PDP-8/E computer engineering drawings

digital equipment corporation · maynard. massachusetts

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS																								
		PDP8/E-AA	PDP8/E-AB	PDP8/E-BA	-BB	-CA	-CB	-DA	-DB	-EA	-EB	-FA	-FB	-GA	-GB	-HA	-HB	-JA	-JB	-KA	-KB	-LA	-LB	-MA	PDP8/E-MB
PDP8/E-Ø	BASIC 8/E	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

USED ON OPTIONS							

REVISIONS

REV	DATE	CHG. NO	APP'D.	REVISED
X			JD	11/24-12
Y		8E-35	AS	
Z		8E-36	AS	
AA		8E-37	AS	
AB		8E-39	RV	
AC		8E-41	RV	
AD	10/71	8E-42	RV	
	11/71	8E-49	LK	
	12/71	8E-52	RV	
	12/71	8E-53		
	1/72	8E-56		
	1/72	8E-57		
	3/72	8E-59		
	4/72	8E-60		
	6/72	8E-62		
	12/72	8E-63		

DRN. FERGUSON	DATE 11/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. K. GULICK	DATE 11/70	
ENG. PROVIDENT	DATE 12/70	TITLE PDP8/E
PROJ. ENG. VOGELSANG	DATE 12/70	
PROD. L. SAYLOR	DATE 12/70	
FIRST USED ON		SIZE A / CODE ML / NUMBER PDP8/E-Ø / REV AD
SCALE		
SHEET 1 OF 3		DIST.

PRINT SET PDP8/E-Ø	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
/	E-UA-PDP8/E-0-0	F	3	PDP8/E ASSEMBLY	
/	C-PL-PDP8/E-0-0	F	2	PDP8/E ASSEMBLY	
/	D-DI-PDP8/E-0-1	L	2	PDP8/E DRAWING INDEX	
/	E-AR-PDP8M-0-1	##	1	OPTION ARRANGEMENT	
/	A-SP-PDP8/E-0-4	D	2	RECOMMENDED OMNIBUS MODULE ASSIGN	
/	D-TD-PDP8/E-0-5	B	2	TIMING DIAGRAM	
/	E-FD-PDP8/E-0-6	A	1	FLOW DIAGRAM	
/	D-IC-PDP8/E-0-10	A	1	POWER WIRING	
/	A-SP-PDP8/E-0-11		5	OPTION POWER REQUIREMENTS	
X	A-ML-KC8-E	#	2	CONSOLE (PDP8/E)	KC8-E
X	E-CS-5409057-0-1	#	1	CONTROL BOARD	KC8-E
X	E-IA-5409057-0-0	#	1	CONTROL BOARD FRONT PANEL	KC8-E
X	A-ML-MM8-E	#	2	MEMORY MM8-E	MM8-E
X	E-CS-G227-0-1	#	2	XY DRIVER	MM8-E
X	E-CS-G619-0-1	#	2	STACK BOARD	MM8-E
X	E-CS-G104-0-1	#	2	SENCE/INHIBIT	MM8-E
X	E-BD-MM8-E-1	#	1	BLOCK DIAGRAM	MM8-E
X	A-ML-KK8-E	#	2	CENTRAL PROCESS KK8-E	KK8-E
X	E-CS-M8300-0-1	#	5	MAJOR REGISTER	KK8-E
X	E-CS-M8310-0-1	#	4	MAJOR REGISTER CONTROL	KK8-E
X	E-CS-M8320-0-1	#	2	BUS LOADS	KK8-E
X	E-CS-M8330-0-1	#	2	TIMING GENERATOR	KK8-E
X	B-CS-M849-0-1	#	1	RFI SHIELD	KK8-E
X	A-ML-KL8-E	#	2	ASYNC. DATA CONTROL	KL8-E
X	E-CS-M8650-0-1	#	3	ASYNC. DATA CONTROL	KL8-E
X	D-IA-7008360-0-0	#	1	CABLE ASSEMBLY	KL8-E
X	E-CS-M8650-YA-1	#	2	ASYNC. DATA CONTROL	KL8-E
X	D-IA-BC01V-25-0	#	1	CABLE ASSEMBLY	KL8-E

TITLE	SHEET	SIZE	CODE	NUMBER	REV
PDP8/E	2 OF 3	A	ML	PDP8/E-Ø	AD

PRINT SET	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	A-SP-KL8-E-1	#	16	ENGINEERING SPECIFICATION	KL8-E
X	A-SL-PDP8/E-0-3	C	1	SOFTWARE LIST (PDP8/E)	
X	A-PL-SP8-EA-0	#	1	RECOMMENDED 1ST LEVEL SPARES	
X	A-PL-SP8-EB-0	#	5	RECOMMENDED 2ND LEVEL SPARES	
X	A-AL-LT33-0-12	#	1	TELETYPE ASR-33 ACCESSORY LIST	LT33
X	D-MD-7605994-0-0	#	2	FLIP CHIP PANEL DATA (CUSTOMER)	
X	E-UA-H724-0-0	#	3	POWER SUPPLY	
X	A-PL-H724-0-0	#	6	POWER SUPPLY	
X	D-CS-H724-0-1	#	1	CIRCUIT SCHEMATIC (115V)	
X	D-CS-H724-A-1	#	1	CIRCUIT SCHEMATIC (230V)	
X	D-DI-H724-0-2	#	1	DRAWING INDEX	
X	E-IA-5409262-0-0	#	1	CONTROL BOARD A2	
X	E-IA-5409264-0-0	#	1	CONTROL BOARD A1	

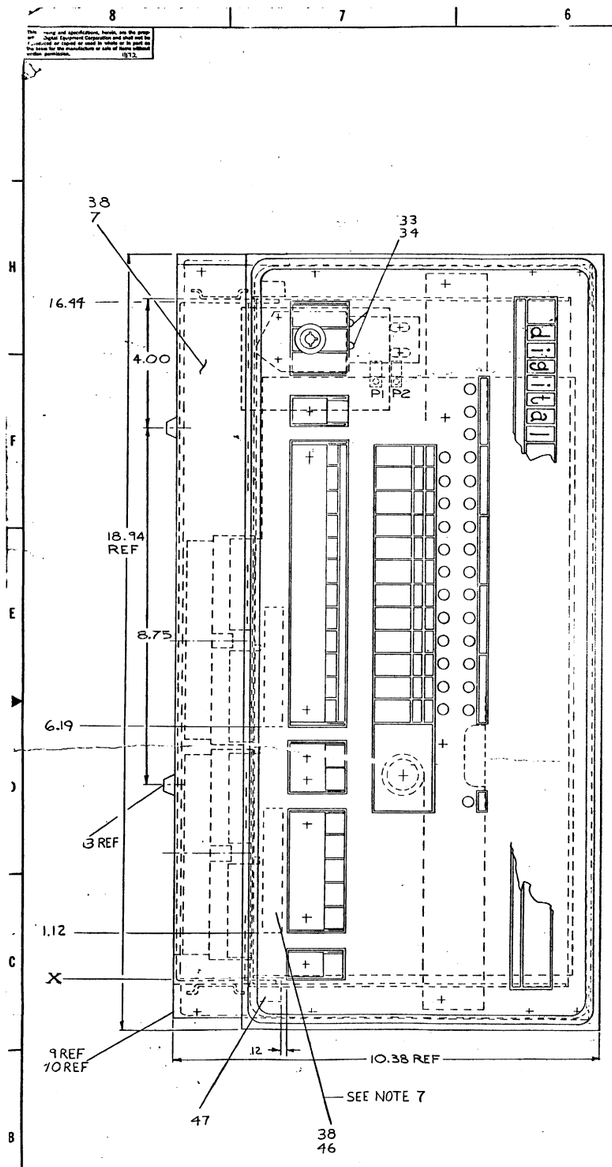
TITLE	SHEET	SIZE	CODE	NUMBER	REV
PDP8/E	3 OF 3	A	ML	PDP8/E-0	AD

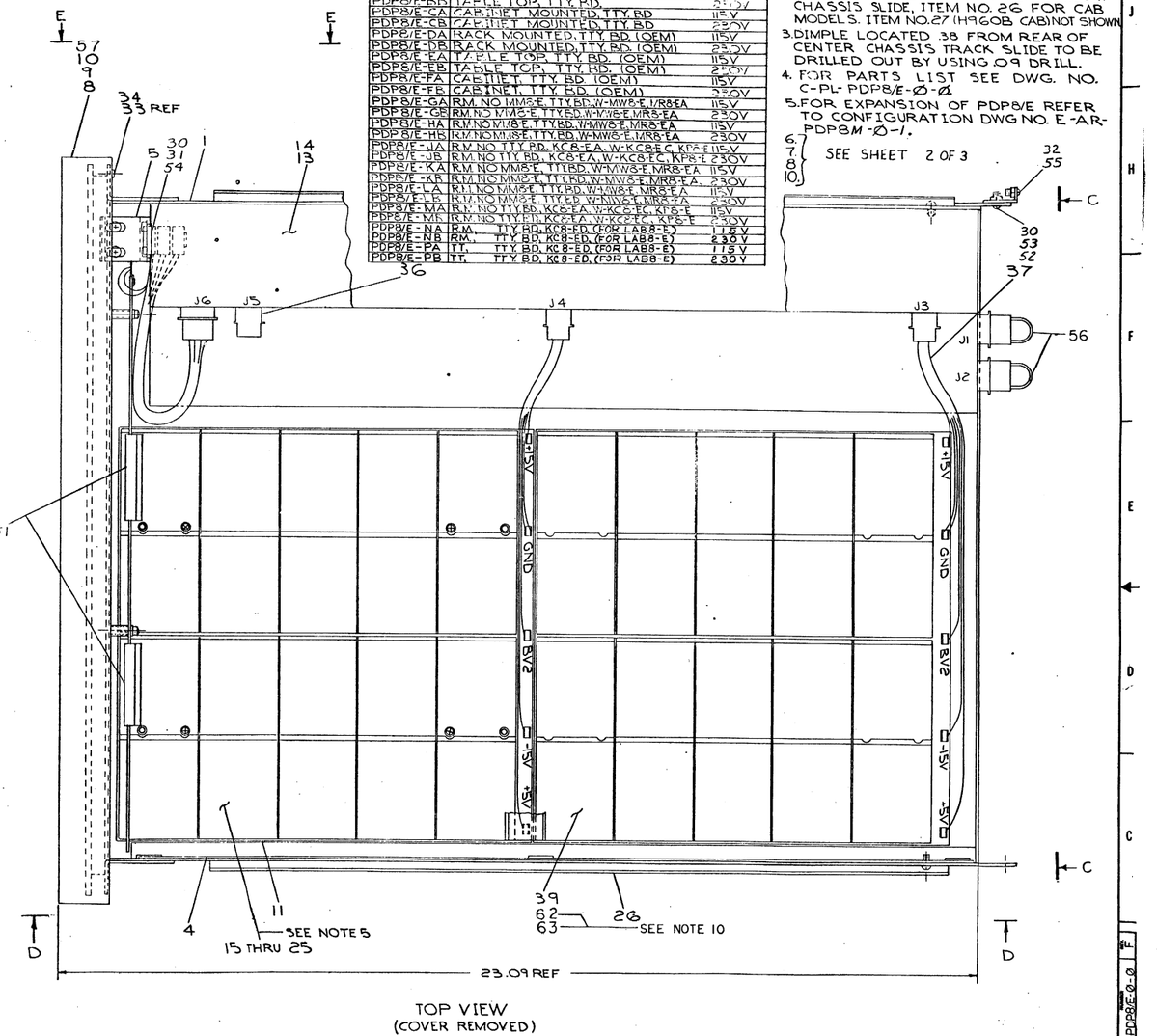
LEGEND		
NUMBER	VARIATION	
PDP8/E-AA	RACK MOUNTED, TTY BD.	115V
PDP8/E-AB	RACK MOUNTED, TTY BD.	230V
PDP8/E-BA	TABLE TOP, TTY BD.	115V
PDP8/E-BB	TABLE TOP, TTY BD.	230V
PDP8/E-CA	CABINET MOUNTED, TTY BD	115V
PDP8/E-CB	CABINET MOUNTED, TTY BD	230V
PDP8/E-DA	RACK MOUNTED, TTY BD. (OEM)	115V
PDP8/E-DB	RACK MOUNTED, TTY BD. (OEM)	230V
PDP8/E-EA	TABLE TOP, TTY BD. (OEM)	115V
PDP8/E-EB	TABLE TOP, TTY BD. (OEM)	230V
PDP8/E-FA	CABINET, TTY BD. (OEM)	115V
PDP8/E-FB	CABINET, TTY BD. (OEM)	230V
PDP8/E-GA	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	115V
PDP8/E-GB	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	230V
PDP8/E-HA	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	115V
PDP8/E-HB	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	230V
PDP8/E-JA	RM. NO TTY BD, KC8-EA, W-KC8-EC, KP8-E	115V
PDP8/E-JB	RM. NO TTY BD, KC8-EA, W-KC8-EC, KP8-E	230V
PDP8/E-KA	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	115V
PDP8/E-KB	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	230V
PDP8/E-LA	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	115V
PDP8/E-LB	RM. NO MM8-E, TTY BD, W-MW8-E, MR8-EA	230V
PDP8/E-MA	RM. NO TTY BD, KC8-EA, W-KC8-EC, KP8-E	115V
PDP8/E-MB	RM. NO TTY BD, KC8-EA, W-KC8-EC, KP8-E	230V
PDP8/E-NA	RM. TTY BD, KC8-ED, (FOR LAB8-E)	115V
PDP8/E-NB	RM. TTY BD, KC8-ED, (FOR LAB8-E)	230V
PDP8/E-PA	TT. TTY BD, KC8-ED, (FOR LAB8-E)	115V
PDP8/E-PB	TT. TTY BD, KC8-ED, (FOR LAB8-E)	230V

NOTES

1. FOR DWG INDEX LIST REFER TO D-D-PDP8/E-Ø-1.
2. HOLES A41 AND A42 ARE USED TO MOUNT CHASSIS SLIDE, ITEM NO. 26 FOR CAB MODELS. ITEM NO. 27 (H960B CAB) NOT SHOWN
3. DIMPLE LOCATED .38 FROM REAR OF CENTER CHASSIS TRACK SLIDE TO BE DRILLED OUT BY USING .09 DRILL.
4. FOR PARTS LIST SEE DWG. NO. C-PL-PDP8/E-Ø-Ø
5. FOR EXPANSION OF PDP8/E REFER TO CONFIGURATION DWG NO. E-AR-PDP8M-Ø-1.

6, 7, 8, 10 SEE SHEET 2 OF 3





TOP VIEW
(COVER REMOVED)

REVISIONS				
SYM	DOCUMENT NO.	DATE	APPROVED	
A	SE-00039	2/25/72	P. GARDNER	
B	SE-00057	2/25/72	P. GARDNER	
C	SE-00039	3/15/72	R. VOGELSANG	
D	SE-00039	3/17/72	R. VOGELSANG	
E	SE-00039	3/24/72	R. VOGELSANG	
F	SE-00039	3/29/72	R. VOGELSANG	
G	SE-00039	4/7/72	R. VOGELSANG	
H	SE-00039	4/21/72	R. VOGELSANG	
J	SE-00039	5/15/72	R. VOGELSANG	
K	SE-00039	6/26/72	R. VOGELSANG	
L	SE-00039	7/25/72	R. VOGELSANG	
M	BE-00057	2/15/73	P. GARDNER	
N	BE-00057	2/21/73	P. GARDNER	
P	BE-00057	3/2/73	P. GARDNER	
R	BE-00057	3/9/73	P. GARDNER	
S	BE-00057	3/23/73	P. GARDNER	
T	BE-00057	4/2/73	P. GARDNER	
U	BE-00057	4/9/73	P. GARDNER	
V	BE-00057	4/23/73	P. GARDNER	
W	BE-00057	5/7/73	P. GARDNER	
X	BE-00057	5/21/73	P. GARDNER	
Y	BE-00057	6/4/73	P. GARDNER	
Z	BE-00057	6/18/73	P. GARDNER	
AA	BE-00057	7/2/73	P. GARDNER	
AB	BE-00057	7/16/73	P. GARDNER	
AC	BE-00057	7/30/73	P. GARDNER	
AD	BE-00057	8/13/73	P. GARDNER	
AE	BE-00057	8/27/73	P. GARDNER	
AF	BE-00057	9/10/73	P. GARDNER	
AG	BE-00057	9/24/73	P. GARDNER	
AH	BE-00057	10/8/73	P. GARDNER	
AJ	BE-00057	10/22/73	P. GARDNER	
AK	BE-00057	11/5/73	P. GARDNER	
AL	BE-00057	11/19/73	P. GARDNER	
AM	BE-00057	12/3/73	P. GARDNER	

DEC FORM NO. OFF 1001

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

FIRST USED ON (SYSTEM/MODEL)	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

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

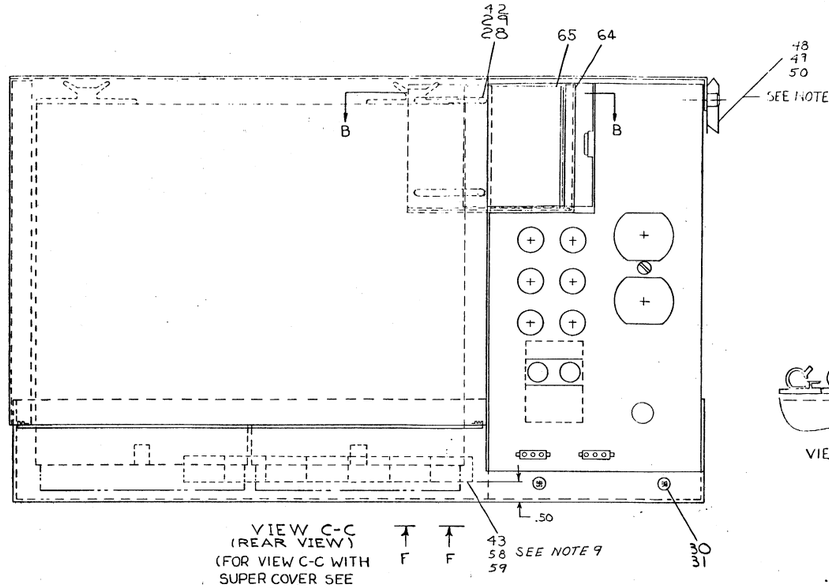
SCALE
SHEET 1 OF 3

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

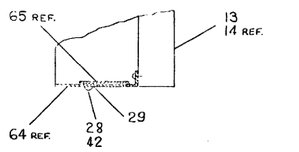
TITLE
UNIT ASSY.
(PDP8/E)

SIZE E | CODE UA | NUMBER PDP8/E-0-Ø | REV. F
DIST.

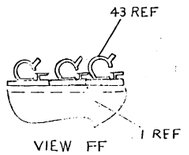
DRAWING NUMBER E-UA-PDP8/E-0-Ø



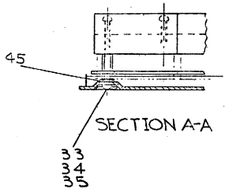
VIEW C-C
(REAR VIEW)
(FOR VIEW C-C WITH SUPER COVER SEE SHEET # 3.)



SECTION B-B



VIEW FF



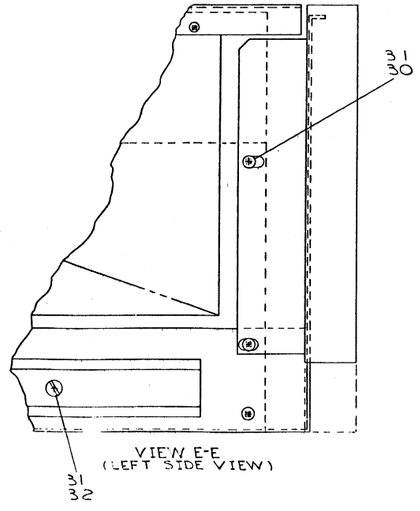
SECTION A-A

MAIN WIRING HARNESSES

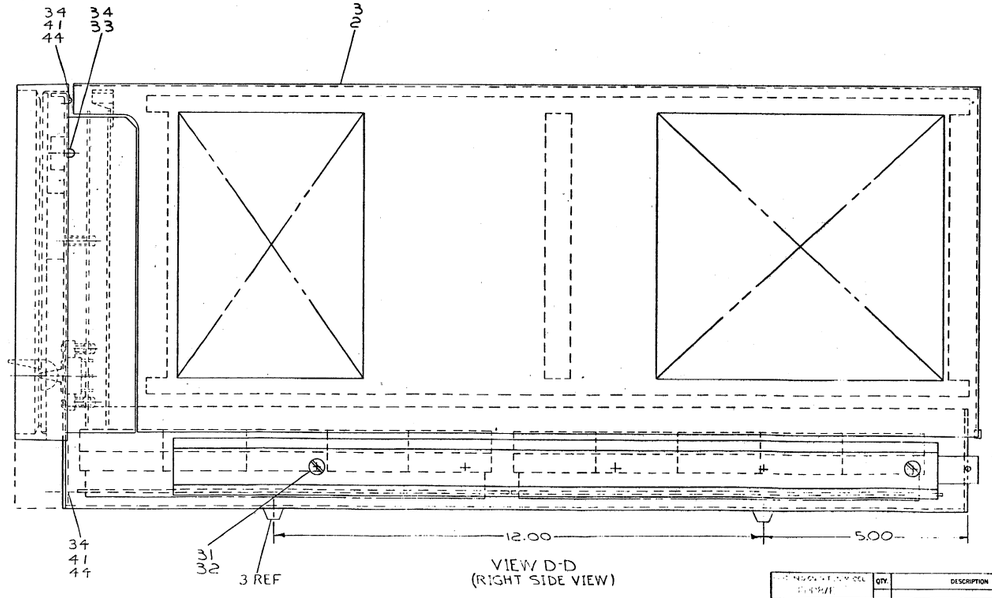
PART NO	COLOR	FROM HARNESS LEAD NO	TO SYSTEM LOCATION	REMARKS
7006994		P1	11724 P5 +5V	
7006992	YEL	PT-11	CSL DD P2	
7006993	BLU	PT-12	CSL ED P1	
7006993		P1	11724 P3 +5V	
	ORN	PT-7	OMNIBUS +15V	
	BLK	PT-8	OMNIBUS GND	
	BLK	PT-9	OMNIBUS GND	
	GRY	PT-10	OMNIBUS BV2	
	BLU	PT-11	OMNIBUS -15V	
7006993	RED	PT-12	OMNIBUS +5V	
		P1	M7842 P3 +5V	OPTIONAL SUPPLIED WITH OMMBUS EXPANDER BD A
	ORN	PT-7	OMNIBUS +15V	
	BLK	PT-8	OMNIBUS GND	
	BLK	PT-9	OMNIBUS GND	
	GRY	PT-10	OMNIBUS BV2	
	BLU	PT-11	OMNIBUS -15V	
7006993	RED	PT-12	OMNIBUS +5V	

NOTES (CONT.)

6. USE ITEMS 48, 49, 50 ONLY WITH E-IA-7408233-0-0, REV B.
7. USE ITEMS 46, ONLY WITH E-IA-7408233-0-0 BLANK REV. OR REV. A.
8. ITEMS 52, 53 FOR SHIPPING PURPOSES ONLY. REMOVE AT INSTALLATION.
9. USE ITEMS 58, 59 IN SYSTEMS WITH 8 OR MORE ROUND CABLES. (4 CABLES PER WRAP)
10. ITEM 62 OR 63 TO BE INSTALLED IN TABLE TOP SYSTEMS WITH CB-E, AD8-EA, OR AD8-ES OPTIONS. FOR INSTALLATION DETAIL REFER TO ENG. D-UA-H945-0-0. OPTIONALLY ITEM 62 OR 63 MAY BE INSTALLED IN THE H945 FOR BOTH TABLE TOP AND RACK MOUNTABLE SYSTEMS.
11. } SEE SHEET 3 OF 3
12. }



VIEW E-E
(LEFT SIDE VIEW)



VIEW D-D
(RIGHT SIDE VIEW)

QTY	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
FRACTIONS ± ANGLES ± .X ± .XX ± .XXX ±
FINAL SURFACE QUALITY
REMOVE BURRS AND SHARP CORNERS
MATERIAL
FINISH

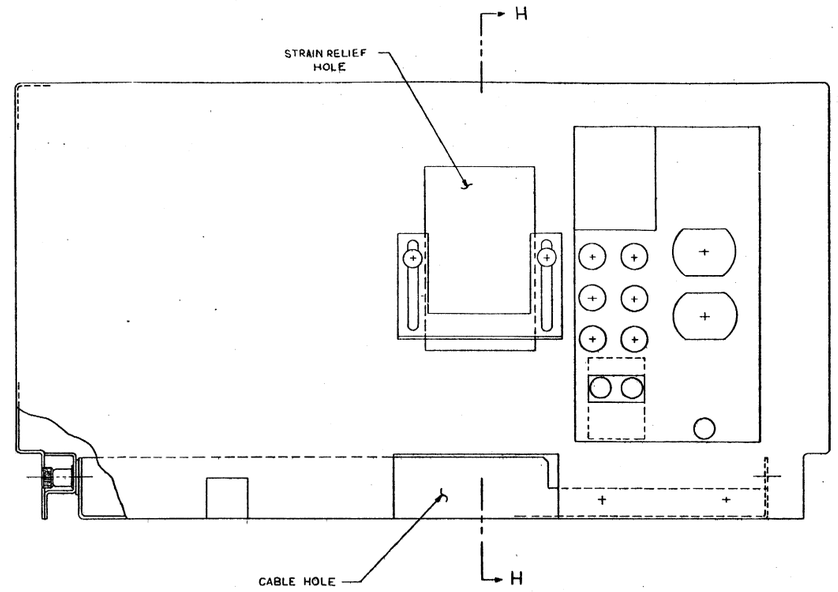
DRN | DATE
CHK | DATE
ENG | DATE
MFG | DATE

DIGITAL EQUIPMENT CORPORATION

TITLE: UNIT ASSY (PDP8/E)

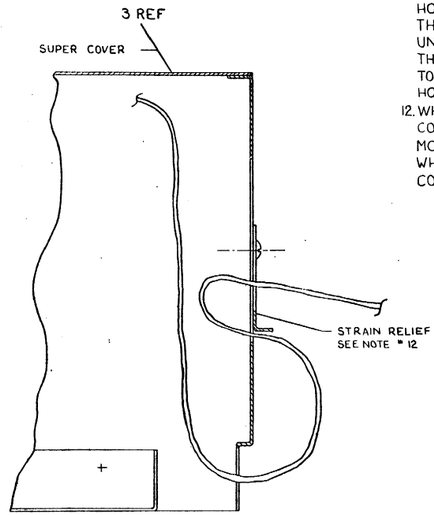
CAGE CODE: E
NUMBER: UA PDP8/E-0-0
REV: F
SCALE: FULL
SHEET 2 OF 3

REVISIONS | REV | DRAWING NO. E-IA-PDP8/E-0-0 | SYSTEM | NEXT ASSY | USED ON



VIEW C-C

(REAR VIEW WITH SUPER COVER)



SECTION H-H

NOTES (CONT)

11. CABLES SHOULD COME DOWN AND OUT THE BACK OF THE COMPUTER, THRU THE CABLE HOLE (SEE VIEW CC SHT #3) THEN LOOP UP AND BACK IN, UNDER THE STRAIN RELIEF, THEN OUT AGAIN THRU THE TOP OF THE STRAIN RELIEF HOLE
12. WHEN REMOVING THE SUPER COVER (ITEM #3) FIRST REMOVE THE STRAIN RELIEF. WHEN REPLACING THE SUPER COVER REFER TO NOTE #11.

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

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

DRN. J. FERGUSON	DATE	Digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. [illegible]	DATE	
ENG. [illegible]	DATE	TITLE: UNIT ASSY (PDP 8/E)
PROJ. ENG. H. WILLIS	DATE	
PROJ. I. SAYLOR	DATE	
NEXT HIGHER ASSY.		SIZE: E; CODE: UA; NUMBER: PDP8/E-0-0; REV: F
MATERIAL		SCALE: NONE; SHEET 3 OF 3
FINISH		

REVISIONS: REV. | CHANGE NO. | DWN.

DEC SCALE NO. DNE 300-A

QUANTITY/VARIATION

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	AA-0	AB-0	BA-0	BB-0	CA-0	CB-0	DA-0	DB-0	EA-0	EB-0	FA-0	FB-0	GA-0	GB-0	HA-0	HB-0	JA-0	JB-0	KA-0	KB-0	LA-0	LB-0	MA-0	MB-0	NA-0	NB-0	PA-0	PB-0
1	E-IA-7408233-0-0	CHASSIS (PDP-E)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	E-IA-7408235-0-0	COVER (PDP8-E)	1	1	–	–	1	1	1	1	–	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	–	–
3	D-AD-7007074-0-0	SUPER COVER (PDP8-E)	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
4	C-IA-7408250-0-0	FILTER, SIDE	1	1	–	–	1	1	1	1	–	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	–	–
5	C-MD-7408249-0-0	BRACKET, SUPPORT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
~~6~~	~~C-IA-7408247-0-0~~	~~STRAIN RELIEF, CABLE~~	~~1~~	~~1~~			~~1~~	~~1~~	~~1~~	~~1~~	~~–~~	~~–~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~–~~	~~–~~
7	C-MD-7407449-0-0	COVER STRIP	1	1	1	1	1	1	1	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1
8	D-UA-KC8-EA-0	CONSOLE ASSY KC8-EA	1	1	1	1	1	1	1	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
9	D-UA-KC8-EB-0	CONSOLE ASSY KC8-EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
10	D-UA-KC8-EC-0	CONSOLE ASSY KC8-EC	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	1	1	1	1	1	1	1	–	–	–	–
11	D-UA-H919-0-0	OMNIBUS ASSY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
~~12~~	~~1209750-0~~	~~RUBBER BUMPER~~	~~–~~	~~–~~	~~4~~	~~4~~	~~–~~	~~–~~	~~–~~	~~–~~	~~4~~	~~4~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	~~–~~	–	–	–	–
13	D-UA-H724-0-0	POWER SUPPLY H724	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–
14	D-UA-H724A-0-0	POWER SUPPLY H724A	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1	–	1
15	A-ML-KK8-E	CENTRAL PROCESSOR KK8-E	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
16	A-ML-KP8-E	PWR FAIL DETECTOR & AUTO RESTART	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	1	1	1	1	1	1	1	1	–	–	–	–
17	A-ML-KH8-E	PUSH DOWN LIST CONTROL	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
18	A-ML-KF8-E	AUTOMATIC PRIORITY INTERRUPT	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
19	A-ML-MM8-E	MM8-E 4K CORE MEMORY	1	1	1	1	1	1	1	1	1	1	1	1	–	–	–	–	1	1	–	–	–	–	1	1	1	1	1	1
20	A-ML-MR8-EA	256 WORD READ ONLY MEMORY MR8-EA	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–
21	A-ML-MW8-E	256 WORD READ/WRITE MEMORY	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1	–	–	1	1	1	1	–	–	–	–	–	–
22	A-ML-MR8-EB	1024 WORD READ ONLY MEMORY	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–
23	A-ML-M18-E	HARDWARE BOOTSTRAP LOADER	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
24	A-ML-MP8-E	MEMORY PARITY CONTROL	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
25	A-ML-KL8-E	KL8E CONSOLE TTY CONTROL	1	1	1	1	1	1	1	1	1	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1
26	D-IA-7408861-0-0	SLIDE CHASSIS 22" TRAVEL	1	1	–	–	1	1	1	1	–	–	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	–	–
27	D-AD-H960-BA-0	CABINET ASSY	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
28	9006022-1	SCR PHL HD PAN #6-32 X .38 SST	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
29	9006653	WASHER FLAT #6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
30	9006071-1	SCR PHL HD PAN #10-32 X .38	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
31	9007651	WASHER EXT TOOTH #10	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
32	9006071-3	SCR PHL HD TRUSS 10-32 UNF X .38	10	10	–	–	12	12	10	10	–	–	12	12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	–	–
33	9006037-1	SCR PHL HD PAN #8-32 X .38	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	A/R	A/R	A/R	A/R
34	9008072	WASHER EXT TOOTH #8	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	A/R	A/R	A/R	A/R
35	9005931	LOCTITE SCR LOCK LOCTITE CORP	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
36	1209351-03	SOC HOUSING MATE-N-LOK 1-480304-0 AMP	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
37	D-IA-7006993-0-0	POWER WIRING HARNESS (PDP8/E)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
38	9008907	SCOTCH GRIP #77 3M	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
39	D-UA-BE8-A-0	OMNIBUS EXPANDER	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
~~40~~	~~9008387~~	~~"0" RING SCOTCH #33 ELECT. TAPE~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	~~A/R~~	–	–	–	–

REVISIONS

CHK	CHANGE NO.	REV.			
	8E-00014	A	E. Wilson 2-26-71	J. PROVIDENT	3-3-71
	8E-00020	B	5-20-71	J. PROVIDENT	5-24-71
	3E-00035	C	7-26-71	PROVIDENT	7/27/71
	8E-00039	D	8-26-71	R. VOGELSANG	Aug 1971
	8E-00057	E	2-18-72	F GARDNER	2-2-72
	8E-00063	F	12-26-72	P. GARDNER	1-2-73

DEC FORM NO.
DRC 100

FIRST USED ON OPTION/MODEL
PDP8/E

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES

DECIMALS	FRACTIONS	ANGLES
± .005	± 1/64	± 0°30'

FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN.		DATE -70
CHK'D.	Kenneth Tulich	DATE 10/20/70
ENG.		DATE 10/30/70
PROJ. ENG.		DATE 10/30/70
PROD.		DATE 11/ 0

NEXT HIGHER ASSY.

SCALE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
UNIT ASSY
(PDP8/E)

SIZE	CODE	NUMBER	REV.
C	PL	PDP8/E-0-0	F

DIST.

SIZE C CODE PL NUMBER PDP8/E-0-0 REV. F

ITEM NO	DWG NO/PART NO.	DESCRIPTION	QUANTITY/VARIATION AA-0	AB-0	BA-0	BB-0	CA-0	CB-0	DA-0	DB-0	EA-0	EB-0	FA-0	FB-0	GA-0	GB-0	HA-0	HB-0	JA-0	JB-0	KA-0	KB-0	LA-0	LB-0	MA-0	MB-0	NA-0	NB-0	PA-0	PB-0
41	90C6120	SCR PHL HD FIL SELF TAPPING	–	–	–	–	–	–	–	–	–	–	–	–	–	4	4	4	4	4	4	4	4	4	4	4	–	–	–	–
42	906633	WASHER INT TOOTH #6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
43	9008442	STRAIN RELIEF	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
44	9CC7603	SPACER 1/4 AF X 7/16 LG #8	–	–	–	–	–	–	–	–	–	–	–	–	4	4	4	4	4	4	4	4	4	4	4	4	–	–	–	–
45	1210302	FOAM, PAD	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
46	7408611-1-0	BUMPER FRONT PANEL	2	2	2	2	2	2	2	2	2	2	2	2	–	–	–	–	–	–	–	–	–	–	–	–	2	2	2	2
47	9008525	BUMPER FRONT PANEL	2	2	2	2	2	2	2	2	2	2	2	2	–	–	–	–	–	–	–	–	–	–	–	–	2	2	2	2
48	B-MD-7408629-0-0	SPACER, LATCH	2	2	–	–	2	2	2	2	–	–	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	–	–
49	A-PS-1210264-2	LATCH, DRAW CATCH FASTENER	2	2	–	–	2	2	2	2	–	–	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	–	–
50	9006024-2	SCREW #6-32 x 1/2 LG, FLAT HD	2	2	–	–	2	2	2	2	–	–	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	–	–
51	1210303	SPACER-PROTECTION, PC BOARD	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
52	C-MD-7408867-0-0	SHIPPING BRACKET	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
53	9006565	NUT, KEPS #10-32 SST.	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
54	9006795	SPACER 1/4 AF X 1/8 LG	–	–	–	–	–	–	–	–	–	–	–	–	2	2	2	2	2	2	2	2	2	2	2	2	–	–	–	–
55	9007786	NUT, CAPTIVE #10-32	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
~~56~~	~~D-IA-7008288-3F-0~~	~~CABLE INTERCONNECTING, 3 1/2 LG~~	AR	AR	AR	–	–	AR	AR	AR	AR	–	–	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	–	–
57	D-UA-KC8-ED-0	CONSOLE ASSY KC8-ED (LAB8-E)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1	1
58	9008264	TIE WRAP BACK MOUNT	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
59	9007031	CABLE TIE WRAP	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR	AR
60	D-AD-7008477-1-0	DOOR MTG. PRECISION P.S. ASSY 115V	*	–	–	–	*	–	*	–	–	–	*	–	*	–	*	–	*	–	*	–	*	–	*	–	*	–	–	–
61	D-AD-7008477-2-0	DOOR MTG. PRECISION P.S. ASSY 230V	–	*	–	–	–	*	–	*	–	–	–	*	–	*	–	*	–	*	–	*	–	*	–	*	–	*	–	–
62	D-AD-7008370-1-0	PRECISION ANALOG P.S. ASSY 115V	–	–	*	–	–	–	–	–	*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*	–
63	D-AD-7008370-2-0	PRECISION ANALOG P.S. ASSY 230V	–	–	–	*	–	–	–	–	–	*	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	*
64	C-IA-7410739-0-0	BRACKET STRAIN RELIEF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
65	C-IA-7410738-0-0	STRAIN RELIEF	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

NOTE: ASSEMBLIES 7008477 AND 7008370 MAYBE USED INTERCHANGEABLY AS REQUIRED.

* REQUIRED FOR SYSTEMS WITH VC8-E, AD8-EA, OR AD8-ES OPTIONS

FIRST USED ON OPTION/MODEL: PL-8/E

REVISIONS | REV. | CHANGE NO. | CHK

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.	J. FERGUSON	DATE 9-23-70
CHK'D.	K. GULICK	DATE 10-20-70
ENG.	J. PPOVIDENT	DATE 10-30-70
PROJ. ENG.	V. VOGELSANG	DATE 10-30-70
PROD.	L. SAYLOR	DATE 11-2-70

NEXT HIGHER ASSY.

SCALE

SHEET 2 OF 2

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: UNIT ASSY (PDP 8/E)

SIZE	CODE	NUMBER	REV.
C	PL	PDP8/E-0-0	F

DIST.

SIZE C CODE PL NUMBER PDP8/E-0-0

DEC FORM NO. DRC 110

NOTES:
1. * (ASTERISK) INDICATES OPTIONAL EQUIPMENT.
2. FOR TEST EQUIPMENT REFER TO DRAWING E-AR-9305293-0-0.

PDP8/E-AA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-A3 ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-BA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-BB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-CA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-CB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-NA ASSEMBLY E-UA-PDP8/E-0-0
PDP8/E-DA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-DB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-EA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-EB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-FA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-FB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-NB ASSEMBLY E-UA-PDP8/E-0-0
PDP8/E-GA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-GB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-HA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-HB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-JA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-JB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-PA ASSEMBLY E-UA-PDP8/E-0-0
PDP8/E-KA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-KB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-LA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-LB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-MA ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-MB ASSEMBLY E-UA-PDP8/E-0-0	PDP8/E-PB ASSEMBLY E-UA-PDP8/E-0-0

- (28) CONSOLE ASSY KC8-ED D-UA-KC8-E-0
  - (6) CONT BOARD ASSY D-IA-5409057-1-0
  - (7) CONTROL BOARD ETCH D-IA-5009056-0-0
  - (29) PANEL CONTROL LAB8-E D-IA-7409007-0-0
  - (9) POWER SWITCH & HARNESS ASSY D-IA-7006994-0-0
  - (10) SWITCH ASSY (PDP8/E) C-AD-7006986-0-0
- (2) OMNIBUS ASSY (PDP8/E) D-UA-H918-B-0
  - (3) OMNIBUS BOARD ETCH E-IA-5009005-0-0
  - (4) CONN. BLOCK ASSY D-AD-7006952-0-0
- (5) CONSOLE ASSY KC8-EA D-UA-KC8-E-0
  - (6) CONTROL BOARD ASSEMBLY E-IA-5409057-0-0
  - (7) CONTROL BOARD ETCH D-IA-5009056-0-0
  - (8) PANEL CONTROL (PDP8/E) D-IA-7408244-0-0
  - (9) POWER SWITCH & HARNESS ASSY D-IA-7006994-0-0
  - (10) SWITCH ASSY (PDP8/E) C-AD-7006986-0-0
  - (11) CONSOLE ASSY. KC8-EB D-UA-KC8-E-0
    - (12) COVER PANEL(10 1/2) H950-QB D-UA-H950-Q-0
    - (13) CONSOLE ASSY KC8-EC D-UA-KC8-E-0
      - (14) POWER SWITCH & HARNESS ASSY D-IA-7007145-0-0
      - (10) SWITCH ASSY. PDP8/E C-AD-7006986-0-0
      - (15) COVER PANEL(10 1/2) H950-QC D-UA-H950-Q-0
- (16) H960-BA CAB D-AD-H960-B-0 D-DI-H960-B-1
- (17) MEMORY MM8-E E-CS-MM8-E-0 A-ML-MM8-E
  - (18) EDGE CONN. H851 B-UA-H851-0-0
  - (19) ETCH BD H851 D-IA-5008903-0-0
  - (20) MEMORY BOARD H220 D-UA-H220-0-0-0
- (21) CENT PROCESSOR KK8-E D-UA-KK8-E-0
  - (18) EDGE CONN H851 B-UA-H851-0-0
  - (19) ETCH BD H851 D-IA-5008903-0-0
- (22) TELETYPE CONT (KL8-E) E-CS-M865-0-1
- (23) * OMNIBUS EXPANDER D-UA-BE8-A-0 C-DI-BE8-A-1
- (24) POWER SUPPLY H724 (115 V) D-UA-H724-0-0
  POWER SUPPLY H724A (230V) D-UA-H724-0-0-0
- (25) * SYSTEM EXPANDER BA8-AA E-UA-BA8-A-0 D-DI-BA8-A-1
  * SYSTEM EXPANDER BA8-AB A-PL-BA8-A-0 D-DI-BA8-A-1
  * SYSTEM EXPANDER BA8-BA A-PL-BA8-A-0 D-DI-BA8-A-1
  * SYSTEM EXPANDER BA8-BB A-PL-BA8-A-0 D-DI-BA8-A-1
- (26) SUPER COVER ASSY PDP8/E D-AD-7007074-0-0
- (27) * TABLE ASSY (H952-HA) D-UA-H952-HA-0 D-DI-H952-0-1

REVISIONS	CHANGE NO.	CHK	REV
	8E-00012	O.D	A
	8E-00014	O.A	B
	8E-00020		C
	8E-00025		D
	H724-00012		E
	8E-00076		F
	8E-00052		H
	8E-00056		J
	8E-00057		K
	8E-00063		L

LAWRENCE 2-18-71; J. PROVIDENT 2-22-71; LAWRENCE 6-9-71; D. MACK 7-6-71; LAWRENCE 6-7-71; M. ARSENAULT 12-7-71; R. VOGELSANG 12-7-71; ARSENAULT 2-1-72; GARDNER 2-15-72; GARDNER 2-22-72; P. GARDNER 12-26-72; 1-2-73

FIRST USED ON OPTION/MODEL: PDP8/E

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

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DRN.		DATE 10/5/70
CHK'D.		DATE 10/5/70
ENG.		DATE 10/5/70
PROJ. ENG.		DATE 10/5/70
PROD.		DATE 10/5/70

NEXT HIGHER ASSY: A-ML-PDP8/E-0
SCALE
SHEET OF

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DRAWING INDEX LIST (PDP8/E)

SIZE	CODE	NUMBER	REV
D	DI	PDP8/E-0-1	L

DIST.

