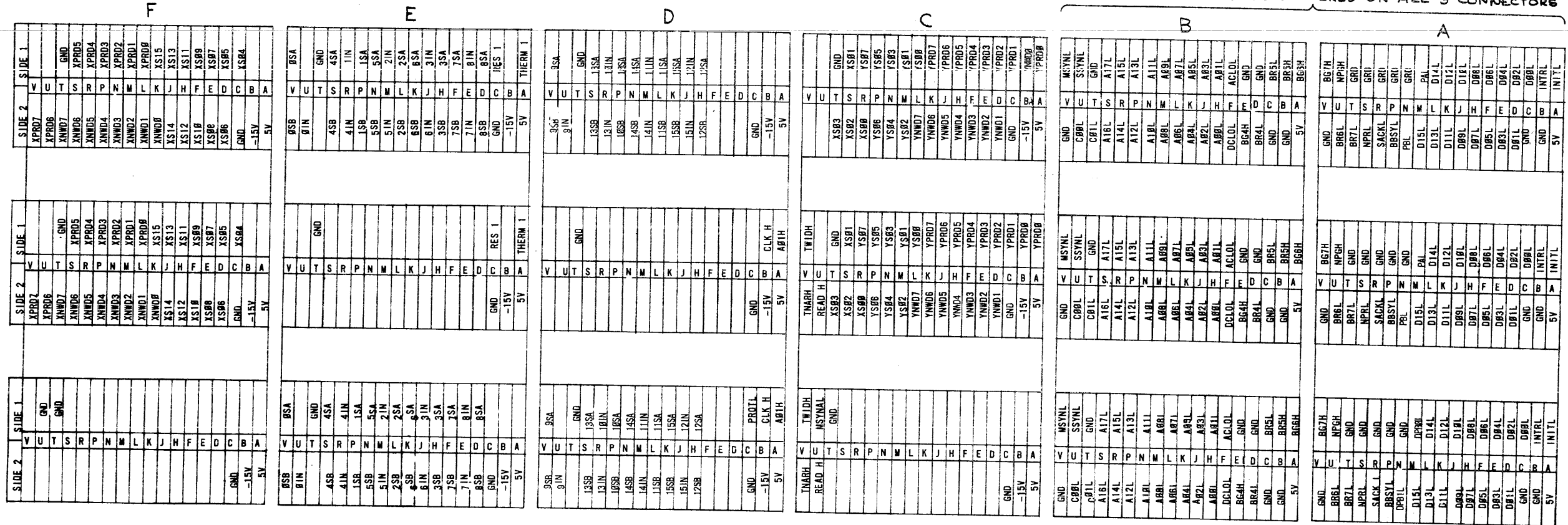
TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
16 BIT 18 MIL MEMORY	2	3	B	DD	MM11-L	H.

CUSTOMER PRINT SET					ELECTRICAL					CUSTOMER PRINT SET					MECHANICAL						
MM11-L				MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	MM11-L				MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X					1	D_MU_MM11-L-1	*	1	MODULE UTILIZATION							1	A_PL_MM11-L-0	*	1	MEMORY	
X						D_BD_MM11-L-2	*	1	BLOCK DIAGRAM												
X						D_TD_MM11-L-3	*	1	TIMING DIAGRAM												
X						E_CS_G231-0-1	#	5	MEMORY DRIVER								A_PS_3010654-0-0			PURCHASE SPEC	
X						E_CS_G110-0-1	#	5	CONTROL & DATA LOOPS												
X						D_BD_MM11-S-2	#	2	BLOCK DIAGRAM												
X						A_PL_MM11-L-0		1	8K MEMORY							2	B_DD_H214-0-1	#	2	STACK SCHEMATIC	
						A_SP_MM11-1-7	A	4	PRELIM. ENG. SPEC. FOR MM11-K,L								B_DD_H213-0	#	2	STACK SCHEMATIC	
X					2	E_CS_H213-0-1	#	2	STACK SCHEMATIC												
X						E_CS_H214-0-1	#	2	STACK SCHEMATIC								A_PL_G645-0-0		1	STACK BOARD	
						A_SP_G109-0-8		1	G109,G110 CONT & DATA LOOP MFG. SPEC.												
						A_SP_G231-0-8		1	MEMORY DRIVER MFG. SPEC.												
						A_SP_MM11-L-4		1	MM11-K,-L,-S & -SP MFG. TEST SPEC.												
				X		A_SP_MM11-L-5		29	MFG. TEST PRO. MM11/K,L,M,S & SP												

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PIN SIDE VIEW OF BACKPLANE

THESE 2 SLOTS ARE UNIBUS WIRED ON ALL 3 CONNECTORS



H213, H214 STACK
(F, D, C) (QUAD B 1/2)
UNIBUS CONN OR TERM (A, B)

DRIVE
(F, D, C, B, A) (HEX B 1/2)
G2 B1

SENSE - CONTROL
(F, D, B, C, A) (HEX B 1/2)
G1 B0

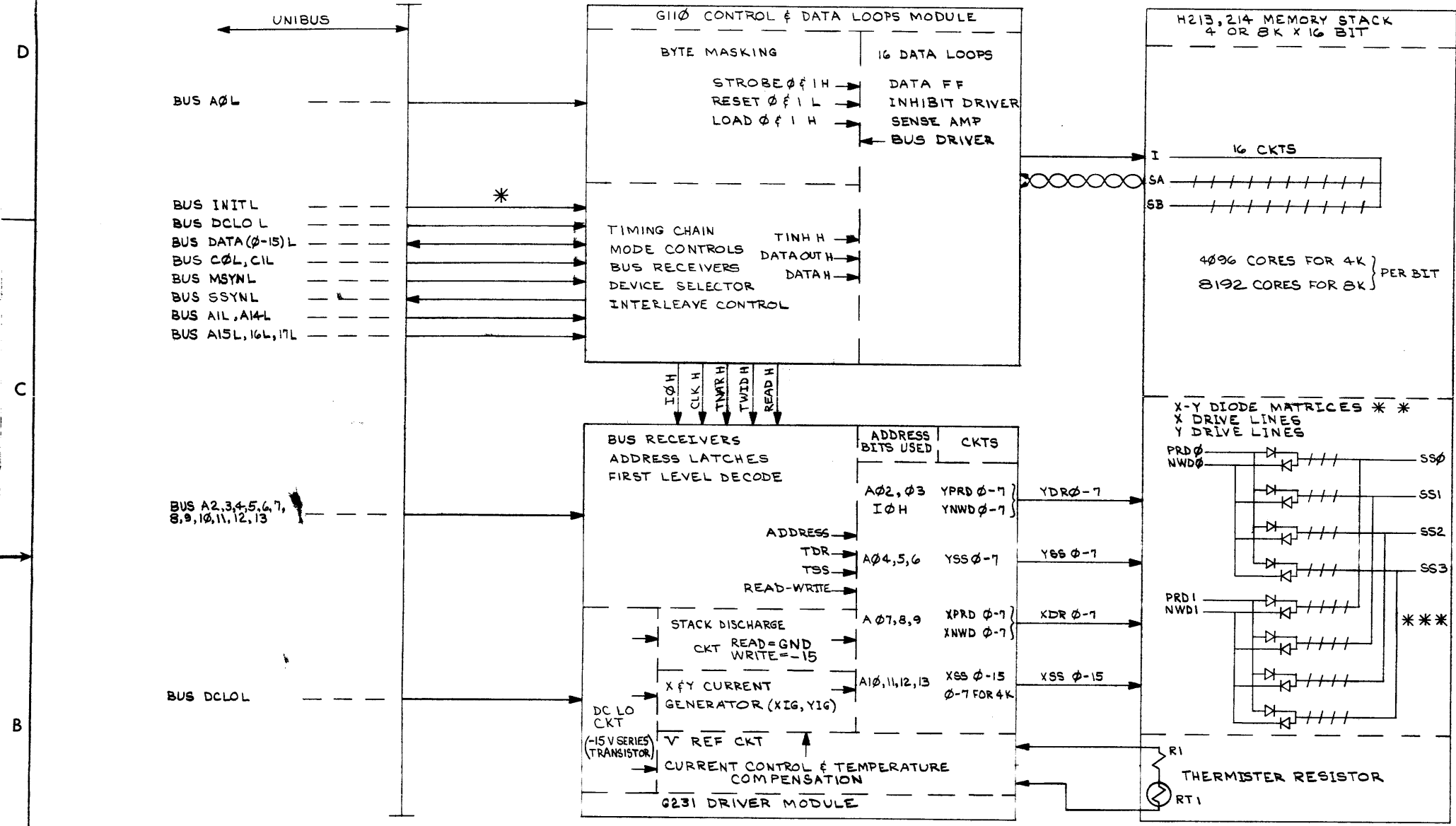
REV	CHANGE NO
CHK	

REVISIONS
DEC FORM NO
DRD 102-B

FIRST USED OR OPTION/MODEL MM11-L	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DBY <i>Clark</i>	DATE 1/19/72	 DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS .XXX - .006	CHK'D <i>P. Dumont</i>	DATE 1-24-72		
ANGLES .XX - .02	ENG <i>P. Dumont</i>	DATE 1-24-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD <i>R.V. Peterson</i>	DATE 1-25-72	TITLE MODULE UTILIZATION	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE DMM11-L-1	NUMBER
FINISH	SCALE	SHEET 1 OF 1	DIST.	REV.

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NOTES:
 *1. ALL ARROWS SHOW SIGNAL FLOW DIRECTION.
 **2. MATRIX SHOWN IS FOR ILLUSTRATION ONLY.
 ***3. ACTUAL MATRIX HAS
 { Y AXIS 8PRD, 8NRD, 8SS
 X AXIS 4K 8PRD, 8NRD, 8SS
 X AXIS 8K 8PRD, 8NRD, 16SS



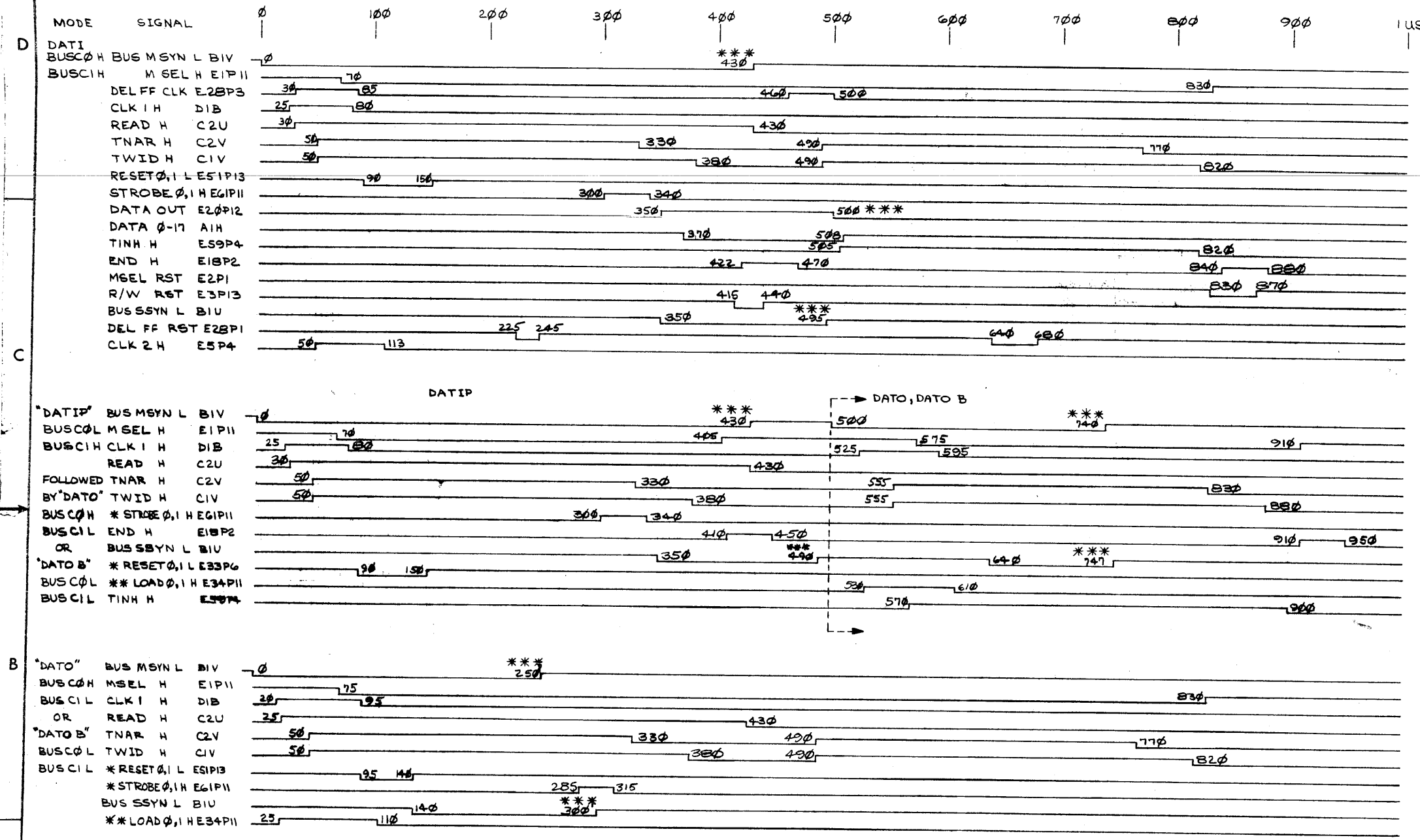
REV.	CHANGE NO.

REV. NUMBER
 BDDMMII-L-2

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MMII-L				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>J. Cahery</i> 11/19/71	DATE 1-25-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	CHK'D. <i>J. Cahery</i>	DATE 1-25-72	TITLE BLOCK DIAGRAM	
ANGLES ±0° 30'	ENG. <i>P. Durant</i>	DATE 1-25-71		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROJ. ENG. <i>P. Durant</i>	DATE 1-25-71		
	PROD. <i>R.K. Peterson</i>	DATE 1-26-72		
MATERIAL	NEXT HIGHER ASSY.		(MMII-L)	
FINISH	B-DD-MMII-L	SIZE CODE DBD	NUMBER MMII-L-2	REV.
	SCALE	SHEET 1	OF 1	DIST.

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- NOTES:
1. ANY SIGNALS NOT SHOWN ON DATIP, DATO OR DATO B ARE AS SHOWN ON DATI TIMING.
 - * 2. RESET L AND STROBE H DO NOT OCCUR IN DATO MODE. THEY ONLY OCCUR FOR THE BYTE NOT BEING ADDRESSED IN DATO B MODE.
 - ** 3. LOAD H OCCURS FOR BOTH BITS IN DATO MODE AND ONLY FOR THE ADDRESSED BYTE IN THE DATO B MODE.
 - *** 4. ACTUAL TIME DEPENDS ON BUS AND PROCESSOR DELAYS.
 5. ALL SIGNALS ON G109 OR G110 MODULE



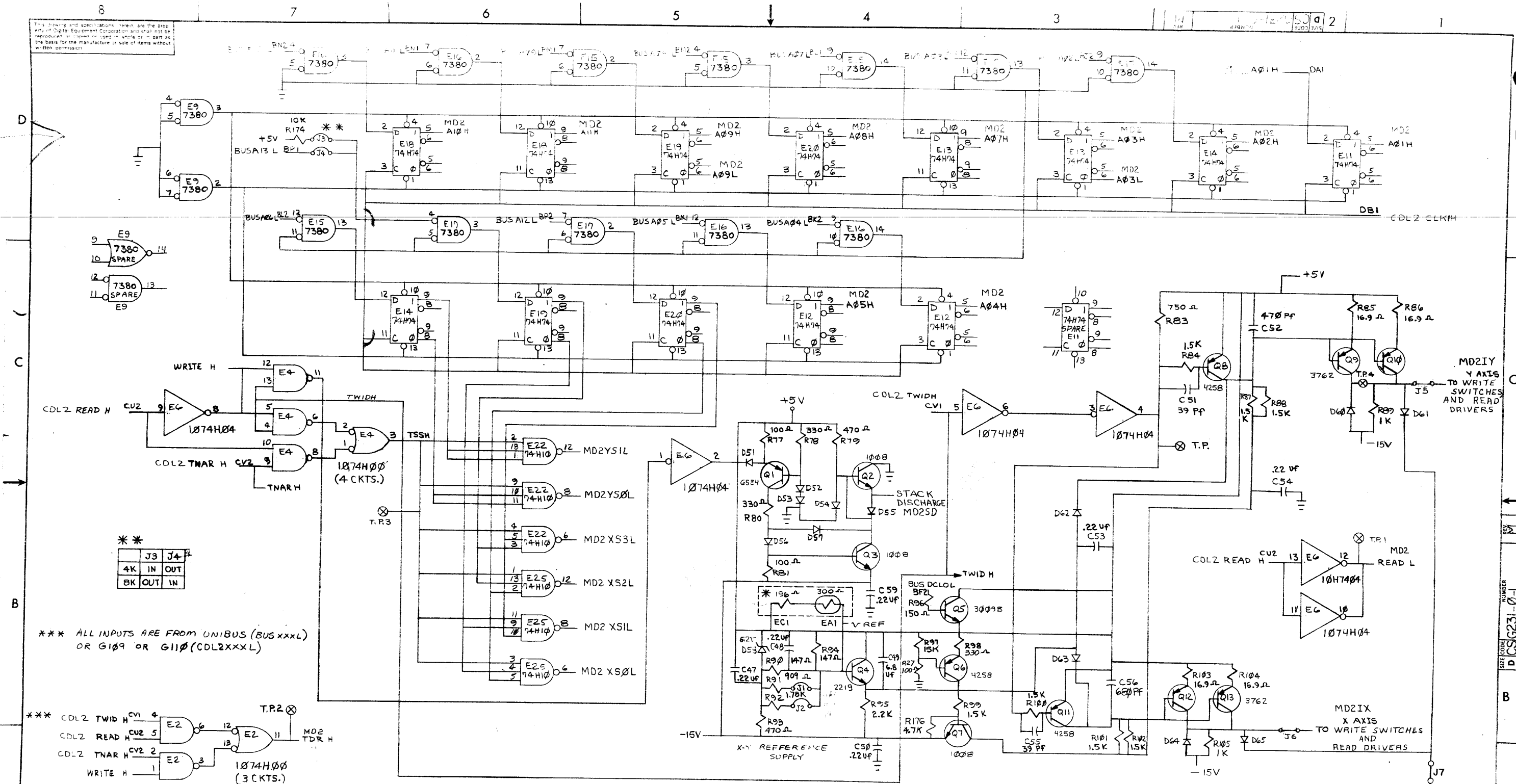
DATI

REV. NO. CHANGE NO. CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MMII-L				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN <i>J. Carbery</i> DATE 12/3/71	EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS	ANGLES	CHK'D <i>J. Carbery</i> DATE 1-27-72	TIMING DIAGRAM (MMII-L, MMII-K)	
.XXX = .005	± 0° 30'	ENG. P. Duvalet DATE 1-25-72		
.XX = .02		PROJ. ENG. P. Duvalet DATE 1-25-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROD. <i>R. Peterson</i> DATE 1-27-72	D T D MMII-L-3	
MATERIAL		NEXT HIGHER ASSY.	SIZE CODE	NUMBER
FINISH				REV.

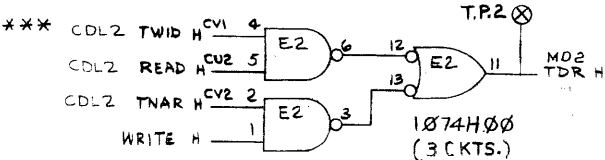
REV. NO. CHANGE NO. CHK

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J3	J4
4K	IN OUT
BK	OUT IN

*** ALL INPUTS ARE FROM UNIBUS (BUS XXXL) OR G109 OR G110 (CDL2XXXL)



* THIS CIRCUIT IS ON STACK BOARD

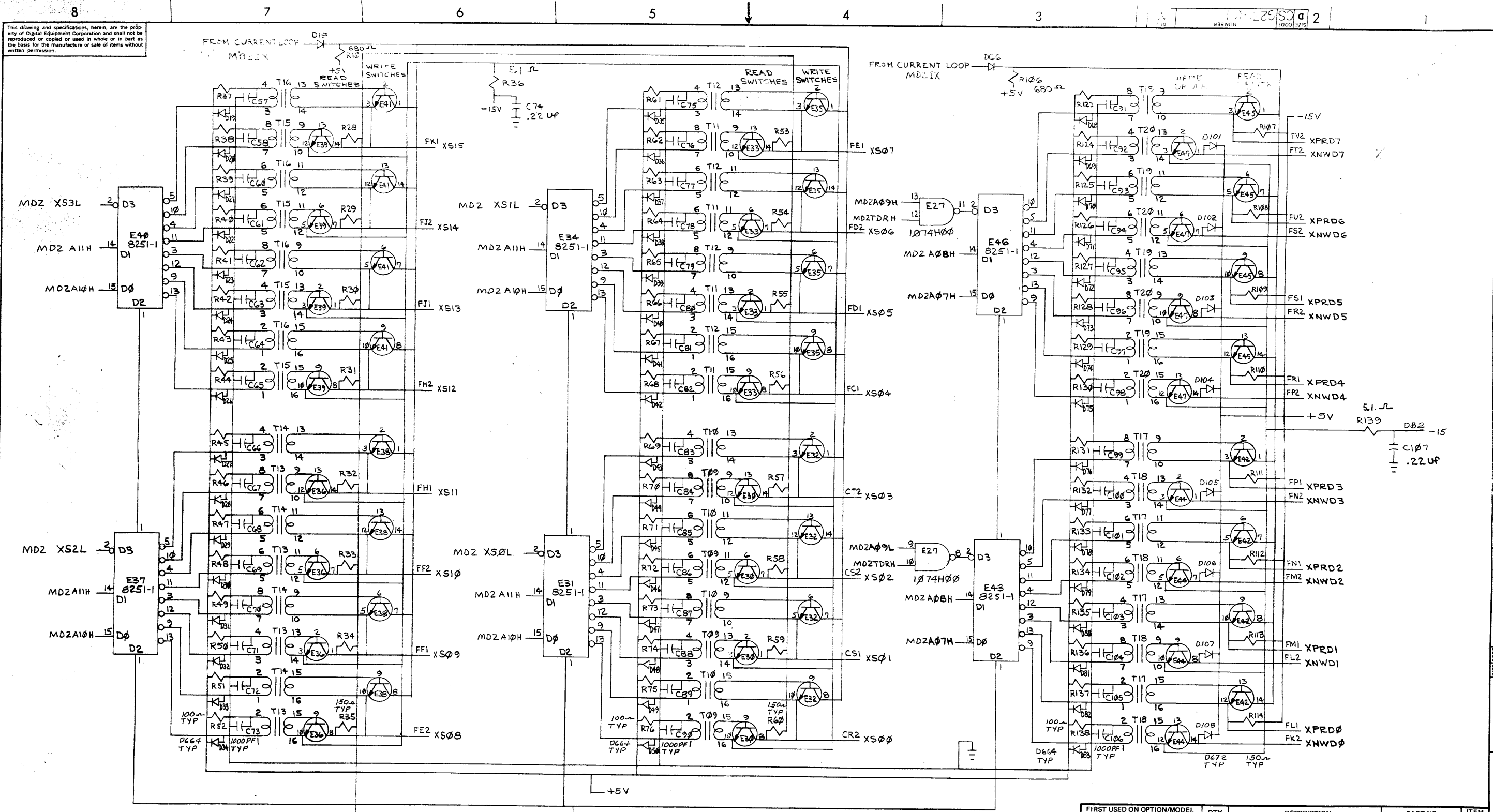
A

REVISIONS	REV
CHANGE NO.	
CHK	

DEC 10 1971
DRC 102-B

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED, DIMENSION IN INCHES. TOLERANCES	DBN Carberry	DATE 9-24-71	 digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHKD Salyer	DATE 1-21-72		
ANGLES	ENG P.D. Grant	DATE 1-25-72		
.XXX = .005 .XX = .02 .X = .1	PROJ. ENG. P. Durand	DATE 1-25-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. R.K. Pines	DATE 1-26-72	TITLE PDP-11 MEMORY DRIVER	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH	SCALE		D CS	G231-0-1
		SHEET 2 OF 4	DIST.	REV. M

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MD2SD STACK DISCHARGE

MD2 READ L

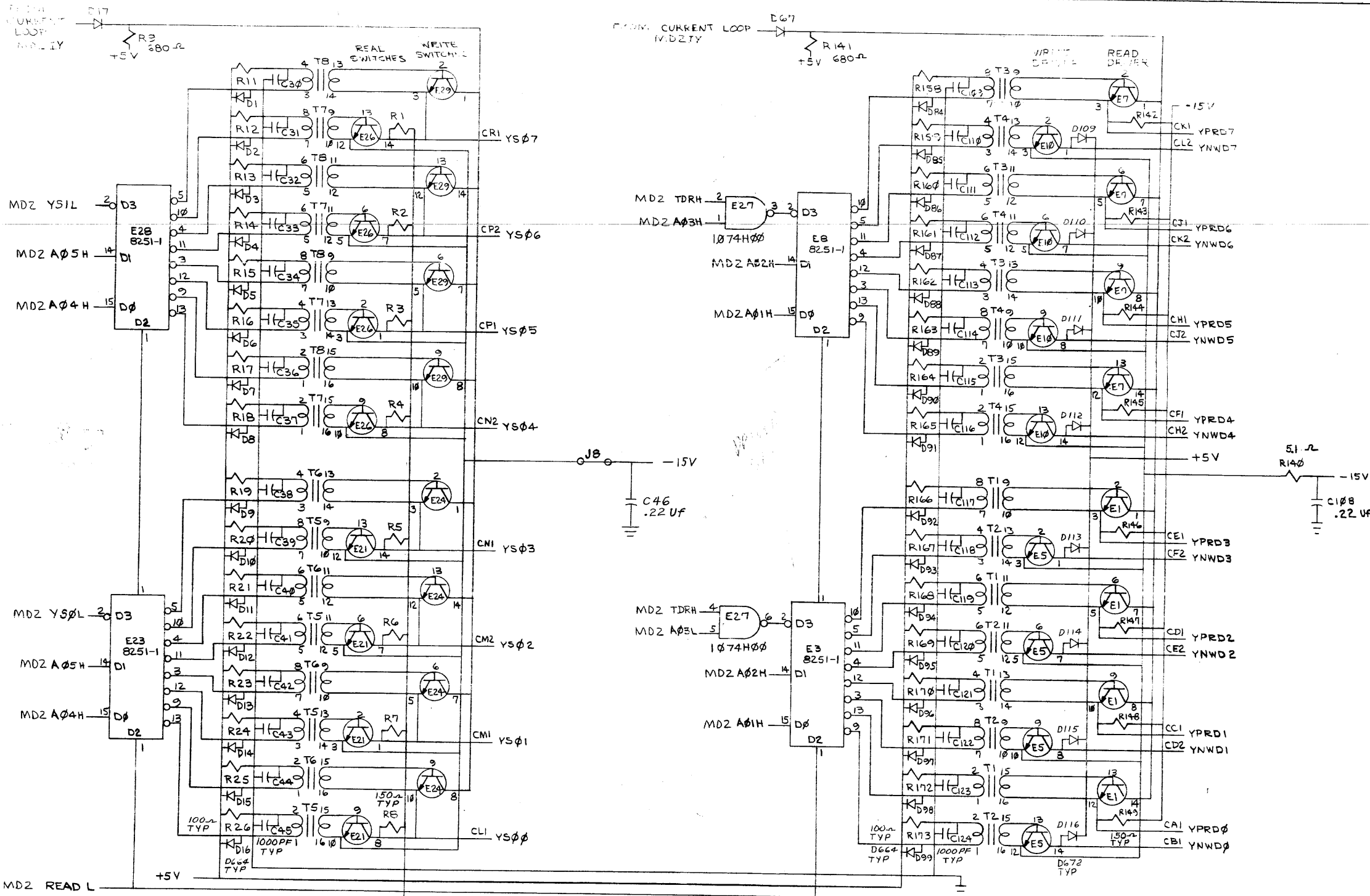
ALL INPUTS FROM G231 SHEET 2 (MD2)
ALL OUTPUTS GO TO MEMORY STACK

REV	CHANGE NO.

DEC FORM NO. DRD 102-B

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN <i>Z. Corbin</i>	DATE 10-1-71	 digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>	
DECIMALS	CHK'D <i>Z. Seligson</i>	DATE 1-21-72		
ANGLES	ENG. P.D. FINST	DATE 1-25-72		
.XXX = .005 .XX = .02 .X = .1	PROJ. ENG. <i>P. D. FINST</i>	DATE 1-25-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. <i>R.K. Pelton</i>	DATE 1-24-72	PDP-11 MEMORY DRIVER	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH	SCALE		DCS G231-0-1	REV.
	SHEET 3 OF 4		DIST.	12

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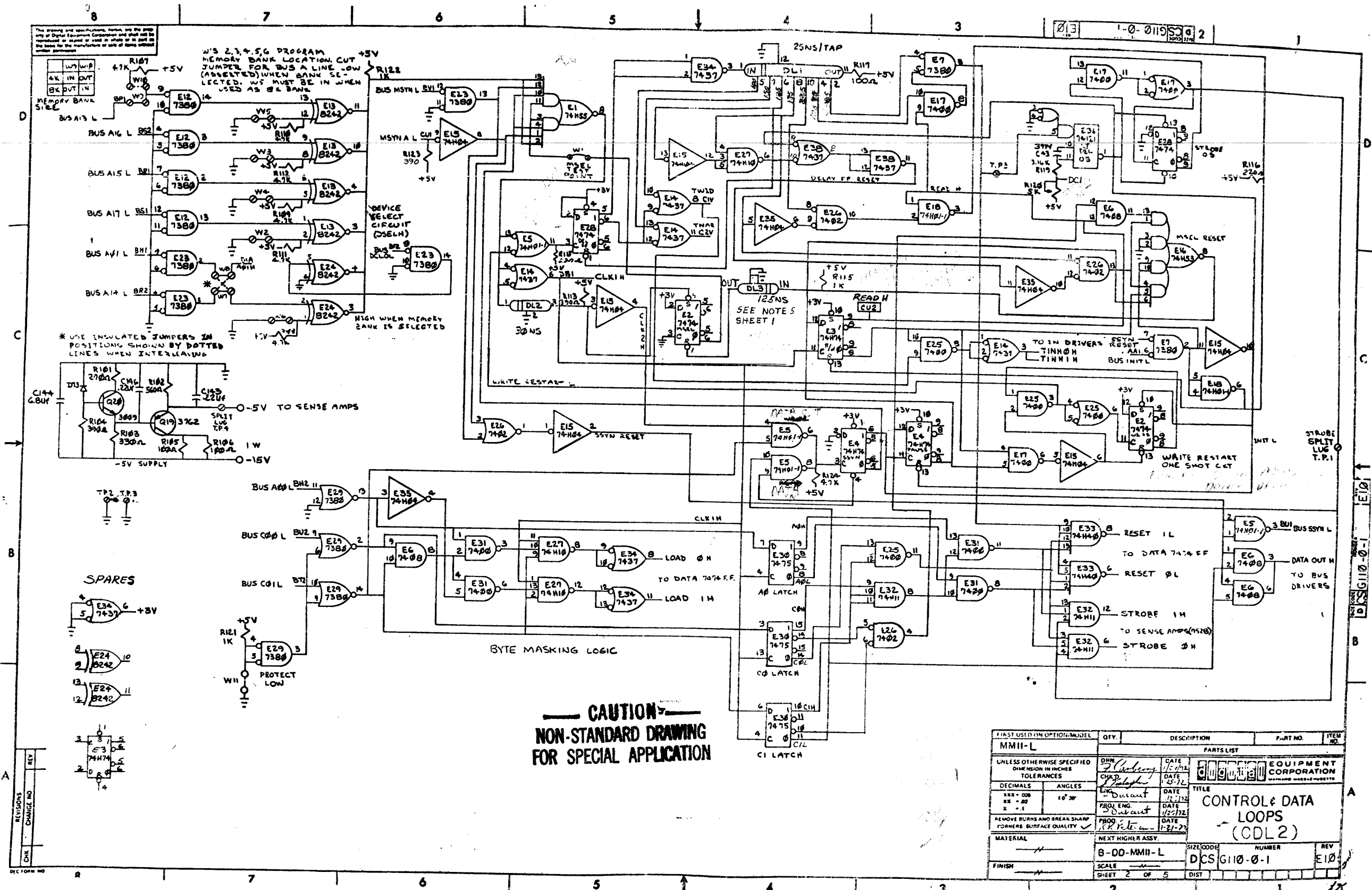


ALL INPUTS FROM 6231 SHEET 2 (MD2)
ALL OUTPUTS TO MEMORY STACK

REV.	CHANGE NO.	REVISIONS

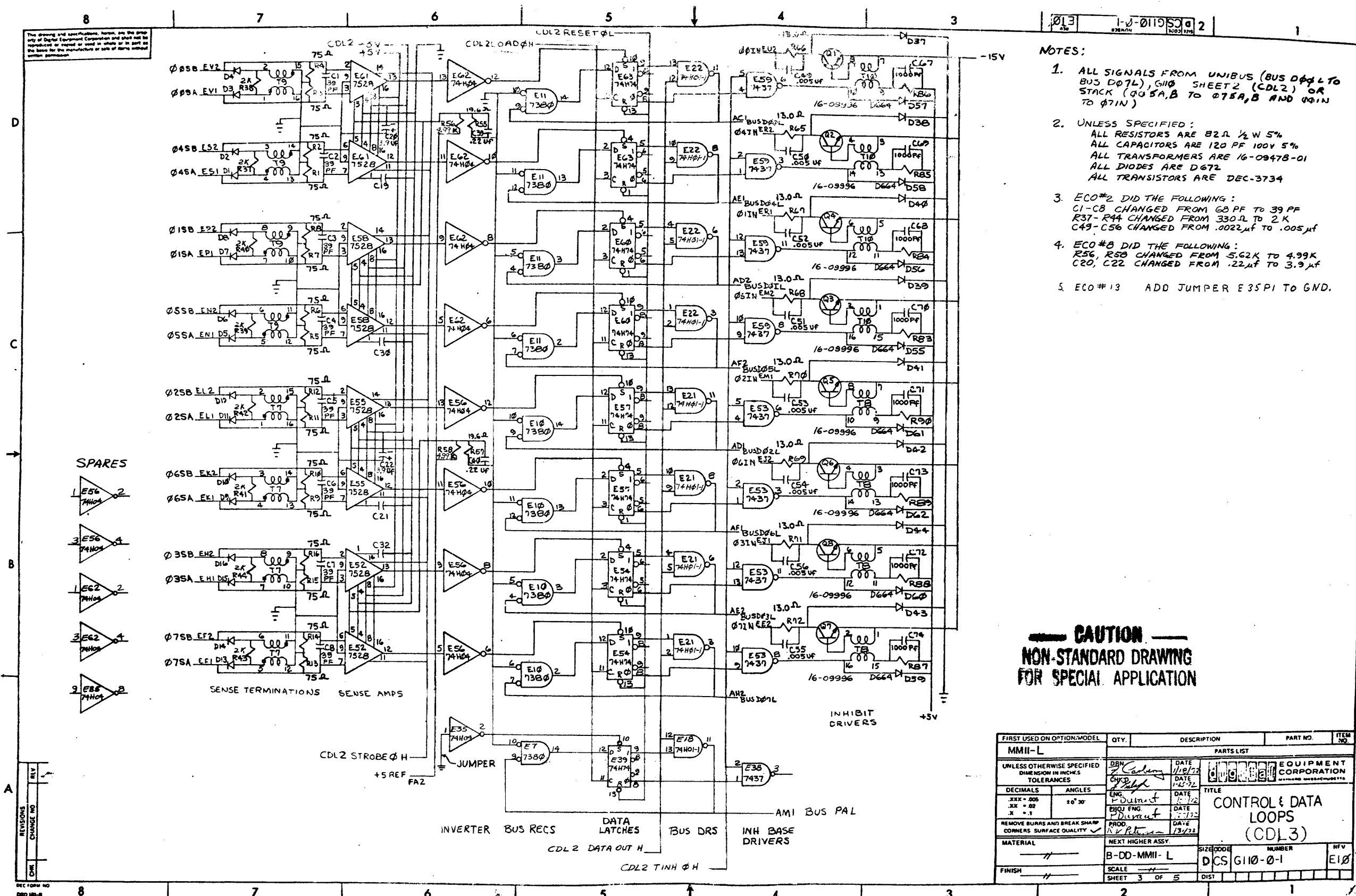
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN 2 Carberry	DATE 10/5/71	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHK'D J. Selig	DATE 1-21-72		
.XXX = .005	ENG. P. Duval	DATE 1-25-72	TITLE PDP-11 MEMORY DRIVER	
.XX = .02	PROJ. ENG. P. Duval	DATE 1-25-72		
.X = .1	PROD. R. Peterson	DATE 1-26-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	MATERIAL //	NEXT HIGHER ASSY.	SIZE CODE DCS	NUMBER G231-0-1
FINISH //	SCALE //	SHEET 4 OF 4	DIST.	REV. M

REV. M
NUMBER
DCS G231-0-1
SIZE CODE



CAUTION
NON-STANDARD DRAWING
FOR SPECIAL APPLICATION

FIRST USED IN OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MMII-L				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	DATE	EQUIPMENT CORPORATION	
XX - .00	± .00	12/72	CONTROL & DATA LOOPS (CDL2)	
REMOVE BURNS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE	NUMBER	
MATERIAL	NEXT HIGHER ASSY.	12/72	DCS G110-0-1	
FINISH		DATE	REV	
		12/72	E10	
		SCALE	SHEET 2 OF 5	
		DIST		



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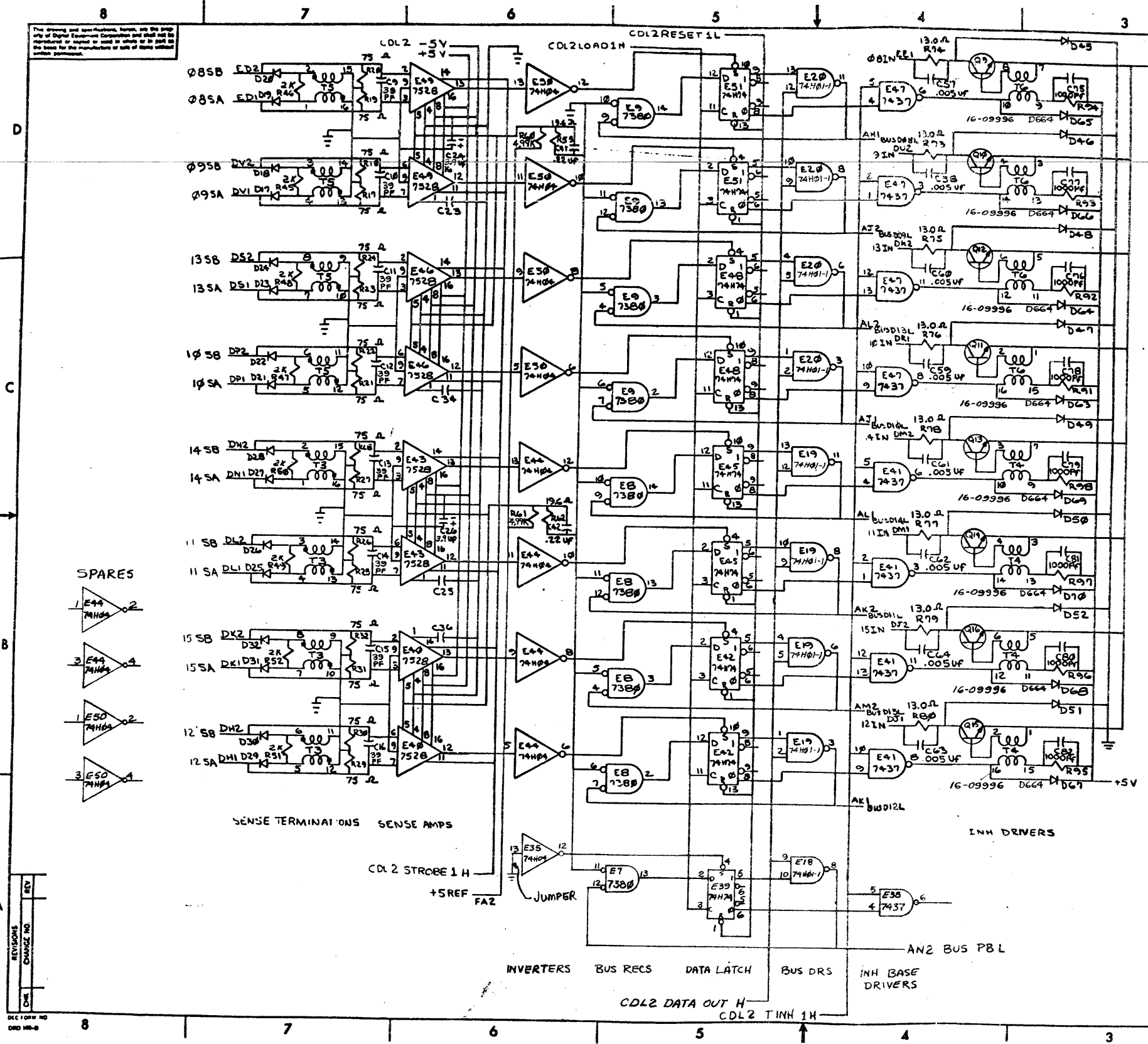
- NOTES:**
1. ALL SIGNALS FROM UNIBUS (BUS D07L TO BUS D07L), G110 SHEET 2 (CDL2) OR STACK (Q05A,B TO Q75A,B AND Q01N TO Q71N)
 2. UNLESS SPECIFIED:
 ALL RESISTORS ARE 82Ω 1/2 W 5%
 ALL CAPACITORS ARE 120 PF 100V 5%
 ALL TRANSFORMERS ARE 16-09478-01
 ALL DIODES ARE D672
 ALL TRANSISTORS ARE DEC-3734
 3. ECO#2 DID THE FOLLOWING:
 C1-C8 CHANGED FROM 60 PF TO 39 PF
 R37-R44 CHANGED FROM 330Ω TO 2.2K
 C49-C56 CHANGED FROM .0022μF TO .005μF
 4. ECO#8 DID THE FOLLOWING:
 R56, R50 CHANGED FROM 5.62K TO 4.99K
 C20, C22 CHANGED FROM .22μF TO 3.9μF
 5. ECO#13 ADD JUMPER E35PI TO GND.

CAUTION
 NON-STANDARD DRAWING
 FOR SPECIAL APPLICATION

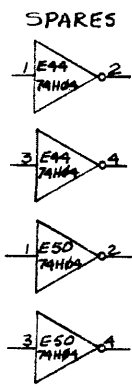
FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
MMII-L		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES		DATE 11/18/72	EQUIPMENT CORPORATION	
TOLERANCES		DATE 1-25-72	MASSACHUSETTS	
DECIMALS	ANGLES	ENG. PRODUCT	TITLE	
.XX - .005	±0°30'	DATE 1-25-72	CONTROL & DATA LOOPS	
.XX - .02		DATE 1-25-72	(CDL3)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROD. DATE 12/22	NUMBER	
MATERIAL		NEXT HIGHER ASSY.	SIZE 0006	REV
FINISH		B-DD-MMII-L	DCS G110-0-1	E10
		SCALE	DIST	
		SHEET 3 OF 5		

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1-0-011950 2



- NOTES:
1. ALL SIGNALS FROM UNIBUS (BUS DOBL-DISL) G110 SHEET 2 (CDL2) OR STACK (085A, B TO 155A, B AND 081N TO 151N)
 2. UNLESS SPECIFIED:
ALL RESISTORS ARE 02.0 1/2 W 5%
ALL DIODES ARE D672
ALL CAPACITORS ARE 120 PF 100V 5%
ALL TRANSFORMERS ARE 16-09478-01
ALL TRANSISTORS ARE DEC-3734
 3. ECO #2 DID THE FOLLOWING:
C9-C16 CHANGED FROM 60 PF TO 39 PF.
R45-R52 CHANGED FROM 330Ω TO 2K
C57-C64 CHANGED FROM .0022μF TO .005μF
 4. ECO #8 DID THE FOLLOWING:
R60, R61 CHANGED FROM 5.62K TO 4.99K
C24, C26 CHANGED FROM .22μF TO 3.9μF
 5. ECO #13 ADD JUMPER E35P13 TO GND.



CAUTION
NON-STANDARD DRAWING
FOR SPECIAL APPLICATION

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART #	ITEM NO.
MM11-L				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DATE 11/72	DATE 11/72	DIGITAL EQUIPMENT CORPORATION CORPORA	
DECIMALS ANGLES	ENG. 11/72	DATE 11/72	TITLE CONTROL & DATA LOOPS (CDL 4)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROJ. ENG. 11/72	DATE 11/72	SCALE B-DD-MM11-L	
MATERIAL	NEXT HIGHER ASSY.	DATE 11/72	SIZE CODE DCS G110-0-1	
FINISH			NUMBER E10	
			SHEET 4 OF 5	

E.C.O. MODULE REFERENCE

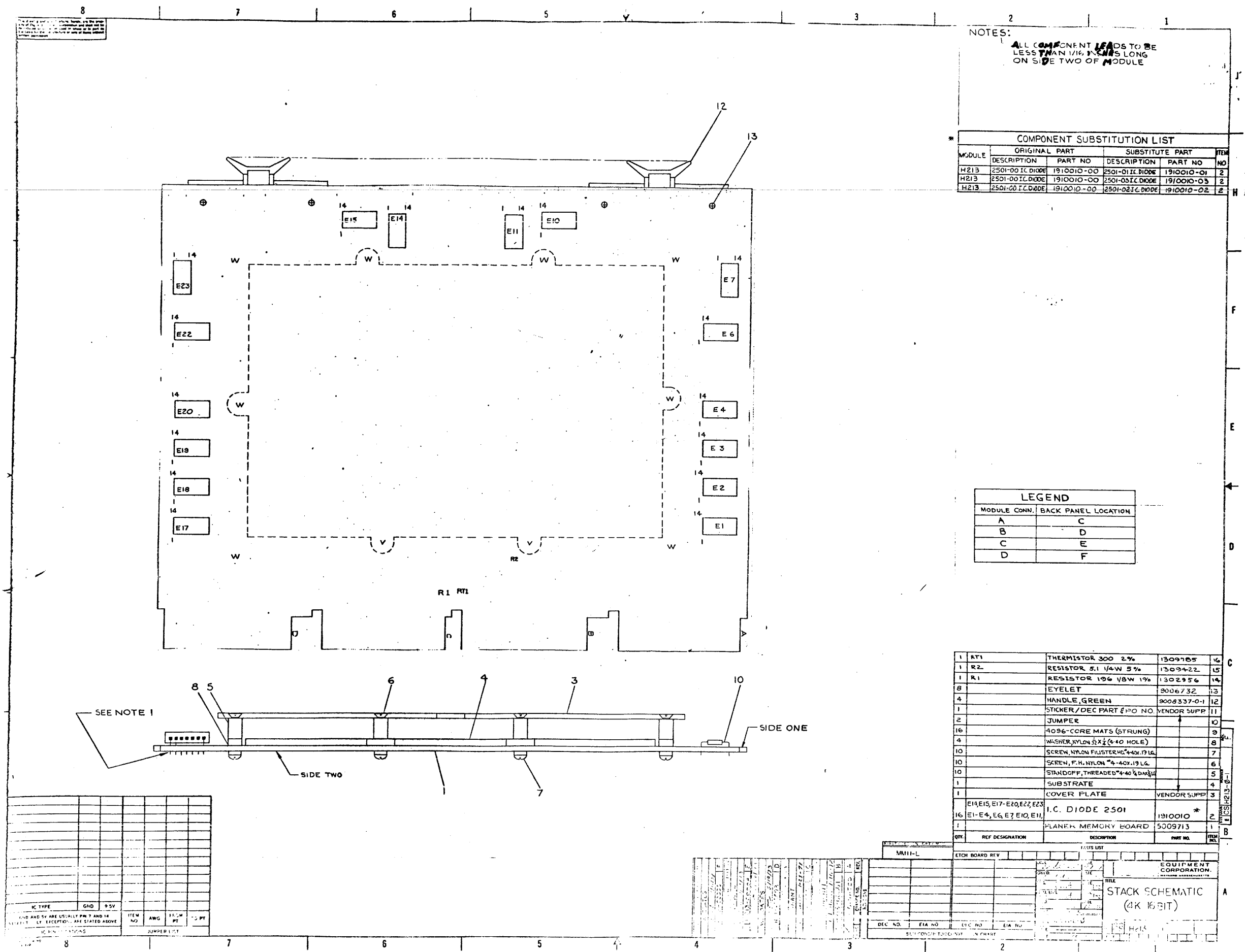
ECO NUMBER	SUMMARY OF E.C.O.	PRINT CHANGE LOCATION	MODULE REVISION	CIRCUIT SCHEM REVISION	E.C.O. REQUIREMENTS																				
					1	2	3	3A	4	5	6	7	8	9	9A	10	10A	11	12	12A	12B	13	15A	16	17
1	CHANGE R118, R118 FROM 1K TO 220Ω. CUT ETCH FROM E2-P3 TO E5-P4 & TO E15-P4. ADD JUMPERS FROM E2-P3 TO GND, FROM E5-P4 TO E15-P4. CUT ETCH FROM E2-P4 TO E2-P2. ADD JUMPER FROM E2-P4 TO DL2-P3. CUT ETCH FROM E26-P8 TO DL1-P9. ADD JUMPER FROM E26-P8 TO DL1-P9.		A	A	□																				
2	CHANGE SENSE TERM. CAPS. FROM 68 PF TO 39 PF. C1-C6 (16 PARTS), CHANGE BALUN RES'S., R37-R52, FROM 330Ω TO 2K (16 PARTS), CHANGE INH. BY PASS CAPS., C49-C64, FROM .0022 UF TO .005 UF (16 PARTS). CHANGE DL3 FROM 100MS DELAY LINE TO 3K. CHANGE TERM. RES R115 FOR DL3 FROM 390Ω TO 3K.	SHT 3 (4) AREA 2-C SHT 2 AREA 4-C SHT 2 AREA 4-C	B	B	□	□																			
3	DID NOT AFFECT C REV ETCH MODULES				*	*	*																		
3A	DID NOT AFFECT C REV ETCH MODULES				*	*	*																		
4	DL3 NOT TERMINATED PROPERLY. CHANGE R115 FROM 3K TO 1K. CUT ETCH FROM DL3 OUT TO E16-P8. CUT ETCH FROM DL3 IN TO E2-P1. ADD JUMPER FROM DL3 IN TO E16-P8. ADD JUMPER FROM DL3 OUT TO E2-P1.	SHEET 2 AREA 4-C	D	D	□	□	*	*	□																
5	BLUE DOWN DL2 WITH ECCO BOND	SHT 1 AREA 3-D	E	E	□	□	*	*	□	□															
6	REVERSE C12 & C13 THAT SIDE OF CAPACITOR GOES TO +5V. INSTALL 4-1/4" 00 Ω 3/8 LG. STAND-OFFS.	SHT 1 AREA 3-E	F	F	□	□	*	*	□	□															
7	DID NOT AFFECT C REV ETCH MODULES				*	*	*	*	*	*															
8	DRILL BLANK BOARD, AND INSTALL (4) STANDOFFS & SCREWS	SHT 1 AREA 2-F	E1	E1	□	□	*	*	□	□	*	*	□	□	*	*									
9	CHANGE R56, 58, 60, 61 FROM 5.62K TO 4.99K. CHANGE C20, 22, 24, 26, 28, 31, 33, 35 FROM .22 UF TO 3.9 UF. CHANGE C44 & 47 FROM .22 UF TO .01 UF.	SHT 3 (4) AREA 2-C SHT 1 AREA 3-C SHT 1 AREA 3-C	E2	E2	□	□	*	*	□	□	*	*	□	□	*	*									
9A	INSTALL GND JUMPERS ON SIDET. CHANGE PART NO. OF #18 WIRE FROM 9107360-03 TO 1700029.	SHEET 1	H	E3	□	□	*	*	□	□	*	*	□	□	*	*									
10	REPLACE HANDLE E-3, CHANGE PRINT FROM H TO E-3		E3	E3	□	□	*	*	□	□	*	*	□	□	*	*									
10A	REMOVE E2B, CUT ETCH FROM E2B-P13 TO E2B-P2. ADD E2B AND JUMPER E2B-P13 TO E15-P10.		J	E4	□	□	*	*	□	□	*	*	□	□	*	*									
10B	REPLACE HANDLE E-4, CHANGE PRINT FROM J TO E4		E4	E4	□	□	*	*	□	□	*	*	□	□	*	*									
11	CANCELED																								
12	PRINT CHANGE ONLY		E5	E5	□	□	*	*	□	□	*	*	□	□	*	*									
13	ADD 2 JUMPERS SO THAT PAL AND PBL ARE HIGH ON THE BUS		E6	E6	□	□	*	*	□	□	*	*	□	□	*	*									
13A	CHANGE EFFECTIVITY DATE				*	*	*	*	*	*	*	*	*	*	*	*									
14	DID NOT AFFECT C REV ETCH MODULE				*	*	*	*	*	*	*	*	*	*	*	*									
15	GENERATE AN ALLOWABLE SUBSTITUTION LIST. CHANGE DL3.	SHEET 1 AREA 1-E	E7	E7	□	□	*	*	□	□	*	*	□	□	*	*									
15A	DELETE 68 Ω RES FROM ALLOWABLE SUBSTITUTION LIST.	SHEET 1 AREA 1+2-H	E7	E7	□	□	*	*	□	□	*	*	□	□	*	*									
16	3 ETCH CUTS, 2 JUMPERS TO E7 PINS 6 & 7	SHT AREA 2-C	E8	E8	□	□	*	*	□	□	*	*	□	□	*	*									
17	DID NOT AFFECT C REV ETCH MODULES				*	*	*	*	*	*	*	*	*	*	*	*									
18	1 ETCH CUT, REMOVE 1 JUMPER. INSTALL #30 TWP FOR STROBE Φ H		E9	E9	□	□	*	*	□	□	*	*	□	□	*	*									
19	MOVE E26-8 FROM TAP 9 TO TAP 10 OF DELAY LINE 1.	SHEET 2 AREA D4	E10	E10	□	□	*	*	□	□	*	*	□	□	*	*									

- NOTES:**
- THIS PRINT IS FOR C REV ETCH MODULES ONLY.
 - THIS CHART IS DESIGNED TO ALLOW THIS GIO CIRCUIT SCHEMATIC TO BE USED WITH ALL PREVIOUS REVISION MODULES.
 - CHART IS USED AS FOLLOWS:
 - LOCATE REVISION LETTER STAMPED ON HANDLE
 - FOLLOW THE MODULE STAMPED COLUMN TO FIND APPROPRIATE REVISION
 - NOTICE SYMBOLS TO RIGHT OF REVISION LETTER, THESE SYMBOLS WILL INDICATE ECO REQUIREMENTS FOR THAT MODULE.
 - SYMBOLS:
 - = REQUIRED BUT REFER TO EFFECTIVITY DATE
 - Δ = ONE OR THE OTHER IS REQUIRED
 - = ONE OR THE OTHER IS REQUIRED BUT (C152 MUST BE CHANGED)
 - * = NOT REQUIRED

CAUTION
NON-STANDARD DRAWING
FOR SPECIAL APPLICATION

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MM11-L				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. LG.	DATE 12-22-79	PARTS LIST	
TOLERANCES	CHK'D.	DATE	digital EQUIPMENT CORPORATION	
DECIMALS	ENG.	DATE	TITLE	
ANGLES ±0° 30'	PROJ. ENG.	DATE	CONTROL & DATA LOOPS (CDL5)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD.	DATE	MATERIAL	
NEXT HIGHER ASSY.	B-DD-MM11-L	SIZE CODE	NUMBER	REV.
SCALE NONE	SHEET 5 OF 5	DIST.	DCS GI10-0-0	E10

REVISIONS
CHANGE NO.
REV.
CH.



NOTES:
 ALL COMPONENT LEADS TO BE LESS THAN 1/16 INCH LONG ON SIDE TWO OF MODULE

* COMPONENT SUBSTITUTION LIST					
MODULE	ORIGINAL PART		SUBSTITUTE PART		ITEM NO
	DESCRIPTION	PART NO	DESCRIPTION	PART NO	
H213	2501-00 I.C. DIODE	1910010-00	2501-01 I.C. DIODE	1910010-01	2
H213	2501-00 I.C. DIODE	1910010-00	2501-03 I.C. DIODE	1910010-03	2
H213	2501-00 I.C. DIODE	1910010-00	2501-02 I.C. DIODE	1910010-02	2

LEGEND	
MODULE CONN.	BACK PANEL LOCATION
A	C
B	D
C	E
D	F

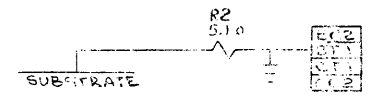
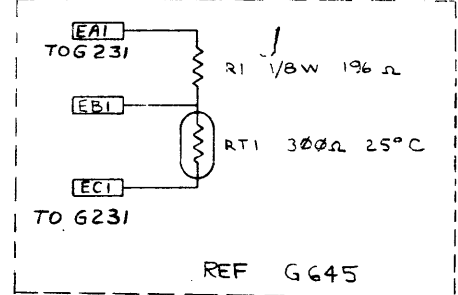
1	RT1	THERMISTOR 300 2%	1309765	16
1	R2	RESISTOR 5.1 1/4W 5%	1309422	15
1	R1	RESISTOR 10K 1/8W 1%	1302956	14
8		EYELET	8006732	13
4		HANDLE, GREEN	8008337-0-1	12
1		STICKER/DEC PART # PO NO. VENDOR SUPP.		11
2		JUMPER		10
16		4096-CORE MATS (STRUNG)		9
4		WASHER, NYLON 3/8 X 1/2 (4-40 HOLE)		8
10		SCREW, NYLON FILUSTER 4-40 X .19 LG.		7
10		SCREW, F.H. NYLON 4-40 X .19 LG.		6
10		STANDOFF, THREADED 4-40 1/2 DM 3/16		5
4		SUBSTRATE		4
1		COVER PLATE	VENDOR SUPP.	3
16	E14, E15, E17-E20, E22, E23	I.C. DIODE 2501	1910010 *	2
1	E1-E4, E6, E7, E10, E11	FLANER MEMORY BOARD	5009713	1

IC TYPE	GND	+5V	ITEM NO	AWG	TRIM PT	15 PT

REV	DATE	BY	CHKD	APP'D	DESCRIPTION

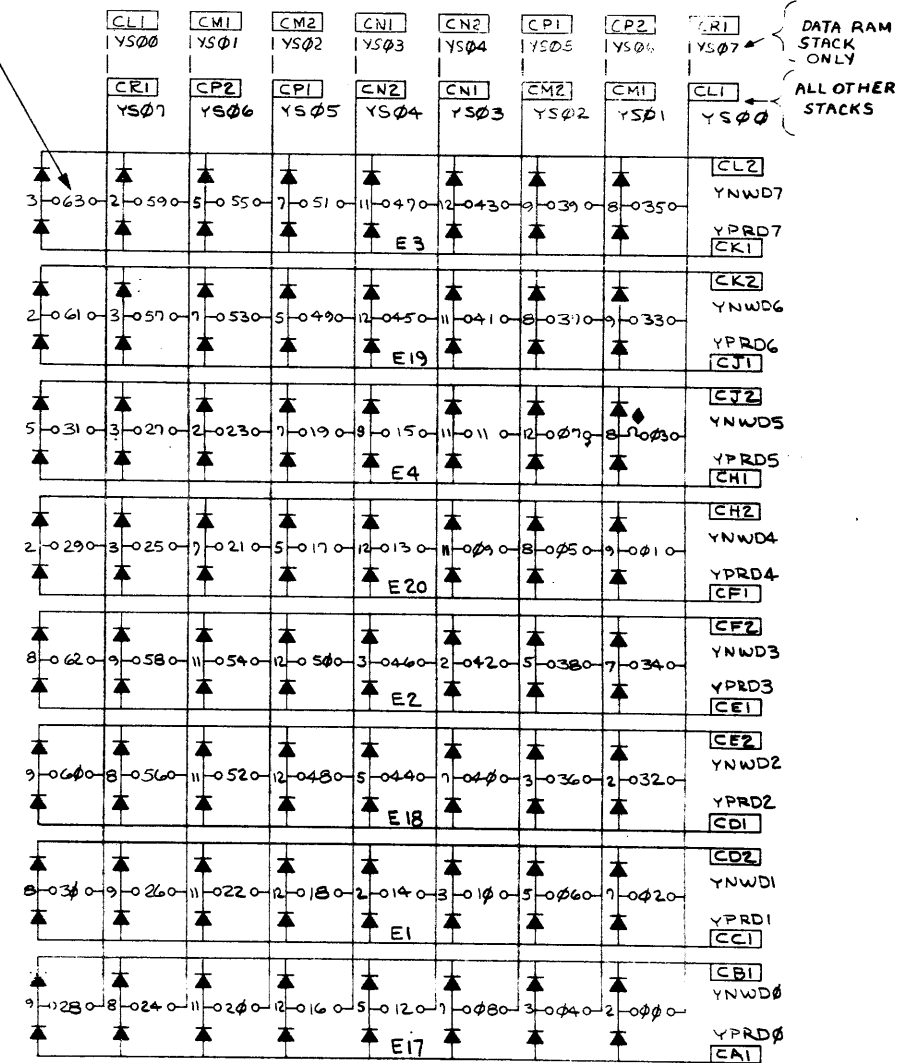
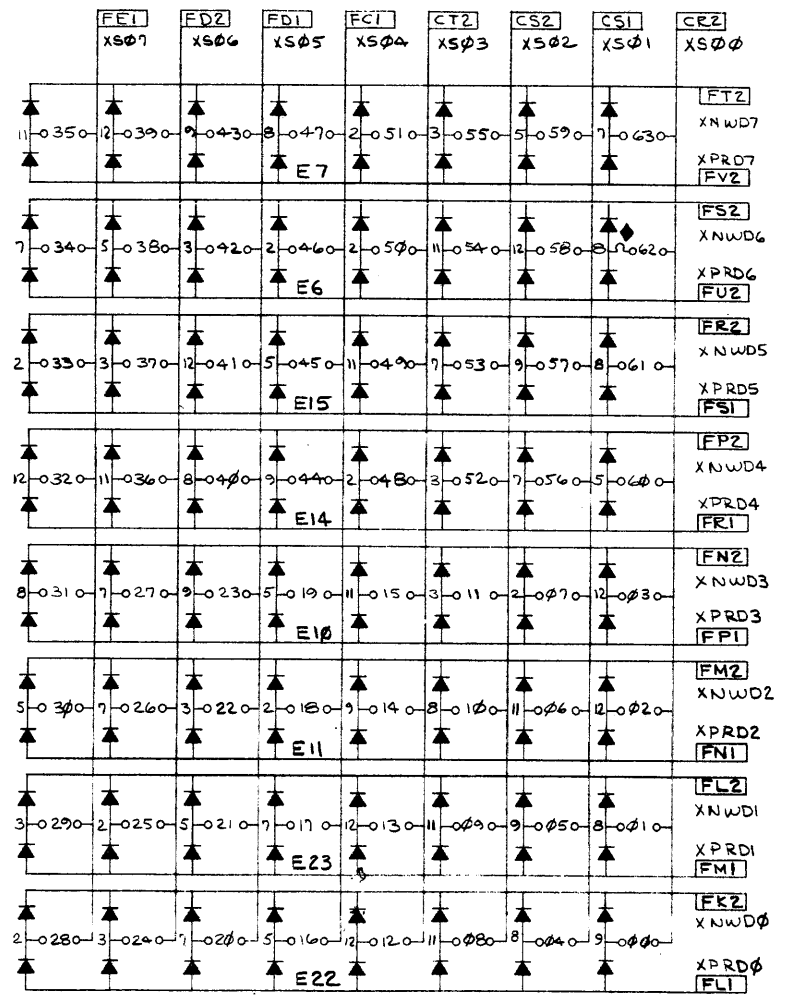
STACK SCHEMATIC
(4K 16BIT)

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- NOTES
- UNLESS OTHERWISE SPECIFIED: IC'S ARE TO BE DEC PART # 1910010
 - INDICATES STACK LINE NUMBER. (TYP)
 - INDICATES CURRENT LOOP.
 - INDICATES MAGNET WIRE TERMINATION (SOLDERED TO P.C. PAD).

