

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		DATE 18 July 77	
ENGINEERING SPECIFICATION			
TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION			
REVISIONS			
REV	DESCRIPTION	CHG NO	ORIG DATE APPD BY DATE
ENG. <i>Bill Eard</i> APPD <i>J. J. ...</i>		SIZE CODE A	NUMBER MSB-C-2
DEC FORM NO. EN-01025-16-0370-1001 DRA 100		SHEET 1 OF 7	

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION			
GENERAL DESCRIPTION: The MSB-C is a 32K X 12 MOS memory using 4096 bit MOS RAM's, packaged on a standard hex module and designed to interface to the PDP-8 OMNIBUS. It requires +5 and -15 Volts.			
DETAILED SPECIFICATIONS			
PACKAGING: DEC standard hex module. Multilayer printed circuit board with inner layers distributing the +12V, +5V, -5V and ground. The module has a standard metal handle with retractors.			
ADDRESS SPACE: May be 16K or 32K by 12 bits. For any of these options, the address space may be programmed by a dip switch to start on any 16K boundary from 0 to 128K. The memory size is programmed by a machine insertable jumper.			
STORAGE DEVICE: The MSB-C uses the 16 pin, address multiplexed, dynamic 4096 bit MOS RAM as the storage device.			
INTERFACE: The control logic is designed to provide complete timing for the RAM's. Connections are made on Connectors A thru E as outlined in Table I. It will perform Fetch, Defer and Execute cycles in accordance with the OMNIBUS specification. In addition, the logic will perform refresh cycles, every 13.5 usec synchronized to be hidden in between the Read and Write half of any cycle. The control, to insure data integrity, forces asynchronous refresh cycles if the processor timing is halted due to a halt or an I/O stall.			
Refresh is resynchronized with the processor by the use of the MTS Stall line. The processor timing is stalled at TPI from 0 to 500 nsec on restart.			
ROM ADRS L allows a ROM to overlay memory locations. The control performs a memory cycle but no data is put on the MD bus.			
SOURCE H is used as the memory go signal and also is used to clear the MD bus at the start of a Fetch, Defer or Execute cycle.			
The control requires initialization upon power up which is done by a positive transition on the POWER OK H line. The memory is ready for operation a maximum of 2.5 msec after POWER OK H. The memory is volatile so if power is lost, the memory data is lost.			
The memory requires +5V, -15V and Ground to operate. The memory array requires +12V, -5V, +5V and Ground to operate. The module generates -5V from -15V through a fixed regulator. The +12V is generated from +5 through a switching regulator. The least significant bit of the refresh counter alternately drives a pair of transistors switches connected to a 1:3 step up transformer. The voltage on the secondary is rectified and put into a fixed 12V regulator. The drive transistors are controlled to not turn on unless the +5V is greater than 3.8V to prevent current surges on the +5 supply.			
DEC FORM NO. EN-01025-16-0370-1001 DRA 100		SHEET 2 OF 7	

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION			
They also are turned off if the -5V supply falls below -3V to protect the MOS RAM's. An etch inductor and a pair of capacitors between the transformer center taps and +5V prevents switching noise from being injected onto the +5V supply lines. DAI and EPI are the -5V margin and +12V margin control pins. Supplying a bi-directional voltage to these pins allows margining of the array during manufacturing test.			
Both the -5V and the +12V supplies start automatically upon power up. Asynchronous refresh is also started automatically upon power up.			
All MA and ENA lines are terminated with a clamp diode to prevent undershoot. BANK SEL 0L thru BANK SEL 3L are pulled up to +5 by a 10K resistors since they are unterminated in systems not extended beyond 32K.			
For manufacturing margining purposes, nodes in two resistor networks determining RAM timing are brought through buffer resistors to pins AA1 and BA1, T MARGIN 1 and T MARGIN 2.			
Test points from the board position switches are brought to the E connector for manufacturing test, as is a refresh disable line, EA1, and the refresh oscillator output, DB1.			
Four test points are brought to the connectors for the purpose of adjusting the internal timing on the module. They are TRAS L at CA1, TMUX L at AB1, TDSTBIL at BB1 and LOCKOUT L at CB1. These timing adjustments are made at module test.			
POWER: The memory requires +5V ± 5% and -15V ± 10% inclusive of all aberrations. The current required for operating and standby is shown below, assuming a maximum operating frequency of .83 MHz.			
		32K	
	OPERATE	STANDBY	OPERATE
	TYP	TYP	TYP
+5V	2.3 A	1.7 A	2.6 A
-15V	.05A	.05A	.07A
TOTAL WATTS	12.3 W	9.3 W	13.8 W
	MAX	MAX	MAX
	3.3 A	2.6 A	3.9 A
	.07A	.07A	.07A
	17.6 W	14.1 W	18.6 W
	10.8 W	10.8 W	15.1 W
SPEED: The access time assumes that no stall has occurred and is measured from SOURCE H to memory data on the MD lines.			
Taccess: 265 nsec Max 265 nsec Typ			
Tcycle: 1.2 usec Max Fetch Cycle 1.4 usec Max Execute Cycle			
DEC FORM NO. EN-01025-16-0370-1001 DRA 100		SHEET 3 OF 7	

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION			
MTBF: Calculated by DEC Part Count method using F = .5%/1000 Hours for Ground Fixed MOS RAM and F = .3%/1000 Hours for Ground Benign.			
		GROUND BENIGN	
16K X 12	48.3K Hours	GROUND FIXED	23.4K Hours
32K X 12	28.5K Hours		15.0K Hours
ADJUSTMENTS: The internal memory timing is adjusted at module test by the removal or insertion of a resistor in the timing generators.			
TRASL	To	TMUXL	To
CA1		AB1	
25nsec ≤ T _D ≤ 45nsec		OK	
T _D ≤ 25 nsec		Insert R100	
TRASL	To	TDSTBIL	To
CA1		BB1	
200nsec ≤ T _D ≤ 220nsec		OK	
T _D > 220nsec		Cut R92 Out	
T _D ≤ 200nsec		Insert R140	
130nsec ≤ T _D ≤ 150nsec		OK	
TRASL	To	LOCKOUT L	To
CA1		CB1	
T _D > 150nsec		Insert R88	
T _D ≤ 130nsec		Cut R87 Out	
MARGINS: The memory should operate with all permutations of +5 ± 5% and -15V ± 10% with any program and stored content. It should also run at +5V and -15V with Pins AA1 and BA1 tied to any voltage source between ground and +5V, with any program and stored contents.			
DEC FORM NO. EN-01025-16-0370-1001 DRA 100		SHEET 4 OF 7	

Copyright © 1977 Digital Equipment Corporation. This document contains confidential proprietary information of DEC. This information shall not be disclosed to persons outside the employ of DEC, or used by DEC personnel or authorized by DEC, without the prior written consent of DEC.

ENGINEERING SPECIFICATION MSB-C-32K CONTINUATION SHEET

TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION

ENVIRONMENTAL: DEC Std 102 Class "C".

SIZE CODE	NUMBER	REV
A	MSB-C-2	
SHEET 5 OF 7		

DEC FORM NO EN-0102-16-N276-1311
ORA 108

ENGINEERING SPECIFICATION MSB-C-32K CONTINUATION SHEET

TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION

TABLE 1

A CONN		B CONN	
SIDE 1	SIDE 2	SIDE 1	SIDE 2
T.P. T MARGIN 1	+5V	T.P. T MARGIN 2	+5V
T.P. T MUXL	GND	T.P. T DSTBIL	GND
GND	EMAO	GND	MA4L
MA0L	EMATL	MA4L	MA5L
MA1L	GND	GND	MA6L
GND	EMAZL	MA6L	MA7L
MA2L		MA7L	MD4L
MA3L	MD DIR L	MD4L	MD5L
MD0L	SOURCE H	MD5L	MD6L
MD1L	STROBE H	MD6L	GND
MD2L	GND	MD7L	GND
MD3L	WRITE H		STALL L
	GND		GND
	ROM ADRS L		RUM L
			POWER OK H

C CONN		D CONN	
SIDE 1	SIDE 2	SIDE 1	SIDE 2
T.P. TRAS L	+5V	T.P. -5V MARGIN	
T.P. LOCKOUT I	-15V	T.P. REF OSC H	
GND	GND	GND	MA8L
		MA8L	MA9L
		GND	MA10L
		GND	MA11L
		GND	MA12L
BUS STROBE L	TP3H	MA12L	MD8L
		MD8L	MD9L
		GND	MD10L
NOT LAST XFER L	GND	GND	MD11L
GND			GND
			GND
			GND
			GND
			GND
			GND
			GND
			GND

DEC FORM NO EN-0102-16-N276-1311
ORA 108

ENGINEERING SPECIFICATION MSB-C-32K CONTINUATION SHEET

TITLE MSB-C 32K PDP-8 MOS MEMORY ENGINEERING SPECIFICATION

TABLE 1
(Continued)

E CONN		F CONN	
SIDE 1	SIDE 2	SIDE 1	SIDE 2
T.P. REF DIS L	BANK SEL 0L		
T.P. POS 1	GND		
GND	BANK SEL 1L		
T.P. POS 2	GND		
T.P. POS 3			
GND			
T.P. POS 4			
T.P. POS 5			
T.P. POS 6			
T.P. POS 7	BANK SEL 2L		
T.P. POS 8	GND		
GND	BANK SEL 3L		
T.P. +12V MARGIN			
T.P. -5V			
T.P. +12V			

DEC FORM NO EN-0102-16-N276-1311
ORA 108

DEC FORM NO EN-0102-16-N276-1311
ORA 108

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 © 1977, DIGITAL EQUIPMENT CORPORATION

M8417-AA (16K)
X = SWITCH OPEN OR OFF

	E62-1	E62-2	E62-3	E62-4	E62-5	E62-6	E62-7	E62-8
0-16	X							
16-32		X						
32-48			X					
48-64				X				
64-80					X			
80-96						X		
96-112							X	
112-128								X

M8417-BA (32K)
X = SWITCH OPEN OR OFF

	E62-1	E62-2	E62-3	E62-4	E62-5	E62-6	E62-7	E62-8
0-32	X	X						
16-48		X	X					
32-64			X	X				
48-80				X	X			
64-96					X	X		
80-112						X	X	
96-128							X	X

- NOTES:**
- MODULE DESIGNATION: M8417-AA = M8417-AB, -AC, -AD, -AE, ETC.
16K MOS MEMORY
REFERENCE DESIGNATIONS NOT USED:
E101 E201 E301 E401
E103 E203 E303 E403
E105 E205 E305 E405
E107 E207 E307 E407
E109 E209 E309 E409
E111 E211 E311 E411
E113 E213 E313 E413
E115 E215 E315 E415
E117 E217 E317 E417
E119 E219 E319 E419
E121 E221 E321 E421
E123 E223 E323 E423
 - MODULE DESIGNATION: M8417-BA = M8417-BB, -BC, -BD, -BE, ETC.
32K MOS MEMORY
 - ALL 8837'S HAVE PINS 7 & 9 GROUNDED.
 - TIMING RESISTORS R87 AND R92 MAY BE REMOVED AT MODULE TEST FOR TIMING ADJUSTMENTS.
 - TIMING RESISTORS R88, R100, R140 MAY BE INSTALLED AT MODULE TEST FOR TIMING ADJUSTMENTS.

JUMPER CONFIGURATIONS

JUMPER	M8417-AA (16K)	M8417-BA (32K)
W2	X	X
W3	X	X
W4	X	X
W9	X	X
W10	X	X
W11	X	X

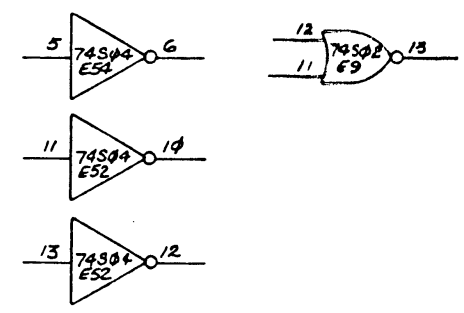
ALL JUMPERS ARE MACHINE INSERTABLE.
 THESE JUMPERS ARE REMOVED:
 W1, W5, W6, W7, W8, W12, W13, W14,
 W15, W16
 X = JUMPER INSTALLATION

IC PIN LOCATIONS

IC TYPE	GND	+5	-5	+12
555	1	8		
7493	10	5		
74LS75	12	5		
8640	1	8		
75107B	7	14	13	
MK4027	16	9	1	8
OTHER 16 PIN IC'S	8	16		
OTHER 14 PIN IC'S	7	14		
75451	4	8		

SPARES

R88	3.16K 1/4W 1% MF	13-03045-00
R100	6040 1/4W 1% MF	13-13155-00
R140	1.21K 1/4W 1% MF	13-02871-00

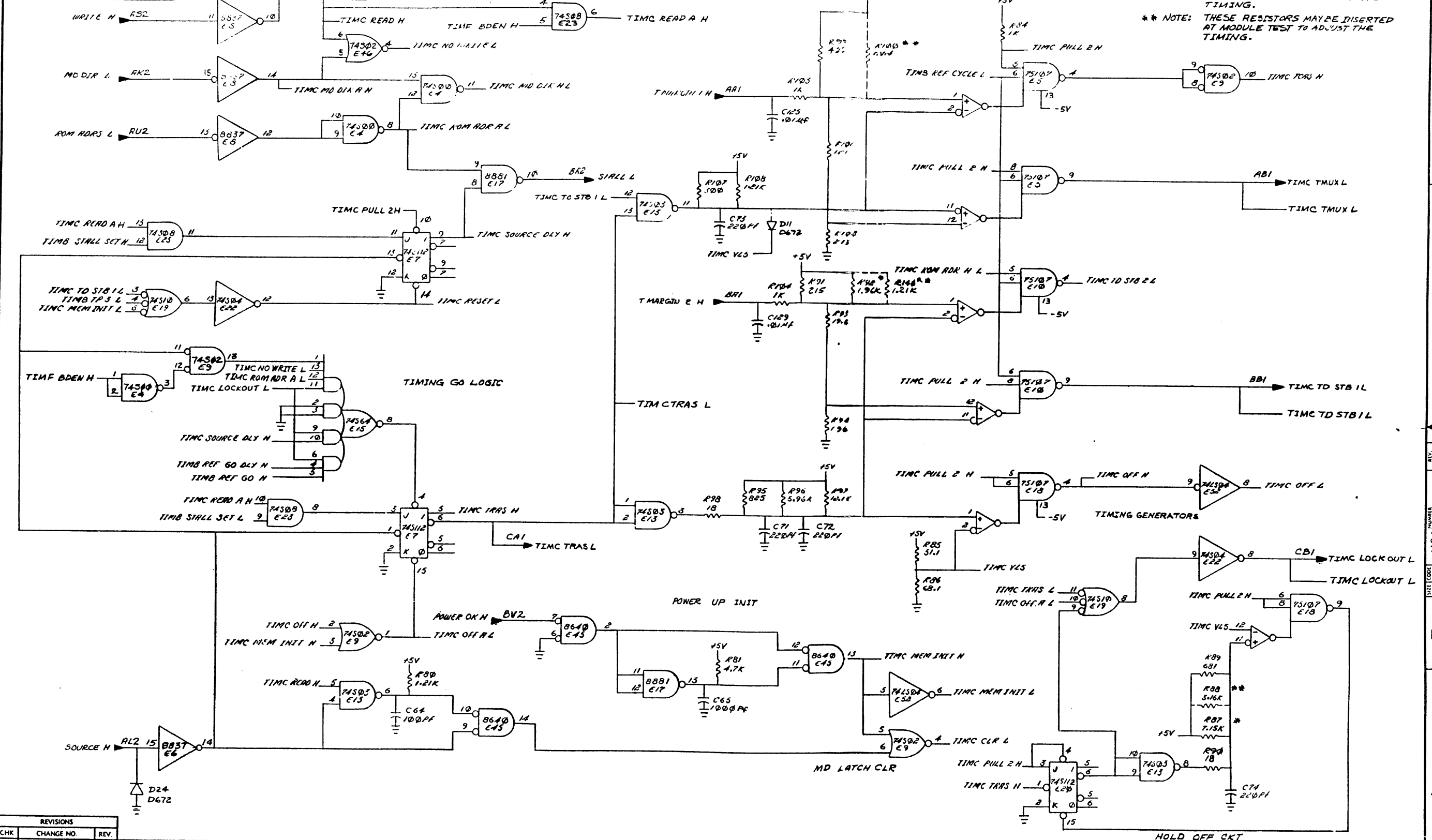


REV.	CHG.	NO.	REV.
B			
C			
D			
E			
F			
G			
H			
I			
J			
K			
L			
M			
N			
O			
P			
Q			
R			
S			
T			
U			
V			
W			
X			
Y			
Z			

DRN. ANGEL COLM	4/23/77	FIRST USED ON	MS8-C
CHK'D	7/1/77	TITLE	PDP8 MOS MEMORY
ENG. J.F.	7/1/77	SCALE	NONE
PROJ. ENG. J.F.	7/1/77	SIZE	D
PROD. J.F.	7/1/77	CS	M8417-0-1
NEXT HIGHER ASSY.		NUMBER	1
17-DD-M8417-0		REV.	E
SHEET	OF 14	DIST.	