FORM NO. 100

MECHANICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
1.	PDP8E-ASSY	E-UA-PDP8E-0-0			
	PDP8E-ASSY (PL)	C-PL-PDP8E-0-0			
	CHASSIS (PDP8-E)	E-IA-7408233-0-0			
	COVER (PDP8-E)	E-IA-7408235-0-0			
	FILTER, SIDE	C-IA-7408250-0-0			
	BRACKET SUPPORT	C-MD-7408249-0-0			
	COVER STRIP	C-MD-7407449-0-0			
	SLIDE, CHASSIS 22'' TRAVEL	D-IA-7408861-0-0			
	PACKAGE INSTRUCTION PDP/8E	A-PI-3700028-0-0			
	BASIC ASSY CONF.	E-AR-PDP8/E-0-2			
	PAD, FOAM	A-SC-1210302-0-0			
	BUMPER, FRONT PANEL	A-MD-7408611-1-0			
	BUMPER, FRONT PANEL	A-MD-7408612-2-0			
	SPACER, LATCH	B-MD-7408629-0-0			
	SHIPPING BRACKET	C-MD-7408867-0-0			
	CABLE, INTERCONNECTING	D-IA-7008288-3F-0			
	STRAIN RELIEF BRACKET	C-IA-7410739-0-0			
	STRAIN RELIEF	C-IA-7410738-0-0			
	RECOMMENDED 1ST LEVEL SPARES	A-PL-SP8-EA-0			
	RECOMMENDED 2ND LEVEL SPARES	A-PL-SP8-EB-0			
	TELETYPE ASR-33 ACCESSORY LIST	A-AL-LT33-0-12			
	PANEL DATA CUST (REF)	D-MD-7605994-0-0			
	LT33 TTY MAIN TOOL KIT	A-PL-LT33-ST-0			
	LT33-B TTY RECOM SPARE PARTS	A-PL-LT33-SB-0			
2.	OMNIBUS ASSY (PDP8-E)	D-UA-H919-0-0			
	OMNIBUS ASSY (PL)	A-PL-H919-0-0			
	USES FOR SPECIAL COMPRESS-O-CARTON	A-PI-3700039-0-0			
3.	OMNIBUS BOARD ETCH	E-IA-5009005-0-0			
	ASSY & DRILLING HOLE LAYOUT	J-AH-E919-0-5			
	PRINTED CIRCUIT LAYOUT	PC-5009005			
4.	CONN BLOCK ASSY	D-AD-7006952-0-0			
	288 PIN CONN BLOCK	D-MD-7408514-0-0			
	MTG BAR CONN BLOCK	C-MD-7408242-0-0			
5.	CONSOLE ASSY (KC8-EA)	D-UA-KC8-E-0			
	CONSOLE ASSY (PL)	A-PL-KC8-E-0			
	BEZEL	E-SC-1210065-0-0			
6.	CONTROL BD ASSY	E-IA-5409057-0-0			
	ROCKER HANDLE	D-SC-1205849-12-0			
	ROCKER HANDLE	D-SC-1205849-13-0			
	SUPPORT GLASS	D-IA-7408245-0-0			
	KNOB CONTROL PANEL	C-SC-1210114-0-0			
	SWITCH MTG BAR	C-MD-7408246-0-0			
	ROCKER HANDLE	D-SC-1205849-14-0			
	ROCKER HANDLE	D-SC-1205849-15-0			
7.	CONTROL BOARD (ETCH)	D-IA-5009056-0-0			
	ASSY & DRILLING HOLE LAYOUT	AH-5009056-5			
	PRINTED CIRCUIT LAYOUT	PC-5009056			
8.	PANEL CONTROL	D-IA-7408244-0-0			
	PANEL CONTROL (PDP8-E)	C-SS-7408244-0-1			
	PANEL CONTROL (PDP8-E)	C-SS-7408244-0-2			
	PANEL CONTROL (PDP8-E)	C-SS-7408244-0-3			
	PANEL CONTROL (PDP8-E)	C-SS-7408244-0-4			

MECHANICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
9.	POWER SWITCH & HARNESS ASSY	D-IA-7006994-0-0			
10.	SWITCH ASSEMBLY	C-AD-7006986-0-0			
	SWITCH ASSEMBLY (PL)	A-PL-7006986-0-0			
11.	CONSOLE ASSY KC8-EB	D-UA-KC8-E-0			
	CONSOLE ASSY KC8-EB (PL)	A-PL-KC8-E-0			
	JUMPER	B-IA-7007146-0-0			
12.	COVER PANEL (10-½)	D-UA-H950-Q-0			
	COVER PANEL (10-½) (PL)	A-PL-H950-Q-0			
	10-½ SNAP-ON BEZEL	E-SC-1209225-0-0			
	INLAY	C-CS-1209176-2-0			
13.	CONSOLE ASSY (KC8-EC)	D-UA-KC8-E-0			
	CONSOLE ASSY (PL)	A-PL-KC8-E-0			
14.	POWER SWITCH & HARNESS ASSY	D-IA-7007145-0-0			
15.	COVER PANEL (10-½)	D-UA-H950-Q-0			
	COVER PANEL (10-½) (PL)	A-PL-H950-Q-0			
	10-½ SNAP-ON BEZEL	E-SC-1209225-0-0			
	INLAY	C-MD-7408855-0-0			
16.	H960-BA CAB	D-UA-H960-B-0			
	H960-BA CAB (PL)	A-PL-H960-B-0			
	DRAWING INDEX LIST	D-DI-H960-B-1			
17.	MEMORY MM8-E	D-UA-MM8-E-0			
	MEMORY MM8-E (PL)	A-PL-MM8-E-0			
	XY DRIVER	E-CS-G227-0-1			
	ETCH BOARD	5008832-0-0			
	SENSE INHIBIT G104	E-CS-G104-0-1			
	ETCH BOARD	5008847-0-0			
18.	EDGE CONNECTOR H851	B-UA-H851-0-0			
	EDGE CONNECTOR H851 (PL)	A-PL-H851-0-0			
	RECEP 36 PIN NETWORK	B-MD-5509071-0-0			
19.	ETCH BOARD	D-IA-5008903-0-0			
	ASSY/DRILLING HOLE LAYOUT	C-AH-5008903-0-5			
	PC ETCH PATTEN	PC-5008903			

MECHANICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
20.	MEMORY BOARD H220	D-UA-H220-0-0			
	MEMORY BOARD H220 (PL)	A-PL-H220-0-0			
	COVER PLATE	C-MD-5509025-0-0			
	PLANAR STACK BD	E-CS-G619-0-1			
	ETCH BD	5009037-0-0			
21.	CENT PROCESSOR KK8-E	D-UA-KK8-E-0			
	CENT PROCESSOR KK8-E (PL)	A-PL-KK8-E-0			
	MAJOR REGISTERS 0 & 1	E-CS-M830-0-0			
	ETCH BOARD	5009250-0-0			
	BUS LOADS LOADS M832	E-CS-M832-0-0			
	ETCH BOARD	5009104-0-0			
	TIMING GENERATOR	E-CS-M833-0-1			
	ETCH BOARD	5009105-0-0			
	MAJOR REG. CONT.	E-CS-M831-0-0			
	ETCH BOARD	5009278-0-0			
22.	TELETYPE CONT. (KL8-E)	E-CS-M865-0-1			
	ETCH BOARD KL8-E	5008891-0-0			
23	OMNIBUS EXPANDER	D-UA-BE8-A-0			
	OMNIBUS EXPANDER (PL)	A-PL-BE8-A-0			
	DRAWING INDEX LIST	C-DI-BE8-A-1			
24.	POWER SUPPLY H724	D-UA-H724-0-0			
	POWER SUPPLY H724 (PL)	A-PL-H724-0-0			
	DRAWING INDEX	D-DI-H724-0-2			
25.	SYSTEM EXPANDER BA8	E-UA-BA8-A-0			
	SYSTEM EXPANDER BA8 (PL)	A-PL-BA8-A-0			
	DRAWING INDEX LIST	D-DI-BA8-A-1			
26.	SUPER COVER ASSY	D-AD-7007074-0-0			
	SUPER COVER ASSY	A-PL-7007074-0-0			
	COVER SUPER	E-IA-7408343-0-0			
	SCREEN BEZEL	D-IA-7407863-0-0			
	BEZEL (5-1/4)	D-SC-1209226-0-0			
	FILTER BEZEL	B-MD-7407866-0-0			
	RETAINER FILTER	C-MD-7407869-0-0			
	LATCH MOLDING	C-SC-1209224-0-0			
	RELIEF STRAIN	D-MD-7408419-0-0			
27.	TABLE ASSY H952-HA	E-UA-H952-H-0			
	TABLE ASSY H952-HA	A-PL-H952-H-0			
	DRAWING INDEX LIST	D-DI-H952-0-1			
28.	CONSOLE ASSY (KC8-ED)	D-UA-KC8-E-0			
	CONSOLE ASSY (PL)	A-PL-KC8-E-0			
	BEZEL	E-SC-1210065-0-0			
29.	PANEL CONTROL (LAB8-E)	D-IA-7409007-0-0			
	PANEL CONTROL (LAB8-E)	C-SS-7409007-0-1			
	PANEL CONTROL (LAB8-E)	C-SS-7409007-0-2			
	PANEL CONTROL (LAB8-E)	C-SS-7409007-0-3			
	PANEL CONTROL (LAB8-E)	C-SS-7409007-0-4			

ELECTRICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
1	PDP8E ASSY	A-ML-PDP8E-0			
	BASIC ASSY CONFIG	E-AR-PDP8/E-0-2			
	SOFTWARE LIST	A-SL-PDP8/E-0-3			
	RECOMMENDED OMNI MOD ASSIGN	A-SP-PDP8/E-0-4			
	TIMING DIAGRAM	D-TD-PDP8/E-0-5			
	FLOW DIAGRAM	E-FD-PDP8/E-0-6			
	CUSTOMER VARIATIONS	A-CV-PDP8/E-0-7			
	BASIC8 MFG TEST PROC	A-SP-PDP8/E-0-8			
	FIELD INSTALL & ACCEPT PROC	A-SP-PDP8/E-0-9			
	POWER WIRING	D-IC-PDP8/E-0-10			
2.	OMNIBUS ASSY (PDP8-E)	A-ML-H919-0-0			
3.	OMNIBUS BOARD ETCH	E-IA-5009005-0-0			
	ASSY & DRILLING HOLE LAYOUT	AH-5009005-5			
	PRINTED CIRCUIT LAYOUT	PC-5009005			
6.	CONTROL BOARD ASSY	D-IA-5409057-0-0			
7.	CONTROL BOARD (ETCH)	E-IA-5009056-0-0			
	ASSY & DRILLING HOLE LAYOUT	AH-5009056-5			
	PRINTED CIRCUIT LAYOUT	PC-5009056			
17.	MEMORY MM8-E ASSY	A-ML-MM8-E			
21.	CENTRAL PROCESSOR KK8-E	A-ML-KK8-E			
22.	TELETYPE CONT (KL8-E)	A-ML-KL8-E			
23.	OMNIBUS EXPANDER	A-ML-BE8-A			
24.	H724 POWER SUPPLY	A-ML-H724-0			
25.	SYSTEM EXPANDER BA8-AA	A-ML-BA8-0			

FIRST USED ON OPTION/MODEL: PDP8/E

DRN. G.FIAHL	DATE 7-20-70	
CHK'D. R.GULINK	DATE 11-4-70	
ENG. J.FLOREN	DATE 11-6-70	
PROJ. ENG. D.VOGEL	DATE 11-3-70	
PROD. TAYLOR	DATE 11-3-70	
NEXT HIGHER ASSY: A-ML-PDP8/E-0		
SCALE		
SHEET 2 OF 2		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: DRAWING INDEX LIST

SIZE D | CODE DI | NUMBER PDP8E-0-1 | REV. L | DIST.

REVISIONS: REV. | CHANGE NO. | CHK

DEC FORM NO DRD 100

COMPUTER & EXPANDER PLUG-IN OPTIONS

OPTION	CABLE ASSY. QTY.	CABLE ASSY. ASSY. NO.	OPTION	CABLE ASSY. QTY.	CABLE ASSY. ASSY. NO.	OPTION	CABLE ASSY. QTY.	CABLE ASSY. ASSY. NO.
ADB-EA	1	7006533	KL8-EA	1	BCØ1V OR BCØ5C	XY8-E	1	7006965
AM8-EA	1	7006533	KL8-F	1	7008360			
BE8-A	2	M935	KL8-FA THRU FJ	1	BCØ1V OR BCØ5C			
CM8-E	1	7007252	KL8-M	1	BCØ1V OR BCØ5C			
CM8-F	1	7008738	KM8-E	0	— — —			
CR8-E	1	7007252	KP8-E	1	7007128			
CR8-F	1	7008738	LC8-E	1	7008417			
DB8-EA	1	BCØ8R	LE8-XX	1	7006964			
DB8-EB	2	BCØ8R & 5409009	MC8-E	0	— — —			
DK8-EA	1	7007128	MI8-E	0	— — —			
DK8-EF	1	BCØ8R	MM8-E	0	— — —			
DP8-EA	1	BCØ1V OR BCØ5C	MP8-E	0	— — —			
DP8-EB	1	BCØ1W	MR8-E	0	— — —			
DR8-EA	1	BCØ8L	PC8-E	2	BCØ8K			
DR8-EB	1	BCØ8R	PP8-E	1	BCØ8K			
KA8-E	3	BCØ8J	PR8-E	1	BCØ8K			
KD8-E	2	BCØ8J	TA8-E	1	BCØ8R OR 7008624			
KE8-E	0	— — —	TD8-E	1	7008447			
KG8-E	0	— — —	TM8-E	2	BCØ8L			
KL8-E	1	7008360	VC8-E	1	7008499			

LEGEND

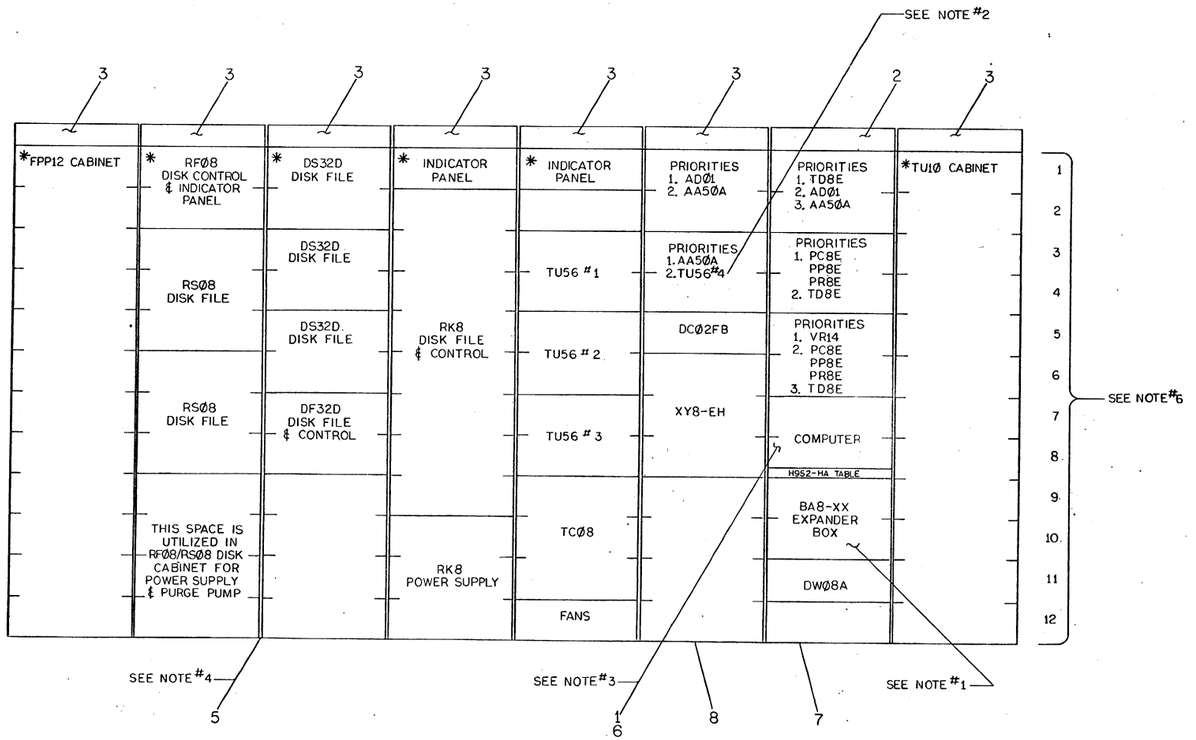
ITEM #1	ITEM #2	ITEM #3	ITEM #4
PDP 8/E	7407936-05	7407936-09	BCCEH-7F
PDP 8/F	7407936-20	7407936-09	BCØEH-4F
PDP 8/M	7407936-12	7407936-16	BCCEH-4F

NOTES:

1. IF A BA8-XX EXPANDER BOX (BA8-XX) IS USED, ITEM #4 (BUS EXTENDER CABLE) MUST RUN FROM THE LAST SLOT IN THE COMPUTER (ITEM #3) OMNIBUS TO THE LAST SLOT IN THE BA8-XX OMNIBUS.
2. A MAX OF THREE DECTAPES (TU56) IS ALLOWED PER CABINET. AN ADDITIONAL CABINET IS REQUIRED FOR A FOURTH DRIVE.
3. SECURE ITEM #1 WITH ITEM #6 (SHIPPING BRACKET) BEFORE SHIPMENT.
4. ITEM #5 (FILLER STRIP SET) IS USED TO JOIN TWO CABINETS, FRONT & REAR.
5. NEXT HIGHER ASSEMBLY:
   A-ML - PDP8E-0
   B-DD - PDP8F-0
   B-DD - PDP8M-0
6. H960 & 961 CABINETS ARE DIVIDED INTO TWELVE 5.25" SECTIONS, WHERE EVER COVER PANELS ARE REQUIRED THEY SHOULD BE PLACED AS FOLLOWS;

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

7. H960 - BC=115V SYSTEM
   H960 - BD=230V SYSTEM
8. H961 - AA=115V SYSTEM
   H961 - AB=230V SYSTEM



* INDICATES A DEDICATED SUBSYSTEM CABINET

ITEM NO.	QTY	DESCRIPTION	PART NO.
8	A/R	OPT ON CABINET	SEE NOTE #8
7	1	BASIC CABINET	SEE NOTE #7
6	1	SHIPPING BRACKET	7408667
5	A/R	FILLER STRIP SET	H962-GA
4	2	BUS EXTENDER CABLE	SEE LEGEND
3	A/R	BLANK LOGO	SEE LEGEND
2	1	PANEL LOGO	SEE LEGEND
1	1	COMPUTER	SEE LEGEND

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP-8

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. R. FLANAGAN DATE 1-7-71
CHK'D. R. GURLEY DATE 1-7-71
ENG. R. GURLEY DATE 1-7-71
PROJ. ENG. R. GURLEY DATE 1-7-71
PROD. R. GURLEY DATE 1-7-71

NEXT HIGHER ASSY. SEE NOTE #5

SCALE

SHEET 1 OF 1

DIGITAL EQUIPMENT CORPORATION

TITLE: OPTION ARRANGEMENT

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

REVISIONS

REV.	DESCRIPTION	DATE	APPROVED
A	ECO 7-1	1-7-71	
B	ECO 7-2	1-7-71	

CHANGE NO.

CHK.

DEC FORM NO. DPE 1000

PDPEM-Ø-Ø1 REV B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 11/24/70

TITLE RECOMMENDED OMNIBUS MODULE ASSIGNMENTS

REVISIONS

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

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

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE RECOMMENDED OMNIBUS MODULE ASSIGNMENTS

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

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

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

DEC FORM NO 16-1022 DRA 108

FAST CYCLE * DURATION 1.2 MICRO SECONDS — SLOW CYCLE DURATION 1.4 MICRO. SECONDS

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

- CLOCK L
- CONTROL: MEM START L; INT STROBE (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; TIME STROBE H
- INTERNAL MEMORY SIGNALS: 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.	CHANGE NO.	CHK
	A	8E-00019	NARHI
	B	8E-00049	L. KLOTZ 11-10-71

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.	G. Ferguson	DATE 11-9-71
CHK'D.		DATE 11/11/71
ENG.	Larry Tarbell	DATE 11/12/71
PROJ. ENG.	Dave Uhrang	DATE 11/12/71
PROD.		DATE 11/12/71

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

SCALE NONE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

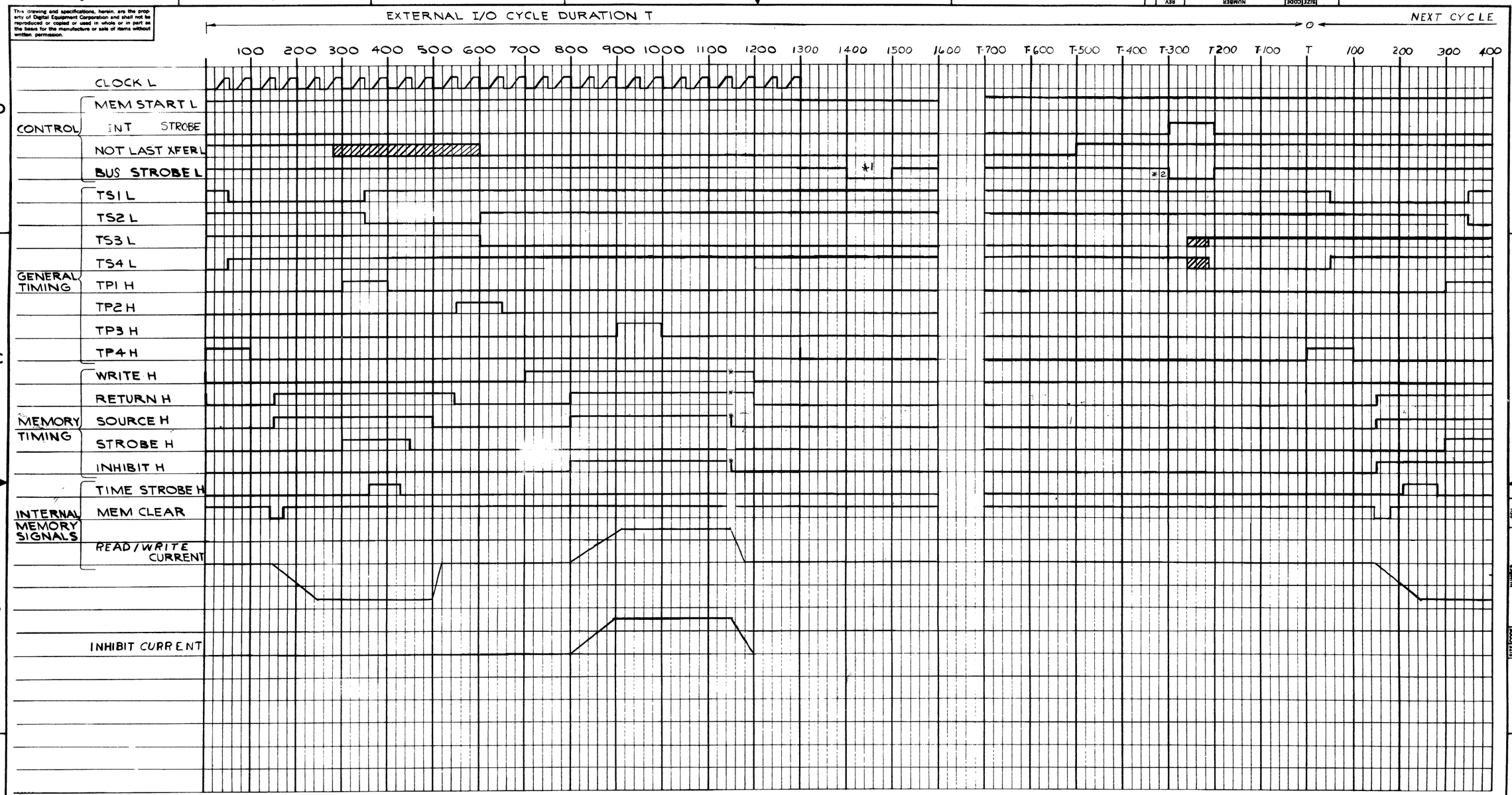
TITLE: TIMING (PDP8/E)

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

DIST.

DEC FORM NO. DRD 102A

ahp



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.

FIRST USED ON OPT/MOD: PDP8/E

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

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

		DATE
DRN.	D. Fuller	1-9-71
CHK'D.	Kenneth Lenk	1/11/71
ENG.	Larry Parker	1/12/71
PROJ. ENG.	Gene Pagdang	1/12/71
PROD.	Larry Sayler	1/13/71

NEXT HIGHER ASSY: A-ML-PDP8/E-Ø

SCALE: NONE

SHEET 2 OF 2

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

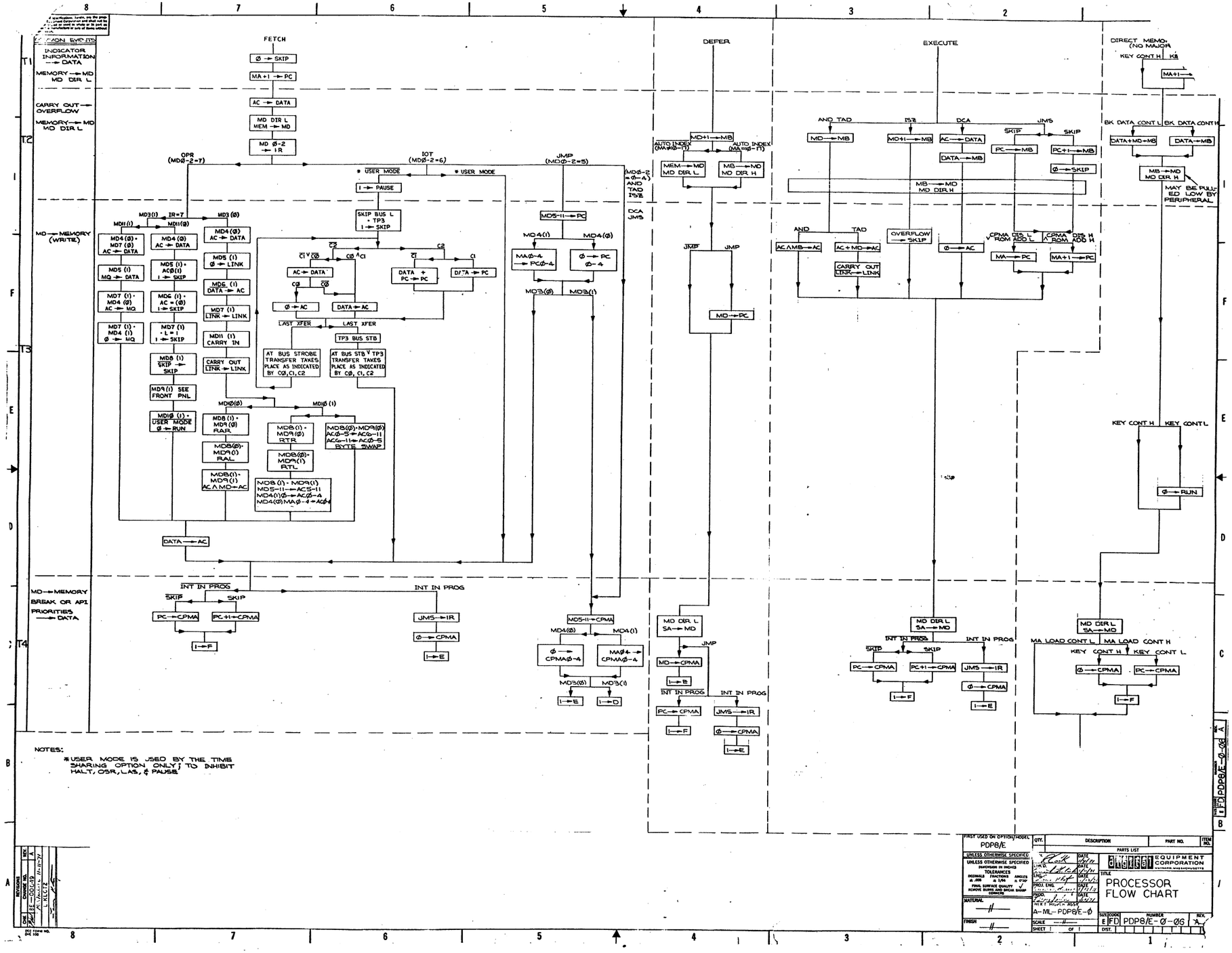
TITLE: TIMING (PDP8/E)

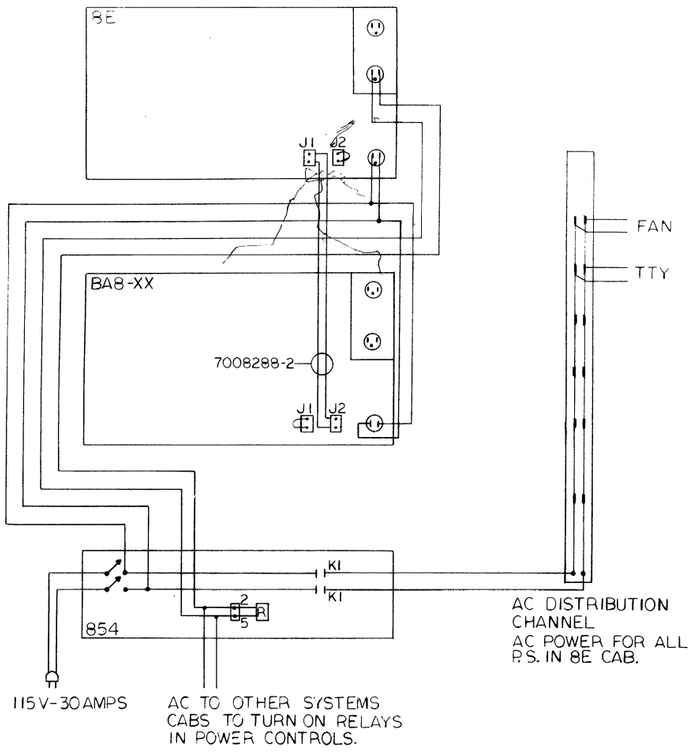
SIZE	CODE	NUMBER	REV.
D	TD	PDP8/E-Ø-Ø5	B

DIST.

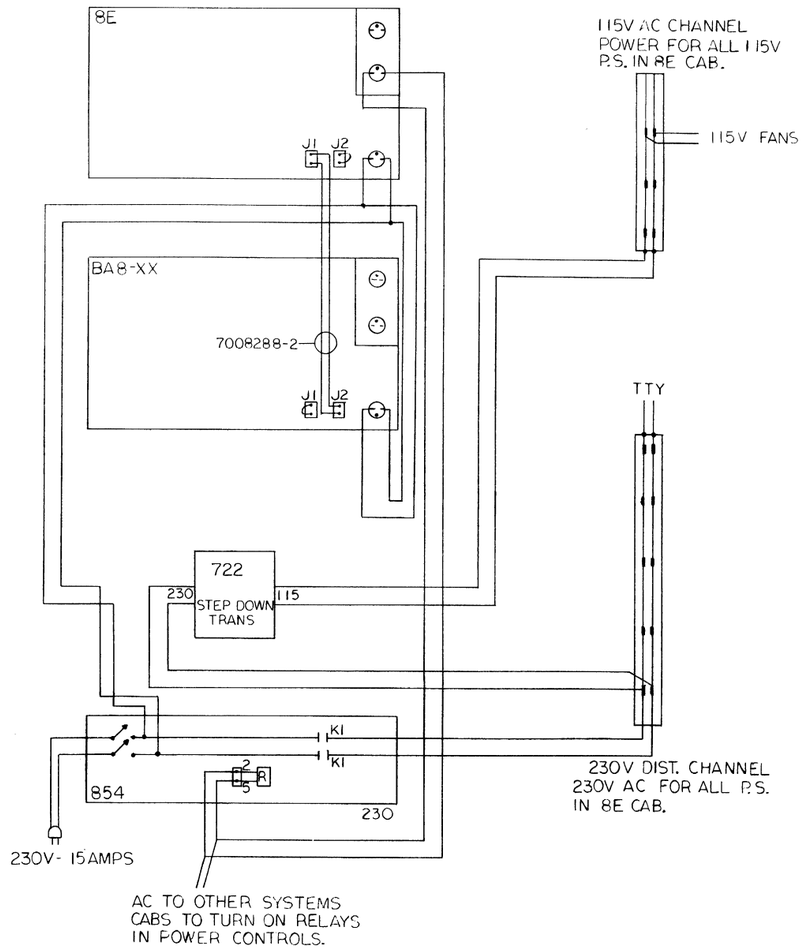
ahp

DEC FORM NO. DRD 102A


FETCH
Ø → SKIP
MA+1 → PC
AC → DATA
MD DIR L MEM → MD
MD Ø-2 → IR
OPR (MDØ-2=7)
IOT (MDØ-2=6)
JMP (MDØ-2=5)
* USER MODE
I → PAUSE
SKIP BUS L + TP3 I → SKIP
MD5-11 → PC
MD4(1)
MD4(Ø)
MA Ø-4 → PC Ø-4
Ø → PC Ø-4
MD3(Ø)
MD3(1)
AC → DATA
MD5 (1) Ø → LINK
MD6 (1) DATA → AC
MD7 (1) LINK → LINK
MD11 (1) CARRY IN
CARRY OUT LINK → LINK
MD8 (1) SKIP → SKIP
MD9(1) SEE FRONT PNL
MD10 (1) · USER MODE Ø → RUN
MD10(Ø)
MD10(1)
MD8 (1) · MD9 (Ø) RAR
MD8(Ø)· MD9(1) RAL
MD8(1)· MD9(1) AC∧MD→AC
MD8(1) · MD9(1) RTR
MD8(Ø)· MD9(1) RTL
MD8(1) · MD9(1) MD5-11→AC5-11 MD4(1)Ø→AC Ø-4 MD4(Ø)MA Ø-4→AC Ø-4
MD8(Ø)·MD9(Ø) AC Ø-5→AC6-11 AC6-11→AC Ø-5 BYTE SWAP
AT BUS STROBE TRANSFER TAKES PLACE AS INDICATED BY C0, C1, C2
AT BUS STB ∨ TP3 TRANSFER TAKES PLACE AS INDICATED BY C0, C1, C2
TP3 BUS STB
LAST XFER
AC → DATA
DATA → AC
DATA + PC → PC
DATA → PC
DATA → AC
INT IN PROG
SKIP
PC → CPMA
PC+1 → CPMA
JMS → IR
Ø → CPMA
I → E
I → F
MD5-11 → CPMA
MD4(Ø)
MD4(1)
Ø → CPMA Ø-4
MA Ø-4 → CPMA Ø-4
MD3(Ø)
MD3(1)
I → D
DEFER
MD+1 → MB
AUTO INDEX (MA Ø-11)
AUTO INDEX (MA 12-17)
MEM → MD MD DIR L
MB → MD MD DIR H
JMP
MD → PC
MD DIR L SA → MD
MD → CPMA
I → B
EXECUTE
AND TAD
ISZ
DCA
JMS
MD → MB
MD+1 → MB
AC → DATA
DATA → MB
PC → MB
PC+1 → MB
Ø → SKIP
MB → MD MD DIR H
AND
TAD
OVERFLOW → SKIP
AC ∧ MB → AC
AC + MD → AC
CARRY OUT LINK → LINK
Ø → AC
CPMA DIS L ∨ ROM ADD L
CPMA DIS H ∧ ROM ADD H
MA → PC
MA+1 → PC
DIRECT MEMO. (NO MAJOR)
KEY CONT H
KB
MA+1 →
BK DATA CONT L
BK DATA CONT H
DATA+MD → MB
DATA → MB
MB → MD MD DIR H
MAY BE PULLED LOW BY PERIPHERAL
KEY CONT H
KEY CONT L
Ø → RUN
MA LOAD CONT L
MA LOAD CONT H
INDICATOR INFORMATION → DATA
MEMORY → MD MD DIR L
CARRY OUT → OVERFLOW
MD → MEMORY (WRITE)
MD → MEMORY BREAK OR API PRIORITIES → DATA
MD Ø-2 = Ø-2 AND TAD ISZ DCA JMS
T1
T2
T3
T4
NOTES:
* USER MODE IS USED BY THE TIME SHARING OPTION ONLY; TO INHIBIT HALT, OSR, LAS, & PAUSE



8L SYSTEM POWER WIRING FOR 115 VOLTS



8E SYSTEM POWER WIRING FOR 230 VOLTS

REVISIONS		
CHK	CHANGE NO	REV
	8E-00053	A

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8/E	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. Norm Crigman DATE 14 Jul 71
CHK'D DATE 7/20/71
ENG DATE 7/26/71
PROJ. ENG. DATE 7/26/71
PROD. DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: POWER WIRING DIAGRAM

MATERIAL
FINISH
NEXT HIGHER ASSY. A-ML-PDP8/E/0
SCALE NONE
SHEET 1 OF 1

SIZE	CODE	NUMBER	REV.
D	IC	PDP-8/E-0-10	A

DIST.

SIZE D CODE IC NUMBER PDP8/E-0-10 REV A
B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 1/20/72

TITLE OPTION POWER REQUIREMENTS

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
Mel Arsenault		A	SP	PDP8E-0-11	

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION

digital CONTINUATION SHEET

TITLE OPTION POWER REQUIREMENTS

Option & Module Number	Steady State Current +5V	Operating Current +5V	Steady State -15V	Operating Current -15V	+15V	Other
KK8-E						
M8300	1.5A	1.65A	NA	NA		
M8310	.57A	.6A	NA	NA		
M8330	1.2A	1.2A	NA	NA		
M8320	.46A	.97A	.97A	.16A	.525A	
MM8-E						
G104, G227, H220	1.02A	2.2A	.24A	3.3A		Only 4K of Mem in an Ext Mem system will be at operating current. The remainder will be at steady state.
MC8-E						
M837	.985A		NA	NA		
KC8-E						
5409668	.55A	.55A	.067A	.24A		
KL8-E						
M8650	.800A	.800A	.013A	.013A	.065A	
KE8-E						
M8340	.835A		NA	NA		
M8341	.750A		NA	NA		
KP8-E						
M848	.280A	.280A		.040A		28V AC CT @ 20 ma.

	SIZE	CODE	NUMBER	REV
	A	SP	PDP8E-0-11	

DEC FORM NO 16-1022 DRA 108

TITLE OPTION POWER REQUIREMENTS

Option & Module Number	Steady State Current +5V	Operating Current +5V	Steady State -15V	Operating Current -15V	+15V	Other
MI8-E						
M847	.71A	.71A	.27A	.27A		
PC8-E						
M840	.745A	.840A		.045A		
LE8-XX						
M841	.350A	.350A	NA	NA		
XY8-E						
M842	.42A	.42A	.020A	.025A	.010A	
KA8-E						
M8350	1.4A	1.4A	NA	NA		
KD8-E						
M8360	1.2A	1.2A	NA	NA		
TD8-E						
M868	.920A	1.25A	.076A			
DK8-EA						
M882	.335A	.335A	NA	NA		

	SIZE	CODE	NUMBER	REV
	A	SP	PDP8E-0-11	

TITLE OPTION POWER REQUIREMENTS

Option & Module Number	Steady State Current +5V	Operating Current +5V	Steady State -15V	Operating Current -15V	+15V	Other
DK8-ED						
M512	.60A					
DK8-ED						
M860	.84A					
DK8-EP						
M860	.810A	.810A	.013A	.013A		
M518	.615A	.615A	.052A	.052A		
DR8-E						
M863	.830A	2.25A	NA	NA		
VC8-E						
M869	.310A	.310A	NA	NA		
VC8-E						
M885	.520A	.520A	.09A	.093A		
AD8-EA						
A841	.175A	.205A	NA	NA		
A231	.790A	.800A	NA	NA		

	SIZE	CODE	NUMBER	REV
	A	SP	PDP8E-0-11	

TITLE

Option & Module Number	Steady State Current +5V	Operating Current +5V	Steady State -15V	Operating Current -15V	+15V	Other
AH8-EA						
A232	.031A	.033A	NA	NA		
DP8-EA						
M839, M866	1.8A		.105A		.050A	
KG8-E						
M884	.800A	.931A	NA	NA		

MASTER DRAWING LIST

MAINTENANCE MANUALS NO.	TITLE	UNIT VARIATIONS KC8-EA	KC8-EB	KC8-EC	KC8-ED
KC8-E	CONSOLE	X	X	X	X

USED ON OPTIONS
PDP8/E

REVISIONS

REV.	DATE	CHG. NO.	APP'D.
ORIG	8/71	MISC-86	

DRN. K. GULICK	DATE 12/3/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. K. GULICK	DATE 12/3/70	
ENG. PROVIDENT	DATE 12/7/70	TITLE CONSOLE (PDP8/E)
PROJ. ENG. VOGELSANG	DATE 12/7/70	
PROD. L. SAYLOR	DATE 12/8/70	
FIRST USED ON A-ML- PDP8/E-Ø		SIZE A / CODE ML / NUMBER KC8-E / REV.
SCALE #		
SHEET 1 OF 2		DIST.

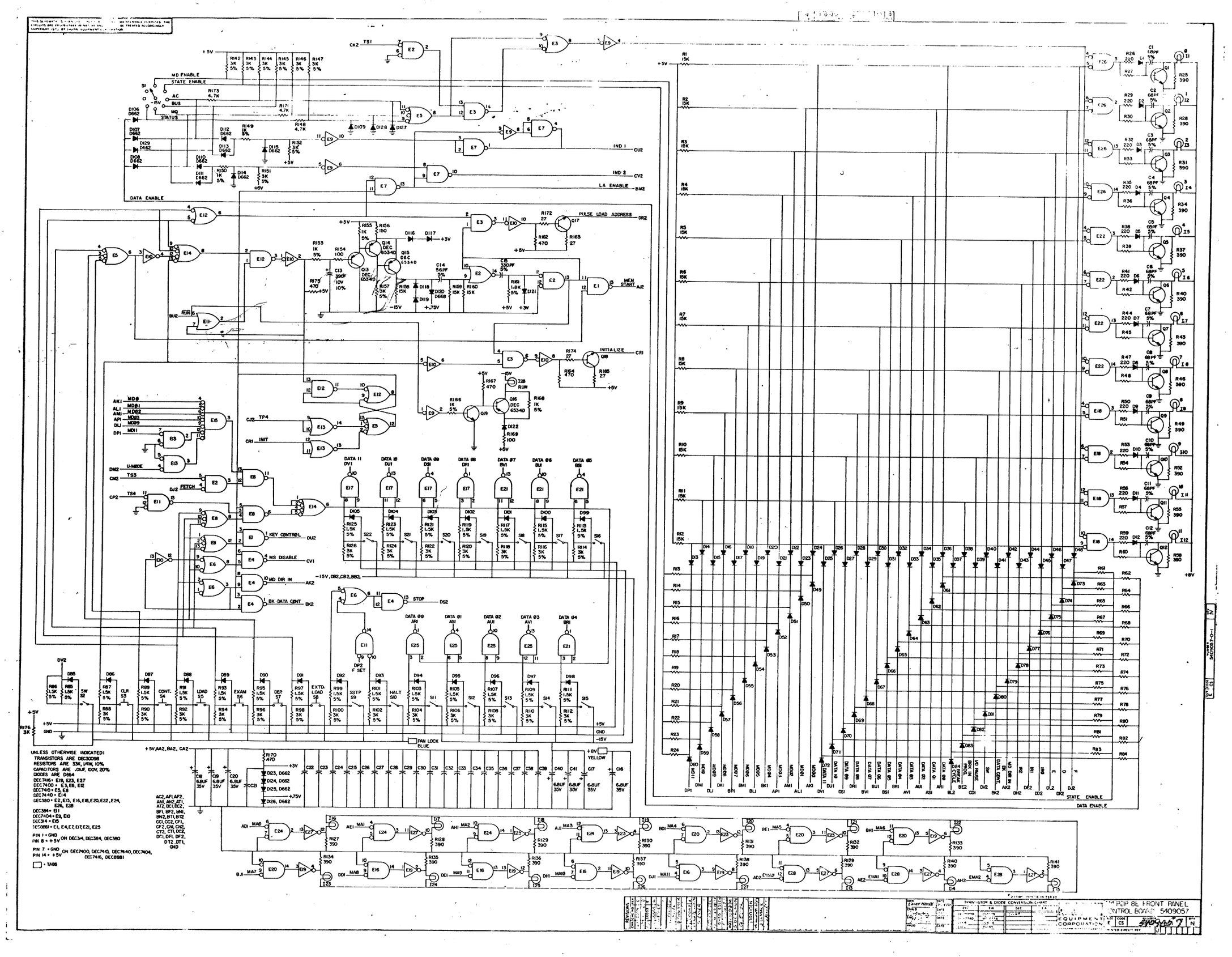
DRA 131

PRINT SET KC8-E	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-IA-5409057-0-0	F	1	FRONT PANEL CONTROL BOARD	
X	E-CS-5409057-0-1	E	1	CIRCUIT SCHEMATIC	
X	D-UA-KC8-E-Ø	E	1	CONSOLE ASSY	
X	A-PL-KC8-E-Ø	E	1	CONSOLE ASSY	

TITLE	SHEET	SIZE	CODE	NUMBER	REV.
CONSOLE	2 OF 2	A	ML	KC8-E	

DRA 132

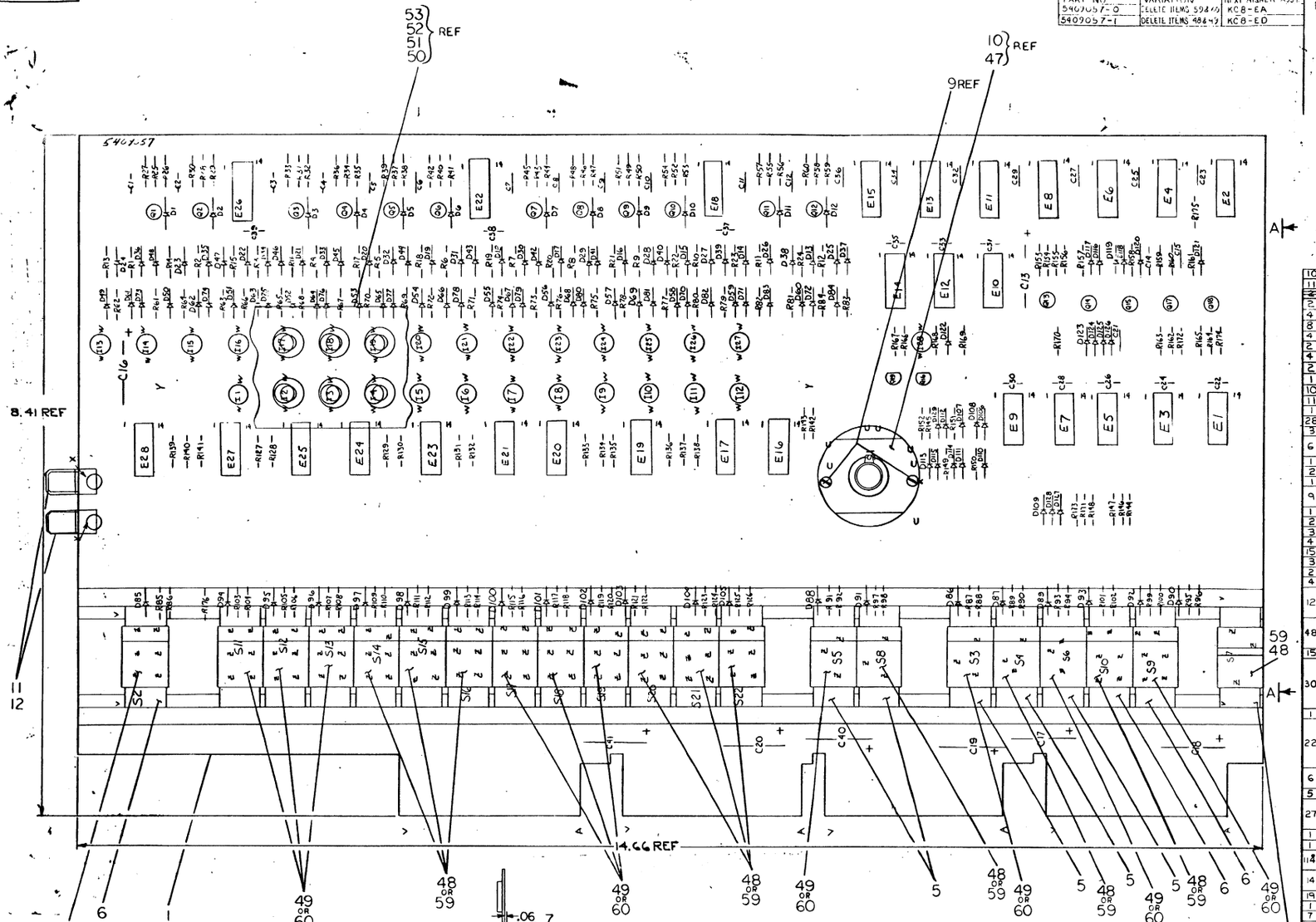
DEC 16-(325)-1048-1-N471


PDP 8E FRONT PANEL
CONTROL BOARD 5409057
DIGITAL EQUIPMENT CORPORATION
5409057-0-1
UNLESS OTHERWISE INDICATED:
TRANSISTORS ARE DEC30098
RESISTORS ARE 33K, 1/4W, 10%
CAPACITORS ARE .OUF, 100V, 20%
DIODES ARE D664
DEC7416 = E19, E23, E27
DEC7400 = E3, E6, E12
DEC7410 = E5, E8
DEC7440 = E14
DEC380 = E2, E13, E16, E18, E20, E22, E24, E26, E28
DEC384 = E11
DEC7404 = E9, E10
DEC314 = E15
DEC8881 = E1, E4, E7, E17, E21, E25
PIN 1 = GND
PIN 8 = +5V
PIN 7 = GND ON DEC7400, DEC7410, DEC7440, DEC7404, DEC7416, DEC8881
PIN 14 = +5V
= TABS
AC2, AF1, AF2, AN1, AN2, AT1, AT2, BC1, BC2, BF1, BF2, BN1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CN2, CT2, CT1, DC2, DC1, DF1, DF2, DT2, DT1, GND
DATA ENABLE
STATE ENABLE
PAN LOCK BLUE
PULSE LOAD ADDRESS
INITIALIZE
IND 1
IND 2
LA ENABLE
MEM START
KEY CONTROL
MS DISABLE
MD DIR IN
BK DATA CONT
STOP
F SET
SSTP
HALT
EXTD. LOAD
LOAD
EXAM
DEP
CONT.
CLR
SW
TRANSISTOR & DIODE CONVERSION CHART

LEGEND		
PART NO.	VARIATION	NEXT HIGHER ASSY
5409057-0	DELETE ITEMS 59&49	KC8-EA
5409057-1	DELETE ITEMS 48&49	KC8-EB

NOTES

1. ITEM NO. 5 (MOMENTARY SWITCH) TO BE INSTALLED SO THAT ROCKER HANDLE IS DOWN WHEN IN "OFF" POSITION, THIS LOCATION ONLY.



