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FIELD MAINTENANCE PRINT SET

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B-TC-11T23-Ø-1	11T23 FIELD MAINTENANCE PRINT SET (TC)
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K-PL-11T23-Ø-DBP	UNIT ASSY 11T23 (PL)
D-UA-H9612-Ø-Ø	CABINET ASSY
A-PL-H9612-Ø-Ø	CABINET ASSY (PL)
MPØØ74Ø	11/23 PRINT SET (COMPLETE)
MPØØ635	RLV11 PRINT SET (COMPLETE)
MPØØ347	RLØ1 PRINT SET (COMPLETE)
MPØØ616	871 PRINT SET (COMPLETE)
B-PL-11T23-Ø	SHIPPING LIST 11T23
MPØØ527	RLØ1-AK PRINT SET (COMPLETE)
MPØØ698	RLØ2-AK PRINT SET (COMPLETE)

UNIT VARIATIONS COVERED BY THIS PRINT SET
11T23-AA
11T23-AB
11T23-AC
11T23-AE
11T23-AF

11T23
Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET PART NUMBER
MPØØ75Ø

REVISIONS		
REV.	A	
CHG. NO.	11T23-MLØØ1	
DATE	12-79	

USED ON OPTION/MODEL

SHEET I OF 1

DRN.	P. TESLA	DATE	20MAR79
CHK'D	J. Woodall	DATE	18 APR 79
PROJ. ENG.	J. Talaylor	DATE	13 APR 79
FIELD SERV.	Rod Kennedy	DATE	12-Apr-79

digital

TITLE: UNIT ASSY 11T23

SIZE	CODE	NUMBER	REV.
B	TC	11T23-Ø-1	A

DIST.

DRR 124

LEGEND	
NUMBER	VARIATION
11T23-AA	120V 50/60 HZ 12A 128KB,R101
11T23-AB	240V 50/60 HZ 8A 128KB,R101
11T23-AC	120V 50/60 HZ 16A 128KB,R101
11T23-AE	120V 50/60 HZ 10A 128KB,R102
11T23-AF	240V 50/60 HZ 6A 128KB,R102

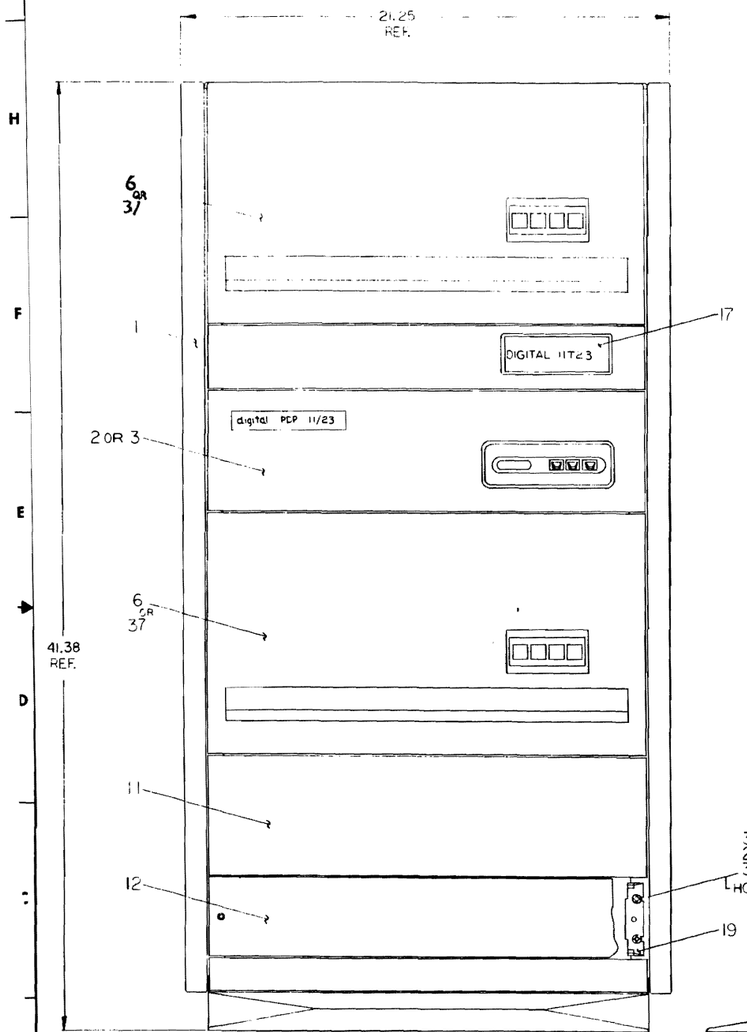
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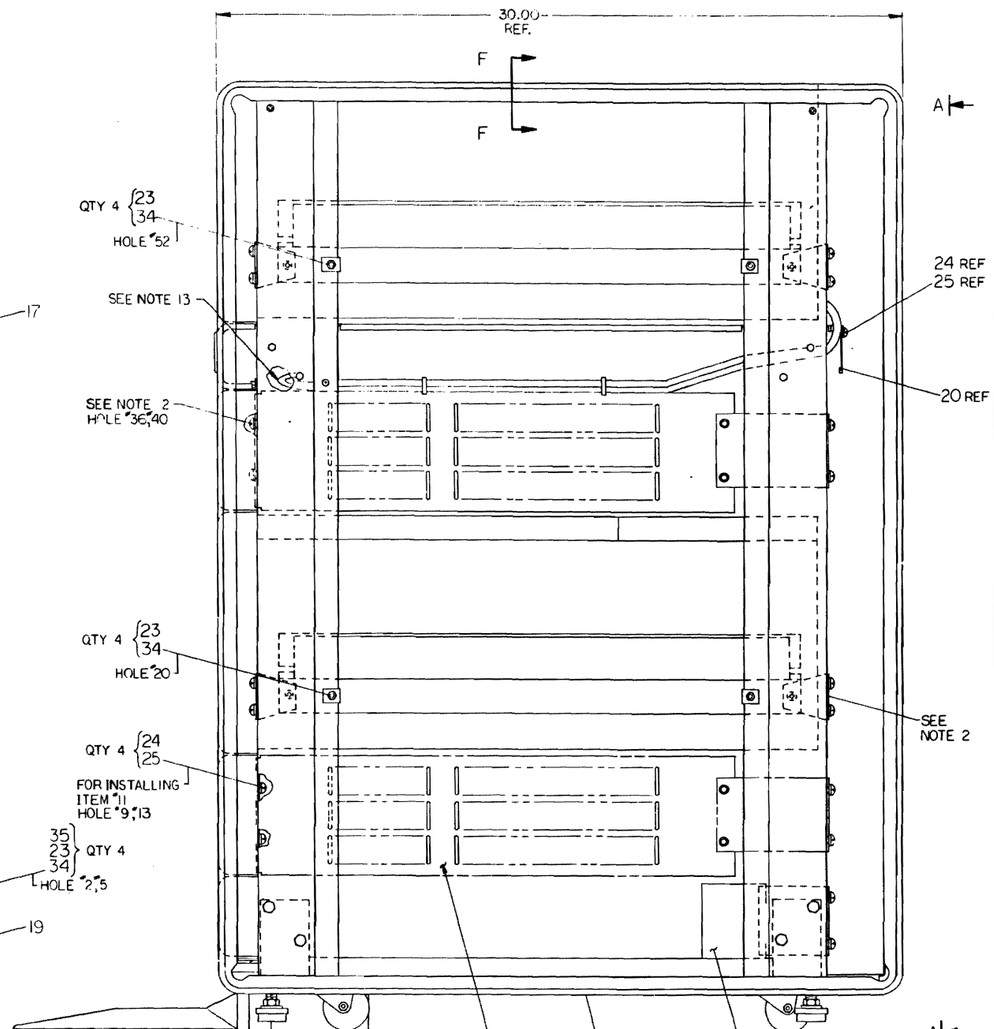
1. THIS SPACE IS FOR BA11-N EXPANSION BOX ONLY.
2. HDW. TO BE SUPPLIED WITH 11/23 & RL01.
3. DEPRESS SPRING CATCH WITH SCREW-DRIVER IN MIDDLE OF SIDE PANELS, PUSHING DOWNWARD. THIS WILL RELEASE SIDE PANELS WHEN PUSHED OUTWARD FROM INSIDE. IF THIS IS NOT DONE PRIOR TO REMOVAL, THE SIDE PANEL WILL BUCKLE AND WILL BE DESTROYED FROM FURTHER USE.
4. TO FASTEN SIDE PANELS, CENTER THEM WITH APPROX. .25 IN. SPACE SHOWING ON BOTH SIDES FROM THE ROLL FORM AND PRESS GENTLY AROUND THE EDGES TILL THE CLIPS ENGAGE.
5. FOR INSTALLING REAR PANEL, DROP HEMMED LIP AT TOP INTO TRAY OF PANEL AND PRESS WHILE TURNING KEY AT BOTTOM OF REAR PANEL. THIS WILL AUTOMATICALLY GROUND ITSELF AND FASTEN THE PANEL SECURELY. TO REMOVE UNLOCK AND LIFT PANEL UPWARD WHILE HOLDING TOP OF PANEL WITH OTHER HAND.
6. BEFORE TIE WRAPPING CORD, EXTEND DRAWER FULLY.
7. DO NOT CUT THE POWER CORDS, OR RETERMINATE.
8. SWITCH SETTINGS ON THE BDV11-AA MUST BE :

SWITCH E15	1	2	3	4	5	6	7	8
SETTING	ON	ON	OFF	ON	OFF	OFF	ON	OFF

SWITCH E21	1	2	3	4	5
SETTING	OFF	OFF	OFF	OFF	ON

9. ALL CABLES MUST BE TIED TO STRAIN RELIEF BRKT. (ITEM #20) IN SUCH A MANNER SO THEY DO NOT RUB ON THE RL WHEN IT SLIDES IN AND OUT.
10. FILL OUT THE SERIAL LABEL (ITEM #16) BY TYPING AND ATTACH AS SHOWN. THE LEGEND CONTAINS THE INFORMATION FOR EACH VARIATIONS.
11. THIS UNIT MUST BE INSTALLED AT LEAST 4" FROM A WALL OR OTHER OBJECTS THAT WOULD OBSTRUCT THE AIR FLOW IN THE REAR OF THE CABINET.
12. CUT W1 & W2 ON 11/23 FRONT PANEL TO ENABLE AUX. SW. FOR POWER ON/OFF APPLICATION.
13. LOOP MUST NOT BE LESS THAN 4 TIMES THE DIA. OF THE CABLE. (REF. DEC. STD 116)



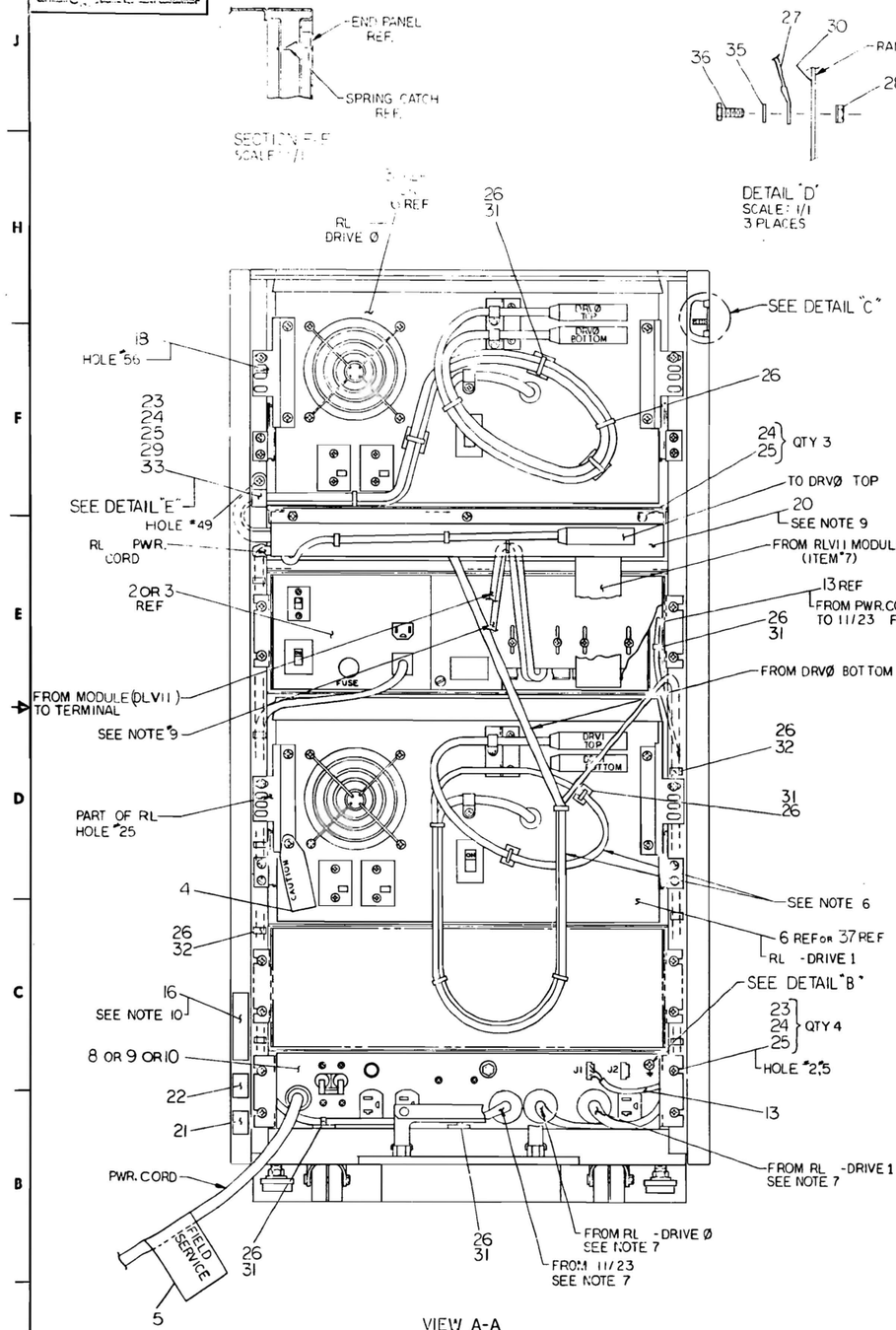


END PANEL REMOVED FOR CLARITY
SEE NOTE 3 & 4

CAUTION :
OFF-SHEETS PARTS LIST EXIST
K-PL-11T23-0-DBP

QUANTITY & VARIATION	DESCRIPTION	DWG./PART NO. / ITEM NO.
THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
	FIRST USED ON: 11T23	
	TITLE: 11T23 UNIT ASSY	
	SEE PARTS LIST / NONE	B-DD-11T23-0 / SIZE E, CODE UA, NUMBER 11T23-0-0, REV. A
	SCALE 1/2	SHT 1 OF 2

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	A	ECO	



TITLE	SIZE	NUMBER	REV
11T23 UNIT ASSY	D UA	11T23-0-0	A

AUTOMATED BY PRTLST.3J(25)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AE	AF
1	1	E-UA-H9612-0-0	H9612-AC	NO PWR CONTROL	1	1	1	1	1
2	2	E-UA-11/23-0-0	11/23-AA	KDF11-AA,BA11-NC,MSV11-DD,BDV11-	1	-	1	1	-
3	3	E-UA-11/23-0-0	11/23-AB	BA11-ND,KDF11-AA,2 MSV11-DD,BDV1	-	1	-	-	1
4	4	A-PS-3616411-0-0	3616411-00	LABEL,CAUTION-INSTALL STABILIZER	1	1	1	1	1
5	5	A-PS-3615903-0-0	3615903-00	TAG,FIELD SERVICE $	1	1	1	1	1
6	6	E-UA-RL01-AK-0	RL01-AK	RL01-A + RL01K-BC,115/230V	2	2	2	-	-
7	7	E-UA-RLV11-0-0	RLV11-00	RL01 LSI11 CONTROLLER	1	1	1	1	1
8	8	E-UA-871-0-0	00871-A	120V 12A POWER CONTROL,UNFILTERE	1	-	-	-	-
9	9	E-UA-871-0-0	00871-B	240V 8A POWER CONTROL,UNFILTERED	-	1	-	-	1
10	10	E-UA-871-0-0	00871-C	120V 16A POWER CONTROL,UNFILTERE	-	-	1	1	-
11	11	E-MD-7415313-0-0	7415313-04	DIE CAST BLANK NO. 10-32	1	1	1	1	1
12	12	D-AD-7011616-0-0	7011616-01	BEZEL ASSY	1	1	1	1	1
13	13	C-IA-7006288-0-0	7006288-BF	CABLE ASSY PDP-11	1	1	1	1	1
14	14	A-SP-3700372-0-0	3700372-01	INSTR PKG CAB H9512/H9612/H9513/	1	1	1	1	1
15	15	B-PL-11T23-0		SHIPPING LIST 11T23	1	1	1	1	1
16	16	A-PS-3615180-0-0	3615180-00	LABEL,SERIAL TAG FOR TYPEWRITER	1	1	1	1	1
17	17	A-PS-3616406-0-0	3616406-00	LABEL,11T23	1	1	1	1	1
18	18	C-MD-7419856-0-0	7419856-01	PRNT,RL01 SHIPPING BLACK	2	2	2	2	2
19	19	B-AD-7011231-0-0	7011231-00	BRACKET BEZEL RETAINER ASSY	2	2	2	2	2
20	20	D-IA-7420779-0-0	7420779-00	BRACKET STRAIN RELIEF	1	1	1	1	1
21	21	A-PS-3613211-0-0	3613211-01	DECAL,CLEAR PREPRINTED CSA 1-1/4	1	1	1	1	1
22	22	A-DC-7416197-0-0	7416197-01	DECAL	1	1	1	1	1
23	23		9007786-00	RETAINER, U-NUT, 10-32	12	12	12	12	12
24	24		9006073-03	SCREW,TRUS,PHIL, 10-32X 1/2	12	12	12	12	12
25	25		9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	16	16	16	16	16
26	26		9007032-00	TIE, CABLE	A/R	A/R	A/R	A/R	A/R
27	27		1213756-12	GROUND STRAP	3	3	3	3	3
28	28		9006565-00	NUT,KEP , 10-32X 3/8 AF	5	5	5	5	5
29	29		9006664-00	WASHER, FLAT, .457 OD X .218 ID	1	1	1	1	1
30	30	A-PS-3612680-0-0	3612680-01	DECAL, GROUND SIGN PER 396 *	5	5	5	5	5

REVISION HISTORY			BASIC PART NO: 11T23
ENG	ECO NUMBER	REV	SECTION A OF A
-	INITIAL	*	SECTION, VARIATION INDEX
*	11T23-ALC01	A	CAT AA,AB,AC,AE,AF
			ED:
			ED:
			ED:
			ED:
			ED:

DRN: PEG TESLA	DATE: 22-MAR-79		D	I	G	I	T	A	L
CHK'D: D. HEALY	DATE: 02-APR-79	TITLE PARTS LIST UNIT ASSY 11T23							
DES.ENG.: J. KALAGHER	DATE: 12-APR-79								
RESP.ENG.: J. KALAGHER	DATE: 12-APR-79	DOCUMENT NUMBER							
		SIZE: K	CODE: PL	NUMBER: 11T23-0-BDP	REV: A				
MFG.ENG.: D. JANUS	DATE: 12-APR-79								
ASSEMBLY NUMBER: E-UA-11T23-0-0	TOP DOCUMENT NUMBER:	FILE NAME: Z0466A.PLS	EDIT #: 3						

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AUTOMATED BY PRTLST,SJK(25) P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AE	AF
31	31		9008264-00	MOUNT, CABLE TIE, ADHESIVE BACKE	A/R	A/R	A/R	A/R	A/R
32	32		9007867-00	MOUNT, PUSH,CABLE TIE $	A/R	A/R	A/R	A/R	A/R
33	33		9007037-00	CLAMP, CABLE, SCREW MNT, 5/8"	1	1	1	1	1
34	34		9006073-01	SCREW,PAN ,PHIL, 10-32X 1/2	12	12	12	12	12
35	35		9006625-00	WASHER,LOCK,INT,.3100D X .200ID	8	8	8	8	8
36	36		9006230-09	SCREW,HEX 10-32X 3/8	3	3	3	3	3
37	37	E-UA-RL02-AK-0	ORL02-AK	RL02-A + RL02K-DC, 120V/240V	-	-	-	2	2

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							UNIT ASSY 11T23		K	PL	11T23-0-DBP	A

LEGEND	
NUMBER	VARIATION
H9612-AA	871-A P.C. 12A 120V
H9612-AB	871-B P.C. 8A 240V
H9612-AC	NO PWR CONTROL
H9612-AD	871-C P.C. 16A 120V

NOTES:

1. DEPRESS SPRING CLIP WITH SCREWDRIVER IN MIDDLE OF SIDE PANELS, PUSHING DOWNWARD. THIS WILL RELEASE SIDE PANELS WHEN PUSHED OUTWARD FROM INSIDE. IF THIS IS NOT DONE PRIOR TO REMOVAL, THE SIDE PANELS WILL BUCKLE AND WILL BE DESTROYED FROM FURTHER USE.
2. TO FASTEN SIDE PANELS, CENTER THEM WITH APPROX. .25 IN. SPACE SHOWING ON BOTH SIDES FROM THE ROLL FORM AND PRESS GENTLY AROUND THE EDGES TILL THE CLIPS ENGAGE.
3. FOR INSTALLING REAR PANEL, DROP HEMMED UP AT TOP INTO TRAY OF PANEL AND PRESS WHILE TURNING KEY AT BOTTOM OF REAR PANEL. THIS WILL AUTOMATICALLY GROUND ITSELF AND FASTEN THE PANEL SECURELY. TO REMOVE UNLOCK AND LIFT PANEL UPWARD WHILE HOLDING TOP OF PANEL WITH OTHER HAND.
4. TORQUE REQUIREMENTS:
   10-32 — 35 INCH POUNDS.

SECTION OF ITEM 1

2 REF

FOR REMOVAL INSTR. SEE NOTE 1

SECTION A-A
SCALE: 1/1

21.25 REF

1

2 REF

10.50 REF. TOP LOAD RLOI

.62 REF.
.62 REF.
.50 REF.
.44 REF.

24.50 REF. PANEL SPACE

2 SEE NOTE 2

18.31 REF

DANGER HIGH VOLTAGE

.50 REF.
.62 REF.
.62 REF.
.34 REF.

41.38 REF

2

30.00 REF

A
A

3 SEE NOTE 3

HOLE "5

HOLE "2

PWR. CORD REF

4 OR 5 OR 9

6
7
8 (QTY 4) SEE NOTE 4

CAUTION:
OFF SHEETS PARTS LIST
EXIST A-PL-H9612-0-0

REVISIONS		
ZONE	CHANGE NO.	REV.

THIRD ANGLE PROJECTION	DESCRIPTION		DP JUPART NO.	ITEM NO.	
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
QUANTITY & VARIATION	DRN.		FINISH UNLESS	1IT03-L	
	CHK'D		TITLE	CABINET (H9612)	
	ENG'G				
	PROJ. ENG'G				
	PROD. & TEST				
	MATERIAL				
SEE PARTS LIST	B-DD-H9612-0	SIZE	CODE	NUMBER	REV.
NONE	SCALE 1/2	C	UA	H9612-0-0	
	SHT. 1 OF 1				

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY [illegible]	CHECKED [illegible]	SECTION 1
DATE [illegible] 78	DATE 10 [illegible] 76	
ENG [illegible]	PROD C. BRADDOCK	ISSUED SECT. 1
DATE 10 [illegible] 76	DATE 26 JUNE 78	

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION H9612-AA	H9612-AB	H9612-AC	H9612-AD
1	E-UA-H9512-AA-0	Cabinet Frame Assy (40") Top Load	1	1	1	1
2	C-PL-H9514-FB-0	End Panel Solid 40" (1.95 Brn)	2	2	2	2
3	C-PL-H9514-JA-0	Rear Panel 40"	1	1	1	1
4	E-UA-871-A-0	Power Control 12A 120V	1	-	-	-
5	E-UA-871-B-0	Power Control 8A 240V	-	1	-	-
6	9007786	Speed Nut #10-32	4	4	-	4
7	9006056-03	Scr Phl Truss Hd #1/4-20 x .50 Lg. SST	4	4	-	4
8	9007651	Washer, Ext Tooth Lock #10	4	4	-	4
9	E-UA-871-C-0	Power Control 16A 120V	-	-	-	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
CABINET (H9612)	E-UA-H9612-0-0	A	PL	H9612-0-0		
	SHEET 1 OF 1	DIST.				

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

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B-TC-11/23-0-1	FIELD MAINTENANCE PRINT SET
E-UA-11/23-0-0	UNIT ASSY 11/23
K-PL-11/23-0-DBP	UNIT ASSY 11/23 (PL)
B-PL-11/23-0	SHIPPING LIST 11/23
MPØØ734	FIELD MAINTENANCE PRINT SET KDF11-A
MPØØ489	FIELD MAINTENANCE PRINT SET BDV11-A
MPØØ487	FIELD MAINTENANCE PRINT SET BA11-N
MPØØ566	FIELD MAINTENANCE PRINT SET MSV11-D
MPØØ586	FIELD MAINTENANCE PRINT SET DLV11-J

UNIT VARIATIONS COVERED BY THIS PRINT SET
PDP 11/23-AA
PDP 11/23-AB
PDP 11/23 AC
PDP 11/23-AD
PDP 11/23-XX

PDP11/23
Field Maintenance
Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.
MPØØ74Ø

REVISIONS		
REV		A
CHG. NO.		11/23-MLC01
DATE		12-79

USED ON OPTION/MODEL	
11/23-AA	
11/23-AB	
11/23-AC	
11/23-AD	

SHEET 1 OF 1

DRN.	PEG TESLA	DATE 16JAN79
CHK'D	[signature]	DATE 11-9-79
PROJ. ENG.	[signature]	DATE 11AR79
FIELD SERV.	[signature]	DATE 12-Apr-79

TITLE:
FIELD MAINT PRINT SET
PDP11/23

SIZE	CODE	NUMBER	REV.
B	TC	11/23-0-1	A

DIST.

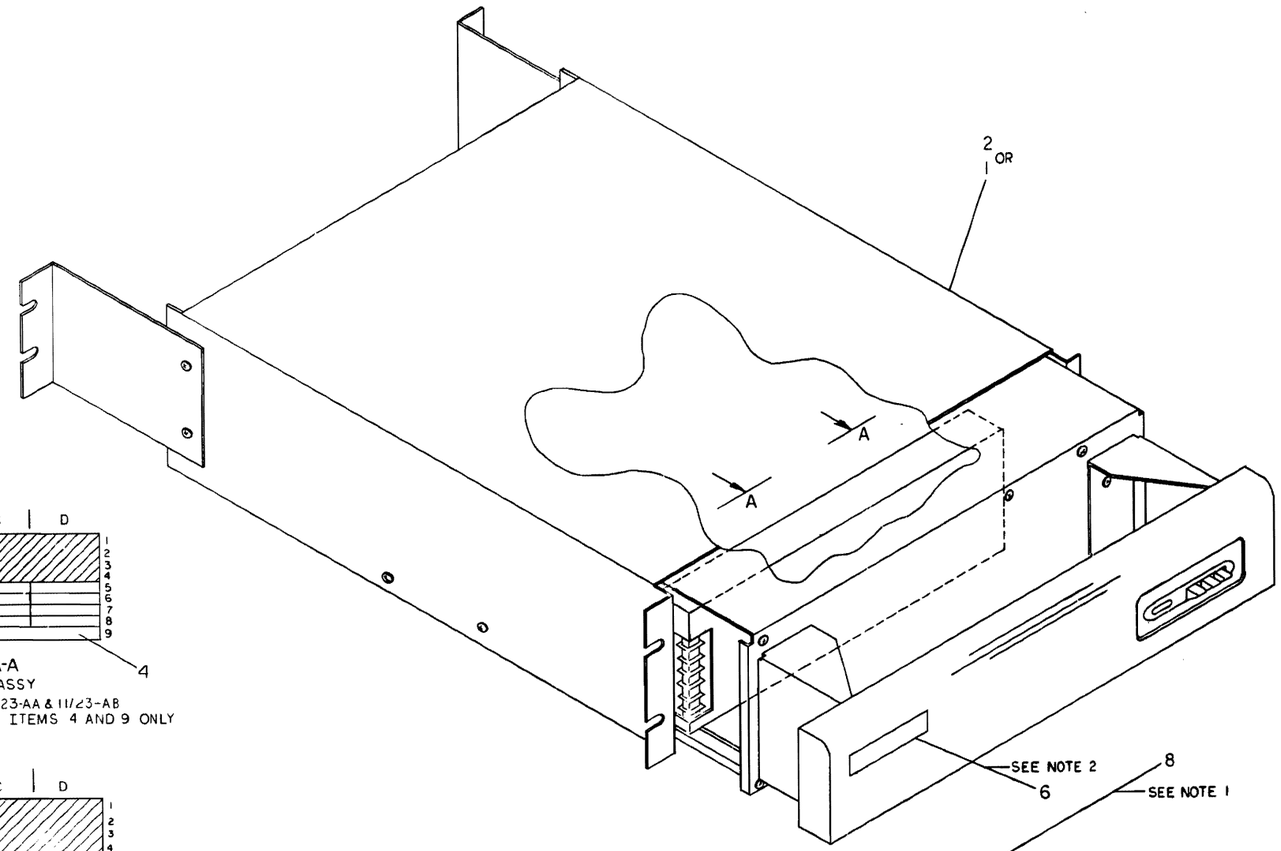
DRD 124

SIZE B | CODE TC | NUMBER 11/23-0-1 | REV. A

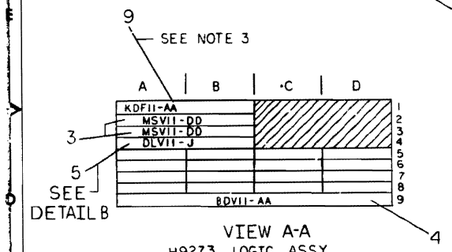
LEGEND	
NUMBER	VARIATION
11/23-AA	BA11-NC, KDF11-AA, (2)MSV11-DD, BDV11-AA, DLV11-J, 120V, 50-60HZ, 128KB
11/23-AB	BA11-ND, KDF11-AA, (2)MSV11-DD, BDV11-AA, DLV11-J, 240V, 50-60HZ, 128KB
11/23-AC	BA11-NC, KDF11-AA, (4)MSV11-DD, BDV11-AA, DLV11-J, 120V, 50-60HZ, 256KB
11/23-AD	BA11-ND, KDF11-AA, (4)MSV11-DD, BDV11-AA, DLV11-J, 240V, 50 60HZ 256KB
11/23-YX	BA11-NC, KDF11-AA, BDV11-AA 120V 50 60HZ FOR INTERNAL MANUFACTURING USE ONLY

NOTES:

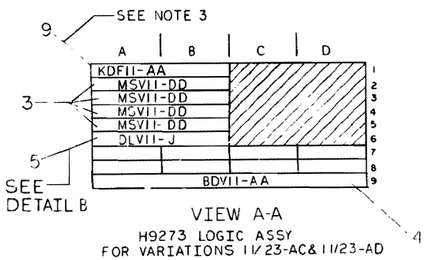
1. INSTALL ITEM #8 (TEST CONNECTOR) ON ITEM 5 (DLV11-J) THREE (3) PLACES AS SHOWN.
2. ITEM #6 (LOGO) MUST BE APPLIED TO THE BEZEL SO THAT IT IS PARALLEL WITH THE TOP OF THE BEZEL AND COMPLETELY COVERS THE CAST IN LOGO ON THE BEZEL.
3. BEFORE INSTALLING (ITEM # 9) KDF11-AA MODULE (M8186) AT HARDWARE REVISION A4 OR EARLIER, CAPACITOR C3 MUST BE REMOVED FOR PROPER POWER UP SEQUENCE. REFER TO D-UA-M8186-0-0. THE CAPACITOR SHOULD NOT BE REMOVED ON MODULES AT HARDWARE REVISIONS A5 OR C1 OR LATER.



DETAIL B



VIEW A-A
H9273 LOGIC ASSY
FOR VARIATIONS 11/23-AA & 11/23-AB
AND VARIATION 11/23-YX ITEMS 4 AND 9 ONLY



VIEW A-A
H9273 LOGIC ASSY
FOR VARIATIONS 11/23-AC & 11/23-AD

CAUTION: OFF-SHEET PARTS LIST
K-PL-11/23-0-DBP

11/23
UNIT ASSY
11/23
MD 11/23-00

AUTOMATED BY PRTLST.3G(17) P A R T S L I S T SHEET A1 OF A1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	YX
1	1	E-UA-BA11-N-0	0BA11-NC	5.2" BOX,METAL COVER,H9273 BACK	1	-	1	-	1
2	2	E-UA-BA11-N-0	0BA11-ND	5.2" BOX,METAL COVER,H9273 BACK	-	1	-	1	-
3	3	A-PL-MSV11-D-0	MSV11-DD	32K 16 BIT MOS RAM,16K CHIPS M80	2	2	4	4	-
4	4	D-UA-BDV11-A-0	BDV11-AA	M8012 WITH BOOTSTRAP DIAGNOSTIC	1	1	1	1	1
5	5	A-PL-DLV11-J-0	DLV11-J	4 SERIAL LINE PERIPHERAL INTF	1	1	1	1	-
6	6	A-PS-3616407-0-0	3616407-00	LABEL,PDP11/23	1	1	1	1	1
7	7	A-PS-3700323-0-0	3700323-00	INSTR. PKG. COMPUTER 11/03-L	1	1	1	1	1
8	8	C-UA-H3270-0-0	H3270-00	TEST CONNECTOR	3	3	3	3	-
9	9	K-PL-KDF11-A-DBP	KDF11-AA	Q-BUS PDP11 (DcF11) WITH KTF11-A	1	1	1	1	1
10	10	B-PL-11/23-0		SHIPPING LIST 11/23	1	1	1	1	1

11 NOTE: NOTE 1: SEE ITEM #5. PART #DLV11-J MUST BE M8043 CS REV E OR LATER.
12 NOTE: NOTE 2: VARIATION YX IS FOR INTERNAL MANUFACTURING USE ONLY

REVISION HISTORY			BASIC PART NO: 11/23										
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: P. TESLA	DATE: 15-JAN-79		D	I	G	I	T	A	L
---	INITIAL	*	SECTION, VARIATION INDEX	CHK'D: D. BRIGHAM	DATE: 11-APR-79	TITLE PARTS LIST							
RL	11/23-ML001	A	[A] AA,AB,AC,AD,YX			UNIT ASSY 11/23							
			[B]	DES.ENG.: J. KALAGHER	DATE: 15-JAN-79								
			[C]	RESP.ENG.: J. KALAGHER	DATE: 15-JAN-79	DOCUMENT NUMBER							
			[D]			SIZE	CODE	NUMBER			REV		
			[E]	MFG.ENG.: R. HAMILTON	DATE: 11-APR-79	K	PL	11/23-0-DBP			A		
			[F]	ASSEMBLY NUMBER: E-UA-11/23-0-0	TOP DOCUMENT NUMBER:			FILE NAME: Z0212A.PLS			EDIT #: 12		

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DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY PEG TESLA DATE 19 MAR 79	CHECKED DATE	SECTION 1
ENG DATE J Flaglor 11 APRIL 79	PROD DATE 4-11-79	ISSUED SECTION 1

NOTES:
* THESE ITEMS ARE ONLY TO BE SHIPPED WITH FIRST SHIP TO CUSTOMER.

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION 11/23-AA	11/23-AB	11/23-AC	11/23-AD									REF DESIGNATION
1		EK-BA11-N-TM-ØØ1	BA11-N TECHNICAL MANUAL	*	*	*	*									
2		ZJØ12-RB	F11 BASIC CPU DOC/PT KIT	*	*	*	*									
3		ZJ269-RB	DLV11-J DIAG DOC/PT KIT	*	*	*	*									
4		ZJ254-RB	M8Ø12 DIAGNOSTIC KIT	*	*	*	*									
5	B-TC-11/23-Ø-1	MPØØ74Ø	11/23 FIELD MAINTENANCE PRINT SET	1	1	1	1									
6		EB-15115-78	MICROCOMPUTER PROCESSORS HANDBOOK	*	*	*	*									
7		EB-15114-78	MEMORIES AND PERIPHERALS HANDBOOK	*	*	*	*									
8		EK-KDF11-UG	KDF11-A USER'S GUIDE	1	1	1	1									

E.C.O. NO.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
SHIPPING LIST 11/23	E-UA-11/23-0-0	B	PL	11/23-0	
	SHEET 1 OF 1	INSERTION PARTS LIST DATA BASE REV			

ORB 125

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-KDF11-A-1	FIELD MAINTENANCE PRINT SET KDF11-A
K-PL-KDF11-A-DBP	PARTS LIST, KDF11-A
C-UA-KDF11-A-Ø	UNIT ASSY, KDF11-A
B-DD-M8186-Ø	DRAWING DIRECTORY, M8186
D-UA-M8186-Ø-Ø	UNIT ASSY, M8186
K-PL-M8186-Ø-DBP	KDF11-A CPU
D-CS-M8186-Ø-1	KDF11-A CPU (CIRCUIT SCHEMATIC)

UNIT VARIATIONS COVERED BY THIS PRINT SET
KDF11-AA
KDF11-AB
KDF11-AC

KDF11-A
Field Maintenance
Print Set

Digital Equipment
Corporation

PRINT SET ORDER NO.
MPØØ734

REVISIONS		
REV.	CHG. NO.	DATE
B	KDF11A-MLØØ1	2/7/80

USED ON OPTION/MODEL	
11/23-A	
	SHEET 1 OF 1

DRN.	W.J. MAHER	DATE 7DEC78
CHK'D		DATE 3/15/79
PROJ. ENG.		DATE 3/15/79
FIELD SERV.		DATE 3/22/79

TITLE: FIELD MAINTENANCE PRINT SET
KDF11-A

SIZE	CODE	NUMBER	REV.
B	TC	KDF11-A-1	B

DIST.

DRD 124

SIZE B | CODE TC | NUMBER KDF11-A-1 | REV. B

AUTOMATED BY PRTLST.3L(40)

P A R T S L I S T

SHEET A1 OF A1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC
1	1		MS186-00	16 BIT MICROPROCESSOR	1	1	1
2	2		2115542-01	F1-=11 MMV W/FLOAT PT RE	1	1	-
3	3		5700001-00	CTL/CTL HYBRID KEF11-AA	-	1	-
4	4		9905622-00	BOX, FOLDING	1	1	1

REVISION HISTORY			
ENG	ECO NUMBER	REV	SECTION A OF A
MT	KDF11A-ML001	B	SECTION. VARIATION INDEX [A] AA,AB,AC [B] [C] [D] [E] [F]

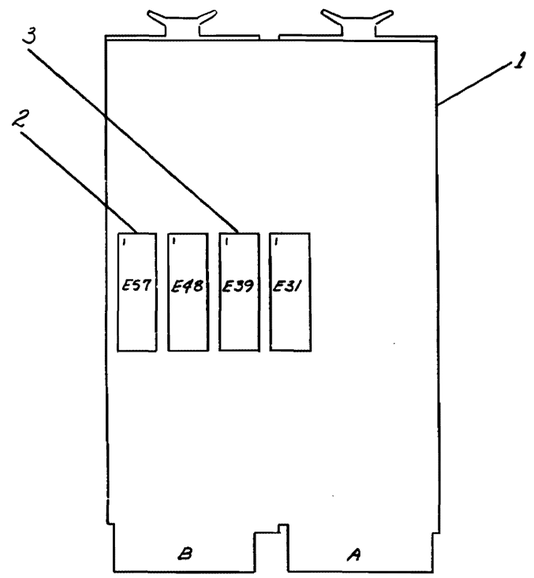
		D	I	G	I	T	A	L					
TITLE: DUAL HEIGHT CPU PARTS LIST													
DRN: P.BLODGETT	DATE: 21-JAN-80	DOCUMENT NUMBER											
CHK'D: W.J. MAHER	DATE: 21-JAN-80	SIZE	CODE	NUMBER	REV								
DES.ENG.: R. BADEAU	DATE: 21-JAN-80												
RESP.ENG.: R. BADEAU	DATE: 21-JAN-80	K	PL	KDF11-A-DBP	B								
MFG.ENG.: A. HOFFMAN	DATE: 21-JAN-80												
ASSEMBLY NUMBER: B-DD-KDF11-A-0	TOP DOCUMENT NUMBER:	FILE NAME: Z0473B.PLS			EDIT # 4								

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LEGEND	
NUMBER	DESCRIPTION
KDF11-AA	M8186 + KTF11-AA
KDF11-AB	M8186+KTF11-AA+KEF11-AA
KDF11-AC	M8186

NOTES:
1. FOR PROPER OPERATION OF FLOATING POINT (ITEM #3), THE M8186 MODULE (ITEM #1) MUST BE AT HARDWARE REVISION A6 OR C2 OR LATER.
2. WHEN INSTALLING ITEMS #2 OR #3 ON ITEM #1 MAKE SURE THAT PIN 1 IS LOCATED AS SHOWN.



COMPONENT SIDE VIEW

FOR PARTS LIST SEE: K-PL-KDF11-A-DBP

REVISION HISTORY		
DATE	ECO NUMBER	REV.
2-Jan-80	KDF11A-ML000	B
11 Feb 80	M. TEHRANIAN	

DESCRIPTION	DRAWING NO.	PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND THE FOLLOWING TOLERANCES APPLY (PER DEC STD 114)

INCHES TOLERANCES	ANGLES ± 0° 30'	APPLICABLE DIMENSION RANGE (CHECK ONE)	DIMENSIONS RANGE IN INCHES					
			OVER 0 TO 0.2	OVER 0.2 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
X = ± .1	SURFACE QUALITY	☐	± .02		± .03	± .05	± .10	
XX = ± .02	✓	☐	± .004	± .008	± .012	± .016	± .024	± .04
XXX = ± .005	MICROINCHES	☐						

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

DO NOT SCALE DRAWING

REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. Gopal Ch. Colo	DATE 2/7/80	
CHKD. Lou Milazzo	DATE 2/7/80	
DES. ENG. Ron Pudnay	DATE 11 Feb 80	
PROJ. ENG. Mike Tehranian	DATE 11 Feb 80	
MFG. ENG. A. Sanyal	DATE 11 Feb 80	
NEXT HIGHER ASSY. B-DD-M8186-0		

TITLE: KDF11-A CPU UNIT ASSEMBLY

DOCUMENT NUMBER			
SIZE	CODE	NUMBER	REV.
C	UA	KDF11-A-Ø	B
SCALE		SHEET 1 OF 1	

SIZE C UA NUMBER KDF11-A-Ø REV. B

CITIAKDF11-A_Ø REV B

DRC 1000

SIZE	CODE	NUMBER	REV.
B	DD	M8186-Ø	K

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS										
		M8186	HARDWARE REVISION (ETCH A)	AØ	A1	A2	A3	A3	A4	A5	A6	A6	A7	
D-UA-M8186-0-0	3		KDF11A CPU	*	A	B	C	C	C1	C2	C2	C2	C3	
B-PL-M8186-0-0			PARTS LIST	*	A	B	C	C	C	C1	C2	C3	C3	
D-CS-M8186-0-1	4		KDF11A CPU	*	A	B	C	C	C1	C2	C2	C2	C3	
D-MD-5013326-0-0	5		DRILL AND ETCH DRAWING	*	*	*	*	*	*	*	*	*	*	
		5013326	ETCHED BOARD	A	A	A	A	A	A	A	A	A	A	
		M8186	HARDWARE REVISION (ETCH C)					CØ	CØ	C1	C2	C2	C3	
D-UA-M8186-0-0			KDF11-A CPU					D	D	E	E	E	F	
K-PL-M8186-0-DBP			DATA BASE PARTS LIST					D	D	E	F	H	J	
D-CS-M8186-0-1			KDF11-A CPU					D	D	E	E	E	F	
D-MD-5013326-0-0			DRILL AND ETCH DRAWING					D	D	D	D	D	D	
		5013326	ETCHED BOARD					C	C	C	C	C	C	

NOTES:

1. THE HARDWARE REVISION IS STAMPED ON THE MODULE HANDLE. IT IS A TWO FIELD ALPHA-NUMERIC CHARACTER. THE FIRST FIELD INDICATES THE ETCH REVISION. THE SECOND FIELD INDICATES THE NUMBER OF MODIFICATIONS TO THE BASIC BOARD.
2. THERE WERE NO ETCH REVISION B BOARDS RELEASED TO PRODUCTION.

REVISIONS	REV.	CHG NO.	DATE
	*	INITIAL	3-79
	A	ML001	4-79
	B	ML002	5-79
	C	ML003	5-79
	D	ML004	7-79
	E	ML005	10-79
	F	ML006	11-79
	H	ML007	12-79
	J	ML008	1-80
	K	ML009	4-80

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digital

USED ON OPTION/MODEL	
KDF11A	

DRN	Rita Z. Bureau	28FEB79
CHK'D		3/15/79
ENG		3/15/79
PROD		3/15/79

TITLE: KDF11A CPU

SIZE	CODE	NUMBER	REV.
B	DD	M8186-0	K

SHEET 1 OF 1

DRB 123

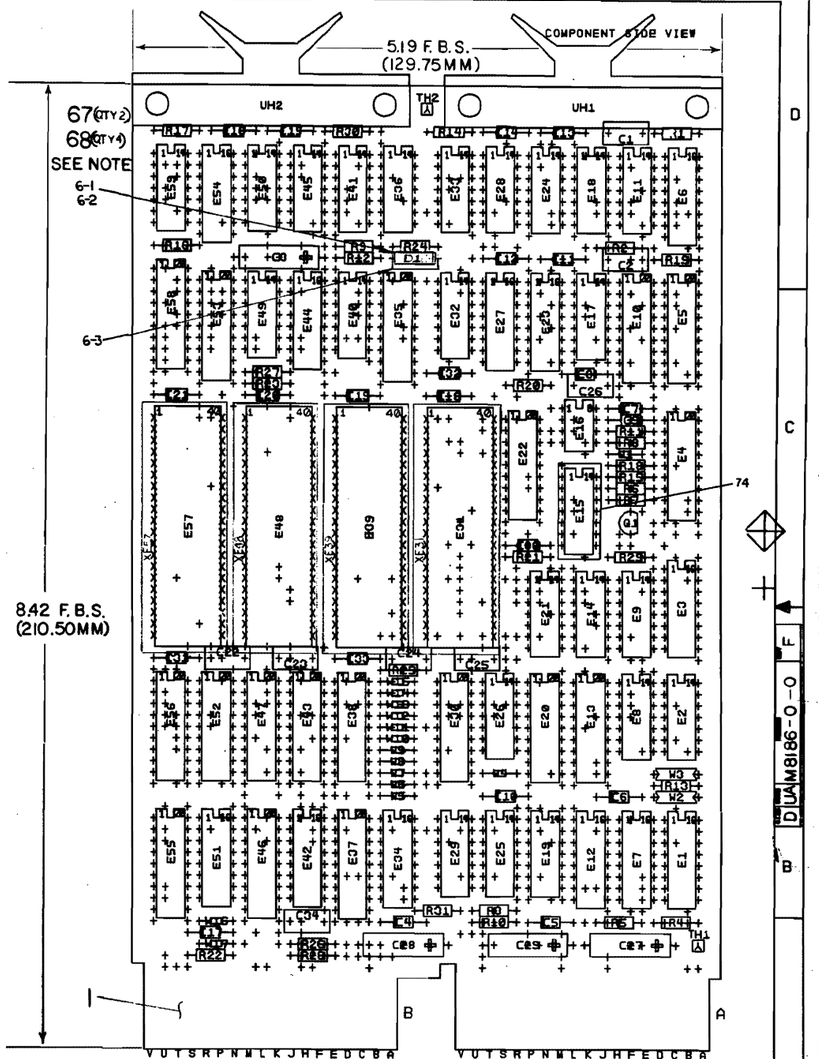
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REWORK INSTRUCTIONS
ECO#6

COMPONENT DELETES:
6-1 DELETE JUMPER W18
COMPONENT ADDS:
6-2 ADD DIODE D1 IN LOCATION PREVIOUSLY USED FOR W18. CATHODE IS TO THE RIGHT.
WIRE ADDS:
6-3 ADD WIRE FROM LEFT END OF D1 TO RIGHT END OF D1. USE RED WIRE 9105740-22. DO NOT GLUE DOWN WIRE.

JUMPER CONFIGURATIONS

JUMPER	NAME	FUNCTIONALITY	SHIPPING STATUS
W1	MASTER CLOCK	IN = ENABLED	IN
W2	RESERVED FOR DEC USE	FACTORY CONFIGURED, DO NOT CHANGE	OUT
W3	RESERVED FOR DEC USE	FACTORY CONFIGURED, DO NOT CHANGE	IN
W4	EVENT LINE ENABLE	OUT = ENABLED	IN
W5, W6	POWER UP MODE	W5 / W6: MODE 0 = PC @ 24, PS @ 26: OUT OUT; MODE 1 = CONSOLE ODT: IN OUT; MODE 2 = BOOTSTRAP: OUT IN; MODE 3 = EXTENDED MICROCODE: IN IN	W5-IN W6-OUT
W7	HALT/TRAP OPTION	IN = TRAP TO 10_8 ON HALT OUT = ENTER CONSOLE ODT ON HALT	OUT
W8	BOOTSTRAP ADDRESS	IN = POWER UP TO 173000_8 OUT = POWER UP TO ADDRESS SPECIFIED BY W9-W15	IN
W9-W15	USER SELECTABLE BOOTSTRAP ADDRESS	W9-W15 CORRESPOND TO ADDRESS BITS 9 THRU 15 RESPECTIVELY IN = LOGIC 1, OUT = LOGIC Ø	IN
W16, W17	RESERVED FOR DEC USE	FACTORY CONFIGURED, DO NOT CHANGE	IN
W18	WAKE-UP CIRCUIT	OUT = ENABLED	IN



MODULE REWORK AT RELEASE
ETCH CUTS-SIDE 1
0-1 UNDER E13 BETWEEN E13-18 & E20-18
0-2 UNDER E13 BETWEEN E13-16 & FEEDTHRU TO THE RIGHT OF E13-5

NOTES:
1. REFER TO PARTS LISTS FOR ALL NUMBERED ITEMS.
2. E39 & E48 ARE SPARE IC'S

CHG	CHANGE NO	REV
	REVISED & RELEASED	D
M8186-ALCO4		E
M8186-ALCO6		
	R. BADEAU	
M8186-ALCO9		F
	M. TERRANIAN	

SIGNATURES	DATE
DRN.	5-22-79
CHK'D.	
MECH. ENG.	
PROJ. ENG.	
PROD.	

ETCH REV. C
P.C. DESIGN DATABASE REV. C/REV.394

digital

TITLE: KDF11 CPU

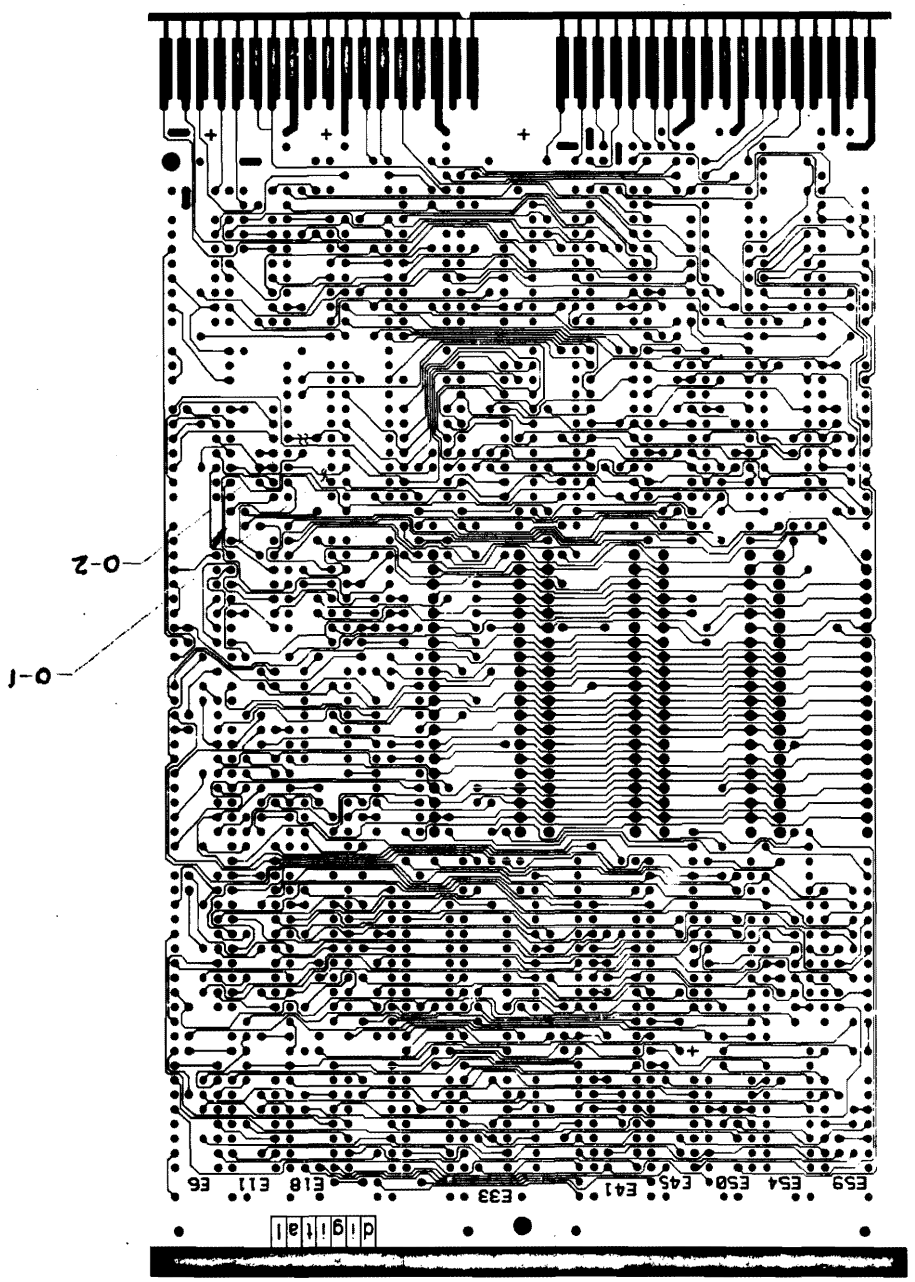
SCALE 2/1 | SHT. OF 5 | SIZE D | CODE UA | NUMBER M8186-0-0 | REV F

NEXT HIGHER ASSY. B-DD-M8186-0-0

STEP E ↑ Y PICKS 0 STEP 0 TIMES
REPORT → X PICKS 5.250 STEP 2 TIMES

MS# 1803770

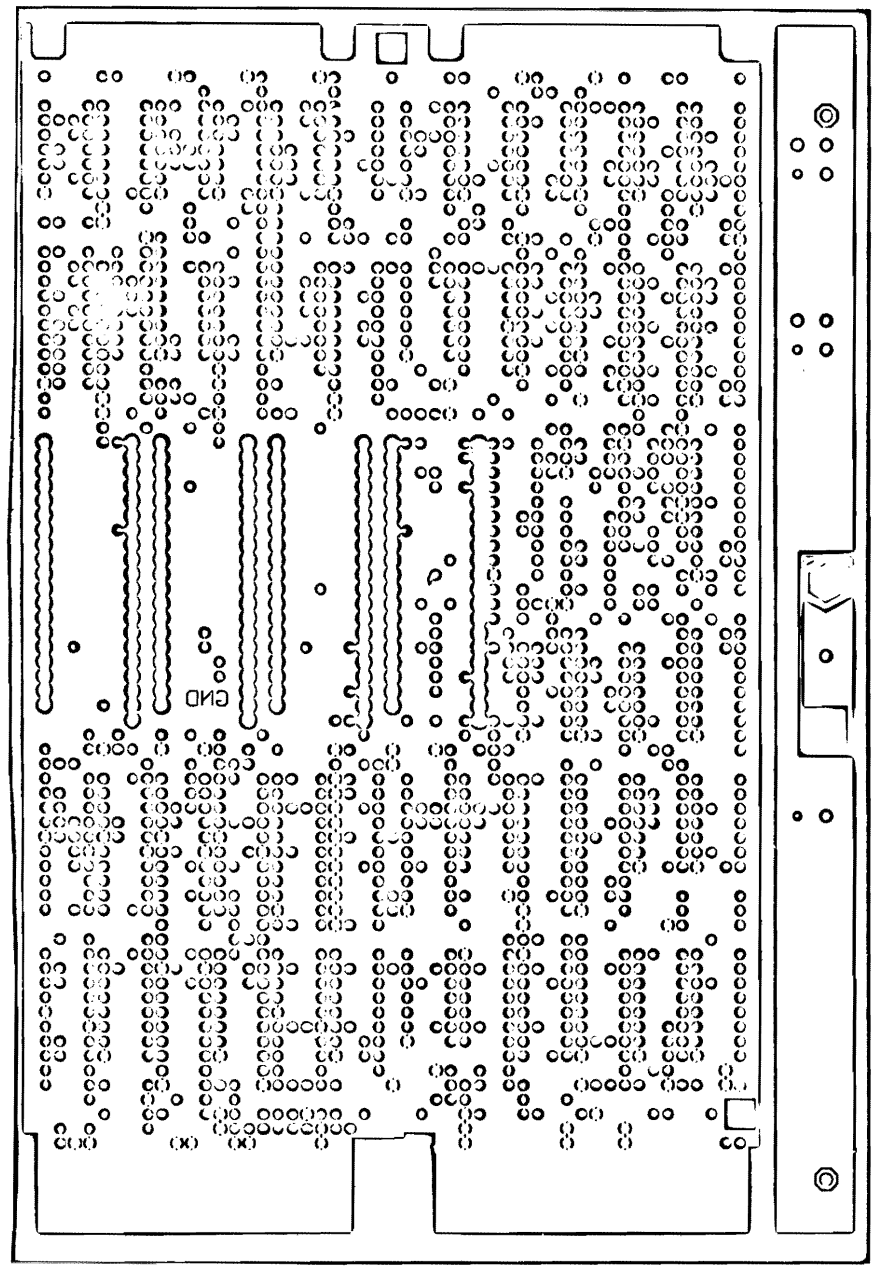
SIZE	DWG NO							REV
D	MB186-0-0							F
SCALE	2/1	SHEET 2 OF 5						



SIZE	DWG NO							REV
D	MB186-0-0							F
SCALE	2/1	SHEET 2 OF 5						

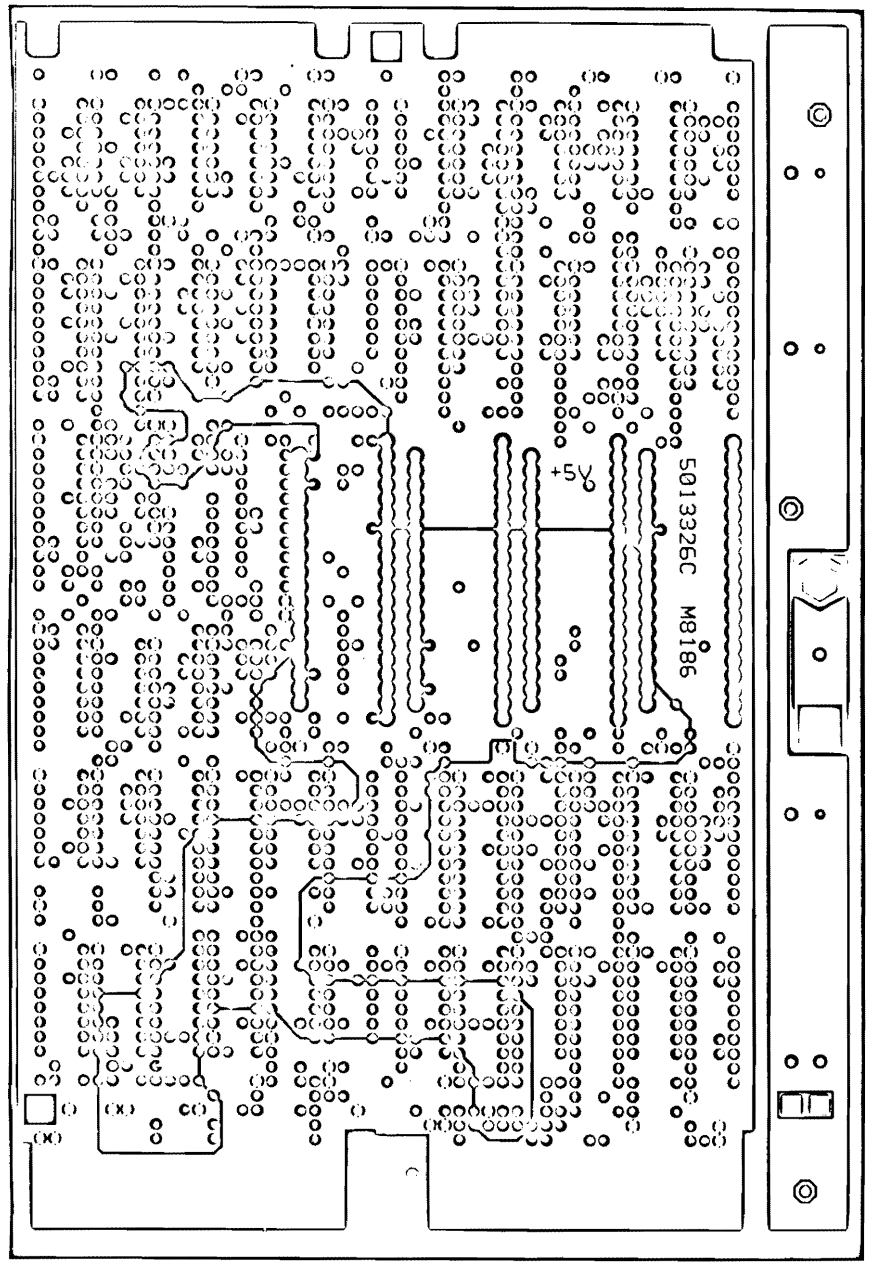
L2

5013326C M8186



KDF11 CPU DUA M8186 Ø Ø F

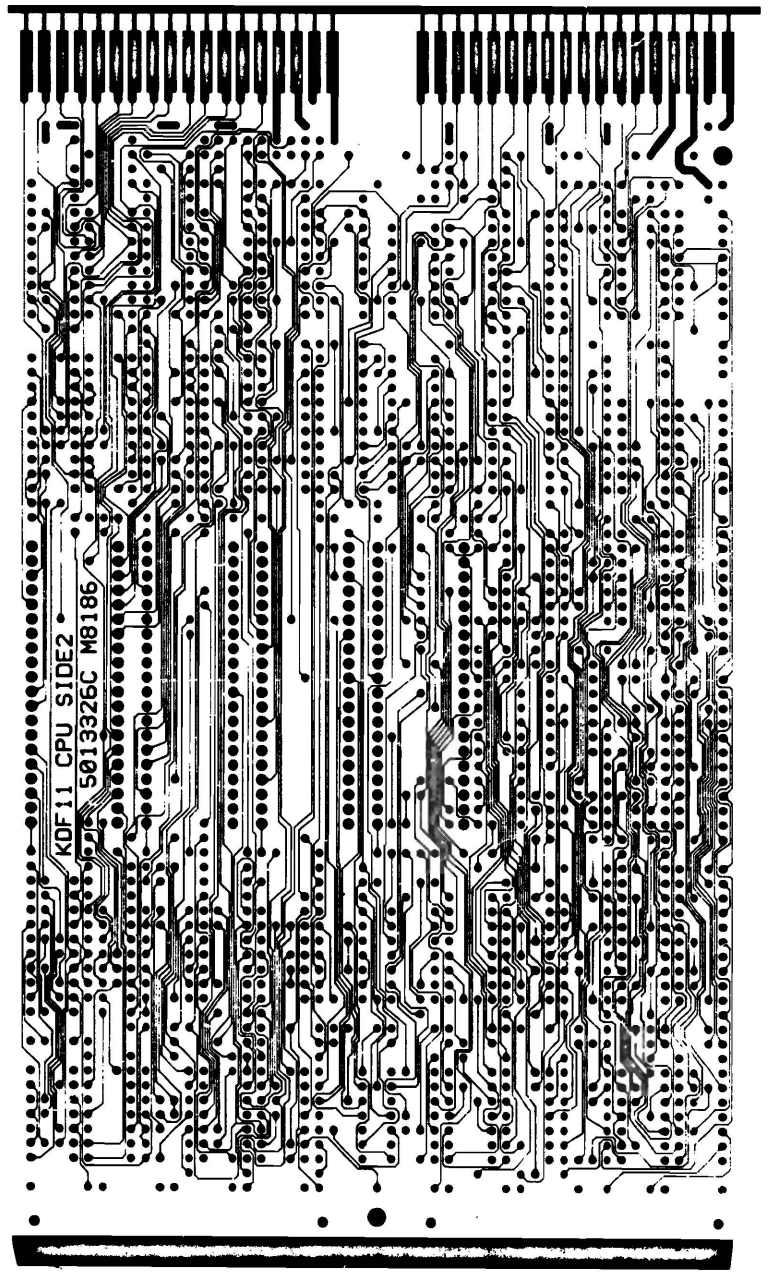
2/1 3 5



KDF11 CPU DUAM8186-0-0 F

2/1 4 3

F	MB186-0-0	D UA	SIZE	REV	TITLE KDF11 CPU	SCALE	SHEET 2/1	OF 5	5



F	MB186-0-0	D UA	SIZE	REV	TITLE KDF11 CPU	SCALE	SHEET 2/1	OF 5	2

AUTOMATED BY PRTLST.3L(32) P A R T S L I S T SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION		QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5013326-0-0	5013326-00	KDF11-CPU		1	
2	2		1912799-00	LS00	NAND-GATE-QUAD 2IN,P	1	E45
3	3		1910532-00	74S00	NAND GATE-QUAD 2IN	1	E2
4	4		1912388-00	74S02	NOR GATE-QUAD 2IN,PO	1	E33
5	5		1910534-00	74S04	INVERTER GATE-HEX 1I	1	E14
6	6		1910535-00	74S05	INVERTER GATE-HEX 1	1	E59
7	7		1912805-00	LS08	AND GATE-QUAD 2IN,PO	1	E28
8	8		1912389-00	74S08	AND GATE-QUAD 2IN,PO	1	E9
9	9		1912807-00	LS10	NAND GATE-TRIPLE 3IN	1	E36
10	10		1912808-00	LS11	AND GATE-TRIPLE 3IN	1	E41
11	11		1913414-00	LS14	INVERTER GATE-HEX SC	1	E40
12	12		1910539-00	74S20	NAND GATE-DUAL 4INPU	1	E18
13	13		1912813-00	LS27	NOR GATE-TRIPLE 3IN	1	E17
14	14		1913340-00	74S32	OR GATE-QUAD 2IN	1	E32
15	15		1910542-00	74S64	A-O-I GATE 4-2-3-2	2	E21,E50
16	16		1912824-00	LS74	FF-D DUAL,EDGE TRIGG	2	E11,E29
17	17		1910544-00	74S74	FF-D DUAL,EDGE TRIGG	2	E24,E49
18	18		1912649-00	LS75	LATCH 4BIT,BISTABLE	1	E27
19	19		1910545-00	74S112	FF-JK DUAL,EDGE TRIG	1	E44
20	20		1912837-00	LS123	ONE SHOT-DUAL,RETRIG	1	E6
21	21		1912842-00	LS138	DECODER-THREE INPUT,	1	E54
22	22		1910550-00	74S174	FF-D HEX	1	E3
23	23		1910957-00	74S175	FF-D QUAD COMMON CLO	1	E1
24	24		1913777-00	LS240	DRIVER,LINE,OCTAL,T	2	E20,E30
25	25		1913462-00	74S240	OCTAL BUFFER,INVERTI	2	E4,E46
26	26		1913493-00	74S241	OCTAL BUFFER,TRI-STA	1	E13
27	27		1915193-00	LS244	DRIVER,LINE,OCTAL,T	1	E53
28	28		1912863-00	LS273	FF-D OCTAL W/CLEAR	1	E10
29	29		1915367-00	74276	FF-JK QUAD	1	E35
30	30		1913671-00	74S374	FF-D OCTAL TRISTATE	4	E5,E22,E38,E58

REVISION HISTORY			BASIC PART NO: M8186
ENG	ECO NUMBER	REV	SECTION A OF A
---	INITIAL	D	SECTION.VARIATION INDEX
RB	M8186-ML006	E	[A] 00
MT	M8186-ML007	F	[B]
MT	M8186-ML008	H	[C]
MT	M8186-ML009	J	[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

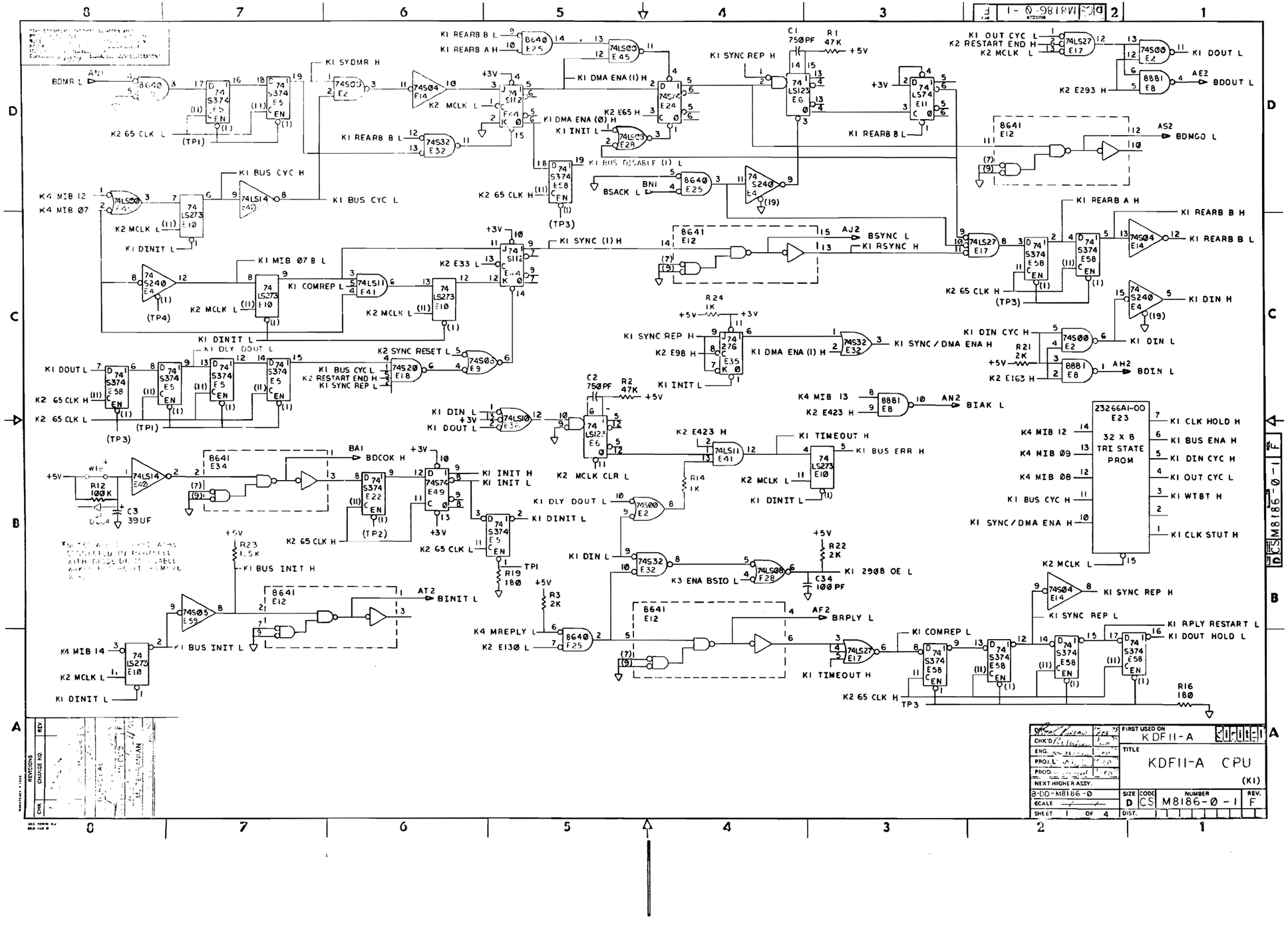
DRN: VIN PARECHANIAN	DATE: 18-JUN-79		D	I	G	I	T	A	L
CHK'D: T. SHETRAWSKI	DATE: 4-SEP-79	TITLE PARTS LIST							
		KDF11 CPU							
DES.ENG: ROY BADEAU	DATE: 4-SEP-79								
		DOCUMENT NUMBER							
RESP.ENG.: ROY BADEAU	DATE: 4-SEP-79	SIZE	CODE	NUMBER	REV
		K	PL	M8186-0-DBP	J
MFG.ENG.: AMALENDA SANYAL	DATE: 4-SEP-79				
ASSEMBLY NUMBER: D-UA-M8186-0-0	TOP DOCUMENT NUMBER:	FILE NAME: Z0224J.PLS	EDIT #: 21

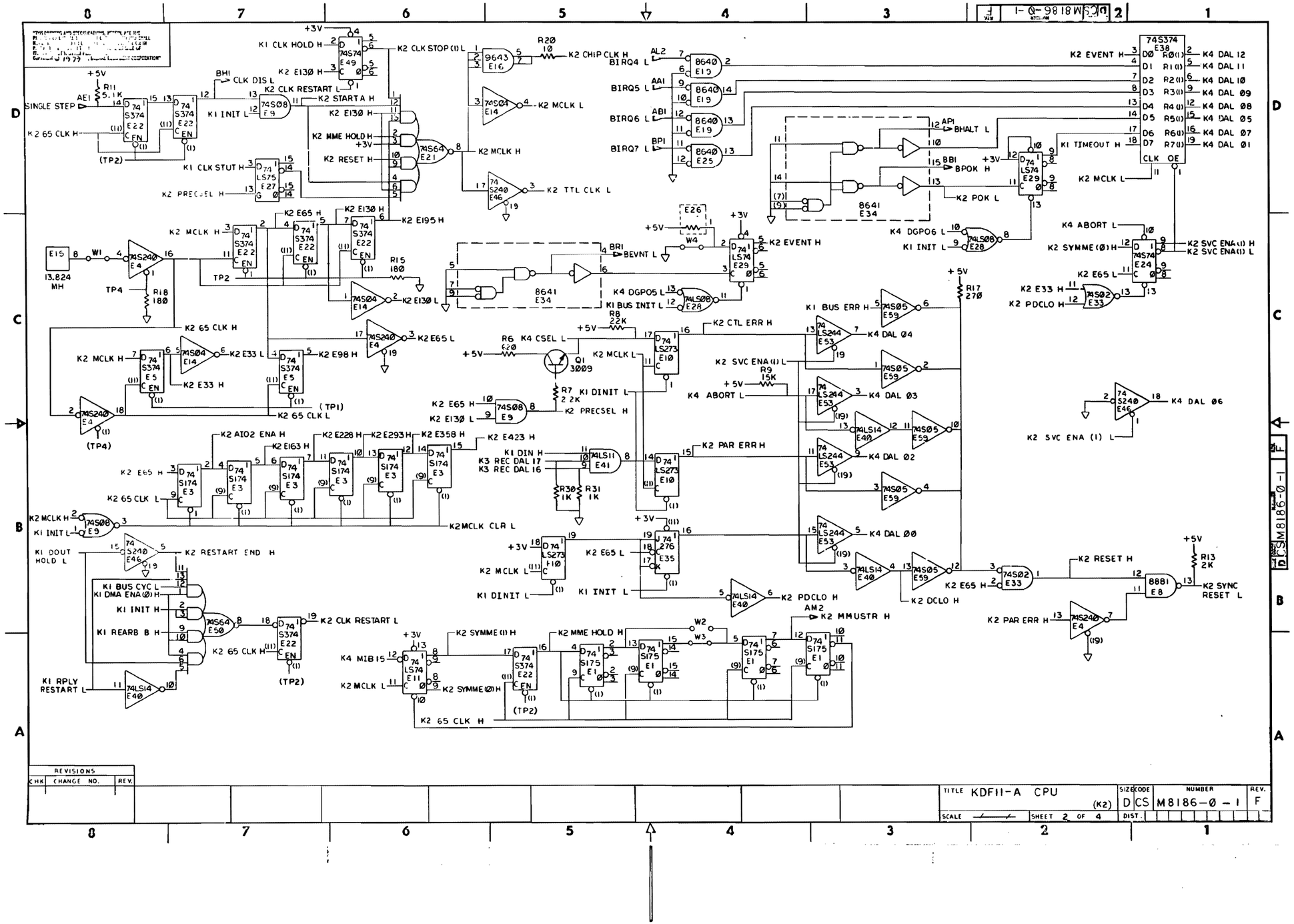
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AUTOMATED BY PRTLST.3L(32) P A R T S L I S T SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	31		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	2	E19,E25
32	32		1911579-00	8641 TRANSCEIVER,BUS,QUA	2	E12,E34
33	33		1909705-00	DEC 8881 NAND GATE-QUAD 2IN O	1	E8
34	34		1916028-01	9643 DRIVER,TTL TO MOS,D	1	E16
35	35		1915305-00	AM 2903 TRANSCEIVER,BUS,LATCH	6	E37,E43,E47,E52,E55,E56
36	36		1912131-00	OSCILLATOR, XTAL 13.024 MHZ	1	E15
37	37		23266A1-00	A1-07	1	E23
38	38		1311003-02	R NETWORK 14-330 14-680 16PIN	3	E7,E42,E51
39	39		1300005-02	R NETWORK 13-6.8K 5.0 % 14PIN	1	E26
40	40		1301317-00	10.0 .25 W 5.0 % CC	1	R20
41	41		1300250-00	150.0 .25 W 5.0 % CC	1	R29
42	42		1301322-00	180.0 .25 W 5.0 % CC	4	R15,R16,R18,R19
43	43		1301972-00	270.0 .25 W 5.0 % CC	1	R17
44	44		1303178-00	620.0 .25 W 5.0 % CC	1	R6
45	45		1301424-00	680.0 .25 W 5.0 % CC	6	R4,R5,R25-R28
46	46		1300365-00	1.0 K .25 W 5.0 % CC	4	R14,R24,R30,R31
47	47		1300391-00	1.50 K .25 W 5.0 % CC	2	R10,R23
48	48		1302389-00	2.0 K .25 W 5.0 % CC	4	R3,R13,R21,R22
49	49		1300417-00	2.20 K .25 W 5.0 % CC	1	R7
50	50		1312930-00	5.10 K .25 W 5.0 % CC	1	R11
51	51		1302177-00	47.0 K .25 W 5.0 % CC	2	R1,R2
52	52		1302466-00	100.0 K .25 W 5.0 % CC	1	R12
53	53		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C34
54	54		1013398-00	750.0 MMF 100V 5%200PPMDM15S	2	C1,C2
55	55		1001610-00	.01 MFD 50V +80-20% ZSUCER	4	C18,C19,C20,C21
56	56		1012784-00	.047 MFD 50V +80-20% CER	18	C4-C17,C30-C33
57	57		1010274-00	.22 MFD 50V -20+80 Z5U CER	5	C22-C26
58	58		1005306-00	6.8MFD 35V 10% S.TANT	1	C29
59	59		1004012-00	15 MFD 20V 10% S.TANT	2	C27,C28
60	60		1000076-00	39 MFD 10V 10% 150D S.TA	1	C3
61	61		1214116-00	SOCKET 40PIN	4	XE31,XE39,XE48,XE57
62	62		1215099-00	CLIP,JUMPER GOLD/TIN	15	W1,W4-W17
63	63		1215901-00	CONN 26POS STRAIGHT	1	
64	64		1503100-00	DEC3009D NPN 20VMU SI 20 25	1	Q1
65	65		2115542-01	*** THIS ITEM IS NOT USED ***	-	
66	66		5700000-01	DAT/CTL HYBRID ASSY U/FP,DCF11-A	1	E31
67	67		9000337-06	HANDLE, FLIP CHIP, MAGENTA	2	
68	68		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	4	
69	69		9007185-00	JUMPER, WIRE, INSULATED, BLACK D	1	W3
70	70		1301000-00	22.0 K .25 W 5.0 % CC	1	R8
71	71		1300496-00	15.0 K .25 W 5.0 % CC	1	R9
72	72		1100114-00	D 664 DS\75PCD PIV= 25V SP	1	D1
73	73		9105740-22	WIRE(WRAP)30AWG UL1423	A/R	W18
74	74		9010213-01	SPACER, DUAL IN-LINE	1	

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							KDF11 CPU		K	PL	M8186-0-DBP	J


BDMR L
K1 REARB B L
K1 REARB A H
K1 SYDMR H
K1 DMA ENA (1) H
K1 DMA ENA (Ø) H
K1 INIT L
K1 BUS DISABLE (1) L
BNI
BSACK L
K1 SYNC REP H
K1 REARB B L
K1 OUT CYC L
K2 RESTART END H
K2 MCLK L
K1 DOUT L
K2 E293 H
AE2
BDOUT L
AS2
BDMGO L
K4 MIB 12
K4 MIB Ø7
K1 BUS CYC H
K1 BUS CYC L
K2 MCLK L
K1 DINIT L
K2 65 CLK L
(TP1)
(TP3)
K2 65 CLK H
K1 MIB Ø7 B L
K1 COMREP L
(TP4)
K2 E33 L
K1 SYNC (1) H
AJ2
BSYNC L
K1 RSYNC H
K1 REARB A H
K1 REARB B H
K1 DLY DOUT L
K2 SYNC RESET L
K1 BUS CYC L
K2 RESTART END H
K1 SYNC REP L
K1 DIN H
K1 DIN CYC H
K1 DIN L
K2 E163 H
AH2
BDIN L
K2 E98 H
K1 SYNC / DMA ENA H
K1 INIT L
K1 DIN L
K1 DOUT L
K4 MIB 13
K2 E423 H
BIAK L
K2 MCLK CLR L
K1 TIMEOUT H
K1 BUS ERR H
K1 DLY DOUT L
K1 DIN L
K3 ENA BSIO L
K1 2908 OE L
K4 MIB 14
K4 MREPLY L
K2 E130 L
BAI
BDCOK H
K1 INIT H
K1 BUS INIT H
K1 BUS INIT L
AT2
BINIT L
AF2
BRPLY L
K1 COMREP L
K1 RPLY RESTART L
K1 DOUT HOLD L
K4 MIB 09
K4 MIB 08
K1 BUS CYC H
K1 SYNC / DMA ENA H
K1 CLK HOLD H
K1 BUS ENA H
K1 DIN CYC H
K1 OUT CYC L
K1 WTBT H
K1 CLK STUT H
23266AI-00
E23
32 X 8
TRI STATE
PROM
C1
750PF
R1
47K
+5V
C2
750PF
R2
47K
R24
1K
R21
2K
R22
2K
R23
1.5K
R3
2K
R12
100K
C3
39UF
C34
100PF
R14
1K
R19
180
R16
180
TPI
TP3
K2 MCLK L
K1 TIMEOUT H
K1 SYNC REP H
K1 SYNC REP L
K2 65 CLK H
TP3
FIRST USED ON
K DF11-A
TITLE
KDF11-A CPU
(K1)
NEXT HIGHER ASSY.
B-DD-M8186-0
SIZE
D
CODE
CS
NUMBER
M8186-0-1
REV.
F
SCALE
SHEET 1 OF 4
DIST.
REVISIONS
REV.
CHANGE NO.
CHK.



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KDF11-A CPU (K2)	SIZE	CODE	NUMBER	REV.
SCALE	SHEET 2 OF 4	D	CS	M8186-0-1	F
		DIST.			

D CS M8186-0-1 F

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BDAL 15 L (BV2) 15
BDAL 14 L (BU2) 14
BDAL 13 L (BT2) 7
BDAL 12 L (BS2) 6
BDAL 11 L (BR2) 13
BDAL 10 L (BP2) 12
BDAL 09 L (BN2) 5
BDAL 08 L (BM2) 4
BDAL 07 L (BL2) 11
BDAL 06 L (BK2) 10
BDAL 05 L (BJ2) 3
BDAL 04 L (BH2) 2
BDAL 03 L (BF2) 9
BDAL 02 L (BE2) 1
330/680 TERM E51

BIRQ 5 L (AA1) 13
BIRQ 6 L (AB1) 11
BIRQ 4 L (AL2) 10
BWTBT L (AK2) 9
BDIN L (AH2) 7
BDOUT L (AE2) 6
BIAK L (AN2) 15
BSYNC L (AJ2) 1
BRPLY L (AF2) 4
BDMR L 12
BBS7 L (AP2) 14
BDAL 17 L (AD1) 5
BDAL 16 L (AC1) 2
BHALT L (AP1) 3
330/680 TERM E7

BDMGO L (AS2) 12
BPOK H (BB1) 11
BDCOK H (BA1) 15
BINIT L (AT2) 14
BDAL 01 L (AV2) 1
BDAL 00 L (AU2) 2
BSACK L (BN1) 3
BEVENT L (BR1) 4
BIRQ 7 L (BP1) 5
BDAL 21 L (BF1) 13
BREF L (AR1) 6
BDAL 20 L (BE1) 10
BDAL 19 L (BD1) 9
BDAL 18 L (AC1) 7
330/680 TERM E42

K1 WTBT H — 74LS75 E27 — K2 PRECSEL H
K4 BSIO — 74S241 E13 — K2 E33 L
2908 E37: K3 REC DAL 17, K3 REC DAL 16, K3 DAL FF CLK, K3 BDAL ENA L, K1 2908 OE L
AK2 BWTBT L; AP2 BBS7 L; AD1 BDAL 17 L; AC1 BDAL 16 L
K4 DAL 01 — 74LS10 E36 — 74LS240 E20 — K4 BSIO
K2 MCLK L, K4 DGP07 L — 74S02 E33
K4 DAL 00 — 74LS240 E20 — K4 DAL 17 — R5 680
K2 MME HOLD H — 74LS240 E20 — K4 DAL 16 — R4 680
K4 MIB 06, K1 MIB 07B L — 74S02 E33 — K2 MCLK L — 74LS276 E35 — K1 INIT L
+3V
74LS244 E53 — K4 MIB 15 — R25 150
74LS244 E53 — K3 DMMUS L
K4 MIB 12 — 74S240 E4 (TP4) — K2 E98 H, K2 E33 H — 74S20 E18
K2 E130 H, K4 MIB 03 — 74LS10 E36 — K3 FDIN ENA L
74S241 E13 — K2 PRECSEL H

+5V — W15 W14 W13 W12 W11 W10 W9 W8 W7 W6 W5 — E26
74LS240 E30: K4 DAL 15, K4 DAL 14, K4 DAL 13, K4 DAL 12, K4 DAL 11, K4 DAL 10, K4 DAL 09, K4 DAL 08
74LS240 E20: K2 POK L; K4 DAL 07, K4 DAL 02, K4 DAL 01, K4 DAL 00
K3 FDIN ENA L

2908 E47: K4 DAL 03 → BDAL 03 L (BF2); K4 DAL 02 → BDAL 02 L (BE2); K4 DAL 01 → BDAL 01 L (AV2); K4 DAL 00 → BDAL 00 L (AU2)
2908 E52: K4 DAL 07 → BDAL 07 L (BL2); K4 DAL 06 → BDAL 06 L (BK2); K4 DAL 05 → BDAL 05 L (BJ2); K4 DAL 04 → BDAL 04 L (BH2)
2908 E55: K4 DAL 11 → BDAL 11 L (BR2); K4 DAL 10 → BDAL 10 L (BP2); K4 DAL 09 → BDAL 09 L (BN2); K4 DAL 08 → BDAL 08 L (BM2)
2908 E56: K4 DAL 15 → BDAL 15 L (BV2); K4 DAL 14 → BDAL 14 L (BU2); K4 DAL 13 → BDAL 13 L (BT2); K4 DAL 12 → BDAL 12 L (BS2)
DRCP BE OE RLE

K2 MMUSTR H (AM2), K2 E163 H — 74S32 E32 — K3 DAL FF CLK H, K1 2903 OE L
K1 BUS ENA H, K2 E130 L — 74LS276 E35 — K1 BUS DISABLE (1) L — 74LS00 E45 — K3 BDAL ENA L
K1 INIT L

REVISIONS: CHK | CHANGE NO. | REV

TITLE KDF11-A CPU (K3)
SIZE D | CODE DCS | NUMBER M8186-0-1 | REV. F
SCALE | SHEET 3 OF 4 | DIST.

ECC FORM NO. DRD 138

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C18 .01UF — +12V, +5V

DAT/CTL E31

K4 DAL 15 18
K4 DAL 14 17
K4 DAL 13 16
K4 DAL 12 15
K4 DAL 11 14
K4 DAL 10 13
K4 DAL 09 12
K4 DAL 08 11
K4 DAL 07 10
K4 DAL 06 9
K4 DAL 05 8
K4 DAL 04 7
K4 DAL 03 6
K4 DAL 02 5
K4 DAL 01 4
K4 DAL 00 3

K4 MIB 15 39
K4 MIB 14 38
K4 MIB 13 37
K4 MIB 12 36
K4 MIB 11 35
K4 MIB 10 34
K4 MIB 09 33
K4 MIB 08 32
K4 MIB 07 31
K4 MIB 06 30
K4 MIB 05 29
K4 MIB 04 28
K4 MIB 03 27
K4 MIB 02 26
K4 MIB 01 25
K4 MIB 00 24

K4 BSIO 19
K2 CHIP CLK 2
K2 RESET H 23
K4 CSEL L 22

+5V, +12V — C20 .01UF

CTL E48

K4 DAL 15 18
K4 DAL 14 17
K4 DAL 13 16
K4 DAL 12 15
K4 DAL 11 14
K4 DAL 10 13
K4 DAL 09 12
K4 DAL 08 11
K4 DAL 07 10
K4 DAL 06 9
K4 DAL 05 8
K4 DAL 04 7
K4 DAL 03 6
K4 DAL 02 5
K4 DAL 01 4
K4 DAL 00 3

K4 MIB 15 39
K4 MIB 14 38
K4 MIB 13 37
K4 MIB 12 36
K4 MIB 11 35
K4 MIB 10 34
K4 MIB 09 33
K4 MIB 08 32
K4 MIB 07 31
K4 MIB 06 30
K4 MIB 05 29
K4 MIB 04 28
K4 MIB 03 27
K4 MIB 02 26
K4 MIB 01 25
K4 MIB 00 24

K2 TTL CLK L — W17 — 19
2
23
22

+5V, +12V — C19 .01UF

CTL E39

K4 DAL 15 18
K4 DAL 14 17
K4 DAL 13 16
K4 DAL 12 15
K4 DAL 11 14
K4 DAL 10 13
K4 DAL 09 12
K4 DAL 08 11
K4 DAL 07 10
K4 DAL 06 9
K4 DAL 05 8
K4 DAL 04 7
K4 DAL 03 6
K4 DAL 02 5
K4 DAL 01 4
K4 DAL 00 3

K4 MIB 15 39
K4 MIB 14 38
K4 MIB 13 37
K4 MIB 12 36
K4 MIB 11 35
K4 MIB 10 34
K4 MIB 09 33
K4 MIB 08 32
K4 MIB 07 31
K4 MIB 06 30
K4 MIB 05 29
K4 MIB 04 28
K4 MIB 03 27
K4 MIB 02 26
K4 MIB 01 25
K4 MIB 00 24

K2 TTL CLK L — W16 — 19
2
23
22
K2 CHIP CLK
K2 RESET H
K4 CSEL L

+5V, +12V — C21 .01UF

MMU E57

K4 DAL 15 18
K4 DAL 14 17
K4 DAL 13 16
K4 DAL 12 15
K4 DAL 11 14
K4 DAL 10 13
K4 DAL 09 12
K4 DAL 08 11
K4 DAL 07 10
K4 DAL 06 9
K4 DAL 05 8
K4 DAL 04 7
K4 DAL 03 6
K4 DAL 02 5
K4 DAL 01 4
K4 DAL 00 3

K4 MIB 15 39
K4 MIB 12 36
K4 MIB 09 33
K4 MIB 08 32
K4 MIB 07 31
K4 MIB 06 30
K4 MIB 05 29
K4 MIB 04 28
K4 DAL 17 23
K4 DAL 16 22
K4 DAL 21 27
K4 DAL 20 26
K4 DAL 19 25
K4 DAL 18 24
K4 MREPLY L 37
K4 ABORT L 38
AR2 34 — BUBMAP L
R10 1.5K — +5V

K4 BSIO 19
K2 CHIP CLK 2
K3 DMMUS L 35

+12V — AD2, BD2
+5V — AA2, BA2, BV1
GND — AC2, AJ1, AM1, AT1, BC2, BJ1, BM1, BT1

C27, C28 15UF
C1 THRU C17, C30 THRU C33 .047UF
C29 6.8UF
C22 THRU C26 .22UF

74LS138 E54

K4 MIB 00 1 SEL A
K4 MIB 01 2 SEL B
K4 MIB 02 3 SEL C
K2 M CLK L 4
K4 MIB 03 5
K2 E130 H 6 EN

D0 15
D1 14 — AF1, AH1 → SRUN
D2 13
D3 12
D4 11
D5 10 — K4 DGP05 L
D6 9 — K4 DGP06 L
D7 7 — K4 DGP07 L

2908 E43

R25 680, R26 680, R27 680, R28 680

K4 DAL 21 17 A3 / R3
K4 DAL 20 18 A2 / R2
K4 DAL 19 13 A1 / R1
K4 DAL 18 12 A0 / R0

ODD 10
B3 16 BF1 → BDAL 21 L
B2 14 BE1 → BDAL 20 L
B1 6 BD1 → BDAL 19 L
B0 4 BC1 → BDAL 18 L

DRCP BE OE RLE
K3 DAL FF CLK H 19
K3 BDAL ENA L 9
+3V 11
1

REVISIONS

CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
KDF11 A CPU (K4)	D	CS	M8186-0-1	F
SCALE — SHEET 4 OF 4				

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-BDV11-A-1	FIELD MAINTENANCE PRINT SET
D-UA-BDV11-A-0	UNIT ASSY (BDV11-A)
D-UA-M8012-0-0	UNIT ASSY (M8012)
B-PL-M8012-0-0	PARTS LIST (M8012)
D-CS-M8012-0-1	CIRCUIT SCHEMATIC (M8012)
A-SP-M8012-0-7	ENGINEERING SPEC (M8012)
A-PL-BDVLL-A	SHIPPING LIST (BDVLL-A)

UNIT VARIATIONS COVERED BY THIS PRINT SET
BDV11-AA

BDV11-A

Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.

MPØØ489

REVISIONS		
DATE	ORIG. NO.	REV.
7-78	BDV11-A-1	A

USED ON OPTION/MODEL	
BDV11-A	

SHEET 1 OF 1

DRN.	ROBICHAUD	DATE 13SEP77
CHKD		DATE 15OCT77
PROJ. ENG.		DATE 10/25/77
FIELD SERV.		DATE 25OCT77

TITLE: BDV11-A

SIZE	CODE	NUMBER	REV.
D	TG	BDV11-A-1	A

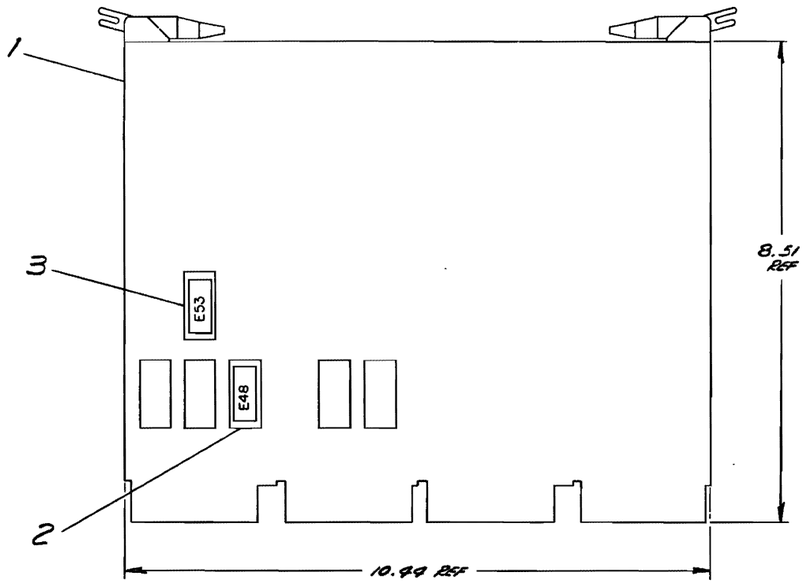
DIST.

EK-BDV11-A-TC-001-0-EN

S/SD 174

NOTES:

1. CHECK WORDS FOR BDVII-A DIAGNOSTIC.
017092, 020656, 065162, 161749, 129453, 113667, 056040, 044734



1	BDVII-A SHIPPING LIST	A-PL-BDVII-A	4
1	2K x 8 ROM	2304662	3
1	2K x 8 ROM	2304562	2
1	BOOT LOADER AND DIAGNOSTIC ROM	D-UA-M8013-YA	1
QUANTITY	DESCRIPTION	DWG/PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

SURFACE QUALITY IN MICRO INCHES	ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	0 to 6	6 to 12	12 to 24	24 to 48	48 to 96	96 to 192
		MEDIUM ☐	±.004	±.008	±.012	±.016	±.024	±.032
		PREFERRED ☐	±.002	±.004	±.008	±.012	±.016	±.024

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG.

MATERIAL

FINISH

NEXT HIGHER ASSY. D-UA-BDVII-A

SCALE FULL

SHEET 1 OF 1

FIRMWARE FOR BDVII

TITLE: UNIT ASSY (BDVII)

SIZE D | CODE UA | NUMBER BDVII-A-Ø | REV. A

DISC.

REVISIONS			
DIS	CHANGE NO.		CTR
			A

MACHINE A-1000

8 7 6 5 4 3 2 1

A B C D

COMPONENT SIDE VIEW

SEE NOTE 2

NOTES:

1. U NOTES 4 & 5 (+5 [illegible]) MAYNARD ONLY

DO NOT INSTALL

3. INSTALL SOCKETS FOR E36, E48 E49 E52, E53 & E57 ONLY

SIGNATURES	DATE
DRWN	
CHK'D	
ENGR	
MANUFG	
PROD'N	

digital

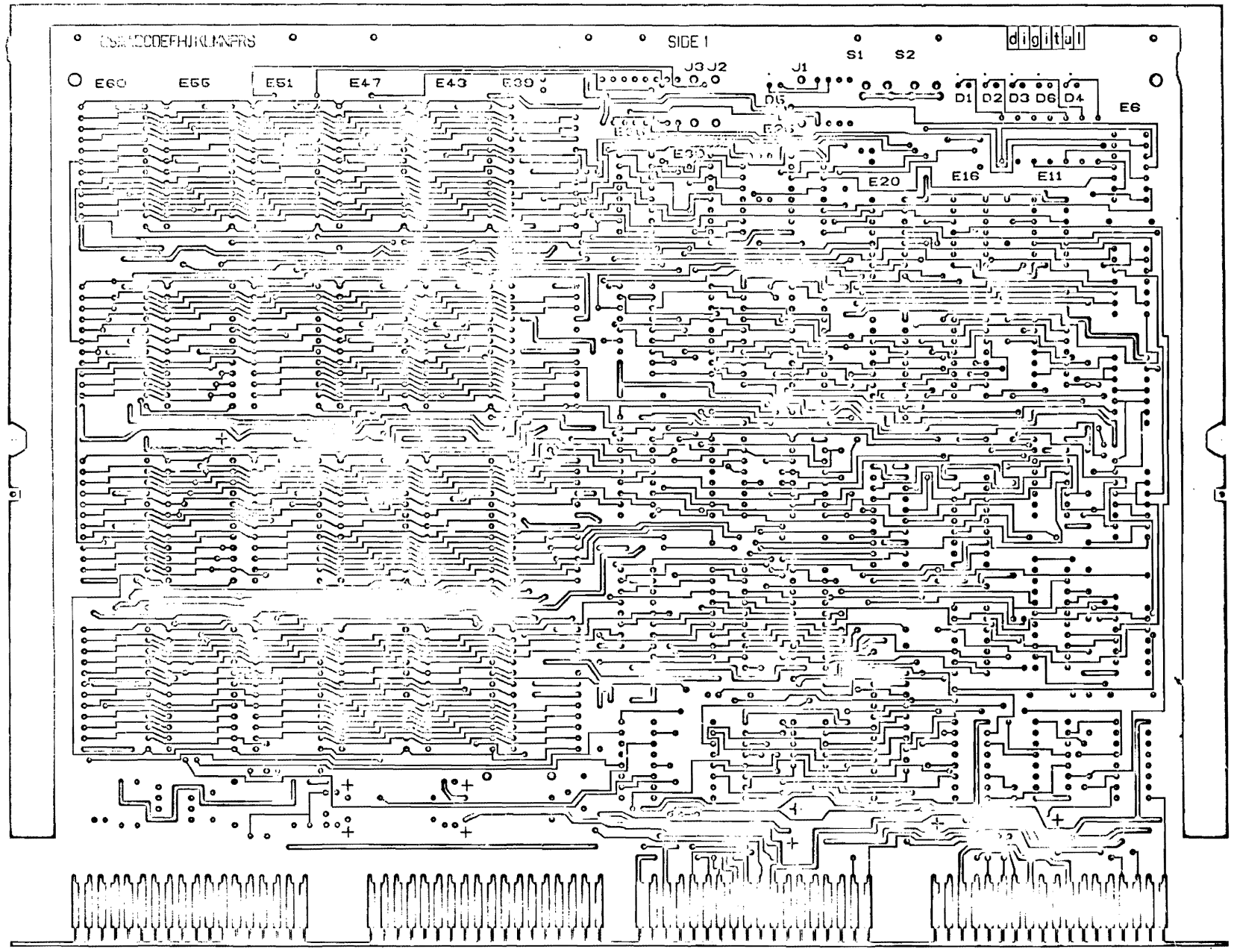
TITLE
BOOT TERMINATOR AND DIAGNOSTIC ROM

SIZE D | CODE 0UA | MRØ12-Ø-Ø | REV H

SCALE | SHEET OF 4

ETCH REV.

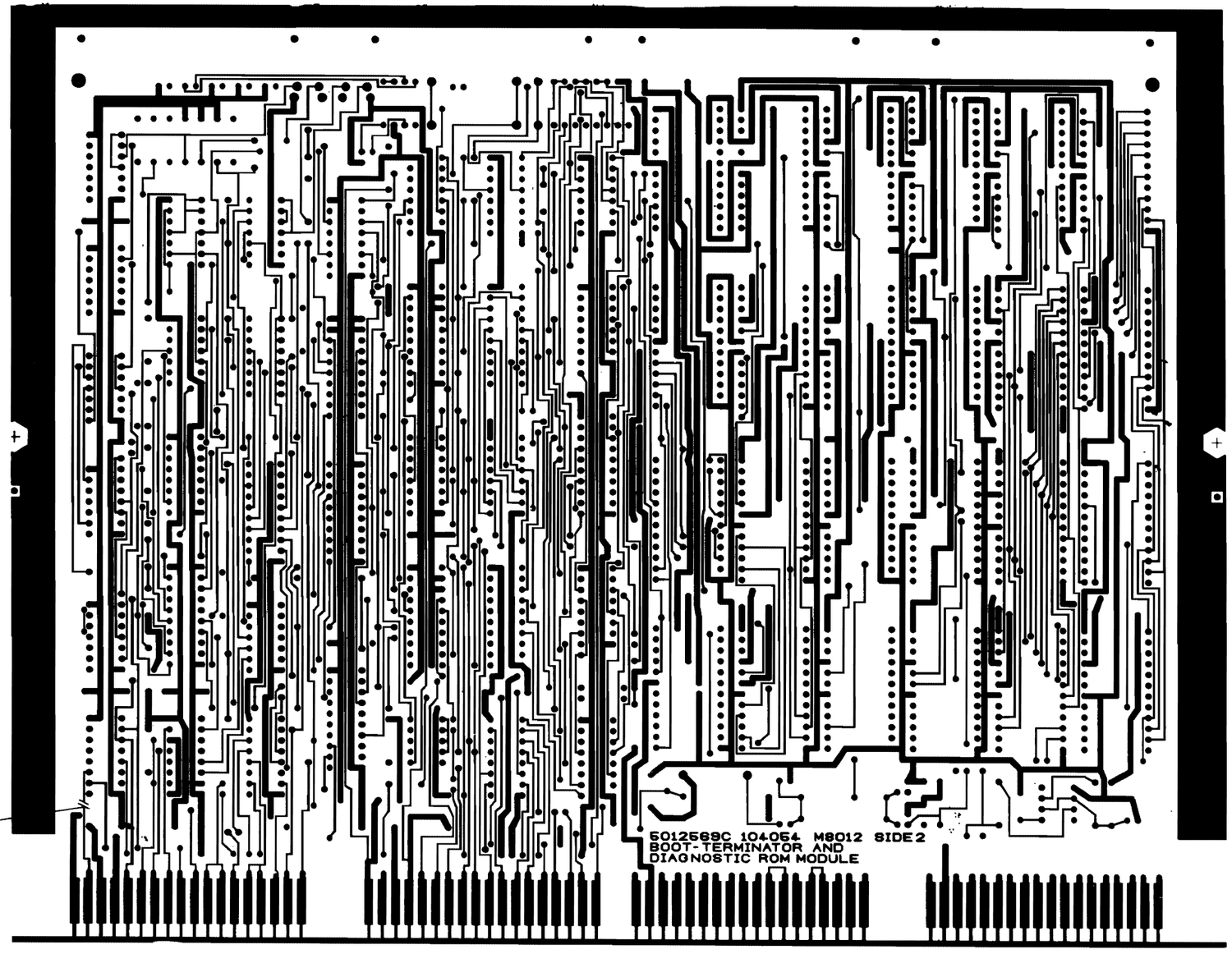
MS:10-105-C



VIEWED FROM SIDE 1

TITLE	BOOT TERMINATOR & DIAGNOSTIC ROM				
SCALE	2:1	SHEET 1 OF 4	SIZE D	DWG NO MB012-00 H	
			DIST		

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2-1

VIEWED FROM SIDE 2

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
BOOT TERMINATOR & DIAGNOSTIC ROM	D	UA	M8012-0-0	H
SCALE 2:1	SHEET 3 OF 4		DIST	

DEC FORM NO. MSD 137

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REWORK INSTRUCTIONS

E.C.O. # 1

COMPONENT DELETES SIDE 1:

1-1. DELETE C30, .047uf (P/N 10,2784)

COMPONENT ADDS SIDE 1:

E.C.O #2

2-1 CUT ETCH SIDE 2 BETWEEN E Ø1 PIN 11 AND FINGER AB2

2-2 ADD WIRE SIDE 1 BETWEEN E Ø1 PIN 11 AND FINGER AB1

E.C.O # 5

WIRE ADDS, SIDE 1

5-1 ADD WIRE FROM FINGER BC1 TO E1 PIN 15

5-2 ADD WIRE FROM FINGER BD1 TO E1 PIN 14

5-3 ADD WIRE FROM FINGER BE1 TO E1 PIN 13

5-4 ADD WIRE FROM FINGER BF1 TO E1 PIN 12

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	BOOT TERMINATOR AND DIAGNOSTIC ROM		
SCALE 2/1	SHEET 4 OF 4	DIST.	

