FIELD MAINTENANCE PRINT SET

TABLE OF CONTENTS

UNIT VARIATIONS COVERED BY THIS PRINT SET
8A1ØØ
8A2Ø5
8A4Ø5
8A425
8A625

8A FAMILY (SEMI)

Field Maintenance Print Set

Digital Equipment Corporation

Print Set Part Number MP- 00415

REV. A

NUMBER 8A-1-1

SIZE B CODE TC

REVISION HISTORY

REV.	ECO NUMBER	DATE
A	8A-1-MKØ2C	4-81

DRN. M. P. DUGGAN	DATE 12-MAY-77	TITLE digital 8A SEMICONDUCTOR MEMORY FAMILY
CHK'D. L. NARHI	DATE 11-JUL-77	
DES. ENG. L. NARHI	DATE 11-JUL-77	
RESP. ENG. L. NARHI	DATE 11-JUL-77	
FIELD SERVICE B. EASH	DATE 11-JUL-77	
NEXT HIGHER DOC. B-DD-8A-1		

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV.
B	TC	8A-1-1	A

SHEET 1 OF 2

DRB 124A

MK

D-FD-M8315-Ø-24	FLOW DIAGRAM
D-FD-M8315-Ø-25	FLOW DIAGRAM
D-FD-M8315-Ø-26	FLOW DIAGRAM
D-FD-M8315-Ø-27	FLOW DIAGRAM
E-FD-PDP8/E-Ø-Ø6	PROCESSOR FLOW CHART
D-TD-PDP8/E-Ø-Ø5	TIMING (PDP8/E)
E-CS-M83ØØ-Ø-1	MAJOR REGISTERS
E-CS-M831Ø-Ø-1	MAJOR REGISTERS CONTROL
E-CS-M832Ø-Ø-1	BUS LOADS
E-CS-M833Ø-Ø-1	TIMING GENERATOR
A-SP-KM8-A-1	FIELD INSTALLATION AND ACCEPTANCE PROCEDURE
D-CS-M8317-Ø-1	OPTION BOARD #2
D-UA-M8317-Ø-Ø	UNIT ASSY
B-PL-M8317-Ø-Ø	PARTS LIST
D-TD-KM8-A-4	AUTO RESTART/BOOT SEQUENCE
D-TD-KM8-A-5	BOOTSTRAP TIMING
D-FD-KM8-A-6	FLOW CHART OPTION #2
A-SP-KM8-A-7	ROM PROG. INST.
A-SP-DKC8-A-1	FIELD INST. AND ACCEPTANCE PROCEDURE
D-CS-M8316-Ø-1	OPTION BOARD #1
D-UA-M8316-Ø-Ø	UNIT ASSY
B-PL-M8316-Ø-Ø	PARTS LIST
E-UA-KC8-A-Ø	BEZEL ASSY
D-AD-7010644-Ø-Ø	KEYBOARD ASSY
D-CS-5411241-Ø-1	INDICATOR DISPLAY
D-CS-5411316-Ø-1	REGISTERS AND CONTROL
A-SP-KT8-A	FIELD INSTALLATION AND ACCEPTANCE PROCEDURE
D-UA-M8416-Ø-Ø	KT8-A UNIT ASSY
B-PL-M8416-Ø-Ø	PARTS LIST
D-CS-M8416-Ø-1	MEMORY MANAGEMENT OPTION
D-CS-M9Ø2Ø-Ø-1	KT8-A TERMINATOR CARD
A-SP-MS8-C-Ø	FIELD INSTALLATION AND ACCEPTANCE PROCEDURE
D-CS-M8417-Ø-1	PDP-8 MOS MEMORY
D-UA-M8417-Ø-Ø	UNIT ASSY
B-PL-M8417-Ø-Ø	PARTS LIST
A-SP-MR8-F-2	FIELD INSTALLATION AND ACCEPTANCE PROCEDURE
D-CS-M8349-Ø-1	1K PROM
A-SP-MS8-A-1	FIELD INSTALLATION AND ACCEPTANCE PROCEDURE
D-CS-M8311-Ø-1	4K X 12 MOS MEMORY

TITLE	SHEET	SIZE	CODE	NUMBER	REV.
8A SEMICONDUCTOR MEMORY FAMILY	2 OF 2	B	TC	8A-1-1	A

DRAWING DIRECTORY

FOR FIELD MAINTENANCE PRINT SET SEE

B-TC-8A-1-1

UNIT VARIATIONS

VAR	TITLE
8A1ØØ	12 SLOT OMNIBUS W/KK8A CPU
8A2Ø5	12 SLOT OMNIBUS W/KK8A CPU
	OPTION #2 AND G8Ø16 REGULATOR
8A4Ø5	12 SLOT OMNIBUS W/KK8A CPU
	OPTION #2 AND G8Ø18 REGULATOR
8A425	2Ø SLOT OMNIBUS W/KK8A CPU
	AND OPTION #2
8A625	2Ø SLOT OMNIBUS W/KK8-F
	CPU AND OPTION #2

REVISIONS		
REV.	CHANGE NO.	CHK
A	8A-1-MKØ2C	

USED ON OPTION/MODEL
8A1ØØ
8A2Ø5
8A4Ø5
8A425
8A625

SHEET 1 OF 3

DRN. M.P. DUGGAN	DATE 12 77 MAY	TITLE digital 8A SEMICONDUCTOR MEMORY FAMILY
CHK'D. Larry Marku	DATE 11- JUL-77	
PROJ. ENG. Larry Marku	DATE 11- JUL-77	
PROD. Jim Fare	DATE 25 OCT 77	SIZE B · CODE DD · NUMBER 8A-1 · REV A DIST.

DRB 106A

MK

1

FOR ITEM #1 SEE BELOW

2 CHASSIS ASSY (PDP-8A) B-DD-H93ØØ-Ø

3 BA8-C UNIT ASSY B-DD-BA8-C

4 HEX OMNIBUS CPU B-DD-KK8-A

5 CENTRAL PROCESSOR KK8-F A-ML-KK8-F

6 8A INTERNAL OPTION #2 B-DD-KM8-A

7 MEM. MANGMT. TIME SHARE CONTROL B-DD-KT8-A

8 DRAWING DIRECTORY KC8-A B-DD-KC8-A

9 8A INTERNAL OPTION #1 B-DD-DKC8-A

10 SEMCONDUCTOR MEMORY (PROM) B-DD-MR8-Ø

11 SEMICONDUCTOR MEMORY (RAM) B-DD-MS8-Ø

12 PACKAGING INSTRUCTION (PDP-8A) INTERPLANT (8A1ØØ, 8A2Ø5 8A4Ø5) A-SP-37ØØ17Ø-Ø-Ø

13 PACKAGING INSTRUCTION (PDP-8A) CUSTOMER (8A1ØØ, 8A2Ø5, 8A4Ø5) A-SP-37ØØ172-Ø-Ø

14 PACKAGING INSTRUCTION (BA8-C) (8A425, 8A625) A-SP-37ØØ259-Ø-Ø

1 8A CORE FAMILY

K-PL-8A1ØØ-Ø-Ø
K-PL-8A2Ø5-Ø-Ø
K-PL-8A4Ø5-Ø-Ø
K-PL-8A425-Ø-Ø
K-PL-8A625-Ø-Ø

TITLE			SIZE	CODE	NUMBER	REV
8A SEMICONDUCTOR MEMORY FAMILY	SHEET 2 OF 3		B	DD	8A-1	A

DRB 107

MK

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	MPØØ415	FIELD MAINTENANCE PRINT SET (MP)	-
	B-TC-8A-1-1	FIELD MAINTENANCE PRINT SET (TC)	-
	K-PL-8A1ØØ-Ø-Ø	8A SEMICONDUCTOR MEMORY FAMILY (8A1ØØ)	E/M
	K-PL-8A2Ø5-Ø-Ø	8A CORE FAMILY (8A2Ø5)	E/M
	K-PL-8A4Ø5-Ø-Ø	8A CORE FAMILY (8A4Ø5)	E/M
	K-PL-8A425-Ø-Ø	8A CORE FAMILY (8A425)	E/M
	K-PL-8A625-Ø-Ø	8A CORE FAMILY (8A625)	E/M
2	B-DD-H93ØØ	CHASSIS ASSY (PDP-8A)	-
3	B-DD-BA8-C	BA8-C UNIT ASSY	-
4	B-DD-KK8-A	HEX OMNIBUS CPU	-
5	A-ML-KK8-F	CENTRAL PROCESSOR KK8-F	-
6	B-DD-KM8-A	8A INTERNAL OPTION #2	-
7	B-DD-KT8-A	MEM MANAGEMENT AND TIME SHARE CONTROL	—
8	B-DD-KC8-A	DRAWING DIRECTORY KC8-A	—
9	B-DD-DKC8-A	8A INTERNAL OPTION #1	—
10	B-DD-MR8-Ø	SEMICONDUCTOR MEMORY (PROM)	—
11	B-DD-MS8-Ø	SEMICONDUCTOR MEMORY (RAM)	—
12	A-SP-37ØØ17Ø-Ø-Ø	PACKAGING INSTRUCTION, INTERPLANT (PDP-8A)	—
13	A-SP-37ØØ172-Ø-Ø	PACKAGING INSTRUCTION, CUSTOMER (PDP-8A)	—
14	A-SP-37ØØ259-Ø-Ø	PACKAGING INSTRUCTION, INTERPLANT W/CONSOLE (BA8-C)	—

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

DRB 108A

digital

TITLE	SHEET	SIZE	CODE	NUMBER	REV
8A SEMICONDUCTOR MEMORY FAMILY	3 OF 3	B	DD	8A-1	A

MK

AUTOMATED BY PRTLST.3P(44) — P A R T S L I S T — SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	AE	AF	AK	AL	AM	AN	AP	AR
1	1	D-UA-H9300-0-0	H9300-AA	CHASSIS ASSY 8/A W FANS 115V 60H	1	0	1	0	1	0	1	0	0	0	0	0
2	2	D-UA-H9300-0-0	H9300-AB	CHASSIS ASSY 8/A W FANS 230V 50H	0	1	0	1	0	1	0	1	0	0	0	0
3	3	D-UA-H9300-0-0	H9300-AC	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	0	0	0	0	0	1	0	1	0
4	4	D-UA-H9300-0-0	H9300-AD	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	0	0	0	0	0	0	1	0	1
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
12	12	A-PL-MS8-C-0	00MS8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
13	13	A-PL-MS8-A-0	00MS8-AA	PDP8A RAM 1K	0	0	1	1	0	0	0	0	0	0	1	1
14	14	A-PL-MS8-A-0	00MS8-AB	PDP8A RAM 2K	0	0	0	0	1	1	0	0	0	0	0	0
15	15	A-PL-MS8-A-0	00MS8-AD	PDP8A RAM 4K	0	0	0	0	0	0	1	1	0	0	0	0
16	16	C-UA-MR8-F-0	00MR8-FB	1KX12 CONTENT ALTERABLE ROM & 25	0	0	0	0	0	0	0	0	0	0	0	0
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
19	19	E-UA-KC8-A-0	00KC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			BASIC PART NO: 8A100
ENG	ECO NUMBER	REV	SECTION A OF B
DF	8A-1-MK002B	B	SECTION. VARIATION INDEX
			[A] AA,AB,AC,AD,AE,AF, AK,AL,AM,AN,AP,AR
			[B] AS,AT,AU,AV,FA,FB, FC,FD
			[C]
			[D]
			[E]
			[F]

DRN: M DUGGAN	DATE: 12-MAY-77	DBP	D	I	G	I	T	A	L
CHK'D: L NARHI	DATE: 8-NOV-77	TITLE PARTS LIST							
DES.ENG.: L NARHI	DATE: 8-NOV-77	8A SEMICONDUCTOR MEMORY FAMILY 8A100							
RESP.ENG.: L NARHI	DATE: 8-NOV-77	DOCUMENT NUMBER							
		SIZE	CODE	NUMBER	REV				
MFG.ENG.: J V KANE	DATE: 8-NOV-77	K	PL	8A100-0-0	B				
ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER: #B-DD-8A-1	FILE NAME: MK0384.PLS			EDIT #: 7				

MK

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	AE	AF	AK	AL	AM	AN	AP	AR
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

D	I	G	I	T	A	L	TITLE	SECTION A OF B
							8A SEMICONDUCTOR MEMORY FAMILY 8A100	

SIZE	CODE	DOCUMENT NUMBER	REV
K	PL	8A100-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AS	AT	AU	AV	FA	FB	FC	FD
1	1	D-UA-H9300-0-0	H9300-AA	CHASSIS ASSY 8/A W FANS 115V 60H	0	0	0	0	1	0	0	0
2	2	D-UA-H9300-0-0	H9300-AB	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	0	0	1	0	0
3	3	D-UA-H9300-0-0	H9300-AC	CHASSIS ASSY 8/A W FANS 230V 50H	1	0	1	0	0	0	1	0
4	4	D-UA-H9300-0-0	H9300-AD	CHASSIS ASSY 8/A W FANS 230V 50H	0	1	0	1	0	0	0	1
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
12	12	A-PL-MS8-C-0	00MS8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
13	13	A-PL-MS8-A-0	00MS8-AA	PDP8A RAM 1K	0	0	0	0	0	0	0	0
14	14	A-PL-MS8-A-0	00MS8-AB	PDP8A RAM 2K	1	1	0	0	0	0	0	0
15	15	A-PL-MS8-A-0	00MS8-AD	PDP8A RAM 4K	0	0	1	1	0	0	0	0
16	16	C-UA-MR8-F-0	00MR8-FB	1KX12 CONTENT ALTERABLE ROM & 25	0	0	0	0	1	1	1	1
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
19	19	E-UA-KC8-A-0	00KC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-

REVISION HISTORY

ENG	ECO NUMBER	REV
DF	8A-1-MK002B	B

BASIC PART NO: 8A100

SECTION B OF B

SECTION, VARIATION INDEX
[A] AA,AB,AC,AD,AE,AF, AK,AL,AM,AN,AP,AR
[B] AS,AT,AU,AV,FA,FB, FC,FD
[C]
[D]
[E]
[F]

DRN: M DUGGAN — DATE: 12-MAY-77

CHK'D: L NARHI — DATE: 8-NOV-77

DES.ENG.: L NARHI — DATE: 8-NOV-77

RESP.ENG.: L NARHI — DATE: 8-NOV-77

MFG.ENG.: J V KANE — DATE: 8-NOV-77

ASSEMBLY NUMBER:

TOP DOCUMENT NUMBER: #B-DD-8A-1

DBP D I G I T A L

TITLE PARTS LIST
8A SEMICONDUCTOR MEMORY FAMILY
8A100

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	8A100-0-0	B

FILE NAME: MK0384.PLS

EDIT # 7

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AS	AT	AU	AV	FA	FB	FC	FD
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-

DIGITAL	TITLE	SECTION B OF B	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A100		K	PL	8A100-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BM	BN	BP	BR	BS	BT	BU	BV
1	1	D-UA-H9300-0-0	H9300-AA	CHASSIS ASSY 8/A W FANS 115V 60H	1	0	0	0	1	0	1	0	0	0	0	0
2	2	D-UA-H9300-0-0	H9300-AB	CHASSIS ASSY 8/A W FANS 230V 50H	0	1	0	0	0	1	0	1	0	0	0	0
3	3	D-UA-H9300-0-0	H9300-AC	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	1	0	0	0	0	0	1	0	1	0
4	4	D-UA-H9300-0-0	H9300-AD	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	1	0	0	0	0	0	1	0	1
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	0	0	0	0	1	1	0	0	1	1	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	0	0	0	0	1	1	0	0	1	1
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	0	0	0	0	0	0	0	0	0	0	0	0
19	19	E-UA-KC8-A-0	00KC8-AA	PROGRAMMER'S CONSOLE	0	0	0	0	0	0	0	0	0	0	0	0
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			
ENG	ECO NUMBER	REV	
DF	8A-1-MK002B	B	

BASIC PART NO: 8A205

SECTION A OF C

SECTION. VARIATION INDEX

[A] AA,AB,AC,AD,BM,BN, BP,BR,BS,BT,BU,BV

[B] CM,CN,CP,CR,CS,CT, CU,CV,DM,DN,DP,DR

[C] DS,DT,DU,DV

[D]

[E]

[F]

DRN: M DUGGAN — DATE: 12-MAY-77

CHK'D: L NARHI — DATE: 8-NOV-77

DES.ENG.: L NARHI — DATE: 8-NOV-77

RESP.ENG.: L NARHI — DATE: 8-NOV-77

MFG.ENG.: J V KANE — DATE: 8-NOV-77

ASSEMBLY NUMBER:

TOP DOCUMENT NUMBER: #B-DD-8A-1

DBP | D | I | G | I | T | A | L

TITLE: PARTS LIST

8A SEMICONDUCTOR MEMORY FAMILY
8A205

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	8A205-0-0	B

FILE NAME: MK0385.PLS

EDIT #: 5

MK

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION CM	CN	CP	CR	CS	CT	CU	CV	DM	DN	DP	DR
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

D	I	G	I	T	A	L	TITLE	SECTION B OF C	SIZE	CODE	DOCUMENT NUMBER	REV
							8A SEMICONDUCTOR MEMORY FAMILY 8A205		K	PL	8A205-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION DS	DT	DU	DV
1	1	D-UA-H9300-0-0	H9300-AA	CHASSIS ASSY 8/A W FANS 115V 60H	0	0	0	0
2	2	D-UA-H9300-0-0	H9300-AB	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	0
3	3	D-UA-H9300-0-0	H9300-AC	CHASSIS ASSY 8/A W FANS 230V 50H	1	0	1	0
4	4	D-UA-H9300-0-0	H9300-AD	CHASSIS ASSY 8/A W FANS 230V 50H	0	1	0	1
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	1	1	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	1	1
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	1	1	1	1
19	19	E-UA-KC8-A-0	00KC8-AA	PROGRAMMER'S CONSOLE	1	1	1	1
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	*** THIS ITEM IS NOT USED ***	-	-	-	-
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-

REVISION HISTORY			BASIC PART NO: 8A205
ENG	ECO NUMBER	REV	SECTION C OF C
DF	8A-1-MK002B	B	SECTION. VARIATION INDEX [A] AA,AB,AC,AD,BM,BN, BP,BR,BS,BT,BU,BV [B] CM,CN,CP,CR,CS,CT, CU,CV,DM,DN,DP,DR [C] DS,DT,DU,DV [D] [E] [F]

DRN: M DUGGAN	DATE: 12-MAY-77	DBP D I G I T A L
CHK'D: L NARHI	DATE: 8-NOV-77	TITLE PARTS LIST 8A SEMICONDUCTOR MEMORY FAMILY 8A205
DES.ENG.: L NARHI	DATE: 8-NOV-77	
RESP.ENG.: L NARHI	DATE: 8-NOV-77	DOCUMENT NUMBER
MFG.ENG.: J V KANE	DATE: 8-NOV-77	SIZE: K; CODE: PL; NUMBER: 8A205-0-0; REV: B
ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER: #B-DD-8A-1	FILE NAME: MK0385.PLS; EDIT #: 5

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BM	BN	BP	BR	BS	BT	BU	BV
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

D	I	G	I	T	A	L	TITLE	SECTION A OF C	SIZE	CODE	DOCUMENT NUMBER	REV
							8A SEMICONDUCTOR MEMORY FAMILY 8A205		K	PL	8A205-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION CM	CN	CP	CR	CS	CT	CU	CV	DM	DN	DP	DR
1	1	D-UA-H9300-0-0	H9300-AA	CHASSIS ASSY 8/A W FANS 115V 60H	1	0	1	0	0	0	0	0	1	0	1	0
2	2	D-UA-H9300-0-0	H9300-AB	CHASSIS ASSY 8/A W FANS 230V 50H	0	1	0	1	0	0	0	0	0	1	0	1
3	3	D-UA-H9300-0-0	H9300-AC	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	0	1	0	1	0	0	0	0	0
4	4	D-UA-H9300-0-0	H9300-AD	CHASSIS ASSY 8/A W FANS 230V 50H	0	0	0	0	0	1	0	1	0	0	0	0
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	1	1	0	0	1	1	0	0	1	1	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	1	1	0	0	1	1	0	0	1	1
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	1	1	1	1	1	1	1	1	1	1	1	1
19	19	E-UA-KC8-A-0	00KC8-AA	PROGRAMMER'S CONSOLE	0	0	0	0	0	0	0	0	1	1	1	1
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			
ENG	ECO NUMBER	REV	
DF	8A-1-MK002B	B	

BASIC PART NO: 8A205

SECTION B OF C

SECTION. VARIATION INDEX

[A] AA,AB,AC,AD,BM,BN, BP,BR,BS,BT,BU,BV

[B] CM,CN,CP,CR,CS,CT, CU,CV,DM,DN,DP,DR

[C] DS,DT,DU,DV

[D]

[E]

[F]

DRN: M DUGGAN — DATE: 12-MAY-77

CHK'D: L NARHI — DATE: 8-NOV-77

DES.ENG.: L NARHI — DATE: 8-NOV-77

RESP.ENG.: L NARHI — DATE: 8-NOV-77

MFG.ENG.: J V KANE — DATE: 8-NOV-77

ASSEMBLY NUMBER:

TOP DOCUMENT NUMBER: #B-DD-8A-1

DBP D I G I T A L

TITLE: PARTS LIST

8A SEMICONDUCTOR MEMORY FAMILY
8A205

DOCUMENT NUMBER			
SIZE	CODE	NUMBER	REV
K	PL	8A205-0-0	B

FILE NAME: MK0385.PLS

EDIT #: 5

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION DS	DT	DU	DV
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-

D	I	G	I	T	A	L	TITLE	SECTION C OF C	SIZE	CODE	DOCUMENT NUMBER	REV
							8A SEMICONDUCTOR MEMORY FAMILY 8A205		K	PL	8A205-0-0	B

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	AA	AB	AC	AD	BM	BN	BP	BR	BS	BT	BU	BV
					QUANTITY PER VARIATION											
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	0	0	0	0	1	1	0	0	1	1	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	0	0	0	0	1	1	0	0	1	1
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	0	0	0	0	0	0	0	0	0	0	0	0
19	19	E-UA-KC8-A-0	00KC8-AA	PROGRAMMER'S CONSOLE	0	0	0	0	0	0	0	0	0	0	0	0
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	0	0	0	0	0	0	0	0	0	0	0	0
27	27	D-UA-H9300-0-0	H9300-BA	CHASSIS ASSY 8/A 8 AMP 115V 60HZ	1	0	0	0	1	0	1	0	0	0	0	0
28	28	D-UA-H9300-0-0	H9300-BB	CHASSIS ASSY 8/A 4 AMP 230V 50HZ	0	1	0	0	0	1	0	1	0	0	0	0
29	29	D-UA-H9300-0-0	H9300-BH	H9300-AB EXCEPT G8018 230V 60HZ	0	0	1	0	0	0	0	0	1	0	1	0
30	30	D-UA-H9300-0-0	H9300-BJ	H9300-AA EXCEPT G8018 115V 50HZ	0	0	0	1	0	0	0	0	0	1	0	1

REVISION HISTORY

ENG	ECO NUMBER	REV
DF	8A-1-MK002B	B

BASIC PART NO: 8A405

SECTION A OF C

SECTION. VARIATION INDEX
[A] AA,AB,AC,AD,BM,BN, BP,BR,BS,BT,BU,BV
[B] CM,CN,CP,CR,CS,CT, CU,CV,DM,DN,DP,DR
[C] DS,DT,DU,DV,LM,LN, LP,LR,LS,LT,LU,LV
[D]
[E]
[F]

DRN:	M DUGGAN	DATE: 12-MAY-77
CHK'D:	L NARHI	DATE: 8-NOV-77
DES.ENG.:	L NARHI	DATE: 8-NOV-77
RESP.ENG.:	L NARHI	DATE: 8-NOV-77
MFG.ENG.:	J V KANE	DATE: 8-NOV-77

ASSEMBLY NUMBER:

DBP D I G I T A L

TITLE PARTS LIST
8A SEMICONDUCTOR MEMORY FAMILY
8A405

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	8A405-0-0	B

TOP DOCUMENT NUMBER: #B-DD-8A-1

FILE NAME: MK0386.PLS

EDIT #: 4

MK

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BM	BN	BP	BR	BS	BT	BU	BV
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	KM8-AC W NO BOOTSTRAP ROMS	0	0	0	0	0	0	0	0	0	0	0	0

DIGITAL	TITLE	SECTION	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A405	A OF C	K	PL	8A405-0-0	B

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	CM	CN	CP	CR	CS	CT	CU	CV	DM	DN	DP	DR
					QUANTITY PER VARIATION											
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	1	1	0	0	1	1	0	0	1	1	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	1	1	0	0	1	1	0	0	1	1
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	1	1	1	1	1	1	1	1	1	1	1	1
19	19	E-UA-KC8-A-0	00KC8-AA	PROGRAMMER'S CONSOLE	0	0	0	0	0	0	0	0	1	1	1	1
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	0	0	0	0	0	0	0	0	0	0	0	0
27	27	D-UA-H9300-0-0	H9300-BA	CHASSIS ASSY 8/A 3 AMP 115V 60HZ	1	0	1	0	0	0	0	0	1	0	1	0
28	28	D-UA-H9300-0-0	H9300-BB	CHASSIS ASSY 8/A 4 AMP 230V 50HZ	0	1	0	1	0	0	0	0	0	1	0	1
29	29	D-UA-H9300-0-0	H9300-BH	H9300-AB EXCEPT G8018 230V 60HZ	0	0	0	0	1	0	1	0	0	0	0	0
30	30	D-UA-H9300-0-0	H9300-BJ	H9300-AA EXCEPT G8018 115V 50HZ	0	0	0	0	0	1	0	1	0	0	0	0

REVISION HISTORY

ENG	ECO NUMBER	REV
DF	8A-1-MK002B	B

BASIC PART NO: 8A405

SECTION B OF C

SECTION, VARIATION INDEX
[A] AA,AB,AC,AD,BM,BN, BP,BR,BS,BT,BU,BV
[B] CM,CN,CP,CR,CS,CT, CU,CV,DM,DN,DP,DR
[C] DS,DT,DU,DV,LM,LN, LP,LR,LS,LT,LU,LV
[D]
[E]
[F]

DRN: M DUGGAN — DATE: 12-MAY-77
CHK'D: L NARHI — DATE: 8-NOV-77
DES.ENG.: L NARHI — DATE: 8-NOV-77
RESP.ENG.: L NARHI — DATE: 8-NOV-77
MFG.ENG.: J V KANE — DATE: 8-NOV-77
ASSEMBLY NUMBER:
TOP DOCUMENT NUMBER: #B-DD-8A-1

DBP D I G I T A L

TITLE PARTS LIST
8A SEMICONDUCTOR MEMORY FAMILY
8A405

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	8A405-0-0	B

FILE NAME: MK0386.PLS — EDIT #: 4

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION CM	CN	CP	CR	CS	CT	CU	CV	DM	DN	DP	DR
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	KM8-AC W NO BOOTSTRAP ROMS	0	0	0	0	0	0	0	0	0	0	0	0

DIGITAL	TITLE	SECTION	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A405	B OF C	K	PL	8A405-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION DS	DT	DU	DV	LM	LN	LP	LR	LS	LT	LU	LV
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
6	6	E-UA-BA8-C-0	00BA8-CB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	E-UA-BA8-C-0	00BA8-CH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	E-UA-BA8-C-0	00BA8-CJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	1	1	0	0	1	1	0	0	1	1	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	1	1	0	0	1	1	0	0	1	1
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	1	1	1	1	1	1	1	1	1	1	1	1
19	19	E-UA-KC8-A-0	00KC8-AA	PROGRAMMER'S CONSOLE	1	1	1	1	0	0	0	0	0	0	0	0
20	20	D-UA-KT8-A-0	00KT8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	INSTR PKG COMPUTER 8A400,600,800	1	1	1	1	1	1	1	1	1	1	1	1
23	23	A-SP-3700172-0-0	3700172-00	INSTR PKG COMPUTER PDP8A CUSHION	1	1	1	1	1	1	1	1	1	1	1	1
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	0	0	0	0	0	0	0	0	0	0	0	0
27	27	D-UA-H9300-0-0	H9300-BA	CHASSIS ASSY 8/A 8 AMP 115V 60HZ	0	0	0	0	1	0	1	0	0	0	0	0
28	28	D-UA-H9300-0-0	H9300-BB	CHASSIS ASSY 8/A 4 AMP 230V 50HZ	0	0	0	0	0	1	0	1	0	0	0	0
29	29	D-UA-H9300-0-0	H9300-BH	H9300-AB EXCEPT G8018 230V 60HZ	1	0	1	0	0	0	0	0	1	0	1	0
30	30	D-UA-H9300-0-0	H9300-BJ	H9300-AA EXCEPT G8018 115V 50HZ	0	1	0	1	0	0	0	0	0	1	0	1

REVISION HISTORY			
ENG	ECO NUMBER	REV	
DF	8A-1-MK002B	B	

BASIC PART NO: 8A405

SECTION C OF C

SECTION. VARIATION INDEX
[A] AA,AB,AC,AD,BM,BN,BP,BR,BS,BT,BU,BV
[B] CM,CN,CP,CR,CS,CT,CU,CV,DM,DN,DP,DR
[C] DS,DT,DU,DV,LM,LN,LP,LR,LS,LT,LU,LV
[D]
[E]
[F]

DRN: M DUGGAN — DATE: 12-MAY-77

CHK'D: L NARHI — DATE: 8-NOV-77

DES.ENG.: L NARHI — DATE: 8-NOV-77

RESP.ENG.: L NARHI — DATE: 8-NOV-77

MFG.ENG.: J V KANE — DATE: 8-NOV-77

ASSEMBLY NUMBER:

TOP DOCUMENT NUMBER: #B-DD-8A-1

DBP | D | I | G | I | T | A | L

TITLE PARTS LIST

8A SEMICONDUCTOR MEMORY FAMILY
8A405

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	8A405-0-0	B

FILE NAME: MK0386.PLS

EDIT #: 4

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION DS	DT	DU	DV	LM	LN	LP	LR	LS	LT	LU	LV
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	0	0	0	0	0	0	0	0
33	33	A-PL-KM8-A-0	00KM8-AD	KM8-AC W NO BOOTSTRAP ROMS	0	0	0	0	1	1	1	1	1	1	1	1

DIGITAL	TITLE	SECTION	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A405	C OF C	K	PL	8A405-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BH	BJ	BK	BL	BM	BN	BP	BR
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	20-SLOT OMNIBUS,10.5 X 21",2 G80	1	0	0	0	1	0	0	0	1	0	1	0
6	6	E-UA-BA8-C-0	00BA8-CB	20-SLOT OMNIBUS,10.5 X 21",2 G80	0	1	0	0	0	1	0	0	0	1	0	1
7	7	E-UA-BA8-C-0	00BA8-CH	SAME AS BA8-CB EXCEPT 240V 60HZ	0	0	1	0	0	0	1	0	0	0	0	0
8	8	E-UA-BA8-C-0	00BA8-CJ	SAME AS BA8-CA EXCEPT 120V 50HZ	0	0	0	1	0	0	0	1	0	0	0	0
9	9	A-PL-KK8-A-0	0CKK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	0	0	0	0	1	1	1	1	0	0	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	0	0	0	0	0	0	1	1	2	2
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	0	0	0	0	0	0	0	0	0	0	0	0
19	19	E-UA-KC8-A-0	00KC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
20	20	D-UA-KT8-A-0	00KT8-A	MEM MAN OPTION FOR KT8-A SYS	0	0	0	0	0	0	0	0	0	0	1	1
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
23	23	A-SP-3700172-0-0	3700172-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	INSTR PKG BA8-C CHASSIS ASSEMBLY	1	1	1	1	1	1	1	1	1	1	1	1
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	1	1	1	1	1	1	1	1	1	1	1	1
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			BASIC PART NO: 8A425
ENG	ECO NUMBER	REV	SECTION A OF B
DF	8A-1-MK002B	B	SECTION. VARIATION INDEX [A] AA,AB,AC,AD,BH,BJ, BK,BL,BM,BN,BP,BR [B] BS,BT,BU,BV,CM,CN, CP,CR,CS,CT,CU,CV [C] [D] [E] [F]

DRN: M DUGGAN	DATE: 12-MAY-77	DBP D I G I T A L
CHK'D: L NARHI	DATE: 8-NOV-77	TITLE PARTS LIST 8A SEMICONDUCTOR MEMORY FAMILY 8A425
DES.ENG.: L NARHI	DATE: 8 NOV-77	
RESP.ENG.: L NARHI	DATE: 8-NOV-77	DOCUMENT NUMBER
MFG.ENG.: J V KANE	DATE: 8-NOV-77	SIZE: K / CODE: PL / NUMBER: 8A425-0-0 / REV: B
ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER: #B-DD-8A-1	FILE NAME: MK0387.PLS / EDIT #: 4

MK

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BH	BJ	BK	BL	BM	BN	BP	BR
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

D	I	G	I	T	A	L	TITLE	SECTION A OF B	SIZE	CODE	DOCUMENT NUMBER	REV
							8A SEMICONDUCTOR MEMORY FAMILY 8A425		K	PL	8A425-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION BS	BT	BU	BV	CM	CN	CP	CR	CS	CT	CU	CV
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	20-SLOT OMNIBUS,10.5 X 21",2 G80	0	0	0	0	1	0	1	0	0	0	0	0
6	6	E-UA-BA8-C-0	00BA8-CB	20-SLOT OMNIBUS,10.5 X 21",2 G80	0	0	0	0	0	1	0	1	0	0	0	0
7	7	E-UA-BA8-C-0	00BA8-CH	SAME AS BA8-CB EXCEPT 240V 60HZ	1	0	1	0	0	0	0	0	1	0	1	0
8	8	E-UA-BA8-C-0	00BA8-CJ	SAME AS BA8-CA EXCEPT 120V 50HZ	0	1	0	1	0	0	0	0	0	1	0	1
9	9	A-PL-KK8-A-0	00KK8-A	8A-CPU	1	1	1	1	1	1	1	1	1	1	1	1
10	10	D-UA-KK8-F-0	00KK8-F	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	0	0	0	0	0	0	0	0	0	0	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	1	1	2	2	1	1	2	2	1	1	2	2
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	0	0	0	0	1	1	1	1	1	1	1	1
19	19	E-UA-KC8-A-0	00KC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
20	20	D-UA-KT8-A-0	00KT8-A	MEM MAN OPTION FOR KT8-A SYS	0	0	1	1	0	0	1	1	0	0	1	1
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
23	23	A-SP-3700172-0-0	3700172-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	INSTR PKG BA8-C CHASSIS ASSEMBLY	1	1	1	1	1	1	1	1	1	1	1	1
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	1	1	1	1	1	1	1	1	1	1	1	1
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			BASIC PART NO: 8A425
ENG	ECO NUMBER	REV	SECTION B OF B
DF	8A-1-MK002B	B	SECTION. VARIATION INDEX [A] AA,AB,AC,AD,BH,BJ, BK,BL,BM,BN,BP,BR [B] BS,BT,BU,BV,CM,CN, CP,CR,CS,CT,CU,CV [C] [D] [E] [F]

DRN: M DUGGAN	DATE: 12-MAY-77	DBP D I G I T A L
CHK'D: L NARHI	DATE: 8-NOV-77	TITLE PARTS LIST 8A SEMICONDUCTOR MEMORY FAMILY 8A425
DES.ENG.: L NARHI	DATE: 8 NOV-77	
RESP.ENG.: L NARHI	DATE: 8-NOV-77	DOCUMENT NUMBER
MFG.ENG.: J V KANE	DATE: 8-NOV-77	SIZE: K CODE: PL NUMBER: 8A425-0-0 REV: B
ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER: #B-DD-8A-1	FILE NAME: MK0387.PLS EDIT #: 4

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION BS	BT	BU	BV	CM	CN	CP	CR	CS	CT	CU	CV
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

DIGITAL	TITLE	SECTION B OF B	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A425		K	PL	8A425-0-0	B

AUTOMATED BY PRTLST.3P(44) — P A R T S L I S T — SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BH	BJ	BK	BL	BM	BN	BP	BR
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	20-SLOT OMNIBUS,10.5 X 21",2 G80	1	0	0	0	1	0	0	0	1	0	1	0
6	6	E-UA-BA8-C-0	00BA8-CB	20-SLOT OMNIBUS,10.5 X 21",2 G80	0	1	0	0	0	1	0	0	0	1	0	1
7	7	E-UA-BA8-C-0	00BA8-CH	SAME AS BA8-CB EXCEPT 240V 60HZ	0	0	1	0	0	0	1	0	0	0	0	0
8	8	E-UA-BA8-C-0	00BA8-CJ	SAME AS BA8-CA EXCEPT 120V 50HZ	0	0	0	1	0	0	0	1	0	0	0	0
9	9	A-PL-KK8-A-0	00KK8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
10	10	D-UA-KK8-F-0	00KK8-F	CENTRAL PROCESSOR [8E]	1	1	1	1	1	1	1	1	1	1	1	1
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	0	0	0	0	1	1	1	1	0	0	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	0	0	0	0	0	0	0	0	1	1	2	2
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	0	0	0	0	0	0	0	0	0	0	0	0
19	19	E-UA-KC8-A-0	00KC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
20	20	D-UA-KT8-A-0	00KT8-A	MEM MAN OPTION FOR KT8-A SYS	0	0	0	0	0	0	0	0	0	0	1	1
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
23	23	A-SP-3700172-0-0	3700172-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	INSTR PKG BA8-C CHASSIS ASSEMBLY	1	1	1	1	1	1	1	1	1	1	1	1
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	1	1	1	1	1	1	1	1	1	1	1	1
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			BASIC PART NO: 8A625
ENG	ECO NUMBER	REV	SECTION A OF B
DF	8A-1-MK002B	B	SECTION, VARIATION INDEX [A] AA,AB,AC,AD,BH,BJ, BK,BL,BM,BN,BP,BR [B] BS,BT,BU,BV,CM,CN, CP,CR,CS,CT,CU,CV [C] [D] [E] [F]

DRN: M DUGGAN	DATE: 12-MAY-77	DBP D I G I T A L
CHK'D: L NARHI	DATE: 8-NOV-77	TITLE: PARTS LIST 8A SEMICONDUCTOR MEMORY FAMILY 8A625
DES.ENG.: L NARHI	DATE: 8 NOV-77	
RESP.ENG.: L NARHI	DATE: 8-NOV-77	DOCUMENT NUMBER
MFG.ENG.: J V KANE	DATE: 8-NOV-77	SIZE: K; CODE: PL; NUMBER: 8A625-0-0; REV: B
ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER: #B-DD-8A-1	FILE NAME: MK0388.PLS; EDIT #: 6

MK

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BH	BJ	BK	BL	BM	BN	BP	BR
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

DIGITAL	TITLE	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A625 — SECTION A OF B	K	PL	8A625-0-0	B

