

digital

LA180

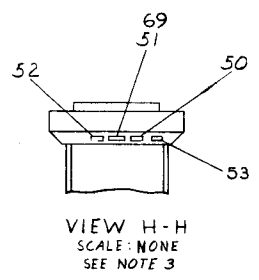
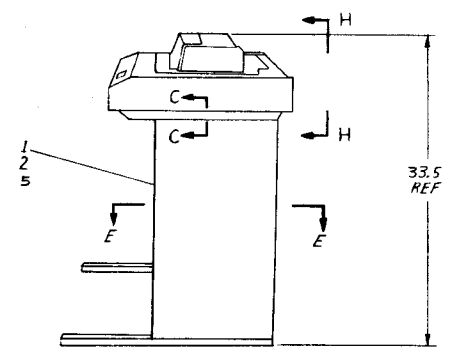
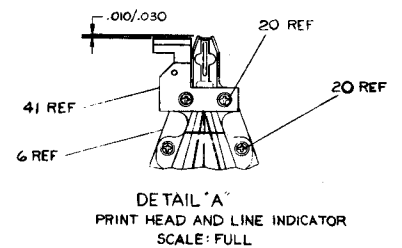
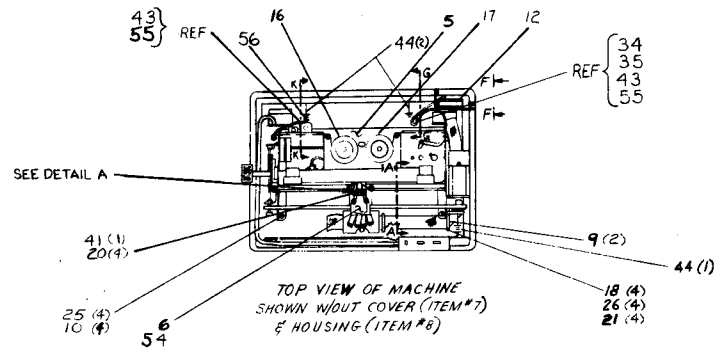
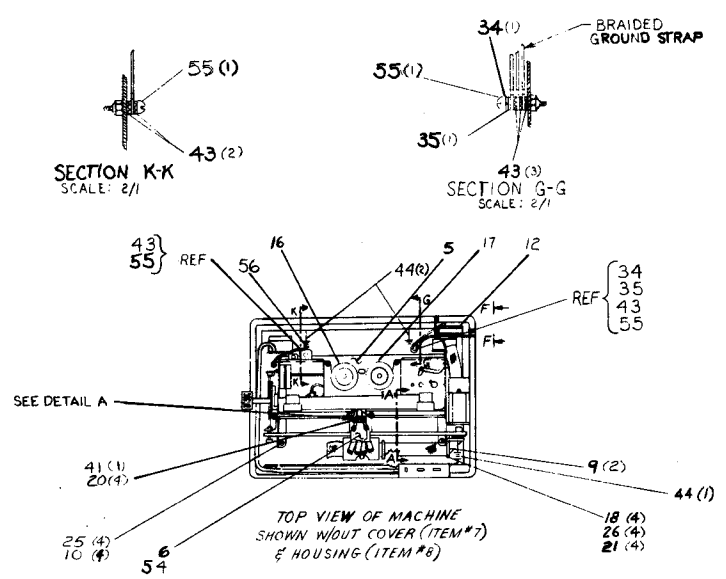
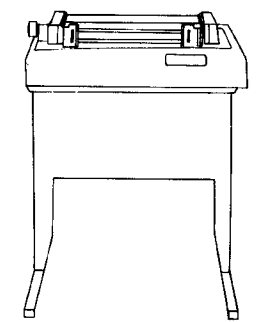
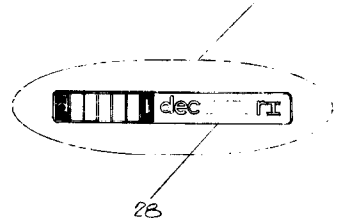
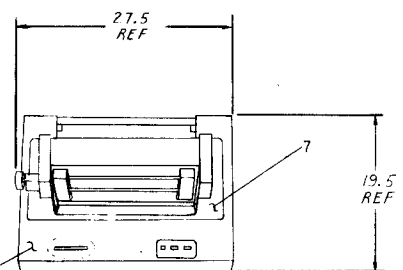
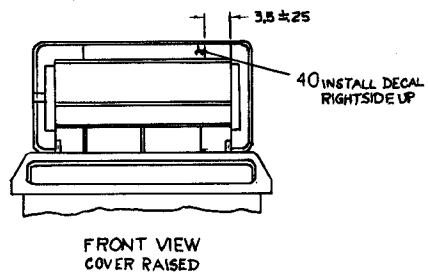
Engineering Drawings

Digital Equipment Corporation

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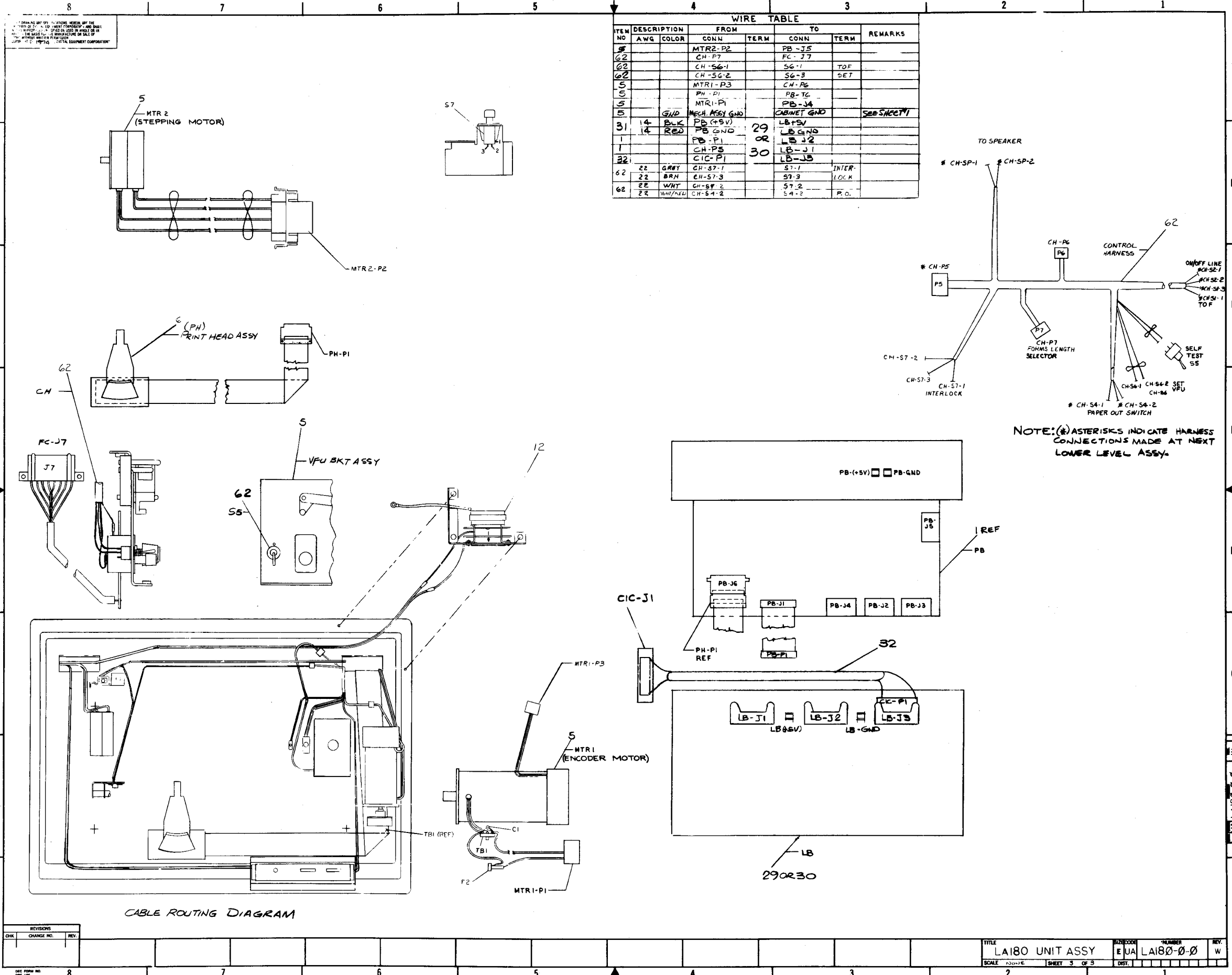
- NOTES:
- FOR PARTS LIST SEE DRAWING # A-PL-LA 180-00.
 - ITEMS #32 (PLATE, INPUT CLAMP), #33 (2 SCREWS), #34 (2 LOCK WASHERS), #35 (2 NUTS) AND #36 (STRAINRELIEF) ARE TO BE SHIPPED LOOSE WITH UNIT.
 - UL AND CSA LABELS TO BE APPLIED ONLY WHEN UNIT HAS MET ALL UL AND CSA REQUIREMENTS.
 - ITEM 6 FOR USE WITH REV C OR LATER OF ITEM 48 OR 49.
 - ASSEMBLE ITEMS 26, 59, 62 (63 WITH 65 & 67 & 68 ON DOOR WITH 2 MOUNTING BOSSES) WITH MODULE (ITEM 48 OR 49) BEFORE INSTALLING MODULE IN DOOR.
 - SEE D-CS-5411023-0-0 FOR JUMPER CONFIGURATIONS.
 - IF CABLE 7013701 (ITEM 62) NOT AVAILABLE, USE BC05C-9. ITEM 60 MATES WITH ITEM 59 OUTSIDE CABINET.
 - ITEM 51, MODEL INFORMATION TAG, IS TO BE PURCHASED AND APPLIED WITH PRE-PRINTED INFORMATION AS FOLLOWS.

MODEL	VOLTS	AMPS	HZ	PH	WIRES
ZZZZ-ZZ	YYY	XX	W	V	U
LA180-PA	115	3	60	1	3
LA180-PB	230	1.5	60	1	3
LA180-PC	115	3	50	1	3
LA180-PD	230	1.5	50	1	3
LA180-EA	115	3	60	1	3
LA180-EB	230	1.5	60	1	3
LA180-EC	115	3	50	1	3
LA180-ED	230	1.5	50	1	3
LA180-CA	115	3	60	1	3
LA180-CB	230	1.5	60	1	3
LA180-CC	115	3	50	1	3
LA180-CD	230	1.5	50	1	3

QTY	DESCRIPTION	PART NO.
1	UNIT ASSY	LA180-00
1	COVER	LA180-01
1	FRONT PANEL	LA180-02
1	REAR PANEL	LA180-03
1	PRINT HEAD	LA180-04
1	LINE INDICATOR	LA180-05
1	STAND	LA180-06
1	DECAL	LA180-07
1	GROUND STRAP	LA180-08
1	PLATE	LA180-09
2	SCREWS	LA180-10
2	LOCK WASHERS	LA180-11
2	NUTS	LA180-12
1	STRAINRELIEF	LA180-13
1	MODULE	LA180-14
1	MODULE	LA180-15
1	MODULE	LA180-16
1	MODULE	LA180-17
1	MODULE	LA180-18
1	MODULE	LA180-19
1	MODULE	LA180-20
1	MODULE	LA180-21
1	MODULE	LA180-22
1	MODULE	LA180-23
1	MODULE	LA180-24
1	MODULE	LA180-25
1	MODULE	LA180-26
1	MODULE	LA180-27
1	MODULE	LA180-28
1	MODULE	LA180-29
1	MODULE	LA180-30
1	MODULE	LA180-31
1	MODULE	LA180-32
1	MODULE	LA180-33
1	MODULE	LA180-34
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1	MODULE	LA180-37
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1	MODULE	LA180-91
1	MODULE	LA180-92
1	MODULE	LA180-93
1	MODULE	LA180-94
1	MODULE	LA180-95
1	MODULE	LA180-96
1	MODULE	LA180-97
1	MODULE	LA180-98
1	MODULE	LA180-99
1	MODULE	LA180-100

FIRST USED ON OPTION/MODEL		QTY	DESCRIPTION	PART NO.
LA 180				
DIMENSIONAL TOLERANCE		DATE		
DIMENSIONS ARE		DRAWN BY		
UNLESS OTHERWISE SPECIFIED		CHECKED BY		
MILLIMETERS	INCHES	APPROVED	TITLE	
±.10	±.005		LA 180	
±.25	±.010		UNIT ASSY	
±.50	±.020		EUA LA 180-00	
±1.0	±.040		SCALE NONE	
±1.5	±.060		SHEET 6 3	
THIRD ANGLE PROJECTION	REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY	NEXT HIGHER ASSY.	REVISION	NUMBER
SEE PARTS LIST				

LA 180-00 W



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	LA180 UNIT ASSY	REV.	W
SCALE	AS SHOWN	SHEET	3 OF 3
DIST.	1		

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY L. TAYLOR	CHECKED <i>[Signature]</i> 6-17-75	SECTION 1
DATE 10/4/74	DATE 6-17-75	ISSUED SECT. 1
ENG <i>[Signature]</i>	PROD R. L. Jodoin	
DATE 6-17-75	DATE 6/18/75	

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	LA180-PA	LA180-PB	LA180-PC	LA180-PD	LA180-CA	LA180-CB	LA180-CC	LA180-CD	LA180-EA	LA180-EB	LA180-EC	LA180-ED
1	E-AD-7010094-1-0	CABINET ASSY W/POWER SUPPLY(115V) 6ØHZ	1	-	-	-	-	-	-	-	-	-	-	-
2	E-AD-7010094-2-0	CABINET ASSY W/POWER SUPPLY(230V) 6ØHZ	-	1	-	-	-	-	-	-	-	-	-	-
3	E-AD-7010094-3-0	CABINET ASSY W/POWER SUPPLY(115V) 5ØHZ	-	-	1	-	-	-	-	-	-	-	-	-
4	E-AD-7010094-4-0	CABINET ASSY W/POWER SUPPLY(230V) 5ØHZ	-	-	-	1	-	-	-	-	-	-	-	-
5	E-AD-7015688-0-0	PRINTER MECHANISM ASSY	1	1	1	1	1	1	1	1	1	1	1	1
6	D-AD-7009883-0-0	PRINT HEAD ASSY	1	1	1	1	1	1	1	1	1	1	1	1
7	D-IA-7010758-0-0	COVER ASSY	1	1	1	1	1	1	1	1	1	1	1	1
8	E-IA-7010757-0-0	HOUSING ASSY	1	1	1	1	1	1	1	1	1	1	1	1
9	1202704-00	CLAMP, CABLE	2	2	2	2	2	2	2	2	2	2	2	2
10	9008896-00	WELLNUT #10-32	7	7	7	7	7	7	7	7	7	7	7	7
11	9007906-00	WASHER, SPLIT LOCK, #10	4	4	4	4	4	4	4	4	4	4	4	4
12	C-AD-7010756-0-0	FAN ASSY 115V, MOTOR	1	1	1	1	1	1	1	1	1	1	1	1
13	9007649-00	WASHER, EXT TOOTH LOCK, #6	1	1	1	1	1	1	1	1	1	1	1	1
14	9006633-00	WASHER, INTERNAL TOOTH LOCK #6	4	4	4	4	4	4	4	4	4	4	4	4
15	A-MD-7412103-0-0	PKG. OF PAPER (100 SHEETS)	1	1	1	1	1	1	1	1	1	1	1	1
16	3612153-00	RIBBON SPOOL W/RIBBON	1	1	1	1	1	1	1	1	1	1	1	1
17	1212008-00	RIBBON SPOOL (EMPTY)	1	1	1	1	1	1	1	1	1	1	1	1
18	9006011-1	SCREW, PHL, PAN HD, #4-40 x .38L	4	4	4	4	4	4	4	4	4	4	4	4
19	9006022-1	SCREW, PHL, PAN HD, #6-32 x .38L	1	1	1	1	1	1	1	1	1	1	1	1
20	9009984-01	SEMS, PHL PAN HD. SCR, #6-32 x.56L, CONE	4	4	4	4	4	4	4	4	4	4	4	4
21	9006557-00	NUT, KEPS, #4-40	4	4	4	4	4	4	4	4	4	4	4	4
22	9009987-00	SCREW, HEX WASHER HD, #6-18 x .50, SELF TH	11	11	11	11	11	11	11	11	11	11	11	11

TITLE LA180 UNIT ASSY	ASSY NO. E-UA-LA180-Ø-Ø	SIZE CODE A PL	NUMBER LA180-Ø-Ø	REV. W	ECO NO. LA180-PN 154
	SHEET 1 OF 4	DIST.			