SIZE	CODE	NUMBER	REV.
D	UA	M8Ø12-Ø-Ø	H

DFC FORM NO. 3910 5/77

AUTOMATED BY PRTLST.2D(12) P A R T S L I S T SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER 00	QTY PER YA	VARIATION	REFERENCE DESIGNATOR
1	1	D-MD-5012569-0-0	5012569-00	M8012	1	1		
2	2		1000024-00	470.0 MMF 100V 5%200PPM DM15S	1	1		C12
3	3		1001610-01	.01 MFD 100V -20+80 Z5U DISC	2	2		C6,C13
4	4		1004812-00	15 MFD 20V 10% S.TANT	4	4		C7,C8,C10,C11
5	5		1005306-00	6.8MFD 35V 10% S.TANT	4	4		C1-C4
6	6		1011740-00	5600.0 MMF 50V 10% CW15C CER.	1	1		C5
7	7		1012784-00	.047 MFD 50V -20+80 CER	19	19		C9,C15-C29,C31-C33
8	8		1103441-00	1N 756A VZ= 8.2 5% .40W P	1	1		D11
9	9		1104860-00	1N 746A VZ= 3.3 5%	1	1		D10
10	10		1105275-00	D 672 TR= 15NS PIV= 60V SI	3	3		D8,D9,D12
11	11		1109991-00	1N 754A VZ= 6.8 5% .40W	2	2		D7,D13
12	12		1110864-00	LED 2MCD@10MA	4	4		D1-D4
13	13		1114384-00	LED 105MW 35MA GREEN	1	1		D6
14	14		1210209-00	SW,TOG,SPDT,.01A@6V,ON/ON,SUBMIN	2	2		S1,S2
15	15		1215006-06	SOCKET 24PIN IC LOW PROFILE	6	-		XE36,XE40,XE48,XE52,XE53,XE57
			CONT		-	24		XE37-XE39,XE41-XE47,XE49-XE51,
							CONT	XE54,XE55,XE58-XE60,XE36,XE40,
							CONT	XE48,XE52,XE53,XE57
16	16		1211164-01	SW,DIP 1P 1A 5POS	1	1		E21
17	17		1211164-04	SW,DIP 1P 1A 8POS	1	1		E15
18	18		1213113-01	HANDLE,MODULE,	1	1		
19	19		1213974-06	JACK 2LINE RED	1	1		J2
20	20		1213974-07	JACK 2LINE BLACK	1	1		J1
21	21		1213974-03	JACK 2LINE PURPLE	1	1		J3
22	22		1300271-00	220 1/4W 5%	CC 6	6		R5,R7,R25-R28
23	23		1300365-00	1 K 1/4W 5%	CC 14	14		R8,R11-R15,R17-R24
24	24		1300417-00	2.2 K 1/4W 5%	CC 1	1		R4
25	25		1301322-00	180 1/4W 5%	CC 1	1		R10
26	26		1301890-00	560 1/4W 5%	CC 2	2		R1,R2
27	27		1311003-01	R NETWORK 14-180 14-3e0	3	3		E1,E12,E26

REVISION HISTORY			
ENG	ECO NUMBER	REV	SECTION A OF A
R.R	00001	C	SECTION.VARIATION INDEX
BHF	ML002	D	[A] 00,YA
G.G	M8012-ML003	E	[B]
GG	M8012-ML004	F	[C]
			[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

BASIC PART NO: M8012

DRN: A COLON — DATE: 25-APR-78

CHK'D: R KOPPENAL — DATE: 25-APR-78

DES.ENG: G GOODRICH — DATE: 25-APR-78

RESP.ENG.: G GOODRICH — DATE: 25-APR-78

MFG.ENG.: R HAMILTON — DATE: 25-APR-78

ASSEMBLY NUMBER: D-UA-M8012-0-0

TOP DOCUMENT NUMBER:

D	I	G	I	T	A	L

TITLE PARTS LIST

BOOT-TERM &DIAGNOSTIC ROM

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	M8012-0-DBP	F

FILE NAME: Z0813F.PLS

EDIT #: 13

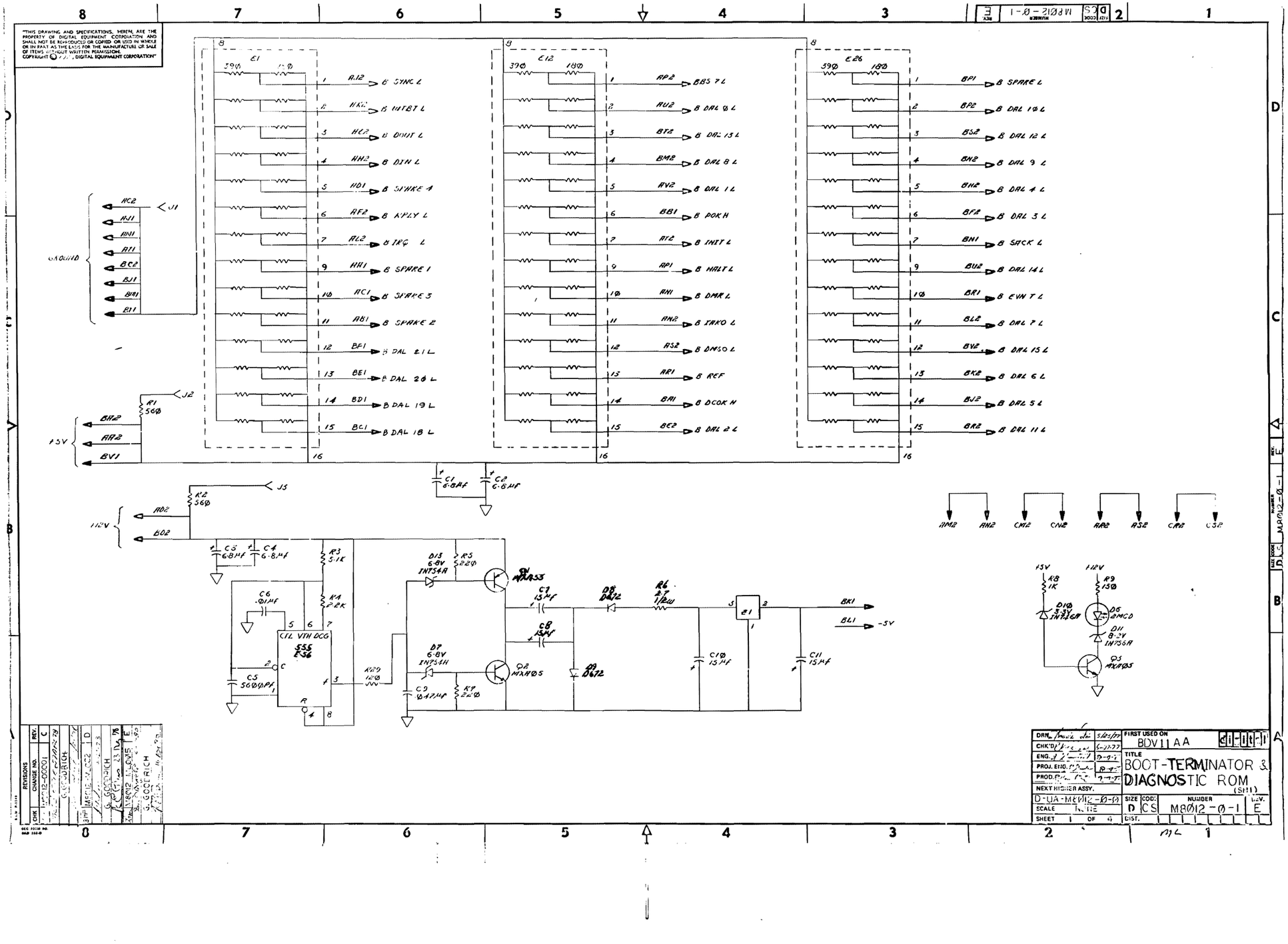
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	YA	REFERENCE DESIGNATOR
28	28		1309444-00	2.7 1/2W 10% CC	1	1	R6
29	29		1312930-00	5.1 K 1/4W 5% CC	2	2	R3,R16
30	30		1300247-00	120 1/4W 5% CC	1	1	R29
31	31		1300250-00	150 1/4W 5% CC	1	1	R9
32	32		1510705-00	XA 05 NPN 500MW SI 60 50 P	3	3	Q2-Q4
33	33		1510706-00	XA 55 PNP 500MW SI 60 50 P	1	1	Q1
34	34		1910741-00	7406 INVERTER GATE-HEX 1I	2	2	E6,E16
35	35		1911579-00	8641 TRANSCEIVER,BUS,QUA	1	1	E7
36	36		1911944-00	555CN TIMER,FUNCT.BLOCK	1	1	E56
37	37		1912541-00	79M05 VOLT.REG.FIX -	1	1	Z1
38	38		1912647-00	LS257 MUX 1 OF 2 (QUAD)	6	6	E20,E23,E28,E31,E32,E34
39	39		1912729-00	DC 004 PROTOCOL,REG. SELECT	1	1	E8
40	40		1912803-00	LS04 INVERTER GATE-HEX 1I	2	2	E5,E13
41	41		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	1	E11
42	42		1912813-00	LS27 NOR GATE-TRIPLE 3IN	3	3	E2-E4
43	43		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	1	1	E10
44	44		1912842-00	LS138 DECODER-THREE INPUT,	1	1	E35
45	45		1912843-00	LS139 DECODER, 2 OF 4(DUAL	1	1	E30
46	46		1912853-00	@LS175 FF-D QUAD	1	1	E25
47	47		1912863-00	LS273 FF-D OCTAL W/CLEAR	3	3	E27,E29,E33
48	48		1912868-00	LS299 SHIFT REG. 8-BIT UNI	2	2	E22,E24
49	49		1913040-00	DC 005 TRANSCEIVER 4BIT	4	4	E14,E17-E19
50	50		23208A1-00	A1-03,A1-04,A1-05	1	1	E9
51	51		9009185-00@	JUMPER, WIRE, INSULATED, BLACK B	6	6	W2,W3,W5,W7,W9,W12
52	52		9000A24-01	EYELET, ROLLED FLANGE, .121 OD X	8	8	
53	53	BLANK			0	0	
54	54		9107256-11	T*BING,THIN WALL,.027ID UL	A/R	A/R	
55	55		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	A/R	

0 NOTE: IF 1215006-06 IS NOT AVAILABLE USE 1210693

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							BOOT-TERM &DIAGNOSTIC ROM		K	PL	M8012-0-DBP	F

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REVISIONS		
ECR	CHANGE NO.	REV.
	M8012-0C001	C
	M8012-0C002	D
	M8012-0C005	E

DRN		5/25/77
CHK'D		6-1-77
ENG.		6-8-77
PROJ. ENG.		6-8-77
PROD. PLN.		6-7-77
NEXT HIGHER ASSY.		
SCALE	NONE	
SHEET	1 OF 4	

FIRST USED ON: BDV11AA

TITLE: BOOT-TERMINATOR & DIAGNOSTIC ROM (SHT)

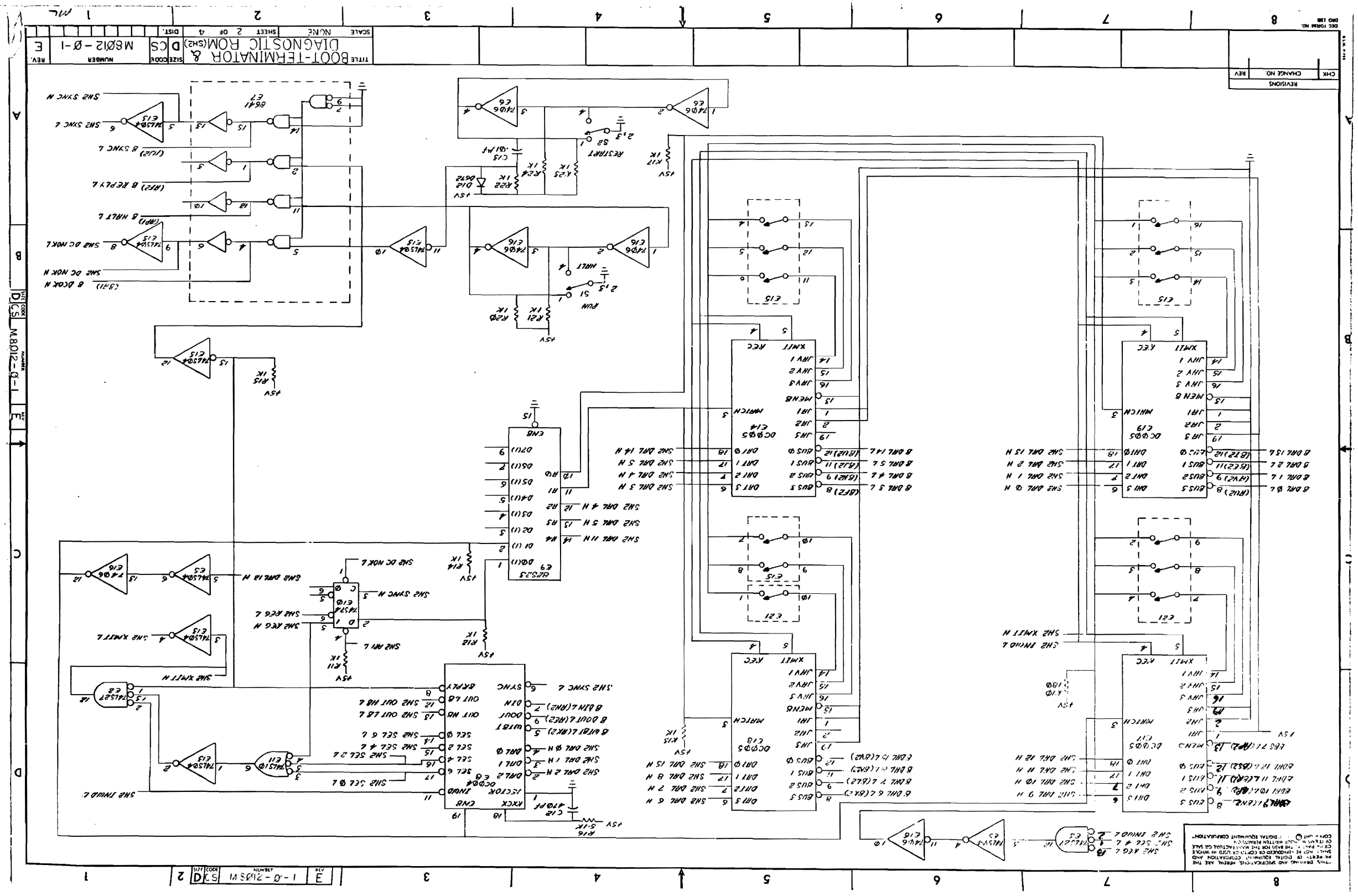
SIZE	CODE	NUMBER	REV.
D	ICS	M8012-0-1	E

DIST.

TITLE	BOOT-TERMINATOR & DIAGNOSTIC ROM(SH2)		
SIZE	CODE	NUMBER	REV.
D	CS	M8012-0-1	E
SCALE	NONE	SHEET 2 OF 4	DIST.

REVISIONS			
CHK	CHANGE NO	REV	

DEC FORM NO. DRD 138


SH2 SYNC N
SH2 SYNC L
(H12) B SYNC L
(H12) B REPLY L
(AP1) B HALT L
SH2 DC NOK L
SH2 DC NOK N
(J3,11) B DCOK N
SH2 XMIT N
SH2 XMIT L
SH2 RCG L
SH2 RCG N
SH2 SYNC N
SH2 DC NOK L
SH2 DAL 12 H
SH2 DAL 13 H
SH2 DAL 14 H
SH2 DAL 15 H
SH2 DAL 0 H
SH2 DAL 1 H
SH2 DAL 2 H
SH2 DAL 3 H
SH2 DAL 4 H
SH2 DAL 5 H
SH2 DAL 6 H
SH2 DAL 7 H
SH2 DAL 8 H
SH2 DAL 9 H
SH2 DAL 10 H
SH2 DAL 11 H
SH2 DAL 12 H
SH2 DAL 13 H
SH2 DAL 14 H
SH2 DAL 15 H
SH2 SCL 0 L
SH2 SCL 1 L
SH2 SCL 2 L
SH2 SCL 3 L
SH2 SCL 4 L
SH2 SCL 5 L
SH2 SCL 6 L
SH2 SCL 7 L
SH2 INIOD L
SH2 XMIT N
SH2 RCG L
SH2 RCG N
SH2 SYNC L
SH2 SYNC N
SH2 DC NOK L
SH2 DC NOK N
SH2 XMIT L
SH2 XMIT N
SH2 RI L
SH2 SYNC L
SH2 SYNC N
SH2 DC NOK L
SH2 DC NOK N
SH2 XMIT L
SH2 XMIT N
SH2 RI L
SH2 SCL 0 L
SH2 SCL 1 L
SH2 SCL 2 L
SH2 SCL 3 L
SH2 SCL 4 L
SH2 SCL 5 L
SH2 SCL 6 L
SH2 SCL 7 L
SH2 INIOD L
SH2 XMIT N
SH2 RCG L
SH2 RCG N

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74LS273 E27 — SH2 DAL 15 H … SH2 DAL 8 H; SH2 DC NOK L; SH2 REG L, SH2 SEL 0 L, SH2 OUT H8 L (74LS27 E3) → SH3 R15 H … SH3 R8 H

74LS257 E38 — SH3 R11 H … SH3 R8 H; SH3 A10 H … SH3 A7 H

74LS257 E34 — SH3 R14 H … SH3 R12 H; SH3 A14 H … SH3 A11 H

74LS273 E29 — SH2 DAL 0 H … SH2 DAL 7 H; SH2 DC NOK L; SH2 REG L, SH2 SEL 0 L, SH2 OUT LE L (74LS27 E3) → SH3 R0 H … SH3 R7 H

74LS273 E33 — SH2 DAL 8 H … SH2 DAL 1 H; SH2 SYNC H; SH2 DC NOK L → SH3 A6 H … SH3 A0 H

SH2 PR 1 L; SH2 DAL 6 H; SH2 REG L, SH2 OUT LB L, SH2 SEL 6 L (74LS74 E2); 74S74 E10; +5V, R18 1K, R19 1K; B EVNT L, E21, MXA05 → SH2 DC NOK L

SH2 SEL 2 L (74LS04 E5); SH2 REG H, SH2 XMIT H (74LS10 E11) → SH3 OUT 2 L

74LS299 E22 — SH2 DAL 15 H … SH2 DAL 11 H

SH2 REG L, SH2 SEL 2 L, SH2 OUT H8 L (74LS27 E4)

74LS299 E24 — SH2 DAL 7 H … SH2 DAL 3 H; SH2 DC NOK L

SH3 R14 L (74LS04 E5) → SH3 A14 L

SH2 PR1 L, W3, W4; 74S138 E35 (G1, G2A, G2B; A, B, C; Y0–Y7) → SH3 SP 8 L … SH3 SP 1 L

SH3 A11 H, SH3 A10 H, SH3 A13 H; W1, W2

W12, W11; SH3 A10 H; 74LS153 E36 (2G, 2A, 1A, 1G; 2Y0–2Y3, 1Y0–1Y3) → SH3 SE1 L, SH3 SE2 L, SH3 SB1 L, SH3 SB2 L

SH3 A12 H, SH3 A14 L; W9, W10

+12V; C17, C18 .047UF; W8; SH3 A10 H, W7 → SH3 SI2

+5V, W13; W5, W6; CB2, DB2; SH3 SI1; C14 THRU C16 .047MF

74LS257 E28 — SH3 R7 H … SH3 R4 H; SH2 DAL 7 H … SH2 DAL 4 H; OUT CONT, S0

74LS257 E30 — SH3 R15 H … SH3 R12 H; SH2 DAL 15 H … SH2 DAL 12 H; OUT CONT, S0

74LS257 E23 — SH3 R3 H … SH3 R0 H; SH2 DAL 3 H … SH2 DAL 0 H; OUT CONT, S0

74LS257 E31 — SH3 R11 H … SH3 R8 H; SH2 DAL 11 H … SH2 DAL 8 H; OUT CONT, S0

74LS175 E15 — SH2 DAL 3 H, SH2 DAL 2 H, SH2 DAL 1 H, SH2 DAL 0 H; CLR, CLK

74S06 E6 — R25 220Ω, R26 220Ω, R27 220Ω, R28 220Ω; D4 2MCD, D3 2MCD, D2 2MCD, D1 2MCD; +5V

SH2 REG L, SH2 OUT LB L, SH2 SEL 4 L (74LS27 E4) → SH2 DC NOK L

SH2 REG H, SH2 XMIT H (74LS10 E11) → SH2 OUT 2 H

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
BOOT-TERMINATOR & DIAGNOSTIC ROM (SH3)	D	DCS	M8012-0-1	E
SCALE NONE	SHEET 3 OF 4		DIST.	

DEC FORM NO. 1138

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NOTES: ALL SIGNALS ON THIS SHEET, EXCEPT THOSE CONNECTED TO PIN 20 OF ALL SOCKETS ON THIS SHEET ARE HIGH IN PUTS AND OUTPUTS. THE SIGNALS CONNECTED TO PIN 20 OF ALL SOCKETS ON THIS SHEET ARE LOW

XE39		XE43		XE47		XE51		XE55		XE60		XE59		XE54	
SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V
SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8
SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9
SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11
SH3 A3 5	20 SH3 SP1	SH3 A3 5	20 SH3 SP2	SH3 A3 5	20 SH3 SP3	SH3 A3 5	20 SH3 SP4	SH3 A3 5	20 SH3 SP5	SH3 A3 5	20 SH3 SP6	SH3 A3 5	20 SH3 SP7	SH3 A3 5	20 SH3 SP8
SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12
SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND
SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015
SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014
SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013
SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012
GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011

XE50		XE46		XE42		XE38		XE37		XE41		XE45		XE49	
SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V
SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8
SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9
SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11	SH3 A4 4	21 SH3 S11
SH3 A3 5	20 SH3 SP1	SH3 A3 5	20 SH3 SP2	SH3 A3 5	20 SH3 SP3	SH3 A3 5	20 SH3 SP4	SH3 A3 5	20 SH3 SP5	SH3 A3 5	20 SH3 SP6	SH3 A3 5	20 SH3 SP7	SH3 A3 5	20 SH3 SP8
SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12	SH3 A2 6	19 SH3 S12
SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND
SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07
SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06
SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05
SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04
GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 03

XE53		XE58		XE57		XE52		XE48		XE44		XE40		XE36	
SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V	SH3 A7 1	24 +5V
SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8	SH3 A6 2	23 SH3 A8
SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9	SH3 A5 3	22 SH3 A9
SH3 A4 4	21 GND	SH3 A4 4	21 GND	SH3 A4 4	21 -5V	SH3 A4 4	21 -5V	SH3 A4 4	21 GND	SH3 A4 4	21 GND	SH3 A4 4	21 -5V	SH3 A4 4	21 -5V
SH3 A3 5	20 SH3 SB1	SH3 A3 5	20 SH3 SB2	SH3 A3 5	20 SH3 SE2	SH3 A3 5	20 SH3 SE1	SH3 A3 5	20 SH3 SB1	SH3 A3 5	20 SH3 SB2	SH3 A3 5	20 SH3 SE1	SH3 A3 5	20 SH3 SE2
SH3 A2 6	19 SH3 A10	SH3 A2 6	19 SH3 A10	SH3 A2 6	19 +12V	SH3 A2 6	19 +12V	SH3 A2 6	19 SH3 A10	SH3 A2 6	19 SH3 A10	SH3 A2 6	19 +12V	SH3 A2 6	19 +12V
SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND	SH3 A1 7	18 GND
SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 015	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07	SH3 A0 8	17 SH4 07
SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 08 9	16 SH4 014	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06	SH4 00 9	16 SH4 06
SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 09 10	15 SH4 013	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05	SH4 01 10	15 SH4 05
SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 010 11	14 SH4 012	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04	SH4 02 11	14 SH4 04
GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 011	GND 12	13 SH4 03	GND 12	13 SH4 03	GND 12	13 SH4 05	GND 12	13 SH4 03

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
BOOT-TERMINATOR & DIAGNOSTIC ROM (SH4)	D	CS	M8012-Ø-1	E
SCALE NONE	SHEET 4 OF 4		DIST.	

DEC FORM NO. DRD 138

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION — DATE 27-May-77

TITLE M8012 TERM, BOOT AND DISGNOSTIC BOARD - M8012

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	00001	GOODRICH	3-78	BCK [illegible]	4/21/78

ENG G. Goodrich | APPD [signature] | SIZE A | CODE SP | NUMBER M8012-0-7 | REV A

DEC 10-(392)-1079-N971
DRA 107

SHEET 1 OF 10

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE M8012 -- TERM, BOOT AND DIAGNOSTIC BOARD

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9.3 PROGRAM ROM
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10.0 PROGRAM ROM/PROM JUMPERS

NOTE: THE LSI-11 BUS SPECIFICATION (DEC STD-160) IS REFERENCED BY AND SHALL BE CONSIDERED PART OF THIS SPECIFICATION

SIZE A | CODE SP | NUMBER M8012-0-7 | REV A

DEC FORM NO EN-01022-16-N370-(381)
DRA 108

SHEET 2 OF 10

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE M8012 -- TERM BOOT AND DIAGNOSTIC BOARD

1.0 GENERAL DESCRIPTION

1.1 DESCRIPTION

THE M8012 TERMINATOR, BOOTSTRAP AND DIAGNOSTIC BOARD IS A QUAD HEIGHT MODULE WHICH INTERFACES WITH THE LSI-11 BUS.IT PROVIDES THE FOLLOWING FEATURES:

A) ROM SPACE FOR BOOTSTRAP/DIAGNOSTIC AND OTHER PROGRAMS.

B) A 12 BIT READABLE SWITCH REGISTER

C) A 16 BIT READ WRITE REGISTER

D) A PROGRAMABLE RTC ENABLE

E) A POWER OK LED

F) A 4 LED DISPLAY REGISTER

G) RESTART AND HALT SWITCHES

H) 120 OHM LSI-11 BUS TERMINATION

1.2 POWER REQUIREMENTS

	TYPICAL	MAX	
+5 VOLTS	1.25	1.6	AMPS
+12 VOLTS	0.05	0.07	AMPS

NOTE: POWER MUST BE ADDED FOR ANY ROMS USED.

SIZE A | CODE SP | NUMBER M8012-0-7 | REV A

DEC FORM NO EN-01022-16-N370-(381)
DRA 108

SHEET 3 OF 10

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE M8012 -- TERM BOOT AND DIAGNOSTIC BOARD

2.0 ROM

2.1 ROM

THE M8012 PROVIDES 2K WORDS OF MASKED ROM SOCKETS FOR BOOTSTRAPS AND DIAGNOSTICS WITH PADS FOR AN ADDITIONAL 2K WORDS FOR FUTURE USE.

IT ALSO PROVIDES SOCKETS FOR 4 2708 EPROMS (2K WORDS) AND PADS FOR 16 8316E/2716 (16K WORDS) ROM/EPROM. THESE PADS MAY BE USED FOR 2708 EPROMS (8K WORDS) BY CHANGING JUMPERS AND SUPPLYING -5 VOLT POWER THRU PINS CB2 AND DB2.

THE M8012-YA PROVIDES SOCKETS FOR THE ADDITIONAL 2K OF BOOT/DIAGNOSTIC ROMS AND FOR THE PROGRAM ROM/EPROM.

2.2 ROM PAGES

ALL ROM IS ACCESED IN A PAGED FORMAT OF 2 128 WORD PAGES AT THE FOLLOWING BUS ADDRESSES

173000 TO 173377 LOW PAGE
173400 TO 173777 HIGH PAGE

SIZE A | CODE SP | NUMBER M8012-0-7 | REV A

DEC FORM NO EN-01022-16-N370-(381)
DRA 108

SHEET 4 OF 10

TO CONTROL MAPPING OF THESE PAGES INTO PHYSICAL ROM ADDRESSES A PAGE CONTROL REGISTER IS USED AT BUS ADDRESS 177520. THIS REGISTER IS WORD OR BYTE ADDRESSABLE AND MAY BY READ OR WRITTEN AND IS CLEARED UPON THE NEGATION OF BDCOK.

THE PHYSICAL ROM ADDRESS IS GENERATED BY LATCHING DAL1-DAL7 AT SYNC AS A0-A6 AND USING THE LOW OR HIGH BYTE OF THE PAGE REGISTER (DEPENDING IF BUS ADDRESS IS IN LOW OR HIGH PAGE) AS A7-A14. TWO ROMS ARE ACCESED AT A TIME, ONE AS LOW BYTE AND ONE AS HIGH BYTE.

NOTE THAT ANY PAGE IN PHYSICAL ROM MAY BE ACCESSED THROUGH THE LOW OR HIGH BUS PAGE.

IF THE BUS ADDRESS IS BETWEEN:

173000 AND 173377		173400 AND 173777	
ROM ADR=SOURCE		ROM ADR=SOURCE	
A0=	DAL1 (LATCHED)	A0=	DAL1 (LATCHED)
A1=	DAL2 "	A1=	DAL2 "
A2=	DAL3 "	A2=	DAL3 "
A3=	DAL4 "	A3=	DAL4 "
A4=	DAL5 "	A4=	DAL5 "
A5=	DAL6 "	A5=	DAL6 "
A6=	DAL7 "	A6=	DAL7 "
A7=	BIT0 (PAGE REG)	A7=	BIT8 (PAGE REG)
A8=	BIT1 "	A8=	BIT9 "
A9=	BIT2 "	A9=	BIT10 "
A10=	BIT3 "	A10=	BIT11 "
A11=	BIT4 "	A11=	BIT12 "
A12=	BIT5 "	A12=	BIT13 "
A13=	BIT6 "	A13=	BIT14 "
A14=	BIT7 "	A14=	BIT15 "

WHERE	PHYSICAL ROM ADDRESS BIT=	SOURCE

3.0 BEVENT CLAMP (REAL TIME CLOCK DISABLE)

3.1 GENERAL

A SINGLE BIT WRITE ONLY REGISTER CLAMPS BEVENTL LOW WHEN CLEARED. THIS ALLOWS PROGRAM CONTROL OF THE LSI-11 LINE TIME CLOCK FUNCTION. REGISTER IS CLEARED UPON NEGATION OF BDCOK. THE M8012 MODULE MUST BE LOCATED IN THE BACKPLANE PROVIDING BEVENT FOR PROPER OPERATION OF THIS FUNCTION. IT MAY BE DISABLED BY SWITCH SELECTION. SWITCH #5 OF E21 DISABLES THIS FUNCTION WHEN OFF.

3.2 ADDRESS

177546 BIT 6 BEVENT CLAMPED WHEN CLEAR (RTC OFF)

4.0 MAINTENANCE REGISTERS

4.1 READ WRITE REGISTER

A SIXTEEN BIT READ WRITE REGISTER IS PROVIDED AT ADDRESS 177522 FOR DIAGNOSTICS. THE REGISTER IS WORD OR BYTE ADDRESABLE AND IS CLEARED UPON NEGATION OF BDCOK.

4.2 DISPLAY REGISTER

A 4 BIT WRITE ONLY REGISTER AT ADDRESS 177524 CONTROLS A 4 LED EDGE MOUNTED RED DISPLAY USED FOR DIAGNOSTICS.
BITS 0-3 CORESPOND TO D1 TO D4 WITH A SET BIT TURNING THE RESPECTIVE LED OFF. THE REGISTER IS CLEARED (ALL LEDS ON) UPON NEGATION OF BDCOK.

4.3 SWITCH REGISTER

A 12 BIT READ ONLY REGISTER AT ADDRESS 177524 IS USED FOR MAINTENANCE AND SYSTEM CONFIGURATION (BITS 0-11). NOTE THAT THIS ADDRESS IS SHARED WITH THE DISPLAY REGISTER. E15 SWITCES 1-8 CORESPOND TO BITS 0-7 AND E21 SWITCHES 1-4 CORESPOND TO BITS 8-11 WITH A ON SWITCH READ AS A 1 AND AN OFF SWITCH AS A 0.

5.0 TERMINATION/PINOUT

ALL BUS LINES ARE TERMINATED BY A RESISTOR NETWORK OF 180 OHMS TO +5 AND 390 OHMS TO GND.

THE PINOUT AND BUS DRIVER/RECEIVER CHARACTERISTICS COMPLY WITH THE LSI-11 BUS SPECIFICATION (DEC STD-160)

6.0 POWER OK LED, RESTART AND HALT SWITCHES

A GREEN EDGE MOUNTED POWER OK LED IS PROVIDED AND IS LIGHTED WHEN +12 IS GREATER THAN 10 VOLTS AND +5 IS GREATER THAN 4V VOLTS.
A EDGE MOUNTED SWITCH (S2) REBOOTS THE SYSTEM BY DEASSERTING BDCOK FOR A NOMINAL 2 USEC WHEN IT IS CYCLED BACK AND FORTH ONCE. A SECOND EDGE MOUNTED SWITH (S1) ASSERTS BHALT WHEN POSITIONED WITH ITS LEVER AWAY FROM THE LED DISPLAY.

7.0 ROM CODE

SEE DIAGNOSTIC ENGINEERING DESIGN PLAN FOR THE BDV11-AA DIAGNOSTIC ROM, DIAGNOSTIC RETRIVAL NUMBER HP-046-10-S58 FOR BOOTSTRAPS/DIAGNOSTICS AND RESTRICTIONS ON EPROM AND PROGRAM ROM CODE

8.0 TEST POINTS

TIP JACKS ARE PROVIDED TO ALLOW MEASUREMENT OF THE 5 AND 12 VOLT POWER SUPPLIES. THE 5 AND 12 VOLT TEST JACKS HAVE A 560 OHM SERIES RESISTOR TO PREVENT DAMAGE BY ACCIDENTAL SHORTS.

JACK	FUNCTION	COLOR
J1	GND	BLACK
J2	+5	RED
J3	+12	PURPLE

9.0 ROM ADDRESS MAP
SEE SECTION 9.4 FOR DESCRIPTION OF CHARACTERS USED TO BRACKET ADDRESSES IN 9.1 TO 9.3

9.1 MASKED BOOT/DIAGNOSTIC ROM

HIGH BYTE	LOW BYTE	CHIP ADDRESS
E53	E48	0-2K,(4K-6K) BOOT/DIAG [16K-18K],<20K-22K>
E58	E44	2K-4K,(6K-8K) RESERVED [18K-20K],<22K-24K>

9.2 EPROM SOCKETS (INTERNAL -5V POWER)

E57	E40	4K-5K,(0-1K) <16K-17K>,[20K-21K]
E52	E36	5K-6K,(1K-2K) <17K-18K>,[21K-22K]

9.3 PROGRAM ROM/EPROM

E54	E49	16K-18K,!16K-17K! :0-2K:,*0-1K*
E59	E45	18K-20K,!18K-19K! :2K-4K:,*1K-2K*

9.2 PROGRAM ROM/EPROM CONTINUED

HIGH BYTE	LOW BYTE	CHIP ADDRESS
I E60 I	I E41 I	20K-22K,!20K-21K! :4K-6K:,*4K-5K*
I E55 I	I E37 I	22K-24K,!22K-23K! :6K-8K:,*6K-7K*
I E51 I	I E38 I	24K-26K,!17K-18K! :8K-10K:,*1K-2K*
I E47 I	I E42 I	26K-28K,!19K-20K! :10K-12K:,*3K-4K*
I E43 I	I E46 I	28K-30K,!21K-22K! :12K-14K:,*5K-6K*
I E39 I	I E50 I	30K-32K,!23K-24K! :14K-16K:,*7K-8K*

9.4 ADDRESS JUMPERS

THE CHARACTERS USED TO BRACKET VARIOUS ADDRESSES IN SECTIONS 9.1 TO 9.3 CORESPOND TO THOSE IN THE TABLE BELOW. FOR EACH JUMPER COMBINATION LISTED BELOW A GIVEN CHIP WILL BE SELECTED AT THE ADDRESSES INDICATED BY THE BRACKETS

CHAR	W1	W2	W3	W4	W9	W10	W11	W12
NONE	R	I	I	R	I	R	R	I
( )	X	X	X	X	I	R	I	R
[ ]	X	X	X	X	R	I	R	I
< >	X	X	X	X	R	I	I	R
! !	I	R	I	R	X	X	X	X
: :	R	I	R	I	X	X	X	X
* *	I	R	R	I	X	X	X	X

I=INSTALLED R=REMOVED X=DON'T CARE

NOTE: JUMPERS MUST NOT BE CONFIGURED AND CHIPS INSTALLED SUCH THAT 2 CHIPS RESPOND TO THE SAME ADDRESS.

10.0 PROGRAM ROM/EPROM JUMPERS

	W5	W6	W7	W8	W13	
8316E	I	R	I	R	R	NOTE 1
8316E	R	R	I	R	I	NOTE 2
2716	R	R	I	R	I	NOTE 3
2708	R	I	R	I	R	NOTE 4

NOTES:
(1) CS1=0, CS2=0, CS3=0
(2) CS1=0, CS2=0, CS3=1
(3) +5 VOLT ONLY PARTS
(4) 2708 WITH EXTERNAL -5 SUPPLIED BY CB2 & DB2.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY R. ROBICHAUD	CHECKED	SECTION
DATE 13 SEP 77	DATE	1
ENG	PROD	ISSUED SECT.
DATE	DATE 11 Nov 77	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION BDV11-A
1	MPØØ489	BDV11-A FIELD MAINTENANCE PRINT SET	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
BDV11-A SHIPPING LIST	-A	A	PL	BDV11-A		
	SHEET 1 OF 1	DIST				

DEC FORM

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-BA11-N-1	FIELD MAINTENANCE PRINT SET
B-DD-BA11-N	DRAWING DIRECTORY
E-UA-BA11-N-0	UNIT ASSY
B-PL-BA11-N-0	UNIT ASSY PARTS LIST
D-IA-7014093-0-0	HARNESS AC POWER
C-IA-7014091-0-0	HARNESS DC
B-DD-H9273-0	LOGIC ASSY DRAWING DIRECTORY
E-UA-H9273-0-0	LOGIC ASSY UNIT ASSY
B-DD-5412233-0	BACKPLANE DRAWING DIRECTORY
D-UA-5412233-0-0	BACKPLANE UNIT ASSY
D-CS-5412233-0-1	BACKPLANE CIRCUIT SCHEMATIC
B-DD-H408-A	AC INPUT BOX DRAWING DIRECTORY
D-UA-H408-A-0	AC INPUT BOX UNIT ASSY
D-IA7014092-0-0	SWITCH VOLTAGE SELECT ASSY
D-AD-7013949-0-0	BEZEL ASSY
B-DD-5412985-0	FRONT PANEL DRAWING DIRECTORY
D-UA-5412985-0-0	FRONT PANEL UNIT ASSY
B-PL-5412985-0-0	FRONT PANEL PARTS LIST
D-CS-5412985-0-1	FRONT PANEL CIRCUIT SCHEMATIC
C-IA-7011411-0-0	CABLE CONSOLE/BACKPLANE
D-AD-7013804-0-0	DOOR ASSY
B-DD-H786-0-	POWER SUPPLY DRAWING DIRECTORY
D-UA-H786-0-0	POWER SUPPLY UNIT ASSY
B-DD-5412530-0	MASTER BOARD DRAWING DIRECTORY
E-UA-5412530-0-0	MASTER BOARD UNIT ASSY
B-PL-5412530-0-0	MASTER BOARD PARTS LIST
D-CS-5412530-0-1	MASTER BOARD CIRCUIT SCHEMATIC
B-DD-5412532-0	CONTROL BOARD DRAWING DIRECTORY
D-UA-5412532-0-0	CONTROL BOARD UNIT ASSY
B-PL-5412532-0-0	CONTROL BOARD PARTS LIST
D-CS-5412532-0-1	CONTROL BOARD CIRCUIT SCHEMATIC
B-DD-5412528-0	POWER MONITOR BOARD DRAWING DIRECTORY
D-UA-5412528-0-0	POWER MONITOR BOARD UNIT ASSY
B-PL-5412528-0-0	POWER MONITOR BOARD PARTS LIST
D-CS5412528-0-1	POWER MONITOR BOARD CIRCUIT SCHEMATIC

UNIT VARIATIONS COVERED BY THIS PRINT SET
BA11-NC
BA11-ND
BA11-NE
BA11-NF

BA11-N
Field Maintenance
Print Set

Digital Equipment
Corporation

PRINT SET ORDER NO.
MPØØ487

REVISIONS		
REV.		
CHG. NO.		
DATE		

USED ON OPTION/MODEL	DRN.	DATE
FDBA11/03-L		5 Oct 77
	CHKD	DATE
		5 Oct 77
		DATE
		5 Oct 77
SHEET 1 OF 1		DATE
		5 Oct 77

TITLE: BA11-N PRINT SET

SIZE	CODE	NUMBER	REV.
D	06	BA11-N-1	

DIGITAL

EN-01124-10-N-0218-0127

DND 124

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FOR FIELD MAINTENANCE PRINT SET SEE B-TC-BA11-N-1

UNIT VARIATIONS

VAR	TITLE
BA11-NC	METAL COVER, H9273 BACKPLANE, CONSOLE, H786, 115V
BA11-ND	METAL COVER, H9273 BACKPLANE, CONSOLE, H786, 230V
BA11-NE	METAL COVER, H9273 BACKPLANE, NO CONSOLE, H786, 115V
BA11-NF	METAL COVER, H9273 BACKPLANE, NO CONSOLE, H786, 230V

REVISIONS			
REV.	CHANGE NO.	CHK	
A	BAIIN-00002		
B	BAIIN-ML0003	EC	

USED ON OPTION/MODEL: BAII-N

SHEET 1 OF 3

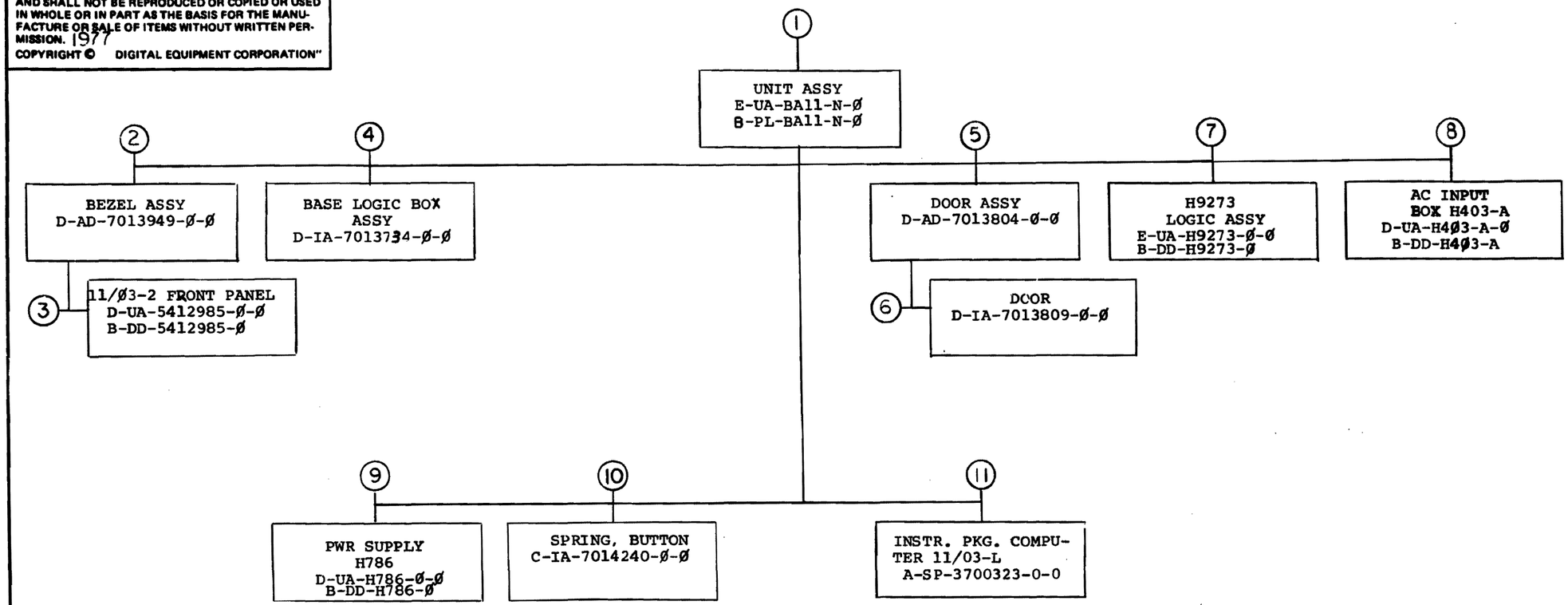
DRN. B. Blodgett	DATE 2 MAY 77	TITLE digital BAII-N LOGIC BOX
CHK'D. J. Galbraith	DATE 2 MAY 77	
PROJ. ENG. J. Black	DATE 9 SEPT 77	
PROD. R. Hamilton ECO	DATE 9-SEPT-77	

SIZE	CODE	NUMBER	REV
B	DD	BAII-N	B

DIST.

DPB 1068

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TITLE		SIZE	CODE	NUMBER	REV
LOGIC BOX BA11-N	SHEET 2 OF 3	B	DD	BA11-N	B

DRB 107

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	MP00487	FIELD MAINTENANCE PRINT SET (MP)	
	B-TC-BAll-N-1	FIELD MAINTENACE PRINT SET (TC)	
	B-PL-BAll-N-0	UNIT ASSEMBLY (BAll-N) PARTS LIST	E/M
	E-UA-BAll-N-0	UNIT ASSEMBLY BAll-N	E/M
	C-MD-7418384-0-0	CLAMP, HINGE	M
	C-IA-7418276-0-0	BRACKET, SUPPORT	M
	D-IA-7014093-0-0	HARNESS AC POWER	E/M
	C-IA-7014091-0-0	HARNESS DC	E/M
	E-IA-7418275-0-0	COVER, LOGIC BOX	M
	C-IA-7011411-0K	CABLE, BACKPLANE	E/M
	C-MD-7418573-0-0	BRACKET, BEZEL MTG	M
	E-MD-7415313-02	BEZEL 5 - 1/4" BLANK	M
	C-IA-7011411-1A	CABLE CONSOLE	E/M
	A-PL-BAll-N-2	SHIPPING LIST	
2	D-AD-7013949-0-0	BEZEL ASSY WITH SEITCHES	E/M
	E-MD-7415313-03	BEZEL 5 - 1/4"	M
	D-MD-7411945-02	FRAME	M
	D-MD-7411744-0-0	WINDOW	M
3	B-DD-5412985-0	11/03-L FRONT PANEL BOARD	-
4	D-IA-7014734-0-0	BASE LOGIC BOX ASSY	M
	E-IA-7418434-0-0	BASE LOGIC BOX	M
	C-IA-7418435-0-0	BRKT, DOOR SUPP.	M
	C-MD-7418433-0-0	SCREEN	M
	B-MD-7418694-0-0	BUSHING	M
5	D-AD-7013804-0-0	DOOR ASSEMBLY	M
	C-MD-7418375-0-0	WINDOW	M
	C-IA-7418374-0-0	STRAIN RELIEF	M

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
6	D-IA-7013809-0-0	DOOR	M
	B-MD-7418692-0-0	PIN	M
7	B-DD-H9273-0	LOGIC ASSY H9273	-
8	B-DD-H403-A	AC INPUT BOX (H403-A)	-
9	B-DD-H786-0	POWER SUPPLY H786	-
10	C-IA-7014240-0-0	SPRING, BUTTON ASSY	M
	C-MD-7418376-0-0	SPRING	M
	B-MD-7418693-0-0	BUTTON	M
11	A-SP-3700323-0-0	INSTR. PKG. COMPUTER 11/03-L	

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

digital

TITLE	SHEET	SIZE	CODE	NUMBER	REV
BAll-N LOGIC BOX	3 OF 3	B	DD	BAll-N	B

DRB 108A

LEGEND					
NUMBER	VARIATION				
	AMPS	PHASE/WIRE	VOLTS	HZ	
BAII-NC	12A	SINGLE/3	115 V	50/60 HZ	BEZEL ASSY/ SWITCHES
BAII-ND	6A	SINGLE/3	230V	50/60 HZ	BEZEL ASSY/ SWITCHES
BAII-NE	12A	SINGLE/3	115 V	50/60 HZ	BEZEL, BLANK
BAII-NF	6A	SINGLE/3	230V	50/60 HZ	BEZEL, BLANK

NOTES:

ASSEMBLY INSTRUCTIONS

1. OPERATIONS TO BE PERFORMED PER HARDWARE STANDARDS NO. SP7665049-C AND DECS WORKMANSHIP STANDARD.
2. INSTALL 1/4 TURN RECEPTACLE (ITEM 19) TO THE BASE (ITEM 6) AS SHOWN 2 PLACES.
3. ATTACH THE A.C. INPUT BOX (ITEM 9) TO THE STUD IN THE BASE (ITEM 6) USING #8-32 KEP NUT (ITEM 20), AND TO THE DOOR SUPPORT BRKT. OF ITEM 6 USING #8 LOCK WASHER (ITEM 14) AND #8-32 x .25 LG SCREW (ITEM 13) 2 PLACES.
4. ATTACH THE LOGIC ASSY. (ITEM 8) TO THE BASE. LOCK THE SNAPSLIDE FASTENERS IN PLACE; 3 PLACES AS SHOWN.
5. ATTACH THE DOOR ASSY. (ITEM 7) TO THE BASE (ITEM 6) USING THE HINGE CLAMP (ITEM 11) AND #6-32 x .25 LG FLAT HD. SCREW (ITEM #21) 2 PLACES AS SHOWN.
6. ATTACH THE CONSOLE CABLE (ITEM 33) TO THE BASE WITH THE CABLE TIE (ITEM 28) AS SHOWN IN DETAIL "A" (FOR VARIATION NC AND ND ONLY).
7. ATTACH THE POWER SUPPLY (ITEM 10) TO THE BASE BY LATCHING THE HINGES.
8. ATTACH THE BEZEL MOUNTING BRKTS. (ITEM 1) TO THE PWR. SUPPLY (ITEM 10) WITH 4 #8-32 x .25 LG SCREWS (ITEM 13) AND 4 LOCK WASHERS (ITEM 14).
9. ATTACH THE BEZEL ASSY WITH SWITCHES (ITEM 2) OR THE BEZEL BLANK (ITEM 3) TO THE BEZEL MOUNTING BRKTS (ITEM 1) WITH 4 #8-32 x .38 LG SCREWS (ITEM 22) AND 4 LOCK WASHERS (ITEM 14).
10. PLUG ONE END OF THE CONSOLE CABLE (ITEM 33) INTO J6 OF THE POWER SUPPLY ASSY (ITEM 10). PLUG THE OTHER END OF THIS CABLE INTO J1 OF THE BEZEL ASSY WITH SWITCHES (ITEM 2) (FOR VARIATION NC + ND ONLY).
11. PLUG ONE END OF THE BACKPLANE CABLE (ITEM 17) INTO J8 OF THE LOGIC ASSY. (ITEM 8). PLUG THE OTHER END OF THIS CABLE INTO J5 OF THE PWR SUPPLY ASSY (ITEM 10).

CONTINUED ON SHEET 2 OF 2

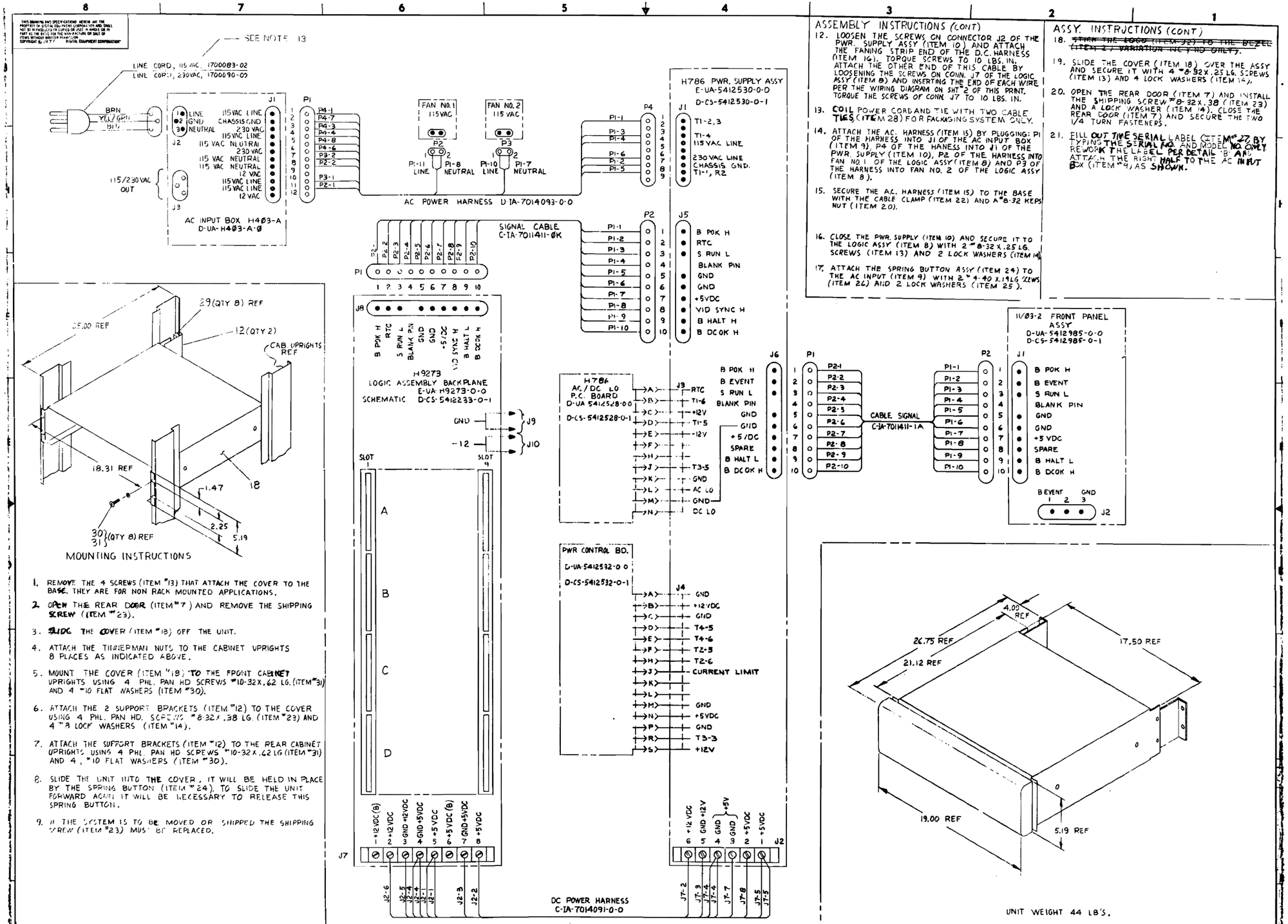
DETAIL B
SERIAL LABEL REWORK

DETAIL "A"
SCALE: NONE
FOR VARIATION -NC & -ND ONLY

OFF SHEET PARTS LIST SEE B-PL-BAII-N-Ø

DRN.	FIRST USED ON
CHK'D	BAII N
ENG.	TITLE
PROJ. ENG.	UNIT ASSY
PROD.	
NEXT HIGHER ASSY.	H-DD-BAII-N-Ø
MATL-HAL	SIZE E
SCALE NONE	SHEET 1 OF 2
FINISH	DWG NO. BAII-N-Ø
	REV. B

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ASSEMBLY INSTRUCTIONS (CONT)

12. LOOSEN THE SCREWS ON CONNECTOR J2 OF THE PWR. SUPPLY ASSY (ITEM 10) AND ATTACH THE FANING STRIP END OF THE D.C. HARNESS (ITEM 16). TORQUE SCREWS TO 10 LBS. IN. ATTACH THE OTHER END OF THIS CABLE BY LOOSENING THE SCREWS ON CONN. J7 OF THE LOGIC ASSY (ITEM 8) AND INSERTING THE END OF EACH WIRE PER THE WIRING DIAGRAM ON SHT #2 OF THIS PRINT. TORQUE THE SCREWS OF CONN J7 TO 10 LBS. IN.
13. COIL POWER CORD AND TIE WITH TWO CABLE TIES (ITEM 28) FOR PACKAGING SYSTEM ONLY.
14. ATTACH THE AC. HARNESS (ITEM 15) BY PLUGGING: P1 OF THE HARNESS INTO J1 OF THE AC INPUT BOX (ITEM 9). P4 OF THE HANESS INTO J1 OF THE PWR. SUPPLY (ITEM 10), P2 OF THE HARNESS INTO FAN NO.1 OF THE LOGIC ASSY (ITEM 8) AND P3 OF THE HARNESS INTO FAN NO. 2 OF THE LOGIC ASSY (ITEM 8).
15. SECURE THE A.C. HARNESS (ITEM 15) TO THE BASE WITH THE CABLE CLAMP (ITEM 22) AND A #8-32 KEPS NUT (ITEM 20).
16. CLOSE THE PWR. SUPPLY (ITEM 10) AND SECURE IT TO THE LOGIC ASSY (ITEM 8) WITH 2 #8-32 X .25 LG. SCREWS (ITEM 13) AND 2 LOCK WASHERS (ITEM 14).
17. ATTACH THE SPRING BUTTON ASSY (ITEM 24) TO THE AC INPUT (ITEM 9) WITH 2 #4-40 X .19 LG SCREWS (ITEM 26) AND 2 LOCK WASHERS (ITEM 25).

ASSY. INSTRUCTIONS (CONT)

18. ~~ATTACH THE LOGO (ITEM 32) TO THE BEZEL (ITEM 2) VARIATION NC 1 NO ONLY.~~
19. SLIDE THE COVER (ITEM 18) OVER THE ASSY AND SECURE IT WITH 4 #8-32 X .25 LG. SCREWS (ITEM 13) AND 4 LOCK WASHERS (ITEM 14).
20. OPEN THE REAR DOOR (ITEM 7) AND INSTALL THE SHIPPING SCREW #8-32 X .38 (ITEM 23) AND A LOCK WASHER (ITEM 14). CLOSE THE REAR DOOR (ITEM 7) AND SECURE THE TWO 1/4 TURN FASTENERS.
21. FILL OUT THE SERIAL LABEL (ITEM 27 BY TYPING THE SERIAL NO. AND MODEL NO ONLY. REWORK THE LABEL PER DETAIL 'B' AND ATTACH THE RIGHT HALF TO THE AC INPUT BOX (ITEM 9) AS SHOWN.

MOUNTING INSTRUCTIONS

1. REMOVE THE 4 SCREWS (ITEM #13) THAT ATTACH THE COVER TO THE BASE. THEY ARE FOR NON RACK MOUNTED APPLICATIONS.
2. OPEN THE REAR DOOR (ITEM #7) AND REMOVE THE SHIPPING SCREW (ITEM #23).
3. SLIDE THE COVER (ITEM #18) OFF THE UNIT.
4. ATTACH THE TINNERMAN NUTS TO THE CABINET UPRIGHTS 8 PLACES AS INDICATED ABOVE.
5. MOUNT THE COVER (ITEM #18) TO THE FRONT CABINET UPRIGHTS USING 4 PHL. PAN HD SCREWS #10-32X.62 LG. (ITEM #31) AND 4 #10 FLAT WASHERS (ITEM #30).
6. ATTACH THE 2 SUPPORT BRACKETS (ITEM #12) TO THE COVER USING 4 PHL. PAN HD. SCREWS #8-32 X .38 LG. (ITEM #23) AND 4 #8 LOCK WASHERS (ITEM #14).
7. ATTACH THE SUPPORT BRACKETS (ITEM #12) TO THE REAR CABINET UPRIGHTS USING 4 PHL. PAN HD SCREWS #10-32 X .62 LG (ITEM #31) AND 4, #10 FLAT WASHERS (ITEM #30).
8. SLIDE THE UNIT INTO THE COVER, IT WILL BE HELD IN PLACE BY THE SPRING BUTTON (ITEM #24). TO SLIDE THE UNIT FORWARD AGAIN IT WILL BE NECESSARY TO RELEASE THIS SPRING BUTTON.
9. IF THE SYSTEM IS TO BE MOVED OR SHIPPED THE SHIPPING SCREW (ITEM #23) MUST BE REPLACED.

REVISIONS		
LTR	CHANGE NO.	REV.

TITLE: UNIT ASSY BAII-N		SIZE: D	DWG NO: BAII-N-0
SCALE: NONE	SHEET 2 OF 2	E.S.T.	REV: D

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY J. J. Gallagher | CHECKED J. Gallagher | SECTION
DATE 3 MAY 77 | DATE 9 AUG 77

ENG J. Gallagher | PROD R Hamilton SFK | ISSUED SECTION
DATE 31 AUG 77 | DATE 31 AUG 77

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION BA11-NC	BA11-ND	BA11-NE	BA11-NF	NOTES: REF DESIGNATION
1	C-MD-7418573-0-0		BRKT. BEZEL MTG.	2	2	2	2	
2	D-AD-7013949-0-0		BEZEL ASSY WITH SWITCHES	1	1	-	-	
3	E-MD-7415313-02		BEZEL BLANK	-	-	1	1	
4		17-00083-02	LINE CORD (115V) USA	1	-	1	-	
5		17-00090-00	LINE CORD (250V) USA	-	1	-	1	
6	D-IA-7013734-0-0		BASE, LOGIC BOX	1	1	1	1	
7	D-AD-7013804-0-0		DOOR ASSY	1	1	1	1	
8	E-UA-H9273-Ø-Ø		LOGIC ASSY (H9273)	1	1	1	1	
9	D-UA-H4Ø3-A-Ø		AC INPUT BOX (H4Ø3-A)	1	1	1	1	
10	D-UA-H786-Ø-Ø		PWR. SUPPLY ASSY (H786)	1	1	1	1	
11	C-MD-7418384-0-0		CLAMP, HINGE	2	2	2	2	
12	C-IA-7418276-0-0		BRKT, SUPPORT	2	2	2	2	
13		90-06035-01	SCR. PHL HD PAN #8-32X.25	11	11	11	11	
14		90-06634-00	WASHER, LOCK #8	21	21	21	21	
15	D-IA-7014093-0-0		HARNESS AC POWER	1	1	1	1	
16	C-IA-7014091-0-0		HARNESS DC	1	1	1	1	
17	C-IA-7011411-ØK		CABLE BACKPLANE	1	1	1	1	
18	E-IA-7418275-0-0		COVER, LOGIC BOX	1	1	1	1	
19		90-08196-00	RECEPTACLE ¼ TURN	2	2	2	2	
20		90-06563-00	NUT, KEPS #8-32	2	2	2	2	
21		90-08404-02	SCR. PHL HD FLAT #6-32X.31	2	2	2	2	
22		90-07082-00	CABLE CLAMP .31 DIA.	1	1	1	1	
23		90-06037-01	SCR. PHL HD PAN #8-32X.38	10	10	10	10	
24	C-IA-7014240-0-0		SPRING, BUTTON ASSY	1	1	1	1	
25		90-06632-00	WASHER, LOCK INT. TOOTH #4	2	2	2	2	
26		90-08032-01	SCREW PHL HD PAN #4-40X.19	2	2	2	2	
27		3613210-00	LABEL SERIAL	1	1	1	1	
28		90-07880-00	TIE, CABLE SST 1.5 M	3	3	2	2	
29		90-07786-00	NUT TINNERMAN #10-32	8	8	8	8	
30		90-07651-00	WASHER LOCK EXT. TOOTH #10	8	8	8	8	
31		90-06073-03	SCR, PHL TRUSS HD. #10-32 x 50	8	8	8	8	
32	~~C-MD-7419481-0-0~~		~~LOGO PDP 11/03-L~~	1	1	-	-	
33	C-IA-7011411-1A		CABLE CONSOLE	1	1	-	-	
34	A-SP-3700323-0-0		INSTR. PKG. COMPUTER 11/03-L	1	1	1	1	

E.C.O. NO. 00002 ML0[illegible]

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TITLE: UNIT ASSY BA11-N

ASSY NO. E-UA-BA11-N-Ø | SIZE B | CODE PL | NUMBER BA11-N-Ø | REV. B

SHEET 1 OF 1 | INSERTION PARTS LIST DATA BASE REV

DP3 125

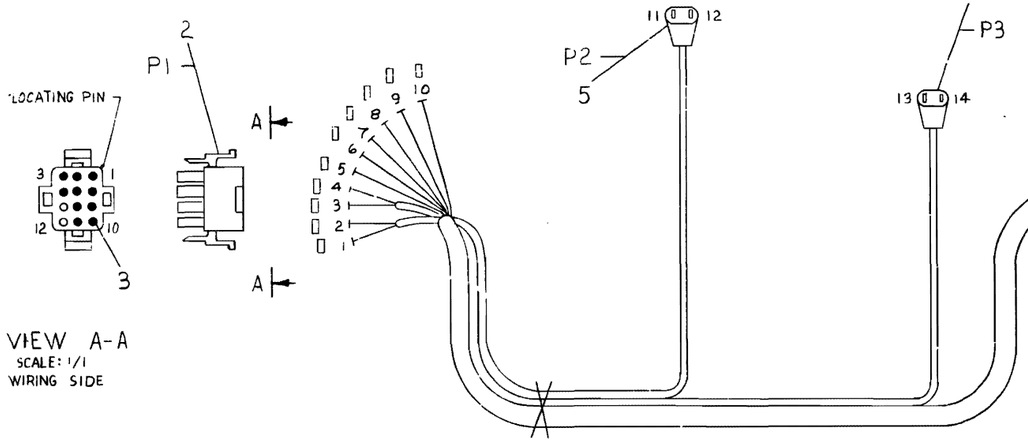
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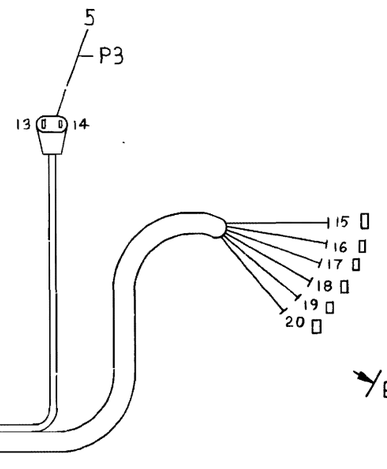
WIRE TABLE

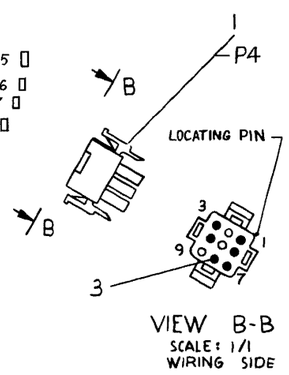
ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM POINT	FROM CONN	FROM TERM	TO POINT	TO CONN	TO TERM
5	18	BLK	1	P1-10	3	13	P3	—
	↓	↓	2	P1-7	↓	14	P3	—
5	↓	↓	3	P1-11		11	P2	—
	18	BLK	4	P1-8		12	P2	—
10	14	BLK	5	P1-4		19	P4-4	3
4	14	BLU	6	P1-5		17	P4-8	↓
11	14	BRN	7	P1-6		16	P4-6	
7	18	BLK	8	P1-1		18	P4-1	
9	18	GRN/YEL	9	P1-2	↓	20	P4-7	↓
8	18	BRN	10	P1-3	3	15	P4-3	3

NOTES:

1. USE TIE WRAPS (X) ITEM #6 APPROXIMATELY AS SHOWN.







DO NOT REDUCE
FOR MANUFACTURING PURPOSES ONLY

SCALE
0 IN 3 IN 6 IN 9 IN 12 IN

SYM	QTY	DESCRIPTION	DWG./PART NO.	ITEM NO.
	9/R	TUBING, EXTRUDED	9107145-00	12
	A/R	WIRE, #14 AWG 300V (BRN)	9107787-11	11
	↓	WIRE, #14 AWG (BLK)	9107370-00	10
	↓	WIRE, #18 AWG (GRN/YEL)	9107410-54	9
	↓	WIRE, #18 AWG 300V (BRN)	9107786-11	8
	A/R	WIRE, #18 AWG (BLK)	9107360-00	7
X	1	TIE, CABLE, SST 1, M	9007031-00	6
	2	PLUG CORD ASSY	12102833-00	5
	A/R	WIRE, #14 AWG 300V (BLU)	9107787-66	4
▯	16	PIN, FEMALE	1212170-01	3
	1	CONN, MATE-N-LOK 12 PIN	1212167-03	2
	1	CONN. MATE-N-LOK 9 PIN	1212167-04	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	PLACES OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE				
		OVER 0 TO 0.5	OVER 0.5 TO 1.2	OVER 1.2 TO 4	OVER 4 TO 12.0	OVER 12.0 TO 40.0
SURFACE QUALITY IN ✓ MICROINCHES	MEDIUM ☐	±.004	±.008	±.012	±.016	±.064
	PREFERRED ☐	±.012	±.016	±.025	±.04	±.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH

DRN. J. Blodgett	30 SEPT 77	FIRST USED ON BAII-N
CHK'D Y. Hoffman Jr	28 APR 77	
ENG. J. Bligh	13 JUNE 77	
PROJ. ENG. J. Bligh	13 JUNE 77	
PROD. K. Hoffman	5 JUNE 78	
NEXT HIGHER ASSY.	E-UA-BAII-N-0	
SCALE 1/1	SHEET 1 OF 1	

TITLE
HARNESS
AC POWER

SIZE	CODE	NUMBER	REV.
D	1A	7014093-0-0	B
DIST.			

REVISIONS	CHANGE NO.	REV.
CHK. JC	7014093-0001	A
	7014093-0002	B

J. KALLAGHER 23 Aug 77
J. KALLAGHER 25 Jan 78
J. KALLAGHER 11 Jul 78

MADE/PACK P-1693
DEC FORM 1-01

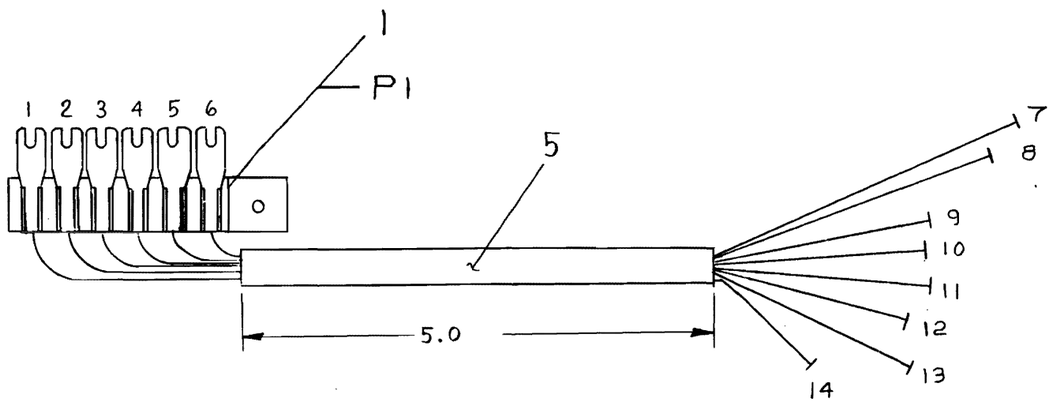
7014093-0-0 B

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WIRE TABLE

ITEM NO	DESCRIPTION AWG	DESCRIPTION COLOR	FROM POINT	FROM CONN.	FROM TERM	TO POINT	TO CONN (REF)	TO TERM (REF)
3	14	RED	—	P1-1	SOLDER	9	J7	5
3	↑	RED	—	↑	↑	11	↑	5
3	↑	RED	—	P1-2	↑	7	↑	8
2	↑	BLK	—	P1-3	↑	8	↑	7
↑	↑	BLK	—	P1-4	↑	10	↑	4
↓	↓	BLK	—	↓	↓	13	↓	4
2	↓	BLK	—	P1-5	↓	12	↓	3
4	14	VIO	—	P1-6	SOLDER	14	J7	2

NOTES:
1. STRIP INSULATION BACK .38 INCH. POINTS 7 – 14



DO NOT REDUCE

0 IN 3 IN 6 IN 9 IN 12 IN

FOR MANUFACTURING PURPOSES ONLY

A/R	DESCRIPTION	DWG./PART NO.	ITEM NO.
A/R	TUBING EXTRUDED .375 I.D.	9107245-00	5
A/R	WIRE, 14 AWG STRD (VIO)	9107370-77	4
A/R	WIRE, 14 AWG STRD (RED)	9107370-22	3
A/R	WIRE, 14 AWG STRD (BLK)	9107370-00	2
1	STRIP, CONNECTOR, (6 POSITION)	1212698-00	1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30' / SURFACE QUALITY IN MICROINCHES — CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES: OVER 0 TO 0.2	OVER 0.2 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
MEDIUM ☐	±.004	±.008	±.012	±.016	±.024	±.04
PREFERRED ☐	±.012	±.016	±.025	±.04	±.06	±0.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH —

DRN. B B Bellavance	18 APR 77	FIRST USED ON BAII-N
CHK'D J Fallowfield	28 APR 77	
ENG. J Kalagher	1 JUNE 77	TITLE HARNESS, D.C.
PROJ. ENG. J Kalagher	1 JUNE 77	
PROD. R Hamilton	15 JUNE 77	
NEXT HIGHER ASSY.		
E-UA-BAII-N-0		SIZE C / CODE IA / NUMBER 7014091-0-0 / REV. B
SCALE 1/1		
SHEET 1 OF 1		DIST.

REVISIONS	CHANGE NO.	REV.
CHK	7014091-00001	A
J. KALAGHER 17 AUG 77	7014091-00002	B
J. KALAGHER 22 DEC 77		

MAKEFACE P-1685

DEC FORM NO. DRC 100-C

SIZE C / CODE IA / NUMBER 7014091-0-0 / REV. B

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UNIT VARIATIONS

VAR	TITLE
H9273	LOGIC ASSY
H9273-A	BACK PLANE LOGIC ASSY. UNIT

REVISIONS	CHANGE NO.	REV.
JA	H9273-1	A
[illegible]	H9273-2	B

USED ON OPTION/MODEL: H9273

SHEET 1 OF 3

DRN. V. SOUZA — DATE 22 APR 77

CHK'D. J. Falkowski — DATE 2 MAY 77

PROJ. ENG. J. Kluch — DATE 7 SEPT 77

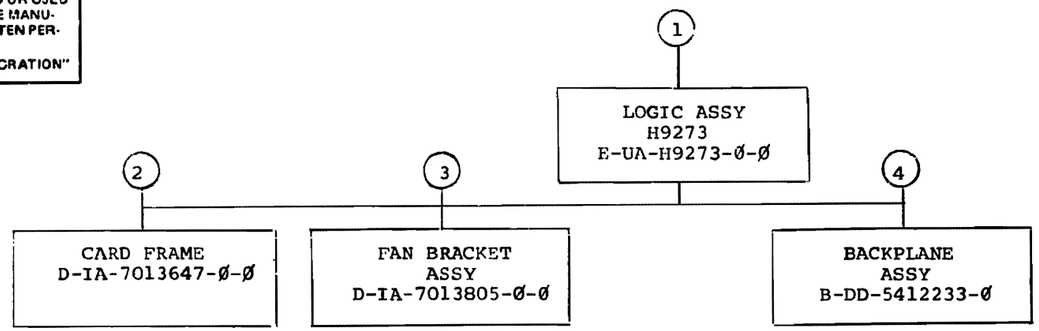
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TITLE: LOGIC ASSY H9273 — digital

SIZE	CODE	NUMBER	REV
B	DD	H9273-Ø	B

DIST.

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TITLE		SIZE	CODE	NUMBER	REV
LOGIC ASSY H9273	SHEET 2 OF 3	B	DD	H9273-Ø	B

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	E-UA-H9273-Ø-Ø	LOGIC ASSY H9273	M
	D-IA-7418122-Ø-Ø	BRACKET, BACKPLANE	M
	3615517-Ø-Ø	DECAL,IDENTIFICATION	M
	A-SP-3700384-0-0	PACKAGING INSTRUCTIONS	M
2	D-IA-7013647-Ø-Ø	CARD FRAME	M
	C-MD-7418393-Ø-Ø	RAIL, BOTTOM	M
	C-MD-7418392-Ø-Ø	PAD, FAN SUPPORT	M
	C-MD-7418391-Ø-Ø	PAD, SLIDE FASTENER	M
	C-MD-7418390-Ø-Ø	SUPPORT GUIDE UPPER	M
	C-MD-7418389-Ø-Ø	SUPPORT GUIDE	M
	C-IA-7418388-Ø-Ø	PAD, FRAME MTG.	M
	C-MD-7418547-Ø-Ø	RAIL, TOP	M
3	D-IA-7013805-Ø-Ø	BRACKET ASSY, FAN	M
	E-IA-7418123-Ø-Ø	BRACKET, FAN	M
	C-MD-7418432-Ø-Ø	BAFFLE	M
4	B-DD-5412233-Ø	BACKPLANE ASSY, DRAWING DIRECTORY	-

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
	A-PL-H9273-A-2	SHIPPING LIST	
	B-TC-H9273-A-1	TABLE OF CONTENTS MPØØ67Ø	

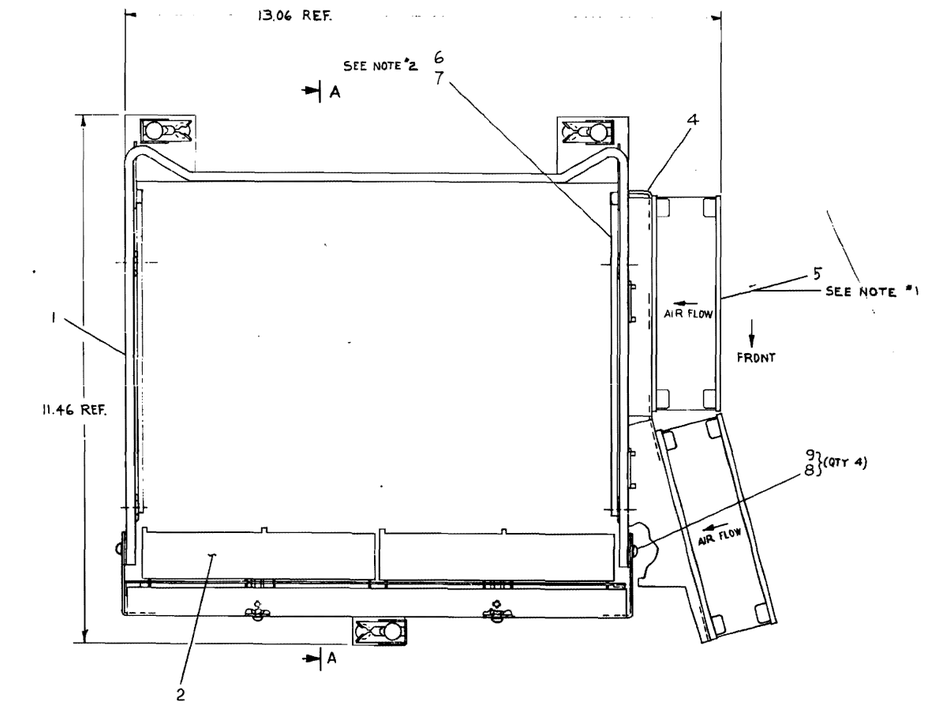
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M MECHANICAL
E/M ELECTRO/MECHANICAL

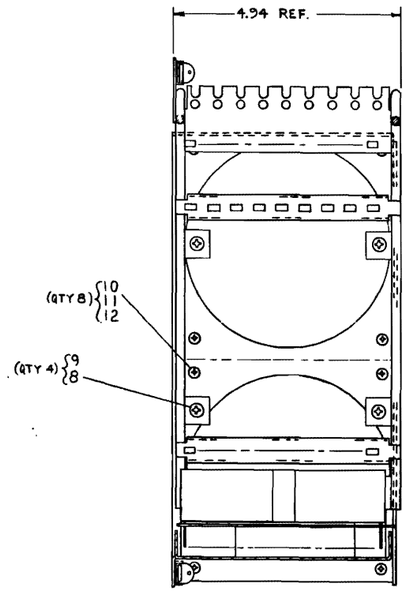
digital

TITLE LOGIC ASSY H9273 | SHEET 3 OF 3 | SIZE B | CODE DD | NUMBER H9273 -Ø | REV B

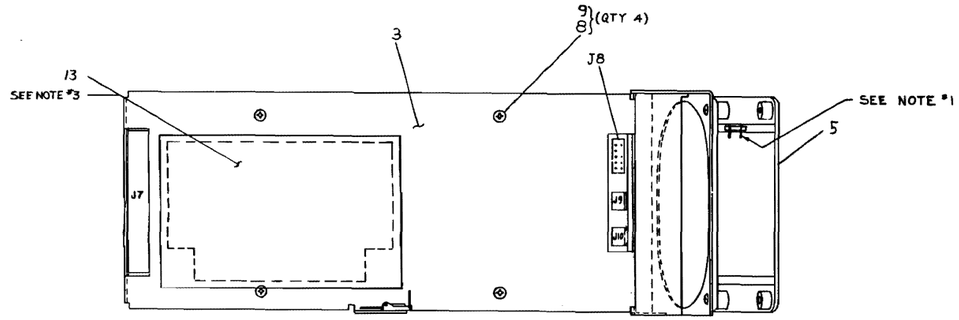
DRB 108A

NOTES:
1. MOUNT FANS SO THAT THE TERMINALS ARE ON THE TOP TOWARDS THE FRONT.
2. 5 NATURAL CARD GUIDES (ITEM #7) AND 4 MEGENTA CARD GUIDES (ITEM #6) ON EACH SIDE. INSTALL SO COLORS ALTERNATE.
3. DECAL MUST COVER SILK SCREENING COMPLETLY





SECTION A-A
CARD GUIDES REMOVED



		DESCRIPTION	DWG./PART NO.	ITEM NO.
1	-	PACKAGING INSTRUCTIONS	A-SP-3700384-00	14
1	-	DECAL, IDENTIFICATION	36155/1700	13
-	8	CLIP, MOUNTING	9009165-00	12
-	8	WASHER, LOCK, INT TOOTH #6	9006633-00	11
-	8	SCR, PHL. PAN HD #6-32 X .62	9006025-01	10
8	12	WASHER, LOCK INT. TOOTH #8	9006634-00	9
8	12	SCR, PHL. PAN HD #8-32 X .38	9006037-01	8
10	10	GUIDE, CARD (NATURAL)	1212405-08	7
8	8	GUIDE, CARD (MEGENTA)	1212405-04	6
-	2	FAN.	1213185-00	5
-	1	BRKT, FAN MTG	D-IA-7013805-0-0	4
-	1	BRACKET, BACKPLANE	D-IA-7418122-0-0	3
1	1	BACKPLANE ASSY	D-IA-5412233-0-0	2
1	1	CARD FRAME ASSY	C-IA-7013647-0-0	1

H9273-A
H9273-0

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

TOLERANCES: ANGLES ±1°, SURFACE QUALITY ±, DECIMALS .X ±.1, .XX ±.03, .XXX ±.010, FRACTIONS ±1/64, MACH. FINISH 125

QUALITY & VARIATION

THIRD ANGLE PROJECTION

DRAWN V. SOULE 4 | CHECK | ENG | PROJ ENG | MFG | QUAL | MATERIAL SEE PARTS LIST | FINISH

FIRST USED ON H9273

TITLE H9273 LOGIC ASSY

SIZE E | CODE IDENT UA | NUMBER H9273-0-0 | REV B | SCALE 1/1 | SHEET OF | DIST

REVISIONS

SYM	ORDER NO.	REV.
M	H9273-00001	A
	ECO 4A1618	
	ECO 4A1618	B
	ECO 4A1618	

A AMCO

H9273-0-0 B

SIZE	DWG NO.	REV.
D	5412233-0	D

DRAWING NO.	QTY.	PART NO.	DESCRIPTION	REVISIONS
D-MI-5012233-0-6	1		MODULE HISTORY	* A
D-UA-5012233-0-0	5		BACKPLANE	C D
D-CS-5012233-0-1	1		BACKPLANE	C D
D-MD-5012232-0-0	6		BACKPLANE	C C
		5012232	ETCHED CIRCUIT BOARD	D D
5412233-0-L			P.C. DESIGN DATA BASE	*E*
5412233-0-PL			INSERTION P/L DATA BASE	*E*

NOTES:

REVISIONS	DATE	CHG NO.	REV.
INITIAL RELEASED	3-03-78		D

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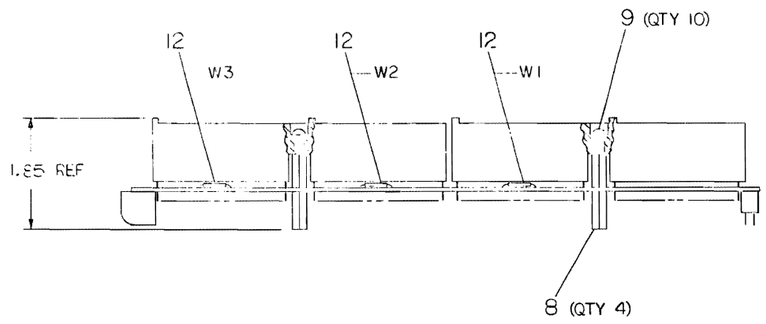
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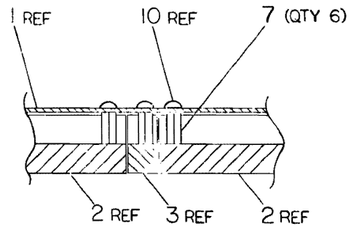
USED ON OPTION/MODEL	DRN	DATE	TITLE
H9273	R. FORTENAL	04677	BACKPLANE ASSY
	CHK		SIZE D
	ENG	2-8-78	NUMBER 5412233-0 REV. D
	MFG		SHT 1 OF 1

DIB 103

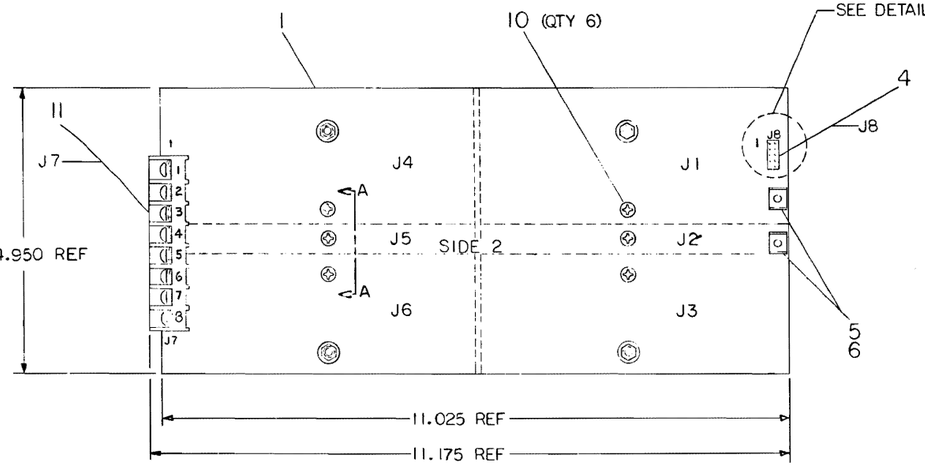
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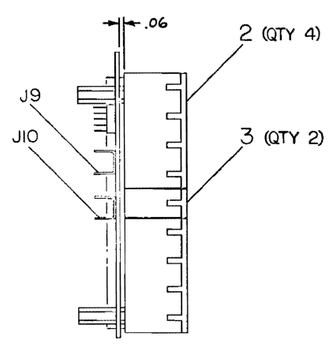
1. ITEM 13 TO BE USED WHEN SHIPPING THIS ASSEMBLY (5412233) INTERPLANT.
2. CUT PIN 4 OF J8 BACK TO THE CARRIER.
3. ITEM 2 MAY BE SUBSTITUTED WITH 1210258-00. ITEM 3 MAY BE SUBSTITUTED WITH 1211425-00. CUT ALL PINS .183 FROM BOARD. (BEFORE ASSEMBLY)

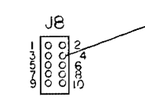




SECTION A-A







DETAIL "A"

	REF	CARTON SHIPPING	A-SP-3700037-00	13
	3	JUMPER WIRE WHITE INSU.	9009183	12
	1	TERMINAL BLOCK, 8 POS	1213463-04	11
	6	SCREW, PH. MIL. 8-32 X .25 LG	9006035-01	10
	10	SCREW, PH. MIL. 8-32 X .63 LG	9006120-06	9
	4	SPACER, 8-32 X .25 X 1.25 LG	9009603	8
	6	SPACER, 8-32 X .25 X .56 LG	9009602	7
	2	EYELET	9009000	6
	2	TAB, FASTON	9007113	5
	1	CONN. 10 POS.	1213488	4
SEE NOTE 3	2	CONN., 72 PIN BLOCK	1211425-02	3
SEE NOTE 3	4	CONN., 28P PIN BLOCK	1210258-01	2
	1	ETCHED CIRCUIT BOARD	5012252	1
		DESCRIPTION	DRAWING NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ALLOW 30° CHIP	CRITICAL ACCURACY (CHECK ONE)	DECIMALS	.X ±.1	.XX ±.03	.XXX ±.010	.XXXX ±.0050	ANGLES ±1°
SURFACE QUALITY IN MICROINCHES		PREFERRED	.X ±.2	.XX ±.05	.XXX ±.015	.XXXX ±.0075	ANGLES ±2°

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP EDGES .010 MAX

DO NOT SCALE DRAWING

MATERIAL

DRAWN 11-10-71 H9273

CHECKED 11-10-71

ENG APPR.

PROJECT MGR.

PURCHASING APPR.

PRODUCTION CONTROL

FINISH PER

PRINTED ON H9273

TITLE

BACKPLANE, UNIT ASSY

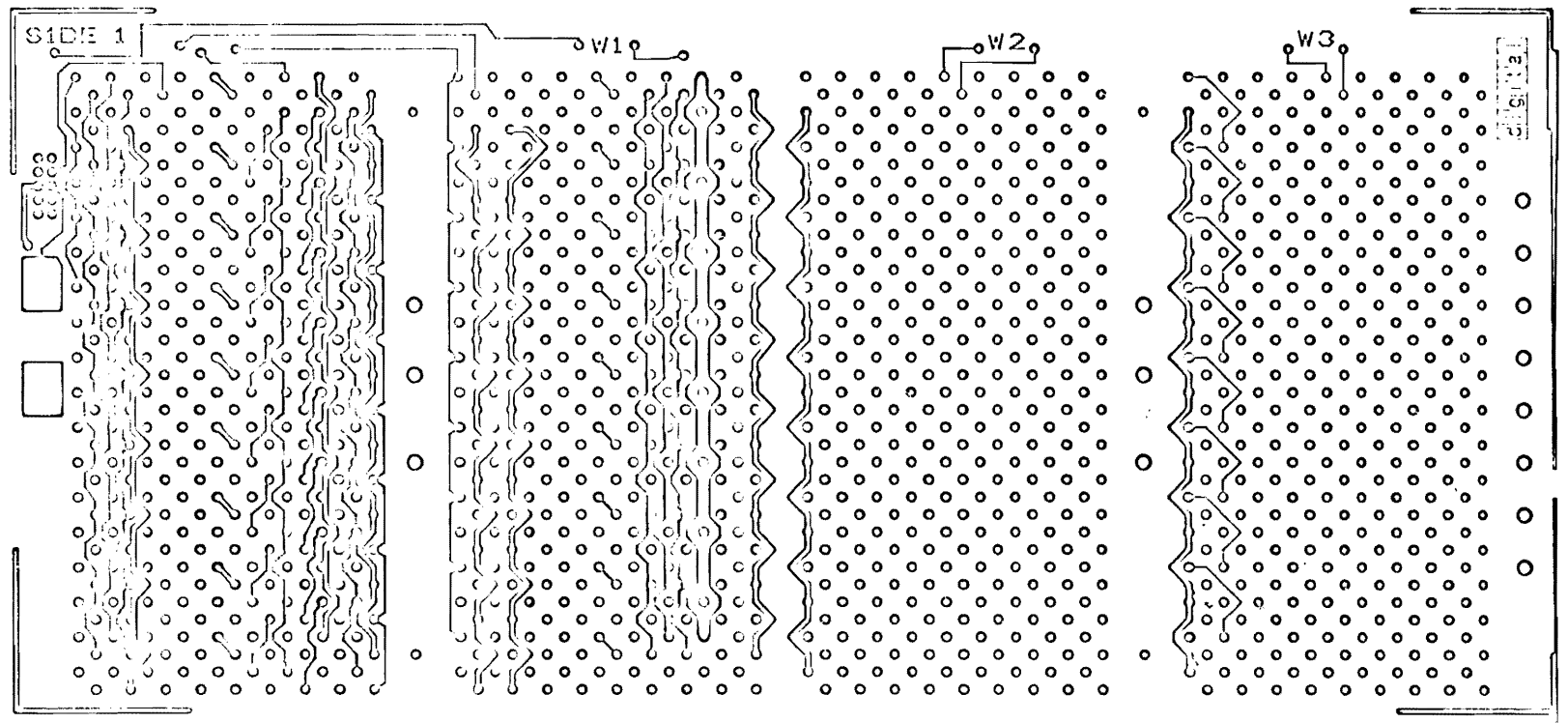
SIZE D CODE IDENT NO. 54122 DRAWING NUMBER 5412233-0-0 REV. D

SCALE 1-1 WEIGHT SHEET 1 OF 1

5412233-0-01 D

0 UA 5412233-0 D

5412233 5012232D L1

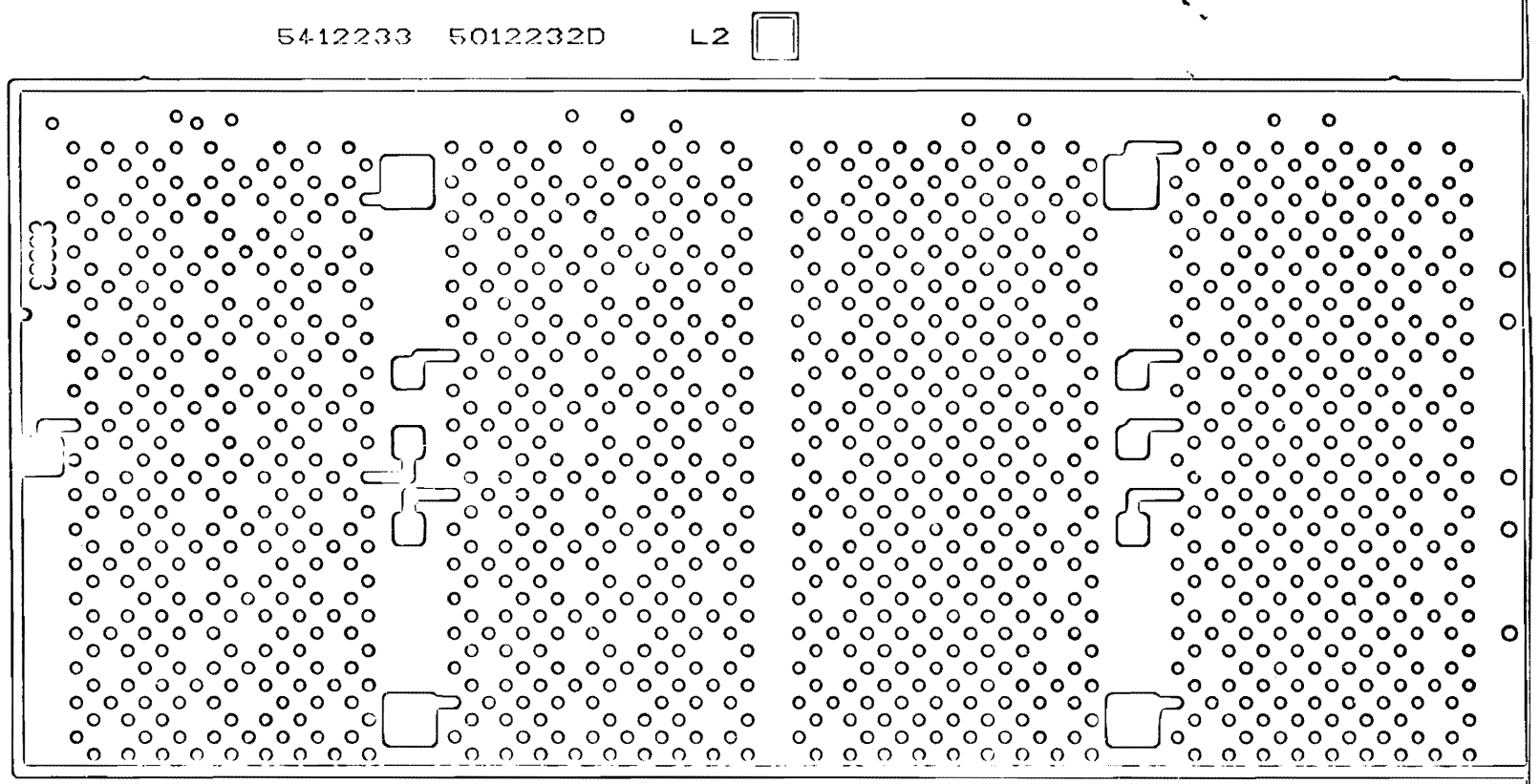


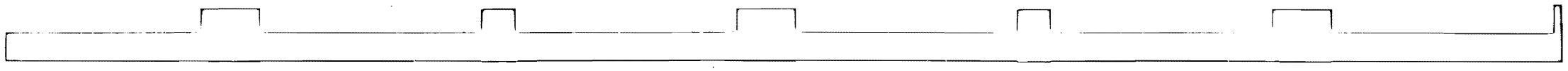
VIEWED FROM SIDE 1

BACKPLANE ASSY DWG 5412233-02 D

6 5 4 3 2

5412233 5012232D L2



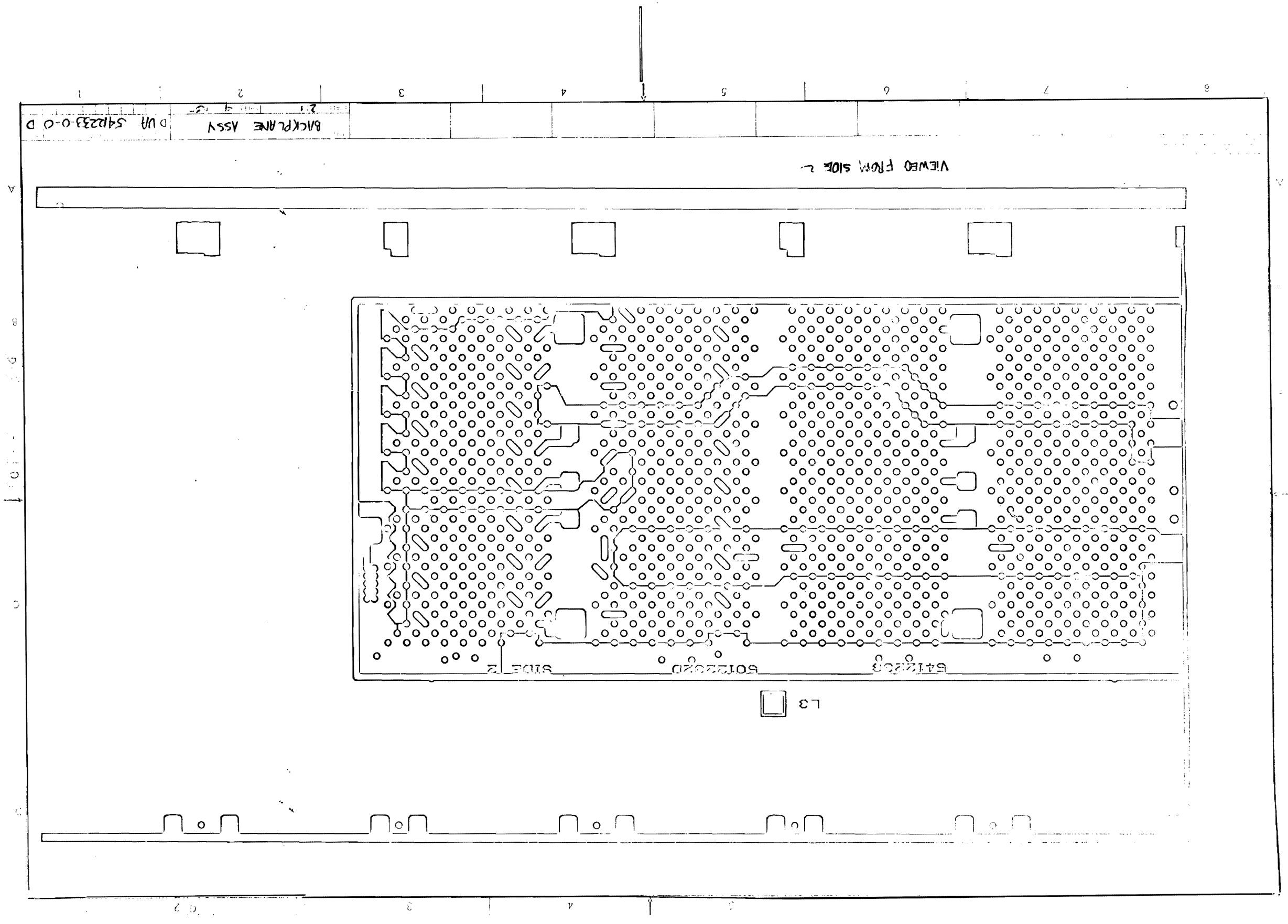


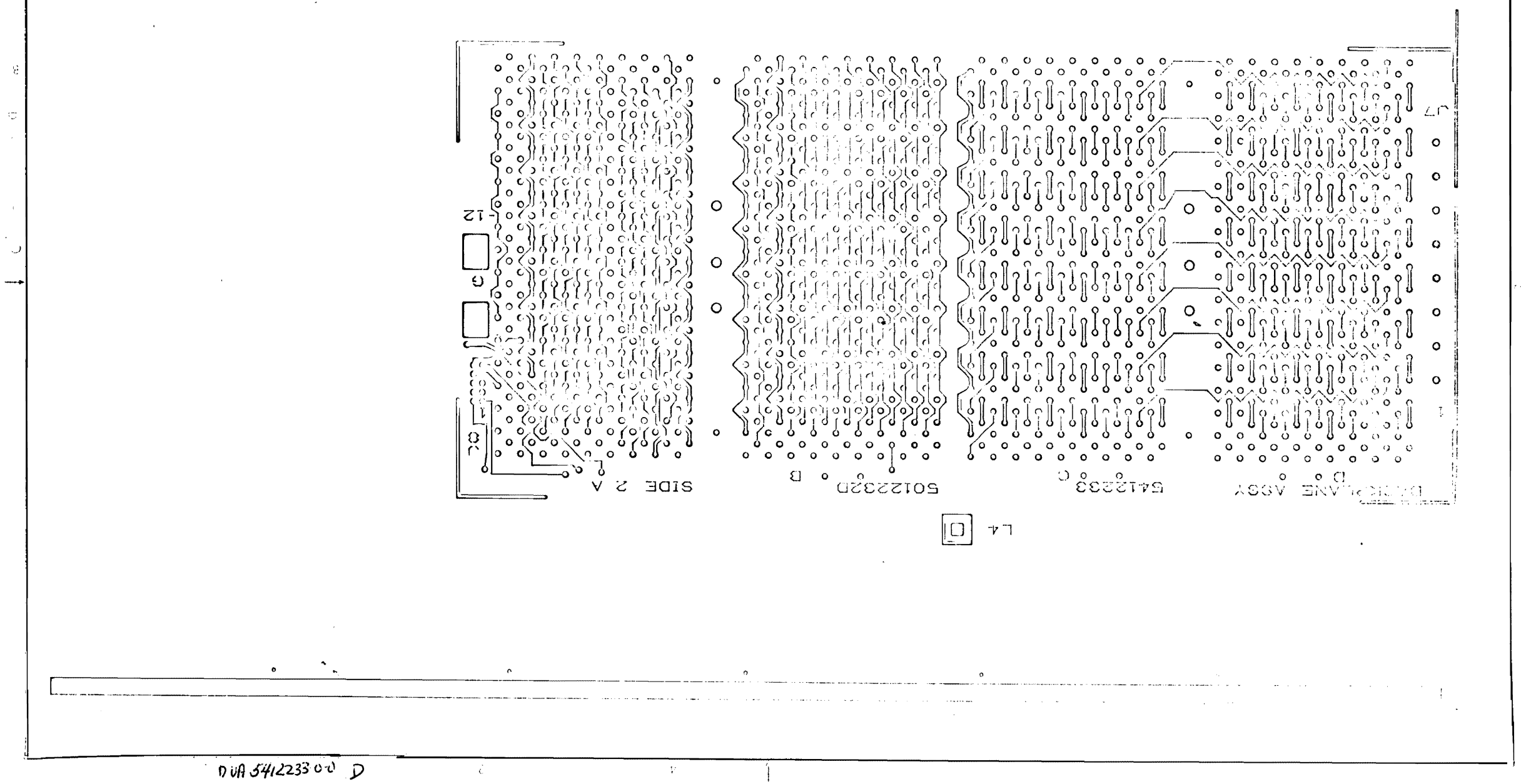
VIEWED FROM SIDE 1

BACKPLANE ASSY D VA 54122 33-001 REV D

SHEET 2 1 SHEET 3 3

7 6 5 4 3 2 1


BACKPLANE ASSY
D VA 54A233-0-0 D
VIEWED FROM SIDE 2
L3
BOTTOM SIDE 2


BACKPLANE ASSY
D VIA 5412233-0-0 D
2:1
VIEWED FROM SIDE 2
L7
L4
L2
L1
BACKPLANE ASSY
5412233 C
5012232D B
SIDE 2 A
C1
C2
D VIA 5412233-0-0 D

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NOTES:

1. ALL SIGNALS IN SLOTS M8201 - M8200 ARE BUSSED TO EACH SLOT AT CONNECTORS J1 - J3 WITH THE FOLLOWING EXCEPTIONS:
   A. S SPARE 1,8 : NOT BUSSED.
   B. M SPARE A1,B : PINS AR1 AND AT1, BR1 AND BT1 ARE TIED TOGETHER RESPECTIVELY FOR EACH SLOT.
   C. P SPARE 1,2 : NOT BUSSED.
   D. BIAK 1 L : BIAK 0 L ; BDMG 1 L : BDMG 0 L
2. THE SIGNALS IN SLOTS CD$1-CD$9 ARE NOT BUSSED EXCEPT FOR +5V (CA2, DA2) AND GND (CC2, CT1, DC2, DT1). EACH SLOT IS WIRED USING SLOT CD$2 AS AN EXAMPLE WITH THE FOLLOWING EXCEPTIONS:
   A. SLOT CD$1 HAS TWO WIRE JUMPERS (W2, W3) WHICH ALLOW THE LSI-11 CPU TO RUN IN THIS SLOT. IF THIS BACKPLANE IS BEING USED AS AN EXTENDED BUS THEN THESE JUMPERS MUST BE REMOVED.

J7: +5V, +5VB, +12V, +12VB

J11 - J3 SLOTS M8201 - M8200 (SEE NOTE 1)

J14 SLOT CD$1 — W2 (SEE NOTE 2), W3 (SEE NOTE 2)

J14 SLOT CD$2

J4 SLOT CD$3

J14 - J6 SLOTS CD$4-$8 (SEE NOTE 2)

J6 SLOT CD$9

J9: GND

J10: -12V

B EVENT L

W1

J8: B PDK H, B EVENT L, S RUN L, BLANK (KEY - NO PIN), +5V, B HALT L, B DCOK H

REVISIONS		
CHK	CHANGE NO.	REV.
	5412233-MILCO1	D

DRN.		
CHK.		
ENG.		
PROJ. ENG.		
PROD.		
NEXT HIGHER ASSY.	D-IA-5412233-0-0	
SCALE	NONE	
SHEET	1 OF 1	

FIRST USED ON: H9273

TITLE: BACK PLANE

SIZE D | CODE CS | NUMBER 5412233-0-1 | REV. D

DIST.

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UNIT VARIATIONS

VAR	TITLE
H4Ø3-A	AC INPUT BOX

REVISIONS

REV.	CHANGE NO.	CHK

USED ON OPTION/MODEL

H4Ø3 - A	

SHEET 1 OF 3

DRN. V. SOUZA	DATE 25 APR 77	
CHK'D. J. Falkowski	DATE 2 MAY 77	
PROJ. ENG. J. Kirby	DATE 9 SEP 77	
PROD. R. Hamilton	DATE 1 SEP 77	

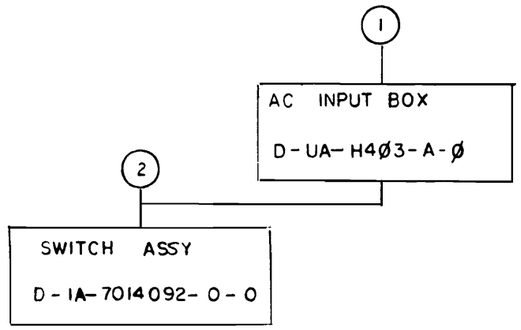
TITLE AC INPUT BOX H4Ø3-A

digital

SIZE	CODE	NUMBER	REV
B	DD	H4Ø3-A	

DIST.

DRB 106A



TITLE		SIZE	CODE	NUMBER	REV
AC INPUT BOX H403-A	SHEET 2 OF 3	B	DD	H4Ø3-A	

DRB 107

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	D-UA-H4Ø3-A-Ø	AC INPUT BOX H4Ø3-A	E/M
	D-IA-7418381-Ø-Ø	BOX AC INPUT	M
	C-IA-7418380-Ø-Ø	COVER, AC INPUT	M
	C-IA-7418378-Ø-Ø	PLATE, VOLTAGE SELECT	M
2	D-IA-7014092-Ø-Ø	SWITCH ASSY	E/M
	C-IA-7418379-Ø-Ø	BRACKET, 12 PIN MATE-N-LOK	M
	C-IA-7418377-Ø-Ø	CLAMP 12 PIN MATE-N-LOK	M

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

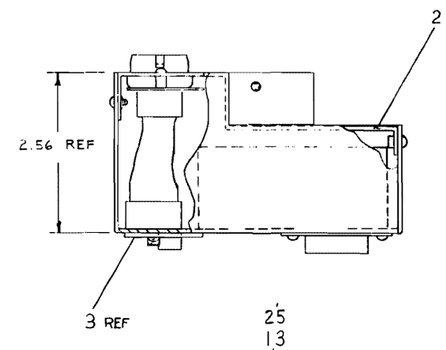
digital

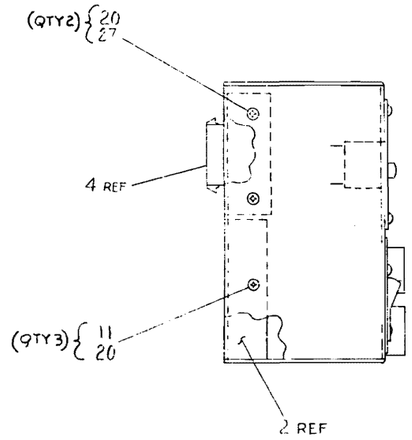
TITLE AC INPUT BOX H4Ø3-A | SHEET 3 OF 3 | SIZE B | CODE DD | NUMBER H4Ø3-A | REV

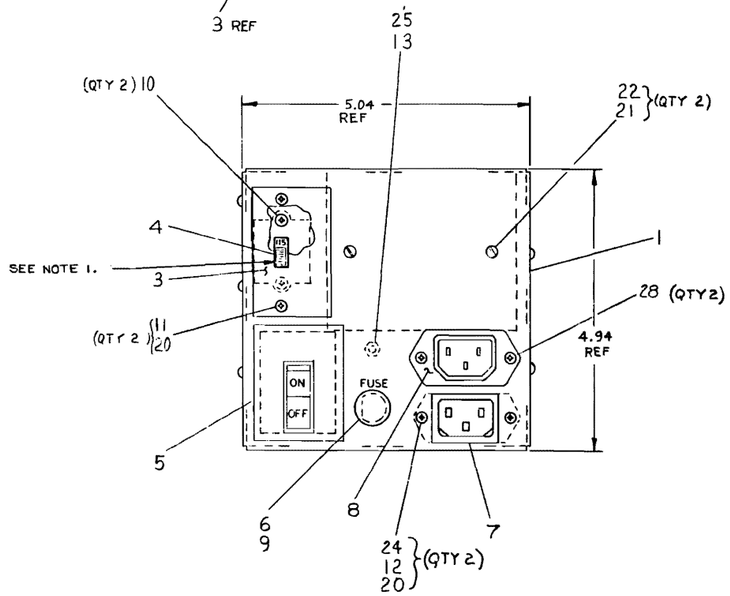
DRB 1084

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NOTES:
1. MOUNT SWITCH AS SHOWN SO THAT WITH SWITCH LEVER DOWN 115V IS INDICATED ON TOP.







2	SCR. PHL. FLAT HD 4-40 X.31	9006010-02	28
2	SCR PHL PAN HD. 4-40 X.31	9006010-01	27
A/R	TUBING, SHRINK	9107305-02	26
1	WASHER, LOCK EXT. TOOTH #8	9008072-00	25
2	SCR PHL. PAN HD. 4-40 X.38	9006011-01	24
4	TERMINAL, FASTON RED	9007970-00	23
2	WASHER, LOCK INT TOOTH #6	9006633-00	22
2	SCR. PHL. PAN HD #6-32 X.38	9006022-01	21
9	WASHER, LOCK INT TOOTH #4	9006632-00	20
2	PIN, MALE MATE-N-LOK	1218837-01	19
A/R	WIRE #18 AWG 300V (BRN)	9107786-11	18
A/R	WIRE #18 AWG 300V (BLU)	9107786-66	17
A/R	WIRE #14 AWG (GRN/YEL)	9107777-54	16
2	TERMINAL, RING #10 (BLU)	9007928-00	15
1	TERMINAL, FASTON (BLU)	9007969-00	14
1	NUT, KEPS #8-32	9006563-00	13
2	NUT, KEPS #4-40	9006557-00	12
5	SCR, PH. PAN HD #4-40 X.25	9008301-01	11
2	SCR, PH FLAT HD #4-40 X.25	9006009-02	10
1	FUSE 10A FAST BLOW	9008330-00	9
1	AC RECEPTACLE (FEMALE)	1214157-00	8
1	AC RECEPTACLE (MALE)	1213773-00	7
1	FUSE HOLDER	1212893-00	6
1	CIRCUIT BREAKER (15 AMP)	1219184-00	5
1	SWITCH ASSY	D-IA-7014092-0-0	4
1	PLATE, VOLTAGE SELECT	C-IA-7418378-0-0	3
1	COVER, AC INPUT	C-IA-7418380-0-0	2
1	BOX, AC INPUT	D-IA-7418381-0-0	1
	DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

SURFACE QUALITY IN MICROINCHES	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES: OVER 0 TO 0.6	OVER 0.6 TO 1.2	OVER 1.2 TO 3.0	OVER 3.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
	MEDIUM ☐	±.005	±.008	±.012	±.015	±.024	±.04
	PREFERRED ☐	±.012	±.016	±.025	±.04	±.063	±0.1

ANGLES ±0° 30'

QUANTITY P. VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL: SEE PARTS LIST

FINISH

DRN. J. S. Lodge	6 APR 77	
CH'K'D. Gordon Sh	24 APR 77	
ENG. J. Kalagher	1 JUNE 77	
PROJ. ENG. J. Kalagher	1 JUNE 77	
PROD.	13 JUNE 77	

NEXT HIGHER ASSY.: F-UA-BAII-N-3

SCALE 1/1

SHEET 1 OF 2

FIRST USED ON: BAII-N

digital

TITLE: AC INPUT BOX H403-A

SIZE D | CODE UA | NUMBER H403-A-0 | REV. D | DIST.

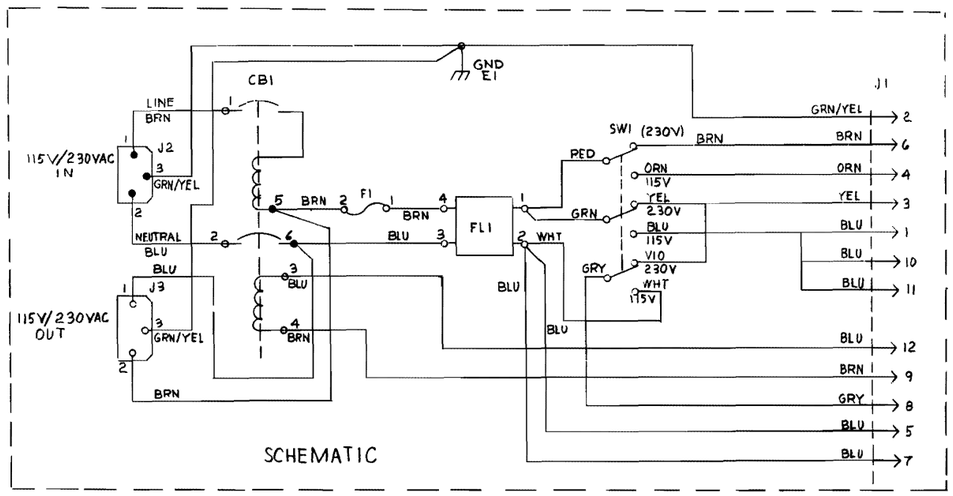
REVISIONS			
CHK	CHANGE NO	REV	
J. KALAGHER	H4G-A-CCO-0-1	A	6 APR 77
J. KALAGHER	H4G-A-CCO-0-2	B	13 JUNE 77

DEC FORM NO. 3001 1180-C

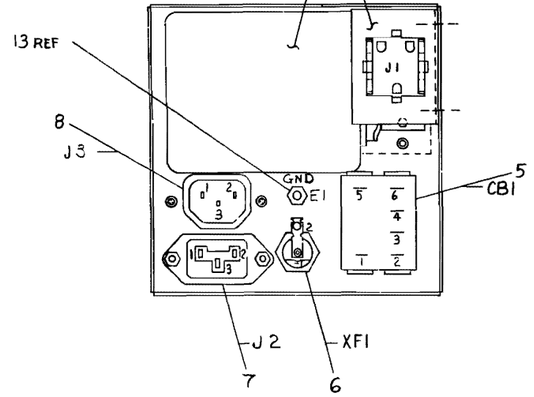
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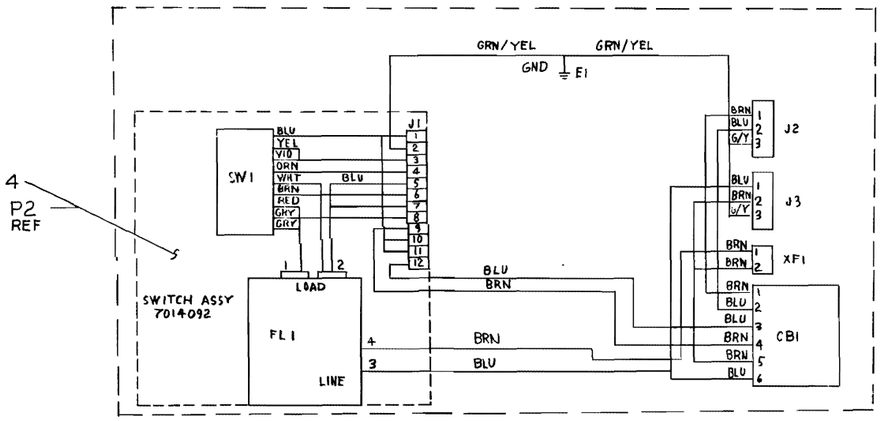
WIRE TABLE

ITEM NO	DESCRIPTION AWG	COLOR	FROM CONN	TERM	TO CONN	TERM	
16	14	GRN/YEL	J3-3	SOLDER	GND (E1)	15	2.25
16	14	GRN/YEL	J2-3	SOLDER		15	2.25
4	18	GRN/YEL	P2 (J1-2)	—		—	—
18		BRN	J2-1	SOLDER	CB1-1	23	5.50
18		BRN	J3-2	SOLDER	CB1-5	14	4.75
18		BRN	XF1-2	SOLDER			3.00
17		BLU	J2-2	SOLDER	CB1-2	23	4.50
17		BLU	P2 (J1-12)	19	CB1-3	23	4.00
18		BRN	P2 (J1-9)	19	CB1-4	23	4.00
4		BRN	P2 (FL1-4)	—	XF1-1	SOLDER26	—
4		BLU	P2 (FL1-3)	—	CB1-6	—	—
4	18	BLU	J3-1	SOLDER			



SCHEMATIC





WIRING DIAGRAM

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
AC INPUT BOX H403-A	D	UA	H403-A-Ø	B
SCALE 1/1 SHEET 2 OF 2	DIST.			