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 © 1977 DIGITAL EQUIPMENT CORPORATION

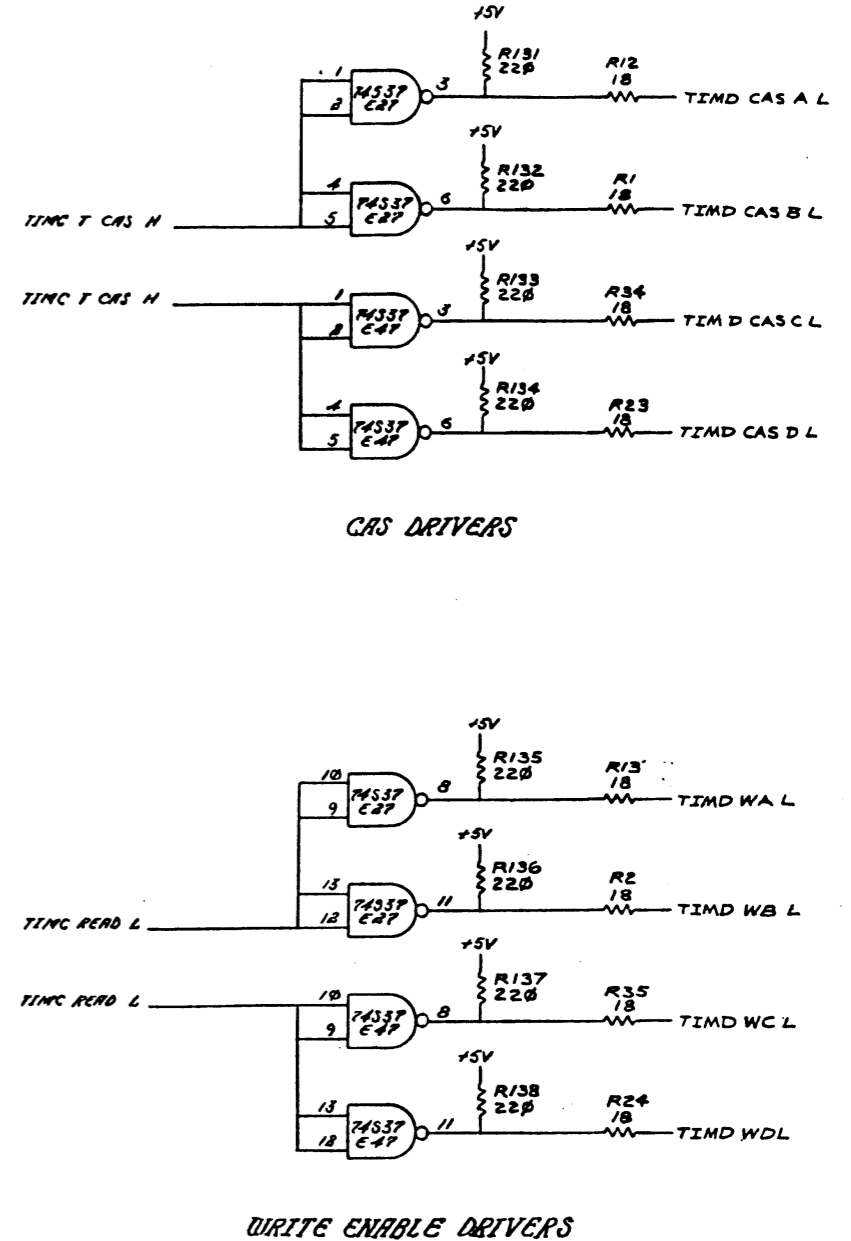
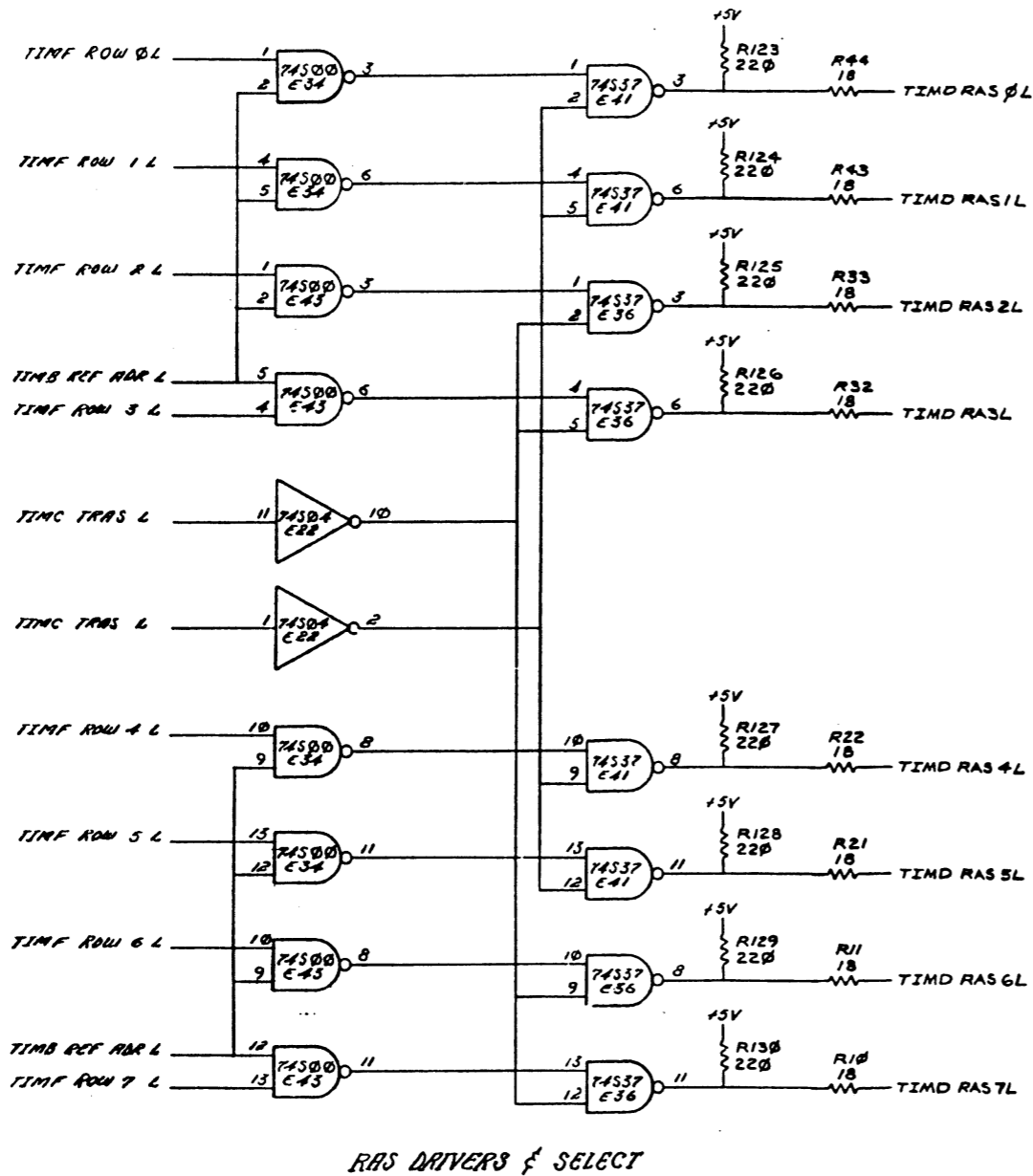
* NOTE: THESE RESISTORS MAY BE REMOVED AT MODULE TEST TO ADJUST THE TIMING.
 ** NOTE: THESE RESISTORS MAY BE INSERTED AT MODULE TEST TO ADJUST THE TIMING.



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE PDP8 MOS MEMORY	SIZE CODE DCS	NUMBER M8417-0-1	REV. E
SCALE NONE	SHEET 3 OF 14	DIST.	

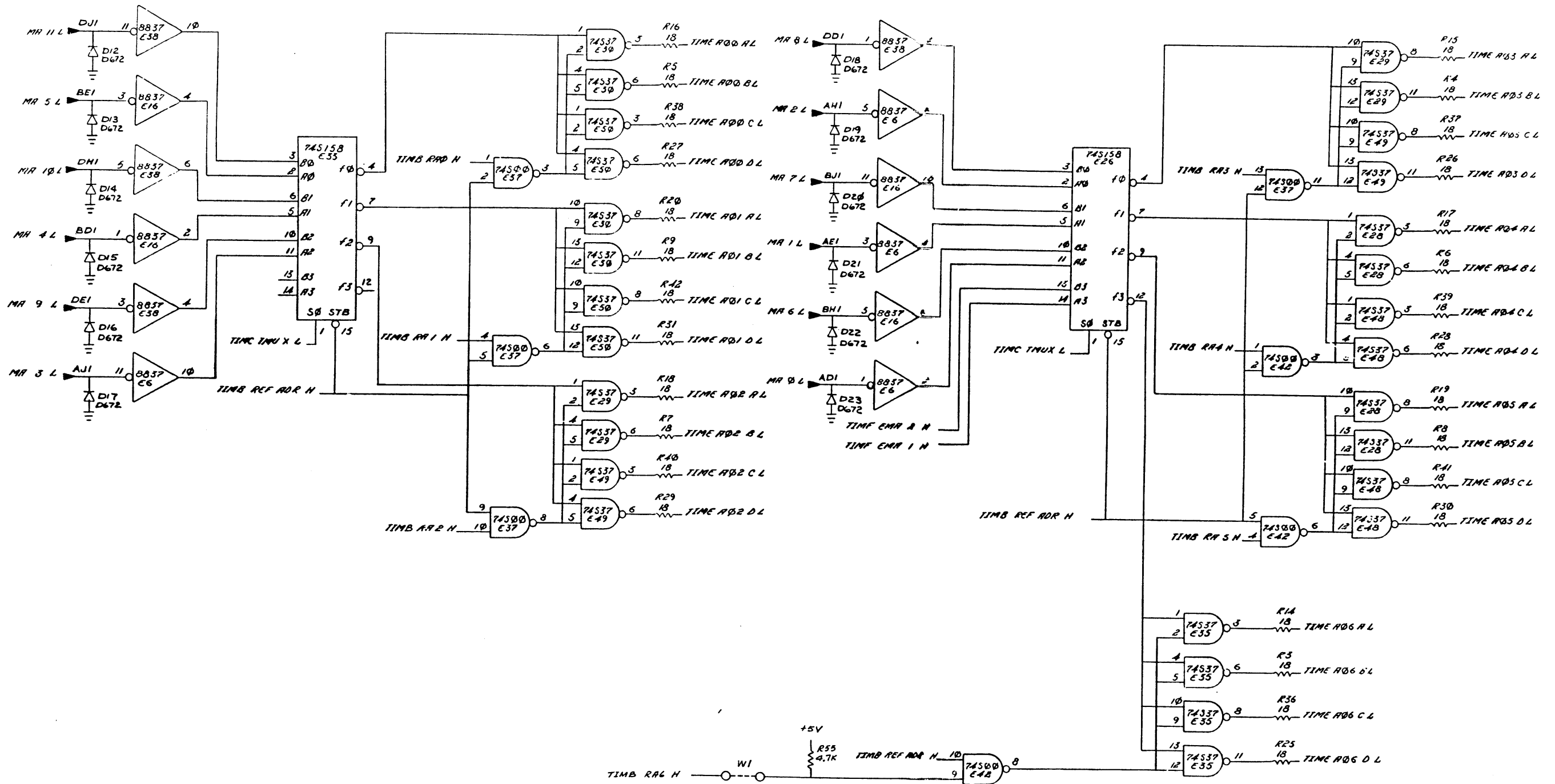
THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1977 DIGITAL EQUIPMENT CORPORATION



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	(TIM D)	SIZE CODE	NUMBER	REV.
PDP8 MOS MEMORY	D	CS	M8417-0-1	E
SCALE	NONE	SHEET	4 OF 14	DIST.

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

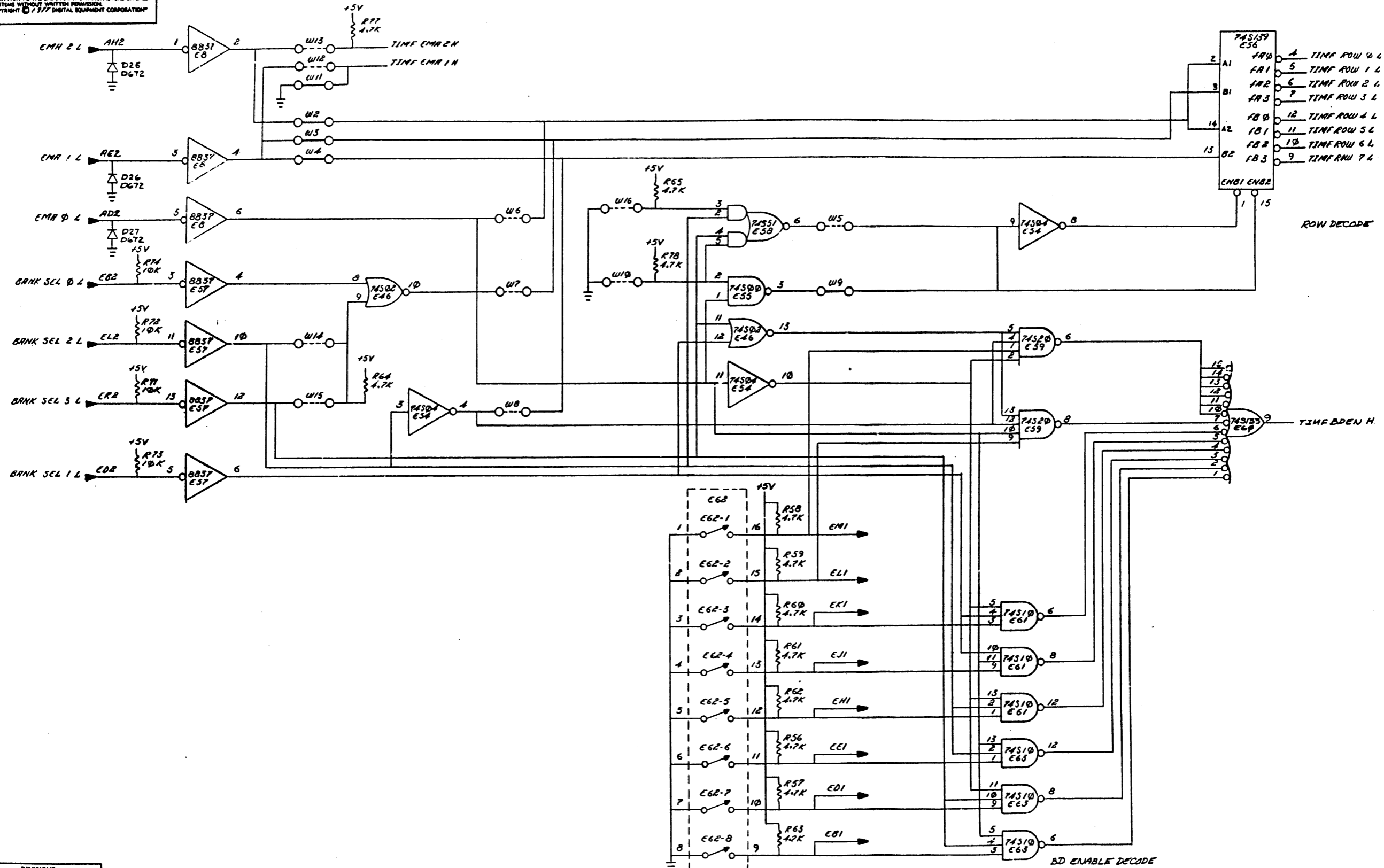


ROW, COLUMN & REF ADR MUX & ADR DRIVERS

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	(TIME)	SIZE CODE	NUMBER	REV.
PDP8 MOS MEMORY	D CS	M8417-0-1	E	
SCALE	NONE	SHEET 5 OF 14	DIST.	