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST					QUANTITY / VARIATION											
MADE BY DICK VENNO		CHECKED <i>[Signature]</i> 6-17-75		SECTION 1	LA180-PA	LA180-PB	LA180-PC	LA180-PD	LA180-CA	LA180-CB	LA180-CC	LA180-CD	LA180-EA	LA180-EB	LA180-EC	LA180-ED
DATE 3/25/74		DATE		ISSUED SECT. 1												
ENG <i>[Signature]</i>		PROD R. L. Jodanis														
DATE 6-17-75		DATE 6/18/75														
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION														
23	9006664-00	WASHER, FLAT, #10			7	7	7	7	7	7	7	7	7	7	7	7
24	9007801-00	WASHER, SPLIT LOCK, #6			1	1	1	1								
25	9009988-04	SEMS, HEX HD MACH SCR, #10-32x1", CONE			7	7	7	7	7	7	7	7	7	7	7	7
26	9006658-00	WASHER, FLAT, #4			4	4	4	4	4	4	4	4	4	4	4	4
27	9006653-00	WASHER, FLAT, #6			4	4	4	4	4	4	4	4	4	4	4	4
28	C-PS-3612451-0-0	NAME PLATE			1	1	1	1	1	1	1	1	1	1	1	1
29	D-CS-5411023-0-1	LOGIC BOARD LA180			1	1	1	1	1	1	1	1	1	1	1	1
30	D-CS-5411023-YA-1	LOGIC BOARD LA180 C/C			1	1	1	1								
31	D-IA-7011469-0-0	C/C INTERFACE CABLE ASSY			1	1	1	1								
32	C-MD-7413216-0-0	PLATE, INPUT CLAMP			1	1	1	1	1	1	1	1	1	1	1	1
33	9009988-08	SEMS, HEX HD. MACH SCR., 8-32 x .38, CONE			2	2	2	2	2	2	2	2	2	2	2	2
34	9006690-00	WASHER SPLIT LOCK #8			1	1	1	1	1	1	1	1	1	1	1	1
35	9006660-00	WASHER FLAT #8			2	2	2	2	2	2	2	2	2	2	2	2
36	9008509-00	STRAIN RELIEF			1	1	1	1	1	1	1	1	1	1	1	1
37	A-SP-3700131-0-0	PACKAGING INSTRUCTIONS			REF	REF	REF	REF	REF	REF	REF	REF	REF	REF	REF	REF
38	9008208-1	SCR PAN HD NYLON 8-32x.50			6	6	6	6	6	6	6	6	6	6	6	6
39	9008708	WASHER NYLON 37 OD x 19 ID x 0.32 THK			12	12	12	12	12	12	12	12	12	12	12	12
40	A-DC-7416178-0-0	DECAL, LA180			1	1	1	1	1	1	1	1	1	1	1	1
41	C-MD-7414953-0-0	LINE INDICATOR			1	1	1	1	1	1	1	1	1	1	1	1
42	9006636	WASHER, FLAT			2	2	2	2	2	2	2	2	2	2	2	2
43	9008072-00	EXTERNAL TOOTH LOCKWASHER #8			5	5	5	5	5	5	5	5	5	5	5	5
44	3612680-00	DECAL, GROUND SYMBOL			3	3	3	3	3	3	3	3	3	3	3	3
TITLE LA180 UNIT ASSY				ASSY NO. E-UA-LA180-0-0	SIZE A	CODE PL	NUMBER LA180-0-0					REV. W	ECO NO.			
SHEET 2 OF 4				DIST.												

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY L. TAYLOR	CHECKED STLETZER	SECTION
DATE 10-4-74	DATE 6-17-75	1
ENG STELTZER	PROD R.L. JODOIN	ISSUED SECT.
DATE 6-17-75	DATE 6-18-75	1

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	LA180-PA	LA180-PB	LA180-PC	LA180-PD	LA180-CA	LA180-CB	LA180-CC	LA180-CD	LA180-EA	LA180-EB	LA180-EC	LA180-ED
45	A-DC-7414832-0-1	SERIAL NUMBER DECAL LA180	1	1	1	1	1	1	1	1	1	1	1	1
46	7413231-0-0	UNDERWRITERS LABEL 115V	1	1	1	1	1	1	1	1	1	1	1	1
47	7413231-1-0	UNDERWRITERS LABEL 230V	1	1	1	1	1	1	1	1	1	1	1	1
48	5412166-YA	SERIAL OPTION MODULE (20MA)	-	-	-	-	1	1	1	1	-	-	-	-
49	5412166-0	SERIAL OPTION MODULE (EIA)	-	-	-	-	-	-	-	-	1	1	1	1
50	A-DC-7416197-0-2	UNDERWRITERS LABEL	1	1	1	1	1	1	1	1	1	1	1	1
51	A-PS-3613210-01	MODEL INFO. TAG	1	1	1	1	1	1	1	1	1	1	1	1
52	A-PS-3613211-00	C S A DECAL	1	1	-	-	1	1	-	-	1	1	-	-
53	A-PS-3613088-00	LABEL, ADHESIVE BACKED RFI SUPPRESSION	-	-	-	1	-	-	-	1	-	-	-	1
54	E-PS-1213365-02	HEAT SHIELD	1	1	1	1	1	1	1	1	1	1	1	1
55	9006039-01	SCREW, PHL. PAN HD. #8-32 X .50 LG.	2	2	2	2	2	2	2	2	2	2	2	2
56	9008340-00	CLIP, HARNESS	1	1	1	1	1	1	1	1	1	1	1	1
57	9006634	WASHER INTERNAL LOCK #8	6	6	6	6	6	6	6	6	6	6	6	6
58	BC08S-2	I/O CABLE	-	-	-	-	1	1	1	1	1	1	1	1
59	BC05M-2C	BC05M CABLE ASSY	-	-	-	-	1	1	1	1	-	-	-	-
60	BC05F-9	BC05F INTERFACE CABLE	-	-	-	-	1	1	1	1	-	-	-	-
61	7010001-8	JUMPER, TWISTED PAIR, 23.5 LG	-	-	-	-	1	1	1	1	1	1	1	1
62	7013701	MODEM CABLE	-	-	-	-	-	-	-	-	1	1	1	1
63	9009556	SPACER 6-32 X .56, FIBER	-	-	-	-	2	2	2	2	2	2	2	2
64	9007661	SPACER, .25 ID X .56	-	-	-	-	4	4	4	4	4	4	4	4
65	9009984-00	SEMS, PHIL PAN HD SCR., 6-32x.38, CONE	-	-	-	-	4	4	4	4	4	4	4	4
66	9007033	CABLE TIE	-	-	-	-	1	1	1	1	1	1	1	1

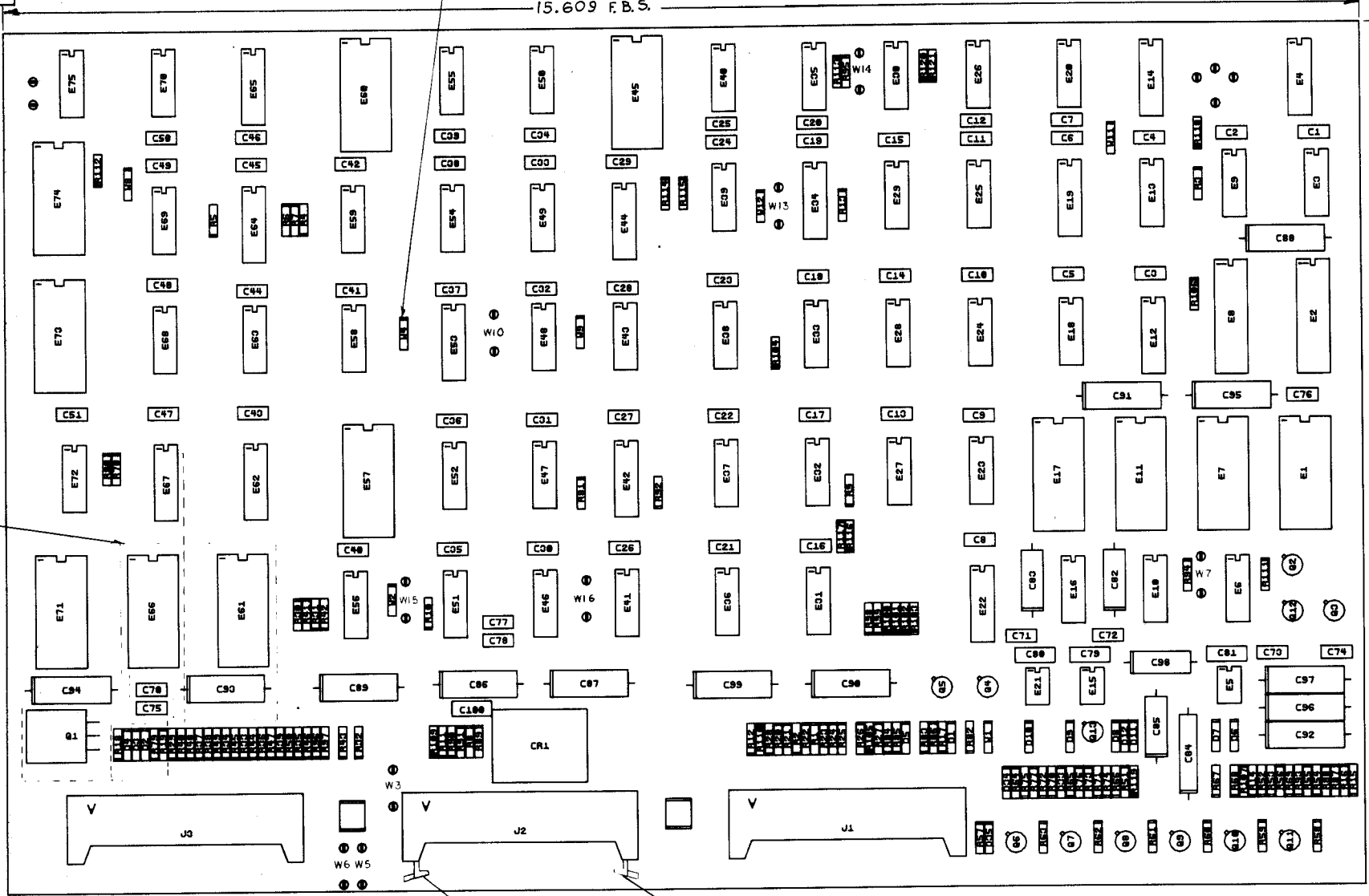
TITLE LA180 UNIT ASSY	ASSY NO. E-UA-LA180-0-0	SIZE CODE A PL	NUMBER LA180 -0-0						REV W	ECO NO.
	SHEET 3 OF 4	DIST.								

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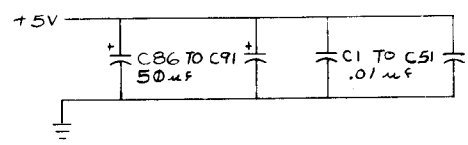
NOTES:

NOTES:

- COMPONENTS WITHIN OUTLINE WERE USED ONLY WHEN PROMS WERE USED ON SERIAL *11303 AND EARLIER.
- W4 NECESSARY FOR 591 NS OR 200 BAUD CLOCK TO J3.
- HOLES IN IC LOCATIONS E11 AND E17 TO BE MASKED FROM WAVE SOLDERING PROCESS IN -00 VARIATION.



2611 IP	12	24							
74175	8	16							
74161	8	16							
74123	8	16							
7489	8	16							
74150	12	24							
74190	8	16							
7442	8	16							
74193	8	16							
74154	12	24							
2101-2	8	22							
8640	1	8							
7493A	10	5							
1702A		12,22,23							16,24
LM301A			7	4					
2627	12	24							
2626	12	24							
IC TYPE	GND	+5V	+12V	-12V	-9V				
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE									
IC PIN LOCATIONS									



SEE PAGE 3	J. BITTO	5411023-0-1	5411023-0001	5411023-0002	5411023-0003	5411023-0004	5411023-0005	5411023-0006	5411023-0007	5411023-0008	5411023-0009	5411023-0010	5411023-0011	5411023-0012	5411023-0013	5411023-0014	5411023-0015	5411023-0016	5411023-0017	5411023-0018	5411023-0019	5411023-0020	5411023-0021	5411023-0022	5411023-0023	5411023-0024	5411023-0025	5411023-0026	5411023-0027	5411023-0028	5411023-0029	5411023-0030	5411023-0031	5411023-0032	5411023-0033	5411023-0034	5411023-0035	5411023-0036	5411023-0037	5411023-0038	5411023-0039	5411023-0040	5411023-0041	5411023-0042	5411023-0043	5411023-0044	5411023-0045	5411023-0046	5411023-0047	5411023-0048	5411023-0049	5411023-0050
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SEE SHEET #2

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

ETCH BOARD REV. F

DRN. J. BITTO	DATE 2/1/77
CHK'D. J. BITTO	DATE 2/1/77
ENG. J. BITTO	DATE 2/1/77
PROJ. ENG.	DATE
PROD.	DATE

LA 180 LOGIC BOARD

SIZE CODE DCS 5411023-0-1

REV. V

SEMICONDUCTOR CONVERSION CHART

REV.	CHANGE NO.	DESCRIPTION
1		

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* SOCKETS ARE TO BE USED IN E11 AND E17 ON VARIATIONS -01 AND -02.
 ** W3, W5 AND W7 TO BE USED ON VARIATION -01 ONLY.

5411023-02
 5411023-01
 5411023-00

5411023-02
 5411023-01
 5411023-00

PARTS LIST				
VARIATION	QTY	REF DESIGNATION	DESCRIPTION	PART NO.
	REF REF REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411023-0-4
	REF REF REF		ASSY/DRILLING HOLE LAYOUT	E-AH-5411023-0-5
	REF REF REF		MODULE ECO HISTORY	B-MH-5411023-0-6
1	1	1	ETCHED CIRCUIT BOARD	5011022-00
4	4	4	CAP, 39pf 100V 5%	1000010-00
1	1	1	CAP, .68uf 50V 10%	1010031-06
2	2	2	CAP, .047uf 100V 10%	1000051-00
6	6	6	CAP, 25 uf 25V 10%	1000075-00
57	57	57	CAP, .01 uf 50V	1001610-00
1	1	1	CAP, .1 uf 100V 10%	1002342-00
2	2	2	CAP, .005 uf 100V 20%	1001765-00
6	6	6	CAP, 50 uf 25V 10%	1001796-00
8	8	8	DIODE D664	1100114-00
2	2	2	DIODE INT48A 3.9V 5%	1100122-00
2	2	2	DIODE 4M5.1A Z1	1105873-00
1	1	1	DIODE D662	1100113-00
3	3	3	CONN 40 PIN	1209941-02
5	5	3	SOCKET I.C. 24 PIN	1210693-00
1	1	1	RES 5.1K 1/4W 5%	1309422-00
17	17	17	RES 150 1/4W 5%	1300250-00
3	3	3	RES 100 1/4W 5%	1300229-00
1	1	1	RES 820 1/4W 5%	1301775-00
3	3	3	RES 180 1/4W 5%	1301322-00
1	1	1	RES 560 1/4W 5%	1301890-00
18	18	18	RES 330 1/4W 5%	1300295-00
3	3	3	RES 470 1/4W 5%	1300316-00
25	25	25	RES 1K 1/4W 5%	1300365-00
1	1	1	RES 1.5K 1/4W 5%	1300391-00
5	5	5	RES 5.6K 1/4W 5%	1301874-00
2	2	2	RES 1K 1/8W 1%	1302748-00
1	1	1	RES 47K 1/4W 5%	1302177-00
1	1	1	RES 11.5K 1/8W 1%	1302860-00
2	2	2	RES 820K 1/4W 10%	1303187-00
2	2	2	RES 2.61K 1/4W 1%	1303303-00
2	2	2	RES 5.11K 1/4W 1%	1304854-00
2	2	2	RES 619 1/4W 1%	1305126-00
1	1	1	RES 31.6K 1/8W 1%	1305419-00
2	2	2	RES 232K 1/8W 1%	1305424-00
6	6	6	RES 2K 1/4W 5%	1302388-00
1	1	1	RES 16.9K 1/8W 1%	1312618-00
1	1	1	RES 24.3K 1/4W 1%	1309418-00
2	2	2	TRANS 6534D PNP	1503409-00
6	6	6	TRANS MPSA05 NPN	1510705-00
1	1	1	TRANS 645CB PNP	1510598-00
1	1	1	CRYSTAL 1.6896 MHZ	1811689-00
11	11	11	I.C. 7474	1905547-00
			E35, E50, E51, E54, E55	

