

FIELD MAINTENANCE PRINT SET

TABLE OF CONTENTS

[illegible]MSII-L
Field Maintenance
Print Set

Digital Equipment Corporation

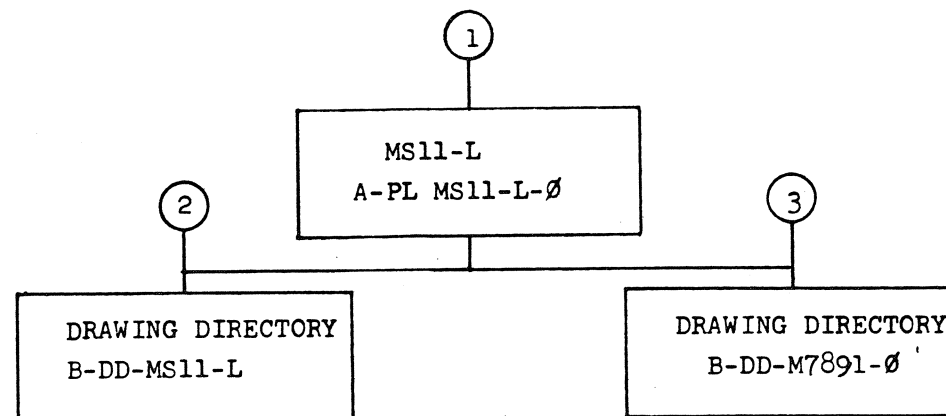
MP00672

<div style="display: flex; justify-content: space-between;"> <div> REVISIONS <div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between;"> <div> DATE 1-20-82 1-2-82 1-12-82 </div> <div> CHG. NO. MS11-L-MLOOI <i>Don Given</i> </div> </div> </div> </div> </div>	REV. A	USED ON OPTION/MODEL PDP 11/34	DRN. E. DEVRIES	DATE 9/28/78	<div style="display: flex; justify-content: space-between;"> <div> TITLE: MS11-L (128K X 18) MOS MEMORY SYSTEM </div> <div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between;"> <div> SIZE B </div> <div> CODE TC </div> <div> NUMBER MS11-L-1 </div> <div> REV. A </div> </div> </div> </div>										
	DATE 1-20-82	CHG. NO. MS11-L-MLOOI	USED ON OPTION/MODEL PDP 11/34	CHK'D R. V. Milano	DATE 9/28/78	<div style="display: flex; justify-content: space-between;"> <div> TITLE: MS11-L (128K X 18) MOS MEMORY SYSTEM </div> <div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between;"> <div> SIZE B </div> <div> CODE TC </div> <div> NUMBER MS11-L-1 </div> <div> REV. A </div> </div> </div> </div>									
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	DATE 1-20-82	CHG. NO. MS11-L-MLOOI	USED ON OPTION/MODEL PDP 11/34	FIELD SERV. R. W. Richard	DATE 9/28/78	<div style="display: flex; justify-content: space-between;"> <div> TITLE: MS11-L (128K X 18) MOS MEMORY SYSTEM </div> <div style="border: 1px solid black; padding: 2px;"> <div style="display: flex; justify-content: space-between;"> <div> SIZE B </div> <div> CODE TC </div> <div> NUMBER MS11-L-1 </div> <div> REV. A </div> </div> </div> </div>									
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REV.	NUMBER	SIZE	CODE
	MS11-L	B	DD

TITLE	SIZE	CODE	NUMBER	REV
DRAWING DIRECTORY MS11 (128K X 18) MCS MEMORY SYSTEM	B	DD	MS11-L	*

SHEET 2 OF 3

DIGITAL EQUIPMENT CORPORATION

MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY E. DEVRIES

CHECKED *R. Marion*

SECTION 1

DATE _____

DATE 9/26/78

ENG *R. Given*

PROD	Bob Schaub
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DATE 9-28-78