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 © 1977 DIGITAL EQUIPMENT CORPORATION

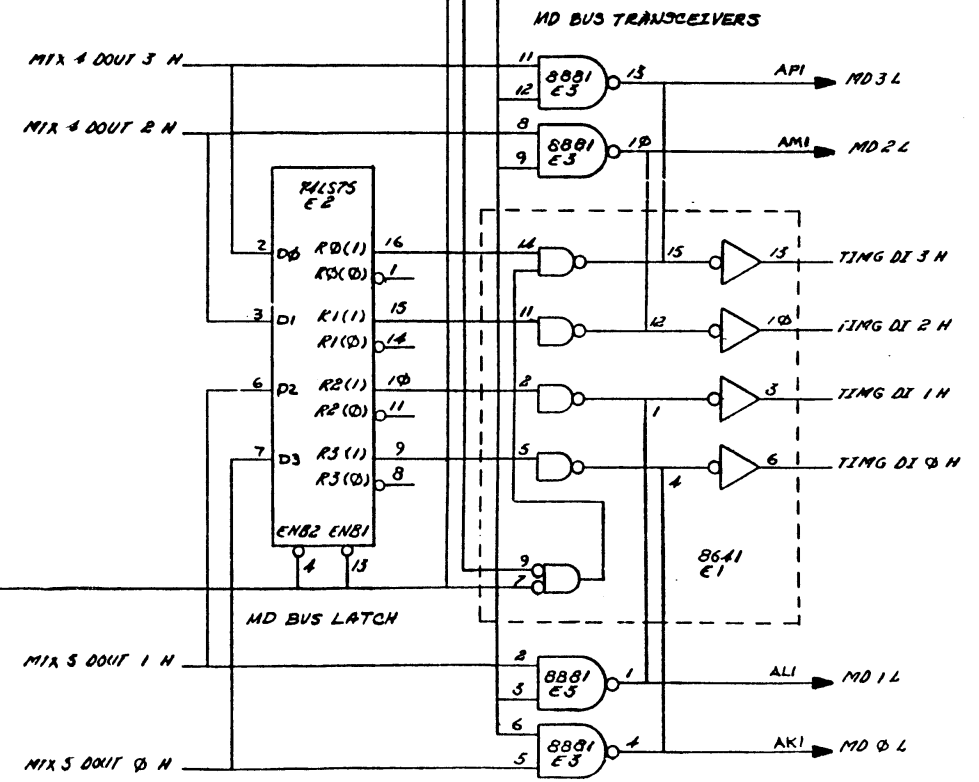
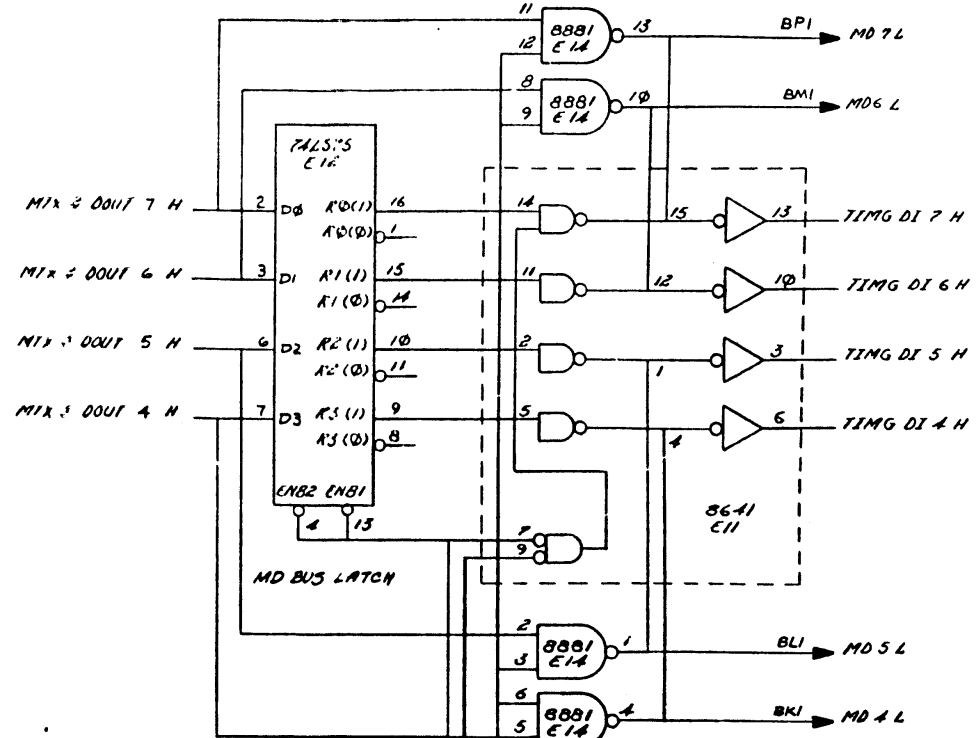
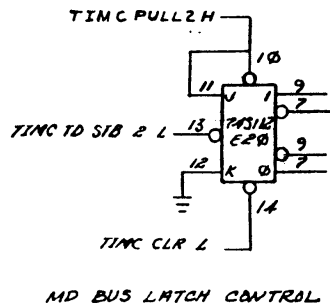
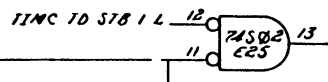
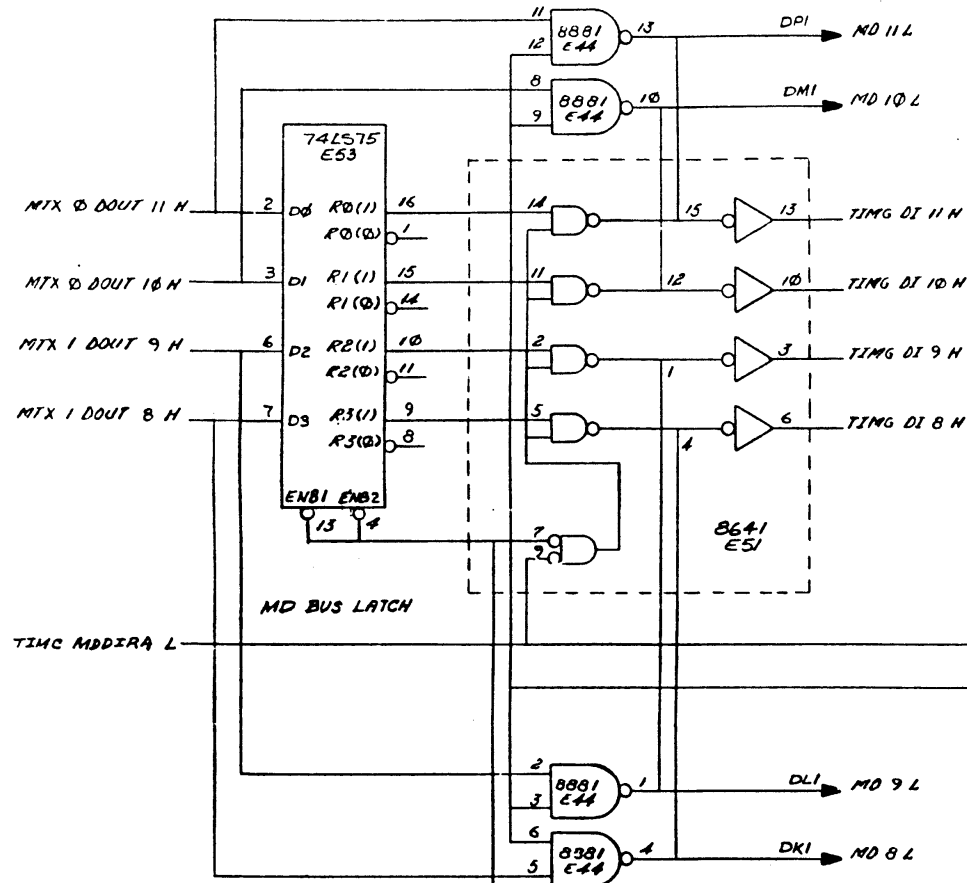


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	(TIMF)	SIZE CODE	NUMB. R	REV.
PDP8 MOS MEMORY	DCS	M8417-0-1	E	
SCALE	NONE	SHEET	6 OF 14	DIST.

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

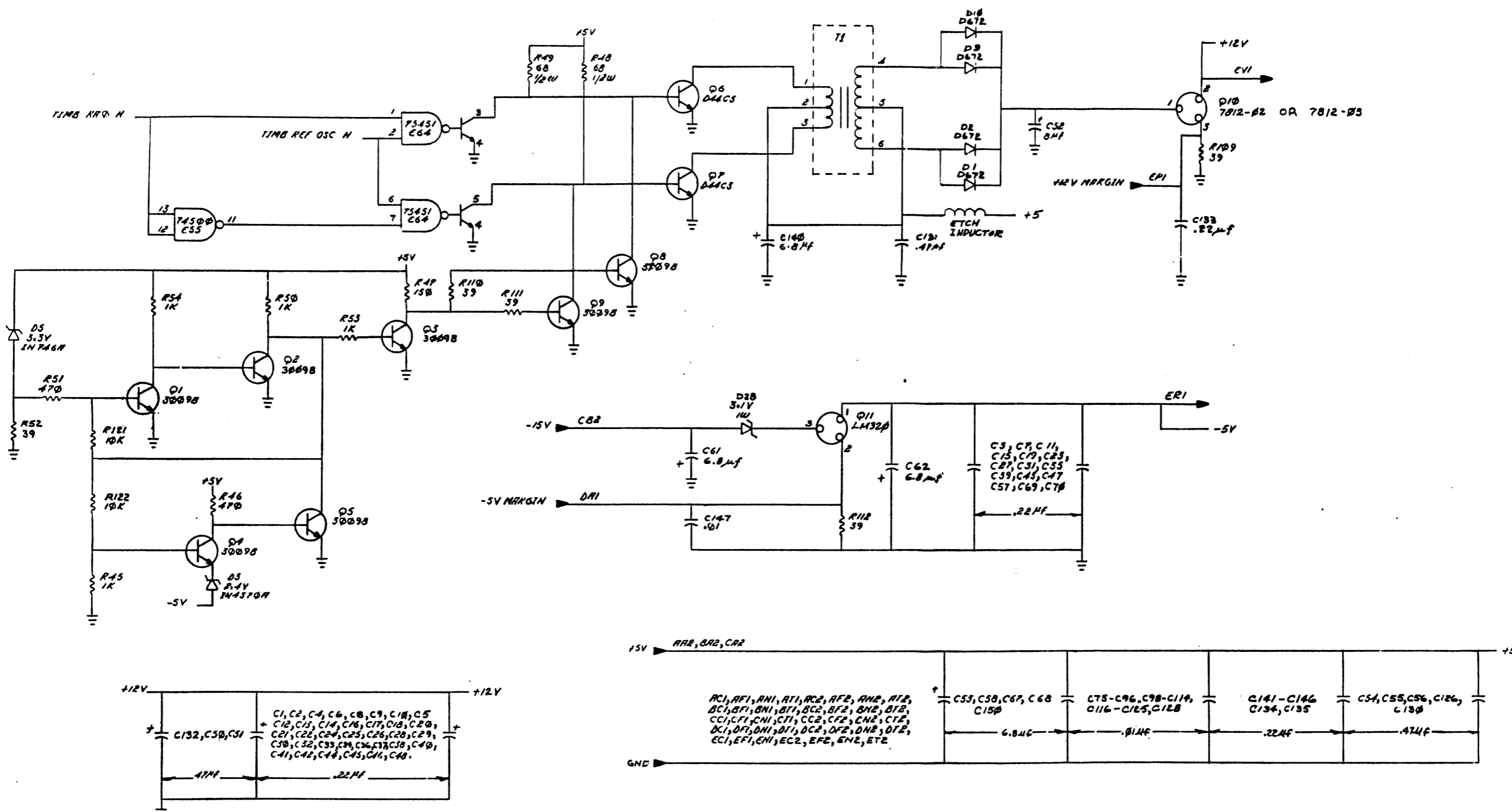
MD BUS TRANSCEIVERS



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	(TIMG)	SIZE CODE	NUMBER	REV.
PDP8 MOS MEMORY	DCS	M8417-0-1	E	
SCALE	NONE	SHEET	7 OF 14	DIST.

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	(TIM)	SIZE CODE	NUMBER	REV.
PDP8 MOS MEMORY	DCS	M8417-0-1	E	
SCALE	NONE	SHEET	8 OF 14	DIST.

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

D

D

C

C

B

B

A

A

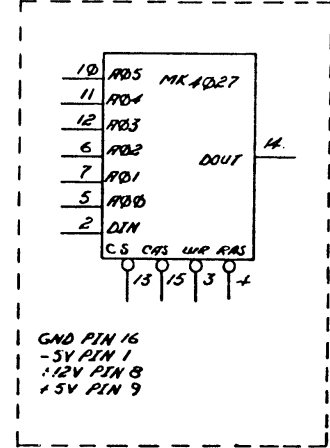
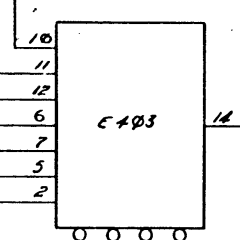
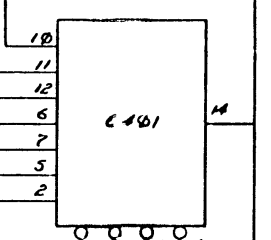
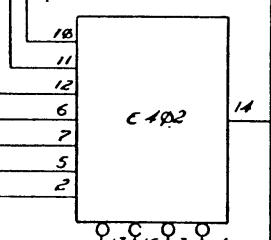
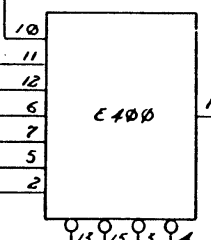
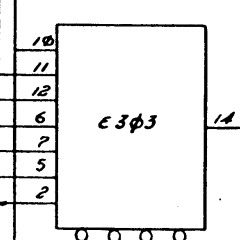
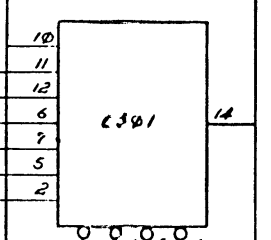
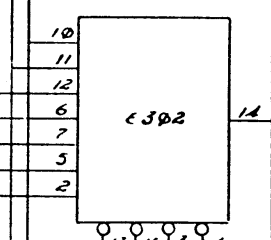
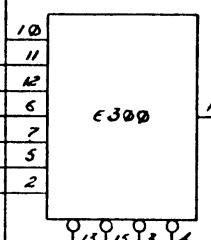
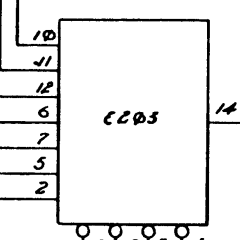
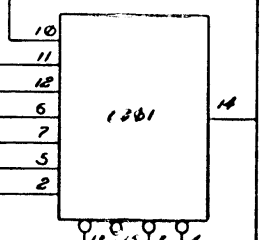
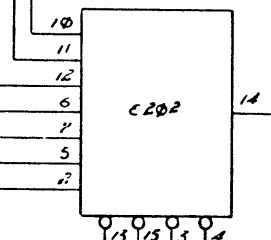
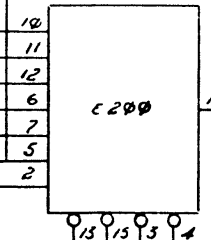
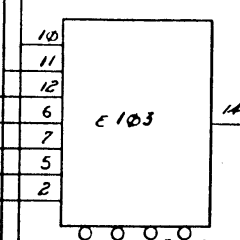
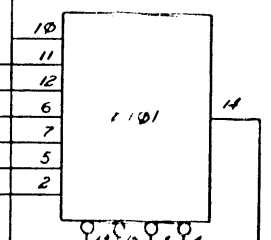
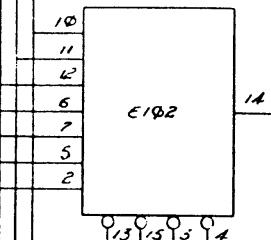
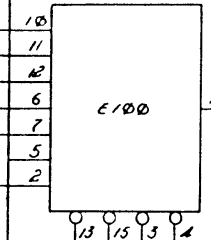
TIME R06 A L
TIME C05 A L
TIME W A L
TIME R05 A L
TIME R05 Q L