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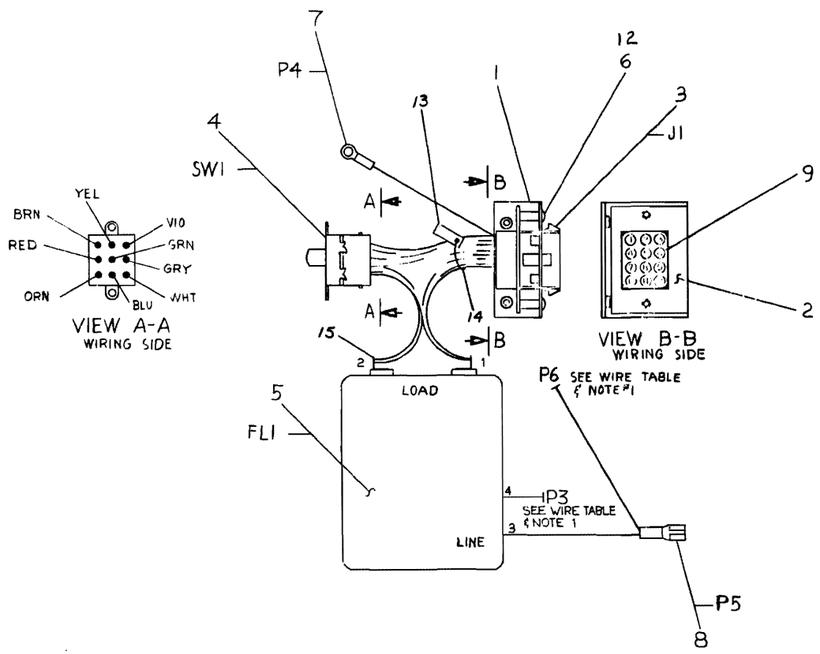
WIRE TABLE

ITEM NO	DESCRIPTION AWG	COLOR	FROM CONN	FROM TERM	TO CONN	TO TERM	PRECUT LENGTH
4	18	BLU	SW1	- - -	J1-1	ITEM #9	3.0 IN.
11	↑	BLU	J1-10	ITEM #9			3.5 IN.
11		BLU			J1-11	ITEM #9	2.0 IN.
4		ORN	SW1	——	J1-4	ITEM #9	3.0 IN.
4		WHT	SW1	——	FL1-2	SOLDER	3.25 IN. ±.12
11		BLU	J1-5	ITEM #9			2.0 IN.
11		BLU			J1-7	ITEM #9	2.0 IN.
4	↓	RED	SW1	- - -	FL1-1	SOLDER	3.25 IN. ±.12
4	18	GRN	SW1	——			3.25 IN. ±.12

WIRE TABLE

ITEM NO	DESCRIPTION AWG	COLOR	FROM CONN	FROM TERM	TO CONN	TO TERM	PRECUT LENGTH
4	18	GRY	SW1	——	J1-8	ITEM #9	3.0 IN.
4	↑	BRN	SW1	——	J1-6	ITEM #9	3.0 IN.
4		YEL	SW1	——	J1-3	ITEM #9	3.0 IN.
4		VIO	SW1	——			3.0 IN.
10		GR. YEL	J1-2	ITEM #9	P4	ITEM #7	5.0 IN.
5		BLU	FL1-3	——	P5	ITEM #8	6.0 IN.
11		BLU	P6	——			5.0 IN.
5	18	BRN	FL1-4	——	P3	——	6.0 IN.

NOTES:
1. STRIP INSULATION 1/4 INCH AND TIN.



REVISIONS				
DIR	CHANGE NO.		REV.	
	7014092-00001	A		
	7014092-00002	B		
		C		

ITEM NO	QTY	DESCRIPTION	PART NO.	REF
2		SHRINK SLEEVING ½" LG	9107253-00	15
1		CABLE TIE	9007031	14
1		TAG	9009532	13
2		WASHER, LOCK INT TOOTH #4	9006632-00	12
A/R		WIRE, 18 AWG 300V (BLU)	9107786-66	11
A/R		WIRE, 18 AWG 300V (GRN/YEL)	9107410-54	10
10		PIN, MALE MATE-N-LOK	1213807-01	9
1		TERM. QUICK CONN, (BLU)	9007969-00	8
1		TERM. RING #10 (RED)	9007930-00	7
2		SCREW PHL. PAN HD 4-40 X .25	9008301-01	6
1		FILTER, AC	1214189-00	5
1		SWITCH, VOLTAGE SELECT	1214155-00	4
1		CONN. FEMALE MATE-N-LOK	1212168-03	3
1		CLAMP 12 PIN MATE-N-LOK	C-1A-74158377-0-0	2
1		BRKT, 12 PIN MATE-N-LOK	C-1A-74158379-0-0	1

DESCRIPTION | ENG./PART NO. | ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL SIZE 0 TO 6	6 TO 12	12 TO 48	48 TO 120	120 TO 480	480 TO 1000
SURFACE QUALITY IN MICROINCHES	MEDIUM	±.005	±.003	±.012	±.018	±.024	±.04
	PREFERRED	±.012	±.018	±.025	±.04	±.063	±.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH —

DRN B.A. Gerrity 18 JUNE 77
CHK'D [illegible] 21 APR 77
ENG. [illegible] 1 JUNE 77
PROJ. ENG. [illegible] 13 JUNE 77
PRODN [illegible] 15 JUNE 77
NEXT HIGHER ASSY. H403-A-0
SCALE —
SHEET 1 OF 1

FIRST USED ON H403-A

TITLE SWITCH, VOLTAGE SELECT ASSY

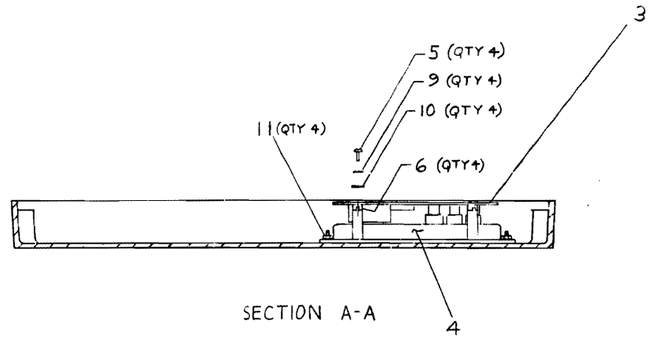
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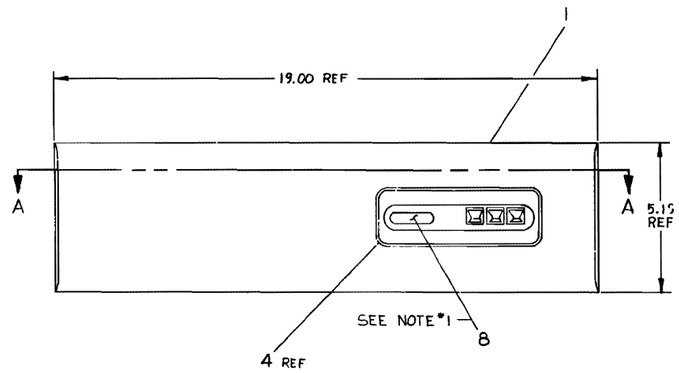
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NOTES:

1. ULTRASONICLY WELD THE WINDOW (ITEM #8) TO THE FRAME (ITEM #4) BEFORE INSTALLING THE FRAME INTO THE BEZEL



SECTION A-A



4	FASTENER, PUSH ON	90100032-00	11
4	WASHER, FLAT #6	9006653	10
4	L'WASHER #6	9006633	9
1	WINDOW	B-MD-7411744-0-0	8
~~4~~	~~WASHER, FLAT NO.8~~	~~9006660-00~~	~~7~~
4	ONSERT #6-32	9009601-00	6
4	SCR. PHL HD PAN #6-32X.38	9006022-01	5
1	FRAME	D-MD-7411945-02	4
1	11/03-L FRONT PANEL	D-UA-5412985-0-0	3
~~4~~	~~NUT, KEPS #8-32~~	~~9006563-00~~	~~2~~
1	BEZEL 5-1/4"	E-MD-7415313-03	1
	DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES				
		OVER 0 TO 0.7	OVER 0.7 TO 2.0	OVER 2.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
SURFACE QUALITY IN MICROINCHES	MEDIUM ☐	±.005	±.012	±.020	±.024	±.04
	PREFERRED ☐	±.012	±.016	±.026	±.04	±.06

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH

DRN. G. Abeyta 8-17-77
CHK'D [illegible] 8/19/77
ENG. [illegible] (1 SHEET) 8-17-77
PROJ. ENG. [illegible] (1 SHEET) 8-17-77
PROD. [illegible] 8-17-77

NEXT HIGHER ASSY.
E-UA-BAII-N-0
SCALE 1/2
SHEET 1 OF 1

FIRST USED ON BAII-N

digital

TITLE
BEZEL ASSY

SIZE	CODE	NUMBER	REV.
D	AD	7013949-0-0	A

DIST.

REVISIONS			
CHK	CHANGE NO.	REV.	
[illegible]	ECO [illegible]	A	

SIZE	CODE	NUMBER	REV.
B	DD	5412985-0	B

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS
D-UA-5412985-0-0	3		11/Ø3-L FRONT PANEL	A B
B-PL-5412985-0-0	1		11/Ø3-L FRONT PANEL	A B
D-CS-5412985-0-1	1		11/Ø3-L FRONT PANEL	A B
D-MD-5012984-0-0	4		DRILL & ETCH DRAWING	A B
		5012984	ETCHED BOARD	B C
K-PC-5412985-0-DBG			P.C. DESIGN DATA BASE	C
5412985-0-PL			INSERTION P/L DATA BASE	REF

NOTES:

REVISIONS	DATE	CHG NO.	REV.
	8/26/77	C0001	B

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digital

USED ON OPTION/MODEL	
11/03-L	

DRN.	R. KOPPENAL	6-23-77
CHKD		8/15/77
ENG	T. PITTMAN	8-17-77
PROD		7-26-77

TITLE: 11/Ø3-L FRONT PANEL

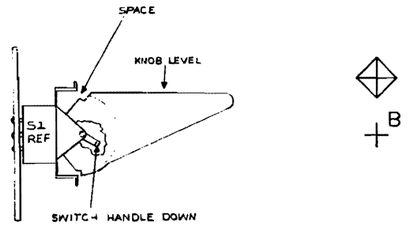
SIZE	CODE	NUMBER	REV.
B	DD	5412985-0	B

SHEET 1 OF 1

DDR 1-74

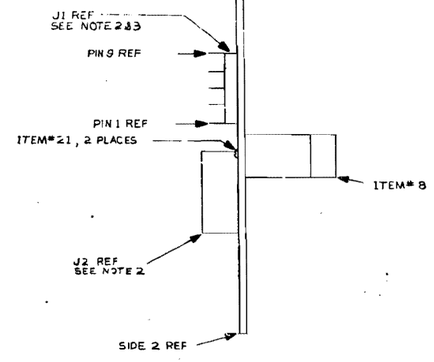
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REFERENCE DESIGNATION CHART		
ACTUAL REF. DESIG.	SUPERFICIAL REF. DESIG.	
E1	E101	
E2	E102	
E3	E103	
E4	E104	
S1 – S3	S101 – S103	
C1 – C9	C101 – C109	SEE NOTE 4
D1 – D4	D101 – D104	
R1 – R21	R101 – R121	SEE NOTE 4
J1 – J3	J101 – J103	
W1 – W4	W101 – W104	SEE NOTE 2&4

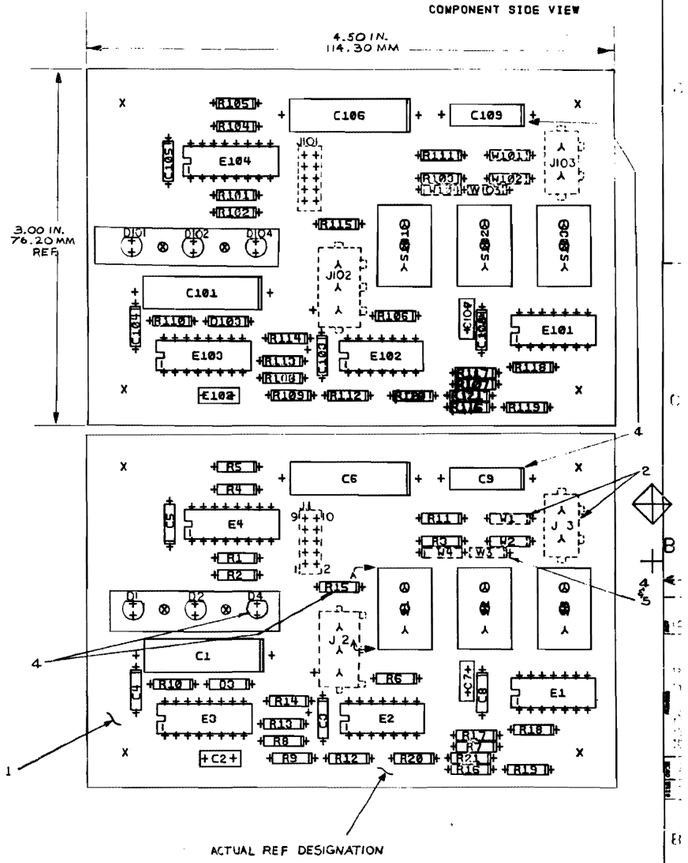


NOTE; FOR S1,S2 AND S3 TO BE PROPERLY INSTALLED, SWITCH HANDLE MUST BE DOWN, SWITCH KNOB MUST BE LEVEL AND THERE MUST BE A SPACE AT THE TOP OF THE SWITCH ASSEMBLY.

SECTION A-A



COMPONENT SIDE VIEW



NOTE; - MULTI-REF DESIGNATIONS ARE USED TO ACCOMODATE PANEL INSERTION TECHNIQUES. REFER TO CHART FOR CROSS-REFERENCE.

NOTES:
5. W3 IS A FIELD OPTION AND MUST BE INSERTED ON SIDE 2.

NOTES:
1. 8 HOLES .0465 (+.003 -.0045) MAYNARD ONLY
2. MOUNT J1,J2,J3,W1,W2 AND W4 ON SIDE 2 AFTER ALL OTHER COMPONENTS HAVE BEEN ASSEMBLED ONTO BOARD AND BOARD HAS BEEN RUN THROUGH WAVE SOLDER.
3. CUT PIN(9) OF J1 OFF AT BASE OF COMPONENT
4. DO NOT INSERT W3, D4, C9 OR R15 | THESE COMPONENTS ARE CUSTOMER OPTIONS.

CHG	CHANGE NO	REV
	PROJECT 5412985-0000	B
	Drawn	12/19/75
	TOM PITMAN	

ETCH REV. C-P2
P.C. DESIGN DATA BASE REV.

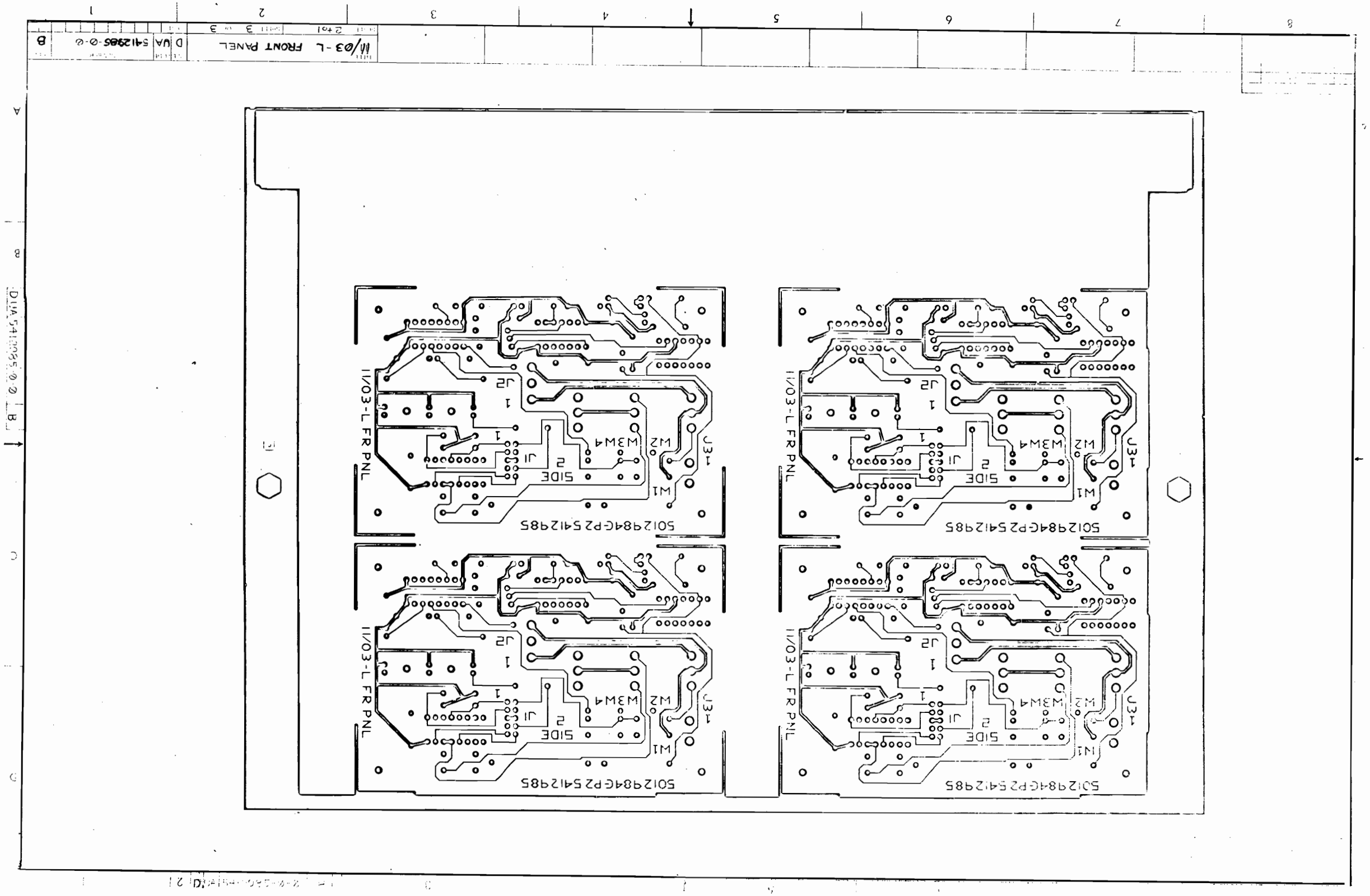
SIGNATURES	DATE
DRN. David Quigley	11/24/75
CHK'D.	4-9-76
ENG. Thomas G. Pitman	4-12-76
PROJ. ENG.	4-14-76
PROD.	4-14-76
SCALE 2 to 1	
SHT. 1 OF 3	
NEXT HIGHER ASSY. B-DD-5412985-0	

digital

TITLE II/03-L FRONT PANEL

SIZE	CODE	NUMBER	REV
D	UA	5412985-0-0	B

1 MS#


11/03-L FRONT PANEL
5412985-0-0
D UA
B
11/03-L FR PNL
J2
J1
J3
J4
W1
W2
SIDE 2
5012984GP2 5412985

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY R. KOPPENAL	CHECKED	SECTION 1
DATE	DATE 8/15/77	
ENG T. Pittman	PROD R Hamilton	ISSUED SECTION 1
DATE 8-17-77	DATE 7-26-77	

NOTES:
FOR ADDITIONAL INSERTION DATA SEE D-UA-5412985-0-0

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION 5412985-0-0	REF DESIGNATION
1	D-MD-5012984-0-0	5012984	ETCHED BOARD	1	
2		1002433	CAP., 22 UF, 35V 2Ø TANT	1	C1
3		100C023	CAP., 33Ø PF, 1ØØV 5% DM	1	C2
4		1005335	CAP., 39 UF, 2ØV 10% TANT	1	C6
5		1012784	CAP., .Ø47 UF, 5ØV CER	4	C3, C4, C5, C8
6		1100114	DIODE, D664	1	D3
7		1110324-00	DIODE, MV5Ø54	2	D1, D2
8		1210940-02	HOLDER, TRIPLE, LED	1	
9		1210840-00	SWITCH, TOGGLE, SPDT	2	S2, S3
10		1210786-00	KNOB, LIGHT GRAY	3	
11		1213488-00	CONNECTOR, 1Ø PIN HOUSING	1	J1
12		~~1211342-03~~	~~CONNECTOR, 3 PIN (P.C. TYPE)~~	1	~~J2~~
13		1302388	RES., 2K, 1/4W, 5% CC	10	R1-R8, R11, R12
14		1302514	RES., 39K, 1/4W, 5% CC	1	R1Ø
15		1300479	RES., 1ØK, 1/4W, 5% CC	5	R9, R16, R17, R18, R21
16		1300271	RES., 22Ø, 1/4W, 5% CC	2	R13, R14
17		1911117	I.C. 8838	1	E4
18		1910741	I.C., 74Ø6	1	E2
19		1910436	I.C., 74123	1	E3
20		9009185	JUMPER INSULATED	3	W1, W2, W4

E.C.O. NO. 00001

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
11/Ø3-L FRONT PANEL	D-UA-5412985-0-0	B	PL	5412985-0-0	B
	SHEET 1 OF 2	INSERTION PARTS LIST DATA BASE REV B			

DRG 125

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY R. KOPPENAL DATE	CHECKED DATE 8/1/77	SECTION 1
ENG DATE 7-26-77	PROD R Hamilton DATE 7-26-77	ISSUED SECTION 1

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION 5412985-0-0	REF DESIGNATION
~~21~~		~~9008230-01~~	~~SCREW, SELF TAPPING, #6-32 X .25~~	~~2~~	
22		1210841-00	SWITCH, MOMENTARY	1	S1
23		1209350-03	CONNECTOR HOUSING	1	J2
24		1209456-01	PIN MATE-N-LOC	3	
25		1212297-00	CONNECTOR 2 PIN P.C. MOUNT	1	J3
26		1302466	RES. 100K, 1/4 W 5% C.C.	1	R 19
27		1300365	RES. 1K, 1/4 W 5% C.C.	1	R 20
28		1010279	CAP. .47 UF 25 V	1	C 7
29		1912108	I.C. LM 339	1	E1
30		9009575-01	SCREW, SELF-TAPPING #4x.25	2	

NOTES:

E.C.O. NO.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
11/03-L FRONT PANEL	D-UA-5412985-0-0 SHEET 2 OF 2	B	PL	5412985-0-0 INSERTION PARTS LIST DATA BASE REV B	B

DRB 123

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NOTES: 1. R15 AND D4 ARE FOR FUTURE USE ONLY.
2. W3 IS TO BE INSERTED, AND W4 REMOVED WHEN THIS BOARD IS USED IN AN EXPANDER BOX.

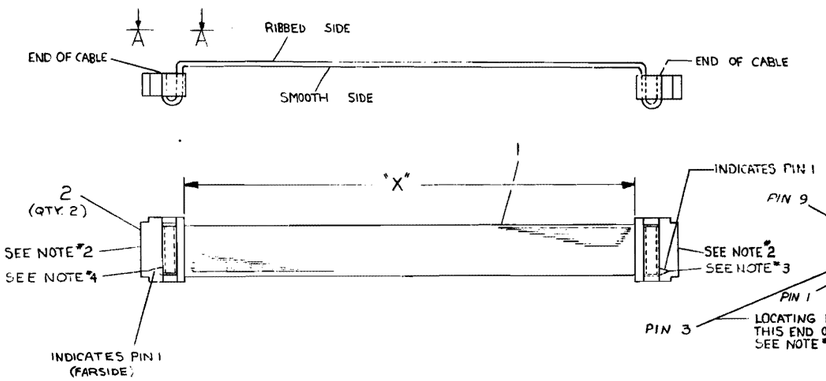
J1
+5V
B EVENT
SPARE
B DCOK H
S RUN L
B HALT L
B POK H
R3 2K
W2
AUX ON
S3
OFF
W1
J2
R15
D4
R5 2K
R1 2K
R12 2K
R13 220
D1 MV5054
POWER OK
7406 E2
R2 2K
R4 2K
ENABLE
S2
HALT
8838 E4
R11 2K
R14 220
D2 MV5054
RUN
W3
W4
R10 39K
D3 D664
C1 22UF
7423 E3
R18 10K
R21 10K
R7 2K
R16 10K
S1
R6 2K
R8 2K
R9 10K
C2 330PF
339 E1
J3
R19 100K
R20 1K
C9
C7 47
R17 10K
C6 39UF
C3 .047UF
C4 .047UF
C5 .047UF
C8 .047UF

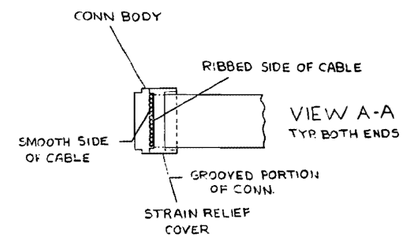
DRAWN	6-21-77	PROPRIETARY CLASS	11/03-L
CHECKED		TITLE	11/03-L FRONT PANEL
ENGINEERING			
PROJECT			
D-CS-5412985-0-0		SIZE D	NUMBER CS 5412985-0-1
SCALE		REV. B	
SHEET 1 OF 1			

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LEGEND			
NUMBER	DIM "X" VARIATION	USED ON	KEY PIN
7011411-0J	8 IN ± .5 IN.	BA11-L OR K	10 ONE END & BOTH ENDS
7011411-0K	9 IN ± .5 IN.	LSI-11	
7011411-1D	1 FT-4 IN ± 1 IN.	KY11-LB	
7011411-2D	2 FT-4 IN ± 1 IN.	BA11-F/BA11-PE	10 ONE END
7011411-0L	7 IN ± .5 IN.	H720 1, 2, 3	
7011411-1F	1 FT-8 IN ± 1 IN.	11C03/34-7A	
7011411-1L	1 FT 10 IN. ± 1 IN.	BA11-L, H777	PIN 3 1 END & BOTH ENDS
7011411-1A	1 FT.-4 IN ± 1 IN.	H787	
7011411-3J	3 FT-8 IN ± 1 IN.	BA11-KN7CE	
7011411-2J	2 FT.-8 IN ± 1 IN.	BA11K-H755	NO KEY
7011411-5F	5 FT.-6 IN ± 1 IN.	1160	0 ONE END
7011411-12	12 FT ± 3 IN.	KA570	
7011411-1	7 FT ± 3 IN.	11780	
7011411-1C	1 FT-3 IN ± 1 IN	VT103	SEE NOTES 3 & NOTE 4
7011411-2	2 FT ± 1 IN	VT103	SEE NOTES 2 & 3 & 12
7011411-0E	5 IN ± .5 IN	NEBULA	12 BOTH ENDS & BOTH ENDS
7011411-3D	3 FT-4 IN ± 1 IN	NEBULA	

NOTES:
1. INSERT KEY IN PROPER CONNECTOR PIN AND BREAK OFF TAB.
2. FOR ITEM (2) DRAWING IS SHOWING 3M CONNECTOR.
3. FOR -1C AND -2 VARIATIONS, KEY PIN 6.
4. FOR -1C AND -2 VARIATIONS, KEY PIN 5.





1	TIE, CABLE	9007031	5
1	LABEL, CABLE IDENT.	9009532	4
A/R	KEY	9009707	3
2	CONN. CRIMP	12111206-02	2
A/R	CABLE, 10 CONDUCT	9107747-02	1
	DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ± 30'	CLASS OF ACCURACY (CHECK ONE)	0 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 400	OVER 400 TO 1000
SURFACE QUALITY IN MICRONCHES	MEDIUM ☐	±.025	±.015	±.015	±.020	±.06
	PREFERRED ☐	±.012	±.015	±.015	±.04	±.06

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG.

MATERIAL SEE PARTS LIST

FINISH

DRN. BARRY

CHK'D HEALEY

ENG. BARRY

PROJ. ENG.

PROD. BEDE

NEXT HIGHER ASSY.

SCALE

SHEET OF

FINISH SEE LEGEND

TITLE CABLE CONSOLE BACKPLANE

SIZE D | CODE 11A | NUMBER 7011411-00 | REV. 5

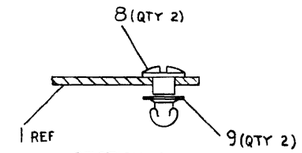
REVISIONS			
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K. DUGGAN			
	7011411-TW13 ... PER ECO 2001 78	12	
	7011411-TW14 ... PER ECO 2001 79	13	
D. SCHANIN			
	7011411-TW15 ... PER ECO 2001 80	14	
D. BARRY			

DEC 10080 80
DEC 1140-C

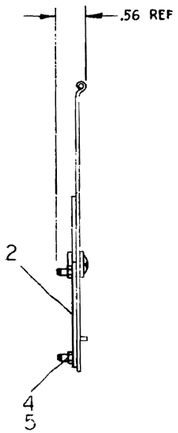
S | 0-0-7011411 | A | 0 | 2

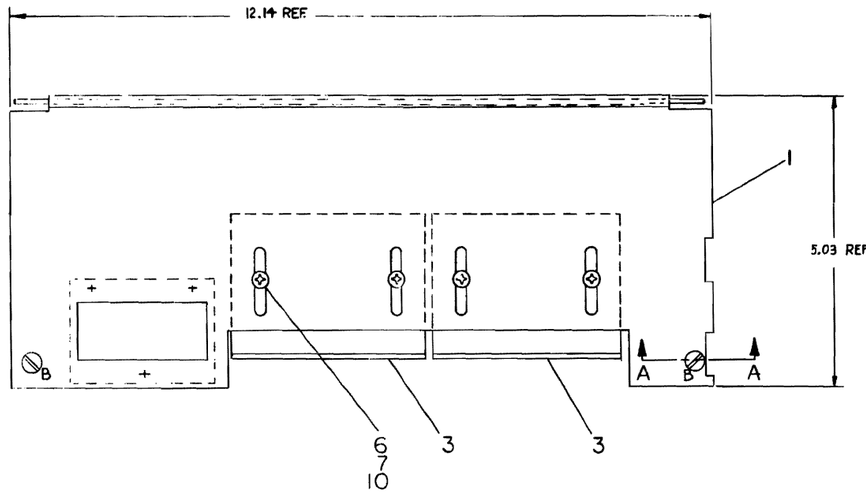
7011411-0-0 | 11A | 7011411-0 | S

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SECTION A-A
SCALE: 2/1
TYP 2 "B" HOLES





ITEM NO.	DWG./PART NO.	DESCRIPTION
10	9006634-00	4 L. WASHER #8
9	9008200-00	2 RETAINER 1/4 TURN
8	9008343-00	2 FASTENER 1/4 TURN
7	9006660-00	4 WASHER FLAT #8
6	9006037-01	4 SCREW, PAN HD. #8-32 X 3/8
5	9006633-00	3 WASHER, FLAT, #6.032 THK.
4	9006560-00	3 KEP NUT #6-32
3	C-IA-7013879-0-0	2 STRAIN RELIEF
2	C-MD-7013875-C-0	1 WINDOW
1	D-IA-7013809-0-0	1 DOOR

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES: OVER 0 TO 0.5	OVER 0.5 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 48.0	OVER 48.0 TO 80.0
SURFACE QUALITY IN MICROINCHES	MEDIUM ☐	±.004	±.008	±.012	±.016	±.024	±.04
	PREFERRED ☑	±.012	±.016	±.025	±.04	±.063	±0.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH

DRN. [illegible] 6 Feb 77
CHK'D J. Fedewick 2 FEB 77
ENG. J. Pelagi 1 June 77
PROJ. ENG. J. Pelagi 1 June 77
PROD. [illegible] 1 June 77

NEXT HIGHER ASSY.
E-UA-BA11-N-0
SCALE NONE
SHEET 1 OF 1

FIRST USED ON BA11-N

digital

TITLE
DOOR ASSEMBLY

SIZE D | CODE AD | NUMBER 7013804-0-0 | REV.
DIST.

REVISIONS	CHANGE NO.	REV.
CHK.		

MANUFACTURE P-1888
DEC 1000 MR
BBS 100-C

D AD 7013804-0-0 REV.

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UNIT VARIATIONS

VAR	TITLE
H786	H786 POWER SUPPLY

REVISIONS

	REV.	CHANGE NO.	CHK
	A	H786-2	JA

USED ON OPTION/MODEL

BA11-N

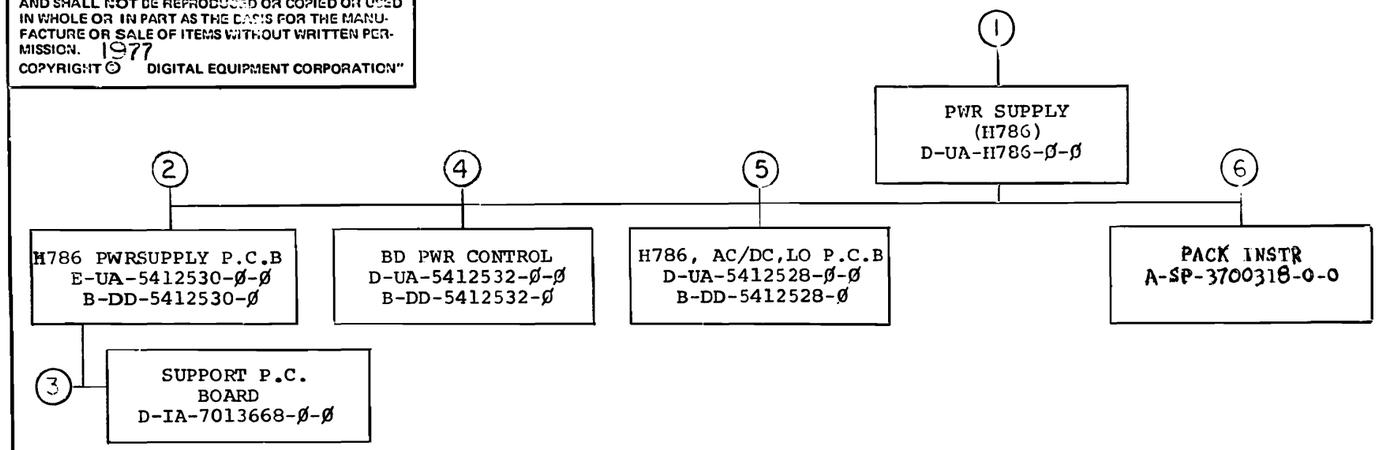
SHEET 1 OF 3

DRN. B. Blodgett	DATE 2 MAY 77	TITLE H786 POWER SUPPLY (digital)
CHK'D. J. Fedewich	DATE 2 MAY 77	
PROJ. ENG. J. Kluglein	DATE 9 SEPT 77	SIZE B · CODE DD · NUMBER H786-Ø · REV A
PROD. Tim Hamilton	DATE 9-SEPT-77	DIST.

DRB 106A

M1

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TITLE		SIZE	CODE	NUMBER	REV
H786 PWR. SUPPLY	SHEET 2 OF 3	B	DD	H786-Ø	A

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	D-UA-H786-Ø-Ø	PWR. SUPPLY (H786)	E/M
	E-IA-7418236-Ø-Ø	CHASSIS, PWR SUPPLY	M
	A-[illegible]	[illegible]	-
	A-PS-3615632-0-0	H786 POWER SUPPLY REVISION LABEL	M
2	B-DD-5412530-Ø	H786 POWER SUPPLY, MASTER BOARD	—
3	D-IA-7013668-Ø-Ø	SUPPORT PRINTED CIRCUIT BOARD	M
	C-MD-7418386-Ø-Ø	CARD SUPPORT	M
	B-MD-7418387-Ø-Ø	TIE BAR	M
	C-MD-7418385-Ø-Ø	RAIL	M
4	B-DD-5412532-0	PWR. CONTROL BOARD,	—
5	B-DD-5412528-0	H786 AC/DC LO PC BOARD,	—
6	A-SP-3700318-0-0	PACK INSTR. P.S. H786	-

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

DRB 108A

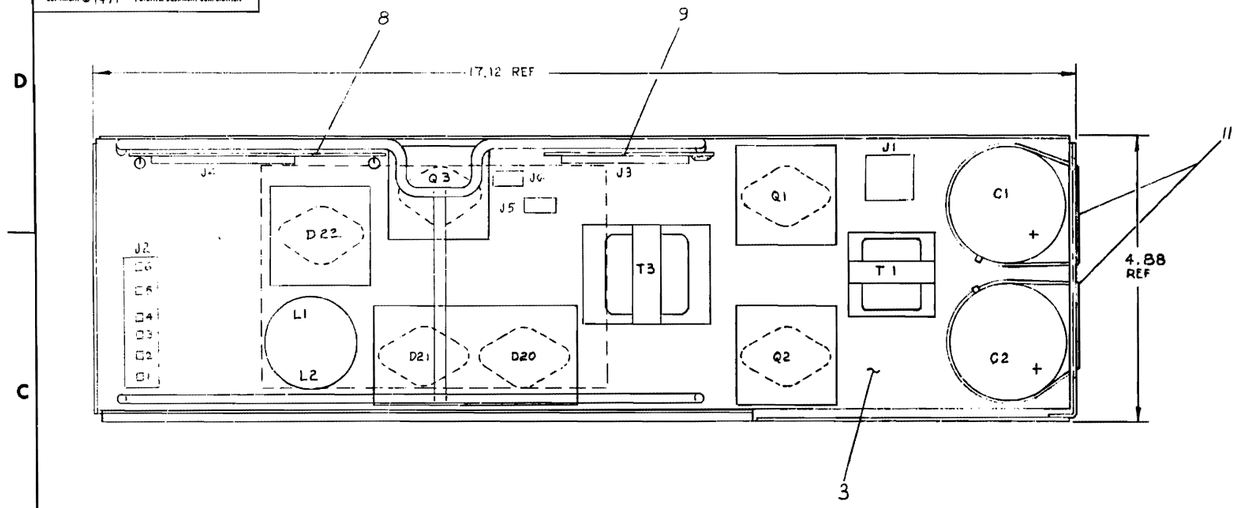
digital

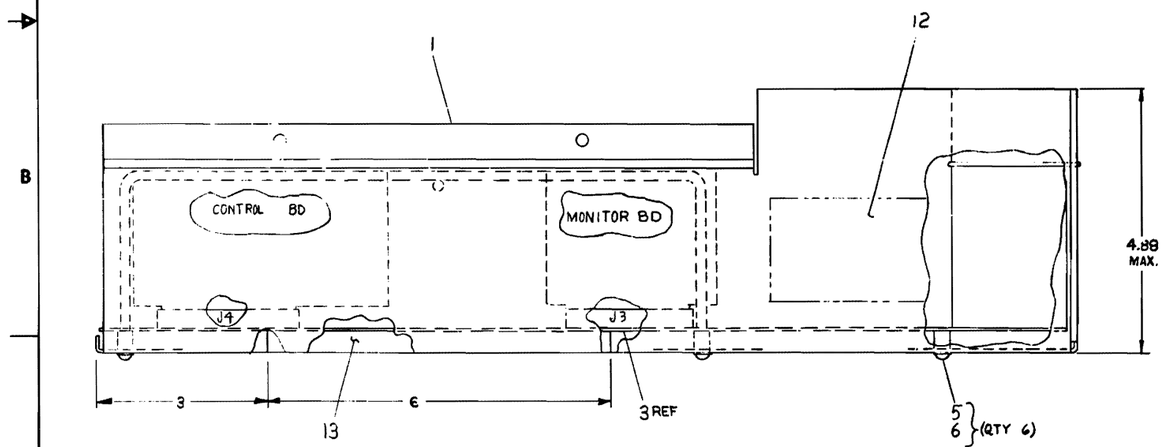
TITLE H786 PWR. SUPPLY

SHEET 3 OF 3 | SIZE B | CODE DD | NUMBER H786 - Ø | REV A

ML

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1	FOAM, ADHESIVE BACK	9008259-01	13
1	LABEL, REVISION	A-PS-36156432-00	12
2	CABLE TIE	9009617	11
A/R	INSTR PKG. PS H786	A-PS-37003119-0-0	10
1	H786 AC/DC LO PCB	D-UA-5412528-0-0	9
1	PWR, CONTROL BD.	D-UA-5412532-0-0	8
7	WASHER, LOCK INT TOOTH #6	9006633-00	6
7	SCREW, PHL. PAN HD. 6-32 X.25	9006020-01	5
1	H786 PWR. SUPPLY BD.	E-UA-5412530-0-0	3
1	CHASSIS, PWR. SUPPLY	E-TA-7410236-0-0	1
	DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30' | SURFACE QUALITY IN MICROINCHES | TOLERANCE ACCUM. (CHECK ONE) MEDIUM / PRECISION

0 TO 6	OVER 6 TO 12	OVER 12 TO 24	OVER 24 TO 48	OVER 48 TO 96	OVER 96 TO 192	OVER 192 TO 384
±.03	±.04	±.06	±.08	±.12	±.16	±.24
±.003	±.005	±.007	±.010	±.015	±.020	±.030
±.012	±.015	±.025	±.06	±.12	±.25	±.50

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL SEE PARTS LIST

FINISH

DRN. J.P. 28-JUL-77
CHK'D
ENG.
PROJ. ENG.
PROJ. MGR.
NEXT HIGHER ASSY. H786-0-0
SCALE 1/1
SHEET 1 OF 1

FIRST USED ON BA11-N

TITLE H786 POWER SUPPLY ASSY

SIZE D | CODE UA | NUMBER H786-0-0 | REV. C

NEXT ASSY H786-0-0 | REV C | CODE UA | SIZE D

REVISIONS				
CHK	CHANGE NO.	REV.		
J.P.	H786-00001	A	J. PALAGHER	27-JUL-77
J.P.	H786-00002	B	J. PALAGHER	27-JUL-77
J.K.			J. KALACHER	27-JUL-77
J.P.	H786-NL0003	C	J. PALAGHER	27-JUL-77
			D. CALDERAN	27-JUL-77

SIZE	CODE	NUMBER	REV.
D	DD	5412530-0	K

DRAWING NO.	NO. OF WIRES	PART NO.	DESCRIPTION	REVISIONS
E-UA-5412530-0-0	3		MASTER BOARD	B C D E F H H H
K-PL-5412530-0-DDP	3		MASTER BOARD	B C D E F H J K
D-CS-5412530-0-1	1		MASTER BOARD	B D C D E F H H
DMD-5012529-0-0	4		DRILL & ETCH DRAWING	B D B D D C C C
		5012529	ETCHED CIRCUIT BOARD	C C C C C D D D
5412530-0-L			P.C. DESIGN DATA BASE	REV - - - - - - -
5412530-0-PL			INSERTION P/L DATA BASE	REV - - - - - - -

NOTES:

REVISIONS									
REV.	B	C	D	E	F	H	J	K	
CHG NO.	ORIG	00001	00002	00003	00004	7-79LG05	MS97	MS97	
DATE	-	10-77	11-77	2-78	4-78	7-79	12-79	6-80	

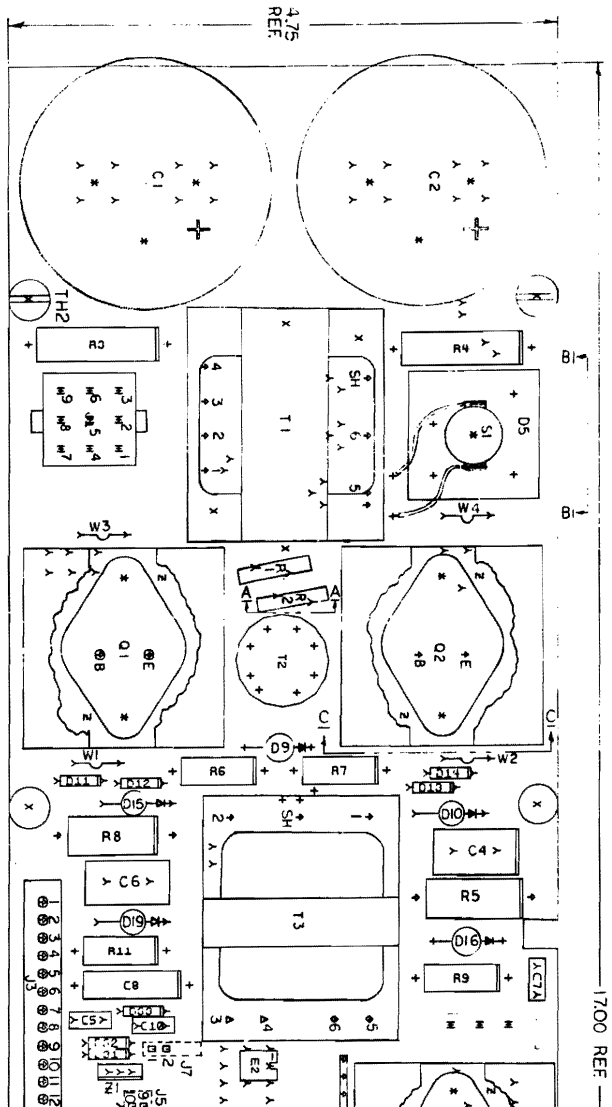
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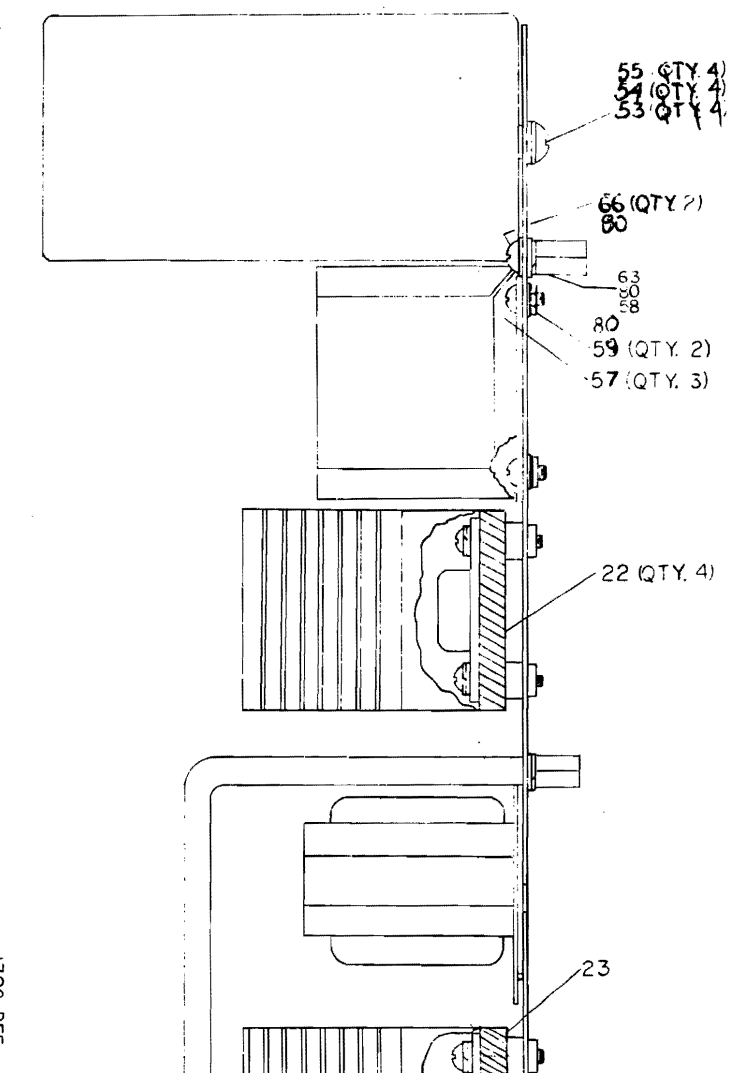
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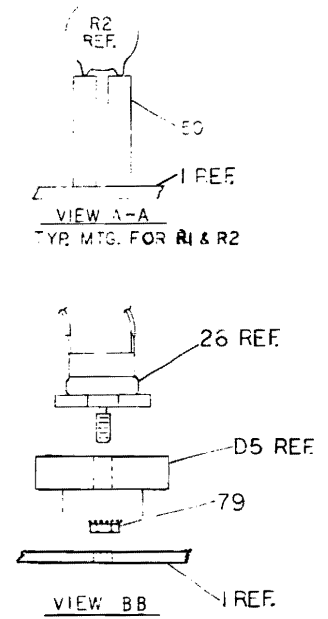
digital

USED ON OPTION/MODEL		DRN.		TITLE
H786		R. KOPPENAL	8/10/77	MASTER BOARD
		CHKD		
		ENGR	8/11/77	SIZE B / CODE DD / NUMBER 5412530-0 / REV K
		PROJ.		SHEET 1 OF 1

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NOTES:
1. THIS BOARD REQUIRES U/L APPROVAL.

CHK	CHANGE NO	REV

ETCH REV. D-P1
P.C. DESIGN DATA BASE REV. DL

SIGNATURES	DATE
DRN.	
CHK'D.	
ENG.	
PROJ. ENG.	
PROD.	
SCALE 2/1	
SHT. 1 OF 3	
NEXT HIGHER ASSY. G-DD-5412530-0	

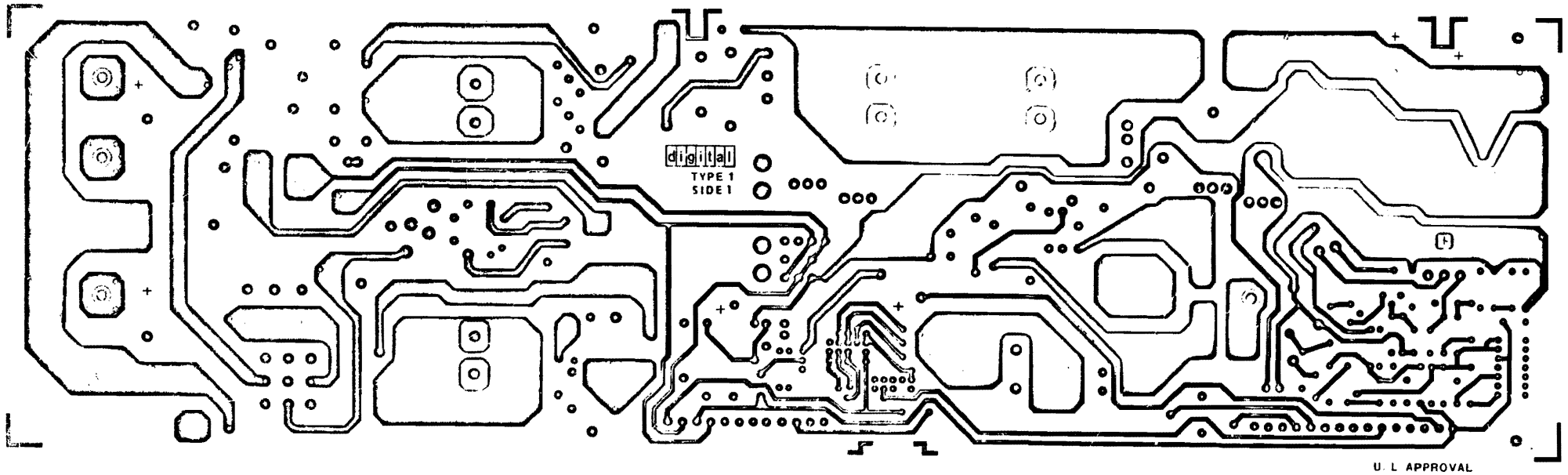
digital

TITLE: PDP-8/e POWER SUPPLY MASTER BOARD

SIZE	CODE	NUMBER	REV
E	UA	5412530-0-0	H1

E A5412530- -0 H

5012529D-P1 5412530

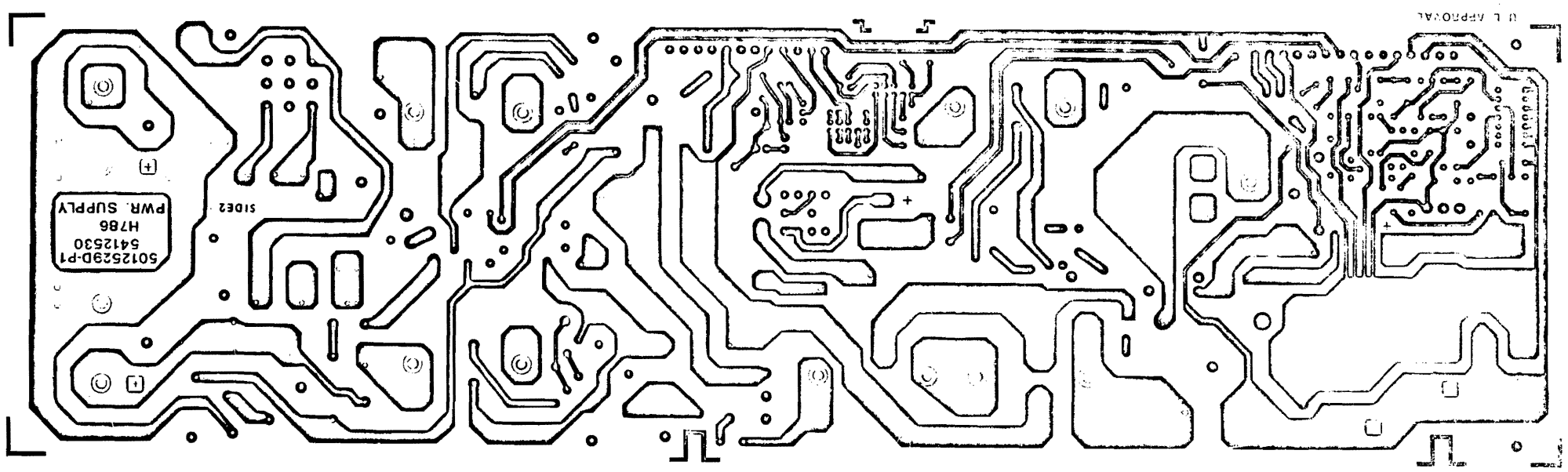


U. L APPROVAL

H786 POWER SUPPLY MASTER BOARD E-LA5412530-0-0 H

8 7 6 5 4 3 2

A 5412530-0-0 H


PWR. SUPPLY
H786
5412530
5012529D-P1
SIDE2

AUTOMATED BY PRTLST,1D(7) P A R T S L I S T SHEET A1 OF A3

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5012529-0-0	5012529-00	5412530	1	
2	2		1014240-00	2000 MFD 200V +75-10% AL EL	2	C1,C2
3	3		1014260-02	2100 MFD 40V +75-10% AL EL	1	C3
4	4		1014139-00	.0022 MFD 600V 10% POLYPROP	2	C4,C6
5	5		1010274-00	.22 MFD 50V +80-20% Z5U CER	5	C5,C10,C17,C23,C24
6	6		1000042-00	1000.0 MMF 100V 5%200PPM MICA	8	C7,C9,C11-C16
7	7		1004814-00	47 MFD 20V 10% S.TANT	1	C8
8	8		1000004-00	.02 MFD 100V 20% Z5U DISC	2	C18,C19
9	9		1001610-01	.01 MFD50/100V +80-20% DISC	1	C20
10	10		1014260-00	11,000 MFD 6.3V +75-10% AL EL	2	C21,C25
11	11		1014260-01	3700 MFD 25V +75-10% AL EL	1	C22
12	12		1105796-00	1N 4004 PIV=400 I= 1A D041 SP	10	D11-D14,D17,D25,D27,D30-D32
13	13		1114245-00	NBS30600LPIV=600 I=30A	1	D5
14	14		1112594-02	A115N PIV=600 I= 3A	2	D9,D16
15	15		1112595-02	A114N PIV=600 I= 1A	2	D10,D15
16	16		1105640-00	1N 4744 VZ= 15.0 10% 1W	1	D33
17	17		1212297-02	MATE-N-LOK 9PIN UNIV HEADER	1	J1
18	18		1213463-05	TERM BLOCK 6POS .165" PINS	1	J2
19	19		1214257-00	EDGE CARD 12PIN STRAIGHT	1	J3
20	20		1214257-01	EDGE CARD 15PIN STRAIGHT	1	J4
21	21		1112595-01	A114B PIV=200 I= 1A	1	D19
22	22		1211987-03	HEAT SINK	4	
23	23		1211987-04	HEAT SINK	1	
24	24		1214256-00	BUS BAR,INSULATED	2	
25	25		1912108-00	339 VOLT CMPRTR,QUAD	1	E1
26	26		1214259-02	THERMOSTAT,00105,00140	1	S1
27	27		1314270-02	2.50 15.0 % NTC THERM	2	R1,R2
28	28		1314038-00	20.0 K 5.0 W 5.0 % WW	2	R3,R4
29	29		1301952-00	1.0 K 2.0 W 5.0 % CC	2	R5,R8
30	30		1314350-00	1.0 2.0 W10.0 % WW	3	R6,R7,R37

REVISION HISTORY			
ENG	ECO NUMBER	REV	SECTION A OF A
P.G	00003	E	SECTION.VARIATION INDEX
KG	00004	F	[A] 00
DC	5412530-ML005	H	[B]
GC	5412530-ML006	J	[C]
GC	5412530-ML007	X	[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

BASIC PART NO: 5412530

DRN: R.KOPPENAL	DATE: 01-FEB-78	D I G I T A L
CHK'D: K.GLEEZEN	DATE: 01-FEB-78	TITLE PARTS LIST
		MASTER BOARD
DES.ENG: J.GREGORICH	DATE: 01-FEB-78	
RESP.ENG.: J.GREGORICH	DATE: 01-FEB-78	DOCUMENT NUMBER
MFG.ENG.: R.HAMILTON	DATE: 01-FEB-78	SIZE K / CODE PL / NUMBER 5412530-0-DDP / REV K
ASSEMBLY NUMBER: E-UA-5412530-0-0	TOP DOCUMENT NUMBER:	FILE NAME: Z0613K.PLS / EDIT # 15

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AUTOMATED BY PRTLST.ID(7)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	31		1110403-00	1N 4733 VZ= 5.1 10% 1W N	1	D18
32	32		1301499-00	1.0 K 1.0 W10.0 % CC	2	R9,R12
33	33		1300232-00	100.0 1.0 W 5.0 % CC	2	R10,R13
34	34		1314239-00	33.0 3.0 W 5.0 % WW	1	R11
35	35		1310632-00	2.37 K .25 W 1.0 % RN55D-F10	2	R15,R17
36	36		1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1	R16
37	37		1304843-00	243.0 K .25 W 1.0 % RN55D-F10	1	R18
38	38		1313014-00	.01 3.75 W 3.0 % WW	3	R19-R21
39	39		1300365-00	1.0 K .25 W 5.0 % CC	3	R22,R25,R32
40	40		1309595-00	1.0 M .25 W 5.0 % CC	4	R23,R26,R38,R39
41	41		1302666-00	10.0 M .25 W 5.0 % CC	2	R24,R27
42	42		1300202-00	47.0 .25 W 5.0 % CC	2	R28,R29
43	43		1301317-00	10.0 .25 W 5.0 % CC	2	R30,R31
44	44		1614274-00	XFMR P=AB S=87V	1	T1
45	45		1614272-00	PULSE XFMR,4 WOUND	1	T2
46	46		1614275-00	XFMR P=200-375V S=5V@3.5A	1	T3
47	47		1614273-00	PULSE XFMR,TRI-WOUND	1	T4
48	48		1614261-00	24.0 UH-80UH DUAL INDUCTOR	2	L1,L2
49	49		1912048-02	DEC 7812 VOLT REG,FIX +12V	1	Z1
50	50		9009790-00	SPACER, CERAMIC, .186 ODX.078 ID	4	
51	51		9009676-00	TERM LUG 1POS SOLDER	12	
52	52		9009149-00	PIN, STAKING, P.C. BOARD, .025 X	20	J5-J7
53	53		9006071-01	SCREW,PAN,PHIL 10-32X 3/8 SS	4	
54	54		9006660-00	WASHER, FLAT, .375 O.D. X .187 I	5	
55	55		9006636-00	WASHER,LOCK,INT,.3800D X .200ID	4	
56	56		9007794-01	SCREW,PAN,PHIL 6-32X 11/16SS	12	
57	57		9006021-01	SCREW,PAN,PHIL 6-32X 5/16 SS	3	
58	58		9006633-00	WASHER,LOCK,INT,.2800D X .146ID	8	
59	59		9008185-00	NUT,KEP , 6-32X1/4 AF	2	
60	60	D-IA-7013668-0-0	7013668-00	P.C. BOARD STIFFENER	1	
61	61		1214789-00	INSERT,THREADED 6-32 ,BRASS,ELEC	12	
62	62		9009947-00	*** THIS ITEM IS NOT USED ***	-	
63	63		9006044-00	SPACER, HEX, ALUM. 6-32, .250 X	7	
64	64		9006653-00	WASHER, FLAT, .375 O.D. X .156 I	2	
65	65		9107240-00	WRAP,CABLE,.2500D VINYL	A/R	
66	66		9006020-01	SCREW,PAN,PHIL 6-32X 1/4 SS	2	
67	67		9006565-00	NUT,KEP , 10-32X 3/8 AF	1	
68	68		1114543-00	UES2602 PIV=100 I=20A TO3	2	D20,D21
69	69		1114246-00	UES-2603 PIV=150 I=30A TO3	1	D22
70	70		1111205-00	SCREENED VZ= 5.7 2% .40W	1	D24
71	71		1109988-00	1N 964B VZ= 13.0 5% .40W	1	D26
72	72		1110615-00	MR 752 PIV=200 I=22A A264 SM	2	D28,D29
73	73		1512782-00	NPN 100W S1325 15	2	Q1,Q2
74	74		1510969-00	2N 5038 NPN 140WC SI 90 50 Y	1	Q3
75	75		1510877-00	2N 6028 UJT 300MW R67B	2	Q4,Q5
76	76		1505867-00	2N 4441 SCR@ 50V & 8A	1	Q6
77	77		9107460-22	WIRE,STRND,20AWG,IPVC UL1429	A/R	W1-W5
78	78		9007801-00	WASHER, LOCK, S.S. #6	12	

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							MASTER BOARD		K	PL	5412530-0-BBP	K

AUTOMATED BY PRTLST.1D(7)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
79	79		9006563-00	NUT,KEP , 8-32 X11/32AF	1	
80	80		9006656-00	WASHER, FLAT, .312 O.D. X .156 I	10	
81	81		1115369-00	VM 18 PIV=100 I=1A	1	E2

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							MASTER BOARD		K	PL	5412530-0-DBP	K

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J1 COM R1 R2 S1 D5 230V 115V C2 200UF 250V R4 20K 5W C4 2200PF R5 1K 2W D10 A115M C1 200UF 250V R3 20K 5W D9 A115M T1 E2 J3 J6 PWR OK RTC DC OK J5 J4 SYNC

T2 J4 W4 R7 1 2W W2 Q2 BUY69B D14 IN4004 D13 IN4004 D16 A115M W5 T3 W3 R6 1 2W W1 Q1 BUY69B D12 IN4004 D11 IN4004 C6 .22UF D15 A115M R8 1K 2W

T4 J4 D1B IN4733 D17 IN4004 Q3 2N5038 R37 1 2W C11 1000PF R10 100 1W L2 D22 R18 243K R13 100 1W C12 1000PF R17 2370 1% R21 .01 3.75W C14 1000 UF C16 1000PF R25 1K R26 1M R27 10M R38 1M LM339 E1 D26 IN964B 13V D25 IN4004 +12V START-UP D27 IN4004 D30 IN4004 +12V START-UP J12 +12V R29 47 C19 .02UF R31 10 Q4 2N4028 D28 MR 752 C22 1000UF 25V C24 .22UF Q6 2N4441 R32 1K C20 .01UF J2 +12V GND J14 Q5 2N6028 R30 10 D29 MR 752 J4 +12V GND J2 +5V J4 J2 +5V GND J4 +5V GND

R9 1K 1W C7 1000PF L1 D20 D21 R12 1K 1W C9 1000PF R16 1000K 1% R15 2370 1% R19 .01 3.75W R20 .01 3.75W D19 A114B R23 1M +12V START-UP R24 10M +12V START-UP C17 .22UF C13 1000PF C15 1000PF R39 1M R22 1K LM339 E1 R28 47 C18 .02UF C25 11,000UF 6.3V C21 1000UF 6.3V C23 .22UF D24 5.1V ±2% J3 J4 R11 33 3W C8 47UF C10 .22UF D33 IN4744 15V J3 -12V J7 TP2 J7 TP1 C3 2100UF 7818-02 E1 D31 IN4004 D32 IN4004 START-UP +12V J3 J4 C5 .22UF

REVISIONS			
	CHK	CHANGE NO.	REV.
1	JCG	5412530-0000	C
2	J.C.GREGORICH	5412530-0000	D
3	J.C.GREGORICH	5412530-1001	F
4	D. CALDERAN	5412530-ML0004	H
5	G. CHRISTIANSEN		

DRN.		9-9-77
CHK		9/16/77
ENG.		9-16-77
PROJ. ENG.		9-16-77
PROD.		9/16/77
NEXT HIGHER ASSY.		
E-UA-5412530-0-0		
SCALE		
SHEET 1 OF 1		

FIRST USED ON H786 digital

TITLE MASTER BOARD

SIZE	CODE	NUMBER	REV.
D	CS	5412530-0-1	H

DIST.

SIZE	CODE	NUMBER	REV.
B	DD	5412532-0	H

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS
B-MH-5412532-0-6	1		MODULE HISTORY	* A B C NA
D-UA-5412532-0-0	3		CONTROL BOARD	C D E F H
K-PL-5412532-0-0	2		CONTROL BOARD	C D E F H
D-CS-5412532-0-1	1		CONTROL BOARD	C C D D E
D-MD-5012531-0-0	4		DRILL & ETCH DRAWING	C C C D E
		5012531	ETCHED BOARD	D D D D E
5412532-Ø-L X			P.C. DESIGN DATA BASE	REF
5412532-Ø-PL			INSERTION P/L DATA BASE	REF

NOTES:

REVISIONS	REV.	CHG NO.	DATE
	D	00001	10-77
	E	00002	11-77
	F	00003	2-78
	H	00004	3-78

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digital

USED ON OPTION/MODEL: H786

DRN.	RITA BUREAU	4-20-77
CHKD	[signature]	8-1-77
ENG.	J. Grayson DEC	8-1-77
PROD.	R Hamilton DEC	8-1-77

TITLE: CONTROL BOARD

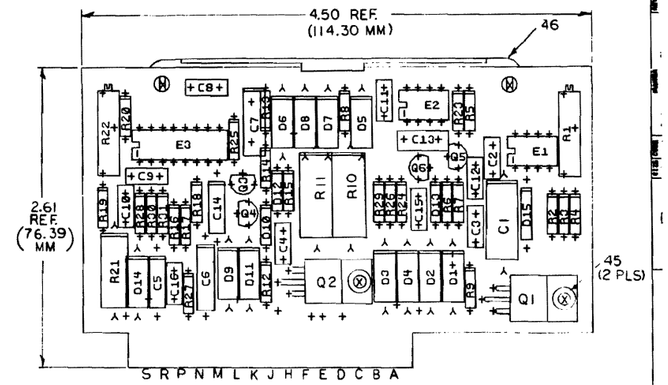
SIZE	CODE	NUMBER	REV.
B	DD	5412532-0	H

SHEET 1 OF 1

DRB 126

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COMPONENT SIDE VIEW



NOTES:
1. THIS BOARD REQUIRES U/L APPROVAL.
2 THIS BOARD WILL NOT BE GR. TESTED.

REV	CHG NO	CHANGE
H	1	ML0041 C. POWERS D.CALDERAN

ETCH REV. E-P1
P.C. DESIGN DATA BASE REV. E

SIGNATURES	DATE
DRN. Judy Ouellette	10-30-73
CHK'D. [illegible]	11/2/73
ENG. [illegible]	[illegible]
PROJ.ENG. [illegible]	[illegible]
PROD. [illegible]	11-5-73
SCALE 2/1	
SHT. 1 OF 3	
NEXT HIGHER ASSY. 8-DD-5412532-0-0	

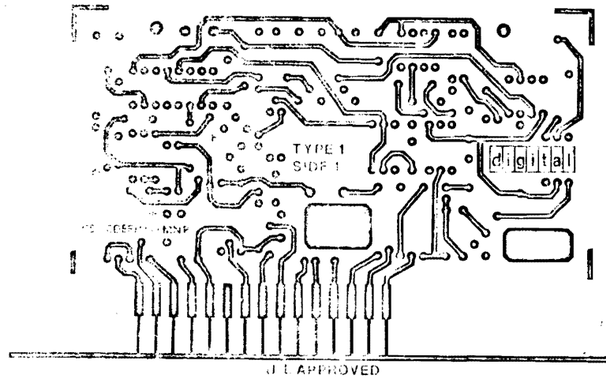
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TITLE
H786 CONTROL BOARD

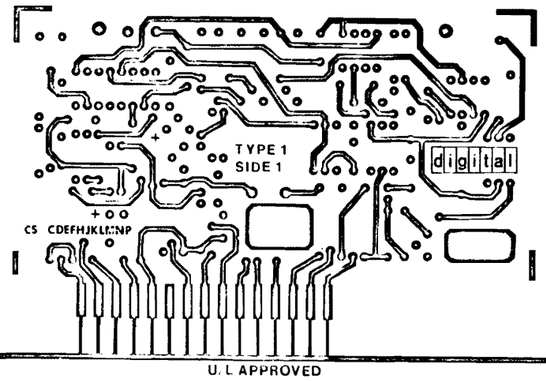
SIZE	CODE	NUMBER	REV
D	UA	5412532-0-0	H

1 MS#104582

5412532 5012531E-P1



5412532 5012531E-P1



							TITLE H786 CONTROL BOARD	DUA 5412532 00 H
7	6	5	4	3	2	1	SHT 2 OF 3	

SIDE 2

5412532
5012531E-P1

U. L APPROVED

SIDE 2

5412532
5012531E-P1

U L APPROVED

							TITLE H786 CONTROL BOARD	D UA 5412532-00 H
								2:1 3 3

8 7 6 5 4 3 2

AUTOMATED BY PRTLST.1D(10) P A R T S L I S T SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5012531-0-0	5012531-00	5412532	1	
2	2		1000039-00	.056 MFD 200V 10% 663UW MYLR	1	C1
3	3		1000009-00	33.0 MMF 100V 5%200PPM DM15S	1	C2
4	4		1000055-00	2200. MMF 250V 20% Y5S DISC	2	C3,C4
5	5		1002627-00	2.2MFD 20V 10% 150D S.TA	1	C5
6	6		1005784-00	.01 MFD 100V 10% 663VW MYLR	1	C6
7	7		1010274-00	.22 MFD 50V -20+80 Z5U CER	4	C8,C10-C12
8	8		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C13
9	9		1000016-00	100.0 MMF 100V 5%200PPM DM15S	3	C9,C15,C16
10	10		1005328-00	.33 MFD 20V 10% 150D S.TA	1	C14
11	11		1112595-00	A114F PIV= 50 I= 1A	4	D1-D3,D5
12	12		1112595-01	A114B PIV=200 I= 1A	7	D4,D6-D9,D11,D14
13	13		1100114-00	D 664 QS\75PCB PIV= 25V SP	3	D10,D12,D13
14	14		1109991-01	4M6.8AZ1 VZ= 6.8 1% .40W	1	D15
15	15		1309143-07	1 K 3/4W10% POT 100PPM	2	R1,R22
16	16		1304868-00	2.74 K 1/4W 1% RN55D-F 100PPM	1	R2
17	17		1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R3
18	18		1300488-00	12 K 1/4W 5% CC	1	R4
19	19		1303187-00	820 K1/4W 5% CC	1	R5
20	20		1300271-00	220 1/4W 5% CC	2	R6,R14
21	21		1301317-00	10 1/4W 5% CC	3	R7,R15,R25
22	22		1300417-00	2.2 K 1/4W 5% CC	1	R8
23	23		1300219-00	68 1/4W 5% CC	2	R9,R12
24	24		1300288-00	270 2W 10% CC	2	R10,R11
25	25		1300365-00	1 K 1/4W 5% CC	2	R13,R26
26	26		1309680-00	2.7 M 1/4W 5% CC	2	R16,R17
27	27		1314187-00	6.19 K 1/4W 1% RN55D-F 100PPM	1	R18
28	28		1309413-00	3.83 K 1/4W 1% RN55D-F 100PPM	2	R19,R20
29	29		1314239-00	33 3W 5% WW	1	R21
30	30		1300426-00	2.7 K 1/4W 5% CC	1	R23

REVISION HISTORY			BASIC PART NO: 5412532										
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: R.BUREAU	DATE: 16-FEB-78		D	I	G	I	T	A	L
P.G	00003	F	SECTION.VARIATION INDEX	CHK'D: K.GLEASEN	DATE: 16-FEB-78	TITLE	PARTS LIST						
---	5412532-ML004	H	[A] 00			CONTROL BOARD							
			[B]	DES.ENG: J. GREGORICH	DATE: 16-FEB-78								
			[C]										
			[D]			DOCUMENT NUMBER							
			[E]										
			[F]	RESP.ENG.: J.GREGORICH	DATE: 16-FEB-78								
			[H]			SIZE	CODE	NUMBER			REV		
			[J]										
			[K]	MFG.ENG.: R.HAMILTON	DATE: 16-FEB-78	K	PL	5412532-0-DBP			H		
			[L]										
			[M]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:			FILE NAME:			EDIT #		
			[N]	D-UA-5412532-0-0				Z0353H.PLS			7		

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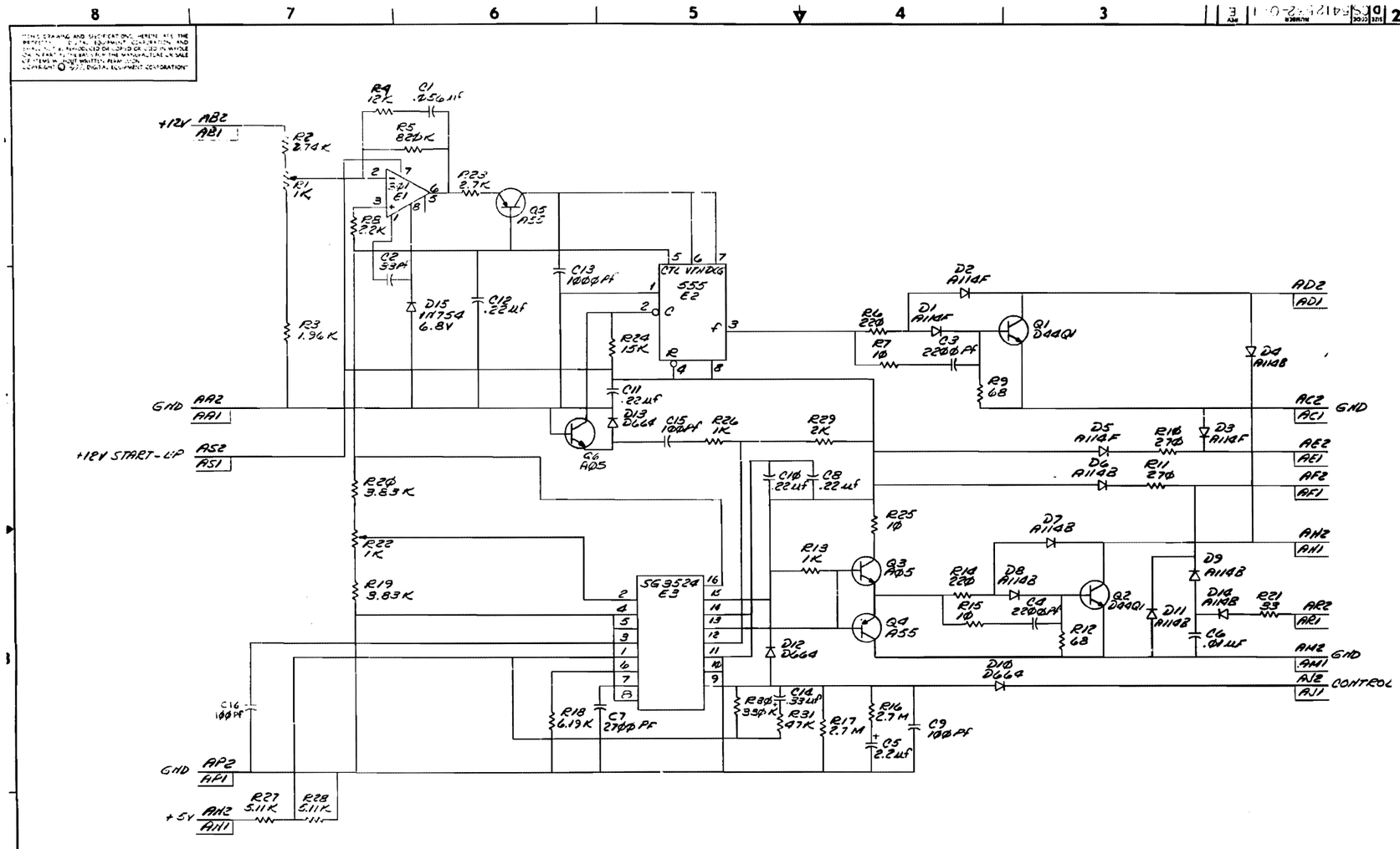
AUTOMATED BY PRTLST.1D(10)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	31		1300496-00	15 K 1/4W 5% CC	1	R24
32	32		1304854-00	5.11 K 1/4W 1% RN55D-F 100PPM	2	R27,R28
33	33		1302388-00	2 K 1/4W 5% CC	1	R29
34	34		1302091-00	330 K 1/4W 5% CC	1	R30
35	35		1302177-00	47 K 1/4W 5% CC	1	R31
36	36		1514271-00	D 44Q1 NPN 4WC SI125 20	2	Q1,Q2
37	37		1510705-00	XA 05 NPN 500MW SI 60 50 P	2	Q3,Q6
38	38		1510706-00	XA 55 PNP 500MW SI 60 50 P	2	Q4,Q5
39	39		1910282-00	301AN OP AMP	1	E1
40	40		1911944-00	555CN TIMER,FUNCT.BLOCK	1	E2
41	41		1914250-00	3524 MODULATOR-REGULATING	1	E3
42	42		9009000-00	*** THIS ITEM IS NOT USED ***	-	
43	43		1014170-00	2700.0 MMF 100V 1% 70PPM	1	C7
44	44		7418695-00	*** THIS ITEM IS NOT USED ***	-	
45	45		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	2	
46	46		1215993-00	RETAINER, CARD	1	

DIGITAL	TITLE	SECTION	SIZE	CODE	DOCUMENT NUMBER	REV
	CONTROL BOARD	A OF A	K	PL	5412532-0-DBP	H

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REVISIONS	REV.	CHANGE NO.	CHK.
	E		

DRN.		4/1/77
CHK'D		4-1-77
ENG.		8-1-77
PROJ. ENG.		2-1-77
PROD.		6-1-77
NEXT HIGHER ASSY.	D-UA-5412532-0-0	
SCALE		
SHEET 1 OF 1		

FIRST USED ON: H786

digital

TITLE: CONTROL BOARD

SIZE	CODE	NUMBER	REV.
D	CS	5412532-0-1	E

DIST.

SIZE	CODE	NUMBER	REV.
B	DD	5412528-0	C

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS
		5412528	MODULE REV	
B-DD-5412528-0	1		POWER MONITOR BOARD	A B C
D-UA-5412528-0-0	3		POWER MONITOR BOARD	A B C
K-PL-5412528-0-DBP	-		PARTS LIST DATA BASE	A B C
D-CS-5412528-0-1	1		POWER MONITOR BOARD	A B C
D-MD-5012527-0-1	4		DRILL & ETCH DRAWING	A A B
		5012527	ETCHED BOARD	B B C
K-PC-5412528-0-DBG	-		P.C. DESIGN DATA BASE (TAPED)	A B C

NOTES:

REVISIONS		
REV.	B	C
CHG NO.	0001	ML002
DATE	10-77	3-79

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digital

USED ON OPTION/MODEL	
11786	

DRN.	KOPPENAL	4-7-77
CHK'D	GLEAZER	8-31-77
ENG.	GREGORICH	8-1-77
PROD	HAMILTON	8-1-77

TITLE: POWER MONITOR BOARD

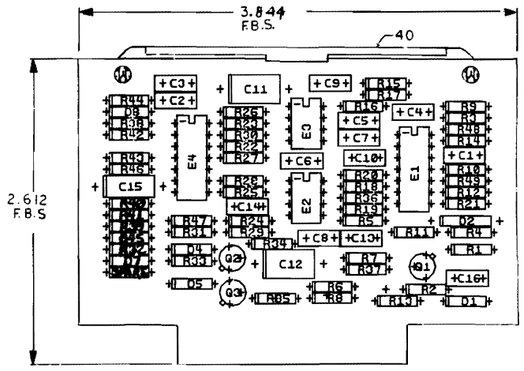
SIZE	CODE	NUMBER	REV.
B	DD	5412528-0	C

SHEET 1 OF 1

DRB 126

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COMPONENT SIDE VIEW



NOTES:

REV	CHANGE NO	CHK
C	ML0032 POWERED CALDERAN	JL

ETCH REV. C-P2
P.C. DESIGN DATA BASE REV. C

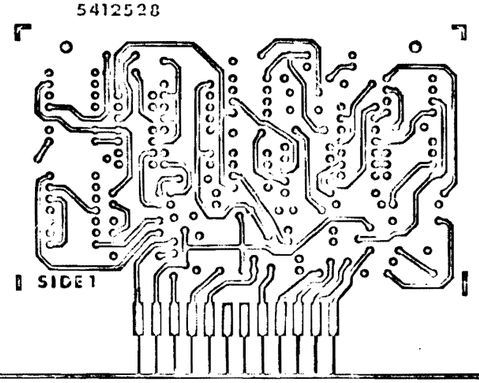
SIGNATURES	DATE
DRN. D. POWERS	4-20-79
CHK'D.	
ENG.	
PROJ. ENG.	
PROD.	

TITLE H786 POWER MONITOR

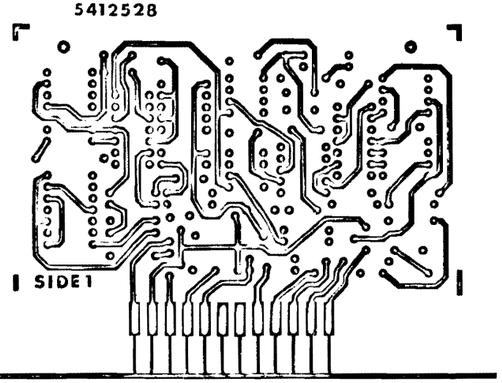
SCALE	SIZE	CODE	NUMBER	REV
2/1	D	UA	5412528 00	C

SHT. 1 OF 3
NEXT HIGHER ASSY. C-DD-5412528-0

5012527C-P2
5412528

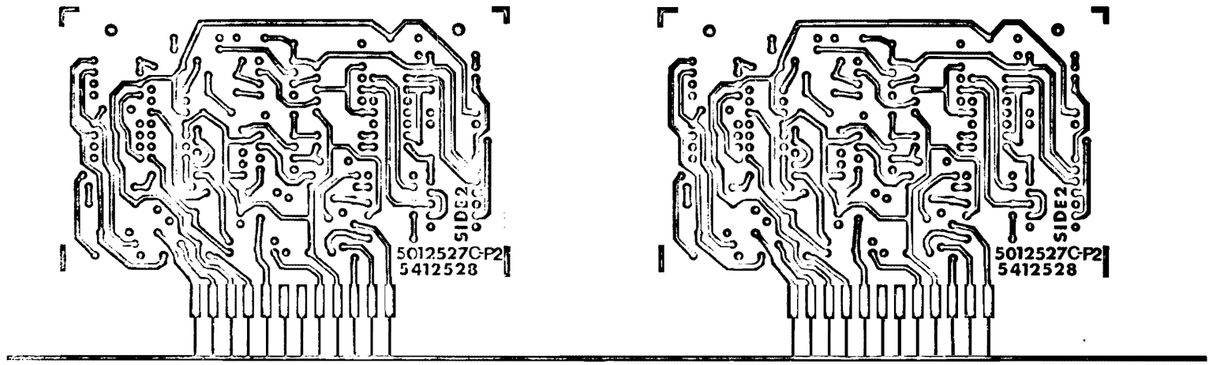


5012527C-P2
5412528



DRILL & ETCH DRAWING D UA 5412528-0-0 C REV

2 3



8	7	6	5	4	3	2	1	TITLE: DRILL & ETCH DRAWING	SIZE: D	NUMBER: DUA 5412528-0-0	REV: C
								SCALE: 2/1	SHEET 3 OF 3	DWG	

AUTOMATED BY PRTLST,3J(25) P A R T S L I S T 'SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5012527-0-0	5012527-00	5412528	1	
2	2		1010274-00	.22 MFD 50V -20+80 Z5U CER	8	C1,C2,C3,C4,C9,C10,C13,C16
3	3		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C14
4	4		1001610-00	.01 MFD 50V -20+80 Z5U AXIAL	2	C7,C8
5	5		1010031-03	.22 MFD 50V 10% M.POLYCARB	2	C11,C12
6	6		1005116-00	3300.0 MMF 200V 10% 192P FILM	1	C15
7	7		1100125-00	1N 758A VZ= 10.0 5% .40W PPE	1	D1
8	8		1105873-00	4M5-1AZ1 VZ= 5.1 1% .400W	1	D2
9	9		1100114-00	D 664 QS\75PCB PIV= 25V SP	4	D4,D5,D7,D8
10	10		1301322-00	180 1/4W 5% CC	1	R1
11	11		1301808-00	22 K 1/4W 5% CC	4	R2,R3,R9,R13
12	12		1300247-00	120 1/4W 5% CC	1	R4
13	13		1313476-00	51.1 K 1/4W 1% RN55D	1	R5
14	14		1311320-00	90.9 K 1/4W 1% RN55D-F 100PPM	1	R6
15	15		1309289-00	63.4 K 1/4W .1% RN55E-B 25PPM	1	R7
16	16		1300479-00	10 K 1/4W 5% CC	10	R10,R17,R20,R32,R33,R34,R38,R42,
					CONT	R49,R35
17	17		1305421-00	35.7 K 1/4W 1% RN55D-F 100PPM	2	R11,R12
18	18		1300539-00	120 K 1/4W 5% CC	1	R14
19	19		1305130-00	133 K 1/4W 1% RN55D-F 100PPM	1	R8
20	20		1309595-00	1 M 1/4W 5% CC	6	R15,R18,R30,R37,R36,R44
21	21		1300447-00	4.7 K 1/4W 5% CC	2	R16,R19
22	22		1301775-00	820 1/4W 5% CC	1	R21
23	23		1313167-00	833 K 1/4W 1% RN55C-F '50PDM	1	R25
24	24		1302395-00	56 K 1/4W 5% CC	6	R26,R27,R28,R29,R40,R41
25	25		1309680-00	2.7 M 1/4W 5% CC	1	R39
26	26		1302466-00	100 K 1/4W 5% CC	3	R31,R46,R47
27	27		1300398-00	1.8 K 1/4W 5% CC	1	R48
28	28		1510705-00	XA 05 NPN 500MW SI 60 50 P	1	Q1
29	29		1511686-00	DEC5433 FET N 350MW 10 25 1A	2	Q2,Q3

REVISION HISTORY			BASIC PART NO: 5412528											
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: R.KOPPENALL	DATE: 07-MAR-79		D	I	G	I	T	A	L	
	5412528-ML002	C	SECTION.VARIATION INDEX	CHK'D: K.GLEEZEN	DATE: 07-MAR-79	TITLE PARTS LIST								
			[A] 00			POWER MONITOR BOARD								
			[B]											
			[C]	DES.ENG: JIM GREGORICH	DATE: 07-MAR-79									
			[D]			DOCUMENT NUMBER								
			[E]											
			[F]	RESP.ENG.: JIM GREGORICH	DATE: 07-MAR-79	SIZE	CODE	NUMBER			REV			
			[H]											
			[J]											
			[K]	MFG.ENG.: R.HAMILTON	DATE: 07-MAR-79	K	PL	5412528-0-DBP			C			
			[L]											
			[M]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:					EDIT #			
			[N]	D-UA-5412528-0-0		Z0411C.PLS					3			

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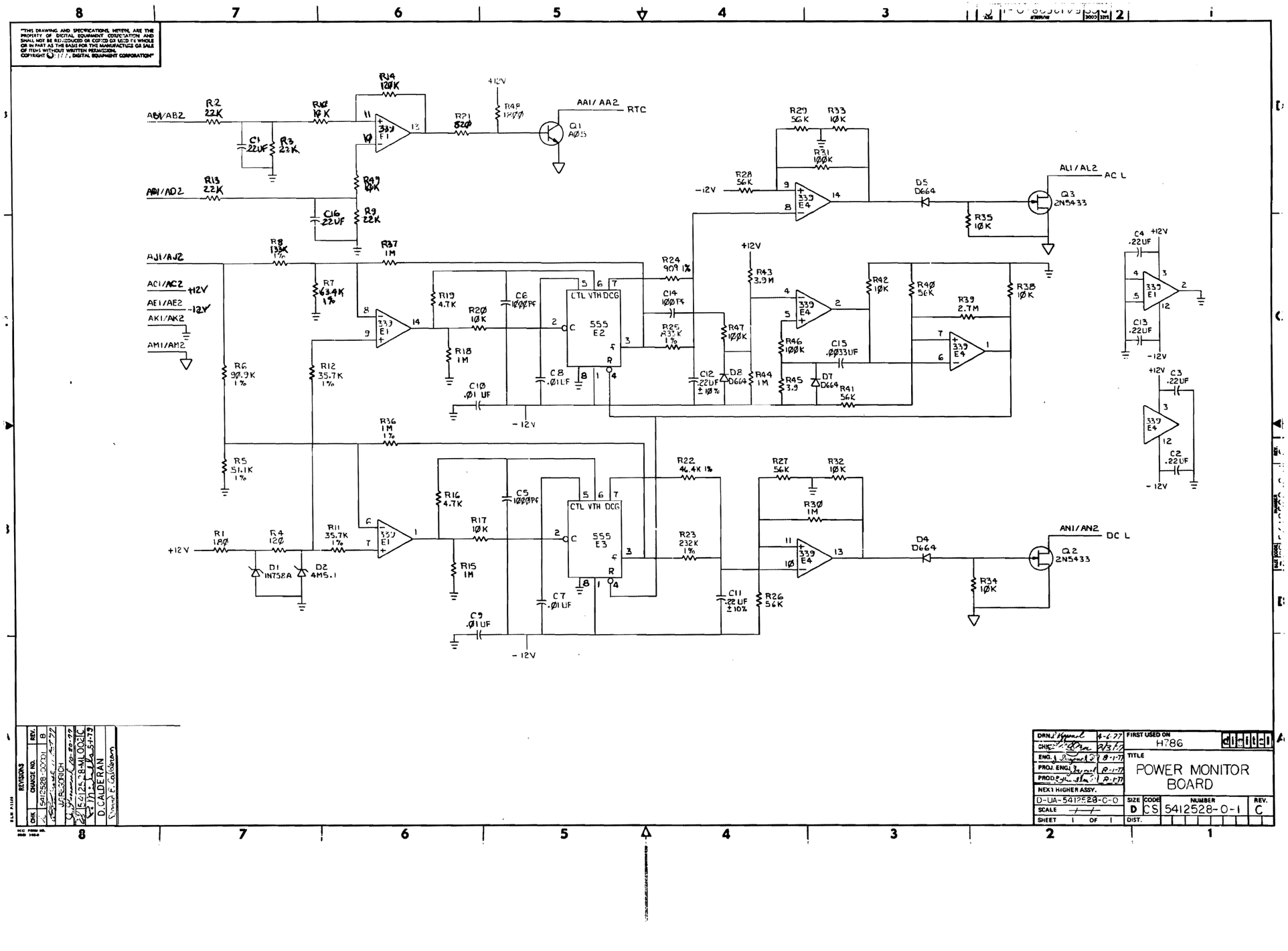
AUTOMATICALLY PRTLST.3.1(25)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30		1912108-00	339 VOLT CMPRTR,QUAD	2	E1,E4
31	31		1911944-00	555CN TIMER,FUNCT.BLOCK	2	E2,E3
32	32		1305424-00	232 K 1/4W 1% RN55D-F 100PPM	1	R23
33	33		1314387-00	3.9 M 1/4W 5% CC	2	R43,R45
34	34		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	2	C5,C6
35	35		7418695-00	*** THIS ITEM IS NOT USED ***	-	
36	36		9009000-00	*** THIS ITEM IS NOT USED ***	-	
37	37		9105740-55	*** THIS ITEM IS NOT USED ***	-	
38	38		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R22
39	39		1302685-00	909 1/4W 1% RN55D-F 100PPM	1	R24
40	40		1215993-00	RETAINER, CARD	1	

DIGITAL	TITLE	SECTION	SIZE	CODE	DOCUMENT NUMBER	REV
	POWER MONITOR BOARD	A OF A	K	PL	5412528-0-DBP	C

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REVISIONS		
CHK	CHANGE NO.	REV.
	5412528-00001	B

J.F.ERICRICH
E6125 28 MAY 0021C
E3 D.CALDERAN
Signed F. Calderan

DRN.	4-6-77
CHK.	5/3/77
ENG.	8-1-77
PROJ. ENG.	8-1-77
PROD. ENG.	8-1-77
NEXT HIGHER ASSY.	D-UA-5412528-C-0
SCALE	—
SHEET	1 OF 1

FIRST USED ON H786

TITLE
POWER MONITOR BOARD

SIZE	CODE	NUMBER	REV.
D	CS	5412528-0-1	C

DIST.

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-MSV11-D-1	FIELD MAINTENANCE PRINT SET
B-DD-MSV11-D	DRAWING DIRECTORY (MSV11-D)
A-PL-MSV11-D-Ø	PARTS LIST (MSV11-D)
D-BD-MSV11-D-4	MSV11-D/E BLOCK DIAGRAM (MSV11-D)
D-FD-MSV11-D-5	MSV11-D/E FLOW DIAGRAM (MSV11-D)
D-TD-MSV11-D-6	MSV11-D/E TIMING DIAGRAM (MSV11-D)
B-DD-M8Ø44-Ø	DRAWING DIRECTORY (M8Ø44)
A-PL-M8Ø44-Ø-Ø	PARTS LIST (M8Ø44)
D-UA-M8Ø44-Ø-Ø	UNIT ASSEMBLY (M8Ø44)(SHT 1 THRU 4 ONLY)
D-CS-M8Ø44-Ø-1	CIRCUIT SCHEMATIC (M8Ø44)
MPØØ566	MSV11-D FIELD MAINTENANCE PRINT SET

UNIT VARIATIONS COVERED BY THIS PRINT SET
MSV11-DA
MSV11-DB
MSV11-DC
MSV11-DD

MSV11-D

Field Maintenance Print Set

MPØØ566

Digital Equipment Corporation

REVISIONS	REV.	CHG. NO.	DATE

USED ON OPTION/MODEL	
LSI 11	

SHEET 1 OF 1

DRN. E. DeVries	DATE 14-12-77	TITLE: MSV11-D (32K X 16) MOS MEMORY SYSTEM
CHK'D R. Wilson	DATE 2-21-78	
PROJ. ENG. R. Wilson	DATE 2-21-78	
FIELD SERV. RW Reichard	DATE 2 MAR 78	

Digital

SIZE	CODE	NUMBER	REV.
B	TC	MSV11-D-1	*

DIST.

DRD 124

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DRAWING DIRECTORY

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NOTE: FOR FIELD MAINTENANCE PRINT SET
SEE B-TC-MSV11-D-1

UNIT VARIATIONS

VAR	TITLE
MSV11-DA	4 K X 16 MOS MEMORY SYSTEM
MSV11-DB	8K X 16 MOS MEMORY SYSTEM
MSV11-DC	16K X 16 MOS MEMORY SYSTEM
MSV11-DD	32K X 16 MOS MEMORY SYSTEM

REVISIONS		
REV.	CHANGE NO.	CHK
A	MSV11-D-1	JA

USED ON OPTION/MODEL: LSI-11

DRN. DEVRIES	DATE 15-12-77	
CHK'D. R. Shaw	DATE 2-21-78	
PROJ. ENG. R. Shaw	DATE 2-21-78	
PROD. R. Mott	DATE 2-21-78	

SHEET 1 OF 3

TITLE: DRAWING DIRECTORY
MSV11-D (32K X 16)
MOS MEMORY SYSTEM

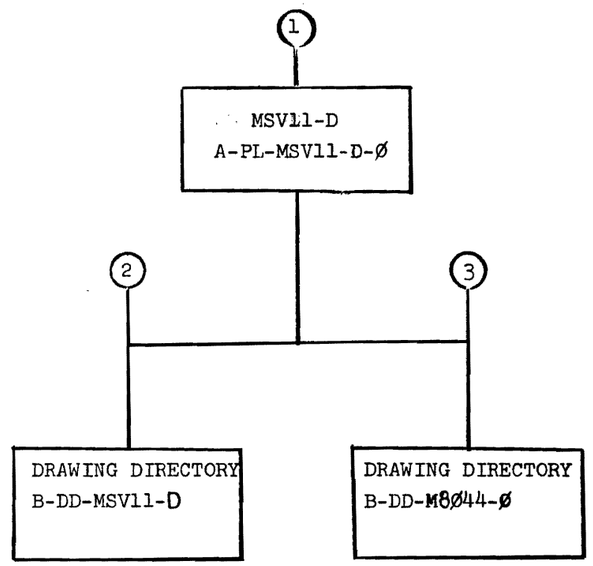
digital

SIZE	CODE	NUMBER	REV
D	DD	MSV11-D	A

DIST.

DRB 103A

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TITLE	SHEET	SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY MSV11-D (32K X 16) MOS MEMORY SYSTEM	SHEET 2 OF 3	D	DD	MSV11—D	A

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
	MP00566	FIELD MAINTENANCE PRINT SET (MP)	-
	B-TC-MSV11-D-1	FIELD MAINTENANCE PRINT SET (TC)	-
1	A-PL-MSV11-D-0	PARTS LIST (MSV11-D)	E/M
	D-BD-MSV11-D-4	MSV11D/E BLOCK DIAGRAM	E
	D-FD-MSV11-D-5	MSV11 D/E FLOW DIAGRAM	E
	D-TD-MSV11-D-6	MSV11 D/E TIMING DIAGRAM	E
	A-SP-MSV11-D-3	MSV11-D SYSTEM SPECIFICATION	E/M
	A-PL-MSV11-D-7	MSV11-D SHIPPING LIST	-
	EK-MSV1D-OP-001	USERS MANUAL	E/M
	~~D-CR-MSV11-D-10~~	~~MSV11-D 32K MOS MEMORY~~	~~E~~
2	B-DD-MSV11-D	DRAWING DIRECTORY MSV11-D MOS MEMORY SYSTEM	E/M
3	B-DD-M8044-0	DRAWING DIRECTORY (M8044) MODULE	E/M

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

digital

TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY MOS MEM. MSV11-D (32K X 16) SYSTEM	3	3	B	CD	MSV11-D	A

DRD 100A

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

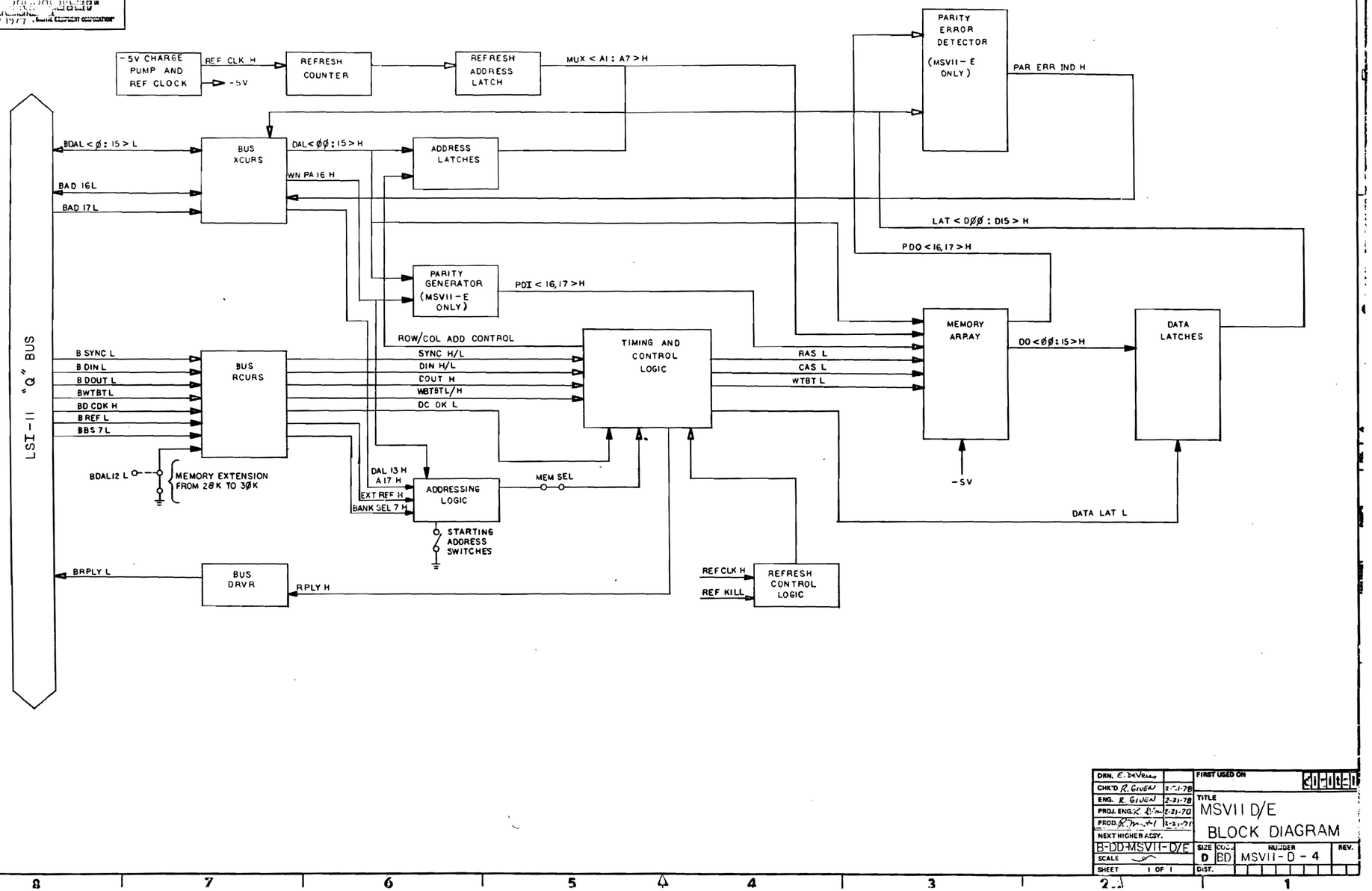
MADE BY E.DEVRIES	CHECKED R. GIVEN	SECTION
DATE 14-12-77	DATE 2-21-78	
ENG R. Given	PROD R. Mabee	ISSUED SECT.
DATE 2-21-78	DATE 2-21-78	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION MSV11-D
1	D-UA-M8044-0-0	MSV11-D (32K X 16) MOS MEMORY SYSTEM	1
2	D-BD-MSV11-D-4	MSV11-D/E BLOCK DIAGRAM	REF
3	D-FD-MSV11-D-5	MSV11-D/E FLOW DIAGRAM	REF
4	A-SP-MSV11-D-3	MSV11-D SYSTEM SPECIFICATION	REF
5	D-TD-MSV11-D-6	MSV11-D/E TIMING DIAGRAM	REF
6	A-PL-MSV11-D-7	MSV11-D SHIPPING LIST	REF

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
MSV11-D (32K - 16) MOS MEMORY SYSTEM	B-DD-MSV11-D	A	PL	MSV11-D-0	*	
	SHEET 1 OF 1		DIST			

DEC FORM
DBA 110

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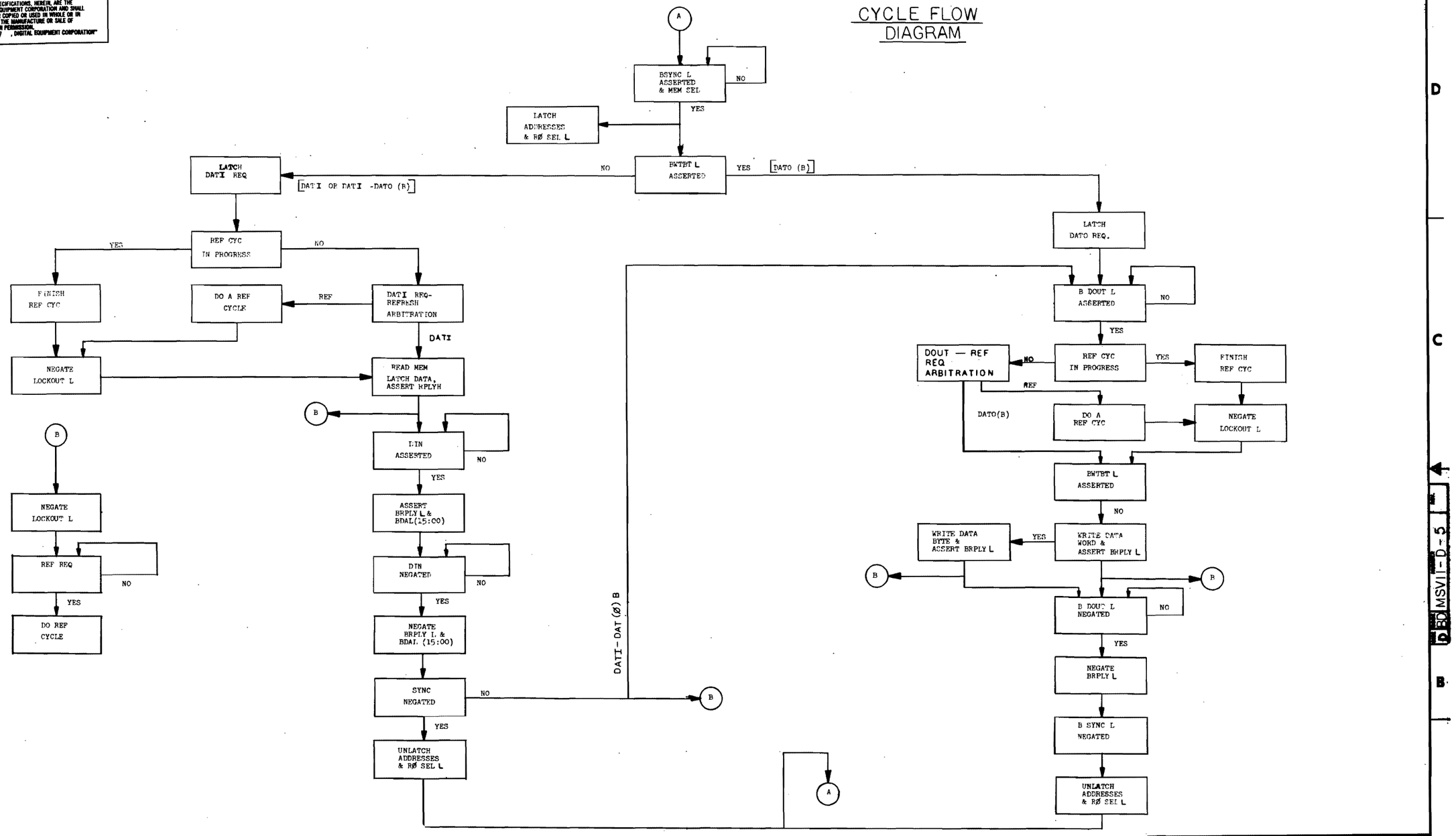


REVISIONS		
REV.	CHANGE NO.	CHK.

DRN. E. DeVeau		FIRST USED ON
CHK'D R. Given	2-21-78	
ENG. R. Given	2-21-78	TITLE
PROJ. ENG.	2-21-78	MSVII D/E
PROD.	2-21-78	BLOCK DIAGRAM
NEXT HIGHER ASSY.	B-DD-MSVII-D/E	
SCALE		SIZE D / CODE BD / NUMBER MSVII-D-4 / REV.
SHEET 1 OF 1		DIST.

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CYCLE FLOW DIAGRAM



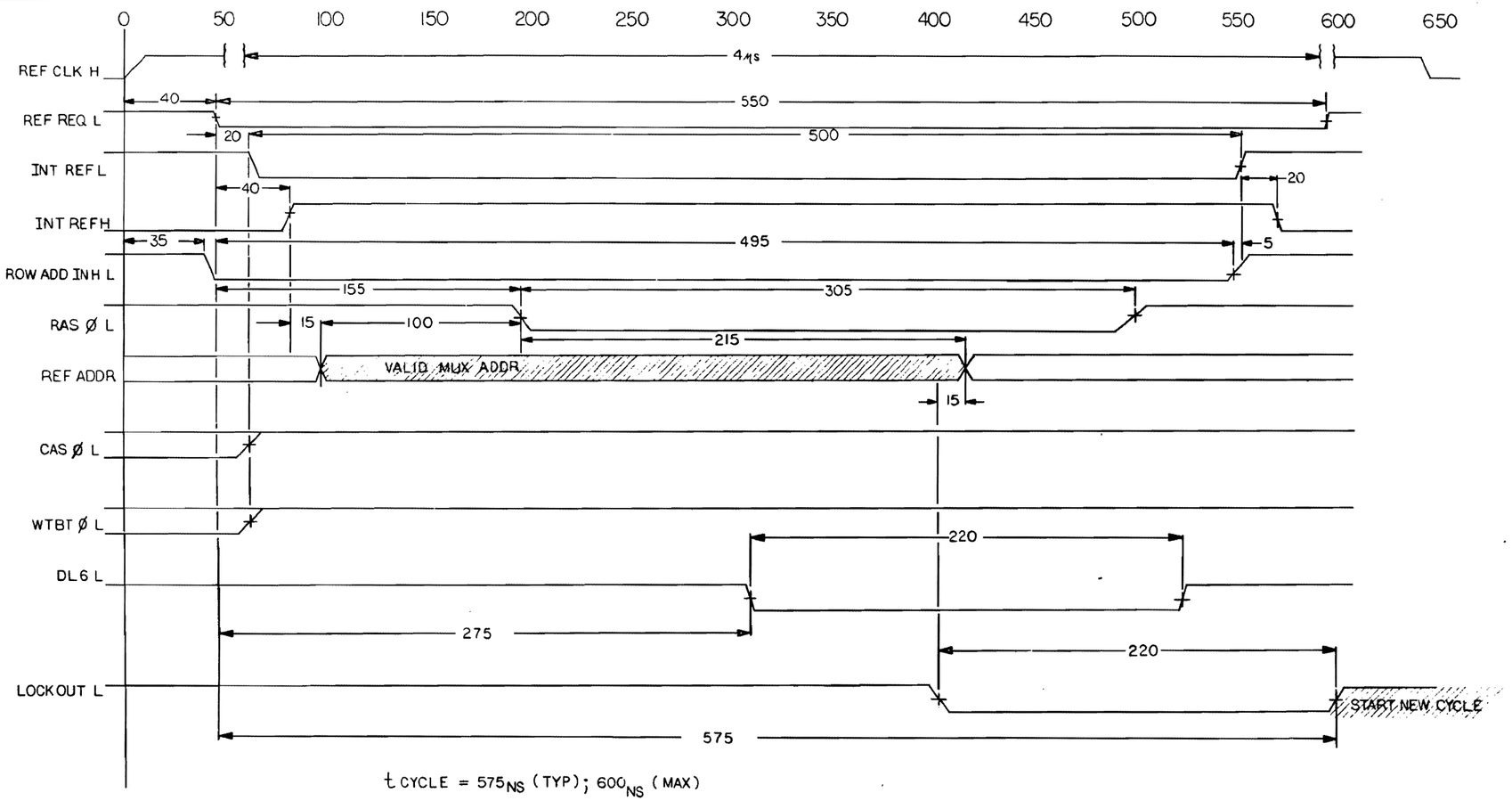
REVISIONS	REV.	CHANGE NO.	CHK

DRN. L DeVries	4-12-77	FIRST USED ON
CHK'D R. Given	2-21-78	digital
ENG. R. Given	2-21-78	TITLE
PROJ. ENG. R. Given	2-21-78	MSVII D/E FLOW DIAGRAM
PROD. R. Martel	2-21-78	
NEXT HIGHER ASSY.		
B-DD-MSVII-D/E		SIZE D · CODE FD · NUMBER MSVII-D-5 · REV.
SCALE		
SHEET 1 OF 1		DIST.

DD MSVII-D-5 REV

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REFRESH CYCLE



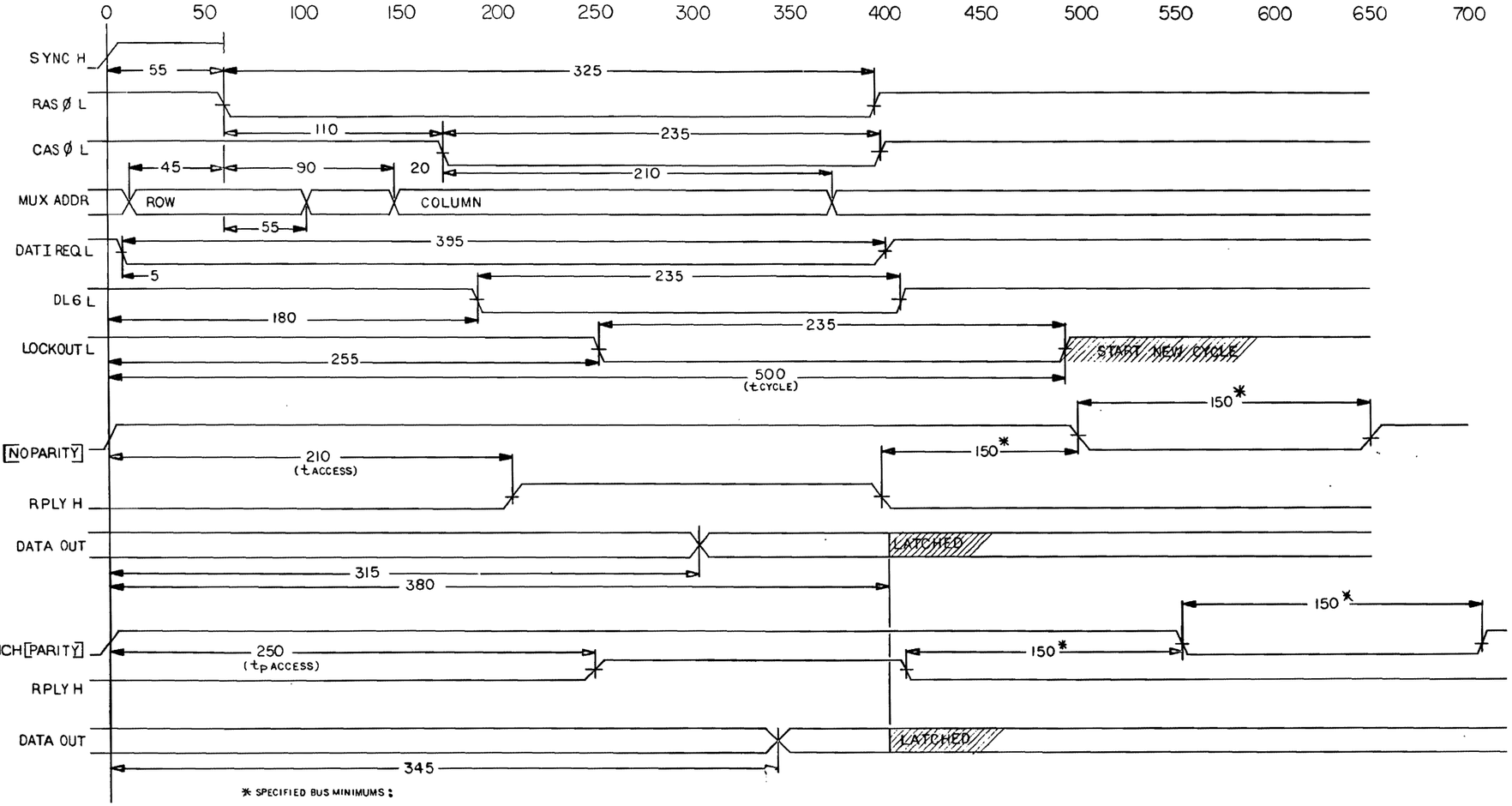
$t_{CYCLE} = 575_{NS}$ (TYP); 600_{NS} (MAX)

REVISIONS	REV.	CHANGE NO.	CHK.