- EV2 - OIN } BIT 0
- EV2 - OSB }
- EV1 - OSA }
- ER2 - OIN } BIT 4
- ER2 - OSB }
- ES1 - OSA }
- ER1 - OIN } BIT 1
- EP2 - OSB }
- EP1 - OSA }
- EM2 - OIN } BIT 5
- EN2 - OSB }
- EN1 - OSA }
- EM1 - OIN } BIT 2
- EL2 - OSB }
- EL1 - OSA }
- EJ2 - OIN } BIT 6
- EK2 - OSB }
- EK1 - OSA }
- ET1 - OIN } BIT 3
- ET2 - OSB }
- EH1 - OSA }
- EF2 - OIN } BIT 7
- EP2 - OSB }
- EF1 - OSA }
- EE1 - OIN } BIT 8
- ED2 - OSB }
- ED1 - OSA }
- DV2 - OIN } BIT 9
- DV2 - OSB }
- DV1 - OSA }
- DR2 - OIN } BIT 13
- DS2 - OSB }
- DS1 - OSA }
- DI1 - OIN } BIT 0
- DP2 - OSB }
- DP1 - OSA }
- DM2 - OIN } BIT 14
- DN2 - OSB }
- DN1 - OSA }
- DL1 - OIN } BIT 11
- DL2 - OSB }
- DL1 - OSA }
- DJ2 - OIN } BIT 15
- DK2 - OSB }
- DK1 - OSA }
- DH1 - OIN } BIT 12
- DH2 - OSB }
- DH1 - OSA }



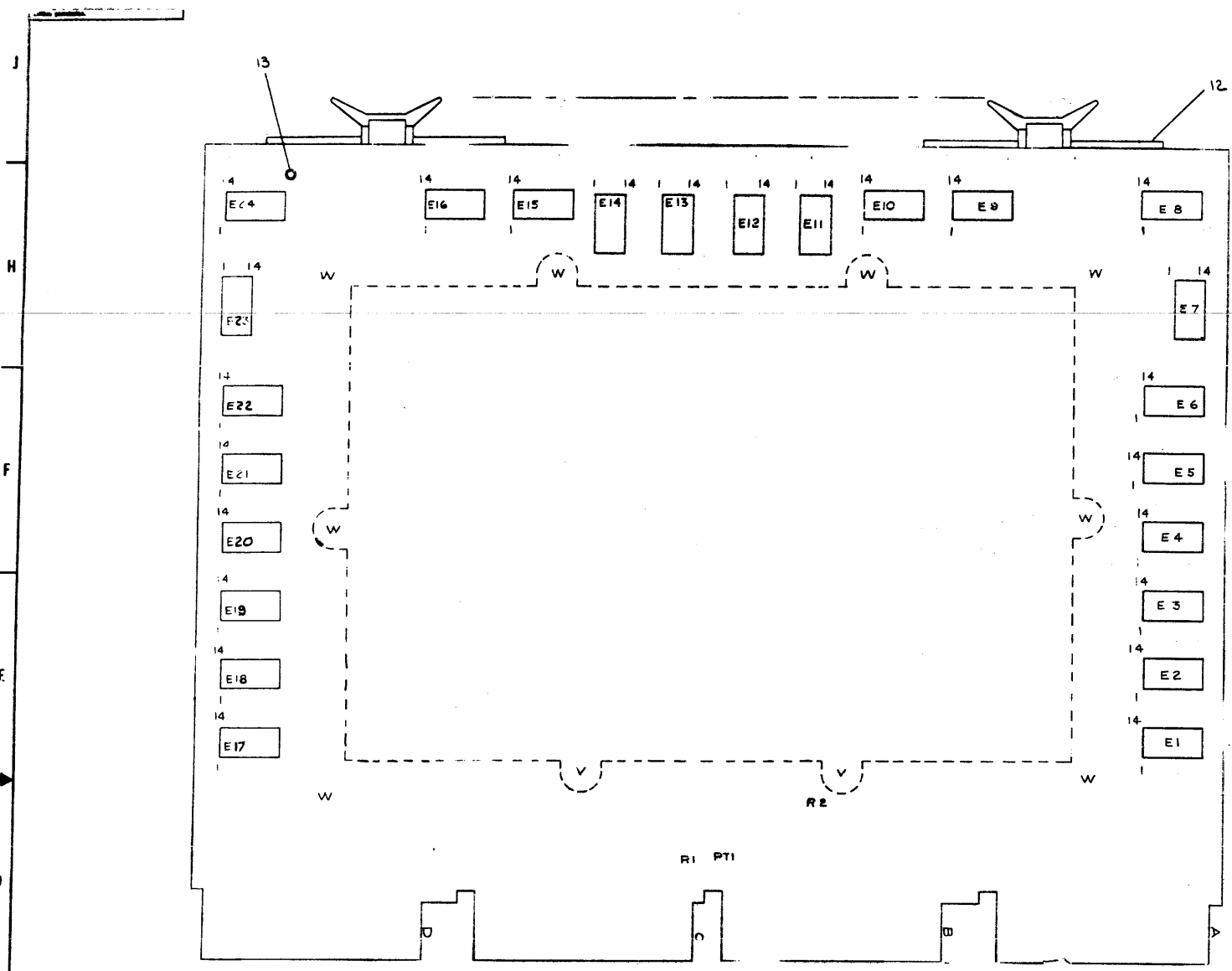
REV	CHG	REVISIONS

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MM11-L				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS	ANGLES	DATE 12/1/71		
.XXX - .005	±0° 30'	DATE 1-25-72		
.XX - .02		DATE 1-25-72		
.X - .1		DATE 1-25-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		DATE 1-26-72		
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE			
		SIZE CODE	NUMBER	REV.
		B-DD-MM11-L-0	DCS H213-0-1	F
		SHEET 2 OF 2	DIST.	

digital EQUIPMENT CORPORATION
 TITLE: STACK SCHEMATIC
 4K X 16 BIT

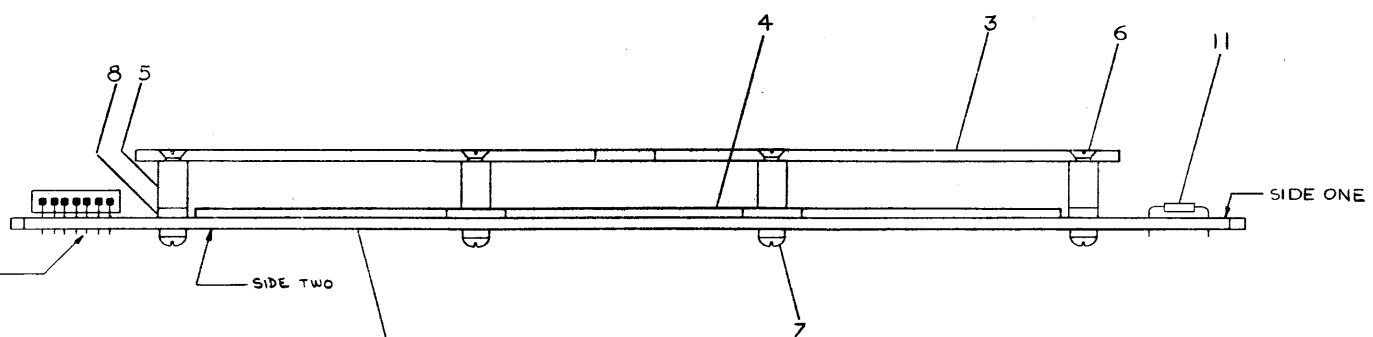
NOTES:
1. ALL COMPONENT LEADS TO BE LESS THAN 1/16 INCHES LONG ON SIDE TWO OF MODULE

MODULES	COMPONENT SUBSTITUTION LIST			
	ORIGINAL PART DESCRIPTION	PART NO.	SUBSTITUTE DESCRIPTION	PART NO.
H214, H215, H216	2501-00 - diode	1910010-00	2501-01 diode	1910010-01
H214, H215, H216	2501-00 - diode	1910010-00	2501-02 diode	1910010-02
H214	2501-00 - diode	1910010-00	2501-03 diode	1910010-03



LEGEND

MODULE CORN.	BACK PANEL LOCATION
A	C
B	D
C	E
D	F



SEE NOTE 1

QTY	QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.
1	1	1	RT1	THERMISTOR 300 2%	1309785
1	1	1	R2	RESISTOR 51 1/4W 5%	1309422
1	1	1	R1	RESISTOR 196 1/8W 1%	1302956
4	4		B	EYELET	9006732
4	4		A	HANDLE, GREEN	9008337-4-1
2	2		Z	TUMPER	VENDOR SUPP
1	1	1		SILKER WITH DEC PART # PO NO	
4	4	4		BISE-CORE MATS (STRUNG)	
4	4	4		WAXE, NYLON 52 X 2 (140 HOLE)	
10	10	10		SCREW, NYLON FIL STEEL #4 X 1.17 LG	
10	10	10		SCREW, FLAT HEAD NYLON #4-40 X .17 LG	
10	10	10		STANDOFFS - ALUMINUM .140 X .005 X .17 LG	
1	1	1		SUBSTRATE	
1	1	1		COVER PLATE	VENDOR SUPP
24	24	24	E1 THRU E24	I.C. DIODE 2501	1910010
1	1	1		PLANNER MEMORY BOARD	5009713

IC TYPE	GRID	+5V	ITEM NO	AVG	FROM PT	TO PT

MM11-L ETCH BOARD REV

B-B-DD-MM11-L-0

SEMICONDUCTOR CONVERSION CHART

DATE: 12/22/72

BY: [Signature]

DESIGNED BY: [Signature]

DRAWN BY: [Signature]

CHECKED BY: [Signature]

APPROVED BY: [Signature]

ORIGINATED BY: [Signature]

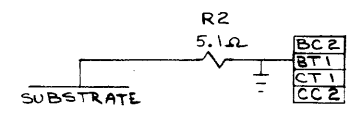
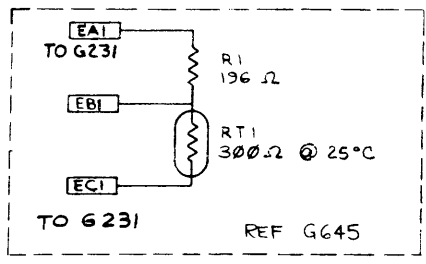
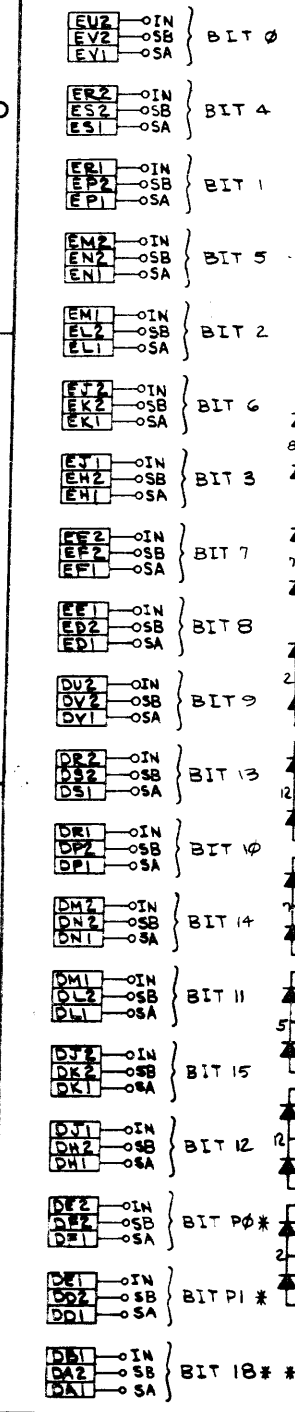
REVISIONS:

REV	DESCRIPTION	DATE
1		

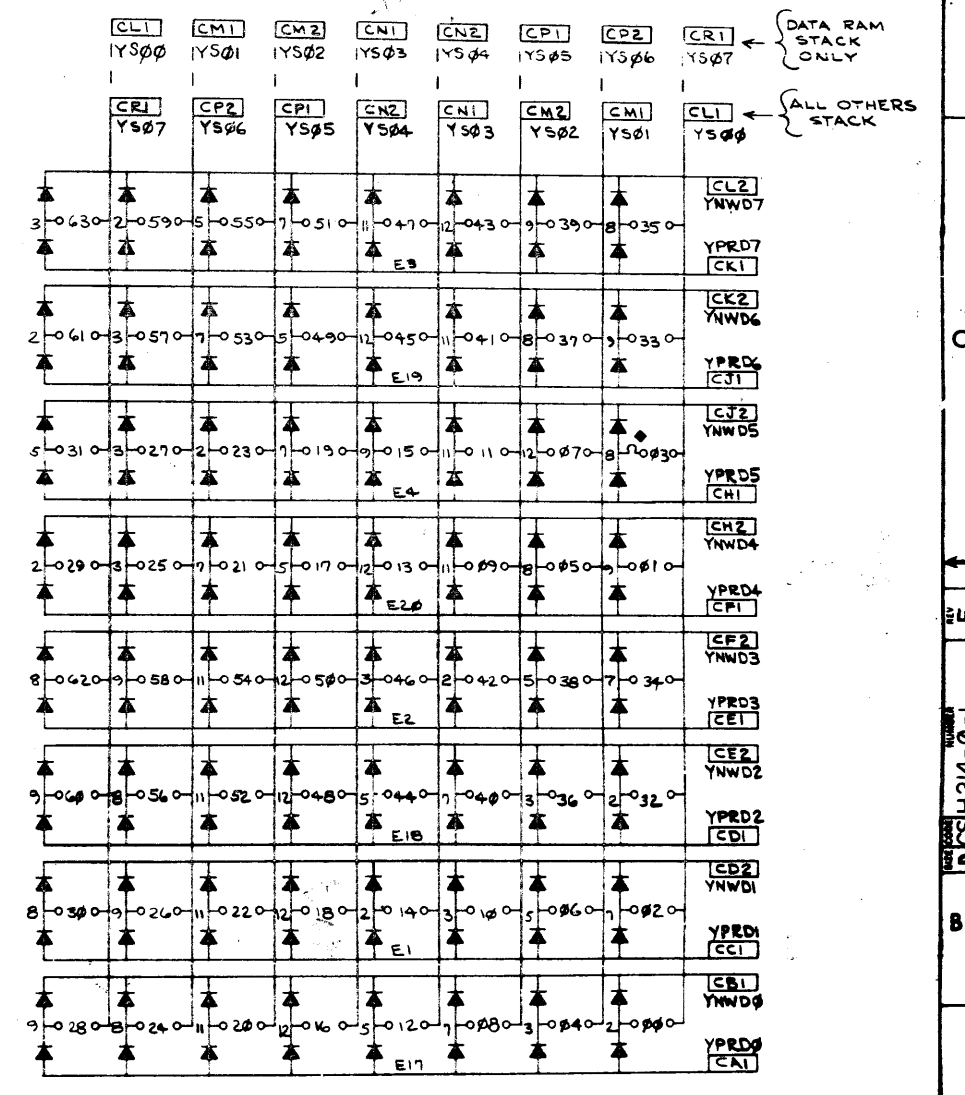
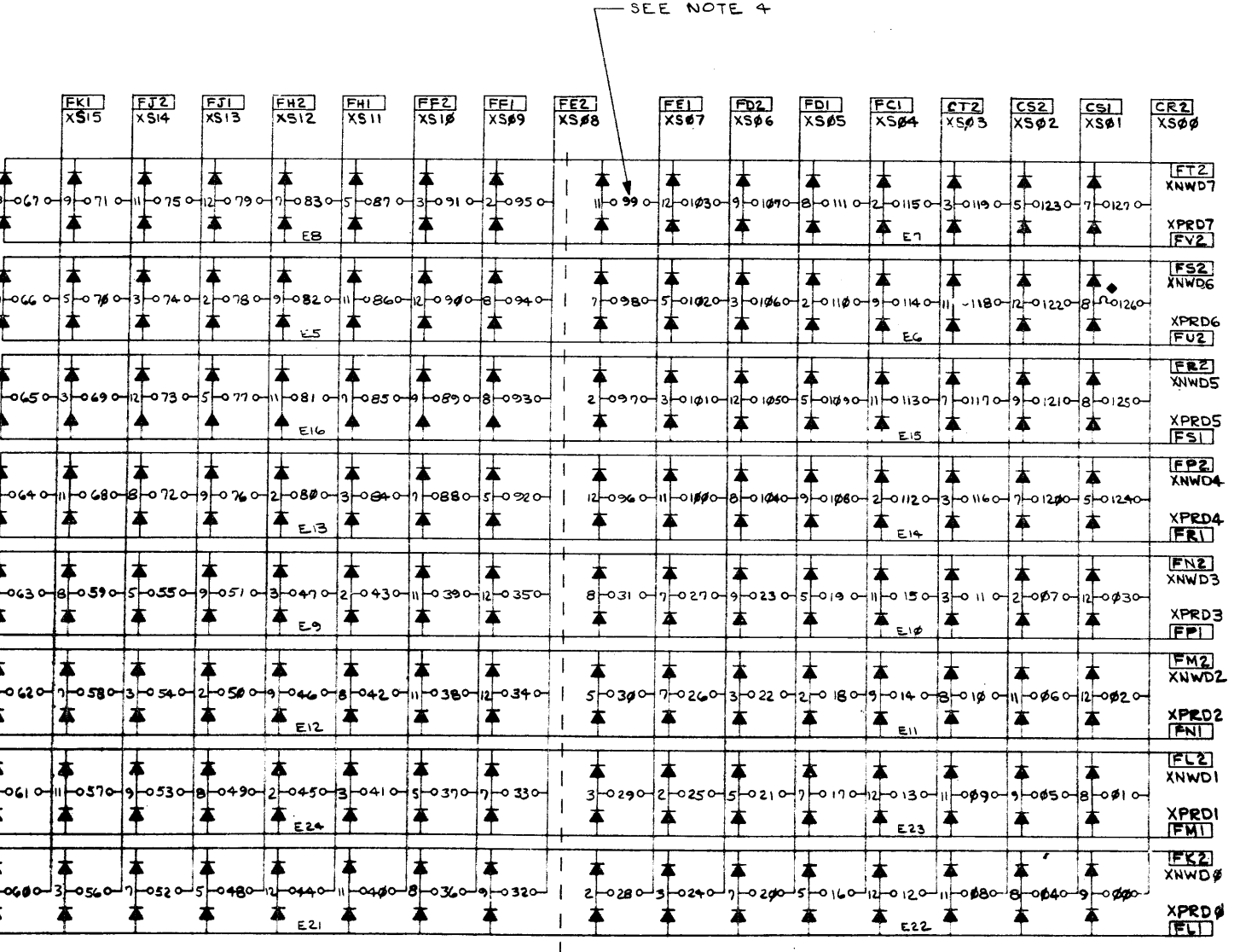
STACK SCHEMATIC (H214 8K X 16BIT), (H215 8K X 16BIT), (H216 8K X 16BIT)

ECS H214-0-1

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NOTES:
 1. UNLESS OTHERWISE SPECIFIED:
 IC'S E1-E24 ARE TO BE DEC PART #1910010
 2. INDICATES STACK LINE NUMBER. (TYP)
 3. INDICATES CURRENT LOOP.
 4. INDICATES MAGNET WIRE TERMINATION (SOLDERED TO PC. PAD).
 * 5. FOR H215 & H216 ONLY. PΦ=PA, PI=PB
 ** 6. FOR H216 ONLY.



REV	DATE	BY	CHK	CHANGE NO

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MM11-L				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	DATE 11/23/71		
.XX - .005	10° 30'	DATE 1-25-72		
.XX - .02		DATE 2/25/72		
.X - .1		DATE 1/25/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASSY.				
B-DD-MM11-L-0				
FINISH				
SCALE				
SHEET 2 OF 2				

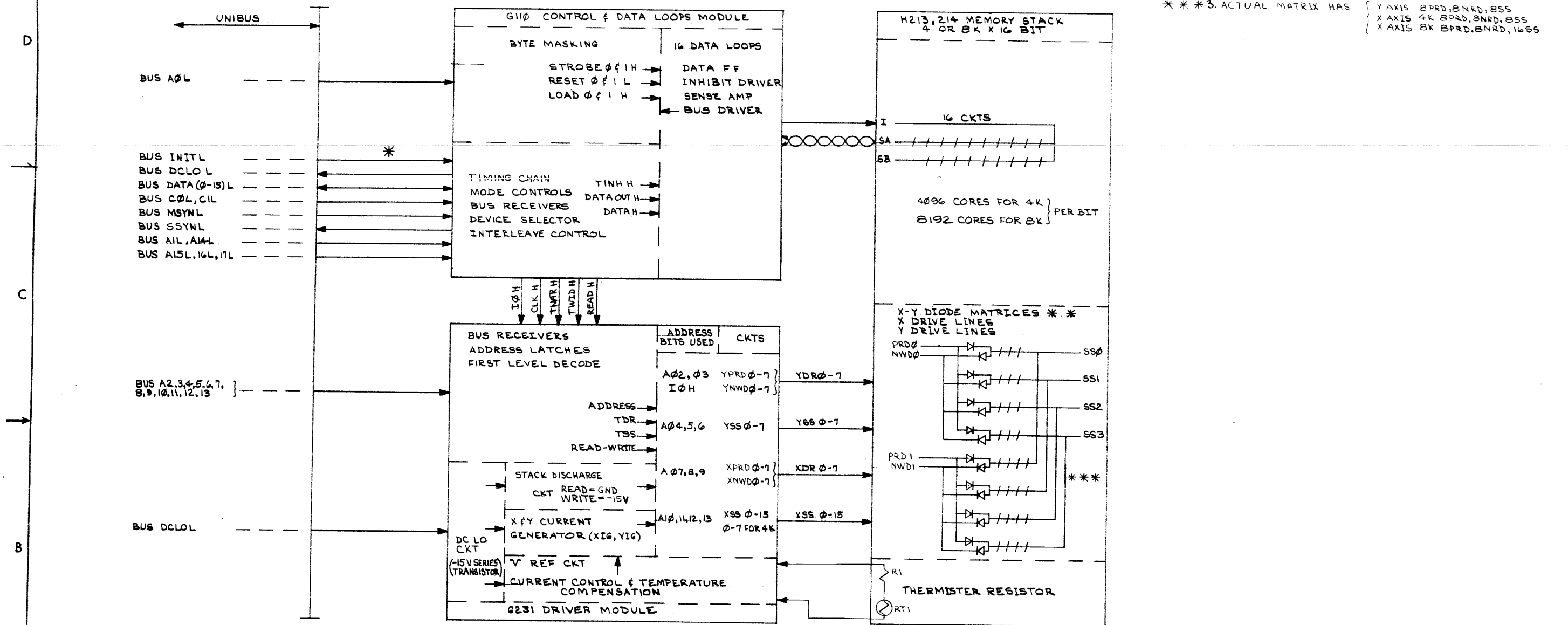
digital EQUIPMENT CORPORATION
 TITLE: STACK SCHEMATIC
 (H214-8K X 16 BIT)
 (H215-8K X 18 BIT)
 (H216-8K X 19 BIT)

DCS H214-0-1

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REV. 2
 NUMBER DBDMM11-S-2
 3000 3215

NOTES:
 *1. ALL ARROWS SHOW SIGNAL FLOW DIRECTION.
 **2. MATRIX SHOWN IS FOR ILLUSTRATION ONLY.
 ***3. ACTUAL MATRIX HAS
 { Y AXIS 8PRD, 8NRD, 8SS
 X AXIS 4K 8PRD, 8NRD, 8SS
 X AXIS 8K 8PRD, 8NRD, 16SS



REV	NO.
CHK	NO.

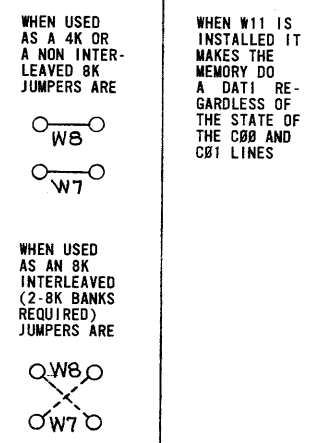
DEC FORM NO. 8
 DPO 100-B

REV. 2
 NUMBER DBDMM11-S-2

FIRST USED ON OPTION/MODEL MM11-S	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. 1/14/72	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS .XXX = .006 .XX = .02 .X = .1	CHKD. 2/11/72	DATE	TITLE BLOCK DIAGRAM	
ANGLES ±0° 30'	ENG. 3/30/72	DATE	PROJ. ENG. 3/31/72	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. 16/2/72	DATE	NEXT HIGHER ASSY.	
MATERIAL	B-DD-MM11-S	SCALE	SIZE CODE DBD	NUMBER MM11-S-2
FINISH	SHEET 1 OF 2	DIST.	REV.	

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MEMORY BANK	MACHINE ADDRESS	W1 * A13 Δ	W5 A14 OR A81	W4 A15	W3 A16	W2 A17L	W9 4K-8K W10	W7-8 INTER LEAVE □	W11 PROTECT
0-4K	000000-017776	IN	IN	IN	IN	IN			
4-8K	020000-037776	↑	OUT	IN	IN	IN			
8-12K	040000-057776	↑	IN	OUT	IN	IN			
12-16K	060000-077776	↑	OUT	IN	IN	IN			
16-20K	100000-117776	↑	IN	IN	OUT	IN			
20-24K	120000-137776	↑	OUT	IN	OUT	IN			
24-28K	140000-157776	↑	IN	OUT	OUT	IN			
28-32K	160000-177776	↑	OUT	OUT	OUT	IN			
32-36K	200000-217776	↑	IN	IN	IN	OUT			
36-40K	220000-237776	↑	OUT	IN	IN	OUT			
40-44K	240000-257776	↑	IN	OUT	IN	OUT			
44-48K	260000-277776	↑	OUT	OUT	IN	OUT			
48-52K	300000-317776	↑	IN	IN	OUT	OUT			
52-56K	320000-337776	↑	OUT	IN	OUT	OUT			
56-60K	340000-357776	↑	IN	OUT	OUT	OUT			
60-64K	360000-377776	↑	OUT	OUT	OUT	IN			
64-68K	400000-417776	↑	IN	IN	IN	IN			
68-72K	420000-437776	↑	OUT	IN	IN	OUT			
72-76K	440000-457776	↑	IN	OUT	IN	IN			
76-80K	460000-477776	↑	OUT	OUT	IN	OUT			
80-84K	500000-517776	↑	IN	IN	OUT	IN			
84-88K	520000-537776	↑	OUT	IN	OUT	OUT			
88-92K	540000-557776	↑	IN	OUT	OUT	IN			
92-96K	560000-577776	↑	OUT	OUT	OUT	OUT			
96-100K	600000-617776	↑	IN	IN	IN	OUT			
100-104K	620000-637776	↑	OUT	IN	IN	OUT			
104-108K	640000-657776	↑	IN	OUT	IN	OUT			
108-112K	660000-677776	↑	OUT	OUT	IN	OUT			
112-116K	700000-717776	↑	IN	IN	OUT	OUT			
116-120K	720000-737776	↑	OUT	IN	OUT	OUT			
120-124K	740000-757776	↑	IN	OUT	OUT	OUT			
DEVICE USED AS 4K MEMORY Δ		IN	X	X	X	X	IN	OUT	



NOTES:

- *1. W1 IS FOR TEST PURPOSES ONLY
- Δ2. WHEN USED AS AN 8K BANK, W5 AND W10 MUST BE INSTALLED AND W9 MUST BE OUT. WHEN USED AS A 4K BANK W10 MUST BE OUT, W9 MUST BE IN AND W5 DETERMINES THE BANKS LOCATION ON THE BUS.
- 3. THIS MEMORY CAN ONLY BE INTERLEAVED AS 16K (TWO ADJACENT, CONTIGUOUS ADDRESS 8K BANKS). WHEN NOT INTER-LEAVED (SOLID JUMPERS ON W7 AND W8) THE DEVICE SELECT IS AS SHOWN IN TABLE 1 USING A14. WHEN TWO 8K BANKS ARE INTER-LEAVED W7 AND W8 MUST BE AS SHOWN IN DOTTED LINES IN TABLE 1. ALSO IN TABLE 1, A81 NOW GOES TO THE DEVICE SELECTOR GATE CONTROLLED BY W6. THE TWO BANKS MUST HAVE W6 IN ON ONE BANK AND OUT ON THE OTHER.
4. FIGURE 1 SHOWS THE PHYSICAL LOCATION OF THE JUMPERS ON THE G110 IF THE MODULE WERE LYING ON THE PRINT WITH COMPONENTS UP AND CONNECTORS TOWARD BOTTOM OF PRINT. W7 & W8 ARE AS SHOWN SCHEMATICALLY ON D-CS-G110-0-1

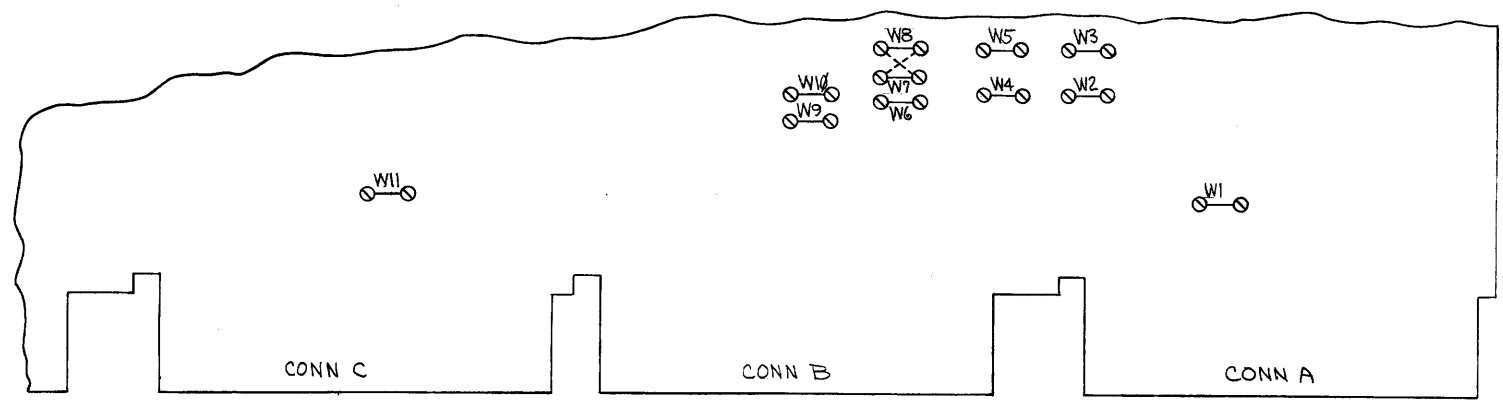


FIGURE 1
 G110 JUMPER PHYSICAL LOCATION
 SEE NOTE 4

REV.	
CHANGE NO.	
CHK	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MM11-S				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.	DRN <i>Carberry</i>	DATE 5/15/72	 digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
TOLERANCES	CHK'D <i>J. Salgho</i>	DATE 5-23-72		
DECIMALS .005	ENG. <i>Plummer</i>	DATE 5-22-72		
ANGLES ±0° 30'	PROJ. ENG. <i>T. Duval</i>	DATE 5-22-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROB. <i>Yose Norman</i>	DATE 6-2-72	TITLE BLOCK DIAGRAM (DEVICE DECODING)	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE D B D M M I I - S - 2	NUMBER
FINISH	B-DD-MM11-S-0	SCALE <i>SS</i>		REV.
	SHEET 2 OF 2		DIST.	

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY F. CARBERRY	CHECKED <i>J. Holahan</i>	SECTION
DATE 1/5/72	DATE 1-25-72	
ENG P. Duwaut	PROD R.K. Peterson	ISSUED SECT.
DATE 1/25/72	DATE 1-26-72	

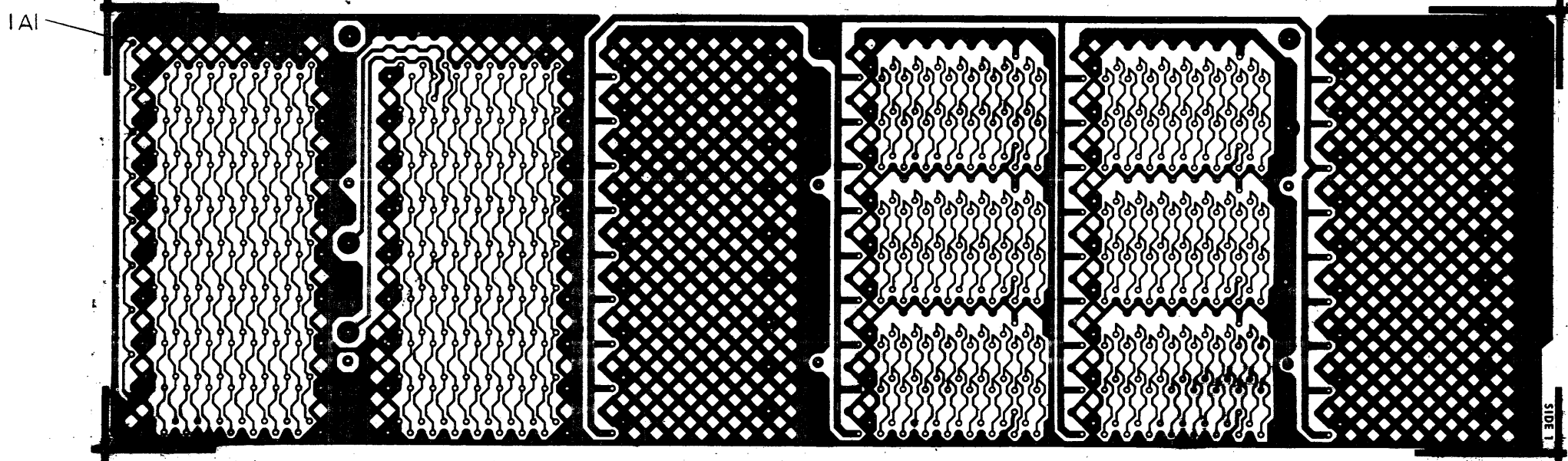
QUANTITY/VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY/VARIATION																		
			MM11-L	MM11-K																	
1	B-DD-H213-Ø	H213 MEMORY STACK (4K X 16)		1																	
2	E-CS-G231-Ø-1	MEMORY DRIVER	1	1																	
3	E-CS-G11Ø-Ø-1	CONTROL & DATA LOOPS	1	1																	
4	B-DD-H214-Ø	H214 MEMORY STACK (8K X 16)	1																		

TITLE MEMORY, MM11	ASSY NO. 11	SIZE A	CODE PL	NUMBER MM11-L-Ø	REV.	ECO NO.
SHEET 1 OF 1		DIST.				

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

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BLOCK SIDE (SIDE D)

REVISIONS	
CHK	CHANGE NO.
A	5409959-00001
B	5409959-00002
C	5409959-00003
D	5409959-00004

1/1 M.L. 8-23-72
 S. ROTHMAN
 F-30-72
 A. H. L. 3-1-73
 C. BLASI
 C. BLASI 3-5-73
 B. H. L. 4-5-73
 C. VALLIANT
 4-10-73

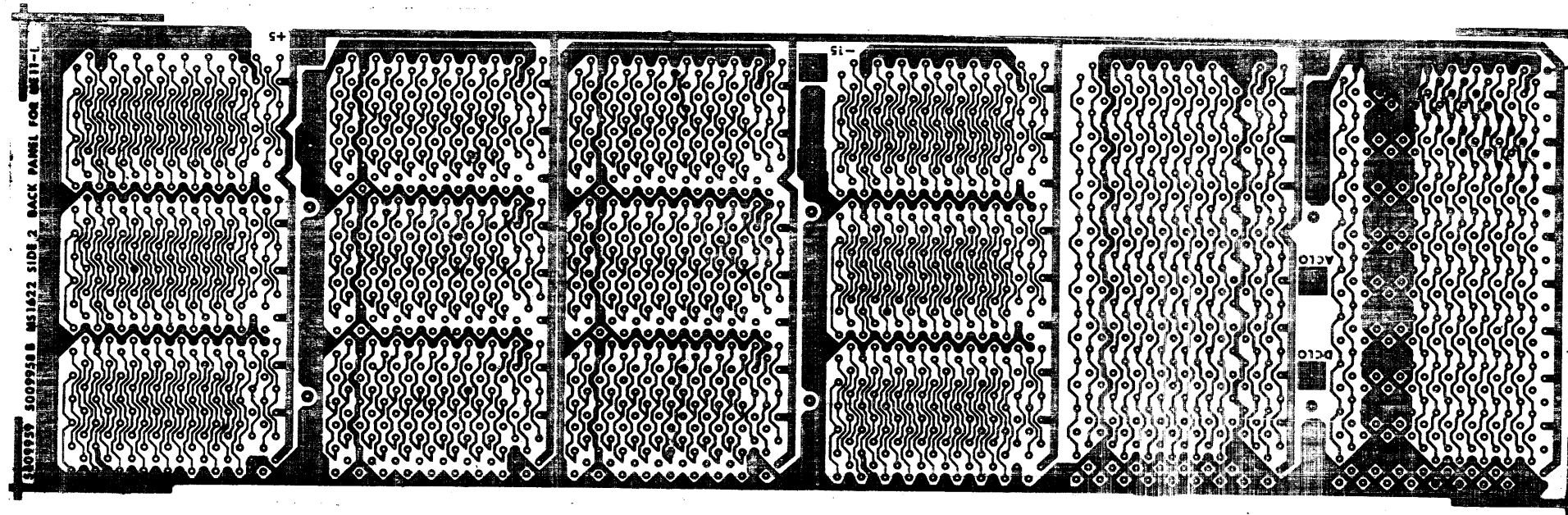
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN. <i>R. I. Naile</i>	DATE <i>8-23-72</i>	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
		CHK'D. <i>[Signature]</i>	DATE <i>8/31/72</i>	
DECIMALS .XXX = .005 .XX = .02 .X = .1	ANGLES ±0° 30'	ENG. <i>S. ROTHMAN</i>	DATE <i>8/31/72</i>	TITLE CIRCUIT SCHEMATIC
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PROJ. ENG. <i>S. ROTHMAN</i>	DATE <i>8/31/72</i>	
MATERIAL		PROD. <i>R. PETERSON</i>	DATE <i>8/31/72</i>	
FINISH		NEXT HIGHER ASSY. E-AD-7003872-0-0		SIZE CODE C CS
SCALE 1/1		NUMBER 5409959-0-1		REV. C
SHEET 1 OF 2		DIST.		

BRUNING 40-107 15968

DEC FORM NO. DRC 100-A

REV. C
NUMBER 5409959-0-1
SIZE CODE C CS

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SOLDER SIDE (SIDE 2)

BRUNING 40-107 15968	REV.
	CHG. NO.
	CHK

DEC FORM NO. DRC 100-A

FIRST USED ON	QTY	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DATE 8/23/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
DECIMALS .010 ANGLES .001	DATE 8/31/72			
DRIVE BOLTS AND OTHER SURFACE MOUNT	DATE 8/31/72	TITLE CIRCUIT SCHEMATIC		
MATERIAL	DATE 8/31/72			
FINISH	DATE	SIZE CODE C CS	NUMBER 54-09959-0-1	REV. C
		DIST.		

SIZE CODE C CS
 NUMBER 54-09959-0-1
 REV. C

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY L. D. ANDERSON	CHECKED J. O'LOUGHLIN	SECTION
DATE 9-29-72	DATE 9-29-72	1
ENG J. O'LOUGHLIN	PROD G.L. STRINGER	ISSUED SECT.
DATE 9-29-72	DATE 9-29-72	1

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	MF11-L																	
1	A-PL-MM11-L-0	16 BIT 18 MIL MEMORY	1																	
2	E-AD-7008872-0-0	BACK PLANE ASSY	1																	
3	A-PL-M920-0-0	INTERNAL BUS CONN ASSY	1																	
4	9009168	SCREW, PAN HD. "NYLOC" #6-32	1																	
5	C-MD-7410871-0-0	SUPPORT BAR, RIGHT	1																	
6	C-MD-7410870-0-0	BRKT, CONN BLOCK TOP	1																	
7	C-PS-120698-0	GUIDE CARD CENTER	6																	
8	9009070	SCR PHIL FLAT HD #8-32 X .81	12																	
9	9107688-0-0	24 AWG SOLID WIRE BLK.	A/R																	
10	9006766	LOCKING TERMINAL	1																	
11	1209856-02	MODULE HOLDER	A/R																	
12	1700021-02	ELECTRO MAGNETIC SHIELD	A/R																	
13*	D-IA-7009560	MF11-L/LP OPTION HARNESS *	1																	
NOTE: * IF FIRST MEMORY IN 11/35-11/40 USE 7009565.																				
FOR 11/45-11/50 WITH SERIAL NO. LESS THAN 2000 USE HARNESS																				
7009242. FOR 11/35-11/40 WITH SERIAL NO. LESS THAN 6000																				
USE 7009103 (FIRST MEMORY) OR 7009174. FOR H960-D,E WITH																				
NO. LESS THAN 7000 USE HARNESS 7009174.																				

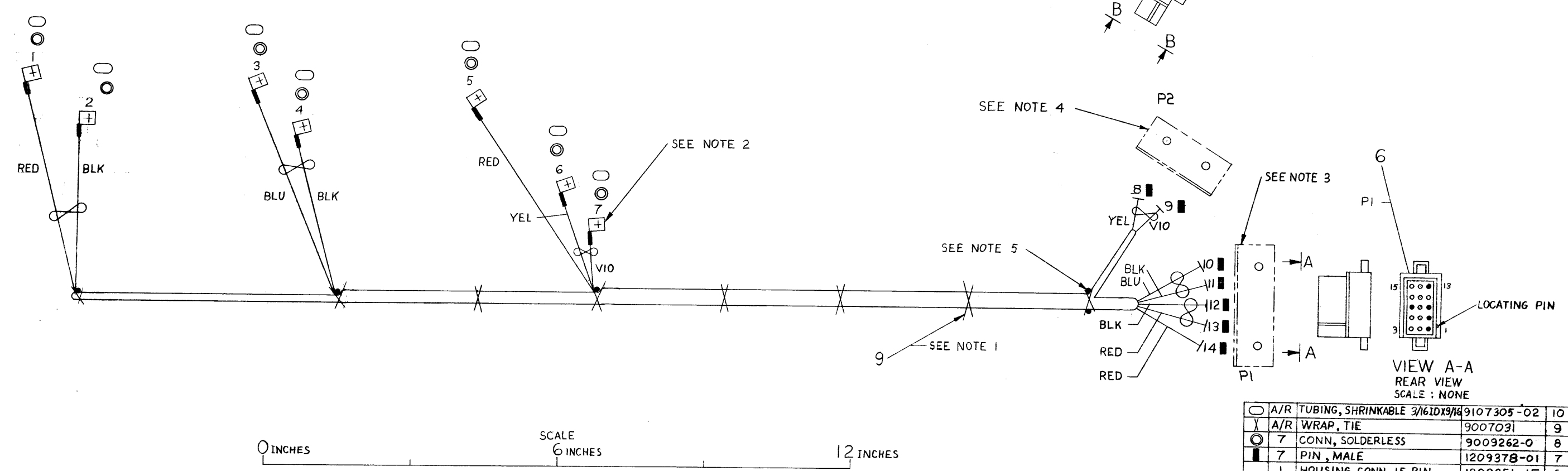
TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
MF11-L MEMORY (PL)	D-UA-MF11-L-0	A	PL	MF11-L-0	D	MF11-00007
	SHEET 1 OF 1	DIST.				

- NOTES:
1. USE TIE WRAPS ITEM #9 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY, AND AT EVERY BREAKOUT POINT.
 2. ATTACH MALE FASTON DEC # (9008219-0) WITH #4 WOOD SCREWS (7 PLACES).
 3. USE CONN. BRKT. #C-MD-9305761-H15-0, MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-15.
 4. USE CONN. BRKT. #C-MD-9305761-H6-0, MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-06.
 5. DOT (•) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.

WIRE TABLE									
ITEM NO	DESCRIPTION	FROM			TO			SIGNAL	
		AWG	COLOR	POINT	CONNECTION	TERM	POINT		CONNECTION
3	14	RED	1		8,10	13	P1-4	7	+5
TWP	14	BLK	2			12	P1-7		GND
2	14	BLU	3			10	P1-13		-15
TWP	14	BLK	4			11	P1-9		GND
4	14	RED	5			14	P1-1		+5
1	18	YEL	6			8	P2-4		AC LO
TWP	18	VIO	7		8,10	9	P2-3	7	DC LO

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REVISIONS
 CHANGE NO. REV.
 CHK



DO NOT REDUCE
 DO NOT BUILD FROM REDUCED PRINT

SYMBOL	DESCRIPTION	PART NO.	ITEM NO.
○	A/R TUBING, SHRINKABLE 3/16IDx1/8	9107305-02	10
Y	A/R WRAP, TIE	9007031	9
○	7 CONN, SOLDERLESS	9009262-0	8
■	7 PIN, MALE	1209378-01	7
	1 HOUSING, CONN 15 PIN	1209351-15	6
	1 HOUSING, CONN 6 PIN	1209351-06	5
A/R	WIRE #14 AWG RED	9107370-22	4
A/R	WIRE #14 AWG TWP BLK/RED	9107440-02	3
A/R	WIRE #14 AWG TWP BLK/BLU	9107440-06	2
A/R	WIRE #18 AWG TWP YEL/VIO	9107430-47	1

FIRST USED ON OPT / MOD	SYMBOL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DRN. <i>B. Blough</i>	DATE 9-26-73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
TOLERANCES		CHK. <i>P. B. [unclear]</i>	DATE 10/15/73	TITLE MF11-L/LP POWER HARNESS	
DECIMALS .xxx = .005	ANGLES ±0° 30'	ENG. <i>[unclear]</i>	DATE 11/3/73	MATERIAL NEXT HIGHER ASSY.	
.xx = .02		PROJ. ENG. <i>[unclear]</i>	DATE 11/3/73	MATERIAL NEXT HIGHER ASSY.	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY 1		PROD. <i>[unclear]</i>	DATE 10/15/73	MATERIAL NEXT HIGHER ASSY.	
FINISH		SCALE 1/1		SIZE CODE D IA 7009560-0-0	NUMBER REV.
		SHEET OF		DIST.	

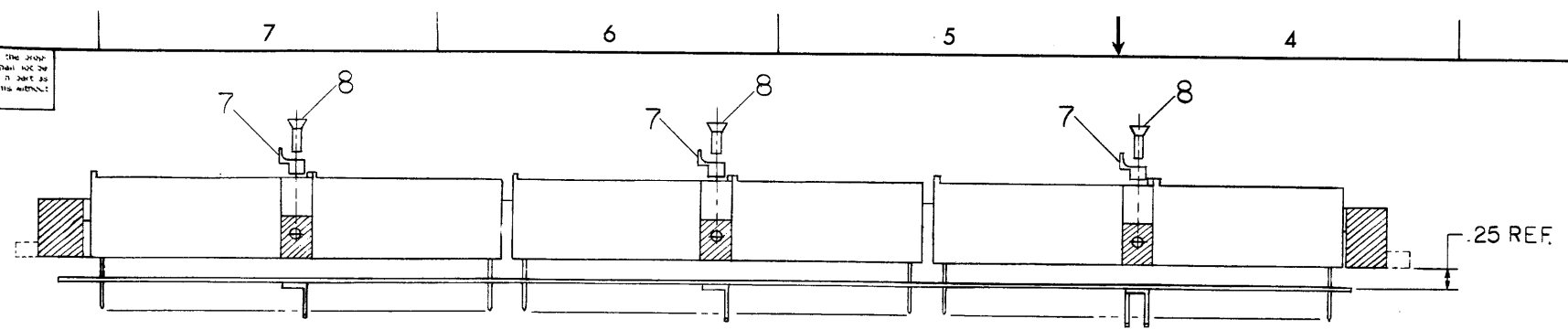
SIZE CODE
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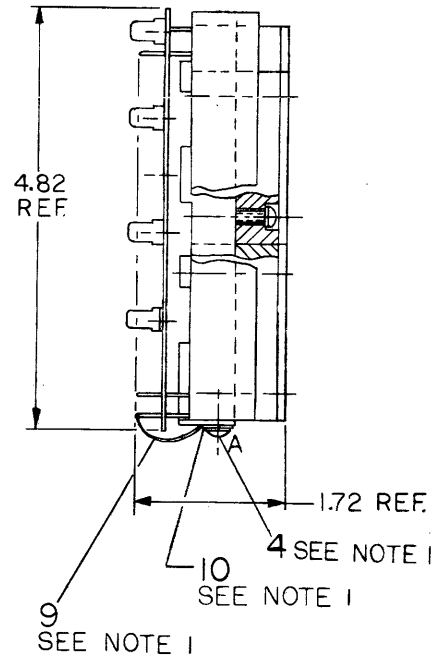
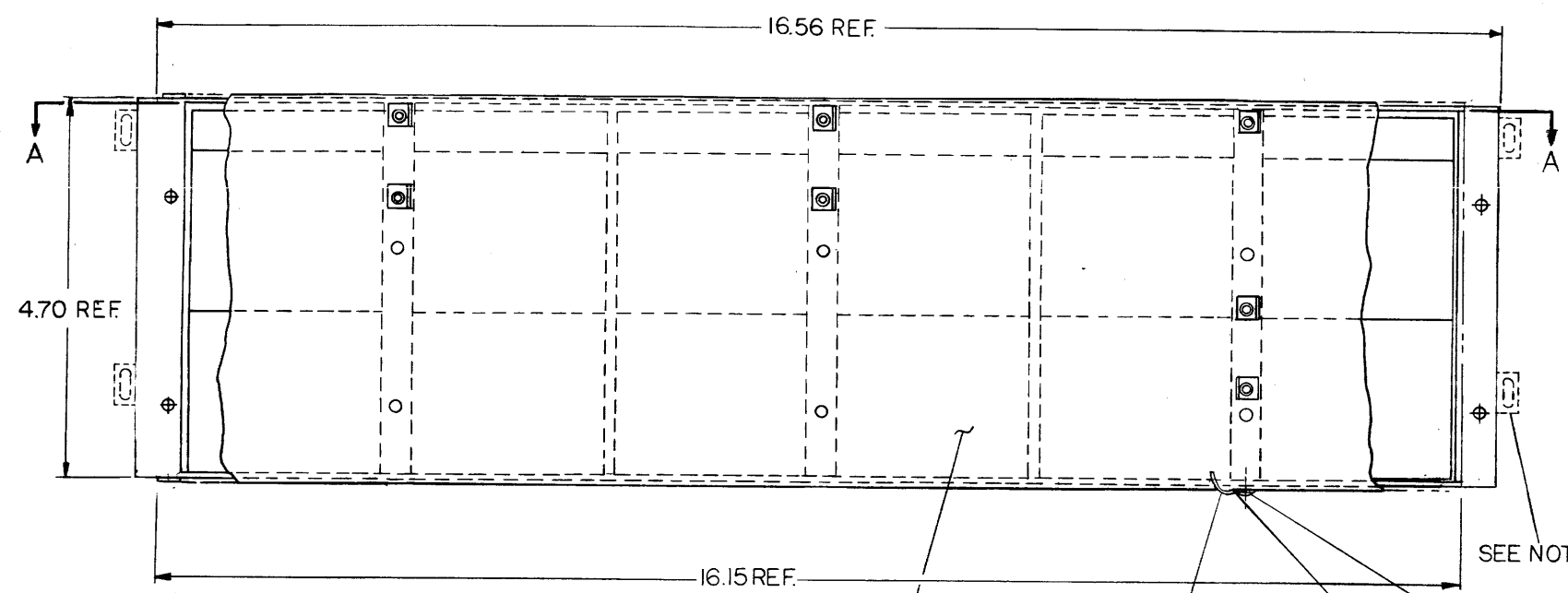
2-7-11-61 2

NOTES:

1. WIRE WRAP ONE END OF ITEM #9 TO PIN BØ9C2 AND SOLDER THE OTHER END TO ITEM #10 WHICH IS MOUNTED AS SHOWN.
2. IF LOGIC FRAMES DEC P/N 1210103 OR 1210991 ARE USED, THE MOUNTING EARS ARE TO BE MACHINED OFF FLUSH WITH THE SIDES OF THE CASTING.



SECTION A-A



REV.	CHANGE NO.	DESCRIPTION
A	00002	ORIGINATED
B	00003	
C	00006	
D	00007	

J.F. O'LOUGHLIN
 P. DURANT
 B. MINOR

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MFII-L		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. Beasley 2	DATE 2-28-73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	CHKD. [Signature]	DATE 3-5-73		
ANGLES ±0° 30'	ENG. [Signature]	DATE 3-14-73	TITLE MFII-L MEMORY	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROJ. ENGR. [Signature]	DATE 3-16-73		
MATERIAL	PROD. [Signature]	DATE 3-16-73	NEXT HIGHER ASSY.	
FINISH	B-DD-MFII-L	SCALE 1/1	SIZE CODE DUA	NUMBER MFII-L-0
	SHEET 1 OF 1	DIST.		REV. D

REV. D
 NUMBER MFII-L-0
 BUFCOON BUA MFII-L-0



CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE			SEQUENCE
DRAWING DIRECTORY		B-DD-KY11-D	(SHEET 1 ONLY)	
PARTS LIST		A-PL-KY11-D-Ø		
KY11-D CONSOLE		D-CS-54Ø97Ø1-Ø-1		
I/O CABLES (BCØ8R)		C-UA-BCØ8R-Ø3-Ø		

UNIT VARIATIONS		PRINT SET TYPE			
		KY11-D	KY11-DJ		
VARIATION	TITLE				
KY11-D	KY11-D CONSOLE	X			
KY11-DJ	INDUSTRIAL CONSOLE	X			

REVISIONS		USED ON OPTION/MODEL	DRN.	DATE	TITLE	
DATE	CHG. NO.	PDP-11/4Ø	<i>W. J. ...</i>	9/26/72	KY11-D CONSOLE	
11-73	KY11D-1 A		CHK'D	<i>W. J. ...</i>		9/27/72
1/74	KY11D-2 B		PROJ. ENG.	<i>W. J. ...</i>		9/27/72
			PROD.	<i>W. J. ...</i>		9-28-72
			FIELD SERV.	DATE	SIZE CODE	
					B DD	
					NUMBER	
					KY11-D	
					REV	
					B	
			SHEET 1 OF 2	DIST		

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

QUANTITY/VARIATION

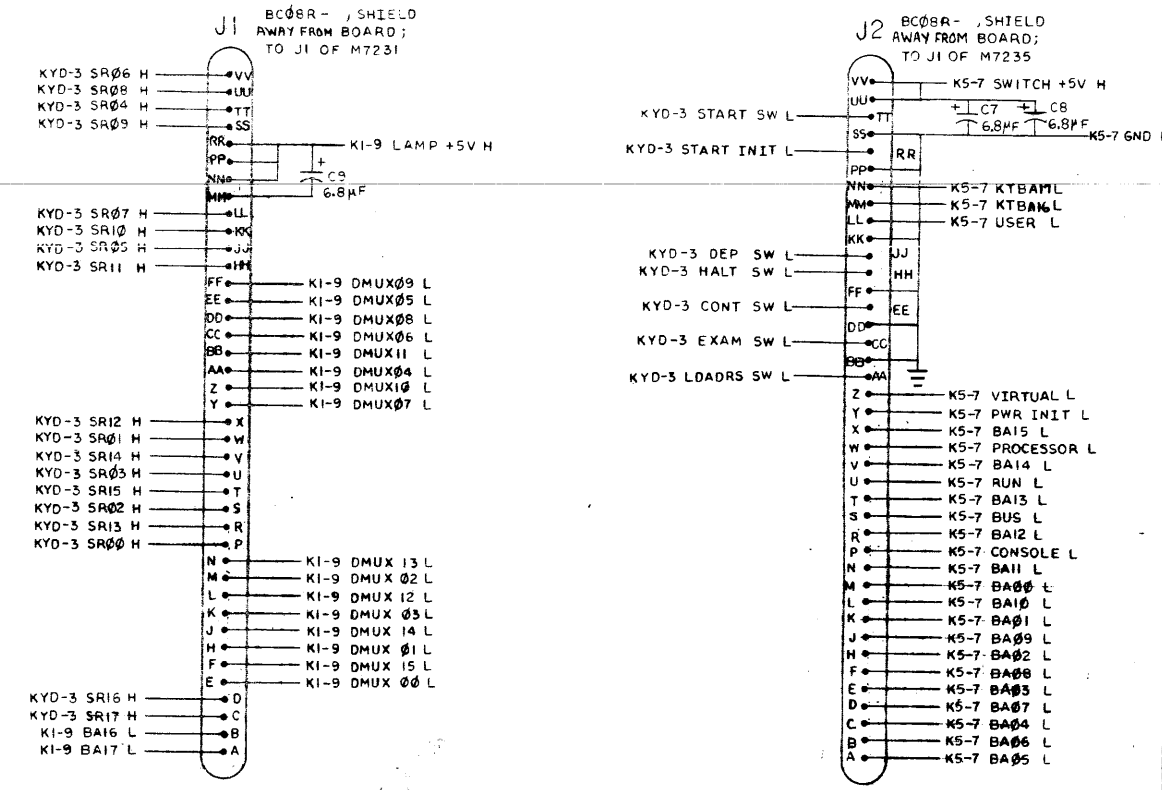
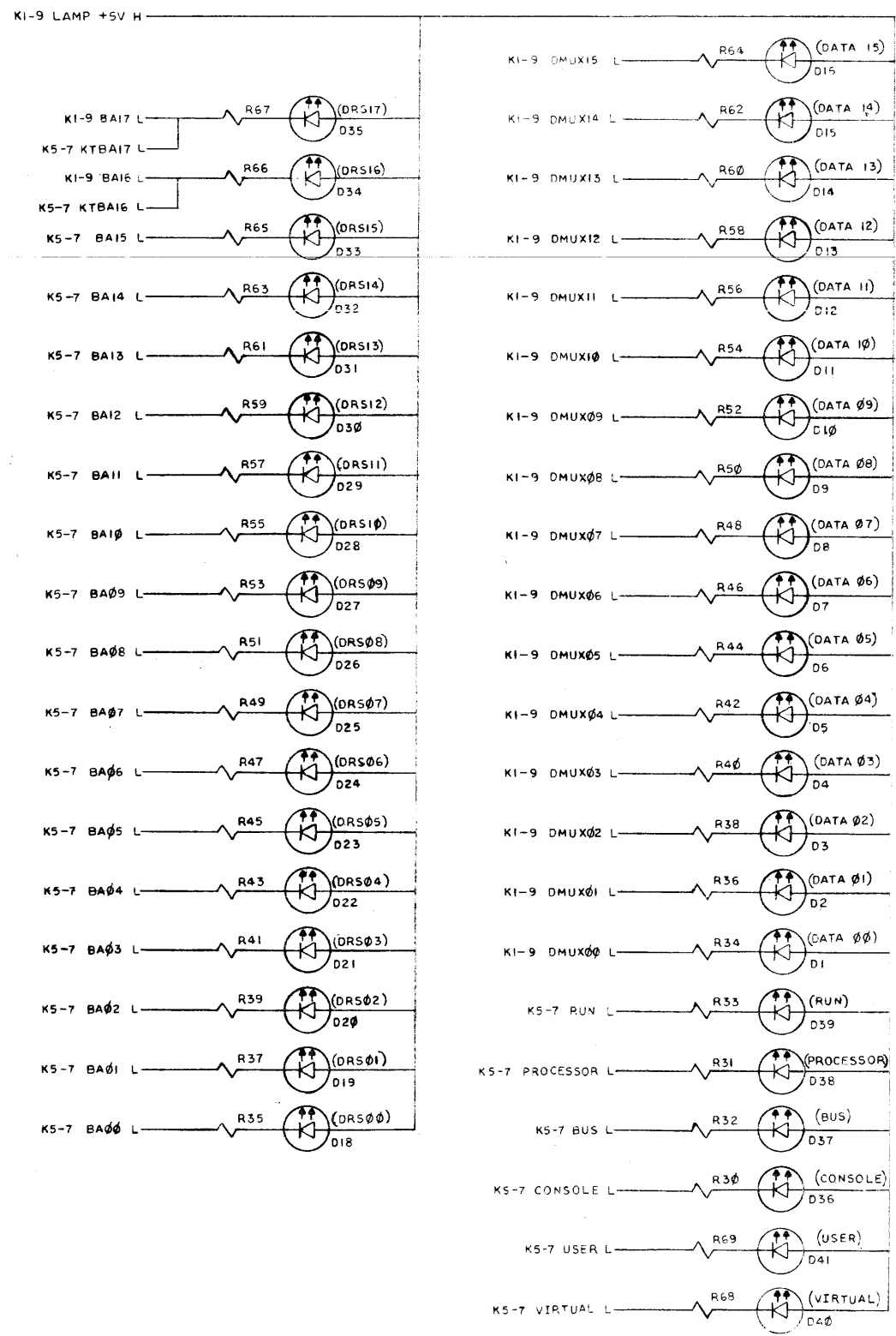
MADE BY <i>J.F. O'Rourke</i>	CHECKED <i>J.F. O'Rourke</i>	SECTION
DATE <i>9/26/72</i>	DATE <i>9/27/72</i>	
ENG <i>J.F. O'Rourke</i>	PROD <i>J.F. O'Rourke</i>	ISSUED SECT.
DATE <i>9/27/72</i>	DATE <i>9-28-72</i>	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	KY11-D	KY11-DJ											
1	D-CS-5409701-0-1	KY11-D CONSOLE	1	-											
2	C-UA-BC08R-03-0	I/O CABLES (BC08R)	2	2											
3	D-1A-7411317-0-0	INDICATOR PANEL INDUSTRIAL	-	1											
4	D-CS-5409701-1-1	KY11-DJ CONSOLE	-	1											

TITLE KY11-D CONSOLE (PL)	ASSY NO. <i>H</i>	SIZE A	CODE PL	NUMBER KY11-D-0	REV. B	ECO NO. KY11D-00002
	SHEET 1 OF 1	DIST. <i>C</i>				

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

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NOTES:
 1. CONSOLE LABELS ARE NOTED IN PARENTHESIS.
 2. CABLE CONNECTION INFORMATION IS NOTED ON SCHEMATIC AND ETCHED BOARD, CABLES MUST BE CONNECTED WITH SHIELD AWAY FROM BOARD.

REV	NO
CHK	NO
CHG	NO

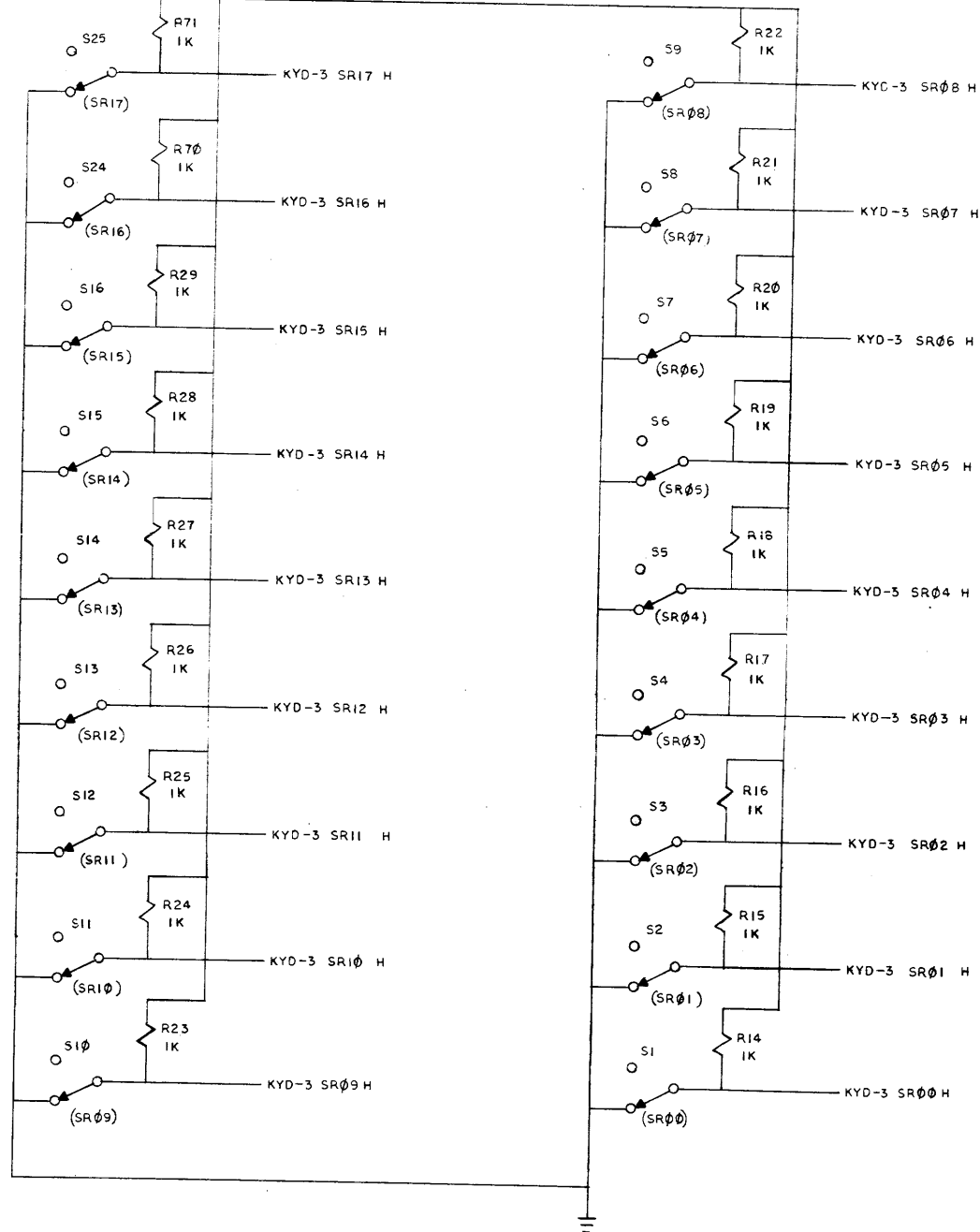
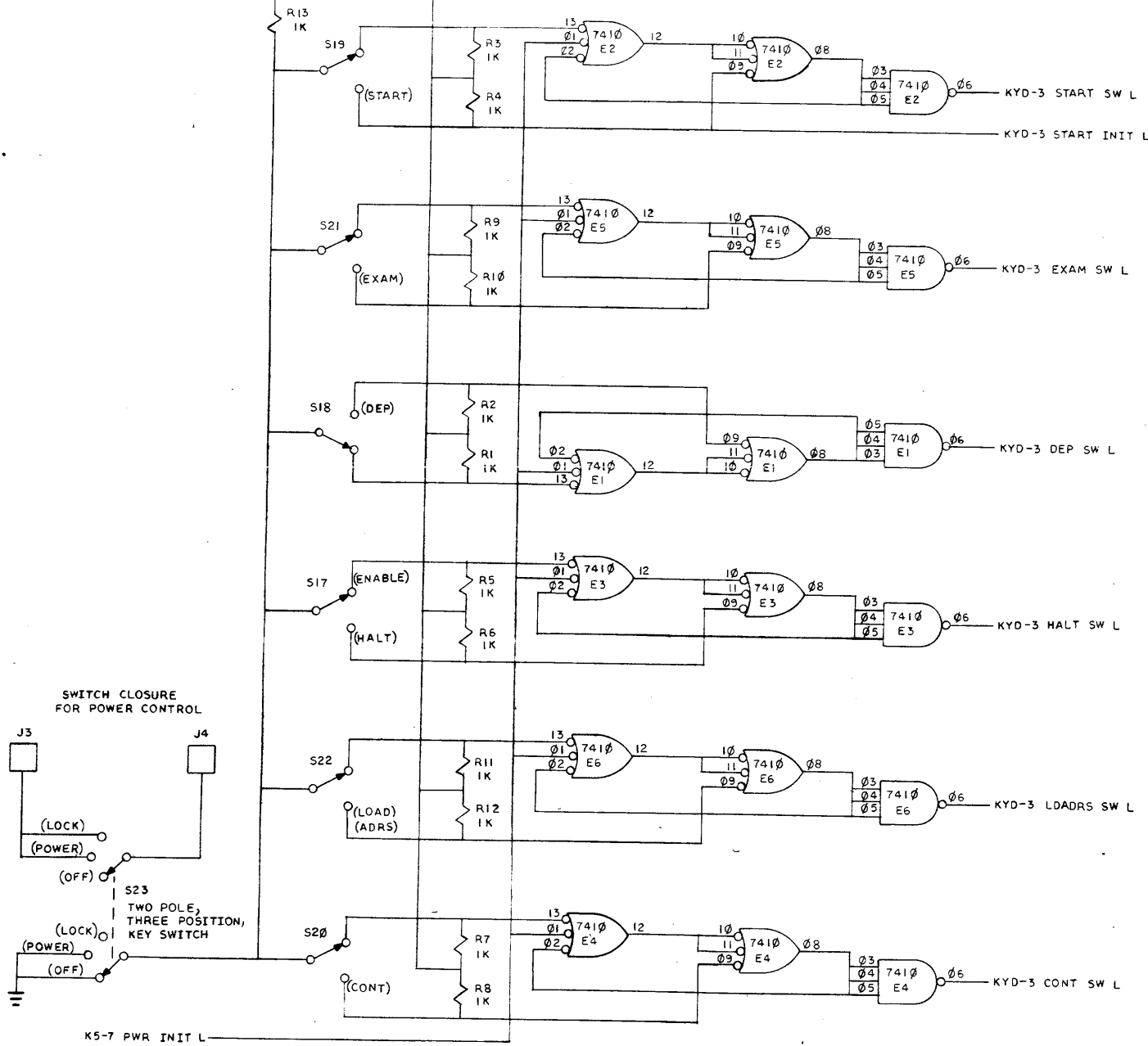
BRUNING 40-822 15840
 DRD 102-B

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDP 11				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
.XXX = .005	±0° 30'	KY11-D CONSOLE		
.XX = .02		DISPLAY		
.X = .1		KYD-2		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL		NEXT HIGHER ASSY.		
FINISH		SCALE		
		SHEET 2 OF 3		
		SIZE CODE	NUMBER	REV.
		D CS	5409701-0-1	K
		DIST.		