TIME R05 A L
TIME R04 A L
TIME R03 A L
TIME R02 A L
TIME R01 A L
TIME R00 A L

TIME R05 S L
TIME R05 I L
TIME R05 B L
TIME R04 B L
TIME R03 B L
TIME R02 B L
TIME R01 B L
TIME R00 B L

TIME R06 B L
TIME C05 B L
TIME W B L
TIME R05 B L
TIME R05 2 L

TIME R05 7 L
TIME R05 3 L
TIME DI 1 H
TIME DI 0 H



GND PIN 16
-5V PIN 1
+12V PIN 8
+5V PIN 9

MTX 5 DOUT 1 H
MTX 5 DOUT 0 H

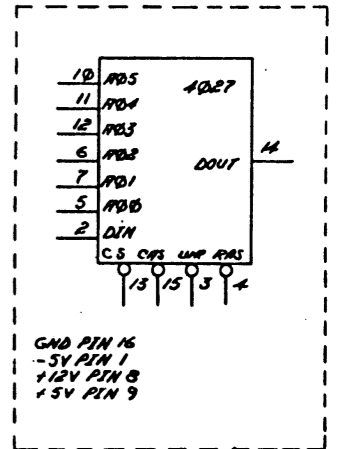
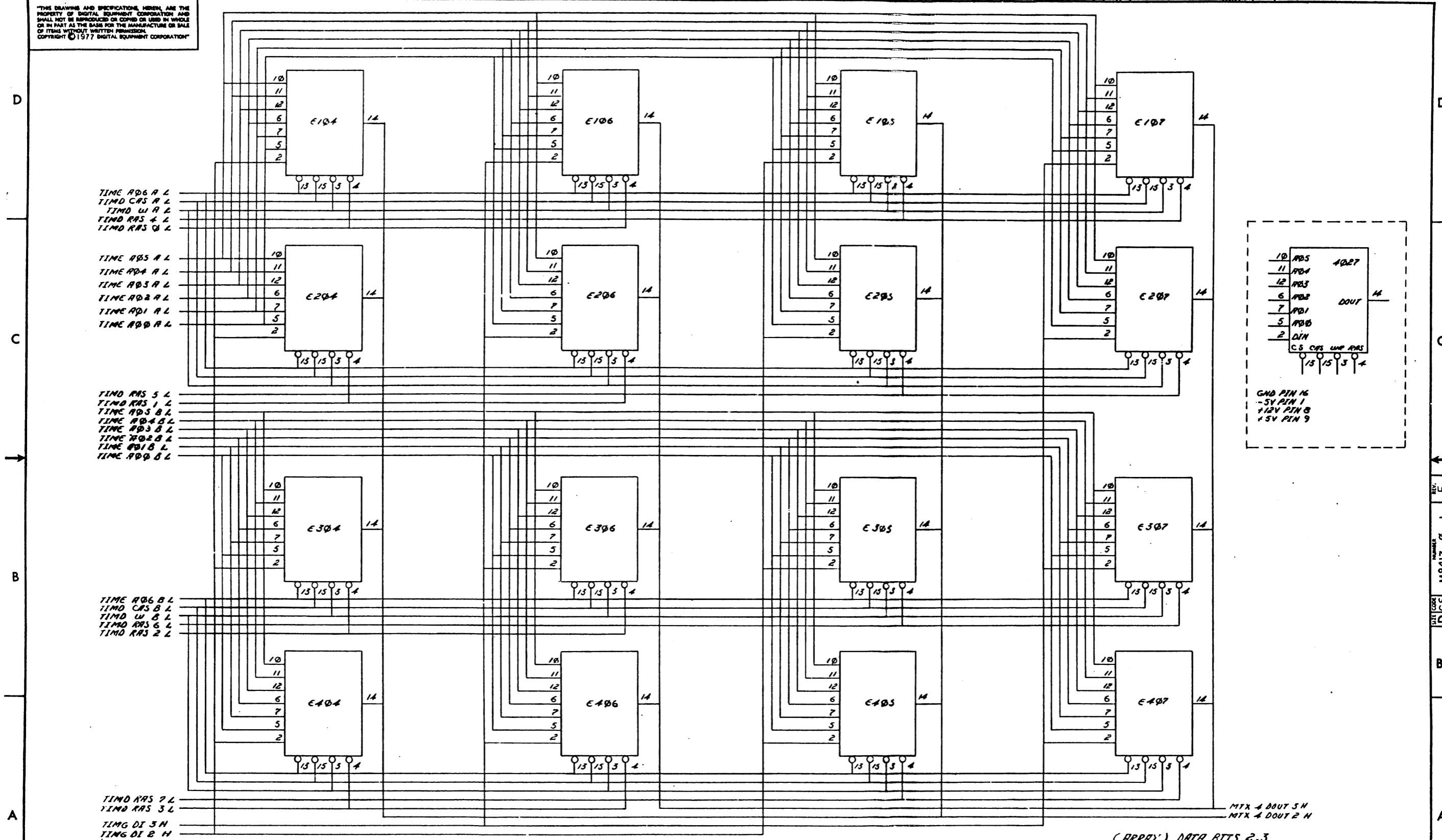
(ARRAY) DATA BITS 0,1
MTX 5

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY	SIZE CODE	DCS	NUMBER	M8417-0-1	REV.	E
SCALE	NONE	SHEET	9 OF 14	DIST.			

REV. E
NUMBER M8417-0-1
FILE CODE DCS

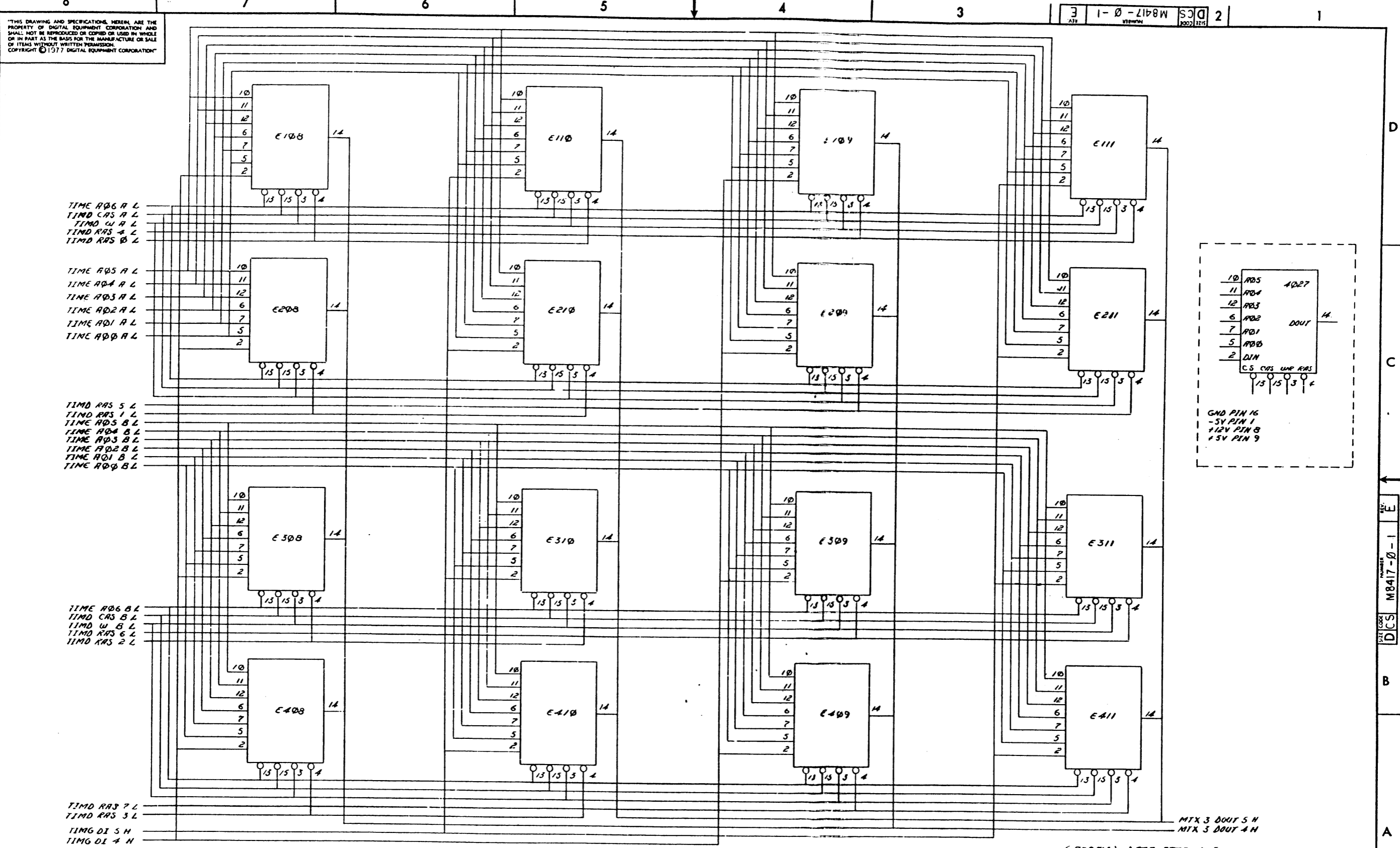
"THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1977 DIGITAL EQUIPMENT CORPORATION"



(ARRAY) DATA BITS 2,3
MTX 4

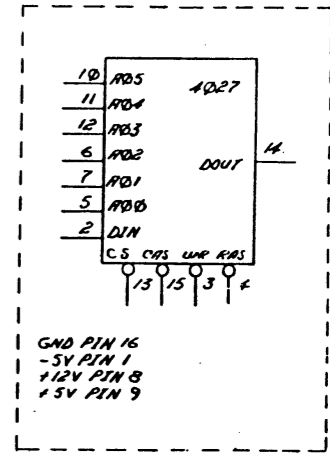
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY	SIZE CODE	DCS	NUMBER	M8417-0-1	REV.	E
SCALE	NONE	SHEET	10	OF	14	DIST.	



"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

E 1-0-118W DCS 2

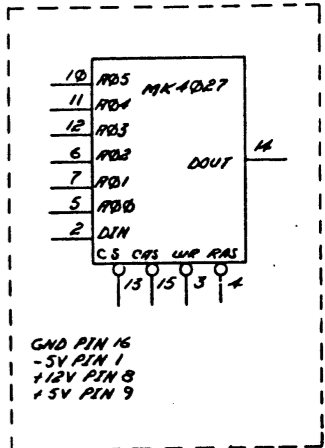
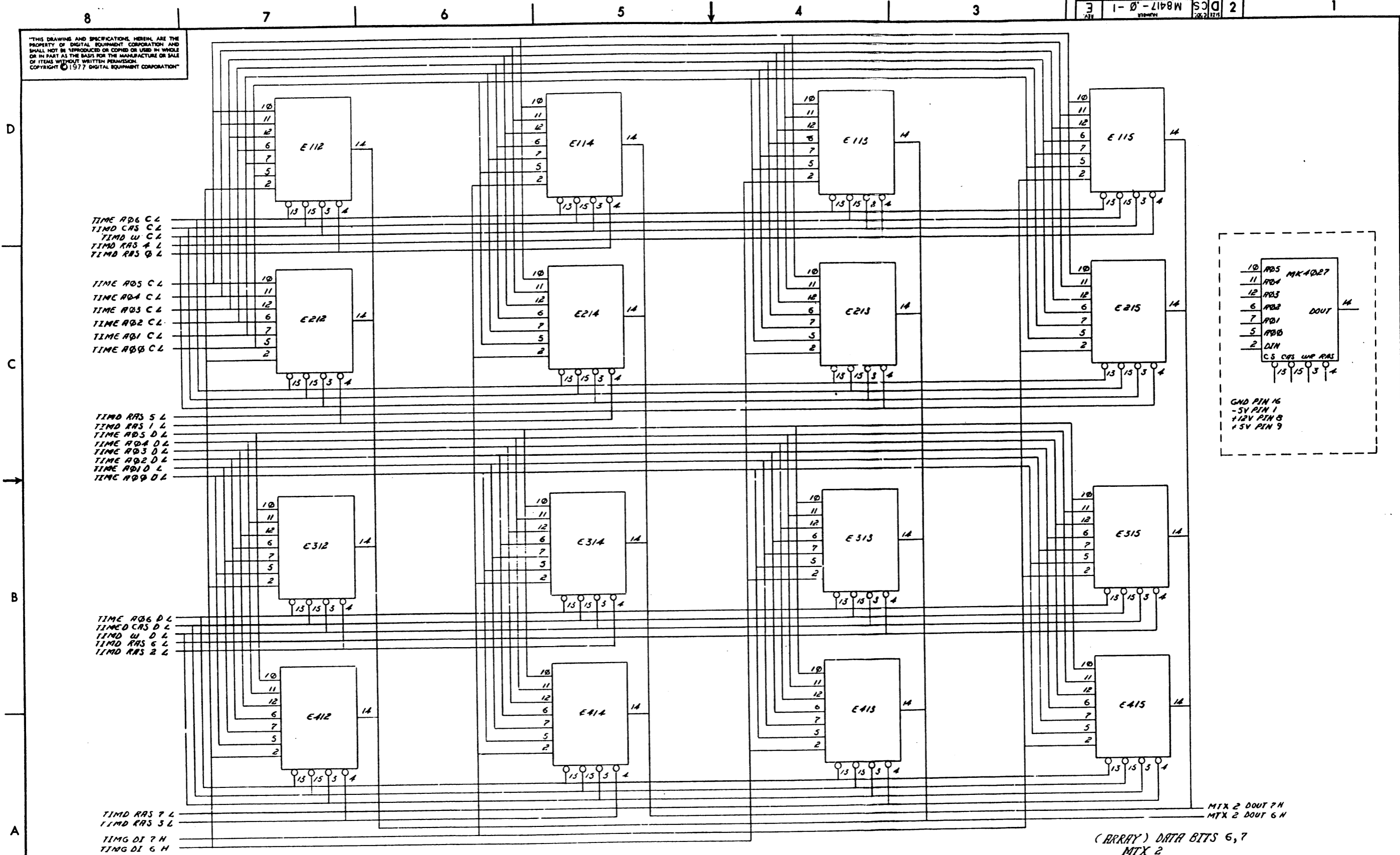


(ARRAY) DATA BITS 4, 5
MTX 5

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY	SIZE CODE	DCS	NUMBER	M8417-0-1	REV.	E
SCALE	NONE	SHEET	11 OF 14	DIST.			