DRN. E. DeVeau	17 NOV 77	FIRST USED ON	
CHK'D R. Given	2-21-78		
ENG. R. Given	2-21-78	TITLE	MSVII D/E TIMING DIAGRAM
PROJ. ENG. R. [illegible]	2-21-78		
PROD. [illegible]	2-24-78		
NEXT HIGHER ASSY.			
DD-MSVII-D/E		SIZE D	CODE TD
SCALE		NUMBER MSVII-D-6	REV.
SHEET 1 OF 4		DIST.	

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DATI CYCLE



* SPECIFIED BUS MINIMUMS:

t_{ACCESS} = 210NS (TYP); 225NS (MAX)
$t_{PACCESS}$ = 250NS (TYP); 265NS (MAX)
t_{CYCLE} = 500NS (TYP); 520NS (MAX)

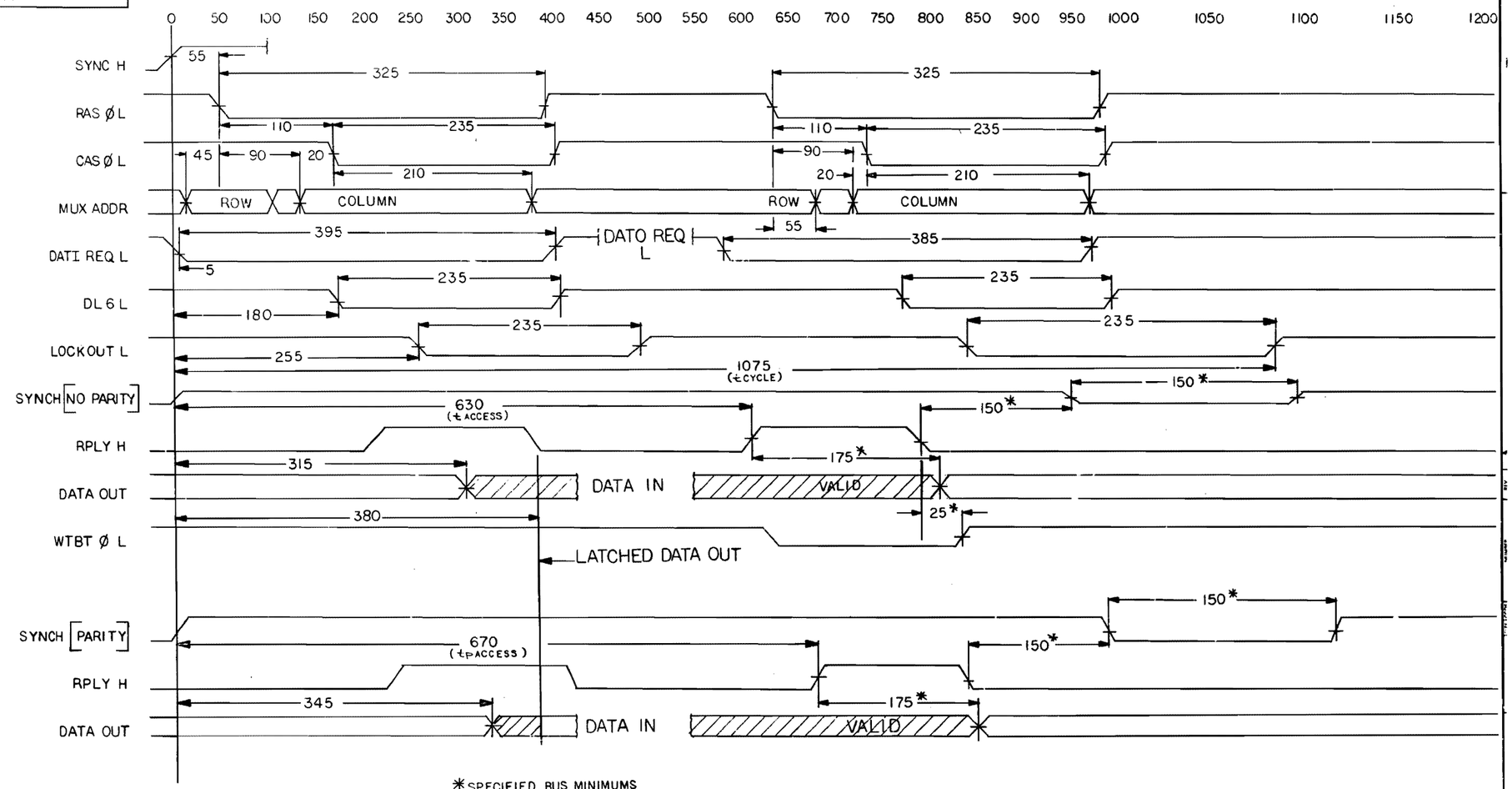
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE MSVII D/E TIMING DIAGRAM		SIZE D	CODE TD	NUMBER MSVII-D-6
SCALE —	SHEET 2 OF 4	DIST.		REV.

DEC FORM NO. D60 1-76

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DATIO (B) CYCLE



*SPECIFIED BUS MINIMUMS

t ACCESS = 630 NS (TYP); 650 NS (MAX)
tp ACCESS = 670 NS (TYP); 690 NS (MAX)
t CYCLE = 1075 NS (TYP); 1100 NS (MAX)
tp CYCLE = 1115 NS (TYP); 1140 NS (MAX)

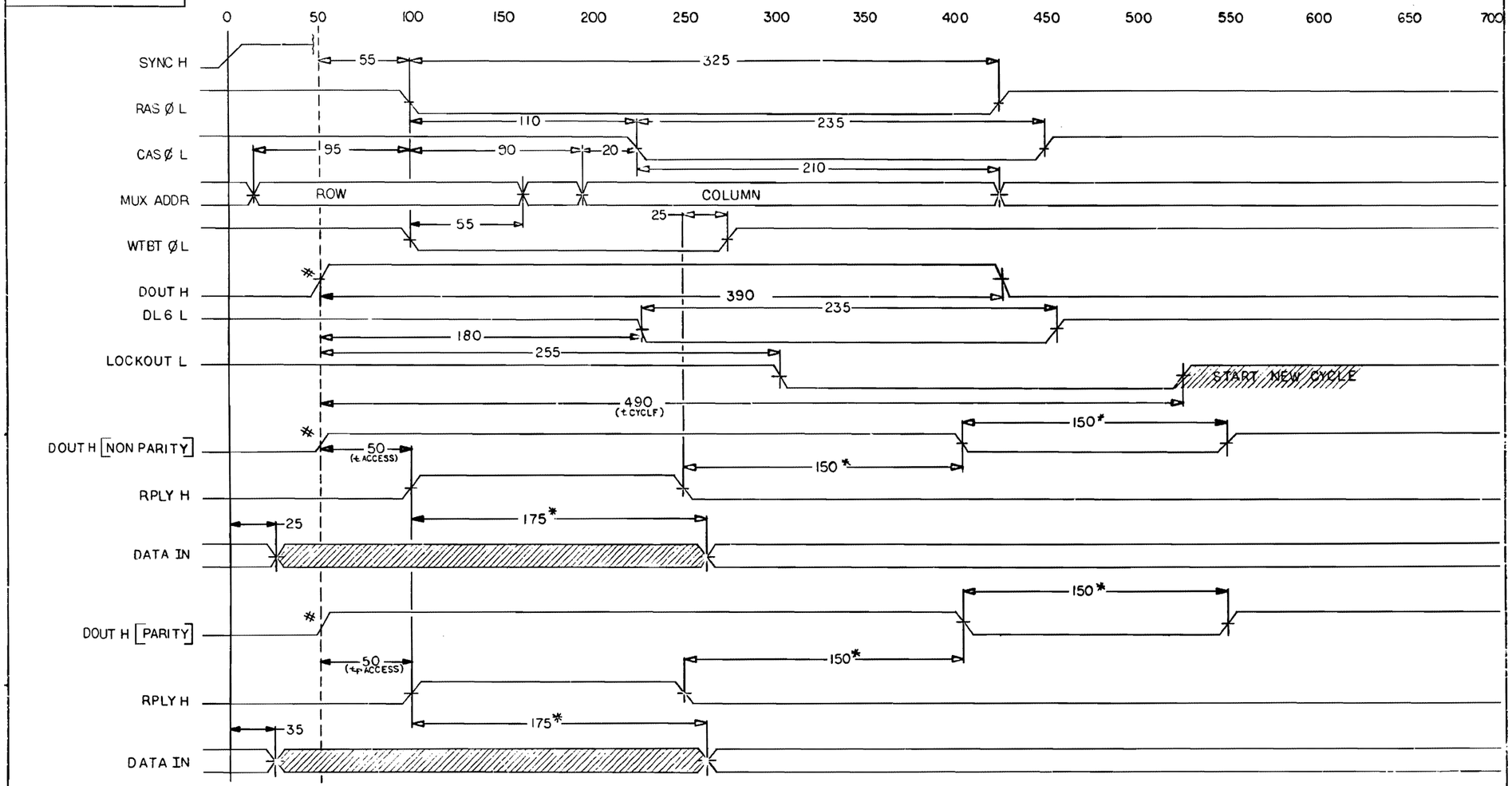
REVISIONS		
CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
MSVII D/E TIMING DIAGRAM	D	TD	MSVII-D-6	
SCALE — SHEET 3 OF 4	DIST.			

DEC FORM NO. DRD 138

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DATO (B) CYCLE



* SPECIFIED BUS MINIMUMS
* TIME DEPENDENT ON PROCESSOR
t ACCESS = 100 NS (TYP); 110 NS (MAX)
t PACCESS = 100 NS (TYP); 110 NS (MAX)
t CYCLE = 545 NS (TYP); 565 NS (MAX)
} SYNC H TO DOUT H SPECIFIED AT A MINIMUM OF 50 NS

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
MSV11 D/E TIMING DIAGRAM	D	TD	MSV11-D-6	
SCALE	SHEET 4 OF 4		DWG.	

SIZE	CODE	NUMBER	REV.
D	DD	M8044-Ø	C

DRAWING NO.	NO. OF CHTS.	PART NO.	DESCRIPTION	REVISIONS
B-DD-M8044-Ø	1		32K X 16 BIT MOS MEMORY	* A B C
D-UA-M8044-Ø-Ø	8		32K X 16 BIT MOS MEMORY	B C D D
B-PL-M8044-Ø-Ø	16		32K X 16 BIT MOS MEMORY	B C D E
D-CS-M8044-Ø-1	7		32K X 16 BIT MOS MEMORY	A B C D
D-MP-5013128-0-0	7		DRILL & ETCH DRAWING	B C C C
		5013128	ETCHED BOARD	C D D D
M8044-Ø-L			P.C. DESIGN DATA BASE	C D D D

NOTES:

REVISIONS	REV.	*	A	B	C
	CHG NO.	ORIG	00001	15992	ML033
	DATE	—	5-78	12/78	7/80

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digital

USED ON OPTION/MODEL: MSV11-D

DRN.	K. HODGSON	12/28/77
CHK'D	R. Rice	3-2-78
ENG.	R. Rice	3-2-78
PROD.	R. Pastel	3-21-78

TITLE: 32K X 16 BIT MOS MEMORY

SIZE	CODE	NUMBER	REV.
B	DD	M8044-Ø	C

SHEET 1 OF 1

DND 123

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MATTON DATE 12/8/77	CHECKED R. Allen DATE 2-21-78	SECTION
ENG R. Allen DATE 2-21-78	PROD [illegible] DATE 2-21-78	ISSUED SECTION

M8044-AA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-AB	M8044-AC	M8044-AD	M8044-AE	REF DESIGNATION
	D-CS-M8044-0-1		CIRCUIT SCHEMATIC	REF	REF	REF	REF	
	D-UA-M8044-0-0		UNIT ASSEMBLY	REF	REF	REF	REF	
	B-DD-M8044-0-0		DWG. DIRECTORY	REF	REF	REF	REF	
	D-MD-5013128-0-0		DRILL & ETCH DRAWING	REF	REF	REF	REF	
1		10-10279-00	CAP 0.47 UF 25V 20% CER	1	1	1	1	C10
2		10-01610-00	CAP 0.01 UF 50V 20% CER	27	27	27	27	C7,C99,C100 thru C123,C146
3		10-02627-00	CAP 2.2 UF 20V 10% S. TANT	3	3	3	3	C5,C6,C9
4		10-12121-00	CAP 220 PF 100V 1% DM	2	2	2	2	C8,C12
5		10-05306-00	CAP 6.8 UF 35V 10% S. TANT	2	2	2	2	C3,C4
6		10-12219-00	CAP 47 UF 30V AL EL	2	2	2	2	C1,C2
7		11-05275-00	DIODE D672	2	2	2	2	D1,D2
8		12-11164-01	SWITCH 5 POS	1	1	1	1	E2
9		13-09412-00	RES 18.2K 1/4W 1% MF	1	1	1	1	R26
10		13-09416-00	RES 31.6K 1/4W 1% MF	1	1	1	1	R25
11		13-02957-00	RES 121 1/4W 1% MF	1	1	1	1	R16
12		13-00295-00	RES 330 1/4W 5% CC	2	2	2	2	R27, R21
13		13-05126-00	RES 619 1/4W 1% CC	1	1	1	1	R19
14		13-03110-00	RES 19.6 1/4W 1% MF	1	1	1	1	R18
15		13-05124-00	RES 287 1/4W 1% MF	1	1	1	1	R20
16		13-01874-00	RES 5.6K 1/4W 5% CC	2	2	2	2	R11,R24
17		13-14636-00	RES NETWORK (2-5K 1/8 W 5%)	3	3	3	3	R4,R5,R6

NOTES:
M8044-AA*IS A PRIMARY VARIATION OF THE 4K X 16 BIT SYSTEM. (NOT A MODULE TYPE) M8044-AB,AC,AD,AE, ARE MODULE TYPES, USING DIFFERENT 4K MOS DEVICES AND ARE IDENTICAL IN FUNCTION AND PURPOSE.

E.C.O. NO.		
2001	ML002	ML003

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DRG 125

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 1 OF 16	INSERTION PARTS LIST DATA BASE REV —			

AJC

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY R. MANION	CHECKED R. Shaw	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Shaw	PROD K. Daniel	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

M8044-AA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-AB	M8044-AC	M8044-AD	M8044-AE								NOTES: REF DESIGNATION
18		13-14637-00	RES NETWORK (3-22 1/8 W 5%)	4	4	4	4								R1,R2,R7,R8
19		13-05123-00	RES 215 1/4W 1% MF	1	1	1	1								R22
20															
21		13-00365-00	RES 1K 1/4W 5% CC	2	2	1	1								R12,R13
~~22~~		~~13-02874-00~~	~~RES 147 1/4W 1% MF~~	~~1~~	~~1~~	~~1~~	~~1~~								~~R21~~
23		13-02685-00	RES 909 1/4W 1% MF	1	1	1	1								R17
24		13-00271-00	RES 220 1/4W 5%	2	2	2	2								R14,R15
25		19-11579-00	DEC I.C. 8641	6	6	6	6								E1,E8,E51,E57,E63,E69
26		19-11469-00	DEC I.C. 8640	2	2	2	2								E13,E22
27		19-11944-00	DEC I.C. 555	1	1	1	1								E34
28		19-12746-00	DEC I.C. 74S37	3	3	3	3								E6,E17,E3
29		19-10544-00	DEC I.C. 74S74	3	3	3	3								E15,E12,E14
30		1913670-01	DEC I.C. 74S373-01	2	2	2	2								E35,E46
31		19-13670-00	DEC I.C. 74S373	3	3	3	3								E40,E70,E29,
32		19-14451-00	DEC I.C. 74LS393	1	1	1	1								E23
33		19-10536-00	DEC I.C. 74S10	1	1	1	1								E20
34		19-10537-00	DEC I.C. 74S11	1	1	1	1								E11
~~35~~		~~19-13462-00~~	~~DEC I.C. 74S240~~	~~1~~	~~1~~	~~1~~	~~1~~								~~E10~~
36		19-12649-00	DEC I.C. 74LS75	1	1	1	1								E16
37		19-10540-00	DEC I.C. 74S22	1	1	1	1								E19

E.C.O. NO.

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DRD 123

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 2 OF 16	INSERTION PARTS LIST DATA BASE REV —			

ML

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION	CHECKED R. Vivas	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Vivas	PROD [illegible]	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

M8044-AA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-AB	M8044-AC	M8044-AD	M8044-AE	NOTES: / REF DESIGNATION
38		19-13340-00	DEC I.C. 74S32	1	1	1	1	E10
39		19-12388-00	DEC I.C. 74S02	1	1	1	1	E7
40		19-10544-01	DEC I.C. 74S74-01	1	1	1	1	E21
41		19-12541-00	-5 VOLT REGULATOR	1	1	1	1	Q1
42		19-12807-00	DEC I.C. 74LS10	1	1	1	1	E28
43		19-13777-00	DEC I.C. 74LS240	2	2	2	2	E5, E18
44		91-07771-00	DIODE ASSEMBLY SPACER	4	4	4	4	(USED WITH W2, W3)
45		90-09149-00	PIN WIRE WRAP .025 SQ. X .345 LNG	13	13	13	13	
46		90-09185-00	JUMPER WIRE INSULATED	1	1	1	1	W1
47		90-07254-00	TRANSIPAD	1	1	1	1	(USE UNDER Q1)
48		90-08337-06	HANDLE FLIP CHIP (MAGENTA)	2	2	2	2	
49		90-06732-00	EYELETS	4	4	4	4	
50		91-05740-55	WIRE 30 AWG. GRN	A/R	A/R	A/R	A/R	
51		16-13120-00	DELAY LINE 200NS	1	1	1	1	E4
52		10-10274-01	CAP 0.22 UF 50V +80 - 20% CER	31	31	31	31	C124 thru C145,C147 thru C155
53								
54								
55		23-216F1-00	DEC I.C. 1KX4 TTL PROM	1	1	1	1	E9
56								
57								
58								

E.C.O. NO.

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DRD 123

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 3 OF 16	INSERTION PARTS LIST DATA BASE REV —			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION DATE 12/8/77	CHECKED R. Wilson DATE 2-21-78	SECTION
ENG R. Wilson DATE 2-21-78	PROD R. Wood DATE 2-21-78	ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-AA* QUANTITY / VARIATION M8044-AB	M8044-AC	M8044-AD	M8044-AE	NOTES: REF DESIGNATION
59								
60		21-13735-01	4K MOS MEMORY 16 PIN IC(MOSTEK)	16	-	-	-	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55, E59,E61,E65,E67,E71,E73,
61		21-14475-01	4K MOS MEMORY 16 PIN IC(FUJITSU)	-	16	-	-	E24,E26,E30,E32,E38,E41,E43,E53,E55,E59, E61,E65,E67,E71,E73,E36
62		5013128	ETCH BOARD	1	1	1	1	
63		91-07560-01	WIRE #22 BUSS	A/R	A/R	A/R	A/R	W2,W3
64		21-13914-01	4K MOS MEMORY 16 PIN IC (DEC)	-	-	16		E24,26,30,32,36,38,41,43,53,55,59,61, E64,67,71,73
65		21-14114-01	4K MOS MEMORY 16 PIN IC (MOTOROLA)	-	-	-	16	E24,26,30,32,36,38,41,43,53,55,59,61. E65,67,71,73
66		2114897-01	16 MOS MEMORY 16 PIN I.C. (HITACHI)	-	-	-	-	
67		2114567-01	16K MOS MEMORY 16 PIN I.C. (NEC)	-	-	-	-	

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 4 OF 16	INSERTION PARTS LIST DATA BASE REV —			

ML

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION	CHECKED R. [illegible]	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. [illegible]	PROD [illegible]	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

M8044-BA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-BB	M8044-BC	M8044-BD	M8044-BE	REF DESIGNATION
	D-CS-M8044-0-1		CIRCUIT SCHEMATIC	REF	REF	REF	REF	
	D-UA-M8044-0-0		UNIT ASSEMBLY	REF	REF	REF	REF	
	B-DD-M8044-0-0		DWG. DIRECTORY	REF	REF	REF	REF	
	D-MD-5013128-0-0		DRILL & ETCH DRAWING	REF	REF	REF	REF	
1		10-10279-00	CAP 0.47 UF 25V 20% CER	1	1	1	1	C10
2		10-01610-00	CAP 0.01 UF 50V 20% CER	27	27	27	27	C7,C99,C100 thru C123,C146
3		10-02627-00	CAP 2.2 UF 20V 10% S. TANT	3	3	3	3	C5,C6,C9
4		10-12121-00	CAP 220 PF 100V 1% DM	2	2	2	2	C8,C12
5		10-05306-00	CAP 6.8 UF 35V 10% S. TANT	2	2	2	2	C3,C4
6		10-12219-00	CAP 47 UF 30V AL EL	2	2	2	2	C1,C2
7		11-05275-00	DIODE D672	2	2	2	2	D1,D2
8		12-11164-01	SWITCH 5 POS	1	1	1	1	E2
9		13-09412-00	RES 18.2K 1/4W 1% MF	1	1	1	1	R26
10		13-09416-00	RES 31.6K 1/4W 1% MF	1	1	1	1	R25
11		13-02957-00	RES 121 1/4W 1% MF	1	1	1	1	R16
12		13-00295-00	RES 330 1/4W 5% CC	2	2	2	2	R27, R21
13		13-05126-00	RES 619 1/4W 1% CC	1	1	1	1	R19
14		13-03110-00	RES 19.6 1/4W 1% MF	1	1	1	1	R18
15		13-05124-00	RES 287 1/4W 1% MF	1	1	1	1	R20
16		13-01874-00	RES 5.6K 1/4W 5% CC	2	2	2	2	R11,R24
17		13-14636-00	RES NETWORK (2-5K 1/8 W 5%)	3	3	3	3	R4,R5,R6

NOTES:

M8044-BA*IS A PRIMARY VARIATION OF THE 8K X 16 BIT SYSTEM. (NOT A MODUIE TYPE) M8044-BB,BC,BD,BE ARE MODULE TYPES, USING DIFFERENT 4K MOS DEVICES AND ARE IDENTICAL IN FUNCTION AND PURPOSE.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-0-0	B	PL	M8044-0-0	E
	SHEET 5 OF 16	INSERTION PARTS LIST DATA BASE REV —			

SD 1E3

ML

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY R. MANION DATE 12/8/77	CHECKED R. [illegible] DATE 2-21-78	SECTION
ENG R. [illegible] DATE 2-21-78	PROD R. Maciel DATE 2-21-78	ISSUED SECTION

M8044-BA* QUANTITY / VARIATION

NOTES:

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-BB	M8044-BC	M8044-BD	M8044-BE	REF DESIGNATION
18		13-14637-00	RES NETWORK (3-22 1/8 W5%)	4	4	4	4	R1,R2,R7,R8
19		13-05123-00	RES 215 1/4W 1% MF	1	1	1	1	R22
20								
21		13-00365-00	RES 1K 1/4W 5% CC	2	2	2	2	R12,R13
22		~~13-02074-00~~	~~RES 147 1/4W 1% MF~~	~~1~~	~~1~~	~~1~~	~~1~~	~~R21~~
23		13-02685-00	RES 909 1/4W 1% MF	1	1	1	1	R17
24		13-00271-00	RES 220 1/4W 5%	2	2	2	2	R14,R15
25		19-11579-00	DEC I.C. 8641	6	6	6	6	E1,E8,E51,E57,E63,E69
26		19-11469-00	DEC I.C. 8640	2	2	2	2	E13,E22
27		19-11944-00	DEC I.C. 555	1	1	1	1	E34
28		19-12746-00	DEC I.C. 74S37	3	3	3	3	E6,E17,E3
29		19-10544-00	DEC I.C. 74S74	3	3	3	3	E15,E12,E14
30		1913670-01	DEC I.C. 74S373-01	2	2	2	2	E35,E46
31		19-13670-00	DEC I.C. 74S373	3	3	3	3	E40,E70,E29,
32		19-14451-00	DEC I.C. 74LS393	1	1	1	1	E23
33		19-10536-00	DEC I.C. 74S10	1	1	1	1	E20
34		19-10537-00	DEC I.C. 74S11	1	1	1	1	E11
35		~~19-10460-00~~	~~DEC I.C. 74S240~~	~~1~~	~~1~~	~~1~~	~~1~~	~~E30~~
36		19-12649-00	DEC I.C. 74LS75	1	1	1	1	E16
37		19-10540-00	DEC I.C. 74S22	1	1	1	1	E19

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 5 OF 16	INSERTION PARTS LIST DATA BASE REV —			

DRD 125

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION DATE 12/8/77	CHECKED R. Lien DATE 2-21-78	SECTION
ENG R. Lien DATE 2-21-78	PROD R. Martel DATE 2-21-78	ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-BA* QUANTITY / VARIATION												NOTES:
				M8044-BB	M8044-BC	M8044-BD	M8044-BE									REF DESIGNATION
38		19-13340-00	DEC I.C. 74S32	1	1	1	1									E10
39		19-12388-00	DEC I.C. 74S02	1	1	1	1									E7
40		19-10544-01	DEC I.C. 74S74-01	1	1	1	1									E21
41		19-12541-00	-5 VOLT REGULATOR	1	1	1	1									Q1
42		19-12807-00	DEC I.C. 74LS10	1	1	1	1									E28
43		19-13777-00	DEC I.C. 74LS240	2	2	2	2									E5, E18
44		91-07771-00	DIODE ASSEMBLY SPACER	4	4	4	4									(USED WITH W2, W3)
45		90-09149-00	PIN WIRE WRAP .025 SQ. X .345 LNG	13	13	13	13									
46		90-09185-00	JUMPER WIRE INSULATED	1	1	1	1									W1
47		90-07254-00	TRANSIPAD	1	1	1	1									(USE UNDER Q1)
48		90-08337-06	HANDLE FLIP CHIP (MAGENTA)	2	2	2	2									
49		90-06732-00	EYELETS	4	4	4	4									
50		91-05740-55	WIRE 30 AWG. GRN	A/R	A/R	A/R	A/R									
51		16-13120-00	DELAY LINE 200NS	1	1	1	1									E4
52		10-10274-01	CAP 0.22 UF 50V +80 - 20% CER	31	31	31	31									C124 thru C145,C147 thru C155
53																
54																
55		23-195F1-00	DEC I.C. 1KX4 TTL PROM	1	1	1	1									E9
56																
57																
58																

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CRD 123

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 7 OF 16	INSERTION PARTS LIST DATA BASE REV —			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MARCH	CHECKED R. [illegible]	SECTION
DATE [illegible]	DATE 2-21-78	
ENG R. [illegible]	PROD [illegible]	ISSUED SECTION
DATE 2-21-78	DATE 2-24-78	

M8044-BA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-33	M8044-3C	M8044-3D	M8044-3E	NOTES: / REF DESIGNATION
59								
60		21-13735-01	4K MOS MEMORY 16 PIN IC(MOSTEK)	32	-	-	-	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E25,E27,E31,E33,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74
61		21-14475-01	4K MOS MEMORY 16 PIN IC(FUJITSU)	-	32	-	-	E24,E26,E30,E32,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E36,E25,E27,E31,E33,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74
62		5013128	ETCH BOARD	1	1	1	1	
63		91-07560-01	WIRE #22 BUSS	A/R	A/R	A/R	A/R	U2,U3
64		21-13914-01	4K MOS MEMORY 16 PIN IC (DEC)	-	-	32	-	E24,26,30,32,36,38,41,43,53,55,59,61,E65,67,71,73,25,27,31,33,37,39,42,44,E54,56,60,62,66,68,72,74
65		21-14114-01	4K MOS MEMORY 16 PIN IC(MOTOROLA	-	-	-	32	E24,26,30,32,36,38,41,43,53,55,59,61,E65,67,71,73,25,27,31,33,37,39,42,44,E54,56,60,62,66,68,72,74
66		2114897-01	16K MOS MEMORY 16PIN I.C.(HITACHI)	-	-	-	-	
67		2114567-01	16K MOS MEMORY 16PIN I.C. (NEC)	-	-	-	-	

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 8 OF 16	INSERTION PARTS LIST DATA PAGE REV —			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION	CHECKED R. Nelson	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Nelson	PROD R. Thacker	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

NOTES:

M8044-CA*IS A PRIMARY VARIATION OF THE 16K X 16 BIT SYSTEM. (NOT A MODULE TYPE) M8044-CB,CC,CD,CE,CF,CH ARE MODULE TYPES. USING DIFFERENT16K MOS DEVICES AND ARE IDENTICAL IN FUNCTION AND PURPOSE.

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-CA* QUANTITY / VARIATION M8044-CB	M8044-CC	M8044-CD	M8044-CE	M8044-CF	M8044-CH	REF DESIGNATION
	D-CS-M8044-0-1		CIRCUIT SCHEMATIC	REF	REF	REF	REF	REF	REF	
	D-UA-M8044-0-0		UNIT ASSEMBLY	REF	REF	REF	REF	REF	REF	
	B-DD-M8044-0-0		DWG. DIRECTORY	REF	REF	REF	REF	REF	REF	
	D-MD-5013128-0-0		DRILL & ETCH DRAWING	REF	REF	REF	REF	REF	REF	
1		10-10279-00	CAP 0.47 UF 25V 20% CER	1	1	1	1	1	1	C10
2		10-01610-00	CAP 0.01 UF 50V 20% CER	27	27	27	27	27	27	C7,C99,C100 thru C123,C146
3		10-02627-00	CAP 2.2 UF 20V 10% S. TANT	3	3	3	3	3	3	C5,C6,C9
4		10-12121-00	CAP 220 PF 100V 1% DM	2	2	2	2	2	2	C8,C12
5		10-05306-00	CAP 6.8 UF 35V 10% S. TANT	2	2	2	2	2	2	C3,C4
6		10-12219-00	CAP 47 UF 30V AL EL	2	2	2	2	2	2	C1,C2
7		11-05275-00	DIODE DG72	2	2	2	2	2	2	D1,D2
8		12-11164-01	SWITCH 5 POS	1	1	1	1	1	1	E2
9		13-09412-00	RES 18.2K 1/4W 1% MF	1	1	1	1	1	1	R26
10		13-09416-00	RES 31.6K 1/4W 1% MF	1	1	1	1	1	1	R25
11		13-02957-00	RES 121 1/4W 1% MF	1	1	1	1	1	1	R16
12		13-00295-00	RES 330 1/4W 5% CC	2	2	2	2	2	2	R27, R21
13		13-05126-00	RES 619 1/4W 1% CC	1	1	1	1	1	1	R19
14		13-03110-00	RES 19.6 1/4W 1% MF	1	1	1	1	1	1	R18
15		13-05124-00	RES 287 1/4W 1% MF	1	1	1	1	1	1	R20
16		13-01874-00	RES 5.6K 1/4W 5% CC	2	2	2	2	2	2	R11,R24
17		13-14636-00	RES NETWORK (2-5K 1/8 W 5%	3	3	3	3	3	3	R4,R5,R6

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TITLE 32K 16 BIT MOS MEMORY	ASSY NO. D-UA-M8044-0-0	SIZE B	CODE PL	NUMBER M8044-0-0	REV. E
	SHEET 9 OF 16	INSERTION PARTS LIST DATA BASE REV ---			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY R. MANION	CHECKED R. Dunn	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Dunn	PROD R. Manion	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

M8044-CA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-CB	M8044-CC	M8044-CD	M8044-CE	M8044-CF	M8044-CH	REF DESIGNATION
18		13-14637-00	RES NETWORK (3-22 1/8W 5%)	4	4	4	4	4	4	R1,R2,R7,R8
19		13-05123-00	RES 215 1/4W 1% MF	1	1	1	1	1	1	R22
20		1301969-00	RES 22 1/4W 5% CC	1	1	1	1	1	1	R3
21		13-00365-00	RES 1K 1/4W 5% CC	2	2	2	2	2	2	R12,R13
~~22~~		~~13-02074-00~~	~~RES 147 1/4W 1% CC~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~R21~~
23		13-02685-00	RES 909 1/4W 1% MF	1	1	1	1	1	1	R17
24		13-00271-00	RES 220 1/4W 5%	2	2	2	2	2	2	R14,R15
25		19-11579-00	DEC I.C. 8641	6	6	6	6	6	6	E1,E8,E51,E57,E63,E69
26		19-11469-00	DEC I.C. 8640	2	2	2	2	2	2	E13,E22
27		19-11944-00	DEC I.C. 555	1	1	1	1	1	1	E34
28		19-12746-00	DEC I.C. 74S37	3	3	3	3	3	3	E6,E17,E3
29		19-10544-00	DEC I.C. 74S74	3	3	3	3	3	3	E15,E12,E14
30		1913670-01	DEC I.C. 74S373-01	2	2	2	2	2	2	E35,E46
31		19-13670-00	DEC I.C. 74S373	3	3	3	3	3	3	E40,E70,E29,
32		19-14451-00	DEC I.C. 74LS393	1	1	1	1	1	1	E23
33		19-10536-00	DEC I.C. 74S10	1	1	1	1	1	1	E20
34		19-10537-00	DEC I.C. 74S11	1	1	1	1	1	1	E11
~~35~~		~~19-12460-00~~	~~DEC I.C. 74S240~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~		~~E10~~
36		19-12649-00	DEC I.C. 74LS75	1	1	1	1	1	1	E16
37		19-10540-00	DEC I.C. 74S22	1	1	1	1	1	1	E19

NOTES:

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 10 OF 16	INSERTION PARTS LIST DATA BASE REV —			

DRD 123

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION DATE 12/8/70	CHECKED R. Jones DATE 2-21-70	SECTION
ENG R. Jones DATE 2-21-70	PROD K. [illegible] DATE 2-21-70	ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-CA* QUANTITY / VARIATION												NOTES:
				M8044-CB	M8044-CC	M8044-CD	M8044-CE	M8044-CF	M8044-CH							REF DESIGNATION
38		19-13340-00	DEC I.C. 74S32	1	1	1	1	1	1							E10
39		19-12388-00	DEC I.C. 74S02	1	1	1	1	1	1							E7
40		19-10544-01	DEC I.C. 74S74-01	1	1	1	1	1	1							E21
41		19-12541-00	-5 VOLT REGULATOR	1	1	1	1	1	1							Q1
42		19-12807-00	DEC I.C. 74LS10	1	1	1	1	1	1							E28
43		19-13777-00	DEC I.C. 74LS240	2	2	2	2	2	2							E5, E18
44		91-07771-00	DIODE ASSEMBLY SPACER	4	4	4	4	4	4							(USED WITH W2, W3)
45		90-09149-00	PIN WIRE WRAP .025 SQ. X .345 LNG	13	13	13	13	13	13							
46																
47		90-07254-00	TRANSIPAD	1	1	1	1	1	1							(USE UNDER Q1)
48		90-08337-06	HANDLE FLIP CHIP (MAGENTA)	2	2	2	2	2	2							
49		90-06732-00	EYELETS	4	4	4	4	4	4							
50		91-05740-55	WIRE 30 AWG. GRN	A/R	A/R	A/R	A/R	A/R	A/R							
51		16-13120-00	DELAY LINE 200NS	1	1	1	1	1	1							E4
52		10-10274-01	CAP 0.22 UF 50V +80 - 20% CER	31	31	31	31	31	31							C124 thru C145,C147 thru C155
53																
54																
55		23-216F1-00	DEC I.C. 1KX4 TTL PROM	1	1	1	1	1	1							E9
56																
57																
58																

E.C.O. NO.

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DRS 123

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-0-0	B	PL	M8044-0-0	E
	SHEET 11 OF 16	INSERTION PARTS LIST DATA BASE REV —			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION DATE	CHECKED R. Nuttall DATE 2-21-78	SECTION
ENG R. Nuttall DATE 2-21-78	PROD K. Daniel DATE 2-21-78	ISSUED SECTION

M8044-CA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-CB	M8044-CC	M8044-CD	M8044-CE	M8044-CF	M8044-CH	REF DESIGNATION
59										
60		21-13825-01	16K MOS MEMORY 16 PIN IC(MOSTEK)	16	-	-	-	-	-	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,
61		21-14408-01	16K MOS MEMORY 16 PIN IC(FUJITSU)	-	16	-	-	-	-	E24,E26,E30,E32,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E36
62		5013128	ETCH BOARD	1	1	1	1	1	1	
63		91-07560-01	WIRE #22 BUSS	A/R	A/R	A/R	A/R	A/R	A/R	W2,W3
64		21-14895-01	16K MOS MEMORY 16 PIN I.C.(INTEL)	-	-	16	-	-	-	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73
65		21-14927-01	16K MOS MEMORY 16 PIN I.C. (TI.)	-	-	-	16	-	-	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E71,E67,E73
66		21-14897-01	16 MOS MEMORY 16 PIN I.C.(HITACHI)	-	-	-	-	16	-	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E71,E67,E73
67		2114567-01	16K MOS MEMORY 16 PIN I.C. (NEC)	-	-	-	-	-	16	E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E71,E67,E73

NOTES:

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 12 OF 16	INSERTION PARTS LIST DATA BASE REV —			

CRD1_3

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION	CHECKED R. Mass	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Mass	PROD R. Martel	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

M8044-DA* QUANTITY / VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-DB	M8044-DC	M8044-DD	M8044-DE	M8044-DF	M8044-DH	REF DESIGNATION
	D-CS-M8044-0-1		CIRCUIT SCHEMATIC	REF	REF	REF	REF	REF	REF	
	D-UA-M8044-0-0		UNIT ASSEMBLY	REF	REF	REF	REF	REF	REF	
	B-DD-M8044-0-0		DWG. DIRECTORY	REF	REF	REF	REF	REF	REF	
	D-MD-5013128-0-0		DRILL & ETCH DRAWING	REF	REF	REF	REF	REF	REF	
1		10-10279-00	CAP 0.47 UF 25V 20% CER	1	1	1	1	1	1	C10
2		10-01610-00	CAP 0.01 UF 50V 20% CER	27	27	27	27	27	27	C7,C99,C100 thru C123,C146
3		10-02627-00	CAP 2.2 UF 20V 10% S. TANT	3	3	3	3	3	3	C5,C6,C9
4		10-12121-00	CAP 220 PF 100V 1% DM	2	2	2	2	2	2	C8,C12
5		10-05306-00	CAP 6.8 UF 35V 10% S. TANT	2	2	2	2	2	2	C3,C4
6		10-12219-00	CAP 47 UF 30V AL EL	2	2	2	2	2	2	C1,C2
7		11-05275-00	DIODE D672	2	2	2	2	2	2	D1,D2
8		12-11164-01	SWITCH 5 POS	1	1	1	1	1	1	E2
9		13-09412-00	RES 18.2K 1/4W 1% MF	1	1	1	1	1	1	R26
10		13-09416-00	RES 31.6K 1/4W 1% MF	1	1	1	1	1	1	R25
11		13-02957-00	RES 121 1/4W 1% MF	1	1	1	1	1	1	R16
12		13-00295-00	RES 330 1/4W 5% CC	2	2	2	2	2	2	R27, R21
13		13-05126-00	RES 619 1/4W 1% CC	1	1	1	1	1	1	R19
14		13-03110-00	RES 19.6 1/4W 1% MF	1	1	1	1	1	1	R18
15		13-05124-00	RES 287 1/4W 1% MF	1	1	1	1	1	1	R20
16		13-01874-00	RES 5.6K 1/4W 5% CC	2	2	2	2	2	2	R11,R24
17		13-14636-00	RES NETWORK (2-5K 1/8 W 5%)	3	3	3	3	3	3	R4,R5,R6

NOTES:
M8044-DA* IS A PRIMARY VARIATION OF THE 32K X 16 BIT SYSTEM. (NOT A MODULE TYPE)
M8044-DB,DC, DD,DE,DF,DH
ARE MODULE TYPES, USING DIFFERENT 16K MOS DEVICES AND ARE IDENTICAL IN FUNCTION AND PURPOSE.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 13 OF 16	INSERTION PARTS LIST DATA BASE REV —			

MD 125

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY R. MANION	CHECKED R Dunn	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Dunn	PROD [illegible]	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-DA* QUANTITY / VARIATION												NOTES:
				M8044-DB	M8044-DC	M8044-DD	M8044-DE	M8044-DF	M8044-DH							REF DESIGNATION
18		13-14637-00	RES NETWORK (3-22 1/8 W 5 %)	4	4	4	4	4	4							R1,R2,R7,R8
19		13-05123-00	RES 215 1/4W 1% MF	1	1	1	1	1	1							R22
20		13-01969-00	RES 22 1/4W 5% CC	1	1	1	1	1	1							R2
21		13-00365-00	RES 1K 1/4W 5% CC	2	2	2	2	2	2							R12,R13
22		~~13-02074-00~~	~~RES 147 1/4W 1% MF~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~								~~R23~~
23		13-02685-00	RES 909 1/4W 1% MF	1	1	1	1	1	1							R17
24		13-00271-00	RES 220 1/4W 5%	2	2	2	2	2	2							R14,R15
25		19-11579-00	DEC I.C. 8641	6	6	6	6	6	6							E1,E8,E51,E57,E63,E69
26		19-11469-00	DEC I.C. 8640	2	2	2	2	2	2							E13,E22
27		19-11944-00	DEC I.C. 555	1	1	1	1	1	1							E34
28		19-12746-00	DEC I.C. 74S37	3	3	3	3	3	3							E6,E17,E3
29		19-10544-00	DEC I.C. 74S74	3	3	3	3	3	3							E15,E12,E14
30		19-13670-01	DEC I.C. 74S373-01	2	2	2	2	2	2							E35,E46
31		19-13670-00	DEC I.C. 74S373	3	3	3	3	3	3							E40,E70,E29,
32		19-14451-00	DEC I.C. 74LS393	1	1	1	1	1	1							E23
33		19-10536-00	DEC I.C. 74S10	1	1	1	1	1	1							E20
34		19-10537-00	DEC I.C. 74S11	1	1	1	1	1	1							E11
35		~~19-13462-00~~	~~DEC I.C. 74S240~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~								~~E10~~
36		19-12649-00	DEC I.C. 74LS75	1	1	1	1	1	1							E16
37		19-10540-00	DEC I.C. 74S22	1	1	1	1	1	1							E19

E.C.O. NO.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	E
	SHEET 14 OF 16	INSERTION PARTS LIST DATA BASE REV ---			

DRD 125

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. MANION DATE 12/20/77	CHECKED R. Dunn DATE 2-21-78	SECTION
ENG R. Dunn DATE 2-21-78	PROD R. Dunn DATE 2-21-78	ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-DA* QUANTITY / VARIATION												NOTES:
				M8044-DB	M8044-DC	M8044-DD	M8044-DE	M8044-DF	M8044-DH							REF DESIGNATION
38		19-13340-00	DEC I.C. 74S32	1	1	1	1	1	1							E10
39		19-12388-00	DEC I.C. 74S02	1	1	1	1	1	1							E7
40		19-10544-01	DEC I.C. 74S74-01	1	1	1	1	1	1							E21
41		19-12541-00	-5 VOLT REGULATOR	1	1	1	1	1	1							Q1
42		19-12807-00	DEC I.C. 74LS10	1	1	1	1	1	1							E28
43		19-13777-00	DEC I.C. 74LS240	2	2	2	2	2	2							E5, E18
44		91-07771-00	DIODE ASSEMBLY SPACER	4	4	4	4	4	4							(USED WITH W2, W3)
45		90-09149-00	PIN WIRE WRAP .025 SQ. X .345 LNG	13	13	13	13	13	13							
46																
47		90-07254-00	TRANSIPAD	1	1	1	1	1	1							(USE UNDER Q1)
48		90-08337-06	HANDLE FLIP CHIP (MAGENTA)	2	2	2	2	2	2							
49		90-06732-00	EYELETS	4	4	4	4	4	4							
50		91-05740-55	WIRE 30 AWG. GRN	A/R	A/R	A/R	A/R	A/R	A/R							
51		16-13120-00	DELAY LINE 200NS	1	1	1	1	1	1							E4
52		10-10274-01	CAP 0.22 UF 50V +80 - 20% CER	31	31	31	31	31	31							C124 thru C145,C147 thru C155
53																
54																
55		23-19581-00	DEC I.C. 1KX4 TTL PROM	1	1	1	1	1	1							E9
56																
57																
58																

E99.MD

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-0-0	B	PL	M8044-0-0	E
	SHEET 15 OF 16	INSERTION PARTS LIST DATA BASE REV —			

ERJ 105

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY D. KONION	CHECKED R. Nute	SECTION
DATE 12/8/77	DATE 2-21-78	
ENG R. Nute	PROD R. Tracy	ISSUED SECTION
DATE 2-21-78	DATE 2-21-78	

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8044-DA* QUANTITY / VARIATION												NOTES:
				M8044-DB	M8044-DC	M8044-DD	M8044-DE	M8044-DF	M8044-DH							REF DESIGNATION
59																
60		21-13825-01	16K MOS MEMORY 16 PIN IC(MOSTEK)	32	-	-	-	-	-							E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E25,E27,E31,E33,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74
61		21-14408-01	16K MOS MEMORY 16 PIN IC(FUJITSU)	-	32	-	-	-	-							E24,E26,E30,E32,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E36,E25,E27,E31,E33,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74
62		5013128	ETCH BOARD	1	1	1	1	1	1							
63		91-07560-01	WIRE #22 BUSS	A/R	A/R	A/R	A/R	A/R	A/R							W2,W3
64		21-14895-01	16K MOS MEMORY 16 PIN I.C. (INTEL)	-	-	32	-	-	-							E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E25,E27,E31,E33,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74
65		21-14927-01	16K MOS MEMORY 16 PIN (TI)	-	-	-	32	-	-							E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E25,E27,E31,E33,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74
66		21-14897-01	16K MOS MEMORY 16 PIN (HITACHI)	-	-	-	-	32	-							E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67, E71,E73,E25,E27,E31,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74,E33
67		2114567-01	16K MOS MEMORY 16 PIN (NEC)	-	-	-	-	-	32							E24,E26,E30,E32,E36,E38,E41,E43,E53,E55,E59,E61,E65,E67,E71,E73,E25,E27,E31,E37,E39,E42,E44,E54,E56,E60,E62,E66,E68,E72,E74,E33

E.C.O. NO.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
32K 16 BIT MOS MEMORY	D-UA-M8044-Ø-Ø	B	PL	M8044-0-0	F.
	SHEET 16 OF 16	INSERTION PARTS LIST DATA BASE REV —			

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MODULE VARIATIONS AA&CA

1.

2. W2 THRU W5 SHOULD BE INSTALLED WITH ASSEMBLY SPACERS SO THAT THEY LOOK LIKE THE FOLLOWING:



3. R-PACKS SHOULD BE INSTALLED SO THAT LEADS DO NOT INTERFERE WITH OTHER COMPONENTS.

4. ⊗ WIRE WRAP PIN.

5.

MEMORY TYPE	JUMPER CONFIG	VARIATION
NON-PARITY	5-7	AA, CA

6.

MEMORY SIZE	JUMPER CONFIG.		VARIATION
4 K	17-15	17-14	AA
16 K	16-15	16-14	CA

7. OPTIONAL JUMPER 1-2 WILL ALLOW USER TO EXTEND USABLE MEMORY SPACE FROM 28K TO 30K NORMAL JUMPER IS 1-3.

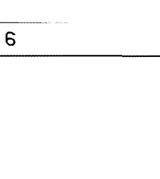
8.

JUMPER	BATTERY BACK-UP	NON BATTERY BACK-UP
W2	OUT	IN
W3	OUT	IN
W4	IN	OUT
W5	IN	OUT

9.

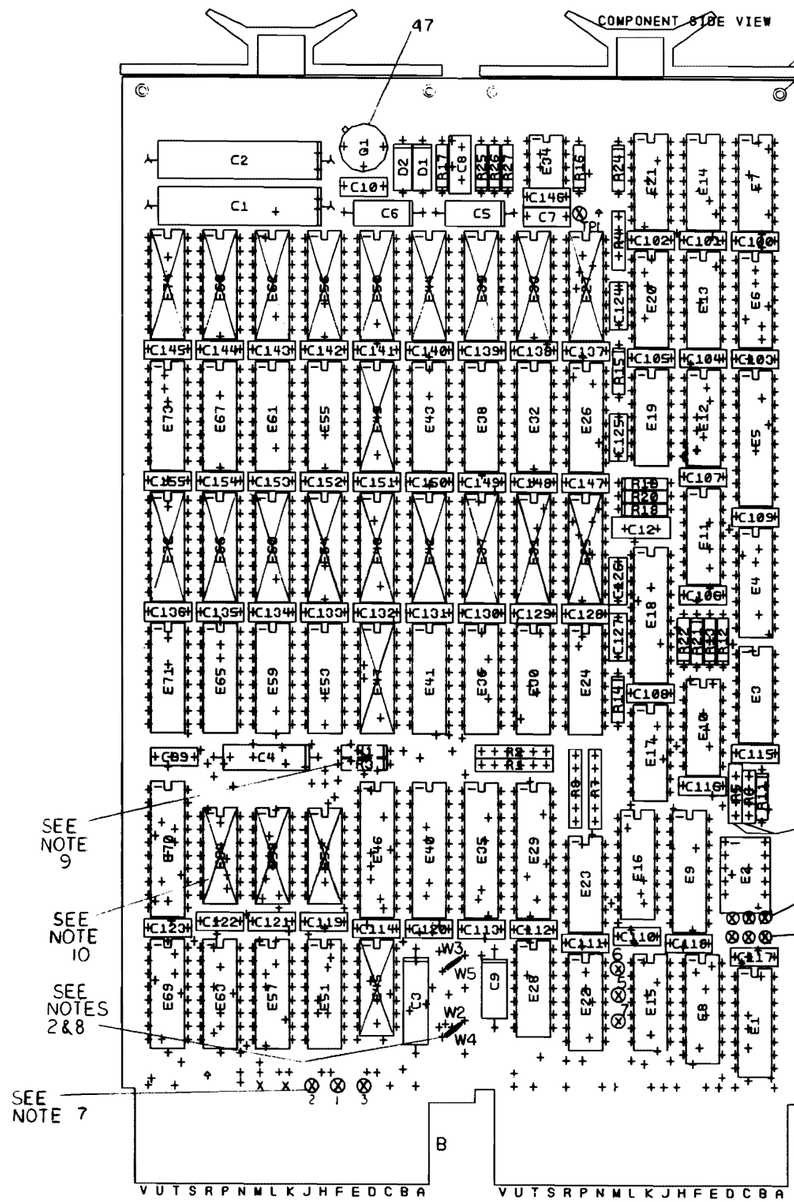
MEMORY SIZE	W1	R3	VARIATION
4K	IN	OUT	AA
16K	OUT	IN	CA

10. THE FOLLOWING IC'S ARE NOT INSTALLED IN AA & CA VARIATIONS:
E25, 27, 31, 33, 37, 39, 42, 44, 45, 47, 48, 49, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 72 & 74.



DETAIL A

COMPONENT SIDE VIEW



NOTES:

CHK	CHANGE NO	REV
P.C.	M8044 CCO01	C
REVISED & REDRAWN		
R. GIVEN		
R. Gwozdz	Apr 8 '76	
P.C.	M8044 M002	D
P.C.	JUNE '78	
R. GIVEN		
R. Gwozdz	DEC '78	

ETCH REV. D-P1
P.C. DESIGN DATA BASE REV. DL & DM

SIGNATURES	DATE
DRN.	
CHK'D.	
ENG.	
PROJ. ENG.	
PROD.	
SCALE 2/1	
SHT. OF 8	
NEXT HIGHER ASSY. B-DD-M8045-0	

digital

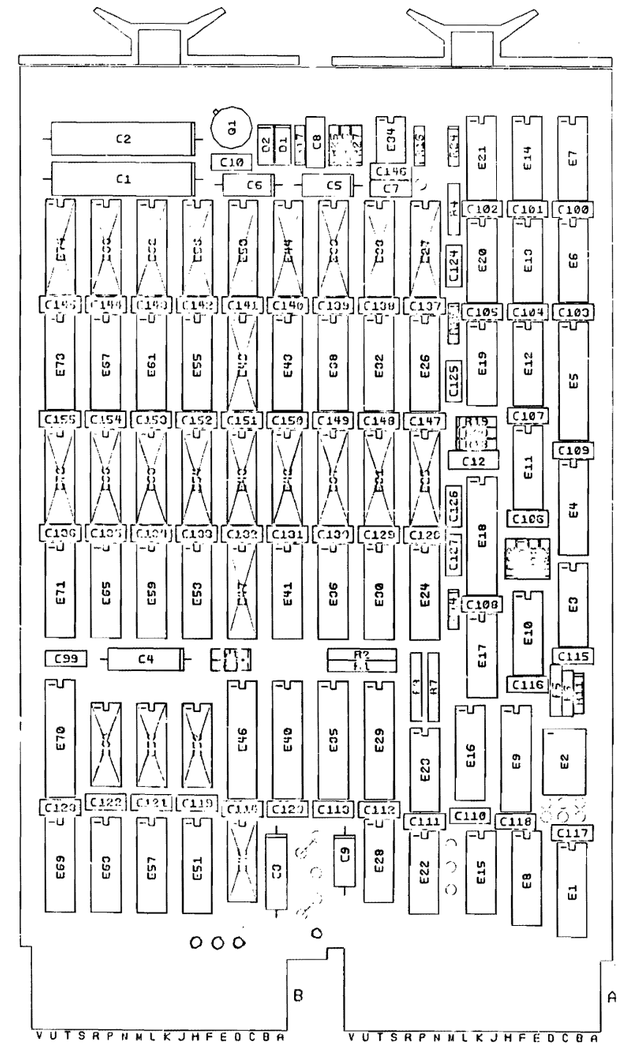
TITLE
32K 16BIT MOS MEMORY

SIZE	CODE	NUMBER	REV
D	UA	M8044-0-0	D

MS#261966

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MODULE VARIATIONS MA & CA



NOTES:

REVISION RECORD			
REV	DESCRIPTION	DATE	APPROVED

SIGNATURES	DATE
DRWN	
CHKD	
ENG	
QUALITY	
MFG	

digital

TITLE
32K 16 BIT MOS MEMORY

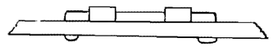
SIZE	CODE	NUMBER	REV
D		CM8044	D

SCALE — SHEET 1 OF 8
MSKD-B DD-M8044-C-D

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1.

2. W2 THRU W5 SHOULD BE INSTALLED WITH ASSEMBLY SPACERS SO THAT THEY LOOK LIKE THE FOLLOWING:



3. R PACKS SHOULD BE INSTALLED SO THAT LEADS DO NOT INTERFERE WITH OTHER COMPONENTS.

4. ⊗ WIRE WRAP PIN.

5.

MEMORY TYPE	JUMPER CONFIG	VARIATION
NON-PARITY	5-7	BA, DA

6.

MEMORY SIZE	JUMPER CONFIG.		VARIATION
8K	17-15	12-14	BA
32K	16-15	10-14	DA

7. OPTIONAL JUMPER 1-2 WILL ALLOW USER TO EXTEND USABLE MEMORY SPACE FROM 28K TO 30K. NORMAL JUMPER IS 1-3.

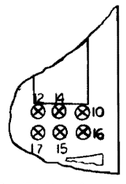
8.

JUMPER	BATTERY BACK-UP	NON BATTERY BACK-UP
W2	OUT	IN
W3	OUT	IN
W4	IN	OUT
W5	IN	OUT

9.

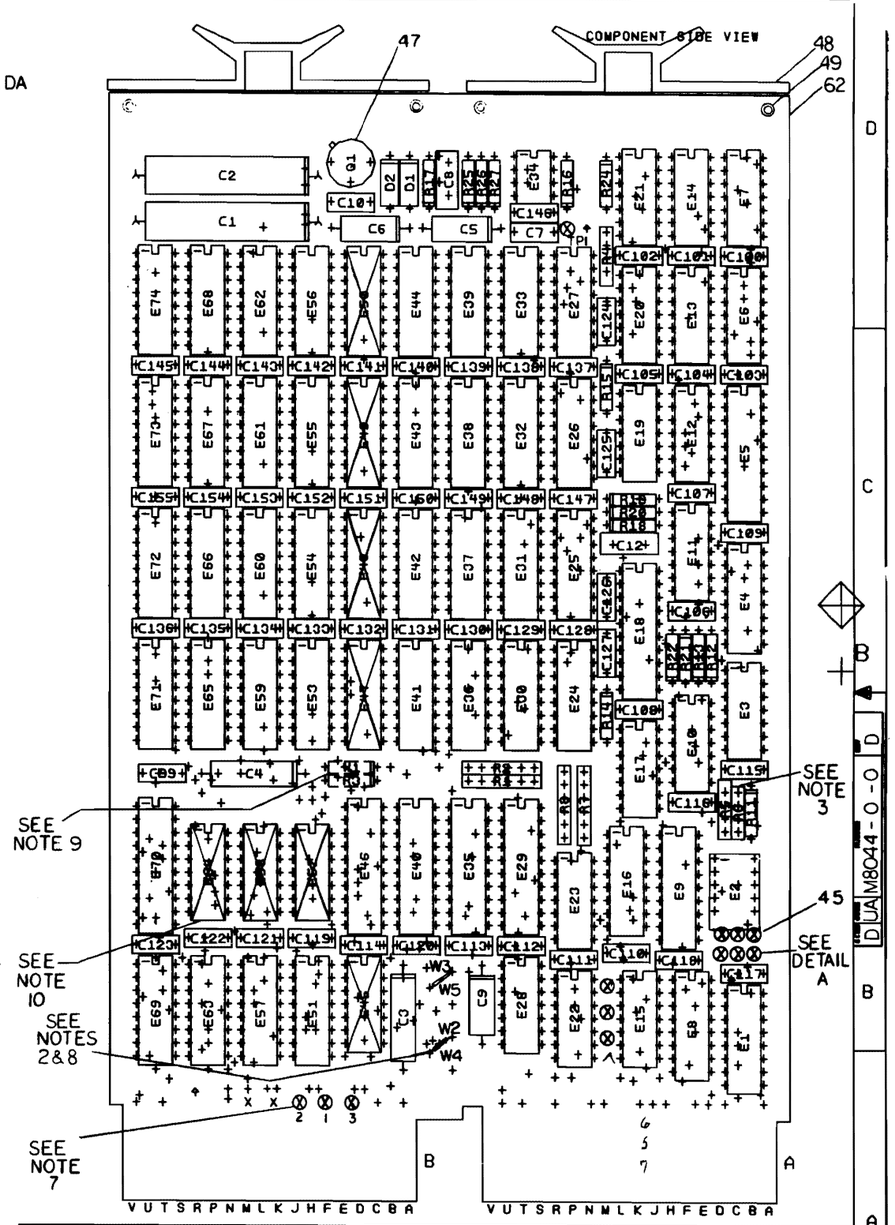
MEMORY SIZE	W1	R3	VARIATION
8K	IN	OUT	BA
32K	OUT	IN	DA

10. THE FOLLOWING IC'S ARE NOT INSTALLED IN BA & DA VARIATIONS: E45, 47, 48, 49, 50, 52, 58 & 64.



DETAIL A

MODULE VARIATIONS BA & DA



NOTES:

REV	CHK	CHANGE NO

	SIGNATURES	DATE
	DRN.	
	CHK'D. Robert Y. Mooney	3-21-78
	ENG.	
	PROJ. ENG.	
	PROD.	
	SCALE 2/1	
	SHT. 3 OF 8	
	NEXT HIGHER ASSY. B-DD-M8044-0	

ETCH REV. D-P1
P.C. DESIGN DATA BASE REV. DL & DM

digital

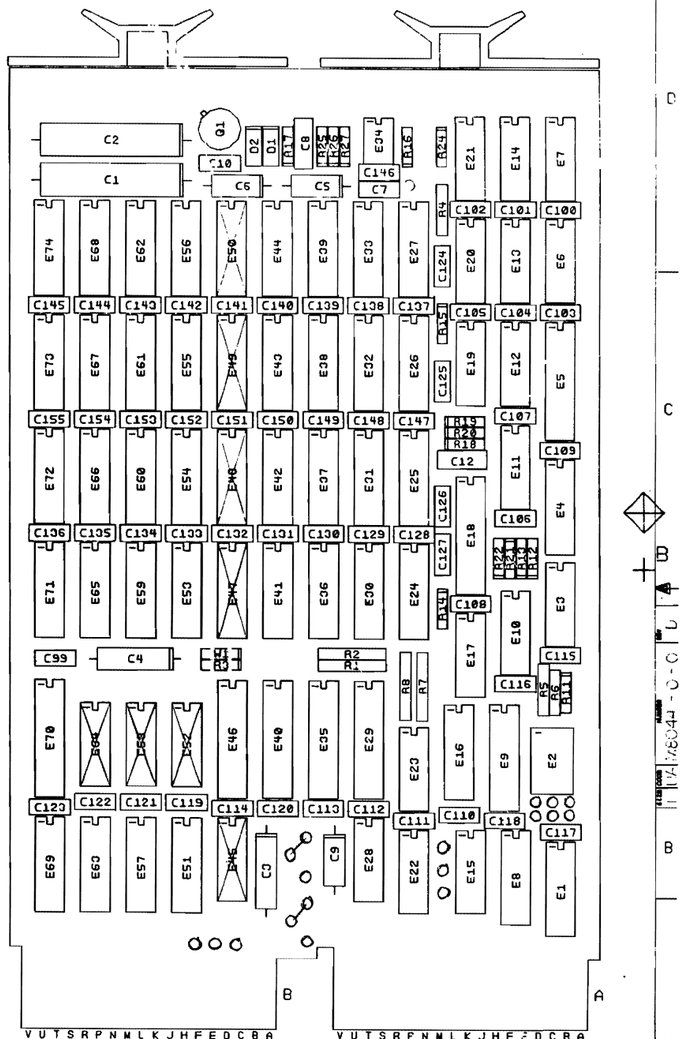
TITLE
32K 16BIT MOS MEMORY

SIZE	CODE	NUMBER	REV
D	UA	M8044-0-0	D

ML 1 MS# 261966

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MODULE VARIATIONS - AREA



NOTES:

CHK	CHANGE NO	REV

SIGNATURES	DATE
DRN.	
CHK'D.	
ENG.	
PROJ.ENG.	
PROD.	
SCALE	
SHT. 4 OF 8	
NEXT HIGHER ASSY- B DD M8044-0-0	

digital

TITLE
32K 16BIT MOS MEMORY

SIZE	CODE	NUMBER	REV
D	UA	M8044-0-0	D

mL 1 MS#26966

M8044-0-0

NOTES:

1. ⊙ = WIRE WRAP PIN

2.

TYPE MEMORY	JUMPER CONFIGURATION
NON PARITY	5 TO 7
PARITY	5 TO 6

3.

TYPE	JUMPER CONFIGURATION
4K	17 TO 15 & 17 TO 14
8K	17 TO 15 & 12 TO 14
16K	16 TO 15 & 16 TO 14
32K	16 TO 15 & 10 TO 14

4

STARTING ADDRESS		SWITCH SETTING (X = OFF)				
DEC (K)	OCTAL	S1-1	S1-2	S1-3	S1-4	S1-5
0	000000					X
4	020000				X	
8	040000				X	X
12	060000			X		
16	100000			X		X
20	120000			X	X	
24	140000			X	X	X
28	160000		X			
32	200000		X			X
36	220000		X		X	
40	240000		X		X	X
44	260000		X	X		
48	300000		X	X		X
52	320000		X	X	X	
56	340000		X	X	X	X
60	360000	X				
64	400000	X				X
68	420000	X			X	
72	440000	X			X	X
76	460000	X		X		
80	500000	X		X		X
84	520000	X		X	X	
88	540000	X		X	X	X
92	560000	X	X			
96	600000	X	X			X
100	620000	X	X		X	
104	640000	X	X		X	X
108	660000	X	X	X		
112	700000	X	X	X		X
116	720000	X	X	X	X	
120	740000	X	X	X	X	X
124	760000	X	X	X	X	X

5. NORMAL JUMPER 1 TO 3.
OPTIONAL JUMPER 1 TO 2
WILL ALLOW USER TO EXTEND USABLE
MEMORY SPACE FROM 28K TO 30K.

6.

JUMPER	BATTERY BACK-UP	NON BATTERY BACK-UP
W2	OUT	IN
W3	OUT	IN
W4	IN	OUT
W5	IN	OUT

7.

MEMORY SIZE	W1	R3
4K	IN	OUT
8K	IN	OUT
16K	OUT	IN
32K	OUT	IN

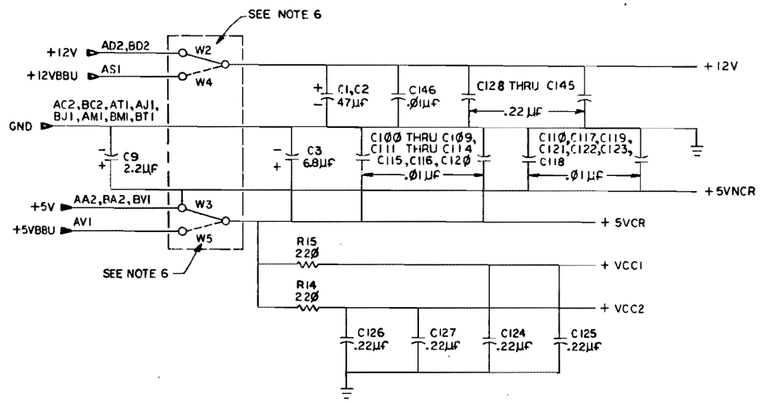
8.

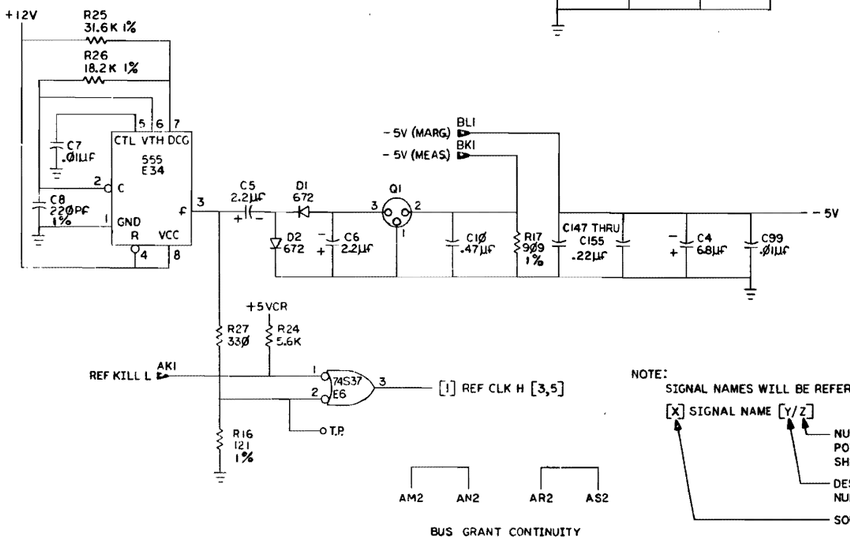
OPTION DESIGNATION	PRIMARY VARIATION	SYSTEM DESCRIPTION
MSV11-DA	M8044-AA	4K×16 BITS
MSV11-DB	M8044-BA	8K×16 BITS
MSV11-DC	M8044-CA	16K×16 BITS
MSV11-DD	M8044-DA	32K×16 BITS

9.

IC TYPE	+5V	GND	+12V	-5V
555		1	8	
MOS	9	16	8	1
74S373	20	10		
74LS393	14	7		
74S280	14	7		
74S74	14	7		
74S10	14	7		
74S11	14	7		
8641	16	8		
8640	8	1		
74S240	20	10		
74S37	14	7		
74S22	14	7		
IKX4 PROM	18	9		
74S12	14	7		
74LS75	5	12		
74S32	14	7		
74LS10	14	7		
74LS240	20	10		

10. THESE I.C.'S USED ONLY IN 8K & 32K CONFIG'S.

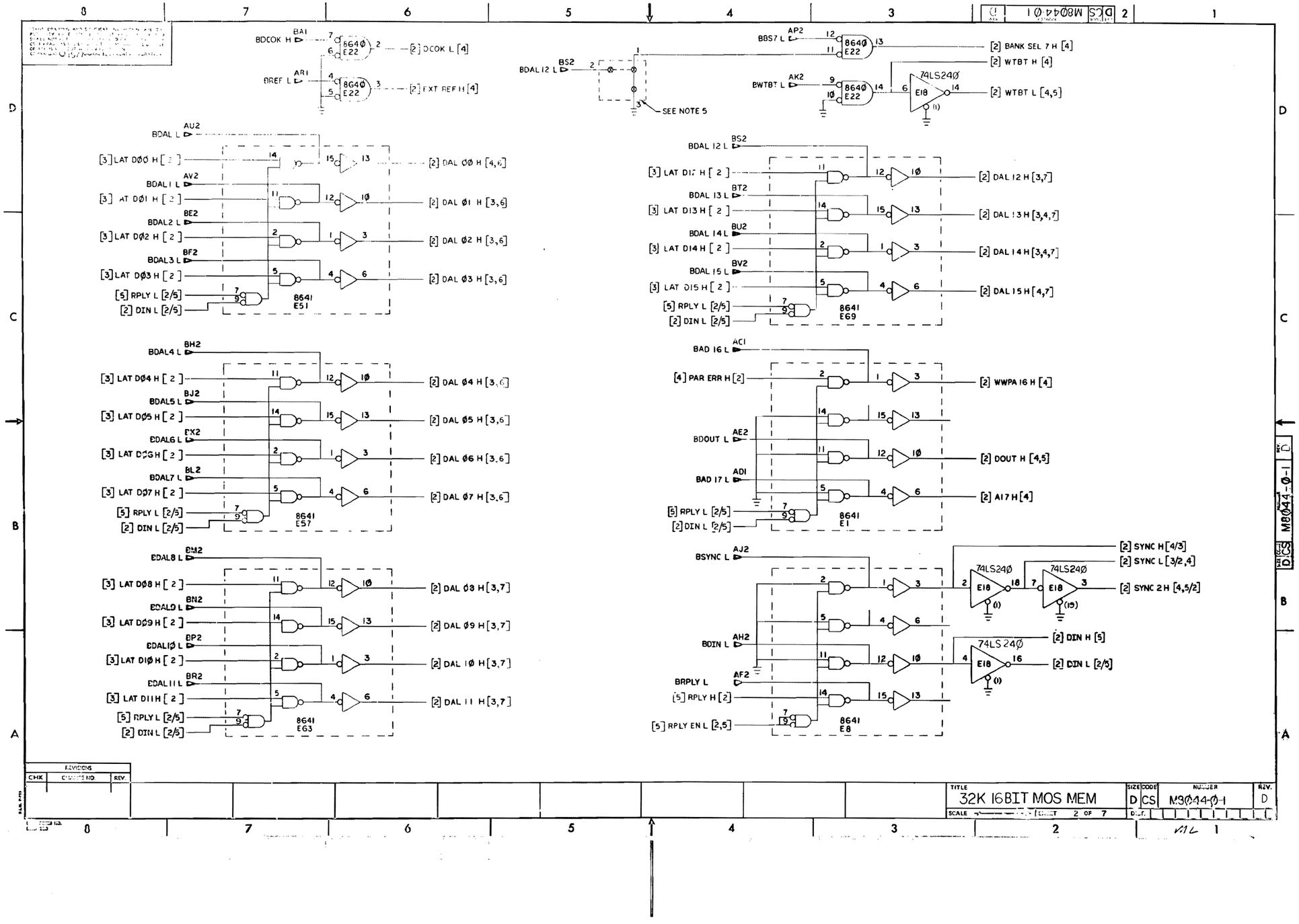




NOTE:
SIGNAL NAMES WILL BE REFERENCED AS FOLLOWS:
[X] SIGNAL NAME [Y/Z]
- NUMBER OF CONNECTION POINTS ON DESTINATION SHEET.
- DESTINATION SHEET NUMBER.
- SOURCE SHEET NUMBER.

DRN Stan Gamble	10-25-72	FIRST USED ON MSV11-D
CHK'D R. GIVEN	2-21-73	
ENG. R. GIVEN	2-21-73	TITLE 32K 16BIT MOS MEM
PROJ. ENG.		
		SIZE D CODE CS M8044-01 REV D

MSV11-D MAR24-01-L



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
32K 16BIT MOS MEM	D	CS	M9044-Ø-1	D
SCALE	SHEET 2 OF 7		DWG.	

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[5] ROW ADD OUT CONT H [3]

74S373 OC E35

[2] DAL Ø1 H [3,6]
[2] DAL Ø2 H [3,6]
[2] DAL Ø3 H [3,6]
[2] DAL Ø4 H [3,6]
[2] DAL Ø5 H [3,6]
[2] DAL Ø6 H [3,6]
[2] DAL 14 H [3,4,7]

[2] SYNC L [3/2,4]

[5] COL ADD OUT CONT L [3]

74S373-01 OC E46

[2] DAL Ø7 H [3,6]
[2] DAL Ø8 H [3,7]
[2] DAL Ø9 H [3,7]
[2] DAL 1Ø H [3,7]
[2] DAL 11 H [3,7]
[2] DAL 12 H [3,7]
[2] DAL 13 H [3,4,7]

[2] SYNC L [3/2,4]

[5] REF ADD OUT CONT L [3/2]

74LS393 E23

[1] REF CLK H [3,5]

1CL 2CL

74S373 OC E29

[5] REF ADD OUT CONT L [3/2]

R2 22 — [3] MUX A1 H [6/2,7/2]
R1 22 — [3] MUX A2 H [6/2,7/2]
R2 22 — [3] MUX A3 H [6/2,7/2]
R1 22 — [3] MUX A4 H [6/2,7/2]
R2 22 — [3] MUX A5 H [6/2,7/2]
R1 22 — [3] MUX A6 H [6/2,7/2]
R3 22 W1 — [3] MUX A7 H [6/2,7/2]

SEE NOTE 7

74S373 OC E40

[6] DO ØØ H [3] — [3] LAT DØØ H [2]
[6] DO Ø1 H [3] — [3] LAT DØ1 H [2]
[6] DO Ø2 H [3] — [3] LAT DØ2 H [2]
[6] DO Ø3 H [3] — [3] LAT DØ3 H [2]
[6] DO Ø4 H [3] — [3] LAT DØ4 H [2]
[6] DO Ø5 H [3] — [3] LAT DØ5 H [2]
[6] DO Ø6 H [3] — [3] LAT DØ6 H [2]
[6] DO Ø7 H [3] — [3] LAT DØ7 H [2]

[4] DATA LAT L [3/2,4]

74S373 OC E70

[7] DO Ø8 H [3] — [3] LAT DØ8 H [2]
[7] DO Ø9 H [3] — [3] LAT DØ9 H [2]
[7] DO 1Ø H [3] — [3] LAT D1Ø H [2]
[7] DO 11 H [3] — [3] LAT D11 H [2]
[7] DO 12 H [3] — [3] LAT D12 H [2]
[7] DO 13 H [3] — [3] LAT D13 H [2]
[7] DO 14 H [3] — [3] LAT D14 H [2]
[7] DO 15 H [3] — [3] LAT D15 H [2]

[4] DATA LAT L [3/2,4]

+5VCR

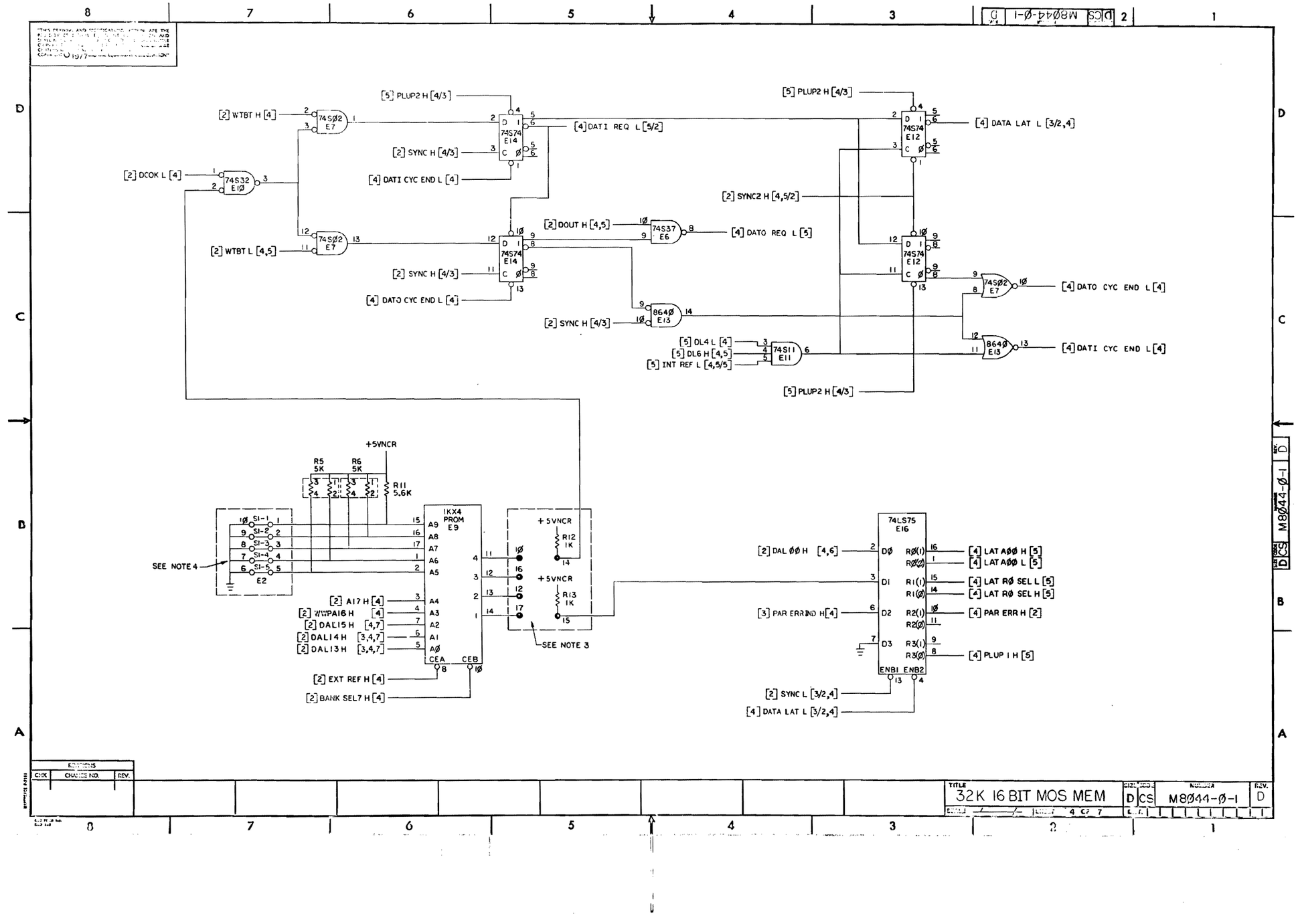
R4 5K
R4 5K

74S1Ø E2Ø — [3] PAR ERR IND H [4]

REVISIONS		
CHK	CHANGE NO.	REV

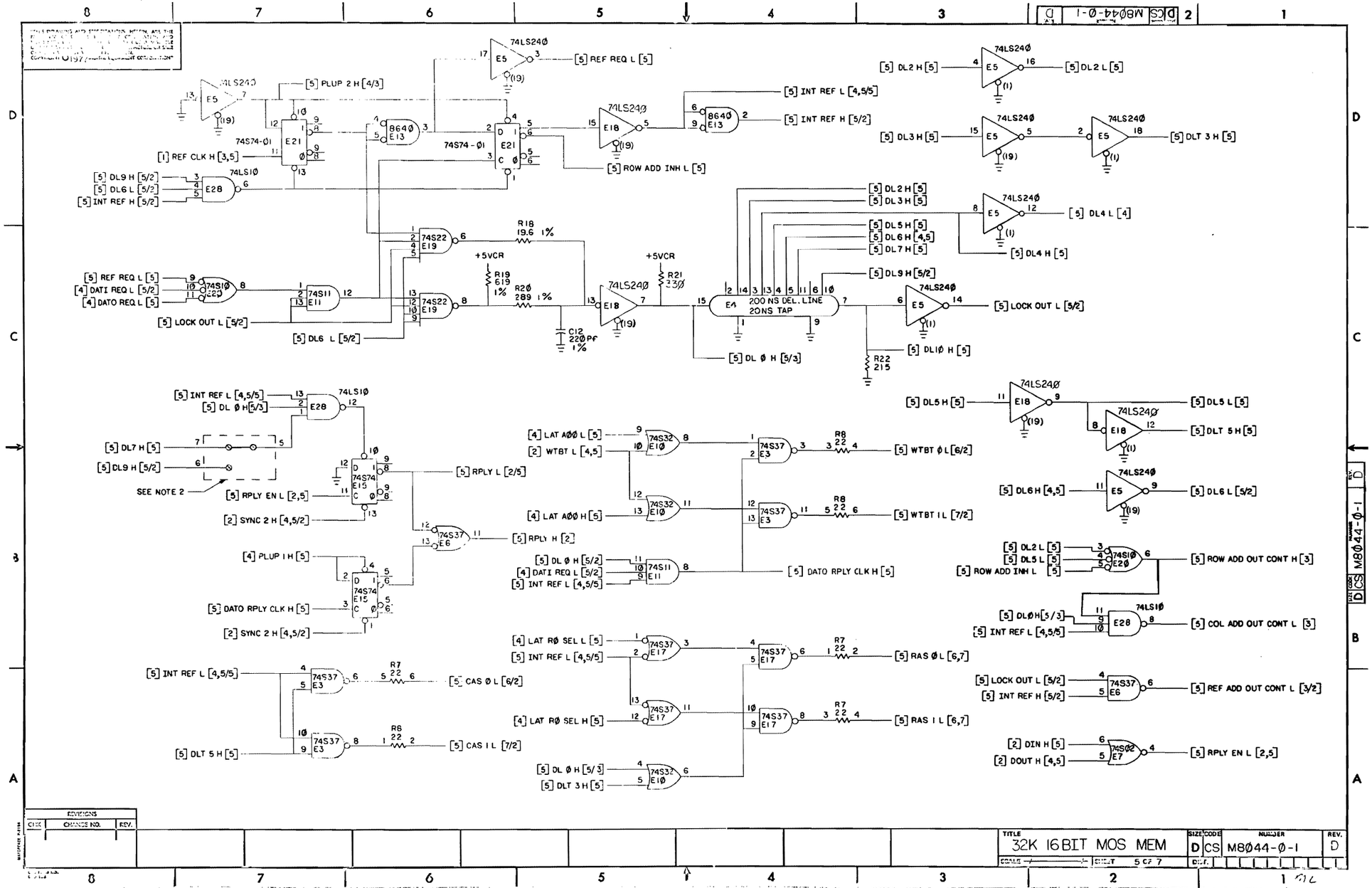
TITLE	SIZE	CODE	NUMBER	REV.
32K 16BIT MOS MEM	D	CS	M8044-Ø-1	D
SCALE — SHEET 3 OF 7	DIST.			

M8044-0-1 REV D



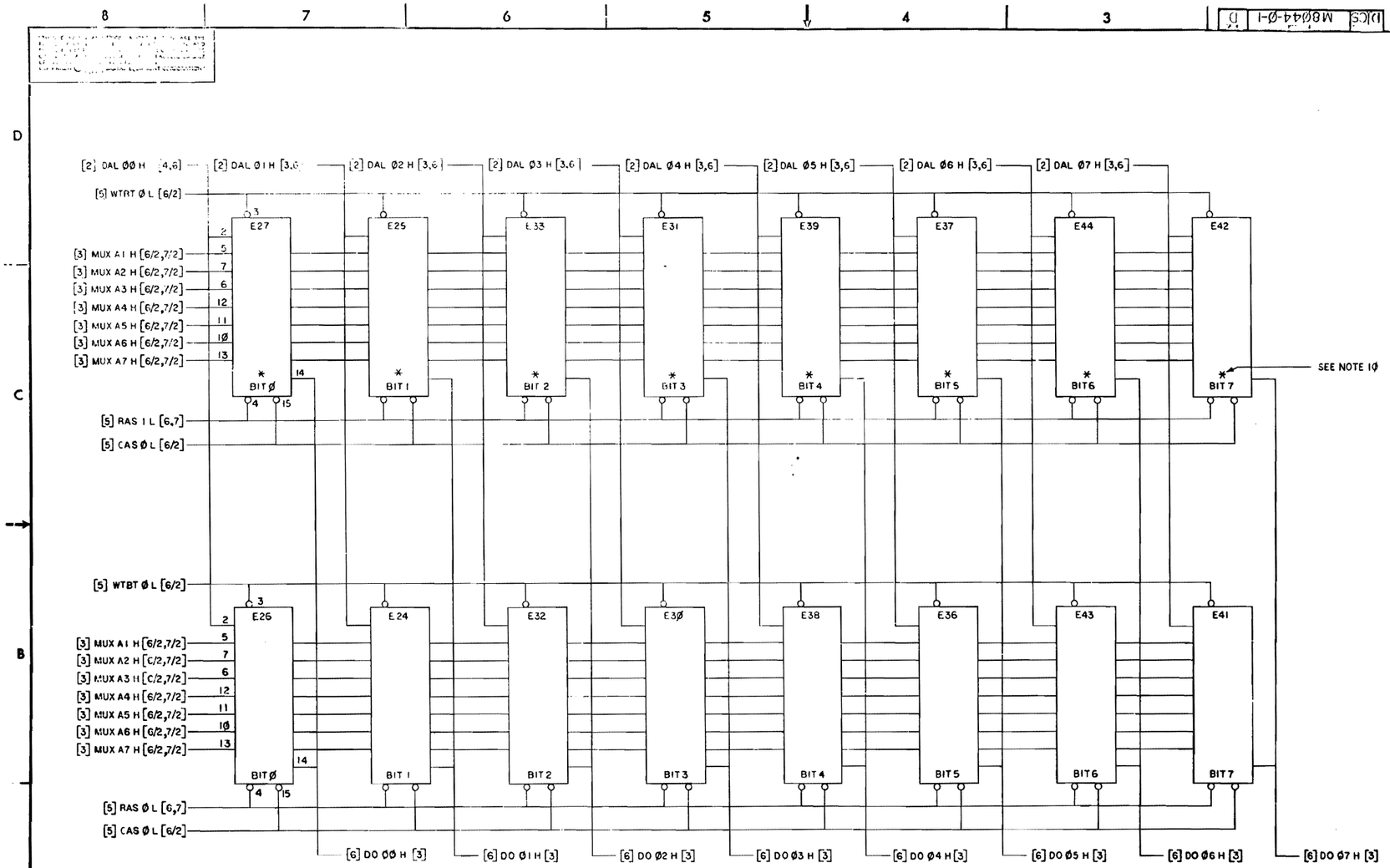
REVISIONS		
ECR	CHANGE NO.	REV.

TITLE	SIZE	NUMBER	REV.
32K 16 BIT MOS MEM	D	DCS M8044-0-1	D
	SCALE	4 OF 7	



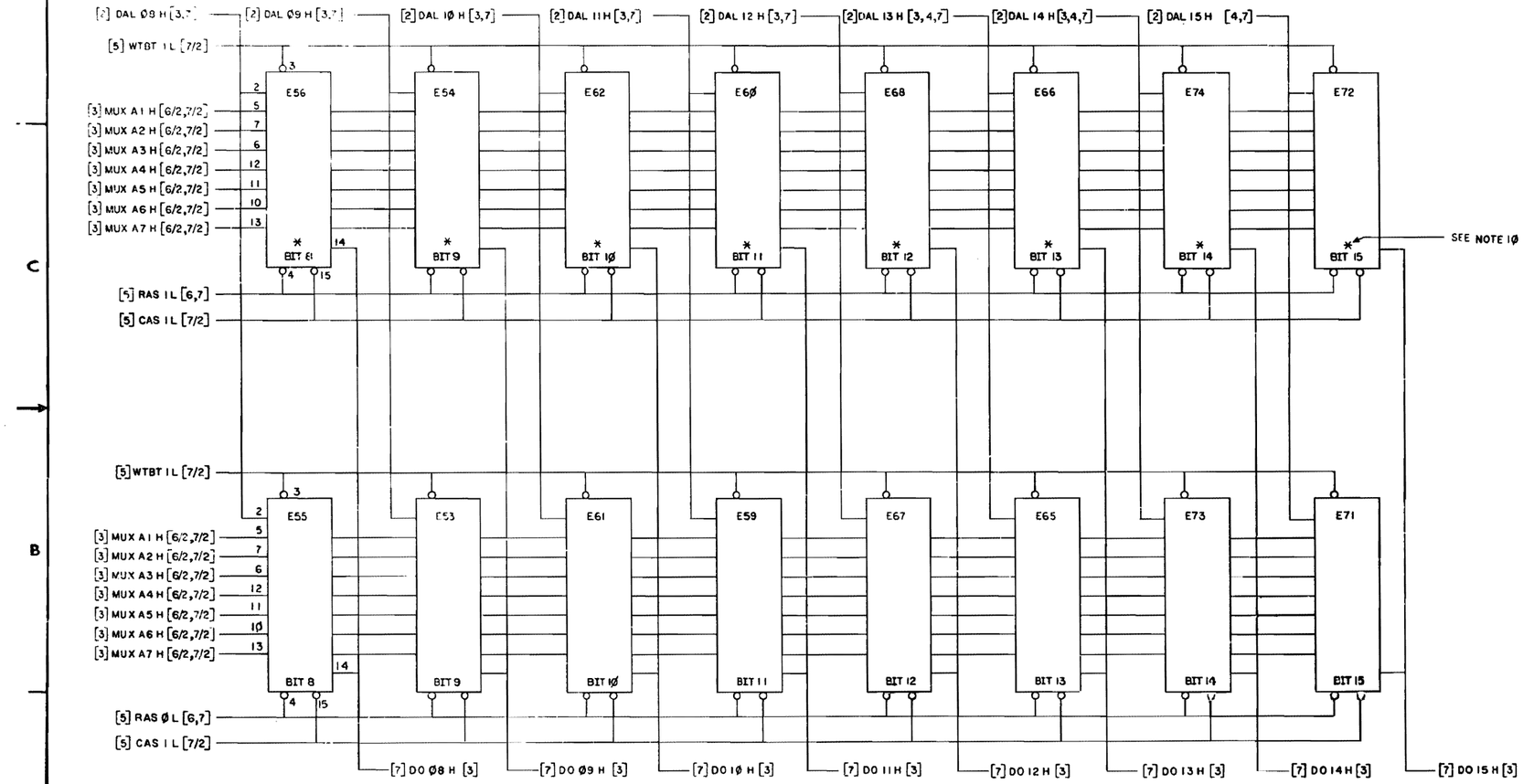
REVISIONS		
CTR	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
32K 16BIT MOS MEM	D	CS	M8Ø44-Ø-1	D
SCALE	SHEET 5 OF 7		DWG.	



VCC1 — E26,E27,E32,E33,E38,E39,E43,E44, E55,E56,E61,E62,E67,E68,E73,E74
VCC2 — E24,E25,E30,E31,E36,E37,E41,E42, E53,E54,E59,E60,E65,E66,E71,E72
+5VNCR-E1, E8, E9, E15,E16,E45,E51,E52,E57,E58,E63,E64,E69,E70
+5VCR-E3 THRU E7, E10 THRU E14,E17 THRU E23,E28,E29,E35,E40,E46

| TITLE | | |



VCC1 — E26,E27,E32,E33,E38,E39,E43,E44, E55,E56,E61,E62,E67,E68,E73,E74
VCC2 — E24,E25,E30,E31,E35,E37,E41,E42, E53,E54,E59,E6Ø,E65,E66,E71,E72
+5VNCR — E1, E8, E9, E15,E16,E45,E51,E52, E57,E58,E63,E64,E69,E7Ø
+5VCR — E3 THRU E7, E1Ø THRU E14,E17 THRU E23, E28,E29,E35,E4Ø,E46

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
32K 16BIT MOS MEM	D	CS	M8Ø44-Ø-1	D

SCALE — | SHEET 7 OF 7 | E.C.#

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-DLV11-J-1	FIELD MAINTENANCE PRINT SET TABLE OF CONTENTS
A-PL-DLV11-J-Ø	4 SERIAL LINE PER.CTLR.
A-PL-DLV11-J-SH	SHIPPING LIST (DLV11-J)
D-CS-M8Ø43-Ø-1	4 SERIAL LINE PER. CTLR.
D-UA-M8Ø43-Ø-Ø	4 SERIAL LINE PER.CTLR.
A-PS-23467A2-Ø-Ø	ROM MAP

UNIT VARIATIONS COVERED BY THIS PRINT SET
DLV11-J

DLV11-J
Field Maintenance
Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.
MPØØ586

SIZE B | CODE TC | NUMBER DLV11-J-1 | REV.

REVISIONS	REV	CHG. NO.	DATE

USED ON OPTION/MODEL: DLV11-J

SHEET 1 OF 1

DRN.		DATE 6-Oct-78
CHKD.		DATE 20-OCT-78
PROJ. ENG.		DATE 24-OCT-78
FIELD SERV.		DATE 2-NOV-78

TITLE: 4 SERIAL LINE PER.CTLR.

SIZE	CODE	NUMBER	REV.
B	TC	DLV11-J-1	

DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY M. Maynard	CHECKED R W Caunter	SECTION 1
DATE 28 Feb 78	DATE 27-Feb 78	
ENG Thomas Joyce	PROD [illegible] 3-6-78	ISSUED SECT. 1
DATE 2 MAR 78	DATE	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION
1	M8043	4 SERIAL LINE PER CTLR	1
2	A-PS-9905622-0-0	BOX, FOLDING, REVERSE TUCK	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
4 SERIAL LINE PER. CTRL.	B-DD-DLV11-J	A	PL	DLV11-J-0		
	SHEET 1 OF 1		DIST			

DEC FORM
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY [illegible]	CHECKED R W Caunter	SECTION 1
DATE 28 Feb 78	DATE 28 Feb 78	
ENG [illegible]	PROD [illegible]	ISSUED SECT. 1
DATE 2 MAR 78	DATE 3/6/78	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION											
1	M8043	4 SERIAL LINE PER. CTRL.	1											
2	A-PS-9905622-0-0	BOX, FOLDING, REVERSE TUCK	1											
3	MP00586	FIELD MAINTENANCE PRINT SET	1	*										
4	EK-DLV1J-UG-001	DLV11-J USER'S MANUAL	1	*										

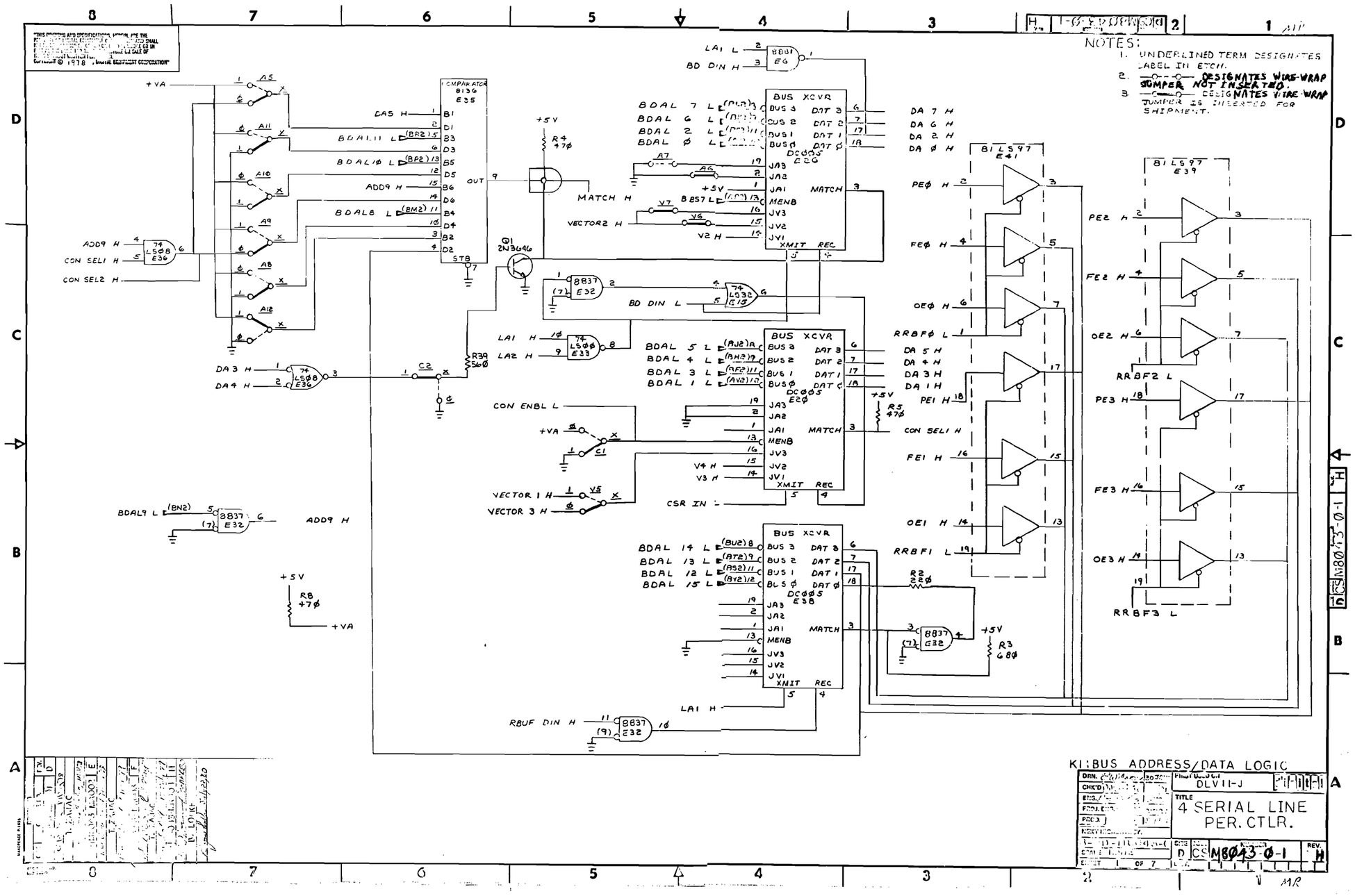
NOTE:
(*) ONE PER SHIPMENT

TITLE	ASSY I.D.	SIZE	CODE	NUMBER	REV	ECO NO.
SHIPPING LIST (DLV11-J)	D-DD-DLV11-J	A	PL	DLV11-J-SH		
	SHEET 1 OF 1	DIST				

DEC FORM

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NOTES:
1. UNDERLINED TERM DESIGNATES LABEL IN ETCH.
2. —o—o— DESIGNATES WIRE-WRAP JUMPER, NOT INSERTED.
3. —o—o— DESIGNATES WIRE-WRAP JUMPER IS INSERTED FOR SHIPMENT.

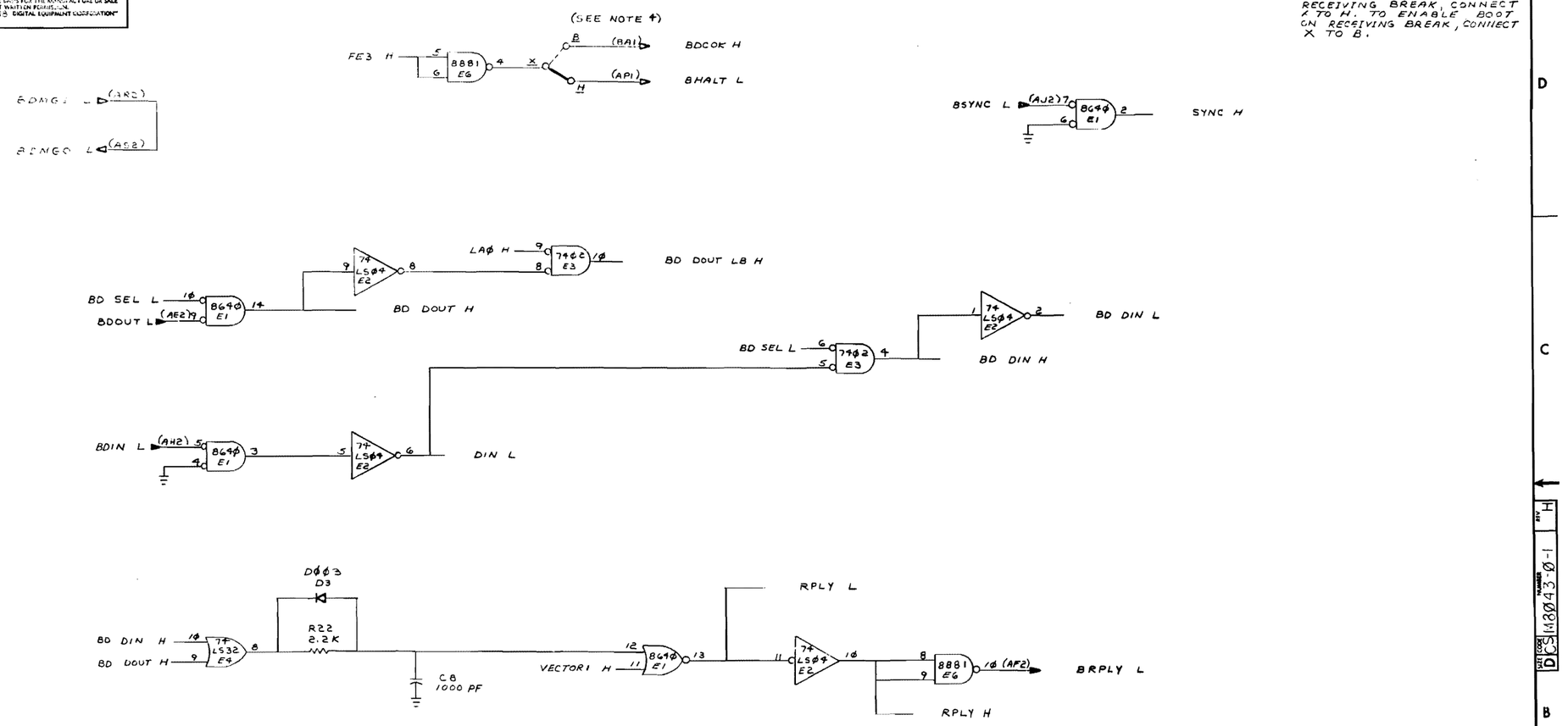


KI:BUS ADDRESS/DATA LOGIC

DRN.	FINISH DIM
CHK'D	DLV11-J
ENG.	TITLE 4 SERIAL LINE PER. CTLR.
PROJ.	
PROG.	
MGR.	
SIZE D	CS M8043-0-1 REV. H
SHEET 1 OF 7	

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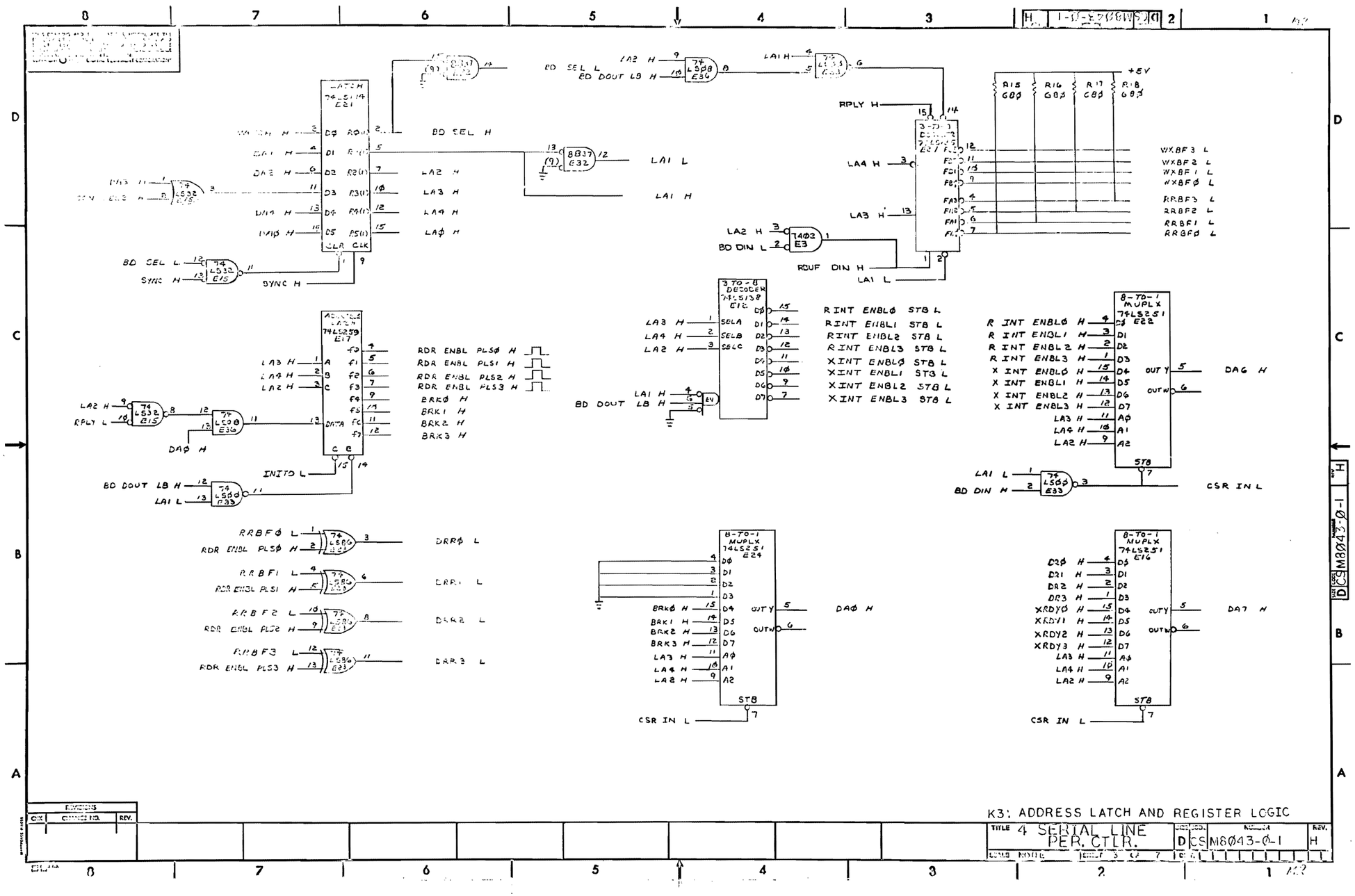
NOTES:
4. TO ENABLE HALT ON RECEIVING BREAK, CONNECT X TO H. TO ENABLE BOOT ON RECEIVING BREAK, CONNECT X TO B.



REVISIONS		
CNK	CHANGE NO.	REV.

K2: CONTROL AND HALT/BOOT LOGIC

TITLE	SIZE	CODE	NUMBER	REV.
4 SERIAL LINE PER. CTLR.	D	CS	M8Ø43-Ø-1	H
SCALE NONE	SHEET 2 OF 7			


K3: ADDRESS LATCH AND REGISTER LOGIC
TITLE 4 SERIAL LINE PER. CTLR.
DCS M8043-0-1
REV. H
BD SEL H
BD SEL L
BD DOUT LB H
LA1 L
LA1 H
LA2 H
LA3 H
LA4 H
LA0 H
RPLY H
RPLY L
SYNC H
BD DIN L
RDUF DIN H
DAØ H
DA1 H
DA2 H
DA3 H
DAØ L
DA1 L
DA2 L
DA3 L
INITØ L
BD DOUT
BD DIN H
CSR IN L
+5V
R15 680
R16 680
R17 680
R18 680
WXBF3 L
WXBF2 L
WXBF1 L
WXBFØ L
RRBF3 L
RRBF2 L
RRBF1 L
RRBFØ L
RDR ENBL PLSØ H
RDR ENBL PLS1 H
RDR ENBL PLS2 H
RDR ENBL PLS3 H
BRKØ H
BRK1 H
BRK2 H
BRK3 H
DRRØ L
DRR1 L
DRR2 L
DRR3 L
R INT ENBLØ STB L
R INT ENBL1 STB L
R INT ENBL2 STB L
R INT ENBL3 STB L
X INT ENBLØ STB L
X INT ENBL1 STB L
X INT ENBL2 STB L
X INT ENBL3 STB L
XRDYØ H
XRDY1 H
XRDY2 H
XRDY3 H
74LS74 E21
74LS32 E15
74LS38 E30
8837 E32
74LS00 E33
74LS32 E15
74LS38 E30
74LS00 E33
74LS00 E31
74LS00 E31
74LS00 E31
74LS00 E31
74LS259 E17
74LS138 E16
74LS251 E22
74LS251 E24
74LS251 E16
74LS08 E3
74LS08 E4
74LS08 E4
74LS00 E33
74LS00 E31
74LS00 E31
74LS00 E31
74LS00 E31
8-TO-1 MUPLX
3-TO-8 DECODER
ADDRESS LATCH
LATCH
STB

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+5V
R11 330
R24 680

DC003 E7
R INT ENBLØ H
INITO L
R INT ENBLI H
R INT ENBLØ STB L
R INT ENBLI STB L

DR2 H
R25 470 +5V
DR3 H
DC003 E11
R INT ENBL2 H
R INT ENBL3 H
R INT ENBL2 STB L
R INT ENBL3 STB L

XRDYØ H
R26 470 +5V
XRDY1 H
DC003 E9
X INT ENBLØ H
X INT ENBLI H
X INT ENBLØ STB L
X INT ENBLI STB L

XRDY2 H
R27 470 +5V
XRDY3 H
DC003 E8
X INT ENBL2 H
X INT ENBL3 H
X INT ENBL2 STB L
X INT ENBL3 STB L

+5V
R28 470
74LSØ4 E8
8881 E6
(AL2)
BIRQ L

256 X 4 ROM 82S129 E10
R29 470 +5V
R2Ø 470
VECTOR2 H
V2 H
V3 H
V4 H
SEE TABLE BELOW
CON ENBL L

INITO H

74LS32 E4
VECTOR2 H
VECTOR1 H
VECTOR 3 H

+5V
R12 330
R6 68Ø
(AN2)
BIAKO L

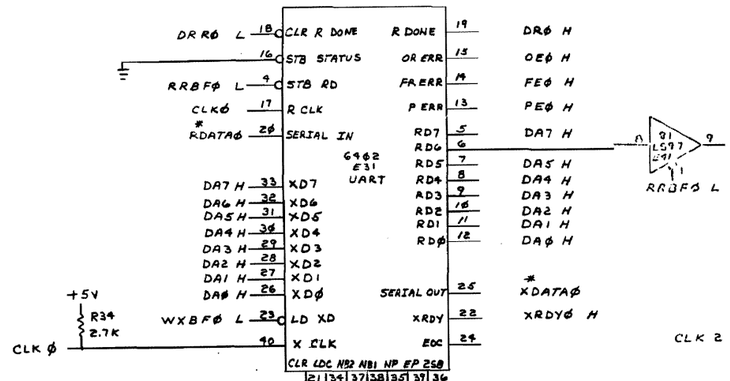
	CON ENBL L = Ø				CON ENBL L = 1			
E1Ø	VECTOR 2 H	V2 H	V3 H	V4 H	VECTOR 2 H	V2 H	V3 H	V4 H
A1 = 1	1	Ø	Ø	Ø	1	Ø	Ø	Ø
$\overline{A1}$ • $\overline{E1}$ = 1	1	Ø	1	Ø	1	Ø	1	Ø
A2 = 1	1	Ø	Ø	1	1	Ø	Ø	1
A2 • A3 = 1	Ø	Ø	Ø	1	1	Ø	1	1
A4 = 1	1	1	Ø	Ø	1	1	Ø	Ø
A4 • A5 = 1	1	1	1	Ø	1	1	1	Ø
A6 = 1	1	1	Ø	1	1	1	Ø	1
A6 • A7 = 1	Ø	1	Ø	1	1	1	1	1
$\overline{E1}$ = Ø & A7 = Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø	Ø

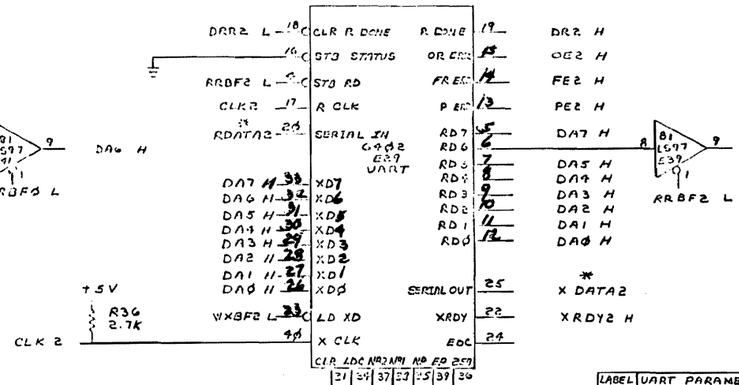
K4: INTERRUPT, VECTOR AND INIT LOGIC

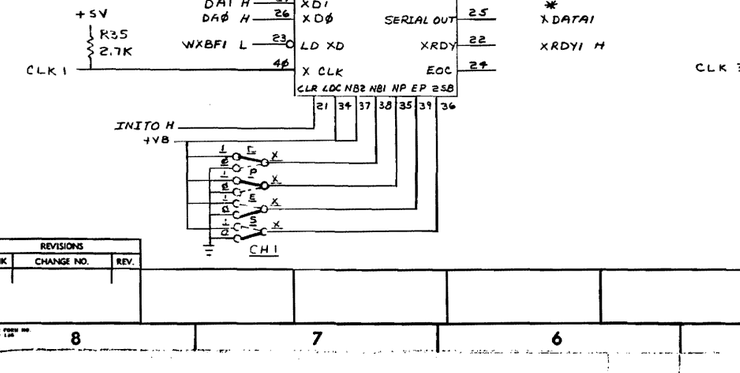
REVISIONS		
CHK	CHANGE NO.	REV.