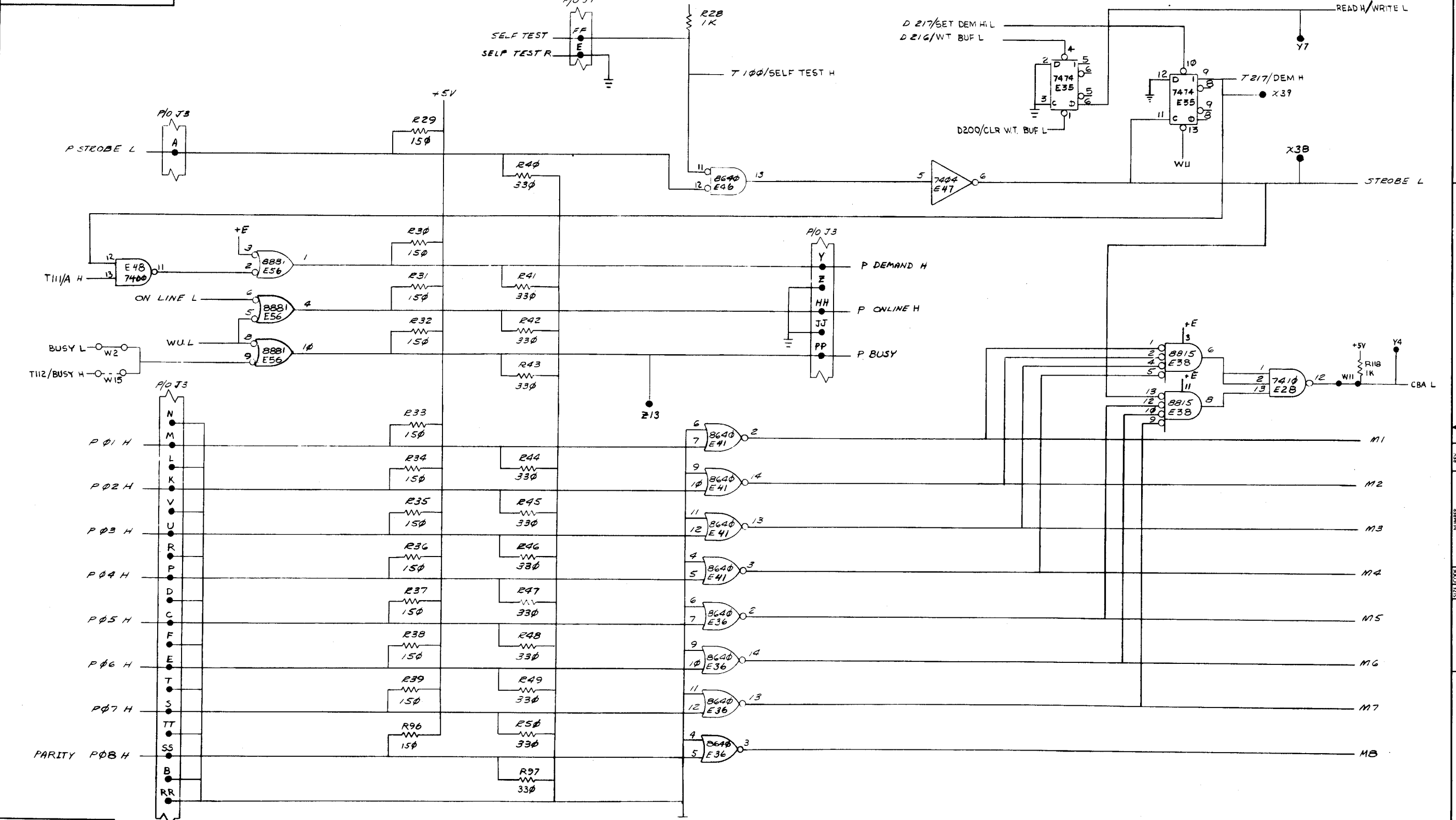
PARTS LIST					
VARIATION	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4	4	4	E24, E48, E49, E52	I.C. 7400	1905575-00 48
1	1	1	E28	I.C. 7410	1905576-00 49
1	1	1	E70	I.C. 7420	1905577-00 50
1	1	1	E69	I.C. 7401	1905590-00 51
2	2	2	E39, E40	I.C. 7493A	1909054-00 52
3	3	3	E36, E41, E46	I.C. 8640	1911469-00 53
6	6	6	E31, E33, E47, E72, E75, E27	I.C. 7404	1909686-00 54
3	3	3	E45, E60, E73	I.C. 74154	1909701-00 55
1	1	1	E16	I.C. 7413	1909989-00 56
5	5	5	E12, E14, E62, E64, E67	I.C. 74193	1910018-00 57
1	1	1	E53	I.C. 7442	1910046-00 58
1	1	1	E19	I.C. 74190	1910095-00 59
2	2	2	E56, E30	I.C. 8881	1909705-00 60
2	2	2	E57, E74	I.C. 74150	1910153-00 61
3	3	3	E5, E15, E21	I.C. ILM301A	1910282-00 62
1	1	1	E65	I.C. 7489	1910396-00 63
1	1	1	E42	I.C. 74123	1910436-00 64
2	2	2	E34, E44	I.C. 74161	1910650-00 65
1	1	1	E22	I.C. 74175	1910651-00 66
2	2	2	E2, E8	I.C. 2101-2	2112323-00 67
-	-	-	E61, E66	I.C. 1702-A PROMS	2300041-00 68
1	1	1	E38	I.C. 8815	90973-00 69
4	4	4	E3, E9, E32, E37	I.C. 74197	1910025-00 70
4	4	4	E43, E59, E63, E68	I.C. 7408	1910155-00 71
1	1	1	E1	I.C. MK2626 (UNSLASHED O)	23071A6-00 72
1	1	1	E7	I.C. MK2627 (ALPHA SET)	23070A6-00 73
24	24	24		SPLIT LUGS	9006735- 74
-	-	-		SCREW PPH	9006011-01 75
2	2	2		FASTON TAB	9007113-00 76
-	-	-		HEP NUT	9006537-00 77
2	2	2		EYE LETS	9009000 78
10	10	10	R98-R104, R109, R107, R51	RES 47K 1/4W 5%	1302177 79
1	1	1	E58	I.C. 7414	1911324 80
1	1	1	E13	I.C. 74180	1910724 81
1	1	1	E10	I.C. 9601	1909373 82
1	1	1	E6	I.C. 7406	1910741 83
1	1	1	C98	CAP 39uf 10V 10%	1000076 84
7	7	7	R20 THRU R26	RES 4.7K 1/4W 5%	1300447-00 85
7	10	7	W1, W4, W5, W11, W12, W2, W9 (W3, W6, W7, W8)	INSULATED JUMPER	9009185- 86
4	4	4	R1, R2, R3	JUMPER, INSULATED	9105740-55 87
3	3	3		LATCH, LEFT	1209941-03 88
3	3	3		LATCH, RIGHT	1209941-04 89
-	-	-	E71	I.C. MK2611 IP CROM	2302866 90
-	-	-	E71	I.C. MK2611 IP CROM	2302866 91
-	-	-	W3, W5, W7	JUMPER, INSULATED	9009185 92
2	2	2	E11, E17	SOCKET IC, 24 PIN	1210693-00 93
1	1	1	D11	DIODE 4M 5.1A Z1	1105873-00 94
3	3	3	Q2, Q3, Q13	TRANS MPS 455	1510706-00 95
1	1	1	Q12	TRANS 6531B	1509338-00 96

REVISIONS			
CHK	CHANGE NO.	REV.	
✓	5411023-PN013	U	5411023-PN014 V
	2 FEB 78		8 MAY 78
	D. RICHMOND		J. DESUK

TITLE LA180 LOGIC BOARD
 SIZE CODE DCS
 NUMBER 5411023-0-1
 REV. V
 SHEET 2 OF 10

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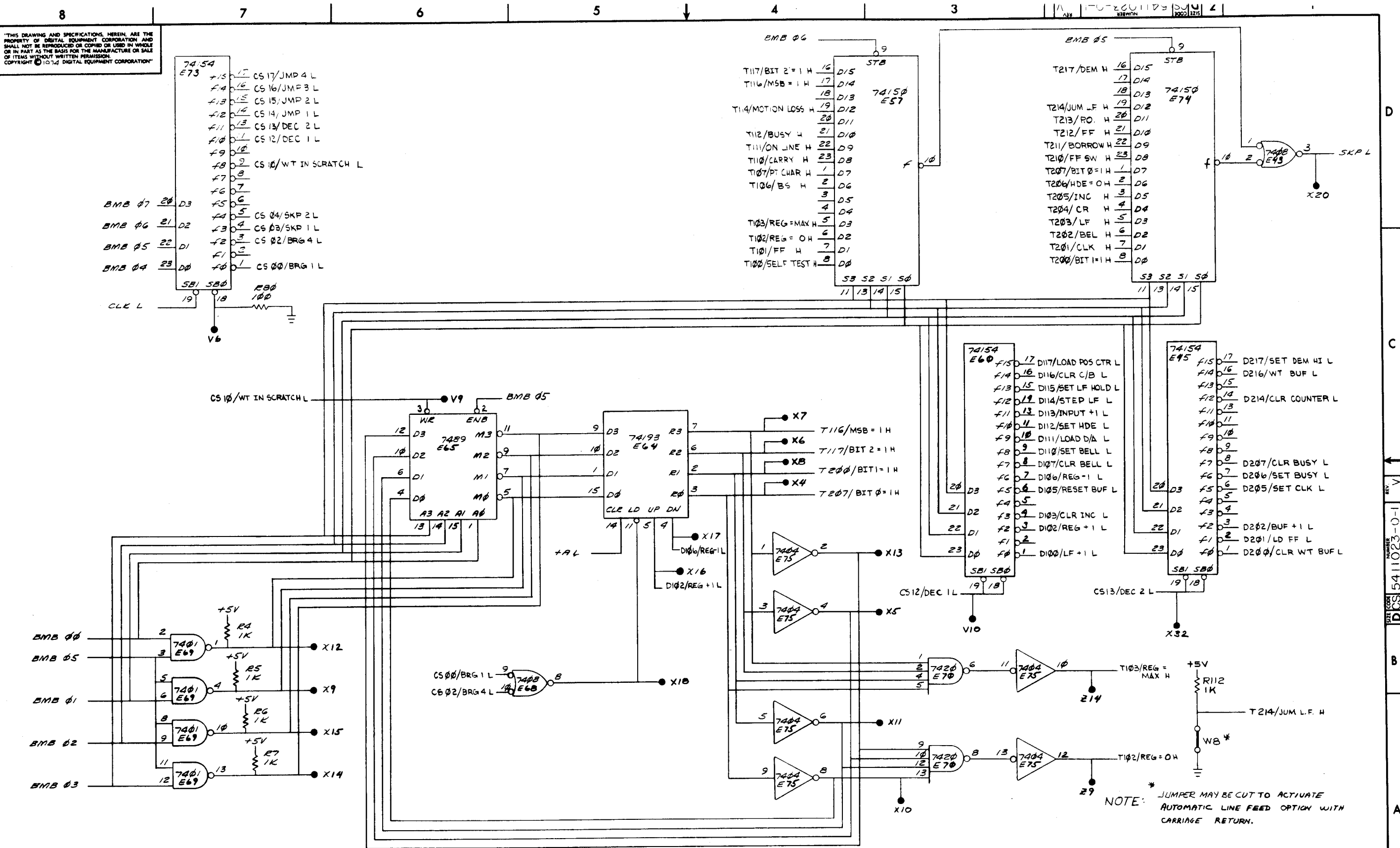
REV. 1-0-1 DCS 5411023-0-1



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE LA180 LOGIC BOARD
 SIZE CODE DCS 5411023-0-1
 NUMBER 4 OF 10
 REV. V

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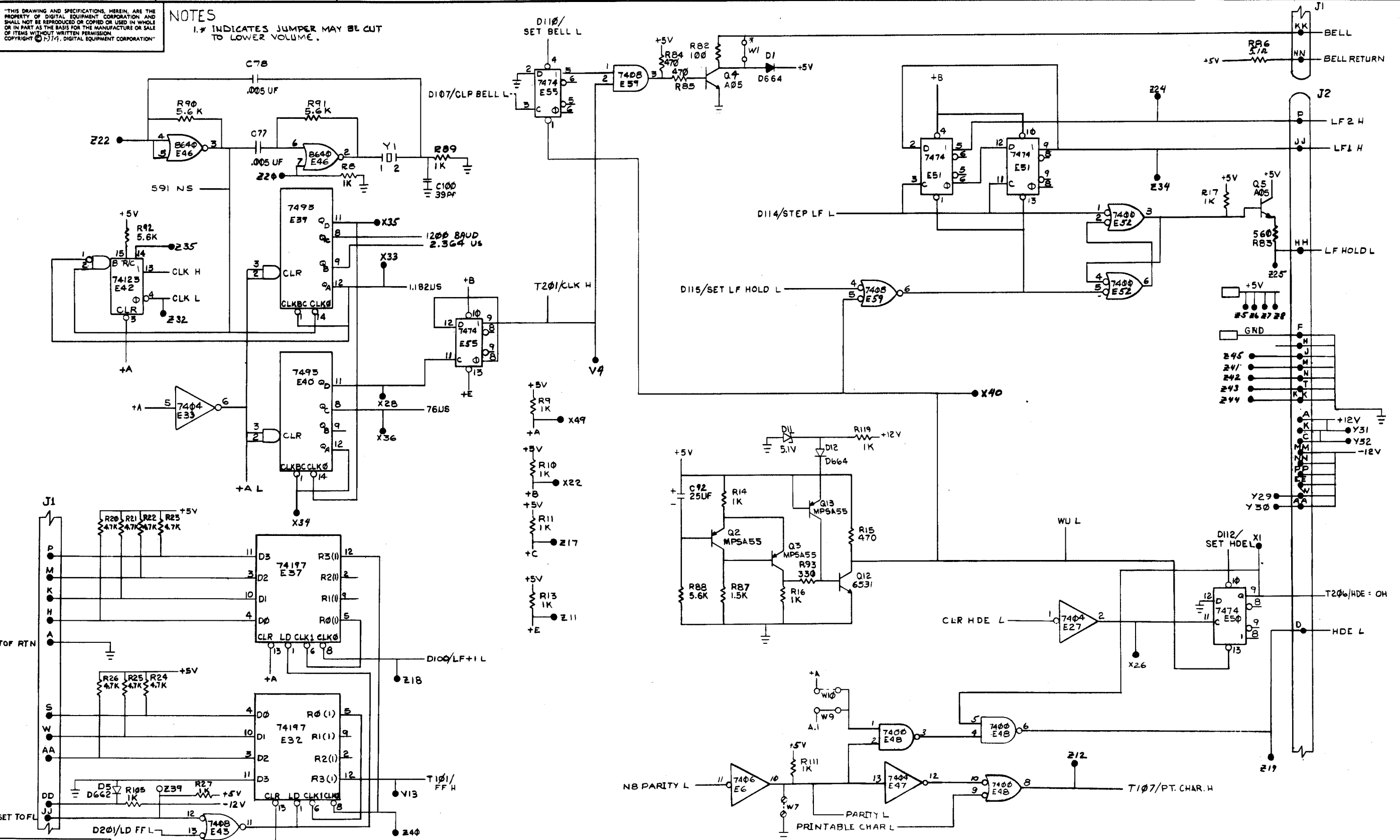
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	LA 180 LOGIC BOARD	SIZE CODE	D CS	NUMBER	5411023-0-1	REV.	V
SCALE	1:1	SHEET	5	OF 10	DIST.		

