digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET [X]

SEQUENCE		
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THERMOSTAT ASSY	C-IA-7009452-0-0	
KEYBOARD ASSY	D-AD-7009477-0-0	
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POWER CONTROL BOARD (230V)	C-IA-5410372-0-0	
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DISPLAY VT14 VIDEO	D-CS-M7443-Ø-1	
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ASYNCHRONOUS DATA CONTROL	D-CS-M865Ø-Ø-1	
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SEQUENCE	
MR8-F REPROGRAMMABLE MEMORY	B-DD-MR8-F
CABLE ASSY(KL8-E)	D-IA-7008360-0-0
CABLE KEYBOARD	C-IA-7006812-0-0
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UNIT VARIATIONS

VAR	TITLE	PRINT SET
VT14-AA	PROGRAMMING PANEL 115V 6Ø HZ	X
VT14-AB	PROGRAMMING PANEL 230V 5Ø HZ	X
VT14-AC	PROGRAMMING PANEL 230V 6Ø HZ	X
VT14-AD	PROGRAMMING PANEL 115V 5Ø HZ	X

REVISIONS

REV	CHG. NO.	DATE
A	VT14-4	3-74
B	VT14-6	5-74
C	VT14-7	7-74
D	VT14-8	7-74
E	VT14-9	3-75

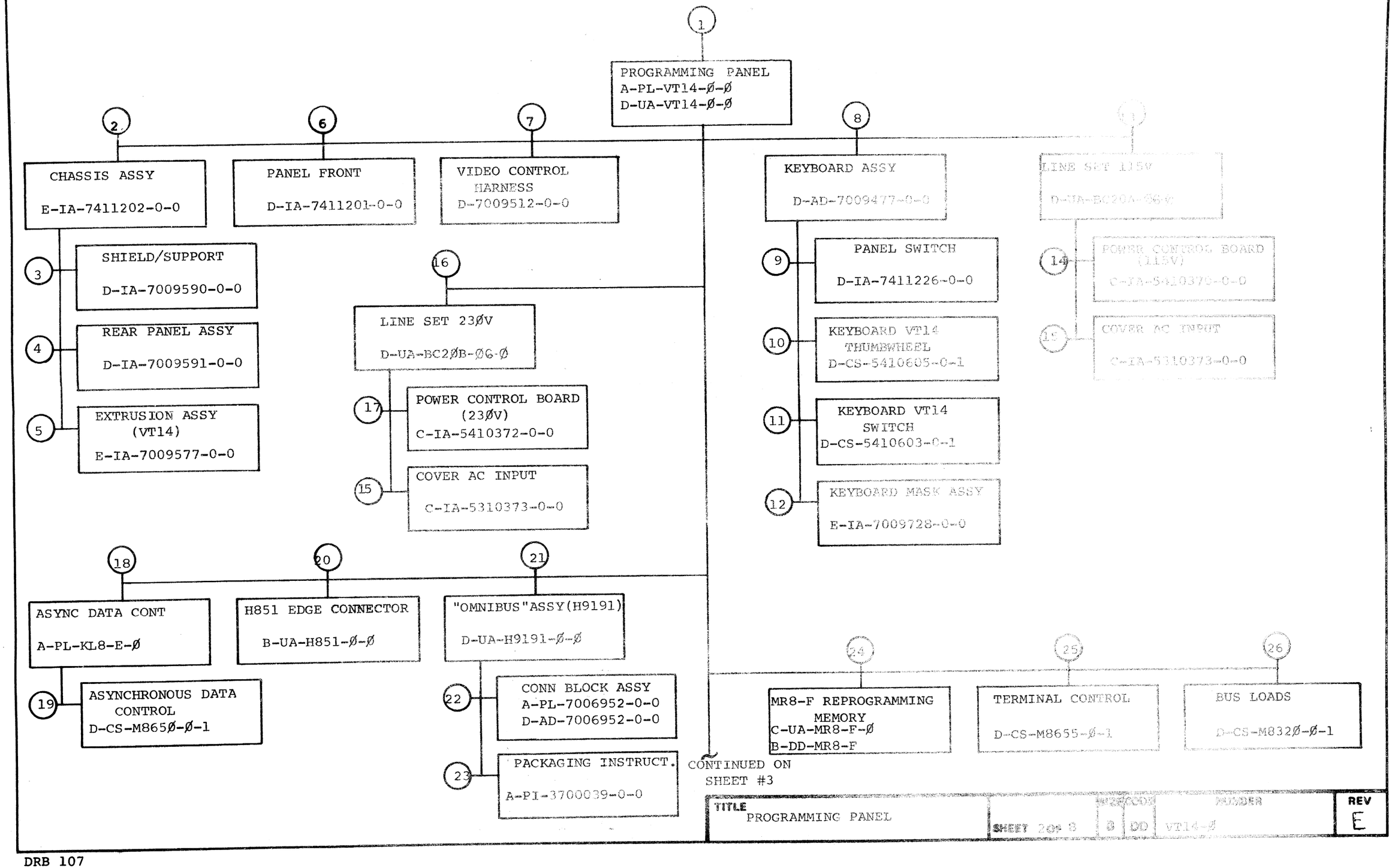
USED ON OPTION/MODEL

SHEET 1 OF 8

DRN. S.ROBERTS	DATE 1/3/74	TITLE: PROGRAMMING PANEL
CHK'D.	DATE 3/22/74	
PROJ ENG.	DATE	
PROD.	DATE	SIZE B / CODE DD / NUMBER VT14-Ø / REV E
FIELD SERV.	DATE	DIST

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

DRB 106



DRB 107
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CONTINUED FROM SHEET #2

27 — MAJOR REG CONT (M831Ø)
D-CS-M831Ø-Ø-1

28 — DISPLAY VT14 VIDEO
D-CS-M7443-Ø-1

29 — CONTROL KEYBOARD
D-CS-M7441-Ø-1

30 — MAJOR REGISTERS (KK8-E)
D-CS-M83ØØ-Ø-1

35 — REWORKED MONITOR VTØ5
D-IA-7411528-0-0

36 — PACKAGING INSTRUCTIONS
A-PI-3700099-0-0

37 — REGULATOR BD ASSY
D-AD-7009796-0-0

38 — TRANSFORMER ASSY
D-AD-7009797-0-0

33 — REGULATOR BOARD
E-IA-5409728-0-0

34 — PACKAGING INSTRUCT.
A-PI-3700065-0-0

39 — BRKT, TRANSFORMER
D-IA-7009798-0-0

TITLE		SIZE	CODE	NUMBER	REV
PROGRAMMING PANEL	SHEET 3 OF 8	B	DD	VT14-Ø	E

ELECTRICAL

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	D-UA-VT14-Ø-Ø	C	3	PROGRAMMING PANEL	
X			D-BD-VT14-Ø-1	*	1	BLOCK DIAGRAM (M7411)	
	X		A-SP-VT14-Ø-2	*	14	VT14 ENGINERRING SPECIFICATION	
	X		A-SP-VT14-Ø-3	*	8	VT14 PROGRAMMING PANEL PRODCUT SPECIFICATION	
	X		A-SP-VT14-Ø-4	A	12	VT14 PRODUCTION CHECKOUT PROCEDURE	
X			D-BD-VT14-Ø-6	*	1	BLOCK DIAGRAM(M7433)	
X			D-FD-VT14-Ø-7	*	1	VIDEO TIMING FLOW	
X			D-TD-VT14-Ø-8	*	2	POINTER REGISTER TIMING	
X			D-TD-VT14-Ø-9	*	1	CONTROL ROM #1 & #2	
X			D-TD-VT14-Ø-1Ø	*	1	VIDEO GENERATION TIMING	
X			D-TD-VT14-Ø-11	*	1	AUTO-RESTART TIMING	
X			D-TD-VT14-Ø-12	*	1	EXTENDED IOT TIMING	
X			D-TD-VT14-Ø-13	*	1	PRIMARY VIDEO TIMING	
X			A-SP-VT14-Ø-14	*	5	SERIAL LINE INTERFACE CALIBRATION	
X			A-AL-VT14-Ø-15	*	1	VT14 ACCESSORY LIST	
X			D-TD-PDP8/E-Ø-Ø5	#	2	TIMING(PDP8/E)	
X			E-FD-PDP8/E-Ø-Ø6	#	1	PROCESSOR FLOW CHART	
X			D-CS-3010326-0-3	#	2	VTØ5 RASTER DISPLAY	
X			A-PL-VT14-0-2	*	1	SOFTWARE LIST	
X		8	D-AD-7009477-0-0	#	2	KEYBOARD ASSY	
X		10	D-CS-5410605-0-1	#	2	KEYBOARD VT14 THUMBWHEEL	
			K-CO-5410605-0-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-5410605-0-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-5410605-0-6		1	MODULE ECO HISTORY	
X		11	D-CS-5410603-0-1	#	2	KEYBOARD VT14 SWITCH	
			K-CO-5410603-0-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-5410603-0-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-5410603-0-6		1	MODULE ECO HISTORY	

ELECTRICAL

CUSTOMER PRINT SET	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		13	D-UA-BC2ØA-Ø6-Ø	#	1	LINE SET 115V	
X		14	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	
X		16	D-UA-BC2ØB-Ø6-Ø	#	1	LINE SET 23ØV	
X		17	C-IA-5410372-0-0	#	1	POWER CONTROL BOARD (23ØV)	
			K-CO-5410372-0-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-5410372-0-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-5410372-0-6		1	MODULE ECO HISTORY	
X		19	D-CS-M865Ø-Ø-1	#	2	ASYNCHRONOUS DATA CONTROL	
			K-CO-M865Ø-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M865Ø-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M865Ø-Ø-6		1	MODULE ECO HISTORY	
		20	B-UA-H851-Ø-Ø		1	H851 EDGE CONNECTOR	
			B-CS-H851-Ø-1		1	CIRCUIT SCHEMATIC	
			C-AH-H851-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-H851-Ø-6		1	MODULE ECO HISTORY	

CUSTOMER PRINT SET CODES

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

TITLE: PROGRAMMING PANEL

SHEET 4 OF 8 | SIZE: B | CODE: 00 | NUMBER: VT14-Ø | REV: E

DRB 108

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

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			ELECTRICAL				
		21	D-UA-H9191-Ø-Ø		1	"OMNIBUS" ASSY(H9191)	
			D-CS-H9191-Ø-1		1	CIRCUIT SCHEMATIC	
			K-CO-5009894-0-4		1	X-Y COORDINATE HOLE LOCATION	
			B-MH-5009894-0-6		1	MODULE ECO HISTORY	
C		24	B-DD-MR8-F	#	2	MR8-F REPROGRAMMABLE MEMORY	
X		25	D-CS-M8655-Ø-1	#	4	TERMINAL CONTROL	
			K-CO-M8655-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M8655-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M8655-Ø-6		1	MODULE ECO HISTORY	
X		26	E-CS-M832Ø-Ø-1	#	2	BUS LOADS	
			K-CO-M832Ø-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M832Ø-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M832Ø-Ø-6		1	MODULE ECO HISTORY	
X		27	D-CS-M831Ø-Ø-1	#	4	MAJOR REG. CONT. (M831Ø)	
			K-CO-M832Ø-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M832Ø-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M832Ø-Ø-6		1	MODULE ECO HISTORY	
X		28	D-CS-M7443-Ø-1	#	4	DISPLAY VT14 VIDEO	
			K-CO-M7443-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M7443-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M7443-Ø-6		1	MODULE ECO HISTORY	

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			ELECTRICAL				
X		29	D-CS-M7441-Ø-1	#	4	CONTROL KEYBOARD	
			K-CO-M7441-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M7441-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M7441-Ø-6		1	MODULE ECO HISTORY	
X		30	D-CS-M83ØØ-Ø-1	#	5	MAJOR REGISTERS (KK8/E)	
			K-CO-M83ØØ-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
			D-AH-M83ØØ-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
			B-MH-M83ØØ-Ø-6		1	MODULE ECO HISTORY	
X		33	E-IA-5409728-0-0		1	REGULATOR BOARD	
			D-CS-5409728-0-1	#	1	REGULATOR BOARD FOR H74Ø	
			K-CO-5409728-0-4		1	X-Y COORDINATE HOLE LOCATION	
			B-MH-5409728-0-6		1	MODULE ECO HISTORY	

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TITLE	SHEET	SIZE	CODE	NUMBER	REV
PROGRAMMING PANEL	5 OF 8	B	DD	VT14-Ø	E

MECHANICAL

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		1	D-UA-VT14-Ø-Ø	C	3	PROGRAMMING PANEL	
X			A-PL-VT14-Ø-Ø	C	4	PROGRAMMING PANEL (PL)	
			D-IA-7411259-0-0		1	SHIELD PWR SUP	
X			C-UA-BCØ8R-Ø-Ø	#	1	I/O CABLE	
X			D-IA-7009511-0-0	#	1	VIDEO HARNESS	
			D-IA-7410924-0-0		1	BRKT FAN	
			D-SC-1210479-0-0			VTØ5 SCOPE MASK	
			C-IA-7411225-0-0		1	RELIEF STRAIN	
			A-DC-7411274-0-0		1	DECALS (VT14)	
			C-MD-7404881-0-0		1	FAN SCREEN	
			D-IA-7409424-0-0		1	FILTER SIDE	
			D-MD-7411254-0-0		1	TABLE CRT	
X			E-IA-7009478-0-0	#	1	INTERNAL INTERFACE HARNESS (115V)	
X			E-IA-7009479-0-C	#	1	HARNESS POWER SUPPLY	
			B-MD-7411469-0-0		1	SHIELD SWITCH	
			D-IA-7606767-0-0		1	SHIPPING SKID	
			E-IA-7411200-0-0		2	COVER	
X			D-UA-BC14J-25-Ø	#	1	CABLE INTERFACE	
X			E-IA-7009721-0-0	#	1	INTERNAL INTERFACE HARNESS (23ØV)	
X			C-IA-7009452-0-0	#	1	THERMOSTAT ASSEMBLY	
			A-DC-5309413-0-0		1	DECAL, NFPA	
			A-DC-5309414-0-0		1	DECAL, U L. INSIGNIA	
			B-MD-7412140-0-0		1	SPACER	
		2	E-IA-7411202-0-0		2	CHASSIS ASSY	
			B-MD-7411342-0-0		1	STRUT	
			B-MD-7411346-0-0		1	PAN BOTTOM	
			B-MD-7411347-0-0		1	FRONT BRACE	
		3	D-IA-7009590-0-0		1	SHIELD/SUPPORT ASSY	
			D-MD-7411343-0-0		1	SHIELD POWER SUPPLY	
			B-MD-7411344-0-0		1	SUPPORT CRT	
		4	D-IA-7009591-0-0		1	REAR PANEL ASSY	
			D-MD-7411345-0-0		1	PANEL REAR	
			B-MD-7411340-0-0		1	CORD TAKEUP	

MECHANICAL

CUSTOMER PRINT SET	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
		5	E-IA-7009577-0-0		1	EXTRUSION ASSY (VT14)	
			C-MD-7411348-0-0		1	OUTER EXTRUSION REWORKED	
			C-MD-7411349-0-0		1	INNER EXTRUSION REWORKED	
		6	D-IA-7411201-0-0		1	PANEL FRONT	
			C-SS-7411201-0-1		1	SILK SCREEN (WHT)	
			C-SS-7411201-0-2		1	SILK SCREEN (BLK)	
X		7	D-IA-7009512-0-0	#	1	VIDEO CONTROL HARNESS	
			B-MD-7411236-0-0		1	BRKT CONTROL	
X		8	D-AD-7009477-0-0	#	2	KEYBOARD ASSY	
			D-PS-1211652-0-0		1	MASK KEYBOARD	
			C-IA-7006812-0-0	#	1	CABLE KEYBOARD	
		9	D-IA-7411226-0-0		1	PANEL SWITCH	
			C-SS-7411226-0-1		1	SILK SCREEN [illegible]	
		12	E-IA-7009728-0-0		1	KEYBOARD MASK	
			B-MD-7411619-0-0		1	BRACKET SUPT	
			C-MD-7411620-0-0		1	BRACKET [illegible]	
			D-MD-7411621-0-0		1	MASK INNER [illegible] BOARD	
			D-MD-7411622-0-0		1	MASK OUTER [illegible]	
		13	D-UA-BC2ØA-Ø6-Ø	#	1	LINE SET 115V	
			A-DC-5310438-0-0		1	PWR CONTROL DECAL (20A 115V)	
			D-IA-5309845-0-0		1	BOX AC INPUT	

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TITLE	SHEET	SIZE	CODE	NUMBER	REV
PROGRAMMING PANEL	6 OF 8	B	DD	VT14-Ø	E

DRB 108

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

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			MECHANICAL				
		15	C-IA-5310373-0-0		1	COVER AC INPUT	
			A-SS-5310373-0-1		1	SILK SCREEN	
		16	D-UA-BC2ØB-ØG-Ø	#	1	LINE SET(23ØV)	
			A-DC-5310439-0-0		1	PWR CONTROL DECAL(BC2ØB 23ØV)	
			D-IA-5309845-0-0		1	BOX AC INPUT	
		18	A-PL-KL8-E-Ø		1	ASYNC DATA CONT	
X			D-IA-7008360-0-0	#	1	CABLE ASSY	
		22	D-AD-7006952-0-0		1	CONN BLOCK ASSY	
			A-PL-7006952-0-0		1	CONN BLOCK ASSY (PL)	
			C-MD-7408242-0-0		1	MTG BAR CONNECTOR BLOCK	
	X	23	A-PI-3700039-0-0	#	2	PACKAGING INSTRUCTIONS	
			A-PS-9905016-3-0		5	COMPRESS-Ø-CARTON	
		24	B-DD-MR8-F	#	2	MR8-F REPROGRAMMING MEMORY	
			C-UA-MR8-F-0		1	MR8-F REPROGRAMMING MEMORY	

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
			MECHANICAL				
X		35	D-IA-7411528-0-0	#	1	REWORKED MONITOR VTØ5	
X			D-IA-7009677-0-0	#	1	MONITOR HARNESS	
	X	36	A-PI-3700099-0-0	#	2	PACKAGING INSTRUCTIONS	
			A-PS-9905355-0-0		2	OUTER CARTON	
			A-PS-9905356-0-0		2	INNER CARTON	
			A-PS-9905357-0-0		2	INNER SLEEVE	
			A-PS-9905129-7-0		3	POLY BAG(20x13x1½ MIL)	
X		37	D-AD-7009796-0-0	#	1	REGULATOR BD ASSY	
			E-IA-7411748-0-0		1	CHASSIS, REGULATOR BD	
			D-IA-7411749-0-0		1	COVER, REGULATOR BD	
			D-IA-7009794-0-0		1	REGULATOR CABLE	
			D-IA-7009795-0-0		1	TERMOSTAT CABLE	

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TITLE		SIZE	CODE	NUMBER	REV
PROGRAMMING PANEL	SHEET 7 OF 8	B	DD	VT14-Ø	E

MECHANICAL

CUSTOMER PRINT SET	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		38	C-AD-7009797-0-0	#	1	TRANSFORMER ASSY	
X			E-IA-7009279-1 -0	#	1	TRANSFORMER ASSY	
		39	D-IA-7009798-0-0		1	BRKT, TRANSFORMER	
			D-IA-7411750-0-0		1	BRKT, FAN	
			C-MD-7411751-0-0		1	PLATE, TRANSFORMER	

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

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TITLE	SHEET	SIZE	CODE	NUMBER	REV
PROGRAMMING PANEL	9 OF 8	B	DD	VT14-Ø	E

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY S. ROBERTS DATE 12/20/73	CHECKED S Roberts DATE 1-23-74	SECTION
ENG B. Moss DATE 1/23/74	PROD R.K. Allen DATE 1-23-74	ISSUED SECT.

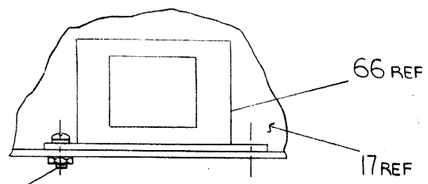
LEGEND

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

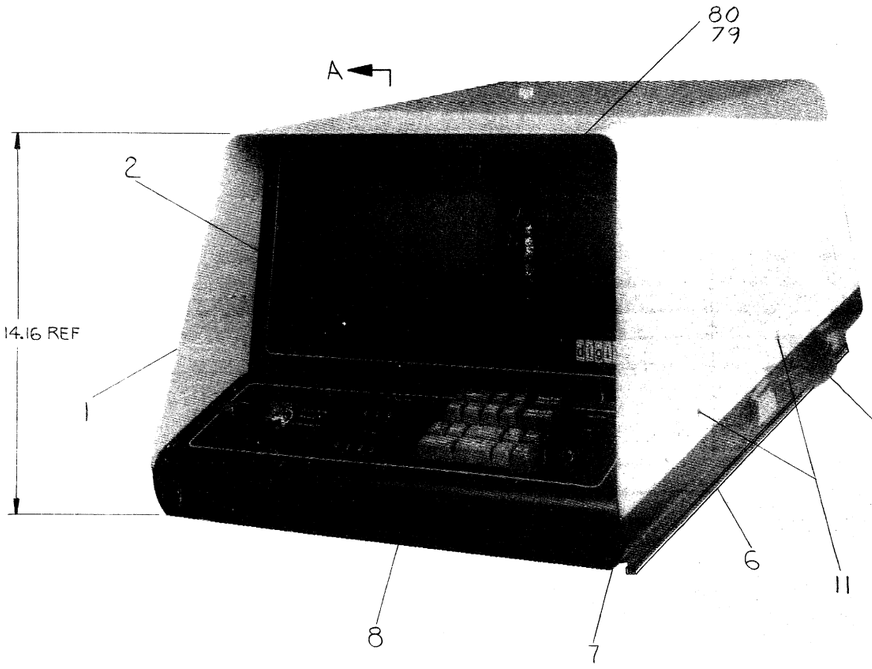
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION							KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
			VT14-AA	VT14-AB	VT14-AC	VT14-AD					
1	B-DD-VT14-Ø	PROGRAMMING PANEL (CUSTOMER PRINT SET)	1	-	-	-					
2	DEC-14-GVTMA-A-D	VT14 USERS MANUAL	1	-	-	-					
3		CUSTOMER ENVELOPE	1	-	-	-					
4	A-PL-VT14-Ø-2	VT14 SOFTWARE LIST	-	-	-	-					

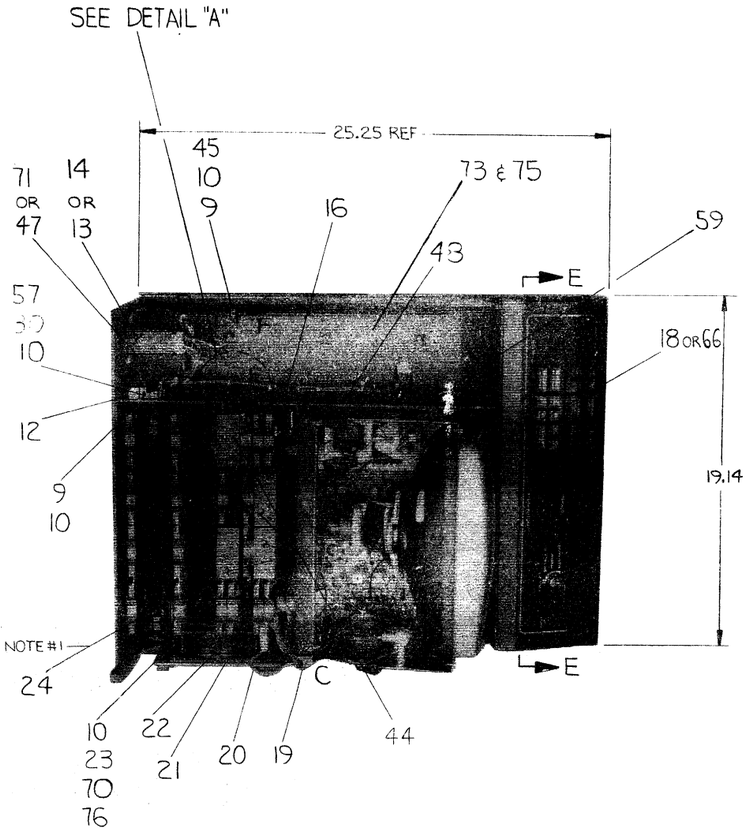
TITLE VT14 ACCESSORY LIST	ASSY. NO. B-DD-VT14-Ø	SIZE A	CODE AL	NUMBER VT14-Ø-15	REV. A	ECO NO VT14-00009
	SHEET 1 OF 1	DIST.				

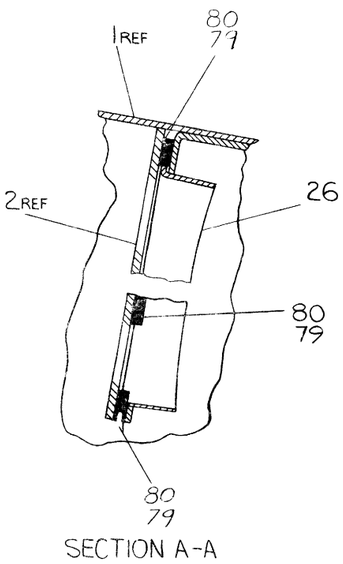
DEC 16-(325)-1075-N172 DRA 121



DETAIL "A"
(50 HZ ONLY)
SEE NOTE #4







SECTION A-A

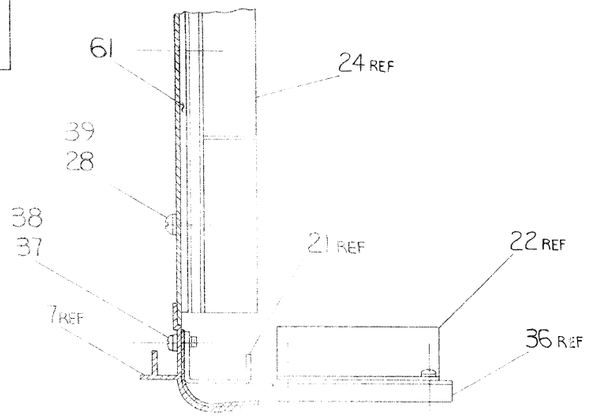
NOTES:
1. REMOVE HARNESS FROM ITEM #24 (OMNIBUS ASSY) BEFORE ASSEMBLING TO ITEM #7 (CHASSIS ASSY)
2. ~~REMOVE ITEM #4 OF D-UA-70 09282-0-0, INSTALL ITEM #48 (HARNESS POWER SUPPLY) FOR VT14~~
3. ~~REMOVE ITEM #48 (HARNESS POWER SUPPLY) PRIOR TO RETURN OF ITEM #17 (PWR SUP) FOR SERVICE~~
4. TRANSFORMER TO BE REMOVED FROM ITEM #18 (MONITOR VTØ5) AND MOUNTED TO ITEM #7 (CHASSIS ASSY) AS SHOWN IN DETAIL "A" AND ITEM #66 (REWORKED MONITOR VTØ5). "FOR 50 HZ ONLY"
5. FOR CONFIGURATION DRAWING SEE D-AR-14/30-0-1

ITEM NO.	PART NO.	DESCRIPTION	QTY.	FIRST USED ON OPTION/MODEL
		PARTS LIST		VT14

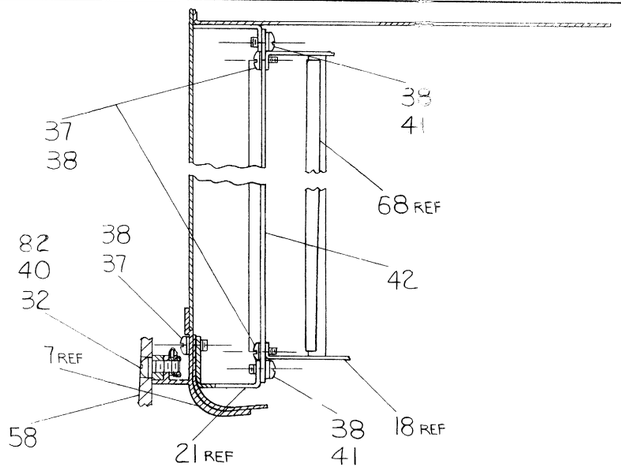
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES	DRN. S Roberts	DATE 5/12/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
TOLERANCES	CHK D. [illegible]	DATE 10/17/73	
DECIMALS: xxx ±.005, xx ±.02, x ±.1 — ANGLES: ±0° 30'	ENG. [illegible]	DATE 12/7/73	TITLE: PROGRAMMING PANEL
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ▽	PROJ ENG. S Mar	DATE 2/21/74	
	PROD. [illegible]	DATE 3-22-74	
MATERIAL: SEE PARTS LIST	NEXT HIGHER ASSY.: B-DD-VT14-Ø		SIZE D · CODE UA · NUMBER VT14-Ø-Ø · REV. D
FINISH: —	SCALE NONE		DIST
	SHEET 1 OF -		

SYM.		
RR	VT14-00004	A
	S.MOHO	
	VT14-00007	B
	GAGNON	
	VT14-00008	C
	G. GAGNON	
	VT14-00009	D
	G. GAGNON	

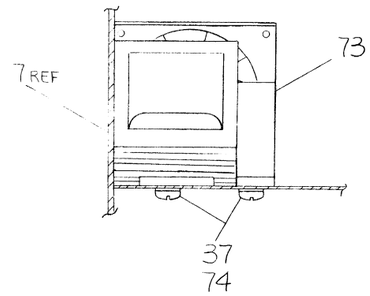
DEC FORM 1-73
0282 10/72



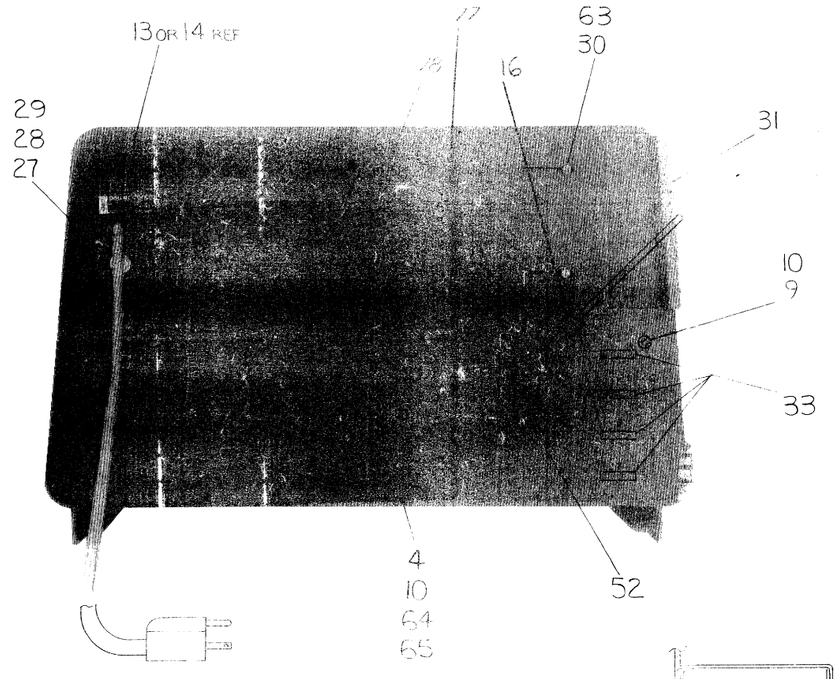
SECTION B-B

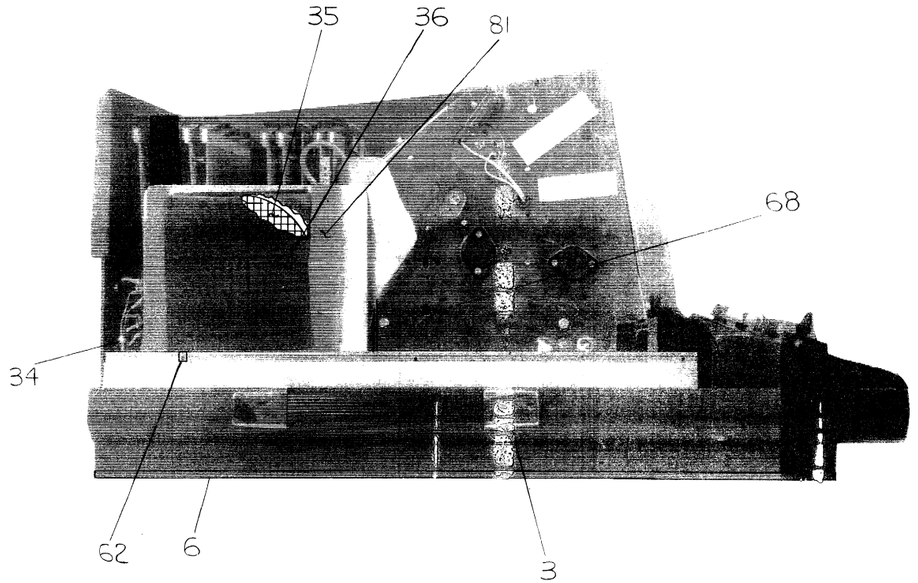


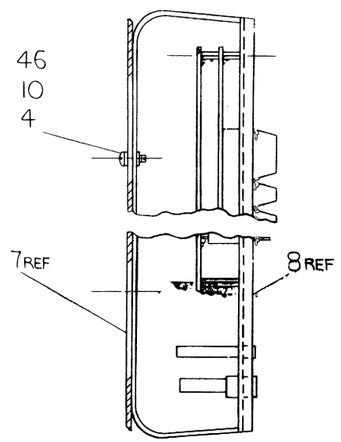
SECTION C-C



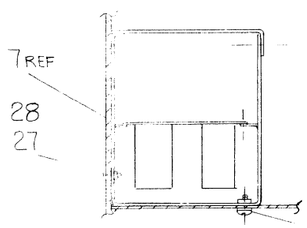
SECTION D-D







SECTION E-E



SECTION F-F

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 ↑

DRN. S. Roberts	DATE	9/17/73
CHK'D. L. Shapiro	DATE	11-27-73
ENG. L. Shapiro	DATE	12-6-73
PROJ. ENG. S. Mor	DATE	4/1/74
PROD. R. K. Oller	DATE	3 22 74

MATERIAL —
FINISH —
NEXT HIGHER ASSY. —
SCALE NONE
SHEET 2 OF 3

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
PROGRAMMING PANEL

SIZE	CODE	NUMBER	REV.
D	UA	VT14-0-0	D

DIST.

SIZE D CODE UA NUMBER VT14-0-0 REV. D

NOTES: "230V ONLY"

1. PHANTOM LINES INDICATE CONNECTIONS FOR HARNESS #7009721 (230V ONLY)
2. REMOVE WIRES GOING TO PINS 1 & 2 OF J3, TRANSFORMER ASSY (#7009797) AND CUT OFF PINS. COMBINE RED WIRE (STRIPPED & TINNED), FROM HARNESS #7009721, WITH WIRE FROM J3-1 (TRANSFORMER ASSY), USING SOCKET, CONN (ITEM #72); DO SAME WITH BLK WIRE (STRIPPED & TINNED) FROM HARNESS #7009721 AND J3-2 (TRANSFORMER ASSY) (INSERT PINS INTO J3)
3. CAUTION: BE SURE SWITCH, ON SIDE OF CRT, IS IN 230V POSITION BEFORE TURNING ON UNIT

BC20-A 115 V AC OR BC20-B 230V AC — P1

P4

COVER — P2

SEE NOTES 1 & 2 (ON THIS SHEET)

#7009478 (115V ONLY) OR #7009721 (230V ONLY)

P1 — P4 — P1

KEYBOARD ASSEMBLY
5410603
5410605 — +5 GND — J1
7006812

FAN — P3 — J2

WHITE RED GREEN BLACK — M7443

7009512

7009511-0-0 — P1 — J1

#7411528 (50HZ ONLY)

BC08R — 7009479 — M7441

MONITOR

RED — BLK

TTY — P1 P2 P2 — J1 — M8650 — 7008360

BC14J — P2 — J1 — M8655 — PDP 14/30 — 25' — 60

REGULATOR BOARD ASSY 5409728

#12 RED — +5V
#12 BLK — GND
#14 GRAY — BV2
#14 BLUE — -15V
#14 ORN — +15V

(OMNIBUS ASSY)

MR8-FE

M8320	M8349-YE	M8349-YE	M8349	M8349	M8655	M8650 (KL8-E)	M7443	M7441	M8300	M8310	M8330
49	50	51	52	53	54	55	56	50	24 REF		

FIRST FIVE SLOTS ARE COVERED BY MONITOR AND ARE NOT USED

P2 — P2 — P1 J1 — #18 BLK, #18 BLK — THERMOSTAT ASSY — P1 — P1 — P2 — #7009794

#7009795 — 7009452 — 7009479

#18 GRN — P3 — J3 — 1610601-1

#18 RED — #16 BLU
#18 RED/YEL — #16 BLU/BLK
#18 BLK — #16 BLU
#18 WHT
#18 GRN

= TRANSFORMER ASSY 7009797

J2

#22 WHT — J4
#22 RED — J5

FAN

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 E Wilson — DATE 11/14/73
CHK'D S Gilbert — DATE 12-7-73
ENG A Klapman — DATE 12-7-73
PROJ ENG J Mac — DATE 2/5/74
PROD R K Hill — DATE 2-5-74
NEXT HIGHER ASSY.
SCALE NONE
SHEET 3 OF 3

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: PROGRAMMING PANEL

SIZE	CODE	NUMBER	REV.
D	UA	VT14-0-0	D

DIST

REVISIONS: REV | CHANGE NO. | CHK

BRUNING 40-107 15968
DEC FORM NO DRD 100-A

SIZE CODE D UA — NUMBER VT14-0-0 — REV D

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY S. Roberts	CHECKED	SECTION
DATE 12/18/73	DATE	
ENG S. Mac	PROD R. K.	ISSUED SECT.
DATE 2/2/74	DATE 2-22-74	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION VT14-AA	VT14-AB	VT14-AC	VT14-AD
1	E-IA-7411200-0-0	COVER	1	1	1	1
2	D-IA-7411201-0-0	PANEL,FRONT	1	1	1	1
3	1211509	HANDLE	2	2	2	2
4	9008185	NUT, KEP #6-32	9	9	9	9
5	9006565	NUT, KEP #10-32	4	4	4	4
6	9009269	DURO STRIPT	A/R	A/R	A/R	A/R
7	E-IA-7411202-0-0	CHASSIS ASSY	1	1	1	1
8	D-AD-7009477-0-0	KEYBOARD ASSY	1	1	1	1
9	9006024-1	SCR PHL PAN HD #6-32 x 1/2 LG	8	8	8	8
10	9006633	WASH INT TOOTH LOCK #6	20	20	20	20
11	9009304-2	SCR PHL FLAT HD(PAINTED) #6-32 x 3/8LG	8	8	8	8
12	1203566	SWITCH INTERLOCK	1	1	1	1
13	D-UA-BC2ØA-Ø6-Ø	LINE SET (115V)	1	-	-	1
14	D-UA-BC2ØB-Ø6-Ø	LINE SET (23ØV)	-	1	1	-
~~15~~	~~D-IA-7411259-0-0~~	~~SHIELD PWR SUP~~	~~1~~	~~1~~		
16	9008340	CLAMP SELF STICKING HARNESS	4	4	4	4
~~17~~	~~D-AD-7009282-1~~	~~POWER SUPPLY ASSY~~	~~1~~			
18	3010326	MONITOR VTØ5	1	1	1	1
19	C-UA-BCØ8R-Ø3	I/O CABLE	1	1	1	1
20	D-IA-7009511-0-0	VIDEO HARNESS	1	1	1	1
21	D-IA-7410924-0-0	BRKT FAN	1	1	1	1
22	1209403-1	FAN	1	1	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PROGRAMMING PANEL	D-UA-VT14-Ø -Ø	A	PL	VT14-Ø-Ø	D	VT14-00009
	SHEET 1 OF 4	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY S. ROBERTS	CHECKED	SECTION
DATE 12/18/73	DATE	
ENG S. Mac	PROD R. K.	ISSUED SECT.
DATE 2/2/74	DATE 2-22-74	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION VT14-AA	VT14-AB	VT14-AC	VT14-AD
23	9008224-1	SCR PHL PAN HD #6-32 x 1-11/16 LG	4	4	4	4
24	D-UA-H9191-Ø-Ø	OMNIBUS ASSY (H9191)	1	1	1	1
~~25~~	~~9007834~~	~~TAPE DBL SIDED 1/2"~~	~~A/R~~	~~A/R~~		
26	D-SC-1210479-0-0	VTØ5 SCOPE MASK	1	1	1	1
27	9006038-1	SCR PHL PAN HD #8-32 x 7/16 LG	3	3	3	3
28	9006634	WASH INT TOOTH LOCK #8	8	9	9	9
29	9006563	NUT KEP #8-32	2	4	4	4
30	9006021-1	SCR PHL PAN HD #6-32 x 5/16 LG	4	4	4	4
31	C-IA-7411225-0-0	RELIEF STRAIN	1	1	1	1
32	9006664	WASHER FLAT .437 x .218 I.D.X.062 THK	8	8	8	8
33	A-DC-7411274-0-0	DECALS (VT14)	1	1	1	1
34	D-IA-7009512-0-0	VIDEO CONTROL HARNESS	1	1	1	1
35	C-MD-7404881-0-0	FAN SCREEN	1	1	1	1
36	C-IA-7409424-0-0	FILTER SIDE	1	1	1	1
37	9006073-1	SCR PHL PAN HD #10-32 x 1/2 LG	7	7	7	7
38	9006635	WASH INT TOOTH LOCK #10	15	15	15	15
39	9006037-3	SCR PHL TRUSS HD #8-32 x 3/8 LG	4	4	4	4
40	9006079-3	SCR PHL TRUSS HD #10-32 x 1-1/2 LG	8	8	8	8
41	9006070-1	SCR PHL PAN HD #10-32 x 5/16 LG	4	4	4	4
42	D-MD-7411254-0-0	TABLE, CRT	1	1	1	1
43	9008957	NUT,HEX #6-32	2	2	2	2
44	B-UA-H851-Ø-Ø	H851 EDGE CONNECTOR	4	4	4	4

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PROGRAMMING PANEL	D-UA-VT14-Ø-Ø	A	PL	VT14-Ø-Ø	D	
	SHEET 2 OF 4	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY S.ROBERTS	CHECKED H Bagnall	SECTION
DATE 12/18/73	DATE 2/22/74	
ENG S. Mars	PROD R. K. allen	ISSUED SECT.
DATE 2/22/74	DATE 2-22-74	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION VT14-AA	VT14-AB	VT14-AC	VT14-AD
~~45~~	~~9007892~~	~~NUT RIV #6-32~~	~~2~~	~~2~~		
46	9006025-1	SCR PHL PAN HD #6-32 x 5/8 LG	4	4	4	4
47	E-IA-7009478-0-0	INTERNAL INTERFACE HARNESS (115V)	1	-	-	1
48	E-IA-7009479-0-0	HARNESS POWER SUPPLY	1	1	1	1
49	D-CS-M832Ø-Ø-1	BUS LOADS	1	1	1	1
50	C-UA-MR8-FE-Ø	MR8-F REPROGRAMMABLE MEMORY	1	1	1	1
51	D-CS-M8655-Ø-1	TERMINAL CONTROL	1	1	1	1
52	A-PL-KL8-E-Ø	ASYNCHRONOUS DATA CONTROL	1	1	1	1
53	D-CS-M7443-Ø-1	DISPLAY VT14 VIDEO	1	1	1	1
54	D-CS-M7441-Ø-1	CONTROL KEYBOARD	1	1	1	1
55	D-CS-M83ØØ-Ø-1	MAJOR REGISTERS	1	1	1	1
56	D-CS-M831Ø-Ø-1	MAJOR REGISTERS	1	1	1	1
57	B-MD-7411469-0-0	SHIELD SWITCH	1	1	1	1
58	D-IA-7606767-0-0	SHIPPING SKID	1	1	1	1
59		ECO STATUS FORM, DEC #12-(776)-1097-N172	1	1	1	1
60	D-UA-BC14J-25-Ø	CABLE INTERFACE	1	1	1	1
61	1210302	FOAM, ADH BACKED 10-1/2 SQ X 1/4 THK	1	1	1	1
62	9009300	SPEED NUT #6-32	8	8	8	8
63	9008079	WASHER FIBER .250 O.D.	2	2	2	2
64	9006796-2	SPACER, 1/4 DIA x 3/16 LG x #6	2	2	2	2
65	9007793-1	SCR, PHL PAN HD #6-32 x 9/16 LG	2	2	2	2
66	D-IA-7411528-0-0	REWORKED MONITOR VTØ5	-	1	-	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PROGRAMMING PANEL	D-UA-VT14-Ø-Ø	A	PL	VT14-Ø-Ø	D	
	SHEET 3 OF 4	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY S.Roberts	CHECKED H Bagnall	SECTION
DATE 12/18/73	DATE 2/22/74	
ENG S. Mars	PROD R. K. allen	ISSUED SECT.
DATE 2/22/74	DATE 2-22-74	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION VT14-AA	VT14-AB	VT14-AC	VT14-AD
67	9006037-1	SCR, PHL PAN HD #8-32 x 3/8 LG	-	2	2	2
68	9008209	GROMMET, RUBBER STRIP	A/R	A/R	A/R	A/R
69	A-PI-3700099-0-0	VT14 PACKAGING INSTRUCTIONS	1	1	1	1
70	9006653	FLAT WASHER .032 THK.	4	4	4	4
71	E-IA-7009721-0-0	INTERNAL INTERFACE HARNESS (23ØV)	-	1	1	-
72	1209379-0-0	SOCKET CONN.	-	2	-	2
73	D-AD-7009797-0-0	TRANSFORMER ASSY	1	1	1	1
74	9008007-1	SCR, PHL PAN HD #10-32 x 1/4 LG	4	4	4	4
75	D-AD-7009796-0-0	REGULATOR BD ASSY	1	1	1	1
76	9008334	SPACER, #8 x 32 x 11/16 LG	4	4	4	4
77	A-DC-5309413-0-0	DECAL NFPA	1	1	1	1
78	A-DC-5309414-0-0	DECAL U.L. INSIGNIA	1	1	1	1
79	9008886	ADHESIVE VELCRO 45 LIQUID	A/R	A/R	A/R	A/R
80	B-MD-7412140-0-0	SPACER	4	4	4	4
81	9008379-0	FOAM TAPE	A/R	A/R	A/R	A/R
82	9007786	CLIP NUT #10-32	8	8	8	8
83	9008055	ELASTIC STOP NUT #6-32	4	4	4	4
84	9008965	ELASTIC STOP NUT #10-32	4	4	4	4

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PROGRAMMING PANEL	D-UA-VT14-Ø-Ø	A	PL	VT14-Ø-Ø	D	
	SHEET 4 OF 4	DIST.				

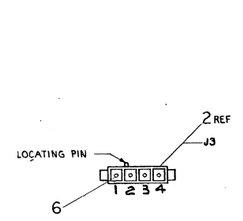
WIRE TABLE (VARIATION 7009279-0)

ITEM NO.	DESCRIPTION AWG	LENGTH	COLOR	FROM POINT	FROM CONN	FROM TERM	TO POINT	TO CONN	TO TERM
1	18	5.5 IN	RED	—	ITEM #1	—	1	J3-1	6
1	18	5.5 IN.	RED/YEL	—	ITEM #1	—	2	J3-2	6
1	18	5.75 IN	BLK	—	ITEM #1	—	3	J3-3	6
11	22 TWP	24.5 IN.	RED	6	J4	9	4	J3-4	6
			WHT	7	J5	9			
1	18	5.75 IN	WHT	—	ITEM #1	—			
1	18	6.0 IN	GRN	—	ITEM #1	—	5	—	7
5	22	8.75 IN	BLU/WHT	8	J1-2	6	13	J2-1	6
1	16	9.0 IN	BLU/BLK	—	ITEM #1	—			
12	22	8.25 IN	BLU	9	J1-3	6	12	J2-2	6
1	16	7.5 IN	BLU	—	ITEM #1	—			
12	22	8.25 IN	BLU	10	J1-1	6	11	J2-3	6
1	16	7.25 IN	BLU	—	ITEM #1	—			

WIRE TABLE (VARIATION 7009279-1)

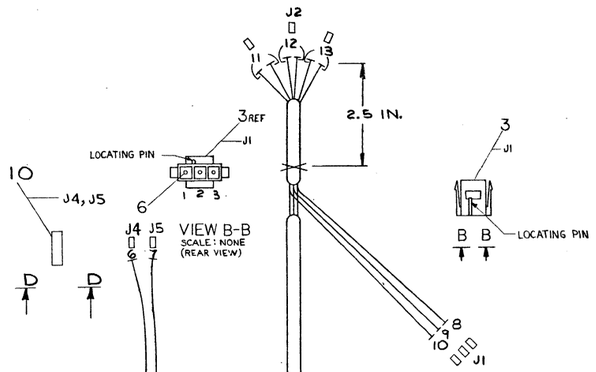
ITEM NO.	DESCRIPTION AWG	LENGTH	COLOR	FROM POINT	FROM CONN	FROM TERM	TO POINT	TO CONN	TO TERM
1	18	9.5 IN	RED	—	ITEM #1	—	1	J3-1	6
1	18	9.5 IN	RED/YEL	—	ITEM #1	—	2	J3-2	6
1	18	9.5 IN	BLK	—	ITEM #1	—	3	J3-3	6
11	22 TWP	11.0 IN	RED	6	J4	9	4	J3-4	6
			WHT	7	J5	9			
1	18	9.75 IN	WHT	—	ITEM #1	—			
1	18	6.0 IN	GRN	—	ITEM #1	—	5	—	7
1	16	9.0 IN	BLU/BLK	—	ITEM #1	—	13	J2-1	6
1	16	7.5 IN	BLU	—	ITEM #1	—	12	J2-2	6
1	16	7.25 IN	BLU	—	ITEM #1	—	11	J2-3	6

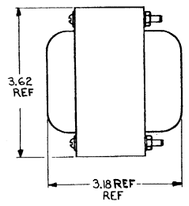
NOTES:
1. USE TIE WRAPS (X) (ITEM #8) AS SHOWN (3 PLACES).
2. LABEL COMPONENTS J1, J2, AND J3, WITH BRADY MARKERS.



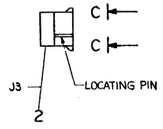
VIEW C-C
SCALE: NONE
(REAR VIEW)

VIEW B-B
SCALE: NONE
(REAR VIEW)

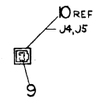




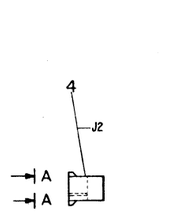
VIEW E-E
SCALE: 1/1
(LEFT SIDE VIEW)

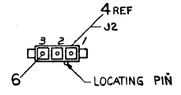


CAUTION
DO NOT SCALE
SEE WIRE TABLE FOR LEAD LENGTHS



VIEW D-D
SCALE: NONE
(REAR VIEW)





VIEW A-A
SCALE: NONE
(REAR VIEW)

7009279-0
7009279-1

	—	A/R	WIRE #22 STRD (BLU)	9107350-66	12
	A/R	A/R	WIRE #22 AWG TWP (RED/WHT)	9107420-29	11
	2	2	MINI FASTAB HOUSING 1-480417-0	1210820-1	10
	2	2	MINI FASTAB, PIN, 60291-1	1210820-2	9
X	3	3	TIE WRAPS SST 1M	9007031	8
△	1	1	TERM, SOLDERLESS #10 503601	9007930-0	7
□	7	10	PIN CONTACT (FEMALE)	1209379-01	6
	—	A/R	WIRE, #22 STRD (BLU/WHT)	9107350-96	5
	1	1	CONN MATE-N-LOCK, 3 PIN	1210821-03	4
	—	1	CONN MATE-N-LOCK, 3 PIN	1209350-03	3
	1	1	CONN MATE-N-LOCK, 4 PIN	1210821-04	2
SM	1	1	TRANSFORMER	1610601-1	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 ± .02, .X ± .1
ANGLES: 60' 30"
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY √

DRN. D. Gardner DATE 2-27-75
CHKD. DATE 4-11-75
ENG. DATE 4-11-75
PROJ. ENG. DATE 4-11-75
MGR. DATE 4-11-75

digital EQUIPMENT CORPORATION

TITLE: TRANSFORMER ASSY

MATERIAL: SEE PARTS LIST
NEXT HIGHER ASSY.: DAD-7009282-0-0
FINISH: √
SCALE: NONE
SHEET OF

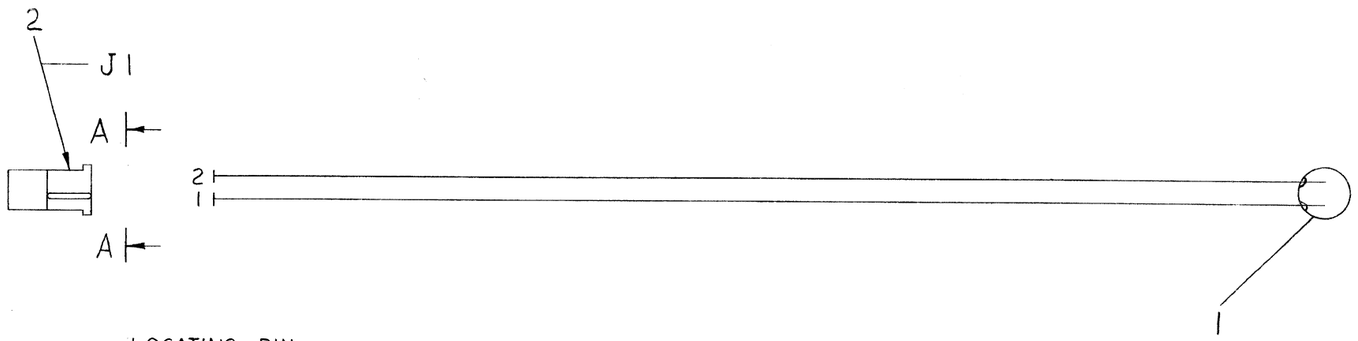
SIZE E | CODE IA | NUMBER 7009279-0-0 | REV. A
DIST.

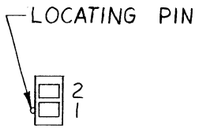
REVISIONS			
ORIG.	7009279-1	3/14/75	A
CHANGE NO.			
REV.			

DEC FORM NO. DMS 2010

WIRE TABLE

ITEM NO	DISCRIPTION		FROM			TO			PRE CUT LENGTH
	AWG	COLOR	POINT	CONN	TERM	POINT	CONN	TERM	
1	18	BLK	—	ITEM # 1	—	1	J1-1	3	12.0 ± .5
1	18	BLK	—	ITEM #1	—	2	J1-2	3	12.0 ± .5





VIEW A-A
SCALE NONE
REAR VIEW

2	PIN MATE-N-LOK FEMALE	1209379-01	3
1	CONN MATE-N-LOK (FEMALE)	1210821-2	2
1	SPST THERMOSTAT	1210824	1
QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP8/M

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.	B.B.Lodgett	DATE 5-17-73
CHK'D.	L.Gilbert	DATE 5-18-73
ENG.		DATE
PROJ. ENG.		DATE
PROD.		DATE

NEXT HIGHER ASSY.: D-AD-7009282-0-0

SCALE 1/1

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: THERMOSTAT ASSY

SIZE	CODE	NUMBER	REV.
C	IA	7009452-0-0	

DIST.

REVISIONS

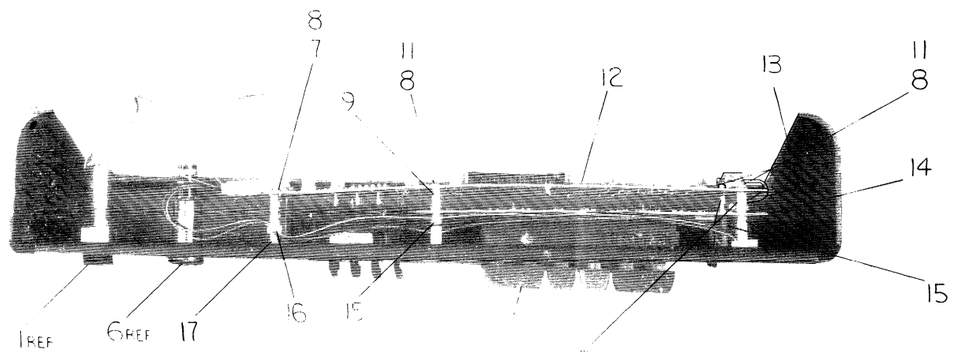
REV.	CHANGE NO.	CHK

SIZE C | CODE IA | NUMBER 7009452-0-0 | REV.

