PDP-11/45
system
engineering drawings

digital equipment corporation · maynard. massachusetts

Rison

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX 11/45-1

SEQUENCE	
DRAWING DIRECTORY (SHT 1 & 2 ONLY)	B-DD-11/45-Ø
CONSOLE PHYSICAL LAYOUT	E-IA-5409684-0-0
CIRCUIT SCHEMATIC	D-CS-5409684-0-1
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DRAWING DIRECTORY	B-DD-DL11-1
DRAWING DIRECTORY	B-DD-KW11-L
DRAWING DIRECTORY	B-DD-BM873-Ø
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-KT11-C-Ø
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POWER SYSTEM CONFIGURATION	D-IC-11/45-Ø-1
11/45 BACK PANEL PC BOARD	D-IC-11/45-Ø-2
WIRE LIST	K-WL-7009540-0-2
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-861-Ø
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-H742Ø-Ø
DRAWING DIRECTORY	B-DD-H742-Ø
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-H744-Ø
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-H745-Ø
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-H746-Ø
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G772-OPTION HARNESS	E-IA-7009562-0-0
ACCESSORY LIST	A-AL-11/45-Ø-3
ARRANGEMENT DRAWING	D-AR-11/45-Ø-4
ARRANGEMENT PARTS LIST	C-PL-11/45-Ø-4
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-M93Ø1-YB
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CUSTOMER PRINT SET INDEX 11/45-2

SEQUENCE	
DRAWING DIRECTORY(SHT 1&2 ONLY)	B-DD-11/45-Ø
CONSOLE PHYSICAL LAYOUT	E-IA-5409684-0-0
CIRCUIT SCHEMATIC	D-CS-5409684-0-1
DRAWING DIRECTORY(SHT 1&2 ONLY)	B-DD-KB11-D-Ø
DRAWING DIRECTORY	B-DD-DL11-1
DRAWING DIRECTORY	B-DD-KW11-L
DRAWING DIRECTORY	B-DD-BM873-Ø
DRAWING DIRECTORY(SHT 1 ONLY)	B-DD-KT11-C-Ø
ACCESSORY LIST	A-AL-KT11-C-Ø
POWER SYSTEM CONFIGURATION	D-IC-11/45-Ø-1
11/45 BACK PANEL PC BOARD	D-IC-11/45-0-2
WIRE LIST	K-WL-7009540-0-2
DRAWING DIRECTORY(SHT 1 ONLY)	B-DD-861-0
DRAWING DIRECTORY)SHT 1 ONLY)	B-DD-H742Ø-Ø
DRAWING DIRECTORY	B-DD-H742-Ø
DRAWING DIRECTORY(SHT 1 ONLY)	B-DD-H744-Ø
DRAWING DIRECTORY(SHT 1 ONLY)	B-DD-H745-Ø
DRAWING DIRECTORY(SHT 1 ONLY)	B-DD-H746-Ø
CIRCUIT SCHEMATIC	E-CS-H754-Ø-1
G772-OPTION HARNESS	E-IA-7009562-0-0
ACCESSORY LIST	A-AL-11/45-0-3
ARRANGEMENT DRAWING	D-AR-11/45-0-4
ARRANGEMENT PARTS LIST	C-PL-11/45-0-4
DRAWING DIRECTORY (SHT 1 ONLY)	B-DD-M93Ø1-YB
TABLE OF CONTENT	B-TC-DL11-W

THIS IS PRINT SET

UNIT VARIATIONS

VAR	TITLE	PRINT SET 11/45-1	PRINT SET 11/45-2
11/45 CA	BASIC ASSY (PDP 11/45 115V	X	–
11/45-CB	BASIC ASSY (PDP 11/45) 230V	X	–
11/45-CC	BASIC ASSY & LA3Ø 115V	X	–
11/45-CD	BASIC ASSY & LA3Ø 230V	X	–
11/45-CE	BASIC ASSY & VTØ5B 115V	X	–
11/45-CF	BASIC ASSY & VTØ5B 230V	X	–
11/45-CH	BASIC ASSY & LA3Ø 115V	X	–
11/45-CJ	BASIC ASSY & LA3Ø 230V	X	–
11/45-CK	BASIC ASSY & VTØ5B 115V	X	–
11/45-CL	BASIC ASSY & VTØ5B 230V	X	–
11/45 FA	BASIC ASSY 115V	X	–
11/45-FB	BASIC ASSY 230V	X	–
11/45-GA	BASIC ASSY & LA3Ø 115V	X	–
11/45-GB	BASIC ASSY & LA3Ø 230V	X	–
11/45-GE	BASIC ASSY & LA3Ø 115V	X	–
11/45-GF	BASIC ASSY & LA3Ø 230V	X	–
11/45-AA	BASIC ASSY (PDP 11/45) 115V	–	X
11/45-AB	BASIC ASSY (PDP 11/45) 230V	–	X

REVISIONS			
DATE	CHG. NO.	REV	
4-76	11/45-00065	AH	REVISED & REDRAWN
6-76	11/45-00066	AJ	

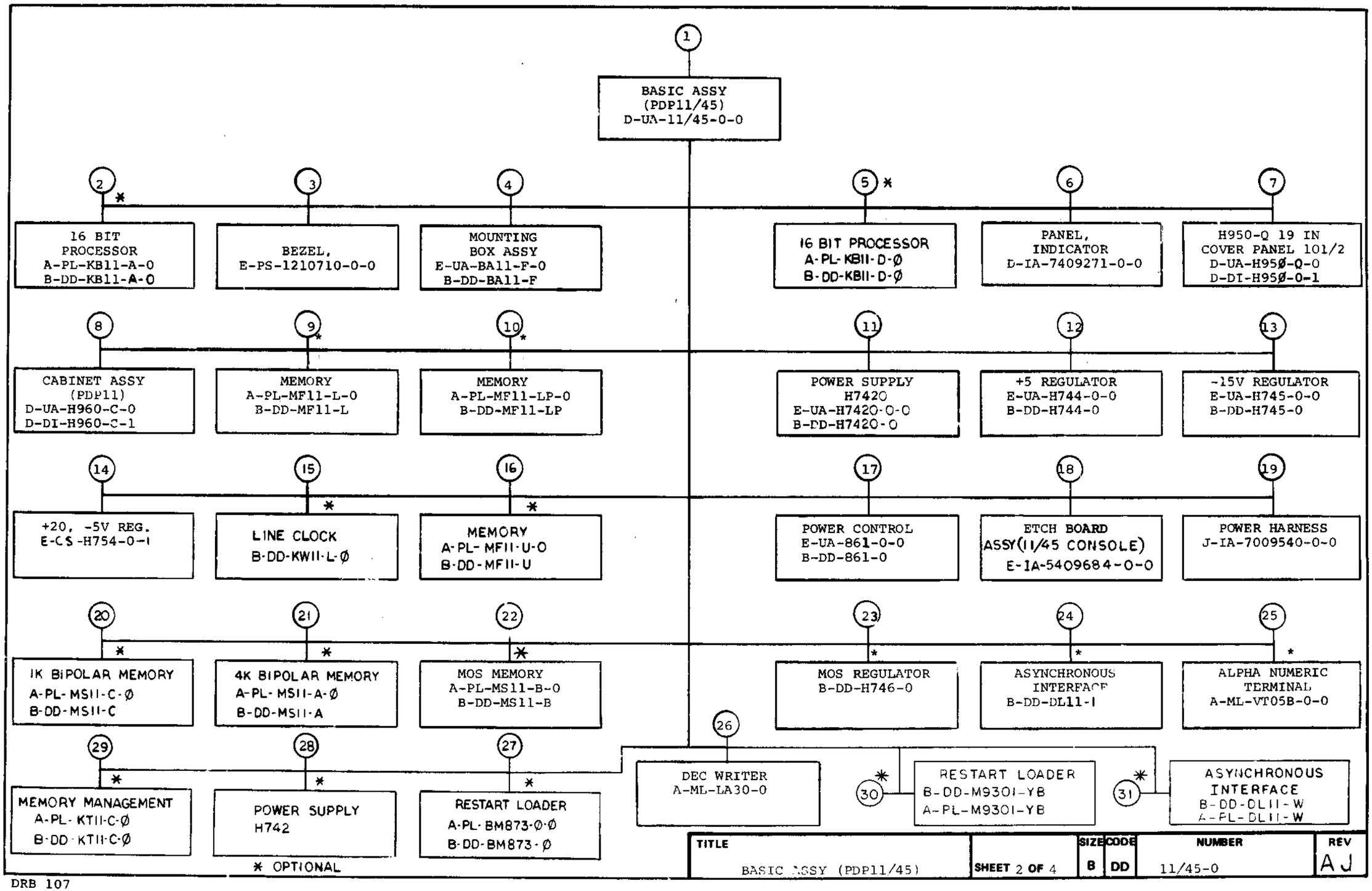
USED ON OPTION/MODEL	
PDP-11	

SHEET 1 OF 4

DRN. R. COOK	DATE 4/72	TITLE BASIC ASSY (PDP11/45)	
CHK'D. R. COOK	DATE 4/72		
PROJ ENG. B. DELAGI	DATE 4/72		
PROD. A. HIRSCH	DATE 5/72	SIZE B / CODE DD / NUMBER 11/45-0	REV AJ
FIELD SERV. A. ZINS	DATE 5/72	DIST	

EN-0102-1A-1-R8(2-325)

DRB 106



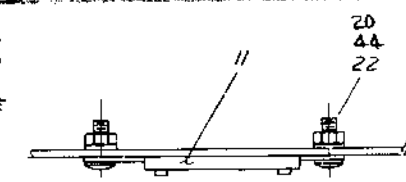
DRB 107

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

KNOB LOCATIONS	
ITEM NO.	REFERENCE DESIGNATIONS
8	S1-S3, S7-S9, S13-S15, S20, S22, S24, S26, S28
40	S4-S6, S10-S12, S16-S18, S21, S23, S25, S27
41	S19

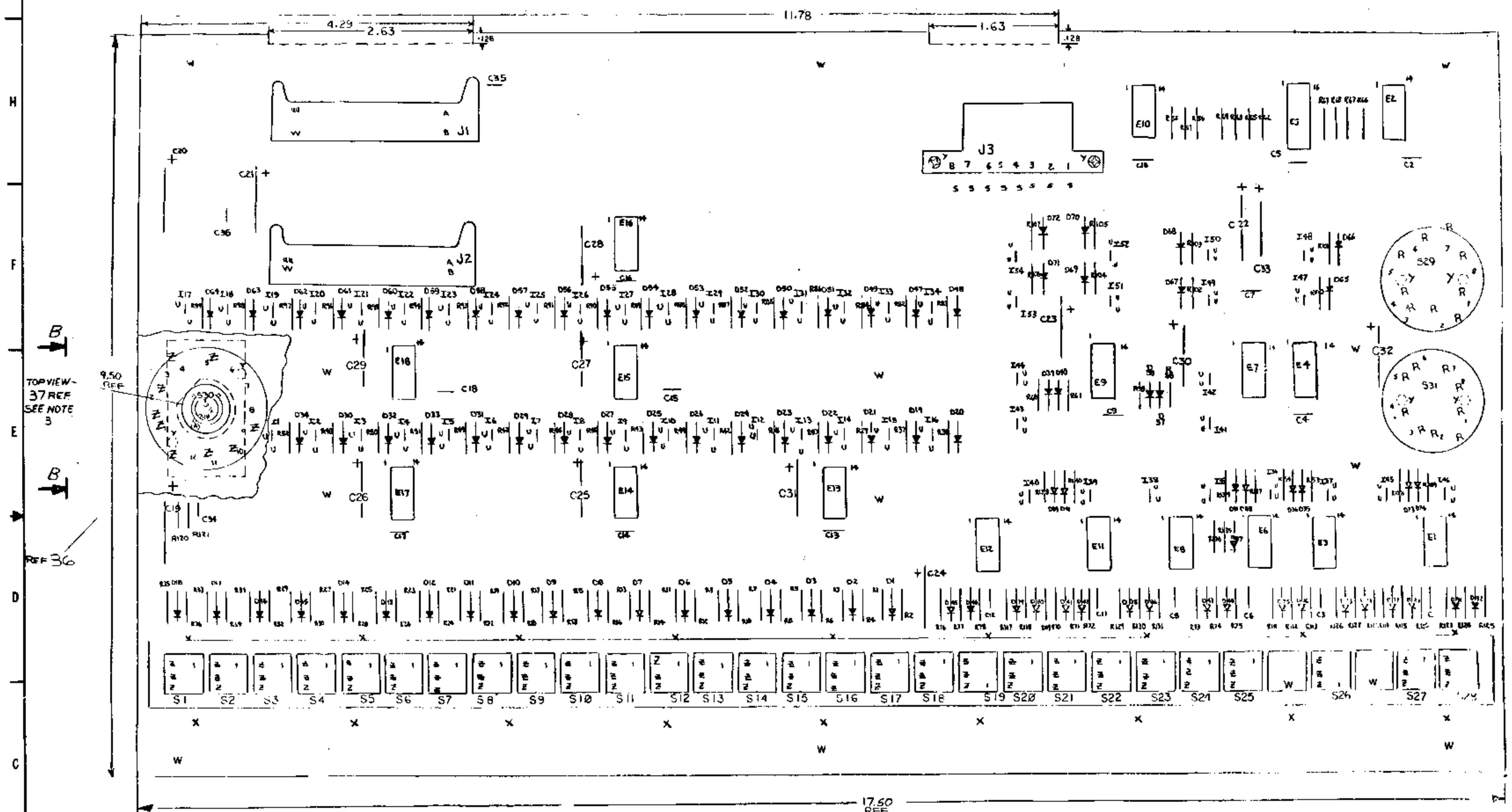
NOTES CONT.

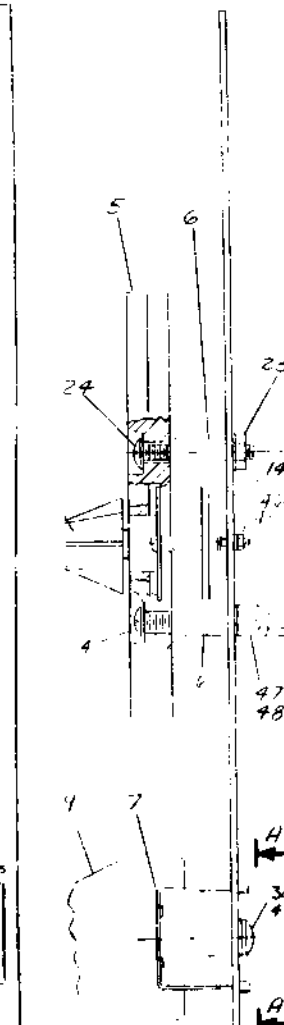
3. IN ORDER TO GET THE PROPER ALIGNMENT BETWEEN ROTARY SWITCH #17 AND POWER LOCK #37, MOUNT ITEM #17 ON P.C. BOARD AND TURN SHAFT C'CLOCKWISE (LEFT) TO STOP. MOUNT ITEM #37 TO SUPPORT BRACKET ITEM #5 WITH 'D' HOLE IN POSITION INDICATED. ROTATE KEY POSITION INDICATED AS "B" OF ITEM #27 TO LINE UP WITH KEY POSITION INDICATED AS 'A' OF ITEM #37.



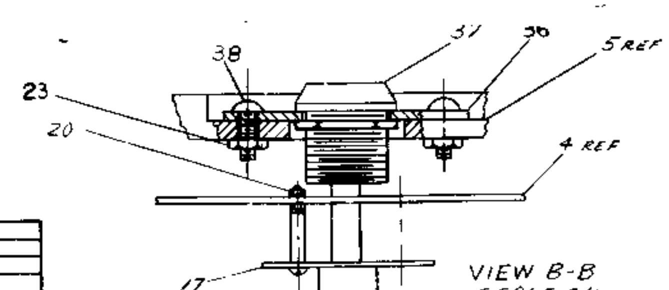
NOTES

1. AFTER ASSEMBLING ITEM #7 TO ITEM #4, THE TABS OF ITEM #7 ARE TO BE TWISTED AS SHOWN IN VIEW A-A
2. ON S1-S19, S26, S28 THE SWITCH ARM IS TO FLIP UP. THE SWITCH ARM TO FLIP DOWN ON 20-25:27.

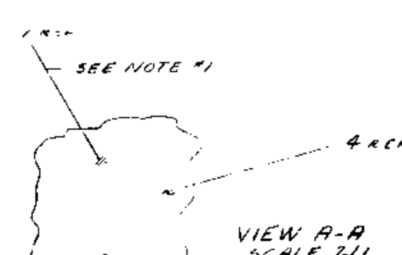




FOR INFORMATION ON COLOR OF KNOB SEE TABLE



VIEW B-B
SCALE 2/1
(ROTATED 90° C'CLOCKWISE)



VIEW A-A
SCALE 2/1

SEE SHEET 2 FOR PARTS LIST

IC TYPE	GND	+5V

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

IC PIN LOCATIONS

ITEM NO.	AWG	FROM PT	TO PT

JUMPER LIST

SEMICONDUCTOR CONVERSION CHART

QTY	REF DESIGNATION	DESCRIPTION	PART NO

PARTS LIST

ETCH BOARD REV E

EQUIPMENT CORPORATION

ETCH BOARD ASSY (11/45 CONSOLE)

FOR AB11-A-0

D A 5409684-0-0 H

5409684-1 QTY	5409684-0 QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
13	0		KNOB SWITCH AC RED	1210796-09	53
14	0		KNOB SWITCH DC BLUE	1210796-08	52
1	1	R120	RES. 68 1/4W 10%	1300221	51
1	1	R121	RES. 56 1/4W 10%	1301429	50
					49
3	3		LOCKWASHER INT TOOTH #6	9006633	48
3	3		SPACER .25 R.F. #6-32X.88LG	1006861	47
4	4		LOCKWASHER #2 INT TOOTH	9006631	46
4	4		NUT, HEX #2 56	9006555	45
2	2		SCR. PHL HD PAN #4-40 x 1/4	9006011-1	44
2	2		LOCKWASHER #8 INT TOOTH	9006634	43
REF	REF		ASSY/DRILLING HOLE LAYOUT	E-AH-5409684-0-3	42
1	1		KNOB, SWITCH GRAY	D-PS-1210796-3-0	41
0	13		KNOB, SWITCH MAGENTA	D-PS-1210796-2-0	40
1	1	E8	I.C. DEC 7404	1905686	39
2	2		SCR PHL PAN HD #6 32 x 3/8 LG	9006022-1	38
1	1		POWER LOCK	1210754	37
1	1		STRAP, LOCK MTG	B-IA-7409989-1-0	36
1	1	E9	I.C. MC 3001	1909514	35
7	7	E7, E13-E18	I.C DEC 7416	1909928	34
1	1	E5	I.C DEC 9318	1110456	33
2	2	E2, E4	I.C DEC 7417	1909929	32
6	6	E1, E3, E6, E10-E12	I.C DEC 7400	1905575	31
2	2		#8 32 x 1/4 SELF TAPPING SCR	9006144-01	30
54	54	R37-R56, R58-R61, R84-R109, R137-R140	RES 220 Ω 1/4W, 10%	1300271	29
76	76	R1-R36, R55-R57, R62-R78, R111-R119, R123-R131, R135, R136	RES CCR 1/4W, 10%	1301917	28
15	15	C19-C33	CAP 6.8 μf 35V 10% TANT	1005506	27
21	21	C1-C18, C34-C36	CAP. .01 μf 100V 10%	1001610-1	26
91	91	D1-D91	DIODE D664	1100114	25
6	6		SCR. PHL PAN HD #6-32 x .50 LG	9006024-1	24
5	5		NUT, KEPS #6-32	9006560	23
2	2		WASHER, FIBER HNHIMINZAE	9006673	22
4	4		NUT, NYLON #4-40	9007992	20
108	108		LAMP SOCKET	9007812	19
54	54	I1-I54	LAMP 6307D HUDSON BLUE	1209214	18
1	1	S30	SWITCH ROTARY (LEDEX) 3 POS	1210753	17
8	8	S19-S22, S25-S28	SWITCH SPDT MOMENTARY (C&K)	1210841	16
20	20	S1-S18, S23, S24	SWITCH SPDT (C&K)	1210840	15
2	2	S29, S31	SWITCH ROTARY (LEDEX) 8 POS	1210775	14
2	2	J1, J2	CONN. RIGHT ANGLE HEADER	1209991	13
8	8		PIN SOCKET AMP 61320-4	1209956	12
1	1	J3	PIN HOUSING	1209340-00	11
2	2		KNOB, FUNCTION BLK	1210723	10
2	2		KNOB, DUMMY GRAY	D-PS-1210825-0-0	9
0	14		KNOB, SWITCH ROSE	D-PS-1210796-1-0	8
1	1		SUPPORT, SWITCH	D-MD-7409270-1-0	7
6	6		STANDOFF, MALE/FEMALE #6-32	9007120-3	6
1	1		SUPPORT, INDICATOR PANEL	D-MD-7409988-0-0	5
1	1		ETCHED CIRCUIT BOARD	5009683	4
REF	REF		MODULE ECO HISTORY	[illegible]	3
REF	REF		CIRCUIT SCHEMATIC	D-CS-5409684-0-1	2
REF	REF		X-Y COORDINATE HOLE LOC	K-CO-5409684-0-0	1

PARTS LIST

IC TYPE	GND	+5V
DEC 9318	8	16

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

IC PIN LOCATIONS

ITEM NO.	AWG	FROM PT	TO PT

JUMPER LIST

DEC NO.	EIA NO.	DEC NO.	EIA NO.
D664	1N3606		

SEMICONDUCTOR CONVERSION CHART

EQUIPMENT CORPORATION

ETCH BOARD ASSY (11/45 CONSOLE)

NEXT HIGHER ASSY E-UA-KGH-A-4

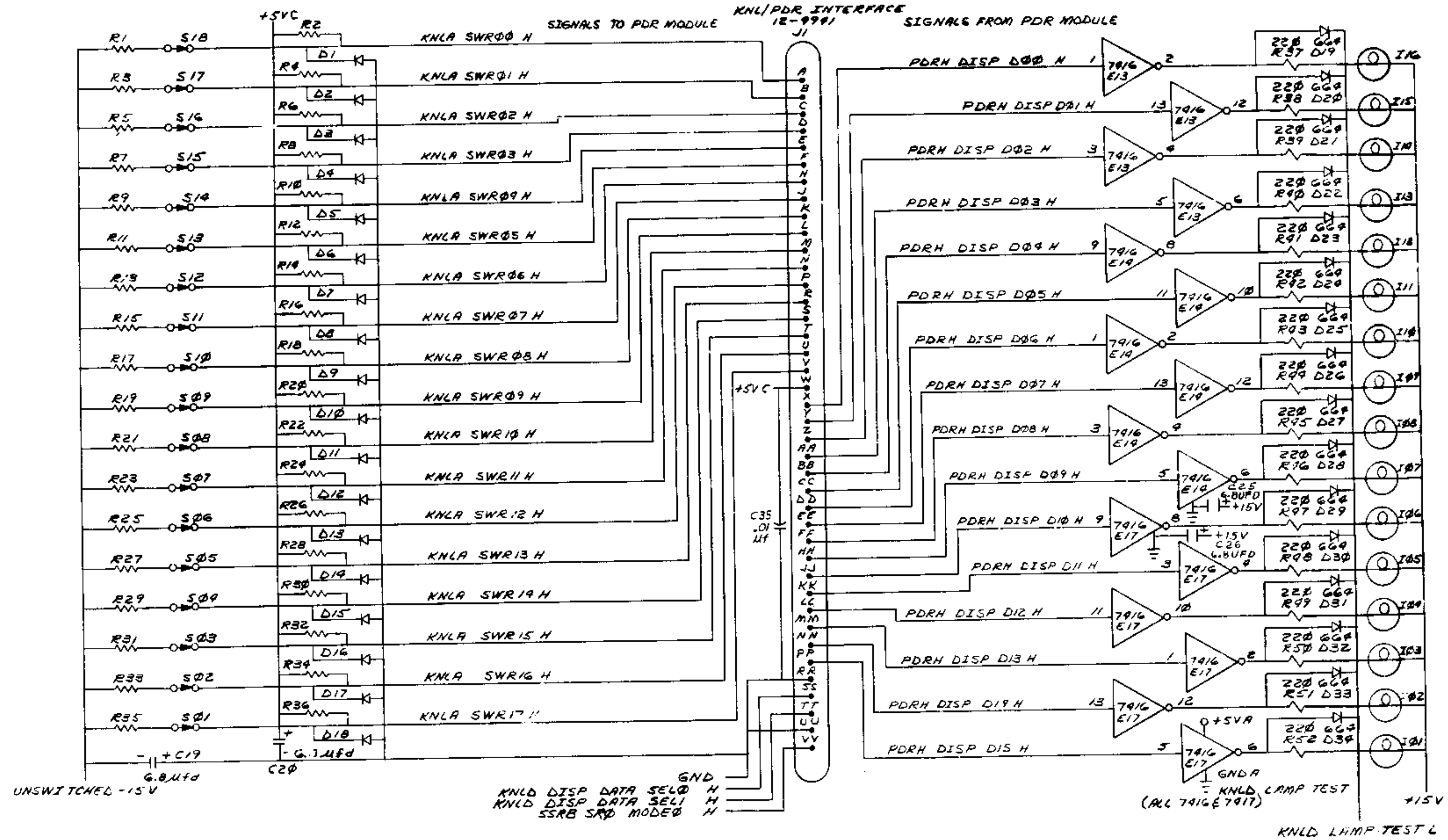
A 5409684-0-0 REV H

SHEET 1 OF 2

A 5409684-0-0

"SWITCH REGISTER" SWITCHES SHOWN IN LOGICAL "Ø" STATE (DOWN)

NOTES:
1. CONTROL LOGIC AND DISPLAY GROUNDS MUST BE KEPT SEPARATE.
2. ALL RESISTORS ARE 2.2K UNLESS MARKED OTHERWISE.
3. ALL UNMARKED DIODES ARE D664



REV	CHANGE NO.	ORIG	DATE	CHK
B	5409684-00001		4-14-72	
C	5409684-00002	J. SWANSON		
D	5409684-00003	J. SWANSON		
E	5409684-00004	J. SWANSON		
F	5409684-00005		6-14-74	
H		B. MINOR		

FIRST USED ON OPTION/MODEL	11/45
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES	DECIMALS .XXX ±.005 .XX ±.02; ANGLES ±0°30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	✓
MATERIAL	
FINISH	
NEXT HIGHER ASSY	B-DD-11/45-0
SHEET	1 OF 4

QTY. | DESCRIPTION | PART NO. | ITEM NO. — PARTS LIST

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: 11/45 CONSOLE BOARD KNLA

SIZE D CODE CS NUMBER 5409684-0-1 REV. H

NOTES:
CONTROL SWITCHES ARE SHOWN IN THEIR "NORMAL" OR NON-OPERATING POSITION. SWITCHES WITH ARROWS POINTING UP ARE PULLED DOWN TO OPERATE. THOSE WITH ARROWS DOWN ARE LIFTED TO OPERATE.
CONTROL SWITCHES S25 THRU S28, S19 THRU S23 ARE MOMENTARY SPDT.
ALL TWMR ON SHEETS 1 THRU 3 ARE TO BE CONNECTED TO +5V B AND FUNCTION SW GND RETURN.

12-9901 J2

SIGNALS FROM UBC MODULE

UBCJ DISP ADRS00 H
UBCJ DISP ADRS01 H
UBCJ DISP ADRS02 H
UBCJ DISP ADRS03 H
UBCJ DISP ADRS04 H
UBCJ DISP ADRS05 H
UBCJ DISP ADRS06 H
UBCJ DISP ADRS07 H
UBCJ DISP ADRS08 H
UBCJ DISP ADRS09 H
UBCJ DISP ADRS10 H
UBCJ DISP ADRS11 H
UBCJ DISP ADRS12 H
UBCJ DISP ADRS13 H
UBCJ DISP ADRS14 H
UBCJ DISP ADRS15 H
UBCJ DISP ADRS16 H
UBCJ DISP ADRS17 H

7416 E15, E16, E18

+15V 220 R88 C27, 6.8UFD GGA D48
220 R88 GGA D47
220 R84 GGA D52
220 R85 GGA D51
220 R86 GGA D50
220 R87 GGA D49
+15V 220 R88 C28, 6.8UFD GGA D54
C29 +15V 6.8UFD GGA D55
220 R90 GGA D56
220 R91 GGA D57
220 R92 GGA D58
220 R93 GGA D59
220 R94 GGA D60
220 R95 GGA D61
220 R96 GGA D62
220 R97 GGA D63
+5V A 220 R98 GGA D64
220 R99

I34 I33 I32 I31 I30 I29 I28 I27 I26 I25 I24 I23 I22 I21 I20 I19 I18 I17 +15V

OL-2C DEC#12-09219

GND A (ALL 7416 & 7417)

KNLD LAMP TEST L

+5V B

R70 R71 R72 R73 R74 R75 R76 R77 R78

S22 S24 S26 S28

D41 D42 D43 D44 D45 D46

7400 E17, E11, E9C, E9B, E18, E16

KNLB CONT SW H
KNLC PNL LOCK H
SSRB SRB MODE1 H
KNLB SINGLE CYCLE SW H
KNLB LOAD ADRS SW H

KNLC SWITCHED (-V)
FUNCTION SW GND RETURN

KNLD DISP ADRS SEL0 H
KNLD DISP ADRS SEL1 H
KNLC START SW H
SAPA IND DATA H
KNLC REG EXAM SW H
KNLC EXAM SW H
+5V B
KNLC REG DEP SW H
KNLD DISP ADRS SEL2 H
KNLC DEP SW H
FUNCTION SW GND RETURN
KNLC HALT SW H

C36 .01 MF

UBCJ IND PAUSE H
UBCJ IND ADRS ERR H
UBCJ IND MASTER H
UBCJ IND RUN H

FIRST USED ON OPTION/MODEL: 11/45	QTY.	DESCRIPTION	PART NO.
PARTS LIST			

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

DRN. [illegible] DATE 12-30-71
CHK'D [illegible] DATE 1/6/72
ENG. [illegible] DATE 3/24/72
MGR. ENG. [illegible] DATE 3/29/72
PROD. [illegible] DATE 3/30/72

NEXT HIGHER ASSY: B-DD-11/45-0
SCALE: NONE
SHEET 2 OF 4

DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

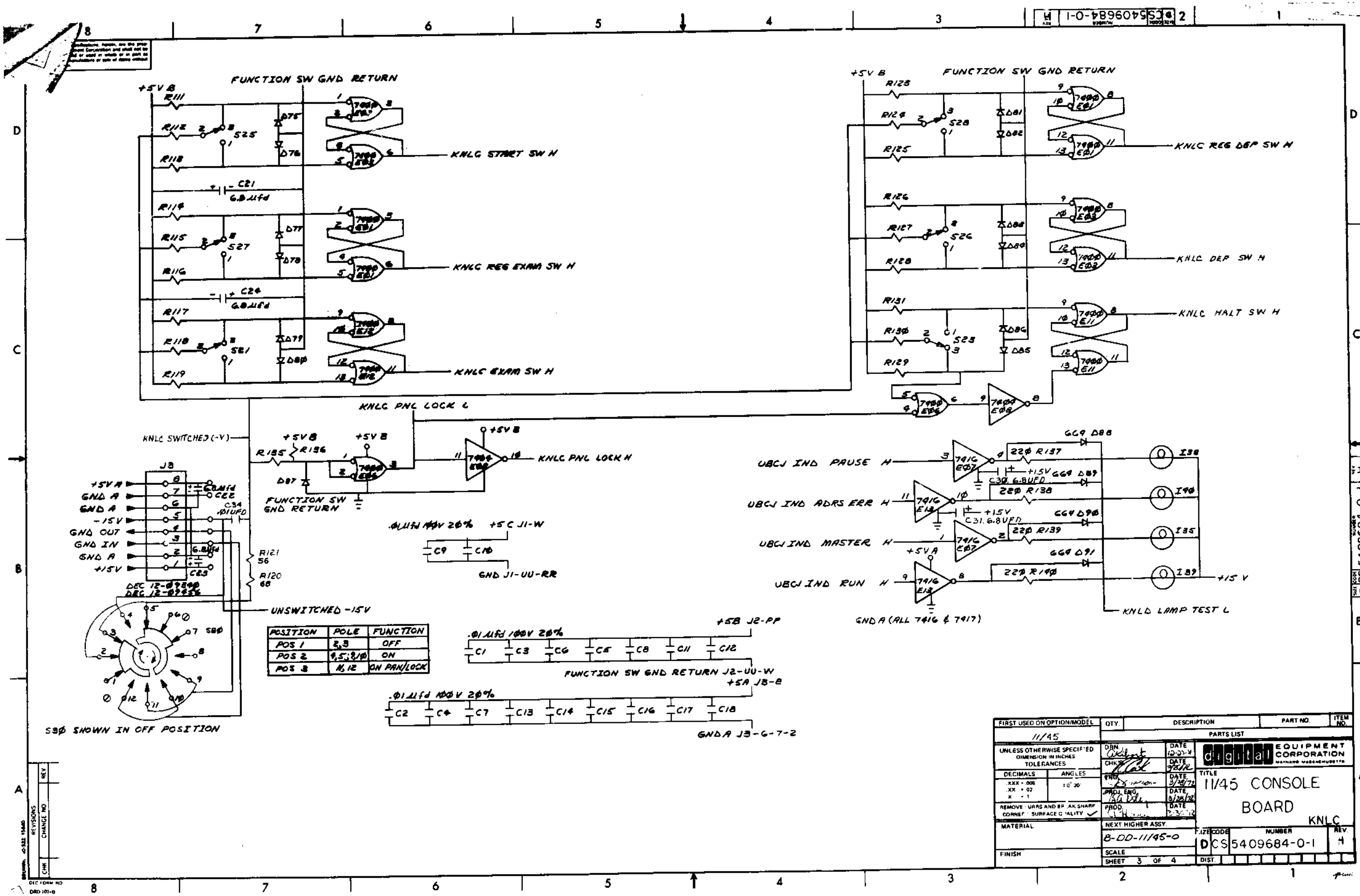
TITLE: 11/45 CONSOLE BOARD
KNLB

SIZE D | CODE CS | NUMBER 5409684-0-1 | REV. H
DIST.

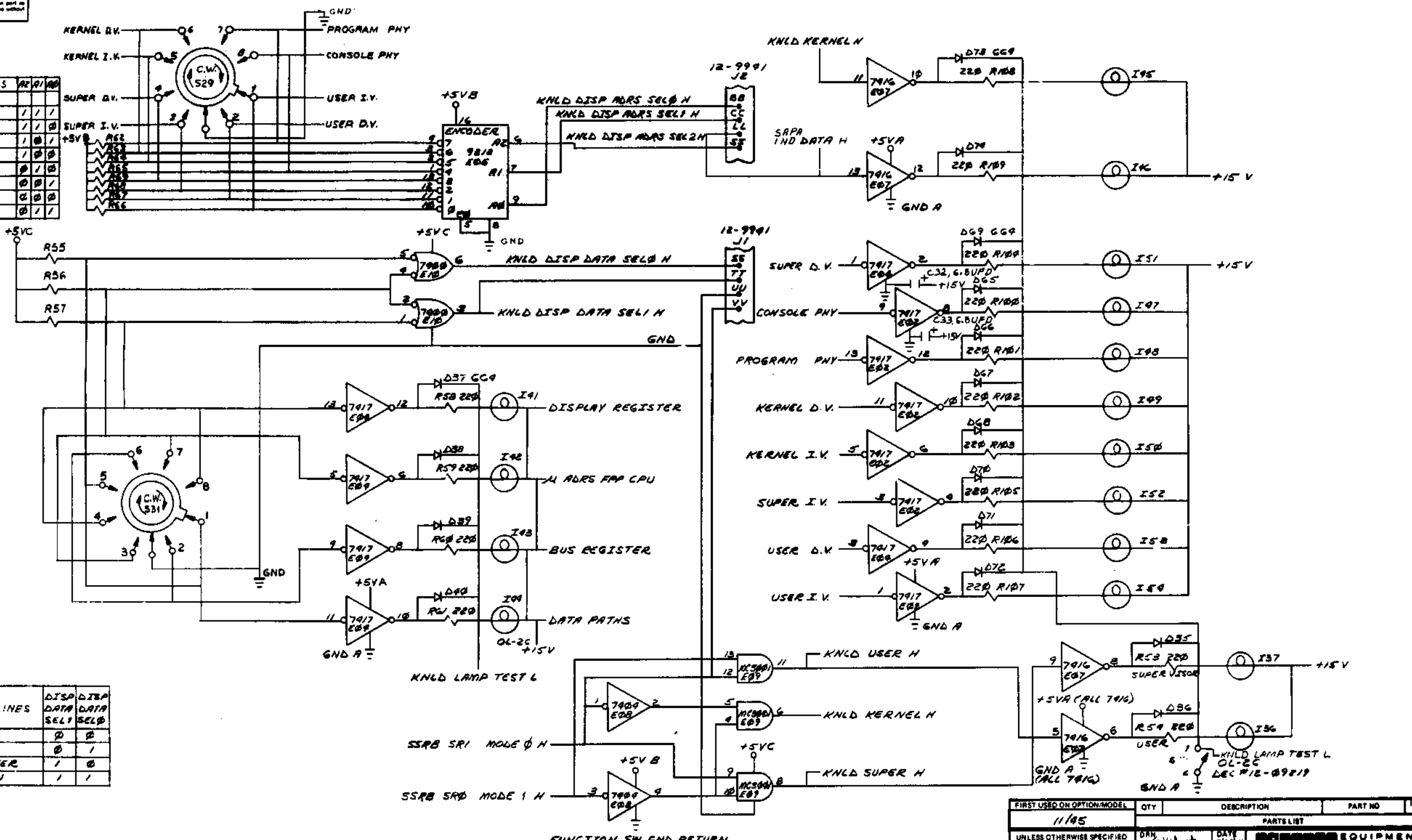
REVISIONS: REV. | CHANGE NO | CHK.

DLC FORM NO DRD 109-B

5409684-0-1 H


FUNCTION SW GND RETURN
+5V B
R111
R112
S25
R113
D75
D76
7400 E07
KNLC START SW H
C21
6.8 µfd
R114
R115
S27
R116
D77
D78
7400 E01
KNLC REG EXAM SW H
C24
6.8 µfd
R117
R118
SE1
R119
D79
D80
7400 E12
KNLC EXAM SW H
R123
R124
S28
R125
D81
D82
7400 E01
KNLC REG DEP SW H
R126
R127
S26
R128
D83
D84
7400 E03
KNLC DEP SW H
R131
R130
S23
R129
D86
D85
7400 E11
KNLC HALT SW H
7400 E06
7404 E08
KNLC PNL LOCK L
KNLC SWITCHED (-V)
+5V B
R135
R136
D87
FUNCTION SW GND RETURN
7400 E06
7404 E08
KNLC PNL LOCK H
J3
+5V A
GND A
GND A
-15V
GND OUT
GND IN
GND A
+15V
C22
C34
C23
R121 56
R120 68
DEC 12-09780
DEC 12-09756
UNSWITCHED -15V
S30
S30 SHOWN IN OFF POSITION
.01 µfd 100V 20%
+5 C J1-W
C9
C10
GND J1-UU-RR
UBCJ IND PAUSE H
7416 E07
220 R137
669 D88
I38
C30 6.8UFD
+15V
UBCJ IND ADRS ERR H
7416 E13
220 R138
669 D89
I40
C31 6.8UFD
+15V
UBCJ IND MASTER H
7416 E07
220 R139
669 D90
I35
+5V A
UBCJ IND RUN H
7416 E13
220 R140
669 D91
I39
+15 V
KNLD LAMP TEST L
GND A (ALL 7416 & 7417)
POSITION
POLE
FUNCTION
POS 1
2,3
OFF
POS 2
4,5;8,10
ON
POS 3
11,12
ON PAN/LOCK
.01 µfd 100V 20%
+5B J2-PP
C1
C3
C6
C5
C8
C11
C12
FUNCTION SW GND RETURN J2-UU-W
+5A J3-8
.01 µfd 100V 20%
C2
C4
C7
C13
C14
C15
C16
C17
C18
GND A J3-6-7-2
FIRST USED ON OPTION/MODEL
11/45
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS
ANGLES
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH
PARTS LIST
QTY
DESCRIPTION
PART NO.
ITEM NO.
DRN
CHK'D
ENG
PROJ. ENG
PROD
DATE
digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS
TITLE
11/45 CONSOLE BOARD
KNLC
NEXT HIGHER ASSY.
B-DD-11/45-0
SIZE
CODE
NUMBER
REV.
D
CS
5409684-0-1
H
SCALE
SHEET 3 OF 4
DIST.