REV K
 NUMBER 5409701-0-1
 SIZE CODE D CS

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K5-7 SWITCH +5V H



NOTES:

1. SWITCHES ARE SHOWN IN THEIR NON-ACTIVE OR ZERO POSITION; FOR ALL DATA SWITCHES (SR) THIS IS DOWN; FOR ALL CONTROL SWITCHES, EXCEPT DEP, THIS IS UP.
2. CONSOLE LABELS ARE SHOWN IN PARENTHESES

REV	NO
CHG	NO

DEC FORM NO DRD 102-B

FIRST USED ON OPTION/MODEL PDP 11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN CHKD ENG PROJ. ENG PROV. ENGR	DATE 2-15-72 6/27/72 6/28/72 6/28/72 6/28/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	ANGLES ±0° 30'	TITLE KY11-D CONSOLE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	NEXT HIGHER ASSY. KY11-D		SIZE CODE D CS	NUMBER 5409701-0-1
MATERIAL	FINISH	SCALE	SHEET 3 OF 3	REV. K
		DIST.		



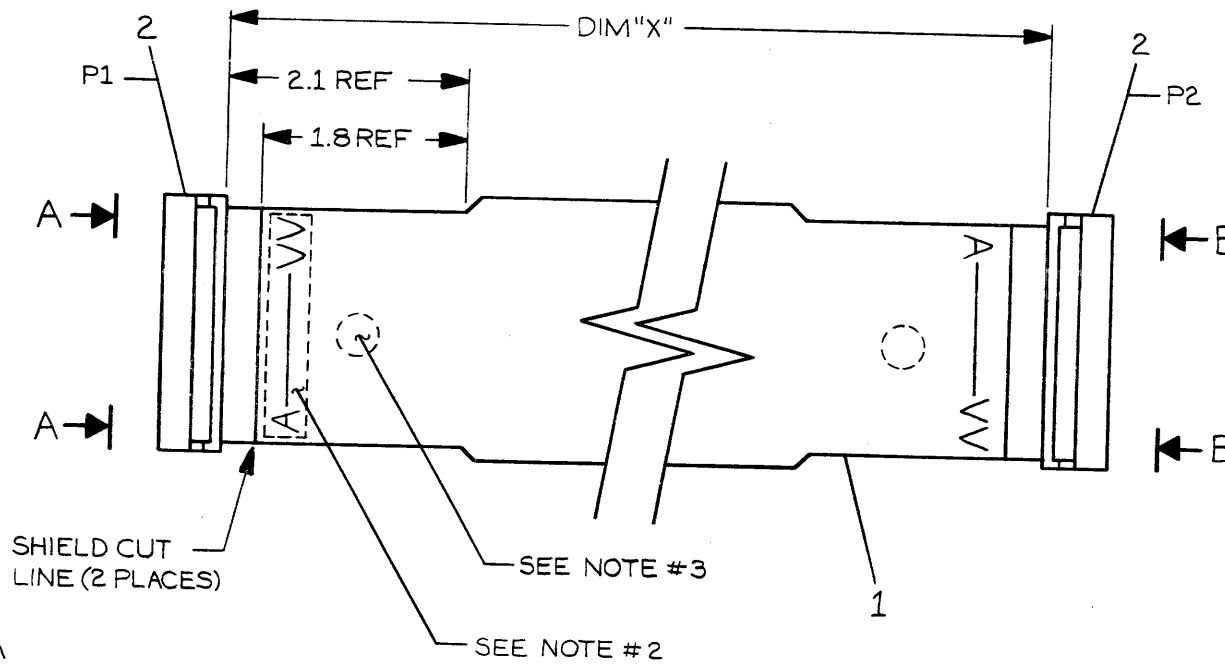
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WIRE TABLE			
FROM	TO	FROM	TO
P1-A	P2-VV	P1-Y	P2-X
P1-B	P2-UU	P1-Z	P2-W
P1-C	P2-TT	P1-AA	P2-V
P1-D	P2-SS	P1-BB	P2-U
P1-E	P2-RR	P1-CC	P2-T
P1-F	P2-PP	P1-DD	P2-S
P1-H	P2-NN	P1-EE	P2-R
P1-J	P2-MM	P1-FF	P2-P
P1-K	P2-LL	P1-HH	P2-N
P1-L	P2-KK	P1-JJ	P2-M
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±12FT
BCØ8R-75	75FT	75FT 1.5IN±15FT
BCØ8R-AØ	1ØØFT	1ØØFT 1.5IN±2FT
BCØ8R-A3	13ØFT	13ØFT 1.5IN±26FT
BCØ8R-A6	16ØFT	16ØFT 1.5IN±32FT

- NOTES:
- ASSEMBLE THIS CABLE PER PROCESS SPEC #76Ø6485-Ø-Ø.
 - CONNECTOR LEGEND IDENTIFICATION TO BE PLACED ON SHIELD SIDE OF CABLE IN THIS AREA AS SHOWN.
 - INSPECTION & TEST STAMPS TO BE PLACED AT EACH END OF THE CABLE ASSEMBLY.

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



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

VIEW A-A
CONN. LEGEND REF.

VIEW B-B
CONN. LEGEND REF.

REV.	CHANGE NO.	CHK	DATE
J	BCØ8R-00004	P. GARDNER	7/17/75
	REVISED & REDRAWN		
	3-6-74		

QTY.	DESCRIPTION	PART NO.	ITEM NO.
2	CONNECTOR, 4Ø SOCKET	12112Ø6	2
A/R	CABLE, 4Ø COND. FLAT W/SHIELD	17ØØØØ4	1

FIRST USED ON OPTION/MODEL		PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. D. FONTAINE	DATE 8-28-70	<p>digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS</p>
TOLERANCES	CHK'D. J. FLEMING	DATE 8-28-70	
DECIMALS	ENG. P. GARDNER	DATE 9-3-70	
ANGLES	PROJ. ENG. P. GARDNER	DATE 9-3-70	
.xxx = .005	±0° 30'	PROD. DONALD	DATE 9-4-70
.xx = .02			
.x = .1			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY √			
MATERIAL	NEXT HIGHER ASSY.		
FINISH			
	SCALE	NCNE	
	SHEET	1 OF 1	
	DIST.		

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
**BCØ8R
I/O CABLE**

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS
DATE 7/17/72
ENG W. Stangor
DATE 9-22-72

CHECKED C. Fessenden
DATE 7/22/72
PROD W. Stangor
DATE 9-26-72

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION				
			11/40-CA	11/40-CB	11/40-CS	11/40-CF	11/40-AC
1	A-PL-KD11-A-0	KD11-A PROCESSOR	1	1	1	1	1
2	E-UA-H742-A-0	POWER SUPPLY, H742A	1	-	1	-	-
3	E-UA-H742-B-0	POWER SUPPLY, H742B	-	1	-	-	-
4	E-UA-H744-0-0	+5 REGULATOR	3	3	3	3	3
5	E-UA-H745-0-0	-15 REGULATOR	2	2	2	2	2
6	D-UA-H960-CD-0	CABINET ASSEMBLY PDP-11	1	1	-	-	-
7	E-UA-BALL-FC-0	MOUNTING BOX ASSY	1	1	1	1	1
8	E-UA-861-C-0	CONTROL, POWER	1	-	1	-	-
9	E-UA-861-B-0	CONTROL, POWER	-	1	-	-	-
10	D-IA-7469881-2	PANEL INDICATOR	1	1	1	1	1
11	E-PS-1210710-O-0	BEZEL	1	1	1	1	1
12	A-PL-KY11-D-0	KY11-D CONSOLE	1	1	1	1	1
13	D-IA-7409289-O-0	MTG BRKT 10 1/2 PANEL	2	2	2	2	-
14	D-UA-H950-C-0	H950-0 19" COVER PANEL, 10 1/2	1	1	1	1	1
15	E-PS-7009045-O-0	HARNESS POWER (EXPANDER)	1	1	1	1	1
16	D-MD-7409445-O-0	BRACKET, HARNESS SUPPORT	1	1	1	1	1
17	D-MD-7409446-O-0	SUPPORT, HARNESS	1	1	1	1	1
18	R-MD-7409447-O-0	PLATE, SUPPORT	1	1	1	1	1
19	E-IA-7009566-O-0	Expander Box Power Harness	1	1	1	1	1
20	E-PS-7009045-O-0	POWER HARNESS	1	1	1	1	1
21	A-PL-MFI-L-0	BACK PLANE (MFI-L) 8 K MEMORY	1	1	1	1	1
22	C-MD-7409312-O-0	BRACKET, SHIPPING	1	1	1	1	1

TITLE BASIC ASSY (PDP 11/40) SIZE CODE A PL ASSY NO. D-UA-11/40-0-0 SHEET 1 OF 4 DIST. 11/40-0-0

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS
DATE 7/17/72
ENG W. Stangor
DATE 7-26-72

CHECKED C. Fessenden
DATE 7/22/72
PROD W. Stangor
DATE 7-26-72

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION				
			11/40-CA	11/40-CB	11/40-CS	11/40-CF	11/40-AC
23	9006021-1	SCR PHL PAN HD #6-32 x .31 LG	6	6	6	6	6
24	9006633	LOCK WASHER #6 INT TOOTH	17	17	17	17	4
25	9009120-1	SPACER HEX SPECIAL	3	3	3	3	3
26	9006037-1	SCR PHL PAN HD #8-32 x .38 LG	4	4	4	4	-
27	9006039-1	SCR PHL PAN HD #8-32 x .50 LG	4	4	4	4	-
28	9008072	LOCK WASHER #8 EXT TOOTH	9	9	9	9	5
29	9006563	NUTS, KEP #8-32	4	4	4	4	-
30	9006073-1	SCR PHL PAN HD #10-32 x .50	4	4	4	4	-
31	9006074-1	SCR PHL PAN HD #10-32 x .62	52	52	52	52	-
32	9007651	LOCK WASHER #10 EXT TOOTH	50	50	50	50	-
33	9006071-1	SCR PHL PAN HD #10-32 x .38	2	2	6	6	-
34	9006565	NUT KEPS #10-32	7	7	7	7	3
35	9007022	STAMP, CABLE 7/8	2	2	2	2	2
36	9007786	NUT, TINNERMAN	45	45	6	6	-
37	9007880	TIE WRAPS	A/R	A/R	A/R	A/R	-
38	9007887	CLAMP, CABLE 5/8	1	1	1	1	1
39	9007867	TIE MOUNT	A/R	A/R	A/R	A/R	A/R
40	9007080	CLAMP, CABLE 3/16	1	1	1	1	1
41	9006404-2	SCR SLOTTED FLAT HD NYLON #6-32 x .38	5	5	5	5	-
42	9006043-1	SCR PHL PAN HD #8-32 x 1.00 LG	4	4	4	4	4
43	E-IA-7009045-O-0	PDP-11 PROCESSOR POWER HARNESS	1	1	1	1	1
44	C-IA-7009053-O-0	CONSOLE TO POWER CONTROL HARNESS	1	1	1	1	1

TITLE BASIC ASSY (PDP 11/40) SIZE CODE A PL ASSY NO. D-UA-11/40-0-0 SHEET 2 OF 4 DIST. 11/40-0-0

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS
DATE 9/15/72
ENG W. Minor
DATE 9-22-72

CHECKED C. Teschner
DATE 9/22/72
PROD G.L. Stringer
DATE 9-26-72

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	11/40-CA	11/40-CB	11/40-CS	11/40-CP	11/40-AC	11/40-AD
45	9006560	NUT KEPS #6-32	3	3	3	3	3	3
46	9007926	CONN, SOLDERLESS ARKLESS #50368	6	6	6	6	6	6
47	A-ML-LT 33-DC	TELETYPE WRITERS	1	X	1	1	1	1
48	A-ML-LT 33-DD	TELETYPE WRITERS	X	1	1	1	1	1
49	3-378-1474-H272	DECAL	1	1	1	1	1	1
50	A-PL-DL11-A-0	TELETYPE CONTROL	1	1	1	1	1	1
51	C-IA-7410581-0-0	BRKT CABLE HOLDDOWN	A/R	A/R	A/R	A/R	A/R	A/R
52	D-PS-1211215-0-0	CABLE CLAMP + STRAP	A/R	A/R	A/R	A/R	A/R	A/R
53	D-IA-7009177-0-0	POWER DISTRIBUTION CABLE	A/R	A/R	A/R	A/R	A/R	A/R
54	9006025-1	SCR PHL PAN HD #6-32 X .62;	4	4	4	4	4	4
55	9006857	SPACER HEX THREADED #6-32 X .62	4	4	4	4	4	4
56	9006026-1	SCR PHL PAN HD #6-32 X .75"LG	4	4	4	4	4	4
57	C-MD-7407607-0-0	PLATE, JONES STRIP	1	1	1	1	1	1
58	B-MD-7404721-0-0	PROTECTION COVER, 541	1	1	1	1	1	1
59	9007589	CINCH JONES JUMPER	2	2	2	2	2	2
60	9009033	CINCH JONES TERM STRIP	1	1	1	1	1	1
61	9007036	CATER PILLAR GROMMET	25"	25"	25"	25"	25"	25"
62	100104-1	115 VAC DECAL (WHITE) 11/40CA	1	1	1	1	1	1
63	100104-7	230 VAC DECAL (WHITE) 11/40CB	1	1	1	1	1	1
64	9107673-9	LINE CORD	1	1	1	1	1	1
65	H950-08-0	10-1/2 COVER PANEL	2	2	2	2	2	2
66	C-SC-1209224-0-0	LATCH MOLDING	8	8	4	4	4	4

TITLE BASIC ASSY (PDP11/40)
ASSY NO. D-UA-11/40-0-0
SHEET 3 OF 4
SIZE CODE A PL
NUMBER 11/40-0-0
REV. ECO NO. L

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G. FLANDERS
DATE 9-15-72
ENG W. Minor
DATE 9-22-72

CHECKED C. Teschner
DATE 9-22-72
PROD G.L. Stringer
DATE 9-26-72

SECTION 1
ISSUED SECT. 1

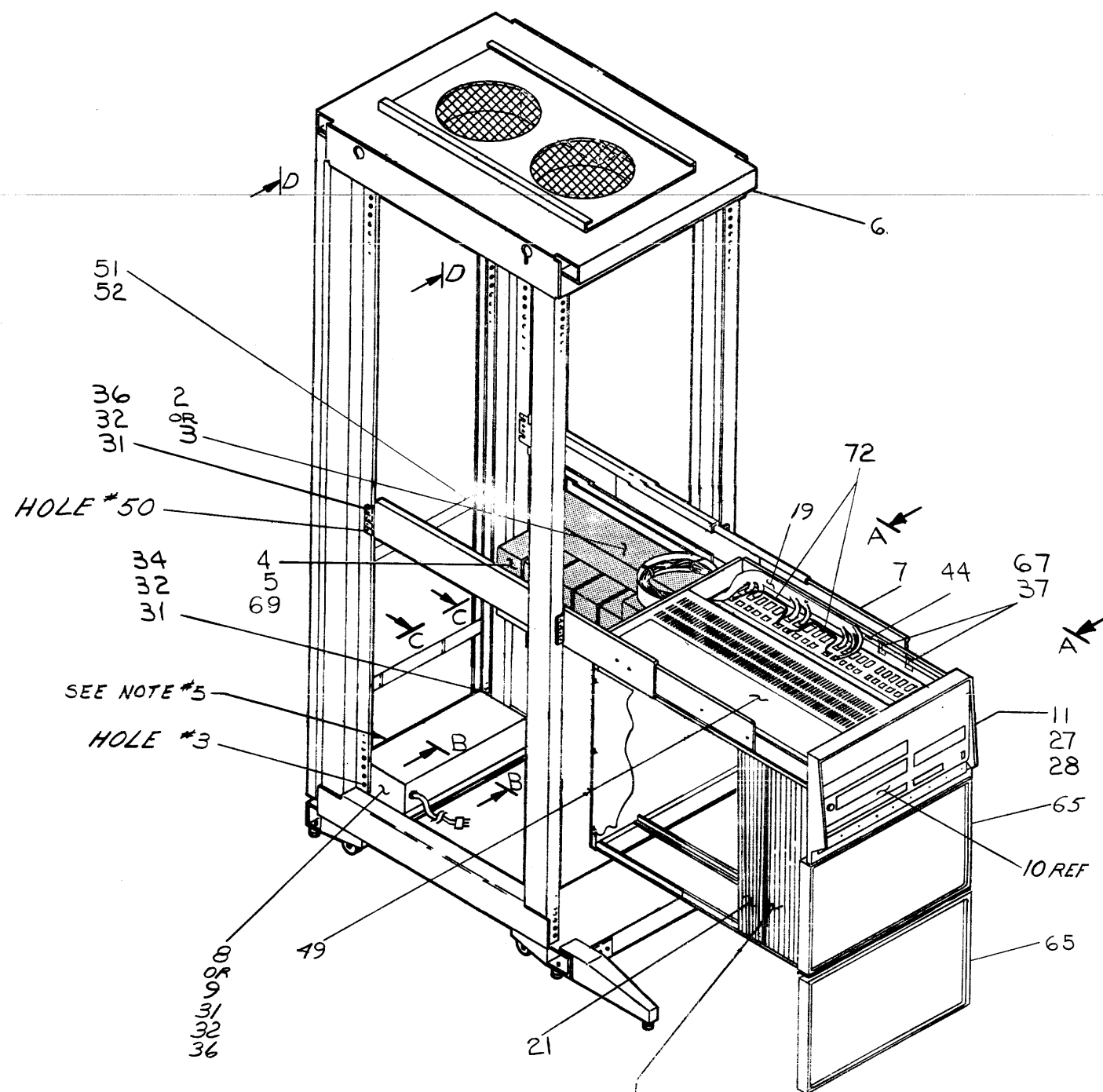
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	11/40-CA	11/40-CB	11/40-CS	11/40-CP	11/40-AC	11/40-AD
67	E-UA-H967-GA-0	CABINET ASSY 115V	-	-	1	-	-	-
68	E-UA-H967-GB-0	CABINET ASSY 230V	-	-	-	1	-	-
69	D-PS-1211442-0-0	COUNTER-WEIGHT	-	-	4	4	-	-
70	D-MD-7411159-0-0	COUNTER WEIGHT BRKT	-	-	1	1	-	-
71	9008264	ADHESIVE TIE MOUNT	12	12	12	12	6	6
72	D-IA-7009573-0-0	6-PIN JUMPER HARNESS	2	2	2	2	2	2
73	E-UA-H754-0-0	+20V; -5V REGULATOR (REF)	-	-	-	-	-	-
74	1209340	8-PIN MATE-N-LOK FEMALE	2	2	2	2	2	2
75	9009263	WASHER, FLAT NYLON #6	4	4	4	4	4	4
76	A-DC-7411323-0-0	DECAL-11/40 REGULATOR CONFIGURATION	1	1	1	1	1	1
77	D-IA-7009994-0-0	KD11-A POWER HARNESS	1	1	1	1	1	1
78	D-IA-7009565-0-0	MF11-L/LP FIRST MEMORY PWR. HARNESS	1	1	1	1	1	1
79	9006035-2	SCR PHL FLAT HD. 8-32X 1/4 LG	16	16	8	8	-	-
80	A-DC-7409478-0-0	DECAL PATENT	1	1	1	1	1	1

TITLE BASIC ASSY (PDP11/40)
ASSY NO. D-UA-11/40-0-0
SHEET 4 OF 4
SIZE CODE A PL
NUMBER 11/40-0-0
REV. ECO NO. L

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LEGEND	
NUMBER	VARIATION
11/40-CA	115 V, 60HZ
11/40-CB	230 V, 50HZ
11/40-CS	115 V, 60HZ
11/40-CT	230 V, 50HZ

- NOTES:
1. A.C. CONNECTION FOR CABINET FAN MAY BE ON BRACKET (VIEW D-D) OR ON JONES STRIP ON INTERIOR OF REAR SIDE OF CABINET MOUNTING CHANNEL.
 2. FOR SYSTEMS CONFIGURATIONS NOT LISTED REFER TO C-PL-11/40-0-3.
 3. BEHIND EACH 10 1/2" PANEL INSTALL (4) 3/8" SPACERS.
 4. FOR VARIATIONS CS & CT SEE SHT. #5 VARIATIONS CA & CB ON SHT. #1 ONLY.
 5. TOP OF CABINET FAN AND H742 POWER SUPPLY MUST BE PLUGGED INTO LINE 1 OUTLETS ON THE 861 POWER CONTROL.
 6. MAIN HARNESS (ITEM #19) HAS TWO (2) UNUSED 8-PIN PLUGS (PI6 AND EITHER PI5 OR PI7). TO PREVENT DAMAGE TO REGULATORS INSERT AN EMPTY MATING CONN. (ITEM #74) INTO THEM AND TIE THEM OUT OF THE WAY, ALSO ADD OR REMOVE JUMPERS PER DIGT009566-0-1



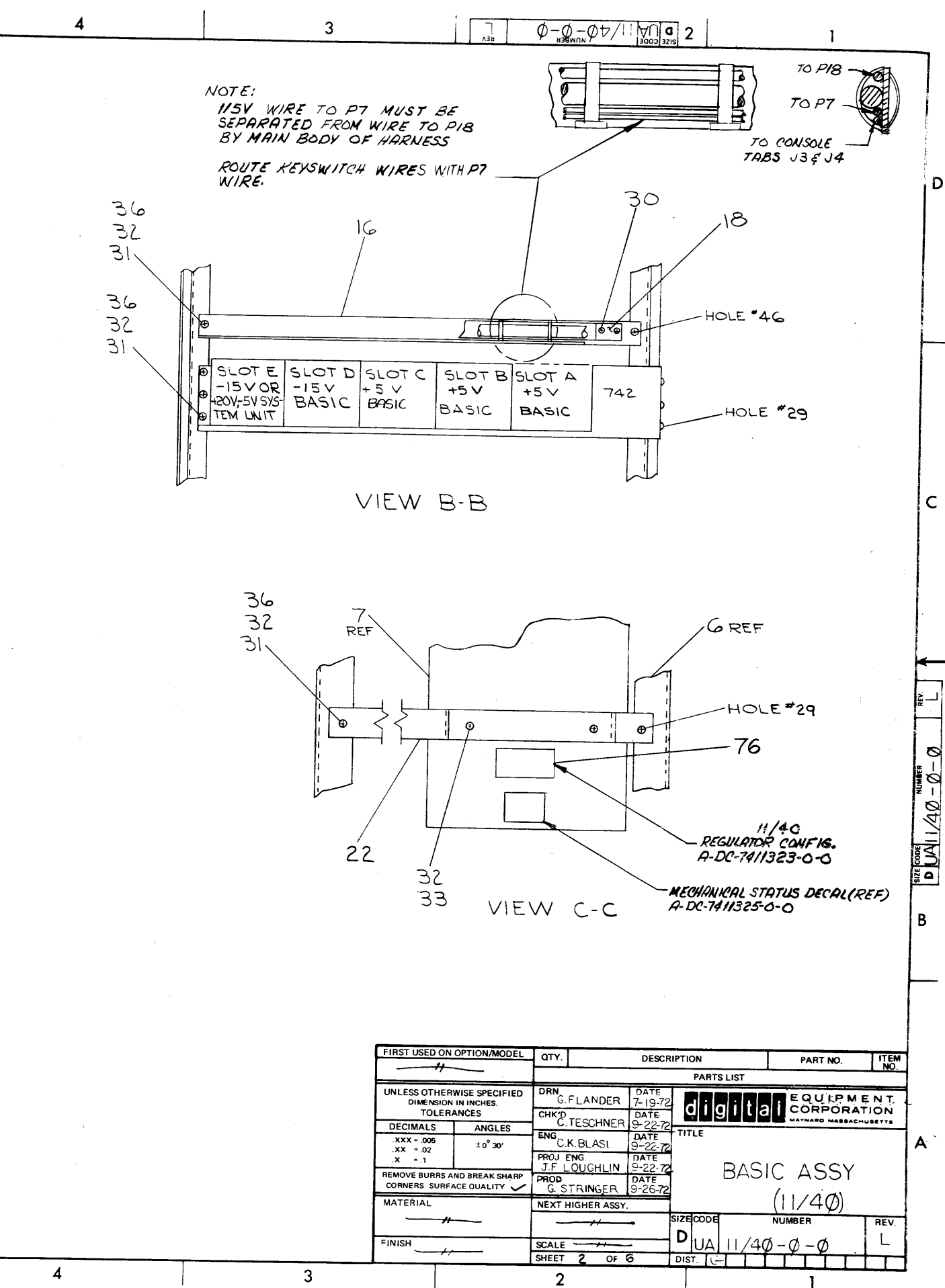
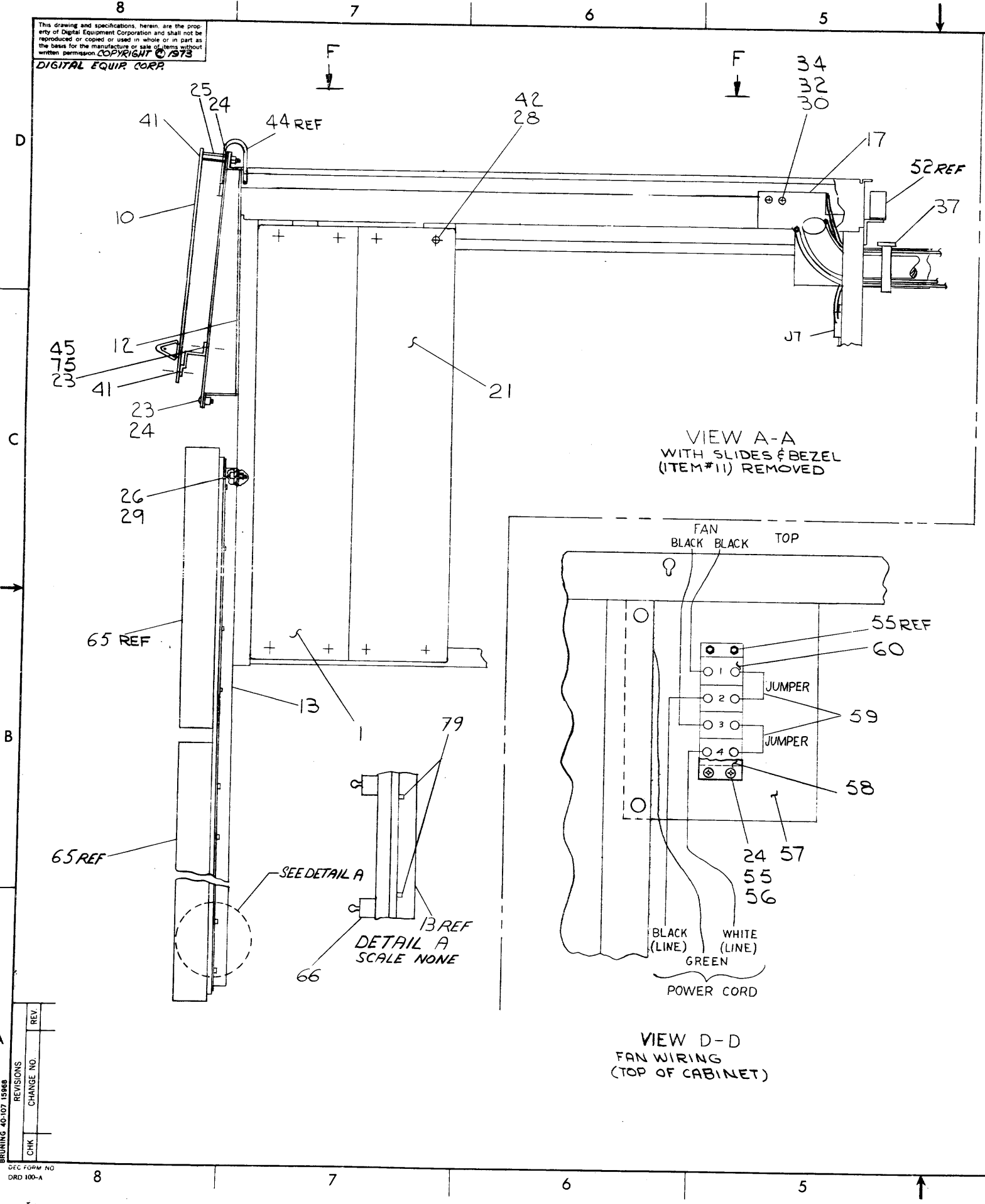
VARIATION CA & CB (ONLY)

REV.	CHANGE NO.	REV.
F	11/40-00010A	F
H	11-12-73	H
J	11-12-73	J
K	11-12-73	K
L	11-12-73	L
M	11-12-73	M
N	11-12-73	N
O	11-12-73	O
P	11-12-73	P
Q	11-12-73	Q
R	11-12-73	R
S	11-12-73	S
T	11-12-73	T
U	11-12-73	U
V	11-12-73	V
W	11-12-73	W
X	11-12-73	X
Y	11-12-73	Y
Z	11-12-73	Z

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11/40				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
.XXX - .005	±0° 30'	digital EQUIPMENT CORPORATION		
.XX - .02		MAYNARD, MASSACHUSETTS		
.X - .1		TITLE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		BASIC ASSY (11/40)		
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE	NUMBER	REV.
	B-DD-11/40	DUA	11/40-0-0	L
FINISH	SCALE	SHEET	OF	DIST.
		1	6	

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0-0-07/11/40 2



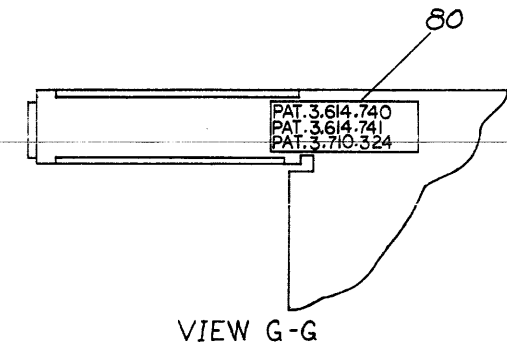
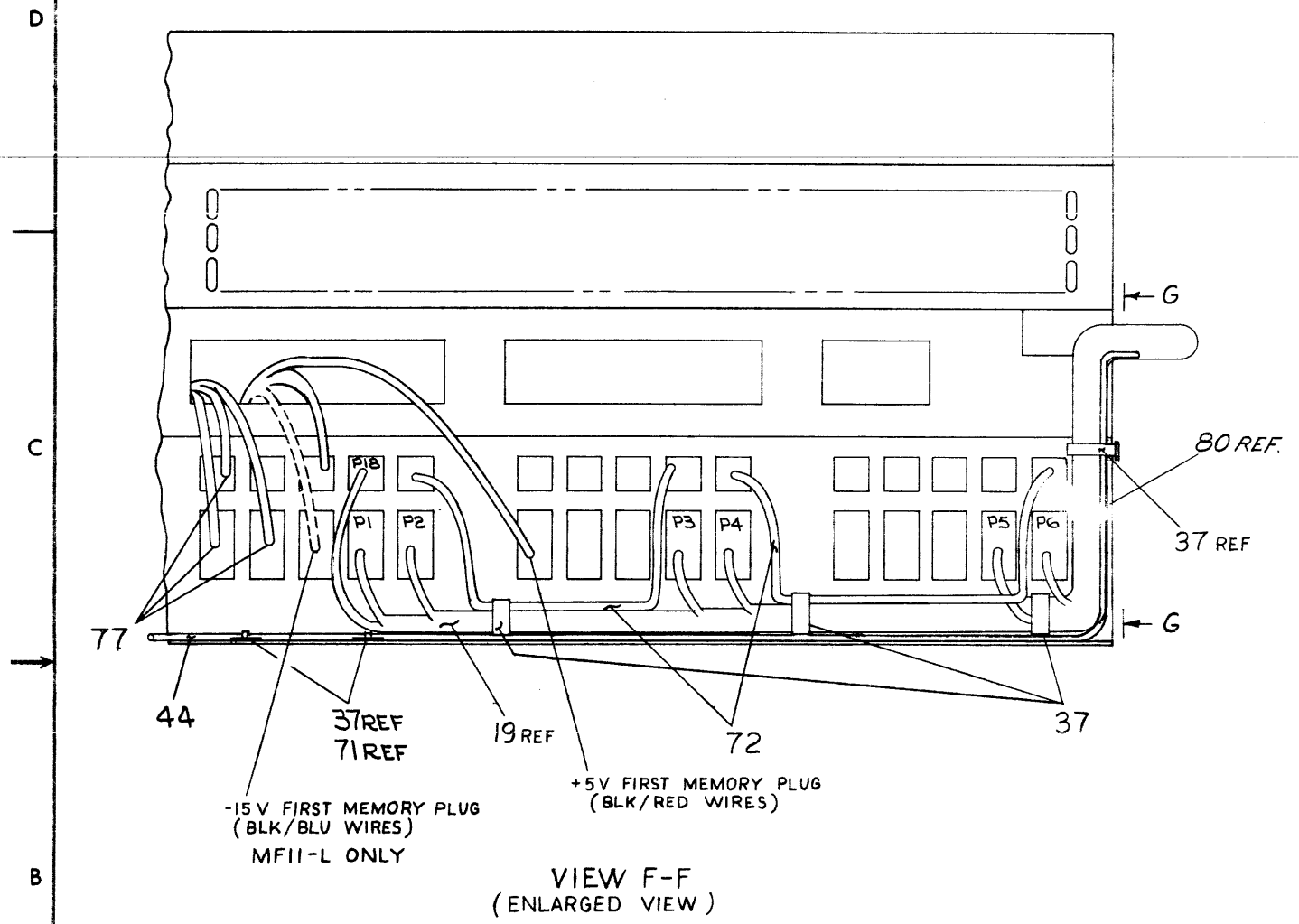
BRUNING 40-107 15888	REV	
DEC FORM NO DRD 100-A	CHANGE NO.	
CHK		

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN	G. FLANDER	DATE 7-19-72	 digital EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small>
DECIMALS	CHK'D	C. TESCHNER	DATE 9-22-72	
ANGLES	ENG	C.K. BLASI	DATE 9-22-72	
XXX = .005 .XX = .02 .X = .1	PROJ ENG	J.F. LOUGHLIN	DATE 9-22-72	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD	G. STRINGER	DATE 9-26-72	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH	SCALE		D U A 11/40-0-0	REV. L
SHEET 2 OF 6			DIST. 1	

BASIC ASSY (11/40)

REV L
NUMBER D U A 11/40-0-0

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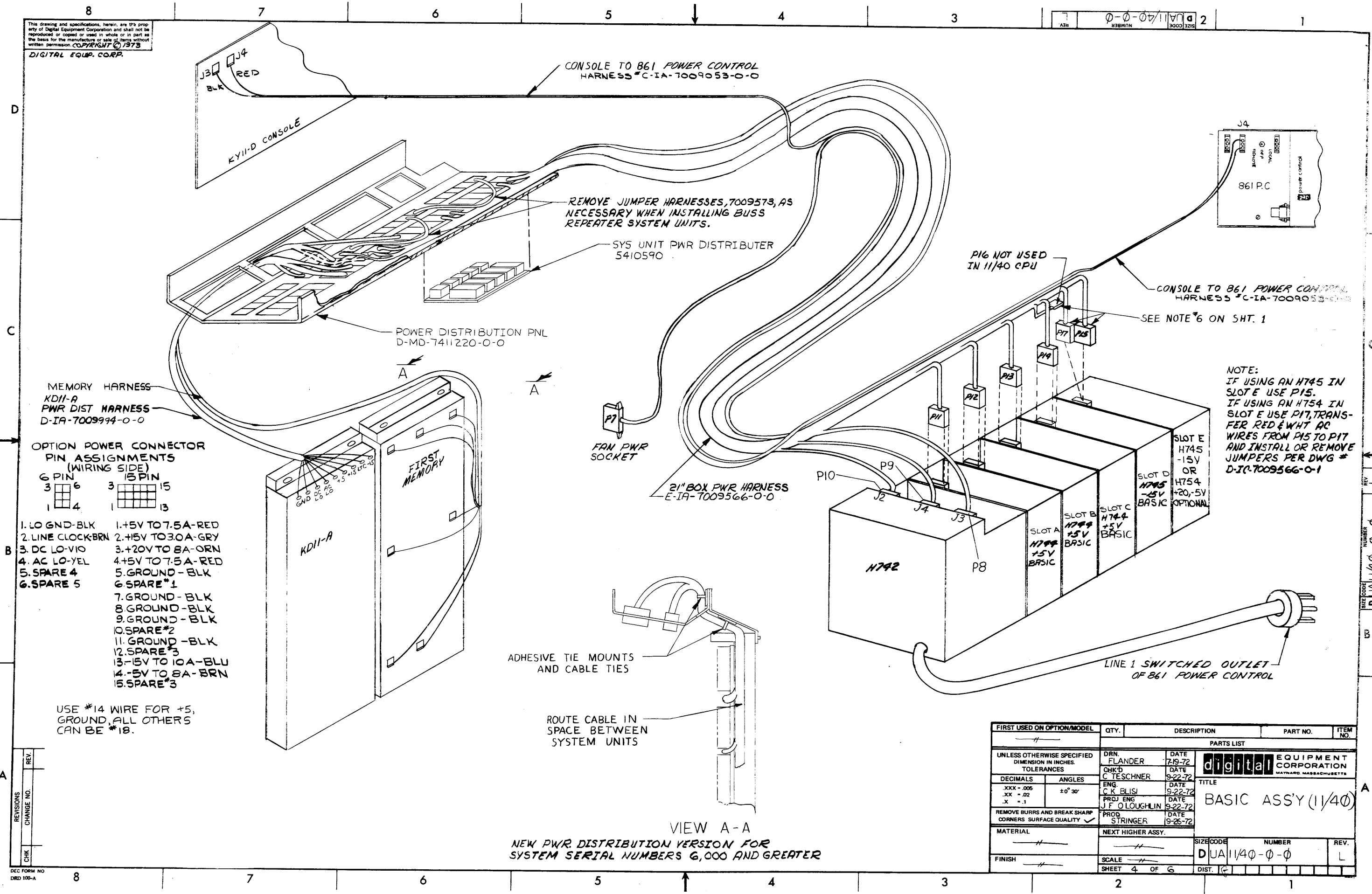


FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. G. FLANDER	DATE 7-19-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TOLERANCES	CHK'D. G. TESCHNER	DATE 9-22-72		
DECIMALS	ENG. C.K. BLASI	DATE 9-22-72	TITLE BASIC ASSY (11/40)	
ANGLES	PROJ. ENG. J.F. LOUGHLIN	DATE 9-22-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y	PROD. G. STRINGER	DATE 9-26-72		
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
FINISH	SCALE		D UA	11/40-0-0
	SHEET	3 OF 6	DIST.	REV. L

REV.	CHANGE NO.	CHK.

SIZE CODE: D UA 11/40-0-0
 NUMBER: 2
 REV: L

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MEMORY HARNESS
KD11-A
PWR DIST HARNESS
D-IA-7009944-0-0

OPTION POWER CONNECTOR
PIN ASSIGNMENTS
(WIRING SIDE)

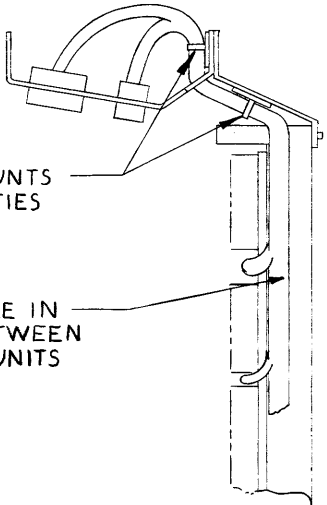
6 PIN		15 PIN	
3	6	3	15
1	4	1	13

- | | |
|-------------------|--------------------|
| 1. LOGND-BLK | 1.+5V TO 7.5A-RED |
| 2. LINE CLOCK-BRN | 2.+15V TO 3.0A-GRY |
| 3. DC LO-VIO | 3.+20V TO 8A-ORN |
| 4. AC LO-YEL | 4.+5V TO 7.5A-RED |
| 5. SPARE 4 | 5.GROUND-BLK |
| 6.SPARE 5 | 6.SPARE*1 |
| | 7.GROUND-BLK |
| | 8.GROUND-BLK |
| | 9.GROUND-BLK |
| | 10.SPARE*2 |
| | 11.GROUND-BLK |
| | 12.SPARE*3 |
| | 13.-15V TO 10A-BLU |
| | 14.-5V TO 8A-BRN |
| | 15.SPARE*3 |

USE #14 WIRE FOR +5,
GROUND, ALL OTHERS
CAN BE #18.

ADHESIVE TIE MOUNTS
AND CABLE TIES

ROUTE CABLE IN
SPACE BETWEEN
SYSTEM UNITS



VIEW A-A
NEW PWR DISTRIBUTION VERSION FOR
SYSTEM SERIAL NUMBERS 6,000 AND GREATER

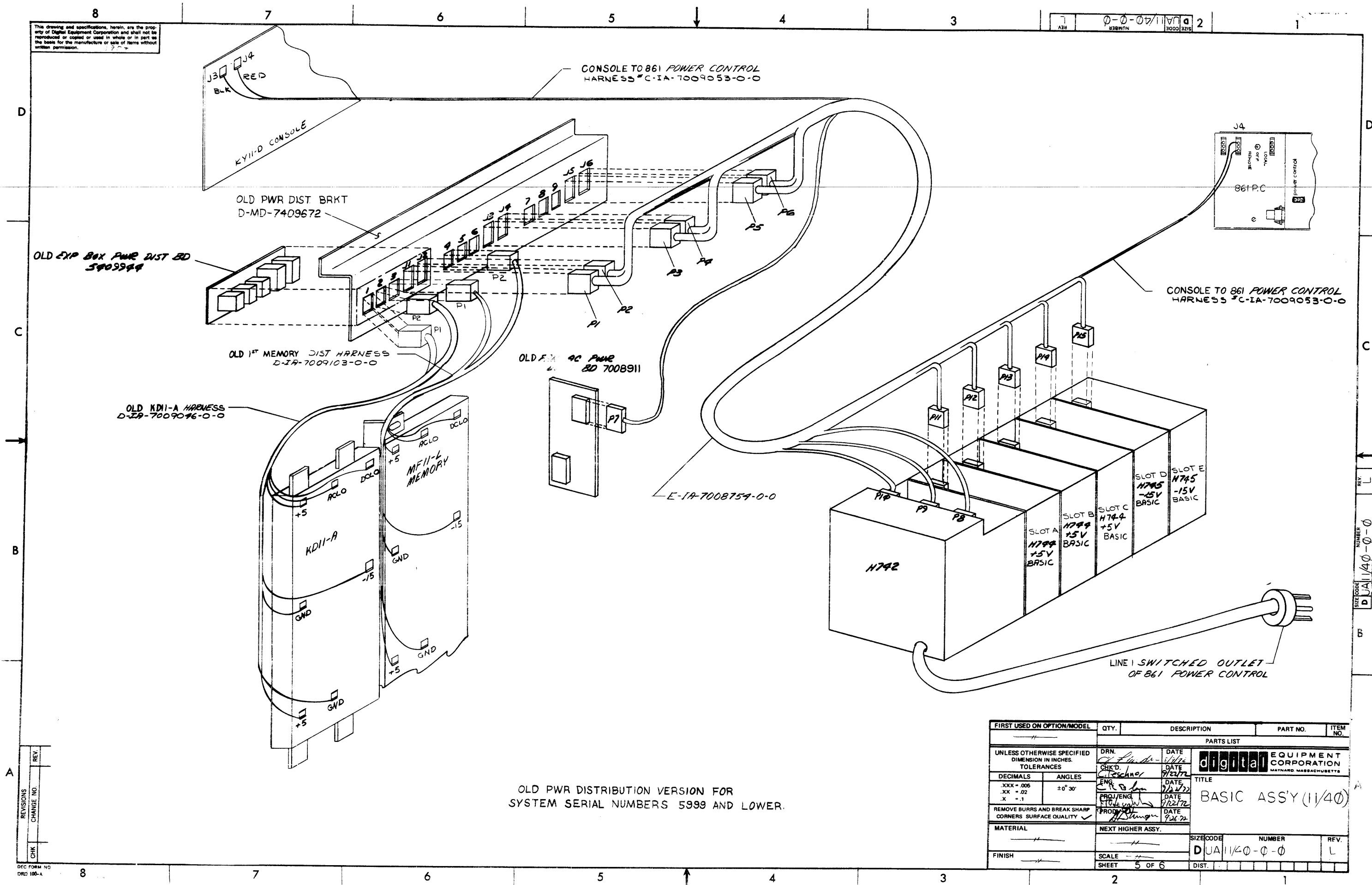
NOTE:
IF USING AN H745 IN
SLOT E USE P15.
IF USING AN H754 IN
SLOT E USE P17, TRANS-
FER RED & WHT AC
WIRES FROM P15 TO P17
AND INSTALL OR REMOVE
JUMPERS PER DWG #
D-IA-7009566-0-1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. CHK'D C TRESCHNER	DATE 7-19-72 DATE 9-22-72	digital CORPORATION <small>MAYNARD, MASSACHUSETTS</small> TITLE BASIC ASS'Y (11/40)	
DECIMALS .XXX - .006 XX - .02 .X - .1	ENG. C K BLISS PROJ ENG J F O'LOUGHLIN	DATE 9-22-72 DATE 9-22-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. STRINGER	DATE 9-26-72		
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE	SHEET 4 OF 6	SIZE CODE DUA11/40-φ-φ	NUMBER L

REVISIONS	REV.
CHANGE NO.	
CHK	

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0-0-07/11/71 d 2
 SIZE CODE NUMBER 300022



OLD PWR DISTRIBUTION VERSION FOR SYSTEM SERIAL NUMBERS 5999 AND LOWER.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN DATE 5/1/72	DATE 5/1/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	CHKD DATE 7/21/72	DATE 7/21/72		
REMOVED BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	ENG DATE 7/21/72	DATE 7/21/72	TITLE BASIC ASSY (11/40)	
MATERIAL	PROJ/ENG DATE 7/21/72	DATE 7/21/72		
FINISH	PROV DATE 7/21/72	DATE 7/21/72	SIZE CODE DUA11/40-0-0	NUMBER L
SCALE		SHEET 5 OF 6		REV. L

REV.	CHANGE NO.	CHK

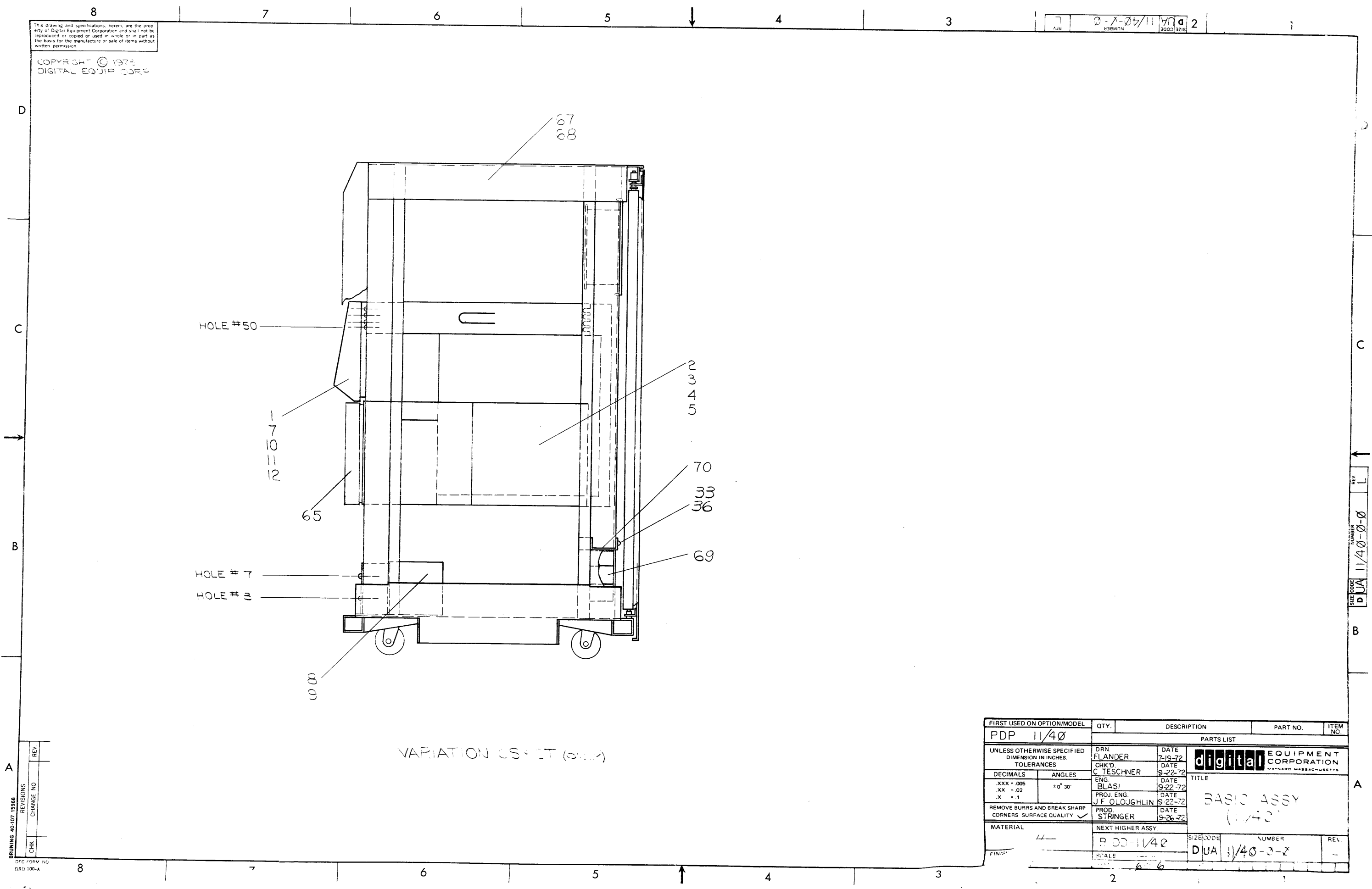
DEC FORM NO
ORD 100-A

REV L
NUMBER DUA11/40-0-0

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2-7-04/11/40 a 2

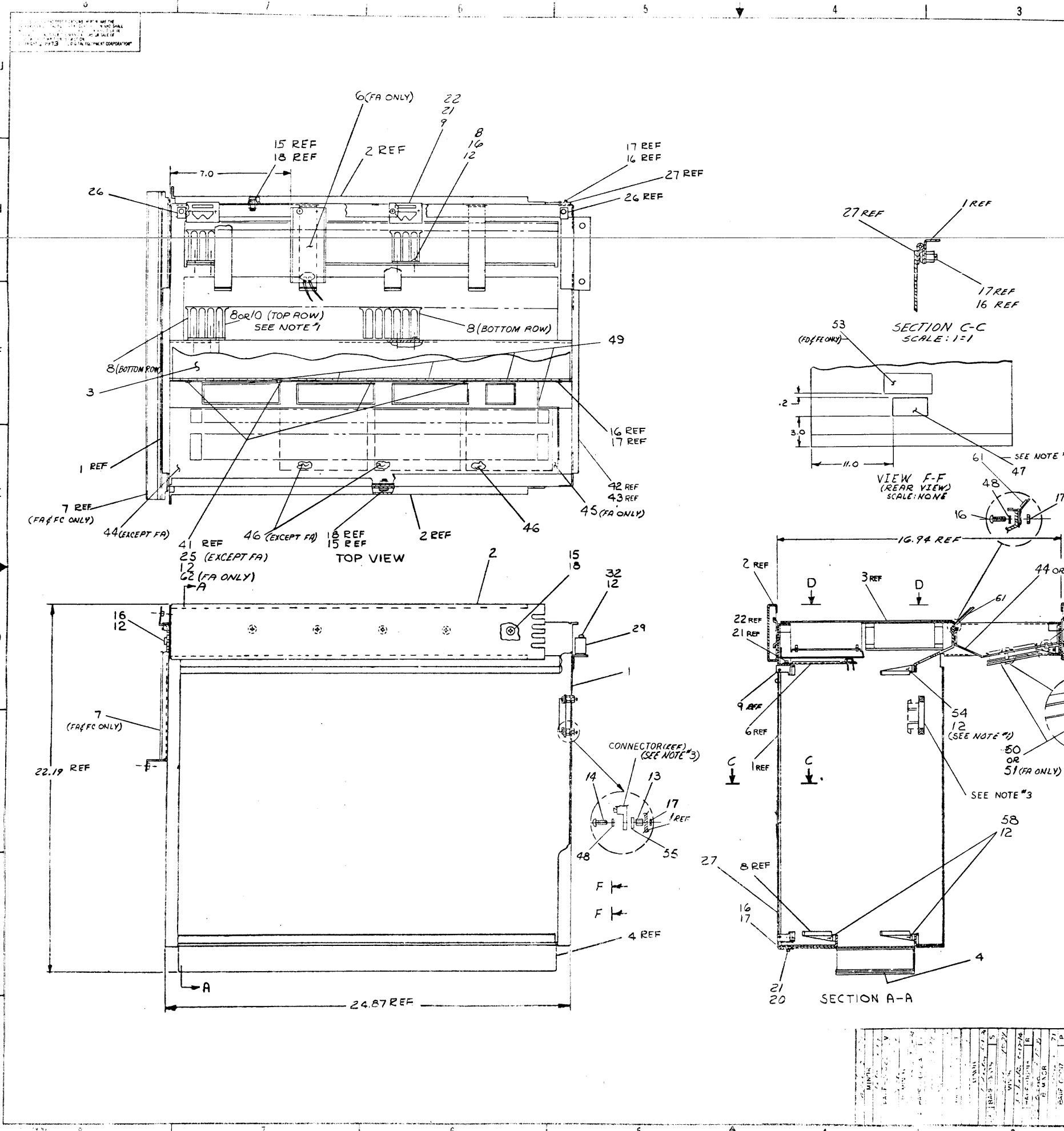


VARIATION CS-IT (50-1)

REV	CHANGE NO	CHK

BRUNING 40-107 1596B
DTC 798M 710
DRD 100-A

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 11/40				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN FLANDER	DATE 7-19-72	digital EQUIPMENT CORPORATION <small>MARLBOROUGH MASSACHUSETTS</small>	
DECIMALS	CHK'D C TESCHNER	DATE 9-22-72		
ANGLES	ENG BLASI	DATE 9-22-72		
.XXX = .005 .XX = .02 .X = .1	PROJ. ENG. J.F. O'LOUGHLIN	DATE 9-22-72	TITLE BASIC ASSY (11/40)	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROD. STRINGER	DATE 9-26-72		
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
	P-03-11/40		DUA	11/40-0-2
FINISH	SCALE		REV.	
	6 6			



NUMBER	VARIATION
BAIL-FA	BASIC 11/45
BAIL-FB	EXPANDER
BAIL-FC	BASIC 11/45
BAIL-FD	FIELD EXPANSION BOX ASSY 115V
BAIL-FE	FIELD EXPANSION BOX ASSY 230V
BAIL-FH	FIELD EXPANSION BAIL-FD WITH +20V DC REGULATOR
BAIL-FJ	FIELD EXPANSION BAIL-FE WITH +20V DC REGULATOR

NOTES
SEE SHEET #2 FOR ALL NOTES

QTY	DESCRIPTION	PART NO.	ITEM NO.
4	SCR PHL PAN HD #8-32	9007854-1	62
1	PLATE SUPPORT	E-1A-741460-0	61
4	CABLE TIE MOUNT	9007867	60
1	BAIL ACCESSORY BRK	DRR BAIL-F-01	59
44	SCR PHL HD PAN #8-32	9006034-1	58
1	DECAL PWR DIST 11/45	A-DC-530941-0	57
1	DECAL PWR DIST	A-DC-530941-0	56
2	WASH PLAT. POC. 0.01	9006662	55
22	SCR PHL HD PAN #8-32	9006035-1	54
1	EXPANDER BOX DECAL	E-1A-741460-0	53
6	SPACER 1/4" X 3/8" X 1/8"	9006859	52
1	MUCKLE GUARD (11/45)	E-1A-741460-0	51
1	MUCKLE GUARD	E-1A-741460-0	50
4	WASHER INT TOOTH #8	9006822	49
6	WASHER EXT TOOTH #8	9008072	48
1	DECAL MECH STATUS	A-DC-530941-0	47
3	PWR DISTRIBUTION BOARD	D-PS-121015-0	46
1	PWR DISTRIBUTION PNL (11/45)	E-1A-741460-0	45
1	PWR DISTRIBUTION PANEL	D-PS-121015-0	44
1	DECAL	A-DC-530941-0	43
1	DECAL	A-DC-530941-0	42
3	NUT, HEX #8-32	9006561	41
ACCESSORY KIT LIST			
A-AL-BAIL-FC REF			
A-AL-BAIL-FD REF			
3	MOUNT, ADM. BACK	9008264	40
3	TIE WRAPS	9007880	39
22	SCR PHL HD PAN #4-40	9006013	38
1	BRKT, CABLE PROTECTION	700909700	37
1	WEDGE DOOR STOP	E-1A-741460-0	36
1	EXP. BOX ASSY	E-1A-741460-0	35
16	SCR PHL HD PAN #8-32	9006034-1	34
16	CLIP, MTS	9006034-1	33
2	SCR PHL HD PAN #8-32	9007854-1	32
1	PLATE, POWER SUPPORT	E-1A-741460-0	31
3	EXPANDER BOX POWER DIST.	E-1A-741460-0	30
1	CABLE CLAMP & STRAP	D-PS-121015-0	29
1	CABLE STRAP	E-1A-741460-0	28
1	DOOR, LEFT SIDE	E-1A-741460-0	27
2	CLIP ON RECEPT	9008194	26
2	SCR PHL HD PAN #8-32	9006034-1	25
12	WASHER INT TOOTH #6	9006633	24
12	SCR PHL HD PAN #8-32	9006011-1	23
22	SCR PHL HD PAN #4-40	9006011-1	22
44	WASHER INT TOOTH #4	9006632	21
1	SCR PHL HD PAN #4-40	9006011-1	20
10	NUT, KEPS #8-32	9006073-1	19
10	SCR PHL HD PAN #8-32	9006073-1	18
10	NUT, KEPS #8-32	9006563	17
9	SCR PHL HD PAN #8-32	9006037-1	16
10	NUT, KEPS #10-32	9006565	15
2	SCR PHL HD PAN #8-32	9006041-1	14
2	SPACER 3/8" X 1/4" X 1/8"	9006818	13
8	WASHER INT TOOTH #8	9006634	12
2	PLATE, PROTECTION	E-1A-741460-0	11
11	CARD GUIDE REWORK	E-1A-741460-0	10
22	EXTRACTOR CARD GUIDE	D-PS-121015-0	9
22	CARD GUIDE	C-PS-121015-0	8
1	BEZEL MTO BRKT	E-1A-741460-0	7
1	TEMPAL CUTOUT BRKT ASSY	C-AD-100674-0	6
1	CORE MEM. POWER DIST. BD	D-PS-121015-0	5
1	FAN ASSY (BOTTOM)	D-AD-100674-0	4
1	FAN ASSY (TOP)	E-1A-741460-0	3
1	SLIDE CHASSIS 23" TRAVEL	D-SC-120452-0	2
1	CHASSIS	E-1A-741460-0	1

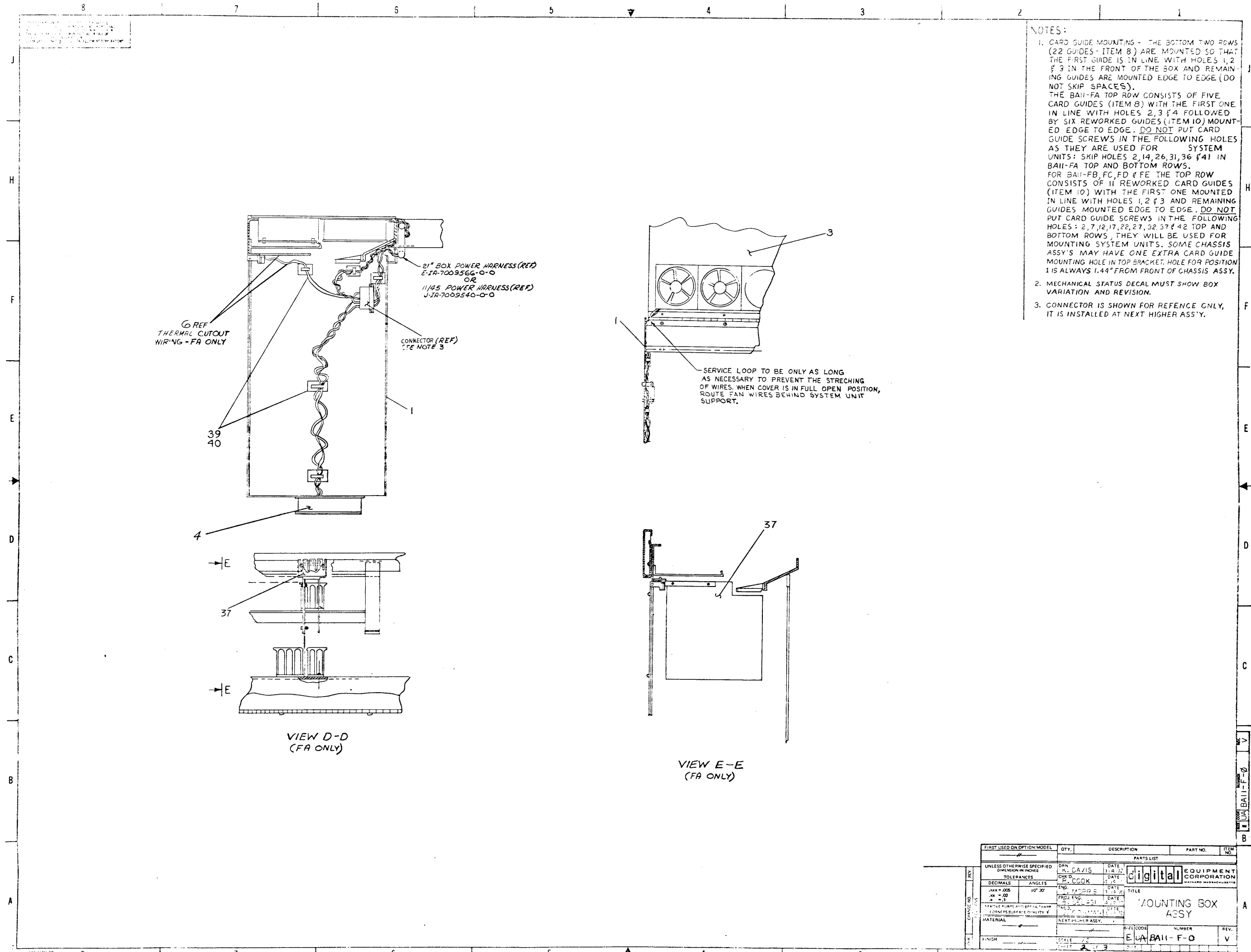
FIRST USED ON OPTION/MODEL	DESCRIPTION	PART NO.	ITEM NO.
11/45			

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DATE	TITLE
DECIMALS ANGLES		
1/16" 005 10' 30"		

MATERIAL	FINISH	REV

DATE	BY	CHKD	APP'D	REV

digital CORPORATION
EQUIPMENT CORPORATION
MOUNTING BOX ASSY.
EVA BAIL F-0



NOTES:

- CARD GUIDE MOUNTING - THE BOTTOM TWO ROWS (22 GUIDES - ITEM 8) ARE MOUNTED SO THAT THE FIRST GUIDE IS IN LINE WITH HOLES 1, 2 & 3 IN THE FRONT OF THE BOX AND REMAINING GUIDES ARE MOUNTED EDGE TO EDGE (DO NOT SKIP SPACES). THE BAII-FA TOP ROW CONSISTS OF FIVE CARD GUIDES (ITEM 8) WITH THE FIRST ONE IN LINE WITH HOLES 2, 3 & 4 FOLLOWED BY SIX REWORKED GUIDES (ITEM 10) MOUNTED EDGE TO EDGE. DO NOT PUT CARD GUIDE SCREWS IN THE FOLLOWING HOLES AS THEY ARE USED FOR SYSTEM UNITS: SKIP HOLES 2, 14, 26, 31, 36 & 41 IN BAII-FA TOP AND BOTTOM ROWS. FOR BAII-FB, FC, FD & FE THE TOP ROW CONSISTS OF 11 REWORKED CARD GUIDES (ITEM 10) WITH THE FIRST ONE MOUNTED IN LINE WITH HOLES 1, 2 & 3 AND REMAINING GUIDES MOUNTED EDGE TO EDGE. DO NOT PUT CARD GUIDE SCREWS IN THE FOLLOWING HOLES: 2, 7, 12, 17, 22, 27, 32, 37 & 42 TOP AND BOTTOM ROWS. THEY WILL BE USED FOR MOUNTING SYSTEM UNITS. SOME CHASSIS ASSY'S MAY HAVE ONE EXTRA CARD GUIDE MOUNTING HOLE IN TOP BRACKET. HOLE FOR POSITION 1 IS ALWAYS 1.44" FROM FRONT OF CHASSIS ASSY.
- MECHANICAL STATUS DECAL MUST SHOW BOX VARIATION AND REVISION.
- CONNECTOR IS SHOWN FOR REFERENCE ONLY, IT IS INSTALLED AT NEXT HIGHER ASS'Y.