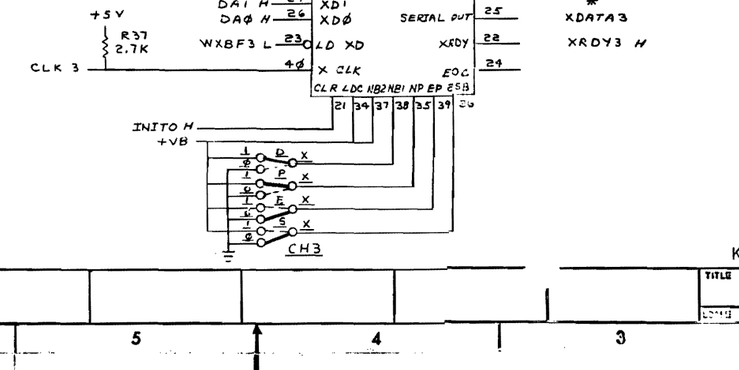
TITLE	SIZE	CODE	NUMBER	REV.
4 SERIAL LINE PER. CTLR.	D	CS	M8Ø43-Ø-1	H
SCALE NONE	SHEET 4 OF 7			

NOTES:
* 5. V HIGH = MARK = 1
V LOW = SPACE = Ø









+5V
R9
470
+VB

LABEL	UART PARAMETER	X = Ø	X = 1	COMMENTS
D	NUMBER OF DATA BITS	7 BITS	8 BITS	LEAST SIGNIFICANT BITS ARE TRANSMITTED FIRST
S	NUMBER OF STOP BITS	1 BIT	2 BIT	
P	PARITY INHIBIT	PARITY CHECK/GENERATION AND ENABLED	PARITY BIT IS DELETED, PARITY ERROR = Ø.	
E	EVEN PARITY ENABLE	ODD PARITY ENABLED	EVEN PARITY ENABLED	ONLY WHEN P = Ø.

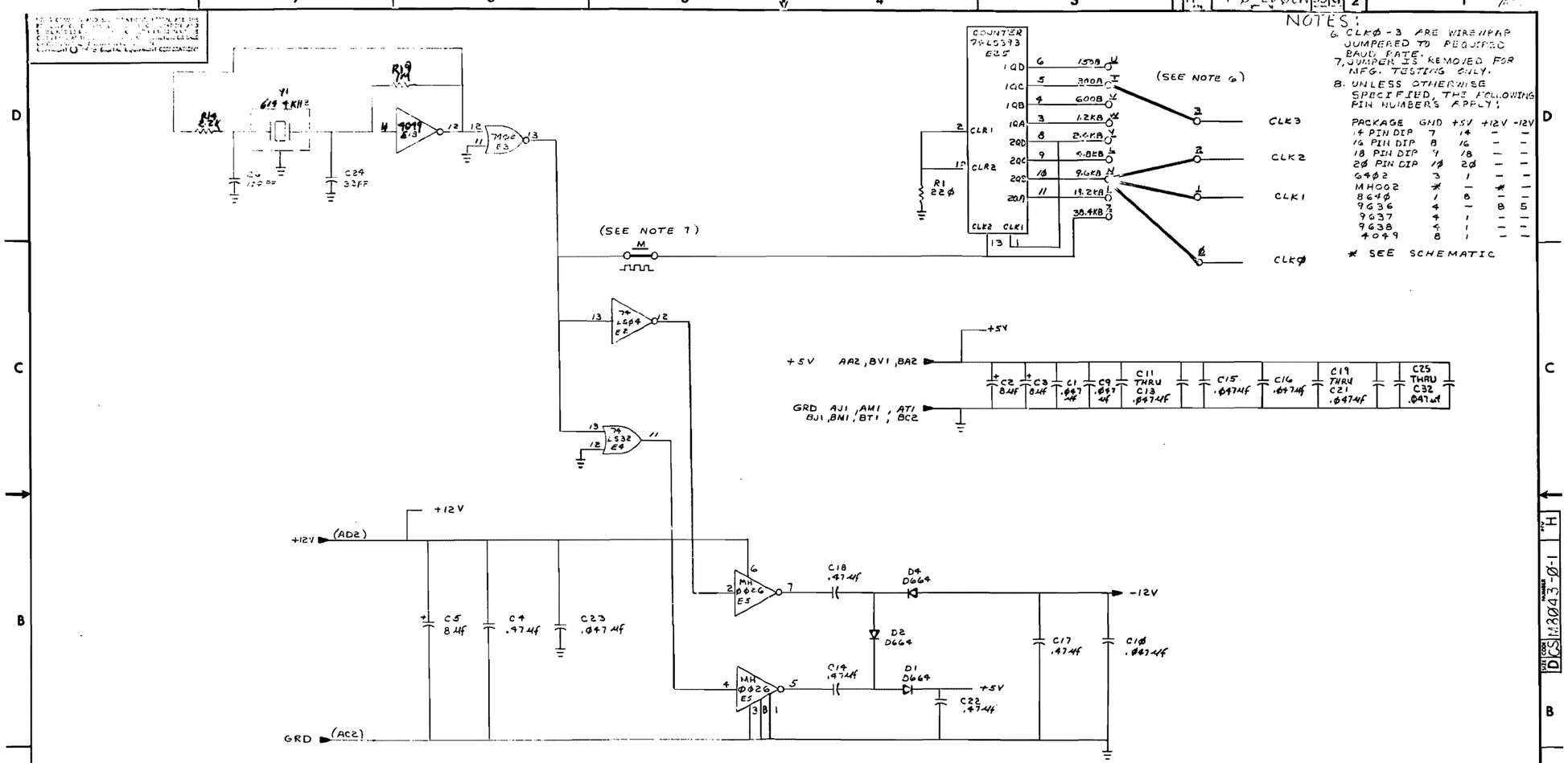
REVISIONS

CHK	CHANGE NO.	REV.

K5; UART LOGIC

TITLE 4 SERIAL LINE PER. CTR.

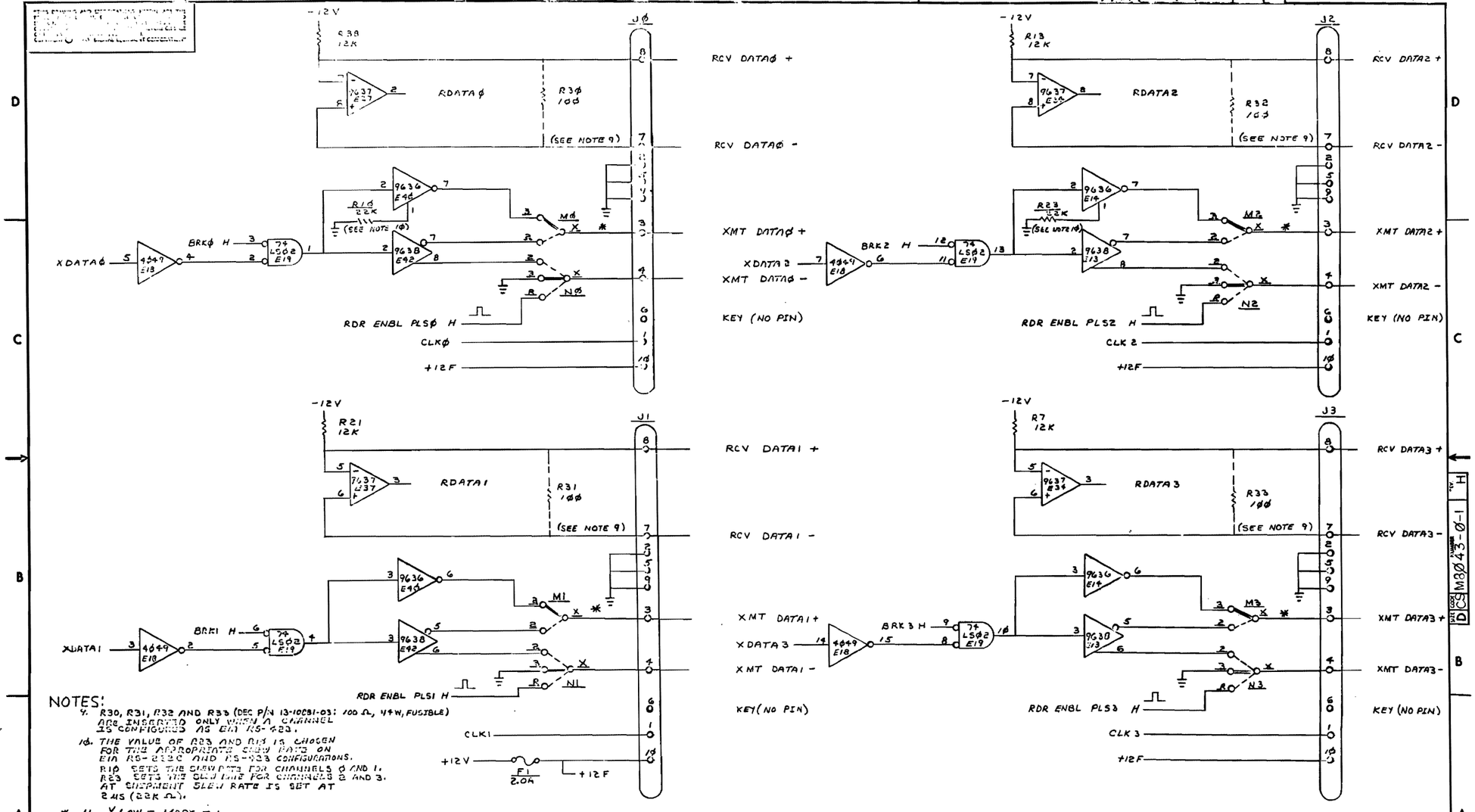
DEC-MØ43-Ø-1 H



K6: PWR DIST, BAUD RATE GEN & -12V CIRCUITRY

REVISIONS		
CODE	CHANGE NO.	REV.

TITLE	4 SERIAL LINE PER. CTLR.
SIZE	D
CODE	CS
NUMBER	M8Ø43-Ø-1
REV.	H
SCALE	NONE
SHEET	6 OF 7



NOTES:

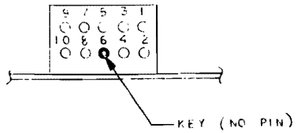
4. R30, R31, R32 AND R33 (DEC P/N 13-10081-03: 100 Ω, ¼W, FUSIBLE) ARE INSERTED ONLY WHEN A CHANNEL IS CONFIGURED AS EIA RS-423.
10. THE VALUE OF R23 AND R24 IS CHOSEN FOR THE APPROPRIATE SLEW RATE ON EIA RS-232C AND RS-423 CONFIGURATIONS. R10 SETS THE SLEW RATE FOR CHANNELS Ø AND 1. R23 SETS THE SLEW RATE FOR CHANNELS 2 AND 3. AT SHIPMENT SLEW RATE IS SET AT 2 µS (22K Ω).

* 11. V LOW = MARK = 1; V HIGH = SPACE = Ø

K7: LINE INPUT/OUTPUT LOGIC

TITLE	SIZE	DWG. NO.	REV.
4 SERIAL LINE PER. CTLR.	D	DCS M8Ø43-Ø-1	H

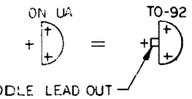
SCALE NONE SHT 7 OF 7



DETAIL A-A
4 PLACES

NOTES.
1. PLACEMENT OF Q1 FOR TO 92(LEADS IN-LINE)

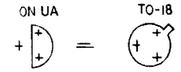
ON UA TO-92



BEND MIDDLE LEAD OUT

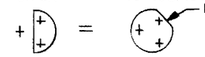
FOR TO 18 PKG (METAL CAN)

ON UA TO-18



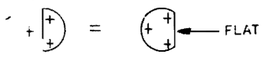
FOR TO-105/106 PKG (ROUND TOP PLASTIC)

ON UA TO-105/106 FLAT



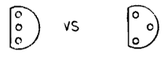
FOR LEADS IN TRIANGULAR PATTERN

ON UA △ PAT

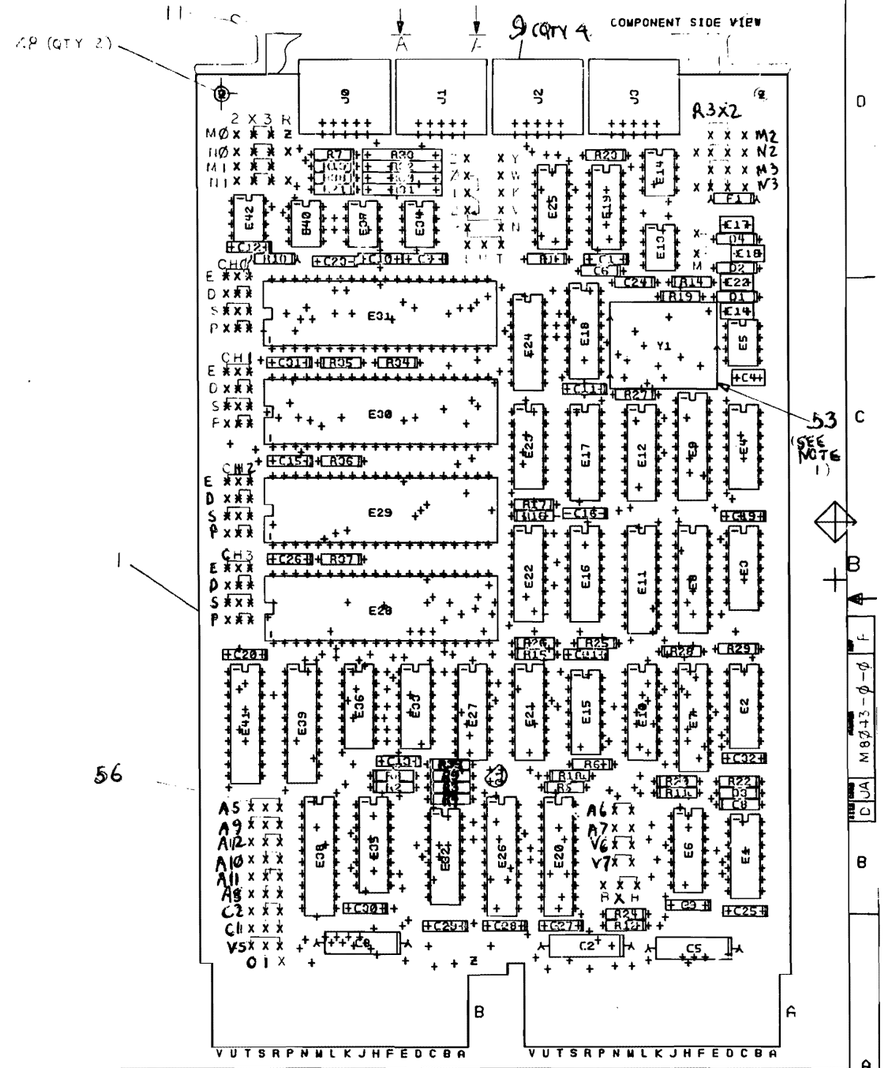


NOTE: DIFFERENCE

TO-92 VS △ PAT







NOTES: 1. R30 THRU R33 OPTIONAL
2. CASE OF J1 MUST BE INSULATED FROM PCB WITH ITEM #53
3. ⌐ DESIGNATES WIRE WRAP JUMPER (ITEM #56) INSULATED FOR SHIPMENT

CHG	CHANGE NO	REV
	M2043-00007	E
		F

ETCH REV. 0-01
P.C. DESIGN DATA BASE REV. B

SIGNATURES	DATE
DRN.	
CHK'D.	
ENG. T. ZAJAC	
PROJ. ENG. T. ZAJAC	
PROD.	
SCALE	
SHT. 1 OF 3	
NEXT HIGHER ASSY. B-DD-M8043-0	

digital

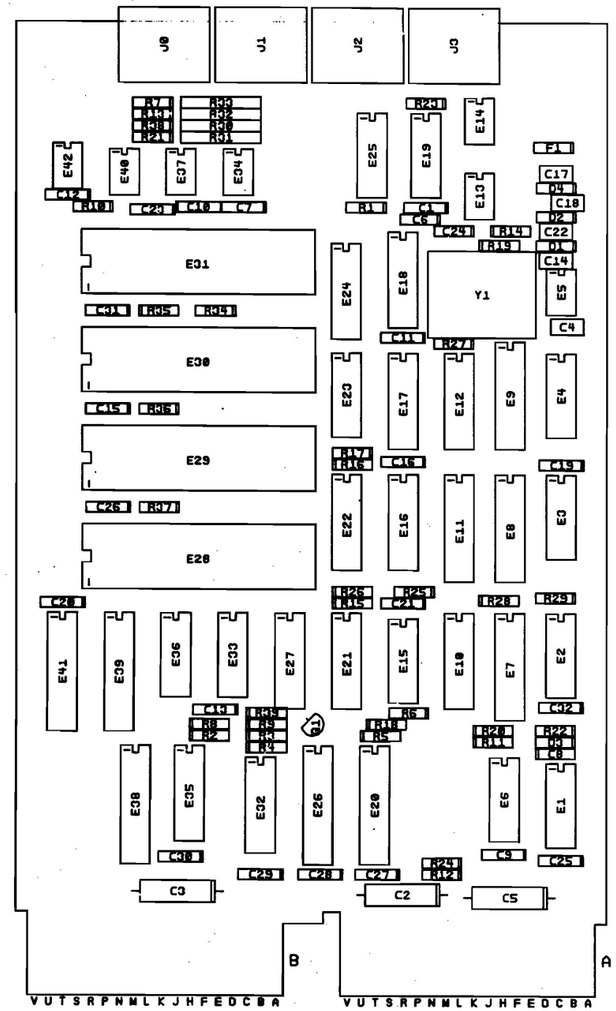
TITLE 4 SERIAL LINE PER CTLR

SIZE	CODE	NUMBER	REV
D	UA	M8043-0-0	F

DUA M8043-0-0 F

1 MS# 900790

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NOTES:

CHK	CHANGE NO	REV

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

digital

TITLE 4 SERIAL LINE PER. CTLR

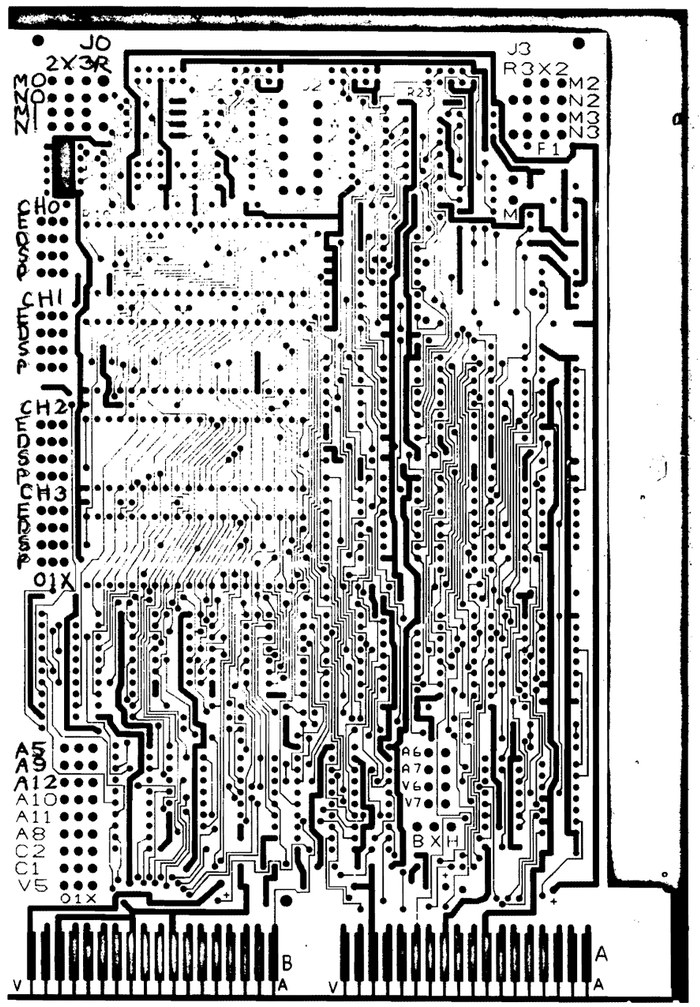
SCALE 2/1 | SIZE D | CODE UA | NUMBER M8043-0-0 | REV F

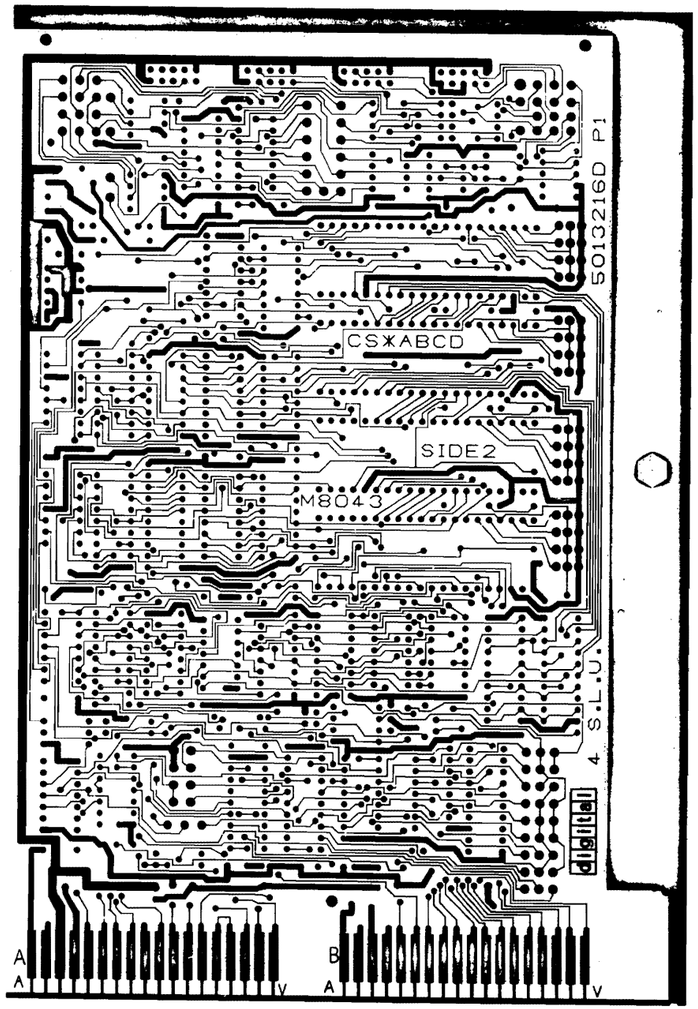
SHT. 2 OF 3

NEXT HIGHER ASSY. B-DD-M8043-0

MR 1 MS#

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REVISIONS		
CHK	CHANGE NO	REV

TITLE 4 SERIAL LINE PER. CTRL		SIZE	CODE	NUMBER	REV.
		D	UA	M8043-0-0	F
SCALE 2/1	SHEET 3 OF 3	DIST.			

DEC FORM NO. 000 137

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-RLV11-Ø-1	RLV11 FIELD MAINTENANCE PRINT SET
E-UA-RLV11-Ø-Ø	DISK CONTROLLER ASSY. (RLV11)
A-SP-RLV11-Ø-2	FIELD SERVICE INSTALLATION AND ACCEPTANCE PROCEDURE
A-PL-RLV11-Ø	RLV11 SHIPPING LIST
B-DD-M8Ø13-Ø	RLV11 BUS CONTROL
B-DD-M8Ø14-Ø	RLV11 DISK CONTROL
D-UA-BCØ6R-Ø-Ø	BCØ6R I/O CABLE
D-FD-RLV11-Ø-3	FLOW DIAGRAM DISK CONTROLLER (RLV11)
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K-PL-M8Ø14-Ø-DBP	RLV11 BUS CONTROL
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D-UA-M8Ø14-Ø-Ø	RLV11 BUS CONTROL
K-PS-23Ø17E2-Ø-Ø (SHEETS 2-17 ONLY)	2048 X 8 ROM/PROM PATTERN SPEC.
K-PS-23219A1-Ø-Ø (SHEET 2 ONLY)	32 X 8 ROM/PROM PATTERN SPEC.
K-PS-23218A1-Ø-Ø (SHEET 2 ONLY)	32 X 8 ROM/PROM PATTERN SPEC.
D-TD-RLV11-0-4	TIMING DIAGRAM (RLV11)

UNIT VARIATIONS COVERED BY THIS PRINT SET
RLV11-ØA
RLV11-AK

RLV11
Field Maintenance
Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.
MPØØ635

REVISIONS	REV.	DWG. NO.	DATE
	A	RLV11-ML0Ø1	11/78

USED ON OPTION/MODEL
RLV11

SHEET 1 OF 1

DRN.	G. Drayton	DATE	3/78
CHK'D	R. Hultman	DATE	
PROJ. ENG.	P. Kotch	DATE	5/78
FIELD SERV.	P. Kotch	DATE	3/78

digital

TITLE: RLV11

SIZE	CODE	NUMBER	REV.
D	TC	RLV11-Ø-1	A
DIST.			

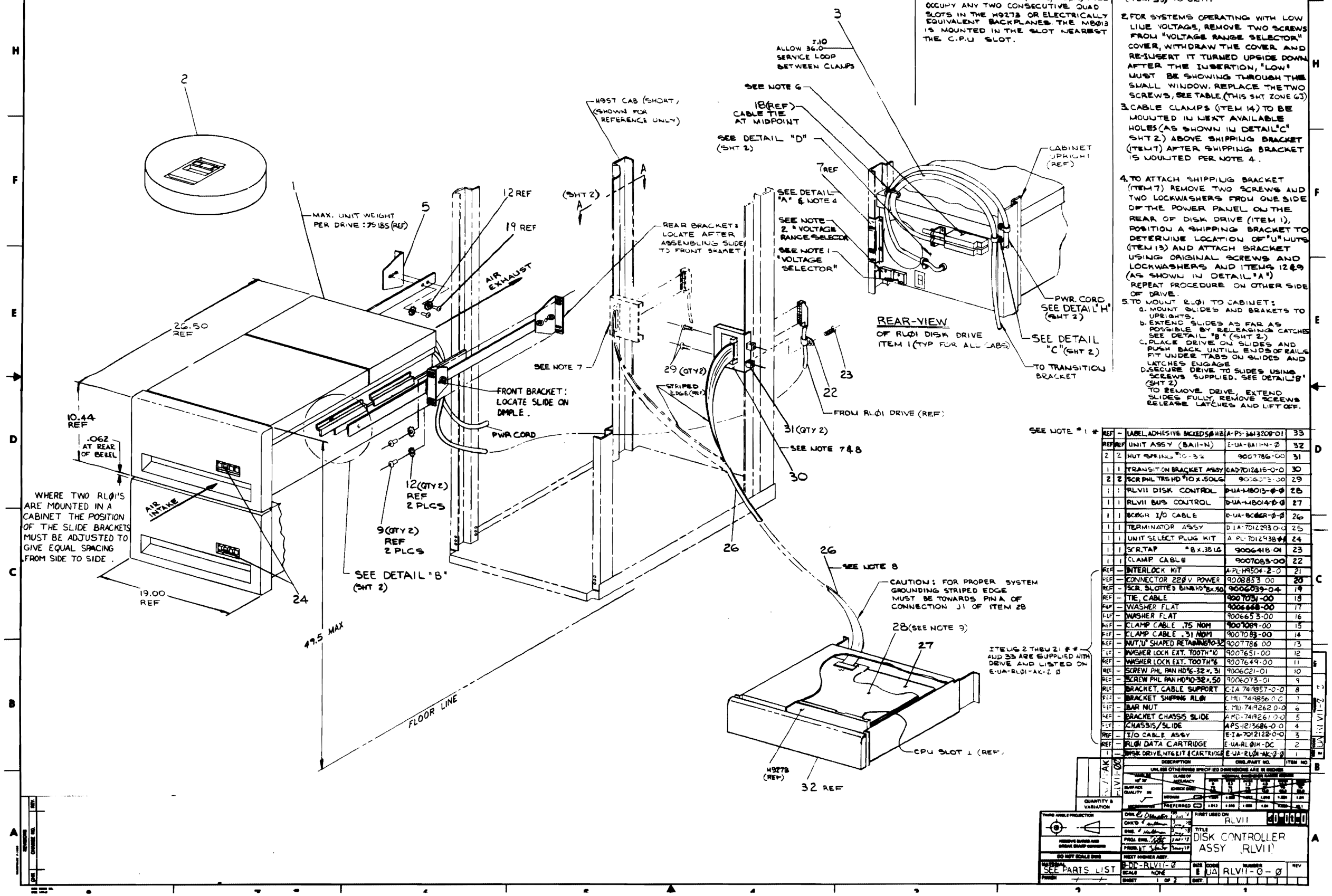
LINE VOLTAGE	VOLTAGE SELECTOR SETTING	VOLTAGE RANGE SELECTOR SETTING
90V-105V	110	LOW
100V-127V	110	NORMAL
180V-210V	220	LOW
200V-254V	220	NORMAL

LEGEND	
NUMBER	VARIATION
RLV11-00	WITH OUT DISK DRIVE
RLV11-AK	WITH DISK DRIVE

6. FOR LAST DRIVE IN A SYSTEM "CONTROLLER CABLE" (ITEM 3) PLUGS INTO EITHER SOCKET, TERMINATOR ASSY (ITEM 25) PLUGS INTO THE OTHER.
7. WHEN ALTERNATE MOUNTING POSITION IS USED CONNECTOR IN TRANSITION BRACKET MUST BE INVERTED SO THAT I/O CABLE FROM DRIVE (ITEM 1) WILL HANG IN A DOWNWARD POSITION AS SHOWN.
8. ITEM 22 THRU 31 ARE NOT ASSEMBLED UNTILL INSTALLATION IN A CABINET
9. THE RLV11 MODULE SET (M8013, M8014) WILL OCCUPY ANY TWO CONSECUTIVE QUAD SLOTS IN THE H9273 OR ELECTRICALLY EQUIVALENT BACKPLANES. THE M8013 IS MOUNTED IN THE SLOT NEAREST THE C.P.U SLOT.

NOTES:

1. FOR SYSTEMS OPERATING AT 220 VAC REMOVE THE SCREWS FROM THE "VOLTAGE SELECTOR" COVER, WITHDRAW THE COVER AND RE-INSERT TURNED UPSIDE DOWN. AFTER INSERTION, "220 V" MUST BE SHOWING THROUGH THE SMALL WINDOW. REPLACE THE TWO SCREWS, CUT OFF "110V" MALE PLUG AND REPLACE BY "220V" PLUG (ITEM 20). FOR COLOR CODE, SEE DETAIL 'H' SHT 2. FOR 50 HZ OPERATION ADD (ITEM 33) TO UNIT.
2. FOR SYSTEMS OPERATING WITH LOW LINE VOLTAGES, REMOVE TWO SCREWS FROM "VOLTAGE RANGE SELECTOR" COVER, WITHDRAW THE COVER AND RE-INSERT IT TURNED UPSIDE DOWN AFTER THE INSERTION, "LOW" MUST BE SHOWING THROUGH THE SMALL WINDOW. REPLACE THE TWO SCREWS, SEE TABLE. (THIS SHT ZONE G3)
3. CABLE CLAMPS (ITEM 14) TO BE MOUNTED IN NEXT AVAILABLE HOLES (AS SHOWN IN DETAIL "C" SHT 2.) ABOVE SHIPPING BRACKET (ITEM 7) AFTER SHIPPING BRACKET IS MOUNTED PER NOTE 4.
4. TO ATTACH SHIPPING BRACKET (ITEM 7) REMOVE TWO SCREWS AND TWO LOCKWASHERS FROM ONE SIDE OF THE POWER PANEL ON THE REAR OF DISK DRIVE (ITEM 1), POSITION A SHIPPING BRACKET TO DETERMINE LOCATION OF "U" NUTS (ITEM 13) AND ATTACH BRACKET USING ORIGINAL SCREWS AND LOCKWASHERS AND ITEMS 12 & 9 (AS SHOWN IN DETAIL "A") REPEAT PROCEDURE ON OTHER SIDE OF DRIVE.
5. TO MOUNT R-Ø1 TO CABINET:
   a. MOUNT SLIDES AND BRAKETS TO UPRIGHTS.
   b. EXTEND SLIDES AS FAR AS POSSIBLE BY RELEASING CATCHES SEE DETAIL "B" (SHT 2)
   c. PLACE DRIVE ON SLIDES AND PUSH BACK UNTILL ENDS OF RAILS FIT UNDER TABS ON SLIDES AND LATCHES ENGAGE
   d. SECURE DRIVE TO SLIDES USING SCREWS SUPPLIED. SEE DETAIL 'B' (SHT 2)
   TO REMOVE DRIVE, EXTEND SLIDES FULLY, REMOVE SCREWS RELEASE LATCHES AND LIFT OFF.



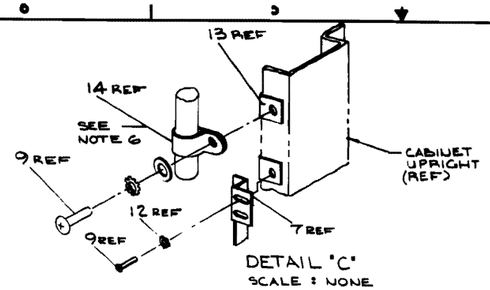
SEE NOTE "1"

REF	QTY	DESCRIPTION	DWG./PART NO.	ITEM NO.
REF	—	LABEL, ADHESIVE BACKED Ø.38 H.28	A-PS-3613208-01	33
REF	REF	UNIT ASSY (BAII-N)	E-UA-BAII-N-Ø	32
2	2	NUT SPRING #10-32	9007786-00	31
1	1	TRANSITION BRACKET ASSY	CAD-7012415-0-0	30
2	2	SCR PHL TRS HD #10 X .50 LG	9006075-00	29
1	1	RLV11 DISK CONTROL	D-UA-M8013-Ø-Ø	28
1	1	RLV11 BUS CONTROL	D-UA-M8014-Ø-Ø	27
1	1	BC08R I/O CABLE	D-UA-BC08R-Ø-Ø	26
1	1	TERMINATOR ASSY	D-IA-7012293-0-0	25
1	1	UNIT SELECT PLUG KIT	A-PL-7012438-Ø-Ø	24
1	1	SCR. TAP #8 X .38 LG	9006418-01	23
1	1	CLAMP CABLE	9007083-00	22
REF	—	INTERLOCK KIT	A-PL-H9504-2-0	21
REF	—	CONNECTOR 220 V. POWER	9008853-00	20
REF	—	SCR. SLOTTED BIND #8 X .50	9006039-04	19
REF	—	TIE, CABLE	9007091-00	18
REF	—	WASHER FLAT	9006648-00	17
REF	—	WASHER FLAT	9006653-00	16
REF	—	CLAMP CABLE .75 NOM	9007089-00	15
REF	—	CLAMP CABLE .31 NOM	9007083-00	14
REF	—	NUT, U SHAPED RETAINING #10-32	9007786-00	13
REF	—	WASHER LOCK EXT. TOOTH #10	9007651-00	12
REF	—	WASHER LOCK EXT. TOOTH #8	9007649-00	11
REF	—	SCREW PHL PAN HD #6-32 X .31	9006021-01	10
REF	—	SCREW PHL PAN HD #10-32 X .50	9006073-01	9
REF	—	BRACKET, CABLE SUPPORT	C-IA-7419857-0-0	8
REF	—	BRACKET SHIPPING RLØI	C-MD-7419856-0-0	7
REF	—	BAR NUT	C-MD-7419262-0-0	6
REF	—	BRACKET CHASSIS SLIDE	A-MD-7419261-0-0	5
REF	—	CHASSIS/SLIDE	A-PS-1213686-0-0	4
REF	—	I/O CABLE ASSY	E-IA-7012122-0-0	3
REF	—	RLØI DATA CARTRIDGE	E-UA-RLØI-DC	2
1	—	DISK DRIVE, MTG KIT & CARTRIDGE	E-UA-RLØI-AK-Ø-Ø	1

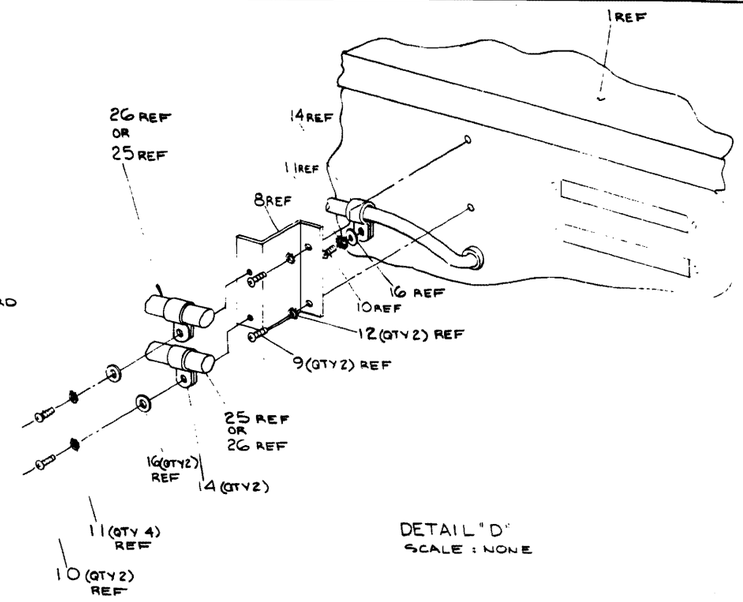
ITEMS 2 THRU 21 # # AND 33 ARE SUPPLIED WITH DRIVE AND LISTED ON E-UA-RLØI-AK-Ø-Ø

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

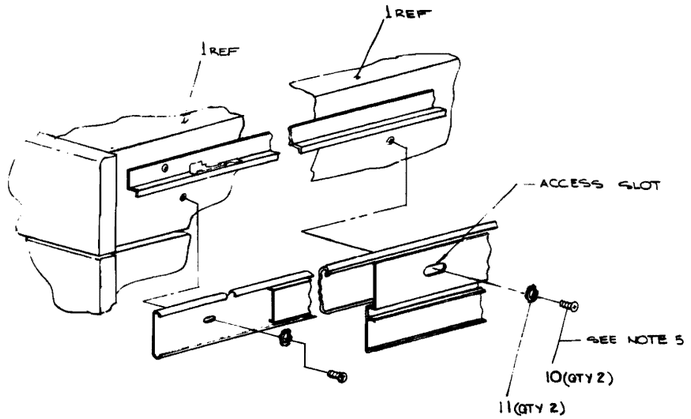
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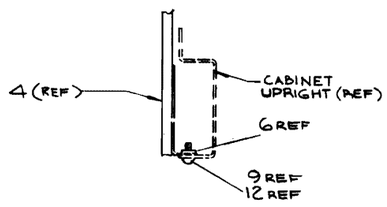
DETAIL "C"
SCALE : NONE
a. ONE CLAMP FOR I/O CABLE ITEM 3 REF
b. ONE CLAMP FOR POWER CORD



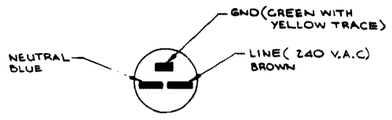
DETAIL "D"
SCALE : NONE



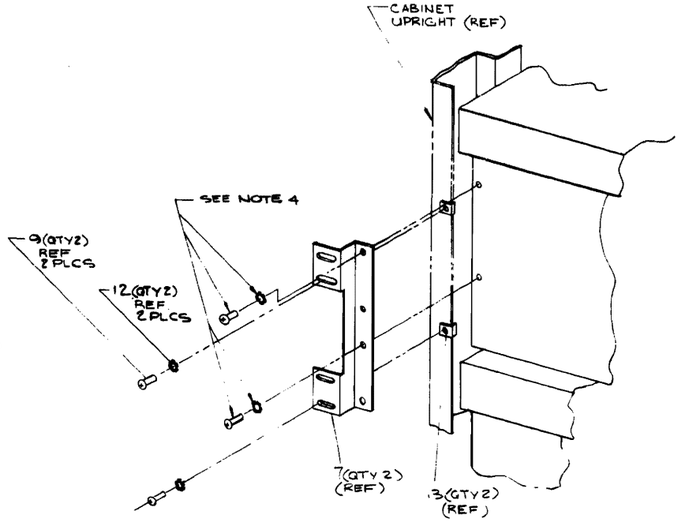
DETAIL "B"
SCALE : NONE



SECTION A-A
(SHOWING TYPICAL MOUNTING OF CHASSIS SLIDES TO CABINET UPRIGHTS)
SCALE: NONE



DETAIL "H"
(FRONT VIEW OF PLUG ITEM 20)



DETAIL "A"
SCALE : NONE

REVISIONS		
ECO#	CHANGE NO.	REV.

TITLE: DISK CONTROLLER (RLV11)
SCALE: — SHEET 2 OF 2
SIZE: E | CODE: UA | NUMBER: 54-V11-0-0 | REV:
DIST:

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DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION — DATE 5-April-78

TITLE RLV11 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	CHANGES VECTOR ADDRESS TO 160	ML0001	R. Lewis	11-78	R Lewis	5 Dec 78

ENG | APPD | SIZE A | CODE SP | NUMBER RLV11-0-2 | REV A

EN-1075A-16-R673-(392) DRA 107A

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE RLV11 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

I. GENERAL

This procedure defines the configurations, module utilization, installation, acceptance and diagnostic startup criteria for the RLV11 Disk Controller. Refer to RL01 Service Manual (EK-RL01-SV) for drive acceptance procedure.

II. CONFIGURATION

A. Setup switches and jumpers as indicated in tables 1 and 2 for type of ROM, standard Device Address 174400; and Vector Address 160. See Figures 2 and 3 for switch and jumper locations. For non standard device and Vector Address settings use table 2 setting corresponding address or Vector switch on for a 1 off for a 0.

III. MODULE UTILIZATION

A. Allowable Backplanes

H9273 4X9 slot backplane for the BA11-N or 11/03L or an electrical equivalent with LSI-11 Bus on the A and B connectors and C,D interconnect bus on the C and D connectors.

B. Module Order

Modules are inserted in any two consecutive slots with the M8013 inserted in the slot which is electrically closest to the CPU and the M8014 inserted in the slot directly behind as in Figure 1.

C. System Guidelines

1. Always locate the RLV11 module set at a lower priority (further away from the CPU) than any volatile DMA devices, tape units, and the RKV11 as in Figure 1.

ENG | APPD | SIZE A | CODE SP | NUMBER RLV11-0-2 | REV A

DEC FORM NO EN-01022-16-N370-(381) DRA 108

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE RLV11 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

Table 1
M8013 Jumper Configuration (See Fig. 2 for jumper locations)

Jumper	E49=Pt.#23-XXXE2	E49=PT.#23-XXXB7
W1	Installed	Removed
W2	Removed	Installed
W3	Installed	Removed
W4	Removed	Installed

Table 2
M8014 Switch settings for standard device address 174400 and vector address 160.
(For switch locations see Fig. 3)

Switch Position	SW2 Address 174400		SW1 Vector 160	
1	A12	on	off	V8
2	A11	on	off	V7
3	A10	off	on	V6
4	A9	off	on	V5
5	A8	on	on	V4
6	A7	off	off	V3
7	A6	off	off	V2
8	A5	off		
9	A4	off		
10	A3	off		

NOTE: ON = 1
For rocker type recessed switches the on position is such that the switch is depressed on the on side with the red stripe visible on the off side.

	A	B	C	D	
1	CPU or M9401 Cable Connector				
2	OPTION A				
3	OPTION B				
4	RLV11 (Ref)				
5		M8013			RLV11
6		M8014			RLV11
7					
8					
9	BOOT TERMINATOR				

FIG. 1:H9273 Backplane Module Configuration

SIZE A | CODE SP | NUMBER RLV11-0-2 | REV A

DEC FORM NO EN-01022-16-N370-(381) DRA 108

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE RLV11 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

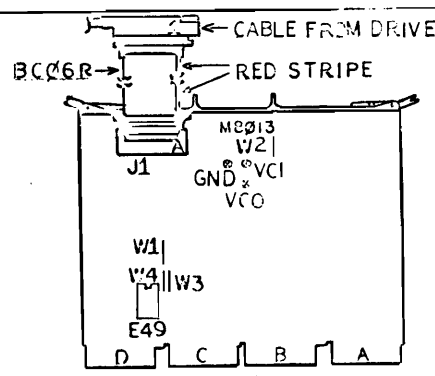


FIGURE 2: M8013 JUMPER LOCATIONS

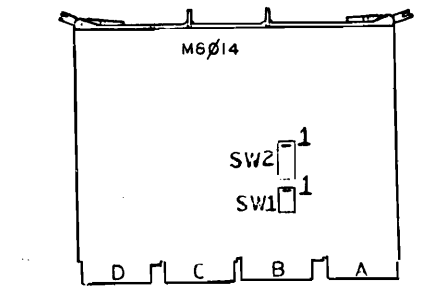


FIGURE 3: M8014 SWITCH LOCATIONS

SIZE A | CODE SP | NUMBER RLV11-0-2 | REV A

DEC FORM NO EN-01022-16-N370-(381) DRA 108

IV. ACCEPTANCE PROCEDURE

A. Equipment

1. Hardware

a. BA11-N 11/03 system with a minimum of 16K of memory
b. Console terminal (VT50, La36, etc.)
c. RL01 Disk Drive

2. Diagnostics

Program Name	Maindec
CVRLAA0 RLV11 RL01 Diskless Test	AC-D107A-MC
CZRLAB0 RL11/RLV11 Controller Test (Part 1)	AC-E036B-MC
CZRLBB0 RL11/RLV11 Controller Test (Part 2)	AC-E040B-MC

B. Acceptance Criteria

Program Name	Accept Time (Error Free)
CVRLAA0	10 Passes
CZRLAB0	5 Passes
CZRLBB0	3 Passes

V. PROGRAM START PROCEDURE

A. Program Loading

Follow standard DEC procedures for program loading. Absolute Loader for paper tape. XXDP, UPD1, UPD2, UPD3 for other media.

B. Program Starting

Program start location is 200. Use standard DEC procedures. For LSI-11 with ODT Type 200 G.

C. Program Execution Procedure

1. Program Example for CVRLAA

After loading and starting program, it will respond at the console with the following. See diagnostic listing for more detailed explanation or if errors are encountered.

2. Program Response Operator Action

CVRLA (Program Name)

L-CIK (L) N?	(Type Y carriage return for 11/03L with BDV11 RTC Enabled)
50HZ (L) N?	(Type carriage return if system is not 50HZ)
LSI (L) N?	(Type Y carriage return)
LPT (L) N?	(Type carriage return)
MEM (K) (D)16?	(Type carriage return)
DS-B	(Type S T A carriage return)
# Units (D) ?	(Type 1 carriage return)
Unit 1 RL11 (L) Y?	(Type N carriage return)
Bus Address (Ø)174400 ?	(Type carriage return)
Vector (Ø) 330 ?	(Type 160 carriage return)
BR Level (Ø) 5?	(Type carriage return)
Drive (Ø) Ø ?	(Type carriage return)
Change SW (L)?	(Type N carriage return)

CVRLA EOP 1 (approximately 45 seconds)

Type C (Control/C) to end execution

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY G Drayton	CHECKED R. Hallman	SECTION
DATE 24 April - 78	DATE 3-May-78	1
ENG Richard Hallman	PROD Hitt Gibson	ISSUED SECT.
DATE 26-Apr-78	DATE 3-May-78	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION RLV11-ØØ	RLV11-AK
1	MPØØ635	MAINTENANCE PRINT SET, RLV11	1	1
2	A-PL-RLV11-Ø-5	SOFTWARE LIST	1	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
RLV11 SHIPPING LIST	E-UA-RLV11-Ø-Ø	A	PL	RLV11-Ø		
	SHEET 1 OF 1	DIST				

SIZE	CODE	NUMBER	REV.
C	DD	M8Ø13-Ø	H

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS
D-UA-M8Ø13-Ø-Ø	3		RLV11 DISK CONTROL	B C D E F H
K-PL-M8Ø13-Ø-DBP	3		RLV11 DISK CONTROL	B C D E F H
D-CS-M8Ø13-Ø-1	5		RLV11 DISK CONTROL	B C D D E F
D-MD-5Ø12962-Ø-Ø	3		DRILL AND ETCH DRAWING	B B B B B B
		5Ø12962	ETCHED BOARD	C C C C C C
K-PC-M8Ø13-Ø-DBC			P.C. DESIGN DATA BASE (CALDEC)	REF C C C C

NOTES:

REVISIONS			
REV.	C	D	E	F	H
CHGD.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DATE	2-3-77	3-2-77	3-8-77	4-11-77	5-5-77

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DRN.	A. COLON	12-9-77
CHK.	[illegible]	[illegible]
ENG.	[illegible]	1-6-78
PROD. CTL	[illegible]	1-6-78

TITLE: REV11 DISK CONTROL

SIZE	CODE	NUMBER	REV.
C	DD	M8Ø13-Ø	H

SHEET 1 OF 1

SIZE	CODE	NUMBER	REV.
B	DD	M8Ø14-Ø	D

DRAWING NO.	NO. OF SHTS.	PART NO.	DESCRIPTION	REVISIONS
D-UA-M8Ø14-Ø-Ø	6		RLV11 BUS CONTROL	A B C D
K-PL-M8Ø14-Ø-DBP	2		RLV11 BUS CONTROL	A B C D
D-CS-M8Ø14-Ø-1	5		RLV11 BUS CONTROL	A B C C
D-MD-5Ø12963-Ø-Ø	5		DRILL & ETCH DRAWING	A A A A
		5012963	ETCHED CIRCUIT BOARD	B B B B
M8Ø14-O-L			P.C. DESIGN DATA BASE	REL - - -

NOTES:

REVISIONS		
DATE	CHG NO.	REV.
5-78	CC001	D
7-78	CC002	C
12/78	[illegible]93	D

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digital

USED ON OPTION/MODEL	
RLV11	

DRN. R. POPPENAL	4 NOV 7	TITLE RLV11 BUS CONTROL
CHK.	11/6/78	
ENG.	6-JAN-79	SIZE B / CODE DD / NUMBER M8Ø14-Ø / REV. D
PROD.	6-JAN-79	SHEET 1 OF 1

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WIRE TABLE

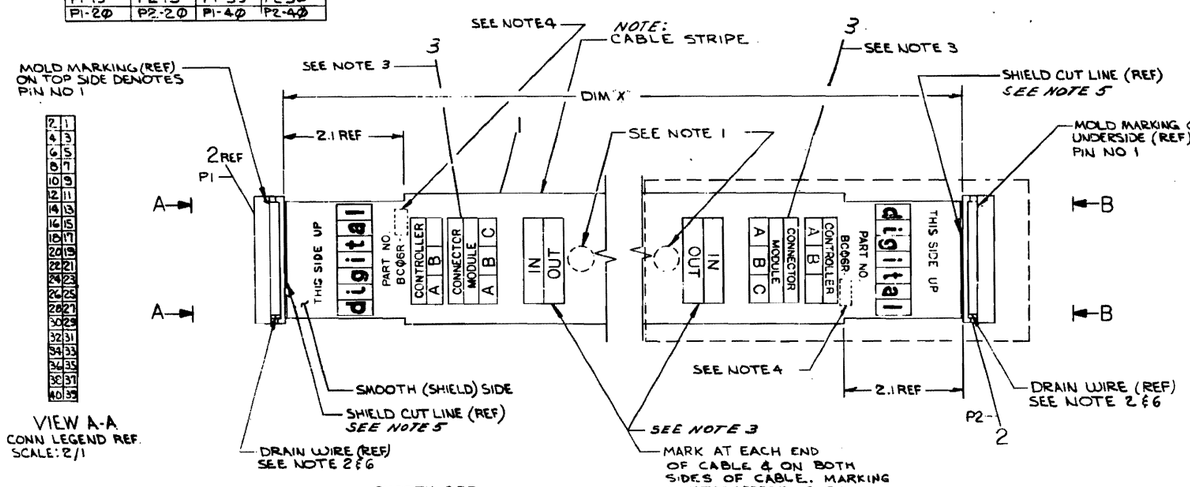
FROM	TO	FROM	TO
P1-1	P2-1	P1-21	P2-21
P1-2	P2-2	P1-22	P2-22
P1-3	P2-3	P1-23	P2-23
P1-4	P2-4	P1-24	P2-24
P1-5	P2-5	P1-25	P2-25
P1-6	P2-6	P1-26	P2-26
P1-7	P2-7	P1-27	P2-27
P1-8	P2-8	P1-28	P2-28
P1-9	P2-9	P1-29	P2-29
P1-10	P2-10	P1-30	P2-30
P1-11	P2-11	P1-31	P2-31
P1-12	P2-12	P1-32	P2-32
P1-13	P2-13	P1-33	P2-33
P1-14	P2-14	P1-34	P2-34
P1-15	P2-15	P1-35	P2-35
P1-16	P2-16	P1-36	P2-36
P1-17	P2-17	P1-37	P2-37
P1-18	P2-18	P1-38	P2-38
P1-19	P2-19	P1-39	P2-39
P1-20	P2-20	P1-40	P2-40

LEGEND

NUMBER	DIM "X"	PRECUT LENGTH	REMARKS
BCØ6R-01	1FT	1FT 1.5IN ± 1IN	SEE PRE-CUT VIEW C-C
BCØ6R-02	2FT	2FT 1.5IN ± 1IN	
BCØ6R-03	3FT	3FT 1.5IN ± 1IN	
BCØ6R-04	4FT	4FT 1.5IN ± 1IN	
* BCØ6R-05	4FT 6IN	4FT 7.5IN ± 1.5IN	SEE NOTE 7 *
BCØ6R-06	6FT	6FT 1.5IN ± 2IN	
BCØ6R-08	8 FT	8FT 1.5IN ± 2IN	
BCØ6R-10	10FT	10FT 1.5IN ± 2IN	
BCØ6R-12	12FT	12FT 1.5IN ± 3IN	
BCØ6R-20	20FT	20FT 1.5IN ± 3IN	
BCØ6R-25	25FT	25FT 1.5IN ± 3IN	
BCØ6R-30	30FT	30FT 1.5IN ± 6IN	
BCØ6R-50	50FT	50FT 1.5IN ± 1.0 FT	
BCØ6R-60	60FT	60FT 1.5IN ± 1.2FT	
BCØ6R-75	75 FT	75 FT 1.5IN ± 1.5 FT	
BCØ6R-A0	100FT	100FT 1.5IN ± 2 FT	
BCØ6R-01	7 FT	7FT 1.5IN ± 2 IN.	
BCØ6R-BE	EFT 6IN	8FT 7.5IN ± 1 IN.	SEE PRE-CUT VIEW C-C

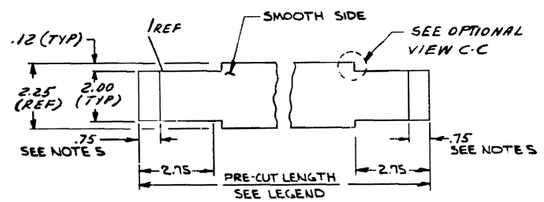
NOTES:

1. INSPECTION & TEST STAMPS TO BE PLACED AT EACH END OF THE CABLE ASSEMBLY.
2. DRAIN WIRE CONNECTS TO PIN NO 40.
3. RUBBER STAMP INFORMATION SHOWN USING INK (ITEM 3) & ART WORK DEC NO A-DC-7911699-0-0
4. STAMP APPLICABLE OPTION DASH NO ACCORDING TO LENGTH.
5. REMOVE SHIELD .75 FROM END OF PRECUT CABLE (SEE VIEW C-C).
6. COVER EXPOSED DRAIN WIRE WITH ITEM 4 PRIOR TO ASSY (BOTH ENDS)
7. * FOR RP04, RP05, RP06 USE WRAP AROUND VINYL LABEL. SEE VARIATIONS ON DRAWING NUMBER A-PS-3615389-0-0. ALSO SEE NEXT HIGHER ASSEMBLY E-IA-7009807-0-0 AND E-IA-7009808-0-0.

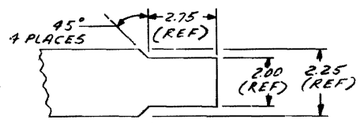


VIEW A-A
CONN LEGEND REF.
SCALE: 2/1

VIEW B-B
SCALE: 2/1



VIEW C-C
PRE-CUT VIEW
SCALE: NONE



OPTIONAL VIEW C-C
PRE-CUT VIEW
SCALE: NONE

A/R	PLASTIC TAPE	3612511-0	4
A/R	INK	4901150	3
2	CONNECTOR, 40 SOCKET	1211206	2
A/R	CABLE, 40 COND FLAT W/SHIELD	17-00034	1
QTY	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: RP04

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

DRW. E. McCann 12-22-78
CHK. [illegible] DATE
ENGR. [illegible] DATE
PROJ. ENGR. [illegible] DATE
MFG. [illegible] DATE

EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: BCØ6R I/O CABLE

SIZE D | CODE UA | NUMBER BCØ6R-Ø-Ø | REV. E

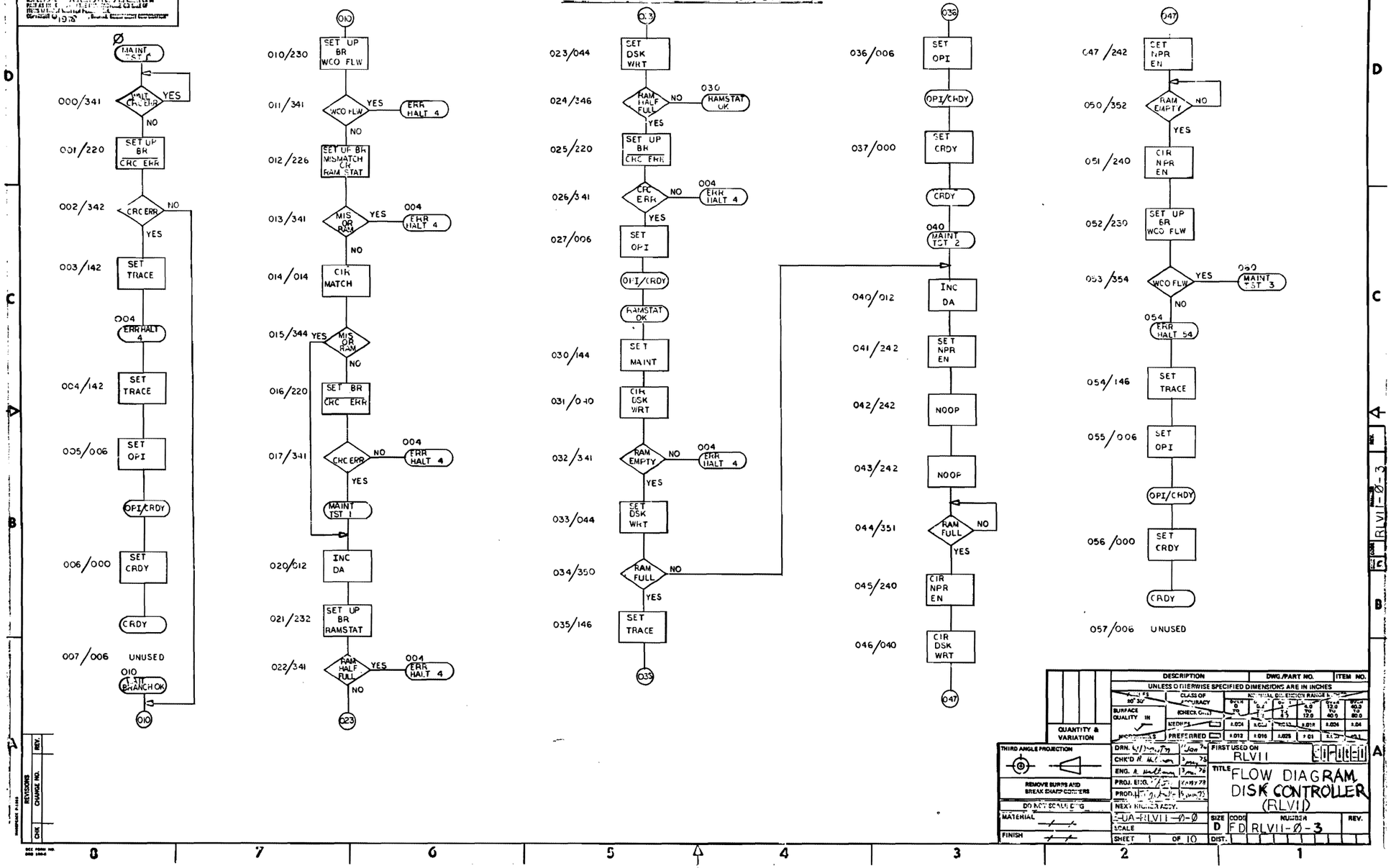
SCALE NONE | SHEET 1 OF 1

REVISIONS			
CHK	CHANGE NO	REV	
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[illegible]	[illegible]	B	
[illegible]	[illegible]	C	
[illegible]	[illegible]	D	
[illegible]	[illegible]	E	

DRAWING 40-107 1985
DEC FORM NO DRU 100-A

UA BC06R-0-0 E

MAINTENANCE FUNCTION Ø



DESCRIPTION	DWG./PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		

QUANTITY & VARIATION			
THIRD ANGLE PROJECTION	DRN.		
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D		
DO NOT SCALE DRG	ENG.		
MATERIAL	PROJ. ENGR.		
FINISH	PROD.		
	NEXT HIGHER ASSY.		
	SCALE		
	SHEET 1 OF 10		

FIRST USED ON: RLV11

TITLE: FLOW DIAGRAM, DISK CONTROLLER (RLV11)

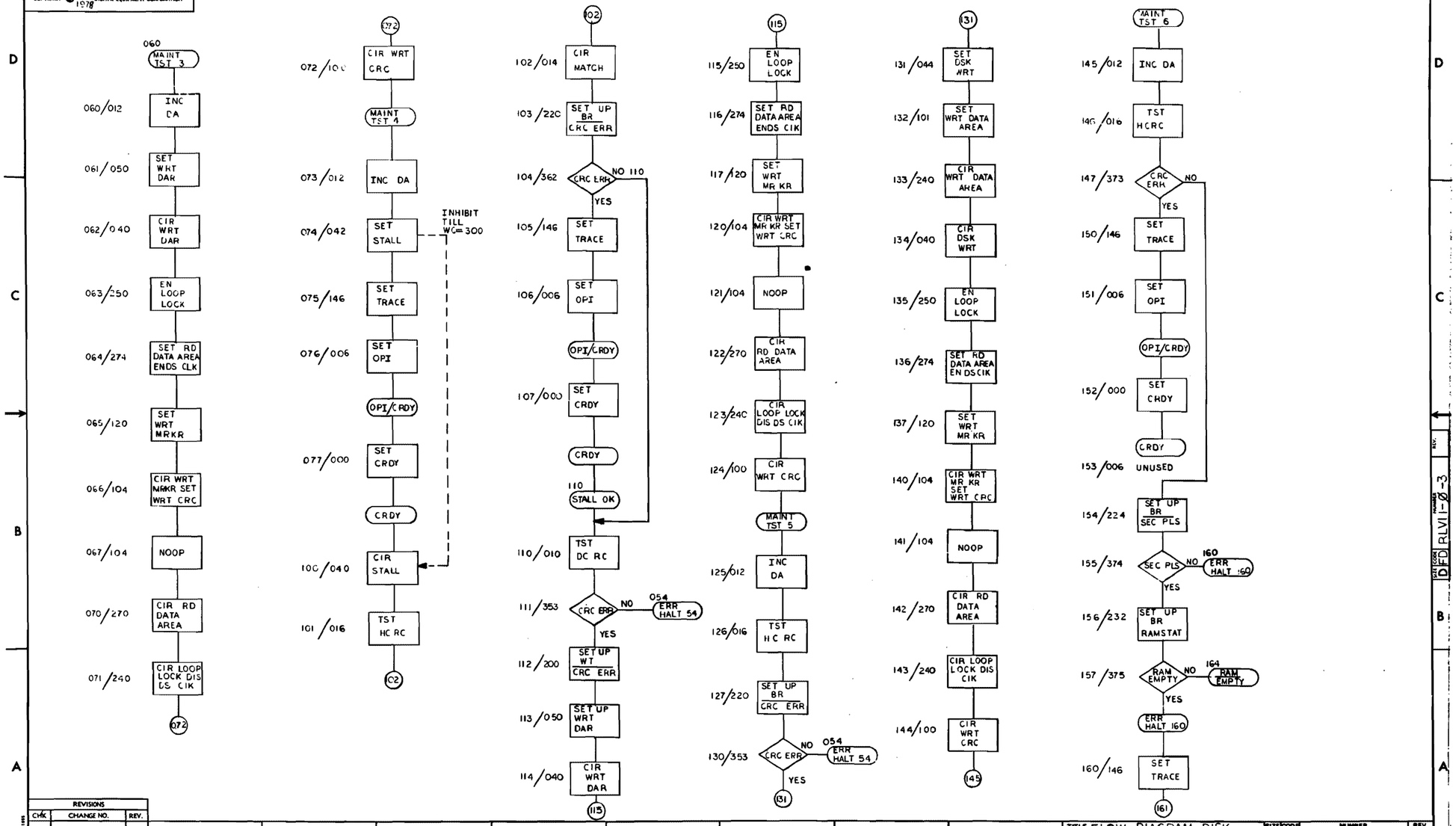
SIZE	CODE	NUMBER	REV.
D	FD	RLV11-Ø-3	

DIST.

REVISIONS	REV.	CHK	CHANGE NO.

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MAINTENANCE FUNCTION Ø (CONT)



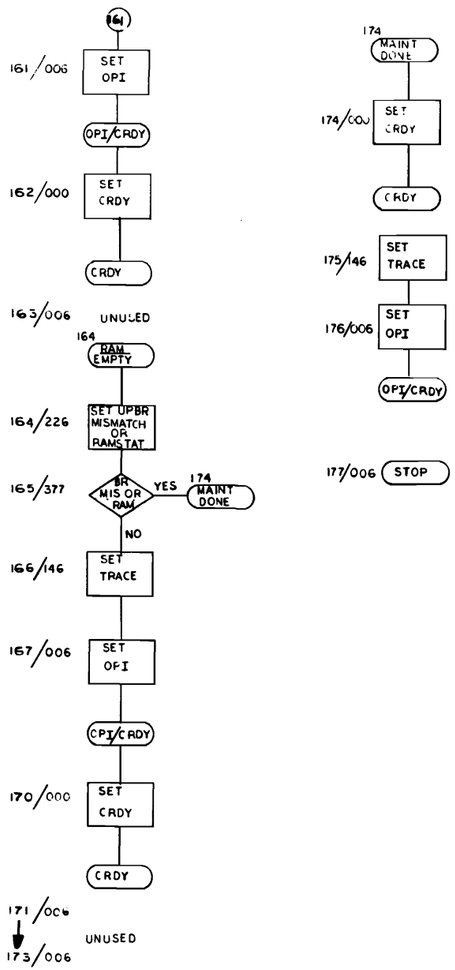
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLVII)	D	DFD	RLVII-Ø-3	
SCALE —	SHEET 2 OF 10	DIST.		

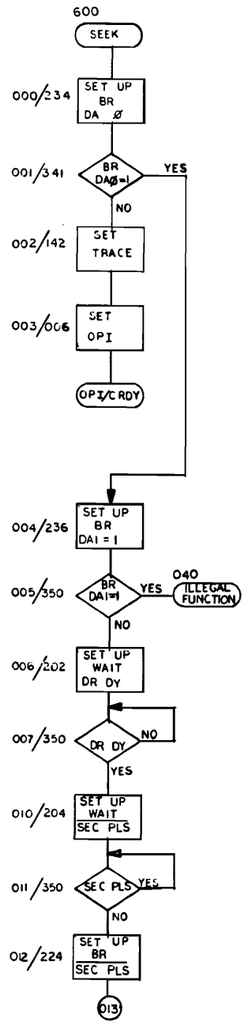
DEC FORM NO. 3BB 137

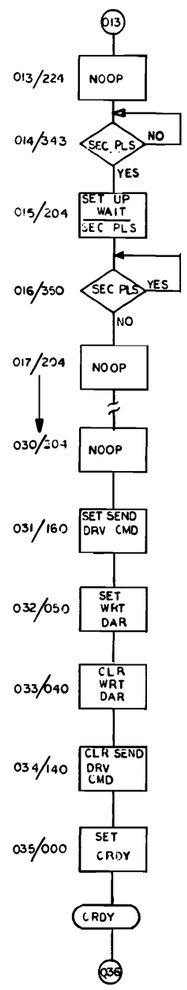
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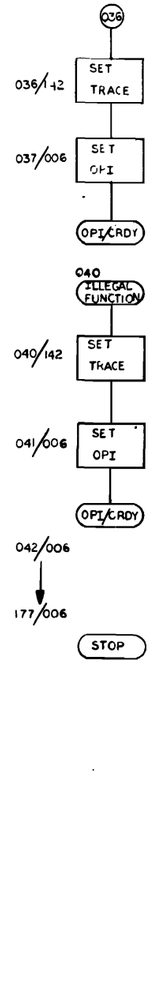
MAINTENANCE FUNCTION Ø (CONT)



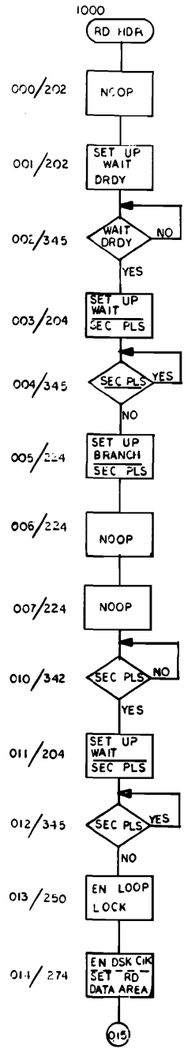
SEEK 600 FUNCTION 3

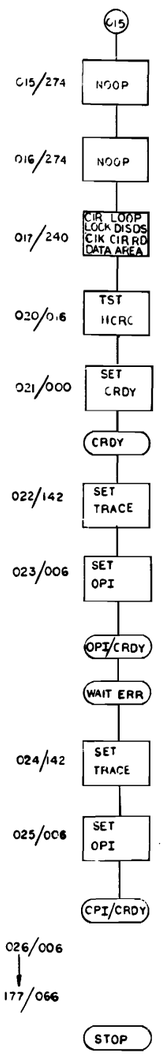






RD HDR 1000 FUNCTION 4





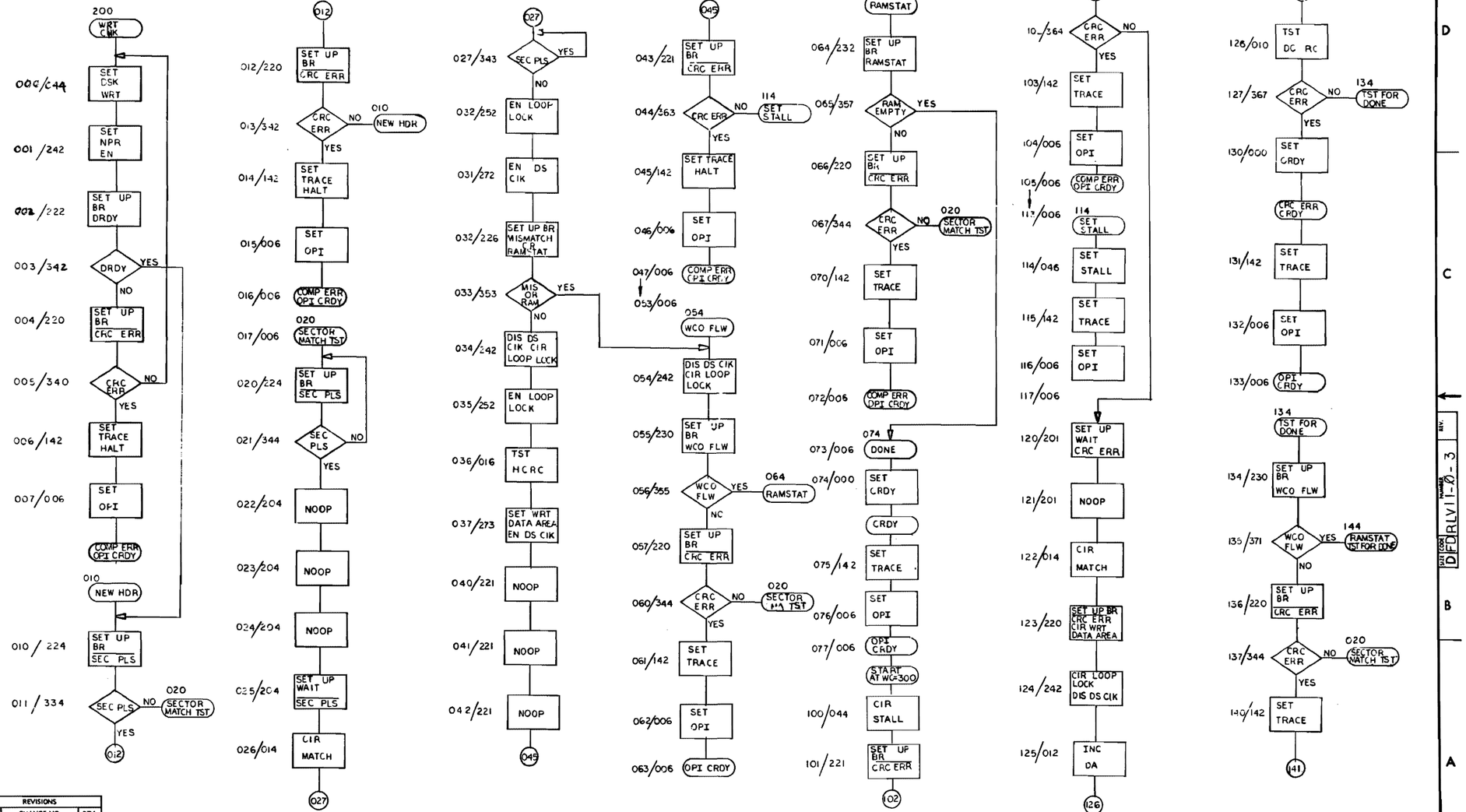
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLVII)	D	FD	RLVII-Ø-3	
SCALE —	SHEET 3 OF 10		DIGT.	

DFD RLVII-Ø-3 REV.

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WRITE CHECK 200 FUNCTION 1



REVISIONS		
CHK	CHANGE NO.	REV.

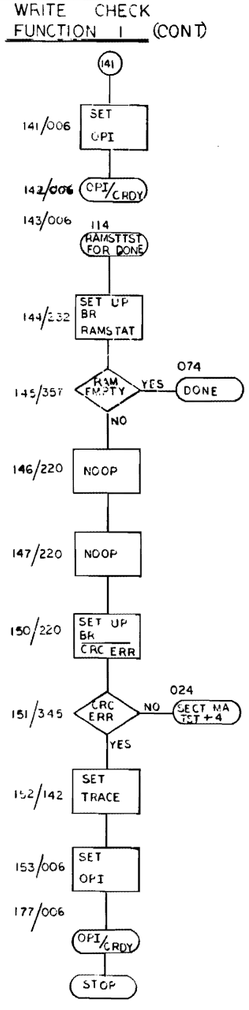
TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLV11)	D	FD	RLV11-Ø-3	
SCALE	SHEET 4 OF 10	DIST.		

DEC FORM NO. BRD 127

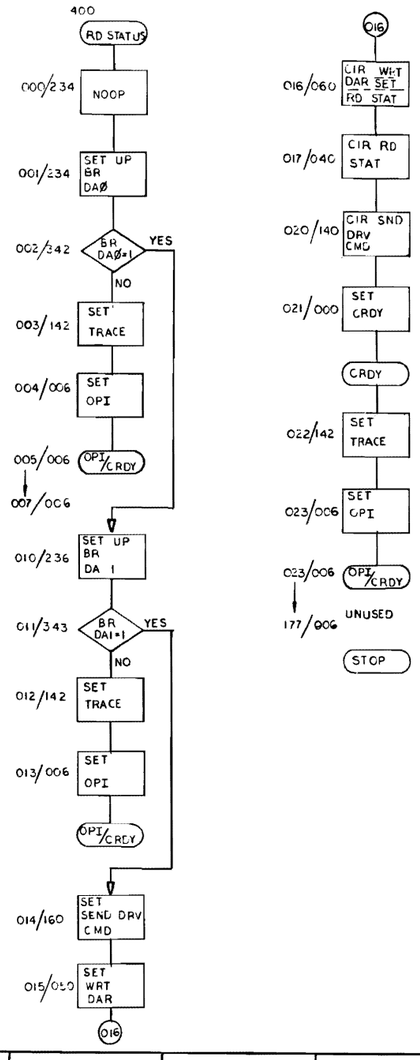
DFD RLV11-Ø-3 REV

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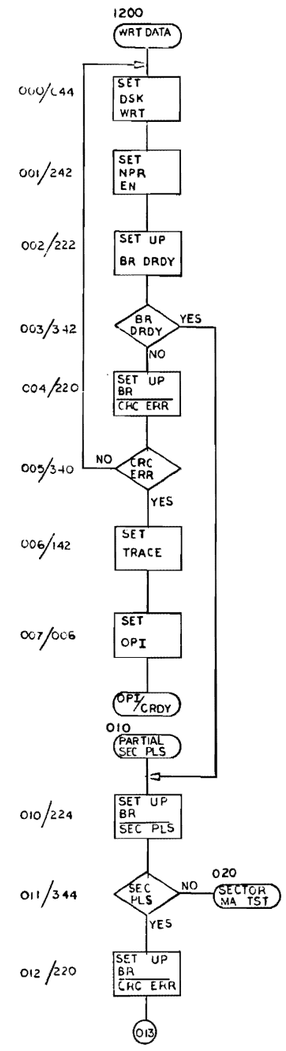
WRITE CHECK FUNCTION 1 (CONT)

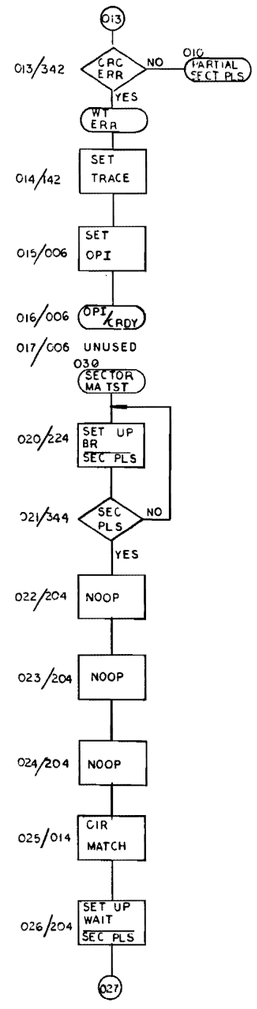


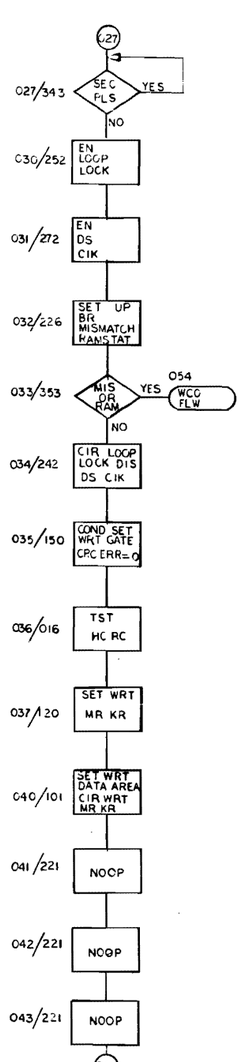
GET STATUS 400 FUNCTION 2



WRITE DATA 1200 FUNCTION 5





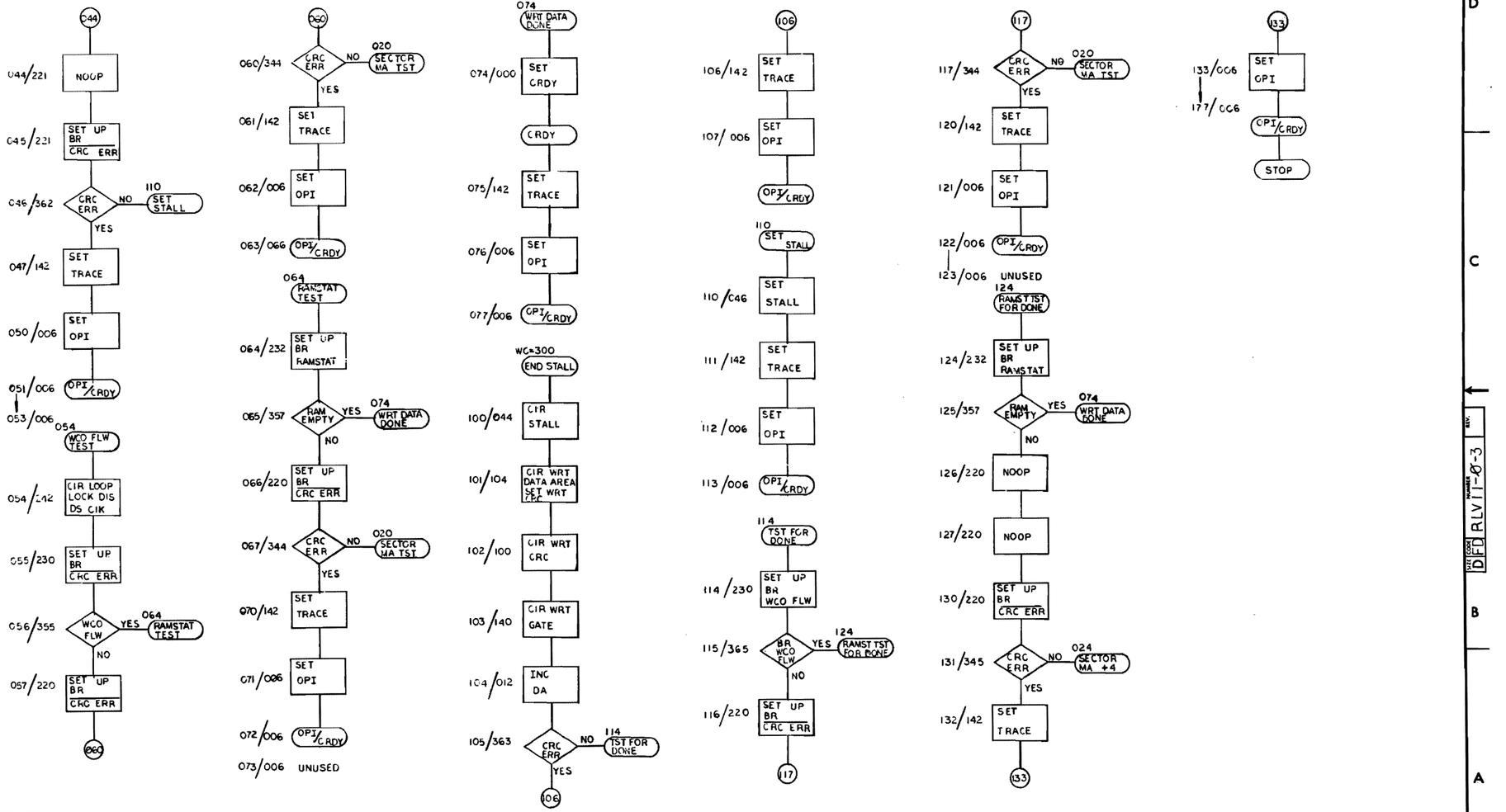


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLVII)	D	FD	RLVII-Ø-3	
SCALE —	SHEET 5 OF 10		DWG.	

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WRITE DATA 1200
FUNCTION 5 (CONT)

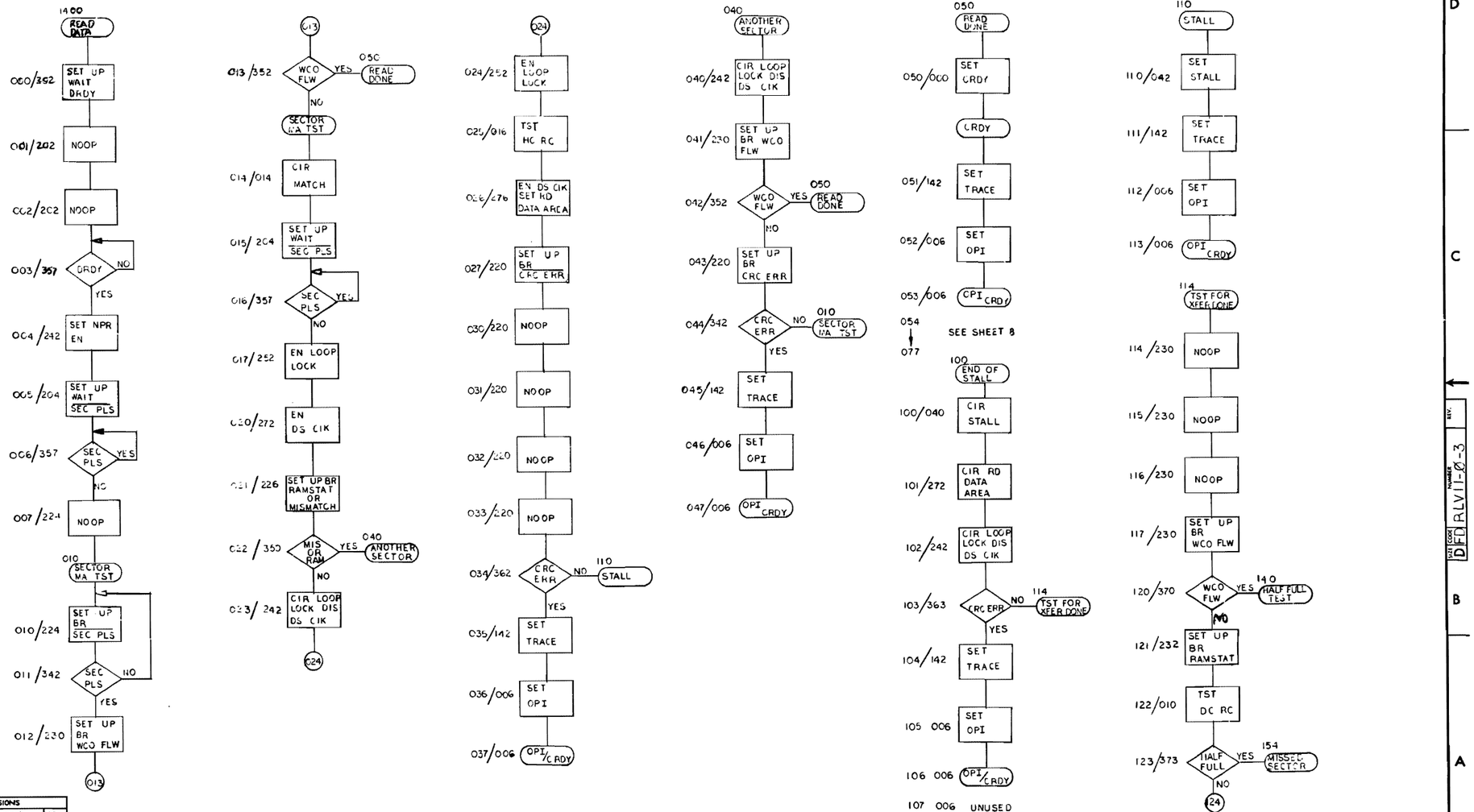


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLV11)	D	DFD	RLV11-Ø-3	
SCALE — SHEET 6 OF 10	DIST.			

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READ DATA 1400
FUNCTION 6



REVISIONS		
CHK	CHANGE NO.	REV.

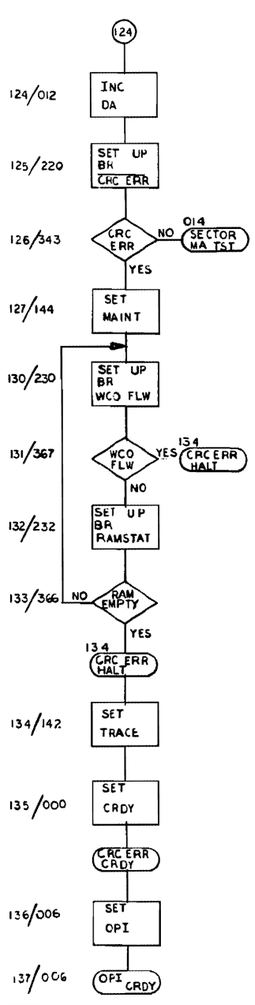
TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLV11)	D	FD	RLV11-Ø-3	

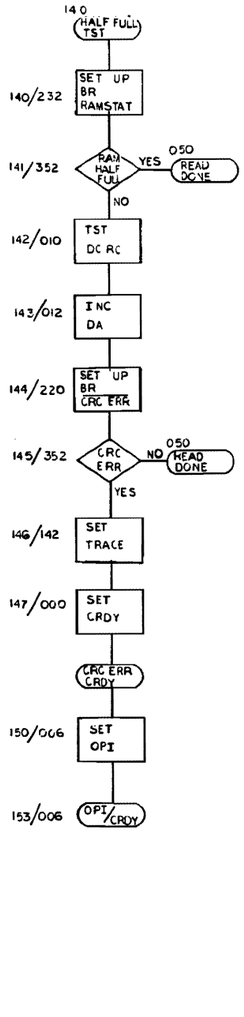
SCALE — SHEET 7 OF 10 DIST.

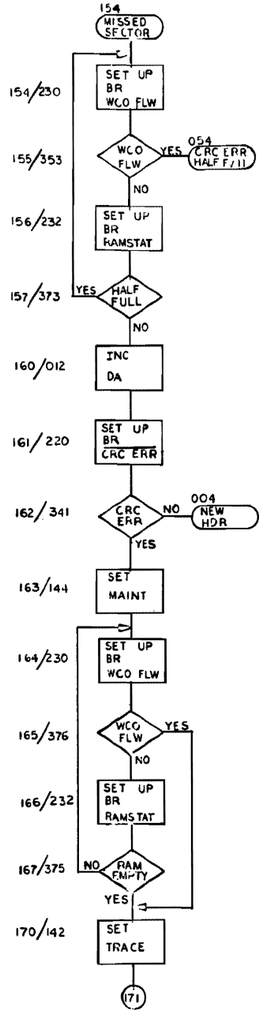
MANUFACTURED BY DEC FORM NO. DRG 137

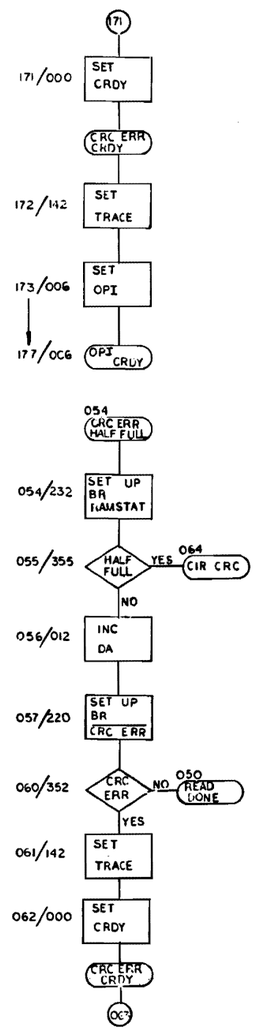
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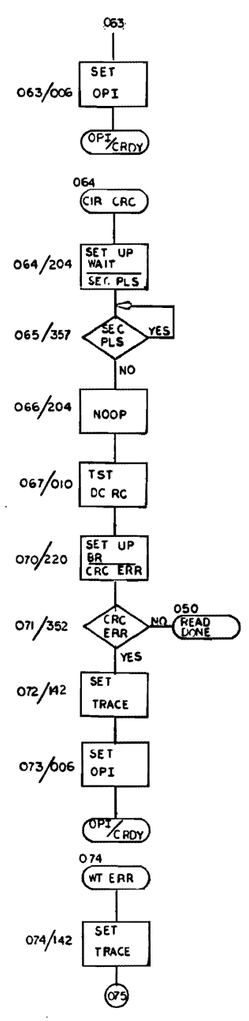
READ DATA
FUNCTION 6 (CONT)

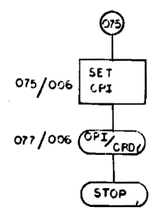












REVISIONS		
CHK	CHANGE NO.	REV.

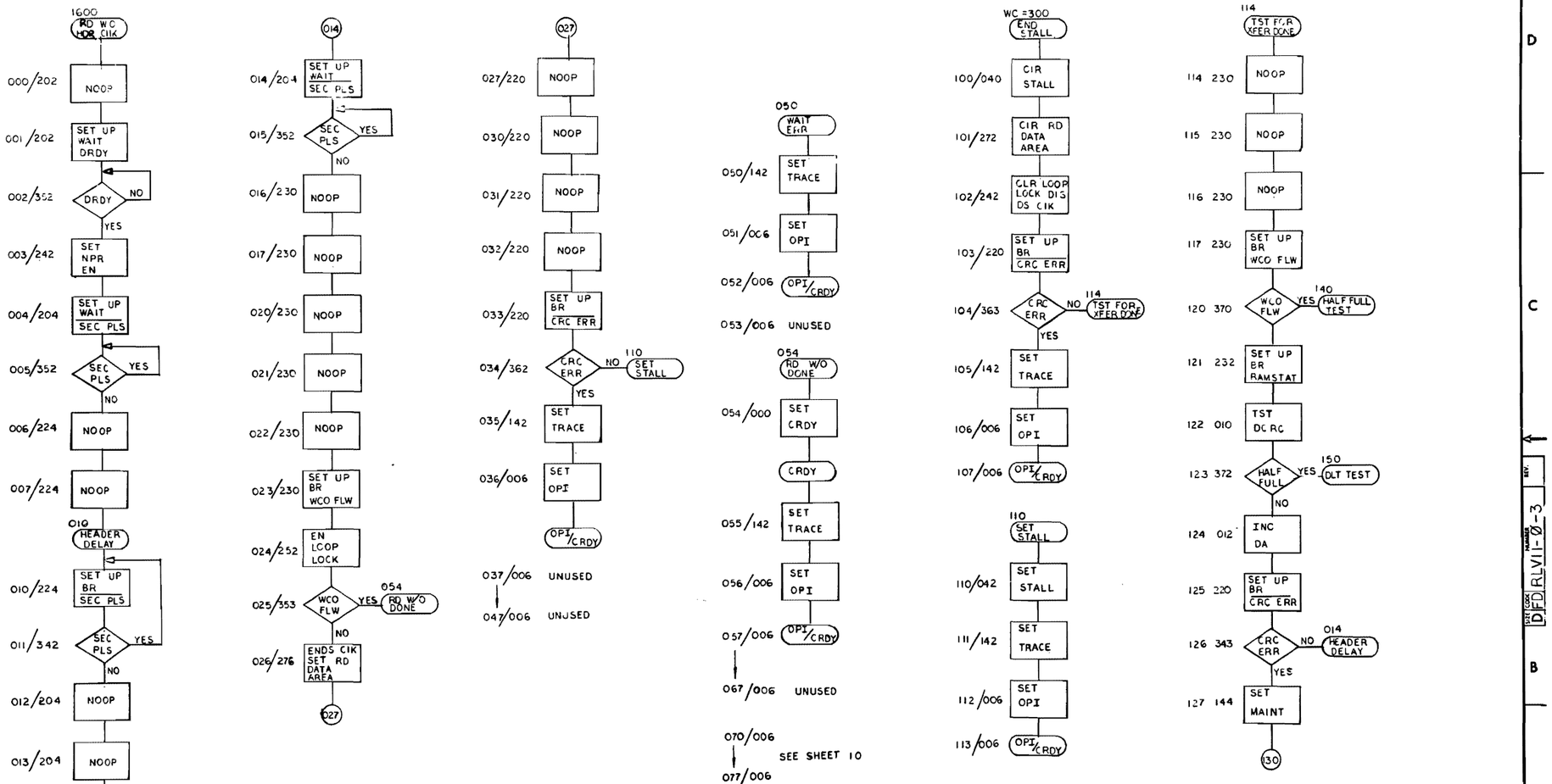
TITLE	FLOW DIAGRAM, DISK CONTROLLER (RLV11)			
SIZE	CODE	NUMBER		REV.
D	FD	RLV11-0-3		
SCALE		SHEET 8 OF 10		

DEC FD RLV11-0-3 REV. B

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READ W/O HDR CHK 1600

FUNCTION 7



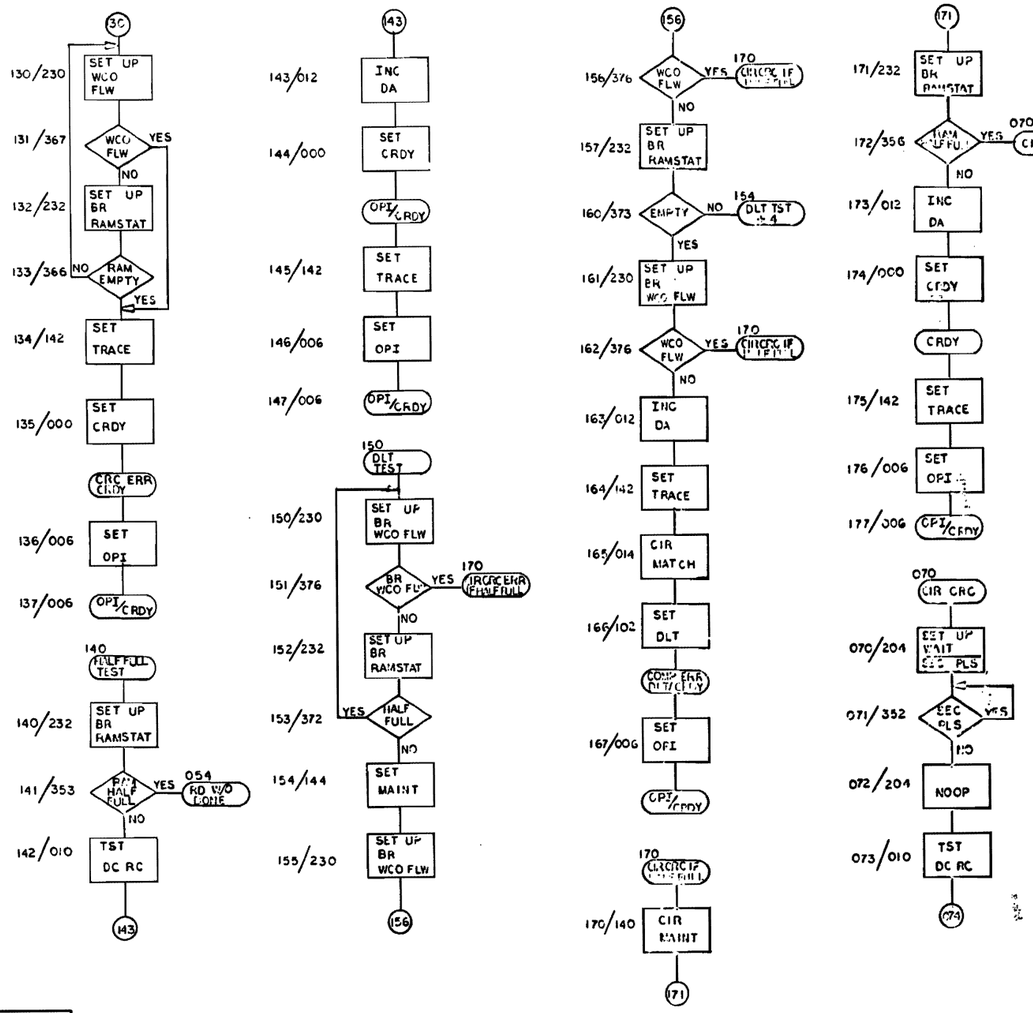
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
FLOW DIAGRAM, DISK CONTROLLER (RLV11)	D	DFD	RLV11-0-3	

SCALE — SHEET 9 OF 10

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READ W.O. HDR CHK FUNCTION 7 (CONT)



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE: FLOW DIAGRAM, DISK CONTROLLER (RLVII)

DWG NO. D FD RLVII-0-3

REV.

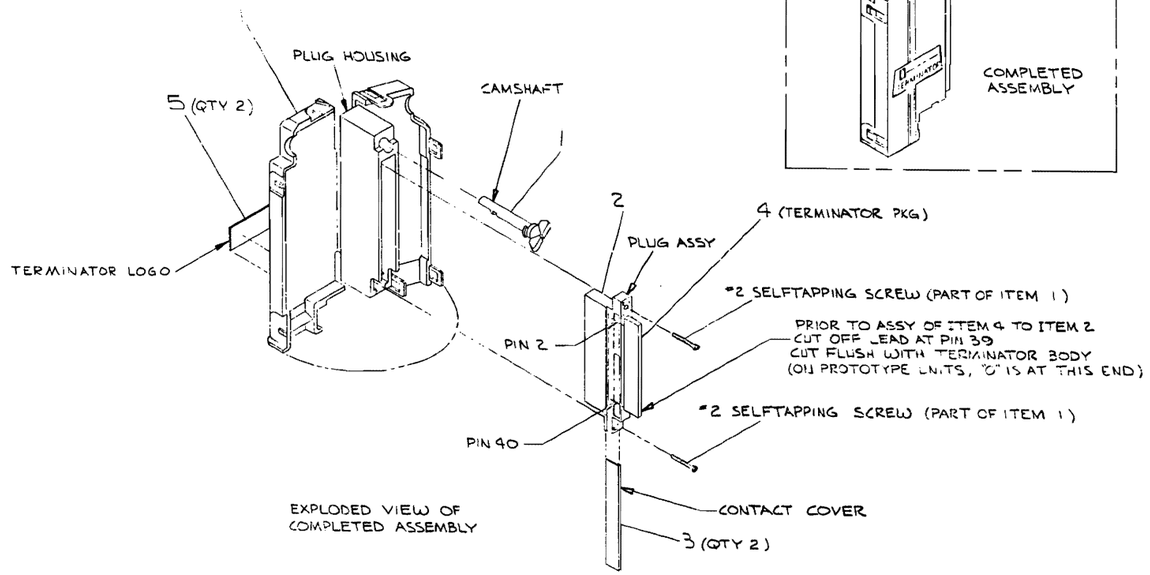
SIZE D

SCALE NONE

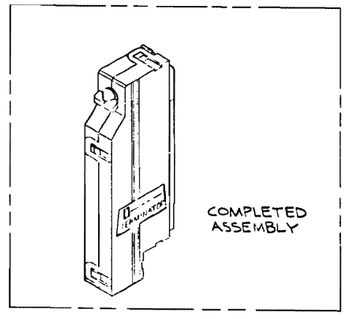
SHEET 10 OF 10

D FD RLVII-0-3 REV

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EXPLODED VIEW OF
COMPLETED ASSEMBLY



COMPLETED
ASSEMBLY

2	LOGO, TERMINATOR	A-DX-7416618-0-0	5
1	TERMINATOR PKG	1313242-00	4
2	COVER, CONTACT	12115911-11	3
1	PLUG ASSY	12115911-07	2
1	CONN PLUG HSG & CONSIST KIT	12115911-34	1

DRAWN	J.C.POOLE	9/29/75	
ENGR			
CHKD			
APPD			
MFG			

REV A

PKOG

TITLE: TERMINATOR ASSY

D|A|7012293-0-0 REV A

D|A|7012293-0-0 REV A

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY Richard Hallman — DATE 4/18/78
CHECKED Richard Hallman — DATE 4/26/78 — SECTION 1
ENG Richard Hallman — DATE 4/18/78
PROD H.T. Pendleton — DATE 3 May 78 — ISSUED SECT. 1

ITEM NO	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION ZJ257-RB	ZJ257-RZ*	ZJ257-PB*
1	AC-E036B-MC	CZRLAB0 RL11/RLV11 CTRL 1 (DOC)	1	1	-
2	AH-E037B-MC	CZRLAB0 RL11/RLV11 CTRL 1 (FICHE)	-	-	-
3	AK-E038B-MC	CZRLAB0 RL11/RLV11 CTRL 1 (PT1)	1	-	1
4	AK-E039B-MC	CZRLAB0 RL11/RLV11 CTRL 1 (PT2)	1	-	1
5	AC-E040B-MC	CZRLBB0 RL11/RLV11 CTRL 2 (DOC)	1	1	-
6	AH-E041B-MC	CZRLBB0 RL11/RLV11 CTRL 2 (FICHE)	-	-	-
7	AK-E042B-MC	CZRLBB0 RL11/RLV11 CTRL 2 (PT1)	1	-	1
8	AK-E043B-MC	CZRLBB0 RL11/RLV11 CTRL 2 (PT2)	1	-	1
9	AC-E044B-MC	CZRLCB0 RL01 Drive Test 1 (DOC)	1	1	-
10	AH-E045B-MC	CZRLCB0 RL01 Drive Test 1 (FICHE)	-	-	-
11	AK-E046B-MC	CZRLCB0 RL01 Drive Test 1 (PT1)	1	-	1
12	AK-E047B-MC	CZRLCB0 RL01 Drive Test 1 (PT2)	1	-	1
13	AC-E048B-MC	CZRLDB0 RL01 Drive Test 2 (DOC)	1	1	-
14	AH-E049B-MC	CZRLDB0 RL01 Drive Test 2 (FICHE)	-	-	-
15	AK-E050B-MC	CZRLDB0 RL01 Drive Test 2 (PT1)	1	-	1
16	AK-E051B-MC	CZRLDB0 RL01 Drive Test 2 (PT2)	1	-	1
17	AC-E246B-MC	CZRLEB0 RL01 Perf Exer (DOC)	1	1	-
18	AH-E247B-MC	CZRLEB0 RL01 Perf Exer (FICHE)	-	-	-
19	AK-E248B-MC	CZRLEB0 RL01 Perf Exer (PT1)	1	-	1
20	AK-E249B-MC	CZRLEB0 RL01 Perf Exer (PT2)	1	-	1
21	AC-E250B-MC	CZRLFB0 RL01 Drive Cmpt (DOC)	1	1	-
22	AH-E251B-MC	CZRLFB0 RL01 Drive Cmpt (FICHE)	-	-	-

TITLE: RLV11 Software List
ASSY NO.: E-UA-RLV11-0-0
SHEET 1 OF 2
SIZE: A | CODE: PL | NUMBER: RLV11-0-5 | REV. | ECO NO. | DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY Richard Hallman — DATE 4/18/78
CHECKED Richard Hallman — DATE 4/26/78 — SECTION 1
ENG Richard Hallman — DATE 4/18/78
PROD H.T. Pendleton — DATE 3 May 78 — ISSUED SECT. 1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION ZJ257-RB	ZJ257-RZ*	ZJ257-PB*
23	AK-E252B-MC	CZRLFB0 RL01 Drive Cmpt (PT1)	1	-	1
24	AK-E253B-MC	CZRLFB0 RL01 Drive Cmpt (PT2)	1	-	1
25	AC-B100A-MC	CVRLAA0 RLV11/RL01 Dskls (DOC)	1	1	-
26	AH-B101A-MC	CVRLAA0 RLV11/RL01 Dskls (FICHE)	-	-	-
27	AK-B102A-MC	CVRLAA0 RLV11/RL01 Dskls (PT1)	1	-	1
28	AK-E375A-MC	CVRLAA0 RLV11/RL01 Dskls (PT2)	1	-	1
		*NOT TO BE SHIPPED REFERENCE ONLY			

TITLE: RLV11 Software List
ASSY NO.: E-UA-RLV11-0-0
SHEET 2 OF 2
SIZE: A | CODE: PL | NUMBER: RLV11-0-5 | REV. | ECO NO. | DIST.

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NOTES:
1. FOR ROM PT. #2301762-00 INSERT W1 AND W3. DELETE W2 AND W4.
   FOR ROM PT. #2305887-00 INSERT W2 AND W4. DELETE W1 AND W3.
2. * MARKS REFERRING TO POINT ON D CS-M8013-0-1

MICRO SEQUENSER

DRNG		FIRST USED ON	RLV11
CHK'D		TITLE	RLV11 DISK CONTROL (DCI)
ENG.			
PROJ. ENG.			
PROD.			
NEXT HIGHER ASSY.			
D-UA-M8013-0-1		SIZE D	CODE CS
SCALE	NONE	NUMBER	M8013-0-1
SHEET	1 OF 5	REV.	F
		DIST.	

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+5V
EN CON H
MF1
A4Ø 1A
A3Ø4 E6
DC2 EN CON L
74LS32 E35
DC2 PLSTL

74LS175 L41
DC1 NPR DIS H
74LS08 E25
DU2
DC2 NPR EN H
DC2 RD DATA AREA H
DC2 EN LOOP LOCK H
DC2 EN LOOP LOCK L
DC2 EN OS CLK H
DC2 EN SYS CLK H

74LS175 C27
CU2
DC2 DET L
DC2 WRT CRC H
DC2 WRT MRK H

DC1 INIT B L

74LS175 C48
DC2 CON Ø H
DC2 CON 1 H
DC2 CON 2 H
DC2 BRANCH H
DC2 BRANCH L

74LS175 C33
DC2 STALL H
DU2
DC2 DSK WRT H
DC2 WRT DAR H
DC2 RD STAT H
DC2 RD DATA AREA H
DU2
DC2 EN WRT ADR H
INITBL

74LS138 C46
DC1 ROM 5 H
DC1 ROM 6 H
DC1 ROM 7 H
DC2 PLS 5 L
DC2 PLS 4 L
DC2 PLS 2 L
DC1 INSTR DTS H
DC1 CLK BC L
DC1 WC EN H
EN

74LS175 C36
DC2 TRACE HALT H
DV2
DC2 MAINT H
DC2 MAINT L
DC2 WRT GATE H
DC2 SEND DRV CMD H
74LS08 C36
DC3 CRC NOT ZERO L

74LS138 C37
DW2
DC2 SET CRDY L
DC2 SET DAT L
DC2 TST DCRC L
DB2
DC2 SNC DR L
DC2 CLR MATCH L
DC2 TST HCRC L
DC1 1 HIGH
MICRO SEQUENCER LATCHES

* (DC3)XRDY (1) L (DF2)

DC1 SEQC RDY (1) L
DC1 ROM 1 H
DC1 ROM 2 H
DC1 ROM 3 H
DC1 ROM 4 H

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
RLV11 DISK CONTROL (DC2)	D	CS	M8013-0-1	F
SCALE NONE	SHEET 2 OF 5		DIST.	

DEC FORM NO. DRD 130

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DC3 2 HIGH

DC3 SYS (0) H

DISABLE CRYS L BDI

EXT CRYS L BCI

CD2 DC3 B2 MAR

+5V

WRT PRECOMP

E10 SOINS

STB

DC3 WRT DATA PLS H

DC3 WRT DATA PLS L

23-219A1 E8

74161 E12

DCI INIT B L

CLR

LD

CLK

CNT EN

CRY EN

CO

EN

DC1 INIT B L

(BC3) SER DATA OUT CN2

DC3 CRC (1) H

DC2 WRT CRC H

DC1 WC EN H

DC2 WRT MKR H

DC2 WRT DHR H

DC2 MAINT L

DC4 B3 DATA (1) H

DC2 CH LOOP LOCK H

DC3 MUX DATA L

(BC2) DATA (1) L CB2

DC1 WRT DATA AREA H

DC4 MARKER (1) L

DC1 CLK BC L

DC2 BRANCH H

DC2 EN B3 CLK H

DC4 B3 CLK H

DC1 WRT DATA AREA H

HEADER MATCH DETECTION

CRC GENERATOR

DC3 2 HIGH

DC1 EN CRC ERR H

DC3 CRC (1) H

DC3 CRC NOT ZERO H

DC3 CRC NOT ZERO L

DC2 SET OPI L

DMR2 DC3 PRESET OPI L

DC2 TST MCRC L

DC2 TST DCRC L

DC3 CRC ERR (1) H

DC3 CRC ERR (0) H

DC3 MISMATCH L

CK2

DC2 CLR MATCH L

DC3 MIS MATCH H

+5V

DC3 2 HIGH

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
RLV11 DISK CONTROL (DC3)	D	CS	M8013-0-1	F
SCALE NONE	SHEET 3 OF 5		DIST.	