REV. V D CS 5411023-0-1

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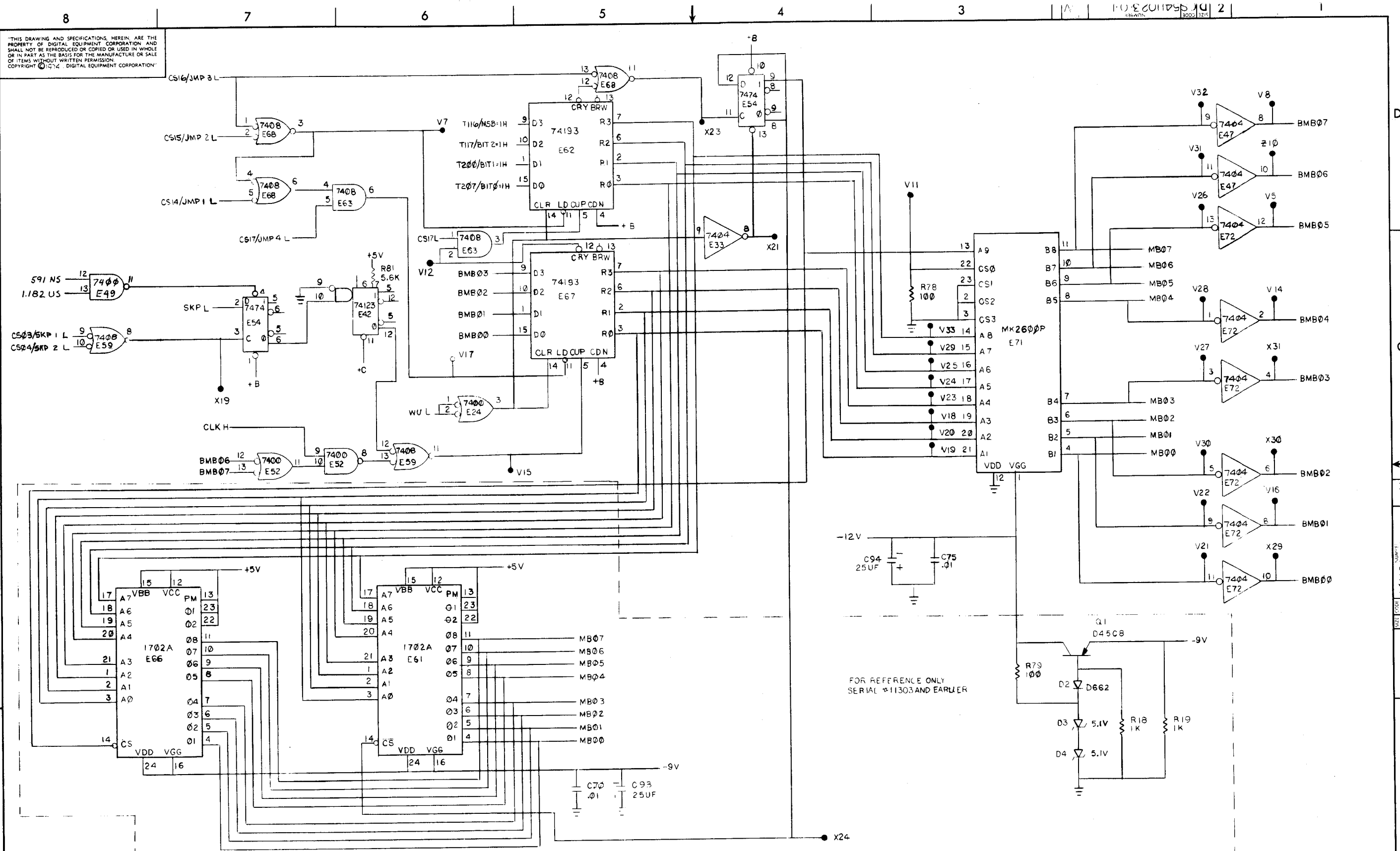
NOTES
 1. * INDICATES JUMPER MAY BE CUT TO LOWER VOLUME.



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	LA180 LOGIC BOARD	SIZE CODE	D CS 5411023-0-1	NUMBER	6 OF 10	REV.	V
SCALE		SHEET		DIST.			

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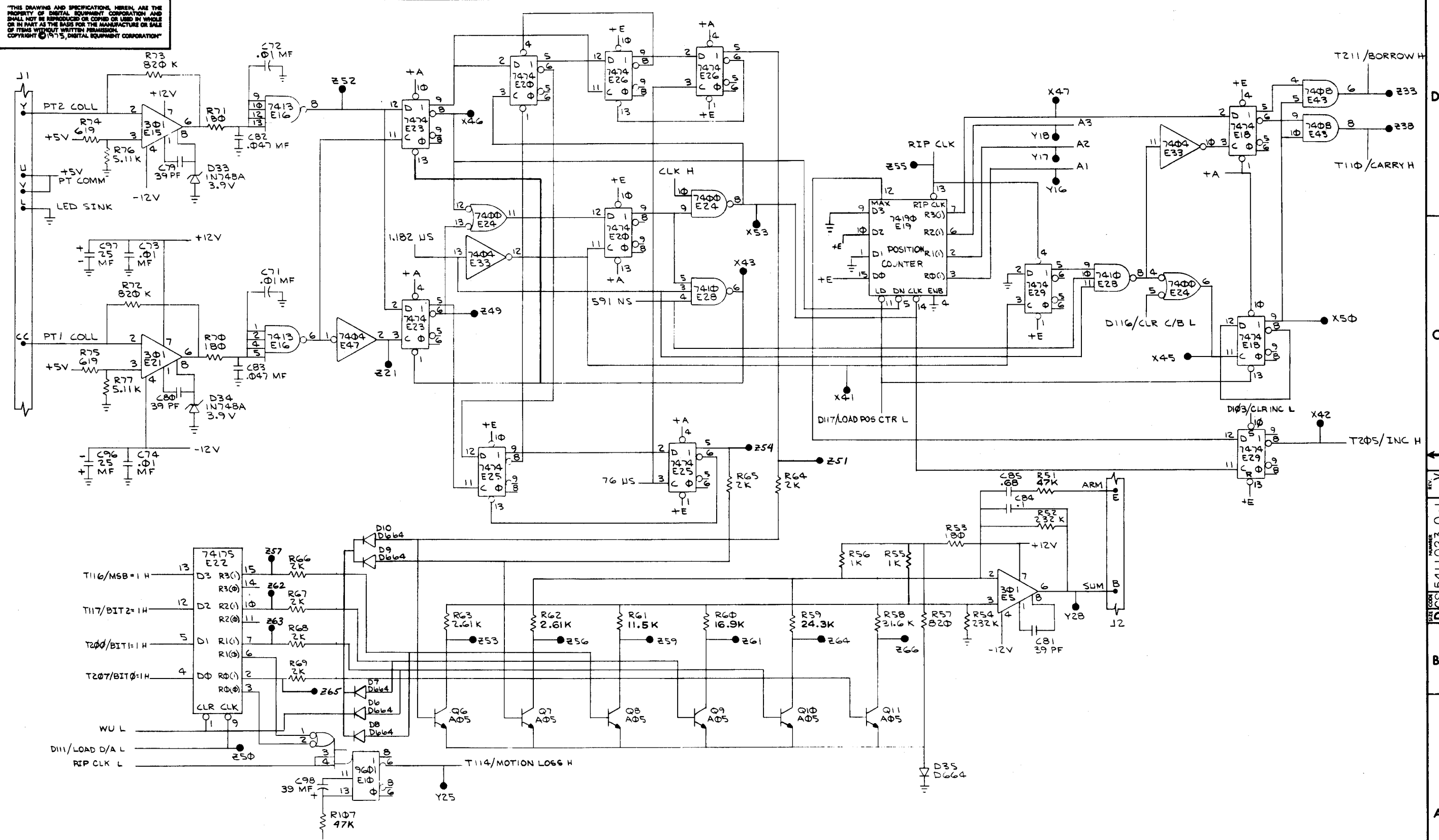


REVISIONS		
CHK	CHANGE NO	REV.

TITLE	SIZE CODE	NUMBER	REV.
LA180 LOGIC BOARD	D CS	5411023-0-1	V
SCALE	SHEET	DIST.	
1/1	7 OF 10		

D CS 5411023-0-1

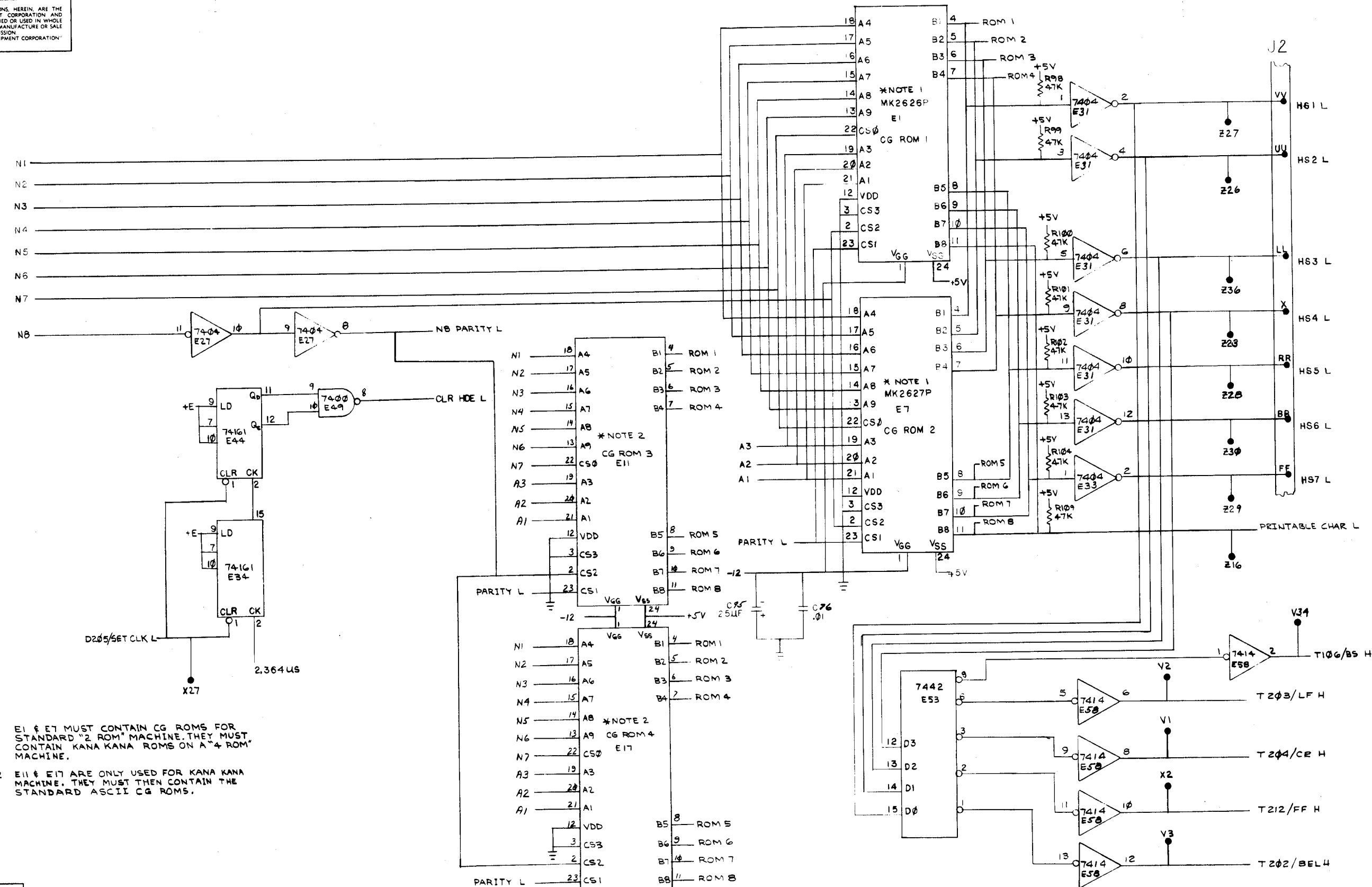
"THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1975, DIGITAL EQUIPMENT CORPORATION"



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	LA180 LOGIC BOARD	SIZE CODE	D CS	NUMBER	5411023-0-1	REV.	V
SCALE		SHEET	8 OF 10	DIST.			

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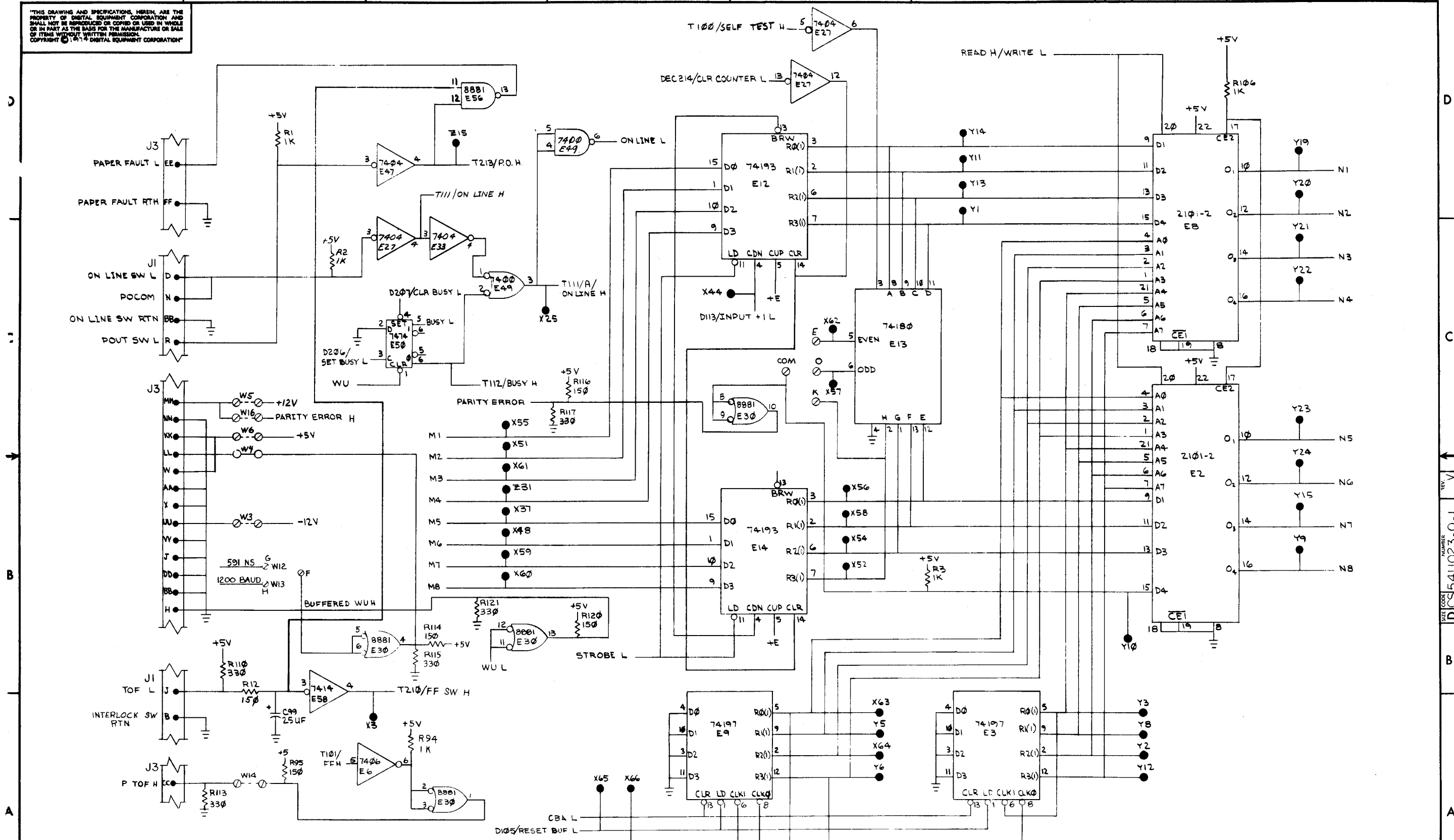
* NOTE 1 E1 & E7 MUST CONTAIN CG ROMS FOR STANDARD "2 ROM" MACHINE. THEY MUST CONTAIN KANA KANA ROMS ON A "4 ROM" MACHINE.