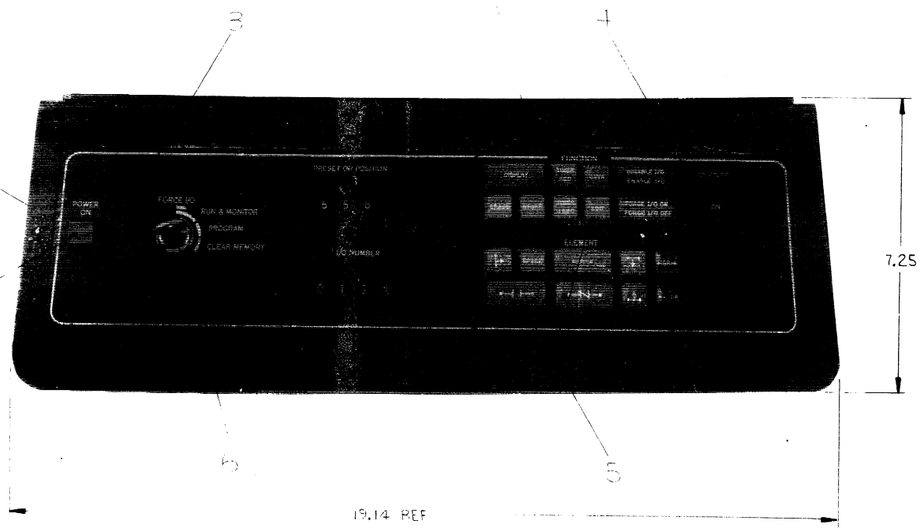
B

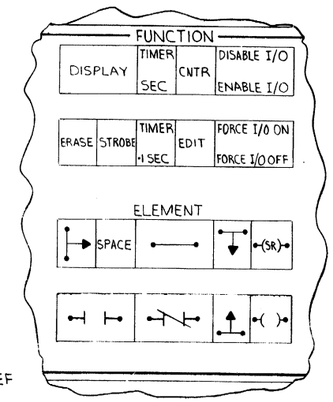
FORM NO 30-0018

NOTES:
1. ITEM #24 (TUBING, SHRINK) TO BE INSERTED OVER TERMINAL #1 OF ITEM #1 (SWITCH, PUSHBUTTON) FOR INSULATION PURPOSES
2. E-IA-7009128-0-0 (KEYBOARD MASK ASSY - SHEET METAL) TO BE USED WHEN ITEM #2 (MASK, KEYBOARD - PLASTIC) IS NOT AVAILABLE



SEE DETAIL "A"





DETAIL "A"
(KEY CAP LOCATIONS)

A/R	WIRE, #18 AWG	RED	9107360-22	33
A/R	WIRE, #22 AWG	WHT	9107350-99	32
A/R	WIRE, #22 AWG	GRY	9107350-88	31
A/R	WIRE, #22 AWG	BLU	9107350-66	30
A/R	WIRE, #22 AWG	GRN	9107350-55	29
A/R	WIRE, #22 AWG	YEL	9107350-44	28
A/R	WIRE, #22 AWG	ORN	9107350-33	27
A/R	WIRE, #22 AWG	RED	9107350-22	26
A/R	WIRE, #22 AWG	BLK	9107350-00	25
A/R	TUBING, SHRINK		9107254-09	24
2	CONN, FASTON		9007919-0	23
1	CONN, SOLDERLESS		9007927-0	22
A/R	TUBING, SHRINK (RED)		9107254-02	21
1	CONN, HOUSING (8 PIN)		1209340-01	20
10	CONN, PIN		1209378-01	19
1	CONN, HOUSING (2 PIN)		1210822-02	18
2	SPACER, HEX 1/4 A.F. X 1-1/2 LG X #6-32		9006867	17
1	TIE WRAP		9007880	16
4	SPACER, HEX 1/4 A.F. X 1 LG X #6-32		9006862	15
1	KEYBOARD, VT14 SWITCH		D-CS-5410603-0-1	14
1	CABLE, KEYBOARD		C-IA-7006812-00	13
1	KEYBOARD, VT14 THUMBWHEEL		D-CS-5410605-0-1	12
4	SCR, PHL PAN HD #6-32 X 3/4 LG		9006026-1	11
A/R	WIRE, #18 AWG TWP (BLK/RED)		9107430-02	10
4	SPACER, HEX 1/4 A.F. X 7/16 LG X #6		9008120	9
6	WASH, INT TTH LOCK #6		9006633	8
4	SCR, PHL PAN HD #6-32 X 7/16 LG		9006023-1	7
1	KEY LOCKING SWITCH		12.11535	6
1	CAPS, KEY SWITCH		12.11456	5
2	DIODE, LIGHT-EMITTING		1110324	4
1	PANEL, SWITCH		D-IA-74112.26-0-0	3
SEE NOTE #2	1 MASK, KEYBOARD		D-PS-12.116520-0	2
1	SWITCH, PUSHBUTTON (RED CAP)		1209823-12	1

PARTS LIST

QTY	DESCRIPTION	PART NO.	ITEM NO.

FIRST USED ON OPTION MODEL: VT14

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES
DECIMALS: .xxx .005; .xx .02; .x .1
ANGLES: 0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE OR ALTER

MATERIAL: SEE PARTS LIST
FINISH: ---

DRN. S Klutz DATE 10/2/73
CHK'D. D Magnan DATE 11/07/73
ENG. D Magnan DATE 12/6/73
PROJ. LDR. S Mm. DATE 1/23/74
PROD. K K DATE 2/22/74

NEXT HIGHER ASSY. D-UA-VT14-0 0
SCALE NONE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: KEYBOARD ASSY

SIZE D | CODE AD | NUMBER 7009477-0-0 | REV.
DIST.

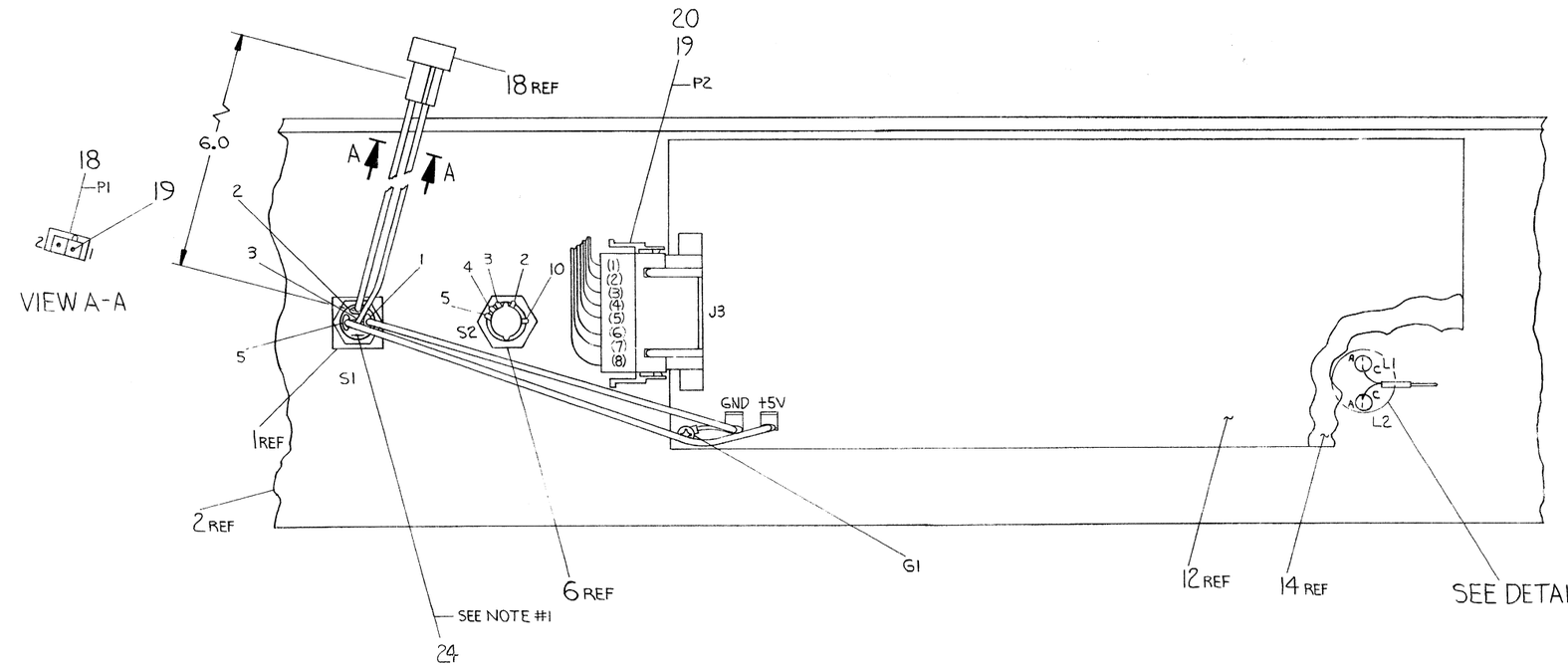
DAD 7009477-0-0

WIRE TABLE

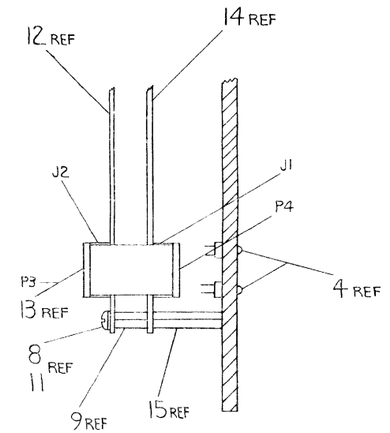
ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	FROM TERM	TO CONNECTION	TO TERM	REMARKS
33	18	RED	S1-3	SOLD & 21	P1-1	18 & 19	
33	18	RED	S1-2	SOLD & 21	P1-2	18 & 19	
10	18	RED	S1-5	SOLD & 21	+5V	23	ITEM #12
	TWP	BLK	S1-1	SOLD & 21	GND	23	
25	22	BLK	G1	22			
25	↑	BLK	S2-2	SOLD & 24	P2-3	19 & 20	
27		ORN	S2-3	↑	P2-2	↑	
30		BLU	S2-4		P2-1		
29		GRN	S2-5		P2-4		
32		WHT	S2-10		P2-7		
31		GRY	L1-A		P2-5		
26		RED	L1-C		P2-8		
			L2-C				
28	22	YEL	L2-A	SOLD & 24	P2-6	19 & 20	
—	—	—	P2	—	J3	—	ITEM #12
13	—	—	P3	—	J2	—	ITEM #12
	—	—	P4	—	J1	—	ITEM #13

CATHODE IS INDICATED BY EITHER A FLAT FLANGE OR A PAINTED DOT ON OR NEAR FLANGE

DETAIL "B"



VIEW A-A



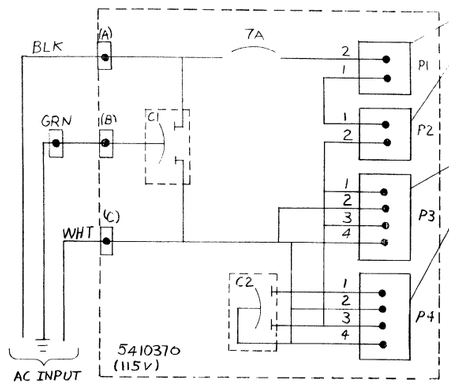
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
KEYBOARD ASSY	D	AD	7009477-0-0	
SCALE NONE	SHEET 2 OF 2		DIST	

DAD 7009477-0-0

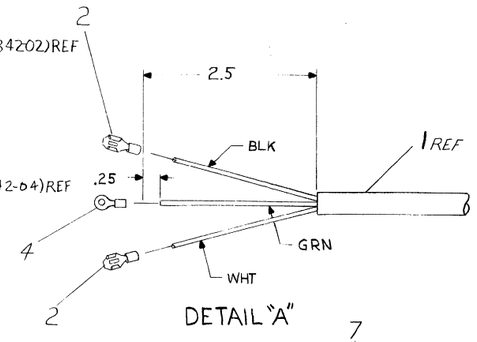
LEGEND		
PART NO.	ITEM #1	VARIATION
BC20A-06	7000/5-06	6 FT
BC20A-07	7000/5-07	7 FT

NOTES:
1. CONNECT 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 3.0" ±.5

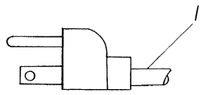


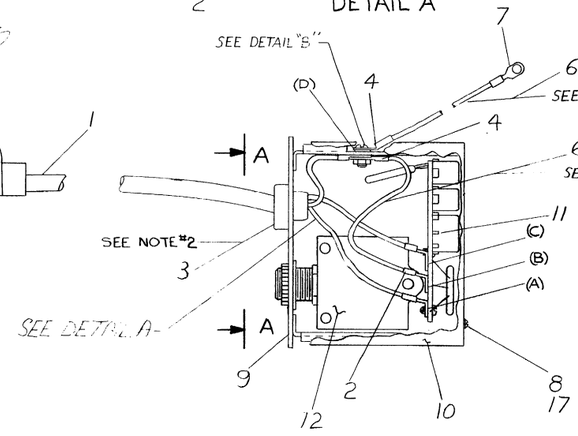
MATE-N-LOCK (DEC 12113420 2) REF

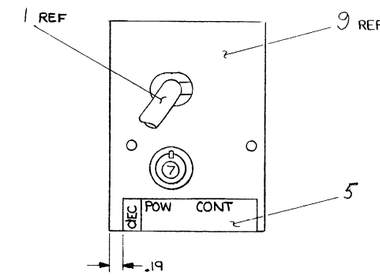
MATE-N-LOCK (DEC 12113420-04) REF



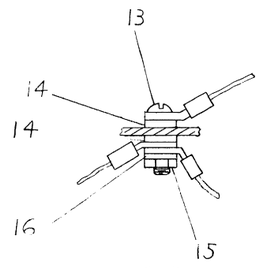
DETAIL "A"







VIEW A-A
SCALE: 1/1



DETAIL "B"

ITEM NO.	PARTS LIST: DESCRIPTION	PART NO.	QTY.
1	WASHER, #6 INTERNAL TOOTH	9006633	17
1	WASHER, FLAT .312×.125×.027	9006655	16
1	KEPNUT #4-40	9006557	15
2	WASHER, #4 INTERNAL TOOTH	9006632	14
1	SCR, PHL, PAN HD #440×.38	9006011-1	13
1	CIRCUIT BREAKER (7 AMP)	1210B30-7	12
1	POWER CONTROL BD (115 V)	C-JA-5410370-0-0	11
1	COVER, AC INPUT	C-MD-5310373-0-0	10
1	BOX, AC INPUT	D-JA-5309845-0-0	9
1	SCR, PHL HD, PAN #6-32×.25	9006020-1	8
1	SOLDERLESS, CONN #50360	9007930	7
A/R	#18 AWG, STRD GRN	9107360-55	6
1	PWR CONTROL DECAL (115V)	A-DC-5310438-0-0	5
3	SOLDERLESS, CONN.	9007929-0	4
1	STRAIN RELIEF SR-6N3-4	9008492-2	3
3	SOLDERLESS CONN	9007917	2
1	POWER CORD 120 V	SEE LEGEND	1

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 2-21-73
CHK'D. DATE
ENG. DATE 3-8-73
PROJ. ENG. DATE 3-5-73
PROD. DATE 3-26-73
NEXT HIGHER ASSY.
SCALE
SHEET OF

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: LINE SET, 115 V

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

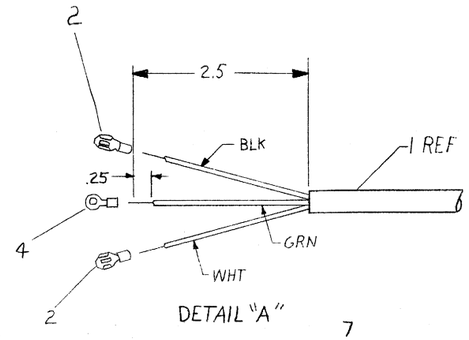
REVISIONS			
DASH	CHANGE NO	REV	
-0	BC20-00001	T	3-8-73
	ORIGINATED		
	D GARDNER		
-1	BC20-00002	B	3-26-73
	D GARDNER		
-2	BC20-00003	C	7-17-73
	D GARDNER		

DRAWING NO. WAS D-UA-4C20-0-0

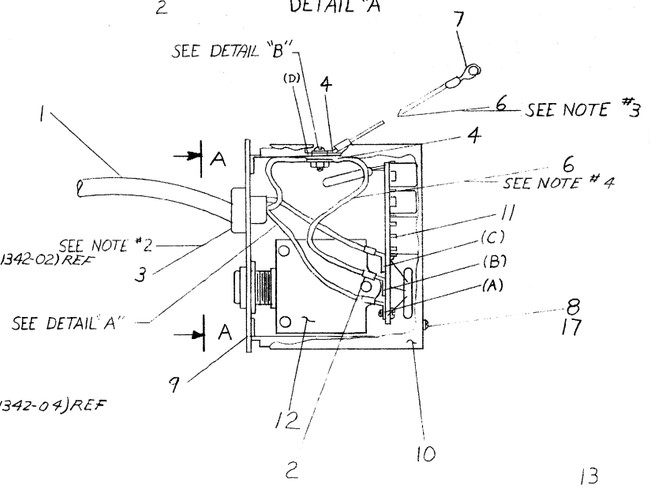
PRINTING 40 107 15968

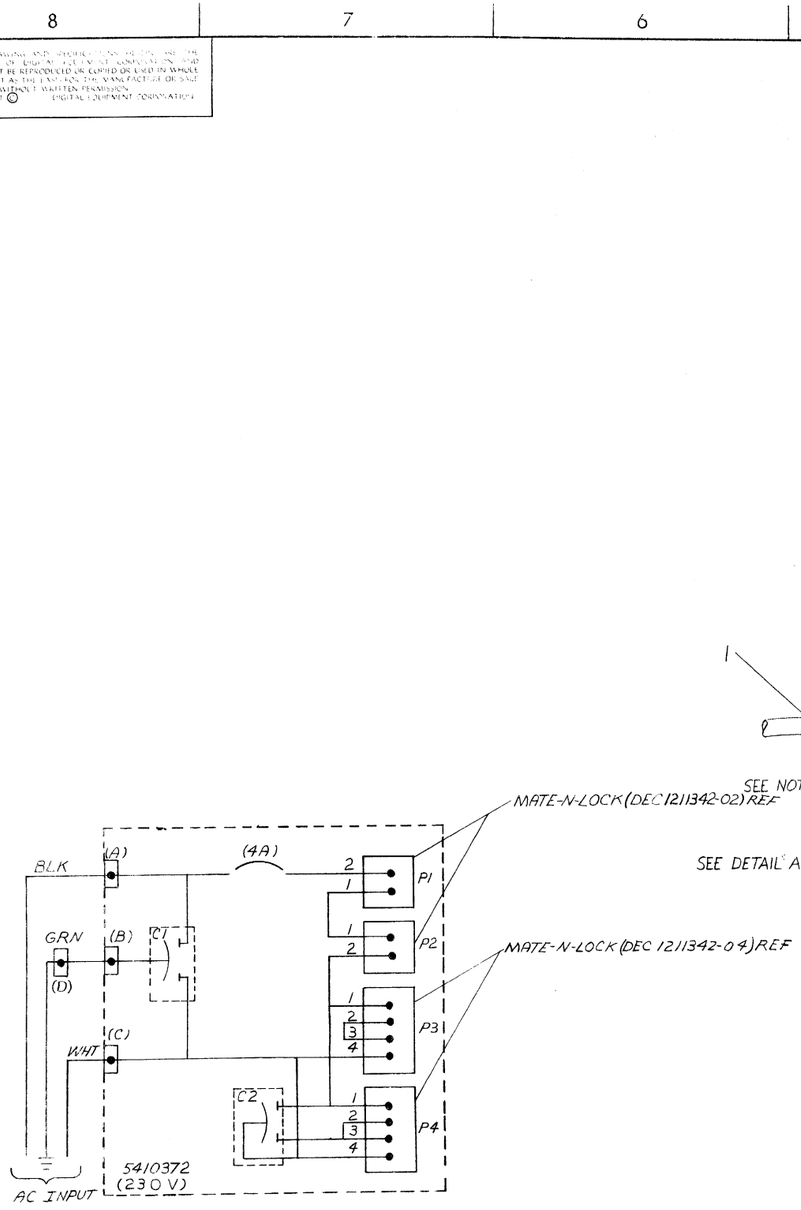
PART NO.	ITEM	VARIATION
BC20B-06	1700616-06	6FT
BC20B-09	1700616-09	9FT

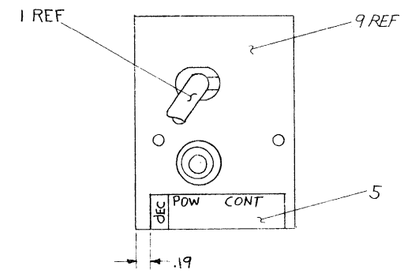
NOTES:
1. CONNECT ITEM #1 (POWER CORD) PER CIRCUIT SCHEMATIC.
2. FOR INSTALLATION USE HEYCO #29 STRAIN RELIEF PLIERS.
3. LENGTH OF THIS WIRE (ITEM #6) IS 9.75 ± .5
4. LENGTH OF THIS WIRE (ITEM #6) IS ± .5



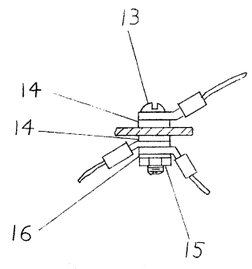
DETAIL "A"







VIEW A-A
SCALE: 1/1



DETAIL "B"

QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	WASHER, #6 INTERNAL TOOTH	9006633	17
1	WASHER, FLAT .312×.125×.027	9006655	16
1	KEP NUT #4-40	9006557	15
2	WASHER, #4 INTERNAL TOOTH	9006632	14
1	SCR PHL PAN HD #4 40×.38	9006011-1	13
1	CIRCUIT BREAKER (9 AMP)	1210830-4	12
1	POWER CONTROL BD (230V)	C-I9-5410372-0-0	11
1	COVER, AC INPUT	C-MD-5310373-0-0	10
1	BOX AC INPUT	D-IA-5309845-0-0	9
1	SCR PHL PAN HD #6-32×.25	9006020-1	8
1	SOLDERLESS CONN #50360	9007930	7
A/R	#18 AWG STRD, GRN	9107360-55	6
1	PWR CONTROL DEC 9L (230V)	A-DC5310439-0-0	5
3	SOLDERLESS CONN	9007727-0	4
1	STRAIN RELIEF SR-6N3-4	9003492-2	3
3	SOLDERLESS CONN	9007717	2
1	POWER CORD 240V	SEE LEGEND	1

PARTS LIST

FIRST USED ON OPTION MODEL: FDP3M

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS: xxx .005; xx .02; x .1 — ANGLES: 0 30
REMOVE BURRS AND BREAK SHARP CORNERS/SURFACE ROUGHNESS

MATERIAL
FINISH

DRN. S. Heather DATE 9-5-73
CHK'D. DATE
ENG. DATE
PROJECT DATE
PROD. DATE
NEXT HIGHER ASSY.

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

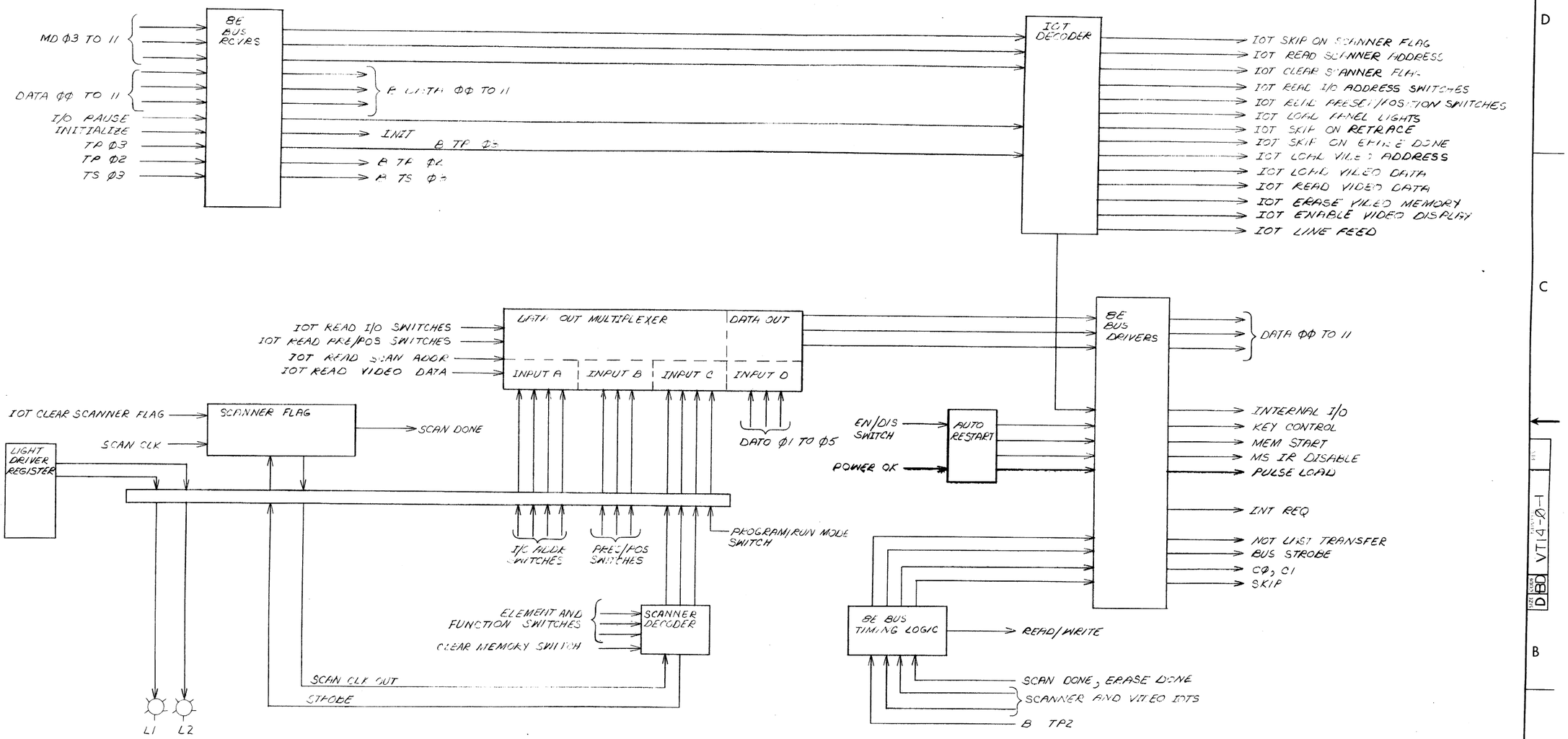
TITLE: [illegible] 230V

SIZE D | CODE | NUMBER BC20B A 1 | REV.
SCALE
SHEET OF | DIST

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
—	ORIGINATED		

BC20-0000 REV —

SHT 1 OF 2 DWG D UA BC20-0-0



FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14	PARTS LIST			

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

DRN. M. Peirce	DATE 10/4/73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. T. Roberts	DATE 10/4/73	
ENG. E. M.	DATE 10/4/73	
PROJ. ENG. M.	DATE 10/4/73	
PROD.	DATE	
NEXT HIGHER ASSY. E-L. - VT14-0		
SCALE NONE		
SHEET 1 OF 1		

MATERIAL —
FINISH —

TITLE: BLOCK DIAGRAM (M7441)

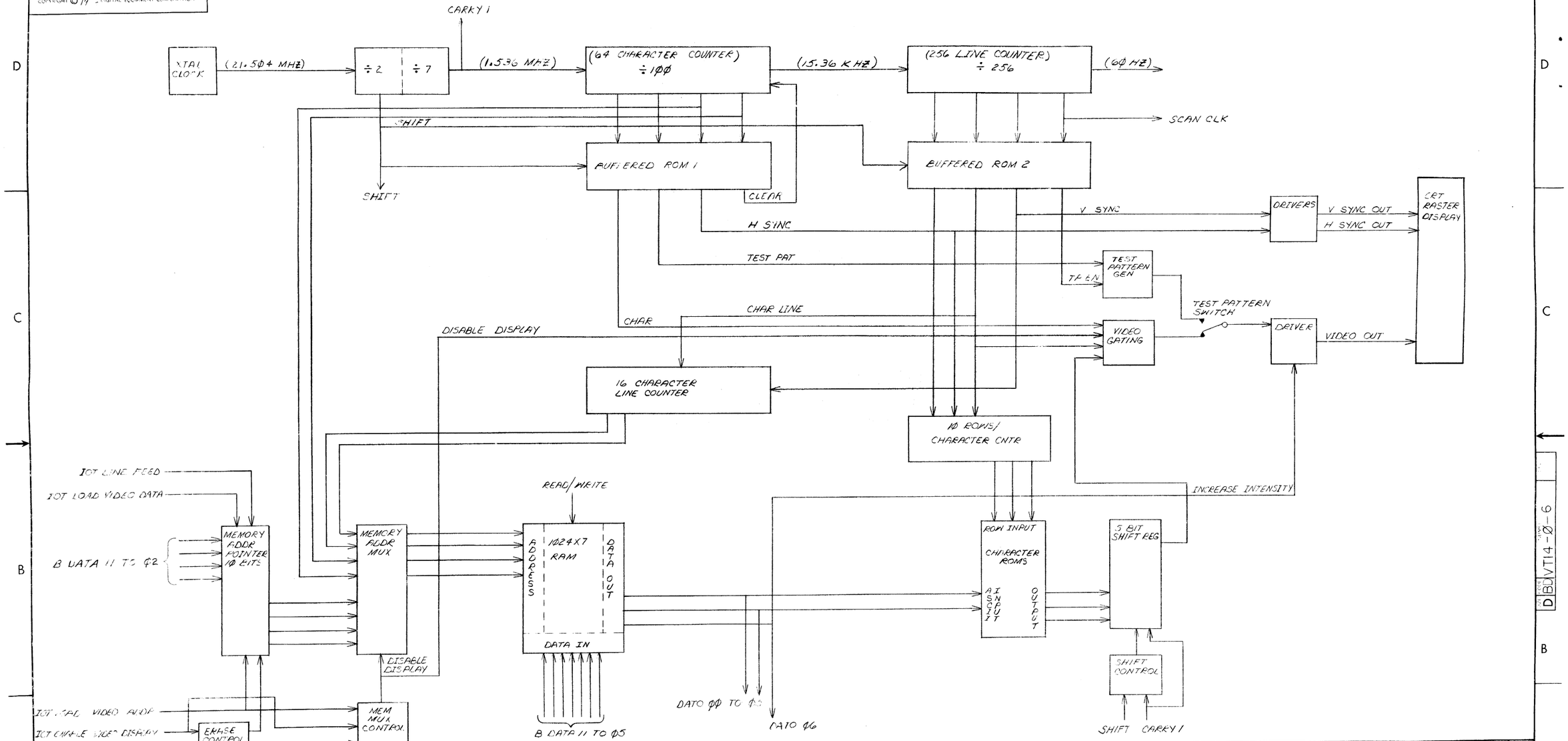
SIZE D | CODE BD | NUMBER VT14-0-1 | REV.

DIST.

USED ON VT14-0-1

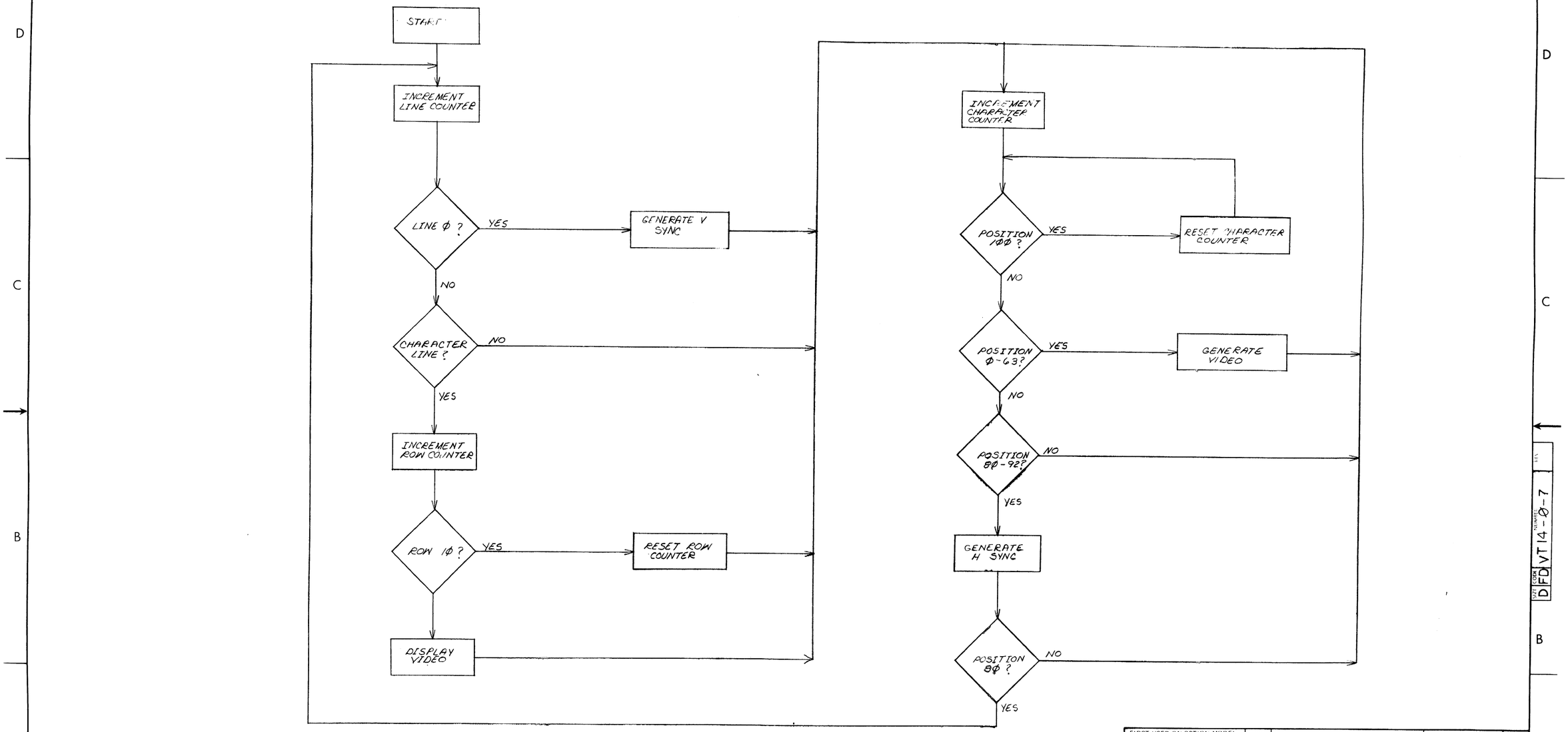
REVISIONS: REV. | CHANGE NO | CHK

SEE FORM 105 FOR USE



FIRST USED ON OPTION MODEL: VT14	QTY	DESCRIPTION / PARTS LIST	PART NO. / ITEM NO.
UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES; TOLERANCES: DECIMALS xxx .005, xx .02, x .1; ANGLES 0 30; REMOVE BURRS AND BREAK SHARP CORNERS SURFACE ROUGHNESS	DRN.	DATE 10/12/73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
	CHK'D.	DATE 12/7/73	
	ENG.	DATE	TITLE: BLOCK DIAGRAM (MP-413)
	PROJ. ENG.	DATE	
	PROJ.	DATE	
MATERIAL	NEXT HIGHER ASSY. B-D-VT14-0		SIZE D; CODE DB; NUMBER VT14-0-6; REV.
FINISH	SCALE		
	SHEET 1 OF		DIST

REVISIONS: REV. | CHANGE NO. | CHK.



FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		PARTS LIST		

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

DRN.	[illegible]	DATE 12/14/73
CHK'D.	[illegible]	DATE 12/11/73
ENG.	[illegible]	DATE 12/11
PROJ. ENG.	[illegible]	DATE 12/11
PROD.	[illegible]	DATE 12/11

MATERIAL
FINISH
NEXT HIGHER ASSY. B-DD-VT14-Ø
SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: VIDEO TIMING FLOW

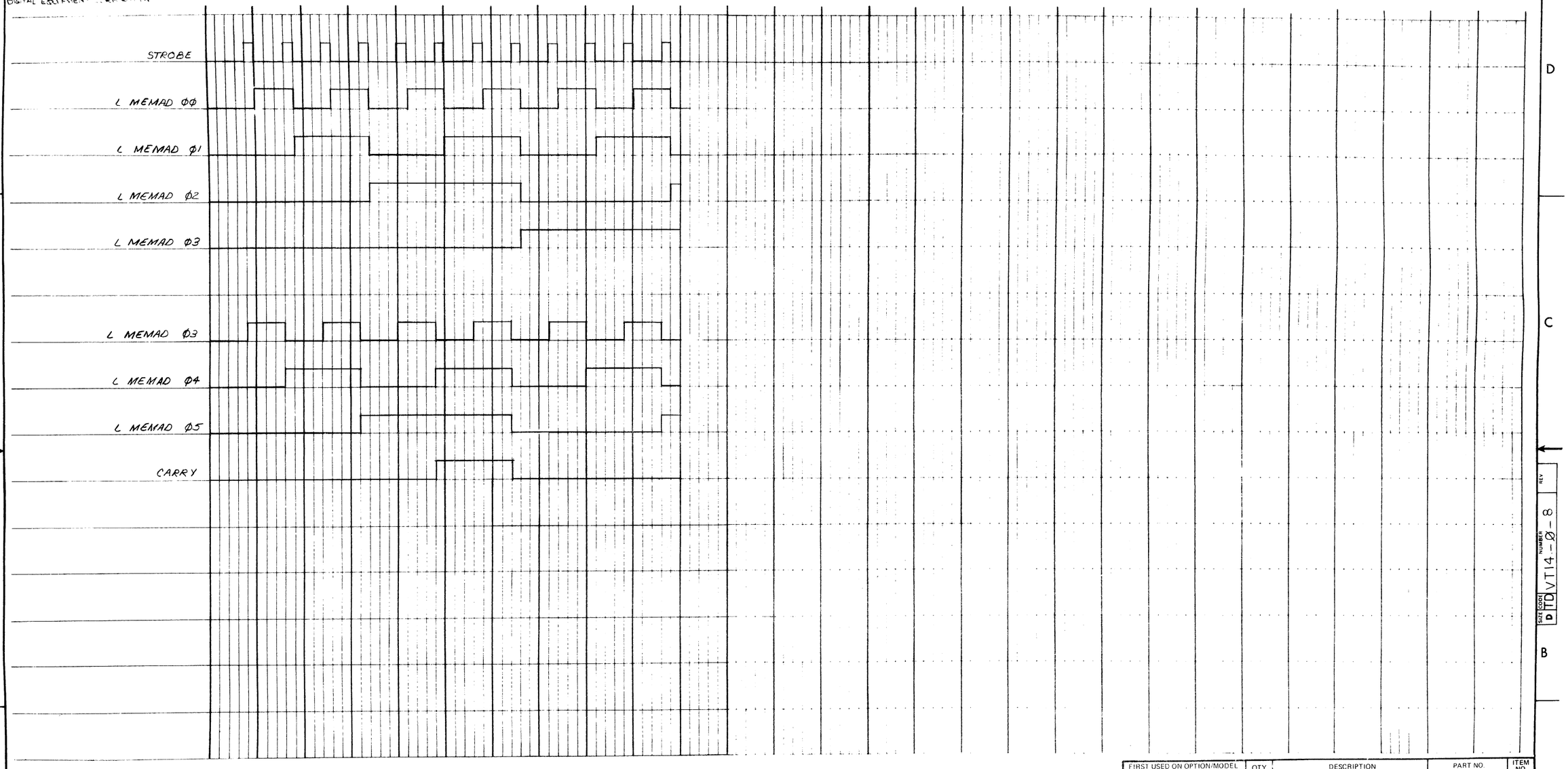
SIZE	CODE	NUMBER	REV.
D	FD	VT14-Ø-7	

2 ST

REVISIONS: REV. | CHANGE NO | CHK

SEE FORM NO. DRD 102-E

DEC VT14-0-7



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		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 11/8/73
CHK'D. S. Roberts — DATE 12/7/73
ENG. — DATE
PROJ. ENG. — DATE
PROD. — DATE
NEXT HIGHER ASSY. B-DE-VT14-Ø
SCALE NONE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CENTER REGISTER TIMING

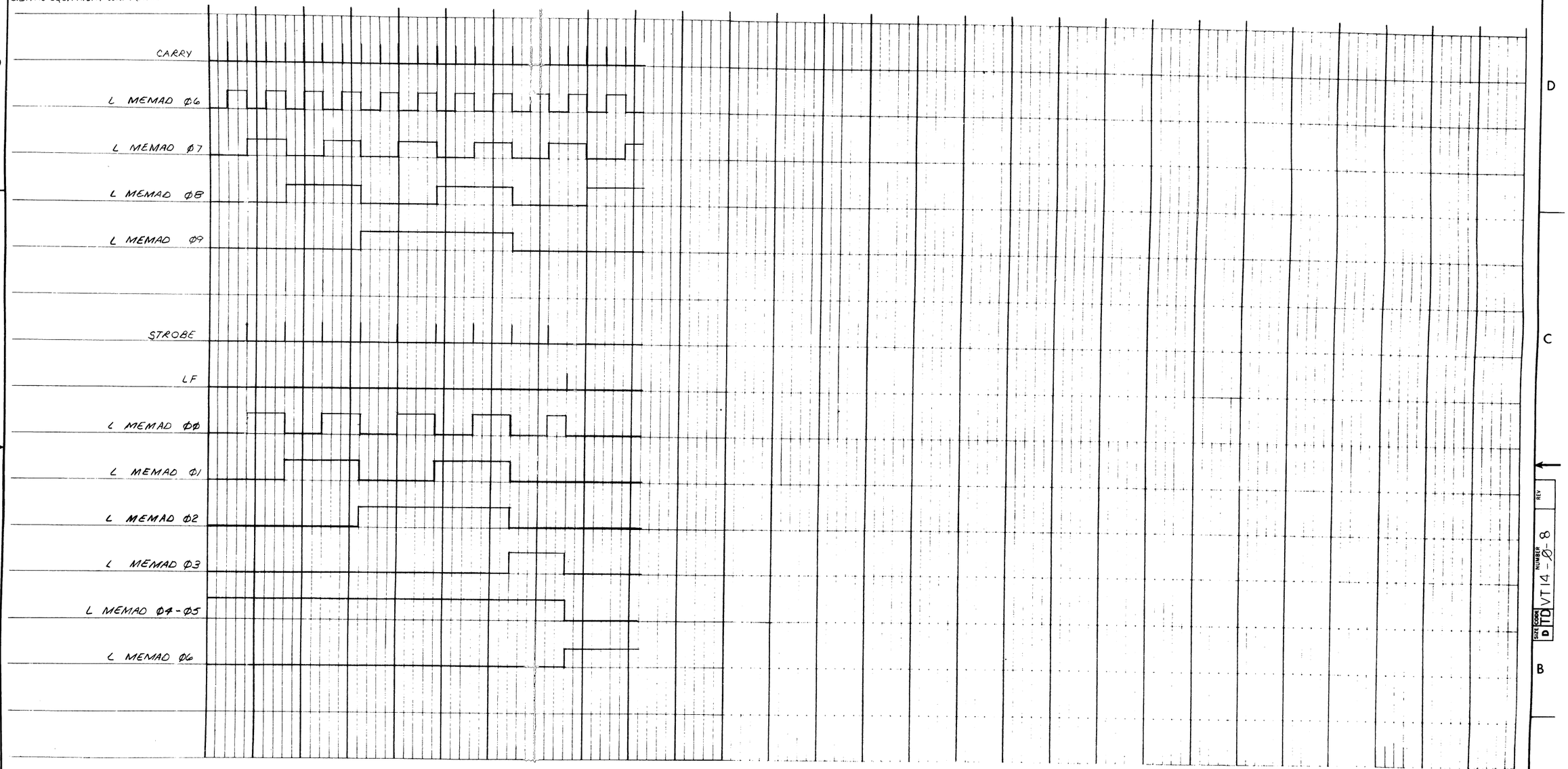
SIZE D | CODE TD | NUMBER VT14-Ø-8 | REV.
DIST

REVISIONS | REV. | CHANGE NO. | CHK

DEC FORM NO. ORD 122

SIZE D | CODE TD | NUMBER VT14-Ø-8 | REV. B

DIGITAL EQUIPMENT CORPORATION



REVISIONS	REV.	CHANGE NO.	CHK

DEC FORM NO. DRD 122

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN. M. Rice	DATE 10/18/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D S. Roberts	DATE 12/17/73	
ENG. S. Hall	DATE 12/17/73	TITLE: POINTER REGISTER TIMING
PROJ. ENG. S. Hall	DATE 12/17/73	
PROD. [illegible]	DATE 12/21/73	

NEXT HIGHER ASSY. B-DL VT14-Ø

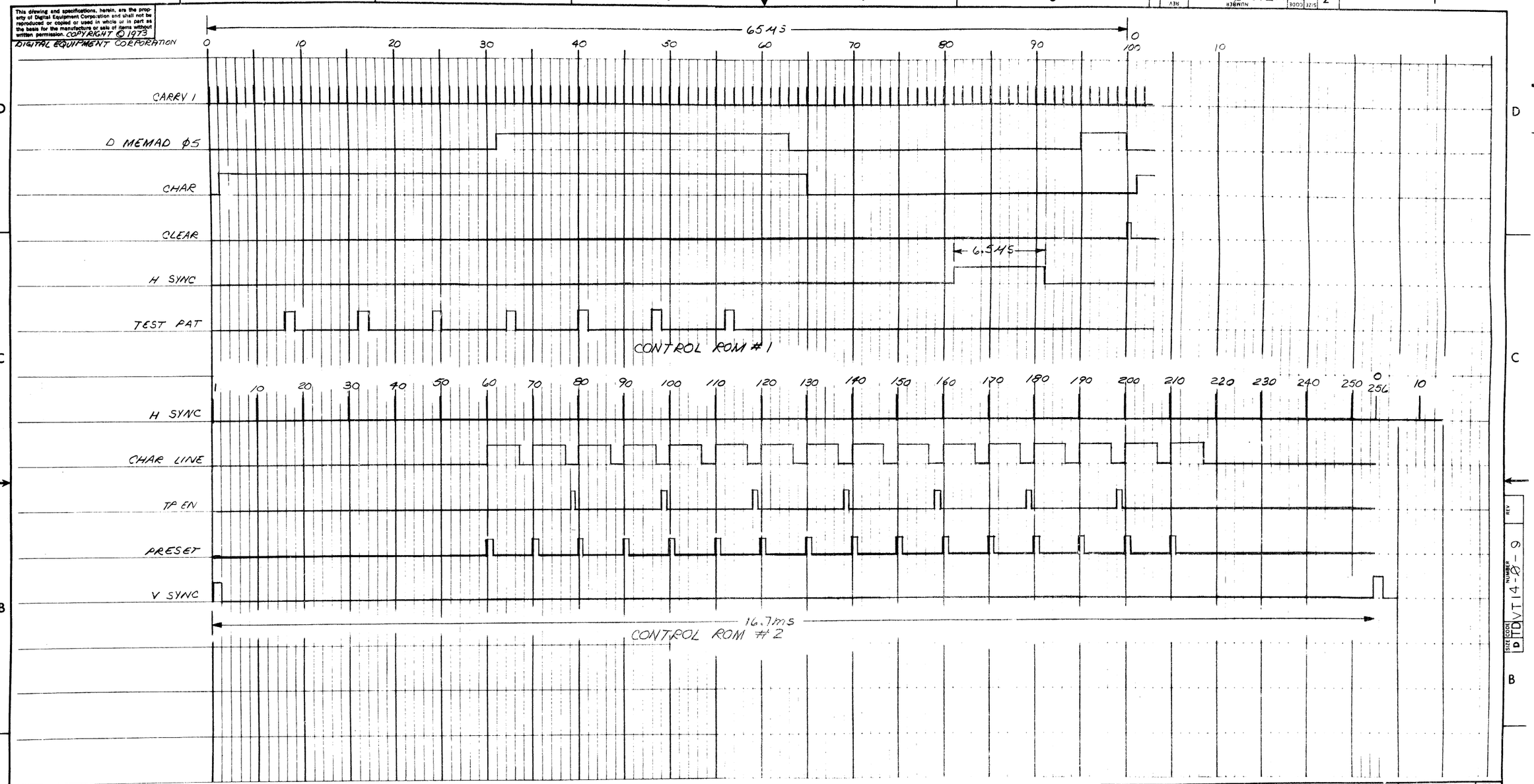
SCALE NONE

SHEET 2 OF 2

SIZE	CODE	NUMBER	REV.
D	TD	VT14-Ø-8	

DIST.

SIZE D CODE TD NUMBER VT14-Ø-8 REV



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		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: /

		DATE
DRN.	M. Pierce	10/30/73
CHK'D.	S. Roberts	12/7/73
ENG.	D. Mintz	12/7/73
PROJ. ENG.	D. Mintz	12/7/73
PROD.		

NEXT HIGHER ASSY.: B-DD-VT14-0
SCALE: NONE
SHEET 1 OF 1
DIST

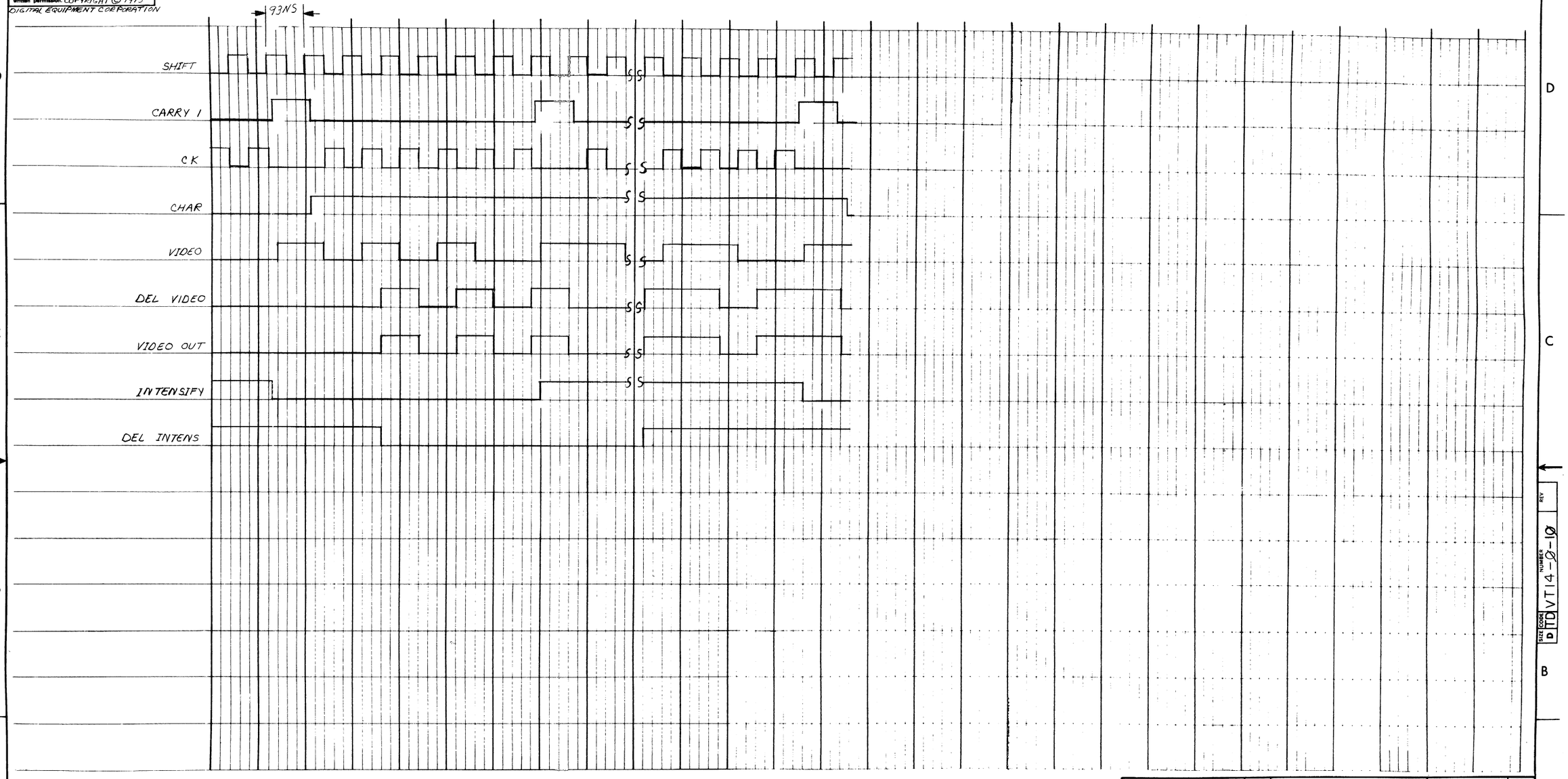
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL ROM # 1 & # 2 TIMING

SIZE	CODE	NUMBER	REV.
D	TD	VT14-0-9	

REVISIONS: REV. | CHANGE NO. | CHK

DEC FORM NO. DRD 122



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN. M. Pierce	DATE 9/25/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D S. Roberts	DATE 12/7/73	
ENG. B. Mac	DATE 12/7/73	
PROJ. ENG. B. Mac	DATE 12/7/73	
PROD. R. K. Dale	DATE 3-7-74	

TITLE: VIDEO GENERATION TIMING

NEXT HIGHER ASSY. B-DD-VT14-Ø

SIZE D | CODE TD | NUMBER VT14-Ø-1Ø | REV.

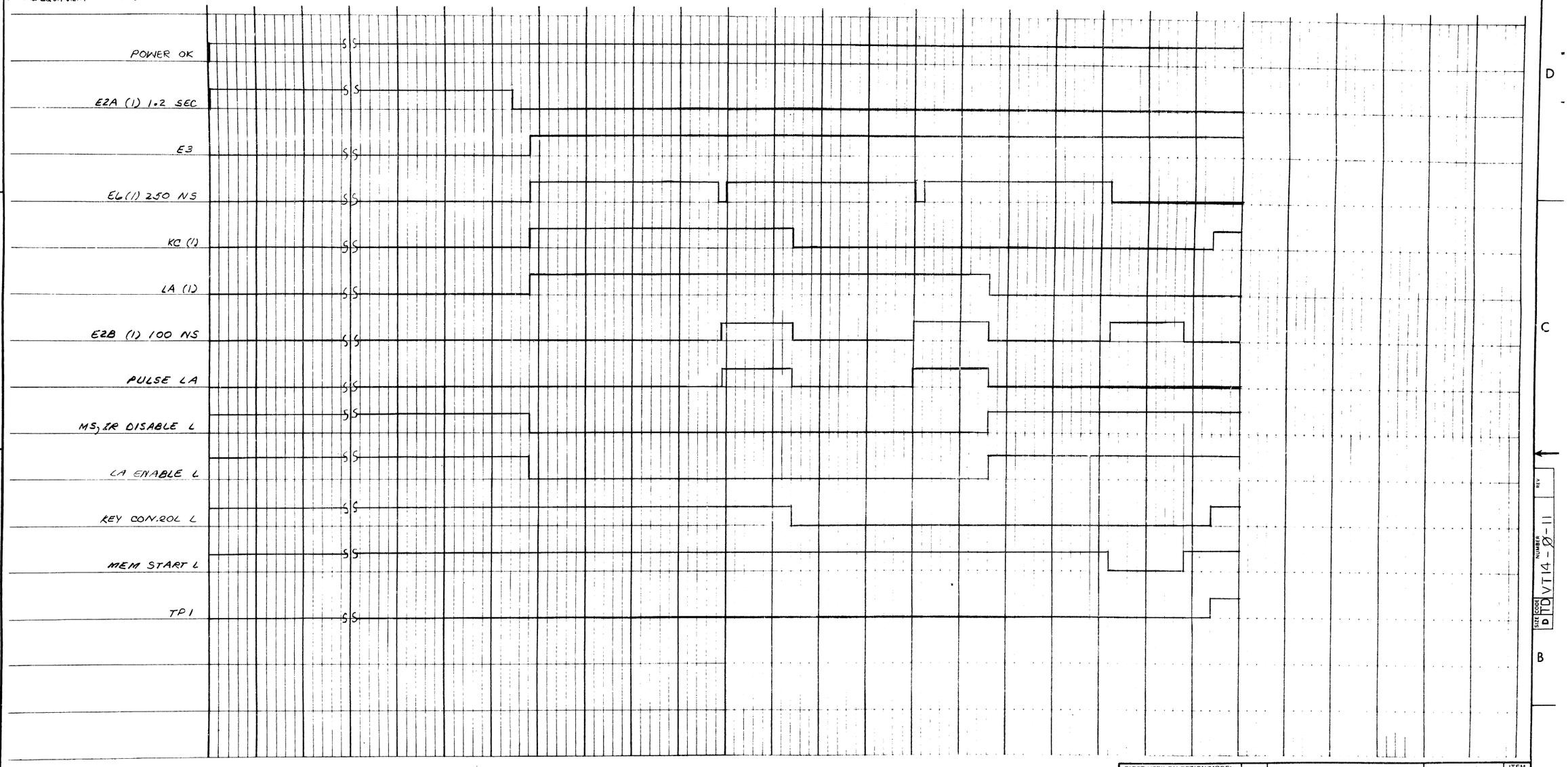
SCALE NONE

SHEET 1 OF 1

DIST.

