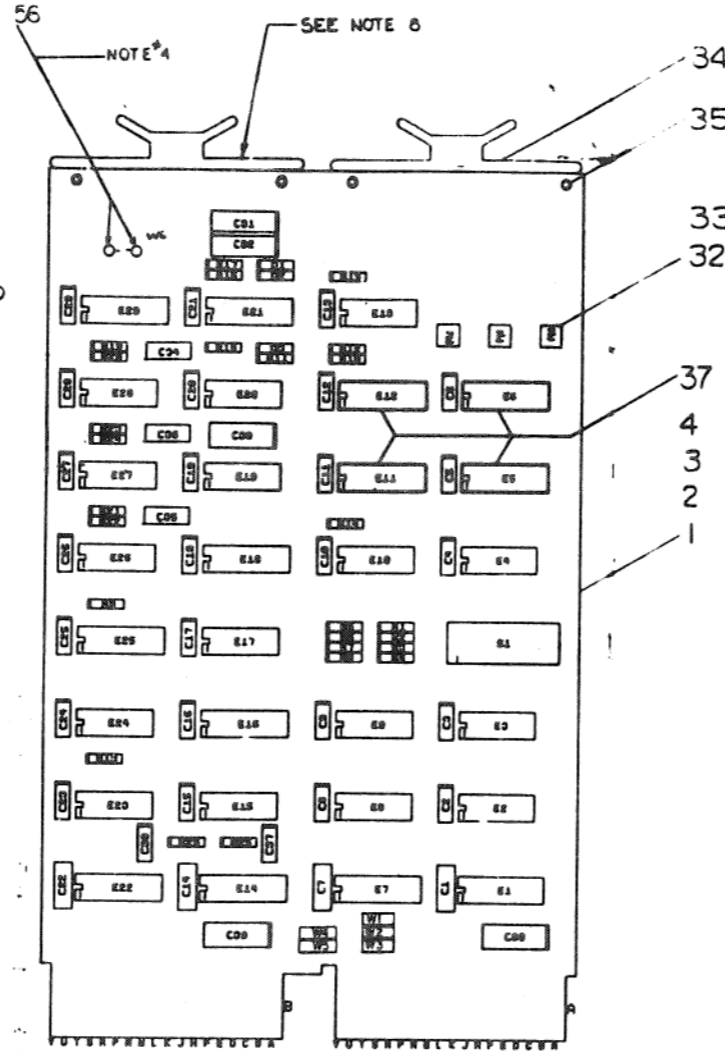


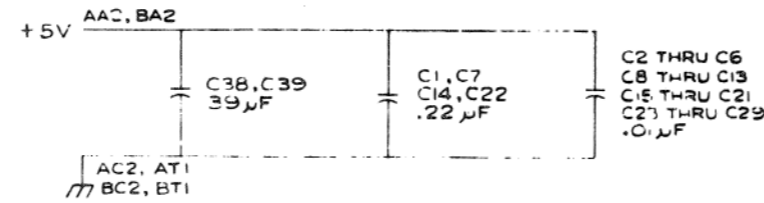
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NOTES:

1. IN PDP11/04, 11/09 AND PDP 11/34, 11/39 SYSTEMS WITHOUT BATTERY BACKUP, TPI SHOULD NOT BE CONNECTED TO THE POWER SUPPLY BATTERY STATUS SIGNAL UNLESS BOOTS ON ALL POWER RESTARTS ARE DESIRED.
2. IN ALL PDP11 SYSTEM WHOSE PROCESSOR MODULE DOES NOT CONTAIN GRANT PULL-UP RESISTORS, EITHER THE M9301 MUST BE POSITIONED IN THE TERMINATOR SLOT AT THE END OF THE UNIBUS FURTHEST FROM THE PROCESSOR OR JUMPERS W1 THRU W5 MUST BE INSTALLED, SO THE M9301 CAN BE INSERTED IN THE TERMINATOR SLOT NEXT TO THE PROCESSOR.
3. ON PDP11 SYSTEMS CONTAINING A BUS REPEATER OPTION, THE M9301 MUST BE INSTALLED ON THE PROCESSOR SIDE OF THE REPEATER SEE NOTE 2 FOR OTHER RESTRICTIONS.
4. JUMPER W6 SHOULD ONLY BE INSTALLED IN 11/55 AND 11/70 COMPUTERS WHOSE BACKPLANES HAVE BEEN MODIFIED FOR THIS MODULE. CONNECTOR PIN B01 IN THESE MODIFIED BACKPLANES WILL NOT BE TIED TO GROUND.
5. EARLIER VERSIONS USED PLASTIC SWITCH COVER (PN 121184-06) TO PREVENT INADVERTENT PROGRAMMING OF S1.
6. 11/40'S WITH AK06 REQUIRE CS REVISION P OR LATER.
7. 1001610-00 AND 1001610-01 ARE INTERCHANGEABLE
8. ON THE 'VF' VARIATION THIS HANDLE IS REMOVED.