DATE 9/28/78

ISSUED SECT.	3
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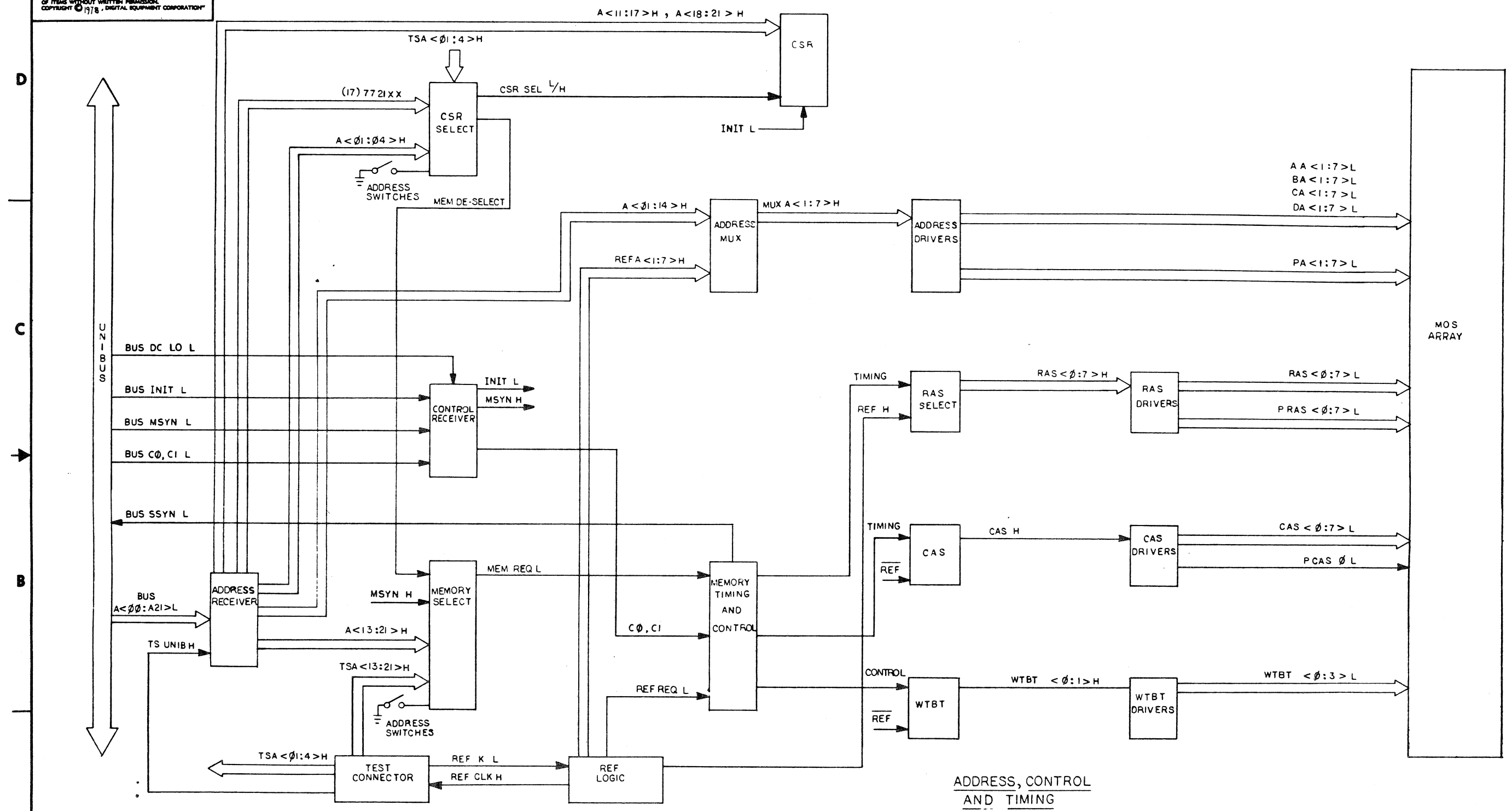
1

[illegible][illegible]

TITLE	MS11-L (128K X 18) MOS MEMORY SYSTEM	ASSY NO. B-DD-MS11-L	SIZE A	CODE PL	NUMBER MS11-L-Ø	REV *	ECO NO.
SHEET	1 OF 1	DIST					

DEC FORM
DRA 110

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ADDRESS, CONTROL
AND TIMING

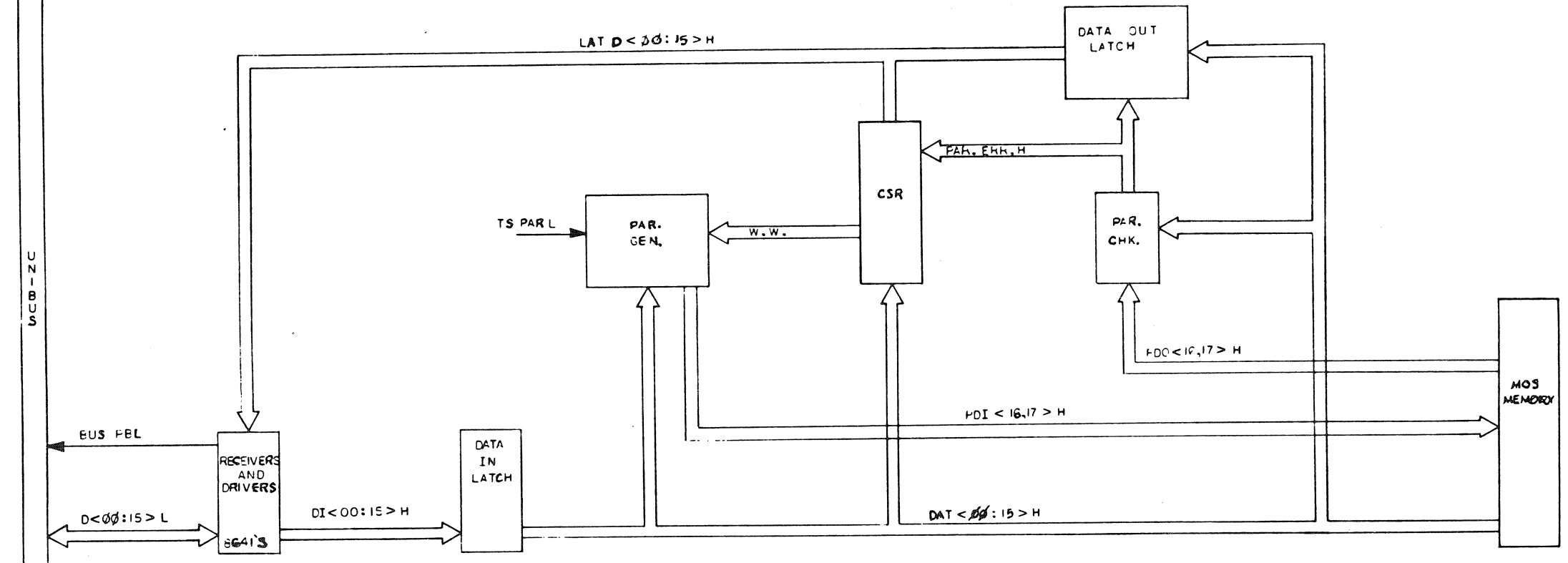
DRN. E. DE VRIES	17 AUG 78	FIRST USED ON	Digital
CHK'D R. M. M. M.	9/14/78	TITLE	MS11-L-1
ENG. R. M. M. M.	9-28-78		BLOCK DIAGRAM
PROJ. ENG. R. M. M. M.	9-28-78		
PROD. R. M. M. M.	9/21/78		
NEXT HIGHER ASSY.			
B DD MS11-L-0		SIZE	CODE
SCALE		D	BD
SHEET	1 OF 2	DIST.	

