PDP-8/M computer engineering drawings

digital equipment corporation · maynard. massachusetts

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE		SEQUENCE	
DRAWING DIRECTORY	B-DD-PDP8M-Ø	MEMORY MM8-E	B-DD-MM8-E
FIELD ACCEPTANCE PROC.	A-SP-PDP8M-Ø-2	X/Y DRIVER	E-CS-G227-Ø-1
SO[illegible]	A-SL-PDP8M-Ø-4	PLANAR STACK BOARD	E-CS-G619-Ø-1
ACC[illegible]	A-AL-PDP8M-Ø-6	SENSE/INHIBIT	E-CS-G1Ø4-Ø-1
PD[illegible]	D-UA-PDP8M-Ø-Ø	BLOCK DIAGRAM MM8-E	E-BD-MM8-E-1
PD[illegible]	C-PL-PDP8M-Ø-Ø	RECOMMENDED 1ST LEVEL SPARES	A-PL-SP8-MA-Ø
POWE[illegible] ASSY 8/M	D-AD-7008714-Ø-Ø	RECOMMENDED 2ND LEVEL SPARES	A-PL-SP8-MB-Ø
REGULATOR BD ASSY	E-IA-5409728-Ø-Ø	TELETYPE ASR-3 ACCESSORY LIST	A-ML-LT33-Ø-12
BD[illegible]	D-CS-5409728-Ø-Ø	CUSTOMER PANEL DATA	D-MD-7605994-Ø-Ø
LINE [illegible] 7 AMP	C-UA-BCØ5H-Ø-Ø		
LINE [illegible] 3 AMP	C-UA-BCØ5J-Ø-Ø		
POWER CONTROL ASSY 8/M	D-AD-7009282-0-0		
LINE CORD	D-UA-BC2Ø-Ø-Ø		
SYSTEM POWER WIRING DIAGRAM	D-IC-PDP8M-Ø-3		
OPTION ARRANGEMENT	E-AR-PDP8M-Ø-1		
RECOMMEND OMNIBUS MODULE ASSGN	A-SP-PDP8/E-Ø-4		
TERMINAL DIAGRAM	D-TD-PDP8/E-Ø-5		
[illegible]	E-FD-PDP8/E-Ø-6		
[illegible]	D-CS-H9191-Ø-1		
OPT[illegible] CONSOLE	B-DD-KC8-M		
[illegible] ASSY	D-UA-KC8-M-Ø		
[illegible] PANEL	C-CS-5409705-Ø-1		
[illegible] CONSOLE	B-DD-KC8-ML		
[illegible] ASSY	D-UA-KC8-ML-Ø		
[illegible] CONTROL BD	E-IA-5409668-Ø-5		
[illegible] CONTROL BD	D-CS-5409668-Ø-1		
CENTRAL PROCESSOR KK8-E	A-ML-KK8-E		
MA[illegible]	E-CS-M83ØØ-Ø-1		
[illegible] CONTROL	E-CS-M831Ø-Ø-1		
BUS [illegible]	E-CS-M832Ø-Ø-1		
TIMING GENERATOR	E-CS-M833Ø-Ø-1		
RFI SHIELD	B-CS-M849-Ø-1		
MEMORY EXTENSION & TIME SHARE			
CONT	A-ML-KM8-E		
[illegible] & TIME SHARE			
[illegible]	E-CS-M837-Ø-1		
[illegible] CONTROL	A-ML-KL8-E		
[illegible] CONTROL	E-CS-M8650-Ø-1		
[illegible] CONTROL	E-CS-M8650-YA-1		
[illegible]	D-IA-7008360-Ø-Ø		
[illegible]	D-UA-BCØ1V-25-Ø		
[illegible] BUSS.	A-SP-KL8-E-L		
[illegible] CONTROL	A-PL-KL8-E-Ø		
[illegible]	A-AL-KL8-E-4		

UNIT VARIATIONS

VAR	TITLE	PRINT SET PDP8-Ø
PDP8M-DC	RACK MOUNTABLE 8/M, 115V	X
	4K WITH KC8-ML AND KL8-E	
	IN 12 INCH BOX	
PDP8M-DD	RACK MOUNTABLE 8/M,230V	X
	4K WITH KC8-ML AND KL8-E	
	IN 12 INCH BOX	
PDP8M-DE	PDP8M-DC WITH 8K	X
PDP8M-DF	PDP8M-DD WITH 8K	X
PDP8M-DH	PDP8M-DC IN 15 INCH BOX	X
PDP8M-DJ	PDP8M-DD IN 15 INCH BOX	X
[illegible]	[illegible] IN 15 INCH BOX	X
[illegible]	[illegible] IN 15 INCH BOX	X
PDP8M-MC	RACK MOUNTABLE 8/M 115V	X
	4K WITH KC8-M IN 12	
	[illegible] BOX	
PDP8M-MD	RACK MOUNTABLE 8/M 230V	X
	4K WITH KC8M IN 12	
	[illegible] BOX	
PDP8M-ME	PDP8M-MC WITH 8K	X
PDP8M-MF	PDP8M-MD WITH 8K	X
PDP8M-MJ	PDP8M-MC IN 15 INCH BOX	X
PDP8M-MJ	PDP8M-MD IN 15 INCH BOX	X
PDP8M-MK	PDP8M-ME IN 15 INCH BOX	X
PDP8M-ML	PDP8M-MF IN 15 INCH BOX	X

[illegible] P.GARDNER	[illegible] GARDNER 10-25-72		
[illegible]	PDP8M-15 D		
[illegible] BEASLEY 11-17-72			
[illegible] GARDNER			
P.GARDNER 11-22-72			
[illegible]	PDP8M-16 E		
B.ASLEY 1-24-73			
P.GARDNER			
P.GARDNER 1-25-73			
[illegible]	PDP8M-17 F		
J.FERGUSON 3-7-73			
P.GARDNER			
[illegible]	PDP8M-18 H		
BLODGETT 5-16-73			
P. GARDNER			

USED ON OPTION/MODEL	DRN	DATE	TITLE
PDP8-M	[illegible]	[illegible]	PDP8M
	PROJENG	DATE	
	PROD	DATE	SIZE B · CODE DD · NUMBER PDP8M-Ø · REV H
SHEET 1 OF 7	[illegible]	[illegible]	DIST

* NOTE: INDICATES OPTIONAL EQUIPMENT (THIS PAGE ONLY)

1

PDP8M ASSY

D-UA-PDP8M-Ø-Ø

2

POWER SUPPLY ASSY

D-AD-7006741-0-0

3

REGULATOR BOARD ASSY

C-IA-5409728-0-0

4

MEM EXT TIME SHARE CONT

A-PL-KM8-E-Ø

5

OMNIBUS ASSY

D-UA-H9191-Ø-Ø

6

CONN BLOCK ASSY

D-AD-7006952-0-0

7

MEMORY (MM8-E)

D-UA-MM8-E-Ø

8

EDGE CONN (H851)

B-UA-H851-Ø-Ø

9

MEMORY BD (H22Ø)

D-UA-H22Ø-Ø-Ø

10

CONSOLE ASSY PROGRAMMER (KC8-ML)

B-DD-KC8-ML

D-UA-KC8-ML-Ø

11

CENT PROCESSOR (KK8-E)

D-UA-KK8-E-Ø

8

EDGE CONN (H851)

B-UA-H851-Ø-Ø

12

[illegible]

13

[illegible]

14

POWER CONTROL BOARD (115V)

C-IA-5409824-0-0

15

[illegible] SOCKET 250V 5 AMPS

C-UA-BCØ5J-Ø-Ø

16

AC INPUT BOX (H4ØØB)

D-UA-H4ØØ-Ø-Ø

17

POWER CONTROL BOARD (230V)

C-IA-5409825-0-0

18

CONSOLE ASSY OPERATORS (KC8-M)

B-DD-KC8-M

D-UA-KC8-M-Ø

19

* SYSTEM EXPANDER (BA8-AA)

D-DI-BA8-A-1

A-PL-BA8-A-Ø

* [illegible] EXPANDER (BA8-AB)

D-DI-BA8-A-1

A-PL-BA8-A-Ø

* SYSTEM EXPANDER (BA8-BA)

D-DI-BA8-A-1

A-PL-BA8-A-Ø

* SYSTEM EXPANDER (BA8-BB)

D-DI-BA8-A-1

D-UA-BA8-A-Ø

20

LINE SET (BC2Ø)

D-UA-BC2Ø-Ø-Ø

21

AC INPUT BOX (H4Ø2)

D-UA-H4Ø2-Ø-Ø

22

POWER CONTROL BOARD (115V)

C-IA-5410370-0-0

23

POWER CONTROL BOARD (230V)

C-IA-5410372-0-0

24

ASYNC. DATA CONTROL

A-PL-KL8-E-Ø

28

[illegible] SUPPLY ASSY

D-AD-7006282-0-0

TITLE		SIZE	CODE	NUMBER	REV
PDP8M	SHEET 2 OF 7	B	DD	PDP8M-Ø	H

CUSTOMER PRINT SET						ELECTRICAL					
FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	PDP8M-Ø	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
	D-UA-PDP8M-Ø-Ø	J	6	PDP8M ASSY		X		7	B-DD-MM8-E	#	2	MEMORY, MM8-E	
	D-TD-PDP8/E-Ø-5	#	2	TIMING DIAGRAM		X			E-BD-MM8-E-1	#	1	BLOCK DIAGRAM	
	D-FD-PDP8/E-Ø-6	#	1	FLOW DIAGRAM		X			E-CS-G227-Ø-1	#	2	XY DRIVER	
	D-IC-PDP8M-Ø-3	B	1	POWER WIRING DIAGRAM, SYSTEM		X			E-CS-G1Ø4-Ø-1	#	2	SENSE INHIBIT	
	A-SP-PDP8M-Ø-2	A	8	FIELD INST. & ACCPT. PROCEDURE									
	A-SP-PDP8/E-Ø-4	#	2	RECOMMENDED OMNIBUS ASSIGNMENTS										
	A-SL-PDP8M-Ø-4	B	1	SOFTWARE LIST									
	A-SP-PDP8/E-Ø-11	#	5	OPTION POWER REQUIREMENTS		X		9	E-CS-619-Ø-1	#	2	PLANAR STACK BOARD	
	A-SP-PDP8M-Ø-5	A	14	8/F & 8/M MAN. TEST PROCEDURE									
	A-AL-PDP8M-Ø-6	B	1	ACCESSORY LIST									
	A-SP-7665165-Ø-Ø	#	24	PDP8/M INSPECTION & ACCEPT. PROC.									
	C-CS-5409705-Ø-1	#	1	PDP8/M OPERATOR'S PANEL		C		10	B-DD-KC8-ML-1	#	3	CONSOLE ASSY, PROGRAMMER'S (KC8-ML)	
	E-IA-5409568-Ø-5	#	1	FRONT PANEL CONTROL BD.									
	D-CS-5409568-Ø-1	#	2	FRONT PANEL CONTROL BD.									
	E-CS-M865Ø-Ø-1	#	2	ASYNC. DATA CONTROL									
	E-CS-M865Ø-YA-1	#	2	ASYNC. DATA CONTROL									
	D-IA-7008360-Ø-Ø	#	1	CABLE ASSY		X		11	A-ML-KK8-E	#	2	CENT. PROCESSOR (KK8-E)	
	D-UA-BCØ1V-25-Ø	#	1	CABLE ASSY		X			E-CS-M83ØØ-Ø-1	#	5	MAJOR REGISTER	
	A-SP-KL8-E-L			ENGINEERING SPECS		x			E-CS-M831Ø-Ø-1	#	4	MAJOR REGISTER CONTROL	
	A-AL-KL8-E-4		1	ACCESSORY LIST		X			E-CS-M832Ø-Ø-1	#	2	BUS LOADS	
	A-SP-PDP8M-O-7	#		PDP8M ASSEMBLY PROCEDURE		X			E-CS-M833Ø-Ø-1	#	2	TIMING GENERATOR	
						X			E-CS-M8349-Ø-1	#	1	RFI SHIELD	
	A-AD-7008714-Ø-Ø	#	1	POWER SUPPLY ASSY										
						X		12	C-UA-BC Ø5H-Ø-Ø	#	1	LINE SET 115V AC 7 AMP.	
3	E-IA-5409728-0-0	#	1	REGULATOR BOARD ASSY									
	D-CS-5409728-0-0	#	1	REGULATOR BOARD CIRCUIT									
4	A-ML-KM8-E	#	2	MEMORY EXT & TIME SHARE CONT									
	E-CS-M837-Ø-1	#	3	M837 CIRCUIT				13	D-UA-H4ØØ-Ø-Ø	#	1	AC INPUT BOX, H4ØØA	
	B-MH-M837-Ø-6	#	1	MODULE ECO HISTORY									
5	A-ML-H9191-Ø-Ø	#	2	OMNIBUS ASSY									
	D-CS-H9191-Ø-1	#	1	OMNIBUS CIRCUIT									

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TITLE		SIZE	CODE	NUMBER	REV
PDP8M	SHEET 3 OF 7	B	DD	PDP8M-Ø	H

CUSTOMER PRINT SET PDP8M-Ø	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		14	C-IA-5409824-0-0	#	1	POWER CONTROL BOARD (115V)	
			K-CO-5409824-0-0	#	1	X-Y COORDINATE HOLE LOCATION	
			D-AD-5409824-0-5	#	1	ASSY DRILLING HOLE LAYOUT	
			B-MH-5409824-0-6	#	1	MODULE ECO HISTORY	
X		15	C-UA-BCØ5-J-Ø-Ø	#	1	LINE SET 23ØV AC, 4 AMP	
		16	D-UA-H4ØØ-Ø-Ø	#	1	AC INPUT BOX,H4ØØB	
		17	C-IA-5409825-0-0	#	1	POWER CONTROL BOARD (230V)	
			K-CO-5409825-0-4	#	1	X-Y COORDINATE HOLE LOCATION	
			D-AD-5409825-0-5	#	1	ASSY DRILLING HOLE LAYOUT	
			B-MH-5409825-0-6	#	1	MODULE ECO HISTORY	
C		18	B-DD-KC8-M	#	3	CONSOLE ASSY,OPERATORS(KC8-M)	
		19	A-ML-BA8-Ø	#	1	SYSTEM EXPANDER,BA8	
X		20	D-UA-BC2Ø-Ø-Ø	#	1	LINE SET	
		21	D-UA-H4Ø2-Ø-Ø	#	1	AC INPUT BOX	

CUSTOMER PRINT SET PDP8M-Ø	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		22	C-IA-5410370-0-0	#	1	POWER CONTROL BOARD (115V)	
			K-CO-5410370-0-4	#	1	X-Y COORDINATE HOLE LOCATION	
			D-AH-5410370-0-5	#	1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-5410370-0-6		1	MODULE ECO HISTORY	
		23	C-IA-5410372-0-0	#	1	POWER CONTROL BOARD (230V)	
			K-CO-5410370-0-4	#	1	X-Y COORDINATE HOLE LOCATION	
			D-AH-5410370-0-5	#	1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-5410370-0-6	#	1	MODULE ECO HISTORY	
C		24	A-ML-KL8-E	#	2	ASYNC. DATA CONTROL	
X		25	D-AD-7009282-0-0	#	1	POWER SUPPLY ASSY	
			D-IA-7009279-0-0	#	1	HARNESS D.C.	
			D-IA-7009452-0-0	#	1	THERMOSTAT ASSY	
			A-SP-PDP8M-0-8	##		POWER SUPPLY ASSY PROCEDURE	

ELECTRICAL

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TITLE		SIZE	CODE	NUMBER	REV
PDP8M	SHEET 4 OF 7	B	DD	PDP8M-Ø	H

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
PDP8M-Ø			MECHANICAL				
		1	D-UA-PDP8M-Ø-Ø	J	3	PDP8M UNIT ASSY	
X			C-PL-PDP8M-Ø-Ø	J	2	PDP8M UNIT ASSY (PL)	
			E-IA-7409379-0-0	#	2	CHASSIS	
			D-IA-7409380-0-0	#	1	COVER	
			C-IA-7409424-0-0	#	1	FILTER,SIDE	
			D-IA-7409419-0-0	#	1	BRKT,CABLE TROUGH	
			C-IA-7409387-0-0	#	1	STRAIN RELIEF,CABLE	
			C-IA-7409377-0-0	#	1	STRAIN RELIEF,EXPANDER	
			C-MD-7407449-0-0	#	1	COVER STRIP	
			D-MD-7408861-0-0	#	1	SLIDE,CHASSIS 22 IN. TRAVEL	
			A-SC-1210302-0-0	#	2	PAD FOAM	
			D-IA-7008288-8F-Ø	#	1	CABLE,INTERCONNECTING	
			D-IA-7008675-0-0	#	1	DC HARNESS	
			A-PL-SP8-MA-Ø	#	1	RECOMMENDED FIRST LEVEL SPARES	
			A-PL-SP8-M8-Ø	#	4	RECOMMENDED SECOND LEVEL SPARES	
			D-MD-7605994-0-0	#	2	CUSTOMER PANEL DATA	
			A-PL-3700055-0-0	#		PACKAGING INSTRUCTIONS PDP8 F & 8M	
			A-AL-LT33-Ø-12	#	1	TELETYPE AS-33 ACCESSORY	
			A-PL-LT33-ST-Ø	#	2	LT33 TTY MAIN TOOL KIT	
			A-PL-LT33-SB-Ø	#	1	LT33-B RECOMMENDED SPARE PARTS	
A			E-AR-PDP8M-Ø-1	B	1	OPTION ARRANGEMENT	
			D-IA-7008537-0-0	#	1	HARNESS,AC	
			D-IA-7008674-0-0	#	1	HARNESS MICRO SW	
			C-IA-7410750-0-0	#	1	BRKT KEY SWITCH	
			C-MD-7410754-0-0	#	1	BRKT SUPPORT	
			E-IA-7410740-0-0	#	3	CHASSIS	
			D-IA-7410751-0-0	#	1	COVER TOP	
			B-IA-7410753-0-0	#	1	BRACKET SUPPORT	
			C-IA-7410749-0-0	#	1	STRAIN RELIEF CABLE	
			C-IA-7410752-0-0	#	1	STRAIN RELIEF EXPANDER	
			D-IA-7410748-0-0	#	1	COVER REAR	
			D-IA-7009281-0-0	#	1	HARNESS AC	
			C-IA-7410768-0-0	#	1	FILTER SIDE	
			A-DC-7410910-0-0	#	1	DECAL	
		2	D-AD-7008714-0-0	#	1	POWER SUPPLY	
			D-IA-7409376-0-0	#	2	CHASSIS POWER SUPPLY	
			C-IA-7409375-0-0	#	1	BRACKET ETCH BD SUPPORT	
			D-IA-7009534-0-0	#	1	SECONDARY HARNESS	
			A-DC-7409651-Ø-Ø	#	1	POWER SUPPLY DECAL	

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
PDP8M-Ø			MECHANICAL				
		3	E-IA-5409728-0-0	#	1	REGULATOR BOARD ASSY	
			B-MH-5409728-0-6	#	1	MODULE ECO HISTORY	
		4	A-PL-MM8-E-Ø	#	2	MEMORY EXTENSION & TIME SHARE CONT	
		5	D-UA-H9191-Ø-Ø	#	1	OMNIBUS ASSY	
			D-IA-7008622-0-0	#	1	HARNESS H9191	
			A-PL-3700039-0-0	#	2	USES FOR SPECAIL COMPRESS 0-CARTON	
		6	D-AD-7006952-0-0	#	1	CONN BLOCK ASSY	
			A-PL-7006952-0-0	#	1	CONN BLOCK ASSY (PL)	
			E-PS-1210258-0-0	#	1	288 PIN CONN BLOCK H863	
			C-MD-7408242-0-0	#	1	MTG BAR CONN BLOCK	
		7	D-UA-MM8-E-Ø	#	1	MEMORY MM8-E	
			A-PL-MM8-E-Ø	#	1	MEMORY MM8-E (PL)	

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TITLE	SIZE	CODE	NUMBER	REV
PDP8M	B	DD	PDP8M-Ø	H

SHEET 5 OF 7

DEB LOB

CUSTOMER PRINT SET PDP8M-Ø	MFG. SET	MECHANICAL FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		8					
			B-UA-H851-Ø-Ø	#	1	EDGE CONN (H851)	
			A-PL-H851-Ø-Ø	#	1	EDGE CONN (H851) (PL)	
			B-MD-5509071-0-0	#	1	RECEP 36 PIN REWORK	
			D-IA-5008903-0-0	#	1	ETCH CKT BD	
		9	D-UA-H22Ø-Ø-Ø	#	1	MEMORY BD H22Ø	
			A-PL-H22Ø-Ø-Ø	#	1	MEMORY BD H22Ø (PL)	
			C-MD-5509025-0-0	#	1	COVER PLATE	
		10	B-DD-KC8-ML	#	3	CONSOLE ASSY PROGRAMMERS (KC8-ML)	
X			D-UA-KC8-ML-Ø	#	1	CONSOLE ASSY PROGRAMMERS	
		11	D-UA-KK8-E-Ø	#	1	CENT PROCESSOR KK8-E	
			A-PL-KK8-E-Ø	#	1	CENT PROCESSOR KK8-E (PL)	
		12	C-UA-BCØ5H-Ø-Ø	#	1	LINE SET 115V AC 7 AMP	
		13	D-UA-H4ØØ-Ø-Ø	#	1	AC INPUT BOX ASSY H4ØØA	
			D-IA-5309845-0-0	#	1	BOX AC INPUT	
			C-MD-5309849-0-0	#	1	COVER	
			A-DC-5309899-0-0	#	1	PWP CONT DECAL (115V)	

CUSTOMER PRINT SET PDP8M-Ø	MFG. SET	MECHANICAL FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		14	C-IA-5409824-0-0	#	1	POWER CONTROL BOARD (115V)	
			B-MH-5409824-0-6	#	1	MODULE ECO HISTORY	
		15	C-UA-BCØ5J-Ø-Ø	#	1	LINE SET 230V AC 4 AMP	
		16	D-UA-H4ØØ-Ø-Ø	#	1	AC INPUT BOX H4ØØB	
			D-IA-5309845-0-0	#	1	BOX AC INPUT	
			C-MD-5309849-0-0	#	1	COVER	
			A-DC-5309900-0-0	#	1	PWR CONTROL DECAL (230V)	
		17	C-IA-5409825-0-0	#	1	POWER CONTROL BOARD (230V)	
			B-MH-5409825-0-6	#	1	MODULE ECO HISTORY	
		18	C8-M	#	3	CONSOLE ASSY OPERATORS (KC8-M)	
X			C8-M-Ø	#	1	CONSOLE ASSY OPERATORS	
		19	E-UA-BA8-A-Ø	#	1	SYSTEM EXPANDER BA8	
			A-PL-BA8-A-Ø	#	2	SYSTEM EXPANDER BA8 (PL)	
			D-DI-BA8-A-1	#	1	DRAWING INDEX LIST	

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TITLE	SHEET	SIZE	CODE	NUMBER	REV
PDP8M	6 OF 7	B	DD	PDP8M-Ø	H

DRB 108

CUSTOMER PRINT SET PDP8M-Ø	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			MECHNICAL				
		20	D-UA-BC2Ø-Ø-Ø	#	1	LINE SET	
			A-DC-5310439-0-0	#	1	DECAL PWR CONTROL (230 V)	
			A-DC-5310438-0-0	#	1	DECAL PWR CONTROL (115 V)	
		21	D-UA-H4Ø2-Ø-Ø	#	1	AC INPUT BOX ASSY	
			D-IA-5309845-0-0	#	1	BOX AC INPUT	
			C-MD-5310373-0-0	#	1	COVER AC INPUT	
			B-SS-5310373-0-1	#	1	SILK SCREEN COVER	
			A-DC-5310438-0-0	#	1	POWER CONTROL DECALS 115V	
			A-DC-5310439-0-0	#	1	POWER CONTROL DECALS 23ØV	
		22	C-IA-5410370-0-0	#	1	POWER CONTROL BOARD (H4Ø2A)	
			B-MH-5410370-0-6	#	1	MODULE ECO HISTORY	
		23	C-IA-5410372-0-0	#	1	POWER CONTROL BOARD (H4Ø2B)	
			B-MH-5410372-0-6	#	1	MODULE ECO HISTORY	
X		24	A-PL-KL8-E-Ø	#	1	ASYNC DATA CONTROL	
			D-IA-7008360-0-0	#	1	CABLE ASSY (KL8-E)	
			D-UA-BC01V-25-C	#	1	CABLE ASSY (BCØ1V)	

CUSTOMER PRINT SET PDP8M-Ø	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			MECHANICAL				
		25	E-AD-7009282-0-0	#	1	POWER SUPPLY ASSY	
			D-IA-7410746-0-0	#	1	CHASSIS POWER SUPPLY	
			D-IA-7009280-0-0	#	1	HARNESS DC	
			A-DC-7410790-0-0	#	1	DECAL	
			D-IA-7009279-0-0	#	1	TRANSFORMER REWORK	
			D-IA-7009452-0-0	#	1	THERMOSTAT ASSY	

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

TITLE		SIZE	CODE	NUMBER	REV
PDP8M	SHEET 7 OF 7	B	DD	PDP8M-Ø	H

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 1/3/72

TITLE PDP8/M FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	DELETED DC CHECKOUT	PDP8M-00013	P.GARDNER	7/72		

ENG	APPD	SIZE	CODE	NUMBER	REV
Paul Gardner	1-7-72	A	SP	PDP8 M-0-2	A

DEC FORM NO. DRA 107

I. General

Installation of a PDP8/M requires no special tools or equipment. Normal hand tools are all that is necessary. However, a fork-lift truck or pallet handling equipment should be available for receiving and installing the rack-mounted system.

II. Unpacking and Inspection

Unpack and inspect the equipment, using the following procedure.

A. Perform the following steps:

Step	Procedure
1	Remove the shipping straps
2	Open the outer carton.
3	Lift out the inner carton.
4	Open the inner carton.
5	Slide the computer out, using care not to damage the switches.
	Check that all equipment is included, as specified on the accessory list.
7	Install the chassis slides using the hardware supplied.

III. Inspection

After removing the equipment packing material, inspect the equipment.

Step	Procedure
1	Inspect the external surfaces of the chassis for surface, bezel, switch and light damage, etc.
2	Internally inspect the cabinet for console and processor damage; loose or broken modules; or fan damage; loose nuts, bolts, screws, etc.

Step	Procedure
3	Inventory all hardware against key sheet.
4	Inventory all software program tapes against software checklist.
5	Inventory all prints against drawing directory.

IV. Installation Procedure

Install the equipment, using the following procedure.

Step	Procedure
1	Turn off power switch.

WARNING

Do not touch computer, after plugging it in, until it is checked for proper ground.

Step	Procedure
2	Insure that all AC power is received from the same source.
3	Plug in power.
4	Before touching the computer, check frame to ground to insure that no AC voltage is present.
5	Unplug power.
6	Turn on computer power switch.
7	Repeat steps 3 and 4.

Step	Procedure
8	Turn off power.
9	Check the jumpers on the modules according to Table 4-1

Table 4-1
Jumpers

Module	Location	Inserted	Omitted
M8330	Center	Slow Cycle Only	Fast Cycle/Slow Cycle
M8650	Upper Right	1) 37 ASR 2) 33 & 35 ASR	33 & 35 ASR 37 ASR
G104	Lower Right	EMA 0 = "0" EMA 1 = "0" EMA 2 = "0" These are used to select which field this memory will be. (All inserted = Field "0"	EMA 0 = "1" EMA 1 = "1" EMA 2 = "1"
G104	Middle Left	Slice Voltage. Factory selected only	
G227	Upper Middle	Current Control. Factory selected only.	
Not to be changed in the field.			

Step	Procedure
10	Check module priorities with recommended Omnibus assignment A-SP-PDP8/E-0-4.

NOTE

The recommended order [illegible] on the Omnibus will result in best-case timing and permit widest margins.

11 Turn on power.

12 Check the operation of the front panel switches and indicators.

13 Using a small program, the automatic operation of the C.P. can be checked out. Example:

a. Load ADDR 0000
b. Deposit 7001
c. Deposit 2101
d. Deposit 5001
e. Deposit 5000
f. Load ADD 0000
g. Rotary Switch to AC position
h. Clear and Cont
i. Observe AC Register incrementing

14 Assemble Teletype as follows:

a. Open the Teletype carton, and remove the packing material. Remove the back cover from the stand. Remove and unwrap the copy-holder, chad box, and power pack. Remove the stand from the shipping carton. Remove the Teletype console from the carton, holding it by the wooden pallet attached to the bottom. Snap the power pack in place at the top of the rear side of the Teletype stand. Remove the Teletype console from the pallet, and mount it on the stand. Remove reader, punch, and printer shipping restraints. Connect the Teletype console to the power pack (a six-lead cable attached at the console is connected to the power pack by means of a white plastic Molex 1375 Female Connector, which mates with a male output plug on the power pack). Pass the 3-wire power cable, and the 7-conductor signal cable (which is terminated by a Mate-N-Lock Connector) through the opening at the lower left-hand corner of the Teletype stand; then replace the back cover of the

stand using the two mounting screws.

b. Turn computer power off.

c. Connect Mate-N-Lock together (with 2 ft. cable on the M8650 to ensure that the Mate-N-Lock remains inside the cover.

d. Connect the 3-prong male connector of the Teletype power cable to the same AC power source as the 8/M.

e. Turn the POWER switch on.

f. Install a roll of printed paper into the Teletype keyboard/printer, and install a tape in the punch as described in the Teletype technical manual.

g. Set the LINE/OFF LOCAL switch to LOCAL.

h. Verify off-line Teletype operation in accordance with the procedures in Chapter 2 of the Small Computer Handbook.

i. Verify on-line Teletype punch and reader operation by performing the following test to type character on keyboard. Load address 0000 and deposit the following test routine in sequence:

Location	Contents
0000	6032
0001	6031
0002	5001
0003	6036
0004	6046
0005	6041
0006	5005
0007	5001

Load address 0000 and press START. Type any character on the keyboard and observe a corresponding echo return on the printer.

Table 5-1

Acceptance Tests

Program Name	Maindec No.	SA/SR Setting	Execute Time	Ind.	Accept. Time
Inst. Test I & II	8E-D0AA	200/7777	2 sec	Bell	3 min.
Inst. Test II	8E-D0BA	200/0000	2 sec	Bell	3 min.
Adder Test	8E-D0CA	200/0000	35 min	1 SIMAD 2 SIMROT 3 FCT 4 RANDOM	35 min.
Basic JMP JMS Test	8E-D0IA	200/0000	10 sec	Bell	3 min.
Random TAD Test	8E-D0EA	200/0000	5 sec	T	3 min.
Random AND Test	8E-D0DA	200/0000	2 sec	A	3 min.
Random ISZ Test	8E-D0FA	200/0000	8 sec	FA	3 min.
Random DCA Test	8E-D0GA	200/0000	5 sec	Bell	3 min.
Random JMP Test	8E-D0HA	200/0000	8 sec	HA	3 min.
Random JMP-JMS Test	8E-D0JA	200/0000	11 sec	JA	3 min.
Memory Address Test	8E-DLEA	200/0000	50 sec	EA	5 min.
Checkerboard Test	8E-DLAA	200/0000	5 min	5	15 min.
Teletype Control Test	8E-D2AA	200/0000			40 min.
Mem. ON/OFF Test	8E-DLGA	200/0000			

Note: When ordering from Program Library:

PB for Binary Tape
D for Document

e.g., after MAINDEC-D0AA-PB
-D0AA-D

V. Acceptance Test

Perform the acceptance tests referenced in Table 5-1. If abnormal indications are encountered, terminate testing, and refer to Chapter 4 of the PDP8/E Maintenance Manual for maintenance. Refer to Chapter 2 of the Small Computer Handbook for loading the diagnostic programs. The procedure is the same as the example provided in Figure 2-9 of the Small Computer Handbook.

Equipment required: PDP8/M (with 4K of R/W memory), Maindecs, Programmer's Console, Teletype (ASR 33 or 35 modified for operation with PDP8/M).

NOTE

If Programmer's console and Teletype, as described, are not part of the system being installed they must be made available in good working order by the customer.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

MADE BY Paul Gardner DATE 12/31/71	CHECKED P. Gardner DATE 1-7-72	SECTION
ENG Paul Gardner DATE 1-7-72	PROD R. K. ALLEN DATE 1-7-72	ISSUED SECT.

LEGEND

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

ITEM NO.	DWG NO. / PART NO		DESCRIPTION	QUANTITY / VARIATION: PDP8M-DC, DD, LHS/DL	PDP8M-DE, DF, DK&DL	PDP8M-DD, DK&DC, MD, MR&MC	PDP8M-DA, DB, MF, MI&ML				KIT CHECK BY DATE	INSTALLATION CHECK BY DATE
1	B-DD-PDP8 M-Ø		PDP 8/M PRINT SET	1	1	1	1					
2	DEC-8E-HR1B-D		MAINTENANCE MANUAL VOL I	*	*	*	*					
3	DEC-8E-HR2A-D		MAINTENANCE MANUAL VOL II	-	*	-	*					
4			CUSTOMER ENVELOPE	1	1	1	1					
5	DEC-16-1000	**	KEY SHEET	1	1	1	1					
6	DEC-3-1416	**	ECO STATUS SHEET	1	1	1	1					
7	DEC-3-1226	**	SUPPLEMENTARY ACCESSORY LIST	1	1	1	1					
8	DEC-12-1015A	**	CUSTOMER ACCEPTANCE SHEET	1	1	1	1					
9			FORMS AND CHECKLIST ENVELOPE	1	1	1	1					
10	DEC-7-1009	***	CUSTOMER FOLLOW UP REPORT	1	1	1	1					
11		***	CUSTOMER SERVICE LETTER	1	1	1	1					
12	DEC-7-1034	***	SOFTWARE ORDER FORM	1	1	1	1					
13	DEC-7-1044	***	SOFTWARE PERFORMANCE REPORT	1	1	1	1					
14	LIBKIT-8E-BASE		BASIC SOFTWARE KIT	*	*	*	*					
15	LIBKIT-8E-XBAS		EXTENDED SOFTWARE KIT	*	-	*	*					
16	LIBKIT-8E-KM8E		EXTENDED MEMORY SOFTWARE KIT	-	*	-	*					
***	INCLUDED IN THE FORMS AND CHECK LIST ENVELOPE (ITEM #11)											
**	INCLUDED IN THE CUSTOMER ENVELOPE (ITEM #6)											
*	TO BE INCLUDED ONLY WHEN SPECIFIED ON THE CONSTRUCTION REQ.											

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
SOFTWARE LIST (PDP-8/M)	B-DD-PDP8 M-Ø SHEET 1 OF 1	A	SL	PDP8 M-Ø Ø1 DIST.	B	PDP8M-00018

DEC FORM NO. DEC 16 (327) [illegible] N451
DRA 120

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY	CHECKED E. gardner	SECTION
	DATE 5/4/72	
PROD	PROD PATTERN	ISSUED SECT
DATE	DATE 5/4/72	

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

ITEM NO.	DWG NO. PART NO.	DESCRIPTION	QUANTITY/VARIATION: PDP8M-MK, DD	PDP8M-MK, DF	PDP8M-MK, DL	PDP8M-MK, MJ	PDP8M-ME	PDP8M-MI, MJ	KIT CHECK BY ____ DATE ____	INSTALLATION CHECK
1	[illegible]	PDP8/M PRINT SET	1	1			1	1	1	
2	[illegible]	MAINTENANCE MANUAL VOL I	*	*			*	*	*	
3	[illegible]	MAINTENANCE MANUAL VOL II	-	*		*	-	*	-	
4		CUSTOMER ENVELOPE	1	1	1	1	1	1	1	
5		FORMS AND CHECKLIST ENVELOPE	1	*	1	1	1	1	1	
6	LIBKIT-8E-BASE	BASIC SOFTWARE KIT	*	*	*	*	*	*	*	
7	LIBKIT-8E-XBAS	EXTENDED SOFTWARE KIT	*	*	*	*	*	*	*	
8	LIBKIT-8E-KM8E	EXTENDED MEMORY SOFTWARE KIT	-	*	-	*	-	*	-	
9	7408861	CHASSIS SLIDES	1	1	1	1	1	1	1	
10	7409424	FILTER, SIDE	1	1	-	-	1	1	-	
11	7410768	FILTER, SIDE	-	-	1	1	-	-	1	

*TO BE INCLUDED ONLY WHEN SPECIFIED ON THE CONSTRUCTION REQUISITION

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
ACCESSORY LIST (PDP8/M)	PDP8/M	A	AL	PDP8M-Ø-6	B	PDP8M-0001
	SHEET 1 OF 2	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

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

MADE BY E. GARDNER	CHECKED E. GARDNER	SECTION
DATE 4-25-72	DATE	2
PROD DATE	PROD DATE	ISSUED SECT.

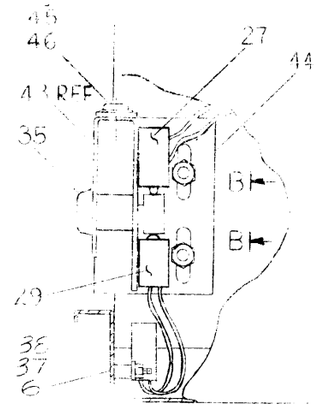
ITEM NO.	DWG NO. PART NO.	DESCRIPTION	QUANTITY/VARIATION: PDP8M-MK, ML	KIT CHECK BY ____ DATE ____	INSTALLATION CHECK
1	B-DD-PDP8M-Ø	PDP8/M PRINT SET	1		
2	DEC-8E-HB1B-D	MAINTENANCE MANUAL VOL I	*		
3	DEC-8E-HB2A-D	MAINTENANCE MANUAL VOL II	*		
4		CUSTOMER ENVELOPE	1		
5		FORMS AND CHECKLIST ENVELOPE	1		
6	LIBKIT-8E-BASE	BASIC SOFTWARE KIT	*		
7	LIBKIT-8E-XBAS	EXTENDED SOFTWARE KIT	*		
8	LIBKIT-8E-KM8E	EXTENDED MEMORY SOFTWARE KIT	*		
9	7408861	CHASSIS SLIDES	1		
10	7409424	FILTER, SIDE	-		
11	7410768	FILTER, SIDE	1		

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
		A	AL	PDP8M-Ø-6	B	PDP8M-

LEGEND #1

NUMBER	VARIATION
PDP8M-0	BASIC PDP 8M, 8IE IN SHORT BOX WITH MTB E
PDP8M-0E	8M RACK MOUNTABLE, 8M, 115V, 4K WITH KC8-ML-KL8-E IN 12 IN BOX
PDP8M-0D	8M RACK MOUNTABLE, 8M, 230V, 4K WITH KC8-ML-KL8-E IN 12 IN BOX
PDP8M-0E	PDP8M-0E WITH 8K
PDP8M-0F	PDP8M-0D WITH 8K
PDP8M-MC	PDP8M RACK MOUNTABLE, 115V, 4K WITH KC8-M IN 12 IN BOX
[illegible]	[illegible] RACK MOUNTABLE, 230V, 4K WITH KC8-M IN 12 IN BOX
PDP8M-1E	PDP8M-MC WITH 8K
PDP8M-1F	PDP8M-MD WITH 8K

SEE SHEET #4 FOR LEGEND #2 (ADDITIONAL VARIATIONS)



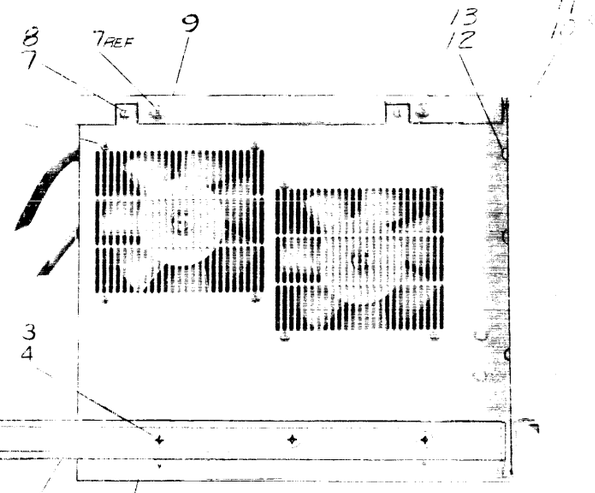
SECTION A-A
LEGEND NONE

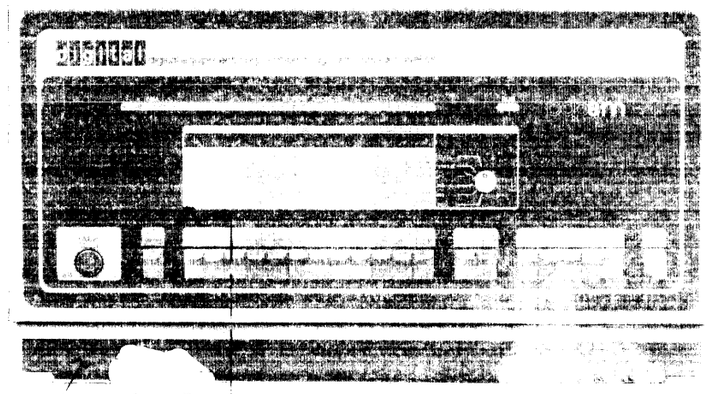
1. [illegible] TO TAB LABELLED "BLUE" ON 5409808 (FRONT PNL. CONT. BD) WHEN USING KC8-ML (ITEM #10) OR TO TAB J2 ON 5409705 WHEN USING KC8-M (ITEM #11 BD)
2. FOR PARTS LIST SEE DWG NO. C-PL-PDP8M-0-0.
3. CONNECT P1 OF THE H9191 (ITEM #21) TO [illegible] OF THE KC8 SWITCH HARNESS (ITEM #23) WHEN USING THE KC8-ML (ITEM #10), OR TO J1 ON THE OPERATOR'S PANEL BOARD (5409705) WHEN USING THE KC8-M (ITEM #11).
4. MOUNTING HARDWARE VARIATION FOR ITEM 16 (FAN) ARE AS FOLLOWS

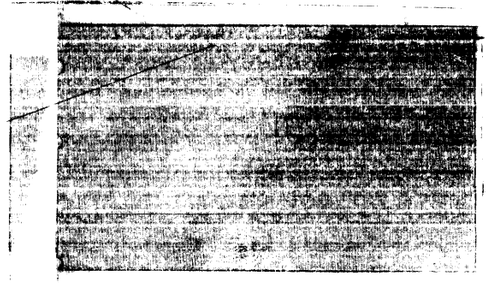
ITEM #16 (FAN)	MOUNTING HARDWARE	
	ITEM NO.	DISCRIPTION
1205033-1 SOTRON	41	MOUNTING CLIP
	5	#6-32 × 5/8 SCREW
1205033-2 TMC	42	#8-32 × .38 SELF TAPPING SCR

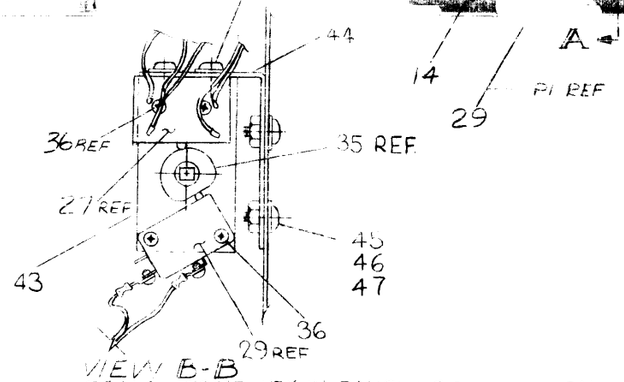
5. SHEETS 1,2 & 3 ARE FOR VARIATIONS SHOWN IN LEGEND #1. SHEETS 4,5 & 6 ARE FOR VARIATIONS SHOWN IN LEGEND #2.

NOTES CONTINUED ON SHEET #4









VIEW B-B
SHELF HOME KEY IN PANEL LOCK POSITION

REVISIONS							
CHK	CHANGE NO						
	PDP8M-00008						
P GARDNER							
	PDP8M-00011	B					
P.GARDNER							
	PDP8M-00013	C					
P.GARDNER							
	PDP8M-00014	D					
P.GARDNER							
	PDP8M-00016	E					
P GARDNER							
	PDP8M-00017	H					
P GARDNER							
	PDP8M-00018	J					
P GARDNER							

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDP 8M		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS ANGLES
XXX ±.005
XX ±.02
X ±.1
REMOVE BURRS AND SHARP CORNERS SURFACE FINISH
MATERIAL
FINISH

DRN DATE
CHK'D DATE
ENG DATE
PROJ. ENG DATE
PROJ. DATE
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

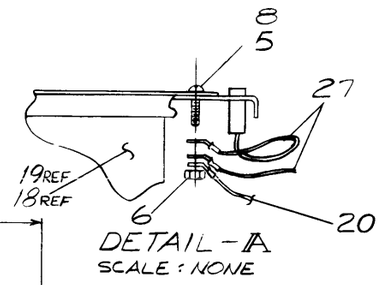
TITLE: UNIT ASSY PDP 8M

SIZE D | CODE | NUMBER PDP 8M-0-0 | REV J

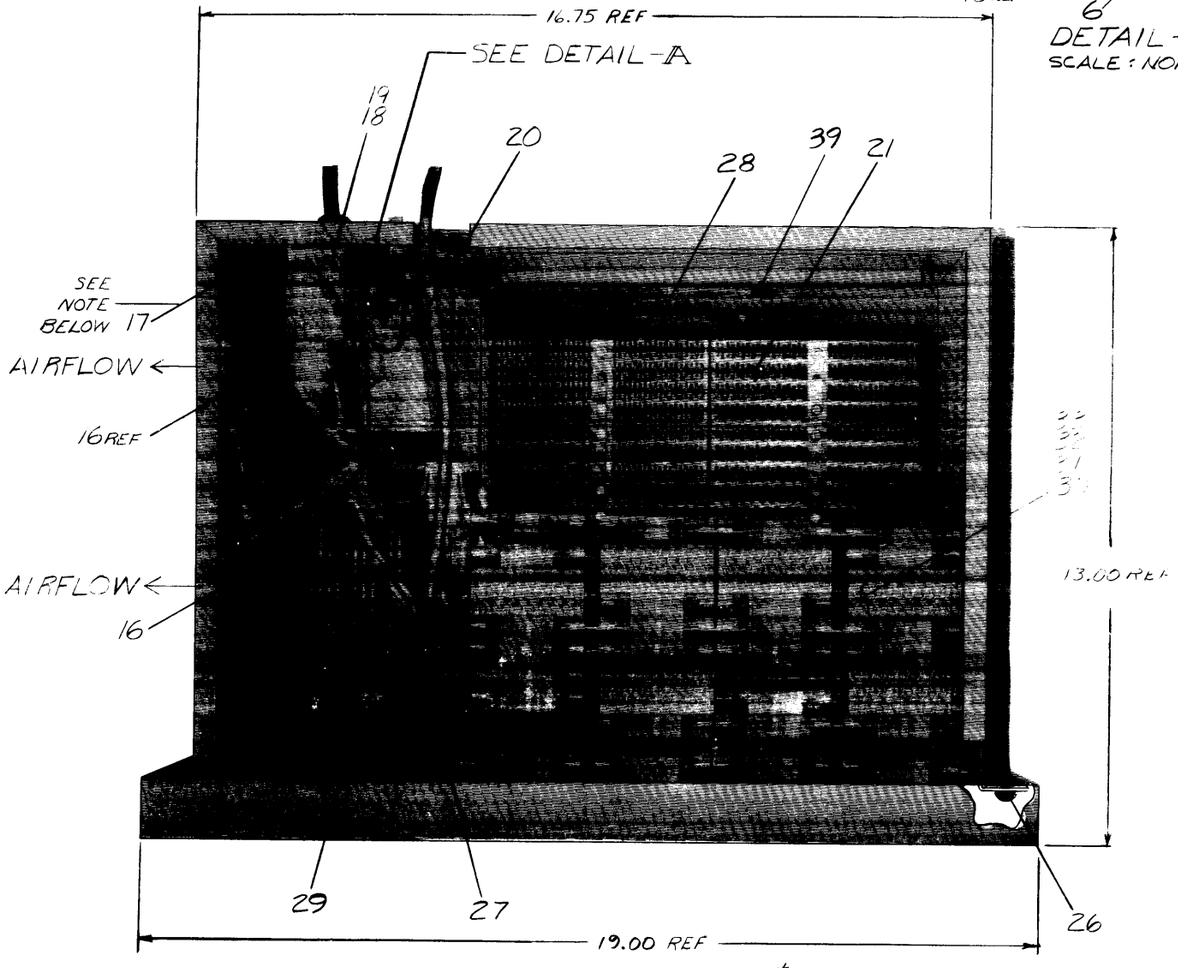
SCALE SHT

FORM NO DRD 100-A

8 7 6 5 4 3 2 1

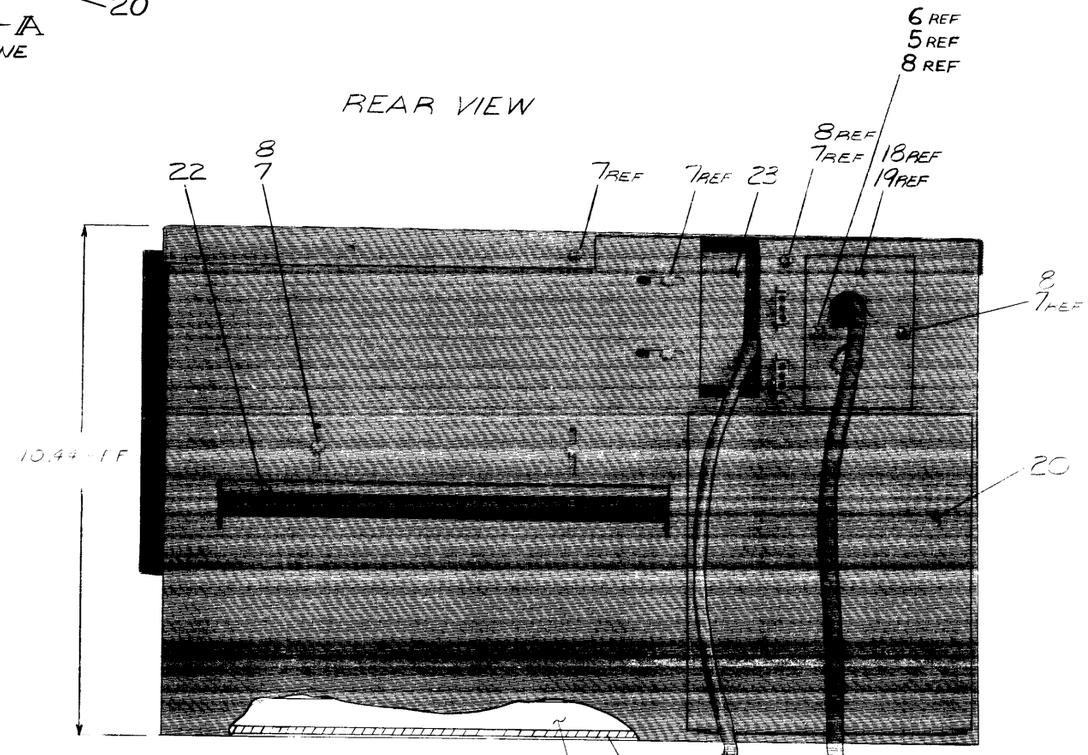


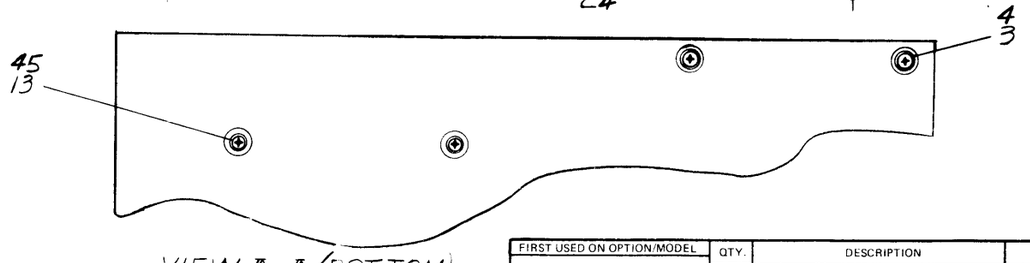
DETAIL-A
SCALE: NONE



TOP VIEW WITH COVER (ITEM #9), CABLE TROUGH (ITEM #17) & PORTION OF LOGIC REMOVED.

REAR VIEW





VIEW A-A (BOTTOM)
SCALE: NONE

REVISIONS	REV	CHANGE NO	CHK

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

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS: XXX ± .005, XX ± .02, X ± 1 — ANGLES: ± .50
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH

DRN		DATE 1/4/72
CHK'D		DATE 1-10-72
ENG		DATE 1-10-72
PROJ ENG		DATE 1-10-72
PROD		DATE 1-8-72

NEXT HIGHER ASSY.
SCALE
SHEET 2 OF 6

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

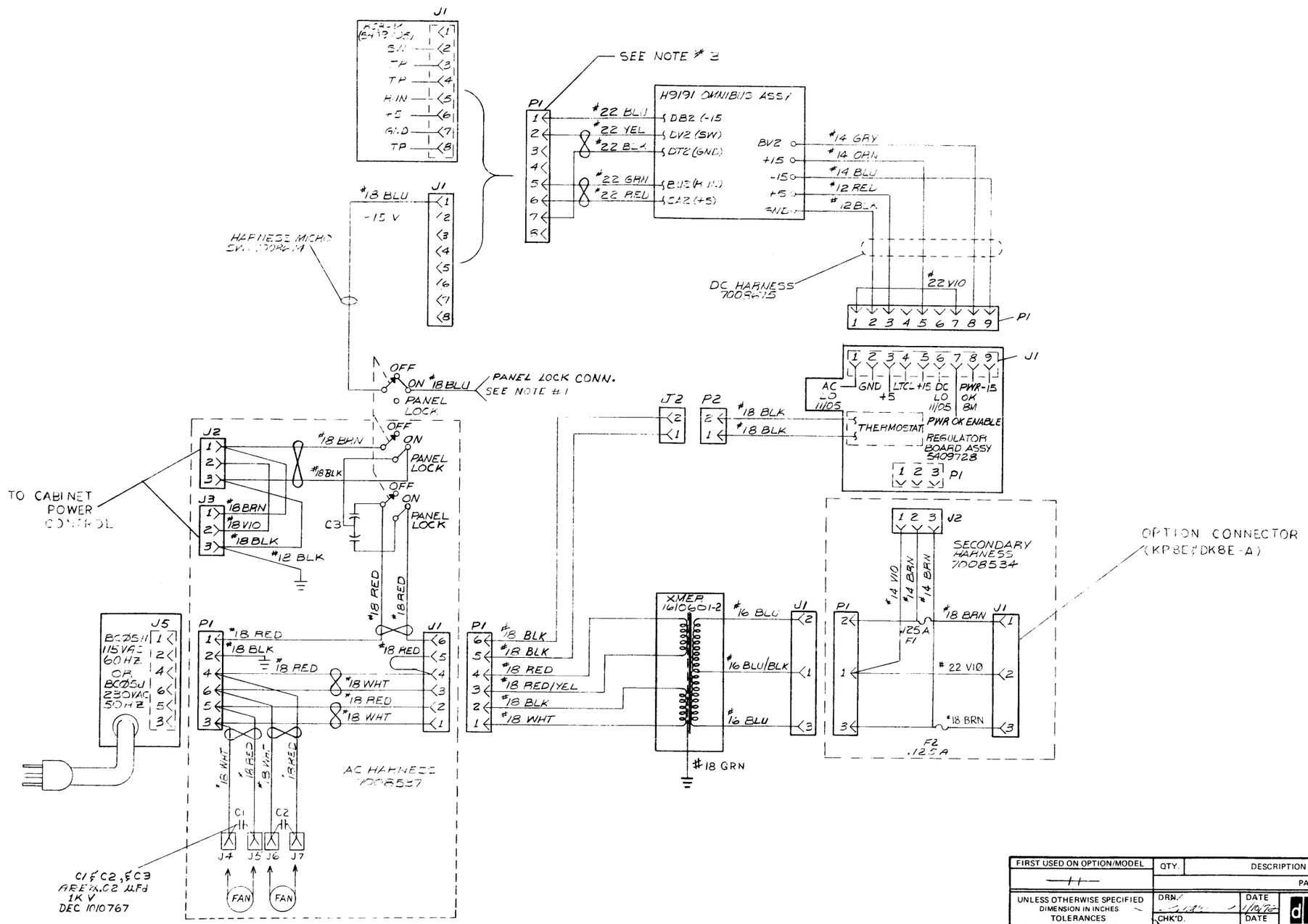
TITLE: UNIT ASSY PDP8M

SIZE	CODE	NUMBER	REV.
D	UA	PDP 8M-Ø-Ø	-

DIST.