M8013-0-1 REV F

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READ DATA PULSE GENERATOR

DC2 MAINT H DV2
DC3 WRT DATA PLS L
74S37 E11
74S37 E11
E2 PDIS NS
R25 220
74S10 E14
DC4 3 HIGH
DC5 READ DATA H
74LS112 E23
DC2 EN LOOP LOCK L
74S04 E6
+5V
R51 1K
DC4 3 HIGH
74S04 E21
74S00 E29
74S00 E29
74S00 E29
74S00 E29
74S10 E14
DC4 EARLY ERROR L
PHASE / FREQUENCY ERROR DETECTION
74S10 E14
DC4 LATE ERROR L
74S04 E21
74S04 E21

READ DATA SEPARATOR

DC4 3 HIGH
DC2 EN DS CLK H
74S74 E23
DC1 INIT B L
74S74 E23
DC4 3 HIGH
DC4 DS DATA(1) H
74S74 E23
DC4 3 HIGH
DC4 MARKER(1) H
74LS112 E28
DC4 MARKER(1) L
DC4 HIGH GAIN L
* (DC3) CARRY (1) L
74S08 E23
74S08 E19
74S08 E18
DC4 MARKER(1) L
DC4 DS CLK H

DC4 HIGAIN L (E23-9)
75452 E39
R56 750 1%
+12V
D15 SM 6-BRZI 6.8V
R31 383 1%
Q5 2N4403
D6 IN4454
Q7 IN4454
D8 IN4454
R42 470
D10 4N6-BRZI 6.8V
R34 6.19K 1%
R21 150 1/2W
R22 150 1/2W
R23 150 1/2W
R24 150 1/2W
D11
D12
C80 .47uF
T.P.1 VC1
R50 470
C81 39PF
R33 2.13K 1%
R35 2.43K 1%
DC4 LATE ERROR L
DC4 EARLY ERROR L
Q7 2N4403
Q8 2N4403
Q9 2N4403
R20 75
C65 100PF
D9 IN4454
R17 100 1%
R15 100 1%
C61
R32 4.87K 1%
R41 5K
C68 .47uF
E54 270 1/2W
-10V
D5 6.8V 4N6-BRZI
C45 .47uF
74S124 E25
CK E11
INH VCO CLK L
T.P.2 VCO
TP3 GND
+5V
R52 1K
R53 1K
EXT PLL CLK L
AE1
AH1
74S00 E5
74S00 E5
74S00 E5
+12V
R43 5.1K
C66 5600 PF
C60 .1uF
CTL VCO DCG 555 E1
R37 2.2K
R19 120
D13 IN754A
Q3 MX8A55
R20 220
C72 15uF
C73 15uF
D14 IN754A
Q4 MX8A55
C67 .047uF
R27 220
D1 D672
D2 D672
R1 2.7 1/2W
-10V
C74 15uF
D10 LM320
C69 6.8uF
AK1
-5V OUT

VCO CONTROL - CHARGE PUMP AND FILTER

-10V AND -5V CHARGE PUMP

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
RLV11 DISK CONTROL (DC4)	D	CS	M8013-0-1	F
SCALE NONE	SHEET 4 OF 5		DIST. 1	

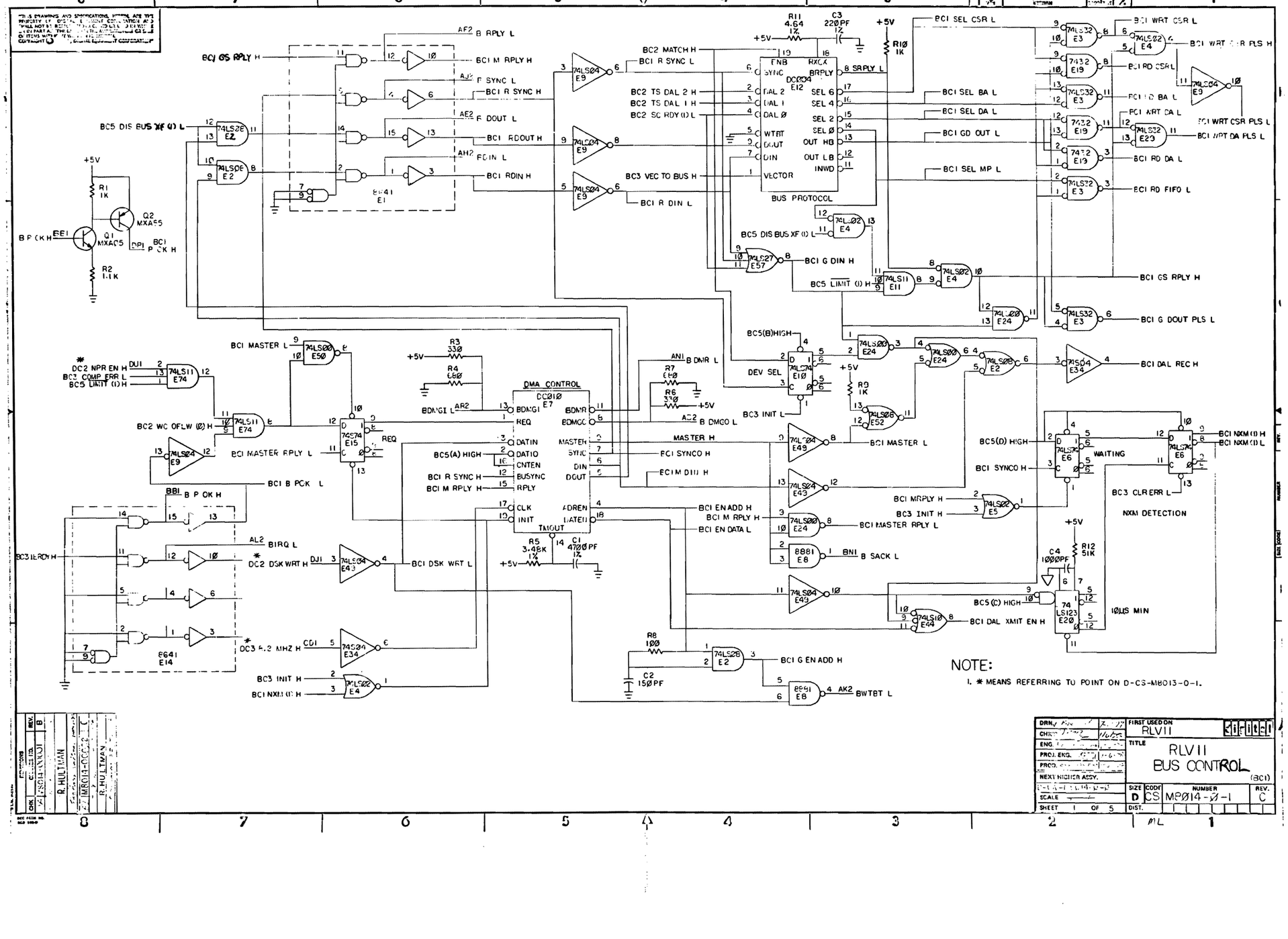
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(BC5) DRV SEL Ø (1) H CE2
DC5 A HIGH
75113 E51
(BC5) DRV SEL 1 (1) H CA1
DC3 WRT DATA PLS H
75113 E37
DC5 A HIGH
75113 E37
DC2 WRT GATE H
DC2 MAINT H (DW2)
74LS04 E23
74LS00 E25
DC2 SEND DRV CMD H
75113 E43
DC5 A HIGH
75113 E48
(BC1) POK H (DP2)
DC1 INIT B L
DC3 MUX DATA L
DC3 SYL (Ø) H
74LS74 E4
DC5 A HIGH
+5V
R3 82 1/2W
R4 82 1/2W
R5 82 1/2W
R6 82 1/2W
R7 82 1/2W
R8 82 1/2W
E63 82
R9 82 1/4W
R10 82 1/4W
R11 82 1/4W
R12 82 1/4W
R13 82 1/4W
R14 82 1/4W
DC5 A HIGH
75107 E33
CI2 DC5 DRIVE READY H
74LS04 E33
74LS00 E20
DC5 GATED SEC PLS L
DC5 READ DATA H
DC2 MAINT H (DW2)
74LS74 E61
DC5 SEC PULSE (1) H
DC5 SEC PULSE (Ø) H
DC5 STATUS CLR H
CH2 DC5 DRIVE ERR H
DC5 STATUS IN H
74S153 E13
DC4 DS DATA (1) H
DC1 EN RD STAT H
DC2 EN SYS CLK H
DC1 INIT B L
74LS74 E61
DC3 A HIGH
CL2 DC5 SER DATA IN H
DC1 CLK 8C H (CF2)
DC1 INIT B L
AA2 BA2 CA2 DA2 BV1 AC2 BC2 CC2 DC2 AJ1 BJ1 AM1 BM1 AT1 BT1 CT1 DT1
+5V
C1 THRU C59 .01UF
C78 THRU C80 .01UF
C70, C71, C75, C76 6.8 UF
AD2 BD2 AJ2 AS2 AM2
+12V
C77 6.8 UF
+5V
R55 1K
DC5 A HIGH

DRIVE BUS INTERFACE

REVISIONS		
CLK	CHANGE NO.	REV.

TITLE: RLV11 DISK CONTROL (DC5)		SIZE: D	CODE: DCS	NUMBER: M8013-Ø-1
CAGE: MCNG	SHEET: 5 OF 5			REV: F



DRN.	
CHK.	
ENG.	
PROJ. ENG.	
PROD.	
NEXT HIGHER ASSY.	
SCALE	
SHEET 1 OF 5	

FIRST USED ON: RLV11

TITLE: RLV11 BUS CONTROL (BCI)

SIZE	CODE	NUMBER	REV.
D	CS	M8014-0-1	C

DIST.

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BUS XCVRS

WC/BA LO BYTE

WC/BA HI BYTE

DISK ADDRESS REGISTER

DISK ADDRESS SERIALIZER

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
RLV11 BUS CONTROL (BC2)	D	CS	M8014-0-1	C
SCALE —	SHEET 2 OF 5	DIST.		

DEC FORM NO. DRD 138

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INTERUPT CONTROL

DC0Ø3 E16

BC3 IE RDY H
BIAK I L AM2
B INIT L AT2
BCI R DIN L
RQSTA
BIAKI
BINIT
EDIN
RQSTB
ENA DAT
ENE DAT
ENA CLK
ENA ST
BIRQ
BIAKO
INITO
VECTOR
VEC RQST
ENB ST
ENB CLK

R15 330 +5V
R16 66Ø
R23 1K +5V
R13 33Ø +5V
R14 66Ø

BC5(B)HIGH
74LS74 E1D
BC3 IERDY H
BC3 C RDY(I) H
BC3 INIT H
74LS02 E5
AN2 BIAKO L
BC3 INIT L
BC3 VEC TO BUS H

BCI WRT CSR PLS H
74LS174 E26
R2Ø R21 R22 1ØK +5V

BC2 TS DAL 1H
BC2 TS DAL 2H
BC2 TS DAL 3H
BC2 TS DAL 6H
BC2 TS DAL 8H
BC2 TS DAL 9H
D3 D2 D1 DØ D4 D5
R3(I) R2(I) R1(I) RØ(I) R4(I) R5(I)
CLK CLR
CVI BC3 FO (I) H
DCI BC3 F1 (I) H
DDI BC3 F2 (I) H
CEI BC3 DRV SEL Ø (I) H
CCI BC3 DRV SEL 1 (I) H

E70 8097 (15)
BCI RD CSR L

* DC2 SET C RDY L DHI 1Ø 74LS03 E52
BC5(G) HIGH
74LS74 E33
BC3 COMP ERR H
BCI WRT CSR PLS L
BCI TS DAL 7 H
74LS32 E23
74Ø5 E56
74LS04 E62 12 CRI
BC3 CLR ERR H
BC3 CLR ERR L
BC3 C RDY (I) H
DFI BC3 C RDY (I) L

BCI NXM (I) L
BC3 C RDY(I)H
DC5 DRV ERR H CHI
DC3 CRC ERR(I) H DLI
74LS51 E4Ø
74LS1Ø E44
74LS04 E43
BC3 COMP ERR L
BC3 COMP ERR H
8097 E76
BC2 TS DAL 15 H
* DC5 DRIVE READY H DT2
BC2 TS DAL Ø H

+5V R17 18Ø K
C5 6.8 UF
* DC2 INC DA L DBI
74LS123 E2Ø
BC5(G)HIGH
74LS74 E63

* DC2 DLT L CUI
74LS08 E52
* DC3 PRESET OPI L DMI
74 LS1Ø9 E69
BC5(G) HIGH
BC3 CLR ERR L

4 BC5(C) HIGH
74S74 E15
BCI R SYNC L
BC3 SCRDY(I) L

* DC3 MIS MATCH L CKI
74LS02 E51

BCI NXM (I) H

8097 E30
BC3 INIT H
BC2 TS DAL 7 H
BC2 TS DAL 1Ø H
BC2 TS DAL 12 H
BC2 TS DAL 13 H
BC2 TS DAL 11 H
BC2 TS DAL 14 H

REVISIONS		
CHK	CHANGE NO.	REV

TITLE			SIZE	CODE	NUMBER	REV.
RLV11 BUS CONTROL (BC3)			D	CS	M8Ø14-Ø-1	C
SCALE	SHEET 3 OF 5	DIST.				

DEC FORM NO. SMD 138

MAØ14-Ø-1

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BCI RD FIFØ L
BCI EN DATA L
74LS00 E59
BC5 LD BOUT PLS L
BC5 ED BIN H
BCI MDIN H
FIFO OUTPUT BUFFER
74LS295 E65 — BC2 TS DAL 6 H, BC2 TS DAL 9 H, BC2 TS DAL 10 H, BC2 TS DAL 11 H → BC2 TS DAL 4 H, BC2 TS DAL 8 H, BC2 TS DAL 9 H, BC2 TS DAL 10 H
74LS295 E31 — BC2 TS DAL 4 H, BC2 TS DAL 5 H, BC2 TS DAL 6 H, BC2 TS DAL 7 H → BC2 TS DAL 5 H, BC2 TS DAL 6 H, BC2 TS DAL 7 H, BC2 TS DAL 11 H
74LS295 E77 — BC2 TS DAL Ø H, BC2 TS DAL 1 H, BC2 TS DAL 2 H, BC2 TS DAL 3 H → BC2 TS DAL Ø H, BC2 TS DAL 1 H, BC2 TS DAL 2 H, BC2 TS DAL 3 H
74LS295 E38 — BC2 TS DAL 12 H, BC2 TS DAL 13 H, BC2 TS DAL 14 H, BC2 TS DAL 15 H → BC2 TS DAL 12 H, BC2 TS DAL 13 H, BC2 TS DAL 14 H, BC2 TS DAL 15 H
74LS295 E64 — BC2 TS DAL 8 H, BC2 TS DAL 9 H, BC2 TS DAL 10 H, BC2 TS DAL 11 H → BC2 TS DAL 8 H, BC2 TS DAL 9 H, BC2 TS DAL 10 H, BC2 TS DAL 11 H
74LS295 E54 — BC2 TS DAL 4 H, BC2 TS DAL 5 H, BC2 TS DAL 6 H, BC2 TS DAL 7 H → BC2 TS DAL 4 H, BC2 TS DAL 5 H, BC2 TS DAL 6 H, BC2 TS DAL 7 H
74LS295 E71 — BC2 TS DAL Ø H, BC2 TS DAL 1 H, BC2 TS DAL 2 H, BC2 TS DAL 3 H → BC2 TS DAL Ø H, BC2 TS DAL 1 H, BC2 TS DAL 2 H, BC2 TS DAL 3 H
S/I = 1, M/C = 6
BC5(L) HIGH
FIFO INPUT BUFFER
BC5(E) HIGH
BC5(L) HIGH
BC5(F) HIGH
BC5(G) HIGH
BC5(M) HIGH
BC5(C) HIGH
BC4 TS FIFO Ø H
BC4 TS FIFO 1 H
BC4 TS FIFO 2 H
BC4 TS FIFO 3 H
BC4 TS FIFO 4 H
BC4 TS FIFO 5 H
BC4 TS FIFO 6 H
BC4 TS FIFO 7 H
BC4 TS FIFO 8 H
BC4 TS FIFO 9 H
BC4 TS FIFO 10 H
BC4 TS FIFO 11 H
BC4 TS FIFO 12 H
BC4 TS FIFO 13 H
BC4 TS FIFO 14 H
BC4 TS FIFO 15 H

BC5 ED BIN H
BCI M DIN H
74LS295 E32 — BC2 TS DAL 12 H, BC2 TS DAL 13 H, BC2 TS DAL 14 H, BC2 TS DAL 15 H → BC2 TS DAL 12 H, BC2 TS DAL 13 H, BC2 TS DAL 14 H, BC2 TS DAL 15 H
S/I = 1, M/C = 6
BC5(E) HIGH

(RD/WRT ADDR CNTR)
DC015 EC0 — CNT IA, CLK-A, S-A, CLK-C, S-C, RD, LD, RD-A; 128 D/F, 64 D/F, 32 D/F, 16 D/F, 8 D/F, 4 D/F, 2 D/F, 1 D/F, MAX-A, MAX-C
74LS04 E49 — BC3 CLR ERR L
BC5 INC RA H
BC5(M) HIGH
BC5 EO RAM L
BC5 WRT RAM L
2111A2 E78 — A7, A6, A5, A4, A3, A2, A1, A0; I/O1, I/O2, I/O3, I/O4; R/W CE1 CE2
2111A2 E66
2111A2 E73
2111A2 E72

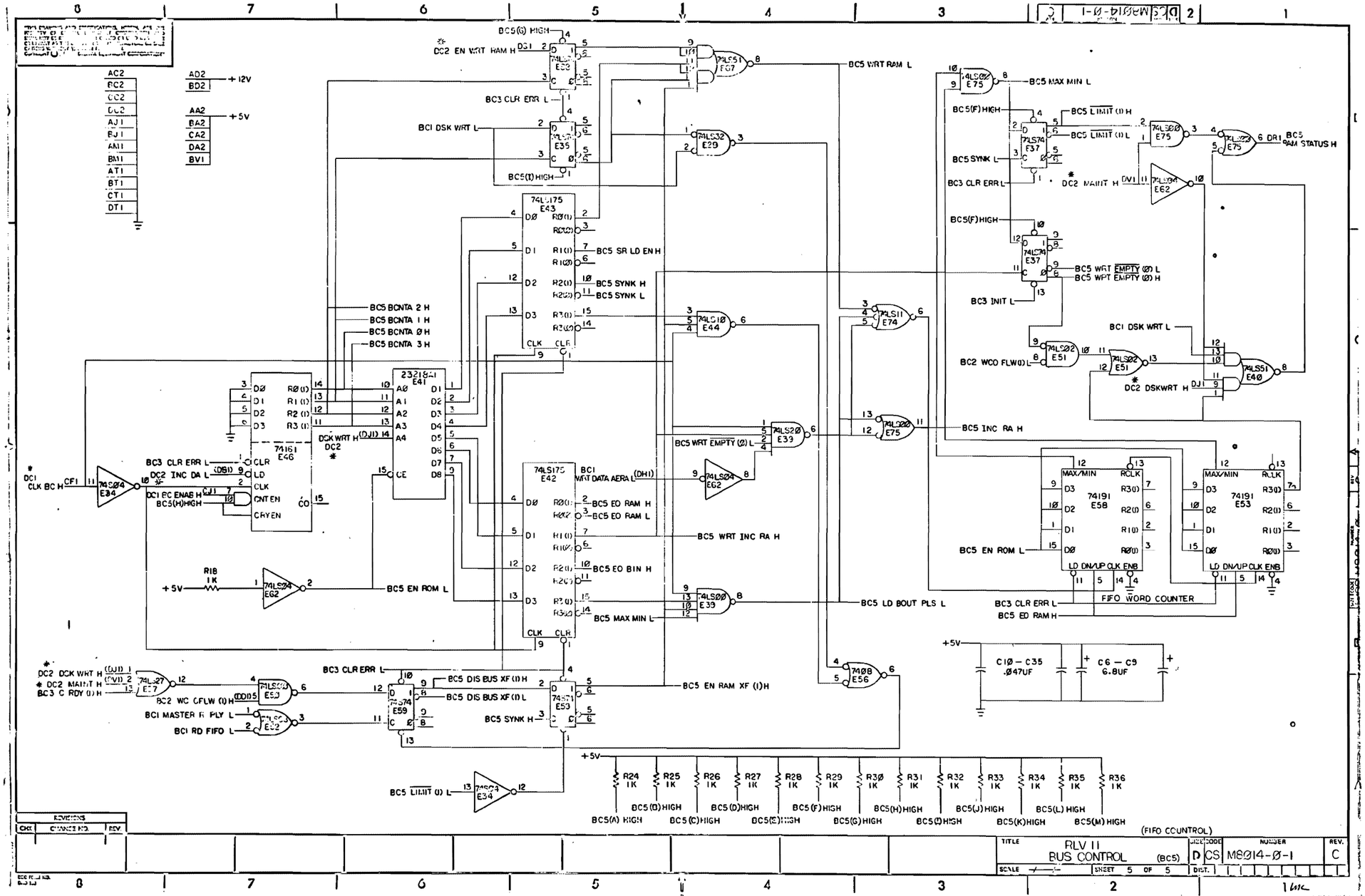
BC5(G) HIGH
DC5 SER DATA IN H
CLI
(SAVE)
74LS74 E69
BC3 INIT L
74LS299 E55 — S/R, QH, QA, S0, S1, CLK, CLR, G1, G2; R8, R7, R6, R5, R4, R3, R2, R1
BC5(K) HIGH
BC5 SR LD EN H
74LS04 E34
BC4 BCNTA Ø L
BC3 INIT L
BC5 WRT RAM L (DJ1)
DC2 CSK WRT H *
BC5 BCNTA Ø H
WRT/RD SHIFT REGISTER
74LS299 E61 — S/LEVEN, S/R, QH, QA, S0, S1, CLK, CLR, G1, G2; R8, R7, R6, R5, R4, R3, R2, R1
BC5(J) HIGH
BC5 SR LD EN H
BC4 BCNTA Ø L
BC4 TS FIFO 15 H, BC4 TS FIFO 13 H, BC4 TS FIFO 11 H, BC4 TS FIFO 9 H, BC4 TS FIFO 7 H, BC4 TS FIFO 5 H, BC4 TS FIFO 3 H, BC4 TS FIFO 1 H
BC4 TS FIFO 14 H, BC4 TS FIFO 12 H, BC4 TS FIFO 10 H, BC4 TS FIFO 8 H, BC4 TS FIFO 6 H, BC4 TS FIFO 4 H, BC4 TS FIFO 2 H, BC4 TS FIFO Ø H
BC4 BCNTA Ø L
74LS51 E67
74LS27 E57 — 6 CNI
BC4 SER DATA OUT H
BC5 WRT EMPTY Ø H
BC WRT DATA AREA L
CNI

(FIFO BUFFER)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PLV11 BUS CONTROL (BC4)	D	CS	M8014-Ø-1	C
SCALE —	SHEET 4 OF 5	DIST.		

DEC FORM NO. DRD 138


BC5(G) HIGH
DC2 EN WRT RAM H
BC5 WRT RAM L
BC3 CLR ERR L
BC1 DSK WRT L
BC5(I) HIGH
74LS175 E43
BC5 SR LD EN H
BC5 SYNK H
BC5 SYNK L
BC5 BCNTA 2 H
BC5 BCNTA 1 H
BC5 BCNTA Ø H
BC5 BCNTA 3 H
74161 E46
DCK WRT H
DC2
DC1 CLK BC H
DC2 INC DA L
DC1 EC ENAB H
BC5(H)HIGH
R18 1K
+5V
BC5 EN ROM L
74LS175 E42
BC1 WRT DATA AERA L
BC5 EO RAM H
BC5 EO RAM L
BC5 WRT INC RA H
BC5 EO BIN H
BC5 MAX MIN L
BC5 LD BOUT PLS L
BC5 WRT EMPTY (Ø) L
BC5 MAX MIN L
BC5(F) HIGH
BC5 LIMIT (I) H
BC5 LIMIT (I) L
BC5 SYNK L
BC3 CLR ERR L
DC2 MAINT H
BC5 DR1 RAM STATUS H
BC5(F) HIGH
BC5 WRT EMPTY (Ø) L
BC5 WPT EMPTY (Ø) H
BC3 INIT L
BC1 DSK WRT L
BC2 WCO FLW(I) L
DC2 DSKWRT H
BC5 INC RA H
MAX/MIN
RCLK
74191 E58
74191 E53
BC5 EN ROM L
LD DN/UP CLK ENB
FIFO WORD COUNTER
BC3 CLR ERR L
BC5 ED RAM H
+5V
C10 – C35 .047UF
C6 – C9 6.8UF
DC2 DCK WRT H
DC2 MAINT H
BC3 C RDY (I) H
BC2 WC CFLW (I) H
BC1 MASTER CLR L
BC1 RD FIFO L
BC5 CLR ERR L
BC5 DIS BUS XF (I) H
BC5 DIS BUS XF (I) L
BC5 SYNK H
BC5 EN RAM XF (I) H
BC5 LIMIT (I) L
R24 1K
R25 1K
R26 1K
R27 1K
R28 1K
R29 1K
R30 1K
R31 1K
R32 1K
R33 1K
R34 1K
R35 1K
R36 1K
BC5(A) HIGH
BC5(B) HIGH
BC5(C) HIGH
BC5(D) HIGH
BC5(E) HIGH
BC5(F) HIGH
BC5(G) HIGH
BC5(H) HIGH
BC5(I) HIGH
BC5(J) HIGH
BC5(K) HIGH
BC5(L) HIGH
BC5(M) HIGH
AC2
BC2
CC2
DC2
AJ1
BJ1
AN1
BN1
AT1
BT1
CT1
DT1
AD2
BD2
+12V
AA2
BA2
CA2
DA2
BV1
+5V
REVISIONS
CHG
CHANGE NO.
REV.
(FIFO COUNTROL)
TITLE
RLV11
BUS CONTROL (BC5)
SIZE
D
CODE
CS
NUMBER
M8014-Ø-1
REV.
C
SCALE
SHEET 5 OF 5
DIST.

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-MD-5012962-0-0	5012962-00	RLV11 DISK CONTROL	1	
2	2		1000011-00	*** THIS ITEM IS NOT USED ***	-	
3	3		1000016-00	100.0 MMF 100V SS200PPM DM15S	1	C63
4	4		1011740-00	5600.0 MMF 50V 10% CW15C CER.	1	C66
5	5		1000050-00	.033 MFD 100V 10% 663UW MYLR	1	C61
6	6		1012704-00	.047 MFD 50V +20-00 CER	1	C67
7	7		1012312-00	.47 MFD 50V X5 CER.	4	C68,C45,C80,C83
8	8		1005306-00	6.8MFD 35V 10% S.TANT	6	C69-C71,C75-C77
9	9		1004812-00	15 MFD 20V 10% S.TANT	3	C72-C74
10	10		1001610-01	.01 MFD 100V +20-00 Z5U DISC	61	C1-C44,C78,C79,C46-C60
11	11		1211013-00	SOCKET 16PIN LOW PROFILE	1	XE8
12	12		1105275-00	D 672 TR= 15NS PIV= 60V SI	2	D1,D2
13	13		1111577-00	1N 4454 TR= 4NS PIV= 50 S	4	D6,D7,D8,D9
14	14		1105871-00	1/4W5.1AZ1 = 5.1 1% .25W N	2	D11,D12
15	15		1109991-00	1N 754A VZ= 6.8 5% .40W	2	D13,D14
16	16		1109991-01	4W6.8AZ1 VZ= 6.8 1% .40W	3	D5,D10,D15
17	17		1210693-00	SOCKET 24PIN IC	1	XE49
18	18		1300285-00	270 1/2W 5% CC	1	R54
19	19		1309444-00	2.7 1/2W 10% CC	1	R1
20	20		1301701-00	82 1/2W 5% CC	12	R3-R14
21	21		1300605-05	R NETWORK 13-02 RESISTORS 5% 14	1	E63
22	22		1302050-00	100 1/4W 1% RN55D-F 100PPM	2	R15,R17
23	23		1300247-00	120 1/4W 5% CC	1	R19
24	24		1301322-00	*** THIS ITEM IS NOT USED ***	-	
25	25		1300260-00	100 1/2W 5% CC	2	R22,R24
26	26		1300271-00	220 1/4W 5% CC	3	R26,R27,R25
27	27		1300295-00	330 1/4W 5% CC	1	R29
28	28		1300316-00	470 1/4W 5% CC	3	R30,R42,R50
29	29		1300365-00	1 K 1/4W 5% CC	11	R40,R44-R49,R51-R53,R55
30	30		1300417-00	2.2 K 1/4W 5% CC	1	R37

REVISION HISTORY			
ENG	ECO NUMBER	REV	SECTION 1 OF 1
W.H	00001	C	SECTION, VARIATION INDEX
J.A	ML002	D	1.00
ER	ML003	E	2.
R.H	M8013-ML004	F	3.
R.H	M8013-ML005	H	4.
			5.
			6.
			7.
			8.
			9.
			10.
			11.
			12.

RESP.ENG.: R. HULTMAN	DATE: 28-DEC-77		D I I G I I T A L
MADE BY: R. NICHOLSON	DATE: 31-OCT-77	TITLE	PARTS LIST
CHECKED: R. KOPPENAL	DATE: 28-DEC-77		RLV11 DISK CONTROL
DSN.ENG.: P. KOTSCH	DATE: 28-DEC-77		
PROD.: R. KIRK	DATE: 28-DEC-77	SIZE: K	CODE: PL
ASSEMBLY NUMBER: D-UA-M8013-0-0		PART NUMBER: 00013	DOCUMENT NUMBER: M8013-0-DBP
			REV: H
			EDIT #: 31

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
31	31		1305145-00	2.8 K 1/4W 1% RN55D-F 100PPM	1	R35
32	32		1309143-09	5 K 3/4W10% POT 100PPM	1	R41
33	33		1312930-00	5.1 K 1/4W 5% CC	1	R43
34	34		1305125-00	383 1/4W 1% RN55D-F 100PPM	1	R31
35	35		1314187-00	6.19 K 1/4W 1% RN55D-F 100PPM	1	R34
36	36		1313592-00	4.87 K 1/4W 1% RN55D-F 100PPM	1	R32
37	37		1312923-00	2.10 K 1/4W 1% RN55D-F 100PPM	1	R33
38	38		1510705-00	XA 05 NPN 500MW SI 60 50 P	1	Q1
39	39		1510706-00	XA 55 PNP 500MW SI 60 50 P	1	Q3
40	40		1513490-00	2N 4403 PNP 350MW SI-40 30	4	Q5-Q8
41	41		1513489-00	2N 4401 NPN 350MW SI 40 20	1	Q9
42	42		1610033-00	DELAY= 10-100NS,10TAPS	1	E2
43	43		1614159-00	DELAY 50NS,10TAPS	1	E10
44	44		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	2	E32,E60
45	45		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E38
46	46		1912805-00	LS08 AND GATE-QUAD 2IN,PO	2	E25,E36
47	47		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E58
48	48		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E21
49	49		1912816-00	LS32 OR GATE-QUAD 2IN,POS	2	E35,E59
50	50		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	2	E4,E61
51	51		1912829-00	LS86 X-OR GATE-QUAD 2IN	1	E16
52	52		1912833-00	LS109 FF-JK DUAL,POS EDGE	1	E53
53	53		1912842-00	LS138 DECODER-THREE INPUT,	1	E37
54	54		1912844-00	LS151 MUX 1 OF 8 & DATA	2	E9,E55
55	55		1912697-00	LS174 FF-D HEX W/CLEAR	1	E17
56	56		1912853-00	LS175 FF-D QUAD	5	E26,E27,E33,E41,E42
57	57		1912863-00	LS273 FF-D OCTAL W/CLEAR	1	E45
58	58		1910950-00	74S74 FF-D DUAL (-45 VERSI	3	E23,E31,E56
59	59		1910091-00	*** THIS ITEM IS NOT USED ***	-	
60	60		1910650-00	74161 COUNTER,SYNCHR, UP	1	E12
61	61		1910542-00	74S64 A-O-I GATE 4-2-3-2	2	E22,E47
62	62		1910532-00	74S00 NAND GATE-QUAD 2IN	3	E5,E20,E29
63	63		1912300-00	7 502 NOR GATE-QUAD 2IN,PO	2	E18,E15
64	64		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E6,E24
65	65		1910536-00	74S10 NAND GATE-TRIPLE 3IN	1	E14
66	66		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	1	E13
67	67		1910545-00	*** THIS ITEM IS NOT USED ***	-	
68	68		1911911-00	DEC 748124 OSCILLATOR,DUAL VOLT	1	E34
69	69		1910547-00	748153 MUX 1 OF 4 (DUAL)	1	E43
70	70		1910268-00	DEC 751078 RECEIVER,LINE,DUAL,	3	E44,E52,E62
71	71		1911341-00	75113 DRIVER,LINE,DUAL,NA	3	E48,E51,E57
72	72		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,D	1	E50
73	73		1913474-00	9401 GENERATOR/CHECKER CR	1	E3
74	74		1911944-00	555CN TIMER,PUBCT,BLOCK	1	E1
75	75		1912541-00	VOLT.REG.FIX -	1	Q10
76	76		2309887-00	*** THIS ITEM IS NOT USED ***	-	
77	77		1912834-00	LS112 FF-JK DUAL,EDGE TRIG	2	E7,E28
78	78		1911675-00	748138 DECODER/DEMUX 3-8 LIN	1	E46

D	I	G	I	T	A	L	TITLE	SECTION 1 OF 1	SIZE	CODE	DOCUMENT NUMBER	REV
							RLV11 DISK CONTROL		K	DB	08013-0-DBR	H

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
79	79		1912849-00	LS161 COUNTER,SYNCHR,4BIT	3	E30,E40,E54
80	80		1811660-12	OSCILLATOR, CRYSTAL 8.2000MHZ	1	Y1
81	81		1209941-02	HEADER 100 40POS RT ANGLE	1	J1
82	82		1209941-03	HEADER RT ANGLE LEFT L	1	
83	83		1209941-04	HEADER RT ANGLE,RIGHT	1	
84	84		1213113-01	HANDLE,MODULE,	1	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	4	W1-W4
86	86		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	8	
87	87		9007791-00	TERM PCB 2POS SOLDER,TURRET	3	TP1,TP2,TP3
88	88		23219A1-00	A1-07	1	E8
89	89		9007201-00	TRANSIPADS #10253	1	
90	90		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	
91	91		1300249-00	150 1/2W 5% CC	2	R21,R23
92	92		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	1	E11
93	93	SEE NOTES	23017E2-00	E2-01	1	E49
94	94		1000010-00	39.0 MMF 100V 5%200PPM DM15S	1	C81
95	95	BLANK			0	
96	96		1302955-00	750 1/4W 1% RN55D-F 100PPM	1	R56
97	97		1910645-00	75452 DRIVER,PERIPH,DUAL,	1	E39
98	98		1303064-00	75 1/4W 1% RN55D-F 100PPM	1	R20

99 NOTE: PARTS SUBSTITUTION LIST
100 NOTE: NOTE: FOR E49:23017E2-00 IS PREFERRED ;ALLOWABLE SUBSTITUTION IS 2305887-00
101 NOTE:
102 NOTE:

DIGITAL	TITLE	SIZE	CODE	DOCUMENT NUMBER	REV
	RLV11 DISK CONTROL				
	SECTION 1 OF 1	E	PL	M9013-0-000	H

AUTOMATED BY PRTLST.2D(12) P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-MD-5012963-0-0	5012963-00	RLV11 BUS CONTROL	REF	
2	2		1012784-00	.047 MFD 50V -20+80 CER	26	C10-C35
3	3		1005306-00	6.8MFD 35V 10% S.TANT	5	C5,C6,C7,C8,C9
4	4		1012121-00	220.0 MMF 100V 1%200PPM DM15S	1	C3
5	5		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C4
6	6		1000019-00	150.0 MMF 100V 5%200PPM DM15S	1	C2
7	7		1009312-00	4700.0 MMF 100V 1% 663UW MYLR	1	C1
8	8		1211164-06	SW,DIP 1P 1A 10POS	1	E23
9	9		1211164-03	SW,DIP 1P 1A 7POS	1	E22
10	10		1213113-01	HANDLE,MODULE,	1	
11	11		1211813-00	SOCKET 16PIN LOW PROFILE	1	XF41
12	12		1300229-00	100 1/4W 5% CC	1	R8
13	13		1300295-00	330 1/4W 5% CC	4	R3,R6,R13,R15
14	14		1301424-00	680 1/4W 5% CC	4	R4,R7,R14,R16
15	15		1300365-00	1 K 1/4W 5% CC	18	R1,R9,R10,R18,R23-R36
16	16		1302873-00	261 1/4W 1% RN55D-F 100PPM	1	R19
17	17		1300439-00	*** THIS ITEM IS NOT USED ***	-	
18	18		1305114-00	3.48 K 1/4W 1% RN55D-F 100PPM	1	R5
19	19		1304856-00	4.64 K 1/4W 1% RN55D-F 100PPM	1	R11
20	20		1302397-00	180 K 1/4W 5% CC	1	R17
21	21		1300479-00	10 K 1/4W 5% CC	3	R20,R21,R22
22	22		1304839-00	51 K 1/4W 5% CC	1	R12
23	23		1510705-00	XA 05 NPN 500MW SI 60 50 P	1	Q1
24	24		1510706-00	XA 55 PNP 500MW SI 60 50 P	1	Q2
25	25		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	3	E24,E50,E75
26	26		1912801-00	LS02 NOR-GATE-QUAD 2IN	3	E4,E5,E51
27	27		1912803-00	LS04 INVERTER GATE-HEX 1I	3	E9,E49,E62
28	28		1912805-00	LS08 AND GATE-QUAD 2IN,PO	2	E2,E52
29	29		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E44
30	30		1912808-00	LS11 AND GATE-TRIPLE 3IN	2	E11,E74

REVISION HISTORY		
ENG	ECO NUMBER	REV
J.A	INIT	B
E.R	00002	C
R.H	M8014-MI003	D

SECTION 1 OF 1

SECTION, VARIATION INDEX

1.00
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.

RESP.ENG.: R. DULTMAN DATE: 24-APR-78

MADE BY: R. KOPPENAL DATE:

CHECKED: K. GLEASON DATE: 24-APR-78

DSN.ENG.: R. DULTMAN DATE:

PROD.: R. KIRK DATE:

ASSEMBLY NUMBER: D-UA-M8014-0-0

	D	I	G	I	T	A	L	

TITLE PARTS LIST

RLV11 BUS CONTROL

SIZE	CODE	DOCUMENT NUMBER	REV
K	PL	M8014-0-DBP	D

EDIT # 7

PART NUMBER: M8014

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER		DESCRIPTION		QTY	REFERENCE DESIGNATOR
31	31		1912813-00		LS27	NOR GATE-TRIPLE 3IN	1	E57
32	32		1912816-00		LS32	OR GATE-QUAD 2IN,POS	2	E3,E29
33	33		1912820-00		LS51	A-O-I GATE 2-WIDE 2I	2	E67,E40
34	34		1912824-00		LS74	FF-D DUAL,EDGE TRIGG	6	E68,E63,E35,E37,E10,E6
35	35		1912833-00		LS109	FF-JK DUAL,POS EDGE	1	E69
36	36		1912837-00		LS123	ONE SHOT-DUAL,RETRIG	1	E20
37	37		1912697-00		LS174	FF-D HEX w/CLEAR	1	E26
38	38		1912853-00		LS175	FF-D QUAD	2	E42,E43
39	39		1912866-00		LS295	SHIFT REG.,4BIT RIGH	8	E71,E54,E64,F38,E77,E31,E65,F32
40	40		1912868-00		LS299	SHIFT REG. 8-BIT UNI	2	E55,E61
41	41		1910155-00	DEC	7408	AND GATE,POS,QUAD 2I	1	E56
42	42		1911521-00		7432	OR GATE-QUAD 2IN, PO	1	E19
43	43		1910153-00	DEC	74150	MUX 1 OF 16	1	E45
44	44		1910652-00		74161	COUNTER,SYNCHR, UP	1	E46
45	45		1910096-00	DEC	74191	COUNTER,SYNCHR, UP/D	2	E53,E58
46	46		1910534-00		74S04	INVERTER GATE-HEX 1I	1	E34
47	47		1910950-00		74S74	FF-D DUAL (-45 VERSI	2	E15,E59
48	48		1911527-00		8097	BUFFER GATE-HEX 2INP	3	E30,E70,E76
49	49		1909705-00	DEC	8881	NAND GATE-QUAD 2IN O	1	E8
50	50		1912951-00	DM	8556	COUNTER,BINARY,4BIT	5	E17,E28,E36,E47,E48
51	51		1911579-00		8641	TRANSCEIVER,BUS,QUA	2	E1,E14
52	52		1912730-00	DC	003	INTERRUPT,2 CIRCUIT	1	E16
53	53		1912729-00	DC	004	PROTOCOL,REG. SELECT	1	E12
54	54		1913040-00	DC	005	TRANSCEIVER 4BIT	4	E13,E21,E27,F33
55	55		1914035-00	DC	006	BIPOLAR,BUS ADDRESS	3	E18,F25,E60
56	56		1914038-00	DC	010	BIPOLAR,MEM ADRESS,L	1	E7
57	57		1912810-00		LS20	NAND GATE-DUAL 4IN	1	E39
58	58		2113106-01			1K MOS RAM 250NS	4	E66,E72,E73,E78
59	59		23218A1-00	A1-07			1	E41
60	60		9000024-01	EYELET, ROLLED FLANGE, .121 OD X			8	
61	61		1301475-00	1.1 K 1/4W 5%		CC	1	R9

D	I	G	I	T	A	L	TITLE	SIZE	CODE	DOCUMENT NUMBER	REV
							RLV11 BUS CONTROL SECTION 1 OF 1	K	PL	M8014-0-0BP	D

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COMPONENT SIDE VIEW

NOTE 1

NOTE 2

NOTES:

MAT SUBSTITUTION LIST:
23-016E2-00 : E49 PREFERRED
23-035B7-00 : E49 SUSTITUTE
1. WHEN USING 23-016E2-00 FOR E49 REMOVE W2-1 W4 (W1-2 W3 INSERTED)
2. WHEN USING 23-035B7-00 FOR E49 REMOVE W1-2 W3 (W2-E W4 INSERTED)

CHK	CHANGE NO	REV
	M8013-00001	C
	M8013-00002	D
	M8013-00003	E
	M8013-00004	F
	M8013-00005	H
	M8013-00006	J

SIGNATURES	DATE
DRN.	10-20-77
CHK'D.	11-1-77
ENG.	11-3-
PROJ.ENG.	11-3-
PROD.	11-4-
SCALE 2/1	
SHT. 1 OF 4	
NEXT HIGHER ASSY. 8-DD-M8013-0	

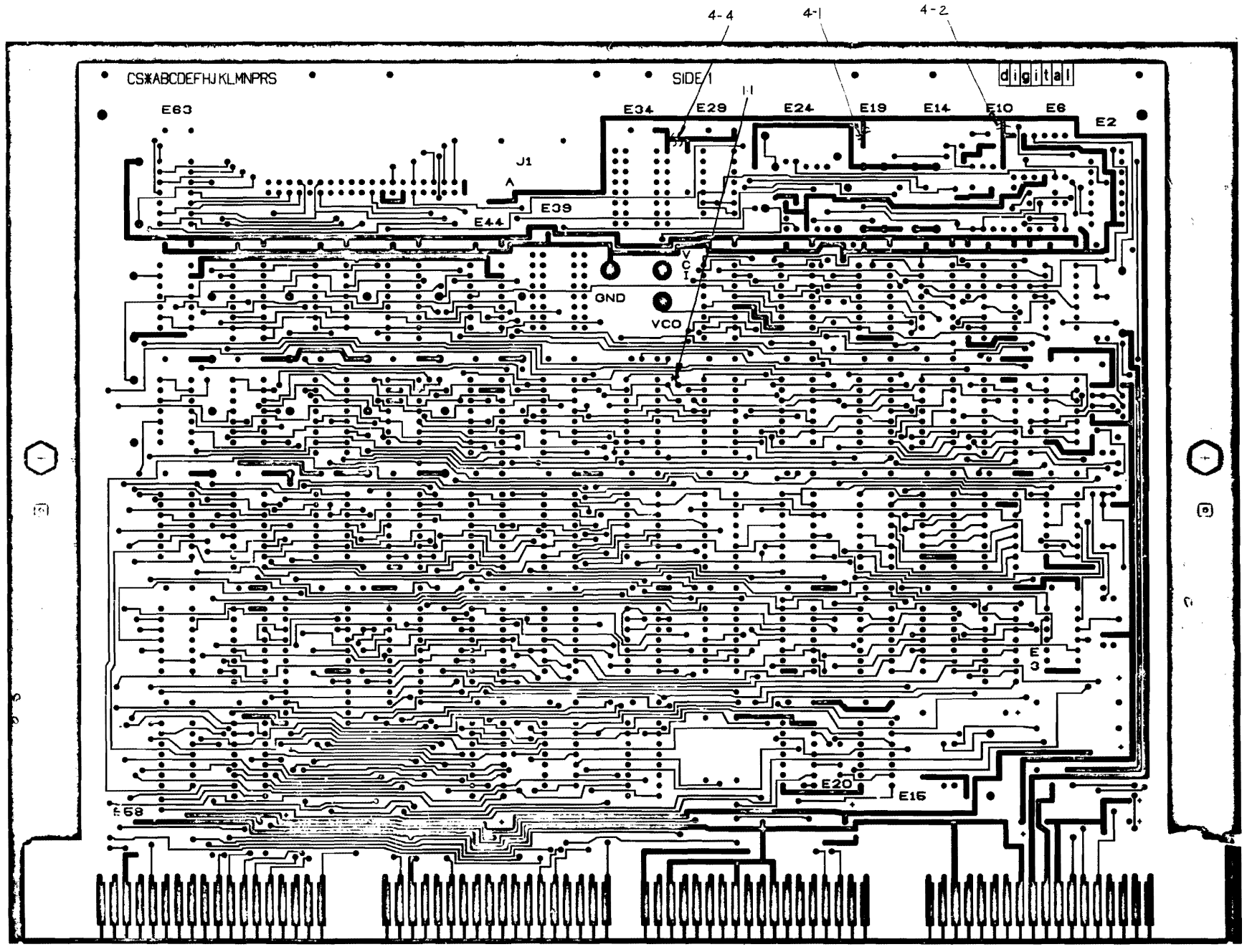
ETCH REV. C
P.C. DESIGN DATA BASE REV. CL

digital

TITLE: RLV11 DISK CONTROL

SIZE	CODE	NUMBER	REV
D	UA	M8013-0-0	H

MS#104123

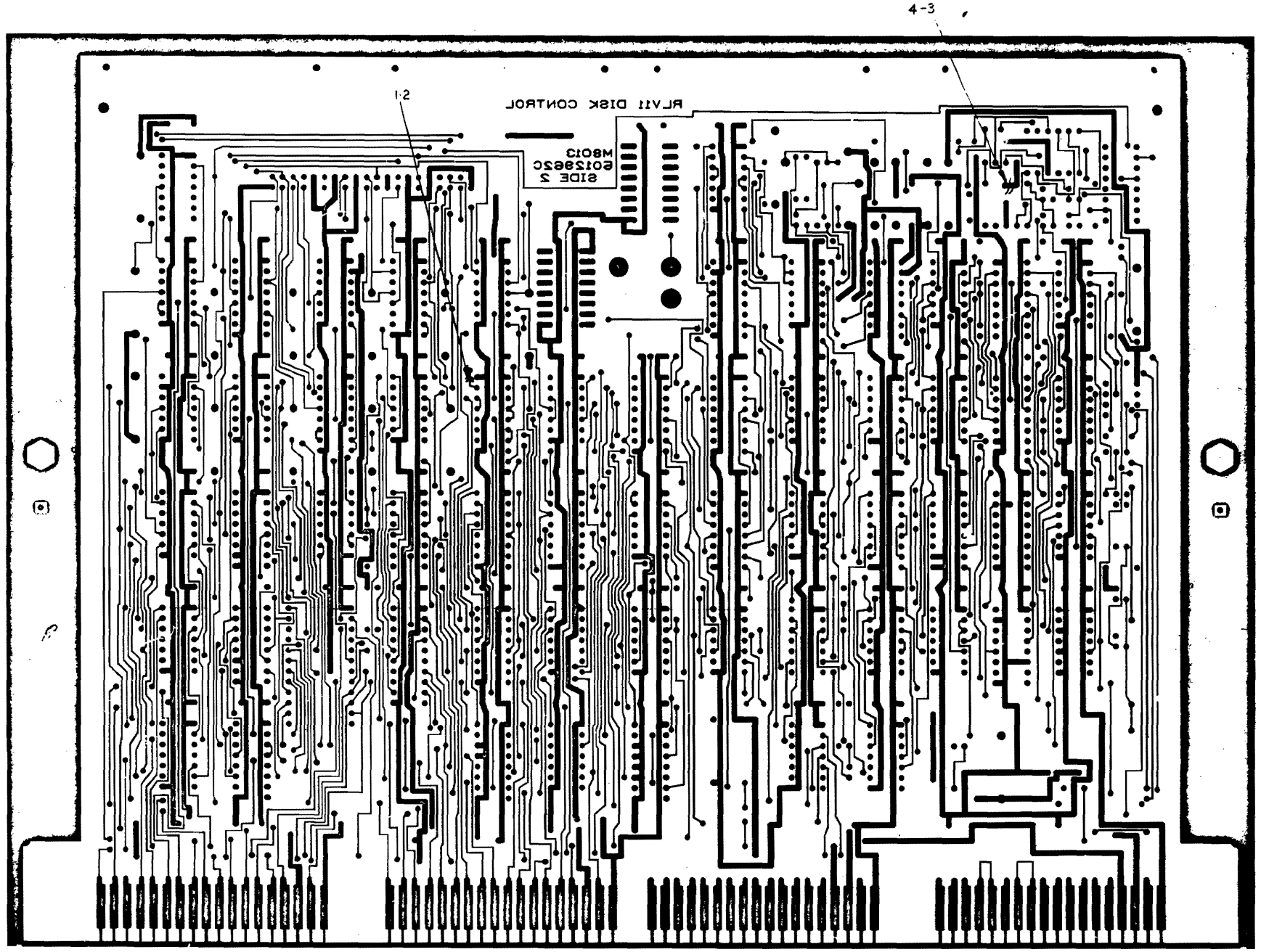


VIEWED FROM SIDE 1

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV
RLV11 DISK CONTROL	D	UA	M8013-00	H
SCALE 2:1 SHEET 2 OF 4	DIST			

DUAM8013-00 H



REVISIONS		
LTR	CHANGE NO.	DATE

TITLE	RL V11 DISK CONTROL	DWG NO.	DUA M8013-00
SCALE 2:1	SHEET 3 of 4		REV

DUA M8013-0-0

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REWORK INSTRUCTIONS:

E.C.O.#1

ETCH CUTS SIDE 1:

1-1. BETWEEN E33-1 AND PTH TO THE RIGHT OF E33-16.

ETCH CUTS SIDE 2:

1-2. BETWEEN E43-2 AND PTH ABOVE AND TO THE LEFT OF E43-1

WIRE ADDS SIDE 1:

1-3. FROM E32-9 TO E36-13
1-4. FROM E35-2 TO E36-12
1-5. FROM E43-2 TO E36-11
1-6. FROM E33-1 TO E27-1

ECO#2

COMPONENT DELETES SIDE 1

2-1. R2, 330Ω (P/N, 13-00295-00)
2-2. R17, 180Ω (P/N, 13-01322-00)
2-3. R25, 470Ω (P/N, 13-00316-00)
2-4. E11, 7437 (P/N, 19-10091-00)
2-5 E28, 74S112 (P/N, 19-10545-00)

COMPONENT ADD SIDE 1

2-6 R17, 100Ω (P/N, 13-00229-00)
2-7 R25, 220Ω (P/N 13-00271-00)
2-8 E11, 74S37 (P/N, 19-12746-00)
2-9 E28, 74LS112 (P/N, 19-12834-00)

ECO#4

ETCH CUTS

4-1 CUT ETCH AT LEFT SIDE OF C61, SIDE 1.
4-2 CUT ETCH AT LINE TO R17 AND R15, AT TOP OF R17, SIDE 1.
4-3 CUT ETCH AT LINE FROM TOP OF R15 TO FEED THRU UNDER R31, SIDE 2.
4-4 CUT ETCH AT E34-16 BETWEEN E34 AND R51 NEAREST R51, SIDE: 1.

WIRE ADDS:

4-5 BOTTOM OF R54 TO TOP OF R15.
4-6 TOP OF D5 (ANODE) TO LEFT SIDE OF C61 (TWO WIRES, REF: REWORK STEP 4-7).
4-7 LEFT SIDE OF C61 TO TOP OF C63 (REF: REWORK STEP 4-6).
4-8 TOP OF R31 TO E39 LOCATION, PIN 7 (REF: REWORK STEP 4-23).
4-9 E19 LOCATION, PIN 3 TO E34 LOCATION, PIN 3 (ROUTE WIRE UP BETWEEN R34 AND R33 THEN LEFT OVER R29 AND E34.)
4-10 FEED THRU TO THE LEFT OF E23, PIN 6 TO E39 LOCATION, PIN 14 (ROUTE WIRE UP TO C7 THEN LEFT TO C26 THEN UP) (TWO WIRES, REF: REWORK STEP 4-11).
4-11 E39 LOCATION, PIN 14 TO E39 LOCATION, PIN 15 (REF: REWORK STEP: 4-10).
4-12 E39 LOCATION, PIN 4 TO E39 LOCATION, PIN 8.
4-13 BOTTOM OF R22 TO E34, PIN 15 (ROUTE WIRE BELOW R41 AND E29).
4-14 E34 PIN 2 TO VC1 AT FEED THRU BELOW E34, PIN 9 (ROUTE WIRE ABOVE E34 THEN DOWN TO FEED THRU).
4-15 E34, PIN 7 TO E19 LOCATION, PIN 7.
4-16 E34, PIN 8 TO E34, PIN 9 (TWO WIRES, REF: REWORK STEP 4-17).
4-17 E34, PIN 8 TO E34, PIN 6 (REF: REWORK STEP 4-16).
4-18 E34, PIN 11 TO BOTTOM OF R51.

REWORK INSTRUCTIONS CONT.

ECO #4 (CONT.)

4-19 E39 LOCATION, P/N 13 TO E39 LOCATION, PIN 10 (REF: REWORK STEP 4-23).
4-20 BOTTOM OF R23 TO E34, PIN 16.

COMPONENT ADDS: (* ONLY THESE INSTRUCTIONS SHOWN ON UA DWG.)

* 4-21 E34 (P/N 19-11911-00) 74S124.
* 4-22 C80, C83 (P/N 10-12312-01) ABOVE E34 LOCATION AND E39 LOCATION.
* 4-23 R56 (P/N 13-02955-00) AT E39 LOCATION, PINS 7 AND 10 (REF: REWORK STEP 4-8 AND 4-18).
* 4-24 E39 (P/N 19-10645-00) AT PINS 1-4, 13-16.
* 4-25 C81 (P/N 10-00010-00) AT LOCATION E34 PINS 4 AND 5.
* 4-26 C82 (P/N 10-00020-00) AT LEFT OF D10 FEED THRUS TOP & BOTTOM.
4-27 R20 (P/N 13-03064-00)
4-28 R42 & R50 (P/N 13-00316-00)
4-29 R31 (P/N 13-05125-00)
4-30 R17 (P/N 13-02858-00).
4-31 R34 (P/N 13-14187-00).
4-32 R33 (P/N 13-12923-00).
4-33 R35 (P/N 13-05145-00).
4-34 R32 (P/N 13-13592-00).
4-35 R54 (P/N 13-00285-00).
4-36 R21 & R23 (P/N 13-00249-00)
4-37 C61 (P/N 10-00050-00)
4-38 C45, C68 (P/N 10-12312-01)

COMPONENT DELETES:

4-39 R31 (P/N 13-03047-00)
4-40 R17 (P/N 13-00229-00)
4-41 R20 (P/N 13-01322-00)
4-42 R34 (P/N 13-04862-00)
4-43 R33 (P/N 13-04858-00)
4-44 R35 (P/N 13-02645-00)
4-45 R32 (P/N 13-10630-00)
4-46 R54 (P/N 13-00228-00)
4-47 R21 & R23 (P/N 13-00260-00)
4-48 C61 (P/N 10-05784-00)
4-49 C45 & C68 (P/N 10-10274-00)
4-50 E19 (P/N 19-11911-00).
4-51 C62 (P/N 10-00011-00)
4-52 R42 & R50 (P/N 13000365-00)

ECO #5

COMPONENT DELETE

5-1 C82 (P/N 10-00020-00)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
RL V11 DISK CONTROL	D	UA	M8013-0-0	H
SCALE —	SHEET 4 OF 4		DIST.	

CUSTODY DUA M8013-0-0 REV H

10.44
(265.17MM)
REF

COMPONENT SIDE VIEW

TH1

TH2

10

60 PLACES

11

8.44
(214.63MM)
REF

NOTE 1

NOTE 2

NOTES:
1. FOR STANDARD UNIBUS ADDRESS SELECTION E23 SWITCH 1,2,5 ARE ON. E23 SWITCH 3,4,6,7,8,9,10 ARE OFF.
2. FOR STANDARD VECTOR ADDRESS SELECTION E23 SWITCH 3 & 5 ARE ON. E22 SWITCH 1,2,4,6,7 ARE OFF.

SIGNATURES | DATE

digital

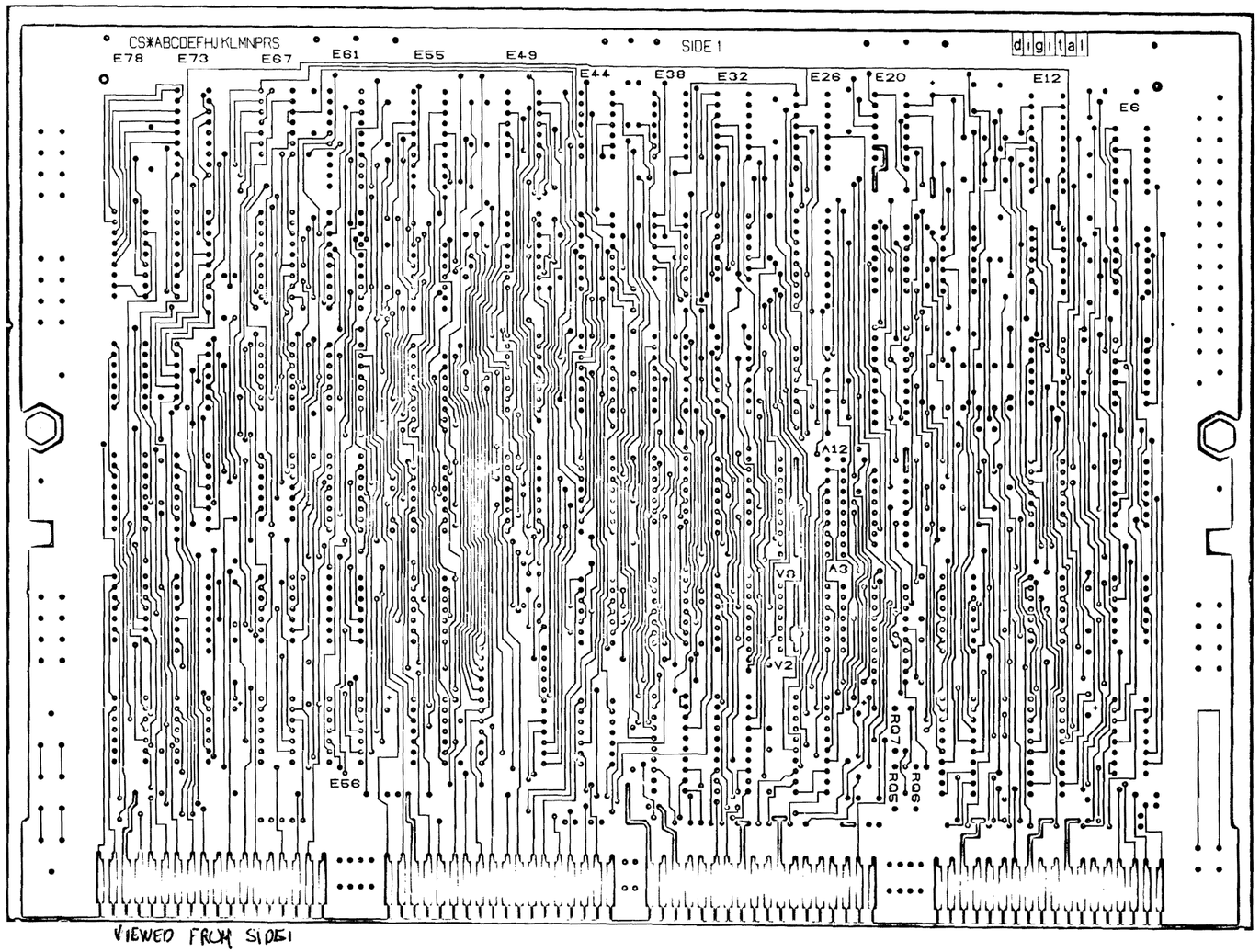
TITLE RLV11 BUS CONTROL

SIZE D | CODE 11A | NUMBER M8014-0-0 | REV D

M8014-0-0-D

MSN004124

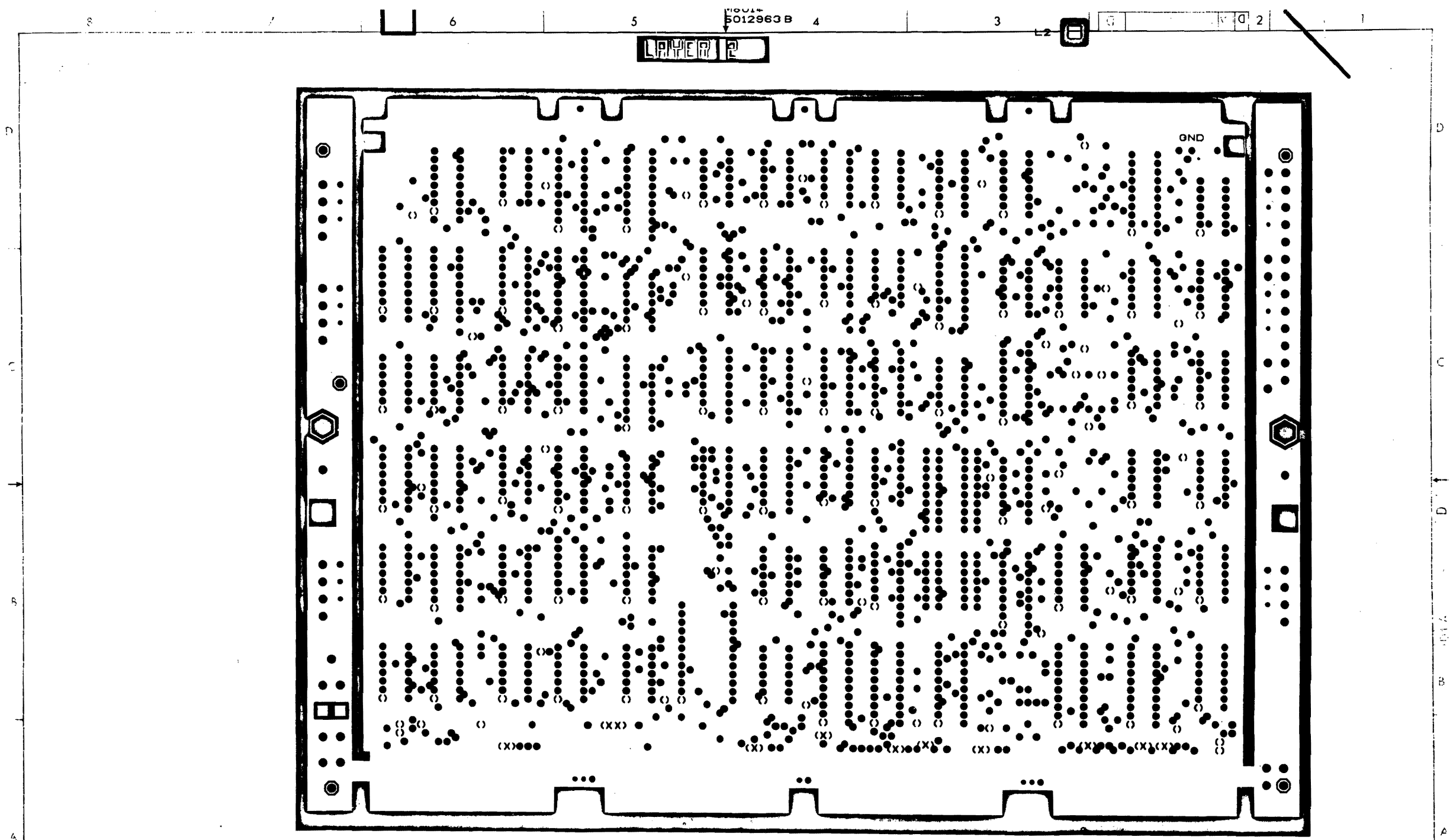
LAYER 1



VIEWED FROM SIDE1

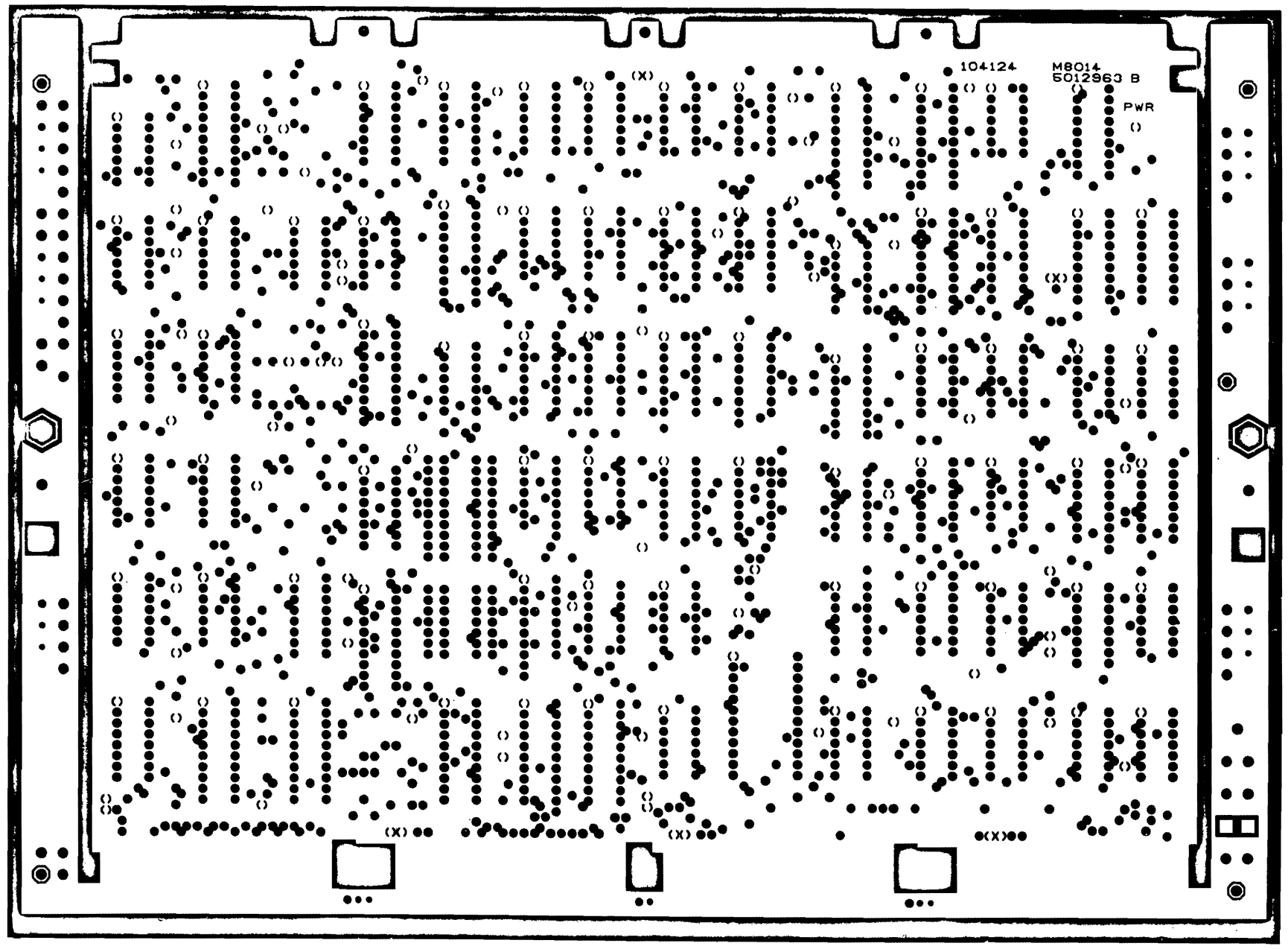
RLV11 BUS CONTROL

D UAM8014-0-0 D



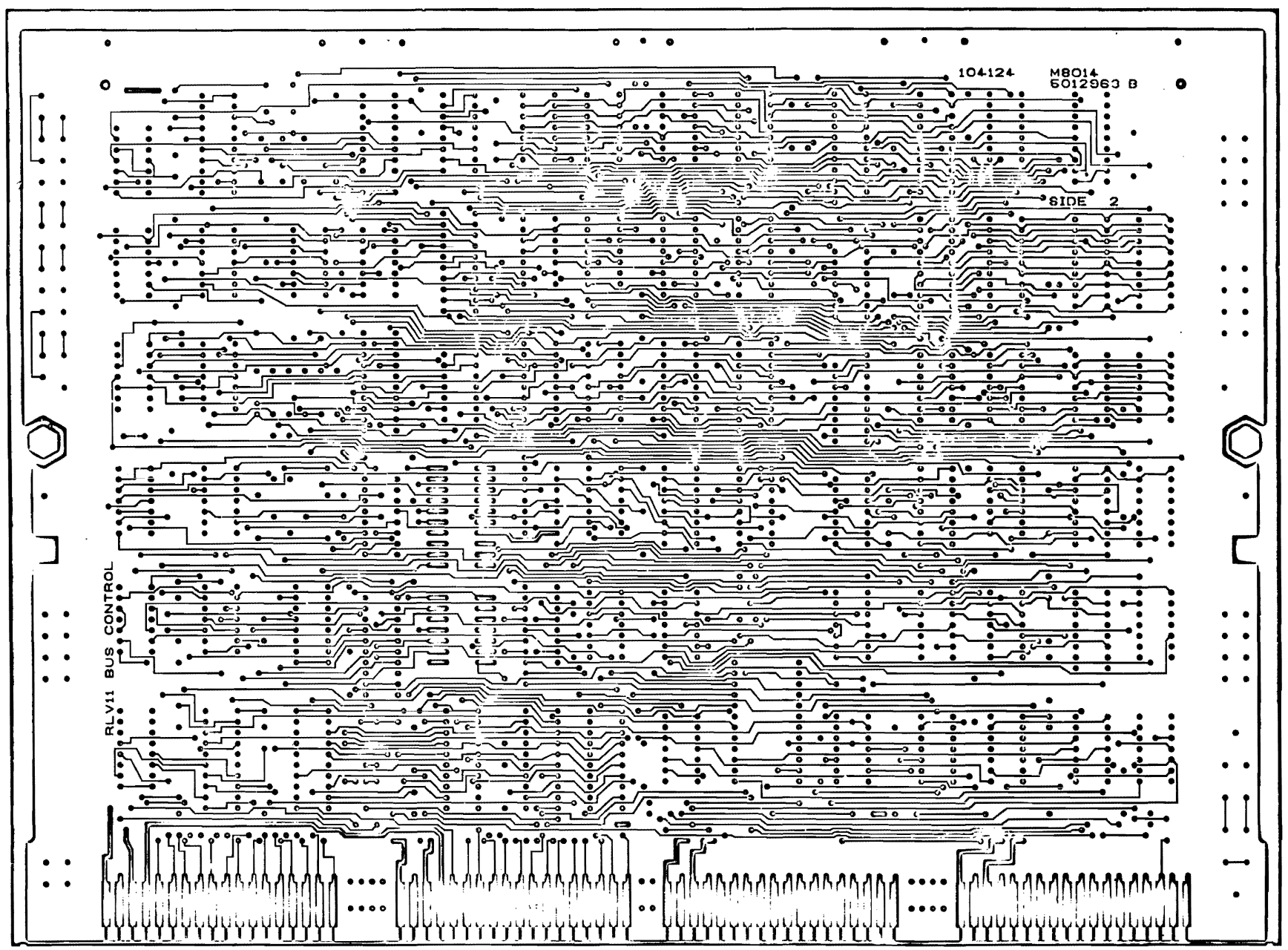
RLV11 BUS CONTROL DUA M8014-0 D

SCALE 2:1 SHEET 3 OF 6



VIEWED FROM SIDE2

TITLE	RLV11 BUS CONTROL			
SCALE	2/1	SHEET	4 OF 6	
SIZE	D	CODE	MBOI4-0-0	REV D



VIEWED FROM SIDE 2

8	7	6	5	4	3	2	1		

TITLE: RLV11 BUS CONTROL
SCALE: 1 SHEET 5 OF 6
D UA M8014-0-0 D

REWORK INSTRUCTIONS:

ECO #1:

COMPONENT DELETE, SIDE 1:

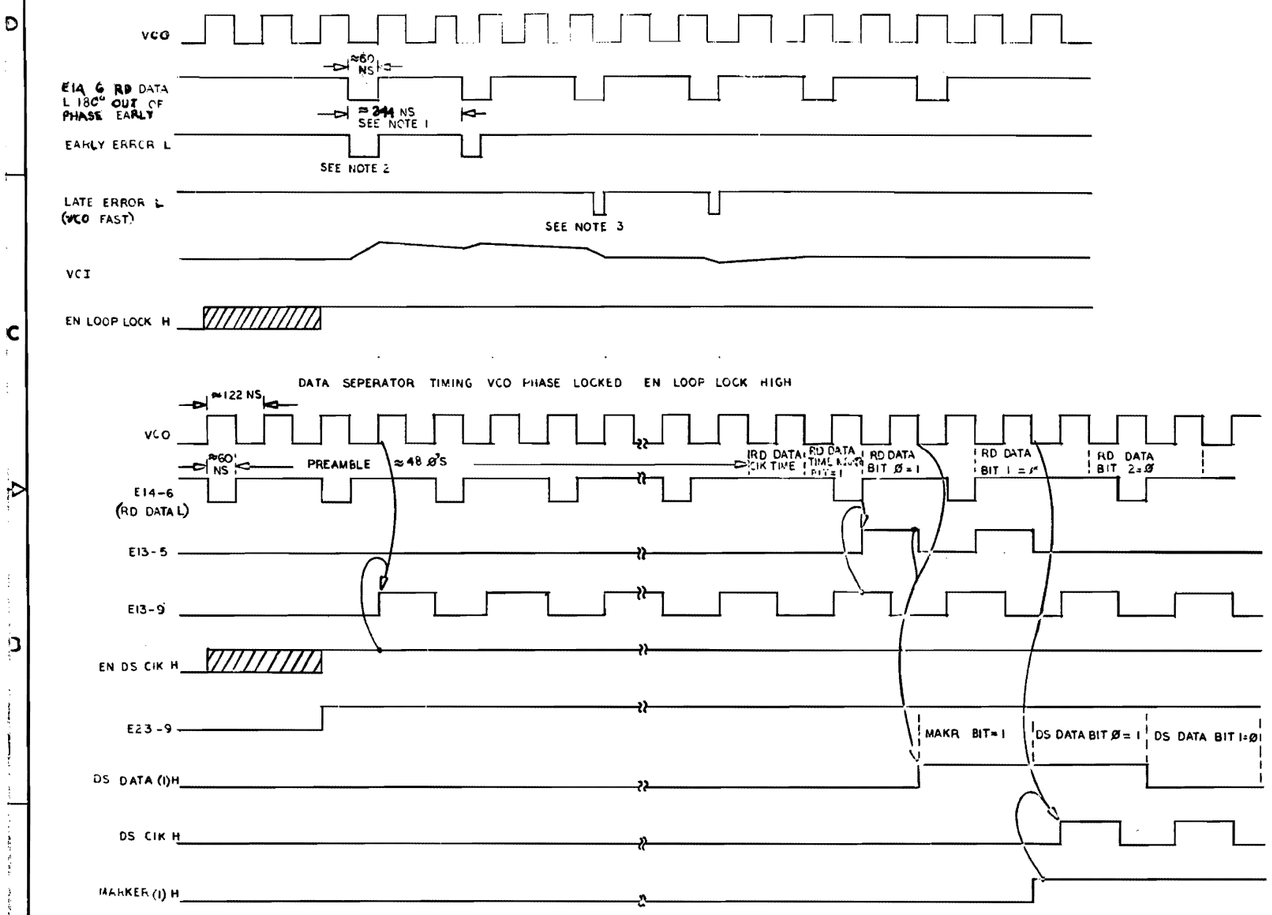
1-1 DELETE R2, 3.3K (P/N 301939-00)

COMPONENT ADDS SIDE 1:

1-2 ADD R2, 1.1K (P/N 301975-00)

REVISIONS		
CHG	CHG NO	REV

RLVII BUS CONTROL	M8014-00	D
2/1	6	



NOTE

1. 244 NS BIT RATE IS DEPENDENT UPON SPEED VARIATIONS AT THE DRIVE.
2. EARLY ERRORS CAUSE THE VCO CLOCK RATE TO INCREASE. VCO IS RUNNING SLOWER THAN READ DATA. POS PLS @ VCI
3. LATE ERRORS CAUSE THE VCO CLOCK RATE TO DECREASE. VCO IS RUNNING FASTER THAN READ DATA. NEG. PLS @ VCI

DRN
CHK'D
ENG.
PROJ. ENG.
MGR. ENGR. DEV.
E-UA-RLVII-Ø-Ø
SCALE
SHEET

FIRST USED ON RLVII

TITLE TIMING DIAGRAM (RLVII)

SIZE D | CODE ID | RLVII-Ø-4 | REV.

DEC FORM NO 880 880

REVISIONS: REV. | CHANGE NO. | CHK.

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

FIELD MAINTENANCE PRINT SET RL01 DISK DRIVE ASSEMBLY RL01 SYSTEM CABLING	B-TC-RL01-0-1 E-UA-RL01-0-0 (Sheets 1,2 & 3 Only) D-IC-RL01-0-3 (Sheet 2 Only)
POWER PANEL ASSEMBLY	D-AD-7012130-0-0
READ/WRITE BOARD	D-UA-5413536-0-0 (Sheet 1 only) B-PL-5413536-0-0 D-CS-5413536-0-1
FRONT PANEL	D-UA-5411846-0-0 (Sheet 1 only) B-PL-5411846-0-0 D-CS-5411846-0-1
AC SERVO	D-UA-5411848-0-0 (Sheet 1 only) K-PL-5411848-0-DBP D-CS-5411848-0-1
DC SERVO AND POWER BOARD	D-UA-5413534-0-0 (Sheet 1 only) K-PL-5413534-0-DBP D-CS-5413534-0-1
DRIVE LOGIC	D-UA-5414025-0-0 (Sheet 1 only) K-PL-5414025-0-DBP D-CS-5414025-0-1

UNIT VARIATIONS COVERED BY THIS PRINT SET
RL01-A

RLØI

Field Maintenance Print Set

Digital Equipment Corporation

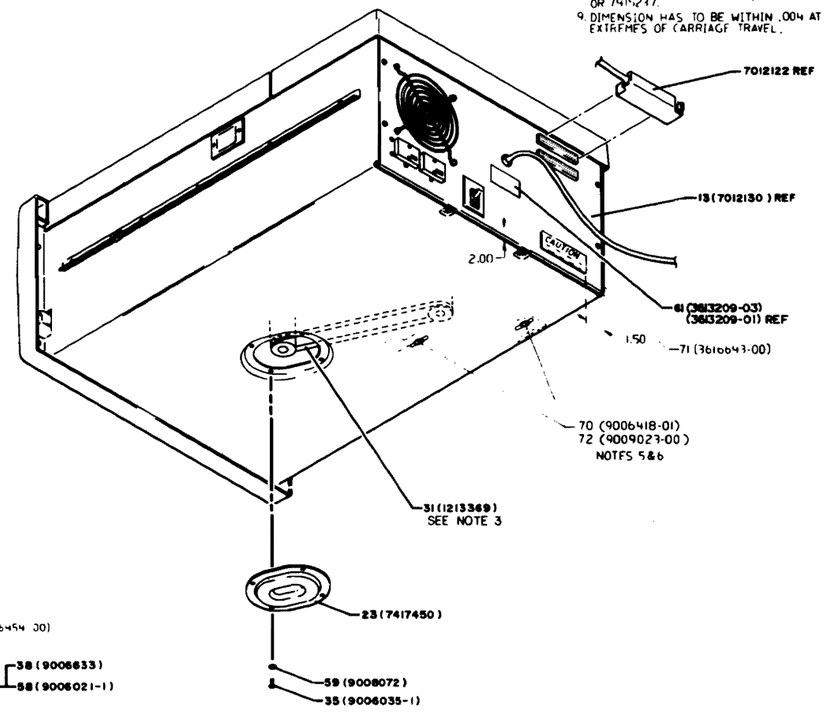
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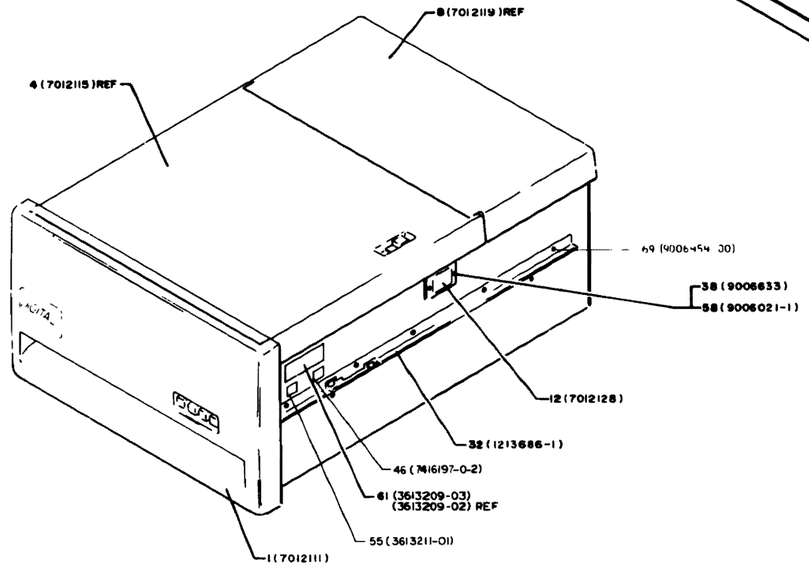
| REVISIONS | | |

NOTES:
1. LOWER HEAD (ITEM 65) SHALL BE POSITIONED REARWARDS AGAINST PIN IN CARRIAGE
2. ALL SCREWS TO BE TIGHTENED AS FOLLOWS:

4-40	SCREW, TORQUE	3.5 ± 0.5 IN LBS
6-32	"	5.0 ± 1.0 "
8-32	"	10.0 ± 1.0 "
10-32	"	18.0 ± 2.0 "

3. DRIVE BELT TENSION 10.0 ± 1.0 LBS
4. 4-40 HEAD MTG BOLTS TO BE TIGHTENED TO 5.0 ± 0.5 IN LBS.
5. TORQUE B 32 SELF TAPPING HARDWARE (ITEM 70) TO 16 18 IN-LBS.
6. BLOWER HOUSING SECURING HARDWARE TO BE REMOVED BEFORE OPERATING UNIT.
7. DIMENSION APPLIES TO HIGHEST OR LOWEST POINT ALONG BRUSH ARM OR BLOCK OF BRUSH.
8. THREE (3) TOOLING POINTS, SEE DRAWING 7416846 OR 7416237.
9. DIMENSION HAS TO BE WITHIN .004 AT BOTH EXTREMES OF CARRIAGE TRAVEL.





REVISIONS			
COM	CHANGE NO	REV	
		A	RELEASED AT REV A
	RL01-0001 G SCHNEIDER	B	
	RL01-0009 G SCHNEIDER	C	
	RL01-CX010 K GUENZEL	D	
	RL01-AC002 ALEXOVAN	E	
	RL01-CX012 BERT MILLER	F	
	RL01-CX023 K GUENZEL	J	
	RL01-CX021 B. MILLER	K	
	RL01-CX022 K. GUENZEL	L	
	RL01-CX025 K. GUENZEL	M	
	RL01-CX032 B. MILLER	N	
	RL01-CX033 K. GUENZEL	P	
	RL01-CX034 K. GUENZEL	R	
	RL01-CX037 B. MILLER	S	
	RL01-CX042 C. ZAPATA	T	
	RL01-CX043 K. GUENZEL	V	
	RL01-CX044 K. GUENZEL	W	
	RL01-CX048 K. GUENZEL	Y	

CAUTION OFF SHEET PARTS LIST EXISTS.
SEE K PL-RL01-0 DBP (Z0459)

	DESCRIPTION	DWG PART NO	ITEM NO
QUANTITY & VARIATION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
	ANGLES ± 30	CLASS III ACCURACY	NOMINAL DIMENSION RANGE IN INCHES
	SURFACE QUALITY	MINIMUM	PREFERRED
	MIL STANDARD		

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG.

MATERIAL

FINISH

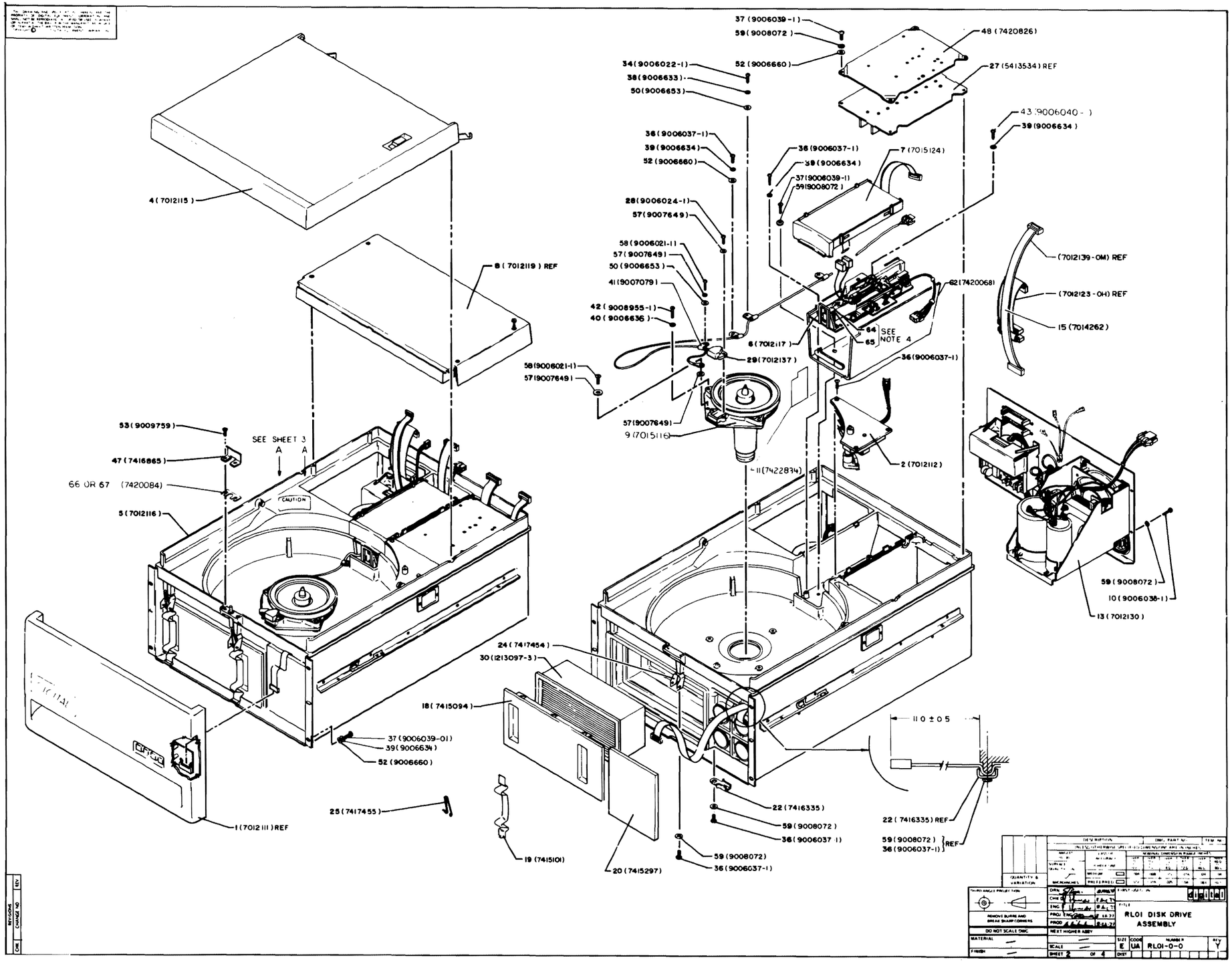
DRN		6-8-77
CHK'D		
ENG		
PROJ ENG		6-28-79
PROD		8-24-77
NEXT HIGHER ASSY		
SCALE		
SHEET	1 OF 4	

FIRST USED ON

TITLE: RL01 DISK DRIVE ASSEMBLY

SIZE E | CODE IDENT NO. UA | NUMBER RL01-0-0 | REV 4

DIST



REVISIONS		
LTR	CHANGE NO	REV

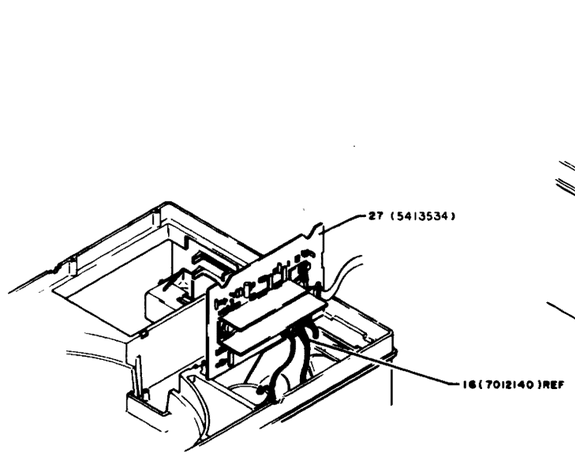
QUANTITY & VARIATION			
THIRD ANGLE PROJECTION	DRN		
	CHK		
REMOVE BURRS AND BREAK SHARP CORNERS	ENG		
	PROJ		
DO NOT SCALE DWG.	NEXT HIGHER ASSY		
MATERIAL			
FINISH			

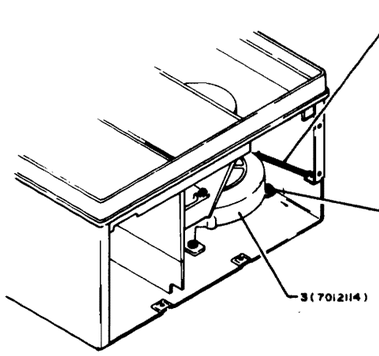
TITLE: RL01 DISK DRIVE ASSEMBLY

SIZE	CODE	NUMBER	REV
E	UA	RL01-0-0	Y

SCALE

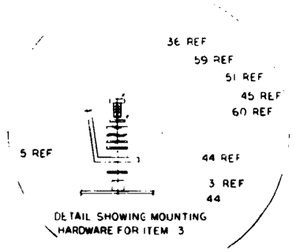
SHEET 2 OF 4



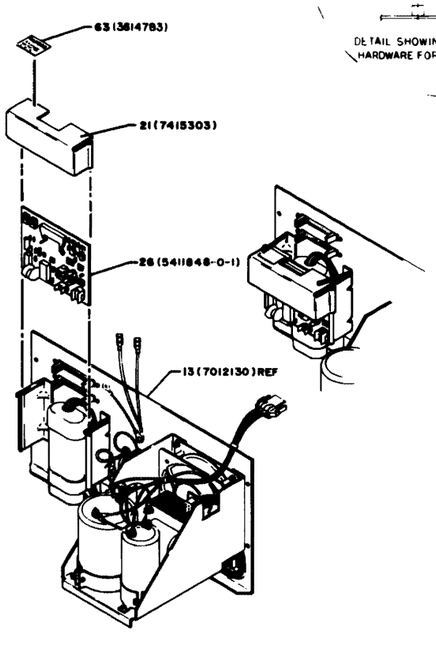


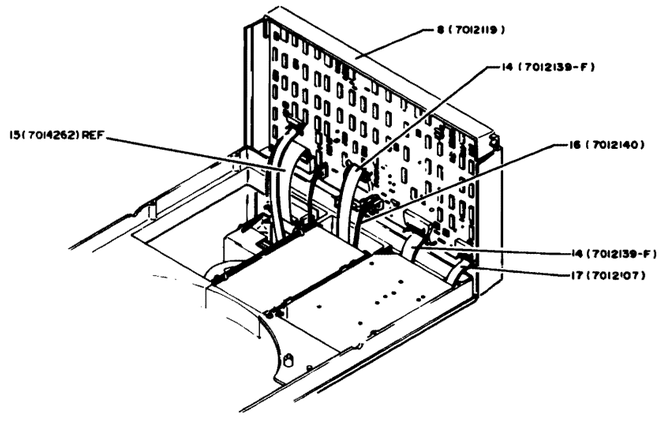
-36 (9006037-01)
-59 (9006072)
-51 (1214359)
-45 (9009885)
-60 (9009974)
-44 (9009884)

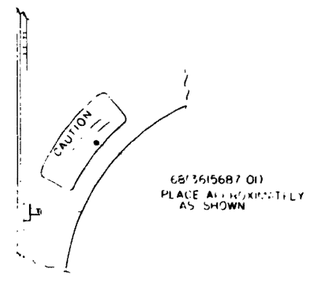
PARTS LISTED IN ASSEMBLY ORDER



DETAIL SHOWING MOUNTING HARDWARE FOR ITEM 3







VIEW A A

REVISIONS		
LTR	CHANGE NO	DATE

DESCRIPTION	DWG PART NO	ITEM NO
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		

SURFACE QUALITY	FINISH OF MACHINED	NOMINAL DIMENSION RANGE INCHES				
		OVER 0 TO 6	OVER 6 TO 12	OVER 12 TO 48	OVER 48 TO 120	OVER 120 TO 480
MICROINCHES	MEDIUM	.004	.008	.012	.016	.024
	PREFERRED	.002	.004	.008	.010	.016

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL

FINISH

DRN		
CHK'D		6-4-77
ENG		6-4-77
PROJ ENG		6-16-77
PROD		6-16-77
NEXT HIGHER ASSY		
SCALE		
SHEET 3	OF 4	

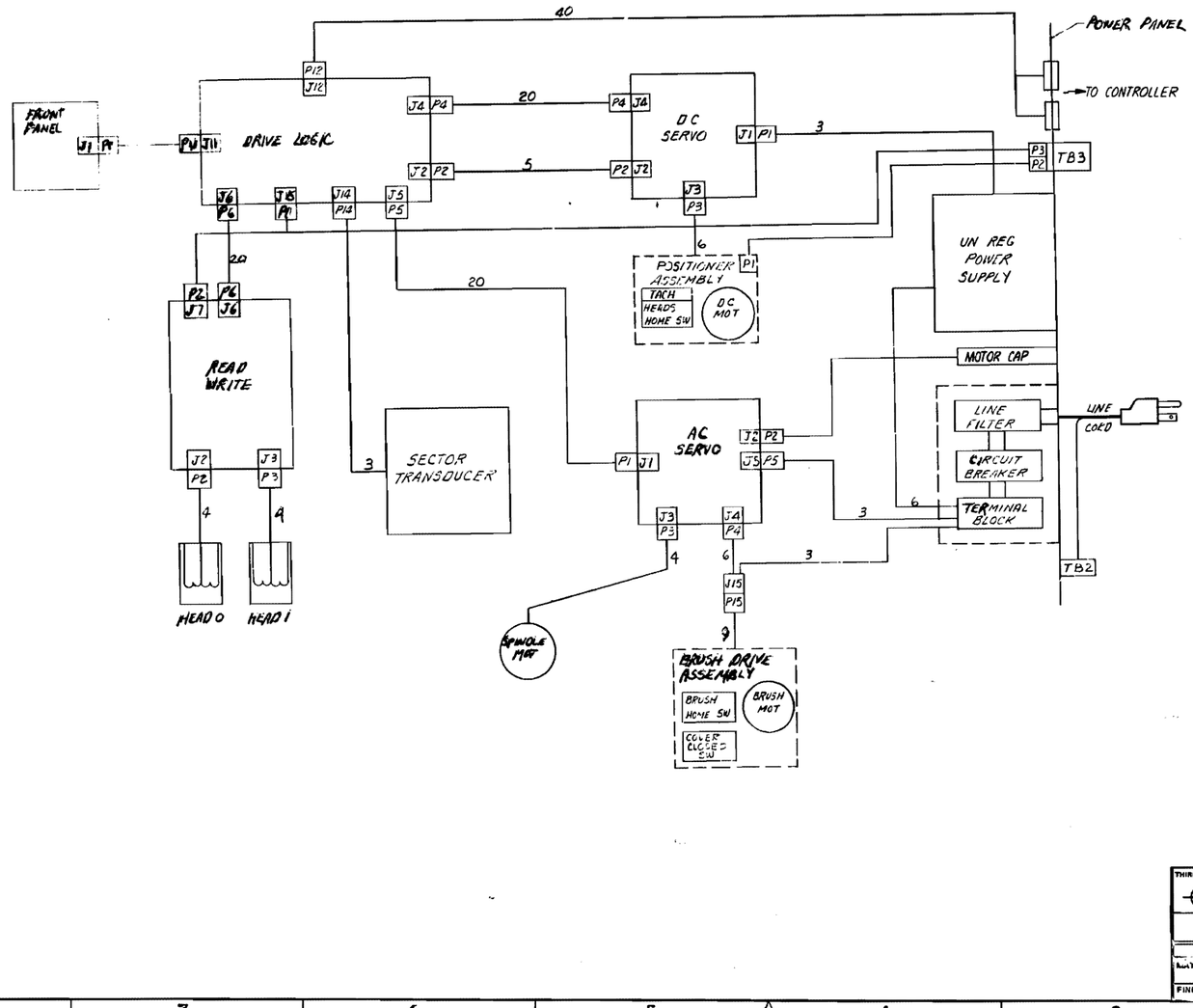
FIRST USED ON

TITLE

RL01 DISK DRIVE ASSEMBLY

SIZE	CODE	NUMBER	REV
E	UA	RL01-0-0	Y
SHT			

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DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES					
		OVER 0 TO 0.7	OVER 0.7 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
SURFACE QUALITY IN MICROINCHES	MEDIUM ☐	±.004	±.003	±.012	±.016	±.024	±.04
	PREFERRED ☐	±.012	±.016	±.025	±.04	±.063	±0.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DRAWING

MATERIAL

FINISH

DRN. J. Wyatt 9 27 74
CHK'D
ENGR
PROJ. ENGR. Tom R 10/31/74
PROD.
QUALITY ASSUR. ASSY.

FIRST USED ON RLØ1

TITLE
RLØ1
SYSTEM CABLING

SIZE D | CODE IC | NUMBER RLØ1-Ø-3 | REV. D

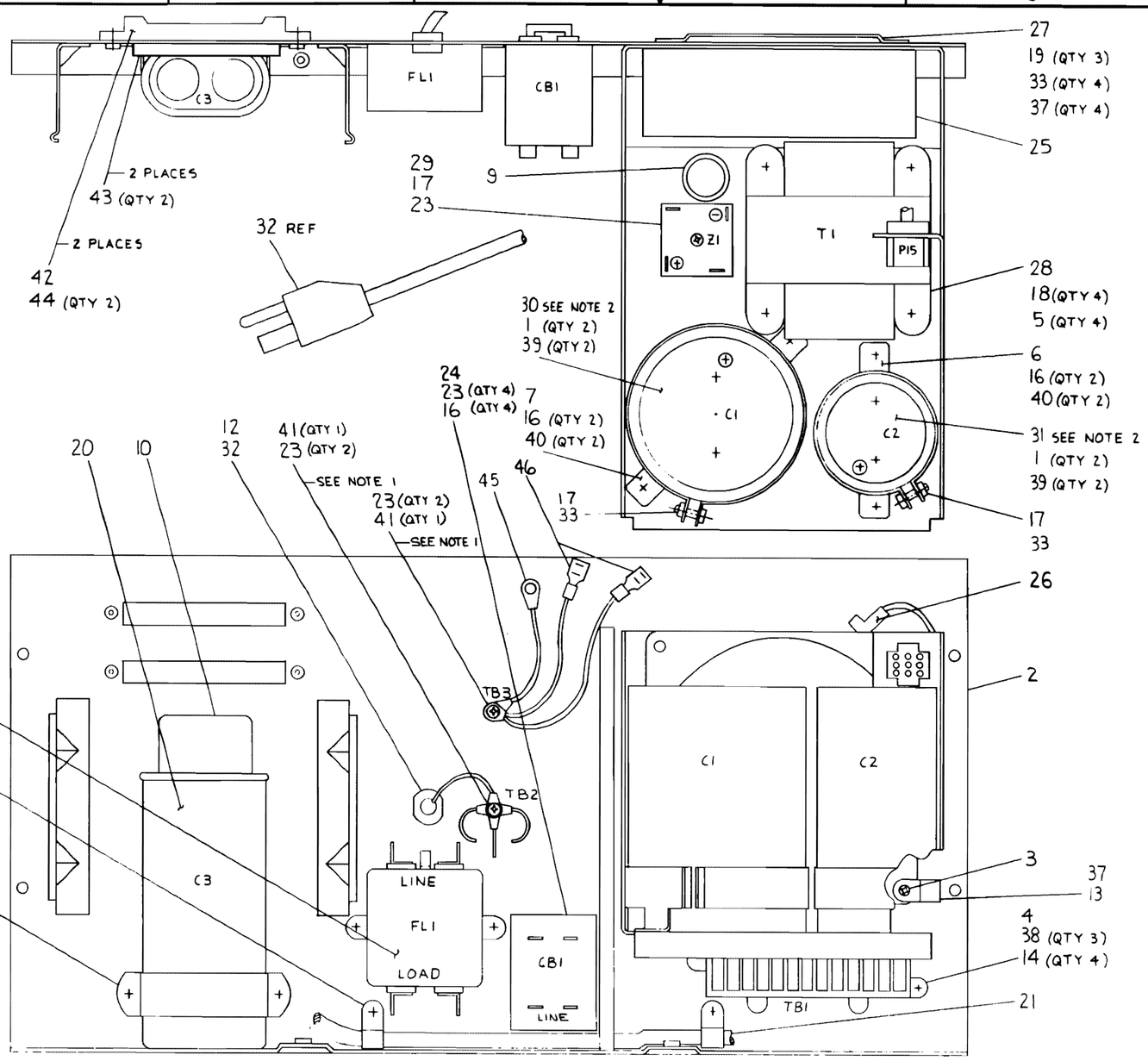
SCALE

SHEET 2 OF 2 | DIST. 1

REVISIONS		
CHK	CHANGE NO.	REV.

D-IC-RLØ1-Ø-3 SHT 2

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NOTES:
1. INT TOOTH LOCK WASHERS (ITEM 23) ARE USED OVER AND UNDER GROUND TERMINALS.
2. ORIENT TERMINALS AS SHOWN.

CAUTION: OFF SHEET PARTS LIST EXISTS.
SEE K-PL-7012130 0-DBP (Z0849)

REVISIONS	REV.	CHK	CHANGE NO.	
	A		RELEASED AT REV A PREVIOUS REV X08	
	B		7012130-CX001 G.REICHENBERG	
	C		7012130-CX002 G.SCHNEIDER	
	D		RL01-CX009 G.SCHNEIDER	
	E		7012130-CX003 K.GUENZEL	
	F		7012130-CX004 G.REICHENBERG	
	T		7012130-CX005	
	J		RL01-CZ006 K.GUENZEL	
	K		7012130-CZ006 K.GUENZEL	
	L		7012130-CZ007 K.GUENZEL	
	M		7012130-CZ008 K.GUENZEL	
	N		7012130-CX009 K.GUENZEL	
	P		7012130-CX010 K.GUENZEL	
	R		RL02-CX008 K.GUENZEL	
	S		7012130-CX011 K.GUENZEL	
	T		RL02-CX010 M. ZARICH	

DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES: OVER 0 TO 0.2	OVER 0.2 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 48.0	OVER 48.0 TO 80.0
SURFACE QUALITY IN MICROINCHES	MEDIUM ☐	±.004	±.008	±.012	±.018	±.024	±.04
	PREFERRED ☐	±.012	±.016	±.025	±.04	±.063	±0.1

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL: SEE PARTS LIST

FINISH

DRN. J. MELCHIOR 2/AUG.77
CHK'D G. SCHNEIDER 24/AUG.77
ENG. G. SCHNEIDER 24/AUG.77
PROJ. ENG. R. ARNOLD 30/AUG.77
PROD. B. RYLANDER 30/AUG.77
NEXT HIGHER ASSY.
SCALE: 1:1
SHEET 1 OF 3

FIRST USED ON: RL01

TITLE: POWER PANEL ASSY

SIZE D | CODE | NUMBER: AD 7012130-0-0 | REV T

DIST.

7012130-0-0T

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NOTES:

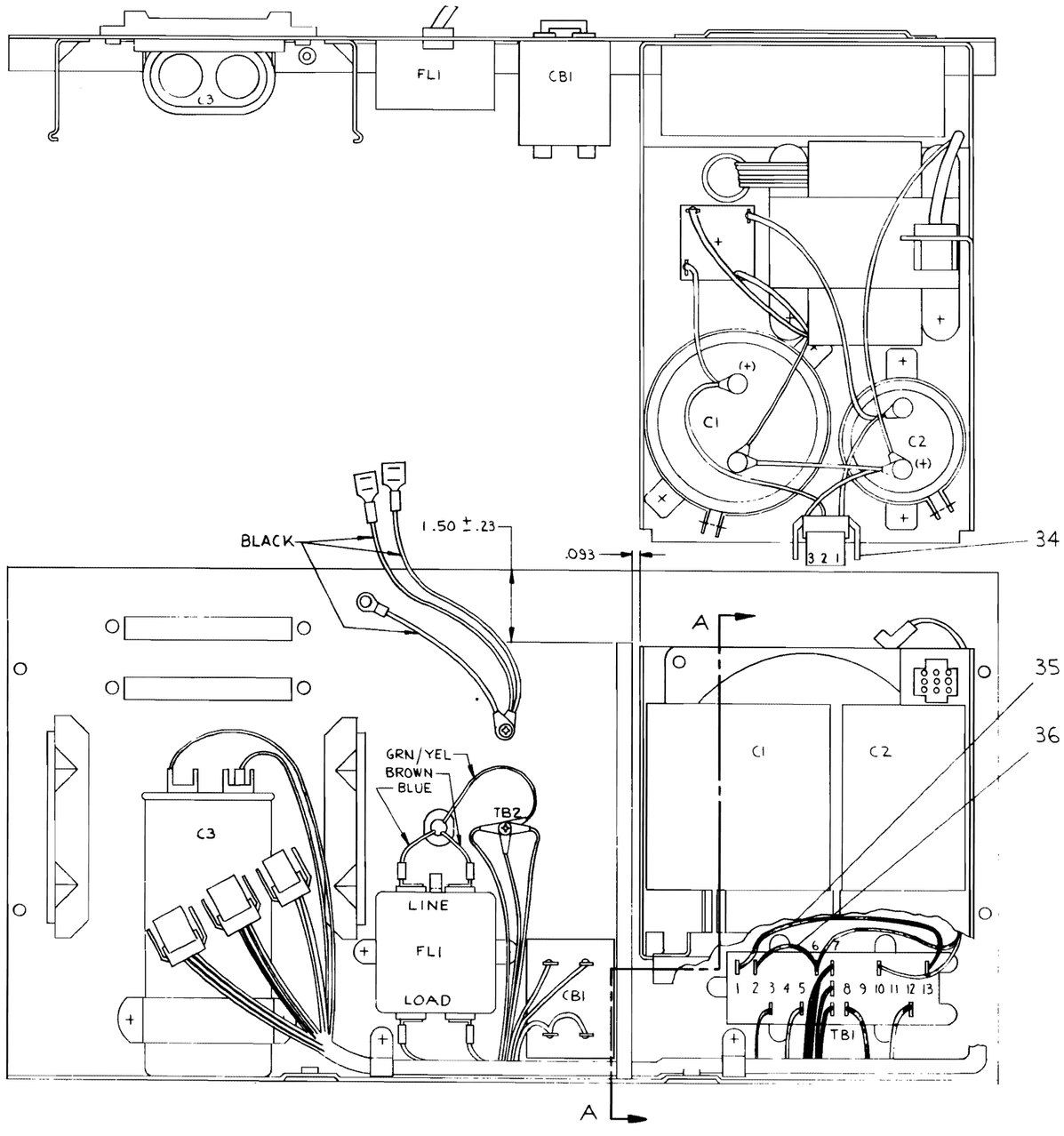
1. INPUT VOLTAGE 50 OR 60 HZ
   90 – 110, 105 – 128 VAC
   180 – 220, 210 – 256 VAC
2. OUTPUT VOLTAGE ±11.5 VDC MIN AT MIN POINT OF THE RIPPLE. 18 VDC MAX AT HIGH LINE. (MAX OF 25 VDC AT HIGH LINE NO LOAD).
3. OUTPUT CURRENT: POSITIVE OUTPUT
   2.5 AMP CONTINUOUS
   3.5 AMP PULSE ".25 MS"
   NEGATIVE OUTPUT
   .25 AMP CONTINUOUS
   3.5 AMP PULSE ".25 MS"
   PULSE CURRENT ON ALTERNATE OUTPUT AT A 65 MS OUT CYCLE.
4. OUTPUT RIPPLE AT 110 VOLTS

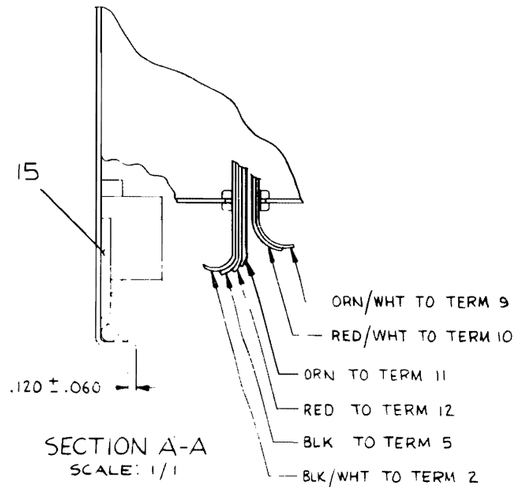
A. NO LOAD	100 MV	P/P
B. + 2.5 A	600 MV	P/P
– .75 A	300 MV	P/P
C. + 2.5 A	600 MV	P/P
– 3.75 A	1.5 V	DURING PULSE

   RIPPLE AT 90 V RMS

+ 2.5 A	500 MV
– 3.75 A	2V
+ 6 A	900 MV
– .25 A	400 MV

5. HIGH POT TEST PER UL 478
   CONNECT BOTH AC LEADS TO THE POSITIVE TERMINAL OF THE SUPPLY AND GRN WIRE GROUND TO THE NEGATIVE TERMINAL OF THE SUPPLY. CLOSE CIRCUIT BREAKER AND INCREASE VOLTAGE TO 1750 VDC, ANY CURRENT INDICATES FAILURE.





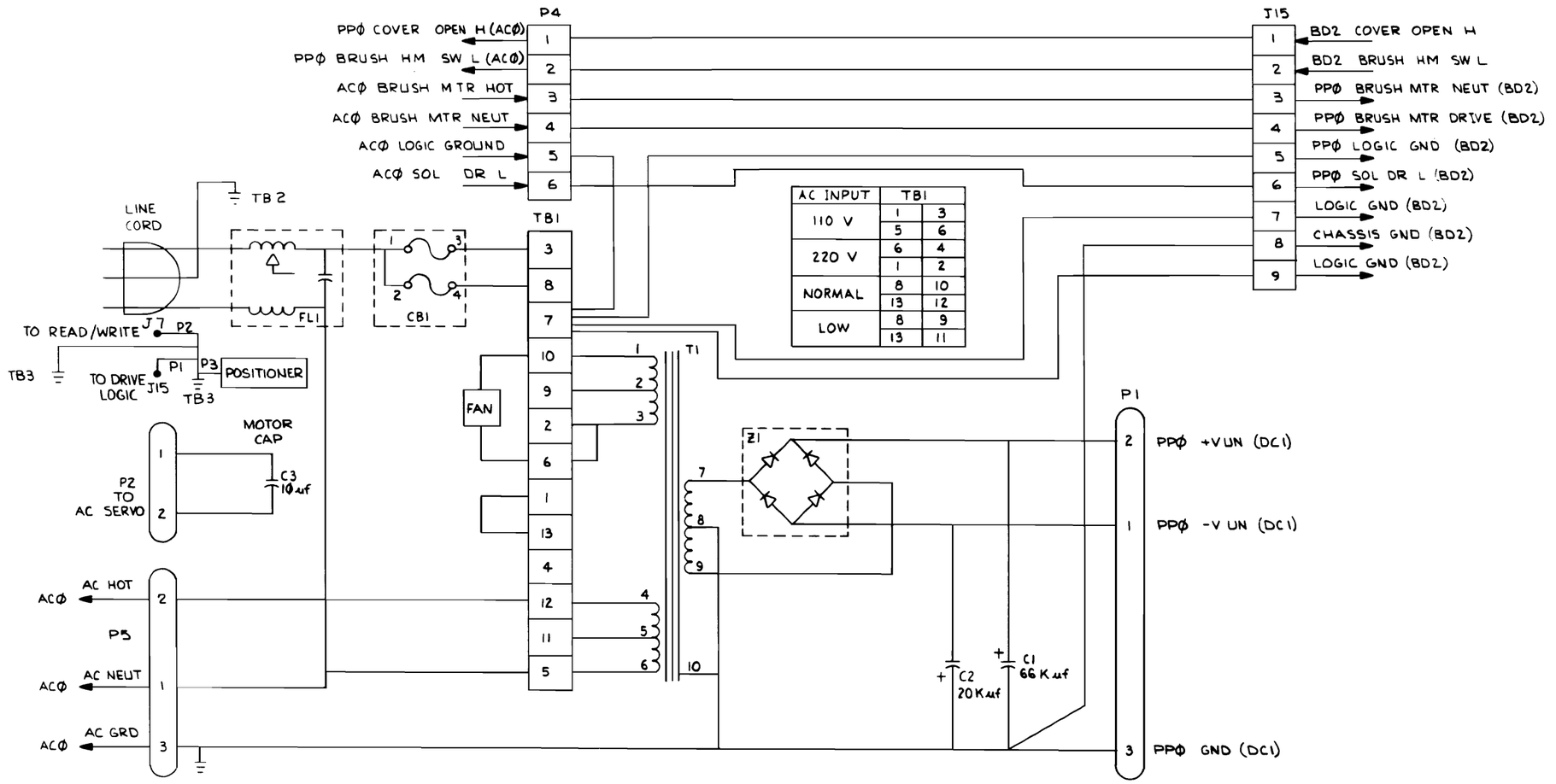
SECTION A-A
SCALE: 1/1

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV
POWER PANEL ASSY	D	AD	7012130 – 0 – 0	T
SCALE: 1/1 SHEET 2 OF 3	DIST.			