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MS11-L-4

2

U-C-B-Z-C

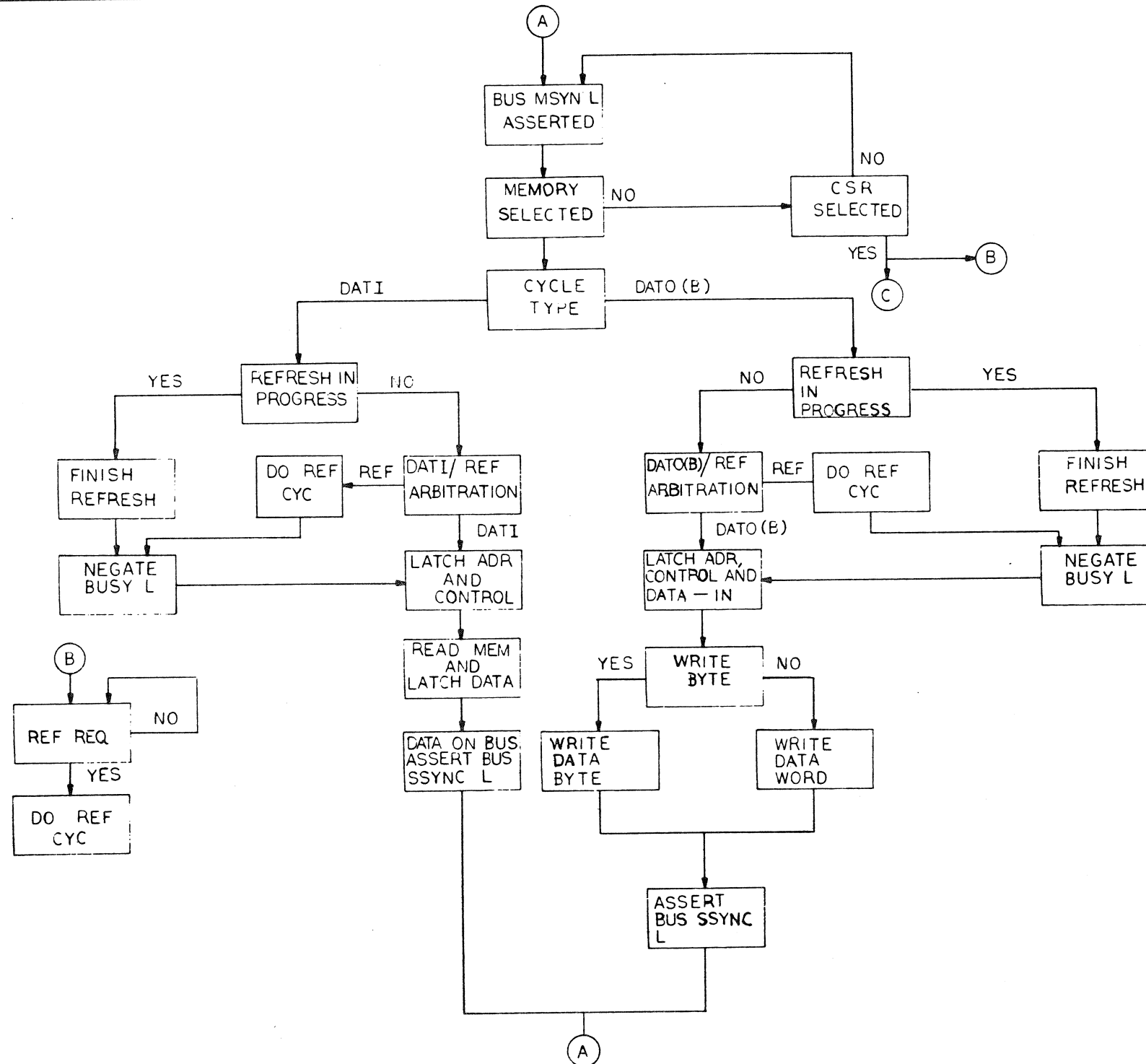


TEST CONNECTOR TS PAR L

DATA

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE MS11-L BLOCK DIAGRAM		SIZE CODE D BD	NUMBER MS11-L-4	REV. *
SCALE	SHEET 2 OF 2	DIST.		