CODE SELECT LINES	A2	A1	AØ
USER I.V.	1	1	1
USER D.V.	1	1	Ø
SUPER I.V.	1	Ø	1
SUPER D.V.	1	Ø	Ø
KERNEL I.V.	Ø	1	Ø
KERNEL D.V.	Ø	Ø	1
PROGRAM PHY	Ø	Ø	Ø
CONSOLE PHY	Ø	1	1



CODE SELECT LINES	DISP DATA SEL1	DISP DATA SELØ
BUS REGISTER	Ø	Ø
DATA PATHS	Ø	1
DISPLAY REGISTER	1	Ø
μ ADRS FPR CPU	1	1

FIRST USED ON OPTION/MODEL: 11/45

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

MATERIAL

FINISH

NEXT HIGHER ASSY: B-DD-11/45-0

SHEET 4 OF 4

DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: 11/45 CONSOLE BOARD KNLD

SIZE D CODE CS NUMBER 5409684-0-1 REV. H

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

SEQUENCE		SEQUENCE	
DRAWING DIRECTORY(SHT 1 ONLY)	B-DD-KB11-A-Ø		
MODULE UTILIZATION	E-MU-KB11-A-1		
BLOCK DIAGRAM	D-BD-KB11-A-Ø2		
KB11-A FLOW DIAGRAMS	D-FD-KB11-A-Ø3		
DATA PATHS (DAP)	E-CS-M81ØØ-Ø-1		
GENERAL REGS & ALU CNTL(GRA)	E-CS-M81Ø1-Ø-1		
IR DECODE & COND CODES(IRC)	E-CS-M81Ø2-Ø-1		
ROM & ROM CONTROL(RAC)	E-CS-M81Ø3-Ø-1		
PROC DATA & UNIBUS REG(PDR)	E-CS-M81Ø4-Ø-1		
TRAP & MISC CNTL(TMC)	E-CS-M81Ø5-Ø-1		
UNIBUS & CONSOLE CNTL (UBC)	E-CS-M81Ø6-Ø-1		
TIMING GENERATOR(TIG)	E-CS-M81Ø9-Ø-1		
SYSTEM JUMPER BOARD(SJB)	E-CS-M8116-Ø-1		
BUS CABLES & GRANT CHAIN	D-IC-KB11-A-BG		
CIRCUIT SCHEMATIC	C-CS-M93Ø-Ø-1		
CIRCUIT SCHEMATIC	C-CS-M9202-Ø-1		
CIRCUIT SCHEMATIC	E-CS-5409910-0-1		
CIRCUIT SCHEMATIC	E-CS-5409912-0-1		
CIRCUIT SCHEMATIC(TIG)	E-CS-M81Ø9-Ø-1		
SPECIAL REVISION			

UNIT VARIATIONS

VAR	TITLE	PRINT SET KB11-1
KB11-A	16 BIT PROCESSOR	X

REVISIONS	DATE	CHG. NO.	REV
	4/76	11/45-00065	AA
REVISED&REDRAWN			

USED ON OPTION/MODEL	
11/45	
SHEET 1 OF 5	

DRN. R. COOK	DATE MAR 72	TITLE 16 BIT PROCESSOR	
CHK'D. R. COOK	DATE MAR 72		
PROJ ENG. B.A. DELAY	DATE APR 72		
PROD. A. HUSCH	DATE MAY 72	SIZE B / CODE DD / NUMBER KB11-A-Ø	REV AA
FIELD SERV. A. ZINA	DATE MAY 72	DIST	

EN-01062-1A-16-R972-(325)

DRB 106

1 — 16 BIT PROCESSOR A-PL-K811-A-Ø

2 — DATA PATHS (DAP) E-CS-M81Ø5-Ø-1

3 — GENERAL REGS & ALU CNTL (GRA) E-CS-M81Ø1-Ø-1

4 — IR DECODE & COND CODES (IRC) E-CS-M81Ø2-Ø-1

5 — ROM & ROM CONTROL(RAC) E-CS-M81Ø3-Ø-1

6 — PROC DATA & UNIBUS REG(PRO) E-CS-M81Ø4-Ø-1

7 — TRAP & MISC CNTL(TMC) E-CS-M81Ø7-Ø-1

8 — UNIBUS & CONSOLE CNTL (UBC) E-CS-M81Ø6-Ø-1

9 — TIMING GENERATOR(TIG) E-CS-M81Ø9-Ø-1

TIMING GENERATOR(TIG) E-CS-M81Ø9-0-1 SPECIAL REV

10 — SYSTEM JUMPER BOARD (SJB) E-CS-M8116-Ø-1

11 — WIRED ASSY E-AD-7008871-0-0

12 — BACK PLANE ASSY E-AD-7008753-0-0

13 — CIRCUIT SCHEMATIC E-CS-5409910-0-1

14 — CIRCUIT SCHEMATIC E-CS-5409912-0-1

15 — BUS TERMINATOR M93Ø A-PL-M93Ø-0-0

16 — INTERNAL BUS CONN ASSY C-UA-M92ØØ-0-0

17 — SYSTEM TOOLS A-PL-SP45-KA-0 B-DD-SP45-KA

TITLE		SIZE	CODE	NUMBER	REV
16 BIT PROCESSOR	SHEET 2 OF 5	B	DD	KB11-A-Ø	AA

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

UNIT VARIATIONS

VAR	TITLE	PRINT SET 1
KB11-D	16 BIT PROCESSOR	X

REVISIONS	DATE	CHG. NO.	REV
	7-76	11/55-1	A

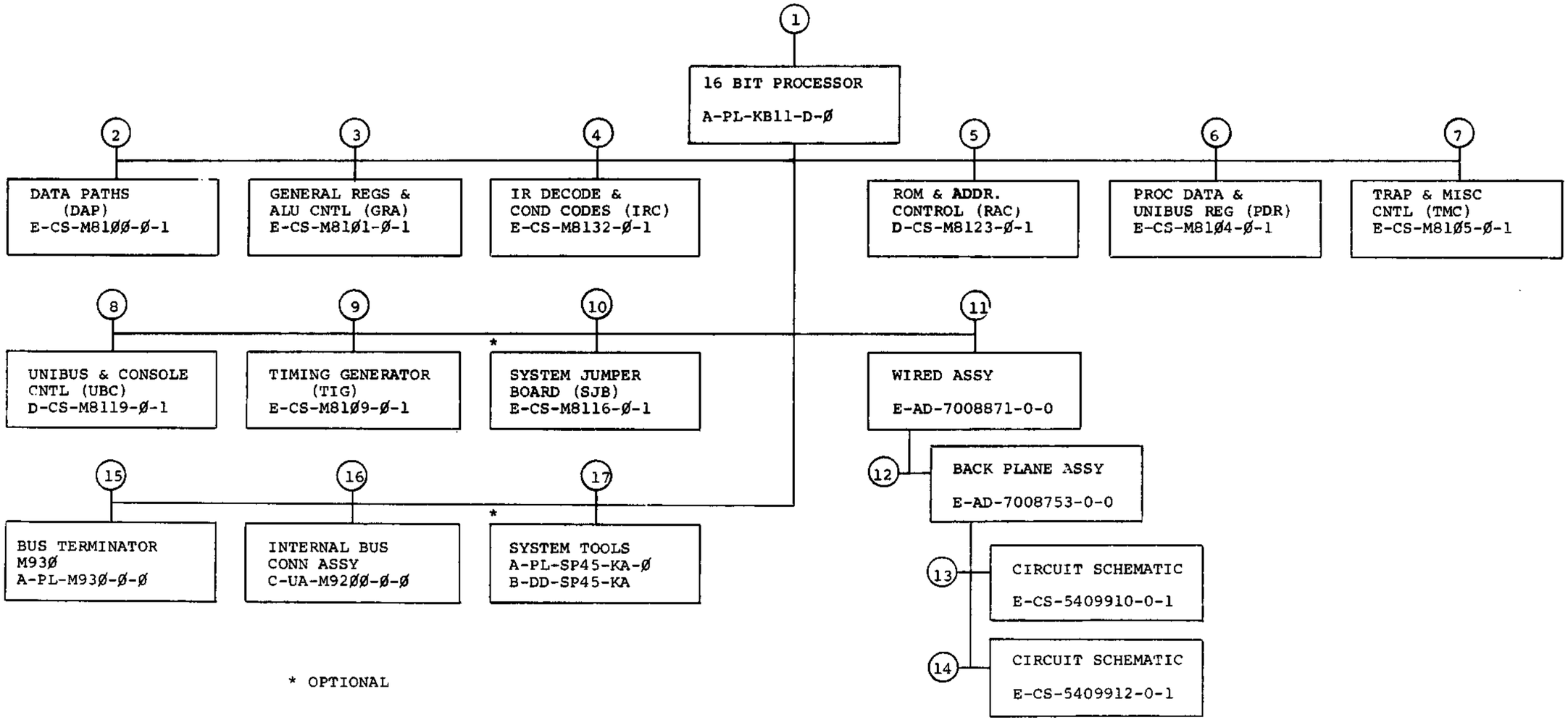
USED ON OPTION/MODEL	
11/45	
11/55	

SHEET 1 OF 5

ORN. D. HEALY	DATE 12/30/75	TITLE 16 BIT PROCESSOR	
CHK'D. D. HEALY	DATE 12/30/75		
PROJ ENG. Verell Byam	DATE 4 Jan '76		
PROD. J. Bonenfant	DATE 4FEB.76	SIZE B / CODE DD / NUMBER KB11-D	REV A
FIELD SERV. C Lynch	DATE 5 Feb 76	DIST	

EN-01062-1A-16-R972-(325)

DRB 106



TITLE		SIZE	CODE	NUMBER	REV
16 BIT PROCESSOR	SHEET 2 OF 5	B		KB11-D	A

digital EQUIPMENT CORPORATION

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

PRINT SET #1

SEQUENCE	
DRAWING DIRECTORY	B-DD-DL11-Ø
ASYNCHRONOUS LINE INTERFACE	C-UA-DL11-Ø-Ø
ASYNCHRONOUS LINE INTERFACE (PL)	A-PL-DL11-Ø-Ø
ASYNCHRONOUS LINE INTERFACE	E-CS-M78ØØ-YA-1
CABLE ASSEMBLY (KL8/E)	D-IA-7008360-Ø-Ø
SOFTWARE LIST	A-SL-DL11-Ø-4
ACCESSORY LIST	A-AL-DL11-Ø-5
INSTALLATION PROCEDURE	A-SP-DL11-Ø-2

PRINT SET #2

SEQUENCE	
DRAWING DIRECTORY	B-DD-DL11-Ø
ASYNCHRONOUS LINE INTERFACE	C-UA-DL11-Ø-Ø
ASYNCHRONOUS LINE INTERFACE (PL)	A-PL-DL11-Ø-Ø
ASYNCHRONOUS LINE INTERFACE	E-CS-M78ØØ-Ø-1
CABLE, MODEM BCØ5C	D-UA-BCØ5C-Ø-Ø
FILTER NETWORK	B-CS-G8ØØØ-Ø-1
MODEM TEST CONN	D-CS-H315-Ø-1
SOFTWARE LIST	A-SL-DL11-Ø-4
ACCESSORY LIST	A-AL-DL11-Ø-5
INSTALLATION PROCEDURE	A-SP-DL11-Ø-2

PRINT SET #3

SEQUENCE	
DRAWING DIRECTORY	B-DD-DL11-Ø
ASYNCHRONOUS LINE INTERFACE	C-UA-DL11-Ø-Ø
ASYNCHRONOUS LINE INTERFACE (PL)	A-PL-DL11-Ø-Ø
ASYNCHRONOUS LINE INTERFACE	E-CS-M78ØØ-Ø-1
CABLE, MODEM BCØ5C	D-UA-BCØ5C-Ø-Ø
CABLE ASSEMBLY (KL81E)	D-IA-7008360-Ø-Ø
MODEM TEST CONN.	D-CS-H315-Ø-1
INSTALLATION PROCEDURE	A-SP-DL11-Ø-2

UNIT VARIATIONS

VAR	TITLE	PRINT SET DL11-1	PRINT SET DL11-2
DL11-A	ASYNC LINE INTERFACE, CURRENT LOOP	1	0
DL11-B	ASYNC LINE INTERFACE, EIA	0	1
DL11-C	ASYNC LINE INTERFACE, CURRENT LOOP	1	0
DL11-D	ASYNC LINE INTERFACE, EIA	0	1
DL11 E	ASYNC LINE INTERFACE, DATA SET	0	1

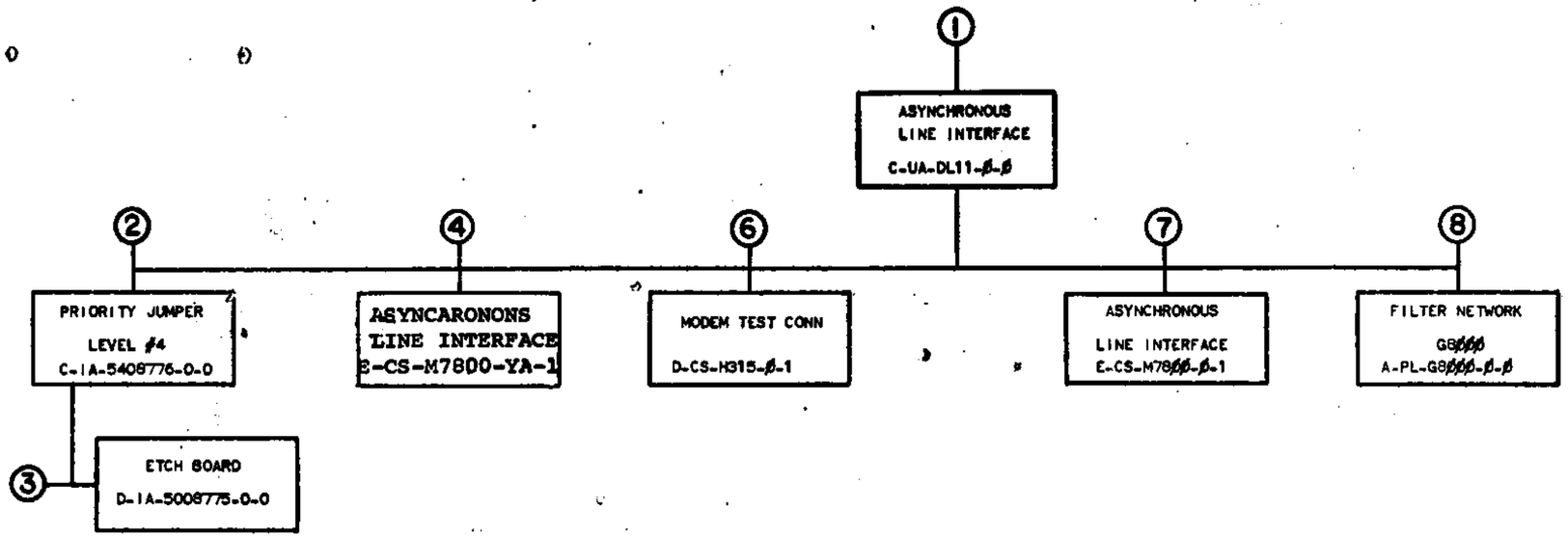
REVISIONS	DATE	CHG. NO.	REV
	2-76	REDRAWN DL11-00009	K

EN-01062-1A-16-R972-(325)

USED ON OPTION/MODEL			
SHEET 1 OF 3			

DRN. M. Pierce	DATE 4-28-72	TITLE ASYNCHRONOUS LINE INTERFACE
CHK'D. R. Cook	DATE 5-9-72	
PROJ ENG. P.E.Janson	DATE 5-11-72	
PROD. J.McIntyre	DATE 5-15-72	SIZE B / CODE DD / NUMBER DL11-Ø / REV K
FIELD SERV. R. Evans	DATE 5-15-72	DIST

DRB 106



TITLE	SHEET	SIZE	CODE	NUMBER	REV
ASYNCHRONOUS LINE INTERFACE	2 OF 3	B	DD	DL11-Ø	K

ELECTRICAL

CUSTOMER PRINT SET DLI1-1	DLI1-2	DLI1-3	DEPOT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
				1.	C-UA-DL11-Ø-Ø	F	1	ASYNCHRONOUS LINE INTERFACE	
X	X	X			A-PL-DL11-Ø-Ø	F	1	ASYNCHRONOUS LINE INTERFACE (PL)	
X	X	X			D-UA-BCØ5C-Ø-Ø	#	1	CABEE, MODEM, BCØ5C	
	X	X			D-1A-7008360-0-0	#	1	CABLE, ASSEMBLY (KL8/E)	
X		X			A-SP-DL11-Ø-1	*	11	ENGINEERING SPECIFICATION	
					A-SP-DL11-Ø-2	F	9	INSTALLATION PROCEDURE	
X	X	X			A-SP-DL11-Ø-3	B	8	TEST PRODEDURE (TEST & ACCEPTANCE)	
					A-SL-DL11-Ø-4	*	1	SOFTWARE LIST	
X	X				A-AL-DL11-Ø-5	C	1	ACCESSORY LIST	
X	X			2.	C-1A-5408776-0-0		1	PRIORITY JUMPER LEVEL #4	
					B-CS-5408776-0-1		1	CIRCUIT SCHEMATIC	
					K-CO-5408776-0-4		1	X-Y COORDINATE HOLE LOC	
					B-MH-5408776-0-6		1	MODULE ECO HISTORY	
				3.	C-AH-5408776-0-5		1	ASSY/DRILLING HOLE LAYOUT	
X				4	E-CS-M7800-YA-1	#	6	ASYNCHRONOUS LINE INTERFACE	
					K-CO-M7800-YA-4		1	X-Y COORDINATE HOLE LOCATION	
					D-AH-M7800-YA-5		1	ASSY DRILLING HOLE LAYOUT	
					B-MH-M7800-YA-6		1	MODULE ECO HISTORY	
	X	X		6.	D-CS-H315-Ø-1	#	1	MODEM TEST CONN	
					K-CO-H315-Ø-4		1	X-Y COORDINATE HOLE LOC	
					D-AH-H315-Ø-5		1	ASSY DRILLING HOLE LAYOUT	
					B-MH-H315-Ø-6		1	MODULE ECO HISTORY	
X	X	X		7.	E-CS-M7800-Ø-1	#	7	ASYNCHRONOUS LINE INTERFACE	
					K-CO-M7800-Ø-4		1	X-Y COORDINATE HOLE LOC	
					D-AH-M7800-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
					B-MH-M7800-Ø-6		1	MODULE ECO HISTORY	
	X			8.	A-PL-G8000-Ø-Ø		1	FILTER NETWORK	
					B-CS-G8000-Ø-1	#	1	CIRCUIT SCHEMATIC	
					K-CO-G8000-Ø-4		1	X-Y COORINATE HOLE LOC	
					C-AH-G8000-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
					B-MH-G8000-Ø-6		1	MODULE ECO HISTORY	

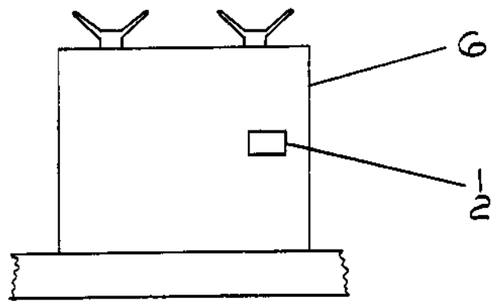
MECHANICAL

CUSTOMER PRINT SET DLI1-1	DLI1-2	DLI1-3	DEPOT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
				1.	C-UA-DL11-Ø-Ø	F	1	ASYNCHRONOUS LINE INTERFACE	
					A-PL-DL11-Ø-Ø	F	1	ASYNCHRONOUS LINE INTERFACE (PL)	
					D-UA-BCØ5C-Ø-Ø		1	CABLE, MODEM BCØ5C	
					D-1A-7008360-0-0		1	CABLE ASSEMBLY (KL8/E)	
				2.	C-1A-5408776-0-0		1	PRIORITY JUMPER LEVEL #4	
					K-CO-5408776-0-4		1	X-Y COORDINATE HOLE LOC	
					B-MH-5408776-0-6		1	ASSY/DRILLING HOLE LAYOUT	
				3.	D-1A-5008775-0-0		1	ETCH BOARD	
					C-AH-5408776-0-5		1	ASSY/DRILLING HOLE LAYOUT	
				6.	D-CS-H315-Ø-1		1	MODEM TEST CONN	
					K-CO-H315-Ø-4		1	X-Y COORDINATE HOLE LOC	
					C-AH-H315-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
					B-MH-H315-Ø-6		1	MODULE ECO HISTORY	
				7.	E-CS-M7800-Ø-1		7	ASYNCHRONOUS LINE INTERFACE	
					K-CO-M7800-Ø-4		1	X-Y COORDINATE HOLE LOC	
					D-AH-M7800-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
					B-MH-M7800-Ø-6		1	MODULE ECO HISTORY	
				8.	A-PL-G8000-Ø-Ø		1	FILTER NETWORK	
					K-CO-G8000-Ø-4		1	X-Y COORDINATE HOLE LOC	
					C-AH-G8000-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
					B-MH-G8000-Ø-6		1	MODULE ECO HISTORY	

TITLE	SHEET	SIZE	CODE	NUMBER	REV
ASYNCHRONOUS LINE INTERFACE	3 OF 3	B	DD	DLII-Ø	K

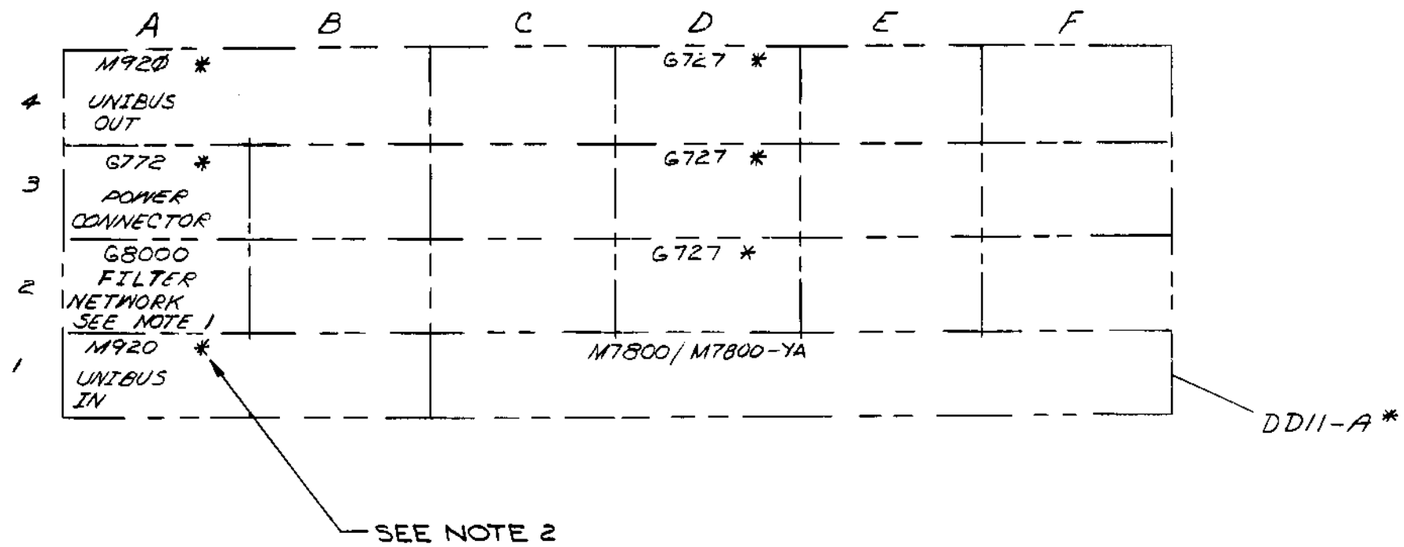
DRB 108

DEC 16-(325)-1062-2-NA71



NOTES:

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



REVISIONS	CHK	CHANGE NO.	REV.
PM		DL11-00001	A
PM		DL11-00002	B
PM		DL11-00005	C
PM		DL11-00006	D
PM		DL11-00008	E
PM		DL11-00009	F

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

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN.	DATE	3/18/72
CHK'D.	DATE	6-24-
ENG.	DATE	5-11-72
PROJ. ENG.	DATE	5-11-72
PROD.	DATE	5-15-72

NEXT HIGHEI. ASSY. B-00-DL11-Ø

SCALE NONE

SHEET 1 OF 1

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE

ASYNCHRONOUS LINE INTERFACE

SIZE	CODE	NUMBER	REV.
C	UA	DL11-Ø-Ø	F

DISP

DEC FORM NO. DRC 100-A

SIZE C UA NUMBER DL11-Ø-Ø REV. F

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

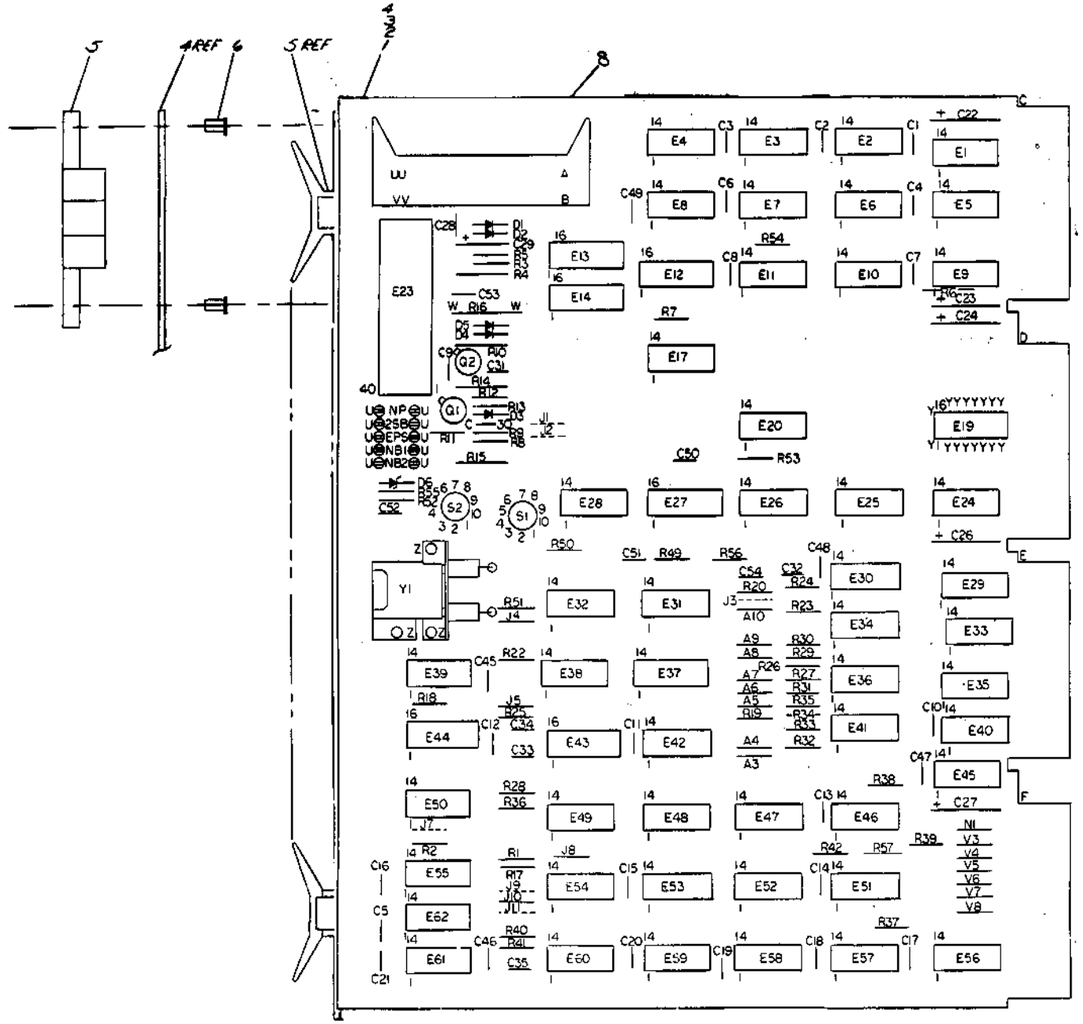
PARTS LIST

MADE BY M. PIERCE DATE 4/27/72	CHECKED J. FERGUSON DATE 4/27/72	SECTION 1
ENG P. E. JANSON DATE 5/11/72	PROD J. McIntyre DATE 5/15/72	ISSUED SECT. 1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION DL11-A	DL11-B	DL11-C	DL11-D	DL11-E
1	C-IA-5408776-0-0	PRIORITY JUMPER LEVEL #4	1	1	1	1	1
3	D-UA-BCØ5C-25	CABLE MODEM BCØ5C	-	1	-	1	1
4	D-IA-7008360-0-0	CABLE ASSEMBLY (KL8E)	1	-	1	-	-
5	D-CS-H315-Ø-1	MODEM TEST CONNECTOR	-	-	-	-	A/R See Note 2
6	E-CS-M7800-Ø-1	ASYNCHRONOUS LINE INTERFACE	-	1	-	1	1
7	~~A-PL-C8ØØ1-Ø-Ø~~	~~FILTER NETWORK~~	~~-~~	~~A/R~~	~~-~~	~~A/R~~	~~A/R See Note 1~~
8		CRYSTAL	A/R	A/R	A/R	A/R	A/R See Note 3
9	E-CS-M7800-YA-1	ASYNCHRONOUS LINE INTERFACE	1	-	1	-	-
10	9008269	TRANSPARENT VINYL TAPE	A/R				
	NOTES:						
	1. G8000 IS REQUIRED	ONLY IN PDP11 SYSTEMS WHERE +15V IS NOT					
	AVAILABLE. ONE PER DD11-A						
	2. ONE H315 PER PDP11 SYSTEM						
	3. CRYSTAL FREQUENCY	DEFINED BY CUSTOMER SPECIFIED BAUD RATE					
	OR BY THE DOCUMENTATION OF AN OPTION WHICH USES THE DL11.						
	4. APPLY TAPE TO TOP	SURFACES OF CRYSTAL AND MOUNTING					
	BRACKETS TO INSULATE FROM ADJACENT MODULES.						
	5. PRIORIY LEVELS 5,6, or 7 MAY BE SPECIFIED BY THE CUSTOMER						
	OR THE DOCUMENTATION OF AN OPTION WHICH USES THE DL11.						

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
ASYNCHRONOUS LINE INTERFACE	C-UA-DL11-Ø-Ø	A	PL	DL11-Ø-Ø	F	DL11-00009
	SHEET 1 OF 1	DIST.				

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



DIGITAL EQUIPMENT CORPORATION

NOTES:

1.) PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE SYSTEM UNIT. MODULE REFERENCE ALONE IS OBTAINED BY CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT THE LEFT.

2.) JUMPERS TO BE USED AT CONNECTIONS A3-A10, J4-J5, J8, J10, V3-V8, AND N1.

3.) LETTERS ENCLOSED IN PARENTHESIS REFER TO PINS ON THE BERG CONNECTOR. EXAMPLE: (X).

4.) DEC 8640'S WERE PHASED IN AS 380 REPLACEMENTS. ANY 380 FAILURES SHOULD BE REPLACED BY 8640'S, EXCEPT E28. E28 MUST BE REPLACED WITH A 7380 CHIP.

PIN NOMENCLATURE

MODULE	SYSTEM UNIT
A	C
B	D
C	E
D	F

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM
3		WASHERS, INTERNAL TOOTH LOCK	90066?1	[illegible]
1	E28	IC DEC 7380	1910390	69
19	J1 THRU J19	JUMPER, INSULATED	[illegible]	68
1	R3	RES 750Ω 1/4 W 5%	1301401	67
1	R38	RES 390 Ω 1/4 W 5%	1300309	[illegible]
1	D6	DIODE 1N746A	1104880	[illegible]
2	Q1, Q2	TRANSISTOR G6340	[illegible]	[illegible]
1	C53	CAP 100PF 100V [illegible]	1000015	[illegible]
1	C54	CAP 560PF 100V [illegible]	1000014	[illegible]
2	C50, C51	CAP .047MF CERAMIC	1009678	61
1	E27	IC DEC 74161	1910650	[illegible]
2	C34, C35	CAP 330PF 100V 5% DIPPED MICA	1000023	[illegible]
1	C32	CAP 470PF 100V 5% DIPPED MICA	1000052	[illegible]
1	C31	CAP 1000PF 100V 5% DIPPED MICA	1000072	[illegible]
29	C1-C21, C30, C45-C48, C52	CAP .01MF 100V 20% CERAMIC DISC	1000040	[illegible]
1	C29	CAP .47UF 35V 10% TANT	1009963	[illegible]
5	C22-C24, C26, C27	CAP 6.8 UF 35V 20% TANT	1000067	[illegible]
1	C33	CAP 150PF 100V 5% DIPPED MICA	1000018	[illegible]
2	R14, R15	RES 1.5K 1/2W 5%	1300394	[illegible]
5	R23, R26, R40, R52, R55	RES 1K 1/4 W 5%	1300165	[illegible]
1	R41	RES 47 Ω 1/4 W 5%	1300602	[illegible]
1	R10	RES 68 Ω 1/2 W [illegible]	[illegible]	[illegible]
1	R5	RES 82 Ω 1/4 W 5%	1301477	[illegible]
1	R24	RES 100 Ω 1/4 W 5%	1300229	[illegible]
1	R11	RES 150 Ω 1/4 W 5%	1300249	[illegible]
2	R42, R57	RES 180 Ω 1/4 W 5%	1301328	[illegible]
1	R53	RES 220 Ω 1/4 W 5%	1300271	[illegible]
5	D1-D5	DIODE D664 20V 100MA	1100114	[illegible]
3	R9, R13, R51	RES 470 Ω 1/4 W 5%	1300316	[illegible]
1	R4	RES 560 Ω 1/2 W 5%	13003[illegible]	[illegible]
3		NUT HEX #2-56	9006555	[illegible]
1	R16	RES 750 Ω 1W 5%	1302303	[illegible]
26	R1, R2, R6, R7, R17-R21, R25, R27-R34, R37, R49, R50, R22, R54, R56	RESISTOR 10K 1/4 W 5%	1300477	[illegible]
2	R8, R12	RES 1.5K 1/4 W 5%	1300391	[illegible]
1	E23	IC DEC UART	1910527-01	[illegible]
4	E32, E55, E61, E62	IC DEC 7474	1905547	[illegible]
2	E36, E41	IC DEC 8242	1909714	[illegible]
3	E31, E49, E59	IC DEC 7408	1910135	[illegible]
3		SCR PHIL HD PAN #2-56 x .25 LG	9006[illegible]-1	[illegible]
2	E20, E26	IC DEC 7490	1909037	[illegible]
11	E1, E2, E5, E7-E9, E11, E30, E47, E54, E56	IC DEC 8881	1909763	[illegible]
2		AUGAT 8000 PG-1	1208[illegible]	[illegible]
1	E43	IC DEC 74123	[illegible]	[illegible]
3	E48, E57, E58	IC DEC 74H74	[illegible]	[illegible]
3	E42, E51, E58	IC DEC 7400	1905575	[illegible]
1	E10	IC DEC 7473	[illegible]	[illegible]
2	E50, E53	IC DEC 7402	1909004	[illegible]
7	E3, E4, E33, E35, E40, E45, E46	IC DEC 8640	[illegible]	[illegible]
1	E12	IC DEC 74153	[illegible]	[illegible]
1	E60	IC DEC 74H04	[illegible]	[illegible]
1	E25	IC DEC 7492	1909033	[illegible]
4	E6, E17, E38, E39	IC DEC 7404	1909686	[illegible]
1	E24	IC DEC 7493	[illegible]	[illegible]
1	E34	IC DEC 7410	[illegible]	[illegible]
1	E29	IC DEC 314	[illegible]	[illegible]
1	E37	IC DEC 7442	[illegible]	[illegible]
1	E44	IC DEC 8271	[illegible]	[illegible]
2	E13, E14	IC DEC 74175	1910631	13
1		BRACKET, CRYSTAL HOLDER	[illegible]	12
1		BRACKET, CRYSTAL HOLDER	[illegible]	11
1	E19	IC SOCKET	[illegible]	[illegible]
2	S1, S2	SWITCH, SINGLE POLE, 10 POS	[illegible]	[illegible]
1		40 PIN CONNECTOR BERG	120[illegible]-02	8
10		SPLIT LUGS	9006[illegible]	7
8		EYELET #GS4-7 E.B. STIMPSON	[illegible]	[illegible]
4		HANDLE, FLIP-CHIP, MAGENTA	[illegible]-06	[illegible]
1		ETCHED CIRCUIT BOARD	[illegible]	[illegible]
REF		MODULE ECO HISTORY	[illegible]	3
REF		ASSY/DRILLING HOLE LAYOUT	[illegible]	2
REF		XY COORDINATE HOLE	[illegible]	1

PARTS LIST

ETCH BOARD REV H

DEC NO.	EIA NO.
G6340	MPS6534
1N746A	1/4M3.3AZ
D664	1N3606

SEMICONDUCTOR CONVERSION CHART

IC TYPE	GND	+5V	+V	-12V
DEC 74161	8	16	—	—
DEC 7380	1	8	—	—
DEC UART	3	1	—	2
DEC 74175	8	16	—	—
DEC 8251	8	16	—	—
DEC 7442	8	16	—	—
DEC 314	1	8	—	—
DEC 7493	10	5	—	—
DEC 7492	10	5	—	—
DEC 74153	8	16	—	—
DEC 8640	1	8	—	—
DEC 7490	10	5	—	—
DEC 74123	8	16	—	—

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

IC PIN LOCATIONS

JOHN MC INTYRE
12-15-75
M7800-00007 H
L. CONDON
M7800YA-00006
L. CONDON
M7800-00005 E
L. CONDON
M7800YA-00004 D
B. SAMPSON
M7800YA-00003 C
L. CONDON
M7800YA-00002 B
P. JANSON
M7800YA-00001 A
CHANGE NO.
REV.

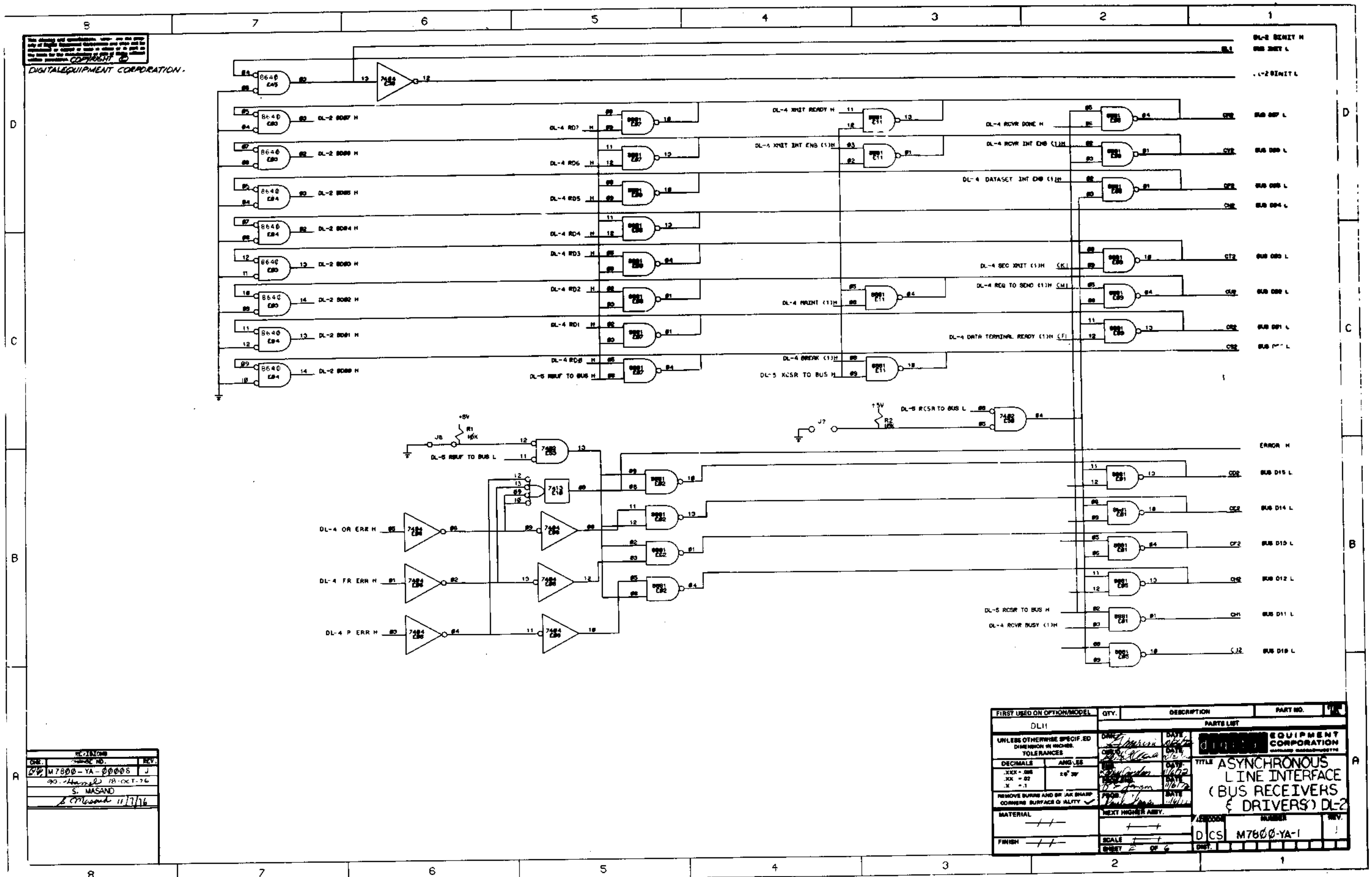
TITLE

ASYNCHRONOUS LINE INTERFACE

EQUIPMENT CORPORATION

CS M7800-YA-1 J

CS-M7800-YA-1



DIGITAL EQUIPMENT CORPORATION
DL-2 BINIT H
BUS INIT L
DL-2 BINIT L
DL-2 BD07 H
DL-2 BD06 H
DL-2 BD05 H
DL-2 BD04 H
DL-2 BD03 H
DL-2 BD02 H
DL-2 BD01 H
DL-2 BD00 H
DL-4 RD7 H
DL-4 RD6 H
DL-4 RD5 H
DL-4 RD4 H
DL-4 RD3 H
DL-4 RD2 H
DL-4 RD1 H
DL-4 RD0 H
DL-5 RBUF TO BUS H
DL-4 XMIT READY H
DL-4 XMIT INT ENB (1)H
DL-4 MAINT (1)H
DL-4 BREAK (1)H
DL-5 XCSR TO BUS H
DL-4 RCVR DONE H
DL-4 RCVR INT ENB (1)H
DL-4 DATASET INT ENB (1)H
DL-4 SEC XMIT (1)H
DL-4 REQ TO SEND (1)H
DL-4 DATA TERMINAL READY (1)H
BUS D07 L
BUS D06 L
BUS D05 L
BUS D04 L
BUS D03 L
BUS D02 L
BUS D01 L
DL-5 RCSR TO BUS L
ERROR H
DL-5 RBUF TO BUS L
DL-4 OR ERR H
DL-4 FR ERR H
DL-4 P ERR H
DL-5 RCSR TO BUS H
DL-4 RCVR BUSY (1)H
BUS D15 L
BUS D14 L
BUS D13 L
BUS D12 L
BUS D11 L
BUS D10 L
+5V
R1 10K
R2 10K

FIRST USED ON OPTION/MODEL
DL11

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —/—

FINISH —/—

NEXT HIGHER ASSY.