21" BOX POWER HARNESS (REF)
E-1A-700956G-0-0
OR
11/45 POWER HARNESS (REF)
J-1A-7009540-0-0

G REF
THERMAL CUTOUT
WIRING - FA ONLY

CONNECTOR (REF)
SEE NOTE 3

3

SERVICE LOOP TO BE ONLY AS LONG AS NECESSARY TO PREVENT THE STRECHING OF WIRES. WHEN COVER IS IN FULL OPEN POSITION, ROUTE FAN WIRES BEHIND SYSTEM UNIT SUPPORT.

4

37

VIEW D-D
(FA ONLY)

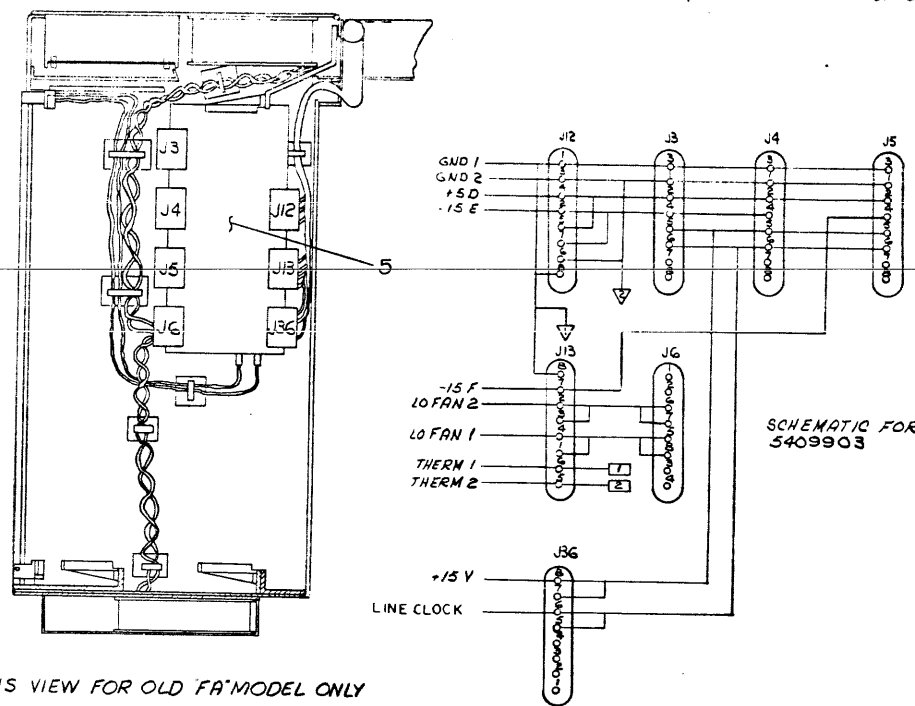
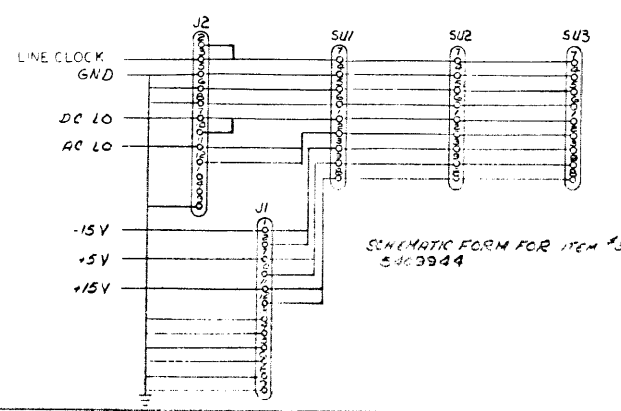
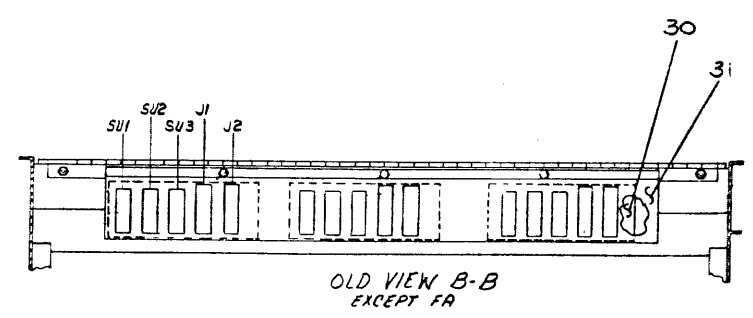
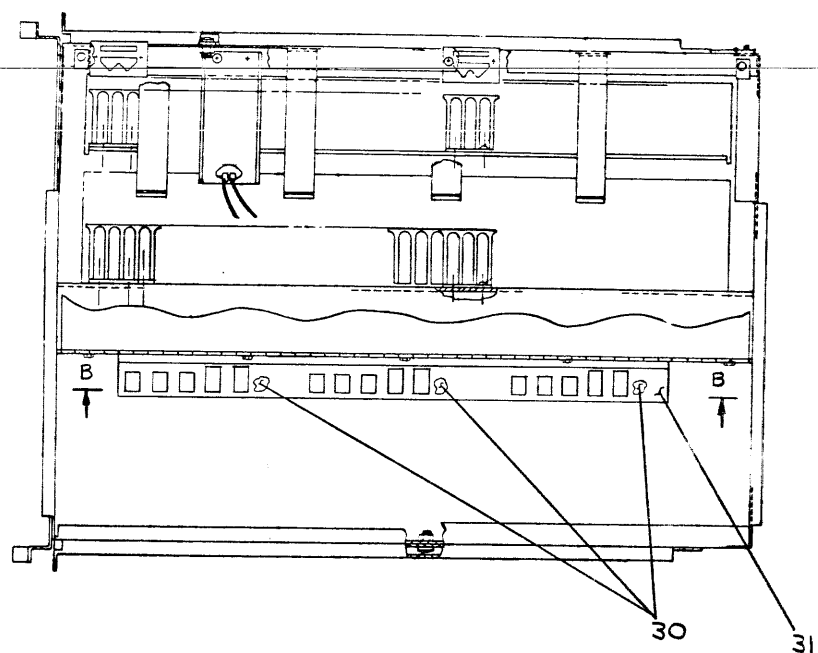
37

VIEW E-E
(FA ONLY)

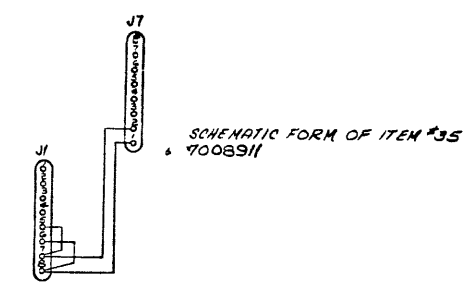
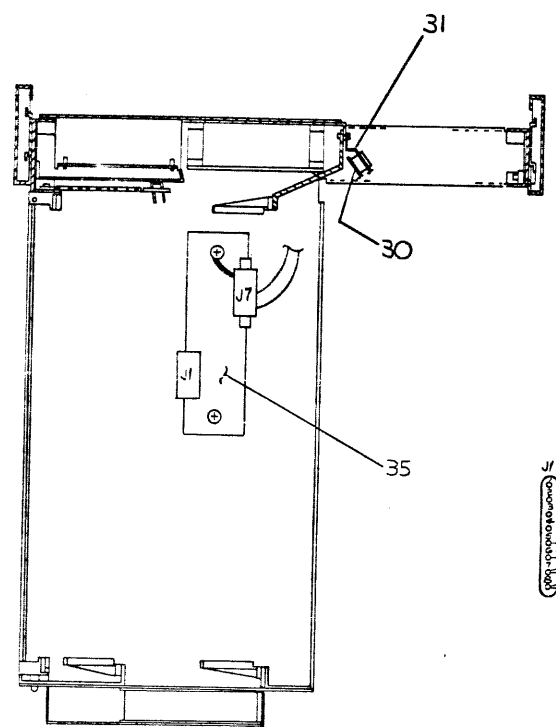
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN A. DAVIS	DATE 11-2-72	digital EQUIPMENT CORPORATION	
TOLERANCES	CHK'D E. COOK	DATE 1-14-73		
DECIMALS .005	ANGLES 90° 30'	ENG. MORSE	MOUNTING BOX ASSY	
FRD. END.	DATE			
MATERIAL	CONSPICUOUS QUALITY	DATE	EUA BAII-F-0	
FINISH	SCALE 2/3			

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NOTE: THIS SHEET FOR REFERENCE ONLY. ALL ITEMS NUMBERED HERE AND LONGER USED IN PRESENT PROD. ITEMS 30, 31, 35 WERE DELETED BY NEW POWER DISTRIBUTION ECO.



THIS VIEW FOR OLD FA MODEL ONLY



SEE NOTE THIS PAGE

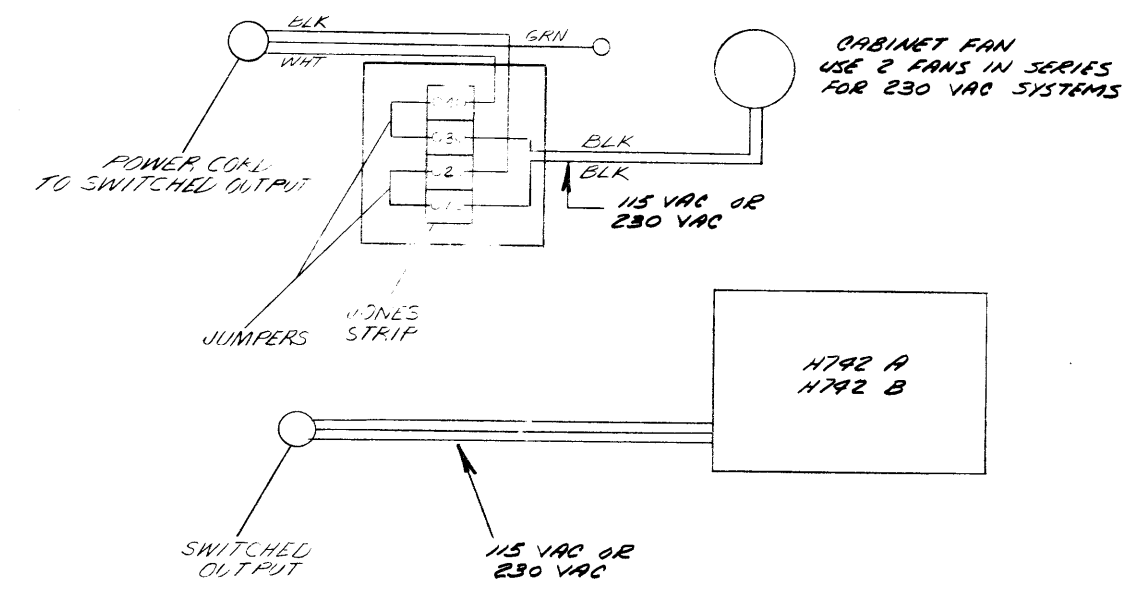
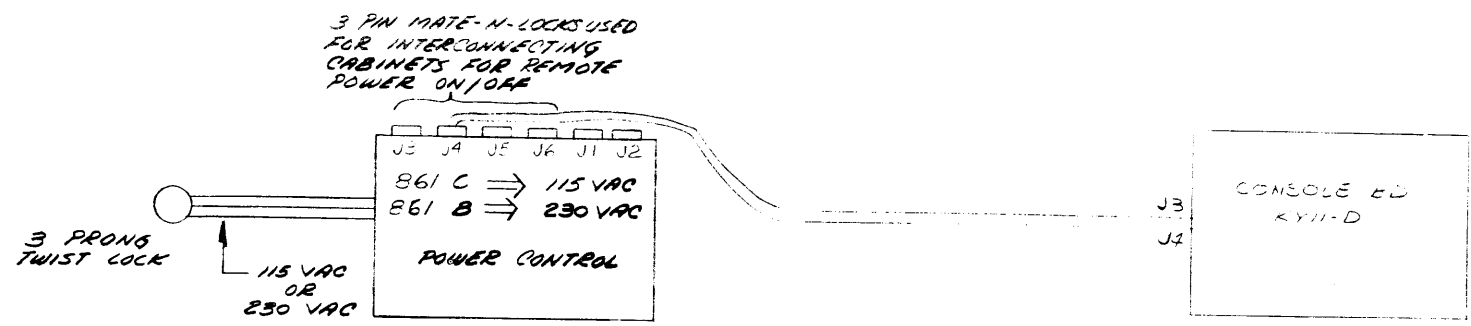
QTY	DESCRIPTION	PART NO.	REV.
1	EXP BOX AC STRIP ASSY	219-7008911-0-0	35
1	PLATE POWER SUPPORT	DMD-1409672-0-0	31
3	EXPANDER BOX POWER DIST	E74-5409944-0-0	30
1	CORE MEM POWER DIST BD	D19-5409923-0-0	5

REV	DATE	DESCRIPTION
1	11/10	ISSUED FOR PRODUCTION
2	11/10	REVISION

DRN	R. DAVIS	DATE	11/10
CHKD		DATE	11/10
ENGR		DATE	11/10
PROF	AGI	DATE	11/10
FILED		DATE	11/10
EXT HIGHER ASSY			

REV	NO	DATE	DESCRIPTION
1	1	11/10	ISSUED FOR PRODUCTION
2	1	11/10	REVISION

REFERENCE ONLY



REVISIONS	CHANGE NO.	REV.
CHK	11/40-00004	A
W. MINOR		
11-77		

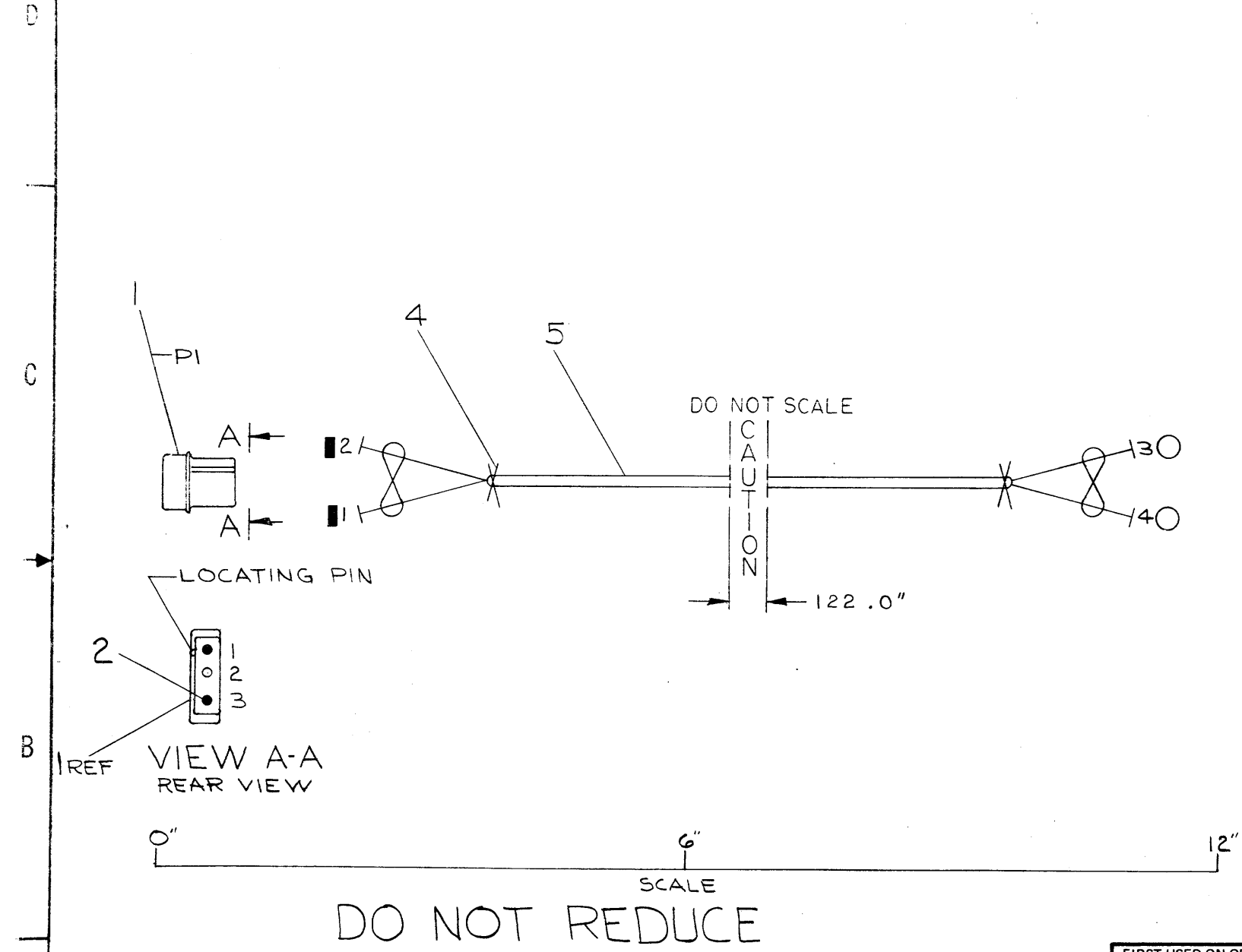
FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN. <i>C. Lindner</i>	DATE 11/15	 digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS ANGLES	CHK'D <i>C. Lindner</i>	DATE 11/21/77		
XXX - 005 ±0° 30'	ENG <i>C. R. Blom</i>	DATE 11/21/77		
XX - 02	PROL ENG <i>C. R. Blom</i>	DATE 11/21/77		
X - 1	PROD <i>C. R. Blom</i>	DATE 11/21/77		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD <i>C. R. Blom</i>	DATE 11/21/77	TITLE	
MATERIAL	NEXT HIGHER ASSY.	DATE 11/21/77	DISTRIBUTION	
FINISH	SCALE	DATE 11/21/77	SIZE CODE	NUMBER
	SHEET 1 OF 1	DIST	DIG	11/2-C-1
				REV A



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WIRE TABLE								
ITEM NO	DESCRIPTION	FROM			TO			
		AWG	COLOR	POINT	CONNECTION	TERM	POINT	CONNECTION
5	18	BLK	1	PI-3	2	3	—	3
		RED	2	PI-1	2	4	—	3

NOTES:
1. USE TIE WRAPS (X) ITEM #4 AT END BREAKOUT POINTS.



DO NOT REDUCE

SYMBOL	DESCRIPTION	PART NO.	QTY.
X	A/R WIRE #18 AWG TWP BLK/RED	9107430-02	5
X	A/R TIE-WRAP SST 1.5M	9007880	4
O	2 CONN SOLDERLESS #50902	9007917	3
I	2 MATE-N-LOCK TERM (MALE)	1209378-01	2
SYM	1 CONN MATE-N-LOCK (3 PIN)	1209351-03	1

REV.	CHANGE NO.	DESCRIPTION
A	7009053-00001	4-3-73
B	7009053-00002	6-21-74

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/4φ		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN. <i>[Signature]</i> DATE 5/11/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE CONSOLE TO POWER CONTROL HARNESS	
DECIMALS .XXX = .005 .XX = .02 .X = .1	ANGLES ±0° 30'	CHK'D. <i>[Signature]</i> DATE 7/24/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		ENG. <i>[Signature]</i> DATE 7/22/72		
MATERIAL SEE PARTS LIST		PROD. <i>[Signature]</i> DATE 7-26-72		
FINISH —				
NEXT HIGHER ASSY. D-UA-11/4φ-φ-φ		SCALE 1/1	SIZE CODE C IA	NUMBER 7009053-0-0
SHEET 1 OF 1		DIST. ←	REV. B	

SIZE CODE C IA 7009053-0-0 REV. B

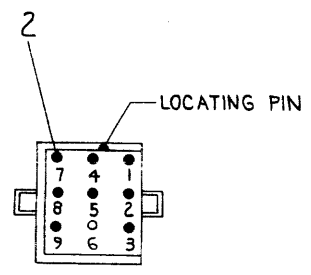
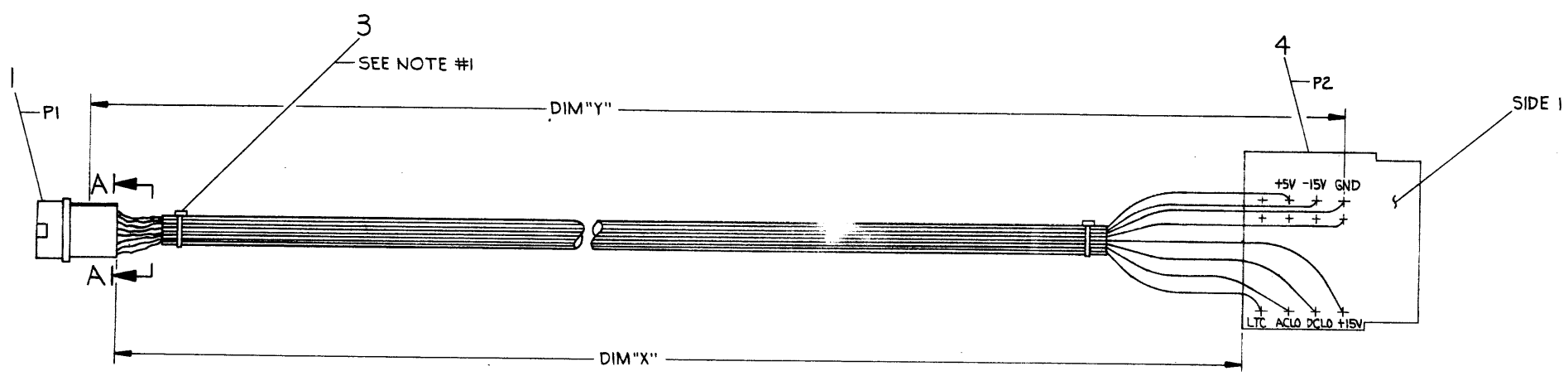
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WIRED TABLE

ITEM NO.	DESCRIPTION	FROM CONNECTION	TO CONNECTION	REMARKS
5	18 VIO	P1-1	P2-DCLO	
6	14 BLK	P1-4	P2-GND	
7	18 BRN	P1-7	P2-LTC	
8	18 YEL	P1-2	P2-ACLO	
6	14 BLK	P1-5	P2-GND	
9	14 GRY	P1-8	P2-+15V	
10	18 BLU	P1-3	P2--15V	
11	14 RED	P1-9	P2-+5V	

NUMBER	DIM "X" VARIATION	DIM "Y" (PRECUT) REF
7009177-02	2 FEET	2 FEET 2 INCHES

NOTES:
1. USE TIE WRAPS ITEM #3 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY, AND AT EVERY BREAKOUT POINT



A/R	WIRE, #14 AWG	COLOR	PART NO.	QTY.
	WIRE, #14 AWG	RED	9107370-22	11
	WIRE, #18 AWG	BLU	9107360-66	10
	WIRE, #14 AWG	GRY	9107370-88	9
	WIRE, #18 AWG	YEL	9107360-44	8
	WIRE, #18 AWG	BRN	9107360-11	7
	WIRE, #14 AWG	BLK	9107370-00	6
	WIRE, #18 AWG	VIO	9107360-77	5
	POWER CONN. G772		A-PL-G772-0-0	4
	TIE WRAP SSTI.5M		9007880	3
	MATE-N-LOC TERM. (MALE)		1209378-01	2
	CONN., MATE-N-LOC (9 PIN)		1209351-09	1

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/40					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		PARTS LIST			
DECIMALS	ANGLES	DRN.	DATE	digital EQUIPMENT CORPORATION	
.XXX = .005		S. K. [Signature]	10/16/72	MAYNARD MASSACHUSETTS	
.XX = .02	±0° 30'	CHK'D	DATE	TITLE	
.X = .1		C. Teschner	1/9/72	POWER DISTRIBUTION	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		ENG.	DATE	CABLE	
		C. R. [Signature]	10/14/72		
MATERIAL	NEXT HIGHER ASSY.	PROJ. ENG.	DATE	SIZE CODE	
SEE PARTS LIST		C. [Signature]	1/9/72	DIA 7009177-02	
FINISH		PROB. [Signature]	DATE	NUMBER	
			10/14/72	77	
				SHEET 1 OF 1	

BRUNING 40-107 19868
REVISIONS
CHANGE NO.
CHK
REV

REV
DIA 7009177-0-0

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE	SEQUENCE
DRAWING DIRECTORY	B-DD-861-0
POWER CONTROL, 861	E-UA-861-0-0
PILOT CONTROL	D-CS-5410206-0-1
CIRCUIT SCHEMATIC 861	D-CS-861-A-1
CIRCUIT SCHEMATIC 861	D-CS-861-B-1
CIRCUIT SCHEMATIC 861	D-CS-861-C-1

VARIATION	TITLE	PRINT SET TYPE			
		861-1			
861 P.C.	POWER CONTROL, 861	X			

REVISIONS	CHG. NO.	REV	USED ON OPTION/MODEL	DRN.	DATE	TITLE
	DATE			SCHMIDT		
	861-3	A			9/13/72	861 POWER CONTROL
				<i>[Signature]</i>	10-6-72	
				PROJ. ENG.	10-6-72	
				PROD.		
				FIELD SERV.	12-10-72	
						SIZE CODE NUMBER REV
						B DD 861-0 A
						SHEET 1 OF 3 DIST G

①
POWER CONTROL,
861
E-UA-861-0-0

②
ETCH CIRCUIT
BOARD
D-CS-5410206-0-1

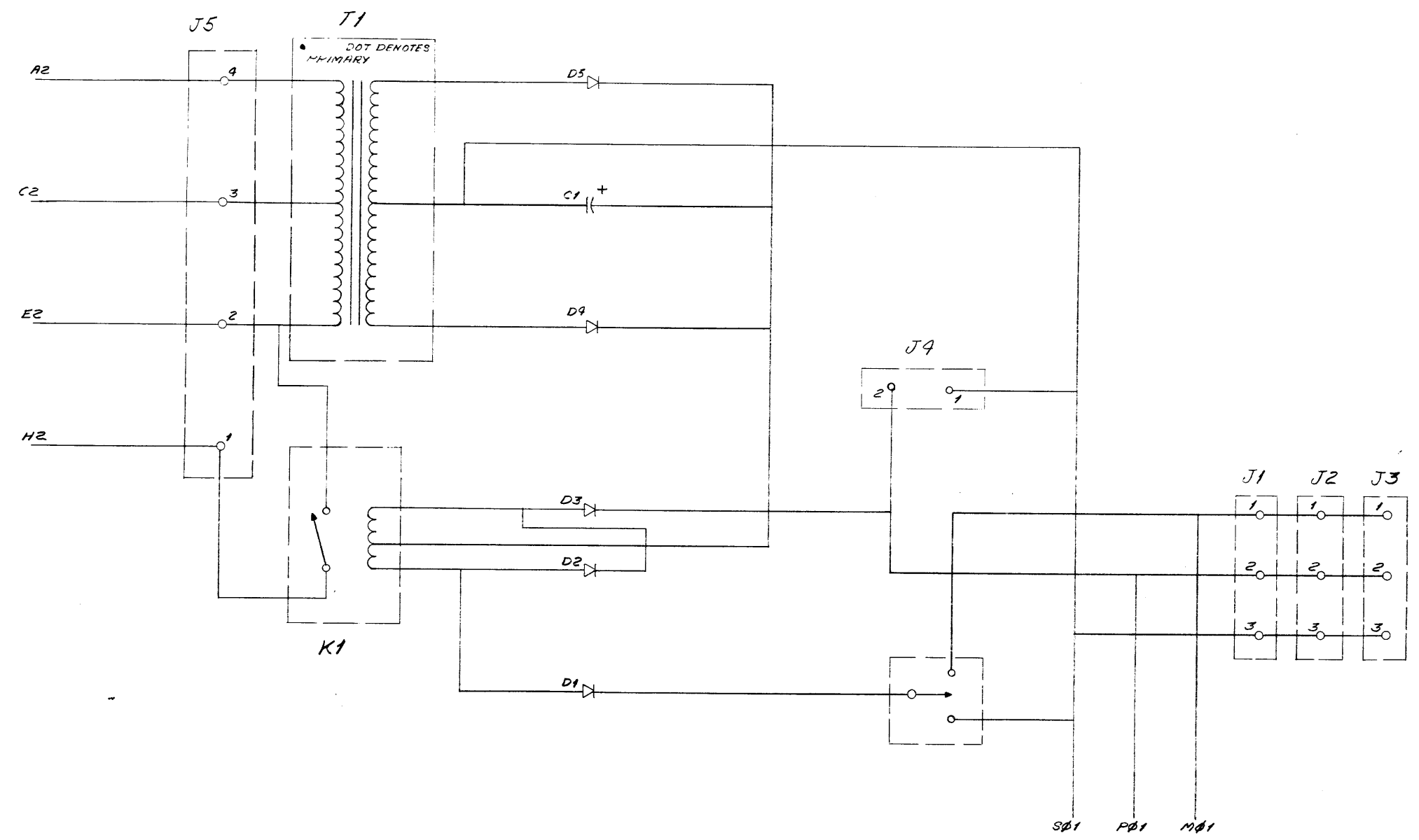
TITLE	SHEET	SIZE	CODE	NUMBER	REV
POWER CONTROL	2 OF 3	B	DD	861-0	A

CUSTOMER PRINT SET		ELECTRICAL					CUSTOMER PRINT SET		MECHANICAL						
861-I	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	861-I	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	D-CS-861-A-1		1	CIRCUIT SCHE. MIC, 861 P.C.		X		1	E-UA-861-0-0	B	2	POWER CONTROL, 861	
X			D-CS-861-B-1		1	CIRCUIT SCHEMATIC, 861 P.C.					E-IA-7410567-0-0		1	CHASSIS, 861 PC	
X			D-CS-861-C-1		1	CIRCUIT SCHEMATIC, 861 P.C.					D-IA-7410568-0-0		2	COVER, 861 P.C.	
			A-SP-861-0-1		2	TEST AND INSPECTION PRO.					A-PS-3611216-0-0			NAME PLATE 861-A	
											C-SS-3611216-0-1		1	NAME PLATE 861-A ARTWORK	
											A-PS-3611217-0-0			NAME PLATE 861-B	
											C-SS-3611217-0-1		1	NAME PLATE 861-B ARTWORK	
											A-PS-3611218-0-0			NAME PLATE 861-C	
											C-SS-3611218-0-1		1	NAME PLATE 861-C ARTWORK	
X		2	D-CS-5410206-0-1	#	2	PILOT CONTROL									
			PC-5010205-0-1		1	ETCH CIRCUIT BOARD									
			K-CO-5410206-0-4		1	X-Y COORDINATE HOLE LOCA.									
			D-AH-5410206-0-5		1	ASSY DRILLING HOLE LAYOUT									
			B-MH-5410206-0-6		1	MODULE ECO HISTORY									

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
		POWER CONTROL, 861	SHEET 3 OF 3	B DD	861-0	A

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7 1-0-00206-01 80 2
3000 375



BRUNING 40522 15840

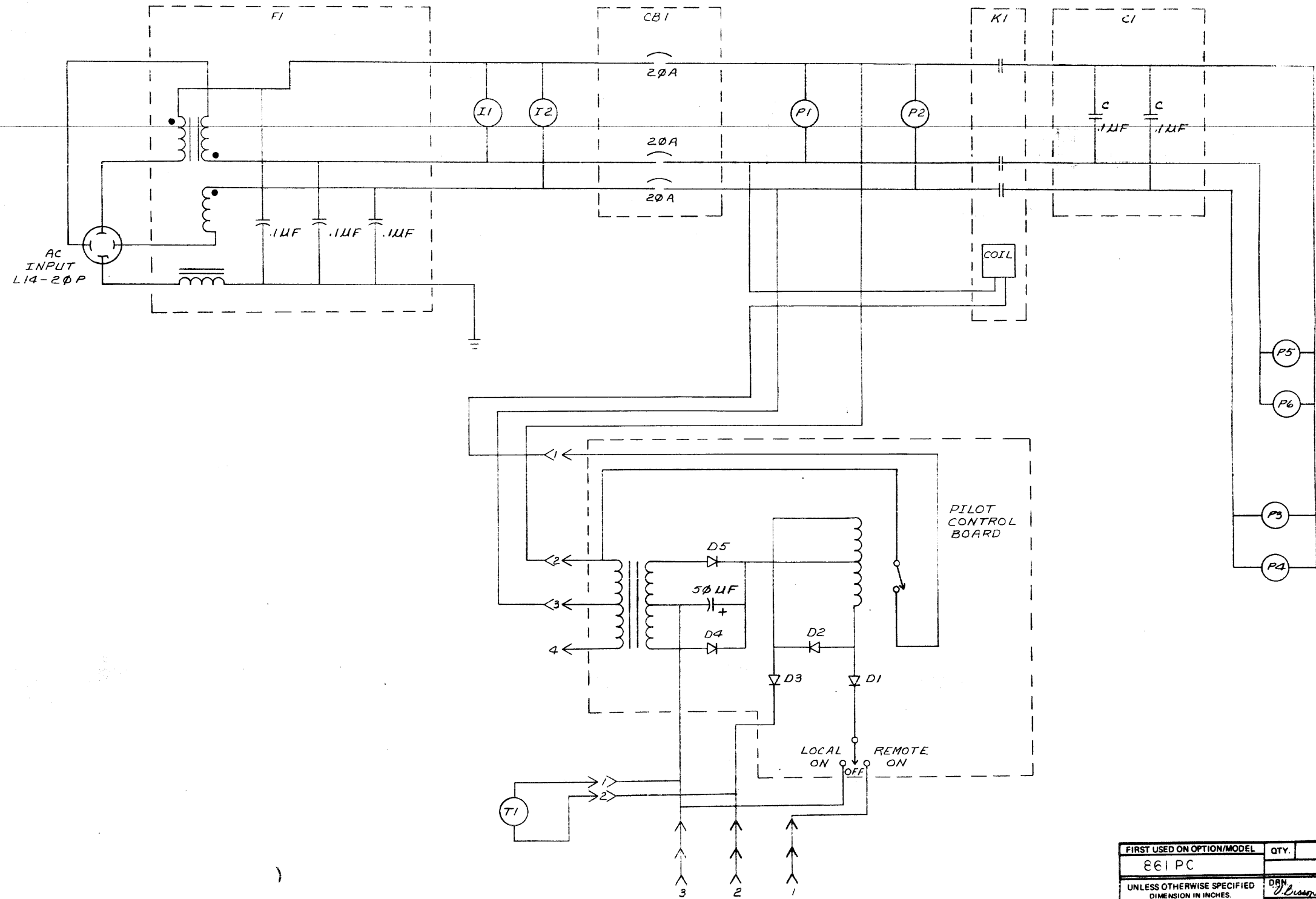
REV	CHANGE NO.	REVISIONS

DEC 10PM NO
ORD 102-

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
861 PC.				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN <i>Belknap</i> DATE 8-25-72	 digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>		
DECIMALS	CHK'D <i>Belknap</i> DATE 7-19-72			
ANGLES	ENG. <i>7c Bente</i> DATE 9-19-72			
.XXX = .005	PROJ. ENG. <i>7c Bente</i> DATE 9-19-72			
.XX = .02	PRGD. <i>Belknap</i> DATE 9-19-72			
.X = .1		TITLE PILOT CONTROL		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		NEXT HIGHER ASSY.		
MATERIAL		SIZE CODE	NUMBER	REV.
FINISH		SCALE NONE	DCS 5410206-0-1	A.
		SHEET 2 OF 2	DIST.	

REV A
NUMBER 5410206-0-1
REV A

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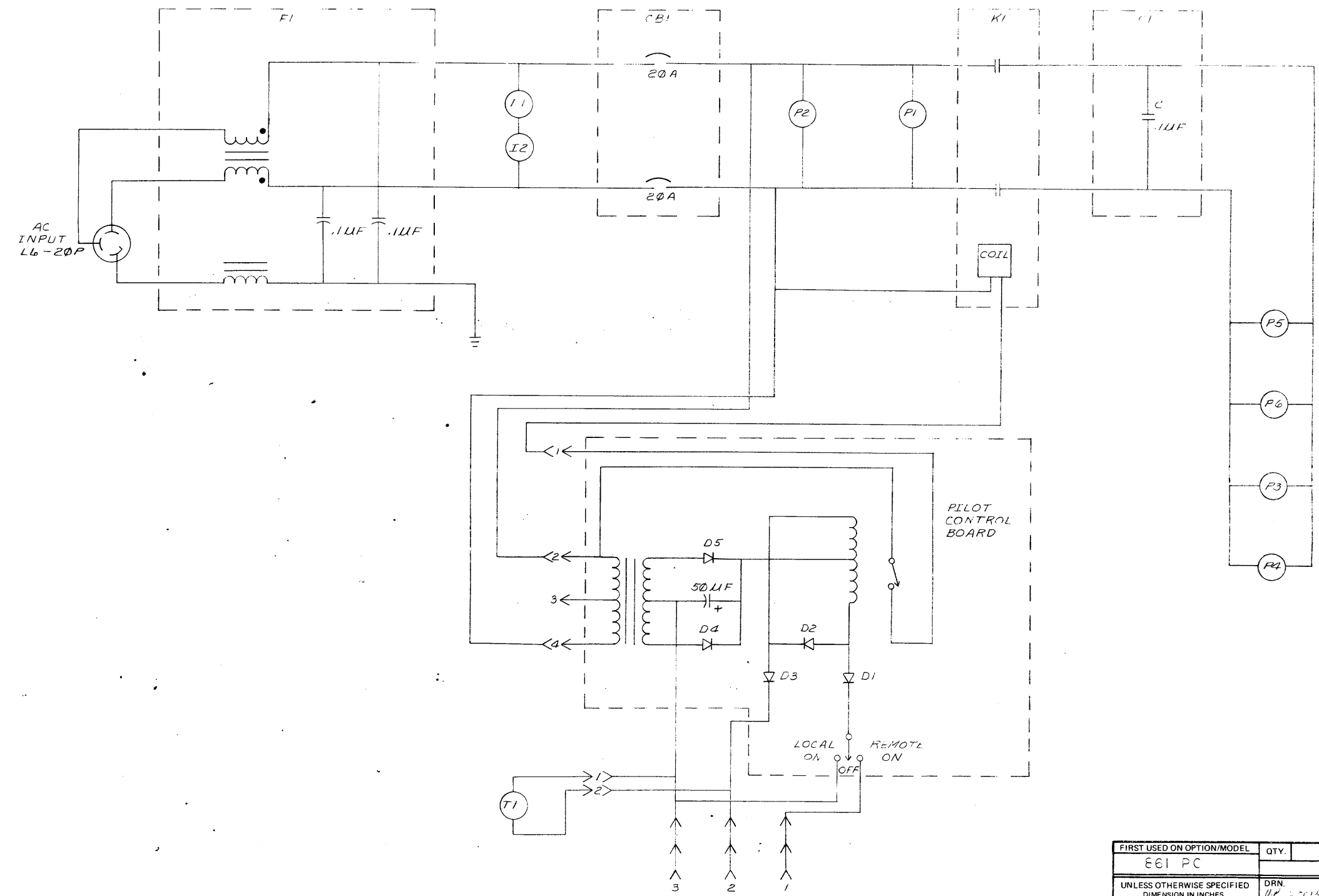
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
861 PC		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DNB J. Casanovi DATE 9-11-72	DATE 9-11-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	ANGLES	ENG R. Smith DATE 10-6-72	TITLE	
XXX = .005	± 0° 30'	DATE 10-6-72	CIRCUIT SCHEMATIC	
XX = .02		DATE 10-6-72	(861-A-PC)	
X = .1		DATE 10-6-72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROJ. ENG R. Smith DATE 10-6-72	DATE 10-6-72		
MATERIAL	PROD. Paul Davis DATE 10-6-72	NEXT HIGHER ASSY.		
FINISH		B-DD-861-0	SIZE CODE	NUMBER
		SCALE	DCS	861-A-1
		SHEET	OF	1

REVISIONS
REV. CHANGE NO.
CHK

BRUNING 40-107 15948
DEC FORM 100-100-A

SIZE CODE
NUMBER
DCS 861-A-1

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REV.	CHG	NO.

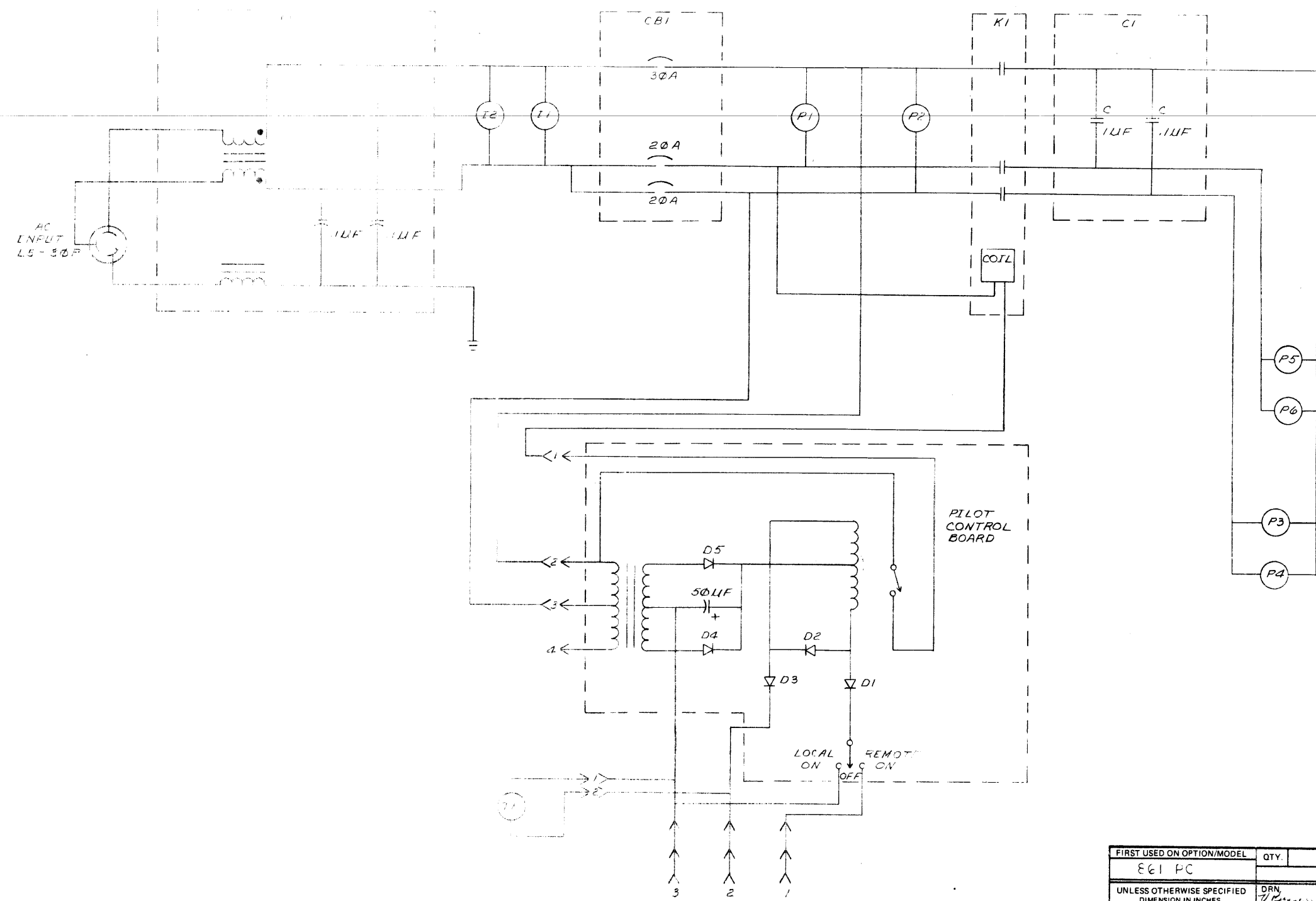
FIRST USED ON OPTION/MODEL E61 PC	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>U. J. ...</i>	DATE 9-72	 digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS	CHK'D. <i>R. ...</i>	DATE 11-2-72		
ANGLES	ENG. <i>R. ...</i>	DATE 10-6-72		
XXX + .005 .XX + .02 X + .1	PROJ. ENG. <i>R. ...</i>	DATE 10/19/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	PROD. <i>R. ...</i>	DATE 1-72		
MATERIAL	NEXT HIGHER ASSY	SIZE CODE	NUMBER	REV.
FINISH	SCALE	DCS	E61-B-1	
	SHEET	OF	DIST.	

DEC FORM NO. DRD 100-A

REV. NUMBER
CS 861-B-1

TITLE
CIRCUIT
SCHEMATIC
(PILOT CONTROL BOARD)

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FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
861 PC				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DRN 10/6/72	DATE 11/22/72	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
DECIMALS .XXX = .006 .XX = .02 .X = .1	CHK'D K. B. B.	DATE 10/6/72		
ANGLES ±0° 30'	ENG K. B. B.	DATE 10/6/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROD ENGR K. B. B.	DATE 10/6/72		
MATERIAL	NEXT HIGHER ASSY.	DATE 11/22/72	TITLE CIRCUIT SCHEMATIC 861-C P.C.	
FINISH	SCALE	DATE 11/22/72		
SHEET	OF	DATE		
		SIZE CODE	NUMBER	REV.
		D 5	861-C-1	
		DIST.		

REVISIONS
CHANGE NO.
REV.

SIZE CODE
D 5
NUMBER
861-C-1

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

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DRAWING DIRECTORY
 CIRCUIT SCHEMATIC
 PWR CONTROL BOARD
 CIRCUIT SCHEMATIC
 UNIT ASSEMBLY H742
 UNIT ASSEMBLY (PL)

SEQUENCE

B-DD-H742- ϕ
 D-CS H742- ϕ -1
 E-1A 5409730-0-0
 C-CS 5409730-0-1
 E-UA-H742- ϕ - ϕ
 A-PL-H742- ϕ - ϕ

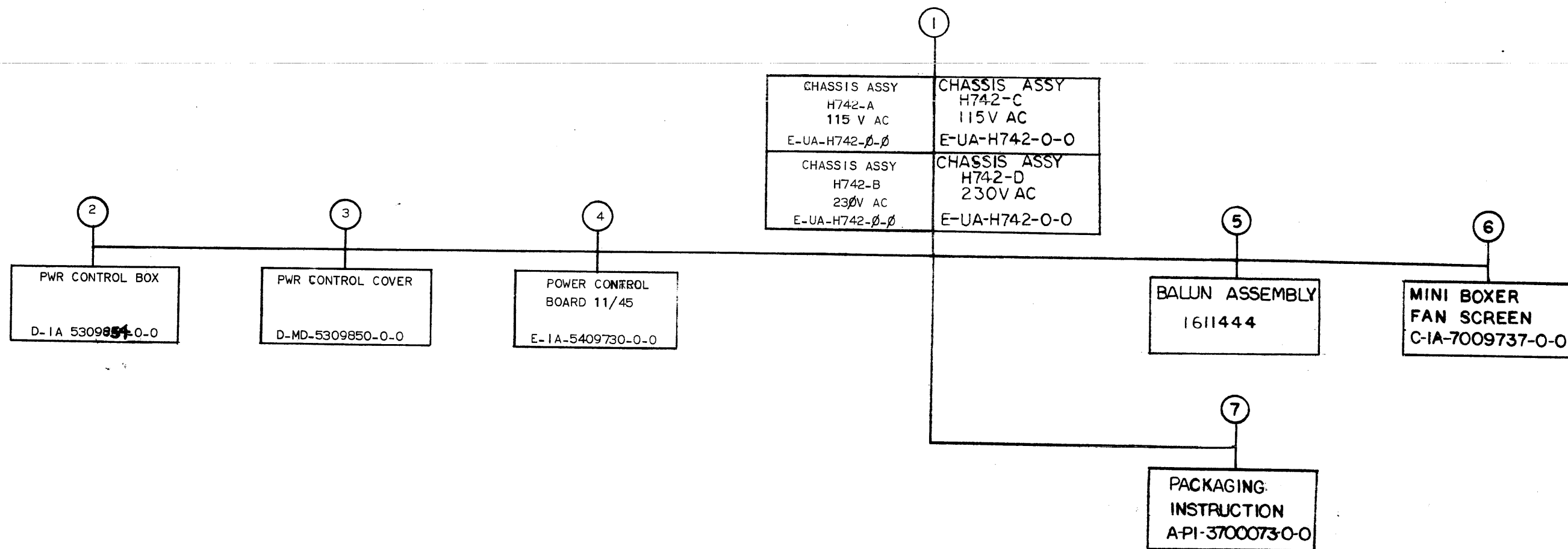
SEQUENCE

MFG SET
 TEST PROCEDURE A-SP-H742 ϕ -3
 MFG SPEC. A-SP-H742- ϕ -8
 PACKAGING INSTRUCTION A-PI-3700073-0-0

UNIT VARIATIONS		PRINT SET TYPE			
VARIATION	TITLE	H742-1			
H742-A	CHASSIS ASSY (115V)	X			
H742-B	CHASSIS ASSY (230V)	X			
H742-C	CHASSIS ASSY (115V)	X			
H742-D	CHASSIS ASSY (230V)	X			

REVISIONS		REV
DATE	CHG. NO.	
1/72	H742-2	A
7/72	H742-3	B
8/72	H742-4	C
8/72	H742-5	D
10/72	H742-7	E
11/72	H742-8	F
12/72	H742-11	H
2/73	H742-12	J
2/73	H742-13	K
2-73	H742-14	L
4-73	H742-15	M
4-73	H742-16	N
5-73	H742-17	P
6-73	H742-18	R
12-73	H742-19	S
3-74	H742-20	T
4-74	H742-21	U

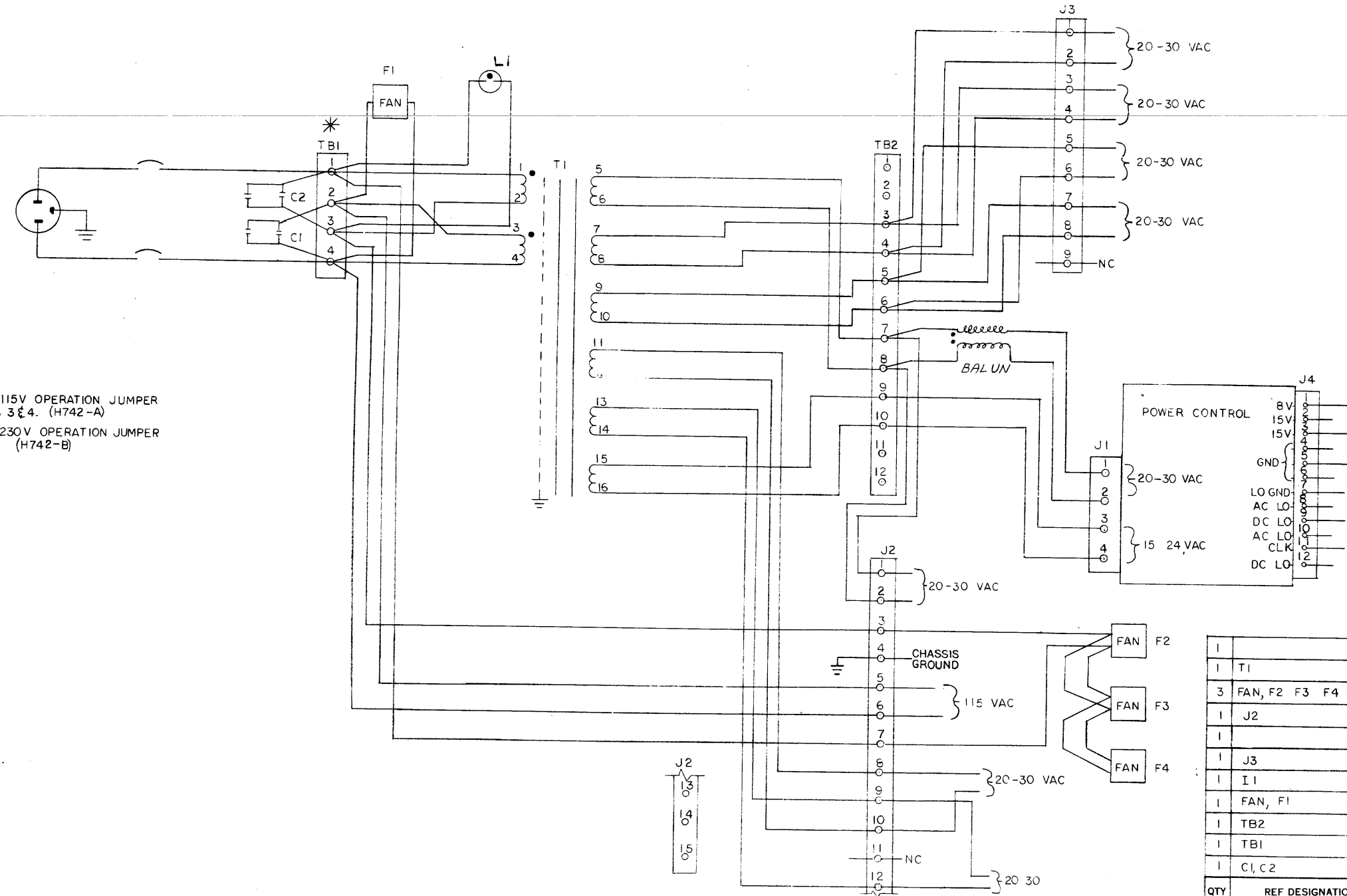
USED ON OPTION/MODEL		DRN. O. FONTAINE	DATE 13172	TITLE CHASSIS ASSY H742
11/45		CHK'D <i>[Signature]</i>	DATE 2-4-72	
		PROJ ENG. <i>[Signature]</i>	DATE 2-4-72	
		PRGD. <i>[Signature]</i>	DATE 2-24-72	
		FIELD SERV. <i>[Signature]</i>	DATE 2-7-72	SIZE CODE B DD
SHEET 1 OF 3			DIST	NUMBER H742-1
				REV U



TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
CHASSIS ASSY H742	2	3	B	DD	H742- \emptyset	U

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REV E
 NUMBER DCS H742-0-1
 SIZE CODE 2



NOTE
 * FOR 115V OPERATION JUMPER
 1 & 2, 3 & 4. (H742-A)
 FOR 230V OPERATION JUMPER
 2 & 3. (H742-B)

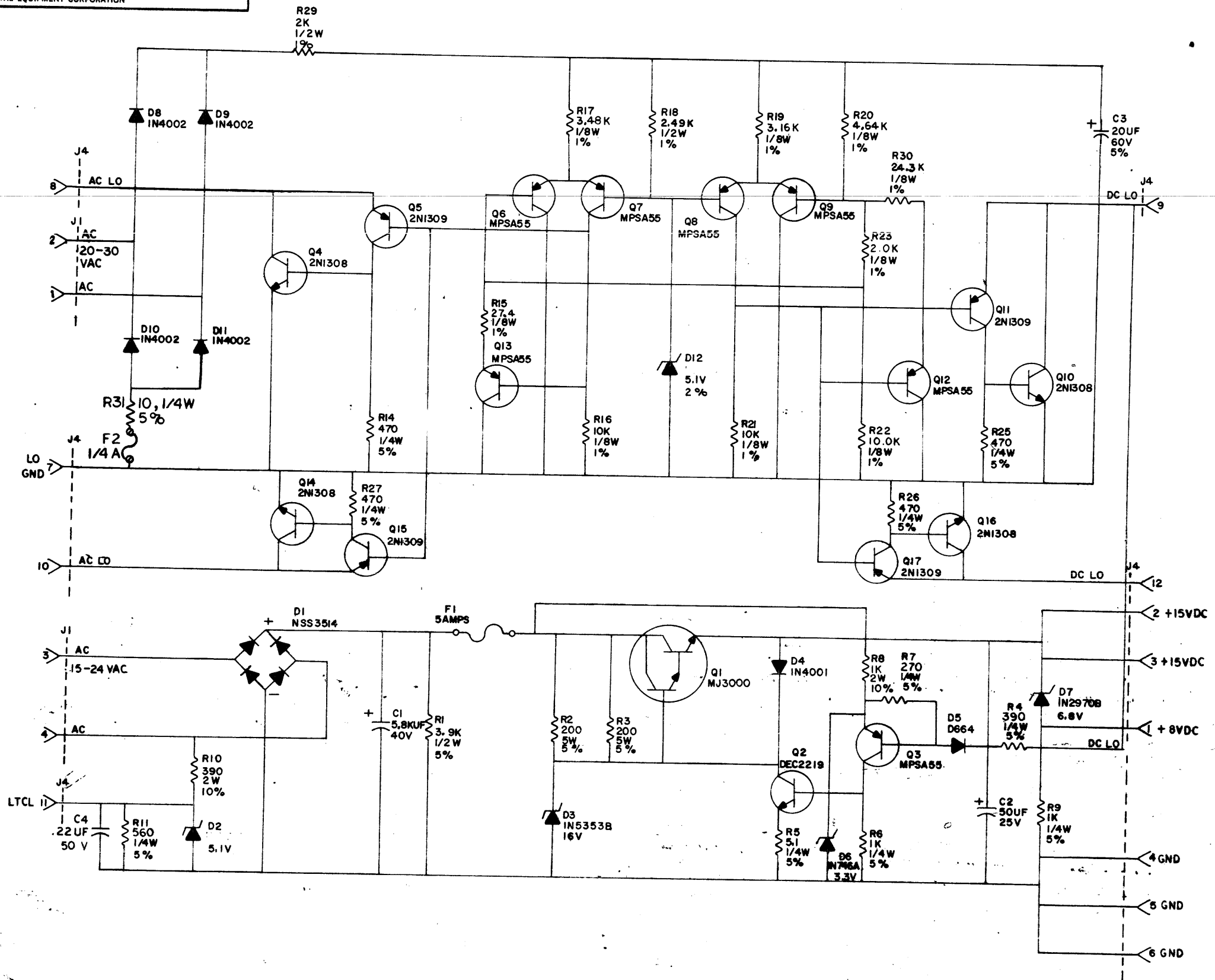
QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		POWER CONTROL	5409730	11
1	T1	XMFR	1610857	10
3	FAN, F2 F3 F4	FAN SUPER BOXER	1209403-1	9
1	J2	MATE-N-LOCK	1209350-15	8
1		BALUN ASSY	1611444	7
1	J3	MATE-N-LOCK	1209350-9	6
1	I1	LIGHT PILOT	1201280	5
1	FAN, F1	FAN PEWEE	1210719	4
1	TB2	JONES STPIP	9006917	3
1	TB1	JONES STRIP	9006902	2
1	C1, C2	CAPACITOR 2 X .1UF 1000V	1010193	1

PARTS LIST

CHK	CHANGE NO.	REV
R. WOLF	1-7-74	
R. WOLF	2-9-74	
R. WOLF	1-3-74	
R. WOLF	6-25-73	
R. WOLF	6-21-73	
R. WOLF	6-15-73	
R. WOLF	5-20-73	
G. POTTER	1-14-72	
G. POTTER	8-25-72	
G. POTTER	8-25-72	
G. POTTER	5-23-72	
G. POTTER	5-23-72	

DRM	DATE 7-3-72		TITLE CIRCUIT SCHEMATIC H742
CHK	DATE 8-9-72		
ENG	DATE 2-9-72		
PROJ. ENG.	DATE 2-9-72		
PROB.	DATE 2-9-72		
NEXT HIGHER ASSY B-DD-H742-0		SCALE	REV. E
DEC NO.	EIA NO.	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART			
SHEET 1 OF 1		NUMBER DCS H742-0-1	REV. E

THIS SCHEMATIC IS FURNISHED ONLY FOR TEST AND MAINTENANCE PURPOSES. THE CIRCUITS ARE PROPRIETARY IN NATURE AND SHOULD BE TREATED ACCORDINGLY. COPYRIGHT 1972 BY DIGITAL EQUIPMENT CORPORATION



REV	CHG NO	REV	DATE	BY
1	00001	C		
2	00002	D		
3	00003	E		
4	00004	F		
5	00005	G		
6	00006	H		
7	00007	I		
8	00008	J		
9	00009	K		
10	00010	L		
11	00011	M		
12	00012	N		
13	00013	O		
14	00014	P		
15	00015	Q		
16	00016	R		
17	00017	S		
18	00018	T		
19	00019	U		
20	00020	V		
21	00021	W		
22	00022	X		
23	00023	Y		
24	00024	Z		

DRM	DATE	TRANSISTOR	CONVERSION	DIODE
S. Cooper	2/24/72	DEC2219	2N2219	IN931
		2N1308	SAME	IN3538
		MPSA55	SAME	IN751A
		MJ3000	SAME	IN4001
		2N1309	SAME	IN2970B
		IN4002	SAME	IN746A
		D664		IN3606

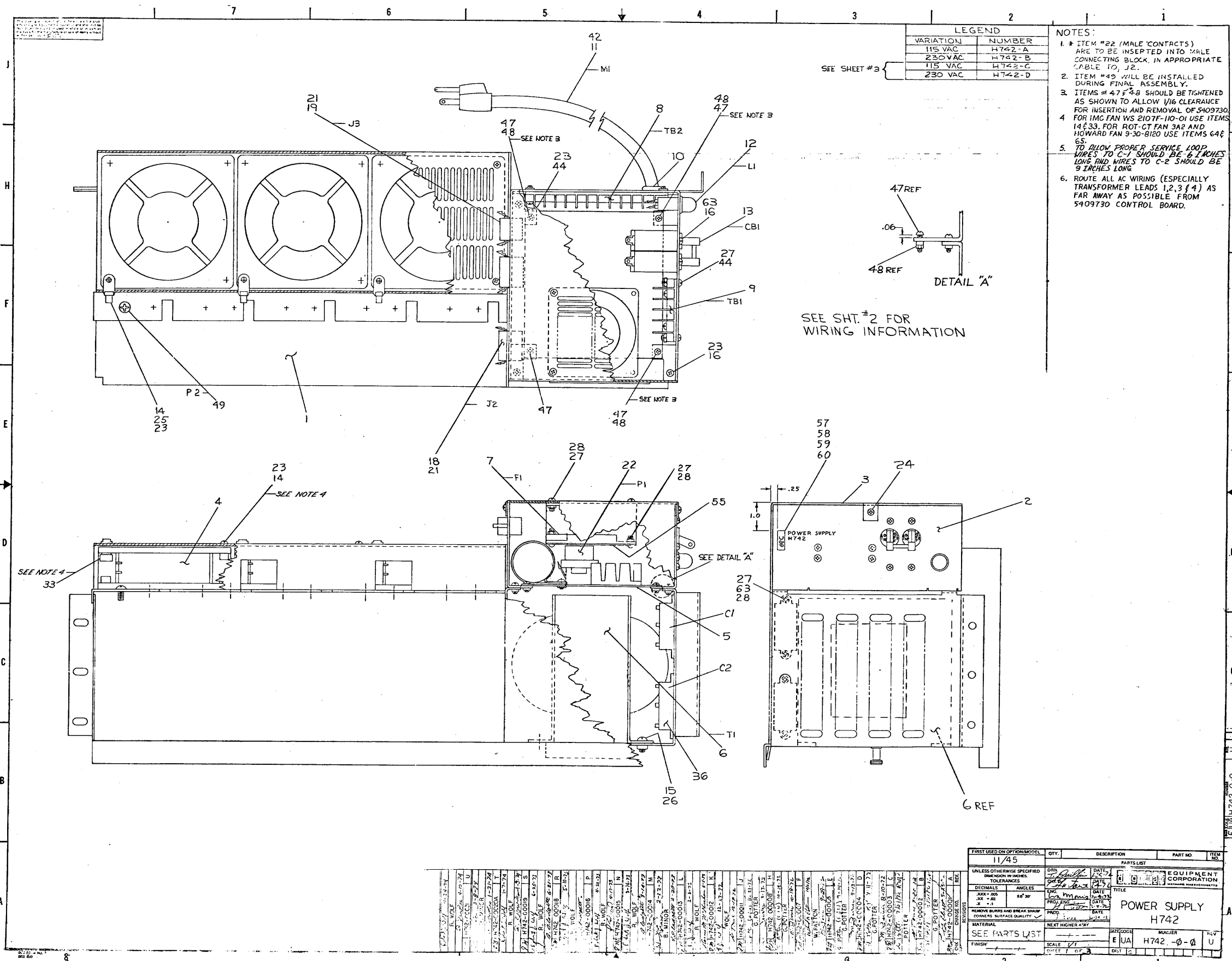
digital POWER CONTROL BD.