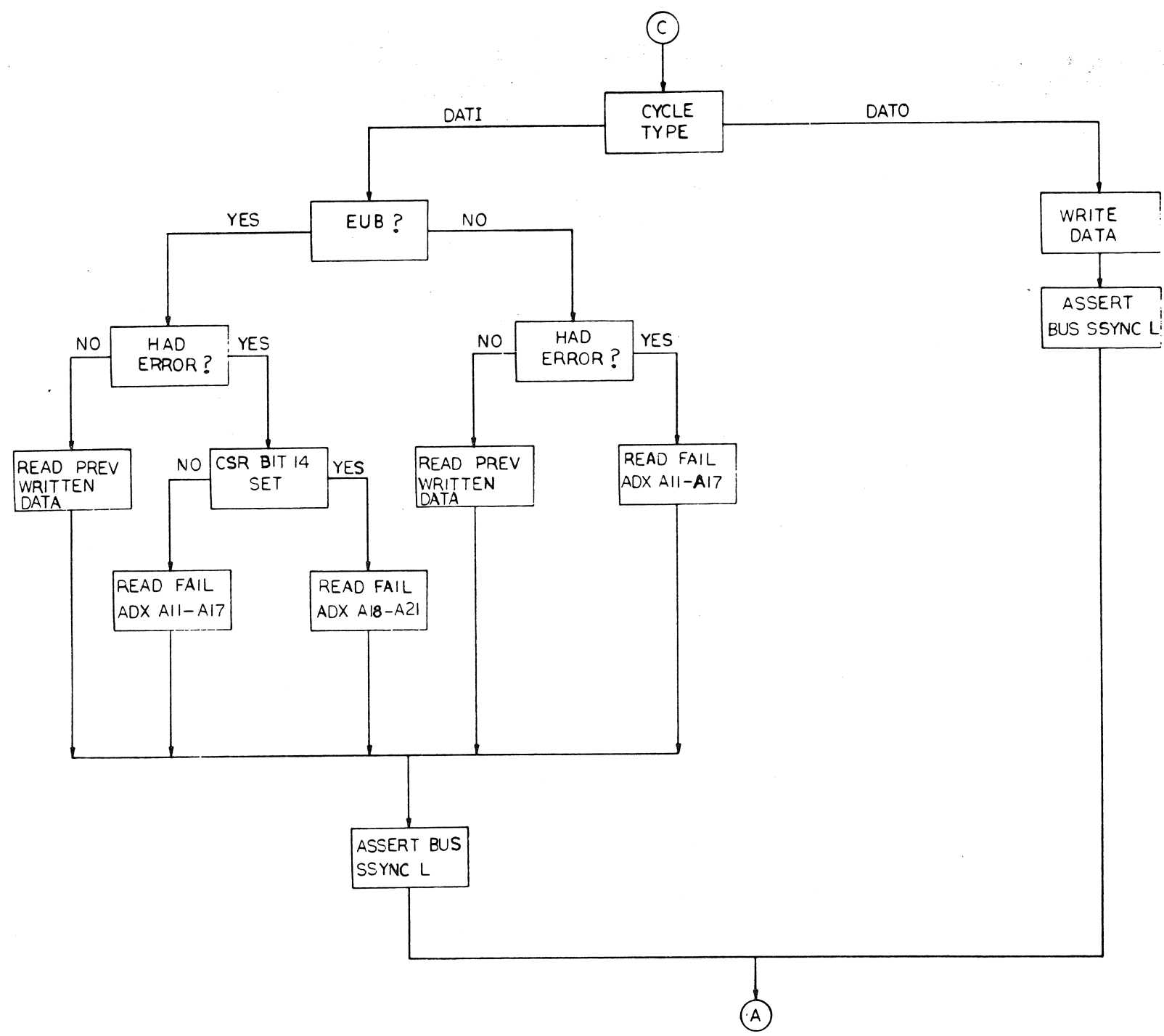


DRN. E. DeVries	27-6-78	FIRST USED ON		digital	
CHKD R. Mamm	9/26/78	TITLE MS11-L (DAT1/DATO) FLOW DIAGRAM			
ENG. R. Mamm	9-28-78				
PROJ. ENG. R. Mamm	9-28-78				
PROD. R. Mamm	9/29/78				
NEXT HIGHER ASSY.					
B-DD-MS11-L		SIZE	CODE	NUMBER	REV.
SCALE		D	FD	MS11-L-5	*
SHEET 1 OF 2		DIST.			

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8 7 6 5 4 3 2 1

MSII-L-5



REVISIONS		
CHK	CHANGE NO.	REV.