DEC FORM NO DRD 100-A

8 7 6 5 4 3 2 1
A B C D



REVISIONS	REV
CHANGE NO	
CHK	

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

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

DRN. — DATE 1/10/78
CHK'D. — DATE
ENG. — DATE
PROJ. ENG. — DATE
PROD. — DATE
NEXT HIGHER ASSY. —
SCALE
SHEET 3 OF 6

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: UNIT ASSY PDP 8M

SIZE	CODE	NUMBER	REV.
D	UA	PDP 8M-Ø-Ø	J

DIST.

DEC FORM NO DRO 100-A

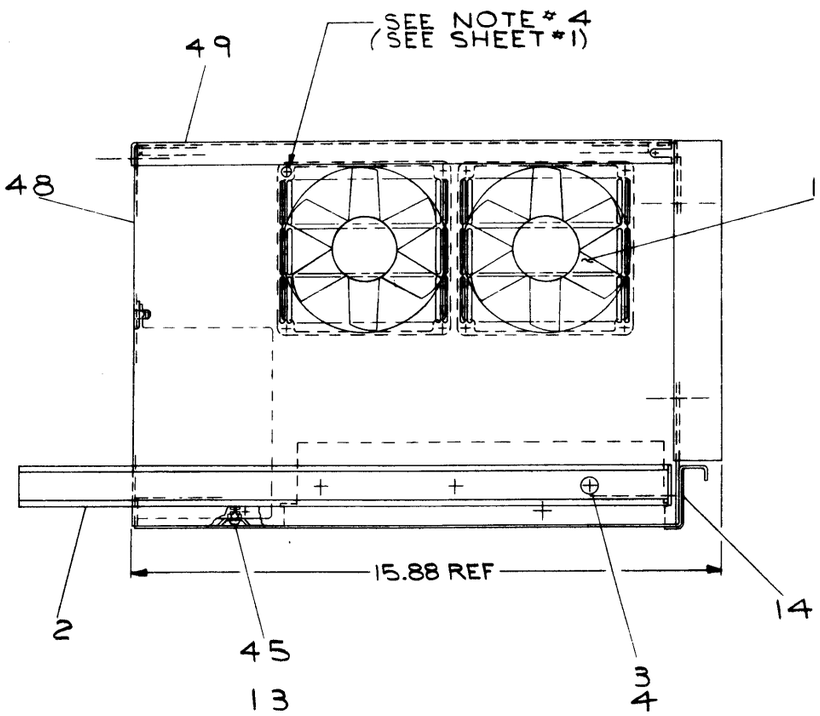
LEGEND	
NUMBER	VARIATION
PDP8M-DH	PDP8M-DC IN 15 INCH BOX
PDP8M-DJ	PDP8M-DD IN 15 INCH BOX
PDP8M-DK	PDP8M-DE IN 15 INCH BOX
PDP8M-DL	PDP8M-DL IN 15 INCH BOX
PDP8M-MH	PDP8M-MC IN 15 INCH BOX
PDP8M-MJ	PDP8M-MD IN 15 INCH BOX
PDP8M-MK	PDP8M-ME IN 15 INCH BOX
PDP8M-ML	PDP8M-MF IN 15 INCH BOX

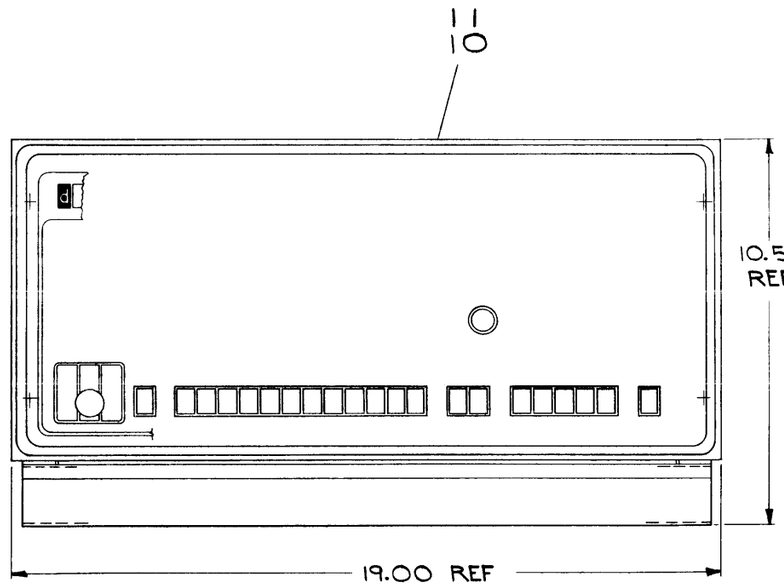
NOTES: (CONT)

6. THE FOLLOWING CHART SHOWS THE CONNECTIONS ON THE BACK OF THE LINE SET (ITEM #54 OR 58)

LINE SET PLUG NO	FROM SOCKET NO	DISCRIPTION	ITEM NO
P1	J1	AC HARNESS	54
P2	J1	POWER SUPPLY THERMOSTAT	56
P3	J3	POWER SUPPLY TRANSFORMER ASSY	56
P4	J3	AC HARNESS	54

7. FOR PDP8/M ASSEMBLY PROCEDURE SEE DWG A-SP-PDP8/M-0-7





FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDP8M		PARTS LIST		

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

DRN. J. FERGUSON	DATE 2/26/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. J. CAHILL	DATE 2/27/73	
ENG. P. GARDNER	DATE 2/28/73	
PROJ. ENG. P. GARDNER	DATE 2/28/73	
PROD. R.K. ALLEN	DATE 2/28/73	

TITLE: UNIT ASS'Y. PDP8M

NEXT HIGHER ASSY: B-DD-PDP8M-Ø

SCALE —

SHEET 4 OF 6

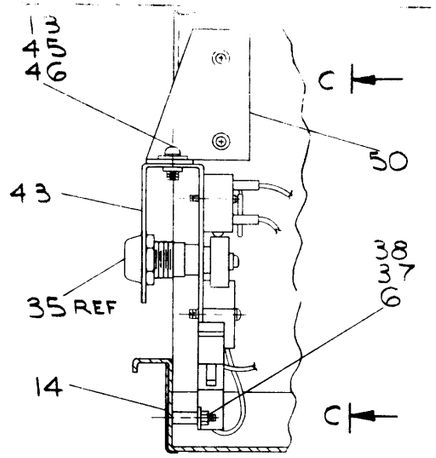
SIZE	CODE	NUMBER	REV.
D	UA	PDP8M-Ø-Ø	J

DIST

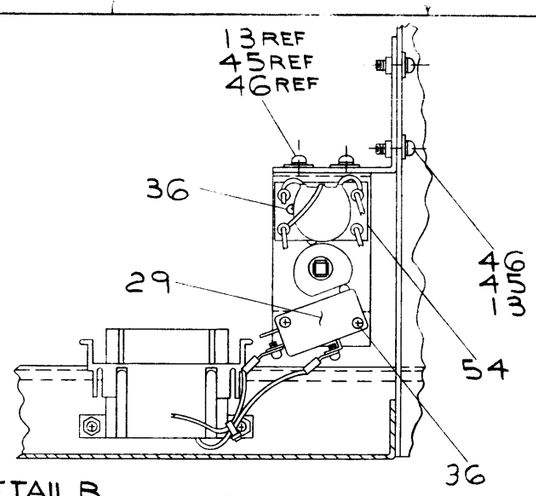
REV	REVISIONS	CHK
J	CHANGE NO	

BRUNING 40-107-1598

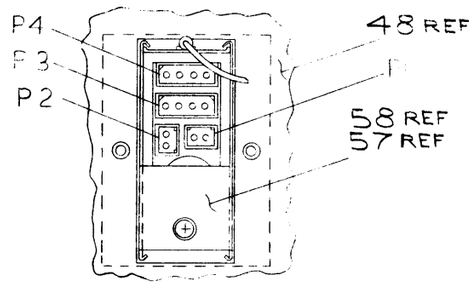
DEC FORM NO. THRU 100-A



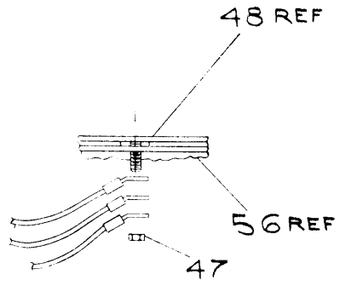
SECTION B-B
SCALE: NONE



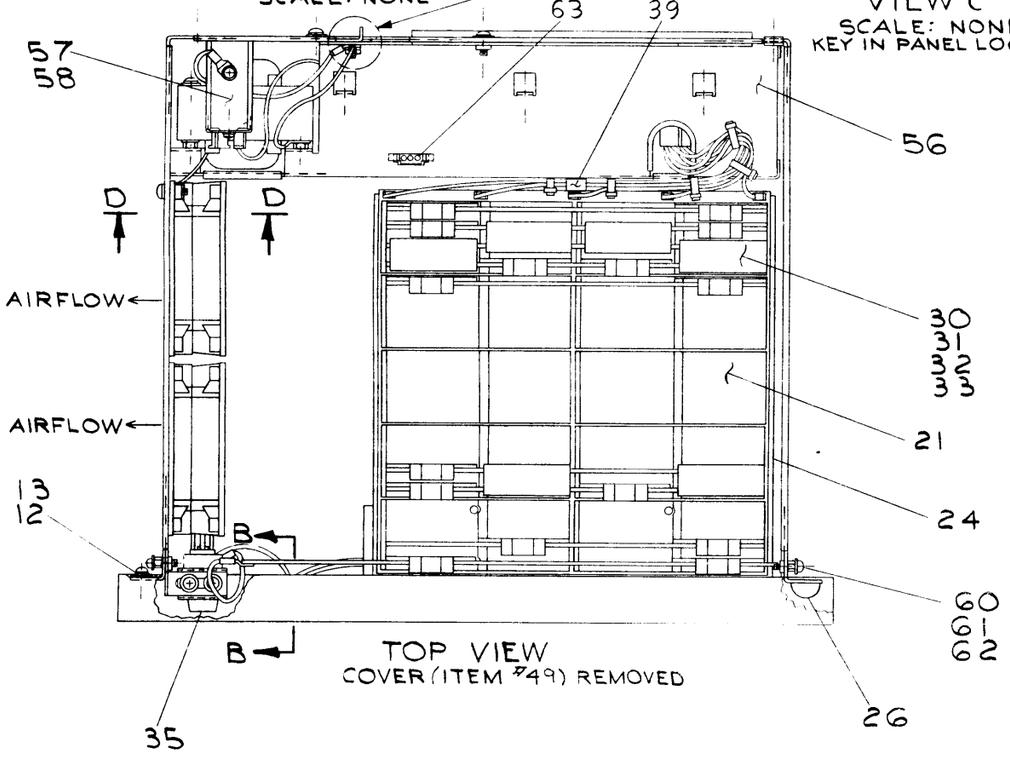
VIEW C-C
SCALE: NONE
KEY IN PANEL LOCK POSITION



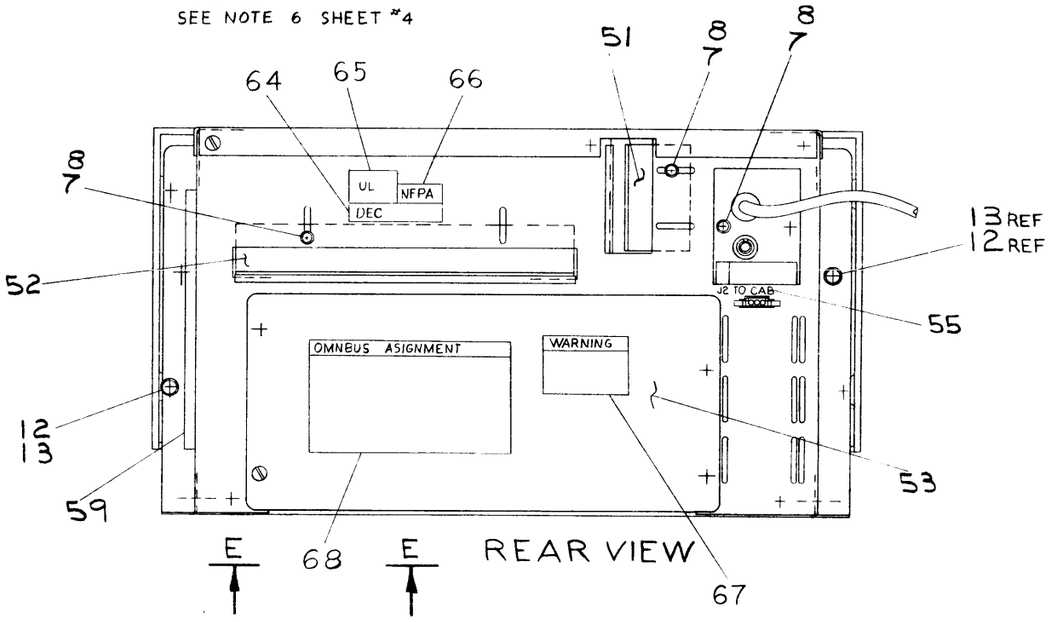
VIEW D-D
SCALE: NONE
SEE NOTE 6 SHEET #4

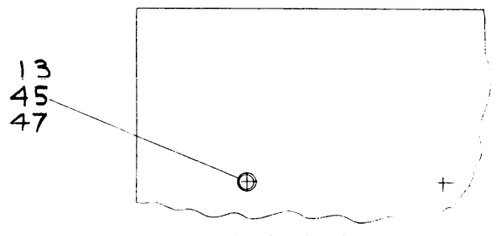


DETAIL-B
SCALE: NONE



TOP VIEW
COVER (ITEM #49) REMOVED





VIEW E-E
(BOTTOM)
SCALE: NONE

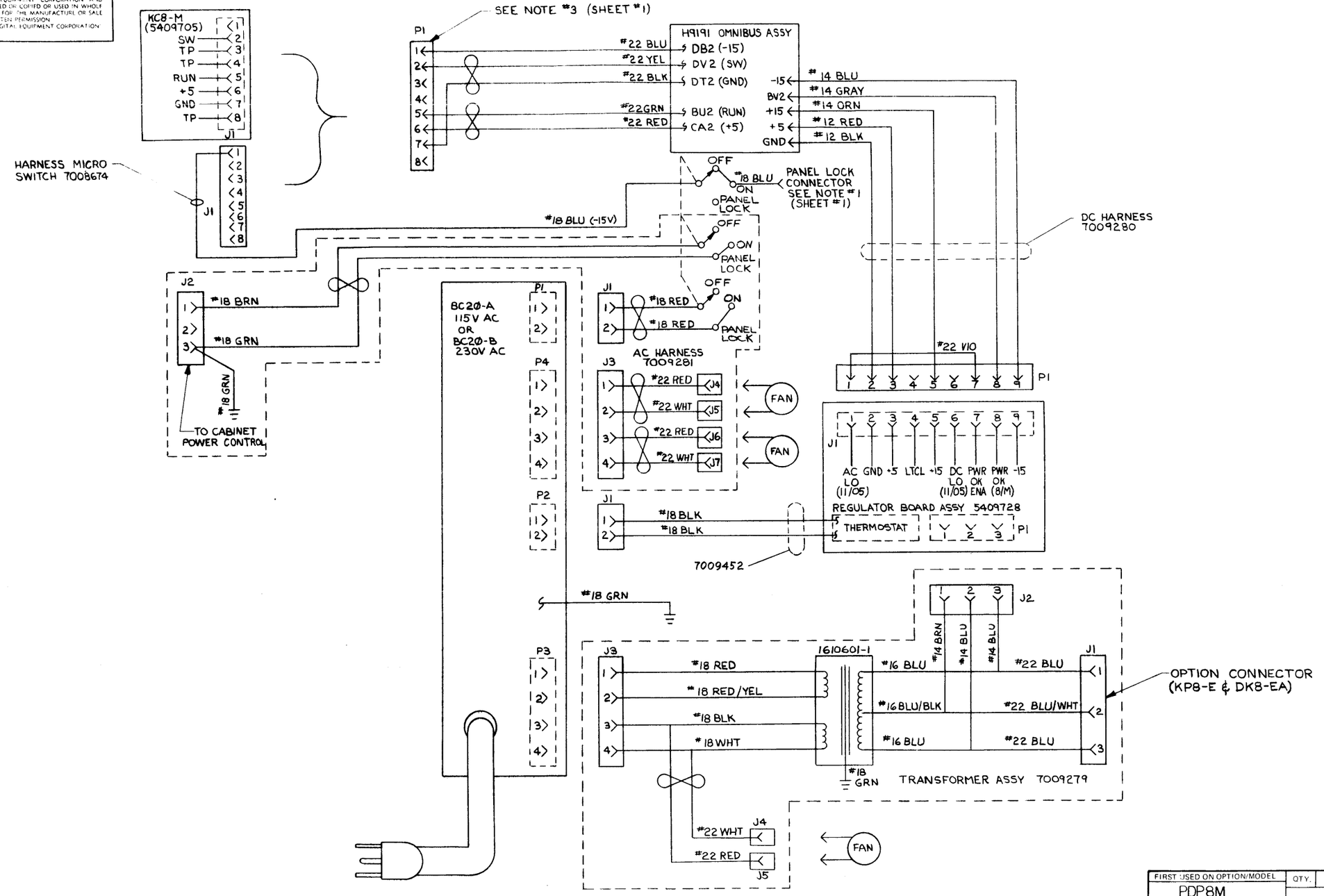
FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDP8M		PARTS LIST		

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

DRN J.FERGUSON	DATE 2/26/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D J.CAHILL	DATE 2/27/73	
ENG P.GARDNER	DATE 2/28/73	TITLE: UNIT ASS'Y. PDP8M
PROJ. ENG P.GARDNER	DATE 2/28/73	
PROD. R.K.ALLEN	DATE 2/6/73	
NEXT HIGHER ASSY: B DD-PDP8M -0		SIZE D, CODE UA, NUMBER PDP8M -0-0, REV J
SCALE —		
SHEET 5 OF 6		DIST

REVISIONS: REV | CHANGE NO | CHK

HRUNING 40 107 15968



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8M		PARTS LIST		

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

DRN	D.SULLIVAN	DATE 2/26/73
CHK'D	J.CAHILL	DATE 2/27/73
ENG	R.GARDNER	DATE 2/28/73
PROJ. ENG.	R.GARDNER	DATE 2/28/73
PROD	R.K ALLEN	DATE 2/28/73

digital EQUIPMENT CORPORATION

MATERIAL
FINISH
NEXT HIGHER ASSY. B-DD-PD8M-0
SCALE
SHEET 6 OF 6

TITLE: UNIT ASSY PDP8M

SIZE	CODE	NUMBER	REV.
D	UA	PDP8M 0 0	J

DIST.

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	PDP8M-DC	PDP8M-DD	PDP8M-DE	PDP8M-DF	PDP8M-MC	PDP8M-MD	PDP8M-ME	PDP8M-MF	PDP8M-DH	PDP8M-DJ	PDP8M-DK	PDP8M-DL	PDP8M-ME	PDP8M-MJ	PDP8M-MK	PDP8M-ML
1	E-IA-7409379-0-0	CHASSIS	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
2	D-MD-7408861-0-0	SLIDE,CHASSIS 22 IN TRAVEL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3	9006071-3	SCR PHL HD TRUSS #10-32 X .38	10	10	10	10	10	10	10	10	6	6	6	6	6	6	6	6
4	9006636	WASHER INT TOOTH LOCK #10	10	10	10	10	10	10	10	10	6	6	6	6	6	6	6	6
5	9007793-1	SCR PHL HD PAN #6-32 X ...	9	9	9	9	9	9	9	9	8	8	8	8	8	8	8	8
6	9006560	NUT KEPS #6-32 X 5/16 X 5/32	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2
7	9006020-1	SCR PHIL HD PAN #6-32 X 25	13	13	13	13	13	13	13	13	6	6	6	6	6	6	6	6
8	9007649	WASHER EXT TOOTH LOCK #6	8	8	8	8	8	8	8	8	6	6	6	6	6	6	6	6
9	D-IA-7409380-0-0	COVER	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
10	D-UA-KC8-ML-Ø	CONSOLE ASSY PROGRAMMER KC8-ML	1	1	1	1	-	-	-	-	1	1	1	1	-	-	-	-
11	D-UA-KC8-M-Ø	CONSOLE ASSY OPERATOR KC8-M	-	-	-	-	1	1	1	1	-	-	-	-	1	1	1	1
12	9006035-1	SCR PHIL HD PAN #8-32 X .25	6	6	6	6	4	4	4	4	6	6	6	6	4	4	4	4
13	9006634	WASHER INT TOOTH LOCK #8	12	12	12	12	10	10	10	10	16	16	16	16	14	14	14	14
14	C-MD-7407449-0-0	COVER STRIP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
15	C-IA-7409424-0-0	FILTER SIDE	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
16	1205033	FAN BOXER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
17	D-IA-7409419-0-0	BRKT CABLE TROUGH	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
18	C-UA-BCØ5H-Ø-Ø	LINE SET 115V 7 AMP	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-
19	C-UA-BCØ5J-Ø-Ø	LINE SET 230V 5 AMP	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-
20	D-AD-7008714-0-0	POWER SUPPLY ASSY	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
21	D-UA-H9191-Ø-Ø	OMNIBUS ASSY (H9191)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
22	C-IA-7409377-0-0	STRAIN RELIEF EXPANDER	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
23	C-IA-7409387-0-0	STRAIN RELIEF CABLE	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
24	A-PS-1210302-0-0	FOAM PAD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
25																		
26	9008525	BUMPER RUBBER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
27	D-IA-7008537-0-0	HARNESS A.C.	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
28	D-IA-7008675-0-0	HARNESS D.C.	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-
29	C-IA-7008674-0-0	HARNESS MICRO SW	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
30	A-ML-KK8-E	CENTRAL PROCESSOR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
31	A-ML-MM8-E	4K CORE MEMORY	1	1	-	-	1	1	-	-	1	1	-	-	1	1	-	-
32	A-ML-KL8-E	CONSOLE TTY CONT	1	1	1	1	-	-	-	-	1	1	1	1	-	-	-	-
33	A-ML-MC8-EJ	8K MEMORY & CONTROL	-	-	1	1	-	-	1	1	-	-	1	1	-	-	1	1
34																		
35	1210789	LOCK ASSY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
36	9006014-1	SCR PHIL HD PAN #4-40 X .62	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
37	9006800	SPACER ROUND AL. ¼ X ¼ X #6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
38	9006025-2	SCR PHIL FLAT HD #6-32 X .62	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
39	9008442	STRAIN RELIEF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
40																		
41	9008202	MTG CLIP	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
42	9006121	#8-32 X 3/8 LG SELF TAPPING SCREW	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
43	C-IA-7410750-0-0	BRACKET KEY SWITCH	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

REVISIONS	CHANGE NO.	CHK	REV.
	PDP8M-17	J. FERGUSON 3-6-73	H
	PDP8M-18	P. GARDNER 3-7-73	J
		P. GARDNER 5-17-73	
		P. GARDNER 5-16-73	

FIRST USED ON OPTION/MODEL: PDP8M

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

		DATE
DRN.	D.SULLIVAN	3/5/73
CHK'D.	J.CAHILL	3/6/73
ENG.	P. GARDNER	3/7/73
PROJ. ENG.	P. GARDNER	3/7/73
PROD.	R.K.ALLEN	3/7/73

NEXT HIGHER ASSY. B-DD-PDP8M-Ø
SCALE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UNIT ASSY PDP8M

SIZE	CODE	NUMBER	REV.
C	PL	PDP8M-Ø-Ø	J

DIST.

SIZE C CODE PL NUMBER PDP8M-Ø-Ø REV. J

DEC FORM NO. DRC 110

ITEM NO.	DWG NO. PART NO.	DESCRIPTION	PDP8M-DC	PDP8M-DD	PDP8M-DE	PDP8M-DF	PDP8M-DG	PDP8M-DH	PDP8M-DJ	PDP8M-DK	PDP8M-DL	PDP8M-DM	PDP8M-DN	PDP8M-DP	PDP8M-DR	PDP8M-DS
44	C-MT-7410754-0-0	BRACKET SUPPORT	1	1	1	1	1	1	1	1	--	-	-	-	-	-	-	-
45	9006037-1	SCR PHL HD PAN #8-32 X .38	8	8	8	8	8	8	8	8	10	10	10	10	10	10	10	10
46	9006666	WASHER FLAT .500 OD X .187 ID X .032 THK	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
47	9006563	NUT KEPS #8-32	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
48	B-IN-7410740-0-0	CHASSIS	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
49	D-IN-7410751-0-0	COVER TOP	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
50	B-IN-7410753-0-0	BRACKET SUPPORT	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
51	C-IN-7410749-0-0	STRAIN RELIEF CABLE	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
52	C-IA-7410752-0-0	STRAIN RELIEF EXPANDER	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
53	D-IN-7410748-0-0	COVER REAR	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
54	D-IN-7009281-0-0	HARNESS AC	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
55	A-DC-7410910-0-0	CHASSIS DECAL	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
56	D-SD-7009282-0-0	POWER SUPPLY ASSY	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
57	D-UA-BC20-A-0	LINE SET 115V 7A	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-
58	D-UA-BC20-B-0	LINE SET 230V 4A	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1
59	C-IA-7410768-0-0	FILTER SIDE	...	...	...	...	...	...	...	...	1	1	1	1	1	1	1	1
60	9006022-1	SCR PHL PAN HD #6-32 X .38	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2
61	9006633	WASHER INT TOOTH LOCK #6	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2
62	9006793	SPACER 187 DIA X 187 LG X #6 HOLE	-	-	-	-	-	-	-	-	2	2	2	2	2	2	2	2
63	1209351-03	SOC HOUSING MATE-N-LOK	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
64	9008141	SERIAL TAG	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
65	A-DC-5309414-0-0	DECAL UL APPROVAL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
66	A-DC-5309413-0-0	DECAL NFPA TYPE II	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
67	A-DC-7409651-0-0	DEC WARNING	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1
68	DEC-4-1096B	OMINBUS ASSIGNMENT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

REVISIONS

REV.	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL: PDP8M

UNLESS OTHERWISE SPECIFIED

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

MATERIAL

FINISH

DRN	D.SULLIVAN	DATE 3/5/73
CHK'D	J.CAHILL	DATE 3/6/73
ENG	P.GARDNER	DATE 3/7/73
PROJ. ENG.	P.GARDNER	DATE 3/7/73
PROD.	R.K.ALLEN	DATE 3/7/73

NEXT HIGHER ASSY. B DD PDP8M 0

SCALE

SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: UNIT ASSY PDP8M

SIZE	CODE	NUMBER	REV.
C	PL	PDP8M-0-0	J

DIST

DEC FORM NO. DRC 110

REV J
NUMBER PDP8M-0-0
SIZE CODE C PL

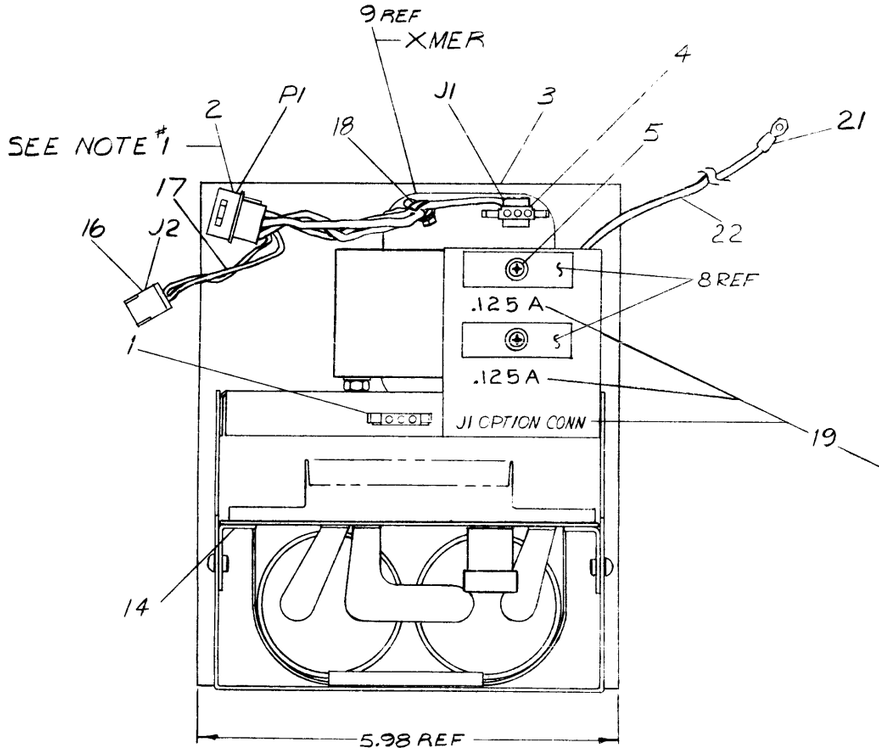
WIRE ID

ITEM NO.	DESCRIPTION AWG	COLOR	FROM: CONNECTOR	WITH	TO: CONNECTION	WITH
9		BLU	XMER	—	J1 - 3	12
↓		BLU	↓	—	J1 - 2	12
		~~BLK~~		—	J1 - 1	12
		~~RED~~		—	P1 - 3	13
		~~YEL~~ RED		—	P1 - 4	13
		WHT		—	P1 - 1	13
9		BLK	XMER	—	P1 - [illegible]	
17	18	BLK	J2 - 1	12	P1 - 5	13
17	18	BLK	J2 - 2	12	P1 - 6	13
22	18	GRN	XMER	SOLDER	—	21

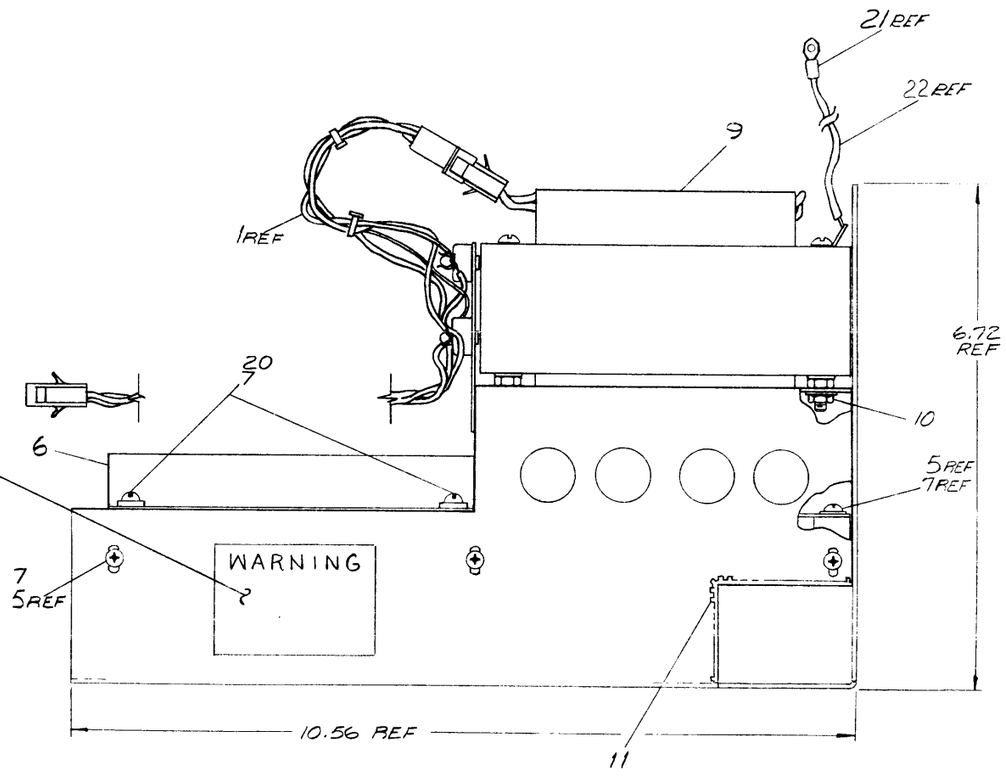
} LENGTH OF WIRE TO BE 4 IN ± 1/2 IN

NOTES:

1. LENGTH OF WIRES TERMINATING TO PS ITEM "2," ARE TO BE 8 INCHES ± 1/2 INCH.
2. COMPONENTS J1, J2, & P1, TO BE LABELED WITH COMPONENT IDENTIFIERS, USING [illegible] MARKER.



END VIEW WITH WIRES FROM ITEM #1 REMOVED



A/R	WIRE 18 AWG GREEN	9107360-55	22
1	TERMINAL SOLDERLESS	9007927	21
4	SCR, PHIL PAN HD. #6-32X.50	9006024-1	20
1	DECAL	A-DC-7409651-0-0	19
1	TIE WRAP PADLIT SST-1B	9007031	18
A/R	WIRE 18 AWG BLK	9107360-00	17
1	CONN MATE-N-LOK (FEM)	1210821-02	16
1	STRAIN, RELIEF	9008442	15
6	BRKT, SUPPORT ETCH BD	C-IA-7409375-0-0	14
6	CONTACT, MATE-N-LOK (MALE)	1209372-01	13
5	CONTACT, MATE-N-LOK (FEM)	1209379-01	12
A/R	GROMMET	9007621	11
4	NUT, KEP #8-32	9006563	10
1	XMER (TRANSFORMER)	1610601-02	9
2	FUSE 1/8 AMP (3AG) S.B.	9008527	8
12	WASHER, INT TOOTH LOCK #6	9006633	7
1	REGULATOR BD ASSY	E-IA-5409728-0-0	6
10	SCR, PHIL PAN HD 6-32 X.25	9006020-1	5
1	CONN, MATE-N-LOK 3 CKT	1209350-03	4
1	CHASSIS, P.S.	D-IA-7409376-0-0	3
1	CONN, MATE-N-LOK 6 CKT	1209351-06	2
1	HARNESS, SECONDARY	D-IA-7008534-0-0	1

ITEM NO.	QTY.	DESCRIPTION	PART NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP 8 M

CAUTION
CHANGE COULD AFFECT U.L. LISTING

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

DRN. — DATE
CHK'D. — DATE
ENG. — DATE 1-1-72
PROJ. ENG. — DATE
PROD. — DATE
NEXT HIGHER ASSY. D-IA-PDP8M-A-A
SCALE NONE
SHEET OF 1

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: POWER SUPPLY ASSY

SIZE D | CODE AD | NUMBER 7008714-0-0 | REV C
DIST.

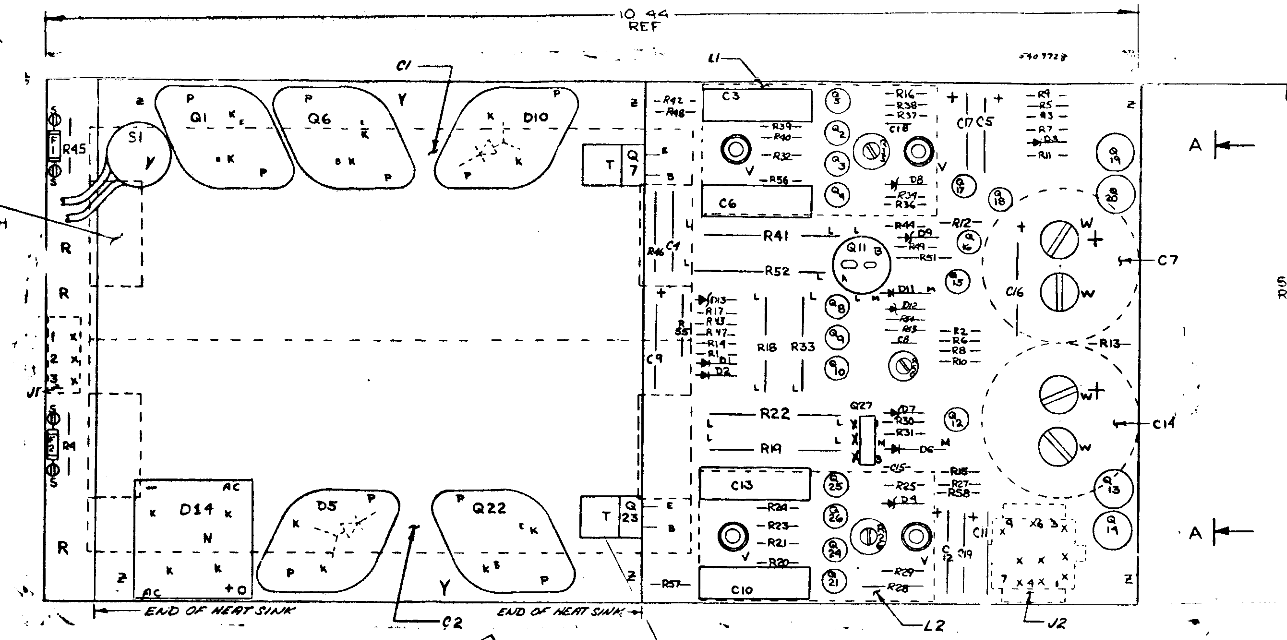
REVISIONS	CHANGE NO.	CHK	REV
	7008714-00001	P. GARDNER	A
	PI P8M-00013	P. GARDNER	B
	PDP8M-00014	P. GARDNER	C

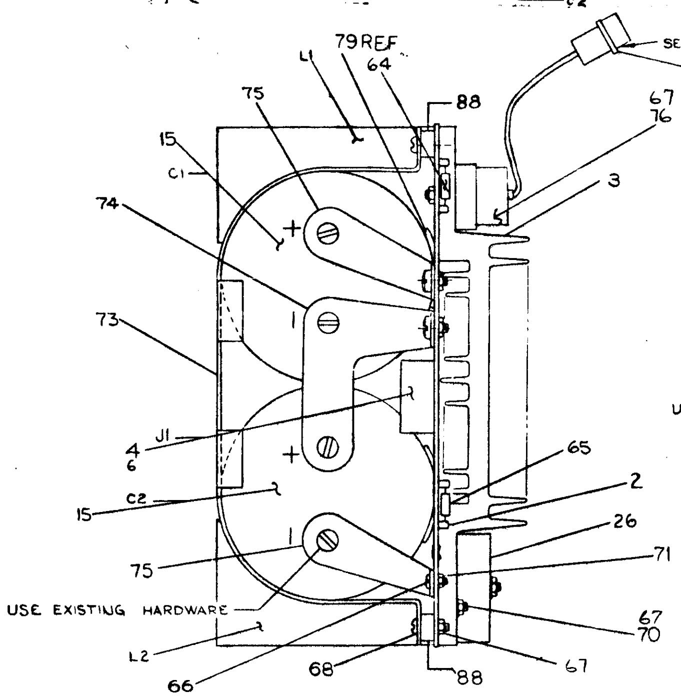
DEC FORM NO. D3D 100-A

NOTES:

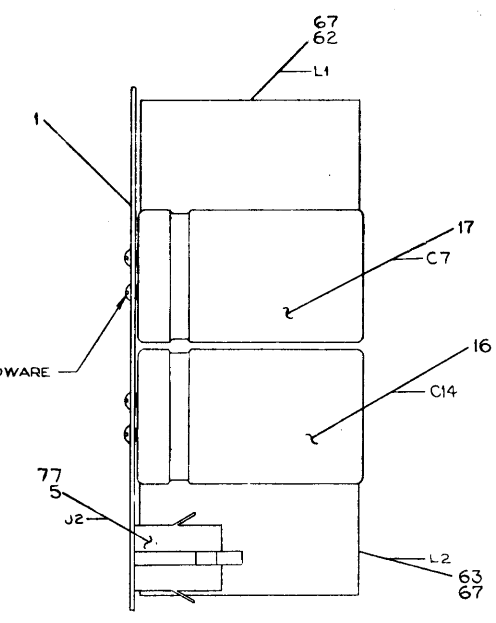
1. APPLY ITEM #8 (THERMAL COMPOUND) BETWEEN TRANSISTOR AND HEAT SINK FOR Q1, Q6, Q7, Q22, Q23, D5, D10, D14 & S1.

2. TRIM LEADS ON ITEM #76 (THERMOSTAT) TO [illegible] INCH AND ATTACH ITEM #84 (PINS) AND ITEM #83 (HOUSING) AS SHOWN.





VIEW B-B



VIEW A-A

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2		#6 HOLE X 1/8 LG. SPACER	[illegible]	88
				87
1	Q11	XSTR [illegible]32A X 135	[illegible]	86
2	R9, R13	RES 470 1/4 W 5%	[illegible]	85
2		PINS MALE CRIMP	[illegible]	84
1	J3	MATE-N-LOCK CONNECTOR	[illegible]	83
				82
1	D12	DIODE, ZENER, 5.7 V, 2%	1111205	81
1	C12, C19	CAP 2.2 µf 35V 10% S.TANT	1002431	80
4		1" LG FOAM TAPE	9009087-1	79
2	R39, R40	RES 5.1 1/4 W 5%	1309422	78
9		PIN FEMALE	1209456	77
1	S1	THERMOSTAT SPST	1210824	76
2		CONTACT, CAPACITOR	C-MD-5309781-0-0	75
1		CONTACT, COMMON CAPACITOR	C-MD-5309779-0-0	74
1		HOLDER, CAPACITOR	C-IA-5310126-0-0	73
[illegible]				72
5		NUT KEPS 4-40	9006557	71
1		SCR PHL PAN HD 6-32-3/4 LG.	9006026-1	70
2		SCR PHL PAN HD 4-40 X 1/2 LG	9006013-4	69
12		SCR. PHL HD. 6-32 X 9/16 LG	9007793-1	68
18		NUT KEPS #6-32 X 1/4	9008185	67
3		SCR PHL PAN HD 4-40 X 5/16 LG	9006010-4	66
1	F2	FUSE 10 AMP, PICO	1210929-01	65
1	F1	FUSE 15 AMP, PICO	1210929	64
1	L2	CHOKE 100 µH 10A MMC 4445	1611031	63
1	L1	CHOKE 00 µH 20A MMC 4289	1610717	62
1	Q27	XSTR MAC 11-3	1510765	61
1	Q1	XSTR MJ 2500	1511282	60
2	Q7, Q23	XSTR D45 H8/B	1510708-2	59
10	Q2, Q3, Q5, Q8, Q9, Q15, Q16, Q17, Q18, Q26	XSTR XA55	1510706	58
6	Q4, Q10, Q12, Q21, Q24, Q25	XSTR XA05	1510705	57
2	Q6, Q22	XSTR 2N5302	1510196	56
2	Q14, Q19	XSTR 2N1309	1501311	55
2	Q13, Q20	TRANSISTOR 2N1308	1500583	54
1	R41	RES .020, 7W, 3%	1310709-2	53
				52
1	R22	RES .2 5W 5%	1309884	51
3	R26, R35, R50	POT 00, 1/2 W 20% 62 PR	1309150-05	50
1	R52	RES .1 5W 5% WW	1305872	49
1	R33	RES 39 2W 5% WW	1310868	48
1	R10	RES 7.5K 1/8W 1% MF	1305322	47
2	R25, R34	RES 383 1/8 W 1% MF	1305125	46
6	R2, R5, R6, R11, R12, R3	RES 10K 1/8 W 1% MF	1303312	45
4	R8, R1, R7, R14	RES 1K, 1/8W, 1% MF	1303114	44
2	R27, R36	RES 464, 1/8 W, 1% MF	1303047	43
1	R51	RES 100, 3%, PTC	1310927-1	42
1	R49	RES 147, 1/8 W, 1% MF	1302874	41
				40
				39
2	R24, R47	RES 68K 1/4W, 5%	1301327	38
5	R20, R21, R30, R48, R54	RES 10 1/4 W, 5%	1301317	37
4	R38, R43, R56, R57	RES. 10K 1/4 W 5%	1300979	36
4	R28, R46, R4, R45	RES 4.7K 1/2W 5%	1300445	35
1	R55	RES 2.7K, 1/2W, 5%	1300425	34
1	R19	RES .06 5W 3% WW	1310376-02	33
2	R29, R37	RES 1K 1/4 W 5%	1300365	32
3	R44, R16, R58	RES 330 1/4 W 5%	1300295	31
1	R18	RES 100, 2W, 5%	1302080	30
7	R15, R17, R23, R31, R32, R42, R53	RES 100, 1/4 W 5%	1300229	29
1	D7	DIODE IN5248B 18V ZENER	1102766	28
2	D5, D10	DIODE 20 AMP FAST RECOVERY RECT	1110715	27
1	D14	DIODE BRIDGE RECTIFIER	1110714	26
1	D3	DIODE 5.1 V ZENER	1110925	25
2	D6, D11	DIODE IN5624	1110420	24
2	D1, D2	DIODE IN4004	1105796	23
2	D4, D8	DIODE IN753A 6.2 V ZENER	1102421	22
1	D9	DIODE AZ5 2.4 V ZENER	1101938	21
1	D13	DIODE IN748A 3.9 V ZENER	1100122	20
1	C18	CAP 680 PF, 100V, DM	1000026	19
1	C9	CAP 20 µf 60V 5% TANT	1010716	18
1	C7	CAP 6000 µf 10V -10+75% S TANT	1010704	17
1	C14	CAP 3,000 µf 25V -10+75% S TANT	1010703	16
2	C1, C2	CAP 24,000 µf 50V -10% +75%	1010702	15
1	C16	CAP 22 µf 35V 20% S TANT	1002433	14
4	C3, C6, C10, C13	CAP 1 µf 100V 10%	1011032	13
2	C8, C15	CAP .22 µf, 50V	1010274	12
2	C5, C17	CAP 6.8 µf 35V 10% S TANT	1005306	11
2	C4, C11	CAPACITOR .033 µf 100V 10% MYLAR	1000050	10
				9
A/R		THERMAL COMPOUND	9008268	8
				7
				6
1	J2	MATE-N-LOCK CONNECTOR	1209350-09	5
1	J1	MATE-N-LOCK CONNECTOR	1211342-03	4
1		HEAT SINK	1210596	3
4		SPLIT LUG	9006735	2
1		ETCHED BOARD	500972[illegible]	1
		MODULE ECO HISTORY	B-MH-5409728-[illegible]	[illegible]
		X-Y COORDINATE HOLE LOC	K-CO-[illegible]	[illegible]
		CIRCUIT SCHEMATIC	D-CS-5409728-0-[illegible]	[illegible]

PARTS LIST

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		5409728 INTERPLANT PACKAGE	A-PI 3700065-0-[illegible]	93
		MANUFACTURING SPECIFICATION	A-SP-5409728-0-[illegible]	92
		ASSEMBLY PROCEDURE	A-SP-5409728-0-9	91
		INSPECTION PROCEDURE	A-SP-5409728-0-10	[illegible]
		MANUFACTURING TEST PROCEDURE	A-SP-5409728-0-3	89

FIRST USED ON OPT/MODEL 11/05

ETCH BOARD REV E

IC TYPE	GND	+5V

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER

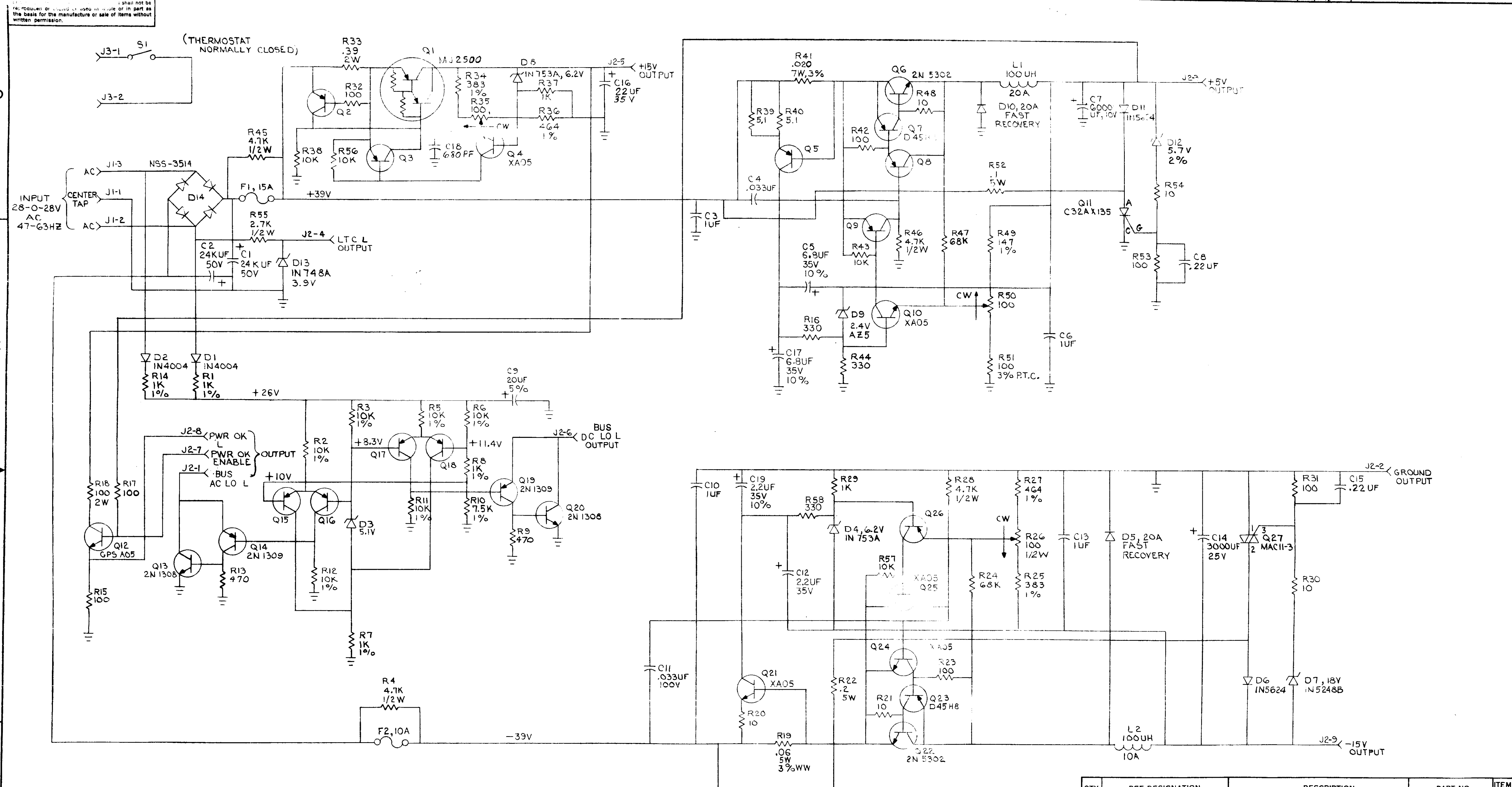
DEC NO. | EIA NO

SEMICONDUCTOR CONVERSION CHART

EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE REGULATOR BOARD

SIZE E | CODE A | NUMBER 5409728-0-0 | REV L



UNLESS OTHERWISE INDICATED:
1% RESISTORS ARE 1/8 W
TRANSISTORS = XA55
VOLTAGES ARE TAKEN AT NO LOAD WITH 115 VAC LINE
VOLTAGES ARE ±10% TAKEN BY A ≥ 1K/V METER

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV E

SEMICONDUCTOR CONVERSION CHART

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

REVISIONS

REV	CHANGE NO.	CHK
L	5409728-0-0-11	R. Burton 8-3-73
K	5409728-000010	G. Graham
J	5409728-00008	R. Wolff 12-26-72
H	5409728-00007	R. Burton
F	5409728-00006	R. Wolff
E	5409728-00005	J. W. Lawrence 6-28-72
D	5409728-00004	R. Burton
C	5409728-00002	R. Wolff
B	5409728-00001	R. Wolff

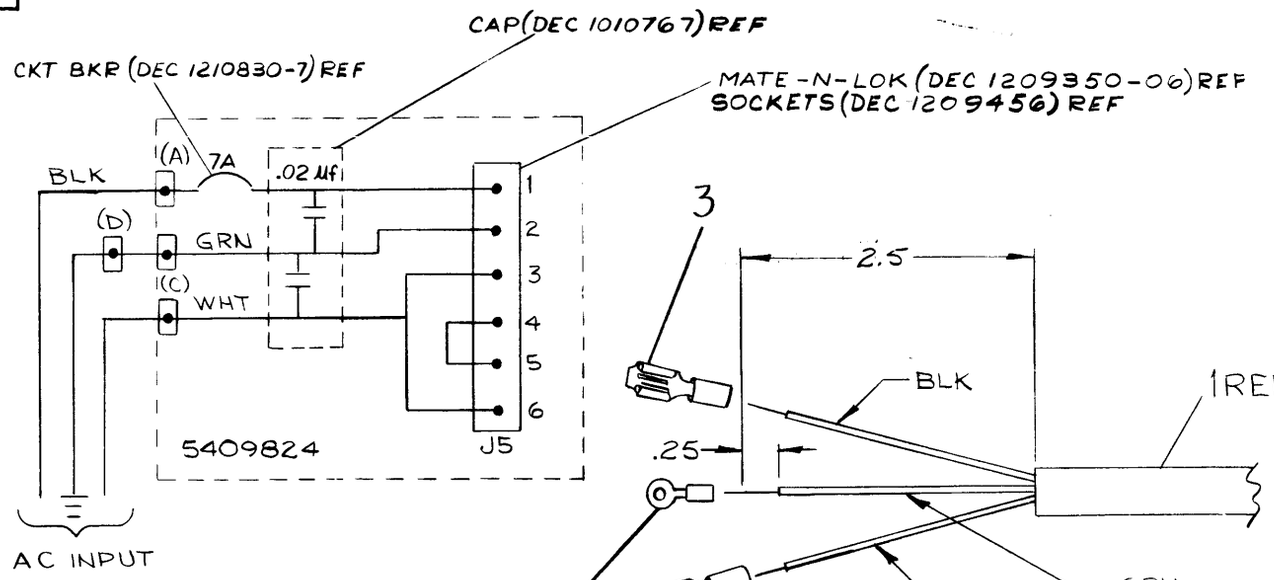
DRN. Roger J. Doucette — DATE 12-20-71
CHK'D. — DATE 12-21-71
ENG. — DATE 12-28-71
PROJ. ENG. — DATE 12-29-71
PROD. — DATE 12/30/71
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

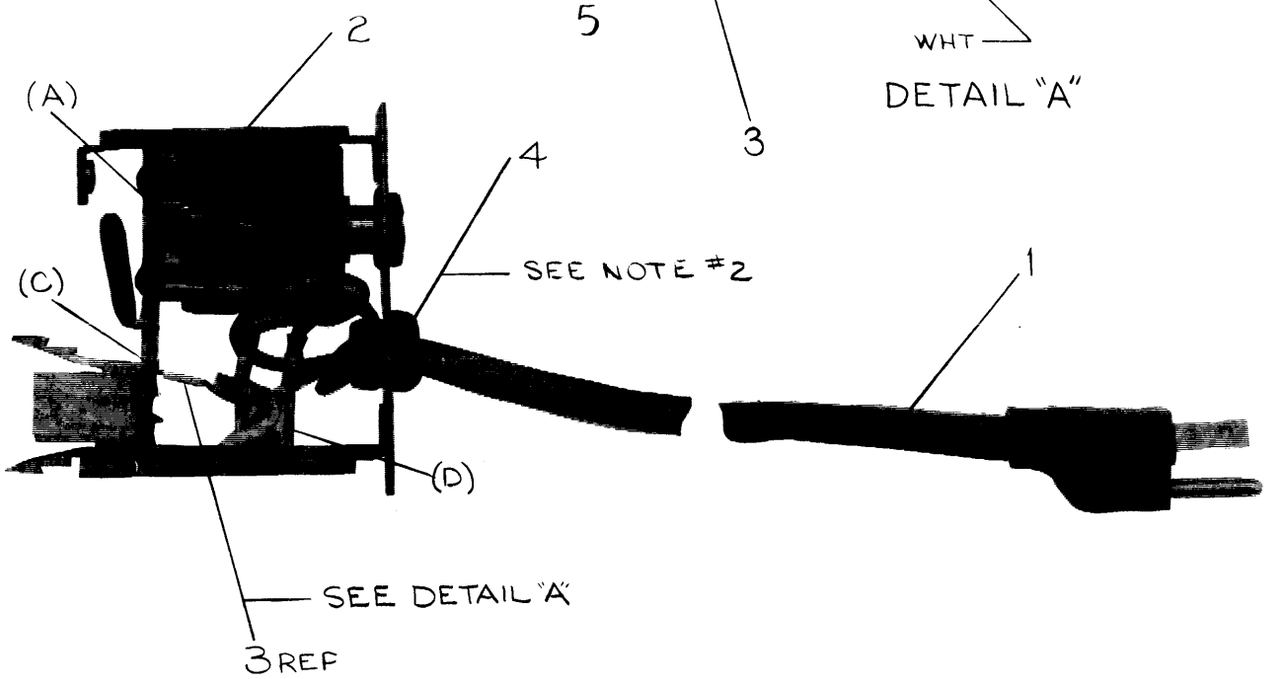
TITLE REGULATOR BOARD FOR H74C

SIZE D CODE CS NUMBER 5409728-0-1 REV. L

SCALE
SHEET 1 OF 1
DIST.