REF	QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF	REF	REF	REF	REF	REF
REF	REF	REF	REF	REF	REF
1	1		X-Y COORDINATE HOLE LOCATION	K-CO-M9301-0-4	1
2	2		ASSY/DRILLING HOLE LAYOUT	D-AH-M9301-0-5	2
3	3		MODULE ECO HISTORY	B-MH-M9301-0-6	3
4	4		ETCHED CIRCUIT BOARD	5011208	4
5	5	C1, C7, C14, C22	CAP .22 μ F 50V	100274-01	5
6	6	C2 THRU C6, C8 THRU C13, C15 THRU C21, C23 THRU C29	CAP .01 μ F 100V 20%	1001610-01	6
7	7	C30, C37	CAP .001 μ F 250V 20%	1000043	7
8	8	C02, C33, C38, C39	CAP 39 μ F 10V 10%	1000076	8
9	9	C34, C35, C36	CAP 270 μ F 100V 5%	1000022	9
10	10	D1, D2, D3	DIODE D664 1N3606	1100114	10
11	11	R1 THRU R8	RES 10K 1/4W 5%	1300173	11
12	12	R9, R12	RES 1K 1/4W 5%	1300365	12
13	13	R11, R13, R14, R18	RES 4.7K 1/4W 5%	1300447	13
14	14	R16, R17	RES 30K 1/4W 5%	1302394	14
15	15	R19, R21, R23	RES 47 Ω 1/4W 5%	1300202	15
16	16	R20, R22, R24	RES 2K 1/4W 5%	1302388	16
17	17	R25, R26	RES 383 Ω 1/4W 1%	1305125	17
18	18	E1, E22	25 RES DIVIDER NETWORK	13-12628-00	18
19	19	E7, E14	25 RES DIVIDER NETWORK	13-12628-01	19
20	20	E2, E3, E8, E9, E15, E23, E27, E28	I.C. DEC 8381	1909705	20
21	21	E4, E10	I.C. DEC 7402	1909004	21
22	22	E13	I.C. DEC 7474	1905547	22
23	23	E16, E18, E25	I.C. DEC 8837	1911116	23
24	24	E17	I.C. DEC 7420	1905577	24
25	25	E19, E24	I.C. DEC 314A	1909704	25
26	26	E20	I.C. DEC 8640	1911469	26
27	27	E21	I.C. DEC 9602	1910951	27
28	28	E26	I.C. DEC 7437	1910091	28
29	29	E29	I.C. DEC 7476	1905585	29
30	30	S1	SWITCH, DIP, 10 POLE	121164-06	30
31	31		SWITCH COVER	121164-06	31
32	32		EYELET (FASTON)	9009000	32
33	33	TPI, TP2, TP3	TAB (FASTON)	9007112	33
34	34		HANDLE FLIP/CHIP MAGENTA	9008337-06	34
35	35		EYELET	9006732	35
36	36	C31	CAP 1 μ F 35V 10%	1001776	36



IC TYPE	QTY	PIN	LOCATION
I.C. DEC 514	1	1	
I.C. DEC 7476	13	5	
I.C. DEC 8640	1	8	
I.C. DEC 8837	8	16	
I.C. DEC 9602	8	6	
IC TYPE	QTY	PIN	LOCATION