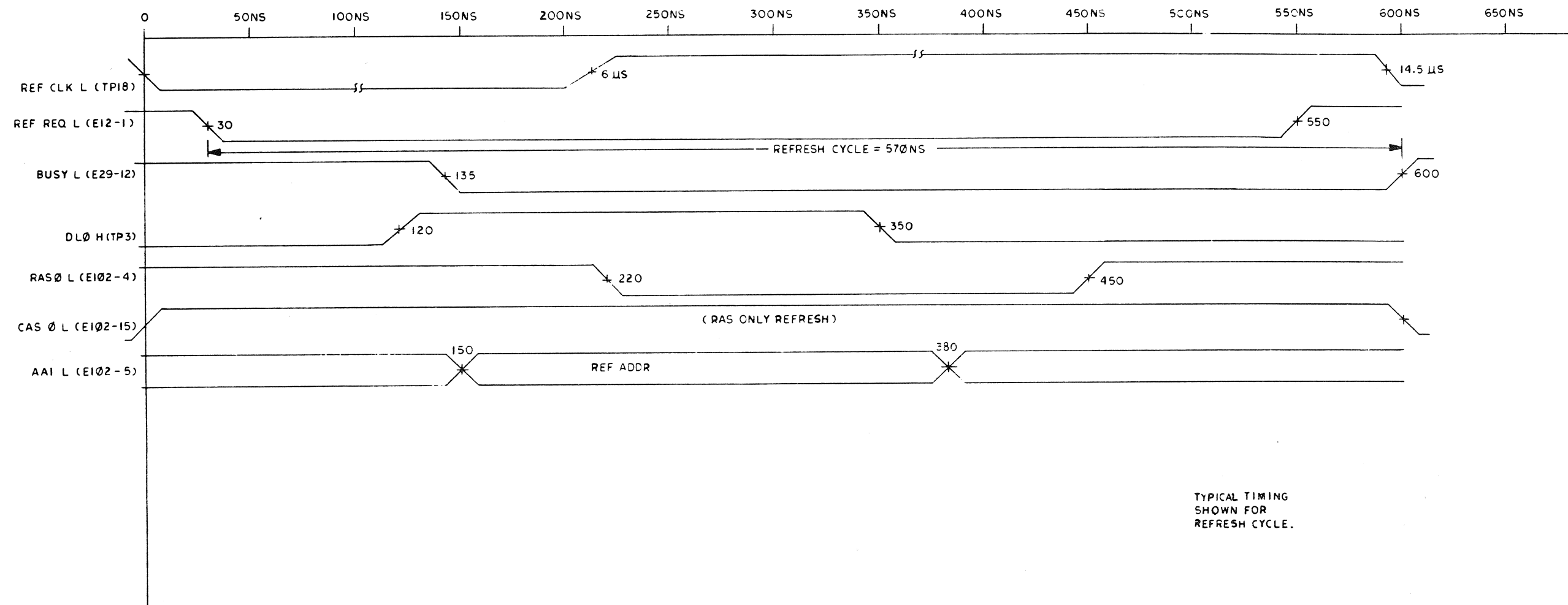
TITLE MSII-L (DATI/DATO) FLOW DIAGRAM		SIZE CODE D FD	NUMBER MSII-L-5	REV. *
SCALE	SHEET 2 OF 2	DIST.		