DIGITAL EQUIPMENT CORPORATION

TITLE ASYNCHRONOUS LINE INTERFACE (BUS RECEIVERS & DRIVERS) DL-2

D CS M7800-YA-1

SHEET 2 OF 6

REVISIONS		
CHG.	ECO NO.	REV.
	M7800-YA-00008	J
	18-OCT-76	
	S. MASAND	
	11/7/76	

SEE NOTE 3

SWITCH POS.		844.8 KHZ		1036.96 KHZ		1.152 MHZ		4.608 MHZ	
		BAUD	μSEC	BAUD	μSEC	BAUD	μSEC	BAUD	μSEC
	1	36.7	1700	44.8	1542	50	1250	200	312
	2	55	1135	67.3	926	75	833	300	208
	3	110	567	134.5	464	150	417	600	104
	4	220	284	269	232	300	208	1200	52
	5	440	142	538	116	600	104	2400	26
	6	880	71	1076	58	1200	52	4800	13
	7	1320	47.4	1614	38.7	1800	34.6	7200	8.7
	8	1760	35.5	2152	29	2400	26	9600	6.5
	9	BERG CLOCK INPUT - COMMON TO RCVR AND XMIT							
	10	EXTERNAL CLOCK INPUT - RCVR; DSI; XMIT; ORI							

DL-3 BR IN H — PRIORITY PLUG E19 — BUS BR7 L
DL-3 BR OUT H — BUS BR6 L
BUS BG4 OUT H — BUS BR5 L
BUS BG4 IN H — BUS BR4 L
BUS BG5 OUT H — DL-3 REQUEST L
BUS BG5 IN H — BUS BR7 IN H
BUS BG6 OUT H — BUS BR7 OUT H
BUS BG6 IN H — BUS BR6 IN H

DR1 EXT XMIT INPUT
DL-3 XMIT CLK H
(CC) BERG CLOCK INPUT
DSI EXT RCVR INPUT
DL-3 RCVR CLK H
FRI DL-3 RCLK H
FSI DL-3 SI H
BERG CLOCK INPUT (CC)
BERG SERIAL IN L (E)
YTL SERIAL IN L DA1
DL-4 MAINT (I)H
BERG CLK ENB L (HH)
DL-4 SERIAL OUT H
20 MA RECEIVE
(K)
(S)
(H) TO BERG INTERLOCK
DL-4 RCR ENB (I)H
DB1 TTL RCR ENB L
READER RELAY
(FF)
(EE)
DC1 TTL SERIAL OUT L
20 MA TRANSMIT
(AA)
(BB)
(SS)
(TT)
(A)
(B)
(VV)
(UU)

NOTES:
1. LETTERS ENCLOSED IN PARENTHESIS REFER TO PINS ON THE BERG CONNECTOR. EXAMPLE: (X)
2. NUMBERS WITHIN TRIANGLES REFER TO PINS ON THE FEMALE MATE-N-LOCK CONNECTOR WHEN USING THE 7008360 CABLE. THIS CABLE ALSO CONNECTS BERG PINS H TO E.
3. ALTHOUGH THE ABOVE TABLE INCLUDES ONLY THE STANDARD DLII CRYSTALS OTHER VALUES MAY BE SPECIFIED BY THE CUSTOMER OR BY OTHER DOCUMENTATION OF AN OPTION WHICH USES THE DLII.

REVISIONS		
CHR.	CHANGE NO.	REV.

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

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

MATERIAL —

FINISH —

NEXT HIGHER ASSY.

SCALE

SHEET 3 OF 7

DRAWN — DATE
CHK'D — DATE
APPD — DATE
MFG — DATE

DIGITAL EQUIPMENT CORPORATION

TITLE: ASYNCHRONOUS LINE INTERFACE (CLOCK & CURRENT LOOPS) DL-3

CAGE CODE	NUMBER	REV.
D CS	M7800-YA-I	

SHEET

DL-2 BINIT L

DL-5 SEL 2 L

DL-2 BINIT H

DL-5 LD XD L

X CLK H

DL-4 RCVR BUSY (1)H

DL-3 RCLK H FRI

DL-4 SERIAL OUT H

DL-3 XMIT CLK H

DL-5 BUS TO XCBR H

DL-5 BUS TO RCSR H

DL-4 XMIT READY H

DL-4 RCVR DONE H

DL-4 BREAK (1)H

DL-4 BREAK (0)H

DL-4 XMIT INT ENB (1)H

DL-4 XMIT INT H

DL-4 RCVR INT H

DL-4 DATASET INT ENB (1)H

DL-4 REQ TO SEND (1)H

DL-4 REQ TO SEND (0)H

DL-4 RCVR INT ENB (1)H

DL-4 DATA LEADS ONLY L

DL-4 SEC XMIT (1)H

DL-4 SEC XMIT (0)H

DL-4 DATA TERMINAL READY (1)H

DL-4 DATA TERMINAL READY (0)H

DL-4 RDR ENB (1) H

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	REV.
DL11		PARTS LIST		

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

MATERIAL —

FINISH —

	NAME	DATE
DRN		
CHK'D		
ENGR		
PROD		

NEXT HIGHER ASSY —

SCALE —

SHEET — OF —

digital EQUIPMENT CORPORATION

TITLE ASYNCHRONOUS LINE INTERFACE (UART & STATUS) DL-4

SIZE D | CS | NUMBER M7800-YA-I | REV.

SHT.

REVISIONS			
CHK.	CHANGE NO.	REV.	

BUS A11 L
BUS A10 L
BUS A14 L
BUS A15 L
BUS A16 L
BUS A17 L
BUS A12 L

BUS A18 L
BUS A09 L
BUS A08 L
BUS A07 L
BUS A05 L
BUS A04 L
BUS A03 L
BUS A01 L
BUS A02 L
BUS A00 L
BUS CI L
BUS C0 L

BUS RPLY L

A18
A17
A16
A15
A14
A13
A12

R27 10K
R28 10K
R29 10K
R30 10K
R31 10K
R32 10K
R33 10K
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R991 10K
R992 10K
R993 10K
R994 10K
R995 10K
R996 10K
R997 10K
R998 10K
R999 10K
R1000 10K

+5V
+3V

C33 150pf
C34 330pf
C35 470 pf

100ΩTYS
56ΩTYS

DL-5 BUS TO XCSR H
DL-5 BUS TO RCSR H
DL-5 XCSR TO BUS H
DL-5 RBUF TO BUS H
DL-5 RCSR TO BUS H

EL1 BUS BSYN L
EL2 REG SEL H
EN DL-5 LO XD L
DL-5 BUS TO XBUF L
DL-5 RBUF TO BUS L
DL-5 SEL 2 L
DL-5 BUS TO XBUF L
DL-5 RCSR TO BUS L

NOTE 1: THE 'A' LINES ARE TO BE JUMPERED FOR A 0.

REVISIONS		
CHK	CHANGE NO.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
DL11		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS: .XXX ± .005, .XX ± .02, .X ± .1
ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL
FINISH
NEXT HIGHER ASSY.
SCALE
SHEET 5 OF 6

DRAWN
CHKD
ENG
PROJ. ENG.
GROUP

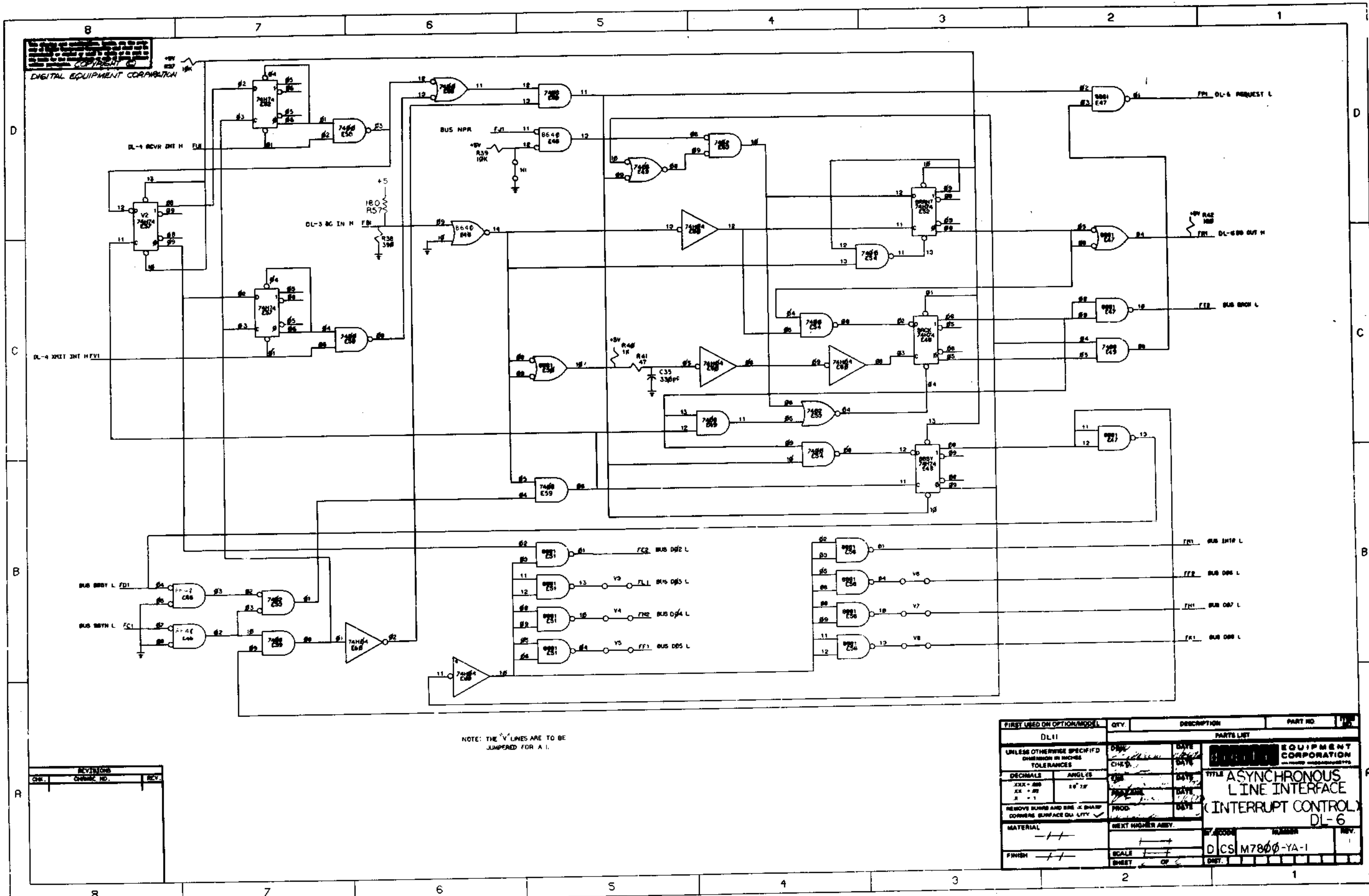
DATE

EQUIPMENT CORPORATION

TITLE: ASYNCHRONOUS LINE INTERFACE (ADDRESS SELECTION) DL-5

SIZE	CODE	NUMBER	REV.
D	CS	M7800-YA-1	J

SHT.


DIGITAL EQUIPMENT CORPORATION
COPYRIGHT ©
DL-4 RCVR INT H
DL-4 XMIT INT H
DL-3 BG IN H
BUS NPR
DL-6 REQUEST L
DL-6 BG OUT H
BUS BACK L
BUS BBSY L
BUS SSYN L
BUS INTR L
BUS D02 L
BUS D03 L
BUS D04 L
BUS D05 L
BUS D06 L
BUS D07 L
BUS D08 L
NOTE: THE "V" LINES ARE TO BE JUMPERED FOR A 1.
REVISIONS
FIRST USED ON OPTION/MODEL
DL11
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES
DECIMALS
ANGLES
MATERIAL
FINISH
QTY.
DESCRIPTION
PART NO.
PARTS LIST
EQUIPMENT CORPORATION
TITLE ASYNCHRONOUS LINE INTERFACE (INTERRUPT CONTROL) DL-6
NEXT HIGHER ASSY.
SCALE
SHEET OF
D
CS
M7800-YA-1
REV.
DIST.

WIRE TABLE

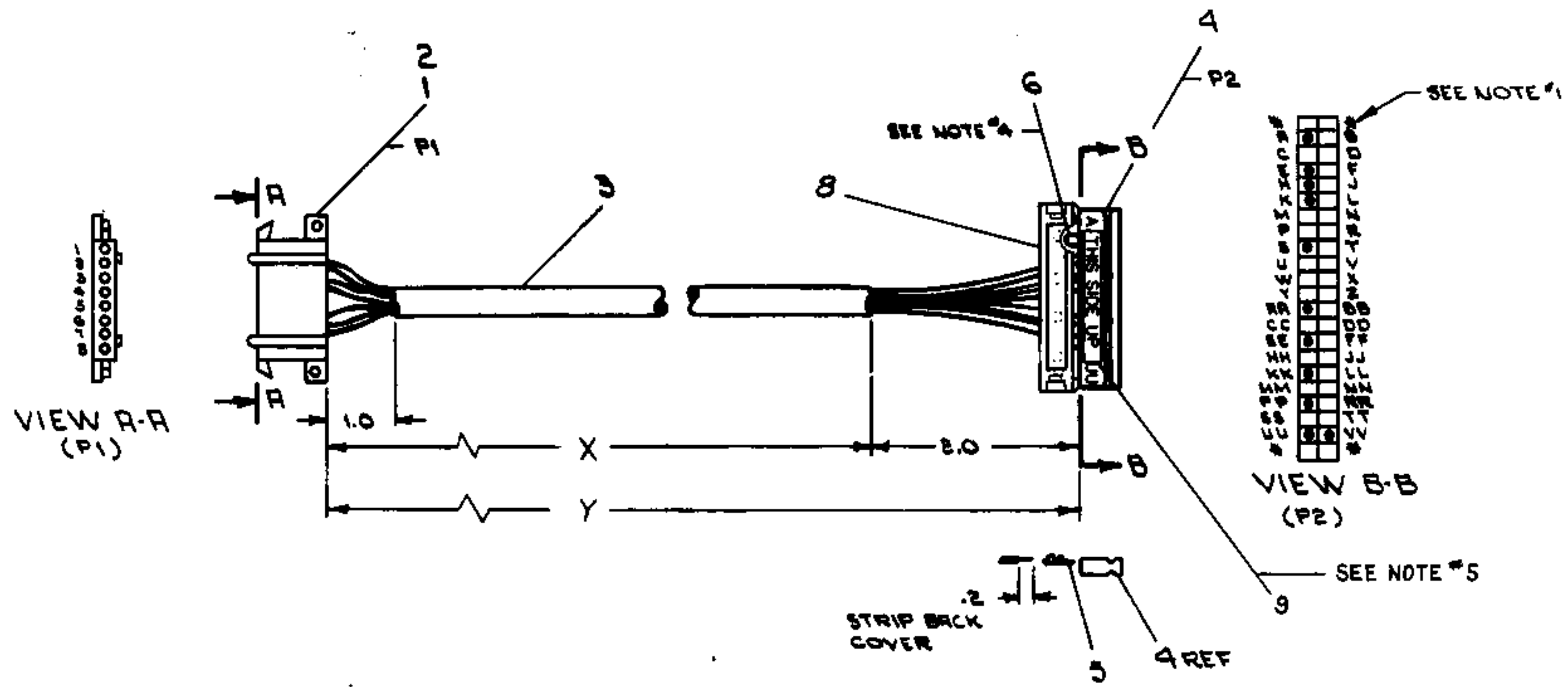
ITEM NO.	DESCRIPTION AWG	DESCRIPTION COLOR	PAIR NO.	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH
3	22	BLK	1	P1-2	2	P2-KK	5
3		RED		P1-3	2	P2-S	
3,7		SHIELD		SEE NOTE #2	—	P2-R(NOTE#3)	
3		BLK	2	P1-4	2	P2-EE	
3		WHT		P1-5	2	P2-RR	
3,7		SHIELD		SEE NOTE #2	—	P2-AA(NOTE#3)	
3		BLK	3	P1-6	2	P2-PP	
3	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

LEGEND

VARIATION	LENGTH X	LENGTH Y
7008360-0	25IN±1.0	27IN±1.0
7008360-1	46IN±1.0	48IN±1.0
7008360-9	9FT±2IN	9FT2IN±2IN

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	9107330-00	6
11	SOCKET, CRIMP # 47216	1210089-07	5
1	HOUSING, BERG #65043-015	1210918-15	4
A/R	CABLE, BELDEN #8777-3PR SHLD	9107728-0	3
6	CONTACT MATE-N-LOCK (FEMALE)	1209379-03	2
1	CONN. MATE-N-LOCK (FEMALE)	1209340-00	1

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP-8E

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

MATERIAL: SEE PARTS LIST

FINISH: —

DRN. DATE 1 APR '71 · CHK'D. DATE 4-8-71 · ENG. DATE 4-8-71 · PROJ. ENG. DATE 4-1-71 · PROD. DATE 4/9/71

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

SCALE: NONE · SHEET 1 OF

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: CABLE ASSEMBLY (KL8E)

SIZE D · CODE IA · NUMBER 7008360-0-0 · REV H

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

MADE BY EMPellegrini	CHECKED P. Janson	SECTION
DATE 8/29/72	DATE 8-30-72	
ENG P. Janson	PROD J. [illegible]	ISSUED SECT.
DATE 8/29/72	DATE 8-31-72	

LEGEND

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

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	DL11-A	DL11-B	DL11-C	DL11-D	DL11-E			KIT CHECK BY ___ DATE ___	INSTALLATION CHECK BY ___ DATE ___
1	LIBKIT-11-KL11-04	KL11 MAINDEC	1	1	0	0	0				
2	LIBKIT-11-DL11C-A-K	DL11 MAINDEC	0	0	1	1	0				
3	LIBKIT-11-DL11E-A-K	DL11 MAINDEC	0	0	0	0	1				

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
DL11 SOFTWARE LIST	SHEET 1 OF 1	A	SL	DL11-0-4		

DIST.

DEC FORM NO. DEC 16-(22)-1049-N471
DRA 120

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY	E. Pellegrini	CHECKED P. Janson	SECTION
DATE	June 26, 1972	DATE 8-8-72	
ENG	Paul Janson	PROD J. Thibodeau	ISSUED SECT.
DATE	June 26, 1972	DATE 8-8-72	

LEGEND

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

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION DL11-A	DL11-B	DL11-C	DL11-D	DL11-E			KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
1	M7800	ASYNCHRONOUS LINE INTERFACE (EIA)	-	1	-	1	1				
2	G8000	FILTER NETWORK	0	A/R	0	A/R	A/R				
3	M7800-YA	ASYNCHRONOUS LINE INTERFACE (CURRENT LOOP)	1	0	1	0	0				
4	5408776	PRIORITY JUMPER LEVEL #4	1	1	1	1	1				
5	BC05-C-25	MODEM CABLE	0	1	0	1	1				
6	7008360	TTY CABLE	1	0	1	0	0				
7	-	CRYSTAL	1	1	1	1	1				
8	-	DL11 ENGINEERING DRAWINGS	1	1	1	1	1				
9	DEC-11-HDLAA-A-D	DL11 ASYNCHRONOUS LINE INTERFACE MANUAL	1	1	1	1	1				
10	LIBKIT-11-KL11-04	KL11 MAINDEC	1	1	0	0	0				
11	LIBKIT-11-DL11C-A-K	DL11 MAINDEC	0	0	1	1	0				
12	LIBKIT-11-DL11E-A-K	DL11 MAINDEC	0	0	0	0	1				
13	H315	MODEM TEST CONNECTOR	0	0	0	0	A/R				

NOTES: 1. G8000 IS REQUIRED ONLY IN PDP-11 SYSTEMS WHERE +15V IS NOT AVAILABLE. ONE PER DD11-A.

2. CRYSTAL FREQUENCY DEFINED BY CUSTOMER SPECIFIED BAUD RATE.

3. ONE H315 PER PDP11 SYSTEM

4. INSURE THAT TRANSPARENT VINYL TAPE HAS BEEN APPLIED TO THE TOP SURFACE OF THE CRYSTAL AND MOUNTING BRACKET.

TITLE: DL11 CHECK LIST	ASSY. NO.	SIZE A	CODE AL	NUMBER DL11-B-5	REV. C	ECO NO DL11-00005
	SHEET 1 OF 1	DIST.				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DATE 6-21-72

TITLE DL11 INSTALLATION PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
C	CHANGE PER ECO	DL11-4	JANSON	3/73	[illegible]	4-73
D	CHANGE PER ECO	DL11-5	CONDON	7/73	[illegible]	[illegible]
E	CHANGE PER ECO	DL11-7	CONDON	8/74	[illegible]	[illegible]
F	CHANGE PER ECO	DL11-8	CONDON	4-75	[illegible]	4/75

ENG	APPD	SIZE	CODE	NUMBER	REV
[illegible]	[illegible]	A	[illegible]	[illegible]	F

DEC FORM NO. DRA 107A

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

DL11 INSTALLATION PROCEDURE:

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

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

A. OPERATION MODE:

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

J1. Ties EIA driver to REQUEST-TO-SEND lead (pin 4) of dataset cable. IN for DL11-B,D, and E; does not affect DL11-A and C. Drawing DL-7.

J2. Ties EIA driver, normally used for the REQUEST-TO-SEND lead, to FORCE BUSY lead (pin 25) for use with Bell 103E. This is a customer option. If not specified, jumper is OUT for all DL11's. Drawing DL-7.

J3. When inserted, allows REQUEST-TO-SEND lead (pin 4) to be controlled by bit 2 of the receiver status register. OUT for DL11-B and D; IN for DL11-E; does not affect DL11-A and C. Drawing DL-4.

J4. When inserted, forces "DATA LEADS ONLY" mode of EIA operation. Turns DATA TERMINAL READY (pin 20) and REQUEST-TO-SEND (pin 4) on. IN for DL11-B and D; OUT for DL11-E; does not affect DL11-A and C. Drawing DL-4.

J5. When inserted, allows the BREAK bit to function. OUT for DL11-A and B; IN for DL11-C,D, and E. Drawing DL-4.

J6. When inserted, allows DSET INT to cause interrupts. OUT for DL11-A,B,C and D; IN for DL11-E. Drawing DL-4.

J7. When inserted, allows dataset control bits to be read as part of the receiver status register.

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

DEC FORM NO DEC 16-(381)-1022-M370 DRA 108

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

J7. (con't)

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

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

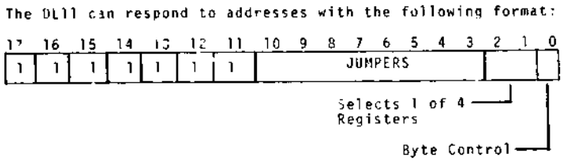
Summary of mode control jumpers:

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

*= don't care

B. REGISTER ADDRESS ASSIGNMENTS:

The DL11 can respond to addresses with the following format:



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

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

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

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

DEC FORM NO DEC 16-(381)-1022-M370 DRA 108

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

C. VECTOR ADDRESS ASSIGNMENT:

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

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

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

D. PRIORITY ASSIGNMENT:

Interrupt priority is established by inserting a "priority plug" in the socket at IC location E19. For DL11-A B,C,D and E use level 4, for the standard assignment or level 5-7 as specified by the customer or the documentation of an option which uses the DL11.

SUMMARY OF REGISTER, VECTOR AND PRIORITY ASSIGNMENTS:

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

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

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

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

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

DEC FORM NO DEC 16-(381)-1022-M370 DRA 108

E. SPECIAL NPR JUMPER:

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

F. SELECTION OF DATA FORMAT:

1. Data Bits

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

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

2. Parity

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

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

3. Stop Bits

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

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

G. CRYSTAL SELECTION:

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

G. Con't

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

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

*Most counter-clock wise position.

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

1050 X 960 = 10080000 = 1.008MHz.

The crystal frequency should not fall outside the range of the standard crystals. Although the above table includes only the standard DL11 crystals other values may be specified by the customer or by other documentation of an option which uses the DL11.

DEC part number for the standard crystals are as follows:

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

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

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

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

H. G8000 INSTALLATION:

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

1. Install G8000 into slot A02 of DD11-A.
2. Wire A03V2 to A02V2.
3. Wire A02M2 to CXXU1 where XX is the slot location of the M7800.

Refer to diagram 1.

I. FILTER CAPACITOR SELECTION:

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

J. DL11-B,D,E in Systems with +15V available using DD11-A

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

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

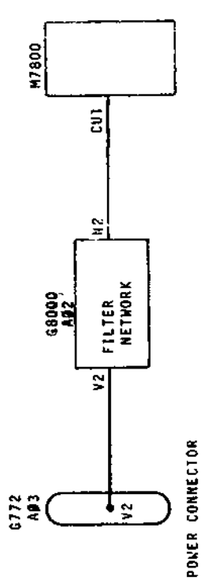


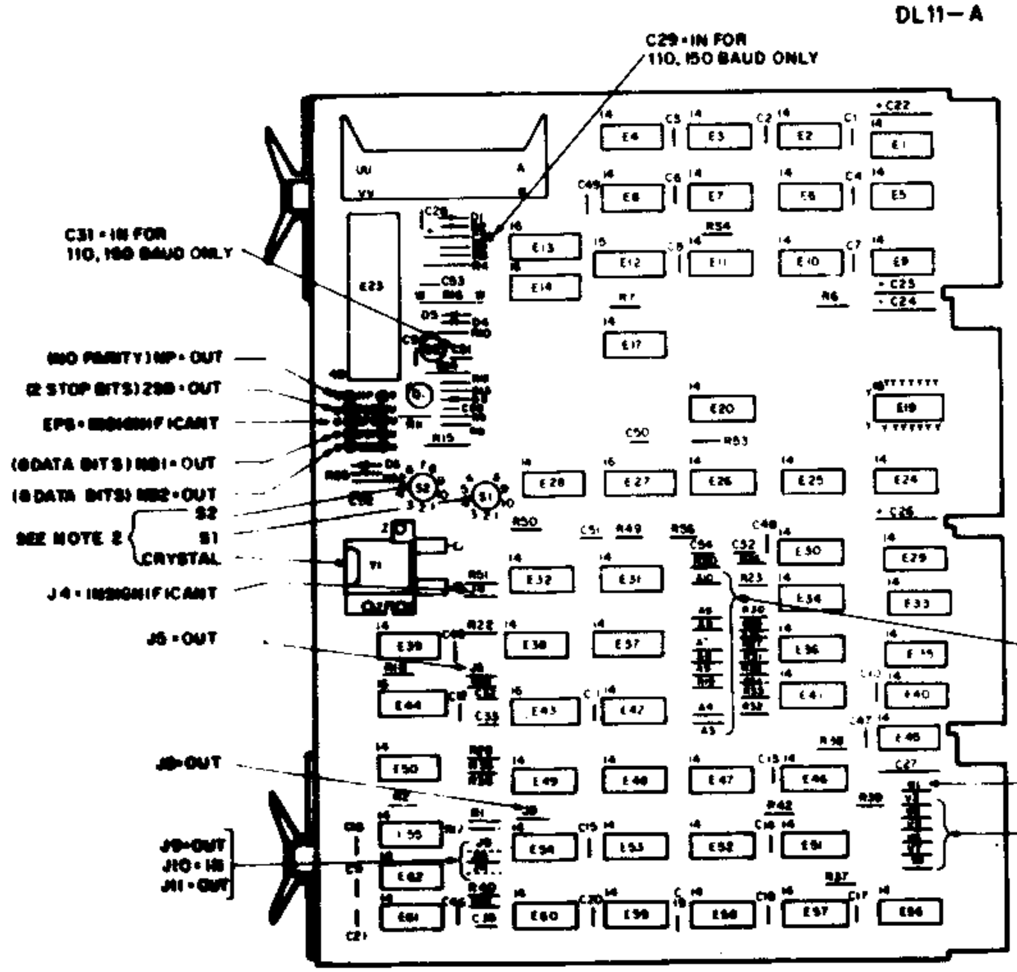
DIAGRAM 1. G8000 INSTALLATION

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE

DL11-A



NOTES:

1. For further information on the DL11-A configuration or the installation of DL11-B, DL11-C, DL11-D or DL11-E refer to:
   a. DL11 Asynchronous Line Interface Manual
   b. A-SP-DL11-0-2 (DL11 installation procedure) in the DL11 Engineering Drawings.

2.

SPEED GROUP	1	2	3	4
CRYSTAL FREQ (HZ)	844.8K	1.03296M	1.152M	4.608M
S1, S2 POS.	BAUD RATE			
1	36.7	44.8	50	200
2	55	67.3	75	300
3	110	134.5	150	600
4	220	269	300	1200
5	440	538	600	2400
6	880	1076	1200	4800
7	1320	1614	1800	7200
8	1760	2152	2400	9600

Position 1 is most counter-clockwise position.

11-2454

SIZE A | CODE SP | NUMBER DL11-0-2 | REV F

EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DRAWING DIRECTORY

THIS IS PRINT SET

CUSTOMER PRINT SET INDEX

	SEQUENCE
TIMING DIAGRAM	D-TD-KW11-L-Ø2
LINE FREQUENCY CLOCK	D-BS-KW11-L-01
LINE CLOCK	D-CS-M787-Ø-1
LINE FREQUENCY CLOCK	A-PL-KW11-L-Ø
SOFTWARE LIST	A-SL-KW11-L-28

MFG PRINTS

TEST PROCEDURE	A-SP-KW11-L-Ø3

UNIT VARIATIONS

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

REVISIONS: REV / CHG. NO. / DATE

USED ON OPTION/MODEL

DRN. [illegible]	DATE 2-14-72	TITLE	LINE FREQUENCY CLOCK (KW11-L)
CHK'D. [illegible]	DATE 6-13-72		
PROJ ENG. [illegible]	DATE 6-14-72		
PROD. [illegible]	DATE 6/14/72		
FIELD SERV. [illegible]	DATE 6-14-72		

SIZE	CODE	NUMBER	REV
B	DD	KW11-L-Ø	*

SHEET 1 OF 2

DIST

DRB 106

CUSTOMER PRINT SET							DEPOT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.
KW11-L													
X							X		D-TD-KW11-L-02	*	1	TIMING DIAGRAM, KW11-L	
X							X		D-BS-KW11-L-01	A	2	LINE FREQUENCY INTERNAL CLOCK	
							X		A-SP-KW11-L-03	*	3	TEST PROCEDURE	
X							X		D-CS-M7B7-0-1	#	2	LINE CLOCK	
X							X		A-PL-KW11-L-0	*	1	LINE FREQUENCY CLOCK	
X							X		A SL KW11 L 28	*	1	SOFTWARE LIST	

CUSTOMER PRINT SET							DEPOT SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO.

TITLE		SIZE	CODE	NUMBER	REV
LINE FREQUENCY CLOCK (KW11-L)	SHEET 2 OF 2	B	DD	[illegible]11-L-0	*

DRB 108

DEC 16—(325)—1062—2—N871

digital EQUIPMENT CORPORATION

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

SEQUENCE		SEQUENCE
RESTART LOADER (PL)	A-PL-BM873-Ø	
RESTART LOADER	D-CS-M873-Ø-1	
WORD LISTING OF ROM CONTENTS (FOR M873-YA)	B-AP-M873-Ø-9	
WORD LISTING OF ROM CONTENTS (FOR M873-YB)	B-AP-M873-Ø-14	
WORD LISTING OF ROM CONTENTS (FOR M873-YC)	B-CS-M873-Ø-17	
WORD LISTING OF ROM CONTENTS (FOR M873-YD)	B-CS-M873-Ø-22	
WORD LISTING OF ROM CONTENTS (FOR M873-YF)	B-CS-M873-Ø-27	
WORD LISTING OF ROM CONTENTS (FOR M873-WA)	K-CS-M873-0-32	
WORD LISTING OF ROM CONTENTS (FOR M873-YG)	B-CS-M873-Ø-33	
WORD LISTING OF ROM CONTENTS (FOR M873-YH)	B-CS-M873-Ø-34	

UNIT VARIATIONS

VAR	TITLE	PRINT SET
M873-Ø	RESTART LOADER	1
BM873-YA	RESTART LOADER	1
BM873-YB	RESTART LOADER	1
BM873-YC	RESTART LOADER	1
BM873-YD	RESTART LOADER	1
BM873-YF	RESTART LOADER	1
BM873-WA	RESTART LOADER DN80 SERIES	1
BM873-YG	RESTART LOADER	1
BM873-YH	RESTART LOADER	1

REVISIONS		
DATE	CHG. NO.	REV
10/75	BM873-4	D
10/75	BM873-5	E
9/76	BM873-6	F

USED ON OPTION/MODEL

SHEET 1 OF 2

DRN. K. GLEEZEN	DATE 11/73	TITLE RESTART LOADER
CHK'D. K. GLEEZEN	DATE 11/73	
PROJ ENG. R. DIETER	DATE 11/73	
PROD. J. BORENSTEIN	DATE 11/73	SIZE B / CODE DD / NUMBER BM873 Ø / REV F
FIELD SERV. G. KLOPPMAN	DATE	DIST

DEC 16-12351-1082-1A-8972

DRB 106

CUSTOMER PRINT SET				SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
				MFG.						
X				X	1	A-PL-BM873-Ø-Ø	A	1	RESTART LOADER (PL)	
				X		A-SP-BM873-Ø-1		16	BM873 ENG. SPECIFICATION	
				X		A-SP-BM873-Ø-2		1	BM873 TEST PROCEDURE	
X						A-AL-BM8873Ø-3		1	BM873 ACCESSORY LIST	
X				X	2	D-CS-M873-Ø-1	#	4	RESTART LOADER	
						K-CO-M873-Ø-4		1	X-Y COORDINATE HOLE LOCATION	
						D-AH-M873-Ø-5		1	ASSY/DRILLING HOLE LAYOUT	
				X		B-MH-M873-Ø-6		1	MODULE ECO HISTORY	
				X		K-RL-M873-Ø-7	#	9	ROM LISTING (FOR 23044A2)	
				X		K-RL-M873-Ø-8	#	9	ROM LISTING (FOR 23045A2)	
X				X		B-AP-M873-Ø-9	#	1	WORD LISTING OF ROM CONTENTS (FOR M873-YA)	
				X		K-RL-M873-Ø-1Ø		9	ROM LISTING (FOR 23089A2)	
				X		K-RL-M873-Ø-11		9	ROM LISTING (FOR 23090A2)	
				X		K-RL-M873-0-12		9	ROM LISTING (FOR 23091A2)	
				X		K-RL-M873-Ø-13		9	ROM LISTING (FOR 23092A2)	
X				X		B-AP-M873-Ø-14		1	WORK LISTING OF ROM CONTENTS (FOR M873-YB)	
				X	4	K-RL-M873-0-7		9	ROM LISTING (FOR 23044A2)	
				X		K-RL-M873-0-8		9	ROM LISTING (FOR 23045A2)	
				X		K-CS-M873-0-15		9	ROM LISTING (FOR 23109A2)	
				X		K-CS-M873-0-16		9	ROM LISTING (FOR 23110A2)	
X				X		B-CS-M873-0-17		1	WORD LISTING OF ROM CONTENTS (FOR M873YC)	
				X	5	K-CS-M873-0-18		9	ROM LISTING (FOR 23095A2)	
				X		K-CS-M873-0-19		9	ROM LISTING (FOR 23096A2)	
				X		K-CS-M873-0-20		9	ROM LISTING (FOR 23097A2)	
				X		K-CS-M873-0-21		9	ROM LISTING (FOR 23098A2)	
X				X		B-CS-M873-0-22		1	WORD LISTING OF ROM CONTENTS (FOR M873 YD)	
				X	6	K-CS-M873-Ø-23		9	ROM LISTING (FOR 23215A2)	
				X		K-CS-M873-Ø-24		9	ROM LISTING (FOR 23216A2)	
				X		K-CS-M873-Ø-25		9	ROM LISTING (FOR 23217A2)	
				X		K-CS-M873-Ø-26		9	ROM LISTING (FOR 23218A2)	
				X		B-CS-M873-Ø-27		1	WORD LISTING OF ROM CONTENTS (FOR M873-YF)	

CUSTOMER PRINT SET				MFG	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
				X	7	K-CS-M873-0-28		9	ROM LISTING (FOR 23225A2)	
				X		K-CS-M873-0-29		9	ROM LISTING (FOR 23226A2)	
				X		K-CS-M873-0-30		9	ROM LISTING (FOR 23227A2)	
				X		K-CS-M873-0-31		9	ROM LISTING (FOR 23228A2)	
			X	X		K-CS-M873-0-32		1	WORD LISTING OF ROM CONTENTS (FOR BM873-WA)	
				X	8	A-PS-23338A2-Ø-Ø		3	ROM LISTING (FOR 23338A2)	
				X		A-PS-23339A2-Ø-Ø		3	ROM LISTING (FOR 23339A2)	
				X		A-PS-23340A2-Ø-Ø		3	ROM LISTING (FOR 23340A2)	
				X		A-PS-23341A2-Ø-Ø		3	ROM LISTING (FOR 23341A2)	
			X	X		B-CS-M873-Ø-33		1	WORD LISTING OF ROM CONTENTS (FOR BM873-YG)	
				X	9	A-PS-23327A2-Ø-Ø		3	ROM LISTING (FOR 23327A2)	
				X		A-PS-23328A2-Ø-Ø		3	ROM LISTING (FOR 23328A2)	
				X		A-PS-23329A2-Ø-Ø		3	ROM LISTING (FOR 23329A2)	
				X		A-PS-23330A2-Ø-Ø		3	ROM LISTING (FOR 23330A2)	
			X	X		B-CS-M873-Ø-34		1	WORD LISTING OF ROM CONTENTS (FOR BM873-YH)	

CUSTOMER PRINT SET CODES

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

TITLE		SIZE	CODE	NUMBER	REV
RESTART LOADER	SHEET 2 OF 2	B	DD	BM873-Ø	F

DRB 108

DEC 16-(325)-1062-28-R972

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE		SEQUENCE	
DRAWING DIRECTORY	B-DD-KT11-C		(SHEETS 1+2 ONLY)
BLOCK DIAGRAM	D-BD-KT11-C-1		
SYSTEM ADDRESS PATHS	E-CS-M8107-0-1		
SYSTEM STATUS REGISTER	E-CS-M8108-0-1		
ACCESSORY LIST	A-AL-KT11-C-2		

NOTE: 1. USE KT11-C ONLY WITH KB11-A & FP11-B
2. USE KT11-CD ONLY WITH KB11-D & FP11-C

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE KT11-C-1
KT11-C	MEMORY MANAGEMENT UNIT (FOR KB11-A)	X
KT11-CD	MEMORY MANAGEMENT UNIT (FOR KB11-D)	X

REVISIONS			
REV	A	B	
CHG. NO.	KT11C-1	KT11C-2	
DATE	12/6	12/75	

USED ON OPTION/MODEL	
11/45	
11/50	
11/55	

DRN. R.COOK	DATE 7/22/72	TITLE: MEMORY MANAGEMENT UNIT
CHK'D.	DATE	
PROJ ENG. R.C. Gray	DATE 4-26-73	
PROD. D. Hough	DATE 5/1/73	SIZE B / CODE DD / NUMBER KT11-C / REV B
FIELD SERV. Art Lee	DATE 5/1/73	
SHEET 1 OF 3		DIST

DRB 106

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY [illegible] DATE [illegible]	CHECKED [illegible] DATE 6-15-72	SECTION
ENG R.C Gray DATE 6/19/72	PROD Jack Harrison DATE 6-20-72	ISSUED SECT.

LEGEND

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

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION KT11-C	KT11-CD
	KT11-C	Print Set	1	-
	Lib Kit 11-KT11C-A-K	Software Kit	1	-
	Dec 11-HKTA-D	Maint. Manual (KT-11C	1	-

KIT CHECK BY _____ DATE _____
INSTALLATION CHECK BY _____ DATE _____

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
Memory management unit	SHEET 1 OF 1	A	AL	KT11-C -	A	KT11-C--00002

DIST.