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION BS	BT	BU	BV	CM	CN	CP	CR	CS	CT	CU	CV
1	1	D-UA-H9300-0-0	H9300-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
2	2	D-UA-H9300-0-0	H9300-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
3	3	D-UA-H9300-0-0	H9300-AC	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
4	4	D-UA-H9300-0-0	H9300-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
5	5	E-UA-BA8-C-0	00BA8-CA	20-SLOT OMNIBUS,10.5 X 21",2 G80	0	0	0	0	1	0	1	0	0	0	0	0
6	6	E-UA-BA8-C-0	00BA8-CB	20-SLOT OMNIBUS,10.5 X 21",2 G80	0	0	0	0	0	1	0	1	0	0	0	0
7	7	E-UA-BA8-C-0	00BA8-CH	SAME AS BA8-CB EXCEPT 240V 60HZ	1	0	1	0	0	0	0	0	1	0	1	0
8	8	E-UA-BA8-C-0	00BA8-CJ	SAME AS BA8-CA EXCEPT 120V 50HZ	0	1	0	1	0	0	0	0	0	1	0	1
9	9	A-PL-KK8-A-0	00KK8-A	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
10	10	D-UA-KK8-F-0	00KK8-F	CENTRAL PROCESSOR [8E]	1	1	1	1	1	1	1	1	1	1	1	1
11	11	A-PL-MS8-C-0	00MS8-CA	16K 12BIT RAM, 4K CHIPS	0	0	0	0	0	0	0	0	0	0	0	0
12	12	A-PL-MS8-C-0	00MS8-CB	32K 12 BIT MOS RAM 4K CHIPS	1	1	2	2	1	1	2	2	1	1	2	2
13	13	A-PL-MS8-A-0	00MS8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
14	14	A-PL-MS8-A-0	00MS8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
15	15	A-PL-MS8-A-0	00MS8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	C-UA-MR8-F-0	00MR8-FB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	A-PL-KM8-A-0	00KM8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
18	18	A-PL-DKC8-A-0	0DKC8-AA	OPTION BOARD #1: SLU,XTAL CLOCK,	0	0	0	0	1	1	1	1	1	1	1	1
19	19	E-UA-KC8-A-0	00KC8-AA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
20	20	D-UA-KT8-A-0	00KT8-A	MEM MAN OPTION FOR KT8-A SYS	0	0	1	1	0	0	1	1	0	0	1	1
21	21	A-PL-8A-1-2		SHIPPING LIST	1	1	1	1	1	1	1	1	1	1	1	1
22	22	A-SP-3700170-0-0	3700170-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
23	23	A-SP-3700172-0-0	3700172-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
24	24	A-SP-3700259-0-0	3700259-00	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
25	25	A-SP-3700259-0-0	3700259-01	INSTR PKG BA8-C CHASSIS ASSEMBLY	1	1	1	1	1	1	1	1	1	1	1	1
26	26	A-SP-3700259-0-0	3700259-02	INSTR PKG COMPUTER 8A820	1	1	1	1	1	1	1	1	1	1	1	1
27	27	D-UA-H9300-0-0	H9300-BA	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
28	28	D-UA-H9300-0-0	H9300-BB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
29	29	D-UA-H9300-0-0	H9300-BH	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
30	30	D-UA-H9300-0-0	H9300-BJ	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

REVISION HISTORY			
ENG	ECO NUMBER	REV	
DF	EA-1-MK002B	B	

BASIC PART NO: 8A625

SECTION B OF B

SECTION. VARIATION INDEX

[A] AA,AB,AC,AD,BH,BJ, BK,BL,BM,BN,BP,BR

[B] BS,BT,BU,BV,CM,CN, CP,CR,CS,CT,CU,CV

[C]

[D]

[E]

[F]

DRN: M DUGGAN — DATE: 12-MAY-77

CHK'D: L NARHI — DATE: 8-NOV-77

DES.ENG.: L NARHI — DATE: 8 NOV-77

RESP.ENG.: L NARHI — DATE: 8-NOV-77

MFG.ENG.: J V KANE — DATE: 8-NOV-77

ASSEMBLY NUMBER:

TOP DOCUMENT NUMBER: *B-DD-8A-1

DBP | D | I | G | I | T | A | L

TITLE: PARTS LIST

8A SEMICONDUCTOR MEMORY FAMILY
8A625

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	8A625-0-0	B

FILE NAME: MK0388.PLS

EDIT #: 6

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION BS	BT	BU	BV	CM	CN	CP	CR	CS	CT	CU	CV
31	31	A-PL-KM8-A-0	00KM8-AB	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32	A-PL-KM8-A-0	00KM8-AC	8A INTERNAL OPTION 2	1	1	1	1	1	1	1	1	1	1	1	1
33	33	A-PL-KM8-A-0	00KM8-AD	*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-

DIGITAL	TITLE	SECTION B OF B	SIZE	CODE	DOCUMENT NUMBER	REV
	8A SEMICONDUCTOR MEMORY FAMILY 8A625		K	PL	8A625-0-0	B

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY M. DUGGAN DATE 12 MAY 77	CHECKED Larry Marlie DATE 11-JUL-77	SECTION 1	
ENG Larry Marlie DATE 11-JUL-77	PROD Jim Kane 25OCT77 DATE	ISSUED SECT. 1	

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY VARIATION 8A1ØØ	8A2Ø5	8A4Ø5	8A425	8A625
1	EK-8AØØ2-OP	PDP-8A OPERATOR'S HANDBOOK	1	1	1	Ø	Ø
2	MPØØ415	8A SEMICONDUCTOR FAMILY MAINTENANCE PRINT SET	1	1	1	1	1
3	A-PL-8A-1-3	8A SEMICONDUCTOR FAMILY SOFTWARE LIST	1	1	1	1	1
4	EK-8AØØ2-MM	PDP-8A USER'S MANUAL	1	1	1	1	Ø
5	EK-H93ØØ-IP	H93ØØ ILLUSTRATED PARTS BREAKDOWN	1	1	1	Ø	Ø
6	EK-BA8C-IP	BA8-C ILLUSTRATED PARTS BREAKDOWN	Ø	Ø	Ø	1	1
7	EK-KC8A-IP	KC8-A ILLUSTRATED PARTS BREAKDOWN	Ø	1	1	1	1

TITLE SHIPPING LIST 8A SEMICONDUCTOR MEMORY FAMILY (8A1ØØ, 8A2Ø5, 8A4Ø5, 8A425, 8A625)	ASSY NO. C-PL-8A-1-Ø	SIZE A	CODE PL	NUMBER 8A-1-2	REV	ECO NO.
	SHEET 1 OF 1	DIST				

DEC FORM
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY M.DUGGAN DATE 12-MAY-77	CHECKED L. NARHI DATE 11-JUL-77	SECTION 1
ENG LARRY.NARHI DATE 11-JUL-77	PROD J.KANE DATE 25-OCT-77	ISSUED SECT.

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION 8A1ØØ	8A2Ø5	8A4Ø5	8A425	8A625
1	ZF006-RB	4K BASIC SOFTWARE	Ø	1	1	1	1
2	ZF2Ø9-RB	4K OPTION #2 SOFTWARE	Ø	1	1	1	1
3	ZF2Ø8-RB	4K OPTION #1 SOFTWARE	Ø	1	1	1	1
4	ZF235-RB	MEMORY MANAGEMENT OPTION SOFTWARE	Ø	Ø	Ø	1	1

TITLE SOFTWARE LIST 8A SEMICONDUCTOR MEMORY FAMILY (8A1ØØ,8A2Ø5,8A4Ø5,8A425,8A625)	ASSY NO. B-DD-8A-1 SHEET 1 OF 1	SIZE A	CODE PL	NUMBER 8A-1-3	REV. A	ECO NO. 8A-1 ML001
		DIST.				

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION DATE 26-apr-77

TITLE 8A100,205,405,425,625 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
L Marks 11-Jul-77	Larry Marks 11-Jul-77	A	SP	8A-1-4	

DEC 16-(392)-1078-N971
DRA 107

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE 8A100,205,405,425,625 FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

SIZE	CODE	NUMBER	REV
A	SP	8A-1-4	

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

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE 8A100,205,405,425,625 FIELD INSTALLATION ACCEPTANCE PROCEDURE

I. GENERAL

Installation of the basic 8A100,205,405,425 and 625 computer requires no special tools or equipment. Normal hand tools are all that are required.

II. UNPACKING

Unpack and inspect the equipment using the procedure provided in the Operator's Handbook.

III. INSPECTION

After removing the equipment packing material, inspect the equipment.

1. Inspect the external surface of the chassis for surface, bezel, switch and light damage.
2. Internally inspect the 8A enclosure and console for damage, loose nuts, bolts, screws, etc.
3. Inventory all hardware against shipping list.
4. Inventory all software against software list, if ordered.
5. Inventory all prints against shipping list if ordered.

IV. INSTALLATION PROCEDURE

Install the equipment using the following procedure:

1. Turn off the power switch of the Limited Function Console.

WARNING

DO NOT TOUCH THE COMPUTER AFTER PLUGGING IT IN UNTIL IT IS CHECKED FOR THE PROPER GROUNDING.

2. Insure that all power is received from the same source.
3. Plug in the power cord.

SIZE	CODE	NUMBER	REV
A	SP	-8A-1-4	

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

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE 8A100,205,405,425,625 FIELD INSTALLATION ACCEPTANCE PROCEDURE

4. Before touching the computer, check frame to ground to insure that no AC voltage is present.
5. Unplug power cord.
6. Turn "on" Power ON/OFF switch and set regulator circuit breaker to the "ON" position. (Behind the Limited Function Console on the 8A100, 8A205, and 8A405 or inside the rear panel on the 8A425 and 8A625.)
7. Repeat Steps 3 and 4.
8. Power should now be applied to the 8A; fans should be running, and the power light on the Limited Function Console should be "ON". The light labeled 'battery charging' should be illuminated on the 8A425 and 8A625 indicating that DC power is okay.

   If none of the above occur, remove the Limited Function panel and check the Master/Slave switch located below the ON/OFF switch on the Limited Function Board.

9. The Run light should not be on. If it is, switch Power Off via the ON/OFF switch.

   Remove the M8315 CPU module (on all except 8A625) and set switches as indicated below. Then insert CPU in the first slot in the OMNIBUS and turn power back on. The Run light should remain off.

   S1-1 thru S1-6, S1-8 set to "OFF" position.
   S1-7 set to "ON" position.

10. Check modules to insure they are located in their proper position in the OMNIBUS. Refer to the Operator's Handbook.
11. Check the operation of the Programmer's Console.
12. Manually load, deposit and examine to insure that memory modules are associated with the correct memory fields. If not, turn the unit off and reconfigure the memory modules to the correct fields.

SIZE	CODE	NUMBER	REV
A	SP	-8A-1-4	

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

V. ACCEPTANCE PROCEDURE

Perform the acceptance tests referred to in table A. If abnormal indications are encountered, refer to the diagnostic listings for error descriptions. Refer to the operators handbook and the diagnostic listings for instructions on loading diagnostics.

Equipment required

1. 8A100,205,405,425,625 with 1-32K of semiconductor memory.
2. Programmer's Console (KC8A and DKC8A)
3. Paper tape input device.
4. Diagnostics and listings.

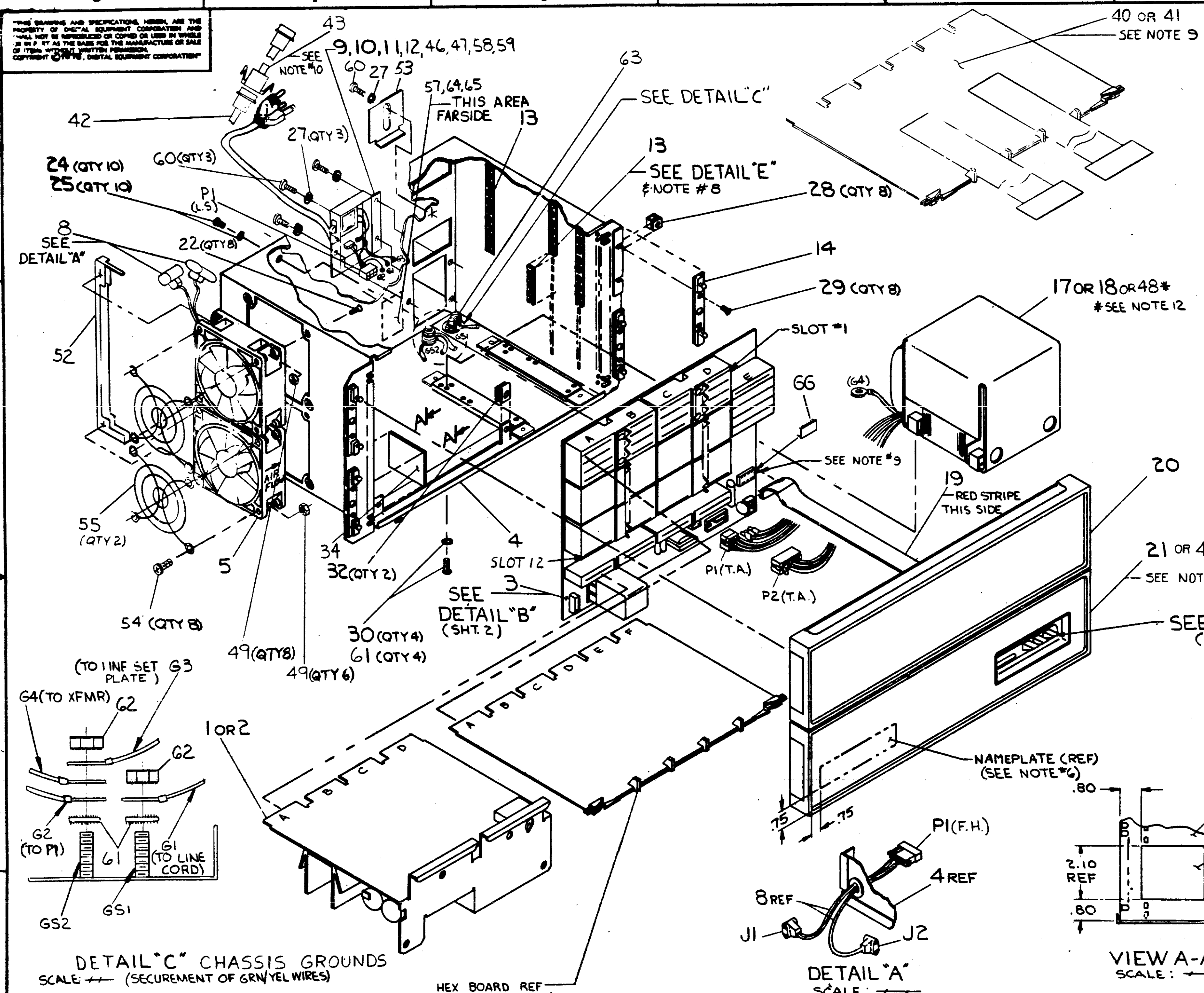
NOTE: If programmer's panel and paper tape input device are not available as part of the system being installed, they must be provided by the customer in good working order. If semiconductor memory is 1K PROM only, refer to the MR8-F Engineering Spec.

Table A

Acceptance 8A100,205,405,425,625

Program Name	MAINDEC #	Accept Time
PDP8A Central Processor Test	08-DJKKA	20 Minutes
1-32K Random Exerciser	08-DJEXA	20 Minutes
MS8-A or MS8-C/D MOS Memory	Refer to Acceptance Procedure for MS8-C/D and MS8-A.	
KT8-A Memory Management Option	Refer to Aceptance Procedure for KT8-A.	

DKC8A Option One	Refer to Acceptance Procedure for DKC8A.
KM8A Option Two	Refer to Acceptance Procedure for KM8A.



LEGEND

NUMBER	VARIATION
H9300-AA	115V, 60HZ (MOS)
H9300-AB	230V, 50HZ (MOS)
H9300-BA	115V, 60HZ (CORE)
H9300-BB	230V, 50HZ (CORE)
H9300-AC	230V, 60HZ (MOS)
H9300-AD	115V, 50HZ (MOS)
H9300-BH	230V, 60HZ (CORE)
H9300-BJ	115V, 50HZ (CORE)

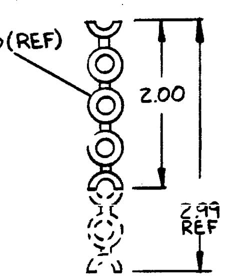
NOTES:

~~1. MOUNTING HARDWARE VARIATIONS FOR ITEM #5 (FAN) ARE AS FOLLOWS:~~

~~FAN VARIATIONS (ITEM #5)~~		~~FAN MTG HARDWARE VARIATIONS (ITEM #16)~~	
~~VENDOR~~	~~VENDOR P/N~~	~~DESCRIPTION~~	~~DEC P/N~~
~~IMC~~	~~WS2107F-110-01~~	~~MOUNTING CLIP~~	~~5005165~~
~~ROTRON~~	~~CT3A2~~	~~NUT, KEPS~~	~~9006660~~
~~TORIN~~	~~TA450-1~~	~~#6-32~~	

~~2. IF ITEMS #6 (RETAINER) AND #7 (FILTER) ARE NOT AVAILABLE, USE TWO FAN SCREENS, DEC P/N CMD 7404881-0-0~~

NOTES CONT. ON PAGE 3 OF "UA".



DETAIL "E"
CARD GUIDE (ITEM #13)
REWORK QTY OF 5
SCALE:

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	OVER 0 TO 0.2	OVER 0.2 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
SURFACE QUALITY IN MICROINCHES	MEDIUM	±.004	±.008	±.012	±.016	±.024	±.04
	PREFERRED	±.012	±.016	±.025	±.04	±.063	±0.1

QUANTITY & VARIATION | DESCRIPTION | DWG./PART NO. | ITEM NO.

THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS
DO NOT SCALE DWG

DRN. 2/24/75
CHK. 5/9/75
ENG. 5/9/75
PROJ. ENG. 5/9/75
PROD. 5/9/75

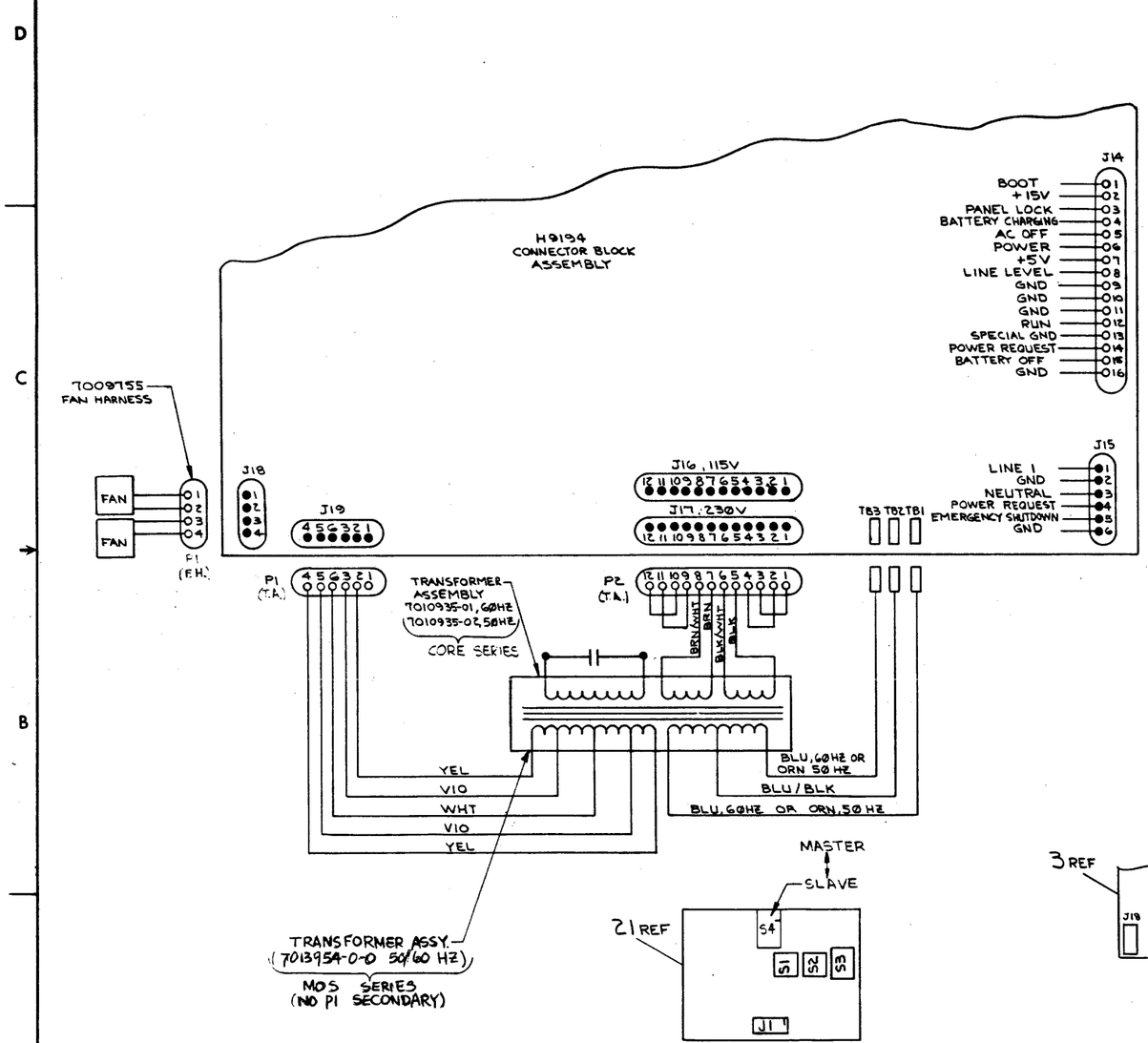
FIRST USED ON
digital

TITLE: CHASSIS ASSY, H9300

NEXT HIGHER ASSY. A-PL-8A400-0-0
MATERIAL: SEE PARTS LIST
FINISH
SCALE
SHEET 1 OF 3

SIZE	CODE	NUMBER	REV.
D	UA	H9300-0-0	J

DIST.



ASSEMBLY INSTRUCTIONS

1. OPERATIONS TO BE PERFORMED PER HARDWARE STANDARDS SP-7685099-0 AND/OR DEC WORKMANSHIP STANDARDS.
2. ATTACH FOAM TAPE (ITEM #34) TO CHASSIS (ITEM #4) AS SHOWN IN VIEW A-A.
3. INSTALL FAN HARNESS (ITEM #8) INTO CHASSIS AS SHOWN IN DETAIL "A".
4. ~~ATTACH FILTER RETAINERS (ITEM #9) TO THE TWO FANS (ITEM #5) WITH #8-32 X .75 FLAT HEAD SCREWS (ITEM #22) AND THE APPROPRIATE MOUNTING HARDWARE (SEE NOTES 8 & 9) FOUR PLACES EACH FAN.~~
5. PLUG FAN HARNESS CONNECTORS J1 & J2 (SEE DETAIL "A") ON TO THE FAN TERMINALS.
6. ATTACH FANS TO CHASSIS WITH #6-32 X .75 FLAT HEAD SCREWS (ITEM #22) AND THE APPROPRIATE MOUNTING HARDWARE FOUR PLACES EACH FAN.
7. REWORK FIVE CARD GUIDES (ITEM #13) AS SHOWN ON DETAIL "E".
8. INSTALL FULL LENGTH CARD GUIDES (ITEM #13) AND REWORKED CARD GUIDES AS SHOWN (10 PLACES).
9. INSTALL THE 1/4 TURN RECEPTACLES (ITEM #32) ON THE TWO TABS ON THE BOTTOM OF THE CHASSIS.
10. ATTACH THE H9194 CONNECTOR BLOCK ASSEMBLY (ITEM #3) TO THE REAR OF THE CHASSIS WITH #8-32 X .25 PAN HEAD SCREWS (ITEM #24) AND #8 EXTERNAL TOOTH LOCK WASHERS (ITEM #25) TEN PLACES.
11. PLUG P1 OF THE FAN HARNESS (4 PIN CONNECTOR) INTO J18 OF THE H9194 (SEE DETAIL "B", SHEET 2)
12. ATTACH THE LINE SET (ITEM #9-#12, #46, #47, #58, #59) TO THE REAR OF THE CHASSIS WITH THREE 6-32 X .25 LG PAN HEAD SCREWS (ITEM #60) AND THREE #6 EXTERNAL TOOTH LOCKWASHERS (ITEM #27) AS SHOWN. SEE DETAIL C (SHEET 1) FOR PROPER GROUNDING.
13. PLUG P1 (6 PIN CONNECTOR) OF THE LINE SET INTO J15 OF THE H9194 (SEE DETAIL "B").
14. PLUG ONE END OF THE 16 CONDUCTOR CABLE (ITEM #19) INTO J14 OF THE H9194 AS SHOWN.
15. ~~SET THE TRANSFORMER ASSEMBLY (ITEM #17 OR 18) IN THE CHASSIS AND FASTEN THE GREEN WIRE TO THE CHASSIS WITH ONE #4-40 X .38 SCREW (ITEM #38) TWO #4 INTERNAL TOOTH LOCK WASHERS (ITEM #36) ONE FLAT WASHER (ITEM #23) AND ONE #4-40 KEP NUT (ITEM #18) AS SHOWN IN DETAIL "C".~~
16. PLACE THE TRANSFORMER ASSEMBLY IN POSITION (THE 16 CONDUCTOR CABLE SHOULD BE ROUTED UNDERNEATH THE TRANSFORMER) AND ATTACH TO THE CHASSIS WITH FOUR #10-32 X .50 PAN HEAD SCREWS (ITEM #30) AND #10 EXTERNAL TOOTH LOCK WASHERS (ITEM #31) AS SHOWN. SEE DETAIL C (SHEET 1) FOR PROPER GROUNDING.
17. PLUG P2 OF THE TRANSFORMER ASSEMBLY (12 PIN CONNECTOR) INTO EITHER J16 (115V) OR J17 (230V) OF THE H9194 (SEE DETAIL "B")
18. CONNECT THE THREE LARGE WIRES ON THE TRANSFORMER ASSEMBLY TO THE TABS TB1, TB2 AND TB3 (SEE DETAIL #B) ON THE H9194. THE BLU/BLK WIRE IS ALWAYS CONNECTED TO THE CENTER TAB (TB2).
19. PLUG P1 OF THE TRANSFORMER ASSEMBLY (6 PIN CONNECTOR) INTO J19 OF THE H9194 (SEE DETAIL #B).
20. PLUG THE G8018 REGULATOR BOARD (ITEM #2) INTO THE H9194 AS SHOWN, AND SECURE IN PLACE WITH THE TWO ATTACHED 1/4 TURN FASTENERS.
21. ATTACH THE LATCH WOLDINGS (ITEM #14) TO THE CHASSIS WITH #10-32 X .75 FLAT HEAD SCREWS (ITEM #29) AND SPEED NUTS (ITEM #28).
22. PLUG THE OTHER END OF THE 16 CONDUCTOR CABLE INTO J1 OF THE LIMITED FUNCTION PANEL (ITEM #21) SEE DETAIL #D.
23. ATTACH THE LIMITED FUNCTION PANEL TO THE CHASSIS.
24. ATTACH THE BLANK BEZEL ASSEMBLY (ITEM #20) TO THE CHASSIS.
25. ~~SLIDE FILTERS (ITEM #7) INTO FILTER RETAINERS.~~
26. ITEMS 14, 16, 22, 23 & 24 THIS INSTRUCTION SHEET REFER TO NOTE *9 AND *10 FOR CORRECTIONS.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
CHASSIS ASSY, H9300	D	UA	H9300-0-0	J
SCALE: —	SHEET 2 OF 3		DIST.	

DEC FORM NO DRD 137

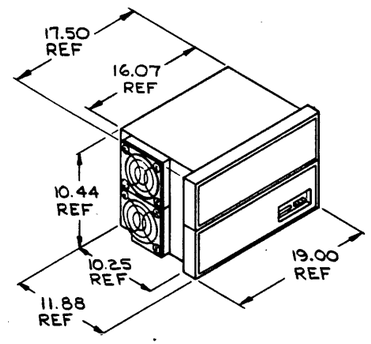
MK

MODULE ASSIGNMENTS AND POWER REQUIREMENTS (SEE NOTES #7,8)

OPTION	DESCRIPTION	BOARD SIZE	NO. SLOTS USED	ASSIGNED SLOT NO.	CURRENT +5V	CURRENT +15V	CURRENT -15V
CM8-F	CARD RDR CONT.	QUAD	1	4 - 12	.55A	—	—
CR8-F	CARD RDR CONT.	↑	↑	4 - 12	.55A	—	—
DB8-EA	INTERPROC. BUFFER		↓	2 - 12	.08A	—	.03A
DK8-EC	RTC, CRYSTAL		1	2 - 12	.34A	—	—
DK8-EP	RTC, PROG.	QUAD	2	2 - 12	1.43A	—	.07A
DKC8-A	OPTION #1	HEX	1	2 - 3	2.8A	.08A	.10A
DP8-EA,-EB	MODEM INTERFACE	QUAD	2	2 - 12	1.68A	.05A	.11A
DR8-EA	DIGITAL I/O	QUAD	1	2 - 12	2.25A	—	—
KA8-E	POSITIVE I/O	QUAD	1	4 - 12	1.48A	—	—
KC8-AA,-AB	PROG. CONSOLE	PNL. MT.	0	N.A.	2.5A	—	—
KD8-E	DATA BREAK	QUAD	1	4 - 12	1.2A	—	—
KG8-EA	REDUNDANCY CHECK	QUAD	1	4 - 12	.94A	—	—
KK8-A	C.P.U.	HEX	1	1	5.8A	—	.84A
KL8-JA	ASYNC. DATA CONT	QUAD	1	2 - 12	1.1A	.05A	.18A
KL8-W	MODEM CONTROL	QUAD	1	2 - 12	.48A	.04A	.04A
KM8-A	OPTION #2	HEX	1	2 - 3	2.8A	—	—
KM8-E	MEM. EXT. & T.S. CONT.	QUAD	1	4 - 12	1.8A	—	—
LE8-XX	LINE PRINTER CONT.	QUAD	1	2 - 12	.35A	—	—
LS8-F	LINE PRINTER CONT.	QUAD	1	2 - 12	.48A	—	—
MM8 AA	8K CORE, OPERATING	HEX	2	4 - 8	2.5A	—	—
MM8-AA	8K CORE, STANDBY	HEX	2	4 - 8	2.5A	—	—
MM8-AB	16K CORE, OPERATING	HEX	2	4 - 8	2.5A	—	—
MM8-AB	16K CORE, STANDBY	HEX	2	4 - 8	2.5A	—	—
MR8-AA	1K ROM	QUAD	1	2 - 12	2.8A	—	—
MR8-AB	2K ROM	↓	1	2 - 12	3.0A	—	—
MR8-AC	3K ROM		1	2 - 12	4.0A	—	—
MR8-AD	4K ROM		1	2 - 12	5.8A	—	—
MR8-FB	1K PROM		1	2 - 12	3.8A	—	.35A
MS8-AA	1K RAM		1	4 - 12	1.4A	—	—
MS8-AB	2K RAM		1	4 - 12	2.1A	—	—
MS8-AC	3K RAM		1	4 - 12	2.8A	—	—
MS8-AD	4K RAM		1	4 - 12	3.5A	—	—
PC8-E,PR8-E	RDR/PUNCH CONTROL		1	4 - 12	.84A	—	.05A
RX8-E	RX01 CONTROL		1	4 - 8	1.5A	—	—
RK8-EA	RK05 CONTROL		3	4 - 12	3.10A	—	—
TA8-AA	TU60 CONTROL		1	2 - 12	2.08A	—	—
TM8-EA,-FA	TU10 CONTROL		4	4 - 12	4.18A	—	—
VC8-E	DISPLAY CONTROL		2	2 - 12	.31A	—	—
VT8-E	DISPLAY CONTROL	↓	3	4 - 12	3.78A	.09A	.13A
XY8-E	PLOTTER CONTROL	QUAD	1	4 - 12	.42A	.01A	.03A
KK8-E	M8300, MAJOR REG.	QUAD	1	12	1.7	—	—
	M8310, MAJOR REG. CONT	QUAD	1	11	.6	—	—
	M8330, TIMING GEN	QUAD	1	10	1.2	—	—
	M8320, BUS LOAD	QUAD	1	1	1.0	1.0	.53
MS8-CA	16K MOS RAM	HEX	1	4-8	3.3A	—	.7A
MS8-CP	32K MOS RAM	↓	1	4-8	3.5A	—	.7A
KT8-A	MEM. MANAGEMENT		1	4-8	3.8A	—	—
RL8-A	RL01 CONTROL	HEX	1	4-12	2.5A	.2A	.1A

AVAILABLE CURRENT - H9300-AA, AB: +15V 2.0A
- H9300-BA, BB: +15V 2.5A

+15V: 2A ← 1A SHARED → -15V: 2A



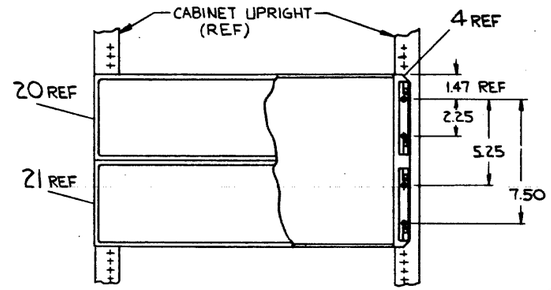
MAX. UNIT WEIGHT = 55 LB.

MOUNTING INSTRUCTIONS

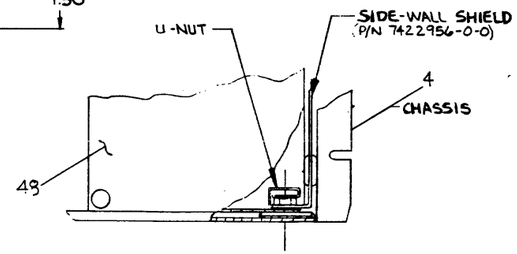
1. SEE DETAIL "F" FOR MTG DIM
2. THE DIM FROM CENTER LINE OF RIGHT CAB UPRIGHT MOUNTING HOLE TO LEFT CAB UPRIGHT MOUNTING HOLE CENTER LINE IS 18.31.
3. REMOVE THE BLANK BEZEL ASSY.
4. REMOVE THE LIMITED FUNCTION PANEL AND DISCONNECT THE CABLE FROM THE LIMITED FUNCTION BD.
5. REMOVE THE LATCH MOULDING (4 PLACES).
6. REMOVE THE SPEED NUT, AND INSTALL ON CABINET POST. 8 PLACES PER MOUNTING DIMENSIONS.
7. ~~IT MAY BE NECESSARY TO REMOVE THE FILTER RETAINER AND THE FILTER IN ORDER TO MOUNT THE BOX IN A CABINET.~~
8. WITH THE BOX IN PLACE, IN THE CABINET, REPLACE THE LATCH MOLDING AND SPACERS SO AS TO SECURE THE BOX TO THE CABINET.
9. PLUG THE CABLE INTO THE LIMITED FUNCTION BD AND REPLACE LIMITED FUNCTION PANEL.
10. REPLACE THE BLANK BEZEL ASSY; ~~REINSTALL THE FILTER RETAINER AND THE FILTER.~~
11. FOR MOUNTING INSTRUCTIONS #4 AND #9, SEE NOTES #9 AND #10.

NOTES:

1. ~~TO CREATE A 115V 50 HZ CORE VARIATION USE THE H9300-BB REPLACE THE LINE SET (ITEM #12) WITH A 115V 50HZ CA LINE SET (DEC P/N 70-18819-02) AND PLUG P3 (12 PIN CONN) OF THE TRANSFORMER ASSEMBLY INTO J16 (11 PIN) OF THE H9194.~~
4. ALL H9300 POWER SUPPLY DC OUTPUTS ARE PROVIDED TO DRIVE LOGIC INTERNAL TO THE BASIC MACHINE ENCLOSURE. DIGITAL WILL NOT BE RESPONSIBLE FOR THE PERFORMANCE OF THE H9300 IF ANY DC POWER IS TAKEN OUTSIDE THE MACHINE.
5. ENVIRONMENTAL CONDITIONS FOR H9300 ARE SPECIFIED IN DEC STD 102 CLASS "C" ENVIRONMENT.
6. THIS ITEM (NAMEPLATE) IS SHOWN FOR REFERENCE ONLY. IT WILL BE ADDED ON A HIGHER LEVEL ASSEMBLY.
7. INSTALL MODULES AS FOLLOWS:
   PLACEMENT OF HEX MODULES IS FROM SLOT #1 (TOP OF BACKPLANE) DOWN ↓
   PLACEMENT OF QUAD MODULES IS FROM SLOT #12 (BOTTOM OF BACKPLANE) UP ↑
8. CARD GUIDES (ITEM #13) ARE PROVIDED FOR SLOTS #1-10. WHEN A QUAD MODULE WITH AN H851 OR H8511 CONNECTOR BLOCK (MR8-A, MS8-A, ETC) ON THE "E" SET OF FINGERS IS INSTALLED, IT IS NESSESARY TO CLIP OFF THE FRONT-LEFT CARD GUIDE IN THOSE SLOTS SO THAT THE CONNECTOR BLOCK MAY BE PROPERLY SEATED (REF DETAIL "E" FOR AN EXAMPLE OF CARD GUIDE REWORK).
9. WHEN USED AS AN EXPANDER BOX THE BC80C ITEM 40, OR THE BC08H CABLE ITEM 41 GOES INTO SLOT 1 OF THE H9300. ALSO THE 16 CONDUCTOR CABLE ITEM 19 IS REMOVED IN EXPANDER BOX AND THE REMOTE SLAVE CIRCUIT ITEM 44 IS INSTALLED IN J14 OF THE H9194 CONNECTOR BLOCK ASSEMBLY.
10. ITEM 21 IS REPLACED BY ITEM 45 IN EXPANDER BOX AND ITEM 42 AND 43 ARE INCLUDED IN EXPANDER BOX VARIATIONS. ITEM 43 IS TO BE USED WITH ITEM 42 WHEN EXPANDING TO 8E. IN ALL OTHER EXPANSION VARIATIONS ITEM 42 IS USED ALONE.
11. ~~REMOVE GROUND WIRE (GRN/YEL OR GRN) FROM LINE SET A53**, ITEM 9,10,11,12,13 OR 14, WELD STUD NOTE 4 LEAD MAY ALREADY BE PRES-ENT. ATTACH THIS GROUND WIRE TO CHASSIS (SEE DETAIL H) USING ITEMS 27,49,50 AND 51. NOTE: HOLE IN RIGHT REAR SIDE MAY HAVE TO BE OPENED TO .18 IN. FOR #8 SCREW.~~
12. FOR ITEM 48 WITH XFMR 16141-0 REV-B, A SPECIAL SIDE-WALL MAGNETIC SHIELD SHOULD BE INSTALLED, DEC P/N 7422952-0-0 (SEE DETAIL H). U-NUTS ARE REMOVED FROM RIGHT SIDE OF ASSY AND PLACED ON SHIELD. SHIELD IS THEN POSITIONED FLUSH ALONG SIDE OF ASSY WITH U-NUTS ENTERING OVER MOUNTING HOLES OF ASSY. (ITEM 48, DATE CODED 79--)



DETAIL "F"
SCALE: —



DETAIL "H"
SCALE: NONE

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
CHASSIS ASSY, H9300	D	UA	H9300-0-0	J
SCALE —	SHEET 3 OF 3		DIST.	