DETAIL "A"



SHOWN WITHOUT COVER

NOTES:

1. CONNECT ITEM #1 (POWER CORD) AND ITEM #2 (AC INPUT BOX PER CIRCUIT SCHEMATIC
2. FOR INSTALLATION USE HEYCO #29 STRAIN RELIEF PLIERS

ITEM NO.	DESCRIPTION	PART NO.	QTY.
1	SOLDER CONN ARKLESS	9007929-0	5
2	STRAIN RELIEF SR-6N3-4	9008492-2	4
3	SOLDERLESS CONN. ARKLESS	9007919	3
4	AC INPUT BOX H400 A	D-UA-H400-0-0	2
5	POWER CORD 120V	170015-6	1

PARTS LIST

REVISIONS				
CHK	CHANGE NO.	REV.		
	EC058H-00001	A	Jim Gavin 3-28-72	R. WOLFF
	BCC5H-00002	B	N. Towne 5-13-72	DEMORANVILLE
	H400-00002	C	N. Towne 5-25-72	R. BURTON
	BC05H-00003	E	N. Towne 5-30-72	R. BURTON

FIRST USED ON OPTION/MODEL	11/05		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DECIMALS: XXX = .005, .XX = .02, X = .1	ANGLES: ±0° 30'	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓			
MATERIAL			
FINISH			

DRN. T. Guillin	DATE 12-27-71	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D	DATE 1-4-72	
ENG. David DeMarinelle	DATE 1-4-72	
PROJ. ENG.	DATE	
PROD. R K Peterson	DATE 1/7/72	
NEXT HIGHER ASSY.		
SCALE		
SHEET OF		

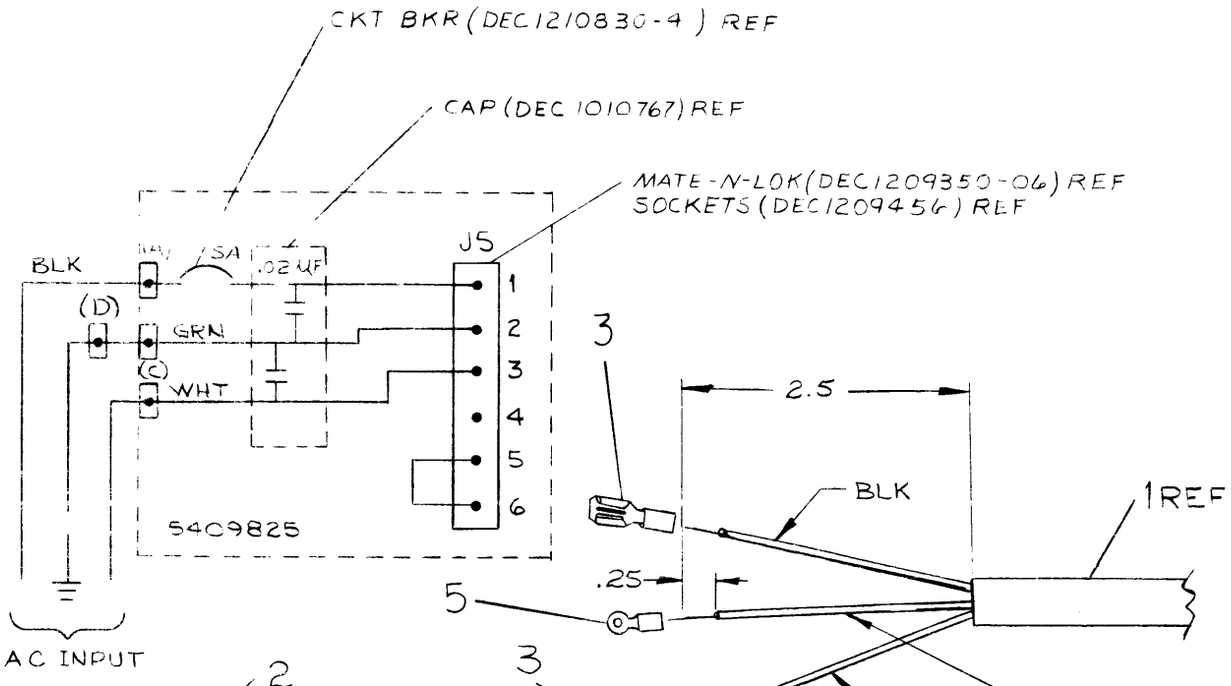
TITLE: LINE SET 115VAC 7AMP

SIZE	CODE	NUMBER	REV
C	UA	BC05H-0-0	D

DEC FORM NO. DRC 100-A

NOTES:

1. CONNECT ITEM #1 (POWER CORD) AND ITEM #2 (AC INPUT) PER CIRCUIT SCHEMATIC.
2. FOR INSTALLATION USE HAYCO #29 STRAIN RELIEF PLIERS.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	SOLDER CONN ARKLESS	9007929-0	5
1	GROMMET HEYCO SR-6N3-4	9008492-2	4
2	SOLDER CONN ARKLESS	9007919	3
1	AC INPUT BOX H400B	D-UA-H400-0-*	2
1	POWER CORD 240V	1700016-6	1

PARTS LIST

FIRST USED ON OPTION/MODEL: 11/05

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL

FINISH

		DATE
DRN.	T. Guillon	12-27-71
CHK'D	[illegible]	1-4-72
ENG.	David DeMarinville	1-4-72
PROJ ENG.	Ronald Hurley	1-7-72
PROD	R.K. Peterson	1/7/72

NEXT HIGHER ASSY.

SCALE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: LINE SET 230VAC 4 AMP

SIZE	CODE	NUMBER	REV.
C	UA	BC05J-0-0	D

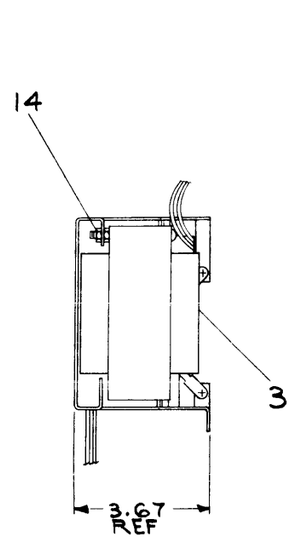
DIST.

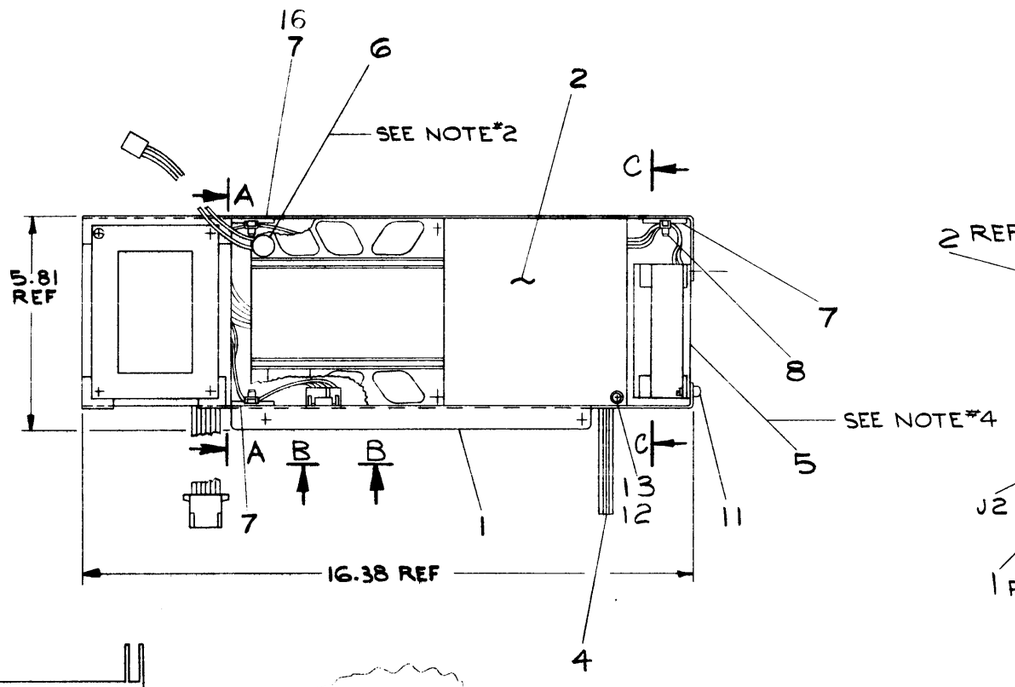
REV.	CHANGE NO.	CHK	
A	BC05J-00001	RK	Released 9-27-72 WOLFF
B	H400-00002	RK	Released 5-25-72 R. BURTON
C	BC05J-00002	RK	Released 10-31-72 R. BURTON
D	BC05J-00003	RK	Released 12-20-72 R. BURTON

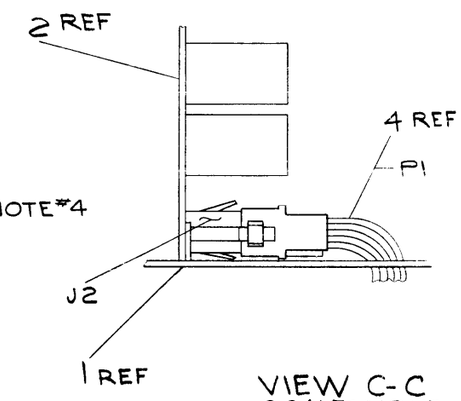
DEC FORM NO. DRC 100-A

NOTES:

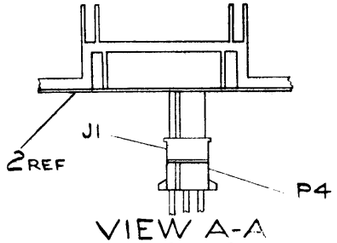
1. CONNECT J2 OF ITEM#2 (REGULATOR BOARD ASS'Y.) TO P1 OF ITEM#4 (D.C. HARNESS).
2. REPLACE THERMOSTAT ON ITEM#2 (ITEM#76 ON DWG.NO E-IA-5409728-0-0) WITH ITEM#6 (THERMOSTAT). LEAVE LEADS AT FULL LENGTH AND ADD ITEM#10 (PIN) AND ITEM#9 (CONN.) TO END OF LEADS. RETURN OLD THERMOSTAT WITH 5 INCH LEADS TO STOCKROOM.
3. CONNECT J1 OF ITEM#2 (REGULATOR BOARD ASS'Y.) TO P4 OF ITEM#3 (TRANSFORMER ASS'Y.)
4. CONNECT J4 AND J5 OF ITEM#3 (TRANSFORMER ASS'Y.) TO ITEM#5 (FAN).
5. FOR POWER SUPPLY ASSEMBLY PROCEDURE SEE DWG. A-SP-PDP8M-0-8



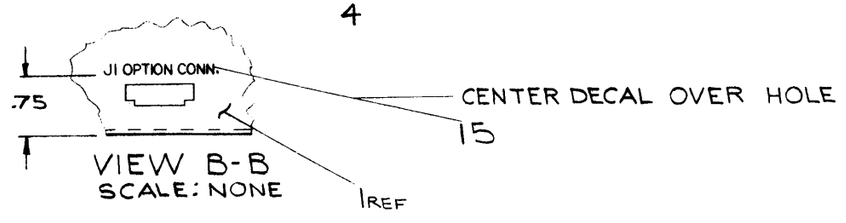




VIEW C-C
SCALE: NONE
SEE NOTE#1



VIEW A-A
SCALE: NONE
SEE NOTE#3



VIEW B-B
SCALE: NONE

A/R	COMPOUND THERMAL JOINT	9008268	16
1	DECAL (PDP8/M)	A-DG-7409651-0-0	15
7	NUT, KEPS #8-32	9006563	14
6	WASHER, INT TOOTH LOCK#6	9006633	13
6	SCR, PHL, HD. PAN#6-32X.62	9006025-1	12
3	SCR, PHL HD PAN #8-32X.38	9006037-1	11
~~4~~	~~PIN, MATE-N-LOK (MALE)~~	~~1209378-01~~	~~10~~
~~2~~	~~CONN. MATE-N-LOK~~	~~1210822-02~~	~~9~~
3	CABLE, TIE	9007031	8
3	CABLE, TIE MOUNT	9008264	7
1	THERMOSTAT ASSY	C-IA-7009452-0-0	6
1	FAN,	1210719	5
1	HARNESS, D.C.	D-IA-7009280-0-0	4
1	TRANSFORMER ASSY	D-IA-7009279-0-0	3
1	REGULATOR BD. ASS'Y	E-IA-5409728-0-0	2
1	CHASSIS, POWER SUPPLY	E-IA-7410746-0-0	1

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO	ITEM NO
PDP8M		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS: XXX .005, XX .01, X .1 — ANGLES: ±0.30
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓
MATERIAL
FINISH

DRN — DATE
CHK'D — DATE
ENG J. Gaynor — DATE 2-1-73
PROJ ENG — DATE
PROD. — DATE
NEXT HIGHER ASSY D-UA-PDP8M-0-0

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: POWER SUPPLY ASSY.

SIZE D | CODE AD | NUMBER 7009282-0-0 | REV A

SCALE NONE
SHEET 1 OF 1
DIST

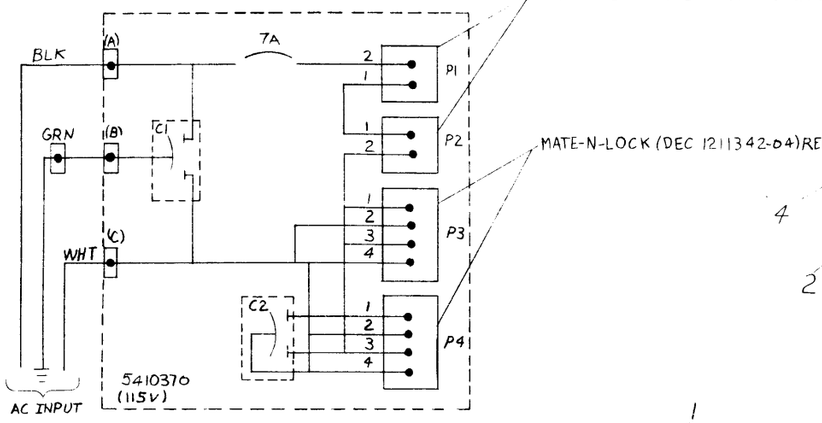
REVISIONS	REV
CHANGE NO PDP8M-00018	A
CHK J.G.	1-11-73
P. GARDNER	

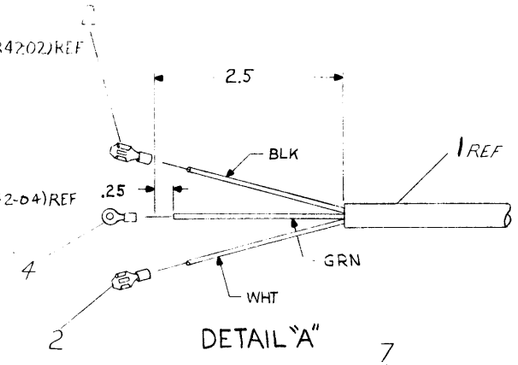
BRUNING 40-107-15966
DEC FORM NO. DRW 100-A

LEGEND		
PART NO.	ITEM #	VARIATION
BC20A-06	7000/5-06	6 FT
BC20A-07	7000/5-07	7 FT

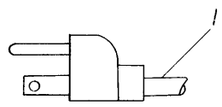
NOTES:

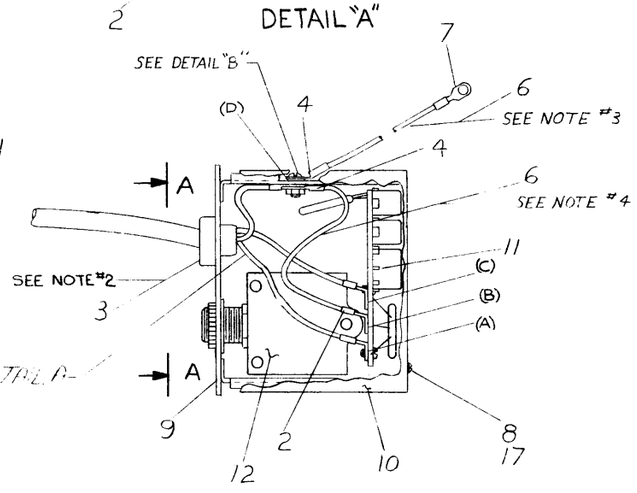
1. CONFIGURE ITEM #1 (POWER CORD) PER CIRCUIT SCHEMATIC.
2. FOR INSTALLATION USE HEYCO #29 STRAIN RELIEF PLIERS.
3. LENGTH OF THIS WIRE (ITEM #6) IS 9.75" ±.5
4. LENGTH OF THIS WIRE (ITEM #6) IS 30" ±.5

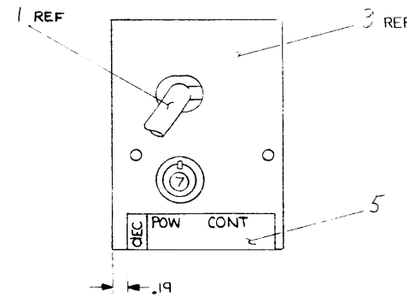




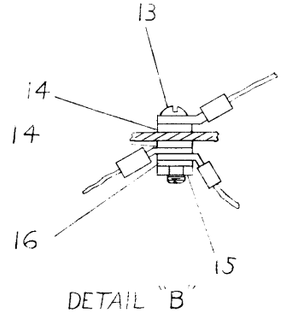
DETAIL "A"







VIEW A-A
SCALE: 1/1



DETAIL "B"

ITEM NO.	QTY.	DESCRIPTION	PART NO.
17	1	WASHER #6 INTERNAL TOOTH	9006633
16	1	WASHER, FLAT .312x.125x.027	9006655
15	1	KEPNUT #4-40	9006557
14	2	WASHER, #4 INTERNAL TOOTH	9006632
13	1	SCR PHL PAN HD #440x.38	9006011-1
12	1	CIRCUIT BREAKER (7 AMP)	1210830-7
11	1	POWER CONTROL BD (115 V)	C-IA-5410370-0-0
10	1	COVER, AC. INPUT	C-MD-5310373-0-0
9	1	BOX, AC. INPUT	D-IA-5309845-0-0
8	1	SCR PHL HD PAN #6-32x.25	9006020-1
7	1	SOLDERLESS, CONN #50360	9007930
6	A/R	#18 AWG. STRD GRN	9107360-55
5	1	PWR CONTROL DECAL (115V)	A-DC-5310438-0-0
4	3	SOLDERLESS, CONN.	9007929-0
3	1	STRAIN RELIEF SR-6N3-4	9008492-2
2	3	SOLDERLESS CONN	9007917
1	1	POWER CORD 120 V	SEE LEGEND

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP8M

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

DRN. D. Sullivan DATE 2-21-73
CHK'D. DATE
ENG. DATE 3-8-73
PROJ. ENG. DATE 3-3-73
PROD. DATE 3-8-73
NEXT HIGHER ASSY.
SCALE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

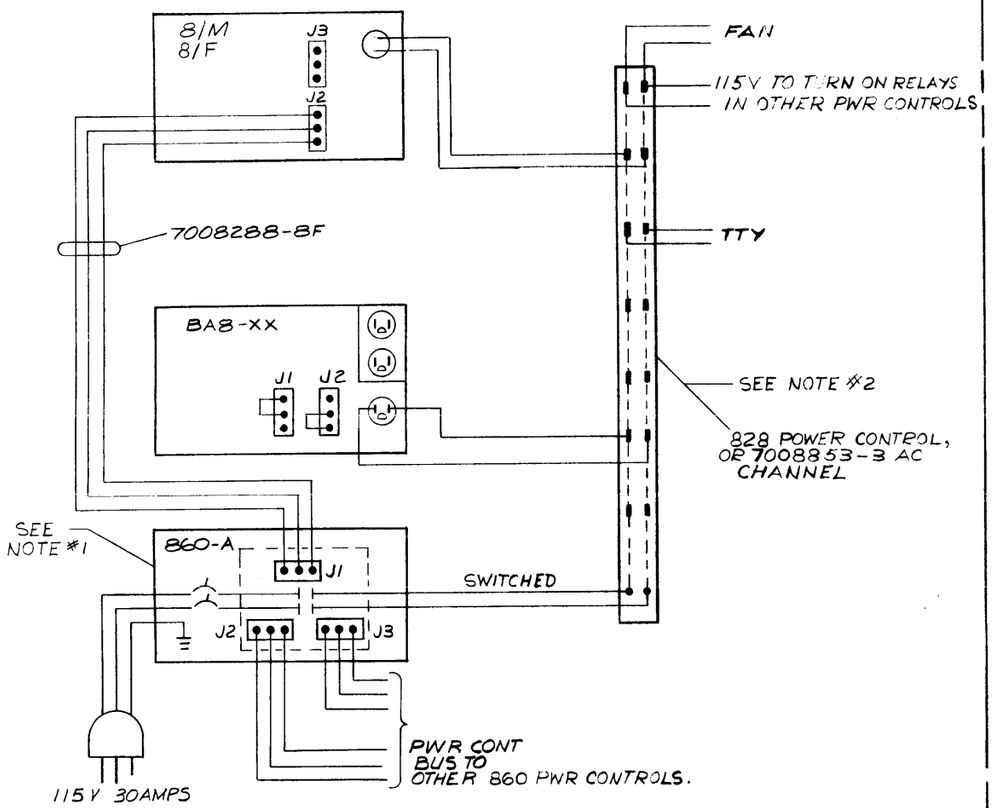
TITLE: LINE SET, 115 V

SIZE D | CODE UA | NUMBER BC20A-0-0 | REV C
DIST.

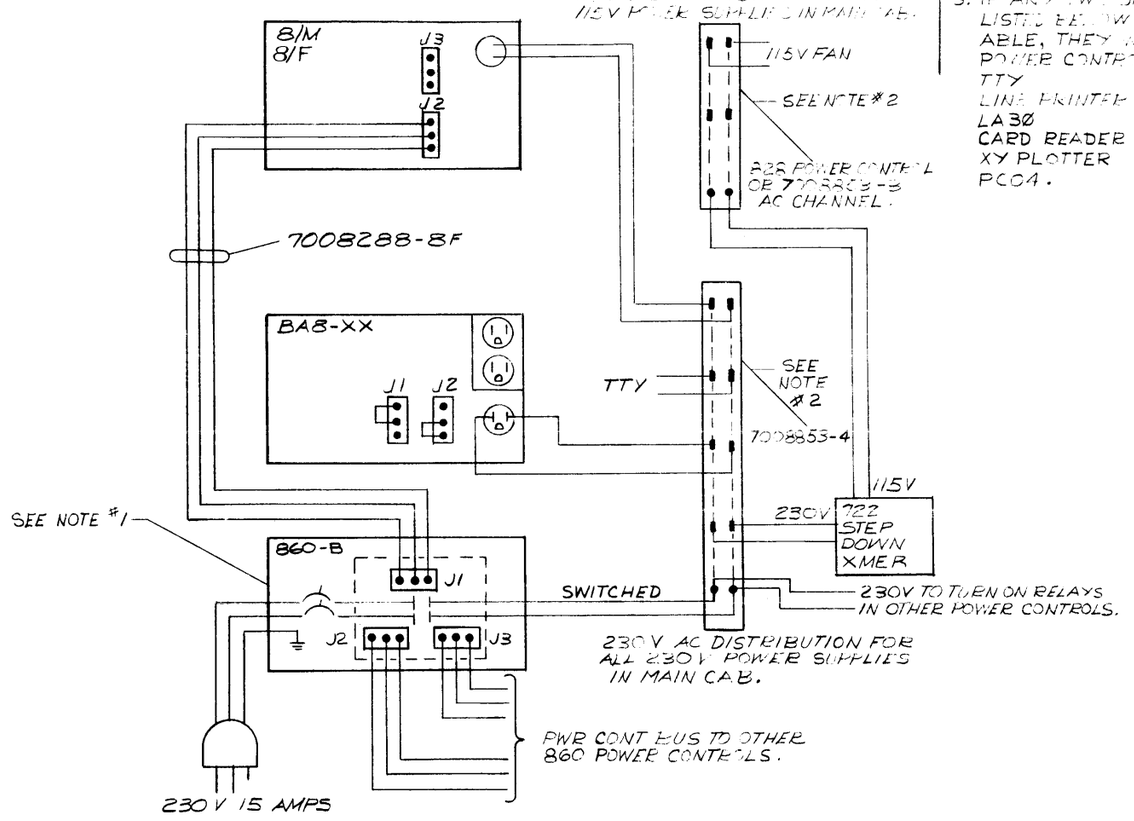
REVISIONS				
REV	CHANGE NO.		CHK	
B	BC20-0000	ORIGINATED P. GARDNER	P. Gardner	4-12-72
C	BC20-0000	DRAWING NO. WAS D-UA-BC20-0-0	P. Gardner	4-12-72

BRUNING 40-107 1568
DEC FORM 240 DR: 100-A

D
C
B
A
8 7 6 5 4 3 2 1



8F OR 8M SYSTEM POWER WIRING FOR 115V



8F OR 8M SYSTEM POWER WIRING FOR 230V

NOTES:

1. CONNECTORS J1, J2, & J3, ON THE 860 POWER CONTROL ARE ALL CONNECTED IN PARALLEL.
2. THIS PART NUMBER APPLIES ONLY TO BACK MOUNTABLE SYSTEMS. WIRING ON BACK MOUNTED SYSTEMS IS IDENTICAL, BUT THE PART NUMBERS MAY BE DIFFERENT. FOR ADDITIONAL INFORMATION SEE D-CS-H960-B-7.
3. IF ANY TWO OR LESS OF THE OPTIONS LISTED BELOW ARE SOLD BACK MOUNTABLE, THEY WILL NOT REQUIRE A POWER CONTROL OR AC DISTRIBUTION.
   TTY
   LINE PRINTER
   LA30
   CARD READER
   XY PLOTTER
   PCO4.

REVISIONS	REV.	CHANGE NO
CHK	A	PDP8M-00010
P. GARDNER 3-17-72	B	PDP8M-00012

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 8M		PARTS LIST		

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

DRN. — DATE 12/26/71
CHK. — DATE 12/26/71
ENG. — DATE
PROJ. ENG. — DATE
PROD. — DATE
NEXT HIGHER ASSY. B-DO-PDP8M-1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: SYSTEM POWER WIRING DIAG

SCALE —
SHEET 1 OF 1

SIZE	CODE	NUMBER	REV.
D	IC	PDP8M-0-03	B

DIST

DEC FORM NO. 1031-100-A

EXPANDER & EXPANDER PLUG-IN OPTIONS

OPTION	CABLE QTY.	CABLE ASSY. NO.	OPTION	QTY.	ASSY. NO.	OPTION	CABLE ASSY. QTY.	CABLE ASSY. NO.
AD8-EA	1	7008533	KL8-EA	1	BCØ1V OR BCØ5C	XY8-E	1	7006965
AM8-EA	1	7008533	KL8-F	1	7008360			
BE8-A	2	M935	KL8-FA THRU FJ	1	BCØ1V OR BCØ5C			
CM8-E	1	7007252	KL8-M	1	BCØ1V OR BCØ5C			
CM8-F	1	7008738	KM8-E	0	— —			
CR8-E	1	7007252	KP8-E	1	7007128			
CR8-F	1	7008738	LC8-E	1	7008417			
DB8-EA	1	BCØ8R	LE8-XX	1	7006964			
DB8-EB	2	BCØ8R & 54Ø9209	MC8-E	0	— —			
DK8-EA	1	7007128	MI8-E	0	— —			
DK8-EF	1	BCØ8R	MM8-E	0	— —			
DP8-EA	1	BCØ1V OR BCØ5C	MP8-E	0	— —			
DP8-EB	1	BCØ1W	MR8-E	0	— —			
DR8-EA	1	BCØ8L	PC8-E	2	BCØ8K			
DR8-EP	1	BCØ8R	PP8-E	1	BCØ8K			
KA8-E	3	BCØ8J	PR8-E	1	BCØ8K			
KD8-E	2	BCØ8J	TA8-E	1	BCØ8R OR 7008624			
KE8-E	0	— —	TD8-E	1	7008447			
KG8-E	0	— —	TM8-E	2	BCØ8L			
KL8-E	1	7008360	VC8-E	1	7008499			

LEGEND

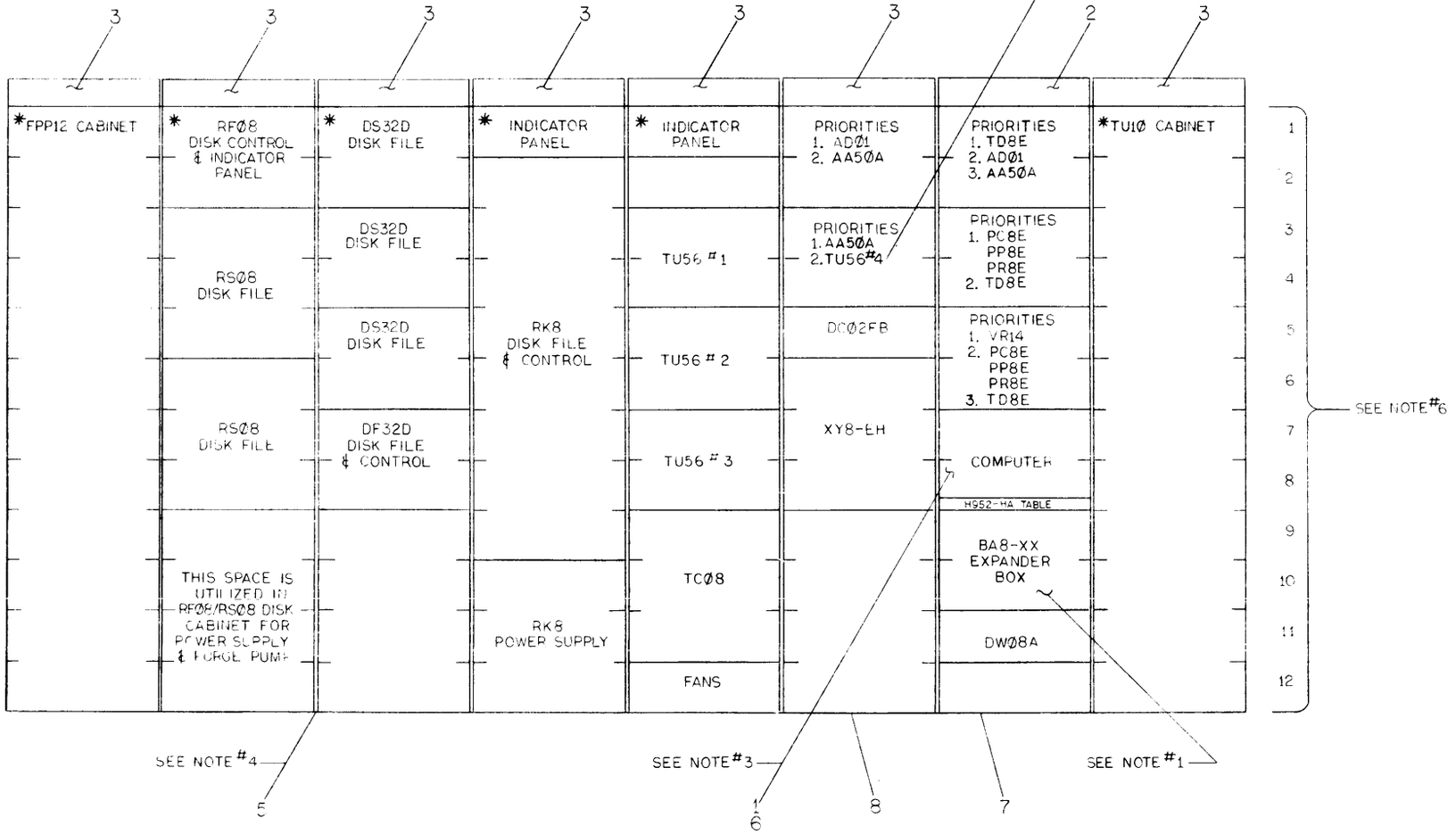
ITEM #1	ITEM #2	ITEM #3	ITEM #4
PDP 8/E	7407936-06	7407936-09	BC08H-3F
PDP 8/F	7407936-20	7407936-09	BC08H-4F
PDP 8/M	7407936-12	7407936-16	BC08H-4F

NOTES:

1. IF AN EXPANDER BOX (BA8-XX) IS USED, ITEM #4 (BUS EXTENDER CABLE) MUST RUN FROM THE LAST SLOT IN THE COMPUTER (ITEM #1) OMNIBUS TO THE LAST SLOT IN THE BA8-XX OMNIBUS.
2. A MAX OF THREE DEC TAPES (TU56) IS ALLOWED PER CABINET. AN ADDITIONAL CABINET IS REQUIRED FOR A FOURTH DRIVE.
3. SECURE ITEM #1 WITH ITEM #6 (SHIPPING BRACKET) BEFORE SHIPMENT.
4. ITEM #5 (FILLER STRIP SET) IS USED TO JOIN TWO CABINETS, FRONT & REAR.
5. NEXT HIGHER ASSEMBLY:
   A-ML - PDP8E-O
   B-DD - PDP8F-O
   B-DD - PDP8M-O
6. H960 & 961 CABINETS ARE DIVIDED INTO TWELVE 5.25" SECTIONS. WHERE EVER COVER PANELS ARE REQUIRED THEY SHOULD BE PLACED AS FOLLOWS:

SECTION	COVER PANEL
1	H950-P, 5.25"
2	H950-P, 5.25"
3 & 4	H950-Q, 10.5"
5 & 6	H950-Q, 10.5"
7 & 8	H950-Q, 10.5"
9 & 10	H950-Q, 10.5"
11 & 12	H950-Q, 10.5"

7. H960 - BC#115V SYSTEM
   H960 - BR#230V SYSTEM
8. H961 - AA#115V SYSTEM
   H961 - AR#230V SYSTEM



* INDICATES A DEDICATED SUBSYSTEM CABINET

ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	COMPUTER	SEE LEGEND
2	1	PANEL LOGO	SEE LEGEND
3	A/R	BLANK LOGO	SEE LEGEND
4	2	BUS EXTENDER CABLE	SEE LEGEND
5	A/R	FILLER STRIP SET	H952-GA
6	1	SHIPPING BRACKET	7408867
7	1	BASIC CABINET	SEE NOTE #7
8	A/R	OPTION CABINET	SEE NOTE #8

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP 8/E

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

DRN. G. FLANDERS 12-17-71
CHK'D. R. GARDNER 12-17-71
ENG. R. GARDNER 12-28-71
PROJ. ENG. R. GARDNER 12-28-71
PROD. R. ALLEN 12-28-71
NEXT HIGHER ASSY. SEE NOTE #5
SCALE —
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: OPTION ARRANGEMENT

SIZE E | CODE AR | NUMBER PDP8M-Ø-Ø1 | REV. B | DIST.

REV.	DESCRIPTION	DATE	APPROVED
A	ECO 7008	2-3-72	R GARDNER
B	ECO 7013	2-24-72	R GARDNER

DEC FORM NO DNE 500

ENGINEERING SPECIFICATION

digital — CONTINUATION SHEET

TITLE RECOMMENDED OMNIBUS MODULE ASSIGNMENTS

The following ordering of modules on the OMNIBUS will result in best case timing and permit widest margins:

	MODULE
	Control Panel
M8330	Timing Board (ALWAYS AFTER CONTROL PANEL)
M8340	EAE
M8341	EAE
M8310	C.P. Major Register Control
M8300	C.P. Major Registers
M837	Extended Memory & Time Share Control
	.
	.
	.
	Other Non-Memory Options
	.
	.
	.
M8350	External I/O Bus Interface
M849	R.F.I. Shield
G104	Memory Sense/Inhibit (0)
H220	Memory Stack (0)
G227	Memory X/Y Drivers (0)
	.
	.
	.
G104	Memory Sense/Inhibit (n)
H220	Memory Stack (n)
G227	Memory X/Y Drivers (n)
	.
	.
	.
	Other Memories
	.
	.
	.
G105	Memory Sense/Inhibit (Parity)
H220	Memory Stack (Parity)
G227	Memory X/Y Drivers (Parity)
M8320	Bus Loads (Always in last slot)

SIZE	CODE	NUMBER	REV
A	SP	PDP8/E-0-4	D

DEC FORM NO 16-1022
DRA 108

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 11/24/70

TITLE RECOMMENDED OMNIBUS MODULE ASSIGNMENTS

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	REORDERED ASSIGNMENTS	KK8E-00001	[illegible]	1/15/71	[illegible]	1/15/71
B	REORDERED ASSIGNMENTS	8E-00037	TEICHER	7-30-71	SNT	8-3-71
C		8E-00054	R. VOGELSANG	1-6-72	[illegible]	1-11-72
D	ADDED NOTE TO M8330	8E 00062	GARDNER	7-14-72	[illegible]	7-17-72

ENG	APPD	SIZE	CODE	NUMBER	REV
Dave Clemow	[illegible]	A	SP	PDP8/E-0-4	D

DEC FORM NO.
DRA 107

DURATION 1.2 MICRO SECONDS — SLOW CYCLE DURATION 1.4 MICRO SECONDS

TIME SCALE NANO SECONDS: 0 100 200 300 400 500 600 700 800 900 1000 1100 1200 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400

- CLOCK L
- CONTROL: MEM START L; INT TROBE (H); NOT LAST XFER L; BUS STROBE L
- GENERAL TIMING: TS1 L; TS2 L; TS3 L; TS4 L; TP1 H; TP2 H; TP3 H; TP4 H
- MEMORY TIMING: WRITE H; RETURN H; SOURCE H; STROBE H; INHIBIT H
- INTERNAL MEMORY SIGNALS: TIME STROBE H; MEM CLEAR; READ/WRITE CURRENT; INHIBT CURRENT; MD DIR L; MA L; MD L

#1

*THIS PLOT SHOWS AN INITIAL FAST CYCLE
THE DOTTED LINES INDICATE A REGULAR CYCLE

#1:MD DIR GOES LOW ONLY IF F+ [D-AUTO INDEX]

CIRCUIT DELAYS ARE NEGLECTED IN THIS TIMING DIAGRAM

REVISIONS	CHANGE NO.	CHK	REV.
NARH 4/11	8E-00019	AJ	A
L.KLOTZ 11-10-71	8E-00049		B

FIRST USED ON OPT/MOD	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8/E		PARTS LIST		

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

MATERIAL

FINISH

		DATE
DRN.	M. Ferguson	1-9-71
CHK'D.		1/11/71
ENG.	Larry Shuler	1/12/71
PROJ. ENG.	Dave W. Hanes	1/12/71
PROD.		1/12/71

NEXT HIGHER ASSY: A-ML-PDP8/E-0

SCALE NONE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: TIMING (PDP8/E)

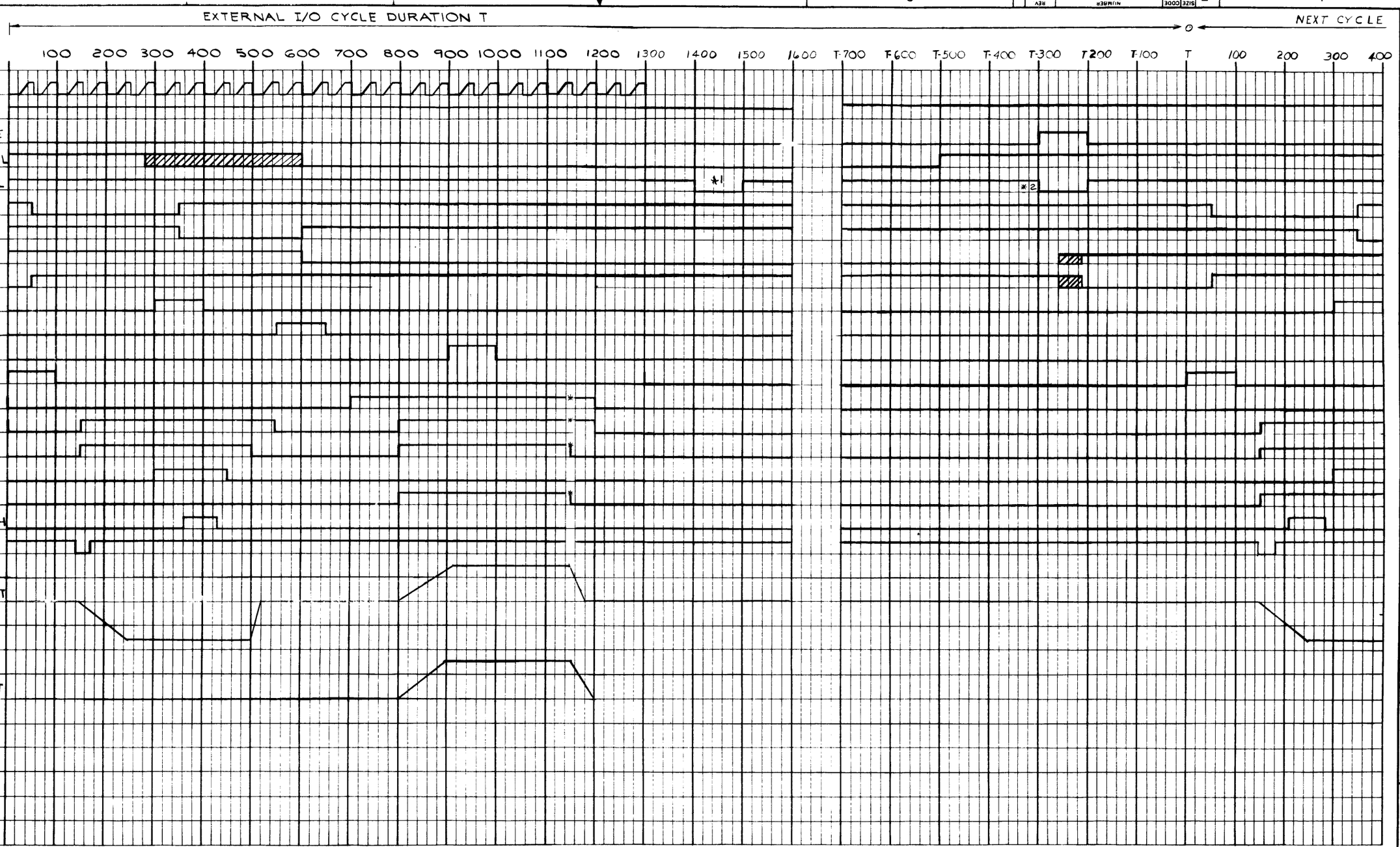
SIZE	CODE	NUMBER	REV.
D	TD	PDP8/E-0-05	B

DIST.

ahp

BBC FORM NO. DRD 102A

SIZE D | CODE TD | NUMBER PDP8/E-0-05 | REV B



NOTE: * MEMORY SIGNALS TIME OUT, AS IN A FAST CYCLE

1 GENERATED BY PERIPHERAL TO STROBE DATA

2 GENERATED BY PERIPHERAL TO TERMINATE EXT. I/O CYCLE AND RESUME NORMAL OPERATION

REVISIONS	CHANGE NO.	CHK.
REV.		

FIRST USED ON OPT/MOD	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8/E		PARTS LIST		

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

MATERIAL

FINISH

		DATE
DRN.	[illegible]	1-5-71
CHK'D.	[illegible]	1/11/71
ENG.	Gary Taylor	1/12/71
PROJ. ENG.	Dave Bogdany	1/12/71
PROD.	Gary Taylor	1/13/71

NEXT HIGHER ASSY
A-ML-PDP8/E-Ø

SCALE NONE
SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

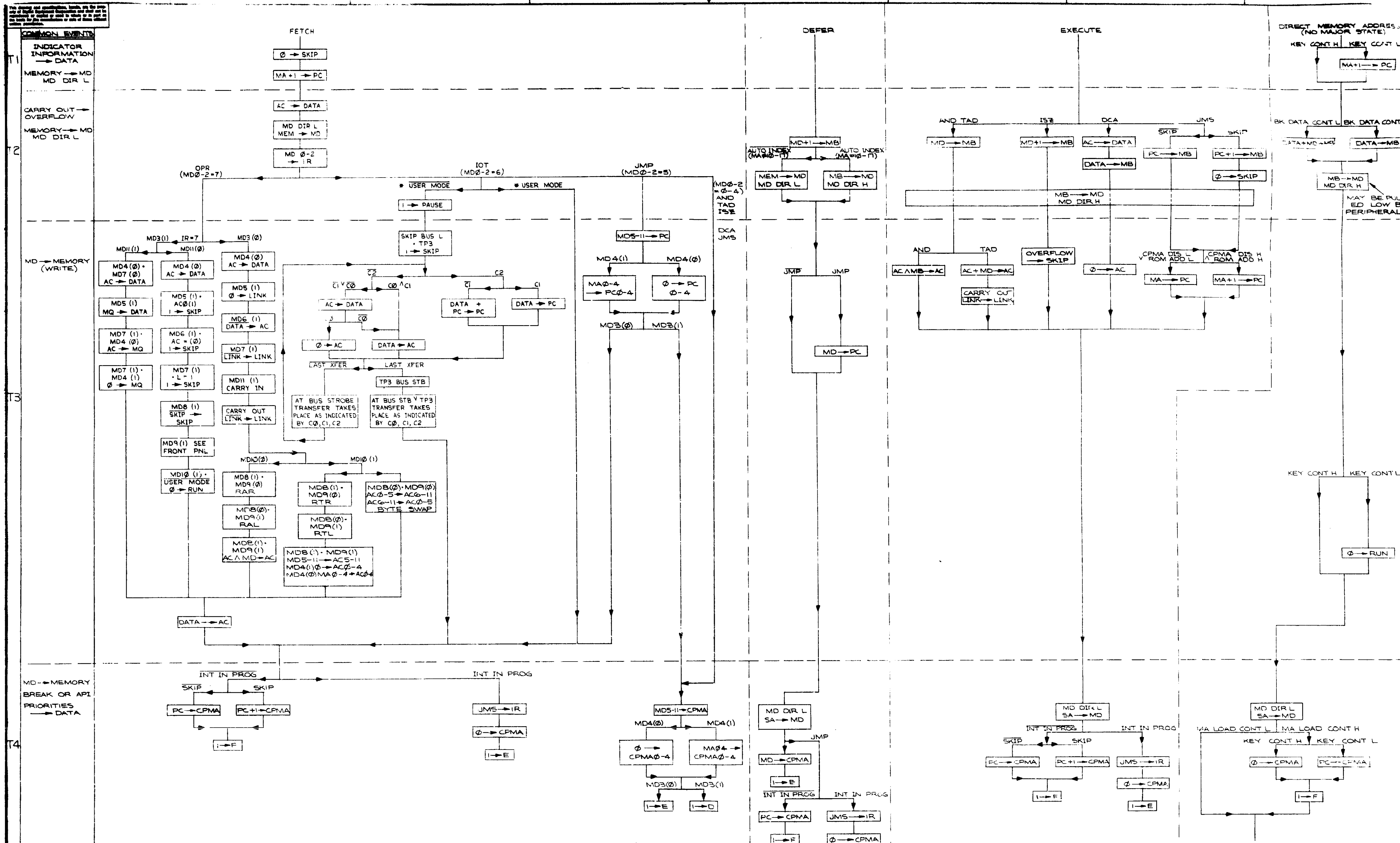
TITLE
TIMING
(PDP8/E)

SIZE	CODE	NUMBER	REV.
D	TD	PDP8/E-Ø-Ø5	B

DIST.

BBC FORM NO. DRD 102A

ahp



NOTES:

* USER MODE IS USED BY THE TIME SHARING OPTION ONLY; TO INHIBIT HALT, OSR, LAS, & PAUSE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8/E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: PROCESSOR FLOW CHART

NEXT HIGHER ASSY: A-ML-PDP8/E-Ø

SIZE E CODE FD NUMBER PDP8/E-Ø-Ø6 REV. A

SCALE — SHEET 1 OF 1

REVISIONS: A ECO 8E-00049 11-11-71

P1

J1 J2 J3 J4 J5 J6 J7 J8 J9 J10

GND

-15V

+5V

+15V

BV2

UNLESS OTHERWISE INDICATED:

□ = TABS

PIN C1 IS CONNECTED TO GND ON THE BUS, BUT SERVES AS A LOGIC SIGNAL WITHIN MODULES TO FACILITATE TESTING

PINS 1 THROUGH 20 ON ALL CONNECTORS ARE COMMONLY BUSSED

CONNECTORS ARE 1205348 (228 PIN)

NOTE: P1 CONNECTS TO J1 ON THE OPERATORS PANEL BOARD (5409705) OF THE KC8-MA OR TO THE MICRO SWITCH HARNESS (70-18674) WHEN USED WITH THE KC8-FL, OR KC8-VL CONSOLES.

REVISIONS

ZONE	ECO NO.	REV.
	H9191-2-4	A

DRN		DATE
CHK'D		DATE
ENGR		DATE
PROD		DATE

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE OMNIBUS ASSEMBLY H9191

SIZE	CODE	NUMBER	REV.
D	CS	H9191-0-1	A

PRINTED CIRCUIT REV.

SIZE CODE D CS NUMBER H9191-0-1 REV A

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE		SEQUENCE	
CONSOLE ASSY, OPERATOR'S	B_DD_KC8_M		
CONSOLE ASSY, OPERATOR'S(KC8_M)	D_UA_KC8_M Ø		
PDP8M OPERATOR'S PANEL	C CS_5409705_0_1		

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE: KC8_M
KC8_M	CONSOLE ASSY, OPERATOR'S	X

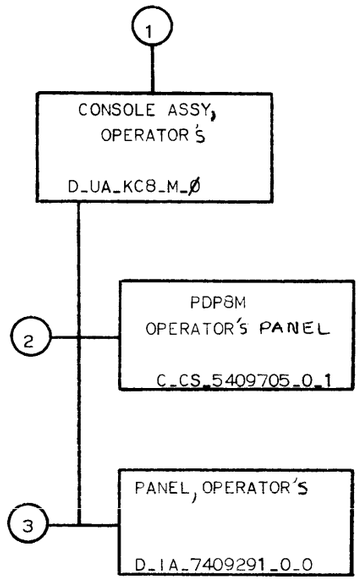
REVISIONS		
REV	A	
CHG. NO.	KC8M-00002	
DATE	RFD 1-26-72	

USED ON OPTION/MODEL
PDP8M

DRN. C.B. MC COY	DATE 12-1-72	TITLE: CONSOLE ASSY OPERATOR'S
CHK'D. G MARINI	DATE 12-6-72	
PROJ ENG.	DATE 2-4-72	
PROD.	DATE 2-4-72	
FIELD SERV. FR G...	DATE 2-9-72	
SHEET 1 OF 3		

SIZE	CODE	NUMBER	REV
B	DD	KC8_M	A

DIST



TITLE		SIZE	CODE	NUMBER	REV
CONSOLE ASSY OPERATOR	SHEET 2 OF 3	B	DD	KC8_M	A

ELECTRICAL

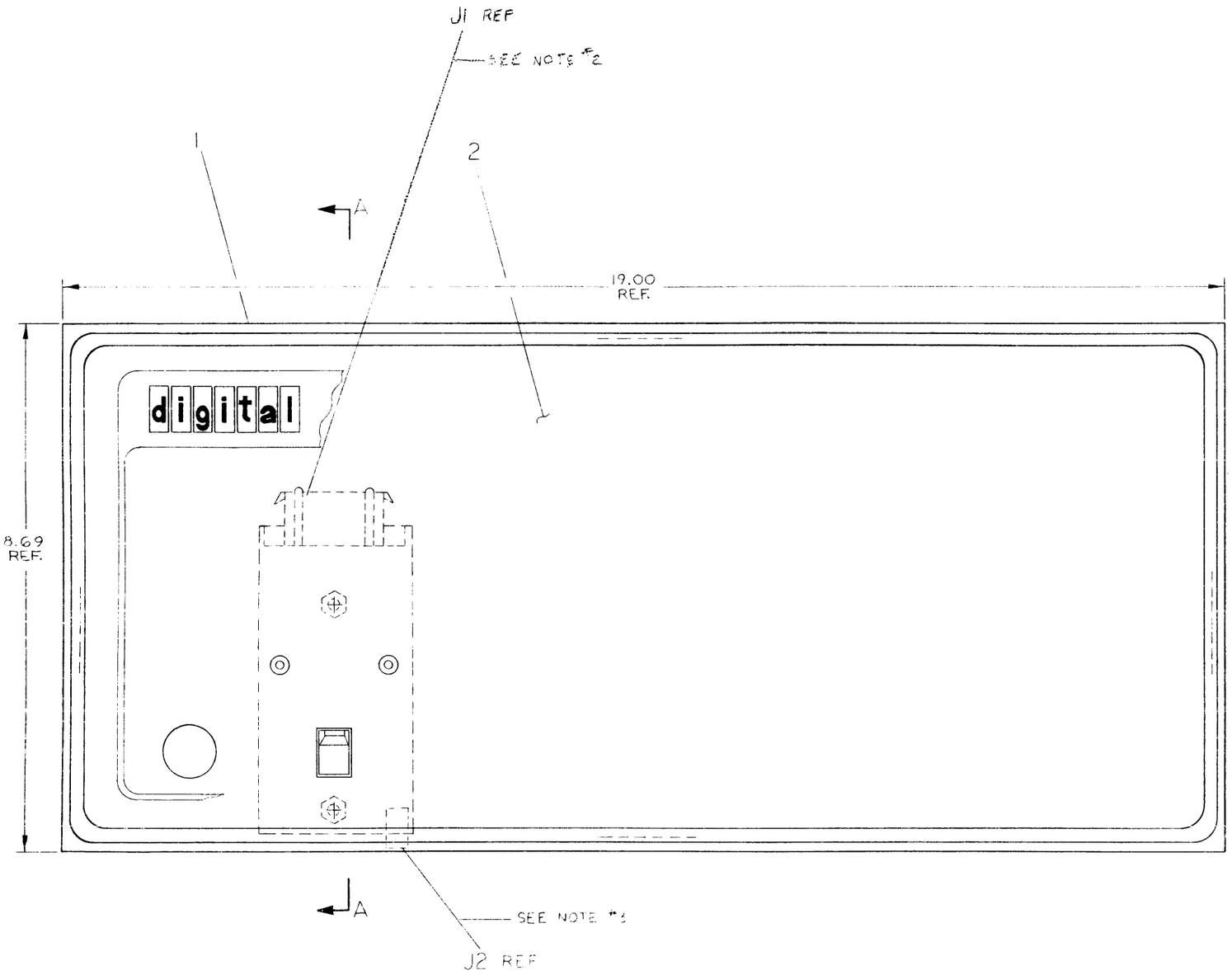
CUSTOMER PRINT SET KC8_M	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
		2	C_CS_5409705_0_1	#	1	CIRCUIT SCHEMATIC	

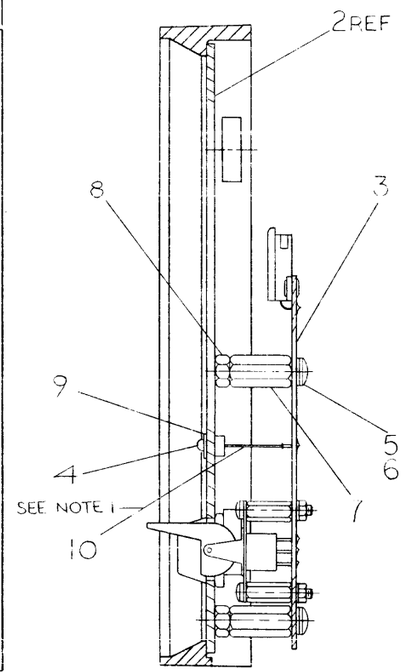
MECHANICAL

CUSTOMER PRINT SET KC8_M	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X		1	D_UA_KC8_M_0	A	1	CONSOLE ASSY, OPERATOR'S	
			E_SC_1210065_0_0	#	1	BEZEL	
X		2	C_CS_5409705_0_1	#	4	PDP8M OPERATOR'S PANEL	
			D_SC_1205849_0_6	#	1	ROCKER HANDLE (RUSSET/ORN)	
		3	D_IA_7409291_0 0	#	1	PANEL OPERATOR'S	
			C_SS_7409291_0_1	#	1	SILK SCREEN (RUSSET/ORN)	
			C_SS_7409291_0_2	#	1	SILK SCREEN (GRAY)	

TITLE		SIZE	CODE	NUMBER	SET
CONSOLE ASSY, OPERATORS	SHEET 3 OF 3	B	DD	KC8_M	

NOTES:
1. ORDER 1421 #10 (BUS WIRE) TO LENGTH AS ITEM #9 (LAMP) AT REQUIRED LENGTH.
2. J1 CONNECTS TO P1 ON THE H919; DIAGNOSIS ASSY.
3. J2 = TSB FOR PANEL LOCK CONNECTOR IN THE B/M.