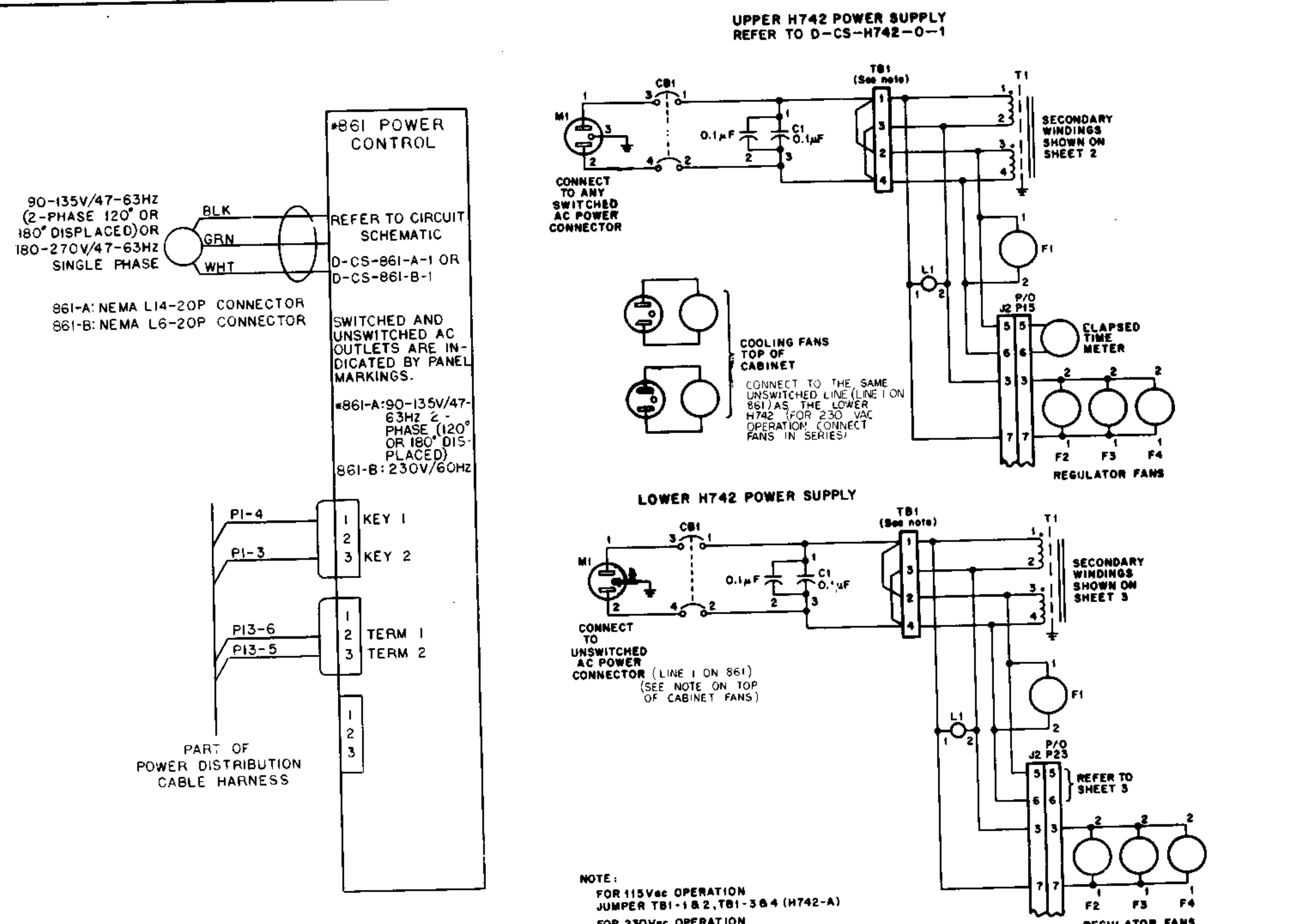
NOTE

1. FOR 11/45 SYSTEMS BUILT WITH 860 POWER CONTROLS, REFER TO D-IC-11/45-0-1 REV.A DRAWING.

TABLE I

POWER SYSTEM - MAJOR ECO SUMMARY

ECO#	D-IC-11/45-0-1 REV CHANGES FROM REV	TO REV	DESCRIPTION (PROBLEM-SOLUTION)
11/45-00031	A	B	REPLACED OBSOLETE 860 POWER CONTROL WITH 861 POWER CONTROL. (D-IC-11/45-0-1 REV. A DOCUMENTS MACHINES WITH 860 POWER CONTROL.)
11/45-00054	C	D	POWER DISTRIBUTION REDESIGNED TO ACCOMMODATE H754 REGULATOR (+20V & -5V) FOR 16K MEMORY. MAIN POWER HARNESS CHANGED FROM 7008784 TO 7009540. SYSTEM UNIT POWER DISTRIBUTION MOVED FROM BACK OF CPU BOX TO TOP REAR OF CPU BOX. SYSTEM UNIT CONNECTORS CHANGED FROM FLAT 8-PIN CONNECTOR TO 15-PIN AND 6-PIN RECTANGULAR CONNECTOR-PAIR. MACHINES WITH THIS ECO HAVE SERIAL NO'S ≥ 2000.
11/45-00057	D	E	7009540 HARNESS REVISED TO DISTRIBUTE -15V TO SYSTEM UNITS WHEN H754 REGULATOR IS INSTALLED FOR 16K MEMORY. P45/J45 (FLAT 4-PIN CONNECTORS) ADDED TO HARNESS NEAR P7. (AFFECTS ONLY MACHINES WITH S/N ≥ 2000).
11/45-00060	E	F	+5V FROM SLOT D H744 REWIRED TO LOWER VOLTAGE DROPS TO SYSTEM UNITS.
11/45-00061	F	H	CPU HARNESS MODIFIED TO ACCOMODATE SECOND H746 MOS REGULATOR. ADD P30 TO 7009540 HARNESS (NEAR P29 MACHINE WITH S/N ≥ 2000). IF S/N < 2000 P30 OF THE 7009784 HARNESS IS REWIRED TO DISTRIBUTE MOS VOLTAGE FROM AN H746 IN SLOT L OF THE LOWER H742. KB11-A ECO* MUST BE INSTALLED AT SAME TIME



NOTE:

FOR 115Vac OPERATION JUMPER TB1-1&2, TB1-3&4 (H742-A)

FOR 230Vac OPERATION JUMPER TB1-2&3 (H742-B)

TABLE 2

MEMORY CONFIGURATION	REGULATOR SLOTS H	J	K	L	JUMPERS +5V2 (P5-7&8)	+5V1 (P5-3&4)	+5V3 (P6-7&8)
BIPOLAR ONLY	—	—	—	—	—	—	—
1-2K	H744	X	X	X	IN	IN	IN
3-4K	H744	H744	X	X	X	IN	IN
5-6K	H744	H744	H744	X	X	X	IN
7-8K	H744	H744	H744	H744	X	X	X
MOS ONLY	—	—	—	—	—	—	—
4-16K	H746	H744	X	X	IN	IN	IN
16-32K	H746	H744	X	H746	IN	IN	IN
MIXED-MOS/BIPOLAR	—	—	—	—	—	—	—
4-16K MOS; 1-2K BIPOLAR	H746	H744	H744	X	IN	X	IN
4-16K MOS; 3-4K BIPOLAR	H746	H744	H744	H744	IN	X	X

FIRST USED ON OPTION/MODEL 11/45

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

REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY √

MATERIAL

FINISH

NEXT HIGHER ASSY. B DD-11/45-Ø

DIGITAL EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE POWER SYSTEMS CONFIGURATION

SIZE D CODE IC NUMBER 11/45-Ø-1 REV. H

SCALE

SHEET 1 OF 5

REVISIONS: A 11/45-00031; B MINOR 11/45-00047; C 11/45-00052; D 11/45-00054; E 11/45-00057; F 11/45-00060; H 11/45-00061

DEC FORM NO DRD 100-A

UPPER H742

SECONDARY - H742

TB2

20-30 VAC
20-30 VAC
20-30 VAC
20-30 VAC
20-30 VAC

J1 / P14

+8VI
+15V1
+15V2
GND1
GND2
GND3
LO GND1
AC LO1
DC LO 2
AC LO4
LINE CLOCK
DC LO 1

P25-4 GRY
P12-2 GRY
P21-3 BLK
P8-8 BLK
P25-3 BLK
P10-1 BLK 18GA
P3-7 YEL 18 GA
P22-10 YEL 18GA
P8-1 VIO
P22-8 YEL 18 GA
P7-7 YEL 18 GA
P37-2 BRN 18GA
P9-8 VIO 18 GA

J3 / P16

AC-1 P18-6
AC-2 P18-7
AC-3 P19-6 RED
AC-4 P19-7 WHT

J2 / P15

AC-5 P17-6 RED
AC-6 P17-7 WHT
AC-7 P20-6 RED
AC-8 P20-7 WHT
AC-9 P21-6 RED
AC-10 P21-8 WHT

AC27 115 VAC
AC28 115 VAC
115 VAC

RED
WHT

P34
P35
TO ELAPSED TIME METER

TO H742 FANS

TO LOWER H742

P17 — H744 +5V REGULATOR (FP11) — SLOT A

RED P15-1
WHT P15-2
AC-5
AC-6
+5VA1
GND A1
GND A2
+5VA2

P17

P2-6 RED
P8-2 BLK
P8-1 BLK
P2-5 RED

P18 — H744 +5V REGULATOR — SLOT B

RED P16-3
WHT P16-4
AC-1
AC-2
+5VB1
GND B1
GND B2
+5VB2

P18

P2-2 RED
P8-4 BLK
P8-3 BLK
P2-1 RED

P19 — H744 +5V REGULATOR — SLOT C

RED P16-7
WHT P16-8
AC-3
AC-4
+5VC1
GND C1
GND C2
+5VC2

P19

P3-6 RED
P8-6 BLK
P8-5 BLK
P3-5 RED

P20 — H744 +5V REGULATOR — SLOT D

RED P15-8
WHT P15-10
AC-7
AC-8
+5VD1
GND D1
GND D2
+5VD2

P20

P36-1 RED
P36-7 BLK
P12-7 BLK
P12-1 RED

P21 — SEE NOTE #3 — H745 -15V REGULATOR (SYSTEM UNITS) — SLOT E

RED P15-9
WHT P15-12
AC-9
AC-10
-15VE1
GND E1
GND D1
+15V3
+15V

P21

P36-13 BLU
P36-11 BLK
P14-4 BLK
P25-5 GRY

P45/J45

BLU P7-1
BLU
SEE NOTE 2
BLU(-15VF1) P25-1
BLU(-15V2) P12-13
-15V3

P40-H754

BLK P12-5
BRN P12-14
ORN P12-3
P15-9
P15-12
SEE NOTE #2
TWP
GND E2
-5VE1
+20VE1
AC-9
AC-10

TO PLUGS ON SHEET 2

P5

RED P28-5 — +5VK2
RED P28-2 — +5VK1
RED — +5V1 *
+5V1
BLUE P3-1 — -15V5
BLUE P22-4 — -15V1
RED — +5V2 *
+5V2

P6

VIO P14-9 — DC LO Y
GRN P30-4 — +19.7VH1
YEL P30-5 — +23.2VH1
BRN P26-3 — -5VH1
RED P29-5 — +5VL2
RED P29-2 — +5VL1
RED — +5V3 *
+5V3

P7

BLUE — -15V3
BLUE P3-4 — -15V6
BLUE P1-5 — -15V4
VIO 18GA P22-9 — DC LO 2
RED P27-5 — +5VJ2
RED P4-4 — +5V1
YEL P14-10 — AC LO 2
RED P12-4 — +5V4

P8

BLK P17-4 — GND A2
BLK P17-3 — GND A1
BLK P18-4 — GND B2
BLK P18-3 — GND B1
BLK P19-4 — GND C2
BLK P19-3 — GND C1
P41 BLK — GND 13
BLK P14-5 — GND 2

* SEE TABLE 2

P1

GRY P3-3 — +15V5
BLK P10-3 — GND 11
BLK P32-3 — PWR CONT COM 1
WHT P32-1 — PWR CONT SW 1
BLU P7-3 — -15V4
BLK P10-4 — GND 12
BLK P36-5 — GND 14
RED P36-4 — +5V6

P2

RED P18-5 — +5VB2
RED P18-2 — +5VE1
RED P17-5 — +5VA2
RED P17-2 — +5VA1
BRN 18GA P37-2 — LINE CLK
WHT P14-1 — +8V

P3

BLU P5-5 — -15V5
GRY P36-2 — +15V4
GRY P1-1 — +15V5
BLU P7-2 — -15V6
RED P19-5 — +5VC2
RED P19-2 — +5VC1
YEL 18GA P14-8 — AC LO 1
VIO 18GA P14-12 — DC LO 1

P4

RED P31-5 — +5VH2
RED P31-2 — +5VH1
VIO 18GA P22-12 — DC LO X
RED P7-6 — +5V5
RED P27-2 — +5VJ1
GRN P26-4 — + 19.7 VH1
YEL P22-5 — + 23.2 VH1

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

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

DRN. R Counter — DATE 8/6/73
CHK'D. — DATE
ENG. — DATE
PROJ. ENG. — DATE
PROD. — DATE
NEXT HIGHER ASSY.
SCALE NONE
SHEET 2 OF 5

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE 11/45 POWER SYSTEM (UPPER H742)

SIZE D CODE IC NUMBER 11/45-0-1 REV. H
DIST.

REVISIONS: REV. | CHANGE NO | CHK

DEC FORM 140 DEC 102 9

LOWER H742

SECONDARY - H742

TB2

20-30 VAC

20-30 VAC

20-30 VAC

20-30 VAC

20-30 VAC

115V AC TO LOGIC FANS

CHASSIS GND

115 VAC

TO H742 FANS

J1 * SEE NOTE 3

GND
GND 4
-15V 1
-15V 2
-15V 3
LO GND 2
AC LO 2
DC LO 2
AC LO 3
DC LO X

J4 P22

P10-5 BLK
P5-6 BLU
P10-2 BLK 18GA
P14-10 YEL 18GA
P7-4 VIO 18GA
P14-6 YEL 18GA
P4-3 VIO 18GA

J3 P24

AC11 P29-6 RED
AC12 P29-7 WHT
AC13 P30-7
AC14 P30-8
AC15 P26-7 RED
AC16 P26-8 WHT
AC17 P31-6 RED
AC18 P31-7 WHT

J2 P23

AC19 P27-6 RED
AC20 P27-7 WHT
AC21 P28-6 RED
AC22 P28-7 WHT
AC23 P25-6 RED
AC24 P25-8 WHT
AC25 P13-1 RED
AC26 P13-2 WHT
SHIELD

TO UPPER H742

P25 H745 -15V REGULATOR SLOT F

AC23
AC24
-15V F1
GND F1
GND 3
+15V 1
+15V 3

RED P23-9
WHT P23-10

J45-1 BLU
P9-4 BLK
P14-6 BLK
P14-2 GRY
P21-4 GRY

P26 H746 MOS REGULATOR (OPTIONAL) SEE NOTE *1 SLOT H

AC15
AC16
GND H3
-5V H1
+19.7V H1
+23.2V H1

RED P24-5
WHT P24-6

P11-2 BLK
P6-4 BRN
P4-6 GRN
P4-8 YEL

P27 H744 +5V REGULATOR (OPTIONAL) SEE NOTE 1 SLOT J

AC19
AC20
+5V J1
GND J1
GND J2
+5V J2

RED P23-1
WHT P23-2

P4-5 RED
P9-2 BLK
P9-1 BLK
P7-5 RED

P28 H744 +5V REGULATOR (OPTIONAL) SEE NOTE 1 SLOT K

AC21
AC22
+5V K1
GND K1
GND K2
+5V K2

RED P23-8
WHT P23-10

P5-2 RED
P11-4 BLK
P11-3 BLK
P5-1 RED

P29 H746 +5V REGULATOR (OPTIONAL) SEE NOTE 1 SLOT L

AC11
AC12
+5V L1
GND L1
GND L2
+5V L2

RED P24-1
WHT P24-2

P6-6 RED
P11-6 BLK
P11-5 BLK
P6-5 RED

P32 J2

WHT 18GA P1-4
BLK 18GA P1-3

SW 1
COM 1

POWER CONTROL (REF. ONLY)

P33 J3

RED 18GA P13-5
BLK 18GA P13-6

THERM 2
THERM 1

FROM SHEET 1

SEE NOTE 1

H744 +5V REGULATOR P31

RED P4-2
BLK P11-1
BLK P10-8
RED P4-1
RED P24-7
WHT P24-8

+5V H1
GND H1
GND H2
+5V H2
AC17
AC18

H746 MOS REGULATOR P30

BLK P9-6
GRN P6-2
YEL P6-3
RED P24-3
WHT P24-4

GND 13
+19.7V L1
+23.2 V L1
AC 13
AC 14

P9

BLK P27-4
BLK P27-3
BLK P12-8
BLK P25-2
BLK 18GA P37-1
BLK P38-1
BLK P30-2

GND J2
GND J1
GND 9
GND F1
LO GND 3
GND 5
GND L3

P10

BLK 18GA P14-7
BLK 18GA P22-7
BLK P1-2
BLK P1-6
BLK P22-3
BLK P31-4

LO GND 1
LO GND 2
GND 11
GND 12
GND 4
GND H2

P11

BLK P31-3
BLK P26-2
BLK P28-4
BLK P28-3
BLK P29-4
BLK P29-3
BLK P39-1
BLK P36-6

GND H1
GND H3
GND H2
GND H1
GND L2
GND L1
GND 6
GND 10

P13

RED P23-5
WHT P23-6
SHIELD
*8 RED
*8 RED
AC25
AC26
RED 18GA P33-2
BLK 18GA P33-3

AC25 115V AC TO LOGIC FANS
AC26
THERM 2 TO THERMAL SWITCH
THERM 1

SHIELD CONNECTED AT P23 ONLY

P12

RED P20-5
GRY P14-3
ORN P40-5
RED P7-8
BLK P40-2
BLK P20-4
BLK P9-3
BLU J45-4
BRN P40-3

+5V D2
+15V 2
+30V E1
+5V 4
GND E2
SPARE -1
GND D2
GND 9
GND
SPARE -2
GND
SPARE -3
-15V2
-5V E1
SPARE -3

TWP

P36

RED P20-2
GRY P3-2
RED P1-8
BLK P1-7
BLK P20-3
BLK P11-8
BLK P21-2
BLU P21-1

+5V D1
+15V 5
+20V
+5V 6
GND 14
SPARE -1
GND D1
GND 10 (CPU)
GND
SPARE -2
GND E1
SPARE -3
-15V E1
-5V
SPARE -3

P37

BLK 18GA P9-5
BRN 18GA P2-7
BRN 18GA P14-11

LO GND 3
LINE CLK
DC LO
AC LO
SPARE 4
SPARE 5

NOTES:

1. SEE TABLE *2 FOR INSTALLATION OF H,J,K AND L OPTIONAL REGULATORS AND HARNESS JUMPERS THAT MUST BE CUT FOR MOS, BIPOLAR MEMORY (-5 V JUMPERS OR EMPTY REGULATOR SLOTS) SEE ATTACHED TABLE SHEET-1
2. IF MEMORY OR OTHER OPTION REQUIRING +20V & -5V IS INSTALLED IN SYSTEM UNIT LOCATION, REPLACE SLOT E-H745 WITH H754 AND USE P40 INSTEAD OF P21, ALSO MOVE AC WIRES FROM P21-6,8 TO P40-7,8. TO PERMIT INSTALLATION OF OPTIONS REQUIRING -15V IN SYSTEM UNIT: MOVE JUMPER FROM P45 PIN 3 TO P45-PIN 4.
3. (*) -15V OF H742 RECONFIGURED AT P22/J4 TO PROVIDE -15V. THEREFORE LINE CLOCK AND +8V OUTPUTS OF THIS H742 MUST NOT BE USED.
4. DO NOT INSTALL M.O.S IN BACKPLANE SLOTS 21 THRU 25 UNLESS SLOTS 16 THRU 20 ALSO ARE FULL OF M.O.S. IF SLOTS 16 THRU 20 DO NOT HAVE M.O.S NO -5V WILL BE AVAILABLE TO SLOTS 21 THRU 25.

REVISIONS	CHANGE NO	CHK

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

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

DRN. J. Vinson	DATE 8-17-73	digital EQUIPMENT CORPORATION
CHK'D.	DATE	
ENG.	DATE	
PROJ. ENG.	DATE	
PROD.	DATE	
NEXT HIGHER ASSY.		

TITLE: 11/45 POWER SYSTEM (LOWER H742)

SIZE	CODE	NUMBER	REV.
D	DIC	11/45 0 1	H

SCALE —
SHEET 5 of 5
DIST.

UPPER H742 POWER SUPPLY

T1 — SECONDARY UPPER H742 POWER SUPPLY

TB2

J1

POWER CONTROL UPPER H742 POWER SUPPLY
REFER TO C-CS-5409730-0-1

J4 P14

+8V	P2-8
+15V	P21-5
+15V	P36-8
GND	P21-3
GND	P8-8
GND	P25-3
GND	P10-1
AC LO 1	P3-7/P22-12
AC LO 2	P22-8
CLOCK	P36-6
DC LO 1	P3-8

J3 P16

AC-1	P18-7
AC-2	P18-6
	P19-7
	P19-6

P/O J2 P15

	P17-7
	P17-6
	P20-7
	P20-6
	P21-8
	P21-6

115V AC FROM UPPER H742 TB1: TB1-2, TB1-4

P/O P15

"Y" ELAPSED TIME METER

J/P17 — H744 +5V REGULATOR (FP11) — SLOT A

P15-2	AC IN
P15-1	AC IN
+5V	P2-6
GND	P8-2
GND	P8-1
+5V	P2-5

J/P18 — H744 +5V REGULATOR — REFER TO D-CS-H744-0-1 — SLOT B

P16-4	AC IN
P16-3	AC IN
+5V	P2-2
GND	P8-4
GND	P8-3
+5V	P2-1

J/P19 — H744 +5V REGULATOR — SLOT C

P16-8	AC IN
P16-7	AC IN
+5V	P3-6
GND	P8-6
GND	P8-5
+5V	P3-5

J/P20 — H744 +5V REGULATOR — SLOT D

P15-10	AC IN
P15-8	AC IN
5VDI	P36-1
GND02	P36-4
GND	P12-6
+5V	P12-5

J/P21 — H745 −15V REGULATOR — REFER TO D-CS-H745-0-1 — SLOT E

P15-12	AC IN
P15-9	AC IN
P14-2	+15V
P14-4	GND
−15V	P12-7
GND	P12-8
+15V	P25-5

7008784 OLD POWER DISTRIBUTION CABLE HARNESS

P5

P28-5	+5V
P28-2	+5V
	+5V*
P3-1	−15V
P22-4	−15V
	+5V*

P6

P30-4	+19.7V
P30-5	+23.2V
P26-3	−5V
P29-5	+5V
P29-2	+5V
	+5V*

P7

P12-2	−15V
P3-4	−15V
P1-5	−15V
P22-9	DC LO 2
P27-5	+5V
P4-4	+5V
P22-8	AC LO 2
P12-4	+5V

P8

P17-4	GND
P17-3	GND
P18-4	GND
P18-3	GND
P19-4	GND
P19-3	GND
P14-5	GND

*CUT JUMPERS

P5 7-8	P5 3-4	P6 7-8
BIPOLAR ONLY		
IF MORE THAN 2K OF BIPOLAR	IF MORE THAN 4K OF BIPOLAR	IF MORE THAN 6K OF BIPOLAR
BIPOLAR AND MOS		
NEVER CUT	ALWAYS CUT	IF MORE THAN 2K OF BIPOLAR

P1 — TO CONSOLE CONNECTOR J3

P3-3	+15V
P10-3	GND
P32-3	860 GND IN
P32-1	860 GND OUT
P7-3	−15V
P10-4	GND
P36-3	GND
P36-2	+5V

P2

P18-5	+5V
P18-2	+5V
P17-5	+5V
P17-2	+5V
P36-5	CLOCK
P14-1	+8V

P3

P5-5	−15V
P36-7	+15V
P1-1	+15V
P7-2	−15V
P19-5	+5V
P19-2	+5V
P14-8	AC LO 1
P14-9	DC LO 1

P4

P31-2	+5V
P31-2	+5V
P22-12	DC LO X
P7-6	+5V
P27-2	+5V
P26-4	+19.7V HI
P26-5	+23.2V HI

THIS SHEET APPLIES TO MACHINES WITH SERIAL NUMBERS LESS THAN 2000.

FIRST USED ON OPTION/MODEL	11/45
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	DECIMALS: XXX ± .005, .XX ± .02, X ± .1; ANGLES: ±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	
MATERIAL	—
FINISH	—
NEXT HIGHER ASSY.	B-11C-11/45-0
SCALE	—
SHEET	4 OF 5

QTY. | DESCRIPTION | PART NO. | ITEM NO.

PARTS LIST

DRN		DATE 4/16/76
CHK		DATE 4/16/76
ENG		DATE 4/16/76
PROJ ENG		DATE 4/16/76
PROD		DATE 4/16/76

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

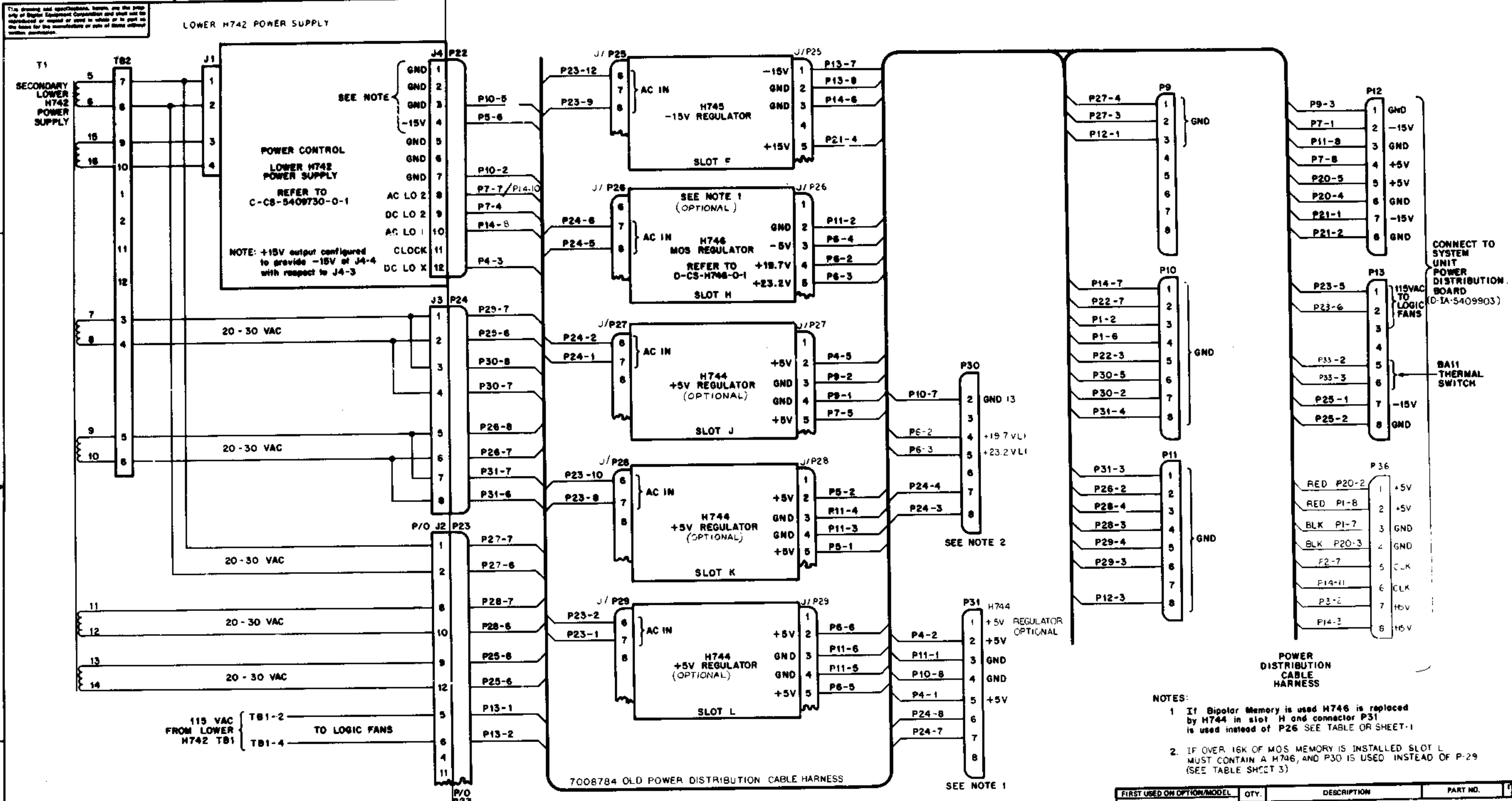
TITLE: OLD POWER SYSTEMS CONFIGURATION

SIZE	CODE	NUMBER	REV.
D	1C	11/45-0-1	H

DIST.

REVISIONS: REV. | CHANGE NO. | CHK.

DEC FORM NO DRD 100-A



NOTES:

1. If Bipolar Memory is used H746 is replaced by H744 in slot H and connector P31 is used instead of P26 SEE TABLE OR SHEET 1
2. IF OVER 16K OF MOS MEMORY IS INSTALLED SLOT L MUST CONTAIN A H746, AND P30 IS USED INSTEAD OF P29 (SEE TABLE SHEET 3)

THIS SHEET APPLIES TO MACHINES WITH SERIAL NUMBERS LESS THAN 2000

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

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES

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

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN. / CHK'D / ENG. / PROJ. ENG. / PROD. — DATE

[redacted] EQUIPMENT CORPORATION

TITLE: OLD POWER SYSTEMS CONFIGURATION

NEXT HIGHER ASSY. B-DD-11/45-Ø

SCALE —

SHEET 5 OF 5

SIZE D CODE IC NUMBER 11/45-Ø-1 REV. H

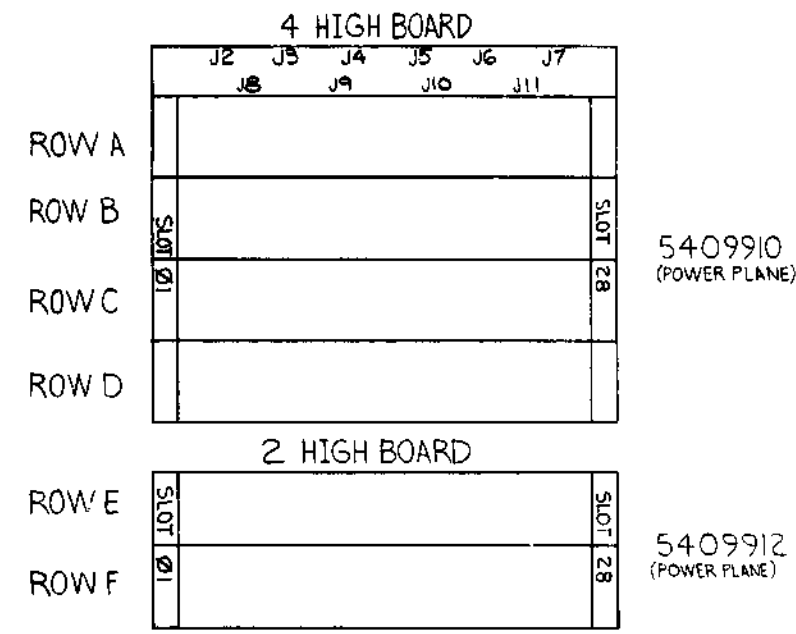
DEC FORM NO DRD 100-A

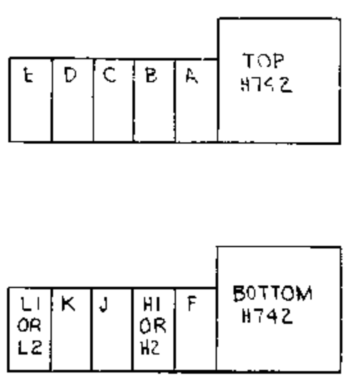
VOLTAGE	REGULATOR LOCATION	PIN	ROW	SLOT	MATE N LOCK CONNECTION	WIRE WRAP PIN
+5V	A	A2, V1	A-F	2-5	J2-5,6	
	B	A2		1,6-9	J2-3,4	
	B	V1		6-9	J2-3,4	
	C	A2, V1		10-15	J3-5,6	
	J			16-18	J4-6,7	
	H2			19,20	J4-1,2 , J5-8	
	K			21-23	J5-1,2,3	
	L	A2, V1	A-F	24,25	J6-5,6,7	
	J	A2	A	16	J5-4,7, J6-8	
	D		A,B	26	J7-8	
	D		C-F	26-28	J7-8	
+5V	J	A2	A,B	27,28	J7-5,6	
+8V	TOP H742	B1	F	1	J2-8	SP-1
LTCL	TOP H742	R1	C	1	J2-7	
DCLOY	TOP H742	—	—	—	J6-1	SP10
DCLO1	TOP H742	U1	C	12	J3-8	
ACLO1	TOP H742	S1	C	12	J3-7	
-15V	E	B2	E	2	J3-4	SP-3
+15V	TOP H742	A1	E	15	J3-2,3	SP-4
-15V	BOT. H742	B2	E	16	J3-1	SP-5
+23.2VL1	L2	V2	A, C, E	22-25	J6-3	
+19.7VL1	L2	U2	A, C, E	22-25	J6-2	
DCLOX	BOT. H742	U2	B	16	J4-3	
-15V	BOT. H742	B2	E	21	J5-5,6	SP-8
-5V	H1	C1	F	17-20,22-25	J6-4	SP-9
+23VH1	H1	V2	A,C,E	17-20	J4-8	SP-6
+19VH1	H1	U2	A,C,E	17-20	J4-6	SP-7
ACLO2	BOT. H742	F1	B	28	J7-7	
DCLO2	BOT. H742	F2	E	28	J7-4	

	PIN	ROW	SLOT	MATE N LOCK CONNECTION
GROUND	C2, N2, T1	A-F	2-25	J8-1, 8
	C2, T1	A-F	1,26-28	J9-1, 8
	B2, V2	A, B		J10-1, 8
	N1, P1, R1, S1	A		J11-1, 8
	D1, E1	B	1,26-28	

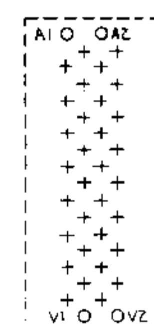
NOTES:

1. THIS LISTING IS FURNISHED TO SHOW COMBINATIONS OF MATE N LOCK CONNECTORS (J#) AND WIREWRAP PINS THAT ARE TO BE ETCHED TOGETHER. VOLTAGES WILL BE WIREWRAPPED BETWEEN 5409910 AND 5409912
2. ALL MATE N LOCK CONNECTORS AND PINS LISTED ARE CONNECTED TOGETHER BY THE GROUND PLANE (5409910-4 HIGH BOARD). WIREWRAP CONNECTIONS WILL BE MADE BETWEEN DXXT1 (5409910) AND EXXC2 (5409912)-XX= SLOT NUMBERS Ø1-28

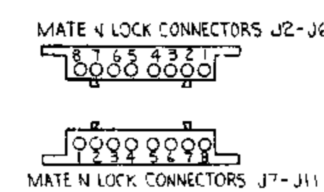




REGULATOR LOCATIONS



PIN CONFIGURATION (ONE ROW-ONE SLOT SECTION)



FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11/45		PARTS LIST		

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

DRN / CHK'D / ENG / PROJ. ENG. / PROD. — DATE 5-1-72

NEXT HIGHER ASSY. B-DD-11/45-0

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: 11/45 BACK PANEL PC BOARD

SIZE D, CODE IC, NUMBER 11/45-0-2, REV. A

SCALE —//— SHEET 1 OF 1

REVISIONS: REV A, CHANGE NO. 11/45 00061

REVISIONS	CHK	CHANGE NO.	REV.
		11/45-00057	A
		11/45-00060	B
		11/45-00061	C

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

DRN. B. Blodgett	DATE 10-5-73	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D.	DATE	
ENG.	DATE	
PROJ. ENG.	DATE	
PROD.	DATE	
NEXT HIGHER ASSEMBLY J-IA-7009540-0-0		
SCALE		
SHEET 1 OF —		

TITLE

WIRE LIST

SIZE	CODE	NUMBER	REV.
K	WL	7009540-0-2	C

DIST.