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SIZE CODE: C CS
NUMBER: 5409730-0-1
REV: N

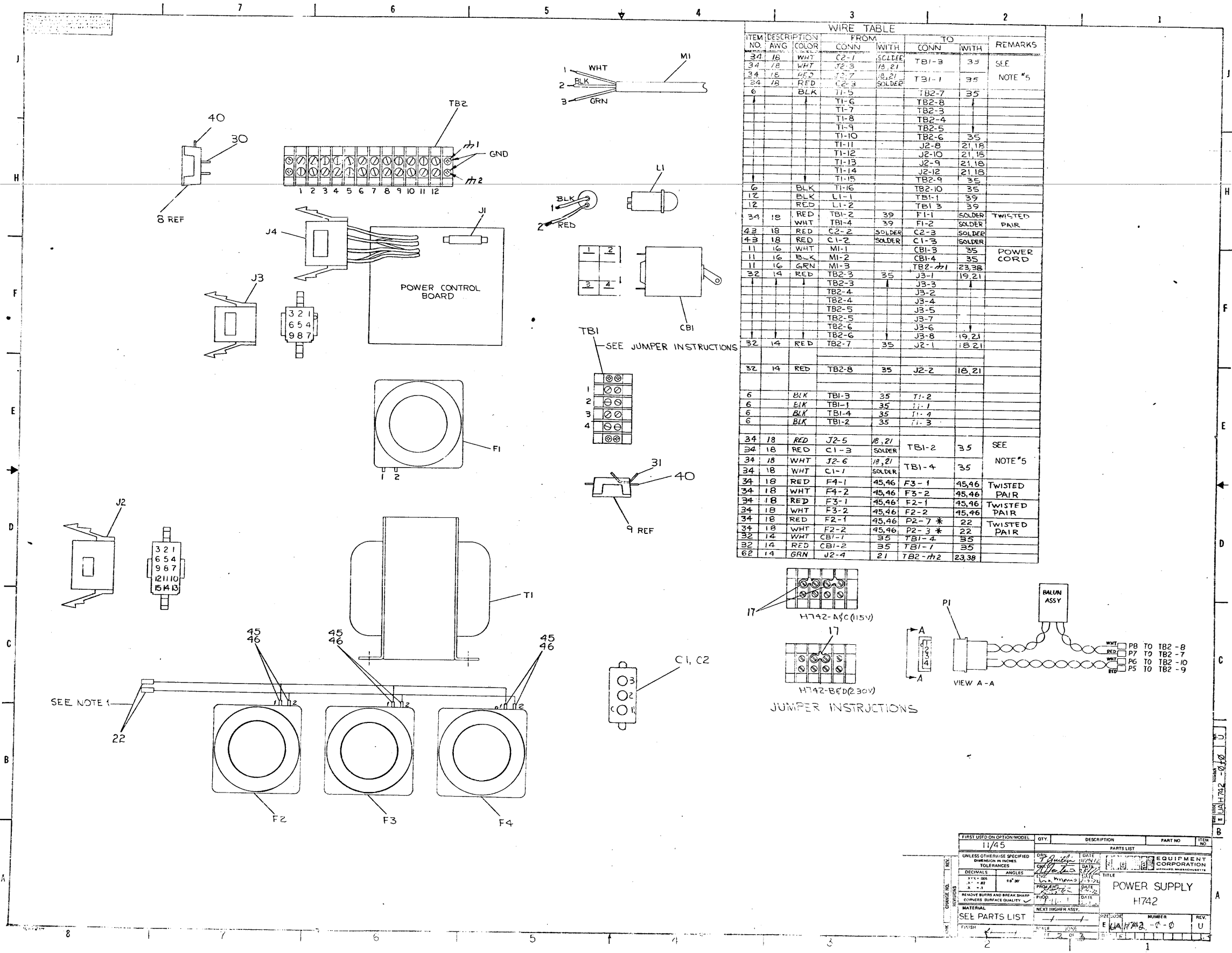
PRINTED CIRCUIT REV. E

REV N
NUMBER 5409730-0-1
SIZE CODE C CS



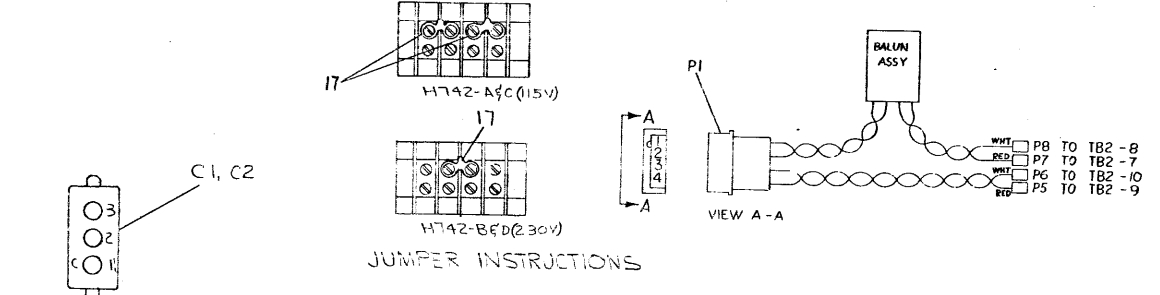
QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/45	POWER SUPPLY H742		
	UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES. TOLERANCES DECIMALS ANGLES		
	XXX - .005		
	XX - .010		
	X - .015		
	MINOR DIMENSIONS BREAK SHARP CORNERS SURFACE QUALITY		
	MATERIAL		
	SEE PARTS LIST		
	FINISH		

DATE: 11/45	BY: [Signature]	CHKD: [Signature]	DATE: 11/45
DRAWN BY: [Signature]		DATE: 11/45	
TITLE: POWER SUPPLY H742		EQUIPMENT CORPORATION	
SCALE: 1/1	REV: E	U.A.	H742-0-0
SHEET 1 OF 3			

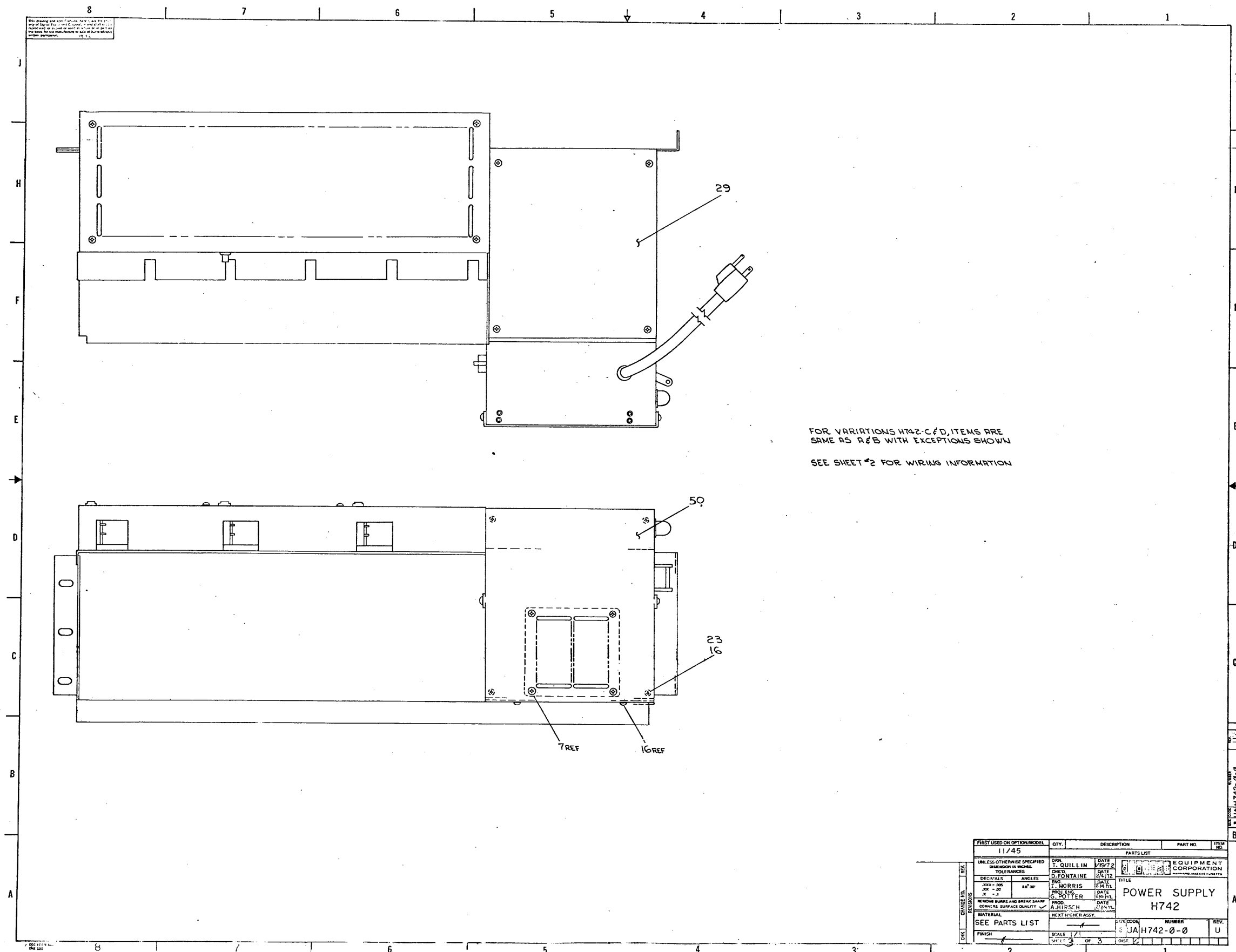


WIRE TABLE

ITEM NO.	AWG	COLOR	FROM CONN	WITH CONN	TO CONN	WITH CONN	REMARKS
34	18	WHT	C2-1	SOLDER	TB1-3	35	SEE NOTE #5
34	18	WHT	J2-3	18,21			
34	18	RED	J2-7	18,21	TB1-1	35	
34	18	RED	C2-3	SOLDER			
6		BLK	T1-5		TB2-7	35	
			T1-6		TB2-8		
			T1-7		TB2-3		
			T1-8		TB2-4		
			T1-9		TB2-5		
			T1-10		TB2-6	35	
			T1-11		J2-8	21,18	
			T1-12		J2-10	21,15	
			T1-13		J2-9	21,18	
			T1-14		J2-12	21,18	
			T1-15		TB2-9	35	
6		BLK	T1-16		TB2-10	35	
12		BLK	L1-1		TB1-1	39	
12		RED	L1-2		TB1-3	39	
34	18	RED	TB1-2	39	T1-1	SOLDER	TWISTED PAIR
34	18	WHT	TB1-4	39	F1-2	SOLDER	
43	18	RED	C2-2	SOLDER	C2-3	SOLDER	
43	18	RED	C1-2	SOLDER	C1-3	SOLDER	
11	16	WHT	MI-1		CB1-3	35	POWER CORD
11	16	BLK	MI-2		CB1-4	35	
11	16	GRN	MI-3		TB2-7	23,38	
32	14	RED	TB2-3	35	J3-1	19,21	
			TB2-3		J3-3		
			TB2-4		J3-2		
			TB2-4		J3-4		
			TB2-5		J3-5		
			TB2-5		J3-7		
			TB2-6		J3-6		
			TB2-6		J3-8	19,21	
32	14	RED	TB2-7	35	J2-1	18,21	
32	14	RED	TB2-8	35	J2-2	18,21	
6		BLK	TB1-3	35	T1-2		
6		BLK	TB1-1	35	T1-1		
6		BLK	TB1-4	35	T1-4		
6		BLK	TB1-2	35	T1-3		
34	18	RED	J2-5	18,21	TB1-2	35	SEE NOTE #5
34	18	RED	C1-3	SOLDER			
34	18	WHT	J2-6	18,21	TB1-4	35	
34	18	WHT	C1-1	SOLDER			
34	18	RED	F4-1	45,46	F3-1	45,46	TWISTED PAIR
34	18	WHT	F4-2	45,46	F3-2	45,46	TWISTED PAIR
34	18	RED	F3-1	45,46	F2-1	45,46	TWISTED PAIR
34	18	WHT	F3-2	45,46	F2-2	45,46	TWISTED PAIR
34	18	RED	F2-1	45,46	F2-7 *	22	TWISTED PAIR
34	18	WHT	F2-2	45,46	F2-3 *	22	TWISTED PAIR
32	14	WHT	CB1-1	35	TB1-4	35	
32	14	RED	CB1-2	35	TB1-1	35	
62	14	GRN	J2-4	21	TB2-7	23,38	



FIRST USED ON OPTION MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
11/45				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
±.005	±.005	POWER SUPPLY		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
SEE PARTS LIST				
NEXT HIGHER ASSY.				
DRAWN BY: [Signature]				
CHECKED BY: [Signature]				
DATE: [Date]				
SCALE: [Scale]				
REV. NO. [Number]				
EQUIPMENT CORPORATION				
H742				
U				



FOR VARIATIONS H742-C & D, ITEMS ARE
 SAME AS A & B WITH EXCEPTIONS SHOWN
 SEE SHEET #2 FOR WIRING INFORMATION

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/45					
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES		DRN. T. QUILLIN	DATE 2/29/72	EQUIPMENT CORPORATION	
DECIMALS	ANGLES	CHKD. D. FONTAINE	DATE 2/17/72	TITLE	
±.005	±0°30'	ENG. I. MORRIS	DATE 2/17/72	POWER SUPPLY	
±.01		PROF. ENG. G. POTTER	DATE 2/17/72	H742	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROD. A. HIRSCH	DATE 2/17/72	REV.	
MATERIAL		NEXT HIGHER ASSY.		NUMBER	
SEE PARTS LIST				JA H742-0-0	
FINISH	SCALE 1/1	SHEET 3 OF 3		DIST 12	

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST

MADE BY T. QUILLIN
 DATE 1/19/72
 ENG *T. Quillin*
 DATE 2-14-72
 CHECKED D. FONTAINE
 DATE 1/26/72
 PROD *D. Fontaine*
 DATE 2-24-72
 SECTION 1
 ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION			
			H742-A (115V)	H742-B (230V)	H742-C (115V)	H742-D (230V)
1	E-IA-5309755-0-0	CHASSIS	1	1	1	
2	6-IA-5309854-0-0	CONTROL BOX POWER	1	1	1	
3	D-MD-5309850-0-0	POWER CONTROL COVER	1	1	1	
4	1209403-1	FAN, BOXER	3	3	3	
5	5409730-0-0	POWER CONTROL BOARD	1	1	1	
6	16-10857	XMFR	1	1	1	
7	1210719	FAN PEWEE, BOXER	1	1	1	
8	9006916	JONES STRIP (12 CONN) 540	1	1	1	
9	9006903	JONES STRIP (4 CONN) 540	1	1	1	
10	9008309	STRAIN RELIEF	1	1	1	
11	1700006-6	CORD, POWER (115V)	1	-	1	
12	1211263	LIGHT, PILOT	1	1	1	
13	1210121-3	CIRCUIT BREAKER 15 AMP	1	1	1	
14	9006025-1	SCR. PHL PAN HD #6 X 32 X 5/8 LG	12	12	12	
15	9006071-3	SCR. PHL TRUSS HD #10-32 X 3/8 LG	4	4	4	
16	9006020-1	SCR. PHL PAN HD #6-32 X 1/4 LG	8	8	14	
17	9009002	MECHANICAL JUMPER	2	1	2	
18	1209350-15	MATE-N-LOCK 15 PIN (FEMALE)	1	1	1	
19	1209350-09	MATE-N-LOCK 9 PIN (FEMALE)	1	1	1	
20	1209351-04	MATE-N-LOCK 4 PIN (FEMALE)	1	1	1	
21	1209379-01	CONTACTS (FEMALE)	19	19	19	
22	1209378-01	CONTACTS (MALE)	6	6	16	

H742, POWER CONTROL
 DEC FORM 16 (325) 1031-N870
 DRA 110

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION			
			H742-A (115V)	H742-B (230V)	H742-C (115V)	H742-D (230V)
23	9007649	L'WASH #6 EXT	20	20	12	12
24	9006453	#6-32 SEMS X 3/8 LG	2	2	6	6
25	9007033	TY WRAP HOLDER	3	3	3	3
26	9007651	L'WASH #10 EXT	4	4	4	4
27	9006560	KEPS NUT #6-32	16	16	16	16
28	9006022-1	SCR. PHL HD PAN #6-32 X .38	12	12	12	12
29	D-IA-7409701-0-0	BRACKET, POWER SUPPLY	-	-	-	-
30	9007113	DOUBLE UPRIGHT 90	8	8	8	8
31	9007269	DOUBLE 450	4	4	4	4
32	9107370-22	#14 AWG 19 STRAND PVC. INS. (RED)	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R
33	9009165	FAN MTG CLIP	12	22	12	12
34	9107530-29	#18 AWG 19 STRAND PVC. INS. (RED/WHT) TWP	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R
35	9007919	FASTON TAB (.250 SERIES) RIM	32	32	32	32
36	10-10193	CAPACITOR 2 X .1 uf @ 1000v	2	2	2	2
37	9007920	FASTON TAB (.250 SERIES) RIM	1	1	1	1
38	9007927	RING TERMINAL RIM	2	2	2	2
39	9007917	FASTON TAB (.250 SERIES) RED	2	2	2	2
40	9007112	SINGLE FLAT	16	16	16	16
41	1700016-6	CORD POWER (230V)	-	-	-	-
42	9107360-22	#18 AWG 19 STRAND PVC. INS. (RED)	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R	A/RA/RA/RA/RA/R
43	9007793-1	SCR PHL PAN HD #6-32 X 9/16 IG	8	8	8	8

H742 POWER CONTROL
 DEC FORM 16 (325) 1031-N870
 DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY T. Quillin
DATE 1/19/72
ENG G. POTTER
DATE 2-14-72

CHECKED D. Fontaine
DATE 1/26/72
PROD A. HIRSCH
DATE 2-24-72

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY	VARIATION
45	12-10820-1	CONNECTOR, HOUSING	6	H742-A (115V)
46	12-10820-2	CONNECTOR, PIN	6	H742-B (230V)
47	9006022-3	SCR, PHL, TRUSS HD. #6-32 X 3/8 LG.	6	H742-C (115V)
48	9006558	NUT, HEX #6-32 X 5/16 X 1/8	4	H742-D (230V)
49	9009228	SCR PHL PAN HD, 10-32 X 3/8 SEMS	3	
50	C-MD-7409702-0-0	COVER, POWER CONTROL	10	
51	D-1A-5309654-3-0	POWER CONTROL BOX	-	
52	D-1A-5309654-4-0	II	-	
53	9006796	SPACER #6*32X 3/16LG SST	=	
54	A-PI-3700073-0-0	H742 POWER SUPPLY INTERPLANT PACKAGE	-	
55	C-1A-7009737-0-0	MINI BOXER FAN SCREEN	1	
56	9006024-1	SCR, PHL, PAN HD, #6-32 X 1/2 LG	12	
57	A-DC-5310459-0-0	DECAL, H742A	1	
58	A-DC-5310460-0-0	DECAL, H742B	-	
59	A-DC-5310461-0-0	DECAL, H742C	-	
60	A-DC-5310462-0-0	DECAL, H742D	-	
61	1611444	BALUN ASSEMBLY	1	
62	9107370-55	#14 AWG IPVC STRANDED, GREEN	A/R	A/R
63	9006633	LOCK WASHER, #6 INT. TOOTH	8	
64	9007993-1	SCR. PHL. PAN HD. 6-32 X 9/16LG	12	
65	9008208	FAN MTG. CLIP	12	

TITLE

H742 POWER CONTROL

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

ASSY NO.
E-UA-H742-0-0
SHEET 3 OF 4

SIZE CODE
A PL
DIST.

NUMBER
H742-0-0

REV
U
ECO NO.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY T. QUILLIN
DATE 1-19-72
ENG G. POTTER
DATE 2-14-72

CHECKED D. FONTAINE
DATE 1-26-72
PROD A. HIRSCH
DATE 2-24-72

SECTION 1
ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY	VARIATION
66	A-PI-3700073-0-0	PACKAGING INSTRUCTIONS	1	H742-A (115V)
			1	H742-B (230V)
			1	H742-C (115V)
			1	H742-D (230V)

TITLE

H742 POWER CONTROL

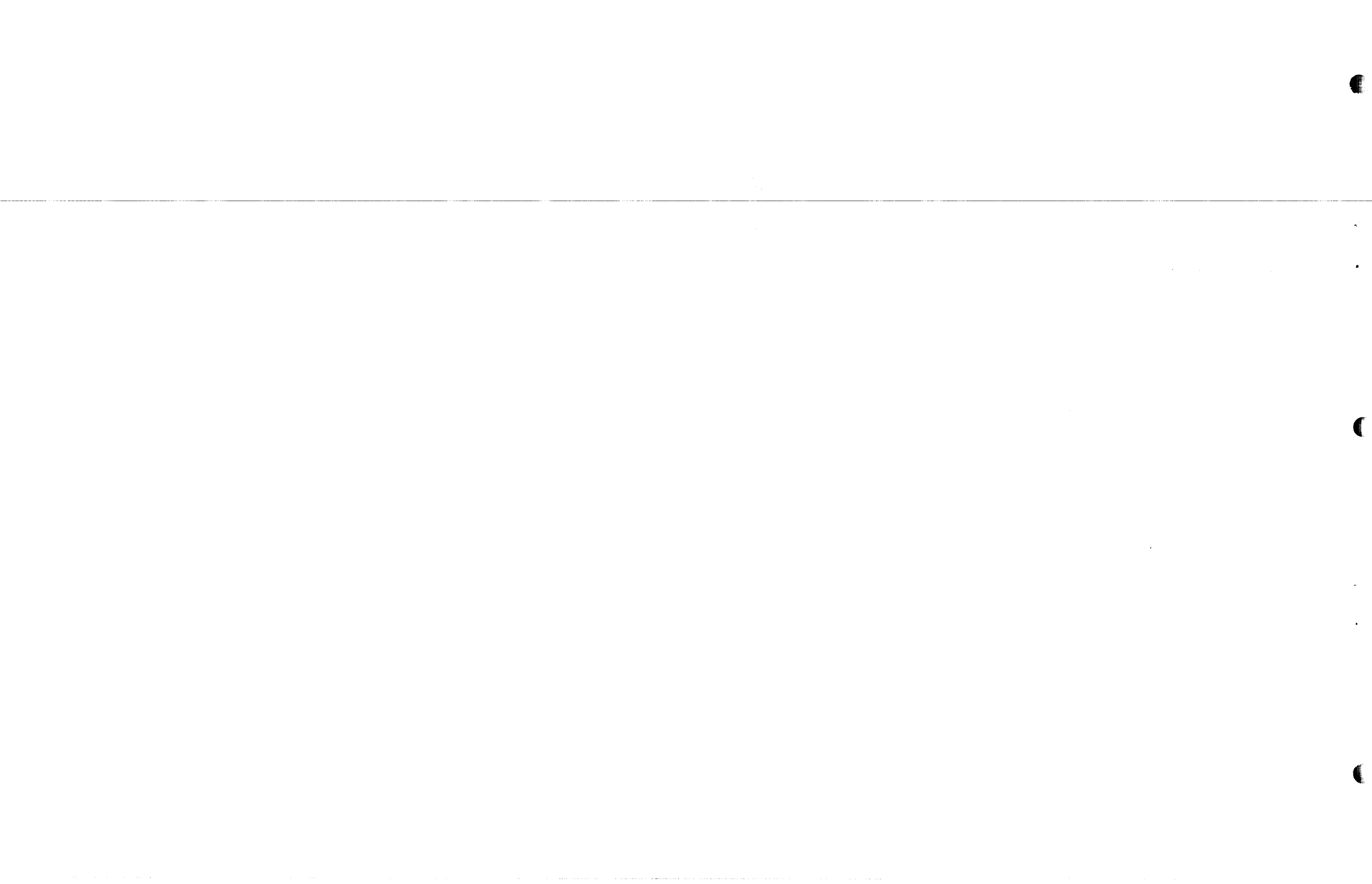
DEC FORM DEC 16-(325)-1031-N870
DRA 110

ASSY NO.
E-UA-H742-0-0
SHEET 4 OF 4

SIZE CODE
A PL
DIST.

NUMBER
H742-0-0

REV
U
ECO NO.



DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

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DRAWING DIRECTORY
CIRCUIT SCHEMATIC
UNIT ASS'Y

SEQUENCE

TB-DD-H744-Ø
D-CS-H744-Ø-1
E-UA-H744-0-0

SEQUENCE

MFG. SET

TEST PROCEDURE

A-SP-H744-Ø-3

MFG. SPE

A-SP-H744-Ø-8

PACKAGING INSTRUCTIONS

A-PI-3700074-0-0

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

REVISIONS			USED ON OPTION/MODEL		DRN.		DATE		TITLE				SIZE CODE B DD	NUMBER H744-Ø	REV B		
DATE	CHG. NO.	REV	11/45		D FONTAINE		2-4-72	+5V REGULATOR									
	00005 A				CHK'D.		D FONTAINE										
	<i>Blaker 10-6-72</i>		PROJECT		<i>D. Fontaine</i>		2-25-72										
	J.W. LAWRENCE		PROD		<i>D. Fontaine</i>		2-29-72	FIELD SERV.	DATE								
	<i>J.W.R.</i>						2-25-72										
	00007 B		SHEET 1 OF 2				DIST										

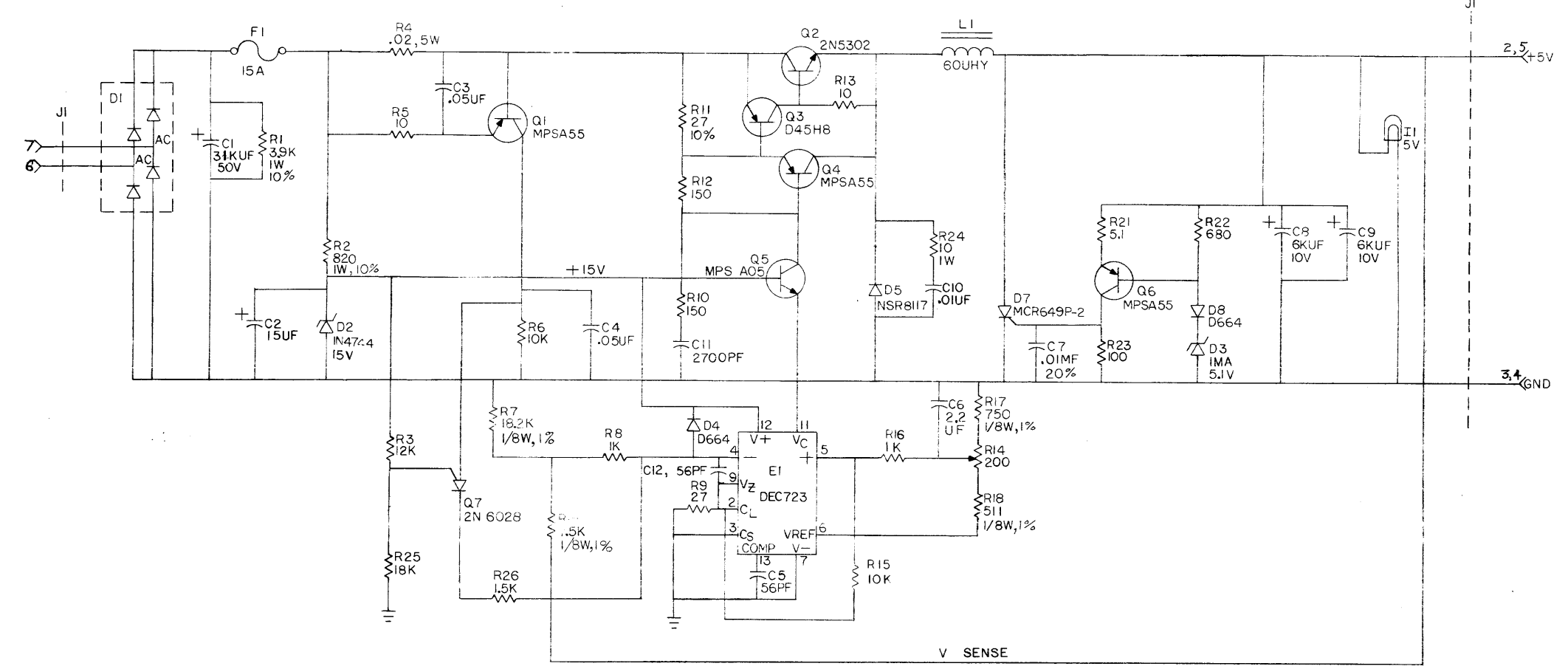
CUSTOMER PRINT SET				ELECTRICAL					CUSTOMER PRINT SET				MECHANICAL									
H744-1				MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	H744-1				MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	
X					1	D-CS-H744-0-1	#	1	CIRCUIT SCHEMATIC	H744	X					1	E-US-H744-0-0	K	1	UNIT ASSY	H744	
				X		A-SP-H744-0-3			TEST PROCEDURE	H744							D-PS-1210737-0-0		1	HEAT SINK	H744	
				X		A-SP-H744-0-8			MFG. SPEC	H744									1	REGULATOR BRK'IT	H744	
																			1	2 - 5 CAP HOLDER	H744	
																			1	COMPONENT COVER	H744	
																			1	CAPACITOR STRAP	H744	
																			2	PACKAGING INSTRUCTION	H744	
																			-	2	OUTER CARTON	
																			-	2	INNER PACKAGE	

45V REGULATOR

SHEET 2 OF 2

SIZE	CODE	NUMBER	REV
B	DD	H744-0	B

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

- R. WOLF 11-20-72
- H. WOLF 10-24-72
- H744-0006
- J.W. LAWRENCE 10/1/72
- J.W. LAWRENCE 10-5-72
- H744-0005
- H744-0006
- G. POTTER 1-14-73
- H744-0004
- G. POTTER 5/1/72
- G. POTTER 5-9-72
- H744-0003
- G. POTTER 2-27-72
- G. POTTER 2-21-72
- H744-0002
- G. POTTER 1-14-73
- H744-0001

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
	ETCH BOARD REV	F H		
	D664	IN3606	2N5302	
	MCR649P-2	D45H9		
	IN4744	MF-SA05		
	NSR8117			
	2N6028			
	IN964A	SAME	MPSA55	
	IN751A	SAME		
	IN4744	SAME		
	NSR8117			
	2N6028			
DEC NO.	EIA NO.	DEC NO.	EIA NO.	
SEMICONDUCTOR CONVERSION CHART				
SCALE	DIST.	H744-0-1	REV.	L

digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

TITLE
 5V REGULATOR

SIZE CODE: DIST. H744-0-1 REV. L

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

--	--	--	--	--

DRAWING DIRECTORY
CIRCUIT SCHEMATIC
UNIT ASS'Y

SEQUENCE
B-DD-H745-0
D-CS-H745-0-1
E-UA-H745-0-0

SEQUENCE
MFG. SET
TEST PROCEDURE A-SP-11/45-TA-2
MFG. SPEC. A-SP-H745-0-3
PACKAGING INSTRUCTION A-PI-3700074-0-0

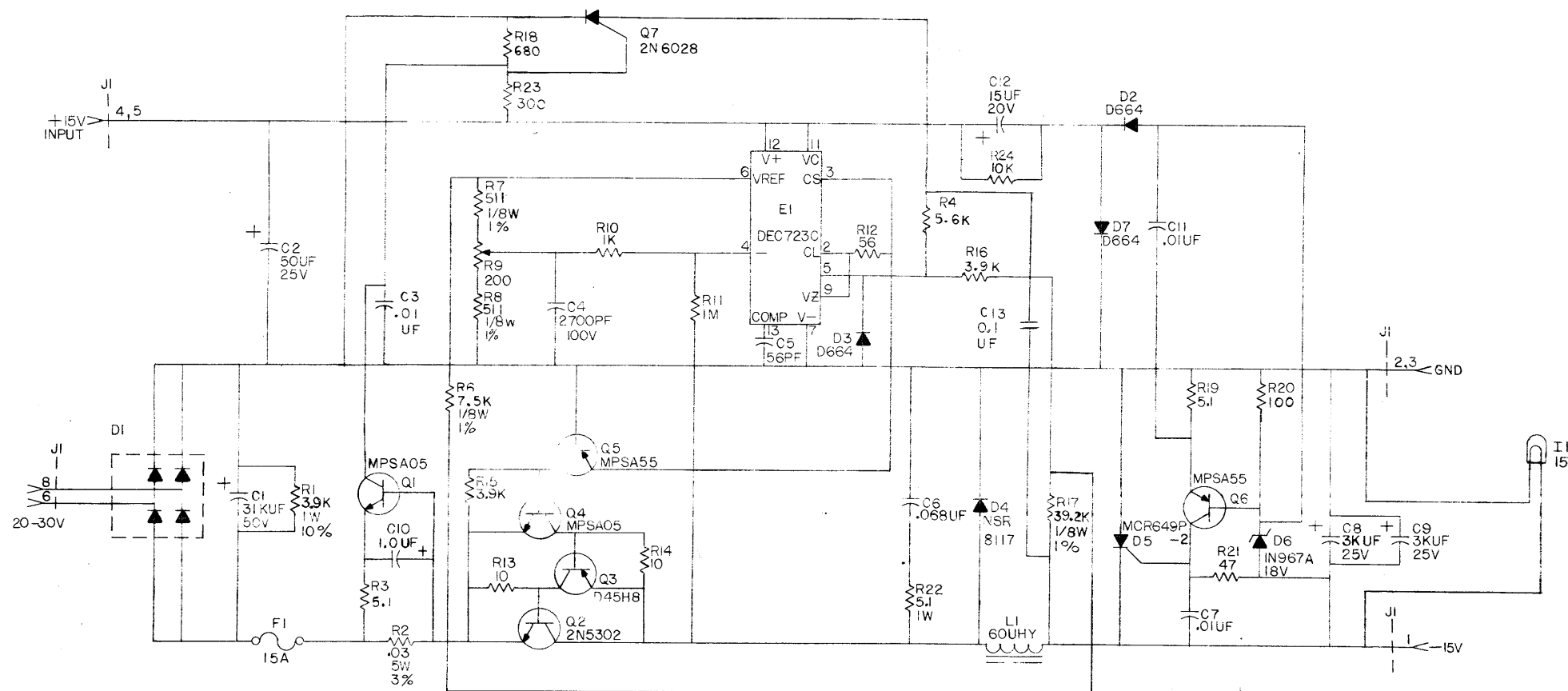
UNIT VARIATIONS		PRINT SET TYPE		
VARIATION	TITLE	H745-1		
H745	-15V REGULATOR	X		

REVISIONS		USED ON OPTION/MODEL		DRN.	DATE	TITLE		SIZE	CODE	NUMBER	REV
DATE	CHG. NO.	REV	11/45	D. FONTAINE	2-7-72	-15V REGULATOR		B	DD	4745-0	E
	00004	A		CHK'D	DATE						
	R. Maile 6-26-72			<i>[Signature]</i>	2-17-72						
	G.POTTER			PROD. ENG.	DATE						
	G. Potter (1/10/82)			<i>[Signature]</i>	2-25-72						
	00005 B			PROD.	DATE						
	S. Blake 10-6-72			FIELD SERV.	DATE						
	J.W. LAWRENCE										
	G. Wolf										
	00006 C										
	R. Maile 11-14-72										
	G.POTTER										
	00007 D										
	R. Maile 2-15-73										
	G.POTTER										
	00010 E										
	R. Maile 4-11-74										
	R. WOLF										
	4-24-74										
			SHEET 1 OF 2		DIST						

CUSTOMER PRINT SET				ELECTRICAL				CUSTOMER PRINT SET				MECHANICAL							
H745-1				FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.					DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.	
X				1	D-CS-H745-0-1	#	1	CIRCUIT SCHEMATIC	H745	X				1	EUA-H745-0-0	1	1	UNIT ASS'Y	H745
			X		A-SP-11/45-TA-2			TEST PROCEDURE	H745					D-PS-1210737-0-0		1	HEAT SINK	H745	
			X		A-SP-H745-0-8			MFG SPEC	H745					D-1A-5309756-0-0		1	REGULATOR BRKT	H745	
														D-1A-5309761-0-0		1	2 - 5 CAP BRKT	H745	
														C-1A-5309760-0-0		1	COMPONENT COVER	H745	
														C-MD-5309759-0-0		1	CAPACITOR STRAP	H745	
														2	A-PI-3700074-0-0	-	2	PACKAGING INSTRUCTIONS	H745
															A-PS-0005211-0-0	-	2	OUTER CARTON	H745
															A-PS-0005212-0-0	-	2	INNER PACKAGE	H745

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7 874 3000 2

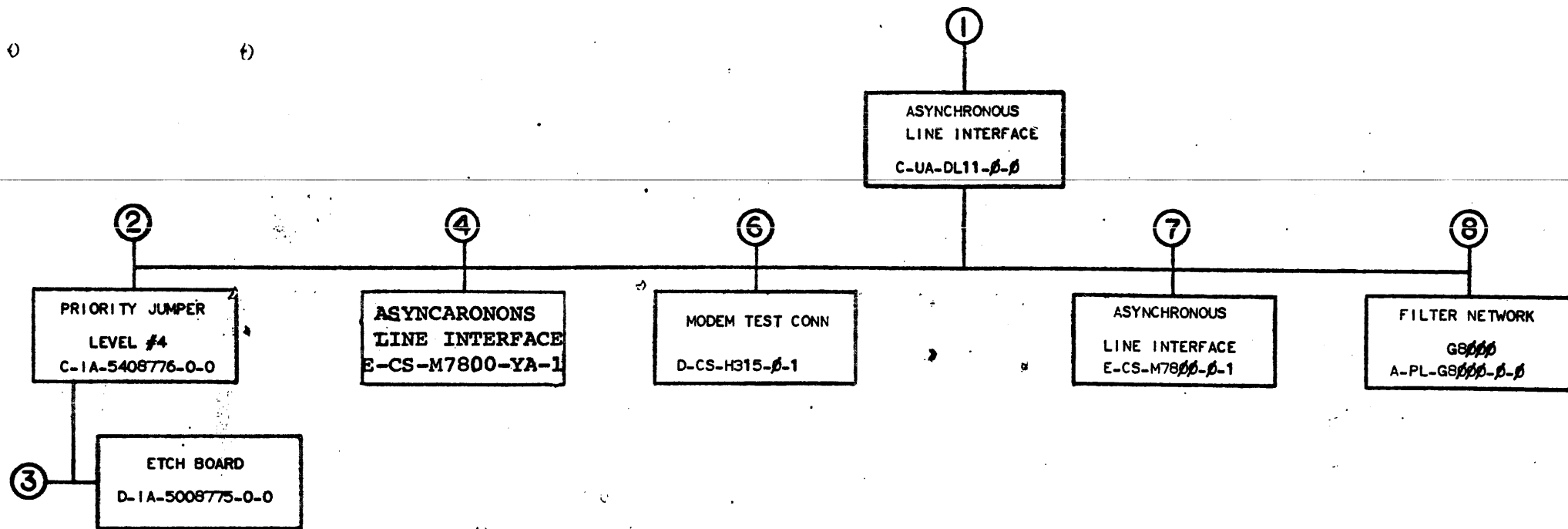


UNLESS OTHERWISE INDICATED:
RESISTORS = 1/4W, 5%

CHK	CHANGE NO.	REV
R. J. WOLF		
R. D. HALL		
H745-00009		
G. POTTER		
H745-00007		
G. POTTER		
H745-00006		
J. W. LAWRENCE		
H745-00005		
G. POTTER		
H745-00004		
G. POTTER		
H745-00003		
G. POTTER		
H745-00002		
G. POTTER		
H745-00001		

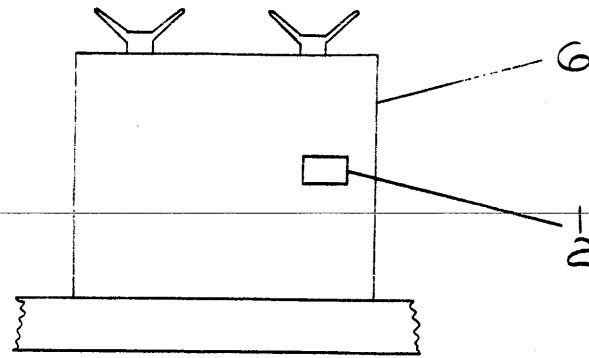
QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
		ETCH BOARD REV	E	
	D664	IN 3606	D45H8	
	NSR8117		2N 6028	
	MCR 649P - 2			
	IN 967A	SAME		
	2N 5302			
	MPS A05			
	MPS A55			
	DEC NO.	EIA NO.	DEC NO.	EIA NO.
SEMICONDUCTOR CONVERSION CHART				

DRN. Roger J. Lawrence	DATE 11-4-71	 digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. Roger J. Lawrence	DATE 1-9-72	
ENG'D. Roger J. Lawrence	DATE 1/11/72	
PROJ. ENG. Roger J. Lawrence	DATE 1/11/72	
PROB. ENG. Roger J. Lawrence	DATE 1/13/72	
TITLE		-15V REG.
NEXT HIGHER ASSY		
SCALE	D/C S	NUMBER
SHEET 1	OF 1	H745 - 0-1
REV.		E



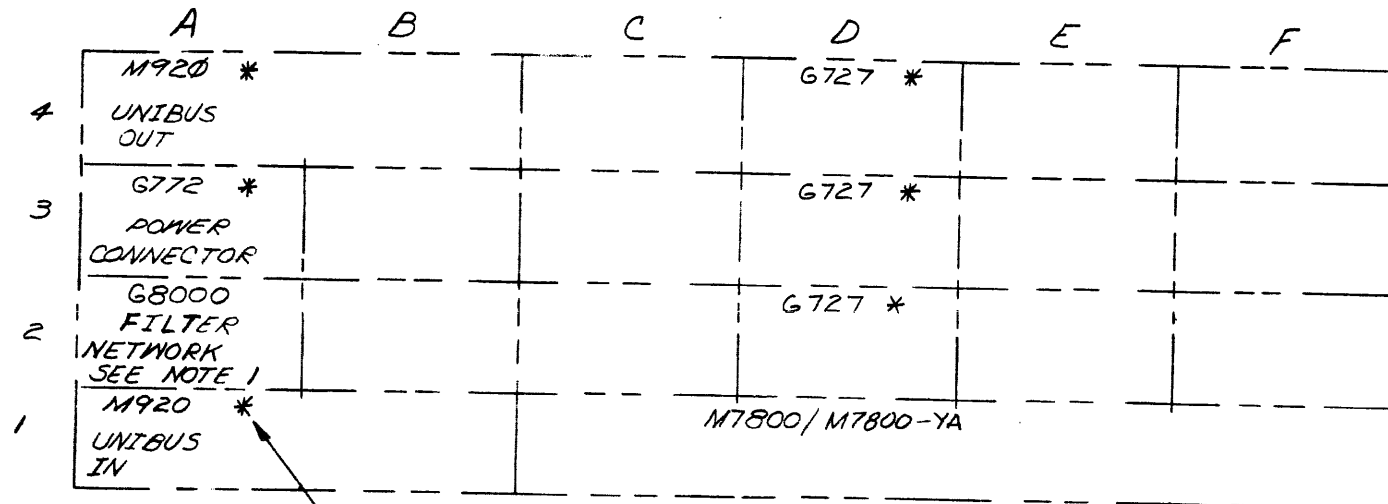
LE	ASYNCHRONOUS LINE INTERFACE	SHEET 2 OF 3	SIZE CODE B DD	NUMBER DL11-0	REV F
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NOTES:

- G 8000 IS REQUIRED ONLY IN PDP 11 SYSTEMS WHERE +15V IS NOT AVAILABLE. THE INSTALLATION REQUIRES 2 WIRES TO BE ADDED.
A03V2 - A02V2
A02N2 - CXXU1
WHERE (XX) IS THE SLOT NUMBER CONTAINING THE DL11.
- ITEMS INDICATED WITH ASTERICK (*) ARE SHOWN FOR REFERENCE ONLY AND ARE NOT PART OF THIS UNIT.



SEE NOTE 2

DD11-A*

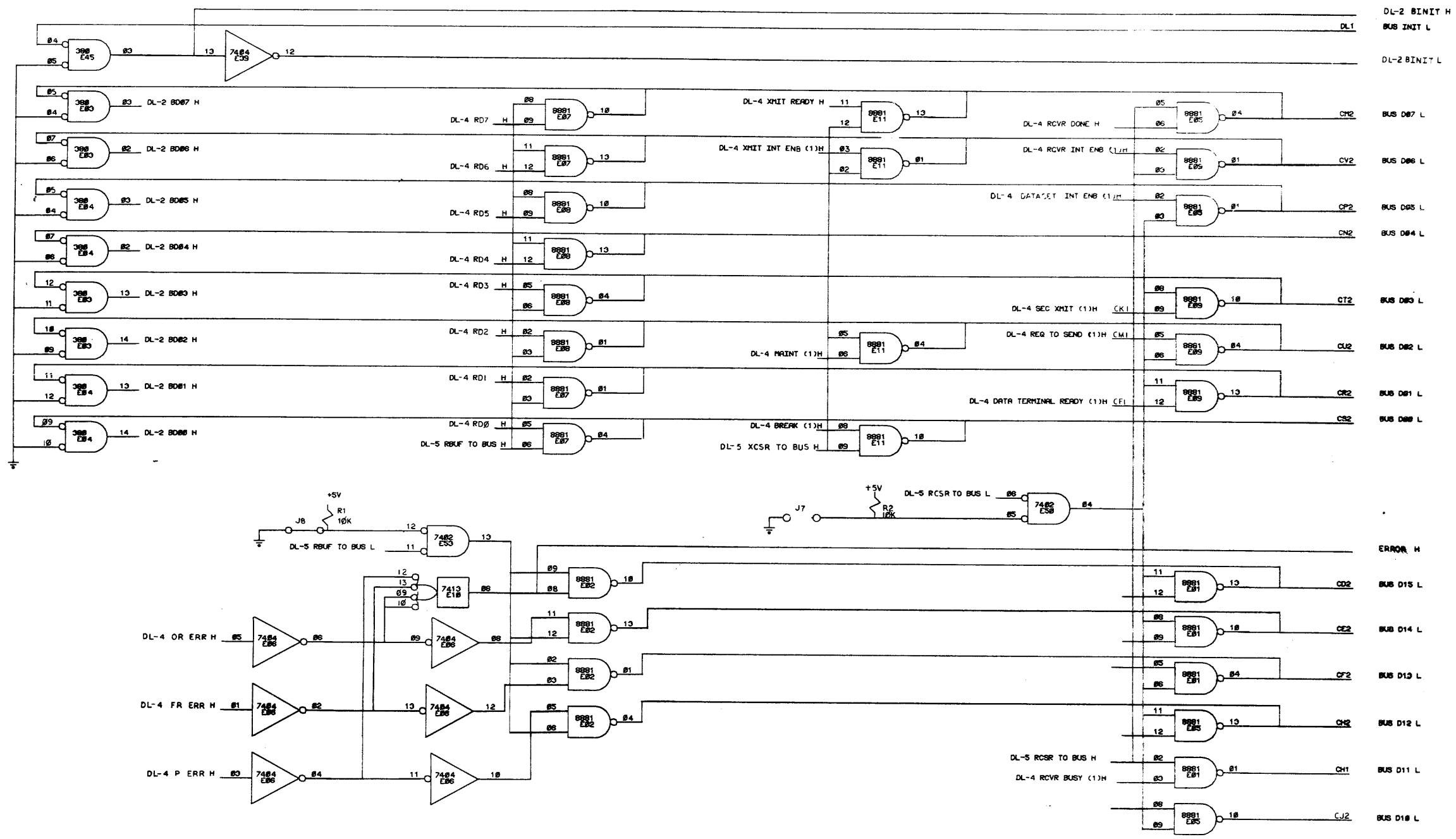
CHK	REV.	CHANGE NO.	DATE	BY
P.M.	A	DL11-00001	2-18-72	F. JANSON
P.E.	B	DL11-00002	7-11-72	P.E. JANSON
P.E.	C	DL11-00005	10-5-72	P.E. JANSON
P.E.	D	DL11-00006	1-31-73	L. CONDON
P.E.				L. CONDON
P.E.				L. CONDON

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP-11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN. <i>M. Riviere</i>	DATE 7/18/72	 digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>
DECIMALS	ANGLES	CHK'D. <i>J. F. Janson</i>	DATE 4-24-72	
.XXX = .005	±0° 30'	ENG. <i>P. E. Janson</i>	DATE 5-11-72	
.XX = .02		PROJ. ENG. <i>P. E. Janson</i>	DATE 5-11-72	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PROD. <i>J. M. Janson</i>	DATE 5-15-72	
MATERIAL	NEXT HIGHER ASSY.		SIZE CODE	NUMBER
+ + +	B-DD-DL11-Ø		C UA	DL11-Ø-Ø
FINISH	SCALE NONE		REV.	D
+ + +	SHEET OF		DIST. G	

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS					QUANTITY/VARIATION															
PARTS LIST			MADE BY M. PIERCE		CHECKED J. FERGUSON		SECTION		DL11-A		DL11-B		DL11-C		DL11-D		DL11-E			
DATE 4/27/72			DATE 4/27/72		DATE 4/27/72		1													
ENG P. E. Jamson			PROD J. Mc Sipe		DATE 5/15/72		ISSUED SECT.													
DATE 5/11/72			DATE 5/15/72		DATE 5/15/72		1													
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION			DL11-A	DL11-B	DL11-C	DL11-D	DL11-E											
1	C-IA-5408776-0-0	PRIORITY JUMPER LEVEL #4			1	1	1	1	1											
2	C-IA-5408778-0-0	PRIORITY JUMPER LEVEL #5																		
3	D-UA-BC05C-25	CABLE, MODEM BC05C				1		1	1											
4	D-IA-7008360-0-0	CABLE ASSEMBLY (KL8E)			1		1													
5	D-CS-H315-0-1	MODEM TEST CONNECTOR							A/R	See Note 2										
6	E-CS-M7800-0-1	ASYNCHRONOUS LINE INTERFACE				1		1	1											
7	A-PL-G8000-0-0	FILTER NETWORK				A/R		A/R	A/R	See Note 1										
8		CRYSTAL			A/R	A/R	A/R	A/R	A/R	See Note 3										
9	E-CS-M7800-YA-1	ASYNCHRONOUS LINE INTERFACE			1		1													
	NOTES:	1. G8000 IS REQUIRED ONLY IN PDP 11 SYSTEMS WHERE +15V IS NOT AVAILABLE. ONE PER DD11-A.																		
		2. ONE H315 PER PDP11 SYSTEM																		
		3. CRYSTAL FREQUENCY DEFINED BY CUSTOMER SPECIFIED BAUD RATE																		
		4. APPLY TAPE TO TOP SURFACES OF CRYSTAL AND MOUNTING BRACKETS TO INSULATE FROM ADJACENT MODULES.																		
10	9008269	TRANSPARENT VINYL TAPE			A/R															
TITLE					ASSY NO.					SIZE CODE		NUMBER					REV.		ECO NO.	
ASYNCHRONOUS LINE INTERFACE					C-UA-DL11-0-0					A PL		DL11-0-0					D		DL11-00006	
					SHEET 1 OF 1					DIST. G										

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DIGITALEQUIPMENT CORPORATION



D

C

B

A

D

C

B

A

REVISIONS	
CHK.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	UNIT
DL11				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES. TOLERANCES				
DECIMALS	ANGLES	TITLE ASYNCHRONOUS LINE INTERFACE (BUS RECEIVERS & DRIVERS) DL-2		
.XXX - .005	±0° 30'	EQUIPMENT CORPORATION		
.XX - .02		DATE 11/6/72		
.X - .1		DATE 11/6/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL NEXT HIGHER ASSY.				
FINISH				
SCALE		SIZE CODE		NUMBER
SHEET 2 OF 6		DCS		M7800-YA-1
		DIST.		REV. B

8

7

6

5

4

3

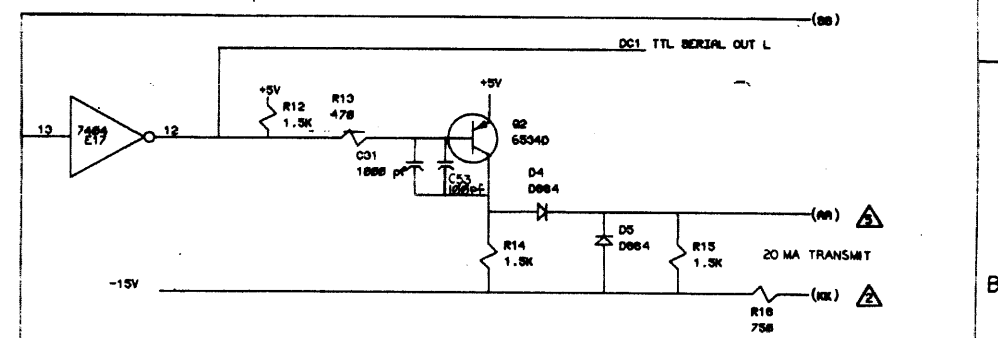
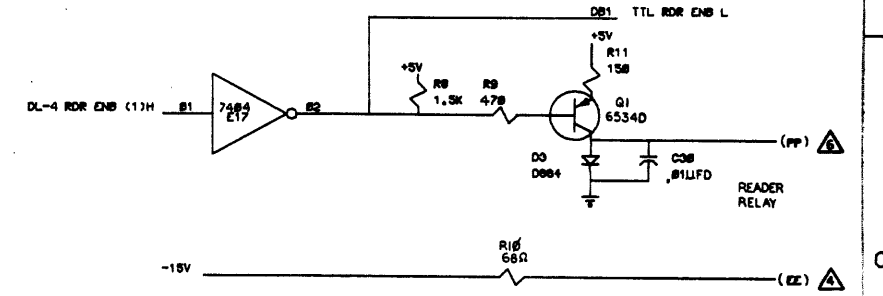
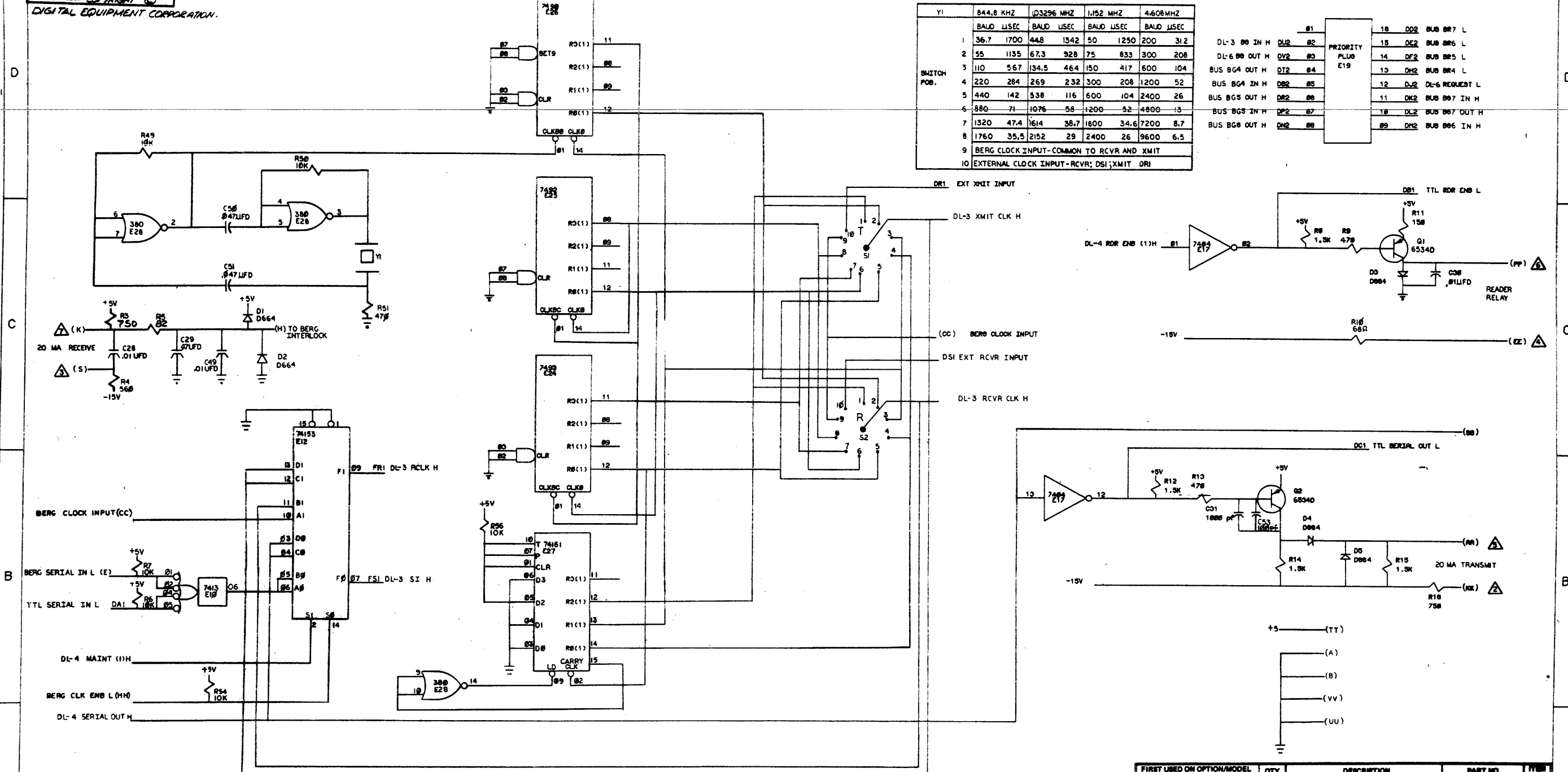
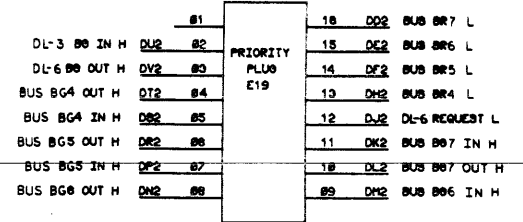
2

1

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DIGITAL EQUIPMENT CORPORATION.

Y1	844.8 KHZ	103296 MHZ	1152 MHZ	4.608MHZ
	BAUD USEC	BAUD USEC	BAUD USEC	BAUD USEC
1	36.7 1700	44.8 1342	50 1250	200 312
2	55 1135	67.3 928	75 833	300 208
3	110 567	134.5 464	150 417	600 104
4	220 284	269 232	300 208	1200 52
5	440 142	538 116	600 104	2400 26
6	880 71	1076 58	1200 52	4800 13
7	1320 47.4	1614 38.7	1800 34.6	7200 8.7
8	1760 35.5	2152 29	2400 26	9600 6.5
9	BERG CLOCK INPUT-COMMON TO RCVR AND XMIT			
10	EXTERNAL CLOCK INPUT-RCVR; DSI; XMIT ORI			



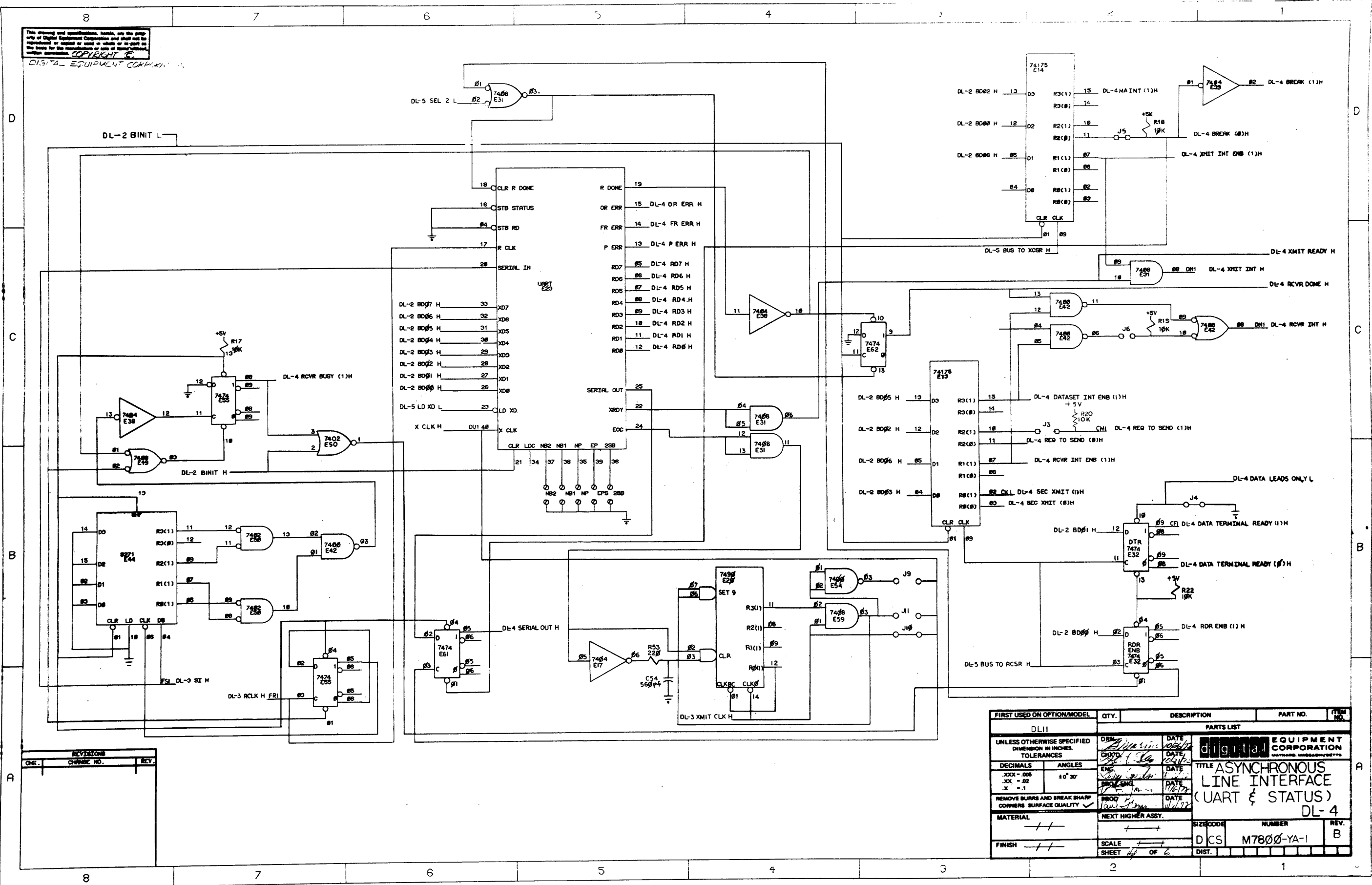
NOTES:
1. LETTERS ENCLOSED IN PARENTHESIS REFER TO PINS ON THE BERG CONNECTOR. EXAMPLE: (X)
2. NUMBERS WITHIN TRIANGLES REFER TO PINS ON THE FEMALE MATE-N-LOCK CONNECTOR WHEN USING THE 700860 CABLE, THIS CABLE ALSO CONNECTS BERG PINS H TO E.

REV.	CHG. NO.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	REV.
DLI				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES				
DECIMALS		ANGLES	EQUIPMENT CORPORATION	
.XX - .008		±0° 30'	TITLE ASYNCHRONOUS LINE INTERFACE (CLOCK & CURRENT LOOPS) DL-3	
.X - .1			SIZE CODE NUMBER REV.	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.		D CS	M7800-YA-1
FINISH	SCALE	SHEET 3 OF 4	DIST.	

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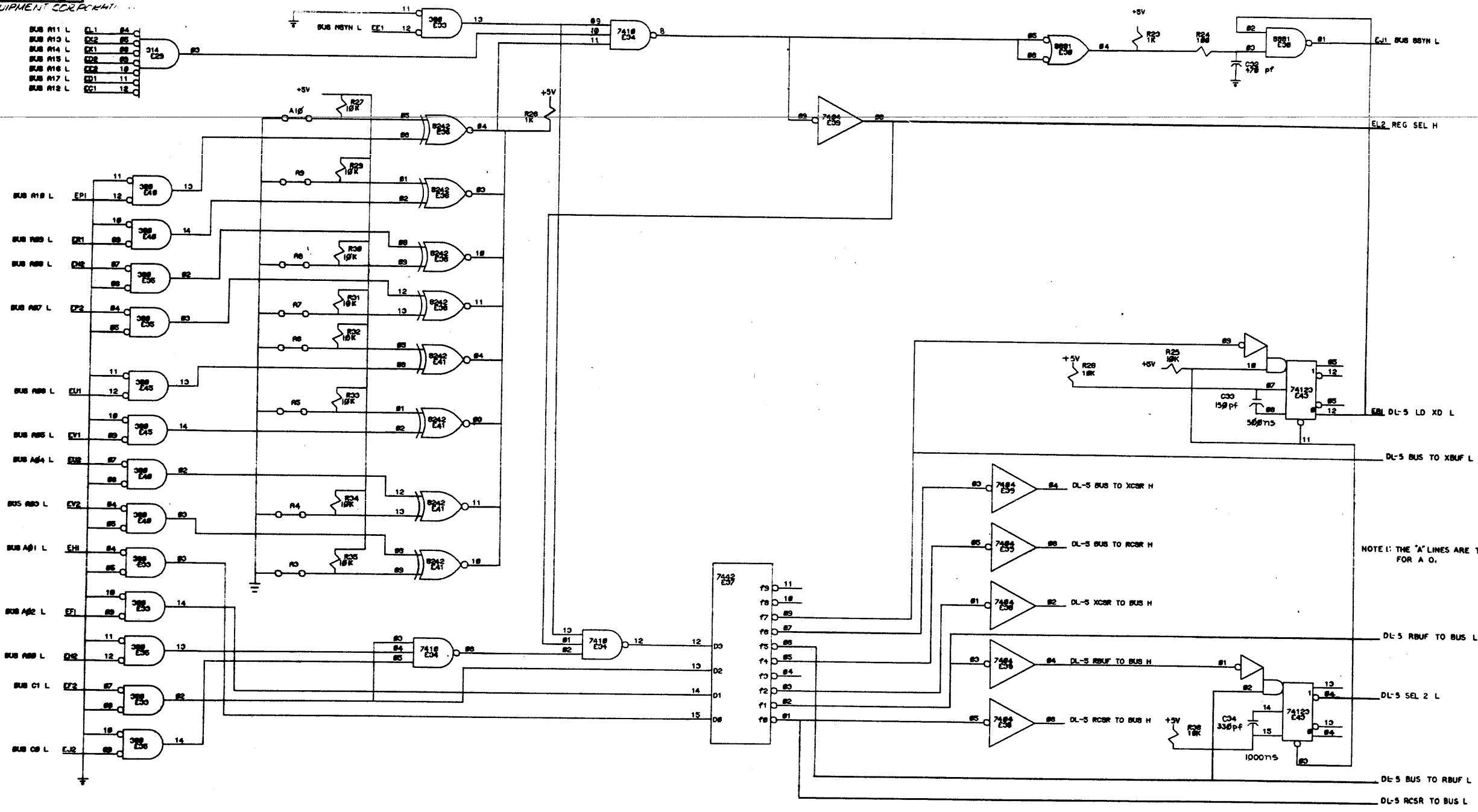
DIGITAL EQUIPMENT CORPORATION



REVISIONS		
CHG.	CHANGE NO.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
DLII				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	DATE	PARTS LIST	
.XXX - .005	±0°30'	DATE	digital EQUIPMENT CORPORATION	
.XX - .02		DATE	TITLE ASYNCHRONOUS LINE INTERFACE (UART & STATUS) DL-4	
.X - .1		DATE	REV. B	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.	DATE	SIZE CODE	NUMBER
FINISH	SCALE	DATE	D.C.S.	M7800-YA-1
	SHEET	OF	DIST.	
	6			

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NOTE: THE 'A' LINES ARE TO BE JUMPED FOR A 0.