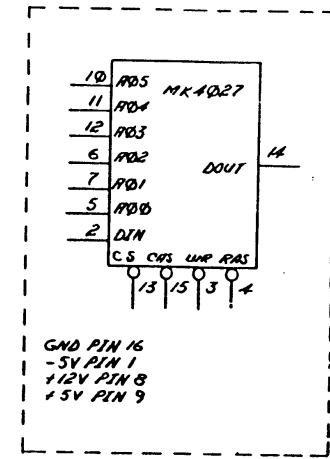
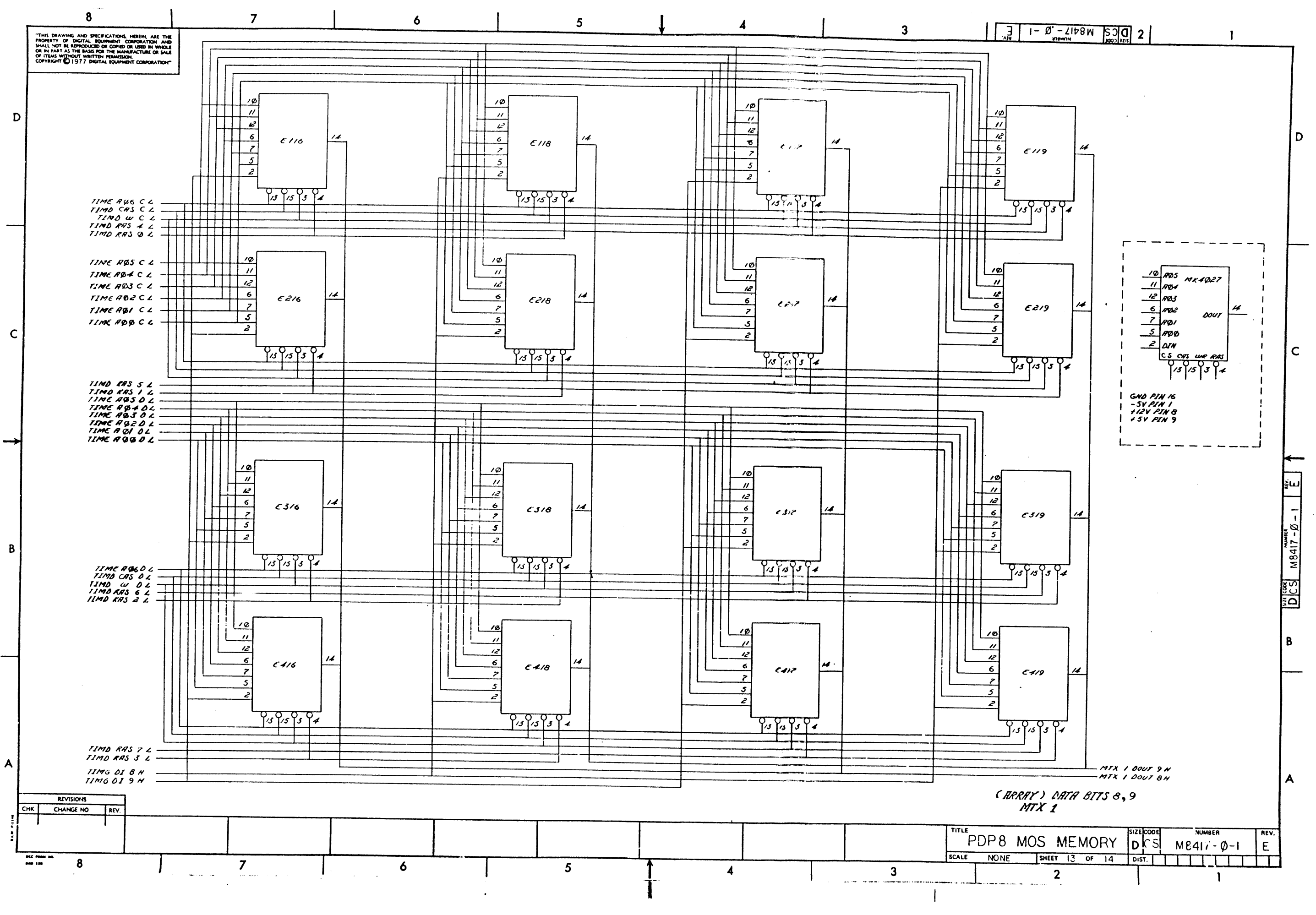
"THIS DRAWING AND SPECIFICATIONS HEREIN ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1977 DIGITAL EQUIPMENT CORPORATION"



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY	SIZE CODE	DCS	NUMBER	M8417-0-1	REV.	E
SCALE	NONE	SHEET	12 OF 14	DIST.			

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

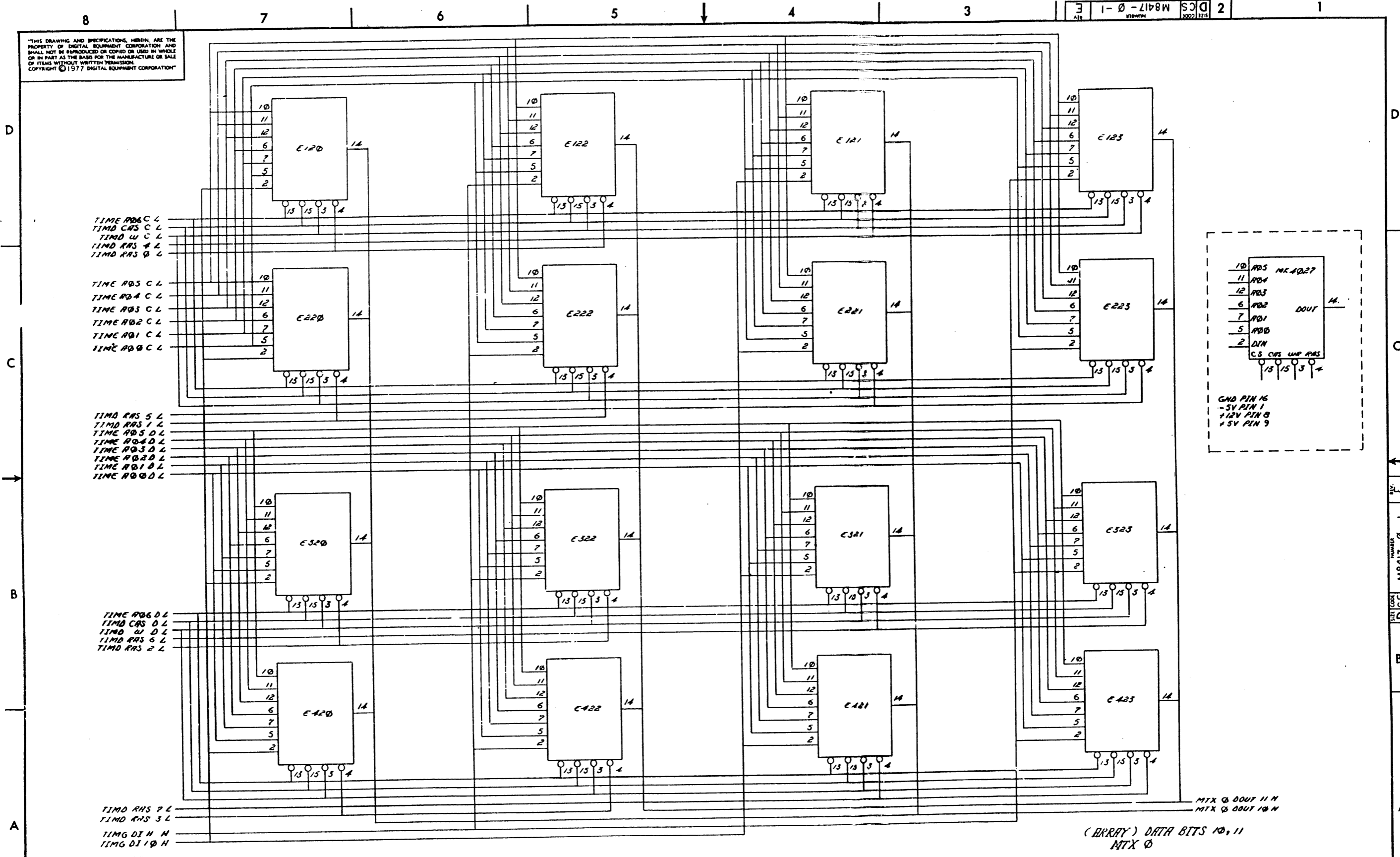


(ARRAY) DATA BITS 8,9
MTX 1

MTX 1 DOUT 9 H
MTX 1 DOUT 8 H

REVISIONS		
CHK	CHANGE NO	REV.

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

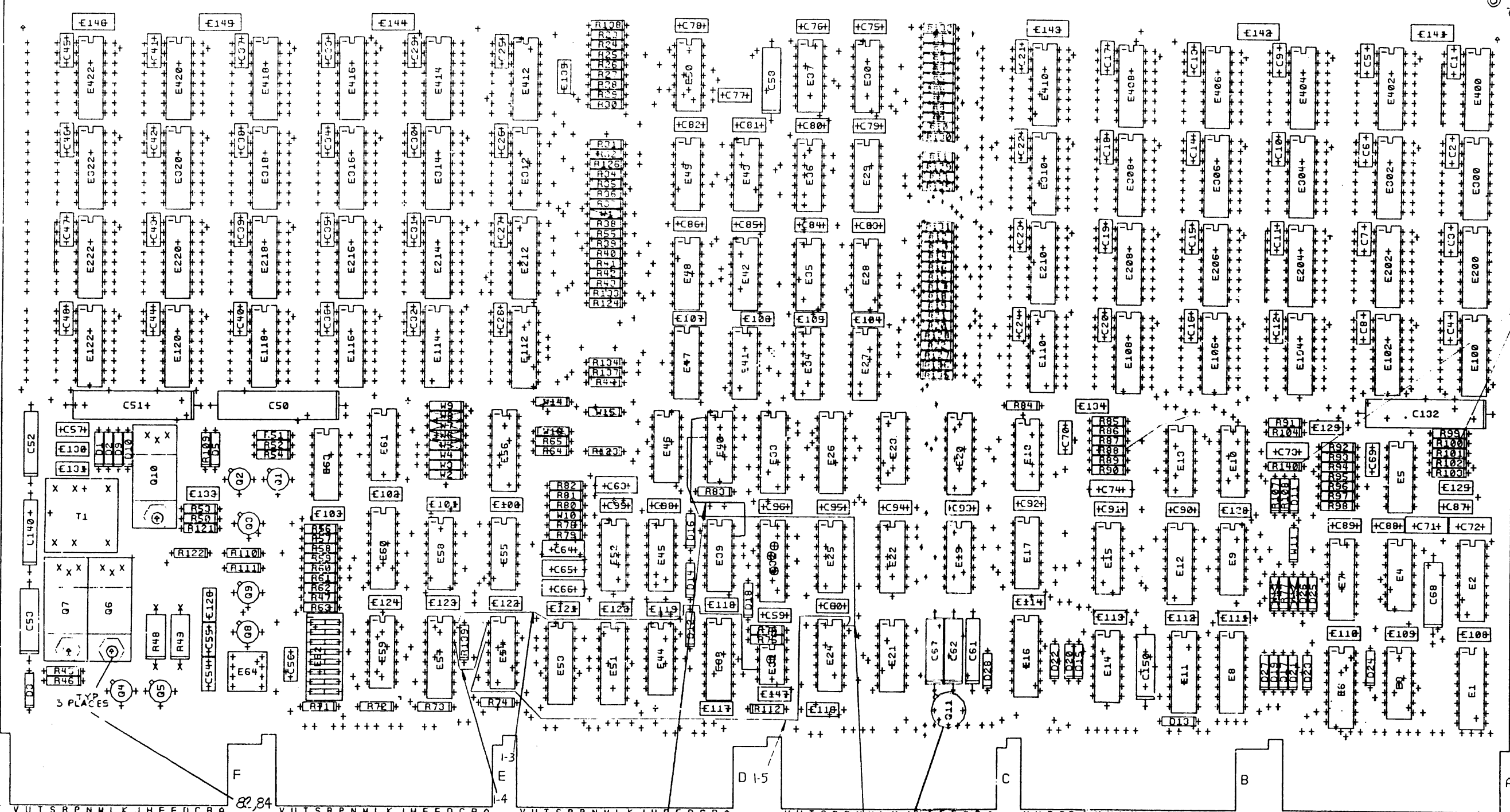


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY	SIZE CODE	DCS	NUMBER	M8417-0-1	REV.	E
SCALE	NONE	SHEET	14	OF	14	DIST.	

MODULE VARIATION M8417-AA

COMPONENT SIDE VIEW



SEE NOTE 1

NOTES: 1. R100, R140 & R88 WILL NOT BE INSTALLED AT ASSEMBLY, BUT AT MEMORY TEST, IF NEEDED.
 2. M8417-AA = M8417-AB, AC, ETC. (8KX12 BIT MEMORY).

CHK	CHANGE NO	REV	BY	DATE
	M8417-0001	B	J. STEGEMAN	5-19-71
	M8417-0002	C	J. STEGEMAN	7-17-71
	M8417-0003	D	J. STEGEMAN	7-27-71
	M8417-0004	E	J. STEGEMAN	7-27-71
	M8417-0005	F	J. STEGEMAN	7-27-71

FOR PARTS LIST, SEE B-PL-M8417-0-0

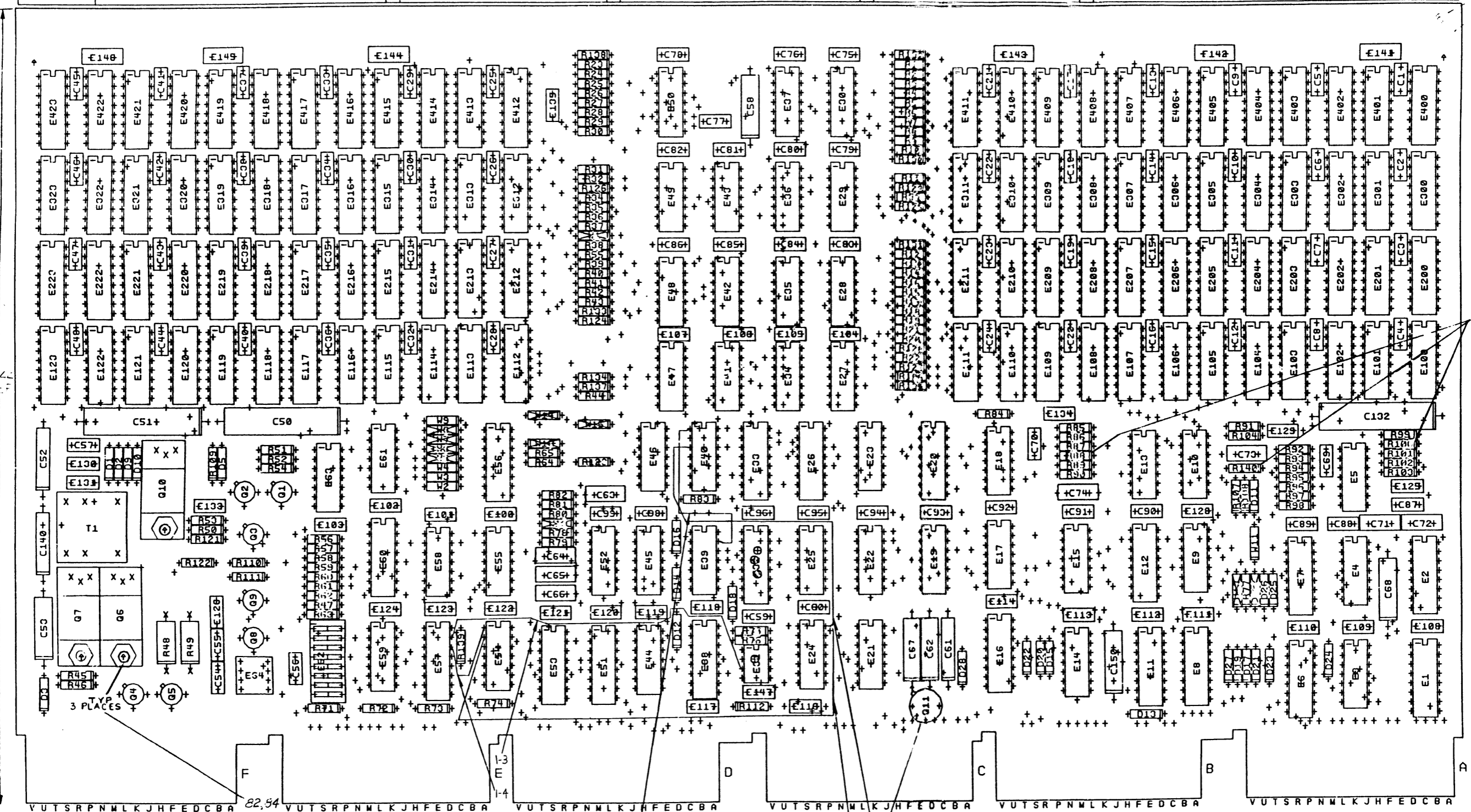
FILM REV. B	DATE
P.C. DESIGN DATA BASE REV. B1	DATE

SIGNATURES	DATE	digital
DRN: J. Stegeman	5-19-71	
CHK'D: J. Stegeman	7-17-71	TITLE PDP 8 MOS MEMORY
ENG: J. Stegeman	7-27-71	
PROJ. ENG: J. Stegeman	7-27-71	SIZE CODE NUMBER
PROD: J. Stegeman	7-27-71	
SCALE 2:1		n IUA M8417-0-0
SHT. 1 OF 8		
NEXT HIGHER ASSY: B-2D-M8417-0		REV E

THE DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF BILTEC EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION.
 BILTEC EQUIPMENT CORPORATION

MODULE VARIATION MB417-BA

COMPONENT SIDE VIEW



SEE NOTE 1

NOTES: 1. R100, R140 & R66 WILL NOT BE INSTALLED AT ASSEMBLY, BUT AT MEMORY TEST, IF NEEDED.
 2. MB417-BA = MB417-BB, BC ETC. (32K X 12 BIT MEMORY).