8 7 6 5 4 3 2 1

MSII-L-5

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REFRESH CYCLE

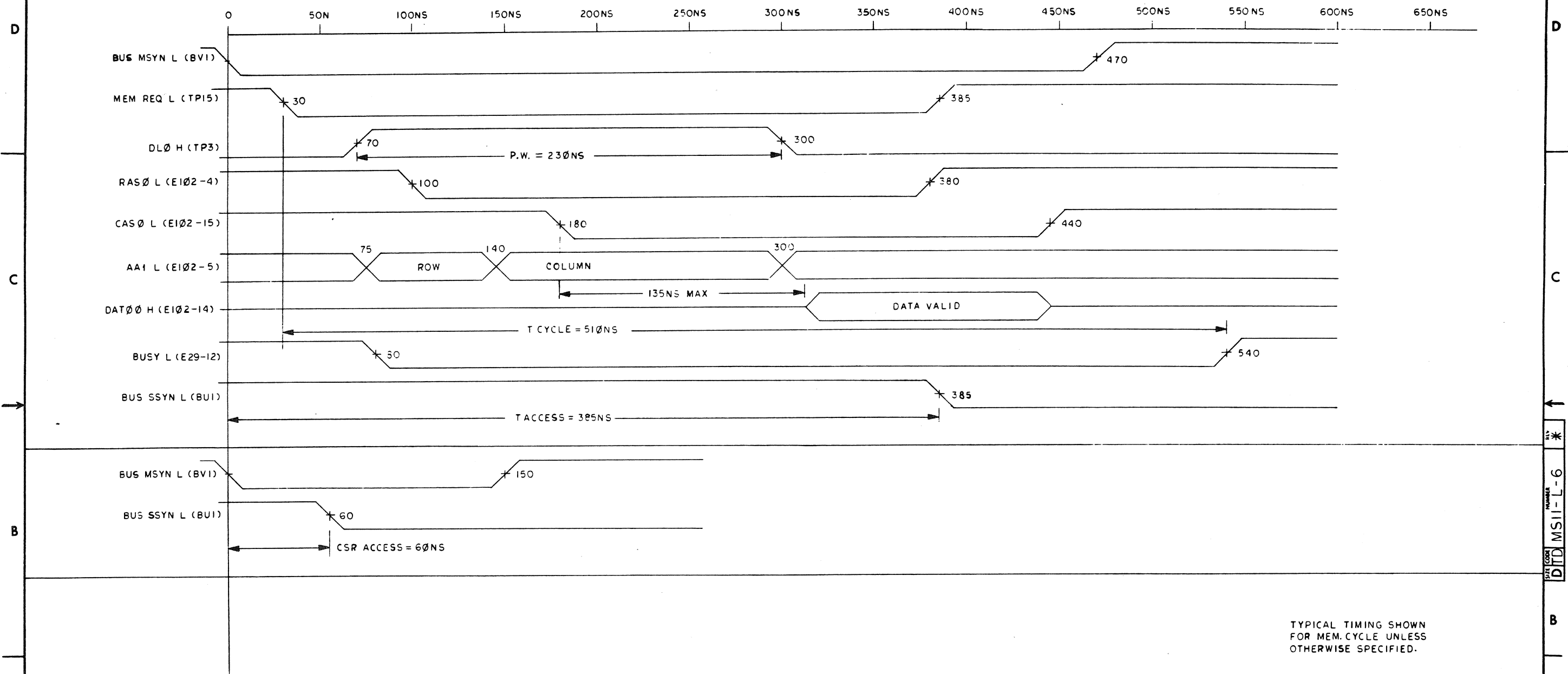


TYPICAL TIMING
SHOWN FOR
REFRESH CYCLE.

DRN: J. Vance	6-30-78	FIRST USED ON	digital
CHK'D: R. H. H.	9-28-78	TITLE	MSII-L
ENG: R. H. H.	9-28-78	NUMBER	MSII-L-6
PROJ. ENG: R. H. H.	9-28-78	REV.	*
PROD: J. J. J.	9-28-78	SCALE	1 OF 3
NEXT HIGHER ASSY.		SHEET	1 OF 3
B-DD-MSII-L		DIST.	

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DATI CYCLE

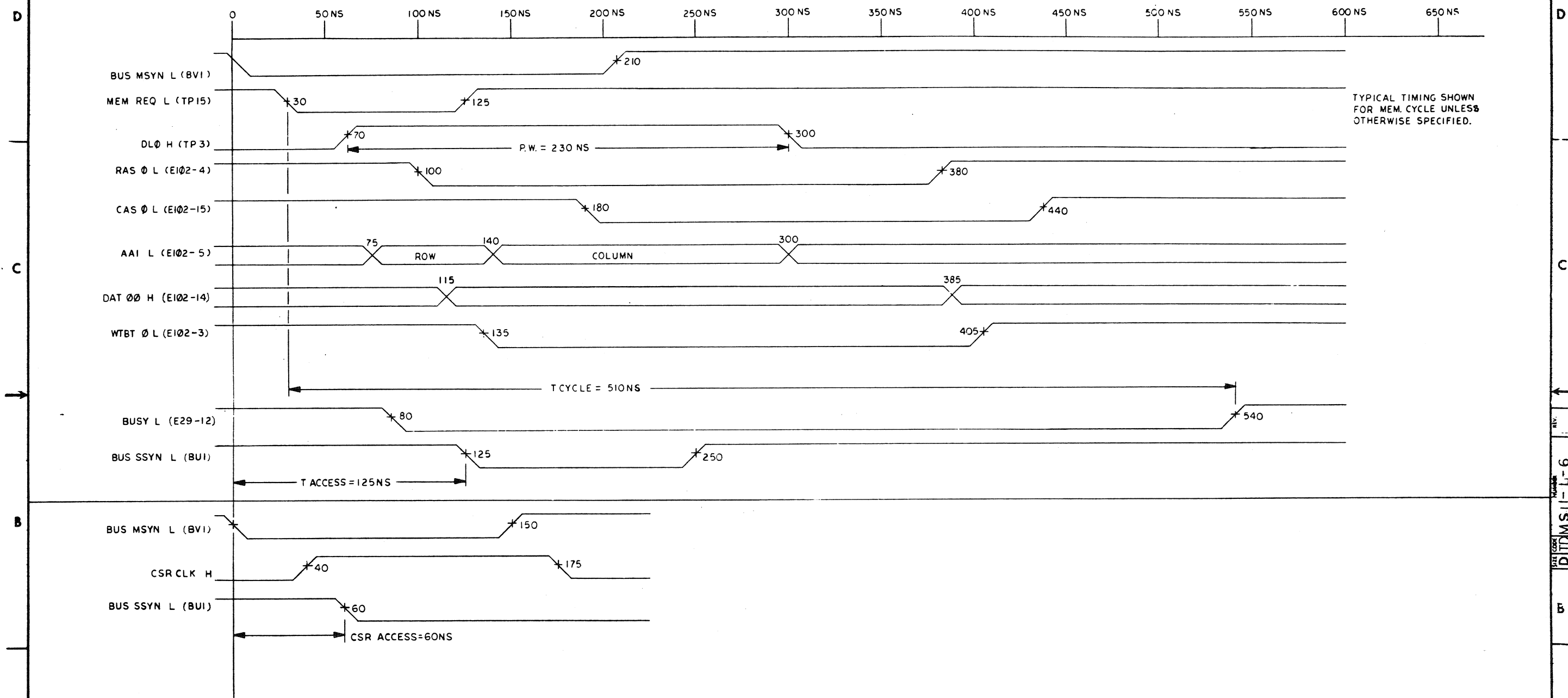


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		MSII-L TIMING	SIZE/CODE	NUMBER	REV.
DIAGRAM			DTD	MSII-L-6	*
SCALE			SHEET 2 OF 3		DIST.