SECTION A-A

A/R	DESCRIPTION	PART NO.	ITEM NO.
A/R	WIRE, BUS, #22 AWG.	9107560-01	10
2	MTG. CLIP, SOLID STATE LAMP	1210791	9
2	SPACER, AL #10, .38AFx.19	9006828	8
2	SPACER, #10-32, .38AFx.75	9007662	7
2	WASHER, INT. TOOTH LOCK #10	9006636	6
2	SCREW, PHL PAN HD, #10-32x.25	9008007-1	5
2	LAMP, SOLID STATE	1110324	4
1	OPERATORS PANEL, PDP8M	C-CS-5409705-01	3
1	PANEL, OPERATORS	D-IA-7409701-0-0	2
1	BEZEL	E-SC-1210065-0-0	1

PARTS LIST

FIRST USED ON OPTION/MODEL	PDP8M
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	
DECIMALS	XXX = .005, XX = .02, X = .1
ANGLES	±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓	
MATERIAL	— // —
FINISH	— // —
DRN.	DATE 1-17-72
CHK'D	DATE 1/19/72
ENG.	DATE 2-4-72
PROJ. ENG.	DATE
PROD.	DATE
NEXT HIGHER ASSY.	[illegible]-KC8-M
SCALE NONE	
SHEET 1 OF 1	

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONSOLE ASSY, OPERATORS

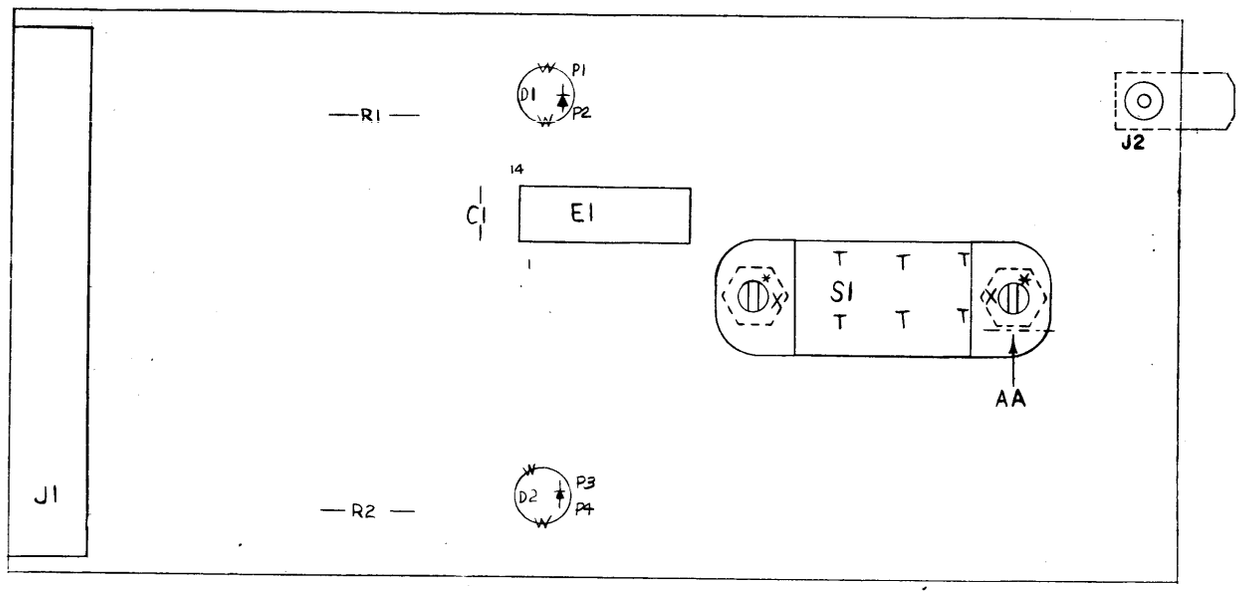
SIZE	CODE	NUMBER	REV.
D	UA	KC8-M-0	A

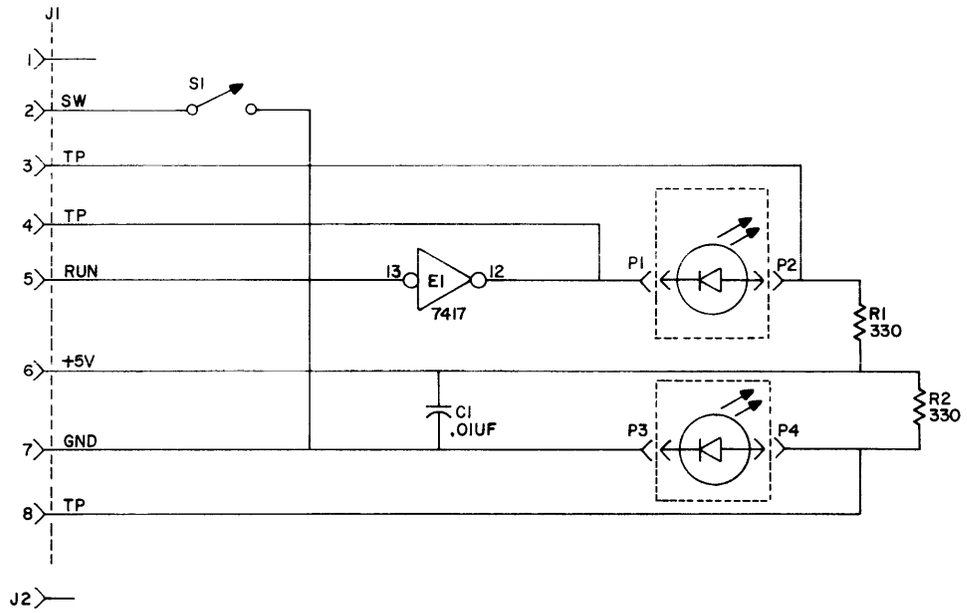
DIST.

REVISIONS			
CHK	CHANGE NO.		REV
	KC8-[illegible]	02	A

GARDNER

D.E. FORM NO. DIR 1019-A





NOTE:
PIN7 = GND ON E1
PIN14 = +5V
LED'S TO BE MOUNTED ON KC8-M PANEL
J2 = TAB FOR PANEL LOCK CONNECTOR IN THE 8/M
J1 CONNECTS TO P1 OF THE H9191 OMNIBUS ASSY.

QTY	REF. DESIGNATION	PART LIST	DEC PART NO.	ITEM NO.
1		EYELET	9007827	17
1	J2	TAB, FASTON	9007112	16
2		KEP NUT #6-32 x 1/8 x 1/8	9008185	15
2		SPACER ¼ AF x 7/16 LG #6 HOLE	9008120	14
4	P1 - P4	SOLDERLESS TERMINAL	9007812	13
2		SCREW PHILLIPS HD #6-32 x 3/4 PAN HD	9006026-1	12
1	E1	IC DEC 7417	1909929	11
2	R1, R2	RES 330 ¼W 10%	1300293	10
8		MATE-N-LOCK PINS	1209456	9
1	J1	MATE-N-LOCK HOUSING	1209340-01	8
1	S1	SWITCH ROCKER	1205941	7
1		ROCKERHANDLE RUSSET ORANGE	1205849-06	6
1	C1	CAP .01 UF 100V 20% DISC	1001610	5
1		ETCHED CIRCUIT BOARD	5009704	4
		MODULE ECO HISTORY	B-MH-5409705-0-6	3
		ASSY/DRILLING HOLE LAYOUT	D-AH-5409705-0-5	2
		X-Y COORDINATE HOLE LOCATION	K-CO-5409705-0-4	1

PART LIST

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

REVISIONS					
CHK	CHG NO	REV			
B.J. Hailes 2-72	000001	C			
B.J. Hailes 8-1-72	000002	D			
P. GARDNER			P. GARDNER		

DRN. B.J. Hailes	DATE	11/4/71
CHK'D NANCY MOORE	DATE	11.8.71
ENG.	DATE	11-22-71
PROD.	DATE	1-3-72

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: PDP 8/M OPERATOR'S PANEL

SIZE	CODE	NUMBER	REV
C	CS	5409705-0-1	D

PRINTED CIRCUIT REV. D

REV. D | NUMBER 5409705-0-1 | SIZE C | CODE CS

DEC FORM NO. DRC 102

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE
DRAWING DIRECTORY	B_DD_KC8_ML
CONSOLE ASSY, PROGRAMMER'S	D_UA_KC8_ML_Ø
FRONT PANEL CONTROL BOARD	E_IA_5409668_0_0
FRONT PANEL CONTROL BOARD	D_CS_5409668_0_1

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE: KC8_ML
KC8_ML	CONSOLE ASSY, PROGRAMMER'S (KC8_ML)	X

REVISIONS	REV	CHG. NO.	DATE
	A	KC8ML-6	[illegible]

USED ON OPTION/MODEL: PDP8M

DRN.	C.B. MC COY	DATE	1-26-72
CHK'D.	G. MARINI	DATE	1-26-72
PROJ ENG.	[illegible]	DATE	2-4-72
PROD.	[illegible]	DATE	2-4-72
FIELD SERV.	[illegible]	DATE	[illegible]

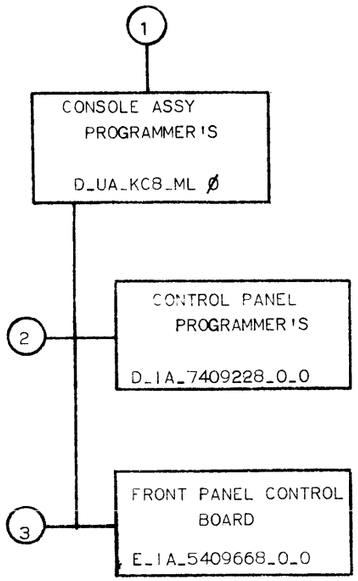
TITLE: CONSOLE ASSY, PROGRAMMER'S (KC8_ML)

SIZE	CODE	NUMBER	REV
B	DD	KC8_ML	A

SHEET 1 OF 3

DIST

DRB 106



TITLE		SIZE	CODE	NUMBER	REV
CONSOLE ASSY PROGRAMMER'S (KC8_ML)	SHEET 2 OF 3	B	DD	KC8_ML	A

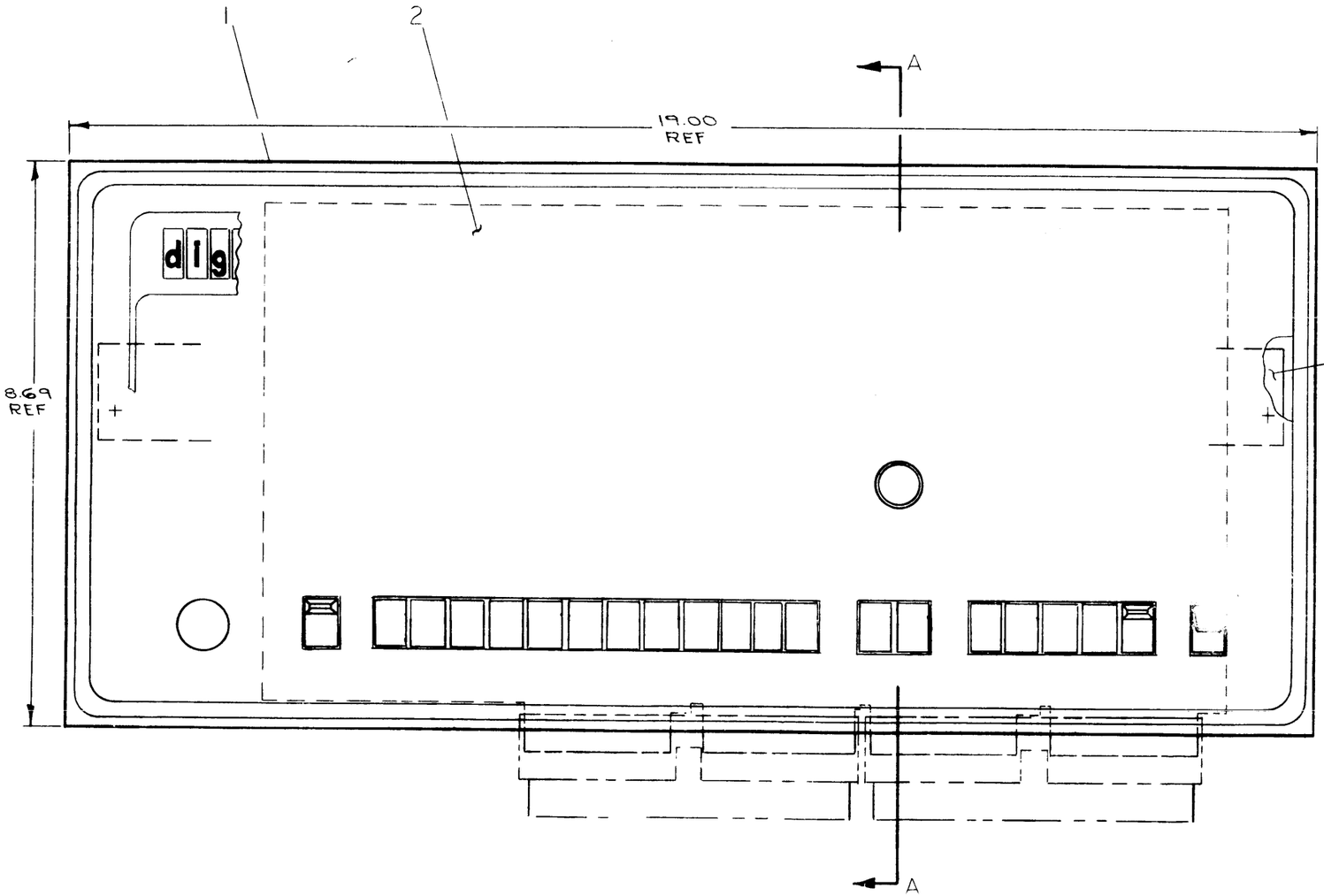
ELECTRICAL

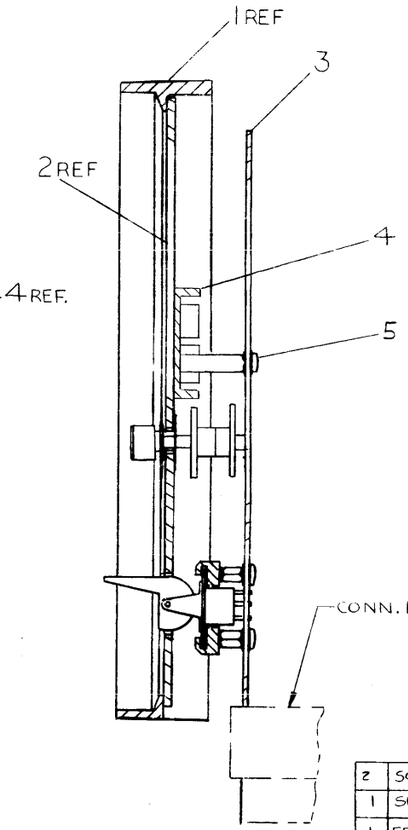
CUSTOMER PRINT SET KC8_ML	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X		3	D_CS_5409668_0_1	#	1	FRONT PANEL CONTROL BOARD	

MECHANICAL

CUSTOMER PRINT SET KC8_ML	SET MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X		1	D_UA_KC8_ML_0	*	1	CONSOLE ASSY, PROGRAMMER'S	
			E_SC_1210065_0_0	#	1	BEZEL	
			D-IA-7409354-0-0	*	1	SUPPORT, LED	
		2	D_IA_7409228_0_0	#	1	CONTROL PANEL, PROGRAMMER'S	
			C_SS_7409228_0_1	#	1	SILK SCREEN (TERRA COTTA)	
			C_SS_7409228_0_2	#	1	SILK SCREEN (RUSSET ORN)	
			C_SS_7409228_0_3	#	1	SILK SCREEN (BLACK)	
X		3	E_IA_5409668_0_0	#	1	FRONT PANEL CONTROL BOARD	
			D_SC_1205849_0_6	#	1	ROCKER HANDLE (RUSSET ORN)	
			D_SC_1205849_0_13	#	1	ROCKER HANDLE (TERRA COTTA)	
			D_MD_7409354_0_0	#	1	SUPPORT, LED	
			C_MD_7408246_0_0	#	1	SWITCH MTG. BAR	
			C_SC_1204947-0-0	#	1	KNOB, CONT PANEL	
			E_IA_5009667_0_0	#	1	FRONT PANEL CONT. BOARD	

TITLE		SIZE	CODE	NUMBER	REV
CONSOLE ASSY PROGRAMMER'S (KC8_ML)	SHEET 3 OF 3	B	DD	KC8_ML	A





SECTION A-A

QTY.	DESCRIPTION	PART NO.	ITEM NO.
2	SCREW, PHL PN HD, NYLON 8-32×.50	9008208	5
1	SUPPORT, LED	D-IA-7409354-0-0	4
1	FRONT PANEL CONTROL BOARD	E-IA-5409668-00	3
1	CONTROL PANEL, PROGRAMER	D-IA-7409228-00	2
1	BEZEL	E-SC-1210065-0-0	1

PARTS LIST

REVISIONS		
REV	CHANGE NO	CHK

FIRST USED ON OPTION/MODEL: PDP8/M

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS .XX ± .01 .XXX ± .005
ANGLES ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: —

FINISH: —

		DATE
DRN	C B McCoy	2-8-72
CHK	[illegible]	2/9/72
ENG	[illegible]	2-9-72
PROJ. ENG	[illegible]	2-9-72
PROD	[illegible]	DATE

NEXT HIGHER ASSY: B-DD-KC8-ML

SCALE: NONE

SHEET 1 OF 1

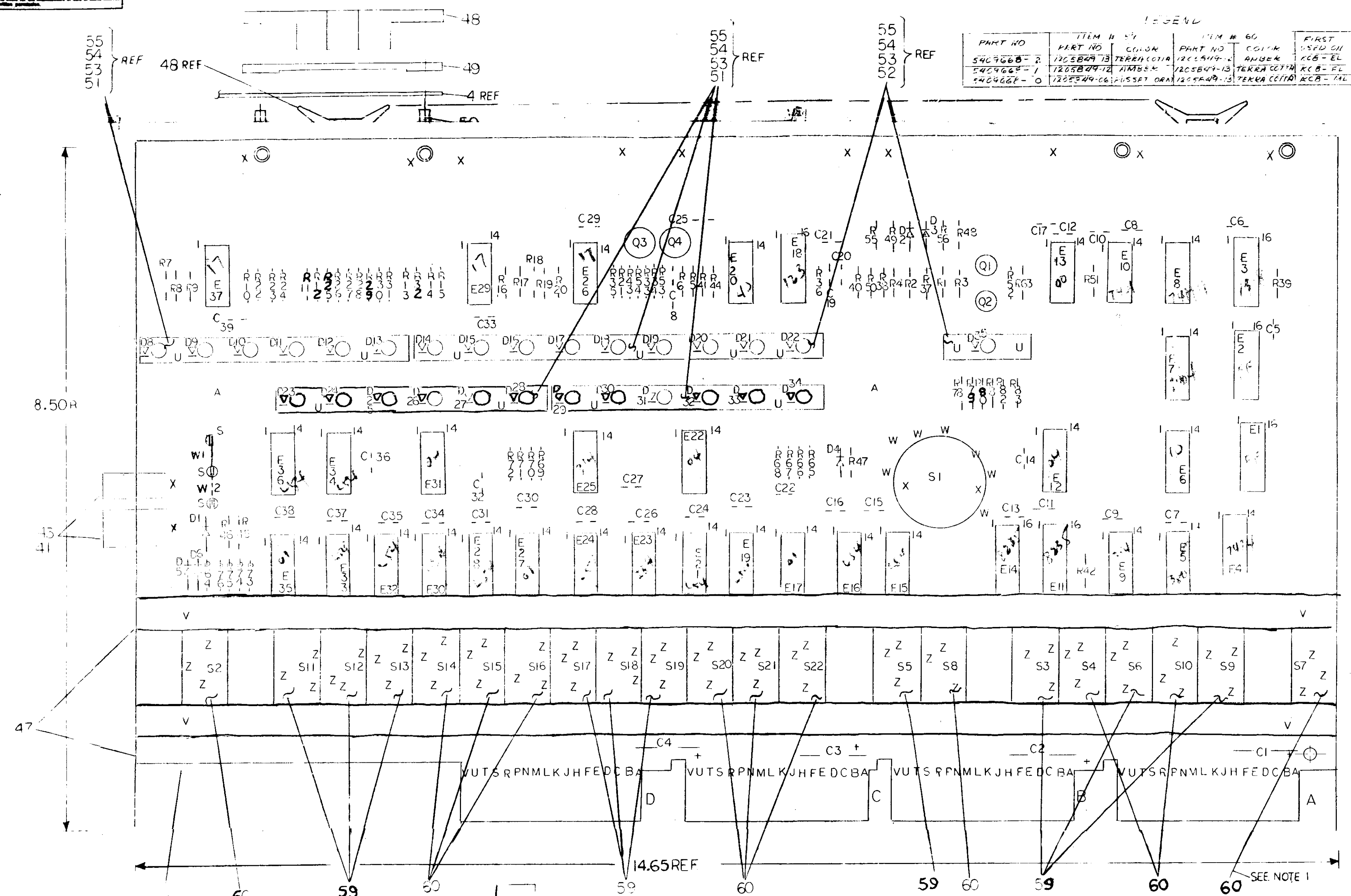
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

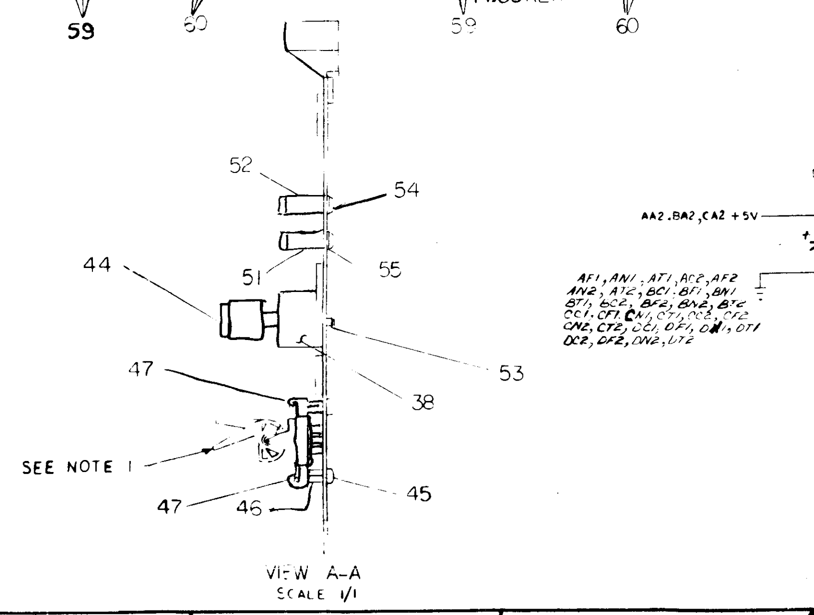
TITLE: CONSOLE ASS'Y, PROGRAMERS

SIZE	CODE	NUMBER	REV
D	UA	KC8-ML-Ø	

DIST.

DEC FORM NO. DRD 100





LEGEND

PART NO	ITEM # 59 PART NO	ITEM # 59 COLOR	ITEM # 60 PART NO	ITEM # 60 COLOR	FIRST USED ON
5409668-2	1205849-13	TERRA COTTA	1205849-12	AMBER	KCB-EL
5409668-1	1205849-12	AMBER	1205849-13	TERRA COTTA	KCB-EL
5409668-0	1205849-06	RUSSET ORN	1205849-13	TERRA COTTA	KCB-ML

NOTES:

1. ITEM NO 40 (MOMENTARY SWITCH) TO BE INSTALLED SO THAT ROCKER HANDLE IS DOWN WHEN IN "OFF" POSITION THIS LOCATION ONLY.

2. ITEM #12 (LIGHT EMITTING DIODE) MAY BE EITHER DEC 1110625 OR 1110664. THEY ARE TO BE USED WITH ITEM #51 & 52 (LED HOLDERS) AS SHOWN BELOW.

ITEM #12	ITEM #51	ITEM #52
1110625	1210796-1	1210940-1
1110664	1210795-2	1210940-2

PARTS LIST

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
11		ROCKER HANDLE	SEE LEGEND	60
10		ROCKER HANDLE	SEE LEGEND	59
3		SPLIT LUGS	9006735	58
1	E3	I.C. DEC 9318	1910454	57
2	E1, E2	I.C. DEC 74175	1910651	56
12		NYLON WASHER FLAT #6 HOLE	9006707	56
2		SELF TAPPING SCR #[illegible] 1/4 BLK PASS	9006830	54
2		NUT HEX #4-40 1/4 1/16	[illegible]	53
2		TRIPLE L.E.D HOLDER	SEE NOTE 2	52
4		L.E.D HOLDER	SEE NOTE 2	51
[illegible]		EYELET #654-1 (STIMPSON)	9006750	50
5		SPACER (CABLE CLAMP)	1202704	49
5		HANDLE, FLIP CHIP - MAGENTA	9008337-06	48
2		SWITCH MTG BAR	C-MD-7408246-0-0	47
4		SPACER 1/4 HF X 1/4 LG X #6 HOLE	9006800	46
4		SCR PHL HD PAN #6-32 7/16 LG	9006023-1	45
1		KNOB CONTROL PANEL	1210114	44
2		TAB, FASTON	9007112	43
A.R.		GRIFLET	1210244-0	42
2		EYELET	9009[illegible]	41
6	S3 THRU S8	SWITCH ROCKER, R5-2-3-FB	1205375	40
15	S2, S9 THRU S22	SWITCH, SLIDE	[illegible]	39
1	S1	SWITCH, ROTARY	1210627	38
4	E10, E17, E27, E35	I.C. DEC 97401	[illegible]9973	37
1	E13	I.C. DEC 7400	1905575	36
1	E18	I.C. DEC 74123	1910436	35
2	E11, E14	I.C. DEC 8235	1909935	34
1	E9	I.C. DEC 5384	1910394	33
1	E5	I.C. DEC 5380	1910392	32
1	E25	I.C. DEC 5314	1910391	31
1	E4	I.C. DEC 7474	1905547	30
12	E15, E16, E19, E21, E23, E24, E28, E30, E32, E33, E34, E36	I.C. DEC 74L54	1910624	29
1	E20	I.C. DEC 7440	1905579	28
3	E26, E29, E37	I.C. DEC 7417	1909929	27
1	E6	I.C. DEC 7410	1905576	26
4	E7, E12, E22, E31	I.C. DEC 7404	[illegible]	25
1	E8	I.C. DEC 74H11	[illegible]267	24
2	Q3, Q4	TRANS, DEC 2904	[illegible]742	23
2	Q1, Q2	TRANS, DEC 3009B	[illegible]	22
				21
4	R1 THRU R4	RES, 27, 1/4W, [illegible]	[illegible]1425	20
2	R36, R40	RES, 10K, 1/4W, 10%	1300431	19
24	R53-R56, R63-R76, R78-R83.	RES, 3.0K, 1/4W, 5%	13004[illegible]2	18
11	R42 THRU R52	RES, 1.5K, 1/4W, 5%	1300391	17
5	R35, R37, R38, R39, R41	RES, 470, 1/4W, [illegible]	1300317	16
28	R7 THRU R34	RES, 330, 1/4W, 10%	1300293	15
2	R5, R6	RES, 47, 1/4W, [illegible]	1300234	14
4	D1 THRU D4	DIODE, D664	1100114	13
28	D8 THRU D35	DIODE LIGHT EMITTING	SEE NOTE #2	12
2	D5, D6	DIODE D662	1100113	11
1	C20	CAP, 100 PF, 100V, 5% DM	[illegible]00016	10
32	C5-17 & 21-39	CAP, .01 UF, 100V, 20% DISC	1001610	9
2	C18, C19	CAP 470 PF 100V 5% DM	1000024	8
4	C1 THRU C4	CAP 6.8 UF, 35V, 20% S.TANT	1000067	7
REF		FRONT PNL CONT BOARD	E-IA-5009667-0-0	6
REF		CIRCUIT SCHEMATIC	D-CS-5409668-0-1	5
1		ETCHED CIRCUIT BOARD	5009667	4
REF		MODULE ECO HISTORY	B-MH-5409668-0-[illegible]	3
REF		FRONT PNL CONT BOARD	E-IA-5409668-0-0	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5409668-0-[illegible]	1

ETCH BOARD REV F

IC PIN LOCATIONS

IC TYPE	GND	+5V
DEC 74175	8	16
DEC 9318	8	16
DEC 5384	1	8
DEC 8235	8	16
DEC 5380	1	8
DEC 5314	1	8

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

JUMPER LIST

ITEM NO	AWG	FROM PT	TO PT

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
D662	1N 645		
D664	1N 3606		
DEC 2904	2N1132		
DEC 3009B	2N3009B		

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: FRONT PNL CONT BOARD

FIRST USED ON: D-UA-KCB-ML-0

SCALE 2/1 SHEET 1 OF 1

E IA 5409668-0-0 REV. L

J. DIMACK
D. WHITE
L. KLOTZ
P. GARDNER
G. ESSER
GREG ESSER
ORIGINATED

R7 330 D8 EMA0 · R9 330 D9 EMA1 · R9 330 D10 EMA2 · R10 330 D11 MA0 · R11 330 D12 MA1 · R12 330 D13 MA2 · R13 330 D14 MA3 · R14 330 D15 MA4 · R15 330 D16 MA5 · R16 330 D17 MA6 · R17 330 D18 MA7 · 330 D19 MA8 · 330 D20 MA9 · 330 D21 MA10 · R21 330 D22 MA11

MEM START AJ2 · + 5V · R36 10K · R40 10K · C19 470 PF · C20 100 PF · E10 · E18

TP4 CJ2 INITIALIZE CR1 · E5 · + 5V · R37 470 · R1 27 · R2 27 · E8 · Q1 DEC 3009B

Q2 DEC 3009B · DR2 LOAD ADDRESS · R3 27 · R4 27 · R38 470 · E8 · E12

PRIORITY ENCODER E3 · E7 · E4 · E2 QUAD FF · E1 QUAD FF · CLR · CLK

S5 "ADDR LOAD" KEY · S6 "EXAM" KEY · S3 "DEP" KEY · S4 "CONT" KEY · S7 "DEP" KEY

TS2 CL2 · E9 · E6 · E11 · MSIR DIS CONTROL CVI · KEY DU2 · LOAD ADDR ENA BM2

R42 1.5K + 5V · + 3V

D3 · E13 · E10 · 10 DS2 STOP L · E9 · FSET L DP2 · D2 · R48 1.5K · R49 1.5K · R55 3K · R56 3K + 5V · S9 "SING STEP" SWITCH · S10 "HALT" SWITCH

+5V AA2 · R43 1.5K · R35 470 · Q3 DEC2904 · Q4 DEC2904 · C18 470PF · R53 3K · R5 47 · R54 3K · R6 47

E20 · SR DATA H

IND2 CV2 · IND1 CU2 · E14 · E12

+8V YELLOW · PAN LOCK - BLUE

LATCH (1) · R82 +5V 3K · R81 3K · E4 LATCH · CD2 TP1 · +3V

R47 1.5K -15V · D4 · SI "BUS" · CW 2 "MQ" · 3 "MD" · R80 3K · R83 3K · MD IND H

E8 · CK2 TSI L · E20 · E5 · TSI H · 4 "AC" · 5 "STATUS" · 6 "STATE" · EG · STATE IND H · BK DATA CONT

R50 1.5K + 5V · R63 3K + 5V · R52 1.5K · R79 3K · R78 3K · +5V

BU2 RUN L · E26 · D35 · R34 330 AA2 + 5V

W1 · S2 · W2 -15V · SW · R46 1.5K · R45 1.5K · D1

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV F

REVISIONS	REV	CHANGE NO.	CHK
J. DIMACK 5409668-00007	L		
D. WHITE 5409668-00006	K		
L. KLOTZ 5/22/72 5409668-00005	J		
P. GARDNER 5409668-00004	H		
P. GARDNER 5409668-00003	F		
GREG ESSER 5409668-00002	E		
GREG ESSER 5409668-00001	D		

DEC NO. · EIA NO. · DEC NO. · EIA NO.

SEMICONDUCTOR CONVERSION CHART

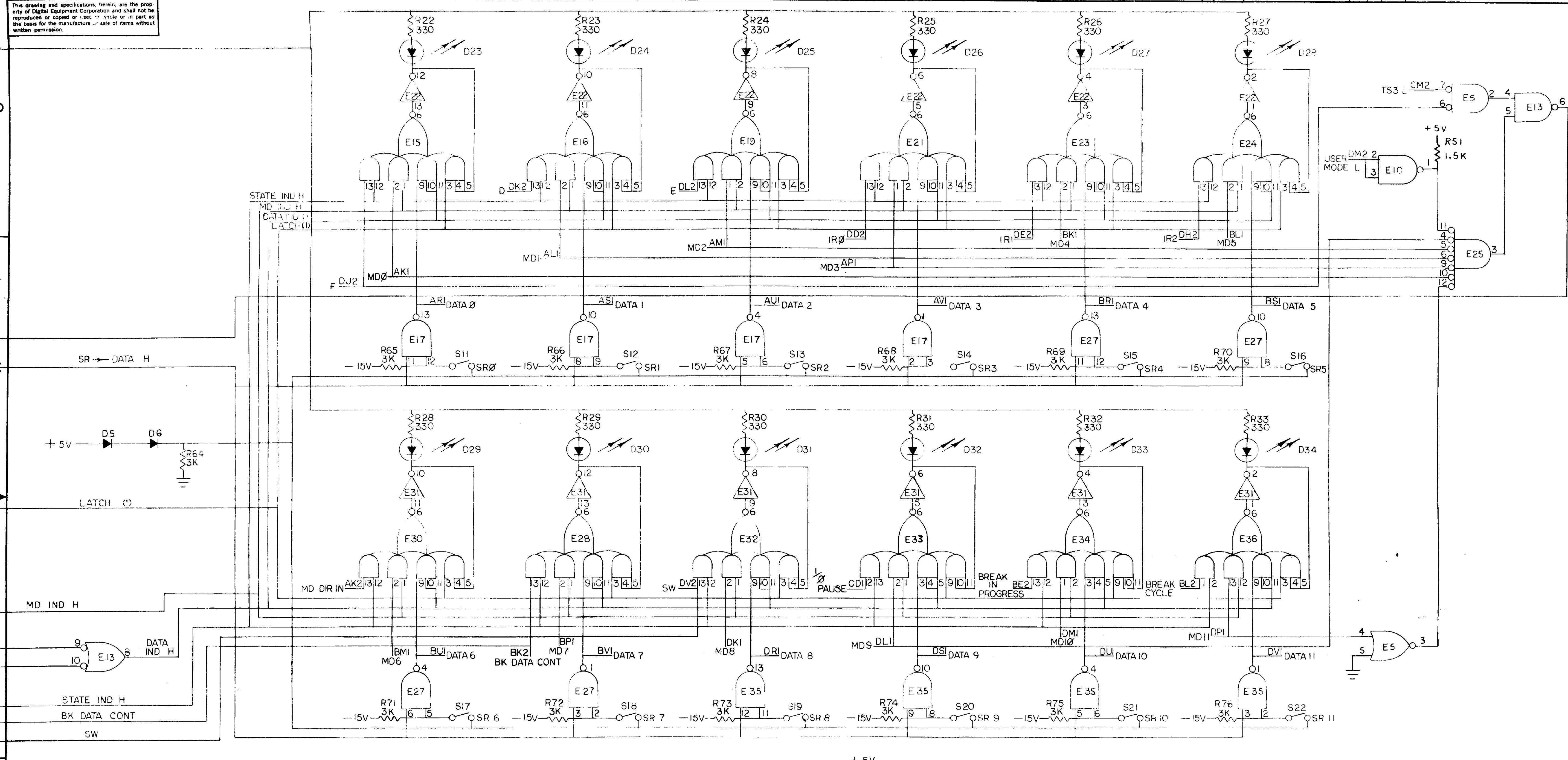
DRN J. Dimack 6-20-72 · CHK'D. · ENG. · PROJ. ENG. · PROD. · NEXT HIGHER ASSY · SCALE · SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: FRONT PANEL CONT BOARD

SIZE D · CODE CS · NUMBER 5409668-0-1 · REV. L · DIST.

DEC FORM NO DRD-135



UNLESS OTHERWISE INDICATED:
CAPACITORS ARE .01UF, 100V, 20%
DIODES ARE LIGHT EMITTING, DEC PART NO. 11-10625 OR 11-10664
SWITCHES ARE SLIDE TYPE, PART NO. 12 10626
RESISTORS ARE 3K, 1/4W, 5%
IC S ARE DEC 7400 = E13
74H11 = E8
7404 = E7, E12, E22, E31
7410 = E6
7417 = E26, E29, E37
7440 = E20
74L54 = E15, E16, E19, E21, E23, E24, E28, E30, E32, E33, E34, E36
7474 = E4
5314 = [illegible]
5380 = E5
5384 = E9
8275 = E11, E14
9318 = E3
97401 = E10, E17, E27, E35
74123 = E18
74175 = E1, E2

+5V, R41 470, +3V, C17 .01UF 100V 20%, R44 1.5K

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV F

SEMICONDUCTOR CONVERSION CHART

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

DRN. Roger Doucette DATE 10-20-71
CHK'D DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE FRONT PANEL CONT BOARD

SIZE D CODE CS NUMBER 5409668-0-1 REV. L

SCALE
SHEET 2 OF 2
DIST.

DEC FORM NO

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS KK8-E
KK8-E	CENT. PROC.	X

USED ON OPTIONS							
PDP8/E							
PDP8/M							

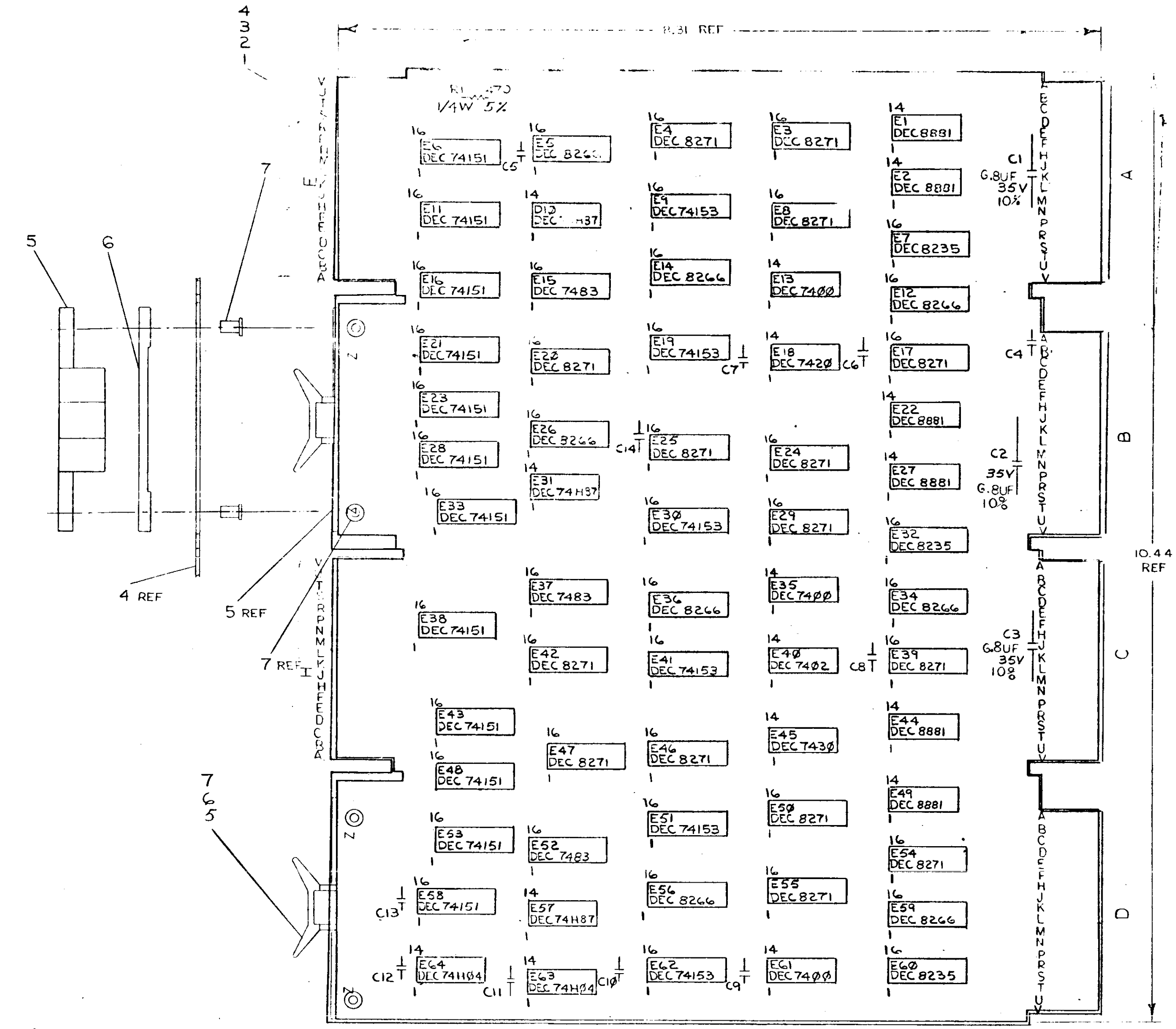
REVISIONS	REV.	DATE	CHG. NO.	APP'D.
	A	1/71	KK8E-1	D.C.
	B	3/71	KK8E-2	R.V.
	C	4/71	KK8E-3	L.K.
	D	5/71	M833-6	L.N.
	E	7/71	MISC-86	A.V.
	F	1/72	8E-55	J.C

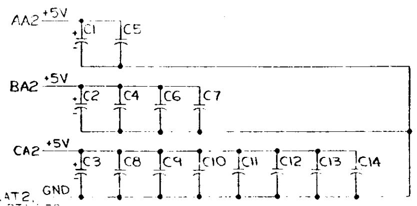
DRN. K. GULICK	DATE 12/28/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. K. GULICK	DATE 12/29/70	
ENG. L. KLOTZ	DATE 1/12/71	TITLE CENTRAL PROCESSOR (KK8-E)
PROJ. ENG. VOGELSANG	DATE 1/12/71	
PROD. L. SAYLOR	DATE 1/13/71	
FIRST USED ON A-ML-PDP8/E-Ø		SIZE A / CODE ML / NUMBER KK8-E / REV. F
SCALE #		
SHEET 1 OF 2		DIST.

PRINT SET KK8-E	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-CS-M83ØØ-Ø-1	B	5	MAJOR REGISTERS	
X	E-CS-M831Ø-Ø-1	B	4	MAJOR REIGSTER CONTROL	
X	E-CS-M832Ø-Ø-1	A	2	BUS LOADS	
X	E-CS-M832-Ø-1	D	2	BUS LOADS	
X	E-CS-M833-Ø-1	F	2	TIMING GENERATOR	
X	B-CS-M849-Ø-1	C	1	RFI SHIELD	
X	D-UA-KK8-E-Ø	A	1	CENTRAL PROCESSOR	
X	A-PL-KK8-E-Ø	A	1	CENTRAL PROCESSOR	
-	A-SP-KK8-E-1		3	ENGINEERING SPECIFICATIONS	

TITLE		SIZE	CODE	NUMBER	REV.
CENTRAL PROCESSOR KK8-E	SHEET 2 OF 2	A	ML	KK8-E	F

NOTES:





AC2, AF1, AF2, AN1, AN2, AT1, AT2, BC1, BC2, BF1, BF2, BN1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CN2, CT1, CT2, DC1, DC2, DF1, DF2, DN1 & DT2

IC TYPE	GND	+5V
DEC 8235	8	16
DEC 7483	12	5
DEC 8271	8	16
DEC 8266	8	16
DEC 74153	8	16
DEC 74151	8	16

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
A/R		~~WIRE #22 AWG SOLID~~	~~9107560-01~~	24
6	E9, E19, E30, E41, E51, E62	I.C. DEC 74153	1909937	23
12	E6, E11, E16, E21, E23, E28, E33, E38, E43, E48, E53, E58	I.C. DEC 74151	1909936	22
3	E7, E32, E60	I.C. DEC 8235	1909935	21
8	E5, E12, E14, E26, E34, E36, E56, E59	I.C. DEC 8266	1909934	20
3	E15, E37, E52	I.C. DEC 7483	1909932	19
2	E63, E64	I.C. DEC 74H04	1909931	18
3	E10, E31, E57	I.C. DEC 74H87	1909927	17
6	E2, E22, E27, E44, E49	I.C. DEC 8881	1909705	16
15	E3, E4, E8, E17, E20, E24, E25, E29, E39, E42, E46, E47, E50, E54, E55	I.C. DEC 8271	1909615	15
1	E40	I.C. DEC 7402	1909004	14
1	E45	I.C. DEC 7430	1905578	13
1	E18	I.C. DEC 7420	1905577	12
3	E13, E35, E61	I.C. DEC 7400	1905575	11
1	R1	RESISTOR 470 1/4W 5%	1300316	10
11	C4 - C14	CAP. .01UF 100V 20% DISC	1001610	9
3	C1, C2, C3	CAP. 6.8UF 35V 20% STANT	1000067	8
4		EYELETS GS4-11 STIMPSON	9006750	7
2		SPACER (CABLE CLAMP)	1202704	6
2		HANDLE FLIP CHIP-MAGENTA	1208337-06	5
1		ETCHED CIRCUIT BOARD	5009250	4
REF		MODULE HISTORY LIST	B-MH-M8300-0-6	3
REF		ASS'Y/DRILLING HOLE LAYOUT	D-AH-M8300-0-5	2
REF		X-Y COORDINATE HOLE LOC	[illegible]	1

PARTS LIST

REV COLUMN B

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH REVISION

SEMICONDUCTOR CONVERSION CHART

DEC NO | EIA NO

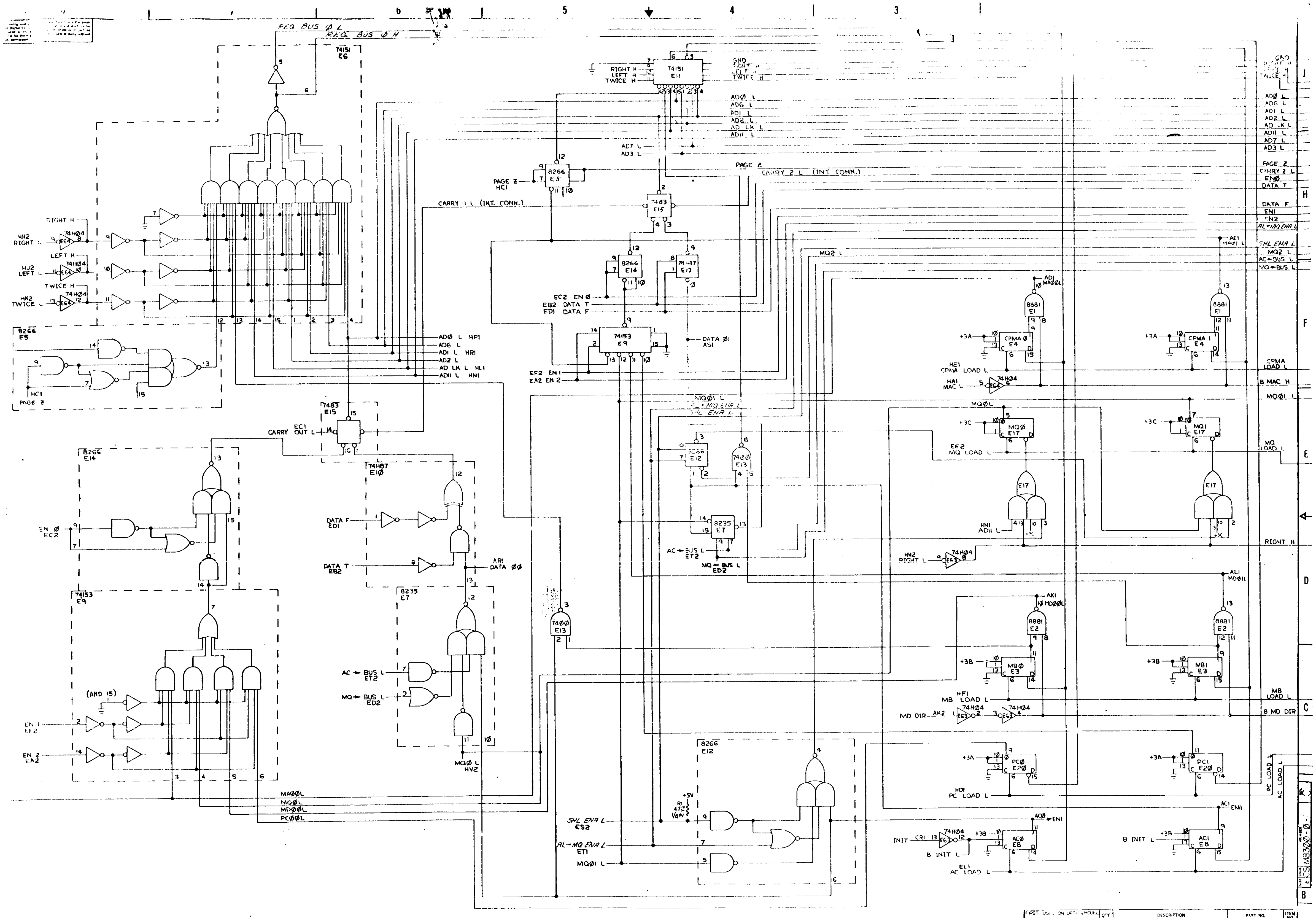
EQUIPMENT CORPORATION

TITLE

SIZE E

NUMBER M8300-0-1

REV. C



CARRY IN TO A 7483 ADDER IS PIN 13
CARRY OUT OF A 7483 ADDER IS PIN 14 THUS

CARRY 2 L (INT CONN)	7483 E15	7483 E15	7483 E37	7483 E37	CARRY 6 L (INT CONN)

DENOTES CONN. BETWEEN E37 PIN 14 & E5 PIN 13 WHILE CARRY 6 L IS INTERNAL TO E37 AND CARRY 2 L IS INTERNAL TO E15

FOR SIMPLICITY OF DRAWING THE FOLLOWING PROCEDURES HAVE BEEN USED TO ELIMINATE LINES:

14	74153 E19	74153 E3Ø	1
2			15

THIS DENOTES A CONNECTION BETWEEN E19 PIN 14 AND E3Ø PIN 14, E19 PIN 2 AND E3Ø PIN 2 (ALSO PINS 1 AND 15 ON EACH I.C.). THIS ALSO IS TRUE FOR OTHER CASES SUCH AS 8266, 74H87, AND 74151.