* NOTE 2 E11 & E17 ARE ONLY USED FOR KANA KANA MACHINE. THEY MUST THEN CONTAIN THE STANDARD ASCII CG ROMS.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	LA180 LOGIC BOARD	SIZE CODE	D CS 5411023-0-1	NUMBER	9 OF 10	REV.	V
SCALE	1:1	SHEET	9 OF 10	DIST.			

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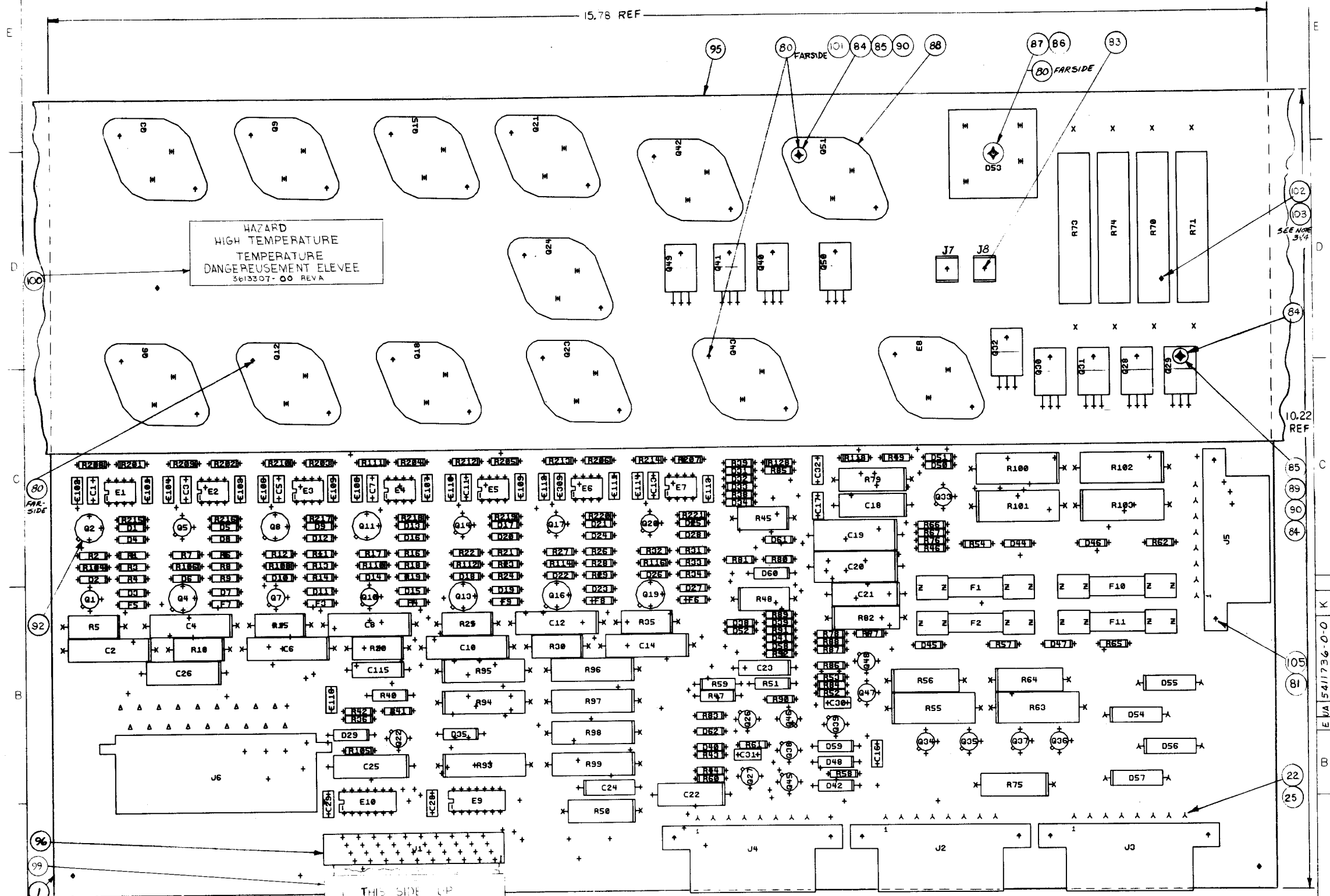
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	LA180 LOGIC BOARD	SIZE CODE	D	NUMBER	CS 5411023-0-1	REV.	V
SCALE	1:1	SHEET	10 OF 10	DIST.			

SIZE CODE NUMBER
 DCS 5411023-0-1 REV. V

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EVA 541736-0-0



- NOTES:
- THE WIDTH BETWEEN TOOLING HOLES IS 16.50.
 - KEY: J2 PIN 4 J4 PIN2
J3 PIN 5 J5 PIN3
 - INSTALL WASHER ITEM103 ON FARSIDE OF BOARD 2 PLACES.
 - INSTALL WASHER BETWEEN HEAT SINK AND BOARD 2 PLACES. ITEM103

CHANGE NO	REV	DATE	BY	CHKD
1	1	11/17/77	J. BITTO	
2	2	11/17/77	J. BITTO	
3	3	11/17/77	J. BITTO	
4	4	11/17/77	J. BITTO	
5	5	11/17/77	J. BITTO	
6	6	11/17/77	J. BITTO	
7	7	11/17/77	J. BITTO	
8	8	11/17/77	J. BITTO	
9	9	11/17/77	J. BITTO	
10	10	11/17/77	J. BITTO	

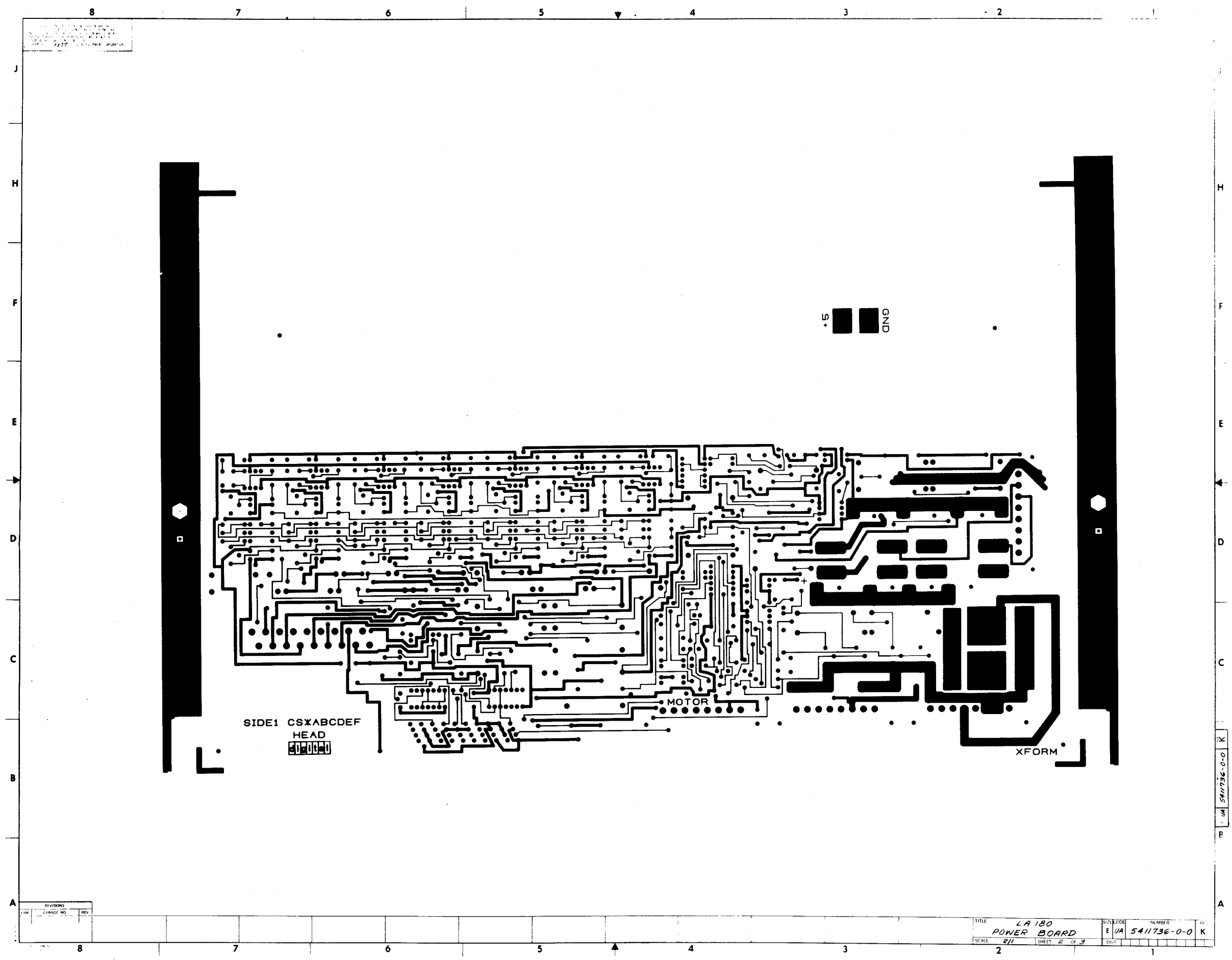
SYMBOL	HOLE DATA
FIN HOLE SIZE	
PLATED	
NON PLATED	
QTY.	
○-OFF GRO HLE	
DRILL SIZE	

BOARD FABRICATION INFORMATION	
PANEL SIZE	12.00 X 17.00
PANEL DATA DVC.#	
PANEL MAT'L	105.00 THK
QTY. OF LAYERS	2
COPPER THICKNESS	2.0
PTH. X PRINT AND ETCH	
MIDDLE INSERTED 100 TIMES OR MORE	

SIGNATURES	DATE
DRN. <i>[Signature]</i>	11/17/77
CHK'D. <i>[Signature]</i>	11/17/77
ENG. <i>[Signature]</i>	11/17/77
PROJ. ENG. <i>[Signature]</i>	11/17/77
PROD. <i>[Signature]</i>	11/17/77
SCALE 2/1	
SHT. 1 OF 3	
NEXT HIGHER ASSY. B 00-541736-0	

digital	
TITLE	LA180 POWER BOARD
SIZE CODE	NUMBER
E UA 541736-0-0	K
ETD REV. E	

1177
 1177



SIDE1 CSX ABCDEF
 HEAD

MOTOR

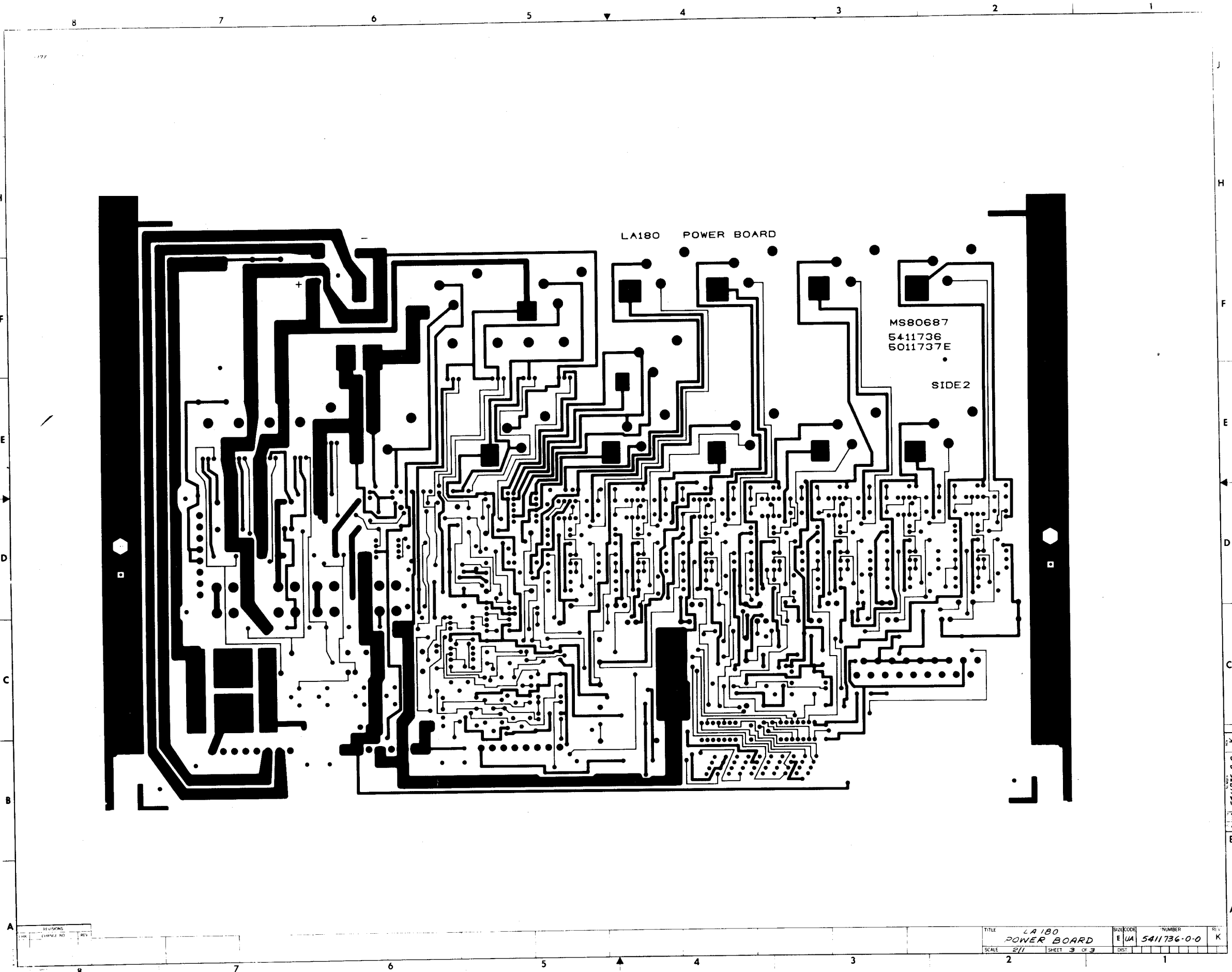
XFORM

+5
 GND

REVISIONS		
NO.	CHANGE NO.	REV.

TITLE		LA 180		SIZE CODE		NUMBER	
POWER BOARD		E UA		541736-0-0		K	
SCALE	2/1	SHEET	2 OF 3	Dist			

E UA 541736-0-0 K



LA180 POWER BOARD

MS80687
5411736
5011737E

SIDE 2

REV	CHANGE NO	DESCRIPTION

TITLE	LA180 POWER BOARD	SIZE/CODE	E/UA	NUMBER	5411736-0-0	REV	K
SCALE	2/1	SHEET	3	OF	3	DIST	

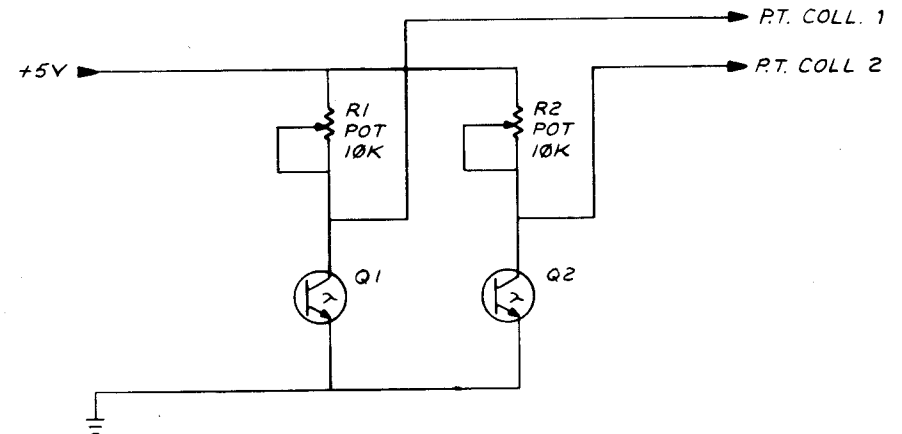
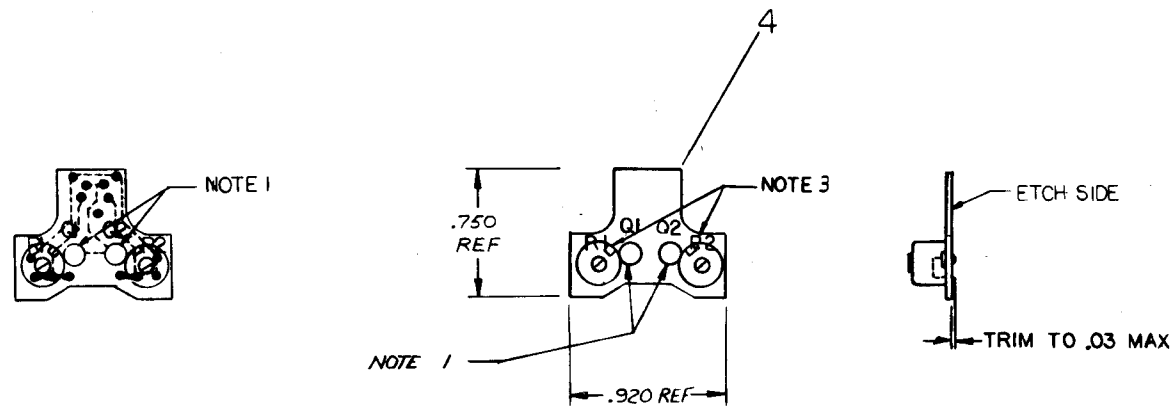
B I UMI 5411736-0-0 K

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NOTES:

1. HEAT APPLIED TO Q1 AND Q2 DURING SOLDERING SHALL NOT EXCEED 285° C FOR A PERIOD OF 15 SECONDS.
2. FINISHED HOLE SIZE FOR MOUNTING Q1 AND Q2 SHALL BE .078 MIN., .083 MAX.
3. R1 AND R2 MUST BE ORIENTED AS SHOWN, WITH NOTCH TOWARD CENTER OF BOARD.
4. AT WORST TOLERANCE CONDITION A .001 INTERFERENCE BETWEEN THE PHOTOTRANSISTOR AND IT'S MOUNTING HOLE IS POSSIBLE.



REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411049-0-1	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5411049-0-5	2
REF		MODULE ECO HISTORY	B-MH-5411049-0-6	3
REF		ETCHED CIRCUIT BOARD	D-IA-5010970-0-0	4
2	R1, R2	POTENTIOMETER 10K	1309150-12	5
2	Q1, Q2	PHOTOTRANSISTOR	1511906	6

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
	ETCH BOARD REV	C		

REV	CHG	CHANGE NO.	REV
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10

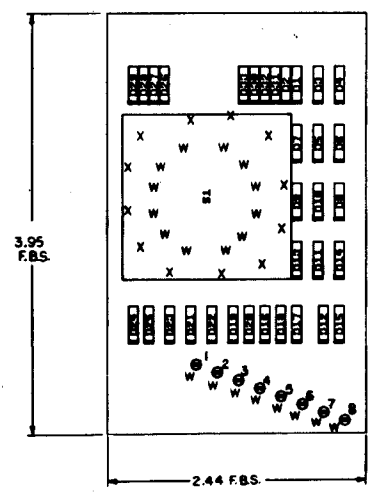
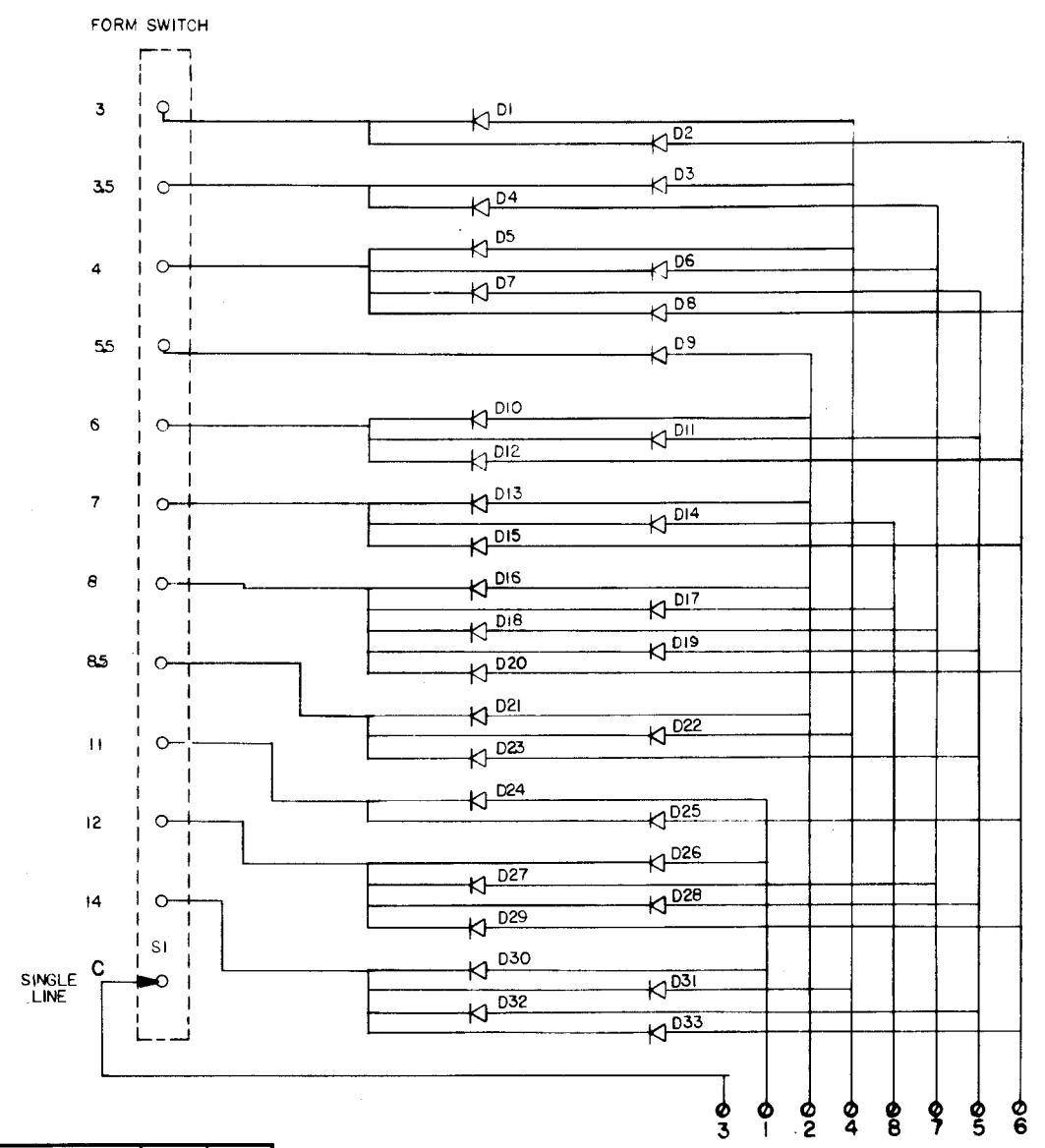
DEC NO.	EIA NO.	DEC NO.	EIA NO.

DRN. <i>J. Desuk</i>	DATE 5/2/74	<p>digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS</p>
CHK'D. <i>J. Desuk</i>	DATE 5/7/74	
ENG. <i>J. Desuk</i>	DATE 7-12-74	
PROD. <i>J. Desuk</i>	DATE 7-25-74	
NEXT HIGHER ASSY		TITLE LA36 ENCODER PC BOARD PHOTOTRANSISTOR
SCALE		SIZE CODE NUMBER REV. DCS 5411049-0-1 E
SHEET / OF /		DIST.

SIZE CODE NUMBER REV
 DCS 5411049-0-1 E

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NOTES:



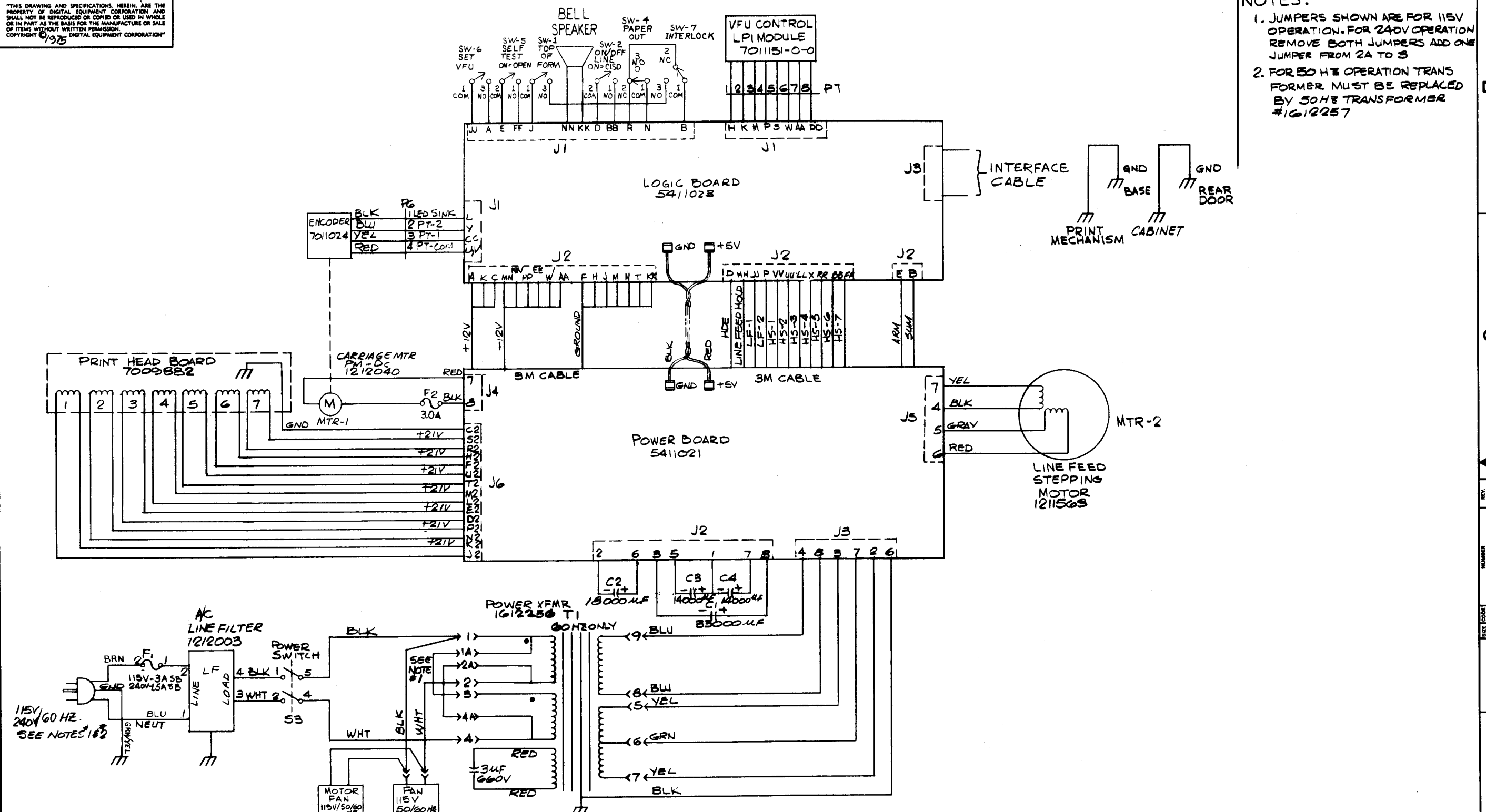
8		SPLIT LUG	9006735-00	7
33	DI-D33	DIODE D664	1100114-00	6
1	SI	SWITCH, SINGLE POLE - 12 POSITION	1212443-00	5
1		ETCHED CIRCUIT BOARD	C-MD-5011652-00	4
REF		MODULE ECO HISTORY	B-MH-5411653-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5411653-0-5	2
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411653-0-4	1
QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

FIRST USED ON OPTION MODEL		LA180		PARTS LIST	
ETCH BOARD REV.		A			
DRN	DATE	 TITLE 6 LPI FORM CONTROL			
CHKD	DATE				
DES	DATE				
PROJ. ENG.	DATE				
PROD	DATE				
NEXT HIGHER ASSY		SCALE NONE		SIZE CODE D CS	
DEC NO.		EIA NO.		NUMBER 5411653-0-1	
SEMICONDUCTOR CONVERSION CHART		SHEET 1 OF 1		REV. *	

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

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NOTES:
 1. JUMPERS SHOWN ARE FOR 115V OPERATION. FOR 240V OPERATION REMOVE BOTH JUMPERS ADD ONE JUMPER FROM 2A TO 3
 2. FOR 50 HZ OPERATION TRANSFORMER MUST BE REPLACED BY 50 HZ TRANSFORMER #1612257



REV.	CHG.	NO.	BY	DATE
1		1	J. BITTO	11/17/75
2		2	J. BITTO	11/17/75
3		3	J. BITTO	11/17/75
4		4	J. BITTO	11/17/75
5		5	J. BITTO	11/17/75
6		6	J. BITTO	11/17/75
7		7	J. BITTO	11/17/75
8		8	J. BITTO	11/17/75

DRN: <i>[Signature]</i>	4/11/75	FIRST USED ON	LA180	digital
CHK'D: <i>[Signature]</i>	4/10/75	TITLE	INTERCONNECTION DRAWING	
ENG. V: <i>[Signature]</i>	4/23/75	PROJECT	LA180-0	
PROD. <i>[Signature]</i>	4/24/75	SCALE	1 OF 1	
NEXT HIGHER ASSY.		SIZE	CODE	NUMBER
E-UA-LA180-0		D	IC	701167-0-0
SHEET		DIST.		REV. D

**DIGITAL EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS**

PACKAGING INSTRUCTION

TITLE DECwriter

REV: E DATE: 8/77
F 3/78
II 10/78

LEGEND

3700131-00	DECwriter with Keyboard
3700131-01	DECwriter without Keyboard

MATERIAL REQUIREMENTS - 3700131-00

Quantity	Purchase Specification No.	Description
1	9905601	Stitched Tube
1	9905601-01	Full Telescope Cap
1	9905639	Pad with Foam (LA36/LA35 only)
1	9905651	Wood Skid
1	9905651-01	Wood Brace
2	9909290-03	3/8-16 X 3 Hex-Head Bolt
1	36-12520-00	Caution Tag
6 ft	90-09634	Stain Resistant Tape
1	90-07032	Panduit Cable Tie
20 ft	9905734-02	Polypropylene Strapping
2	9008319	Washer, Flat
1	9905129-33	Poly Bag 18 X 24

PACKAGING INSTRUCTIONS - 3700131-00
Procedure

- Lift the cover and slide the print head to the left as far as it will go. Slip the Panduit Cable Tie (90-07032) around the ribbon rollers (A and B). Do not over-tighten. Fasten Caution Tag (36-12520-00) to tractor drive shaft. Close cover. (Fig. 1)
- Place Pad with Foam (9905639) (foam side down) on top of the LA36/LA35 keyboard. Tape with two (2) strips of glass filament tape (90-09634). Tape back door closed, using two (2) strips of glass filament tape (90-09634). (Fig. 1)
- Place DECwriter on top of Skid Deck (9905651). (Fig. 2)
- Place all hardware and software into Poly Bag (9905129-33) and staple to deck of skid.
- Place one strip of CW21 (Custom Wrap) or Microfoam, over each leg of the DECwriter.
- Place Wood Braces (9905651-01) on top of legs as far back as it will go to properly align the bolt holes.
- Place Hex-Head Bolts (9909290-03) and washers (9008319) through the bolt holes in the wood braces into the Tee Nuts in the underside of the skid deck; then tighten down.
- Place the Stitched Tube (9905601) over and around the unit. Assemble Full Telescope Cap (9905601-01) and place on top of Stitched Tube.
- Strap in two places as shown in Figure 2.

NOTE
Make sure that the Stitched Tube is resting on the wood skid base, on all 4 sides.