REVISIONS	REV.	CHANGE NO.	CHK

DEC FORM NO. DRD 122



REVISIONS	REV.	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN. M. Pierce	DATE 10/25/73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D S. Roberts	DATE 12/7/73	
ENG. [illegible]	DATE [illegible]	TITLE: AUTO-RESTART TIMING
PROJ. ENG. [illegible]	DATE [illegible]	
PROD. [illegible]	DATE [illegible]	

NEXT HIGHER ASSY. B-DE-VT14-0

SCALE NONE

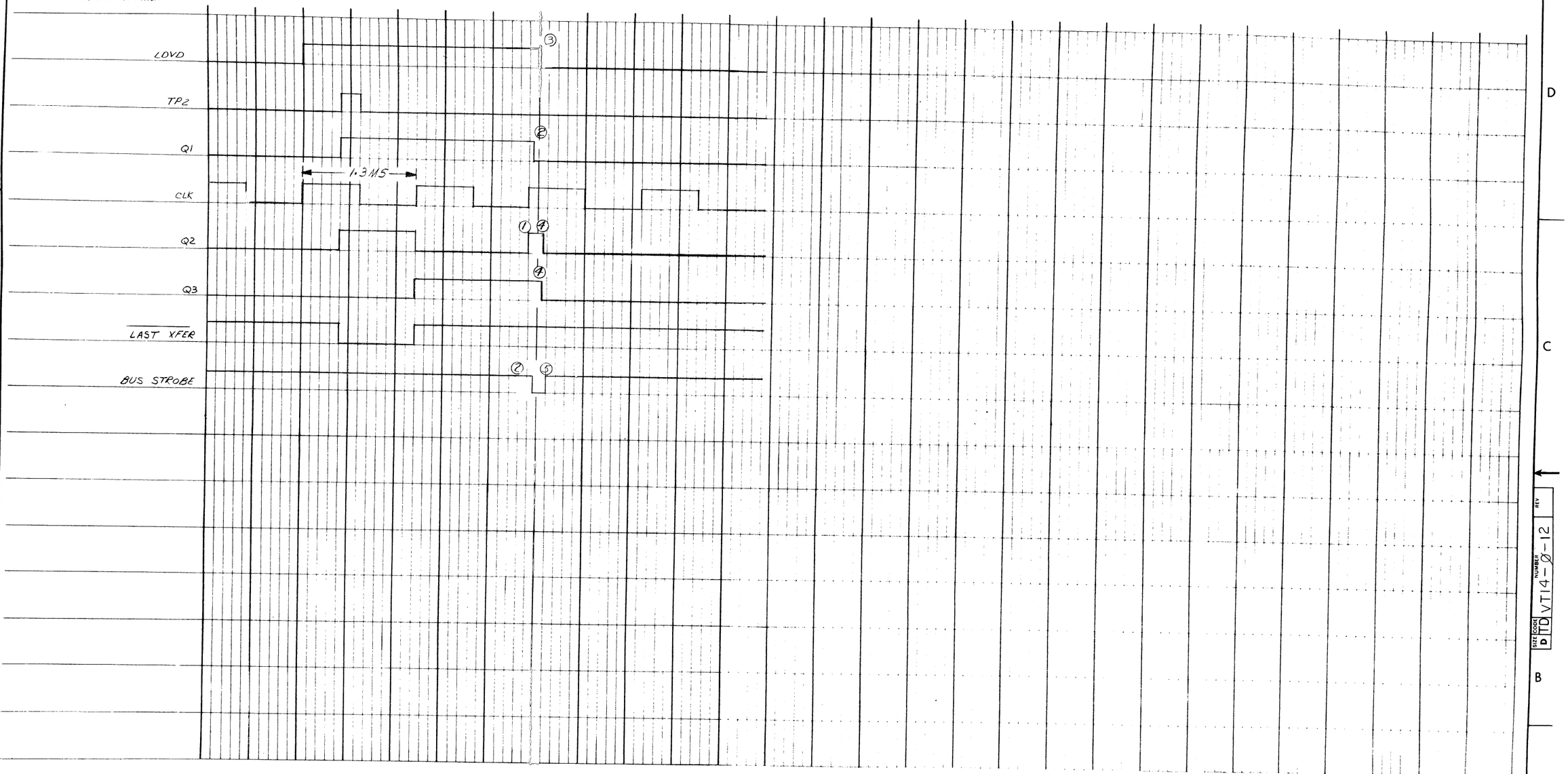
SHEET 1 OF 1

SIZE	CODE	NUMBER	REV.
D	TD	VT14-0-11	

DIST

DEC FORM NO. DRD 122

DIGITAL EQUIPMENT CORPORATION



NOTE: ①&② INDICATE RELATIVE TIME SEQUENCES.

REVISIONS	REV.	CHK	CHANGE NO.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

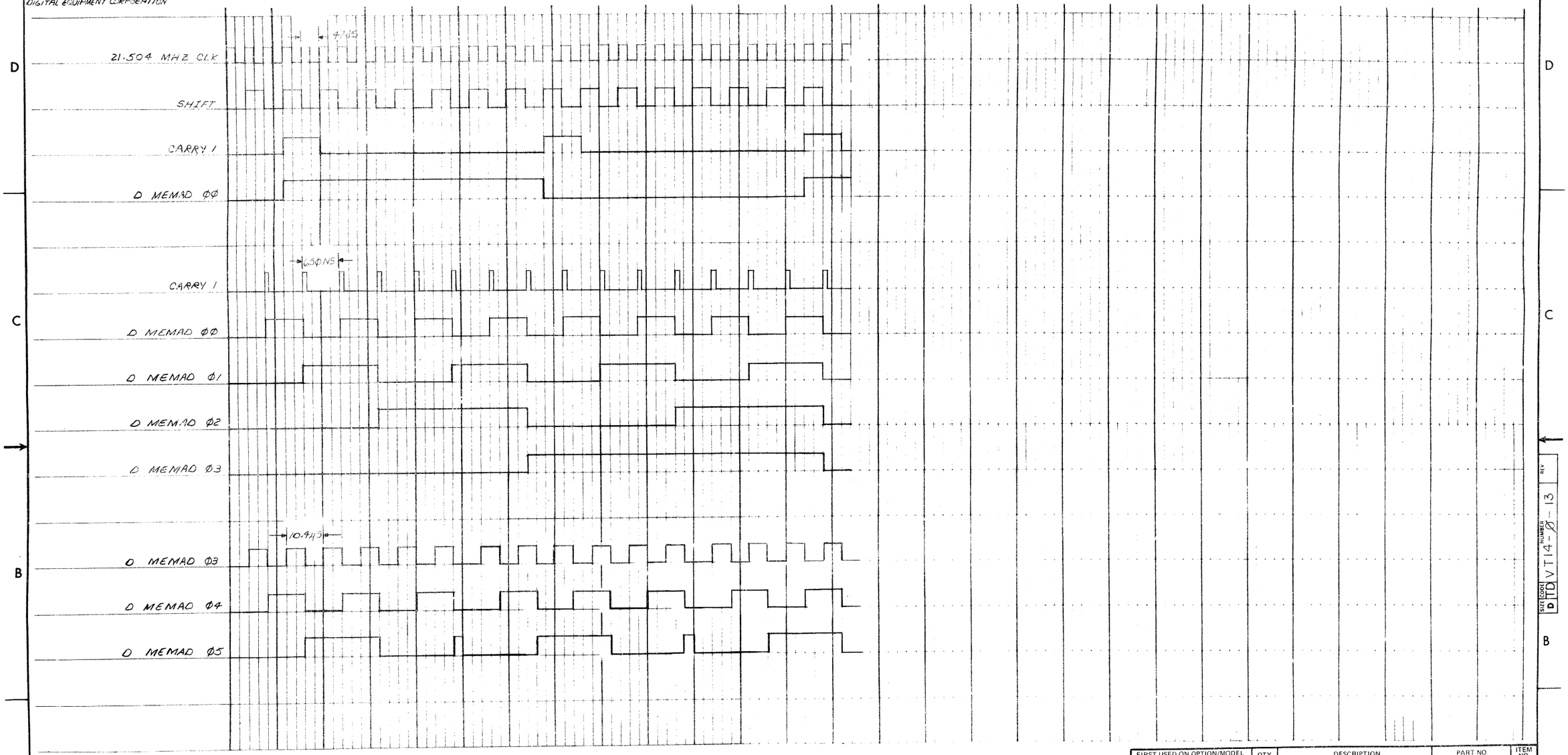
MATERIAL —

FINISH —

DRN. M.C.	DATE 11/24/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D J. Roberts	DATE 12/7/73	
ENG. B. Mc.	DATE 11/30/73	TITLE EXTENDED IOT TIMER
PROJ. ENG. B. Mc.	DATE 11/30/73	
PROD. R. K. Cl...	DATE 12/21/73	
NEXT HIGHER ASSY. B-DD-VT14-Ø		SIZE D CODE TD NUMBER VT14-Ø-12 REV.
SCALE NONE		
SHEET 1 OF 1		DIST.

SIZE D CODE TD NUMBER VT14-Ø-12 REV.

DEC FORM NO. DRD 122



REVISIONS		
REV	CHANGE NO.	CHK

FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
VT14		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN. Bill Pearce	DATE 10/16/73	digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
CHK'D. S. Robertson	DATE 12/7/73	
ENG. L. Mac	DATE 1/1/74	
PROJ. ENG. L. Mac	DATE	
PROD. [illegible]	DATE [illegible]	

NEXT HIGHER ASSY. B-DD-VT14-0

SCALE NONE

SHEET 1 OF 1

TITLE: PRIMARY VIDEO TIMING

SIZE	CODE	NUMBER	REV.
D	TD	VT14-0-13	

DIST.

DEC FORM NO. DRD 122

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 10/23/73

TITLE Serial Line Interface Calibration

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	VT14-00003	MORO	2/74	S. Mora	3/11/74

ENG	APPD	SIZE	CODE	NUMBER	REV
S. Mora	S. Mora	A	SP	VT14-Ø-14	A

1.0 Scope.

This document references the switch or jumper options used with the serial line interface modules. Factory settings are listed as well as functional descriptions of the options.

2.0 M7483.

This half of the serial line module pair is located in the PDP 14.

2.1 Switch 1 (8 Section Rocker)

Section	Function On	Function Off	Factory Setting
1	Odd Parity	No Parity	On
2	1 Stop Bit	2 Stop Bits	On
3	7 Data Bits/ Char	8 Data Bits/ Char	ON
4	Enable Echo Loop	Disable Echo Loop	Off
5	Enable LD Output 6	Disable LD Output 6	Off
6	Enable LD Output 1	Disable LD Output 1	On
7	LOW PRIORITY	HI PRIORITY	ON
8	-----	-----	---

2.2 Switch 2 (6 Position Rotary)

Position	Function
1	---
2	9,600 BAUD (Factory Setting)
3	1,200 BAUD
4	300 BAUD
5	150 BAUD
6	---

3.0 M8655.

This half of the serial line module pair is located in the VT14.

3.1 Jumpers

Jumper	Function IN	Function OUT	Factory Setting
NS	Parity	No Parity	IN
SB (or W4)	1 Stop Bit	2 Stop Bits	IN
EVN	Odd Parity	Even Parity	IN
SWD (or W3)	Status Word	No Status Word	IN
TTY (or W1)	Filter IN	Filter OUT	OUT
FIL	VTØ5 Fill	No VTØ5 FIL	OUT
NB1	SEE TABLE BELOW		IN
NB2	"	"	OUT
W2	-----	-----	IN
W5	-----	-----	

Data Bits/Char	8	7	6	5
NB 1	OUT	IN	OUT	IN
NB 2	OUT	OUT	IN	IN

3.2 Transmit Switch (8 Section Rocker)

Section	Function ON	Function OFF	Factory Setting
1	B3 (SEE BAUD	RATE TABLE)	ON
2	Receive Baud Rate=150	Transmit=Receive Baud Rate	OFF
3	MSB = 1	MSB = Ø	OFF
4	↑	↑	ON
5	(Device Code	$ØØ_8$ to 77_8)	ON
6	↓	↓	OFF
7			OFF
8	LSB = 1	LSB = Ø	ON

3.3 Receive Switch (8 Section Rocker)

Section	Function ON	Function OFF	Factory Setting
1	B1 (SEE BAUD	RATE TABLE)	ON
2	B2 (SEE BAUD	RATE TABLE)	ON
3	MSB = 1	MSB = Ø	OFF
4	↑	↑	ON
5	(Device Code	$ØØ_8$ to 77_8)	ON
6	↓	↓	OFF
7			OFF
8	LSB = 1	LSB = Ø	OFF

3.4 Baud Rate Table

B1	B2	B3	Baud Rate
OFF	OFF	OFF	110
OFF	OFF	ON	150
OFF	ON	OFF	300
OFF	ON	ON	600
ON	OFF	OFF	1200
ON	OFF	ON	2400
ON	ON	OFF	4800
ON	ON	ON	9600

FAST CYCLE * DURATION 1.2 [illegible] SEC NL

SLOW CYCLE DURATION 1.4 [illegible]

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 TRAP (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	REV
CHK / CHANGE NO.	
AV / 8E-00049	A
NARH / 8E-00049	B
SMG / 11-10-71	
L. KLOTZ	

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

DRN.	DATE	12-9-71
CHK'D.	DATE	12/14/71
ENG.	DATE	
PROJ. ENG.	DATE	
PROD.	DATE	

NEXT HIGHER ASSY
A-ML-PDP8/E-C

SCALE NONE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
TIMING
(PDP8/E)

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

DIST.

DEC FORM NO. DRD 102A

PDP8/E-0-05 REV B

EXTERNAL I/O CYCLE DURATION T

NEXT CYCLE

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 T-700 T-600 T-500 T-400 T-300 T-200 T-100 T 0 100 200 300 400

CLOCK L

CONTROL
- MEM START L
- INT STROBE
- 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
- INHIBIT CURRENT

*1

*2

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	REV.	CHANGE NO.	CHK.

DEC FORM NO. DRD 102A

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]	1-7-71
CHK'D.	[illegible]	1/11/71
ENG.	Larry Harden	1/12/71
PROJ. ENG.	Dave Bagley	1/12/71
PROD.	Larry Boyer	1/13/71

NEXT HIGHER ASSY: A-ML-PDP8/E-Ø

SCALE: NONE

SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

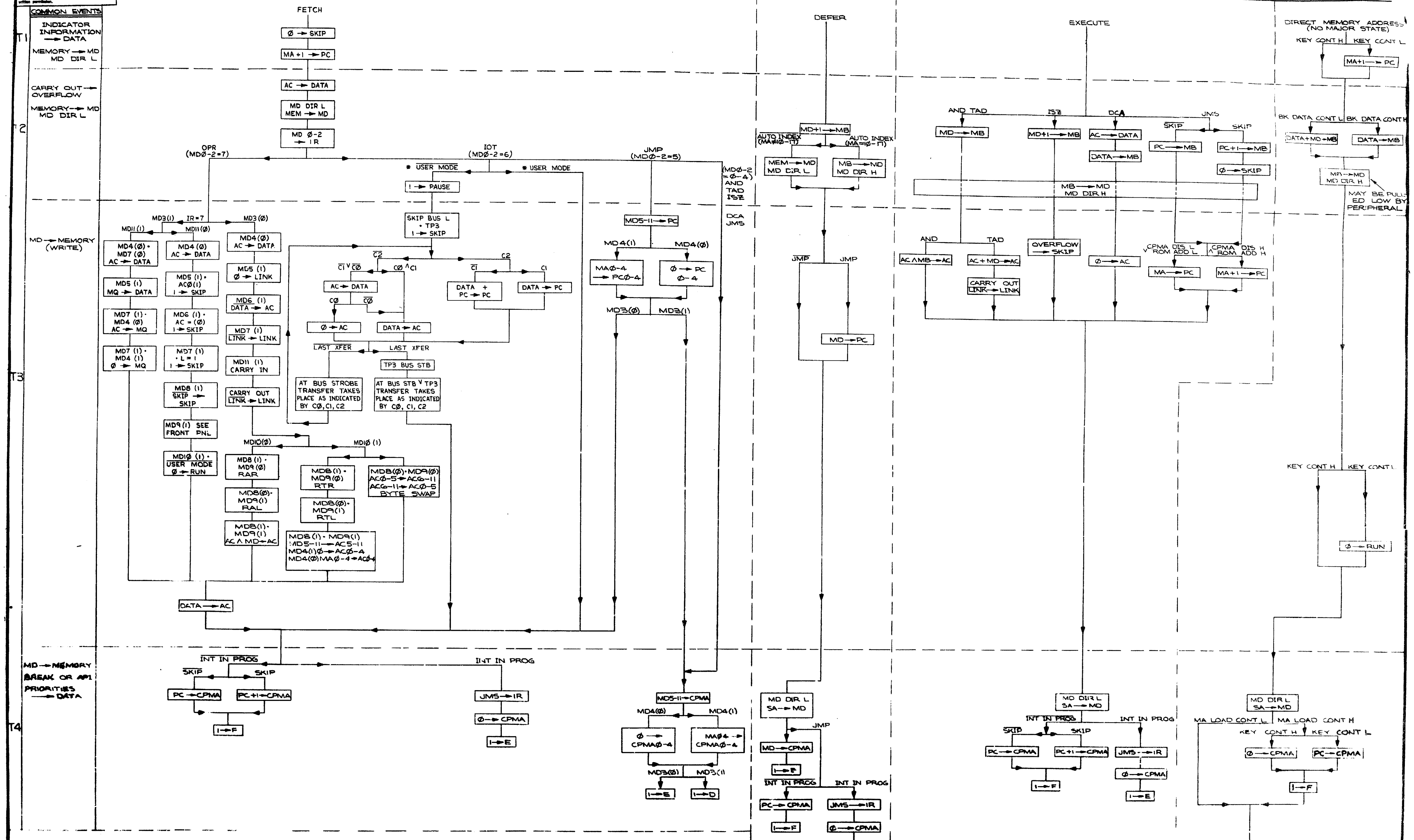
TITLE: TIMING (PDP8/E)

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

DIST.

ahp

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



NOTES:

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

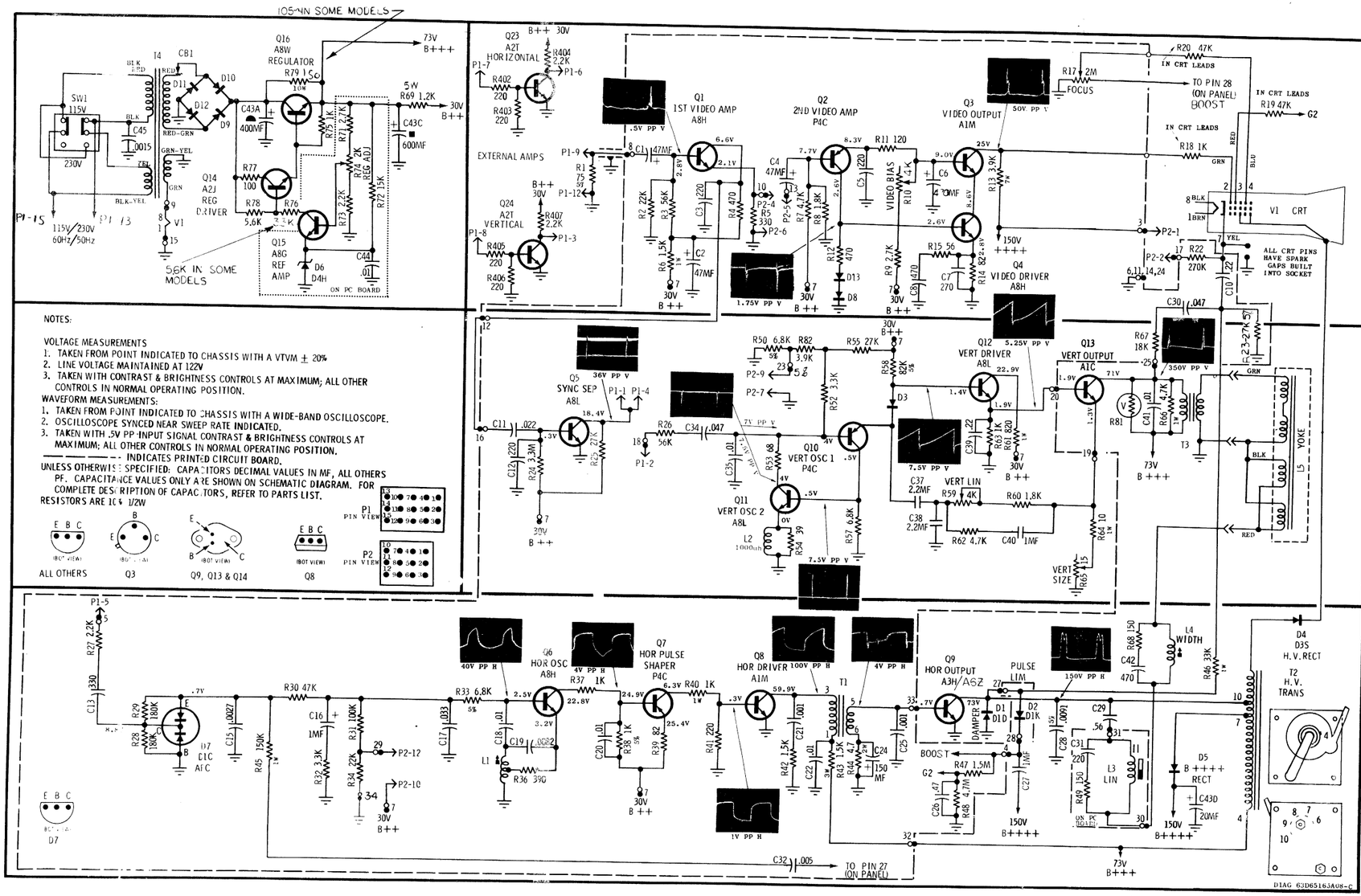
FIRST USED ON OPTION/MODEL
PDP8/E

EQUIPMENT CORPORATION

TITLE
PROCESSOR
FLOW CHART

TEST PROGRAM ASSY
A-VL-PDP8/E-0

E FD PDP8/E-0-06 A



NOTES:

VOLTAGE MEASUREMENTS
1. TAKEN FROM POINT INDICATED TO CHASSIS WITH A VTVM ± 20%
2. LINE VOLTAGE MAINTAINED AT 122V
3. TAKEN WITH CONTRAST & BRIGHTNESS CONTROLS AT MAXIMUM; ALL OTHER CONTROLS IN NORMAL OPERATING POSITION.

WAVEFORM MEASUREMENTS:
1. TAKEN FROM POINT INDICATED TO CHASSIS WITH A WIDE-BAND OSCILLOSCOPE.
2. OSCILLOSCOPE SYNCED NEAR SWEEP RATE INDICATED.
3. TAKEN WITH .5V PP INPUT SIGNAL CONTRAST & BRIGHTNESS CONTROLS AT MAXIMUM; ALL OTHER CONTROLS IN NORMAL OPERATING POSITION.

———— INDICATES PRINTED CIRCUIT BOARD.

UNLESS OTHERWISE SPECIFIED: CAPACITORS DECIMAL VALUES IN MF, ALL OTHERS PF. CAPACITANCE VALUES ONLY ARE SHOWN ON SCHEMATIC DIAGRAM. FOR COMPLETE DESCRIPTION OF CAPACITORS, REFER TO PARTS LIST.

RESISTORS ARE 10% 1/2W

REV	CHANGE NO.	CHK
A	3010326-02	

PUC1

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		
1	SPRING SPECIAL CRT ADAPTR GRND	41D65987A01	183
1	HARDW TRANSISTOR Q3,Q8	42D68719A01	182
1	SOCKET TRANSISTOR Q9,Q13,Q16	9C63825A01	181
1	SOCKET CRT INCLS LEADS R18,R19,R20	9D67555A25	180
1	SCREW TPG 8-18 X 1 DEF YOKE CLAMP MTG	3S131480	179
1	SCREW TPG 6-20 X 1/2 CLU PAN HD TRANSISTOR MTG Q9,Q13,Q16	3S136050	178
1	RIVET DRIVE PIN NYLON HV TRANSF MTG	5S10281A03	177
1	INSULATOR TRANSISTOR COVER Q9,Q13,Q16	14V25000A41	176
1	INSULATOR MOLDED RUBBER SS RECT CAP/HV TRANSF	14C68842A04	175
1	INSULATOR MICA TRANSISTOR SOCKET Q9,Q13,Q16	19A562353	174
1	HEAT SINK: Q3	26C66745A05	173
1	GROMMET PLASTIC PC PANEL MTG	5B69911A01	172
1	COVER NYLON SLIDE SWITCH(SW-1)	15S10630A01	171
1	CONTACT RECPT FOR CONN(P1,P2)	39S10184A41	170
1	(P2) CONNECTOR RECPT: 12 CONTACT LESS CONTACTS	15S10183A27	169
1	(P1) CONNECTOR RECPT: 15 CONTACT LESS CONTACTS	15S10183A30	168
1	CONNECTOR PC PANEL: 9 CONTACT ON CHASSIS	31D70084A04	167
1	CONNECTOR, 2ND ANODE	42D65864A54	166
1	CLAMP METAL DEF YOKE MTG	42B66166A15	165
1	CAP SS RECTIFIER (H.V. TRANSF PRI/SEC LEAD)	9D66133A30	164
1	CRT (SYLVANIA ST5449A OR CLINTON CE226-M12P4S)	96S233A01	163

MOTOROLA
DEC MONITOR
NUMBER
63D65.05A08

FIRST USED ON OPTION/MODEL	
VTØ5	

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

DRN.		DATE
CHK'D.		DATE
ENG.		DATE 10/30/72
PROJ. ENG.		DATE 10 Oct 72
PROD.		DATE

NEXT HIGHER ASSY.: A-ML-VTØ5-Ø

SCALE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
VTØ5
RASTER DISPLAY

SIZE	CODE	NUMBER	REV.
D	CS	3010326-0-3	A

DIST.

DEC FORM NO DRD 100-A

1	T-4	Power	25D68164A17	162	1	R-31	100K 10% 1/2W	6S125534	108	1	D-13	Diode: low power	48D67120A11	53
1	T-3	Vert. Output	25D65840A22	161	1	R-30	47K 10% 1/2W	6S125862	107	1	D-12	Rectifier, silicon: 91A05	48S191A05	52
1	T-2	H.V. Transformer: complete	24D69791A11	160	1	R-29	180K 10% 1/2W	6S125531	106	1	D-11	Rectifier, silicon 91A05	48S191A05	51
1	T-1	Horiz. Driver	25D67440A03	159	1	R-28	180K 10% 1/2W	6S125531	105	1	D-10	Rectifier, silicon 91A05	48S191A05	50
1	SW-1	Switch, slide. DPDT: (115V/230V)	40S10624A01	158	1	R-27	2200 10% 1/2W	6S129875	104	1	D-9	Rectifier, silicon 91A05	48S191A05	49
1	R-407	2200 10% 1/2W	6S129875	157	1	R-26	56K10% 1/2W	6S127541	103	1	D-8	Diode, low power	48D67120A11	48
1	R-406	220 10% 1/2W	6S127099	156	1	R-25	27K 10% 1/2W	6S121300	102	1	D-7	Diode, dual: DIC detector	48S134917	47
1	R-405	220 10% 1/2W	6S127099	155	1	R-24	3.3 meg 10% 1/2W	6S127538	101	1	D-6	Diode, silicon: zener D4H	48S137266	46
1	R-404	2200 10% 1/2W	6S129875	154	1	R-23	27K 5% 1/2W	6S10053C67	100	1	D-5	Rectifier, silicon: 91A05	48S191A05	45
1	R-403	220 10% 1/2W	6S127099	153	1	R-22	270K 10% 1/2W	6S129296	99	1	D-4	Rectifier, H.V.: sel: D3S	48S137201	44
1	R-402	220 10% 1/2W	6S127099	152	1	R-20	Part of CRT Socket Assembly		98	1	D-3	Diode, low power	48D67120A11	43
1	R-82	3900 5% 1/2W	6S10053C47	151	1	R-19	Part of CRT Socket Assembly		97	1	D-2	Diode: pulse limiter; DIK	48S134978	42
1	R-81	Varistor	6C66263A08	150	1	R-18	Part of CRT Socket Assembly		96	1	D-1	Diode, silicon: DID; Damper	48S134921	41
1	R-79	105 10% 10W WW	17S135589	149	1	R-15	56 10% 1/2W	6S131412	95	1	C-45	.0015 mf 20% 1.4KV Z5U	21S10330A05	40
1	R-78	5600 10% 1/2W	6S127005	148	1	R-14	82 10% 1/2W	6S127516	94	1	C-44	.01 mf + 80 - 20% 50V Z5V	21S180C98	39
1	R-77	100 10% 1/2W	6S129221	147	1	R-13	3900 10% 7W WW	17S740259	93	1	C-43	400 mf/125V, 600 mf/100V, 200 mf/50V, 20 mf/200V lytic	23C65807A47	38
1	R-76	5600 10% 1/2W	6S124506	146	1	R-12	470 10% 1/2W	6S127633	92			470 pf 10% 500V Y5F	21S180A71	37
1	R-75	1000 10% 1/2W	6S121301	145	1	R-11	120 10% 1/2W	6S128226	91	1	C-42	.01 mf 10% 600V mylar	8S10064A06	36
1	R-73	2200 10% 1/2W	6S129875	144	1	R-9	2700 10% 1/2W	6S119926	90	1	C-41	1.0 mf 10% 100V mtlz polyester	8S10212A10	35
1	R-72	15K 10% 1/2W	6S124551	143	1	R-8	1800 10% 1/2W	6S122445	89	1	C-40	.22 mf 10% 160V polyester	8S10191B67	34
1	R-71	2700 10% 1/2W	6S119926	142	1	R-7	4700 10% 1/2W	6S121847	88	1	C-39	2.2 mf 10% 100V mtlz polyester	8S10212A20	33
1	R-69	1200 10% 3W WW	17S647132	141	1	R-6	1500 10% 1W	6S128955	87	1	C-38	2.2 mf 10% 100V mtlz polyester	8S10212A20	32
1	R-68	150 10% 1/2W	6S124797	140	1	R-5	330 10% 1/2W	6S127940	86	1	C-37	.01 mf 10% 160V polyester	8S10191B98	31
1	R-67	18K 10% 1/2W	6S122848	139	1	R-4	470 10% 1/2W	6S127633	85	1	C-35	.047 mf 10% 160V polyester	8S10191A32	30
1	R-66	4700 10% 1W	6S129064	138	1	R-3	56K 10% 1/2W	6S127541	84	1	C-34	.005 mf 20% 1KV Z5F	21S180D34	29
1	R-64	10 10% 1W	6S10053F17	137	1	R-2	22K 10% 1/2W	6S125568	83	1	C-32	220 pf 10% 500V Y5F	21S180B87	28
1	R-63	1000 10% 1/2W	6S121301	136	1	R-1	75 5% 1/2W	6S10053C06	82	1	C-31	.047 mf 10% 160 V polyester	8S-019-A32	27
1	R-62	470010% 1/2W	6S121847	135	1	R-74	Regulator Adjust: 2K	17D65820A37	81	1	C-30	.56 mf 10% 250V mtlz polyester	8S10212D33	26
1	R-61	820 10% 1W	6S10053F29	134	1	R-65	Vert. Size: 15 ohms	17D65820A38	80	1	C-29	.0082 mf 5% 1000V mylar	8S10064B81	25
1	R-60	1800 10% 1/2W	6S122445	133	1	R-59	Vert. Linearity: 4K	18D66401A44	79	1	C-28	1.0 mf 10% 630V mtlz polyester	8S10212A11	24
1	R-58	82K 5% 1/2W	6S129793	132	1	R-17	Focus: 2 meg.	18D67858A12	78	1	C-27	.47 mf 10% 630V mtlz polyester	8S10212B53	23
1	R-57	6800 10% 1/2W	6S119930	131	1	R-10	Video Bias: 4K	18D66401A54	77	1	C-26	.001 mf 10% 500V Y5F	21S180B51	22
1	R-55	27K 10% 1/2W	6S121300	130	1	Q-24	Vertical: A2T	48S134970	76	1	C-25	150 mf 10V lytic	23D65282A40	21
1	R-54	39 10% 1/2W	6S131972	129	1	Q-23	Horizontal: A2T	48S134970	75	1	C-24	.01 mf 10% 160V polyester	8S10191B56	20
1	R-53	68 10% 1/2W	6S129874	128	1	Q-16	Regulator: A8W	48S137368	74	1	C-22	.001 mf 10% 500V Y5F	21S180B51	19
1	R-52	3300 10% 1/2W	6S124506	127	1	Q-15	Reference Amp: A8G	48S137315	73	1	C-21	.01 mf 10% 160V polyester	8S10191B98	18
1	R-50	6800 5% 1/2W	6S10053C53	126	1	Q-14	Regulator driver: A2J	48S134952	72	1	C-20	.0082 mf 10% 160V polycarb	8S10259A74	17
1	R-49	150 10% 1/2W	6S124797	125	1	Q-13	Vert. output: A1C	48S134900	71	1	C-19	.01 mf 10% 100V polycarb	8S10259A73	16
1	R-48	4.7 meg 10% 1/2W	6S10053D21	124	1	Q-12	Vert. driver: A8L	48S137325	70	1	C-18	.033 mf 10% 160V polyester	8S10191B96	15
1	R-47	1.5 meg 10% 1/2W	6S129417	123	1	Q-11	Vert. oscillator (2): A8L	48S137317	69	1	C-17	1.0 mf 15V lytic	23S10229A01	14
1	R-46	33K 10% 1W	6S127634	122	1	Q-10	Vert. oscillator (1): P4C	48S137324	68	1	C-16	.0027 mf 10% 500V Z5F	21S180C47	13
1	R-45	150K 10% 1W	6S120141	121	1	Q-9	Horiz output: A6Z	48S137203	67	1	C-15	330 pf 10% 500V X5F	21S131625	12
1	R-44	4.7 10% 2W WW	17S10159A04	120	1	Q-8	Horiz driver: A1W	48S134919	66	1	C-13	220 pf 20% 100V X5F	21S180D90	11
1	R-43	1500 10% 3W fxd mtl film	17S10130B07	119	1	Q-7	Horiz pulse shaper: P4C	48S137324	65	1	C-12	.022 mf 10% 160V polyester	8S10191A21	10
1	R-42	1500 10% 1/2W	6S127513	118	1	Q-6	Horiz oscillator: A8H	48S137317	64	1	C-11	.22 mf 10% 160V polyester	8S10191B67	9
1	R-41	220 10% 1/2W	6S127099	117	1	Q-5	Sync separator: A8L	48S137325	63	1	C-10	470 pf 10% 500V X5F	21S180E55	8
1	R-40	1000 10% 1W	6S127547	116	1	Q-4	Video driver: A8H	48S137317	62	1	C-8	270 pf 10% 500V X5F	21S180E78	7
1	R-39	82 10% 1/2W	6S127516	115	1	Q-3	Video output: A1W	48S134919	61	1	C-7	470 mf 16V lytic	23S10295A78	6
1	R-38	1000 5% 1/2W	6S10053C33	114	1	Q-2	2nd video: P4	48S137324	60	1	C-6	220 pf 20% 100V X5F	21S180D	5
1	R-37	1000 10% 1/2W	6S121301	113	1	Q-1	1st video: A8H	48S137317	59	1	C-5	47 mf 35V lytic	23S10295A33	4
1	R-36	390 10% 1/2W	6S125545	112	1	L-5	Deflection Yoke	24D68523A13	58	1	C-4	220 pf 20% 100V X5F	21S180D	3
1	R-34	22K 10% 1/2W	6S125568	111	1	L-4	Horiz width: incls C42 & R68	24V25000A74	57	1	C-3	47 mf 35V lytic	23S10295A33	2
1	R-33	6800 5% 1/2W	6S10053C53	110	1	L-3	Horiz Linearity Compensating: 1000 HH	24D69163A09	56	1	C-2	47 mf 35V lytic	23S10295A33	1
1	R-32	3300 10% 1/2W	6S124506	109	1	L-2		24D68801A26	55	1	C-1			
					1	L-1	Horiz set	24D68822A08	54					

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VTØ5		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓

MATERIAL

FINISH

DRN. DATE

CHK'D DATE 10/3/82

ENG DATE 10/3/82

PROJ. ENG DATE 10-04-82

PROJ DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE VTØ5 MASTER LIST

NEXT HIGHER ASSY. A-ML-VTØ5-0

SIZE D | CODE CS | NUMBER 3C10326-03 | REV A

SCALE

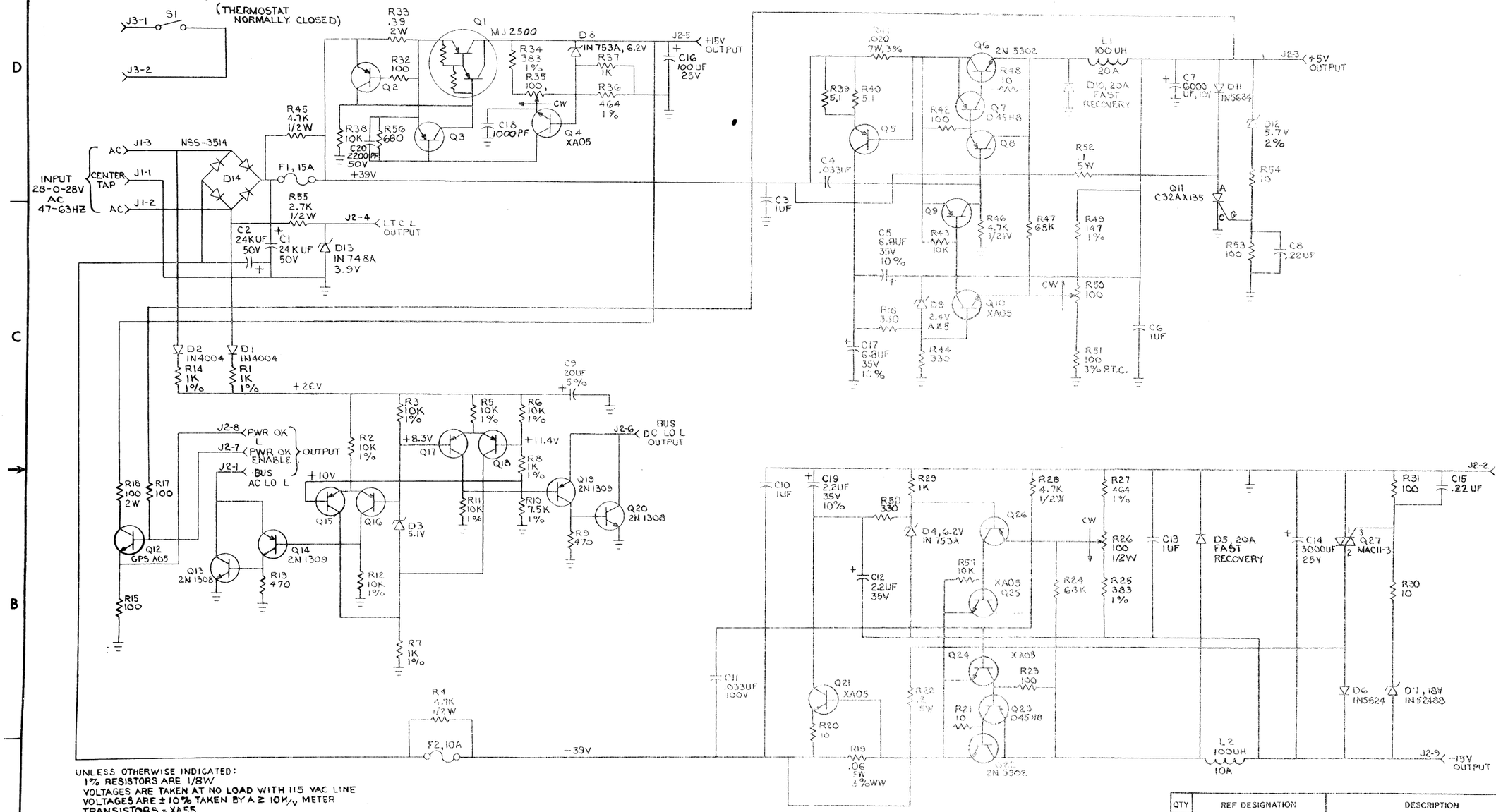
SHEET 2 OF 2

DIST

REV.	REVISIONS	CHK
A	CHANGE NO.	

BRUNING 40-107 15968

DEC FORM NO DRD 100-A



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

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				
CHK	CHANGE NO.	REV		
	5409728-00001	A/B		
	5409728-00002	C		
	5409728-00003	D		
	5409728-00004	E		
	5409728-00005	F		
	5409728-00006	G		
	5409728-00007	H		
	5409728-00008	J		
	5409728-00009	K		
	5409728-00010	L		
	5409728-00011	M		
	5409728-00012	N		
	5409728-00013	P		
	5409728-00016	R		
	5409728-00017	S		
	5409728-00019	T		
	5409728-00020	U		
	5409728-00021			

DRN.	DATE
K. Figueiredo	12-20-71
CHK'D. NANCY MOORE	1-21-72
ENG.	12-28-71
PROJ. ENG.	12-28-71
PROD. R.V. Peterson	1/31/72
NEXT HIGHER ASSY	
SCALE	
SHEET 1 OF 1	

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: REGULATOR BOARD FOR H740

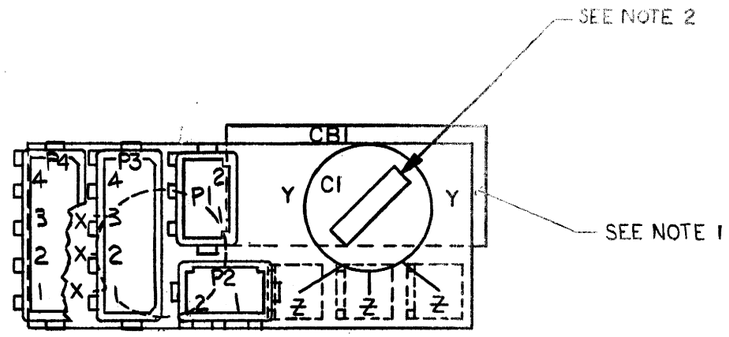
SIZE	CODE	NUMBER	REV.
D	CS	5409728-0-1	U
DIST.			

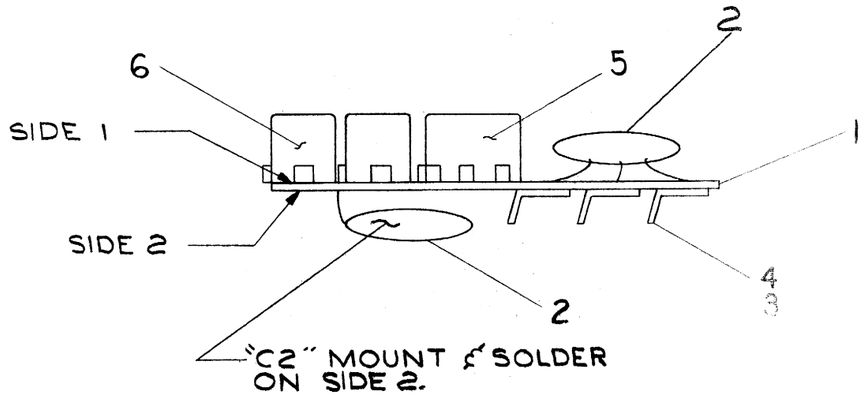
SIZE D CODE CS NUMBER 5409728-0-1 REV U

DEC FORM NO 1RD-135

NOTES:

1. CB1 (CIRCUIT BREAKER) TO BE INSTALLED ON NEXT HIGHEST ASSEMBLY.
2. ETCHED BOARD (ITEM #1) MUST BE U.L. APPROVED LOCATION FOR MANUFACTURERS U.L. NUMBER SHALL BE ON SIDE 1 IN POSITION SHOWN. SIZE 1/8" X 1/2" FULL SCALE MAX.





QTY.	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	P3, P4	4 CIRCUIT P.C. B'D MATE-N-LOCK	1211342-04	6
2	P1, P2	2 CIRCUIT P.C. B'D MATE-N-LOCK	1211342-02	5
3		EYELET #GS4-5	9009000	4
3		FASTON TABS	9008219	3
2	C1, 2	CAP. DUAL-SECTION DISC .02 uf	1010767	2
1		ETCHED CIRCUIT BOARD	5010369	1
		MODULE ECO HISTORY	B-MH-5410370-0-6	REF
		ASSY/DRILLING HOLE LAYOUT	D-AH-5410370-0-5	REF
		X-Y COORDINATE HOLE LOCATION	K-CO-5410370-0-4	REF

FIRST USED ON OPTION/MODEL: H4Ø2

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. D Sullivan	DATE 2/13/73	
CHK'D.	DATE 3.6.73	
ENG.	DATE 4-18-73	
PROJ. ENG.	DATE 4-18-73	
PROD.	DATE 4-16	

NEXT HIGHER ASSY.: D-UA-H4Ø2-Ø-Ø

SCALE —//—

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: POWER CONTROL BOARD (115V)

SIZE	CODE	NUMBER	REV.
C	IA	5410370-0-0	A

DIST.

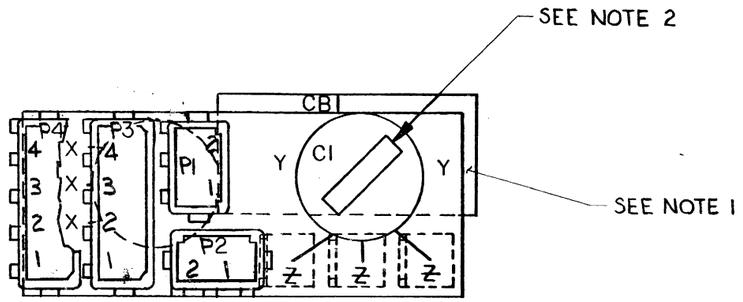
REVISIONS		
REV.	CHANGE NO	CHK

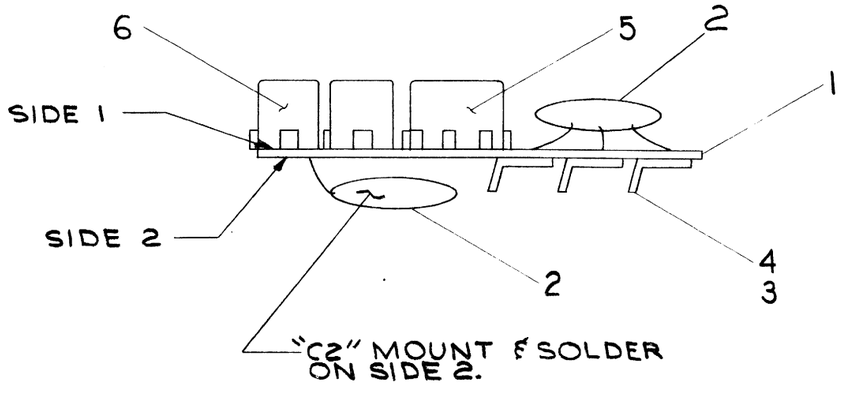
DEC FORM NO. DRC 100-B

SIZE C CODE IA NUMBER 5410370-0-0 REV. A

NOTES:

1. CB1 CIRCUIT BREAKER TO BE INSTALLED ON [illegible] ASSEMBLY.
2. ETCHED BOARD ITEM (1) MUST BE UL APPROVED LOC[illegible] MANUFACTURERS U.L. NO[illegible] TYPE 1 IN [illegible] 3 1/2" FULL SCALE [illegible].





QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	P3,P4	4 CIRCUIT P.C. B'D MATE-N-LOCK	1211342-04	6
2	P1,P2	2 CIRCUIT P.C. B'D MATE-N-LOCK	1211342-02	5
3		EYELET #GS4-5	9009000	4
3		FASTON TABS	7008219	3
2	C1,C2	CAP DUAL-SECTION DISC [illegible]	1010[illegible]	2
1		ETCHED CIRCUIT BOARD	501037[illegible]	1
		MODULE ECO HISTORY	B-MH-5410372-0-6	REF
		ASSY/DRILLING HOLE LAYOUT	D-AH-5410372-0-5	REF
		X-Y COORDINATE HOLE LOC.	X-CO-5410372-0-4	REF

PARTS LIST

FIRST USED ON OPTION/MODEL: H402

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

DRN. D. Sullivan DATE 2-13-13
CHK'D DATE 3-6-13
ENG. DATE 4-19-13
PROJ. ENG. DATE
PROD. DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: POWER CONTROL BOARD (230V)

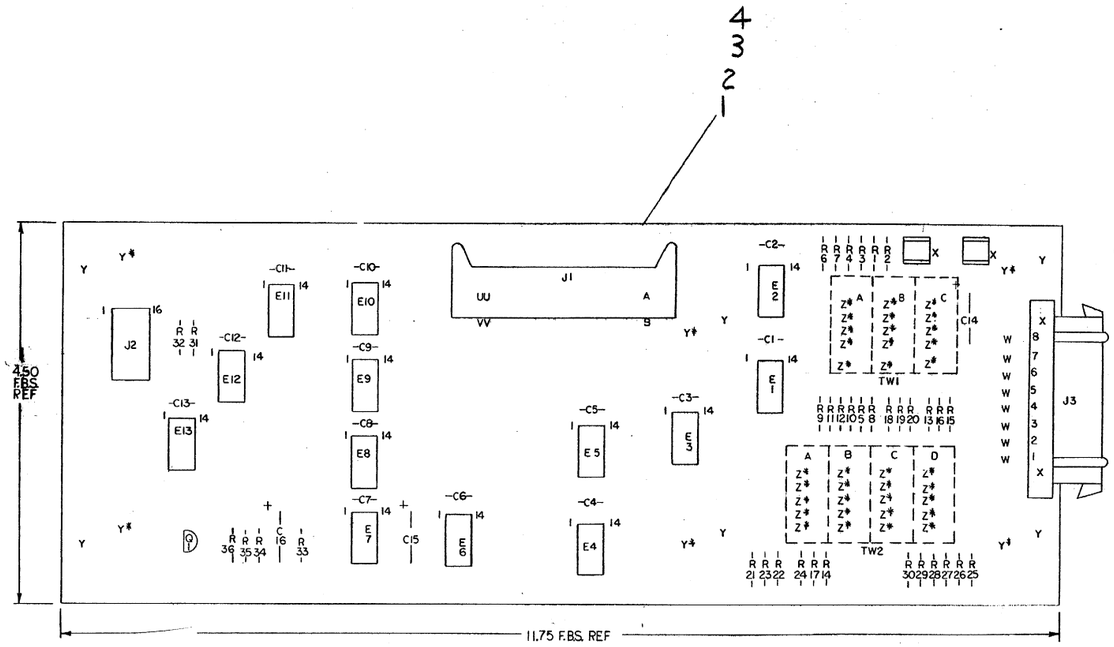
MATERIAL
FINISH
NEXT HIGHER ASSY. D-UA-H402-0-0
SCALE
SHEET

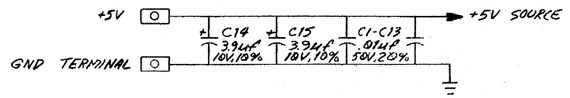
SIZE C CODE TA NUMBER 5410372-0-0 REV. A

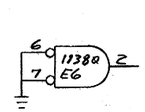
REVISIONS: REV. A — CHANGE NO — CHK

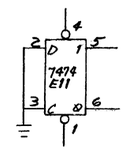
DEC FORM NO DRC 100-B

NOTES:









7493	10	5
7491	10	5
11380	1	8
IC TYPE	GND	+ 5V

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

IC PIN LOCATIONS

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION		1
REF		ASSY DRILLING HOLE LAYOUT	D-AM-54106[illegible]-5	2
REF		ECO MODULE HISTORY	B-MM-54106[illegible]-4	3
1		ETCHED CIRCUIT BOARD	50106CA	4
13	C1-C13	CAP. .01μf, 50V, 20%	1001610	5
1	C16	CAP. 1.0μf, 35V, 10%	1001776	6
2	C14, C15	CAP. 3.9μf, 10V, 10%	1000064	7
1	J1	CONN (40 PIN)	1209941	8
1	J2	IC SOCKET	1210025	9
1	J3	CONN (8 PIN) FEMALE	1209340	10
8		PIN, CONN. FEMALE	1209456	11
1	R34	RES 100Ω 1/4W 5%	1300229	12
30	R1-R28, R31, R36	RES, 2.2K, 1/4W, 5%	1300417	13
3	R32, R33, R35	RES, 1K, 1/4W, 5%	1300365	14
2	R29, R30	RES. 330Ω, 1/4W, 5%	1300295	15
1	TW1	SWITCH ASSY, THUMBWHEEL	1211453	16
1	TW2	SWITCH ASSY, THUMBWHEEL	1211454	17
1	Q1	TRANSISTOR, DEC 3009B	1503188	18
5	E1-E5	I.C. DEC 7404	1909686	19
1	E6	I.C. DEC 11380	1911113	20
1	E13	I.C. DEC 7408	1918153	21
4	E7-E10	IC. DEC 7491	1909052	22
1	E11	I.C. DEC 7474	1905547	23
1	E12	I.C. DEC 7493	1909054	24
2		TERMINAL	9007113	25
2		EYELET (TERMINAL)	9009000	26
2		EYELET	9006745	27

PARTS LIST

FIRST USED ON OPTION MODEL	ETCH BOARD REV
VT14	A

CHK	CHANGE NO. REVISIONS	REV

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		3009B	2N3646

SEMICONDUCTOR CONVERSION CHART

DRN.	DATE	9-12-73
CHK'D.	DATE	11-2-73
ENG.	DATE	11-2-73
PROJ. ENG.	DATE	11-2-73
PROD.	DATE	11/2/73

NEXT HIGHER ASSY

SCALE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
KEYBOARD, VT14
THUMB WHEEL

SIZE	CODE	NUMBER	REV.
D	CS	5410605-0-1	A

DIST.

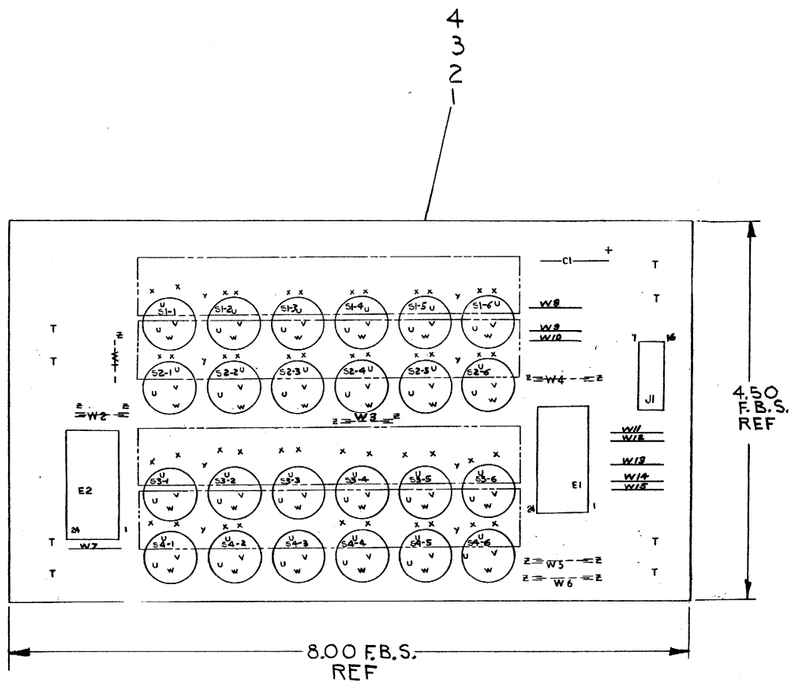
BRUNING 40-522 16699

DEC FORM NO. DRD-135A

NUMBER 5410603-0-1 REV B | SIZE D | CODE CS | SHEET 2

NOTES:

1.) NUTS, (ITEM #11), ARE TO BE USED AT THE 8 "Y" HOLES.