FIRST USED ON OPTN MODEL: PDP 8/E

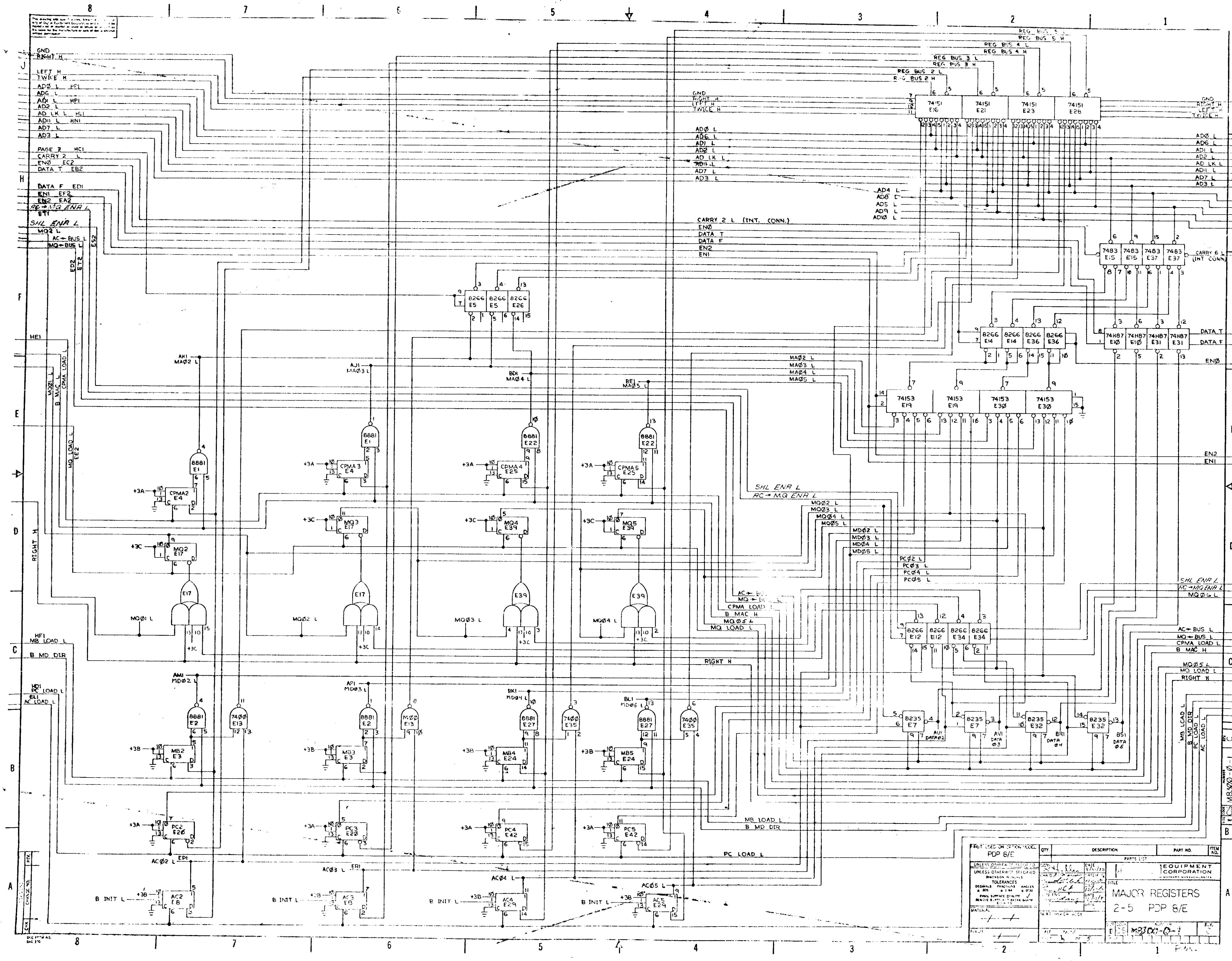
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES

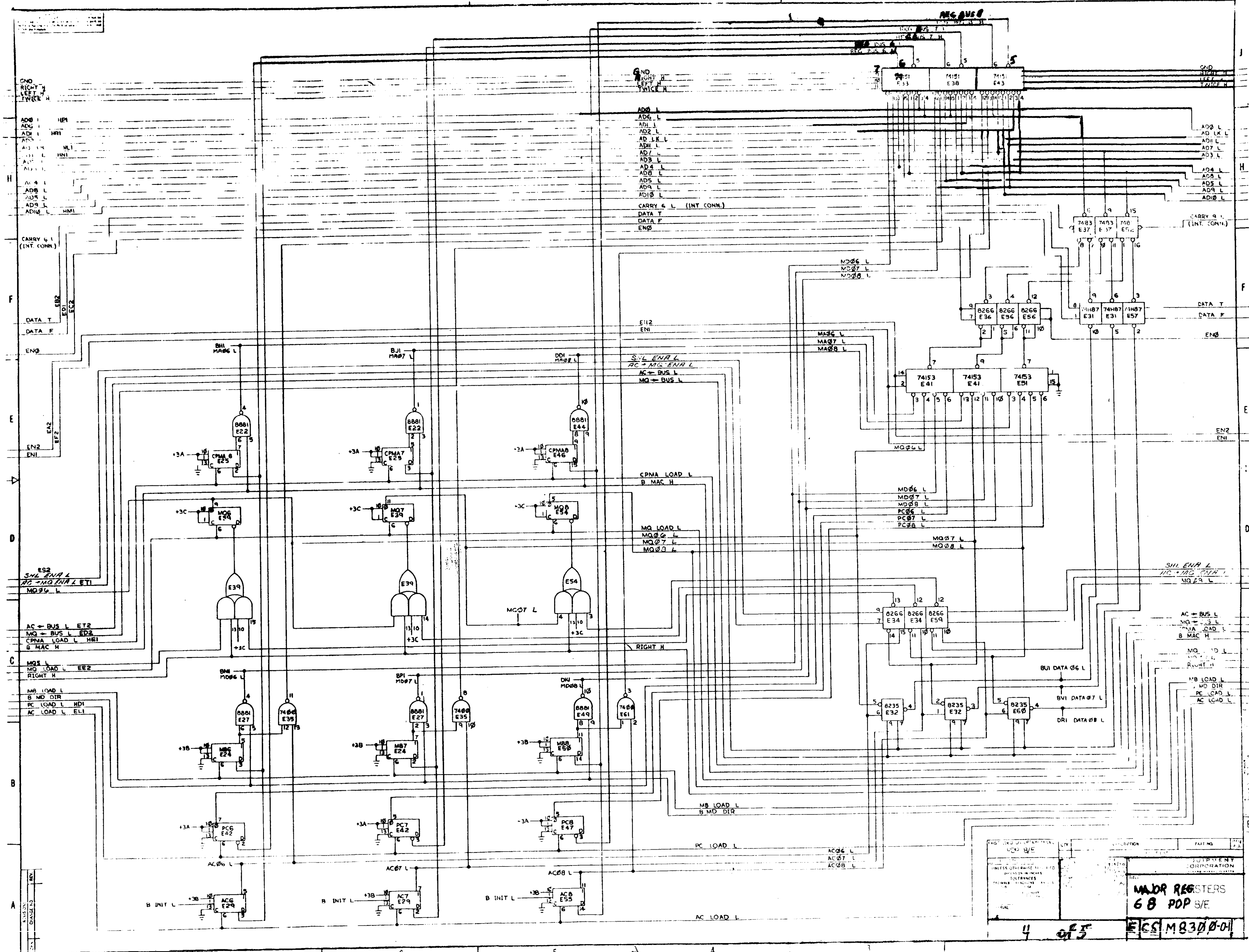
DIGITAL EQUIPMENT CORPORATION

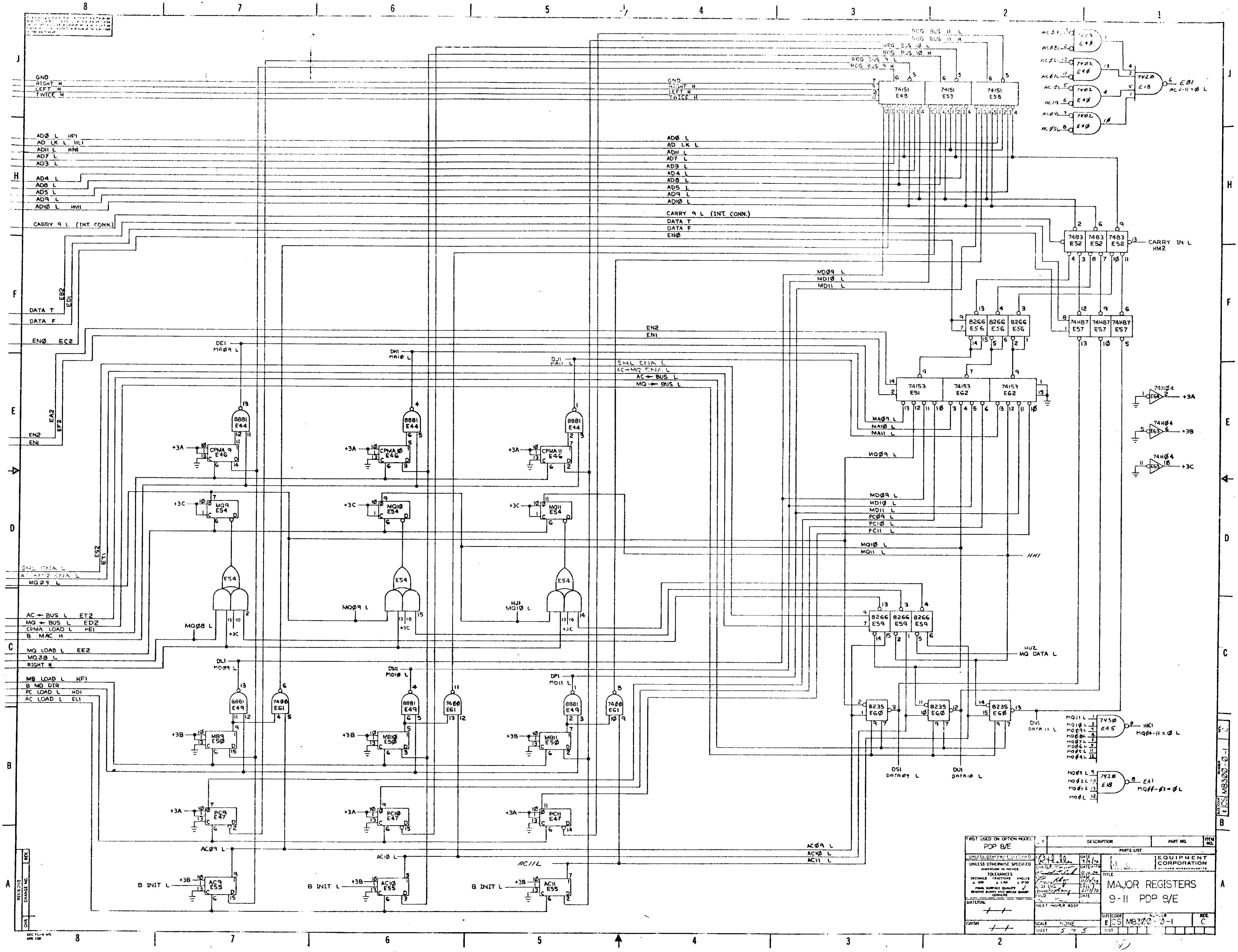
TITLE: MAJOR REGISTERS Ø & 1 PDP 8/E

E M8300-0-1

ECSM8300-0-1

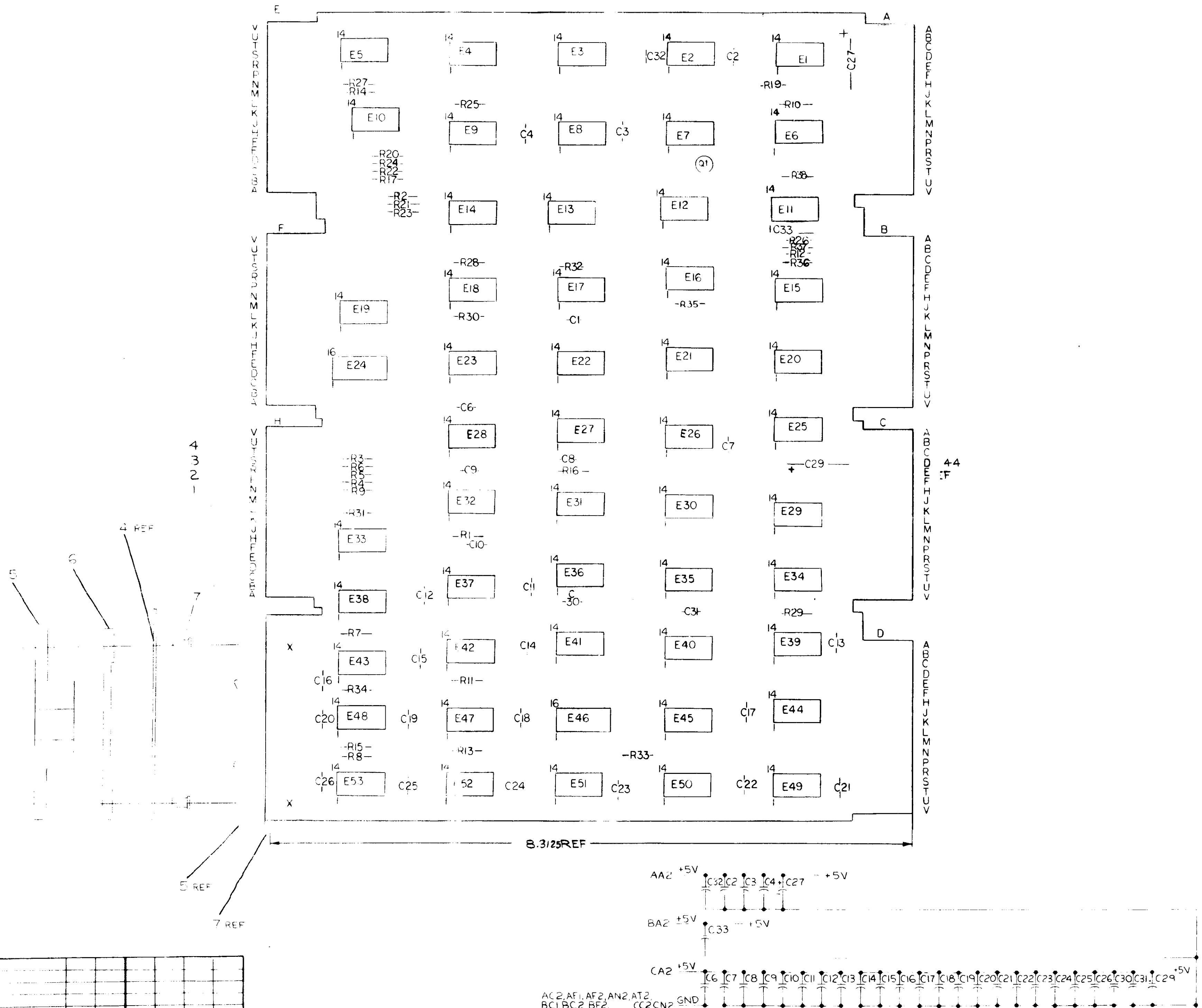

MAJOR REGISTERS
2-5 PDP 8/E
M8300-0-1
EQUIPMENT CORPORATION
PDP 8/E
UNLESS OTHERWISE SPECIFIED
TOLERANCES
74151 E16
74151 E21
74151 E23
74151 E28
REG BUS 5 L
REG BUS 5 H
REG BUS 4 L
REG BUS 4 H
REG BUS 3 L
REG BUS 3 H
REG BUS 2 L
REG BUS 2 H
GND
RIGHT H
LEFT H
TWICE H
ADØ L
AD6 L
ADI L
AD2 L
AD LK L
ADII L
AD7 L
AD3 L
AD4 L
AD8 L
AD5 L
AD9 L
PAGE Z
CARRY 2 L
ENØ
DATA T
DATA F
EN1
EN2
CARRY 2 L (INT. CONN.)
CARRY 6 L (INT CONN)
7483 E15
7483 E37
8266 E5
8266 E26
8266 E14
8266 E36
74H87 E1Ø
74H87 E31
74153 E19
74153 E3Ø
MAØ2 L
MAØ3 L
MAØ4 L
MAØ5 L
8881 E1
8881 E22
CPMA2 E4
CPMA3 E4
CPMA4 E25
CPMA5 E25
MQ2 E17
MQ3 E17
MQ4 E39
MQ5 E39
MQØ1 L
MQØ2 L
MQØ3 L
MQØ4 L
MQØ5 L
SHL ENA L
AC→MQ ENA L
MDØ2 L
MDØ3 L
MDØ4 L
MDØ5 L
PCØ2 L
PCØ3 L
PCØ4 L
PCØ5 L
AC← BUS L
MQ← BUS L
CPMA LOAD L
B MAC H
MQ LOAD L
MB LOAD L
B MD DIR
PC LOAD L
AC LOAD L
RIGHT H
8266 E12
8266 E34
8235 E7
8235 E32
DATA Ø2
DATA Ø3
DATA Ø4
DATA Ø6
8881 E2
8881 E27
7400 E13
7400 E35
MB2 E3
MB3 E3
MB4 E24
MB5 E24
PC2 E20
PC3 E20
PC4 E42
PC5 E42
ACØ2 L
ACØ3 L
ACØ4 L
ACØ5 L
AC2 E8
AC3 E13
AC4 E29
AC5 E29
B INIT L
+3A
+3B
+3C


REG BUS 8
REG BUS 7 H
REG BUS 6 H
74151 E33
74151 E38
74151 E43
GND
RIGHT H
LEFT H
TWICE H
ADØ L
AD6 L
AD1 L
AD2 L
AD LK L
AD11 L
AD7 L
AD3 L
AD4 L
AD8 L
AD5 L
AD9 L
AD1Ø L
CARRY 6 L (INT. CONN.)
DATA T
DATA F
ENØ
CARRY 9 L (INT. CONN.)
7483 E37
MDØ6 L
MDØ7 L
MDØ8 L
8266 E36
8266 E56
74H87 E31
74H87 E57
EN2
EN1
MAØ6 L
MAØ7 L
MAØ8 L
SHL ENA L
AC + MQ ENA L
AC ← BUS L
MQ ← BUS L
74153 E41
74153 E51
8881 E22
8881 E44
CPMA 6 E25
CPMA7 E25
CPMA8 E46
MQØ6 L
CPMA LOAD L
B MAC H
MQ6 E39
MQ7 E39
MQ8 E54
MQ LOAD L
MQØ7 L
MQØ8 L
PCØ6 L
PCØ7 L
PCØ8 L
E39
E54
8266 E34
8266 E59
RIGHT H
BU1 DATA Ø6 L
BV1 DATA Ø7 L
DR1 DATA Ø8 L
8235 E32
8235 E6Ø
8881 E27
8881 E49
7400 E35
7400 E61
MB6 E24
MB7 E24
MB8 E5Ø
MB LOAD L
B MD DIR
PC LOAD L
AC LOAD L
PC6 E42
PC7 E42
PC8 E47
ACØ6 L
ACØ7 L
ACØ8 L
AC6 E29
AC7 E29
AC8 E55
B INIT L
MAJOR REGISTERS
68 PDP 8/E
E CS M83ØØ-01
4 of 5



REG BUS 11 L
REG BUS 11 H
REG BUS 10 L
REG BUS 10 H
REG BUS 9 L
REG BUS 9 H
GND
RIGHT H
LEFT H
TWICE H
74151 E48
74151 E53
74151 E58
AD0 L HP1
AD LK L HL1
AD11 L HN1
AD7 L
AD3 L
AD4 L
AD8 L
AD5 L
AD9 L
AD10 L HM1
CARRY 9 L (INT. CONN.)
DATA T
DATA F
EN0
EN0 EC2
7483 E52
CARRY IN L HM2
MD09 L
MD10 L
MD11 L
8266 E56
74H87 E57
EN2
EN1
SHL ENA L
AC←MQ ENA L
AC ← BUS L
MQ ← BUS L
74153 E51
74153 E62
MA09 L
MA10 L
MA11 L
MQ09 L
PC09 L
PC10 L
PC11 L
MQ10 L
MQ11 L
8881 E44
CPMA 9 E46
CPMA 10 E46
CPMA 11 E46
MQ9 E54
MQ10 E54
MQ11 E54
E54
AC ← BUS L ET2
MQ ← BUS L ED2
CPMA LOAD L HE1
B MAC H
MQ LOAD L EE2
MQ38 L
RIGHT H
MB LOAD L HF1
B MD DIR
PC LOAD L HD1
AC LOAD L EL1
8266 E59
MQ DATA L
8235 E60
DATA 11 L
DATA09 L
DATA10 L
8881 E49
7400 E61
MB9 E50
MB10 E50
MB11 E50
PC9 E47
PC10 E47
PC11 E47
AC09 L
AC10 L
AC11 L
B INIT L
AC9 E55
AC10 E55
AC11 E55
7402 E40
7420 E18
74H04 E63
+3A
+3B
+3C
7430 E45
FIRST USED ON OPTION MODEL
PDP 8/E
UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
DESCRIPTION
PART NO.
PARTS LIST
DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
TITLE
MAJOR REGISTERS
9-11 PDP 8/E
SIZE E
CODE CS
NUMBER M8300-0-1
REV. C
SCALE NONE
SHEET 5 OF 5

NOTES:



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	R37	RES. 3K, 1/4W, 5%	1300432	30
1	R38	RES. 00, 1/4W, 10%	1300231	29
1	Q1	TRANSISTOR DEC3009B	1503100	28
2	E40, E45	I.C. DEC 74H74	1909667	27
3	E18, E21, E35	I.C. DEC 74H00	1909056	26
2	E14, E36	I.C. DEC 74H04	1909931	25
1	R35	RES 100, 1/4W, 5%	1300229	24
1	E38	I.C. DEC 7486	1910011	23
3	E9, E11, E13	I.C. DEC 7412	1909955	22
1	E24	I.C. DEC 74151	1909936	21
4	E8, E10, E27, E28	I.C. DEC 7405	1909930	20
12	E1-E5, E23, E43, E44, E49, E52, E53, E15	I.C. DEC 8881	1909705	19
7	E6, E16, E20, E26, E34, E47, E48	I.C. DEC 7404	1909686	18
1	E46	I.C. DEC 8251	1909594	17
1	E29	I.C. DEC 384	1909486	16
6	E19, E22, E25, E37, E41, E51	I.C. DEC 7402	1909004	15
2	E7, E30	I.C. DEC 7420	1905577	14
2	E12, E31	I.C. DEC 7410	1905576	13
3	E32, E39, E42	I.C. DEC 7400	1905575	12
3	E17, E33, E50	I.C. DEC 7474	1905547	11
34	R1-R17, R19-R34, R36	RES. 470, 1/4W, 5%	1300316	10
29	C1-C4, C6-C26, C30-33	CAP. .01UF, 100V, 20% DISC	1001610	9
2	C27, C29	CAP. 6.8UF, 35V, 20% S. TANT	1000067	8
2		EYELETS GS4-11 STIMPSON	9006750	7
1		SPACER (CABLE CLAMP)	1202704	6
1		HANDLE, FLIP CHIP - MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009278	4
REF		MODULE ECO HISTORY	B-MH-M8310-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8310-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8310-0-4	1

PARTS LIST

DEC NO.	EIA NO.
DEC3009B	2N3646

SEMICONDUCTOR CONVERSION CHART

IC TYPE	GND	+5V
DEC 74H5	3	6
DEC 8251	8	16
DEC 384	1	8

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

REV COLUMN — PRINTED CIRCUIT BOARD REVISION: H — CIRCUIT SCH REVISION

DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: MAJOR REG. CONT. (M8310)

FIRST USED ON: D-UA-KK8-E-0

SCALE 2/1 — SHEET 1 OF 4

SIZE E — CODE CS — NUMBER M8310-0-1 — REV. F

PAGE 2

LINK L

LINK

INITIALIZE

BTP3

LINK DATA L

TAD·E L

OPI L

LINK LOAD L

ADLK L

RIGHT L

LEFT L

TWICE L

ADIØ L

ADI1 L

ADI L

ADØL

BMDØ

BMD8

BMD9

BUS STROBE

MD4 L

F SET L

PC LOAD L

CPMA DIS L

MAC L

FR2 & EE2

MQ LOAD L

CPMA LOAD L

MB LOAD L

DR2 PULSE LA

C2 L

SKIP L

OV H

INIT

LINK

BTS4

BTP2

TAD·E L

BTP3

BTS3

BF

OPI·TS3

FE+FD L

JMP

TP1

JMS·E

BMD7

BMD5

BMD6

CPMA LOAD L

OPE

TP4·MALC

OVERFLOW L

FM2 & EC1 CAR OUT L

+3VA

BTS3

OV H

BTP2

IOT L

ADLK DIS L TO EAE

F SET L

TAD·E L

BTP3

MD7 L

MD5 L

OPI L

AND·E L

DCA·E L

ISZ·E

OPR-IOT L

OPR-F L

AC=Ø

ACØ

BF+KC

OP2·TS3

AND·E TS3

MDBL

OPR+IOT

OPE·TS3

TS4·SET·MS DIS

OPR·F

BMD11

MD7 L

MD5 L

BF+KC

SKIP (L)

C2 L

MD4

BTS4

BTP2

BTS3

BF

OPI·TS3

FE+FD L

JMP

TP1

JMS·E

BMD7

BMD5

BMD6

MDBL	
BMDØ	
BMD9	
BMD8	
BTP3	
BUS STROBE	
TP1	
F SET L	
BTS4	
CPMA LOAD L	
TP4 MALC	
AND·E L	
TAD·E L	
DCA·E L	
JMS·E	
BTP2	
AND·E TS3	
ISZ·E TS3	

OPR+IOT	
OPR·IOT L	
OPR·F L	
FE+FD L	
BTS3	
ACØ	
AC=Ø	
BF	
KC L	
BF+KC	
OPE	
OP2·TS3	
OPI·TS3	
OPI L	
OPE·TS3	
BMS DIS	
TS4·SET·MS DIS	
D JMP	
TAD·E·TS3	
ISZ·E·TS2	
DCA·E·TS2	
JMS·E·TS3	
JMS·E·TS2	
JMP	
IOT L	
BTS2	
BD	
BKC	
OPR·F	
BMD11	

OPR+IOT	
OPE·TS3	
BMS DIS	
TS4·SET·MS DIS	
D JMP	
TAD·E·TS3	
ISZ·E·TS2	
DCA·E·TS2	
JMS·E·TS3	
JMS·E·TS2	
BTS2	
BF	
BKC	
OPR·F	
BMD11	

FIRST USED ON OPTION MODE: PDP 8/E

PARTS LIST

QTY	DESCRIPTION	PART NO	ITEM NO.

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

DRN R. Hall DATE 7/24/70

CHK'D DATE

ENG DATE

PROJ ENG DATE 12/14/70

PROD DATE

MATERIAL

FINISH

NEXT HIGHER ASSY A-ML-KK8-E

SCALE NONE

SHEET 2 OF 4

digital EQUIPMENT CORPORATION

TITLE V83Ø MAJOR REG. CONT.

SIZE E CODE ECS-M83Ø-0-1 REV. F

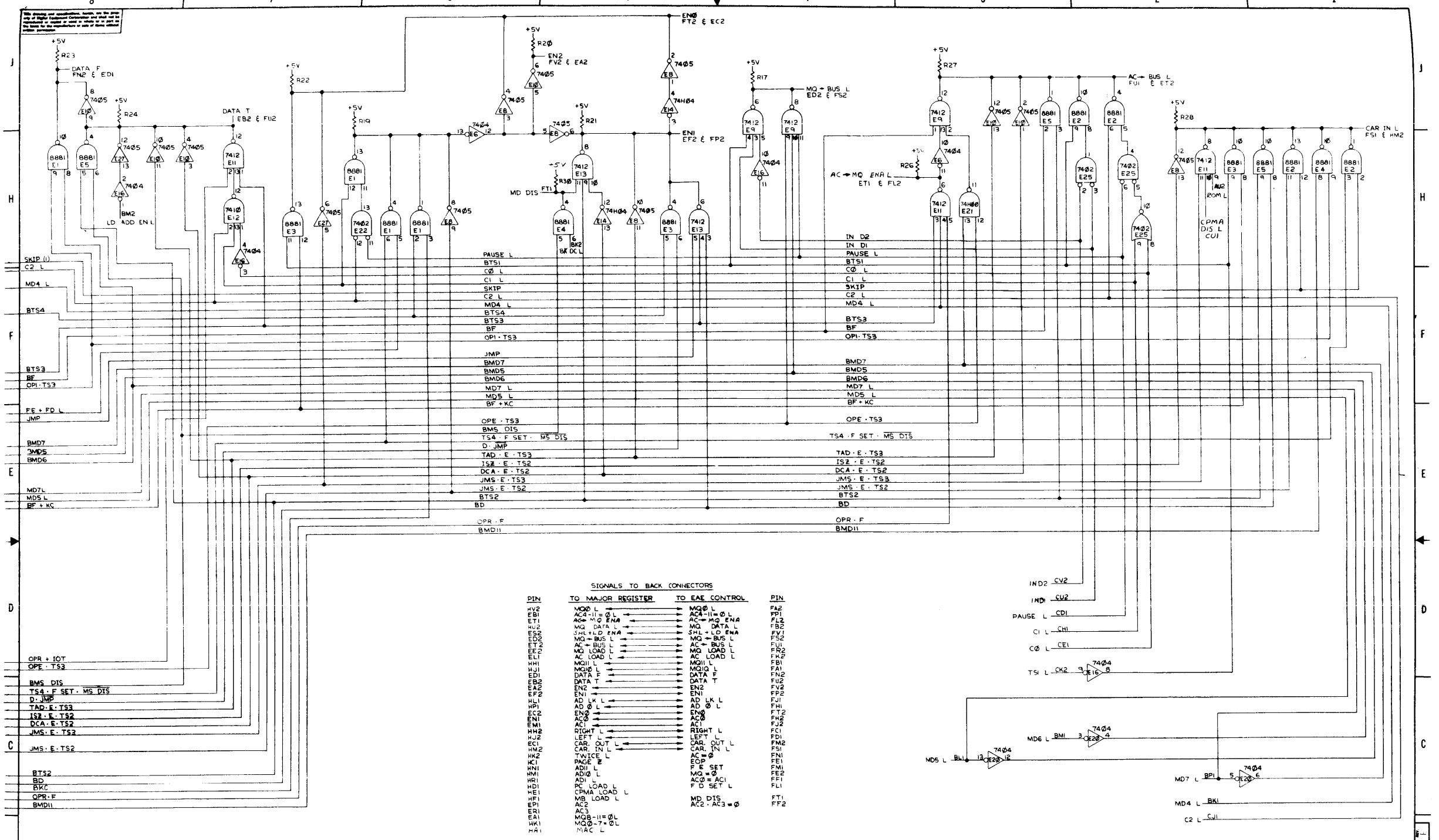
DIST

DEC FORM NO ORT 100

REVISIONS

REV	CHANGE NO	CHK

DATA CODE ECS-M83Ø-0-1 NUMBER B



SIGNALS TO BACK CONNECTORS

PIN	TO MAJOR REGISTER	TO EAE CONTROL	PIN
HV2	MQØ L	MQØ L	FA2
EB1	AC4-11 = Ø L	AC4-11 = Ø L	FP1
ET1	AC → MQ ENA	AC → MQ ENA	FL2
HU2	MQ DATA L	MQ DATA L	FB2
ES2	SHL + LD ENA	SHL + LD ENA	FV1
ED2	MQ → BUS L	MQ → BUS L	FS2
ET2	AC → BUS L	AC → BUS L	FU1
EE2	MQ LOAD L	MQ LOAD L	FR2
EL1	AC LOAD L	AC LOAD L	FK2
HH1	MQ11 L	MQ11 L	FB1
HJ1	MQ10 L	MQ10 L	FA1
ED1	DATA F	DATA F	FN2
EB2	DATA T	DATA T	FU2
EA2	EN2	EN2	FV2
EF2	ENI	ENI	FP2
HL1	AD LK L	AD LK L	FJ1
HM1	AD Ø L	AD Ø L	FH1
EC2	ENØ	ENØ	FT2
EN1	ACØ	ACØ	FH2
EM1	ACI	ACI	FJ2
HH2	RIGHT L	RIGHT L	FC1
HJ2	LEFT L	LEFT L	FD1
EC1	CAR. OUT L	CAR. OUT L	FM2
HM2	CAR. IN L	CAR. IN L	FS1
HN2	TWICE L	AC = Ø	FN1
KC1	PAGE 2	EOP	FE1
HN1	ADII L	F E SET	FM1
HM1	ADI0 L	MQ = Ø	FE2
HR1	ADI L	ACØ = ACI	FF1
HD1	PC LOAD L	F D SET L	FL1
HE1	CPMA LOAD L		
HF1	MB LOAD L	MD DIS	FT1
EP1	AC2	AC2 · AC3 = Ø	FF2
ER1	AC3		
EA1	MQ8-11 = ØL		
HK1	MQØ-7 = ØL		
HA1	MAC L		

RIGHT L	LEFT L	TWICE L	PAGE 2	DATA TO REGISTER	USE
L	L	L	L	MA ← Ø-4 MQ ← 5-11	PAGE ADDRESSING
L	L	H	X	MBX ∧ ACX	AND
L	H	L	X	ADDER (X-2)	RTR
L	H	H	X	ADDER (X-1)	RAR
H	L	L	X	ADDER (X+2)	RTL
H	L	H	X	ADDER (X+1)	RAL
H	H	L	X	ADDER (X+6)	BYTE SWAP
H	H	H	X	ADDER X	NO SHIFT
L	L	L	H	Ø → MAØ → 4 MD → MA5-11	PG Ø ADDRESSING

ENØ	EN1	EN2	INPUT TO ADDER
L	L	L	PC
L	L	H	MD
L	H	L	MQ
L	H	H	MA
H	X	X	Ø (ARITHMETIC ZERO)

DATA T	DATA F	INPUT TO ADDER
L	L	DATA BUS NOT
L	H	DATA BUS
H	L	Ø (ARITHMETIC ZERO)
H	H	1 (ARITHMETIC ONE)

BIT X OF THE REGISTER SELECTED HERE ← IS ADDED TO ← BIT X OF THE DATA BUS AS SELECTED HERE AND THE SUM (ADDER X) IS FED TO A MULTIPLEXER TO BE DECODED AS ABOVE. THE OUTPUT OF THIS MULTIPLEXER IS LOADED INTO WHICH EVER REGISTER IS CLOCKED.

SHL ENA L	AC→MQ ENA L	DATA → MQ
L	L	MQX + 1 Ø-1Ø MQ DATA → MQ11
L	H	MQX + 1 Ø-1Ø MQ DATA → MQ11
H	L	AC (IN COMPLEMENT TO REDEFINE)
H	H	1 (Ø → MQ)

REVISIONS	CHANGE NO	CHK
REV		

FIRST USED ON OPTION MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDP 8/E		PARTS LIST		

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

MATERIAL —

FINISH —

DRWN — DATE 7/11/70
CHK'D — DATE 10/17/70
ENG — DATE 7/11/70
PROJ ENG — DATE 12/4/70
PROD — DATE

NEXT HIGHER ASSY: A ML-KK8-E

SCALE: NONE
SHEET 3 OF 4

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

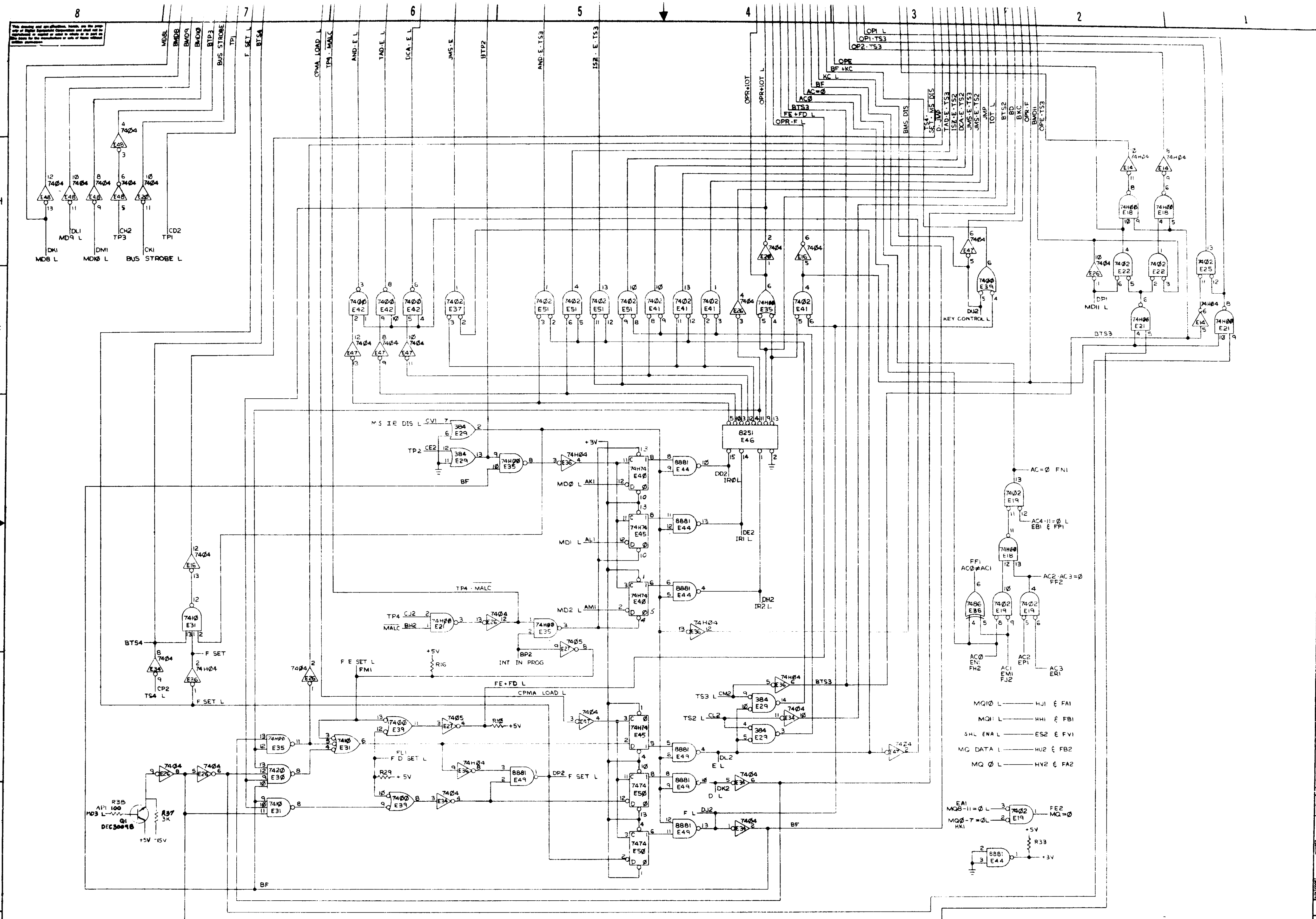
TITLE: M8310 MAJOR REG. CONT.

SIZE E | CODE CS | NUMBER M8310-0-1 | REV F

DIST

DEC FORM NO. ONE 100

REV F | NUMBER M8310-0-1 | SET CODE CS | B



FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP 8/E		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —/—/—
FINISH —/—/—

DATE 7/22/70

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
M8310 MAJOR REG CONT.

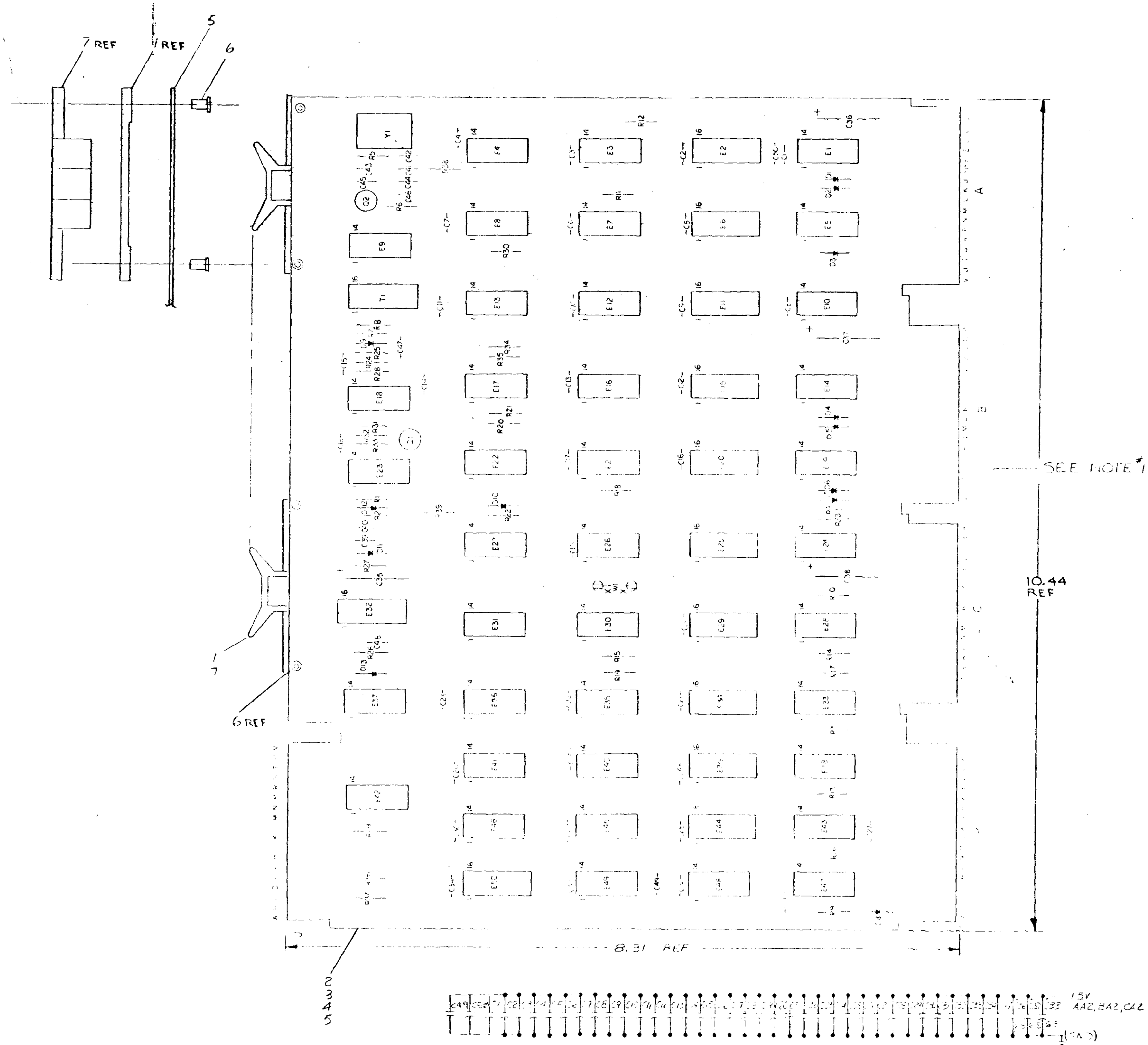
NEXT HIGHER ASSY A-ML-KK8-E
SCALE NONE
SHEET 4 OF 4

SIZE E | CODE CS | NUMBER M8310-0-1 | REV. F

ECO No. M8330-00004 Sheet 2 of 3

NOTES:

1. W1 (JUMPER) TO BE INSERTED BY CUSTOMER ONLY.



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM
2	R38, R39	RES 1K 1/4W, 5%	[illegible]	48
2		[illegible] LUG	4006735	47
1	R6	RES 220 1/4W 5%	[illegible]	46
1	E27	I.C. DEC 5384	[illegible]	45
1	E13	I.C. DEC 5380	[illegible]	44
1	E4	I.C. DEC [illegible]	[illegible]	43
1	E50	I.C. DEC 8251	[illegible]	42
1	E17	I.C. DEC 8881	[illegible]	41
1	E8	I.C. DEC 74H11	1909261	40
[illegible]	[illegible] 41	I.C. DEC [illegible]	[illegible]	39
[illegible]	[illegible]	I.C. DEC 74174	[illegible]	[illegible]
[illegible]	E32	I.C. DEC 74123	[illegible]	37
[illegible]	[illegible]	I.C. DEC [illegible]	[illegible]	[illegible]
[illegible]	[illegible]	I.C. DEC [illegible]	[illegible]	[illegible]
2	E17 E10	I.C. DEC [illegible]	[illegible]	[illegible]
1	E46	I.C. DEC [illegible]	[illegible]	[illegible]
2	E37 E35	I.C. DEC [illegible]	[illegible]	[illegible]
1	E45	I.C. DEC 7410	[illegible]	[illegible]
2	E[illegible] 42	I.C. DEC 7404	[illegible]	[illegible]
[illegible]	E22	I.C. DEC 7403	[illegible]	[illegible]
2	E[illegible] E47	I.C. DEC 7400	[illegible]	8
1	Y1	CRYSTAL 20 MC	[illegible]	[illegible]
1	T1	[illegible]	[illegible]	[illegible]
2	[illegible] 2	TRANSISTOR DEC [illegible]	[illegible]	[illegible]
[illegible]	R27	RES [illegible] 1/4W 5%	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1	R1	RES [illegible] 1/4W 5%	[illegible]	[illegible]
[illegible]	[illegible] R34 [illegible] R37	RES 470 1/4W [illegible]	1300317	[illegible]
[illegible]	[illegible]	RES [illegible] 10%	[illegible]	[illegible]
2	R31 R33	RES [illegible] 5%	[illegible]	[illegible]
[illegible]	D1-D8, D10-D13	DIODE [illegible]	[illegible]	[illegible]
1	D9	[illegible]	[illegible]	[illegible]
1	C35	CAP [illegible]	[illegible]	[illegible]
3	[illegible] C38	CAP [illegible] 10% 5 TANT	[illegible]	[illegible]
1	C42	CAP [illegible]	[illegible]	[illegible]
4	C37-C41 C46	CAP [illegible]	[illegible]	13
1	C43	CAP 33 PF, 100V, 5% [illegible]	[illegible]	12
[illegible]	C1-C34, C47, C49, C50	CAP [illegible]	[illegible]	11
1	C48	CAP 1000 PF [illegible] MICA	[illegible]	10
1	C45	CAP [illegible] PF, 100V [illegible]	[illegible]	9
1	C44	CAP 68 PF, 100V 5% [illegible]	[illegible]	8
3		[illegible] MAGENTA	[illegible]	7
6		[illegible]	[illegible]	[illegible]
1		ETCHED CIRCUIT BOARD	[illegible]	[illegible]
REF		MODULE [illegible]	[illegible]	[illegible]
REF		ASSEMBLY [illegible]	[illegible]	[illegible]
REF		[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	1

PARTS LIST

ETCH BOARD REV

IC TYPE	GND	+5V
74H74	8	14
[illegible]	8	16
[illegible]	7	8
[illegible]	7	8
[illegible]	7	8

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

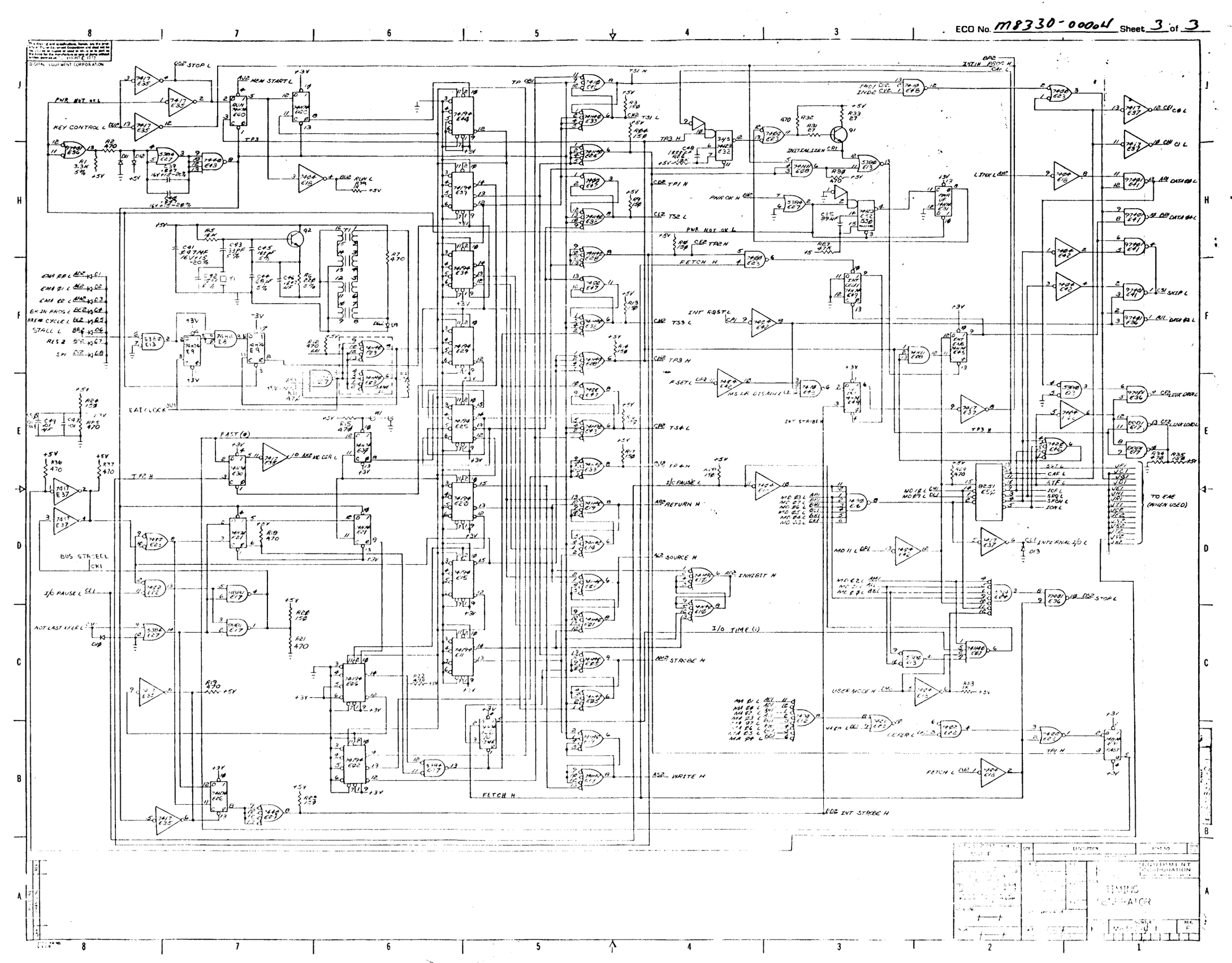
IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT
		W1	

SEE NOTE #1

EQUIPMENT CORPORATION

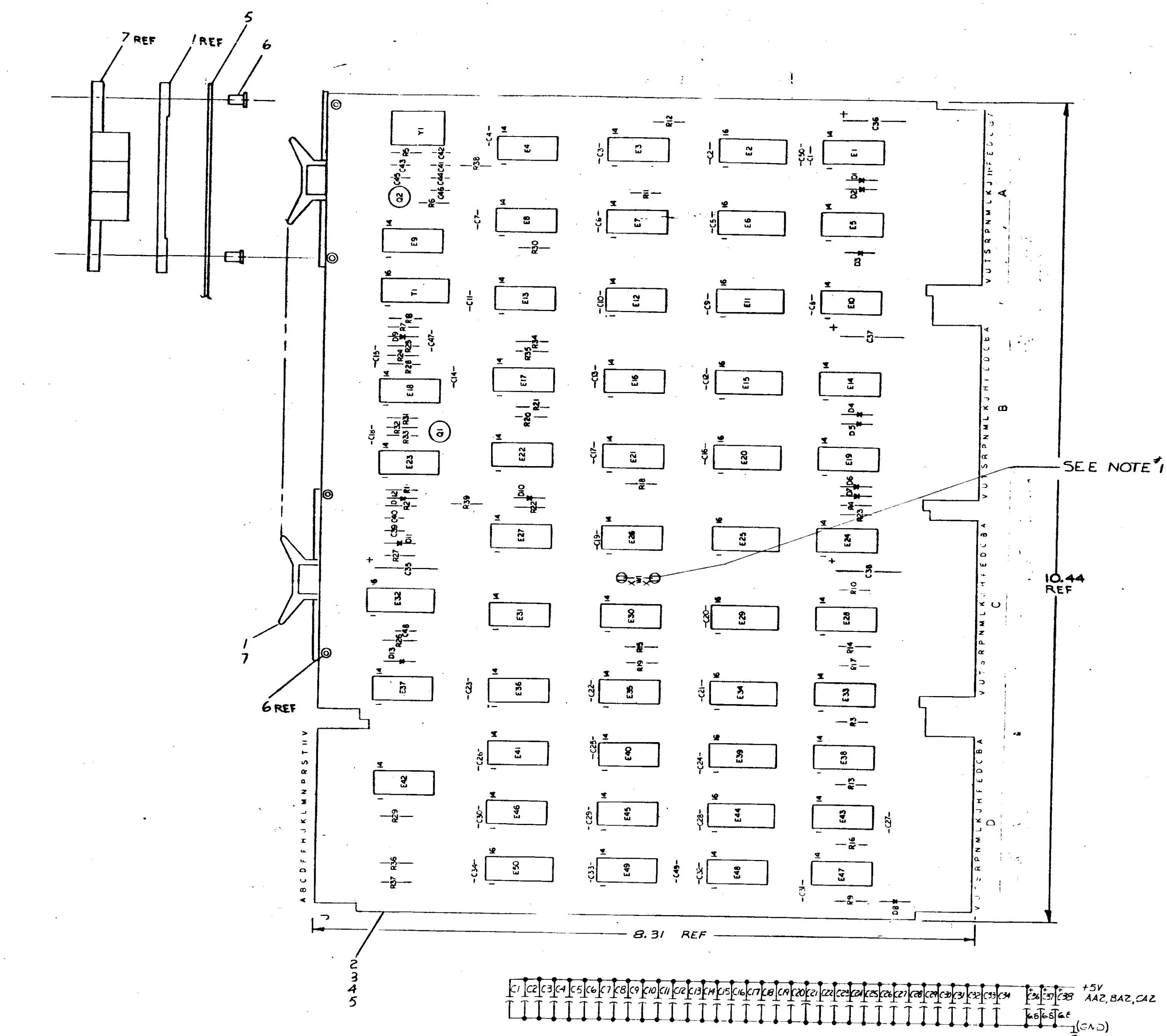
TITLE: TIMING GENERATOR


DIGITAL EQUIPMENT CORPORATION
TIMING GENERATOR
KEY CONTROL L
PWR NOT OK L
RUN
MEM START L
BUS RUN L
EAE CLOCK
FAST (e)
BUS STROBE L
I/O PAUSE L
NOT LAST XFER L
FETCH H
TP1 H
TP3 H
TS1 H
TS2 L
TS4 L
INT RQST L
I/O TIME (1)
ASR WRITE H
INT STROBE H
USER MODE H
TO EAE (WHEN USED)

ECO No. M8330-00005 Sheet 2 of 3

NOTES:

1. W1 (JUMPER) TO BE INSERTED BY CUSTOMER ONLY.



GND = AC2, AF1, AN1, AN2, AT1, BC1, BC2, BF1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CT1, DC1, DF1, DN1, DT1, DT2.

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	R38, R39	RES 1K, 1/4W, 5%	1300365	48
2		SPLIT LUG	9008735	47
1	R6	RES 220 1/4W 5%	1300271	46
1	E27	I.C. DEC 5384	1910394	45
1	E13	I.C. DEC 5380	1910392	44
1	E4	I.C. DEC 5314	1910391	43
1	E50	I.C. DEC 8251B	1909594	42
1	E17	I.C. DEC 8881	1909705	41
1	E8	I.C. DEC 74H11	1909267	40
2	E36, 41	I.C DEC 97401	1909973	39
10	E2,6,11,15,20,25,29,34,39,44	I.C DEC 74194	1910623	38
1	E32	I.C DEC 74123	1910436	37
8	E9,21,26,30,31,40,45,49	I.C DEC 74H74	1909667	36
12	E1,3,5,7,10,14,19,24,28,33,38,43	I.C. DEC 74H40	1905586	35
2	E12 E16	I.C. DEC 7430	1905578	34
1	E46	I.C. DEC 7420	1905577	33
2	E37, E35	I.C. DEC 7417	1909929	32
1	E48	I.C. DEC 7410	1905576	31
2	E18, E42	I.C. DEC 7404	1909686	30
1	E22	I.C. DEC 7402	1909004	29
2	E23, E47	I.C. DEC 7400	1905575	28
1	Y1	CRYSTAL 20 MC	1809880	27
1	T1	TRANSFORMER	1609651	26
2	Q1, Q2	TRANSISTOR DEC 3009B	1503100	25
1	R27	RES 47K 1/4W 5%	1302177	24
2	R5, R26	RES 10K 1/4W 5%	1300479	23
1	R1	RES 3.3K 1/4W 5%	1300439	22
17	R2,7,8,11,15,18,12,19,21,22,25,29,30, R32, R34, R36, R37	RES 470 1/4W 10%	1300317	21
13	R3,4,9,10,13,14,16,17,20,23,24,28,35	RES 150 1/4W 10%	1300252	20
2	R31, R33	RES 27 1/4W 10%	1301420	19
12	D1-D8, D10-D13	DIODE D664	1100114	18
1	D9	DIODE D662	1100113	17
1	C35	CAP 39 uf, 10V, 10% S.TANT	1000076	16
3	C36-C38	CAP 6.8 uf, 35V, 10% S.TANT	1005306	15
1	C42	CAP 10 PF, 100V, 5% D.M	1000006	14
4	C39-C41, C46	CAP .047 uf, 16V, -20% +50%	1009678	13
1	C43	CAP 33 PF, 100V, 5% D.M	1000009	12
37	C1-C34, C47, C49, C50	CAP .01 uf, 100V, 20% DISC	1001610	11
1	C48	CAP 1000 PF, 100V, 5% MICA	1000042	10
1	C45	CAP 100 PF, 100V 5% DM	1000016	9
1	C44	CAP 68 PF, 100V, 5% DM	1000014	8
3		HANDLE FLIP-CHIP MAGENTA	9008337-06	7
6		EYELET GS4-11 STIMPSON	9006750	6
1		ETCHED CIRCUIT BOARD	5009707	5
REF		MODULE E.C.O HISTORY	B-IH-M8330-0-6	4
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8330-0-5	3
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8330-0-4	2
3		SPACER CABLE CLAMP	1202704	1

PARTS LIST

ETCH BOARD REV E

LIST USED ON: MODEL M8-F

IC TYPE	GND	+5V
DEC 74194	8	16
DEC 8251	8	16
DEC 5314	1	8
DEC 5380	1	8
DEC 5384	1	8

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT
—	—	W1	—

JUMPER LIST

SEE NOTE 1

DEC NO.	EIA NO	DEC NO.	EIA NO.
		DEC 3009B	2N3646
		D664	1N3606
		D662	1N645

SEMICONDUCTOR CONVERSION CHART

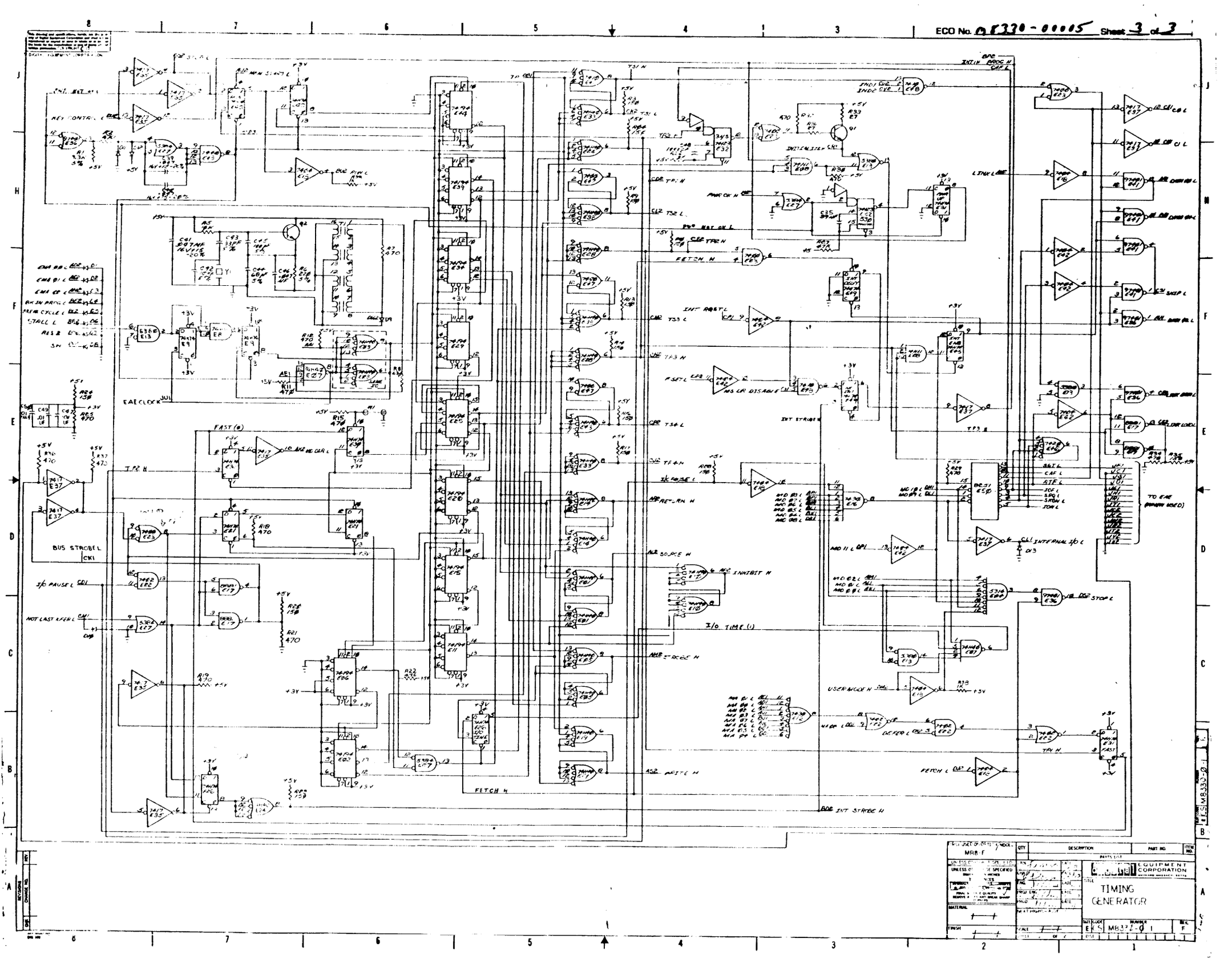
DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

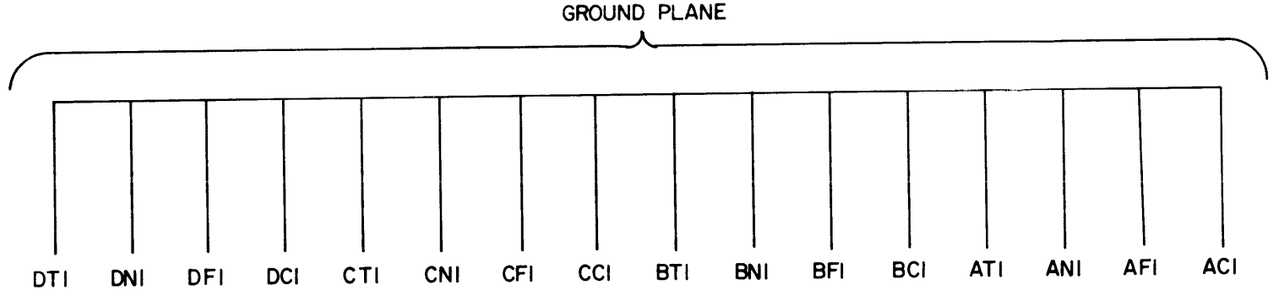
TITLE: TIMING GENERATOR

SIZE D CODE CS NUMBER M8330-0-1 REV. F

SCALE — SHEET 1 OF 2

D.L. ADAMS M8330-00004 E


ECO No. M8330-00005 Sheet 3 of 3
TIMING GENERATOR
DIGITAL EQUIPMENT CORPORATION
MRB F
EKS M8330-0 1 F
TO EAE (WHEN USED)
FETCH H
BUS STROBE L
I/O TIME (L)
EAE CLOCK
INT STROBE H



REVISIONS	REV.	CHG NO.	CHK

DRN. Nancy Moore	DATE 8/18/70		
CHK'D R. Waldin	DATE 8/24/70		
ENG. [illegible]	DATE 10/1/70		
PROD. [illegible]	DATE 7-6-71		

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: RFI SHIELD M849

SIZE	CODE	NUMBER	REV.
B	CS	M849-0-1	C

PRINTED CIRCUIT REV. D

DIST. 324,434,435 [illegible]
5 PINK

DEC FORM NO.
DRB 102

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS KM8-E
KM8-E	MEM EXT & TIME SHARE CONTROL	X

USED ON OPTIONS							
PDP8-E							
PDP 8/M							

REVISIONS

REV.	DATE	CHG. NO.	APP'D.
A	3/23/71	00001	R.M.
B	6/71	KM8E-2	R.M.
C	7/71	MISC-86	A.V.
D	7/71	KM8E-3	J.C.
E	1/72	8E-55	

DRN. K. GULICK	DATE 1/19/71	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. K. GULICK	DATE 1/19/71	
ENG. R MADDEN	DATE 3/3/71	TITLE MEM EXT & TIME SHARE CONTROL
PROJ. ENG. R.VOGELSANG	DATE 3/3/71	
PROD. L.SAYLOR	DATE 3/3/71	
FIRST USED ON A-ML-PDP8/E-0		
SCALE NONE		
SHEET 1 OF 2		

SIZE	CODE	NUMBER	REV.
A	ML	KM8-E	E

DIST.