DEC FORM NO DOD 137

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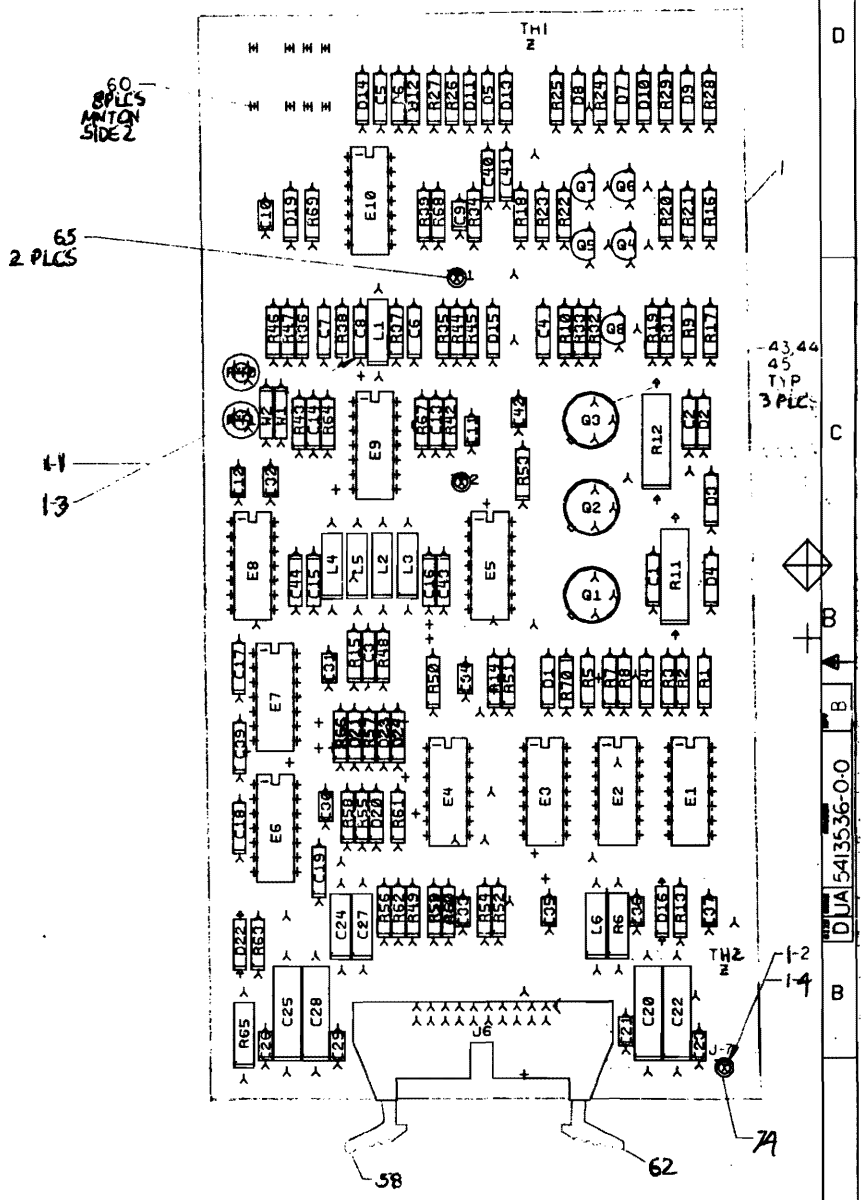
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
POWER PANEL ASSY (PPΦ)	D	AD	7012130-0-0	T
SCALE: 1/1	SHEET 3 OF 3		DIST.	

DAD 7012130-0-0 T

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COMPONENT SIDE VIEW



NOTES:

CHK CHANGE NO	REV
5413750 (X003) M ZARICH 8	B

ETCH REV. B
P.C. DESIGN DATA BASE REV. B1

SIGNATURES	DATE
DRN. L Rak	5/5/77
CHK'D. L Rak	5/5/77
ENG. B Nagel EE	5/5/77
PROJ.ENG. [illegible]	5/11/77
PROD. [illegible]	11/11/78

SCALE 2/1
SHT. 1 OF 2
NEXT HIGHER ASSY. B-DD-5413533-0

digital

TITLE RL02
READ/WRITE BOARD

SIZE	CODE	NUMBER	REV
D	UA	5413536-0-0	B

5413536-0-0 DUA B

AUTOMATED BY PRTLST.2E(3) P A R T S L I S T SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION *00	REFERENCE DESIGNATOR
1	1	D-MD-5013535-0-0	5013535-00	ETCHED CIRCUIT BD	1	
2	2		1001610-00	.01 MFD 50V -20+80 Z5U AXIAL	17	C9-C12,C21,C23,C26,C29-C37,C42
3	3		1005306-00	6.8MFD 35V 10% S.TANT	4	C20,C22,C25,C28
4	4		1013466-14	82.0 MMF 50V 5% CER	2	C16,C43
5	5		1013466-06	100.0 MMF 50V 5% CER.	1	C8
6	6		1013466-05	56.0 MMF 50V 5% CER.	1	C5
7	7		1013466-07	220.0 MMF 50V 5% CER.	5	C1,C2,C4,C17,C39
8	8		1013466-09	1000.0 MMF 50V 10% CER.	1	C18
9	9		1013466-11	.22 MFD 50V +80/-20% CER.	2	C24,C27
10	10		1013466-15	1200.0 MMF 50V 5% CER.	3	C19,C40,C41
11	11		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	2	D16,D22
12	12		1113953-00	1N 5523D VZ= 5.1 1%	1	D1
13	13		1100122-00	1N 748A VZ= 3.9 5%	1	D19
14	14		1111577-00	1N 4454 TR= 4NS PIV= 50 S	11	D5-D10,D15,D20,D21,D23,D24
15	15		1300250-00	150.0 .25 W 5.0 % CC	1	R5
16	16		1300229-00	100.0 .25 W 5.0 % CC	5	R39,R52,R54,R59,R69
17	17		1300232-00	100.0 1.0 W 5.0 % CC	2	R11,R12
18	18		1300247-00	120.0 .25 W 5.0 % CC	1	R56
19	19		1300365-00	1.0 K .25 W 5.0 % CC	8	R13,R14,R35,R36,R48,R49,R66,R70
20	20		1300444-00	3.90 K .25 W 5.0 % CC	1	R46
21	21		1300447-00	4.70 K .25 W 5.0 % CC	3	R9,R10,R32
22	22		1301775-00	820.0 .25 W 5.0 % CC	1	R31
23	23		1301317-00	10.0 .25 W 5.0 % CC	1	R63
24	24		1302612-00	1.78 K 1/4W 1% RN55D-F 100PPM	2	R50,R51
25	25		1300195-00	33.0 .50 W 5.0 % CC	2	R6,R65
26	26		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R62
27	27		1312930-00	5.10 K .25 W 5.0 % CC	2	R55,R58
28	28		1301424-00	680.0 .25 W 5.0 % CC	4	R16,R18,R21,R23
29	29		1302391-00	20.0 K .25 W 5.0 % CC	1	R60
30	30		1300426-00	2.70 K .25 W 5.0 % CC	1	R33

REVISION HISTORY			BASIC PART NO: 13536											
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: JERRY BEST	DATE: 14-AUG-78		D	I	G	I	T	A	L	
	INIT	A	SECTION.VARIATION INDEX	CHK'D: L. ROOHR	DATE: 14-AUG-78	TITLE PARTS LIST								
MZ	5413536-CX001 M. Zaech W.C.K. 17 Jan 80	B	[A] 00			READ/WRITE BOARD								
			[B]	DES.ENG: B. NOGUCHI	DATE:									
			[C]			DOCUMENT NUMBER								
			[D]											
			[E]	RESP.ENG.: B. NOGUCHI	DATE: 14-AUG-78	SIZE	CODE	NUMBER				REV		
			[F]			K	PL	5413536-0-DBP				B		
			[H]	MFG.ENG.: P. CHURCH	DATE:									
			[J]											
			[K]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:						EDIT #		
			[L]	D-UA-5413536-0-0	RL02	Z1091B.PLS						7		
			[M]											
			[N]											

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AUTOMATED BY PRTLST,2E(3)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION *00	REFERENCE DESIGNATOR
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	3	R2,R3,R4
32	32		1300439-00	3.30 K .25 W 5.0 % CC	2	R20,R22
33	33		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R44,R45
34	34		1303303-00	2.61 K 1/4W 1% RN55D-F 100PPM	4	R24,R25,R28,R29
35	35		1302645-00	1.1 K 1/4W 1% RN55D-F 100PPM	1	R61
36	36		1301477-00	82.0 .25 W 5.0 % CC	1	R68
37	37		1301322-00	180.0 .25 W 5.0 % CC	2	R37,R38
38	38		1313469-00	240.0 .25 W 5.0 % CC	1	R34
39	39		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	2	R26,R27
40	40		1501913-00	2N 2904A PNP 600MW SI 60 40 Y	3	Q1-Q3
41	41		1513489-00	2N 4401 NPN 350MW SI 40 20	3	Q6-Q8
42	42		1513490-00	2N 4403 PNP 350MW SI-40 30	2	Q4,Q5
43	43		1210001-00	HEAT SINK BLACK	3	
44	44		9007201-00	TRANSIPADS #10253	3	
45	45		9008268-00	COMPOUND, THERMAL JOINT $	A/R	
46	46		1611257-01	CHOKE(CERAMIC BEAD)AXIAL LEAD,ON	1	L6
47	47		1613898-01	33.0 UH INDUCTOR	4	L2-L5
48	48		1613898-02	39.0 UH INDUCTOR	1	L1
49	49		1910268-00	DEC 75107B RECEIVER,LINE,DUAL,	1	E8
50	50		1909686-00	7404 INVERTER GATE-HEX 1I	1	E3
51	51		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	1	E2
52	52		1910644-00	733 DIFFERENTIAL AMP,WID	2	E9,E10
53	53		1910741-00	7406 INVERTER GATE-HEX 1I	1	E7
54	54		1911521-00	7432 OR GATE-QUAD 2IN, PO	1	E1
55	55		1910268-01	DEC 75107B-01 RECEIVER,LINE,DUA	2	E5,E4
56	56		1910725-00	75108B RECEIVER,LINE,DUAL,	1	E6
57	57		1209941-06	HEADER,100 20POS RT ANGLE	1	J6
58	58		1209941-03	HEADER RT ANGLE LEFT L	1	
59	59		1209941-04	HEADER RT ANGLE,RIGHT	1	
60	60		1210385-01	PIN 1POS WIRE WRAP	8	
61	61		9007791-00	TERM PCB 2POS SOLDER,TURRET	2	TP1,TP2
62	62		1303067-00	422 1/4W 1% RN55D-F 100PPM	2	R42,R43
63	63		1300219-00	68.0 .25 W 5.0 % CC	4	R7,R8,R47,R57
64	64		1301423-00	6.80 K .25 W 5.0 % CC	3	R15,R64,R67
65	65		1300391-00	1.50 K .25 W 5.0 % CC	2	R17,R19
66	66		1114117-00	1N 4152 PIV=450 I=75M	3	D2-D4
67	67		1113003-00	IN 5282 PIV=55 I=500M D035	4	D11-D14
68	68		1015573-01	5600.0 MMF 50V 5% CER. $	5	C3,C6,C7,C13,C14
69	69		1304857-00	237 1/4W 1% RN55D-F 100PPM	1	R1
70	70		1300309-00	390.0 .25 W 5.0 % CC	1	R53
71	71		1013466-17	150 MMF 50V 5% CER	2	C15,C44
72	72		1309150-07	2 K 1/2W10% POT 100PPM	2	R40,R41
73	73		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	2	W1,W2
74	74		1217377-00	TERM QUICK 1POS TAB PC MNT	1	J7

########## UNDERGOING CHANGE ##########

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							READ/WRITE BOARD		K	PL	5413536-0-DBP	B

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WRITE CURRENT SOURCE

+8.0F

D1 IN5523D

R1 237 1%
R2 196 1%
R3 196 1%
R4 196 1%
R70 1K

Q1 2N2954

WRITE CURRENT SWITCH

Q2 2N2954

WRITE CURRENT DRIVERS

Q3 2N2904

D2 IN4152
D3 IN4152
D4 IN4152

R5 68

+5.2V

R32 3.7K
R33 4.7K
R31 82Ω
C4 220pf
D11 IN4152
Q6 2N4403

CURRENT W HEADS DETECTOR

-V UNREG F

CURRENT IN HEADS L

WRITE DATA ERROR DETECTOR

WRITE DATA ERROR H L S I

J6

WRITE GATE H
WRITE DATA PULSE L
R/W REF L

7406 E7
7401 E3
74S74 E2
7432 E1

R6 33 1/2W
R5 150
D16 IN4733A
C36 .01 mf
R7 150
R8 150

+5.0F

R13 1K
R14 1K
WRT ENABLE H.E.

R9 4.7K
R10 4.7K
R11 100 1W
C1 220pf
C2 220pf
R12 100 1W
C3 .005mf

R15 6.9K
R19 1.5K
R46 680
Q5 2N4403

WRITE HEAD 1

WRITE GATE L

WRITE HEAD Ø

NO SELECT ZERO I

SELECT HEAD 1

SELECT HEAD Ø GATE

R16 680
R17 1.5K
Q4 2N4403
R22 8.3K
D5 IN4454
C41 1200pf
Q5 2N4401
R21 68Ω

- V UNREG F

STEERING NETWORK

UPPER (HEAD Ø)
P2
J2
J3
P3
LOWER (HEAD 1)

D7 IN4454
D8 IN4454
D10 IN4454
D9 IN4454
D11 IN5282
D12 IN5282
D13 IN5282
D14 IN5282
D6 IN4454

R24 2.61K 1%
R25 2.61K 1%
R26 3.16K 1%
R27 3.16K 1%
R29 2.61K 1%
R28 2.61K 1%
R22 4.7K
C40 1200pf
Q7 2N4401
R23 68Ω

Vc
-VE
+Vc

READ SIGNAL I R/W 2

R/W SIGNAL 2 R/W 2

NOTE:
1. FOR RL01 CUT W2 AND LEAVE IN W1.
FOR RL02 CUT W1 AND LEAVE IN W2.

REVISIONS

ORIG	CHANGE NO.	REV
REV A	5413536-0001 W1,2 ARTICH W1,2 ADDED W1 ONLY	B

DRN		
CHK'D		
ENG		
PROJ ENG		
PROD		
NEXT HIGHER ASSY		
SCALE		
SHEET	1 OF 2	

FIRST USED ON: RL02

digital

TITLE: READ/WRITE BOARD

SIZE D | CODE CS | NUMBER 5413536 0 1 | REV B

DIST

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SERVO AND READ DATA PULSE GENERATOR

ZERO CROSSING DETECTORS

AMP SENSOR LEVEL DETECTORS

PICK TIME DETECTOR

FALL TIME DETECTOR

SEE NOTE 1

SERVO DATA 1

SERVO DATA 2

AMP SENSOR H

READ SIGNAL 1

READ SIGNAL 2

+8.0 V

SIG GND

-8.0 FM SUPPLY

+5.0 V

LOGIC GND

LOGIC GND

-5.0 FM LOGIC

V UNREG

SIG GND

SIG GND

SIG GND

-VD

+8.0F

+5.0F

LOGIC GND

-5F

-V UNREG F

-V_B

I.C. DECOUPLING

+5.0 F

C30 THRU C35, C37 .01 uf

LOGIC GND

VOLTAGE & GND PINS NOT SHOWN IN LOGIC

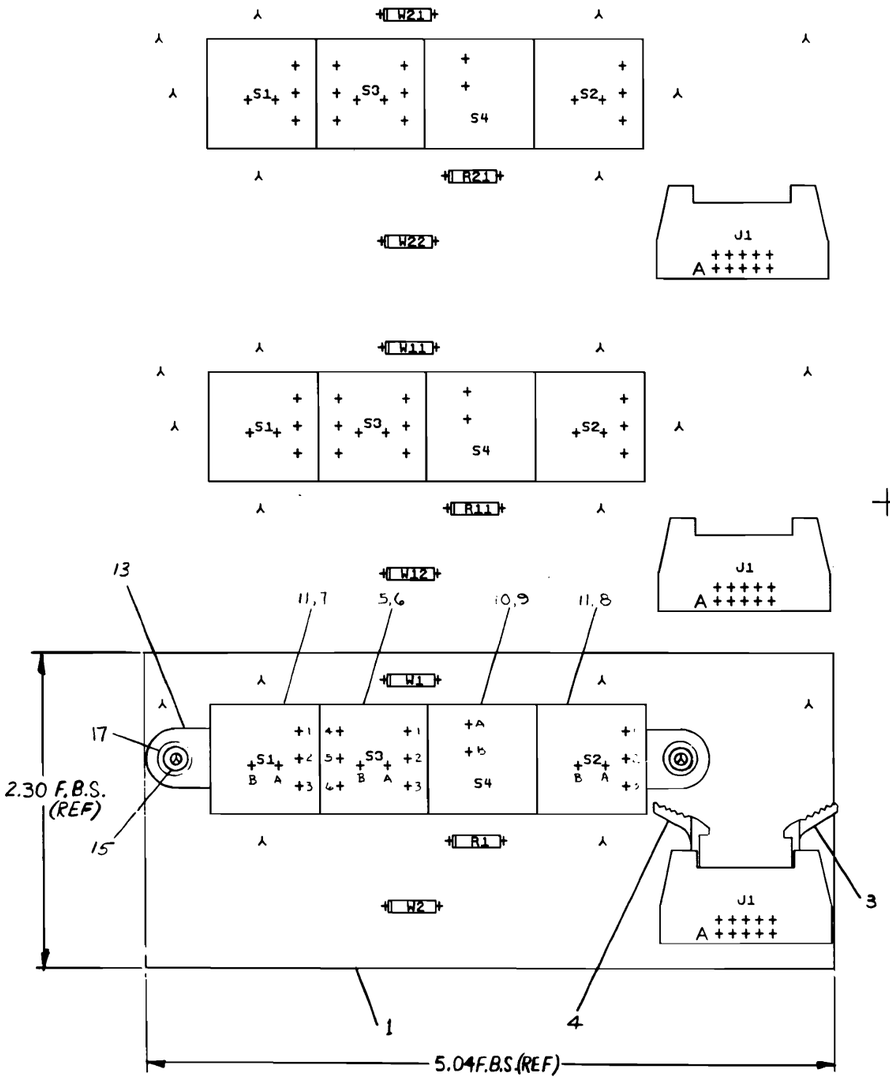
IC	E NO	3	+5.0F	-5 F	2	1
751078-00	E8	7	14	13	–	–
7404	E3	–	14	–	–	7
751078-01	E4, E5	7	14	13	–	–
7406	E7	7	14	–	–	–
7432	E1	–	14	–	–	7
75108A	E6	7	14	13	–	–

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
READ/WRITE BOARD	D	CS	5413536-0-1	B
SCALE — / — SHEET 2 OF 2	DIST.			

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COMPONENT SIDE VIEW



NOTES:

CHK	CHANGE NO	REV

ETCH REV. D
P.C. DESIGN DATA BASE REV. D

SIGNATURES	DATE
DRN. MR Riley	11/5/76
CHK'D. G Burnell	1-11-77
ENG.	
PROJ.ENG.	3/1/77
PROD.	

digital

TITLE: FRONT PANEL

SCALE	SIZE	CODE	NUMBER	REV
2/1	D	UA	5411846-0-0	F

SHT. 1 OF 2
NEXT HIGHER ASSY. B-DD-5411846-0

5411846-0-0 F
D UA

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY	S. MARLOW	CHECKED	P. BURNELL	SECTION
DATE	7 APR 76	DATE	10 JAN 77	
ENG	G. REICHENBERG	PROD	L. KIRK	ISSUED SECTION
DATE	7 MAR 77	DATE	9 MAR 77	

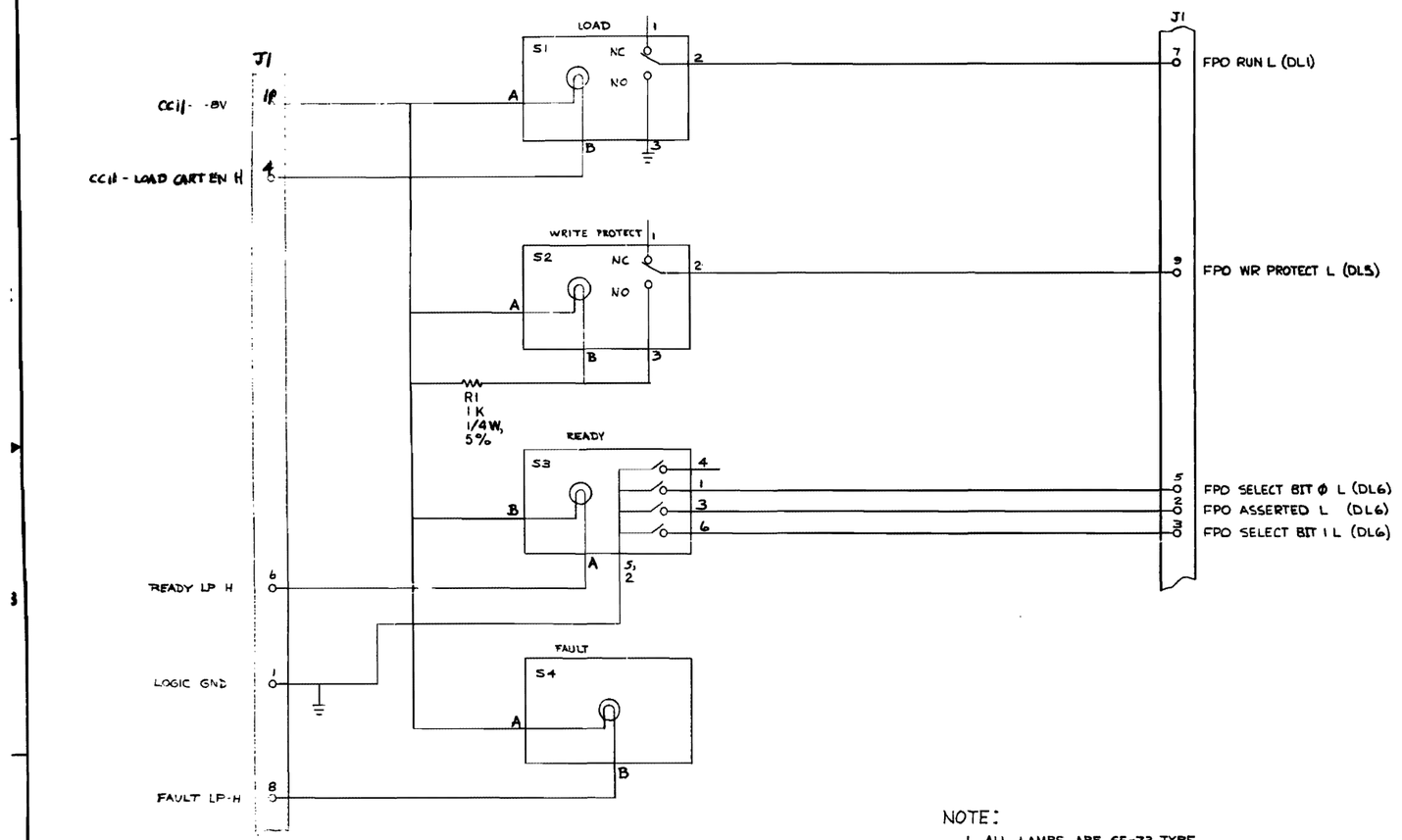
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION 5411846-0-0	NOTES: REF DESIGNATION
1	D-MD-5011845-0-0	5011845	ETCH BOARD	1	
2		1209941-05	CONN., 10 PIN BERG	1	J1
3		1209941-04	CONN., LATCH-LEFT	1	
4		1209941-03	CONN., LATCH-RIGHT	1	
5		1212690-02	SWITCH, UNIT SELECT	1	S3
6		1212691-00	SWITCH CAP., DRIVE SELECT UNIT 0	1	S3
7		1212714-05	SWITCH CAP., LOAD	1	S1
8		1212714-01	SWITCH CAP., WRITE PROTECT	1	S2
9		1212714-02	SWITCH CAP., FAULT	1	S4
10		1212715-02	INDICATOR, FAULT DISPLAY	1	S4
11		1212717-05	SWITCH, PB	2	S1, S2
12		1212716-01	BULB, 14V	1	
13		1213188-01	SWITCH MOUNTING BRACKET, 4 POS.	1	
14		1300365	RES., 1K, ¼W, 5%	1	R1
15		9006732	EYELET, GS4-7	2	
16		9107560-01	BUS WIRE, JUMPER	2	W1, W2
17		9006655	WASHER	2	

E.C.O. NO. 5411846-22003 6-FEB-79 W.C.M.
5411846-C2004 21-MAR-79 W.C.M.

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
FRONT PANEL	D-UA-5411846-0-0	B	PL	5411846-0-0	H
	SHEET 1 OF 1	INSERTION PARTS LIST DATA BASE REV			

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NOTE:
1. ALL LAMPS ARE GE-73 TYPE

REVISIONS			
DIST	CUSTOMER NO.	REV.	
	5411846-0001	E	7-21-77
	G. REICHENBERG		7-21-77
	5411846 C2	F	
	M. ZARICH		
	5411846 C2	H	
	M. ZARICH		

DRN.		8-2-77
CHK'D		7-11-77
ENG.		8-2-77
PROJ. ENG.		8-10-77
PROD.		8-9-77
NEXT HIGHER ASSY.		
SCALE		
SHEET	1 OF	

FIRST USED ON: 5411846

TITLE: FRONT PANEL

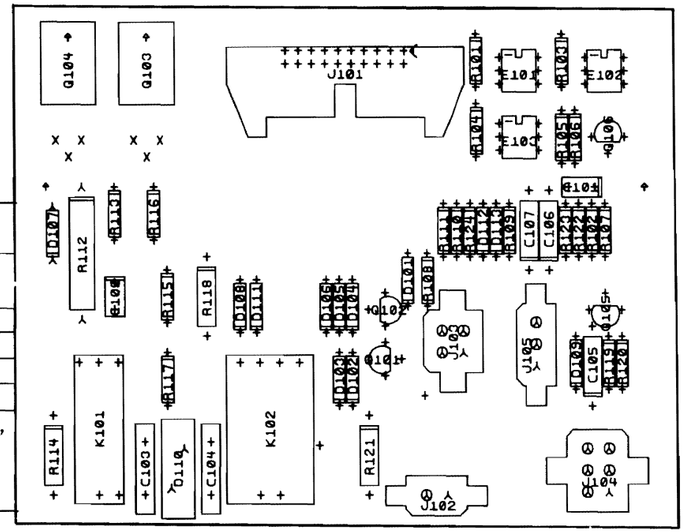
SIZE	CODE	NUMBER	REV.
D	CS	5411846-0-1	H

DIST.

5411846-01 H

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COMPONENT SIDE VIEW



AUTOMATED BY PRTLST.3K(27) P A R T S L I S T SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5011847-0-0	5011847-00	ETCH CRKT BRD	1	
2	2		1011683-00	.022 MFD 50V 10% 2C067 CER.	1	C1
3	3		1012312-01	.47 MFD 50V X%	1	C2
4	4		1013682-00	.1 MFD 500V +80 -20% CER.	2	C3,C4
5	5		1001776-00	1 MFD 35V 10% S.TANT	2	C5,C7
6	6		1110856-00	1N 970B VZ= 24.0 5% .40W Y	1	D1
7	7		1111577-00	1N 4454 TR= 4NS PIV= 50 S	10	D2-D6,D8,D9,D11-D13
8	8		1105796-00	1N 4004 PIV=400 I= 1A D041 SP	1	D7
9	9		1510727-01	OPTO COUPLED ISOLATOR	3	E1-E3
10	10		1213917-00	RLY,REED 5V COIL,DPDT	1	K2
11	11		1213915-00	RLY,REED, 5V COIL,SPDT	1	K1
12	12		1110997-00	VP 130A10 VOLT. SUPRESS.130VAC	1	D10
13	13		1209941-06	HEADER.100 20POS RT ANGLE	1	J1
14	14		1213922-00	HEADER 2POS	1	J2
15	15		1213922-01	HEADER 3POS	1	J5
16	16		1213922-03	HEADER 4POS	1	J3
17	17		1213922-04	HEADER 6POS	1	J4
18	18		1300315-00	470 1/2W 5% CC	2	R14,R21
19	19		1300271-00	220 1/4W 5% CC	3	R1,R3,R4
20	20		1311220-00	5.1 1/2W 5% CC	1	R18
21	21		1301327-00	68 K 1/4W 5% CC	1	R6
22	22		1302466-00	100 K 1/4W 5% CC	2	R5,R8
23	23		1300444-00	3.9 K 1/4W 5% CC	1	R20
24	24		1314516-00	200 K 1/4W 5% CC	2	R7,R23
25	25		1300496-00	15 K 1/4W 5% CC	1	R10
26	26		1300479-00	10 K 1/4W 5% CC	2	R11,R24
27	27		1300482-00	10 K 2W 10% CC	1	R12
28	28		1312927-00	16 1/4W 5% CC	2	R15,R16
29	29		1314649-00	430 K 1/4W 5% CC	1	R22

REVISION HISTORY			
ENG	ECO NUMBER	REV	SECTION A OF A
---	INITIAL	E	SECTION.VARIATION INDEX
MZ	5411848-CZ003	F	[A] 00
			[B]
			[C]
			[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

BASIC PART NO: 5411848

DRN: H. RICHER DATE: 23 MAR 76

CHK'D: P. BURNELL DATE: 10 JAN 77

DES.ENG: P. BADUM DATE: 7 JUN 77

RESP.ENG.: P. BADUM DATE: 7 JUN 77

MFG.ENG.: D. LESAGE DATE: 7 JUN 77

ASSEMBLY NUMBER: D-UA-5411848-0-0

SIZE	CODE	NUMBER	REV
K	PL	5411848-0-DBP	F

TITLE PARTS LIST

AC SERVO

FILE NAME: Z0491.PLS

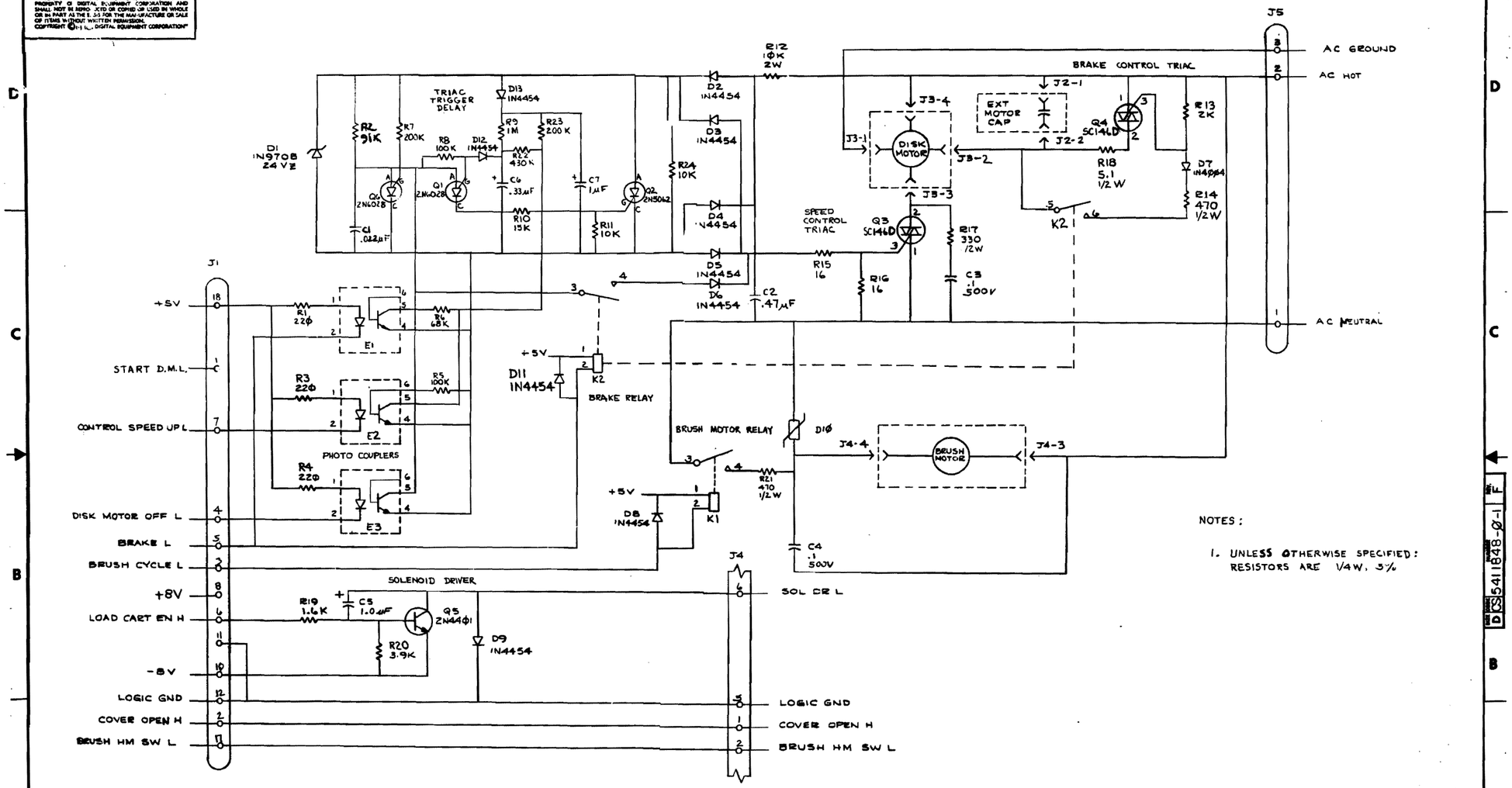
EDIT # 3

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30		1300296-00	330 1/2W 5% CC	1	R17
31	31		1302388-00	2 K 1/4W 5% CC	1	R15
32	32		1309595-00	1 M 1/4W 5% CC	1	R9
33	33		1303176-00	1.6 K 1/4W 5%	1	R19
34	34		1209941-03	HEADER RT ANGLE LEFT L	1	J1
35	35		1209941-04	HEADER RT ANGLE,RIGHT	1	J1
36	36		1510877-00	2N 6028 UJT 300MW R67B	2	Q1,Q6
37	37		1110968-00	2N 5062 SCR@100V I=.8A T092	1	Q2
38	38		1510070-00	TRIAC@400V,I> 8A #RCA40669 M	2	Q3,Q4
39	39		1513489-00	2N 4401 NPN 350MW SI 40 20	1	Q5
40	40		9006557-00	NUT,KEP , 4-40X 1/4 AF	2	Q3,Q4
41	41		9006010-01	SCREW,PAN ,PHIL, 4-40X 5/16	2	Q3,Q4
42	42		9006655-00	WASHER, FLAT, .312 O.D. X .125 I	2	Q3,Q4
43	43			*** THIS ITEM IS NOT USED ***	-	
44	44		1000002-04	.33 MFD 35V 10% .150D S.TA	1	C6
45	45		1314650-00	91 K 1/4W 5% CC	1	R2

DIGITAL	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
	AC SERVO		K	PL	5411848-0-DBP	F

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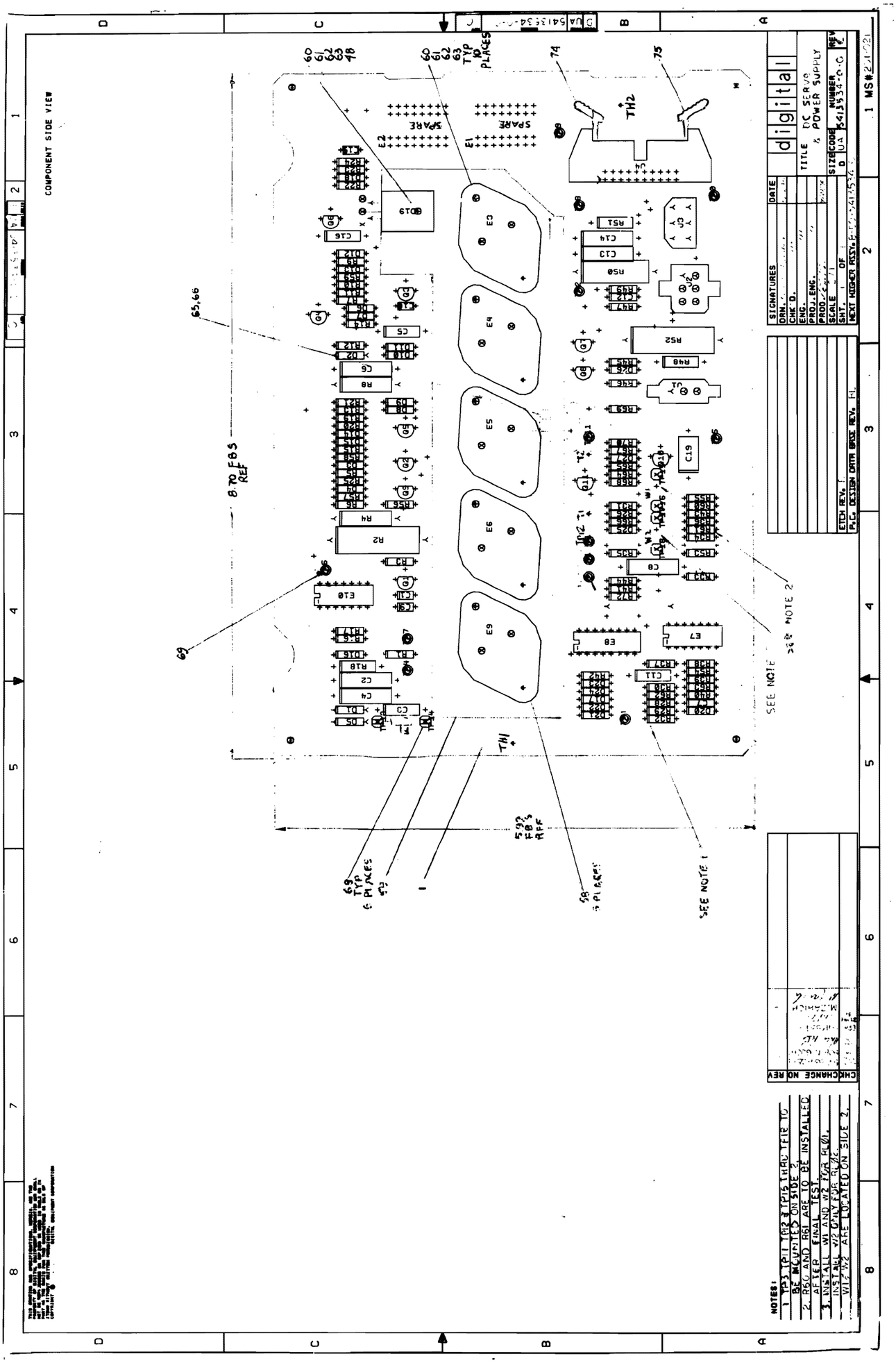


NOTES:

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

REVISIONS					
DR	CHANGE NO.	REV.			
SB	RELEASED AT REV C EQUAL TO C1 PLUS FIELD SERVICE MODIFICATION	C			
SB	5411848-0001	D			
PHYLLIS BURNELL					
	5411848-0005	F			

DRN.		FIRST USED ON	digital
CHK'D	1-14-77	RL01	
ENG.	1-19-77	TITLE	
PROJ. ENG.	1-19-77	AC SERVO	
PROD.	2-16-77		
NEXT HIGHER ASSY.			
D-UA-5411848-0-0		SIZE D	CODE CS
SCALE		NUMBER 5411848-0-1	REV. F
SHEET 1 OF 1		DIST.	


COMPONENT SIDE VIEW
digital
TITLE DC SERVO POWER SUPPLY
SIZE D
CODE UA
NUMBER 5413534-0-0
REV E
SIGNATURES
DRWN.
CHK. D.
ENG.
PROJ. ENG.
PROD.
DATE
SCALE
SHT. 1 OF 1
ETCH REV.
P.C. DESIGN DATA BASE REV. H1
NEXT HIGHER ASSY.
1 MS#
CHG
CHANGE NO
REV
NOTES:
1. TP3 THRU TP8 THRU TP10 TO BE MOUNTED ON SIDE 2.
2. R60 AND R61 ARE TO BE INSTALLED AFTER FINAL TEST.
3. INSTALL W1 AND W2 AS SHOWN.
INSTALL W3 AND W4 AS SHOWN.
W1 THRU W4 ARE LOCATED ON SIDE 2.
60 61 62 63 TYP 10 PLACES
74
75
TH2
SPARE
E1
E2
E3
E4
E5
E6
E7
E8
E9
E10
CR19
RS1
RS0
RS2
R48
C19
C8
C11
C13
C14
C16
C5
C6
R8
R2
R1
C2
C4
C3
R18
65,66
8 TO F8S REF
69
68 TYP 6 PLACES
1
TH1
5,22 F8,5 REF
58 6 PLACES
SEE NOTE 1
SEE NOTE 2

AUTOMATED BY PRTLST.2E(2) P A R T S L I S T SHEET A1 OF A3

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5013533-0-0	5013533-00	ETCHED CIRCUIT BOARD	1	
2	2		1013466-08	680.0 MMF 50V 10% CER.	1	C12
3	3		1016009-00	2200 MMF 50V 5% CER.	1	C7
4	4		1001610-00	.01 MFD 50V -20+80 Z5U AXIAL	4	C1,C9,C10,C15
5	5		1002630-00	.015 MFD 100V 10% 663UW MYLR	1	C8
6	6		1013466-11	.22 MFD 50V +80/-20% CER.	4	C3,C5,C11,C16
7	7		1005306-00	6.8MFD 35V 10% S.TANT	4	C4,C6,C13,C14
8	8		1000076-00	39 MFD 10V 10% 150D S.TA	1	C2
9	9		1309422-00	5.1 1/4W 5% CC	1	R58
10	10		1312929-00	62 1/4W 5% CC	2	R3,R23
11	11		1311523-00	110 1/4W 5% CC	1	R22
12	12		1300247-00	120 1/4W 5% CC	1	R13
13	13		1300271-00	220 1/4W 5% CC	1	R59
14	14		1301425-00	300 1/4W 5% CC	1	R55
15	15		1303178-00	620 1/4W 5% CC	1	R6
16	16		1300365-00	1 K 1/4W 5% CC	5	R1,R7,R39,R44,R57
17	17		1300391-00	1.5 K 1/4W 5% CC	1	R5
18	18		1302388-00	2 K 1/4W 5% CC	2	R31,R43
19	19		1300426-00	2.7 K 1/4W 5% CC	2	R46,R47
20	20		1302389-00	4.3 K 1/4W 5% CC	1	R53
21	21		1300447-00	4.7 K 1/4W 5% CC	10	R10-R12,R14,R15,R19,R20,R24,R49, CONT R68
22	22		1303179-00	8.2 K 1/4W 5% CC	3	R9,R16,R17
23	23		1300488-00	12 K 1/4W 5% CC	4	R25,R26,R45,R56
24	24		1305346-00	27 K 1/4W 5% CC	1	R21
25	25		1305131-00	*** THIS ITEM IS NOT USED ***	-	
26	26		1312923-00	2.10 K 1/4W 1% RN55D-F 100PPM	1	R41
27	27		1305114-00	3.48 K 1/4W 1% RN55D-F 100PPM	1	R34
28	28		1314763-00	4.12 K 1/4W 1% RN55D-F 100PPM	1	R36

REVISION HISTORY			BASIC PART NO: 5413534
ENG	ECO NUMBER	REV	SECTION A OF A
---	INIT	A	SECTION.VARIATION INDEX
BN	5413534-CZ001	B	[A] 00
			[B]
			[C]
			[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

DRN: JERRY BEST	DATE: 26-JUL-78		D	I	G	I	T	A	L
CHK'D: JERRY BEST	DATE: 26-JUL-78	TITLE PARTS LIST D.C. SERVO AND POWER SUPPLY							
DES.ENG: R. NOGUCHI	DATE:								
RESP.ENG.: R. NOGUCHI	DATE: 26-JUL-78	DOCUMENT NUMBER							
		SIZE	CODE	NUMBER	REV				
MFG.ENG.: P. CHURCH	DATE:	K	PL	5413534-0-DBP	B				
ASSEMBLY NUMBER: D-UA-5413534-0-0	TOP DOCUMENT NUMBER: RL02	FILE NAME: Z0494B.PLS	EDIT #: 14						

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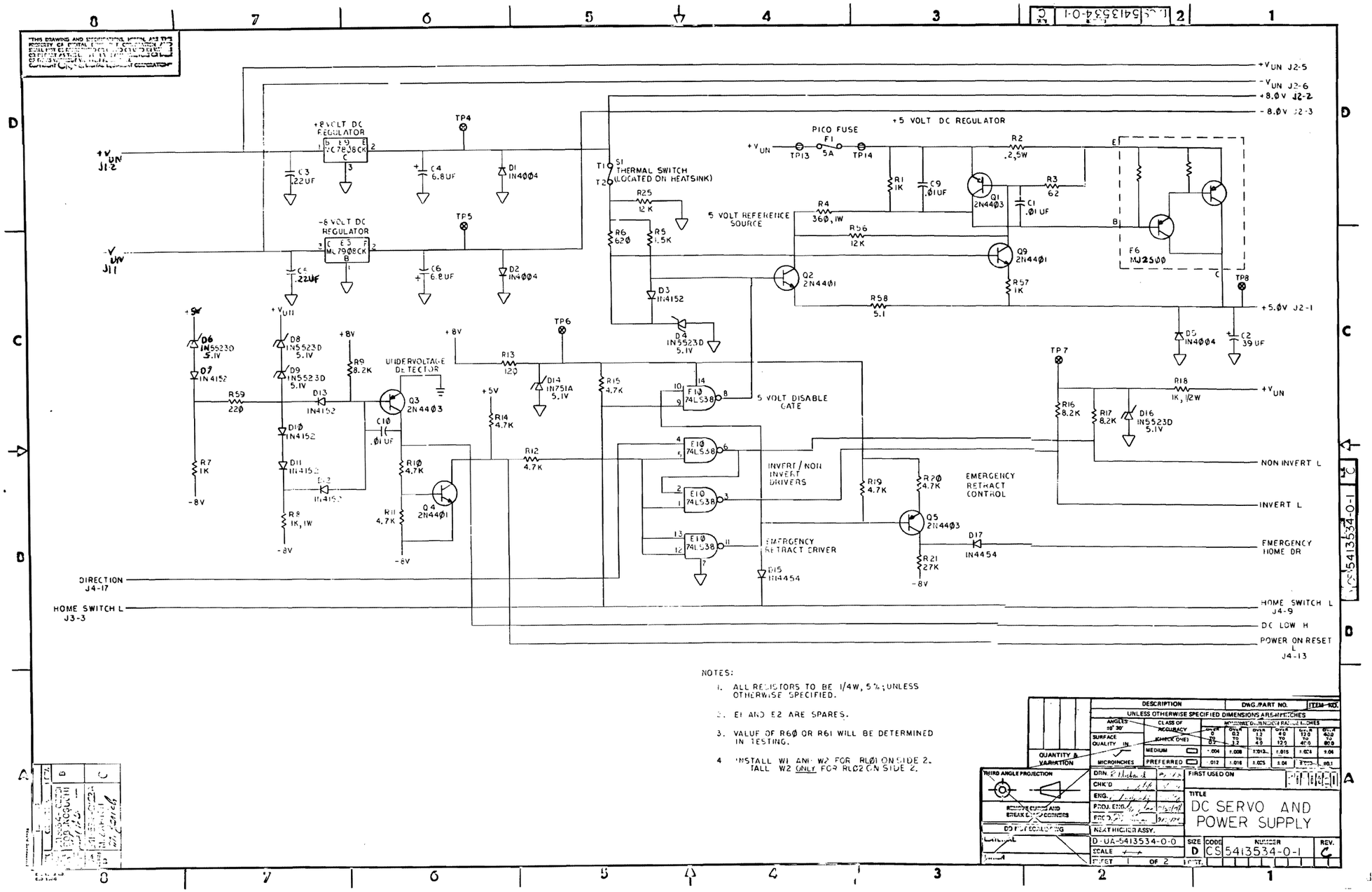
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
29	29		1303312-00	10.0 K 1/4W 1% RN55D-F 100PPM	3	R28,R29,R62
30	30		1312924-00	10.7 K 1/4W 1% RN55D-F 100PPM	1	R32
31	31		1309412-00	18.2 K 1/4W 1% RN55D-F 100PPM	1	R33
32	32		1315436-00	52.3 K 1% RN55D-F 100PPM	1	R54
33	33		1304843-00	243 K 1/4W 1% RN55D-F 100PPM	1	R72
34	34		1315437-00	237 K 1% RN55D-F 100PPM	1	R38
35	35		1302378-00	51 1/2W 5% CC	1	R51
36	36		1300364-00	1 K 1/2W 5% CC	2	R18,R48
37	37		1314068-00	360 1W 5% CC	1	R4
38	38		1300368-00	1 K 1W 5% CC	1	R8
39	39		1301494-00	200 2W 5% CC	1	R50
40	40		1313358-00	.2 5W 3% WW	2	R2,R52
41	41		1105796-00	1N 4004 PIV=400 I= 1A DO41 SP	3	D1,D2,D5
42	42		1113953-00	1N 5523D VZ= 5.1 1%	8	D4,D6,D8,D9,D16,D18,D21,D22
43	43		1109990-00	1N 757A VZ= 9.1 5% .40W P	2	D23,D24
44	44		1110994-00	1N 751A VZ= 5.1 5% .40W	1	D14
45	45		1114117-00	1N 4152 PIV=450 I=75M	6	D3,D7,D10,D11,D12,D13
46	46		1111577-00	1N 4454 TR= 4NS PIV= 50 S	6	D15,D17,D20,D25-D27
47	47		1513698-00	TRIAC@200V,I=14A	1	D19
48	48		9009597-00	INSULATOR, THERMA-FILM $	1	
49	49		1513489-00	2N 4401 NPN 350MW SI 40 20	4	Q2,Q4,Q8,Q9
50	50		1513490-00	2N 4403 PNP 350MW SI-40 30	6	Q1,Q3,Q5-Q7,Q11
51	51		1511282-00	MJ2500 PNP 150WC SI 60 5 1K 5A	2	E4,E6
52	52		1511349-00	TIP 640 (OR MJ3000) NPN DARLINGT	1	E3
53	53		1911706-00	5012 ANALOG SWITCH,4CHNL	1	E8
54	54		1912818-00	LS38 NAND BUFFER-QUAD 2IN	1	E10
55	55		1912107-01	324ANOP AMP,QUAD	1	E7
56	56		1913695-00	7808 VOLT.REG.FIX +	1	E9
57	57		1913694-00	7908 VOLT.REG.FIX -	1	E5
58	58		9008419-00	WASHER, FLAT, THERMAFILM .002THK	5	
59	59		7418595-00	HEATSINK ASSEMBLY	1	
60	60		9008033-01	SCREW,PAN ,PHIL, 4-40X 9/16	11	
61	61		9006557-00	NUT,KEP , 4-40X 1/4 AF	11	
62	62		9006655-00	WASHER, FLAT, .312 O.D. X .125 I	11	
63	63		9008268-00	COMPOUND, THERMAL JOINT $	A/R	
64	64		1210824-00	THERMOSTAT,O@215,C@156,SPST	1	S1
65	65		9008185-00	NUT,KEP , 6-32X1/4 AF	1	
66	66		9006653-00	WASHER, FLAT, .375 O.D. X .156 I	1	
67	67		1205747-00	FUSE, SUB-MINI, 5.000A, 125V, A	1	F1
68	68		9006735-00	EYELET, FUNNEL FLANGE, .059 OD X	6	TP13-TP18
69	69		9007791-00	TERM PCB 2POS SOLDER,TURRET	13	TP0-TP12
70	70		1213922-01	HEADER 3POS	1	J1
71	71		1213922-04	HEADER 6POS	1	J2
72	72		1213900-00	CONN,RCPT 6PIN	1	J3
73	73		1209941-06	HEADER.100 20POS RT ANGLE	1	J4
74	74		1209941-04	HEADER RT ANGLE,RIGHT	1	
75	75		1209941-03	HEADER RT ANGLE LEFT L	1	

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							D.C. SERVO AND POWER SUPPLY		K	PL	5413534-0-DBP	B

AUTOMATED BY PRTLST.2E(2) — P A R T S L I S T — SHEET A3 OF A3

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
76	76		1305324-00	4.99 K 1/4W 1% RN55D-F 100PPM	2	R37,R30
77	77		1300250-00	150 1/4W 5% CC	1	R42
78	78		1312618-00	16.9 K 1/4W 1% RN55D-F 100PPM	1	R40
79	79		1300229-00	100 1/4W 5% CC	1	R63
80	80		1305336-00	*** THIS ITEM IS NOT USED ***	-	
81	81		1309416-00	31.6 K 1/4W 1% RN55D-F 100PPM	1	R65
82	82		1015574-01	*** THIS ITEM IS NOT USED ***	-	
83	83		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	2	W1,W2
84	84		1303044-00	100 K 1/4W 1% RN55D-F 100PPM	1	R64
85	85		1015574-00	*** THIS ITEM IS NOT USED ***	-	
86	86		1315435-00	25.5 K 1/4W 1% RN55D-F 100PPM	1	R66
87	87		1312930-00	5.1 K 1/4W 5% CC	1	R67
88	88		1015520-00	1 MFD 100V 5% M.POLYESTER	1	C19
89	89		1513697-00	2N 5640 FET N CHNNL	1	Q10
90	90		1300479-00	10 K 1/4W 5% CC	1	R69
91	91		1302466-00	100 K 1/4W 5% CC	1	R70

DIGITAL	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
	D.C. SERVO AND POWER SUPPLY		K	PL	5413534-0-DBP	B



NOTES:

1. ALL RESISTORS TO BE 1/4W, 5%; UNLESS OTHERWISE SPECIFIED.
2. E1 AND E2 ARE SPARES.
3. VALUE OF R60 OR R61 WILL BE DETERMINED IN TESTING.
4. INSTALL W1 AND W2 FOR RL01 ON SIDE 2. INSTALL W2 ONLY FOR RL02 ON SIDE 2.

TITLE	DC SERVO AND POWER SUPPLY
SIZE	D
CODE	CS
NUMBER	5413534-0-1
REV.	C
D-UA-5413534-0-0	
SCALE	
SHEET 1 OF 2 SHT.	

D-CS-5413534-0-1 1 OF 2 RL02

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DC LOW H
NON INVERT L
POS MODE L J4-5
POS SIG J4-3
EMERGENCY HOME DR INVERT L
VEL MODE L J4-1
VEL COMMAND J4-7
TACH J3-5
VEL SIG J4-2
DC MOTOR DRIVE J3-6
DC MOTOR RETURN J3-2
GND J1-3
J2-1 LOGIC GND
TACH RET J3-4
SIG GND
HOME SWITCH GND J1-3
INTEGRATOR GND J4-15
SIGNAL GND J4-14,16

SEE NOTE 4
TP17 TP18 RL02
TP16 TP15 RL01 SEE NOTE 4
W1
TP9 TP1 TP2 TP3 TP10 TP11 TP12 TBD

R72 243K, 1%
R26 12K
R64 100K, 1%
R65 31.6K, 1%
R66 25.5K, 1%
R67 5.1K
R68 4.75K, 1%
R69 10K
R70 100K
C19 .1UF
Q11 2N4403
Q10 2N5640
D27 IN4454
E8 LM5012

R54 52.3K 1/4W, 1%
C7 2200PF
R38 237K, 1%
R39 1K
R63 100Ω
D20 IN4454
R37 4.99K, 1%
E7 LM324A
D21 IN5523D 5.1V
D22 IN5523D 5.1V
MOTOR CURRENT LIMITERS
SUMMING AMPLIFIER

R40 16.9K, 1%
R41 2.10K, 1%
R43 2K
R42 150Ω
D23 IN757A 9.1V
D24 IN757A 9.1V
C11 .22UF
D25 IN4454
R44 1K
D26 IN4454
-8V

R46 2.7K
R49 4.7K
C12 680PF
R48 1K 1/2W
R45 12K
R47 2.7K
Q8 2N4401
Q7 2N4403
E4 MJ2500
E3 MJ3000
POWER AMPLIFIER
R50 200Ω 2W, 5%
C13 6.8UF
C14 6.8UF
R51 5Ω 1/2W
R52 .2, 5W
MOTOR CURRENT SENSING RESISTOR

E1 LM3900
E8 LM5012
R31 2K, 5%
R28 10.0K, 1%
R29 10.0K, 1%
R32 10.7K, 1%
R30 4.99K, 1%
R62 10.0K 1%
INSERT/NON INVERT SELECTION CONTROL

R35 10K, 1%
R33 4.75K, 1%
C8 .015UF
R34 3.48K, 1%
R36 4.12K, 1%
R55 300
R63 TBD SEE NOTE 3
R61 TBD SEE NOTE 3
TACH AMPLIFIER

D18 IN5523D 5.1V
R22 110
Q6 2N4403
D19 SC146B
C16 .22UF
R23 62
R24 4.7K
C15 .01UF
OVERVOLTAGE CROWBAR

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	NUMBER	REV.
DC SERVO AND POWER SUPPLY	D	DCS5413534-0-1	C
SCALE	SHEET 2 OF 2		

DCS5413534-0-1 REV C
2 OF 2
RL02

NOTES:
1. INSTALL ITEM 106 AFTER TEST
   BETWEEN TP19 & TP8 ONLY
2. VALUE OF ITEM 2 TO BE DETERMINED
   AT MOST HIGHER ASSEMBLY
3. SLAPPOR IENTATION INDICATES ON
   CONNECTOR'S PIN SHOWN WITH
   INDICATABLE MEDIUM

REV	CHG	CHANGE NO

ETCH REV.
P.C. ASSEMBLY DART PART REV.

SIGNATURES	DATE
DWN.	
CHK'D.	
ENG.	
PROJ. ENG.	
PROD.	
SCALE 1	SHT. 1 OF 1
NEXT HIGHER ASSY. B3D	

TITLE: DRIVE LOGIC

SIZE D | CODE | NUMBER 04 5419025 | REV F

d i g i t a l

SEE M/E 3

SEE M/E 2

TP11 TP18

21 JUMPERS

J1 JUMPERS

J2 SPARE

J3 SPARE

J4

J5

U11

U12

U13

U14

TP25 TP24

TP21 TP22

TP23 TP20

C78

R1

R2

R3

R4

R5

R6

R7

R8

R9

R10

R11

R12

R13

R14

R15

R16

R17

R18

R19

R20

R21

R22

R23

R24

R25

R26

R27

R28

R29

R30

R31

R32

R33

R34

R35

R36

R37

R38

R39

R40

AUTOMATED BY PRTLST.3H(20) — P A R T S L I S T — SHEET A1 OF A3

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5014024-0-0	5014024-00	DRILL AND ETCH BRD	1	
2	2	EWS		RESISTOR,FINAL TEST, 1/4W, 1%	4	R115,R116,R118,R119
3	3		1000023-00	330.0 MMF 100V 5%200PPM DM15S	4	C93,C106-C108
4	4		1000024-00	470.0 MMF 100V 5%200PPM DM15S	1	C94
5	5		1000064-00	3.9MFD 10V 10% 150D S.TA	2	C76,C85
6	6		1000076-00	39 MFD 10V 10% 150D S.TA	4	C73,C78,C86,C95
7	7		1001610-00	.01 MFD 50V +80-20% Z5UCER	74	C1-C6,C8-C39,C40-C45,C47-C49,
						CONT C51-C53,C55-C68,C70,C71,C77,
						CONT C79-C82,C84,C88,C104
8	8		1001776-00	1 MFD 35V 10% S.TANT	4	C74,C75,C92,C97
9	9		1004812-00	15 MFD 20V 10% S.TANT	1	C87
10	10		1005784-00	.01 MFD 100V 10% 663VW MYLR	1	C101
11	11		1010978-32	.047 MFD 50V 10% 2C067CER.	1	C96
12	12		1013466-07	220.0 MMF 50V 5% CER	1	C91
13	13		1013466-08	680.0 MMF 50V 10% X7R CER	2	C89,C90
14	14		1013466-09	1000.0 MMF 50V 10% X7RCER	1	C83
15	15		1013466-10	3300.0 MMF 50V 5% CER	4	C98,C100,C103,C105
16	16		1013466-11	.22 MFD 50V +80-20% Z5U CER	2	C99,C102
17	17		1111577-00	1N 4454 TR= 4NS PIV= 50 S	16	D1,D7-D20,D22
18	18		1113953-00	1N 5523D VZ= 5.1 1%	1	D21
19	19		1114117-00	1N 4152 PIV=450 I=75M	5	D2-D6
20	20		1209941-02	HEADER 100 40POS RT ANGLE	1	J12
21	21		1209941-03	HEADER RT ANGLE LEFT L	5	
22	22		1209941-04	HEADER RT ANGLE,RIGHT	5	
23	23		1209941-05	HEADER.100 10POS RT ANGLE	1	J11
24	24		1209941-06	HEADER.100 20POS RT ANGLE	3	J4-J6
25	25		1210385-01	PIN 1POS WIRE WRAP	10	TP17-TP26
26	26		1213922-02	HEADER 3POS	1	J14
27	27		1213922-04	HEADER 6POS	1	J2
28	28		1300229-00	100.0 .25 W 5.0 % CC	5	R48,R133-R136

REVISION HISTORY			BASIC PART NO: 5414025										
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: ART SIMM	DATE: 18-APR-79		D	I	G	I	T	A	L
---	INITIAL	A	SECTION.VARIATION INDEX	CHK'D: P. KENDRICK	DATE: 18-APR-79	TITLE PARTS LIST							
MB	5414025-CX001	B	[A] 00			DRIVE LOGIC							
MB	5414025-CX002	C	[B]										
MZ	5414025-CX003	D	[C]	DES.ENG: MIKE BROWN	DATE: 18-APR-79								
MB	5414025-CX005	E	[D]										
MZ			[E]			DOCUMENT NUMBER							
			[F]	RESP.ENG.: MIKE BROWN	DATE: 18-APR-79								
			[H]			SIZE	CODE	NUMBER			REV		
			[J]										
			[K]	MFG.ENG.: D. LICK	DATE: 18-APR-79	K	PL	5414025-0-DBP			E		
			[L]										
			[M]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:					EDIT #		
			[N]	D-UA-5414025-0-0	#RL02	Z0496E.PLS					26		

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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
29	29		1300271-00	220.0 .25 W 5.0 % CC	4	R3,R14,R41,R143
30	30		1300315-00	470.0 .50 W 5.0 % CC	3	R16,R73,R130
31	31		1300316-00	470.0 .25 W 5.0 % CC	4	R1,R2,R79,R142
32	32		1300365-00	1.0 K .25 W 5.0 % CC	16	R5,R15,R39,R40,R42,R47,R52,R54,
						CONT R56,R61,R72,R74,R101,R106,R129,
						CONT R140
33	33		1300411-00	2.0 K .25 W 1.0 % RN55D-F10	1	R144
34	34		1300439-00	3.30 K .25 W 5.0 % CC	3	R93,R124,R126
35	35		1300447-00	4.70 K .25 W 5.0 % CC	36	R4,R6-R13,R26-R28,R34,R35,R38,
						CONT R43,R44,R49,R53,R57,R58,R62,
						CONT R75-R78,R80,R82-R92,R102,R105,
						CONT R123,R125,R127,R138,R145
36	36		1300479-00	10.0 K .25 W 5.0 % CC	2	R70,R107
37	37		1302388-00	2.0 K .25 W 5.0 % CC	13	R18-R21,R45,R50,R66,R67,R71,R87,
						CONT R122,R129,R131
38	38		1302391-00	20.0 K .25 W 5.0 % CC	1	R59
39	39		1302394-00	30.0 K .25 W 5.0 % CC	1	R95
40	40		1302398-00	470.0 K .25 W 5.0 % CC	1	R55
41	41		1302466-00	100.0 K .25 W 5.0 % CC	1	R121
42	42		1302514-00	39.0 K .25 W 5.0 % CC	2	R91,R120
43	43		1302666-00	10.0 M .25 W 5.0 % CC	1	R94
44	44		1302871-00	1.21 K .25 W 1.0 % RN55D-F10	1	R88
45	45		1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1	R25
46	46		1303047-00	464.0 .25 W 1.0 % RN55D-F10	5	R64,R65,R83,R85,R113
47	47		1303114-00	1.0 K .25 W 1.0 % RN55D-F10	2	R89,R117
48	48		1303312-00	10.0 K .25 W 1.0 % RN55D-F10	7	R17,R29-R31,R36,R60,R63
49	49		1304693-00	562.0 .25 W 1.0 % RN55D-F10	1	R108
50	50		1304841-00	75.0 K .25 W 5.0 % CC	1	R81
51	51		1304862-00	1.62 K .25 W 1.0 % RN55D-F10	1	R110
52	52		1304870-00	6.81 K .25 W 1.0 % RN55D-F10	1	R33
53	53		1305124-00	287.0 .25 W 1.0 % RN55D-F10	2	R84,R86
54	54		1305265-00	39.20 K .25 W 1.0 % RN55D-F10	1	R24
55	55		1305337-00	3.65 K .25 W 1.0 % RN55D-F10	2	R96,R99
56	56		1305405-00	24.90 K .25 W 1.0 % RN55D-F10	1	R23
57	57		1309595-00	1.0 M .25 W 5.0 % CC	3	R46,R51,R132
58	58		1310632-00	2.37 K .25 W 1.0 % RN55D-F10	1	R109
59	59		1317303-00	301.0 .25 W 1.0 % RN55D-F10	2	R97,R100
60	60		1312929-00	62.0 .25 W 5.0 % CC	2	R111,R112
61	61		1312930-00	5.10 K .25 W 5.0 % CC	3	R68,R69,R137
62	62		1312989-00	17.80 K .25 W 1.0 % RN55D-F10	3	R22,R103,R104
63	63		1313589-00	1.40 K .25 W 1.0 % RN55D-F10	1	R90
64	64		1313846-00	2.26 K .25 W 1.0 % RN55D-F10	1	R32
65	65		1314041-00	3.01 K .25 W 1.0 % RN55D-F10	1	R37
66	66		1314491-00	1.02 K .25 W 1.0 % RN55D-F10	1	R114
67	67		1513489-00	2N 4401 NPN 350MW SI 40 20	3	Q7,Q10,Q12
68	68		1513490-00	2N 4403 PNP 350MW SI-40 30	10	Q1-Q3,Q5,Q6,Q8,Q9,Q11,Q13,Q15
69	69		1513697-00	2N 5640 FET N CHNNL	1	Q14
70	70		1909928-00	7416 INVERTER GATE-HEX II	4	E9,E10,E68,E85

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							DRIVE LOGIC		K	FL	5414025-0-000	E

AUTOMATED BY PRTLST.3H(20)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
71	71		1910046-00	7442 DECODER-1 OF 10,BCD	1	E55
72	72		1910268-00	DEC 75107B RECEIVER,LINE,DUAL,	4	E57,E61,E65,E87
73	73		1910298-00	741 OP AMP GEN PURP. COM	1	E31
74	74		1910363-00	7496 SHIFT REG.,5BIT	1	E63
75	75		1910536-00	74S10 NAND GATE-TRIPLE 3IN	1	E45
76	76		1910655-00	74157 MUX 2 TO 1 QUAD	2	E23,E24
77	77		1911341-00	75113 DRIVER,LINE,DUAL,MA	3	E77,E83,E86
78	78		1912107-01	324ANOP AMP,QUAD	1	E49
79	79		1912108-00	339 VOLT CMPRTR,QUAD	3	E5,E36,E56
80	80		1912541-00	79M05 VOLT REG,FIX -5V	1	Q4
81	81		1912697-00	LS174 FF-D HEX W/CLEAR	2	E37,E41
82	82		1912799-00	LS00 NAND-GATE-QUAD 2IN,P	4	E7,E15,E44,E67
83	83		1912801-00	LS02 NOR-GATE-QUAD 2IN	4	E1,E30,E39,E54
84	84		1912803-00	LS04 INVERTER GATE-HEX 1I	2	E79,E80
85	85		1912805-00	LS08 AND GATE-QUAD 2IN,PO	6	E14,E34,E38,E69,E72,E76
86	86		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1	E18
87	87		1912810-00	LS20 NAND GATE-DUAL 4IN	1	E2
88	88		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1	E73
89	89		1912816-00	LS32 OR GATE-QUAD 2IN,POS	4	E17,E35,E59,E84
90	90		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	9	E3,E11,E16,E26,E42,E46,E47,E62,
					CONT	E75
91	91		1912829-00	LS86 X-OR GATE-QUAD 2IN	3	E51,E66,E78
92	92		1912837-00	LS123 ONE SHOT-DUAL,RETRIG	1	E50
93	93		1912854-00	LS193 COUNTER,SYNCHR,4BIT,	3	E27,E28,E43
94	94		1912855-00	LS195 SHIFT REG.,4BIT PARA	5	E19-E22,E25
95	95		1912857-00	LS197 COUNTER,BINARY,PRESET	4	E4,E8,E13,E74
96	96		1912864-00	LS279 LATCH,QUAD-S-R	6	E6,E12,E29,E33,E58,E71
97	97		1913414-00	LS14 INVERTER GATE-HEX SC	2	E40,E48
98	98		1914156-00	LM 393 VOLT.COMPARATOR DUAL	1	E53
99	99		23368A2-00	A2-02,A2-04	1	E52
100	100		23371A2-00	A2-02,A2-04	1	E60
101	101		23444A2-00	A2-02,A2-04	1	E70
102	102		23445A2-00	A2-02,A2-04	1	E32
103	103		9007201-00	TRANSIPADS #10253	1	
104	104		9007791-00	TERM PCB 2POS SOLDER,TURRET	15	TP1-TP4,TP6-TP16
105	105		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	1	W1
106	106		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	
107	107		1012784-00	.047 MFD 50V +80-20% CER	8	C7,C46,C50,C54,C69,C72,C109,C110
108	108		1911324-00	7414 INVERTER,HEX 1IN SCH	1	E64
109	109		1217377-00	TERM QUICK 1POS TAB PC MNT	1	J15

D	I	G	I	T	A	L	TITLE	SECTION A OF A
							DRIVE LOGIC	

SIZE	CODE	DOCUMENT NUMBER	REV
K	PL	5414025-0-DBP	E

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HOME SWITCH L J4-9
COVER OPEN H J5-2
TP19
TP20
RUN L J11-7
+5.0V
R1 470Ω
R2 470Ω
74LS02 E54
HEADS HM GATE H
STATE ROM
IM5603 E52
DL2 TRK CNT Ø H
DL5 ERR STATE COMD L
DL4 DISK ON SPEED L
DL5 DISK STOPPED L
ME
R134 100
R6 4.7K
R7 4.7K
R8 4.7K
R9 4.7K
STATE ROM DECODER
SN7442 E55
LOAD CART
SPIN UP
BRUSH CYCLE
LOAD HEADS
LOCK ON
SPIN DOWN
74LS08 E72
7414 E64
7416 E68
BRUSH CYCLE LT H
SEEK CONTROL ROM
IM5603 E60
+5V
RI0 4.7K
RI1 4.7K
RI2 4.7K
RI3 4.7K
DL7 GUARD BAND H
DL2 SIGN FWD H
DL3 E1 HELD H
DL3 E2 HELD H
DL5 SEEK TIME OUT ERR H
R14 220
C79 .01
RI35 100
R3 220 LOAD CART
DL6 LOGIC POR L
C88 .01
R4 4.7K
R5 1K
BRUSH HM SW L J5-7
C78 39 uf
74LS279 E71
BRUSH CYCLE LATCH
RI31 2K
R15 1K
R16 470 1/2 W 5%
Q1 2N4403
D1 IN4454

DLI LOAD HDS L (5)
DLI HOME SWITCH L (2)
DLI COVER OPEN H (2)
DLI SPIN UP L (5)
J5-1 START DM L
J5-3 BRUSH CYCLE L
DLI BRUSH HM H (2)
J5-4 DISK MOTOR OFF L
J4-5 POS MODE L
J4-1 VEL MODE L
DLI LOCK ON L (3,5)
J5-5 BRAKE L
DLI SPIN DOWN L (4)
DLI STATUS BIT A (2)
DLI STATUS BIT B (2)
DLI STATUS BIT C (2)
DLI TIME OUT COMD L (5)
J4-17 DIRECTION
DLI VEL CMD 1 H (2)
DLI VEL CMD 2 H (2)
DLI RESET TRK CNT L (2)
DLI POR OR LOAD CART L (2),(4)
+5V
J11-4 LOAD LP H
J5-6 LOAD CART EN H

IC	▽	=	+5V	-5V	+8V	-8V
75107B-00	7		14	13		
75113, 7442, 74LS123, 74LS174, 74LS193, 74LS195, 74LS279	8		16			
324					4	11
ROM		8	16			
UNSPECIFIED	7		14			
339	12				3	
339					3	12
339		12			3	

REVISIONS	REV.	B	C	D	E	F
CHANGE NO.		5414025-CX001 N. BROWN	5414025-CX002 W. BROWN	5414025-CX003 M. ZARICH	5414025-CX005 MIKE BROWN	5414025-CX006A MIKE BROWN
CHK						

DRN. [illegible] 5 June 78
CHK'D [illegible] 3 May 78
ENG. [illegible] 5 June 78
PROJ. ENG. [illegible] 5 June 78
PROD. [illegible]
NEXT HIGHER ASSY.
B-DD-5414025-C
SCALE —
SHEET 1 OF 3

FIRST USED ON digital
TITLE DRIVE LOGIC (STATE CONTROL LOGIC) DLII
SIZE D CODE CS NUMBER 5414025 0 REV -
DIST.

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SIZE	NUMBER	REV
D	54-14025-0-1	F

CMD 2	CMD 1	MODE	VEL
Z	Z	OFF	0
0	1	GUARD BAND	3 IPS
1	0	HEAD LOAD	6 IPS
1	1	HEAD UNLOAD	15 IPS

NOTES:
1. W1 IN FOR RL02
   W1 CUT FOR RL01
2. W2 NOT FOR FIELD USE. (W2 IS ON DL5 PAGE)

DL1 VEL CMD 2 H
DL1 VEL CMD 1 H
DL3 CMD PLS H
DL6 DRIVE COMMAND L
DRIVE COMMAND/ STATUS REGISTER
74LS195 E20
DL5 WRITE DATA ERR H
DL5 CURRENT HEAD ERR H
DL5 WRITE LOCK H
DL5 SEEK TIME OUT ERR H
74157 E24
TRACK DIFFERENCE COUNTER
74LS193 E28
COUNT PULSE DISABLE
74LS08 E35
DL2 RL02 H
74157 E23
74LS193 E27
+5.0 V
VEL ROM
IM5603 MEI MEZ
E32
R18 2K
R19 2K
R20 2K
R21 2K
+5.0V
17.8K R27
24.9K R24
39.0K R23
100K R22
D2 IN4152
D3 IN4152
D4 IN4152
D5 IN4152
TP13
-8V
R132 1M
D6 IN4152
J47 VEL COMMAND
DL2 BORROW H (3)
DL2 TRK CNT 0 H (1)
DL5 SPIN ERR H
DL5 WR GATE ERR H
DL5 VOLUME CHECK H
DL5 DRIVE SELECT ERR H
74LS195 E19
TRACK COUNT 0 GATE
74LS08 E38
74LS195 E21
DL1 POR ORLOAD CART L
74LS32 E33
+5V
R17 10K
SEE NOTE 1
N1
TRACK DIFF
DL2 LSB TRK DIFF H
TRACK DIFFERENCE COUNTER LOAD LATCH 74LS279 E33
E40 74LS14
E30
DL3 KICK PULSE H
DL1 COVER OPEN H
DL1 HOME SWITCH L
HEAD SELECT/SIGN BIT HOLDING REGISTER
74LS195 E25
ENABLE TIMEOUT GATE
DL2 ENABLE TIMEOUT H (7)
J5 11 J5 12 LOGIC GND
R142 470Ω
TP22
TP21 +5.0V
FORCE HEAD SELECT 1
74LS32 E35
J6-3 HD SELECT ZERO L
DL2 SIGNFWD H (1,3)
DL1 BRUSH HM H
DL1 STATUS BIT C H
DL1 STATUS BIT B H
DL1 STATUS BIT A H
HEAD 0 L
RESET ERR H
SIGN
GET STATUS H
DL6 LOGIC POR L
74LS32 E35
74LS08 E34
RESET ERROR LATCHES GATE
DL2 RESET ERROR LATCHES L (5,8)
+8V J5 8
-8V J5 10
DL2 VT2
74LS74 E26
74LS02 E30
LOAD REGISTERS GATE
74LS32 E35
SHIFT/LOAD GATE
DL2 VT1
DL2 STATUS CLOCK GATE H (6)
DL6 STATUS DATA H (5)
74LS279 E29
GET STATUS LATCH
74LS08 E34
STATUS CLOCK GATE
+5V J5 18
MARKER LATCH
74LS279 E29
74LS74 E26
SHIFT CLOCK DISABLE GATE
74LS08 E34
MARKER
CLEAR LATCH

VELOCITY COMMAND AND STATUS DATA CONTROL LOGIC

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV
DRIVE LOGIC (DL2)	D	DCS	54-14025-0-1	F
SCALE -	SHEET 2 OF 8	DIST.		

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DL3 E2 HELD H (I)

DL2 SUB TRK DIFF H

DL3 KICK PULSE H (2)

DL3 CNT RES H (I)

DL1 RESET TRK CNT L

DL2 RESET H

DL1 LOCK ON L

DL7 SEC TIME H

DL2 LOAD REG H

DL4 62.4 µS H

DL2 LOAD REG L

DL4 SEC TIME L

INNER GUARD BAND GATE

OUTER GUARD BAND GATE

DL7 GUARD BAND L

DL7 GUARD BAND H

DL2 SIGN FWD H

DL2 BORROW H

DL4 1 MHZ

DL7 E1

DL3 INVERT INTG H (I)

DL7 -

VEL IN J4-2

SIGNAL GND J4-14 J4-16

RECTIFIER

VELOCITY LEVEL DETECTORS

CNT ROM IM5603 E70

COUNT ROM DECODER

DISABLE COUNT LATCH

+V

VEL	VEL MAG	DET V	CODE MSB		LSB
25.6 IPS	3.79 V	3.80 V	1	1	1
19.2 IPS	2.84 V	2.86 V	Ø	1	1
12.8 IPS	1.89 V	1.85 V	1	Ø	1
Ø	Ø		Ø	Ø	Ø

J11-1 LOGIC GND

+5V J6 18

-8V J11-10 -8V

-VUN J6-19 -VUN

+8V J6-8 +8V

-8V J6 10

J6-20 -8 FM LOGIC

J6-11 J6-12 LOGIC GND

J6-14 J6 16 SIGNAL GND

+5V R39 1K — DL2, DL5, DL7, VT1

+5V R40 1K — DL2 VT2

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	DRIVE LOGIC (COUNT LOGIC) (DL3)	SIZE	CODE	NUMBER	REV
SCALE	SHEET 3 OF 3	D	DCS	5414025	E
		DIST.			

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SECTOR DETECTION TIMER

DL6 CLOCK H

74LS197 E4 — (.244 µS) (.488 µS) (.975 µS) (1.951 µS)

74LS197 E8 — (3.90 µS) (7.80 µS) (15.6 µS) (31.2 µS)

74LS197 E13 — (62.4 µS) (124.9 µS) (249.7 µS) (499.5 µS)

74LSØØ E7 — 74LS32 E17 — 74LSØ E18 — DL4 62.4 µS H (3)

DL4 1 MHZ (3)

74LS279 E29 — (640.6 µS) (DISK UNDERSPEED)

TIMER DECODE LATCHES

74LS279 E12 — (62.5 µS) (SECTOR TIME)

TP11 Ø — DL4 SEC TIME L (3,7)

+5V — 74LS279 E12 — (593.2 µS) — DL4 593 µS LT L (5)

593 µS LATCH (DISK OVERSPEED)

+5V — R42 1K — DL7, VT5

74LSØØ E7 — DL4 625 µS LT/SEC TIME H (6)

74LS279 E12 — 625.0 MS

VT5 — 74LS74 E3

74LS279 E29 — DISK ON SPEED LATCH — DL4 DISK ON SPEED L (1)

74LSØ8 E38 — 7416 E68 — J5-7 CONTROL SP UP L

VT5 TIMER AND LATCH RESET FLOP — 74LS74 E3

74LS279 E12

74LSØ8 E38

DL6 SEC DET L

DL6 LOGIC POR L

DL1 SPIN DOWN L

DL1 POR OR LOAD CART L

74LSØØ E7 — R41 220Ω — C8Ø .Ø1 UF — 74LSØØ E7

DL5 CLOCK ERR H — 7416 E68

TP11
C8Ø
R41, R42

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
DRIVE LOGIC (DISK SPEED CONTROL) (DL4)	D	CS	5414025-Ø-1	F
SCALE	SHEET 4 OF 8	DIST.		

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DL1 SPIN UP L
DL6 SEC DET L
74LSØØ E15
7416 E1Ø
+5.ØV R45 2K
+8.ØV R46 1M
D8 IN4454
R47 1K
DISK STOPPED TIMER
+8.ØV
LM339 E5
+5.ØV
R48 1ØØ
R49 4.7K
C1Ø6 33Ø pf
C87 15uF
DL5 DISK STOPPED L (1)

DLA DRIVE SELECT ERR H

WRITE DATA ERROR PLS L J6-1
DL4 593µS LT L
WRITE DATA ERROR LATCH
74LS279 E6
SPIN ERROR FLIP FLOP
74LS74 E11
VOLUME CHECK FLIP FLOP
74-LS74 E11
DL5 WR DATA ERR H (2)

DL1 LOAD HDS L
DISK SPINUP ERROR TIMER
CLOCK ERROR DETECTOR
DL6 CLOCK H
DL6 CLOCK L
DL3 VTI — VTI
7416 E1Ø
+5.ØV R43 4.7K
C81 .Ø1µF
7416 E9
R44 4.7K
C82 .Ø1µF
74LSØ2 E1
+5.ØV R5Ø 2K
D9 IN4454
+8.ØV R51 1M
R52 1K
C86 39µF
LM339 E5
+5.ØV R53 4.7K
SEE NOTE 2 ON DL2
W2 TP17 TP18
SPIN UP ERROR LATCH
74LS279 E6
7416 E9
R145 4.7K +5.ØV
C1Ø7 33Ø pf
+VTI
DL5 VOLUME CHECK H (2,8)
DL5 SPIN ERR H (2)
DL5 CLOCK ERR H (4)

DL7 READY TO R/W H
DL1 LOCK ON L
DL1 TIME OUT COMD L
74LS32 E17
74LSØ8 E14
7416 E1Ø
+5V R54 1K
DIØ IN4454
+8.ØV R55 47ØK
R56 1K
C85 3.9µF 1ØV, 1Ø%
SEEK ERROR TIMER
+8.ØV
LM339 E5
+5.ØV R57 4.7K
SEEK TIME OUT ERROR LATCH
74LS279 E6
74LS2Ø E2
74LS14 E48
DL5 ERR STATE COMD L (1)
7416 E9
R58 4.7K +5V
DL5 SEEK TIME OUT ERR H (1,2)

CURRENT IN HEADS L J6-7
74LSØØ E15
CURRENT IN HEADS ERROR LATCH
74LS279 E6
C1Ø8 33Ø pf
DL5 CURRENT HEAD ERR H (2)

DL2 RESET ERROR LATCHES L

WRITE PROTECT DETECTOR
+5.ØV R59 2ØK
C83 1ØØØ PF
DL6 RECD WR GATE H
7416 E1Ø
WR PROTECT L J11-9
D11 IN4454
D12 IN4454
R6Ø 1ØK
R61 1K
C84 .Ø1µF
+5.ØV
Q2 2N44Ø3
R62 4.7K -8.ØV
74LS2Ø E2
DL5 DRIVE ERR H (6,8)

+VT1
74LS74 E16
SECT PULSE L
DL5 WRITE LOCK LATCHED H (6)

DL6 SET WR GATE ERR L
74LS74 E16
WRITE GATE ERROR LATCH
DL5 WRITE LOCK H (2)
DL5 WR GATE ERR H (2)

C81-C87, C1Ø6, C1Ø7, C1Ø8
D8-D12
Q2
R43-R62, R146
W2
TP17, TP18, TP23, TP24

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
DRIVE LOGIC (ERROR LOGIC) (DL5)	D	CS	5414025-0-1	F
SCALE —	SHEET 5 OF 8	DIST.		

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LINE RECEIVERS

DL8 AC LO LATCHED L
DL8 AC LO L
POWER ON RESET L J4-13
DRIVE COMMAND (H) J12-X
DRIVE COMMAND (L) J12-W
SYS CLK (Ø) (H) J12-M
SYS CLK (Ø) (L) J12-N
WRITE GATE (L) J12-J
WRITE GATE (H) J12-H
WRITE DATA (L) J12-T
WRITE DATA (H) J12-S
DL7 READY TO R/W L
DL5 WRITE LOCK H
DL5 DRIVE ERR H
DL4(625 US) LT/SEC TIME H
DL7 READY TO R/W L SYNC L
DRIVE SELECT Ø (1) (L) J12-D
DRIVE SELECT Ø (1) (H) J12-C
DRIVE SELECT 1 (1) (L) J12-F
DRIVE SELECT 1 (1) (H) J12-E
SELECT BIT Ø L J11-5
SELECT BIT 1 L J11-3
ASSERTED L J11-2
RAW SEC PLS J14-2
RAW SEC PLS RETURN J14-3
J14-1
J12-VV,UU,LL,KK,FF,EE,BB,AA GND
U, V, P, R, K, L, A

READY LAMP DRIVER

SECTOR PULSE DETECTOR

DL2 STATUS DATA H
DL7 READY TO R/W H
DL2 STATUS CLK GATE H
DL7 SEC PLS L
DL7 DATA PULSE H

DL6 LOGIC POR L (1,2,4,7)
DL6 ENABLE INTERFACE H (8)
J6-2 R/W POR L
DL6 DRIVE COMMAND L (2)
DL6 CLOCK H (2,4,5,7)
DL6 RECD WR GATE H (5)
DL6 CLOCK L (2,5)
DL6 SET WR GATE ERR L (5)
J6-6 WRITE GATE H
J6-4 WRITE GATE L
J6-9 WRITE DATA PULSE L
J11-6 READY LAMP H
DL6 SEC DET L (4,5)

DL8 VT3

J12-CC STATUS IN (L)
J12-DD STATUS IN (H)
J12-PP DRIVE READY (L)
J12-RR DRIVE READY (H)
J12-HH STATUS CLOCK (L)
J12-JJ STATUS CLOCK (H)
J12-Y READ DATA (L)
J12-Z READ DATA (H)

LINE DRIVERS

DL5 -5.0V

TP14
C76, C77, C89-C93, C95
D13-D15, D22
Q3, Q4
R63-R82, R138

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
DRIVE LOGIC (INTERFACE LOGIC) (DL6)	D	DCS	5414025-0-1	F
SCALE	SHEET 6 OF 8	DIST.		

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SERVO DATA CYCLE COUNTER

INTEGRATE ENABLE FLIP FLOP

E1/E2 INTEGRATOR SELECTOR

DL3 INVERT INTG H

J6-5 INTEGRATE H

INTEGRATE H

DL7 SEC PLS L(6)

DL7 SEC PLS H(8)

DL7 GUARD BAND H(1,3)

DL7 GUARD BAND L(3)

SAMPLE ONE SHOT

SAMPLE ONE SHOT DRIVER

INTEGRATOR CIRCUIT ENABLE/DISABLE

-V UN J2-6

AMP SENSOR H J6-17

DL4 SEC TIME L

DL6 LOGIC POR L

DL3 VTI — VTI

DL4 VTS — VTS

E1 INTEGRATOR

E2 INTEGRATOR

GUARD BAND DETECTOR

DL7 SEC TIME H

+5V R87 2K VT4

SERVO DATA LATCH

SERVO DATA 2 J6-13

SERVO DATA 1 J6-15

READ DATA GATE

SERVO DATA CYCLE START

E2 POLARITY DETECTOR

E1 POLARITY DETECTOR

POSITION SIGNAL SAMPLE AND HOLD

POS SIGNAL

TP15

T1

T2

T3

DL7 E1 (2)

DL7 E2 (3)

POSITION NULL DETECTOR

DL2 ENABLE TIME OUT H

DL6 CLOCK H

INTEGRATOR GND J4-15

LOGIC GND J2-4

TP1 THRU TP4 & TP12

IC DECOUPLING

RETRIGGER DISABLE LATCH

READY TO READ/WRITE TIMER

6.5 MSEC ± 20%

DL7 READY TO R/W I (6)

DL7 READY TO R/W H (6)

DL7 READY TO R/W SYNC (6)

SEC PLS L

POS MODE H

DL7 DATA PULSE H

TP1 - TP12, TP15, TP16
R83 - R124, R133
Q5 - Q14
D16 - D21
C1 - C73, C96 - C103

NOTE:
1. T1 - T3 ARE PADS FOR FORMATTER WIRING (NO ASSEMBLED PARTS).

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV
DRIVE LOGIC (INTEGRATOR LOGIC) (DL7)	D	CS	54140[illegible]-0-1	
SCALE	SHEET 2 OF C		DIST.	

DCS 54140[illegible]-0-1F

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D.2 RESET ERROR LATCHES L

DL6 ENABLE INTERFACE H

DRIVE SELECT/PARTIAL SECTOR PULSE DISABLE

74LS279 E71

74LS04 E80

SECTOR PULSE LINE DRIVER

VT3

75113 E86

J12-MM DRIVE SECTOR PLS L

J12-NN DRIVE SECTOR PLS H

DL7 SEC PLS H

MULTIPLE DRIVE SELECT ERROR DETECTOR

+5.0V

R126 3.3K

74LS08 E76

7416 E85

R127 4.7K

C105 3,300PF

74LS74 E75

DL8 DRIVE SELECT ERR L (5)

DL8 DRIVE SELECT ERR H (2)(5)

DRIVE SELECT ERROR LATCH

DL6 VT3 — VT3

DL6 -5.0V — -5.0V

75107B-00 E87

C94 470 PF

-5.0V

AC LO L J11-B

C104 .01 UF

R125 4.7K

-8.0V

DL6 AC LO L (6)

DL6 AC LO LATCHED L (6)

DLI HM SW L J11-D

DL5 VOLUME CHECK H

DL5 DRIVE ERR H

74LS32 E17

J12-SS DRIVE ERROR L

J12-TT DRIVE ERR H

MULTIPLE DRIVE SELECT ERROR CONDITIONAL DRIVE DESELECT

R129 1K

Q15 2N4403

R130 470Ω 1/2W

7416 E9

R128 2K

J11-B FAULT LAMP H

FAULT LAMP DRIVER

C94, C104, C105
Q15
R125-R130

REVISIONS		
CHK	CHANGE NO	REV.

TITLE	SIZE	CODE	NUMBER	REV.
DRIVE LOGIC (DL8)	D	CS	5414025-0-1	F
SCALE —	SHEET 8 OF 8	DIST.		

DEC FORM NO DRG 1.97

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TABLE OF CONTENTS

B-TC-871-0-2	871 FIELD MAINTENANCE PRINT SET
B-DD-871-0	871 POWER CONTROLLER
E-UA-871-0-0	871 POWER CONTROLLER
A-PL-871-0-0	871 POWER CONTROLLER
D-CS-871-0-1	SCHEMATIC AC POWER CONTROLLER 871
D-AD-7015605-0-0	CONTROL BOARD ASSY.
D-UA-5413089-0-0	A.C. CONTROL BOARD
K-PL-5413089-0-DBP	A.C. CONTROL BOARD
D-CS-5413089-0-1	A.C. CONTROL BOARD

UNIT VARIATIONS COVERED BY THIS PRINT SET
871-A
871-B
871-C

871

Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.
MPØØ616

REVISIONS	REV.	CHG. NO.	DATE

USED ON OPTION/MODEL
871-0
SHEET 1 OF 1

DRN.	R. ROBICHAUD	DATE 8MAR78
CHK'D	J. FALKOWSKI	DATE 27MAR78
PROJ. ENG.		DATE
FIELD SERV.		DATE

digital

TITLE: 871 PWR CONTROLLER

SIZE	CODE	NUMBER	REV.
D	TC	871-0-2	
DIST.			

FP: 2:1124.16-N675-(327)

DRD 124

MK

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FOR FIELD MAINTENANCE PRINT SET
REFER TO B-TC-871-0-2

UNIT VARIATIONS

VAR	TITLE
871-A	871 POWER CONTROLLER (120V), 12 AMP
871-B	871 POWER CONTROLLER (240V), 8 AMP
871-C	871 POWER CONTROLLER (120V), 16 AMP

REVISIONS			
REV.	CHANGE NO.	CHK	
A	871-MK001	TC	

USED ON OPTION/MODEL: 871

SHEET 1 OF 3

DRN.	R. ROBICHAUD	DATE	9MAR78
CHK'D.	J. FALKOWSKI	DATE	27MAR78
PROJ. ENG.		DATE	5MAY78
PROD.	For M. Dacey	DATE	5MAY78

TITLE: 871 PWR CONTROLLER

digital

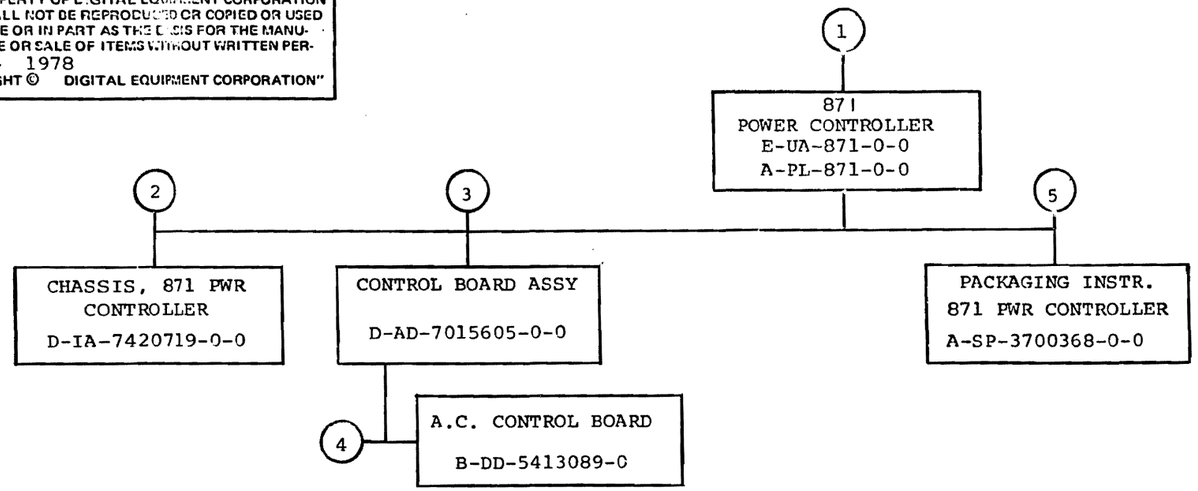
SIZE	CODE	NUMBER	REV
B	DD	871-0	A

DIST.

DRB 106A

MK

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TITLE		SIZE	CODE	NUMBER	REV
871 POWER CONTROLLER	SHEET 2 OF 3	B	DD	871-0	A

DRB 107

MK

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	MPØØ616	871 FIELD MAINTENANCE PRINT SET (MP)	-
	B-TC-871-0-2	871 TABLE OF CONTENT (TC)	-
	A-SP-871-0-3	871 PWR. CONTROLLER TEST PROC.	-
	E-UA-871-0-0	871, POWER CONTROLLER	E/M
	A-PL-871-0-0	871, POWER CONTROLLER	E/M
	D-IA-7420720-0-0	COVER, 871, POWER CONTROLLER	M
	C-MD-7420721-0-0	BRACKET, 871, MOUNTING	M
	D-CS-871-0-1	SCHEMATIC, 871. PWR.CONTROLLER	E
	A-SP-871-0-4	871 POWER CONTROLLER SPEC.	-
	A-PS-3610267-00	STICKER-DANGER HIGH VOLTAGE	M
	A-PS-3612680-00	DECAL-GROUND SYMBOL	M
	A-DC-7416197-0-2	DECAL, UL LISTED EDP	M
	B-DC-5308753-23	DECAL, N	M
	A-PS-3613211-0-0	LABEL, ADHESIVE BACKED CSA, PRINTED	M
	A-PS-3613210-02	LABEL, ADHESIVE BACKED, PRINTED	M
	A-PS-3611448-0-0	LABEL, WARNING, AC CORD	M
	A-DC-7416582-1-1	DECAL, NOT FOR EXTERNAL LOADS	M
			M
2	D-IA-7420719-0-0	CHASSIS, 871 PWR CONTROLLER	M
	C-SS-7420719-0-1	SILK-SCREEN, 871-A	M
	C-SS-7420719-0-2	SILK-SCREEN, 871-B	M
	C-SS-7420719-0-3	SILK-SCREEN, 871-C	M

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
3	D-AD-7015605-0-0	CONTROL BOARD ASSY	E/M
4	B-DD-5413089-0	A.C. CONTROL BOARD	-
5	A-SP-3700368-0-0	PKG INSTR, 871 PWR CONTROLLER	M
	A-PS-9906274-0-0	CARTON, REGULAR SLOTTED	M
	A-PS-9905044-0-0	CUSHION, PAD	M
	A-PS-9905729-0-0	TAPE, CARTON SEALING	M

TYPE: E ELECTRICAL
M MECHANICAL
E/M ELECTRO/MECHANICAL

digital

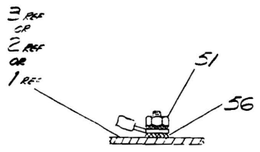
TITLE	SHEET	SIZE	CODE	NUMBER	REV
871 POWER CONTROLLER	3 OF 3	B	DD	871-0	A

DRB 108A

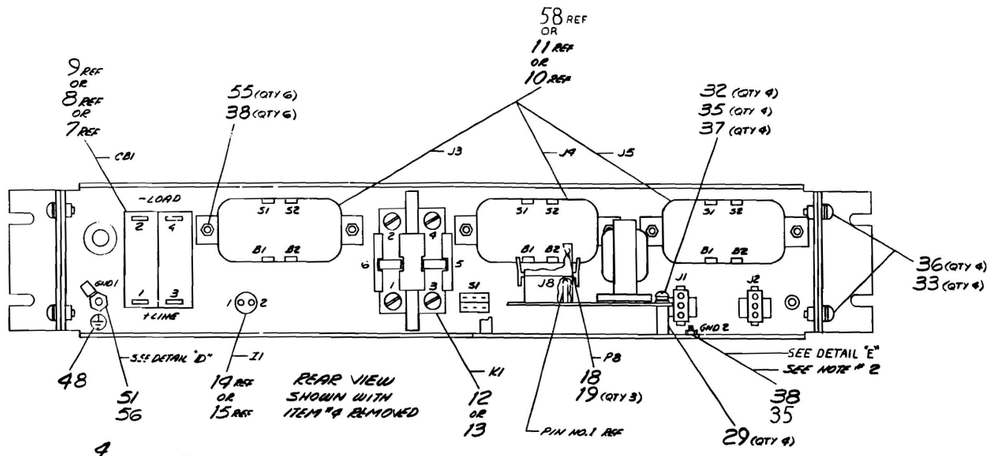
MK

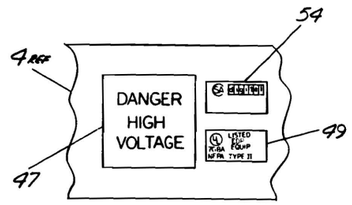
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LEGEND	
NUMBER	VARIATION
871-A	120V, 12 AMP
871-B	220V, 8 AMP
871-C	120V, 16 AMP

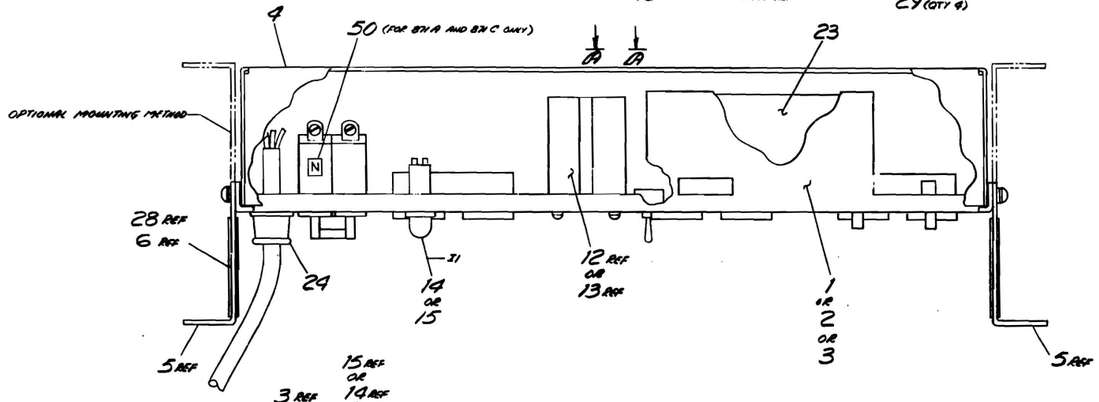


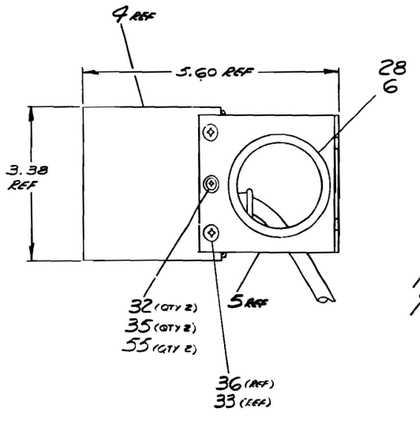
DETAIL "D"
SCALE: NONE

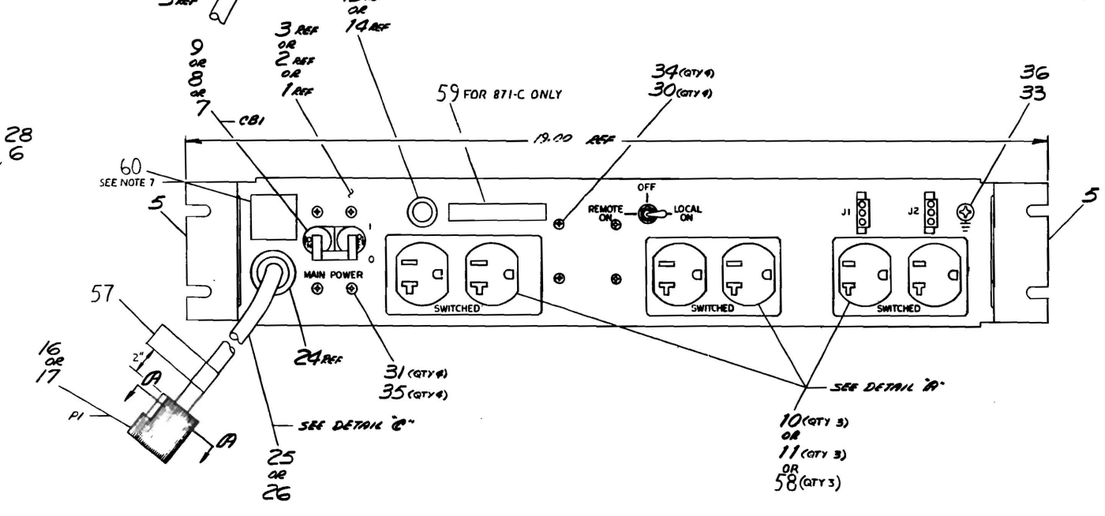




VIEW A-A







NOTES:

1. LEADS ON CAPACITOR ITEM #20 AND VARISTOR ITEM #21 OR #22 TO BE APPROXIMATELY 1.25 INCHES LONG. SEE WIRE TABLE AND DETAIL "B".
2. WIRE (GRN/YEL) WITH RING TERMINAL COMING FROM CONTROL BOARD ASSY ITEM #23 TO BE MOUNTED TO STUD SHOWN AND SECURED WITH KEP NUT. ITEM #38 AND LOCK WASHER ITEM #35
3. INSULATION OF POWER CORD ITEM #25 OR #26 EXTENDS APPROX. 1.5 INCHES BEYOND INSIDE OF STRAIN RELIEF ITEM #24.
4. TORQUE REQUIREMENT FOR CERTAIN ELECTRO-MECHANICAL CONNECTIONS.
   A. 18 ± 2 IN LBS FOR NUMBER 10 HARDWARE & LUGS ON CONTACTOR ITEM #12 OR #13. & NUT ON GROUND NO. 1 ITEM #51
   B. 16 ± 2 LBS FOR 8-32 SCREW CONNECTIONS ON OUTLETS J8, J9 & J5. ITEMS #10 OR #11 OR #58 & NUT ON NO. 2 GROUND.
   C. 12 ± 2 IN LBS FOR 8-32 SCREWS CONNECTIONS TO CIRCUIT BREAKER CB1 ITEM #7, #8 OR #9.
5. FOR SCHEMATIC 871 POWER CONTROLLER SEE DRAWING D-CS-871-0-1
6. THE THREE WIRES MAKING UP POWER CORD ITEM #25 ARE TO BE CUT BACK AND ARE TO BE THE SAME LENGTH AFTER CUTTING OFF TERMINAL AFFIXED TO GRN/YEL WIRE AND THEN RING TERMINAL ITEM #40 TO BE CRIMPED ON AT THESE THREE POINTS. CUT BACK INSULATION IF NECESSARY
7. SERIAL TAG (ITEM #60) TO CONTAIN MODEL NUMBER, REV LETTER, PLACE OF MANUFACTURE, AND SERIAL NUMBER.

CAUTION:
SEE SHEET PARTS LIST REFER TO A-PL-871-0-0

DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

SURFACE QUALITY	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES				
		OVER 0 TO 6	OVER 6 TO 30	OVER 30 TO 120	OVER 120 TO 315	OVER 315 TO 1000
	CHECK ONE					
	MEDIUM	± .004	± .008	± .012	± .016	± .06
	PREFERRED	± .017	± .016	± .025	± .04	± .160

QUANTITY & VARIATION

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

DRAWN
CHK'D
ENG.
PROJ. ENG.
PROG.
NEXT HIGHER ASSY
SCALE
SHEET 1 OF 2

FIRST USED ON 0923

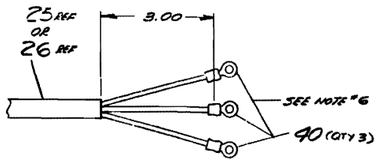
TITLE
871
POWER CONTROLLER

SIZE E | CODE UA | NUMBER 871-0-0 | REV A
DIST.

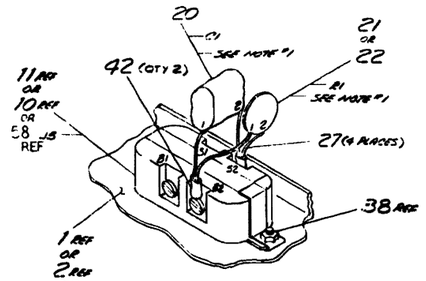
MK 1

WIRE TABLE

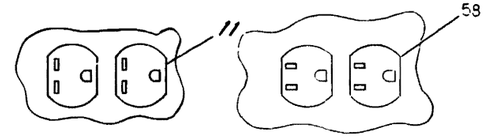
ITEM NO	DESCRIPTION WIRE	COLOR	FROM CONNECTION	WITH	TO CONNECTION	WITH	REMARKS
37	22	BLU	P1-2	90	J9-S1	91	7"
39	22	BLU	K1-2	90	J3-S2	91	9"
43	18	BRN	K1-9	90	J9-B1	91	9"
43	18	BRN	K1-9	90	J3-B2	91	8"
43	22	BLU	P1-1	90	CB1-2	90	10"
45	18	BLU	K1-1	39	P3-3	18&19	10"
47	18	BLK	K1-8	90	CB1-4	90	10"
51	18	BRN	K1-3	39	P3-1	18&19	6" 871-B ONLY
53	18	BRN	K1-3	39	P3-2	18&19	6" 871-A & 871-C ONLY
—	18	YEL	K1-6	—	CB1-4	39	7"
—	18	YEL	K1-5	—	P3-4	18&19	7"
55 THRU 59	18	BLK	J1-1	—	CB1-1	39	8.25
	18	RED	J1-2	—	CB1-3	39	8.25
44	22	BLU	J9-S2	91	J2-S1	91	6"
42	18	BRN	J9-B2	91	J3-B1	91	6"
7	—	—	C1-1	27	J3-B2	92	SEE DETAIL "B"
20 THRU 22	—	—	P1-1	27			
—	—	—	C1-2	27	J3-S2	92	SEE DETAIL "B"
20 THRU 22	—	—	P1-2	27			
23	18	GRN/WHT.	A.C. BOARD	TERM	GND 2	38	SEE REAR VIEW
25	16	BRN	—	—	CB1-3	90	871-A ONLY
	16	BLU	—	—	CB1-1	90	
	18	GRN/WHT.	—	—	GND-1	90,51,56	
26	18	BRN	P1-2	17	CB1-3	90	871-B ONLY
	18	BLU	P1-1	17	CB1-1	90	
	18	GRN/WHT.	P1-6	17	GND-1	90,51,56	
26	16	BRN	P1-2	16	CB1-3	90	871-C ONLY
	16	BLU	P1-1	16	CB1-1	90	
	18	GRN/WHT.	P1-6	16	GND-1	90,51,56	



DETAIL "C"



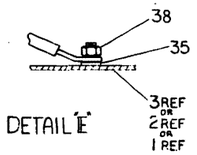
DETAIL "B"
SEE NOTE "1



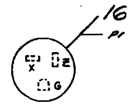
RECEPTACLE FOR VARIATION 871-B ONLY

RECEPTACLE FOR VARIATION 871-A ONLY

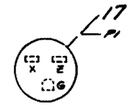
DETAIL A



DETAIL "E"



SECTION A-A
FOR 871-C ONLY
SCALE : NONE



SECTION A-A
FOR 871-B ONLY
SCALE : NONE

REV.	REVISION CHANGE NO.	DWN.
A		

DESCRIPTION — DWG./PART NO. — ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

SURFACE QUALITY	CLASS OF ACCURACY	DECIMAL DIMENSION TOLERANCES					
		1 PL	2 PL	3 PL	4 PL	5 PL	6 PL
		± .030	± .010	± .005	± .002	± .001	± .0005
		± .062	± .015	± .005	± .002	± .001	± .0005

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG.

MATERIAL: SEE PARTS LIST

FINISH

DWN'R: [illegible]
ENG.
PROJ. ENG.
PROD'N
NEXT HIGHER ASSY.: 871-0-0
SCALE: NONE
SHEET 2 OF 2

FIRST USED ON: 0323

TITLE: 871 POWER CONTROLLER

SIZE E | CODE UA | NUMBER 871-0-0 | REV. A | DIST.