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
10		ROCKER HANDLE, LIME	1205849-15	60
11		ROCKER HANDLE, CHARTREUSE	1205849-14	59
2		WASH INT TOOTH #4 HOLE	9006685	58
2		SWITCH MTG BAR	K-MD-7408246-0-0	57
4		SPACER 1/4 AF x 1/4 LG x #6 HOLE	9006800	54
8		WASH, WHT NYLON #6 x .032 THK	9006707	55
4		SCR SLT HD PAN #6-32 x 44 NYLON	9008212	54
2		SPACER 1/4 AF x 1/2 LG #8 HOLE	9007977	53
4		WASH, WHT NYLON #8 x .032 THK	9006713	52
2		SCR PHL HD PAN SS #8-32 x 7/8	9006042-1	51
1		SUPPORT GLASS	D-IA-7408245-0-0	50
10		ROCKER HANDLE, TERRA COTTA	1205849-13	49
11		ROCKER HANDLE, AMBER	1205849-12	48
1	S1	ROTARY SWITCH	1210627	47
28	I1-I28	INDICATOR BULBS	1209219	46
3	E19, E23, E27	I.C. DEC 7416	1909928	45
6	E1, E4, E7, E17, E21, E25	I.C. DEC 8881	1909705	44
1	E15	I.C. DEC 314	1909704	43
2	E9, E10	I.C. DEC 7404	1909686	42
1	E11	I.C. DEC 384	1909486	41
9	E2, E13, E16, E18, E20, E22, E24, E26, E28	I.C. DEC 380	1909485	40
1	E14	I.C. DEC 7440	1905579	39
2	E5, E8	I.C. DEC 7410	1905576	38
3	E3, E6, E12	I.C. DEC 7400	1905575	37
4	Q13-Q16	TRANSISTOR DEC 6534D	1503409-00	36
15	Q1-Q12, Q17-Q19	TRANSISTOR DEC 3009B	1503100	35
3	R148, R171, R173	RES. 4.7K, 1/4W, 10%	1300448	34
2	R154, R169	RES. 100, 1/4W, 10%	1300231	33
4	R163, R165, R172, R174	RES. 27, 1/4W, 10%	1301420	32
12	R26, R29, R32, R35, R38, R41, R44, R47, R50, R53, R56, R59	RES. 220, 1/4W, 10%	1300275	31
48	R13-R24, R27, R30, R33, R36, R39, R42, R45, R48, R51, R54, R57, R60-R84	RES. 33K, 1/4W, 10%	1300510	30
15	R1-R12, R158-160	RES. 15K, 1/4W, 10%	1300494	29
30	R88, R90, R92, R94, R96, R98, R100, R102, R104, R106, R108, R110, R112, R114, R116, R118, R120, R122, R124, R126, R142-R147, R151, R152, R157, R176	RES. 3K, 1/4W, 5%	1300432	28
1	R161	RES. 1.8K, 1/4W, 5%	1300398	27
22	R85-R87, R89, R91, R93, R95, R97, R99, R101, R103, R105, R107, R109, R111, R113, R115, R117, R119, R121, R123, R125	RES. 1.5K, 1/4W, 5%	1300391	26
6	R149, R150, R153, R155, R166, R168	RES. 1K, 1/4W, 5%	1300365	25
5	R162, R164, R167, R170, R175	RES. 470, 1/4W, 10%	1300317*	24
27	R25, R28, R31, R34, R37, R40, R43, R46, R49, R52, R55, R58, R127-R141	RES. 390, 1/4W, 10%	1300310	23
1	R156	RES. 150, 1/4W, 10%	1300252	22
1	D120	DIODE D668	1102161	21
114	D1-D105, D109, D116-D119, D121, D122, D127, D128	DIODE D664	1100114	20
14	D106-D108, D110-D115, D123-D126, D129	DIODE D662	1100113	19
19	C21-C39	CAP. .01UF, 100V, 20% DISC	1000610	18
1	C13	CAP. 33UF, 10V, 10% S. TANT	1000076	17
7	C16-C20, C40, C41	CAP. 6.8UF, 35V, 20% S. TANT	1000067	16
1	C15	CAP. 330PF, 100V, 5% D.M.	1000023	15
12	C1-C12	CAP. 68PF, 100V, 5% D.M.	1000014	14
1	C14	CAP. 56PF, 100V, 5% D.M.	1000012	13
2		EYELET	9007827	12
2		TAB	9007112	11
1		KNOB CONTROL PANEL	1204747	10
2		NUT, NYLON #4-40	9007992	9
				8
56		TERMINALS, SOLDERLESS	9007812	7
15		SWITCH, ROCKER R5-50-FB-PC	1205941	6
6		SWITCH, ROCKER R5-9-3-FB	1205375	5
1		ETCHED CIRCUIT BOARD	E-IA-5409056-0-0	4
REF		MODULE ECO HISTORY	B-MH-5409057-0-6	3
REF		CIRCUIT SCHEMATIC	E-CS-5409057-0-1	2
REF		X-Y COORDINATE HOLE	X-CO-5409057-0-4	1

PARTS LIST

IC TYPE	GND	+5V
DEC 314	1	8
DEC 384	1	8
DEC 380	1	8

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

REVISIONS				
DWR	ECO	REV	DESCRIPTION	DATE
	5409057-00008	D	ORIGINATED	3-7-72
	5409057-00004	E		3-7-72
	5409057-00005	H		3-7-72
	5409057-00003	L		3-7-72
	5409057-00006	J		3-7-72
	5409057-00007	K		3-7-72
	5405357-0300	M		3-7-72
	5409057-00009	M		3-7-72
	5409057-00010	N		3-7-72

GREGORY ESSER 3-7-72

REV COLUMN

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH REVISION

DRN E. Hall 1-1-72
CHK'D DATE
ENG DATE
PROJ ENG DATE
PROD DATE

FIRST USED ON D-UA-KC8-EA-0

SCALE 2/1
SHEET 1 OF 1

DEC NO. EIA NO.

SEMICONDUCTOR CONVERSION CHART

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE PDP 8/E FRONT PNL CONT BOARD

SIZE CODE E | IA NUMBER 5409057-0-0 REV. N

DIST.

DRAWING CODE E IA 5409057-0-0

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE	MM8-1 PRINT SET	
	BLOCK DIAGRAM	E-BD-MM8-E-1
	4K XY DRIVER	E-CS-G227-Ø-1
	STACK BOARD	E-CS-G619-Ø-1
	SENSE INHIBIT (4K)	E-CS-G1Ø4-Ø-1
	MEMORY ASSY (4K)	D-UA-MM8-E-Ø
	MEMORY ASSY (PL)	A-PL-MM8-E-Ø
	STACK 4K 12 BIT	D-UA-H220-Ø-Ø
	ACCESSORY LIST	A-AL-MM8-E-3
	MM8-E ACCEPTANCE PROCEDURE	A-SP-7665139-0-0

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

SEQUENCE	MM8-2 PRINT SET	
	BLOCK DIAGRAM	E-BD-MM8-EJ-5
	8K XY DRIVER	E-CS-G233-Ø-1
	8K SENSE INHIBIT	E-CS-G111-Ø-1
	8K STACK SCHEMATIC	E-CS-H212-Ø-1
	MEMORY (8K)	D-UA-MM8-EJ-Ø
	ACCESSORY LIST	A-AL-MM8-E-3
	12 BIT STACK BOARD	D-CS-G646-0-1
	MM8-EJ & MM8-EH ACCEPTANCE PROCEDURE (F.S.)	A-SP-MM8-EJ-1
	8K OR 4K SENSE INHIBIT	E-CS-G115-0-1
	8K OR 4K X-Y DRIVER	E-CS-G234-0-1
	ENGINEERING SPECIFICATION	A-SP-MM8-EJ-4
	MFG SET	
	MANUFACTURING PROC.	A-SP-MM8-E-2
	MM8-EJ & MM8-EH MANUFACTURING PROCEDURE (ON LINE)	A-SP-MM8-EJ-2
	MM8-EJ & MM8-EH TEST PROCEDURE (OFF LINE)	A-SP-MM8-EJ-3
	PURCHASE SPEC.	A-PS-3010654-0-0
	PURCHASE SPEC.	A-PS-8009834-0-0

UNIT VARIATIONS

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

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

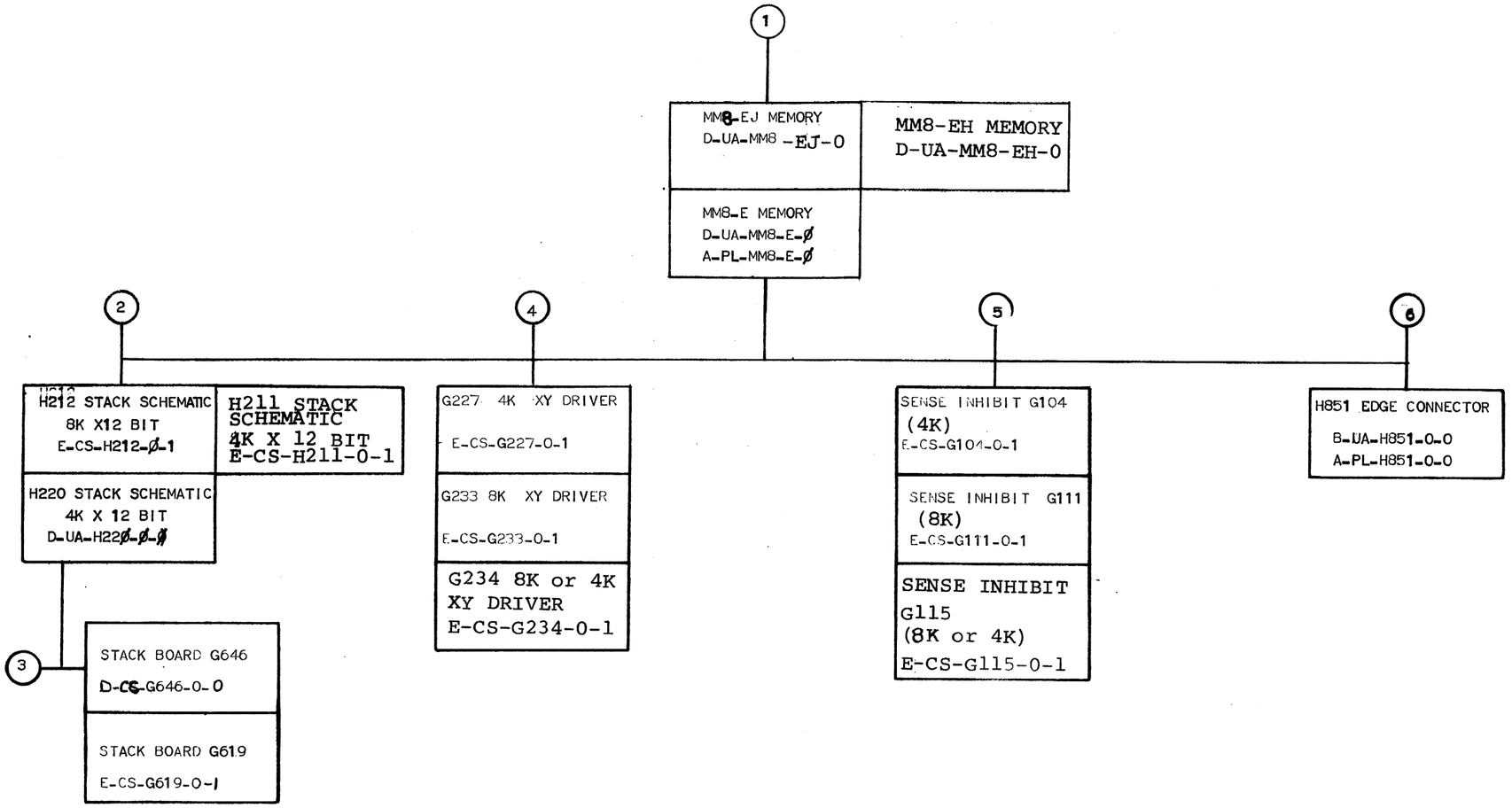
USED ON OPTION/MODEL

SHEET 1 OF 3

DRN.	DATE	TITLE: MEMORY DRAWING DIRECTORY
CHK'D.	DATE	
PROJ ENG. DAC, B. COATES	DATE 10-1-73	
PROD.	DATE	SIZE B · CODE DD · NUMBER MM8-E · REV E
FIELD SERV.	DATE	DIST G

DEC 16-13251-1062-1A-R972

DRB 106



TITLE		SIZE	CODE	NUMBER	REV
MEMORY	SHEET 2 OF 3	B	DD	MM8E	B

DRB 107
DEC 16—(325)—1062—3—N871

ELECTRICAL

CUSTOMER PRINT SET MM8-1	MM8-2	MM8-3	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X				1	E-BD-MM8-E-1		1	BLOCK DIAGRAM TIMING	
			X		A-SP-MM8-EJ-3	A	21	MM8-EJ&MM8-EH TEST PROCEDURE (OFFLINE)	
	X	X			E-BD-MM8-EJ-5	A	1	BLOCK DIAGRAM TIMING	
		X		2	E-CS-H212-Ø-1	#	2	STACK SCHEMATIC 8K X 12 BIT	
	X				E-CS-H211-0-1	#	2	STACK SCHEMATIC 4K X 12 BIT	
X				3	E-CS-G619-Ø-1	#	2	PLANAR STACK SCHEMATIC	
	X	X			D-CS-G646-Ø-1	#	1	12 BIT STACK BOARD	
X				4	E-CS-G227-0-1	#	2	4K XY DRIVER BOARD	
	X				E-CS-G233-0-1	#	5	8K XY DRIVER BOARD	
	X	X			E-CS-G234-0-1	#	5	4K or 8K DRIVER BOARD	
X				5	E-CS-G104-0-1	#	2	SENSE INHIBIT	
	X				E-CS-G111-0-1	#		8K SENSE INHIBIT BOARD	
	X	X			E-CS-G115-0-1	#	3	4K or 8K SENSE INHIBIT BOARD	

MECHANICAL

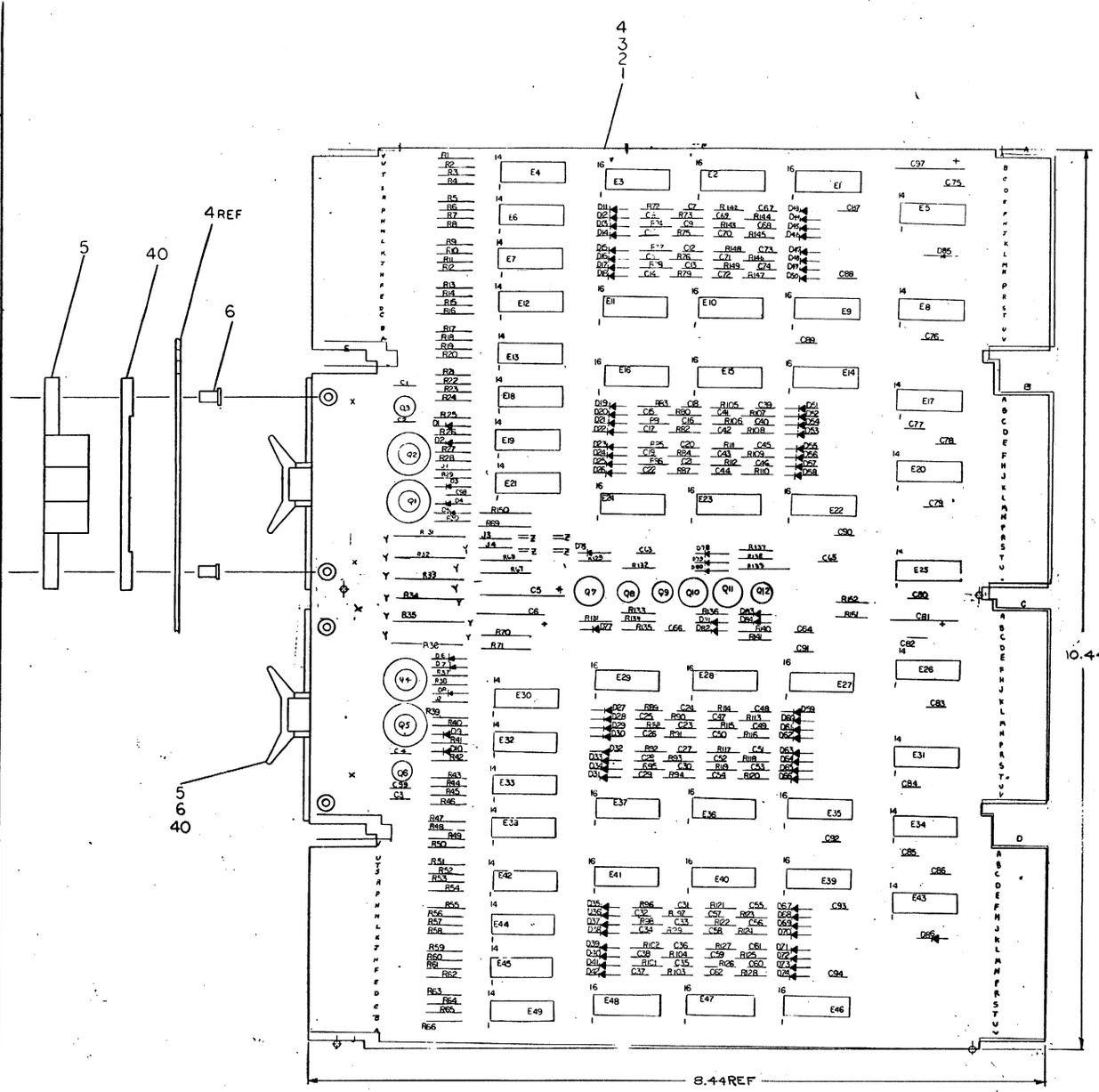
CUSTOMER PRINT SET MM8-1	MM8-2	MM8-3	MFG. SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
X				1	D-UA-MM8-E-0		1	4K 12 BIT MEMORY	
X					A-PL-MM8-E-0		1	4K 12 BIT MEMORY (PL)	
	X				D-UA-MM8-EJ-0	B	1	8K 12 BIT MEMORY	
		X			D-UA-MM8-EH-0		1	4K 12 BIT MEMORY	
X					A-SP-7665139-0-0	#	4	ACCEPTANCE PROC	
			X		A-SP-MM8-E-2			MANUFACTURING PROC.	
	X	X			A-SP-MM8-EJ-1	A	5	MM8-EJ& MM8-EH ACCEPTANCE PROCEDURE	
			X		A-SP-MM8-EJ-2	A	4	MM8-EJ&MM8-EH MANUFACTURING PROC. (F.S.)	
X	X	X			A-AL-MM8-E-3	A	1	ACCESSORY SHIPPING LIST	
	X	X			A-SP-MM8-EJ-4			ENGINEERING SPECIFICATION	
				2	B-DD-H212-0		2	STACK 8K 12 BIT	
X					D-UA-H220-0-0	#	2	STACK 4K 12 BIT	
			X	3	A-PS-3010654-0-0	#		PURCHASE SPEC	
			X		A-PS-3009834 -0-0	#		PURCHASE SPEC	
					C-MD-5509025-0-0		1	COVER PLATE	
				6	B-UA-H851-0-0			EDGE CONNECTOR	
					A-PL-H851-0-0			EDGE CONNECTOR PL	
					B-MD-5509071-1-0			RECEP 36 PIN REWORK	
					D-IA-5008903-0-0			ETCH BOARD	

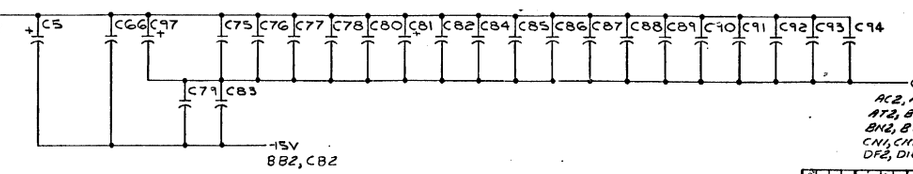
TITLE		SIZE	CODE	NUMBER	REV
COPY	SHEET 3 OF 3	B	DD	MM8-E	B

DRB 108

DEC-1 [illegible] 27

NOTES





			39	20	J4-A	J4-B
DEC6380	1	8	39	22	J3-A	J3-B
DEC8251	B	16	39	22	J2-A	J2-B
IC TYPE	GND	+5V	39	22	J1-A	J1-B
GND AND 5V ARE USUALLY PIN 7 AND 16 RESPECTFULLY EXCEPTIONS ARE STATED ABOVE			ITEM NO	AWG	FROM PT	TO PT
IC PIN LOCATIONS			JUMPER LIST			

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4		SPLIT LUGS	9006735	48
16	R1, R3, R5, R7, R9, R12, R14, R15, R52, R54, R56, R58, R60, R61, R64, R66	RES. 180 1/4W 5%	1301322	47
20	R2, R4, R8, R10, R11, R13, R16, R51, R53, R55, R57, R59, R62, R63, R65, R132, R137, R138, R141	RES. 330 1/4W 5%	1300295	46
66	C2, C3, C7-C62, C67-C74	CAP. 680 PF, 100V, 5% MICA	1000026	45
4		HEAT SINK	1210001	44
1	R140	RES 68 1/4W, 5%	1300219	43
1	R139	RES 470 1/2W, 5%	1300315	42
4	R25, R28, R39, R42	RES 680 1/4W, 5%	1301424	41
2		SPACER (CABLE CLAMP)	1202704	40
AR		WIRE #22AWG STRD TEF INS	0733055	39
8	E1, E9, E14, E22, E27, E35, E39, E46	I.C. DEC 8251	1909594	38
4	E5, E20, E26, E43	I.C. DEC6380	1909971	37
1	E25	I.C. DEC 74H11	1909267	36
4	E8, E17, E31, E34	I.C. DEC 74H10	1909057	35
16	E2, E3, E10, E11 E15, E16, E23, E24, E28, E29, E36, E37, E40, E41, E47, E48	PULSE TRANSFORMER	1609651	34
16	E4, E6, E7, E12, E13, E18, E19, E21, E30, E32, E33, E38, E42, E44, E45, E49	TRANSISTOR DEC4008	1510015	33
4	Q1, Q2, Q4, Q5	TRANSISTOR DEC 3762	1509649	32
2	Q3, Q6	TRANSISTOR DEC 4258	1505321	31
2	Q8, Q12	TRANSISTOR DEC6534B	1503404-01	30
1	Q9	TRANSISTOR DEC 3001B	1503100	29
3	Q7, Q10, Q11	TRANSISTOR DEC 1008	1502155	28
4	R32-R35	RES. 16.9 2W, 1% BERYLLIUM	3100332	27
1	R67	RES. 34.8K, 1/8W, 1% MF	1303156	26
1	R68	RES. 14.7K, 1/8W, 1% MF	1302941	25
C	R26, 27, 40, 41, 134, 135	RES. 4.7K, 1/4W, 5%	1300447	24
~~1~~	~~R39, R42, R41~~	~~RES. 2.2K, 1/4W, 5%~~	~~1300444~~	~~23~~
5	R29, R30, R37, R38, R131	RES. 1.5K, 1/4W, 5%	1300391	22
2	R31, R36	RES. 750, 1W, 5%	1302385	21
~~1~~	~~R1-R16, R51-R66~~	~~RES. 330, 1/4W, 5%~~	~~1300295~~	~~20~~
~~1~~	~~R52, R137, R138, R141~~			
1	R151	RES. 220, 1/4W, 5%	1300271	19
81	R17-R24, R43-R50, R67-R74, R101-R108, R117-R124	RES. 150, 1/4W, 5%	1300250	18
3	R133, R136, R152	RES. 100, 1/4W, 5%	1300229	17
4	R69-R71, R150	RES. 10, 1/2W, 5%	1300168	16
9	D1-D3, D8-D10, D75, D77, D81	DIODE DG72	1105275	15
76	D4-D7, D11-D74 D78-D80, D82-D86	DIODE DGG4	1100114	14
1	C5	CAP. 20UF, 50V, -10-75% ELECT	1002839	13
22	C66-C76, C75-C80, C82-C94	CAP. .01UF, 100V, 20% DISC	1001610	12
3	C6, C81, C97	CAP. 33UF, 10V, 10% S. TANT	1000076	11
3	C63, C98, C99	CAP. .047UF, 16V, 5-20% DISC	1009678	10
~~2~~	~~C2, C3~~	~~CAP. 360PF, 500V, 5% D.M.~~	~~1000235~~	~~9~~
~~6~~	~~C7-C62, C67-C74~~	~~CAP. 680PF, 100V, 5% DISC~~	~~1000026~~	~~8~~
2	C1, C4	CAP. 39PF, 100V, 5% D.M.	1000010	7
4		EYELET - GS4-11 SIMPSON	9006750	6
2		HANDLE FLIP CHIP GREEN	900337-01	5
1		ETCHED CIRCUIT BOARD	5006832	4
REF		MODULE HISTORY LIST	B-MH-G227-0-6	3
REF		ASSY. DRILLING HOLE LAYOUT	J-AH-G227-0-5	2
REF		X-Y COORDINATE - DLE LOCK	K-CO-G227-0-4	1

PARTS LIST

DEC 3762	++	REV COLUMN	E
DEC4258	2N4258	PRINTED CIRCUIT BOARD REVISION	
DEC6534B	NPN6534	CIRCUIT SCH REVISION	
DEC3001B	2N 3646		
DEC 1008	NONE		
DEC D672	IN 3653		
DEC DGG4	IN 3606		

DRN.		DATE	11-1
CHKD		DATE	11
ENG.		DATE	11
PROJ. ENG		DATE	11
PROD.		DATE	11
FIRST USED ON			
DEC NO.	EIA NO.		
SEMICONDUCTOR CONVERSION CHART		SCALE	2/1
		SHEET	1 OF

EQUIPMENT CORPORATION

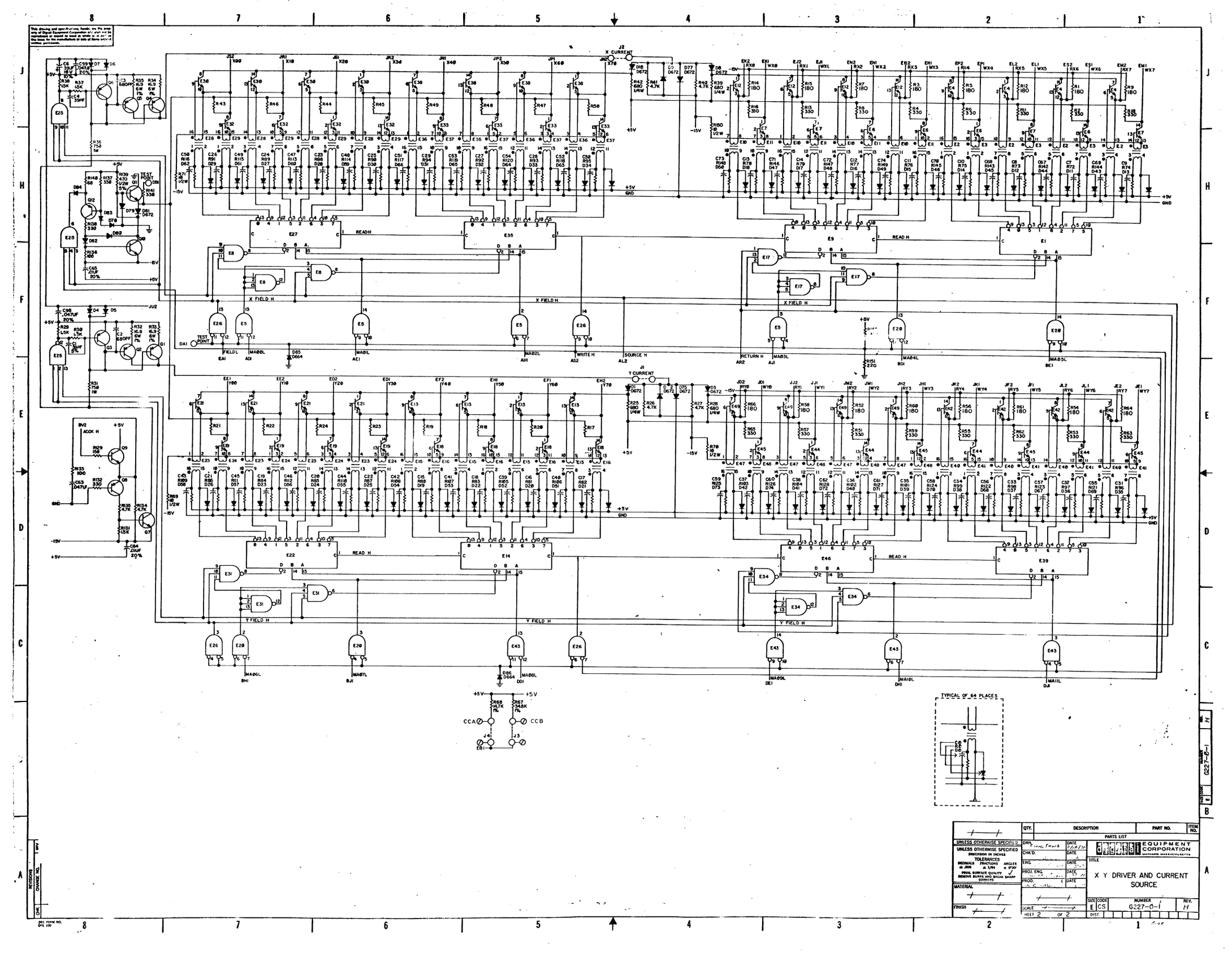
TITLE: X Y DRIVER & CURRENT SOURCE

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

DIST.

REVISIONS					
REV	DESCRIPTION	DRN	CHK	APP'D	DATE
E	ORIGINATED				5/66

G227-0-1 H



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

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

DRN. Gene Frank DATE 2/18/71
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE

MATERIAL
FINISH

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
X Y DRIVER AND CURRENT SOURCE

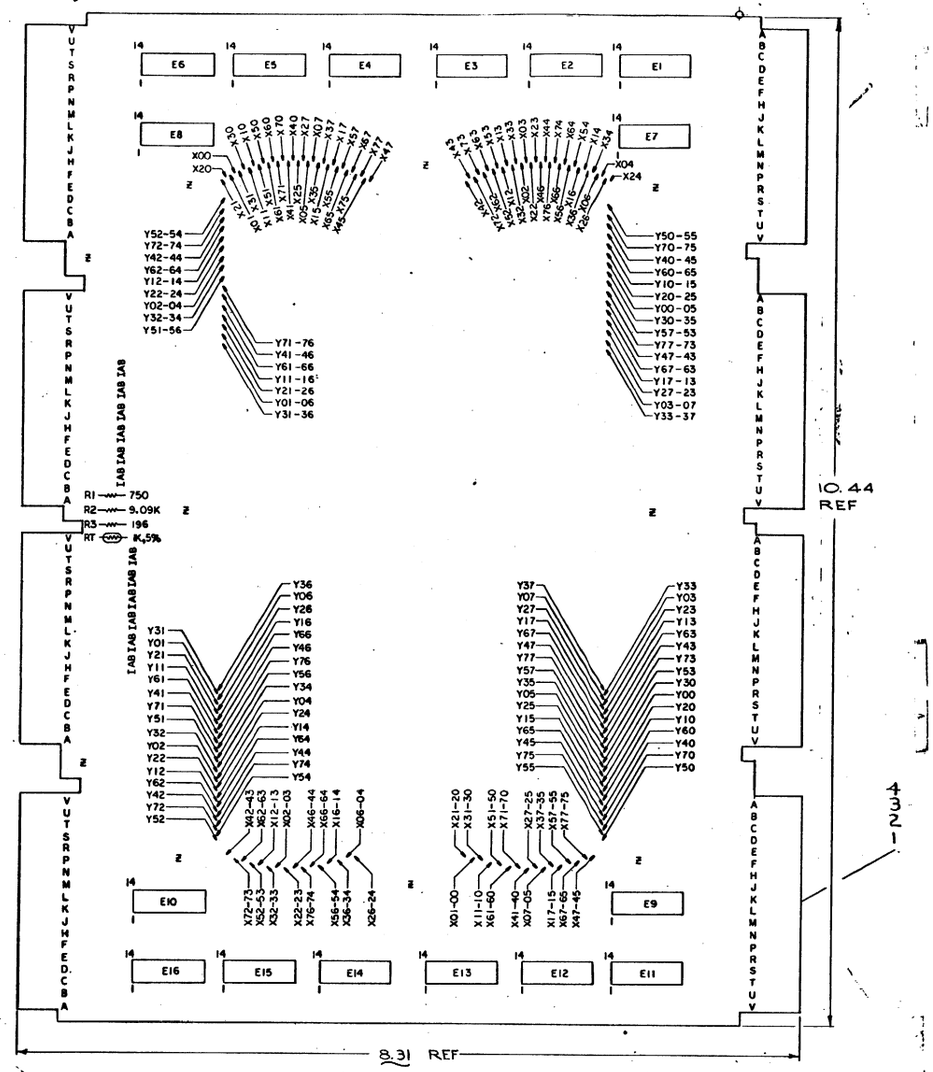
SIZE E | CODE CS | NUMBER G227-0-1 | REV. H
SCALE | SHEET 2 OF 2 | DIST

REVISIONS			
LTR	DESCRIPTION	CHANGE NO.	BY
H			

ASSEMBLY G227-0-1
SHEET E
SIZE B

DEC FORM NO. D41 100

NOTES:
1. UNLESS OTHERWISE INDICATED:
   GND=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
2. DIODE ARRAYS WILL BE MOUNTED BY STACK VENDOR. DIODE ARRAYS ARE DEC2501
3. THERMISTOR (RT) 1.0K, 1% AT 25°C
4. 2501-01 MAY BE USED INTERCHANGEABLY WITH ITEM 9.



SEE NOTE 4

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
16	E1-E16	I.C. DEC 2501	1910010	9
1	RT	RES. 1K THERMISTOR 1%	1310071	8
1	R2	RES. 9.09 1/8W 1% MF	1304885	7
1	R3	RES. 196 1/8W 1% MF	1302956	6
1	R1	RES. 750 1/8W 1% MF	1302955	5
1		ETCHED CIRCUIT BOARD	50090537	4
REF		MODULE HISTORY LIST	S-MH-G619-0-0	3
REF		ASSY/DRILLING HOLE LAYOUT	E-AH-G619-0-0	2
REF		XY COORDINATE HOLE LOC	K-CO-G619-0-0	1

PARTS LIST

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

REV	DESCRIPTION	DATE	APPROVED
A	W COATES 12 NOV 1969 G619-0001		

REVISIONS

REV COLUMN
PRINTED CIRCUIT BOARD REVISION
CIRCUIT SCH. REVISION

DRN. DATE
CH'K'D DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
FIRST USED ON: D-UA-H220-0-0

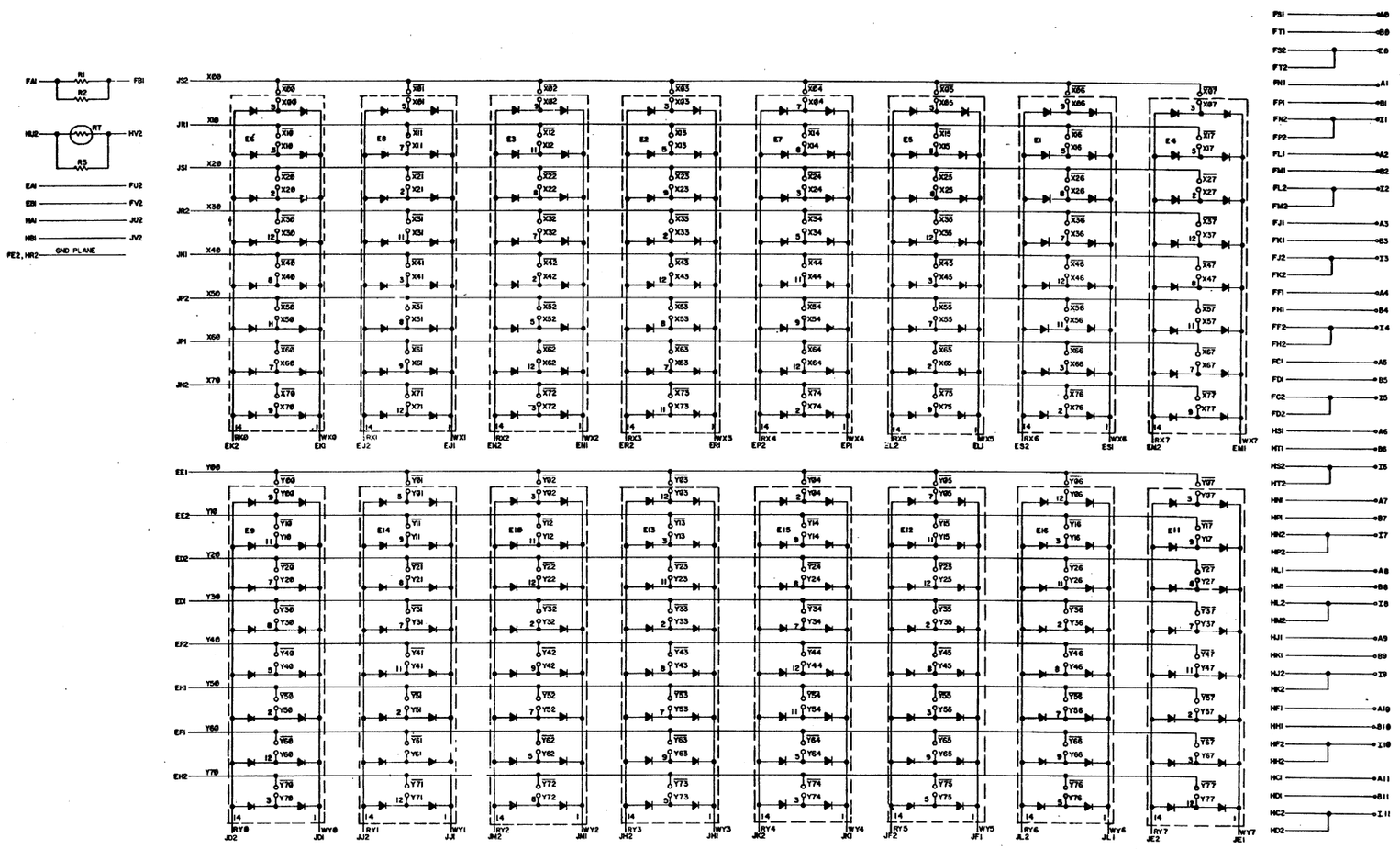
DEC NO. EIA NO.
SEMICONDUCTOR CONVERSION CHART
SCALE 2/1 SHT 1 OF 1

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: PLANAR STACK BOARD G619

SIZE D | CODE 07CS | NUMBER G619-0-1 | REV. A
DIST. 1

DEC FORM NO. ONE 1001



QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			

UNLESS OTHERWISE SPECIFIED

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

MATERIAL

FINISH

DRN.	JEANNE FRENCH	DATE 7/3/70
CHK'D.	R. VOGELSANG	DATE 7/28/70
ENG.	R. VOGELSANG	DATE 7/29/70
PROJ. ENG.		DATE
PROD.		DATE

SCALE

SHEET 2 OF 2

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
PLANAR STACK BOARD

SIZE	CODE	NUMBER	REV.
E	CS	G619-0-1	A

INST. A

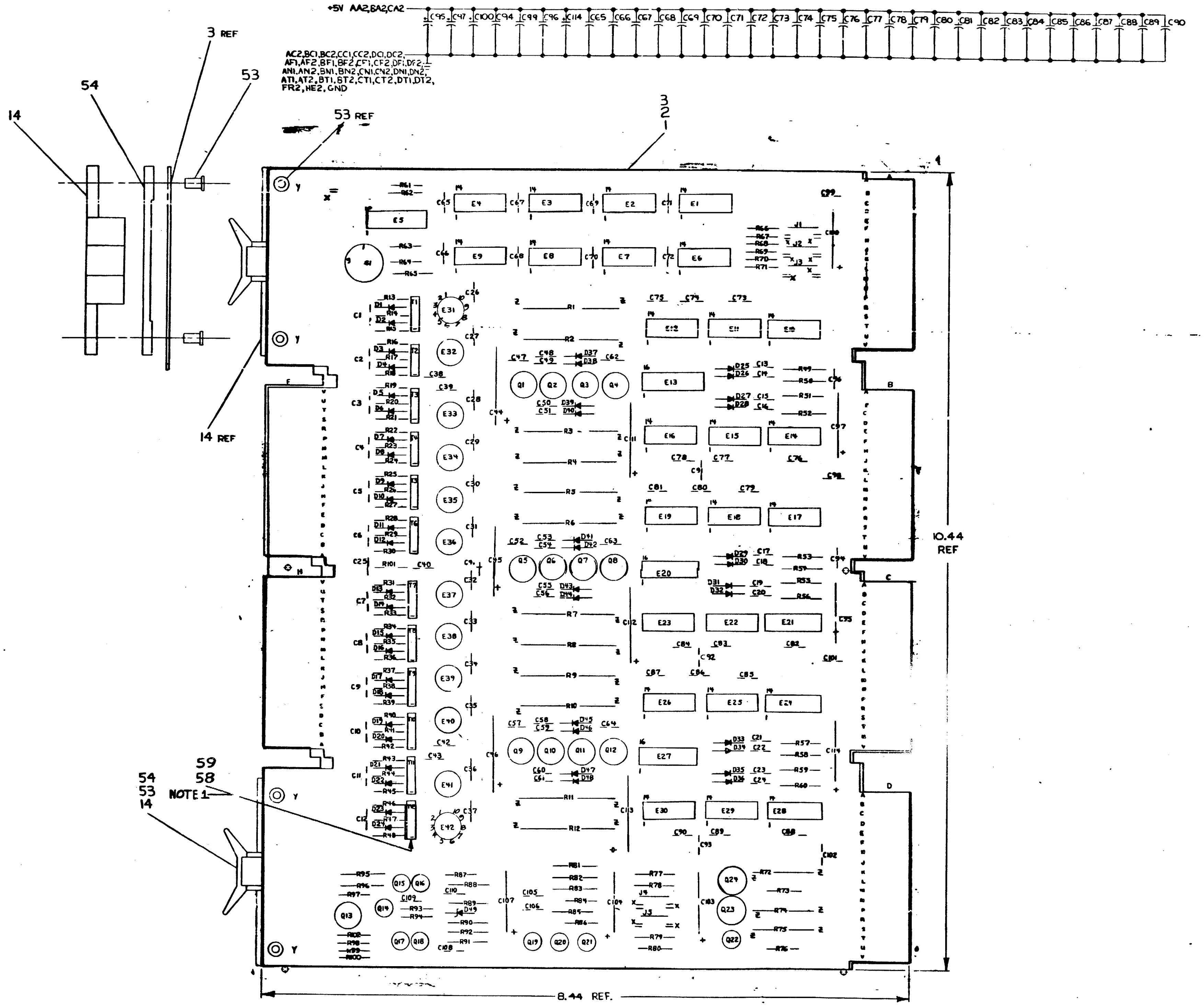
REVISIONS

REV.	CHANGE NO.	DATE

REC FORM NO. DEC 100

SIZE E CODE CS NO. G619-0-1 REV. A

L. BAR



NOTES:

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

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	R102	RES. 10, 1/4W, 10%	1300170	62
11		SPLIT LUGS	9006735	61
1	R81	RES 2.74 1/8W 1% 100 MFP	1304868	60
A/R		SCOTCH GRIP ADHESIVE	9008907	59
A/R		CATERPILLER GROMMET	9007622	58
REF		ASSY/DRILLING HOLE LAYOUT	E-AH-G104-0-5	57
2	R90, R101	RES. 100, 1/8W, 1% 100 MFP	1302358	56
A/R		WIRE #22 AWG SOLID BUS	9107560-01	55
2		SPACER (CABLE CLAMP)	1202704	54
4		EYELET #GS4-11 E.B. STIMPSON	9006750	53
1	E6	I.C. DEC 7486	1910011	52
3	E10,E17,E24	I.C. DEC 8881	1909705	51
4	E1,E14,E21,E28	I.C. DEC 384	1909486	50
1	E2	I.C. DEC 6380	1909971	49
2	E3,E8	I.C. DEC 74H	1909267	48
1	E9	I.C. DEC 74H00N	1909056	47
6	E11,E15,E18,E22,E25,E29	I.C. DEC 74H40N	1905586	46
1	E7	I.C. DEC 7440N	1905579	45
6	E12,E16,E19,E23,E26,E30	I.C. DEC 7400N	1905575	44
1	E4	I.C. DEC 7474N	1905547	43
12	E31-E42	I.C. MC 1540G	1905521	42
1	E5	100NS DELAY LINE	1610033-0	41
3	E13, E20, E27	PULSE TRANSFORMER	1609996	40
12	T1-T12	TRANSFORMER 17Z-5	1609478	39
12	Q1-Q12	TRANSISTOR DEC 3734	1510062	[illegible]
2	Q23,Q24	TRANSISTOR DEC 3762	1509649	
9	Q14-Q22	TRANSISTOR DEC 6534-B	1503409-01	36
1	Q13	TRANSISTOR DEC 2219-S	1501881	35
12	R1-R12	RES. 16.9, 6W, 1%	1309679	34
12	R49-R60	RES. 68, 1/2W, 5% CC	1309405	33
1	R89	RES. 68.1K, 1/8W, 1% 100 MFP	1305252	32
1	R88	RES. 5.62K, 1/8W, 1% 100 MFP	1305128	31
1	R91	RES. 348, 1/8W, 1% 100 MFP	1304858	30
2	R79, R95	RES. 4.64K, 1/8W, 1% 100 MFP	1304856	29
1	R77	RES. 9.09K, 1/8W, 1% 100 MFP	1304855	28
3	R65, R92, R85	RES. 1.96K, 1/8W, 1% 100 MFP	1304833	27
3	R82, R83, R96	RES. 1K, 1/8W, 1% 100 MFP	1303114	26
1	R78	RES. 1.21K, 1/8W, 1% 100 MFP	1302871	25
24	R13,R15,R16,R18,R19,R21, R22,R24,R25,R27,R28, R30,R31,R33,R34,R36, R37,R39,R40,R42 R43, R45,R46,R48	RES. 75 1/8W 1%	1303064	24
2	R64, R86	RES. 680, 1/4W, 5% CC	1301424	23
6	R66, R68, R70, R80, R94, R99	RES. 10K, 1/4W, 5% CC	1300479	22
3	R73, R76, R97	RES. 4.7K, 1/4W, 5% CC	1300447	21
2	R61, R87	RES. 1K, 1/4W, 5% CC	1300365	20
19	R14,R17,R20,R23,R26, R29,R32,R35,R38,R41, R44,R47,R62,R67,R69, R71,R84,R93,R98	RES. 330, 1/4W, 5% CC	1300295	19
1	R63	RES. 220, 1/4W, 5% CC	1300271	18
1	R100	RES. 100, 1/4W, 5% CC	1300229	17
3	R72, R74, R75	RES. 68, 1W, 10% CC	1300222	16
1	S1	ROTARY SWITCH	1210043-0	15
2		HANDLE FLIP CHIP - GREEN	9008337-01	14
1	D49	DIODE 1/4M 6.8AZ1	1109991-1	13
36	D1-D24, D37-D48	DIODE D672	1105275	12
12	D25-D36	DIODE D664	1100114	11
32	C25-C43, C47, C52, C57, C62-C64, C91-C93, C98, C101, C102, C110	CAP. .047MFD 16V 20% DISC	1009678	10
33	C65-C90, C94, C96, C99, C105, C106, C108, C109	CAP. .01MFD 100V 20% DISC	1001610	9
6	C44-C46, C111-C113	CAP. 47MFD 20V 20% S. TANT	1000079	8
7	C95, C97, C100, C103, C104, C107, C114	CAP. 6.8MFD 35V 20% S. TANT	1000067	7
12	C48-C51, C53-C56, C58-C61	CAP. 1500PF 200V 10% DISC	1000054	6
12	C13-C24	CAP. 1000PF 100V 5% MICA	1000042	5
12	C1-C12	CAP. 33PF 100V 5% D. MICA	1000009	4
1		ETCHED CIRCUIT BOARD	5008847	3
REF		MODULE ECO HISTORY	B-MH-G104-0-6	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-G104-0-4	1

PARTS LIST

REV COLUMN E

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH. REVISION F

DEC NO.	EIA NO.
DEC 3734	SAME
DEC 3762	SAME
DEC 6534-B	MPS 6534
DEC 2219-S	2N 2219
1/4 M 6.8AZ1	1N4099
D672	1N3653
D664	1N3606

SEMICONDUCTOR CONVERSION CHART

IC TYPE	GND	+5V
DEC 380	1	8
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
55	22	J5-A	J5-B
↑	↑	J4-A	J4-B
		J3-A	J3-B
↓	↓	J2-A	J2-B
55	22	J1-A	J1-B

JUMPER LIST

B. TARPLEY
G104-00006 H
B. TARPLEY
G104-00005 F
R. VOGELSANG
G104-00004 E
VOGELSANG
G104-00003 D
K. VOGELSANG
G104-00002 C
ORIGINATED B

CHANGE NO
REV.