REF				
REF		X-Y COORDINATE HOLE LOCATION	X-CO-5410603-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5410603-0-5	2
REF		MODULE ECO HISTORY	B-MH-5410603-0-6	3
1		ETCHED CIRCUIT BOARD	5010602	4
1	C1	CAP 6.8uF, 35V, 10%	1005306	5
4	S1-S4	SWITCH	1211455	6
1	J1	IC SOCKET	1210025	7
2	E1, E2	IC DEC 74154	1909701	8
12	W1-W6	SPLIT LUG	9006735	9
9	W7-W15	BUS WIRE #22 AWG	9107560-01	10
8		NUTS #4-40	9009280	11

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

74154	12	24
IC TYPE	GND	+ 5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE		
IC PIN LOCATIONS		

BRUNING 40-522 16699

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

FIRST USED ON OPTION MODEL: VT14

ETCH BOARD REV: C

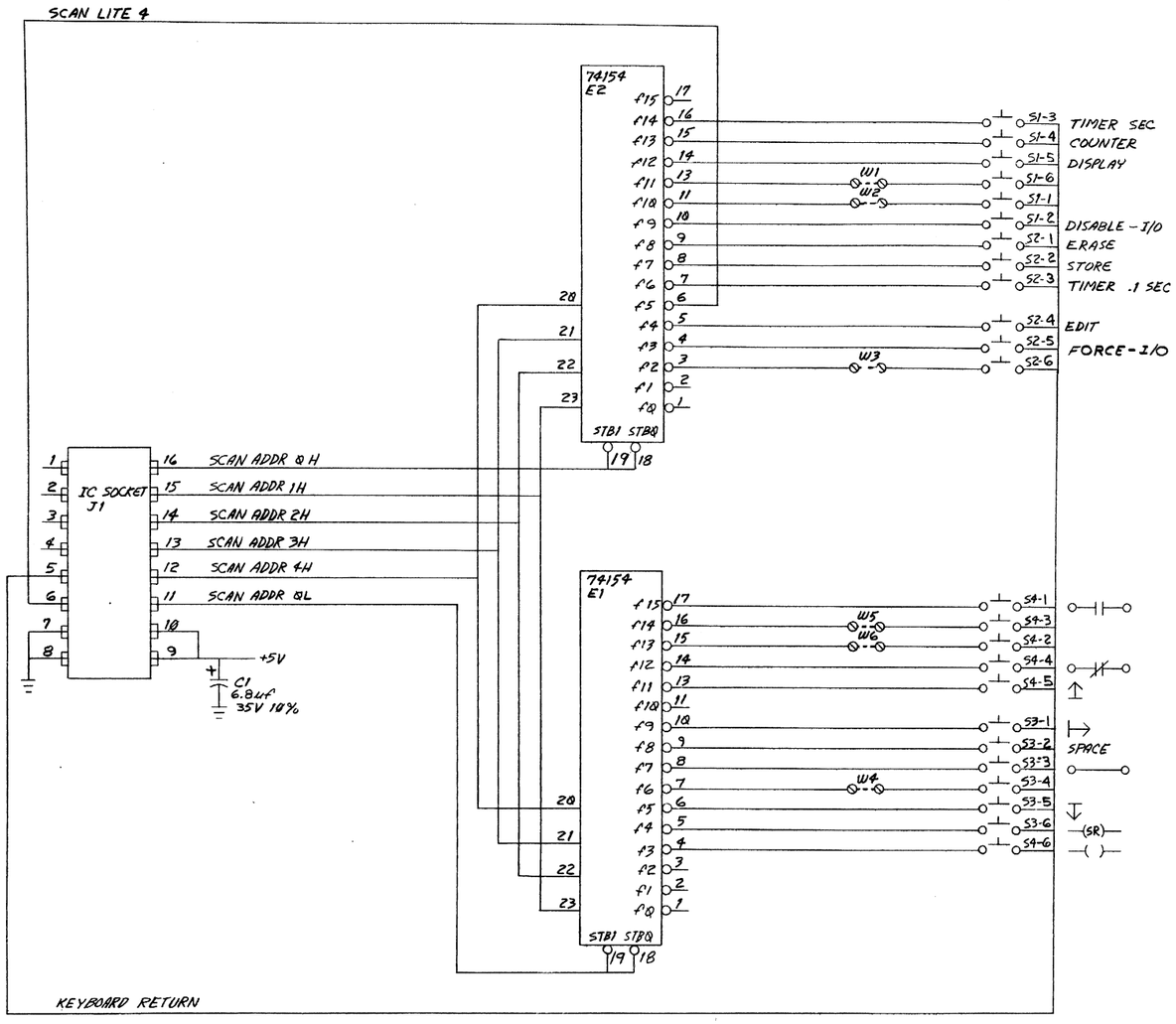
DRN: D. Williams 8-17-73
CHK'D: R. Gumpy 11-21-73
ENG: S. Mm 11-21-73
PROJ. ENG: M. Mm 11-21-73
PROD: R.E. Wilson 12-12-73
NEXT HIGHER ASSY
SCALE
SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: KEYBOARD, VT14 SWITCH

SIZE D | CODE CS | NUMBER 5410603-0-1 | REV B | DIST.

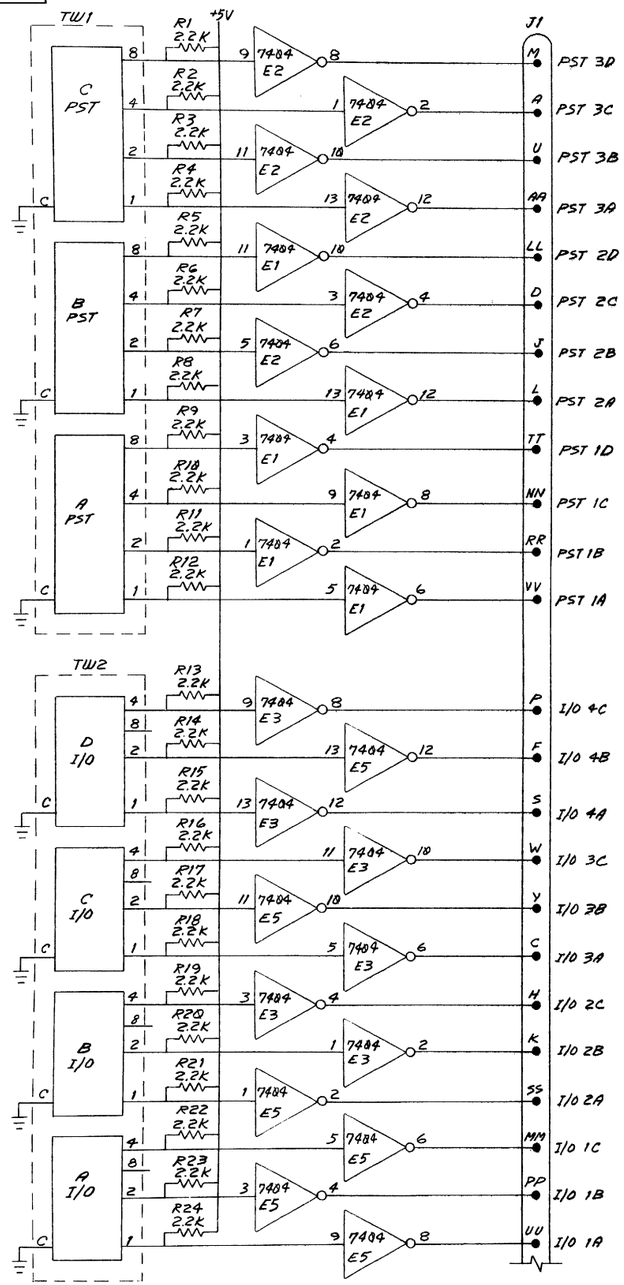
DEC FORM NO. DRD-135A

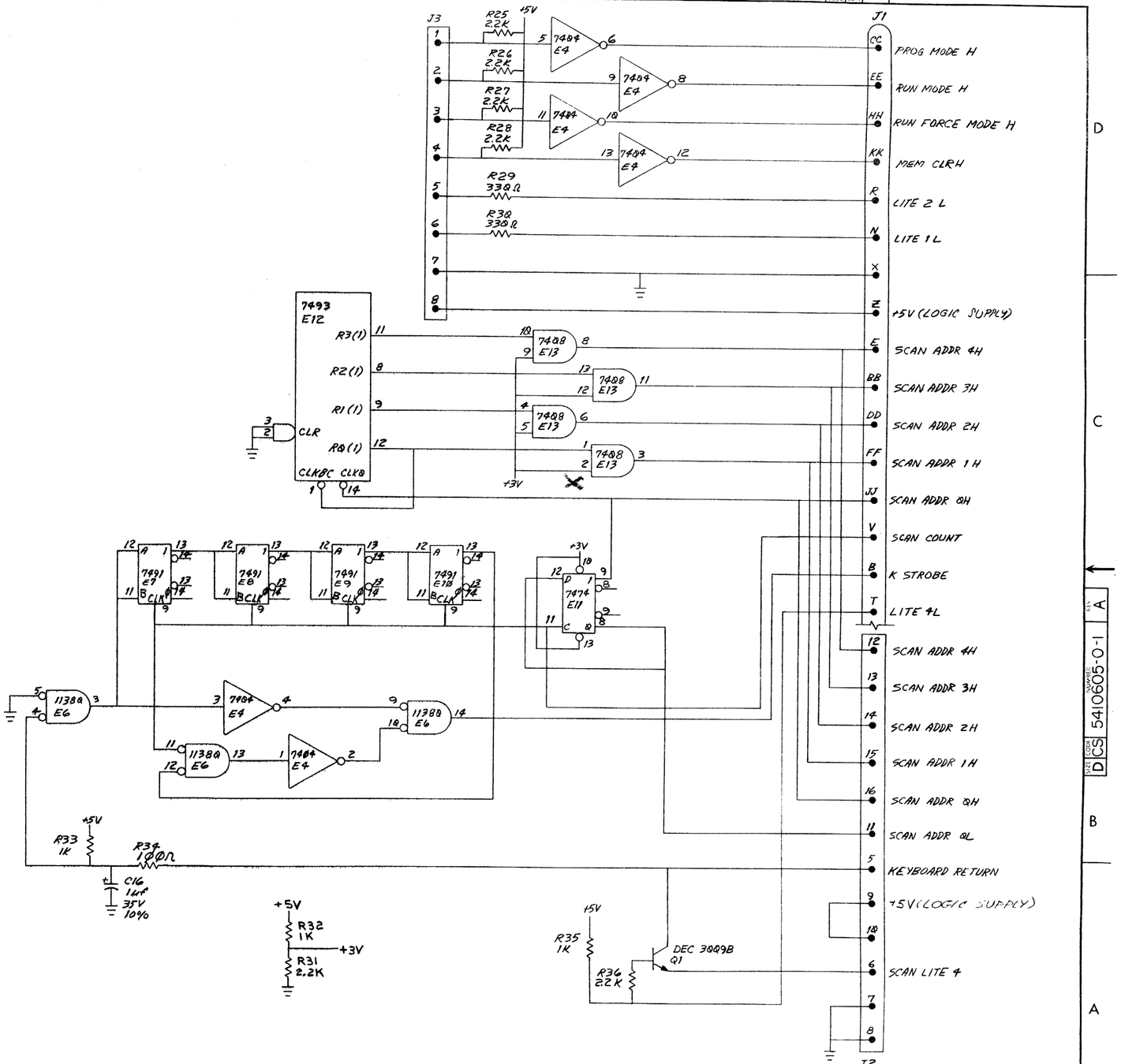


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
KEYBOARD, VT14 SWITCH	D	CS	5410603-0-1	B
SCALE	SHEET 2 OF 2	DIST		

DEC FORM NO
DRD 135



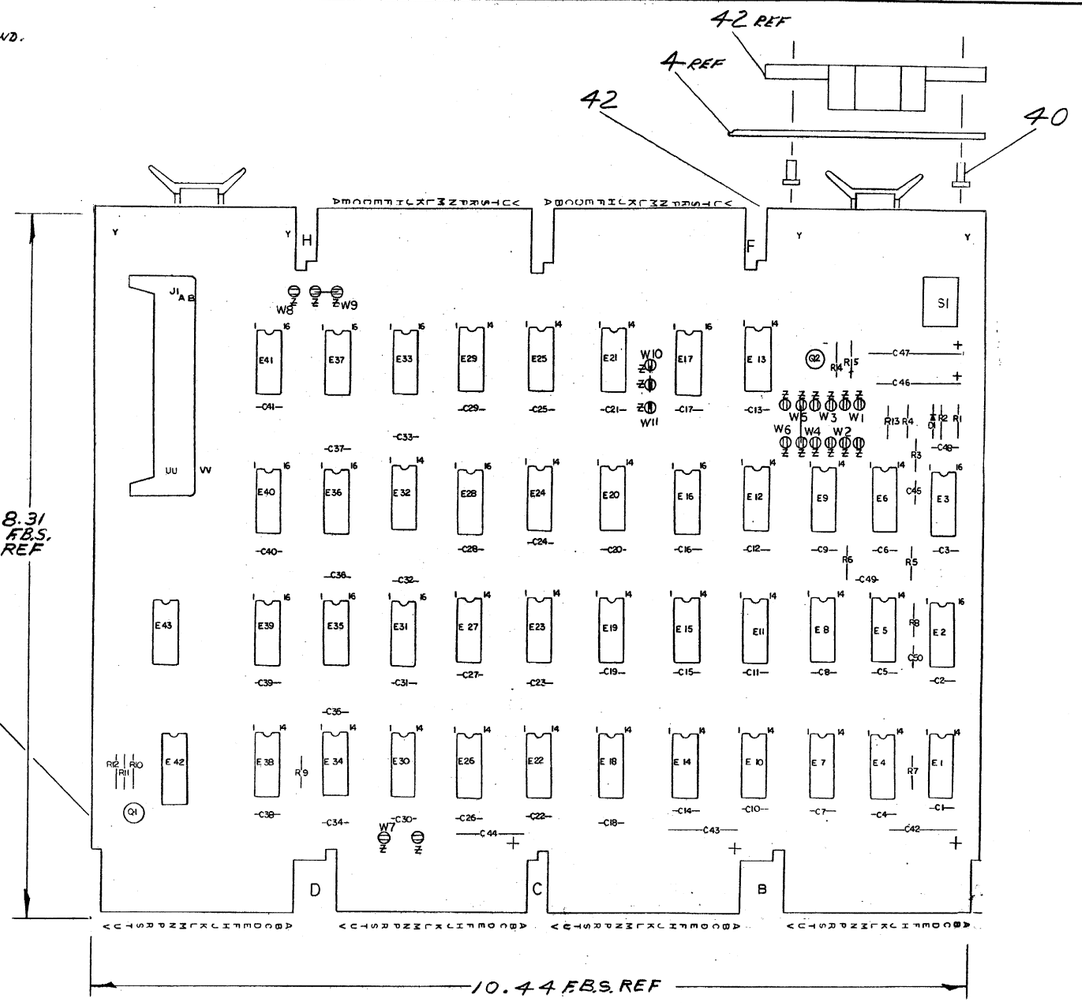


REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
KEYBOARD, VTH THUMB WHEEL	D	CS	5410605-0-1	A
SCALE —	SHEET 2 OF 2		DIST	

SIZE D CODE CS NUMBER 5410605-0-1 REV A

NOTES:
1. UNUSED INPUTS ARE TIED TO GND.



REF				
REF		X-Y COORDINATE HOLE LOCATION	[illegible]	1
REF		ASSY/DRILLING HOLE LAYOUT	B-MM-M7441-B-5	2
REF		MODULE ECO HISTORY	B-MM-M7441-B-6	3
1		ETCHED CIRCUIT BOARD	5010596	4
1	C49	CAP 220 PF 100V 5%	1000021	5
3	C42,C43,C44	CAP 6.8 UF 35V 10%	1005306	6
1	C47	CAP 68 UF 15V 10%	1000082	7
1	C45	CAP 68 PF 100V 5%	1000014	8
42	C1-41,48	CAP .01 UF 100V 20%	1001610-01	9
1	C46	CAP 15 UF 16V -10 75%	1003274	10
1	C50	CAP 27 PF 100V 5%	1001739	11
1	D1	DIODE D864	1100114	12
4	R6,9,12,13	RES 470 OHM 1/4W 5%	1300316	13
2	R4,7	RES 1K 1/4W 5%	1300385	14
1	R5	RES 1.5K 1/4W 5%	1300391	15
1	R2	RES 3.3K 1/4W 5%	1300439	16
2	R3,8	RES 10K 1/4W 5%	1300479	17
4	R10,11,14,15	RES 27 OHM 1/4W 5%	1301522	18
1	R1	RES 47K 1/4W 5%	1302177	19
1	J1	40 PIN RT ANG HEADER	1209941	20
1	S1	SWITCH TOGGLE	1210209	21
2	Q1,Q2	TRANS DEC 3009B	1503100	22
3	E7,22,30	I.C. DEC 7474	1905547	23
2	E5,23	I.C. DEC 7400	1905575	24
1	E25	I.C. DEC 7420	1905577	25
1	E4	I.C. DEC 7402	1909004	26
3	E3,35,37	I.C. DEC 7475	1909050	27
1	E34	I.C. DEC 74H11	1909267	28
1	E1	I.C. DEC 384	1909486	29
3	E12,20,21	I.C. DEC 7404	1909686	30
5	E8,9,19,26,38	I.C. DEC 97401	1909973	31
2	E11,15	I.C. DEC 5314	1910391	32
7	E10,13,14,18,27,29,32	I.C. DEC 5380	1910392	33
2	E16,17	I.C. DEC 7442A	1910046	34
1	E6	I.C. DEC 9601	1909373	35
1	E24	I.C. DEC 5384	1910394	36
1	E2	I.C. DEC 74123	1910436	37
1	E28	I.C. DEC 74175	1910651	38
6	E31,33,36,39,40,41	I.C. DEC 8234	1911315	39
4		EYELET	9006732	40
20		SPLIT LUG	9006735	41
2		HANDLE FLIP CHIP MAGENTA	9008337-06	42
A/R	W 5, W 9	BUS WIRE (#22 GA)	9007560-01	43

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST
ETCH BOARD REV C

AA2, BA2, CA2 — +5V
.01 μF — C1 THRU C41 100V
C42 6.8 μF 35V
C43 6.8 μF 35V
C44 6.8 μF 35V
AT1, AC2, AF2, AN2, AT2,
BT1, BC2, BF2, BN2, BT2,
CT1, CC2, CF2, CN2, CT2,
DT1, DC2, DF2, DN2, DT2,

IC TYPE	GND	+ 5V
IC 74123	8	16
IC 384	1	8
IC 7442A	8	16
IC 8234	8	16
IC 74175	8	16
IC 7475	12	5
IC 5314	1	8
IC 5380	1	8
IC 5384	1	8

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

IC PIN LOCATIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		3009B	2N 3646
		D664	IN 3606

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPTION MODEL

ORIGINATED B
REVISIONS
CHANGE NO.
REV.
CHK

DRN. M. Fowler DATE
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
NEXT HIGHER ASSY
SCALE
SHEET 1 OF 4

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
CONTROL KEYBOARD

SIZE D | CODE DCS | M7441-0-1 | REV. B
DIST.

BRUNING 40-522 16699
DEC FORM NO. DRD-135A

INITIALIZE H
MD 11 L
MD 10 L
MD 09 L
I/O PAUSE L
MD 03
MD 04
MD 05
MD 06
MD 07
MD 08
INIT L
INIT H
MD 00
MD 01
MD 02
IOT 605X
IOT 606X
INTERNAL I/O L
RPRS L
RDVD L
RDSA L
RIOS L
SKSF H
RDSA H
CLSF H
RIOS H
RPRS H
LDVA L
SKED H
FRI
LDVA H
LDVD L
LDVD H
TP02 H
B TP02 H
RDVD H
FTI
ERVD H
FUI
ENVD H
SKRT H
FPI
LF L
FEI
LF H
LDLT L
FDI
W10
W11
INIT H
K STROBE
SCAN FLAG H
SKSF H
DONE I H
SKED H
RETRACE H
SKRT H
SKIP L
SCAN CLK H
J1
SCAN COUNT
READ/WRITE H
ERASE H
D MEMAD 00 H
STROBE H
BUSS STROBE L
NOT LAST XFER
INIT REQ L
+3V
470Ω

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 ▸

DRN.		DATE 11-20-72
CHK'D.		DATE 11-27-72
ENG.		DATE 11-21-72
PROJ. ENG.		DATE 11-21-72
PROD.		DATE 11-28-72

MATERIAL
NEXT HIGHER ASSY.
FINISH
SCALE
SHEET 2 OF 4

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL, KEYBOARD

SIZE	CODE	NUMBER	REV.
D	CS	M7441-0-1	B

DIST.

J1 V PST 3A, I/O 3C, BB PST 3B, DD I/O 9A, VV PST 3C, PP I/O 9B, JJ PST 3D, FF I/O 9C, W +5V, NN I/O 2C, LL I/O 2B, TT I/O 3A, X I/O 3B, KK PST 2A, MM PST 2B, 55 PST 2C, K PST 2D, F I/O 1B, B I/O 1A, J I/O 1C, D I/O 2A, Y, A PST 1A, E PST 1B, UU K STROBE, H PST 1C, C PST 1D

8239 E40: B3 A3 B2 A2 B1 A1 B0 A0 → f3 f2 f1 f0; S1 S0 7 9

RPRS L

8234 E41: B3 A3 B2 A2 B1 A1 B0 A0 → f3 f2 f1 f0; S1 S0 7 9

7475 E37: D1 D0 CLK → R1(1) R1(0) R2(1) R2(0); 7475 E37: D3 D2 CLK → R3(1) R3(0) R2(1) R2(0)

JD W8 W9 +3V

7475 E35: D1 D0 CLK → R1(1) R1(0) R0(1) R0(0); 7475 E35: D3 D2 CLK → R3(1) R3(0) R2(1) R2(0)

RIOS H, RPRS H → 5380 E32 → 13

J1 Z LITE 4 H, MEM CLR; N RUN FORCE MODE H; R LITE 2 H, RUN MODE H; T LITE 1 H, PROG MODE H

8234 E36: B3 A3 B2 A2 B1 A1 B0 A0 → f3 f2 f1 f0; S1 S0 7 9

RDVD L

ERASE H FF1 9, LF H FB1 10 → 5380 E24 → 14

ASI DATA Ø1, ARI DATA ØØ, AUI DATA Ø2, DATA Ø3 AVI, DATA Ø4 BRI, DATA Ø5 BSI, DATA Ø6 BUI, DATA Ø7 BVI, DATA Ø8 DRI, DATA Ø9 DSI, DATA 11 DVI, DATA 1Ø DUI

J1 RR: DATO 5 H HF1, +3V; DATO 4 H, SCAN ADD 4 H; DATO 6 H HE1, +3V

8234 E33: B3 A3 B2 A2 B1 A1 B0 A0 → f3 f2 f1 f0; S1 S0 7 9

J1 P: DATO 1 H HJ1, SCAN ADD 1 H; M: DATO Ø H HK1, SCAN ADD Ø H; S: DATO 2 H HA1, SCAN ADD 2 H; U: DATO 3 H HB1, SCAN ADD 3 H

8234 E31: B3 A3 B2 A2 B1 A1 B0 A0 → f3 f2 f1 f0; S1 S0 7 9

RDVD H, RDSA H → 5380 E32 → 14

HDI B DATA Ø2, HCI B DATA Ø3, HTI B DATA Ø4, HSI B DATA Ø5, HPI B DATA Ø6, HNI B DATA Ø7, HUI B DATA Ø8, HEI B DATA Ø9, HHI B DATA 1Ø, HKI B DATA 11

TSØ3 L, CM2 → 5380 E18 → B TSQ3 H

TPØ3 H, CH2 → 5380 E24 → 2 → 7404 E20 → 6 → 11 → 5380 E13 → 13 → LDLT L

FC1 B TPØ3 H

74175 E28: D3 D2 D1 D0 CLR CLK; R3(1) R3(0) R2(1) R2(0) R1(1) R1(0) R0(1) R0(0); 9 → INIT L

LITE 4 H, LITE 2 H, LITE 2 L, LITE 1 H, LITE 1 L

J1 CC EE HH

REVISIONS		
CHK	CHANGE NO.	REV.

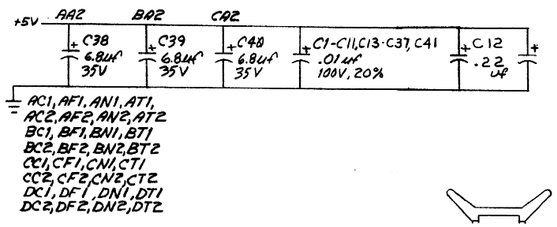
TITLE	SIZE	CODE	NUMBER	REV.
CONTROL, KEYBOARD	D	CS	M7441-Ø-1	B
SCALE —	SHEET 3 OF 4	DIST.		

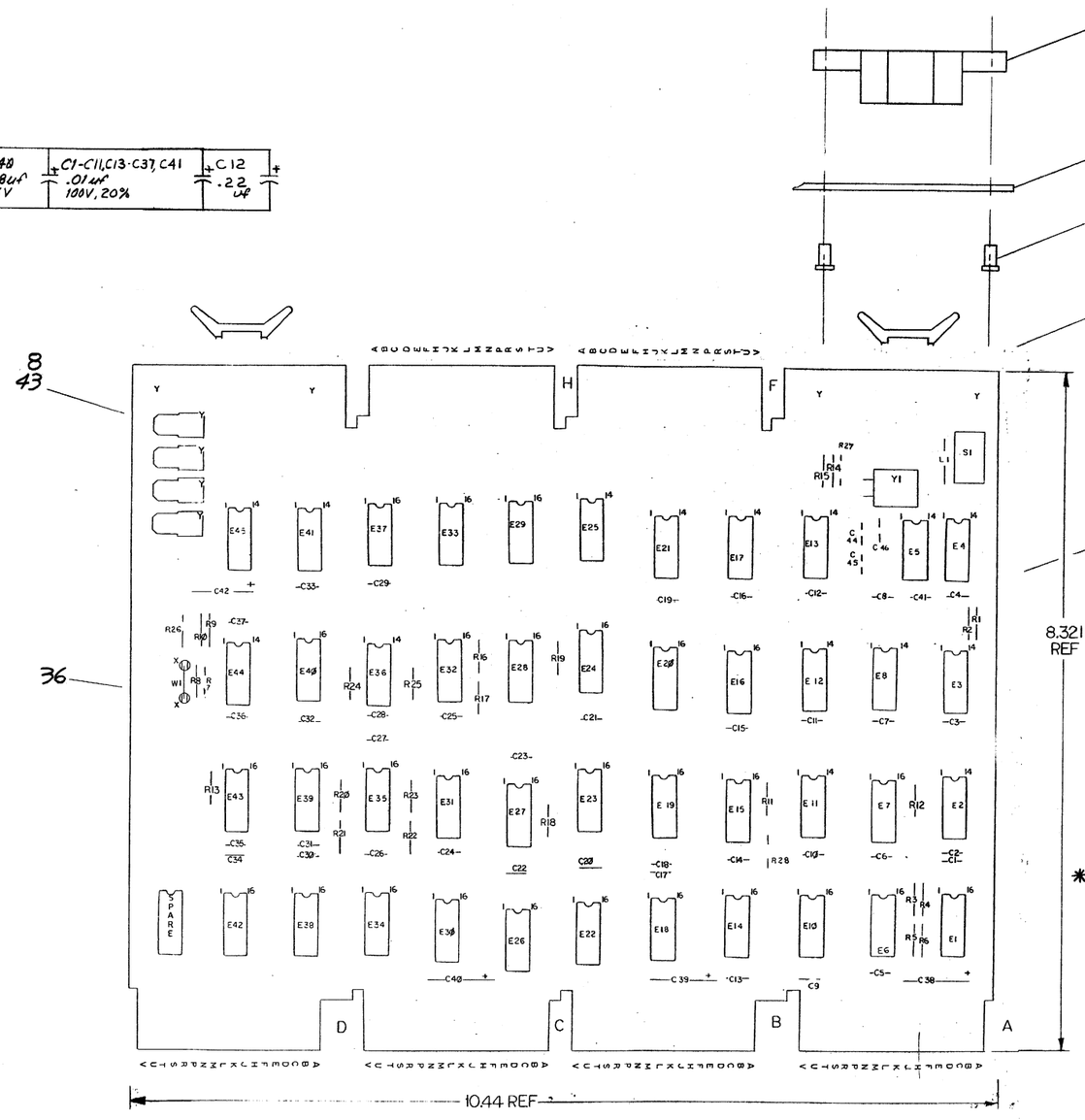
POWER OK H
BV2
C46 .15μf
C47 68μf
47K R1
.01 μf C48
C49 220 PF
47Ø R6
R5 1.5K
3.3K R2
D1 DG64
-15V
C45 6.8PF
R3 10K
R8 10K
C50 27PF
TP1
CD2
INITIALIZE H
CRI
47Ø Ω R13
27Ω R15
27Ω R14
3ØØ9 B Q2
AUTO RESTART ENABLE / DISABLE
S1
1K R4
1K R7
47Ø Ω R12
27Ω R10
27Ω R11
3ØØ9 B Q1
DR2
PULSE LOAD ADD
CU2
IND L
KEY CONT L
DU2
MEM START L
AJ2
BM2
L A ENA L
CV1
MS IR DISABLE L
DATA 5 L
DATA 4 L
DATA 3 L
DATA 2 L
DATA 1 L
DATA Ø L
SPARE LOGIC

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV
CONTROL, KEYBOARD	D	CS	M7441-Ø-1	B
SCALE —	SHEET 4 OF 4	DIST		

NOTES:





REF		X-Y COORDINATE HOLE LOCATION	K-CO-M7443-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M7443-0-5	2
REF		ECO MODULE HISTORY	B-MH-M7443-0-6	3
1		ETCHED CIRCUIT BD.	5010597	4
3	C38,C39,C40	CAP 6.8 UF 35V 10%	1005306	5
37	C1-C11,C13-C37,C41	CAP .01 UF 50V 20% AXIAL	1001610	6
2	R24,R25	RES 2.2K 1/4W 5%	1300417	7
4		TAB FASTON (OFFSET)	9007112	8
1	S1	SWITCH TOGGLE	1210209	9
1	R8	RES 150 1/4W 5%	1300250	10
2	R9,R10	RES 220 1/4W 5%	1300271	11
3	R11,R12,R13	RES 470 1/4W 5%	1300316	12
17	R1-R6,R14-R23,R28	RES 1.2K 1/4W 5%	1301320	13
1	R7	RES 75 1/4W 5%	1302379	14
1	Y1	CRYSTAL 21.504 MHZ	1809880-09	15
2	E5,E13	I.C. DEC 74H08	1909056	16
2	E4,E8	I.C. DEC 7474	1905547	17
2	E11,E21,	I.C. DEC 7400	1905575	18
1	E2	I.C. DEC 74H21	1909058	19
1	E3	I.C. DEC 74H50	1909060	20
1	E25	I.C. DEC 74H11	1909267	21
1	E17	I.C. DEC 380	1909485	22
1	E12	I.C. DEC 74H74	1909667	23
1	E36	I.C. DEC 7404	1909686	24
1	E44	I.C. DEC 7417	1909929	25
2	E41,E45	I.C. DEC 7486	1910011	26
4	E15,E29,E33,E37	I.C. DEC 74191	1910096	27
1	E1	I.C. DEC 7486	1910363	28
6	E16,E20,E24,E27,E40,E43	I.C. DEC 74161	1910650	29
2	E28,E35	I.C. DEC 74175	1910651	30
1	E7	I.C. DEC 74174	1910652	31
3	E19,E23,E31	I.C. DEC 74157	1910655	32
7	E18,E22,E26,E30,E34,E38,E42	I.C. 2102-1	2111318-01	33
				34
1	E14	I.C. 5603	23013A2	35
2		SPLIT LUGS	9008735	36
2		HANDLE FLIP CHIP MAGENTA	9008337-08	37
4		EYELET	9006732	38
1	E6	I.C. 5603	23014A2	39
1	E10	I.C. 5603	23015A2	40
1	E32	I.C. 5603	23042A2	41
1	E39	I.C. 5603	23043A2	42
4		EYELETS	9009000	43
1 IN	W1 *	BUSS WIRE #22 AWG	9107560-01	44
1	R26	RES 10 1/4W 5%	1301317	45
1	C42	CAP 47UF 20V 10%	1004814	46
AR		30 AWG GREEN	9105740-55	47
1	L1	10uH CHOKE	1609477	48
1	R27	RES. 390 1/4W 5%	1300309	49
1	C44	CAP. 39PF DM 5%	1000010	50
1	C45	CAP. 100PF DM 5%	1000016	51
1	C46	CAP. 220PF DM 5%	1000021	52
1	C12	CAP. .22uF 50V	1010274-00	53
QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DEC 7496	12	5
DEC 2102-1	9	10
DEC 74157	8	16
DEC 74174	8	16
DEC 74175	8	16
DEC 74161	8	16
DEC 74191	8	16
DEC 380	1	8
IC TYPE	GND	+ 5V

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

IC PIN LOCATIONS

REV	CHANGE NO.	CHK
E	M7443-00003	R. Hibbard 7/30/74
D	M7443-00002	S. MORO 4-25-74
C	M7443-00001 & A	S. MORO 1/17/74

REVISIONS

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

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPTION MODEL

ETCH BOARD REV D

DRN	D. Sullivan	DATE 8-2-73
CHK'D.	J. Ferguson	DATE
ENG.	S. Moro	DATE 11-21-73
PROJ. ENG.	S. Moro	DATE 11-21-73
PROD.	R. Olsen	DATE 11/21/73

NEXT HIGHER ASSY

SCALE

SHEET 1 OF 4

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DISPLAY, V 14 VIDEO

SIZE	CODE	NUMBER	REV
D	CS	M7443 0-1	E

DIST.

BRUNING 40-522 16699

DEC FORM NO. DRD-135A

SHIFT (H) — 74H00 E5 — 74H00 E5

CLK — 74H74 E12 — SHIFT (L)

+3VB

74161 E16 ÷7 — ENBCN, RCRY, D3, D2, D1, D0, CLR LD CLK ENBCR — +3A — +5 — R28 — BA1

INIT L A — CARRY 1 L

74161 E20 — +3VA — +100

74161 E24 — CARRY 1 H — +3VA

74161 E40 — +3VC

74161 E43 — INIT L A — INIT LA — FH1 SCAN CLK

5683 23047A2 E32 — ME1, ME2, D, E, F, G, H, A, B, C, Y4, Y3, Y2, Y1

5683 23047A2 E39 — ME1, ME2, D, E, F, G, H, A, B, C, Y4, Y3, Y2, Y1

D MEMAD Ø3 H
D MEMAD Ø2 H
D MEMAD Ø1 H
D MEMAD Ø0 H
D MEMAD Ø5H
D MEMAD Ø4H

F:41 — R19, R18, R17, R16, +5V, R35

74175 E28 — D3, D2, D1, D0, CLR CLK, R3(1), R3(Q), R2(1), R1(1), R0(1), R0(Q)

H SYNC L
CLEAR H
TEST PATH
CHAR H
CHAR L

INIT HA — 38Ø E17

CLR ÷100 COUNTER

B DATA Ø8 H
B DATA Ø9 H
B DATA 10 H
B DATA 11 H

74191 E37 — HU1, HR1, HL1, HM1, LD DN CLK ENB, PCLK

L MEMAD Ø3 H
L MEMAD Ø2 H
L MEMAD Ø1 H
L MEMAD Ø0 H

H SYNC H
ERASE H
STROBE — EVI — 74H30 E3

74191 E33 — LFL, LDVA L, FP1, FD1, HP1, HN1

B DATA Ø6 H
B DATA Ø7 H

L MEMAD Ø5
L MEMAD Ø4

74H11 E25 — B TP3 H, B TS3 H, FC1, FJ1

74H00 E13

O FLO L

74191 E29 — HD1, HC1, HT1, HS1

B DATA Ø2 H
B DATA Ø3 H
B DATA Ø4 H
B DATA Ø5 H

L MEMAD Ø9
L MEMAD Ø8
L MEMAD Ø1
L MEMAD Ø6

74Ø8 E21 — L DVA H, EK1

74H11 E25

74Ø4 E36

L FH — FE1 — 38Ø E17

INIT HA — 38Ø E17

74175 E35 — D3, D2, D1, D0, CLR CLK, R3(1), R3(Ø), R2(1), R1(1), R0(1), R0(Ø)

V SYNC H
V SYNC L
PRESET H
TP EN H
CHAR LINE H
CHAR LINE L

CARRY 1 H

INIT LA

+5V — 1.2 K R15 — FU2 — 74H00 E13 — CLK

FV2 — 1.2K R14 — +5V — 74H00 E13

1ØUH L1 — R27 39Ø — C44 39 PF — Y1 21.504 MHZ — C45 1ØØ PF — C46 22Ø PF

74161 E27 — D MEMAD Ø9 H, D MEMAD Ø8 H, D MEMAD Ø7 H, D MEMAD Ø6 H

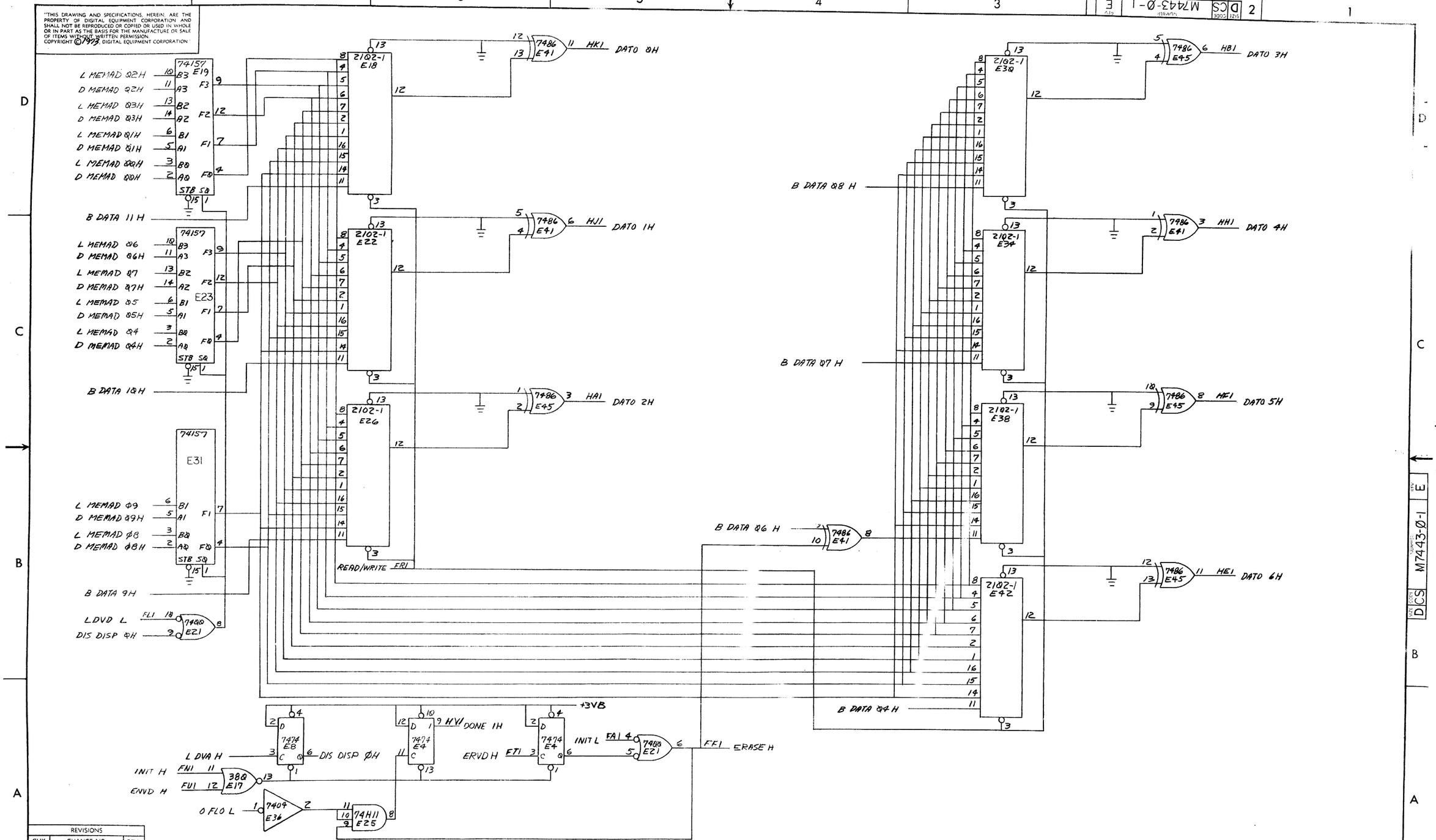
+3VC

REVISIONS

CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
DISPLAY, VTH VIDEO	D	CS	M7443-01	E
SCALE	SHEET 2 OF 4	DIST		

M7443-01 E
DCS
B
A



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
DISPLAY VT14 VIDEO	D	CS	M7443-Ø-1	E
SCALE	SHEET 3 OF 4	DIST.		

DATA 0H
7404 E36
5603 23014A2 E6 EVEN CHAR ROM
2.2K R6 R5 R4 R3 +5V
74191 E15
MAX/MIN RCLK D3 D2 D1 D0 R3(1) R2(1) R1(1) R0(1) LD DN CLK ENB
+3A
CHAR LINE H
H SYNC H
7408 E11
PRESET 1 H
CHAR H
5603 23015A2 E10 ODD CHAR ROM
5603 23013A2 E14 EXTRA DOT ROM
DATA 1H
DATA 2H
DATA 3H
DATA 4H
DATA 5H
R1 2.2K R2 2.2K +5V
74H58 E3
74H08 E5
DATA 6H
CARRY 1L
SHIFT L
74H21 E2
CARRY 1H
7496 E1
SET 4 SET 3 SET 2 SET 1 SET 0 SER IN CLR CLK ENBSET
+3VB
7474 E8
INIT LA
74174 E7
D5 D4 D3 D2 D1 D0 R5(1) R4(1) R3(1) R2(1) R1(1) R0(1) CLR CLK
SHIFT H
+3V A R11 470Ω +5V
+3V B R12 470Ω +5V
+3V C R13 470Ω +5V

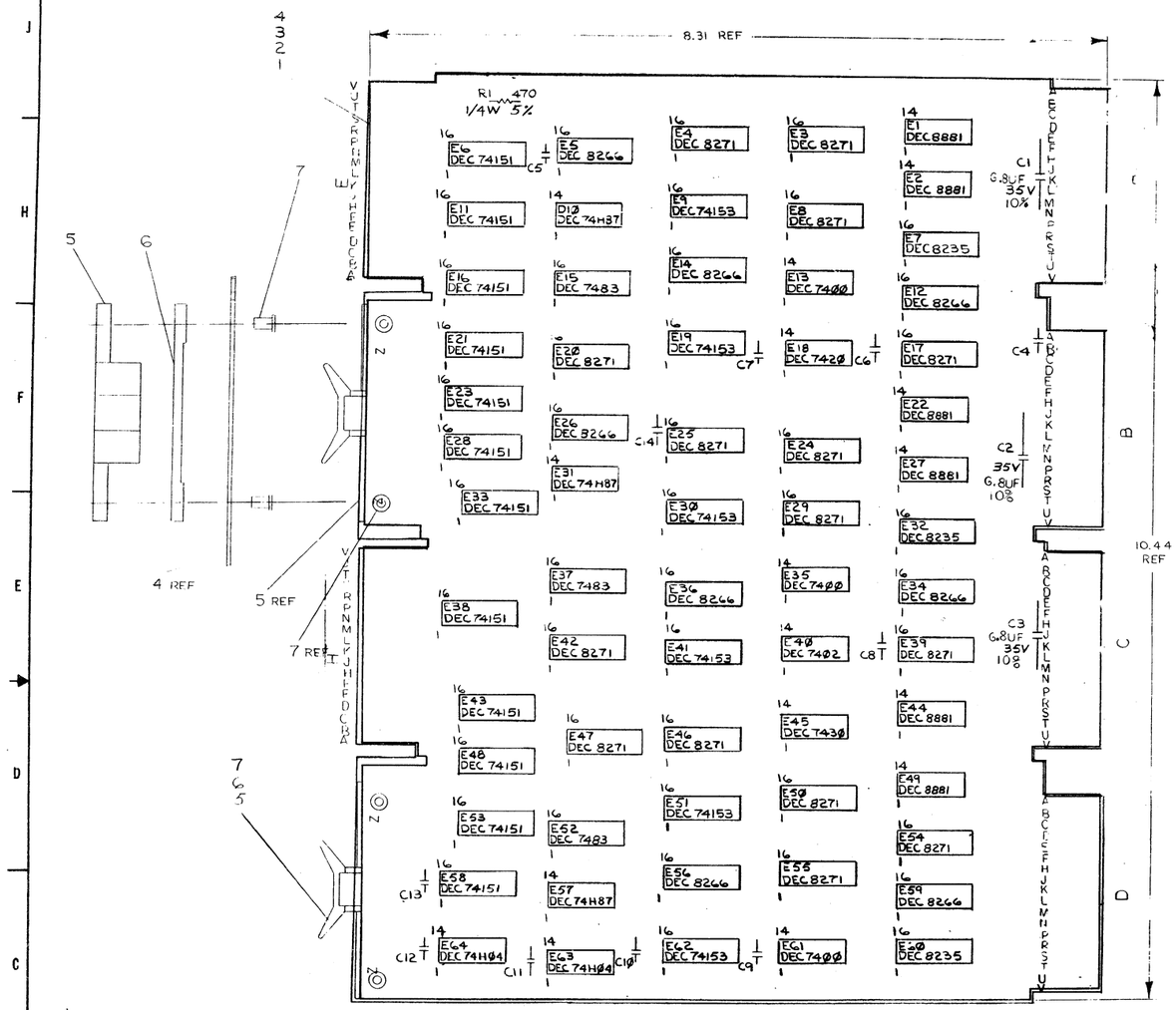
DIS DISP 8H
CHAR H
CHAR LINE H
74H21 E2
TEST PAT H
7408 E11
74H08 E13
TP EN H
V NC NO S1 TP
C42 47UF 20V 10%
+5V R26 10Ω R7 75Ω VIDEO OUT
7417 E42
7417 E44
R8 150Ω
W1
DA1
R9 220Ω
R18 220Ω
WHITE
RED
GREEN
BLACK
FASTON TAB (TYP)
V SYNC H
H SYNC H
CHAR LINE L
74H74 E12
V SYNC L
FSL RETRACE
INIT LA
FT2
R24 2.2K
INIT HA
+3C

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
DISPLAY, VT14 VIDEO	D	CS	M7443 0 1	E
SCALE	SHEET 4 OF 4	DIST		

M7443-0-1 E
DCS

NOTES:



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
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	1909930	17
6	E1,E2,E22,E27,E44,E49	I.C. DEC 8881	1909929	16
15	E3,E4,E8,E17,E20, E24,E25,E29,E37,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 .8UF 35V 20% TANT	1000067	8
4		EYELETS GS4-11 STIMPSON	9002750	7
AR/D		SPACER (CABLE CLAMP)	1202704	6
1		HANDLE FLIP CHIP-MAGENTA	9003837-06	5
1		ETCHED CIRCUIT BOARD	5009550	4
REF		MODULE HISTORY LIST	SMH-M8300-0-1	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8300-0-1	2
REF		X-Y COORDINATE HOLE LOCK	X-CO-M8300-0-1	1

PARTS LIST

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 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

REV	DESCRIPTION	DATE	APPROVED
A	ECO M8300-0-1	11/11/...	
B	ECO M8300-0-2	11/11/...	
C	ECO M8300-0-3	11/11/...	
D	ECO M8300-0-4	11/11/...	

DEC NO. | EIA NO.

SEMICONDUCTOR CONVERSION CHART

REV COLUMN B

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH REVISION

CHANGE NO

REVISIONS

M8300-...-...

JUMPER

D-UA-KK8-E-0

SIZE D

SHEET 1 OF 5

EQUIPMENT CORPORATION

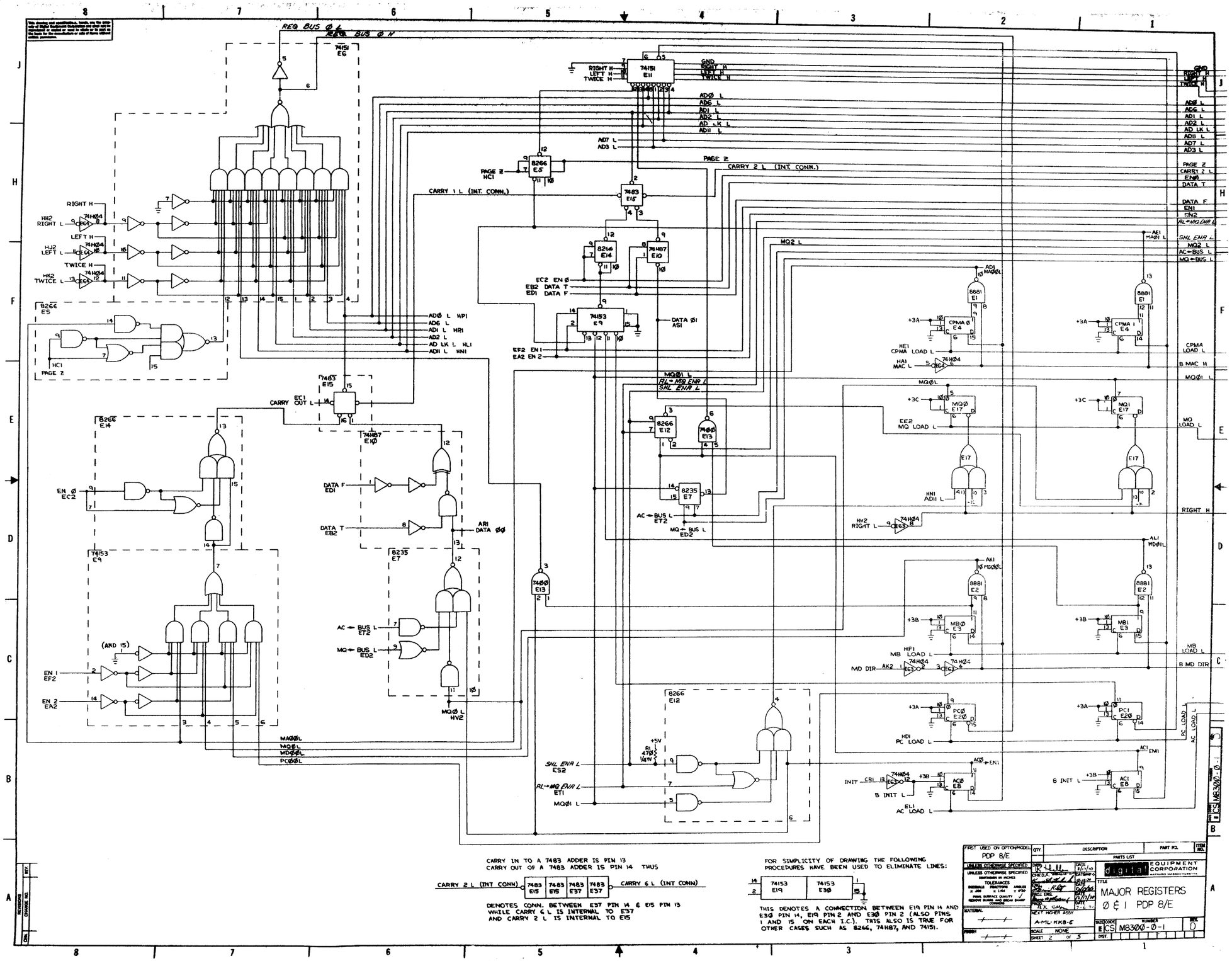
TITLE

MAJOR REGISTERS (KK8/E)

ECS M8300-0-1

REV D

DWG. 1-27-83



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 & E15 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 E30 — 15

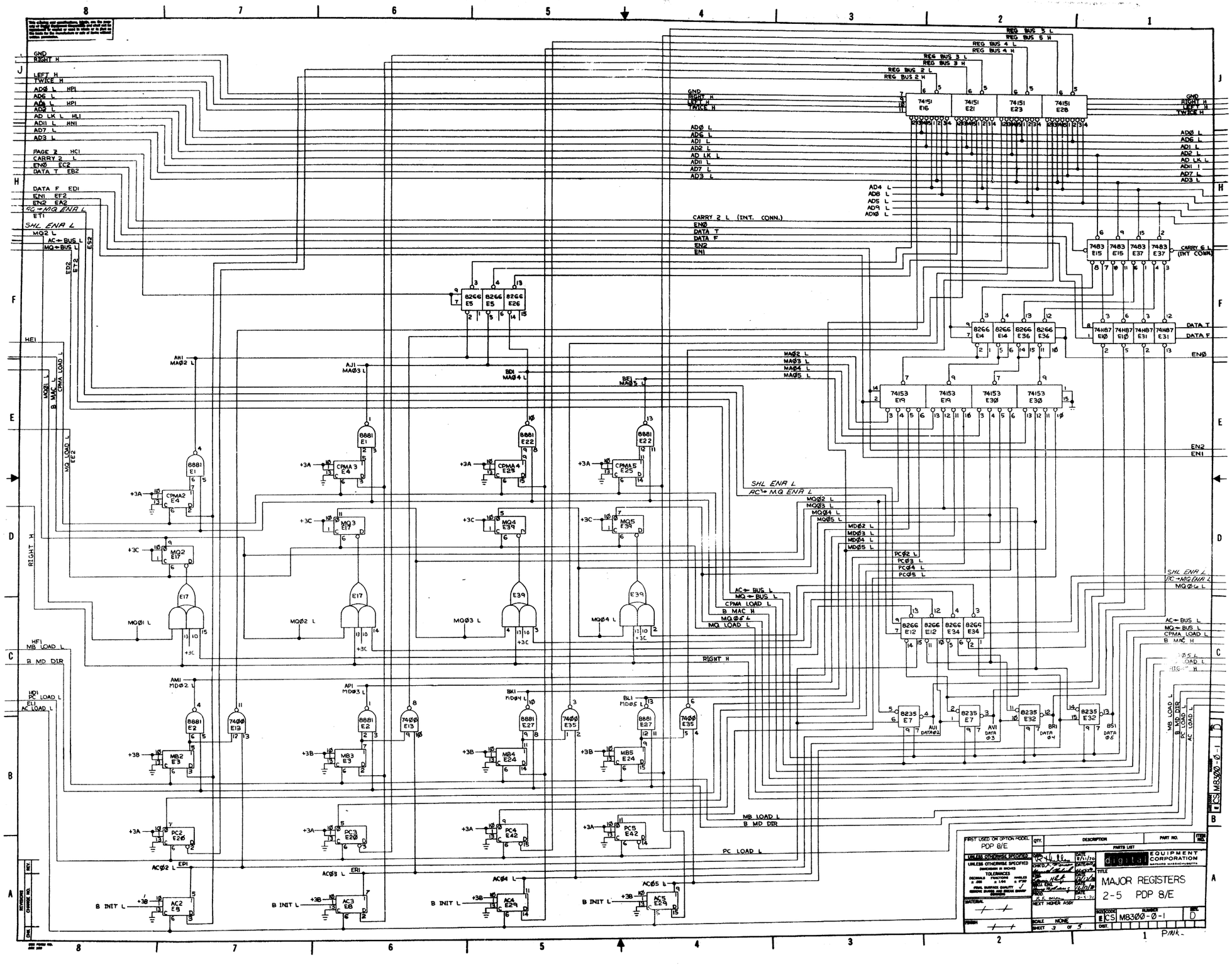
THIS DENOTES A CONNECTION BETWEEN E19 PIN 14 AND E30 PIN 14, E19 PIN 2 AND E30 PIN 2 (ALSO PINS 1 AND 15 ON EACH I.C.). THIS ALSO IS TRUE FOR OTHER CASES SUCH AS 8266, 74H87, AND 74151.