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DCA 8-10831-1003-1-0073 SHEET 1 OF 10

PACKAGING INSTRUCTION

TITLE DECwriter

MATERIAL REQUIREMENTS - 3700131-01

Quantity	Purchase Specification No.	Description
1	9905601	Stitched Tube
1	9905601-01	Full Telescope Cap
1	9905651	Wood Skid
1	9905651-01	Wood Brace (2 X 3)
2	9909290-03	3/8-16 X 3 Hex-Head Bolts
1	36-12520-00	Caution Tag
2 ft	90-09634	Stain Resistant Tape (3M)
1	90-07032	Panduit Cable Tie
20 ft	9905734-02	Polypropylene Strapping
2	9008319	Washer, Flat
1	9905129-33	Poly Bag 18 X 24

PACKAGING INSTRUCTIONS - 3700131-01
Procedure

- Lift the cover and slide the print head to the left as far as it will go. Slip the Panduit Cable Tie (90-07032) around the ribbon rollers (A and B). Do not over-tighten. Fasten Caution Tag (36-12520-00) to tractor drive shaft. Close cover.
- With two (2) strips of glass filament tape (90-09634) tape back door closed.
- Place DECwriter on top of Skid Deck (9905651).
- Place all hardware and software into Poly Bag (9905129-33) and staple to deck of skid.
- Place one strip of CW21 (Custom Wrap) or Microfoam, over each leg of the DECwriter.
- Place Wood Braces (9905651-01) on top of legs as far back as it will go to properly align the bolt holes.
- Place Hex-Head Bolts (9909290-03) and washers (9008319) through the bolt holes in the wood braces into the Tee Nuts in the underside of the skid deck; then tighten down.
- Place the Stitched Tube (9905601) over and around the unit. Assemble Full Telescope Cap (9905601-01) and place on top of Stitched Tube.
- Strap in two places as shown in Figure 2. Use Polypropylene strapping (9905734-02).

NOTE
Make sure that the Stitched Tube is resting on the wood skid base, on all 4 sides.

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DCA 8-10831-1003-1-0073 SHEET 2 OF 10

PACKAGING INSTRUCTION

TITLE DECwriter

CONTINUATION SHEET

DECwriter

METHODS OF TRUCK SHIPMENTS, TRUCK SIZES AND CONFIGURATIONS FOR DECwriters (Cont)

This section of the Packaging Instruction lists the approved methods of shipping full truck load and partial truck load quantities of DECwriters; LA35, LA36, LA120, LA180 etc.

The methods outlined below apply to the following types of shipments shown in Table 1.

Table 1

Truck Type	DECwriter Height	Length (in)	Interior Truck Dimensions Width (in)	Height (in)	Figure and Title
1. Common Carrier and Ocean Container	Two High with Skids	450	92.5	111.5	2.1 Truck Dimensions 2.2 Configuration 2.3 Skid
2. Electronics Air Ride Van	Two High	126 + 346 Step	92.5	103.5 + 111.5 Step	3.1 Truck Dimensions 3.2 Configuration
3. King Size Air Ride Van	Three High With Plywood	108 + 430 Step	92.5	105 + 122 Step	4.1 Truck Dimensions 4.2 Configuration 4.3 Plywood Skid
4. Full and Partial Truck Load Temporary Barricades					5.1 Barricades

COMMON CARRIER AND OCEAN CONTAINER

The Common Carrier or the Ocean Container is a leaf spring truck designed for a payload of 40,000 lbs. with inside dimensions as shown on Figure 2.1. The DECwriters weigh about 145 lbs each packaged with 76 machines per truckload for a total weight of about 11,000 lbs. This is not enough weight to allow the springs to act as springs, consequently we have damaged DECwriters on the last 16 machines over the rear axle. The solution to the damage problem is to put cushioning under these last 16 machines to protect them. Figure 2.2 shows the truckload of DECwriters with the cushioning under the last 16 machines. Figure 2.3 shows the cushioned skid.

ELECTRONICS AIR RIDE VAN

The Electronics Van usually has a stepped body with dimensions as shown in Figure 3.1. The Air Ride system is a bag of air which acts in conjunction with the leaf springs and cushions the cargo over a wider weight range. It is for superior in cushioning ability to the hard spring above. The truck load configuration of DECwriters is shown in Figure 3.2.

KING SIZE AIR RIDE VAN

The King Size Van is an Air Ride Electronics Van of greater height than the normal Air Ride Electronics Van. It can take DECwriters stacked three high separated by a sheet of plywood between the second and third machines. Figure 4.1 shows the truck dimensions. Figure 4.2 shows the DECwriter three high in the truck separated by plywood. Figure 4.3 shows the plywood.

PGCY-BACK

There is no provision yet for PGCY Back shipments of DECwriters.

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PACKAGING INSTRUCTION

TITLE DECwriter

CONTINUATION SHEET

DECwriter

METHODS OF TRUCK SHIPMENTS, TRUCK SIZES AND CONFIGURATIONS FOR DECwriters (Cont)

PARTIAL LOAD - LESS THAN FULL TRUCK LOAD
Partial Loads in trucks may be held in place and protected from tip over by one of the following barricade methods. Figure 5-1 illustrates these methods in the truck.

1. LOAD LOCKS

Load Locks are rectangular or round bars which rest on or unscrew like a lally column horizontally and force against the sidewalls of the truck to prevent movement of cargo. They can be used in any type truck.

2. CHANNEL LOCKS

Channel Locks are rectangular cross section bars which fit into slotted rails built into the sidewalls of Electronic Van type trucks. The slotted rails are spaced about every 18 inches.

3. STRAPS AND BUCKLES

Straps and Buckles fit into the same slotted rails as the Channel Locks and are tensioned with a buckle. Rails are built into Electronic Vans only.

4. AIR BAG

The Air Bag is an inflatable paper and plastic bag which can only be used between two sections of cargo or between the cargo and the rear door if the space is small enough. The bags will take up a maximum of one foot of space.

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		<u>E</u>	<u>8/77</u>
		<u>F</u>	<u>4/78</u>
TITLE	DECWRITER		

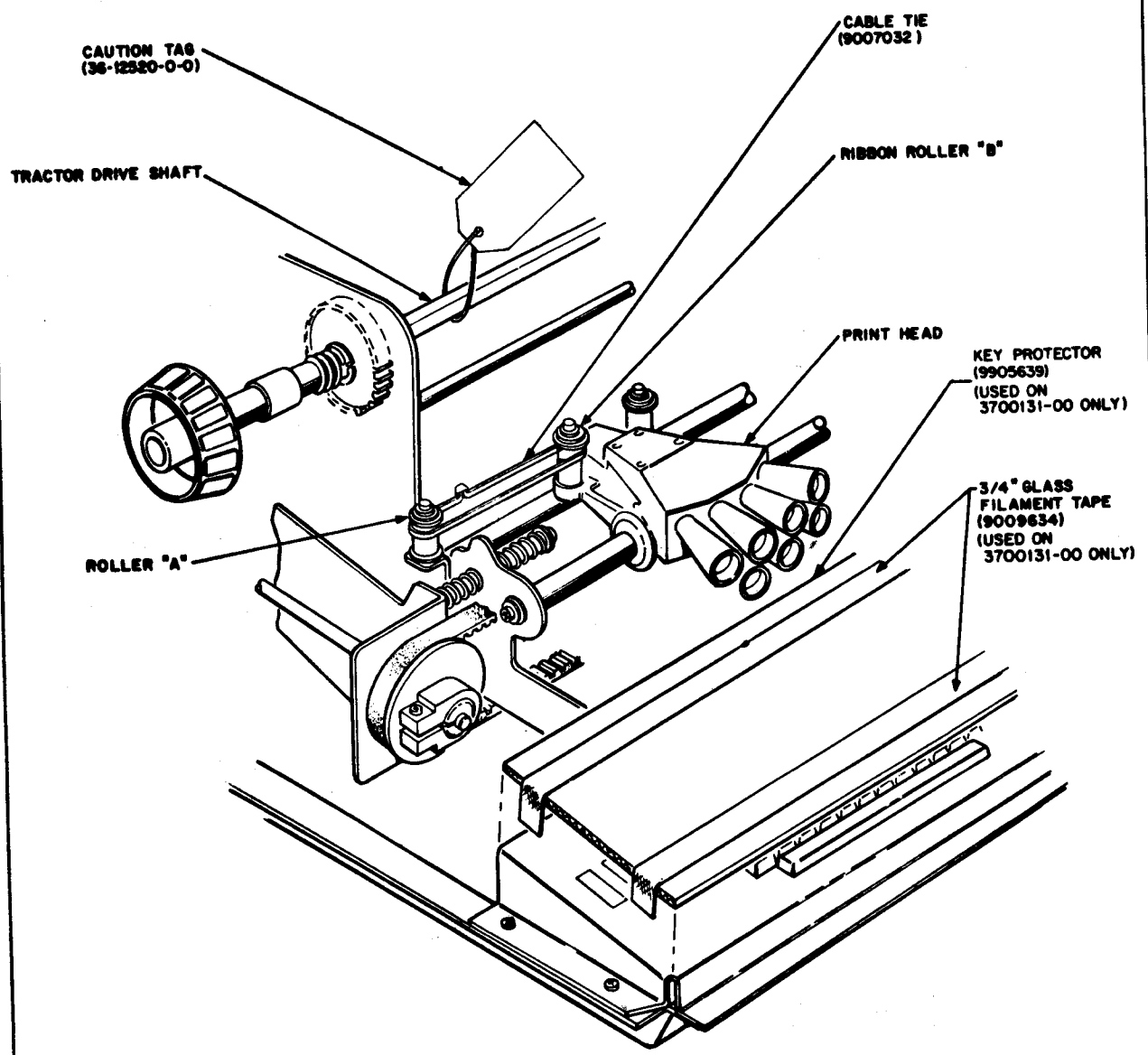


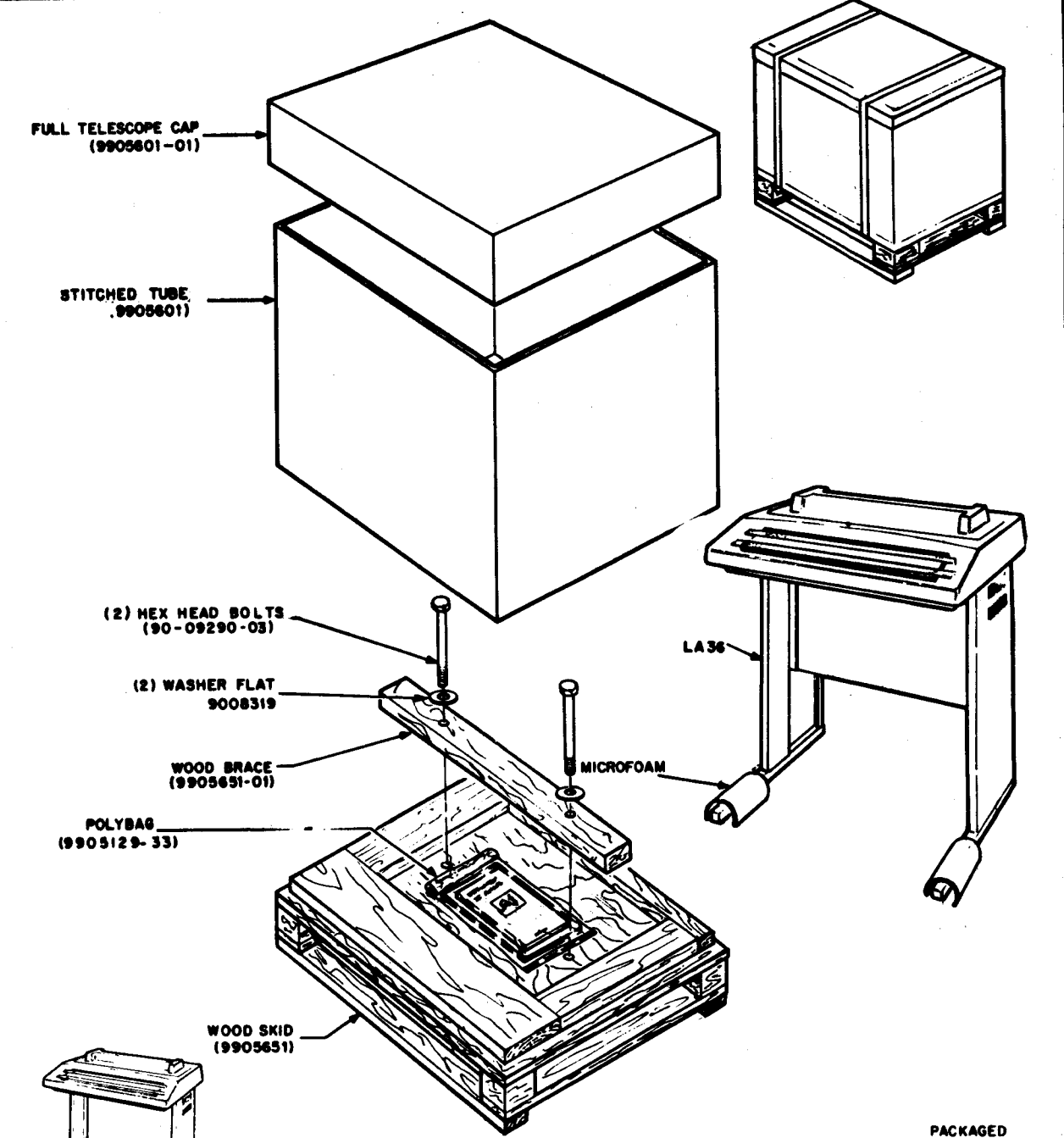
FIGURE 1

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

ENG. <i>Ken Merian</i> 7/7/75	APPD. <i>J. W. Lawrence</i> 11/7/75	SIZE A	CODE SP	NUMBER 3700131-0-0	REV H
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		<u>E</u>	<u>8/77</u>
		<u>F</u>	<u>4/78</u>
TITLE	DECWRITER		



NOTE: Make changes to "C" size originals only and rephotograph.

ENG. <i>Ken Merian</i> 9/4/75	APPD. <i>J. W. Lawrence</i> 2/24/75	SIZE A	CODE SP	NUMBER 3700131-0-0	REV H
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	PACKAGED DIMENSIONS & WEIGHTS	
	U.S.A.	METRIC
WEIGHT	145.00lb.	65.91 KILO
LENGTH	37.0in.	940 mm
WIDTH	290.0in.	737 mm
HEIGHT	40.9in.	1039 mm
CUBE	25.40cu. ft.	0.72cu. m
DENSITY	5.71lb/cu. ft.	91.5kg/cu. m

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TITLE: <u> DECWRITER </u>		<u> F </u> <u> 4/78 </u>
		<u> H </u> <u> 10/78 </u>

FIGURE 2.1
COMMON CARRIER DIMENSIONS

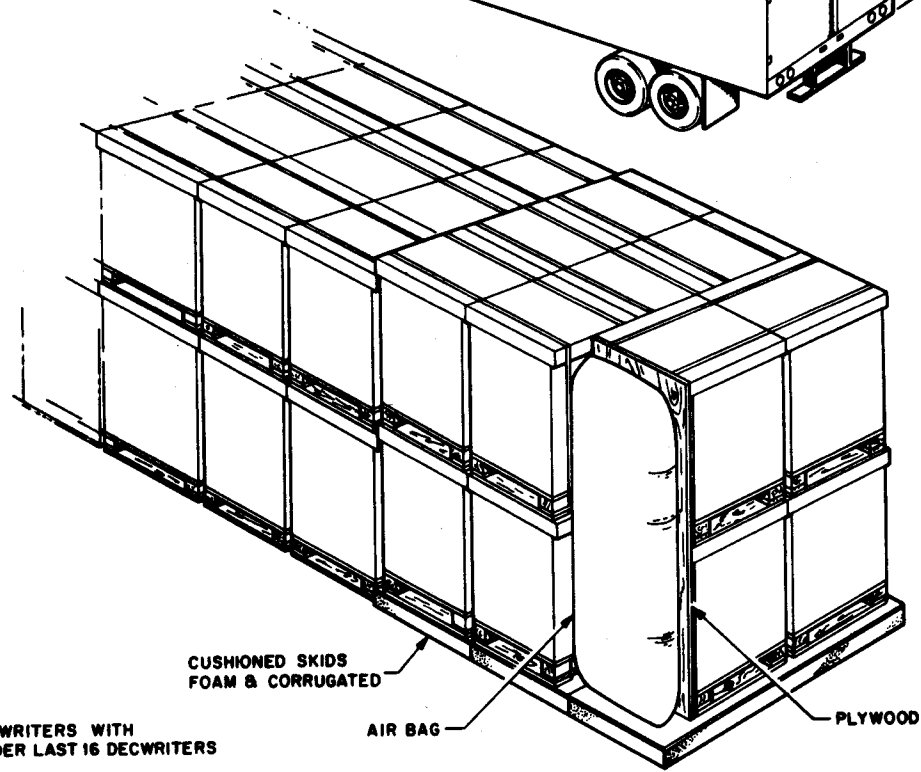
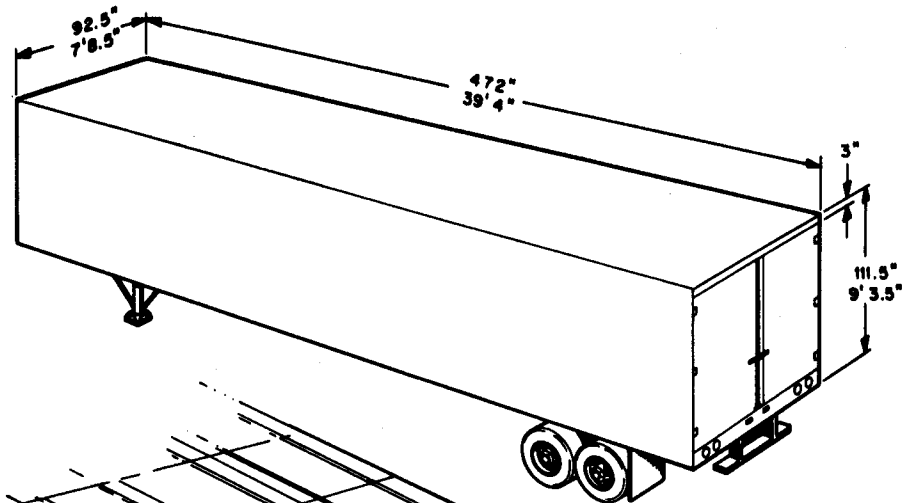


FIGURE 2.2
COMMON CARRIER DECWRITERS WITH CUSHIONED SKIDS UNDER LAST 16 DECWRITERS OVER REAR AXLE.