D-A 121

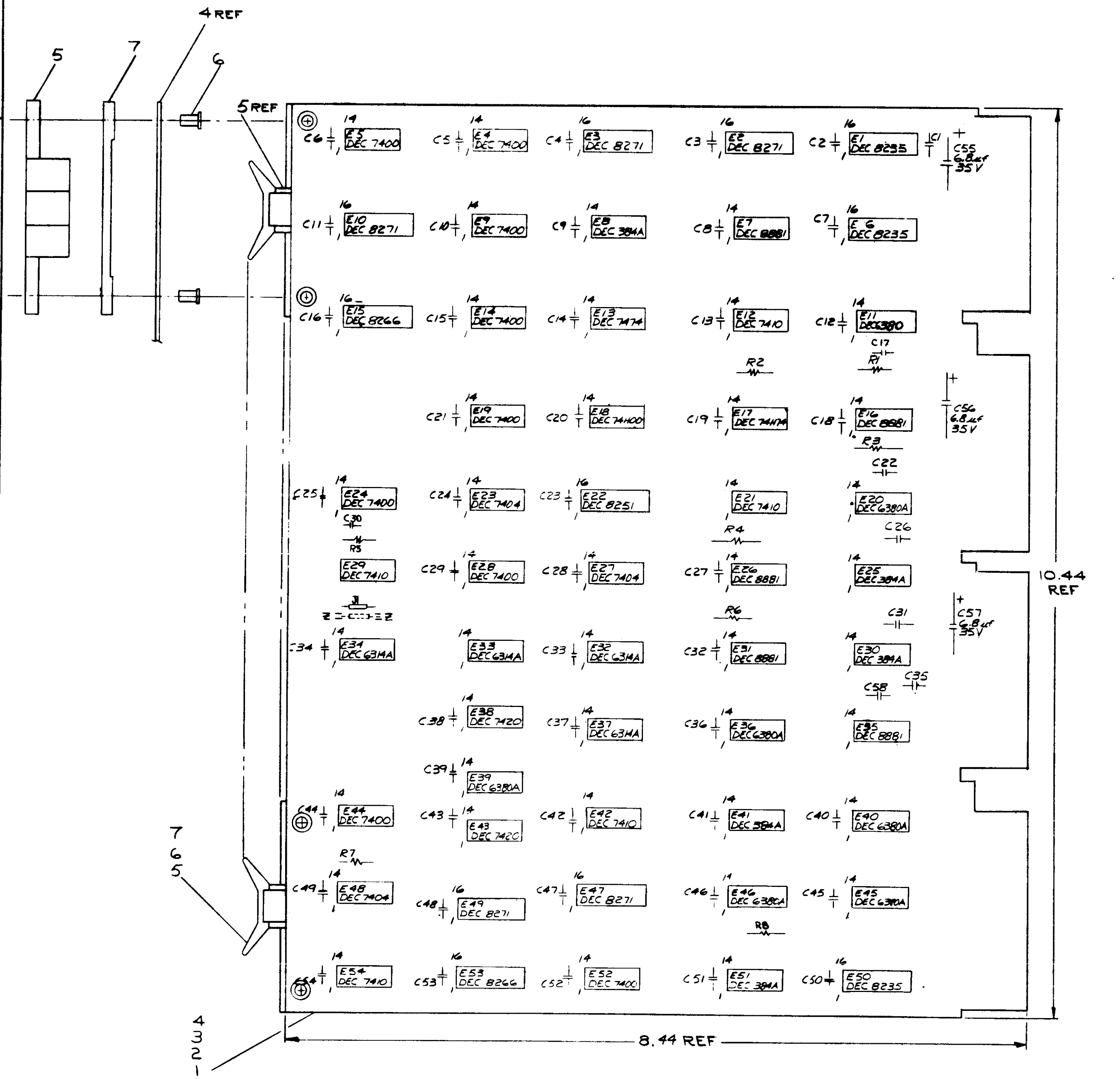
PRINT SET KM8-E	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-CS-M837-0-1	#	3	MEM EXT & TIME SHARE CONTROL	
-	A-PL-KM8-E-0	REF	1	MEM EXT & TIME SHARE CONTROL (PL)	
-	A-SP-7665140-0-0		3	KM8E ACCEPTANCE PROCEDURE	
-	A-SP-KM8-E-1		4	MEMORY EXTENSION TEST PROCEDURE	
-	A-SP-KM8-E-2		2	MEMORY EXTENSION SPECIFICATIONS	
-	LIBKIT-8E-KM8E	REF		PROGRAM LIBRARY KIT	

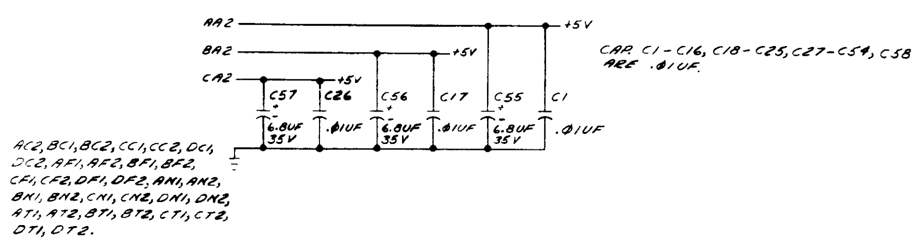
TITLE				
MEM EXT & TIME SHARE CONTROL	SHEET 2 OF 2	SIZE A	CODE ML	NUMBER KM8-E / REV. E

D-A 132

NOTES:

1. UNLESS OTHERWISE NOTED: CAPACITORS ARE .01μF 100V 20% RESISTORS ARE 1K 1/4W 5%





QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
7	E11, E20, E36, E39, E40, E45, E46	IC DEC 6380	1909971	25
8	R1-R8	RESISTOR 1K 1/4W 5%	1300365	24
55	C1-C54, C58	CAPACITOR .01MF DISC 20%	1001610	23
3	C55, C56, C57	CAPACITOR 6.8UF 35V 10%	1005306	22
9	E5, E4, E9, E14, E19, E24, E28, E44, E52	IC DEC 7400	1905575	21
5	E7, E16, E26, E31, E35	IC DEC 8881	1909705	20
5	E2, E3, E10, E47, E49	IC DEC 8271	1909615	19
3	E1, E6, E50	IC DEC 8235	1909935	18
2	E15, E53	IC DEC 8266	1909934	17
1	E22	IC DEC 8251	1909594	16
1	E17	IC DEC 74H74	1909667	15
1	E13	IC DEC 7474	1905547	14
2	E38, E43	IC DEC 7420	1905577	13
5	E12, E21, E29, E42, E54	IC DEC 7410	1905576	12
3	E23, E27, E48	IC DEC 7404	1909686	11
1	E18	IC DEC 74H00	1909056	10
5	E8, E25, E30, E41, E51	IC DEC 384A	1909406	9
4	E32-E34, E37	IC DEC 6314A	1909972	8
4		SPACER (CABLE CLAMP)	1202704	7
8		EYELET GS4-11 STIMPSON	9006750	6
4		HANDLE FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009255	4
REF		MODULE HISTORY LIST	B-MH-M837-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M837-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M837-0-4	1

PARTS LIST

ETCH BOARD REV C

IC TYPE	GND	+5V
DEC 314	1	8
DEC 384	1	8
DEC 6380	1	8
DEC 8251	8	16
DEC 8266	8	16
DEC 8235	8	16
DEC 8271	8	16

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

SEMICONDUCTOR CONVERSION CHART (DEC NO. / EIA NO.)

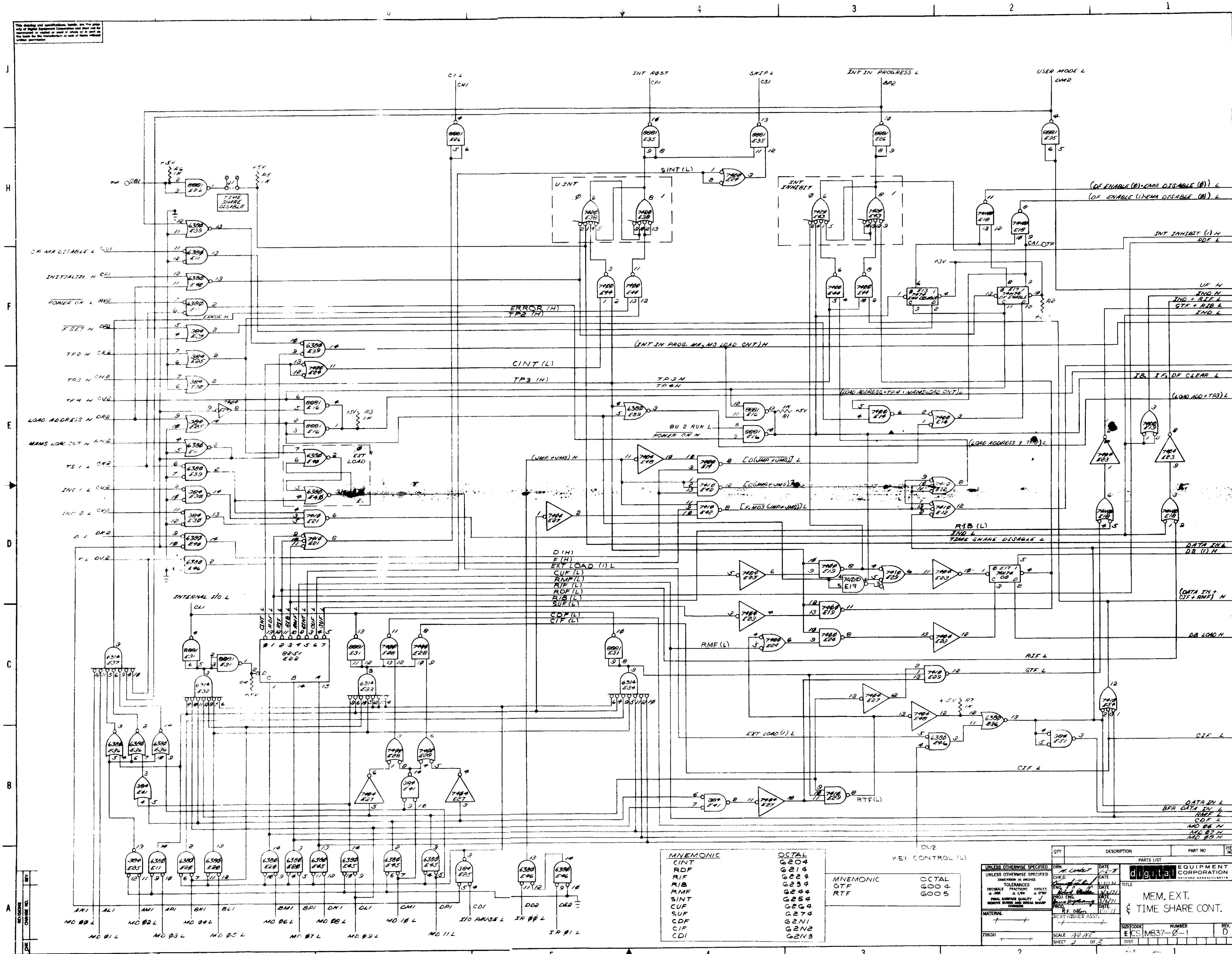
[redacted] EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: MEM EXT & TIME SHARE CONTROL

FIRST USED ON: A-ML-KM8-E

SCALE 2/1 SHEET 1 OF 3

E CS M837-Ø-1 REV. D



C1 L
INT RQST
SKIP L
INT IN PROGRESS L
USER MODE L
SINT (L)
U INT
INT INHIBIT
TIME SHARE DISABLE
(DF ENABLE (Ø)·EMA DISABLE (Ø)) L
(DF ENABLE (1)·EMA DISABLE (Ø)) L
INT INHIBIT (1) H
RDF L
CF MA DISABLE L
INITIALIZE H
POWER ON L
F SET H
TP2 H
TP3 H
TP4 H
LOAD ADDRESS H
MAMS LOAD CNT H
TS1 L
INC 1 L
INC 2 L
ERROR (H)
TP2 (H)
(INT IN PROG. MA, MS LOAD CNT) H
CINT (L)
TP3 (H)
TP3 H
TP4 H
BU 2 RUN L
POWER ON H
UF H
IND H
IND + RIF L
GTF + RIB L
IND L
IB, IF, DF CLEAR L
(LOAD ADD + TP3) L
(LOAD ADDRESS + TP4 · MAMS LOAD CNT) L
(LOAD ADDRESS + TP3) L
EXT LOAD
(JMP + JMS) H
[D(JMP + JMS)] L
[F, MD3 (JMP + JMS)] L
RIB (L)
IND L
TIME SHARE DISABLE L
D (H)
F (H)
EXT LOAD (1) L
CUF (L)
RMF (L)
RIF (L)
RDF (L)
RIB (L)
SUF (L)
CDF (L)
CIF (L)
DATA IN L
DB (1) H
(DATA IN + CIF + RMF) H
DB LOAD H
INTERNAL I/O L
RMF (L)
RIF L
GTF L
EXT LOAD (1) L
CIF L
CIF L
RTF (L)
DATA IN L
BFR DATA IN L
RMF L
CDF L
MD Ø6 H
MD Ø7 H
MD Ø8 H
KEY CONTROL (L)
I/O PAUSE L
IR ØØ L
IR Ø1 L
MD ØØ L
MD Ø1 L
MD Ø2 L
MD Ø3 L
MD Ø4 L
MD Ø5 L
MD Ø6 L
MD Ø7 L
MD Ø8 L
MD Ø9 L
MD 1Ø L
MD 11 L
MNEMONIC / OCTAL
CINT 6204
RDF 6214
RIF 6224
RIB 6234
RMF 6244
SINT 6254
CUF 6264
SUF 6274
CDF 62N1
CIF 62N2
CDI 62N3
MNEMONIC / OCTAL
GTF 6004
RTF 6005
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
MATERIAL
FINISH
DRN.
CHK'D.
ENG.
PROJ. ENG.
PROD.
QTY
DESCRIPTION
PART NO
ITEM NO.
PARTS LIST
digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
TITLE
MEM. EXT.
& TIME SHARE CONT.
SIZE E
CODE CS
NUMBER M837-Ø-1
REV. D
SCALE NONE
SHEET 2 OF 3

EMA0L EMA1L EMA2L DATA 05L DATA 06L DATA 07L DATA 08L DATA 03L DATA 09L DATA 10L DATA 11L

(OF ENABLE (0) • EMA DISABLE (0)) L
(OF ENABLE (1) • EMA DISABLE (0)) L
INT INHIBIT (1) H
ADF L
UF H
IND H
IND • RIF L
OTF • RIE0 L
IND L
(INT IN PROG. MA, MS LOAD CNT) H
[DATA IN • D (JMP + JMS) + F • MD3 (JMP + JMS)] H
(LOAD ADD + TPA • MA MS LOAD CNT) L
IO, IF, OF CLEAR L
(LOAD ADDRESS + TP3) L
TIME SHARE DISABLE L
DATA IN L
DB (1) H
(DATA IN + CIF + RMF) H
DB LOAD H
CIF L
DATA IN L
DFR DATA E L
RMF L
COF L
MD 06 H
MD 07 H
MD 08 H

+3V

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

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

DRN. DATE 9/4/71
CHK'D DATE 9/6/71
ENG. DATE 9/8/71
PROJ. ENG. DATE 9/12/71
PROD. DATE 9/10/71
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
MEM. EXT.
& TIME SHARE CONT.

SIZE E | CODE CS | NUMBER M837-0-1 | REV. D
DIST
SCALE NONE
SHEET 3 OF 3

REVISIONS: REV. | CHANGE NO. | DATE

DEC FORM NO. DNS 100

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS KL8-E	KL8-EA	KL8-EB	KL8-EC	KL8-ED	KL8-EE	KL8-EF	KL8-EG
KL8-E	ASYNC DATA CONTROL	X	X	X	X	X	X	X	X

USED ON OPTIONS							
PDP8/E							
PDP8/M							

REVISIONS

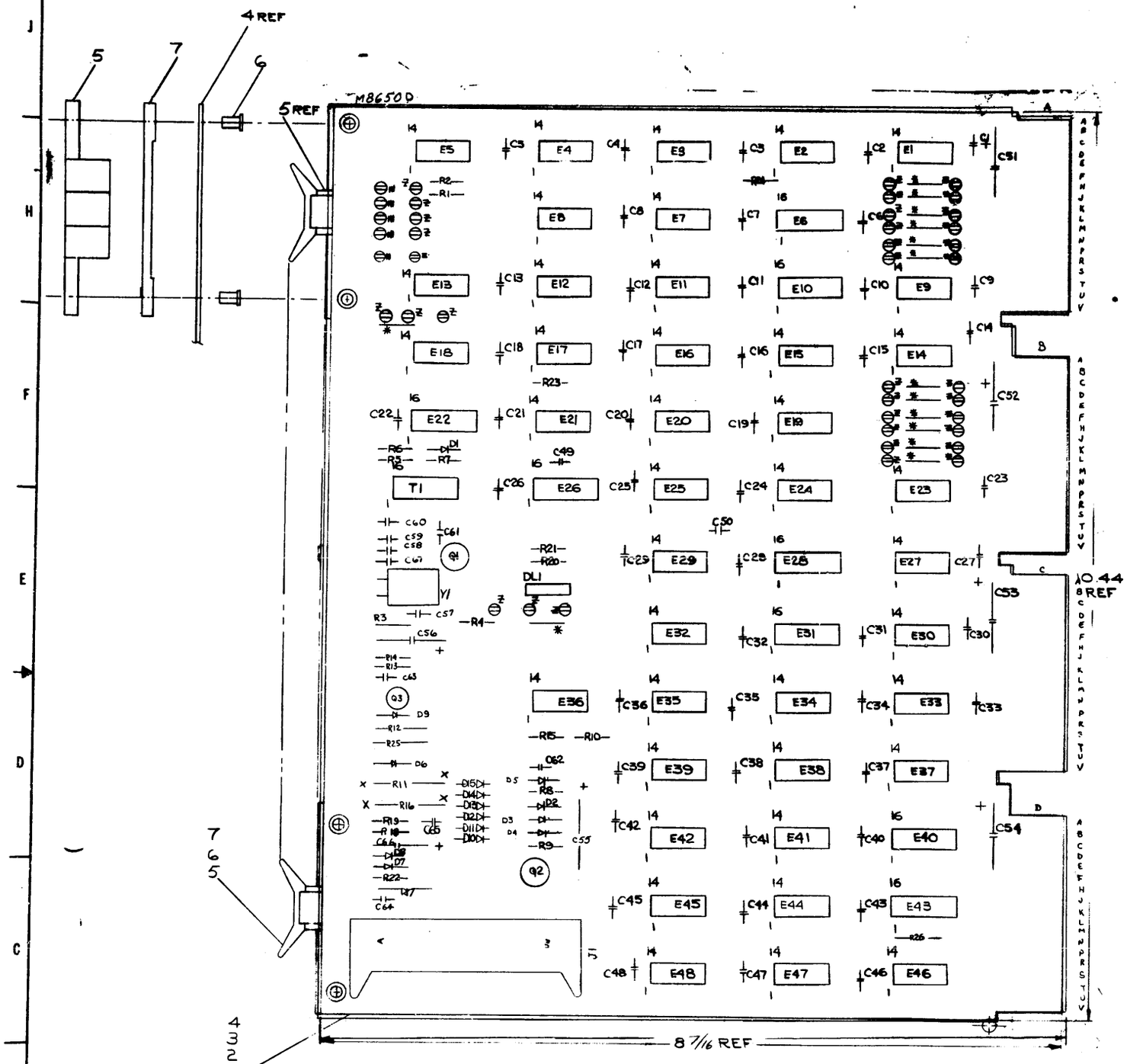
REV.	DATE	CHG. NO.	APP'D.
A	4/71	M865-3	JM
B	8/71	KL8E-3	ows
C	12/71	KL8E-4	[illegible] for J.C
D	1/72	8E-55	FJC
E	1/72	KL8E-5	

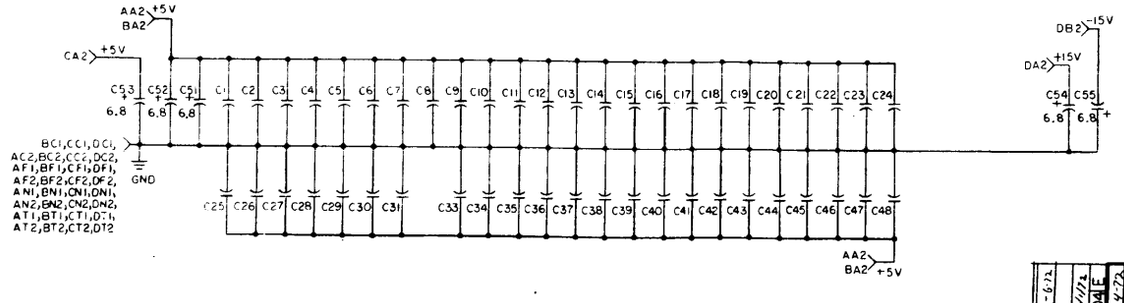
DRN. K. GULICK	DATE 12-3-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. K. GULICK	DATE 12-3-70	
ENG. MCNAMARA	DATE 1-13-71	TITLE ASYNC DATA CONTROL
PROJ. ENG. VOGELSANG	DATE 1-13-71	
PROD. L. SAYLOR	DATE 1-13-71	
FIRST USED ON PDP8/E		SIZE A / CODE ML / NUMBER KL8-E / REV E
SCALE		
SHEET 1 OF 2		DIST.

PRINT SET KL8E	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-CS-M865Ø-Ø-1	#	2	ASYNC. DATA CONTROL	
X	E-CS-M865Ø-YA-1	#	2	ASYNC. DATA CONTROL	
X	D-IA-7008360-0-0		1	CABLE ASSY	
X	D-IA-BCØ1V-25-Ø		1	CABLE ASSY	
X	A-SP-KL8-E-1		16	ENGINEERING SPECIFICATIONS	
X	A-PL-KL8-E-Ø		1	ASYNC. DATA CONTROL	
	A-SP-KL8-E-2		10	TEST PROCEDURE	
	A-SP-KL8-E-3		5	ACCEPTANCE	
-	LIBKIT-8E-KL8-E-02	REF	1	KIT LIST	
X	A-AL-KL8-E-4		1	ACCESSORY LIST	

TITLE ASYNC. DATA CONTROL	SHEET 2 OF 2	SIZE A / CODE ML	NUMBER KL8-E	REV E

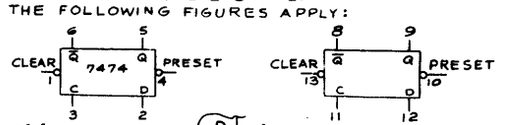
DEA 132





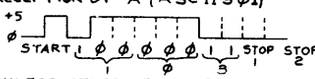
NOTES

1. = SPLIT
   = MACHINE INSERTED JUMPER
   = 40 PIN HEADER CONNECTION
   DATA = DVL = SINGLE CONNECTION
2. PIN F IS EIA [illegible]
   +6V OR MORE = SPACE = 0
   -6V OR LESS = MARK = 1
   PIN V IS EIA REQUEST TO SEND, +6V OR MORE = ON (PERMANENTLY).
   PIN DD IS EIA DATA TERMINAL READY, +6V OR MORE = ON (PERMANENTLY).
   [illegible] R" 056
   LOGIC SYMBOLOGY.
   FLIP-FLOPS ARE NAMED FOR THE CONDITION THEY REPRESENT IN THE "1" STATE.
   THE FOLLOWING FIGURES APPLY:



IF 'D' SHOWN THUS D, '1' STATE = Q STATE.
IF 'D' SHOWN THUS D, '1' STATE = $\bar{Q}$ STATE.
IF '1' SHOWN THUS THIS LEAD IS HIGH WHEN FLIP-FLOP IS IN '1' STATE.
IF '1' SHOWN THUS THIS LEAD IS LOW WHEN FLIP-FLOP IS IN '1' STATE.

4. WAVEFORM AT TEST POINT #6 FOR RECEPTION OF "A" (ASCII 301)



5. UNLESS OTHERWISE NOTED:
   RESISTORS = 1K 1/4W 5%
   CAPACITORS = .01μf 100V 20%
   DIODES = D664

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	R12, R25	RES. 1.5K 1/2W 5%	1300399	59
1	R22	RES. 82 1/4W 5%	1301477	58
5	E1, E23, E27, E30, E46	I.C. DEC 5380	1910392	57
4	E2, E15, E33, E37	I.C. DEC 97401	1909973	56
9	E3, E4, E7, E8, E16, E20, E29, E38, E48	I.C. DEC 7474	1905547	55
3	E5, E13, E18	I.C. DEC 7493	1909054	54
5	E6, E10, E26, E28, E31	I.C. DEC 8271	1909615	53
2	E9, E14	I.C. DEC 5314	1910391	52
3	E11, E45, E47	I.C. DEC 7402	1909004	51
3	E12, E41, E44	I.C. DEC 7400	1905575	50
1	E17	I.C. MC1489L EIA RECIEVER	1910323	49
1	E19	I.C. DEC 7410	1905576	48
2	E21, E42	I.C. DEC 7404	1909686	47
1	E22	I.C. DEC 74193	1910018	46
1	E24	I.C. DEC 8815	1909713	45
2	E25, E39	I.C. DEC 7450	1905580	44
1	E32	I.C. MC1488L EIA DRIVER	1910322	43
2	E34, E36	I.C. DEC 5384	1910394	42
2	E40, E43	I.C. DEC 8251	1909594	41
1	E35	I.C. DEC 74H00	1909056	40
52	C1-C50, C62, C64	CAP. .01μf 100V 20% DISC	1001610	39
6	C51-C56	CAP. 6.8μf 35V 20% TANT	1000067	38
2	C57, C61	CAP. .047μf DISC	1009678	37
1	C58	CAP. 33PF MICA	1006009	36
1	C59	CAP. 100PF MICA	100 [illegible]	35
1	C60	CAP. 68PF MICA	100 [illegible]	34
1	C63	CAP. .001 μf 250V DISC	100 [illegible]	33
2	C65, C67	CAP. 10μf 100V 5% MICA	0 [illegible]	32
1	C66	CAP. .47μf 35V TANT	100 5965	31
1	D1	DIODE, D662	1 [illegible]	30
14	D2-D15	DIODE, D664	1100114	29
3	R1, R4, R20	RES. 220, 1/4W 5%	1300271	28
1	R2	RES. 750 1/4W 5%	1301401	27
2	R3, R19	RES. 10K, 1/4W 5%	1300479	26
2	R5, R18	RES. 3.3K 1/4W 5%	1300439	25
4	R6, R7, R13, R24	RES. 470 1/4W, 5%	1300316	24
1	R8	RES. 150 1/4W, 5%	1300250	23
2	R10, R15, R26	RES. 1K, 1/4W, 5%	1300365	22
3	R11, R16	RES. 750 1W, 5%	1302385	21
1	R14	RES. 1.5K, 1/4W, 5%	1300391	20
1	R21	RES. 330 1/4W, 5%	1300295	19
1	R23	RES. 30K, 1/4W, 5%	1302394	18
1	R9	RES. 180 1/4W, 5%	1301322	17
1	R17	RES. 560, 1/2W, 5%	1300338	16
1	Q1	TRANSISTOR, DEC 3009B	1503100	15
2	Q2, Q3	TRANSISTOR, DEC 6534D	1503409	14
1	T1	XFMR 8010	1609651	13
1	DL1	DELAY LINE 30 NANO SEC	1605528	12
1	Y1	CRYSTAL, 14.418 MHZ.	1809880-01	11
40		LUGS, SPLIT	9206735	10
1		CONNECTOR, 40 PIN	1209941	9
1/2		WIRE #22AWG SOLID BUS	9107560-01	8
4		SPACER (CABLE CLAMP)	1202704	7
8		EYELET GS4-11 STIMPSON	9006750	6
4		HANDLE FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009546	4
REF		MODULE HISTORY LIST	B-MH-M8650-0-0	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8650-0-0	2
REF		X-Y COORDINATE HOLE LOC.	X-CO-M8650-0-0	1

PARTS LIST — ETCH BOARD REV D

			8	22	JJ23-AJJ23-B	
					JH12-AJH12-B	
					JB13-AJB13-B	
					JB12-AJB12-B	
					JA12-AJA12-B	
	DEC MC1488L	7	14(+5V)		JA13-AJA13-B	
1	8251	8	16		JF24-AJF24-B	
	5384	1	8		JF12-AJF12-B	
	74193	8	16		JE13-AJE13-B	
	5314	1	8		JE24-AJE24-B	
	8271	8	16		JD24-AJD24-B	
	7493	10	5		JD13-AJD13-B	
DEC	5380	1	8		JC24-AJC24-B	
IC TYPE		GND	+5V	8	JC13-AJC13-B	

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

IC PIN LOCATIONS

ITEM NO	WIRE	FROM PT	TO PT

JUMPER LIST

DEC NO.	EIA NO.
DEC6534D	MPS6534
DEC3009B	2N3646
D664	IN3606
D662	IN645

DEC NO. EIA NO.

SEMICONDUCTOR CONVERSION CHART

REVISIONS	DESCRIPTION	ORIGINATED	CHANGE NO.
A	M8650-00001	J.McNAMARA 6-10-72	
B	M8650-00002	J.McNAMARA 6-29-72	
C	M8650-00003	J.McNAMARA 7-6-72	
D	M8650-00004	E.CLARK 9-4-72	
E		E.CLARK 11-13-72	

EQUIPMENT CORPORATION
BRAINTREE, MASSACHUSETTS

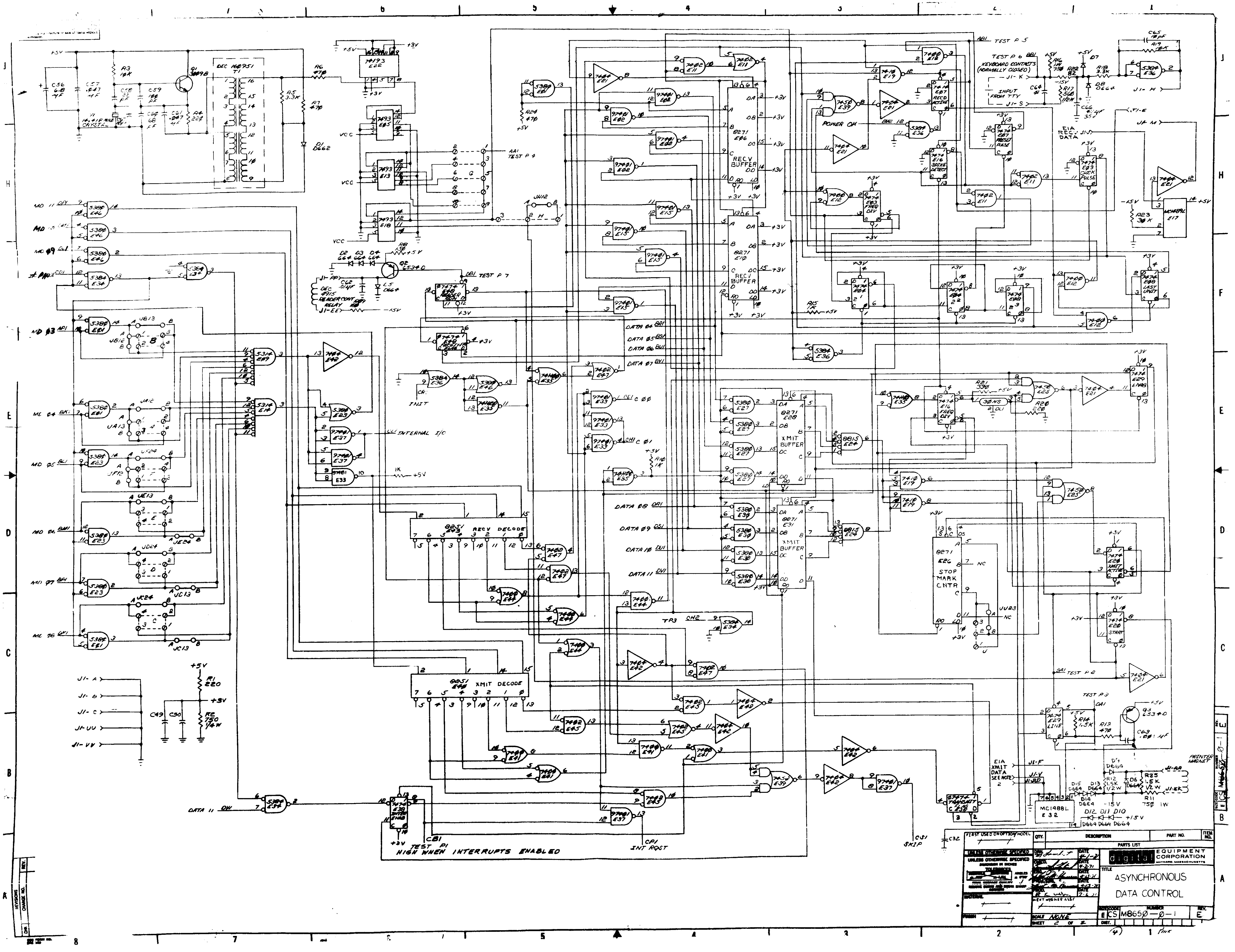
TITLE: ASYNCHRONOUS DATA CONTROL

A-ML-KLB-E

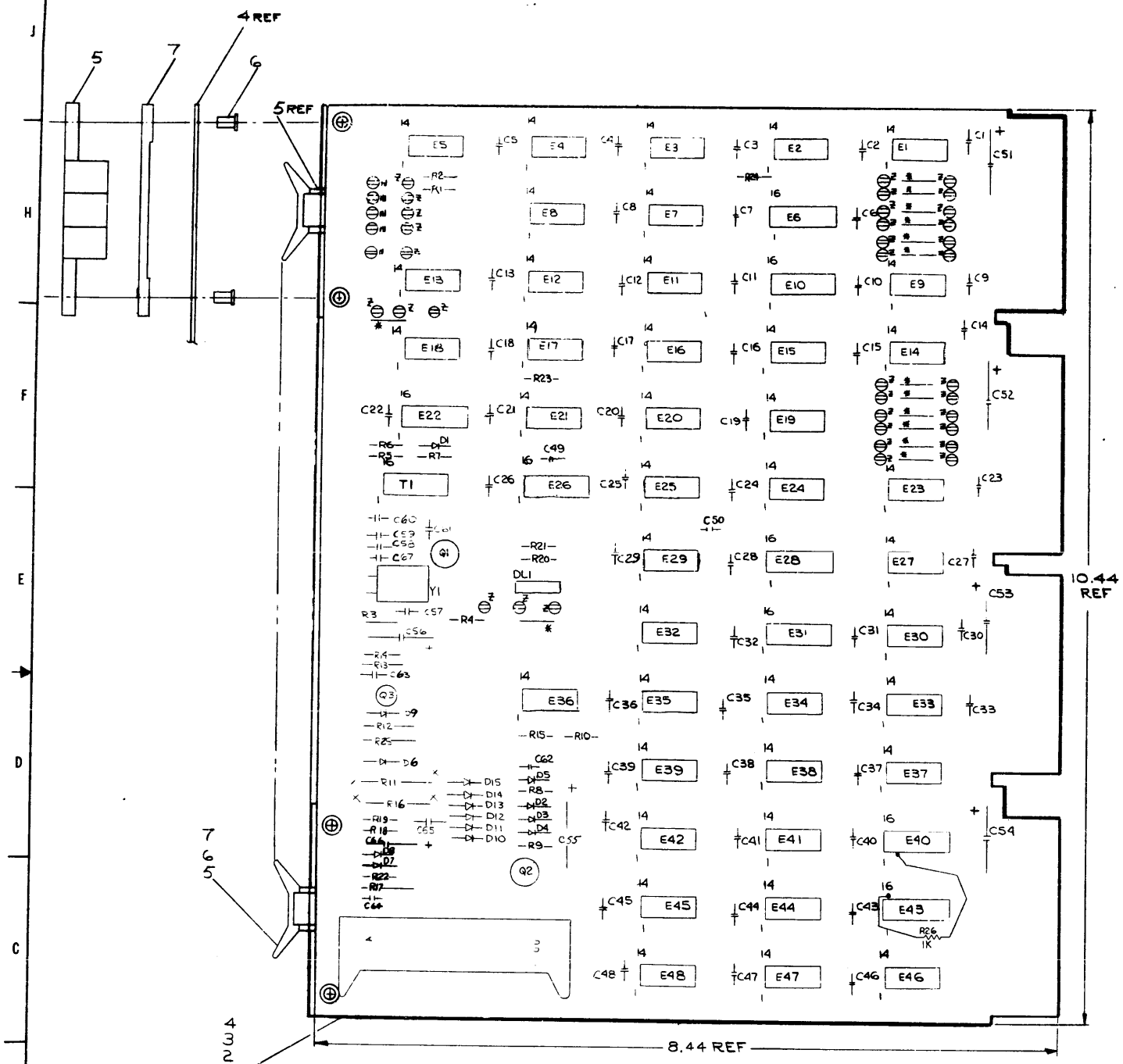
SIZE E | CS M8650-0-1 | REV. E

SCALE 2/1 SHEET 1 OF 2

(4) 1 rev

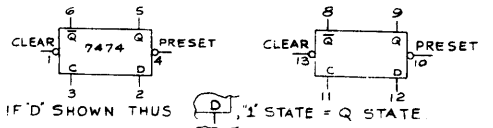


digital EQUIPMENT CORPORATION
ASYNCHRONOUS
DATA CONTROL
CS M8650-0-1
RECV BUFFER
XMIT BUFFER
RECV DECODE
XMIT DECODE
STOP MARK CNTR
INTERNAL I/O
POWER OK
TEST P 7
TEST P 2
TEST P 3
TEST P 4
TEST P 5
INPUT FROM TTY
KEYBOARD CONTACTS (NORMALLY CLOSED)
EIA RECV DATA
EIA XMIT DATA SEE NOTE 2
PRINTER MAGNET
INT RQST
SKIP
HIGH WHEN INTERRUPTS ENABLED
DEC 4915 READER CONT RELAY
DEC 1609951 T1



NOTES:

1. = SPLIT LUGS
   = MACHINE INSERTED JUMPER
   = 40 PIN HEADER CONNECTION
   DATA II = OMNIBUS CONNECTION
2. PIN F IS EIA TRANSMITTED DATA:
   +6V OR MORE = SPACE = Ø
   -6V OR LESS = MARK = 1
   PIN V IS EIA REQUEST TO SEND, +6V OR MORE = ON (PERMANENTLY).
   PIN DD IS EIA DATA TERMINAL READY, +6V OR MORE = ON (PERMANENTLY).
3. THIS DRAWING FOLLOWS DEC STANDARD 056 LOGIC SYMBOLOGY.
   FLIP-FLOPS ARE NAMED FOR THE CONDITION THEY REPRESENT IN THE "1" STATE.
   THE FOLLOWING FIGURES APPLY:



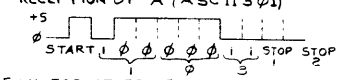
IF 'D' SHOWN THUS D, '1' STATE = Q STATE

IF 'D' SHOWN THUS D, '1' STATE = $\bar{Q}$ STATE

IF '1' SHOWN THUS THIS LEAD IS HIGH WHEN FLIP-FLOP IS IN '1' STATE.

IF 1 SHOWN THUS THIS LEAD IS LOW WHEN FLIP-FLOP IS IN '1' STATE.

4. WAVEFORM AT TEST POINT #6 FOR RECEPTION OF "A" (ASCII 3Ø1)



5. UNLESS OTHERWISE NOTED:
   RESISTORS = 1K 1/4W 5%
   CAPACITORS = .01μf 100V 20%
   DIODES = D664

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
2	R12, R25	RES. 1.5K 1/2 W 5%	1300394	60
A/R		TUB THIN WALL #22 TEFLON (WHT)	9107265	59
1	R22	RES. 82 1/4W 5%	1301477	58
5	E1, E23, E27, E30, E46	I.C. DEC 5380	1910392	57
4	E2, E15, E33, E37	I.C. DEC 97401	1909973	56
9	E3, E4, E7, E8, E16, E20, E29, E38, E48	I.C. DEC 7474	1905547	55
3	E5, E13, E18	I.C. DEC 7493	1903054	54
5	E6, E10, E26, E28, E31	I.C. DEC 8271	1909615	53
2	E9, E14	I.C. DEC 5314	1910391	52
3	E11, E45, E47	I.C. DEC 7402	1909004	51
3	E12, E41, E44	I.C. DEC 7400	1905575	50
1	E17	I.C. MC1489L EIA RECIEVER	1910323	49
1	E19	I.C. DEC 7410	1905576	48
2	E21, E42	I.C. DEC 7404	1909686	47
1	E22	I.C. DEC 74193	1910018	46
1	E24	I.C. DEC 8815	1909713	45
2	E25, E39	I.C. DEC 7450	1905580	44
1	E32	I.C. MC1488L EIA DRIVER	1910322	43
2	E34, E36	I.C. DEC 5384	1910394	42
2	E40, E43	I.C. DEC 8251	1909594	41
1	E35	I.C. DEC 74H00	1909056	40
52	C1-C50, C62, C64	CAP. .01μf 100V 20% DISC	1001610	39
6	C51-C56	CAP. 6.8μf 35V 20% TANT	1000067	38
2	C57, C61	CAP. .047μf DISC	1009678	37
1	C58	CAP. 33PF MICA	1000009	36
1	C59	CAP. 100PF MICA	1000016	35
1	C60	CAP. 68PF MICA	1000014	34
1	C63	CAP. .001μf 250V DISC	1000043	33
2	C65, C67	CAP. 10PF 100V 5% MICA	1000006	32
1	C66	CAP. .47μf 35V TANT	1005965	31
1	D1	DIODE, D662	1100113	30
14	D2-D15	DIODE, D664	1100114	29
3	R1, R4, R20	RES. 220, 1/4W 5%	1300271	28
1	R2	RES. 750 1/4W 5%	1301401	27
2	R3, R19	RES. 10K 1/4W 5%	1300479	26
2	R5, R18	RES. 3.3K 1/4W 5%	1300439	25
4	R6, R7, R13, R24	RES. 470 1/4W 5%	1300316	24
1	R8	RES. 150 1/4W 5%	1300250	23
3	R10, R15, R26	RES. 1K 1/4W 5%	1300365	22
2	R11, R16	RES. 750 1W 5%	1302385	21
1	R14	RES. 1.5K 1/4W 5%	1300391	20
1	R21	RES. 330 1/4W 5%	1300295	19
1	R23	RES. 30K 1/4W 5%	1302394	18
1	R9	RES. 180 1/4W 5%	1301522	17
1	R17	RES. 560 1/2W 5%	1300338	16
1	Q1	TRANSISTOR, DEC 3009B	1503100	15
2	Q2, Q3	TRANSISTOR, DEC 6534D	1503409	14
1	T1	XFMR 8010	1609651	13
1	DL1	DELAY LINE .30 NANO SEC	1605528	12
1	Y1	CRYSTAL 19.661 MHZ	1809880-02	11
40		LUGS, SPLIT	9006735	10
1		CONNECTOR 40 PIN	1209941	9
1/A		WIRE #22AWG SOLID BUS	9107560-01	8
4		SPACER (CABLE CLAMP)	1202704	7
8		EYELET GS4-11 STIMPSON	9006750	6
4		HANDLE FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009546	4
REF		MODULE HISTORY LIST	B-MH-M8650-YA	3
REF		ASSY/DRILLING HOLE LAYOUT	D-MH-M8650-YA	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8650-YA	1

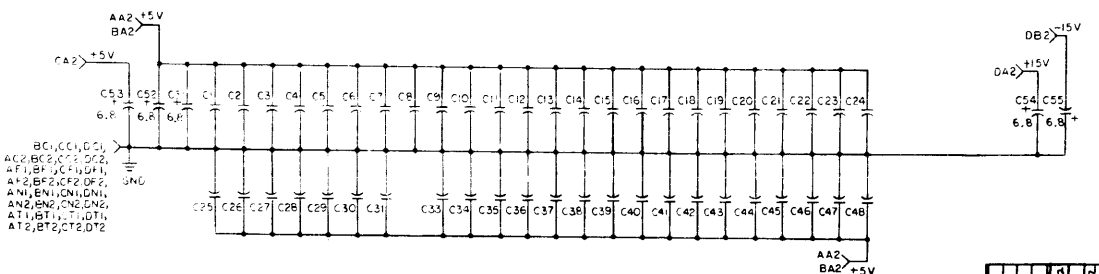
ETCH BOARD REV D

IC TYPE	GND	+5V	IC PIN LOCATIONS
DEC MC1488L	7	14(+15V)	
8251	8	16	
5384	1	8	
74193	8	16	
5314	1	8	
8271	8	16	
7493	10	5	
DEC 5380	1	8	
	59/8	22	

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

ITEM NO	AWG	FROM PT	TO PT
		JJ23-A	JJ23-B
		JH12-A	JH12-B
		JB13-A	JB13-B
		JB12-A	JB12-B
		JA12-A	JA12-B
		JA13-A	JA13-B
		JF24-A	JF24-B
		JF12-A	JF12-B
		JE13-A	JE13-B
		JE24-A	JE24-B
		JD24-A	JD24-B
		JD13-A	JD13-B
		JC24-A	JC24-B
		JC13-A	JC13-B
59/8	22		

JUMPER LIST



	MPS6534
DEC5534D	
DEC3009B	2N3646
D664	IN3606
D662	IN645
DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

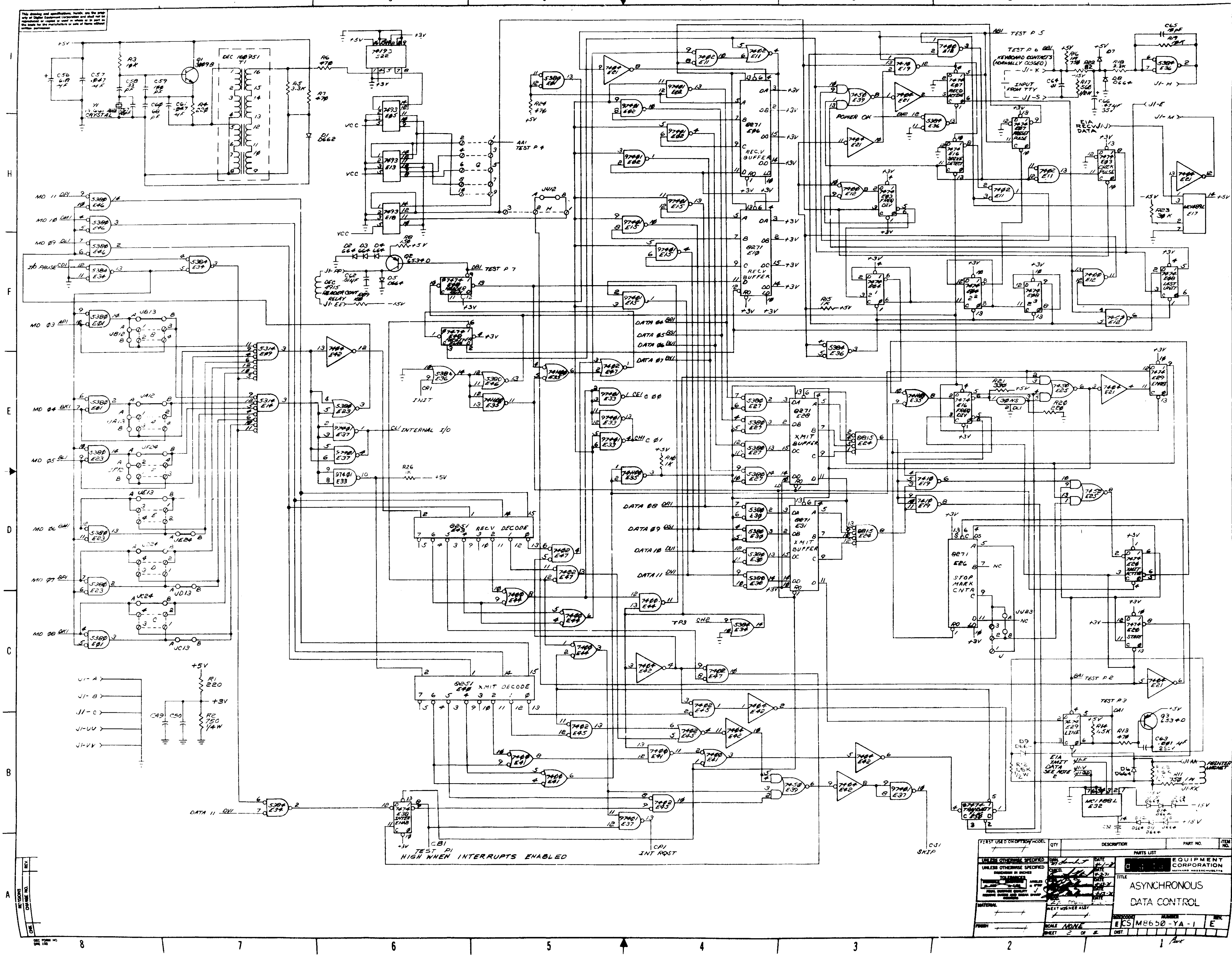
EQUIPMENT CORPORATION

TITLE: ASYNCHRONOUS DATA CONTROL

A-ML-KLB-E

SCALE: 2/1 SHEET 1 OF 2

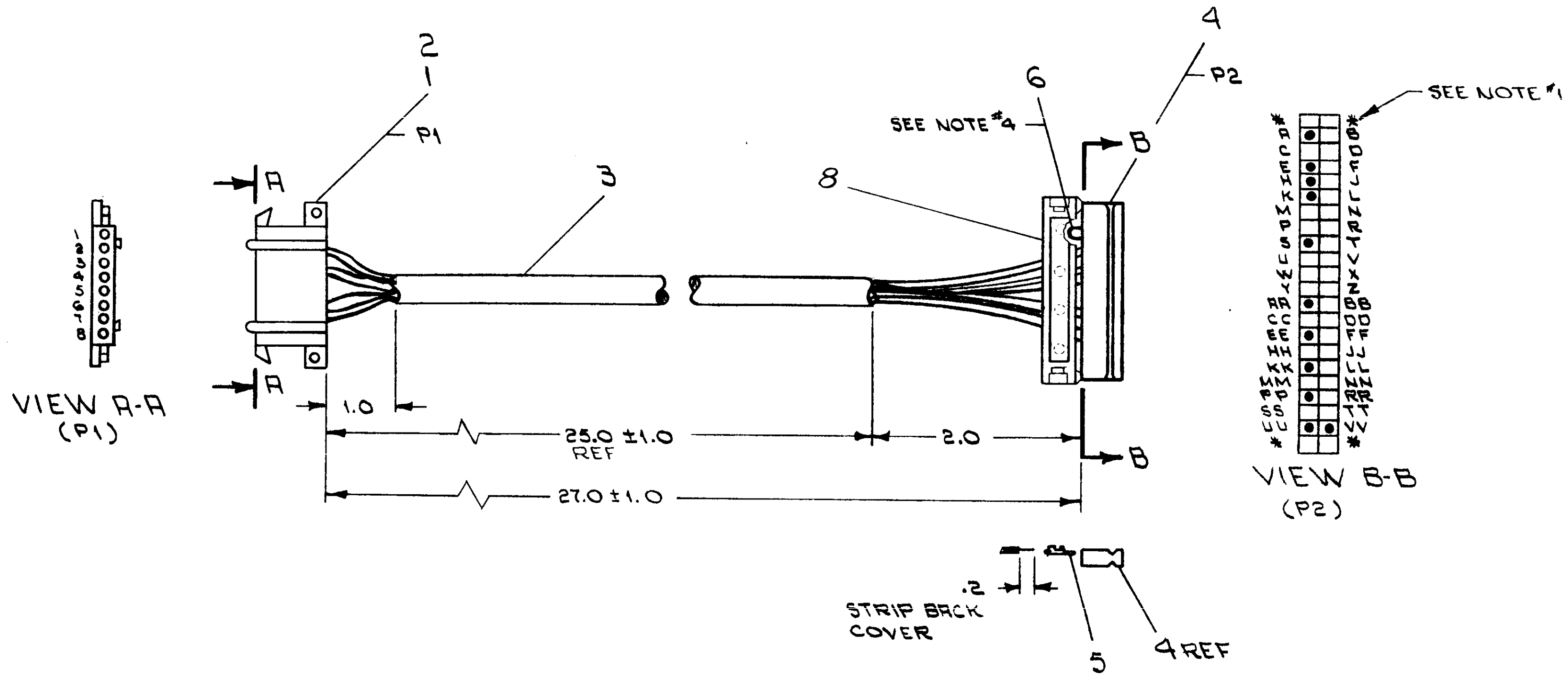
ECS M8650-YA-1 E


ASYNCHRONOUS
DATA CONTROL
E CS M8650-YA-1 E
EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
SCALE NONE
SHEET 2 OF 2
UNLESS OTHERWISE SPECIFIED
FIRST USED ON OPTION/MODEL
PARTS LIST
DESCRIPTION
PART NO.
NEXT HIGHER ASSY
RECV DECODE
XMIT DECODE
REC.V BUFFER
XMIT BUFFER
STOP MARK CNTR
HIGH WHEN INTERRUPTS ENABLED
INT RQST
SKIP
INTERNAL I/O
TEST P 1
TEST P 2
TEST P 3
TEST P 4
TEST P 5
TEST P 6
TEST P 7
KEYBOARD CONTACTS (NORMALLY CLOSED)
INPUT FROM TTY
POWER OK
EIA RECV DATA
PRINTER MAGNET
READER CONT RELAY
CRYSTAL
DATA 04
DATA 05
DATA 06
DATA 07
DATA 08
DATA 09
DATA 10
DATA 11
MD 11
MD 10
MD 09
MD 03
MD 04
MD 05
MD 06
MD 07
MD 08
TO PAUSE
INIT

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	PAIR NO.	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH
3	22	BLK	1	P1-2	2	P2-KK	5
3	↑	RED		P1-3	2	P2-S	↑
3,7		SHIELD		SEE NOTE #2	—	P2-A(NOTE #3)	
3		BLK	2	P1-4	2	P2-EE	
3		WHT		P1-5	2	P2-AA	
3,7		SHIELD		SEE NOTE #2	—	P2-UU(NOTE #3)	
3		BLK	3	P1-6	2	P2-PP	
3		GRN		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:
1. * ASTERISKS INDICATE CAVITIES NOT USED OR DESIGNATED BY LETTERS.
2. DRAIN WIRES TO BE CUT BACK TO OUTER INSULATION ON P1 END OF CABLE ONLY. SHIELDS TO BE CUT BACK TO OUTER INSULATION ON BOTH ENDS OF CABLES.
3. DRAIN WIRES ON P2 END OF CABLE TO BE EACH ENCLOSED WITH ITEM #7 (TUBING) FROM END OF CABLE JACKET TO POINT WHERE THEY ENTER P2 CONNECTOR.
4. ITEM #6 (WIRE) TO BE APPROXIMATELY ONE(1) INCH LONG.