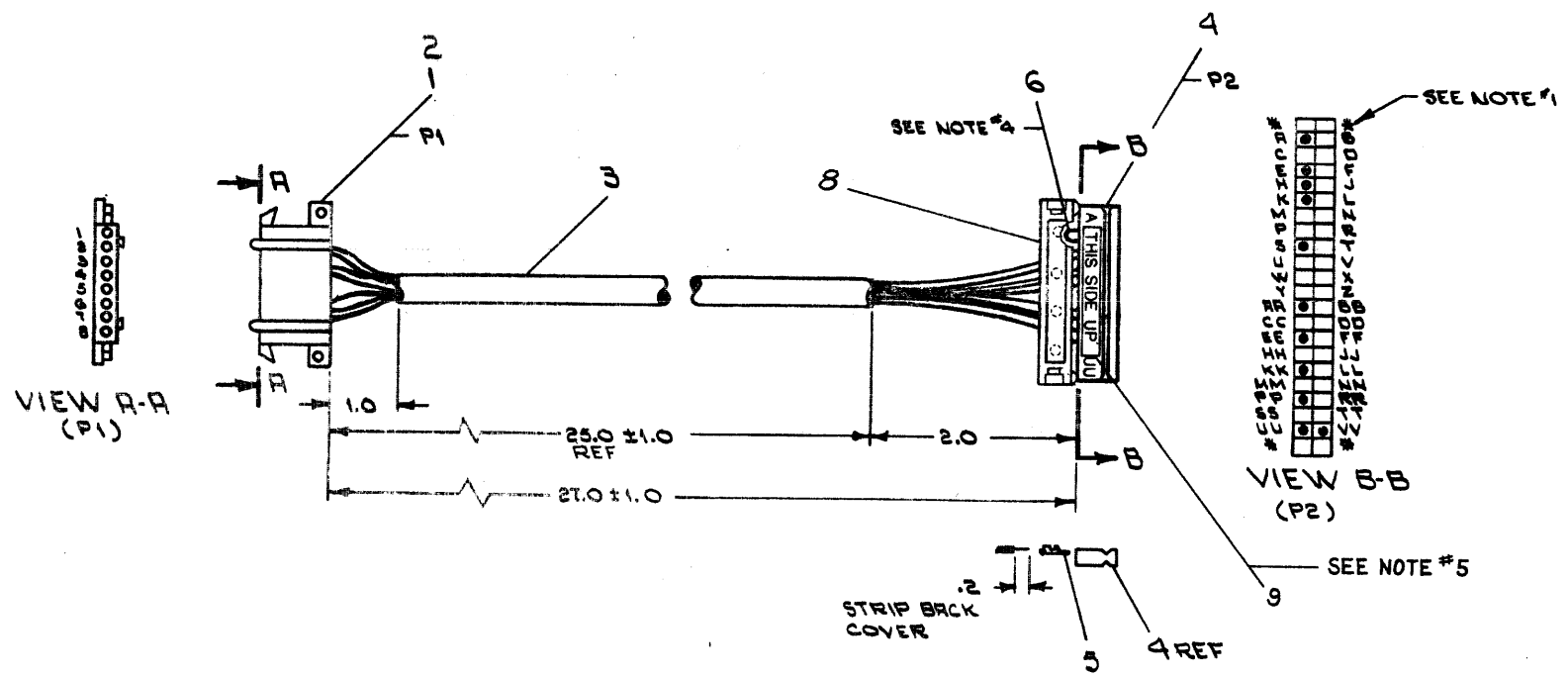
REVISIONS		
CHK.	CHANGE NO.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	FIN. NO.
DL11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES.				
TOLERANCES				
DECIMALS	ANGLES	DATE		
.XXX - .005	±0° 30'	DATE		
.XX - .002		DATE		
.X - .001		DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASSY.				
FINISH				
SCALE		D/C S		REV.
SHEET 5 OF 6		M7800-YA-1		B
		DISTR.		

DIGITAL EQUIPMENT CORPORATION
ASYNCHRONOUS LINE INTERFACE (ADDRESS SELECTION)
DL-5

WIRE TABLE							
ITEM NO.	AWG	COLOR	PAIR NO.	FROM		TO	
				CONNECTION WITH	CONNECTION WITH	CONNECTION WITH	CONNECTION WITH
3	22	BLK		P1-2	2	P2-KK	5
3		RED	1	P1-3	2	P2-S	
3,7		SHIELD		SEE NOTE #2	-	P2-R(NOTE 3)	
3		BLK		P1-4	2	P2-EE	
3		WHT	2	P1-5	2	P2-RR	
3,7		SHIELD		SEE NOTE #2	-	P2-UV(NOTE 3)	
3		BLK		P1-6	2	P2-PP	
3		GRN	3	P1-7	2	P2-K	
3,7		SHIELD		SEE NOTE #2	-	P2-VV(NOTE 3)	
6	22	BLK	-	P2-E	5	P2-H	5

- NOTES:
- * ASTERISKS INDICATE CAVITIES NOT USED OR DESIGNATED BY LETTERS.
 - 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.
 - 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.
 - ITEM #6 (WIRE) TO BE APPROXIMATELY ONE (1) INCH LONG.
 - PLACE ITEM #9 ("THIS SIDE UP" STICKER) ON LETTERED SIDE OF ITEM #4 (BERG HOUSING) AS SHOWN.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	LABEL, THIS SIDE UP	3611567	9
1	STRAIN RELIEF	1211166	8
R/R	TUB. #18 TEF. THINWALL WRT	9107278-11	7
R/R	WIRE #22 AWG STRD TEF BLK	9107350-00	6
11	SOCKET, CRIMP # 47216	1210089-07	5
1	HOUSING, BERG # 65043-05	1210918-15	4
R/R	CABLE, BELDEN #BTTT-3FR SHLD	9107723-0	3
6	CONTRACT MATE-LOCK (FEMALE)	1209379	2
1	CONN. MATE-N-LOCK (FEMALE)	1209340-00	1

REV.	CHANGE NO.	DATE	BY
A	KLSE-00002	5/13/71	V. MCNAHARA
B	KLBE-00006	3-15-73	E. CLARK
C	7008360-00001	10-29-73	B. REGAN
D	7008360-00002	3/21/74	B. REGAN

FIRST USED ON OPTION/MODEL PDP-8E

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES ANGLE ± 90° FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL SEE PARTS LIST

FINISH

DATE 7/18/71
DATE 7-8-71
DATE 4-8-71
DATE 4/10/71

ORIGINATOR
CHG'D.
EPA
PROJ. ENG.
PROD.

DATE 7/18/71
DATE 7-8-71
DATE 4-8-71
DATE 4/10/71

PARTS LIST

Digital EQUIPMENT CORPORATION BAYLARD, MASSACHUSETTS

TITLE CABLE ASSEMBLY (KL8E)

NEXT HIGHER ASSY A-ML-KL9-E-0

SCALE NONE

SHEET OF DIST

SIZE CODE DIA 7008360-0-0

NUMBER

REV D

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS					LEGEND			QUANTITY / VARIATION								
SOFTWARE LIST			SECTION		D	DOCUMENT										
MADE BY	EMPellegrini		CHECKED	P. Janson		DN	DOCUMENT CHANGE NOTICE		PA	PAPER TAPE ASCII						
DATE	8/29/72		DATE	8-20-72		PB	PAPER TAPE BINARY		PM	PAPER TAPE READ-IN-MODE						
ENG	P. Janson		PROD	P. Janson		ISSUED SECT.		PM	PAPER TAPE READ-IN-MODE							
DATE	8/29/72		DATE	8-31-72												
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION				DL11-A	DL11-B	DL11-C	DL11-D	DL11-E	KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
1	LIBKIT-11-KL11-04	KL11 MAINDEC				1	1	0	0	0						
2	LIBKIT-11-DL11C-A-K	DL11 MAINDEC				0	0	1	1	0						
3	LIBKIT-11-DL11E-A-K	DL11 MAINDEC				0	0	0	0	1						
TITLE					ASSY. NO.	SIZE CODE		NUMBER		REV.	ECO NO					
DL11 SOFTWARE LIST						A SL		DL11-0-4		T						
SHEET 1 OF 1					DIST.											

DEC FORM NO. DEC 16-(327)-1049-N471
DRA 120

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				LEGEND		QUANTITY/VARIATION									
ACCESSORY LIST				D	DOCUMENT										
				DN	DOCUMENT CHANGE NOTICE										
MADE BY	E. Pellegrini	CHECKED	<i>P. Janson</i>	SECTION	PA	PAPER TAPE ASCII									
DATE	June 26, 1972	DATE	8-8-72		PB	PAPER TAPE BINARY									
ENG	Paul Janson	PROD'D	<i>P. Pellegrini</i>	ISSUED SECT.	PM	PAPER TAPE READ-IN-MODE									
DATE	June 26, 1972	DATE	8-8-72												
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION			DL11-A	DL11-B	DL11-C	DL11-D	DL11-E	KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
1	M7800	ASYNCHRONOUS LINE INTERFACE (EIA)			-	1	-	1	1						
2	G8000	FILTER NETWORK			0	A/R	0	A/R	0						
3	M7800-YA	ASYNCHRONOUS LINE INTERFACE (CURRENT LOOP)			1	0	1	0	0						
4	5408776	PRIORITY JUMPER LEVEL #4			1	1	1	1	1						
5	BC05-C-25	MODEM CABLE			0	1	0	1	1						
6	7008360	TTY CABLE			1	0	1	0	0						
7	-	CRYSTAL			1	1	1	1	1						
8	-	DL11 ENGINEERING DRAWINGS			1	1	1	1	1						
9	DEC-11-HDLAA-A-D	DL11 ASYNCHRONOUS LINE INTERFACE MANUAL			1	1	1	1	1						
10	LIBKIT-11-KL11-04	KL11 MAINDEC			1	1	0	0	0						
11	LIBKIT-11-DL11C-A-K	DL11 MAINDEC			0	0	1	1	0						
12	LIBKIT-11-DL11E-A-K	DL11 MAINDEC			0	0	0	0	1						
13	H315	MODEM TEST CONNECTOR			0	0	0	0	A/R						
NOTES: 1. G8000 IS REQUIRED ONLY IN PDP-11 SYSTEMS WHERE +15V IS NOT AVAILABLE. ONE PER DD11-A.															
2. CRYSTAL FREQUENCY DEFINED BY CUSTOMER SPECIFIED BAUD RATE.															
3. ONE H315 PER PDPII SYSTEM															
4. INSURE THAT TRANSPARENT VINYL TAPE HAS BEEN APPLIED TO THE TOP SURFACE OF THE CRYSTAL AND MOUNTING BRACKET.															
TITLE DL11 CHECK LIST				ASSY. NO.	SIZE CODE A AL	NUMBER DL11-0-5			REV. C	ECO NO DL11-00005					
				SHEET 1 OF 1	DIST.										

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DATE 6 21 73

TITLE DL11 INSTALLATION PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
C	CHANGE PER ECO	DL11-4	JANSON	3/73	<i>P. Janson</i>	4-6-73
D	CHANGE PER ECO	DL11-5	CONDON	7/73	<i>L. Condon</i>	8/1/73

ENG <i>Paul E. Janson</i>	APPD <i>Paul E. Janson</i>	SIZE A	CODE SP	NUMBER DL11-0-2	REV D
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DEC FORM NO. DRA 107A

ENGINEERING SPECIFICATION



CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

DL11 INSTALLATION PROCEDURE:

Installation of the M7800 module or its variation as a DL11-A through DL11-E option consists of the following preparations:

1. Jumper insertion/deletion for selection of operation mode (A, B, C, D, or E).
2. Register address assignment.
3. Vector address assignment.
4. Priority assignment.
5. Special NPR jumper insertion/deletion.
6. Selection of data format (data bits, stop bits, parity).
7. Selection of crystal for baud rate.
8. Installation of G8000 in systems where +15v is not available.
9. Filter capacitor selection for high baud rate current-loop.

A. OPERATION MODE:

The following describes the jumpers associated with controlling the mode of operation (A,B,C,D, or E):

- J1. Ties EIA driver to REQUEST-TO-SEND lead (pin 4) of dataset cable. IN for DL11-B,D, and E; does not affect DL11-A and C. Drawing DL-7.
- J2. Ties EIA driver, normally used for the REQUEST-TO-SEND lead, to FORCE BUSY lead (pin 25) for use with Bell 103E. This is a customer option. If not specified, jumper is OUT for all DL11's. Drawing DL-7.
- J3. When inserted, allows REQUEST-TO-SEND lead (pin 4) to be controlled by bit 2 of the receiver status register. OUT for DL11-B and D; IN for DL11-E; does not affect DL11-A and C. Drawing DL-4.
- J4. When inserted, forces "DATA LEADS ONLY" mode of EIA operation. Turns DATA TERMINAL READY (pin 20) and REQUEST-TO-SEND (pin 4) on. IN for DL11-B and D; OUT for DL11-E; does not affect DL11-A and C. Drawing DL-4.
- J5. When inserted, allows the BREAK bit to function. OUT for DL11-A and B; IN for DL11-C,D, and E. Drawing DL-4.
- J6. When inserted, allows DSET INT to cause interrupts. OUT for DL11-A,B,C and D; IN for DL11-E. Drawing DL-4.
- J7. When inserted, allows dataset control bits to be read as part of the receiver status register.

SIZE A	CODE SP	NUMBER DL11-0-2	REV D
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DEC FORM NO. DEC 16-(381)-1022-N370
DRA 108

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

J7. (con't)

OUT for DL11-A,B,C and D; IN for DL11-E.
Drawing DL-2.

J8. When inserted, allows error bits to be read as part of the receiver data register. OUT for DL11-A and B; IN for DL11-C,D and E.
Drawing DL-2.

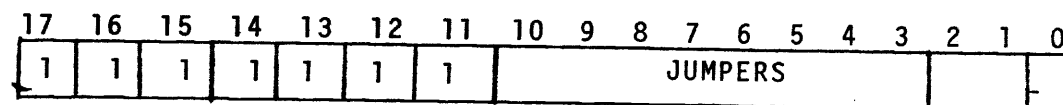
Summary of mode control jumpers:

JUMPER	A	B	C	D	E	DRAWING
J1	*	IN	*	IN	IN	DL-7
J2	OUT	OUT	OUT	OUT	OUT	DL-7
J3	*	OUT	*	OUT	IN	DL-4
J4	*	IN	*	IN	OUT	DL-4
J5	OUT	OUT	IN	IN	IN	DL-4
J6	OUT	OUT	OUT	OUT	IN	DL-4
J7	OUT	OUT	OUT	OUT	IN	DL-2
J8	OUT	OUT	IN	IN	IN	DL-2

*= don't care

B. REGISTER ADDRESS ASSIGNMENTS:

The DL11 can respond to addresses with the following format:



Selects 1 of 4 Registers

Byte Control

Bits 10 through 3 are controlled by jumpers A10 to A3. A jumper inserted indicates a zero.

For the DL11-A and B used as the console device, address 777560 is assigned. For additional units, assign 776XX0, where XX=50 for the first additional unit and XX=67 for the 16th unit.

For the DL11-C,D and E assign address 77XXX0, where XXX=561 for the first line, and XXX=617 for the 31st line. Assign all C's first, then D's, and then E's.

SIZE	CODE	NUMBER	REV
A	SP	DL11-0-2	D

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

C. VECTOR ADDRESS ASSIGNMENT:

Jumpers V8 through V3 control the interrupt vector. A jumper inserted provides a vector bit of one. Vectors can be produced in the form XX0 and XX4, where XX ranges from 00 to 77.

For the DL11-A and B used as a console device the vector address is 060/064. For additional units, vectors are floating.

For the DL11-C,D, and E, vector addresses are floating. Assign all C's first, then D's, then E's.

D. PRIORITY ASSIGNMENT:

Interrupt priority is established by inserting a "priority plug" in the socket at IC location F19. For DL11-A,B,C,D and E use level 4.

SUMMARY OF REGISTER, VECTOR AND PRIORITY ASSIGNMENTS:

	ADDRESS	VECTOR	PRIORITY
DL11-A,B CONSOLE	777560	60/64	BR4
	777562		
	777564		
	777566		
DL11-A,B ADDITIONAL UNITS	776XX0	Floating	BR4
	776XX2		
	776XX4		
	776XX6		

Where XX= 50 for line #1
and XX= 67 for line #16

	ADDRESS	VECTOR	PRIORITY
DL11-C,D,E	77XXX0	Floating	4
	77XXX2		
	77XXX4		
	77XXX6		

Where XXX= 561 for line #1
and XXX= 617 for line #31

SIZE	CODE	NUMBER	REV
A	SP	DL11-0-2	D

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

E. SPECIAL NPR JUMPER:

Jumper N1, shown on drawing DL-6, controls the response of the interrupt circuit to an NPR request. The jumper should normally be IN, except for 11/20 and 11/15 systems without the KH11 option.

F. SELECTION OF DATA FORMAT:

1. Data Bits

Split lug pairs NB2 and NB1 control the number of data bits in the serial character as follows:

NB2	NB1	# OF DATA BITS
OUT	OUT	8
OUT	IN	7
IN	OUT	6
IN	IN	5

2. Parity

Parity is controlled by split lug pairs NP and EPS as follows:

NP	EPS	PARITY
OUT	OUT	OFF
OUT	IN	OFF
IN	OUT	EVEN
IN	IN	ODD

3. Stop Bits

Split lug pair 2SB and jumpers J9, J10 and J11 control the number of stop bits in the serial character as follows:

2SB	J9	J10	J11	# OF STOP BITS
OUT	OUT	IN	OUT	2
IN	OUT	IN	OUT	1
IN	OUT	OUT	IN	1.5 for TI, GI, and SCM UARTS
IN	IN	OUT	OUT	1.5 for WD UARTS

G. CRYSTAL SELECTION:

The clocking scheme of the DL11 consists of a single crystal oscillator feeding a divider network, with two 10-position switches tapping various points to feed into the UART's

SIZE	CODE	NUMBER	REV
A	SP	DL11-0-2	D

ENGINEERING SPECIFICATION

digital

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

G. Con't

transmitter and receiver sections. Thus, for a given crystal frequency, 8 baud rates are independently selectable for transmit and receive. The two addition switch positions select external clocks.

SPEED GROUP		1	2	3	4
		CRYSTAL (HZ)			
POSITION	FACTOR	844.8K	1.03296M	1.152M	4.608M
1*	23040	36.7	44.8'	50	200
2	15360	55	67.3	75	300
3	7680	110	134.5	150	600
4	3840	220	269	300	1200
5	1920	440	538	600	2400
6	960	880	1076	1200	4800
7	640	1320	1614	1800	7200
8	480	1760	2152	2400	9600

*Most counter-clock wise position.

To determine a crystal frequency for a non-standard baud rate, pick the position of the closest baud rate in the 1.152MHz column, and then multiply the non-standard baud rate by the factor for that position. For example, if the customer specifies 1050 baud, this is closest to 1200 baud, position 6.

$$1050 \times 960 = 10080000 = 1.008\text{MHz.}$$

The crystal frequency should not fall outside the range of the standard crystals.

DEC part numbers for the standard crystals are as follows:

844.8 KHz	18-10245-1*
1.03296 MHz	18-05501-6
1.152 MHz	18-05501-5
4.608 MHz	18-05501-7

*Use A or C cut crystals only. Do not use crystals marked NE-6D.

When ordering a special crystal, refer to purchase specification 18-05501 for crystal specification.

Insure that transparent vinyl tape (9008269) is applied to the top surfaces of the crystal and mounting brackets to insulate from adjacent modules.

SIZE	CODE	NUMBER	REV
A	SP	DL11-0-2	D

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

H. G8000 INSTALLATION:

For DL11-B, D, and E a positive voltage is required between 9 and 15 volts to operate the EIA drivers. For PDP-11/20 and PDP-11/15 systems with the H720 power supply, a G8000 module must be installed to provide this voltage. Using a filter network, this module converts the full-wave rectified "+8V" signal to a positive DC voltage.

1. Install G8000 into slot A02 of DD11-A.
2. Wire A03V2 to A02V2.
3. Wire A02N2 to CXXU1 where XX is the slot location of the M7800.

Refer to diagram 1.

I. FILTER CAPACITOR SELECTION:

For DL11-A's and DL11-C's, which operate with 20ma current loops, capacitors are used to filter the receive line and slow the switching time of the transmit line. To avoid excessive distortion above 150 baud, the capacitance in each of these two circuits must be reduced. This is accomplished by clipping C29 (.47 mfd) and C31 (1000 pf), both shown on drawing DL-3.

J. DL11-B,D,E in Systems with +15V available using DD11-A
 There is a special situation of using a DD11-A to mount a DL11-B, D, Or E in systems with +15V available. These systems have +15V available and it appears at pin A03V2 of the DD11-A when using power harness such as 7009177, 7008855, or 7008909. In this situation, no G8000 is necessary, and +15V can be wired directly from A03V2 to CXXU1, where XX is the slot number of the DL11.
 NOTE: this does not apply to DL11-A or C or DD11-B.

K. When using the DL11-B,D,E in an 11/05 processor pin CXXU1 has +15V available on it so no G8000 or no jumpers are required.

SIZE	CODE	NUMBER	REV
A	SP	DL11-0-2	D

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

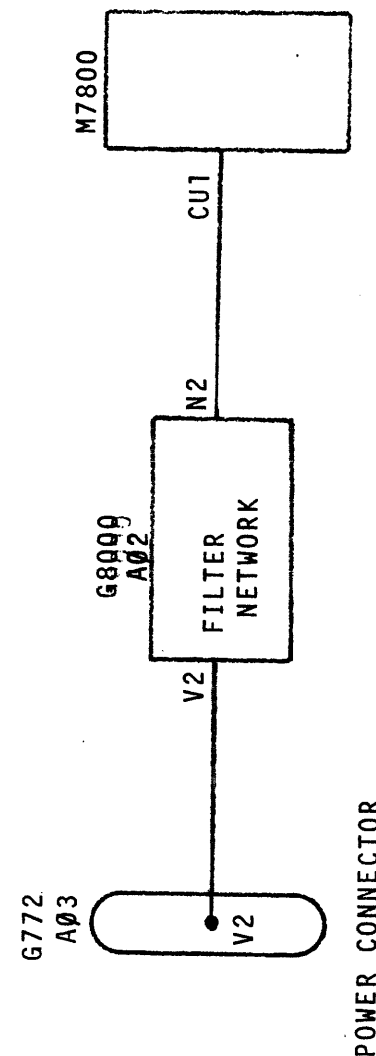


DIAGRAM 1. G8000 INSTALLATION

SIZE	CODE	NUMBER	REV
A	SP	DL11-0-2	D

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				LEGEND		QUANTITY/VARIATION											
ACCESSORY LIST				D	DOCUMENT	ALL MODELS	OPTIONAL					KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
MADE BY DATE	CHECKED DATE	SECTION	PA	PAPER TAPE ASCII													
ENG DATE	PROD DATE	ISSUED SECT.	PB	PAPER TAPE BINARY													
			PM	PAPER TAPE READ-IN-MODE													
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION															
1	LIBKIT-11/40-BASE-A-K	PDP-11/40 PROGRAM LIBRARY CHECK LIST AND KIT		1													
2	DEC-11-H40SA-A-D	PDP-11/40 SYSTEMS MANUAL		1													
3	DEC-11-HKDAA-A-D	KD11-A PROCESSOR MANUAL		1													
4	DEC-11-HKEFA-A-D	KEL INSTRUCTION SET OPTIONS MANUAL			1												
5	DEC-11-HKTDAA-A-D	KT11 MEMORY MANAGEMENT OPTION MANUAL			1												
6	DEC-11-HMELA-A-D	MEL1-L CORE MEMORY MANUAL		1													
7	DEC-11-HDLAA-A-D	DL11 ASYNCHRONOUS LINE INTERFACE MANUAL		1													
8	B-DD-11/40-0	PDP-11/40 PRINT SET		1													
9	B-DD-KEL1-E	KEL1-E PRINT SET			1												
10	B-DD-KEL1-F	KEL1-F PRINT SET			1												
11	B-DD-KT11-D	KT11-D PRINT SET			1												
12	D-1A-7009177-0-0	POWER DISTRIBUTION CABLES FOR UNUSED SYSTEM															
		UNIT PLACES IN BOX															
TITLE				ASSY. NO.	SIZE	CODE	NUMBER				REV.	ECO NO					
ACCESSORY LIST (PDP-11/40)				74	A	AL	11/40-0-4				B	11/40 00013					
				SHEET 1 OF 1	DIST.												

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

LEGEND

QUANTITY/VARIATION

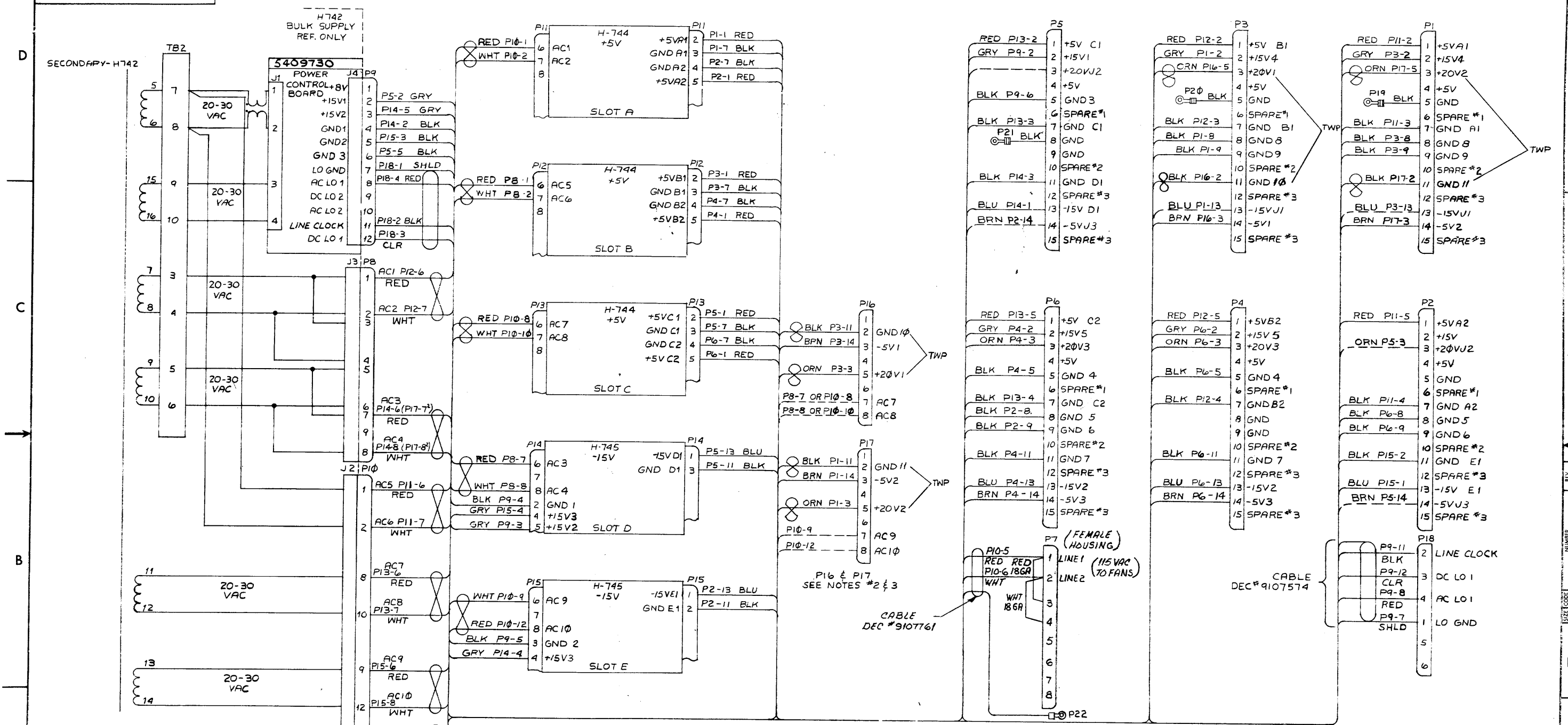
SOFTWARE LIST

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

MADE BY *J. J. Loughlin* CHECKED *J. J. Loughlin* SECTION
DATE *9/28/72* DATE *9/28/72*
ENG *J. J. Loughlin* PROD. *Stinger* ISSUED SECT.
DATE *9/28/72* DATE *9/28/72*

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY/VARIATION										KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE	
			ALL MODELS																
1	LIBKIT-11/40-BASE	PDP-11/40 PROGRAM LIBRARY CHECK LIST (DIAGNOSTIC AND SYSTEM SOFTWARE)	*																
		*THIS LIST SUPERCEEDS THE INDIVIDUAL SOFTWARE LISTS NOTED FOR KJ11-A, KW11-L, AND MF11-L (MM11-L) IN THE PDP-11/40 DOCUMENTATION. SOFTWARE FOR THESE DEVICES IS INCLUDED ONCE IN THE ABOVE LIBKIT.																	
TITLE		SOFTWARE LIST (PDP-11/40)	ASSY. NO. <i>44</i>		SIZE CODE A SL		NUMBER 11/40-0-5		REV.	ECO NO		SHEET 1 OF 1		DIST.					

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NOTES:
 1. ALL WIRES ARE 14 AWG UNLESS OTHERWISE SPECIFIED.
 2. IF OPTIONS REQUIRING +20V AND -5V ARE INSTALLED IN BOX, REPLACE H745 AND P15 IN SLOT E WITH H754 AND P17, TRANSFER AC WIRES FROM P15 PIN 6 & 8 TO P17 PINS 7 & 8 IF ADDITIONAL +20, -5 IS REQUIRED. REPLACE H745 AND P14 IN SLOT D WITH H754 AND P16. TRANSFER AC WIRES AS ABOVE.
 3. WARNING TO PREVENT DAMAGE TO REGULATORS REMOVE OR ADD JUMPERS ACCORDING TO TABLE BELOW:

REGULATORS		JUMPERS		
SLOT D	SLOT E	-5VJ1	+20VJ2	-5VJ3
H745	H745	OUT	-	-
H745	H754	IN	IN	IN
H754	H754	-	OUT	OUT

REV	CHANGE NO	DATE
1	009566-0000	7-19-73
2		8-2-73
3		8-2-73
4		9-6-73

FIRST USED ON OPTION/MODEL H960-D/E	QTY.	DESCRIPTION	PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES				
TOLERANCES		PARTS LIST		
DECIMALS	ANGLES	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
.xxx = .005	.x = .1	TITLE 21" BOX POWER HARNESS		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V		MATERIAL		
FINISH		NEXT HIGHER ASSY.		
SCALE NONE		SIZE CODE		
SHEET 1 OF 1		NUMBER D I C 7009566-0-1		
		REV. A		

REV. 7009566-0-1 A



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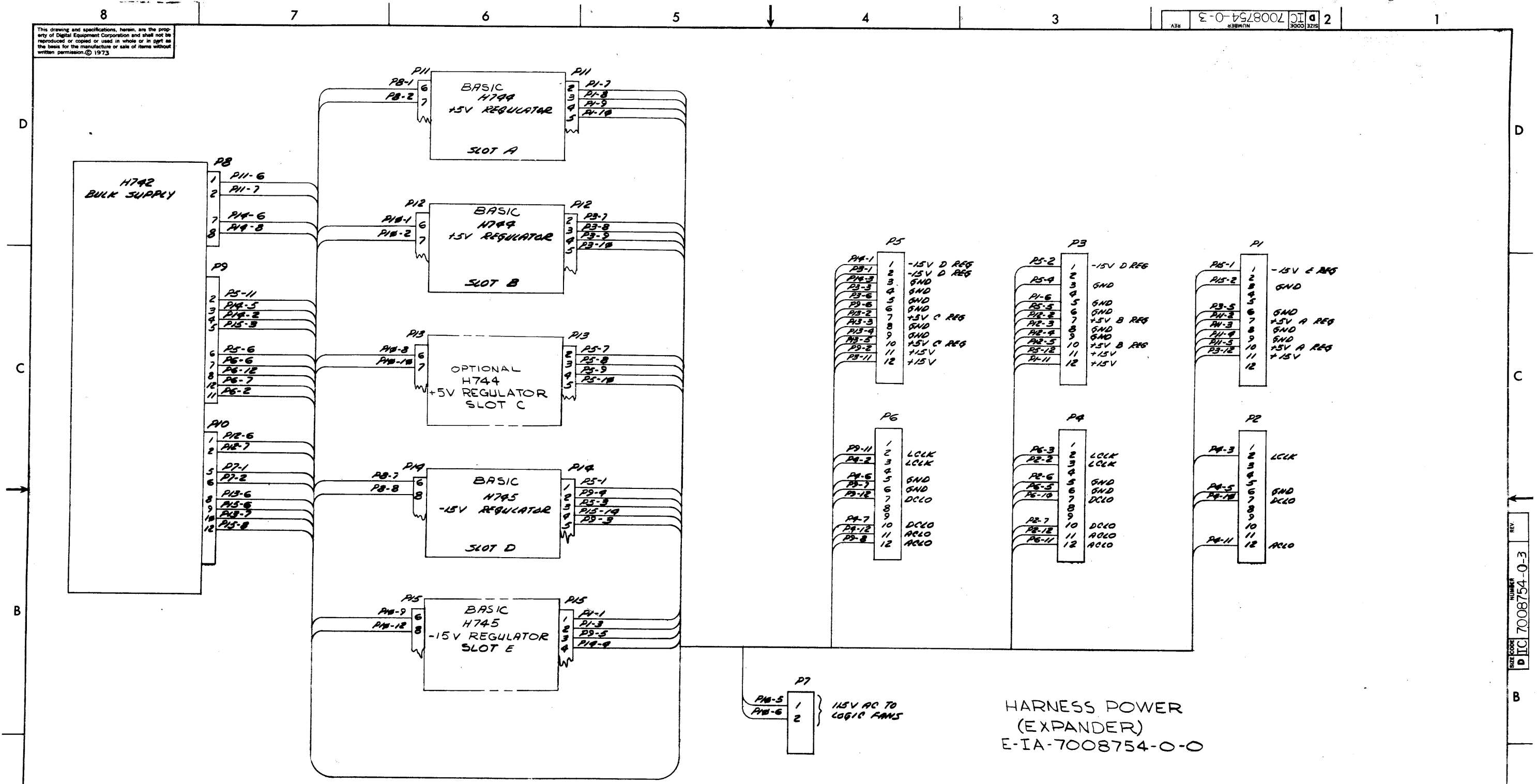
REV. A
NUMBER 7009566-0-2
SIZE CODE K WL
2

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
H960-D/E				
PARTS LIST				
DRN <i>F.S. LeBlanc</i>	DATE 9-10-73	digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small> TITLE <h1 style="text-align: center;">WIRE LIST</h1>		
CHK'D <i>P. Daignault</i>	DATE 9-19-73			
ENG. <i>Verell Boen</i>	DATE 9/19/73			
PROJ. ENG. <i>VERELL BOEN 2B</i>	DATE 9-19-73			
PROD. <i>Jack Norman</i>	DATE 9/19/73			
NEXT HIGHER ASSEMBLY				
E-IA-7009566-0-0		SIZE CODE K WL	NUMBER 7009566-0-2	REV. A
SCALE -X-				
SHEET	OF	DIST.		

REVISIONS		CHANGE NO.	REV.
CHK <i>LD</i>	7009566-00002	A	
<i>by Norman 12-19-73</i>			
<i>V. BOAEN</i>			
<i>Verell Boen 12-26-73</i>			

RUN NAME	A/P	PIN LOCATION	BAY ORDER	DRAW RV	RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
GND R2		P12-4							X	54
GND B2		P4-7					BLK			54
GND C1		P13-3							X	55
GND C1		P5-7					BLK			55
GND C2		P13-4							X	56
GND C2		P6-7					BLK			56
GND D1		P14-3							X	57
GND D1		P5-11					BLK			57
GND E1		P15-2							X	58
GND E1		P2-11					BLK			58
LINE 1		P7-1					RED	118 AWG	X	59
LINE 1		P7-3								59
LINE 2		P7-2							X	60
LINE 2		P7-4					WHT	118 AWG		60
LINE 1		P10-5							X	61
LINE 1		P7-1					RED	CABLE PN 9107761		61
LINE 2		P10-6							X	62
LINE 2		P7-2					WHT	CABLE PN 9107761		62
LINE CLOCK		P18-2							X	63
LINE CLOCK		P9-11					BLK	CABLE PN 9107574		63
LO GND		P18-1							X	64
LO GND		P9-7					SHLD	CABLE PN 9107574		64
SHIELD		P22					SHLD	CABLE PN 9107761	X	65

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HARNESS POWER (EXPANDER) E-IA-7008754-0-0

OLD STYLE HARNESS FOR SYSTEMS WITH SERIAL NUMBERS 5999 AND LOWER

REVISIONS	NO.	REV.
CHK	11/40-00010	ORIGINATED

DEC FORM NO. DRD 100-A

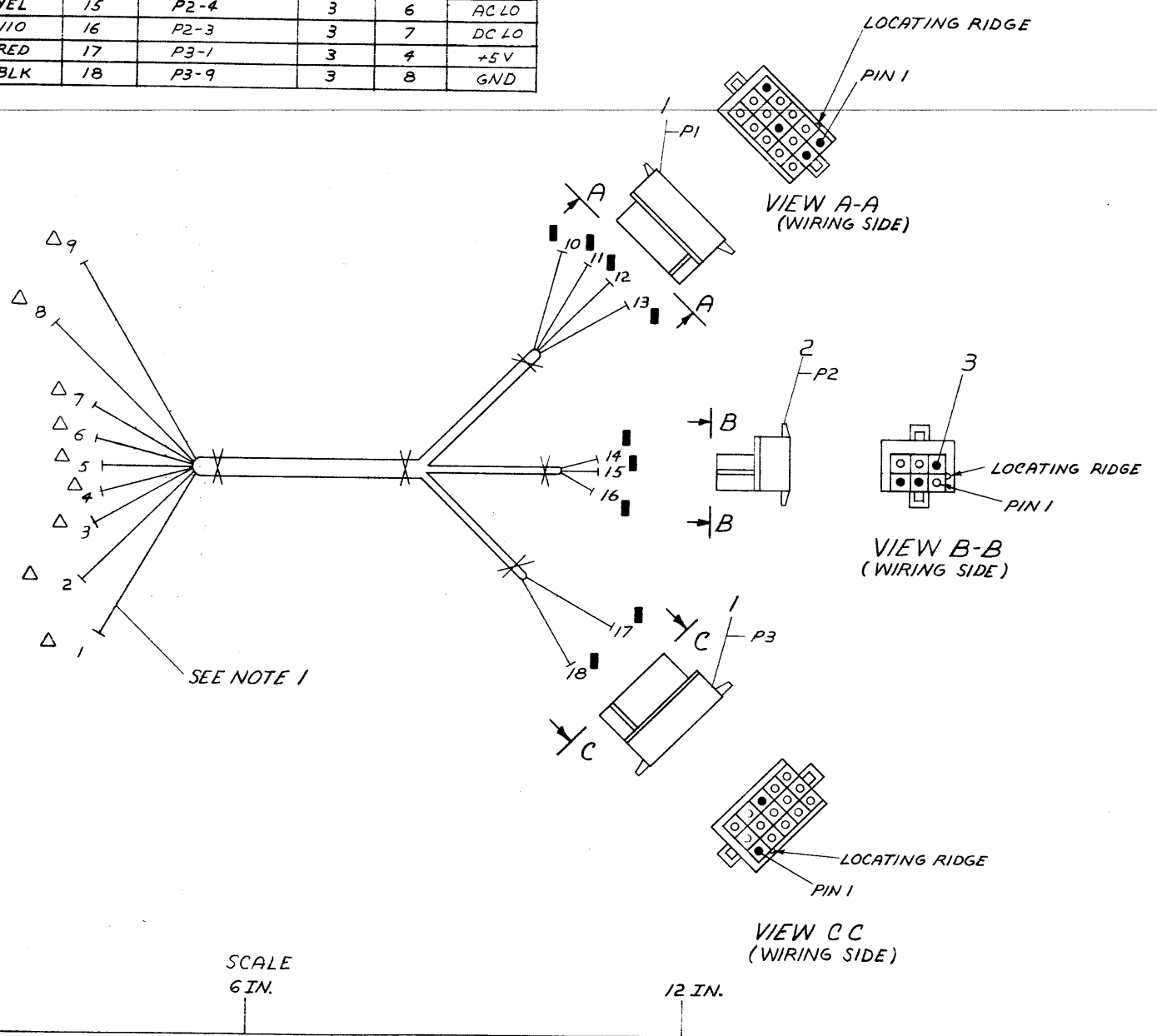
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/4φ		PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DRN. <i>C. T. London</i> DATE 8/1/72	CHK'D. <i>C. T. London</i> DATE 7/21/72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DECIMALS .XXX - .005 .XX - .02 .X - .1	ENG. <i>C. T. London</i> DATE 7/21/72	DATE 7/21/72		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	PROD. <i>C. T. London</i> DATE 7/21/72			
MATERIAL	NEXT HIGHER ASSY.			
FINISH	B-DD-11/4φ-φ	SIZE CODE	NUMBER	REV.
	SCALE	DIC	7008754-0-3	
	SHEET 1 OF 1	DIST.		

REV. 2 D I C 7008754-0-3

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WIRE TABLE							
ITEM NO	DESCRIPTION		FROM		WITH	TO POINT	SIGNAL
	AWG	COLOR	POINT	CONNECTION			
6	14	BLU	10	P1-13	3	1	-15V
5	14	BLK	11	P1-8	3	9	GND
4	14	RED	12	P1-1	3	5	+5V
9	18	GRY	13	P1-2	3	3	+15V
10	18	BRN	14	P2-2	3	2	LTC
8	18	YEL	15	P2-4	3	6	AC LO
7	18	VIO	16	P2-3	3	7	DC LO
4	14	RED	17	P3-1	3	4	+5V
5	14	BLK	18	P3-9	3	8	GND

NOTES:
 1. INSULATION AT POINT 1 THRU 9 SHOULD BE STRIPPED BACK .25 INCH WHEN HARNESS IS SOLDER CONNECTED TO BACKPANEL.



DO NOT REDUCE

QTY.	DESCRIPTION	PART NO.	ITEM NO.
X	A/R TIE WRAP	9007031	11
	A/R WIRE, 18 AWG BRN	9107360-11	10
	A/R WIRE, 18 AWG GRY	9107360-88	9
	A/R WIRE, 18 AWG YEL	9107360-44	8
	A/R WIRE, 18 AWG VIO	9107360-77	7
	A/R WIRE, 14 AWG BLU	9107370-66	6
	A/R WIRE, 14 AWG BLK	9107370-00	5
	A/R WIRE, 14 AWG RED	9107370-22	4
	9 PIN, MALE	1209378-01	3
	1 HOUSING, CONN, 6 PIN	1209351-06	2
	2 HOUSING, CONN 15 PIN	1209351-15	1

FIRST USED ON OPT/ MOD	SYM.	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/40					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES			PARTS LIST		
TOLERANCES	DRN. <i>J. Chatter</i>	DATE 5-5-74	TITLE 11/40 CPU POWER HARNESS		
DECIMALS	CHK'D. <i>J. Chatter</i>	DATE 5-7-74			
ANGLES	ENG. <i>J. Chatter</i>	DATE 6-3-74			
.XXX = .005 .XX = .02 .X = .1	PROJ. ENG. <i>J. Chatter</i>	DATE 6-3-74			
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V	PROD. <i>J. Chatter</i>	DATE 7-12-74	MATERIAL		
			SEE PARTS LIST		
			FINISH		
			NEXT HIGHER ASSY.		
			SCALE		
			SHEET 1 OF 1		
			D-UA-11/40-0-0		
			SIZE CODE		
			NUMBER		
			REV.		
			D IA 7009994-0-0		
			DIST.		

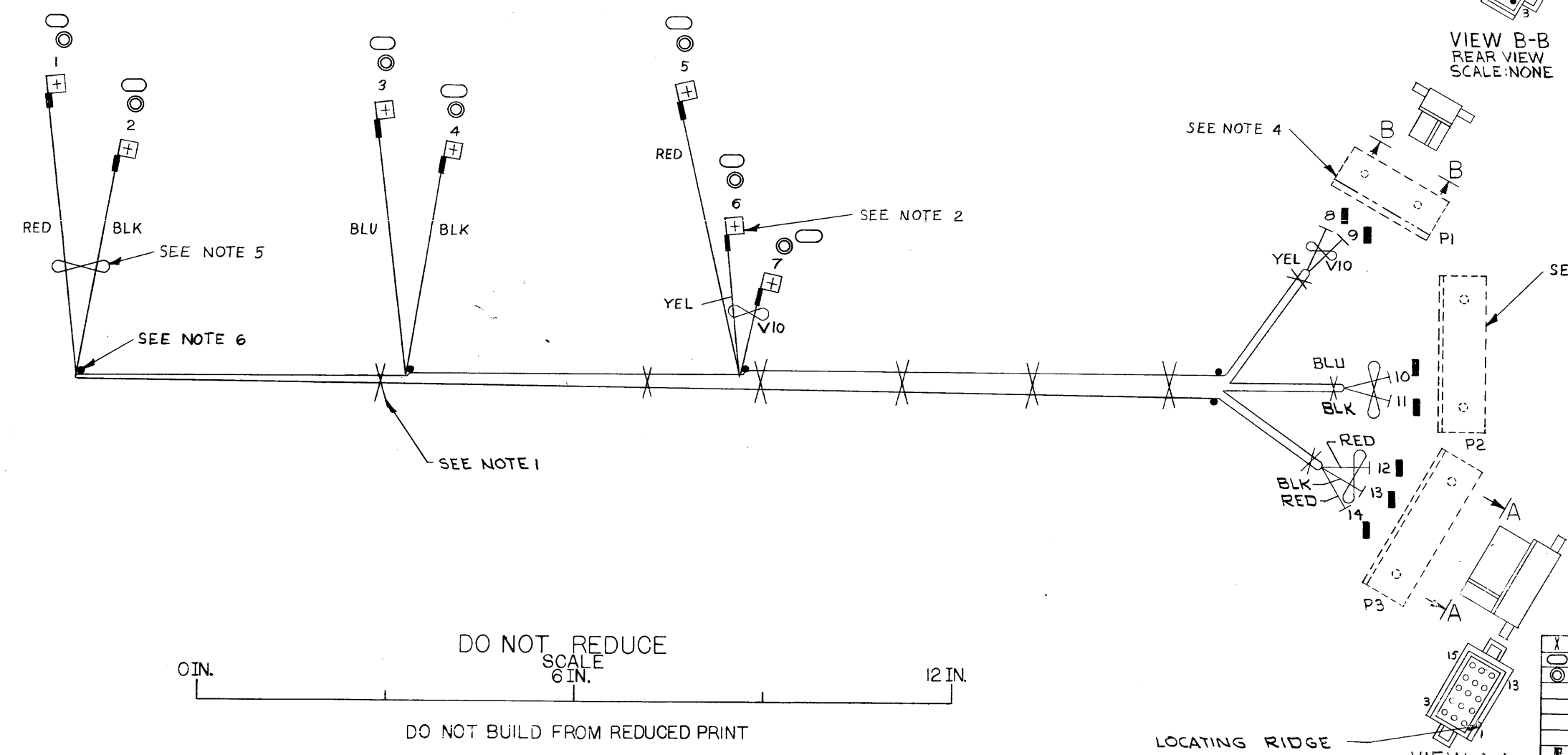
REVISIONS	CHANGE NO.	REV.
	11/40-00015	1
CHK		
	ORIGINATED	

NUMBER 7009994-0-0

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WIRE LIST									
ITEM NO	DESCRIPTION	FROM			TO			SIGNAL	
		AWG	COLOR	POINT CONNECTION	WITH	POINT CONNECTION	WITH		
4	14 TWP	RED	1	---	8,9	12	P3-1	3	+5V
		BLK	2	---	8,9	13	P3-B	3	GND
5	14 TWP	BLU	3	---	8,9	10	P2-13	3	-15V
		BLK	4	---	8,9	11	P2-B	3	GND
6	14	RED	5	---	8,9	14	P3-4	3	+5V
7	18 TWP	YEL	6	---	8,9	8	P1-4	3	AC LO
		VIO	7	---	8,9	9	P1-3	3	DC LO

- NOTES:
- USE TIE WRAPS (1) FROM 10 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAK-OUT POINT.
 - ATTACH MALE FASTON DEC # (9008219-0) WITH #4 WOOD SCREWS (7 PLACES).
 - USE CONN. BRKT C-MD-9305761-H15-0 MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-15
 - USE CONN. BRKT C-MD-9305761-H6-0 MOUNT WITH #6 WOOD SCREWS. USE MATING CONN. 1209350-06
 - AT POINTS 1-7 UNTWIST WIRES BACK TO NAIL
 - DOT (•) DENOTES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.



SYM	A/R	WRAP, TIE	QTY.	DESCRIPTION	PART NO.	ITEM NO.
X	A/R	WRAP, TIE			9007031	10
○	A/R	TUBING, SHRINK			9107305-02	9
⊙	7	CONN, SOLDERLESS			9009262-0	8
	A/R	WIRE, #18 TWP YEL/VIO			9107430-47	7
	A/R	WIRE, #14 AWG RED			9107370-22	6
	A/R	WIRE, #14 TWP BLK/BLU			9107440-06	5
	A/R	WIRE, #14 TWP BLK/RED			9107440-02	4
■	7	PIN, MALE			1209378-01	3
	2	HOUSING CONN, 15 PIN			1209351-15	2
	1	HOUSING CONN, 6 PIN			1209351-06	1

FIRST USED ON OPTION/MODEL		QTY.	DESCRIPTION	PART NO.	ITEM NO.
MF11-L					

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DATE	
TOLERANCES		DRN.	9/27/72
DECIMALS	ANGLES	CHK'D	DATE
.xxx = .005	±0° 30'	J. L. B...	10/1/72
.xx = .02		ENG.	DATE
.x = .1		W. B...	11/1/72
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY V		PROJ. ENG.	DATE
		David Benjamin	10/1/72
		PROD.	DATE
		Jack Homan	10/1/72

PARTS LIST			
digital EQUIPMENT CORPORATION			
MILFORD MASSACHUSETTS			
TITLE			
MF11-L			
1ST MEMORY			
(POWER HARNESS)			
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE	NUMBER
SEE PARTS LIST		D 14	7009565-0-0
FINISH	SCALE 1/1	DIST.	REV.
	SHEET 1 OF 1		A

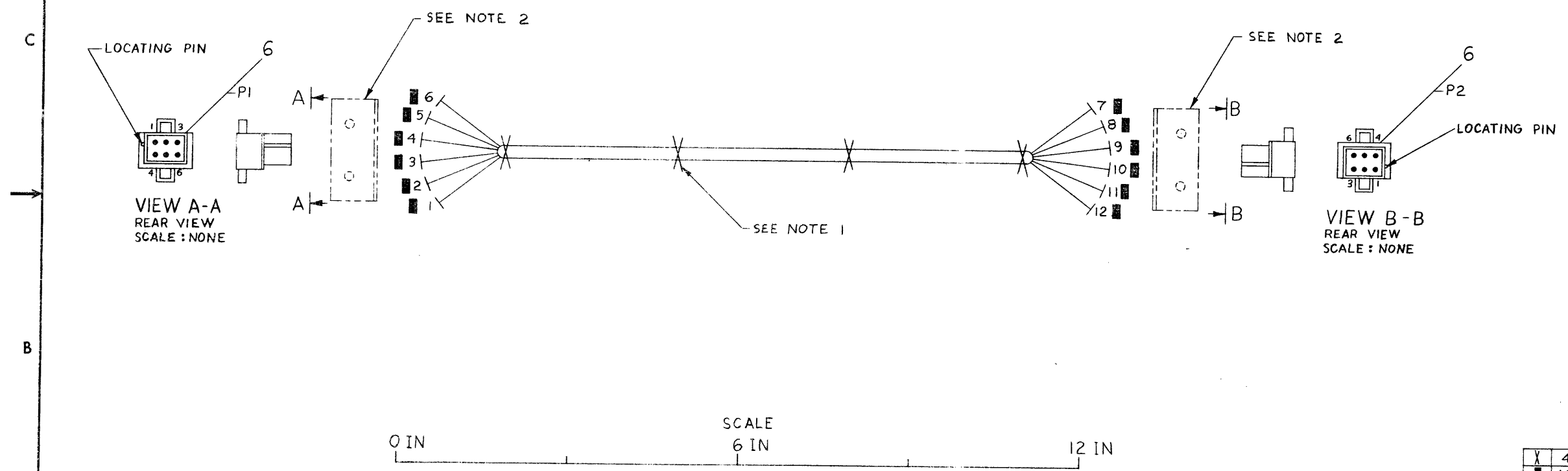
REV.	DATE	BY	CHK'D
1	10-23-72	BOAEN	
2	11-23-72	David Benjamin	

SECTION NUMBER D1A7009565-0-0 A

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ITEM NO.	DESCRIPTION	FROM			TO			SIGNAL	LENGTH	
		AWG	COLOR	POINT	CONNECTION	TERM	POINT			CONNECTION
1	18	WHT	1	P1-6	7	7	P2-6	7	SPARE-2	12 IN
1	↑	WHT	2	P1-5	↑	8	P2-5	↑	SPARE-1	↑
3		YEL	3	P1-4		9	P2-4		AC LO	
2		VIO	4	P1-3		10	P2-3		DC LO	
4		BRN	5	P1-2		11	P2-2		LINE CLOCK	
5	18	BLK	6	P1-1	7	12	P2-1	7	LO GND	12 IN

NOTES:
 1. USE TIE WRAPS ITEM 8 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
 2. USE CONN. BRKT, C-MD-9305761-H6-0. MOUNT WITH WOOD SCREWS. USE MATING CONN. 1209350-06.



DO NOT REDUCE
DO NOT BUILD FROM REDUCED PRINT

4	WRAP, TIE	9007031	8
12	PIN, MALE	1209378-00	7
2	HOUSING, CONN. 6 PIN	1209351-06	6
12 IN	WIRE #18 AWG BLK	9107360-00	5
12 IN	WIRE #18 AWG BRN	9107360-11	4
12 IN	WIRE #18 AWG YEL	9107360-44	3
12 IN	WIRE #18 AWG VIO	9107360-77	2
24 IN	WIRE #18 AWG WHT	9107360-99	1

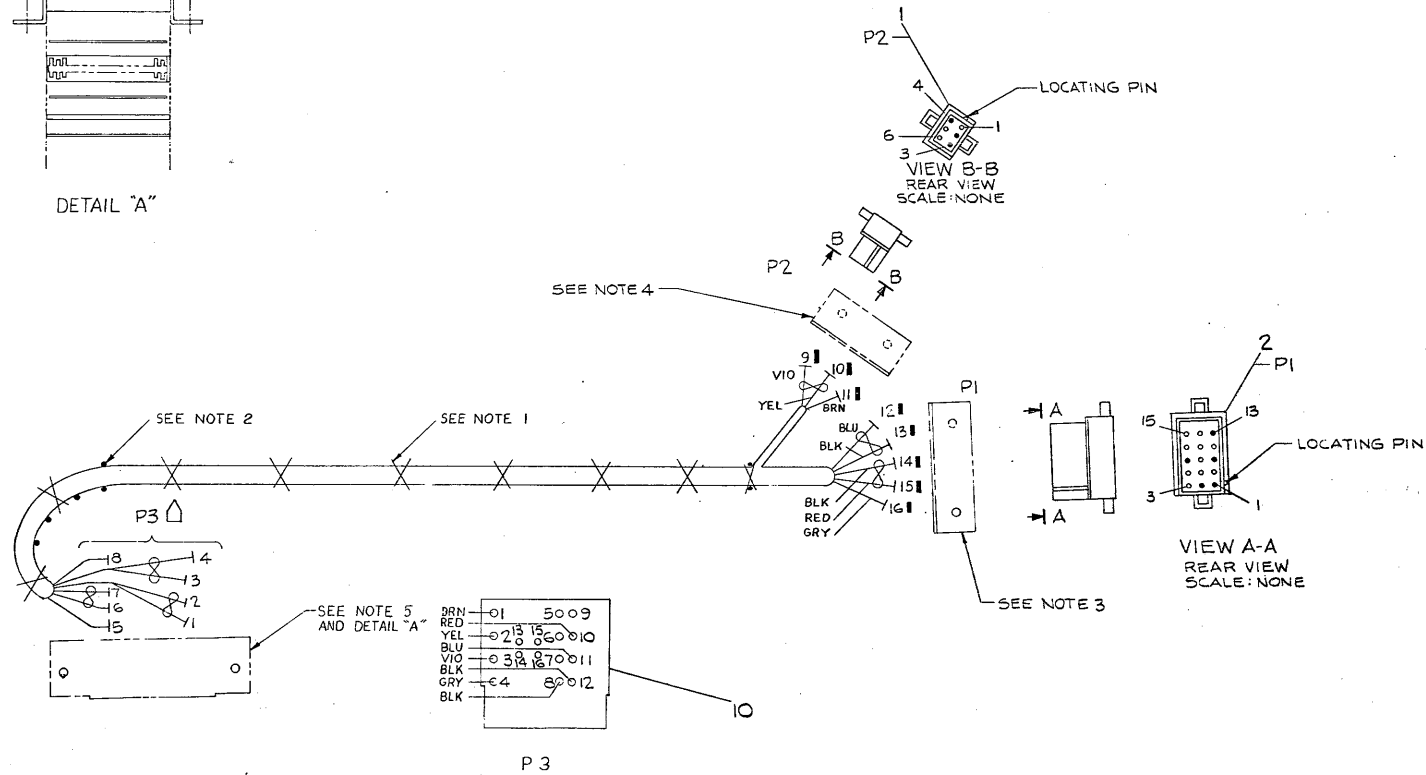
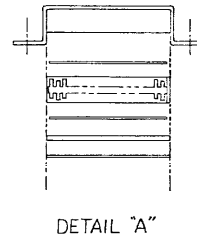
FIRST USED ON OPT/MOD	SYM	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES		DRN	DATE	<div style="display: flex; align-items: center;"> DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS </div>	
TOLERANCES		CHK'D	DATE		
DECIMALS	ANGLES	ENG.	DATE	TITLE	
.xxx = .005	±0° 30'	PROJ. ENG.	DATE		
.xx = .02		PROD.	DATE	6 PIN JUMPER HARNESS	
.x = .1			DATE		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY					
MATERIAL		NEXT HIGHER ASSY.			
SEE PARTS LIST		SCALE		SIZE CODE	NUMBER
FINISH		SHEET		DIA	7009573-0-0
		OF		DIST.	

REV	CHANGE NO.

SEC 7009573-0-0

REV. DIA 7009573-0-0

REV	DESCRIPTION	WIRE		FROM		TERM	POINT	CONNECTION	TERM	SIGNAL
		AWG	COLOR	POINT	CONNECTION					
5	14	RED	3	P3-10	SOLD	15	P1-1	3	+5V	
9	14	GRY	5	P3-4	SOLD	14	P1-7	3	GND	
6	14	BLK	1	P3-12	SOLD	15	P1-2	3	+15V	
8	18	BRN	8	P3-1	SOLD	11	P1-9	3	GND	
7	8	VIO	6	P3-3	SOLD	9	P2-3	3	DeLo	
11	22	-	-	P3-13	SOLD	-	P2-4	3	AcLo	
11	22	-	-	P3-15	SOLD	-	P3-14	SOLD	DeLo	
				P3-16	SOLD			SOLD	AcLo	



0 IN. SCALE 6 IN. 12 IN.

DO NOT REDUCE
DO NOT BUILD FROM REDUCED PRINT

- NOTES:
- USE TIE WRAPS (X) ITEM #4 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAKPOINT.
 - DOT (•) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.
 - USE CONN BRKT C-MD-930376H-150 MOUNT WITH WOOD SCREWS. USE MATING CONN 1209350-3
 - USE CONN BRKT C-MD-930376H-150 MOUNT WITH WOOD SCREWS. USE MATING CONN 1209350-06
 - USE CONN. HOLD DOWN B-MD-930576F-0-0 WITH PLATE B-MD-930576F-0-1, USE TAPE DEC #7008734 & CONN H07 DEC # (209123) REMOVE PINS & FLANGES AS SHOWN IN DETAIL "A". MOUNT WITH WOOD SCREWS.

SYM	DESCRIPTION	QTY	PART NO.	ITEM NO.
NR	BUSS WIRE #22AWG	9107560-01	11	
1	POWER CONN	6772	10	
A/R	WIRE #4AWG GRY	9107560-08	9	
A/R	WIRE #8AWG BRN	9107560-11	9	
A/R	WIRE #16AWG YEL/VIO	9107560-14	7	
A/R	WIRE #22AWG BLU	9107560-06	6	
A/R	WIRE #22AWG BLK/RED	9107560-02	5	
X	WRAP TIE	9107560-04	4	
8	PIN, MALE	1209350-00	3	
1	HOUSING CONN. 15 PIN	1209350-15	2	
1	HOUSING CONN. 6 PIN	1209350-06	1	

REV	DATE	BY	CHKD	DATE	DESCRIPTION
1					

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES

TOLERANCES

DECIMALS ANGLES

XXX - .000 1/4°

XX - .001 1/2°

X - .002 1/2°

NO GROOVES AND BREAK SHARP EDGES SURFACE QUALITY

PROVIDE DATE

MATERIAL

USE NEXT HIGHER ASSY.

FINISH

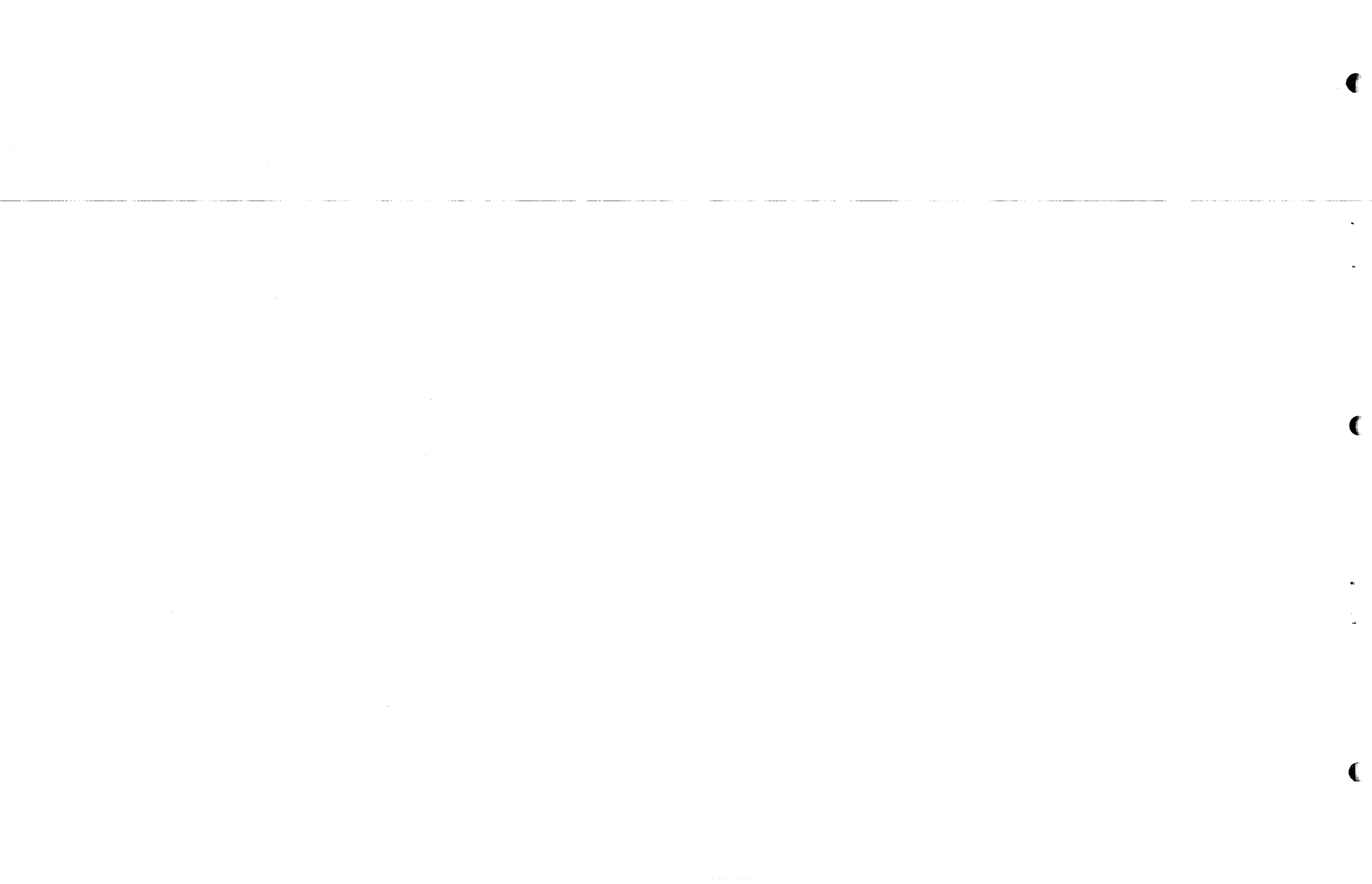
SCALE 12:1

SHEET 1 OF 1

DATE: 7/1/62

TITLE: 6772 SYSTEM UNIT HARNESS

SYMBOL: 1009562-00



DRAWING DIRECTORY

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CUSTOMER PRINT SET INDEX

SEQUENCE

SEQUENCE

- DRAWING DIRECTORY
- MODULE UTILIZATION
- TIMING DIAGRAM
- 16K UNIBUS TIMING
- 16K X-Y DRIVE
- 16K SENSE MEMORY
- MEMORY STACK (16K X 16)
- PARITY CONTROL
- BACK PLANE
- OPTION HARNESS
- PARTS LIST
- CUSTOMER ACCEPTANCE PROC.