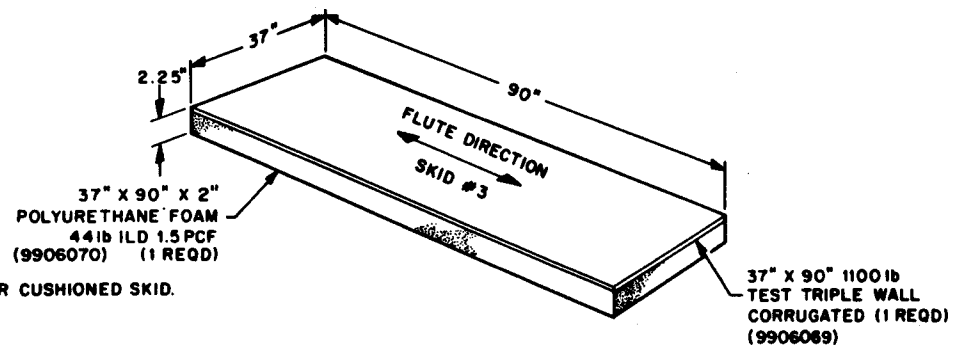


FIGURE 2.3
COMMON CARRIER CUSHIONED SKID.

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

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TITLE: <u> DECWRITER </u>		<u> F </u> <u> 4/78 </u>
		<u> H </u> <u> 10/78 </u>

FIGURE 3.1
ELECTRONICS VAN AIR RIDE INSIDE DIMENSIONS

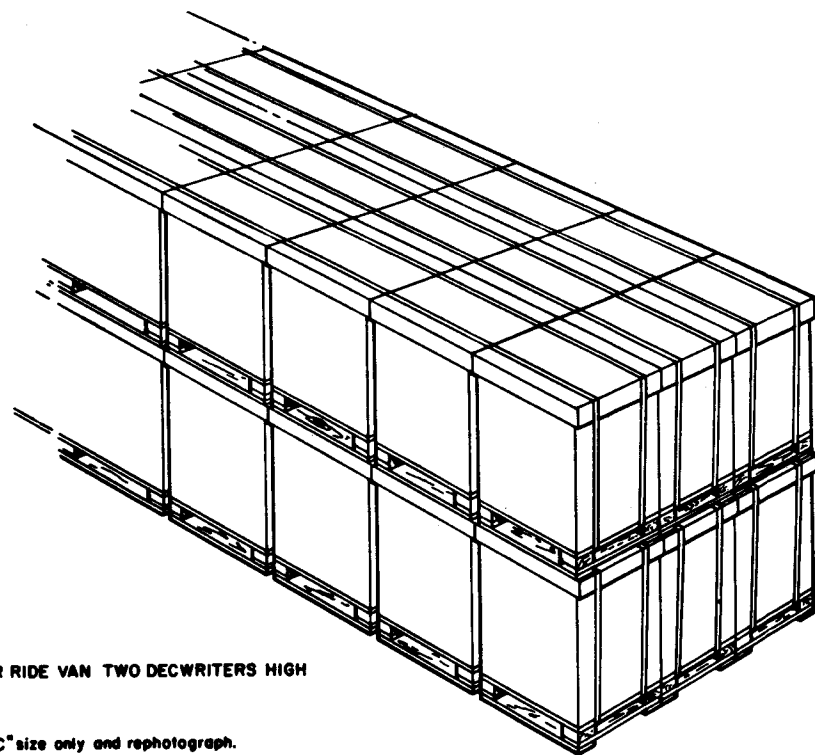
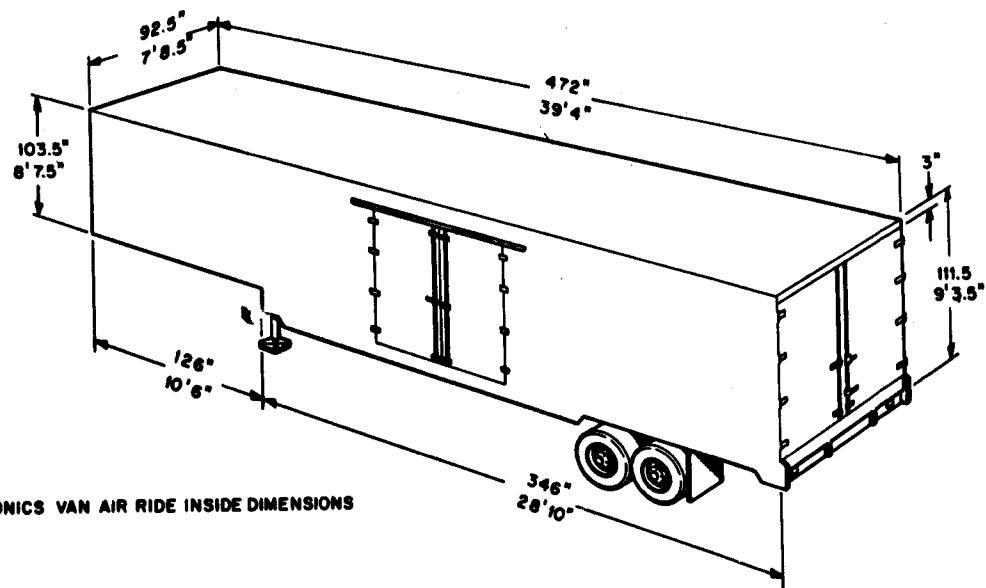


FIGURE 3.2
ELECTRONICS VAN AIR RIDE VAN TWO DECWRITERS HIGH

NOTE:
Make changes to "C" size only and rephotograph.

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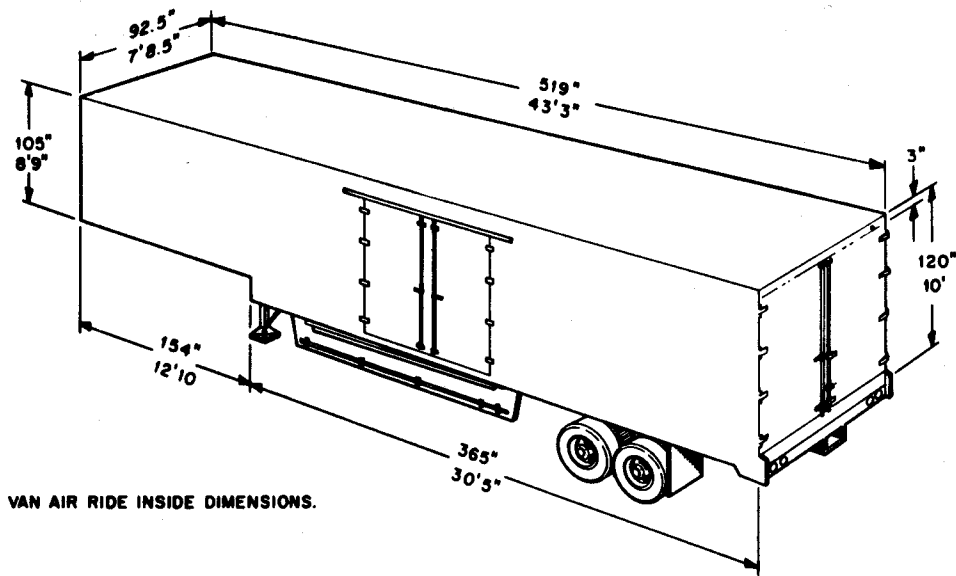


FIGURE 4.1
 KING SIZE VAN AIR RIDE INSIDE DIMENSIONS.

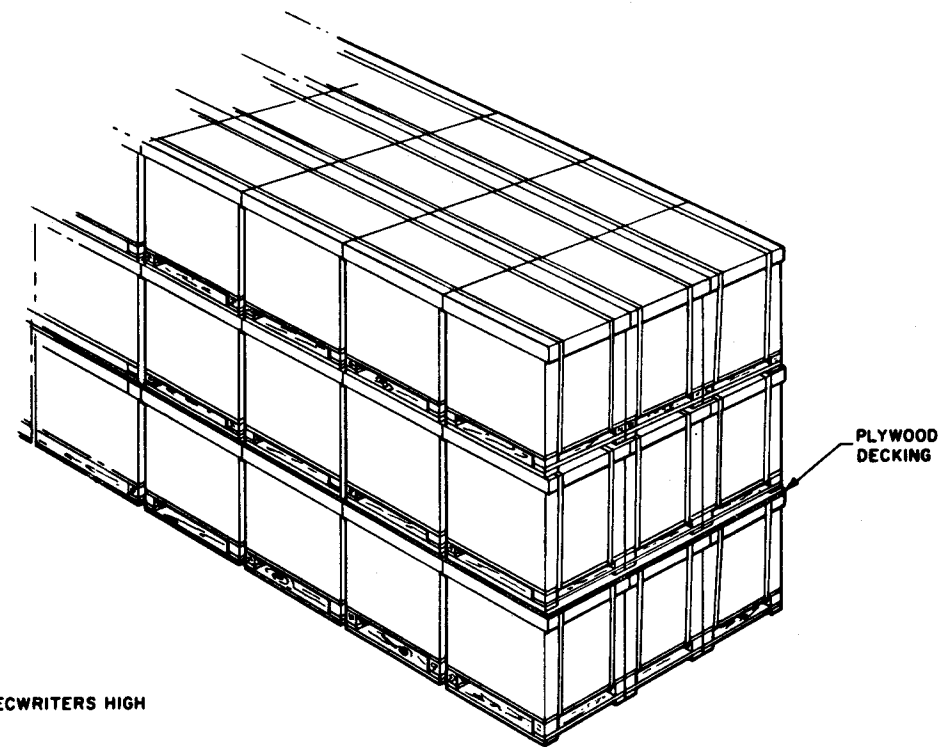


FIGURE 4.2
 KING SIZE VAN THREE DECWRITERS HIGH
 SEPARATED BY PLYWOOD

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

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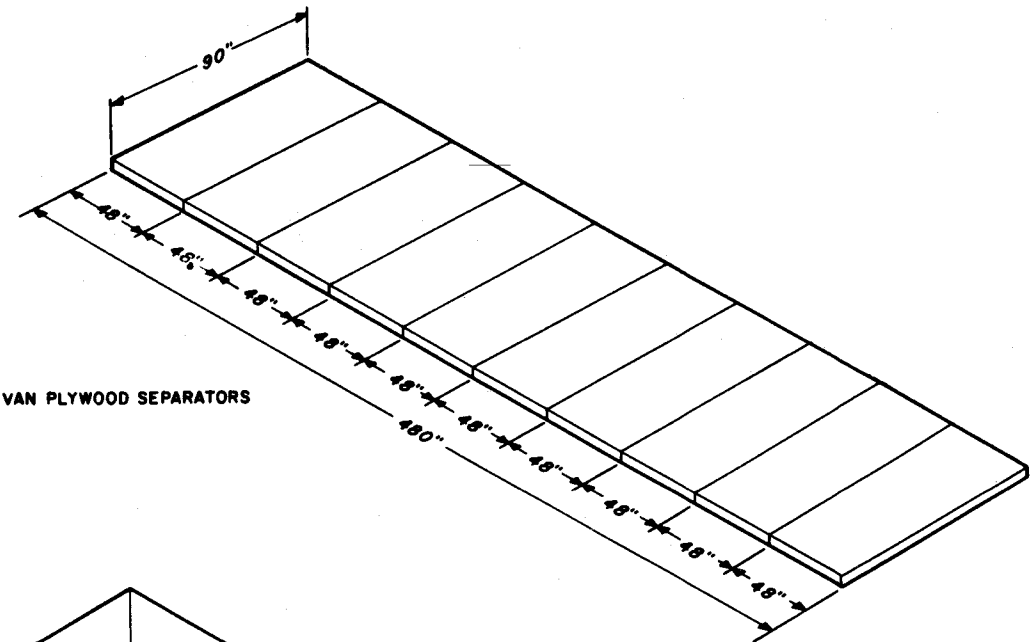


FIGURE 4.3
 KING SIZE VAN PLYWOOD SEPARATORS

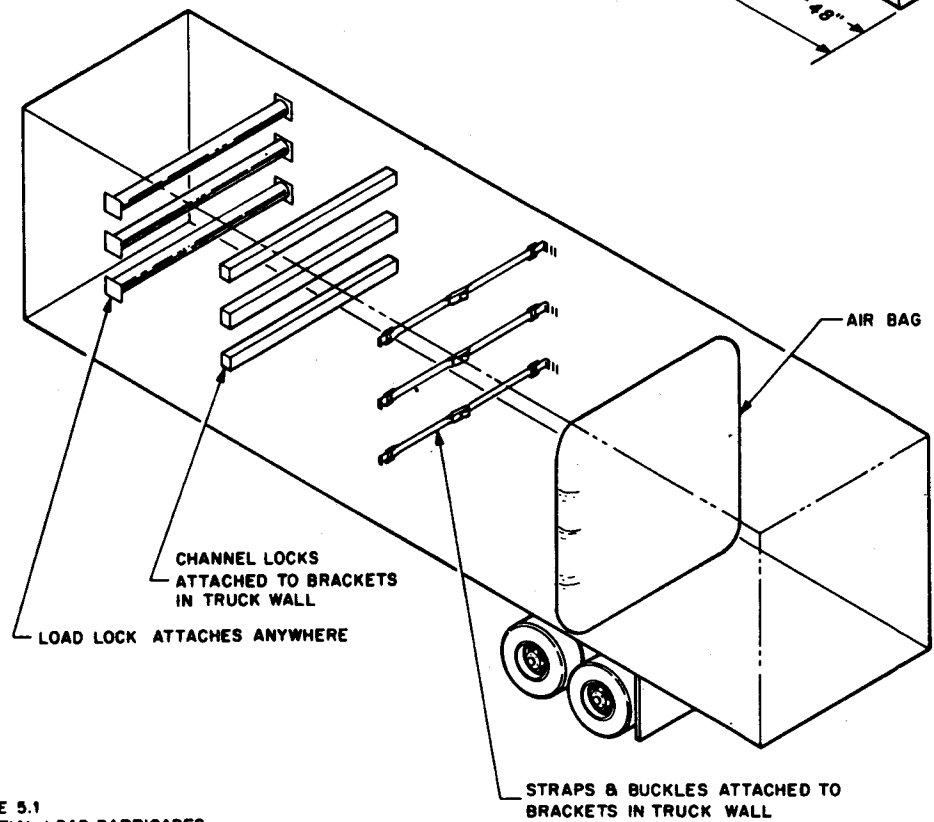


FIGURE 5.1
 PARTIAL LOAD BARRICADES

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

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