PARTS LIST

QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	STRAIN RELIEF	1211166	8
A/R	TUB. #18 TEF. THINWALL NAT	9107278-11	7
A/R	WIRE, #22 AWG STRD TEF BLK	9107350-00	6
11	SOCKET, BERG #47706	1210089-6	5
1	HOUSING, BERG #65043-015	1210918-15	4
A/R	CABLE, BELDEN #8777-3PR SHLD	9107723-0	3
6	CONTACT MATE-N-LOCK (FEMALE)	1209379	2
1	CONN. MATE-N-LOCK (FEMALE)	1209340-00	1

FIRST USED ON OPTION/MODEL: PDP-8E

DO NOT SCALE DRAWING

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

MATERIAL: SEE PARTS LIST

FINISH: —

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

NEXT HIGHER ASSY: A ML KL8 E-0

SCALE: NONE

SHEET OF

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

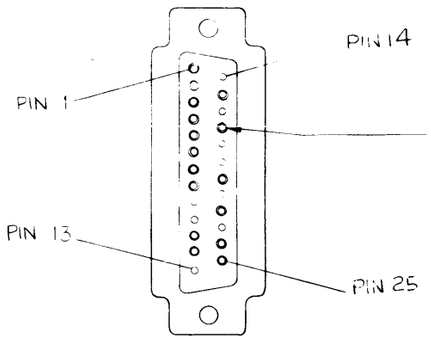
TITLE: CABLE ASSEMBLY (KL8E)

SIZE	CODE	NUMBER	REV.
D	IA	7008360-0-0	B

REVISIONS

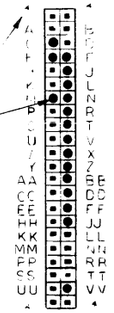
CHK	CHANGE NO	REV
	8E-0000	A
	KL8E-00006	B
	E. CLARK	

DEC FORM NO DRD 100



P2

SECTION A-A



P1

SECTION B-B

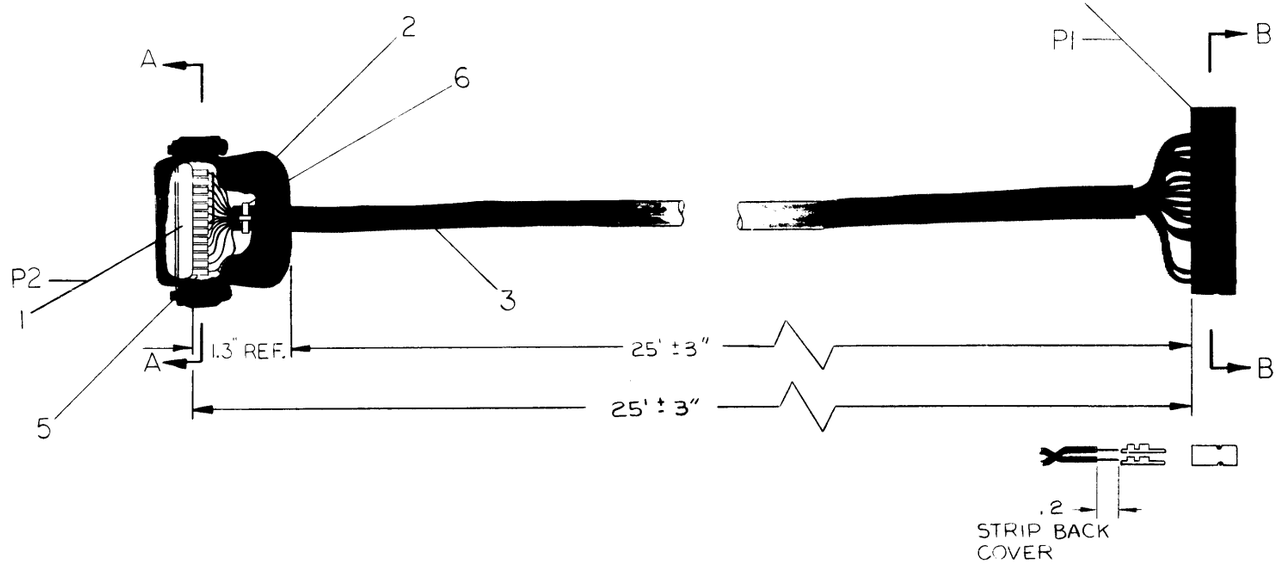
WIRE TABLE

ITEM NO.	DESCRIPTION AWG	COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH
3	22	BLK	P1-VV	CRIMP	P2-7	SOLD.
↑	↑	GRN/WHT	P1-C	↑	P2-25	↑
		GRN/BLK	P1-JJ		P2-12	
		ORN/BLK	P1-FF		P2-11	
		RED	P1-DD		P2-20	
		GRN	P1-BB		P2-8	
		BLU/WHT	P1-Z		P2-6	
		ORN	P1-X		P2-22	
		BLU	P1-V		P2-4	
		WHT	P1-T		P2-5	
		BLU/BLK	P1-R		P2-17	
		BLK/WHT	P1-N		P2-15	
		RED/WHT	P1-L		P2-24	
		WHT/BLK	P1-J		P2-3	
↓		RED/BLK	P1-F	↓	P2-2	SOLD.
8		BLK	P1-E	CRIMP	P1-M	CRIMP
8	22	BLK	P2-1	SOLD.	P2-7	SOLD.

NOTES:

1. EACH SOLDERED CONN. ON P2 SHALL BE INSULATED WITH A 1/4" PIECE OF HY-SHRINK TUBING (ITEM #5).

• INDICATES PINS USED ON P1 (BERG CONN)
⊙ INDICATES PINS USED ON P2 (CINCH PLUG)
* DENOTES CAVITIES NOT USED OR DESIGNATED BY LETTER ON P1 (BERG CONN)



QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		
A/R	WIRE #22 AWG STRD TEF BLK	9107350-0-0	8
17	PIN, CONN. #47706 BERG	1210089-6	7
1	TIE WRAP, PANDUIT #SST-1B	9007031	6
16	TUBING, HEAT SHRINK 1/8	9107255	5
1	HOUSING #20383 BERG	1210090-0	4
A/R	CABLE, BELDON 15 CONN.	9107672	3
1	HOOD, PLUG CINCH #DB51226-1	1205885	2
1	PLUG, CINCH #DB-25P	1205886	1

FIRST USED ON OPTION/MODEL: PDP8/E

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

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NEXT HIGHER ASSY: A-PL-DP8-EA-Ø

SCALE: NONE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: CABLE ASS'Y (BCØ1V)

SIZE	CODE	NUMBER	REV.
D	UA	BCØ1V-25-Ø	A

DIST.

REVISIONS			
CHK	CHANGE NO		REV
	BCØ1V-00001	MCNAMARA 3-10-71	A

DEC FORM NO 100

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 3/15/71

TITLE KL8/E Asynchronous Data Control (M8650)

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

Abstract

The KL8/E is a single line asynchronous data control for the PDP8-E. A variety of speeds are offered and split lugs are provided such that any desired device codes may be wired in. Factory wiring provides the standard console teleprinter device codes 03 and 04. Both 20 milliampere and EIA/CCITT levels are offered at 110 baud. In the higher speed ranges, only EIA/CCITT interface is offered. The EIA/CCITT interface applies to data leads only; no modem control is provided. This specification includes a complete discussion of the current driver capabilities, the selection of device codes, the selection of speeds, and the configurations available under each option designation.

ENG	APPD	SIZE	CODE	NUMBER	REV
John E. McNamara		A	SP	KL8-E-1	

DEC FORM NO. DRA 107

I. General Description

KL8/E provides complete facilities for interfacing an asynchronous device such as a teleprinter or display to the PDP8/E. Split lugs are provided such that a KL8/E may be assigned any two device codes desired. In this manner a quantity of KL8/E units may be used on a single PDP8/E to provide a multiple teleprinter capability. The instruction set is similar to that used on previous Family-of-8 console teleprinter controls and asynchronous data controls. Several different clock speed and interface options are offered.

II. Physical

The KL8/E is a single quad board which plugs directly into the Omnibus. The same etched board (M8650) is used for all KL8/E options listed below, with a crystal change or cable change determining the option designation applicable.

III. Options

The KL8/E is available in the following options:

Designation	Receive Speed	Transmit Speed	Interface Type	(Board Type)
KL8/E	110 Baud	110 Baud	20 milliampere	M8650
KL8/EA	110 Baud	110 Baud	EIA Data Leads	M8650
KL8/EB	150 Baud	150 Baud	EIA Data Leads	M8650 YA
KL8/EC	300 Baud	300 Baud	EIA Data Leads	M8650 YA
KL8/ED	600 Baud	600 Baud	EIA Data Leads	M8650 YA
KL8/EE	1200 Baud	1200 Baud	EIA Data Leads	M8650 YA
KL8/EF	150 Baud	1200 Baud	EIA Data Leads	M8650 YA
KL8/EG	150 Baud	2400 Baud	EIA Data Leads	M8650 YA

The M8650 and M8650 YA boards use an identical etched board, but differ in their parts lists. The M8650 uses a DEC Part # 18-09880-01 14.418 MHz crystal, while the M8650 YA uses a DEC Part # 18-09880-02 19.661 MHz crystal. The 14.418 MHz crystal is used to obtain the 110 baud frequency, while the 19.661 MHz crystal is used to obtain the 150, 300, 600, 1200, and 2400 baud frequencies. This means that if one desires to change speeds in the field, a crystal change is involved to change to or from the 110 baud speed, plus re-labelling the board handle. To change amongst the speeds that are multiples of 150 baud, only jumper changes are involved.

SIZE	CODE	NUMBER	REV
A	SP	KL8-E-1	

DEC FORM NO 16-1022 DRA 108

Both the M8650 and M8650 YA boards contain the appropriate circuitry for both 20 milliampere and EIA operation. A noise suppression network in the 20 milliampere circuitry protects against high frequency noise, but in so doing limits the operating speed of the 20 milliampere interface to 110 baud. The 20 milliampere circuitry is automatically connected when the 7008360 interface cable assembly supplied with the KL8/E option is connected to the board. This cable terminates in a Mate-N-Lock connector compatible with PDP8/E teleprinters, PDP-11 teleprinters, and Mate-N-Lock equipped PDP-15 teleprinters. In like manner, the EIA interface circuitry is automatically connected when the BC01V cable assembly (or BC05C) supplied with the KL8/EA, EB,EC,ED,EE,EF, and EG options is connected. (See Section X)

The EIA interface circuitry meets all present requirements of EIA Specification RS232-C and CCITT Recommendation V24, but interfaces the DATA LEADS ONLY. No modem control is supplied - Data Terminal Ready and Request To Send are held asserted. Use of these options on modems arranged for automatic origination or automatic answering of dial telephone calls is not recommended. The EIA interfaces provided are intended for use with private(non-switched) wire modems operated on a full duplex basis or with a Null Modem (H308 or H312) and a terminal with an EIA interface.

IV. Specifications - Environment

Temperature: Ø degrees to 55 degrees C (Operating)
Humidity: 10% to 90% non-condensing (Operating)

During storage, temperature extremes of -15 degrees C and +65 degrees C can be tolerated.

V. Specifications - Communications Variables

A. Type or Transmission: Asynchronous
Type of Reception: Asynchronous

B. Number of Start Elements Per Character: One

C. Number of Data Elements Per Character: Eight

D. Number of Stop Elements Per Character: One or Two (Jumper selectable on board. Unless otherwise specified, the KL8/E and KL8/EA options will be supplied jumpered for two stop elements and all other options will be supplied jumpered for one stop element.)

E. Receiver Sample Rate: 16 times the baud rate

F. Capabilities of the 20 milliampere driver:

For current calculation purposes, the driver circuit may be envisioned as one lead returned through 750 ohms to -15 volts and the other lead as going to a point connected to -15 through 1 K and to +5 through a 6534D PNP transistor, the state of which is controlled by the KL8/E transmitter circuitry. If one assumes a maximum voltage drop across the transistor when saturated as 1 volt and a minimum potential difference between -15 and +5 of 19.75 volts, the output circuit may be envisioned as an 18.75 volt source in series with a 750 ohm resistor, or at worst a 788 ohm resistor. This arrangement would deliver 24 milliamperes in the short circuit case and would tolerate 150 additional ohms for resistance of the teleprinter magnet circuit and the wiring to the teleprinter magnet. The following wire resistances may be of assistance: (Annealed copper wire, 20 degrees C)

26 AWG : 40.81 ohms/1000 feet
24 AWG : 25.67 ohms/1000 feet
22 AWG : 16.14 ohms/1000 feet
19 AWG : 8.05 ohms/1000 feet

In calculating permissable loop length, remember that the above figures are for one conductor only. You must measure the distance from the KL8/E to the teleprinter AND BACK to obtain a footage distance for use in the above calculation. In addition, certain environmental influences such as radio interference, transformers, possibility of physical damage, etc. may cause the maximum operating distance to be less than that indicated by simple resistive calculations. Extreme caution should be used in any installation over 1500 feet.

G. Capabilities of the 20 milliampere receiver:

For current calculation purposes, the receiver circuit may be envisioned as one lead returned through 560 ohms to -15 volts and the other lead returned to both + 5 through 750 ohms and to a -.7 volt diode drop through 82 ohms. The resultant current will be 21 milliamperes for a zero ohm resistance loop to the keyboard contacts and 18 milliamperes in the case of a 150 ohm loop such as that mentioned in Section V-F above. Intermediate values can be determined from straight line interpolation between these points. It is not recommended that contact currents less than 18 milliamperes be used.

The 20 milliampere current receiving circuitry contains

an integrator circuit that may be modelled as a capacitor in series with 402 ohms. The standard value for this capacitor is .47 mfd. This arrangement assists in providing noise reduction by integrating high frequency noise such that its amplitude is insufficient to operate the Schmidt Trigger circuit that follows the integrator. Unfortunately, the integration reduces the rate-of-rise of signals, introducing an additional 2% distortion to the received signal at 110 baud. The high sampling rate of the receiver (16 times the baud rate) makes this additional distortion inconsequential except in the case of very extreme distortion already being present in the received signals. At speeds greater than 110 baud, EIA interface circuitry is used, bypassing both the 20 milliampere integrator circuit and the 20 milliampere Schmidt Trigger circuit.

Should it be desired to operate in current loop mode at speeds greater than 110 baud, the .47 mfd capacitor should be reduced in size by the same proportion as the speed is increased; i.e. if you double the speed, halve the value of the capacitor. This product is not specified to operate in current loop mode at speeds greater than 110 baud and the suggestions given above should not be construed as a commitment on the part of Digital Equipment Corporation to make this product operate in current loop mode at any speed other than 110 baud.

H. Capabilities of the Reader Run Control:

For current calculation purposes, this circuitry may be modelled as one lead being connected to -15 through 180 ohms and the other lead connected to +5 through a 6534D PNP transistor and a 150 ohm resistor. Due to the presence of diode clamps, transistor voltage drop, etc., this second lead may be envisioned as being connected to a + 7/10ths volt source or floating, depending upon the state of the 6534D transistor. The circuit formed by the above elements may be considered as a 14 volt source in series with 180 ohms.

The reader run leads operate a Wheelock #30002 reed relay mounted on a DEC 4915 teleprinter reader control card mounted within the call control area of the Teletype.* This relay has a coil resistance of 920 ohms and is specified to operate by the time the voltage across its coil reaches 9.6 volts. There is a ± 10% tolerance on coil resistance, so a worst case current of 12 milliamperes is required to achieve 9.6 volts across 828 ohms. The 12 milliamperes would cause a 2.3 volt drop across the 180 ohm resistor if that resistor were at the 189 ohm extreme of its ± 5% specification. This means that no more than 14.0 - 11.9 = 2.1 volts can

* "Teletype" is a registered trademark of Teletype Corporation, Skokie, Ill. USA

be dropped by the passage of 12 milliamperes through the wiring to the reader run. That sets a resistance limit of 175 ohms for the reader run control wiring from the KL8/E to the Teletype (and back). (See Section X)

I. EIA Signals Provided

Circuitry on the M8650 and M8650 YA modules conditions the transmitted data and received data to the specifications of Electronic Industries Association (EIA) Specification RS 232 C and Committe Consultatif International Telephonique et Telegraphique (CCITT) Recommendation V24.

The signals and their assigned pins on the 40 pin header found on the M8650 are as follows:

Protective Ground	UU	
Send Data	F	
Receive Data	J	
Request To Send	V	(Held Asserted)
Signal Ground	VV	
Data Terminal Ready	DD	(Held Asserted)

Assertion of the Request To Send lead is required with such modems as the Bell System 103F to maintain them in Full Duplex transmission mode on a private (non-switched) line.

Assertion of the Data Terminal Ready lead is required with such modems as the Bell System 103A to maintain an established dial-up connection.

Note that, since the Request To Send lead is held true, the M8650 and M8650 YA are suitable ONLY FOR FULL DUPLEX OPERATION (An additional reason is that there is no interlocking logic in the M8650 and M8650 YA to make the transmitter and receiver dependent upon each other in the fashion that Half Duplex would require).

Note further that, since Data Terminal Ready is held true, the M8650 and M8650 YA are suitable for dial telephone connection use (such as with the Bell System 103A) ONLY UNDER MANUAL CONTROL. In other words, these modules should not be used in dial telephone connections arranged for the automatic origination of calls or arranged for the automatic answering of calls. The reason for this is that Data Terminal Ready must be negated for a dial-up connection to be dropped when the call is over and the M8650 and M8650 YA are incapable of doing this. In addition, they do not monitor the leads necessary to tell them when to take such action.

In summary, the KL8/E, EA, EB, EC, ED, EE, EF, and EG do not have modem control. Thus, their use with modems is limited to full duplex private line and manual use on the dial-up telephone network.

J. Capabilities of the EIA interface

Total cable length from the KL8/EA(EB, EC,etc) to the associated modem or terminal must not exceed 50 feet under any circumstances.

K. Use With EIA Interface Terminals

The BC01V and BC05C cable assemblies end in male 25 pin connectors in accordance with the EIA specification requirements for data terminal equipment. Likewise, most terminals that have EIA interfaces also employ male 25 pin connectors, as they too are data terminal equipment in the language of the EIA specification.

The EIA specification, in specifying male connectors for data terminal equipment, envisions that each piece of data terminal equipment will be connected to a piece of data communications equipment. The typical connection which the specification envisions is data terminal equipment - modem-communications facility - modem - data terminal equipment. Thus, to stay within the specification when connecting a piece of data terminal equipment to another piece of data terminal equipment, one must introduce the modem-communications facility-modem link. In cases where the two terminals are more than 50 feet apart this would be done with real modems and a real communications facility. Where distances less than fifty feet are involved, Digital Equipment Corporation has devices called Null Modems which contain a female 25 pin connector,a length of cable that transposes the transmitted an received data leads such as a communications facility would,and a second female connector at the opposite end. Use of the Null Modem (H312 or H308) permits the same cables and other hardware to be used for both local and remote terminal applications.

Should a null modem not be available in a VT06 installation, the male/male cord supplied with the VT06 could be removed and the BC01V plugged directly into the female receptacle on the VT06 provided that the following lead swaps are made in the BC01V by swapping pins in the forty pin connector: Swap F & J; Move V to BB.

The above pin changes are not recommended as a general thing, as they result in non-standard cables.

VI. Programming

The KL8/E uses an augmented version of the instruction set used on Family-of-8 console teleprinters and teleprinter controls such as the PT08.

The instruction set is as follows:

6XX0 Clear Keyboard Flag (KCF)

Clears the keyboard flag without setting the reader run flip-flop. The AC is not cleared by this instruction.

6XX1 Skip on Keyboard Flag (KSF)

Increments the contents of the Program Counter if the keyboard flag is set,so that the next sequential instruction is skipped.

6XX2 Clear Keyboard Flag (KCC)

Clears the keyboard flag and AC and sets the reader run flip-flop. This action allows the hardware to begin assembling the next input character in the TTI register. If the reader is activated and there is tape in the reader, a serial character is read from the tape and is assembled in the TTI register. The keyboard can also load characters into the TTI register provided that the reader is deactivated. In either case, the keyboard flag is set when the character is assembled in the TTI register.

6XX4 Read Keyboard Buffer Static (KRS)

ORs the contents of the TTI register with AC4 through 11, and leaves the result in AC4-11. This is termed a static command because neither the AC nor the keyboard flag is cleared.

6XX5 Set/Clear Interrupt Enable (KIE)

Sets or clears the interrupt enable flip-flop as determined by AC11. If AC11 is asserted, an interrupt request will be generated when the KL8/E keyboard or teleprinter flag is set. If AC11 is negated interrupt requests cannot be generated.

6XX6 Read Keyboard Buffer Dynamic (KRB)

Performs the combined operations of the KCC and KRS instructions. Clears the AC and keyboard flag and transfers the contents of the TTI register to AC4 through AC11. This instruction also sets the reader run flip-flop to begin assembly of another character in the TTI register. When this operation is complete, the keyboard flag is set to indicate that another character is available.

The computer clears all flags which are on the clear flags bus (including both the keyboard flag and the reader run enable) when the console CLEAR pushbutton is depressed or when a Clear All Flags instruction is given. This means that the user program must set the reader enable by means of a KCC or KRB instruction before the first input data can be received from the reader. After the first character is assembled, the KRB instructions used to read that character and the succeeding characters will operate the reader appropriately.

6YY0 Set Teleprinter Flag (TFL)

Sets the teleprinter flag to ready the logic for another character.

6YY1 Skip on Teleprinter Flag (TSF)

If the teleprinter flag is set, increments the contents of the program counter by one so that the next sequential instruction will be skipped.

6YY2 Clear Teleprinter Flag (TCF)

Clears the teleprinter flag. This instruction can be microprogrammed with TPC.

6YY4 Load Teleprinter and Print (TPC)

Transfers AC bits 4-11 to the TTO register and starts shifting the character out to the printer/punch units. This instruction does not clear the teleprinter flag. This instruction can be microprogrammed with TCF to produce TLS.

6YY5 Skip on Printer or Keyboard Flag (TSK)

Skips the next instruction if the keyboard flag or printer flag is set and the interrupt enable flip-

flop is set.

6YY6 Load Teleprinter Sequence (TLS)

This instruction combines TCF and TPC. The teleprinter flag is cleared and the contents of AC bits 4-11 are transferred to the TTO register where the hardware shifts the character out to the printer/punch unit. Then the shifting operation has finished outputting the character and is ready for another character, the teleprinter flag is set. The whole operation, from the time at which the TLS has cleared the flag and the TTO starts character transfer, until the time the hardware finishes with the character and again sets the flag, requires 100 milliseconds at 110 baud.

Since a Clear All Flags instruction or operation of the CLEAR button on the console will cause the teleprinter output flag to be cleared, it is necessary that each program set the flag by means of a TFL instruction before commencing a teleprinter output sequence for the first time.

In all of the above instructions the device code has been represented as XX for keyboard instructions and YY for teleprinter instructions. In the case of the console teleprinter, these would be device codes 03 and 04 respectively. For further information on device codes, consult Secion VII of this specification.

VII. Device Code Selection

All input/output devices on a PDP8/E (or other Family-of-8 machine) have device codes. These device codes determine which unique input/output device responds to a given instruction. In a typical I/O instruction, such as 6031, the "6" indicates that this is an I/O instruction; the"03"indicates that the device having device code 03 is the device that is to respond to the instruction; and the "1" determines exactly what type of input/output operation is to take place at device 03.

It is vitally necessary that no two input/output devices on the same PDP8/E system have the same device code. If, for example, two devices use code 03, the instruction 6031 would cause a skip on teleprinter receiver flag if either flag was set. Instruction 6036 would probably OR together the contents of both receiver input registers, even if one contained only a partially assembled character - so long as one of them had the receiver flag set. In summary, a multiple teleprinter system (or any multi-input/output device system) must have unique device codes for each device so that the program can address each device individually.

Since there are a limited number of possible device codes in a PDP8/E, no assignment of device codes for large multi-teleprinter systems can be made. It is suggested, however, that the following device codes be used first:

03/04 Console teleprinter receive/transmit
30/31 Second KL8/E teleprinter receive/transmit
32/33
34/35
36/37

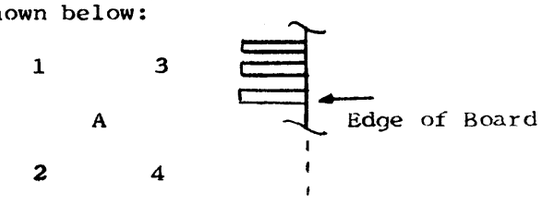
For PT08 compatibility 40/41,42/43,44/45,46/47 may be used, as long as no DP8-E Synchronous Modem Control is used.

To obtain additional device codes, determine which device codes you do not have yet on your system. Then write down the desired device code as two binary numbers, labelling the most significant bit "MD3", the next "MD4", the next"MD5", the next "MD6", the next "MD7", and the last "MD8". For example, for device code 03:

Octal:		0			3		
Binary:	0	0	0	0	1	1	
Label:	MD3	MD4	MD5	MD6	MD7	MD8	
Split Lug Group:	B	A	F	E	D	C	

The "Split Lug Groups" are explained on the next page.

In the lower right hand corner of the M8650/M8650YA board are split lugs which determine the device code to which the receiver will respond and the device code to which the transmitter will respond. The split lugs are arranged in groups of four. Each group has an alphabetic designation (A-F), and each split lug within a group has a numeric designation (1-4). A typical layout is shown below:



The correct strapping for each possible RECEIVER device code is given below:

	Group A	Group B	Group C	Group D	Group E	Group F
00	1-3	1-2	1-2	1-2	2-4	2-1
01	1-3	1-2	4-2	1-2	2-4	2-1
02	1-3	1-2	1-2	4-2	2-4	2-1
03	1-3	1-2	4-2	4-2	2-4	2-1
04	1-3	1-2	1-2	1-2	3-4	2-1
05	1-3	1-2	4-2	1-2	3-4	2-1
06	1-3	1-2	1-2	4-2	3-4	2-1
07	1-3	1-2	4-2	4-2	3-4	2-1
10	1-3	1-2	1-2	1-2	2-4	3-1
11	1-3	1-2	4-2	1-2	2-4	3-1
12	1-3	1-2	1-2	4-2	2-4	3-1
13	1-3	1-2	4-2	4-2	2-4	3-1
14	1-3	1-2	1-2	1-2	3-4	3-1
15	1-3	1-2	4-2	1-2	3-4	3-1
16	1-3	1-2	1-2	4-2	3-4	3-1
17	1-3	1-2	4-2	4-2	3-4	3-1
20	4-3	1-2	1-2	1-2	2-4	2-1
21	4-3	1-2	4-2	1-2	2-4	2-1
22	4-3	1-2	1-2	4-2	2-4	2-1
23	4-3	1-2	4-2	4-2	2-4	2-1
24	4-3	1-2	1-2	1-2	3-4	2-1
25	4-3	1-2	4-2	1-2	3-4	2-1
26	4-3	1-2	1-2	4-2	3-4	2-1
27	4-3	1-2	4-2	4-2	3-4	2-1

IMPORTANT NOTICE: Device codes 03 for receiver and 04 for transmitter are factory wired by means of machine inserted jumpers located in the split lug groups A,B,C,D,E,&F.
CUT THESE JUMPERS BEFORE ADDING THE JUMPERS LISTED ABOVE.

Continuation of receiver device code strapping table:

	Group A	Group B	Group C	Group D	Group E	Group F
30	4-3	1-2	1-2	1-2	2-4	3-1
31	4-3	1-2	4-2	1-2	2-4	3-1
32	4-3	1-2	1-2	4-2	2-4	3-1
33	4-3	1-2	4-2	4-2	2-4	3-1
34	4-3	1-2	1-2	1-2	3-4	3-1
35	4-3	1-2	4-2	1-2	3-4	3-1
36	4-3	1-2	1-2	4-2	3-4	3-1
37	4-3	1-2	4-2	4-2	3-4	3-1
40	1-3	4-2	1-2	1-2	2-4	2-1
41	1-3	4-2	4-2	1-2	2-4	2-1
42	1-3	4-2	1-2	4-2	2-4	2-1
43	1-3	4-2	4-2	4-2	2-4	2-1
44	1-3	4-2	1-2	1-2	3-4	2-1
45	1-3	4-2	4-2	1-2	3-4	2-1
46	1-3	4-2	1-2	4-2	3-4	2-1
47	1-3	4-2	4-2	4-2	3-4	2-1
50	1-3	4-2	1-2	1-2	2-4	3-1
51	1-3	4-2	4-2	1-2	2-4	3-1
52	1-3	4-2	1-2	4-2	2-4	3-1
53	1-3	4-2	4-2	4-2	2-4	3-1
54	1-3	4-2	1-2	1-2	3-4	3-1
55	1-3	4-2	4-2	1-2	3-4	3-1
56	1-3	4-2	1-2	4-2	3-4	3-1
57	1-3	4-2	4-2	4-2	3-4	3-1
60	4-3	4-2	1-2	1-2	2-4	2-1
61	4-3	4-2	4-2	1-2	2-4	2-1
62	4-3	4-2	1-2	4-2	2-4	2-1
63	4-3	4-2	4-2	4-2	2-4	2-1
64	4-3	4-2	1-2	1-2	3-4	2-1
65	4-3	4-2	4-2	1-2	3-4	2-1
66	4-3	4-2	1-2	4-2	3-4	2-1
67	4-3	4-2	4-2	4-2	3-4	2-1
70	4-3	4-2	1-2	1-2	2-4	3-1
71	4-3	4-2	4-2	1-2	2-4	3-1
72	4-3	4-2	1-2	4-2	2-4	3-1
73	4-3	4-2	4-2	4-2	2-4	3-1
74	4-3	4-2	1-2	1-2	3-4	3-1
75	4-3	4-2	4-2	1-2	3-4	3-1
76	4-3	4-2	1-2	4-2	3-4	3-1
77	4-3	4-2	4-2	4-2	3-4	3-1

IMPORTANT NOTICE: Device codes 03 and 04 for receiver and transmitter respectively are factory wired by means of machine inserted jumpers located in the split lug groups A,B,C,D,E,&F. CUT THESE JUMPERS BEFORE ADDING THE JUMPERS LISTED ABOVE.

The correct strapping for each possible TRANSMITTER device code is given below:

	Group A	Group B	Group C	Group D	Group E	Group F
00	1-2	1-3	1-3	1-3	2-1	2-4
01	1-2	1-3	4-3	1-3	2-1	2-4
02	1-2	1-3	1-3	4-3	2-1	2-4
03	1-2	1-3	4-3	4-3	2-1	2-4
04	1-2	1-3	1-3	1-3	3-1	2-4
05	1-2	1-3	4-3	1-3	3-1	2-4
06	1-2	1-3	1-3	4-3	3-1	2-4
07	1-2	1-3	4-3	4-3	3-1	2-4
10	1-2	1-3	1-3	1-3	2-1	3-4
11	1-2	1-3	4-3	1-3	2-1	3-4
12	1-2	1-3	1-3	4-3	2-1	3-4
13	1-2	1-3	4-3	4-3	2-1	3-4
14	1-2	1-3	1-3	1-3	3-1	3-4
15	1-2	1-3	4-3	1-3	3-1	3-4
16	1-2	1-3	1-3	4-3	3-1	3-4
17	1-2	1-3	4-3	4-3	3-1	3-4
20	4-2	1-3	1-3	1-3	2-1	2-4
21	4-2	1-3	4-3	1-3	2-1	2-4
22	4-2	1-3	1-3	4-3	2-1	2-4
23	4-2	1-3	4-3	4-3	2-1	2-4
24	4-2	1-3	1-3	1-3	3-1	2-4
25	4-2	1-3	4-3	1-3	3-1	2-4
26	4-2	1-3	1-3	4-3	3-1	2-4
27	4-2	1-3	4-3	4-3	3-1	2-4
30	4-2	1-3	1-3	1-3	2-1	3-4
31	4-2	1-3	4-3	1-3	2-1	3-4
32	4-2	1-3	1-3	4-3	2-1	3-4
33	4-2	1-3	4-3	4-3	2-1	3-4
34	4-2	1-3	1-3	1-3	3-1	3-4
35	4-2	1-3	4-3	1-3	3-1	3-4
36	4-2	1-3	1-3	4-3	3-1	3-4
37	4-2	1-3	4-3	4-3	3-1	3-4
40	1-2	4-3	1-3	1-3	2-1	2-4
41	1-2	4-3	4-3	1-3	2-1	2-4
42	1-2	4-3	1-3	4-3	2-1	2-4
43	1-2	4-3	4-3	4-3	2-1	2-4
44	1-2	4-3	1-3	1-3	3-1	2-4
45	1-2	4-3	4-3	1-3	3-1	2-4
46	1-2	4-3	1-3	4-3	3-1	2-4
47	1-2	4-3	4-3	4-3	3-1	2-4

Continuation of transmitter device code strapping table:

	Group A	Group B	Group C	Group D	Group E	Group F
50	1-2	4-3	1-3	1-3	2-1	3-4
51	1-2	4-3	4-3	1-3	2-1	3-4
52	1-2	4-3	1-3	4-3	2-1	3-4
53	1-2	4-3	4-3	4-3	2-1	3-4
54	1-2	4-3	1-3	1-3	3-1	3-4
55	1-2	4-3	4-3	1-3	3-1	3-4
56	1-2	4-3	1-3	4-3	3-1	3-4
57	1-2	4-3	4-3	4-3	3-1	3-4
60	4-2	4-3	1-3	1-3	2-1	2-4
61	4-2	4-3	4-3	1-3	2-1	2-4
62	4-2	4-3	1-3	4-3	2-1	2-4
63	4-2	4-3	4-3	4-3	2-1	2-4
64	4-2	4-3	1-3	1-3	3-1	2-4
65	4-2	4-3	4-3	1-3	3-1	2-4
66	4-2	4-3	1-3	4-3	3-1	2-4
67	4-2	4-3	4-3	4-3	3-1	2-4
70	4-2	4-3	1-3	1-3	2-1	3-4
71	4-2	4-3	4-3	1-3	2-1	3-4
72	4-2	4-3	1-3	4-3	2-1	3-4
73	4-2	4-3	4-3	4-3	2-1	3-4
74	4-2	4-3	1-3	1-3	3-1	3-4
75	4-2	4-3	4-3	1-3	3-1	3-4
76	4-2	4-3	1-3	4-3	3-1	3-4
77	4-2	4-3	4-3	4-3	3-1	3-4

It will be noted that in many cases two straps are inserted in the same split lug. This is acceptable, but three in the same lug would not be, nor would a diagonal run such as from lug 1 to 4 or from lug 2 to 3. If such runs exist, the strapping has been done incorrectly.

VIII. Speed Selection

A group of split lugs labelled "G" determine the operating speed of each KL8/E, EA, EB etc. option. Another split lug group labelled "H" determines whether the transmitter and receiver sections operate at the same speed. The correct strappings of groups G & H are listed below for each option:

Option	Group G	Group H	Notes
KL8/E	7-8	1-2	M8650 board
KL8/EA	7-8	1-2	M8650 board
KL8/EB	7-8	1-2	M8650 YA board
KL8/EC	5-6	1-2	M8650 YA board
KL8/ED	3-4	1-2	M8650 YA board
KL8/EE	1-2	1-2	M8650 YA board
KL8/EF	7-8	2-3	M8650 YA board
KL8/EG	7-8	H2 to G5	M8650 YA board

IMPORTANT NOTICE: There are no factory machine inserted jumpers in Group G. There must be one and only one of the straps shown in the above table in place in section G for the board to work; said jumper was hand soldered between the split lugs at the time the board left Digital's production facility. Remove that jumper before adding any other Group G jumpers. Group H has a factory machine inserted jumper between H1 and H2. Cut this jumper before adding any other Group H jumper.

IX. Stop Code Selection

Mechanical teleprinters, such as those that operate at 110 baud, require stop bits after each character transmitted so that their mechanisms can coast to a predetermined starting position before handling the next character. The same restriction applies to their receivers. To prevent the KL8/E from sending characters during this stopping interval, a stop bit counter is inserted in the KL8/E transmitter circuitry. This counter permits the KL8/E to request another character from the program as soon as it has send the last information bit of the preceding character, but prohibits it from sending that new character until an appropriate stop bit interval has been counted out following the transmission of the final information bit of the preceding character. This counter is controlled by a split lug group labelled "J".

Group J	Stop Code	Devices Using This Stop Code
1-2	1 bit	Electronic receiver devices operating at 150 baud and above.
2-3	2 bits	Mechanical receiver devices operating at 110 baud.

The KL8/E and KL8/EA contain a machine inserted jumper

that provides 2 stop bits (J2-J3), as 110 baud devices use 2 stop bits. To the best of the author's knowledge, all devices operating at speeds above 110 baud use electronic receiver systems (even though all other parts of the device may be mechanical), so the KL8/EB, EC, etc are provided with hand inserted jumpers from J1 to J2, thus providing only 1 stop bit.

X. Special Notes

In the upper right corner of schematic E-CS-M8650-0-1, one will find points labelled E, H, and M. These, as indicated in the notes on the cover sheet,are designations of pins on the forty pin header at which point cables connect to the M8650 printed circuit board. Pin E is the input to the M8650 TTL logic circuitry in the receiver section. Pin H is the output of a filter and Schmidt Trigger circuit which convert 20 milliampere signals from the teleprinter keyboard to TTL logic signals. Pin M is the output of an inverter and EIA/CCITT level converter that convert EIA/CCITT received signals to TTL logic signals. The cable that is used for serving 20 milliampere devices (7008360) consists of a Mate-N-Lock connector at one end and a 40 pin housing at the other. The 40 pin housing contains a jumper from pin E to pin H, so that when that cable is plugged into the 40 pin header, a connection will be established from the 20 milliampere receiving circuitry to the receiving circuitry of the M8650. The cables that can be used with EIA/CCITT interface devices (BC05V and BC05C) consist of a 25-pin male connector at one end and a 40 pin housing at the other. In this housing there is a jumper from pin E to pin M, so that when this cable is plugged into the forty pin header, a connection will be established from the EIA/CCITT receiving circuitry to the receiving circuitry of the M8650 board.

It should be noted that the 175 ohm limitation cited for Reader Run control is actually unimportant, as the keyboard and printer requirements of 150 ohm limitation on line resistance are the ruling limitations.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY KEN GULICK	CHECKED KEN GULICK	SECTION 1
DATE 4/8/71	DATE 4/8/71	
ENG John E. McNamara	PROD R. P. [illegible]	ISSUED SECT. 1
DATE 8-18-71	DATE 8-18-71	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION											
			KL8-E	KL8-EA	KL8-EB	KL8-EC	KL8-ED	KL8-EE	KL8-EF	KL8-EG				
1	D-IA-7008360-0-0	CABLE ASSEMBLY (KL8-E)	1	-	-	-	-	-	-	-				
2	E-CS-M865Ø-Ø-1	ASYNC DATA CONTROL	1	1	-	-	-	-	-	-				
3	D-IA-BCØ1V-25-Ø	CABLE ASSY (BCØ1V)	-	1	1	1	1	1	1	1				
4	E-CS-M865Ø-YA-Ø	ASYNC DATA CONTROL (YA)	-	-	1	1	1	1	1	1				

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
ASYNC DATA CONT	NONE	A	PL	KL8-E-Ø		
	SHEET 1 OF 1	DIST	G			

DEC FORM NO. 16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

ACCESSORY LIST

MADE BY J.McCluskey	CHECKED	SECTION
DATE 1/28/72	DATE E Clark 1/28/72	
ENG E Clark	PROJ	ISSUED SECT
DATE 1/28/72	DATE E Clark 1/28/72	

LEGEND
DOCUMENT
DOCUMENT CHANGE NOTICE
PA PAPER TAPE ASCII
PB PAPER TAPE BINARY
PM PAPER TAPE
READER PUNCH

ITEM NO	DWG NO PART NO	DESCRIPTION	QUANTITY VARIATION KL8/E	KL8, A	KL8/EB-G						
1	M8650	KL8/E Control Module	X	X							
2	M8650-YA	KL8/EB-EC Control Module			X						
3	7008360	KL8/E Control Cable	X								
4	BC01-V	KL8/EA-G Control Cable		X	X						
5	Maindec-8/E-D2AC-D	PDP-8E Teltype And KL8 Asynchronous Data Control Test Binary Tape	X	X	X						
6	Maindec-8/E-D2AC-PB	PDP-8E Teltype And KL8 Asynchronous Data Control Test Document	X	X	X						
7	Maindec-00-D2G3-PT	Binary Count Pattern Test Tape	X	X	X						
8	KL8/E-0	KL8/E Print Set	X	X	X						
9	KL8/E	KL8/E Maintenance Manual	X	X	X						
		Note: When Item 9 Is Temporarily Waived Ship Following									
	A-SP-KL8/E-2	Test Procedure	X	X	X						
	A-SP-KL8-E-3	Acceptance Proedure	X	X	X						

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV	ECO NO
ASYNC. DATA CONTROL	SHEET OF	A	AL	KL8-E-4		
		DIST.				

DEC FORM NO.
DRA 12'

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

SEQUENCE

MM8-1 PRINT SET

BLOCK DIAGRAM	E-BD-MM8-E-1
4K XY DRIVER	E-CS-G227-Ø-1
STACK BOARD	E-CS-G619-Ø-1
SENSE INHIBIT (4K)	E-CS-G104-Ø-1
MEMORY ASSY (4K)	D-UA-MM8-E-Ø
MEMORY ASSY (PL)	A-PL-MM8-E-Ø
STACK 4K 12 BIT	D-UA-H220-Ø-Ø
ACCESSORY LIST	A-AL-MM8-E-3
MM8-E ACCEPTANCE PROCEDURE	A-SP-7665139-0-0

MM8-3 PRINT SET

BLOCK DIAGRAM	E-BD-MM8-EJ-5
ACCESSORY LIST	A-AL-MM8-E-3
12 BIT STACK BOARD	D-CS-G646-0-1
MM8-EJ & MM8=EH ACCEPTANCE PROCEDURE (F.S.)	A-SP-MM8-EJ-1
4K 12 BIT MEMORY	D-UA-MM8-EH-0
4K STACK SCHEMATIC	E-CS-H211-0-1
8K OR 4K SENSE INHIBIT	E-CS-G115-0-1
8K OR 4K X-Y DRIVER	E-CS-G234-0-1
ENGINEERING SPECIFICATION	A-SP-MM8-EJ-4

SEQUENCE

MM8-2 PRINT SET

BLOCK DIAGRAM	E-BD-MM8-EJ-5
8K XY DRIVER	E-CS-G233-Ø-1
8K SENSE INHIBIT	E-CS-G111-Ø-1
8K STACK SCHEMATIC	E-CS-H212-Ø-1
MEMORY (8K)	D-UA-MM8-EJ-Ø
ACCESSORY LIST	A-AL-MM8-E-3
12 BIT STACK BOARD	D-CS-G646-0-1
MM8-EJ & MM8-EH ACCEPTANCE PROCEDURE (F.S.)	A-SP-MM8-EJ-1
8K OR 4K SENSE INHIBIT	E-CS-G115-0-1
8K OR 4K X-Y DRIVER	E-CS-G234-0-1
ENGINEERING SPECIFICATION	A-SP-MM8-EJ-4

MFG SET

MANUFACTURING PROC.	A-SP-MM8-E-2
MM8-EJ & MM8-EH MANUFACTURING PROCEDURE (ON LINE)	A-SP-MM8-EJ-2
MM8-EJ & MM8-EH TEST PROCEDURE (OFF LINE)	A-SP-MM8-EJ-3
PURCHASE SPEC.	A-PS-3010654-0-0
PURCHASE SPEC.	A-PS-8009834-0-0

UNIT VARIATIONS

VAR	TITLE	PRINT SET MM8-1	MM8-2	MM8-3
MM8-E	4K 12 BIT MEMORY	X		
MM8-EJ	8K 12 BIT MEMORY		X	
MM8-EH	4K 12 BIT MEMORY			X

REVISIONS	REV	CHG. NO.	DATE
	A	MM8EJ-1	WJC
	B	MM8E-5	12

USED ON OPTION/MODEL	
SHEET 1 OF 3	

DRN.		DATE
CHK'D.		DATE
PROJ ENG. D.P.C.	B. COATES	DATE 10-1-73
PROD.		DATE
FIELD SERV.		DATE

TITLE

MEMORY
DRAWING DIRECTORY

SIZE	CODE	NUMBER	REV
B	DD	MM8-E	B

DIST G

DEC 16-12321-0622-1A-R672

DRB 106

1

MM8-EJ MEMORY
D-UA-MM8-EJ-0

MM8-EH MEMORY
D-UA-MM8-EH-0

MM8-E MEMORY
D-UA-MM8-E-Ø
A-PL-MM8-E-Ø

2

H212 STACK SCHEMATIC
8K X12 BIT
E-CS-H212-Ø-1

H211 STACK SCHEMATIC
4K X 12 BIT
E-CS-H211-0-1

H220 STACK SCHEMATIC
4K X 12 BIT
D-UA-H22Ø-Ø-Ø

3

STACK BOARD G646
D-CS-G646-0-0

STACK BOARD G619
E-CS-G619-0-1

4

G227 4K XY DRIVER
E-CS-G227-0-1

G223 8K XY DRIVER
E-CS-G223-0-1

G234 8K or 4K
XY DRIVER
E-CS-G234-0-1

5

SENSE INHIBIT G104
(4K)
E-CS-G104-0-1

SENSE INHIBIT G111
(8K)
E-CS-G111-0-1

SENSE INHIBIT
G115
(8K or 4K)
E-CS-G115-0-1

9

M351 [illegible]
D-UA-[illegible]
A-PL-[illegible]

TITLE [illegible]

SHEET [illegible]

SIZE D

NUMBER [illegible]

DRB-107

ELECTRICAL

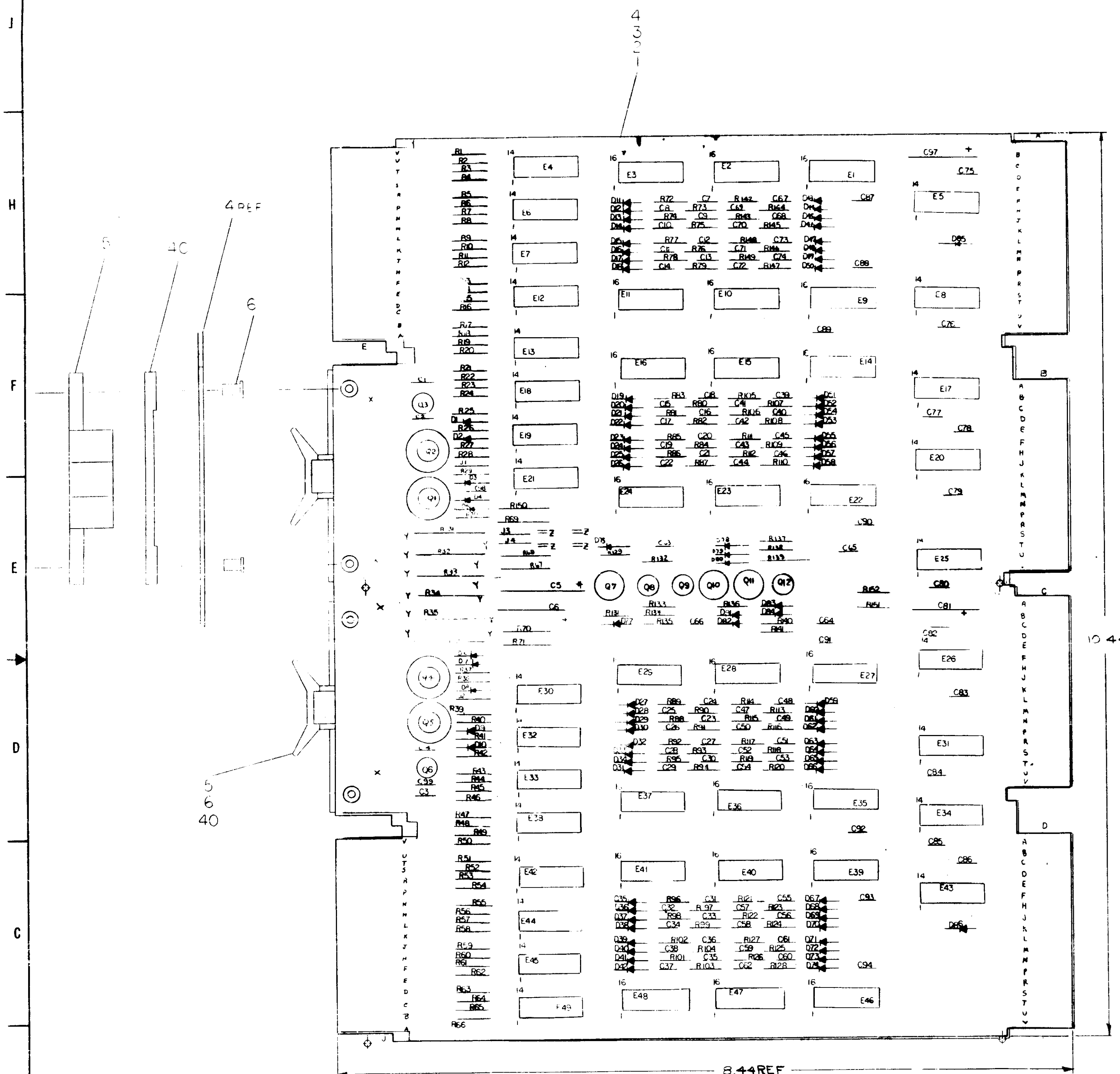
CUSTOMER PRINT SET						MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
MM8-1	MM8-2	MM8-3										
X							1	E-BD-MM8-E-1		1	BLOCK DIAGRAM TIMING	
						X		A-SP-MM8-EJ-5	A	21	MM8-EJ&MM8-EH TEST PROCEDURE (OFFLINE)	
	X	X						E-BD-MM8-EJ-5	A	1	BLOCK DIAGRAM TIMING	
	X						2	E-CS-G611-0-1	#	2	STACK SCHEMATIC 8K X 12 BIT	
		X						E-CS-G611-0-1	#	2	STACK SCHEMATIC 4K X 12 BIT	
X							3	E-CS-G619-0-1	#	2	PLANAR STACK SCHEMATIC	
	X	X						D-CS-G646-0-1	#	1	12 BIT STACK BOARD	
X							4	E-CS-G234-0-1	#	5	4K or 8K DRIVER BOARD	
	X							E-CS-G233-0-1	#	5	4K XY DRIVER BOARD	
	X	X						E-CS-G234-0-1	#	5	4K or 8K DRIVER BOARD	
X							5	E-CS-G104-0-1	#	2	SENSE INHIBIT	
	X							E-CS-G111-0-1	#	3	8K SENSE INHIBIT BOARD	
	X	X						E-CS-G113-0-1	#	3	4K or 8K SENSE INHIBITBOARD	

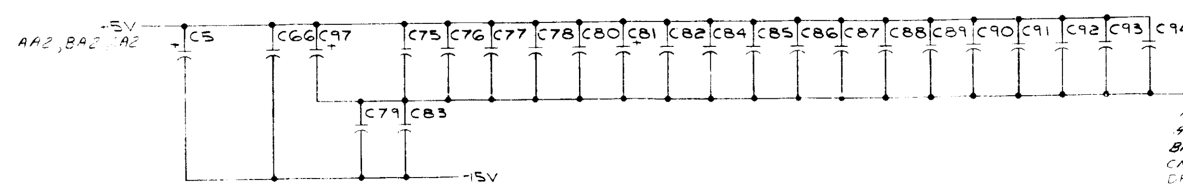
MECHANICAL

CUSTOMER PRINT SET						MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
MM8-1	MM8-2	MM8-3										
X							1	D-UA-MM8-E-0		1	4K 12 BIT MEMORY	
X								A-PL-MM8-E-0		1	4K 12 BIT MEMORY (PL)	
	X							D-UA-MM8-EJ-0	B	1	8K 12 BIT MEMORY	
		X						D-UA-MM8-EH-0		1	4K 12 BIT MEMORY	
X								A-SP-7665103-0-0	#	4	ACCEPTANCE PROC	
						X		A-SP-MM8-E-2			MANUFACTURING PROC.	
	X	X						A-SP-MM8-EJ-1	A	5	MM8-EJ& MM8-EH ACCEPTANCE PROCEDURE	
						X		A-SP-MM8-EJ-2	A	4	MM8-EJ&MM8-EH MANUFACTURING PROC. (F.S.)	
X	X	X						A-AL-MM8-E-3	A	1	ACCESSORY SHIPPING LIST	
	X	X						A-SP-MM8-EJ-4			ENGINEERING SPECIFICATION	
							2	B-BD-H212-0		2	STACK 8K 12 BIT	
X								D-UA-H220-0-0	#	2	STACK 4K 12 BIT	
						X	3	A-PS-3010654-0-0	#		PURCHASE SPEC	
						X		A-PS-3008834 -0-0	#		PURCHASE SPEC	
								C-MD-5509025-0-0		1	COVER PLATE	
							6	B-UA-H851-0-0			EDGE CONNECTOR	
								A-PL-H851-0-0			EDGE CONNECTOR PL	
								B-MD-5509071-1-0			RECEP 36 PIN REWORK	
								D-IA-5008903-0-0			ETCH BOARD	