DEC FORM NO. DRB 109

RUN NAME	A/P	PIN LOCATION		BAY ORDER	Q	DRAW RV RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
SEE NOTE:		NOTE							ALL WIRES #14 AWG	X	1
SEE NOTE:		NOTE							UNLESS OTHERWISE NOTED		1
+15V1		P14-2								X	2
+15V1		P25-4	42.25"			GRY					2
+15V2		P12-2								X	3
+15V2		P14-3	56.5"			GRY					3
+15V3		P21-4								X	4
+15V3		P25-5	51"			GRY					4
+15V4		P3-2								X	5
+15V4		P36-2	31.5"			GRY					5
+15V5		P1-1								X	6
+15V5		P3-3	18"			GRY					6
+19.7VH1		P26-4	96"			GRN				X	7
+19.7VH1		P4-6									7
+19.7VL1		P30-4								X	8
+19.7VL1		P6-2	81"			GRN					8
+20VE1		P12-3								X	9
+20VE1		P40-5	62.5"						ORN-BLK TWP(GND E2)		9
+23.2VH1		P26-5	96"			YEL				X	10
+23.2VH1		P4-8									10
+23.2VL1		P30-5								X	11
+23.2VL1		P6-3	81"			YEL					11
+5J1		P27-2	80"			RED				X	12
+5J1		P4-5									12
+5V1		P5-3								X	13
+5V1		P5-4	2.25"			RED					13
+5V2		P5-7								X	14
+5V2		P5-8	2.25"			RED					14
+5V3		P6-7								X	15
+5V3		P6-8	2.25"			RED					15
+5V4		P12-4	20.5"			RED				X	16
+5V4		P7-8									16
+5V5		P4-4								X	17
+5V5		P7-6	17"			RED					17
+5V6		P1-A	38"			RED				X	18
+5V6		P36-4									18

RUN NAME	A/P	PIN LOCATION		BAY ORDER	Q	DRAW RV RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
+5VA1		P17-2	65"			RED				X	19
+5VA1		P2-6									19
+5VA2		P17-5	65.5"			RED				X	20
+5VA2		P2-5									20
+5VB2		P18-5	64"			RED				X	21
+5VB2		P2-1									21
+5VC1		P19-2	71"			RED				X	22
+5VC1		P3-6									22
+5VC2		P19-5	71"			RED				X	23
+5VC2		P3-5									23
+5VD1		P20-2	61"			RED				X	24
+5VD1		P36-1									24
+5VD2		P12-1								X	25
+5VD2		P20-5	59.5"			RED					25
+5VE1		P18-2	64"			RED				X	26
+5VE1		P2-2									26
+5VH1		P31-2	77"			RED				X	27
+5VH1		P4-2									27
+5VH2		P31-5	77"			RED				X	28
+5VH2		P4-1									28
+5VJ2		P27-5	72.5"			RED				X	29
+5VJ2		P7-5									29
+5VK1		P28-2	81.25"			RED				X	30
+5VK1		P5-2									30
+5VK2		P28-5	81"			RED				X	31
+5VK2		P5-1									31
+5VL1		P29-2	81"			RED				X	32
+5VL1		P6-6									32
+5VL2		P29-5	81"			RED				X	33
+5VL2		P6-5									33
+8V		P14-1	71"			WHT				X	34
+8V		P2-8									34
-15V1		P22-4	76.5"			BLU				X	35
-15V1		P5-6									35
-15V2		J45-4	21"			BLU				X	36
-15V2		P12-13									36

RUN NAME	A/P	PIN LOCATION	BAY ORDER	Q	DRAW RV RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
-15V3		P07-1 4"			BLU			*18AWG	x	37
-15V3		P45-1 2"			BLU			*18AWG		37
-15V3		P45-3								37
-15V4		P1-5							x	38
-15V4		P7-3 27.75"			BLU					38
-15V5		P3-1							x	39
-15V5		P5-5 14.5"			BLU					39
-15V6		P3-4							x	40
-15V6		P7-2 19.5"			BLU					40
-15VE1		P21-1							x	41
-15VE1		P36-13 64"			BLU					41
-15VF1		J45-1							x	42
-15VF1		P25-1 65"			BLU					42
+5VE1		P12-14							x	43
+5VE1		P40-3 62.75"			BRN					43
-5VH1		P26-3 72.5"			BRN				x	44
-5VH1		P6-4								44
AC L01		P14-8 70.5			YEL			*18AWG	x	45
AC L01		P3-7								45
AC L01'		P14-8							x	46
AC L01'		P22-10 47"			YEL			*18AWG		46
AC L02		P14-10			YEL			*18AWG	x	47
AC L02		P7-7 60.25"								47
AC L02'		P14-10							x	48
AC L02'		P22-8 46"			YEL			*18AWG		48
AC01		P16-1							x	49
AC01		P18-6 11"						RED-WHT TWP(AC2)		49
AC02		P16-2							x	50
AC02		P18-7 11"						WHT-RED TWP(AC1)		50
AC03		P16-7							x	51
AC03		P19-6 15.75"						RED-WHT TWP(AC4)		51
AC04		P16-8							x	52
AC04		P19-7 15.75"						WHT-RED TWP(AC3)		52
AC05		P15-1							x	53
AC05		P17-6 11.5"						RED-WHT TWP(AC6)		53
AC06		P15-2							x	54
AC06		P17-7 11.5"						WHT-RED TWP(AC5)		54

RUN NAME	A/P	PIN LOCATION	BAY ORDER	Q	DRAW RV RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
AC07		P15-8							x	55
AC07		P20-6 16"						RED-WHT TWP(AC8)		55
AC08		P15-10							x	56
AC08		P20-7 16"						WHT-RED TWP(AC7)		56
AC09		P15-9							x	57
AC09		P21-6 21.5"						RED-WHT TWP(AC10)		57
AC10		P15-12							x	58
AC10		P21-8 21.5"						WHT-RED TWP(AC9)		58
AC11		P24-1							x	59
AC11		P29-6 27"						RED-WHT TWP(AC12)		59
AC12		P24-2							x	60
AC12		P29-7 27"						WHT-RED TWP(AC11)		60
AC13		P24-3							x	61
AC13		P30-7 27"						RED-WHT TWP(AC14)		61
AC14		P24-4							x	62
AC14		P30-8 27"						RED-WHT TWP(AC13)		62
AC15		P24-5							x	63
AC15		P26-7 18"						RED-WHT TWP(AC16)		63
AC16		P24-6							x	64
AC16		P26-8 18"						WHT-RED TWP(AC15)		64
AC17		P24-7							x	65
AC17		P31-6 17.5"						RED-WHT TWP(AC18)		65
AC18		P24-8							x	66
AC18		P31-7 17.5"						WHT-RED TWP(AC17)		66
AC19		P23-1							x	67
AC19		P27-6 21"						RED-WHT TWP(AC20)		67
AC20		P23-2							x	68
AC20		P27-7 21"						WHT-RED TWP(AC19)		68
AC21		P23-8							x	69
AC21		P28-6 17.5"						RED-WHT TWP(AC22)		69
AC22		P23-10							x	70
AC22		P28-7 17.5"						WHT-RED TWP(AC21)		70
AC23		P23-9							x	71
AC23		P25-6 9.5"						RED-WHT TWP(AC24)		71
AC24		P23-12							x	72
AC24		P25-8 9.5"						WHT-RED TWP(AC23)		72

RUN NAME	A/P	PIN LOCATION	BAY ORDER	Ø	DRAW RV	RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
AC25		P13-1								X	73
AC25		P13-3 2.75"				RED			#18AWG		73
AC25'		P13-1								X	74
AC25'		P23-5 64.5"				RED			CABLE 9107761		74
AC26		P13-2								X	75
AC26		P23-6 64.5"				WHT			CABLE 9107761		75
AC26'		P13-2								X	76
AC26'		P13-4 2.75"				WHT			#18AWG		76
AC27		P15-5								X	77
AC27		P34 57"							RED-WHT TWP TO TIME MTH		77
AC28		P15-6								X	78
AC28		P35 57"							WHT-RED TWP TO TIME MTH		78
DC L01		P14-12 69.5"				VIO			#18AWG	X	79
DC L01		P3-8									79
DC L02		P22-9 71"				VIO			#18AWG	X	80
DC L02		P7-4									80
DC L0X		P22-12				VIO			#18AWG	X	81
DC L0X		P4-3 78.5"									81
DC L0Y		P14-9								X	82
DC L0Y		P6-1 64"				VIO					82
GND 01		P14-4								X	83
GND 01		P21-3 28.5"				BLK					83
GND 02		P14-5 73"				BLK				X	84
GND 02		P8-8									84
GND 03		P14-6								X	85
GND 03		P25-3 43.5"				BLK					85
GND 04		P10-5								X	86
GND 04		P22-3 74"				BLK					86
GND 05		P38 9"				BLK				X	87
GND 05		P9-6									87
GND 06		P11-7								X	88
GND 06		P39 9"				BLK					88
GND 09		P12-8 31.5"				BLK				X	89
GND 09		P9-3									89
GND 10		P11-8								X	90
GND 10		P36-8 25.5"				BLK					90

RUN NAME	A/P	PIN LOCATION	BAY ORDER	Ø	DRAW RV	RG Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
GND 11		P1-2								X	91
GND 11		P10-3 24.5"				BLK					91
GND 12		P1-6								X	92
GND 12		P10-4 24.5"				BLK					92
GND 13		P41 9"				BLK				X	93
GND 13		P8-7									93
GND 14		P1-7 38				BLK				X	94
GND 14		P36-5									94
GND A1		P17-3 64.5"				BLK				X	95
GND A1		P8-2									95
GND A2		P17-4 66"				BLK				X	96
GND A2		P8-1									96
GND B1		P18-3 70.75"				BLK				X	97
GND B1		P8-4									97
GND B2		P18-4 71.5"				BLK				X	98
GND B2		P8-3									98
GND C1		P19-3 73.5"				BLK				X	99
GND C1		P8-6									99
GND C2		P19-4 73.5"				BLK				X	100
GND C2		P8-5									100
GND D1		P20-3 61"				BLK				X	101
GND D1		P36-7									101
GND D2		P12-7								X	102
GND D2		P20-4 61"				BLK					102
GND E1		P21-2								X	103
GND E1		P36-11 64"				BLK					103
GND E2		P12-5								X	104
GND E2		P40-2 43"							BLK-ORN TWP(+2UVEL)		104
GND F1		P25-2 75.5"				BLK				X	105
GND F1		P9-4									105
GND H1		P11-1								X	106
GND H1		P31-3 74.5"				BLK					106
GND H2		P10-8								X	107
GND H2		P31-4 74"				BLK					107
GND H3		P11-2								X	108
GND H3		P26-2 73"				BLK					108

RUN NAME	A/P	PIN LOCATION	BAY ORDER	#	DRAW RV	RG	Y	X	Z LEVEL	REMARKS	NEW RUN INDICATOR	RUN NUM
GND J1		P27-3 82.5"				BLK					X	109
GND J1		P9-2										109
GND J2		P27-4 82.5"				BLK					X	110
GND J2		P9-1										110
GND K1		P11-4									X	111
GND K1		P28-3 78"				BLK						111
GND K2		P11-3									X	112
GND K2		P28-4 78"				BLK						112
GND L1		P11-6									X	113
GND L1		P29-3 81"				BLK						113
GND L2		P11-5									X	114
GND L2		P29-4 81"				BLK						114
GND L3		P30-2									X	115
GND L3		P9-8 89"				BLK						115
LINE CLOCK		P14-11									X	116
LINE CLOCK		P37-2 58.5"				BRN			#18AWG			116
LINE CLOCK'		P2-7									X	117
LINE CLOCK'		P37-2 33"				BRN			#18AWG			117
LO GND 01		P10-1									X	118
LO GND 01		P14-7 66"				BLK			#18AWG			118
LO GND 02		P10-2									X	119
LO GND 02		P22-7 78"				BLK			#18AWG			119
LO GND 03		P37-1 30.5"				BLK			#18AWG		X	120
LO GND 03		P9-5										120
PWR CONT COM1		P1-3									X	121
PWR CONT COM1		P32-3 98.25"				BLK-WHT			TWP(P.C SW1)#18AWG			121
PWR CONT SW1		P1-4									X	122
PWR CONT SW1		P32-1 98.25"				WHT-BLK			TWP(P.C COM1)#18AWG			122
SHIELD		P23-4							CABLE 9107761		X	123
THERM 1		P13-6									X	124
THERM 1		P33-3 77.75"				BLK			#18AWG			124
THERM 2		P13-5									X	125
THERM 2		P33-2 77.75"				RED			#18AWG			125

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

UNIT VARIATIONS

VAR	TITLE	PRINT SET
861-A	POWER CONTROL, 861-A	
861-B	POWER CONTROL, 861-B	
861-C	POWER CONTROL, 861-C	
861-F	POWER CONTROL, 861-F	

REVISIONS		
DATE	CHG. NO.	REV
2/73	861-3	A
8/74	861-4	B
12-74	861-6	C
4-75	861-7	D
7-75	861-8	E
2-76	861-9	F
4-76	861-10	H
8-76	861-11	J
9-76	861-12	K
1-77	861-13	L

USED ON OPTION/MODEL

SHEET 1 OF 1

DRN		DATE 9/13/72
CHK'D		DATE 9/13/72
PROJ ENG		DATE 9/13/72
PROD		DATE 9/25/72
FIELD SERV.	Irvine	DATE 9/25/72

TITLE: 861 POWER CONTROL

SIZE	CODE	NUMBER	REV
B	DD	861-0	L

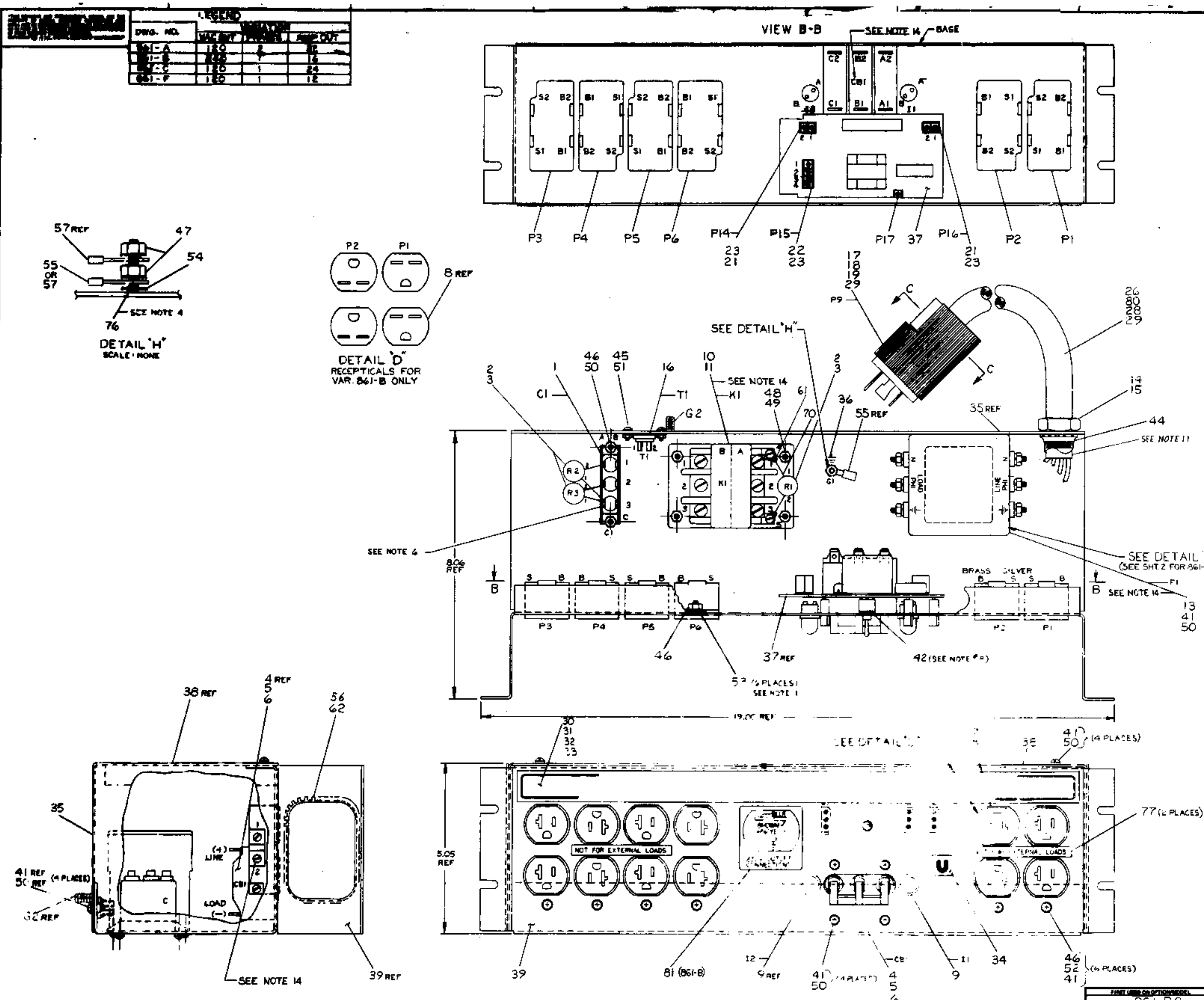
DIST

DEC 16-12531-1063-1A-N972

DRB 106

LEGEND

DWG. NO.	VAC INPUT	[illegible]	AMP OUT
861-A	120	2	12
861-B	240	1	16
861-C	120	1	24
861-F	120	1	12



NOTES:

1. ITEM 53 #6 EXT WASHER MUST BE BETWEEN CHASSIS AND MOUNTING TAB OF RECEPTACLE (P1-P6).

~~[illegible]~~

4. REMOVE PAINT MASK FROM AROUND 10-32 GROUND STUD (G1) AND COAT EXPOSED SURFACE WITH CONDUCTIVE GREASE (ITEM 76); PLACE EXTERNAL TOOTH LOCK-WASHER (ITEM 54) ON STUD FIRST, THEN CRIMP LUG (FROM THIS LUG A WIRE GOES TO THE FILTER, LUG IS ITEM 55 OR 57) THEN KEPNUT (ITEM 47), THEN CRIMP LUG (ITEM 57, WIRE FROM THIS LUG GOES TO PC BOARD), AND LAST KEPNUT (ITEM 47). SEE DETAIL 'H'.

~~[illegible]~~

6. C1-3 IS THE COMMON (C) SIDE OF C1.

~~[illegible]~~

8. TO PREVENT STRESS FROM SWITCH ON PC BOARD USE ITEM 42 (FIBER WASHER) BETWEEN CHASSIS AND PC BOARD
9. USE TIE WRAPS (ITEM 43) A/R.
10. REMOVE PAINT MASK FROM AROUND 10-32 STUD (G2) AND APPLY CONDUCTIVE GREASE (ITEM 76).
11. POWER CORD TO EXTEND APPROX. 30 IN. BEYOND LOCKNUT (ITEM 44) FOR ITEMS 27 & 29. ITEMS 26 & 28 TO REMAIN FLUSH WITH LOCKNUT.
12. ~~[illegible]~~
13. REF WIRE LIST. THESE CONNECTIONS HAVE THREE RING TERMINALS AND REQUIRE (ITEM 82) SCREW 8-32 x 1/4" WITH (ITEM 40) LOCKWASHER.
14. REQUIRED TORQUE LEVELS FOR CERTAIN ELECTRO-MECHANICAL CONNECTIONS.
   A. 18±2 IN-LBS FOR TERMINALS ON F1 (ITEMS 12 & 13). THE 6 LUG BOXES ON K1 (ITEMS 10 & 11) AND NUTS ON GROUND STUD G1.
   B. 16±2 IN-LBS FOR 8-32 SCREW CONNECTIONS ON OUTLETS P1 THRU P6 (ITEMS 7 & 8).
   C. 12±2 IN-LBS ON 8-32 SCREW CONNECTIONS ON CIRCUIT BREAKER CONNECTIONS CB1 (ITEMS 4, 5 & 6)

FOR PARTS LIST SEE A-PL-861-0-0

FIRST USED ON OPTION/MODEL	861-PC
DRN.	D. SCHMINT 9-12-72
CHK'D.	J. KALAGHAN 10-6-72
ENG.	R. BERTON 10-6-72
PROJ. ENG.	ALLEN 10-6-72
PROD.	P. FAZIO 10-6-72
MATERIAL	SEE PARTS LIST
	B-DD-861-0-0
SHEET	1 OF 2
TITLE	POWER CONTROL 861
	digital
SIZE / CODE	E / UA
NUMBER	861-0-0
REV.	L

WIRE TABLE, 861-A

ITEM NO	AWG	COLOR	FROM CONN	FROM POINT	FROM WITH	TO CONN	TO POINT	TO WITH	REMARKS
2	—	—	R1-1		—	R1-4		70,61	1. IN
	—	—	R1-2		—	R1-5		70,61	1. IN
73	14	BLU	K1-B3		*	P6-S2		60	6. IN
					*	P4-S2		60	4.5 IN
			K1-B3		*	C1-3B		63	3.5 IN
			P6-S1		60	P5-S1		60	4.5 IN
73		BLU	P4-S1		60	P3-S1		60	4.5 IN
72		BRN	K1-B2		*	C1-2B		63	3.5 IN
72		BRN			*	P6-[illegible]		60	6. IN
72		BRN	P[illegible]		60	P5-B2		60	3. IN
71		BLK	K1-B1		*	C1-1B		63	[illegible] IN
71		BLK			*	P4-B1		60	[illegible]
71		BLK	P4-B2		60	P3-B2		60	5. IN
73		BLU	CB1-C2		55	P1-S1		60	9. IN
66	12					K1-A3		*	3.5 IN
73	14		K1-A3		*	P15-2		23,22	3.75 IN
73	14	BLU	P16-2		23,21	K1-A3		*	6.5 IN
65	12	BRN	CB1-B2		55	K1-A2		*	6.75 IN
72	14	BRN				P1-B1		60	10.5 IN
64	12	BLK	CB1-A2		55	K1-A1		*	7.5 IN
71	14	BLK				P2-B1		60	6. IN
71		BLK	K1-A1		*	P15-3		23,22	5.5 IN
72		BRN	K1-A2		*	K1-4		63	3. IN
72		BRN	P16-1		23,21	K1-5		63	7.5 IN
73	14	BLU	P1-S2		60	P2-S1		60	9. IN
66	12	BLU	CB1-C1	SEE NOTE 13	55	F1-N	LOAD	55	5.5 IN
9	—	RED	I1-A		—	CB1-C1	SEE NOTE 13	58	5.75 IN
9	—	RED	I2-A		—	CB1-C1		58	4. IN
9	—	BLK	I1-B		—	CB1-A1		58	3.75 IN
64	12	BLK	F1-PH1	LOAD	55	CB1-A1		55	3. IN
9	—	BLK	I2-B		—	CB1-B1		58	4.75 IN
65	12	BRN	F1-PH2	LOAD	55	CB1-B1		55	5.25 IN
74	14	ORN	P14-1		23,21	T1-1		63	10. IN
74	14	ORN	P14-2		23,21	T1-2		63	10. IN
68	12	GRN/YEL	F1-⏚	LOAD	55	G1	SEE DETAIL H	55	4.75 IN
67	14	GRN/YEL	P17		SOLD	G1		57	7.78 IN
2	—	—	R2-1		70	C1-3A		59	1. IN
	—	—	R3-1						
	—	—	R2-2			C1-1A		59	1.25 IN
2	—	—	R3-2		70	C1-2A		59	1. IN
26	12	BLK	P9-Y		17	F1-PH1	LINE	55	15. FT
		WHT	P9-S			F1-N	LINE	55	
		RED	P9-X			F1-PH2	LINE	55	
26	12	GRN	P9-G		17	F1-⏚	LINE	55	15. FT

* STRIP WIRE .38 IN

WIRE TABLE, 861-B

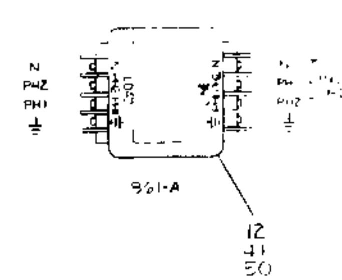
ITEM NO	AWG	COLOR	FROM CONN	FROM POINT	FROM WITH	TO CONN	TO POINT	TO WITH	REMARKS
5	—	—	R1-1		—	K1-4		70,61	1. IN
	—	—	R1-2		—	K1-5		70,61	1. IN
73	14	BLU	K1-B3		*	P6-S1		60	4. IN
					*	P4-S1		60	4. IN
			K1-B3		*	C1-3B		63	3.5 IN
			P6-S2		60	P5-S1		60	4.5 IN
73		BLU	P4-S2		60	P3-S1			4.5 IN
72		BRN	K1-B1		*	P6-B1			5. IN
					*	P4-B1		60	5.8 IN
			K1-B1		*	C1-1B		63	3.6 IN
			P6-B2		60	P5-B1		60	3. IN
			P4-B2		60	P3-B1		60	3. IN
			K1-A1		*	K1-4		63	3.25 IN
			K1-A1		*	P15-4		23,22	6. IN
			CB1-A2		55	P1-B2		60	10. IN
72		BRN				K1-A1		*	7.5 IN
73		BLU	CB1-C2		55	K1-A3		*	5.5 IN
						P1-S2		60	8. IN
			K1-A3		*	P16-2		23,21	6. IN
			K1-A3		*	P15-2		23,22	4. IN
73		BLU	P1-S1		60	P2-S2		60	3. IN
72	14	BRN	P1-B1		60	P2-B2		60	4.5 IN
9	—	BLK	I1-B		—	CB1 B2		58	4. IN
	—	BLK	I2-B		—	CB1 B2		58	4. IN
	—	RED	I1-A		—	CB1-A1		58	5. IN
9	—	RED	I2-A		—	CB1-C1		58	5. IN
72	14	BRN	CB1-A1		57	F1-PH1	LOAD	57	3. IN
73		BLU	CB1-C1		57	F1-N	LOAD	57	4.75 IN
74		ORN	P14-1		23,21	T1-1		63	10. IN
74		ORN	P14-2		23,21	T1-2		63	10. IN
67		GRN/YEL	F1-⏚	LOAD	57	G1	SEE DETAIL "H"	57	4.75 IN
67	14	GRN/YEL	P17		SOLD	G1		57	7.75 IN
3	—	—	R2-1		70	C1-3A		59	1. IN
	—	—	R2-2		70	C1-1A		59	1. IN
72	14	BRN	P16-1		23,21	K1-5		63	7. IN
80		GRN/YEL	P9-G		18	F1-⏚	LINE	57	15. FT
80		BRN	P9-Y		18	F1-PH1	LINE	57	15. FT
80	14	BLU	P9-X		18	F1-N	LINE	57	15. FT

WIRE TABLE 861-C

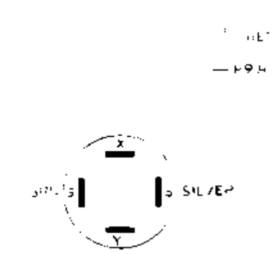
ITEM NO	AWG	COLOR	FROM CONN	FROM POINT	FROM WITH	TO CONN	TO POINT	TO WITH	REMARKS
2	—	—	R1-1		—	R1-4		70,61	1. IN
	—	—	R1-2		—	R1-5		70,61	1. IN
73	14	BLU	K1-B3		*	P6-[illegible]		60	4.5 IN
		BLU				P4-[illegible]			4.75 IN
72		BRN	K1-B2			P6-B1			5. IN
		BRN				P5-B2			4.5 IN
71		BLK	K1-B1			P4-B1			6.0 IN
		BLK			*	P3-B2			6.0 IN
73		BLU	P6-S2		60	P5-S1			4.5 IN
73		BLU	P3-B1		60	P4-S2		60	4.5 IN
73		BLU	K1-B3		*	C1-3B		63	3.5 IN
72		BRN	K1-B2		*	C1-2B		63	3.5 IN
71		BLK	K1-B1		*	C1-1B		63	3.5 IN
72		BRN	CB1-B2		55	P1-B2		60	9.5 IN
		BRN				K1-A2		*	6.75 IN
72		BRN	K1-4		63	K1-A2		*	3.[illegible] IN
71		BLK	CB1-C2		55	P2-B1		60	9.0 IN
		BLK				K1-A1		*	5.75 IN
71		BLK	K1-A1		*	P15-3		23,22	5.5 IN
73		BLU	CB1-A2		55	P1-S2		60	7.5 IN
						K1-A3		*	6. IN
			P1-S1		60	P2-S2		60	3.0 IN
			P15-2		22,23	K1-A3		*	3.75 IN
73		BLU	P16-2		23,21	K1-A3		*	6.5 IN
72		BRN	P16-1			K1-5		63	6.75 IN
74		ORN	P14-1			T1-1		63	10. IN
74	14	ORN	P14-2		23,21	T1-2		63	10. IN
2	—	—	R2-1		70	C1-3A		59	1. IN
	—	—	R3-1						
	—	—	R2-2			C1-1A		59	1.25 IN
2	—	—	R3-2		70	C1-2A		59	1. IN
68	12	GRN/YEL	F1-⏚	LOAD	55	G1	SEE DETAIL H	55	4.75 IN
67	14	GRN/YEL	P17		SOLDER	G1		57	7.75 IN
65	12	BRN	CB1-B1	SEE NOTE 13	55	F1-PH1	LOAD	55	3. IN
64	12	BLK	CB1-C1		55	F1-PH1	LOAD	55	3.25 IN
9	—	RED	I1-A			CB1-B1	SEE NOTE 13	57	4.25 IN
	—	RED	I2-A			CB1-B1			4.75 IN
	—	BLK	I1-B			CB1-A1	SEE NOTE 13	57	3.00 IN
9	—	BLK	I2-B			CB1-A1			5.75 IN
66	12	BLU	CB1-A1	SEE NOTE 13	55	F1-N	LOAD	55	4.5 IN
28		GRN	P9-G		19	F1-⏚	LINE	55	15. FT
28		BLK	P9-B		19	F1-PH1	LINE	55	15. FT
28	12	WHT	P9-[illegible]		19	F1-N	LINE	55	15. FT

WIRE TABLE 861-F

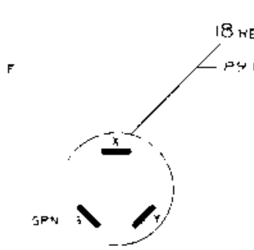
ITEM NO	AWG	COLOR	FROM CONN	FROM POINT	FROM WITH	TO CONN	TO POINT	TO WITH	REMARKS
2	—	—	R1-1		—	K1-4		70,61	1. IN
	—	—	R1-2		—	K1-5		70,61	1. IN
73	14	BLU	K1-B3		*	P6-S1		60	5.25 IN
73		BLU				P4-S1			4. IN
72		BRN	K1-B2			P6-B1			5.25 IN
72		BRN				P5-B2			5.25 IN
71		BLK	K1-B1			P4-B1			6.25 IN
71		BLK				P3-B2		60	6.25 IN
73		BLU	K1-B3			C1-3B		63	3.5 IN
72		BRN	K1-B2			C1-2B		63	3.5 IN
71	14	BLK	K1-B1		*	C1-1B		63	3.5 IN
	—	—	R2-2		70	C1-1A		59	1. IN
2	—	—	R2-1			C1-3A		59	1. IN
	—	—	R3-1						1. IN
2	—	—	R3-2		70	C1-2A		59	1.25 IN
73	14	BLU	K1-A[illegible]		*	P15-2		23,22	4.25 IN
			K1-A[illegible]		*	P16-2		23,21	5.75 IN
			CB1-A2		55	K1-A3		*	6.75 IN
73		BLU				P1-S2		60	8. IN
72		BRN	K1-A2		*	K1-4		63	3.75 IN
			CB1-B2		55	K1-A2		*	6.5 IN
						P1-B2		60	8.25 IN
72		BRN	K1-5		63	P16-1		23,21	6.75 IN
71		BLK	K1-A1		*	P15-3		23,22	6. IN
71		BLK	CB1-C2		55	P2-B1		60	8. IN
71		BLK				K1-A1		*	7. IN
73	14	BLU	P1-S1		60	P2-S2		60	3. IN
9	—	BLK	I1-B		—	CB1-C1		58	4.5 IN
	—	BLK	I2-B		—	CB1-B1		58	4.5 IN
	—	RED	I1-A		—	CB1-A1	SEE NOTE 13	58	3.5 IN
9	—	RED	I2-A		—	CB1-A1		58	4.5 IN
73	14	BLU	CB1-A1	SEE NOTE 13	57	F1-N	LOAD	57	4.5 IN
71		BLK	CB1-C1		57	CB1-B1		55	3. IN
71		BLK	F1-PH1	LOAD		CB1-B1			8.5 IN
67		GRN/YEL	F1-⏚	LOAD	57	G1	SEE DETAIL H	57	4.75 IN
67		GRN/YEL	P17		SOLD	G1		57	7.75 IN
74		ORN	P14-1		23,21	T1-1		63	10. IN
74		ORN	P14-2		23,21	T1-2		63	10. IN
73		BLU	P3-S1		60	P4-S2		60	4.5 IN
73	14	BLU	P5-S1		60	P6-S2		60	4.5 IN
29	16	GRN	P9-G		—	F1-⏚	LINE	—	9. FT
29	16	BLK	P9-X		—	F1-PH1	LINE	57	9. FT
29	16	WHT	P9-Y		—	F1-N	LINE	57	9. FT



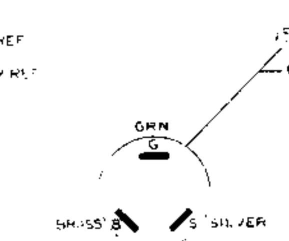
DETAIL "F"
SCALE : NONE



SECTION C-C
861-A
SCALE : NONE



SECTION C-C
861-B
SCALE : NONE

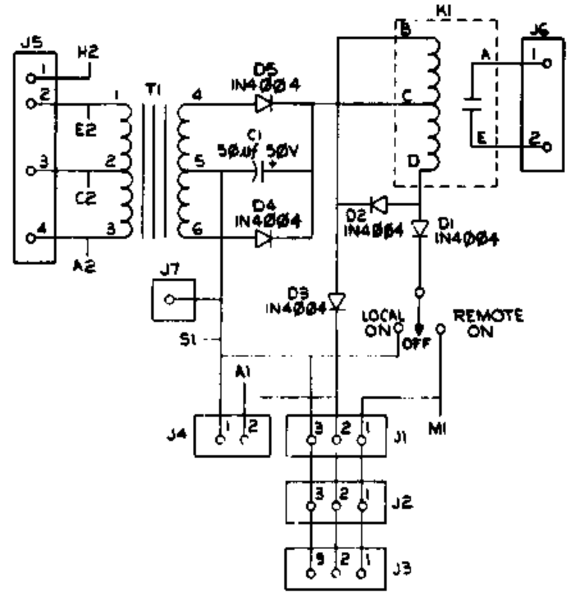


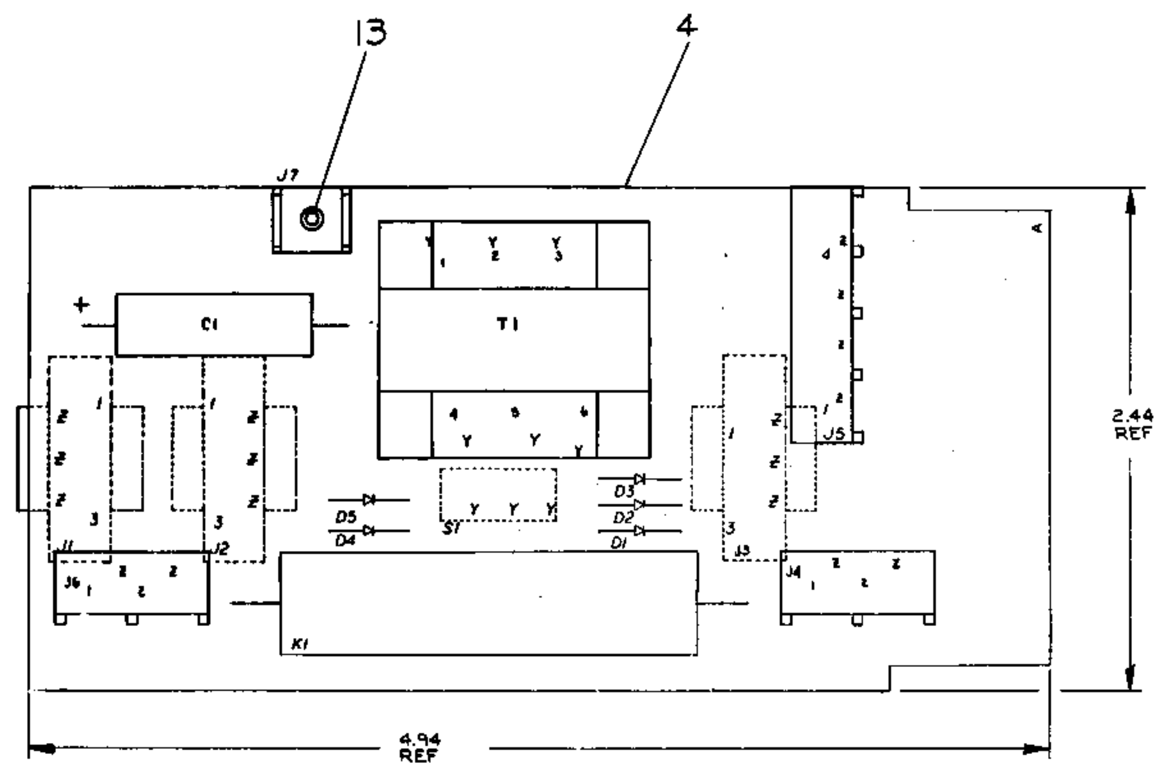
SECTION C-C
861-C
SCALE : NONE

REAR VIEW

TITLE	SIZE	CODE	NUMBER	REV.
POWER CONTROL, 861	E	UA	861-0-0	L
SCALE 1/1	SHEET 2 OF 2			

NOTES:





QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411522-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5411522-0-5	2
REF		MODULE ECO HISTORY	B-MH-5411522-0-6	3
1		ETCHED CIRCUIT BOARD	5011521	4
1	K1	RELAY, REED, 48 V COIL, 2.5 A CONT.	1212267-00	5
1	T1	TRANSFORMER MMC 5415	1612342-00	6
1	C.	CAP 5Ø MFD 5ØV TANT	1000080-00	7
5	D1-D5	DIODE IN4004	1105796-00	8
1	S1	SWITCH	1211180-00	9
3	J1-J3	HOUSING, SOCKET	1209350-03	10
1	J5	CONN, UNIVERSAL, 4 PIN HEADER	1212297-01	11
2	J4, J6	CONN, UNIVERSAL, 2 PIN HEADER	1212297-00	12
1		EYELET	9006732-00	13
9		TERMINAL, SOCKET CONTACT	1209456-01	14
1	J7	TERMINAL, SOLDERLESS	9007113-00	15

PARTS LIST

IC TYPE	GND	+5V

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

IC PIN LOCATIONS

FIRST USED ON OPTION MODEL: 861-D / 861-E

ETCH BOARD REV: B

DEC NO	EIA NO.	DEC NO.	EIA NO

SEMICONDUCTOR CONVERSION CHART

REV / CHANGE NO / CHK — REVISIONS

DRN. DATE 2/4/75
CHK'D W.F. McCarthy DATE 2/4/75
ENG. DATE
PROJ. ENG. DATE
PROD. DATE 2/4/75

NEXT HIGHER ASSY: E-UA-861-D-Ø

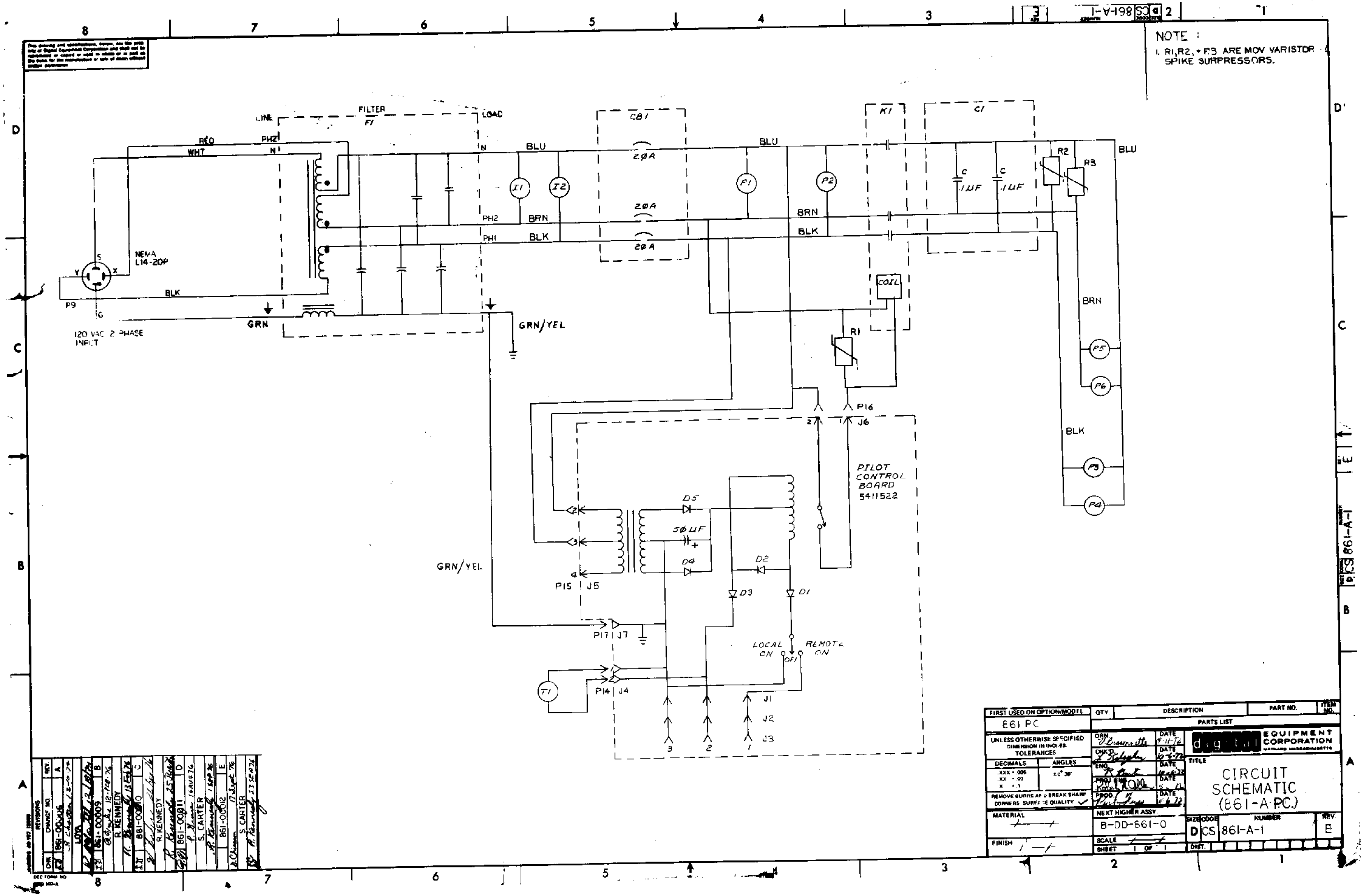
SCALE: NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION

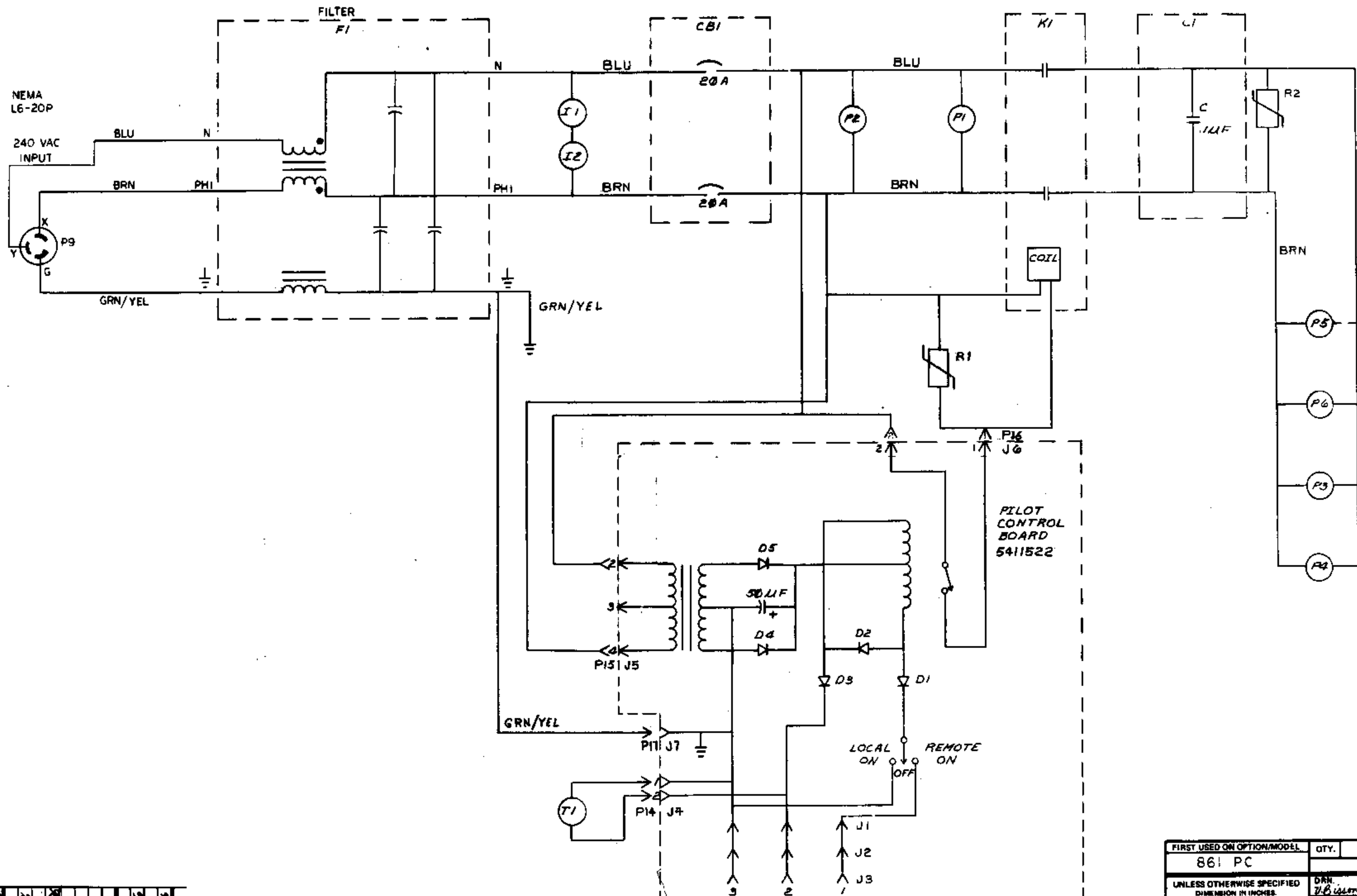
TITLE: PILOT CONTROL

SIZE	CODE	NUMBER	REV.
D	CS	5411522-0-1	A

DIST


NOTE :
1. R1, R2, + R3 ARE MOV VARISTOR SPIKE SURPRESSORS.
FILTER
F1
LINE
LOAD
CB1
K1
C1
RED
WHT
PHZ
N
BLU
BRN
BLK
PH2
PH1
20A
I1
I2
P1
P2
C
.1UF
R2
R3
NEMA
L14-20P
Y
S
X
G
P9
120 VAC 2 PHASE INPUT
GRN
GRN/YEL
COIL
R1
P5
P6
P3
P4
P16
J6
PILOT
CONTROL
BOARD
5411522
D5
50 UF
D4
D2
D3
D1
P15
J5
P17
J7
P14
J4
T1
LOCAL ON
REMOTE ON
OFF
J1
J2
J3
FIRST USED ON OPTION/MODEL
861 PC
QTY.
DESCRIPTION
PART NO.
ITEM NO.
PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES. TOLERANCES
DECIMALS
ANGLES
REMOVE BURRS AND BREAK SHARP CORNERS
MATERIAL
FINISH
NEXT HIGHER ASSY.
B-DD-861-0
SCALE
SHEET 1 OF 1
DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS
TITLE
CIRCUIT SCHEMATIC (861-A-PC)
SIZE
CODE
NUMBER
REV.
D
CS
861-A-1
E
REVISIONS
REV
CHANGE NO
861-00006
861-00009
861-00010
861-00011
861-00012
R. KENNEDY
S. CARTER
DEC FORM NO

NOTE :
1. R1 + R2 ARE MOV VARISTOR SPIKE SURPRESSORS.