FIRST USED ON
DA-MMS-E-0

EQUIPMENT CORPORATION

TITLE
SENSE INHIBIT

E CS G104-0-1
REV. H

SHEET 1 OF 2

PART OF XY DRIVE G227

PART OF THE STACK M220 (G69)

NOTE: IN PLACE OF DEC 6380, DEC 380 (8094485) MAY BE USED.

QTY.	DESCRIPTION	PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINISH SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORN. .4

MATERIAL

FINISH

DRN. Harry Moore DATE 9/9/64
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE

SCALE

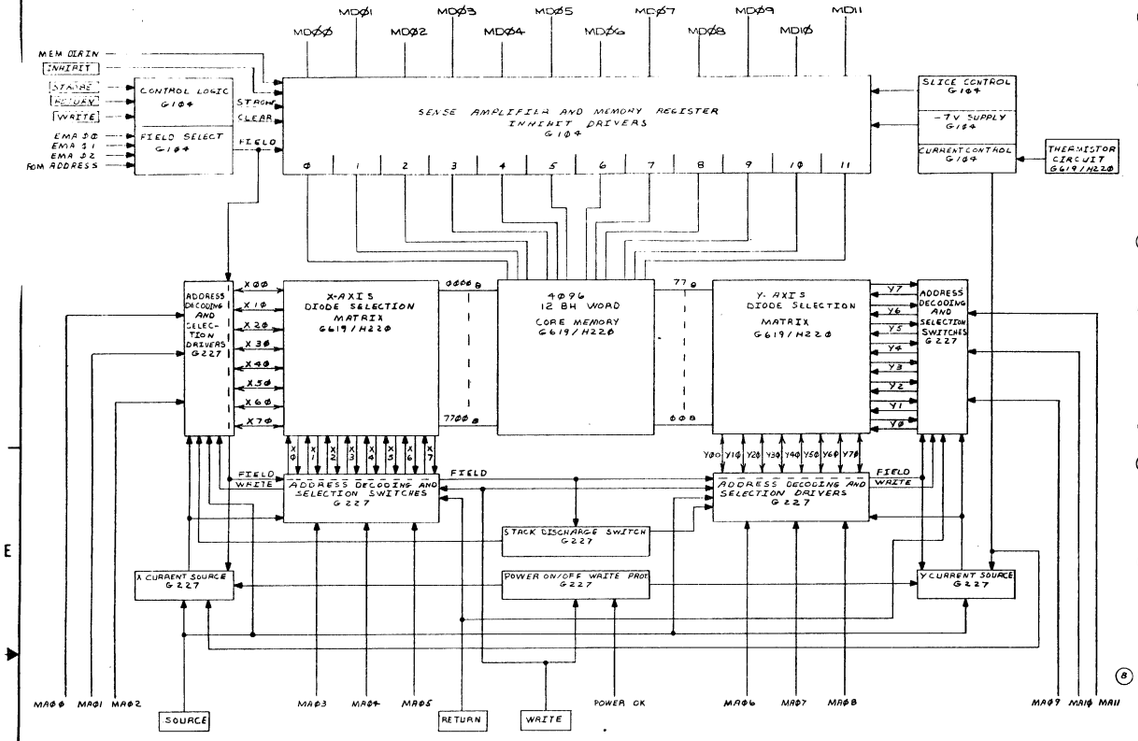
SHEET 2 OF 2

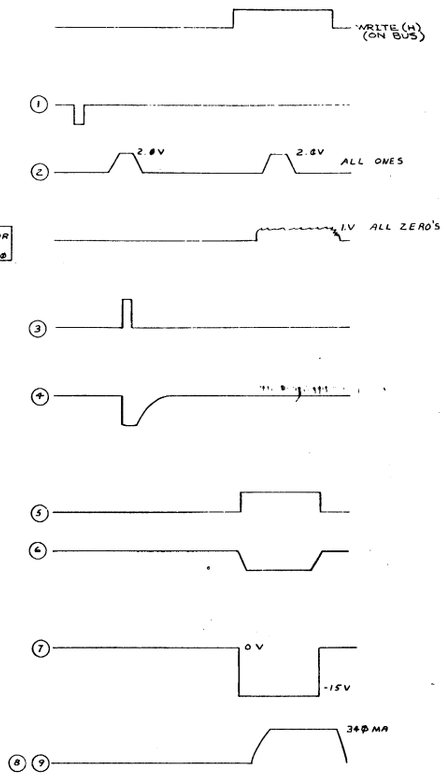
DIGITAL EQUIPMENT CORPORATION

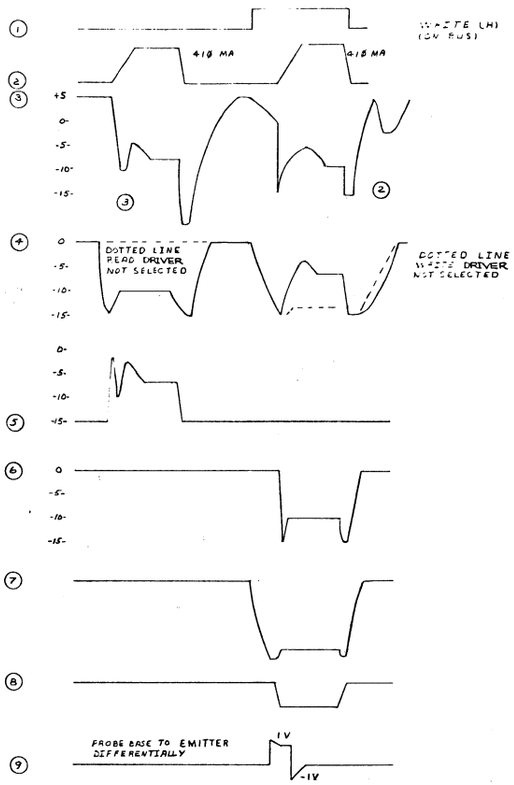
TITLE
SENSE INHIBIT

SIZE E | CODE | NUMBER G104-0-1 | REV. H
DIST

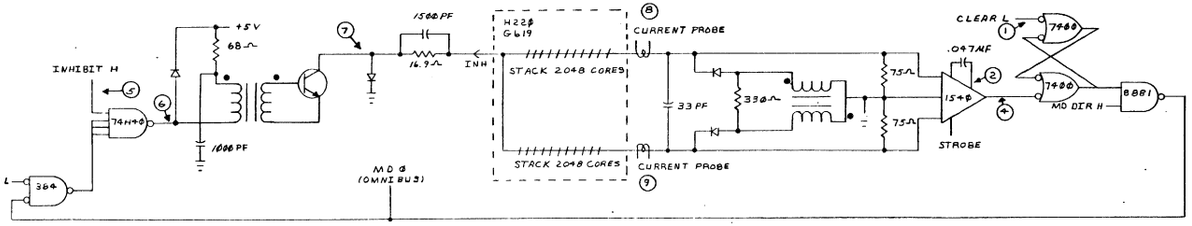
REVISIONS: REV. | CHANGE NO. | DATE

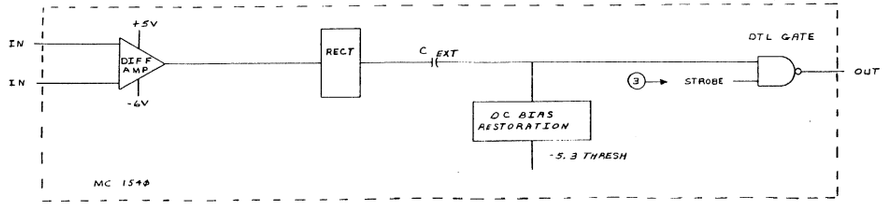


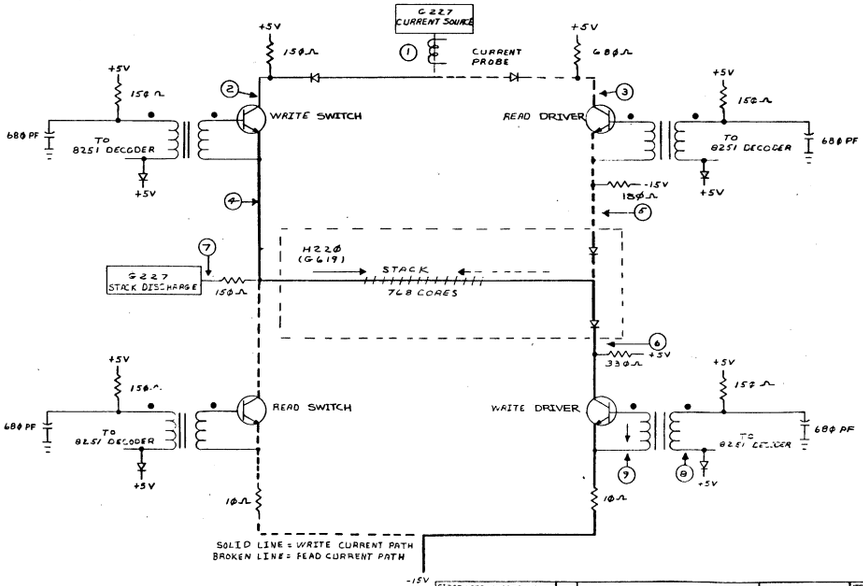




MEMORY TIMING SIGNALS GENERATED IN THE CP







PARTS LIST			
QTY.	DESCRIPTION	PART NO.	ITEM NO.

FIRST USED ON PT/MOD MM8-E

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

CHK'D DATE

ENG. DATE

SLENG. DATE

PROJ. DATE

A-ML-MM8-E

SCALE

SHEET OF

DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE BLOCK DIAGRAM TIMING MM8-E

SIZE E | CODE 80 | NUMBER MM8-E-1 | REV.

DWG. MM8-E-1

REVISIONS | REV. | CHANGE NO.

MASTER DRAWING LIST

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

USED ON OPTIONS							
PDP8/E							
PDP8/M							
PDP8/F							

REVISIONS REV.	DATE	CHG. NO.	APP'D.
A	1/71	KK8E-1	D.C.
B	3/71	KK8E-2	R.V.
C	4/71	KK8E-3	L.K.
D	5/71	M833-6	L.N.
E	7/71	MISC-86	A.Y.
F	1/72	8E-55	J.C.
H	10/73	KKBE-4	J.K.

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

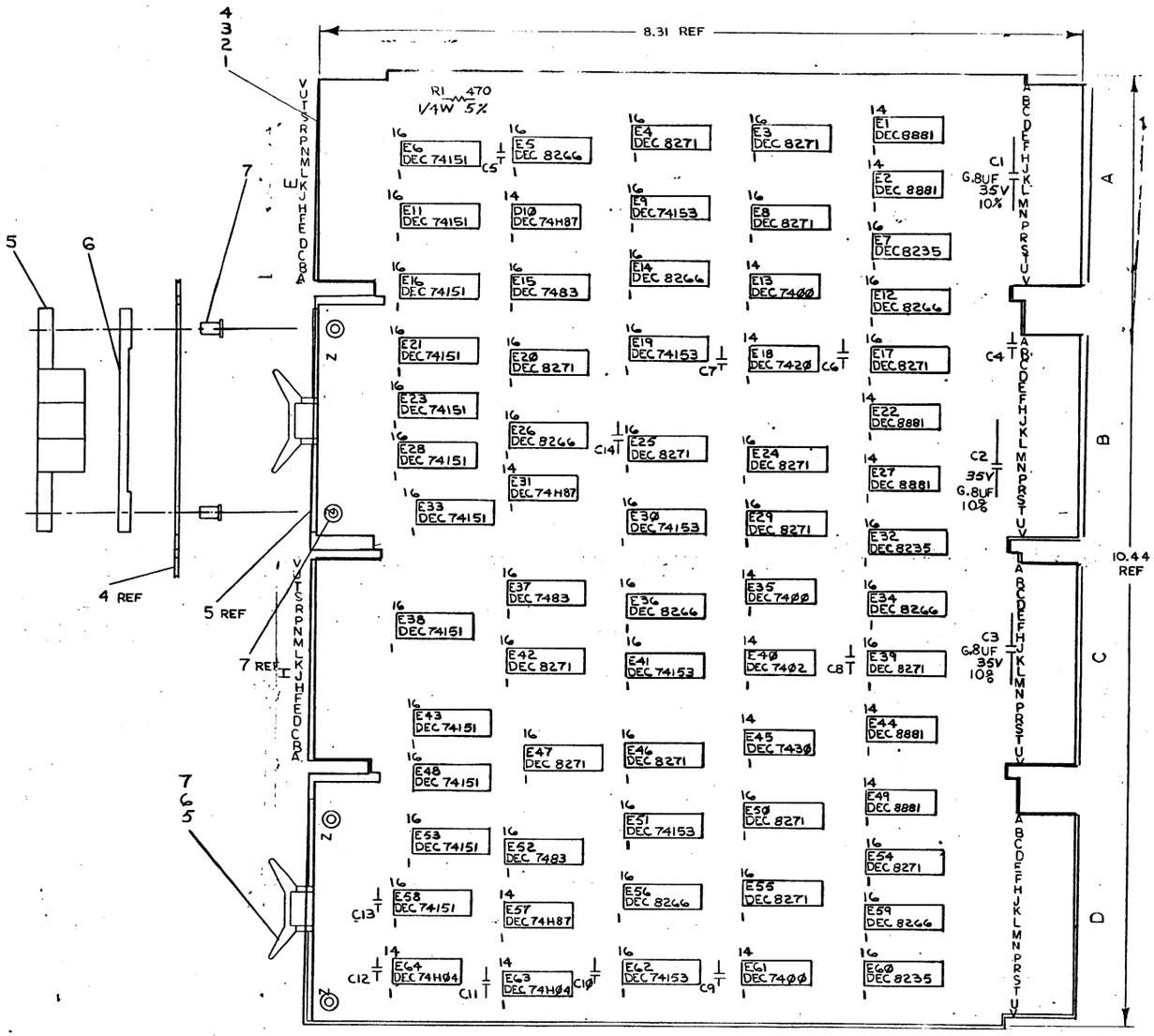
PRINT SET KK8-E	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE	OPTION NO.
X	E-CS-M83ØØ-Ø-1	#	5	MAJOR REGISTERS	
X	E-CS-M831Ø-Ø-1	#	4	MAJOR REIGSTER CONTROL	
X	E-CS-M832Ø-Ø-1	#	2	BUS LOADS	
C	B-DD-KM8-F	#	2	TIMING GENERATOR (M8330)	
X	B-CS-M849-Ø-1	#	1	RFI SHIELD	
X	D-UA-KK8-E-Ø	B	1	CENTRAL PROCESSOR	
X	A-SP-KK8-E-1	A	3	ENGINEERING SPECIFICATIONS	

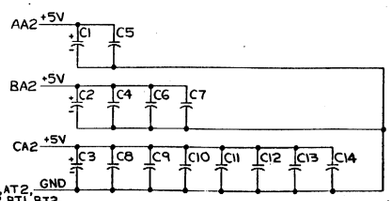
TITLE				
CENTRAL PROCESSOR KK8-E	SHEET 2 OF 2	SIZE A · CODE ML	NUMBER KK8-E	REV. H

DRA 132

DEC 16-(325)-1048-1-N471

NOTES:





AG2, AF1, AF2, AN1, AN2, AT1, AT2, BC1, BC2, BF1, BF2, BN1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CN2, CT1, CT2, DC1, DC2, DF1, DF2, DN1 & DT2

A/R	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		WIRE #22 AWG SOLID	9107560-01	24
6	E9,E19,E30,E41,E51,E62	I.C. DEC 74153	1909937	23
12	E6,E11,E16,E21,E23,E28,E33,E38,E43,E48,E53,E58	I.C. DEC 74151	1909936	22
3	E7,E32,E60	I.C. DEC 8235	1909935	21
8	E5,E12,E14,E26,E34,E36,E56,E59	I.C. DEC 8266	1909934	20
3	E15,E37,E52	I.C. DEC 7483	1909932	19
2	E63,E64	I.C. DEC 74H04	1909931	18
3	E10,E31,E57	I.C. DEC 74H87	1909927	17
6	E1,E2,E22,E27,E44,E49	I.C. DEC 8881	1909705	16
15	E3,E4,E8,E17,E20,E24,E25,E29,E35,E42,E46,E47,E50,E54,E55	I.C. DEC 8271	1909615	15
1	E40	I.C. DEC 7402	1909004	14
1	E45	I.C. DEC 7430	1905578	13
1	E18	I.C. DEC 7420	1905577	12
3	E13,E35,E61	I.C. DEC 7400	1905575	11
1	R1	RESISTOR 470 1/4W 5%	1300316	10
11	C4 - C14	CAP .01UF 100V 20% DISC	1001610	9
3	C1,C2,C3	CAP 6.8UF 35V 20% TANT	1000067	8
4		EYELETS GS4-11 STIMPSON	9000750	7
2		SPACER (CABLE CLAMP)	1202704	6
1		HANDLE FLIP CHIP-MAGENTA	9003337-06	5
1		ETCHED CIRCUIT BOARD	5009250	4
REF		MODULE HISTORY LIST	3-MH-M8320-06	3
REF		ASSY/DRILLING HOLE LAYOUT	D-MS-M8320-05	2
QTY.		XY COORDINATE HOLE LOCATION	D-CO-M8320-04	1

PARTS LIST

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

GND AND 5V ARE USUALLY PIN 7 AND 16 RESPECTFULLY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

REV	DATE	BY	CHANGE NO.	REVISIONS
A	4-13-73	L. TURNER	M8300-00001	
B	5-22-73	KLOTZ		

REV COLUMN B

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH. REVISION

DRW. E.C.S. 1.0 DATE 1/1/71
CHK'D DATE
ENGR DATE
PROJ. ENGR. DATE
PROD. DATE

FIRST USED ON D-UA-KK8-E-0
SCALE 2/1
SHEET 1 OF 5

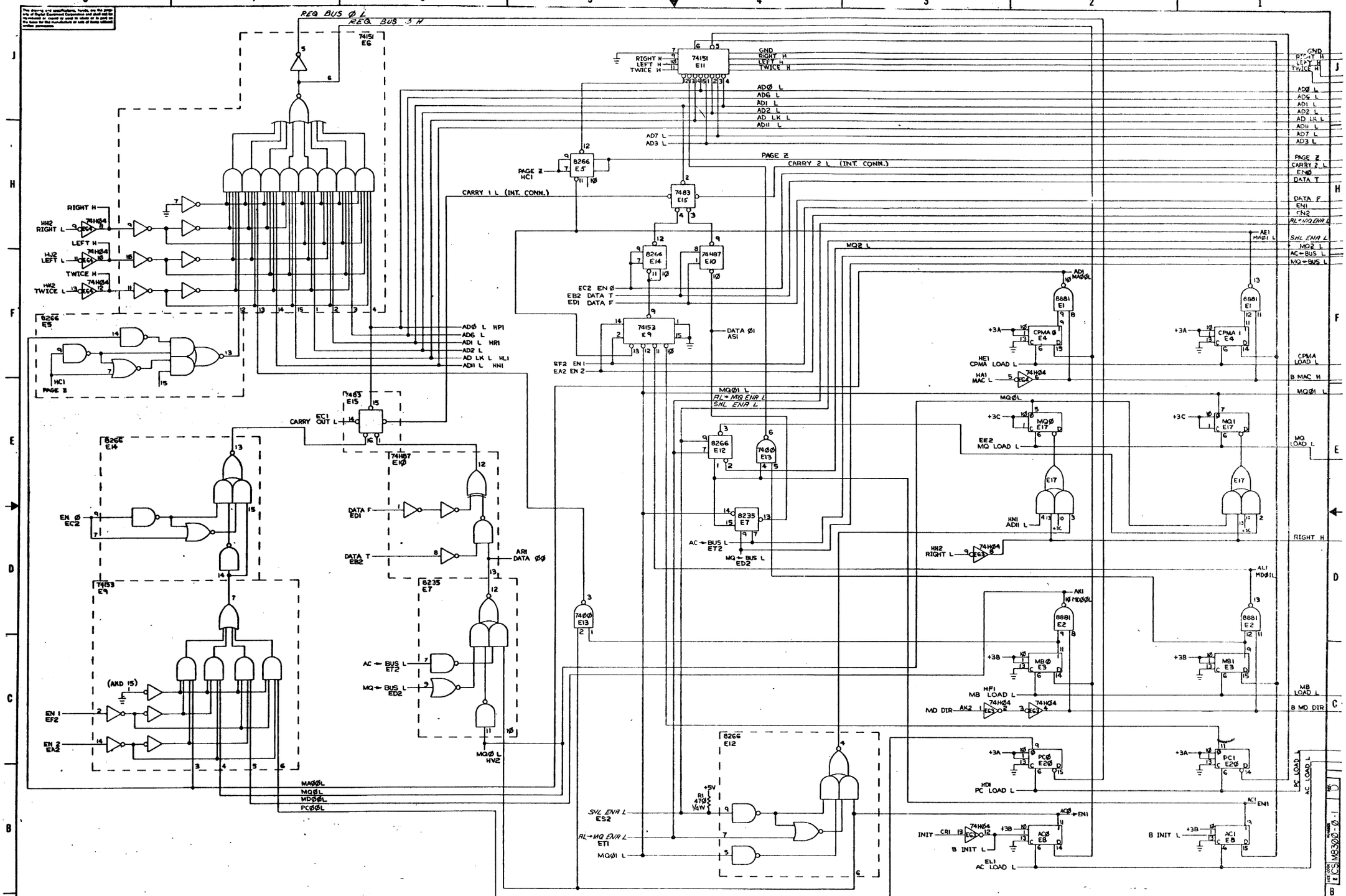
DEC NO. EIA NO.
SEMICONDUCTOR CONVERSION CHART

EQUIPMENT CORPORATION

TITLE MAJOR REGISTERS (KK8/E)

SIZE D CODE E C S NUMBER M8320-0-1 REV. D
DIST.

M8300-0-1
E C S



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 E3Ø — 15

THIS DENOTES A CONNECTION BETWEEN E19 PIN 14 AND E3Ø PIN 14, E19 PIN 2 AND E3Ø PIN 2 (ALSO PINS 1 AND 15 ON EACH I.C.). THIS ALSO IS TRUE FOR OTHER CASES SUCH AS 8266, 74H87, AND 7415I.

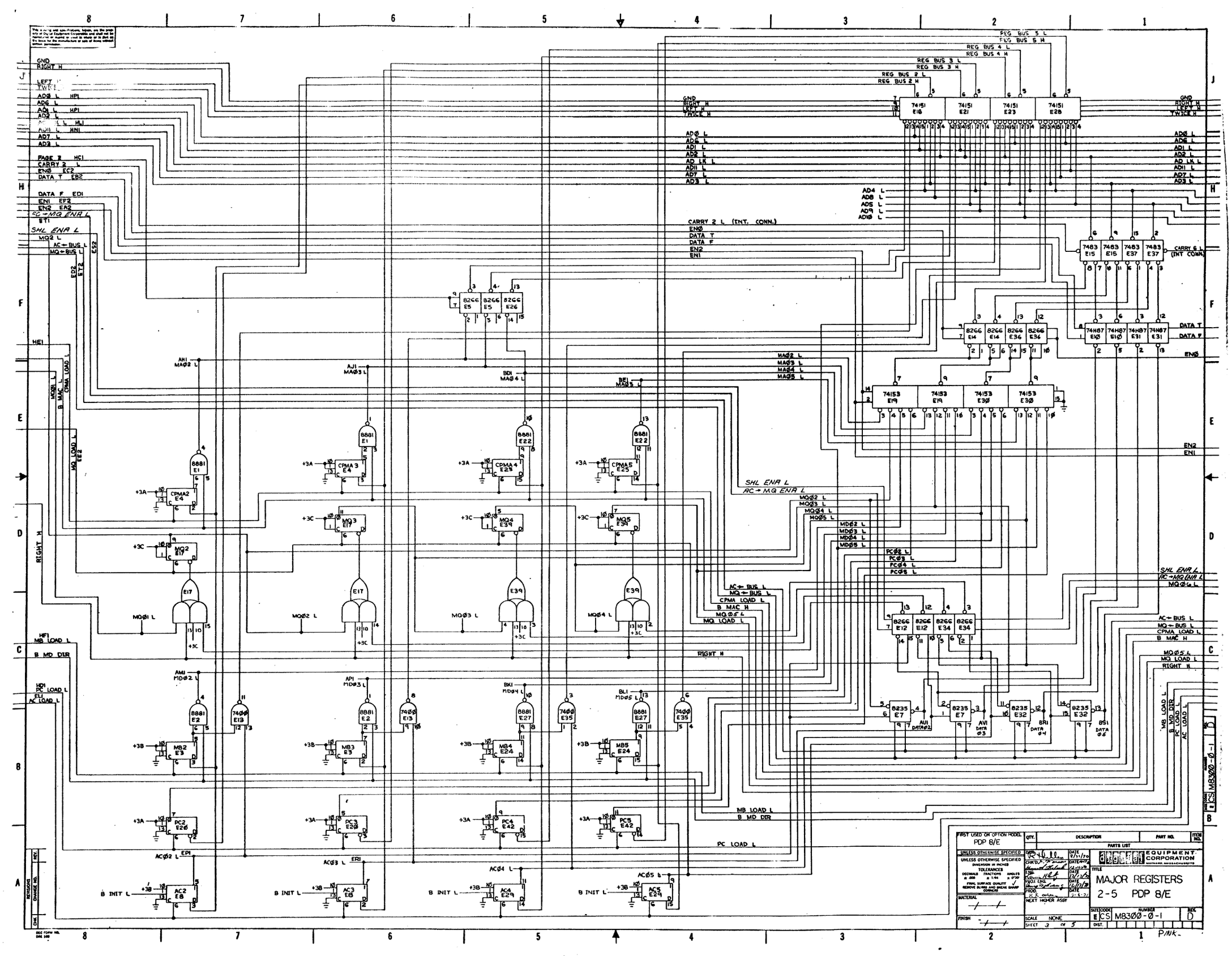
FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
PDP 8/E		PARTS LIST	

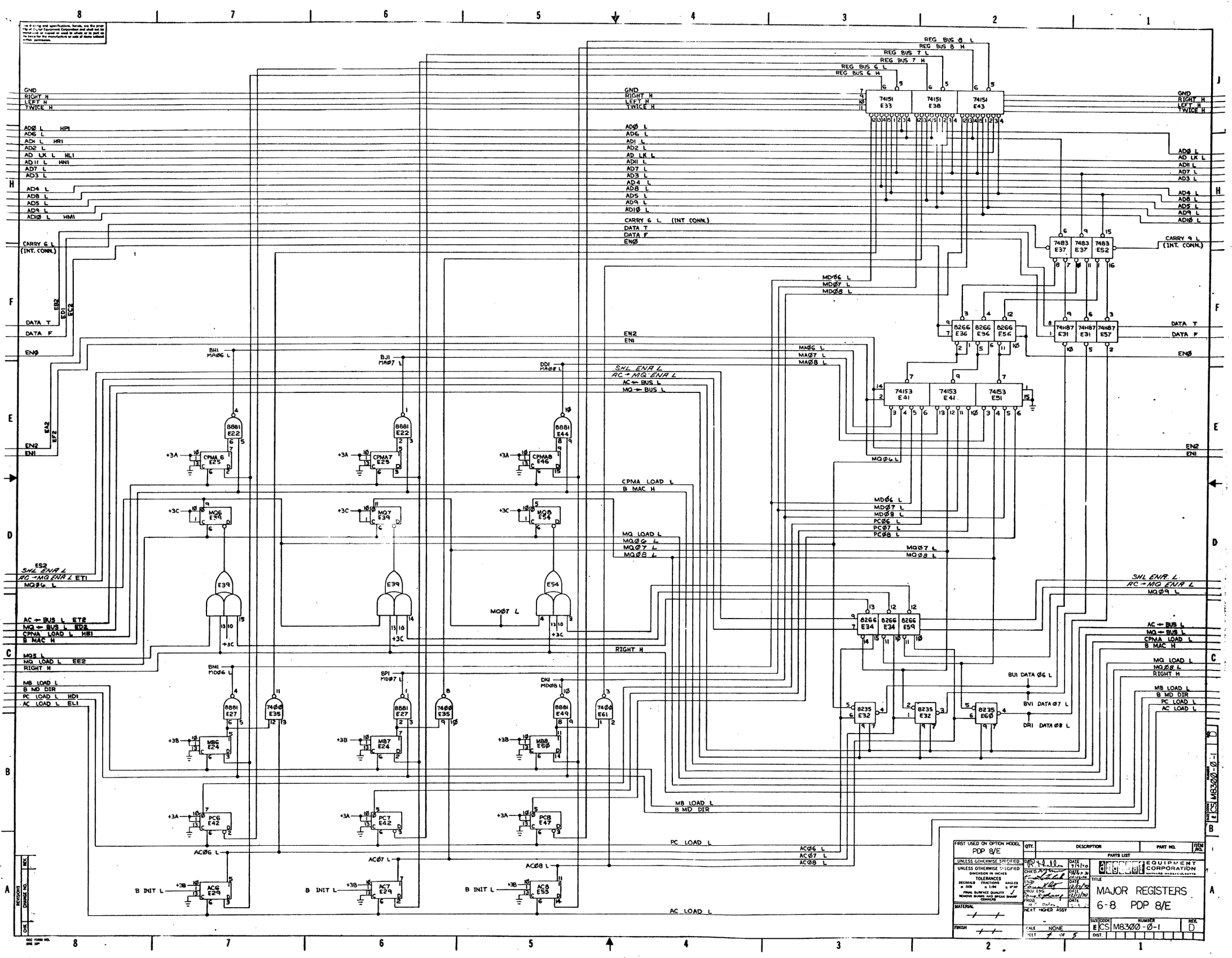
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY 125 MICRO INCH AND BREAK SHARP CORNERS
MATERIAL
FINISH

DRWN D.F. DATE 9/1/70
CHK'D. DATE 9/1/70
PROJ. ENG. DATE 7-6-72
NEXT HIGHER ASSY A-ML-KK8-E
SCALE NONE
SHEET 2 OF 5

EQUIPMENT CORPORATION
TITLE: MAJOR REGISTERS Ø & 1 PDP 8/E
SIZE E | CODE | NUMBER CS M8300-Ø-1 | REV D
DIST

REVISIONS: REV. | CHANGE NO. | DRN.


MAJOR REGISTERS
2-5 PDP 8/E
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
ECS M8300-0-1
REV. D
SHEET 3 OF 5
SCALE NONE
FIRST USED ON OPTION MODEL PDP 8/E
UNLESS OTHERWISE SPECIFIED
DRWN. 10-10-70
CHK'D. 10-10-70
ENG. 10-10-70
PROJ. ENG. 10-10-70
PROD. 10-10-70
NEXT HIGHER ASSY
MATERIAL
FINISH
QTY.
DESCRIPTION
PART NO.
ITEM NO.
PARTS LIST
DATE 9/1/70
DATE 10/1/70
DATE 10/1/70
DATE 10/10/70
DATE 10-10-70
DATE 12/1/70
DATE 12/10/70
DATE 12-10-70
SIZE CODE E
NUMBER ECS M8300-0-1
REV. D
DIST.
REVISIONS
REV.
CHANGE NO.
CHK.
DEC FORM NO. DNC 100
GND
RIGHT H
LEFT H
TWICE H
ADØ L HPI
AD1 L
AD2 L
AD3 L HLI
AD4 L HNI
AD5 L
AD6 L
AD7 L
AD8 L
AD9 L
ADIØ L
AD11 L
AD LK L
PAGE R HCI
CARRY 2 L
ENØ EC2
DATA T EB2
DATA F EDI
EN1 EF2
EN2 EA2
SHL ENA L
MQ2 L
AC→BUS L
MQ→BUS L
ES2
ED2
ET2
HEI
MQØ1 L
B MAC L
CPMA LOAD L
MQ LOAD L
EE2
RIGHT H
HFI
MB LOAD L
B MD DIR
HDI
PC LOAD L
ELI
AC LOAD L
ACØ2 L EPI
ACØ3 L ERI
ACØ4 L
ACØ5 L
B INIT L
AHI MAØ2 L
AJI MAØ3 L
BDI MAØ4 L
BEI MAØ5 L
AMI MDØ2 L
API MDØ3 L
BKI MDØ4 L
BLI MDØ5 L
AC→MQ ENA L
MQØ1 L
MQØ2 L
MQØ3 L
MQØ4 L
MQØ5 L
MDØ2 L
MDØ3 L
MDØ4 L
MDØ5 L
PCØ2 L
PCØ3 L
PCØ4 L
PCØ5 L
CARRY 2 L (INT. CONN.)
CARRY 6 L (INT CONN.)
DATA T
DATA F
EN2
EN1
MQØ5 L
AUI DATAØ2
AVI DATA Ø3
BRI DATA Ø4
BSI DATA Ø5
74151 E16
74151 E21
74151 E23
74151 E28
7483 E15
7483 E15
7483 E37
7483 E37
74H87 E10
74H87 51Ø
74H87 E31
74H87 E31
74153 E19
74153 E19
74153 E30
74153 E30
8266 E5
8266 E5
8266 E26
8266 E14
8266 E14
8266 E36
8266 E36
8266 E12
8266 E12
8266 E34
8266 E34
8881 E1
8881 E22
8881 E2
8881 E27
8235 E7
8235 E32
7400 E13
7400 E35
CPMA 2 E4
CPMA 3 E4
CPMA 4 E23
CPMA 5 E25
MQ2 E17
MQ3 E17
MQ4 E39
MQ5 E34
MB2 E3
MB3 E3
MB4 E24
MB5 E24
PC2 E26
PC3 E20
PC4 E42
PC5 E42
AC2 E8
AC3 E8
AC4 E29
AC5 E29
+3A
+3B
+3C



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

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

MATERIAL

FINISH

DRWN: N. Hall DATE 1/1/70
CHK'D: A. Kotok DATE 1/8/70
ENGR: Edward Kilgallen DATE 1/8/70
ENGR ENG: George Rogers DATE 1/8/70
PROJ. ENGR: N. Hall DATE 1/8/70
NEXT HIGHER ASSY

SCALE NONE
SHEET 1 OF 5

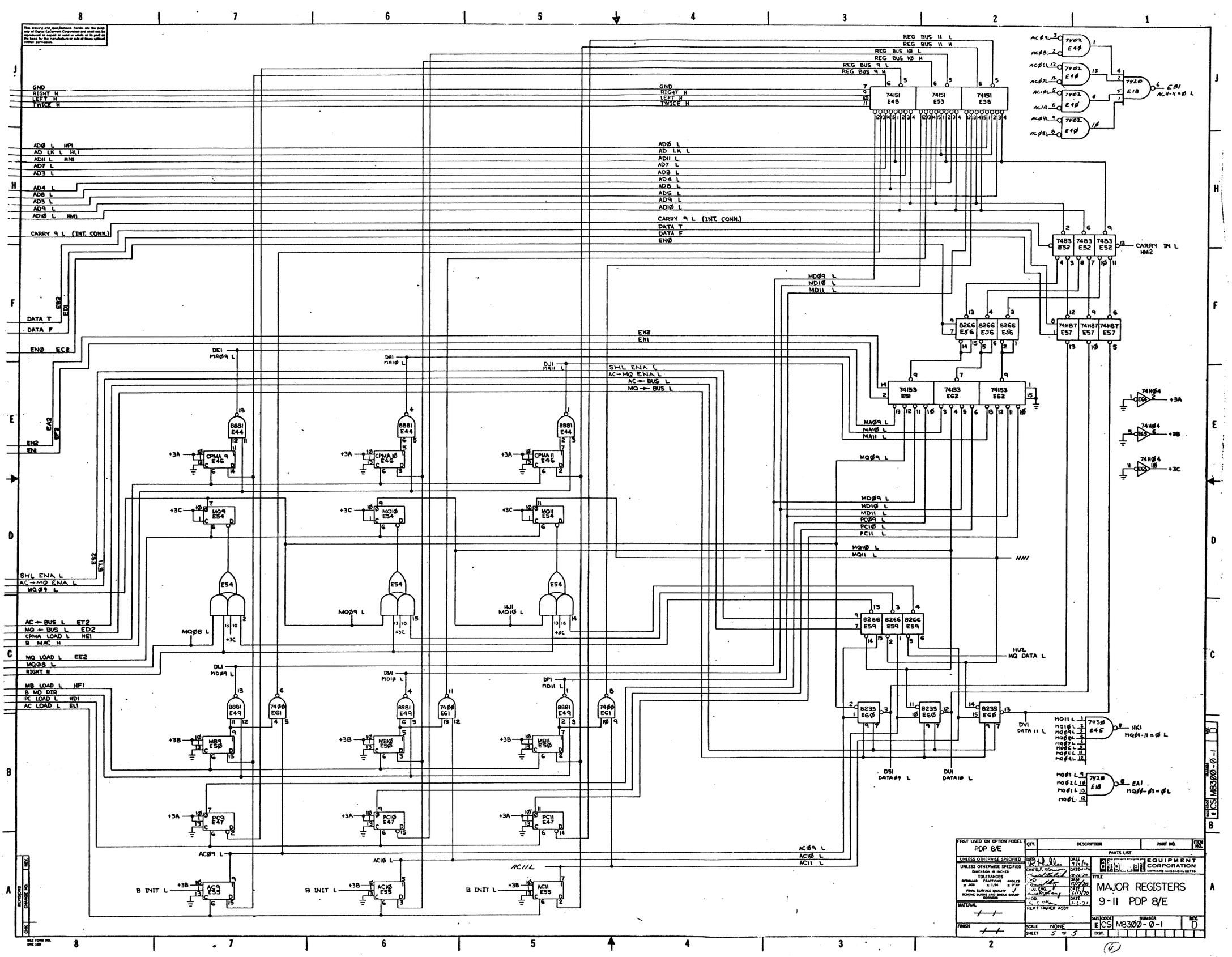
DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
MAJOR REGISTERS
6-8 PDP 8/E

SIZE E | CODE CS | NUMBER M8300-0-1 | REV. D
DIST.

REVISIONS			
REV.	CHANGE NO.	DATE	CHK.

DEC FORM NO. 1010 SEP



FIRST USED ON OPTION MODEL: PDP 8/E	QTY.	DESCRIPTION	PART NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30' FINAL SURFACE QUALITY 125 REMOVE BURRS AND BREAK SHARP CORNERS	PARTS LIST		
MATERIAL —	NEXT HIGHER ASSY		
FINISH —	SCALE NONE	SHEET 5 OF 5	

DRAWN C.T.O. DATE 7/1/70
CHK'D T. Mann DATE 7/17/70
J.J. ENG DATE 2/13/70
PROD. DATE 7-1-71

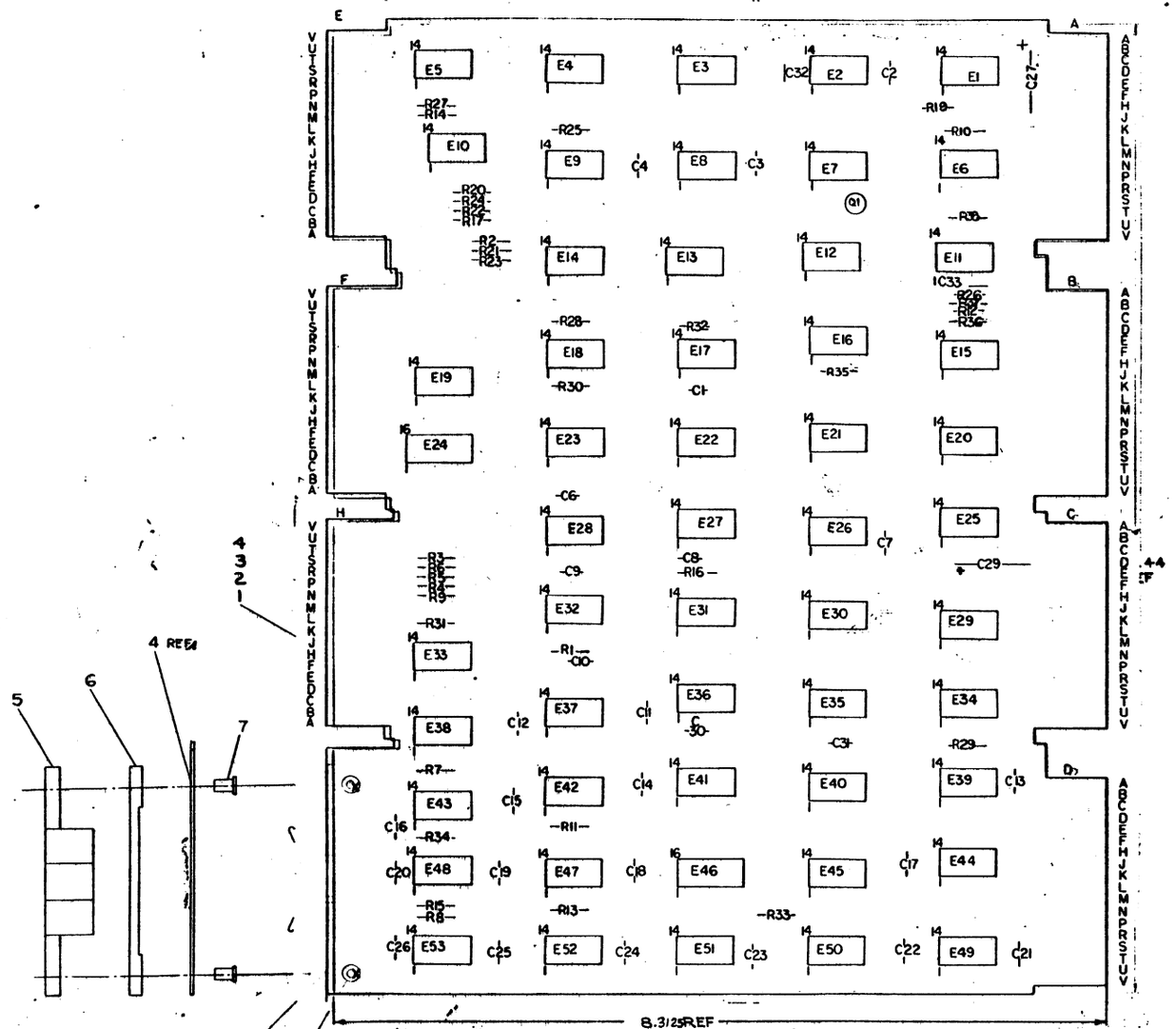
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

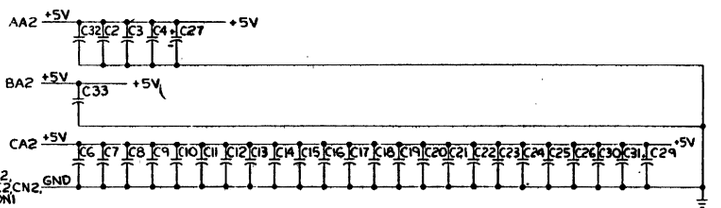
TITLE: MAJOR REGISTERS 9-11 PDP 8/E

SIZE E | CODE CS | NUMBER M8300-0-1 | REV D | DIST.