- B-DD-MF11-U
- D-MU-MF11-U-MU
- D-TD-MF11-U-1
- D-CS-M8293-0-1
- D-CS-G235-0-1
- D-CS-G114-0-1
- D-CS-H217-0-1
- D-CS-M7259-0-1
- D-CS-5410345-0-1
- E-IA-7009535-0-0
- A-PL-MF11-U-0
- A-SP-MF11-U-3

- ON-LINE TEST PROCEDURE A-SP-MF11-U-2
- MF11-U ENGINEERING SPECIFICATION A-SP-MF11-U-4

MFG. PRINT SET

THIS IS PRINT SET

UNIT VARIATIONS		PRINT SET	
VAR	TITLE	MF11-U	
MF11-U	16K SENSE MEMORY	X	
MM11-U	16K SENSE MEMORY	X	
MF11-UP	16K SENSE MEMORY	X	
MM11-UP	16K SENSE MEMORY	X	

NOTE: TO INSTALL MF11-U OR MF11-UP IN 11/40 CPU WITH SERIAL NUMBER LESS THAN 6000 OR H960-D (OR-E) WITH SERIAL LESS THAN 7000 A FIELD MODIFICATION KIT (FM11-UA, -UB, OR -UC) IS REQUIRED.

DEC 16 (325)-1062-1A-R072

REVISIONS		USED ON OPTION/MODEL	DRN.	DATE	TITLE					
CHG. NO.	REV		J. FLEMING	5/1/73	16K SENSE MEMORY					
			CHK'D.	DATE						
			W. MAJOR	5/11/73						
			PROJ ENG.	DATE						
DATE			D. SMELSER	5/15/73	SIZE	CODE	NUMBER		REV	
12/73			R. SHOOP	6/13/73	B	DD	MF11-U		A	
			FIELD SERV.	DATE	DIST					
			WP HUBEE	1/8/74						
		SHEET 1 OF 3								

①
16K Sense Memory
A-PL-MF11-U-Ø

②
BACK PLANE ASSY
D-AD-7009295-0-0

TITLE	SHEET	SIZE	CODE	NUMBER	REV
16K SENSE MEMORY	2 OF 3	B	DD	MF11-U	A

CUSTOMER PRINT SET		ELECTRICAL						CUSTOMER PRINT SET		MECHANICAL							
MF11-U	SET	NO.	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	MF11-U	SET	NO.	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X			1	A-PL-MF11-U-0	A	1	16K SENSE MEMORY					1	A-PL-MF11-U-0	A	1	16K SENSE MEMORY	
X				D-CS-G114-0-1	#	9	16K SENSE INHIBIT		X				E-TA-7009535-0-0	#	1	OPTION HARNESS	
X				D-CS-G235-0-1	#	9	16K X-Y DRIVE										
X				D-CS-M8293-0-1	#	10	16K UNIBUS TIMING										
X				D-CS-H217-0-1	#	3	MEMORY STACK										
X				D-MU-MF11-U-MU	A	1	MODULE UTILIZATION										
X				D-TD-MF11-U-1	A	1	TIMING DIAGRAM										
X				D-CS-M7259-0-1	#	3	PARITY CONTROL										
X				A-SP-MF11-U-3	*	2	CUSTOMER ACCEPTANCE PROCEDURE										
	X			A-SP-MF11-U-2	*	6	ONLINE TEST PROCEDURE										
	X			A-SP-MF11-U-4	*	3	MF11-U ENG. SPEC.										
X			2	D-AD-7009295-0-0	#	1	BACK PLANE ASSY										
X				D-CS-5410345-0-1	#	1	32K X 16,18 MEMORY BACKPLANE										

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
16K SENSE MEMORY

SHEET 3 OF 3

SIZE CODE
B DD

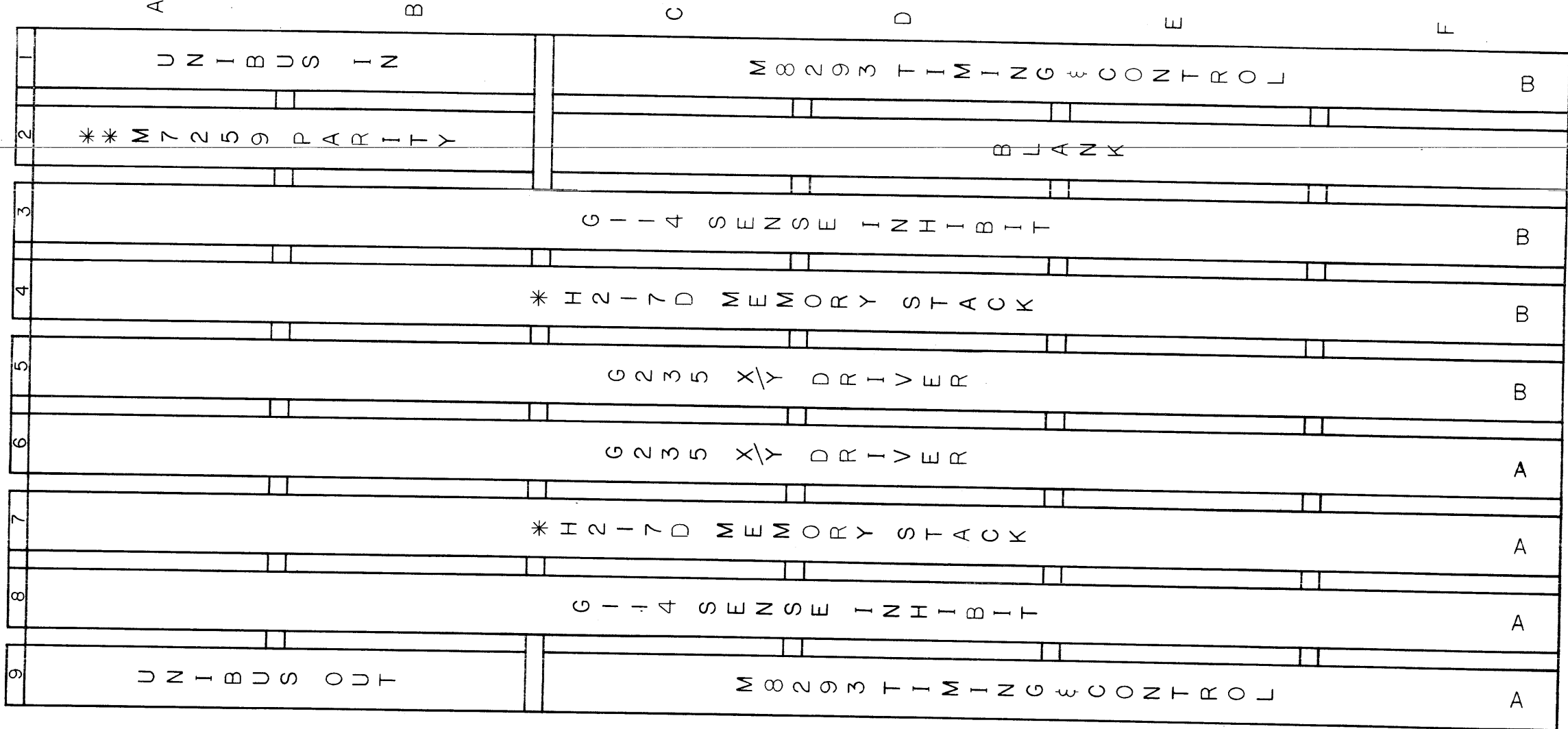
NUMBER
MF11-U

REV
A

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NOTES:

- * 1. FOR MEMORY (WITH PARITY), USE H217C MEMORY STACK.
- ** 2. M7259 IS USED WITH MEMORY ONLY
- 3. INSTALL A MODULES FOR FIRST 16K, B MODULES FOR ENL 16K.



VIEWS FROM MODULE SIDE OF BACKPLANE

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		QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
MF11-U						

REVISIONS		DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DRN	DATE	CHK'D	DATE	ENG	DATE	PROJ. ENR.	DATE	PROD.	DATE
P. DURANT	4-11-73	J. Miller	8/13/73	R. Anderson	5/15/73		5/15/73		6/11/73

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

SEMICONDUCTOR CONVERSION CHART

SCALE SHEET 1 OF 1

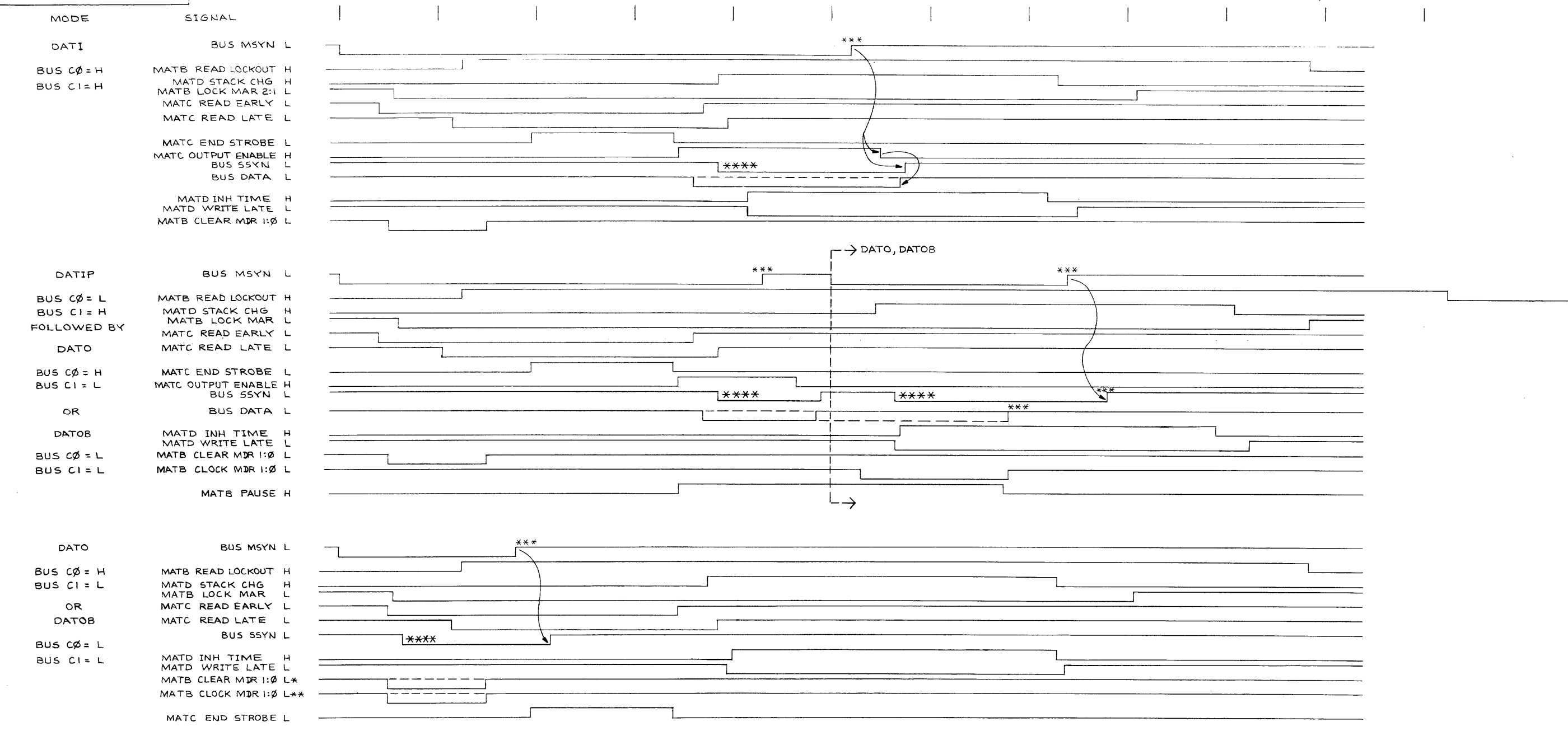
digital EQUIPMENT CORPORATION
 MAYNARD, MASSACHUSETTS

TITLE: MODULE UTILIZATION

SIZE CODE: DMU
 NUMBER: MF11-U-MU
 REV: A

BRUNING 40-522 16699

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- NOTES:
- * IN THE DATOB MODE CLEAR MDR ONLY OCCURS IN THE BYTE NOT BEING ADDRESSED.
 - ** IN THE DATOB MODE CLOCK MDR ONLY OCCURS IN THE BYTE BEING ADDRESSED.
 - *** ACTUAL TIME DEPENDS ON BUS AND PROCESSOR DELAYS.
 - **** IN PARITY SYSTEMS BUS SSYN WILL BE 20 NS LATER THAN SHOWN FOR DATO-DATOB BUS MODES AND 150 NS LATER FOR DATI-DATIP MODES.

REV. NO.	DATE	BY
1	1-2-73	P. DURANT
2	7-7-74	

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MFII-U				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. <i>H. Sampson</i>	DATE 4-19-73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
TOLERANCES	CHKD. <i>A. Williams</i>	DATE 4/30/73	TITLE MFII-U TIMING DIAGRAM (UNIBUS INTERFACE)	
DECIMALS .xxx = .005	ENG. <i>D. Schuler</i>	DATE 5/29/73	SIZE CODE DTD	
ANGLES ° 0 30'	PROJ. ENG. <i>D. Schuler</i>	DATE 5/29/73	NUMBER MFII-U-1	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY Y	PROD. <i>H. Lind</i>	DATE 6/11/73	REV. A	
MATERIAL	NEXT HIGHER ASSY.		SCALE 1/1	
FINISH	B-DD-MFII-U		SHEET 1 OF 1	

REV. A
NUMBER MFII-U-1
SIZE CODE DTD

PAGE REVISION CONTROL SHEET

SH NO. REMARKS

PAGE REVISIONS

DATE	ENG.	REV.	NO.	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.	BY	DATE	NO.	BY
11/16/73	WCB	B	00002																									
9/27/73	WCB	B	00001																									
		B	0016																									

FIRST USED ON OPTION/MODEL

MM11-U



EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
16K UNIBUS TIMING

SIZE CODE
B CS

NUMBER
M8293-0-1

REV.
C

SCALE
B-DD-MM-1-U

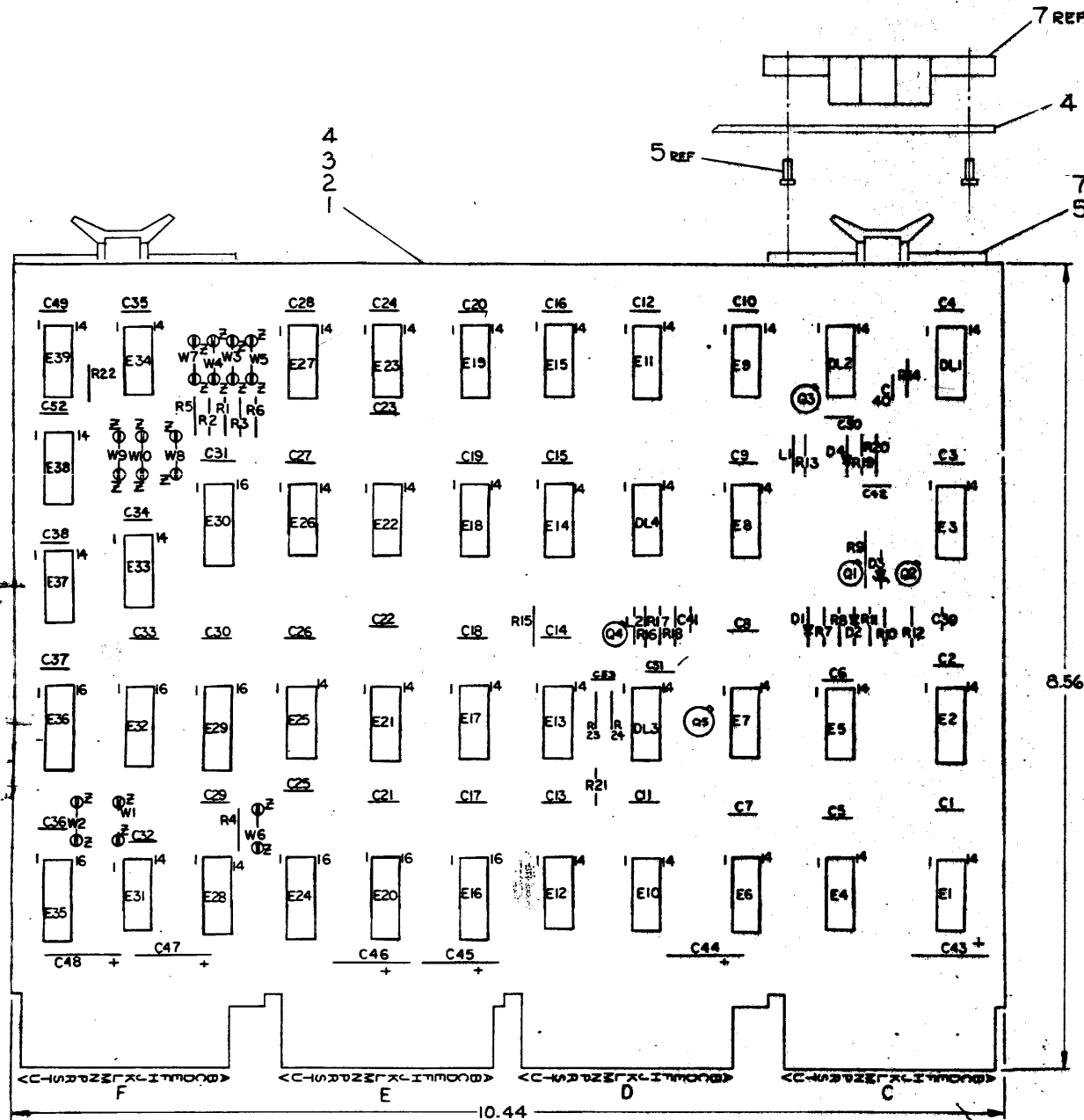
SHEET OF 10

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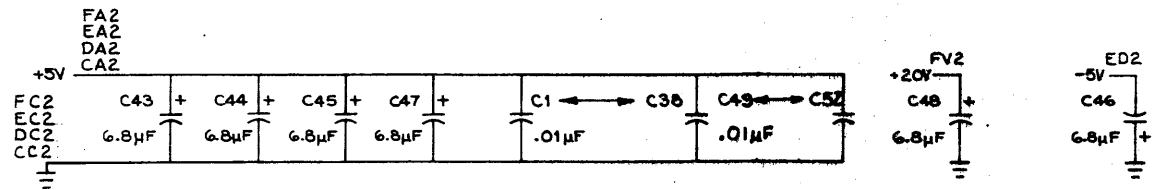
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NOTES: 1 UNLESS OTHERWISE SPECIFIED:
RESISTANCE IS IN OHMS,
CAPACITANCE IS IN MICROFARADS.



REF	XY COORDINATE	HOLE LOCATION	K-CO-M8293-0-4	1
REF	ASSY/DRILLING HOLE LAYOUT	D-4H-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
20	SPLIT LUGS	9006735		6
4	HANDLE FLIP-CHIP MAGENTA	9008337-6		7
2	C40, C41	CAP 82 PF 100V ±5% DM	1000015	8
1	C39	CAP 1000 PF 100V ±5% DM	1000042	9
43	C1 → 38, 42, 49-52	CAP .01μF 50V ±20%	1001610	10
6	C43 → 48	CAP 6.8μF 35V ±10% S,TANT	1005306	11
1	D3	DIODE 1N746A 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 1/4 W 5%	1300247	15
1	R9	RES 750 1/2 W 5%	1300354	16
1	R16	RES 1K 1/4 W 5%	1300365	17
10	R1 → 6, 10, 21, 15, 22	RES 2K 1/4 W 5%	1302388	18
3	R7, 11, 8	RES 20K 1/4 W 5%	1302391	19
2	R19, 12	RES 560 1/4 W 5%	1301890	20
1	R20	RES 33K 1/4 W 10%	1308510	21
1	Q1	TRANSISTOR DEC 6534 D	1503409	22
4	Q2, 3, 4, 5	TRANSISTOR DEC 3009 B	1503100	23
2	L1, 2	INDUCTOR 100μH	1610662	24
4	DL1, 2, 3, 4	DELAY LINE 250 NS, TAPPED	1611243	25
1	E28	IC DEC 74H40	1905586	26
5	E20, 24, 16, 36, 35	IC DEC 7475	1909050	27
6	E15, 8, 26, 18, 37, 38	IC DEC 74H00	1909056	28
4	E14, 19, 1, 39	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 380	1909485	33
4	E9, 22, 13, 34	IC DEC 74H04	1909931	34
1	E30	IC DEC 7483	1909932	35
2	E29, 32	IC DEC 7485	1910224	36
2	E3, 10	IC DEC 8885	1910649	37
2	E2, 12	IC DEC 7427	1910878	38
2	R23, 24	RES 330 1/4 W 5%	1300295	39
1	C53	CAP 120 PF 100V ±5% D.M.	1000018	40

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		



FIRST USED ON OPTION MODEL
MM11-U

ETCH BOARD REV B

DRN	DATE
B. VALENTINE	1-23-73
CHK'D	DATE
W. Major	5/10/73
ENG	DATE
D. Schuler	5/10/73
PROD. ENG	DATE
R. Schuler	5/10/73
PROD.	DATE
R. Schuler	5/10/73

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: 16K UNIBUS TIMING

NEXT HIGHER ASSY: B-DD-MM11-U

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

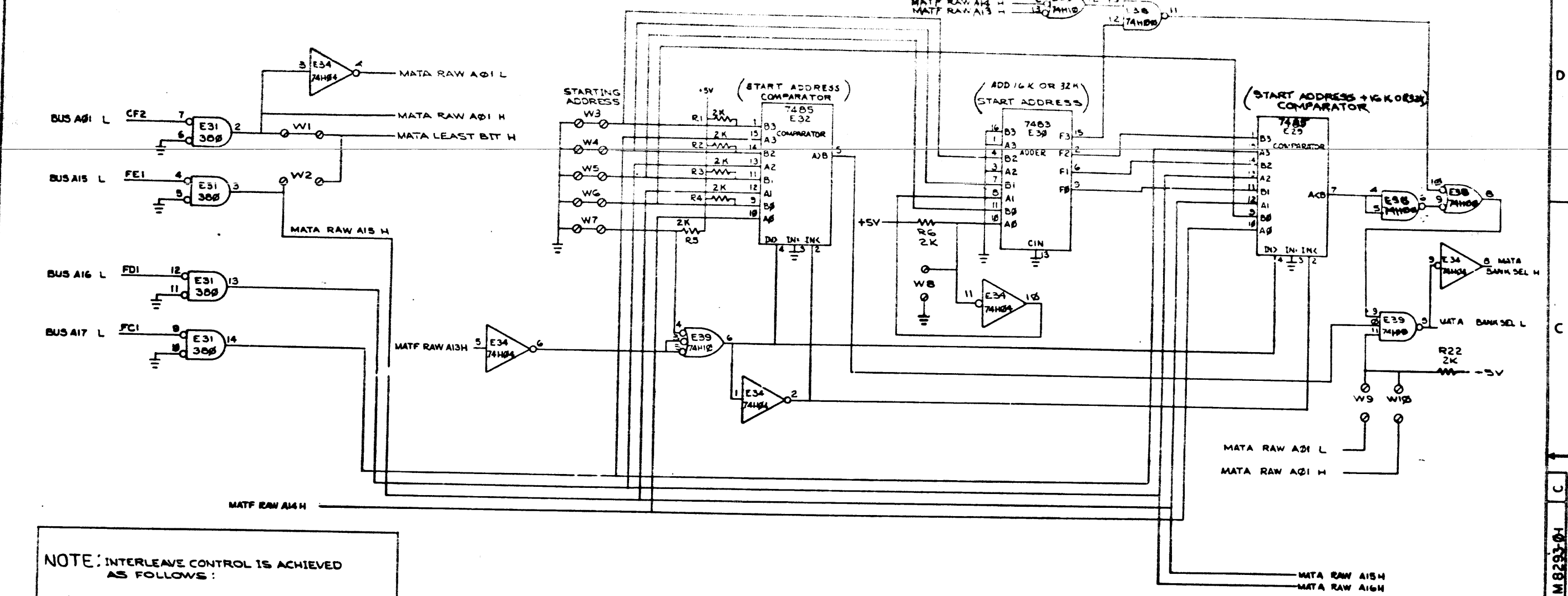
SCALE: SHEET 2 OF 12

SEMICONDUCTOR CONVERSION CHART

SIZE/ CODE	NUMBER	REV.
D/CS	M8293-0-1	C

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DEVICE SELECTION



NOTE: INTERLEAVE CONTROL IS ACHIEVED AS FOLLOWS:

a) **NON-INTERLEAVED**
W1 IN
W2, W8, W9 (WB) OUT

b) **INTERLEAVED**
W1 OUT
W2 (WB) IN
W8 IN } ONE MEMORY
W9 OUT }
W9 IN } THE OTHER MEMORY

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 (1000000).

0-IN 1-OUT

NON-INTERLEAVED START ADDRESS	W3	W4	W5	W6	W7	NON-INTERLEAVED MAX ADDRESS
000000 (0K)	0	0	0	0	0	077776
020000 (4K)	0	0	0	0	1	117776
040000 (8K)	0	0	0	1	0	137776
060000 (12K)	0	0	0	1	1	157776
100000 (16K)	0	0	1	0	0	177776
120000 (20K)	0	0	1	0	1	217776
140000 (24K)	0	0	1	1	0	237776
160000 (28K)	0	0	1	1	1	257776
200000 (32K)	0	1	0	0	0	277776
220000 (36K)	0	1	0	0	1	317776
240000 (40K)	0	1	0	1	0	337776
260000 (44K)	0	1	0	1	1	357776
300000 (48K)	0	1	1	0	0	377776
320000 (52K)	0	1	1	0	1	417776
340000 (56K)	0	1	1	1	0	437776
360000 (60K)	0	1	1	1	1	457776
400000 (64K)	1	0	0	0	0	477776

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

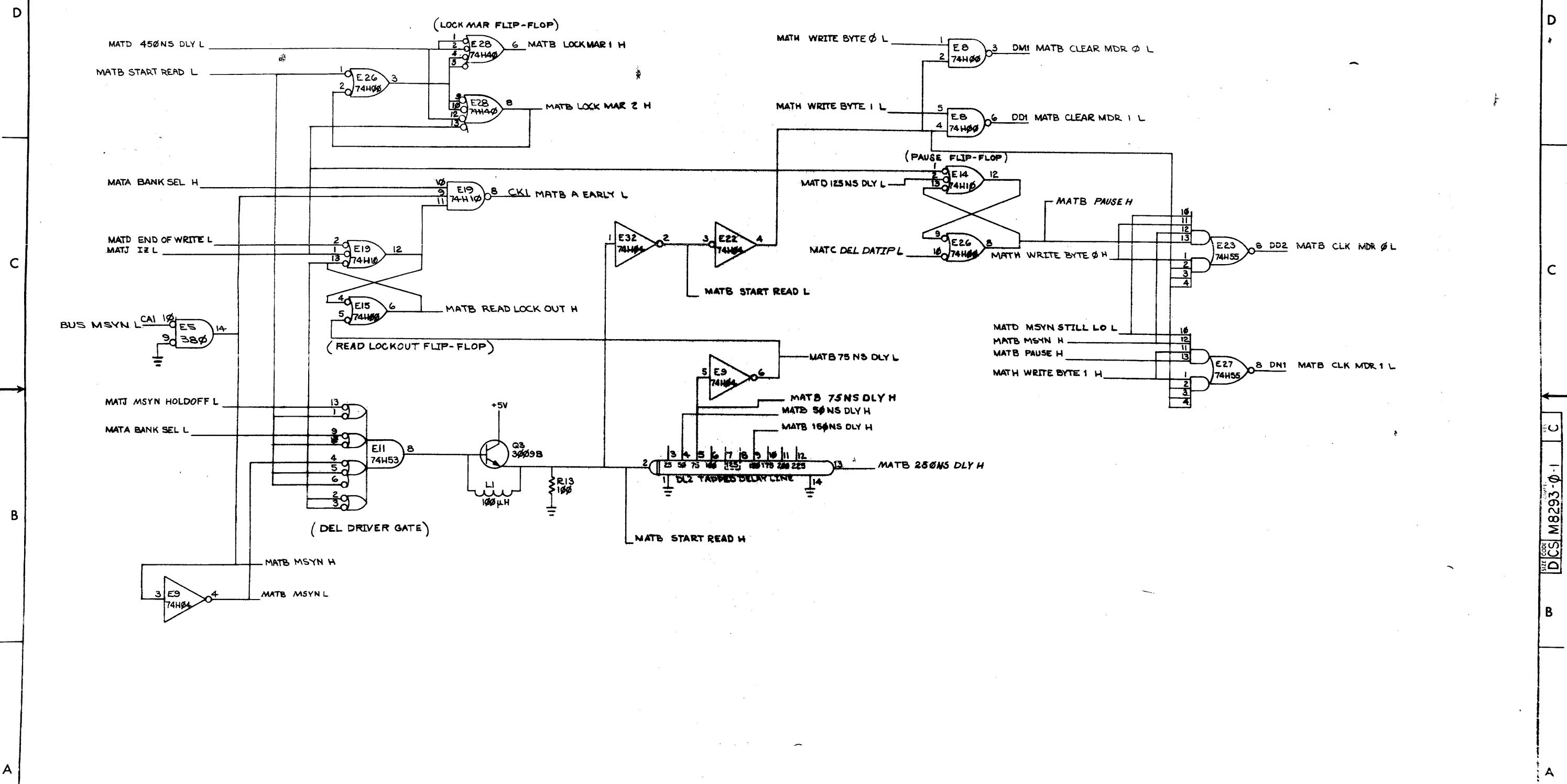
	W3	W4	W5	W6	W7	
420000 (68K)	0	0	0	0	1	517776
440000 (72K)	0	0	0	1	1	537776
460000 (76K)	1	0	0	1	1	557776
500000 (80K)	1	0	1	0	0	577776
520000 (84K)	1	0	1	0	1	617776
540000 (88K)	1	0	1	1	0	637776
560000 (92K)	1	0	1	1	1	657776
600000 (96K)	1	1	0	0	0	677776
620000 (100K)	1	1	0	0	1	717776
640000 (104K)	1	1	0	1	0	737776
660000 (108K)	1	1	0	1	1	757776
700000 (112K)	1	1	1	0	0	777776
720000 (116K)	1	1	1	0	1	797776
740000 (120K)	1	1	1	1	0	797776

DEVICE SELECTION LOGIC

REVISIONS		
CHK	CHANGE NO	REV

DCS M8293-01

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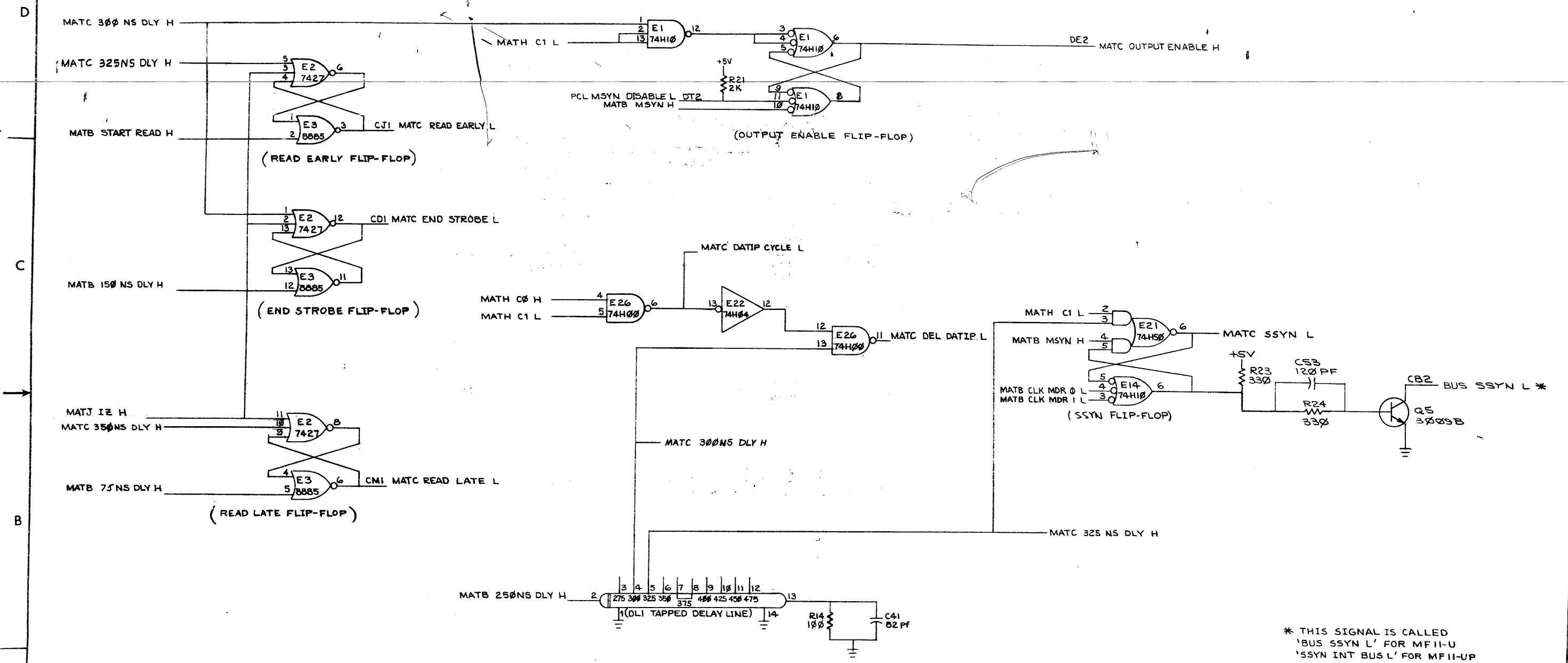


REVISIONS		
CHK	CHANGE NO	REV

READ START TIMING
 MARK UNIBUS TIMING
 DATE: DCS M8293

SIZE CODE: DCS M8293-0-1

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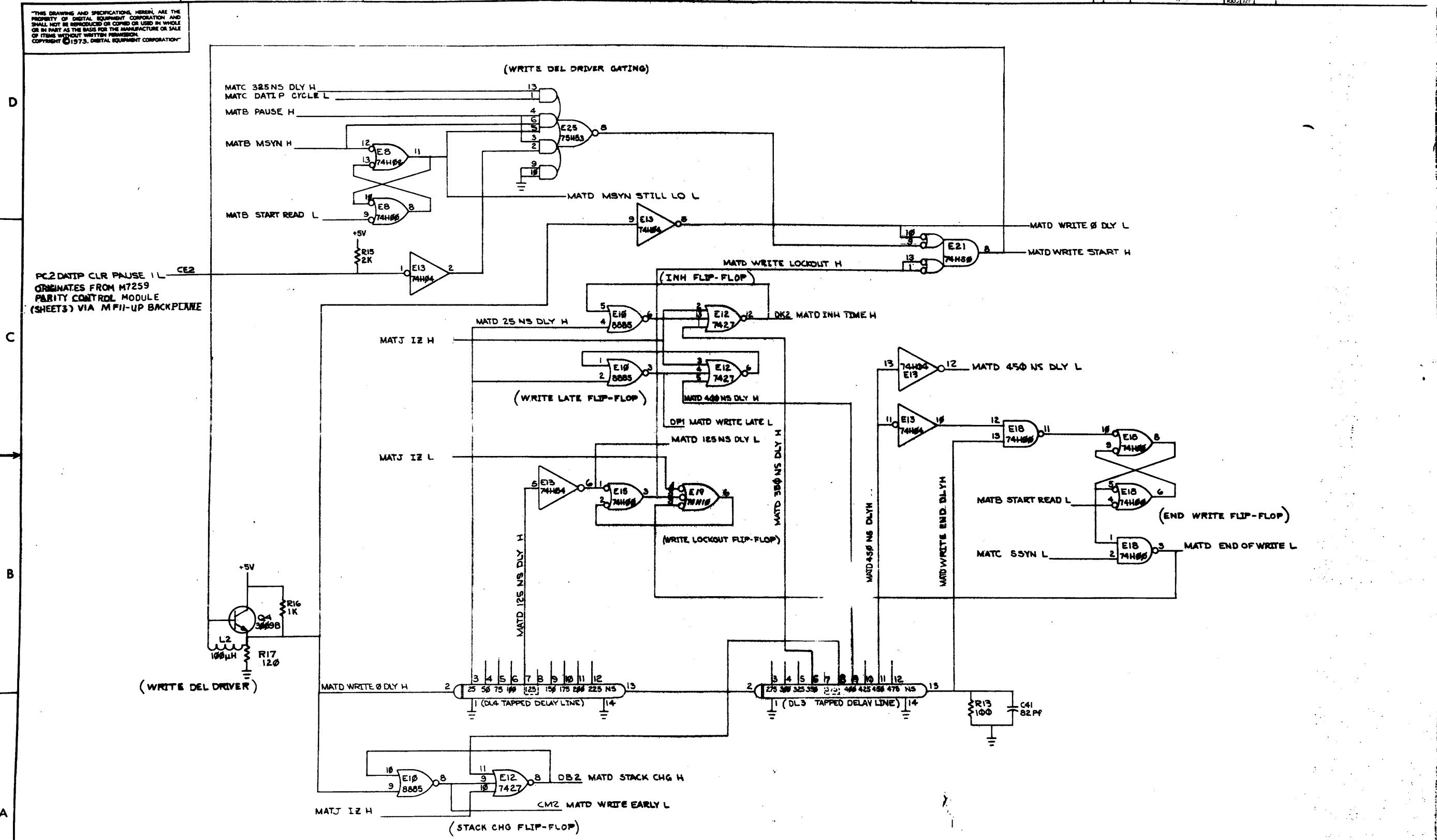


* THIS SIGNAL IS CALLED 'BUS SSYN L' FOR MF11-U 'SSYN INT BUS L' FOR MF11-U

REVISIONS		
CHK	CHANGE NO	REV

TITLE		READ TIMING		SIZE/CODE		NUMBER		REV.	
MATH CLK UNIBUS TIMING (MATC)		D/CS		M8293-0-1		C			
SCALE		SHEET 5 OF 7		DIST					

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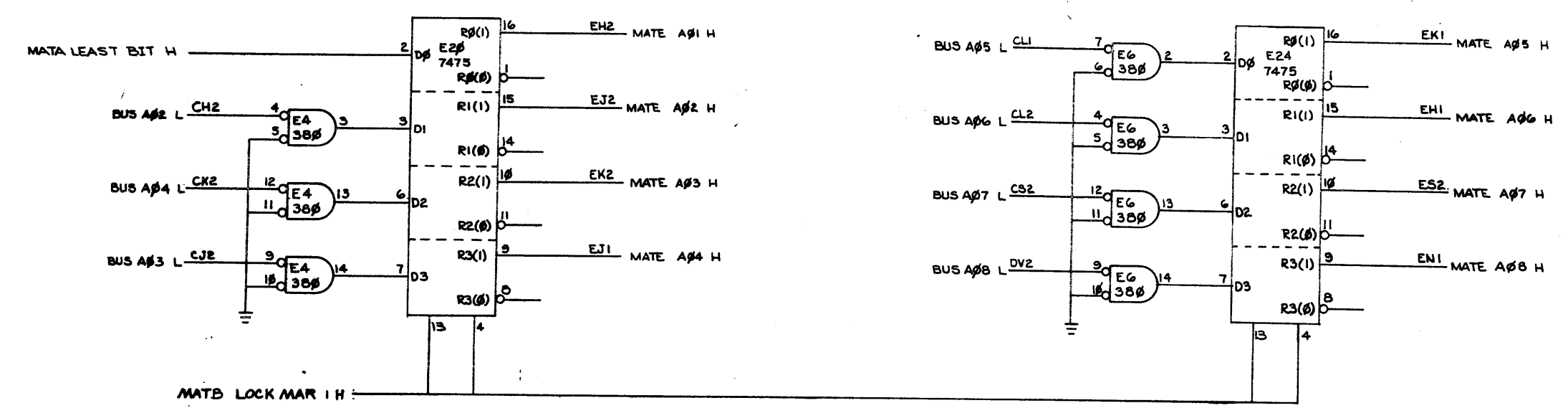


REVISIONS		
CHK	CHANGE NO.	REV.

DCS M8293-0-1

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DCS M8293-0-1 2

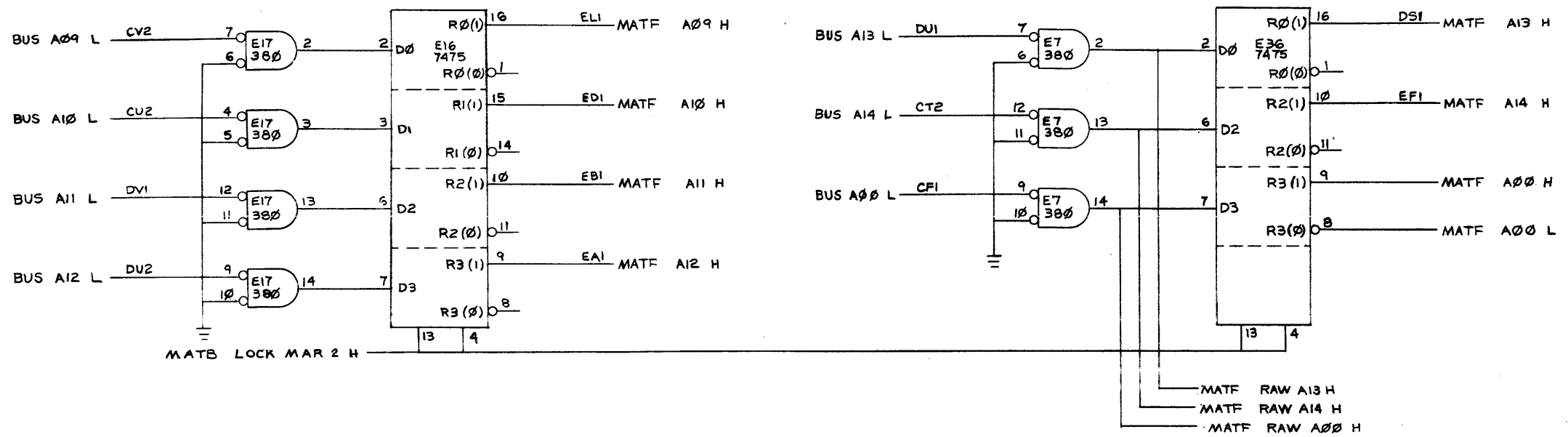


REVISIONS		
CHK	CHANGE NO	REV.

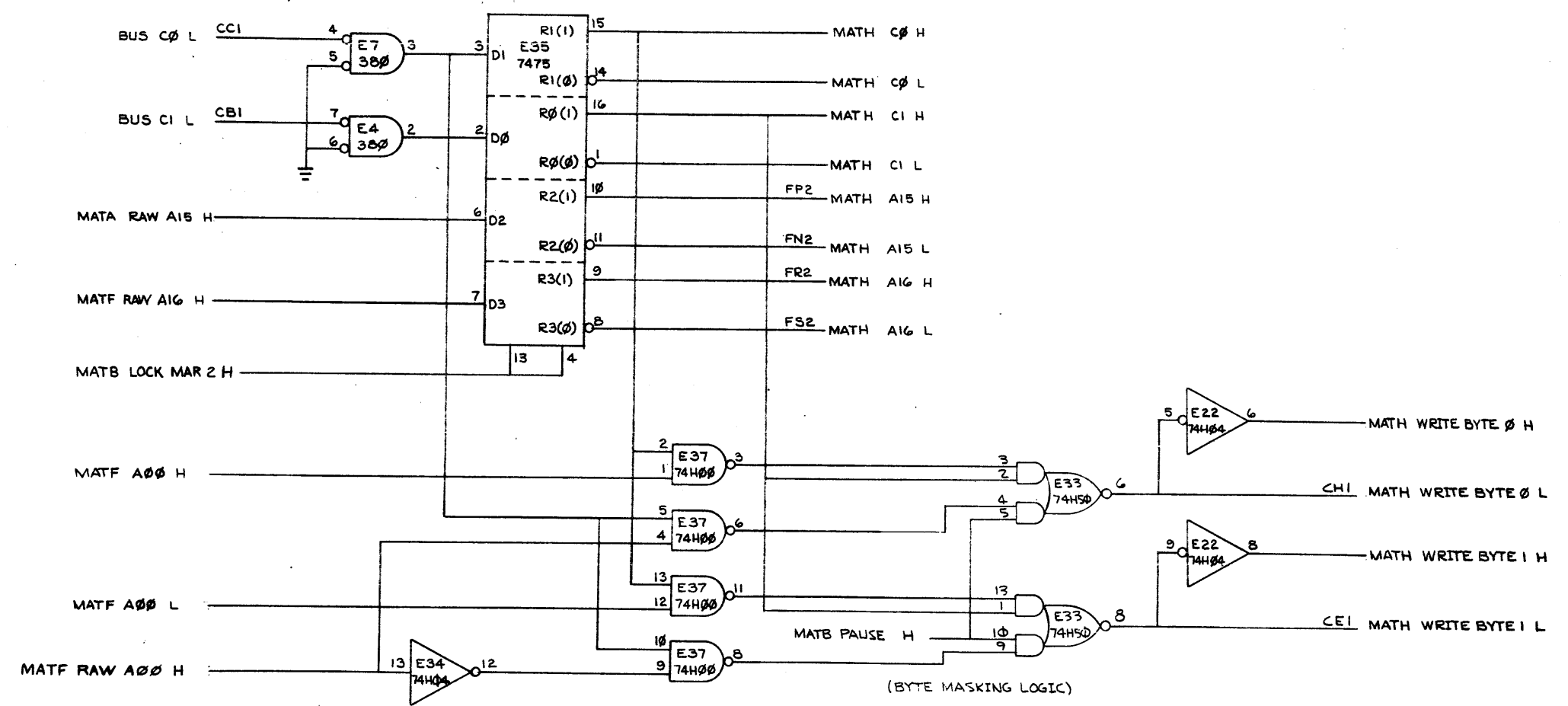
TITLE		SIZE CODE	NUMBER	REV.
A01-A08 LATCHES 16k UNIBUS TIMING (MATE)		DCS	M8293-0-1	C
DATE		PLANT	7 OF 712	DIST

DCS M8293-0-1 C

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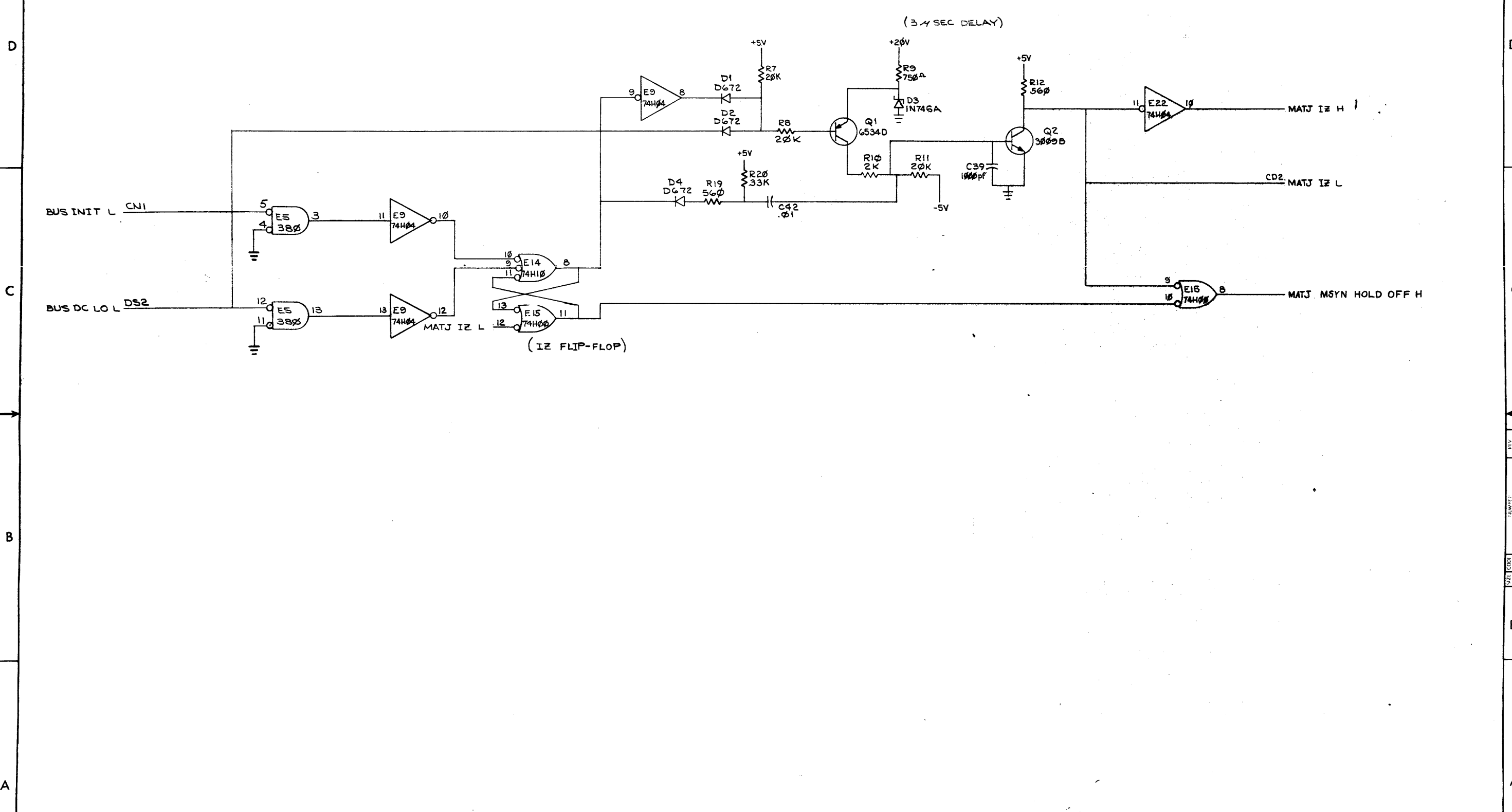
D
C
B
A

D
C
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A

REVISIONS		
CHK	CHANGE NO	REV

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DCS M8293-0-1



REVISIONS		
CHK	CHANGE NO.	REV.

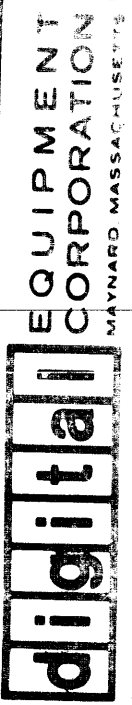
INIT & DCLO INITIALIZING

TITLE	INIT & DCLO INITIALIZING (MATJ)	SIZE CODE	DCS	NUMBER	M8293-0-1	REV.	C
SCALE		SHEET	10	OF	10	DIST.	

PAGE REVISION CONTROL SHEET

SH NO.	C	D	E	F	H	J	PAGE REVISIONS														REMARKS							
1	C	D	E	F	H	J																						
2	C	D	E	F	H	J																						
3	C	D	E	F	H	J																						
4	C	D	E	F	H	J																						
5	C	D	E	F	H	J																						
6	C	D	E	F	H	J																						
ECO NO.	-	1	2	3	4	5																						
ETCH REV.	D	D	D	D	D	D																						
ENG.		<i>D. Amelun</i>	<i>P. Marchaud</i>	<i>P. Marchaud</i>	<i>P. Marchaud</i>	<i>P. Marchaud</i>																						
DATE		7/27/73	8-15-73	11-16-73	12-19-73	3/13/74																						

FIRST USED ON OPTION/MODEL
MF11U & MF11-UP



TITLE
16K X-Y DRIVE

DRN. *B. BARENTINE*
 DATE 2-8-73
 CHK'D. *M. MARCHAUD*
 DATE 4-4-73
 ENG. *D. Amelun*
 DATE 4/4/73
 PROJ. ENG. *D. Amelun*
 DATE 4/4/73
 PROD. *R. Legend*
 DATE 4/4/73

NEXT HIGHER ASSY.
11

SCALE *1:1*
SHEET 1 OF 6

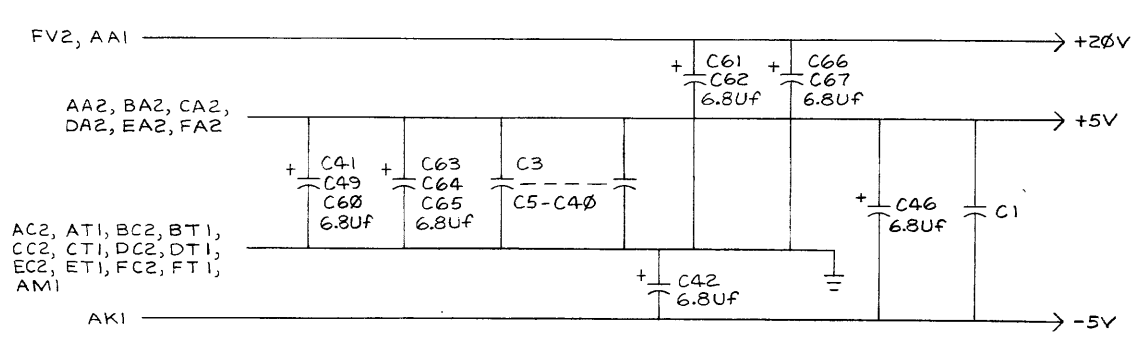
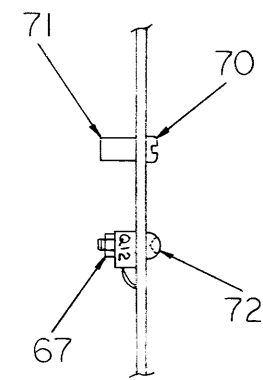
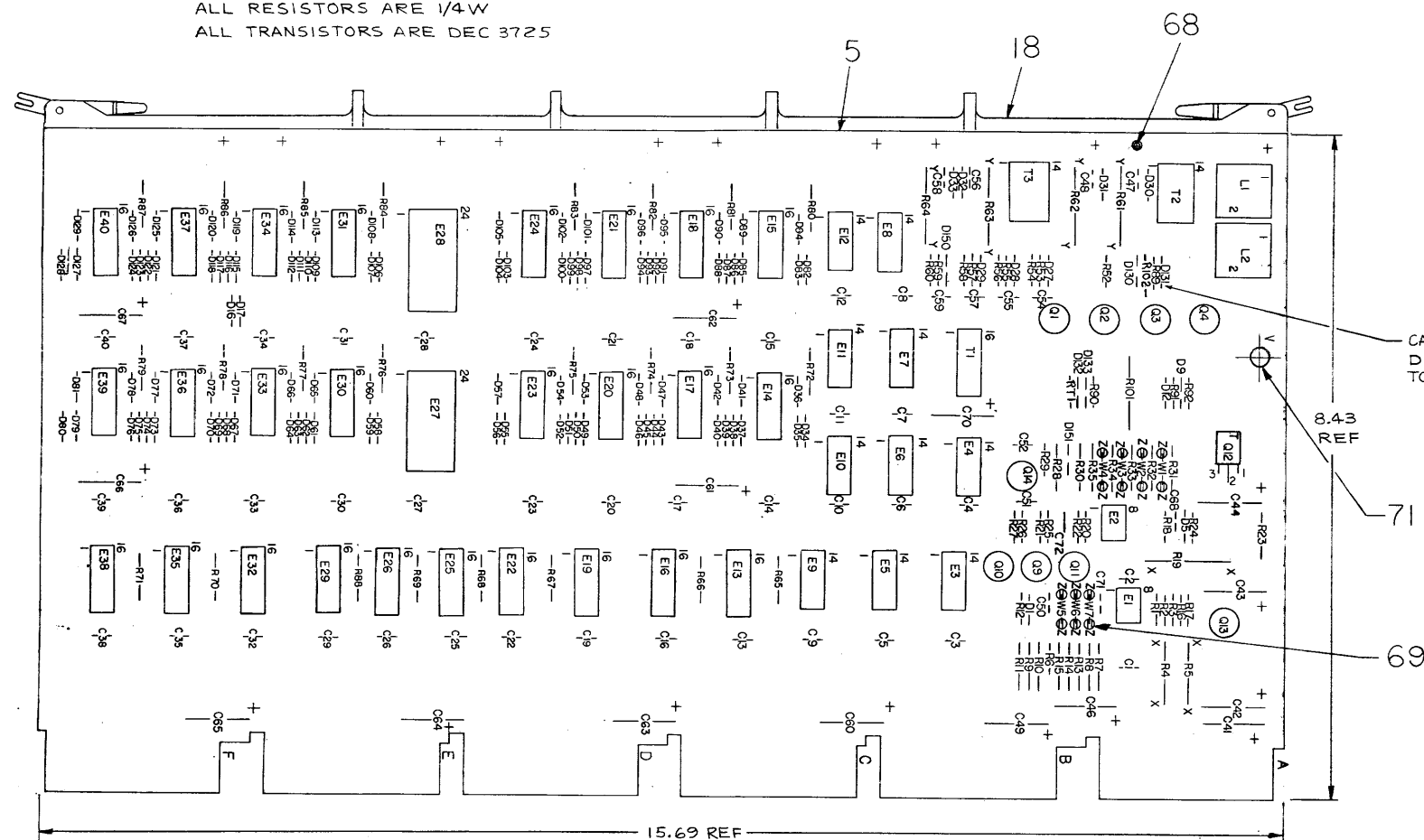
SIZE CODE B CS
 NUMBER G235-0-1
 REV. J

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NOTES:

- * INDICATES NOT USED ON MF11-U & MF11-UP (2 PLACES).
- ** 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).
- 1 THERMISTOR LOCATED ON H217 STACK MODULE, 1 ON 6235
- UNLESS OTHERWISE INDICATED;
ALL DIODES ARE D672
ALL CAPACITORS ARE .01 UF
ALL RESISTORS ARE 1/4W
ALL TRANSISTORS ARE DEC 3725



74121	7		
741			
75325		9	16
7442	8	16	
74154	12	24	
IC TYPE	GND	+5V	+20V

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

IC PIN LOCATIONS

BRUNING 40-522 16629
DEC FORM NO. DRD-135A

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
FIRST USED ON OPTION MODEL: MF11-U & MF11-UP				
ETCH BOARD REV: D				
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				
TITLE: 16K X-Y DRIVE				
SIZE CODE: DCS NUMBER: G235-0-1 REV: J				
SCALE: SHEET 2 OF 2				

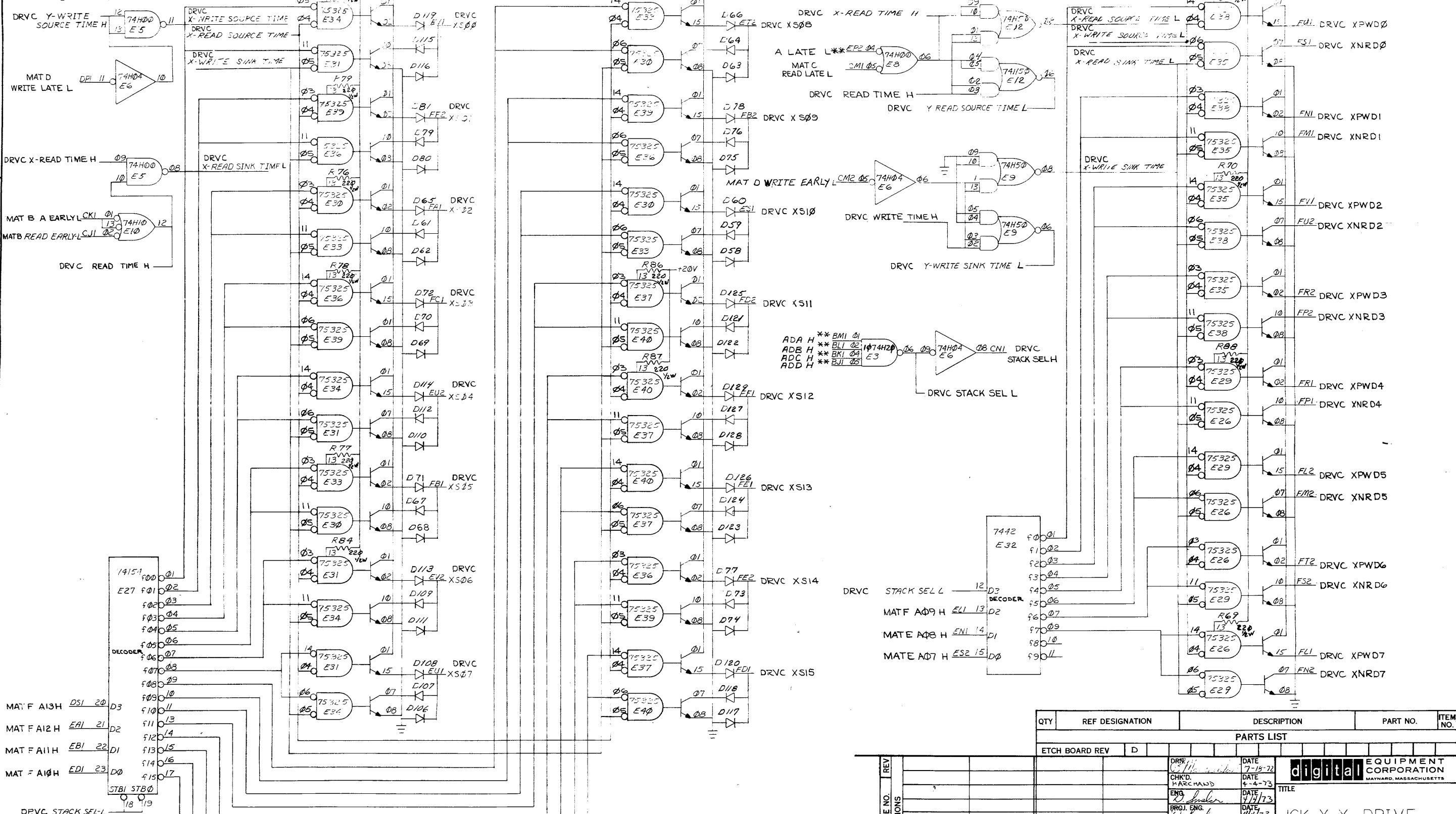
REV	CHANGE NO.	REVISIONS

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

SEMICONDUCTOR CONVERSION CHART

REV: J
ITEM NO.:
NUMBER: G235-0-1
SITE CODE: DCS

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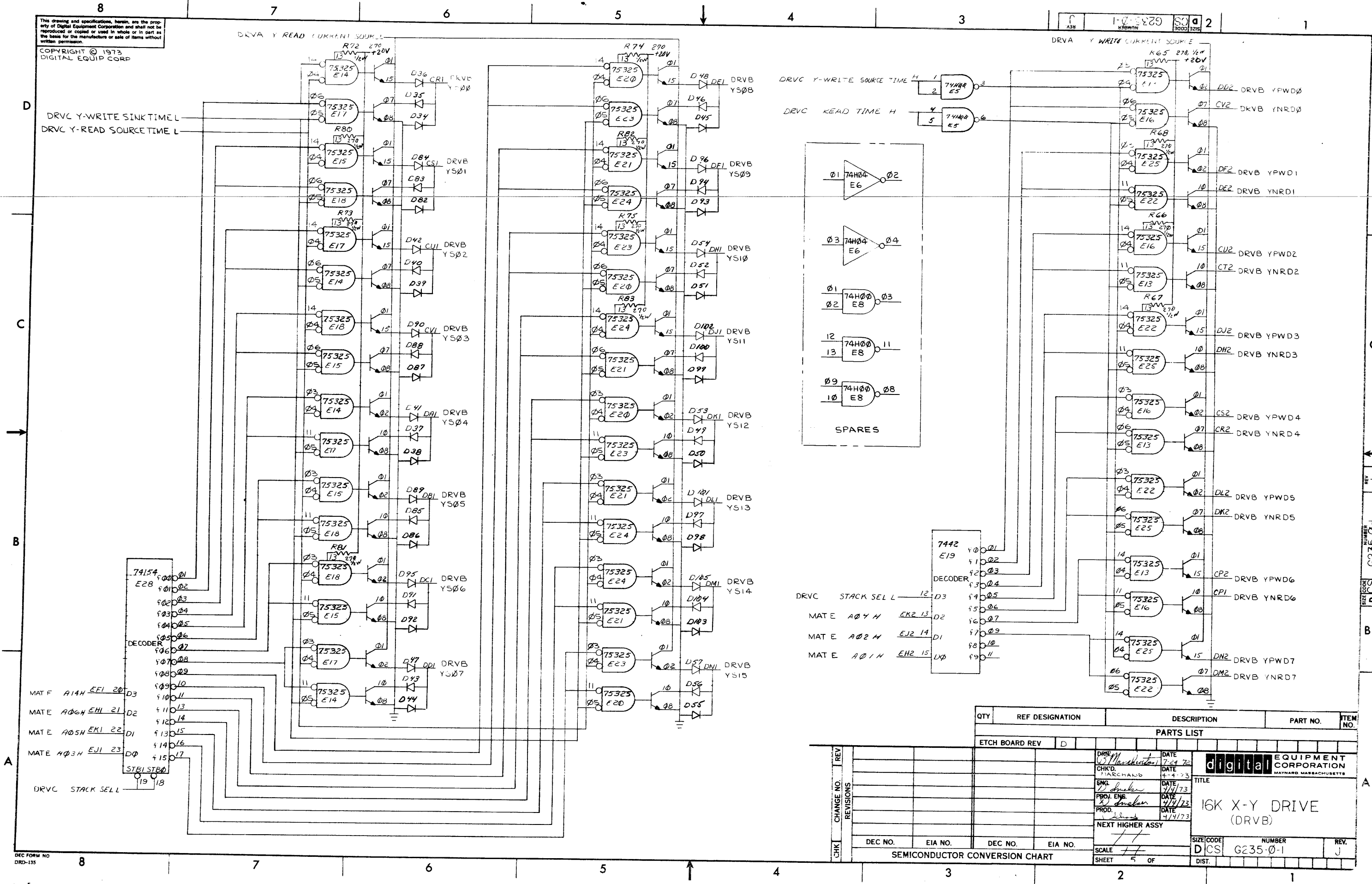


QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV D				
DRV	DATE	digital EQUIPMENT CORPORATION MATNARD, MASSACHUSETTS TITLE 16K X-Y DRIVE (DRVC) SIZE CODE D NUMBER 6235-0-1 REV. J		
CHK'D.	DATE			
ENG.	DATE			
PROJ. ENG.	DATE			
PROD.	DATE			
NEXT HIGHER ASSY	DATE			
DEC NO.	EIA NO.	DEC NO.	EIA NO.	SCALE
SEMICONDUCTOR CONVERSION CHART				SHEET 4 OF

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1-0-5229 SO 2



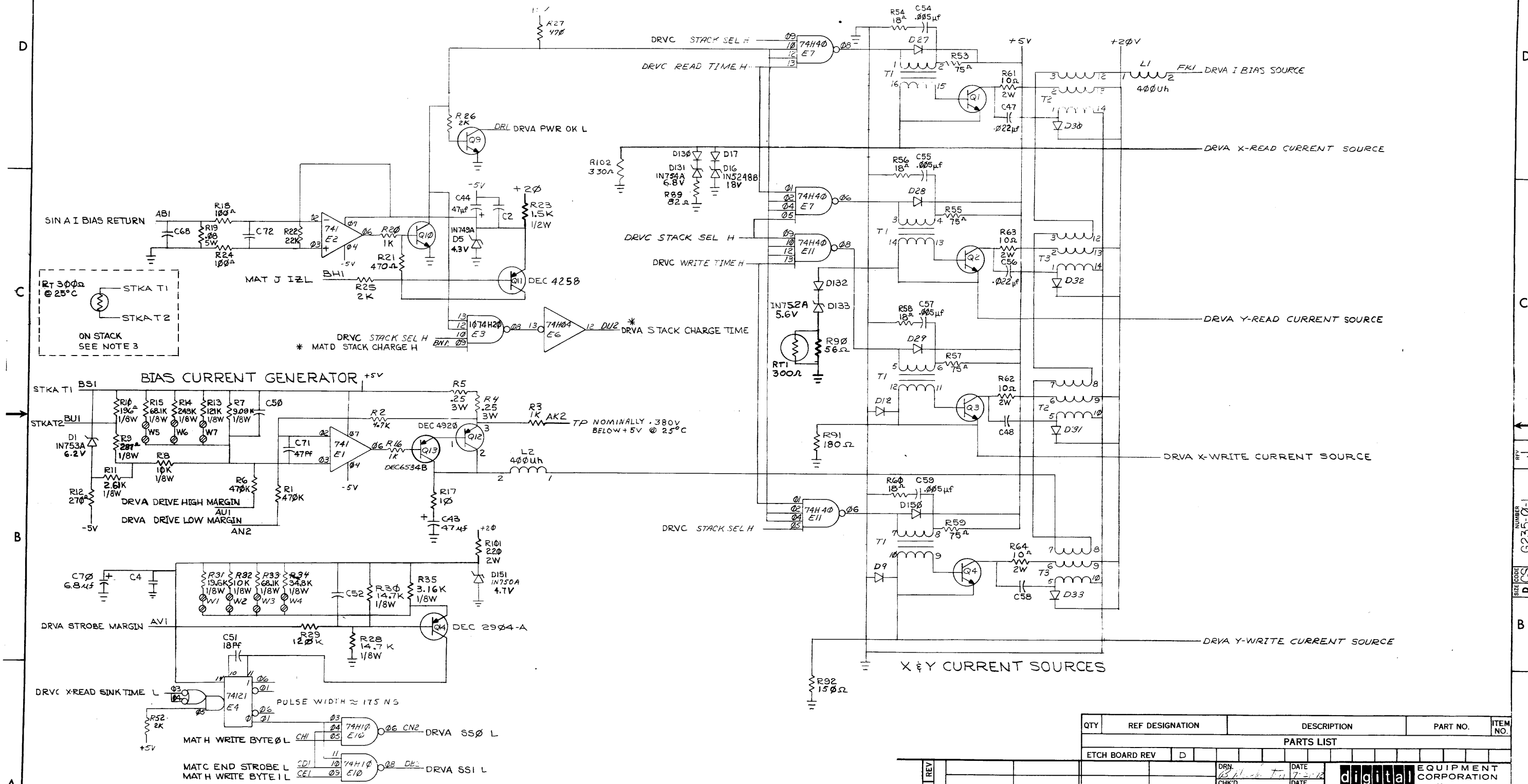
DEC FORM NO DRD-135

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
	ETCH BOARD REV	D		
REV	CHANGE NO.	REVISIONS	DATE	TITLE
			7-22-72	16K X-Y DRIVE (DRVB)
			4-4-73	
			4/4/73	
			4/4/73	
			4/4/73	
NEXT HIGHER ASSY				
DEC NO.	EIA NO.	DEC NO.	EIA NO.	REV.
				J
SEMICONDUCTOR CONVERSION CHART				
SCALE	1/1			
SHEET	5	OF		
SIZE CODE		NUMBER		
D CS		G235-0-1		
DIST.				