REV.	CHANGE NO.	
A		
B	861-00099	
C		R. Kennedy
D	861-00010 / 861-00011	R. Kennedy
E	861-00012	S. Carter

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

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

DRN. V. Bissonnette — DATE 4-11-72
CHK'D — DATE 10-4-72
ENG. — DATE 10-4-72
PROJ. ENG. — DATE 10-4-72
PROD. — DATE 10-4-72

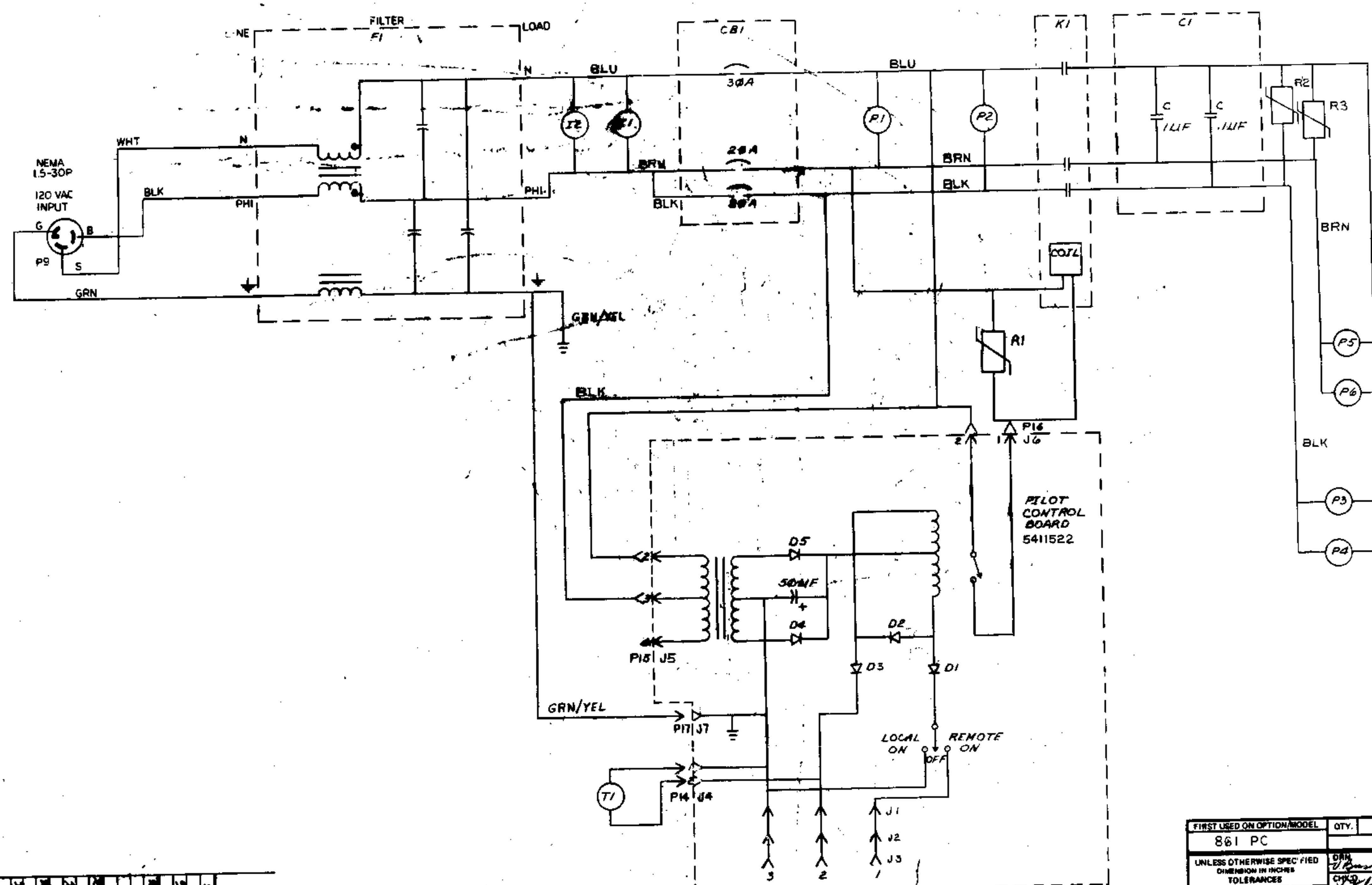
NEXT HIGHER ASSY. B-DD-861-0
SCALE
SHEET OF

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
CIRCUIT SCHEMATIC (861-B P.C.)

SIZE D CODE CS NUMBER 861-B-1 REV. E

NOTE :
1. R1, R2 + R3 ARE MOV VARISTOR SPIKE SURPRESSORS.



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

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

DRN DATE 9-12-72
CHKD DATE
ENG DATE
DATE
PROD DATE

digital EQUIPMENT CORPORATION

TITLE
CIRCUIT SCHEMATIC 861-C P.C.

NEXT HIGHER ASSY. B-DD-861-0
SCALE —
SHEET 1 OF 1
SIZE D CODE CS NUMBER 861-C-1 REV E
DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

PACKAGING INSTRUCTION | REV: A | DATE: 4-73

TITLE 861 POWER CONTROL, INTERPLANT PACKAGE

MATERIAL REQUIREMENTS

Quantity	Identification No.	Purchase Spec	Description
1	7-2008 1314 0500-0	9905229	Full overlap carton
2		9905228	Expanded polystyrene foam insert
A/R			3-inch wide Glasflex tape

PACKAGING INSTRUCTIONS

Step	Procedure
1	Set up the full over lap carton (9905229) using one strip of tape across the bottom and extending up the sides approximately three inches. See Figure 1.
2	Place one expanded polystyrene foam insert (9905228) in each end of the carton with the slots in the foam facing inward.
3	Place the 861 power control in the carton with the ears of the upright sliding into the slots in the foam.
4	Coil the power cord so that it fits into the cavity in the rear of the power control.
5	Close and seal the carton with one piece of tape across the top of the carton and extending down the sides approximately three inches.

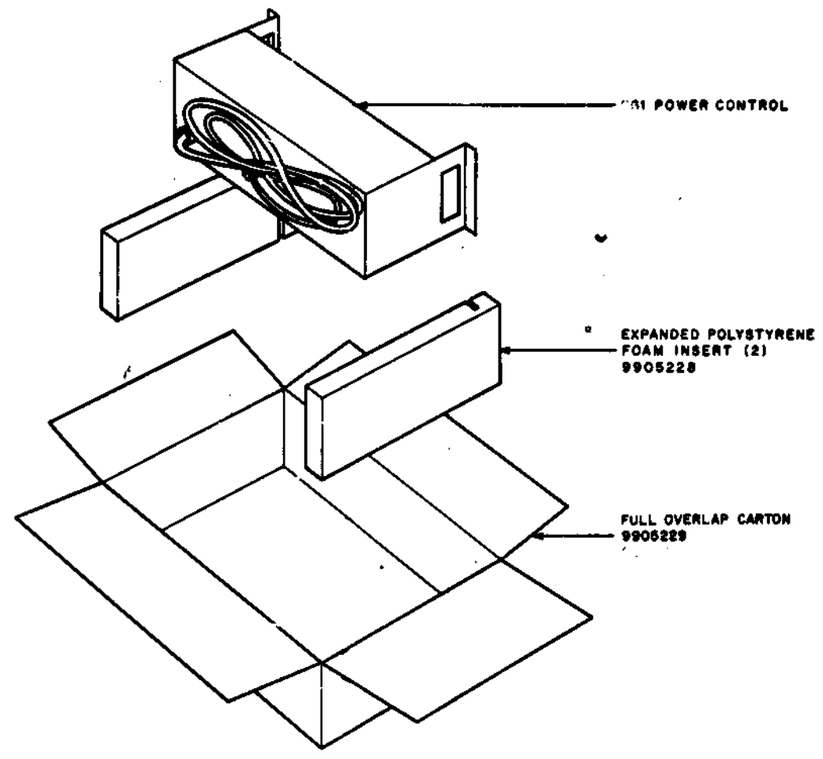
ENG	APPD	SIZE	CODE	NUMBER	REV
4/12/73		A	PI	3700083-0-0	A

DEC 8-(551)-1031-1-R671
DRA - 129

PACKAGING INSTRUCTION | REV: A | DATE: 4/73

TITLE 861 POWER CONTROL, INTERPLANT PACKAGE

FIGURE 1

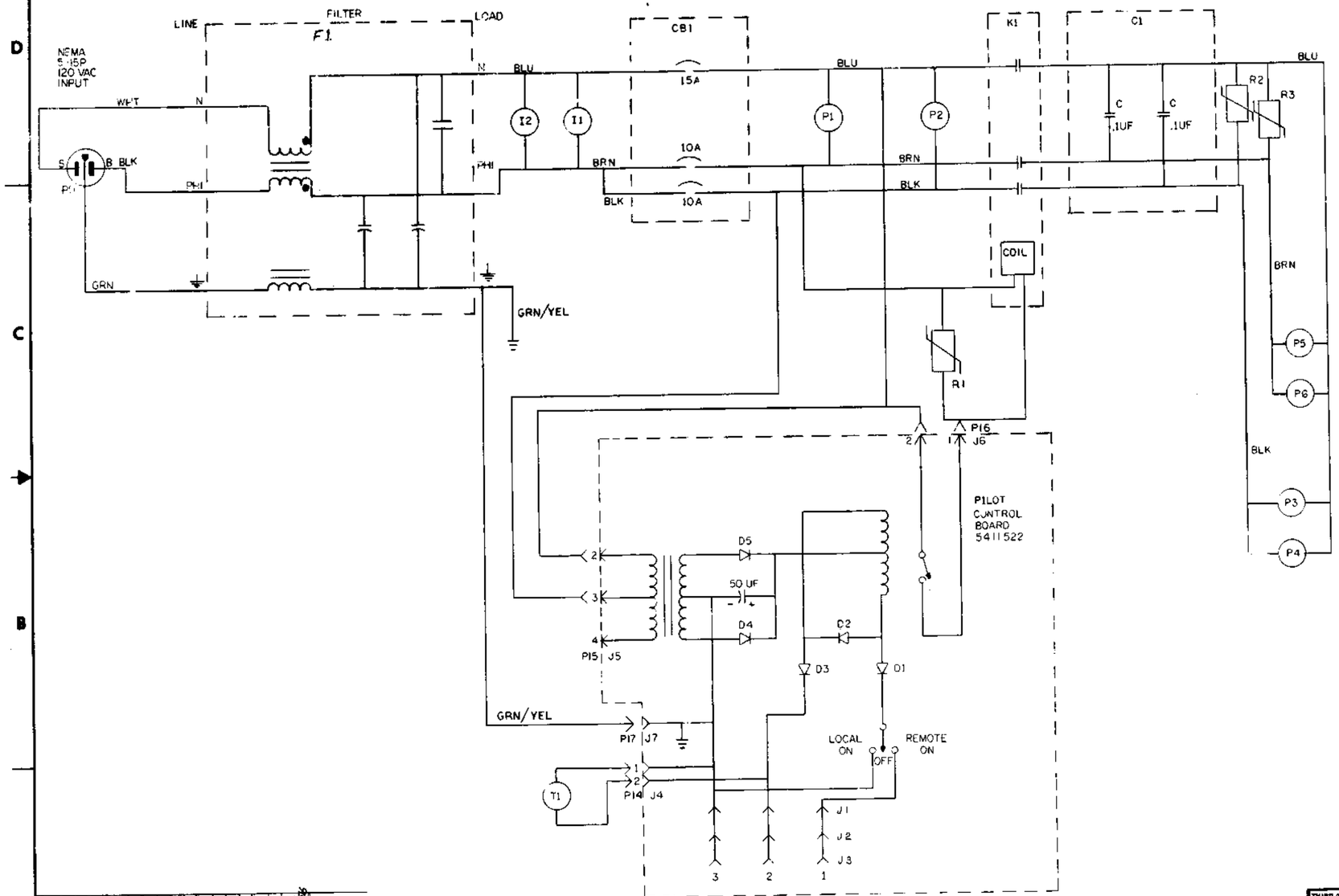


NOTE
Make changes to the "C" size original only and rephotograph.

ENG.	APPD.	SIZE	CODE	NUMBER	REV
		A	PI	3700083-0-0	A

DEC-107

NOTE :
1 R1 R2 + R3 ARE MOV VARISTOR SPIKE SURPRESSORS.



REVISIONS			
DASH	CHANGE NO.	REV.	
—	861-00007	*	
	ORIGINATED	A	
#3	861-00009	A	R. KENNEDY
#4	861-00010	B	R. KENNEDY
#4	861-00011	C	S. CARTER
#5	861-00012	D	S. CARTER

DEC FORM NO.

	DESCRIPTION	DWG./PART NO.	ITEM NO.
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
QUANTITY & VARIATION	ANGLES ±0° 30' / CLASS OF ACCURACY / SURFACE QUALITY IN MICROINCHES (CHECK ONE) / NOMINAL DIMENSION RANGE INCHES		
	MEDIUM ☐	±.004	±.008 ±.012 ±.016 ±.024 ±.04
	PREFERRED ☐	±.012	±.016 ±.032 ±.04 ±.060 ±0.1

THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS
DO NOT SCALE DWG
MATERIAL
FINISH

DRN.	4-24-76	FIRST USED ON 861 P.C.
CHK'D	4-25-76	
ENG.	5-2-76	TITLE CIRCUIT SCHEMATIC 861-F P.C.
PROJ. ENG.	5-3-76	
PROD.	5-3-76	
NEXT HIGHER ASSY.	B-DD-861-0	
SCALE		SIZE D / CODE CS / NUMBER 861-F-1 / REV. D
SHEET 1 OF 1		DIST.

861-F-1 D CS D

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET ☐☐☐☐

	SEQUENCE
DRAWING DIRECTORY	B-DD-H742Ø-Ø
WIRING DIAGRAM	D-CS-H742Ø-Ø-Ø
POWER LINE MONITOR	D-CS-5411086-0-1
H742Ø POWER SUPPLY	E-UA-H742Ø-Ø-Ø
H7420 POWER SUPPLY (P.L.)	A-PL-H742Ø-Ø-Ø

UNIT VARIATIONS

VAR	TITLE	PRINT SET 1
H742ØA	H742Ø POWER SUPPLY (120V)	
H742ØB	H742Ø POWER SUPPLY (240V)	

REVISIONS		
DATE	CHG. NO.	REV
6-75	H7420-1	A
7-75	H7420-2	B
3-76	H7420-3	C
4-76	H7420-4	D
9-76	H7420-5	E

USED ON OPTION/MODEL

SHEET 1 OF 3

DRN. R.E.Thellen	DATE 1/29/75	TITLE H742Ø POWER SUPPLY
CHK'D. P.Cappabianca	DATE 2/3/75	
PROJ ENG. [illegible]	DATE 2/5/75	
PROD. [illegible]	DATE 2/17	SIZE B · CODE DD · NUMBER H742Ø-Ø · REV E
FIELD SERV. [illegible]	DATE 9-19-75	DIST

DEC 18-ED31-1042-1A-N92

DRB 106

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

	SEQUENCE
DRAWING DIRECTORY	B-DD-H742-Ø
CIRCUIT SCHEMATIC	D-CS H742-Ø-1
PWR CONTROL BOARD	E-1A 5409730-0-0
CIRCUIT SCHEMATIC	C-CS 5409730-0-1
UNIT ASSEMBLY H742	E-UA-H742-Ø-Ø
UNIT ASSEMBLY (PL)	A-PL-H742-Ø-Ø

MFG SET	
TEST PROCEDURE	A-SP H742 Ø-3
MFG SPEC.	A-SP-H742-Ø-0
PACKAGING INSTRUCTION	A-PI-3700078-0-0

THIS IS PRINT SET

UNIT VARIATIONS

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

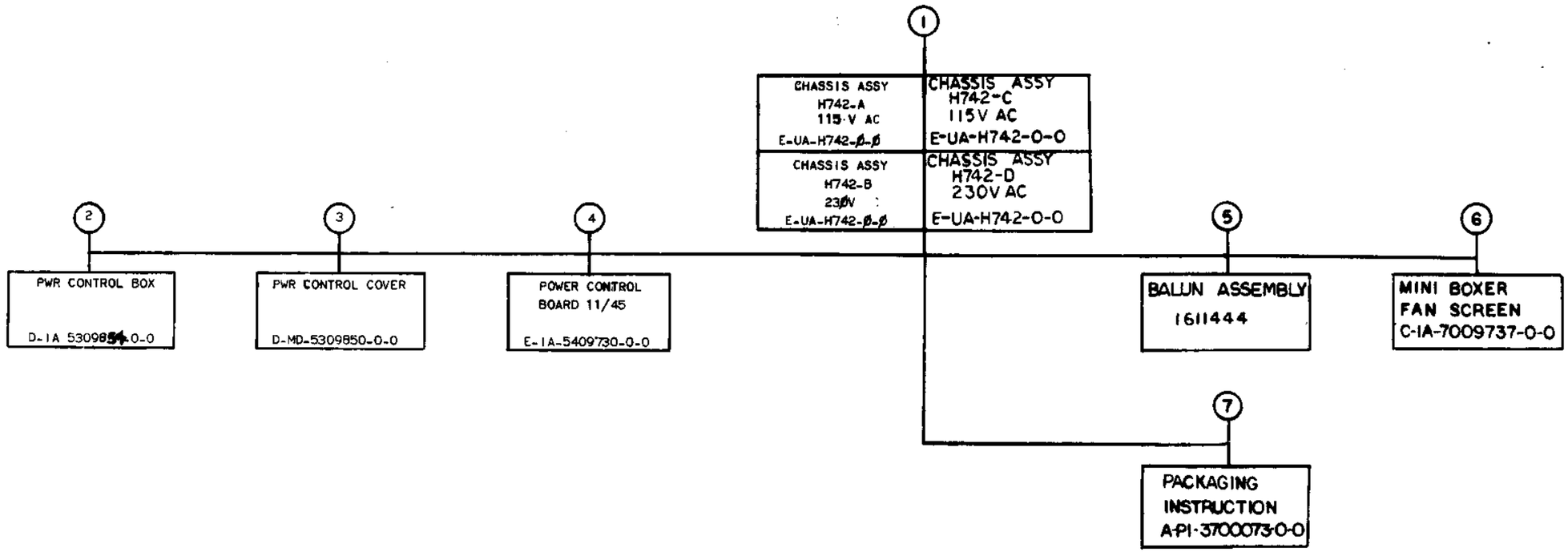
REVISIONS	DATE	CHG. NO.	REV
	7/72	H742-2	A
	7/72	H742-3	B
	8/72	H742-4	C
	8/72	H742-5	D
	10/72	H742-7	E
	11/72	H742-8	F
	12/72	H742-11	H
	2/73	H742-12	J
	2/73	H742-13	K
	2-73	H742-14	L
	4-73	H742-15	M
	4-73	H742-16	N
	5-73	H742-17	P
	6-73	H742-18	R
	12-73	H742-19	S
	3-74	H742-20	T
	4-74	H742-21	U
	5-75	H742-22	V
	9-75	H742-23	W
	4-76	H742-24	Y

USED ON OPTION/MODEL
1145

DRN. D.FONTAINE	DATE 13172	TITLE CHASSIS ASSY H742
CHK'D	DATE 2-4-72	
PROJ ENG.	DATE 2-4-72	
PROD.	DATE 2-24-72	SIZE B / CODE DD / NUMBER H742-Ø / REV Y
FIELD SERV.	DATE 2-7-72	
SHEET 1 OF 3		DIST

DRB 106

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



TITLE		SIZE	CODE	NUMBER	REV
CHASSIS ASSY H742	SHEET 2 OF 3	B	DD	H742-Ø	Y

DRB 107

DEC 16 (325)-1062-3-N871

ELECTRICAL

CUSTOMER PRINT SET	MFG SET	FIND NO.		REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	D-CS-H742-Ø-1	F	1	CIRCUIT SCHEMATIC	H742
	X		A-SP-H742-Ø-3			TEST PROCUDERE	H742
	X		A-SP-H742-Ø-8			MFG SPECIFICATION	H742
X		4	C-CS-5409730-0-1	#	1	CIRCIUT SCHEMATIC	H742

MECHANICAL

CUSTOMER PRINT SET H742-1	MFG SET	FIND NO.	DRAWING NO.	REV	NO OF SHT	DESCRIPTION	OPTION NO./FILE DATE
X		1	E-UA-H742-Ø-Ø	Y	3	CHASSIS ALLY H742	H742
X			A-PL-H742-Ø-Ø	Y	4	CHASSIS ASSY H742	H742
			E-IA-5309755-0-0		3	CHASSIS H742	H742
			D-IA-7409701-0-0		1	BRACKET, POWER SUPPLY	H742
			C-MD-7409702-0-0		1	COVER POWER SUPPLY	H742
			A-DC-5310459-0-0		1	DECAL, H742A	H742
			A-DC-5310460-0-0		1	DECAL, H742B	H742
			A-DC-5310461-0-0		1	DECAL, H742C	H742
			A-DC-5310462-0-0		1	DECAL, H742D	H742
		2	D-IA-5309854-0-0		1	POWER CONTROL BOX	H742
			A-SS-5309854-0-1		1	SILK SCREEN (H742)	H742
		3	D-MD-5309850-0-0		1	POWER CONTROL COVER	H742
			A-SS-5309850-0-1		1	SILK SCREEN	H742
X		4	E-IA-5409730-0-0	#	1	PWR CONTROL BD ASSY	H742
			5009729-0-0	#	1	PWR CONTROL BD	H742
		5	1611444		1	BALUN ASSEMBLY	H742
		6	C-IA-7009737-0-0		1	MINI BOXER FAN SCREEN	
			B-MD-7411626-0-0		1	FAN SCREEN	
			B-MD-7411627-0-0		1	FAN PLATE	
X		7	A-PI-3700073-0-0	#	2	PACKAGING INSTRUCTION	
			A-PS-9905205-0-0		2	REGULAR SLOTTED CARTON	
			A-PS-9905206-0-0		2	DIE-CUT SHEET	
			A-PS-9905207-0-0		2	LAMINATED BASE	

CUSTOMER PRINT SET CODES

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

TITLE: CHASSIS ASSY H742

SHEET 3 OF 3 | SIZE: B | CODE: DD | NUMBER: H742-Ø | REV: Y

DRB 108

DEC 16-(325)-1062-28-8972

DRAWING DIRECTORY

CUSTOMER PRINT SET

DRAWING DIRECTORY	B-DD-H744-0
CIRCUIT SCHEMATIC	D-CS-H744-0-1
UNIT ASSY	E-UA-H744-0-0

MFG SET

TEST PROCEDURE	A-SP-H744-0-3
MFG SPEC	A-SP-H744-0-8
PACKAGING INST	A-PI-3700074-0-0

UNIT VARIATIONS

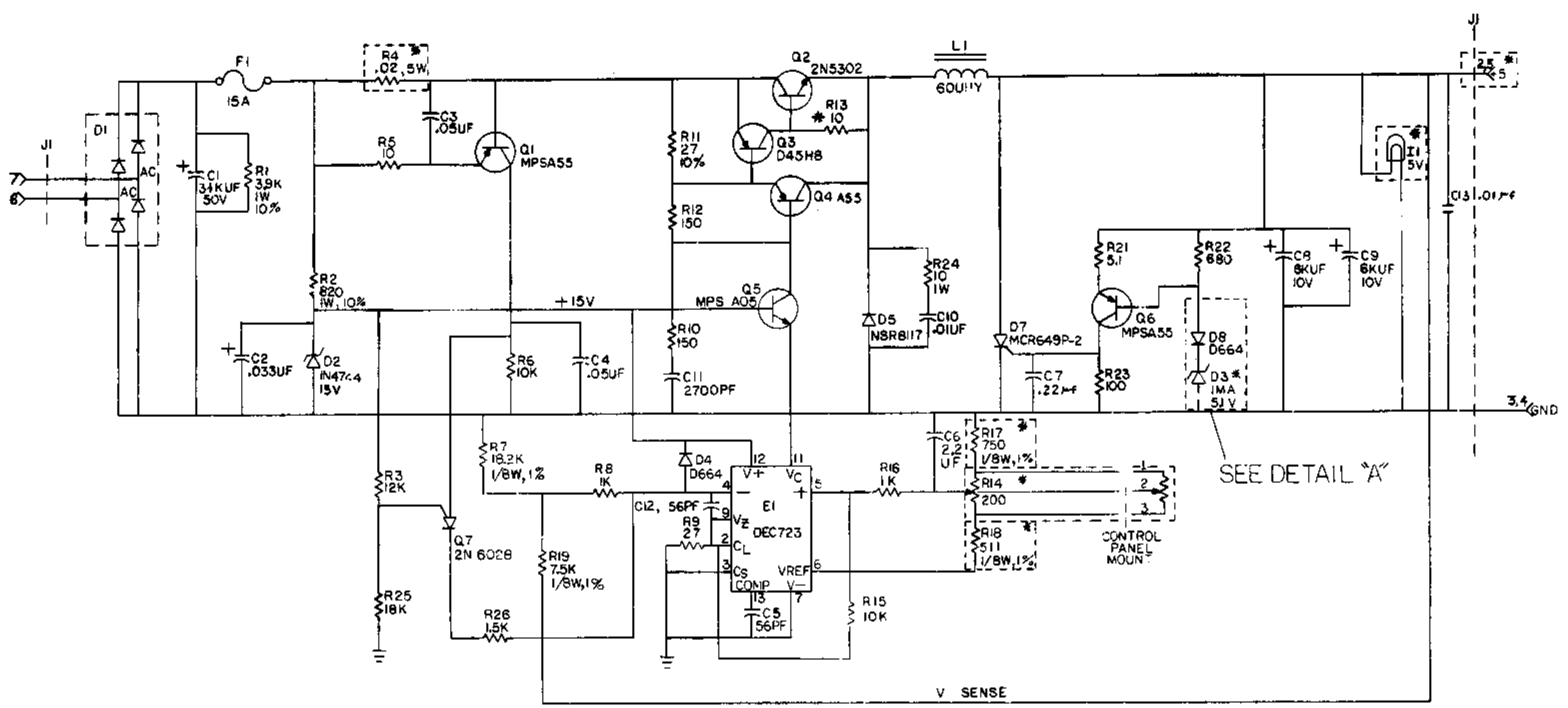
VAR	TITLE
H744	+5V REGULATOR

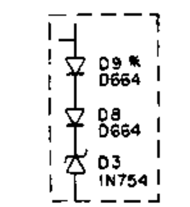
REVISIONS		
REV.	CHANGE NO.	CHK
R	00019	GP

USED ON OPTION/MODEL	
11/45	
SHEET 1 OF 4	

DRN. D. FONTAINE	DATE 2-4-72	TITLE +5V REGULATOR
CHK'D. D. FONTAINE	DATE 2-4-72	digital
PROJ. ENG. G. POTTER	DATE 2-24-72	SIZE B / CODE DD / NUMBER H744-0 / REV R
PROD. A. HIRSCH	DATE 2-24-72	DIST.

DRB 106A





DETAIL A
FOR YA VARIATION ONLY

*FUSIBLE RESISTOR

[*] FOR YA VARIATION COMPONENT VALUES ARE AS FOLLOWS:
- R4 - .06 5W
- R14 - 1K 10 TURN
- R7 - 300 1/8W 1%
- R18 - 150 1/4W 5%
- D3 - 1N754
- I1 - 15V
- J1-2,5 - 20-8.0V

* D9 - D664 ADDED FOR YA VARIATION ONLY

UNLESS OTHERWISE INDICATED:

RESISTORS ARE 1/4W, 5%

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

ETCH BOARD REV F H

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.	DEC NO.	EIA NO.
1N964A	SAME	MPSA55	
D664	1N3606	2N5302	
MCR649P-2		D45H8	
1175A	SAME	MPSA05	
1N4744	SAME		
NSR8117			
2N6028			

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

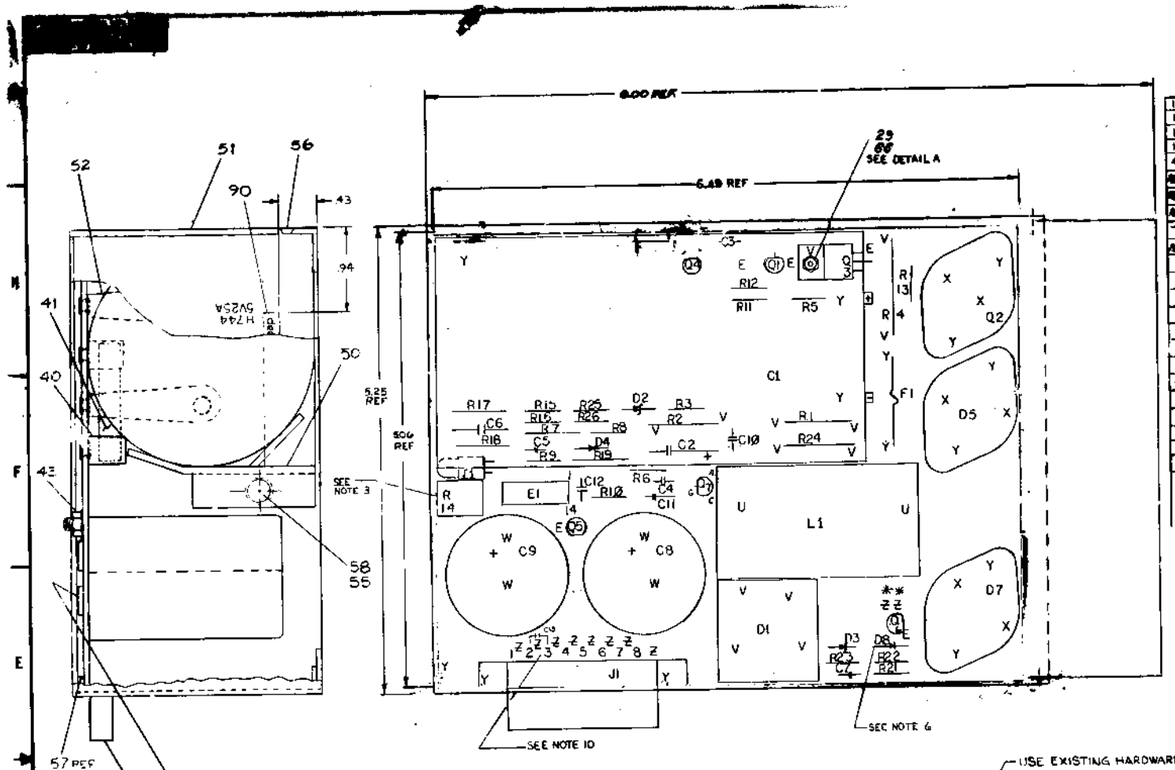
TITLE: 5V REGULATOR

SIZE: D CODE: CS NUMBER: H744-Ø-1 REV: Y

SCALE SHEET 1 OF 1

NEXT HIGHER ASSY

DEC FORM NO DRD-13S



NOTES:

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

DETAIL B
SCALE 2/1

NOTES CONT:

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

NOTE 9: TORQUE APPLICATION
(1) APPLY 12 INCH LBS. OF TORQUE TO THE SCREWHEAD OF #4 HARDWARE EXCEPT Q3.
(2) APPLY 12 INCH LBS. OF TORQUE TO #6 HARDWARE ON L1.
(3) APPLY 16 INCH LBS. OF TORQUE TO ALL #6 AND #10 HARDWARE EXCEPT ON L1.
(4) ALL HARDWARE TO BE TORQUED BEFORE SOLDERING.

NOTE 10:
INSERT C13 INTO ETCH PAD HOLES CONNECTED TO J1 TERMINALS, 2-3.

NOTE 11:
MIN TORQUE REQUIRED FOR QC INSPECTION:
8 INCH LBS. FOR #4 HARDWARE;
12 INCH LBS. FOR #6 AND #10 HARDWARE.

* SEE NOTE 7

1. APPLY [illegible] BETWEEN TRANSISTOR (Q2), [illegible] AND ITEM #44 (WASHER) ALSO BETWEEN ITEM #44 (WASHER) AND HEAT SINK (ITEM #49). ALSO APPLY ITEM #63 (COMPOUND) BETWEEN ITEM #9 (DIODE BRIDGE) AND ITEM #64 (HEAT SINK BRIDGE).

1	1	R22	RES 680 1/4W 5%	1301484	69
1	1		PACKING INSTRUCTIONS	AP 3700074-0-0	70
1	1		SCR, PHL PAN HD #6-32 x 5/8 LG	9006088-1	71
1	Ø	I1	15 VOLT LAMP	1209169	72
4	4		LOCKWASHER #10 INT	9006685	73
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	74
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	75
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	76
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	77
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	78
1	Ø	2 IN	WIRE, MICRODOT	1700014	79
1	Ø		CLAMP, CABLE	9007079	80
1	Ø	R14	POT, 10 TURN, 1KΩ	1309532-04	81
1	Ø	R17	RES, 300Ω 1/4W 5%	1301428	82
1	Ø	R18	RES, 150Ω 1/4W 5%	1300250	83
1	Ø	R4	RES, 86Ω 5W 3%	1310876-02	84
1	Ø	D3	DIODE ZENER 1N754	1109991	85
6	6	-	WASHER, INT TOOTH #4	9006632	86
1	1	C7	CAP .22μf 80V	1010874	87
1	1	R13	RES 10 1/4W 5% FUSIBLE	1312496	88
1	1	-	WASHER, RECTANGULAR	9009789	89
1	1	-	DECAL (H744)	ADG7416945-1-0	90
1	1	-	JUMPER	1214074	91

QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	
Ø	1	I1	5 VOLT LAMP	12-09219-1	68
1	1		L WASHER #4	9006632	67
7	7		NUT KEPS #4-40	9006697	66
6	6		SCR. PHL PAN HD #4-40 x 5/16 LG	9008033-1	65
1	1		HEAT SINK BRIDGE	1210907	64
[illegible]	[illegible]		COMPOUND THERMAL JOINT	[illegible]	63
1	1	R26	RESISTOR 1.5K 1/8W 5%	[illegible]	62
1	1	R10	RESISTOR 7.5K 1/8W 1%	1305322	61
1	1	R8	RESISTOR 12K 1/4W 5%	1300488	60
1	1	Q7	TRANSISTOR, UNIJUNCTION [illegible]	1510877	59
1	1		SCR. PHL PAN HD #6-32 X 1/4 LG	9006020-1	58
[illegible]	[illegible]		[illegible]	[illegible]	57
			SCR. PHL FLT HD #6-32 x 3/16 LG	9006-20-2	56
			WASHER, LOCK #6	9006633	55
			[illegible]	[illegible]	54
6	6		CONTACT FEMALE	1209456	53
2	2		STRAP, CAPACITOR	C-MD-5309759-0-0	52
1	1		BRACKET, REGULATOR	D-IA-5509756-0-0	51
1	1		HOLDER, CAPACITOR 2.5	C-IA-12386-0-0	50
1	1		HEAT SINK REGULATOR	D-PS-1210737-0-0	49
2	2	C6 C12	CAP 56 PF	1000012	48
1	1	R24	RESISTOR 10 1W	1300171	47
1	1	L1	REACTOR 60 μHY MMC4347	1610850	46
2	2		SCR, PHL PAN HD #4-40 1/4 LG	9008401-1	45
3	3		WASHER, INSULATOR	9006721	44
3	3		NUT, KEPS #6-32	9006185	43
4	4		SCR #10-32 x 3/8 SLOTTED PAN HD	9009669-01	42
1	1	F1	FUSE 15 AMP	1213237-01	41
2	2		FUSE CLIP	9007205	40
6	6		EYELET GS-4-5	9004000	39
1	1	J1	MATE-N-LOCK CONN, 8 PIN	1209340	38
1	1	E1	INTEGRATED CIRCUIT DEC 723C	1910415	37
1	1	Q5	TRANSISTOR A05	1510705	36
1	1	Q3	TRANSISTOR D45H8	1510708-1	35
3	3	Q1, Q6, Q4	TRANSISTOR MPSA55 MOT	1510706	34
1	1	Q2	TRANSISTOR 2N6302	1510196	33
Ø	1	R14	RES VARIABLE 200	1310652	32
1	1	R21	RES 5.1 1/4W 5%	1309422	31
1	1	R23	RES 100 1/4W 5%	1300229	30
1	1		SCR, PPH #4-40 X 3/8	9006011-[illegible]	29
1	1	R11	RES 27 1/4W 10%	1301420	28
Ø	1	[illegible]	RES 750 1/8W, 1%	1308955	27
1	1	R9	RES 27 1/4W 5%	1301522	26
1	1	R7	RES 18.2K 1/8W, 1%	1309412	25
2	2	R3, R16	RES 1K 1/4W 5%	1300395	24
Ø	1	R18	RES 511 1/8W 1%	1302411	23
1	1	R25	RES 15K 1/4W 5%	1302465	22
2	2	R6, R15	RES 10K 1/4W 5%	1300479	21
Ø	1	R4	RES .02 5W 3%	1310876	20
1	1	R2	RES 820 1W 10%	1300358	19
1	1	R1	RES 3.9K 1W 10%	1302927	18
1	1	R5	RES 10 1/4W 5%	1301317	17
2	2	[illegible]	RES 150 1/4W 5%	1300250	16
Ø	1	D3	DIODE ZENER 1 MA. 5.1V	1110925	15
1	1	D7	SCR MCR 649P-2	1109465	14
4	4		SCR, PFH #4 X 5/16 LG SELF TAP	9009144	13
1	1	D5	DIODE PWR NSK 8117	1110715	12
3	2	D4, D8 D9*	DIODE PWR D664	1100114	11
1	1	D2	DIODE ZENER 1N4744	1105648	10
1	1	D1	DIODE BRIDGE	1110714	9
2	2	C8, C9	CAP 6K μF 10V	1010704	8
1	1	C1	CAP 31K μF 30V	1010659	7
2	2	C4, C5	CAP [illegible] μF 35V	1001774	6
1	1	C3	CAP .033 μF 100V 10%	1000050	5
1	1	C11	CAP 2700PF 100V 5% DM	1001837	4
2	2	C10, C13	CAP .01 MF 100V 20% DISC	1001610	3
1	1	C6	CAP 2.2 UF, 20V, 10%	1002627	2
1	1		ETCHED CIRCUIT BOARD	5009725	1
			A'SY/DRILLING HOLE LAYOUT	D-AH-H744-0-5	
			X-Y COORDINATE HOLE LOCATION	K-CD-H744-0-4	[illegible]
			MODULE ECO HISTORY	D-MH-H744-0-6	[illegible]
			CIRCUIT SCHEMATIC	D-CS-H744-0-1	[illegible]

FIRST USED ON OPT/MOD
D-UA-H742A-0-0

D664	1N3606
1N4744	

ETCH BOARD REV H

MA 723C 7 12

5V REGULATOR

H744 Z

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE			SEQUENCE	
DRAWING DIRECTORY	B-DD-H745-Ø	MFG. SET		
CIRCUIT SCHEMATIC	D-CS-H745-Ø-1			
UNIT ASS'Y	E-UA-H745-Ø-Ø			
		TEST PROCEDURE	A-SP-11/45 TA-2	
		MFG. SPEC.	A-SP-H745-Ø 8	
		PACKAGING INSTRUCTION	A-PI-3700074-0-0	

UNIT VARIATIONS

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

REVISIONS

REV	K	L	M	N	P
CHG. NO.	H745-16	H745-17	H745-18	H745-19	H745-20
DATE				9-76	10-76

USED ON OPTION/MODEL	
11/45	

SHEET 1 OF 2

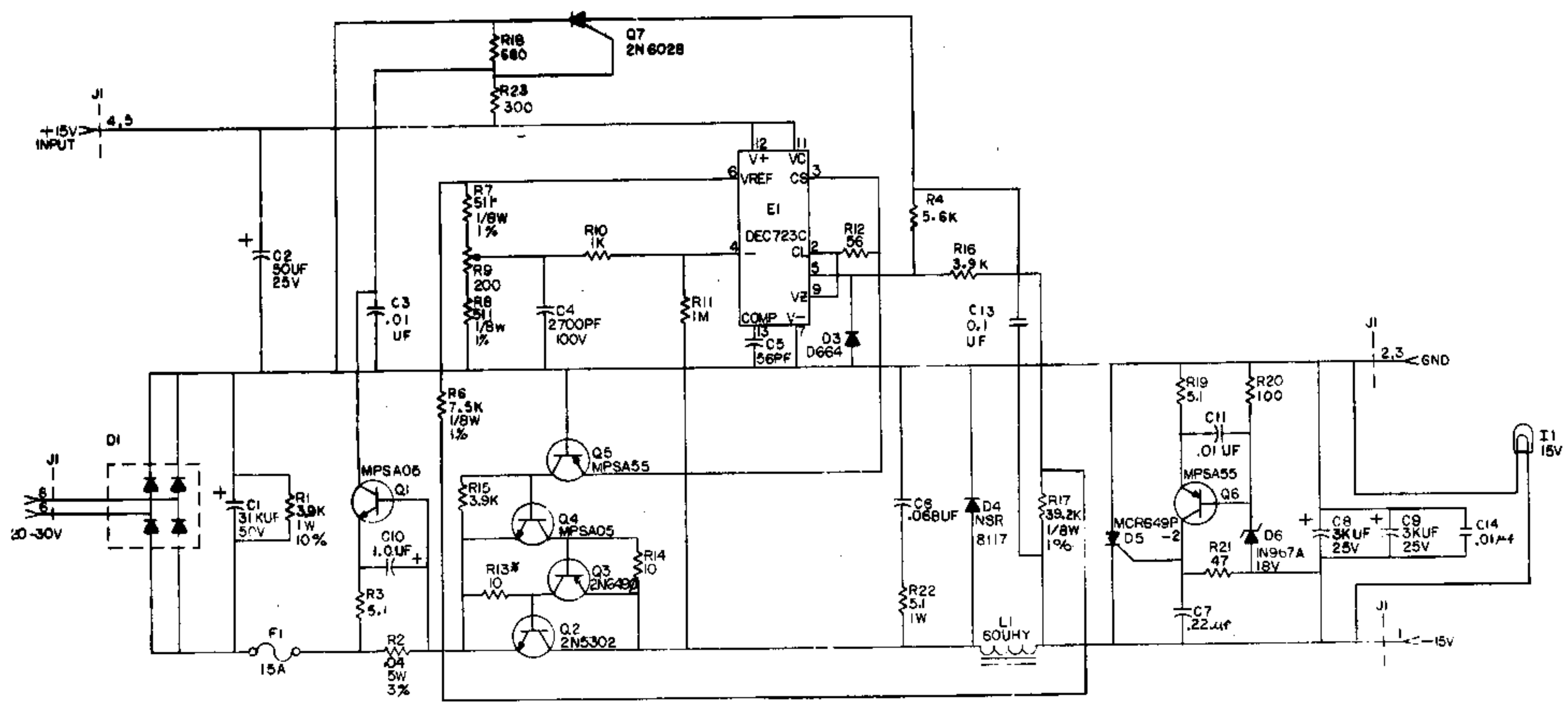
		DATE
DRN.	D FONTAINE	2-7-72
CHK'D.	J GAUDETTE	2-17-72
PROJ ENG.	G POTTER	2-25-72
PROD.	A HUSCH	2-25-72
FIELD SERV.	A. ZINS	2-25-72

TITLE: -15V REGULATOR

SIZE	CODE	NUMBER	REV
B	DD	H745-Ø	P

DIST

DRB 106



* FUSIBLE

UNLESS OTHERWISE INDICATED:

RESISTORS = 1/4W, 5%

QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO.