DEC FORM NO DBD 137

MK

AUTOMATED BY PRTLST.3P(44) — P A R T S L I S T — SHEET A1 OF A2

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BA	BB	BC	BD	BE	BF	BH	BJ
1	1	D-CS-G8016-0-1	G8016-00	REGULATOR FOR H763	1	1	1	1	-	-	-	-	-	-	-	-
2	2	D-CS-G8018-0-1	G8018-00	H774 REGULATOR	-	-	-	-	1	1	1	1	1	1	1	1
3	3	D-AD-H9194-0-0	H9194-00	BUS CONN B/A 8+4 SLOTS	1	1	1	1	1	1	1	1	1	1	1	1
4	4	E-IA-7016715-0-0	7016715-00	CHASSIS WELDMENT	1	1	1	1	1	1	1	1	1	1	1	1
5	5		1209403-01	FAN,115CFM,SLEEVE BRNG	2	2	2	2	2	2	2	2	2	2	2	2
6	6	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
7	7	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
8	8	D-IA-7009755-0-0	7009755-00	HARNESS FAN (H763) PDP8A	1	1	1	1	1	1	1	1	1	1	1	1
9	9	D-AD-7016124-0-0	7016124-00	C.B. LINE SET ASSY	1	-	-	-	-	-	-	-	-	-	-	-
10	10	D-AD-7016124-0-0	7016124-01	LINESET ASSY	-	1	-	-	-	-	-	-	-	-	-	-
11	11	D-AD-7016124-0-0	7016124-02	LINESET ASSY	-	-	-	-	1	-	1	-	1	-	-	-
12	12	D-AD-7016124-0-0	7016124-03	LINESET ASSY	-	-	-	-	-	1	-	1	-	1	-	-
13	13		1211630-00	CARD GUIDE	10	10	10	10	10	10	10	10	10	10	10	10
14	14		1209224-00	LATCH, NORYL PLASTIC	4	4	4	4	4	4	4	4	4	4	4	4
15	15	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
16	16	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
17	17	D-IA-7010935-0-0	7010935-01	TRANSFORMER ASSY 60HZ	-	-	-	-	1	-	1	-	1	-	1	-
18	18	D-IA-7010935-0-0	7010935-02	TRANSFORMER ASSY 50HZ	-	-	-	-	-	1	-	1	-	1	-	1
19	19	C-IA-7010871-0-0	7010871-1F	CABLE KEY BOARD 8A	1	1	1	1	1	1	-	-	-	-	1	1
20	20	D-AD-7009978-0-0	7009978-00	BEZEL ASSY (H763)PDP8A	1	1	1	1	1	1	1	1	1	1	1	1
21	21	D-AD-7010039-0-0	7010039-04	PANEL LIMITED FUNCTION	1	1	1	1	1	1	-	-	-	-	1	1
22	22		9006026-02	SCREW,FLAT,PHIL, 6-32X 3/4	8	8	8	8	8	8	8	8	8	8	8	8
23	23	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
24	24		9006035-01	SCREW,PAN,PHIL 8-32X 1/4 SS	10	10	10	10	10	10	10	10	10	10	10	10
25	25		9008072-00	WASHER, LOCK, EXTERNAL TOOTH #8	10	10	10	10	10	10	10	10	10	10	10	10
26	26	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
27	27		9007649-00	WASHER, LOCK, EXTERNAL TOOTH #6	4	4	4	4	4	4	4	4	4	4	4	4
28	28		9007786-01	RETAINER, U-NUT, 10-32	8	8	8	8	8	8	8	8	8	8	8	8
29	29		9006075-02	SCREW,FLAT,PHIL, 10-32X 3/4	8	8	8	8	8	8	8	8	8	8	8	8
30	30		9006037-01	SCREW,PAN,PHIL 8-32X 3/8 SS	4	4	4	4	4	4	4	4	4	4	4	4

REVISION HISTORY

ENG	ECO NUMBER	REV
DF	H9300-MK007	H
DF	H9300-MK008	J

BASIC PART NO: H9300

SECTION A OF B

SECTION. VARIATION INDEX
[A] AA,AB,AC,AD,BA,BB, BC,BD,BE,BF,BH,BJ
[B] BK,BL,BM,BN
[C]
[D]
[E]
[F]

DRN: D.SULLIVAN — DATE: 21-FEB-75

CHK'D: P.GARDNER — DATE: 09-MAY-75

DES.ENG.: P.GARDNER — DATE: 09-MAY-75

RESP.ENG.: D.FRENIERE — DATE: 22-OCT-80

MFG.ENG.: D.DEHOME — DATE: 09-MAY-75

ASSEMBLY NUMBER: D-UA-H9300-0-0

TOP DOCUMENT NUMBER: #B-DD-H9300-0

DBP | D | I | G | I | T | A | L

TITLE: PARTS LIST — H9300 UNIT ASSEMBLY

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	H9300-0-0	J

FILE NAME: MK0245.PLS

EDIT #: 13

MK

AUTOMATED BY PRTLST.3P(44)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION AA	AB	AC	AD	BA	BB	BC	BD	BE	BF	BH	BJ
31	31	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
32	32		9008196-00	RECP. CLIP ON F/1/4 TURN FASTNR	2	2	2	2	2	2	2	2	2	2	2	2
33	33	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
34	34		9009087-00	FOAM, TAPE, SINGLE SIDED 1/8 THK	1	1	1	1	1	1	1	1	1	1	1	1
35	35	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
36	36	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
37	37	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
38	38	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
39	39	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
40	40	D-UA-BC80C-0-0	BC80C-04	BC80C CABLE	-	-	-	-	-	-	-	-	1	1	-	-
41	41	D-UA-BC08H-0-0	BC08H-1F	CABLE	-	-	-	-	-	-	2	2	-	-	-	-
42	42	C-IA-7008288-0-0	7008288-3F	CABLE ASSY	-	-	-	-	-	-	1	1	1	1	-	-
43	43	C-IA-7013953-0-0	7013953-01	8E POWER CONTROL ADAPTER CABLE	-	-	-	-	-	-	-	-	1	1	-	-
44	44	D-UA-5413011-0-0	5413011-00	H9300 REMOTE SLAVE CIRCUIT	-	-	-	-	-	-	1	1	1	1	-	-
45	45	D-AD-7009978-0-0	7009978-01	BLANK BEZEL ASSY	-	-	-	-	-	-	1	1	1	1	-	-
46	46	D-AD-7016124-0-0	7016124-04	LINESET ASSY	-	-	-	-	-	-	-	-	-	-	-	1
47	47	D-AD-7016124-0-0	7016124-05	LINESET ASSY	-	-	-	-	-	-	-	-	-	-	1	-
48	48	D-IA-7013954-0-0	7013954-00	MOS TRANSFORMER ASSY	1	1	1	1	-	-	-	-	-	-	-	-
49	49		9008185-00	NUT,KEP 6-32X 1/4 AF	14	14	14	14	14	14	14	14	14	14	14	14
50	50	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
51	51	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
52	52	D-IA-7421088-0-0	7421088-00	COVER,FAN HARNESS	1	1	1	1	1	1	1	1	1	1	1	1
53	53	C-MD-7421087-0-0	7421087-00	ENCLOSURE PLATE	1	1	1	1	1	1	1	1	1	1	1	1
54	54		9006025-03	SCREW,TRUS,PHIL, 6-32X 5/8	8	8	8	8	8	8	8	8	8	8	8	8
55	55		1210263-00	GUARD,FINGER 4.125 X 4.125 MTG H	2	2	2	2	2	2	2	2	2	2	2	2
56	56	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-	-	-	-	-	-	-	-	-
57	57		3613210-00	/REPLACED BY 36-17674-00	1	1	1	1	1	1	1	1	1	1	1	1
58	58	D-AD-7016124-0-0	7016124-06	LINESET ASSY	-	-	-	1	-	-	-	-	-	-	-	-
59	59	D-AD-7016124-0-0	7016124-07	LINESET ASSY	-	-	1	-	-	-	-	-	-	-	-	-
60	60		9006020-01	SCREW,PAN,PHIL 6-32X 1/4 SS	4	4	4	4	4	4	4	4	4	4	4	4
61	61		9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	6	6	6	6	6	6	6	6	6	6	6	6
62	62		9006565-00	NUT,KEP 10-32X 3/8 AF	2	2	2	2	2	2	2	2	2	2	2	2
63	63		3612680-01	DECAL, GROUND SIGN PER 3S6 *	1	1	1	1	1	1	1	1	1	1	1	1
64	64		3613211-00	DECAL,CLEAR PREPRINTED CSA 1-1/4	1	1	1	1	1	1	1	1	1	1	1	1
65	65	A-DC-7416197-0-0	7416197-02	DECAL-UL LISTED EDP	1	1	1	1	1	1	1	1	1	1	1	1
66	66	C-IA-7013952-0-0	7013952-00	REMOTE INTERLOCK JUMPER ASSY	-	-	-	-	-	-	1	1	1	1	-	-

D	I	G	I	T	A	L	TITLE	SECTION A OF B	SIZE	CODE	DOCUMENT NUMBER	REV
							H9300 UNIT ASSEMBLY		K	PL	H9300-0-0	J

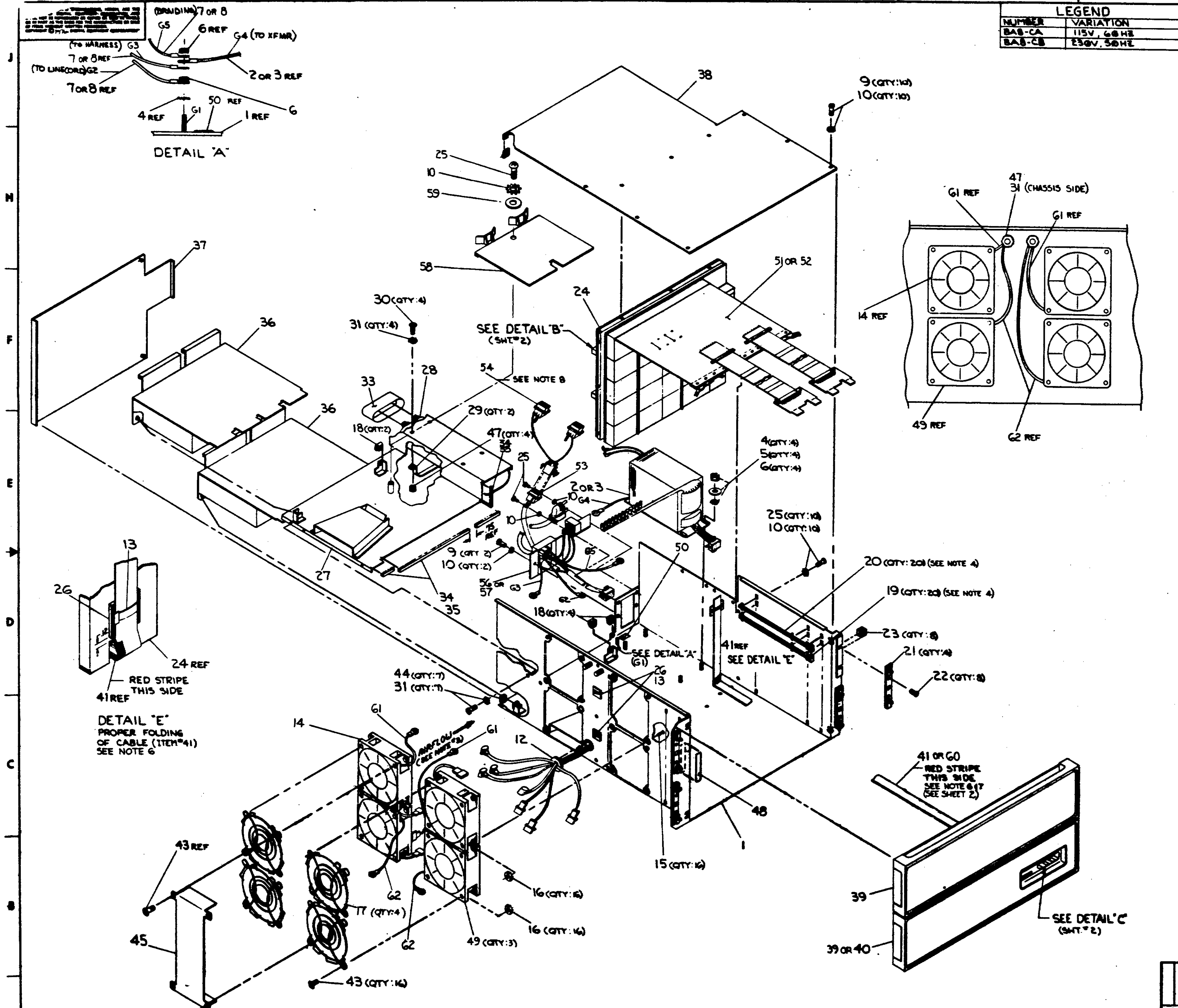
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION BK	BL	BM	BN
1	1	D-CS-G8016-0-1	G8016-00	*** THIS ITEM IS NOT USED ***	-	-	-	-
2	2	D-CS-G8018-0-1	G8018-00	H774 REGULATOR	1	1	1	1
3	3	D-AD-H9194-0-0	H9194-00	BUS CONN 8/A 8+4 SLOTS	1	1	1	1
4	4	E-IA-7016715-0-0	7016715-00	CHASSIS WELDMENT	1	1	1	1
5	5		1209403-01	FAN,115CFM,SLEEVE BRNG	2	2	2	2
6	6	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
7	7	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
8	8	D-IA-7009755-0-0	7009755-00	HARNESS FAN (H763) PDP8A	1	1	1	1
9	9	D-AD-7016124-0-0	7016124-00	*** THIS ITEM IS NOT USED ***	-	-	-	-
10	10	D-AD-7016124-0-0	7016124-01	*** THIS ITEM IS NOT USED ***	-	-	-	-
11	11	D-AD-7016124-0-0	7016124-02	*** THIS ITEM IS NOT USED ***	-	-	-	-
12	12	D-AD-7016124-0-0	7016124-03	*** THIS ITEM IS NOT USED ***	-	-	-	-
13	13		1211630-00	CARD GUIDE	10	10	10	10
14	14		1209224-00	LATCH, NORYL PLASTIC	4	4	4	4
15	15	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
16	16	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
17	17	D-IA-7010935-0-0	7010935-01	TRANSFORMER ASSY 60HZ	1	-	1	-
18	18	D-IA-7010935-0-0	7010935-02	TRANSFORMER ASSY 50HZ	-	1	-	1
19	19	C-IA-7010871-0-0	7010871-1F	*** THIS ITEM IS NOT USED ***	-	-	-	-
20	20	D-AD-7009978-0-0	7009978-00	BEZEL ASSY (H763)PDP8A	1	1	1	1
21	21	D-AD-7010039-0-0	7010039-04	*** THIS ITEM IS NOT USED ***	-	-	-	-
22	22		9006026-02	SCREW,FLAT,PHIL, 6-32X 3/4	8	8	8	8
23	23	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
24	24		9006035-01	SCREW,PAN,PHIL 8-32X 1/4 SS	10	10	10	10
25	25		9008072-00	WASHER, LOCK, EXTERNAL TOOTH #8	10	10	10	10
26	26	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
27	27		9007649-00	WASHER, LOCK, EXTERNAL TOOTH #6	4	4	4	4
28	28		9007786-01	RETAINER, U-NUT, 10-32	8	8	8	8
29	29		9006075-02	SCREW,FLAT,PHIL, 10-32X 3/4	8	8	8	8
30	30		9006037-01	SCREW,PAN,PHIL 8-32X 3/8 SS	4	4	4	4

REVISION HISTORY			BASIC PART NO: H9300										
ENG	ECO NUMBER	REV	SECTION B OF B	DRN: D.SULLIVAN	DATE: 21-FEB-75	DBP	D	I	G	I	T	A	L
DF	H9300-MK007	H	SECTION. VARIATION INDEX	CHK'D: A. Kanarek P.GARDNER	23-JUL-81	TITLE	PARTS LIST						
DF	H9300-MK008	J	[A] AA,AB,AC,AD,BA,BB, BC,BD,BE,BF,BH,BJ	DES.ENG.: P.GARDNER	DATE: 09-MAY-75	H9300 UNIT ASSEMBLY							
			[B] BK,BL,BM,BN	RESP.ENG.: Gary L Prue D.BRENIERE	DATE: 22-OCT-80	DOCUMENT NUMBER							
			[C]	MFG.ENG.: D.DEHOME	DATE: 09-MAY-75	SIZE: K	CODE: PL	NUMBER: H9300-0-0		REV: J			
			[D]	ASSEMBLY NUMBER: D-UA-H9300-0-0	TOP DOCUMENT NUMBER: #B-DD-H9300-0			FILE NAME: MK0245.PLS		EDIT #: 13			
			[E]										
			[F]										

MK

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QUANTITY PER VARIATION BK	BL	BM	BN
31	31	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
32	32		9008196-00	RECP. CLIP ON F/1/4 TURN FASTNR	2	2	2	2
33	33	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
34	34		9009087-00	FOAM, TAPE, SINGLE SIDED 1/8 THK	1	1	1	1
35	35	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
36	36	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
37	37	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
38	38	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
39	39	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
40	40	D-UA-BC80C-0-0	BC80C-04	BC80C CABLE	-	-	1	1
41	41	D-UA-BC08H-0-0	BC08H-1F	CABLE	2	2	-	-
42	42	C-IA-7008288-0-0	7008288-3F	CABLE ASSY	1	1	1	1
43	43	C-IA-7013953-0-0	7013953-01	8E POWER CONTROL ADAPTER CABLE	-	-	1	1
44	44	D-UA-5413011-0-0	5413011-00	H9300 REMOTE SLAVE CIRCUIT	1	1	1	1
45	45	D-AD-7009978-0-0	7009978-01	BLANK BEZEL ASSY	1	1	1	1
46	46	D-AD-7016124-0-0	7016124-04	LINESET ASSY	-	1	-	1
47	47	D-AD-7016124-0-0	7016124-05	LINESET ASSY	1	-	1	-
48	48	D-IA-7013954-0-0	7013954-00	*** THIS ITEM IS NOT USED ***	-	-	-	-
49	49		9008185-00	NUT,KEP 6-32X 1/4 AF	14	14	14	14
50	50	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
51	51	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
52	52	D-IA-7421088-0-0	7421088-00	COVER,FAN HARNESS	1	1	1	1
53	53	C-MD-7421087-0-0	7421087-00	ENCLOSURE PLATE	1	1	1	1
54	54		9006025-03	SCREW,TRUS,PHIL, 6-32X 5/8	8	8	8	8
55	55		1210263-00	GUARD,FINGER 4.125 X 4.125 MTG H	2	2	2	2
56	56	BLANK		*** THIS ITEM IS NOT USED ***	-	-	-	-
57	57		3613210-00	/REPLACED BY 36-17674-00	1	1	1	1
58	58	D-AD-7016124-0-0	7016124-06	*** THIS ITEM IS NOT USED ***	-	-	-	-
59	59	D-AD-7016124-0-0	7016124-07	*** THIS ITEM IS NOT USED ***	-	-	-	-
60	60		9006020-01	SCREW:PAN,PHIL 6-32X 1/4 SS	4	4	4	4
61	61		9007651-00	WASHER, LOCK, EXTERNAL TOOTH #10	6	6	6	6
62	62		9006565-00	NUT,KEP 10-32X 3/8 AF	2	2	2	2
63	63		3612680-01	DECAL, GROUND SIGN PER 3S6 *	1	1	1	1
64	64		3613211-00	DECAL,CLEAR PREPRINTED CSA 1-1/4	1	1	1	1
65	65	A-DC-7416197-0-0	7416197-02	DECAL-UL LISTED EDP	1	1	1	1
66	66	C-IA-7013952-0-0	7013952-00	REMOTE INTERLOCK JUMPER ASSY	1	1	1	1

D	I	G	I	T	A	L	TITLE	SECTION B OF B	SIZE	CODE	DOCUMENT NUMBER	REV
							H9300 UNIT ASSEMBLY		K	PL	H9300-0-0	J



LEGEND	
NUMBER	VARIATION
BA8-CA	115V, 60HZ
BA8-CB	230V, 50HZ

NOTES:

2. EXTERNAL TOOTH LOCK WASHERS (ITEM NO.'S 4, 6 & 31) ARE BEING USED TO ENSURE A POSITIVE GROUND.
3. INLET AIRFLOW VOLUME IS 540 C.F.M. MAXIMUM AT SEA LEVEL.
4. CARD GUIDES (ITEM 19 & 20) IS PROVIDED FOR SLOTS 1-20. WHEN A QUAD MODULE IS USED IT WILL BE NECESSARY TO REMOVE CARD GUIDES ON LOWER LEFT SIDE.
5. INSTALL MODULES AS FOLLOWS: PLACEMENT OF HEX MODULE IS FROM SLOT 1 (TOP OF BACKPLANE DOWN) & PLACEMENT OF QUAD MODULES IS FROM SLOT 20 (BOTTOM OF BACKPLANE UP) &
6. ON EXPANDER OPTIONS ITEM #41 IS REPLACED BY ITEM #55.
6B. POSITION 14" LENGTH OF INSULATION TO FRONT SIDE OF UNIT, 6" LENGTH NEXT TO TRANSFORMER.

ASSEMBLY INSTRUCTIONS

2. ASSEMBLE FANS (ITEM #14) TO CHASSIS (ITEM #1) USING NUTS, 6-32 (ITEM #16) AND PHL FLT HD SCREW 6-32 X .75 LG (ITEM #15)
3. INSTALL FAN HARNESS (ITEM 12) FROM THE FARSIDE OF THE CHASSIS WALL IN HOLE PROVIDED. SECURE IN PLACE WITH THE FAN HARNESS GROMMET.

3.2 ATTACH FAN HARNESS (ITEM 12) TO FANS (ITEM 14).
3.3 ASSEMBLE 1/4 TURN RECEPTACLE (ITEM 18) TO CHASSIS (ITEM 1)
4. ASSEMBLE LINE SET ASSY (ITEM 7 OR ITEM 8) USING PHL PAN HD SCREW 6-32 X .25 LG (ITEM 9) AND #6 EXT TOOTH LOCKWASHER (ITEM 10).
5. ASSEMBLE XFMR ASSY (ITEM 2 OR 3) TO CHASSIS (ITEM 1) USING #10 EXT TOOTH LOCKWASHER (ITEM 4) FLAT WASHER (ITEM 5) AND 10-32 KEP NUT (ITEM 6).
5.1 ATTACH G2 (GND WIRE) FROM LINE SET ASSY (ITEM 7 OR 8) AND XFMR GND (ITEM 2 OR 3) TO STUD (ITEM 1) AS SHOWN BY DETAIL A, USING (ITEMS 4, 5, & 6).
5.2 ASSEMBLE KEYBOARD CABLE (ITEM 41) TO CENTER WALL ASSY (ITEM 24). SEE DETAIL E USING (ITEMS 13 & 26). (SEE SHT. 2 OF UA)
6. ASSEMBLE CENTER WALL ASSY (ITEM 24) USING #6 EXT TOOTH LOCKWASHER (ITEM 10) AND PHL PAN HD SCREW 6-32 X .31 LG (ITEM 25).
7. ASSEMBLE CARD GUIDE (ITEM 19 AND ITEM 20) TO CHASSIS (ITEM 1); USE TOOL PROVIDED.
8. PLUG XFMR ASSY (ITEM 2 OR ITEM 3) TO CENTER WALL ASSY (ITEM 24).
9. ATTACH CABLE OF XFMR ASSY (ITEM 2 OR 3) TO CENTER WALL ASSY (ITEM 24) AT J10 TERM. STRIP.
9.1 ATTACH CONN FROM LINE SET ASSY (ITEM 7 OR 8) TO CENTER WALL (ITEM 24).
10. ASSEMBLE CAPACITOR (ITEM 28) TO REGULATOR BOARD SHELF ASSY, (ITEM 27) USING CAPACITOR CLAMP (ITEM 29) WITH PHL TRUSS HD SCREW 8-32 X .38 LG (ITEM 30), #8 EXT. TOOTH LOCKWASHER (ITEM 31) AND KEP NUT 8-32 (ITEM 47).
10.1 ASSEMBLE 1/4 TURN RECEPTACLE (ITEM 18) TO REG. SHELF ASSY (ITEM 27).
10.2 ASSEMBLE CATERPILLAR GROMMET (ITEM 34) TO REG SHELF ASSY (ITEM 27) USING PERMA BOND ADHESIVE (ITEM 35).
11. ASSEMBLE REG. SHELF ASSY (ITEM 27) TO CHASSIS (ITEM 1) USING #8 EXT TOOTH LOCKWASHER (ITEM 31) AND PHL PAN HD SCREW 8-32 X .38 LG (ITEM 44).
11.1 ATTACH CABLE OF XFMR ASSY (ITEM 2 OR 3) TO REG. SHELF ASSY (ITEM 27) USING FLAT WASHER (ITEM 32), #8 EXT TOOTH LOCKWASHER (ITEM 31) AND PHL PAN HD SCREW 8-32 X .38 LG. (ITEM 44).
11.2 ATTACH LEADS OF XFMR ASSY (ITEM 2 OR 3) TO CAPACITOR (ITEM 28) AND COVER WITH CAPACITOR INSULATOR (ITEM 33).

(CONTINUED ON SHEET 3)

OFFSHEET PARTS LIST REFER TO A-PL-BA8-C-0

UNIT ASSEMBLY, BA8-C

BA8-C

SEE PARTS LIST

D UA BA8-C-0

MODULE ASSIGNMENT AND POWER REQUIREMENTS

OPTION	DESCRIPTION	BOARD SIZE	NO. SLOTS USED	ASSIGNED SLOT NO.	CURRENT +5V	CURRENT +15V	CURRENT -15V
CM8-F	CARD RDR CONT.	QUAD	1	4 – 20	.56A	—	—
CR8-F	CARD RDR CONT.		1	4 – 20	.55A	—	—
DB8-EA	INTERPROC. BUFFER		1	2 – 20	.80A	—	.03A
DK8-EC	RTC. CRYSTAL		1	2 – 20	.34A	—	—
DK8-EP	RTC. PROG.	QUAD	2	2 – 20	1.43A	—	.07A
DKC8-A	OPTION #1	HEX	1	2 – 3	2.0A	.06A	.1A
DP8-EA,-EB	MODEM INTERFACE	QUAD	2	2 – 20	1.80A	.05A	.11A
DR8-EA	DIGITAL I/O	QUAD	1	2 – 20	2.25A	—	—
KA8-E	POSITIVE I/O	QUAD	1	4 – 20	1.40A	—	—
KC8-AA,-AB	PROG. CONSOLE	PNL. MT.	0	N.A.	2.5A	—	—
KD8-E	DATA BREAK	QUAD	1	4 – 20	1.2A	—	—
KG8-EA	REDUNDANCY CHECK	QUAD	1	4 – 20	.94A	—	—
KK8-A	C.P.U.	HEX	1	1	5.0A	—	.04A
KL8-JA	ASYNC. DATA CONT.	QUAD	1	2 – 20	1.1A	.05A	.10A
KL8-M	MODEM CONTROL	QUAD	1	2 – 20	.40A	.04A	.04A
KM8-AA OR -AB	OPTION #2	HEX	1	2 – 3	2.0A	—	—
KM8-E	MEM. EXT. & T. S. CONT.	QUAD	1	4 – 20	1.0A	—	—
LE8-XX	LP05 CONTROL	QUAD	1	2 – 20	.35A	—	—
LS8-F	LS01 CONTROL	QUAD	1	2 – 20	.40A	—	—
MM8-AA	8K CORE, OPERATING	HEX	2	4 – 11	2.5A	—	—
MM8-AA	8K CORE, STANDBY	HEX	2	4 – 11	2.5A	—	—
MM8-AB	16K CORE, OPERATING	HEX	2	4 – 11	2.5A	—	—
~~MM8-AB~~	~~16K CORE, STANDBY~~	~~HEX~~	~~2~~	~~4 – 11~~	~~2.5A~~	—	—
MR8-AA	1K ROM	QUAD	1	2 – 20	2.0A	—	—
MR8-AB	2K ROM		1	2 – 20	3.0A	—	—
MR8-AC	3K ROM		1	2 – 20	4.0A	—	—
MR8-AD	4K ROM		1	2 – 20	5.0A	—	—
MR8-FB	1K PROM		1	2 – 20	3.8A	—	.35A
MS8-AA	1K RAM		1	4 – 20	1.4A	—	—
MS8-AB	2K RAM		1	4 – 20	2.1A	—	—
MS8-AC	3K RAM		1	4 – 20	2.8A	—	—
MS8-AD	4K RAM		1	4 – 20	3.5A	—	—
PC8-E, PR8-E	PC04 CONTROL		1	4 – 20	.84A	—	.05A
RX8-E	RX01 CONTROL		1	4 – 20	1.5A	—	—
RK8-EA	RK05 CONTROL		3	4 – 20	3.10A	—	—
TA8-AA	TU60 CONTROL		1	2 – 20	2.80A	—	—
TM8-EA,-FA	TU10 CONTROL		4	4 – 20	4.10A	—	—
VC8-E	DISPLAY CONTROL		2	2 – 20	.31A	—	—
VT8-E	DISPLAY CONTROL		3	4 – 20	3.70A	.09A	.13A
XY8-E	PLOTTER CONTROL		1	4 – 20	.42A	.01A	.03A
KK8-E	M8300, MAJOR REG.		1	*18	1.7A	—	—
	M8310, MAJOR REG. CONT.		1	*19	.60A	—	—
	M8330, TIMING GEN.		1	*20	1.2A	—	—
	M8320, BUS LOAD		1	1	1.0A	1.0A	.53A
AD8-A	A/D CONV.	QUAD	1	4 – 20	3.25A	—	—
FPP8-A	FLOATING POINT	HEX	2	4 – 20	.88A	—	—
KE8-E	M8340, EAE IR		1	*19	1.6A	—	—
	M8341, EAE REG		1	*18	—	—	—
KL8-A	MSLU	HEX	1	4 – 20	2.5A	.09A	.425A
LA8-P	LA80 CONT.	QUAD	1	4 – 20	1.0A	—	—
MI8-E	BOOT LOADER	QUAD	1	4 – 20	.75A	—	.05A
RK8-L	RK05 CONT.	QUAD	2	4 – 20	3.5A	—	—
TD8-E	TU56 CONT.	QUAD	1	4 – 20	1.3A	—	—
VK8-A	VIDEO DISPLAY CONT.	HEX	1	4 – 20	2.8A	—	—

* WITH KE8-E OPTION, M8300 & M8310 MUST BE MOVED TO SLOTS 16 & 17 RESPECTIVELY. THE KE8-E OPTION PLUGS INTO SLOTS 18 & 19 (M8341 & M8340)

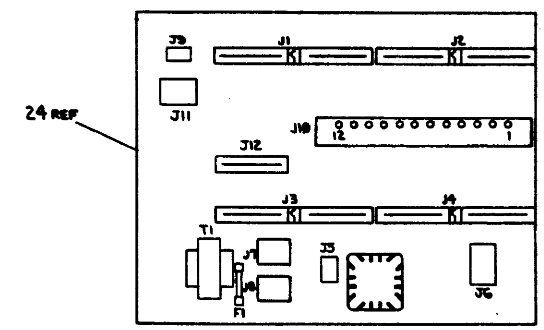
AVAILABLE CURRENT:

SLOTS* 1 THRU 10

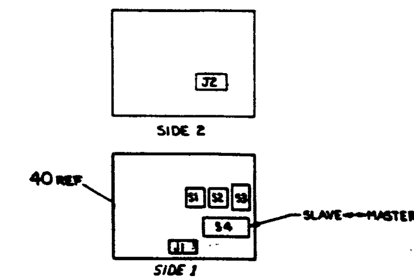
+5V	-15V	+15V
25A (MAX)	2A (MAX)	2A (MAX)

SLOTS* 11 THRU 20

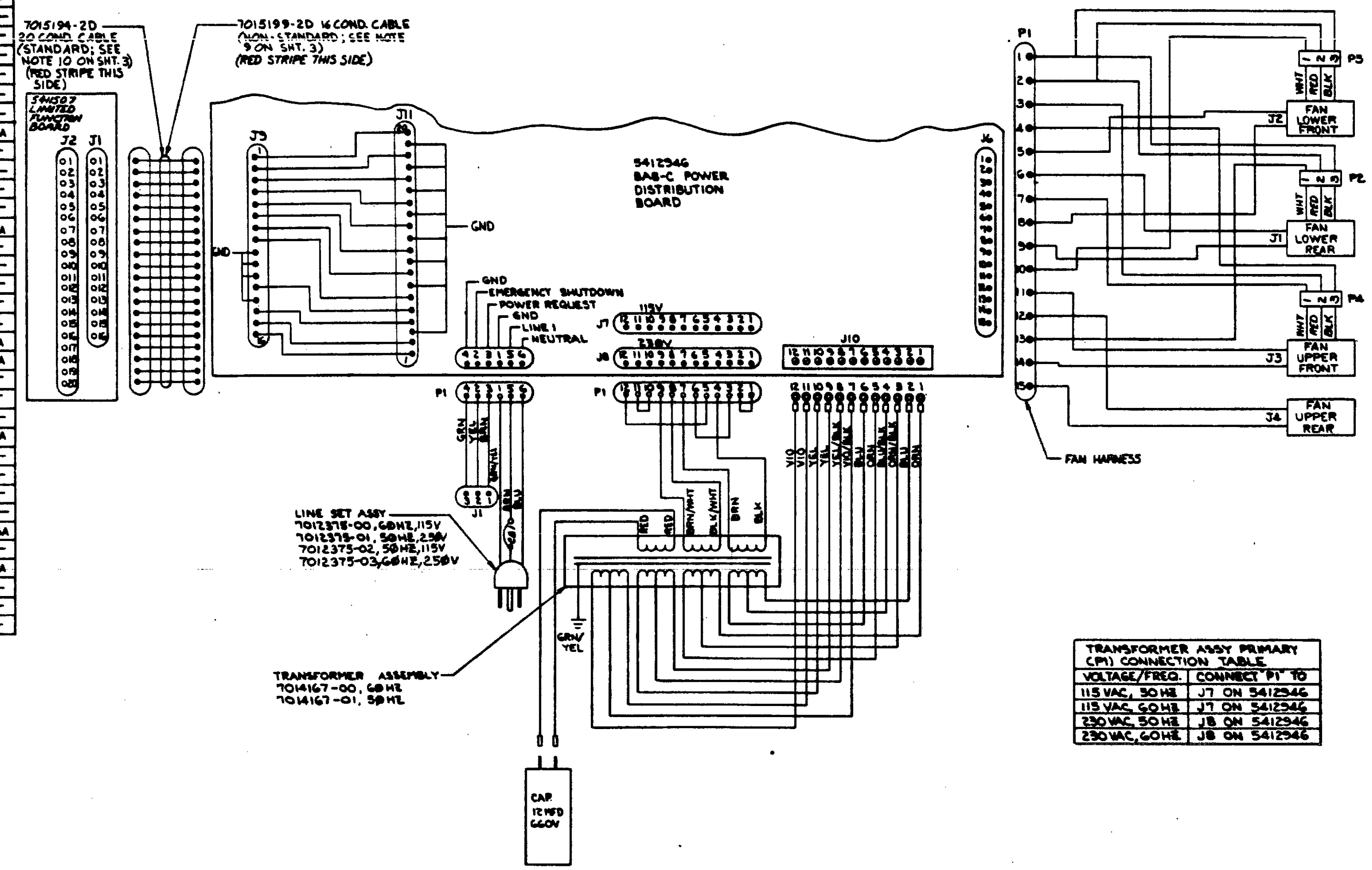
+5V	-15V	+15V
25A (MAX)	2A (MAX)	2A (MAX)



DETAIL "B"
JACK LOCATIONS ON POWER DISTRIBUTION BOARD OF CENTER WALL ASSEMBLY (ITEM #24)

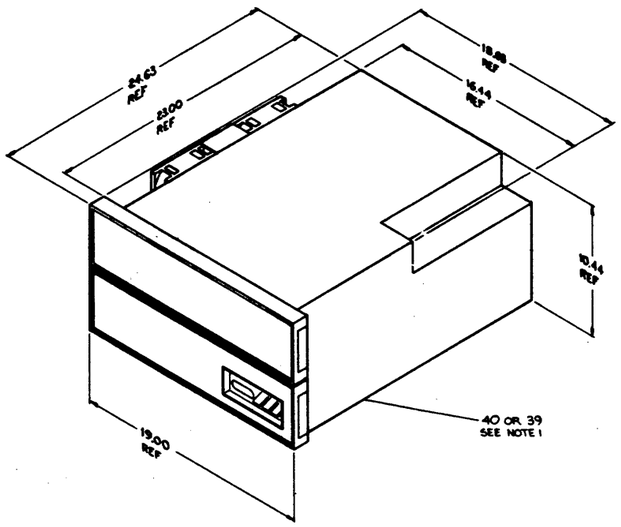


DETAIL "C"
SWITCH LOCATIONS ON LIMITED FUNCTION BOARD OF PANEL ASSY (ITEM #40)



TRANSFORMER ASSY PRIMARY (P1) CONNECTION TABLE	
VOLTAGE/FREQ.	CONNECT "P1" TO
115 VAC, 50 HZ	J7 ON 5412946
115 VAC, 60 HZ	J7 ON 5412946
230 VAC, 50 HZ	J8 ON 5412946
230 VAC, 60 HZ	J8 ON 5412946

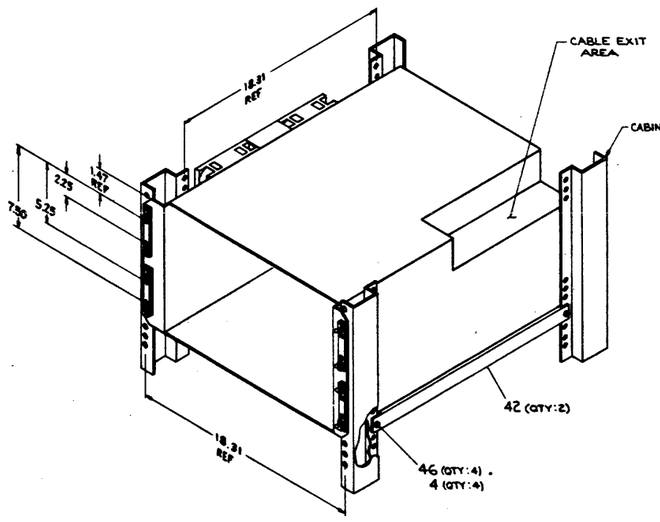
TITLE: UNIT ASSEMBLY, BA8-C | UA | NUMBER: BA8-C-0 | REV. K | SHEET 2 OF 3



MAX. UNIT WEIGHT = 117 LBS.

MOUNTING INSTRUCTIONS

1. SEE DETAIL "D" FOR MOUNTING DIMENSIONS.
2. REMOVE THE BLANK BEZEL ASSEMBLY OR PROGRAMMER'S PANEL
3. REMOVE THE LIMITED FUNCTION PANEL AND DISCONNECT THE CABLE FROM THE LIMITED FUNCTION BOARD.
4. REMOVE THE LATCH MOLDING (4 PLCS)
5. REMOVE THE SPEED NUT, AND INSTALL ON CAB UPRIGHT. EIGHT PLACES PER MOUNTING DIMENSIONS.
6. IT MAY BE NECESSARY TO REMOVE THE FINGER GUARDS (4) AND HARNESS COVER IN ORDER TO MOUNT BOX IN CAB.
7. ATTACH MOUNTING RAILS USING SCREWS AND LOCK WASHERS TO LEFT AND RIGHT SIDE OF CABINET AS PER DETAIL "D"
8. WITH THE BOX IN PLACE, IN THE CABINET, REPLACE THE LATCH MOLDING, SO AS TO SECURE THE BOX TO THE CABINET.
9. PLUG THE CABLE INTO THE LIMITED FUNCTION PANEL AND REPLACE THE PANEL.
10. REPLACE BLANK BEZEL OR PROGRAMMER'S PANEL
11. RE-INSTALL FINGER GUARDS AND HARNESS COVER.