FIRST USED ON OPTION/MODEL: PDP 8/E	QTY.	DESCRIPTION	PART NO.
UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES; TOLERANCES: DECIMALS ± .XX, FRACTIONS ± 1/32, ANGLES ± 1°; FINISH: SURFACE QUALITY √, REMOVE BURRS & SHARP EDGES	PARTS LIST		
MATERIAL: —	DRN D.K. Thomas 8/1/10	CHK D.K. Thomas 8/1/10	APVD R.K. Gaw 11/21/14
FINISH: —	ENGR R.K. Gaw 11/21/14	SCALE NONE	SHEET 2 OF 3
NEXT HIGHER ASSY: A-ML-KK8-E	SIZE E	CODE CS	NUMBER M8300-Ø-1
	DIST		REV D

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: MAJOR REGISTERS Ø & 1 PDP 8/E

M8300-Ø-1


GND
RIGHT H
LEFT H
TWICE H
AD0 L HP1
AD6 L
AD1 L HP1
AD2 L
AD LK L HL1
AD11 L HN1
AD7 L
AD3 L
PAGE 2 HC1
CARRY 2 L
EN0 EC2
DATA T EB2
DATA F ED1
EN1 EF2
EN2 EA2
AC→MQ ENA L
ET1
SHL ENA L
MQ2 L
AC←BUS L
MQ→BUS L
EB2
EF2
EA2
HE1
MQ01 L
B MAC L
CPMA LOAD L
MQ LOAD L
EE2
RIGHT H
HF1
MB LOAD L
B MD DIR
HD1
PC LOAD L
EL1
AC LOAD L
AH1
MA02 L
AJ1
MA03 L
BD1
MA04 L
BE1
MA05 L
8881 E1
8881 E22
CPMA 3 E4
CPMA 4 E25
CPMA 5 E25
CPMA2 E4
MQ3 E19
MQ4 E39
MQ5 E34
MQ2 E17
E17
E39
MQ01 L
MQ02 L
MQ03 L
MQ04 L
+3A
+3B
+3C
AM1
MD02 L
AP1
MD03 L
BK1
MD04 L
BL1
MD05 L
8881 E2
8881 E27
7400 E13
7400 E35
MB2 E3
MB3 E3
MB4 E24
MB5 E24
PC2 E26
PC3 E20
PC4 E42
PC5 E42
AC2 E5
AC3 E8
AC4 E29
AC5 E29
ACØ2 L EP1
ACØ3 L ER1
ACØ4 L
ACØ5 L
B INIT L
8266 E5
8266 E5
8266 E26
74151 E16
74151 E21
74151 E23
74151 E28
REG BUS 3 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
AD4 L
AD8 L
AD5 L
AD9 L
AD10 L
CARRY 2 L (INT. CONN.)
7483 E15
7483 E15
7483 E37
7483 E37
CARRY 6 L (INT CONN.)
8266 E4
8266 E14
8266 E36
8266 E36
74H87 E10
74H87 E10
74H87 E31
74H87 E31
DATA T
DATA F
ENØ
74153 E19
74153 E19
74153 E30
74153 E30
MAØ2 L
MAØ3 L
MAØ4 L
MAØ5 L
EN2
EN1
MDØ2 L
MDØ3 L
MDØ4 L
MDØ5 L
PCØ2 L
PCØ3 L
PCØ4 L
PCØ5 L
8266 E12
8266 E12
8266 E34
8266 E34
8235 E7
8235 E7
8235 E32
8235 E32
AUI DATAØ2
AVI DATA Ø3
BRI DATA Ø4
BSI DATA Ø6
MB LOAD L
B MD DIR
PC LOAD L
AC LOAD L
MQ LOAD L
CPMA LOAD L
B MAC H
AC←BUS L
MQ→BUS L
BS L
LOAD L
BUS H
FIRST USED ON OPTION MODEL
PDP 8/E
UNLESS OTHERWISE SPECIFIED
TOLERANCES
MATERIAL
FINISH
PARTS LIST
QTY.
DESCRIPTION
PART NO.
ITEM NO.
DRAWN
CHK'D
ENGR
MFG
NEXT HIGHER ASSY
DATE 8/1/70
EQUIPMENT CORPORATION
TITLE
MAJOR REGISTERS
2-5 PDP 8/E
SIZE CODE
E
CS MB300-Ø-1
REV.
D
SCALE NONE
SHEET 3 OF 5
DIST.
P/Nk-
REVISIONS
CHANGE NO.
DWN.
CS MB300-Ø-1

GND
RIGHT H
LEFT H
TWICE H

ADØ L HPI
AD6 L
AD1 L HRI
AD2 L
AD LK L HLI
AD11 L HNI
AD7 L
AD3 L
AD4 L
AD8 L
AD5 L
AD9 L
ADIØ L HMI

CARRY G L (INT. CONN.)

EB2 EDI EC2
DATA T
DATA F
ENØ

EA2 EF2
EN2
EN1

ES2
SHL ENA L
AC → MQ ENA L ET1
MQØ6 L

AC ← BUS L ET2
MQ ← BUS L ED2
CPMA LOAD L HEI
B MAC H

MQS L
MQ LOAD L EE2
RIGHT H

MB LOAD L
B MD DIR
PC LOAD L HDI
AC LOAD L ELI

BHI MAØ6 L
BJI MA07 L
DDI MA08 L

8881 E22 — CPMA 6 E25 — +3A
8881 E22 — CPMA7 E25 — +3A
8881 E44 — CPMA8 E46 — +3A

MQ6 E39 — +3C
MQ7 E39 — +3C
MQ8 E54 — +3C

E39
E39
E54
+3C

BNI MDØ6 L
BPI MDØ7 L
DKI MDØ8 L

8881 E27 — MB6 E24 — +3B
8881 E27 — MB7 E24 — +3B
8881 E49 — MB8 E50 — +3B

7400 E35
7400 E35
7400 E61

PC6 E42 — +3A
PC7 E42 — +3A
PC8 E47 — +3A

AC6 E29 — B INIT L — +3B
AC7 E29 — B INIT L — +3B
AC8 E53 — B INIT L — +3B

ACØ6 L
ACØ7 L
ACØ8 L

REG BUS 8 L
REG BUS 8 H
REG BUS 7 L
REG BUS 7 H
REG BUS 6 L
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
ADIØ L

CARRY G L (INT. CONN.)
DATA T
DATA F
ENØ

EN2
EN1

SHL ENA L
AC → MQ ENA L
MQ → BUS L

CPMA LOAD L
B MAC H

MQ LOAD L
MQØ6 L
MQØ7 L
MQØ8 L

RIGHT H

MB LOAD L
B MD DIR

PC LOAD L

ACØ6 L
ACØ7 L
ACØ8 L

AC LOAD L

MDØ6 L
MDØ7 L
MDØ8 L

7483 E37 — 7483 E37 — 7483 E52 — CARRY 9 L (INT. CONN.)

8266 E36 — 8266 E36 — 8266 E56
74H87 E31 — 74H87 E31 — 74H87 E57

74153 E41 — 74153 E41 — 74153 E51

MAØ6 L
MA07 L
MA08 L

MQØ6 L
MDØ6 L
MDØ7 L
MDØ8 L
PCØ6 L
PCØ7 L
PCØ8 L

MQØ7 L
MQØ8 L

SHL ENA L
AC → MQ ENA L
MQØ9 L

8266 E34 — 8266 E34 — 8266 E59

8235 E32 — 8235 E32 — 8235 E60

BUI DATA Ø6 L
BVI DATA Ø7 L
DRI DATA Ø8 L

AC ← BUS L
MQ ← BUS L
CPMA LOAD L
B MAC H

MQ LOAD L
MQØ8 L
RIGHT H

MB LOAD L
B MD DIR
PC LOAD L
AC LOAD L

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

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

MATERIAL —
FINISH —

NEXT HIGHER ASSY

DRWN A. C. Gulmi DATE 7/11/70
CHK'D DATE
ENGR DATE
MFG DATE
QUAL DATE
SCALE NONE
SHEET 4 OF 5

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
MAJOR REGISTERS
6-8 PDP 8/E

SIZE/CODE ECS M8300-Ø-1 REV D
DIST.

ECS M8300-Ø-1

GND
RIGHT H
LEFT H
TWICE H

AD0 L HPI
AD LK L HLI
AD11 L HNI
AD7 L
AD3 L
AD4 L
AD8 L
AD5 L
AD9 L
AD10 L HMI
CARRY 9 L (INT. CONN.)
DATA T
DATA F
EN0 EC2
EN2
EN1

DE1 MA09 L
DN1 MA10 L
DJ1 MA11 L
SHL ENA L
AC→MQ ENA L
AC← BUS L
MQ→ BUS L

8881 E44
CPMA 9 E46
CPMA 10 E46
CPMA 11 E46
MQ9 E54
MQ10 E54
MQ11 E54
E54
MQ09 L
MQ08 L
HJ1 MQ10 L

AC← BUS L ET2
MQ← BUS L ED2
CPMA LOAD L HE1
B MAC H
MQ LOAD L EE2
MQ08 L
RIGHT H
MB LOAD L HF1
B MD DIR
PC LOAD L HD1
AC LOAD L EL1

DL1 MD09 L
DM1 MD10 L
DP1 MD11 L
8881 E49
MB9 E50
MB10 E50
MB11 E50
7400 E61
+3A
+3B
+3C

PC9 E47
PC10 E47
PC11 E47
AC09 L
AC10 L
AC11 L
B INIT L
ACJ9 E55
ACK0 E55
ACL1 E55

REG BUS 11 L
REG BUS 11 H
REG BUS 10 L
REG BUS 10 H
REG BUS 9 L
REG BUS 9 H
74151 E48
74151 E53
74151 E58

7402 E49
7420 E18
AC09L
AC08L
AC07L
AC10L
AC11L
AC-11=0 L

7483 E52
CARRY IN L HM2

MD09 L
MD10 L
MD11 L
8266 E56
74H87 E57
74153 E51
74153 E62
MA09 L
MA10 L
MA11 L
MQ09 L
PC09 L
PC10 L
PC11 L
MQ10 L
MQ11 L
HNI

74H04 E63
+3A
+3B
+3C

8266 E59
HU2 MQ DATA L
8235 E60
DS1 DATA 09 L
DU1 DATA 10 L
DV1 DATA 11 L
7430 E45
HK1 MQ6A-11=0 L
7428 E18
EA1 MQ4A-8=0 L

REVISIONS	REV.
CHANGE NO.	
DRN	

FIRST USED ON OPTION MODEL: PDP 8/E
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
MATERIAL
FINISH
NEXT HIGHER ASSY

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

DRAWN 12/70
CHK'D 12/70
ENGR 12/70
MFG 12/70
QUAL 12/70

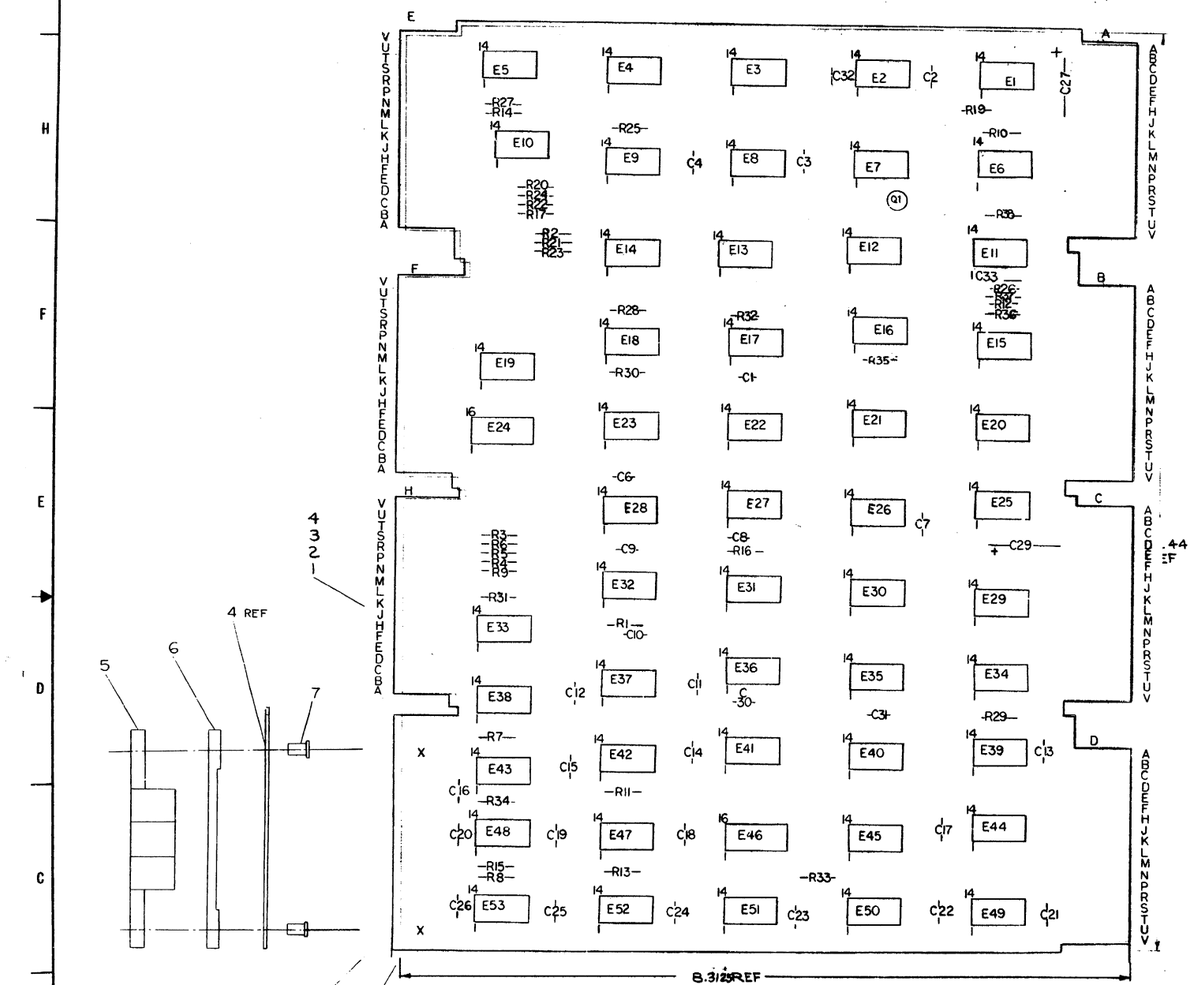
DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: MAJOR REGISTERS 9-11 PDP 8/E

CUSTOMER DEC | NUMBER CS M8300-0-1 | REV

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. 100, 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	1909331	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	1909455	22
1	E24	I.C. DEC 74151	1909936	21
4	E8, E16, 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, E10, 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
6		EYELETS 564-11 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.	X-CO-M8310-0-4	1

PARTS LIST

IC TYPE	GND	+5V
DEC 74151	8	16
DEC 8251	8	16
DEC 384	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

JUMPER LIST

REVISIONS				
DEC3009B	2N3646			

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH. REVISION

SEC. NO.	EIA NO.
D-UA-10C8-E-0	

SEMICONDUCTOR CONNECTION CHART

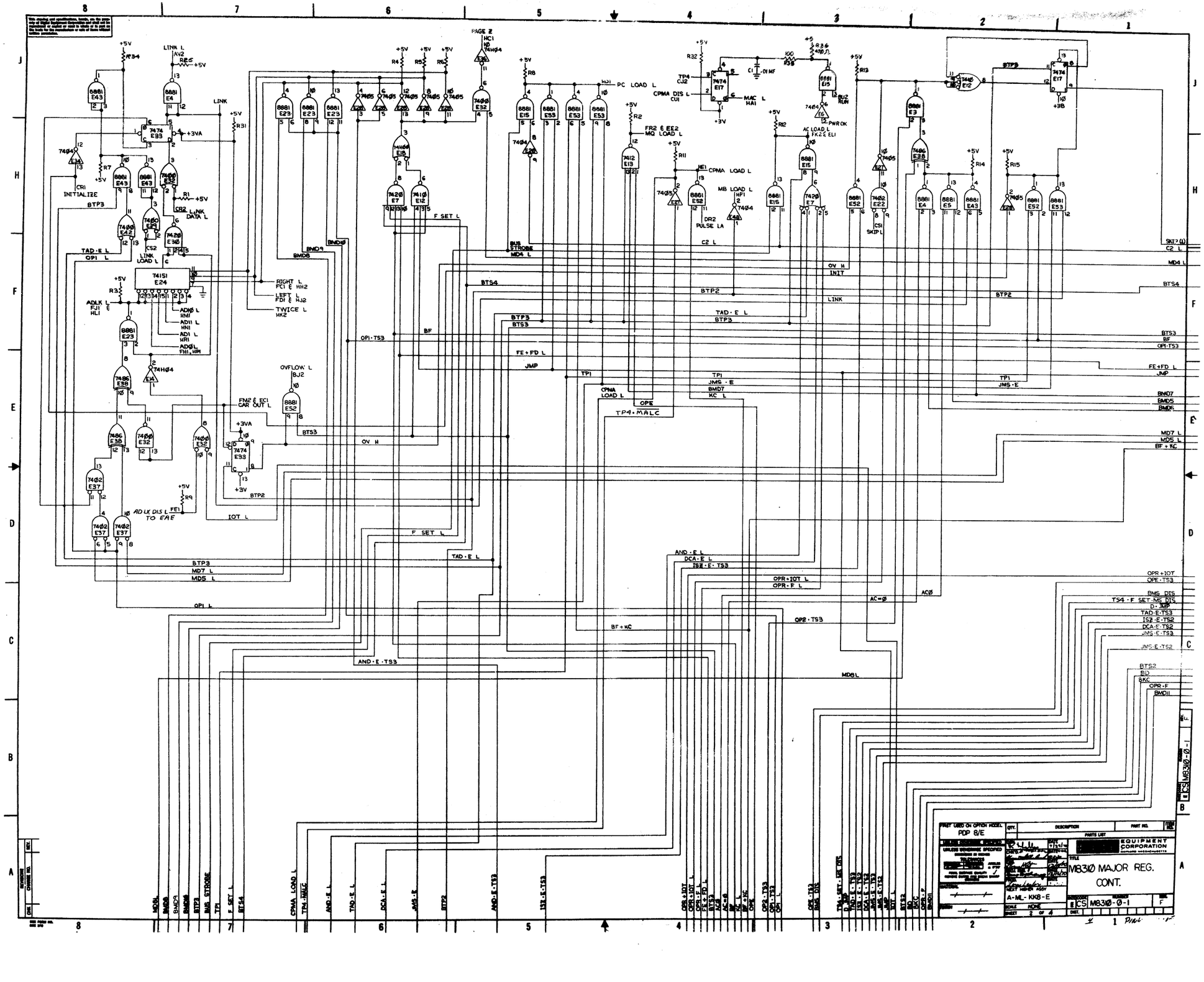
EQUIPMENT CORPORATION

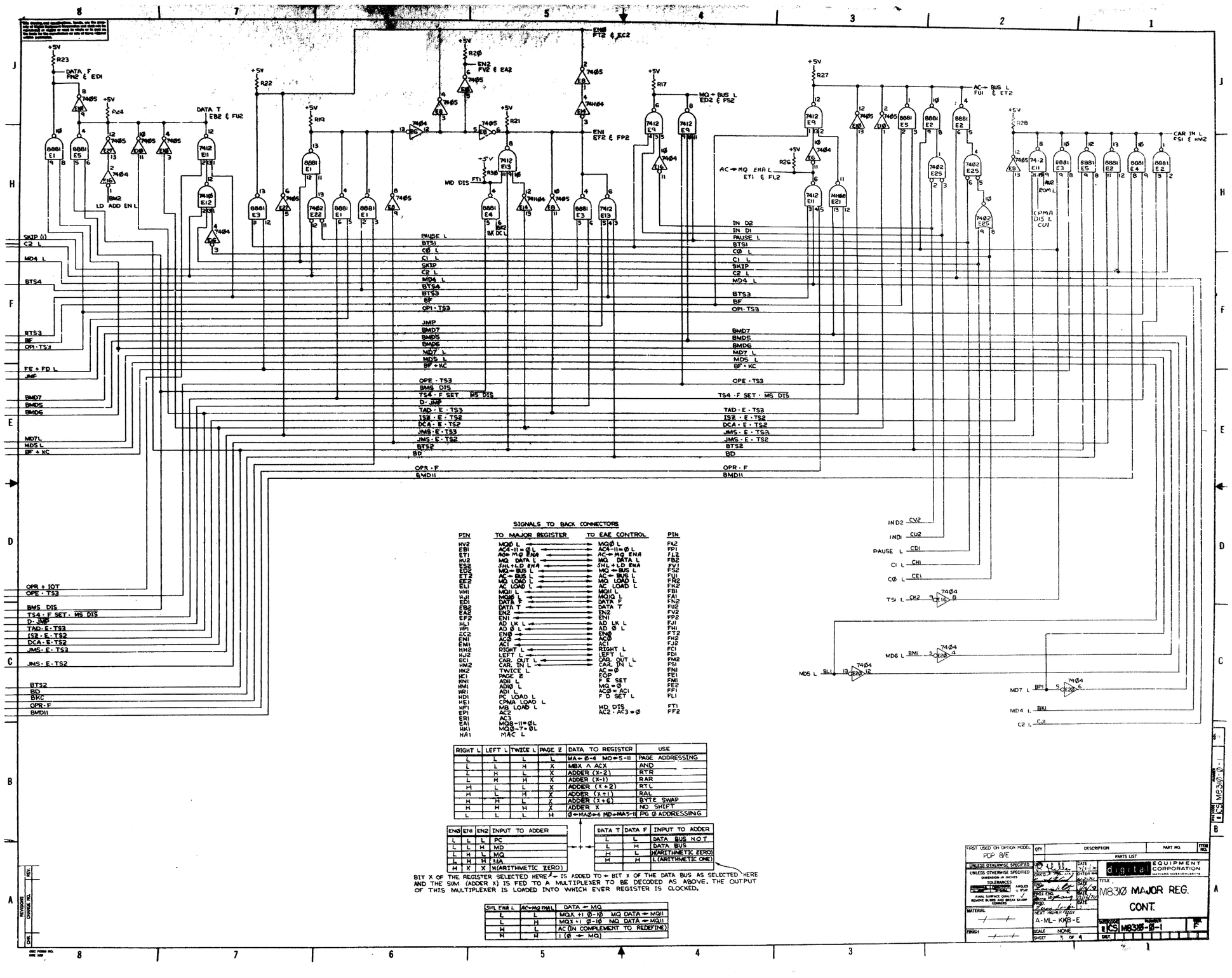
TITLE: MAJOR REG. CONT. (M8310)

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

SCALE 2/1 | SHEET 1 OF 4

1 Print


PAGE 2
LINK L
LINK
+5V
+3VA
+3V
CRI INITIALIZE
BTP3
CR2 LINK DATA L
TAD·E L
OPI L
LINK LOAD L
CS2
RIGHT L
LEFT L
TWICE L
ADLK L
ADLK DIS L TO EAE
OVFLOW L
FNC & EC1 CAR OUT L
IOT L
F SET L
BTP2
BMD9
BMD8
BUS STROBE
MD4 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
PWR OK
AC LOAD L FK2 & EL1
CSI SKIP L
OV H INIT
BTS4
BTP2
LINK
TAD·E L
BTP3
BTS3
BF
OPI·TS3
FE+FD L
JMP
TP1
JMS·E
BMD7
BMD5
BMD6
MD7 L
MD5 L
BF+KC
TP4·MALC
OPE
CPMA LOAD L
TP4·HALT
AND·E L
DCA·E L
JMS·E
AND·E·TS3
ISZ·E·TS3
OPR+IOT L
OPR·F L
OPR·TS3
OPR+IOT
OPE·TS3
BMS DIS
TS4·F SET·MS DIS
D·MP
TAD·E·TS3
ISZ·E·TS2
DCA·E·TS2
JMS·E·TS3
JMS·E·TS2
BTS2
BD
8KC
OPR·F
BMD11
AC=Ø
ACØ
OPR·TS2
BMS DIS
MD8L
SKP? (L)
MD4 L
BTS4
BTS3
BF
OPI·TS3
FE+FD L
JMP
BMD7
BMD5
BMD6
MD7 L
MD5 L
BF+KC
PDP 8/E
EQUIPMENT CORPORATION
M8310 MAJOR REG. CONT.
CS M8310-0-1
A-ML-KK8-E



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	FN2
EL1	AC LOAD L	AC LOAD L	FK2
EM1	MQ1I L	MQ1I L	FB1
HU1	MQ1Q L	MQ1Q L	FA1
ED1	DATA F	DATA F	FM2
EB2	DATA T	DATA T	FU2
EA2	EN2	EN2	FV2
EF2	ENI	ENI	FP2
HL1	AD LK L	AD LK L	FJ1
HP1	AD Ø L	AD Ø L	FH1
EC2	EN Ø	EN Ø	FT2
EN1	AC Ø	AC Ø	FH2
EM1	AC1	AC1	FJ2
HM2	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
HK2	TWICE L	AC = Ø	FN1
HC1	PAGE 2	EOP	FE1
HN1	ADI L	F E SET	FN1
HM1	ADI Ø L	MQ = Ø	FE2
HR1	ADI 1	AC Ø = ACI	FF1
HD1	PC LOAD L	F D SET L	FL1
HE1	CPMA LOAD L	MD DIS	FT1
HF1	MB LOAD L	AC2 · AC3 = Ø	FF2
EP1	AC2		
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 → 6 MD → MA5-11	PG Ø ADDRESSING

EN Ø	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-10 MQ DATA → MQ11
L	H	MQX + 1 Ø-10 MQ DATA → MQ11
H	L	AC (IN COMPLEMENT TO REDEFINE)
H	H	1 (Ø → MQ)

FIRST USED ON OPTION MODEL: PDP 8/E

UNLESS OTHERWISE SPECIFIED: DIMENSIONS IN INCHES; TOLERANCES: FRACTIONS ±1/64, DECIMAL ±.010, ANGLES ± 0°30'; FINAL SURFACE QUALITY 125 REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL —

FINISH —

QTY | DESCRIPTION | PART NO. | ITEM NO.

PARTS LIST

DRAWN L.D.N. 7/11/70
CHK'D J. Mc... 7/11/70
ENGR'G Jim Lee 7/11/70
PROJ. ENG. Jerry Sweeney 7/11/70
PROG. Dave Locke 7/11/70
NEXT HIGHER ASSY —
A-ML-KK8-E
SCALE NONE
SHEET 5 OF 6

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: M83Ø MAJOR REG. CONT.

SIZE D | CODE 18Ø83 | M83Ø-Ø-1 | REV F

DIST

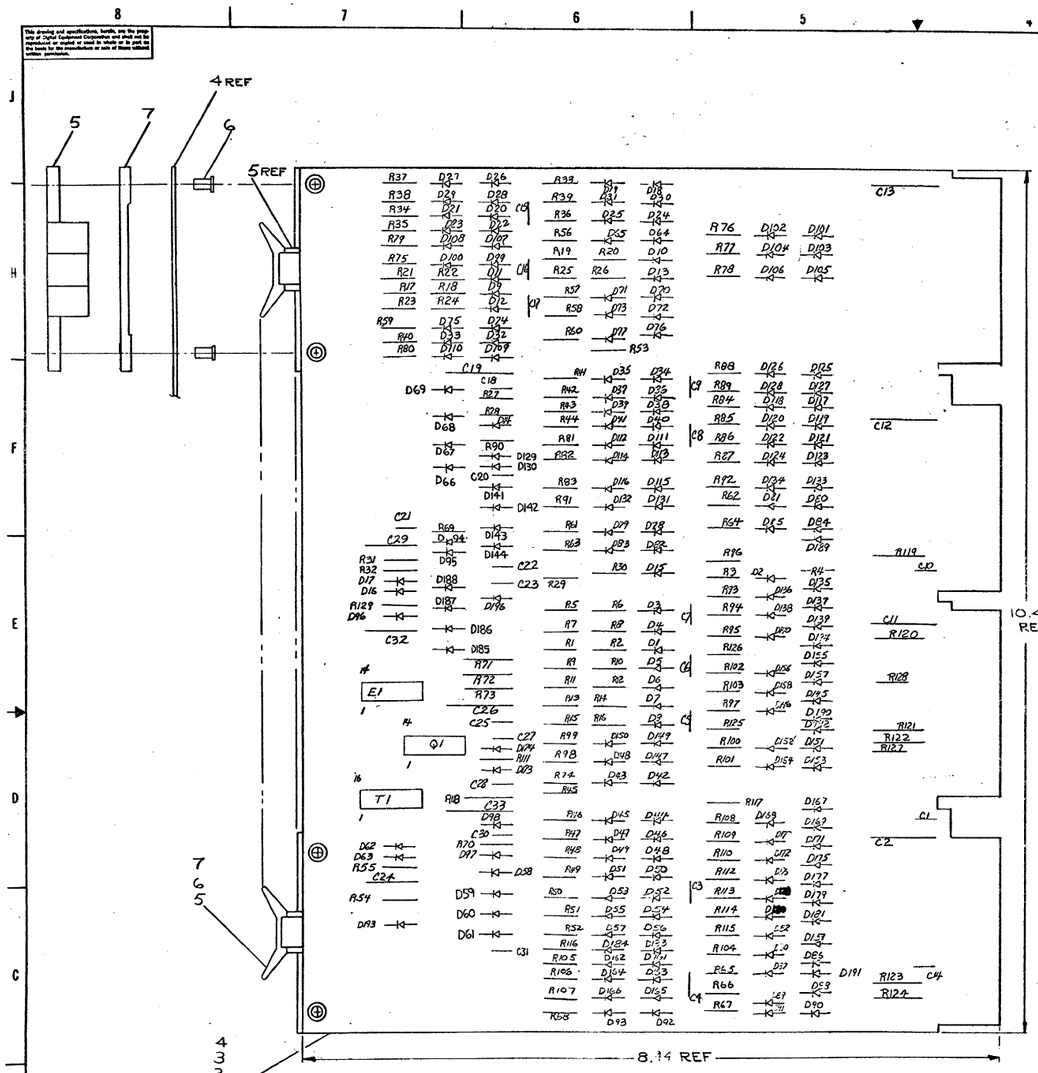
REVISIONS: REV. | CHANGE NO. | CHK.

DRAWING M83Ø-Ø-1 | SHEET B

MDØ
MD1
MD2
BTP3
BUS STROBE
TP1
F SET L
BTP4
CPMA LOAD L
TP3 - MALC
AND-E L
TAD-E L
DCA-E L
JMS-E
BTP2
AND-E-TS3
ISZ-E-TS3
OPR+IOT
OPR+IOT L
OPE
BF +KC L
KC L
BF
AC=Ø
ACØ
BTS3
FE+FD L
OPR-F L
OPI L
OPI-TS3
OPE-TS3
BMS DIS
BMS DIS L
SC=Ø
TAD-E-TS3
ISZ-E-TS3
DCA-E-TS3
JMP
JMS-E-TS3
IOT L
BTS2
BTS1
BTS0
OPR-F
BMØH
OPE-TS3

DKI MDØ L
DMI MDI L
DLI MD9 L
CKI BUS STROBE L
CD2 TP1
CH2 TP3
CP2 TS4 L
F SET
F SET L
BTS4
BTS3
DPI MC1 L
DØ2 KEY CONTROL L
M S IR DIS L
TP2
CE2
BF
MDØ L AKI
MDI L ALI
MD2 L AMI
DD2 IRØ L
DE2 IRI L
DF2 IR2 L
TP4 · MALC
TP4 CJ2
MALC BH2
BP2 INT IN PROG
+5V
RIG
F E SET L FM1
FE+FD L
CPMA LOAD L
TS3 L CM2
TS2 L CL2
DL2 E L
DK2 D L
DJ2 F L
BF
FL1 F D SET L
DD2 F SET L
R35 100
R37 3K
API MD3 L
Q1 DEC30C48
+5V -15V
R33 +3V
AC=Ø FN1
AC4-11=Ø L EBI & FPI
FF1 ACØ≠AC1
AC2·AC3=Ø FF2
ACØ EMI FMI FKI
AC1 EMI FJI
AC2 EPI
AC3 ERI
MQIØ L HJI & FAI
MQI1 L HHI & FBI
SHL ENA L ES2 & FVI
MQ DATA L HJ2 & FB2
MQ Ø L HY2 & FA2
EAI MQ8-11=Ø L
MQ8-7 =QL
FEE MQ=Ø
BTS3

PART USED ON OPTION MODEL	QTY. / DESCRIPTION / PART NO. / REV
PDP 8/E	PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES FRACTIONS ± DECIMALS ± ANGLES ± MATERIAL FINISH NEXT ASSY USED ON APPLICATION DO NOT SCALE DRAWING	DRAWN CHECKED ENGR APPROVED MFG APPROVED QA APPROVED COMMENTS:
	DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
	TITLE: M8310 MAJOR REG CONT.
	SIZE D DWG NO. MCS M8310-0-1 REV F
	SCALE NONE SHEET 4 OF 4



NOTES:

1. UNLESS OTHERWISE SPECIFIED:
   CAPACITORS = .047UF 16V 15-20%
   RESISTORS = 1500 1/4W 5%
   DIODES = D664
2. CONNECT ALL PINS C, F, N, T (EXCEPT AC1) TOGETHER TO GROUND.
3. ITEM NO. 8 (D664) MAY BE REPLACED WITH D600 P.N. 1105366 (REV C ONLY).

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
12	R57-R68	RES 1K 1/4 W 5%	1300365	23
A/R		GRIPLET	1210249-0	22
3	C24, C29, C32	CAP 330PF 100V 5%	1000023	21
7	C2, C11, C12, C13, C19, C26, C33	CAP 6.8UF 35V 20%	1000067	20
23	C1, C3-C10, C14-C18, C20-C23, C25, C27, C28, C30, C31	CAP .047UF 16V 15-20%	1009678	19
1	E1	IC DEC 7400	1905575	18
1	T1	PULSE XFMR 8010 DUAL IN LINE	1609651	17
1	Q1	TRANS DEC 4008	1510015	16
6	R119-R124	RES 1K 1/2W 10%	1302187	15
4	R71-R73, R118	RES 1.2K 1/2W 10%	1300387	14
46	R53, R69, R74-R117,	RES 1500 1/4W 5%	1300391	13
41	R2, R4, R6, R8, R10, R12, R14, R16, R18, R20, R22, R24, R26, R28, R30, R32-R52, R55, R56, R70, R127, R128	RES 470 1/4W 10%	1300317	12
20	R1, R3, R5, R7, R9, R11, R13, R15, R17, R19, R21, R23, R25, R27, R29, R31, R54, R125, R129, R126	RES 150 1/4W 5%	1300250	11
2	D7, D97	DIODE D672	1105275	10
16	D58-D61, D66-D69, D141-D144, D55-D188	DIODE D662	1100113	9
177	D1-D16, D18-D57, D62-D65, D70-D96, D98-D140, D45-D184, D189-D194, D196	DIODE D664	1100114	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	5009486	4
REF		MODULE HISTORY LIST	8-MH [illegible]	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH [illegible]	2
REF		X-Y COORDINATE HOLE LOC.	K-CO [illegible]	1

SEE NOTE 3 (item 8)

PARTS LIST

ETCH BOARD REV D

DEC NO	EIA NO	DEC NO	EIA NO
DEC 4008			
D664	1N3606		
D672	1N3653		
D662	1N645		

SEMICONDUCTOR CONVERSION CHART

REV.	CHANGE NO	ORIGINATED		CHK
E	M8320-00004	J. KIRK 12/14/73		
D	M8320-00003	J. KIRK		

REVISIONS

DRN.		DATE	
CHK'D.		DATE	
ENG.		DATE	
PROJ. ENG.		DATE	
PROD.		DATE	
FIRST USED ON	D-UA-KK8-E-0		
SCALE	2/1		
SHEET	1 OF 2		

EQUIPMENT CORPORATION

TITLE BUS LOADS

SIZE	CODE	NUMBER	REV.
E	CS	M8320-0-1	E

DIST.

IC TYPE	GND	+5V

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

C18 .047 MF
C19 6.8 UF
C26 6.8 UF
C25 .047 MF
C22 .047 MF
C11 6.8 MF
C10 .047 MF
C7 .047 MF
C16 .047 MF
C12 6.8 UF
ARR BUS CA2 +5V
R231 150
C29 33 PF
C8 6.8 MF
DAL +15V
C1 .047 MF
C13 6.8 MF
C27 .047 UF
T1
Q1 2N929
R253
R232 470
TEST POINT R81
E1 7400
TP B4 H
CJ2
E1 7400
D16 D17 D472
+5V
E1 150
R2 470
C1
R3 150
R4 470
D2
R5 150
R6 470
D3
R7 150
R8 470
D4
R9 150
R10 470
D5
R11 150
R12 470
D6
R13 150
R14 470
D7
R15 150
R16 470
D8
R17 150
R18 470
D9
R19 150
R20 470
D10
R21 150
R22 470
D11
R23 150
R24 470
D12
R25 150
R26 470
D13
R27 150
R28 470
D14
R29 150
R30 470
D15
GND
ALL C,F,N +T PINS EXCEPT AC1
CJ2 TP B1 H
CR2 TP B2 H
CM2 TP B3 H
CM2 TS B1 L
CL2 TS B2 L
CM2 TS B3 L
CP2 TS B4 L
ARR RETURN H
AL2 SOURCE H
AM2 STROBE H
AS2 WRITE H
AP2 INHIBIT H
BC8 INT STROBE H
CD1 I/O PAUSE L
R233 470
D18 D19
R234 470
D20 D21
R235 470
D22 D23
R236 470
D24 D25
R237 470
D26 D27
R238 470
D28 D29
R239 470
D30 D31
R240 470
D32 D33
R241 470
D34 D35
R242 470
D36 D37
R243 470
D38 D39
R244 470
D40 D41
R245 470
D42 D43
R246 470
D44 D45
R247 470
D46 D47
R248 470
D48 D49
R249 470
D50 D51
R250 470
D52 D53
R251 470
D54 D55
R252 470
D56 D57
C15 .047 UF
C14 .047 UF
D59 D59 D60 D61
NO1 MA B8 L
AR1 MA B1 L
AN1 MA B2 L
AN1 MA B3 L
AD2 E MA B8 L
AR2 E MA B1 L
AM2 E MA B2 L
AU2 ROM ADDRESS L
BD1 MA B4 L
BE1 MA B5 L
BH1 MA B6 L
BJ1 MA B7 L
CW1 MS TP DISABLE L
DD1 MA B9 L
DE1 MA B9 L
DH1 MA 10 L
DJ1 MA 11 L
DL2 F L
DM2 D L
DL2 E L
+5V
C24 330 PF
R54 150
T1
Q1 2N929
TEST POINT R81
R255 470
R256 470
R274
E1 7111
D62 D63
+5V
AMP MEM ERR INH
D64 D65
C17 .047 UF
C23 .047 UF
D66 D67 D68 D69 D662 D663 D662 D662
R257 1K
D70 D71
R259 1K
D72 D73
R260 1K
D74 D75
R261 1K
D76 D77
R262 1K
D78 D79
R263 1K
D80 D81
R264 1K
D82 D83
R265 1K
D84 D85
R266 1K
D86 D87
R267 1K
D88 D89
R268 1K
D90 D91
R269 1K
D92 D93
R270 1K
D94 D95
ARI DATA B0 L
AJ1 DATA B1 L
AU1 DATA B2 L
AV1 DATA B3 L
BR1 DATA B4 L
BS1 DATA B5 L
BU1 DATA B6 L
BV1 DATA B7 L
DR1 DATA B8 L
DS1 DATA B9 L
DU1 DATA 10 L
DV1 DATA 11 L
BE2 ENT IN PROG H
+15 V
D97 D662
R70 470
DR1 TEST POINT
D96 C32 330 pf
R129 150
T1
Q1 2N929
C33 6.8 UF
C36 .047 UF
C28 .047 UF
D98
E1 7401
R271 1.2K
R273 1.2K
R272 1.2K
R118 1.2K
-15 V
C9 .047 MF
C21 .047 MF
R96
E75 D99 D100
E76 D101 D102
E77 D103 D104
E78 D105 D106
E79 D107 D108
E80 D109 D110
E81 D111 D112
E82 D113 D114
E83 D115 D116
E84 D117 D118
E85 D119 D120
E86 D121 D122
E87 D123 D124
E88 D125 D126
E89 D127 D128
E90 D129 D130
E91 D131 D132
E92 D133 D134
E93 D135 D136
E94 D137 D138
E95 D139 D140
C8 .047 UF
C20 .047 MF
D662 D662 D662 D662
D141 D142 D143 D144
ANI MD B0 L
AL1 MD B1 L
AV1 MD B2 L
AP1 MD B3 L
AU2 MEM START L
AV2 LINK L
BE2 BRK IN PROG L
BJ2 OVERFLOW L
BM2 LD ADD ENABLE L
BK1 MD B4 L
BL1 MD B5 L
BM1 MD B6 L
BP1 MD B7 L
BU2 MAINS LOAD CONT L
BV2 BREAK DATA CONT L
DL2 BREAK CYCLE L
BR2 RES B1 L
BS2 RES B2 L
CE1 C B0 L
CH1 C B1 L
DJ1 C B2 L
C3 .047 UF
C5 .047 UF
R117
E97 D145 D146
E98 D147 D148
E99 D149 D150
E100 D151 D152
E101 D153 D154
E102 D155 D156
E103 D157 D158
E104 D159 D160
E105 D161 D162
E106 D163 D164
E107 D165 D166
E108 D167 D168
E109 D169 D170
E110 D171 D172
E111 D173 D174
E112 D175 D176
E113 D177 D178
E114 D179 D180
E115 D181 D182
E116 D183 D184
C4 .047 MF
C6 .047 MF
D662 D662 D662 D662
D185 D186 D187 D188
CJ1 INT POST L
CS1 SKIP L
CR2 LINK DATA L
CU2 IND B1 L
CV2 IND B2 L
CL1 INTERNAL I/O L
CM1 NOT LAST XFER L
DP2 P SET L
DS2 STOP L
DU2 KEY CONTROL L
DV2 SM L
DD2 IR B8 L
DE2 IR B1 L
DH2 IR B2 L
CW1 CPMA DISABLE L
DK1 MD B8 L
DL1 MD B9 L
DM1 MD 10 L
DP1 MD 11 L
DM2 USER MODE L
D193
R119 1K
R120 1K
BV2 POWER OK H
D189
R121 1K
R122 1K
CR1 INITIALIZE H
D190
R123 1K
R124 1K
DR2 LOAD ADDRESS L
D191
.047 MF C4
C82, D82
-15 V
+5V
R125 150
CS2 LINK LOAD L
D192
R127 470
R126 150
CM1 BUS STROBE L
D194
R128 470
BU2 RUN H
D196

REVISIONS		
LTR	CHANGE NO.	DATE

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
FRACTIONS ±1/64 ANGLES ±1°30'
.XXX ±.005 .XX ±.01
FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

CHK'D
ENG.
PROJ. ENG.
FOUND:
APPROVED

DATE 5-5-71
DATE 5-7-71
DATE 5-7-71
DATE 5-7-71
DATE 5-7-71

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
BUS LOADS

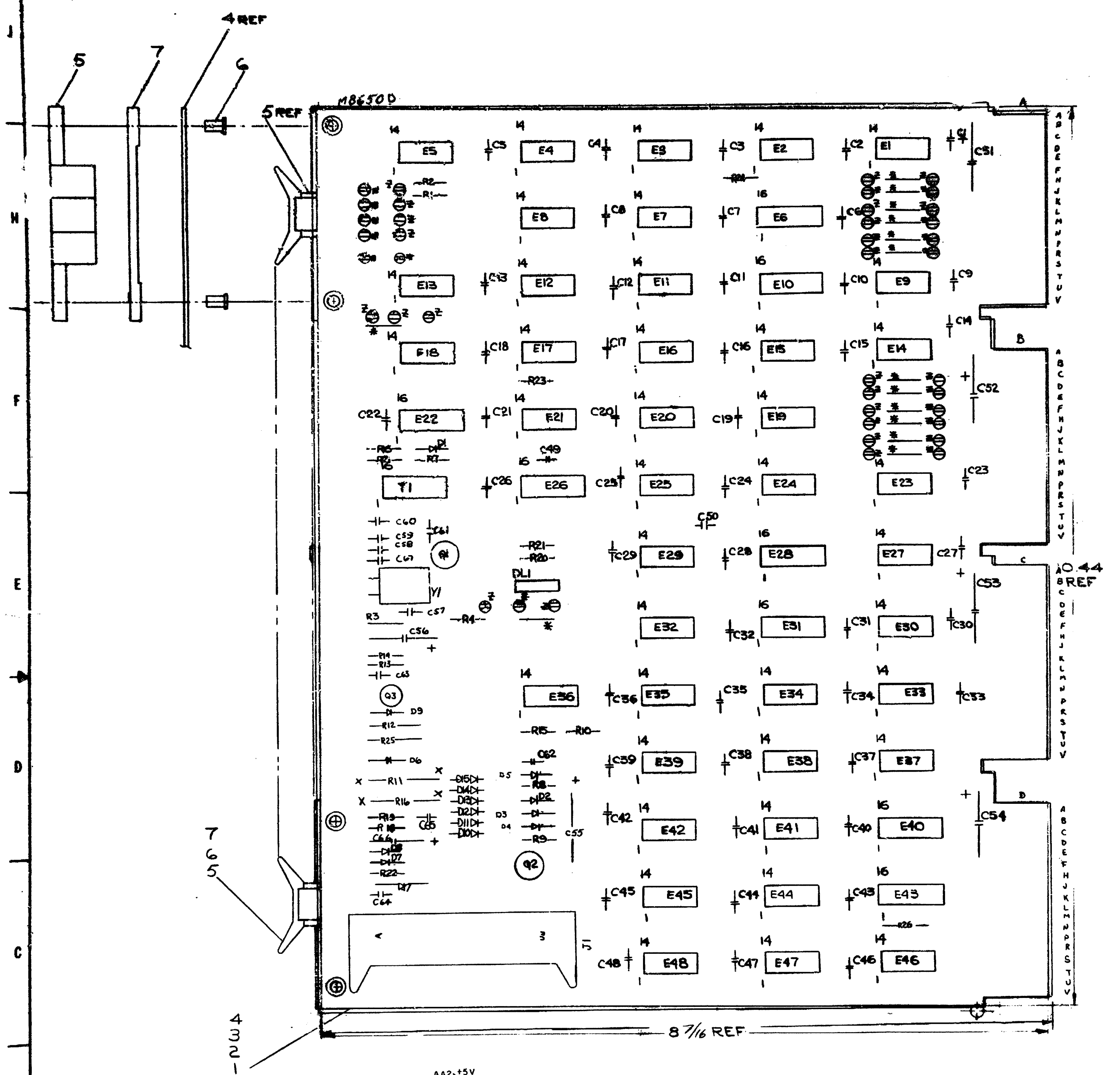
SIZE CODE NUMBER REV.
E CS M8320-0-1 E

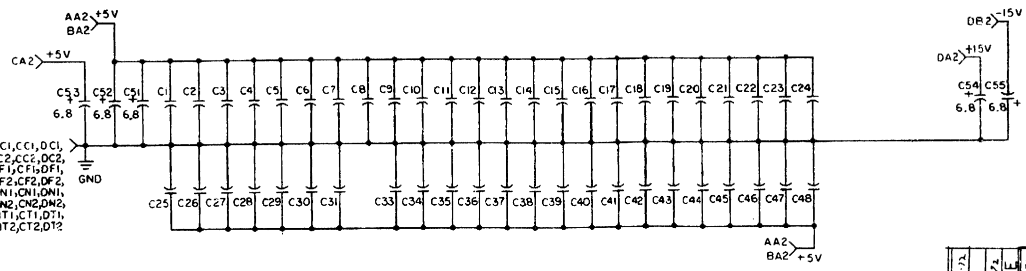
SCALE
SHEET 2 OF 2
DIST.

NEXT ASSY
USED ON

CS M8320-0-1

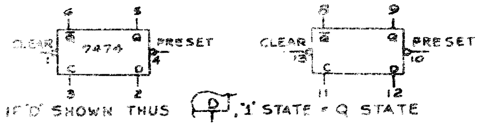
SEE FORM NO. FOR TYPE





1. ~4~ SPLIT LUGS
   JD2A : MACHINE INSERTED JUMPER
   J1 : 40 PIN HEADER CONNECTION

   DATA 11 DV1 : OMNIBUS CONNECTION
2. PIN F IS EIA TRANSMITTED DATA:
   +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).
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, "1" STATE = Q STATE
   IF "D" SHOWN THUS "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%	1300394	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	190547	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 9815	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%	[illegible]0271	28
1	R2	RES. 750, 1/4W 5%	[illegible]1401	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	9006735	10
1		CONNECTOR 40 PIN	1209941	9
A/R		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	900833706	5
1		ETCHED CIRCUIT BOARD	5009546	4
REF		MODULE HISTORY LIST	B-MH-M8650-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8650-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-C0-M8650-0-4	1

PARTS LIST

ETCH BOARD REV D

IC TYPE	GND	+5V
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

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT
8	22	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
8	22	JC13-A	JC13-B

JUMPER LIST

REV.	CHANGE NO.		CHK.
A	ORIGINATED		
B	M8650-00001	6-10-71	
C	M8650-00002	J.McNAMARA 1-7-72	6-14-71
D	M8650-00003	4-3-72 E.CLARK 4-4-72	2-29-72
E	M8650-00004	E.CLARK 12-6-72	12/1/72

REVISIONS

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

SEMICONDUCTOR CONVERSION CHART

DRN 4/2/71
CHKD 4-7-71
DATE 4-13-71
DATE 4-13-71
DATE 7-6-71

PART USED ON A-ML-KL8-E

EQUIPMENT CORPORATION

TITLE ASYNCHRONOUS DATA CONTROL

SIZE E CODE CS NUMBER M8650-0-1 REV. E

SCALE 2/1 SHEET 1 OF 2

E CS M8650-0-1

ASYNCHRONOUS DATA CONTROL

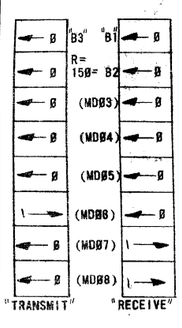
EQUIPMENT CORPORATION

DEC MB650-0-1

NOTES:

1. TOP OF BRACKET (ITEM 52) SHOULD BE SLIPPED UNDERNEATH INSULATOR (ITEM 59).
2. FOR YA,YB,YC VARIATIONS SEE SHEET 5 OF 5 FOR CRYSTALS. (REFERENCE KL8-K OPTION ALSO)

DEVICE CODE & SPEED SELECTION



(ARROWS INDICATE DEPRESSED SWITCH, ON = 1, OFF = Ø. FOR THE EXAMPLE SHOWN, RECEIVE DEVICE CODE = Ø3, TRANSMIT DEVICE CODE = Ø4, AND SPEED = 110 BAUD)

R = 150
OFF – TRANSMIT & RECEIVE SPEEDS ARE THE SAME.

ON – TRANSMIT SPEED SET BY B1, B2, & B3 RECEIVE SPEED IS 150 BAUD.

B1	B2	B3	BAUD RATE
Ø	Ø	Ø	110
Ø	Ø	1	150
Ø	1	Ø	300
Ø	1	1	600
1	Ø	Ø	1200
1	Ø	1	2400
1	1	Ø	4800
1	1	1	9600
1	1	1	19200

← 1 = ON
Ø = OFF

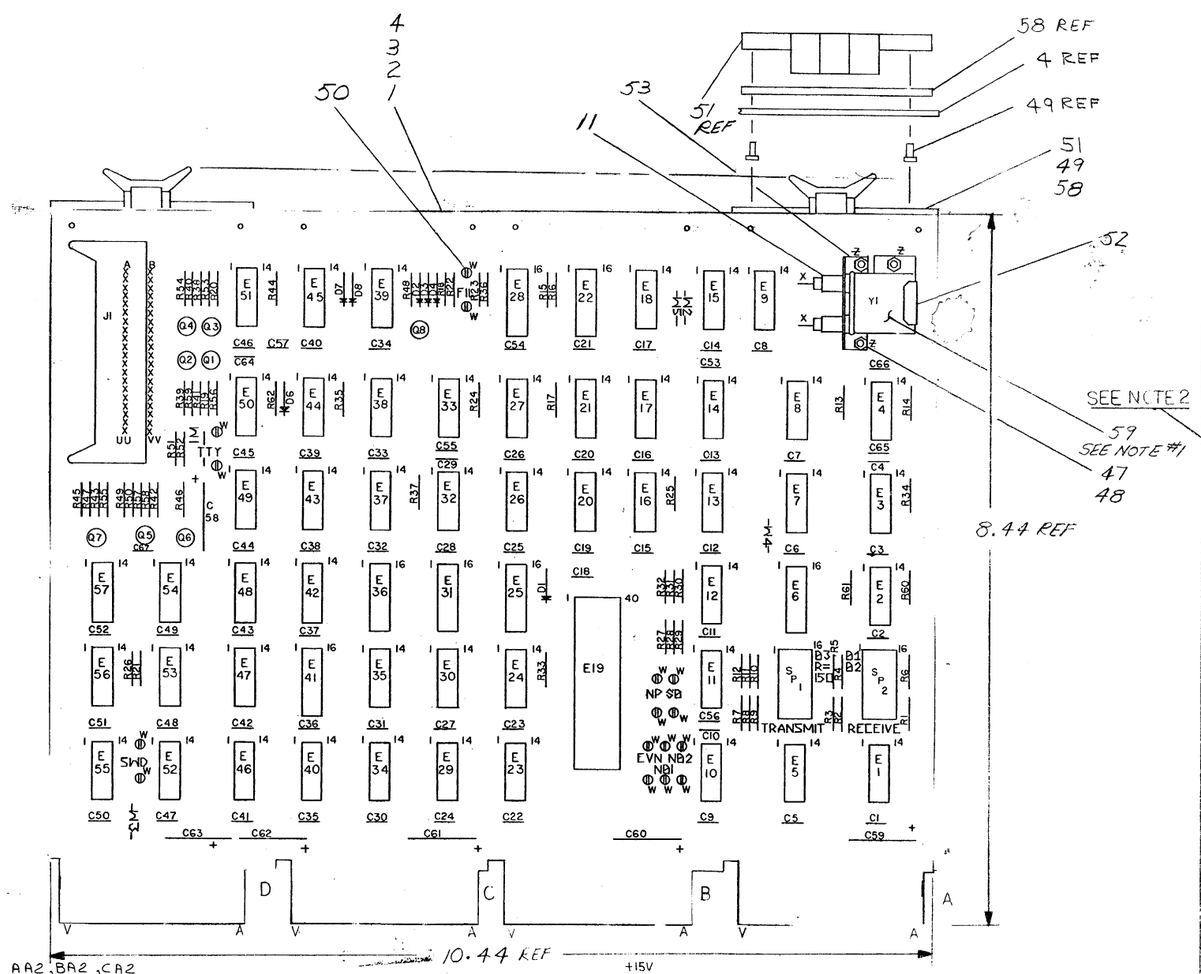
W2 IN, W5 OUT
NORMAL SETTING
W2 OUT, W5 IN, SPECIAL UART CHIP REQUIRED

JUMPER DEFINITIONS

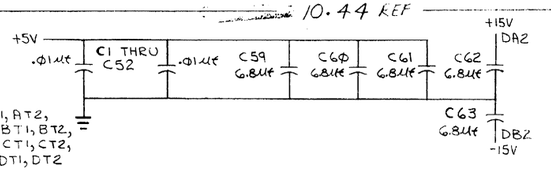
SB/#4 STOP BITS OUT = 2 STOP BITS IN = ONE
NP - NO PARITY OUT = NO PARITY IN = PARITY
EVN - EVEN PARITY OUT = EVEN IN = ODD
NB1 & NB2 - NUMBER OF DATA BITS/CHAR

DATA BITS/CHAR	8	7	6	5
NB1	OUT	IN	OUT	IN
NB2	OUT	OUT	IN	IN

SWD/W3 - STATUS WORD ENABLE OUT = DISABLE IN = ENABLE
FIL - FILLER CHARACTER ENABLE OUT = DISABLE IN = ENABLE (INSTALLED FOR VT85 OPERATION ABOVE 300 BAUD)
TTY/W1 - TELETYPE FILTER OUT = DISABLE IN = ENABLE (INSTALLED FOR 110 BAUD TELETYPE OPERATION ONLY)



AA2, BA2, CA2



AC1, 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

IC	PIN	GND
IC 1808 UART -12V=2	3	1
IC 1488 -12V=1	7	1/2=14
IC 5380	1	8
IC 74175	8	16
IC 8266	8	16
IC 7442	8	16
IC 11380	1	8
IC 5394	1	8
IC 74151	8	16
IC 7493	10	5
IC 7492	10	5
IC TYPE	GND	+ 5V

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

IC PIN LOCATIONS

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	E9	I.C. DEC 7492	1909053	55
1	E50	I.C. DEC 1488L	1910322	56
1	E45	I.C. DEC 1489L	1910323	57
4		CLAMP, CABLE	1202704	58
A/R	YI, INSULATOR	SHRINKABLE TUBING	9107249-09	59

REF				
REF		ASSY/DRILLING HOLE LOCATION	D-AM-8655-R-5	2
REF		MODULE ECO HISTORY	B-MI-8655-R-5	3
1		ETCHED CIRCUIT BOARD	5010614	4
5	C64,C65,C66,C67,C67	CAP 330 PF 100V 5%	1000323	5
58	C1-C58	CAP .01 100V 20% AXIAL	1001616-09	6
1	C58	CAP 2.2 UF 35V 10%	1002431	7
5	C59 THRU C63	CAP 6.8 UF 35V 10%	1005306	8
5	D2 THRU D4,D7,D8	DIODE D664	1100114	9
2	D1,D6	DIODE ZENER 1N4742	1109502	10
2		CRYSTAL SOCKET 8000 PGT	1202812	11
2	E6,E28	I.C. SOCKET	1210025	12
1	J1	CONN 40 PIN	1209941	13
2	SP1,SP2	SWITCH (DIP 8 BIT)	1211184-04	14
2		SWITCH COVER	1211284-04	15
5	R48 THRU R52	RES 47 1/4W 5%	1300202	16
6	R44-R47,R53,R54	RES 68 1/4W 5%	1300219	17
1	R62	RES 150 1/4W 5%	1300250	18
2	R60,R61	RES 220 1/4W 5%	1300271	19
22	R23-R43,R18	RES 1K 1/4W 5%	1300385	20
3	R56-R58	RES 3.3K 1/4W 5%	1300439	21
21	R1-R17,R19-R22	RES 10K 1/4W 5%	1300479	22
2	R59,R55	RES 6.8K 1/4W 5%	1301423	23
3	Q1,Q2,Q7	TRANS MPS A65	1510769	24
5	Q3,Q4,Q5,Q6,Q8	TRANS MPS A55	1510790	25
1	Y1	CRYSTAL 5.0688 MHZ	1811163	26
7	E20,E27,E39,E42,E43,E56,E57	I.C. DEC 7474	1905547	27
5	E3,E21,E38,E40,E54	I.C. DEC 7400	1905575	28
1	E47	I.C. DEC 7410	1905576	29
1	E26	I.C. DEC 7430	1905578	30
1	E48	I.C. DEC 7440	1905579	31
2	E35,E37	I.C. DEC 7402	1909804	32
6	E8,E14,E15,E17,E18,E44	I.C. DEC 7493	1909854	33
3	E16,E32,E49	I.C. DEC 7404	1909896	34
2	E13,E53	I.C. DEC 8815	1909713	35
1	E36	I.C. DEC 8268	1909934	36
1	E22	I.C. DEC 74151	1909938	37
5	E11,E23,E29,E33,E34	I.C. DEC 97401	1909973	38
1	E7	I.C. DEC 7486	1910011	39
3	E1,E2,E5	I.C. DEC 8242	1908712	40
1	E41	I.C. DEC 7442	1910046	41
1	E4	I.C. DEC 5380	1910382	42
3	E10,E12,E46	I.C. DEC 5384	1910384	43
1	E19	I.C. DEC 1808 (UART)	1910459-1	44
2	E25,E31	I.C. DEC 74175	1910651	45
5	E24,E30,E51,E52,E55	I.C. DEC 11380	1911113	46
3		PH SCREW #2-56 x 1/4 IN.	9006601-1	47
3		HEX NUT #2-56	9006555	48
8		EYELET #GS4-11	9006750	49
16		SPLIT LUG	9006735	50
4		HANDLE FLIP CHIP (MAGENTA)	9008337-06	51
1		R405-2024 REAR SUPPORT BRACKET	5302625	52
1		R405-2026 CRYSTAL HOLDER BRACKET	5303154	53
A/R	W2,W3,W4	BUS WIRE #22GA	9107560-01	54

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

FIRST USED ON OPTION MODEL: KL8-JA

ETCH BOARD REV: B

PARTS LIST

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		1N5	NONE
		A55	NONE
		1N4742	SAME
		0664	1N4006

SEMICONDUCTOR CONVERSION CHART

REV	CHANGE NO.	CHK	REVISIONS
B			E. Hood 10-7-74
A	7		B. REGAN 9-23-74
	M8655-0C0018/A		Drawn per

DRN. M. Pierce DATE 8-1-73
CHK'D. W. Smith DATE 9-26-73
ENG. K. Regan DATE 10-1-73
PROJ. ENG. K. Regan DATE 10-1-73
PROG. T. King DATE 10-1-73
NEXT HIGHER ASSY B-CS-KL8-JA-1
SCALE NONE
SHEET 1 OF 5

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: TERMINAL CONTROL

SIZE L | CODE | NUMBER CS M8655 -0-1 | REV. B

DIST.