MK

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY R. ROBICHAUD | CHECKED J. PALKOWSKI | SECTION 1
DATE 1 MAR 78 | DATE 27 MAR 78 |
ENG | PROD | ISSUED SECT. 1
DATE | DATE

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	871-A 120V	871-B 240V	871-C 120V
1	D-IA-7420719-00	CHASSIS, 871 PWR, CONTROLLER	1	-	-
2	D-IA-7420719-01	CHASSIS, 871 PWR, CONTROLLER	-	1	-
3	D-IA-7420719-02	CHASSIS, 871 PWR, CONTROLLER	-	-	1
4	D-IA-7420720-0-0	COVER, 871 PWR, CONTROLLER	1	1	1
5	C-IA-7420721-0-0	BRACKET, 871 MOUNTING	2	2	2
6	9009157-00	ADHESIVE, PERMANENT #101	A/R	A/R	A/R
7	A-PS-1212124-03	CIRCUIT BREAKER 10 AMP, CB1	-	1	-
8	A-PS-1212124-04	CIRCUIT BREAKER 15 AMP, CB1	1	-	-
9	A-PS-1212124-05	CIRCUIT BREAKER 20 AMP, CB1	-	-	1
10	A-PS-1212265-00	RECEPTACLE 120 VAC 20 AMP, J3-J5	-	-	3
11	A-PS-1211204-01	RECEPTACLE 240 VAC 15 AMP, J3-J5	-	3	-
12	A-PS-1214281-00	CONTACTOR, 20 AMP, 2 POLE, 120V, K1	1	-	1
13	A-PS-1214281-01	CONTACTOR, 20 AMP, 2 POLE, 240V, K1	-	1	-
14	A-PS-1205303-00	LAMP, PILOT, NEON, 120V, I1	1	-	1
15	A-PS-1202556-00	LAMP, PILOT, NEON, 240V, I1	-	1	-
16	A-PS-1215181-00	HUBBELL PLUG 5366-C 20 AMP	-	-	1
17	9008853-00	CONN, PWR 3 PIN PLUG, 6-15P NEMA	-	1	-
18	A-PS-1212167-01	CONN, PLUG 4 POS.	1	1	1
19	A-PS-1212170-00	CONTACT, SOCKET	3	3	3
20	A-PS-1014439-01	CAPACITOR .1 UF 270 VAC, C1	1	1	1
21	A-PS-1311995-00	VARISTOR 150V, R1	1	-	1
22	A-PS-1311995-02	VARISTOR 275V, R1	-	1	-

TITLE: 871 POWER CONTROLLER | ASSY NO. E-UA-871-0-0 | SIZE A | CODE PL | NUMBER 871-0-0 | REV A | ECO NO. MK-01
SHEET 1 OF 3 | DIST

DEC FORM DRA 110

MK

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY R. ROBICHAUD | CHECKED J. PALKOWSKI | SECTION 1
DATE 1 MAR 78 | DATE 27 MAR 78 |
ENG | PROD | ISSUED SECT. 1
DATE | DATE

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	871-A 120V	871-B 240V	871-C 120V
23	D-AD-7015609-0-0	CONTROL BOARD ASSY (871)	1	1	1
24	9009768-01	STRAIN RELIEF	1	1	1
25	A-PS-1700206-15	POWER CORD 15 FT.	1	-	-
26	A-PS-1700027-01	POWER CORD 300V, 15 AMP 15 FT.	-	1	1
27	9107267-11	TUBING THIN WALL .034 ID	A/R	A/R	A/R
28	9008209-00	GROMMET, STRIP	A/R	A/R	A/R
29	9009555-00	SPACER #6-32 X .56 LG X .25 O.D.	4	4	4
30	9008301-01	SCR, PHL PAN HD #4-40 X .25 LG	4	4	4
31	9006920-01	SCR, PHL. PAN HD #6-32 X .25 LG	4	4	4
32	9006921-01	SCR, PHL PAN HD. #6-32 X .31 LG	6	6	6
33	9006971-01	SCR, PHL PAN HD #10-32 X .38 LG	5	5	5
34	9006688-00	WASHER, #4 LOCK	4	4	4
35	9007801-00	WASHER, #6 LOCK	11	11	11
36	9007906-00	WASHER, #10 LOCK	5	5	5
37	9006707-00	WASHER, FLAT NYLON #6	4	4	4
38	9008185-00	NUT HEX #6-32	7	7	7
39	9007930-00	TERMINAL RING (RED)	5	5	5
40	9007928-00	TERMINAL RING (BLU)	11	11	11
41	9009695-00	TERMINAL FORK (BLU)	8	8	8
42	9009695-05	TERMINAL FORK (RED)	2	2	2
43	9107787-11	WIRE #14 AWG (BRN)	A/R	A/R	A/R
44	9107787-66	WIRE #14 AWG (BLU)	A/R	A/R	A/R

TITLE: 871 POWER CONTROLLER | ASSY NO. E-UA-871-0-0 | SIZE A | CODE PL | NUMBER 871-0-0 | REV A | ECO NO. MK-01
SHEET 2 OF 3 | DIST

DEC FORM DRA 110

MK

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

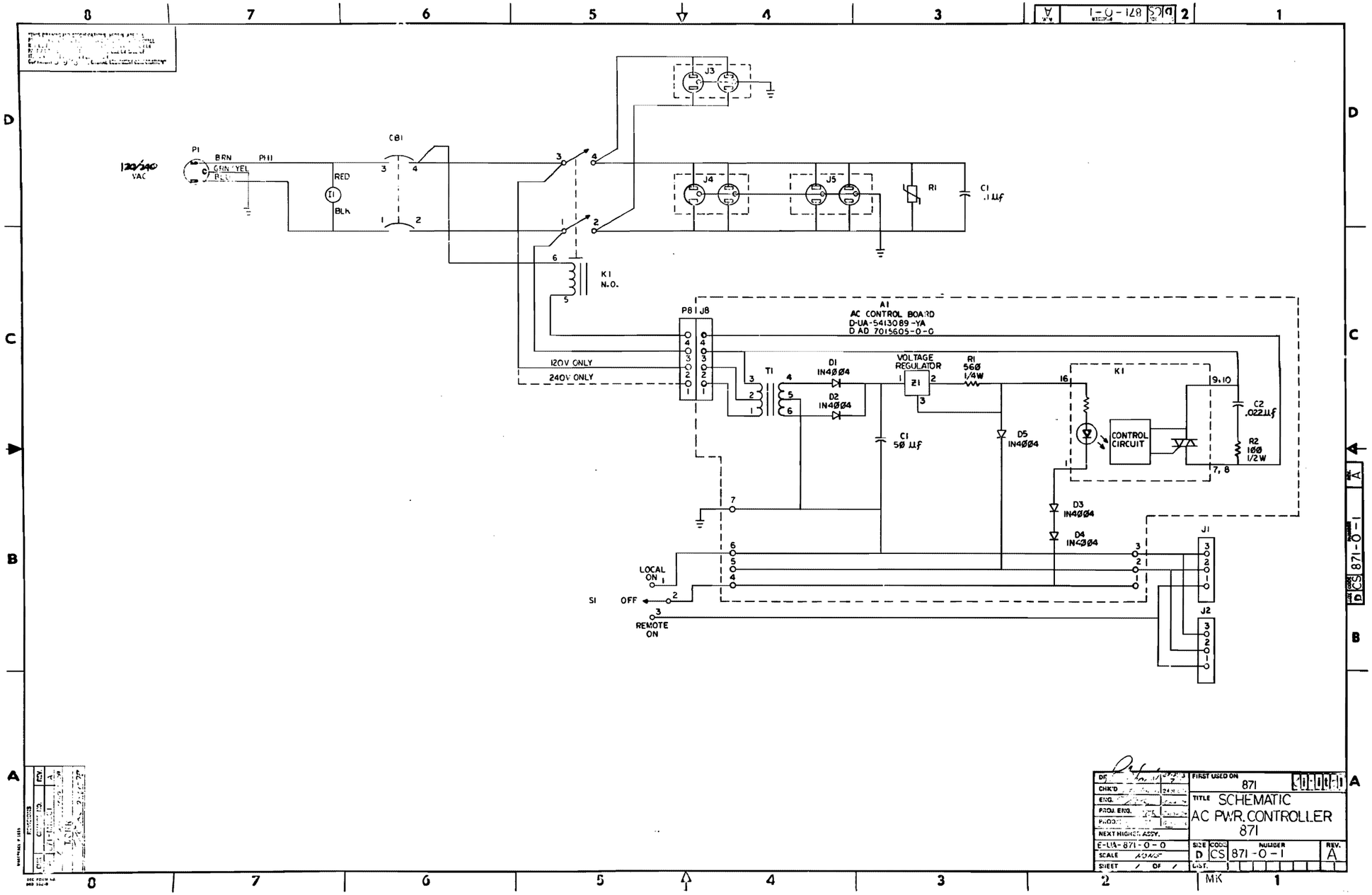
MADE BY R. ROBICHAUD | CHECKED J. PALKOWSKI | SECTION 1
DATE 1 MAR 78 | DATE 27 MAR 78 |
ENG | PROD | ISSUED SECT. 1
DATE | DATE

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	871-A 120V	871-B 240V	871-C 120V
45	9107786-11	WIRE #18 AWG (BRN)	A/R	A/R	A/R
46	9107786-66	WIRE #18 AWG (BLU)	A/R	A/R	A/R
47	A-PS-3610267-00	STICKER-DANGER HIGH VOLTAGE	1	1	1
48	A-PS-3612680-00	DECAL-GROUND SYMBOL	1	1	1
49	A-DC-7416197-0-2	DECAL, UL LISTED EDP	1	1	1
50	B-DC-5308753-23	DECAL, N	1	-	1
51	9006565-00	NUT, KEP 10-32	1	1	1
52	D-CS-871-0-1	SCHEMTIC, 871 PWR CONTROLLER	REF	REF	REF
53	A-SP-3700368-0-0	PACKAGING INSTRUCTIONS 871 PWR CONTROLLER	1	1	1
54	A-PS-3612211-01	LABEL, ADHESIVE BACKED, CSA, PRINTED	1	1	1
55	9006556-00	WASHER, FLAT #6	8	8	8
56	9007351-00	WASHER, EXT. TOOTH #10	1	1	1
57	A-PS-3611443-0-0	LABEL, WARNING, AC CORD	1	1	1
58	A-PS-1214899-00	RECEPTACLE 120VAC, 15 AMP, J3-J5	3	-	-
59	A-DC-7416582-1-1	DECAL, NOT FOR EXTERNAL LOADS	-	-	1
60	A-PS-3613210-02	LABEL, ADHESIVE BACKED, PRINTED	1	1	1

TITLE: 871 POWER CONTROLLER | ASSY NO. E-UA-871-0-0 | SIZE A | CODE PL | NUMBER 871-0-0 | REV A | ECO NO. MK-01
SHEET 3 OF 3 | DIST

DEC FORM DRA 110

MK



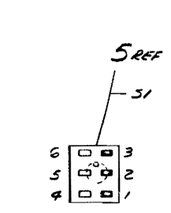
DR		FIRST USED ON	871
CHK'D		TITLE	SCHEMATIC AC PWR. CONTROLLER 871
ENG.			
PROJ. ENG.			
PROD.			
NEXT HIGHER ASSY.			
E-LIS-871-0-0		SIZE	D
SCALE	NONE	CODE	CS
SHEET / OF /		NUMBER	871-0-1
		REV.	A
		LIST	

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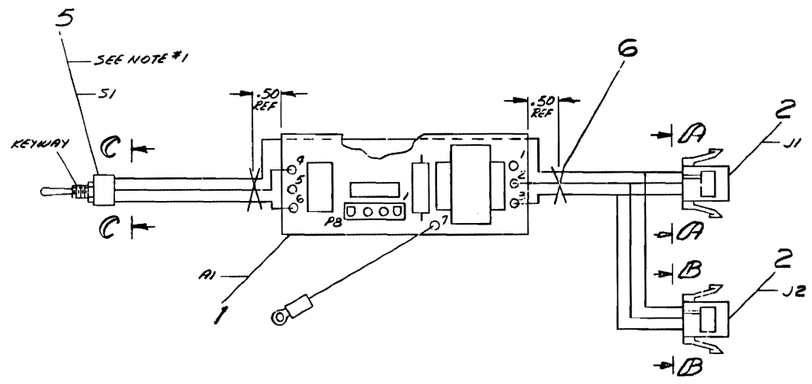
WIRE TABLE

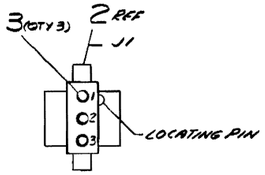
ITEM NO.	DESCRIPTION AWG	COLOR	FROM CONNECTION	FROM WITH	TO CONNECTION	TO WITH	PRECUT LENGTH
11	22	ORN	A1 - 4	SOL	S1-2	SOL	3 IN
10		VIO	A1 - 6	SOL	S1-1	SOL	3 IN
8		BLK	A1 - 2	SOL	J1-2	#3	3 IN
8		BLK	J2-2	#9			3 IN
7		GRN	A1-3	SOL	J1-3	#3	3 IN
7		GRN	J2-3	#4			3 IN
9		RED	S1-3	SOL	J1-1	#3	9.75 IN
9	22	RED	J2-1	#9			3 IN

NOTES:
1. HARDWARE FOR MOUNTING SWITCH IS SUPPLIED WITH ITEM #5 (SWITCH, TOGGLE DPDT).

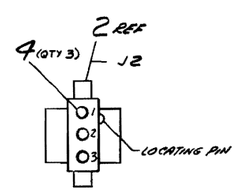


VIEW C-C
SCALE : NONE





VIEW A-A
SCALE : NONE



VIEW B-B
SCALE : NONE

1/2	WIRE, 22 AWG (ORN)	9107350-33	11
1/2	WIRE, 22 AWG (VIO)	9107350-77	10
1/2	WIRE, 22 AWG (RED)	9107350-22	9
1/2	WIRE, 22 AWG (BLK)	9107350-00	8
1/2	WIRE, 22 AWG (GRN)	9107350-55	7
2	TIE, CABLE	9007031-00	6
1	SWITCH, TOGGLE DPDT	A-PS-1213776-00	5
3	SOCKET, FEMALE CONTACT	A-PS-1203379-03	4
3	SOCKET, FEMALE CONTACT	A-PS-1203379-00	3
2	TERM. HOUSING FEMALE (3 PIN)	A-PS-1203350-03	2
1	AC CONTROL BOARD	D-UA-5913089-YA	1
QTY	DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES 0 TO .12	.12 TO .40	.40 TO 1.2	1.2 TO 4.0	4.0 TO 12.0	12.0 TO 40.0	OVER 40.0 TO 80.0
SURFACE QUALITY IN MICROINCHES	MEDIUM	±.004	±.01	±.012	±.016	±.024	±.04	
	PREFERRED	±.012	±.016	±.025	±.04	±.063	±.1	

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL: SEE PARTS LIST

FINISH

CHK'D

ENG.

PROJ. ENG.

PROD.

NEXT HIGHER ASSY.: E-UA-871-0-0

SCALE: NONE

SHEET 1 OF 1

FIRST USED ON: 871

TITLE: CONTROL BOARD ASSY

SIZE D | CODE AD | NUMBER 7015605-0-0 | REV.

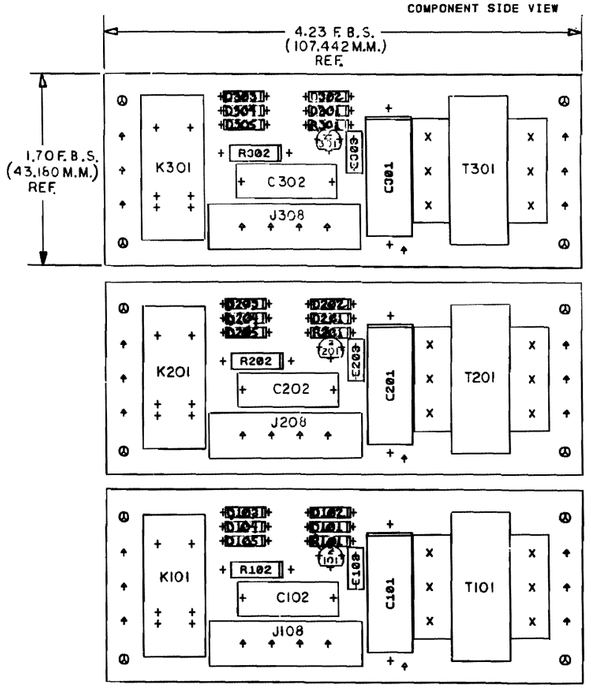
DIST.

REVISIONS: REV. | CHANGE NO. | CHK.

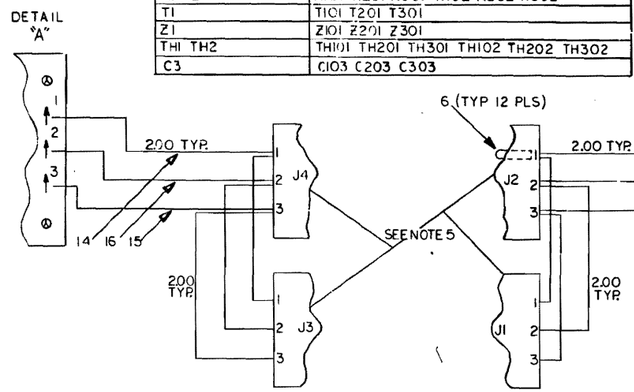
7015605-00

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COMPONENT SIDE VIEW



REFERENCE DESIGNATION	CHART
ACTUAL REF DES	SUPERFICIAL REF DES
C1 C2	C101 C201 C301 C102 C202 C302
D1 D2	D101 D201 D301 D102 D202 D302
D3 D4	D103 D203 D303 D104 D204 D304
D5	D105 D205 D305
J9	J108 J208 J308
K1	K101 K201 K301
R1 R2	R101 R201 R301 R102 R202 R302
T1	T101 T201 T301
Z1	Z101 Z201 Z301
TH1 TH2	TH101 TH201 TH301 TH102 TH202 TH302
C3	C103 C203 C303



NOTES:
1. THIS BOARD REQUIRES U/L APPROVAL.
2. DO NOT SLIT BOARD MUST BE SHEARED.
3. REFER TO PARTS LIST FOR IDENTIFICATION OF NUMBERED LEADS.
4. MULTI-REF DESIGNATIONS ARE USED TO ACCOMODATE PULSE TEST POINTS - SEE CHART FOR REF DES.
5. J1 J2 J3 J4 ARE NOT CONSIDERED A VARIATION.

CHK CHANGE NO	REV
	E

SIGNATURES	DATE
DRN. STU EVANS	7-27-78
CHKD.	
ENG.	
PROJ. LDR.	
PROD.	

ETCH REV. C - P1
P.C. DESIGN DATA BASE REV. C

digital

TITLE: A.C. CONTROL BOARD

SCALE 2/1 | SHT. 1 OF 3 | SIZE D | CODE UA | NUMBER 5413089-0-0 | REV E

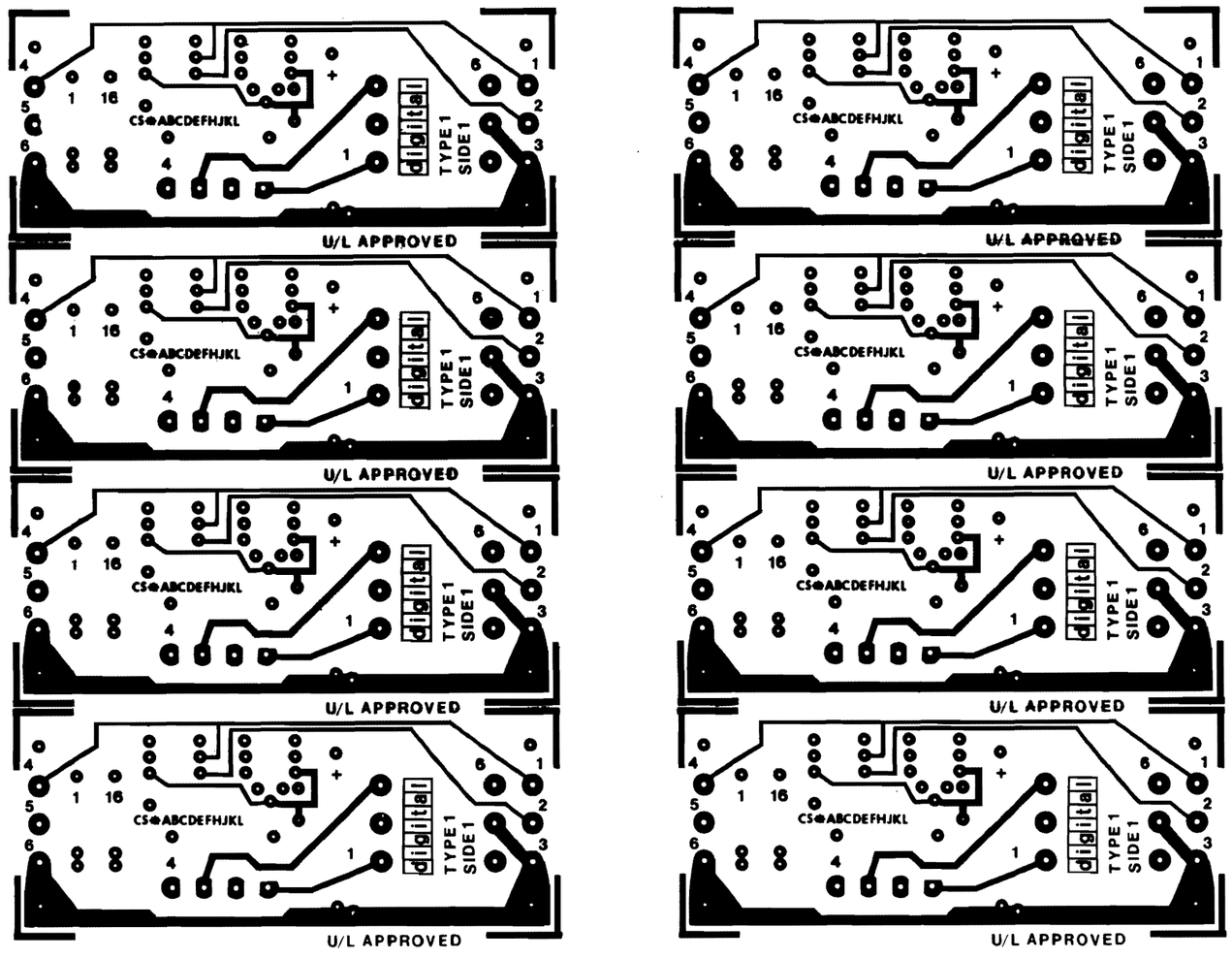
NEXT HIGHER ASSY. B-DD-5413089-0-0

1 MS#

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L1

5413089 5013088C-P1



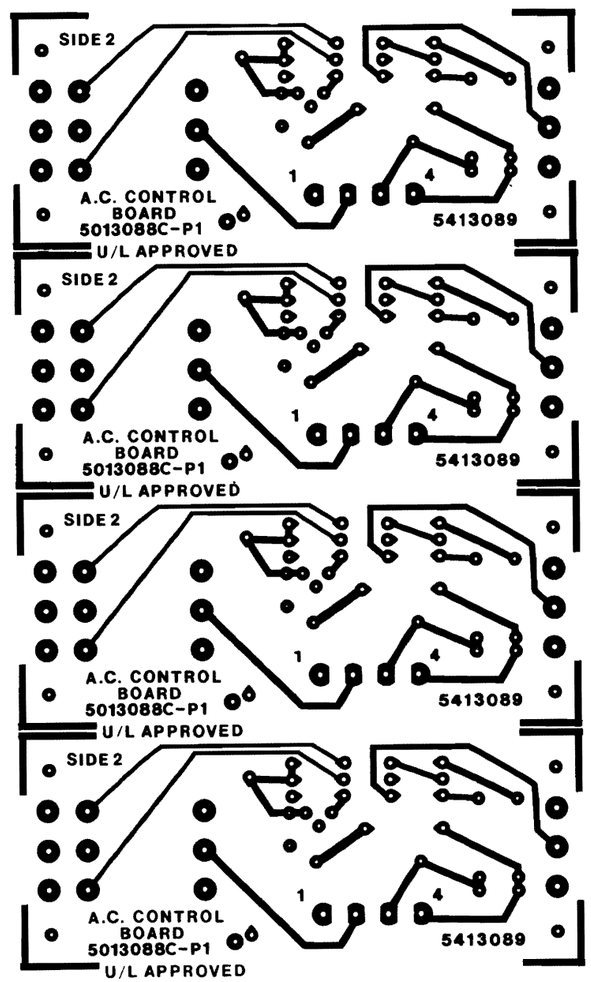
REVISIONS		
LTR	CHANGE NO	ITV

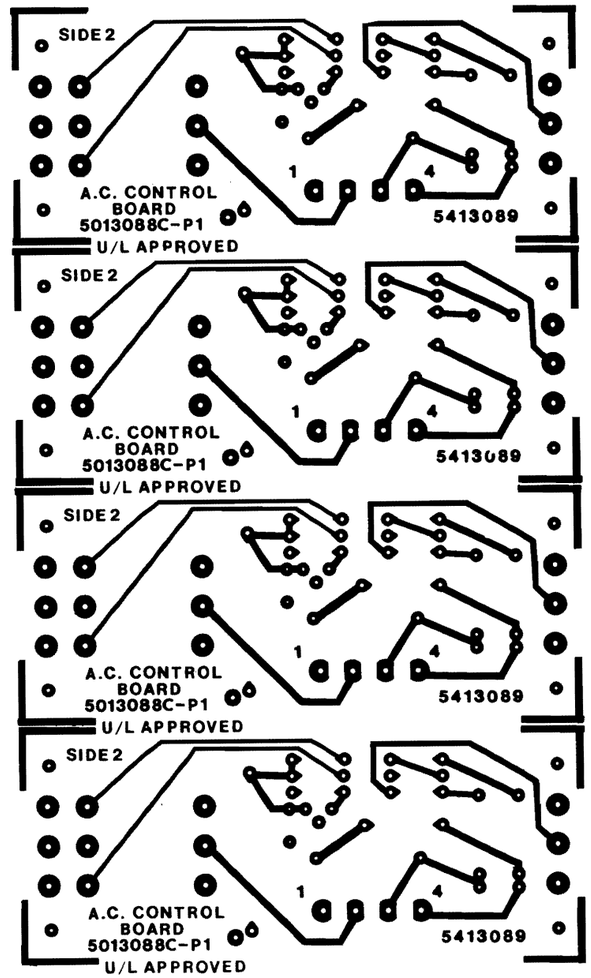
TITLE	SIZE	CODE	NUMBER	REV
AC. CONTROL BOARD	D	UA	5413089-Ø-Ø	E
SCALE 2 : 1 SHEET 2 OF 3	DIST			

DUA5413089-Ø-Ø E

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L2





REVISIONS		
ECO	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
A.C. CONTROL BOARD	D	UA	5413089-0-0	E
SCALE 2:1 SHEET 3 OF 3	DIST			

5413089-0-0 E DUA

AUTOMATED BY PRTLST.1D(11) P A R T S L I S T SHEET 1 OF 1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-MD-5013088-0-0	5013088-00	PILOT CONTROL BOARD	1	
2	2		1000080-00	50 MFD 50V G% 30D AL EL	1	C1
3	3		1014430-00	.022 MFD 270V 10% M.POLYPROP	1	C2
4	4		1105796-00	1N 4004 PIV=400 I= 1A DO41 SP	5	D1-D5
5	5		1209350-03	MATE-N-LOK 3PIN,HOUSING,SKT	4	J1-J4
6	6		1209379-00	MATE-N-LOK PIN 20-14AWG STRIP SD	12	
7	7		1212297-01	MATE-N-LOK 4PIN UNIV HEADER	1	J8
8	8		1214380-00	RLY,G.P., SPST, 0.5A $	1	K1
9	9		1300128-00	100 1/2W 5% CC	1	R2
10	10		1301890-00	560 1/4W 5% CC	1	R1
11	11		1612342-00	XFMR P=AB S=48CT	1	T1
12	12		1914471-00	78L08 VOLT.REG.FIX .+	1	Z1
13	13		9007930-00	TERM RING 1POS INSULATED,22-16	1	
14	14		9107360-66	WIRE,STRND,18AWG,IPVC UL1429	A/R	
15	15		9107360-77	WIRE,STRND,18AWG,IPVC UL1429	A/R	
16	16		9107360-88	WIRE,STRND,18AWG,IPVC UL1429	A/R	
17	17		9107410-54	WIRE,STRND,18AWG,IPVC UL1429	A/R	
18	18		1010274-00	.22 MFD 50V -20+80 Z5U CER	1	C3

19 NOTE: REFER TO DWG. D-UA-5413089-0-0, REV.A FOR ADDITIONAL INSERTION CRITERIA.

REVISION HISTORY			BASIC PART NO: 5413089											
ENG	ECO NUMBER	REV	SECTION 1 OF 2											
KIT	00002	C	SECTION.VARIATION INDEX	DRN: A.COLON	DATE: 14-MAR-78		D	I	G	I	T	A	L
R.R	00003	D	[1] 00											
C.L	5413089-ML004	E	[2] YA	CHK'D: R.GLEEZEN	DATE: 14-MAR-78	TITLE: PARTS LIST								
			[3]			A.C. CONTROL BOARD								
			[4]	DES.ENG: L.DOIRON	DATE: 14-MAR-78									
			[5]			DOCUMENT NUMBER								
			[6]	RESP.ENG.: R.KENNEDY	DATE: 14-MAR-78									
			[7]			SIZE: K	CODE: PL	NUMBER: 5413089-0-DBP		REV: E				
			[8]											
			[9]	MFG.ENG.: B.MANSON	DATE: 14-MAR-78									
			[10]											
			[11]	ASSEMBLY NUMBER:		FILE NAME:		EDIT #:						
			[12]	D-UA-5413089-0-0		Z0195E.PLS		12						

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AUTOMATED BY PRTLST.1D(11) P A R T S L I S T SHEET 1 OF 1

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-MD-5013088-0-0	5013088-00	PILOT CONTROL BOARD	1	
2	2		1000000-00	50 MFD 50V 6% 30D AL EL	1	C1
3	3		1014430-00	.022 MFD 270V 10% M.POLYPROP	1	C2
4	4		1105796-00	1N 4004 PIV=400 I= 1A DO-41 SP	5	D1-D5
5	5		1209350-03	MATE-N-LOK 3PIN;HOUSING;SKT	0	
6	6		1209379-00	MATE-N-LOK PIN 20-14AWG STRIP SD	0	
7	7		1212297-01	MATE-N-LOK 4PIN UNIV HEADER	1	J8
8	8		1214300-00	RLY,G.P., SPST, 0.5A $	1	K1
9	9		1300223-00	100 1/2W 5% CC	1	R2
10	10		1301890-00	560 1/4W 5% CC	1	R1
11	11		1612342-00	XFMR P=AB S=48CT	1	T1
12	12		1914471-00	78L09 VOLT.REG.FIX .+	1	Z1
13	13		9007930-00	TERM RING 1POS INSULATED,22-16	1	
14	14		9107360-66	WIRE,STRND,18AWG,IPVC UL1429	0	
15	15		9107360-77	WIRE,STRND,18AWG,IPVC UL1429	0	
16	16		9107360-88	WIRE,STRND,18AWG,IPVC UL1429	0	
17	17		9107410-54	WIRE,STRND,18AWG,IPVC UL1429	A/R	
18	18		1010274-00	.22 MFD 50V -20+80 Z5U CER	1	C3

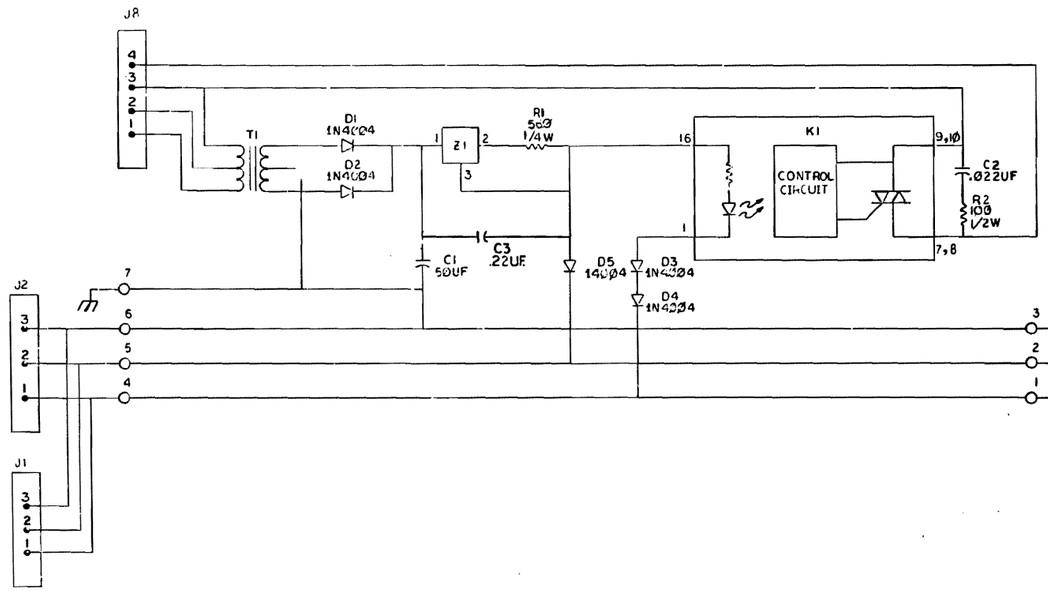
19 NOTE: REFER TO DWG. D-UA-5413089-0-0, REV.A FOR ADDITIONAL INSERTION CRITERIA.

REVISION HISTORY			BASIC PART NO: 5413089											
ENG	ECO NUMBER	REV	SECTION 2 OF 2	DRN: A.COLON	DATE: 14-MAR-78		D	I	G	I	T	A	L
KIT	00002	C	SECTION.VARIATION INDEX	CHK'D: R.GLEEZEN	DATE: 14-MAR-78	TITLE PARTS LIST							
R.R	00003	D	[1] 00			A.C. CONTROL BOARD							
C.L	5413089-ML004	E	[2] YA										
			[3]	DES.ENG: L.DOIRON	DATE: 14-MAR-78								
			[4]			DOCUMENT NUMBER							
			[5]										
			[6]	RESP.ENG.: R.KENNEDY	DATE: 14-MAR-78	SIZE	CODE	NUMBER				REV	
			[7]										
			[8]										
			[9]	MFG.ENG.: D.MANSON	DATE: 14-MAR-78	K	PL	5413089-0-DBP				E	
			[10]										
			[11]	ASSEMBLY NUMBER:		FILE NAME:						EDIT #	
			[12]	D-UA-5413089-0-0		Z0195E.PLS						12	

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NOTES:
1. CONNECTORS J4, J3, J2, J1 ARE NOT USED ON YA VARIATION.



REVISIONS			
CHK	CHANGE NO.	REV.	
		P	
		D	
		E	

541C084 E
W. BAUSHA 1/19/71

DR		FIRST USED ON H765
CHK		
ENG.		TITLE A.C. CONTROL BOARD
PROJ. ENG.		
PROD.		
NEXT HIGHER ASSY.		
SCALE NONE	SIZE D	CODE CS 5413089 01 REV. E
SHEET 1 OF 1	DIST.	

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY PEG. TESLA DATE	CHECKED DATE 79	SECTION 1
ENG DATE 13 APR 79	PROD DATE 16 APR 79	ISSUED SECTION 1

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION 11T23-AA	11T23-AB	11T23-AC	11T23-AE	11T23-AF								NOTES: REF DESIGNATION
1	B-TC-11T23-0-1	MP0075Ø	FIELD MAINTENANCE PRINT SET 11T23	1	1	1	1	1								
2		EK-11T23-OP	PDP-11T23 SYSTEM MANUAL	1	1	1	1	1								
3		ZJ278-RQ	DIAGNOSTIC KIT	1	1	1	1	1								
4		EB-15836-18	MICROCOMPUTER PROCESSOR HANDBOOK	1	1	1	1	1								
5		EB-15114-78	LSI MEMORIES AND PERIPHERALS	1	1	1	1	1								
~~6~~	~~EK-KDF11-UG~~	~~KDF11-A USER'S GUIDE~~		~~1~~	~~1~~	~~1~~	-	-								

E.C.O. NO. 11T23-ML001

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TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
SHIPPING LIST 11T23		B	PL	11T23-0	A
	SHEET 1 OF 1	INSERTION PARTS LIST DATA BASE REV			

DRB 123

B-TC-RLØ1-AK-1

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-RLØ1-AK-1 TABLE OF CONTENTS

E-UA-RLØ1-AK-Ø DISK DRIVE, MTG KIT & CARTRIDGE

MP00347 (COMPLETE) FIELD MAINTENANCE PRINT SET

UNIT VARIATIONS COVERED BY THIS PRINT SET

RLØ1-AK

Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.
MPØØ527

REVISIONS	REV.	CHG. NO.	DATE
	A	RLI1-AK-CZØØ2 W. MAJOR	11-MAY-78
	B	RLØ1-CZØ34 B. MILLER	16 NOV 77

USED ON OPTION/MODEL
RLØ1-AK

SHEET 1 OF 1

DRN.	B.K.NICHOLS	DATE 15OCT77
CHK'D		DATE 16 NOV 77
PROJ. ENG.	D. Ellis	DATE 16 Nov 77
FIELD SERV.		DATE

digital

TITLE: DISK DRIVE, MTG KIT & CARTRIDGE

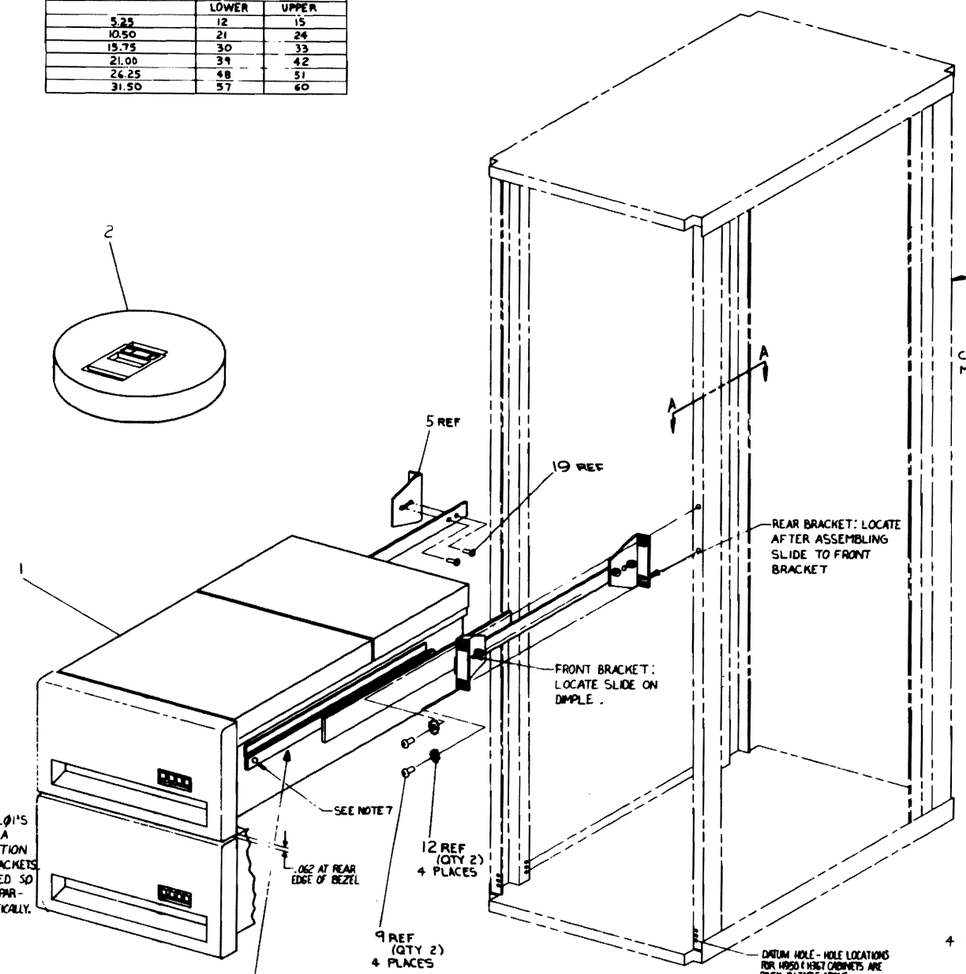
SIZE	CODE	NUMBER	REV.
B	TC	RLØ1-AK-1	B

DIST.

EK-0112A-IB-N-0178-1227

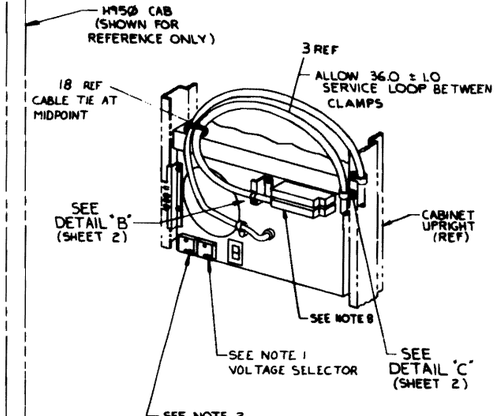
DRB 124

HOLE LOCATIONS FOR MOUNTING IN H950 AND H967 CABINETS		
AVAILABLE SPACE BENEATH RLØ1	MOUNTING HOLES (FROM DATUM HOLE)	
	LOWER	UPPER
5.25	12	15
10.50	21	24
15.75	30	33
21.00	39	42
26.25	48	51
31.50	57	60

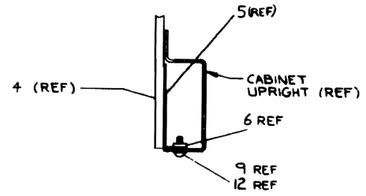


WHEN TWO RLØ1'S ARE MOUNTED IN A CABINET THE POSITION OF THE SLIDE BRACKETS MUST BE ADJUSTED SO THAT THE BEZELS ARE PARALLEL AND ALIGNED VERTICALLY.

RLØ1-AK
(SHOWN IN AN H95Ø CAB)



REAR VIEW OF RLØ1-AK DISK DRIVE (ITEM 1) TYPICAL FOR ALL CABS NOTE 11



SECTION A-A
(SHOWING TYPICAL MOUNTING OF CHASSIS SLIDES TO CABINET UPRIGHTS)
SCALE: NONE

7. CONT.
   D. SECURE DRIVE TO SLIDES USING SCREWS SUPPLIED. (SEE DETAIL "F", SHEET 4)
   E. TO REMOVE DRIVE, EXTEND SLIDES FULLY, REMOVE SCREWS, RELEASE LATCHES AND LIFT OFF.
8. FOR LAST DRIVE IN A SYSTEM I/O CABLE PLUGS INTO EITHER SOCKET. TERMINATOR (SUPPLIED WITH CONTROLLER) PLUGS INTO THE OTHER.

NOTES CONT. ON SHT 2

NOTES:
1. MACHINES ARE SHIPPED CONFIGURED FOR 110 V, AND NOMINAL VOLTAGE RANGE. FOR 220 V OPERATION REMOVE TWO SCREWS FROM "VOLTAGE SELECTOR" COVER, WITHDRAW THE COVER, AND RE-INSERT TURNED UPSIDE DOWN. AFTER INSERTION, 220 MUST BE SHOWING THRU THE SMALL WINDOW. REPLACE THE TWO SCREWS, CUT OFF 110V PLUG ON THE POWER CORD, REPLACE BY 220 V PLUG (ITEM 20). FOR COLOR CODE SEE DETAIL "G", SHEET 4.
2. LOW LINE" AND "NOMINAL LINE" ARE DEFINED ON COVER OF "VOLTAGE RANGE SELECTOR" FOR LOW LINE VOLTAGE OPERATION REMOVE TWO SCREWS FROM "VOLTAGE RANGE SELECTOR" COVER, WITHDRAW THE COVER AND RE-INSERT IT TURNED UPSIDE DOWN. AFTER INSERTION, "LOW" MUST BE SHOWING THRU THE SMALL WINDOW. REPLACE THE TWO SCREWS.
3. WHEN AN RLØ1-AK IS ORDERED IN CONJUNCTION WITH H95ØØ, H95Ø1 H95Ø2, H95Ø3, H96ØØ, H96Ø1, H96Ø2, H96Ø3 INTERLOCK KIT(S) (REF 21) OR CABLE RESTRAINT SYSTEM (S) (REF 22) MUST BE ORDERED AND INSTALLED.
4. WHEN AN RLØ1-AK IS ORDERED IN CONJUNCTION WITH A H95Ø3/H96Ø3 THE TRIM PIECES (H9514-B) MUST BE ORDERED.
5. WHEN AN RLØ1-AK IS ORDERED IN CONJUNCTION WITH A H95Ø1/H96Ø1 TRIM PIECES (H9514-A) MUST BE ORDERED.
6. TO ATTACH SHIPPING BRACKET (ITEM 7) REMOVE TWO SCREWS AND TWO LOCKWASHERS FROM ONE SIDE OF THE POWER PANEL ON THE REAR OF DISK DRIVE (ITEM 1). POSITION A SHIPPING BRACKET TO DETERMINE LOCATION OF "U" NUT (ITEM 13) AND ATTACH BRACKET USING ORIGINAL SCREWS AND LOCKWASHERS AND ITEMS 12 AND 9 (AS SHOWN IN DETAIL D) BRACKET MAY BE ATTACHED TO EITHER SIDE OF UNIT.
7. TO MOUNT RLØ1 IN CABINET:
   A. MOUNT BRACKETS AND SLIDES TO UPRIGHTS.
   B. EXTEND SLIDES AS FAR AS POSSIBLE BY RELEASING CATCHES. (SEE DETAIL "F" SHT 4)
   C. PLACE DRIVE ON SLIDES AND PUSH BACK UNTIL ENDS OF RAILS FIT UNDER TABS ON SLIDES AND LATCHES ENGAGE.

CAUTION: OFF SHEET PARTS LIST EXISTS. SEE K-PL-RLØ1-AK-DBP (Z0908).

A	B	C	D	E	F	
			RLØ1-CØØ9 D. MILLER		RLØ1-CØ1Ø K. GUENZEL	

RLØ1
DISK DRIVE MTG. KIT & CARTRIDGE
SEE PARTS LIST
NONE
DWG NO. RLØ1-AK
REV A

HOLE LOCATIONS (FROM BOTTOM OF CAB) FOR CHASSIS SLIDE MOUNTING BRACKETS (ITEM*2) MUST BE USED FOR LOBOY CABINETS - OPTIONAL FOR HIBOYS

HOLE 62
HOLE 59

SECTION A-A SHOWN ON SHEET 1

5 REF

OPTIONAL LOCATION FOR HIBOYS ONLY { HOLE 55 / HOLE 50

19 REF (QTY 2) 4 PLACES

SINGLE WIDTH CAB (SHOWN FOR REFERENCE ONLY) SEE NOTES 3 & 4

DATUM HOLE

21 REF
SEE NOTE 3
SEE INSTRUCTIONS ON DWG E-AB-7013688-0-0 ON HOW TO INSTALL INTERLOCK KITS ITEM*21

SEE DETAIL "F" (SHEET 4)

12 REF (QTY 2) 4 PLACES

9 REF (QTY 2) 4 PLACES

14 REF
13 REF
CABINET UPRIGHT (REF)
9 REF
17 REF
12 REF

DETAIL "C"
SCALE: NONE
ONE CLAMP FOR I/O CABLE ITEM 3 REF
ONE CLAMP FOR POWER CORD

RLØ1-AK
(SHOWN IN A SINGLE WIDTH CAB)
FOR 220 V VARIATION, SEE NOTE 1, REAR VIEW OF DRIVE ON SHT 1 AND ITEM*20 IN CALL OUT
FOR LOW LINE VOLTAGE VARIATION SEE NOTE 2.

1 REF
14 REF
11 REF
2ND I/O CABLE
8 REF
16 REF
10 REF
11 REF (QTY 2)
10 REF (QTY 2)
11 REF (QTY 2)
10 REF (QTY 2)
3 REF
16 REF
19 REF (QTY 2)
FOR ONE CABLE USE ONE OF EACH

DETAIL "B"
SCALE: NONE

NOTES: (CONT.)

9. CABINET OPTIONS, INCLUDE DRAWINGS, DOORS, COVERS, TRIM, & PWR CONTROLLERS.

TYPE	VOLTAGE	DASH NO.	REMARKS
H950	110	H960-BC	INCLUDES FIVE 0.5 IN. PANELS
	220	H960-BD	
H967	110	H967-BA	10.5 IN. COVER PANELS (H970-GA) MUST BE ORDERED IF REQUIRED.
	220	H967-BB	
H9500	110	H9603-ED	SWLB WITH H9601-EE TOP COVER.
	220	H9603-EE	
	110	H9601-ED	SWLB WITH H9602-EA TOP COVERS.
	220	H9601-EE	
	110	H9602-EA	SWHB (TRIPLE) HIBOY CABINET.
	220	H9602-EB	
	110	H9600-EA	DWHB COMPLETE HIBOY CABINET
	220	H9600-EB	
		H9602-B-0	SWHB OPTION ARRANGEMENT DWG ORDER AS REQ'D
		H9600-A-0	DWHB OPTION ARRANGEMENT DWG ORDER AS REQ'D
		H9603-B-0	SWLB OPTION ARRANGEMENT DWG ORDER AS REQ'D
H9500		H9601-A-0	DWLB OPTION ARRANGEMENT DWG ORDER AS REQ'D

10. WHERE A LONGER CABLE IS REQUIRED THAN ITEM*3 USE ONE OF THE FOLLOWING:

LENGTH	PART NO.
20 FEET	7012122-20
40 FEET	7012122-40
60 FEET	7012122-60

TOTAL LENGTH OF CABLE(S) NOT TO EXCEED 100 FEET

11. OPTIONAL CABLE ROUTING INSIDE CHANNEL UPRIGHTS. DO NOT ALLOW CABLES TO BE CAUGHT BETWEEN CABINET UPRIGHTS AND REAR OF DISK DRIVE

TITLE: DISK DRIVE MTG KIT & CARTRIDGE
SIZE: B | NO. RLØ1-AK-Ø | REV: F
SCALE: NONE | SHEET 2 OF 4

HOLE LOCATIONS (FROM BOTTOM OF CAB) FOR CHASSIS SLIDE MOUNTING BRACKET
THIS LOCATION MUST BE USED FOR LOBOY CABINETS - OPTION FOR HIBOYS

HOLE 62

HOLE 59

SECTION A-A SHOWN ON SHEET 1

OPTIONAL LOCATION FOR HIBOYS { HOLE 55 / HOLE 50 }

2

5 REF

19 REF

DOUBLE WIDTH CAB
(SHOWN FOR REFERENCE ONLY)
SEE NOTES 3 & 5

12 REF
(QTY 2)
4 PLACES
(SEE SECTION A-A
SHEET 1)

SEE
DETAIL 'F'
(SHEET 4)

9 REF
(QTY 2)
4 PLACES
(SEE SECTION A-A
SHEET 1)

2ND DISK DRIVE AND
DISK CARTRIDGE
(SHOWN FOR REFERENCE ONLY)

RLØI-AK
(SHOWN IN A DOUBLE WIDTH CABINET)

FOR 220V VARIATION SEE NOTE #1,
REAR VIEW OF DRIVE ON SHEET #1,
AND ITEM #20 IN CALL OUT
FOR LOW LINE VOLTAGE VARIATION
SEE NOTE #2

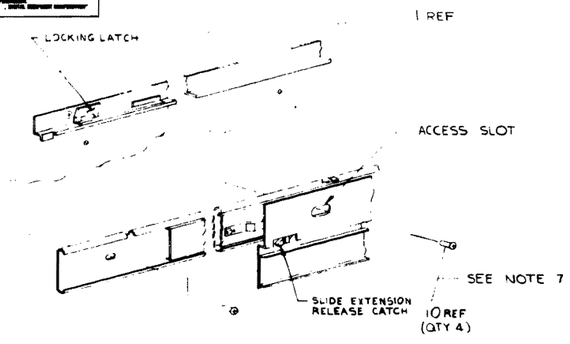
TYPICAL CABLE RESTRAINT SYSTEM
SEE NOTE 3 AND INSTRUCTIONS
ON DRAWING D-AD-7016785-0-0
(REF ITEM 22)

RLØI-AK-Ø

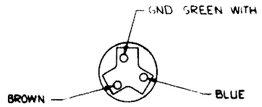
DISK DRIVE MTG
KIT & CARTRIDGE

B | UA | RLØI-AK-Ø | F

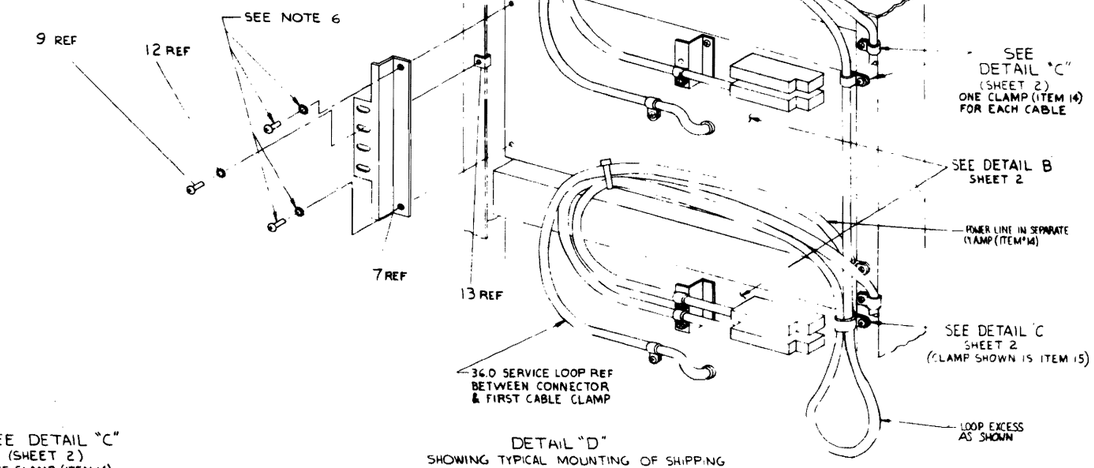
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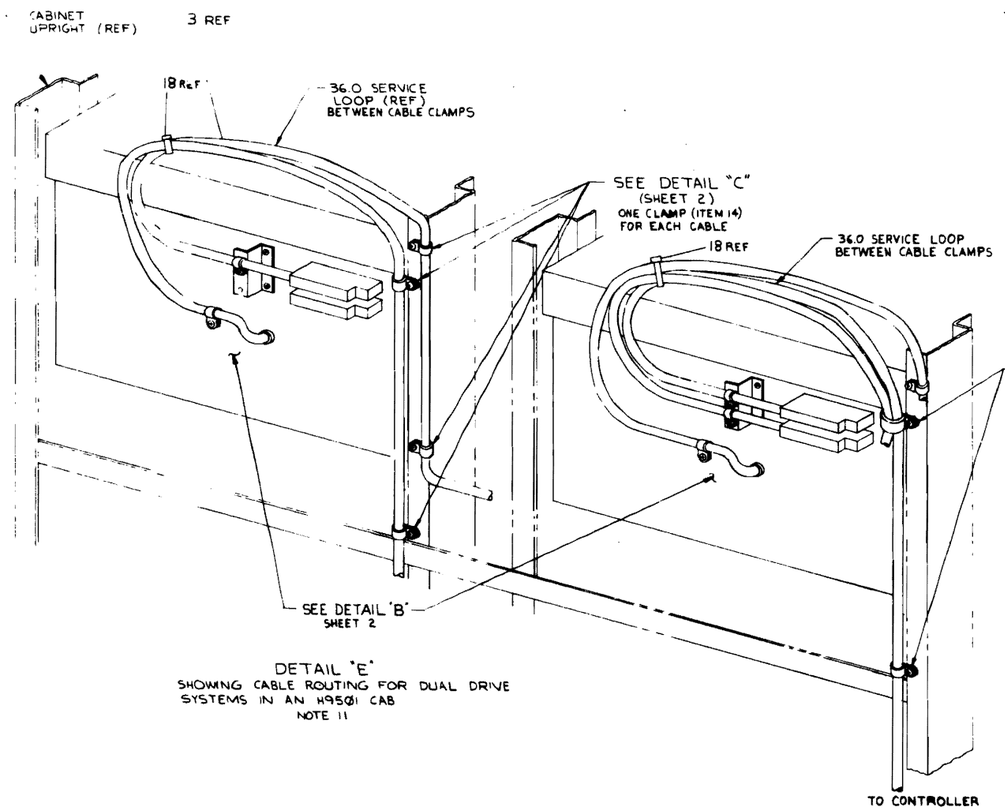
DETAIL "F"
SEE NOTE 7



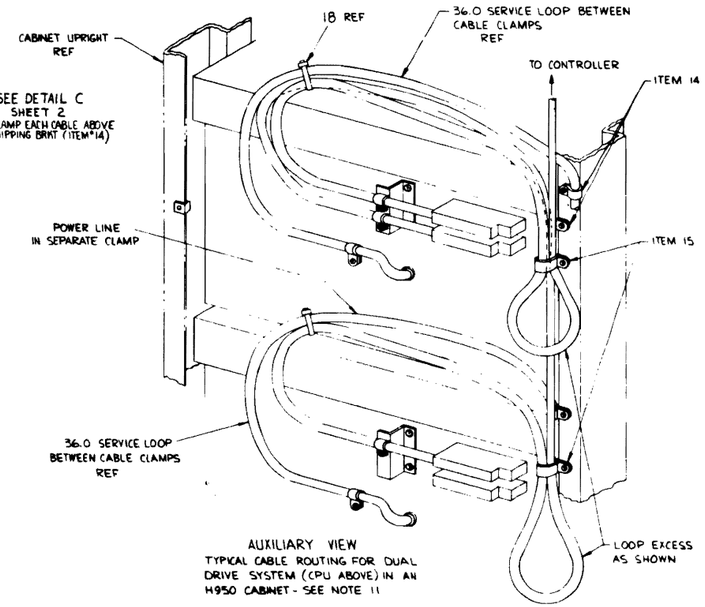
DETAIL G
REAR VIEW OF ITEM 20
WITH STRAIN RELIEF REMOVED



DETAIL "D"
SHOWING TYPICAL MOUNTING OF SHIPPING BRKT (ITEM 7) AND CABLE ROUTING FOR DUAL DRIVE SYSTEM (CPU BELOW) IN AN H95Ø CABINET
NOTE 11



DETAIL "E"
SHOWING CABLE ROUTING FOR DUAL DRIVE SYSTEMS IN AN H95Ø1 CAB
NOTE 11



AUXILIARY VIEW
TYPICAL CABLE ROUTING FOR DUAL DRIVE SYSTEM (CPU ABOVE) IN AN H950 CABINET - SEE NOTE 11

| | | |

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

B-TC-RL02-AK-1	TABLE OF CONTENTS
E-UA-RL02-AK-0	DISK DRIVE MOUNTING KIT AND CARTRIDGE FIELD MAINTENANCE PRINT SET
MP00553 (COMPLETE)	
E-AD-7013688-0-0	INTERLOCK KIT (MARK III)

UNIT VARIATIONS COVERED BY THIS PRINT SET

RL02-AK

Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO.

MP 00698

REVISIONS	REV.	CHG. NO.	DATE
	A	RL02-CZ001 B.MILLER	W.E.M. 9 JAN 79
	B	RL02-CX007 K.GUFFIE K.Sumner	RDM 28 Nov 78

USED ON OPTION/MODEL	
RL02-AK	
SHEET 1 OF 1	

DRN. P.Richard	DATE 21-SEP-78	
CHK'D L.Mann	DATE 9 Mar 79	
PROJ. ENG. M.Glover	DATE 9 Mar 79	
FIELD SERV. Clay Moore	DATE 15 Mar 79	

digital

TITLE: DISK DRIVE MOUNTING KIT AND CARTRIDGE

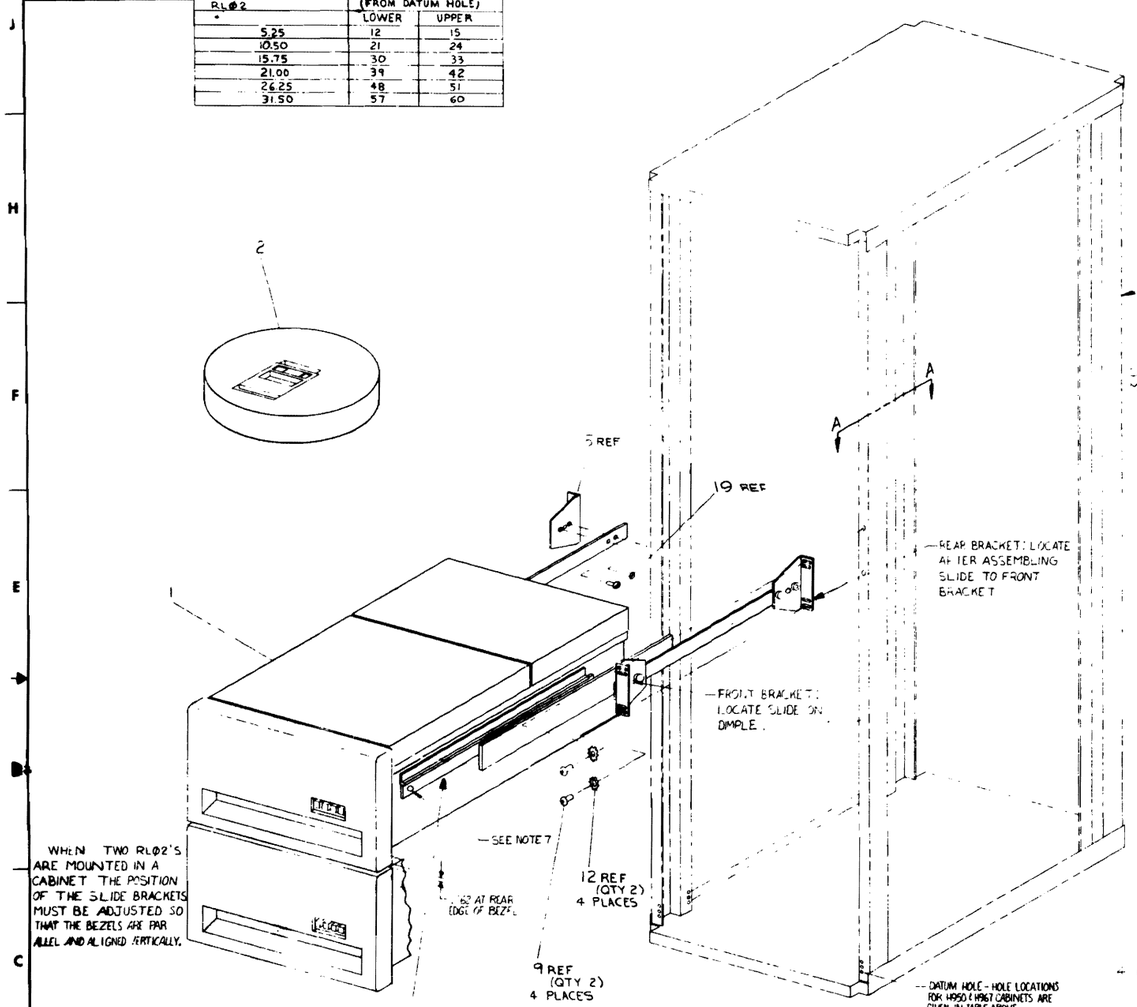
SIZE	CODE	NUMBER	REV.
B	TC	RL02-AK-1	B

DIST.

DRB 124

SIZE B | CODE TC | NUMBER RL02-AK-1 | REV. B

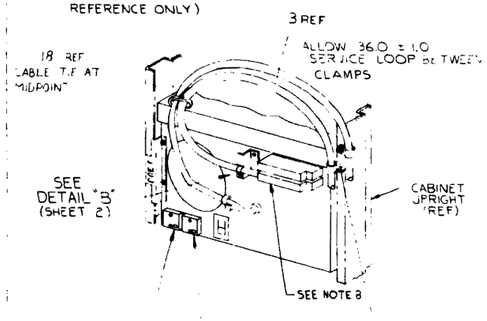
HOLE LOCATIONS FOR MOUNTING IN H950 AND H967 CABINETS		
AVAILABLE SPACE BENEATH RL02	MOUNTING [illegible] (FROM DATUM HOLE)	
"	LOWER	UPPER
5.25	12	15
10.50	21	24
15.75	30	33
21.00	39	42
26.25	48	51
31.50	57	60



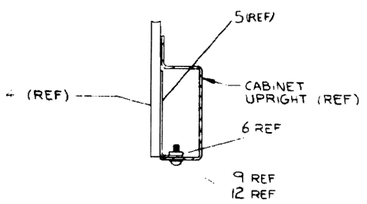
SEE DETAIL F (SHEET 4)

RL02-AK
(SHOWN IN A H950 CAB.)

H950 CAB (SHOWN FOR REFERENCE ONLY)



REAR VIEW OF RL02-AK DISK DRIVE (ITEM 1) TYPICAL FOR ALL CABS NOTE 11



SECTION A-A
(SHOWING TYPICAL MOUNTING OF CHASSIS SLIDES TO CABINET UPRIGHTS)
SCALE: NONE

7 MOUNT
D. SECURE DRIVE TO SLIDES USING SCREWS SUPPLIED. (SEE DETAIL F, SHEET 4) TO REMOVE DRIVE EXTEND SLIDES FULLY, REMOVE SCREWS, RELEASE LATCHES AND LIFT OFF.

8. FOR LAST DRIVE IN A SYSTEM, I/O CABLE PLUGS INTO EITHER SOCKET. TERMINATOR (SUPPLIED WITH CONTROLLER) PLUGS INTO THE OTHER.

NOTES CONT ON SH 2

NOTES:

1. MACHINES ARE SHIPPED CONFIGURED FOR 230 V, 60 HZ NOMINAL VOLTAGE RANGE. FOR 220 V OPERATION REMOVE TWO SCREWS FROM "VOLTAGE SELECTOR" COVER, WITHDRAW THE COVER AND RE-INSERT TURNED UPSIDE DOWN. AFTER INSERTION 220 MUST BE SHOWING THRU THE SMALL WINDOW. REPLACE THE TWO SCREWS, CUT OFF 230 V PLUG ON THE POWER CORD AND REPLACE BY 220 V PLUG (ITEM 20). FOR LOCAL CODE SEE DETAIL, SHEET 4.
2. LOW LINE AND NOMINAL LINE ARE DEFINED ON COVER OF VOLTAGE RANGE SELECTOR FOR LOW LINE VOLTAGE OPERATION. REMOVE TWO SCREWS FROM "VOLTAGE RANGE SELECTOR" COVER WITH DRAW THE COVER AND RE-INSERT IT TURNED UPSIDE DOWN. AFTER INSERTION, "LOW" MUST BE SHOWING THRU THE SMALL WINDOW. REPLACE THE TWO SCREWS.
3. WHEN AN RL02-AK IS ORDERED IN CONJUNCTION WITH H9500 H9501 H9502 H3503 H3622, H9601 H9602 H9603 INTERLOCK KIT (S) (REF 21) OR CABLE RESTRAINT SYSTEM (S) (REF 22) MUST BE ORDERED AND INSTALLED.
4. WHEN AN RL02-AK IS ORDERED IN CONJUNCTION WITH A H9503/H9603 THE TRIM PIECES (H9514-B) MUST BE ORDERED
5. WHEN AN RL02-AK IS ORDERED IN CONJUNCTION WITH A H9501/H9601 TRIM PIECES (H9514 A) MUST BE ORDERED.
6. TO ATTACH SHIPPING BRACKET (ITEM 7) REMOVE TWO SCREWS AND TWO LOCKWASHERS FROM ONE SIDE OF THE POWER PANEL ON THE REAR OF DISK DRIVE (ITEM 1), POSITION A SHIPPING BRACKET TO DETERMINE LOCATION OF T-NUT (ITEM 13) AND ATTACH BRACKET USING ORIGINAL SCREWS AND LOCKWASHERS AND ITEMS 12 AND 9 (AS SHOWN IN DETAIL D) BRACKET MAY BE ATTACHED TO EITHER SIDE OF UNIT.
7. TO MOUNT RL02 IN CABINET
   A. MOUNT BRACKETS AND SLIDES TO UPRIGHTS.
   B. EXTEND SLIDES AS FAR AS POSSIBLE BY RELEASING CATCHES. (SEE DETAIL F SHT 4)
   C. PLACE DRIVE ON SLIDES AND PUSH BACK UNTIL ENDS OF RAILS FIT UNDER TAB ON SLIDES AND LATCHES ENGAGE.

CAUTION: THIS SHEET PARTS LIST EXISTS
SEE K-PL-RL02-AK-DBP (70849)

REVISIONS				
REV	#	A	B	C
DESCRIPTION	RELEASED TO CONTROL W REV FOR PCO P			
ORIG/PART NO		RL02-C8001	RL02-C0003	RL02-C8007
ITEM NO				
DATE				
APPROVED				

DESCRIPTION	ORIG./PART NO	ITEM NO
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE (INCHES)
SURFACE QUALITY ∇ MICROINCHES	MEDIUM ☐ PREFERRED ☐	PART 0 TO 6 / 6 TO 30 / 30 TO 120 / OVER 120 / BASIC
	MEDIUM: ±.004 ±.005 ±.017 ±.010 ±.031 1.04	
	PREFERRED: ±.012 ±.010 ±.025 ±.04 ±.093 10.1	

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DRG

MATERIAL SEE PARTS LIST

FINISH

DRN [illegible] 1977 — FIRST USED ON RL02

CHK'D [illegible] 1977

ENG [illegible] 1977

PROJ. ENG. [illegible] 1977

PROD. [illegible] 1977

NEXT HIGHER ASSY B-DD-RL02-AK

SCALE 3/8

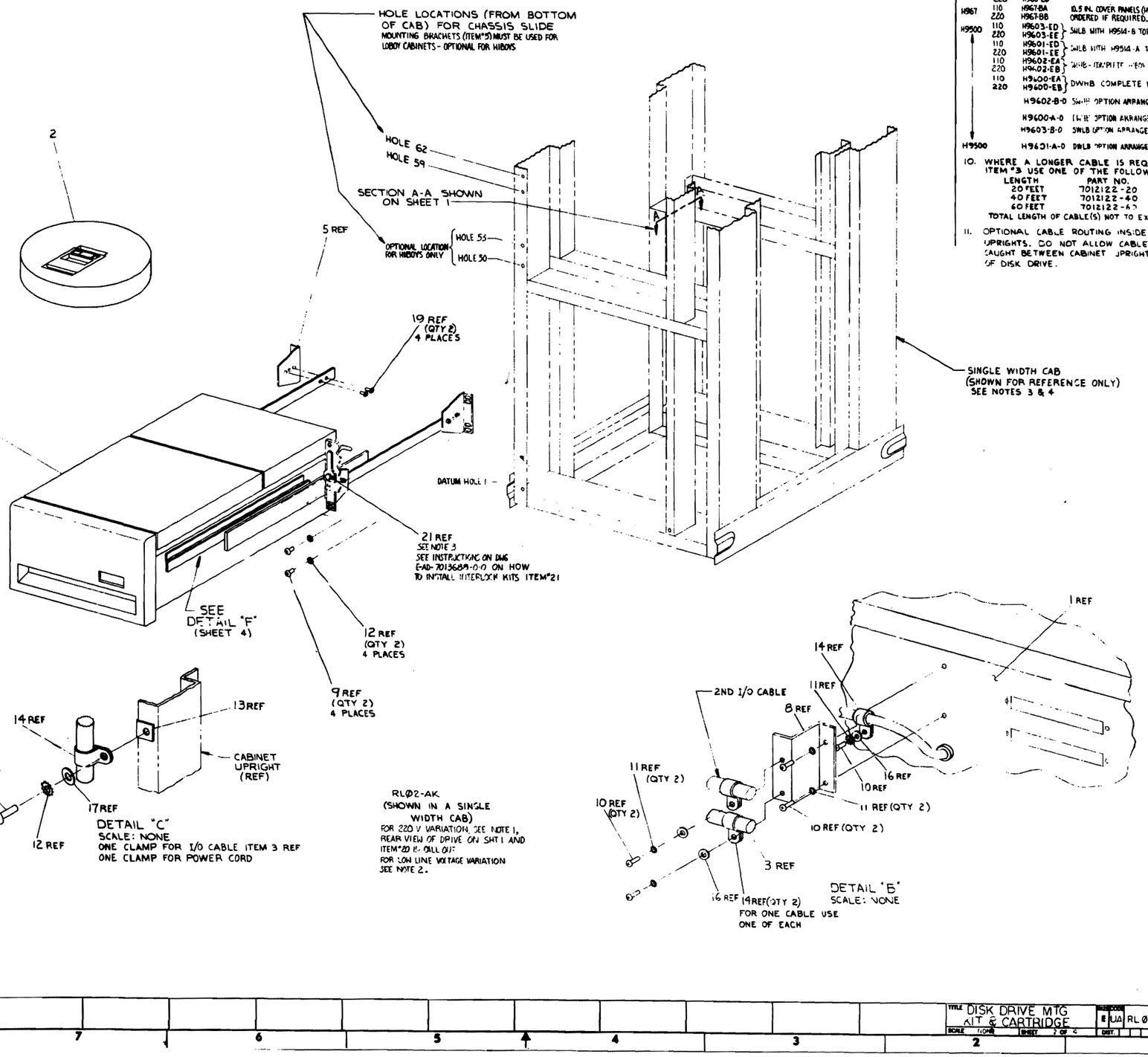
SHEET OF 4

TITLE DISK DRIVE MTG. KITS, CARTRIDGE

SIZE E | CODE UA | NUMBER RL02-AK-0 | REV

DIST

RL02-AK-0



NOTES: (CONT.)

9. CABINET OPTIONS INCLUDE SKINS, DOORS, COVERS, TRIM & PWR CONTROLLERS.

TYPE	VOLTAGE	DAG	REMARKS
H950	110	H960-BC	INCLUDES FIVE 10.5 IN. PANELS
	220	H960-BD	
H967	110	H967-BA	10.5 IN. COVER PANELS (H950-QA) MUST BE ORDERED IF REQUIRED.
	220	H967-BB	
H9500	110	H9603-ED	SWLB WITH H9514-B TOP COVERS.
	220	H9603-EE	
	110	H9601-ED	SWLB WITH H9514-A TOP COVERS.
	220	H9601-EE	
	110	H9602-EA	SWHB - (INCOMPLETE HIBOY CABINET.
	220	H9602-EB	
	110	H9600-EA	DWHB COMPLETE HIBOY CABINET
	220	H9600-EB	
		H9602-B-0	SWHB OPTION ARRANGEMENT DWG ORDER AS REQ'D
		H9600-A-0	DWHB OPTION ARRANGEMENT DWG ORDER AS REQ'D
		H9603-B-0	SWLB OPTION ARRANGEMENT DWG ORDER AS REQ'D
H9500		H9601-A-0	DWLB OPTION ARRANGEMENT DWG ORDER AS REQ'D

10. WHERE A LONGER CABLE IS REQUIRED THAN ITEM *3 USE ONE OF THE FOLLOWING:

LENGTH	PART NO.
20 FEET	70121 22-20
40 FEET	70121 22-40
60 FEET	70121 22-60

TOTAL LENGTH OF CABLE(S) NOT TO EXCEED 120 FEET

11. OPTIONAL CABLE ROUTING INSIDE CHANNEL UPRIGHTS. DO NOT ALLOW CABLES TO BE CAUGHT BETWEEN CABINET UPRIGHTS AND REAR OF DISK DRIVE.

TITLE	DISK DRIVE MTG KIT & CARTRIDGE			
SCALE	NONE	SHEET	2 OF 4	
SIZE	CODE	NUMBER		REV.
E	UA	RL02-AK-0		C
DIST.				

RL02-AK-0 C

HOLE LOCATIONS (FROM BOTTOM OF CAB) FOR CHASSIS SLIDE MOUNTING BRACKET
THIS LOCATION MUST BE USED FOR LOBOY CABINETS - OPTION FOR HIBOYS

HOLE 62

HOLE 59

SECTION A-A SHOWN ON SHEET 1

OPTIONAL LOCATION FOR HIBOYS { HOLE 53, HOLE 50

DOUBLE WIDTH CAB (SHOWN FOR REFERENCE ONLY) SEE NOTES 3 & 5

2

5 REF

19 REF

12 REF (QTY 2) 4 PLACES (SEE SECTION A-A SHEET 1)

9 REF (QTY 2) 4 PLACES (SEE SECTION A-A SHEET 1)

SEE DETAIL "F" (SHEET 4)

2ND DISK DRIVE AND DISK CARTRIDGE (SHOWN FOR REFERENCE ONLY)

RL02-AK (SHOWN IN A DOUBLE WIDTH CABINET)

FOR 220V VARIATION SEE NOTE *1, REAR VIEW OF DRIVE ON SHEET *1, AND ITEM *20 IN CALL OUT FOR LOW LINE VOLTAGE VARIATION SEE NOTE *2

TYPICAL CABLE RESTRAINT SYSTEM SEE NOTE 3 AND INSTRUCTIONS ON DRAWING D-AD-7016785-0-0 (REF ITEM 22)

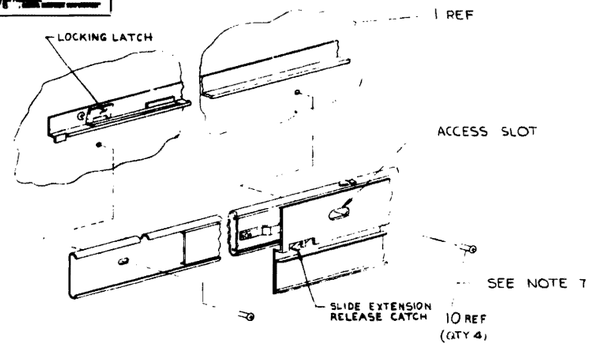
REVISIONS: ZONE | CHANGE NO. | REV.

TITLE: DISK DRIVE MTG KIT & CARTRIDGE

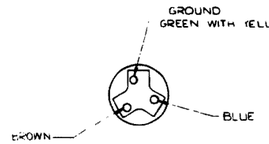
SCALE: 1/4 NE | SHEET 3 OF 4 | ENG CODE: E | UA | NUMBER: RL02-AK-0 | REV: -

DIST:

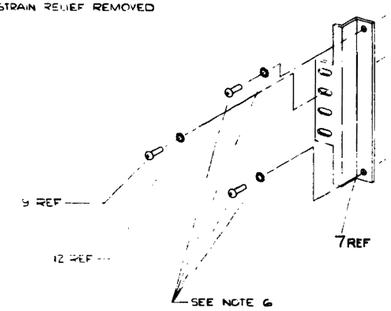
RL02-AK-0

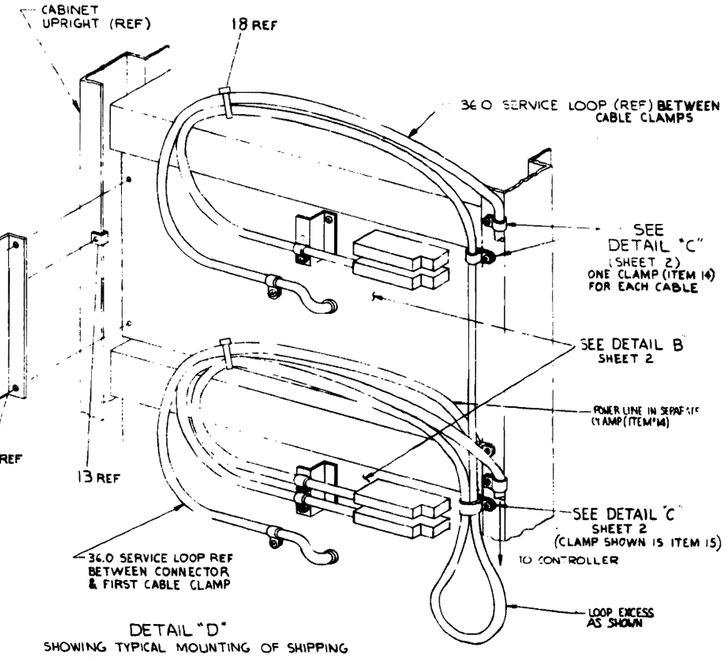


DETAIL "F"
SEE NOTE 7

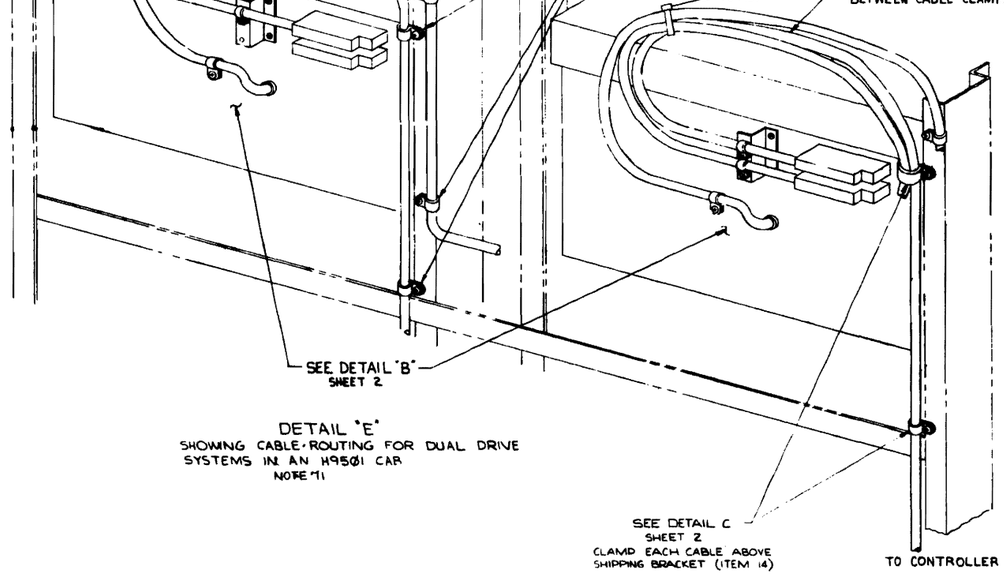


DETAIL G
REAR VIEW OF ITEM 20
WITH STRAIN RELIEF REMOVED

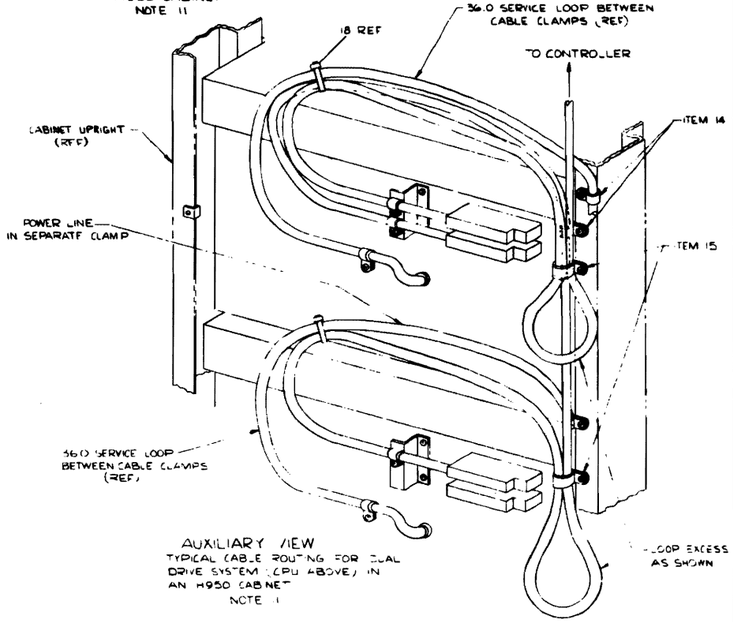




DETAIL "D"
SHOWING TYPICAL MOUNTING OF SHIPPING BRKT (ITEM 7) AND CABLE ROUTING FOR DUAL DRIVE SYSTEM (CPU BELOW) IN AN H950 CABINET
NOTE 11



DETAIL "E"
SHOWING CABLE ROUTING FOR DUAL DRIVE SYSTEMS IN AN H9501 CAB
NOTE 11



AUXILIARY VIEW
TYPICAL CABLE ROUTING FOR DUAL DRIVE SYSTEM (CPU ABOVE) IN AN H950 CABINET
NOTE 1

TITLE DISK DRIVE MTG KIT & CARTRIDGE					
SCALE NONE	SHEET 4 OF 4	E	UA	RL02-AK-0	REV
		DIST.			

RL02-AK-0

DIG-RL02-0-1

1 OF 1

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Field Maintenance Print Set	B-TC-RL02-0-1
RL02 Disk Drive Assembly	E-UA-RL02-0-0 (Sheets 1,2 & 3 Only)
RL02 System Cabling	D-IC-RL02-0-3 (Sheet 2 Only)
Power Panel Assembly	D-AD-7012130-0-0
Read/Write Board	D-UA-5413536-0-0 (Sheet 1 Only) B-PL-5413536-0-0 D-CS-5413536-0-1
Front Panel	D-UA-5411846-0-0 (Sheet 1 Only) B-PL-5411846-0-0 D-CS-5411846-0-1
AC Servo	D-UA-5411848-0-0 (Sheet 1 Only) B-PL-5411848-0-0 D-CS-5411848-0-1
DC Servo and Power Board	D-UA-5413534-0-0 (Sheet 1 Only) B-PL-5413534-0-0 D-CS-5413534-0-1
Drive Logic	D-UA-5414025-0-0 (Sheet 1 Only) A-PL-5414025-0-0 D-CS-5414025-0-1
RL02 Disk Drive Assembly	K-PL-RL02-0-DBP
Power Panel Assembly	K-PL-7012130-0-DBP

UNIT VARIATIONS COVERED BY THIS PRINT SET

RLØ2
Field Maintenance
Print Set

Digital Equipment
Corporation
PRINT SET NO.
MPØØ553

REVISIONS	REV	CHG. NO.	DATE
	A	RL02-CX0005 B.MILLER	RPM 23 Aug. 79
	B	RL02-CX0007 K.GUENZEL	RPM 28 Nov 79

USED ON OPTION/MODEL
RL02
SHEET 1 OF 1

DRN. R.Richard	DATE 21-SEP-78	TITLE: RL02 DISK DRIVE
CHK'D W.Mann	DATE 6 JUN 79	
PROJ. ENG.	DATE 6-6-79	
FIELD SERV.	DATE 6 JUN 79	

SIZE	CODE	NUMBER	REV.
B	TC	RL02-0-1	B

DIST.

SIZE	CODE	NUMBER	REV.
B	TC	RL02-0-1	B

DRW 124

NOTES
1. LOWER HEAD (ITEM 65) SHALL BE POSITIONED REARWARDS AGAINST PIN IN CARRIAGE

2. ALL SCREWS TO BE TIGHTENED AS FOLLOWS:

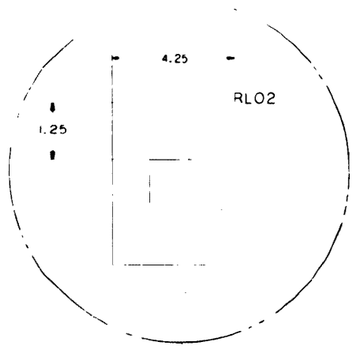
4-40	SCREW, TORQUE	3.5 ± 0.5	IN LBS
6-32	"	5.0 ± 1.0	"
8-32	"	10.0 ± 1.0	"
10-32	"	18.0 ± 2.0	"

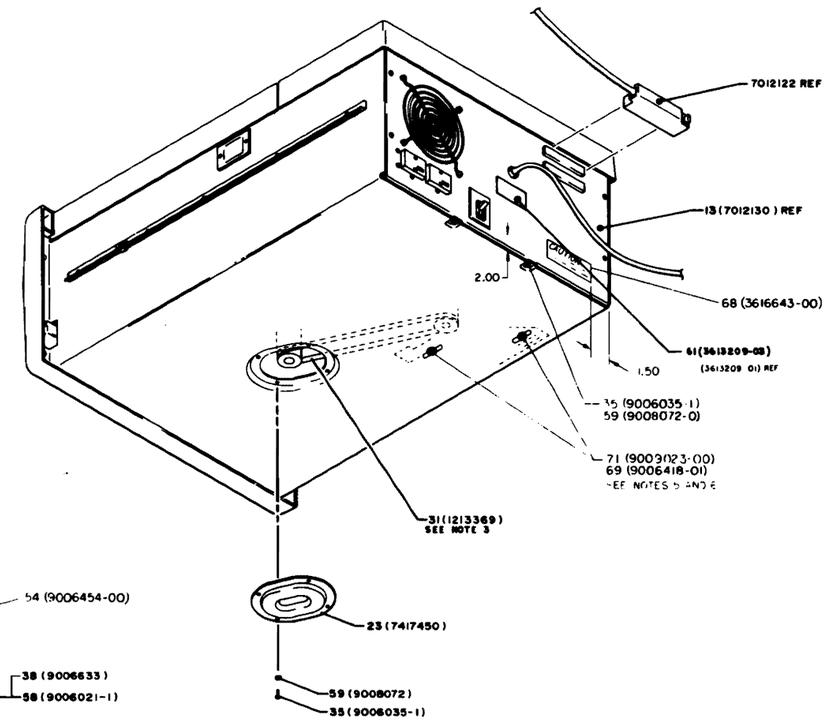
3. DRIVE BELT TENSION 10.0 ± 1.0 LBS.

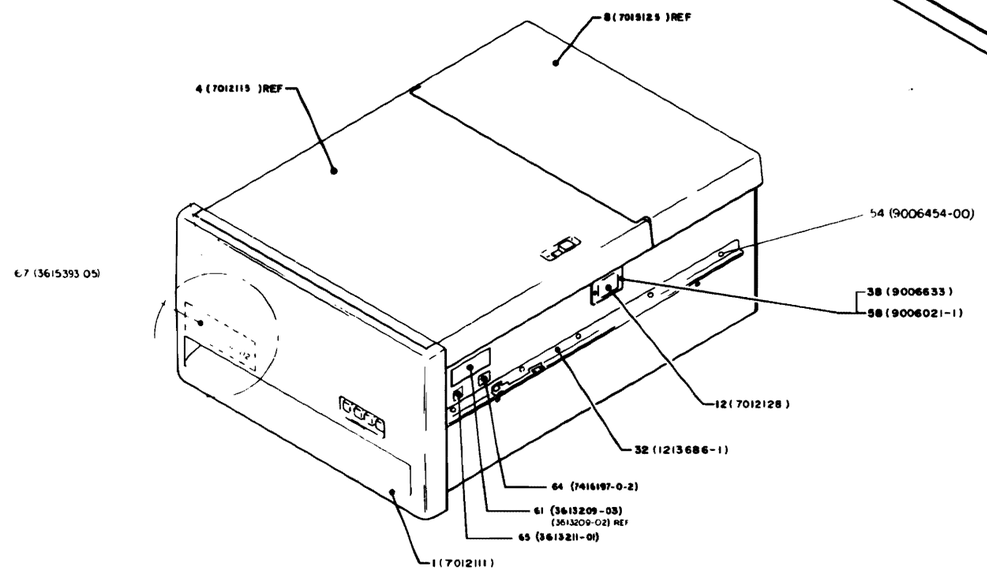
4. 4-40 HEAD MOUNTING BOLTS TO BE TIGHTENED TO 5±.5 IN. LBS.

5. TORQUE 8-32 SELF TAPPING HARDWARE (ITEM 69) TO 16 18 IN LBS.

6. BLOWER HOUSING SECURING HARDWARE TO BE REMOVED BEFORE OPERATING UNIT.



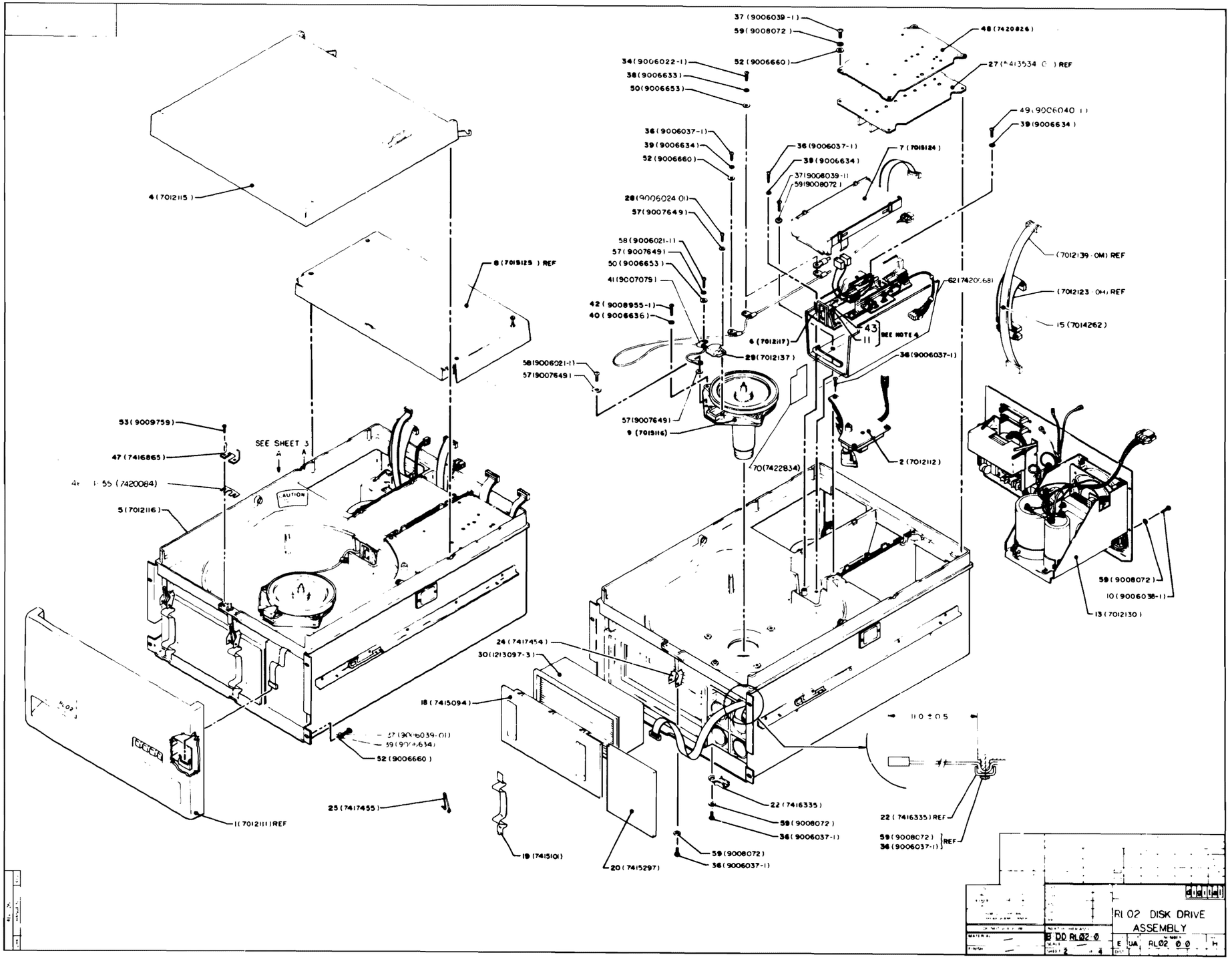


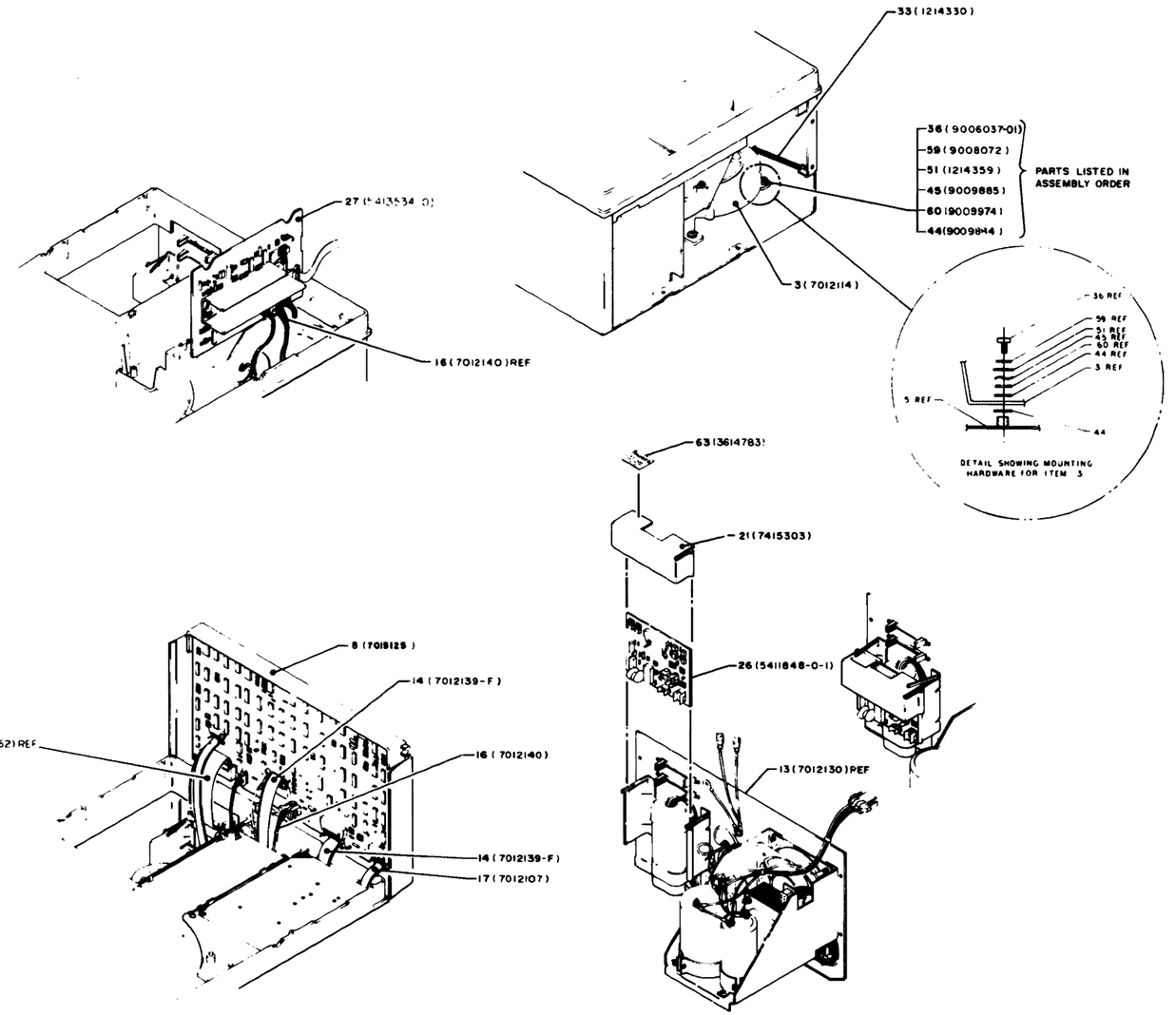


CAUTION

OFF-SHEET PARTS LIST EXISTS.
SEE K-PL-RL02-0 DBP (20485).

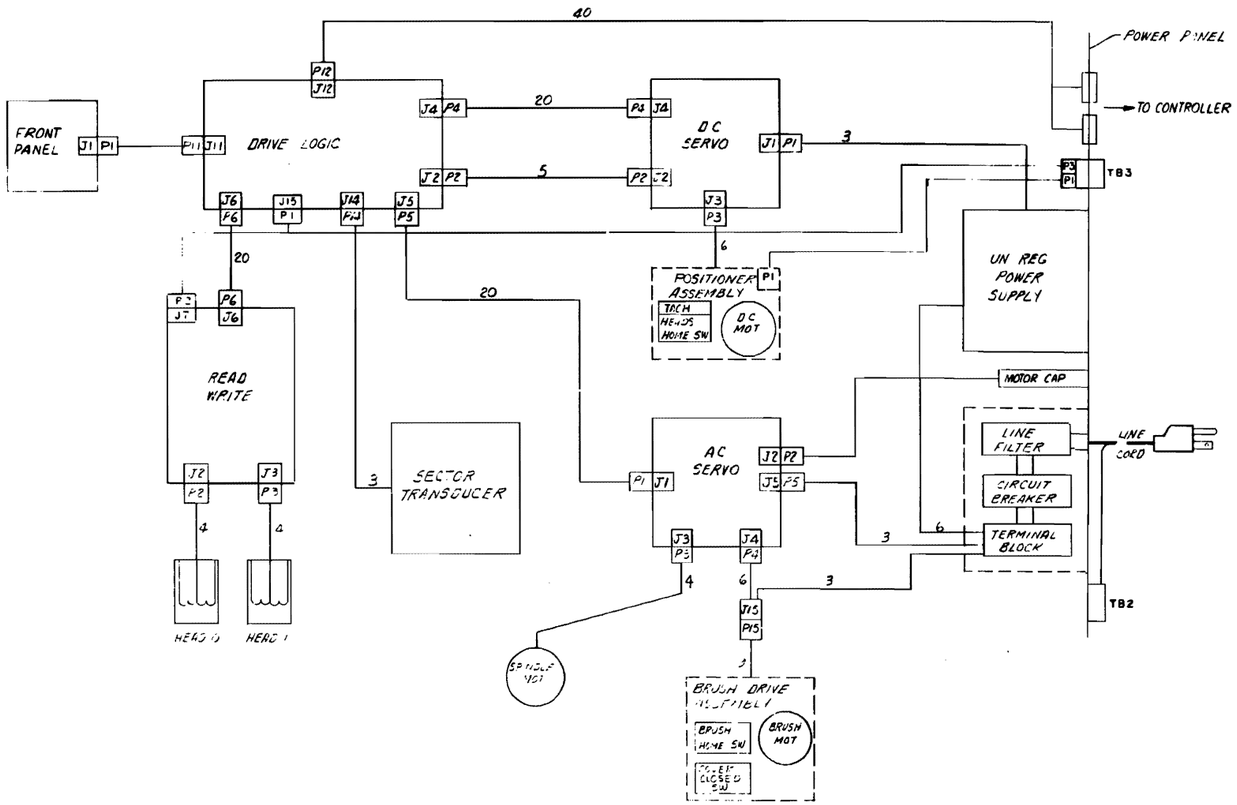
| REVISIONS | | |


4 (7012115)
8 (7015125) REF
53 (9009759)
47 (7416865)
55 (7420084)
5 (7012116)
SEE SHEET 3
AUTION
11 (7012111) REF
37 (9006039-01)
59 (9006634)
52 (9006660)
25 (7417455)
18 (7415094)
19 (7415101)
24 (7417454)
30 (12130973)
20 (7415297)
22 (7416335)
59 (9008072)
36 (9006037-1)
22 (7416335) REF
59 (9008072)
36 (9006037-1)
REF
110 ± 05
37 (9006039-1)
59 (9008072)
34 (9006022-1)
52 (9006660)
38 (9006633)
50 (9006653)
48 (7420826)
27 (7413534) REF
49 (9006040-1)
39 (9006634)
36 (9006037-1)
39 (9006634)
52 (9006660)
36 (9006037-1)
39 (9006634)
37 (9006039-1)
59 (9008072)
7 (7015124)
28 (9006024-01)
57 (9007649)
58 (9006021-1)
57 (9007649)
50 (9006653)
41 (9007079)
42 (9008955-1)
40 (9006636)
6 (7012117)
43
11
SEE NOTE 4
62 (7420068)
29 (7012137)
58 (9006021-1)
57 (9007649)
57 (9007649)
9 (7015116)
70 (7422834)
2 (7012112)
36 (9006037-1)
(7012139-0M) REF
(7012123-0H) REF
15 (7014262)
59 (9008072)
10 (9006038-1)
13 (7012130)
RL02 DISK DRIVE ASSEMBLY
B DD RL02-0
RL02 00



TITLE	RL02 DISK DRIVE ASSEMBLY
SIZE	E
CODE	UA
NUMBER	RL02-0-0
REV	H
SHEET	3 OF 4
NEXT HIGHER ASSY	B-DD-RL02-0

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DESCRIPTION	DWG./PART NO.	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0°30'	CLASS OF ACCURACY (CHECK ONE)	FRACTIONS					
		over 0 to 6	over 6 to 12	over 12 to 48	over 48 to 120	over 120 to 240	over 240 to 480
SURFACE QUALITY IN MICROINCHES	MACHINE	±.014	±.013	±.012	±.016	±.024	±.04
	PRECISION	±.010	±.010	±.010	±.014	±.020	±.031

QUANTITY & VARIATION

THIRD ANGLE PROJECTION

DRN
CHK'D
ENG
MFG
MATERIAL
FINISH
D-DD-RLØ2-Ø
SCALE
SHEET 2 OF 2

FIRST USED ON: RLØ2

TITLE: RLØ2 SYSTEM CABLING

SIZE	CODE	NUMBER	REV
D	IC	RLØ2-Ø-3	C

REVISIONS			
REV	CLASS	ECO	CHK

D-IC-RLØ2-Ø-3 2 OF RLØ2

AUTOMATED BY PRTLST.3P(44) P A R T S L I S T SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION 00
1	1	D-AD-7012111-0-0	7012111-00	BEZEL ASSY	1
2	2	D-AD-7012112-0-0	7012112-00	BRUSH DRIVE ASSY	1
3	3	E-AD-7012114-0-0	7012114-00	DISK MOTOR ASSY	1
4	4	E-AD-7012115-0-0	7012115-00	FRONT COVER ASSY	1
5	5	E-AD-7012116-0-0	7012116-00	MAIN CHASSIS ASSY	1
6	6	D-AD-7012117-0-0	7012117-00	POSITIONER ASSY	1
7	7	D-AD-7015124-0-0	7015124-00	RL02 R/W BOX ASSY	1
8	8	D-AD-7015125-0-0	7015125-00	RL02 REAR COVER ASSY	1
9	9	D-AD-7015116-0-0	7015116-00	SPINDLE ASSY	1
10	10		9006038-01	SCREW,PAN,PHIL 8-32X 7/16 SS	4
11	11	D-IA-7015637-0-0	7015637-00	RL02 DATA HEAD 'A'UP	1
12	12	B-AD-7012128-0-0	7012128-00	ACCESS COVER ASSEMBLY	1
13	13	D-AD-7012130-0-0	7012130-00	POWER PANEL ASSEMBLY	1
14	14	B-IA-7012139-0-0	7012139-0F	INTERCONNECT CABLE	2
15	15	B-IA-7014262-0-0	7014262-00	INTERCONNECT CABLE ASSEMBLY	1
16	16	C-IA-7012140-0-0	7012140-00	POWER HARNESS DC	1
17	17	B-IA-7012107-0-0	7012107-3D	INTERCONNECT CABLE	1
18	18	D-MD-7415094-0-0	7415094-00	REAR COVER	1
19	19	C-MD-7415101-0-0	7415101-00	SPRING, PLENUM COVER	2
20	20	C-MD-7415297-0-0	7415297-00	FILTER,PAD	1
21	21	C-MD-7415303-0-0	7415303-00	COVER AC SERVO	1
22	22	C-MD-7416335-0-0	7416335-00	CABLE RETAINER	1
23	23	D-MD-7417450-0-0	7417450-00	HATCH	1
24	24	C-MD-7417454-0-0	7417454-00	BRACKET PLENUM	2
25	25	C-MD-7417455-0-0	7417455-00	LATCH PLENUM	2
26	26	D-UA-5411848-0-0	5411848-00	ETCH BRD 54-11848	1
27	27	D-UA-5413534-0-0	5413534-00	DC SERVO + POWER SUPPLY (RL02)	1
28	28		9006024-01	SCREW,PAN,PHIL 6-32X 1/2 SS	2
29	29	D-AD-7012137-0-0	7012137-00	TRANEDUCER ASSY	1
30	30		1213097-00	FILTER,AIR,HEPA,33CFM	1

REVISION HISTORY			BASIC PART NO: ORL02											
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: W.GRIMES	DATE: 15 FEB 78		D	I	G	I	T	A	L
						TITLE PARTS LIST							
	RL02-CZ002	A	SECTION. VARIATION INDEX	CHK'D: W.MAJOR	DATE: 15 FEB 78	RL02 DISK DRIVE ASSEMBLY							
BM	RL02-CX003	B	[A] 00										
BM	RL02-CX004	C											
KG	RL02-CX006A	D	[B]	DES.ENG.: B.MILLER	DATE: 15 FEB 78								
KG	RL02-CX008	E											
KG	RL02-CX009	F	[C]			DOCUMENT NUMBER							
MZ	RL02-CX010	H		RESP.ENG.: B.MILLER	DATE: 15 FEB 78								
MZ			[D]			SIZE	CODE	NUMBER	REV				
			[E]	MFG.ENG.: D.LICK	DATE: 15 FEB 78	K	PL	RL02-0-DBP	H				
			[F]	ASSEMBLY NUMBER: E-UA-RL02-0-0	TOP DOCUMENT NUMBER: $ B-DD-RL02-0			FILE NAME: Z0485H.PLS	EDIT $: 19				

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AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION 00
31	31		1213369-00	BELT,WOVEN,ENDLESS,.375WX27.148LG	1
32	32		1213686-01	MOUNTING RAIL FOR 12-13686-00	1
33	33		1214330-00	SPRING,EXTENSION,2.5LGX.360D	1
34	34		9006022-01	SCREW,PAN,PHIL 6-32X 3/8 SS	2
35	35		9006035-01	SCREW,PAN,PHIL 8-32X 1/4 SS	6
36	36		9006037-01	SCREW,PAN,PHIL 8-32X 3/8 SS	13
37	37		9006039-01	SCREW,PAN,PHIL 8-32X 1/2 SS	12
38	38		9006633-00	WASHER,LOCK,INT,.280OD X .146ID	4
39	39		9006634-00	WASHER,LOCK,INT,.230OD X .172ID	15
40	40		9006636-00	WASHER,LOCK,INT,.380OD X .200ID	3
41	41		9007079-00	CLAMP, CABLE, SCREW MNT, 1/8"	4
42	42		9008955-01	SCREW,PAN,PHIL 10-32X 15/16SS	3
43	43	D-IA-7015637-0-0	7015637-01	RL02 DATA HEAD "A" DN	1
44	44		9009884-00	WASHER, FLAT, TEFLON .62 OD X.31	4
45	45		9009885-00	WASHER, SPRING	2
46	46	B-MD-7420084-0-0	7420084-00	SHIM, LATCH	A/R
47	47	C-MD-7416865-0-0	7416865-00	BRACKET LATCH	1
48	48	D-MD-7420826-0-0	7420826-00	COVER, DC SERVO BOARD	1
49	49		9006040-01	SCREW,PAN,PHIL 8-32X 5/8 SS	2
50	50		9006653-00	WASHER, FLAT, .375 O.D. X .156 I	3
51	51		1214359-00	WASHER,FLAT,S/S .169ID X .620D X	2
52	52		9006660-00	WASHER, FLAT, .375 O.D. X .187 I	11
53	53		9009759-00	SCREW,FLAT,PHIL, 8-32X 3/8	2
54	54		9006454-00	RIVET, BLIND, .156 DIA X .254 LG	10
55	55	B-MD-7420084-0-0	7420084-01	SHIM LATCH	A/R
56	56		3700406-00	INSTR PKG DISK RL01 DRIVE	1
57	57		9007649-00	WASHER, LOCK, EXTERNAL TOOTH #6	5
58	58		9006021-01	SCREW,PAN,PHIL 6-32X 5/16 SS	4
59	59		9008072-00	WASHER, LOCK, EXTERNAL TOOTH #8	21
60	60		9009974-00	WASHER, FLAT, METAL,.62 O.D. X .	2
61	61		3613209-03	LABEL,ELECTRICAL DATA VARIATIO	1
62	62	D-MD-7420068-0-0	7420068-00	SHIELD POSITIONER	1
63	63		3614783-00	LABEL,ADH BACK "DANGER HIGH VOLT	1
64	64	A-DC-7416197-0-0	7416197-02	DECAL, LA36	1
65	65		3613211-01	DECAL,CLEAR PREPRINTED CSA 1-1/4	1
66	66		3615687-00	LABEL,ADHESIVE BACK FOR RL02	1
67	67		3615393-05	LABEL,RUB-ON,RL02	1
68	68		3616643-00	LABEL,CAUTION	1
69	69		9006418-01	SCREW,TAPPING,TYPE TT,PAN ,PHIL,	2
70	70	B-MD-7422834-0-0	7422834-00	INSULATOR,HEAD CABLE	1
71	71		9009023-00	WASHER,LOCK,INT,.330OD X .172ID	2
72	72	C-IA-7017608-0-0	7017608-00	*** THIS ITEM IS NOT USED ***	-
73	73	B-IA-7017609-0-0	7017609-00	*** THIS ITEM IS NOT USED ***	-

SIZE	CODE	DOCUMENT NUMBER	REV
K	PL	RL02-0-DBP	H

TITLE: RL02 DISK DRIVE ASSEMBLY

SECTION A OF A

AUTOMATED BY PRTLST.3L(40) — P A R T S L I S T — SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION 00
1	1		9006070-01	SCREW,PAN,PHIL 10-32X 5/16 SS	4
2	2	D-IA-7416326-0-0	7416326-00	CHASSIS	1
3	3		9006028-01	SCREW,PAN,PHIL 6-32X1 SS	1
4	4	C-AD-7012127-0-0	7012127-00	CHASSIS ASSY	1
5	5		9008072-00	WASHER, LOCK, EXTERNAL TOOTH #8	4
6	6		1210430-00	BRACKET,CAPACITOR,2"	1
7	7		1210431-00	BRACKET,CAPACITOR,3-1/16"	1
8	8		1213156-01	BRACKET,CAPACITOR,WRAP-AROUND	1
9	9		9007016-00	GROMMET, RUBBER	1
10	10		1213683-00	BOOT,CAPACITOR,RUBBER	1
11	11		9007113-00	*** THIS ITEM IS NOT USED ***	-
12	12		9009768-01	BUSHING,STRAIN RELIEF .280-.393W	1
13	13		9007082-00	CLAMP,CABLE,SCREW MTD. 5/16"	3
14	14		9009800-01	SCREW,PAN,PHILLIPS, 6X7/8 SELF-	4
15	15		9009059-01	TAPE,FOAM, 1/2W X 1/4THK W/ ADH	A/R
16	16		9006020-01	SCREW,PAN,PHIL 6-32X 1/4 SS	12
17	17		9006023-01	SCREW,PAN,PHIL 6-32X 7/16 SS	3
18	18		9006036-01	SCREW,PAN,PHIL 8-32X 5/16 SS	4
19	19		9006027-01	SCREW,PAN,PHIL 6-32X 7/8 SS	3
20	20		1013102-00	10 MFD 370V 6% NON-PCB	1
21	21	D-IA-7012108-0-0	7012108-00	POWER PANEL HARNESS	1
22	22		1215360-00	FILTER,LINE,115/250V,47-400HZ, F	1
23	23		9006633-00	WASHER,LOCK,INT,.280OD X .146ID	11
24	24		1216827-00	CKT BKR 2.5 A 250V 2P MAGNETIC	1
25	25		1209403-01	FAN,115CFM,SLEEVE BRNG	1
26	26	B-IA-7012110-0-0	7012110-00	HARNESS AC-TB	1
27	27		1210263-00	GUARD,FINGER 4.125 X 4.125 MTG H	1
28	28		1613897-00	XFMR P=AB S=11.5@6A	1
29	29		1110051-00	DM 16 ASSY@200V & 25A #990-3	1
30	30		1013530-00	66,000 MFD 30V G% 36D AL EL	1

REVISION HISTORY			BASIC PART NO: ORL01										
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: D. MELCHOIR	DATE: 12-AUG-76		D	I	G	I	T	A	L
KG	7012130-CX010	P	SECTION. VARIATION INDEX	CHK'D: G. SCHNEIDER	DATE: 24-AUG-77	TITLE PARTS LIST							
KG	RL02-CX008	R	[A] 00			POWER PANEL ASSEMBLY							
KG	7012130-CX011	S											
MZ	RL02-CX010	T	[B]	DES.ENG.: G. SCHNEIDER	DATE: 24-AUG-77								
mz			[C]			DOCUMENT NUMBER							
				RESP.ENG.: P. ARNOLD	DATE: 30-AUG-77								
			[D]			SIZE: K	CODE: PL	NUMBER: 7012130-0-DBP		REV: T			
			[E]	MFG.ENG.: B. RYLANDER	DATE: 30-AUG-77								
			[F]	ASSEMBLY NUMBER: D-AD-7012130-0-0	TOP DOCUMENT NUMBER: # B-DD-RL02-0	FILE NAME: Z0849T.PLS				EDIT #: 13			

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AUTOMATED BY PRTLST.3L(40) P A R T S L I S T SHEET A2 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION 00
31	31		1013531-00	20,000 MFD 40V GX 36D AL EL	1
32	32	B-IA-7012109-0-0	7012109-00	POWER HARNESS	1
33	33		9006560-00	NUT,KEP , 6-32 X5/16AF	6
34	34	C-IA-7012142-0-0	7012142-00	CABLE	1
35	35	B-IA-7012125-0-0	7012125-0E	INTERCONNECT CABLE	1
36	36	B-IA-7012125-0-0	7012125-0B	TB INTERCONNECTOR HARNESS	1
37	37		9006653-00	WASHER, FLAT, .375 O.D. X .156 I	7
38	38		9009800-06	SCREW,PAN,PHILLIPS, 6X.38	3
39	39		9006635-00	WASHER,LOCK,INT,.3100D X .200ID	4
40	40		9007649-00	WASHER, LOCK, EXTERNAL TOOTH #6	8
41	41		9006021-01	SCREW,PAN,PHIL 6-32X 5/16 SS	4
42	42		1211591-35	EDGE CARD 40 PIN ZIF RCPT ASS	2
43	43		1211591-38	EDGE CARD 40 PIN ZIF RCPT,SNAP	4
44	44		9008301-01	SCREW,PAN,PHIL 4-40X 1/4 SS	4
45	45	B-IA-7017609-0-0	7017609-00	GROUND HARNESS	1
46	46	C-IA-7017608-0-0	7017608-00	GROUND HARNESS	1

DIGITAL	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
	POWER PANEL ASSEMBLY		K	PL	7012130-0-DBP	T