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

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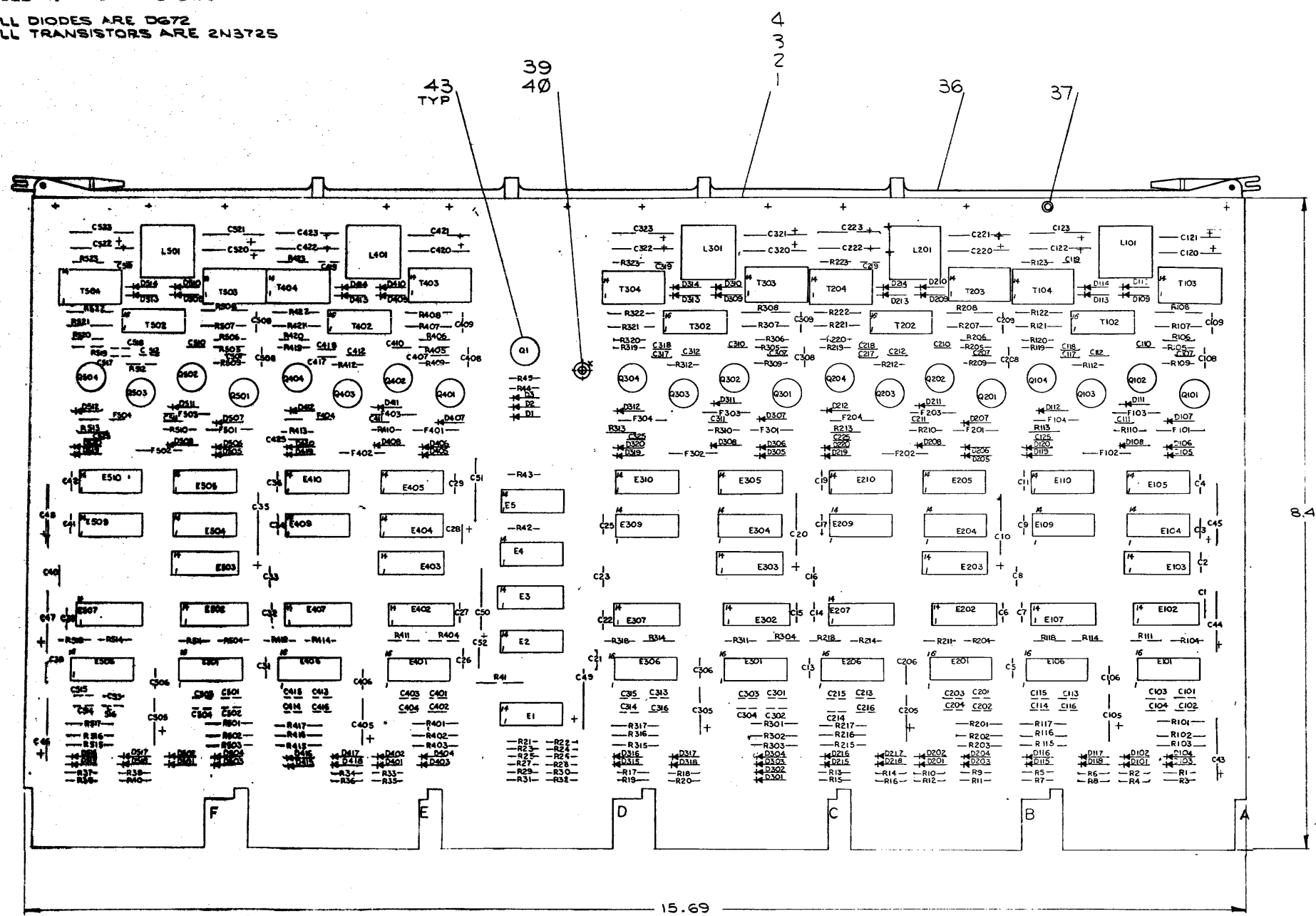
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QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV D				
DRV	DRV	DRV	DATE 7-20-73	 digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE 16K X-Y DRIVE (DRVA) SIZE CODE NUMBER DCS G2350-1 REV. J SCALE SHEET 3 OF 3 DIST.
CHKD.	CHKD.	CHKD.	DATE 9-4-73	
ENG.	ENG.	ENG.	DATE 7/7/73	
PROJ. ENG.	PROJ. ENG.	PROJ. ENG.	DATE 4/1/73	
PROD.	PROD.	PROD.	DATE 4/14/73	
NEXT HIGHER ASSY				
SEMICONDUCTOR CONVERSION CHART				
DEC. NO.	EIA NO.	DEC. NO.	EIA NO.	

- NOTES:** UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE IN OHMS 1/4W
 2. ALL CAPACITANCE IS 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 DG72
 7. ALL TRANSISTORS ARE 2N3725

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IC	TYPE	QTY	REF	DESCRIPTION
IC D.C. 7360		1	8	
IC D.C. 380		1	8	
IC D.C. 7528		9	18	
IC TYPE				GND +5V -5V

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

IC PIN LOCATIONS

REV	CHANGE NO.	DESCRIPTION	DATE	BY
1		FIRST USED ON OPTION MODEL MF 11-U & MF 11-UP	4-3-73	
2		ETCH BOARD REV B	4-15-73	
3			4/15/73	
4			4/15/73	
5			4/15/73	

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
		NEXT HIGHER ASSY		
		DEC NO.	EIA NO.	
		DEC NO.	EIA NO.	

DATE	4-3-73	<p>digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS</p>			
CHK'D	4-15-73				
ENG	4/15/73				
PROJ. ENG.	4/15/73				
PROD.	4/15/73				
TITLE	16 K SENSE/INHIBIT				
SCALE	DCS	NUMBER	114-0-1	REV.	C
SHEET	2	DIST.			

SEMICONDUCTOR CONVERSION CHART

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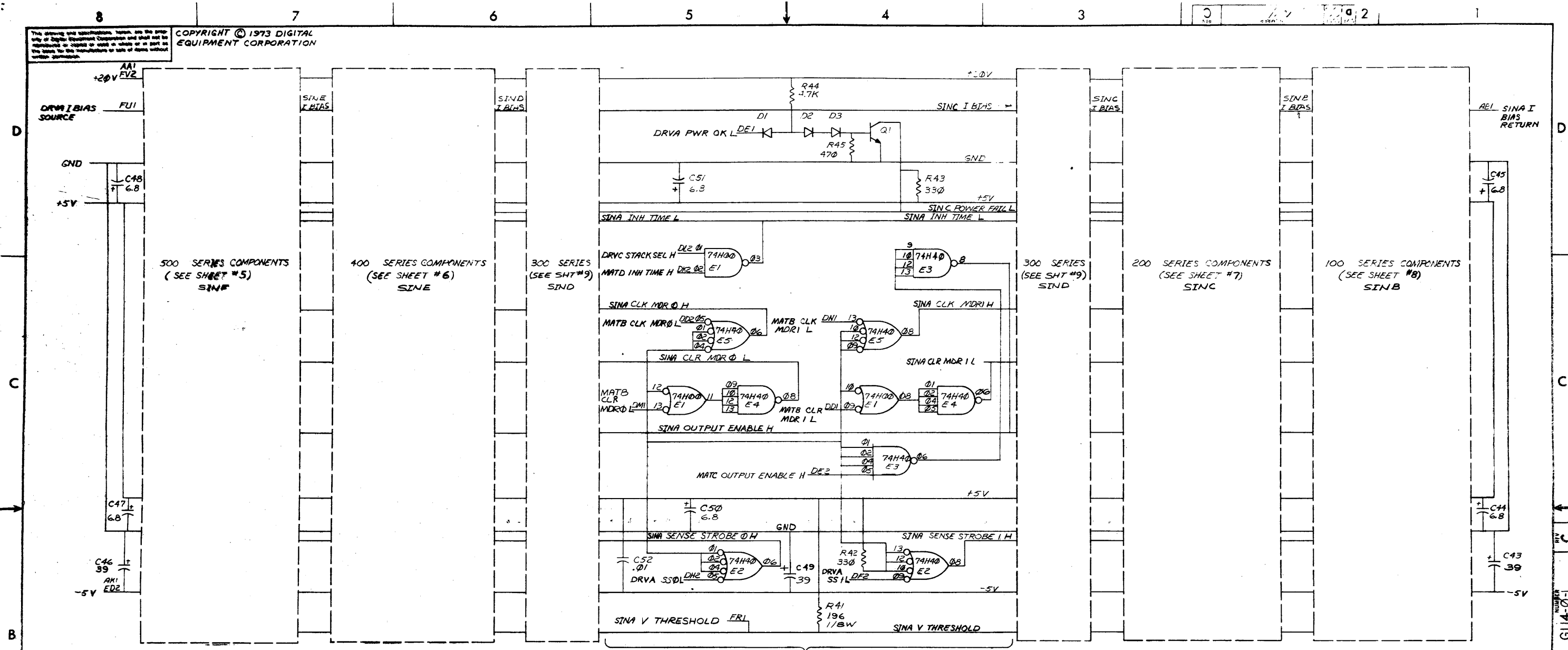
QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	E1	IC DECIC 74H00	1910462	30
14	E2 THRU E5, E105, E110, E205, E210, E305, E310, E405, E410, E505, E510	IC DEC 1074H40	1910469	31
10	E101, E106, E201, E206, E301, E306, E401, E406, E501, E506	IC DEC. 7526 SENSE AMP	1910687	32
5	E107, E207, E307, E407, E507	IC DEC 8881	1909725	33
10	E104, E109, E204, E209, E304, E309, E404, E409, E504, E509	IC DEC 1074H74	1910553	34
5	L101, L201, L301, L401, L501	CHOKE 400 UH	1610963	35
1		HANDLE ASSY	1210711-2	36
12		EYELET GS-4-7	9006732	37
20	F101 THRU F104, F201 THRU F204, F301 THRU F304, F401 THRU F404, F501 THRU F504	FUSE PICO FUSE 3/4A	1210929-3	38
1		STANDOFF 1/4 x 3/8 #6-32 THRU	9008213	39
1		SCREW, NYLON 6/32 x 1/4 LG	9009041-1	40
5	E103, E203, E303, E403, E503	I.C. DEC 10 74H04	1910463	41
4	E102, E202, E502	IC DEC 380	1909485	42
21		TRANSIPAD	9007200	43
1	E302	IC DEC 7380	1910390	44
103	D1, D2, D3, D101 THRU D120, D201 THRU D220, D301 THRU D320, D401 THRU D420, D501 THRU D520	DIODE D672		1105275
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%	1304322	14
1	R41	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, R16, R17, 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%	1307422	23
1	R45	RES 470 1/4W 5%	1300316	24
5	R23, R23, R323, R423, R523	RES 150 1/4W 5%	1300290	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%	1309725	26
21	Q1, Q101 THRU Q104, Q201 THRU Q204, Q301 THRU Q304, Q401 THRU Q404, Q501 THRU Q504	TRANS 2N3725 (T85)	1510353	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 (LIF)	1609996	29

REVISIONS		
CHK	CHANGE NO	REV

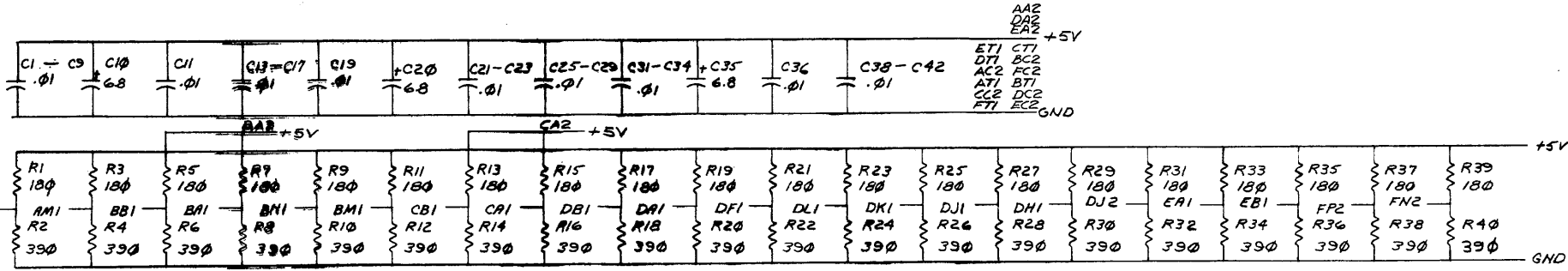
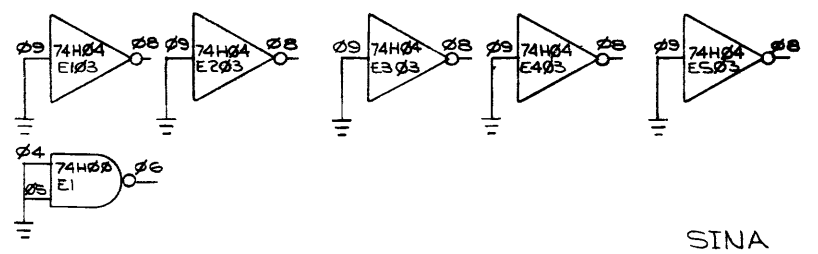
TITLE	SIZE CODE	NUMBER	REV.
16K SENSE/INHIBIT	D CS	G114-0-1	C
SCALE	SHEET 3 OF	DIST	

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SINA

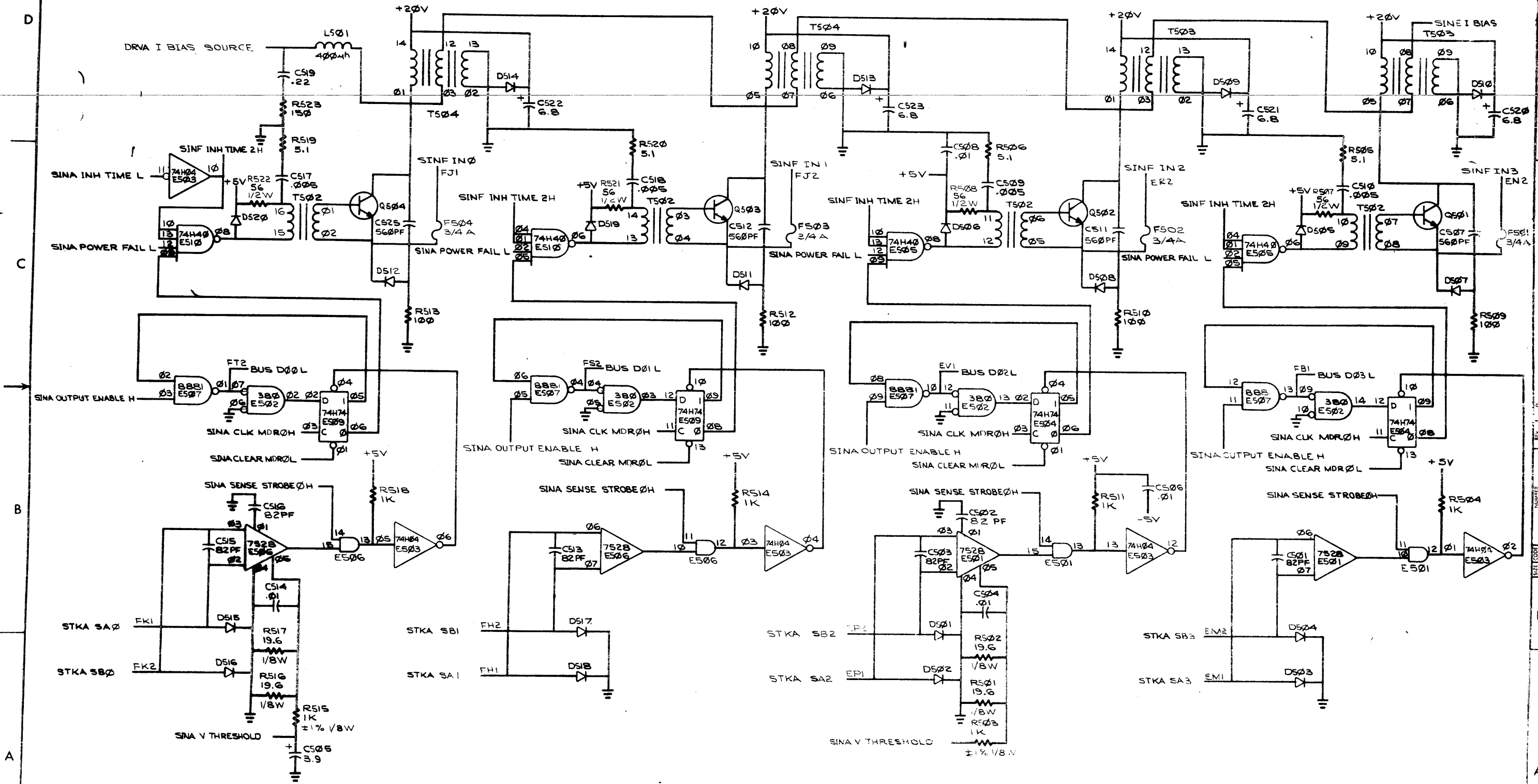


REVISIONS

REV	CHANGE NO

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MF11-U & MF11-UP				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DBN DATE 4-13-73		
DECIMALS	ANGLES	CHK'D DATE 4-13-73		
.XXX - .005	±0° 30'	ENG DATE 4-11-73	TITLE 16K SENSE/INHIBIT (SINA)	
.XX - .02		PROJ. ENG. DATE 4-13-73		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		PROD. DATE 4-13-73		
MATERIAL		NEXT HIGHER ASSY.	SIZE CODE	NUMBER
FINISH		SCALE	DCS	G114-01
SHEET 4 OF		DIST		REV. C

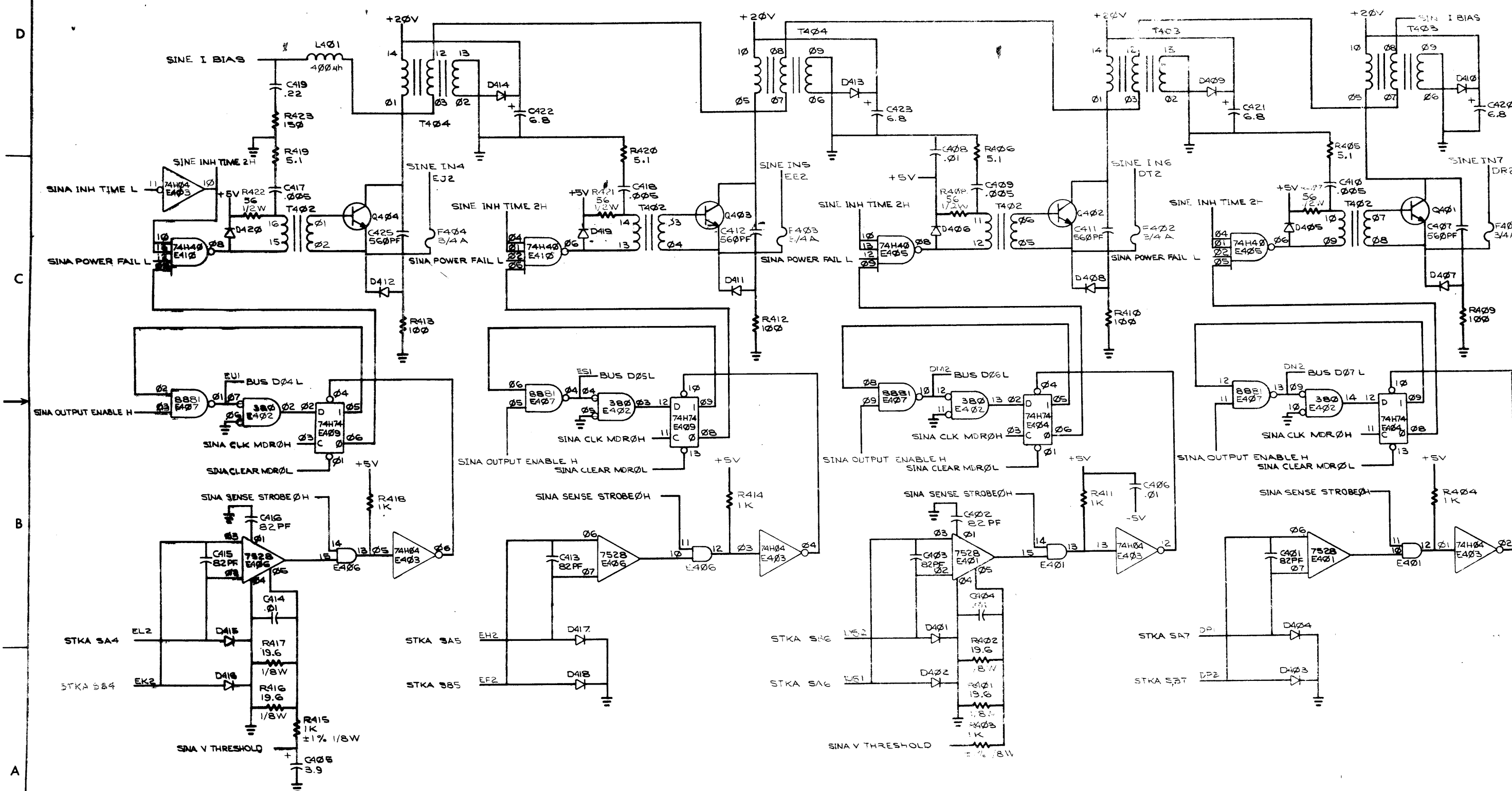
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REVISIONS		
CHK	CHANGE NO	REV

500 SERIES SINE		FILE	SIZE CODE	NUMBER	REV.
10K SENS/INHIBIT		DCS	114-0-1	1	C

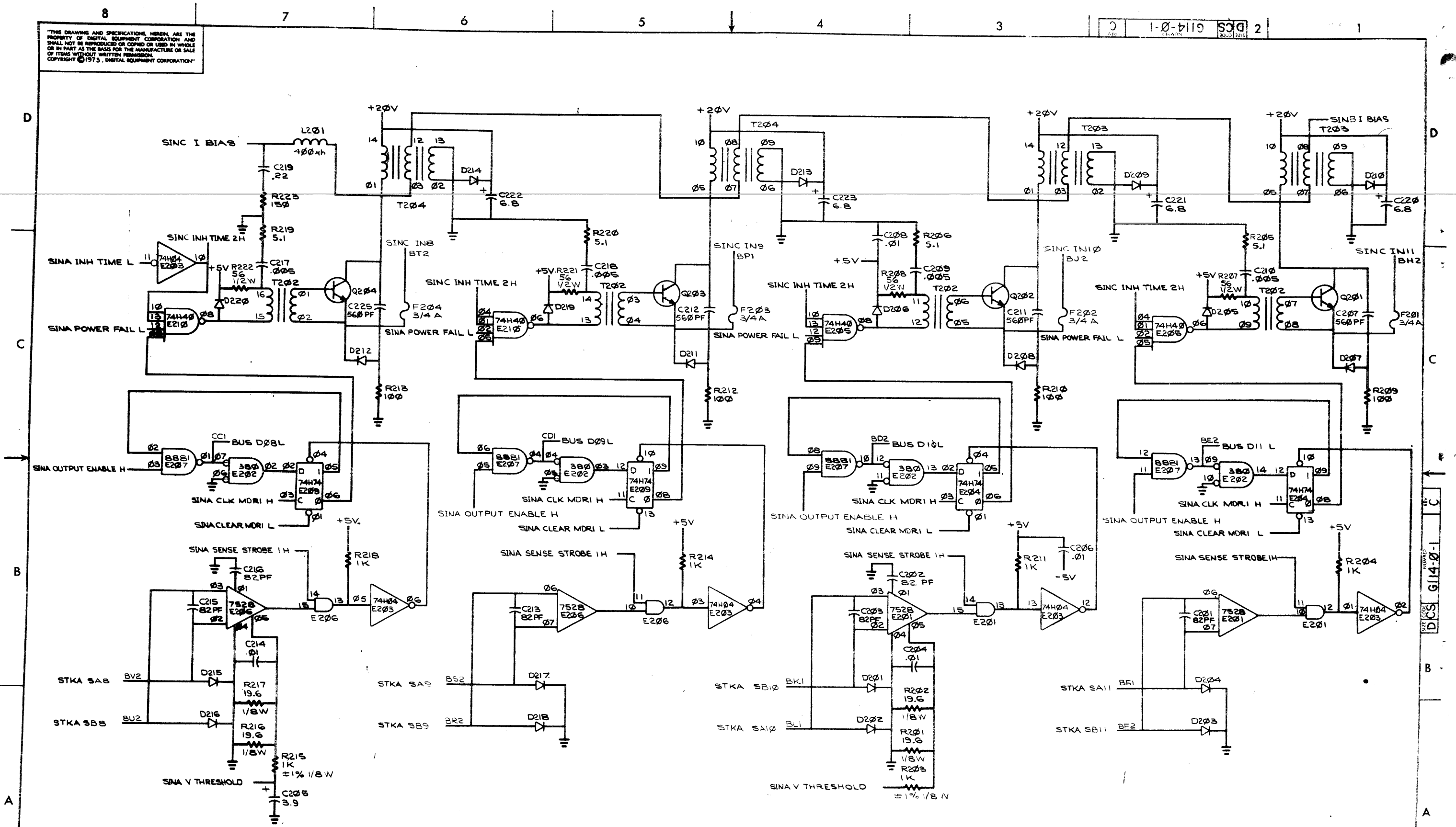
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REVISIONS		
CHK	CHANGE NO.	REV.

77 SERIES SINE		FILE	1-0-4110	DCS	2
SINA SENSE/INHIBIT		DATE	6		

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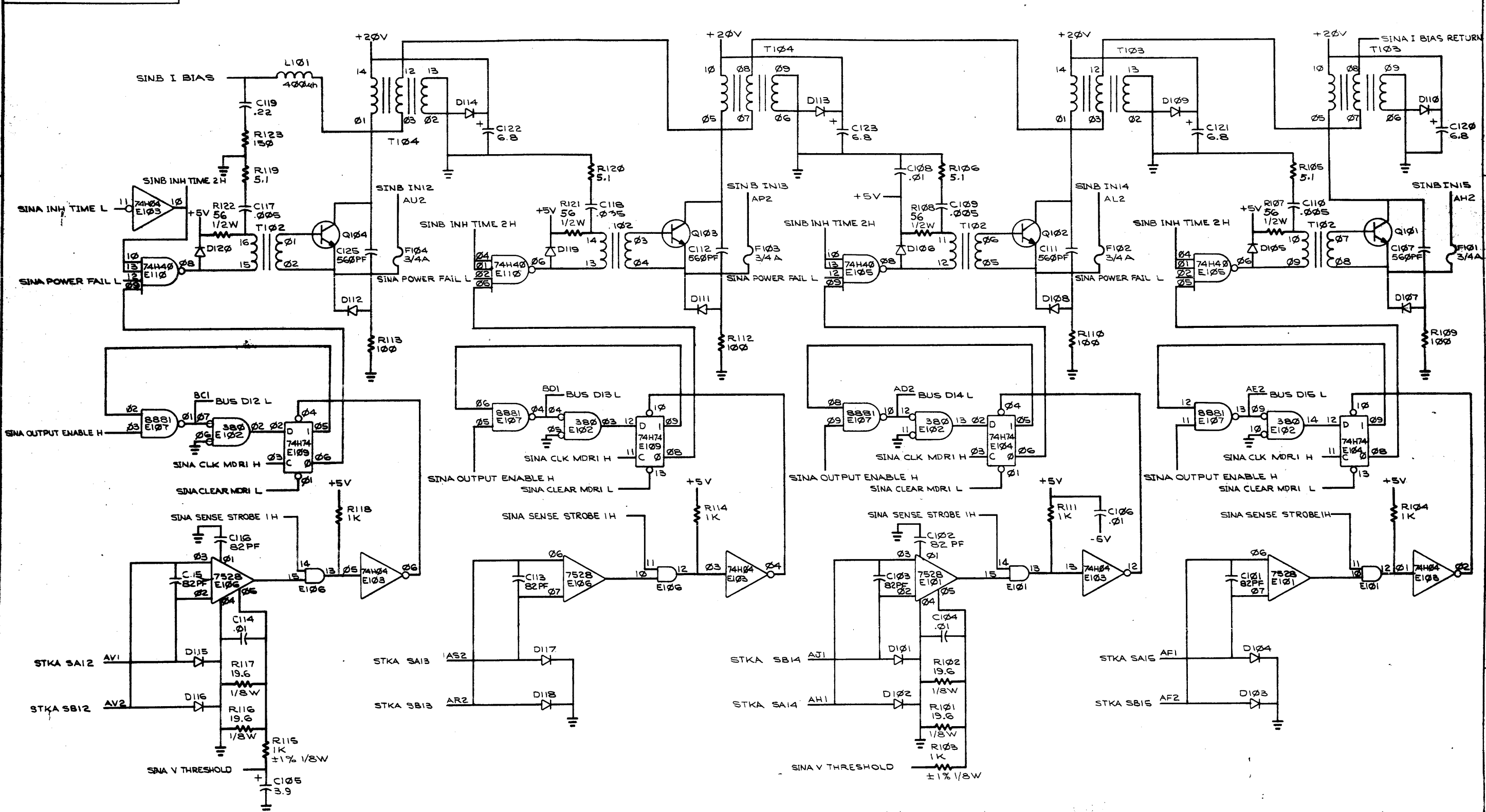


REVISIONS		
CHK	CHANGE NO.	REV.

200 SERIES SINC

TITLE	16K SENSE/INHIBIT	SIZE CODE	DCS	NUMBER	G114-0-1	REV.	C
SCALE		SHEET	2	DIST			

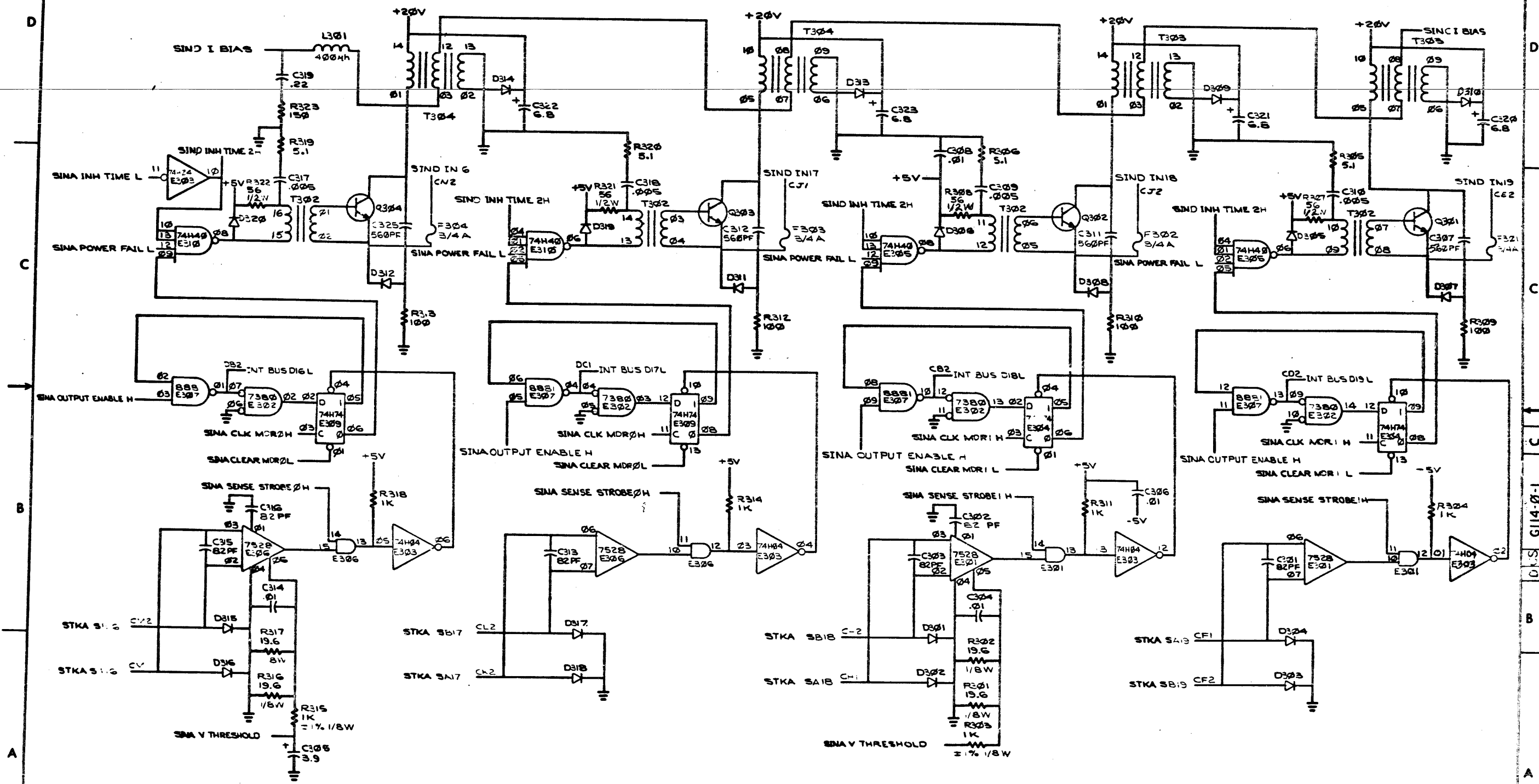
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REVISIONS		
CHK	CHANGE NO.	REV.

100 SERIES SINB

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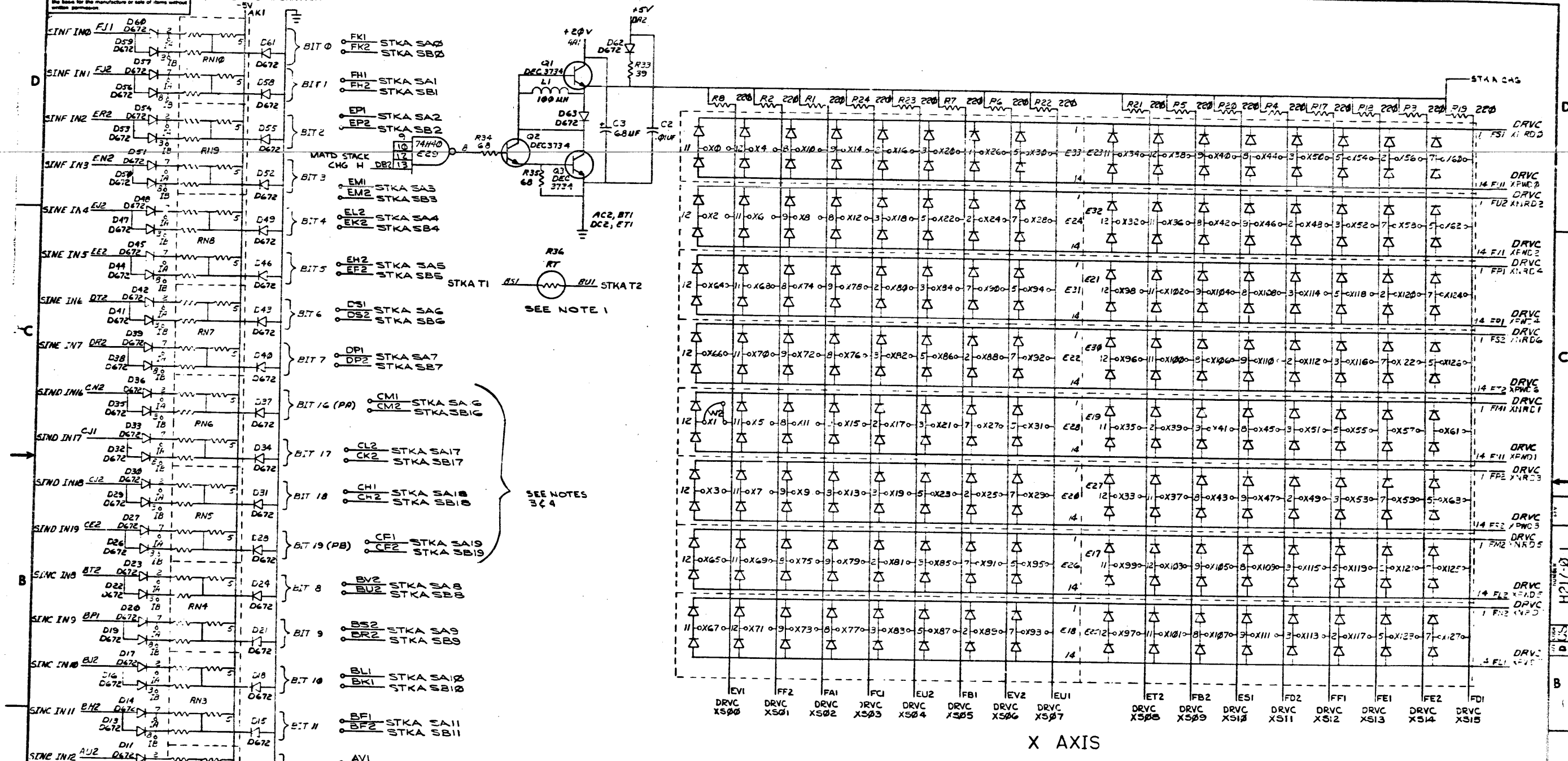


REVISIONS		
CHK	CHANGE NO	REV

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1-0217H 30 2



SEE NOTE 1

SEE NOTES 3 & 4

- 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 MAY BE DELETED: RN5, RN6 D26 THRU D31
 4. FOR H217-B AND H217-C, NO COMPONENTS MAY BE DELETED; AND FOR UNUSED BITS THE FOUR MAGNET WIRE TERMINATION PADS (IA, IB, SA, SB) MUST BE SHORTED TOGETHER.

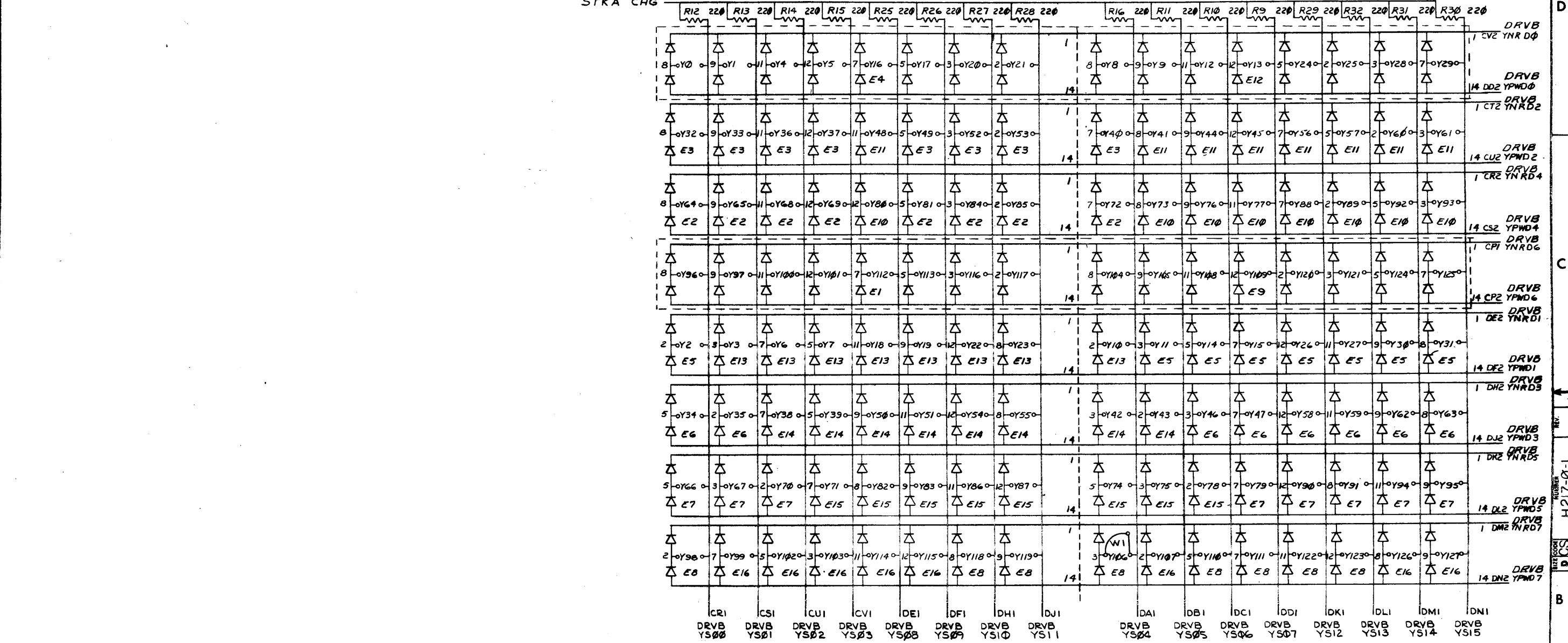
X AXIS

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV E				
DIGITAL EQUIPMENT CORPORATION				
STACK BOARD (STKA)				
H217J				
SEMICONDUCTOR CONVERSION CHART				

DEC FORM NO. 082-115

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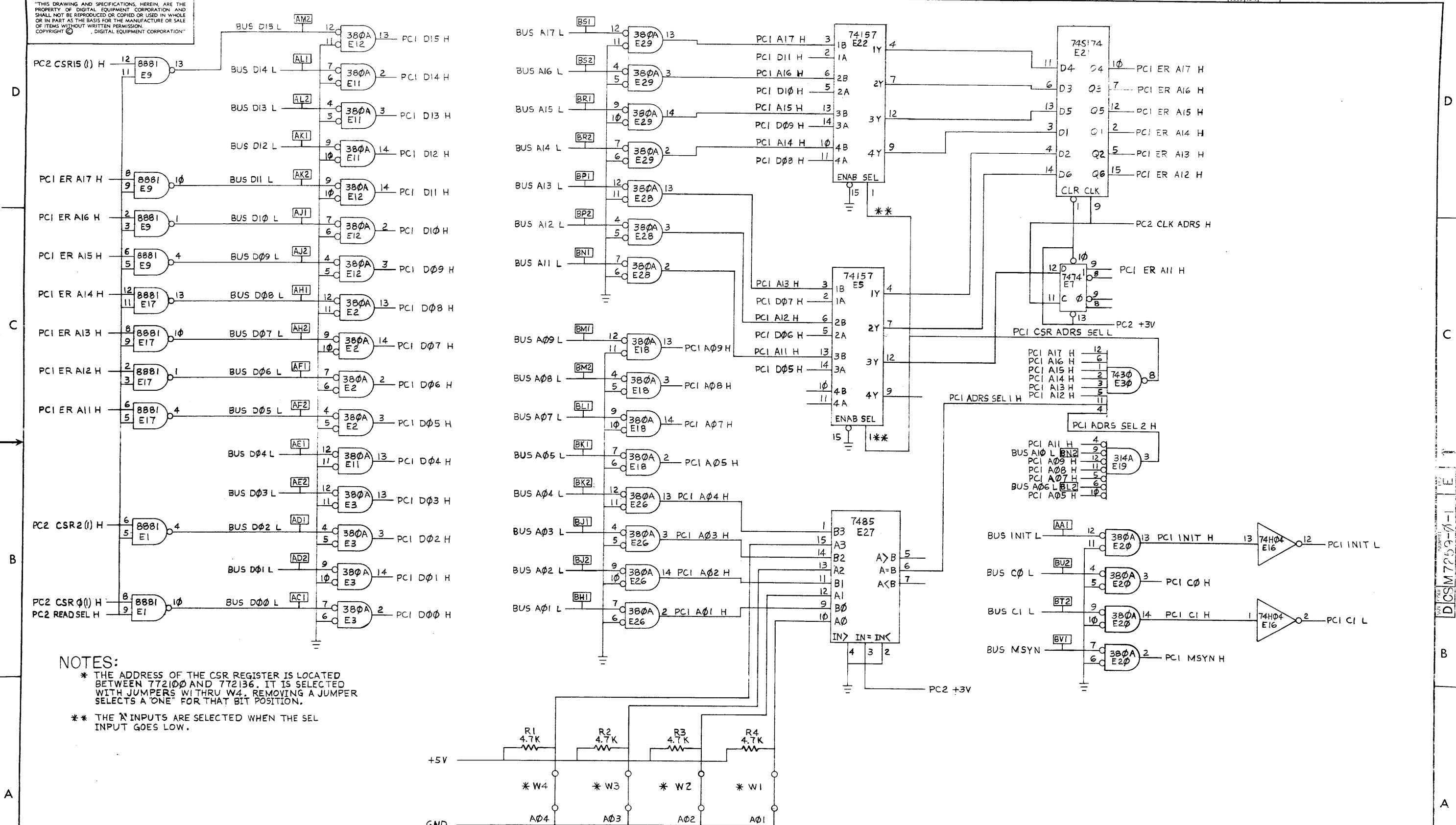
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NOTE: JUMPER W1 IS A CURRENT LOOP FOR TEST USE ONLY

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
ETCH BOARD REV E				
REV	DATE	EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
DESIGNED BY	DATE	TITLE		
CHIEF ENGINEER	DATE	STACK BOARD (STKB)		
PROJECT ENGINEER	DATE	SIZE CODE NUMBER REV.		
PRODUCTION ENGINEER	DATE	DCSI H217-0-1		
NEXT HIGHER ASSY		SCALE		
		SHEET 3 OF 3		
DEC NO.		EIA NO.		DIST.
SEMICONDUCTOR CONVERSION CHART				

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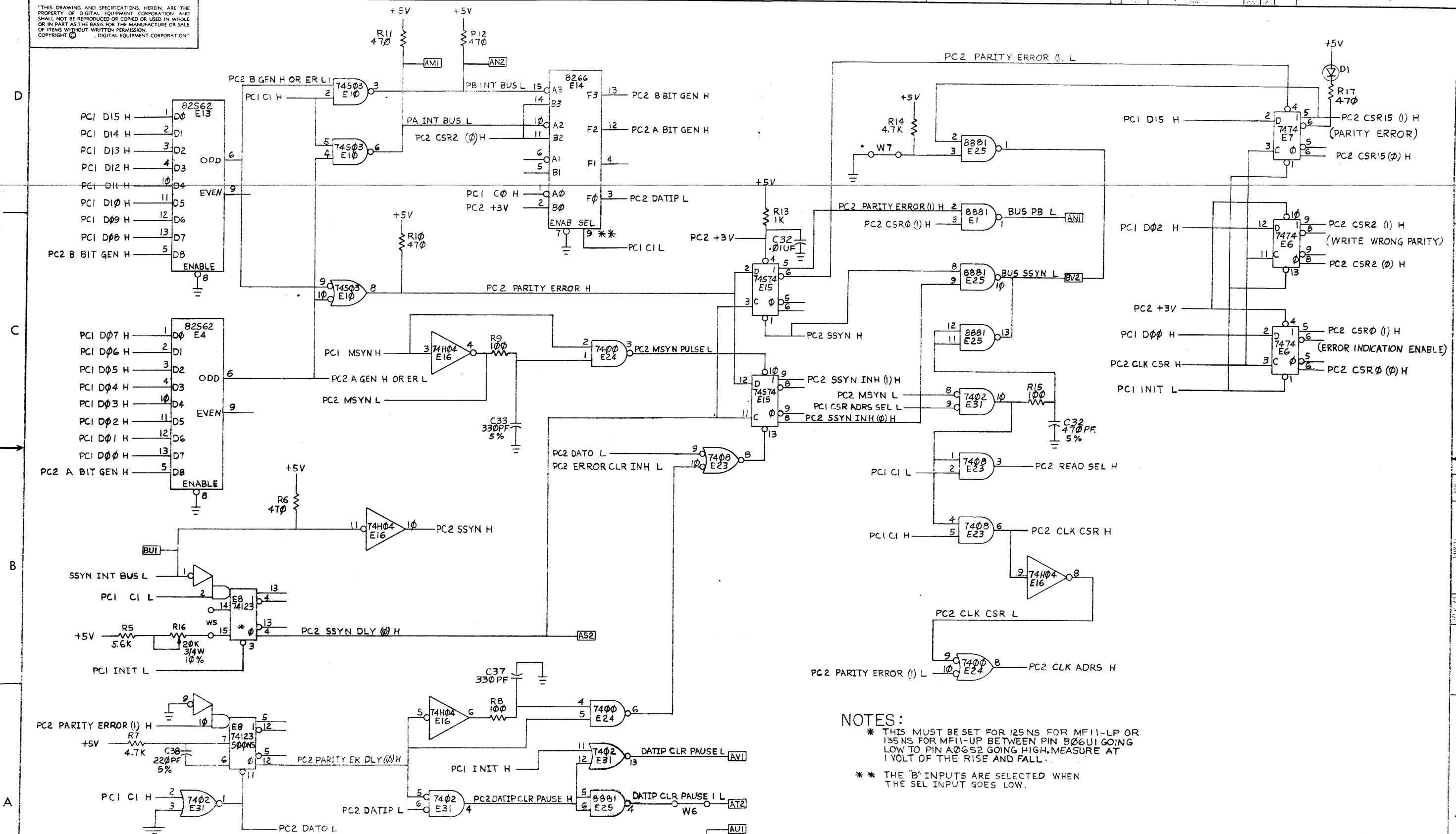
NOTES:

- * THE ADDRESS OF THE CSR REGISTER IS LOCATED BETWEEN 772100 AND 772136. IT IS SELECTED WITH JUMPERS WITHRU W4. REMOVING A JUMPER SELECTS A "ONE" FOR THAT BIT POSITION.
- ** THE 'N' INPUTS ARE SELECTED WHEN THE SEL INPUT GOES LOW.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PARITY CONTROL-MFII-LP (PCI)	SIZE CODE	NUMBER	REV.
SCALE	NONE	SHEET	2 OF 3	DIST.
ECSM7259-0-1		E		

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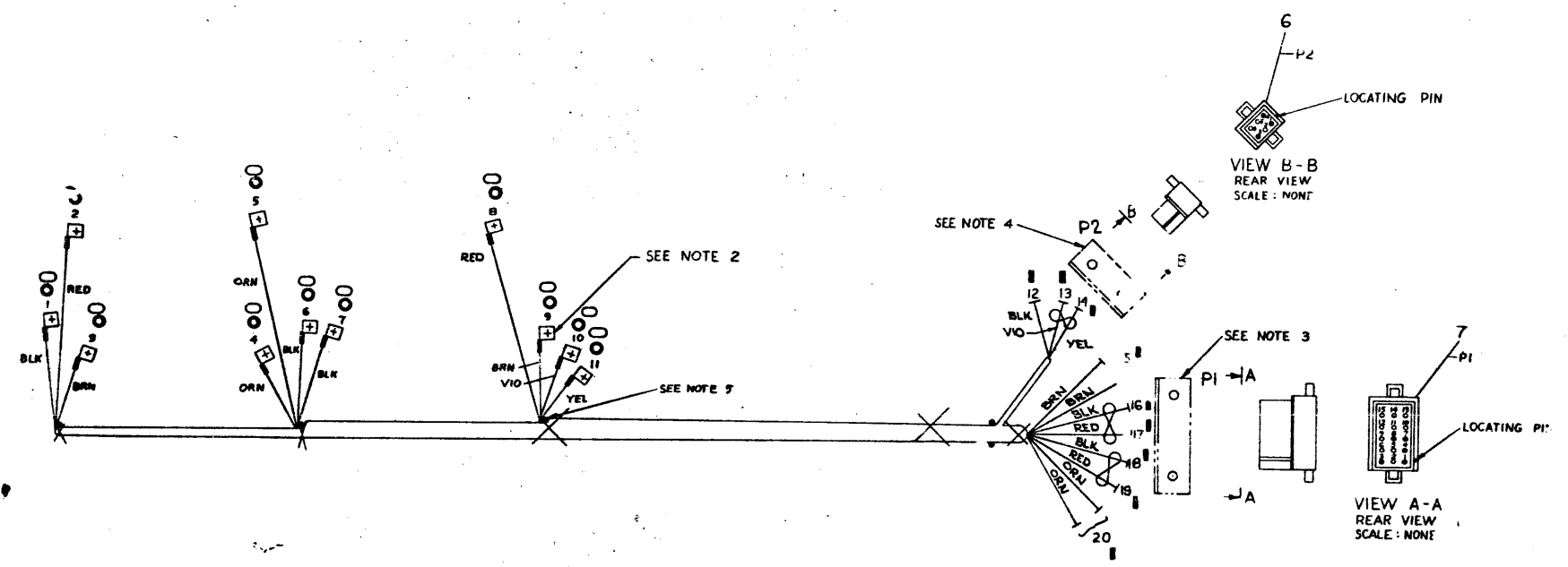


NOTES:
 * THIS MUST BE SET FOR 125 NS FOR MFII-LP OR 135 NS FOR MFII-UP BETWEEN PIN B06U1 GOING LOW TO PIN A06S2 GOING HIGH. MEASURE AT 1 VOLT OF THE RISE AND FALL.
 ** THE 'B' INPUTS ARE SELECTED WHEN THE SEL INPUT GOES LOW.

REVISIONS		
CHK	CHANGE NO	REV

ITEM NO.	DESCRIPTION	FROM				TO			
		AWG	COLOR	POINT	CONNECTION TERM	POINT	CONNECTION TERM	SIGNAL	
1	14 BLK	1		9,11	16	PI-7	8	GND	
1	TWP RED	2			17	PI-4		+5V	
3	18 BRN	3			15	PI-14		-5V	
2	18 BRN	9							
2	18 ORN	4			20	PI-3		+20	
4	18 BLK	6			12	P2-1		LO GND	
1	14 BLK	7			18	PI-8		GND	
1	TWP RED	8			19	PI-1		+5V	
5	18 VIO	10			13	P2-3		DC LO	
5	TWP YEL	11		9,11	14	P2-4	8	AC LO	

- NOTES:
- USE TIE WRAPS (X) ITEM #10 APPROXIMATELY EVERY THREE (3) PINS WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
 - ATTACH MALE FASTON DEC # (9008219-0) WITH #4 WOOD SCREWS (11 PLACES).
 - USE CONN. BRKT. #C-MD-9305761-H15-0, MOUNT WITH 6 WOOD SCREWS USE MATING CONN. #1209350-15.
 - USE CONN. BRKT. #C-MD-9305761-H16-0, MOUNT WITH 6 WOOD SCREWS USE MATING CONN. #1209350-06.
 - DOT (•) INDICATES MARK LOCATIONS FOR ASSEMBLY USE ONLY COVER NAILS WITH WINK TUBING TO PREVENT CUTTING HARNESS.



SCALE
0 IN 6 IN 12 IN

DO NOT REDUCE
DO NOT BUILD FROM REDUCED PRINT

REF. DESIGNATION	SYM	QTY	DESCRIPTION	PART NO.	UNIT
	○		W/TUBING, SHRINKABLE 3/16 DIA	9107305-02	11
	X		W/TIE WRAPS	9007031	10
	○	11	90° FAST ON TABS	9009262-0	9
	■	9	PIN, MRLE	11209378-01	7
P1		1	HOUSING, 9 PIN	1209351-15	1
P2		1	HOUSING, 6 PIN	1209351-06	1
			W/WIRE #18 RWG TWP/YEL/VIO	9107430-47	5
			W/WIRE #18 RWG BLK	9107360-00	4
			W/WIRE #18 RWG BRN	9107360-11	3
			W/WIRE #18 RWG ORN	9107360-23	2
			W/WIRE #14 RWG TWP BLK/RED	9107460-02	1

FIRST USED ON QTY/NO: 11/45

UNLESS OTHERWISE SPECIFIED

PRODUCTION IN QUANTITY

TOLERANCES

FINISH

SEE PARTS LIST

DATE: 11/73

BY: [Signature]

REVISION: 1

DESCRIPTION: OPTION HARNESS MFI1-U

PART NO.: 7009535-0-0

SCALE: 1/1

SHEET: 1 OF 1

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				QUANTITY / VARIATION															
PARTS LIST				MFI1-U	MM11-U	MFI1-UP	MM11-UP												
MADE BY	DATE	CHECKED	DATE																
W. MAJOR	5/11/73	W. MAJOR	5/11/73	1															
ENG	DATE	PROD	DATE	ISSUED SECT.															
D. Amaker	5/29/73	R. DeLoach	6/13/73	1															
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION																	
1	D-CS-G114-0-1	16K SENSE INHIBIT		1	1	1	1												
2	D-CS-G235-0-1	16K X-Y DRIVE		1	1	1	1												
3	D-CS-M8293-0-1	16K UNIBUS TIMING		1	1	1	1												
4	D-AD-7009295-1	BACK PLANE ASSY		1	-	-	-												
5	D-CS-H217-D-1	MEMORY STACK (16K X 16)		1	1	-	-												
6	D-CS-H217-C-1	MEMORY STACK (16K X 18)		-	-	1	1												
7	D-AD-7009295-2	BACK PLANE ASSY		-	-	1	-												
REF	D-MU-MF11-U-MU	MODULE UTILIZATION																	
8	D-CS-M7259-0-1	Parity(SAME AS MF11-LP)		-	-	1	-												
9	E-IA-7009535-0-0	OPTION HARNESS		1	-	1	-												
TITLE 16K SENSE MEMORY				ASSY NO. NONE		SIZE CODE A PL		NUMBER MF11-U-0				REV. A		ECO NO. MFIU-00001					
SHEET 1 OF 1				DIST.															

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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 <i>P. Durant</i>	APPD <i>J. Shaw</i> 12-5-73	SIZE A	CODE SP	NUMBER MF11-U-3	REV
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DEC FORM NO. DRA 107A

ENGINEERING SPECIFICATION



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 Keysheets (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)
 - 2.1.7 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 2 passes/MF11-U/UP (MF11-UP Memory Only)

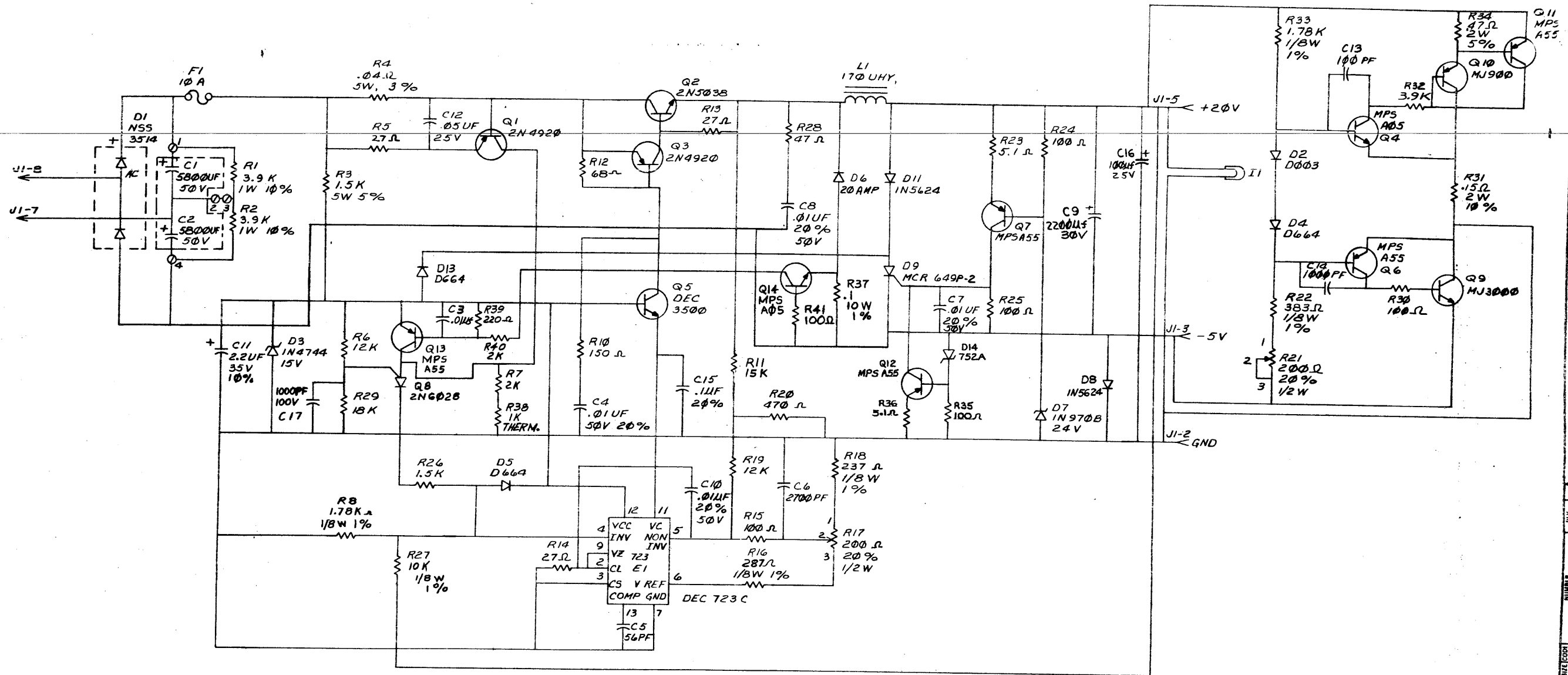
*Only for add-on memories in systems with NPR devices

SIZE A	CODE SP	NUMBER MF11-U-3	REV
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DEC FORM NO. DEC 16-(381)-1022-N370
DRA 108

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REV	CHANGE NO	BY	DATE
F	H754 00005	G. WHITCOMB	4-23-72

BRUNING 40-522 15840
DEC FORM NO DRD 102-R

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
H754				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES		DRN: <i>V. Bussanetta</i>	DATE: 9-21-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
DECIMALS ANGLES		CHKD: <i>J.B.</i>	DATE: 12-17-72	
.XXX = .005 ±0° 30'		ENG: <i>K. Boston</i>	DATE: 5-7-73	
.XX = .02		PROJ. ENG: <i>K. Boston</i>	DATE: 5-7-73	
X = .1		PROJ. ENG: <i>K. Boston</i>	DATE: 5-7-73	+20 VOLT REGULATOR
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PROJ. ENG: <i>K. Boston</i>	DATE: 5-7-73	
MATERIAL	NEXT HIGHER ASSY.	SIZE CODE NUMBER REV		
FINISH	SCALE	DCS H754 0-1 / 5		
SHEET 2 OF 2		DIST.		