REV	DATE	DESCRIPTION
1	11/04	INITIAL RELEASE
2	11/04	REDESIGN 00002 F
3	11/04	REDESIGN 00002 F
4	11/04	REDESIGN 00002 F
5	11/04	REDESIGN 00002 F
6	11/04	REDESIGN 00002 F
7	11/04	REDESIGN 00002 F
8	11/04	REDESIGN 00002 F
9	11/04	REDESIGN 00002 F
10	11/04	REDESIGN 00002 F
11	11/04	REDESIGN 00002 F
12	11/04	REDESIGN 00002 F
13	11/04	REDESIGN 00002 F
14	11/04	REDESIGN 00002 F
15	11/04	REDESIGN 00002 F
16	11/04	REDESIGN 00002 F
17	11/04	REDESIGN 00002 F
18	11/04	REDESIGN 00002 F
19	11/04	REDESIGN 00002 F
20	11/04	REDESIGN 00002 F
21	11/04	REDESIGN 00002 F
22	11/04	REDESIGN 00002 F
23	11/04	REDESIGN 00002 F
24	11/04	REDESIGN 00002 F
25	11/04	REDESIGN 00002 F
26	11/04	REDESIGN 00002 F
27	11/04	REDESIGN 00002 F
28	11/04	REDESIGN 00002 F
29	11/04	REDESIGN 00002 F
30	11/04	REDESIGN 00002 F
31	11/04	REDESIGN 00002 F
32	11/04	REDESIGN 00002 F
33	11/04	REDESIGN 00002 F
34	11/04	REDESIGN 00002 F
35	11/04	REDESIGN 00002 F
36	11/04	REDESIGN 00002 F
37	11/04	REDESIGN 00002 F
38	11/04	REDESIGN 00002 F
39	11/04	REDESIGN 00002 F
40	11/04	REDESIGN 00002 F
41	11/04	REDESIGN 00002 F
42	11/04	REDESIGN 00002 F
43	11/04	REDESIGN 00002 F
44	11/04	REDESIGN 00002 F
45	11/04	REDESIGN 00002 F
46	11/04	REDESIGN 00002 F
47	11/04	REDESIGN 00002 F
48	11/04	REDESIGN 00002 F
49	11/04	REDESIGN 00002 F
50	11/04	REDESIGN 00002 F

FIRST USED ON OPTION MODEL		ETCH BOARD REV.		PARTS LIST	
11/04		F			
DRN. J. VINCENT	DATE 4/9/78	 TITLE UNIBUS TERMINATOR/BOOTSTRAP			
CHKD. R. COOK	DATE 8/28/78				
ENGR. T. DUBANIEUR	DATE 6/23/78				
PROJ. ENG. J. ELOE	DATE 6/15/78				
PROD. R. PETERSON	DATE 6/30/78	SCALE: _____		SHEET 1 OF 5	
NEXT HIGHER ASSY		SEMICONDUCTOR CONVERSION CHART		NUMBER: M9301-0-1	