REVISIONS: REV. | CHANGE NO. | ONE

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	1909931	25
1	R35	RES 100, 1/4W, 5%	1300229	24
1	E38	I.C. DEC 7486	1910011	23
3	E9, E11, E13	I.C. DEC 7412	1909955	22
1	E24	I.C. DEC 74151	1909936	21
4	E8, E10, E27, E28	I.C. DEC 7405	1909930	20
12	E1-E5, E23, E43, E44, E49, E52, E53, E15	I.C. DEC 8881	1909705	19
7	E6, E16, E20, E26, 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
22	C1-C4, C6-C26, C30-33	CAP. .01UF, 100V, 20% DISC	1001610	9
2	C27, C29	CAP. 6.8UF, 35V. 20% S.TANT	1000067	8
2		EYELETS GS4-11 STIMPSON	9C06750	7
1		SPACER (CABLE CLAMP)	1202704	6
1		HANDLE, FLIP CHIP - MAGENTA	9C08337-06	5
1		ETCHED CIRCUIT BOARD	5009278	4
REF		MODULE ECO HISTORY	D-MH-M8310-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-MH-M8310-0-5	2
REF		X-Y COORDINATE HOLE LOC.	D-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

REV	CHANGE NO	DATE	BY
A	M8310-00001	7-31-71	LOUIS KLOTZ
B	M8310-00002	10-21-71	LOUIS KLOTZ
C	M8310-00004	7-31-71	LOUIS KLOTZ
D	M8310-00005	7-31-71	LOUIS KLOTZ
E	M8310-00006	7-31-71	LOUIS KLOTZ
F	M8310-00007	7-31-71	LOUIS KLOTZ

DEC3200B 2N3646

REV COLUMN

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH REVISION

DRN	DATE 7/31/71	
CHK'D	DATE 7/31/71	
ENG	DATE 7/31/71	
PROJ ENG	DATE 7/31/71	
PROD	DATE 7/31/71	

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

DEC NO EIA NO.

SEMICONDUCTOR CONVERSION CHART

EQUIPMENT CORPORATION

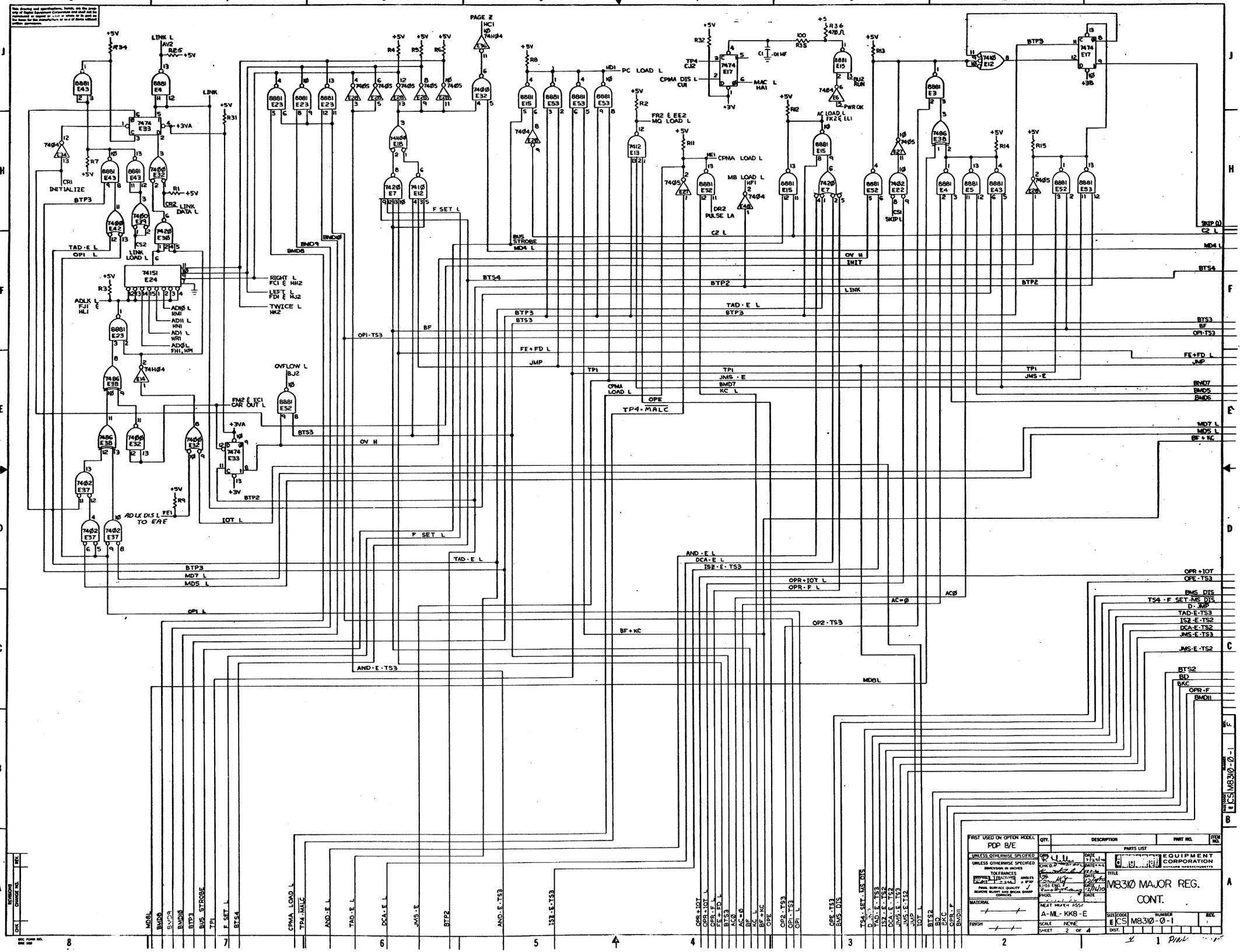
TITLE MAJOR REG. CONT. (M8310)

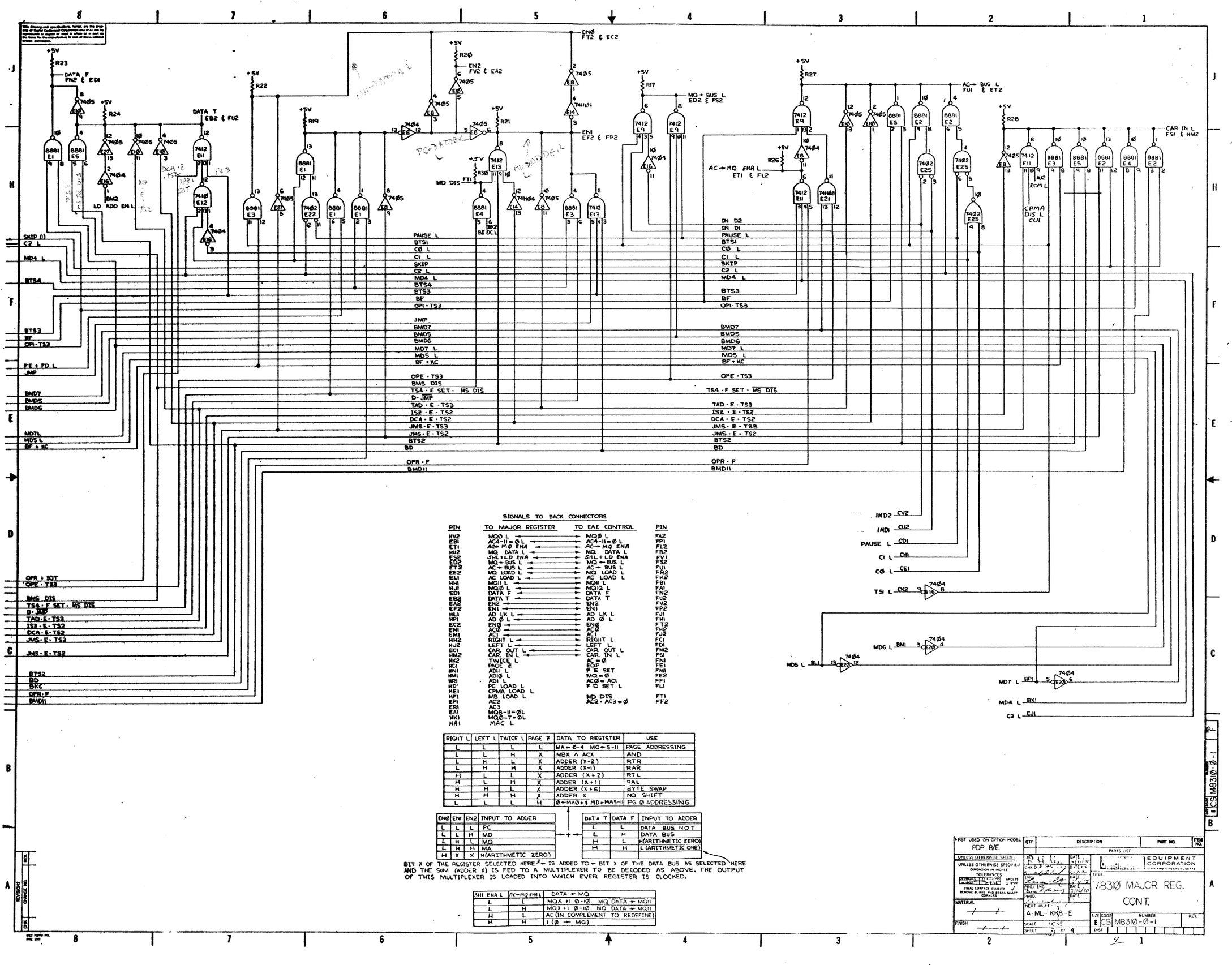
SIZE CODE IDENT NO. DWG NUMBER REV.
E CS M8310-01

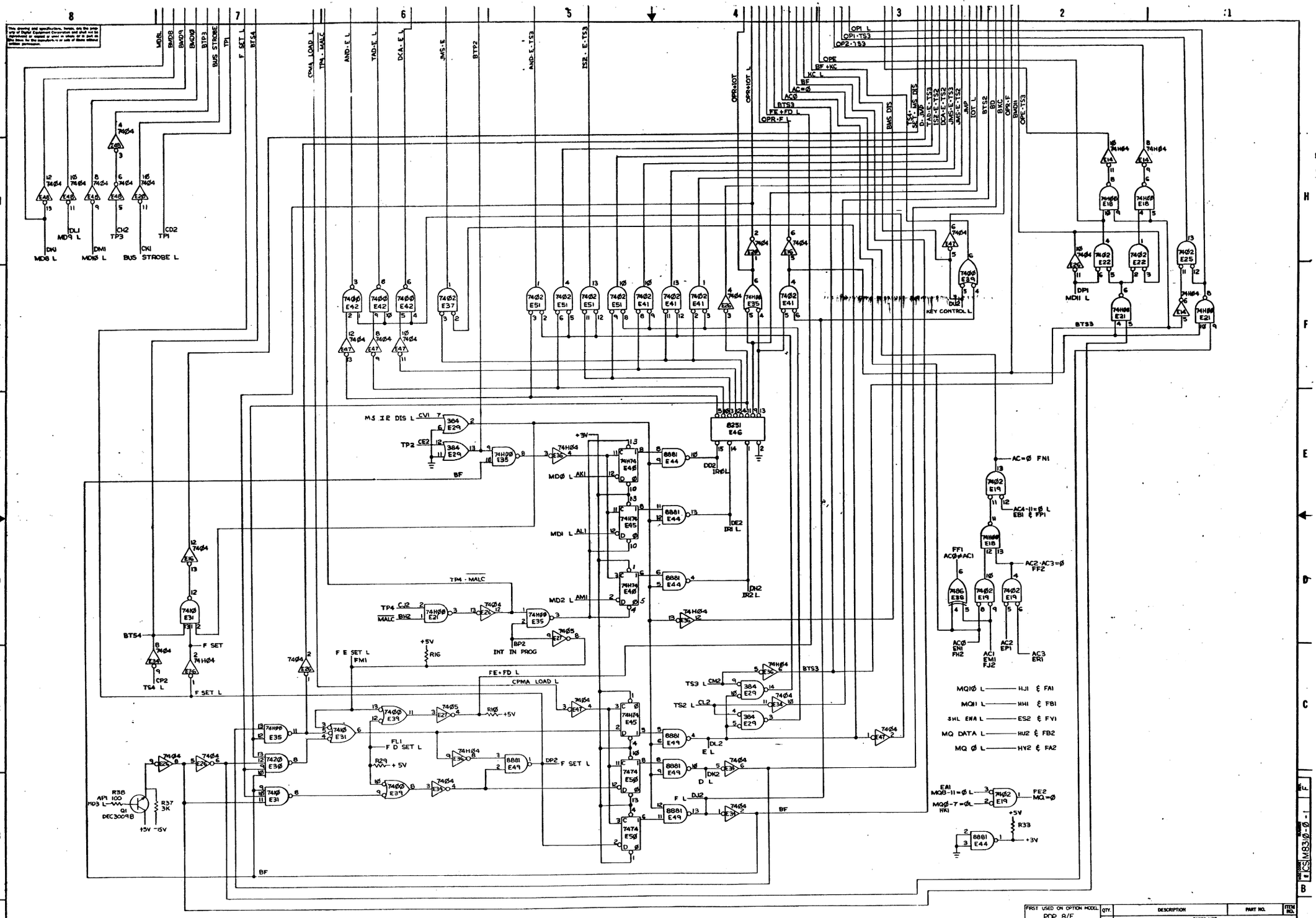
SCALE 2/1 SHT 1 OF 2

DST.

1 1 PINK


PAGE 2
LINK L
INITIALIZE
LINK
LINK LOAD L
LINK DATA L
TAD·E L
OP1 L
BTP3
BTP2
BTS3
BTS4
F SET L
IOT L
OV H
OVFLOW L
CPMA LOAD L
PC LOAD L
MQ LOAD L
MB LOAD L
AC LOAD L
DR2 PULSE LA
BUS STROBE
MD4 L
JMP
JMS·E
BF
OPE
TP4·MALC
AND·E·TS3
OPR+IOT
OPR·F L
AC=Ø
ACØ
BF+KC
OP2·TS3
MD8L
SKIP Ø
C2 L
LINK
TP1
FE+FD L
BMD7
BMD5
BMD6
MD7 L
MD5 L
BF+KC
OPR+IOT
OPE·TS3
BMS DIS
TS4·F SET·MS DIS
D·JMP
TAD·E·TS3
IS2·E·TS2
DCA·E·TS2
JMS·E·TS3
JMS·E·TS2
BTS2
BD
BKC
OPR·F
BMDII
M8310-Ø-1
MODEL
PDP 8/E
A-ML-KK8-E
NEXT HIGHER ASSY
SCALE NONE
SHEET 2 OF 4
EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
M8310 MAJOR REG. CONT.
DIGITAL


SIGNALS TO BACK CONNECTORS
PIN | TO MAJOR REGISTER | TO EAE CONTROL | PIN
HV2 | MQØ L | MQØ L | FA2
EBI | AC4-11=Ø L | AC4-11=Ø L | FPI
ETI | AC← MQ ENA | AC← MQ ENA | FL2
HV2 | MQ DATA L | MQ DATA L | FB2
ES2 | SHL+LD ENA | SHL+LD ENA | FVI
ED2 | MQ← BUS L | MQ← BUS L | FS2
ET2 | AC← BUS L | AC← BUS L | FUI
EE2 | MQ LOAD L | MQ LOAD L | FR2
ELI | AC LOAD L | AC LOAD L | FW2
HNI | MQII L | MQII L | FBI
HJI | MQIØ L | MQIØ L | FAI
EDI | DATA F | DATA F | FN2
EB2 | DATA T | DATA T | FU2
EA2 | EN2 | EN2 | FV2
EF2 | EN1 | EN1 | FP2
HLI | AD LK L | AD LK L | FJI
HPI | AD Ø L | AD Ø L | FHI
EC2 | ENØ | ENØ | FT2
ENI | ACØ | ACØ | FH2
EMI | ACI | ACI | FJ2
NH2 | RIGHT L | RIGHT L | FCI
HJ2 | LEFT L | LEFT L | FDI
ECI | CAR. OUT L | CAR. OUT L | FM2
HM2 | CAR. IN L | CAR. IN L | FSI
HK2 | TWICE L | AC=Ø | FNI
HCI | RQST 2 | EOP | FEI
HNI | ADIL L | F IE SET | FMI
HMI | ADIØ L | MQ=Ø | FE2
HRI | ADI L | ACØ=ACI | FFI
HD' | PC LOAD L | F D SET L | FLI
ME1 | CPMA LOAD L | |
HF1 | MB LOAD L | MD DIS | FTI
EPI | AC2 | AC2·AC3=Ø | FF2
ERI | AC3 | |
EAI | MQ8-11=ØL | |
HKI | MQØ-7=ØL | |
HAI | MAC L | |
RIGHT L | LEFT L | TWICE L | PAGE Ø | DATA TO REGISTER | USE
L | L | L | L | MA← Ø-4 MQ← 5-11 | PAGE ADDRESSING
L | L | H | X | MBX ∧ ACX | AND
L | H | L | X | ADDER (X-2) | RTR
L | H | H | X | ADDER (X-1) | RAR
H | L | L | X | ADDER (X+2) | RTL
H | L | H | X | ADDER (X+1) | RAL
H | H | L | X | ADDER (X+6) | BYTE SWAP
H | H | H | X | ADDER X | NO SHIFT
L | L | L | H | Ø← MAØ-4 MD← MA5-11 | PG Ø ADDRESSING
ENØ | EN1 | EN2 | INPUT TO ADDER
L | L | L | PC
L | L | H | MD
L | H | L | MQ
L | H | H | MA
H | X | X | Ø(ARITHMETIC ZERO)
DATA T | DATA F | INPUT TO ADDER
L | L | DATA BUS NOT
L | H | DATA BUS
H | L | Ø(ARITHMETIC ZERO)
H | H | 1 (ARITHMETIC ONE)
BIT X OF THE REGISTER SELECTED HERE IS ADDED TO BIT X OF THE DATA BUS AS SELECTED HERE AND THE SUM (ADDER X) IS FED TO A MULTIPLEXER TO BE DECODED AS ABOVE. THE OUTPUT OF THIS MULTIPLEXER IS LOADED INTO WHICH EVER REGISTER IS CLOCKED.
SHL ENA L | AC←MQ ENA L | DATA ← MQ
L | L | MQX +1 Ø-1Ø MQ DATA ← MQII
L | H | MQX +1 Ø-1Ø MQ DATA ← MQII
H | L | AC (IN COMPLEMENT TO REDEFINE)
H | H | 1 (Ø ← MQ)
FIRST USED ON OPTION MODEL PDP 8/E
PARTS LIST
QTY. | DESCRIPTION | PART NO. | ITEM NO.
EQUIPMENT CORPORATION
TITLE
M8310 MAJOR REG. CONT.
SIZE E | CODE CS | NUMBER M8310-0-1 | REV.
MATERIAL
FINISH
SCALE NONE
SHEET 3 OF 4
NEXT HIGHER A-ML-KK8-E
REVISIONS REV. CHANGE NO. DWN
CS M8310-0-1

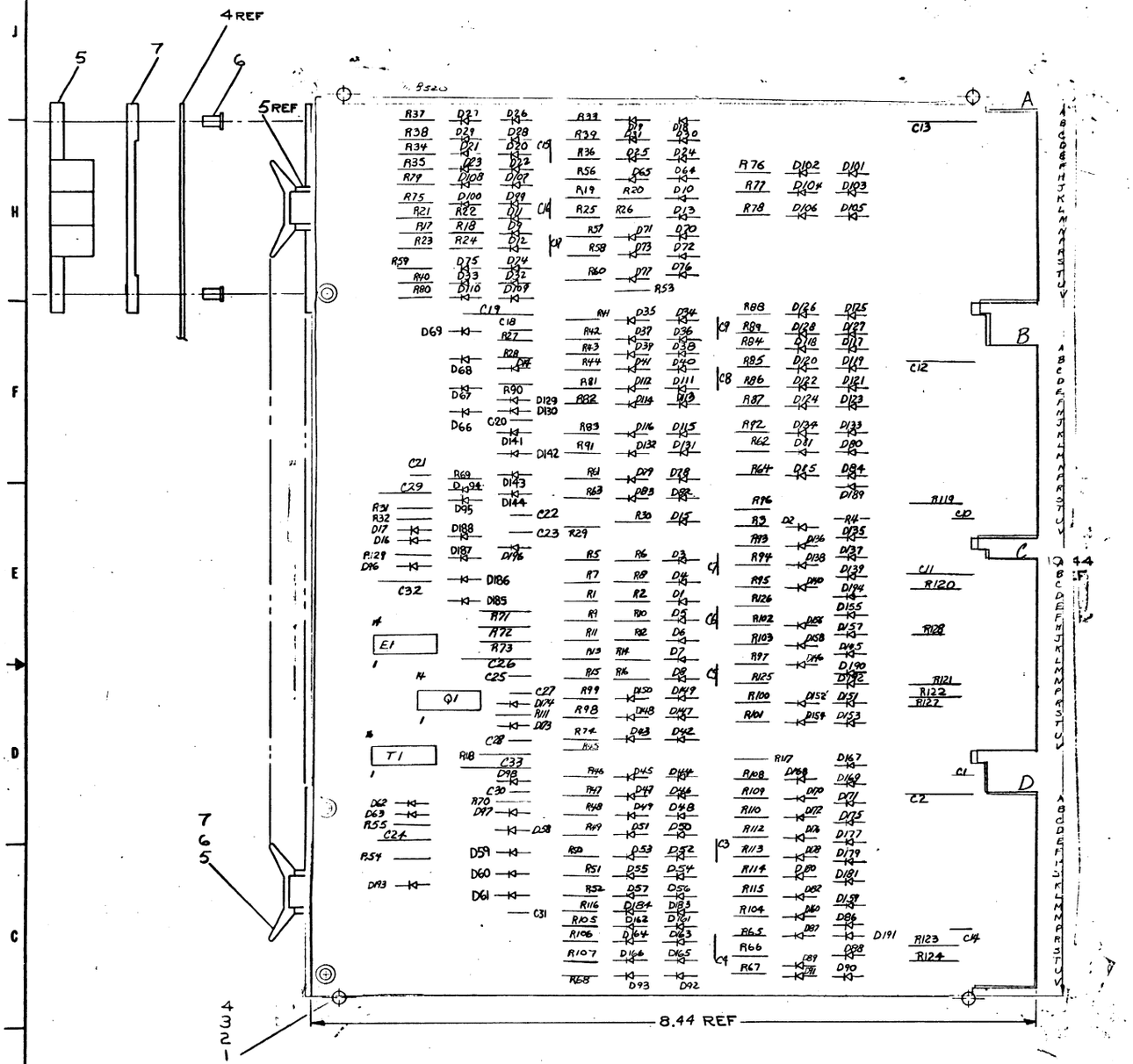


FIRST USED ON OPTION MODEL PDP 8/E	QTY.	DESCRIPTION	PART NO. / ITEM NO.
UNLESS OTHERWISE SPEC.	PARTS LIST		
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS ± FRACTIONS ± ANGLES ± FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS	DRN 7/12/70 CHK DES ENG PROD	DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS	
MATERIAL	HEAT MICHEY ANSY	TITLE M8310 MAJOR REG CONT.	
FINISH	A-ML-KK8-E	SIZE E CODE CS NUMBER M8310-0-1 REV. F	
	SCALE NONE	SHEET 4 OF 4	DIST.

REVISIONS — REV. — CHANGE NO. — DR.

M8310-0-1

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.



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		
12	R57-R68	RES 1K 1/4 W 5%	1300365	23
AR		GRIPLET	1210249-0	22
3	C24, C29, C32	CAP 330DF 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 9320	19-5975	18
1	T1	PULSE XMFR 8010 DUAL INLINE	1609651	17
1	Q1	TRANS DEC 4008	1510015	16
6	E119-E124	RES 1K 1/2W 10%	1302187	15
4	E77-E273, E118	RES 1.2K 1/2W 10%	1300387	14
16	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, R118, 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	D17, D97	DIODE D672	1105275	10
16	D58-D61, D66-D69, D141-D144, D185-D188	DIODE D662	1100113	9
177	D1-D16, D18-D57, D62-D65, D70-D96, D98-D140, D145-D184, D189-D194, D196	DIODE D664	1100114	8
4		SPACER (CABLE CLAMP)	1202704	7
8		EYELET GS4-11 STIMPSON	9000750	6
4		HANDLE FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	50099486	4
REF		MODULE HISTORY LIST	B-MH-M8328-0-0	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8328-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8328-0-0	1

ETCH BOARD REV D

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

SEMICONDUCTOR CONVERSION CHART

REV.	DESCRIPTION	CHANGE NO.	ORIGINATED
A	M8328-C0201		4-19-72
B	M8328-C0301		4-19-72
C	M8328-00002		4-27-72
D	M8328-00003		4-27-72

DRN. 4-30-71 DATE 3-3-71
CHK'D. DATE
ENG. DATE 5-5-71
PROJ. ENG. DATE 5-5-71
MOD. DATE 11-1-71
FIRST USED ON D-UA-KK8-E-Ø
SCALE 2/1
SHEET 1 OF 2

DIGITAL EQUIPMENT CORPORATION MAYNARD MASS. MASSACHUSETTS

TITLE: BUS LOADS

SIZE B | CODE | NUMBER M8328-0-1 | REV. D

DIST.

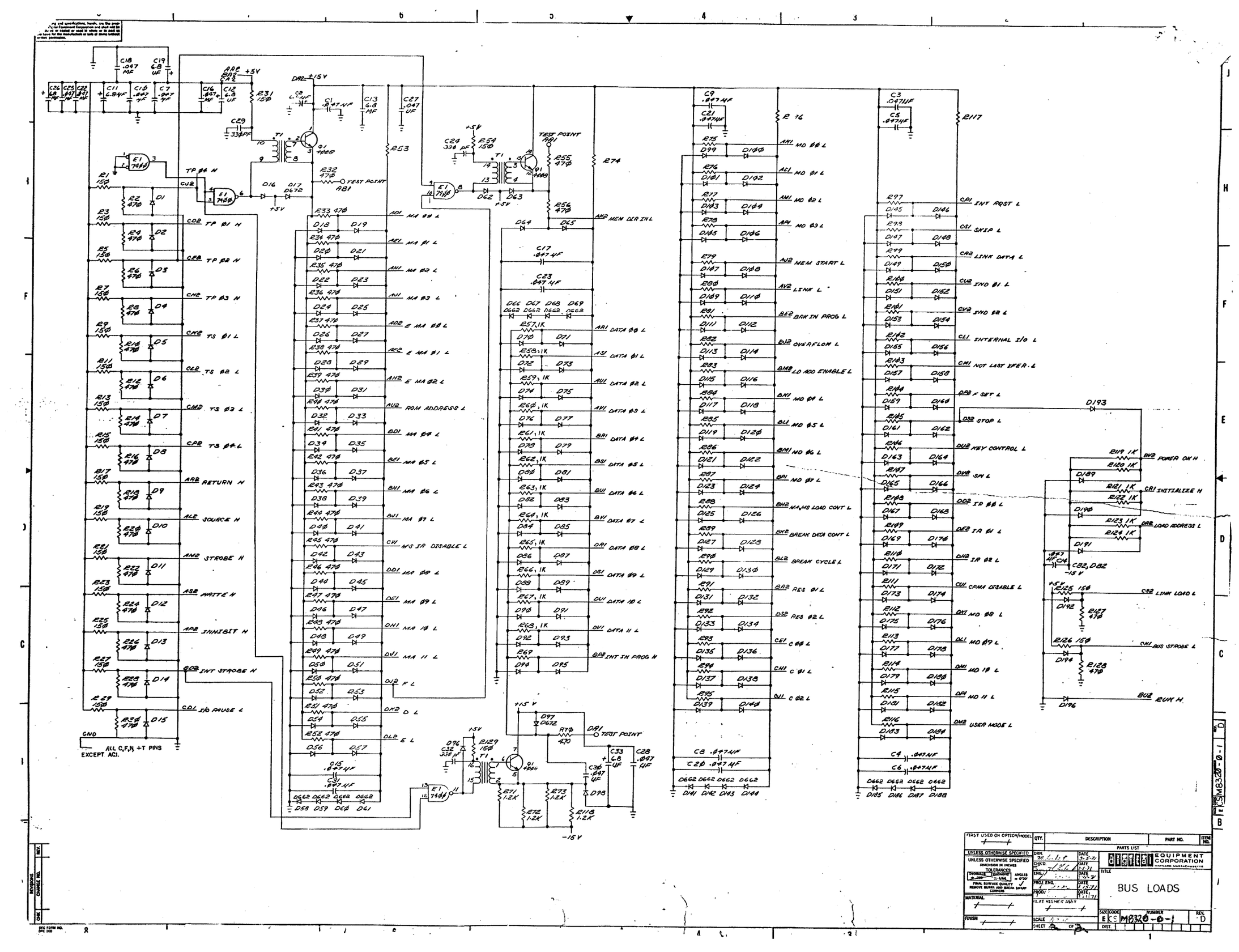
IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE		

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

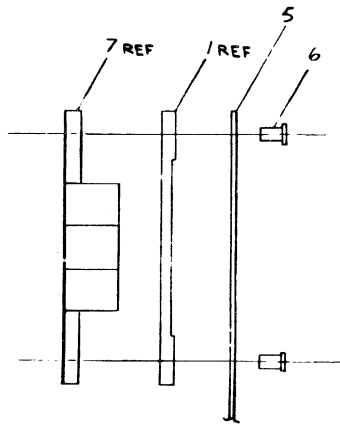
JUMPER LIST

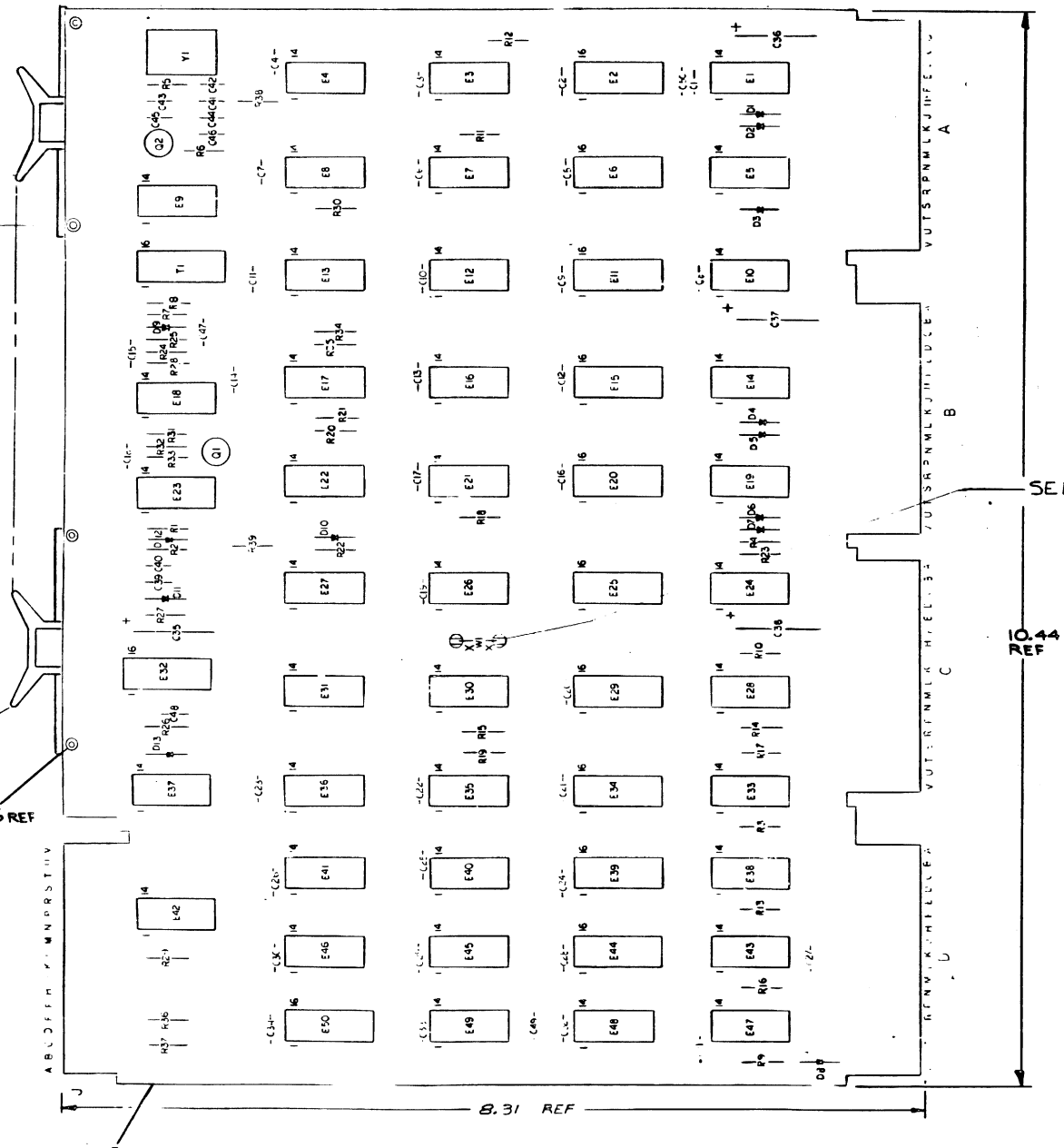
DEC FORM NO. DNS 100


BUS LOADS
DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
SIZE CODE E
NUMBER M8320-0-1
REV D
SCALE 4"
SHEET 2 OF 2
DRN. J.H.F. DATE 3-5-71
CHK'D DATE 3-5-71
ENG. DATE 3-5-71
PROJ. ENG. DATE 3-5-71
PROD. DATE 3-5-71
NEXT HIGHER ASSY
MATERIAL
FINISH
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS
FIRST USED ON OPTION/MODEL
QTY.
DESCRIPTION
PART NO.
ITEM NO.
PARTS LIST
ALL C,F,R, +T PINS EXCEPT AC1.
GND
TP Ø0 N
TP Ø1 N
TP Ø2 N
TP Ø3 N
TS Ø1 L
TS Ø2 L
TS Ø3 L
TS Ø0 L
RETURN N
SOURCE H
STROBE H
WRITE H
INHIBIT H
INT STROBE N
I/O PAUSE L
+5V
+15V
-15V
TEST POINT
INT RQST L
SKIP L
LINK DATA L
IND Ø1 L
IND Ø2 L
INTERNAL I/O L
NOT LAST XFER. L
F SET L
STOP L
KEY CONTROL L
SW L
IR Ø0 L
IR Ø1 L
IR Ø2 L
CPMA DISABLE L
MD Ø0 L
MD Ø1 L
MD 10 L
MD 11 L
USER MODE L
POWER ON H
INITIALIZE H
LOAD ADDRESS L
LINK LOAD L
BUS STROBE L
BUS H
MD Ø0 L
MD Ø1 L
MD Ø2 L
MD Ø3 L
MEM START L
LINK L
BRK IN PROG L
OVERFLOW L
LD MOD ENABLE L
MD Ø4 L
MD Ø5 L
MD Ø6 L
MD Ø7 L
MA/MS LOAD CONT L
BREAK DATA CONT L
BREAK CYCLE L
RES Ø1 L
RES Ø2 L
C Ø0 L
C Ø1 L
C Ø2 L
MEM DEF IN L
INT IN PROG H
MA Ø0 L
MA Ø1 L
MA Ø2 L
MA Ø3 L
E MA Ø0 L
E MA Ø1 L
E MA Ø2 L
ROM ADDRESS L
MA Ø4 L
MA Ø5 L
MA Ø6 L
MA Ø7 L
MS IR DISABLE L
MA Ø8 L
MA Ø9 L
MA 10 L
MA 11 L
F L
D L
E L
DATA Ø0 L
DATA Ø1 L
DATA Ø2 L
DATA Ø3 L
DATA Ø4 L
DATA Ø5 L
DATA Ø6 L
DATA Ø7 L
DATA Ø8 L
DATA Ø9 L
DATA 10 L
DATA 11 L
BUS
ECS M8320-0-1
REV D
DIST
DEC FORM NO. DAE 100

NOTES:

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





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

QTY.	REF DESIGNATION	* DESCRIPTION	PART NO.	ITEM NO.
2	R38, R39	RES 1K 1/4W, 5%	1300369	46
2		SPLIT LUG	9006735	45
1	R6	RES 220 1/4W 5%	1300271	44
1	E27	I.C. DEC 5384	1910394	43
1	E13	I.C. DEC 5380	1910392	42
1	E4	I.C. DEC 5314	1910391	41
1	E50	I.C. DEC 8251	1909594	40
1	E17	I.C. DEC 8881	1909735	39
1	E8	I.C. DEC 74H11	1909267	38
2	E36, 41	I.C. DEC 97401	1909973	37
10	E2, 6, 11, E20, 25, 29, 34, 39, 44	I.C. DEC 74174	1910623	36
1	E32	I.C. DEC 74123	1910436	35
8	E9, 21, 26, 30, 31, 40, 45, 49	I.C. DEC 74H74	1909627	34
12	E3, 5, 7, 10, 13, 16, 22, 24, 33, 43	I.C. DEC 74H0	1905586	33
2	E12, E16	I.C. DEC 74H30	1905575	32
1	E46	I.C. DEC 7420	1905577	31
2	E37 E35	I.C. DEC 7417	1909929	30
1	E48	I.C. DEC 7410	1905576	29
2	E18 E42	I.C. DEC 7404	1909686	28
1	E22	I.C. DEC 7402	1909004	27
2	E23 E47	I.C. DEC 7400	1905575	26
1	Y1	CRYSTAL 20 MC	1807880	25
1	T1	TRANSFORMER	4C965	24
2	Q1, Q2	TRANSISTOR DEC 3T298	1503100	23
1	R27	RES 47A 1/4W 5%	1302177	22
2	R5, R26	RES 10K 1/4W 5%	1300479	21
1	R1	RES 3.3K 1/4W 5%	1302439	20
17	R2, R11, R18, R12, R21, R22, R25, R29, R30, R32, R34, R36, R37	RES 470 1/4W 10%	1300317	19
13	R3, R9, R10, R4, R7, R24, R28, R35	RES 150 1/4W 10%	1302252	18
2	R31, R33	RES 27 1/4W 10%	1301420	17
12	D1-D8, D10-D12	DIODE D664	1100114	16
1	D9	DIODE D662	1100113	15
1	C35	CAP 39 MF, 10V 10% S.TANT	1000076	14
3	C36-C38	CAP 6.8 MF, 35V 10% S.TANT	1005306	13
1	C42	CAP 10PF, 100V 5% C.M	1000016	12
4	C39-C41, C46	CAP .047 MF, 100V +15-20%	1009678	11
1	C43	CAP 33 PF, 100V, 5% C.M	1000009	10
37	C1-C34, C47, C49, C50	CAP .01 MF, 100V 20% DISC	1001610	9
1	C48	CAP 1000 PF, 100V 5% MICA	1000542	8
1	C45	CAP 100 PF, 100V 5% C.M	1000016	7
1	C44	CAP 68 PF, 100V, 5% C.M	1000014	6
3		TRIANGLE FLIP-CHIP MAGENTA	9008337-06	5
6		EYELET 55411 STIMPSON	9006750	4
1		ETCHED CIRCUIT BOARD	5009707	3
REF		MODULE ECO HISTORY	SEE MR8-F-2-6	2
REF		ASSEMBLING HOLE LAYOUT	SEE MR8-F-2-5	1
REF		X-Y COORDINATE HOLE LOCATION	SEE MR8-F-2-4	0
		SPACER CABLE CLAMP	1202704	

FIRST USED ON OPTION MODULE: MR8-F

PARTS LIST

ETCH BOARD REV D

IC TYPE	GND	+5V
DEC 74174	8	16
DEC 8251	7	26
DEC 5314	1	8
DEC 5380	1	8
DEC 5384	1	8

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

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT
		W1	

JUMPER LIST

SEE NOTE 1

DEC NO.	EIA NO.
DEC 2007M	2N5696
D664	11.360a
D662	11N645

SEMICONDUCTOR CONVERSION CHART

ORIGINATED FOR MR330-0004

	DATE
DRAWN	
CHKD	
ENG	
MFG	

EQUIPMENT CORPORATION.

TITLE: TIMING GENERATOR

SIZE: E | CODE: CS | NUMBER: MR330-0-1 | REV: E

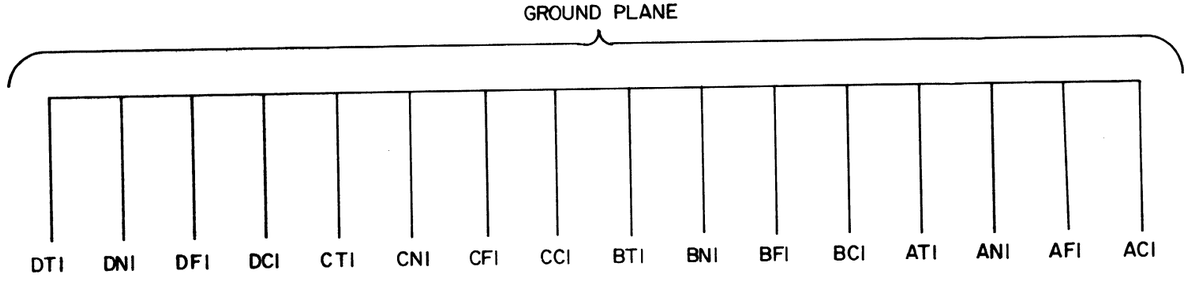
SCALE | SHEET 1 OF 2 | DIST.

MR330-0-1

DIGITAL EQUIPMENT CORPORATION

STOP L
MEM START L
PWR NOT OK L
KEY CONTROL L
RUN L
+5V
+3V
-3V
TP3
TP2 H
TP4 H
TSI H
TSI L
TS2 L
TS3 L
TS4 L
TP1 H
TP3 H
TP4 H
PWR NOT OK L
FETCH H
INT RQST L
P SET L
MS OR DISABLE
INT STROBE H
I/O PAUSE L
RETURN H
SOURCE H
INHIBIT H
I/O TIME (1)
STROBE H
WRITE H
INT STROBE H
INITIALIZEN
PWR OK H
USER MODE H
DEFER L
FETCH L
TP4 H
FAST (0)
EAE CLOCK
BUS STROBE
NOT LAST XFER L
STALL L
BREAK CYCLE L
RUN L
TO EAE (WHEN USED)
INTERNAL I/O L
SKIP L
DS2 STOP L
LINK DEMAND L
LINK LOCK L
TIMING GENERATOR
EQUIPMENT CORPORATION
MR8-F
SIZE E CODE CS NUMBER MR8-CO-1 REV.
SCALE
SHEET OF

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



REVISIONS

REV.	CHG NO.	CHK

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

TRANSISTOR & DIODE CONVERSION CHART

DEC	EIA	DEC	EIA

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: RFI SHIELD M849

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

PRINTED CIRCUIT REV. D

DIST. 324,434,435
5 PINK

DEC FORM NO.
DRB 102

MASTER DRAWING LIST

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

USED ON OPTIONS							
PDP8/E							
PDP8/M							

REVISIONS REV.	DATE	CHG. NO.	APP'D.
A	4/71	M865-3	JM
B	8/71	KL8E-3	
C	12/71	KL8E-4	
D	1/72	SE-55	
E	1/72	KL8E-5	

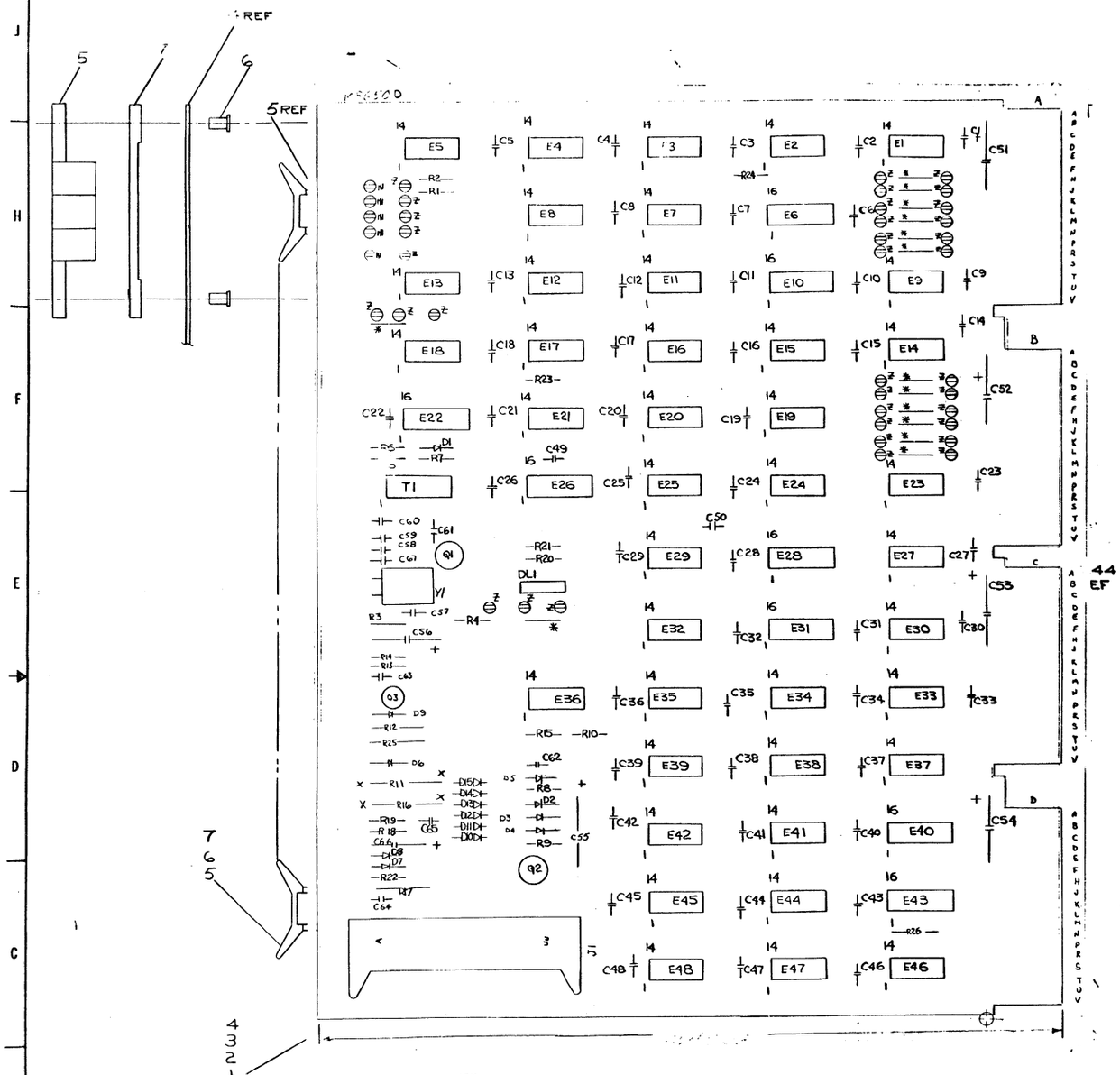
DRN. K. GULICK	DATE 12-3-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. K. GULICK	DATE 12-3-70	
ENG. MCNAMARA	DATE 1-13-71	TITLE ASYNC DATA CONTROL
PROJ. ENG. VOGELSANG	DATE 1-13-71	
PROD. L. SAYLOR	DATE 1-13-71	
FIRST USED ON PDP8/E		SIZE A · CODE ML · NUMBER KL8-E · REV E
SCALE		DIST.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

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

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

DRA 132

DEC 16 (325) 1048-1 N471



NOTES:

1. ⁴ ⁵ ᴬ ᴮ² = SPLIT LUGS
   A = MACHINE INSERTED JUMPER
   B = 40 PIN HEADER CONNECTION
   DATA II 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:

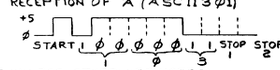
IF 'D' SHOWN THUS D, '1' STATE = Q STATE.