CS M8655-0-1 B

DEC FORM NO. DRD-135A

BRUNING 40-522 16699

SIZE D CODE CS NUMBER M8655-0-1 REV B

E6 & E28 ARE I.C. SOCKETS PROVIDING TEST POINTS.

(1.18 µS PULSE)
RESET DATA AVAILABLE
P1.18 µS
RECEIVED DATA AVAILABLE
I/O CLR RECEIVE FLAG
RECEIVE FLAG
THIS MODULE SELECTED L
B PAUSE L
I/O PAUSE CD1
TRANSMIT DEVICE CODE DECODER
RECEIVE DEVICE CODE DECODER
INITIALIZE CR1
INIT L
INIT H
INTERNAL I/O
STATUS ENABLE FF
INTERRUPT ENABLE FF
TRANSMIT FLAG
I/O CLR TRANS FLAG L
B TRANS BUFFER EMPTY FILCH (Ø) H
DATA Ø DV1
DATA 11 DV1
I/O SET ADR RUN L
I/O TRANSMIT DATA L
I/O READ DATA H
C&L SKIP CP1
INT REQ Q
TRANSMIT FLAG (1) L
TP3 C2
TRANS 2,4 OR 6 L
MDØ3 BPI
MDØ4 BXI
MDØ5 BLI
MDØ6 BMI
MDØ7 BPJ
MDØ8 BXJ
MDØ9 DLI
MDIØ DMI
MDI1 DPJ
SP1
SP2

* S0 LOW (INITIALIZE) CAUSES "B" INPUT SIGNALS TO APPEAR AT "F" OUTPUTS.
S1 LOW (TP3) CAUSES THE COMPLEMENT OF THE "A" INPUTS (DECODED INSTRUCTIONS) TO APPEAR AT THE "F" OUTPUTS.

REVISIONS

CHK	CHANGE NO.	REV.

(INSTRUCTION DECODING & FLAGS)

TITLE TERMINAL CONTROL
SIZE D CODE CS NUMBER M8655-Ø-1 REV. B
SCALE SHEET 2 OF 5 DIST.

BAUD RATE SELECTION

B1	B2	B3	W2	W5	PULSE WIDTH OF TRANMIT CLOCK	BAUD RATE
OFF	OFF	OFF	IN	OUT	2084 µS	110
OFF	OFF	ON	IN	OUT	208 µS	150
OFF	ON	OFF	IN	OUT	104 µS	300
OFF	ON	ON	IN	OUT	52 µS	600
ON	OFF	OFF	IN	OUT	26 µS	1200
ON	OFF	ON	IN	OUT	13 µS	2400
ON	ON	OFF	IN	OUT	6.5 µS	4800
ON	ON	ON	IN	OUT	3.26 µS	9600
ON	ON	ON	OUT	IN	*	19.2 KBD

19.2 KBD SETTING IS FOR A SPECIAL APPLICATION AND REQUIRES THE SUBSTITUTION OF THE NORMAL UART CHIP WITH ANOTHER PART.

R = 150 - OFF - RECEIVE CLOCK = TRANSMIT CLOCK
ON - RECEIVE CLOCK IS 208 µS PULSE WIDTH - RECEIVE BAUD RATE IS 150, TRANSMIT BAUD RATE IS AS SHOWN ABOVE.

* ASYMYMETRICAL PULSE WIDTH.
1.094S 2.174S

NOTE:
1. SIGNAL NAMES SUCH AS P1.08 µS ARE INTERPRETED AS FOLLOWS:

P1.08 µS = PW 1.08 µS + PN 1.08 µS

E1 & E28 ARE IC SOCKETS PROVIDING TEST POINTS.

TEST SYNC E28-9 → FF TO SYNC TIMING BETWEEN TWO MODULES ON B/E XOR TESTER

CLK OUT ENABLE H E28-5 · TEST CLK OUT E28-8 · TEST CLK IN E28-4

150 BD CLK · 7400 E21 · 7404 E16 · R25 1K · +3V · E28-7 · R = 150 · 7400 E21 · RECEIVE CLK

TRANSMIT CLK · E28-15 (TRANSMIT CLK) TESTPOINT

+3V · E28-14 · E28-11 · E28-12 · R15 10K · R16 10K · R17 10K · B3 B2 B1 · 74151 E22 ONE OF EIGHT MUX · SØ S1 S2 · STB · DØ D1 D2 D3 D4 D5 D6 D7

9.6/19.2 KBD CLK · 4800 BD CLK · 2400 BD CLK · 1200 BD CLK · 600 BD CLK · 300 BD CLK · 150 BD CLK · 110 BD CLK

W5 W2 · P3.26 µS · 7486 E7 · 7492 E9 ÷11 · P1.09 µS · 7493 E15 ÷12 · 7493 E18 ÷16 · CLR

P99 NS · P296 NS · P592 NS · P17.84 µS · P1.18 µS · 7486 E7 · 7493 E8 ÷12 · 7493 E14 ÷15 · 7493 E17 ÷16

Y1 5.0688 MHZ · R14 10K · C66 330 PF · 5380 E4 · R13 10K · C65 330 pf · R34 1K · R36 1K · R23 1K · 7400 E3

TRANSMIT BUFFER EMPTY · 5384 E46 · I/O TRANSMIT DATA L · INIT H · 7402 E37 · 7400 E42 · FF'S FOR ESTABLISHING TRANSMIT DATA SET UP TIME FOR UART. · BTRANS BUFFER EMPTY

ATTAHIN (WEAVING FILLER CHARACTERS) · 7414 E49 · INIT L · 7474 E27 ASYNCH · R37 1K · LINE FEED DECODE L · 7400 E54 · 7410 E47 · 7400 E48

INIT L · 7474 E43 FCCA · 7474 E43 FCCB · COUNT FILL CHARS · FILLER CHARACTER COUNTER · 7402 E37 · 7404 E49 · (296 NS PULSE) TRANSMIT DATA STROBE

REVISIONS		
CHK	CHANGE NO.	REV.

(TIMING & FILLER CHARACTER GENERATION)

TITLE	SIZE	CODE	NUMBER	REV
TERMINAL CONTROL	D	CS	M8655-Ø-1	B
SCALE	SHEET 3 OF 5		DIST.	

D CS M8655-Ø-1 B

SIZE D | CODE 03216 | NUMBER CSM8655-Ø-1 | REV B

UART POWER
E19-1 → +5V
E19-2 → -12V
E19-3 → GND

+3V R22 10K E28-3 FIL 7404 E32 LINE FEED DECODED L

74175 E31: DATA 11 (DV1), DATA 10 (DV1), DATA Ø9 (DS1), DATA ØB (DR1) → 1138Ø E3Ø → D Ø, D1, D3, D2; R33 1K +5V; CLR CLK

74175 E25: DATA Ø7 (BV1), DATA Ø6 (BU1), DATA Ø5 (BS1), DATA ØØ (BR1) → 1138Ø E24 → D Ø, D1, D3, D2; TRANS 2 OR 6; CLR CLK

COUNT FILL CHARS 7404 E32

1Ø TRANSMIT DATA L 7404 E32

7430 E26 (3 4 12 2 1 5 6 11)

UART - 18ØB E19

XDØ	26	RDØ 12
XD1	27	RD1 11
XD2	28	RD2 1Ø
XD3	29	RD3 9
STB STATUS	16	
STB RD	4	
XD4	3Ø	RD4 8
XD5	31	RD5 7
XD6	32	RD6 6
XD7	33	RD7 5
R CLK	17	RECEIVE CLK
X CLK	4Ø	TRANSMIT CLK
RDA	18	RESET DATA AVAILABLE
DS	23	TRANSMIT DATA STROBE
SI	2Ø	
		TBMT 22 — TRANSMIT BUFFER EMPTY
		EOC 24
		DA 19 — RECEIVED DATA AVAILABLE
		SO 25 — SERIAL DATA OUT
		OR ERR 15 — OVERRUN ERR
		FR ERR 14 — FRAMING ERR
		P ERR 13 — PARITY ERR

I/O READ DATA H

9746 E29: 1 DV1 DATA 11; 4 DV1 DATA 10; 13 DS1 DATA Ø9; 1Ø DR1 DATA ØB

9746 E23: 1 BV1 DATA Ø7; 4 BU1 DATA Ø6; 13 BS1 DATA Ø5; 1Ø BR1 DATA Ø4

9746 E11: 1 AV1 DATA Ø3; 4 AU1 DATA Ø2; 13 AS1 DATA Ø1

1Ø AR1 DATA ØØ

SCR LDC NB2 NB1 NP EP 2SB — 21 34 37 38 35 39 36

R29 1K +5V; N4; SB Ø R32 1K; EVN Ø R28 1K; NP Ø R31 1K; NB1 Ø R3Ø 1K; NB2 Ø R27 1K

E6-1 E28-1Ø E6-2 E6-16 E6-15

8815 E13 → 7404 E16 → 8815 E11 → 1Ø ARI DATA ØØ; HAS ERROR

8815 E53: B PAUSE L; STAT ENBL (W3) L; I/O READ DATA H → 7417 E16; +3V R21 1K E28-1; W3; SW1

POWER OK BV2 9 → 1138Ø E55 → 14

+5V D7 D664; +15V E62 15Ø +15V; D8 D664; E28-16; R35 1K; C53 .Ø1μF; C54 .Ø1μF; C55 .Ø1μF; C5L .Ø1μF; D6 IN4742; C18; D1 IN4742; -12V; R44 68; -15V

JUMPER DEFINITIONS

FIL - FILLER CHARACTER ENABLE
OUT = NORMAL OPERATION
IN = LINE FEED CODE (ØA12 OR 212) IS FOLLOWED BY FOUR NULL CHARACTERS (ØØØØ) BEFORE TRANSMIT FLAG IS SET.

SB OR W4 - STOP BITS
OUT = 2 STOP BITS
IN = 1 STOP BIT

EVN - EVEN PARITY
OUT = EVEN PARITY
IN = ODD PARITY

NP - NO PARITY
OUT = NO PARITY
IN = PARITY

NB1, NB2 - NUMBER OF DATA BITS/CHAR
OUT OUT = 8
OUT IN = 7
IN OUT = 6
IN IN = 5

TTY OR W1 - TELETYPE FILTER
OUT = NOT TELETYPE
IN = TELETYPE

SWD OR W3 - STATUS WORD ENABLE
OUT = NO ERROR STATUS
IN = ERROR STATUS IS READ WHEN STATUS ENABLE FF IS SET.

E6 & E28 ARE IC SOCKETS PROVIDING TEST POINTS.

7493 E44 ÷16: R3(1) 11, R2(1) 8, R1(1) 9, RØ(1) 12, CLKØ CLKBC 14 1 — RECEIVE CLK

7400 E54 CLR

I/O SET RDR RUN L → 7474 E39 RDRN → INIT L → READER RUN FF

+5V D2 D664; D3 D664; R45 47; Q8 A55; R18 1K; D4; -15V; R45 68; READER RUN +; READER RUN -

1489 E45 EIA-TTL LEVEL CONVERTER; C57 33ØPF; R49 47; EIA/TTL RECEIVED DATA; EIA DATA IN

EITHER JUMPER IS INSTALLED FOR LT33 & LT35 TELETYPE OPERATION: TTY / W1; C58 2.2μf; R51 47; R52 47; R5Ø 47; 2Ø MA RECEIVE +; 2Ø MA RECEIVE -

+5V R4Ø 1K; Q4 A55; R53 68; R54 6.8K; R38 1K; Q3 A55; R39 1K; -15V; R56 3.3K; R19 10K; Q2 A05; R59 68; R41 1K; Q1 A05; R2Ø 1ØK

1138Ø E51 (1Ø, 9, 14, 5, 4, 3, 11, 12, 13, 6, 7, 2); 20 MA/TTL RECEIVED DATA

1138Ø E55 (11, 12, 13)

R57 3.3K; R58 3.3K; C67 33Ø; R42 1K; +5V R46 68; Q6 A55; Q5 A55; R55 6.8K; Q7 A05; R43 1K; R47 68; -15V; 2Ø MA TRANSMIT +; 2Ø MA TRANSMIT -

7404 E49 (11, 1Ø, 2); 1488 E5Ø (3, 4, 5, 6); C68 33Ø PF; TTL-EIA LEVEL CONVERTERS; EIA TRANSMIT DATA; * REQUEST TO SEND; * DATA TERMINAL READY

TTL SERIAL DATA IN → TTL SERIAL DATA IN

* HELD ASSERTED FOR MODEM OPERATION (USE KL8-M WITH KL8-VA FOR AUTO ANSWER)

J1: PP READER RUN +; EE READER RUN -; M EIA/TTL RECEIVED DATA; J EIA DATA IN; K 2Ø MA RECEIVE +; S 2Ø MA RECEIVE -; A; B; SS; TT; UU; VV; H 20 MA/TTL RECEIVED DATA; AA 2Ø MA TRANSMIT +; KK 2Ø MA TRANSMIT -; F EIA TRANSMIT DATA; Y * REQUEST TO SEND; DD * DATA TERMINAL READY; E TTL SERIAL DATA IN

(DATA IN & DATA OUT)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE TERMINAL CONTROL
SIZE D | CODE 03216 | NUMBER CSM8655-Ø-1 | REV B
SCALE | SHEET 4 OF 5 | DIST.

M8655 VARIATION TRANSLATION TABLE

B1	B2	B3	M8655 XTAL 5.0688 MHz. DEC #18-11163-00 CLK PULSE WD/BAUD RATE	M8655-YA XTAL 4.435 MHz. DEC #18-11163-01 CLK PULSE WD/BAUD RATE	M8655-YB XTAL 3.0737 MHz. DEC #18-11163-02 CLK PULSE WD/BAUD RATE	M8655-YC XTAL 2.619 MHz. DEC #18-11163-03 CLK PULSE WD/BAUD RATE
OFF	OFF	OFF	284 USEC/110	326 USEC/N/A	468 USEC/66.7	535 USEC/56.8
OFF	OFF	ON	208 USEC/150	238 USEC/N/A	343 USEC/N/A	402 USEC/N/A
OFF	ON	OFF	104 USEC/300	119 USEC/N/A	171 USEC N/A	201 USEC/N/A
OFF	ON	ON	52 USEC/600	59.6 USEC/N/A	86 USEC/N/A	100 USEC/N/A
ON	OFF	OFF	26 USEC/1200	29.8 USEC/1050	43 USEC/N/A	50.5 USEC/N/A
ON	OFF	ON	13 USEC/2400	14.9 USEC/N/A	21.4 USEC/N/A	25.1 USEC/N/A
ON	ON	OFF	6.5 USEC/4800	7.45 USEC/N/A	10.7 USEC/N/A	12.6 USEC/N/A
ON	ON	ON	3.26 USEC/9600	3.62 USEC/N/A	5.37 USEC/N/A	6.35 USEC/N/A
ON	ON	ON	1.63 USEC/19.2 KBD *	1.87 USEC/N/A *	2.69 USEC/N/A *	3.17 USEC/N/A *

NOTE: DIFFERENTIATION BETWEEN M8655, YA, YB, AND YC MODULES IS THE XTAL SELECTION.
*W2 OUT, W5 IN FOR THESE CLOCK PULSES—W2 IN W5 CUT FOR ALL OTHER CASES.

PULSE NAME TRANSLATION TABLE

SIGNAL NAME (ORIGINATING PIN)	PULSE WIDTH FOR M8655	PULSE WIDTH FOR M8655 YA	PULSE WIDTH FOR M8655 YB	PULSE WIDTH FOR M8655 YC
P99 NSEC (E03-03)	99 NSEC	113 NSEC	163 MSEC	192 MSEC
P296 NSEC (E08-09)	296 NSEC	339 NSEC	489 NSEC	573 NSEC
P592 NSEC (E06-08)	592 NSEC	677 NSEC	976 NSEC	1.14 MICROSEC
P3.26 MICROSEC (E15-09)	3.26 MICROSEC	3.74 MICROSEC	5.39 MICROSEC	6.31 MICROSEC
P1.09 MICROSEC (E15-12)	*1.09 MICROSEC	*1.23 MICROSEC	* 1.78 MICROSEC	* 2.12 MICROSEC
P17.8 MICROSEC (E14-11)	17.8 MICROSEC	20.2 MICROSEC	29.3 MICROSEC	33.4 MICROSEC

*ASYMMETRICAL PULSE WIDTH

NOTE: THIS TABLE IN REFERENCE TO SHEET 3 OF M8655 LOGIC DIAGRAM.

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV
TERMINAL CONTROL	D	CS	M8655-0-1	B
SCALE	SHEET 5 OF 5	DIST.		

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

MP-MR8-F

	SEQUENCE
MR8-F REPROGRAMMABLE MEMORY	B-DD-MR8-F
MR8-F FIELD INSTALLATION & ACCEPTANCE PROCEDURE	A-SP-MR8-F-2
SHIPPING LIST, MR8-F	A-PL-MR8-F-5
SOFTWARE LIST, MR8-F	A-PL-MR8-F-6
UNIT ASSEMBLY (MR8-F)	C-UA-MR8-F-Ø
MR8-F ENGINEERING SPEC.	A-SP-MR8-F-1
PROM, 1K	D-CS-M8349-Ø-1
H8511 SHORTING BLOCK	D-CS-H8511-Ø-1

Print Set #2

	SEQUENCE
MR8-F REPROGRAMMABLE MEMORY	B-DD-MR8-F
SHIPPING LIST, MR8-F	A-PL-MR8-F-5
UNIT ASSEMBLY, MR8-F	C-UA-MR8-F-Ø
MR8-F ENGINEERING SPEC.	A-SP-MR8-F-1
PROM, 1K	D-CS-M8349-Ø-1
MEMORY, PROM 1K	D-CS-M8349-YE-1
H8511 SHORTING BLOCK	D-CS-H8511-Ø-1
KM8-F TIMING GENERATOR	B-DD-KM8-F

UNIT VARIATIONS

VAR	TITLE	PRINT SET: MP-MR8-F 2
MR8-FB	1K x 12 PROM & 256 x 12 WORD RAM	X
MR8-FE	4K x 12 PROM (EXCLUDING AUTO START)	X

REVISIONS

REV	CHG. NO.	DATE
C	MR8F-4	12-74

USED ON OPTION/MODEL	
PDP8A	
PDP8E	
PDP8F	
PDP8M	
VT14	

SHEET 1 OF 2

DRN. K. Gleezen	DATE 10/73	TITLE: MR8-F REPROGRAMMABLE MEMORY
CHK'D. K. Gleezen	DATE 10/73	
PROJ ENG. D. Adams	DATE 10/73	
PROD. D. Adams	DATE 10/73	
FIELD SERV.	DATE	

SIZE	CODE	NUMBER	REV
B	DD	MR8 F	C

DEC 16-13251-1042-1A-R972

DRB 106

CUSTOMER PRINT SET				MFG. SET	ELECTRICAL						CUSTOMER PRINT SET				MFG SET	MECHANICAL					
MP-MR8-F	2				FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE	MP-MR8-F	2				FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
					1						X	X				1	C-UA-MR8-F-Ø	A	1	UNIT ASSY (MR8-F)	
X	X					A-PL-MR8-F-5	*	1	SHIPPING LIST, MR8-F												
X						A-PL-MR8-F-6	*	1	SOFTWARE LIST, MR8-F												
X	X					A-SP-MR8-F-1	B	6	MR8-F ENGINEERING SPEC.												
X						A-SP-MR8-F-2	B	3	MR8-F FIELD INSTALLATION AND ACCEPTANCE PROCEDURE												
						A-SP-MR8-FB-4	B	1Ø	MFG CHECK-OUT PROCEDURE MR8-FB												
				S		K-SP-MR8-FE-1		168	MR8-FE PROGRAM SPECIFICATION												
						A-SP-MR8-FE-2	*	8	MR8-FE MFG CHECKOUT PROCEDURE												
	C				2	B-DD-KM8-F	#	2	TIMING GENERATOR												
X	X				3	D-CS-M8349-Ø-1	#	7	PROM 1K												
						K-CO-M8349-Ø-4		1	X-Y COORDINATE HOLE LOCATION												
						D-AH-M8349-Ø-5		1	ASSY DRILLING HOLE LOCATION												
						B-MH-M8349-Ø-6		1	MODULE ECO HISTORY												
X	X				4	D-CS-H8511-Ø-1	#	1	EDGE CONN. SHORTING BLOCK												
						K-CO-H8511-Ø-4		1	X-Y COORDINATE HOLE LOCATION												
						D-AH-H8511-Ø-5		1	ASSY DRILLING HOLE LOCATION												
						B-MH-H8511-Ø-6		1	MODULE ECO HISTORY												
	X				5	D-CS-M8349-YE-1	#	4	MEM PROM 1K												
						K-CO-M8349-YE-4		1	X-Y COORDINATE HOLE LOCATION												
						D-AH-M8349-YE-5		1	ASSY DRILLING HOLE LOCATION												
						B-MH-M8349-YE-6		1	MODULE ECO HISTORY												

CUSTOMER PRINT SET CODES	X = PRINT OF DOCUMENT INCLUDED IN PRINT SET C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED	TITLE	SHEET	SIZE	CODE	NUMBER	REV
		MR8-F REPROGRAMMABLE MEMORY	2 OF 2	B	DD	MR8-F	C

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 10/3/73

TITLE MR8-F FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	MR8F-00001	ADAMS	1-74	David F Adams	3/27/74
B	UPDATE TO ADD PDP8A	MR8F 00004	REGAN	12-74	R. Regan	12/30/74

ENG	APPD	SIZE	CODE	NUMBER	REV
Richard Morris	David F Adams 10/11/73	A	SP	MR8-F-2	B

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE MR8-F FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

1. Shipping Hardware

   1.1 See A-PL-MR8-F-5 (Shipping List)

2. Shipping Software

   2.1 See A-PL-MR8-F-6 (Software List)
   NOTE: Prom Diagnostics are not used in this Acceptance Procedure. These Maindecs are used to diagnose the MR8-FB after the MR8-FB has been programmed to the customers specifications.

3. Equipment required for acceptance

   3.1 PDP8E, 8M, or 8A with a programmers console. If 4K of read/write memory is present, the system must have a KM8-E (M837), or KM8-A (M8317), extended memory control. All these options must be customer supplied.

4. Unpacking and Installation

   4.1 Unpack and inspect the modules for physical damage.

   4.2 Make sure all four top edge connectors on the M8349 are fitted correctly.

   4.3 Turn power off in the PDP8E, 8M, 8F, or 8A.

   4.4 If the MR8-FB is a PDP8E, 8F, or 8M, add-on remove M8330 and insert the new M8330-YB in the same slot. The MR8-FB requires an M8330-YB inorder to operate.

   4.5 Insert the M8349 in the OMNIBUS behind the RFI shield (M849) in the PDP8E, 8F, or 8M, and in the lowest available Omnibus slot in the PDP8A.

   4.6 Remove or disable all other options in PDP8E, 8M, 8F, or 8A that use the "SW" or "BOOT" switch option.

SIZE	CODE	NUMBER	REV
A	SP	MR8-F-2	B

DEC FORM NO DEC 15-(381)-1022-N370 DRA 108

5. Acceptance

5.1 The MR8-FB is shipped with Prom Internal test Maindec-08-DHMRE programmed in the Prom chips.

5.2 Turn PDP8E, 8M, 8F, or 8A, power on.

5.3 If the MR8-FB is an add-on and an M8330-YB was installed, run all basic 8E diagnostics and EAE diagnostics if applicable.

5.4 Toggle "SW" or "BOOT" switch. The Prom Internal Test should be running. Refer to MAINDEC-08-DHMRE writeup if there are any errors. With the switch register = ØØØØ the test will halt in approx. 3 min. Repeat the test 4 times.

5.5 If no errors have occurred the MR8-FB is ready to be erased and reprogrammed by the customer.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY R. Vowles	CHECKED L. Gilbert	SECTION
DATE 12-27-74	DATE 12-30-74	
ENG R. Regan	PROD R. Regan	ISSUED SECT.
DATE 12/30/74	DATE 12/30/74	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION MR8-FB	MR8-FE
1	MP-MR8-F	*MR8-FB MAINTENANCE PRINT SET	1	0
2	B-DD-MR8-F (Set #2)	MR8-FE CUSTOMER PRINT SET	0	1
3	A-PL-MR8-F-6	*MR8-F SOFTWARE LIST	1	0
4	DEC-Ø8-OMRAA-B-D	*PROGRAM FORMAT DESCRIPTION	1	0
5	DEC-8E-HR2C-D	*PDP8E MAINTENANCE MANUAL VOL 11	1	0
*	NOT TO BE INCLUDED WHEN SHIPPED IN A PDP8A			

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
SHIPPING LIST, MR8-F	SHEET 1 OF 1	A	PL	MR8-F-5		MR8F - 00004
		DIST				

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY R. Vowles DATE 12-27-74	CHECKED L. Gilbert DATE 12-30-74	SECTION
ENG R. Rogan DATE 12/30/74	PROD R. Rogan DATE 12/30/74	ISSUED SECT.

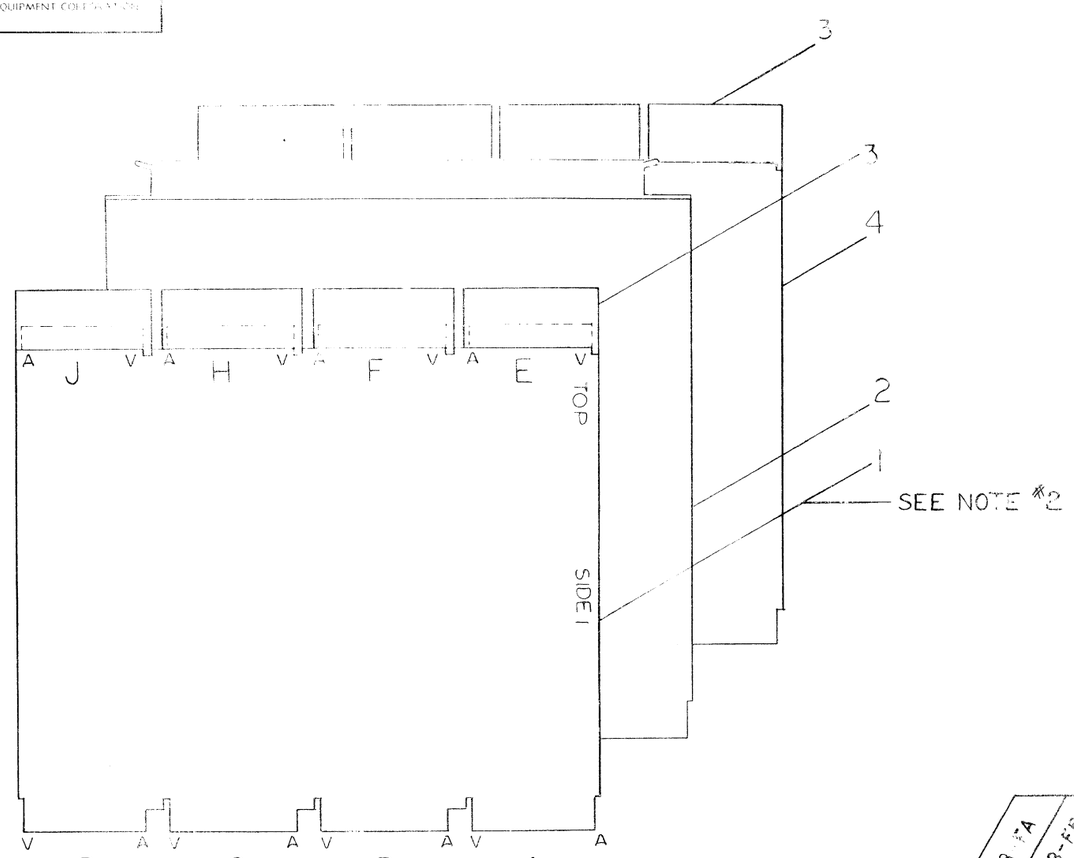
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION MR8-FB
1	ZF196-RB/MR8-FB	MR8-FB 1K SOFTWARE KIT	1
2	ZF197-RB/MR8-FB	MR8-FB 2K SOFTWARE KIT	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
SOFTWARE LIST, MR8-F	SHEET 1 OF 1	A	PL	MR8-F-6		MR8F-00004

DIST.

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

NOTE
1. THE SAME ASSEMBLY IS USED FOR ALL MR8-F VARIATIONS.
2. A KM8-F TIMING GENERATOR(M8330 YE, SEE ECO* M8330-00011)IS REQUIRED WHEN MR8-F IS INSTALLED IN A BD/M8, BF, OR BV.



MR8-FA	MR8-FB	MR8-FC	MR8-FD	MR8-FE	QTY.	DESCRIPTION	PART NO.	REV
0	1	0	0	1	1	SHIPPING LIST MR8-F	A-PL-MR8-F-5	C
—	—	—	—	2	1	MEM BD II PROM	D-CS-M8349-YE-1	A
4	4	4	4	16	1	EDGE CONN. SHORTING BLOCKS	D-CS-H5511-2-1	B
—	—	—	—	1	1	TIMING GENERATOR	A-PL-KM8-F	C
1	1	1	1	2	1	PROM II (SEE NOTE 1)	D-CS-M8349-(2-1	1

FIRST USED ON: MR8-F — PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES
TOLERANCES
DECIMALS
x.xx = .005
x.x = .02
.x = .1
REMOVE BURRS & SHARP CORNERS
MATERIAL
FINISH

		DATE
DRAWN	[illegible]	5/21/73
CHKD.	[illegible]	6/1/73
ENGR.	[illegible]	10/11/73
PROJ. ENG.	[illegible]	10/11/73
PROD.		DATE

NEXT HIGHER ASSY.: B-DD-MR8-1
SCALE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: MR8-F REPROGRAMMABLE MEMORY

SIZE	CODE	NUMBER	REV.
C	UA	MR8-F-Ø	A

DIST.

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
A	MR8-F-0 RELEASED	10/11/73	R. PECK

NEXT ASSY. USED ON
APPLICATION

C MR8-F-Ø A

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 7/27/73

TITLE MR8-F REPROGRAMMABLE MEMORY

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	MR8F-00001	ADAMS	1-74	Ronald Adams	2/27/74
B	UPDATE TO ADD PDP8A	MR8F-00004	REGAN	12-74	R. Regan	12/30/74

NOTE: MR8-FA, MR8-FC, MR8-FD PRESENTLY DO NOT EXIST, FOR REFERENCE ONLY.

ENG	APPD	SIZE	CODE	NUMBER	REV
Dave Adams	Ronald Adams 10/11/73	A	SP	MR8-F-1	B

DEC 16-(392)-1079-N971
DRA 107

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE MR8-F REPROGRAMMABLE MEMORY

General:

The MR8-F is a memory option to the PDP8/E/F/M/A series of computers. The board utilizes a maximum of seven (7) ultraviolet erasable, reprogrammable, MOS memory chips with a capacity of 2048 bits (256 x 8 bits) each.

There are four (4) versions of the MR8-F. The MR8-FA is 256 words x 12 bits PROM only memory. The MR8-FB is a 1K word x 12 bits PROM with a maximum of 256 of the 1K words being Read/Write Random Access Memory. The MR8-FC is a 1K word x 12 bits PROM only memory. The MR8-FD is a 512 word x 12 bits PROM only memory.

All versions of the MR8-F have a SW start capability. This allows the program to start in one of two specified locations, using "SW" or "BOOT" on the Operator's or Programmer's Console. It is possible to disable this by removing a jumper, if an other device in the system use the "SW" line on the "OMNIBUS".

Physical:

The MR8-F is a single quad card that plugs into the OMNIBUS. There are address select diodes that can be arranged so other cards may be added to expand the capacity up to a total of 4K words. The maximum of four (4) boards is due to the high +5V current drain per board.

Electrical:

Voltage - The MR8-F uses +5V and -15V. There are tabs on the board where +5V from a battery supply may be applied to the bipolar Read/Write chips. This will allow them to hold their contents during an AC power loss.

Maximum Current Rating:

MR8-FA	+5V @ 1.7A	-15V @ 100 MA
MR8-FB	+5V @ 3.8A	-15V @ 350 MA
MR8-FC	+5V @ 1.9A	-15V @ 300 MA
MR8-FD	+5V @ 1.7A	-15V @ 150 MA

	SIZE	CODE	NUMBER	REV
	A	SP	MR8-F-1	B

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

Cycle Time - 3.4/3.6 uS.
PROM Erasure Method - UV light
WAVELENGTH - 2537 Å
Recommended intergrated dosage - 6W - sec/cm^2 for 1Ø to 20 Min.

PROM Programming Method - On board by external programmer (MR8-SL)

Capacity - MR8-FA - 256 words of PROM
MR8-FB - 1K of PROM 256 words R/W memory
MR8-FC - 1K of PROM
MR8-FD - 512 words of PROM

Temperature - $0^{o}C$ to $50^{o}C$ (Standard Computer Environment)

Detailed Description:

A normal problem with Read Only memories is that code must be specially written to avoid instructions that require a write operation (i.e. JMS, DCA and ISZ) and placing variable locations in R/W memory.

In this PROM that restriction is removed if the total number of alterable locations in a piece of code is 256 or less. This is done by making the PROM a 13 bit memory. On a Read access, if the 13th bit is a "1", the least significant 8 bits stored in the ROM are treated as an address, rather than an operand, and point to a Read/Write location. 256 of these locations are provided within the 1K words of the MR8-FB. These RAM locations can be anywhere within the 1K of PROM.

By checking a program as it is written, it is possible to tag all operands that may be changed in the course of execution and then to modify the program controlling the PROM programmer to set the 13th bit for this address and place the next available RAM address in this location. Thus, whenever this location in PROM is accessed, the actual data will be read from or written into the corresponding RAM location.

e.g. the sequence

```
210/    TAD CONST
211/    DCA TEM
212/    ISZ CNTR
213/    TAD TEM
214/    JMS SUBR
```

becomes

```
210/    02154
 11/    03361
 12/    02255
 13/    01361
 14/    04300

254/    00010    /constant 10
255/    10001    /points to RAM Loc. 1
361/    10002    /points to RAM Loc. 2

300/    10003    /points to RAM Loc. 3 for return address storage
```

NOTE: During Single Step operation if an instruction causes the processor to leave the PROM's area, i.e., a TAD or DCA Indirect to a location outside the 1K of PROM, the MD lights will go out during the time the processor is outside the area of PROM. This is due to the PROM select signal (MCL Field) being disabled when the PROM is not selected. This in turn disables all the PROM outputs to the MD lines. When the PROM is reselected, the PROM output is turned back on and the MD lines will show what was in the output register of the PROM AND'd with whatever was put on the MD by the instruction issued.

SW Operation:

There is a provision for using SW to start a program whose starting address is either Loc 0 or 200_8 of any even 1K in any memory field (jumper selectable) provided that the Instruction Field and Data Field are the same. The relation of the MR8-F and the CPU is similar to that of the Operator's Console and the CPU. Both the PROM and

console must:

a. Initialize the CPU
b. Load Starting Address
c. Load Memory Field
d. Start the Program

This is all done in the MR8-F when "SW" or "BOOT" is toggled.

ROM Address:

ROM Address line is jumper selectable so that if the MR8-FA,FC,FD are required to overlay core memory, the core will be disabled when accessing the PROM. If the PROM does not overlay core, the jumper (YA1) is removed. The MR8-FB cannot pull ROM Address as this also disables any JMS from incrementing the PC.

Programming:

The PROM chip used is the 1702A, UV erasable device. Seven of these are needed to accomplish the 1K x 12 plus 1K x 1 bit storage. The programming pulses needed are of high (30-48V) amplitude. To isolate these from the TTL logic, all pins of the PROM chips are brought out to top fingers on the one side of the PC board. The TTL levels associated with the normal PROM functions are brought to the corresponding fingers on the two side. In normal operation single width top connectors H8511 join side 1 to side 2. To program the PROM, the top connectors are removed and four connectors of a cable plugged onto the top fingers. This cable makes contact with the 1 side only and is interlocked to prevent application of distructive voltages should the connectors be put on incorrectly. The cable connects the PROM to the Programmer (MR8-SL).

The 1702A when received from the factory or erased contains all zeros. When programming the PROM you insert "1" where they are needed. You cannot put "0" into the PROM using the programmer. The "0" can be put in only by erasing the whole PROM. The 1702A is guaranteed reprogrammable a minimum of 100 times.

The Programmer (MR8-SL) and MR8-F Programmer utility program (MAINDEC-08-DHMRD) control the timing and voltages required to reprogram the 1702A. The utility program takes the paper tape in the format specified by the MR8-F PROGRAM FORMAT DESCRIPTION (DEC-08-OMRAA) and reassembles it into chip loading buffers; assigns R/W locations where necessary and assembles the 13th bit data. Then under user's direction, loads the 1702A's.

Stall:

The MR8-F's require the new timing board (KM8-F) be in the CPU as it pulls the Stall line to interrupt the normal sequence of timing.

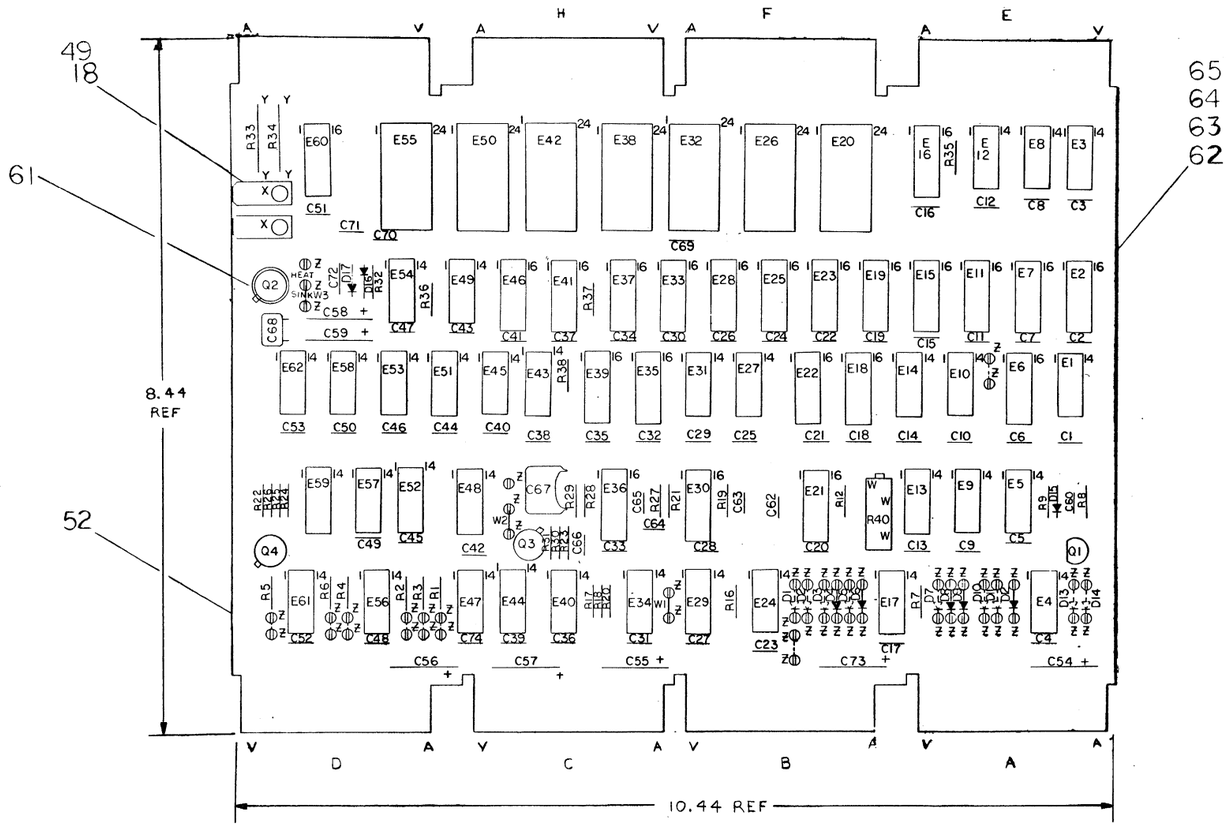
Stall will be pulled for about 2.2 uS to allow for access time for the 1702A's and data settling time for the MD outputs.

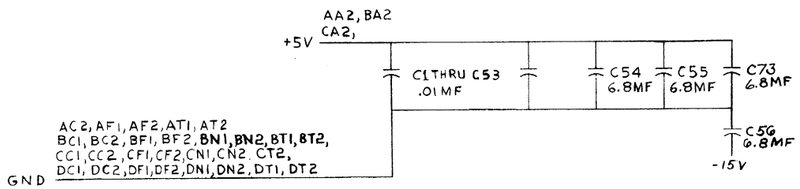
Testing:

There will be an MR8-F Diagnostic program (MAINDEC-08-DHMRC) to test the PROM after it is programmed. The Diagnostic will require the use of the tape used in programming the PROM, to tell it what is in the PROM and where the R/W locations are (13th bit). Then the PROM will be read and compared against the Program Tape and the R/W locations will be exercised to check that there is no interaction between them and that they, in fact, do read and write correctly. See Checkout Procedure (A-SP-MR8-FB-4) for production tests.

NOTES:

1. JUMPERS IN FOR Ø OUT FOR 1
2. DIODES ON OUTPUT OF INVERTERS ARE IN FOR 1
   DIODES ON INPUT OF INVERTERS ARE IN FOR Ø
   SOME DIODES ARE INSTALLED IN PRODUCTION TO FACILITATE CHECKOUT. A CUSTOMER WILL RE-ARRANGE DIODES TO HIS REQUIREMENTS
3. DELAY OUTPUT IS ADJUSTED TO 2 2 S ± 50 NS.
4. DIODES AND JUMPERS SHOWN IN DOTTED LINES ARE NOT PUT ON THE BOARD DURING MANUFACTURE. THEY ARE ADDED DURING CHECKOUT AS REQUIRED. SOLID LINE JUMPERS ARE PUT IN WHEN BOARD IS ASSEMBLED.
5. UNLESS OTHER WISE NOTED RESISTANCE IS IN OHMS 1/4W 5%.
6. YA1 JUMPER (ROM ADDRESS) IS ONLY INSTALLED IF THE PROM ADDRESSES OVERLAY CORE MEMORY ADDRESSES.
7. UNLESS OTHER WISE SPECIFIED ALL DELAY TIMES ARE ± 20%.





DEC 1702A	–	12
DEC 5380	1	8
DEC 7384	1	8
DEC 74151	8	16
DEC 74123	8	16
DEC 74157	8	16
DEC 74174	8	16
DEC 74200	8	16
IC TYPE	GND	+ 5V

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

IC PIN LOCATIONS

BRUNING 40-522 16699

DEC FORM NO. LRD 135A

REV	CHK	CHANGE NO.	ORIGINATED	DESCRIPTION
F	D. ADAMS	M8349-00005	4-4-74	R. Regan 2-8-75 B. REGAN 3-5-75
E	D. ADAMS	M8349-00004	11-12-73	R. Regan 1-6-75 B. REGAN 1-2-75
D	D. ADAMS	M8349-00003	4-5-74	H. Simmons 12-5-73
C	D. ADAMS		12-10-73	
B				
A				
1				

M8349-YA	M8349-YC	M8349-YD					
			1	C64	CAP 68 PF 100V 5% DM	1000014	5
			1	C65	.047 CAP.	1009678	6
2	6	3	7	SEE Y VARIATION CHART	IC DEC 1702 A	23041A4	7
			1	C68	CAP 1000 PF 100V 5% DM	1000042	8
			1	C57	CAP 39 MF 10V 10F S.TANT	1000076	9
			58	C1-C53, C69, C70, C71, C72, C74	CAP .01 MF 100V 20% DISC	1001610	10
			1	C60	CAP 390 PF 100V 5% DM	1001631	11
			1	C67	CAP 2700 PF 100V 5% DM	1001637	12
			2	C63, C66	CAP 27 PF 100V 5% DM	1001739	13
			6	C54, C55, C56, C58, C59, C73	CAP 6.8 MF 35V 10% S TANT	1005306	14
			1	D15	DIODE D662	1100113	15
			6	D16, D4, D6, D8, D9, D12.	DIODE D664	1100114	16
			1	D17	DIODE IN757A	1109990	17
			2		FASTON TABS	9007112	18
			2	R8, R29	RES 100 OHMS 1/4W 5%	1300229	19
			1	R32	RES 220 OHMS 1/4W 5%	1300271	20
			2	R24, R28	RES 470 OHMS 1/4W 5%	1300316	21
			6	R7, R16, R17, R22, R36, R38	RES 1K OHMS 1/4W 5%	1300365	22
			1	R35	RES 1.5K OHMS 1/4W 5%	1300391	23
			1	R31	RES 2 2K OHMS 1/4W 5%	1300417	24
			1	R18	RES 3K OHMS 1/4W 5%	1300432	25
			1	R9	RES 3.3K OHMS 1/4W 5%	1300439	26
			7	R1-R6, R12	RES 4 7K OHMS 1/4W 5%	1300447	27
			3	R19, R21, R23	RES 10K OHMS 1/4W 5%	1300479	28
			2	R20, R37	RES 15K OHMS 1/4W 5%	1300498	29
							30
			2	R25 R26	RES 27 OHMS 1.4W 10%	1301420	31
			1	R27	RES 22K OHMS 1/4W 5%	1301808	32
			1	R30	RES 270 OHMS 1/4W 5%	1301972	33
							34
			2	R33, R34	RES 4.7 OHMS 1W 5%	1304983	35
			2	Q3, Q4	TRANSISTOR 3009B	1503100	36
			1	Q1	TRANSISTOR 6531B	1509338	37
			1	Q2	TRANSISTOR 3762	1909849	38
			2	E29, E58	I.C. DEC 7474	1909547	39
			1	E57	I.C. DEC 7400	1905575	40
			2	E48, E59	I.C. DEC 7402	1909004	41
			1	E12	I.C. DEC 74H00	1909056	42
			1	E13	I.C. DEC 74H10	1909057	43
			2	E9, E62	I.C. DEC 74H11	1909287	44
			7	E14, E31, E44, E45, E47, E56, E61	I.C. DEC 8881	1909705	45
			3	E1, E17, E40	I C. DEC 74H04	1909931	46
Ø	Ø	Ø	1	SEE Y VARIATION CHART	I.C. DEC 74151	1909936	47
			3	E49, E53, E54	I.C. DEC 7408	1910155	48
			2		EYELETS-(65-4-7)	9006732	49
			5	E34, E52, E3, E5, E8	I.C. DEC 5380 (CAN USE 11380)	1910392 (1911113)	50
3	3	3	6	SEE Y VARIATION CHART	I.C. DEC 5384 (CAN USE 384)	1910394 (1909486)	51
			56		SPLIT LUGS -4-7)	9006735	52
			3	E21, E30, E36	I.C. DEC 74123	1910436	53
			2	E22, E39	I.C. DEC 74174	1910852	54
			3	W1, W2, W3	BUS WIRE #22 AWG	9107560-01	55
QTY	QTY	QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

FIRST USED ON OPTION MODEL: MR8-F

PARTS LIST

ETCH BOARD REV: C

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		3762	NONE
		6531B	NONE
		IN757A	NONE
		D664	IN3606
		D662	IN645

SEMICONDUCTOR CONVERSION CHART

DRN: E. Sadlik 3-1-73
CHK'D: [illegible] 3-1-73
ENG: David F. Adams 10/11/73
PROJ. ENG: David F. Adams 10/11/73
PROG: C. Tang 10/16/73
NEXT HIGHER ASSY: C-UA-MR8-F-Ø
SCALE: NONE
SHEET 1 OF 7

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: PROM IK

SIZE D | CODE DCS | NUMBER M8349-Ø-1 | REV. F

DIST.

QTY M8349-YA	QTY M8349-YC	QTY M8349-YD	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
Ø	Ø	Ø	12	SEE Y VARIATION CHART	I.C. DEC 74200 (3108)	1910818-2	56
			4	E6,E18,E35,E60	I.C. DEC 74157	1910655	57
			1	.C62	CAP 560PF 100V 5%	1000025	58
							59
			1	.R40	RES. 10K POT 3/4 W 10%	1309143-10	60
			1		HEAT SINK: TRANSISTOR	1210001	61
			REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8349-Ø-4	62
			REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8349-Ø-5	63
			REF		ECO MODULE HISTORY	B-MH-M8349-Ø-6	64
			1		ETCH CIRCUIT BOARD	5010426	65

Y VARIATION CHART

COMPONENTS	M8349 YA	M8349 YC	M8349 YD	M8349
I.C. DEC 1702A	E26,E50	E26,E32,E38 E42,E50,E55	E26,E32,E50	E20,E26,E32, E38,E42,E50, E55,
I.C. DEC 5384	E4,E24,E51	E4,E24,E51	E4,E24,E51	E4,E10,E24, E27,E43,E51
JUMPER YA1 SEE NOTE 6	IN	IN	IN	OUT
JUMPER YA2	IN	IN	IN	OUT
I.C. DEC 74151	0	0	0	E16
I.C. DEC 74200	0	0	0	E2 E7 E11 E15 E19 E23 E25 E28 E33 E37 E41 E46

* DIODE & JUMPER SETTINGS FOR ADDRESS DEFINITIONS

MEMORY FIELD SELECT	DIODE D3	D4	D5	D6	D9	D10
Ø	1	–	1	–	–	1
1	–	1	1	–	–	1
2	1	–	1	–	1	–
3	–	1	1	–	1	–
4	1	–	–	1	–	1
5	–	1	–	1	–	1
6	1	–	–	1	1	–
7	–	1	–	1	1	–

FIRST MEMORY ADDRESS	DIODE D7	D8	D11	D12
ØØØØ	–	1	–	1
2ØØØ	1	–	–	1
4ØØØ	–	1	1	–
6ØØØ	1	–	1	–

STARTING MEMORY ADDRESS	JUMPERS BELOW R1	R2	R3
ØØØØ	1	1	1
Ø2ØØ	1	1	–
2ØØØ	1	–	1
22ØØ	1	–	–
4ØØØ	–	1	1
42ØØ	–	1	–
6ØØØ	–	–	1
62ØØ	–	–	–

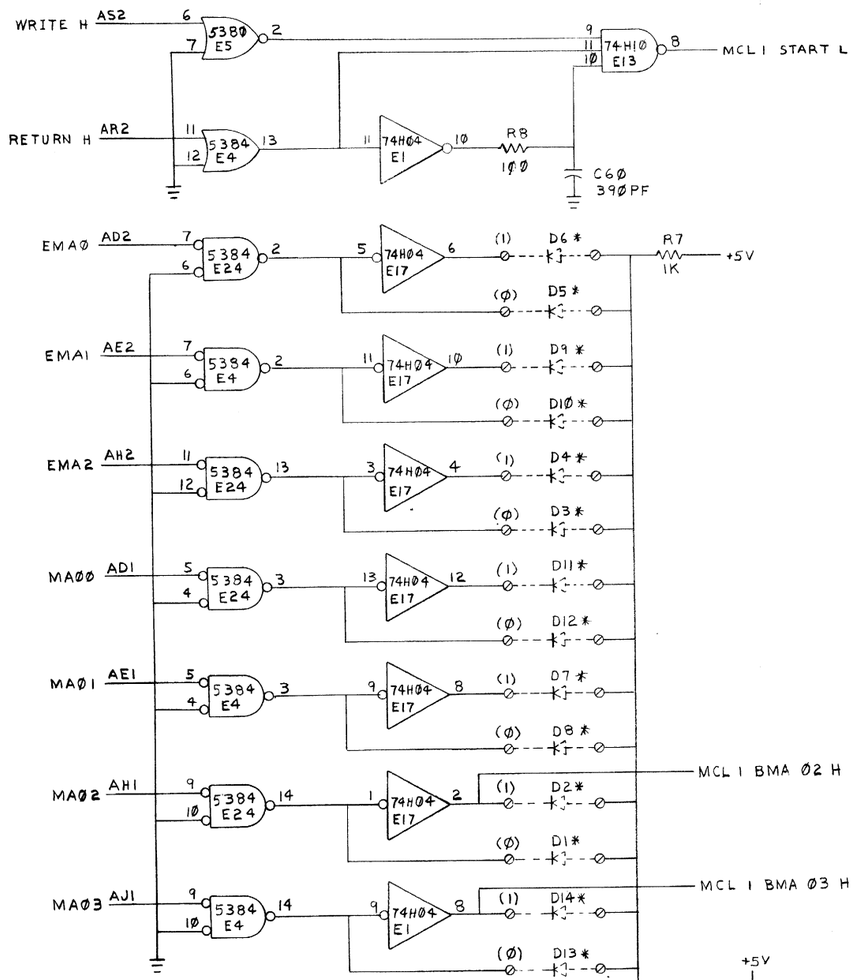
"SW" OR "BOOT" FIELD SELECT	JUMPER BELOW R4	R5	R6
Ø	1	1	1
1	1	1	–
2	1	–	1
3	1	–	–
4	–	1	1
5	–	1	–
6	–	–	1
7	–	–	–

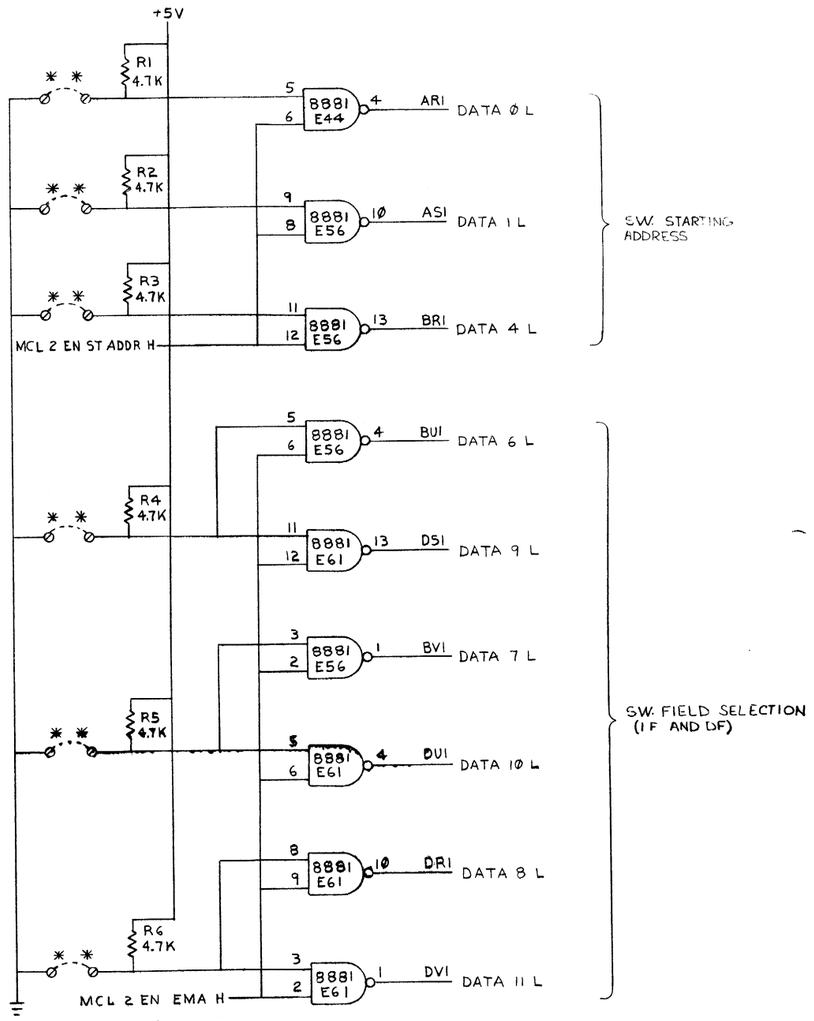
* "1" = DIODE OR JUMPER IN
"–" = DIODE OR JUMPER OUT

REVISIONS CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K	D	CS	M8349-Ø-1	F
SCALE	SHEET 2 OF 7	DIST.		