DETAIL "D"
MOUNTING DIMENSIONS

BA8-C TORQUE SPECIFICATIONS	
ITEM	TORQUE ± 2 IN/LBS
16	12 IN/LBS
6	25 "
9	13 "
25	13 "
30	15 "
2 OR 3 (TERMS)	13 "
44	15 "
22	12 "
43	12 "
15	12 "

11.3 INSERT G6019 (ITEM 51) TO CENTER WALL ASSY. (ITEM 24) USING PHL PAN HD. SCREW 6-32 × .38 (ITEM 25) AND INT. TOOTH LOC. WSHR (ITEM 10) AND FLAT WSHR. (ITEM 52).

12. INSERT LOWER G8018 (ITEM 36) TO CHASSIS (ITEM 1) AND CENTER WALL ASSY (ITEM 24).

12.1 INSERT UPPER G8018 (ITEM 36) TO REG SHELF ASSY (ITEM 27) AND CENTER WALL ASSY (ITEM 24)

13. ADD 1/4 TURN RECEPTACLE (ITEM 18) TO TOP COVER (ITEM 38).

14. ASSEMBLE TOP COVER (ITEM 38) TO CHASSIS (ITEM 1) USING #6 EXT TOOTH LOCKWASHER (ITEM 10) AND PHL PAN HD SCREW 6-32 X .25 LG (ITEM 9).

15. ASSEMBLE REAR COVER (ITEM 37) TO CHASSIS (ITEM 1).

16. ASSEMBLE LATCH MOLDING (ITEM 21) TO CHASSIS (ITEM 1) USING 10-32 SPEED NUT (ITEM 23) AND PHL FLAT HD SCREW 10-32 X .75 LG (ITEM 22).

17. ATTACH KEYBOARD CABLE (ITEM 41) TO LIMITED FUNCTION PANEL (ITEM 40). SEE NOTE 7

18. ATTACH 5¼ BLANK BEZEL ASSY (ITEM 39) TO CHASSIS (ITEM 1). SEE NOTE 7

19. ATTACH GND STRAP (ITEMS 54 + 56) TO FANS (ITEMS 14 + 49) WITH SCREW PROVIDED, THEN ATTACH GND STRAP TO CHASSIS STUDS (ITEM 1) WITH #8 KEP-NUT (ITEM 47) #8 EXT TOOTH LOCKWASHER (ITEM 31).

NOTES

7 IN EXPANSION OPTIONS KEYBOARD CABLE IS REPLACED BY REMOTE INTERLOCK JUMPER (ITEM 55). THIS JUMPER IS INSERTED INTO J9 ON THE 5412946 POWER DISTRIBUTION BOARD ALSO EXPANDER BOXES DO NOT INCLUDE LIMITED FUNCTION PANELS (ITEM 40). IN THIS CASE THERE WILL BE TWO 5¼ BLANK BEZELS. THESE ARE TO BE MOUNTED ONE ON TOP OF THE OTHER ON THE CHASIS FRONT.

8. ALL EXPANDER BOX VARIATONS WILL CONTAIN ITEMS 53 AND 54. USE ITEMS 53 AND 54 WHEN EXPANDING TO 8E BOX. IN ALL OTHER EXPANSION VARIATIONS USE ONLY ITEM 53 AS POWER CONTROL CABLE.

9. THIS CABLE TO BE USED WITH LIMITED FUNCTION BOARD ETCH REV B OR EARLIER. (CS REV D OR EARLIER)

10. THIS CABLE TO BE USED WITH LIMITED FUNCTION BOARD ETCH REV C AND LATER. (CS REV E OR LATER)

ASSEMBLY INSTRUCTIONS

19A. ATTACH WIRES TO CABLE TIE MOUNT (ITEM 26) WITH CABLE TIE (ITEM 13).

19B. ASSEMBLE HARNESS COVER (ITEM 45) AND FINGER GUARD (ITEM 17) TO FANS (ITEM 14) USING KEPNUT 6-32 (ITEM 16) AND PHL. PAN HD. SCREW 6-32 × .75 LG. (ITEM 43).

TITLE
UNIT ASSEMBLY, BA8-C
E UA
BA8-C-0
REV. K
SCALE
SHEET 3 OF 3
DIST.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY D. SULLIVAN | CHECKED [illegible] | SECTION 1
DATE 22 MAR 76 | DATE 26 JULY 76 |
ENG Larry Marler | PROD [illegible] | ISSUED SECT.
DATE 26-JULY-76 | DATE 26 July 76 | 1

ITEM NO	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION											
			(115V-60HZ) BA8-CA	(230V-50HZ) BA8-CB	(115V-60HZ) BA8-CC	(230V-50HZ) BA8-CD	(115V-60HZ) BA8-CE	(230V-50HZ) BA8-CF	(230V-60HZ) BA8-CH	(115V-50HZ) BA8-CJ	(230V-60HZ) BA8-CK	(115V-50HZ) BA8-CL	(230V-60HZ) BA8-CM	(115V-50HZ) BA8-CN
23	9007786-01	NUT, SPEED #10-32	8	8	8	8	8	8	8	8	8	8	8	8
24	7014245-0-0	WALL ASSY, CENTER	1	1	1	1	1	1	1	1	1	1	1	1
25	9006021-01	SCR, PHL PAN HD #6-32 X .38LG.	10	12	10	12	10	12	12	10	12	10	12	10
26	9008264	MOUNT, CABLE TIE	3	3	3	3	3	3	3	3	3	3	3	3
27	D-AD-7012541-0-0	SHELF ASSY, REG. BOARD	1	1	1	1	1	1	1	1	1	1	1	1
28	1011729-01	CAPACITOR, 12 MFD, 660 V	1	1	1	1	1	1	1	1	1	1	1	1
29	1213156	CLAMP, CAPACITOR	2	2	2	2	2	2	2	2	2	2	2	2
30	9006037-03	SCR, PHL TRUSS HD, #8-32 X .38 LG.	4	4	4	4	4	4	4	4	4	4	4	4
31	9008072	WASHER, #8 EXT TOOTH LOCK	13	13	13	13	13	13	13	13	13	13	13	13
~~32~~	~~9006640~~	~~WASHER, FLT, .375 X .187 ID X .036 THK~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~
33	1213683	TERMINAL, BOOT CAP	1	1	1	1	1	1	1	1	1	1	1	1
34	9007036	GROMMET, CATERPILLAR	1	1	1	1	1	1	1	1	1	1	1	1
35	9009157	ADHESIVE, PERMA BOND #102	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R	A/R
36	D-CS-G8018-Ø-1	REGULATOR BOARD ASSEMBLY (CORE)	2	2	2	2	2	2	2	2	2	2	2	2
37	D-IA-7415703-0-0	COVER, REAR	1	1	1	1	1	1	1	1	1	1	1	1
38	D-MD-7415706-0-0	COVER, TOP	1	1	1	1	1	1	1	1	1	1	1	1
39	D-AD-7012452-0-0	BEZEL ASSY, 5.25 BLANK	1	1	2	2	2	1	1	2	2	2	2	2
40	D-AD-7010039-03	PANEL, LIMITED FUNCTION	1	1	-	-	-	-	1	1	-	-	-	-
41	C-IA-7015194-2D	20 COND. PANEL CABLE	1	1	-	-	-	-	1	1	-	-	-	-
42	C-MD-7415702-0-0	RAIL, CHASSIS MOUNTING	2	2	2	2	2	2	2	2	2	2	2	2
43	9006026-03	SCR, PHL TRUSS HD #6-32 X .75 LG.	16	16	16	16	16	16	16	16	16	16	16	16
44	9006037-01	SCR, PHL PAN HD #8-32 X .38 LG.	7	7	7	7	7	7	7	7	7	7	7	7

TITLE: BA8-C UNIT ASSEMBLY | ASSY NO. B-DD-BA8-C | SHEET 2 OF 3 | SIZE A | CODE PL | NUMBER BA8-C-Ø | REV. K | ECO NO | DIST.

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

ML

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY D. SULLIVAN | CHECKED [illegible] | SECTION 1
DATE 22 MAR 76 | DATE 26 JULY 76 |
ENG Larry Marler | PROD [illegible] | ISSUED SECT.
DATE 26-JULY-76 | DATE 26 July 76 | 1

ITEM NO	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION											
			(115V-60HZ) BA8-CA	(230V-50HZ) BA8-CB	(115V-60HZ) BA8-CC	(230V-50HZ) BA8-CD	(115V-60HZ) BA8-CE	(230V-50HZ) BA8-CF	(230V-60HZ) BA8-CH	(115V-50HZ) BA8-CJ	(230V-60HZ) BA8-CK	(115V-50HZ) BA8-CL	(230V-60HZ) BA8-CM	(115V-50HZ) BA8-CN
1	D-IA-7012417-0	CHASSIS, BA8-C	1	1	1	1	1	1	1	1	1	1	1	1
2	7014167-00	TRANSFORMER ASSY (60HZ)	1	-	1	-	1	-	1	-	1	-	1	-
3	7014167-01	TRANSFORMER ASSY (50HZ)	-	1	-	1	-	1	-	1	-	1	-	1
4	9007651	WASHER, #10 EXT TOOTH LOCK	8	8	8	8	8	8	8	8	8	8	8	8
5	9006668	WASHER, FLT, .625 X .200 I.D. X .032 THK	4	4	4	4	4	4	4	4	4	4	4	4
6	9006565	NUT, #10-32 KEPS	4	4	4	4	4	4	4	4	4	4	4	4
7	D-AD-7012375-00	LINE SET ASSY (115V)	1	-	1	-	1	-	-	-	-	-	-	-
8	D-AD-7012375-01	LINE SET ASSY (230V)	-	1	-	1	-	1	-	-	-	-	-	-
9	9006020-01	SCR, PHL PAN HD #6-32 X .25 LG.	12	12	12	12	12	12	12	12	12	12	12	12
10	9007649	WASHER, #6 EXT TOOTH LOCK	23	25	23	25	23	25	25	23	25	23	25	23
~~11~~	~~9007013~~	~~GROMMET, .187 I.D. (BLK)~~	~~2~~	~~2~~										
12	D-IA-7014181-0-0	HARNESS, FAN	1	1	1	1	1	1	1	1	1	1	1	1
13	9007031	CABLE TIE	6	6	6	6	6	6	6	6	6	6	6	6
14	1213013	FAN, 5 IN., 135 CFM, 115 VAC	1	1	1	1	1	1	1	1	1	1	1	1
15	9006028-02	SCR, PHL FLT HD #6-32 X .750 LG.	16	16	16	16	16	16	16	16	16	16	16	16
16	9006560	NUT, KEP 6-32	32	32	32	32	32	32	32	32	32	32	32	32
17	1213266-01	GUARD, FINGER	4	4	4	4	4	4	4	4	4	4	4	4
18	9008196	RECEPTACLE, 1/4 TURN, .5Ø WIDE	8	8	8	8	8	8	8	8	8	8	8	8
19	1212405-08	CARD GUIDE, FULL LENGTH (NATURAL)	20	20	20	20	20	20	20	20	20	20	20	20
20	1212405-09	CARD GUIDE, FULL LENGTH (MAGENTA)	20	20	20	20	20	20	20	20	20	20	20	20
21	1209224	LATCH MOLDING	4	4	4	4	4	4	4	4	4	4	4	4
22	9006075-02	SCR, PHL FLT HD #10-32 X .75LG.	8	8	8	8	8	8	8	8	8	8	8	8

TITLE: BA8-C UNIT ASSEMBLY | ASSY NO. B-DD-BA8-C | SHEET 1 OF 3 | SIZE A | CODE PL | NUMBER BA8-C-Ø | REV. K | ECO NO ML000 | DIST.

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

ML

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

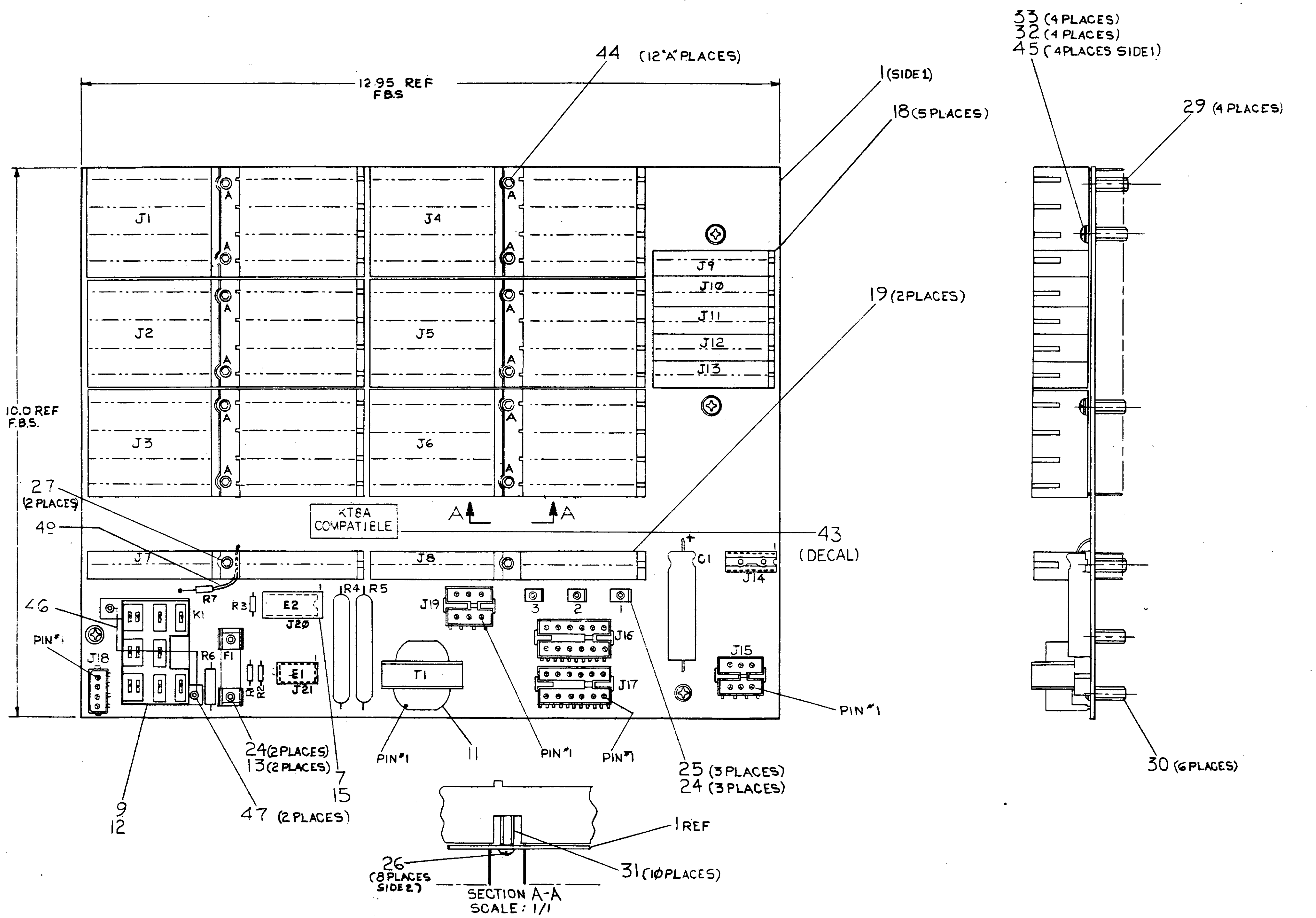
MADE BY D. SULLIVAN | CHECKED [illegible] | SECTION 1
DATE 22 MAR 76 | DATE 26 JULY 76 |
ENG Larry Marler | PROD [illegible] | ISSUED SECT.
DATE 26-JULY-76 | DATE 26 July 76 | 1

ITEM NO	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION											
			(115V-60HZ) BA8-CA	(230V-50HZ) BA8-CB	(115V-60HZ) BA8-CC	(230V-50HZ) BA8-CD	(115V-60HZ) BA8-CE	(230V-50HZ) BA8-CF	(230V-60HZ) BA8-CH	(115V-50HZ) BA8-CJ	(230V-60HZ) BA8-CK	(115V-50HZ) BA8-CL	(230V-60HZ) BA8-CM	(115V-50HZ) BA8-CN
45	D-MD-7416740-0-0	COVER, HARNESS	1	1	1	1	1	1	1	1	1	1	1	1
46	9006071-03	SCR. PHL TRUSS HD #10-32 X .38LG.	4	4	4	4	4	4	4	4	4	4	4	4
47	9006563	NUT, KEPS 8-32	6	6	6	6	6	6	6	6	6	6	6	6
48	A-DC-7417273-0-0	WARNING LABEL	1	1	1	1	1	1	1	1	1	1	1	1
49	7014193-00	FAN ASSEMBLY	3	3	3	3	3	3	3	3	3	3	3	3
50	3612680-01	DECAL	1	1	1	1	1	1	1	1	1	1	1	1
51	D-UA-BC8ØC-04	CABLE, FLEX OMNIBUS EXPANDER	-	-	-	-	1	1	-	-	-	-	1	1
52	D-UA-BCØ8H-1F	CABLE, OMNIBUS EXPANDER	-	-	2	2	-	-	-	-	2	2	-	-
53	C-IA-7008288-3F	CABLE, DC POWER CONTROL BUS	-	-	1	1	1	1	-	-	1	1	1	1
54	C-IA-70-13953-01	CABLE, 8E DC POWER CONTROL ADAPTER	-	-	1	1	1	1	-	-	1	1	1	1
55	D-UA-5413011-0-0	CIRCUIT, REMOTE SLAVE	-	-	1	1	1	1	-	-	1	1	1	1
56	D-AD-7012375-02	LINE SET ASSY (115V, 50HZ)	-	-	-	-	-	-	-	1	-	1	-	1
57	D-AD-7012375-03	LINE SET ASSY (230V, 60HZ)	-	-	-	-	-	-	1	-	1	-	1	-
58	G8019	POWER DIST. CONTROL BOARD	1	1	1	1	1	1	1	1	1	1	1	1
59	9006653	WASHER, FLAT #6	1	1	1	1	1	1	1	1	1	1	1	1
* 60	C-IA-7015199-2D	16 COND. PANEL CABLE	*	*	—	—	—	*	*	—	—	—	—	—
61	7011412-0F	CABLE, CHASSIS GND.	2	2	2	2	2	2	2	2	2	2	2	2
62	7011412-01	CABLE, CHASSIS, GND	2	2	2	2	2	2	2	2	2	2	2	2
~~63~~	~~9107250-00~~	~~TUBING, SHRINK 1.4 IN. LENGTH~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~	~~1~~
*	SEE NOTE 9 ON SHT. 3													

TITLE: BA8-C UNIT ASSEMBLY | ASSY NO. B-DD-BA8-C | SHEET 3 OF 3 | SIZE A | CODE PL | NUMBER BA8-C-Ø | REV. K | ECO NO BA8-C ML000 | DIST.

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

ML



QTY	REF DES	DESCRIPTION	DWG./PART NO.	ITEM NO.
A/R		THIN WALL TUBING (.75 LENGTH)	9107256-11	49
1	R7	RES 1K 1/4W 5%	1300365-00	48
2		EYELET	9000024-07	47
1		SPRING, RELAY HOLDDOWN	1216422-00	46
4		SCR, PHL PAN HD 8-32 X 5/16	9006036-01	45
12		SCR, SOCKET HD 8-32 X 5/8	9006339-08	44
1		DECAL "KT8A COMPATIBLE"	3615653-00	43
A/R		WIRE 30AWG SOLID GRN	9105790-55	42
A/R		WIRE, 18 AWG, STRANDED, GRN.	9107360-55	41
A/R		WIRE, 22 AWG, STRANDED, GRN.	9107350-55	40
REF		"OMNIBUS" SPEC	A-SP-OMNIB-US	39
~~REF~~		~~MODULE ECO HISTORY~~	~~B-MH-H9194-Ø-6~~	~~38~~
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-H9194-Ø-5	37
REF		X-Y COORDINATE HOLE LOCATION	K-CO-H9194-Ø-4	36
REF		CIRCUIT SCHEMATIC	D-CS-H9194-Ø-1	35
~~A/R~~		~~WIRE, 24 AWG, GREEN~~	~~9107683-55~~	~~34~~
4		WASHER, FLAT #8	9006660	33
4		WASHER, INTL TOOTH #8	9006634	32
10		SPACER, #8-32x.25AFx.56	9009602	31
6		SPACER, #8-32x.25AFx.62	9009629	30
4		SPACER, #8-32x.25AFx1.25	9009603	29
~~12~~		~~SCR, SLFTPG #8-32x.81~~	~~9009070~~	~~28~~
2		SCR, SOC, HD #8-32x1.25	9008471-08	27
8		SCR, PHL PAN HD #8-32x.25	9006035-01	26
3		TERMINAL, SINGLE MALE TAB	9008219	25
5		EYELET	9009000	24
~~2~~		~~EYELET~~	~~9006746~~	~~23~~
1	J18	CONN, P.C. 4 PIN	1211342-04	22
2	J15 J19	CONN, PC 6 PIN	1211342-06	21
2	J16 J17	CONN, PC 12 PIN	1211342-12	20
2	J7, J8	CONN BLK, 72 PIN SLTD	1211425-02	19
5	J9 → J13	CONN BLK, 36 PIN SLTD	1211029	18
6	J1 → J6	CONN BLK, 288 PIN SLTD	1210258-01	17
1	J21	SOCKET, IC, 14 PIN	1211813-01	16
2	J14, J2Ø	SOCKET, IC, 16 PIN	1211813-02	15
~~6~~		~~CARD GUIDE, CENTER~~	~~1210698~~	~~14~~
2		CLIP, FUSE	9007203	13
1		SOCKET, RELAY	1210684	12
1	T1	TRANSFORMER	1611646	11
1	F1	FUSE, 3/8 A, S.B	9007207	10
1	K1	RELAY, 3 POLE, 6V, 1Ø AMP	1210683-01	9
1	E1	QUAD CORE DRIVER 4Ø11	1511102	8
1	E2	DIODE ARRAY	C-IA-7010866-Ø-Ø	7
1	R6	RES, 1Ø Ω, 2W, 1Ø %	1300172	6
2	R4, R5	RES, 2Ø Ω, 1ØW, 1%	1305416	5
3	R1, R2, R3	RES, 2.2K 1/4W, 5%	1300417	4
~~1~~	~~C2~~	~~CAP .02 µf, 1000V, DUAL DISC~~	~~1010767~~	~~3~~
1	C1	CAP 93Ø µf 30V	1010509-00	2
1		ETCHED CIRCUIT BOARD	5011505	1

QUANTITY & VARIATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

ANGLES ±0° 30'

SURFACE QUALITY IN MICROINCHES

CLASS OF ACCURACY (CHECK ONE)	OVER 0 TO 0.2	OVER 0.2 TO 1.2	OVER 1.2 TO 4.0	OVER 4.0 TO 12.0	OVER 12.0 TO 40.0	OVER 40.0 TO 80.0
MEDIUM	±.004	±.008	±.012	±.016	±.024	±.04
PREFERRED	±.012	±.016	±.026	±.04	±.083	±0.1

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS

DO NOT SCALE DWG

MATERIAL —

FINISH —

DRN. 1/28/75
CHK'D 2-18-75
ENG 2-29-75
PROJ ENG 2-29-75
PROD 2-27-75

NEXT HIGHER ASSY. B-DD-H9194-Ø

SCALE 1/1

SHEET 1 OF 1

FIRST USED ON H93ØØ

digital

TITLE CONNECTOR BLOCK ASS'Y

SIZE D CODE AD NUMBER H9194-Ø-Ø REV. H

DIST.

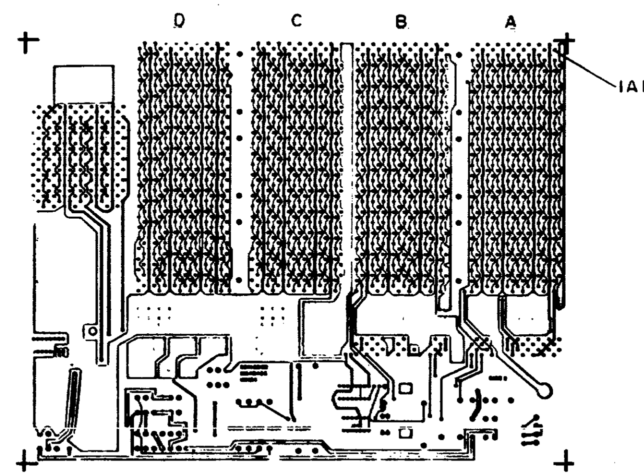
REVISIONS

CHANGE NO.	REV.
H9194-00001	C
H9194-00002	D
H9194-00003	E
H9194-00004	F
H9194-ML005	H

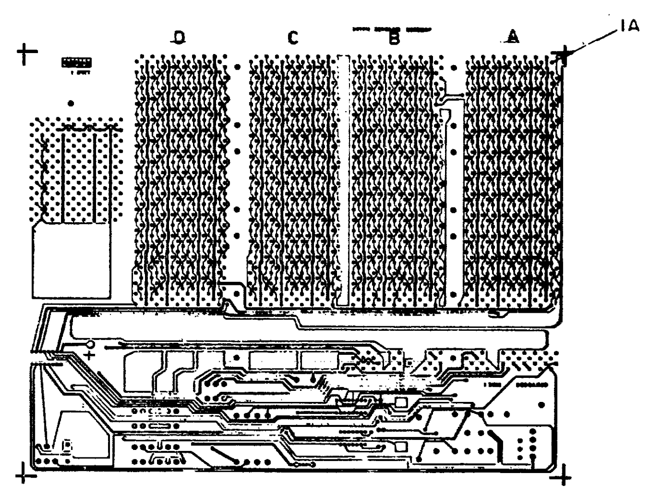
P. GARDNER; L. NARHI; A. TSHUDY; W. KERCHNER; W. KERCHNER

DEC FORM NO.

NOTES:



SOLDER SIDE
(SIDE 2)



BLOCK SIDE
(SIDE 1)
AS SEEN THRU. SIDE 2

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y-COORDINATE HOLE LOCATION	K-CO-H9194-Ø-4	1
REF		ASSY/DRILLING HOLE LAYOUT	E-AH-H9194-Ø-5	2
~~REF~~		~~MODULE ECO HISTORY~~	~~D-MH-H9194-Ø-6~~	3
REF		ETCHED CIRCUIT BOARD	5011505	4
REF		CONNECTOR BLOCK ASSY	D-AD-H9194-Ø-Ø	5

PARTS LIST

IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

REV.	CHANGE NO.	ORIGINATED	DATE	CHK
B	ORIGINATED			
C	H9194-00001	P. GAHDNER	5-13-75	
D	H9194 - 00002		5/16/75	
E	H9194-00001	L. NARHI	15 June 77	
F	H9194-00004	A. TSHUDY	11 Sept 78	
H	H9194-ML005	W. KERCHNER	17 MAY 79	
		W. KERCHNER	22 Oct 79	

REVISIONS

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

SEMICONDUCTOR CONVERSION CHART

FIRST USED ON OPTION MODEL: PDP8A

ETCH BOARD REV. B

DRN. Robert Kyparel DATE 3-3-75
CHK'D. Robert Kyparel DATE 3-4-75
ENG. DATE 3/4/75
PROJ. ENG. DATE 3/4/75
PROD. DATE 3/4/75

NEXT HIGHER ASSY: H9300

digital

TITLE: CONNECTOR BLOCK ASSY

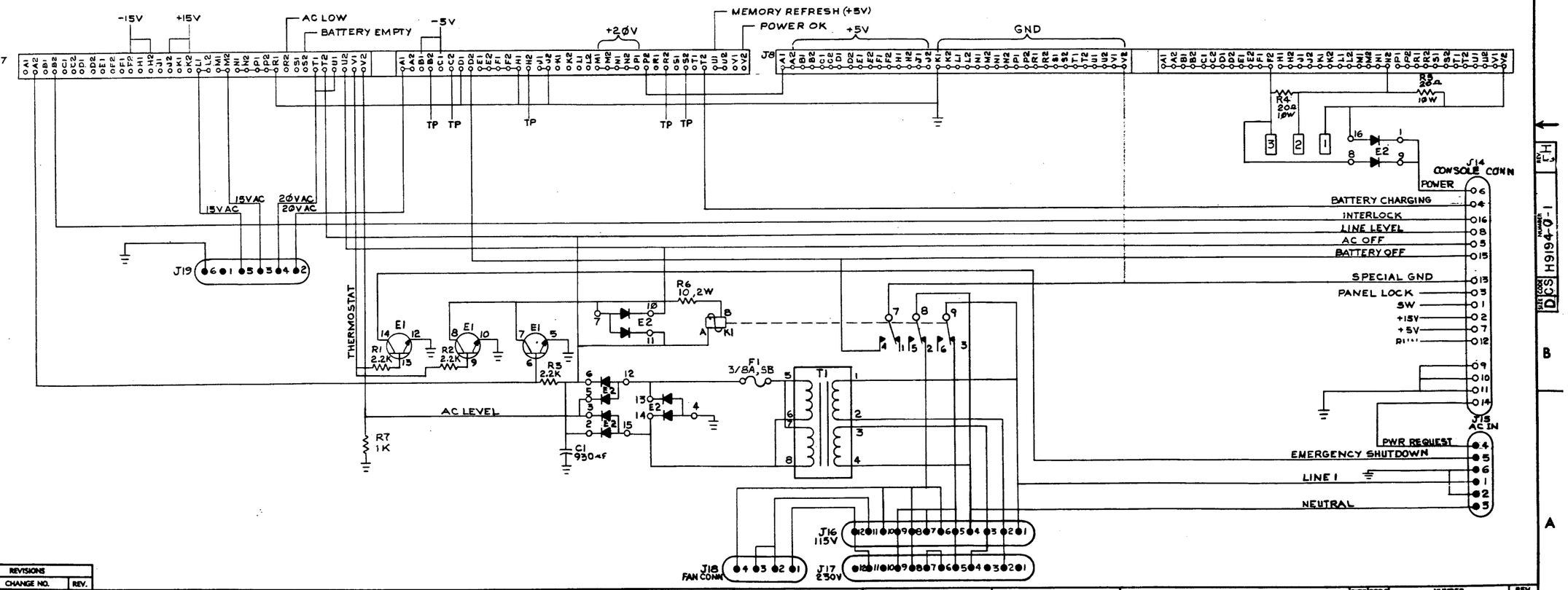
SIZE: D CODE: CS NUMBER: H9194-Ø-1 REV.: H

SCALE

SHEET 1 OF 2

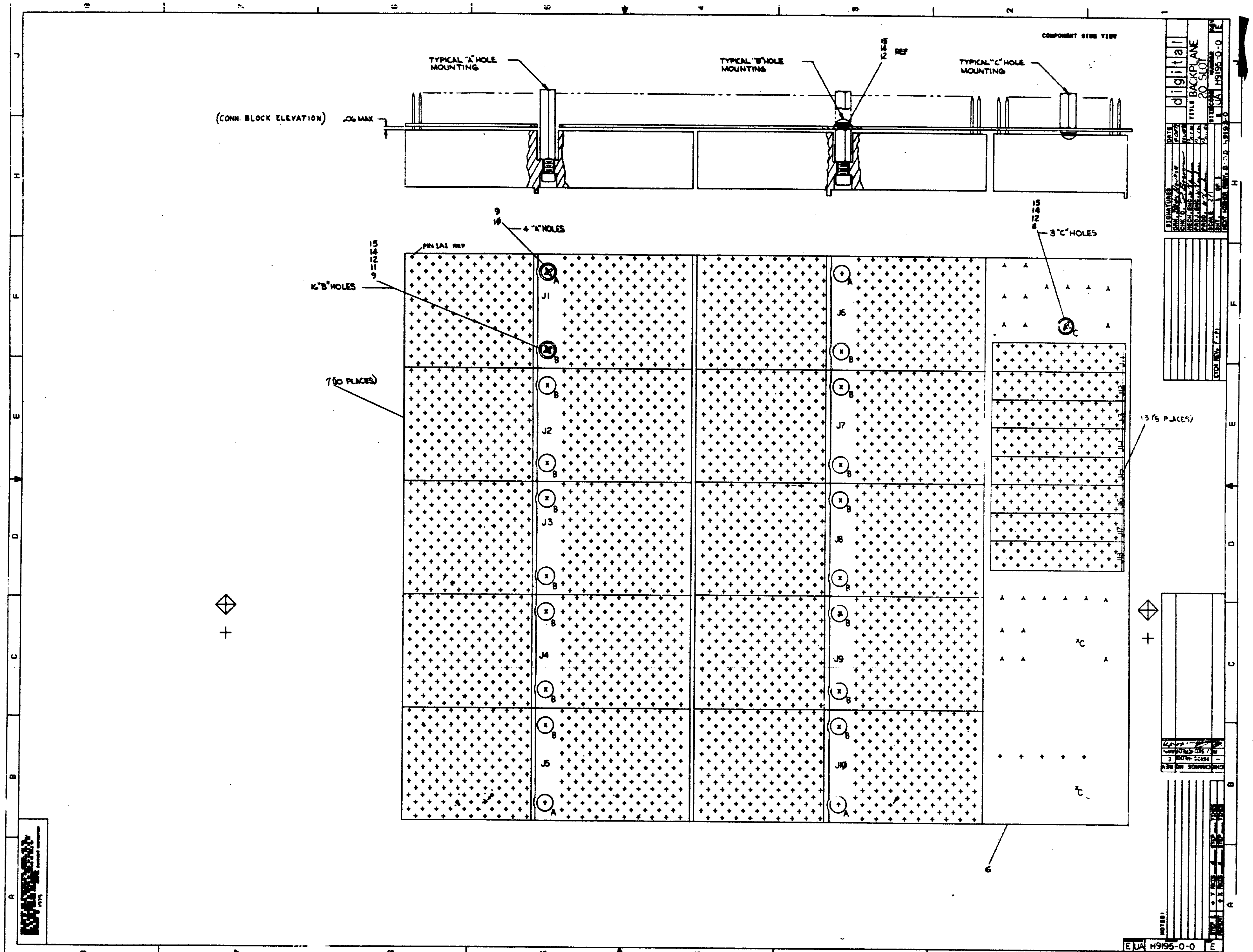
DIST.

PIN	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
A	AØ1=+5V ALL OTHERS=TP	+5V	BØ2&BØ3=BATTERY EMPTY, ALL OTHERS=TP	+5V	CØ1=+5V ALL OUTHERS=TP	+5V	DØ2&DØ3=PANEL LOCK, ALL OTHERS=TP	+15V	TEST POINT	+2ØV
B	TEST POINT	-15V	BØ2=BØ3=AC LOW, ALL OTHERS=TP	-15V	TEST POINT	-15V	TEST POINT	-15V	TEST POINT	BANK SEL Ø
C	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND
D	MAØ L	EMAØ L	MA4 L	INT STROBE H	I/O PAUSE L	TP1 H	MA8 L	IRØ L	TEST POINT	BANK SEL 1
E	MA1 L	EMA1 L	MA5 L	BREAK IN PROG L	CØ L	TP2 H	MA9 L	IR1 L	TEST POINT	+2ØV
F	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND
H	MA2 L	EMA2 L	MA6 L	MA, MS, LOAD CONT L	C1 L	TP3 H	MAIØ L	IR2 L	TEST POINT	MEMORY REFRESH
J	MA3 L	MEM START L	MA7 L	OVERFLOW L	C2 L	TP4 H	MA11 L	F L	TEST POINT	MEMORY REFRESH
K	MDØ L	MD DIR L	MD 4 L	BREAK DATA CONT L	BUS STROBE H	TS1 L	MD 8 L	D L	TEST POINT	+2ØV
L	MD1 L	SOURCE H	MD5 L	BREAK CYCLE L	INTERNAL I/O L	TS2 L	MD9 L	E L	TEST POINT	BANK SEL 2
M	MD2 L	STROBE H	MD6 L	LOAD ADD ENABLE L	NOT LAST XFER L	TS3 L	MDIØ L	USER MODE L	TEST POINT	-5V
N	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND
P	MD3 L	INHIBIT H	MD7 L	INT IN PROG H	INT REQUEST L	TS4 L	MD11 L	F SET L	TEST POINT	+2ØV
R	DATA Ø L	RETURN H	DATA 4 L	NTS STALL L	INITIALIZE H	LINK DATA L	DATA 8 L	PULSE LA H	TEST POINT	BANK SEL 3
S	DATA 1 L	WRITE H	DATA 5 L	RES	SKIP L	LINK LOAD L	DATA 9 L	STOP L	UNUSED	UNUSED
T	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	JUMPER	GROUND
U	DATA 2 L	ROM ADDRESS L	DATA 6 L	RUN L	CPMA DISABLE L	IND 1 L	DATA 1Ø L	KEY CONTROL L		UNUSED
V	DATA 3 L	LINK L	DATA 7 L	POWER OK H	MS, IR DISABLE L	IND 2 L	DATA 11 L	SW	UNUSED	UNUSED



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
CONN BLOCK ASSY	D	DCS	H9194-Ø-1	H
SCALE --	SHEET 2 OF 2	DIST.		