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1978

DATA CYCLE




REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	MSII-L TIMING DIAGRAM
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SIZE	CODE	NUMBER
D	TD	MSII-L-6

REV
*

SCALE  SHEET 3 OF 3

[illegible]

LINE	ITEM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
1	1	D-CS-M7891-0-1		CIRCUIT SCHEMATIC	REF	
2	2	D-UA-M7891-0-0		UNIT ASSEMBLY	REF	
3	3	D-DD-M7891-0-0		DRAWING DIRECTORY	REF	
4	4	D-MD-5013399-0-0		DRILL AND ETCH DRAWING	REF	
5	5	SEE NOTES BELOW.	5013399-00	128K X 18 MOS. MEM	1	
6	6		1001610-00	.01 MFD 50V 25U 309CER/8000PF MIN	49	C1,C2,C141-C182,C264,C266,C268,C270,C272
7	7		1010279-01	.47 MFD 25V 20% 2C023 CER.	90	C6,C8,C184-C263,C267,C269,C271,C273,C265,C278-C280
8	8		1012084-01	8 MFD 25V G% 30D AL EL (10-12	4	C10-C12,C276
9	9		1012121-00	220.0 MMF 100V 1%200PPM DM15S	2	C4,C5
10	10		1012219-00	47. MFD 30V G% 600D AL EL	5	C3,C9,C274,C275,C277
11	11		1109988-00	***** THIS ITEM IS NOT USED *****		
12	12		1110324-00	LED 1MCD010MA 8MV5054-1#HP4882	1	D3
13	13		1114384-00	LED 105MW 35MA GREEN	1	D2
14	14		1209941-06	HEADER,100 20POS RT ANGLE	1	J1
15	15		1210711-02	HANDLE,HFX MODULE,10-1/2	1	
16	16		1211751-00	FUSE, SUB-MINI, 2.000A, 125V, AXIAL LEAD	1	F1
17	17		1211164-00	SW,DIP 1P 1A 4POS	1	E47
18	18		1211164-05	SW,DIP 1P 1A 9POS	1	E61
19	19		1300271-00	220 1/4W 5% CC (13-00	3	R29,R32,R33
20	20		1300295-00	330 1/4W 5% CC (13-00	1	R3
21	21		1315679-00	R NETWORK 3-39 OHM RESISTORS 5% SIP	5	R36-R40
22	22		1300316-00	470 1/4W 5% CC (13-00	4	R11,R14,R19,R23
23	23		1300365-00	1 K 1/4W 5% CC (13-00	4	R13,R16-R18
24	24		1301874-00	5.6 K 1/4W 5% CC (13-00	4	R12,R15,R28,R30
25	25		1302377-00	39 1/4W 5% CC (13-00	2	R8,R35
26	26		1302411-00	511 1/4W 1% RN55D-F 100PPM (13-00	1	R6
27	27		1302874-00	147 1/4W 1% RN55D-F 100PPM (13-00	2	R7,R21
28	28		1302957-00	121 1/4W 1% RN55D-F 100PPM (13-00	1	R2