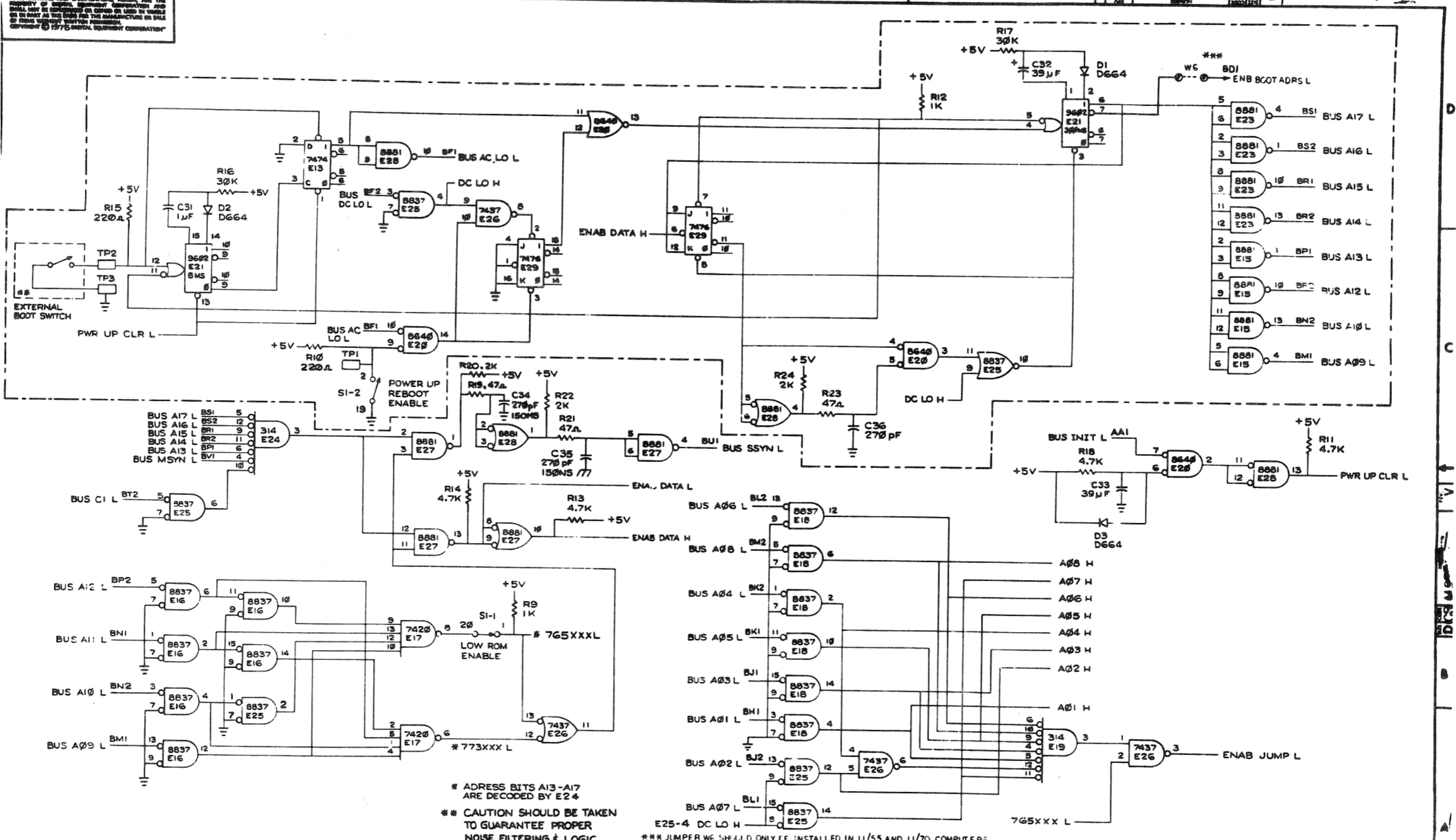
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QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4	4	4	4	4	4	4	4	4	4	4	4	E5, E6, E11, E12	SOCKET, 16 PIN, I.C.	1211813	37
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23034A9	38
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23035A9	39
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23036A9	40
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23037A9	41
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23038A9	42
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23039A9	43
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23040A9	44
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23041A9	45
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23042A9	46
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23043A9	47
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23044A9	48
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23045A9	49
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23046A9	50
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23047A9	51
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23123A9	52
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23049A9	53
0	0	7	5	0	0	0	0	0	0	0	0	WI THRU W5	JUMPER, WIRE, WHITE INSULATION	9009185	54
2	2	2	2	2	2	2	2	2	2	2	2	R10, R15	RES 220A, 1/4W, 5%	1300271	55
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	9006735	56
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23480A9	57
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23481A9	58
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23482A9	59
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23483A9	60
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23332A9	61
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23333A9	62
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23334A9	63
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23335A9	64
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23538A9	65
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23539A9	66
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23540A9	67
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23541A9	68
0	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23520A9	69
0	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23521A9	70
0	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23522A9	71
0	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23523A9	72
A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	WI 30 GA.	9105740-35	73	
1	0	0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC. TRI-STATE 2048 ROM	23744A9	74
1	0	0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC. TRI-STATE 2048 ROM	23745A9	75
1	0	0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC. TRI-STATE 2048 ROM	23746A9	76
1	0	0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC. TRI-STATE 2048 ROM	23747A9	77
A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R		CEMENT PERMABOND	9009157	78

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE UNIBUS TERMINATOR/BOOTSTRAP
 SCALE 1:1 SHEET 2 OF 5
 NUMBER M9301-0-1
 REV. 1 V

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* ADDRESS BITS A13-A17 ARE DECODED BY E24
 ** CAUTION SHOULD BE TAKEN TO GUARANTEE PROPER NOISE FILTERING & LOGIC LEVELS ON THESE INPUTS

*** JUMPER W6 SHOULD ONLY BE INSTALLED IN 11/55 AND 11/70 COMPUTERS WHOSE BACK PLANES HAVE BEEN MODIFIED FOR THIS MODULE.