COMPONENT SIDE VIEW
TYPICAL "A" HOLE MOUNTING
TYPICAL "B" HOLE MOUNTING
TYPICAL "C" HOLE MOUNTING
REF
(CONN. BLOCK ELEVATION)
.06 MAX
4 "A" HOLES
PIN 1A1 REF
16 "B" HOLES
3 "C" HOLES
7 (10 PLACES)
13 (5 PLACES)
J1
J2
J3
J4
J5
J6
J7
J8
J9
J10
6
digital
TITLE BACKPLANE 20 SLOT
SIZE CODE
UA
NUMBER
H9195-0-0
REV
E
SIGNATURES
DATE
DRN.
CHK'D.
MECH. ENG.
PROJ. ENG.
PROD.
SCALE 2/1
SHT. 1 OF 1
NEXT HIGHER ASSY.
E UA H9195-0-0 E

PIN	A1	A2	B1	B2	C1	C2	D1	D2	E1	E2
A	AØ1 = +5V ALL OTHERS = TP	+5V	BØ2 & BØ3 = BATTERY EMPTY, ALL OTHERS = TP	+5V	CØ1 = +5V, ALL OTHERS = TP	+5V	DØ2 & DØ3 = PANEL LOCK, ALL OTHERS = TP	+15V	TEST POINT	+2ØV
B	TEST POINT	-15V	BØ2 & BØ3 = AC LOW, ALL OTHERS = TP	-15V	TEST POINT	-15V	TEST POINT	-15V	TEST POINT	BANK SEL Ø
C	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND
D	MAØ L	EMAØ L	MA4 L	INT STROBE H	I/O PAUSE L	TP 1 H	MA8 L	IRØ L	TEST POINT	BANK SEL 1
E	MA1 L	EMA1 L	MA5 L	BREAK IN PROG L	CØ L	TP 2 H	MA9 L	IR1 L	TEST POINT	+2ØV
F	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND
H	MA2 L	EMA2 L	MA6 L	MA, MS, LOAD CONT L	C1 L	TP3 H	MA1Ø L	IR2 L	TEST POINT	MEMORY REFRESH
J	MA3 L	MEM START L	MA7 L	OVERFLOW L	C2 L	TP4 H	MA11 L	F L	TEST POINT	MEMORY REFRESH
K	MDØ L	MD DIR L	MD4 L	BREAK DATA CONT L	BUS STROBE L	TS1 L	MD 8 L	D L	TEST POINT	+2ØV
L	MD1 L	SOURCE H	MD5 L	BREAK CYCLE L	INTERNAL I/O L	TS 2 L	MD 9 L	E L	TEST POINT	BANK SEL 2
M	MD2 L	STROBE H	MD6 L	LOAD ADD ENABLE L	NOT LAST XFER L	TS3 L	MD1Ø L	USER MODE L	TEST POINT	-5V
N	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND
P	MD3 L	INHIBIT H	MD 7 L	INT IN PROG H	INT REQUEST L	TS4 L	MD11 L	F SET L	TEST POINT	+2ØV
R	DATA 7 L	RETURN H	DATA 4 L	NTS STALL L	INITIALIZE H	LINK DATA L	DATA 8 L	PULSE LA H	TEST POINT	BANK SEL 3
S	DATA 1 L	WRITE H	DATA 5 L	RES 2	SKIP L	LINK LOAD L	DATA 9 L	STOP L	UNUSED	UNUSED
T	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	GROUND	JUMPER	GROUND
U	DATA 2 L	ROM ADDRESS L	DATA 6 L	RUN L	CPMA DISABLE L	IND 1 L	DATA 1Ø L	KEY CONTROL L		UNUSED
V	DATA 3 L	LINK L	DATA 7 L	POWER OK H	MS, IR DISABLE L	IND 2 L	DATA 11 L	SW	UNUSED	UNUSED

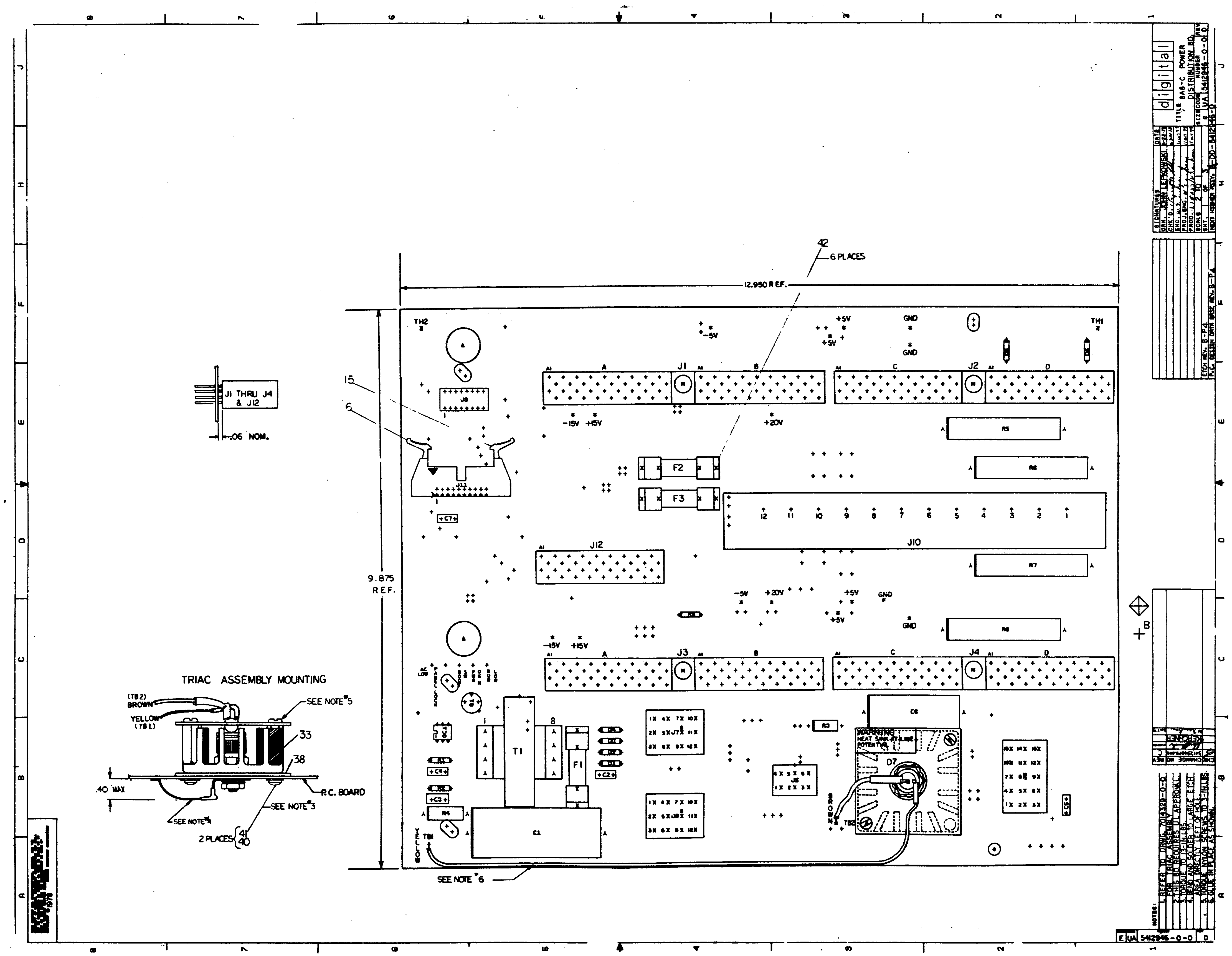
FIRST USED ON: BA8-C

digital

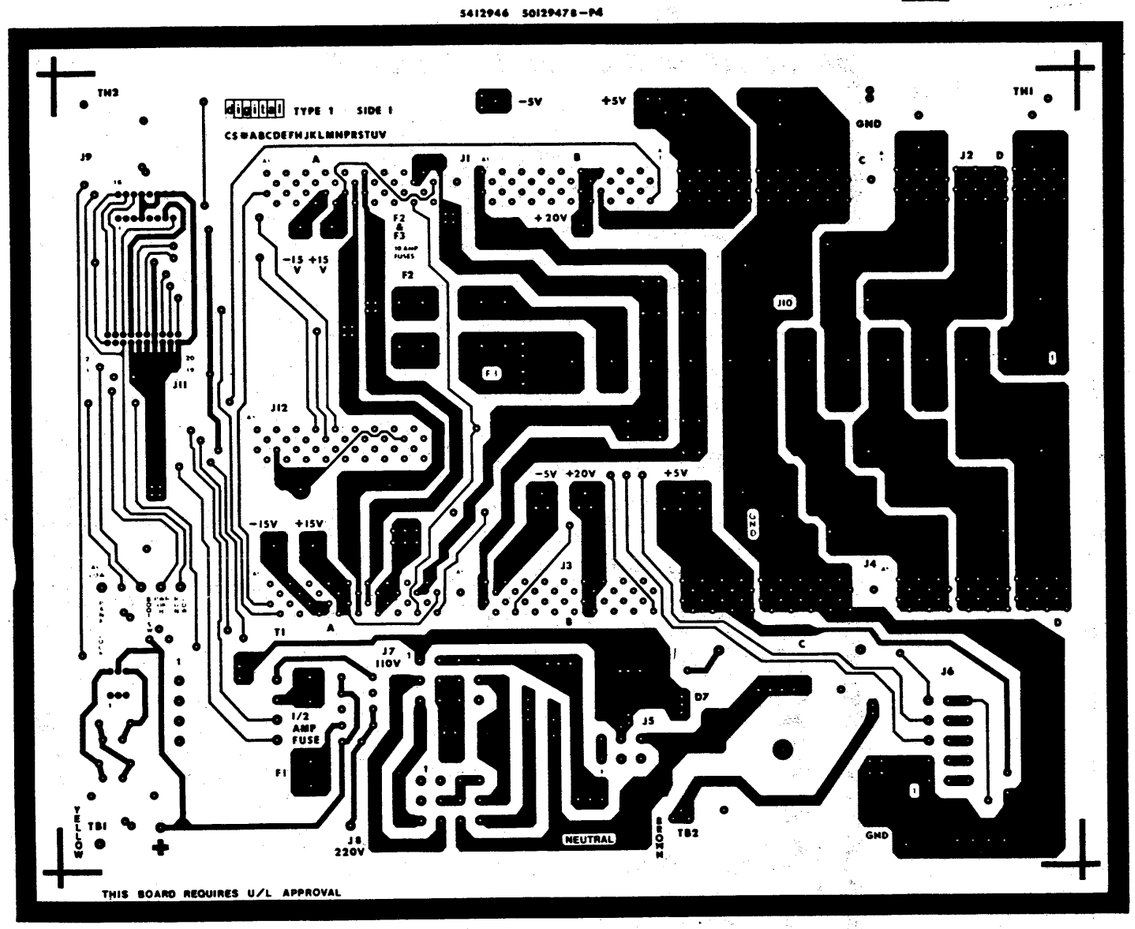
TITLE: 2Ø SLOT BACK PLANE

NEXT HIGHER ASSY.: D-UA-H9195-0-0

SIZE: D CODE: CS NUMBER: H9195-Ø-1 REV.: E

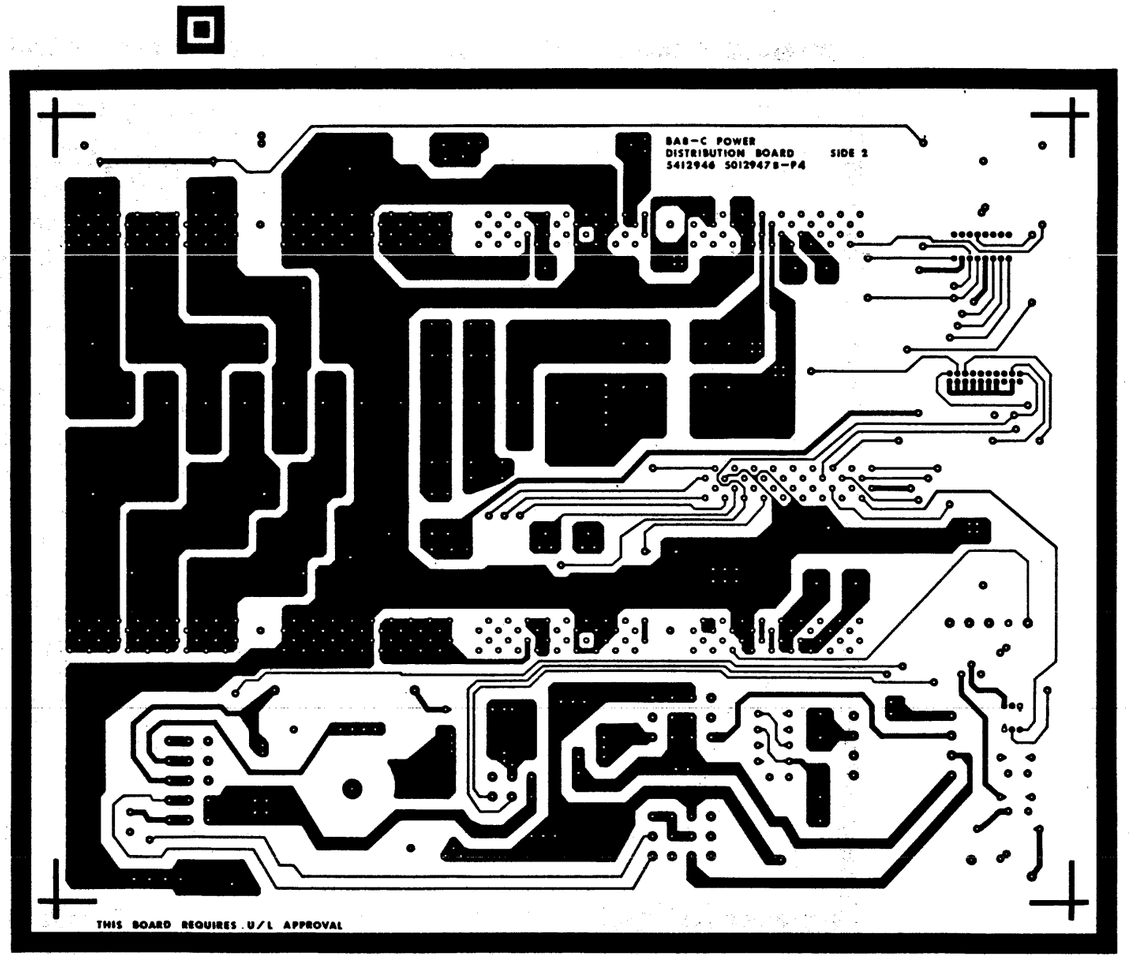


TRIAC ASSEMBLY MOUNTING
(TB2) BROWN
YELLOW (TB1)
SEE NOTE #5
33
38
.40 MAX
P.C. BOARD
SEE NOTE #3
SEE NOTE #4
2 PLACES 41 40
J1 THRU J4 & J12
.06 NOM.
12.950 REF.
9.875 REF.
42
6 PLACES
15
6
TH2
TH1
J1
J2
J3
J4
J10
J12
F1
F2
F3
T1
C1
C6
D7
R5
R6
R7
R8
-5V
+5V
GND
+20V
-15V
+15V
WARNING HEAT SINK AT LINE POTENTIAL
TB1
TB2
SEE NOTE #6
digital
BA8-C POWER DISTRIBUTION BD.
E UA 5412946-0-0 D



TITLE	BA8-C POWER DIST. BD.	
SIZE	E	
CAGE CODE	UA	
NUMBER	5412946-0-0	
REV	D	
SCALE	2"=1"	
SHEET	2 OF 3	
DIST.		

5412946 REV D



TITLE	SIZE	NUMBER	REV
BA8-C POWER DIST BD	E UA	5412946-0-0	D
SCALE 2:1	SHEET 1 OF 1	DO NOT SCALE	

NOTES:

LINE SET J5: LINE, NEUTRAL, SAFETY GND, EMERGENCY SHUT DOWN, POWER REQ, GND

J7 (115V) J8 (230V)

FAN HARNESS J6: C5 .22 UFD, +5 VOLTS BOTTOM SUPPLY, UPPER FRONT FAN, LOWER FRONT FAN, LOWER REAR FAN

TO LIMITED FUNCTION BD J9: BOOT SW, POWER OK LITE, PANEL LOCK, AC OFF, CONSOLE POWER, LINE LEVEL, RUN LOW, J3-BD2 BATTERY OFF, J3-AB2 INTERLOCK

TO LIMITED FUNCTION BD J11

TO DAUGHTER BD J12: POWER OK(TOP) J1-BV2, POWER OK H, J3-AV2 AC LEVEL R9 1K, +20V J3-BM1, POWER OK (BOTTOM) J3-BV2, J1AT2,J3AT2 THERMOSTATS

T1, F1 1/2A, D1 (4) D3, D2 1N4004 D4, C1 930 UFD, C2 .22UFD, OC1, OC1-2

Q1 2N6531B, R1 51K, R2 150K, R3 100 2W, R4 47 1W, C3 .01UFD, C4 .22UFD, C6 .1UFD 600V, C7 22 UFD, SMALL PIN (TB1), LARGE PIN (TB2), D7

— REF. ONLY —
REFER TO DRAWING NO. D-UA-5412946-0-0

FAN HARNESS: LOWER FRONT FAN J2, LOWER REAR FAN J1, TOP UPPER FAN J3, UPPER REAR FAN J4

TRANSFORMER HARNESS: BLK, BRN, BLK/WHT, BRN/WHT

IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

REV.	REVISIONS	CHG NO.	DATE	BY
*	ORIGINATED	5412946-00001	1-SEP-77	A. DELUCA
A		5412946-00002	1-NOV-77	W. KERCHNER
B		5412946-00003	2-DEC-77	W. KERCHNER
C		5412946-00004	11-JAN-78	W. KERCHNER
D			11-JAN-78	W. KERCHNER

FIRST USED ON OPTION MODEL: BA8-C

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

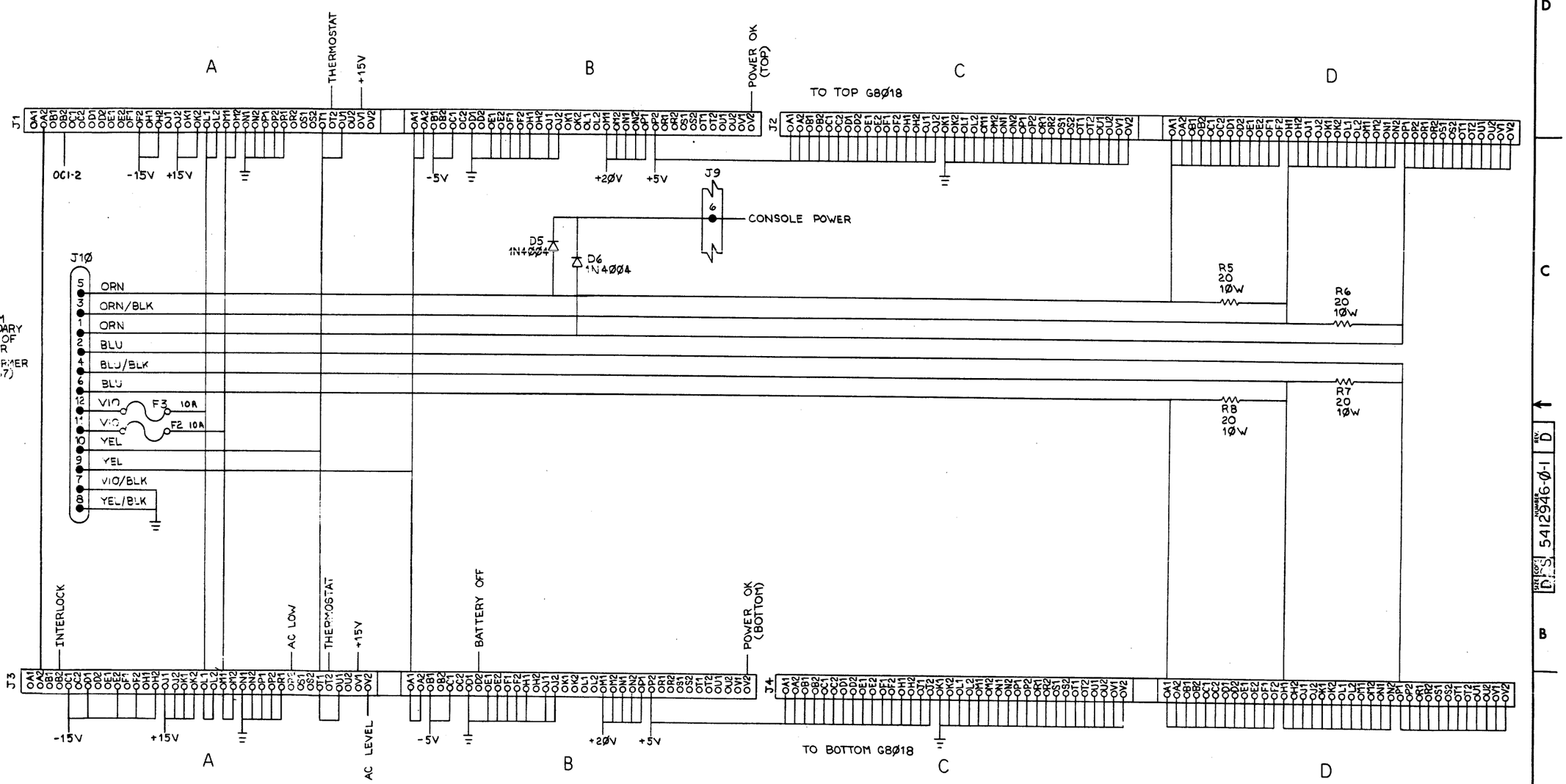
ETCH BOARD REV. B-P4

SEMICONDUCTOR CONVERSION CHART

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

DRN. D. ZWICKER	DATE 7-APR-77	digital
CHK'D W. Kercher	DATE 13 MAY 77	TITLE BA8-C POWER DISTRIBUTION BOARD
ENG. [illegible]	DATE 6-6-77	
PROJ. ENG. [illegible]	DATE 6-6-77	
PROD. J. V. Kane	DATE 7-7-77	
NEXT HIGHER ASSY 5412946-00		SIZE D CODE CS NUMBER 5412946-0-1 REV. D
SCALE —		
SHEET 1 OF 2		DIST.

SIZE D CODE CS NUMBER 5412946-0-1 REV. D



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
BA8-C POWER DISTRIBUTION BOARD	D	CS	5412946-Ø-1	D
SCALE —//	SHEET 2 OF 2		DIST.	

AUTOMATED BY PRTLST.2D(16)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	E-MD-5012947-0-0	5012947-00	BA8C POWER DISTRIBUTION BOARD	1	
2	2		1000043-00	1000.0 MMF 250V 20% Y5F DISC	1	C3
3	3		1000033-00	.1 MFD 600V 10% MYLR	1	C6
4	4		1010509-00	930 MFD 30V +75-10% AL EL	1	C1
5	5		1105796-00	1N 4004 PIV=400 I= 1A DO41 SP	6	D1-D6
6	6		1209941-04	HEADER RT ANGLE,RIGHT	1	
7	7		1211425-00	CONN,CARD 72PIN SLOTTED DOUBLE	4	J1-J4
8	8		1211029-00	CONN,CARD 36PIN SLOTTED	1	J12
9	9		1211813-02	SKT,IC 16PIN DIP GOLD PLATE	1	J9
10	10		1209941-06	HEADER.100 20POS RT ANGLE	1	J11
11	11		1211905-01	TERM BLOCK 12POS 7/16 SPACING	1	J10
12	12		1212297-09	MATE-N-LOK 15PIN UNIV HEADER	1	J6
13	13		1212297-05	MATE-N-LOK 6PIN UNIV HEADER	1	J5
14	14		1212297-08	MATE-N-LOK 12PIN UNIV HEADER	2	J7,J8
15	15		1209941-03	HEADER RT ANGLE LEFT L	1	
16	16		1302199-00	47.0 1.0 W 5.0 % CC	1	R4
17	17		1300228-00	100.0 .50 W 5.0 % CC	1	R3
18	18		1304839-00	51.0 K .25 W 5.0 % CC	1	R1
19	19		1305416-00	20.0 10.0 W 1.0 % WW	4	R5-R8
20	20		1509338-00	DEC6531B NPN 310MW SI 40 90 P	1	Q1
21	21		1914194-00	OPTP-COUPLED ISOLATOR	1	OC1
22	22		9006707-00	*** THIS ITEM IS NOT USED ***	-	
23	23		1613282-00	XFMR P=AB S=14.5@.12A	1	T1
24	24		9006023-01	*** THIS ITEM IS NOT USED ***	-	
25	25		9008185-00	*** THIS ITEM IS NOT USED ***	-	
26	26		9007203-00	*** THIS ITEM IS NOT USED ***	-	
27	27		9007208-00	FUSE,REG BLO 1/2 A,250V GLASS	1	F1
28	28		9009000-00	*** THIS ITEM IS NOT USED ***	-	
29	29		9008838-00	FUSE,REG BLO 10 A, 32V GLASS	2	F2,F3
30	30		9107560-01	*** THIS ITEM IS NOT USED ***	-	

REVISION HISTORY

ENG	ECO NUMBER	REV
ER	00003	C
WK	5412946-ML004	D

BASIC PART NO: 5412946

SECTION A OF A

SECTION.VARIATION INDEX

[A] 00
[B]
[C]
[D]
[E]
[F]
[H]
[J]
[K]
[L]
[M]
[N]

DRN: W.E.

CHK'D: J.P. LEPKOWSKI

DES.ENG: AL DELUCA

RESP.ENG.: AL DELUCA

MFG.ENG.: J.V. KANE

ASSEMBLY NUMBER:
E-UA-5412946-0-0

DATE: 09-JUN-78

DATE: 09-JUN-78

DATE: 09-JUN-78

DATE: 09-JUN-78

DATE: 09-JUN-78

TOP DOCUMENT NUMBER:
BA8-C

D I G I T A L

TITLE PARTS LIST

BA8-C POWER DISTRIBUTION BOARD

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	5412946-0-DBP	D

FILE NAME: Z0805D.PLS

EDIT # 6

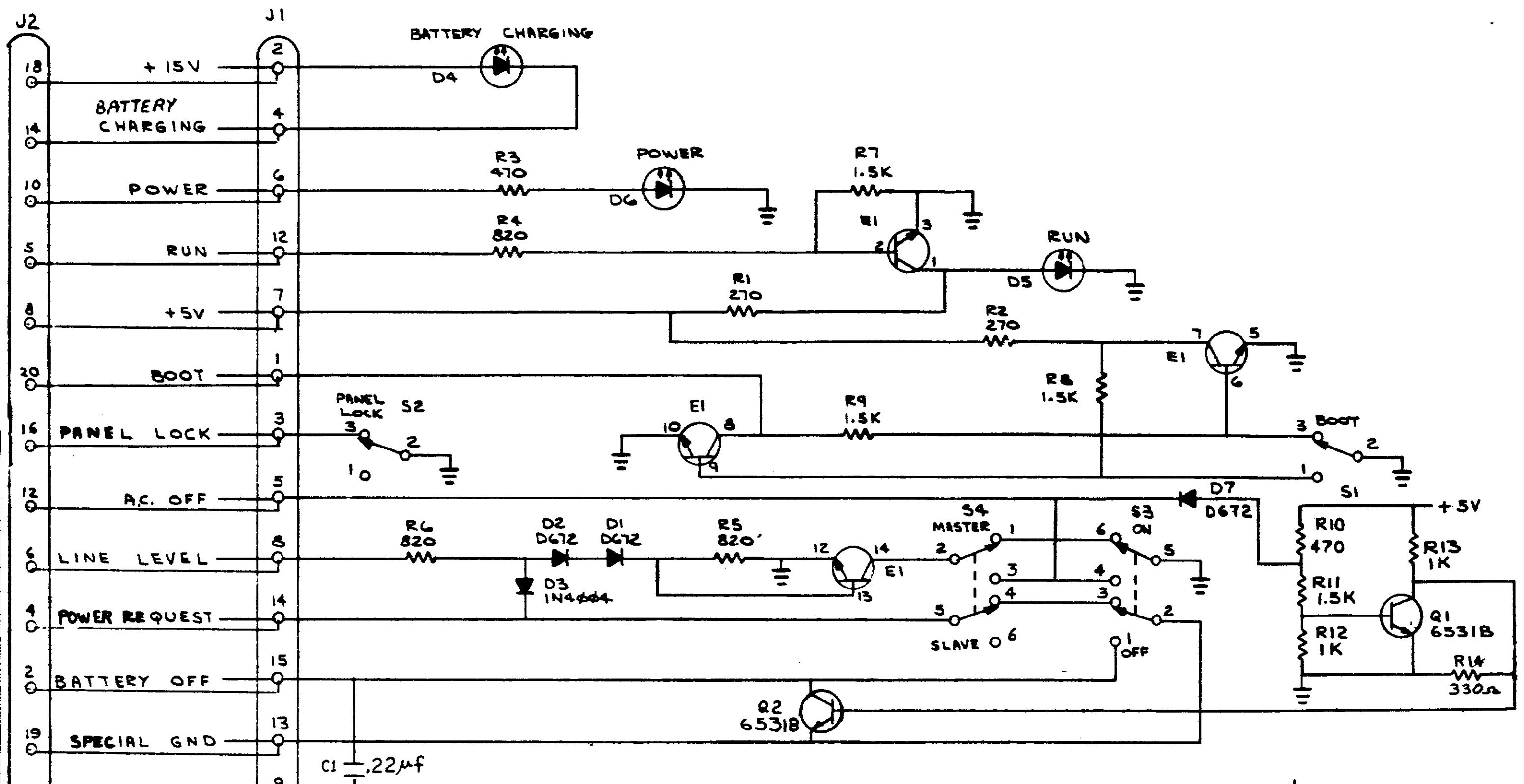
AUTOMATED BY PRTLST.2D(16)

P A R T S L I S T

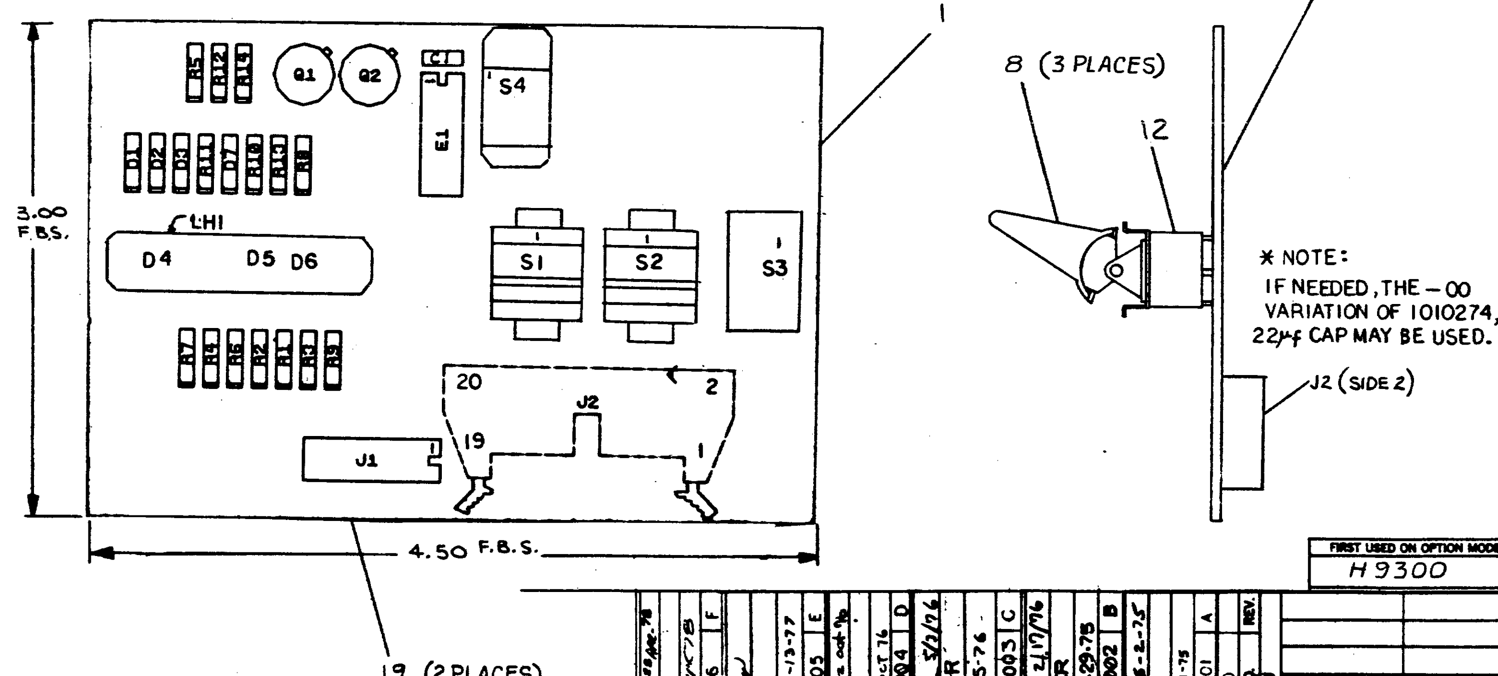
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
31	31		1210929-01	*** THIS ITEM IS NOT USED ***	-	
32	32		1302396-00	150.0 K .25 W 5.0 % CC	1	R2
33	33		7014329-00	TRIAC ASSY	1	D7
34	34		1010274-00	.22 MFD 50V +80-20% Z5U CER	4	C2,C4,C5,C7
35	35		9105740-55	*** THIS ITEM IS NOT USED ***	-	
36	36		1300365-00	1.0 K .25 W 5.0 % CC	1	R9
37	37		9107256-11	*** THIS ITEM IS NOT USED ***	-	
38	38		7420187-00	PLATE LABEL	1	
39	39		9006431-06	*** THIS ITEM IS NOT USED ***	-	
40	40		9007801-00	WASHER, LOCK, S.S. #6	2	
41	41		9006024-01	SCREW,PAN,PHIL 6-32X 1/2 SS	2	
42	42		9009513-03	CLIP, FUSE, WITH STOP, FOR PC BO	6	

							TITLE					
D	I	G	I	T	A	L	BA8-C POWER DISTRIBUTION BOARD	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
									K	PL	5412946-0-DBP	D

NOTES:



NOTE:
SEE AH DWG. FOR INSERTION



* NOTE:
IF NEEDED, THE −00 VARIATION OF 1010274, .22µf CAP MAY BE USED.

PARTS LIST

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411507-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5411507-0-5	2
REF		MODULE ECO HISTORY	B-MH-5411507-0-6	3
1		ETCHED CIRCUIT BOARD	5011506	4
3	D1, D2, D7	DIODE, D672	1105275	5
1	D3	DIODE, 1N4004	1105796	6
3	D4, D5, D6	DIODE, LIGHT EMITTING	1110324	7
3		KNOB, DARK GRAY (#47)	1210786-01	8
2	S1, S2	SWITCH, TOGGLE, S.P.D.T.	1210840	9
1	S4	SWITCH, SLIDE, D.P.S.T.	1210919	10
1	LH1	LED HOLDER, TRIPLE	1210940-02	11
1	S3	SWITCH, TOGGLE, D.P.D.T	1212010	12
2	R3, R10	RES. 470, 1/4W 5%	1300316	13
4	R7, R8, R9, R11	RES. 1.5K, 1/4W 5%	1300391	14
3	R4, R5, R6	RES 820, 1/4W, 5%	1301775	15
2	R1, R2	RES 270, 1/4W, 5%	1301972	16
1	E1	QUAD CORE DRIVER, 4011	1511102-00	17
1	J1	SOCKET, 16 PIN	1211813-02	18
2		SCR, SLOTTED PAN HD, SELF TAP. #6-25	9008230-01	19
2	R12, R13	RES. 1K, 1/4W 5%	1300365	20
2	Q1, Q2	TRAN. DEC 6531B	1509338	21
1	R14	RES 330, 1/4W, 5%	1300295	22
~~2~~		~~EYELET, FUNNEL FLANGE~~	~~9006736~~	23
~~A/R~~		~~WIRE, #30 GREEN SOLID~~	~~9105740-55~~	24
1	J2	RT. ANGLE HEADER, 20 PIN	1209941-06	25
1		RT. ANGLE HEADER, LEFT LATCH	1209941-03	26
1		RT. ANGLE HEADER, RT. LATCH	1209941-04	27
1	C1	* CAP., .22µf, 50V, 20%	1010274-01	28

FIRST USED ON OPTION MODEL: H9300

ETCH BOARD REV. C

REV.	CHANGE NO.	ORIGINATED	CHK
A	5411507-00001	P. GARDNER 6-2-75	
B	5411507-00002	P. GARDNER 12-29-75	
C	5411507-00003	P. GARDNER 3-15-76	
D	5411507-00004	P. GARDNER 5/2/76	
E	5411507-00005	P. SCANTLEBURY 6-13-77	
F	7411507-00006	P. SCANTLEBURY	

IC TYPE | GND | +5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

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

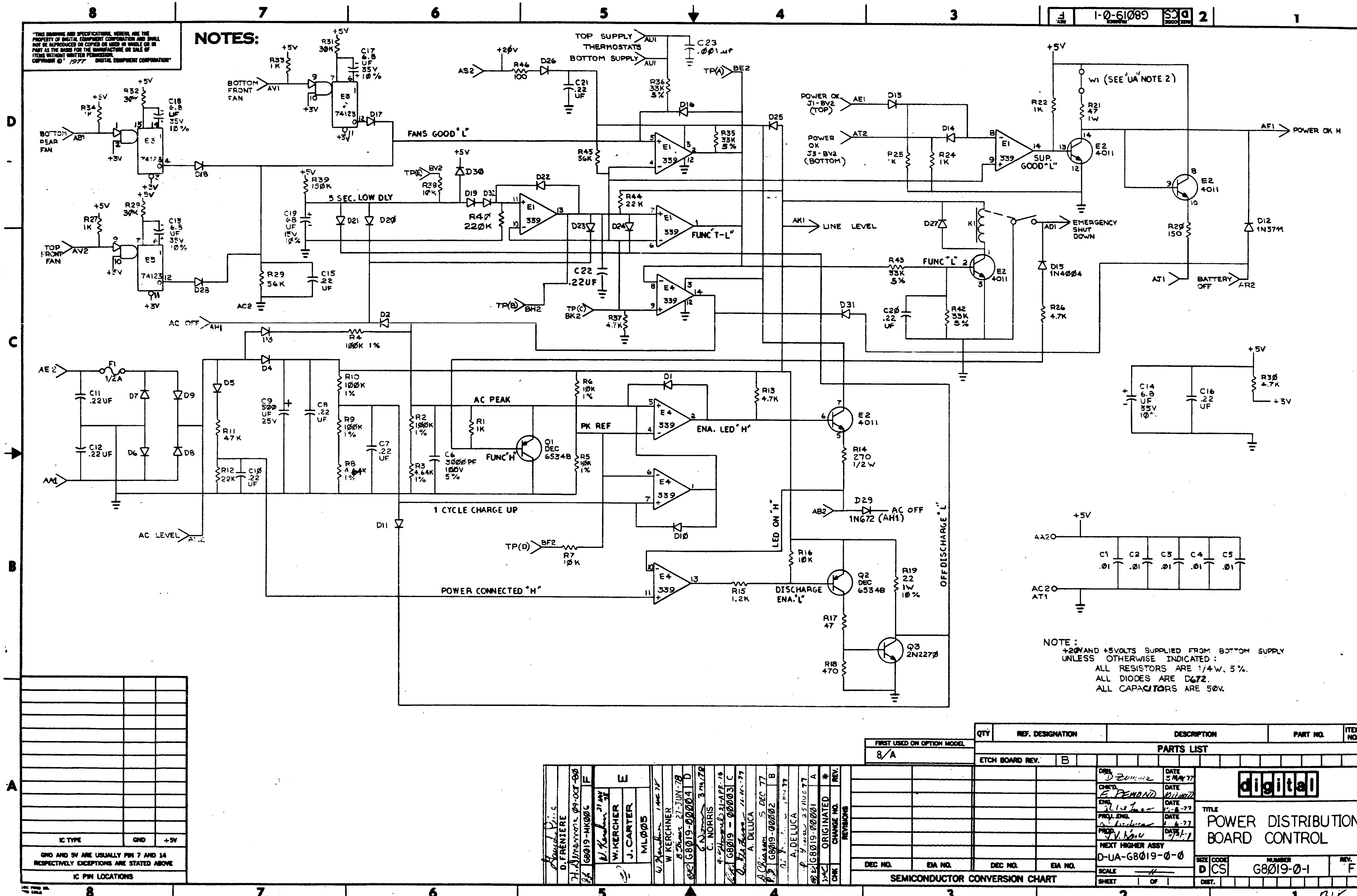
SEMICONDUCTOR CONVERSION CHART

DRN. K. Gould DATE 1-27-75
CHKD. DATE 1-27-75
ENG. DATE 2-20-75
PROD. DATE 2-7-75
NEXT HIGHER ASST D-AD-7010033-0-0
SCALE —
SHEET 1 OF 1

digital

TITLE: LIMITED FUNCTION BOARD

SIZE D CODE CS NUMBER 5411507-0-1 REV. F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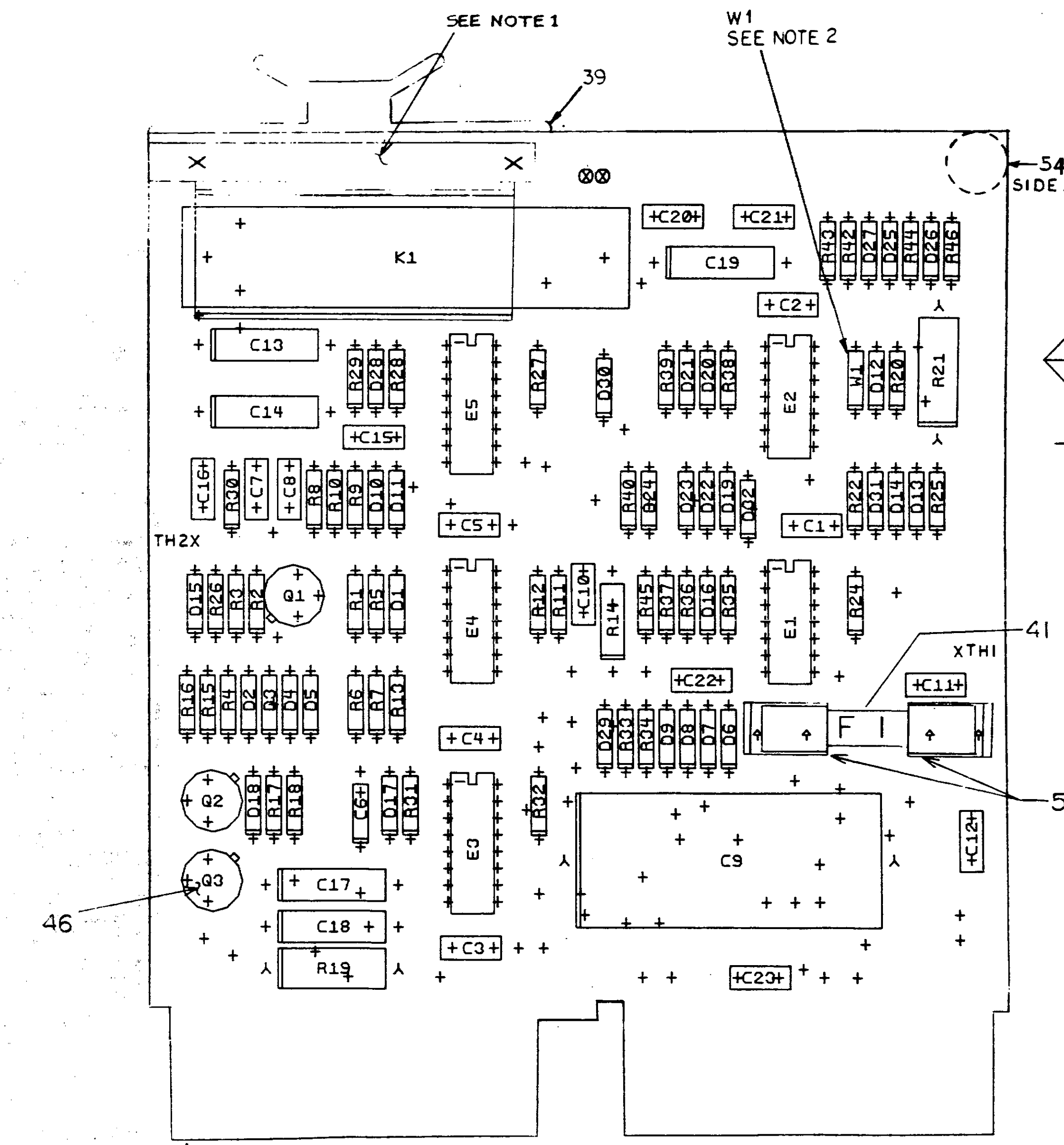
NOTES:
BOTTOM FRONT FAN
BOTTOM REAR FAN
TOP FRONT FAN
FANS GOOD "L"
TOP SUPPLY
THERMOSTATS
BOTTOM SUPPLY
5 SEC. LOW DLY
FUNC "T-L"
LINE LEVEL
EMERGENCY SHUT DOWN
POWER OK J1-BV2 (TOP)
POWER OK J3-BV2 (BOTTOM)
SUP. GOOD "L"
POWER OK H
W1 (SEE "UA" NOTE 2)
BATTERY OFF
FUNC "L"
AC OFF
AC PEAK
PK REF
FUNC "H"
ENA. LED "H"
1 CYCLE CHARGE UP
AC LEVEL
LED ON "H"
OFF DISCHARGE "L"
DISCHARGE ENA. "L"
POWER CONNECTED "H"
1N672 (AH1)
NOTE:
+20V AND +5VOLTS SUPPLIED FROM BOTTOM SUPPLY UNLESS OTHERWISE INDICATED:
ALL RESISTORS ARE 1/4W, 5%.
ALL DIODES ARE D672.
ALL CAPACITORS ARE 50V.
IC TYPE
GND
+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE
IC PIN LOCATIONS
FIRST USED ON OPTION MODEL
8/A
ETCH BOARD REV. B
QTY
REF. DESIGNATION
DESCRIPTION
PART NO.
ITEM NO.
PARTS LIST
SEMICONDUCTOR CONVERSION CHART
DEC NO.
EIA NO.
ORIGINATED
A. DELUCA
C. NORRIS
W. KERCHNER
J. CARTER
D. FRENIERE
G8019-MK006
ML005
NEXT HIGHER ASSY
D-UA-G8019-0-0
TITLE
POWER DISTRIBUTION BOARD CONTROL
digital
SIZE D
CODE CS
NUMBER G8019-0-1
REV. F
SCALE
SHEET 1 OF 1
DIST.