REVISION HISTORY			VARIATIONS FOR THIS ASSY.		FIRST USED ON: 11/34		DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK	ECO NO	REV	DC,DD,DE,CC,CD,CF,AC AD,AF,BC,BD,BF	MADE BY: H. WEINBRENNER	DATE: 13-SEP-78	TITLE		
---	INIT	A		CHECKED: R. V. MANION	DATE: 13-SEP-78	PARTS LIST		
				DSN, ENG. I. R. GIVEN	DATE: 13-SEP-78	MS11-LD 128K X 18 MOS MEMORY		
				PROD. I. R. SCHAAF	DATE: 13-SEP-78	SIZE	CODE	DOCUMENT NUMBER
				RESP. ENG. I. R. GIVEN	DATE: 13-SEP-78	K	PL	M7891-DC-DBP
						ASSY. NO.	D-UA-M7891-0-0	EDIT#
								6
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LINE	ITEM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
29	29		1303110-00	19.6 1/4W 1% RN55D-F 100PPM (13-00	1	R10
30	30		1303156-00	34.8 K 1/4W 1% RN55D-F 100PPM (13-00	1	R5
31	31		1305123-00	215 1/4W 1% RN55D-F 100PPM (13-00	1	R20
32	32		1305322-00	7.5 K 1/4W 1% RN55D-F 100PPM (13-00	1	R4
33	33		1312466-00	10 1W 1% WW (13-00	1	R1
34	34		1315678-00	R NETWORK 3-18 OHM RESISTORS 5% SIP	16	R41-R56
35	35		1315339-00	R NETWORK 4-5K RESISTORS 5% SIP	7	R9,R22,R24-R27,R31
36	36		1613120-00	DELAY= 200NS,10TAPS	1	E18
37	37		1910532-00	74S00 NAND GATE-QUAD 2IN	3	E16,E46,E53
38	38		1910533-00	74S03 NAND GATE-QUAD 2IN,OPN COLLECT	1	E7
39	39		1910536-00	74S10 NAND GATE-TRIPLE 3IN	2	E28,E39
40	40		1910537-00	74S11 AND GATE-TRIPLE 3INPUT	2	E29,E44
41	41		1910539-00	74S20 NAND GATE-DUAL 4INPUT	1	E59
42	42		1910544-00	74S74 FF-D DUAL,EDGE TRIGGER	2	E33,E34
43	43		1910544-01	74S74-60GG-D DUAL,EDGE TRIGGER,SYNCHR	1	E6
44	44		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E58,E65
45	45		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,UNIBUS,Q-BU	6	E48,E62,E25,E31,E37,E41
46	46		1911573-00	74S280 PARITY GEN/CHKR,9BIT ODD/EVEN	4	E42,E49,E56,E63
47	47		1911579-00	8641 TRANSCEIVER,BUS,QUAD,UNIBUS	6	E1,E3,E8,E13,E19,E55
48	48		1911675-00	74S138 DECODER-THREE INPUT	1	E51
49	49		1911944-00	555CN TIMER,FUNCT.BLOCK	1	E5
50	50		1911903-00	74S133 NAND GATE-POSITIVE 13IN	1	E45
51	51	SEE LINE #83.	1912048-02	DEC 7812-02 VOLT.REG.FIX T12V 1.5A T	1	Q2
52	52		1912388-00	74S02 NOR GATE-QUAD 2IN,POS	1	E30
53	53		1912389-00	74S08 AND GATE-QUAD 2IN,POS	14	E22,E23
54	54		1912541-00	VOLT.REG.FIX -5V .02A	1	Q1
55	55		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	1	E12
56	56		1912807-00	LS10 NAND GATE-TRIPLE 3IN	2	E11,E40
57	57		1912828-00	LS85 COMPARATOR,4BIT MAGNITUDE	1	E54
58	58		1912853-00	LS175 FF-D QUAD	2	E10,E15
59	59		1912867-00	LS298 MUX 1 OF 4,2IN W/STORAGE	2	E21,E27
60	60		1913340-00	74S32 OR GATE-QUAD 2IN	2	E35,E36
61	61		1913462-00	74S240 OCTAL BUFFER,INVERTING TRI-STA	1	E52
62	62		1913670-00	74S373 LATCH 8BIT TRASP TRISTATE	2	E50,E57,E64
63	63		1913777-00	LS240 DRIVER,LINE,OCTAL,TRI-ST	9	E24,E68,E69,E86,E119,E136,
					CONT	E169,E186,E203
64	64		1914086-00	74S30 NAND GATE-POS 8IN	1	E60
65	65		1914451-00	74LS393 COUNTER,BINARY,4BIT	1	E43
66	66		1915193-00	LS244 DRIVER,LINE,OCTAL,TRI-ST	1	E17
67	67		1915219-00	LS373 FF-D OCTAL-TRANSPARENT	8	E2,E4,E9,E14,E20,E26,E32,E38
68	68		23249F1-00	F1-01 PROM, 1	1	E67
69	69		23468A2-00	A2-05 PROM,	1	E66
70	70		7414765-00	HEATSINK	1	
71	71		9000024-01	EYELET, ROLLED FLANGE, .121 OD X .196 LG	12	
72	72		9010092-00	SCREW,PAN,PHIL, 4-40X 5/16 SS	1	
73	73		9007201-00	TRANSIPADS #10253	1	
74	74		9009149-00	PIN, STAKING, P.C. BOARD, .025 X .025	5	
75	75		9009185-00	JUMPER, WIRE, INSULATED, BLACK BAND	11	W2,W7,W10-W16,W20,W21

	TITLE	SIZE	CODE	DOCUMENT NUMBER	REV
DIGITAL EQUIPMENT CORPORATION	PARTS LIST				
MAYNARD, MASSACHUSETTS	MS11-LD 128K X 18 MOS MEMORY	K	PL	M7891-DC-DBP	A

LINE	ITEM	DOCUMENT NO.	PART NO.	DESCRIPTION	QTY	REFERENCE DESIGNATORS
76	76		1109991-00	1N 754A VZ= 6.8 5% .40W	1	D5
77	77		1105275-00	***** THIS ITEM IS NOT USED *****	-	
78	78		1210929-04	FUSE, SUB-MINI .250A, 125V, AXIAL LEAD	1	F2
79	79		2114408-01	16K MOS RAM 200NS 16PIN DYNA	144	E70-E85,E120-E135,E170-E185,
					CONT	E87-E118,E137-E168,E187-E202,
					CONT	E204-E219
80	80		1301969-00	22 1/4W 5% CC (13-00	1	R34

81 NOTE: M7891-DA IS A PRIMARY VARIATION OF THE 128K X 18 BIT SYSTEM (NOT A MODULE TYPE).
82 NOTE: M7891-DC IS A MODULE TYPE USING FUJITSU 16K MOS DEVICES.
83 NOTE: 1912048-05 MAY BE SUBSTITUTED FOR ITEM 51 PART #1912048-02.

TITLE	PARTS LIST	SIZE	CODE	DOCUMENT NUMBER	REV
DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	M611-LD 128K X 18 MOS MEMORY	K	PL	M7891-DC-DBP	A