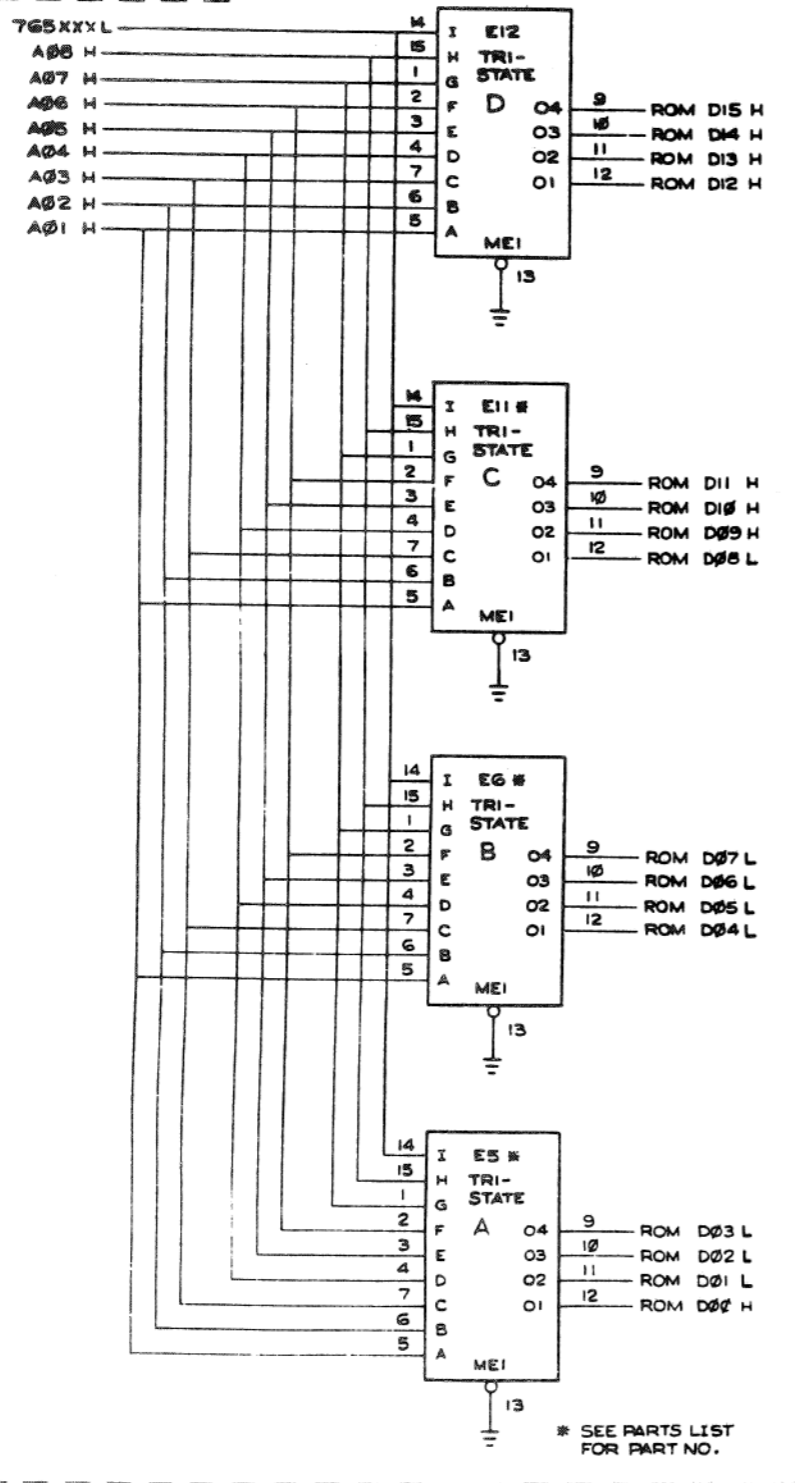
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	UNIBUS	ADDRESS	NAME	REV.
	TERMINATOR/ BOOTSTRAP	D CS	M9301-0-1	V
SCALE	SHEET 3 OF 5		INSTR.	

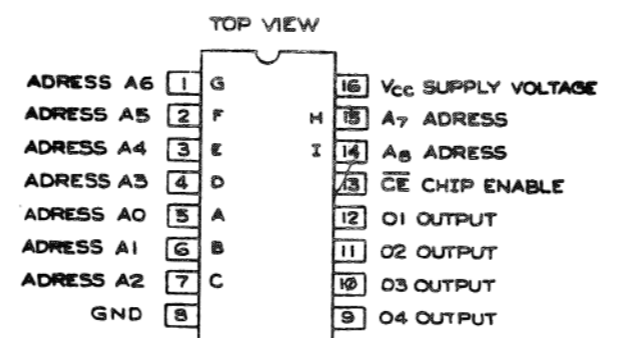
8 7 6 5 4 3 2 1

81

THIS UNIT MUST BE USED WITH PROMS AND THE PROMS MUST BE PROGRAMMED AND TESTED IN THE PROM PROGRAMMER OR PROM PROGRAMMER ON SITE.