PARTS LIST

ETCH BOARD REV E

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

SEMICONDUCTOR CONVERSION CHART

REVISIONS: REV E — CHANGE NO. H745 - 00021 — A. BARON

EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

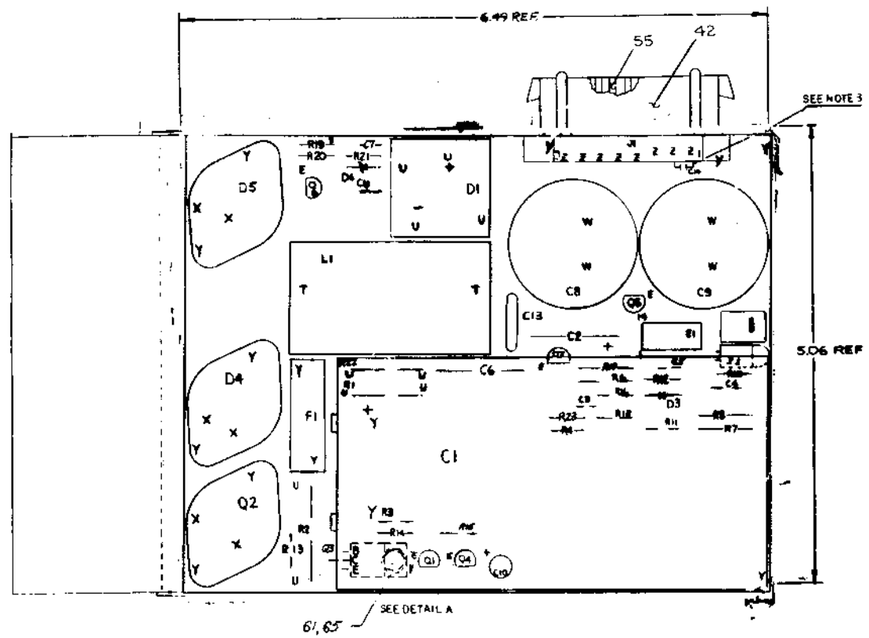
DRN. DATE 11-4-71 — CHK'D. DATE 1-9-71 — ENG. DATE — PROJ. DATE — PROD. DATE

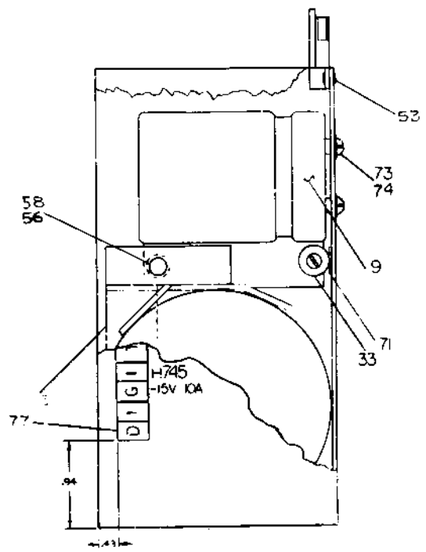
TITLE: −15V REG.

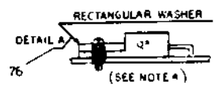
NEXT HIGHER ASSY

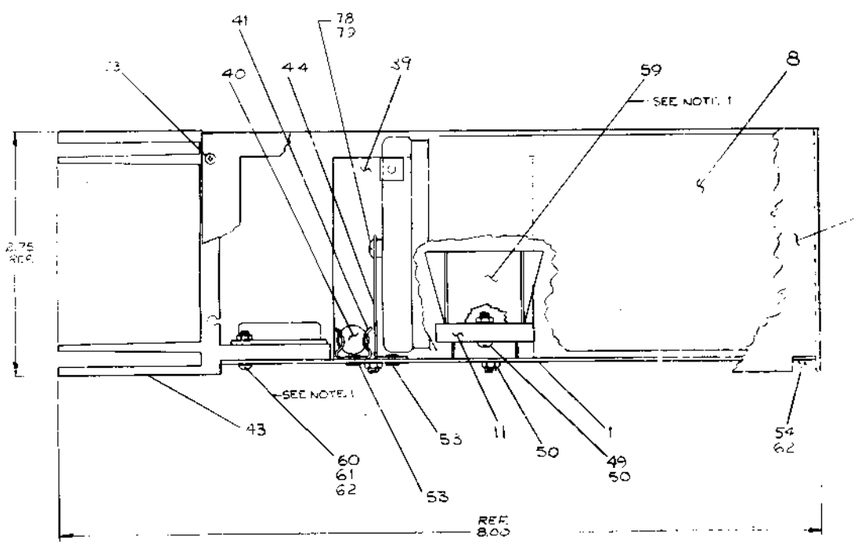
SIZE D CODE CS NUMBER H745 -Ø-1 REV E

SCALE — SHEET 1 OF 1 — DIST.









NOTE:
3. INSERT C14 INTO ETCH PAD HOLES CONNECTED TO J1 TERMINALS 1-2.

NOTE 4:
Q3 SCREW HEAD SHOULD BE ON TOP OF FLAT RECTANGULAR WASHER AS SHOWN. APPLY 6 INCH LBS. OF TORQUE WHEN SECURING Q3 TO CKT. BOARD BEFORE SOLDERING.

NOTE 5: TORQUE APPLICATION
(1) APPLY 12 INCH LBS. OF TORQUE TO ALL #4 HARDWARE EXCEPT Q3.
(2) APPLY 16 INCH LBS. OF TORQUE TO ALL #6 AND #10 HARDWARE.
(3) ALL HARDWARE TO BE TORQUED BEFORE SOLDERING.

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

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	
		A. (H745)	74-5745-02	80
2		WASHER INT. TOOTH #10	9006635	79
2		SCR PAN 10-32 × 7/8	9009669-01	78
1	C7	CAP .01 UF 50V	1010274	77
1		WASHER, RECTANGULAR	9009769	76
1	R13	RES 10Ω 1/4W, FUSIBLE	1312496-00	75
4		LOCKWASHER #10 INT	9006535	74
4		SCR #10-32 × 3/8 SLOTTED PAN HD.	9009669-01	73
				72
1		TRANSIPAD	9008206	71
		ASSY/DRILLING HOLE LAYOUT	D-AH-H745-0-5	70
1		PACKING INSTRUCTIONS	API-3700074-0-0	69
1	R18	RES. 680 1/4W 5%	1301424	68
1	R23	RES. 300 1/4W 5%	1301425	67
1	C13 (SEE NOTE 2)	CAP. 0.1 UF 100V 20%	1000030	66
1		SCR PH #4-40 × 5/16 LG	9006010-1	65
1	I1	LAMP 15V	1209169	64
4		SCR. PPH #4 × 5/16 LG. SELF TAPPING	9009442	63
4		L WASHER #4	90066[illegible]	62
7		NUT KEPS #4-40	[illegible]	61
4		SCR PHL PAN HD #4-40 [illegible]	[illegible]	60
1		HEAT SINK BRIDGE RECT	1210007	59
1		SCR PHL PAN HD #6-32 × [illegible] LG	[illegible]-1	58
1		SCR PHL FLT HD #6-32 × 1/4 LG	9006[illegible]-02	57
1		WASHER LOCK #6	[illegible]	56
8		CONTACT FEMALE	1209466	55
2		SCR PHL PAN HD #4-40 × [illegible] LG	[illegible]	54
6		EYELET OS-4-	[illegible]	53
3		INSULATOR WASHER	9008721	52
A/R		THERMAL COMPOUND	[illegible]	51
3		NUT KEPS 6-32	9006175	50
1		SCREW PHL PAN HD 6-32 × 5/8 LG	9006[illegible]-01	49
~~4~~		~~SCREW PHL FLT HD #4-40 × [illegible]~~	~~[illegible]~~	48
~~1~~		~~[illegible]~~	~~[illegible]~~	47
1		REGULATOR BRKT	D-IA-[illegible]-0	46
1		HOLDER CAPACITOR	C-IA-7412[illegible]	45
2		STRAP CAPACITOR	C-MD-[illegible]-0-0	44
1		HEAT SINK	D-PS-1210237-0-0	43
1	J1	CONN. [illegible] 8 PIN	[illegible]	42
2		FUSE CLIP	[illegible]	41
1	F1	FUSE	1213237-01	40
1	L1	REACTOR 60 UHY	1610050	39
1	E1	INTEGRATED CIRCUIT UA723C	1910415	38
1	Q3	TRANSISTOR [illegible]	1510452-01	37
2	Q5 Q6	TRANSISTOR 855	1510708	36
2	Q1 Q4	TRANSISTOR 865	1510105	35
1	Q2	TRANSISTOR 2N5302	1510198	34
1	R9	RES VARIABLE 200 Ω 20%	1310052	33
1	R20	RES 100Ω 1/4 5	130022[illegible]	32
1	R11	RES 1 MEG 1/4 5	[illegible]	31
1	R4	RES 5.6K 1/4W 5%	130[illegible]24	30
2	R15, R16	RES 3.9K 1/4 5	1300444	29
2	R19, R23	RES 5.1K 1/4 5	1300422	28
1	R12	RES 56 1/4 5	1302602	27
1	R21	RES 47 1/4 5	1300202	26
1	R17	RES 30.1K 1/8W 1%	130[illegible]	25
1	R10	RES 1K 1/4 5	[illegible]	24
1	R14	RES 16 1/4 5	1301313	23
1	R6	RES 7.5K 1 1/4 1	130[illegible]22	22
2	R7, R8	RES 511 1.0[illegible]	[illegible]	21
1	R22	RES 5.1 1/4 5	13021[illegible]	20
~~1~~	~~[illegible]~~	~~RES 10K 1/4 1%~~	~~[illegible]~~	19
1	R2	RES .04[illegible] 1%	1311357[illegible]	18
1	R1	RES 3.9K 1W 10%	13092[illegible]	17
1	D6	DIODE [illegible]	[illegible]	16
1	D5	SCR MCR649P-2	[illegible]	15
1	D4	DIODE MSR1117	1110[illegible]	14
2	D3	DIODE D664	1100114	13
1	Q7	TRANSISTOR UNI JUNCTION 2N[illegible]	15[illegible]	12
1	D1	DIODE BRIDGE	1110714	11
~~1~~	~~C12~~	~~CAP 150V 200 UF~~	~~[illegible]~~	10
2	C8 C9	CAP 3.0 UF 25V	1010203	9
1	C1	CAP 3[illegible] UF 50V	1010050	8
1	C10	CAP 4.0 UF 25V	1010866-01	7
1	C2	CAP 50 UF 25V -10+75%	10[illegible]	6
1	C5	CAP .068 UF 100V 10%	1000052	5
1	C4	CAP 2700PF 100V 5%	1001431	4
3	C11, C3, C14	CAP .01UF 100V 20	[illegible]	3
1	C5	CAP [illegible] 100V 5%	[illegible]	2
1		ETCHED CIRCUIT BOARD	[illegible]	1
		[illegible] ASSEMBLY	[illegible]	
		CIRCUIT SCHEMATIC	[illegible]	
		ASSY/DRILLING HOLE LOCATION	[illegible]	

PARTS LIST

ETCH BOARD REV E

DEC NO.	EIA NO.	DEC NO.	EIA NO.
0664	1N3606		

SEMICONDUCTOR CONVERSION CHART

EQUIPMENT CORPORATION

TITLE
-15 REGULATOR

E UA H745-0-0

SHEET 1 OF 1

H745-0-0

E UA

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

	SEQUENCE		SEQUENCE
DRAWING DIRECTORY	B-DD-H746-Ø		
CIRCUIT SCHEMATIC	D-CS-H746-Ø-1		
UNIT ASS'Y	E-UA-H746-Ø-Ø	MFG SET	
		TEST PROCEDURE	A-SP-H746-Ø-3
		MFG SPEC.	A-SP-H746-Ø-8
		PACKAGING INSTRUCTION	A-PI-3700074-0-0

UNIT VARIATIONS

VARIATION	TITLE	PRINT SET TYPE: H746-1
H746	MOS REGULATOR	X

REVISIONS	REV	CHG. NO.	DATE
	A	-00005	
	B	-00006	
	C	-00007	
	D	-00012	
	E	-00013	5-76

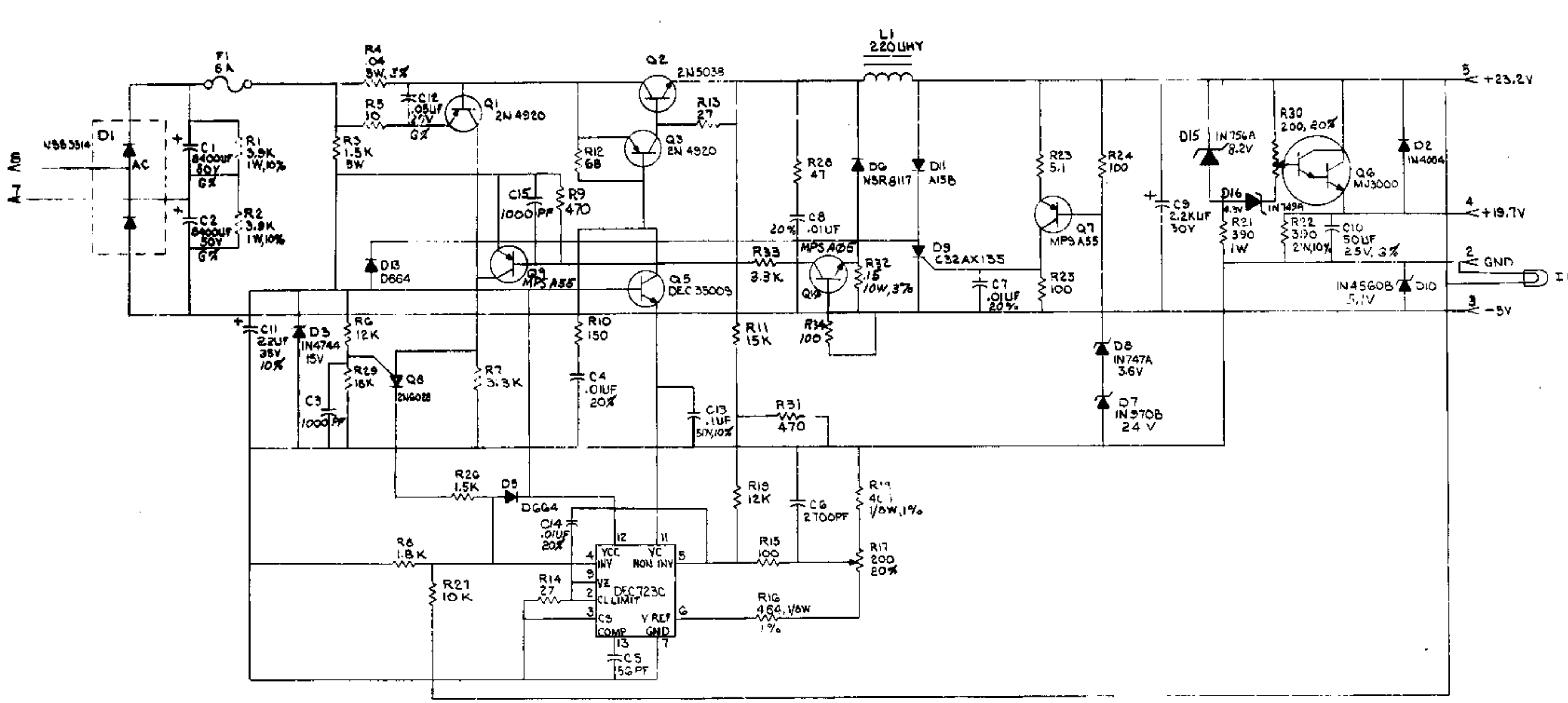
USED ON OPTION/MODEL

11/

DRN.	DATE	TITLE: MOS REGULATOR
CHK'D.	DATE	
PROJ ENG.	DATE 2-?	
PROD.	DATE	SIZE B · CODE DD · NUMBER -1 · REV E
FIELD SERV.	DATE	
SHEET 1 OF		DIST

DRB 106

DEC 16—(325)--1062--1—N871



UNLESS OTHERWISE INDICATED:
CAPACITORS = 100V, 5%
RESISTORS = 1/4W, 5%
G% = -10% + 75%

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		PARTS LIST		

ETCH BOARD REV H

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

SEMICONDUCTOR CONVERSION CHART

DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

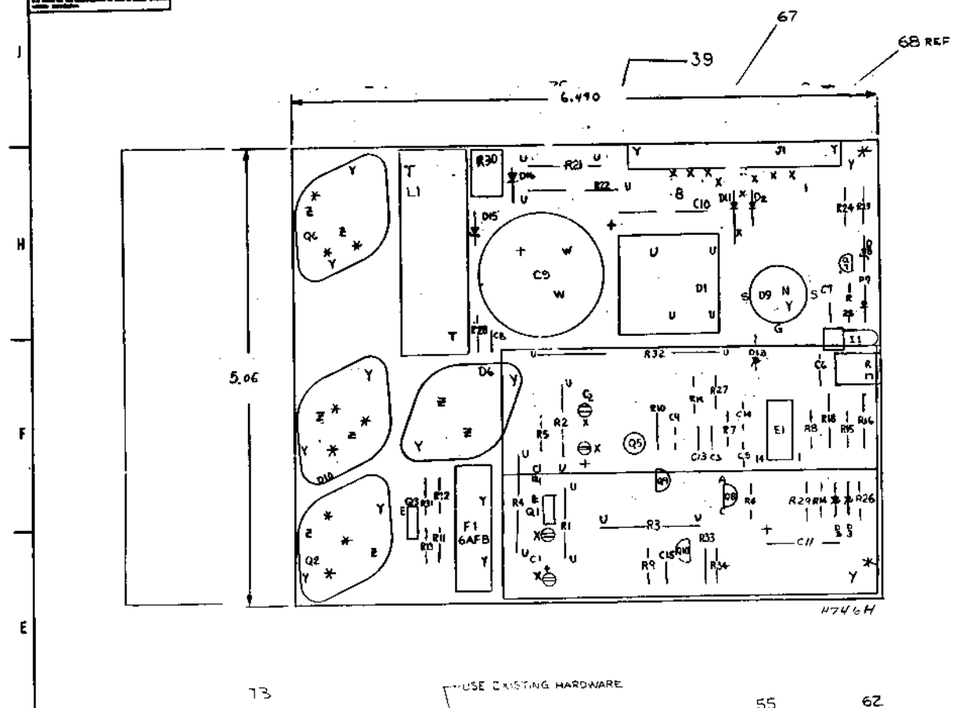
TITLE: MOS REGULATOR

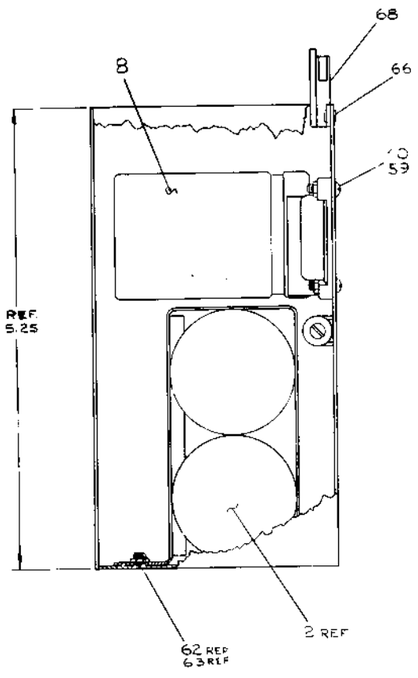
SIZE D, CODE CS, NUMBER H746-0-1, REV. P

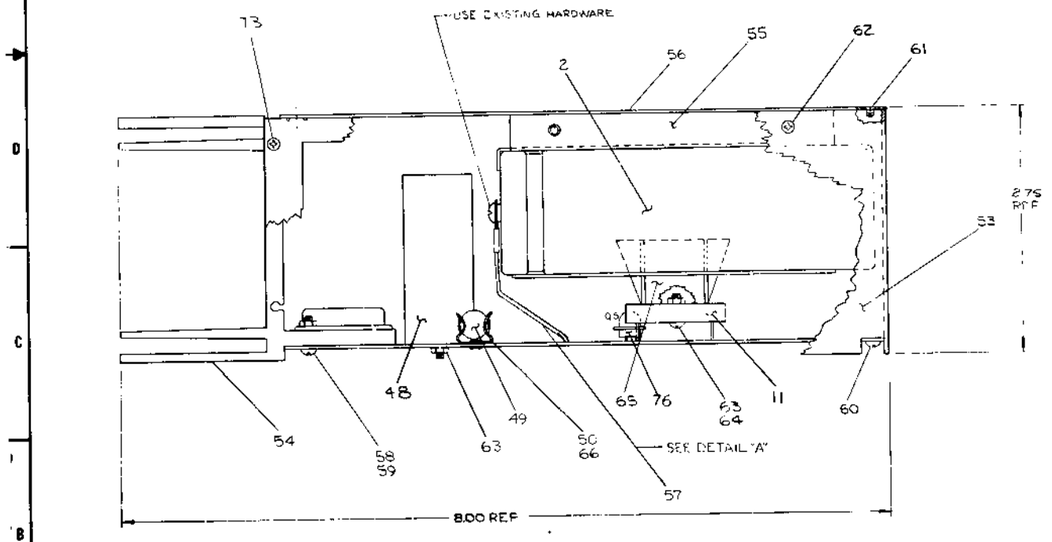
NEXT HIGHER ASSY

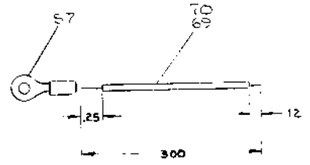
SHEET 1 OF 1

NOTE
APPLY ITEM #71 (COMPOUND) ON:
1. BOTH SIDES OF INSULATOR WASHERS FOR Q2, Q6, D6, D10.
2. BETWEEN ITEM #11 DIODE BRIDGE (D1) AND ITEM #65 HEAT SINK.









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

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
2	R7, R33	RES. 33K, 1/4W, 5%	13-00439	29
1	R6	RES. 1.6K, 1/4W, 5%	13-00398	74
1	R32	RES. 15, 10W, 3%	13-11625	25
1	D8	SCR C32AX135	15-10928	15
1	Q10	TRANSISTOR A05 (MOT)	15-10705	84
2	C3, C15	CAP 1000PF, 100V DM	10-00042	83
1	C13	CAP .1UF, 50V, 10%	10-10978-36	92
1	R12	RES 68, 1/4W, 5%	13-00219	81

PARTS LIST

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
		ASSY/DRILLING HOLE LAYOUT	D-AH-746-0-5	REF
1		PACKING INSTRUCTIONS	API-3700074-0-0	80
1	D15	DIODE 1N756A	11-02447	79
1	R21	RES. 350, 1W, 5%	13-02384	78
1	I1	LAMP 28V	12-11239	77
2		TRANSIPAD	90-[illegible]	76
1	D9	DIODE 1N747A	110672	75
4		SCR PHL FLAT HD. #4 SELF TAPPING	9009442-02	73
4		WASHER INSULATOR	9001171	72
AR		COMPOUND THERMAL	9006098	71
AR		#18 AWG STRD TLF INS (BLK)	9101360-00	70
AR		#18 AWG STRD TLF INS (RED)	9101360-22	69
1		MATE-N-LOCK CONN 2 PIN	1209348	68
8		CONTACT FEMALE	1209945	67
4		EYELET 65-4-7	9016732	66
1		HEAT SINK BRIDGE	12 0807	65
1		SCR PHL PAN HD 6-32 X 3/4	9016075-1	64
5		KEPS NUT 6-32	9006105	63
2		SCR PHL FLAT HD 6-32 X 5/16	9004021-2	62
4		SCR PHL FLAT HD 4-40 X 1/4	900 009-2	61
4		SCR PHL PAN HD 4-40 X 3/8	9006011-1	60
9		KEPS NUT 4-40	9006007	59
6		SCR PHL PAN HD 4-40 X 1/2	9006013-1	58
4		TERMINAL RING	9007830	57
1		COVER COMP	C-MD-5309760-0-0	56
1		I.S. CAP BRKT	C-IA-5309758-0-0	55
1		HEAT SINK, REGULATOR	D-PS-1210732-0-0	54
1		BRACKET REG	C-IA-5309750-0-3	53
4		SPLIT LUG	9006135	52
1	Q8	TRANSISTOR 2N6029	15-10072	51
2		FUSE CLIP	9007203	50
1	F1	FUSE 6AFB	9007[illegible]	49
1	L1	REACTOR 220µH	16 10849	48
1	E1	INTEGRATED CIRCUIT UA 723C	19 10415	47
2	Q7 Q9	TRANSISTOR A55 (MOT)	15 10706	46
1	Q6	TRANSISTOR MJ3000 MOT	15-11349	45
1	Q5	TRANSISTOR [illegible]	15 03209	44
1	Q2	TRANSISTOR 2N5038	15 10069	43
2	Q1 Q3	TRANSISTOR 2N4920	15 09605	42
2	R17, R30	RES VARIABLE 200, 20%	13-10852	41
1	R23	RES 5.1 1/4 5	13 09422	40
2		#10 LOCKWASHER EXTERNAL TOOTH	9007651	39
2	R31 R9	RES 470 1/4 W 5	13 00376	38
1	R11	RES 15K 1/4 5	13-00496	37
1	R10	RES 150 1/4 5	13 00250	36
1	R27	RES 10K 1/4W 5%	13-00419	34
2	R6, R19	RES 12K 1/4 5	13 00480	33
4	R15, R25, R24, R34	RES 100 1/4 5	13-00259	32
2	R13 R14	RES 2.2 1/4W 5%	13-01522	31
1	R5	RES 10 1/4 5%	13 [illegible]	30
2	R16 R18	RES 464 1% 1	13-03047	27
1	R29	RES 18K 1/4 5	13-02465	26
1	C11	CAP 2.2 UF 35V 10%	10-02431	25
1	R4	RES .04 5W 3%	13-11362	24
1	R3	RES [illegible] 5%	13-01897	23
1	R32	RES 390 2W 10	13-01880	22
1	R26	RES 3.9K 1/4 5	13-00391	21
2	R1 R2	RES 3.9K 1W 10	13-02827	20
1	R20	RES 47 1/4 5	13-00282	19
1	D11	DIODE 1N5624	11-10470	18
1	D2	DIODE 1N4004	11 05796	17
1	D12	DIODE 1N4560B	11-10[illegible]	16
1	D7	DIODE [illegible]	11-10856	14
1	D6	DIODE [illegible]	11-10775	13
1	D3	DIODE 1N4744	11-05840	12
1	D1	DIODE MSS 3514	11-10714	11
2	D5, D13	DIODE D664	11-00114	10
1	C10	CAP 50UF 75V -10+75	10-01795	9
1	C8	CAP 2.2 UF 30V	10 10[illegible]	8
4	C2, C4, C5, C14	CAP .1UF 100V 20	10-01610	7
1	C6	CAP 2700PF 100 5%	10-01631	6
1	C5	CAP 56PF 100V 5%	10-00012	5
1	D14	DIODE 1N7439	11 02977	4
1	C12	1.2 UF 25V	10-01224	3
2	C1 C2	CAP 8.4UF 50V	10-10851	2
1		ETCHED CIRCUIT BOARD	5008121	1
		MODULE ECO HISTORY	B-MH-H746-0-6	REF
		X-Y COORDINATE HOLE LOCATION	B-CD-H746-0-4	REF
		CIRCUIT SCHEMATIC	E-CS-H746-0-1	REF

PARTS LIST

ETCH BOARD REV H

REV	CHANGE NO.	ORIG	DATE
C	H746-00001+1A	G. POTTER	3-14-72
D	H746-00002		3-29-73
E	H746-00003	G. POTTER	6-9-72
F	H746-00004	G. POTTER	
H	H746-00005	J.W. LAWRENCE	10-3-72
J	H746-00006	G. POTTER	12-8-72
K	H746-00007	R. WOLF	1/12/73
L	H746-00008	R. WOLF	
M	H746-00009	R. WOLF	11-2-73
N	H746-00010	R. WOLF	12/11/73
P	H746-00011	R. WOLF	3/27/74

REVISIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.
D664	1N3606		
IN40[illegible]	SEE MR 2044		

SEMICONDUCTOR CONVERSION CHART

EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE
MOS REGULATOR

NEXT HIGHER ASSY
SCALE NONE
SHEET 1 OF 1
SIZE E CODE UA NUMBER H746-0-0 REV. F
DIST. G

IC TYPE	GND	+5V	ITEM NO.	NAME	FROM PT	TO PT
			7	12		

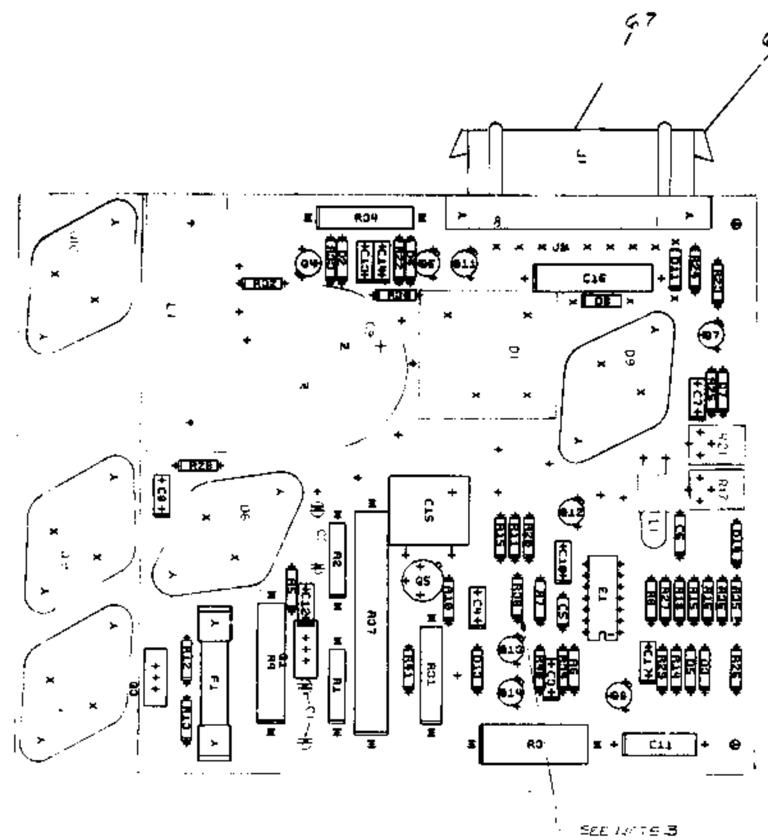
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.

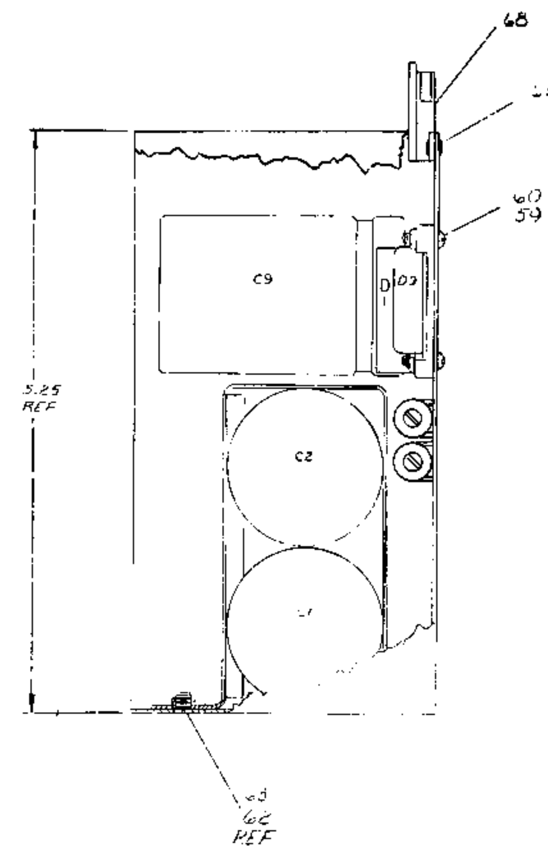
IC PIN LOCATIONS

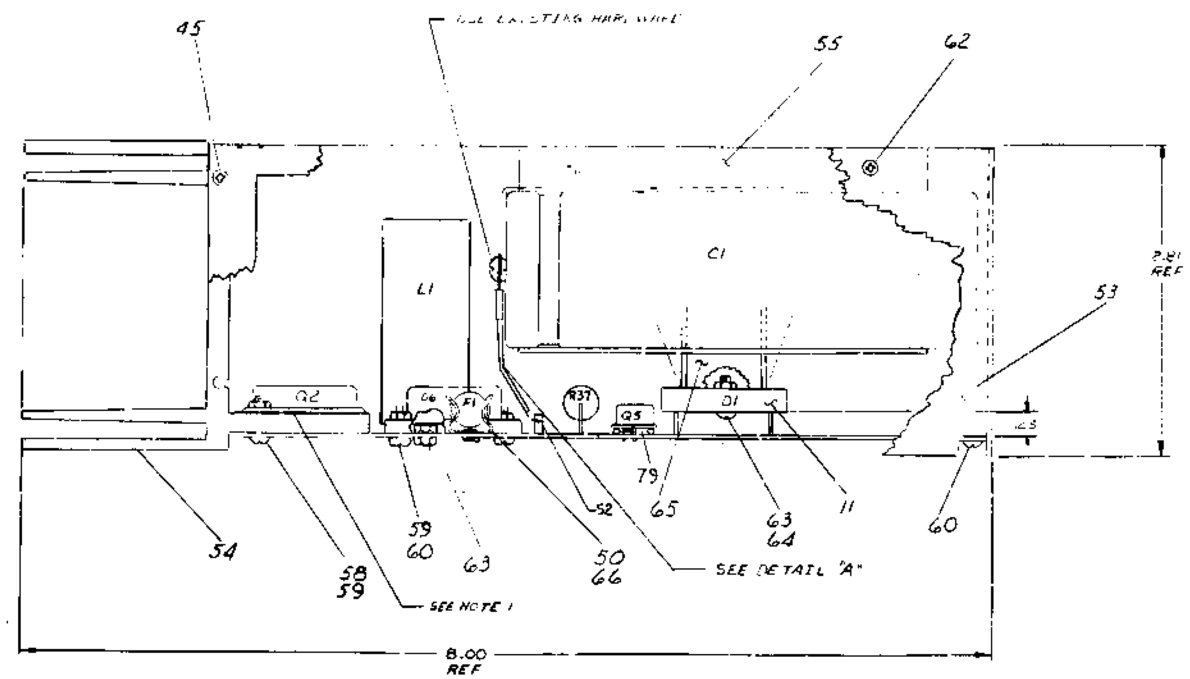
JUMPER LIST

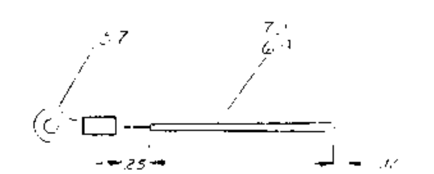
NOTES:

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









DETAIL "A"
SCALE: NONE
RED W[illegible] TO POSITIVE TERMINAL
BLK W[illegible] TO NEGATIVE TERMINAL

DELETED COMPONENTS	
RESISTORS	[illegible]
DIODES	[illegible]

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
1	C7	CAP .22 µF 50V	1010274	93
1	Q1	TRANSISTOR 2N4920-1	1509605-1	92
1	R13	RES 27Ω 1/4W 5% FUSIBLE	1312496-01	91
AR		INSULATION	9107256-11	90
1	R39	RES 220 1/4W 5%	1300271	89
1	R37	RES .1 10W 1%	1309108	88
1	R38	RES 1K THERMISTOR	1310071	87
1	C16	CAP 100µF 25V	1002781	86
1	Q10	TRANSISTOR MJ900	1510712	85
1	Q9	TRANSISTOR MJ3000	1511349	84
1	C13	CAP 100 PF 100V ±5% DM	1000016	83
				82
2	Q4, Q14	TRANSISTOR MPS [illegible]	[illegible]	81
1	D2	DIODE [illegible]	1100100	80
2	(UNDER Q1 [illegible])	TRANSIPAD	9051200	79
1	R31	RES .75Ω 2W 10%	1310127	78
2	C14, C17	CAP 1000 PF 100V ±5% DM	1000042	77
1	R22	RES 453Ω 1/8W ±1%	1305125	76
2	R33, R8	RES 4.75K 1/8W ±1%	1302612	75
1	R11	RES 15K 1/4W ±5%	1300496	74
1	R20	RES 470Ω 1/4W ±5%	1300816	73
3		WASHER INSULATOR	9008721	72
A/R		COMPOUND, THERMAL	9008850	71
A/R		WIRE #[illegible]	9107380-00	70
A/R		WIRE #[illegible]	9107380-22	69
1	J1	MATE-N-LOCK CONN 6 PIN	1200340	68
8		[illegible]	1200450	67
4		EYELET [illegible]	9006132	66
1		HEAT SINK BRIDGE [illegible]	7210607	65
1		SCR PHL PAN HD 6-32 [illegible]	9006024	64
4		KEPS NUT 6-32	9006105	63
2		SCR PHL FLAT HD 6-32 X 5/16	9006021	62
[illegible]		[illegible]	[illegible]	61
[illegible]		SCR PHL PAN HD 4-40 X 3/8	9006011	60
10		KEPS NUT 4-40	9006557	59
6		SCR PHL PAN HD 4-40 X [illegible]	9006013	58
2		TERMINAL [illegible]	1101930	57
[illegible]		[illegible]	[illegible]	56
1		1.5 CAP BRKT	C-IA-5109758-0-0	55
1		HEAT SINK, REGULATOR	D-PS-1210037-0-0	54
1		BRACKET REG	D-IA-5309756-4	53
4		SPLIT LUG	9008735	52
1	D9	TRANSISTOR 2N6028	15-10877	51
2		FUSE CLIP	9007203	50
1	F1	FUSE 10 AMP	1213237-10	49
1	L1	REACTOR [illegible]	16-10843	48
1	E1	INTEGRATED CIRCUIT 723	19-10415	47
6	Q2, Q6, Q11, Q12, Q13	TRANSISTOR [illegible]	15-10706	46
4		SCR PHL FLAT HD [illegible]	9008142-01	45
1	Q5	TRANSISTOR DEC3500	15-03709	44
1	Q7	TRANSISTOR 2N5038	15-10869	43
1	Q3	TRANSISTOR 2N6491	1512704	42
2	R17, R21	RES VARIABLE 200 [illegible]	13-10852	41
2	R23, R26	RES 5.1 [illegible] 5	13-00422	40
1	R16	RES [illegible] 1/8W 1%	1304657	39
				38
2	R14, R5	RES [illegible]	13-01527	37
1	R10	RES 150 [illegible] 5	13-00250	36
1 REF		ASSY/DRILLING HOLE LAYOUT	D-AH-H754-0-5	35
2	R7, R40	RES 2K 1/4W 5%	1302318	34
2	R6, R[illegible]	RES 12K [illegible] 5%	13-00488	33
6	R15, R25, R30, R24, R35, R41	RES 100 [illegible] 5	13-00226	32
1	R12	RES 68Ω 1/4W 5% FUSIBLE	1312495-02	31
				30
1	R27	RES 10K 1/8W 1%	1302772	29
1	R32	RES [illegible] 1/8W 5	13-00444	28
1	R18	RES [illegible] 1/8W 1%	13-05124	27
1	R29	RES 10K [illegible] 5	13-02465	26
1	C19	CAP 2.7 UF 35V 10 [illegible] TANT	10-00431	25
1	R4	RES [illegible]	1310578-1	24
1	R3	RES 1.5K 5W 5%	13-01857	23
1	R34	RES 47 [illegible] 5	13-01[illegible]	22
1	R28	RES 1.5K [illegible] 5	13-00391	21
2	R1, R2	RES 3.9K [illegible]	13-02027	20
1	R20	RES 12Ω [illegible] 1/4W 5%	1301317	19
2	D11, D8	DIODE 1N5624	1110420	18
				17
1	D14	DIODE 752A ZENER	1100808	16
1	D8	DIODE [illegible]	11-00485	15
1	D7	DIODE 1N970B 24V	11-10006	14
1	D6	DIODE 20 AMP FAST REC	11-10715	13
1	D3	DIODE 1N4744 ZENER, 15V	11-00848	12
1	D1	DIODE MSS 3014	11-10714	11
3	D5, D13, [illegible]	DIODE D664	11-20014	10
1	C15	CAP 1UF 100V 20% DISC	1000030	9
1	C8	CAP 2.2 UF 35V [illegible] AL EL	10-00[illegible]	8
4	C3, C4, C5, C12	CAP .01UF 50V 20% DISC	10-01610-01	7
1	C6	CAP 2700PF 100V 5% DM	10-01027	6
1	C5	CAP [illegible] 100V 5% DM	10-00012	5
1	I1	LAMP 28V 40 MA	49-01239	4
1	C12	CAP .01UF 25V DISC	10-01714	3
2	C1, C2	CAP 5.8KUF 50V [illegible]% AL EL	10-01[illegible]	2
1		ETCHED CIRCUIT BOARD	5010531	1
		MODULE ECO HISTORY	[illegible]-H754-0-6	REF
		X Y COORDINATE HOLE LOCATION	[illegible]-H754-0-4	REF

PARTS LIST

ETCH BOARD REV	
D664	1N3606

DEC NO	EIA NO	DEC NO.	EIA NO.