COMPONENT SIDE VIEW



NOTES: 1. INSTALL A.Y.S. BRACKET (7419122-00) USED TO SECURE RELAY K1 BY USING SCREWS (9006011-0-1), AND KEP NUTS (9006557-0-0), WASHERS (9006655-00)
2. POWER OK W1 IS ONLY REMOVED WHEN G8019 IS AN EXPANDED UNIT.

REV	E	F
CHANGE NO	ML005 J.CARTER KERSCHNER	GEN19-MK006 H.Newman D.FRENIERE

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

SIGNATURES	DATE
DRN. D. Dinardo	5-15-78
CHK'D.	
ENG.	
PROJ.ENG.	
PROD.	

digital

TITLE BA8-C POWER DISTRIBUTION BOARD CONTROL

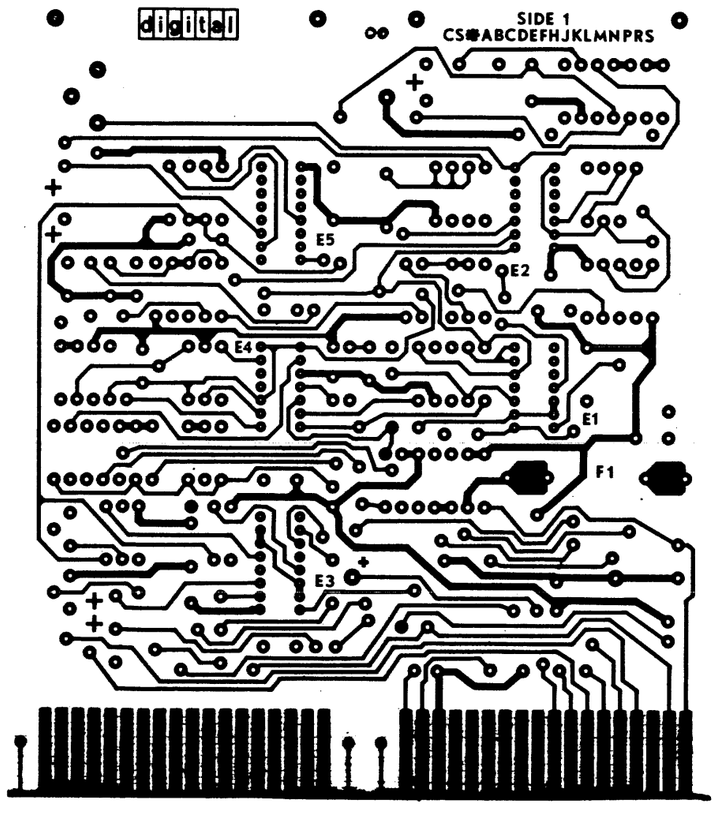
SCALE 2X
SHT. 1 OF 3

SIZE	CODE	NUMBER	REV
D	UA	G8019-0-0	F

NEXT HIGHER ASSY. B-DD-G8019-0

MS#

G8019 5012948B-P1

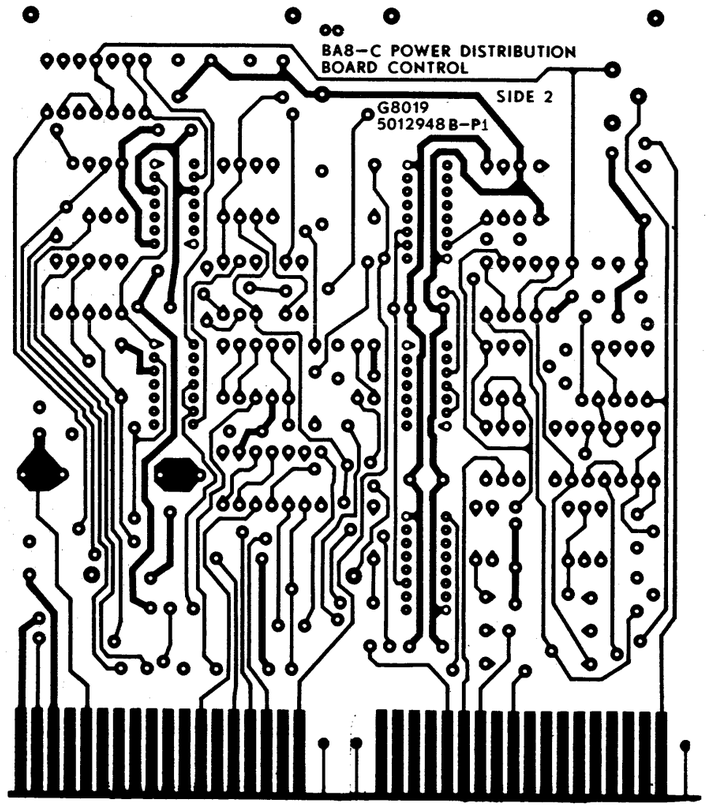


REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	BA8-C POWER DISTIBUTION BOARD CONTROL	SIZE	CODE	NUMBER	REV.
SCALE 2 to 1	SHEET 2 OF 3	D	UA	G8019-0-0	F
		DIST.			

DEC FORM NO
DRD 138

D UA G8019-0-0 F



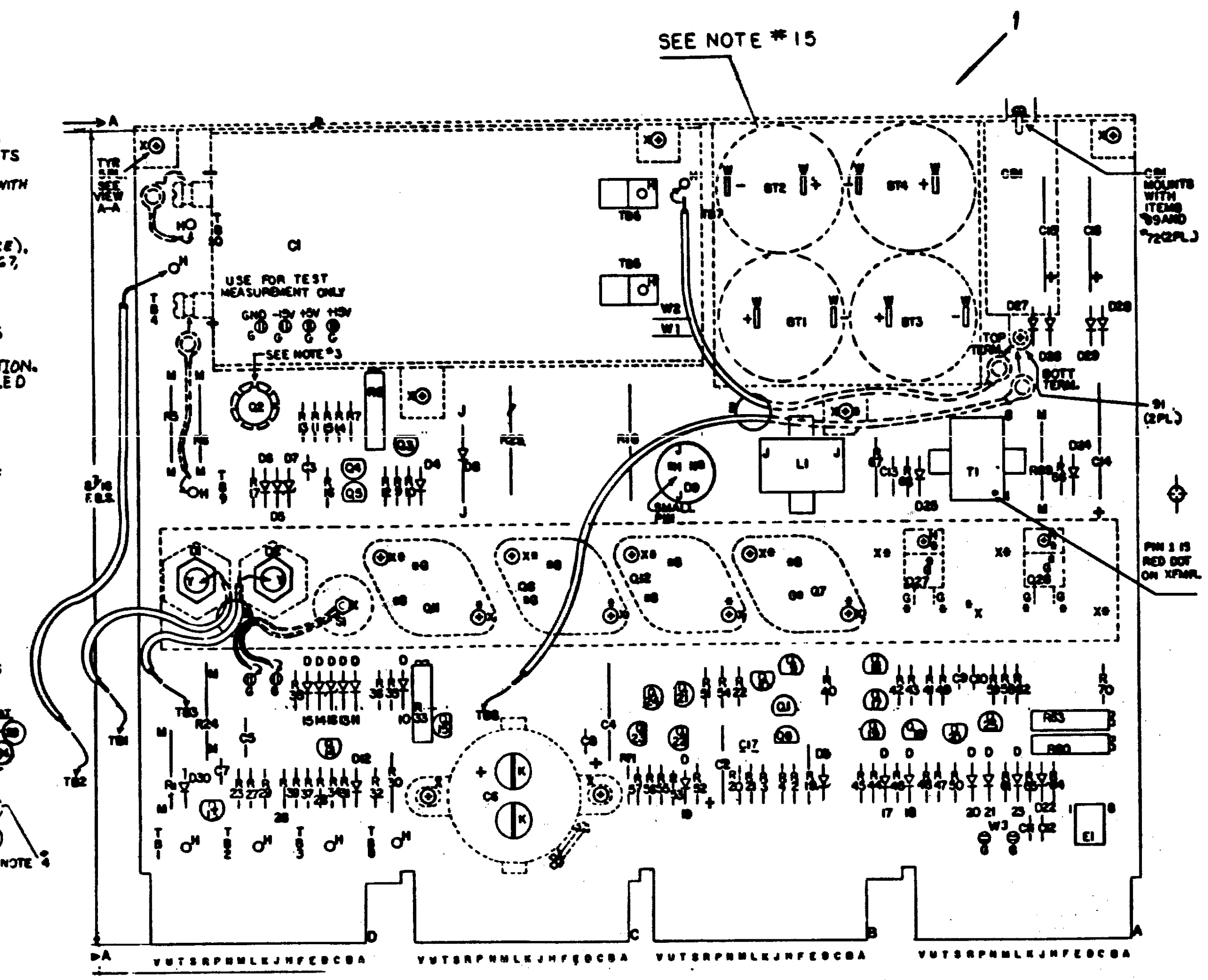
REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
BA8-C POWER DISTRIBUTION BOARD CONTROL	D	UA	G8019-C-C	F
SCALE 2=1 SHEET 3 OF 3	DIST.			

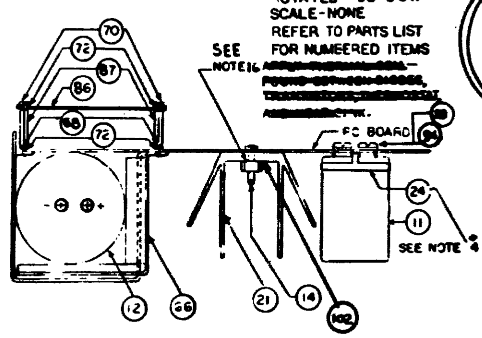
DUAG8019-0-0 F

NOTES:

1. TRANSISTOR DEC 2N5302, 1510196 MAY BE USED AS A SECOND SOURCE FOR ITEM # 62 TRANSISTOR DEC D44H8 1511654.
2. ALL COMPONENTS SHOWN BY A BROKEN LINE MOUNT ON SIDE 2.
3. TRANSISTOR PAD MOUNTS UNDER Q2, AND HEAT SINK MOUNTS ON Q2. REFER TO PARTS LIST, ITEM #25 AND #77.
4. ITEM #24 BRKT. IS MOUNTED ON BOARD WITH ITEM #68, 73, AND #81 (2 PL).
5. Q6, Q7, Q11 AND Q12 ARE MOUNTED WITH ITEM #73, 78, 81, 92 AND 101.
6. S1 MOUNTS WITH ITEM 73, 81 AND 92 (1 PLACE).
7. Q26 AND Q27 ARE MOUNTED WITH ITEM #67, #71, 74, 92 AND 103.
9. PHYSICAL IS MADE IN REVERSE, SIDE 1 IS LIGHT, SIDE 2 IS DARK.
10. INSERT JUMPER W3 FOR 50Hz. OPERATION.
11. JUMPERS W1, W2 SHOULD BE INSTALLED AFTER TEST.
15. FOR HANDLING AND SOLDERING REQUIREMENTS OF 1211670 LEAD ACID BATTERIES (ITEM #23) SEE A-SP-7665252-0-0



VIEW A-A
ROTATED 90° CCW
SCALE-NONE
REFER TO PARTS LIST FOR NUMBERED ITEMS



16. APPLY THERMAL COMPOUND TO SIDES OF ALL THERMAL INSULATORS AND TO BOTTOM OF THERMOSTAT.

17. BELOW IS LISTED TORQUE VALUES TO BE USED IN ASSEMBLY:

SIZE OF SCREW			INCH/LB
10-32	SCREWS	SECURING PC BOARD TO C6	14
10-32	SCREWS	SECURING THE CRIMPS TO C1	14
6-32	SCREWS	HOLDING PC BOARD TO THE CHASSIS	14
6-32	SCREWS	ON THE TRANSISTORS Q6, Q7, Q11, Q12	14
4-40	SCREWS	ON THE TRANSISTORS Q26, Q27	10
	NUTS	HOLDING THE DIODES, D1 & D2	20
	NUT	HOLDING THERMOSTAT, S1	10
6-32	SCREWS	HOLDING THE CIRCUIT BREAKER TO CHASSIS	14
6-32	SCREWS	HOLDING BATTERY SHIELD TO CHASSIS	14
	SCREWS	HOLDING CRIMPS TO CIRCUIT BREAKER	14

NOTE:
TO ACHIEVE TRUE TORQUE READINGS, ALWAYS USE A NUT DRIVER ON ONE SIDE AND A TORQUE DRIVER ON THE OTHER WHERE A SCREW AND A KEP NUT ASSEMBLY IS INVOLVED.
Q.C. TOLERANCE: INSPECT TO MINUS (-) 2 IN/LB OF ASSEMBLED TORQUE VALUES.

*CAUTION:
OFF SHEET P/L DATA BASE PER G8016-MK006

IC TYPE	GND	+5V
72741	4	7

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION	K-CO-G8016-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AN-G8016-0-5	2
REF		MODULE ECO HISTORY	B-MH-G8016-0-6	3
1		ETCHED CIRCUIT BOARD	D-IA-5010984-0-0	4
2	C5,C13	CAP .1 UF 100V 20% DISC	1000030	5
1	C4	CAP 100 UF 6V 20% STANT	1000066	6
5	C3,C9,C10,C11,C12	CAP .01 UF 100V 20% DISC	1001610-01	7
3	C14,C15,C16	CAP 100 UF 25V -10% + 75% ELECT	1002781	8
1	C2	CAP 22 UF 6V 10% STANT	1005530	9
2	C7,C8	CAP .22 UF 50V -20% + 80% CER	1010274-00	10
1	C6	CAP 6000 UF 10V -10% + 75% ELECT	1010704	11
1	C1	CAP .1F 10V	1011570	12
7	D5,D8,D11,D12,D13,D14,D15	DIODE D662	1100113	13
2	D1,D2	DIODE 1N1183	1111600	14
10	D16,D17,D18,D19,D20,D21, D23,D24,D25,D30	DIODE D672	1105275	15
5	D4,D26,D27,D28,D29	DIODE 1N4004	1105706	16
1	D6	DIODE MR752	1110615	17
2	D7,D22	DIODE 1N751A ZENER	1110094	18
2	D3,D10	DIODE SCREENED 5.7V 2% ZENER	1111205	19
1	S1	THERMOSTAT	1211682	20
1		HEAT SINK	1211814	21
1	CB1	CIRCUIT BREAKER 25A	1211873	22
4	BT1,BT2,BT3,BT4	BATTERIES D-CELL	1211670	23
1		BRACKET	1210420	24
1		HEAT SINK T-66 TRANSISTOR MOUNTED	1211543	25
3	R5,R6,R60	RES. 10 1W 5%	1300171	26
2	R29,R42	RES. 47 1/4W 5%	1300202	27
1	R1	RES. 100 1W 5%	1300232	28
7	R71,R4,R22,R26,R39,R50,R57,	RES. 100 1/4W 5%	1300229	29
2	R12,R47	RES. 120 1/4W 5%	1300247	30
2	R27,R43	RES. 150 1/4W 5%	1300250	31
4	R10,R17,R28,R54	RES. 220 1/4W 5%	1300271	32
5	R3,R15,R37,R64, R36	RES. 330 1/4W 5%	1300295	33
13	R11,R13,R20,R21,R38,.. R40,R41,R46,R52,R55,R66, R68,R70	RES. 1K 1/4W 5%	1300365	34
2	R14,R56	RES. 1.5K 1/4W 5%	1300391	35
6	R23,R44,R45,R48,R51,R65	RES. 3.3K 1/4W 5%	1300430	36
1	R30	RES. 10 1/4W 5%	1301317	37
1	R49	RES. 100 1/4W 5%	1301322	38
1	R2	RES. 82 1/4W 5%	1301477	39
1	R19	RES. 56 5W 5%	1301502	40
2	R18,R62	RES. 511 1/4W 1% MF	1302411	41
1	R24	RES. 56 2W 5%	1302036	42
1	R34	RES. 100 1/8W 1% MF	1302050	43
1	R7	RES. 1.21K 1/4W 1% MF	1302071	44
1	R31	RES. 196 1/4W 1% MF	1302056	45
1	R59	RES. 464 1/4W 1% MF	1303047	46
2	R16,R25	RES. 1 5W 10% WW	1303305	47
1	R32	RES. 1.96K 1/4W 1% MF	1304033	48
2	R9, R61	RES. 383 1/4W 1% MF	1305125	49
1	R53	RES. 27K 1/4W 5%	1305346	50
3	R8,R33,R60	RES. 100 3/4W 10% POT 76 PR	1309143-04	51
1	R63	RES. 5K 3/4W 10% POT 76 PR	1309143-08	52

PARTS LIST

FIRST USED ON OPTION MODEL: PDP8A

ETCH BOARD REV: E

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

SEMICONDUCTOR CONVERSION CHART

REV	CHANGE NO.	ORIG.	DATE
H	G8016-H0008		
F	G8016-00004	L. MIZINA	
E	G8016-00003	A. DELUCA	11-11-74
D			10-7-74
C	ORIG INATED		

DRN. E. Wilson DATE 8/7/74
CHK'D DATE
NEXT HIGHER ASSY B-DD-PDP8A-0
SCALE
SHEET 1 OF 3

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE
H763
REGULATOR BOARD

SIZE D | CODE CS | NUMBER G8016-0-1 | REV. H

WIRE TABLE

PART NO.	FROM	TO	TERMINATION	WIRE LENGTH
91-07380-22	TB1	D1	SOLDER AT D1 END. SOLDER AT TB1 END	5.00
91-07380-22	TB3	D2	SOLDER AT D2 END. TAB AT TB3 END	5.00
91-07380-00	TB2	TB4	SOLDER AT TB2 END SOLDER AT TB4 END	7.00
91-07380-00	+ TERMINAL OF C1	TB9 HOLE	SOLDER WIRE AT HOLE END TB9. SOLDERLESS CONNECTOR AT C1 END 90-07926	2.50
91-07380-00	- TERMINAL OF C1	TB10 HOLE	SOLDER WIRE AT HOLE END TB1Ø SOLDERLESS CONNECTOR AT C1 END 90-07926	1.25
91-07380-00	TB7	TOP TERMINAL OF CB1	SOLDER AT TB7 END. SOLDERLESS CONNECTOR AT CB1 END 90-07926	7.00
91-07380-00	TB8	BOTTOM TERMINAL OF CB1	SOLDER AT TB8 END. SOLDERLESS CONNECTOR AT CB1 END 90-07926	11.25
91-07350-22	S1	SPLIT LUG	SOLDER AT SPLIT LUG END	4.00
	S1	SPLIT LUG	SOLDER AT S1 END	4.00

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM
1	R36	RES. 100 1/2W NTC	1311760	53
1	R67	RES. 2.7 1/2W 10%	1300444	54
2	Q7,Q12	TRANS. DEC 2N3715	1503060	55
1	Q2	TRANS. 2N3762	1500840-Ø1	56
18	Q1,Q3,Q4,Q5,Q9,Q10,Q13 Q15,Q17,Q19,Q20,Q21,Q22, Q23,Q24,Q25	TRANS. DEC A05	1510705	57
1	R5Ø	RES. 5.6K, 1/4W, 5%	1301874	58
4	Q6,Q14,Q16,Q18	TRANS. DEC A55	1510709	59
1	D9	DIODE SCR C32AX135	1510928	60
2	Q8,Q11	TRANS. 2N5683	1511047	61
2	Q26,Q27	TRANS. D44H8	1510707-01	62
1	T1	TRANSFORMER	1611758	63
1	L1	CHOKE	1611759	64
1	E1	I.C. DEC 72741	1910290	65
1		BRACKET REG. B.D.	7411478	66
2		SCREW 4-40 x .50 PH	9006013-1	67
4		SCREW 6-32 x .25 PH	9006020-1	68
2		SCREW 6-32 x .31 PH	9006021-1	69
3		SCREW 6-32 x .75 PH	9006026-1	70
2		KEPNUT 4-40	9006557	71
7		WASHER #6 INTERNAL	9006633	72
9		WASHER #6 FLAT	9006656	73
2		WASHER #4 FLAT	9008172	74
8		SPLIT LUGS	9006735	75
2	TB5,TB6.	TAB FAST-ON (OFF SET)	9007112	76
1		TRANS1 PAD #10134	9007200	77
8		SCREW 6-32 X .56PH	9007793-1	78
REF		G6Ø16 REG. BOARD SPEC	G6Ø16-Ø-8	79
4		SOLDERLESS CONNECTOR	9007920-01	80
11		KEPNUT 6-32	9006105	81
A/R		WIRE #12 AWG	9107380-00	82
A/R		WIRE #12 AWG	9107380-22	83
A/R	W3	BUS WIRE #22 AWG (SEE NOTE #10)	9107580-01	84
A/R	W1,W2	REEL JUMPER (SEE NOTE #11)	9107560	85
1		SHIELD BATTERY	7411693-0-0	86
3		SPACER #6 .38 LG.	9006801	87
2	TB5 TB6	EYELET	9009000	88
8	TB1,TB2,TB3,TB4, TB7,TB8,TB9,TB1Ø	EYELET GS4-3	9007836	89
A/R		WIRE #22 AWG	9107350-22	90
2		WASHER #8 INTERNAL	9006634	91
A/R		THERMO COMPOUND	9008268	92
2		SCREW 10-32 X .31	9006070-01	93
2		WASHER #10 INTERNAL	9006635	94
1	C17	CAP .47UF 25V 20% CER.	1010279	95
				96
1		DECAL	A-DC-7413109-0-0	97
REF		FINAL INSP. PROC. FOR G8Ø16	A-SP-G8Ø16-0-9	98
REF		POWER SUPPLY TESTER	B-DD-G8Ø16-TA	99
1		PACKAGING INSTRUCTION	A-SP-3700175-0-0	100

REVISIONS		
CHK	CHANGE NO	REV

TITLE H763 REGULATOR BOARD

SIZE	CODE	NUMBER	REV.
D	CS	G8Ø16-Ø-1	H

SCALE — SHEET 2 OF 3 — DIST.

MK

BATT. CHARGER

BATT CHARGING BT2

(SEE NOTE 10)

AT2 LINE LEVEL

AC LOW CIRCUIT

AR2 AC LOW(L)

±15 VOLT INVERTER

AJ2 +15V .25A

AH2 -15V .75A

USE FOR TEST MEASUREMENT ONLY
GND -15V +5V +15V

+5V 20A

BATT. ADJUSTMENT

AC OFF L AU2

BATT. EMPTY CIRCUIT

POWER OKAY CIRCUIT

BV2 PWR OK H

AS2 BATTERY EMPTY L

CB1 25A

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE H763 REGULATOR BOARD		SIZE D	CODE CS	NUMBER 68016-C-1	REV. H
SCALE —/—	SHEET 3 OF 3	DIST.			

SIZE D | CODE CS | NUMBER G8018-0-1 | REV S

+5 VOLT REGULATOR

DP1, DP2, DR1, DR2, DS1, DS2, DT1, DT2, DU1, DU2, DV1, DV2 — TB11 — D1 IN1183 — BC2 — TP1

D18 ME752 — D2 IN1183 — D19 ME752

DM1, DA2, DB1, DB2, DC1, DC2, DD1, DD2, DE1, DE2, DF1, DF2 — TB10

TB7 — CB1 25A — TB6

C1 .22uf — E1 100 1W — TB13 — C2 .11 F — TB12

D3 C32AX135

Q1 2N5683 — R2 5W — R3 5G 3W — Q2 VE3055 — Q3 G5318 — R4 100

D4 D672 — G5348 Q4 — R7 47 — C3 .1uf

R6 150 — R5 220

D5 DGG2 — D6 DGG2 — NTC — R8 100 1/8W — R9 196 — R10 1.1K — +5V ADJ — R11 100 3/4W 10% — R12 100 1/4W 1% — Q5 G5318

E14 1K — E13 330 — E15 330 — C4 .04uf

D7 DGG2 — D8 DGG2 — D9 DGG2 — D10 5.7V — R16 10 — R17 100

C5 6000uf — C6 .22uf

AP2, AE2 — S1 — TO AV1, AT2 — +5V 25A

CA1, CA2, CB1, CB2, CC1, CC2, CD1, CD2, CE1, CE2, CF1, CF2, CH1, CH2, CJ1, CJ2

AM2, AB2, AC2

CE1, CE2, CL1, CL2, CM1, CM2, CN1, CN2, CP1, CP2, CR1, CR2, CS1, CS2, CT1, CT2, CU1, CU2, CV1, CV2

+5V GND

DH1, DH2, DJ1, DJ2, DK1, DK2, DL1, DL2, DM1, DM2, DN1, DN2

-5 VOLT REGULATOR

TP2 — BH2 — TB9 — C13 18,000 uf — TB8

Q8 MJE2955 — Q20 G5348 — F2 2.5A — BB1, BC1 -5V 2A

R31 2.2K — R30 1K — C14 .01 uf — C15 .01uf

E5 78741 — R32 4G4 — R34 1.21K — R33 1.21 K — R35 4G4

POWER OK INDICATOR

BS2 — TP4

R37 15K — R38 15K — R39 15K — R40 1K — R42 680 — R45 1.5K — R44 1K — E46 200 2W

R36 3.3K — C23 680 Pf — Q9 G5318 — Q10 G5318 — Q11 G5318 — C22 .39uf — Q12 G5348 — R41 3.3K — D24 672 — D23 DG72 — C8 680Pf — Q14 G5318 — Q13 G5318 — Q16 G5318 — R47 680 — D26 IN4734 — D25 LED MV5054 — BW2 POWER OK H

E43 330

AJ2, AC2 +15V 2A

BK2 — TP5

AF2, AH2 — -15V 2A

BH1, BA2, BN1, BN2, BP1 — +20V 4A

+20 VOLT REGULATOR

AT1, AU1 — D11 — BB2 — TP3 — BA1, BA2 — NS3514

F1 4A — TB5 — C7 19,000 uf — TB4 — E18 470 2W — D12 C32AX135

Q6 2N3791 — E19 220 — D30 D672 — D31 D672 — R20 1/4 5W — DEC G5348 — Q21

E21 1.21K — E22 200 3/4W 10% — +20V ADJ — E28 619

E24 390 — D13 IN746B — Q7 G5818 — E25 47

D14 IN758A — D15 IN759A — E26 5G — E27 1.5K 1/8 W — E62 1K — C9 .1uf — C10 4500 uf

OVERVOLT, CROWBAR

R64 270 — R65 270 — R66 33 — D34 IN9708

BD1, BF1, BE2, BT1, BF2, BH1, BJ2, AJ1 — +20V GND

REVISIONS					
CHK	CHANGE NO.	REV.			
—	REVISED & REDRAWN ML010	N			

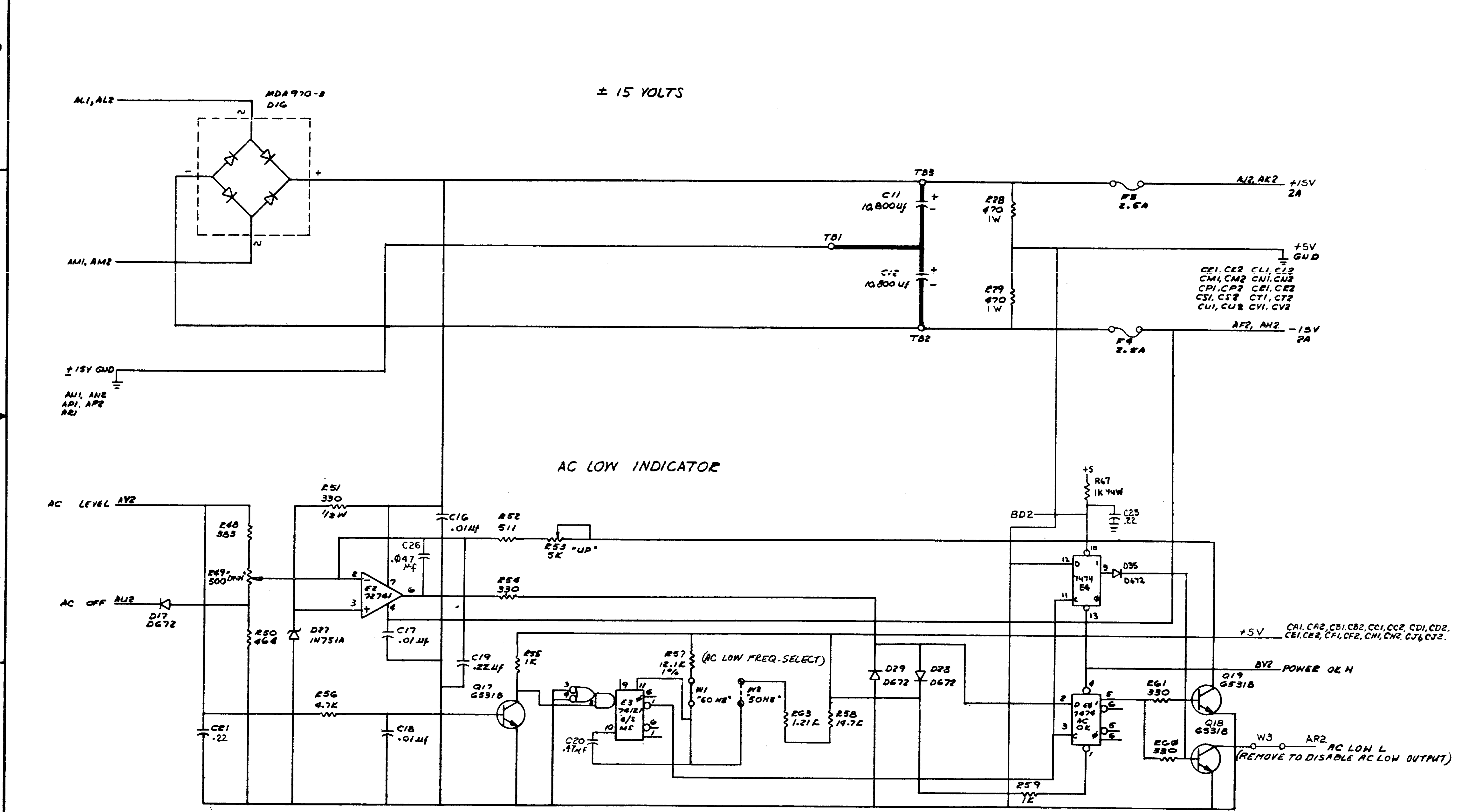
DRN	G8018-ML011	P	G8018-ML013	R	G8018-MK014	S
CHK	D. FRENIERE		W. KERCHNER		D. FRENIERE
ENG	W. Kerchner 13 NOV 80				D. Freniere 13-JUL-81

DRN. Douglas	21AUG79
CHK Linda Peterson	10-1-79
ENG W. Kerchner	8 MAY 79
PROJ. ENG W. Kerchner	8 MAY 79
PROD W. Kerchner	8 MAY 79
NEXT HIGHER ASSY.	
SCALE	
SHEET 1 OF 2	

FIRST USED ON — digital

TITLE: REGULATOR BOARD 8A CORE

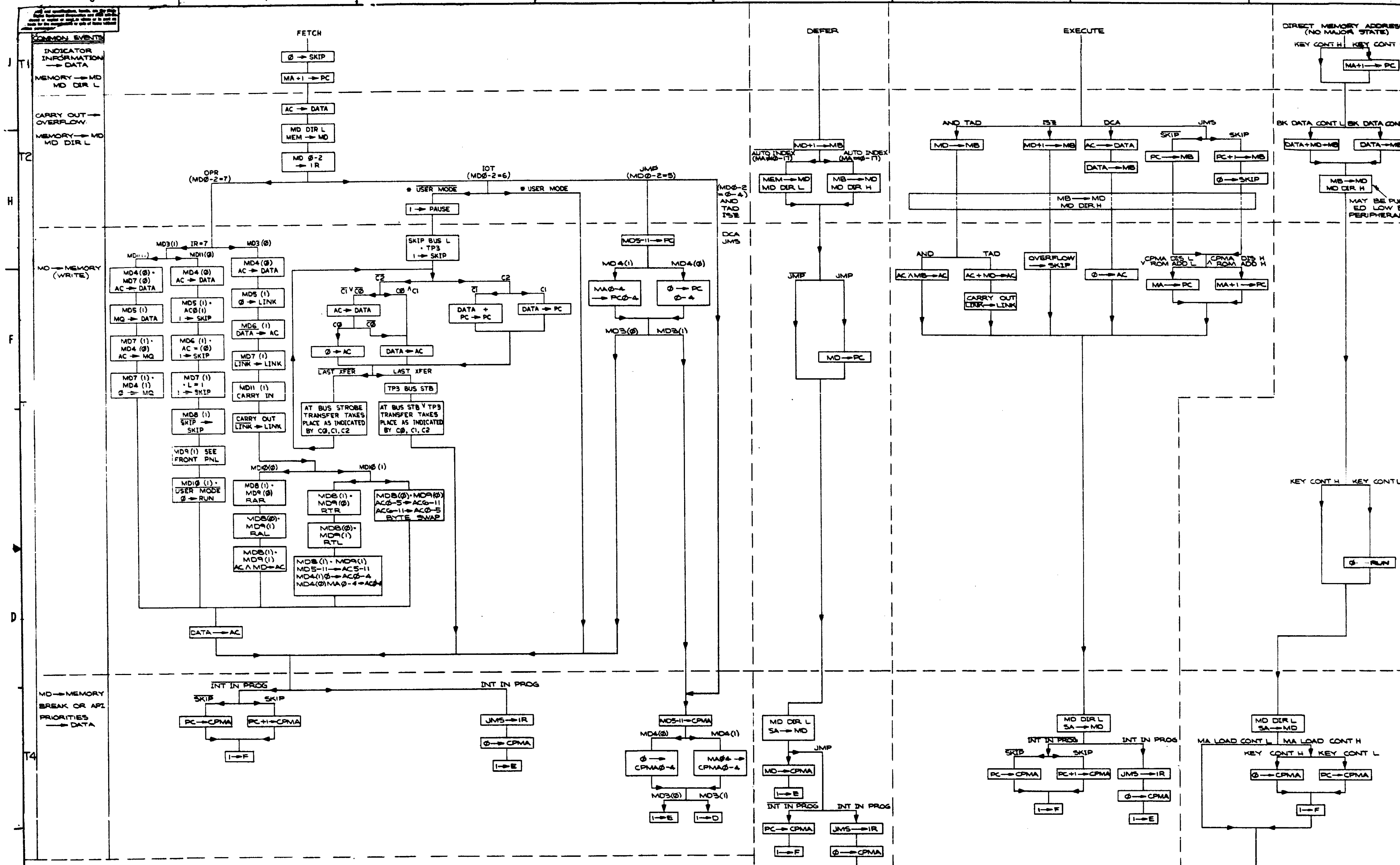
SIZE D | CODE CS | NUMBER G8018-0-1 | REV S | DIST.