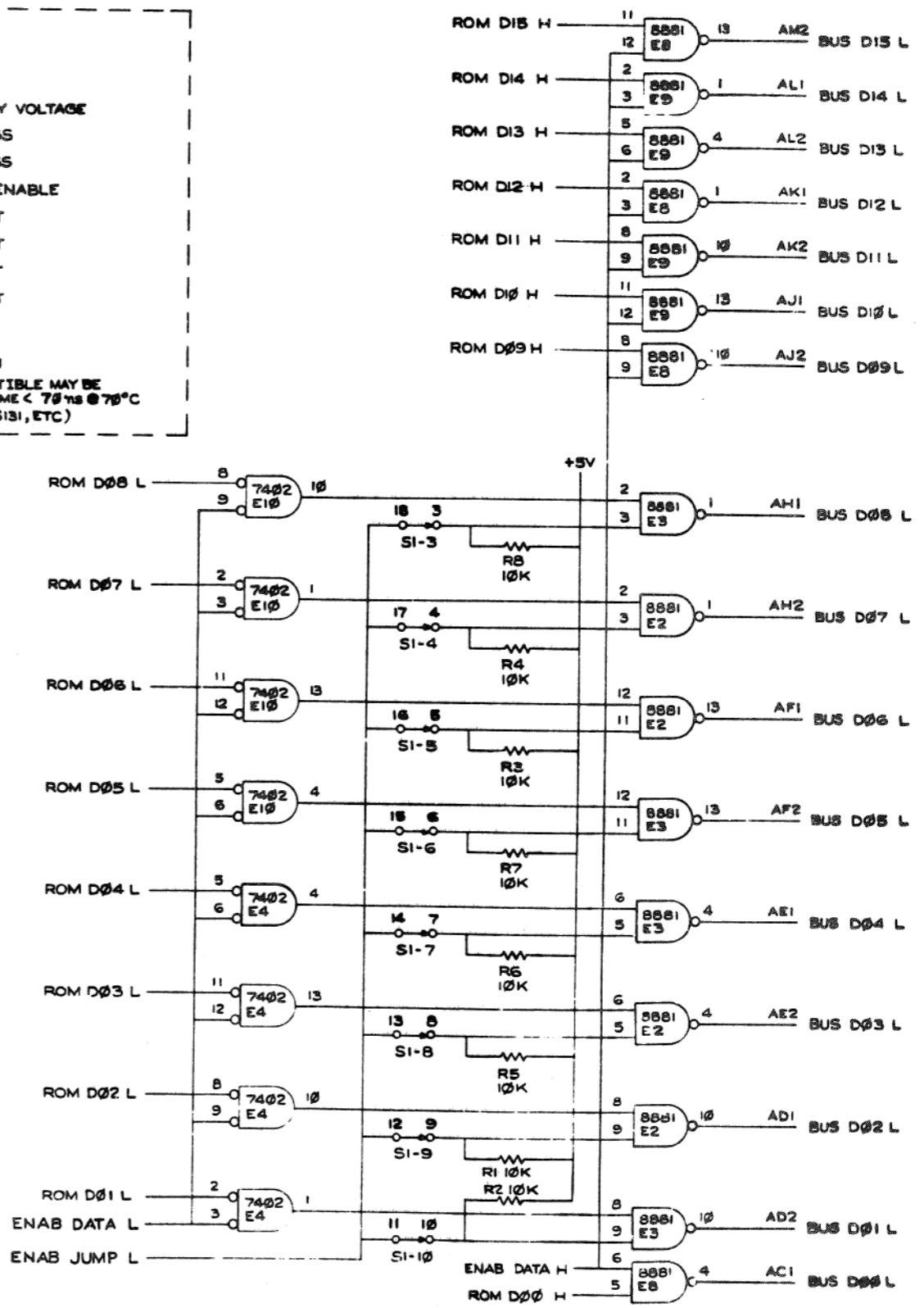


* SEE PARTS LIST FOR PART NO.



- 3. BLANK PROMS HAVE DEC PART NO. 23-000A901
- 4. BIPOLAR 2048 (512 X 4) BIT PROMS PIN COMPATIBLE MAY BE USED WITH TRI-STATE OUTPUTS AND ACCESS TIME < 70 ns @ 70°C (INTERSIL 5624, MMI 6306, SIGNETICS 82531, ETC)