DEC FORM 1-75 GRD 137





* SEE NOTES 2 AND 4 AND Y VARIATION CHART.
** SEE NOTES 1 AND 4.

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (MCL1)	D	CS	M8349-Ø-1	F
SCALE —	SHEET 3 OF 7	DIST.		

DEC FORM 105
DRD 138

7474 E29 D C
7474 529 ROM ADDR D C
8881 E44
YA1
AU2 ROM ADDRESS L
CU2
5380 E34
TP4
74H11 E62
MCL 2 EN ST ADDR H
MCL 2 EN EMA H
74H04 E40
7474 E58 IOC KC D C
CE2
5380 E52
TP2 H
7408 E53
8881 E47
DU2 KEY CONTL L
+5V
R22 1K
MCL 2 GO (1) H
7474 E58 IOC LA D C
IND 1 L
BM2 LA EN L
R19 10K
C63 27PF
74123 E30 DLY 2 100NS
R21 10K
C64 68PF
74123 E30 DLY 3 250NS
R23 10K
C66 27PF
74123 E36 DLY 4 100NS
CVI MS, IR DIS L
INIT H
CR1
5380 E34
MCL 2 STALL PL L
R24 470
R25 27 1/4W 10%
R26 27 1/4W 10%
Q4 DEC 3009
DR2 PULSE LA H
7402 E59
8881 E44
AU2 MEM START L
MCL 1 START L
MCL 1 FIELD H
C62 50PF
74123 E21 STALL DLY 2.2 US
R12 4.7K
R40 10K
8881 E44
BR2 NTS STALL L
SW DV2
R17 1K
* * W1
SW DIS
C57 39MF
R18 3K
5380 E34
74H04 E40
R20 15K
C65 .047 PF
74123 E36 DLY 1 .3MS
R16 1K
7402 E48
7400 E57
R29 100
C67 2700PF
R28 470
R27 22K
R31 2.2K
R30 270
Q3 DEC 3009
BV2 PWR OK H
5380 E52
7402 E59
ON W2
OFF
** RUN
MCL 2 RUN H
RUN L BU2
5380 E52

* SEE NOTE 3
** SEE NOTE 4

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (MCL 2)	D	CS	M8349-0-1	F
SCALE —	SHEET 4 OF 7	DIST.		

DEC FORM 119
ORD 136

+5V JP2 JP1 C71 .01MF

-9V C72 .01MF C58 6.8MF JS2 JS1 JR2 JR1 IN5574 D16 D17 D664 Q2 3762 R32 220 R33 4.7 1W R34 4.7 1W -15V

+5V R35 1.5K

MA04 L BD1 MCL 1 FIELD L MA05 L BE1 MA06 L BH1 MA07 L BJ1 MA08 L DD1 MA09 L DE1 MA10 L DH1 MA11 L DJ1 5380 E3 5380 E8

EP2 EN2 EM2 EL2 EK2 EF2 EH2 EJ2 ER2

POWER INTERLOCK JC1 JD1 HA1 HB1 FA1 FC1 EC1 EB1

JT1 JT2 +5V C70 .01MF

JE1 JF1 JH1 JJ1 JK1 JL1 JM1 JN1 JU1 JE2 JF2 JH2 JJ2 JK2 JL2 JM2 JN2 JU2

74157 E60 BØ AØ BI A1 B2 A2 B3 A3 STB SØ f0 f1 f2 f3 ROM ØØ H ROM Ø1 H ROM Ø2 H ROM Ø3 H

A7 A6 A5 A4 A3 A2 A1 AØ VCC VBB VGG VDD P CS D7 D6 D5 D4 D3 D2 D1 DØ

17Ø2A E55 (1000-1377) E56 (400 777) E42 (1400-1777) E38 (1000-1377) E32 (400-777) E26 (Ø-377) E20 13TH BIT (000-377)

HJ1 HJ2 HR1 HR2 FU1 FT1 FT2 FS1 FS2 FR1 FR2 FP1 FP2 ED1 ED2 FD1 FD2

74151 E16 STB D7 D6 D5 D4 D3 D2 D1 DØ S2 S1 S0 f ROM H ROM L

HN1 HM1 HL1 HK1 HH1 HF1 HE1 HD1 HN2 HM2 HL2 HK2 HH2 HF2 HE2 HD2

EE1 EE2 +5V

+5V R36 1K

7408 E49 7408 E54 ROM Ø4 H ROM Ø5 H ROM Ø6 H ROM Ø7 H ROM Ø8 H ROM Ø9 H ROM 10 H ROM 11 H

MCL 1 BMAØ2 H MCL 1 BMAØ3 H 74H00 E12 74H04 E1

FE2 FE1 FF2 FF1 FH2 FH1 (1400-1777) FJ2 FJ1 (1000-1377) FK2 FK1 (400-777) FL2 FL1 (000-377)

FM1 FM2 FN1 FN2 +5V C69 .01MF

* SEE Y VARIATION CHART

REVISIONS

CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PROM IK (ROM)	D	CS	M8349-Ø-1	F
SCALE — / — SHEET 5 OF 7	DIST.			

DEC FORM 119 DRG 138

SIZE D | CODE CS | NUMBER M8349-0-1 | REV F

MCL 1 FIELD L
ROM L

MD0 L AK1 10 — 5384 E10 (9, 14)
MD1 L AL1 12 — 5384 E10 (11, 13)
MD2 L AM1 6 — 5384 E10 (7, 2)

MD0 E2 74200 — MD1 E7 74200 — MD2 E11 74200
(A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0 WE VCC; DØ 6)

ROM Ø4 H
ROM Ø5 H
ROM Ø6 H
ROM Ø7 H
ROM Ø8 H
ROM Ø9 H
ROM 1Ø H
ROM 11 H

+5V — GND — FAST ON TABS
BAT.
C59 6.8MF
C68 1000PF
W3
R37 15K
+5V

RAM 1 +5 H
RAM 2 WRT EN L

MD3 L API 4 — 5384 E10 (5, 3)
MD4 L BK1 10 — 5384 E27 (9, 14)
MD5 L BL1 12 — 5384 E27 (11, 13)

MD3 E15 74200 — MD4 E19 74200 — MD5 E23 74200
(A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0 WE VCC; DØ 6)

74157 E6

RAM 1ØØ H
ROM ØØ H
RAM 1Ø1 H
ROM Ø1 H
RAM 1Ø2 H
ROM Ø2 H
RAM 1Ø3 H
ROM Ø3 H
B0 A0 B1 A1 B3 A3 B2 A2 STB S0
f0 f1 f3 f2

74157 E18

RAM 1Ø4 H
ROM Ø4 H
RAM 1Ø5 H
ROM Ø5 H
RAM 2 Ø6 H
ROM Ø6 H
RAM 2 Ø7 H
ROM Ø7 H
B0 A0 B1 A1 B3 A3 B2 A2 STB S0
f0 f1 f3 f2
RAM 1 Ø6 H
RAM 1 Ø7 H

YA2
ROM H
MCL 2 STALL PL L
R38 1K
+5V

74174 E22
(D0 D1 D2 D3 D4 D5; R0(1) R1(1) R2(1) R3(1) R4(1) R5(1); CLR CLK)
RAM 2 RD EN H
RAM 1 PULL UP H

8881 E14 — AK1 MD0 L
8881 E14 — AL1 MD1 L
8881 E14 — AM1 MD2 L
8881 E14 — AP1 MD3 L
8881 E31 — BK1 MD4 L
8881 E31 — BL1 MD5 L

* SEE NOTE 4
* * SEE Y VARIATION CHART

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (RAM 1)	D	CS	M8349-Ø-1	F
SCALE —	SHEET 6 OF 7	DIST.		

DEC FORM 240
ORD 138

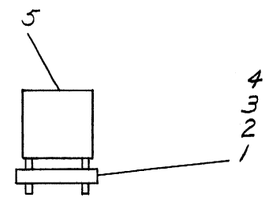
RAM 2 Ø6 H
RAM 2 Ø7 H
MCL1 FIELD L
ROM L
MD6 L BMI
MD7 L BPI
MD8 L DKI
5384 E27
5384 E27
5384 E43
ROM Ø4 H
ROM Ø5 H
ROM Ø6 H
ROM Ø7 H
ROM Ø8 H
ROM Ø9 H
ROM 1Ø H
ROM 11 H
A7 DI CS3 CS2 CS1
A6 A5 A4 A3 A2 A1 AØ WE VCC
DØ
MD6 E25 74200
MD7 E28 74200
MD8 E33 74200
RAM 1 +5 H
MD9 L DLI
MDIØ L DMI
MDII L DPI
5384 E43
MD9 E37 74200
MDIØ E41 74200
MDII E46 74200
RAM 2 Ø8 H
ROM Ø8 H
RAM 2 Ø9 H
ROM Ø9 H
RAM 2 1Ø H
ROM 1Ø H
RAM 2 11 H
ROM 11 H
74157 E35
B Ø A Ø f Ø
B 1 A 1 f 1
B 3 A 3 f 3
B 2 A 2 f 2
ROM H
RAM 1 Ø6 H
RAM 1 Ø7 H
74174 E39
D Ø R Ø (I)
D 1 R 1 (I)
D 2 R 2 (I)
D 3 R 3 (I)
D 4 R 4 (I)
D 5 R 5 (I)
RAM 1 PULL UP H
MCL 2 STALL PL L
8881 E31
8881 E31
8881 E45
8881 E45
8881 E45
BMI MD6 L
BPI MD7 L
DKI MD8 L
DLI MD9 L
DMI MDIØ L
DPI MDII L
MCL 1 FIELD H
74H11 E9
RAM 2 RD EN H
MD DIR L AK2
5380 E34
74H04 E1
RAM 2 MD DIR H
TP3 CH2
5384 E51
74H10 E13
RAM 2 WRT EN L

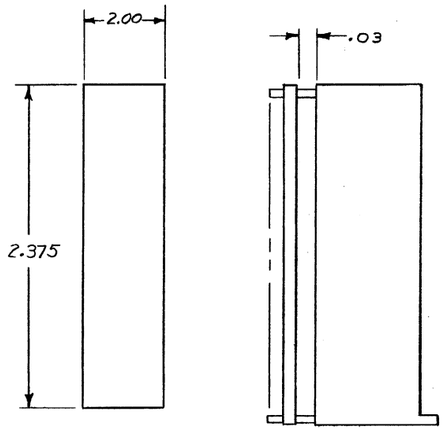
✳ SEE Y VARIATION CHART

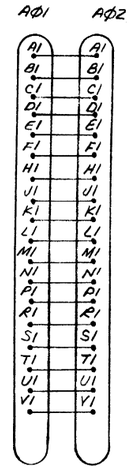
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PROM 1K (RAM 2)	SIZE D / CODE CS	NUMBER M8349-Ø-1 REV. F
SCALE	SHEET 7 OF 7	DIST.	

NOTES:







IC TYPE	GND	+ 5V

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

IC PIN LOCATIONS

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1		CONN H807	3509071-1-0	5
1		ETCHED CIRCUIT BOARD	501039Z	4
REF		MODULE ECO HISTORY	B-MH-H8511-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-H8511-0-5	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-H8511-0-4	1

PARTS LIST

FIRST USED ON OPTION MODEL: H8511

ETCH BOARD REV: A

ORIGINATED	REV	DEC NO.	EIA NO.	DEC NO.	EIA NO.
CHANGE NO.					
REVISIONS					
CHK					

SEMICONDUCTOR CONVERSION CHART

		DATE
DRN.	M. Perio	3/26/73
CHK'D		DATE
ENG.		DATE
PROJ. ENG.		DATE
PROD.		DATE

NEXT HIGHER ASSY

SCALE NONE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: EDGE CONN SHORTING BLOCK

SIZE D | CODE CS | NUMBER H8511-Ø-1 | REV *

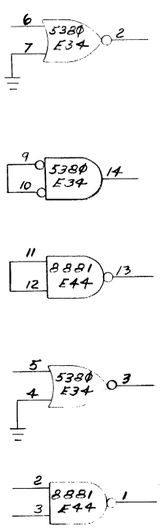
DIST.

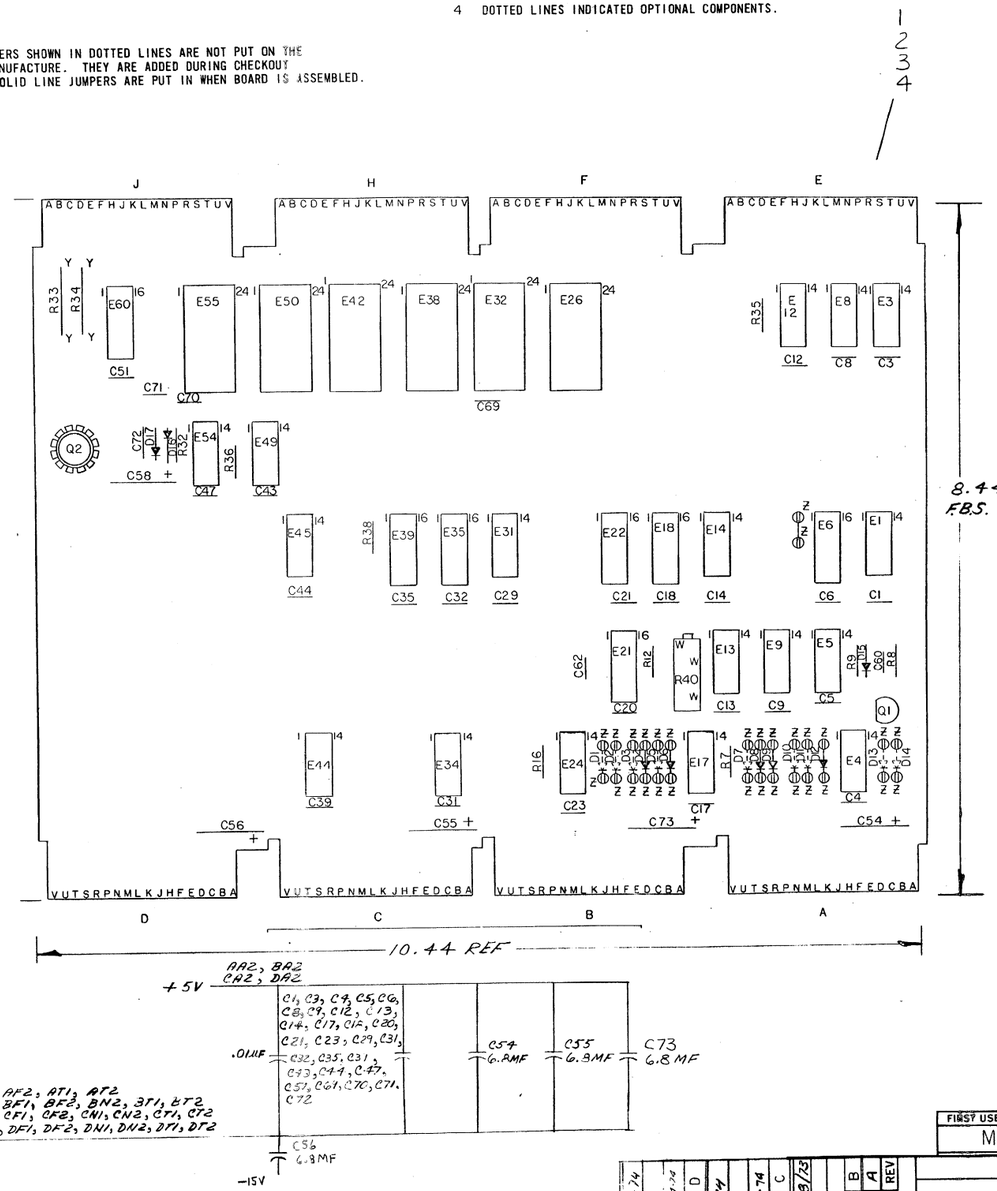
REV	NUMBER	SIZE	CODE
*	H8511-Ø-1	D	CS

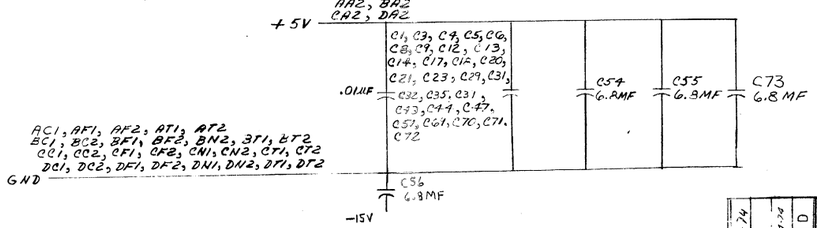
NOTES:

1. DIODES ON OUTPUT OF INVERTERS ARE IN FOR 1
   DIODES ON INPUT OF INVERTERS ARE IN FOR 0
2. DIODES AND JUMPERS SHOWN IN DOTTED LINES ARE NOT PUT ON THE BOARD DURING MANUFACTURE. THEY ARE ADDED DURING CHECKOUT AS REQUIRED. SOLID LINE JUMPERS ARE PUT IN WHEN BOARD IS ASSEMBLED.
3. UNLESS OTHER WISE NOTED RESISTANCE IS IN OHMS. 1/4W 5%
4. DOTTED LINES INDICATED OPTIONAL COMPONENTS.

SPARES.







REF				
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8349-O-4	1
REF		ASSY /DRILLING HOLE LAYOUT	D-AH-M8349-YE-5	2
REF		MODULE ECO HISTORY	B-MH-M8349-YE-6	3
1		ETCHED CIRCUIT BOARD	5010426	4
A/R		BUS WIRE #22 AWG	9107560-01	5
1	C62	CAP 560 PF 100V 5%	1000025	6
28	C1,3,4,5,6,8,9,12,13,14,17,18,20,21,23,29,31,32,35,39,43,44,47,51,69,70,71,72	CAP .01 UF 100V 20% DISC	1001610-01	7
1	C60	CAP 390 PF 100V 5% D.M.	1001631	8
5	C54,55,56,58,73	CAP 6.8 UF 35V 10% TAN	1005306	9
1		HEAT SINK	1210001-00	10
1	D15	DIODE D662	1100113	11
6	D4,6,8,9,12,16	DIODE D664	1100114	12
1	D17	DIODE IN757A ZENER	1109990	13
1	R8	RES 100 OHM 1/4W 5% CC	1300229	14
1	R32	RES 220 OHM 1/4W 5% CC	1300271	15
4	R7,16,36,38	RES 1K 1/4W 5% CC	1300365	16
1	R35	RES 1.5K 1/4W 5% CC	1300391	17
1	R9	RES 3.3K 1/4W 5% CC	1300439	18
2	R33,34	RES 4.7Ω 1W 5% CC	1304983	19
				20
				21
				22
				23
1	Q1	TRANS DEC 6531	1509338	24
1	Q2	TRANS 2N3762	1509649	25
1	E12	I.C. 74H00	1909056	26
1	E13	I.C. 74H10	1909057	27
1	E9	I.C. 74H11	1909267	28
4	E14,31,44,45	I.C. 8881	1909705	29
2	E1,17	I.C. 74H04	1909931	30
2	E49,54	I.C. 7408	1910155	31
4	E3,5,8,34	I.C. 5380 (OR 11380)	1910392	32
2	E4,24	I.C. 7384	1910393	33
2	E22,39	I.C. 74174	1910652	34
4	E6,18,35,60	I.C. 74157	1910655	35
6	E26,32,38,42,50,55	I.C. 1702 PROM	2[illegible]	36
1	E21	I.C. 74123	1918[illegible]	37
30		SPLIT LUGS	9006735	38
1	R12	RES 4.7K 1/4 W 5% CC	1300447	39
1	R40	RES 10K POT 3/4W 10%	1309143-10	40

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

IC	GND	+ 5V
IC 74174	8	16
IC 74157	8	16
IC 74123	8	16
IC 7384	1	8
IC 5380	1	8
IC 1702A	-	12

IC PIN LOCATIONS

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

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		3762	NONE
		6531	NONE
		IV751A	NONE
		D664	IN3606
		D662	IN645

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPTION MODEL: MR8-F

ETCH BOARD REV: C

REV	CHANGE NO.	ORIGINATED	CHK
D	M8349YE-3	A. RICKETTS 2/19/74	
C	M8349YE-2	A. RICKETTS 12/11/73	
B	M8349YE-00001	A. RICKETTS 12/11/73	R.D. Hale 12/11/73
A	ORIGINATED	H. Simmons 1-5-74	

REVISIONS

DRN.	9-28-73
CHK'D.	10/1/73
ENG.	10/2/73
PROJ. ENG.	10/2/73
PROD.	
NEXT HIGHER ASSY	
SCALE	1
SHEET	1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

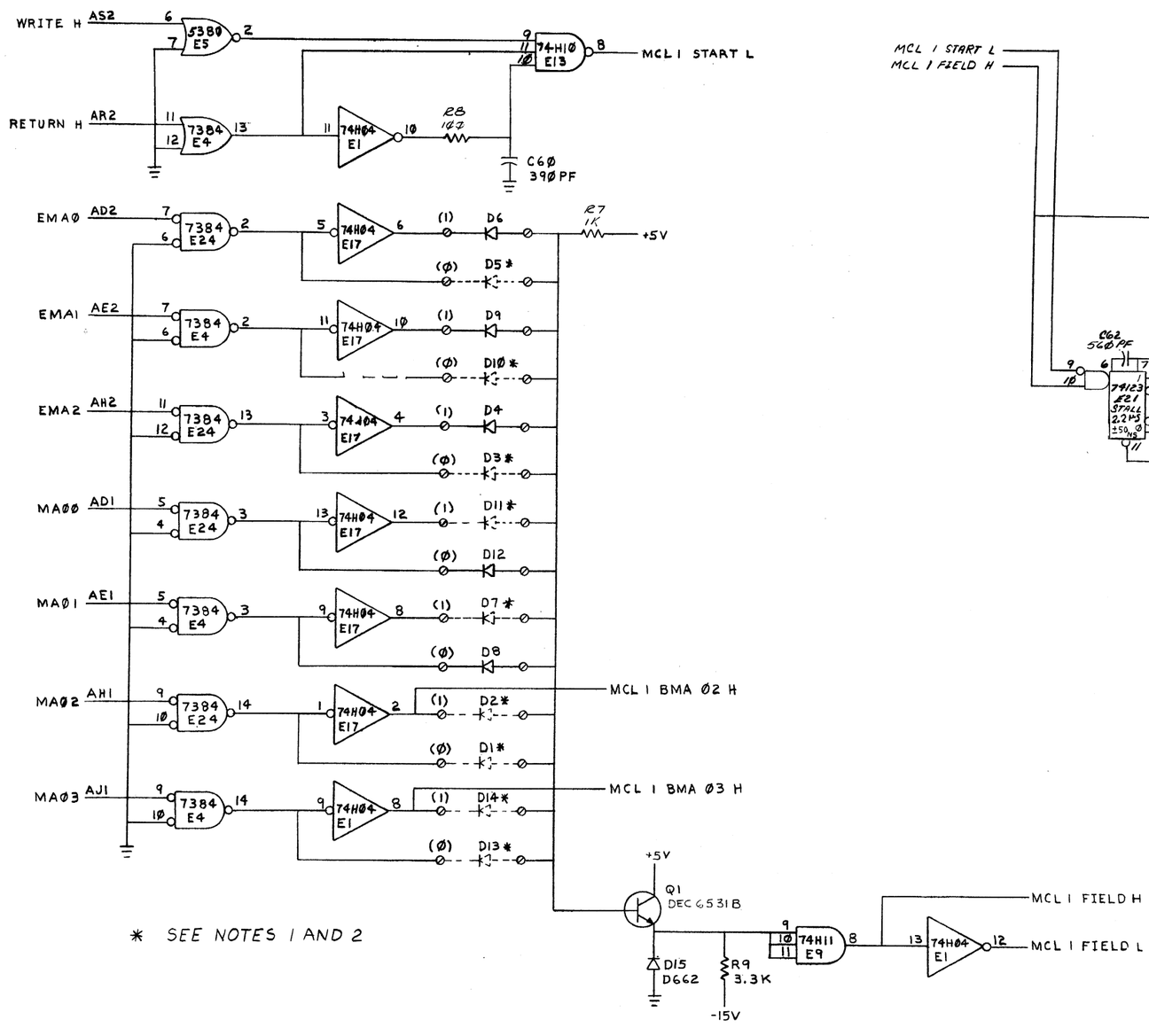
TITLE: FROM II X 12 BIT

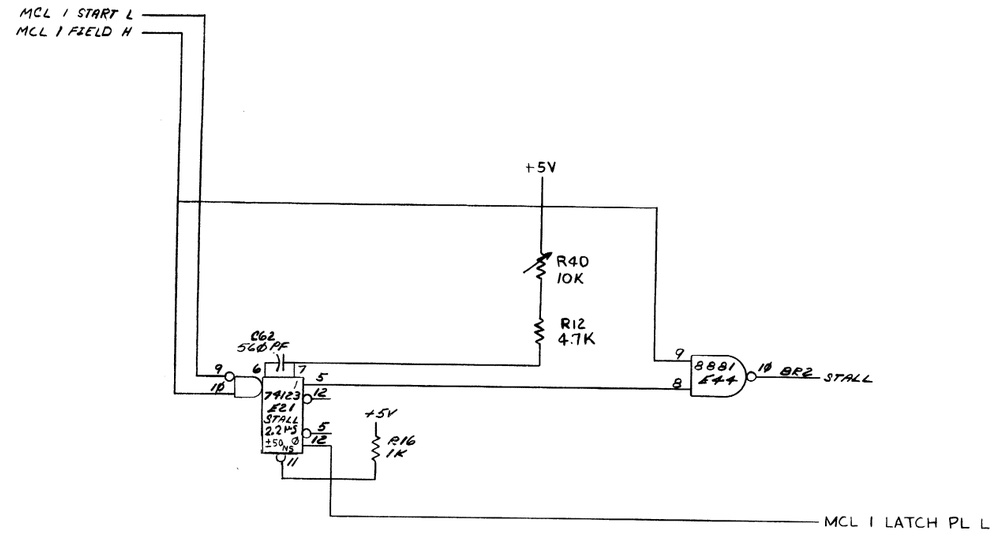
SIZE: D | CODE: CS | NUMBER: M8349-YE-1 | REV: D

DIST

BRUNING 40-522 16699

DEC FORM NO. DRD 135A





REVISIONS		
CHK	CHANGE NO.	REV.

(MCL 1)

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K X 12 BIT	D	CS	M8349-YE-1	D
SCALE —	SHEET 2 OF 4		DIST.	

DEC FORM NO. DRD 138

+5V
JP2
JP1
C71 .01MF
C72 .01 MF
-9V
C58 6.8MF
JS2
JS1
JR2
JR1
D16 D664
D17 1N578
Q2 2N3762
R33 4.7Ω
R34 4.7Ω
R32 220
-15V

MA04 L BD1 — 5380 E3 — MCL1 FIELD L
MA05 L BB1 — 5380 E3
MA06 L BH1 — 5380 E3
MA07 L BJ1 — 5380 E3
MA08 L DD1 — 5380 E8
MA09 L DE1 — 5380 E8
MA10 L DH1 — 5380 E8
MA11 L DJ1 — 5380 E8
+5V — R35 1.5K

EP2 EP1
EN2 EN1
EM2 EM1
EL2 EL1
EK2 EK1
EF2 EF1
EH2 EH1
EJ2 EJ1
ER2

JC1 POWER INTERLOCK
JD1
HA1
HB1
FA1
FC1
EC1
EB1

FE2 FE1
FF2 FF1

MCL1 BMA02 H — 74H00 E12 — FH2 FH1 (1400-1777)
MCL1 BMA03 H — 74H00 E12 — FJ2 FJ1 (1000-1377)
74H04 E1 — 74H00 E12 — FK2 FK1 (400-777)
74H04 E1 — 74H00 E12 — FL2 FL1 (000-377)

E55 1702A (1000-1377) — JE1 JF1 JH1 JJ1 JK1 JL1 JM1 JN1
E50 1702A (400-777) — JE2 JF2 JH2 JJ2 JK2 JL2 JM2 JN2
JU1 JU2
HJ1 HJ2

74157 E60 — ROM Ø0 H, ROM Ø1 H, ROM Ø2 H, ROM Ø3 H

JT1 JT2 +5V
C70 .01MF

E42 1702A (1400-1777) — HR1 HR2
E38 1702A (1000-1377) — FD1 FD2
HN1 HN2
HM1 HM2
HL1 HL2
HK1 HK2
HH1 HH2
HF1 HF2
HE1 HE2
HD1 HD2
EE1 EE2 +5V
E32 1702A (400-777) — FM1 FM2
E26 1702A (0-377) — FN1 FN2
+5V
C69 .01MF

+5V
R36 1K
7408 E49 — ROM Ø4 H, ROM Ø5 H, ROM Ø6 H, ROM Ø7 H
7408 E54 — ROM Ø8 H, ROM Ø9 H, ROM 10 H, ROM 11 H

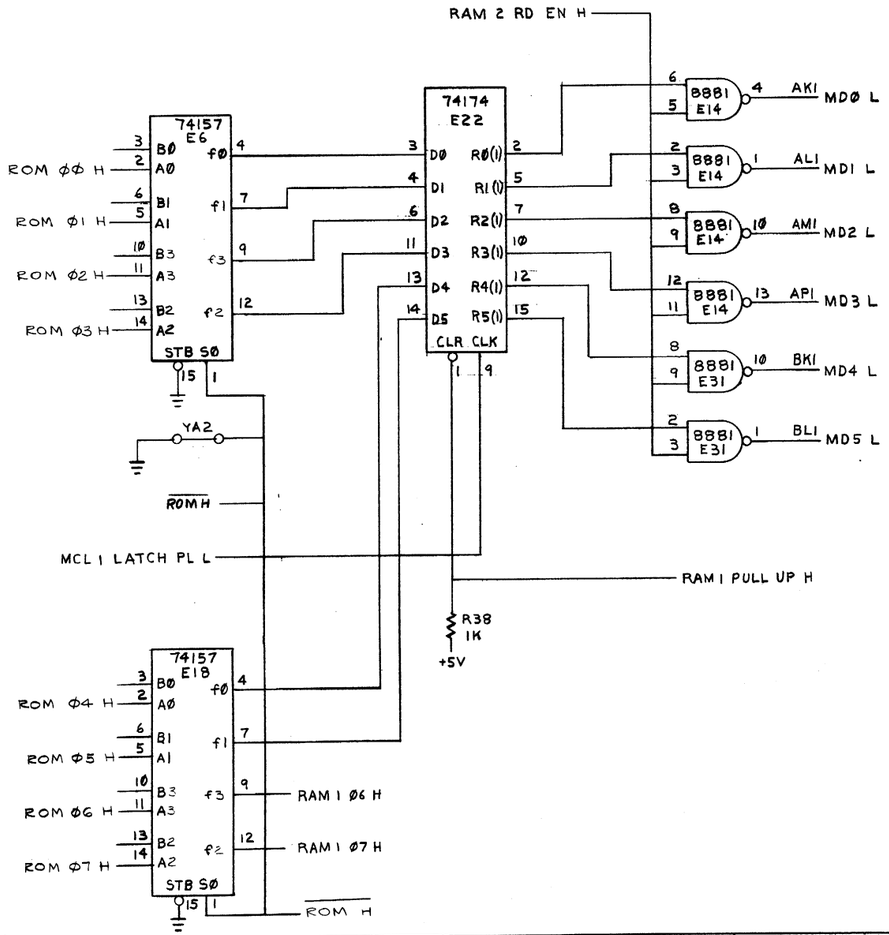
REVISIONS

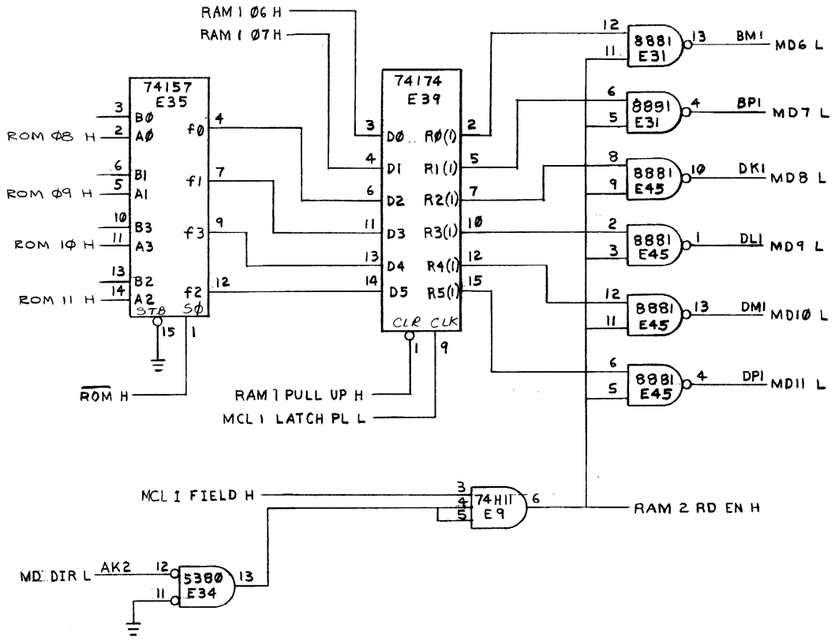
CHK	CHANGE NO.	REV.

(ROM)

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K X 12 BIT	D	CS	M8349-YE-1	D
SCALE —	SHEET 3 OF 4	DIST.		

DEC FORM NO ORD 138





REVISIONS		
CHK	CHANGE NO.	REV.

(RAM 2)

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K x 12 BIT	D	CS	M8349-YE-1	D
SCALE — / — SHEET 4 OF 4	DIST.			

DEC FORM NO. DRD 138

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

SEQUENCE		SEQUENCE	
DRAWING DIRECTORY	B-DD-KM8-F		
PARTS LIST	A-PL-KM8-F-Ø		
TIMING GENERATOR	E-CS-M8330-YB-1		

UNIT VARIATIONS

VAR	TITLE	PRINT SET KM8-F
KM8-F	TIMING GENERATOR	X
	(M8330-YB, SEE ECO# M8330-00011	

REVISIONS		
DATE	CHG. NO.	REV
	KK8E-00001 ORIGINATED	A
	KM8F-00001	A

USED ON OPTION/MODEL	
MR8-F	

SHEET 1 OF 2

DRN. S. Chartier	DATE 10-10-73	TITLE TIMING GENERATOR
CHK'D. [illegible]	DATE 10-18-73	
PROJ ENG. [illegible]	DATE 1-NOV-73	
PROD. [illegible]	DATE	SIZE B / CODE DD / NUMBER KM8-F / REV A
FIELD SERV.	DATE	DIST

DEC 16-13251-1062-1A-R572

DRB 106

ELECTRICAL

CUSTOMER PRINT SET KM8-F	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		2	E-CS-M8330-YB-1	#	2	TIMING GENERATOR	
			K-CO-M8330-0-4	#	-	X-Y COORDINATE HOLE LOCATION	
			D-AH-M8330-YB-5	#	1	ASSY/DRILLING HOLD LOCATION	
			B-MH-M8330-YB-6	#	1	MODULE ECO HISTORY	

MECHANICAL

CUSTOMER PRINT SET KM8-F	MFG SET	FIMD NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	A-PL-KM8-F-Ø	A	1	PARTS LIST	

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

TITLE	SHEET 2 OF 2	SIZE	CODE	NUMBER	REV
		B	DD	KM8-F	A

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY S. Chartier	CHECKED L. Gilbert	SECTION
DATE 10-10-73	DATE 10-18-73	
ENG John Kirk	PROD	ISSUED SECT.
DATE 13 Nov 73	DATE	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION KM8-F
1	E-CS-M8330-YB-1	TIMING GENERATOR	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
TIMING GENERATOR	SHEET 1 OF 1	A	PL	KM8-F-Ø	A	KM8F-00001
		DIST.				

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

NOTES:

1. W1 (JUMPER) TO BE INSERTED BY CUSTOMER ONLY.
2. THE STICKER READS AS FOLLOWS: "M8330 ETCH D MAY BE REPLACED WITH ETCH C IF MACHINE USES ONLY CORE MEMORY. SEMICONDUCTOR MEMORIES MR8-F REQUIRE ETCH D OR LATER.
3. INSERT OSC. UPSIDE-DOWN, SO THAT PIN 1 IS CLOSEST TO THE FINGERS. PIN 1 IS IDENTIFIED BY A SOLDER BLOB ON SIDE OF OSC. CAN.
4. M8330-YB IS TO BE USED ONLY WITH THE MR8F OPTION ONLY.
5. THE YB VARIATION WILL BE CREATED BY INSTALLING ECO No.5' M8330-00006 & M8330-00007 IN M8330 ETCH REV D OR LATER.

SEE NOTE 2 — 49 — 7 REF — 1 REF — 5 — 6

SEE NOTE 3

SEE NOTE 1

10.44 REF

6 REF

8.31 REF

1 — 7

2 3 4 5

+5V AA2, BA2, CA2

(GND)

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

DEC 74174	8	16				
DEC 8251	9	16				
DEC 5314	1	8				
DEC 5380	1	8				
DEC 5384	1	8				
IC TYPE	GND	+5V	ITEM NO	AWG	FROM PT	TO PT
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE			—	—	W1	—
IC PIN LOCATIONS			JUMPER LIST			

SEE NOTE 4

A/R				
		WIRE #30 AWG	9105740-05	53
1	Y1	OSC 20 MHz	1811660-00	52
4	E9,E21,E30,E40	I.C. DEC 74S74	1910544	51
1	E18	I.C. DEC 74H04	1909931	50
1		M8330 REV. STICKER	3611623	49
2	R38,R39	RES 1K, 1/4W, 5%	1800365	48
2		SPLIT LUG	9006735	47
				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	E20	I.C. DEC 8251B	1909894	42
1	E17	I.C. DEC 8801	1909705	41
1	E8	I.C. DEC 74H11	1909267	40
2	E36,41	I.C DEC 97401	1909973	39
10	E22,11,15,20,25,29,34,39,44	I.C. DEC 74H04	1910623	38
1	E38	I.C. DEC 74123	1909436	37
4	E26,31,45,49	I.C. DEC 74H74	1909667	36
12	E1,3,5,7,10,14,19,24,28,33,38,43	I.C. DEC 74H40	1905886	35
2	E2,E6	I.C. DEC 7430	1905878	34
1	E16	I.C. DEC 7420	1905877	33
2	E37, E35	I.C. DEC 7417	1909929	32
1	E48	I.C. DEC 7410	1905876	31
1	E42	I.C. DEC 7404	1909686	30
1	E22	I.C. DEC 7402	1909004	29
2	E23, E47	I.C. DEC 7400	1905875	28
				27
				26
1	Q1	TRANSISTOR DEC 32298	1503100	25
1	R27	RES 47Ω 1/4W 5%	1802177	24
1	R26	RES 10K 1/4W 5%	1804439	23
1	R1	RES 5.6K 1/4 W 5%	1803439	22
14	R2, 11,18 R21,22,29,30 R34, R35, R36, R37	RES 470 1/4 W 10%	1804317	21
13	R3,4,10,12,14,16,17,23,24,31,32,33	RES 150 1/4W 10%	1802238	20
2	R31, R33	RES 27 1/4W 10%	1801420	19
12	D1-D8, D10-D13	DIODE D664	1100114	18
				17
1	C35	CAP 39 mf, 10V, 10% S.TANT	1000076	16
3	C36-C38	CAP 6.8 mf, 35V, 10% S.TANT	1005008	15
				14
2	C39-C40	CAP .047 mf, 16V, -20% +50%	1009678	13
				12
37	C1-C34, C42, C43, C45	CAP .01 mf, 100V, 20% DISC	1001610	11
1	C48	CAP 1000 PF, 100V, 5% MICA	1000042	10
				9
8		HANDLE FLIP-CHIP MAGENTA	9008337-06	7
6		EYELET 654-11 STIMPSON	9036760	6
1		ETCHED CKT BOARD	5009707	5
REF		MODULE ECO HISTORY	D-SH-M8338-8-6	4
REF		ASSY/DRILLING HOLE LAYOUT	D-SH-M8338-8-5	3
REF		XXY COORDINATE HOLE LOCATION	K-CO-M8338-8-4	2
2		SPACER CABLE CLAMP	1202702	1
QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: MR8-F

ETCH BOARD REV: E

REVISIONS	DEC NO.	EIA NO.	DEC NO.	EIA NO.
A Made to MD 74 L. NARAH 1-14-75				
B Made to M8330-00011 L. NARAH 4-4-75				
C Made to M8330-00005 L. NARAH 4-15-75				
D Made to M8330-00006 L. NARAH 5-15-75				
E M8330-00007 D. ADAMS 3/19/76				
F M8330-00008 D. ADAMS 2/21/76				
G M8330-00009 D. ADAMS 6/11/76				
H M8330-00010 D. ADAMS 7/15/76				
J M8330-00011 D. ADAMS 8/20/76				
K M8330-00012 D. ADAMS 10/1/76				
DEC			DEC 32078	2N5616
REMARKS			D664	IN3606

SEMICONDUCTOR CONVERSION CHART

DRN. — DATE —
CONTR. — DATE —
ENG. — DATE —
POST ENG. — DATE —
APVD — DATE —

EQUIPMENT CORPORATION.

TITLE: TIMING GENERATOR

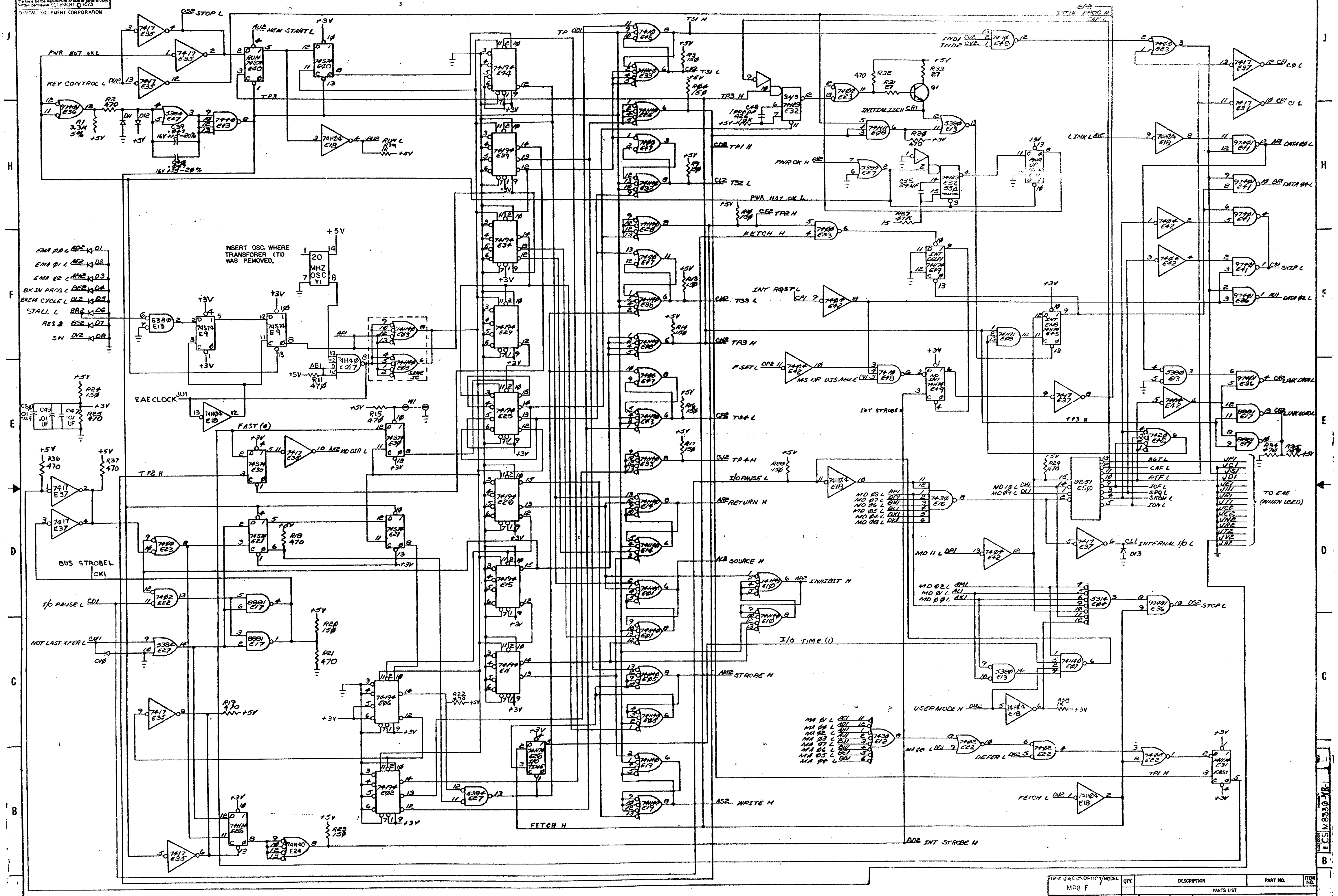
SIZE C | CODE CS | NUMBER M8330-YB-1 | REV. L

DWG. M8330

SHEET 1 OF 2

A

DIGITAL EQUIPMENT CORPORATION



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
MR8-F		PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH

DRN. DATE 5-2-73
CHKD. DATE 7/2/73
ENG. DATE
PROJ. ENG. DATE /11/73
PROD. DATE /11/73
NEXT HIGHER ASSY
SCALE
SHEET 2 OF 2

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
TIMING GENERATOR

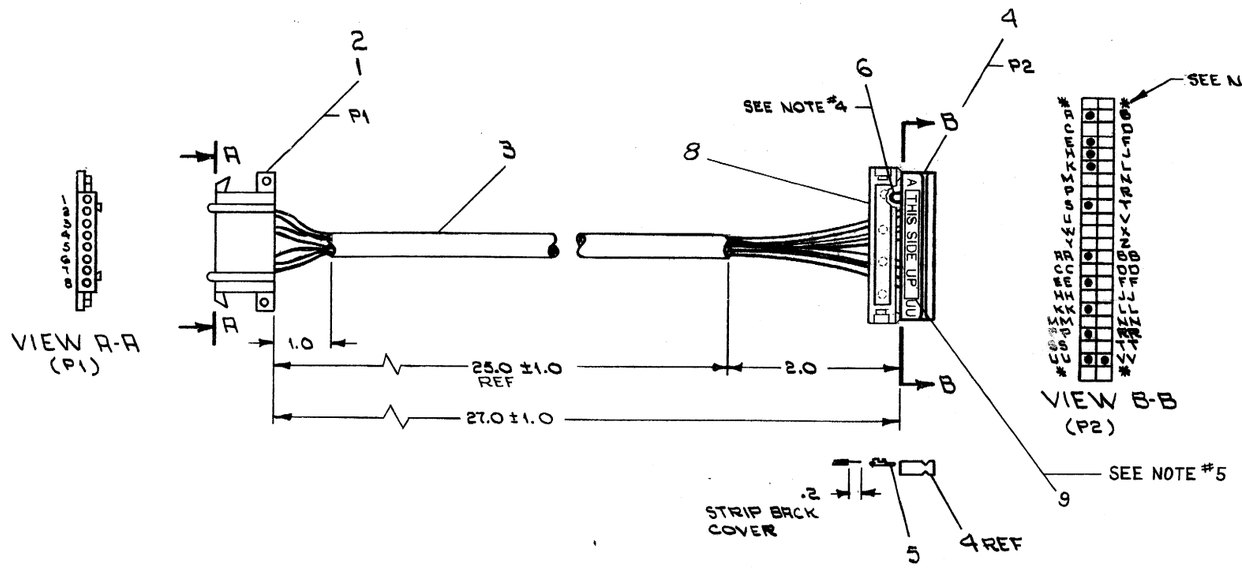
SIZE C CODE CS NUMBER M8330-Y8-1 REV. L
DIST.

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	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-R(NOTE #3)	
3		BLK	2	P1-4	2	P2-EE	
3		WHT		P1-5	2	P2-RR	
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.
5. PLACE ITEM #9 ("THIS SIDE UP" STICKER) ON LETTERED SIDE OF ITEM #4 (BERG HOUSING) AS SHOWN.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	LABEL, THIS SIDE UP	3611567	9
1	STRAIN RELIEF	1211166	8
R/R	TUB. #18 TEF. THINWALL WHT	9107278-11	7
R/R	WIRE, #22 AWG STRD TEF BLK	9107350-00	6
11	SOCKET, CRIMP # 47216	1210089-07	5
1	HOUSING, BERG # 65023-015	1210918-15	4
R/R	CABLE, BELDEN #8777-3PR SHLD	9107229-0	3
6	CONTACT MATE-N-LOCK (FEMALE)	1209379-03	2
1	CONN. MATE-N-LOCK (FEMALE)	1209340-00	1

PARTS LIST

REVISIONS REV	CHANGE NO.	CHK	ORN
A	KL8E-00002	E. Clark 3-15-73	E. MCNAMARA 5/13/71
B	KL8E-00006	E. CLARK 3-15-73	E. MCNAMARA 3-14-73
C	7008360-00001	E. Allain 10-29-73	B. REGAN 10-29-73
D	7008360-00002	B. Regan 3-12-74	REGAN 3/12/74
E	7008360-00003	R. REGAN 9-30-74	R. REGAN 10/4/74

FIRST USED ON OPTION/MODEL: PDP-8E

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES: DECIMALS .XX ±.01, .XXX ±.005, ANGLES ± 0°30'
FINAL SURFACE QUALITY 63
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: SEE PARTS LIST
FINISH

ORN. P. L. Reed DATE 1APR'71
CHK'D. [illegible] DATE 4-8-71
ENG. [illegible] DATE 4-8-71
PROJ. ENG. [illegible] DATE 4-8-71
PROD. [illegible] DATE 4/8/71

NEXT HIGHER ASSY: A ML-KL8-E-0
SCALE: NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

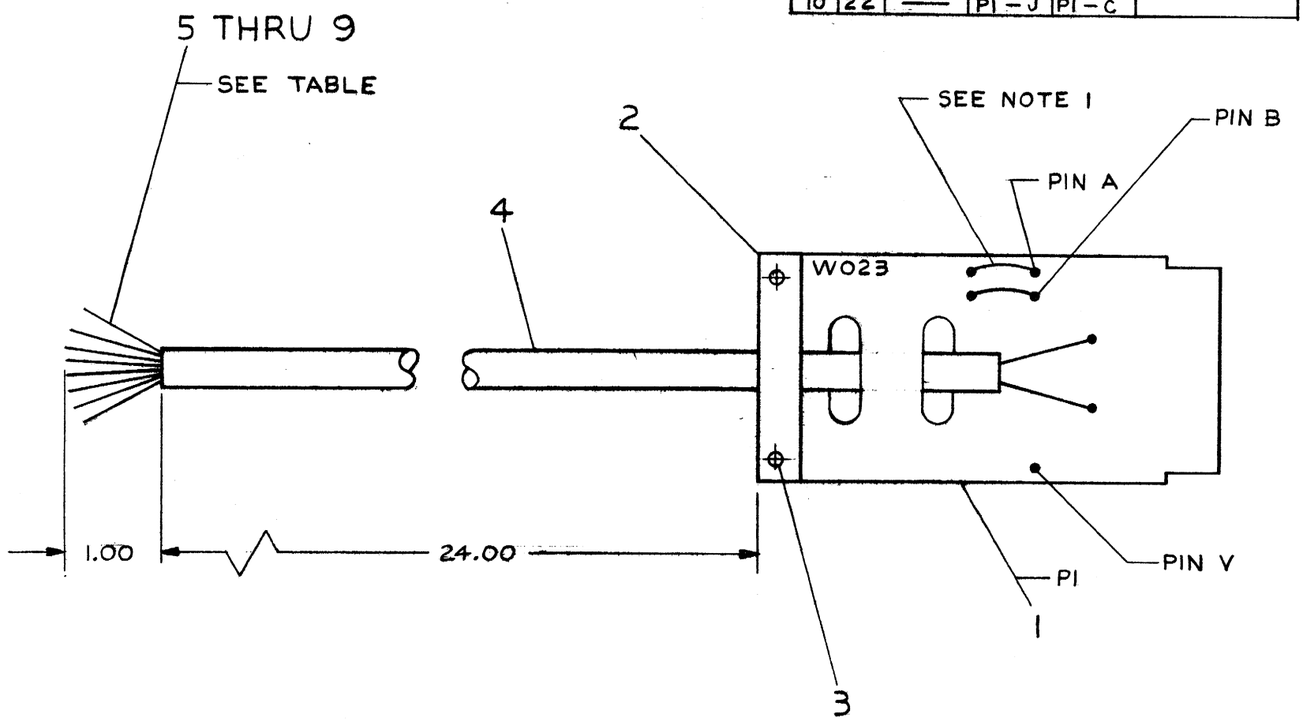
TITLE: CABLE ASSEMBLY (KL8E)

SIZE D | CODE IA | NUMBER 7008360-0-0 | REV E
DIST.