± 15 VOLTS
AL1, AL2
MDA 970-3 DIG
AM1, AM2
TB3
TB1
TB2
C11 10,800 uf
C12 10,800 uf
R28 470 1W
R29 470 1W
F3 2.5A
F4 2.5A
AJ2, AK2 +15V 2A
+5V GND
AF2, AH2 -15V 2A
±15V GND
AC LOW INDICATOR
AC LEVEL AV2
AC OFF BU2
D17 D672
R48 383
R49 500 DKN
R50 464
D27 1N751A
R51 330 1/8W
C16 .01uf
C26 .047 uf
E2 72741
C17 .01uf
R52 511
R53 5K "UP"
R54 330
C19 .22uf
R55 1K
Q17 G5318
R56 4.7K
C18 .01uf
CE1 .22
E3 74121 4/5 MS
C20 .47uf
R57 12.1K 1%
(AC LOW FREQ. SELECT)
W1 "60 HZ"
W2 "50HZ"
R63 1.21K
R58 19.7K
D29 D672
D28 D672
+5
R67 1K 1/4W
C25 .22
BD2
7474 E4
D35 D672
+5V
BV2 POWER OK H
7474 AC OK
R61 330
R62 330
Q19 G5318
Q18 G5318
R59 1K
W3
AR2
AC LOW L
(REMOVE TO DISABLE AC LOW OUTPUT)

REVISIONS

CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
REGULATOR BOARD 8A CORE	D	CS	G8018-Ø-1	S
SCALE	SHEET 2 OF 2	DIST.		



NOTES:
* USER MODE IS USED BY THE TIME SHARING OPTION ONLY; TO INHIBIT HALT, OSR, LAS, & PAUSE

FIRST USED ON OPTION/MODEL PDP8/E

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE PROCESSOR FLOW CHART

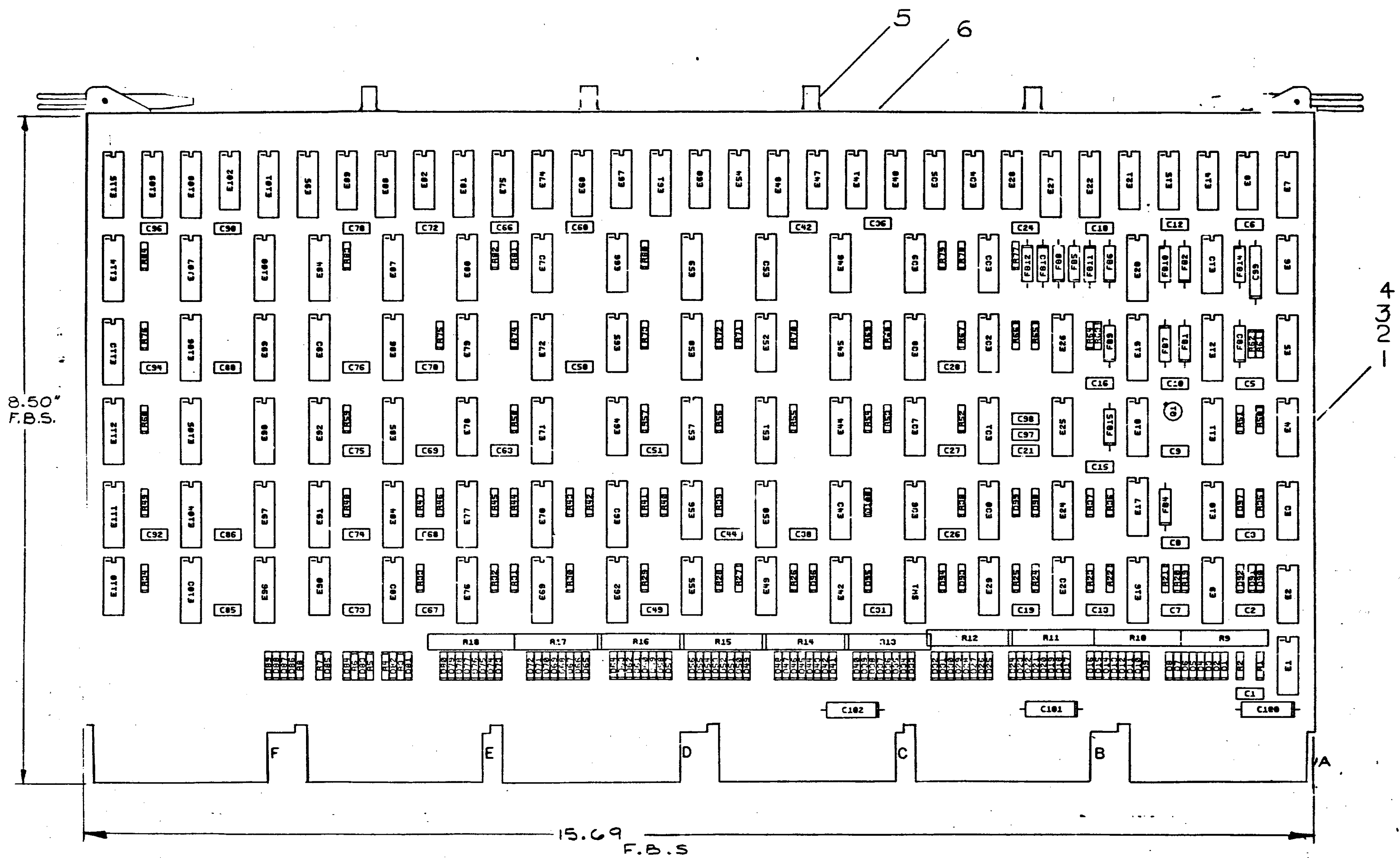
NEXT HIGHER ASSY A-ML-PDP8/E-∅

SIZE E | CODE FD | NUMBER PDP8/E-∅-∅6 | REV A

SHEET 1 OF 1

NOTES:

1. ALL UNLABELED DIODES ARE DEC TYPE D664
2. +3V, +3VA AND +3VB GENERATION ON SHEET # 8
3. ~~FOR ETCH CUTS REFER TO D-AH-M8315-Ø-5~~
4. ~~9 ETCH CUTS~~



GND. CONNECTION—PINS C,F,N,T ON CONNECTORS (A1, A2 / B1, B2 / C1, C2 / D1, D2) (AA1, AA2, BA2, CA1, CA2) +5V — 6.8 µf, .01 µf — GND — FOR ALL 6.8 µf & .01 µf CAPS

IC TYPE	GND	+5V
IC 74157	8	16
74S158	8	16
74163	8	16
74S175	8	16
74S194	8	16
380	1	8
8097	8	16
8235	8	16
8234	8	16
8271	8	16
74173-1	8	16
256 BIT ROM	8	16

IC TYPE	GND	+5V
1024 BIT ROM	8	16
7442	8	16
7483	12	5
74120	8	16
74123	8	16
74S137	8	16
74151	8	16
74153	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

PARTS LIST

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8315-Ø-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8315-Ø-5	2
REF		MODULE ECO HISTORY	B-MH-8315-Ø-6	3
1		ETCHED CIRCUIT BOARD	5010932	4
1		HEX BOARD HANDLE ASSY	1210711-2	5
12		EYELETS	9006732	6
3	C100 THRU C102	CAP 6.8uf 35V 10%	1005306	7
2	C97, C98	CAP .047uf 16V DISC	1005678	8
1	C99	CAP 15uf 20V 10%	1004812	9
48	C1 THRU C3, C5 THRU C10, C12, C13, C15, C16, C18, C19, C21, C24, C26, C27, C28, C31, C36, C38, C42, C44, C49, C51, C58, C60, C63, C66 THRU C70, C72 THRU C76, C79, C85, C86, C88, C90, C92, C94, C96	CAP .01uf 100V DISC	1001610-01	10
8	D86 THRU D92, D97	DIODE D662	1100113	11
92	D1 THRU D85, D93 THRU D96, D98 THRU D100	DIODE D664	1100114	12
1	SW1	DIP SWITCH PACKAGE	1211164-Ø4	13
11	R2, R5, R6, R8, R19, R36, R62 THRU R68	RES 390 1/4W 5%	1300309	14
12	R1, R3, R4, R7, R20, R21, R23 THRU R26, R35, R37	RES 470 1/4W 5%	1300316	15
45	R22, R27, R29 THRU R34, R39 THRU R49, R52, R53, R55 TRHU RC0, R67 THRU R84	RES 1K 1/4W 5%	1300365	16
1	R28	RES 3.3K 1/4W 5%	1300439	17
1	R61	RES 22K 1/4W 5%	1301808	18
2	R50, R51	RES 27 1/4W 5%	1301522	19
5	R9, R10, R13, R14, R18	RES PACK 390 OHM	1312114-00	20
5	R11, R12, R15, R16, R17	RES PACK 470 OHM	1312114-01	21
2	R38, R54	RES 150 1/4W 5%	1300250	22
1	Q1	TRANSISTOR DEC 3009B	1503100	23
15	FB1 THRU FB15	FERRITE BEAD CHOKE	1611257-Ø1	24
1	E2	20 MHZ X'TAL OSC	1811660-00	25
6	E1, E10, E17, E26, E29, E46	IC DEC 74S00	1910532	26
1	E33	IC DEC 7402	1909004	27
8	E3, E23, E25, E40, E56, E78, E82, E89	IC DEC 74S04	1910534	28
3	E47, E65, E74	IC DEC 7408	1910155	29
3	E24, E64, E90	IC DEC 74S10	1910536	30
2	E13, E28	IC DEC 74S11	1910537	31
1	E60	IC DEC 7412	1909955	32
3	E44, E49, E52	IC DEC 7417	1909929	33
2	E110, E102	IC DEC 74H21	1909058	34
1	E54	IC DEC 7430	1905578	35
3	E41, E43, E66	IC DEC 7432	1911521	36
1	E14	IC DEC 7437	1910091	37
2	E18, E32	IC DEC 74S40	1910541	38
1	E71	IC DEC 7442	1910046	39
2	E4, E6	IC DEC 74S51	1911712	40
4	E8, E15, E21, E34	IC DEC 74S74	1910544	41
3	E85, E101, E113	IC DEC 7483	1909932	42
3	E19, E22, E27	IC DEC 74120	1911314	43
1	E7	IC DEC 74123	1910436	44
2	E20, E58	IC DEC 74S139	1911676	45
2	E48, E59	IC DEC 74151	1909936	46
1	E45	IC DEC 74153	1909937	47

FIRST USED ON OPTION MODEL: PDP8 A

ETCH BOARD REV. E

REV.	CHANGE NO.		
C	M8315-00001	L. KLOTZ 11-13-74	
D	M8315-00003	L. KLOTZ 12-3-74	3-20-75
E	M8315-00004	L.KLOTZ 7-18-75	1/5/75
F	M8315-00005	W. KERCHNER 8-JUN-77	24 JUN 77

REVISIONS

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

SEMICONDUCTOR CONVERSION CHART

DRN. M.D. Laurence DATE 10/1/74
CHKD. DATE 11/1/74
ENG. DATE
PROJ. ENG. DATE
PROD. DATE 11/12/74

NEXT HIGHER ASSY A-PL-KK8-A-Ø

SCALE —
SHEET 1 OF 10

digital

TITLE HEX OMNIBUS CPU

SIZE D CODE CS NUMBER M8315-Ø-1 REV. F

DIST.

1	E51	IC DEC 74157	1910056	48
7	E80,E79,E80,E95,E107,E109, E115	IC DEC 74S150	1910540	49
3	E75,E93,E94	IC DEC 74163	1911713	50
2	E5,E42	IC DEC 74S175	1910067	51
8	E9,E11,E12,E18,E61,E90,E100 E114	IC DEC 74S194	1910552	52
1	E38	IC DEC 380	1909485	53
2	E67,E73	IC DEC 8093	1910837	54
4	E77,E84,E104,E105	IC DEC 8097	1911527	55
3	E80,E86,E98	IC DEC 8234	1911315	56
3	E81,E87,E92	IC DEC 8235	1909935	57
1	E31	IC DEC 8271	1909815	58
5	E30,E35,E37,E39,E55	IC DEC 8881	1909705	59
11	E50,E62,E83,E91,E96,E97, E103,E106,E108,E111,E112	IC DEC 74173-1	1911330-01	60
1	E69	256 BIT ROM (A)	23078A1	61
1	E57	256 BIT ROM (B)	23077A1	62
1	E70	256 BIT ROM (C)	23076A1	63
1	E72	256 BIT ROM (D)	23075A1	64
1	E76	256 BIT ROM (E)	23074A1	65
1	E63	256 BIT ROM (H)	23073A1	66
1	E36	256 BIT ROM (J)	23079A1	67
1	E53	1024 BIT ROM (F)	23080A2	68
~~-~~	~~WIRE~~	~~30AWG GREEN~~	~~9103740-30~~	~~69~~

SWITCH SELECTION CHART
(FOR AUTO RESTART LOCATION)

SW1–	1	FIELD 7
	2	4000
	3	2000
	4	1000
	5	400
	6	200
	7	OFF (DISABLES AUTO RESTART)
	8	OFF FOR NORMAL OPERATION

Switches 2–6: ONLY ONE SWITCH MAY BE CLOSED AT A TIME

COMPONENT SUBSTITUTION CHART

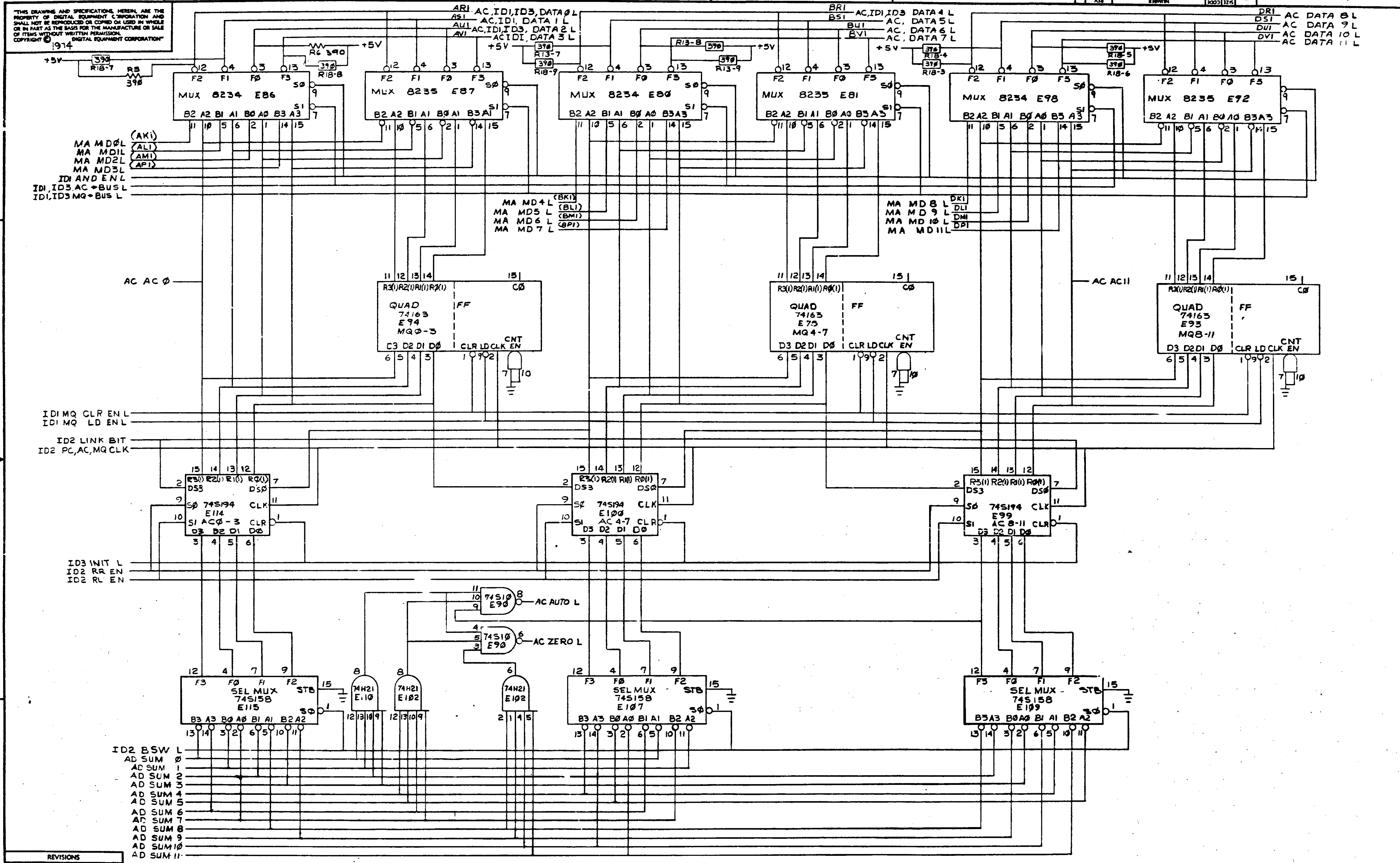
PART CALLED FOR			SUBSTITUTE PART		
QTY	PART NO	DESC	QTY	PART NO	DESC.
1	1909485	IC 380	1	1910392	5380
			1	1909971	6380
			1	1910390	7380
			1	1911464	8640

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
HEX OMNIBUS CPU	D	CS	M8315-Ø-1	F

SCALE –/– SHEET 2 OF 10 DIST.

D CS M8315-Ø-1 F



TITLE	SIZE	CODE	NUMBER	REV.
PDP8A CPU (AC)	D	CS	M8315-Ø-1	F

SHEET 3 OF 10

AD SUM 0 AD SUM 1 AD SUM 2 AD SUM 3 — AD C OUT L — ADDER 7483 E113 (C1, Σ4 Σ3 Σ2 Σ1, B4 A4 A3 B3 A2 B2 A1 B1, CO) — SEL MUX 74S158 E95 (F0 F1 F2 F3, B0 A0 B1 A1 B2 A2 B3 A3, STB, S0) — IDI DATA CMP L — IDI DATA ENA L — 74S04 E89 ×4 — AC IDI DATA 0 L (AR1) — AC IDI DATA 1 L (AS1) — AC IDI DATA 2 L (AU1) — AC IDI DATA 3 L (AV1) — D83 D78 D84 D79 +3V B — R3(), R2(), R1(), R0() QUAD 3ST FF 74173-1 E112 PC 0-3 (CLR, CLK, OUT CONT, D3 D2 D1 D0, DATA ENA) — MA AD ADD IN 0 — MA AD ADD IN 1 — MA AD ADD IN 2 — MA AD ADD IN 3 — IDI PC EN L — IDI PC LD EN L — IDI2 PC AC MQ CLK — HEX 3ST BUF 8097 E105 (DIS2, DIS4) — MA MD0L (AK1) — MA MD1L (AL1) — MA MD2L (AM1) — MA MD3L (AP1) — MA MD4L (BK1) — 8095 E73 — MA MD5L (EL1) — 7408 E74 — IDI MD EN L — IDI PAGE EN L

AD SUM 4 AD SUM 5 AD SUM 6 AD SUM 7 — ADDER 7483 E101 — SEL MUX 74S158 E88 — 74S04 E89 ×2, 74S04 E82 ×2 — AC IDI DATA 4 L (BR1) — AC DATA 5 L (BS1) — AC DATA 6 L (BU1) — AC DATA 7 L (BV1) — D80 D38 D39 D40 +3V A +3V B — R3(), R2(), R1(), R0() QUAD 3ST FF 74173-1 E106 PC 4-7 — MA AD ADD IN 4 — MA AD ADD IN 5 — MA AD ADD IN 6 — MA AD ADD IN 7

AD SUM 8 AD SUM 9 AD SUM 10 AD SUM 11 — ADDER 7483 E85 — IDI C IN L — SEL MUX 74S158 E79 — 74S04 E82 ×4 — AC DATA 8 L (DR1) — AC DATA 9 L (DS1) — AC DATA 10 L (DU1) — AC DATA 11 L (DV1) — D74 D75 D76 D77 +3V B — R3(), R2(), R1(), R0() QUAD 3ST FF 74173-1 E91 PC 8-11 — MA AD ADD IN 8 — MA AD ADD IN 9 — MA AD ADD IN 10 — MA AD ADD IN 11 — HEX 3ST BUF 8097 E77 — MA MD6L (BM1) — MA MD7L (BP1) — MA MD8L (DK1) — MA MD9L (DL1) — MA MD10L (DM1) — MA MD11L (DP1)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8A CPU (AD)	D	CS	M8315-0-1	F
SCALE —	SHEET 4 OF 10	DIST.		

+3VB D61 D60 D59 DI7 +3VA
+5V R16-6 R16-5 R16-4 R11-2 470Ω
ĀKI MA MD Ø L
ALI MA MD 1 L
AMI MA MD 2 L
API MA MD 3 L
R3(I) R2(I) R1(I) RØ(I)
QUAD 3ST FF
74173-1
E111
MBØ-3
CLR
CLK OUT CONT
DATA ENA D3 D2 DI DØ

D24 D23 D26 D29 +3VA
+5V R11-9 R11-8 R12-3 R12-6 470Ω
BKI MA MD 4 L
BLI MA MD 5 L
BMI MA MD 6 L
BPI MA MD 7 L
R3(I) R2(I) R1(I) RØ(I)
QUAD 3ST FF
74173-1
E97
MB4-7

D66 D69 D71 D82 +3VB
+5V R17-3 R17-6 R17-8 470Ω R4 470Ω
DKI MA MD 8 L
DLI MA MD 9 L
DMI MA MD 10 L
DPI MA MD 11 L
R3(I) R2(I) R1(I) RØ(I)
QUAD 3ST FF
74173-1
E108
MB8-11

TG2 MD DIR L (AK2) 74S04 E76
TG1 TP2 H (CE2)

MA AD ADD IN Ø
MA AD ADD IN 1
MA AD ADD IN 2
MA AD ADD IN 3
1K R84 +5V
1K R60
1K R76
1K R34
HEX 3ST BUF 8097 E104 DIS2 DIS4
7408 E74
MA MD 4 L (BKI) 7432 E91
IDI MA EN L
IDI PAGE EN L
DI D3 D5 D7 +3VA
R9-2 R9-4 R9-6 R9-8 330Ω +5V
ADI MA Ø L
AEI MA 1 L
AHI MA 2 L
AUI MA 3 L
R3(I) R2(I) R1(I) RØ(I)
QUAD 3ST FF
74173-1
E103
CPMAØ-3
IDI CPMA→BUS L
AD SUM 3
AD SUM 2
AD SUM 1
AD SUM Ø
IDI CPMA LOAD

MA AD ADD IN 4
MA AD ADD IN 5
+5V
1K R49
1K R82
8093 E73
R13-4 R13-3 R13-2 R10-9 330Ω +5V
D35 D34 D33 D16 +3VA
BDI MA 4 L
BEI MA 5 L
BHI MA 6 L
BJI MA 7 L
R3(I) R2(I) R1(I) RØ(I)
QUAD 3ST FF
74173-1
E96
CPMA4-7
AD SUM 7
AD SUM 6
AD SUM 5
AD SUM 4

MA AD ADD IN 6
MA AD ADD IN 7
MA AD ADD IN 8
MA AD ADD IN 9
MA AD ADD IN 10
MA AD ADD IN 11
R48 1K +5V
R59 1K
R46 1K
R47 1K
+5V R83 1K R45 1K
HEX 3ST BUF 8097 E84 DIS2 DIS4
D46 D47 D48 D73 +3VB
R14-7 R14-8 R14-9 R18-2 330Ω +5V
DDI MA 8 L
DEI MA 9 L
DHI MA 10 L
DUI MA 11 L
R3(I) R2(I) R1(I) RØ(I)
QUAD 3ST FF
74173-1
E83
CPMA8-11
AD SUM 11
AD SUM 10
AD SUM 9
AD SUM 8

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8A CPU (MA)	D	DCS	M8315-Ø-1	F
SCALE —	SHEET 5 OF 10	DIST.		

IDI DATA ENA L
DATA CMP
IDI PC LD EN L
CARRY EN L
SEL A L
SEL B L
SEL C L

IDI CPMA LOAD
IDI DATA CMP L
IDI DATA ENA L
IDI PC LD EN L
IDI MA EN L
IDI MD EN L
IDI PAGE EN L
IDI AND EN L
IDI ISZ SKP TST L
IDI AC LD EN L
IDI,IDI3 MQ → BUS L
IDI MQ LD EN L
IDI MQ CLR EN L
IDI,IDI3 AC → BUS L
IDI MS IR EN L
IDI CPMA → BUS L

REVISIONS		
UNK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8A CPU (IDI)	D	CS	M8315-Ø-1	F
SCALE	SHEET 6 OF 12	DIST.		

256 BIT ROM H 23Ø73A1 EG3

ID2 IRØ L (DD2)
ID2 IR1 L (DE2)
ID2 IR2 L (DM2)
MA MD3 L (AP1)
IDI FL (DW2)

R16-7 470
R16-8 470
R16-9 470

IDI MSØ
+3VB
D62
D63
D64

R30 1K
R42 1K
+5V
ID2 E SET L
ID2 D SET L

MUX 74S158 E68
IDI AC LD EN L
MA MDB L (DK1)
MA MD9 L (DL1)
ID2 RR EN
ID3 LINK DATA L (CR2)
ID2 RL EN

LNK RR EN
LNK RL EN

MUX 74151 E48
AC AC11
AC ACØ
AD C OUT L
ID3 INIT L

74S194 E61 LINK
+3V
R3(I)
R2(I)
R1(I)
RØ(I)

8881 E35
+5V
+3VA
R11-3
D18
AV2 LINK L

7408 E47
ID2 LINK BIT

TGI TS3L (CM2)
74S04 E40
8881 E35
OVERFLOW L
D21
R11-6

R45 1K
R39 1K
TGI TS3 L (CM3)
7432 E66
7408 E65
OPI L

RG7 1K
TGI TS4 L (CP2)
7432 E66

8093 E73
R81 1K
+5V

74S74 E34 OVF
(CE2)
TGI TP2 H
IDI ISZ SKP TST L
74S04 E40
8881 E35
R57 1K
+5V

ID2 INT IN PROG L
ID3 INT IN PROG H (BP3)
74SØ4 E40

MUX 74157 E51
MA MDI L (AL1)
MA MD2 L (AM1)
+3V

QUAD 3 ST DATA ENA FF 74173-1 E5Ø
AC ZERO L
IDI MS,IR EN L
F56 1K
+5V
DD2 ID2 IRØ L
DE2 ID2 IR1 L
DM2 ID2 IR2 L

1024 BIT ROM F 23Ø5ØA2 E53
FJ1 TP
TP ELI
R77 1K
+5V
MA MD5 L (BL1)
MA MD6 L (BM1)
MA MD7 L (BP1)

TGI TP4 H (CJE)
TGI TP2 H (CE2)
7432 E43
OP2 + OP3 L
74S04 E56
MA MD11 L (DP1)
7408 E46
OP2 L
TGI TP4 L
TGI TP1 L
7411 E28
IOT XFER L
MA MDØ L (AK1)
7432 E66
ID2 MDØ • MD2 L
TGI TP3H (CH2)
TG2 TP3 1/2 L

7402 E33
MD MD 10 L (DM1)
USER MODE L DM2
R17-7 470
D7Ø
+3VB
IDI ID2, ID3 STOP L
8881 E39 (OS2)

ID3 LINK LOAD L (CS2)
74S40 E32
ID2, PC, AC, MQ CLK
TGI BUS STROBE L
IDI DMA L

74S18 E64
ID2 BSW L

74S74 E34 SKIP
ID2 SKIP FF
R15-6 470
D53
SKIP L CS1
7417 E52
ID2, ID3 I SKIP L

REVISIONS		
CHK	CHANGE NO.	REV.

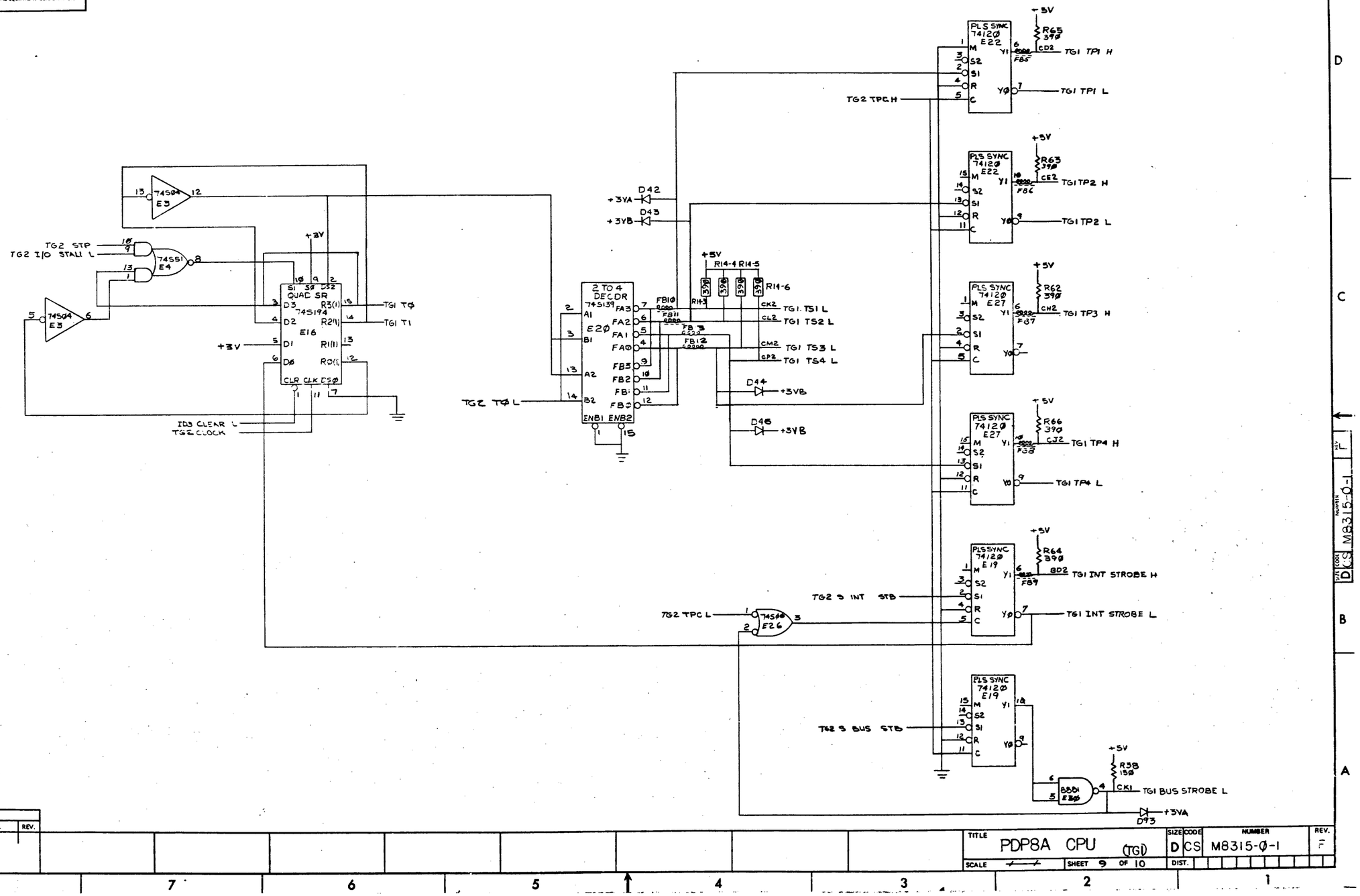
TITLE	SIZE	CODE	NUMBER	REV.
PDP8A CPU (ID2)	D	CS	M8315-Ø-1	
SCALE —	SHEET 7 OF 10		DIST.	

TG2 I/O PAUSE H
MA MD3L (API) MA MD4L (BKI) MA MD5L (BMI) MA MD6L (BPI) MA MD7L (DKI) MA MD8L (DLI)
7430 E54
7417 E52
D60 +3VB +5V R15-3 470 CL1 INTERNAL I/O L
TG2 ON L
+5V R78 1K
74S74 E15
TG1 TP3H (CH2)
(CK2) TG1 TS1 L
256 BIT ROM J 23Ø79A1 E38
MA MD9L (DLI) MA MD10L (DMI) MA MD11L (DPI)
ID3 GTF H
RTF H
1K R52 +5V
+5V R53 1K +3VB D54 R15-7 470 +5V
AC ACØ 8881 E39 CR2 LINK DATA L
8881 E37 CS2 LINK LOAD L
+3VA D10Ø R54 150 +5V
+5V R15-9 470 R16-3 470
IND 1 L CU2 IND 2 L CV2
2 TO 4 DECDR 74S139 E58
FBØ FB2 FB1 FB3 ENB2
D56 D56 +3VB
7417 E52 IDI, ID3 AC → BUS L
7417 E52 IDI, ID3 MQ → BUS L
+5V R69 1K
SRQ H
SKON H
+5V R79 1K R68 1K
8881 E39 ID2 ID3 I SKIP L
8881 E39
BP2 ID3 INT IN PROG H
+5V R70 1K INT OFF L
IDI FL (DU2) 74S04 E56
7408 E65 ID3 F H
INT ON H
MUX 74153 E45
SHF QUAD FF 8271 E31
INT SYNC INT DLY
7417 E44 D36 +3VA
7417 E44 R13-5 390 +5V
INT ENA
8881 E37 10(BE1) AC, IDI, ID3, DATA 4 L
4(AU1) AC, IDI, ID3, DATA 2 L
1(AR1) AC, IDI, ID3, DATA Ø L
ID2 LINK BIT
+5V +3VA EMAØ L AD2 EMA1 L AE2 EMA2 L AH2 RES BS2 BRK IN PROG L BE2 BREAK CYCLE L BL2 SW DV2 390 R9-3 R9-5 R9-7 R12-7 R11 R12-2 D2 D4 D6 D30 D29 D31 +5VB R3 470
+5V R19 390 +3V
POWER OK H BV2 D94 380 E36 7417 E49 +5V R28 3.3K R26 470 C97 .047 C98 .047 D96 D98
8881 E30 (DS2) IDI ID2 ID3 STOP L
ID3 CLEAR H
74S04 E23 7417 E44 7417 E44 R36 39Ø +5V ID5 CLEAR L
+5V R35 470 R50 27 R51 27 Q1 3009B
-15V R23 470 R37 470 T3H INT STROBE L
IDI DMA L
INITIALIZE H CRI D95 380 E36 ID3 INIT L
IDI I F SET L INT RQST L CP1 380 E36 D52 +3VB R15-5 470 +5V
+5V R2 390 D90 D91 D92 D97 D662 +3VA
+5V R8 390 D86 D87 D88 D89 D662 +3VB

REVISIONS		
CHK	CHANGE NO.	REV.

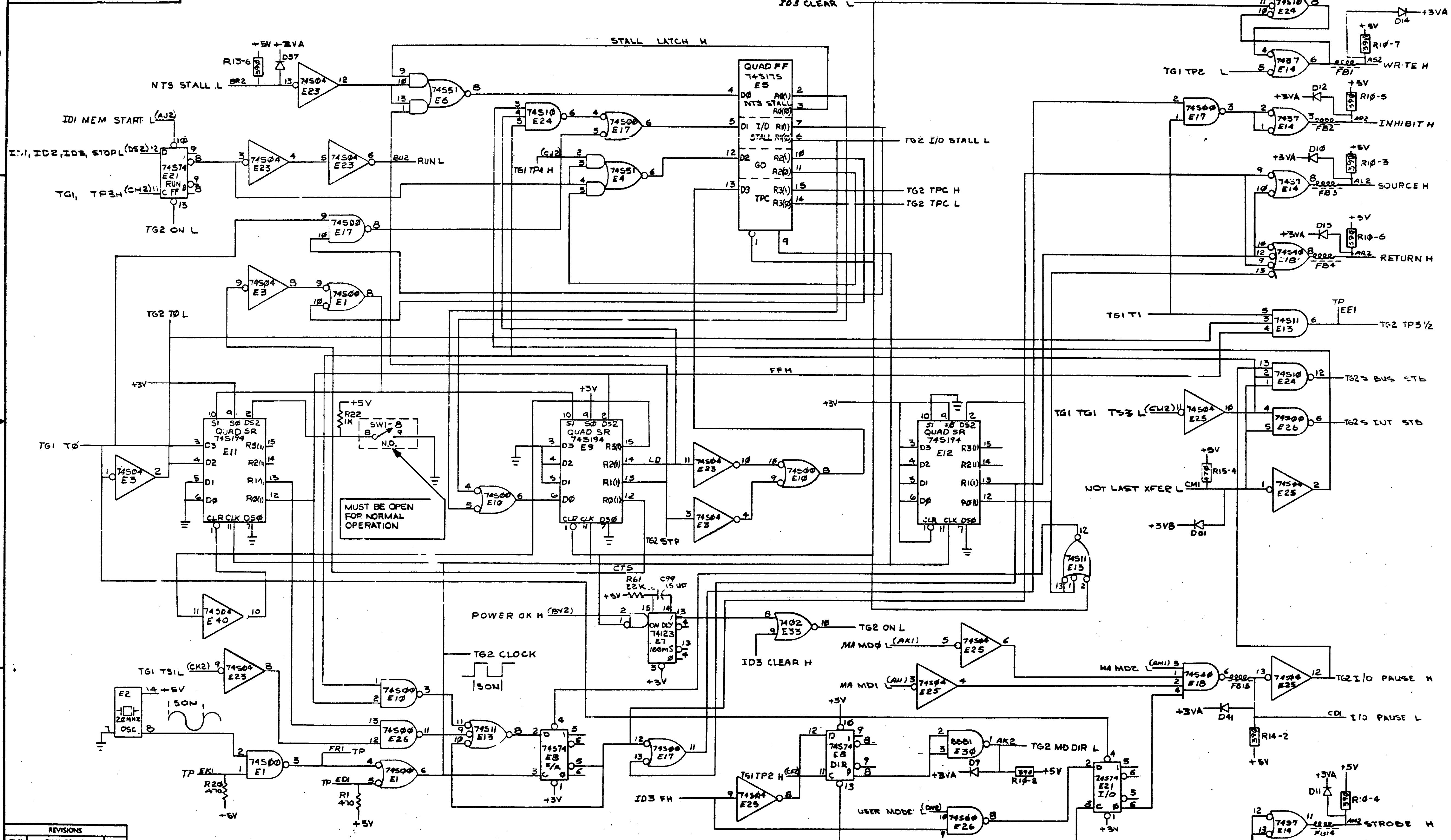
TITLE	SIZE	CODE	NUMBER	REV.
PDP8A- CPU (ID3)	D	CS	M8315-Ø-1	F
SCALE	SHEET 8 OF 1Ø	DIST.		

DSC M8315-Ø-1 REV F



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8A CPU (TG1)	D	CS	M8315-0-1	F
SCALE —	SHEET 9 OF 10		DIST.	