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

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

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

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



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

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	R12,R25	RES. 1.5K 1/2W 5%	1300399	59
1	R22	RES. 82 1/4W 5%	1301477	58
5	E1,E23,E27,E30,E46	I.C. DEC 5380	1910392	57
4	E2,E15,E33,E37	I.C. DEC 97401	1909973	56
9	E3 E4,E7,E8,E16, E20,E29,E38,E48	I.C. DEC 7474	1905547	55
3	E5,E13,E18	I.C. DEC 7493	1909054	54
5	E6,E10,E26,E28,E31	I.C. DEC 8271	1909615	53
2	E9,E14	I.C. DEC 5314	1910391	52
3	E11,E45,E47	I.C. DEC 7402	1909064	51
3	E12,E41,E44	I.C. DEC 7400	1905575	50
1	E17	I.C. MC1489L EIA RECIEVER	1910323	49
1	E19	I.C. DEC 7410	1905576	48
2	E21,E42	I.C. DEC 7404	1909686	47
1	E22	I.C. DEC 74193	1910018	46
1	E24	I.C. DEC 8815	1909713	45
2	E25,E39	I.C. DEC 7450	1905580	44
1	E32	I.C. MC1488L EIA DRIVER	1910322	43
2	E34,E36	I.C. DEC 5384	1910394	42
2	E40,E43	I.C. DEC 8251	1909594	41
1	E35	I.C. DEC 74H00	1909056	40
52	C1-C50,C62,C64	CAP. .01μF 100V 20% DISC	1001610	39
6	C51-C56	CAP. 6.8μF 35V 20% TANT	1000067	38
2	C57,C61	CAP. .047μF DISC	1009678	37
1	C58	CAP 33PF MICA	1000009	36
1	C59	CAP 100PF MICA	1000016	35
1	C60	CAP 68PF MICA	1000014	34
1	C63	CAP. .001 μF 250V DISC	1000043	33
2	C65,C67	CAP 10μF 100V 5% MICA	1000008	32
1	C66	CAP .47μF 35V TANT	1005965	31
1	D1	DIODE, D662	1100113	30
14	D2-D15	DIODE, D664	1100114	29
3	R1,R4,R20	RES. 220, 1/4W 5%	1300271	28
1	R2	RES. 750 1/4W 5%	1301401	27
2	R3,R19	RES. 10K 1/4W 5%	1300479	26
2	R5,R18	RES. 3.3K 1/4W 5%	1300439	25
4	R6,R7,R13,R24	RES. 470 1/4W 5%	1300316	24
1	R8	RES. 150 1/4W 5%	1300250	23
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. 332 1/4W 5%	1300295	19
1	R23	RES. 3CK 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 8310	1609651	13
1	DL1	DELAY LINE 30 NANO SEC	1605528	12
1	Y1	CRYSTAL 14.418 MHZ.	1809380-01	11
40		LUGS, SPLIT	90-6735	10
1		CONNECTOR 40 PIN	1203941	9
1/2		WIRE #22 AWG SOLID BUS	9107500-01	8
4		SPACER (CABLE CLAMP)	1202704	7
8		EYELET 554-11 STIMPSON	9006750	6
4		HANDLE FLIP CHIP-MAGENTA	900-4337-06	5
1		ETCHED CIRCUIT BOARD	900 9546	4
REF		MSC HISTORY LIST	[illegible]	3
REF		ASSY. WIRING DIAGRAM, LAYOUT	[illegible]	2
REF		ASSY COORDINATE LOC.	[illegible]	1

ETCH BOARD REV

IC TYPE	GND	+5V
DEC MC1489L	7	14
8251	8	5
5384	1	8
7493	8	16
5314	1	6
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	J123-A	J123-B
		J113-A	B-13-B
		J112-A	J112-B
		J212-A	A12-B
		J11-A	A-3-B
		J124-A	J124-B
		J112-A	J112-B
		C13-A	JC13-B
		JC24-A	JC24-B
		JC13-A	JC13-B

JUMPER LIST

DEC NO.	EIA NO	DEC NO	EIA NO
2N5340	[illegible]		
2N3098	2N3646		
DEC4	IN3606		
D662	IN645		

SEMICONDUCTOR CONVERSION CHART

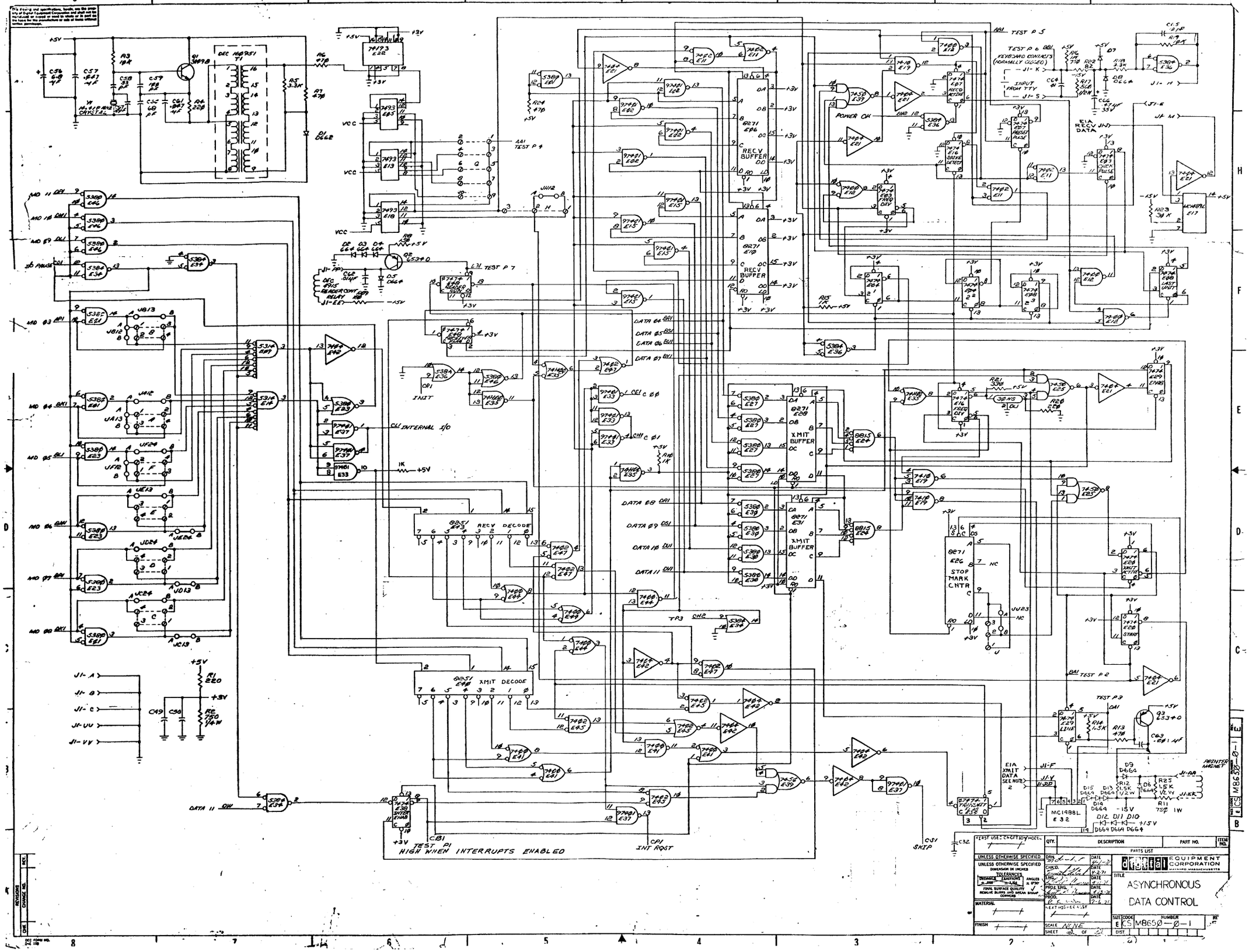
EQUIPMENT CORPORATION

TITLE: ASYNCHRONOUS DATA CONTROL

SIZE: C | CODE: 06760 | NUMBER: 7-M8650-0 | REV: E

SCALE: 2/1 | SHEET 1 OF 2

DEC TECH NO. DWG 1688



REVISIONS			
ZONE	CHANGE NO.	REV.	

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED

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

MATERIAL

FINISH

		DATE
DRN.		
CHKD.		
ENG.		
PROJ. ENG.		
PROD.		

NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
ASYNCHRONOUS
DATA CONTROL

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

SCALE NONE

SHEET OF

DEC FORM NO. D-E 100

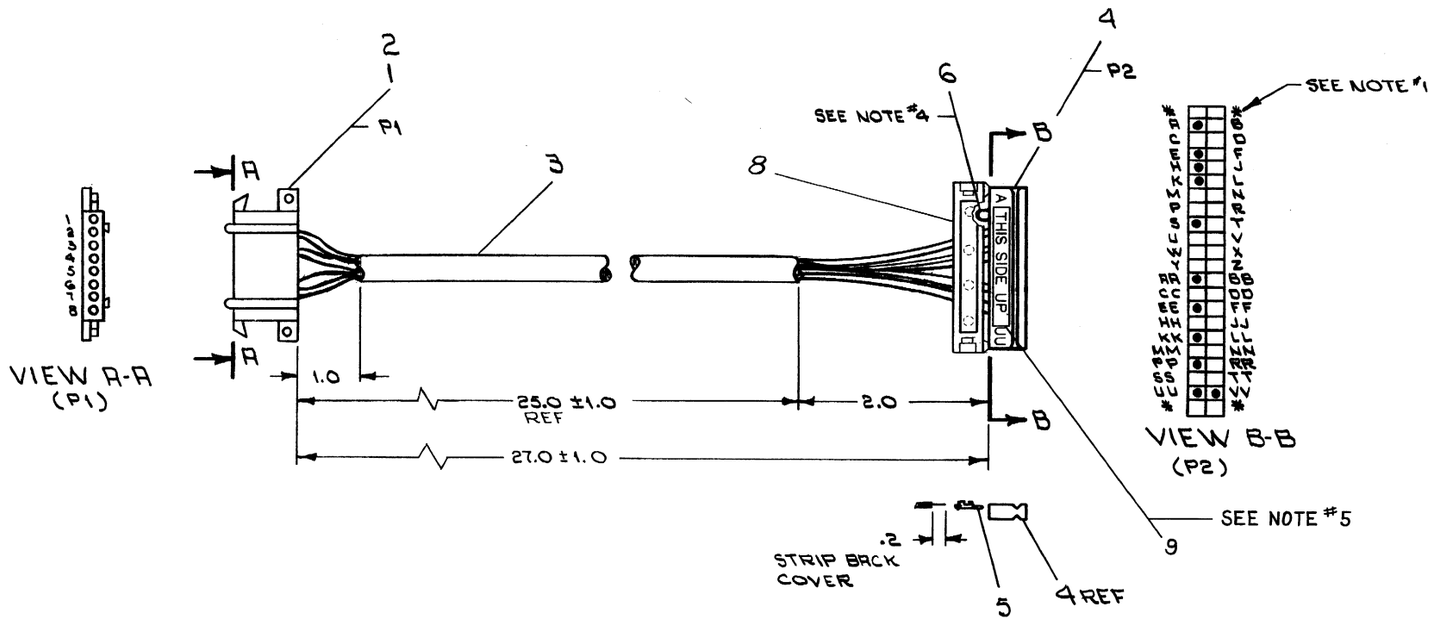
CS M8650-0-1

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-A(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
A/R	TUB. #18 TEF. THINWALL NAT	9107278-11	7
A/R	WIRE, #22 AWG STRD TEF BLK	9107350-00	6
11	SOCKET, BERG #47706	1210089-6	5
1	HOUSING, BERG #65043-015	1210918-15	4
A/R	CABLE, BELDEN #8777-3PR SHLD	9107723-0	3
6	CONTACT MATE-N-LOCK (FEMALE)	1209379	2
1	CONN. MATE-N-LOCK (FEMALE)	1209340-00	1

PARTS LIST

REVISIONS CHK	CHANGE NO.	REV
K.L.	KL8E-00002	A
K.L.	KL8E-00006	B
P.M.	7008360-00001	C

K.L. 5/3/71 G. MCNAMARA
K.L. 3-10-73 E. CLARK
P.M. 10-29-73 B. REGAN

FIRST USED ON OPTION / MODEL: PDP-8E

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

MATERIAL: SEE PARTS LIST
FINISH

DRN.		DATE 3/APR/71
CHK'D.		DATE 4-8-71
ENG.		DATE 4-8-71
PROJ. ENG.		DATE 4-8-71
PROD.		DATE 4/9/71

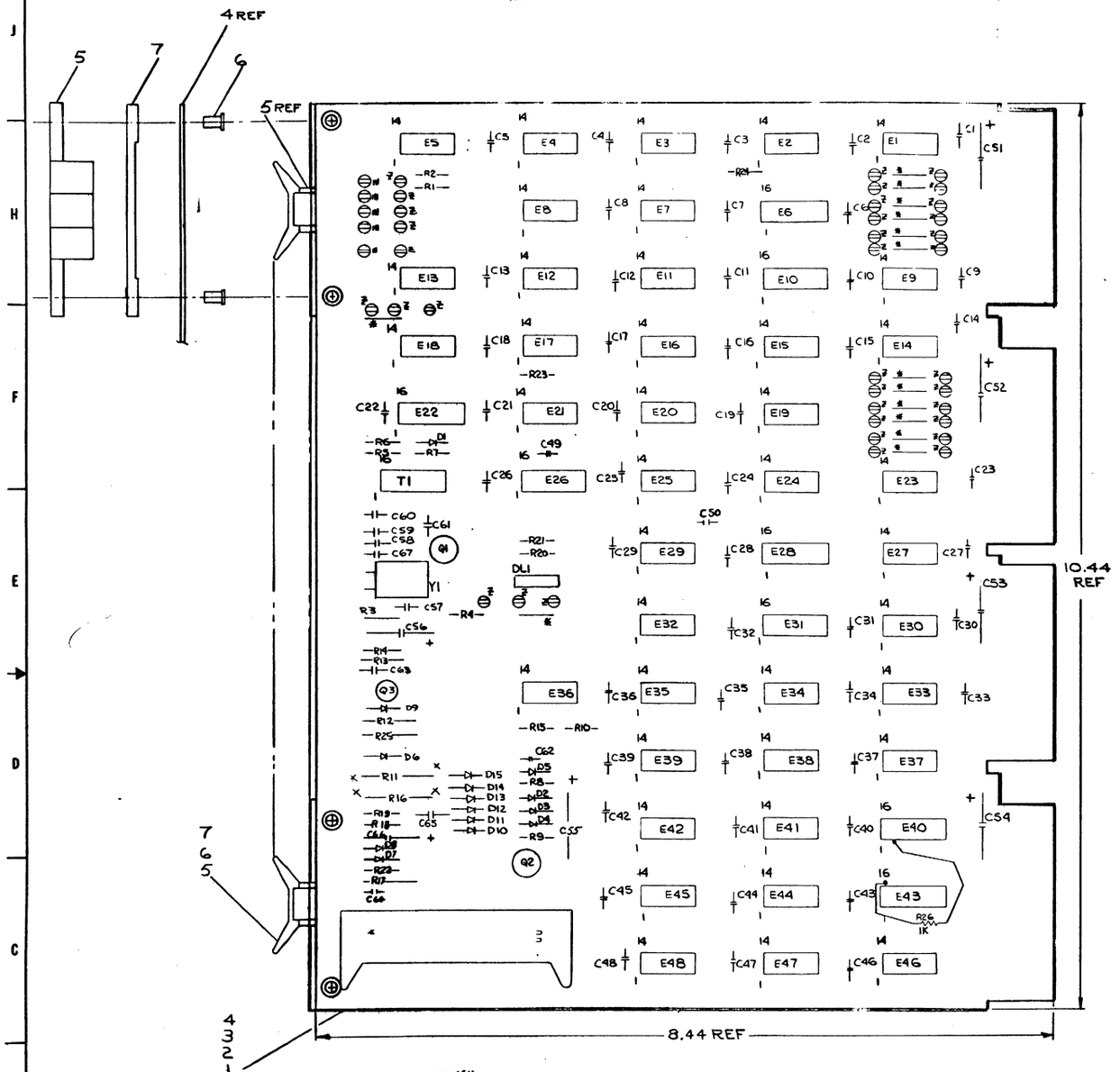
NEXT HIGHER ASSY: A-ML-KL8-E-0
SCALE: NONE
SHEET 1 OF 1

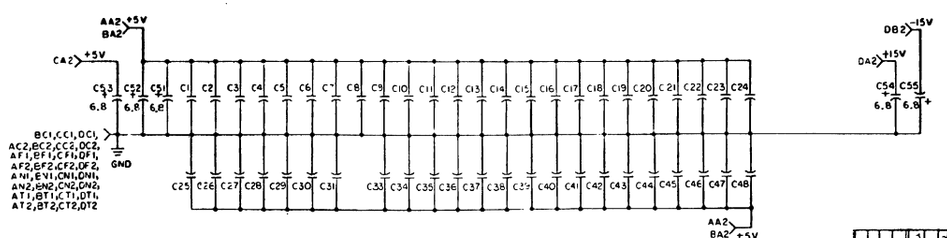
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: CABLE ASSEMBLY (KL8)

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

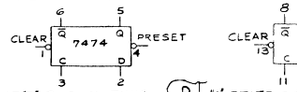
DEC FORM NO DRD 100





NOTES:

1. $\frac{1}{0}$ ^ $\frac{2}{0}$: SPLIT LUGS
   $\frac{A}{B}\frac{JD24}{}$: MACHINE INSERTED JUMPER
   B ⟩ : 40 PIN HEADER CONNECTION
   DATA II $\frac{DV1}{}$: 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:



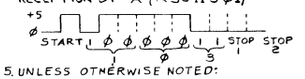
IF 'D' SHOWN THUS  '1' STATE = Q STATE.

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 3 Φ1)



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

2	R12, R25	RES. 1.5K 1/2 W 5%	1300396	60
A/R		TUB THIN WALL #22 TEFLON (WHT)	9107265	59
1	R22	RES. 82 1/4W 5%	1301477	58
5	E1, E23, E27, E30, E46	I.C. DEC 5380	1910392	57
4	E2, E15, E33, E37	I.C. DEC 97401	1909973	56
9	E3, E4, E7, E8, E16, E20, E29, E38, E48	I.C. DEC 7474	1905547	55
3	E5, E13, E18	I.C. DEC 7493	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	1909024	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	1909286	47
1	E22	I.C. DEC 74193	1910018	46
1	E24	I.C. DEC 8815	1909713	45
2	E25, E39	I.C. DEC 7450	1905580	44
1	E32	I.C. MC1488L EIA DRIVER	1910324	43
2	E34, E36	I.C. DEC 5384	1910393	42
2	E40, E43	I.C. DEC 8251	1909554	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. 330PF MICA	1000009	36
1	C59	CAP. 100PF MICA	1000010	35
1	C60	CAP. 68PF MICA	1000014	34
1	C63	CAP. .001 μF 250V DISC	1000043	33
2	C65, C67	CAP. 10PF 100V 5% MICA	1000006	32
1	C66	CAP. .47μF, 35V TANT	1005965	31
1	DI	DIODE, D662	1100113	30
14	D2-D15	DIODE D664	1100114	29
3	R1, R4, R20	RES. 220, 1/4W 5%	1302271	28
1	R2	RES. 750 1/4W 5%	1301401	27
2	R3, R19	RES. 10K 1/4W 5%	1300479	26
2	R5, R18	RES. 3.3K 1/4W 5%	1300439	25
4	R6, R7, R13, R24	RES. 470 1/4W, 5%	1300316	24
1	R8	RES. 150 1/4W, 5%	1300250	23
3	R10, R15, R26	RES. 1K 1/4W, 5%	1300365	22
2	R11, R16	RES. 750 1W 5%	1302395	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 2N3638	1503100	15
2	Q2, Q3	TRANSISTOR, DEC 6534D	1503409	14
1	T1	XFMR 8310	1709851	13
1	DL1	DELAY LINE 32 NANO SEC	1705528	12
1	Y1	CRYSTAL 19.661 MHZ	1709880-00	11
90		LUGS, SPLIT	9006735	10
1		CONNECTOR, 40 PIN	1209941	9
1/2		WIRE #22 AWG SOLID BUS	9107560-01	8
4		SPACER (CABLE CLAMP)	1402704	7
8		EYELET G54-11 STIMPSON	1400750	6
4		HANDLE FLIP CHIP-MAGENTA	1703206	5
1		ETCHED CIRCUIT BOARD	1709546	4
REF		MODULE HISTORY LIST	1711665	3
REF		ASSY/DRILLING HOLE LAYOUT	1711665	2
REF		X-Y COORDINATE HOLE LOC.	1711665	1
QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV D

				5/8	22
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			
IC TYPE	GND	+5V		5/8	22

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

IC PIN LOCATIONS

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

JUMPER LIST

DEC6534D	VPS6534	
DEC3009B	2N3646	
D664	IN3606	
D662	IN645	
DEC NO.	EIA NO	
DEC NO	EIA NO	

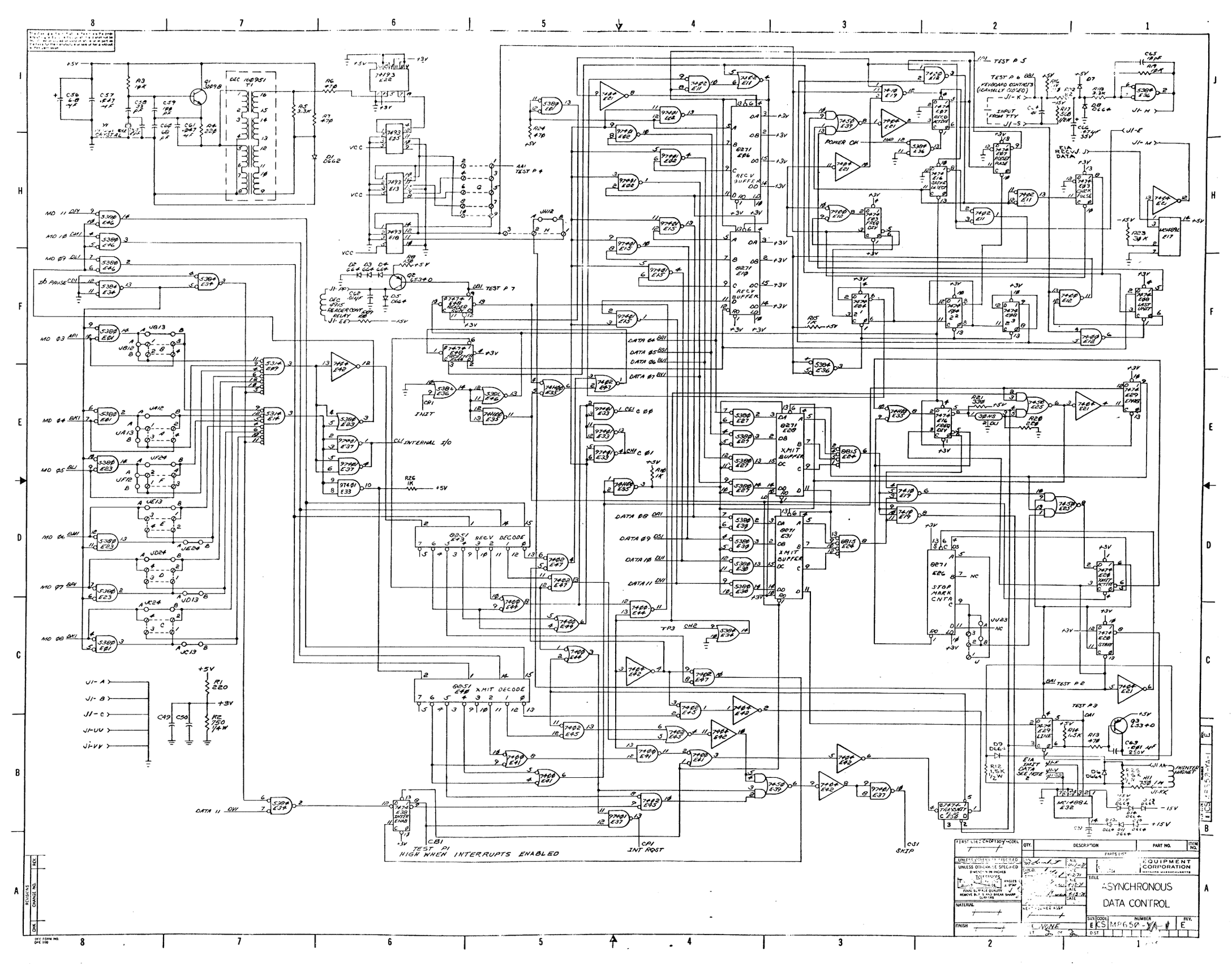
SEMICONDUCTOR CONVERSION CHART

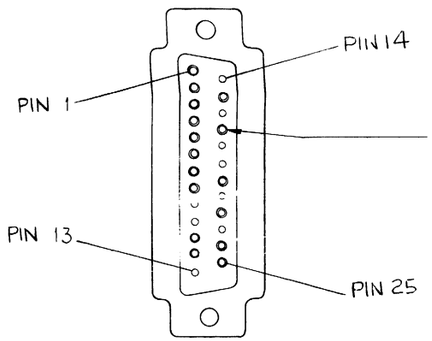
REV	CHANGE NO	DESCRIPTION	ORIG
A		ORIGINATED	
B			
C			
D			
E			

J. KIRK 6/1/73
SCHEMATIC
J. MAMARA 6/13/73
MANUFACTURING DRAWING
J. MAMARA 6/13/73

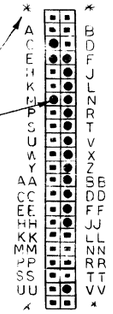
EQUIPMENT CORPORATION
TITLE
ASYNCHRONOUS DATA CONTROL
SIZE E
CODE
DWG NO
REV E
SCALE
DATE
FIRST USED ON
A-MXXLB-E
SHT 1 OF
DIST

DEC FORM NO. CHG 3001


ASYNCHRONOUS DATA CONTROL
EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
SIZE E CODE 80009 NUMBER MP650-YA REV. E
DEC 1602R51
RECV BUFFER
XMIT BUFFER
6271 EB6
6271 EB10
6271 EB20
6271 EB31
6851 EA3 RECV DECODE
6851 EA8 XMIT DECODE
INTERNAL I/O
INIT
TEST P1
HIGH WHEN INTERRUPTS ENABLED
INT RQST
SKIP
POWER ON
TEST P 5
TEST P 6 6811
(KEYBOARD CONTROLS (VERTICALLY CODED)
INPUT FROM TTY
EIA RECVD DATA
EIA XMIT DATA SEE NOTE 2
TEST P 7
TEST P 2
TEST P 3
STOP MARK CNTR
LINE
PRINTER MAGNET
LAST UNIT
XMIT BUFFER
RECV BUFFER
DATA 04 BRI
DATA 05 BSI
DATA 06 BUI
DATA 07 BVI
DATA 08 DRI
DATA 09 DSI
DATA 10 DUI
DATA 11 DVI
MD 03 API
MD 04 BKI
MD 05 BLI
MD 06 BMI
MD 07 BPI
MD 08 BRI
MD 11 DDY
MD 10 DMI
MD 09 DLI
26 PAUSE CDI
+5V
+3V
-15V
VCC



P2
SECTION A-A



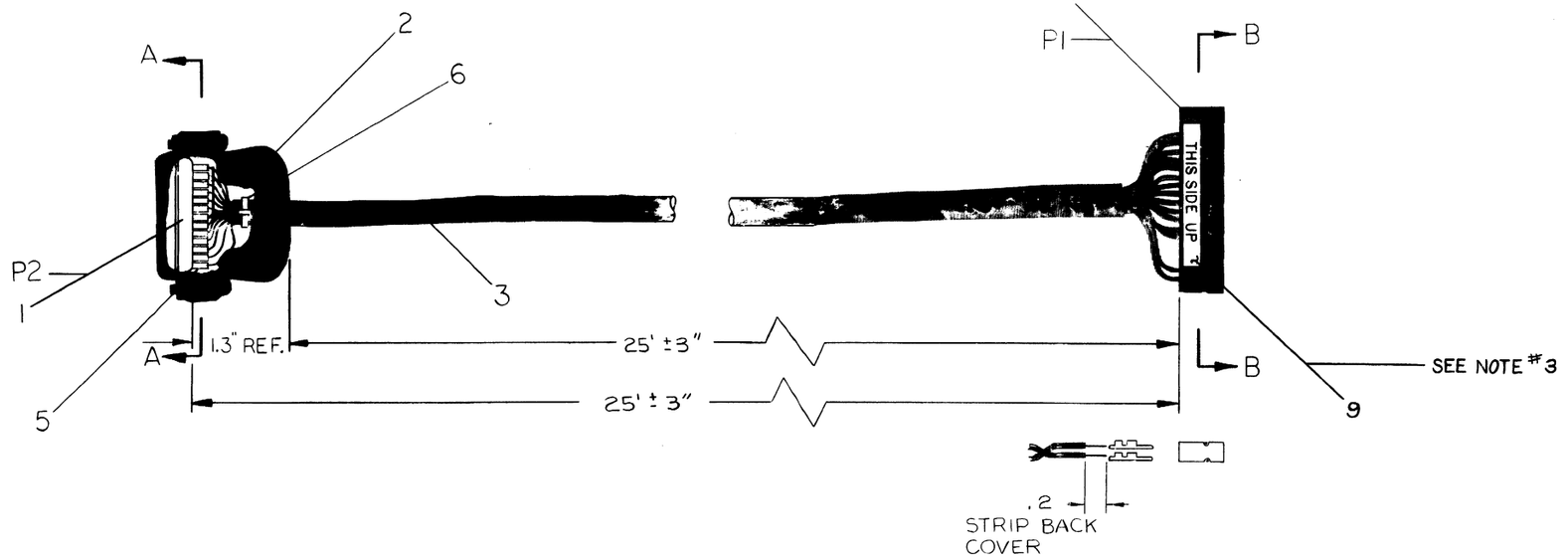
P1
SECTION B-B

WIRE TABLE

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

NOTES:

1. EACH SOLDERED CONN. ON P2 SHALL BE INSULATED WITH A 1/4" PIECE OF HY-SHRINK TUBING (ITEM #5).
2. * INDICATES PIN LOCATION ON P1 (BERG CONN) ○ INDICATES PIN LOCATION ON P2 (CINCH PLUG)
3. PLACE ITEM #9 ("THIS SIDE UP" STICKER) ON LETTERED SIDE OF ITEM #1 (BERG HOUSING) AS SHOWN.



ITEM	QTY.	DESCRIPTION	PART NO.	REV
1	1	LABEL, THIS SIDE UP	36[illegible]7	C
A/R		WIRE #22 AWG STRD TEFLON	[illegible]	B
17		PIN, CONN. *BERG	[illegible]	3
1		[illegible]	[illegible]	
16		TURNS, [illegible]	[illegible]	
1		HOUSING *20563 BERG	12[illegible]0-0	4
A/R		CABLE-RIBBON [illegible]	3107672	3
1		HOOD, PLUG 25PCH *DB-25P	1205855	2
1		PLUG, CINCH *DB-25P	1205[illegible]6	1

REVISIONS			
CHK	CHANGE NO.	REV.	
J. MCNAMARA	BCOIV-00001	A	
E. ALLain 10-29-79	BCØIV-00002	B	
B. REGAN			

FIRST USED ON OPTION/MODEL: PDP8/E

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

MATERIAL: SEE PARTS LIST

FINISH

		DATE
DRN.	[illegible]	
CHK'D.	[illegible]	
ENG.	[illegible]	
PROJ. ENG.	[illegible]	
PROD.	[illegible]	

NEXT HIGHER ASSY: A-PL-DP8-EA-Ø

SCALE: NONE

SHEET 1 OF 1

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: CABLE ASSY (BCØIV)

SIZE D | NUMBER BCØIV-25 | REV B

DIST

DEC FORM NO. E 100

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 3/15/71

TITLE KL8/E Asynchronous Data Control (M8650)

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

Abstract

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

ENG	APPD	SIZE	CODE	NUMBER	REV
John E. McNamara		A			

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE KL8/E Asynchronous Data Control

I. General Description

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

II. Physical

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

III. Options

The KL8/E is available in the following options:

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

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

	SIZE	CODE	NUMBER	REV
	A			

DEC FORM NO 16-1022 DRA 108

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

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

IV. Specifications - Environment

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

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

V. Specifications - Communications Variables

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

B. Number of Start Elements Per Character: One

C. Number of Data Elements Per Character: Eight

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

E. Receiver Sample Rate: 16 times the baud rate

F. Capabilities of the 20 milliampere drivers:

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

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

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

G. Capabilities of the 20 milliampere receiver:

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

The 20 milliampere current receiving circuitry contains

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

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

H. Capabilities of the Reader Run Control:

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

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

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

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

I. EIA Signals Provided

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

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

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

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

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

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

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

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

J. Capabilities of the EIA interface

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

K. Use With EIA Interface Terminals

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

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

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

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

VI. Programming

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

The instruction set is as follows:

6XX0 Clear Keyboard Flag (KCF)

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

6XX1 Skip on Keyboard Flag (KSF)

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

6XX2 Clear Keyboard Flag (KCC)

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

6XX4 Read Keyboard Buffer Static (KRS)

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

6XX5 Set/Clear Interrupt Enable (KIE)

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

6XX6 Read Keyboard Buffer Dynamic (KRB)

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

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

6YY0 Set Teleprinter Flag (TFL)

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

6YY1 Skip on Teleprinter Flag (TSF)

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

6YY2 Clear Teleprinter Flag (TCF)

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

6YY4 Load Teleprinter and Print (TPC)

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

6YY5 Skip on Printer or Keyboard Flag (TSK)

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

flop is set.

6YY6 Load Teleprinter Sequence (TLS)

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

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

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

VII. Device Code Selection

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

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

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

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

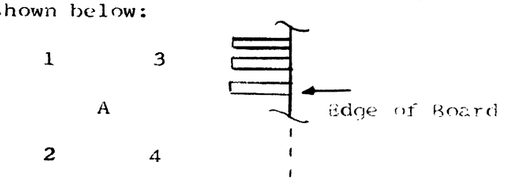
For PT08 compatibility 40/41,42/43,44/45,46/47 may be used, as long as no DP8-E Synchronous Modem Control is used.

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

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

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

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



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

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

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

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

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

Continuation of receiver device code strapping table:

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

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

Continuation of transmitter device code strapping table:

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

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

VIII. Speed Selection

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

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

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

IX. Stop Code Selection

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

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

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

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

X. Special Notes

In the upper right corner of schematic E-CS-M8650-0-1, one will find points labelled E, H, and M. These, as indicated in the notes on the cover sheet,are designations of pins on the forty pin header at which point cables connect to the M8650 printed circuit board. Pin E is the input to the M8650 TTL logic circuitry in the receiver section. Pin H is the output of a filter and Schmidt Trigger circuit which convert 20 milliampere signals from the teleprinter keyboard to TTL logic signals. Pin M is the output of an inverter and EIA/CCITT level converter that convert EIA/CCITT received signals to TTL logic signals. The cable that is used for serving 20 milliampere devices (7008360) consists of a Mate-N-Lock connector at one end and a 40 pin housing at the other. The 40 pin housing contains a jumper from pin E to pin H, so that when that cable is plugged into the 40 pin header, a connection will be established from the 20 milliampere receiving circuitry to the receiving circuitry of the M8650. The cables that can be used with EIA/CCITT interface devices (BC01V and BC05C) consist of a 25-pin male connector at one end and a 40 pin housing at the other. In this housing there is a jumper from pin E to pin M, so that when this cable is plugged into the forty pin header, a connection will be established from the EIA/CCITT receiving circuitry to the receiving circuitry of the M8650 board.

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

MADE BY FERGUSON DATE 11-30-70	CHECKED GULICK DATE 1-2-70	SECTION
ENG CHERTKOW DATE 12-7-70	PROD SAYLOR DATE 12-8-70	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: PDP8/E-GA to MB	PDP8/E-DA to FB	PDP8/E-AA to CB	PDP8/E-NA TO PB	KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
1	A-ML-PDP8/E-Ø	PDP8/E PRINT SET	X	X	X	X		
2	DEC-8E-HR1B-D	PDP8/E MAINT. MANUAL VOL. I	X	X	X	X		
3	12-1Ø31	LOG BOOK	X	X	X	X		
4	DEC-8E-HR2A-D	PDP8/E MAINT. MANUAL VOL. II	X	X	X	X		
5	DEC-8E-HR3A-D	PDP8/E MAINT. MANUAL VOL. III	X	X	X	X		
6		CUSTOMER SERVICE LETTER	X	X	X	X		
7	DEC-7-1Ø34	FORM, SOFTWARE ORDER	X	X	X	X		
8	DEC-7-1009	CUSTOMER FOLLOW-UP REPORT	X	X	X	X		
9	DEC-7-1044	SOFTWARE PERFORMANCE REPORT	X	X	X	X		
10		CUSTOMER ENVELOPE	X	X	X	X		
11	DEC-3-1416	ECO STATUS SHEET	X	X	X	X		
12	DEC-3-1226	SUPPLEMENTARY ACCESSORY LIST	X	X	X	X		
13		~~INSTALLATION REPORT SHEET~~	~~X~~	~~X~~	~~X~~	~~X~~		
14	DEC-12-1015A	CUSTOMER ACCEPTANCE SHEET	X	X	X	X		
15	DEC-16-1000	KEY SHEET	X	X	X	X		
16	LIBKIT-8E-BASE	BASIC SOFTWARE KIT		X	X	X		
17	LIBKIT-8E-XBAS	EXTENDED SOFTWARE KIT			X	X		
18	LIBKIT-8E-LAB-Ø-2	LAB8E SOFTWARE KIT (AD8E, VC8E, DK8E NECESSARY)				X		
19	A-ML-LAB8-E	LAB8E PRINT SET	*	*	*	X		
*	DRAWINGS SHOULD BE SUPPLIED WITH LAB8E OPTIONS NOT SOLD ON LAB8E SYST.							

TITLE SOFTWARE LIST (PDP8/E)	ASSY. NO. A-ML-PDP8/E-Ø SHEET 1 OF 1	SIZE A	CODE SL	NUMBER PDP8/E-Ø-3	REV. C
		DIST.			ECO NO 8E-00059

DEC FORM NO
DRA 120

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY J. FERGUSON	CHECKED K. GULICK	SECTION
DATE 11-30-70	DATE 11-30-70	1
ENG D. Chatham	PROD Larry Boyle	ISSUED SECT.
DATE 12-1-70	DATE 12/7/70	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION SP8-EA
1	M8300	MAJOR REGISTERS MODULE	1
2	M8310	REGISTERS CONTROL MODULE	1
3	M837	TIMING MODULE	1
4	G'04	SENSE/INHIBIT MODULE	1
5	G227	X/Y DRIVE MODULE	1
6	1205941	SLIDE SWITCH	2
7	1205875	SLIDE SWITCH	2
8	125849-13	HANDLE, TERRA COTTA	2
9	125849-12	HANDLE, AMBER	2
10	1209219	INDICATOR BULB	6
11	7006394	KEY SWITCH ASSEMBLY	1
12	5409264	POWER SUPPLY CONTROL MODULE A1	1
13	5409262	POWER SUPPLY CONTROL MODULE A2	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP8/E RECOMMENDED 1ST LEVEL SPARES		A	PL	SP8-EA-Ø	A	SP8EA-00001
	SHEET 1 OF 1	DIST.				

DEC FORM NO.16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY J. FERGUSON	CHECKED K. GULICK	SECTION
DATE 11-30-70	DATE 11-30-70	1
ENG D. Chisholm	PROD Leroy Saylor	ISSUED SECT.
DATE 12-1-70	DATE 12/7/70	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP8-EB
1	1000004	CAPACITOR .02 MFD	2
2	1000016	CAPACITOR .100 MFD	2
3	1003053	CAPACITOR .47 MFD	2
4	1005306	CAPACITOR 6.8 MFD	2
5	1009678	CAPACITOR .47 MFD	2
6	1100114	IN914 OR IN644	1
7	1105?14	IN645	1
8	1109977	IN749A	1
9	1109979	IN1185A	1
10	1110006	IN1201A	1
11	1110181-0	THYRECTOR 6RS05P5B5	1
12	1110182-0	IN4721	2
13	1110183-0	SCR C45A	1
14	1205317	SWITCH	2
15	1209403	FAN	1
16	1210043	SWITCH	1
17	1210072	TERMINAL	2
18	1210073	CONNECTOR SOCKET	2
19	1210198-0	RELAY	1
20	1210199-0	THERMAL RELAY	1
21	1300229	RESISTOR 100, ¼W	2
22	1300317	RESISTOR 470, ¼W	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP8/E RECOMMENDED 2ND LEVEL SPARES		A	PL	SP8-EB-Ø		
	SHEET 1 OF 5	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY J. FERGUSON	CHECKED K. GULICK	SECTION
DATE 11-30-70	DATE 11-30-70	1
ENG D. Chisholm	PROD Leroy Saylor	ISSUED SECT.
DATE 12-1-70	DATE 12/7/70	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION SP8-EB
23	1300429	RESISTOR 3.3K, ¼W	2
24	1301420	RESISTOR 27, ¼W	2
25	1302871	RESISTOR 1.21K, 1/8W	2
26	1302941	RESISTOR 14.7K, 1/8W	2
27	1302955	RESISTOR 750, 1/8W	2
28	1302956	RESISTOR 196, 1/8W	2
29	1303156	RESISTOR 34.8K, 1/8W	2
30	1304833	RESISTOR 1.96K, 1/8W	2
31	1304855	RESISTOR 9.09K, 1/8W	2
32	1304868	RESISTOR 2.74K, 1/8W	2
33	1305128	RESISTOR 5.62K, 1/8W	2
34	1305252	RESISTOR 68.1K, 1/8W	2
35	1309143-6	POTENTIOMETER 2K 3/4W	1
36	1309143-9	POTENTIOMETER 500 3/4W	1
37	1310032	RESISTOR 16.9K 6W	2
38	1310071	RESISTOR	2
39	1310170	THERMISTER	1
40	1503409	MPS6534 OR 2N3133	2
41	1505321	2N4258	3
42	1505819	2N3055 T041 CASE	2
43	1509338	MPS6531 OR 2N1613	1
44	1509632	DEC 2007	4

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP8/E RECOMMENDED 2ND LEVEL SPARES		A	PL	SP8-EB-Ø		
	SHEET 2 OF 5	DIST.				