FOR PARTS LIST
 SEE B-PL-MB417-0-0

CHK	CHANGE NO	REV

ETCH REV. 3	P.C. DESIGN DATA BASE REV. 3
-------------	------------------------------

SIGNATURES		DATE	digital
DRN	CHK'D	5-19-77	
ENG.	PROJ. ENG.	7-8-77	TITLE PDI 8
PROD.	SCALE 2:1	7-9-77	MOS MEMORY
SHT. 2 OF 8			SIZE CODE NUMBER
NEXT HIGHER ASSY. B. C. D. M. B. 417-0-0			REV

8

7

6

5

4

3

U-0-01010 111 D 2

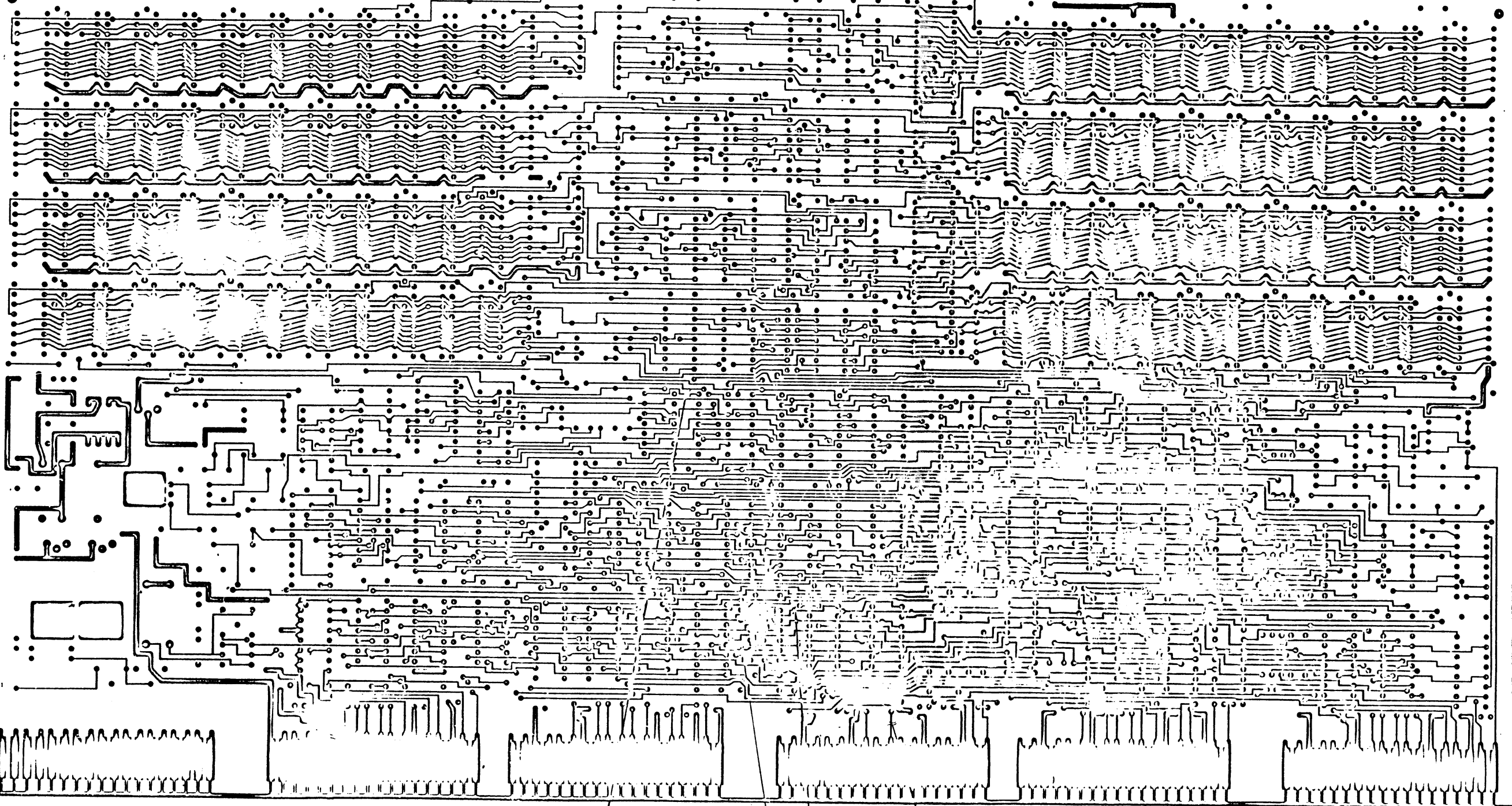
1

0.177

L1 0

LAYER 1
M8417 5012701B

CSXABCDEFGHIJKLNPRS
E423 E422 E421 E420 E419 E418 E417 E416 E415 E414 E413 E412 E60 E37 E30
SIDE 1
E411 E410 E409 E408 E407 E406 E405 E404 E403 E402 E401 E400
digital



3-1 1-1 1-2 2-1

PDP8 MOS MEMORY		REV	NUMBER	REV
D	UA	M8417-1-0	E	
SHEET	2/1	SHEET	3 OF 8	
2 ml				

8

7

6

5

4

3

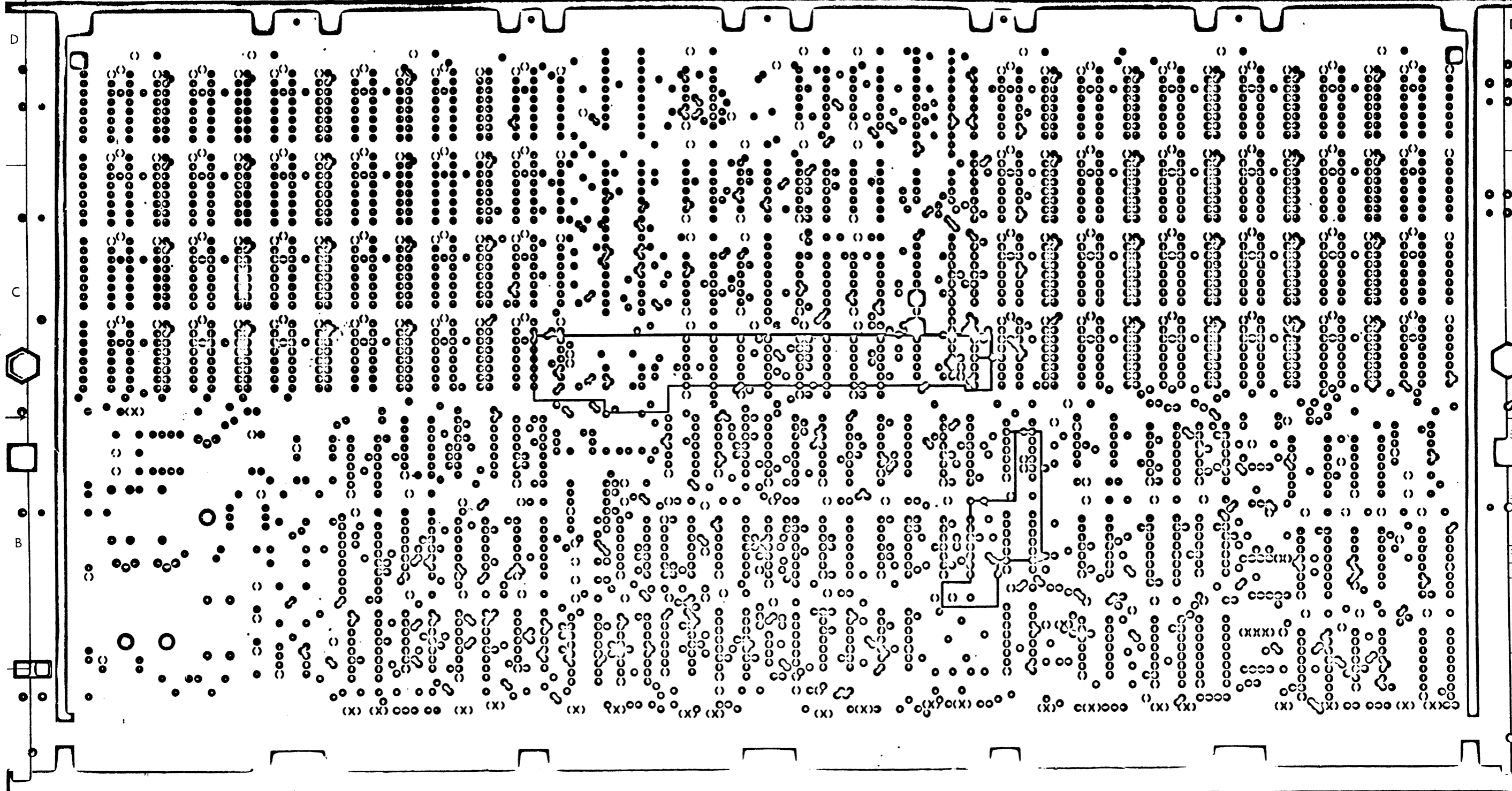
1

M8417

60127018

THIS DRAWING IS THE PROPERTY OF THE RANDOLPH AIR FORCE CENTER, TEXAS. IT IS TO BE KEPT IN THE RANDOLPH AIR FORCE CENTER, TEXAS. IT IS TO BE KEPT IN THE RANDOLPH AIR FORCE CENTER, TEXAS. IT IS TO BE KEPT IN THE RANDOLPH AIR FORCE CENTER, TEXAS.

L2 M8417B

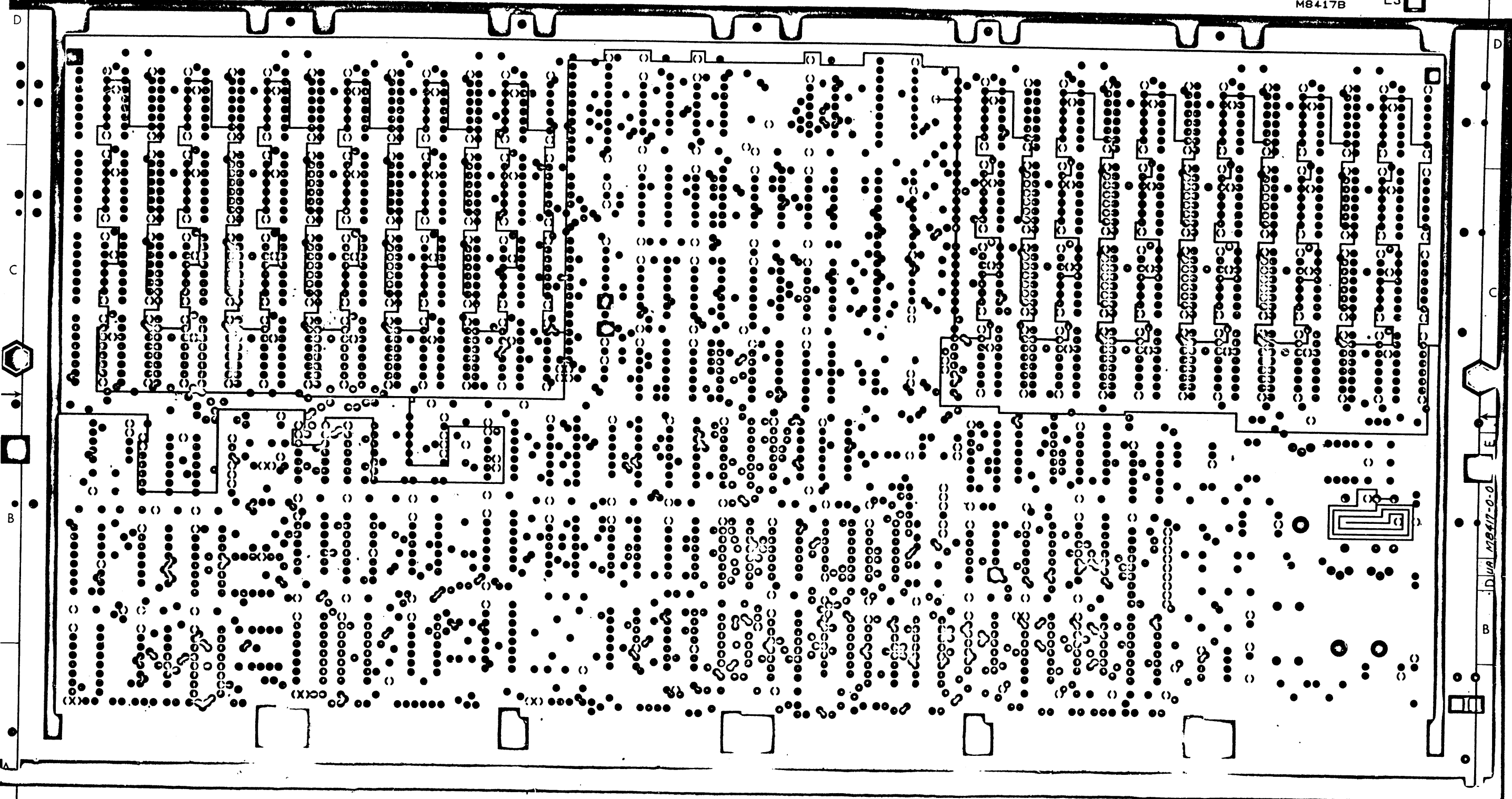


REV.	DATE	BY

TITLE	PDP 8 MOS MEMORY	SIZE	D UA	NUMBER	M8417-0-0	REV.	E
SCALE	2/1	SHEET	4 OF 5	DIST			

MB417B L3

ALL INFORMATION CONTAINED HEREIN IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE AND IS SUBJECT TO THE PROVISIONS OF THE EXECUTIVE ORDER ON PRIVACY AND INFORMATION COLLECTION, AND TO THE PROVISIONS OF THE EXECUTIVE ORDER ON THE MANUFACTURE OF SALT AND SULPHUR DIOXIDE. THIS INFORMATION IS UNCLASSIFIED DATE 03/14/97 BY SP4 JES/STW/STW