TITLE		SIZE	CODE	NUMBER	REV
MEMORY	SHEET OF	B	DD	MM8E	P

DRB 108





AC2, AF1, AF2, AN1, AN2, AT1, AT2, BC1, BC2, BF1, BF2, BN1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CN2, CT1, CT2, DC1, DC2, DF1, DF2, DN1, DN2, DT1, DT2

PARTS LIST

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4		SPLIT LUGS	9006735	48
16	R1, R3, R5, R7, R9, R12, R14, R15, R52, R54, R56, R58, R60, R61, R64, R66	RES. 180 1/4W 5%	1301322	47
20	R2, R4, R6, R8, R10, R11, R13, R16, R51, R53, R55, R57, R59, R62, R63, R65, R132, R137, R138, R141	RES. 330 1/4W 5%	1300295	46
66	C2, C3, C7-C62, C67-C74	CAP. 680 PF, 100V 5% MICA	1000026	45
4		HEAT SINK	1210001	44
1	R140	RES 68 1/4W, 5%	1300219	43
1	R139	RES 470 1/2W, 5%	1300315	42
4	R25, R28, R39, R42	RES 680 1/4W, 5%	1301424	41
2		SPACER (CABLE CLAMP)	1202704	40
A/R		WIRE #22 AWG STED TEFLON	0735055	39
8	E1, E9, E14, E22, E27, E35, E39, E46	I.C. DEC 8251	1909594	38
4	E5, E20, E26, E43	I.C. DEC 6380	1909971	37
1	E25	I.C. DEC 74H11	1909267	36
4	E8, E17, E31, E34	I.C. DEC 74H10	1909057	35
16	E2, E3, E10, E11, E15, E16, E23, E24, E28, E29, E36, E37, F40, E41, E47, E48	PULSE TRANSFORMER	1609651	34
16	E4, E6, E7, E12, E13, E18, E19, E21, E30, E32, E33, E38, E42, E44, E45, E49	TRANSISTOR DEC4008	1510015	33
4	Q1, Q2, Q4, Q5	TRANSISTOR DEC 3762	1509649	32
2	Q3, Q6	TRANSISTOR DEC 4258	1505321	31
2	Q8, Q12	TRANSISTOR DEC 6534B	1503409-01	30
1	Q9	TRANSISTOR DEC 3009B	1503100	29
3	Q7, Q10, Q11	TRANSISTOR DEC 1008	1502155	28
4	R32-R35	RES. 16.9 6W, 1% BERYLLIUM	1310032	27
1	R67	RES. 34.8K 1/8W, 1% MF	1303156	26
1	R68	RES. 14.7K 1/8W, 1% MF	1302941	25
6	R26, 27, 40, 41, 134, 135	RES. 4.7K, 1/4W, 5%	1300447	24
~~4~~	~~R26, R27, R40, R41~~	~~RES. 3.9K, 1/4W, 5%~~	~~1300444~~	23
5	R29, R30, R37, R38, R131	RES. 1.5K 1/4W 5%	1300391	22
2	R31, R36	RES. 750, 1W, 5%	1302385	21
~~37~~	~~R1-R16, R51-R66, R132, R137, R138, R141~~	~~RES. 330, 1/4W, 5%~~	~~1300295~~	~~20~~
1	R151	RES. 220, 1/4W, 5%	1300271	19
81	R17-R24, R43-R50, R72-R99, R101-R129, R142-R149	RES. 150 1/4W, 5%	1300250	18
3	R133, R136, R152	RES. 100, 1/4W, 5%	1300229	17
4	R69-R71, R150	RES. 10, 1/2W 5%	1300168	16
9	D1-D3, D8-D10, D75, D77, D81	DIODE D672	1105275	15
76	D4-D7, D11-D74, D78-D80, D82-D86	DIODE D664	1100114	14
1	C5	CAP. 20UF, 50V, 10-75% ELECT	1002839	13
22	C64-C66, C75-C80, C82-C94	CAP. .01UF 100V, 20% DISC	1001610	12
3	C6, C81, C97	CAP. 39UF, 10V, 10% S.TANT	1000076	11
3	C63, C98, C99	CAP. .047UF, 16V, 15 20% DISC	1009678	10
~~2~~	~~C2, C3~~	~~CAP. 560PF, 100V, 5% D.M.~~	~~1000025~~	9
~~66~~	~~C2, C3, C7-C62, C67-C74~~	~~CAP. 680 PF 100V, 5% DISC~~	~~1010812~~	8
2	C1, C4	CAP. 39PF 100V, 5% D.M.	1000010	7
4		EYELET #G54-11 STIMPSON	9006750	6
2		HANDLE FLIP CHIP GREEN	900337-01	5
1		ETCHED CIRCUIT BOARD	5008832	4
REF		MODULE HISTORY LIST	B-MH-G227-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	J-AH-G227-0-5	2
REF		X-Y COORDINATE HOLE LOC	K-CO-G227-0-4	1

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO
DEC 3762	**
DEC 4258	2N4258
DEC 6534B	MPS6534
DEC 3009B	2N 3646
DEC 1008	NONE
DEC D672	1N 3653
DEC D664	1N 3606

IC PIN LOCATIONS

IC TYPE	GND	+5V
DEC 6380	1	8
DEC 8251	8	16

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

JUMPER LIST

ITEM NO	AWG	FROM PT	TO PT
39	22	J4-A	J4-B
39	22	J3-A	J3-B
39	22	J2-A	J2-B
39	22	J1-A	J1-B

REV COLUMN E

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH REVISION

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

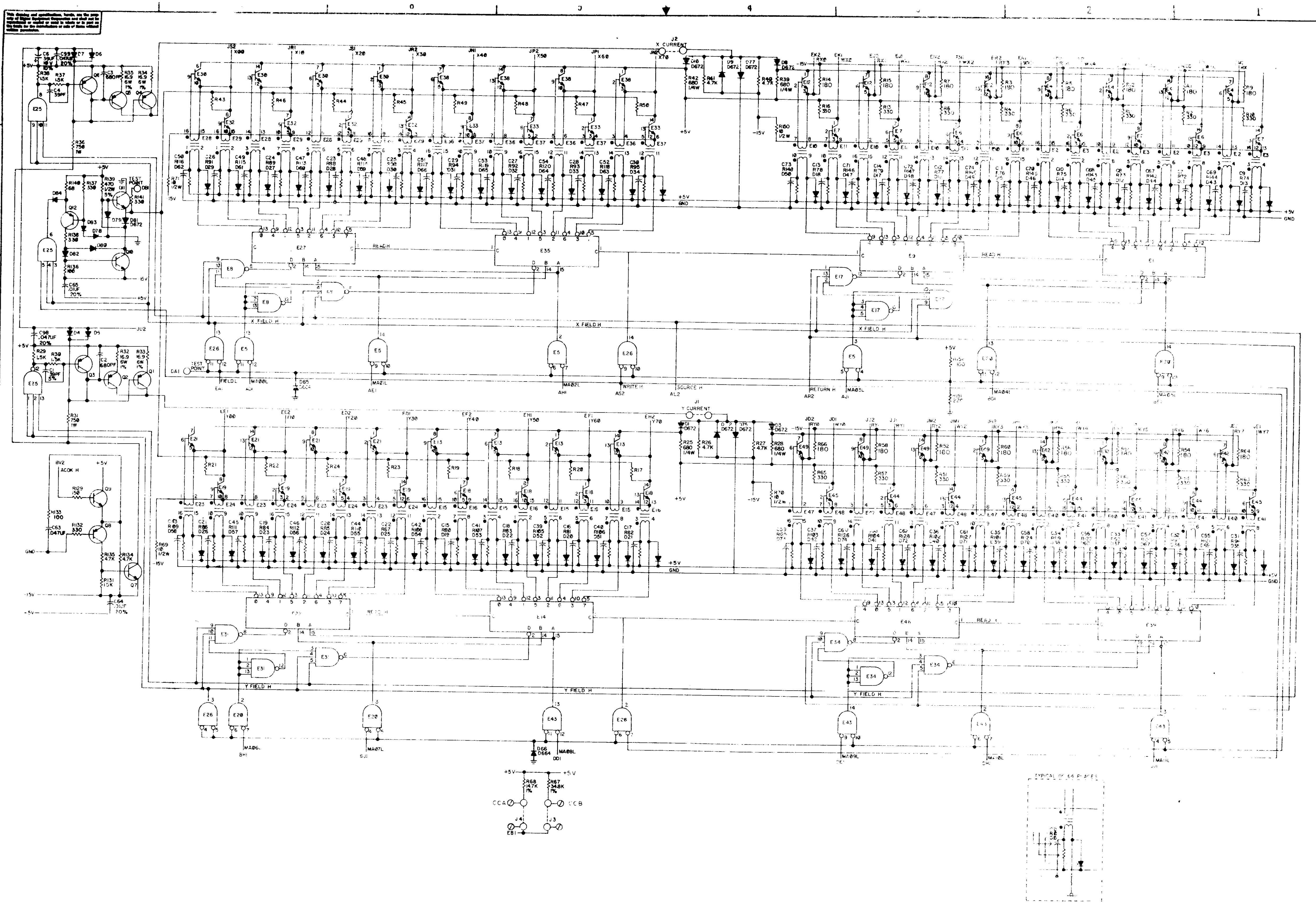
TITLE: X-Y DRIVER & CURRENT SOURCE

FIRST USED ON: D-BA-MM8-E-0

SIZE: E | CODE: CS | NUMBER: G227-0-1 | REV: H

SCALE: 2/1 | SHEET 1 OF 2

REVISIONS: ORIGINATED | CHANGE NO | REV | CHK



QT	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

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

MATERIAL

FINISH

DRN. Dona French DATE 8/18/70
CHK'D. DATE
ENG. DATE 2-30-71
PROJ. ENG. DATE
PROD. R. K. DATE

SCALE
SHEET 2 OF 2

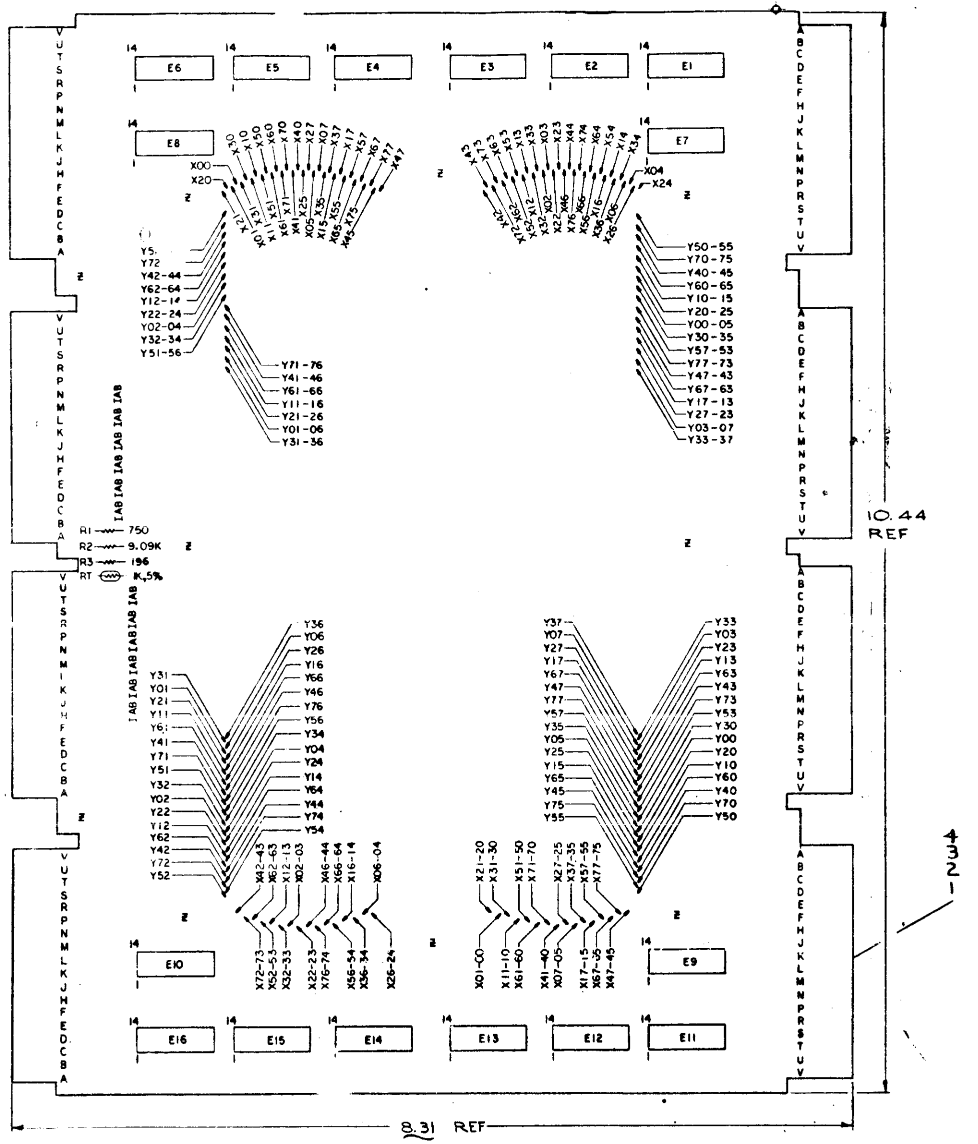
EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
X Y DRIVER AND CURRENT SOURCE

SIZE E CODE CS NUMBER G227-0-1 REV. H

DIST.

NOTES:
1. UNLESS OTHERWISE INDICATED:
GND=AC2, AF, AF2, AN1, AN2, AT1, AT2, BC1, BC2, BF1, BF2, BN1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CN2, CT1, CT2, DC1, DC2, DF1, DF2, DN1, DN2, DT1, DT2
2. DIODE ARRAYS WILL BE MOUNTED BY STACK VENDOR. DIODE ARRAYS ARE DEC2501
3. THERMISTOR (RT) 1.0K, 1% AT 25°C
4. 2501-01 MAY BE USED INTERCHANGEABLY WITH ITEM 9.



SEE NOTE 4

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
16	E1-E16	I.C. DEC 2501	1910010	9
1	RT	RES. 1K THERMISTOR 1%	1310071	8
1	R2	RES. 9.09 1/8W 1% MF	1304885	7
1	R3	RES. 196 1/8W 1% MF	1302956	6
1	R1	RES. 750 1/8W 1% MF	1302955	5
1		ETCHED CIRCUIT BOARD	5009037	4
REF		MODULE HISTORY LIST	B-MH-G619-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	E-AH-G619-05	2
REF		X-Y COORDINATE HOLE LOC	K-CO-G619-04	1

PARTS LIST

REV COLUMN

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH REVISION

DIGITAL EQUIPMENT CORPORATION

PLANAR STACK BOARD G619

FIRST USED ON D-UA-H220-0-0

SIZE: E CODE: KS NUMBER: G619-0-1 REV.: A

W. COATES

G619-00051

SEMICONDUCTOR CONVERSION CHART

DEC NO | EIA NO

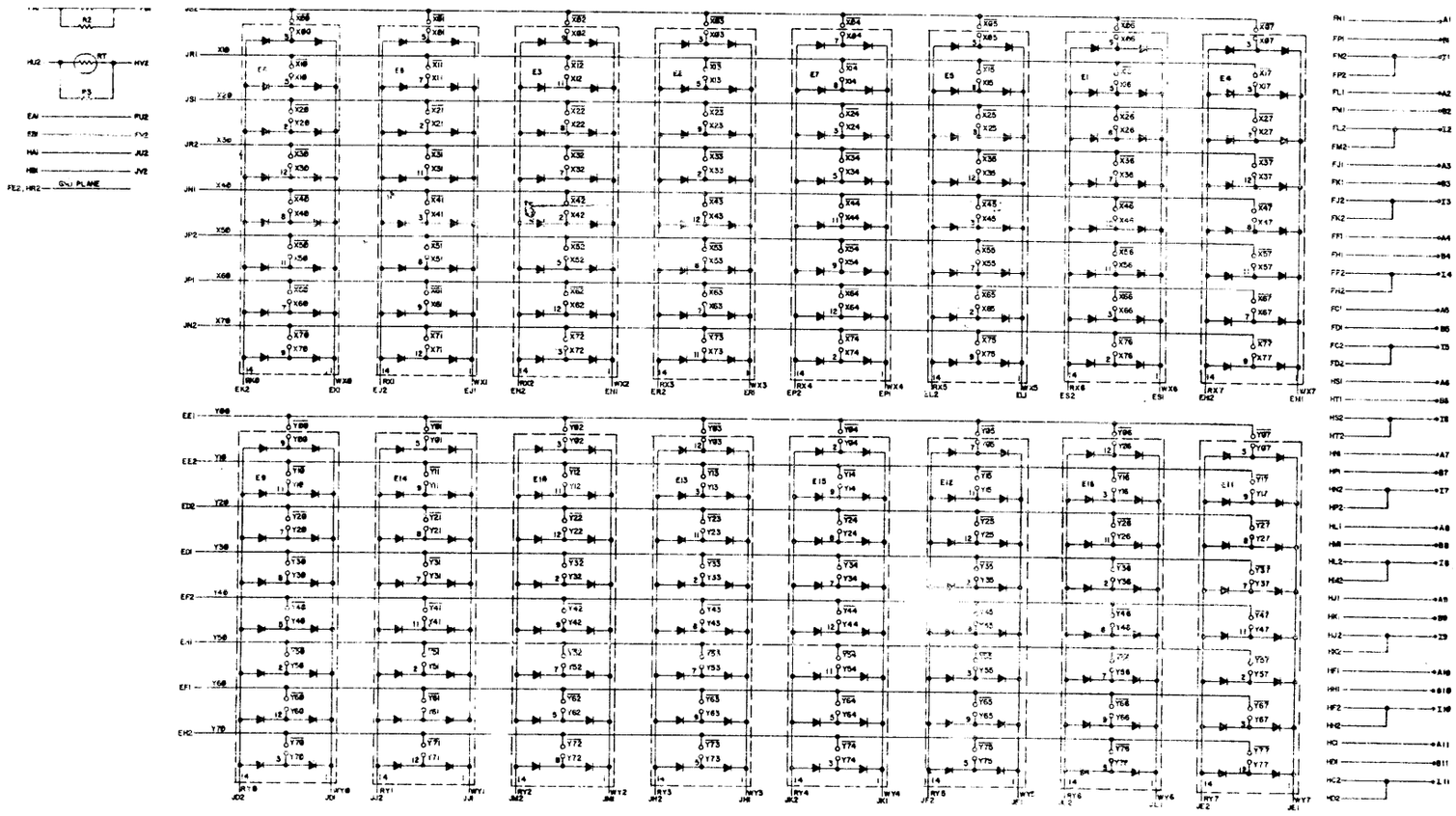
IC TYPE | GND | +5V

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

IC PIN LOCATIONS

ITEM NO | AWG | FROM PT | TO PT

JUMPER LIST



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS .XX ±.03 .XXX ±.010
FRACTIONS ±1/64
ANGLES ±1°30'
FINISH SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

	NAME	DATE
DRN	JEANNE FRENCH	9-1-70
CHK'D	N. YOGE-SANG	9-28-70
ENG	N. YOGE-SANG	10-28-70
PROJ. LDR.		DATE
PROJ.		DATE
SCALE		

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
PLANAR STACK BOARD

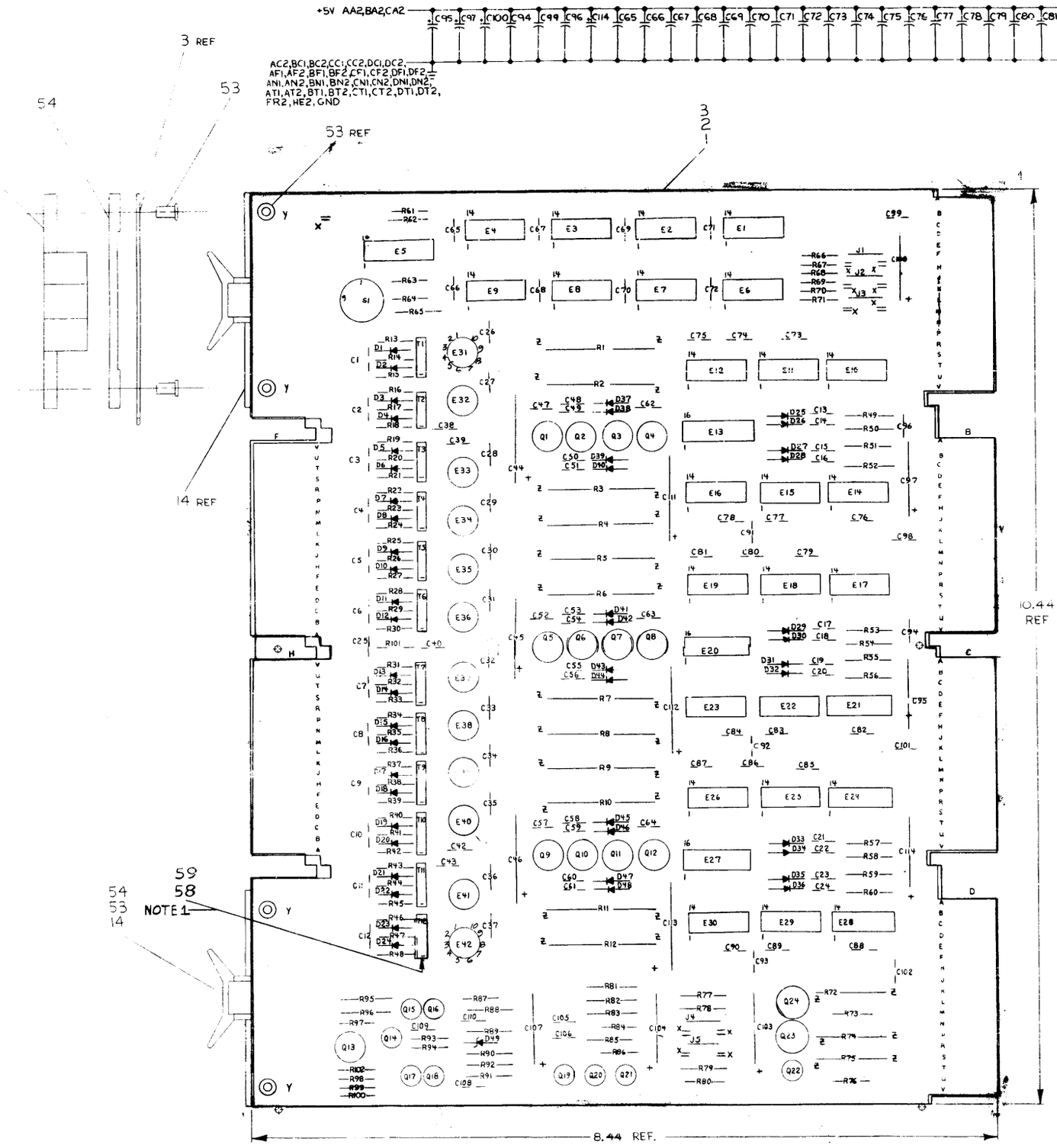
SIZE	CODE	NUMBER	REV.
E	CS	0619-0-1	A

SCALE

REVISIONS			
REV.	CHANGE NO.	DATE	
A			

0619-0-1 A
CS
B

1. CUT CATERPILLER GROMMET (DEC 9007622) 7-1/8" LONG. ON ONE SIDE CUT TOOTH OUT 3-5/8" FROM ONE END. ON EACH END SPRAY WITH SCOTCH-GRIP ADHESIVE NO 77 (DEC 9008907) FOLLOW DIRECTIONS FOR NON-PERMANENT BONDS ON BACK OF CAN. PLACE THE GROMMET OVER 17Z5 TRANSFORMERS WITH CUT OUT TOOTH OVER CAPACITOR C40.



1	R102	RES 10, 1/4W, 10%	1300170	62
11		SPLIT LUGS	9006735	61
1	R81	RES 2.74 1.8W 1% 100 MFP	1304868	60
WR		SCOTCH GRIP ADHESIVE	9008907	59
A/R		CATERPILLER GROMMET	9007622	58
REF		ASSY DRILLING HOLE LAYOUT	E-AH-G104-0-5	57
2	R90, R101	RES, 100, 1/8W, 1% 100 MFP	1302858	56
A/R		WIRE #22 AWG SOLID BUS	9107560-01	55
2		SPACER (CAP F CLAMP)	1202704	54
4		EYELET #GS4-11 E B STIMPSON	9006750	53
1	E6	IC DEC 7486	1910011	52
3	E10, E17, E24	IC DEC 8881	1909705	51
4	E1, E14, E21, E28	IC DEC 384	1909486	50
1	E2	IC DEC 8280	1909971	49
2	E3, E8	IC DEC 7411	1909267	48
1	E9	IC DEC 74H00N	1909056	47
6	E11, E15, E18, E22, E25, E29	IC DEC 74H40N	1905586	46
1	E7	IC DEC 7440N	1905579	45
6	E12, E16, E19, E23, E26, E30	IC DEC 7400N	1905575	44
1	E4	IC DEC 7474N	1905547	43
12	E31 - E42	IC MC 5400	1905521	42
1	E5	100NS DELAY LINE	1610033-0	41
3	E13, E20, E27	PULSE TRANSFORMER	1009996	40
12	T1 - T12	TRANSFORMER 17Z-5	1609478	39
16	Q1 - Q12	TRANSISTOR DEC 3734	500662	38
2	Q23, Q24	TRANSISTOR DEC 3762	1509699	37
4	Q14 - Q22	TRANSISTOR DEC 6534-B	1503409 01	36
1	Q13	TRANSISTOR DEC 2219-S	1501861	35
12	R1 - R12	RES 16.5K, 1/8W, 1%	1309679	34
12	R13 - R24	RES 28.7K 1/8W 1% 100 MFP	1309105	33
1	R89	RES 68.1K, 1/8W, 1% 100 MFP	1305252	32
1	R88	RES 5.62K 1/8W 1% 100 MFP	1305128	31
1	R91	RES 10K 1/8W 1% 100 MFP	1304858	30
2	R79, R95	RES 5.64K 1/8W 1% 100 MFP	1304856	29
1	R77	RES 4.05K 1/8W 1% 100 MFP	1304855	28
3	R65, R92, R86	RES 1.96K 1/8W 1% 100 MFP	1304833	27
3	R82, R83, R96	RES 1K, 1/8W, 1% 100 MFP	1303114	26
1	R78	RES 1.21K 1/8W 1% 100 MFP	1302871	25
24	R13, R15, R16, R18, R19, R21, R22, R24, R25, R61, R62, R30, R31, R33, R34, R36, R37, R39, R40, R43, R45, R46, R48	RES 75 1/8W 1%	1303064	24
2	R64, R80	RES 680, 1/4W, 5% CC	1301424	23
6	R66, R68, R70, R80, R94, R99	RES 10K, 1/4W, 5% CC	1300479	22
3	R73, R76, R97	RES 4.7K, 1/4W, 5% CC	1300447	21
2	R61, R87	RES 1K, 1/4W, 5% CC	1300365	20
19	R14, R17, R20, R23, R26, R29, R32, R35, R38, R41, R44, R47, R62, R67, R69, R71, R84, R95, R98	RES 330, 1/4W, 5% CC	1300295	19
1	R63	RES 220, 1/4W, 5% CC	1300271	18
1	R100	RES 100, 1/4W, 5% CC	1300229	17
3	R72, R74, R75	RES 68, 1W, 10% CC	1300222	16
1	S1	ROTARY SWITCH	1210043-0	15
2		HANDLE FLIP CHIP - GREEN	9008337-01	14
1	D49	DIODE 1/4M 6.8AZ1	1109991-1	13
36	D1 - D24, D37 - D48	DIODE D672	1105275	12
12	D25 - D36	DIODE D664	1100114	11
32	C25 - C43, C47, C52, C57, C62 - C64, C91 - C93, C98, C101, C102, C110	CAP .047MFD 16V 20% DISC	1009678	10
33	C65 - C90, C94, C96, C99, C105, C106, C108, C109	CAP .01MFD 100V 20% DISC	1001610	9
6	C44 - C46, C111 - C113	CAP 47MFD 20V 20% S. TANT	1000079	8
7	C95, C97, C100, C103, C104, C107, C114	CAP 6.8MFD 35V 20% S. TANT	1000067	7
12	C48 - C51, C53 - C56, C58 - C61	CAP 1500PF 200V 10% DISC	1000054	6
12	C13 - C24	CAP 1000PF 100V 5% MICA	1000042	5
12	C1 - C12	CAP 33PF 100V 5% D. MICA	1000009	4
1		ETCHED CIRCUIT BOARD	5008847	3
REF		MODULE ECO HISTORY	B-MH-G104-0-6	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-G104-0-4	1
QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DEC 3734	SAME		
DEC 3762	SAME		
DEC 6534 B	MPS6534		
DEC 2219-S	2N 2219		
1/4 M 6.8AZ1	IN4099		
D672	IN3633		
D664	IN3606		
DEC NO.	EIA NO.	SEMICONDUCTOR CONVERSION CHART	

			55	22	J5-A
					J4-A
DEC 380	1	8			J3-A
DEC 384	1	8			J2-A
IC TYPE	GND	+5V	55	22	J1-A
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE			ITEM NO	AWG	FROM PT
IC PIN LOCATIONS			JUMPER LIST		

					J5-B
					J4-B
					J3-B
					J2-B
					J1-B
				TO PT	

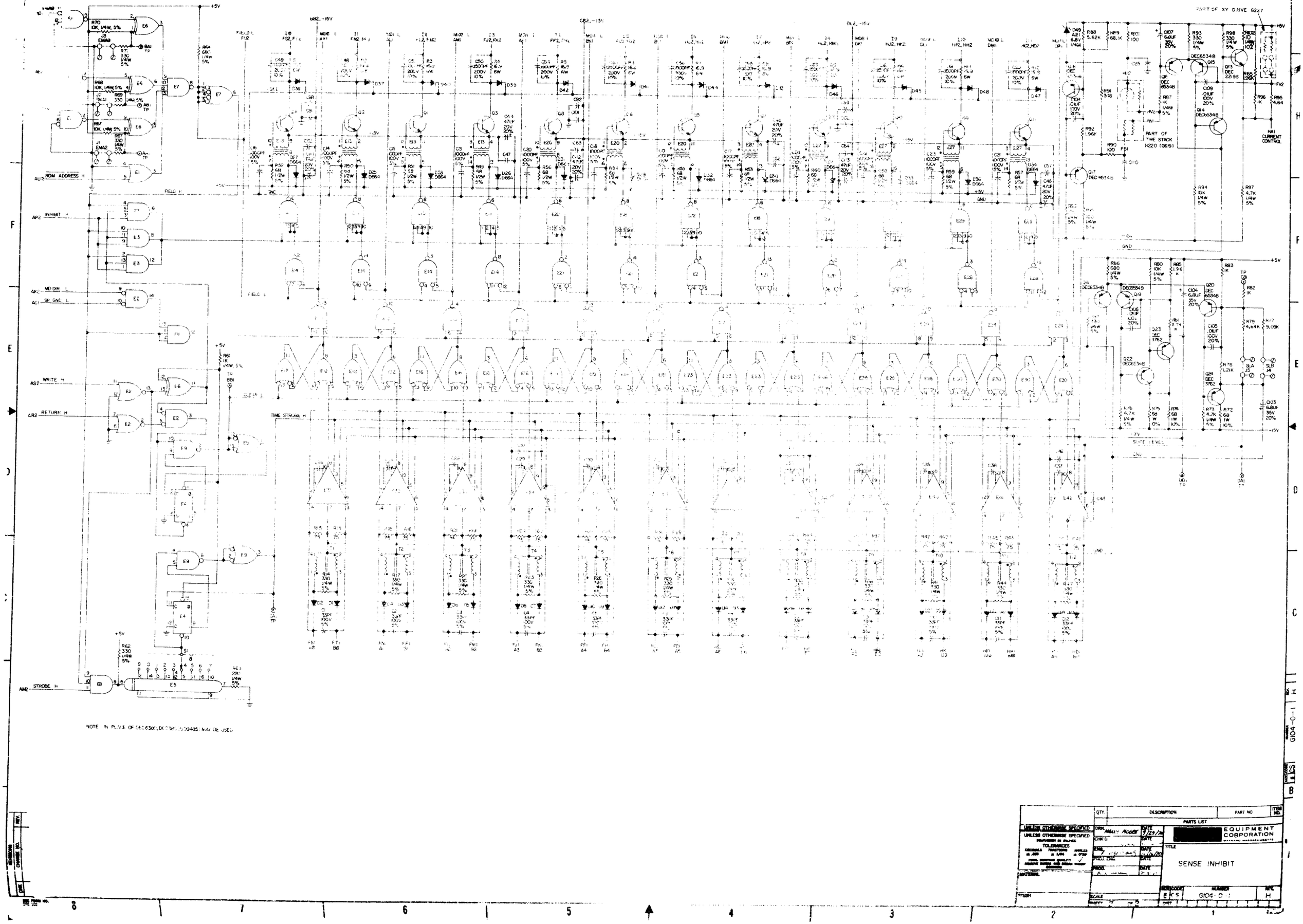
REV	DESCRIPTION	DATE	ORIGINATED
A	G104-0000-3	6/16/71	R. VOGELSANG
B	G104-0000-5	7/9/71	B. TARPLEY
C	G104-000002	8/10/71	R. VOGELSANG
D	G104-000003	8/16/71	R. VOGELSANG
E	G104-000004	8/17/71	R. VOGELSANG
F	G104-0000-5	9/9/71	B. TARPLEY
G	G104-000006	10-22-71	B. TARPLEY
H		11/4/71	R. Brennan

PRINTED CIRCUIT BOARD REVISION: E
CIRCUIT SCH REVISION: F

EQUIPMENT CORPORATION

TITLE: SENSE INHIBIT

SIZE: E | CODE: G104-0-1 | REV: H



QTY	DESCRIPTION	PART NO	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
FRACTIONS ± 1/64
DECIMALS .XX ± .02
.XXX ± .010
ANGLES ± 0°30'
FINISH, SURFACE QUALITY, ADHESIVE BASES AND EDGES, RADIUS DIMENSIONS

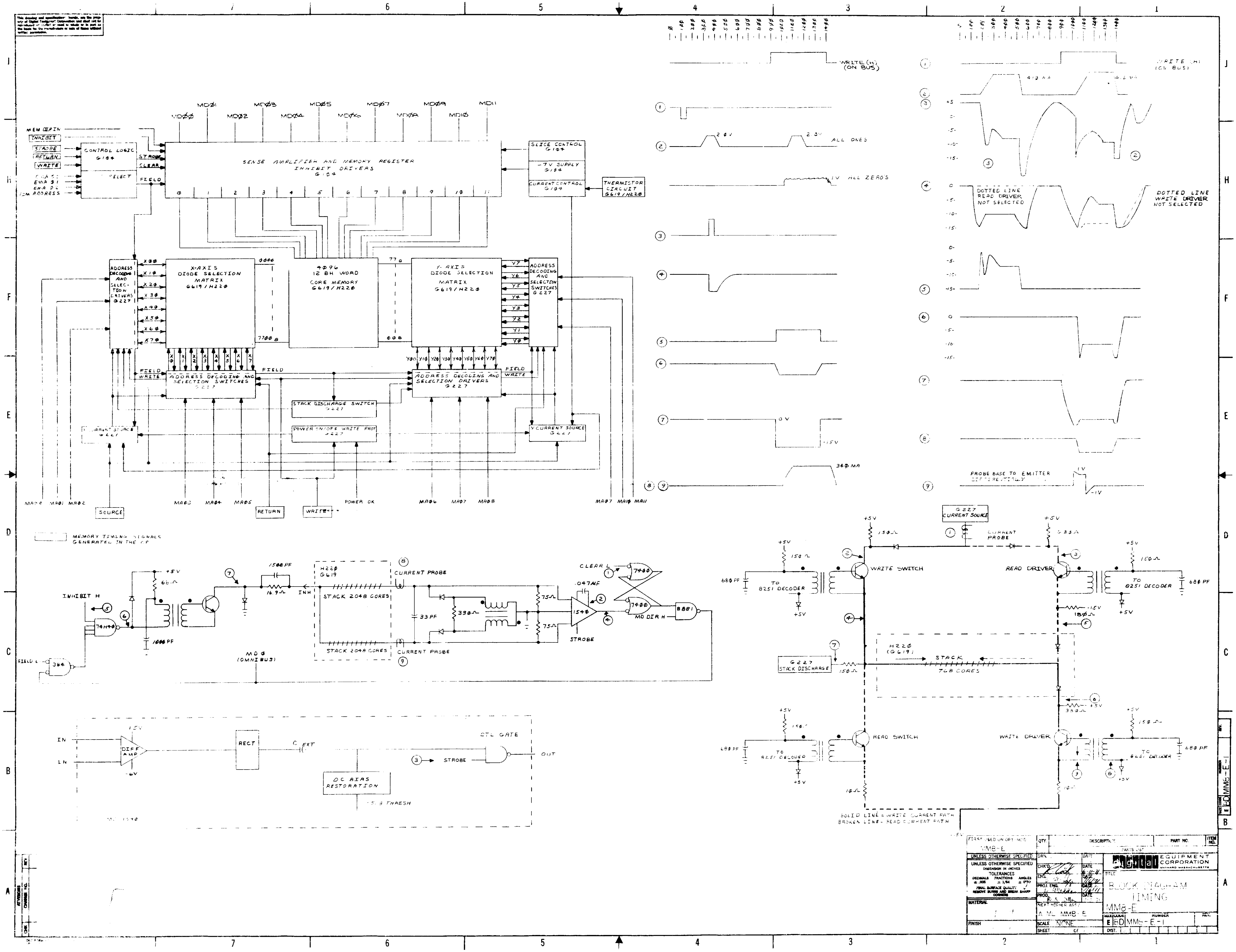
DRN. Mary Moser DATE 7/29/70
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
MATERIAL
FINISH
SCALE

[redacted] EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
SENSE INHIBIT

SIZE B | CODE IDENT NO. 24355 | DRAWING NUMBER G104-0-1 | REV. H
SHEET 1 OF 2

REVISIONS: REV. | DESCRIPTION | DATE


SENSE AMPLIFIER AND MEMORY REGISTER
INHIBIT DRIVERS
G104
CONTROL LOGIC
G104
STROBE
RETURN
WRITE
INHIBIT
CLEAR
FIELD
SLICE CONTROL
G104
-7V SUPPLY
G104
CURRENT CONTROL
G104
THERMISTOR
CIRCUIT
G619/H220
X-AXIS
DIODE SELECTION
MATRIX
G619/H220
4096
12 BIT WORD
CORE MEMORY
G619/H220
Y-AXIS
DIODE SELECTION
MATRIX
G619/H220
ADDRESS
DECODING
AND
SELECTION
SWITCHES
G227
ADDRESS DECODING AND
SELECTION SWITCHES
G227
ADDRESS DECODING AND
SELECTION DRIVERS
G227
STACK DISCHARGE SWITCH
G227
POWER ON/OFF WRITE PROT
G227
Y CURRENT SOURCE
G227
SOURCE
RETURN
POWER OK
MEMORY TIMING SIGNALS
GENERATED IN THE CP
WRITE (H)
(ON BUS)
ALL ONES
ALL ZEROS
340 MA
INHIBIT H
M D 0
(OMNIBUS)
CURRENT PROBE
STACK 2048 CORES
MD DIR H
STROBE
CLEAR L
DIFF
AMP
RECT
DC BIAS
RESTORATION
DTL GATE
OUT
DOTTED LINE
READ DRIVER
NOT SELECTED
DOTTED LINE
WRITE DRIVER
NOT SELECTED
PROBE BASE TO EMITTER
G227
CURRENT SOURCE
CURRENT
PROBE
WRITE SWITCH
READ DRIVER
TO
8251 DECODER
H220
(G619)
STACK
768 CORES
G227
STACK DISCHARGE
READ SWITCH
WRITE DRIVER
SOLID LINE = WRITE CURRENT PATH
BROKEN LINE = READ CURRENT PATH
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
MATERIAL
FINISH
digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
TITLE
BLOCK DIAGRAM
TIMING
MM8-E
SCALE NONE
D MM8-E-1

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Paul Gardner	CHECKED	SECTION
DATE 12/7/71	DATE 1-7-72	
ENG	PROD	ISSUED SECT.
DATE 1-7-72	DATE	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP3-MA
1	M8300	Major Registers Module	1
2	M8310	Registers Control Module	1
3	M8330	Timing Module	1
4	G104	Sense/Inhibit Module	1
5	G227	X/Y Drive Module	1
6	1110625	Light Emmitting Diode	2
7	1210626	Slide Switch	2
8	1205375	Slide Switch, Momentary	2
9	1205849-06	Handle, Russett Orange	2
10	1205849-13	Handle, Terracotta	2
11	5409728	Regulator Board ASSEMBLY	1

TITLE PDP 8 M Recommended 1st Level Spares	ASSY NO.	SIZE A	CODE PL	NUMBER SP-[illegible]-MA	REV A
	SHEET 1 OF 1	DIST			

DEC FORM DEC 16 (325) 0[illegible] N870
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Paul Gardner | CHECKED | SECTION
DATE 12/7/71 | DATE 1-7-72 |
ENG | PROD | ISSUED SECT.
DATE 1-7-72 | DATE 1-7-72 |

ITEM NO	DWG NO / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP8-MB
1	1000004	Capacitor .02 MFD	2
2	1000016	Capacitor .100 MFD	2
3	1003053	Capacitor .47 MFD	2
4	1005306	Capacitor 6.8 MFD	2
5	1009678	Capacitor .47 MFD	2
6	1110324	Solid State Lamp	1
7	1110714	12A Diode BridgeNSS3514	1
8	1209355	Switch, Micro	1
9	1205033	Fan, ~~Super~~ Boxer	1
10	1210043	Switch, Miniature Rotary	1
11	1210073	Connector, 40 Terminal	2
12	1210627	Rotary Switch	1
13	1210790	Switch, DPST N.O.	1
14	1210824	Thermostat	1
15	1210830-5	Circuit Breaker, 5 Amp	1
16	1210830-7	Circuit Breaker, 7 AMP	1
17	1300229	Resistor 100 Ω, 1/4 W	2
18	1300317	Resistor 470 Ω, 1/4W	2
19	1300439	Resistor 3.3K Ω, 1/4W	2
20	1301420	Resistor 27 Ω, 1/4W	2
21	1302871	Resistor 1.21K, 1/8W	2
22	1302941	Resistor 14.7K, 1/8W	2

TITLE: PDP 8 M Recommended 2nd Level Spares | ASSY NO. | SIZE A | CODE PL | NUMBER SP8-MB-Ø | REV. A | ECO NO PDP8M-00008
SHEET 1 OF 4 | DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Paul Gardner | CHECKED | SECTION
DATE 12/7/71 | DATE 1-7-72 |
ENG | PROD | ISSUED SECT.
DATE 1-7-72 | DATE 1-7-72 |

ITEM NO	DWG NO / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP8-MB
23	1302955	Resistor 750 Ω 1/8 W	2
24	1302956	Resistor 196 Ω, 1/8 W	2
25	1303156	Resistor 34.8K, 1/8W	2
26	1304833	Resistor 1.96K, 1/8W	2
27	1304855	Resistor 9.09K, 1/8W	2
28	1304868	Resistor 2.74K, 1/8W	2
29	1305128	Resistor 5.62K, 1/8W	2
30	1305252	Resistor 68.1K, 1/8W	2
31	1305872	Resistor .1 Ω, 5W, 5%	2
32	1310032	Resistor 16.9 Ω, 6W	2
33	1310071	Resistor 1K, 1%, Thermister	2
34	1310709	Resistor .03 Ω, 7W, 3%	2
35	1503409-01	MPS6534B or 2n3133	2
36	1505321	2N4258	3
37	1509338	MPS6531 or 2N1613	1
38	1509632	DEC 2007	4
39	1509649	2N3762	3
40	1909594	DEC 6251	2
41	1510015	DEC 4008	4
42	1510151	RCA 40372	2
43	1510196	2N5302	2
44	1510706	GPS-A55 or MPS-A55	2

TITLE: PDP 8 M Recommended 2nd Level Spares | ASSY NO. | SIZE A | CODE PL | NUMBER SP8-MB-Ø | REV. A | ECO NO.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Paul Gardner	CHECKED	SECTION
DATE 12/7/71	DATE 1-7-72	
ENG	PROD	ISSUED SECT.
DATE 1-7-72	DATE 1-7-72	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP8-MB
45	1510765	Triac Mac 11-3	2
46	1609478	Transformer 17Z5	2
47	1609651	Transformer 8010	2
48	1609996	Transformer 6501	1
49	1809880	Crystal 20 MHz	1
50	1809880-01	Crystal 14.418 MHZ	1
51	1905521	Dec 1540	2
52	1905547	DEC 7474	3
53	1905586	DEC 74H40	2
54	1909004	Dec 7402	2
55	1909055	DEC 7495	2
56	1909056	DEC 74H00	1
57	1909057	DEC 74H10	1
58	1909267	DEC 74H11	1
59	1909373	DEC ML-9601	1
60	1909594	DEC 82513-930	2
61	1909667	DEC 74H74	1
62	1909686	DEC 7404	2
63	1909705	DEC 8881	1
64	1909867	DEC 4007	1
65	1909927	DEC 74H87	1
66	1909928	DEC 7416	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP 8 M Recommended End Level Spares	SHEET 3 OF 4	A	PL	SP8-MB-Ø	A	
		DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Paul Gardner	CHECKED	SECTION
DATE 12/7/71	DATE 1-7-72	
ENG	PROD	ISSUED SECT.
DATE 1-7-72	DATE 1-7-72	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP8-MB
67	1909929	DEC 7417	1
68	1909930	DEC 7405	1
69	1909931	DEC 74H04	1
70	1909932	DEC 7483	1
71	1909934	DEC 8266	2
72	1909935	DEC 8235	1
73	1909936	DEC 74151	2
74	1909937	DEC 74153	1
75	1909955	DEC 7412	1
76	1909971	DEC 6380A	3
77	1909972	DEC 6314A	1
78	1909973	DEC 97401	5
79	1910010	DEC FSA2501	4
80	1910011	DEC 7486	1
81	9007221	FUSE 5A	5
82	9007226	FUSE 15A	5
~~83~~	~~9008349~~	~~Socket~~	~~40~~
~~84~~	~~9008350-0~~	~~Housing~~	~~2~~
85	9008389	FUSE 125A 250V AGC 1/8	5

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP 8 M Recommended 2nd Level Spares	SHEET 4 OF 4	A	PL	SP8-MB-Ø	A	
		DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY J. CUDMORE	CHECKED PFYFFER	SECTION
DATE 7/21/69	DATE 7/25/69	1
ENG [signature]	PROD [signature]	ISSUED SECT.
DATE 7/28/69	DATE 7/21/69	1

LEGEND

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

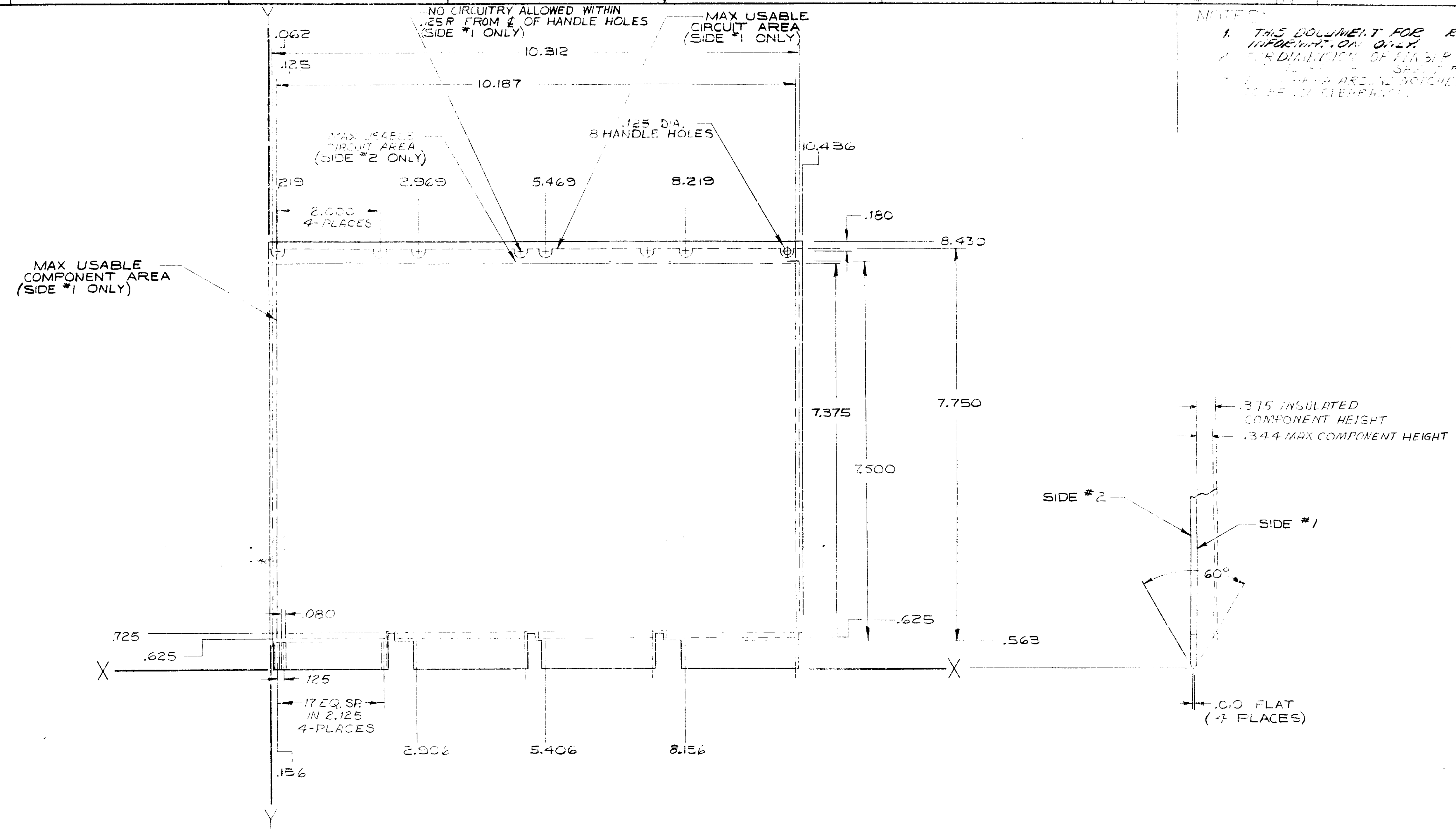
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY/VARIATION: LT33-B, -D, -E, -F, -H, TYPES			LT33-AA, -AB, -CA, -CB, -CC, -CD, -CE				KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
1	36-5360	ROLLS, ROLLED OILED PAPER TAPE	3			-					
2	36-5365	ROLL, TWX PAPER	1			1					
3	BULLETIN 273B	TTY MANUAL VOL #1 (VENDOR)	1			1					
4	BULLETIN 310B	TTY MANUAL VOL #2 (VENDOR)	1			1					
5	BULLETIN 1184B	TTY MANUAL PARTS (VENDOR)	1			1					
6	18-9137	ROLL TTY RIBBON	1			1					

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
TELETYPE WRITERS LT33 SERIES	SHEET 1 OF 1	A	AL	[illegible]	B	[illegible]
		DIST				

DEC FORM NO.
DRA 121

NOTES:

1. THIS DOCUMENT FOR REF INFORMATION ONLY.
2. FOR DIMENSION OF FINGER ... SHEET #2.
3. ... AREA AROUND NOTCHES TO BE ... CLEARANCE.



TOLERANCE
DECIMALS
.XXX = ±.005
.XX = ±.02
.X = ±.1

FIRST USED ON	QTY	DESCRIPTION	PART NO	ITEM NO.
		PARTS LIST		

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

MATERIAL

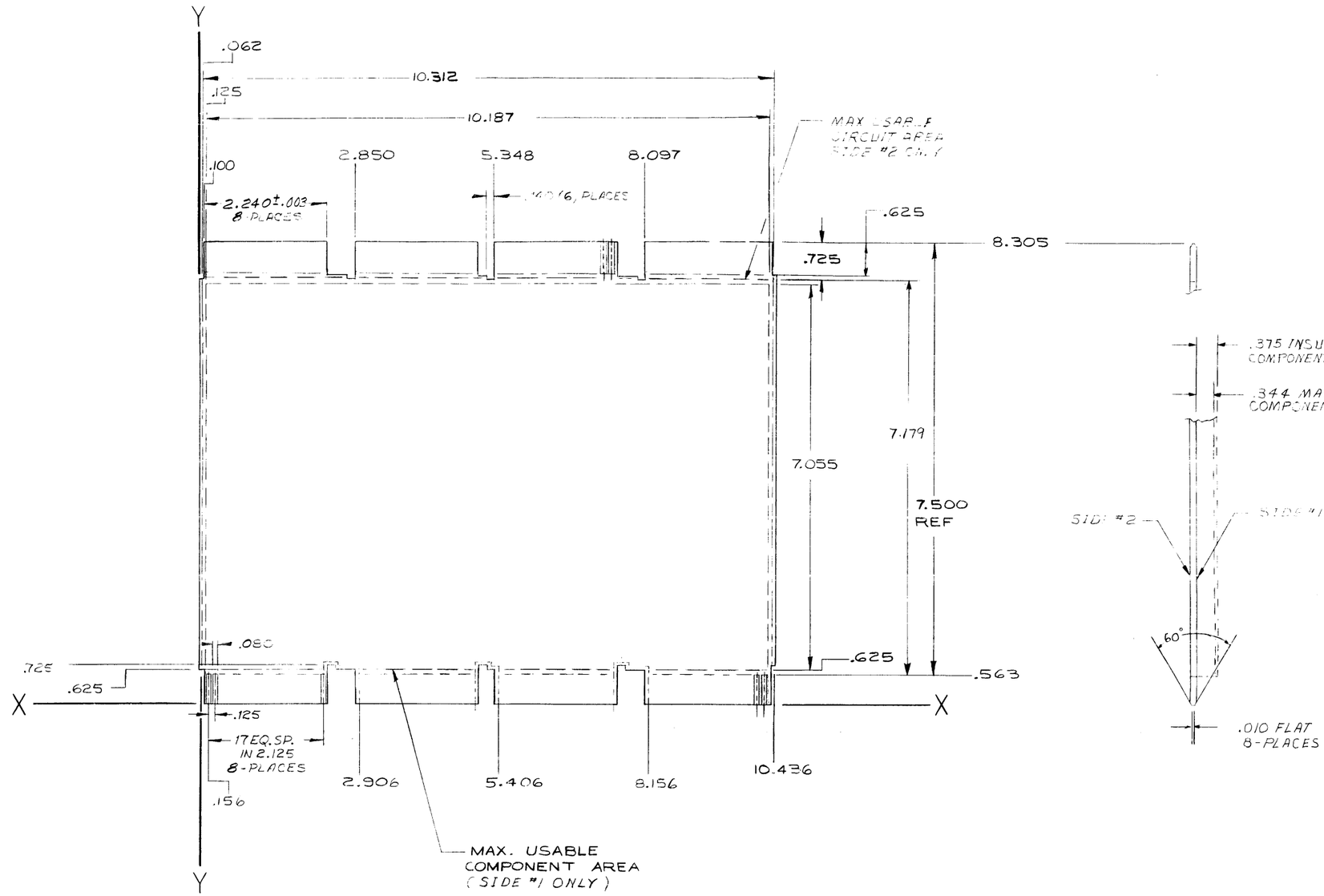
DRN	[illegible]	DATE	4-13-71
CHK'D	[illegible]	DATE	5-5-71
ENG		DATE	
PROJ ENG.		DATE	
PROD		DATE	

digital EQUIPMENT CORPORATION

TITLE

REVISIONS | CHANGE NO | SHERTKOW

D MD 7605994-0-0 A



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL

DO NOT SCALE DRAWING

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

MATERIAL

FINISH

DRN.		DATE 4-13-71
CHK'D.		DATE 5-5-71
ENG.		DATE
PROJ. ENG.		DATE
PROD.		DATE

NEXT HIGHER ASSY

SCALE 1/1

SHEET 2 OF

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
PANEL DATA
CUSTOMER (REF)

SIZE D | CODE MD | NUMBER 7605994-0-0 | REV. A

DIST.

REVISIONS			
REV.	CHANGE NO	CHK	

DEC FORM NO

SIZE	CODE	NUMBER	REV
D	MD	7605994-0-0	A