DEC 1970 MO 15-037

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY J. FERGUSON	CHECKED K. GULICK	SECTION 1
DATE 11-30-70	DATE 11-30-70	
ENG D. Chisholm	PROD Leroy Saylor	ISSUED SECT. 1
DATE 12-1-70	DATE 12/7/70	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION SP8-EB
45	1509649	2N3762	3
46	1509854	DEC 8251	2
47	1510150	DEC 4008	4
48	1510151	RCA 40372	2
49	1609478	TRANSFORMER 17Z5	2
50	1609651	TRANSFORMER 8010	2
51	1609996	TRANSFORMER 6501	1
52	1809880	CRYSTAL 20 MHZ	1
53	1809880-01	CRYSTAL 14.418 MHZ	1
54	1905521	DEC 1540	2
55	1905547	DEC 7474	3
56	1905586	DEC 74H40	2
57	1909004	DEC 7402	2
58	1909055	DEC 7495	2
59	1909056	DEC 74H00	1
60	1909057	DEC 74H10	1
61	1909267	DEC 74H11	1
62	1909373	DEC ML-9601	1
63	1909594	DEC 82513-930	2
64	1909667	DEC 74H74	1
65	1909686	DEC 7404	2
66	1909867	DEC 4007	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP8/E RECOMMENDED 2ND LEVEL SPARES		A	PL	SP8-EB-Ø		
	SHEET 3 OF 5	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY J. FERGUSON	CHECKED K. GULICK	SECTION 1
DATE 11-30-70	DATE 11-30-70	
ENG D. Chisholm	PROD Leroy Saylor	ISSUED SECT. 1
DATE 12-1-70	DATE 12/7/70	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION SP8-EB
67	1909927	DEC 74H87	1
68	1909928	DEC 7416	2
69	1909929	DEC 7417	1
70	1909930	DEC 7405	1
71	1909931	DEC 74H04	1
72	1909932	DEC 7483	1
73	1909934	DEC 8266	2
74	1909935	DEC 8235	1
75	1909936	DEC 74151	2
76	1909937	DEC 74153	1
77	1909955	DEC 7412	1
78	1909971	DEC 6380A	3
79	1909972	DEC 6314A	1
80	1909973	DEC 97401	5
81	1909981	DEC UA723C	1
82	1910010	DEC FSA2501	4
83	1910011	DEC 7486	1
84	9007208	FUSE .5A 250V AGC ½	5
85	9008349	SOCKET	2
86	9008350-0	HOUSING	2
87	9008386-0	FUSE 25A 125V ABC 25	5
88	9008387-0	FUSE 2.5A 250V AGC 2½	5

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP8/E RECOMMENDED 2ND LEVEL SPARES		A	PL	SP8-EB-Ø		
	SHEET 4 OF 5	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY J. FERGUSON	CHECKED K. GULICK	SECTION
DATE 11-30-70	DATE 11-30-70	1
ENG J. Chisholm	PROD Leroy Taylor	ISSUED SECT.
DATE 12-1-70	DATE 12/7/70	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION SP8-EB
89	9008388-0	FUSE 1.5A 250V AGC 1⅓	5
90	9008389-0	FUSE .125A 250V AGC 1/8	5
91	9008390-0	FUSE 10A 250V ABC 10	5
92	9107722	SCR HEX SET ¼-20 X ¼LG NYLON	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
PDP8/E RECOMMENDED 2ND LEVEL SPARES		A	PL	SP8-EE-Ø		
	SHEET 5 OF 5	DIST.				

DEC FORM NO.16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY J. CUDMORE	CHECKED PFYFFER	SECTION
DATE 7/21/69	DATE 7/25/69	1
ENG Maynard	PROD Maynard	ISSUED SECT.
DATE 7/28/69	DATE 7/29/69	1

LEGEND

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

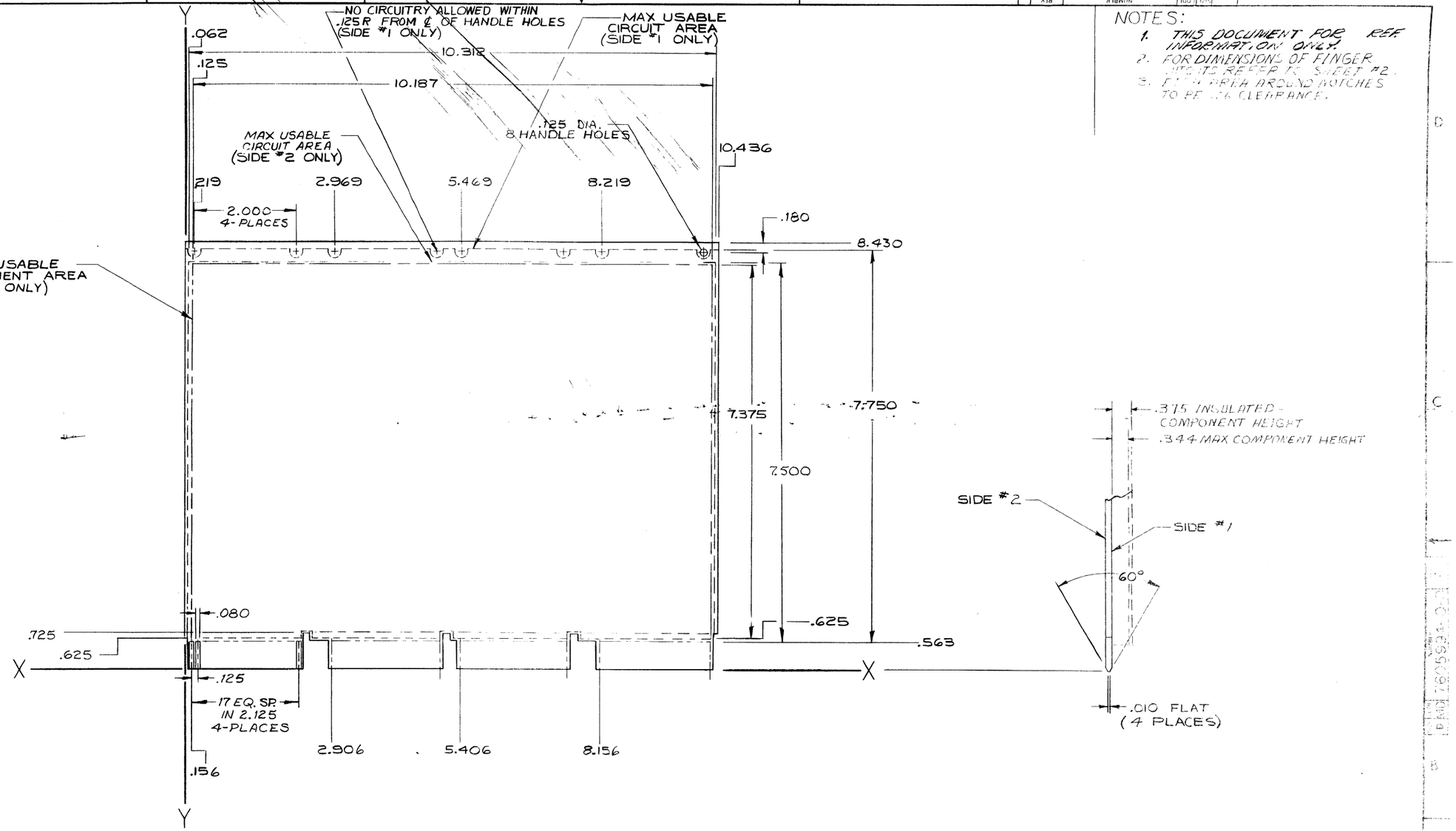
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY/VARIATION: LT33-B,-D,-E,-F,	-H, TYPES		LT33-AA,-AB,	-CA, -CB, -CC,	-CD, -CE		KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
1	36-5360	ROLLS, ROLLED OILED PAPER TAPE	3			-					
2	36-5365	ROLL, TWX PAPER	1			1					
3	BULLETIN 273B	TTY MANUAL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

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
TELETYPE WRITERS LT33 SERIES	SHEET 1 OF 1	A	AL	LT33-0-12	B	LT33-00008

DIST.

DEC FORM NO.
DRA 121

NOTES:
1. THIS DOCUMENT FOR REF INFORMATION ONLY.
2. FOR DIMENSIONS OF FINGER LIMITS REFER TO SHEET #2.
3. FILL AREA AROUND NOTCHES TO BE .06 CLEARANCE.



REVISIONS			
REV	CHANGE NO	CHK	
A	7605994-0003	CHERTKOW	7/6/71

ECO FORM NO DPD 1029A

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

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

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			

FIRST USED ON OPT./MOD.

DRN		DATE 4-12-71
CHK'D		DATE 5-5-71
ENG		DATE
PROJ. ENG.		DATE
PROD		DATE
NEXT HIGHER ASSY		
SCALE	1/1	
SHEET	OF	

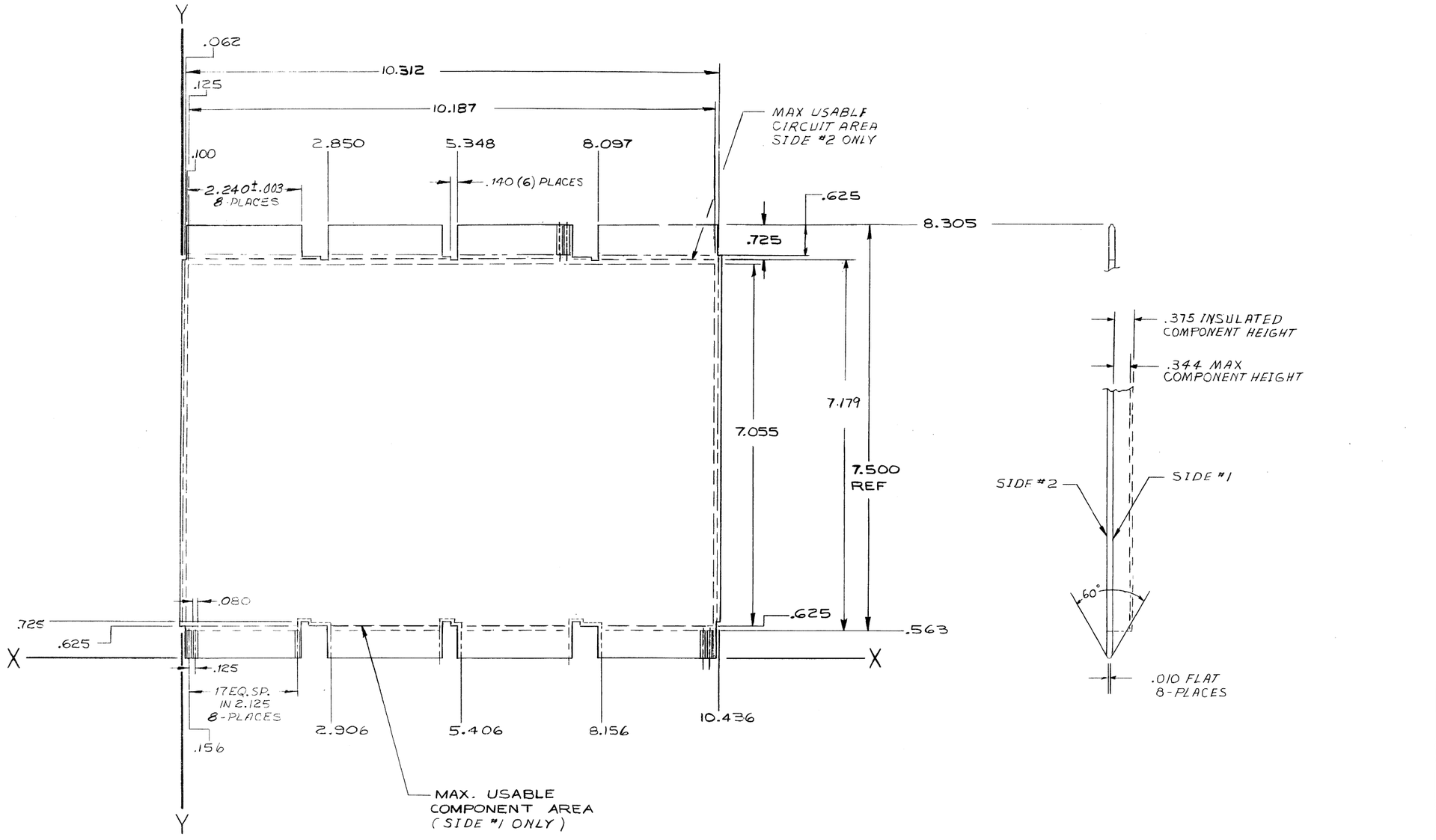
digital EQUIPMENT CORPORATION

TITLE: PANEL ASY - CUSTOMER (REF)

SIZE D | CODE IDENT NO. MDY | NUMBER 7605994-0-0 | REV

DIST

DRD 7605994-0-0



QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL

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

MATERIAL

FINISH

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

NEXT HIGHER ASSY

SCALE 1/1
SHEET 2 OF 2

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
PANEL DATA
CUSTOMER (REF)

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

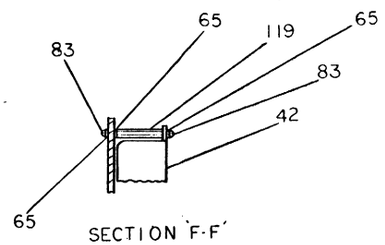
REVISIONS	REV.
CHANGE NO	
CHK	

DEC FORM NO DRD 100

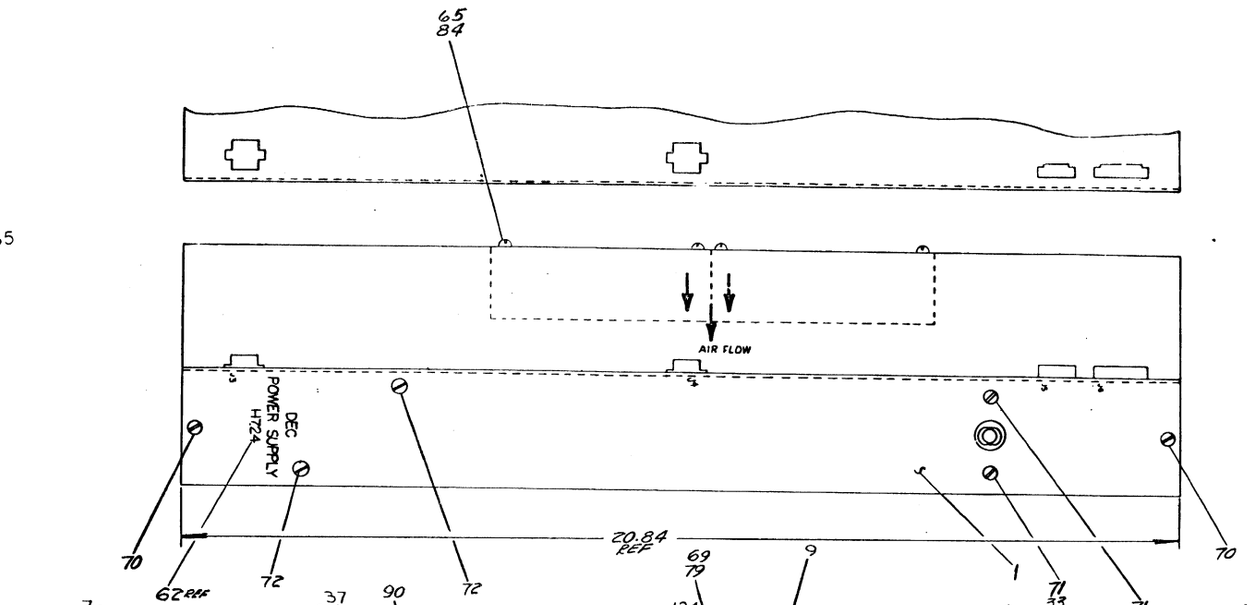
LEGEND	
H724-0	SEE PARTS LIST
H724-0	SEE PARTS LIST

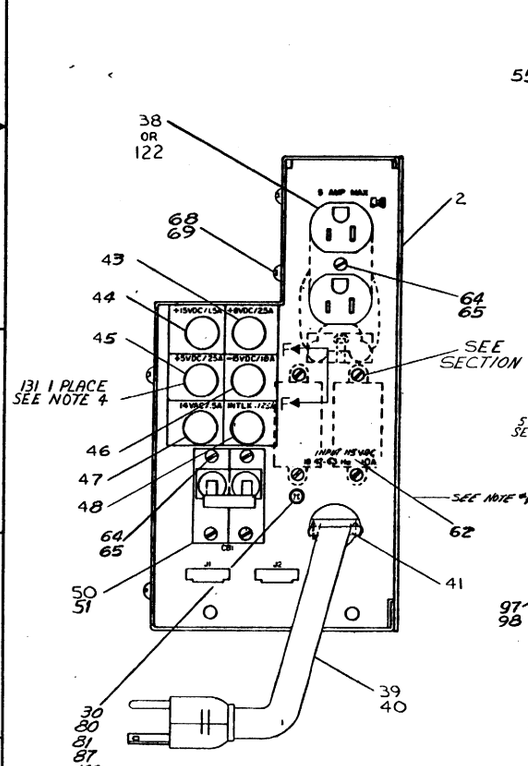
NOTES:
1. ITEM #62 (DECAL) TO BE PLACED ON 230V POWER SUPPLY ONLY.
2. WIRE SOLDERED TO DIODES TO BE DONE AS SHOWN. DETAIL & REF
3. #10 EXT TOOTH LOCKWASHER TO BE INSTALLED BETWEEN SCREWHEAD AND LUG & BETWEEN LUG AND GND PLATE.
4. 5 VOLT FUSEHOLDER IS ITEM #131. ALL OTHER FUSEHOLDERS ARE ITEM #49

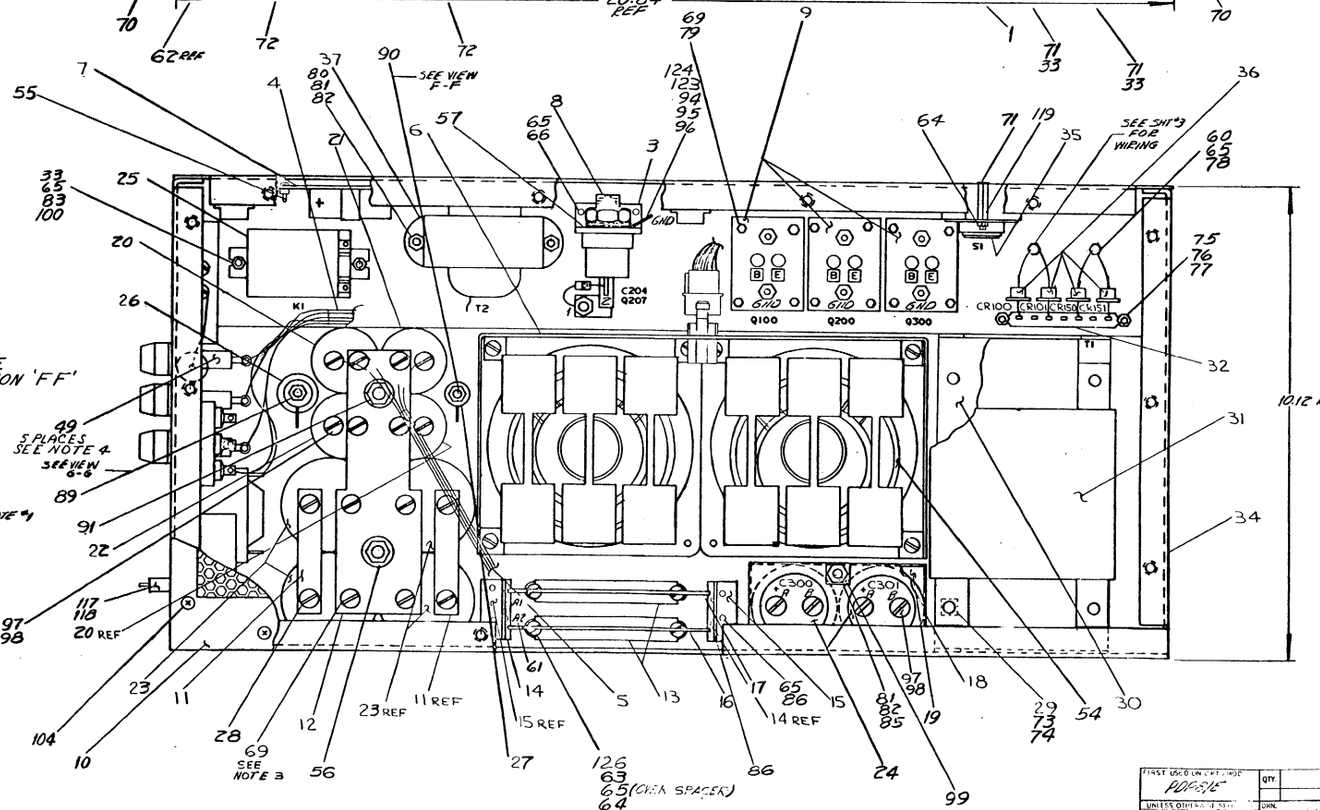
BATHTUB CAPACITOR MOUNTING



SECTION F-F







REVISIONS				
REV.	CHANGE NO.	DESCRIPTION	DATE	APPROVED
A		PRELIMINARY	6-24-71	
B		PRELIMINARY	6-24-71	
C		PRELIMINARY	7-11-71	
D		PRELIMINARY	7-28-71	
E		PRELIMINARY	8-5-71	
H		PRELIMINARY	8-5-71	

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
FRACTIONAL ± ANGULAR ±
.XXX ± .005 — 1 DEC ± 1°
FINAL SURFACE QUALITY
REMOVE BURRS AND SHARP EDGES
DO NOT SCALE DRAWING
MATERIAL
FINISH

	NAME	DATE
DRN.		
CHK'D		
ENG.		
PROJ. LDR.		
PROD.		
MFG.		

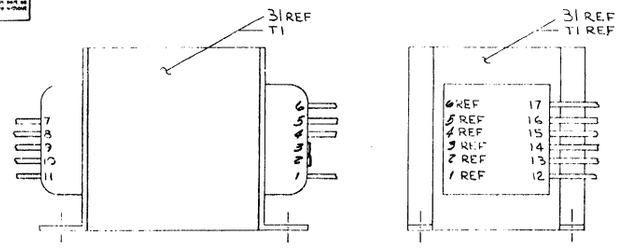
HEWLETT-PACKARD CORPORATION

TITLE
POWER SUPPLY
(H724)

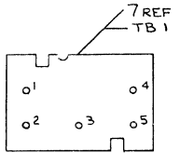
CODE	NUMBER	REV.
E	H724-0-0	

SCALE
SHEET 1 OF 2

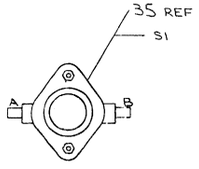
DOCUMENT NUMBER H724-0-0



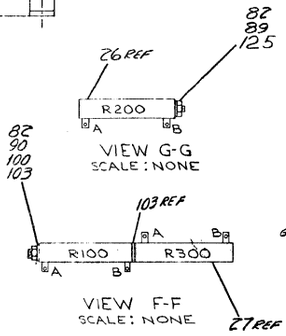
DETAIL A
REVOLVED 90° COUNTER CLOCKWISE SCALE: NONE



VIEW G-C
SCALE: NONE

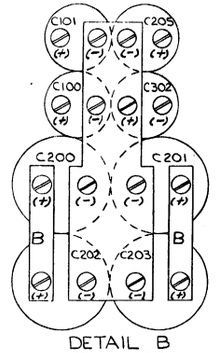


VIEW E-E
SCALE: NONE

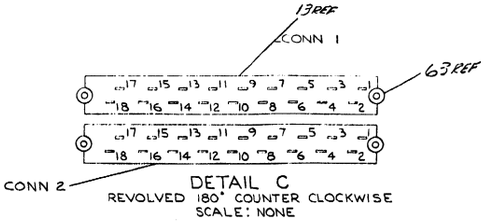


VIEW G-G
SCALE: NONE

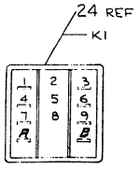
VIEW F-F
SCALE: NONE



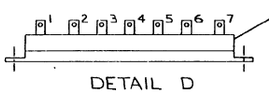
DETAIL B
SCALE: NONE



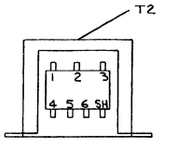
DETAIL C
REVOLVED 180° COUNTER CLOCKWISE
SCALE: NONE



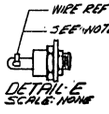
VIEW A-A
SCALE: NONE



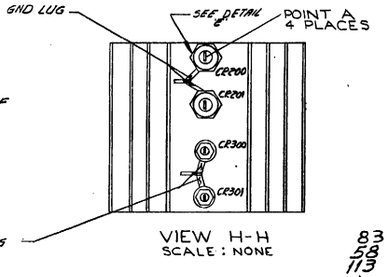
DETAIL D
SCALE: NONE



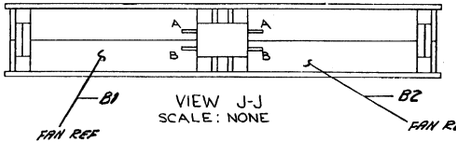
VIEW B-B
SCALE: NONE



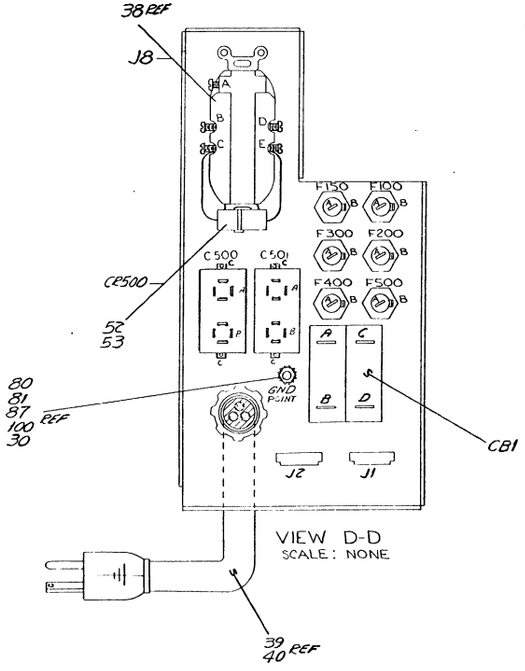
DETAIL E
SCALE: NONE



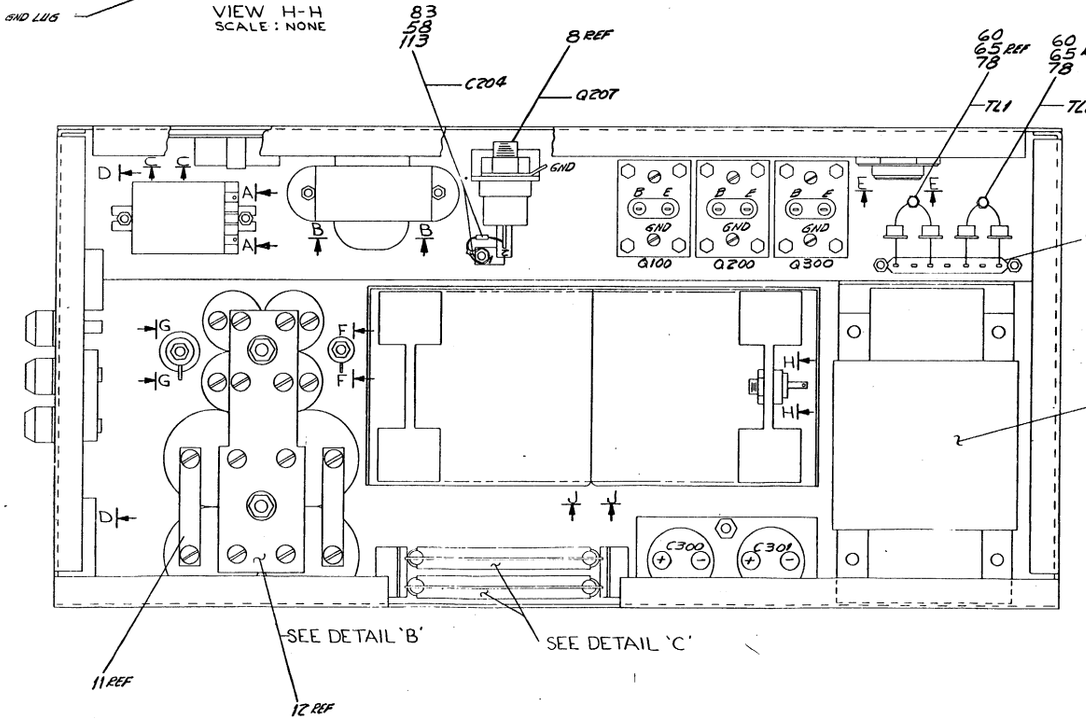
VIEW H-H
SCALE: NONE



VIEW J-J
SCALE: NONE



VIEW D-D
SCALE: NONE



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

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS — FRACTIONS — ANGLES ± .030
.XXX — ± 0.64
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

DRN	[illegible]	DATE 12-2-71
CHK'D	[illegible]	DATE 12-2-71
ENG	[illegible]	DATE 1-11-72
PROJ. ENG.	[illegible]	DATE 1-25-72
PROD.	[illegible]	DATE
MATERIAL	—	NEXT HIGHER ASSY E-UA-H724-0
FINISH	—	SCALE —
		SHEET 2 OF 3

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
POWER SUPPLY
(H724)

SIZE	CODE	NUMBER	REV.
E	UA	H724-0-0	H
DIST.			

DEC FORM NO. D-CS-100

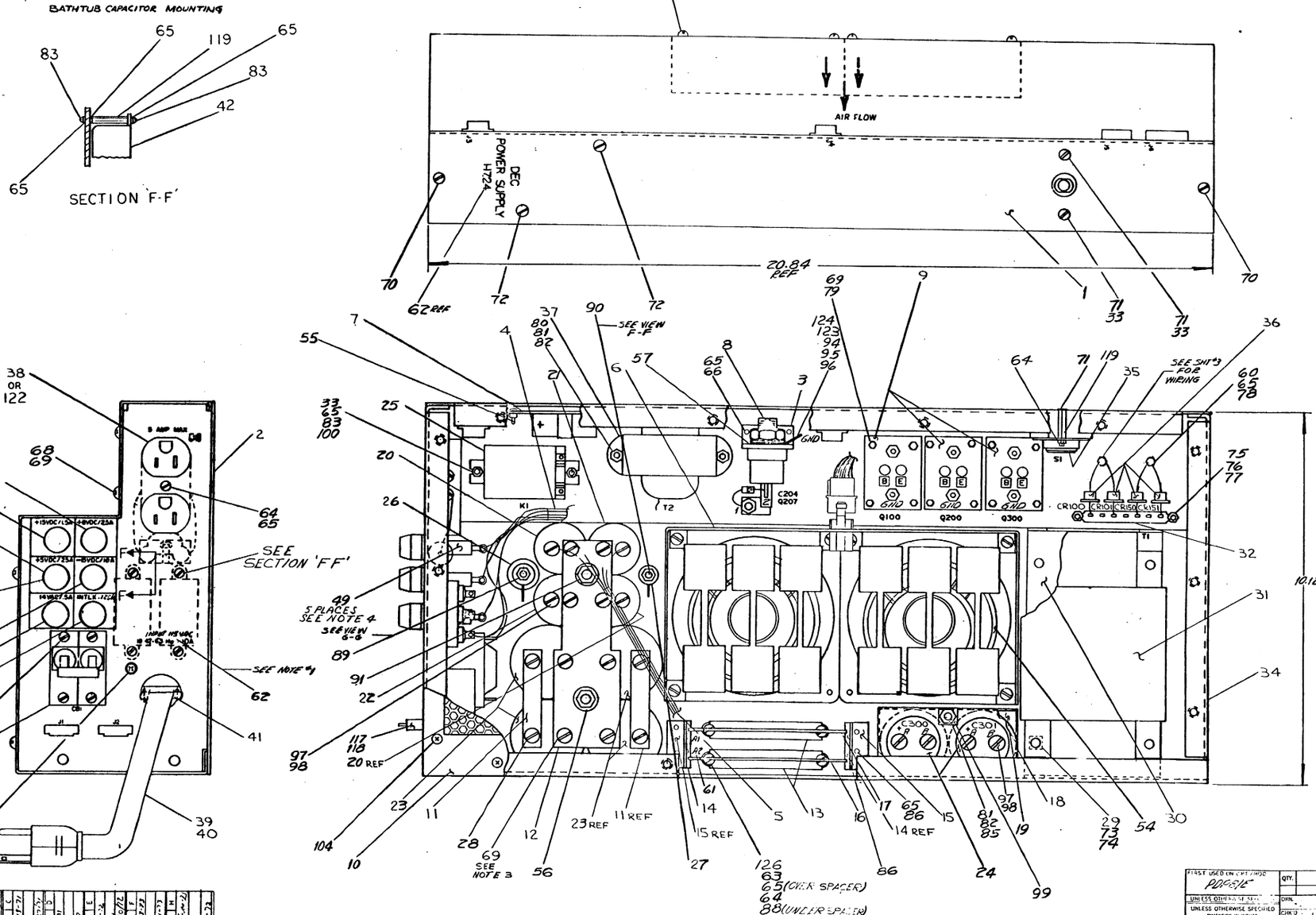
REVISIONS
REV. | DESCRIPTION | DATE | APPROVED

LEGEND	
H724-0	SEE PARTS LIST
H724-1	SEE PARTS LIST

NOTES:
1. ITEM # 62 (DECAL) TO BE PLACED ON 230V POWER SUPPLY ONLY.
2. WIRE SOLDERED TO DIODES TO BE DONE AS SHOWN. DETAIL E REF
3. # 10 EXT TOOTH LOCKWASHER TO BE INSTALLED BETWEEN SCREWHEAD AND LUG & BETWEEN LUG AND GND PLATE.
4. 5 VOLT FUSEHOLDER IS ITEM # 131 ALL OTHER FUSEHOLDERS ARE ITEM # 49

BATHTUB CAPACITOR MOUNTING

SECTION F-F



REVISIONS				
DWG NO.	REV.	DESCRIPTION	DATE	APPROVED
H724-0001	A	PRELIMINARY	2-11-71	
H724-0003	B	CHANGED PER ECO 1	3-11-71	
H724-0004	C	PRELIMINARY	3-15-71	
H724-0005	D	PRELIMINARY	4-5-71	
H724-0006A	E	PRELIMINARY	4-28-71	
H724-0007	F	PRELIMINARY	5-3-71	
H724-0008	G	ALLEN	5-24-71	
H724-0009	H	R. BURTON	6-2-71	
H724-0032	J	PRELIMINARY	6-8-72	

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

FIRST USED ON CMT/MOD: POPSIE

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES
TOLERANCES
DECIMALS ±.01 ±.005 ANGLES ±1°
FINAL SURFACE QUALITY 125 MICRO INCH (3.2 MICRO M) EXCEPT AS NOTED

MATERIAL

FINISH

DRN. DATE
CHK'D DATE
ENG. DATE
PROJ. DATE
PROD. DATE
E 1 2 3 4 5 6 A
SCALE
SHEET 1 OF 2

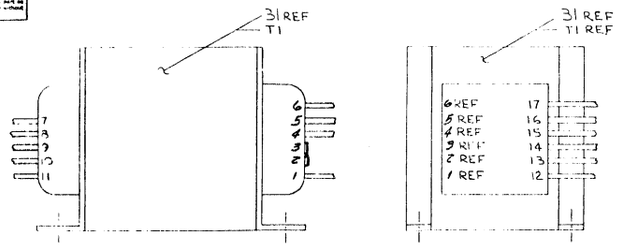
DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: POWER SUPPLY (H724)

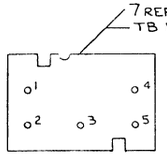
CODE E | UA
NUMBER H724-0-0
REV.
DIST.

DEC 70-10 (REV. 1) DWG 5108

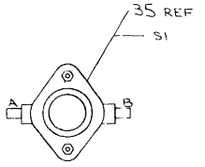
DOCUMENT E UA H724-0-0 REV J



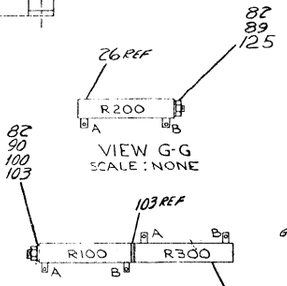
DETAIL A
REVOLVED 90° COUNTER CLOCKWISE SCALE: NONE



VIEW C-C
SCALE: NONE

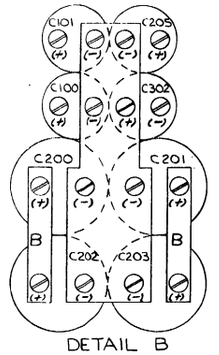


VIEW E-E
SCALE: NONE

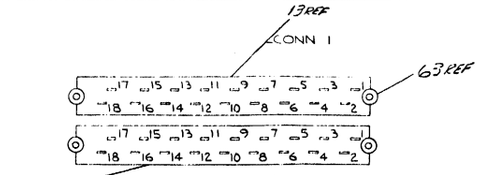


VIEW G-G
SCALE: NONE

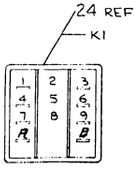
VIEW F-F
SCALE: NONE



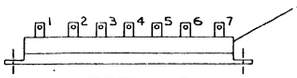
DETAIL B
SCALE: NONE



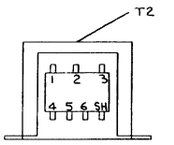
DETAIL C
REVOLVED 180° COUNTER CLOCKWISE
SCALE: NONE



VIEW A-A
SCALE: NONE

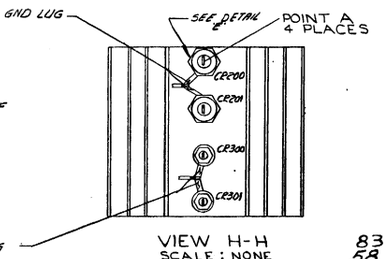


DETAIL D
SCALE: NONE

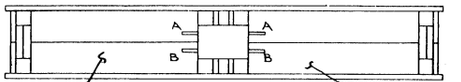


VIEW B-B
SCALE: NONE

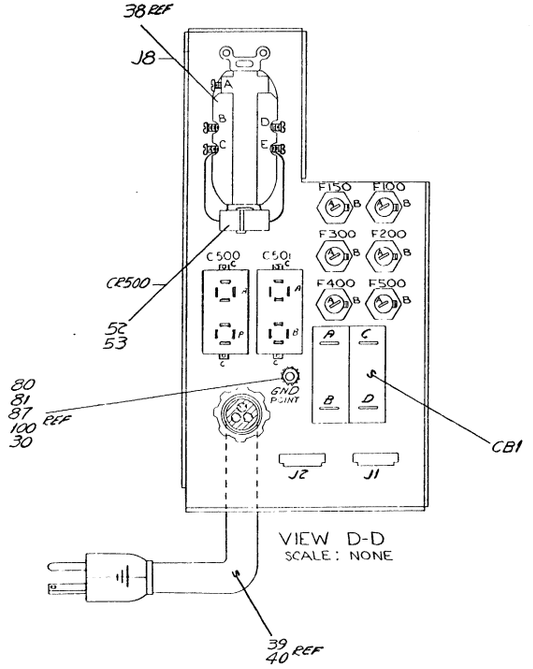
DETAIL E
SCALE: NONE



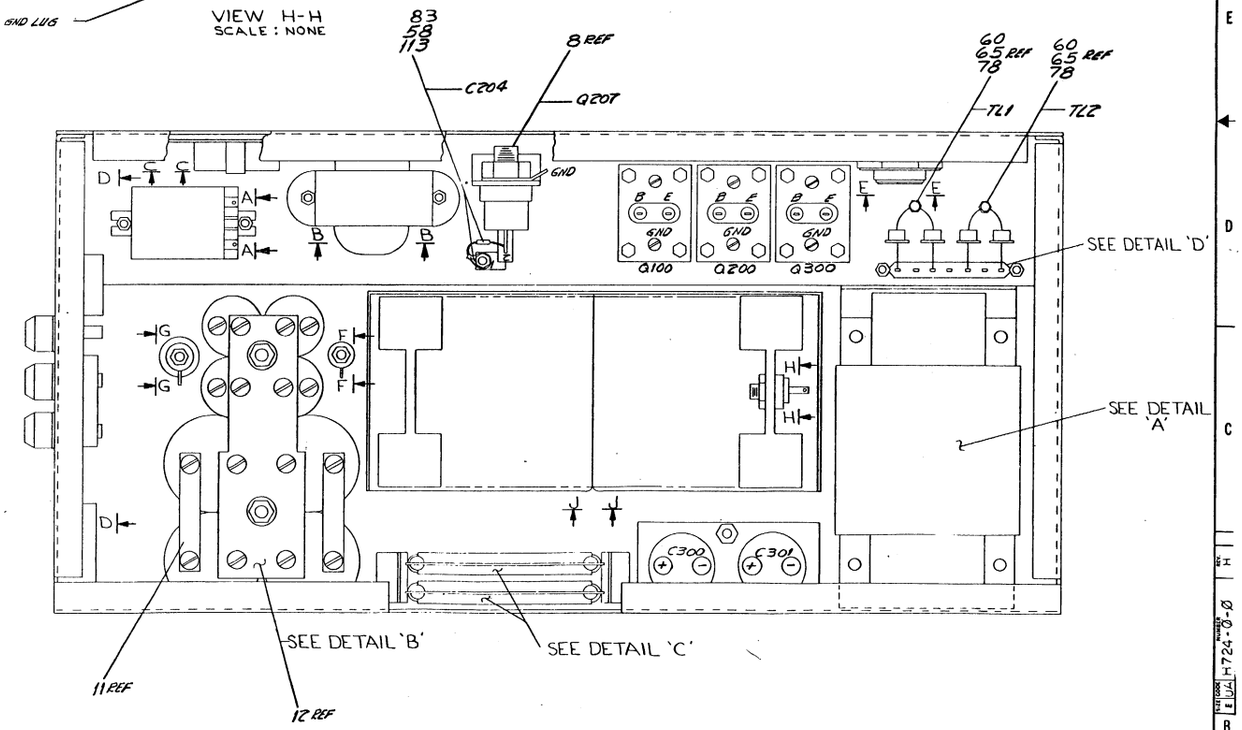
VIEW H-H
SCALE: NONE



VIEW J-J
SCALE: NONE



VIEW D-D
SCALE: NONE



ITEM NO.	PART NO.	DESCRIPTION	QTY.
		PARTS LIST	

FIRST USED ON ITEM NO.: POPSIE

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS — FRACTIONS — ANGLES
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. [illegible] DATE 12-7-11
CHK'D [illegible] DATE 12-7-11
ENG. [illegible] DATE 12-7-11
PROJ. ENG. [illegible] DATE 1-23-11
PROD. DATE
NEXT HIGHER ASSY E-UA-H724-Ø
SCALE
SHEET 2 OF 3

EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
POWER SUPPLY
(H724)

SIZE E | CODE UA | NUMBER H724-Ø-Ø | REV. H
DIST -

DEC FORM NO. DNE 1100

REVISIONS
REV. H
DWN. E.U.A.
DATE 12-7-11

WIRE TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM HARNESS NUMBER	TO POWER SUPPLY LOCATION	REMARKS
4	18	BLK	1	C202-(-)	
	18	BLK			
	18	BLK	2	C201-(-)	
	18	BLK			
	18	RED	3	C202-(+)	
				C501-C	
	22	BLK	9		
			LOCATION J2 HARNESS	POWER SUPPLY SLOT J2	
	22	VIO			
	22	GRN			
			LOCATION J1 HARNESS	POWER SUPPLY SLOT J1	
	22	BLU			
	22	GRN			
	18	BRN	19	F500-B	
	18	BRN	20	F300-A	
	18	BRN	21		
	18	BLK	22	F300-B	
	14	RED	23	F200-B	
	18	BLK	24	F200-A	
	18	BLK	25		
	18	BLK	26		
	22	YEL	27	F150-B	
	22	RED	28	F150-A	
	22	ORN	29	F100-B	
	22	RED	30	F100-A	
	22	ORN	LOCATION J3 HARNESS	POWER SUPPLY SLOT J3	
	18	BLU			
	14	RED			
	18	BLK			
	14	BLK			
	22	GRN	38	TB1-5	
	22	GRN	39		
	18	BLK	46	T2-GND	
	18	BLK	48	Q207-1	
	14	BLK	LOCATION J4 HARNESS	POWER SUPPLY SLOT J4	
	14	RED			
	18	BLK			
	18	BLU			
	22	ORN			
	18	RED	55	Q207-GND	
	22	WHT/BLU	56	Q207-2	
	22	YEL	57	Q100-E	
	22	YEL	58		
	22	ORN	59	Q100-GND	
	22	ORN	60		
	22	WHT/BRN	61	Q100-B	
4	22	YEL	62	Q200-E	

WIRE TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM HARNESS NUMBER	TO POWER SUPPLY LOCATION	REMARKS
4	22	YEL	63	Q200-E	
	22	YEL	64		
	22	WHT/YEL	65		
	22	WHT/RED	66	Q200-B	
	18	RED	67	Q200-GND	
	22	BLU	68	Q300-E	
	22	BLU	69		
	22	BLU	70		
	22	WHT/ORN	71	Q300-B	
	18	RED	72	Q300-GND	
	22	GRN	73	S1-A	
	22	BLU	74	S1-B	
	22	BRN	J5 HARNESS	PS. SLOT J5	
	22	YEL	LOCATION J6 HARNESS	POWER SUPPLY SLOT J6	
	22	GRN			
	22	VIO			
	22	BLU			
	22	WHT/BRN	82	CONN 1-17	
	22	YEL	83	CONN 1-14	
	22	ORN	84	CONN 1-12	
	22	WHT/ORN	85	CONN 1-8	
	22	BLU	86	CONN 1-2	
	22	BLK	87	CONN 1-3	
	22	WHT/YEL	90	CONN 2-12	
	22	WHT/BLU	91	CONN 2-15	
	22	WHT/RED	92	CONN 2-17	
	18	ORN	93	C300-(+)	
	18	ORN			
	18	BLK	94	C300-(-)	
	22	BLK			
	18	RED	95	C301-(+)	
	18	RED			
	18	BLU	96	C301-(-)	
	22	RED	99	TL-1	
	22	RED	100	TL-2	
	22	BLU	LOCATION (MALE) P7 HARNESS	HEAT SINK HOUSING ASSY (FEMALE) MATING JACK J7	
	22	BLU			
	22	YEL			
	22	YEL			
	22	YEL			
	18	BRN			
	18	BRN			
	18	BLK			
	18	BLK			
	18	BLK			
	18	ORN			
	18	ORN			
	18	RED			
	18	RED			
	18	RED			
	18	BLK	116	R300-B	
	18	RED	117	R300-A	
	18	BLU	118	C302-(-)	
	18	BLU			
	18	BLU			
	18	BLU			
	18	RED	119	C205-(+)	
	14	RED			
	14	RED	120		
	14	RED			
	22	ORN	121	C101-(+)	
	22	ORN			
	22	YEL			
	22	RED	122	C100-(+)	
	22	RED			
4	18	RED	123	C200-(+)	

WIRE TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM HARNESS NUMBER	TO POWER SUPPLY LOCATION	REMARKS
4	18	RED	123	C200-(+)	
4	18	RED			
			124	C200-(-)	
4	14	BLK			
4	14	BLK			
5	22	YEL	1	C302-(+)	
	22	BLK	2	C205-(-)	
	22	BLK	3		
	22	ORN	4	C101-(+)	
	22	ORN	5		
	22	BLK	6	C101-(-)	
	22	BLK	7		
	18	RED	8	C205-(+)	
	18	RED	9		
	18	RED	10		
	22	BLU	11		
	22	GRY	12	C302-(-)	
	22	BLK	13		
	22	BLK	14	CONN 1-4	
	22	BLK	15	CONN 2-4	
	18	RED	17	CONN 2-14	
	22	ORN	18	CONN 1-16	
	18	RED	19	CONN 2-16	
	22	BLK	20	CONN 2-18	
	22	YEL	21	CONN 1-15	
	22	BLK	22	CONN 1-13	
	22	ORN	23	CONN 2-13	
	22	BLK	24	CONN 1-10	
	22	GRY	25	CONN 1-9	
5	18	RED	26	CONN 2-2	

JUMPER TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH
31	—	BLK	T1-4	—	J5-1	SOL
31	—	BLK	T1-5	—	F500-A	SOL
31	—	BLK	T1-6	—	J5-3	SOL
31	—	BLK	T1-12	—	CR200-A	SOL 114
31	—	BLK	T1-13	—	C203-(-)	SOL
31	—	BLK	T1-14	—	CR201-A	SOL 114
31	—	BLK	T1-15	—	CR300-A	SOL 114
31	—	BLK	T1-16	—	C301-(-)	SOL
31	—	BLK	T1-17	—	CR301-A	SOL 114
106	18	RED	C300-(+)	111	C301-(+)	111
105	18	BLK	C300-(-)	111	C301-(-)	111

EXTERNAL COMPONENT LIST

ITEM NO	DESCRIPTION	POL	FROM	TO	POL	REMARKS
52	THYRECTOR (CR500)		J8-C	J8-E		115 V
53	THYRECTOR (CR500)		J8-C	J8-E		230 V
58	CAPACITOR (C204)		Q207-1	Q207-2		
36	DIODE (CR100)		TS1-1	TL1		
36	DIODE (CR101)		TS1-3	TL1		
36	DIODE (CR150)		TS1-5	TL2		
36	DIODE (CR151)		TS1-7	TL2		

JUMPER TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH	REMARKS
105	18	BLK	K1-A	110	TB1-3	SOL	4 1/2"
105	18	BLK	K1-B	110	TB1-4	SOL	3 1/2"
37	—	BLK	T2-1	SOL	CB1-D	SOL	
37	—	BLK	T2-4	SOL	TB1-1	SOL	
37	—	BLK	T2-5	SOL	F400-A	SOL	
37	—	BLK	T2-6	SOL	TB1-2	SOL	
37	—	BLK	T2-SH	SOL	T2-GND	112	
106	18	RED	C100-B	111	R100-A	SOL	6"
105	18	BLK	C100-A	111	R100-B	SOL	8"
106	18	RED	C200-A	111	R200-A	SOL	6"
105	18	BLK	C200-B	111	R200-B	SOL	7 1/2"
109	14	RED	C200-A	113	C201-(+)	113	5"
109	14	RED	C203-B	113	CR200 & 201 (GND LUG)	113	26"
106	18	RED	C300-A	111	CR300 & 301 (GND LUG)	SOL	
39	16	GRN	ITEM #39	—	GND-CORD	SOL	
		WHT		—	CB1-A	SOL	
		BLK		—	CB1-C	SOL	
40	18	GRN	ITEM #40	—	GND-CORD	SOL	
		WHT		—	CB1-A	SOL	
		BLK		—	CB1-C	SOL	
~~107~~	~~18~~	~~GRN~~	~~C500-C~~	~~SOL~~	~~C501-C~~	~~SOL~~	
31	—	BLK	T1-11	—	TS1-3	SOL	
31	—	BLK	T1-10	—	TS1-7	SOL	
31	—	BLK	T1-9	—	C205-(-)	SOL	
31	—	BLK	T1-8	—	TS1-5	SOL	
31	—	BLK	T1-7	—	TS1-1	SOL	
31	—	BLK	T1-1	—	C501-A	SOL	
115	22	RED	C501-A	110	B1-A	SOL	
	∞	WHT	T1-2	SOL	B1-B	SOL	
116	18	WHT	T1-2	SOL	C501-B	110	H724 (ONLY)
116	18	WHT	T1-3	SOL	C501-B	110	H724-A (ONLY)
106	18	RED	C500-A	110	C501-A	110	2 1/2"
116	18	WHT	C500-B	110	C501-B	110	2 1/2"
116	18	WHT	C500-B	110	J8-B	110	6"
106	18	RED	C500-A	110	J8-D	121	6"

JUMPER TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH	REMARKS
108	22	BLK	J2-3	123	GRND PNT	112	
108	22	BLK	J1-3	123	GRND PNT	112	
105	18	BLK	TB1-4	SOL	GRND PNT	112	
105	18	BLK	C200-	113	GRND PNT	112	
105	18	BLK	F400-B	SOL	GRND PNT	112	
105	18	BLK	C501-C	111	GRND PNT	112	
108	22	BLK	A2 PIN 11	SOL	C101 NEG	112	
108	22	BLK	A2 PIN 11	SOL	C101 NEG	112	
129	18	RED	CB1-D	SOL	K1-7	128	
129	18	WHITE	CB1-B	SOL	K1-9	128	
129	18	RED	C501-A	110	K1-4	128	
129	18	WHITE	C501-B	110	K1-6	128	
130	22	VIOLET	J4-6	127	CONN 2-10	SOL	
130	22	VIOLET	J3-6	127	CONN 2-10	SOL	
116	18	WHITE	T2-2 OR 3 *	SOL	K1-9	128	
108	18	BLK	J8-A	112	C501-C	112	

* T2-2 ON H724
T2-3 ON H724-A

FIRST USED ON OPTION/MOD PDP8/E	QTY.	DESCRIPTION	PART NO. / ITEM NO.
		PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ± 1/64 ANGLES ± 0°30' FINAL SURFACE QUALITY ✓ REMOVE BURRS AND BREAK SHARP CORNERS	DR'N.	DATE 1-10-71	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
	CHK'D.	DATE	
	ENG.	DATE	TITLE POWER SUPPLY (H724)
	PROJ. ENG.	DATE	
	PROD.	DATE	
MATERIAL —	NEXT HIGHER ASSY E-LA-PDP8/E-0		
FINISH —	SCALE —		SIZE E · CODE UA · NUMBER H724-0-0 · REV. H
	SHEET 3 OF 3		DIST.