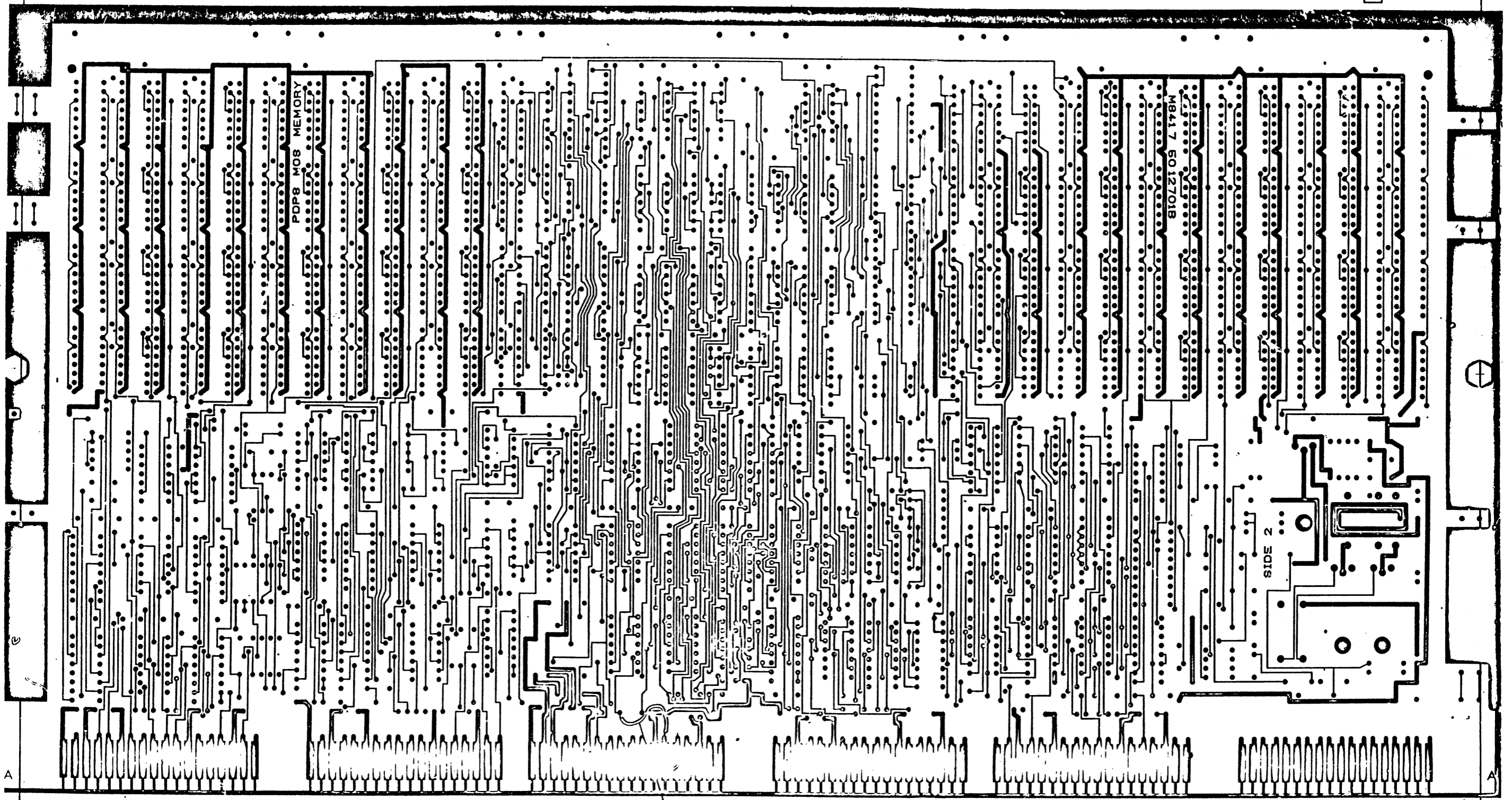
REV	DATE

TITLE	PDP8 MOS MEMORY	SIZE CODE	D UA	NUMB R	118417-0-0	REV	E
SCALE	2/1	SHEET	5 OF 8	DIST			

2 ML

РЗУАЈ

L4

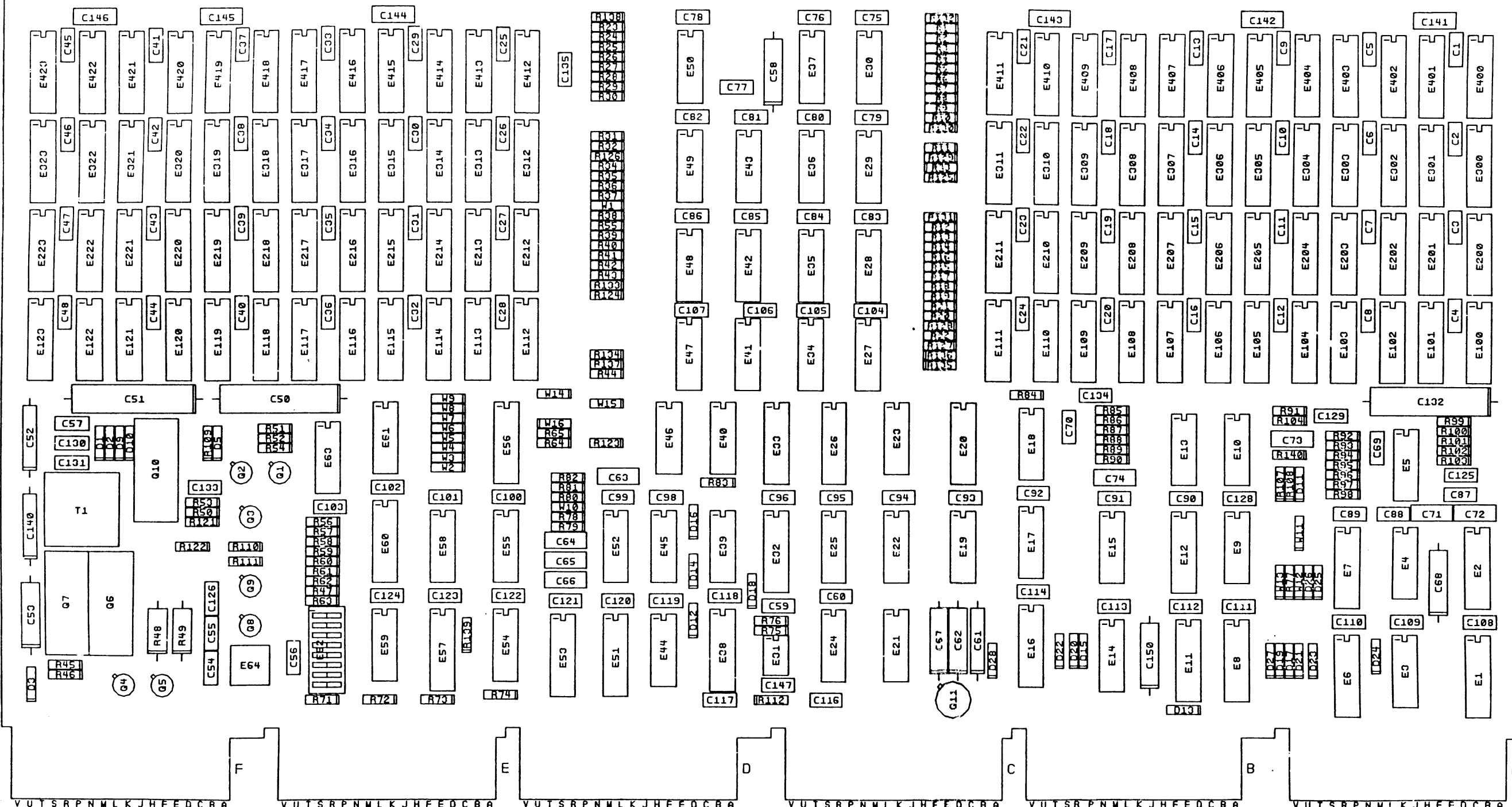


2-2

TITLE	PDP8 MOS MEMORY		SIZE CODE	DUA	NUMBER	MB417-0-0	REV.	E
SCALE	2/1	SHEET	6	OF	8	DIST.		

8	7	6	5	4	3	2	1
---	---	---	---	---	---	---	---

THIS DRAWING AND SPECIFICATIONS, WHETHER BY THE PROPERTY OF BELL TELEPHONE CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART IN THE UNITED STATES OR IN ANY OTHER COUNTRY WITHOUT WRITTEN PERMISSION OF BELL TELEPHONE CORPORATION.



NOTES:

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

CHANGE NO.	REV.

DWG - REF ONLY

SIGNATURES		DATE	digital
DRG. <i>Sullivan</i>		5-18-77	
CHK'D. <i>A. Brennan</i>		5-19-77	
ENC. <i>...</i>		7/8/77	
PROJ. ENG. <i>...</i>		7/8/77	
PRCD. <i>...</i>		7-8-77	
SCALE 2:1	977F	CODE	NUMBER
SHT. 7 OF 8	0	UA M847-0-0	
NEXT HIGH LEVEL ASSY. B-DC-M847-0			REV

"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 © 1977 DIGITAL EQUIPMENT CORPORATION"

REWORK INSTRUCTIONS

ECO #1

- ETCH CUTS SIDE 1:
 1-1 CUT ETCH TO FREE E31-3
 1-2 CUT ETCH TO FREE E31-3
 WIRE ADDS SIDE 1:
 1-3 WIRE E31-3 TO E57-15
 1-4 WIRE E57-14 TO E54-1
 1-5 WIRE E54-2 TO E24-14
 1-6 WIRE E24-14 TO E40-3

ECO #2

- ETCH CUTS SIDE 1:
 2-1 CUT ETCH BETWEEN PIN CK1 & FEED THRU.
 WIRE ADDS SIDE 2:
 2-2 WIRE PIN CP2 TO FEEDTHRU ABOVE
 CK2 PER PROCEDURE IN MODULE REWORK
 SPECIFICATION A-SP-7665265-0-0

ECO #3

- ETCH CUTS SIDE 1:
 3-1 CUT ETCH TO FREE E40-1
 WIRE ADDS SIDE 1:
 3-2 FROM E40-1 TO E39-13.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP 8 MOS MEMORY	SIZE CODE	DUA	NUMBER	M8417-U-0	REV.	E
SCALE	1:1	SHCET	8 OF 8	DIST.			

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	D-UA-M8417-0-0		UNIT ASSY		
2	D-UA-M8417-0-0		UNIT ASSY		
3		5012701-00	50-12701 32KX12 MOS MEMORX		
4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C126,C129,C147
8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13		1012219-00	47. MFD 30V G% 600D AL EL	3	C50,C51,C132
14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19		1210711-02	HANDLE,MODULE,HEX	1	
20		1300250-00	150 1/4W 5% CC	1	R47
21		1300271-00	220 1/4W 5% CC	16	R123-R138
22		1300316-00	470 1/4W 5% CC	2	R46,R51
23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY		SECTION 1 OF 8	RESP.ENG.: J. STEGEMAN	DATE: 30-MAY-78	D I G I T A L
ENG: ECO NUMBER	REV	SECTION. VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE PARTS LIST
E.R:00003	D	1.AB	CHECKED: P. BOSSMAN	DATE: 30-MAY-78	PDP8 MOS MEMORY
J.S:M8417-ML004	E	2.AD	DSN.ENG.: J. STEGEMAN	DATE: 30-MAY-78	SIZE CODE DOCUMENT NUMBER REV
		3.AC	PROD.: C. TANNER	DATE: 30-MAY-78	K PL M8417-0-DBP E
		4.AE	ASSEMBLY NUMBER: D-UA-M8417-0-0		PART NUMBER: M8417-AB EDIT # 11
		5.BB			
		6.BC			
		7.BD			
		8.BE			
		9.			
		10.			
		11.			
		12.			

"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 1979. DIGITAL EQUIPMENT CORPORATION"

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R86
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	T1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2IN 0	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN, 0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-0-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN, PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN, PO	1	E23
72	72		1912541-00	VOLT. REG. FIX	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	4K MOS RAM 200NS 1	48	E100,E102,E104,E106,E108,E110,E112,E114,

D	I	G	I	T	A	L	TITLE	SECTION	1	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY					K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
					CONT	E116,E118,E120,E122,E200,E202,E204,E206,
					CONT	E208,E210,E212,E214,E216,E218,E220,E222,
					CONT	E300,E302,E304,E306,E308,E310,E312,E314,
					CONT	E316,E318,E320,E322,E400,E402,E404,E406,
					CONT	E408,E410,E412,E414,E416,E418,E420,E422
78	78		2114114-01	*** THIS ITEM IS NOT USED ***	-	
79	79		2113914-01	*** THIS ITEM IS NOT USED ***	-	
80	80	SEE NOTE 91	2114475-01	*** THIS ITEM IS NOT USED ***	-	
81	81		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP , 4-40X 1/4 AF.	3	
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	6	W2,W3,W4,W9,W10,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-PA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS PAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D	I	G	I	T	A	L	TITLE	SECTION	1	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY					K	PL	M8417-0-DPP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY		REF
2	2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		-
3	3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7	7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129, CONT C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9	9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10	10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13	13		1012219-00	47. MFD 30V G% 60D AL EL	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19	19		1210711-02	HANDLE,MODULE,HEX	1	
20	20		1300250-00	150 1/4W 5% CC	1	R47
21	21		1300271-00	220 1/4W 5% CC	16	R123-R138
22	22		1300316-00	470 1/4W 5% CC	2	R46,R51
23	23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24	24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26	26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27	27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28	28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29	29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY			SECTION 2 OF 8	RESP,ENG.: J.STEGEMAN	DATE: 30-MAY-78	DIGITAL				
ENG	ECO NUMBER	REV	SECTION. VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE	PARTS LIST			
E.R.	100003	D				PDP8 MOS MEMORY	SIZE	CODE	DOCUMENT NUMBER	REV
J.S.	M8417-ML004	E	1.AB	CHECKED: P.BOSSMAN	DATE: 30-MAY-78		K	PL	M8417-0-DBP	E
			2.AD	DSN,ENG.: J.STEGEMAN	DATE: 30-MAY-78					
			3.AC	PROD.: C.TANNER	DATE: 30-MAY-78					
			4.AE	ASSEMBLY NUMBER: D-UA-M8417-0-0						
			5.BB							
			6.BC							
			7.BD							
			8.BE							
			9.							
			10.							
			11.							
			12.							

"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 1979. DIGITAL EQUIPMENT CORPORATION"

LINE	ITFM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R86
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R48,R49
46	46		1503100-00	DEC3009H NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	T1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50	50		1909705-00	DEC 8081 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN,0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-0-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,F11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E50
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN,PO	1	E23
72	72		1912541-00	VOLT.REG.FIX -	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT,BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	*** THIS ITEM IS NOT USED ***	-	

D	I	G	I	T	A	L	TITLE	SECTION 2 OF 8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY		K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78		2114114-01	*** THIS ITEM IS NOT USED ***	-	
79	79		2113914-01	4K MOS RAM 200NS 1	48	E100,E102,E104,E106,E108,E110,E112,E114, CONT E116,E118,E200,E120,E122,E202,E204,E206, CONT E208,E210,E212,E214,E216,E218,E220,E222, CONT E300,E302,E304,E306,E308,E310,E312,E314, CONT E316,E318,E320,E322,E400,E402,E404,E406, CONT E408,E410,E412,E414,E416,E418,E420,E422
80	80	SEE NOTE 91	2114475-01	*** THIS ITEM IS NOT USED. ***	-	
81	81		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	6	W2,W3,W4,W9,W10,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D	I	G	I	T	A	L	TITLE	SECTION 2 OF 8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY		K	PL	M8417-0-DBP	E

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	D-UA-M8417-0-0		UNIT ASSY		
2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		
3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4		1000006-00	100.0 MMF 100V 5%200PPM DM15S	1	C66
5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129,C147
8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13		1012219-00	47. MFD 30V G% 600D AL EL	3	C50,C51,C132
14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18		1211164-04	SW,DIP 1P 1A 6POS	1	E62
19		1210711-02	HANDLE,MODULE,HEX	1	
20		1300250-00	150 1/4W 5% CC	1	R47
21		1300271-00	220 1/4W 5% CC	16	R123-R138
22		1300316-00	470 1/4W 5% CC	2	R46,R51
23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY		SECTION 3 OF 8	RESP.ENG.: J. STEGEMAN	DATE: 30-MAY-78	D	I	G	I	T	A	L
ENG	ECO NUMBER	REV	SECTION VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE PARTS LIST					
E.R.	100003	D	1.AB	CHECKED: P. BOSSMAN	DATE: 30-MAY-78	PDF8 MOS MEMORY					
J.S.	M8417-ML004	E	2.AD	DSN.ENG.: J. STEGEMAN	DATE: 30-MAY-78	SIZE CODE DOCUMENT NUMBER REV					
			3.AC	PPOD.: C. TANNER	DATE: 30-MAY-78	K	PL	M8417-0-DBP	E		
			4.AE	ASSEMBLY NUMBER: D-UA-M8417-0-0		PART NUMBER: M8417-AC		EDIT #:		11	
			5.BB								
			6.BC								
			7.BD								
			8.BE								
			9.								
			10.								
			11.								
			12.								