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	COLOR	CONNECTION FROM	TO	REMARKS
6	22	RED	P1 – D		
5		BLU	– B		
8		BLK	– F		
8		BLK	– H		
8		BLK	– J		
8		BLK	– C		
7		ORN	– A		
9		GRN	– E		
10		——	– F	P1 – H	
10		——	– H	P1 – J	
10	22	——	P1 – J	P1 – C	

NOTES:
1. JUMP PINS A AND B TO CORRESPONDING LUGS WITH (#22 BUS WIRE) ITEM #10



A/R	DESCRIPTION	PART NO.	ITEM NO.
A/R	#22 AWG BUS WIRE	9107560-01	10
	STRD TEF GRN	9107350-55	9
	BLK	9107350-00	8
	ORN	9107350-33	7
	RED	9107350-22	6
	#22 AWG STRD TEF BLU	9107350-66	5
A/R	TUBING, SULFLEX #2	9107244	4
2	EYELET, GS-4-7 STIMPSON	9006732	3
1	CLAMP, CABLE (WHITE)	1202704	2
1	CABLE CONNECTOR	W023	1

PARTS LIST

REVISIONS			
REV.	CHANGE NO.	CHK	
A	AG12A-00002	KFK	3/15/71

BUDIANSKY 3/15/71

FIRST USED ON OPTION/MODEL: AG12-A

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: SEE PARTS LIST

FINISH

DRN. R. Rudelka	DATE 4/13/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. K. Kiernan	DATE 5-11-70	
ENG. G. Budiansky	DATE 5-29-72	TITLE: PREAMPLIFIER P.S. CABLE (AG12-A)
PROJ. ENG. G. BUDIANSKY	DATE 5-29-72	
PROD. D Call	DATE 6/3/70	
NEXT HIGHER ASSY: C-UA-AG12-A-Ø		SIZE C CODE IA NUMBER 7006812-0-0 REV. A
SCALE 1/1	SHEET 1 OF	DIST

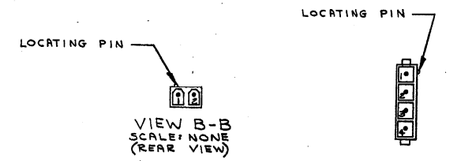
SIZE C CODE IA NUMBER 7006812-0-0 REV. A

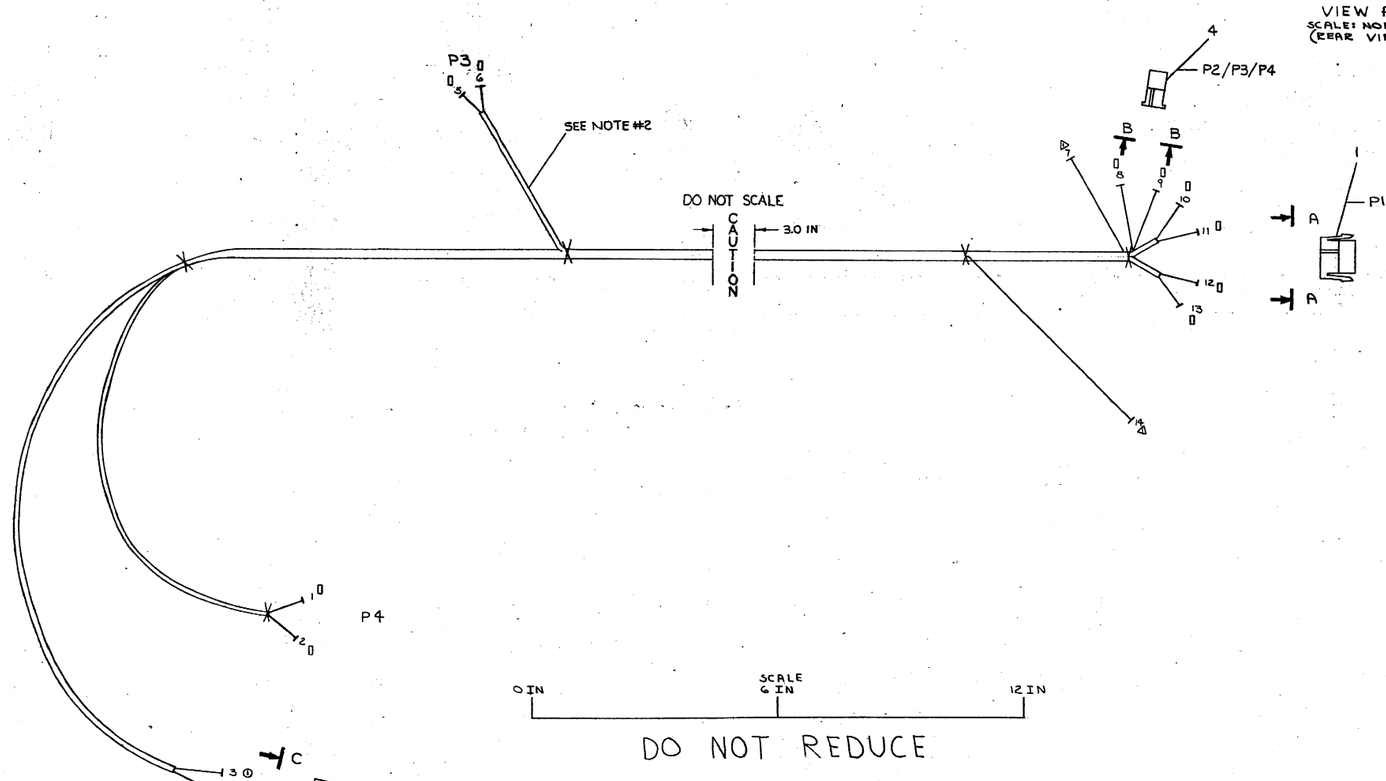
DEC FORM NO. DRC 100

WIRE TABLE

ITEM NO	DESCRIPTION AWG	COLOR	FROM POINT	FROM CONN.	FROM TERM	TO POINT	TO CONN	TO TERM
7	18	RED	1	P4-1	2E4	8	P2-1	2E4
7	18	RED	2	P4-2	2E4	14		.8
3	22	BLK	3		5E6	13	P1-4	1E2
	22	RED	4		5E6	12	P1-3	1E2
5	22	BLK	5	P3-1	2E4	11	P1-2	1E2
	22	RED	6	P3-2	2E4	10	P1-1	1E2
7	18	RED	7		8	9	P2-2	2E4

NOTES:
1. USE TIE WRAPS (X) ITEM #9 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY, AND AT EVERY BREAKOUT POINT
2. CUT SHIELD FLUSH AT EDGE OF CABLE JACKET - BOTH ENDS





X	A/R	TIE WRAP SST1 M	90070031	9
△	2	LUGS, RED	9007929	8
	A/R	WIRE #18 AWG (RED)	9107360-22	7
①	2	CONTACT	1210820-2	6
	2	CONN, HOUSING (1 PIN)	1210820-01	5
	3	CONN, HOUSING (2 PIN)	1210821-02	4
	A/R	CABLE	9107703	3
[]	10	PIN CONTACT FEMALE	1209379-00	2
	1	CONN, HOUSING (9 PINS)	1210821-4	1
	QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

REVISIONS			
DES	VT14-00009	5-23-72	
DRN			
CHK			
ENG			

DEC FORM NO. 1

FIRST USED ON OPT/MOD: VT14

TOLERANCES
DECIMALS
.XXX ±.005
.XX ±.02
.X ±.1

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ANGLES
X .030 ± 1°
TWO PLACE ±.010
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: SEE PARTS LIST
FINISH

DRN. K.W. DATE 5-10-73
CHECK DATE 5-22
ENGR DATE 5-22
PROJ. MGR. DATE 5-23-73
PROG. DATE 5-23-73
NEXT HIGHER ASSY: D-UA-VT14-0-0
SCALE 1/1
SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: INTERNAL INTERFACE HARNESS

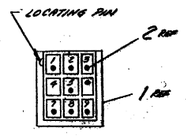
SIZE/CODE E | IA | NUMBER 7009478-0-0 | REV. A
DIST.

Ref: 7009478-00 A

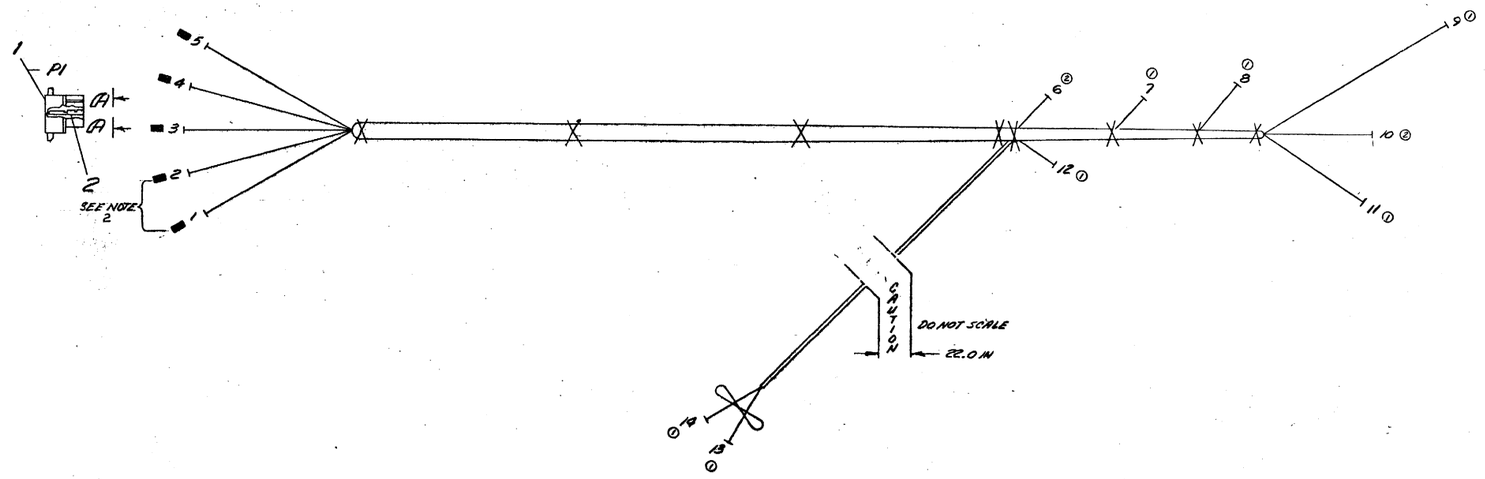
WIRE TABLE

ITEM NO	DESCRIPTION WIRE	COLOR	FROM POINT	FROM CONNECTION	FROM TERM	TO POINT	TO CONNECTION	TO TERM	
7	12	BLK	1	P1-2		10	—		
6	12	RED	2	P1-3		6	—	#5	NOTE 2
11	14	ORN	3	P1-5	#2	9	—	#4	
10	14	GRY	4	P1-8		8	—	#4	
9	14	BLU	5	P1-9		7	—	#4	
12	18	BLK	11	—	#4	13	—	#4	
	TWP	RED	12	—	#4	14	—	#4	
8	22	VIO	—	P1-1	—	—	P1-7	#2	

NOTES:
1. USE THE WRAPS (X) ITEM #3 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY, AND AT EVERY BREAKOUT POINT.
2. APPLY CONTACT WITH AMP CRIMP TOOL #90124-2 HAND CRIMPER THEN TOUCH UP WITH SOLDER TO INSURE GOOD CONTACT. A LARGE BUILD UP OF SOLDER WILL PREVENT THE PIN FROM LOCKING INTO HOUSING.



VIEW A-A
SCALE: NONE



DO NOT REDUCE

SCALE
0 IN. 6 IN. 12 IN.

	QTY	DESCRIPTION	PART NO.	ITEM NO.
	N/R	WIRE #18 AWG TWP (BLK/RED)	9107430-08	12
	N/R	WIRE #18 AWG (GRN)	9107370-33	11
	N/R	WIRE #14 AWG (GRY)	9107370-88	10
	N/R	WIRE #14 AWG (BLU)	9107370-66	9
	N/R	WIRE #22 AWG (VIO)	9107330-77	8
	N/R	WIRE #12 AWG (BLK)	9107380-00	7
	N/R	WIRE #12 AWG (RED)	9107380-22	6
②	8	CONN SOCKETLESS	9007920	5
①	7	CONN SOCKETLESS	9007969	4
X		TIE WRAP MANDUIT SST1M	9007091	3
■	7	TERMINAL PIN CONTACT	1209378-01	2
	1	CONN MATE-N-LOCK (5 PIN)	1209355-09	1

PARTS LIST

FIRST USED ON OPTION MOD: VTI4

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

UNLESS OTHERWISE SPECIFIED
DIMENSION IS IN INCHES
TOLERANCES
DECIMALS ± .005
ANGLES ± 1/2°
FIRST SURFACE
SURFACE TO BE FREE FROM BURRS, SLIVERS AND SHARP CORNERS

MATERIAL: SEE PARTS LIST
FINISH:

DRAWN [illegible] DATE 7-31-73
CHECK [illegible] DATE 8-1-73
ENGINEER [illegible] DATE 8-1-73
PROD [illegible] DATE 8-1-73
NEXT HIGHER ASSY: D-UB-VTI4-B-0

dataTran EQUIPMENT CORPORATION
TITLE: HARNESS POWER SUPPLY
CUST CODE: EIA | NUMBER: 7009479-0-0 | REV: A
DIST.
SCALE 1/1
SHEET 1 OF 1

REVISIONS

LTR	CHANGE NO.	REV
A	7009479-00001	A

ECO [illegible] DATE 7-31-73
BY [illegible] DATE 7-31-73

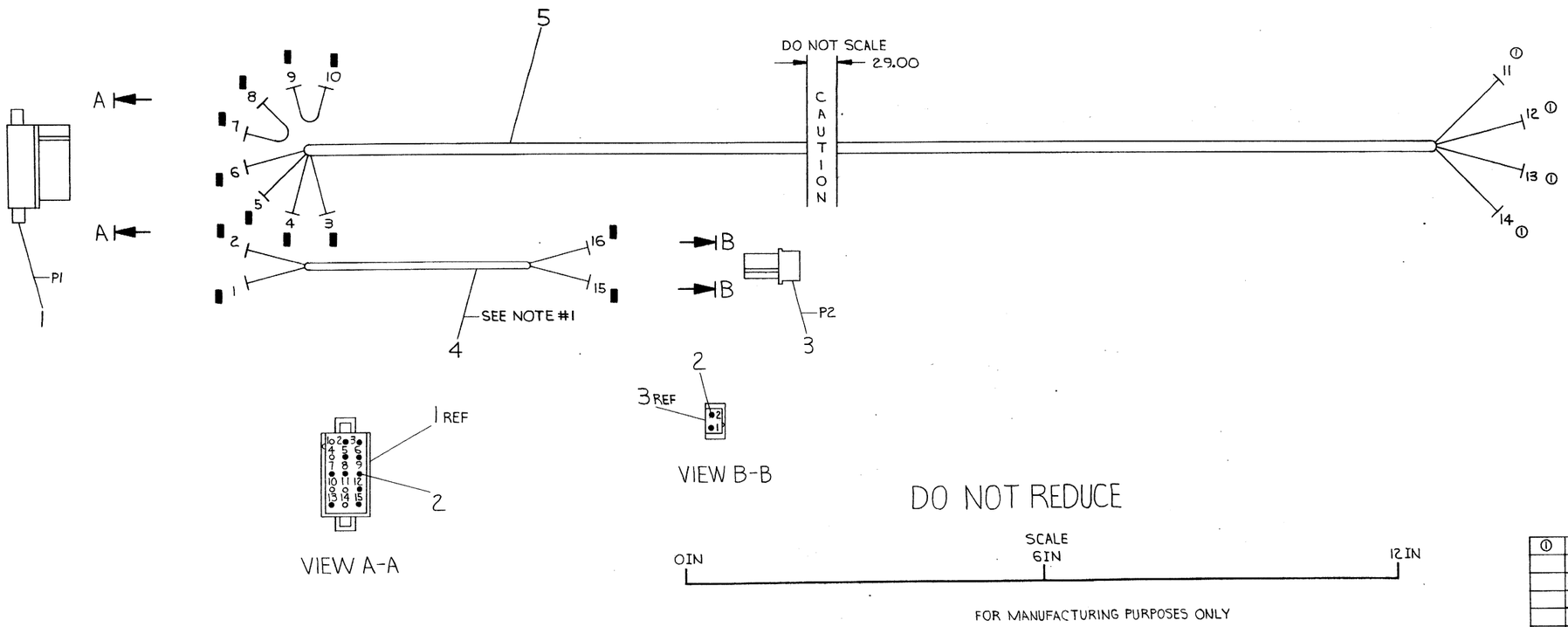
DEC FORM NO. 2221-1

7009479-0-0 A
EIA
B

WIRE TABLE

ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	FROM POINT	FROM CONNECTION	FROM TERM	TO POINT	TO CONNECTION	TO TERM
4	22	BLK	1	P1-15	1 & 2	15	P2-1	2 & 3
	↓	RED	2	P1-13	↓	16	P2-2	2 & 3
5		BLK	3	P1-12		11		7
		WHT	4	P1-9		12		7
		RED	5	P1-8		13		7
		GRN	6	P1-7		14		7
6	↓	VIO	7	P1-6	↓	8	P1-5	1 & 2
6	22	VIO	9	P1-3	1 & 2	10	P1-2	1 & 2

NOTES:
1. CUT SHIELD FLUSH AT EDGE OF CABLE JACKET-BOTH ENDS



DO NOT REDUCE

SCALE
6IN
0IN
12IN

FOR MANUFACTURING PURPOSES ONLY

①	4	CONN, SOLDERLESS	9007917	7
	A/R	WIRE, #22 AWG STRD VIO	9107350-77	6
	A/R	CABLE, 2 TW PAIRS	9107706	5
	A/R	CABLE, 2 COND, TW AND SHLD	9107703	4
	1	CONN HOUSING	1210822-02	3
	12	CONN PIN	1209378-00	2
SYM	1	CONN HOUSING	1209351-15	1
	QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: VT14

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: SEE PARTS LIST
FINISH: —

		DATE
DRN.	S. Roberts	8/9/73
CHK'D.		DATE
ENG.		DATE
PROJ. ENG.		DATE
PROD.		DATE

NEXT HIGHER ASSY.: D-UA-VT14-0-0
SCALE 1/1
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: VIDEO HARNESS

SIZE D | CODE IA | NUMBER 7009511-0-0 | REV.
DIST.

REV.	REVISIONS	CHANGE NO.	CHK

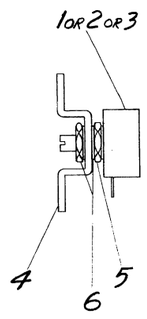
BRUNING 40-107 15968
DEC FORM NO. DRD 100-A

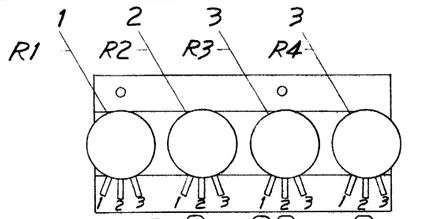
REV 0-0-1196007 | IA | a | 2
SIZE CODE NUMBER

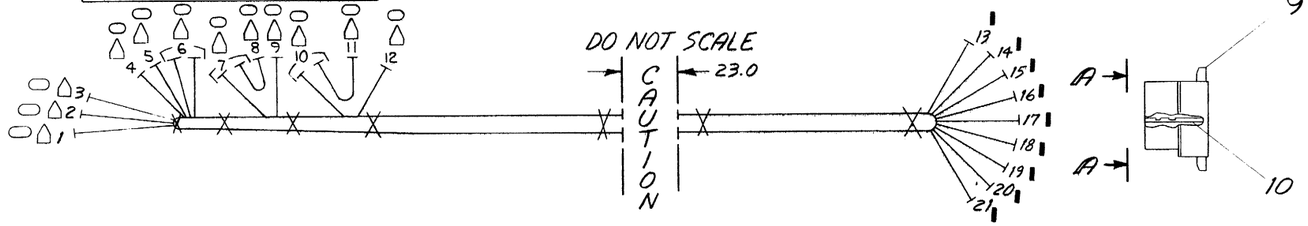
WIRE TABLE

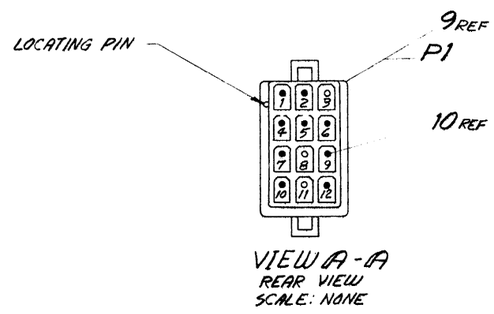
ITEM	DESCRIPTION		FROM			TO		
NO.	AWG	COLOR	POINT	CONN	TERM	POINT	CONN	TERM
11	22	BLK	1	R1-1	SOLDER+7	6	R2-3	SOLDER+7
11	↑	BLK	6	R2-3	↑	17	P1-6	10
12	↑	ORN	2	R1-2	↑	14	P1-2	↕
13	↑	RED	3	R1-3	↑	13	P1-1	↕
12	↑	ORN	4	R2-1	↑	15	P1-4	↕
14	↑	GRN	5	R2-2	↑	16	P1-5	10
13	↑	RED	8	R3-2	↑	7	R3-1	SOLDER+7
13	↑	RED	7	R3-1	↑	18	P1-7	10
14	↑	GRN	9	R3-3	↑	19	P1-9	10
13	↑	RED	11	R4-2	↑	10	R4-1	SOLDER+7
13	↑	RED	10	R4-1	↑	20	P1-10	10
14	22	GRN	12	R4-3	SOLDER+7	21	P1-12	10

NOTES:
1. USE TIE WRAPS (X) (ITEM #8) APPROX. EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.



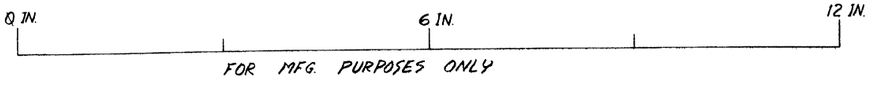






VIEW A-A
REAR VIEW
SCALE: NONE

DO NOT REDUCE



FOR MFG. PURPOSES ONLY

	QTY.	DESCRIPTION	PART NO.	ITEM NO.
	A/R	WIRE #22 AWG (GRN)	9107350-55	14
	A/R	WIRE #22 AWG (RED)	9107350-22	13
	A/R	WIRE #22 AWG (ORN)	9107350-33	12
	A/R	WIRE #22 AWG (BLK)	9107350-00	11
	9	PIN, MALE	1209378-01	10
	1	CONN (12 PIN)	1209351-12	9
X	A/R	TIE WRAP	9007031	8
○	A/R	HEAT SHRINK TUBING (RED) 5816	9107305-02	7
	8	LOCKWASHER, INT TTH	9006639	6
	8	NUT, SWITCH	9007960	5
	1	BRKT, CONTROL	B-MD-7411236-0-0	4
	2	POTENTIOMETER, 10K	1302205	3
	1	POTENTIOMETER, 1K	1300370	2
SYM	1	POTENTIOMETER, 250K	1310311-00	1

PARTS LIST

FIRST USED ON OPTION/MODEL: VT14

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

DRN. A. Wilson 8-16-73
CHK'D. [illegible] 8/23/73
ENG. [illegible]
PROJ ENG. [illegible]
PROD. [illegible]

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: VIDEO CONTROL HARNESS

MATERIAL: SEE PARTS LIST
FINISH
NEXT HIGHER ASSY.: D-UA-VT14-B-1
SCALE 1/1
SHEET 1 OF 1

SIZE D | CODE 1A | NUMBER 7009512-0-0 | REV.
DIST

BRUNING 40-107 15968
REVISIONS: REV. | CHANGE NO | CHK
DEC FORM NO. 1080 100-A

WIRE TABLE

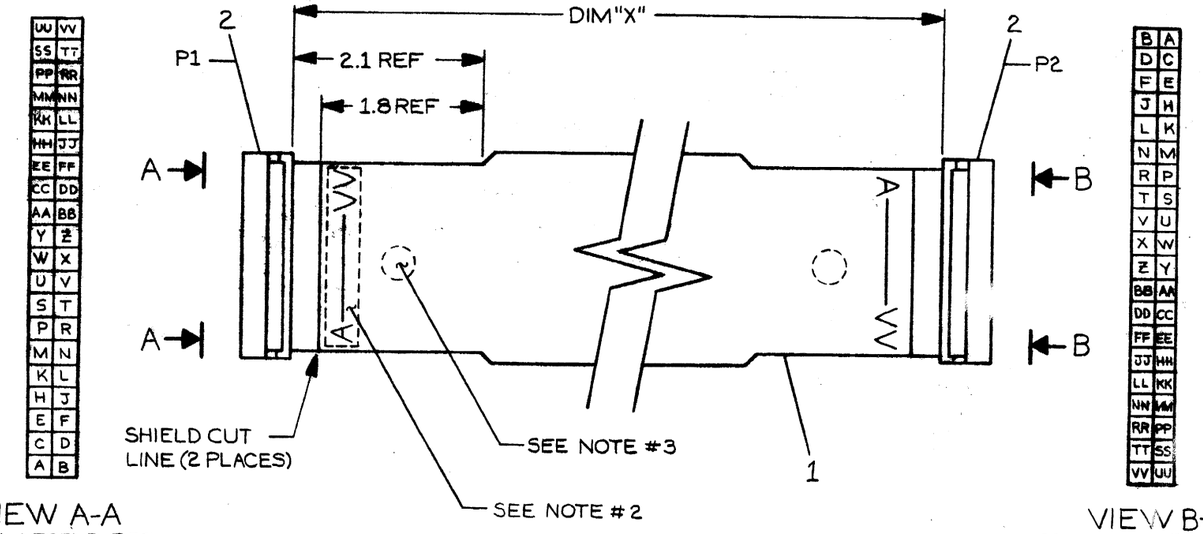
FROM	TO	FROM	TO
P1-A	P2-VV	P1-Y	P2-X
P1-B	P2-UU	P1-Z	P2-W
P1-C	P2-TT	P1-AA	P2-V
P1-D	P2-SS	P1-BB	P2-U
P1-E	P2-RR	P1-CC	P2-T
P1-F	P2-PP	P1-DD	P2-S
P1-H	P2-NN	P1-EE	P2-R
P1-J	P2-MM	P1-FF	P2-P
P1-K	P2-LL	P1-HH	P2-N
P1-L	P2-KK	P1-JJ	P2-M
P1-M	P2-JJ	P1-KK	P2-L
P1-N	P2-HH	P1-LL	P2-K
P1-P	P2-FF	P1-MM	P2-J
P1-R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

LEGEND

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

NOTES:

1. ASSEMBLE THIS CABLE PER PROCESS SPEC. #7ØØ6485-Ø-Ø.
2. CONNECTOR LEGEND IDENTIFICATION TO BE PLACED ON SHIELD SIDE OF CABLE IN THIS AREA AS SHOWN.
3. INSPECTION ¢ TEST STAMPS TO BE PLACED AT EACH END OF THE CABLE ASSEMBLY.



VIEW A-A
CONN. LEGEND REF.

VIEW B-B
CONN. LEGEND REF.

2	CONNECTOR, 4Ø SOCKET	1211ØØ6	2
A/R	CABLE, 4Ø COND. FLAT W/SHIELD	17ØØØØ4	1
QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: —/—

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

MATERIAL —/—
FINISH —/—

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

NEXT HIGHER ASSY.

SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
BCØ8R
I/O CABLE

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

DIST.

REVISIONS			
CHK	CHANGE NO.	REV.	
	BCØ8R-ØØØØ4	J	REVISED & REDRAWN 9-4-74 P. GARDNER 9/17/73

DEC FORM NO. DRC 100-B

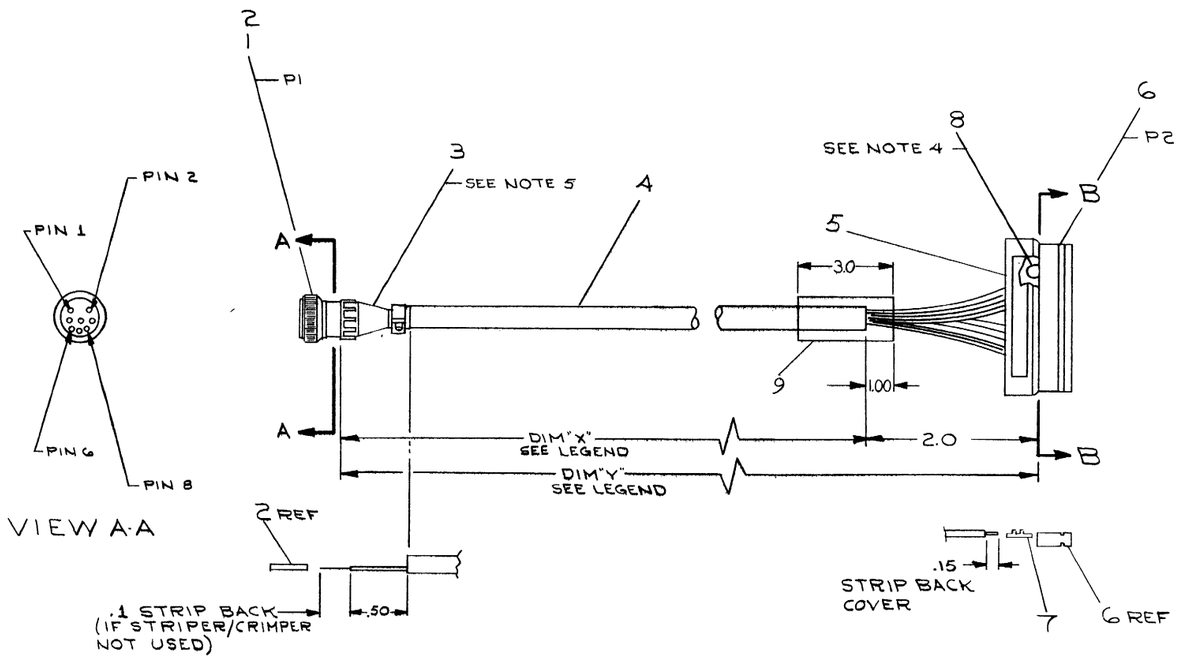
LEGEND		
NUMBER	VARIATION	
	DIM "X"	DIM "Y"
BC14J-25	24'10"	25' ± 2"
BC14J-50	49'10"	50' ± 2"

WIRE TABLE

ITEM NO.	AWG	COLOR	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH
4		BLK	P1-4	2-CRIMP	P2-K	7-CRIMP
TWP		WHT	P1-3		P2-S	
TWP		BLK	P1-2		P2-AA	
4		RED	P1-1	2-CRIMP	P2-KK	
8	22	BLK	P2-E	7-CRIMP	P2-H	7-CRIMP
8	22	BLK	P1-7	2-CRIMP	P1-5	CRIMP

NOTES:

1. * ASTERISKS INDICATE CAVITIES NOT USED OR DESIGNATED BY LETTERS.
2. REMAINING PAIR OF WIRES TO BE CUT BACK TO JACKET (BOTH ENDS)
3. SHIELDS TO BE CUT BACK (STRIP) OUTER INSULATION ON BOTH ENDS OF CABLE
4. ITEM NO. 8 (WIRE) TO BE APPROX. ONE INCH LONG (2 PLACES).
5. ON ITEM NO. 3 USE CLAMP #3 (2 PLACES).
6. FOR CRIMPING PINS FOR ITEM NO. 1 USE AMP HAND CRIMPER #90265-1



REV	CHANGE NO	CHK	
A	BC14J-00001	RW	SULICK 11/1/73
B	BC14J-00002	RW	G GAGNON

BRUNING 40-107 15968

DFC FORM NO. HIRI 100-A

A/R	DESCRIPTION	PART NO.	ITEM NO.
A/R	SHRINK TUBING	9107685-00	9
A/R	WIRE #22 AWG TPVC (BLK)	9107350-00	8
6	SOCKET	1210089-6	7
1	HOUSING	1210918-15	6
1	RELIEF, STRAIN	1211166	5
A/R	CABLE 3PR SHLD	9107723-0	4
1	CLAMP, CABLE	1211430	3
6	SOCKETS	1211432	2
1	RECEPT	1211429	1

FIRST USED ON OPTION/MODEL: 14/30

PARTS LIST

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓

MATERIAL: SEE PARTS LIST

FINISH

		DATE
DRN		7/27/73
CHKD	R. Corbett	8/3/73
ENG	R. Corbett	8/3/73
PROJ. ENG	R. Corbett	8/3/73
PROD.		8/6/73

NEXT HIGHER ASSY.: D-UA-14/30-0-0

SCALE: NONE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

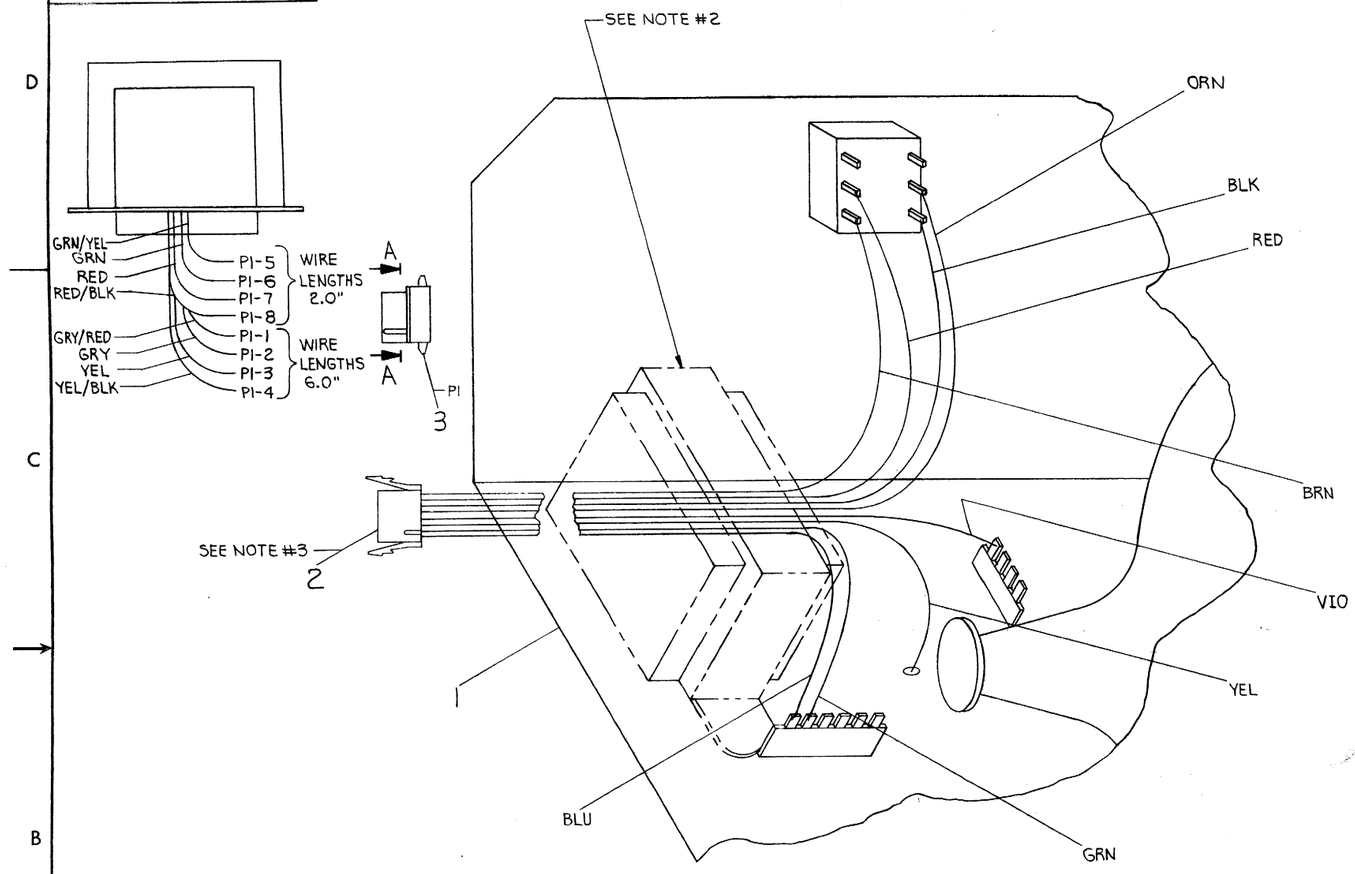
TITLE: CABLE, DC14-F INTERFACE

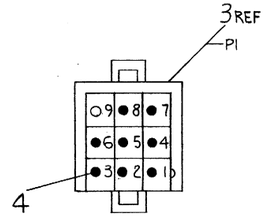
SIZE	CODE	NUMBER	REV.
D	UA	BC14J-0-0	B

DIST.

SIZE D UA BC14J-0-0 REV B

NOTES:
1. MAKE FROM A-PS-3010326-0-0
2. REMOVE TRANSFORMER FROM ITEM #1 (MONITOR VTØ5), CUT WIRE LENGTHS AND ADD ITEM NO.S 3 & 4 (HOUSING,CONN & PIN.CONN) AS SHOWN
3. REMOVE WIRES FROM CONNECTIONS THAT ARE SHOWN AND SOLDER ITEM #2 (MONITOR HARNESS) TO SAME CONNECTIONS, AS SHOWN





VIEW A-A

ITEM NO	PART NO.	DESCRIPTION	QTY.
8	1209378-02	PIN, CONN	4
1	1209351-09	HOUSING, CONN	3
1	D-IA-7009677-0-0	MONITOR HARNESS	2
1	SEE NOTE #1	MONITOR VTØ5	1

PARTS LIST

FIRST USED ON OPTION/MODEL: VT14

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: SEE PARTS LIST
FINISH: —//—

DRN. S. Roberts — DATE 11/16/73
CHK'D. D. Wagner — DATE 11/21/74
ENG. D. Wagner — DATE 11/21/74
PROJ. ENG. B. Moss — DATE 12/3/74
PROD. K K Quirk — DATE 1/23/74

NEXT HIGHER ASSY. D-UA-VT14-Ø-Ø
SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: REWORKED MONITOR VTØ5

SIZE D | CODE IA | NUMBER 7411528-0-0 | REV.
DIST.

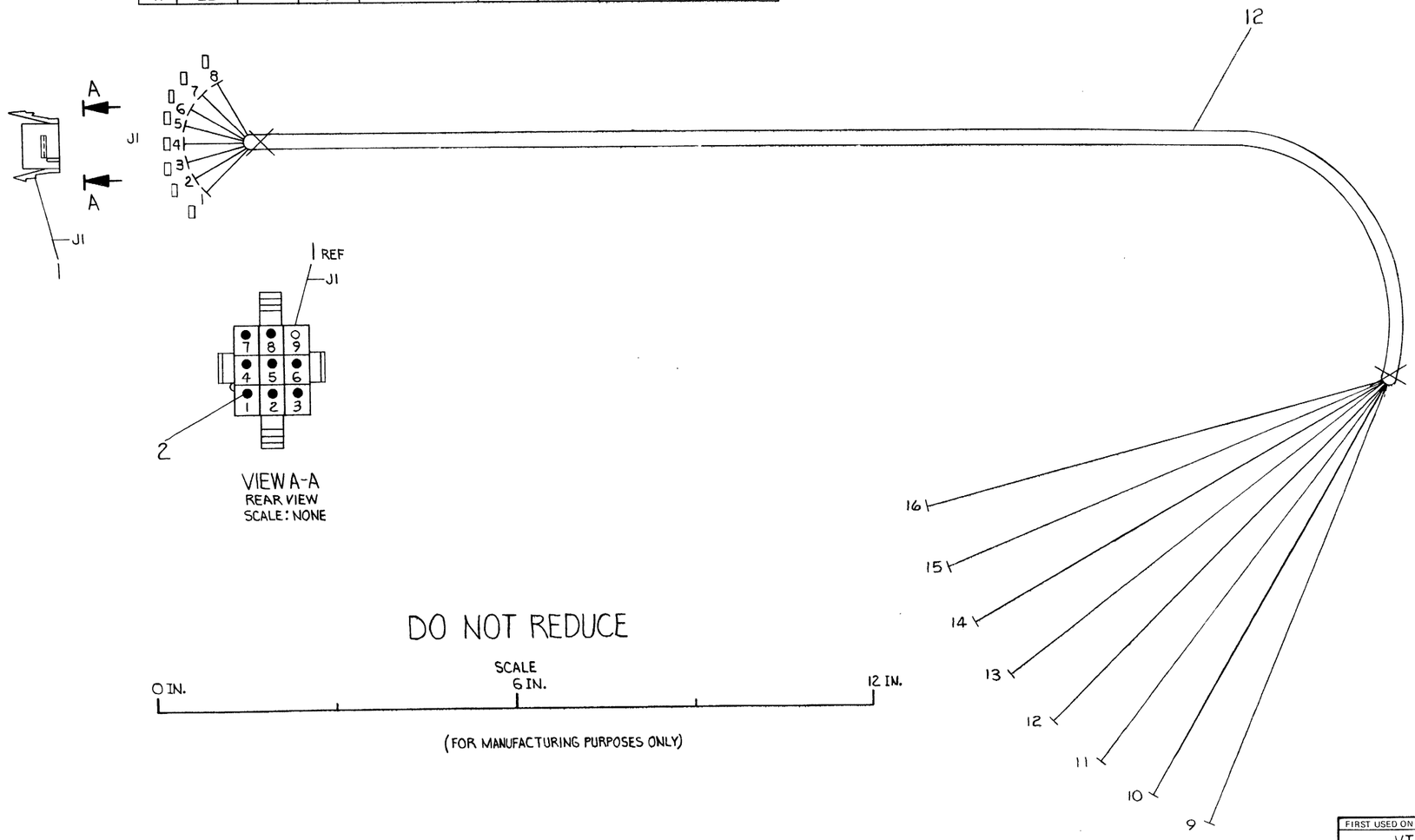
REVISIONS: REV | CHANGE NO | CHK

SIZE D | CODE 1A | NUMBER 7411528-0-0 | REV

WIRE TABLE

ITEM	DESCRIPTION		FROM			TO		
NO.	AWG	COLOR	POINT	CONNECTION	TERM	POINT	CONNECTION	TERM
4	22	BLK	1	J1-1	1 & 2	12		
5	↑	BRN	2	J1-2	↑	15		
6		RED	3	J1-3		9		
7		ORN	4	J1-4		14		
8		YEL	5	J1-5		10		
9		GRN	6	J1-6		13		
10	↓	BLU	7	J1-7	↓	11		
11	22	VIO	8	J1-8	1 & 2	16		

NOTES:
1. USE TIE WRAPS (X)(ITEM #3) AT BOTH ENDS OF SLEEVING.
2. DO NOT STRIP + TIN POINTS 9 THRU 16.



DO NOT REDUCE

SCALE 6 IN.

0 IN. 12 IN.

(FOR MANUFACTURING PURPOSES ONLY)

A/R	SLEEVING		9107244	12
A/R	WIRE, #22 AWG	VIO	9107350-77	11
A/R	WIRE, #22 AWG	BLU	9107350-66	10
A/R	WIRE, #22 AWG	GRN	9107350-55	9
A/R	WIRE, #22 AWG	YEL	9107350-44	8
A/R	WIRE, #22 AWG	ORN	9107350-33	7
A/R	WIRE, #22 AWG	RED	9107350-22	6
A/R	WIRE, #22 AWG	BRN	9107350-11	5
A/R	WIRE, #22 AWG	BLK	9107350-00	4
X	A/R	TIE WRAP	9007031	3
□	8	SOCKET, CONN	1209379-00	2
SYM	1	HOUSING, CONN	1209350-09	1

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
VT14	PARTS LIST			

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

DRN. S. Robitaille DATE 1-11-74
CHK'D R. A. Brennan DATE 1-21-74
ENG. R. J. Thomas DATE 1-21-74
PROJ. ENG. S. Wynn DATE 1-23-74
PROD. DATE

MATERIAL: SEE PARTS LIST
FINISH: 11
NEXT HIGHER ASSY.: D-IA-7411528-0-0
SCALE 1/1
SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: MONITOR HARNESS

SIZE	CODE	NUMBER	REV.
D	IA	7009677-0-0	A

DIST

REVISIONS			
REV	CHANGE NO	CHK	
A	VT14-0003	SW	G. GAGNON 3-24-72

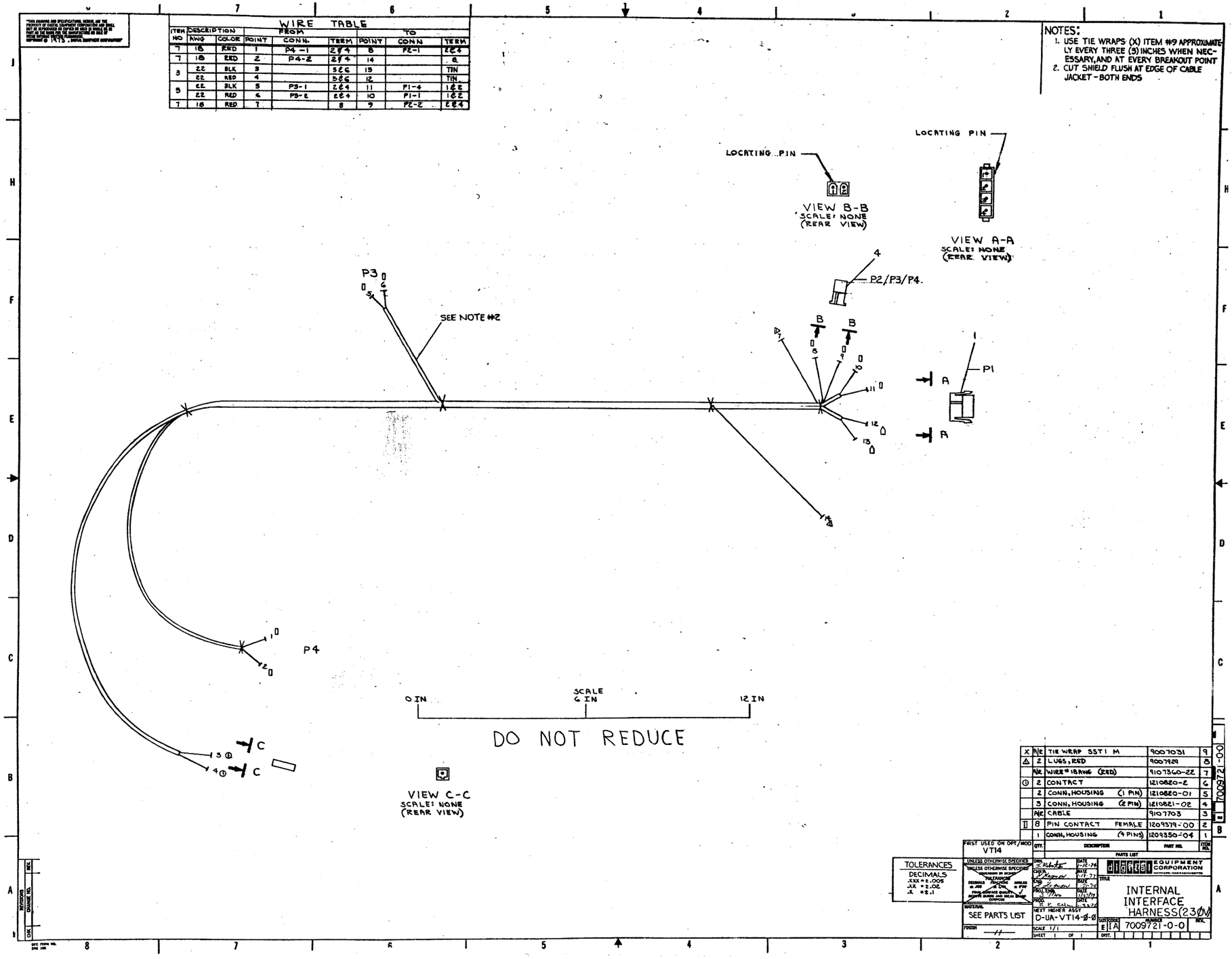
DEC FORM NO DRD 1105-B

D IA 7009677-0-0 REV A

WIRE TABLE

ITEM NO.	DESCRIPTION WIRE AWG	COLOR	FROM POINT	FROM CONN.	FROM TERM	TO POINT	TO CONN	TO TERM
7	18	RED	1	P4 -1	2264	8	P2-1	2264
7	18	RED	2	P4-2	2264	14		8
3	22	BLK	3		5566	13		TIN
	22	RED	4		5566	12		TIN
5	22	BLK	5	P3-1	2264	11	P1-6	1188
	22	RED	6	P3-2	2264	10	P1-1	1122
7	18	RED	7		8	9	P2-2	2264

NOTES:
1. USE TIE WRAPS (X) ITEM #9 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY, AND AT EVERY BREAKOUT POINT
2. CUT SHIELD FLUSH AT EDGE OF CABLE JACKET - BOTH ENDS



	QTY	DESCRIPTION	PART NO.	ITEM NO.
X	A/R	TIE WRAP SST1 M	90070031	9
△	2	LUGS, RED	9007429	8
	A/R	WIRE* 18 AWG (RED)	9107360-22	7
①	2	CONTACT	1210820-2	6
	2	CONN, HOUSING (1 PIN)	1210820-01	5
	3	CONN, HOUSING (2 PIN)	1210821-02	4
	A/R	CABLE	9107703	3
II	8	PIN CONTACT FEMALE	1209379-00	2
	1	CONN, HOUSING (9 PINS)	1209350-04	1

PARTS LIST

FIRST USED ON OPT/MOD: VT14

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
DECIMALS
.XXX ±.005
.XX ±.02
.X ±.1
ANGLES ± 1°
FINISH SURFACE QUALITY, REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: SEE PARTS LIST
FINISH

DRAWN: [illegible] DATE 1/15/74
CHECKED: [illegible] DATE 1/15/74
ENG: [illegible] DATE
PROJ. MGR: [illegible] DATE
PROD. ENG: [illegible] DATE
NEXT HIGHER ASSY: D-UA-VT14-B-0
SCALE 1/1
SHEET 1 OF 1

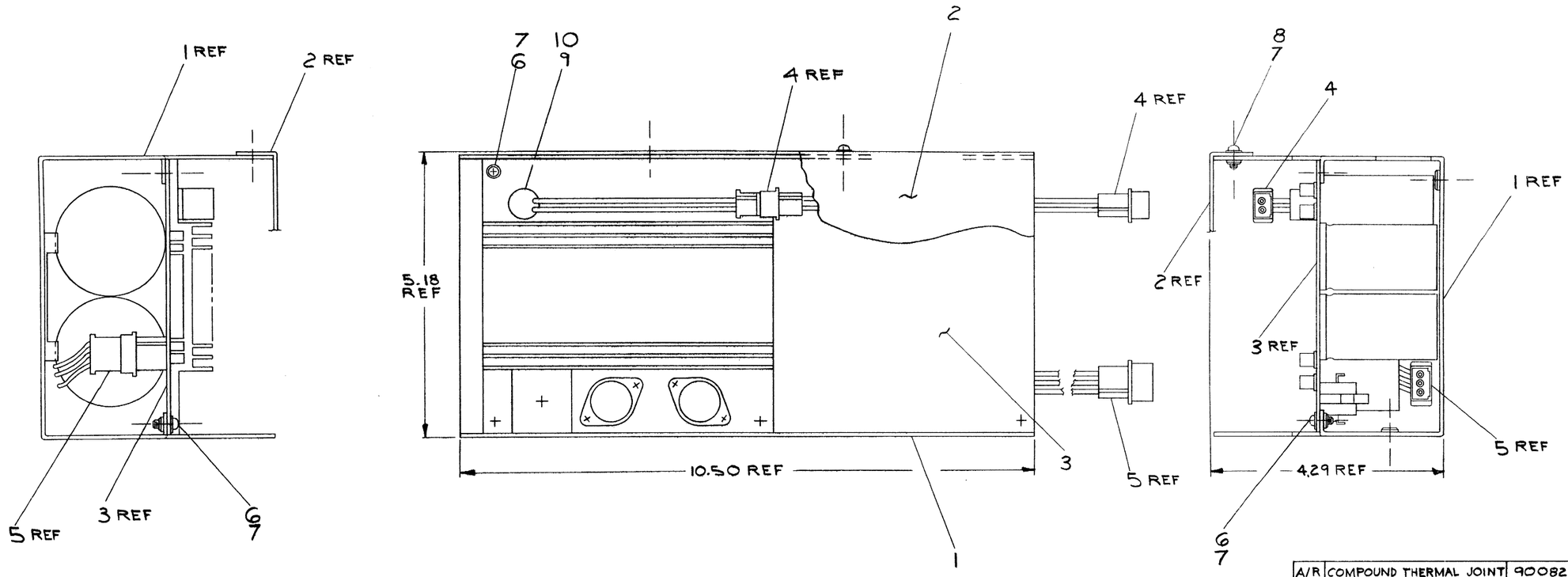
digital EQUIPMENT CORPORATION

TITLE: INTERNAL INTERFACE HARNESS (230V)

SIZE CODE: E | A | NUMBER: 7009721-0-0 | REV.
DIST.

7009721-00

REVISIONS: LTR | DESCRIPTION | DATE | APPROVED



ITEM NO.	QTY.	DESCRIPTION	PART NO.
10	A/R	COMPOUND THERMAL JOINT	9008268
9	1	THERMOSTAT ASS'Y	7009452
8	2	SCR, PHL PAN HD 6-32X.25LG	9006020-1
7	8	WASHER, INT TOOTH LOCK #6	9006633
6	6	SCR, PHL PAN HD 6-32X.44LG	9006023-1
5	1	CABLE, REGULATOR	D-IA-7009794-0-0
4	1	CABLE, THERMOSTAT	D-IA-7009795-0-0
3	1	BOARD, REGULATOR	E-IA-5409728-0-0
2	1	COVER	C-MD-7411749-0-0
1	1	CHASSIS, REG. BOARD	E-IA-7411748-0-0

PARTS LIST

FIRST USED ON OPTION/MODEL: VT14

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

MATERIAL: —

FINISH: —

		DATE
DRN.	J. Ferguson	8-1-74
CHK'D.	W. Haynes	8/2/74
ENG.	W. Haynes	8/2/74
PROJ. ENG.	—	—
PROD.	—	8 21 74

NEXT HIGHER ASSY.: D UA-VT14-0-0
SCALE: NONE
SHEET: 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

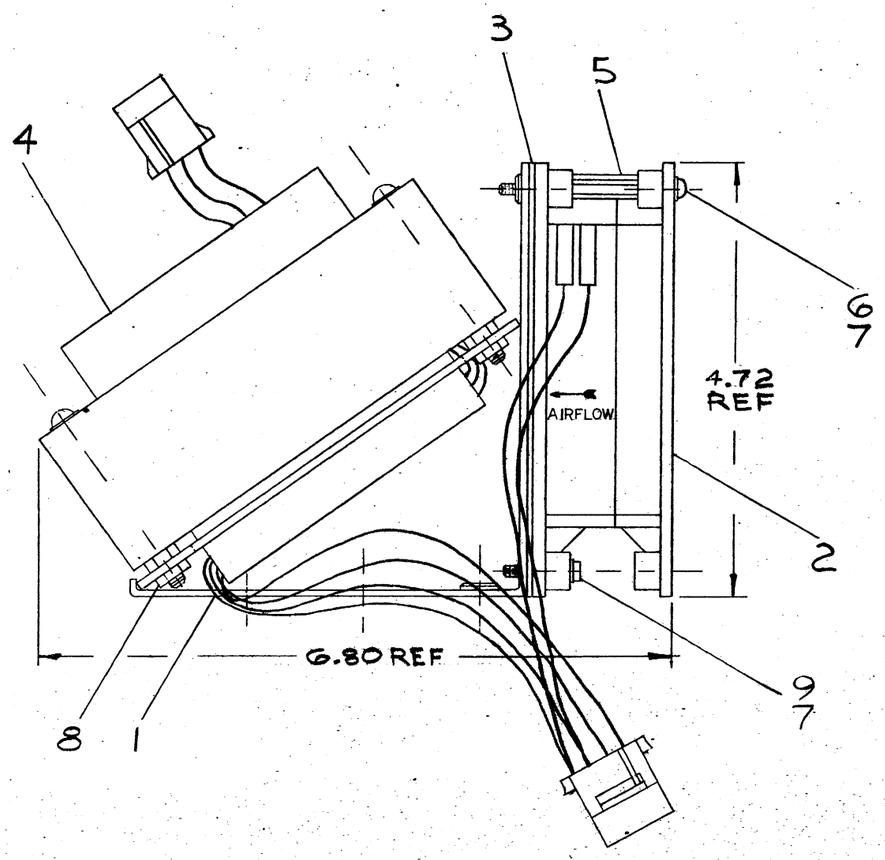
TITLE: REGULATOR BOARD ASS'Y.

SIZE: D | CODE: AD | NUMBER: 7009796-0-0 | REV:
DIST:

REVISIONS	REV	CHANGE NO	CHK

DEC FORM 119 SHEET 1 OF 1

7009796-0-0



REVISIONS		
CHK	CHANGE NO.	REV.
RH	VT14-00004	A
	S. MORO 4/4/74	
RH	7009797-00001	A
	G. GAGNON 10-24-74	

QTY.	DESCRIPTION	PART NO.	ITEM NO.
2	SCRS, PHL PAN HD 6-32×5/8	9006025-1	9
4	NUTS, #8 KEPS	9006563	8
4	WASHER, #6 INT. TOOTH LOCK	9006633	7
2	SCRS, PHL PAN HD #6-32X1.69 LG	9008224-1	6
2	SPACER, #8-32X.69 LG.	9008334	5
1	TRANSFORMER ASS'Y.	7009279-1-0	4
1	FAN, SCREEN	G-MD-7404881-0-0	3
1	FAN	1210331-00	2
1	BRKT, TRANS.	D-IA-7009798-0-0	1

PARTS LIST

FIRST USED ON OPTION/MODEL: VT14

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: SEE PARTS LIST

FINISH

		DATE
DRN.	J. Ferguson	2-20-74
CHK'D.	R. Hagman	2/20/74
ENG.	R. Hagman	2/20/74
PROJ. ENG.	B. Mar	2/21/74
PROD.	R. K. Cahill	2-22-74

NEXT HIGHER ASSY.: D-UA-VT14-0-0

SCALE: NONE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: TRANSFORMER ASS'Y.

SIZE	CODE	NUMBER	REV.
C	AD	7009797-0-0	B

DIST.

REV B
SIZE C CODE AD NUMBER 7009797-0-0

DEC FORM NO. CRC 100-B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Richard Powers DATE 2-12-75	CHECKED [illegible] DATE 3-24-75	SECTION
ENG RA Powers DATE 2-12-75	PROD Bill Martino DATE 2-12-75	ISSUED SECT.

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION VT14 AA	VT14 AB	VT14 AC	VT14 AD
1	ZL109-RB	Industrial 14 Self Test	1	1	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
VT14 Software List	SHEET 1 OF 1	A	PL	VT14-0-2	—	VT14-00009

DIST.

DEC FORM DEC 16 (325) 1031 N870
DRA 110