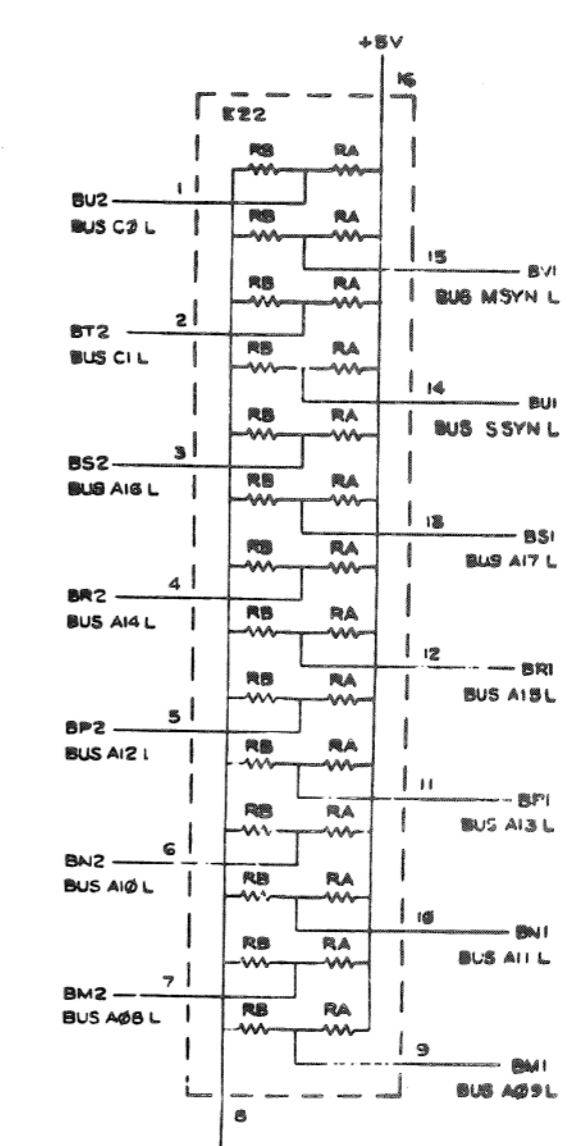
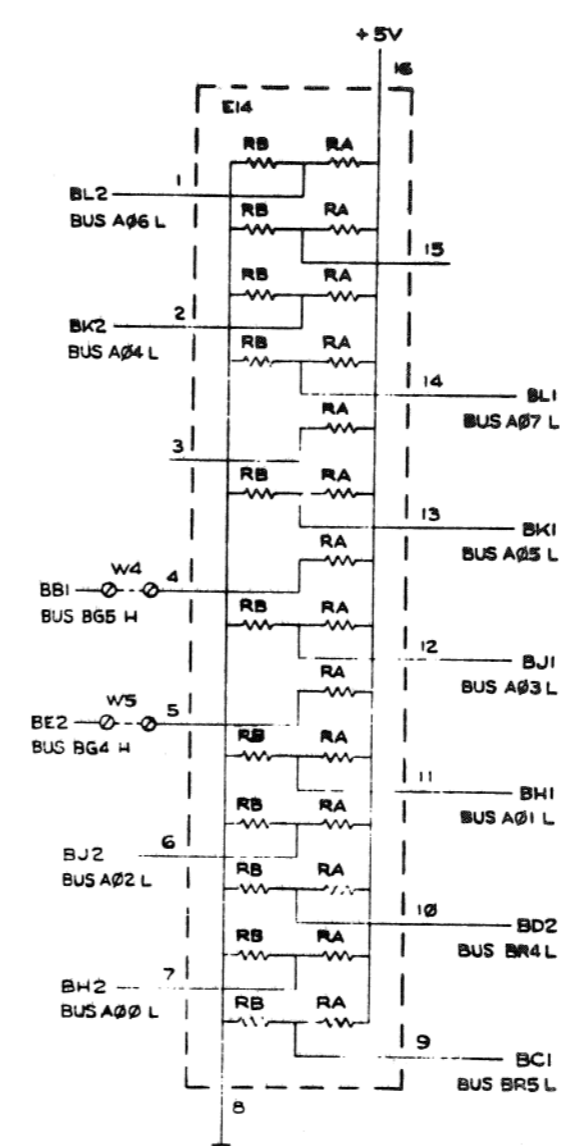
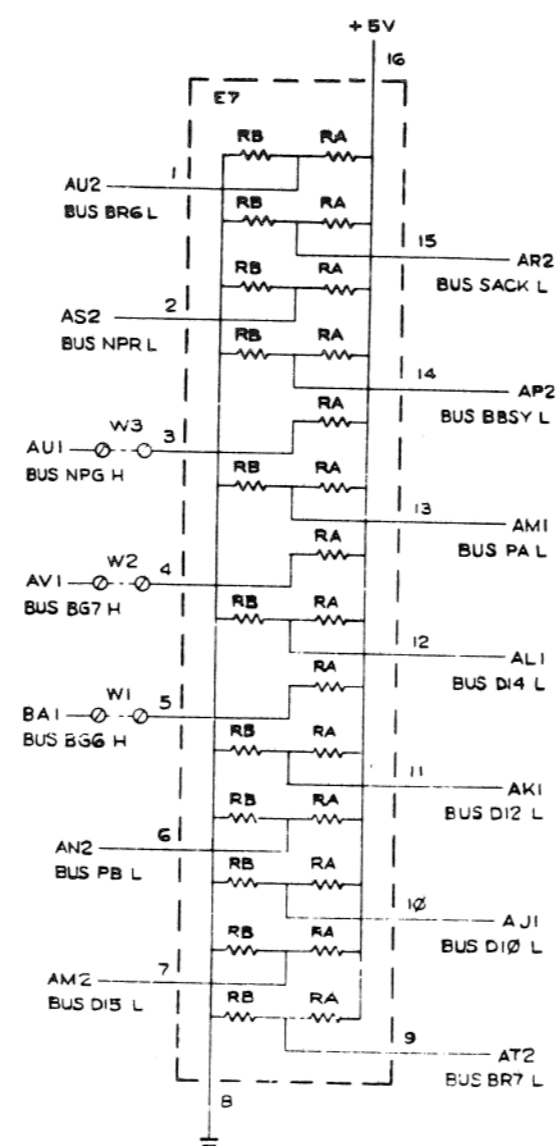
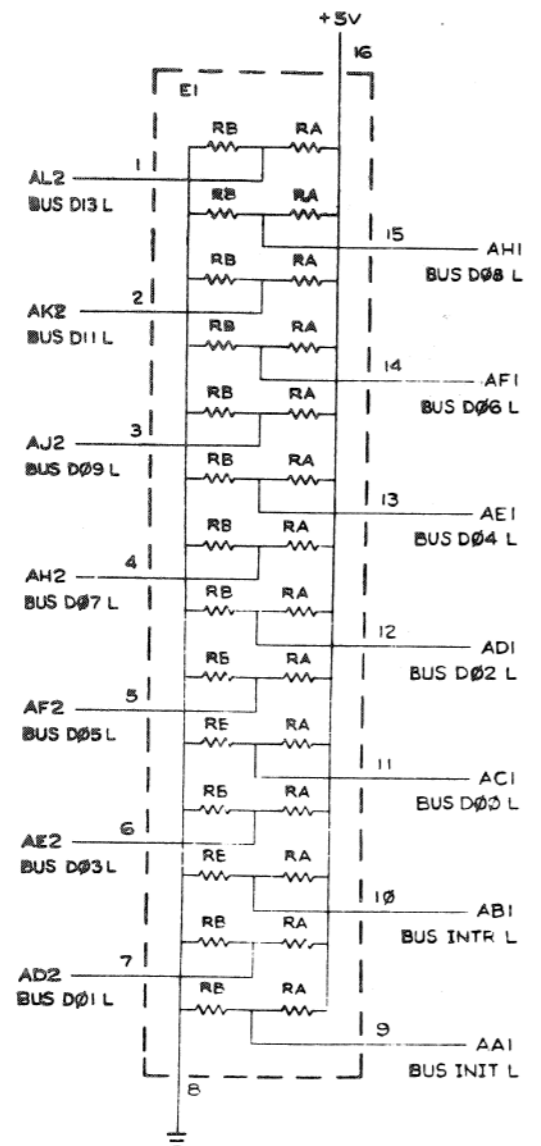
ADDRESS RANGE	
765000 - 765776	LOW ROM
773000 - 773776	HIGH ROM