E UA H724-0-0 H

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BOB EMMA	CHECKED John Dennin	SECTION 1
DATE 12-22-70	DATE 1-20-71	
ENG E M Fike	PROD	ISSUED SECT. 1
DATE 1-20-71	DATE Paul Page 1/25/71	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
1	E-IA-5309257-0-0	CHASSIS	1	1
2	D-IA-5309252-0-0	PANEL REAR	1	1
3	B-MD-5309199-0-0	BRKT MTG. SCR. PRV	1	1
4	E-IA-7007191-0-0	HARNESS, MAIN CHASSIS	1	1
5	D-IA-7007192-0-0	HARNESS, CONNECTORS	1	1
6	D-AD-7007197-0-0	HEAT SINK HOUSING ASSY	1	1
7	C-AD-5409248-0-0	TURRET BD. ASSY	1	1
8	1110183	SCR. PRU. 100 IDC 55A	1	1
9	C-AD-7007205-0-0	CASTING HEAT SINK ASSY	1	1
10	D-IA-5309187-0-0	COVER, POWER SUPPLY	1	1
11	B-MD-5309202-0-0	BAR, BUS	2	2
12	B-MD-5309251-0-0	PLATE, BUS	1	1
13	B-MD-5509626-0-0	18 PIN CONNECTOR BLOCK	2	2
14	B-MD-5309196-0-0	CARD GUIDE	2	2
15	B-MD05309197-0-0	BRKT, MTG CARD GUIDE	2	2
16	E-IA-5409262-0-0	MODULE BD (A2)	1	1
17	E-IA-5409264-0-0	MODULE BD (A1)	1	1
18	B-MD-5309200-0-0	CAP. PLATE, TOP	1	1
19	B-MD05309201-0-0	CAP. PLATE, BOTTOM	1	1
20	1010185	CAP. 10800 MFD @ 20VDC	2	2
21	1010197	CAP 18000 MFD @ 10 VDC	1	1
22	1010186	CAP. 6000 MFD @ 40 VDC	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY (H724)	E-UA-H724-0-0	A	PL	H724-0-0	H	H724-00021
	SHEET 1 OF 7	DIST. 6				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BOB EMMA	CHECKED John Dennin	SECTION 1
DATE 12-22-70	DATE 1-20-71	
ENG E M Fike	PROD	ISSUED SECT. 1
DATE 1-20-71	DATE Paul Page 1/25/71	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
23	1010184	CAP 30000 MFD @ 25 VDC	4	4
24	1010187	CAP 14000 MFD @ 40 VDC	2	2
25	1210198	RELAY 24V	1	1
26	1302888	RES. 100Ω 25W 5%	1	1
27	1310188	RES. 300Ω 10W 5%	2	2
28	9008203	SCR. PAN HD PHL #10-32 X ½ LG SST	12	12
29	9006590	NUT, ¼-20 TINNERMAN	4	4
30	9008072	WASHER, EXT TOOTH #8	1	1
31	1610178	TRANSFORMER, #6012296	1	1
32	9008392	TERM STRIP 7 POS. JONES #2007	1	1
33	9006560	NUT, KEPS #6-32 SST	10	10
34	D-MD-5309260-0-0	PANEL, FRONT	1	1
35	1210199	SWITCH, THERMOSTAT	1	1
36	1110182	DIODE IN4721	4	4
37	1610177	TRANSFORMER #6012297	1	1
38	1205351	RECPT. DUPLEX 3 WIRE	1	—
39	1700006-15	POWER CORD (115V)	1	-
40	1700016-15	POWER CORD (230V)	-	1
41	9008280	CONN. EFCOR 3/8 DIA	1	1
42	1002153	CAP. .1 MFD @ 100 VDC	2	2
43	9008387	FUSE 2.5A 250V AGC 2½ BUSSMAN	1	1
44	9008388	FUSE 1.5A 250V AGC 1½ BUSSMAN	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY (H724)	E-UA-H724-0-0	A	PL	H724-0-0	H	
	SHEET 2 OF 7	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY BOB EMMA	CHECKED John Quinn	SECTION
DATE 12-22-70	DATE 1-20-71	1
ENG E N Kite	PROD Paul Fazio 1/25/71	ISSUED SECT.
DATE 1-20-71	DATE	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
45	9008386	FUSE 25A 125V ABC25 BUSSMAN	1	1
46	9008390	FUSE 10A 250V ABC10 BUSSMAN	1	1
47	9007208	FUSE .5A 250V AGC ½ BUSSMAN	1	1
48	9008527	FUSE .125A 125V 3AG SLO BLO	1	1
49	9007242	FUSE HOLDER	5	5
50	1210191-0	CIRCUIT BREAKER 10A (115V)	1	-
51	12-10364	CIRCUIT BREAKER 5A (230V)	-	1
52	1110181	TYRECTOR 6RS20SP5B5	1	-
53	1102915	TYRECTOR 6RS20SP9B9	-	1
54	1210263	GUARD-INLET MUFFIN	2	2
55	9008395	NUT, TOGGLE TINNERMAN	2	2
56	9008426	BUSHING INS. FLANGED	2	2
57	9008418	WASHER SCR. ½ I.D.	2	2
58	1001776	CAP. IMFD 35VDC	1	1
~~59~~	~~9006809~~	~~SPACER ¼ AFX 1 LG~~	~~1~~	~~1~~
60	9006966	LUG. TURRET #6-32	2	2
61	A-DC-5309375-0-0	DECAL MODULE BDS	A/R	A/R
62	A-DC-5309376-0-0	DECAL 230V	-	A/R
63	B-MD-5309198-0-0	SPACER, CONNECTOR BLOCK	2	2
64	9006021-1	SCR, HD. PAN, PHL #6-32 X 5/16 LG	7	7
65	9006633	WASHER INT TOOTH #6	18	18
66	9008407-1	SCR. THD CUTTING HD. PAN. PHL #6-32X3/8	4	4

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
POWER SUPPLY	E-UA-H724-0-0	A	PL	H724-0-0	H	
	SHEET 3 OF 7	DIST.				

DEC FORM NO. 16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY BOB EMMA	CHECKED JOHN QUINN	SECTION
DATE 12-22-70	DATE 1-20-71	1
ENG E N KITE	PROD PAUL FAZIO	ISSUED SECT.
DATE 1-20-71	DATE 1-25-71	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
~~67~~	~~9008400~~	~~NUT SPEED #6-32 TINNERMAN~~	~~4~~	~~4~~
68	9006072-1	SCR, HD, PAN, PHL #10-32 X 7/16 LG	8	8
69	9006635	WASHER, INT TOOTH #10	24	24
70	9006022-2	SCR, HD FLAT, PHL #6-32 X 5/16 LG	8	8
71	9006029-2	SCR HD FLAT, PHL #6-32 X 1/4 LG	2	2
72	9008409-2	SCR, HD FLAT, #8-18 X 1/2 LG	2	2
73	9006058-3	SCR, HD TRUSS, PHL # 1/4-20 X 3/4 LG	4	4
74	9006637	WASHER INT TOOTH #1/4	4	4
75	9006010-1	SCR, HD PAN, PHL #4-40 X 5/16 LG	2	2
76	9006557	NUT, KEPS #4-40	2	2
77	9006632	WASHER INT. TOOTH #4	2	2
78	9007842-1	SCR, HD PAN, PHL #6-32 X 3/16 LG	2	2
79	9008915-1	SCR, HD PAN, PHL #10-32 X 11/16 LG	12	12
80	9006039-1	SCR, HD PAN, PHL #8-32 X 1/2 LG	2	2
81	9006634	WASHER, INT TOOTH #8	13	13
82	9006563	NUT, KEPS #8-32	4	4
83	9006022-1	SCR, HD, PAN, PHL #6-32 X 3/8 LG	12	12
84	9006026-1	SCR, HD, PAN, PHL #6-32 X 3/4 LG	16	16
85	9008412-5	SCR, HD, ROUND, SLOT #8-32 X 4 5/8 LG	2	2
86	9008408-1	SCR, HD PAN SELG CUTTING &FORM 6-32X¼LG	4	4
87	9006561	NUT, HEX #8-32	1	1
88	9007649	WASHER (EXT TOOTH) #6	2	2

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY (H724)	E-UA-H724-0-0	A	PL	H724-0-0	H	
	SHEET 4 OF 7	DIST.				

DEC FORM NO. 16-1031
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BOB EMMA	CHECKED John Dacier	SECTION 1
DATE 12-22-70	DATE 1-20-71	
ENG Ernie	PROD Paul Gozo 1/25/71	ISSUED SECT. 1
DATE 1-20-71		

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
89	9008410-5	SCR, HD ROUND SLOT #8-32 X 2 9/16 LG	1	1
90	9008411-5	SCR, HD ROUND SLOT #8-32 X 4 ¼ LG	1	1
91	9008401	CARRIAGE BOLT 5"LG	2	2
92	9008203	NUT, KEPS #¼-20	2	2
93	9006676	WASHER FLAT #¼	2	2
94	9008418	WASHER, MICA (SCR)	2	2
95	9008068	WASHER, FLAT #½ SS. (SCR)	1	1
96	9008439	LUG GROUND #½ (SCR)	1	1
97	9006071-1	SCR, HD PAN, PHL #10-32 3/8 LG	8	8
98	9007906	WASHER, SPLIT LOCK	8	8
99	9007081	CABLE CLAMP, HOLUB	1	1
100	9006660	WASHER, FLAT #8 SS	5	5
101	9008414	WASHER, MKA	4	4
102	9008417	WASHER, INS	2	2
103	9008416	WASHER, INS	5	5
104	9006022-2	SCR, HD FLAT, PHL #6-32 X 3/8 LG	14	14
105	9107360-00	WIRE #18 AWH STRD TEF INS COLOR BLK	A/R	A/R
106	9107360-22	WIRE #18 AWG STRD TEF INS COLOR RED	A/R	A/R
107	9107360-55	WIRE #18 AWG STRD TEF INS COLOR GRN	A/R	A/R
108	9107350-00	WIRE #22 AWG STRD TEF INS COLOR BLK	A/R	A/R
109	9107370-22	WIRE #14 AWG STRD TEF INS COLOR RED	A/R	A/R
110	9007917	CONN, SOLDERLESS #5-902 ARKLESS	10	11

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY (H724	E-UA-H724-0-0	A	PL	H724-0-0	H	
	SHEET 5 OF 7	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BOB EMMA	CHECKED John Dacier	SECTION 1
DATE 12-22-70	DATE 1-20-71	
ENG Ernie	PROD Paul Gozo 1/25/71	ISSUED SECT. 1
DATE 1-20-71		

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
111	9007930	CONN. SOLDERLESS #50360 ARKLESS	9	9
112	9007928	CONN. SOLDERLESS #50364 ARKLESS	1	1
113	9007926	CONN. SOLDERLESS #50368 ARKLESS	3	3
114	9107250	TUBING, SHRINKABLE WHT	A/R	A/R
115	9107420-29	#22 AWG TWP TEF INS COLOR RED/WHT	A/R	A/R
116	9107360-99	#18 AWG STR TEF INS COLOR WHT	A/R	A/R
117	7007006-1	JUMPER	1	1
118	7007006-2	JUMPER	1	1
119	9006861	SPACER ¼ AF X 7/8 AL #6-32	6	6
120	9007919	250 SERIES 14-16 AWG	1	-
121	9006998	250 FLAG 10-20 AWG	1	1
122	12-11204	250V 15A 50HZ DUPLEX RECEPTACLE	-	1
123	90-08448	INS BUSHING (USE WITH ITEM #8)	1	1
124	90-08447	EXT TOOTH LOCK WASHER (USED WITH ITEM #8)	1	1
125	90-06674	CENTER WASHER	2	2
126	90-06653	#6 FLAT WASHER	2	2
127	1209379-01	PIN CONTACT FEMALE MATE-N-LOCK	4	4
128	9008836	CONN SOLDERLESS #42566-1 AMP	4	4
REF	D-CS-H724-0-1	CIRCUIT SCHEMATIC		
REF	D-CS-H724-A-1	CIRCUIT SCHEMATIC		
129	9107430-29	#18 AWG STRD TEF TWP RED/WHT	A/R	A/R
130	9107350-77	WIRE #22 AWG STRD TEF INS VIO.	A/R	A/R

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY (H724)	E-UA-H724-0-0	A	PL	H724-0-0	H	
	SHEET 6 OF 7	DIST				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY BOB EMMA DATE 12-22-70	CHECKED JOHN QUINN DATE 1-20-71	SECTION 1
ENG E N KITE DATE 1-20-71	PROD PAUL FAZIO DATE 1-25-71	ISSUED SECT. 1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION H724-0	H724-A
131	12-11348	FUSE HOLDER	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
POWER SUPPLY (H724)	E-UA-H724-0-0	A	PL	H724-0-0	H	
	SHEET 7 OF 7	DIST.				

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

NOTES:

1. FOR POWER SUPPLIES MADE BY NORTH ELECTRIC CO. AC INPUT WILL BE THRU P10 INLET
   FOR POWER SUPPLIES MADE BY DEC, AC INPUT WILL BE THRUGH CORD SET DEC PART #17000006-15
2. +18.9VDC MINIMUM
   +36VDC MAXIMUM
3. +8.6 VDC MINIMUM
   +18VDC MAXIMUM

INPUT
95-130VAC
47-63HZ

CORD SET OR P10

SEE NOTE 1

CB1

K1

CR500

B1 B2

C500 C501

T1 T2

F400 1/8 AMP

≈24V

CR400 CR401

R400 C400

INTERLOCK

K1

CR402

J1-1 J1-2 J1-3 J2-1 J2-2 J2-3

C401

THERMAL SI CUT OUT SWITCH

J6-1 POWER SWITCH J6-2

F500 0.5 AMP

F150 2.5 AMP

F100 1.5 AMP

J5-1 ≈14VAC @.2A
J5-2 ≈14VAC @.2A
J5-3
J6-4 ≈+8VDC @ 2A

CR100 CR150 CR151 CR101

C100 R100

NOTE 1

CKT. BD A1 5409264

Q100 Q1 Q2 Q3

R1 R2 R3 R4 R62 R61 R7 C20 C1

+15VDC @ 1A

C101

J3-5 J4-5

CR200 CR201

C200-203

R200

A2

Q10 Q12

R20 VR5 R56 R23 R28 R26 R38 R24 R29 R30 R40 R41 R22 C10 C14 C15 C12 R59 R39

SEE NOTE 3

P7-2,5,8 F200 25 AMP

R201-206

Q201-206 P7-1,4,7 P7-3,6,9

Q200

RT1 R25 R27 C13 C11

R44 R45 Q15 Q16 CR6 R63 C21 R31 Q207 VR7 R32 C204 C205

+5VDC @ 20A

J3-3 J4-3

POWER OK

J4-6 J3-6

J3-1 J4-1

CR300 CR301

C300 C301

SEE NOTE 2

R300

Q301-304 P7-10,13 R301-304 P7-11,14

P7-12,15

Q300

CKT. BD A1 5409264

C18 C19 R12 R9 R59 R60 R5 VR1 R15 R12 R8 Q8 R18 R11 C2 C3 R10 R13 R61 R14 Q4 Q5 R6 R33 R17 CR1 CR2 C17

TEST POINT

F300 10 AMP

CR4 VR8 VR9 R51 Q14 Q13 R36 R37 Q9 R55 Q7 Q6 R42 R43 R50 CR5 R52 R53 R34 C16

CKT. BD A2 5409262

C302

J3-4 J4-4 J6-3

-15VDC @ 8A.

J3-2 J4-2

REF DES	DESCRIRTION	PART NO.
A1	CONTROL BOARD A1	5409264
A2	CONTROL BOARD A2	5409262
Q100	2N3055 TO-41 CASE	1510008
Q300-304	2N3055 TO-41 CASE	1510008
Q200-206	2N3055 TO-41 CASE	1510008
R100,R300	RES 300Ω 10W 5%	1310188-0
R200	RES 100Ω 25W 5%	1302888
R201-206	RES .14Ω 5W 1%	1310189
R301-304	RES .25Ω 3W 1%	1310219
R400	RES 3.9K 1/2W 5%	1300443
S1	SWITCH THERMOSTAT	1210199-0
T1	TRANSFORMER	1160178-0
T2	TRANSFORMER	1610177-0
J8	OUTLET AH #10103 OR EQUIV	1205351
P10	MALE INLET AH# 5278 OR EQUIV	1209983
CR400-402	DIODE IN645	1105314
F400	FUSE 1/8 SLO BLO	9008527
C401	CAP .01 MFD @ 200V DC	1001610
C400	CAP 270 MFD @ 50V DC	1010192-0
CR500	THYRECTOR 6RS 20SP 5B5	1110181
B1, 2	BLOWER	1209403-0
Q207	SCR PRV 100 IGC 55A	1110183-0
C100	CAP 6,000 MFD @ 40V DC	1010186
C101,302	CAP 10,800 MFD @ 20V DC	1010185-0
C200-203	CAP 30,000 MFD @ 25 VDC	1010184-0
C204	CAP 1.0 MFD @ 35V DC	1001776
C205	CAP 18,000 MFD @ 10V DC	1010197-0
C300,301	CAP 14,000 MFD @ 40 V DC	1010187-0
C500,501	CAP. 1-.1 MFD @ 1000 V DC	10 02153
CB1	CKT. BRK. 10 AMP	12 0191-0
CR100,101	DIODE IN4721	1110182-0
CR150,151	DIODE IN 4721	1110182-0
CR200,201	DIODE IN1185A	1109979
CR300,301	DIODE IN1201A	1110006
F500	FUSE .5A AGC	9007208
F100	FUSE 1.5 AGC	9008388
F150	FUSE 2.5A ABC	9008387
F200	FUSE 25A ABC	9008386
F300	FUSE 10A ABC	9008390
K1	REALY	121098-0

PARTS LIST

DRN	J. DIMACK	DATE 9/23/70
CHK	A. DeLUCIA	DATE 10/14/70
ENG		DATE 10/21/70
MFG		DATE

TRANSISTOR & DIODE CONVERSION CHART

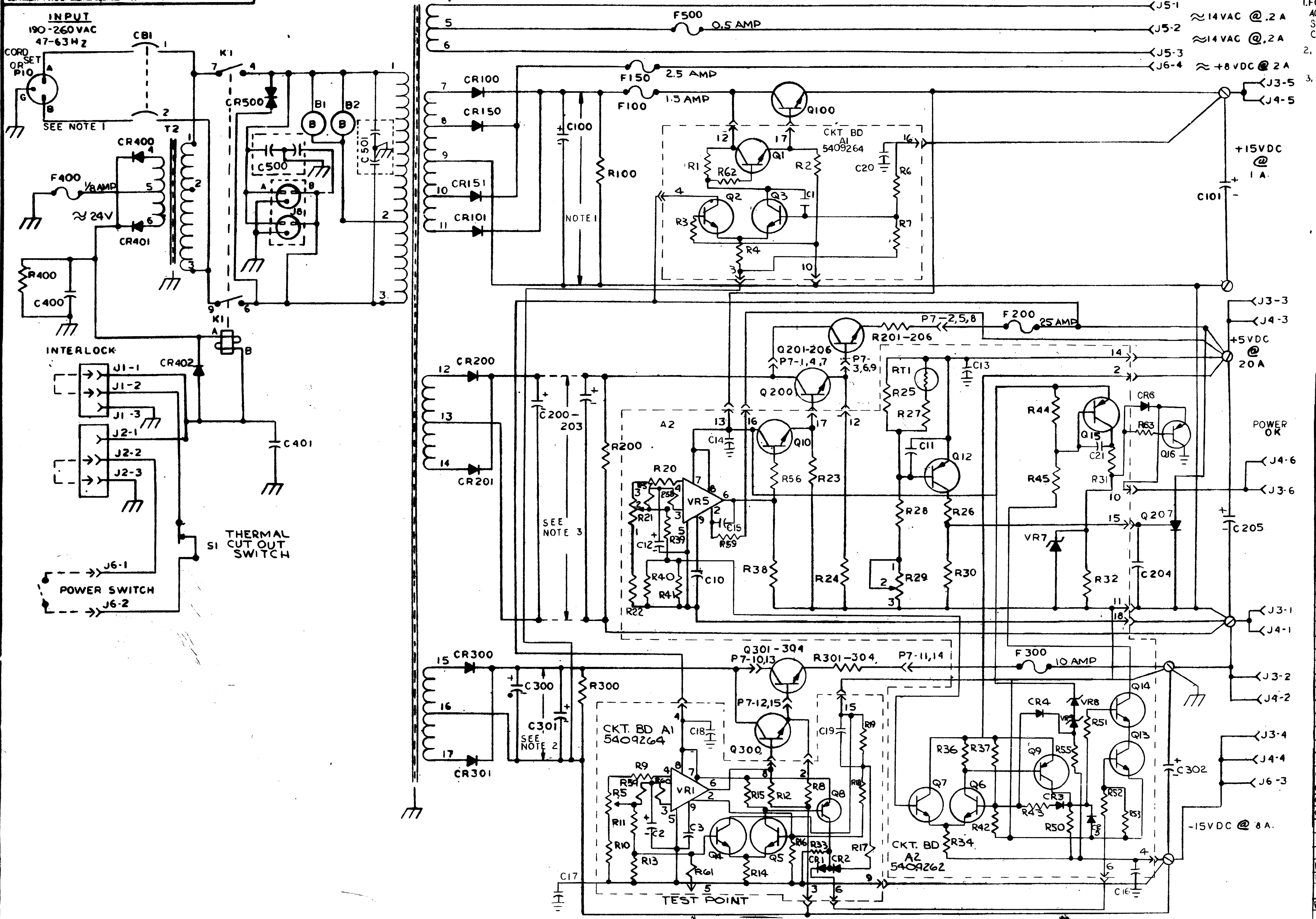
DEC	EIA	DEC	EIA

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: H724 SCHEMATIC

SIZE D | CODE CS | NUMBER H724-0-1 | REV J

PRINTED CIRCUIT REV F



NOTES:

1. FOR POWER SUPPLIES MADE BY NORTH ELECTRIC CO. AC INPUT WILL BE THROUGH P10 INLET. FOR POWER SUPPLIES MADE BY DEC AC INPUT WILL BE THROUGH CORD SET DEC PART # 1700005-15
2. +18.9VDC MINIMUM
   +36VDC MAXIMUM
3. +8.6 VDC MINIMUM
   +18VDC MAXIMUM

REF DES	DESCRIPTION	PART NO
A1	CONTROL BOARD A1	5409264
A2	CONTROL BOARD A2	5409262
Q300-304 Q200-206 Q100	2N3055 TO-41 CASE	1510008
R100, R300	RES 300 Ω 10W 5%	1310188
R200	RES 100 Ω 25W 5%	1302888
R201-206	RES .14Ω 5W 1%	1310189
R301-304	RES .25Ω 3W 1%	1310219
R400	RES 3.9 K 1/2 W 5%	1300443
S1	SWITCH THERMOSTAT	1210199-0
T1	TRANSFORMER	1601780
T2	TRANSFORMER	1610177-0
J8	OUTLET AH #5662-DOR EQUIV	9008856
P10	MALE INLET AH # 5678 OR EQUIV	9008854
CR400-402	DIODE 1N645	1105314
F400	FUSE 1/8 SLO BLO	9008527
C401	CAP .01MFD @ 200 VDC	1001610
C400	CAP 270 MFD @ 50 VDC	1010192
CR500	THYRECTOR 6RS20SP9B9	1102915
B1, 2	BLOWER	1209403-1
Q207	SCR PRV 100 Idc 55A	1110183
C100	CAP 6000 MFD @ 40 VDC	1010186-0
C101, 302	CAP 10,800 MFD @ 20 VDC	1010185
C200-203	CAP 30,000 MFD @ 25 VDC	1010184-0
C204	CAP 1.0 MFD @ 35 VDC	1001776
C205	CAP 18,000 MFD @ 10 VDC	1010197
C300, 301	CAP 14,000 MFD @ 40 VDC	1010187
C500, 501	CAP .1-.1 MFD @ 1000 VDC	1002153
CB1	CKT. BRK. 5 AMP	1210364
CR100, 101 CR150, 151	DIODE 1N4721	1110182
CR200, 201	DIODE 1N1185A	1109979
CR300, 301	DIODE 1N1201A	1110006
F500	FUSE .5A AGC	9007208
F100	FUSE 1.5 AGC	9008388
F150	FUSE 2.5A ABC	9008387
F200	FUSE 25A ABC	9008386
F300	FUSE 10A ABC	9008390
K1	RELAY	1210198-0

PARTS LIST

REVISIONS

REV.	CHG NO.
A	00001
B	540924 1&2
C	H724 00003
D	5409262 00003
E	H724-00012
F	00005
H	00006
J	5409262 00009

J. DIMACK

A. DeLUCA

DATE 7/29/70
DATE 12-10-70
DATE 12-10-70
DATE 12/16/70

TRANSISTOR & DIODE CONVERSION CHART

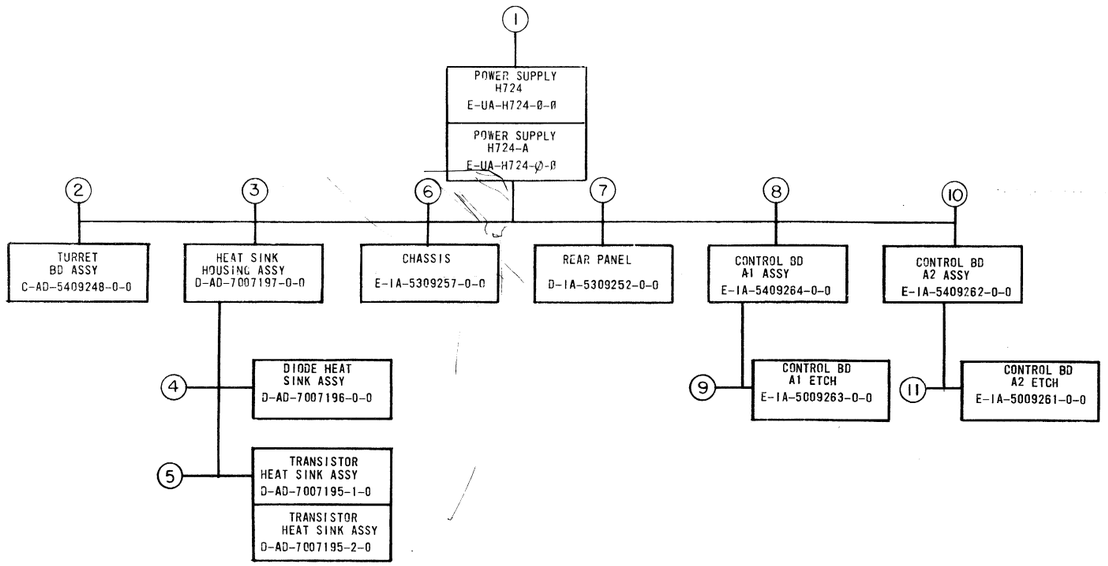
DEC	EIA	DEC	EIA

EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE H724A SCHEMATIC

SIZE D CODE CS NUMBER H724-A-1 REV J

PRINTED CIRCUIT REV F



MECHANICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
1.	POWER SUPPLY ASSY (H724)	E-UA-H724-0-0			
	POWER SUPPLY ASSY (PL)	A-PL-H724-0-0			
	~~POWER SUPPLY (H724A)~~	~~E-UA-H724-A-0~~			
	~~POWER SUPPLY (H724A) (PL)~~	~~A-PL-H724-A-0~~			
	PLATE, CAP. TOP	B-MD-5309200-0-0			
	PLATE, CAP. BTM	B-MD-5309201-0-0			
	BRKT. MTG. CARD GUIDE	D-MD-5309197-0-0			
	GUIDE, CARD	B-MD-5309196-0-0			
	BAR, BUS	B-MD-5309202-0-0			
	BRKT. MTG SCR. PRV.	B-MD-5309199-0-0			
	SPACER, CONN	B-MD-5309198-0-0			
	DECAL MODULE BDS	A-DC-5309375-0-0			
	DECAL 230V	A-DC-5309376-0-0			
	CASTING HEAT SINK ASSY	C-AD-7007205-0-0			
	CASTING HEAT SINK ASSY (PL)	A-PL-7007205-0-0			
	PANEL, FRONT	D-MD-5309260-0-0			
	COVER, POWER SUPPLY	D-IA-5309187-0-0			
	HARNESS, CONN.	D-IA-7007132-0-0			
	HARNESS, MAIN CHASSIS	E-IA-7007191-0-0			
	PLATE, BUS	B-MD-5309251-0-0			
	18 PIN CONN BLOCK	B-MD-5509626-00			
	INTERPLANT SHIPPING (H724)	A-PI-3700030-00			
2.	TURRET BD ASSY	C-AD-5409248-0-0			
	TURRET BD ASSY (PL)	A-PL-5409248-0-0			
	BOARD TURRET	C-MD-5309301-0-0			
3.	HEAT SINK HOUSING ASSY	D-AD-7007197-0-0			
	HEAT SINK HOUSING ASSY (PL)	A-PL-7007197-0-0			
	HOUSING HEAT SINK	C-MD-5309256-0-0			
	STANDOFF FAN SUPPORT	B-MD-5309265-0-0			
	HOUSING CABLE	D-IA-7009286-00			
4.	DIODE H.S. ASSY	D-AD-7007196-0-0			
	DIODE HEAT SINK (PL)	A-PL-7007196-0-0			
	DIODE H.S.	D-PS-1210212-0-1			
5.	TRANS H.S. ASSY	D-AD-7007195-0-0			
	TRANS H.S. ASSY (PL)	A-PL-7007195-0-0			
	TRANS H.S.	D-PS-1210211-0-1			
6.	CHASSIS	E-IA-5309257-0-0			
	SILK SCREEN (WHT)	B-SS-5309257-0-1			
	BRKT, TRANSFORMER	C-MD-5309296-0-0			
7.	REAR PANEL	D-IA-5309252-0-0			
	SILK SCREEN (WHT)	B-SS-5309252-0-1			
8.	CONTROL BD A1 ASSY	E-IA-5409264-0-0			
	DRILLING TAPE (A1)	K-CO-5409264-0-4			
	MODULE HISTORY (A1)	B-MH-5409264-0-6			
9.	CONTROL BD A1 FAB	E-IA-5009263-0-0			
10.	CONTROL BD A2 ASSY	E-IA-5409262-0-0			
	DRILLING TAPE (A1)	K-CO-5409262-0-4			
	MODULE HISTORY (A1)	B-MH-5409262-0-6			
11.	CONTROL BD A2 FAB	E-IA-5009261-0-0			

ELECTRICAL

FIND NO.	DESCRIPTION	PART NO.	DEPT USAGE PROD	CUST	F/C
1.	POWER SUPPLY	~~A-WL-H724-0~~			
	~~POWER SUPPLY~~	~~A-WL-H724-A~~			
	CIRCUIT SCHEMATIC	D-CS-H724-0-1			
	CIRCUIT SCHEMATIC	D-CS-H724-A-1			
~~8.~~	~~CIRCUIT SCHEMATIC~~	~~B-CS-5409284-0-1~~			
~~9.~~	~~P.C. LAYOUT~~	~~PC-5009283-0-1~~			
~~10~~	~~CIRCUIT SCHEMATIC~~	~~B-CS-5409282-0-1~~			
~~11.~~	~~P.C. LAYOUT~~	~~PC-5009281-0-1~~			

FIRST USED ON OPTION/MODEL: H724

DRN.		DATE
CHK'D.		DATE 1-14-71
ENG.		DATE
PROJ. ENG.		DATE 1-14-71
PROD.		DATE
NEXT HIGHER ASSY	A-M-H724-D	
SCALE		
SHEET	1 OF 1	

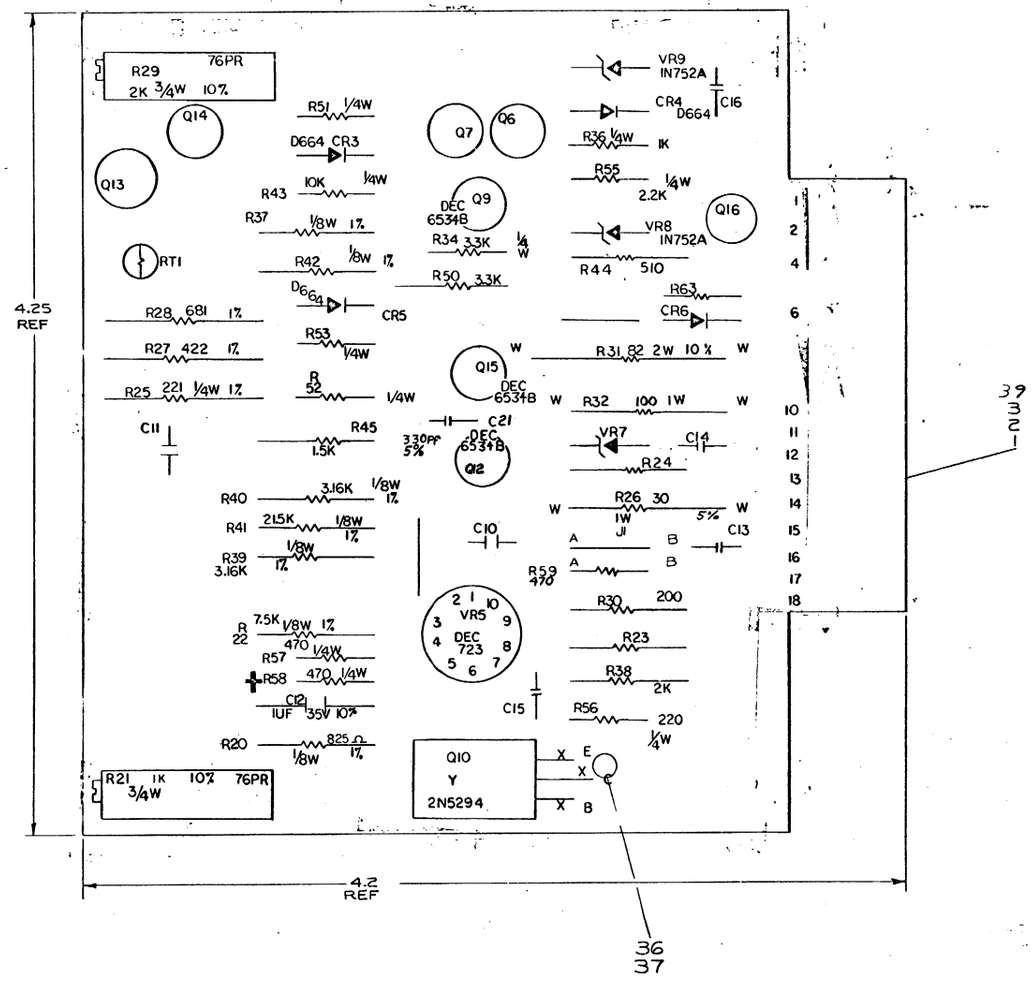
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: DRAWING INDEX LIST (H724)

SIZE D | CODE DDI | NUMBER H724-0-2 | REV C

DIST

SIZE D | CODE DDI | NUMBER H724-0-2 | REV C



1	R63	RES. 10Ω, 1/4W, 5%	1301317	44
1	C21	CAP 330 PF 100V 5 %	10-CC023	43
4	CR3, CR4, CR5, CR6	DIODE IN914 OR EQUIV (D664)	1100-14	42
1	R55	RES 2.2K 1/4 W 5%	1300417	41
1	R50	RES 3300 Ω 1/2W 5%	1300440	40
REF		CIRCUIT SCHEMATIC	D-CS-1724-A-1	39
REF		CIRCUIT SCHEMATIC	D-CS-1724-D-1	39
1/R	J1	WIRE, #22 AWG BUS	9107560-01	38
1		SCREW, PHL. PAN HD. #4-40x.25	9008301-1	37
1		KEP NUT #4-40	3006557	36
1	Q10	TRANSISTOR 2N5294	1510377	35
4	Q9, Q12, Q15, Q16	TRANSISTOR DEC 6534-B	1503409-01	34
4	Q6, Q7, Q13, Q14	TRANSISTOR MPS 6531	1509338	33
2	VR8, VR9	DIODE IN752A ZENER	1102808	32
3	R57, R58, R59	RES 470 Ω 1/4 W 5%	1300316	31
1	RT1	THERMISTOR 1000 ±10%	1310170	30
4	R36, R51, R52, R53	RES. 1K, 1/4W, 5%	1300365	29
1	R45	RES. 1.5K, 1/2W, 5%	1300394	28
1	R44	RES. 510, 1/2 W, 5%	1302321	27
1	R43	RES. 10K, 1/4W, 5%	1300479	26
1	R41	RES. 21.5K, 1/8W, 1% MF	1303155	25
2	R39, R40	RES. 3.16K, 1/8W, 1% MF	1303045	24
1	R38	RES. 2K, 1/2W, 5%	1302387	23
2	R37, R42	RES. 1K, 1/8W, 1% MF	1303114	22
1	C12	CAP 1.0 MFD, 35V 10%	1001776	21
1	R34	RES. 3300, 1/4W 5%	1300439	20
1	R32	RES. 100, 1W, 5%	1300232	19
1	R31	RES. 82, 2W, 10%	1301654	18
1	R30	RES. 200, 1/2W, 5%	1302381	17
1	R29	RES. 2K, 3/4W, 10% POT 76PR	1303143-08	16
1	R28	RES. 681, 1/2W, 1% MF	1302922	15
1	R27	RES. 422, 1/2W, 1% MF	1300313	14
1	R26	RES. 30, 1W, 5%	1302782	13
1	R25	RES. 221, 1/4W, 1% MF	1302222	12
2	R23, R24	RES. 1K, 1/2W, 5%	1300364	11
1	R22	RES. 7.5K, 1/8W, 1% MF	1305822	10
1	R21	RES. 1K, 3/4W. POT 10% 76PR	1303143-07	9
1	R20	RES. 825 Ω 1/8W 1% MF	1305143	8
1	VR5	I.C. DEC 723	1609381	7
1	R56	RES 220 1/4W 5%	1300271	6
1	VR1	DIODE IN751 A ZENER	1105873	5
6	C10, C11 C13-C16	CAP. .01 MFD 100 V. 20%	1001610	4
1		ETCHED CIRCUIT BOARD	E-IA-5009261-0-0	3
REF		MODULE ECO HISTORY	B-MH-5409262-0-0	2
REF		X-Y COORDINATE HOLE	X-CO-5409262-0-0	1
QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV F

UA 723 C	5	2	38	22	J2-A	J2-B
IC TYPE	GND	+5V	38	22	J1-A	J1-B

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

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		2N5294	++
		DEC 6443	NONE
		DEC 6531	MPS6531
		DEC6534B	MPS 6534
		IN749A	SAME
		DG72	IN3653

SEMICONDUCTOR CONVERSION CHART

REV.	DESCRIPTION	DATE	APPROVED
A	5409262-0001 E. DeLUCA	7/1/72	
B	5409262-0002 E. DeLUCA	7/12/72	
C	5409262-0003 E. DINACK	8/1/72	
D	5409262-0004 E. DINACK	8/15/72	
E	5409262-0005 E. DINACK	9/1/72	
F	5409262-0006 E. DINACK	9/15/72	
G	5409262-0007 D. ADAMS	10/1/72	
H	5409262-0008 D. ADAMS	10/15/72	

REVISIONS

CONT.		DATE	11/1/72
CHK'D		DATE	
ENG.		DATE	
PROJ. ENG.		DATE	
PROD.		DATE	

FIRST USED ON: E-IA-H724-0-0

471

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: CONTROL BOARD A2

SIZE	CODE	NUMBER	REV.
E	IA	5409262-0-0	H

DIST

E IA5409262-0-0 H

DEC FORM NO. DMS 168