"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 1979. DIGITAL EQUIPMENT CORPORATION "

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R86
37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45		1309405-00	68 1/2W 5% CC	2	R48,R49
46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	T1
49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54		1910533-00	74S03 NAND GATE-QUAD 2IN, 0	1	E13
55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58		1910542-00	74S64 A-O-I GATE 4-2-3-2	1	E15
59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70		1912388-00	74S02 NOR GATE-QUAD 2IN, PO	3	E9,E25,E46
71		1912389-00	74S08 AND GATE-QUAD 2IN, PO	1	E23
72		1912541-00	VOLT. REG. FIX	1	Q11
73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77		2113735-01	*** THIS ITEM IS NOT USED ***	-	

D	I	G	I	T	A	L	TITLE	SECTION 3 OF 8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY		K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78		2114114-01	4K MOS RAM 200NS 1	48	E100,E102,E104,E106,E108,E110,E112,E114, CONT E116,E118,E120,E122,E200,F202,E204,E206, CONT E208,E210,E212,E214,E216,F218,E220,E222, CONT E300,E302,E304,E306,E308,E310,E312,E314, CONT E316,E318,E320,E322,E400,E402,E404,E406, CONT E408,E410,E412,E414,E416,E418,E420,E422
79	79		2113914-01	*** THIS ITEM IS NOT USED ***	-	
80	80	SEE NOTE 91	2114475-01	*** THIS ITEM IS NOT USED ***	-	
81	81		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	6	W2,W3,W4,W9,W10,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AR,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TFST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D I G I T A L					TITLE	SECTION 3 OF 8		SIZE	CODE	DOCUMENT NUMBER	REV
					PDP8 MOS MEMORY			K	PL	M8417-0-DRP	E

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	D-UA-M8417-0-0		UNIT ASSY		
2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		
3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129, CONT C147
8		1005306-00	. 6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10		1010279-00	.47 MFD 25V 20% 20023 CER.	6	C54-C56,C126,C130,C131
11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13		1012219-00	47. MFD 30V G% 600D AL EL	3	C50,C51,C132
14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19		1210711-02	HANDLE,MODULE,HEX	1	
20		1300250-00	150 1/4W 5% CC	1	R47
21		1300271-00	220 1/4W 5% CC	16	R123-R138
22		1300316-00	470 1/4W 5% CC	2	R46,R51
23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25		1300475-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY		SECTION 4 OF 8	RESP.ENG.: J. STEGEMAN	DATE: 30-MAY-78	D I G I T A L			
ENG:	ECO NUMBER	REV	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE		PARTS LIST	
E.R.	00003	D	CHECKED: P. BOSSMAN	DATE: 30-MAY-78	PDP8 MOS MEMORY			
J.S.	M8417-ML004	E	DSN.ENG.: J. STEGEMAN	DATE: 30-MAY-78	SIZE	CODE	DOCUMENT NUMBER	REV
			PROD.: C. TANNER	DATE: 30-MAY-78	K	PL	M8417-0-DBP	E
			ASSEMBLY NUMBER: D-UA-M8417-0-0				PART NUMBER: M8417-AE	EDIT # 11
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 1979, DIGITAL EQUIPMENT CORPORATION								

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R80
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	I1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN,0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 11	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-0-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN,PO	1	E23
72	72		1912541-00	VOLT, REG, FIX -	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 11	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	*** THIS ITEM IS NOT USED ***	-	

D	I	G	I	T	A	L	TITLE	SECTION	4	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY					K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78		2114114-01	*** THIS ITEM IS NOT USED ***	-	
79	79		2113914-01	*** THIS ITEM IS NOT USED ***	-	
80	80	SEE NOTE 91	2114475-01	4K MOS RAM 200NS 1	48	E100,E102,E104,E106,E108,E110,E112,E114, E116,E118,E120,E122,E200,E202,E204,E206, E208,E210,E212,E214,E216,E218,E220,E222, E300,E302,E304,E306,E308,E310,E312,E314, E316,E318,E320,E322,E400,E402,E404,E406, E408,E410,E412,E414,E416,E418,E420,E422
81	81		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	5	W2,W3,W4,W9,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D	I	G	I	T	A	L	TITLE	PDP8 MOS MEMORY	SECTION 4 OF 8	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY		
2	2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		
3	3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7	7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129,C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9	9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10	10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13	13		1012219-00	47. MFD 30V G% 60D AL EL	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19	19		1210711-02	HANDLE,MODULE,HEX	1	
20	20		1300250-00	150 1/4W 5% CC	1	R47
21	21		1300271-00	220 1/4W 5% CC	16	R123-R138
22	22		1300316-00	470 1/4W 5% CC	2	R46,R51
23	23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24	24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26	26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27	27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28	28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29	29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY		SECTION 5 OF 8	RESP.ENG.: J. STEGEMAN	DATE: 30-MAY-78	D	I	G	I	T	A	L
ENG:	ECO NUMBER	REV	SECTION, VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE PARTS LIST					
E.R.	00003	D		CHECKED: P. BOSSMAN	DATE: 30-MAY-79	PDP8 MOS MEMORY					
J.S.	M8417-ML004	E	1. AB	DSN.ENG.: J. STEGEMAN	DATE: 30-MAY-78	SIZE	CODE	DOCUMENT NUMBER	REV		
			2. AD	PROD.: C. TANNER	DATE: 30-MAY-78	K	PL	M8417-0-DBP	E		
			3. AC	ASSEMBLY NUMBER: D-UA-M8417-0-0						EDIT #	
			4. AE							11	
			5. BB								
			6. BC								
			7. BD								
			8. BE								
			9.								
			10.								
			11.								
			12.								

"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 1979. DIGITAL EQUIPMENT CORPORATION"

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	08.1 1/4W 1% RN55D-F 100PPM	1	R86
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R40,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-05,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	T1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN, 0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-0-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN, PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN, PO	1	E23
72	72		1912541-00	VOLT. REG. FIX	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	4K MOS RAM 200NS 1	96	E100-E123,E200-E223,E300-E323,E400-E423

D	I	G	I	T	A	L	TITLE	SECTION	5	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY					K	PL	M8417-0-DBP	F

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78		2114114-01	*** THIS ITEM IS NOT USED ***	-	
79	79		2113914-01	*** THIS ITEM IS NOT USED ***	-	
80	80	SEE NOTE 91	2114475-01	*** THIS ITEM IS NOT USED ***	-	
81	81		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	USE WITH 06,07,010	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	USE WITH 011	9007254-00	TRANSIPADS #10146	1	
84	84	USE WITH 06,07,010	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	5	W2,W3,W4,W9,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D	I	G	I	T	A	L	TITLE	SECTION 5 OF 8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY		K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY		REF
2	2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		-
3	3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7	7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129, CONT C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9	9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10	10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13	13		1012219-00	47. MFD 30V G% 600D AL EL	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V S1	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19	19		1210711-02	HANDLE,MODULE,HEX	1	
20	20		1300250-00	150 1/4W 5% CC	1	R47
21	21		1300271-00	220 1/4W 5% CC	16	R123-R138
22	22		1300316-00	470 1/4W 5% CC	2	R46,R51
23	23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24	24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26	26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27	27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28	28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29	29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY			SECTION 6 OF 8	RESP.ENG.: J.STEGEMAN	DATE: 30-MAY-78	D I G I T A L				
ENG	ECO NUMBER	REV	SECTION. VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE		PARTS LIST		
E.R.	00003	D		CHECKED: P.BOSSMAN	DATE: 30-MAY-78	PDP8 MOS MEMORY				
J.S.	M8417-M1004	E	1.AB	DSN.ENG.: J.STEGEMAN	DATE: 30-MAY-78	SIZE	CODE	DOCUMENT NUMBER	REV	
			2.AD	PROD.: C.TANNER	DATE: 30-MAY-78	K	PL	M8417-0-DBP	E	
			3.AC	ASSEMBLY NUMBER: D-UA-M8417-0-0		PART NUMBER:		M8417-BC	EDIT #	
			4.AE						11	
			5.RB							
			6.BC							
			7.BD							
			8.BE							
			9.							
			10.							
			11.							
			12.							

"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 1979, DIGITAL EQUIPMENT CORPORATION"

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R86
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	T1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN, 0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-0-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912380-00	74S02 NOR GATE-QUAD 2IN, PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN, PO	1	E23
72	72		1912541-00	VOLT. REG. FIX -	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	*** THIS ITEM IS NOT USED ***	-	

D	I	G	I	T	A	L	TITLE	SECTION	6 OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							POP8 MOS MEMORY				K	PL	M8417-0-DBP	E

PARTS LIST

AUTOMATED BY PRTLST.2D(16)

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78	2114114-01	4K MOS RAM 200NS 1	96	E100-E123,E200-E223,E300-E323,E400-E423
79	79	2113914-01	*** THIS ITEM IS NOT USED ***	-	
80	80	2114475-01	*** THIS ITEM IS NOT USED ***	-	
81	81	9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	9007254-00	TRANSIPADS #10146	1	
84	84	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85	9009185-00	JUMPER, WIRE, INSULATED, BLACK B	5	W2,W3,W4,W9,W11
86	86	9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF. ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D	I	G	I	T	A	L	TITLE	SECTION 6 OF 8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY		K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY		PEF
2	2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		-
3	3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7	7		1001610-01	.01 MFD. 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129, C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9	9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10	10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V G% 30D AL EL	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13	13		1012219-00	47. MFD 30V G% 60D AL EL	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D20
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19	19		1210711-02	HANDLE,MODULE,HEX	1	
20	20		1300250-00	150 1/4W 5% CC	1	R47
21	21		1300271-00	220 1/4W 5% CC	16	R123-R138
22	22		1300316-00	470 1/4W 5% CC	2	R40,R51
23	23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24	24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26	26		1302124-00	18 1/4W 5% CC	46	R1-R44,R90,R98
27	27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28	28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29	29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY			SECTION 7 OF 8	RESP. ENG.: J. STEGEMAN	DATE: 30-MAY-78	DIGITAL			
ENG	ECO NUMBER	REV	SECTION. VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE PARTS LIST			
E.R.	100003	D				PDP8 MOS MEMORY			
J.S.	M8417-ML004	E	1. AB						
			2. AD						
			3. AC	CHECKED: P. BOSSMAN	DATE: 30-MAY-78				
			4. AE						
			5. BB						
			6. BC	DSN. ENG.: J. STEGEMAN	DATE: 30-MAY-78	SIZE	CODE	DOCUMENT NUMBER	REV
			7. BD			K	PL	M8417-0-DBP	E
			8. BE						
			9.	PROD.: C. TANNER	DATE: 30-MAY-78				
			10.						
			11.						
			12.	ASSEMBLY NUMBER: D-UA-M8417-0-0		PART NUMBER: M8417-BD		EDIT #	
								11	

"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 1979, DIGITAL EQUIPMENT CORPORATION"

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R86
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	K107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	I1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, RI	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DIA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN,0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-O-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN, PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN, PO	1	E23
72	72		1912541-00	VOLT. REG. FIX	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	*** THIS ITEM IS NOT USED ***	-	

D	I	G	I	T	A	L	TITLE	SECTION	7	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PNP8 MOS MEMORY					K	PL	M8417-0-DBP	E

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78	2114114-01	*** THIS ITEM IS NOT USED ***	-	
79	79	2113914-01	4K MOS RAM 200NS 1	96	E100-E123,E200-E223,E300-E323,E400-E423
80	80	2114475-01	*** THIS ITEM IS NOT USED ***	-	
81	81	9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
82	82	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	9007254-00	TRANSIPADS #10146	1	
84	84	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85	9009185-00	JUMPER, WIRE, INSULATED, BLACK B	5	W2,W3,W4,W9,W11
86	86	9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D	I	G	I	T	A	L	TITLE	SECTION	7	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY					K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY		
2	2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***		
3	3		5012701-00	50-12701 32KX12 MOS MEMORX	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM DM15S	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM DM15S	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM DM15S	1	C65
7	7		1001610-01	.01 MFD 100V -20+80 Z5U DISC	53	C60,C75-C96,C98-C114,C116-C125,C128,C129,C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	C53,C58,C67,C61,C62,C68,C140,C150
9	9		1010274-00	.22 MFD 50V -20+80 Z5U CER	60	C1-C48,C57,C69,C70,C133-C135,C141-C146
10	10		1010279-00	.47 MFD 25V 20% 2C023 CER.	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V G% 3ND AL EL	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM DM15S	6	C59,C63,C71-C74
13	13		1012219-00	47. MFD 30V G% 60ND AL EL	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	E62
19	19		1210711-02	HANDLE,MODULE,HEX	1	
20	20		1300250-00	150 1/4W 5% CC	1	R47
21	21		1300271-00	220 1/4W 5% CC	16	R123-R138
22	22		1300316-00	470 1/4W 5% CC	2	R40,R51
23	23		1300365-00	1 K 1/4W 5% CC	9	R45,R50,R53,R54,R82-R84,R103,R104
24	24		1300447-00	4.7 K 1/4W 5% CC	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10 K 1/4W 5% CC	6	R71-R74,R121,R122
26	26		1302124-00	1R 1/4W 5% CC	46	R1-R44,R90,R98
27	27		1302377-00	39 1/4W 5% CC	5	R52,R109-R112
28	28		1302859-00	5.76 K 1/4W 1% RN55D-F 100PPM	1	R96
29	29		1302871-00	1.21 K 1/4W 1% RN55D-F 100PPM	2	R80,R108

REVISION HISTORY			SECTION 8 OF 8	RESP.ENG.: J. STEGEMAN	DATE: 30-MAY-78	D I G I T A L				
ENG	ECO NUMBER	REV	SECTION. VARIATION INDEX	MADE BY: L. METZGER	DATE: 30-MAY-78	TITLE PARTS LIST				
E.R.	00003	D				PDP8 MOS MEMORY.				
J.S.	M8417-ML004	E	1.AB	CHECKED: P. BOSSMAN	DATE: 30-MAY-78					
			2.AD	DSN.ENG.: J. STEGEMAN	DATE: 30-MAY-78	SIZE	CODE	DOCUMENT NUMBER	REV	
			3.AC	PRD.: C. TANNER	DATE: 30-MAY-78	K	PL	M8417-0-DBP	E	
			4.AE	ASSEMBLY NUMBER: D-UA-M8417-0-0				PART NUMBER: M8417-8E		EDIT #
			5.BB							11
			6.BC							
			7.BD							
			8.BE							
			9.							
			10.							
			11.							
			12.							

"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 1979. DIGITAL EQUIPMENT CORPORATION"

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
30	30		1302872-00	681 1/4W 1% RN55D-F 100PPM	1	R89
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	1	R94
32	32		1302957-00	121 1/4W 1% RN55D-F 100PPM	1	R101
33	33		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	1	R76
34	34		1303067-00	422 1/4W 1% RN55D-F 100PPM	1	R99
35	35		1303110-00	19.6 1/4W 1% RN55D-F 100PPM	1	R93
36	36		1303226-00	68.1 1/4W 1% RN55D-F 100PPM	1	R86
37	37		1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R75
38	38		1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R97
39	39		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K 1/4W 1% RN55D-F 100PPM	1	R92
41	41		1305122-00	51.1 1/4W 1% RN55D-F 100PPM	1	R85
42	42		1305123-00	215 1/4W 1% RN55D-F 100PPM	2	R91,R102
43	43		1305143-00	825 1/4W 1% RN55D-F 100PPM	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R87
45	45		1309405-00	68 1/2W 5% CC	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	Q6,Q7
48	48		1614234-00	XFMR, CONVERTER, RATIO 1:3 300UH	1	T1
49	49		1909054-00	7493 COUNTER, ASYNCH UP, BI	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN 0	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER, LINE, DUA	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER, PERIPH, DUAL,	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2INS	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN, 0	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E59
58	58		1910542-00	74S64 A-O-I GATE 4-2-3-2	1	E15
59	59		1910544-01	74S74-60GG-D DUAL, EDGE TRIG	1	E39
60	60		1910545-00	74S112 FF-JK DUAL, EDGE TRIG	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER, BUS, HEX, UN	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER, BUS, QUAD, U	1	E45
64	64		1911579-00	8641 TRANSCEIVER, BUS, QUA	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	E58
67	67		1911944-00	555CN TIMER, FUNCT. BLOCK	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E60
69	69	SEE NOTE 92	1912048-02	DEC 7812-02 VOLT REG, FIXED +12	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN, PO	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN, PO	1	E23
72	72		1912541-00	VOLT. REG. FIX	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT, BISTABLE	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	E27-E30,E35,E36,E41,E47-E50
75	75		1912803-00	LS04 INVERTER GATE-HEX 1I	1	E52
76	76		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	1	E40
77	77		2113735-01	*** THIS ITEM IS NOT USED ***	-	-

D	I	G	I	T	A	L	TITLE	SECTION	0	OF	8	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY					K	PL	M8417-0-DBP	E

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
78	78		2114114-01	*** THIS ITEM IS NOT USED ***	-	
79	79		2113914-01	*** THIS ITEM IS NOT USED ***	-	
80	80	SEE NOTE 91	2114475-01	4K MOS RAM 200NS 1	96	E100-E123,E200-E223,E300-E323,E400-E423
81	81		9000024-01	EYELFT, ROLLED FLANGE, .121 OD X	12	
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP , 4-40X 1/4 AF	3	
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN ,PHIL, 4-40X 1/4	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	5	w2,w3,w4,w9,w11
86	86		9105740-55	WIRE(WPAP)30AWG UL1423	A/R	

- 87 NOTE: M8417-AA=M8417-AB,AC,AD,AE(16KX12)
- 88 NOTE: M8417-BA=M8417-BB,BC,BD,BE(32KX12)
- 89 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
- 90 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
- 91 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
- 92 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-02.
- 93 NOTE: -----

D I G I T A L							TITLE	SECTION 8 OF 8		SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY			K	PL	M8417-0-DBP	E