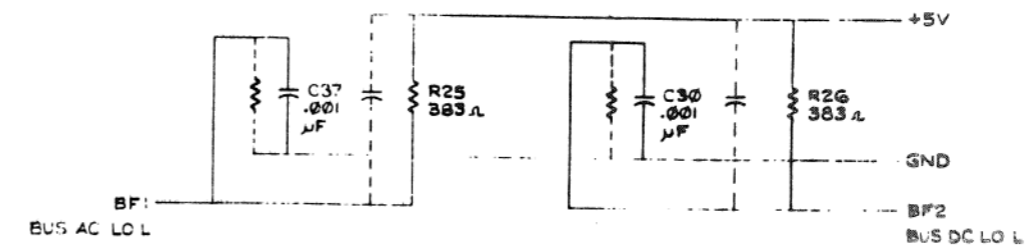
REVISIONS		
OK	CHANGE NO.	REV.

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1-C-036W SCD 2



- NOTES :
1. ALL RA RESISTORS SHOWN ARE 176.5 Ω , $\pm 2\%$
 2. ALL RB RESISTORS SHOWN ARE 375 Ω , $\pm 2\%$
 3. JUMPERS W1 THRU W5 ARE ONLY INSERTED ON THE M9301-YC AND M9301-YH IF USED IN AN 11/70 COMPUTER.



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE UNIBUS TERMINATOR/BOOTSTRAP
 SCALE 1:1 SHEET 5 OF 5
 DCS M9301-0-1