SEMICONDUCTOR CONVERSION CHART

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

EQUIPMENT CORPORATION

TITLE: + 20 VOLT REGULATOR

SIZE: E CODE: CS NUMBER: H754-0-1 REV: T

SHEET 1 OF 2

E CS H754-0-1

J1-8
J1-7
F1 1ØA
D1 NSS 3514
AC
C1 58ØØUF 5ØV
C2 58ØØUF 5ØV
R1 3.9K 1W 10%
R2 3.9K 1W 10%
R4 .Ø3Ω 5W, 3%
R5 27Ω
R3 1.5K 5W, 5%
C12 .Ø5UF 25V
Q1 2N492Ø-1
Q2 2N5Ø38
Q3 2N6491
R13 * 27Ω
R12 * 68Ω
L1 17Ø UHY
R28 1ØΩ
C8 .01UF 2Ø% 5ØV
D6 2ØAMP
D11 IN5624
R23 5.1Ω
R24 1ØØΩ
C16 1ØØUF 25V
Q7 MPSA55
C9 22ØØUF 3ØV
J1-5 +2ØV
J1-3 -5V
J1-2 GND
D13 D664
C3 .Ø1UF
R39 22ØΩ
R40 2K
Q13 MPS A55
Q8 2N6Ø28
C11 2.2UF 35V 1Ø%
D3 IN4744 15V
1ØØØPF 1ØØV C17
R6 12K
P29 18K
R7 2K
R38 1K THERM.
R1Ø 15Ø Ω
C4 .Ø1UF 5ØV 2Ø%
C15 .1UF 2Ø%
Q14 MPS A Ø5
R41 1ØØΩ
R37 1 10W 1%
D9 MCR 649P-2
C7 .22UF 5ØV
R25 1ØØΩ
R11 15K
R2Ø 47Ø Ω
Q12 MPSA55
R36 5.1Ω
R35 1ØØΩ
D14 752A
D8 IN5624
D7 1N97ØB 24V
R26 1.5K
D5 D664
R8 1.78K Ω 1/8W, 1%
R27 1ØK 1/8W, 1%
R14 27Ω
C1Ø .Ø1UF 2Ø% 5ØV
R19 12K
C6 27ØØPF
R18 237Ω 1/8W 1%
R15 1ØØΩ
R17 2ØØΩ 2Ø% 1/2W
R16 287Ω 1/8W 1%
C5 56PF
DEC 723C
VCC VC INV NON INV VZ CL CS VREF COMP GND
R33 1.78K 1/8W 1%
C13 1ØØPF
R34 .47Ω 2W 5%
Q11 MPS A55
Q1Ø MJ9ØØ
R32 3.9K
MPS A Ø5 Q4
D2 DØØ3
R31 .15Ω 2W 1Ø%
D4 D664
MPS A55 Q6
C14 1ØØØPF
R3Ø 1ØØΩ
Q9 MJ3ØØØ
R22 383Ω 1/8W 1%
R21 2ØØΩ 2Ø% 1/2W
I1

* FUSIBLE RESISTOR

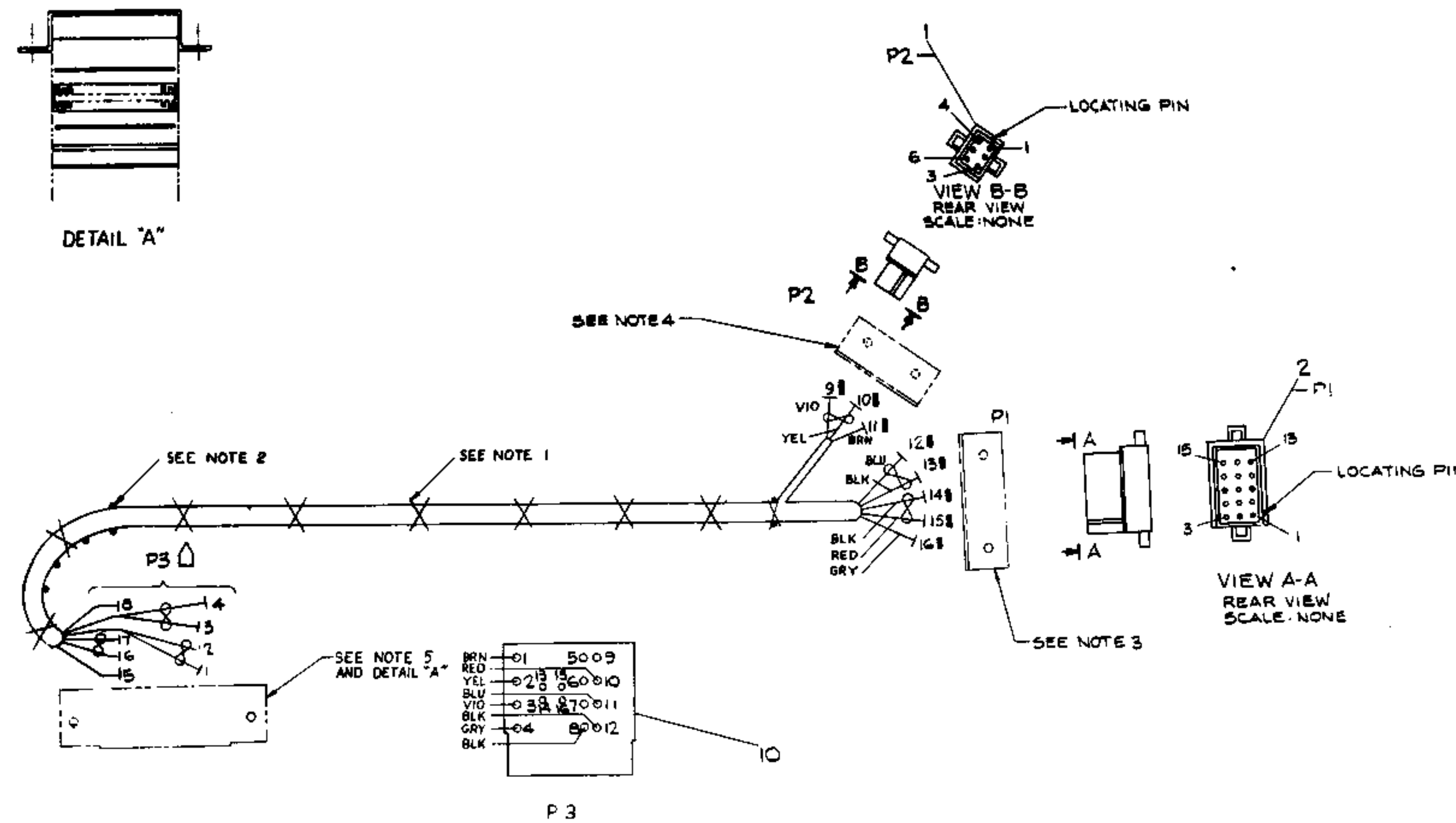
DRN V. BISSONNETTE	8-2-72	FIRST USED ON H754
CHK'D A. VOWLES	12 17-72	TITLE +2Ø VOLT REGULATOR
ENG. H. BURTON	5 7 73	
PROJ. ENG. R. BURTON	5-7-73	
PROD. L. BAPTISTE	5-7-73	
NEXT HIGHER ASSY.		SIZE D CODE CS NUMBER H754-Ø-1 REV. T
SCALE		
SHEET 2 OF 2		DIST

H754-Ø-1 REV. T

ITEM NO.	DESCRIPTION AWG	COLOR	FROM POINT	FROM CONNECTION	FROM TERM	TO POINT	TO CONNECTION	TO TERM	SIGNAL
5	14 TWP	RED	3	P3-10	SOLD	15	P1-1	3	+5V
		BLK	4	P3-9	SOLD	14	P1-7	3	GND
9	14	GRY	5	P3-4	SOLD	16	P1-2	3	+15V
6	14 TWP	BLK	1	P3-12	SOLD	13	P1-8	3	GND
		BLU	2	P3-11	SOLD	12	P1-13	3	-15V
8	18	BRN	8	P3-1	SOLD	11	P2-2	3	LTc
7	18 TWP	VIO	6	P3-3	SOLD	9	P2-3	3	DcLo
		YEL	7	P3-2	SOLD	10	P2-4	3	AcLo
11	22	-	-	P3-13	SOLD	-	P3-14	SOLD	DcLo
11	22	-	-	P3-15	SOLD	-	P3-16	SOLD	AcLo

WIRE TABLE

NOTES:
1. USE TIE WRAPS (X) ITEM #4 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
2. DOT (●) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY, COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.
3. USE CONN BRKT C-MD-930576-H5-0 MOUNT WITH WOOD SCREWS. USE MATING CONN 1209350-15.
4. USE CONN BRKT C-MD-930576-H6-0 MOUNT WITH WOOD SCREWS. USE MATING CONN 1209350-06.
5. USE CONN. HOLD DOWN B-MD-930576T-0-0 WITH PLATE B-MD-9305767-0-1, USE TAPE DEC #9008734 & CONN H807 DEC # (1209129) REMOVE PINS & FLANGES AS SHOWN IN DETAIL "A". MOUNT WITH WOOD SCREWS.



SCALE
0 IN. 6 IN. 12 IN.

DO NOT REDUCE
DO NOT BUILD FROM REDUCED PRINT

CAUTION—DRAWING SIZE AND SCALE REDUCED FOR MICROFILM NOT TO BE USED FOR PRODUCTION

SYM	QTY.	DESCRIPTION	PART NO.	ITEM
	A/R	BUSS WIRE #22 AWG	9107560-01	11
	1	POWER CONN	G772	10
	A/R	WIRE #14AWG GRY	9107570-88	9
	A/R	WIRE #18AWG BRN	9107560-11	8
	A/R	WIRE #18TWP YEL/VIO	9107520-47	7
	A/R	WIRE #14TWP BLK/BLU	9107440-06	6
	A/R	WIRE #14TWP BLK/RED	9107440-02	5
X	A/R	WRAP TIE	9007031	4
	8	PIN, MALE	1209378-00	3
	1	HOUSING CONN. 3PIN	1209350-15	2
		HOUSING CONN. 6PIN	1209351-06	1

EQUIPMENT CORPORATION

G772 SYSTEM UNIT HARNESS

SEE PARTS LIST

B | A | 7009562 0 0

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY C. Forman	CHECKED J. Forman	SECTION
DATE 6-15-72	DATE 6-15-72	
ENG DATE 6/20/72	PROD Jack Forman DATE 6-20-72	ISSUED SECT.

LEGEND

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

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION: ALL VARIATIONS
	Lib Kit 11-Bas 45-B-K	System Software Kit	1
	Dec 11-H45B-D	11/45 Systems and installation Manual	1
	112-01071-1854-D-09-25	11 Peripherals and interfacing Handbook	1
	112-01071-1876-D-09	11/45 Processor Handbook	1
	Dec 11-HKBA-D	KB11 Maintenance Manual	1
	B-DD-11/45-0	PDP-11/45 Systems Eng. Drawings	1
		Dec Supplies List	1
		Log Book	1
		PDP-11 Instruction Card	1
		H960C Cab Filter	1
	9007221	AGC 5 A Fuse	5
	9007226	AGC 15A Fuse	5
	9009039	Fuse 2/10A SB	5
		Key on off Switch	2
	7008855	POWER CABLE, SYSTEM UNIT	3

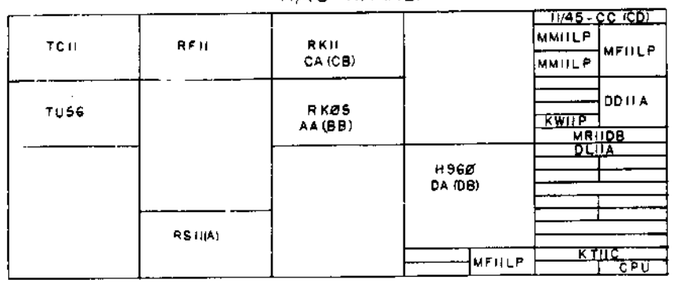
QUANTITY/VARIATION: KIT CHECK BY ____ DATE ____; INSTALLATION CHECK BY ____ DATE ____

TITLE Central Processor	ASSY. NO.	SIZE A / CODE AL	NUMBER 11/45 — [illegible]	REV. B	ECO NO 11/45-00065
	SHEET 1 OF 1	DIST.			

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

NOTES:
1. SYSTEMS IN ( ) ARE 230V 50 HZ VERSIONS.
2. DL11A SPEED GROUP 3 (300 BAUD ONE STOP BITS, NO PARITY, 8 BITS)
3. DL11A MUST BE SET FOR 150 BAUD TO RUN DIAGNOSTICS.

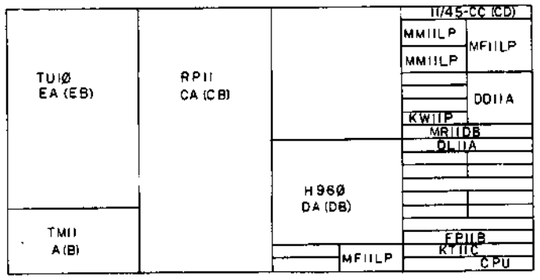
11/45 - RA (RB)



SOFTWARE QR430-AC

LA30
CA (CD)

11/45 - RE (RF)

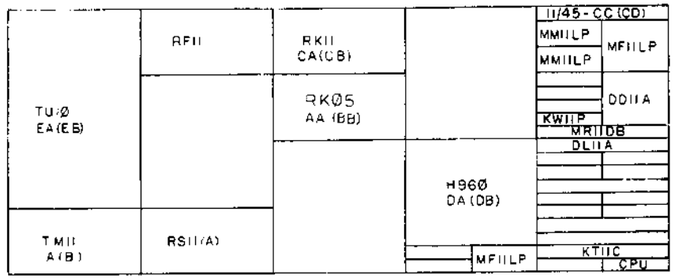


SOFTWARE QR430-AD

RP03
AS (BS)

LA30
CA (CD)

11/45 RC(RD)



SOFTWARE QR430-AD

LA30
CA (CD)

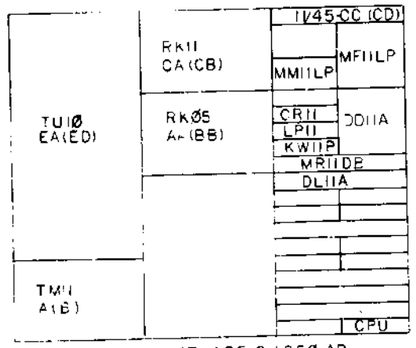
REVISIONS			
CHK	CHANGE NO	REV	
	1145-00048	A	
	RELEASED REDRAWN		
B. F. FITZGERALD			
	11AF-00065	C	
V. BLAEN			

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.
PDP11/45		PARTS LIST	

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

DRN. B CRAMM	DATE 11-6-72	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. J BAILEY	DATE 11-10-72	
ENG. SWANSON	DATE 11-13-72	TITLE TIME SHARING SYSTEMS
PROJ. ENG. SWANSON	DATE 11-13-72	
PROD. HILGENDORF	DATE	
NEXT HIGHER ASSY. B-DD-11/45-0		SIZE D CODE AR NUMBER 11/45-0-4 REV. C
SCALE —		
SHEET 1 OF 5		DIST.

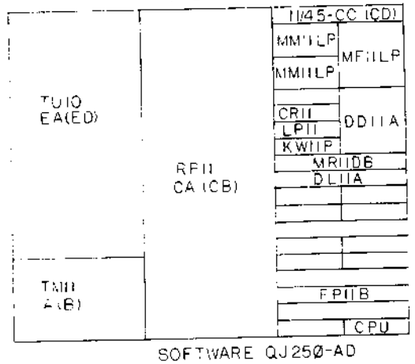
11/45 - PA (PB)



SOFTWARE QJ250-AD

CR11(A) 300 CPM | LP11 JA(JB) | LA30 CA(CD)

11/45 - PC (PD)



SOFTWARE QJ250-AD

RP03 AG(BS) | CR11(A) 300 CPM | LP11 JA(JB) | LA30 CA(CD)

REVISIONS	REV	CHNG NO
DRAWING 40-107-15948	CHK	

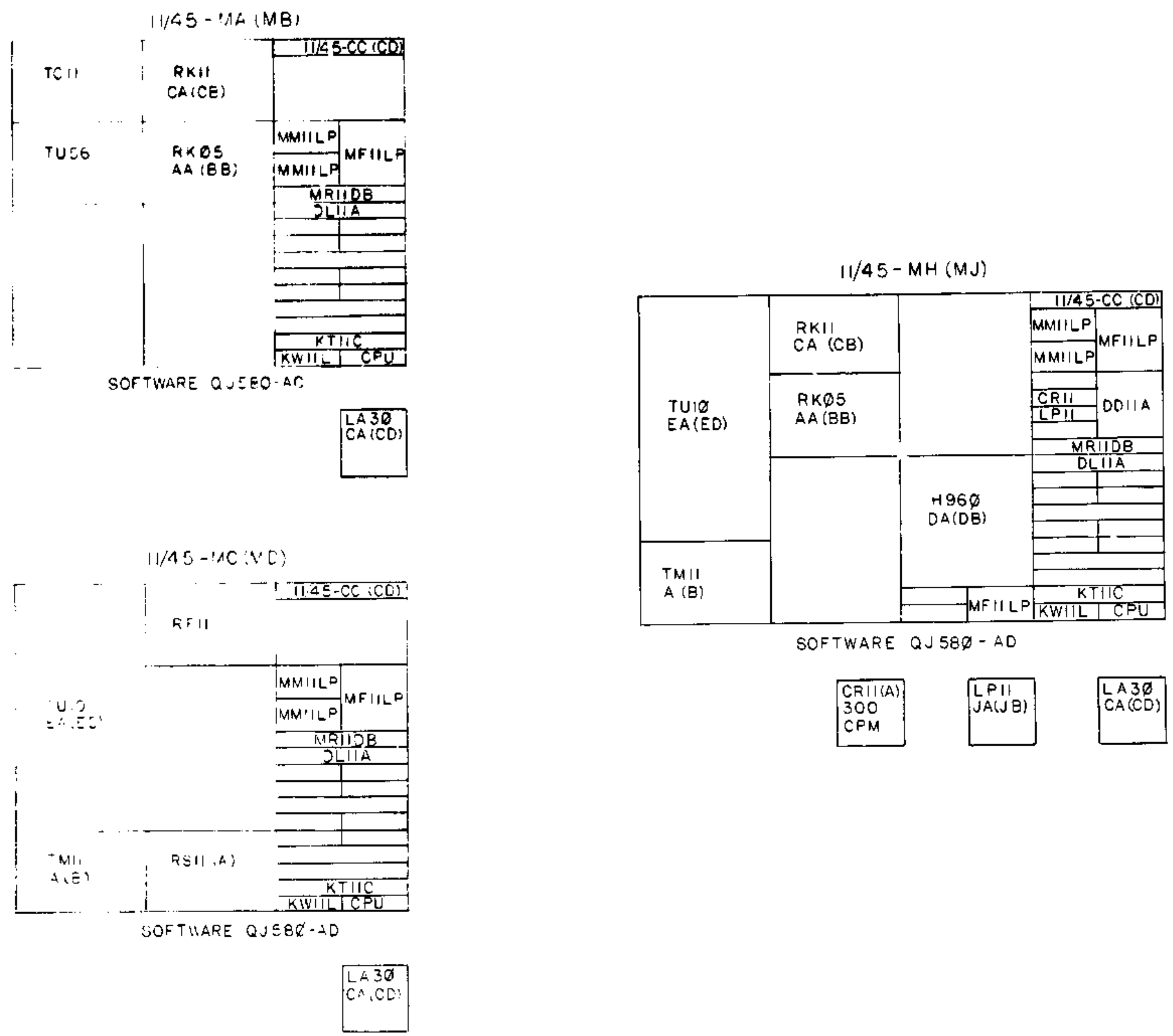
FIRST USED ON OPTION#/MODEL	QTY	DESCRIPTION	PART NO	TYPE NO.
PDP11/45	PARTS LIST			

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

DRN. B CRAMM	DATE	11-6-72
CHK'D. J BAILEY	DATE	11-10-72
ENG. SWANSON	DATE	11-13-72
PROJ ENG SWANSON	DATE	11-13-72
PROD R HILGENDORF	DATE	
NEXT HIGHER ASSY	B DD-11/45-0	
SCALE —	SHEET 2 OF 5	

EQUIPMENT CORPORATION
TITLE: BATCH PROCESSING SYSTEMS
SIZE D | CODE AR | NUMBER 11/45-0-4 | REV. C
DIST

NEXT ASSY USED ON | APPLICATION

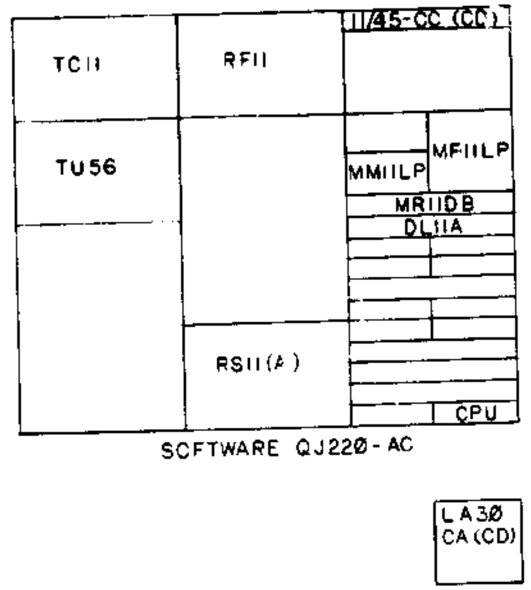


11/45 - MA (MB)
TC11
RK11 CA(CB)
11/45-CC (CD)
TU56
RK05 AA (BB)
MM11LP
MM11LP
MF11LP
MR11DB
DL11A
KT11C
KW11L
CPU
SOFTWARE QJ580-AC
LA30 CA(CD)
11/45 - MC (MD)
11/45-CC (CD)
RF11
TU10 EA(ED)
MM11LP
MM11LP
MF11LP
MR11DB
DL11A
TM11 A(B)
RS11 (A)
KT11C
KW11L
CPU
SOFTWARE QJ580-AD
LA30 CA(CD)
11/45 - MH (MJ)
RK11 CA (CB)
11/45-CC (CD)
MM11LP
MM11LP
MF11LP
TU10 EA(ED)
RK05 AA(BB)
CR11
LP11
DD11A
MR11DB
DL11A
H960 DA(DB)
TM11 A (B)
MF11LP
KT11C
KW11L
CPU
SOFTWARE QJ580 - AD
CR11(A) 300 CPM
LP11 JA(JB)
LA30 CA(CD)

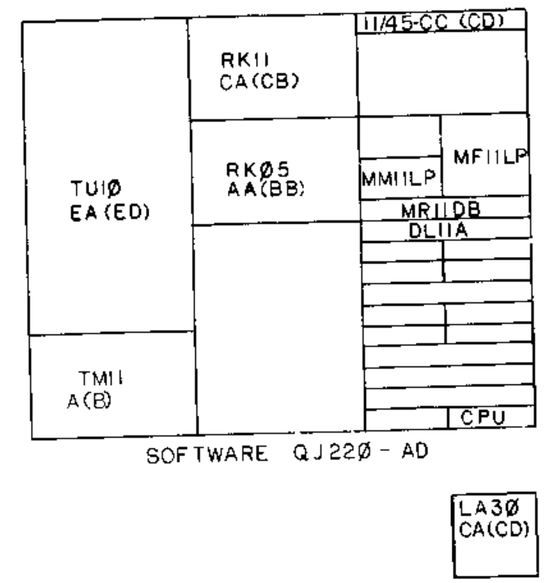
FIRST USED ON OPTION/MODEL	PDP11/45
DRN	B. CRAMM — DATE 11-6-72
CHK'D	J. BAILEY — DATE 11-10-72
ENG	SWANSON — DATE 11-13-72
PROJ. ENG.	SWANSON — DATE 11-13-72
PROD	HILGENDORF
NEXT HIGHER ASSY.	B-DD-11/45-0
TITLE	REAL TIME SYSTEMS
SIZE / CODE	D / AR
NUMBER	11/45-Ø-4
REV.	C
SHEET	3 OF 5

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

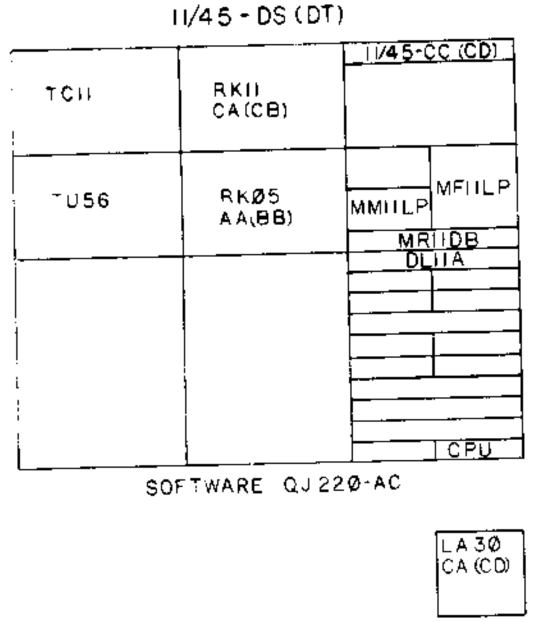
11/45 - DA (DB)



11/45 - DU (DV)



11/45 - DS (DT)



FIRST USED ON OPTION/MODEL: PDP 11/45

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES

DRN.	BCRAMM	DATE 11-6-72
CHK'D.	J BAILEY	DATE 11-10-72
ENG.	SWANSON	DATE 11-13-72
PROJ. ENG.	SWANSON	DATE 11-13-72
PROD.	HILGENDORF	DATE

NEXT HIGHER ASSY: B-DD-11/45-Ø

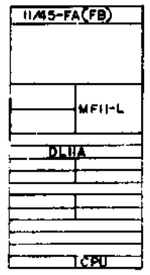
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: INTERACTIVE DISK SYSTEMS

SIZE: D CODE: AR NUMBER: 11/45-0-4 REV: C

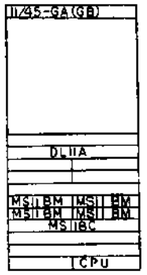
SCALE: — SHEET 4 OF 5

11/45-FC (FD)



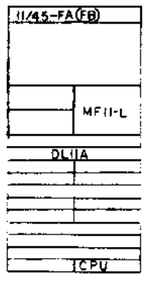
LA30
CA(CD)

11/45-GK (GL)



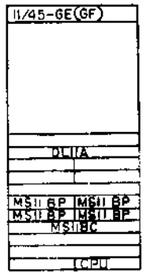
LA30
CA(CD)

11/45-FE (FF)



VT05B
AA(AD)

11/45-GP(GR)



LA30
CA(CD)

FIRST USED ON OPTION/MODEL: PDP-11	QTY	DESCRIPTION	PART NO.
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES. DECIMALS: XXX ± .005, XX ± .02, X ± .1. ANGLES: ± 0° 30'. REMOVE BURRS AND BREAK SHARP CORNERS. SURFACE QUALITY ✓	PARTS LIST		
MATERIAL	NEXT HIGHER ASSY: B-DD-11/45-0		
FINISH	SCALE		
	SHEET 5 OF 5		

DRN: B C PAMM	DATE: 6-22-73	digital EQUIPMENT CORPORATION maynard, massachusetts	
CHK'D: [signature]	DATE: 6-25-73	TITLE: OEM SYSTEMS	
ENG.	DATE		
PROJ ENG	DATE		
PROD	DATE		
SIZE: D	CODE: DAR	NUMBER: 11/45-0-4	REV: C
		SHEET	

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QUANTITY / VARIATION

ITEM NO.	DWG. NO./PART NO.	DESCRIPTION	11/45-RA	11/45-RB	11/45-RC	11/45-RD	11/45-RE	11/45-RF	11/45-PA	11/45-PB	11/45-PC	11/45-PD	11/45-MA	11/45-MB	11/45-MC	11/45-ME	11/45-MJ	11/45-DA	11/45-DB	11/45-DS	11/45-DC	11/45-DD	11/45-DU	11/45-FC	11/45-FD	11/45-FE	11/45-FF	11/45-GK	11/45-GL	11/45-GP	11/45-GR	11/45-MD	11/45 DW	11/45 DY
1	C-PL-11/45-CC	BASIC ASS'Y 115V 60 HZ	1	-	1	-	1	-	1	-	1	-	1	-	1	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
2	C-PL-11/45-CD	BASIC ASS'Y 230V ~~50 HZ~~	-	1	-	1	-	1	-	1	-	1	-	1	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-
3	B-DD-KT11-C	MEMORY MANAGEMENT	1	1	1	1	1	1	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
4	B-DD-FP11-B	FLOATING POINT PROCESSOR		-	-	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
~~5~~	~~B-DD-KW11-L~~	~~LINE FREQUENCY CLOCK~~																																
6	B-DD-KW11-P	PROGRAMMABLE CLOCK	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	B-DD-MF11-LP	8K PARITY CORE MEM. AND CONTROL	1	1	1	1	1	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	B-DD-MM11-LP	8K PARITY CORE MEM.	1	1	1	1	1	1	-	-	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
9	B-DD-MR11-DB	MULTI-DEVICE BOOTSTRAP LOADER	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	1	-	-
10	A-ML-RF11-Ø	DISK CONTROL	1	1	1	1	-	-	-	-	-	-	-	-	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
11	A-ML-RK11-CA	DISK CONTROL 115V 60 HZ	1	-	1	-	-	-	1	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
12	A-ML-RK11-CB	DISK CONTROL 230V 50 HZ	-	1	-	1	-	-	-	1	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
13	B-DD-RP11-CA	DISK CONTROL 115V 60 HZ	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	B-DD-RP11-CB	DISK CONTROL 230V 50 HZ	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	A-ML-RS11-Ø	DISK DRIVE 115V 60 HZ	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	A-ML-RS11-A	DISK DRIVE 230V 50 HZ	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
17	B-DD-RKØ5-AA	DISK DRIVE 115V 60 HZ	1	-	1	-	-	-	1	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-
18	B-DD-RKØ5-BB	DISK DRIVE 230V 50 HZ	-	1	-	1	-	-	-	1	-	-	-	1	-	-	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-
19	A-PL-RPØ3-AS	DISK DRIVE 115V 60 HZ	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	A-PL-RPØ3-BS	DISK DRIVE 230V 50 HZ	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	A-ML-TC11-Ø	MAGNETIC TAPE CONTROL	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
22	A-ML-TM11-A	MAGNETIC TAPE CONTROL 115V 60 HZ	-	-	1	-	1	-	1	-	1	-	-	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
23	A-ML-TM11-B	MAGNETIC TAPE CONTROL 230V 50 HZ	-	-	-	1	-	1	-	1	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-
24	A-ML-TU56-Ø	MAGNETIC TAPE TRANSPORT	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
25	C-PL-TU1Ø-EA	MAGNETIC TAPE TRANSPORT 115V 60 HZ	-	-	1	-	1	-	1	-	1	-	-	-	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
26	C-PL-T[illegible]Ø-ED	MAGNETIC TAPE TRANSPORT 230V 50 HZ	-	-	-	1	-	1	-	1	-	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-
27	A-PL-[illegible]11-JA	LINE PRINTER & CONTROL 115V 60 HZ	-	-	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	A-PL-LP11-JB	LINE PRINTER & CONTROL 230V 50 HZ	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	A-PL-LP11-RA	LINE PRINTER & CONTROL 115V 60 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	A-PL-LP11-RB	LINE PRINTER & CONTROL 230V 50 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	A-PL-CR11	CARD READER & CONTROL 115V 60 HZ	-	-	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	A-PL-CR11-A	CARD READER & CONTROL 230V 50 HZ	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
~~33~~	~~B-DD-DL11-A~~	~~SERIAL CONTROL~~																																
34	C-PL-LA3Ø-CA	SERIAL DEC WRITER 115V 60 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
35	C-PL-LA3Ø-CD	SERIAL DEC WRITER 230V 50 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
36	D-UA-H96Ø-DA	EXTENSION MOUNTING BOX 115V 60 HZ	1	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	D-UA-H96Ø-DB	EXTENSION MOUNTING BOX 230V 50 HZ	-	1	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	A-PL-DD11-A	SYSTEM UNIT	1	1	1	1	1	1	1	1	1	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	QR43Ø-AC	TIMESHARING SOFTWARE	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
40	QR43Ø-AD	TIMESHARING SOFTWARE	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	QJ25Ø-AD	BATCH SOFTWARE	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	QJ58Ø-AC	REAL-TIME SOFTWARE	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	QJ58Ø-AD	REAL-TIME SOFTWARE	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-

REVISIONS

REV.	CHANGE NO.		CHK
-	11/45-00043	ORIGINATED	-
A	11/45-00048	REVISED & REDRAWN DWG. NO. WAS 11/45-0-5; R.F. Beasley 3-29-73; B. FITZGERALD 4-2-73	
B	11/45-00053	MINOR; 9-5-73; 9-14-73	
C	11/45 00065	14-APRIL-76; V. BOAEN 21 APRIL 76	
D	11/45-00066	23 JUNE 76; V. BOAEN 28 July 76	

FIRST USED ON OPTION/MODEL: 11/45

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.	BEASLEY	12/19/2
CHK'D.	L. GILBERT	1/2/73
ENG.	J. SWANSON	1/11/73
PROJ. ENG.	J. SWANSON	1/11/73
PROD.	A. ZINS	1/11/73

NEXT HIGHER ASSY. B-DD-11/45-0

SCALE

SHEET 1 OF 2

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE ARRANGEMENT PARTS LIST

SIZE C CODE PL NUMBER 11/45-0-4 REV. D

DIST.

DEC FORM NO. DRC 110

			QUANTITY / VARIATION																															
ITEM NO.	DWG. NO./PART NO.	DESCRIPTION	11/45-RA	11/45-RB	11/45-RC	11/45-RD	11/45-RE	11/45-RF	11/45-PA	11/45-PB	11/45-PC	11/45-PD	11/45-MA	11/45-MB	11/45-MC	11/45-MD	11/45-MH	11/45-MJ	11/45-DA	11/45-DB	11/45-DS	11/45-DT	11/45-DU	11/45-DV	11/45-RC	11/45-PD	11/45-FE	11/45-FF	11/45-GK	11/45-GL	11/45-GE	11/45-GF	11/45-DW	11/45-DY
44	QJ220-AC	DISK-SYSTEM SOFTWARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
45	QJ220-AD	DISK-SYSTEM SOFTWARE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
~~46~~	~~QJ001~~	[illegible]	~~1~~	~~1~~	-	-	-	-	-	-	-	-	~~1~~	~~1~~	-	-	-	-	~~1~~	~~1~~	~~1~~	~~1~~	-	-	-	-	-	-	-	-	-	-	-	-
47	B-DD-MS11-BP	4K MOS MEM W/PARITY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-
48	B-DD-MS11-BM	4K MOS MEM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-
49	B-DD-MS11-BD	SECOND MOS MEM CONTROL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	C-PL-11/45-FA	BASIC ASS'Y 115V 60 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
51	C-PL-11/45-FB	BASIC ASS'Y 230V 50 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
52	C-PL-11/45-GA	BASIC ASS'Y 115V 60 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
53	C-PL-11/45-GB	BASIC ASS'Y 230V 50 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
54	C-PL-11/45-GE	BASIC ASS'Y 115V 60 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
55	C-PL-11/45-GF	BASIC ASS'Y 230V 50 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
56	A-PL-VT05B-AA	ALPHANUMERIC CRT 115V 60 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
57	A-PL-VT05B-AD	ALPHANUMERIC CRT 230V 50 HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
58	B-DD-MF11-L	8K CORE MEM. W/CONTROL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
59	B-DD-MM11-L	8K CORE MEM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	C-PL-11/45-AA	BASIC ASS'Y 115V 60HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
61	C-PL-11/45-AB	BASIC ASS'Y 230V 50HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
62	B-DD-LA36-CE	SERIAL DEC WRITER 60HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
63	B-DD-LA36-CJ	SERIAL DEC WRITER 50HZ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

REVISIONS
REV.
CHANGE NO.
CHK

FIRST USED ON OPTION/MODEL
11/45

UNLESS OTHERWISE SPECIFIED

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

MATERIAL

FINISH

DRN. BEASLEY	DATE 12/19/72
CHK'D. L. GILBERT	DATE 1/2/73
ENG. J. SWANSON	DATE 1/11/73
PROJ. ENG. J. SWANSON	DATE 1/11/73
PROD. A. ZINS	DATE 1/11/73

NEXT HIGHER ASSY.
B-DD-11/45-0

SCALE

SHEET 2 OF 2

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
ARRANGEMENT
PARTS LIST

SIZE C
CODE PL
NUMBER 11/45-0-4
REV D

DIST.

REV. D
NUMBER 11/45-0-4
SIZE C CODE PL

DEC FORM NO. DRC 110

digital EQUIPMENT CORPORATION

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

SEQUENCE SEQUENCE

NOTE:
FOR FEILD MAINTENANCE
PRINT SET, REFER TO:
B-TC-M9301-0-3

THIS IS PRINT SET ☐☐☐☐

UNIT VARIATIONS

VAR	TITLE	PRINT SET
M9301-YA	UNIBUS TERMINATOR/BOOTSTRAP	
M9301-YB	UNIBUS TERMINATOR/BOOTSTRAP	
M9301-YC	UNIBUS TERMINATOR/BOOTSTRAP	
M9301-YD	UNIBUS TERMINATOR/BOOTSTRAP	
M9301-YF	UNIBUS TERMINATOR/BOOTSTRAP	
M9301-YH	UNIBUS TERMINATOR/BOOTSTRAP	

REVISIONS	DATE	CHG. NO.	REV
ORIGINATED	8-76	M9301-6	-
	9-76	M9301-7	A
	12-76	M9301-8	B
	2-77	M9301-9	C
	3-77	M9301-10	D

EN-01062-1A-1-R972-(12S)

DRB 106

USED ON OPTION/MODEL
11/34
11/04

SHEET 1 OF 2

DRN. W. Hamel	DATE 3AUG76	TITLE UNIBUS TERMINATOR BOOTSTRAP
CHK'D. E. Remond	DATE 3AUG76	
PROJ ENG. John Olsen	DATE 9-7-76	
PROD.	DATE	SIZE B / CODE DD / NUMBER M9301-0 / REV D
FIELD SERV.	DATE	DIST

FIELD MAINTENANCE PRINT SET

TABLE OF CONTENTS

UNIT VARIATIONS COVERED BY THIS PRINT SET
DL11-W
DL11-WA
DL11-WB
DL11-WC

DL11-W
Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.
MPØØ1Ø6

REV.	CHG. NO.	DATE
A	DL11W-1	NOV-76

USED ON OPTION/MODEL

SHEET 1 OF 1

DRN.	D. Healy	DATE 26 MAR 76
CHK'D	D. Healy	DATE 26 MAR 76
PROJ. ENG.	R.E. Pratt	DATE 29-MAR 1976
FIELD SERV.	[illegible]	DATE 14-April 1976

digital

TITLE: FIELD MAINTENANCE PRINT SET DL11-W

SIZE	CODE	NUMBER	REV.
B	TC	DL11-W-1	A

DIST.

EN-01124-16-N675-(327)

DRB 124