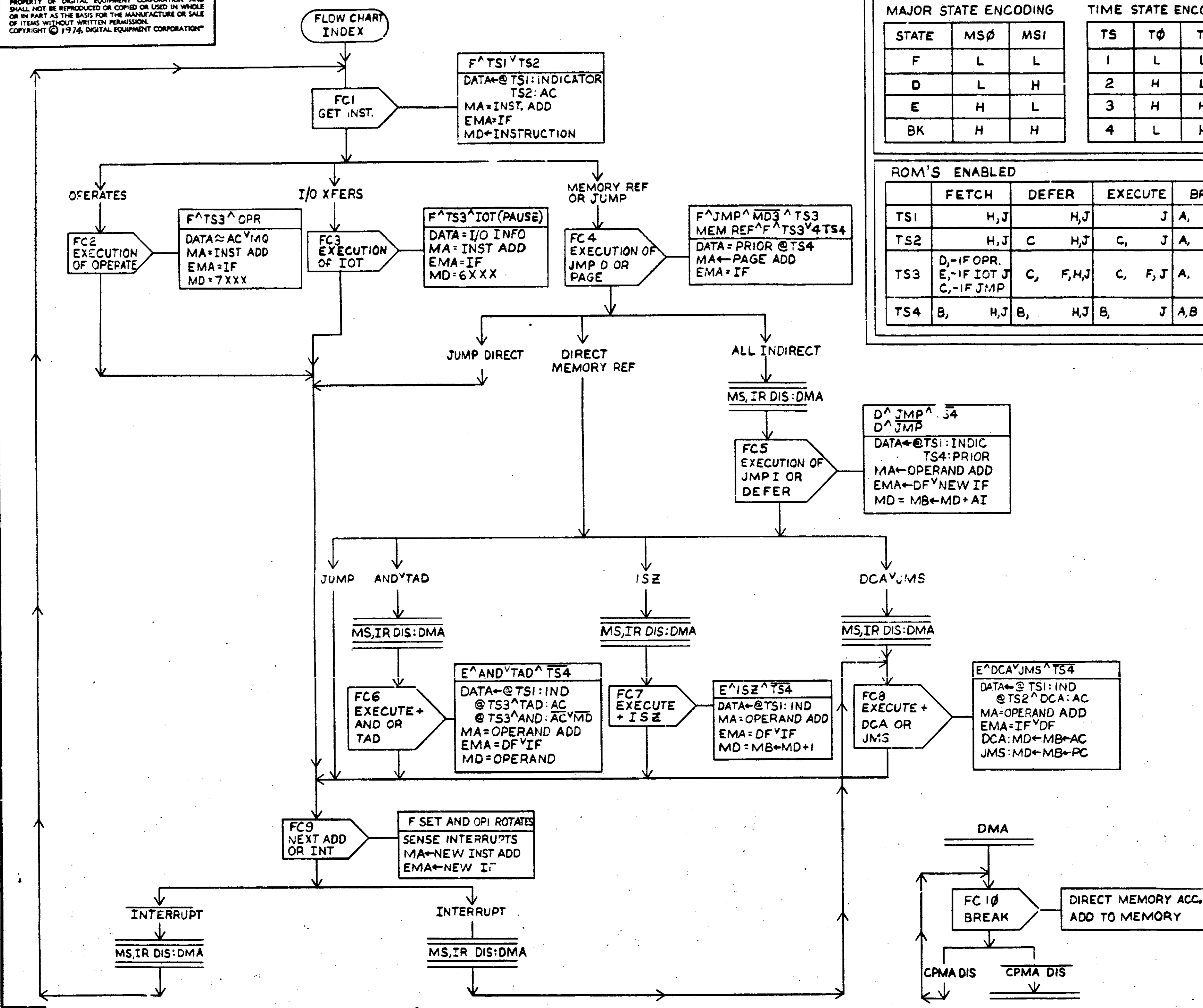
NTS STALL L
ID1 MEM START L
ID1, ID2, ID3, STOP L
TG1, TP3 H
TG2 ON L
RUN L
STALL LATCH H
QUAD FF 74S175 E5
NTS STALL
I/O STALL
GO
TPC
TG2 I/O STALL L
TG2 TPC H
TG2 TPC L
ID3 CLEAR L
TG1 TP4 L
TG1 TP2 L
WRITE H
INHIBIT H
SOURCE H
RETURN H
TG1 T1
TG2 TP3½
TG2 TØ L
TG1 TØ
FFH
QUAD SR 74S194 E11
QUAD SR 74S194 E9
QUAD SR 74S194 E12
SW1-8
N.O.
MUST BE OPEN FOR NORMAL OPERATION
TG2 STP
TG1 TG1 TS3 L
TG2 S BUS STB
TG2 S INT STB
NOT LAST XFER L
POWER OK H
ON DLY 74123 E7 100mS
TG2 ON L
ID3 CLEAR H
MA MDØ L
MA MD1
MA MD2
TG2 I/O PAUSE H
I/O PAUSE L
TG2 CLOCK
150N
TG1 TS1 L
20 MHZ OSC.
TG2 MD DIR L
TG1 TP2 H
ID3 FH
USER MODE
TG1 TP1 L
STROBE H

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE PDP8A CPU (TG2)

SIZE D CODE CS NUMBER M8315-Ø-1 REV. F

SCALE — SHEET 10 OF 10 DIST.



MAJOR STATE ENCODING

STATE	MSØ	MS1
F	L	L
D	L	H
E	H	L
BK	H	H

TIME STATE ENCODING

TS	TØ	T1
1	L	L
2	H	L
3	H	H
4	L	H

ROM'S ENABLED

	FETCH	DEFER	EXECUTE	BREAK
TS1	H,J	H,J	J	A, J
TS2	H,J	C H,J	C, J	A, J
TS3	D,-IF OPR. E,-IF IOT J C,-IF JMP	C, F,H,J	C, F,J	A, F, J
TS4	B, H,J	B, H,J	B, J	A,B J

NOTES:
THIS IS AN INDEX TO THE 8A FLOW CHARTS.
THE FLOW CHART NUMBER THAT APPEARS WITHIN THE SYMBOL [FCX> REFERS TO ANOTHER FLOW WHICH DETAILS THE ACTION WHICH IS BRIEFLY DESCRIBED IN THE SYMBOL [ ]
OPTION FLOW CHARTS WILL USE THE SAME FC"X" TIME REFERENCE TO SHOW ITS RELATION TO THE CPU
FLOWS WILL BE NUMBERED AS FOLLOWS
M8315-FC"X" CPU FLOW FOR TIME "X"
MABCD-FC"X" OPTION FLOW FOR CPU TIME "X"

THE FOLLOWING IS A LIST OF MAJOR OMNIBUS SIGNALS AND THE FLOW CHARTS MOST PERTINENT TO THEM

BUS SIGNAL	FLOW CHARTS	MOST IMPORTANT LOGIC PRINTS
IRØ-2	FC1	ID2
F, D, E	(FC1, FC4), FC5, FC8	ID1
USER MODE	FC2, FC3	ID2, TG2
FSET	FC8	ID1
PULSE LA	FC1Ø	ID1
STOP	FC2, FC1Ø	ID1, ID3, TG2
KEY CONTROL	FC1Ø	ID1
SW	SEE M8317 TIMING & FLOW CHARTS	
I/O PAUSE	FC3	TG2
CØ-2	FC3	ID1
BUS STB	FC3	ID2, TG1
NOT LAST XFER	FC3	TG2
INT RQST	FC3	ID3
SKIP	FC7, FC8, FC9	ID2
INITIALIZE	FC3	ID3
CPMA DIS	FC4, FC5, FC9	ID1
MSIR DIS	FC1Ø	ID1
LK LD & DATA	FC3	ID2, ID3
INDI-2	FC1	ID3
MAMS LD CTRL	FC4, FC9, FC1Ø	ID1
OVERFLOW	FC7	ID2
BK DATA CTRL	FC1Ø	ID1
LA ENABLE	FC1, FC1Ø	ID1
INT IN PROG	FC9	ID2, ID3
RUN	FC2, FC1Ø	TG2
PWR OK		ID3
MEM START	FC1Ø	ID1, TG2

FIRST USED ON OPTION/MODEL: PDP8A

DIMENSIONAL TOLERANCE: DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
.XXX =±0.10 .XX =±0.5 .X =±2.	.XXX =±.005 .XX =±.02 .X =±.1	±0°30'

THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL —/—
FINISH —/—

DRN: DATE 11-11-74
CHKD: DATE
ENG: DATE
PROJ. ENG.: DATE
PROD.: DATE 1-25-75
NEXT HIGHER ASSY.: B-DD-KK8A-Ø
SCALE —/—
SHEET 1 OF 1

QTY. | DESCRIPTION | PART NO. | ITEM NO.
PARTS LIST

digital

TITLE: FLOW DIAGRAM M8315 INDEX

SIZE: D CODE: FD NUMBER: M8315-Ø-16 REV.

REVISIONS: REV. | CHANGE NO. | CHK

MA+1 IS ENABLED TO THE PC

A MEMORY READ IS STARTED (REFER TO TIMING)

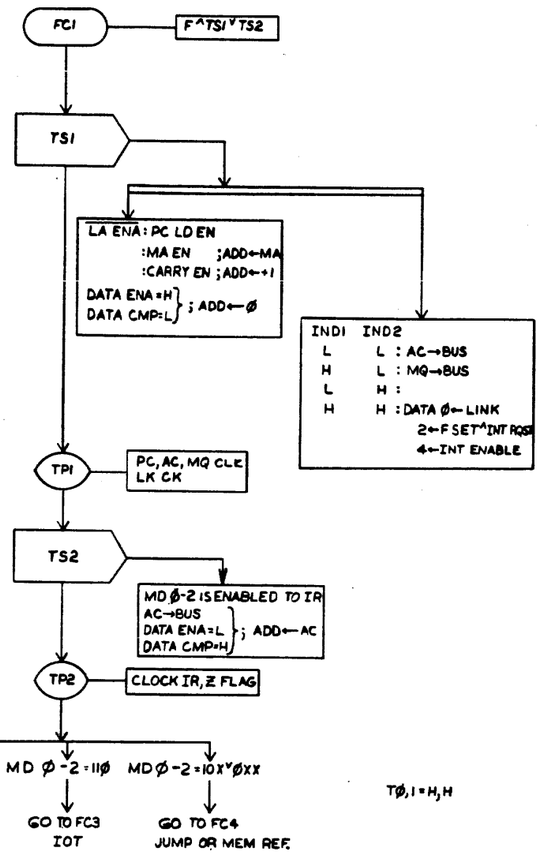
INDICATOR INFORMATION IS PLACED ON THE DATA BUS (REFER TO OPT1) FOR THE PANEL TO DISPLAY

THE PC IS LOADED

THE AC IS GATED THROUGH THE ADDERS TO SEE IF IT EQUALS Ø

THE INSTRUCTION WILL APPEAR ON THE MD LINES FROM MEMORY

THE IR GETS LOADED WITH THE OPCODE AND THE Z FLAG IS ADJUSTED



MSØ,1=L,L

TØ,1=L,L

TØ,1=H,L

TØ,1=H,H

THE INSTRUCTION IS DECODED AT THIS POINT AS FOLLOWS:

MD ——	Ø	1	2	3	4	5	6	7	8	9	1Ø	11
AND	Ø	Ø	Ø									
TAD	Ø	Ø	1									
ISZ	Ø	1	Ø									
DCA	Ø	1	1									
JMS	1	Ø	Ø									
JMP	1	Ø	1									
IOT	1	1	Ø									
OPR	1	1	1									

BITS 3-11 ARE NOT IMPORTANT AT THIS TIME

FETCH AND (TS1 or TS2) (GET AN INSTRUCTION)

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

DIMENSIONAL TOLERANCE — DIMENSIONS ARE MILLIMETERS / INCHES — UNLESS OTHERWISE SPECIFIED
MILLIMETERS: X.XX ±0.10, XX ±0.5, X ±2; INCHES: .XXX ±.005, .XX ±.02, .X ±.1; ANGLES: ±0° 30'
THIRD ANGLE PROJECTION — REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

DRN. Q Vowles	DATE 11-13-74	digital
CHKD.	DATE 12/31/74	
ENG.	DATE 1-21-75	
PROJ. ENG.	DATE 1-21-75	TITLE: FLOW DIAGRAM M8315 FC1
PROD.	DATE 1-21-75	
NEXT HIGHER ASSY.		
MATERIAL ++	B-DD-KK8A-Ø	SIZE D CODE DFD NUMBER M8315-Ø-17 REV.
FINISH ++	SCALE ++	DIST.
	SHEET 1 OF 1	

REVISIONS — REV. / CHANGE NO. / CHK

DFD M8315-0-17 REV

FC2 → F^TS3^OPR

MSØ, I=L, L

TS3

TØ, I=H, H

MDØ-3=1111

MDØ-3=111Ø

MDII=1

MDII=Ø

THE INSTRUCTION IS DECODED AT THIS POINT AS FOLLOWS
THE SEQUENCES OF OPERATION ARE LOGICAL NOT CHRONOLOGICAL
ALL OP2 & OP3 OCCUR AT TP3
ALL OP1 EXCEPT ROTATE LEFT OR RIGHT OCCUR AT TP3
A SINGLE LEFT OR RIGHT ROTATE OCCURS AT TP4
A DOUBLE LEFT OR RIGHT ROTATE OCCURS AT TP3½ AND 4 } SEE FLOW CHART 9 F SET

OPERATE | GROUP 3

				Ø TO AC	MQ TO AC	X	AC TO MQ	X	X	X	I
I	I	I	I								

Ø	Ø	Ø	NO OPERATION
Ø	Ø	I	AC GOES TO THE MQ AND THE AC IS CLEARED
Ø	I	Ø	MQ "ORED" WITH THE AC GOES TO THE AC
Ø	I	I	AC Ø-11 SWAPS WITH MQ Ø-11
I	Ø	Ø	THE AC IS CLEARED
I	Ø	I	BOTH THE AC AND MQ ARE CLEARED
I	I	Ø	THE MQ GOES TO THE AC
I	I	I	THE MQ GOES TO THE AC AND THE MQ IS CLEARED

OPERATE | GROUP 2

				Ø TO AC	SKIP IF ACØ	SKIP IF AC=Ø	SKIP IF L=1	REVERSE SKIP IF A"I" SWREG	GET THE SWREG	HALT	Ø
I	I	I	I								

- 1ST MAKE A SKIP DECISION
- THEN REVERSE THEN DECISION IF BIT 8=1
- THEN CLEAR THE AC IF BIT 4=1
- THEN "OR" THE AC WITH THE SWITCHS IF BIT 3=1
- THEN STOP IF BIT 10=1

OPERATE | GROUP 1

				Ø TO AC	Ø TO LINK	AC TO AC	LINK TO LINK	ROTATE	+1 TO AC
I	I	I	Ø						

- 1ST CLEAR THE AC & LINK IF BITS=1
- THEN COMPLEMENT IF BITS=1
- THEN INCREMENT THE L, AC IF BIT11=1
- THEN ROTATE DEPENDENT UPON 8,9,10 AS FOLLOWS

MD 8 9 10

H H H	NO ROTATE
H H L	SWAP ACØ-5 WITH AC 6-11
H L H	ROTATE LEFT ONCE
H L L	ROTATE LEFT TWICE
L H H	ROTATE RIGHT ONCE
L H L	ROTATE RIGHT TWICE
L L X	ILLEGAL

L | ØAC | 11 — THESE OCCUR AT F SET TIME

INTSTB, TP3 → AC, MQ CLK
STOP: RUN ← Ø
I SKIP: SKIP ← 1
INT EQST: INTSYNC ← 1

GO TO FC9

OP3

ENA. ROM D
MD — 4,5,7

(NOP)	H H H	DATA ENA; AC → BUS
(MQL)	H H L	DATA CMP; MQ LD EN
(MQA)	H L H	DATA ENA; AC → BUS, MQ → BUS
(SWP)	H L L	DATA ENA; MQ LD EN
(CLA)	L H H	DATA CMP;
(CLA MQL)	L H L	DATA CMP; MQ CLR EN
(CLA MQA)	L L H	DATA ENA; MQ → BUS
(Ø → MQ, AC)	L L L	DATA ENA MQ CLR EN; MQ → BUS

ENA. ROM F
ADLK = LINK

OP2

ENA. ROM D
DATA ENA:
MD4 = Ø : AC → BUS
ENA. ROM F
I SKIP L = (MD5 ^ ACØ ∨ MD6 ^ ≠ERO ∨ MD7 ^ LINK) ⊻ MD8
ADLK = LINK

MDIØ ^ $\overline{UM}$: STOP
MD9 : CONSOLE PLACES SWITCH REG ON DATA BUS

OP1

ENA. ROM D : DATA ENA. L
MD4 = Ø : AC → BUS
MD6 = 1 : DATA CMP L
MDII = 1 : CARRY EN; C IN L = 1
ENA. ROM F
MD — 5, 7

L L :	ADLK =	$\overline{LINK}$
L H :		$\overline{LINK}$
H L :		Ø
H H :		1

; DATA → LINK = ADLK ⊻ C OUT L

$\overline{MD9}$ ^ $\overline{MD8}$ ^ MDIØ : BSW; ADDER Ø-5 TO AC 6-11 ADDER 6-11 TO AC Ø-5

AC LD EN L : RR EN
: RL EN
: LNK RR EN
: LNK RL EN

EXECUTION OF AN OPERATE

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

DRN. Q. Vowles	DATE 11-7-74	digital	
CHK'D	DATE 12/13/74		
ENG.	DATE 12/13/74		
PROJ. ENG.	DATE 12/13/74	TITLE FLOW DIAGRAM M8315 FC2	
PROD.	DATE 1-23-75		
NEXT HIGHER ASSY. B-DD-KK8A-Ø		SIZE D CODE FD NUMBER M8315-0-18 REV.	
SCALE		SHEET 1 OF 1	DIST.

DIMENSIONAL TOLERANCE — DIMENSIONS ARE MILLIMETERS/INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
XXX = ±0,10	.XXX = ±.005	±0° 30'
XX = ±0,5	.XX = ±.02	
X = ±2,	.X = ±.1	

THIRD ANGLE PROJECTION — REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓ — MATERIAL — — FINISH —

REVISIONS | REV. | CHANGE NO. | CHK

THE INSTRUCTION AT THIS POINT IS DECODED AS FOLLOWS: ONLY IF *USER MODE IS NEGATED THUS ALLOWING PAUSE TO BE ASSERTED.

1	1	Ø	DEVICE CODE	COMMAND

FOR DEVICE CODE ØØ8 THE CPU TAKES CONTROL DEPENDING UPON THE COMMAND AS FOLLOWS:

	MD-9	1Ø	11	
SKON	Ø	Ø	Ø	SKIP IF INT ON, TURN IT OFF
ION	Ø	Ø	1	TURN INT SYS ON
IOF	Ø	1	Ø	TURN INT SYS OFF
SRQ	Ø	1	1	SKIP IF INT RQST
* GTF	1	Ø	Ø	LINK, INT ON, INT RQST TO ACØ,2,4
* RTF	1	Ø	1	ACØ TO LINK, TURN INT SYS ON
NOP	1	1	Ø	NO OPERATION
CAF	1	1	1	GENERATE INITIALIZE.

* ALSO SEE OPT 2

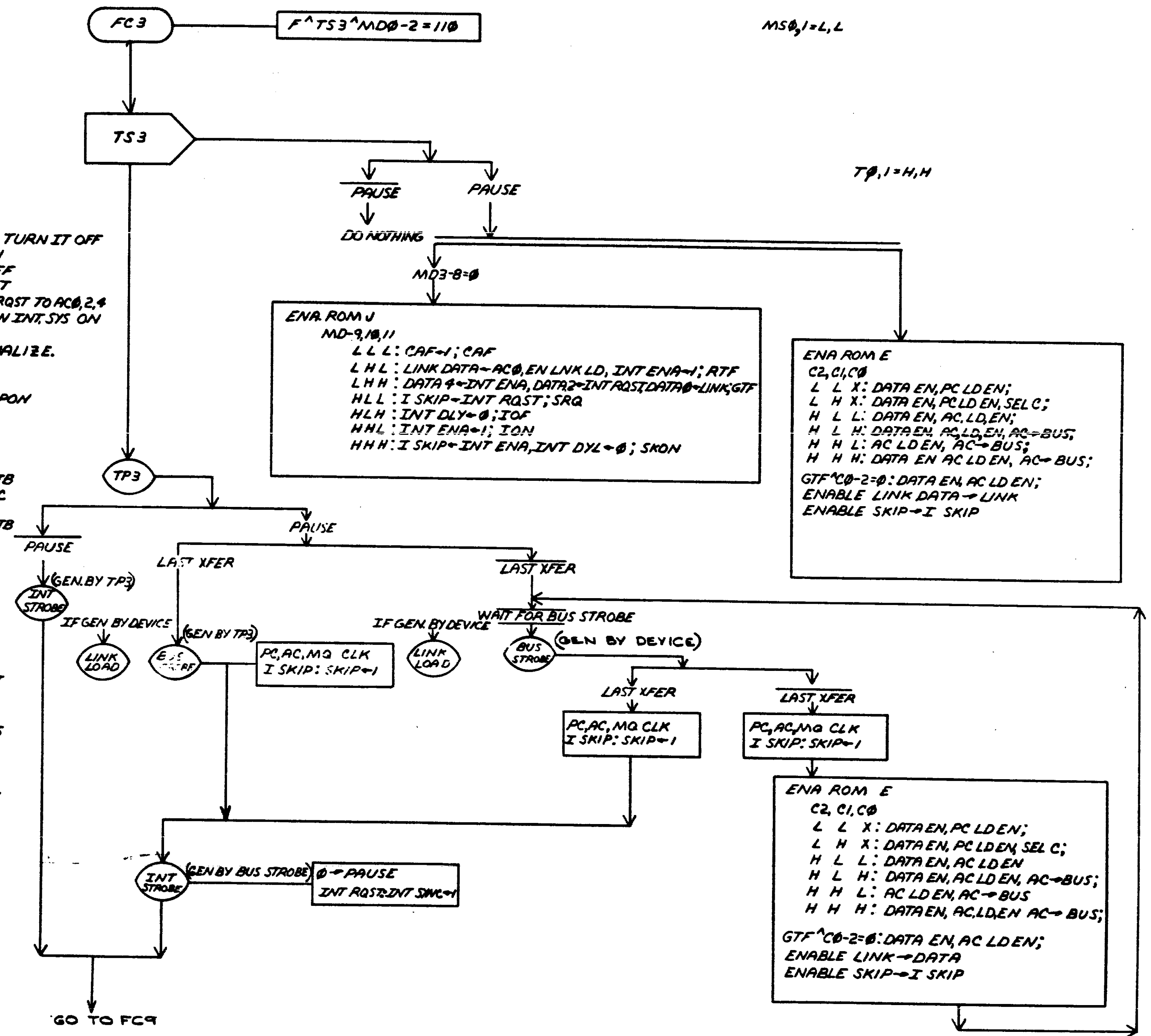
OTHER DEVICES SEND OR RECIEVE DATA DEPENDING UPON THE "C" LINES AS FOLLOWS:

	C0 C1 C2	
AC→DEV	H H H	THE DEVICE RECIEVES THE AC AT TP3
RELATIVE JUMP	H H L	THE DATA LINES+THE PC GO TO PC AT BUS STB
INPUT "OR" TO AC	H L H	THE AC"ORED" WITH DATA LINES GOES TO THE AC BUS STB
ABSOLUTE JUMP	H L L	THE DATA LINES GO TO THE PC AT BUS STB
AC→DEV Ø→AC	L H H	THE DEVICE RECIEVES THE AC AT TP3 AND THE AC IS CLEARED
INPUT JAM TO AC	L L H	THE DATA LINES GO TO THE AC BUS STB

NOTE ALL I/O XFERS TAKE PLACE OVER THE DATA LINES.

IN REALITY ALL XFERS TAKE PLACE ON THE LEADING EDGE OF BUS STB IN ACCORDANCE WITH THE "C" LINES AT THAT TIME.
ASSERTING NOT LAST XFER CAUSES THE CPU TO WAIT FOR A BUS STROBE TO DO THE NEXT XFER
THE CPU WILL NOT ADVANCE TO TS4 UNTIL IT SEES A BUS STROBE WITH NOT LAST XFER NEGATED - THIS IN TURN CAUSES INTERRUPT STROBE.

LINK LOAD SHOULD BE GIVEN IN SYNC WITH BUS STROBE AND CAUSES LINK DATA TO GO TO THE LINK.



EXECUTION OF AN IOT

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

FIRST USED ON OPTION/MODEL: PDP8A

DIMENSIONAL TOLERANCE — DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

THIRD ANGLE PROJECTION

MATERIAL —/— FINISH —/—

DRN. DATE 11-6-74 — CHK'D DATE 12/31/74 — ENG. DATE 1-21-75 — PROJ. ENG. DATE — PROD. DATE 1-23-75

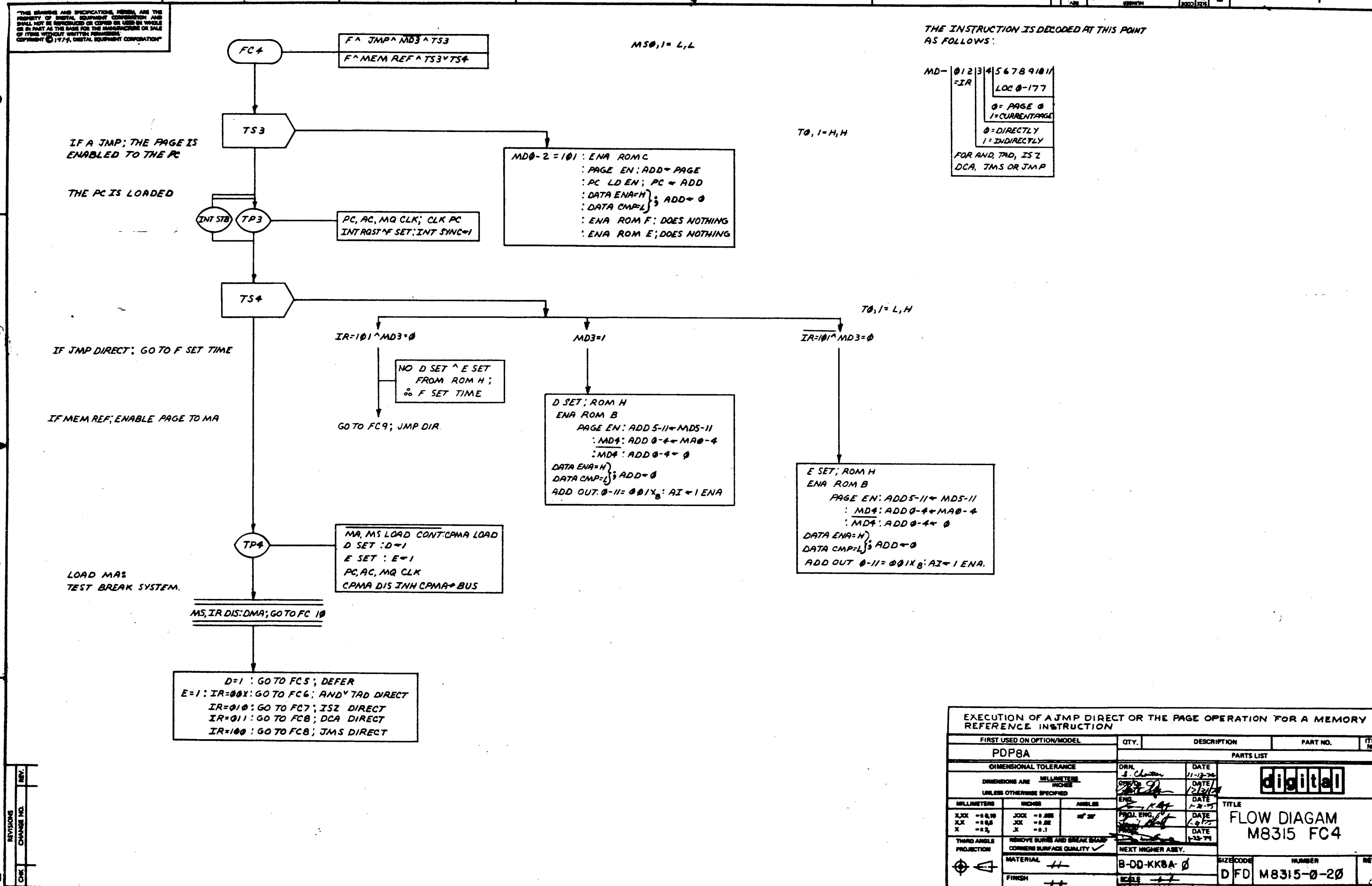
NEXT HIGHER ASSY. B-DD-KK8A-Ø

SCALE — SHEET 1 OF 1

digital

TITLE: FLOW DIAGRAM M8315 FC3

SIZE D CODE FD NUMBER M8315-Ø-19 REV.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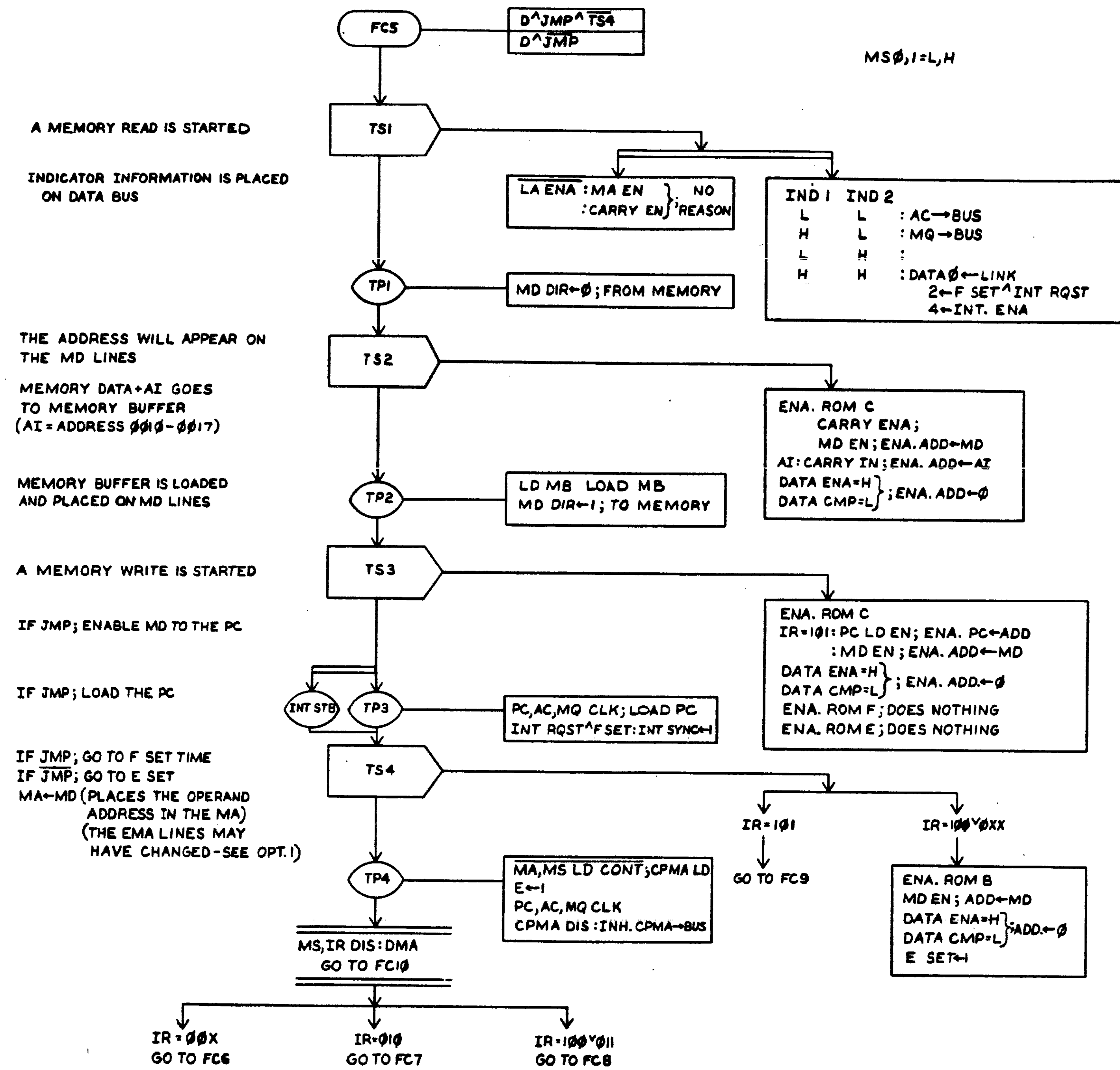
FC4
F ^ JMP ^ MD3 ^ TS3
F ^ MEM REF ^ TS3 v TS4
MSØ,1 = L,L
THE INSTRUCTION IS DECODED AT THIS POINT AS FOLLOWS:
MD- Ø 1 2 3 4 5 6 7 8 9 10 11
=IR
LOC Ø-177
Ø = PAGE Ø
1 = CURRENT PAGE
Ø = DIRECTLY
1 = INDIRECTLY
FOR AND, TAD, ISZ DCA, JMS OR JMP
TS3
IF A JMP; THE PAGE IS ENABLED TO THE PC
TØ,1 = H,H
MDØ-2 = 1Ø1 : ENA ROM C
: PAGE EN : ADD ← PAGE
: PC LD EN ; PC ← ADD
: DATA ENA=H
: DATA CMP=L ; ADD ← Ø
: ENA ROM F : DOES NOTHING
: ENA ROM E ; DOES NOTHING
THE PC IS LOADED
INT STB
TP3
PC, AC, MQ CLK; CLK PC
INT RQST ^ F SET : INT SYNC ← 1
TS4
TØ,1 = L,H
IR=1Ø1 ^ MD3 = Ø
MD3=1
IR=1Ø1 ^ MD3=Ø
IF JMP DIRECT: GO TO F SET TIME
NO D SET ^ E SET FROM ROM H ; ∴ F SET TIME
IF MEM REF; ENABLE PAGE TO MA
GO TO FC9; JMP DIR
D SET ; ROM H
ENA ROM B
PAGE EN : ADD 5-11 ← MD5-11
: MD4 : ADD Ø-4 ← MAØ-4
: MD4 : ADD Ø-4 ← Ø
DATA ENA=H
DATA CMP=L ; ADD ← Ø
ADD OUT Ø-11 = ØØ1X8 : AI ← 1 ENA
E SET ; ROM H
ENA ROM B
PAGE EN : ADD 5-11 ← MD5-11
: MD4 : ADD Ø-4 ← MAØ-4
: MD4 : ADD Ø-4 ← Ø
DATA ENA=H
DATA CMP=L ; ADD ← Ø
ADD OUT Ø-11 = ØØ1X8 : AI ← 1 ENA.
TP4
MA, MS LOAD CONT CPMA LOAD
D SET : D ← 1
E SET : E ← 1
PC, AC, MQ CLK
CPMA DIS INH CPMA ← BUS
LOAD MA:
TEST BREAK SYSTEM.
MS, IR DIS: DMA; GO TO FC 1Ø
D=1 : GO TO FC5 ; DEFER
E=1 : IR=ØØX : GO TO FC6 ; AND v TAD DIRECT
IR=Ø1Ø : GO TO FC7 ; ISZ DIRECT
IR=Ø11 : GO TO FC8 ; DCA DIRECT
IR=1ØØ : GO TO FC8 ; JMS DIRECT
EXECUTION OF A JMP DIRECT OR THE PAGE OPERATION FOR A MEMORY REFERENCE INSTRUCTION
FIRST USED ON OPTION/MODEL
PDP8A
QTY. DESCRIPTION PART NO. ITEM NO.
PARTS LIST
DIMENSIONAL TOLERANCE
DIMENSIONS ARE MILLIMETERS INCHES
UNLESS OTHERWISE SPECIFIED
THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
MATERIAL
FINISH
DRN. DATE CHKD. DATE ENG. DATE PROJ. ENG. DATE PROD. DATE
digital
TITLE
FLOW DIAGAM
M8315 FC4
NEXT HIGHER ASSY.
B-DD-KK8A-Ø
SIZE CODE NUMBER REV.
D FD M8315-Ø-2Ø
SCALE
SHEET 1 OF 1
DIST.
REVISIONS
CHANGE NO.



EXECUTION OF A JUMP INDIRECT OR CALCULATING THE INDIRECT ADDRESS FOR AND, TAD, DCA, ISZ OR JMS

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

DIMENSIONAL TOLERANCE — DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
XXX = ±0.13	.XXX = ±.005	±0° 30'
XX = ±0.5	.XX = ±.02	
X = ±2.	.X = ±.1	

THIRD ANGLE PROJECTION — REMOVE BURRS AND BREAK SHARP CORNERS; SURFACE QUALITY ✓

MATERIAL —/— FINISH —/—

DRN. DATE 11-12-74; CHKD. DATE 12-3-74; ENG. DATE 1-21-75; PROJ. ENG. DATE 1-21-75; PROD. DATE 1-23-75

NEXT HIGHER ASSY. B-DD-KK8A-Ø

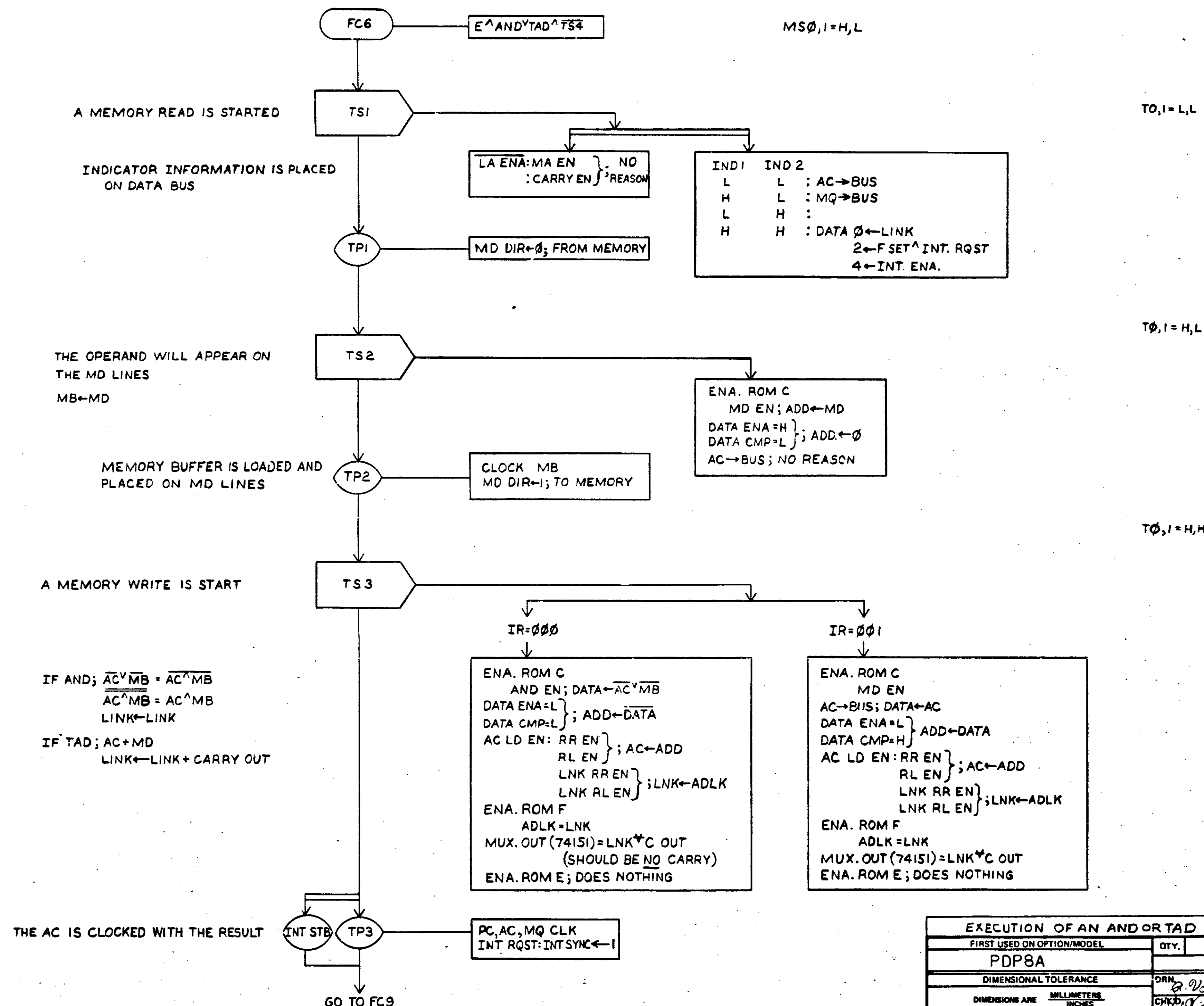
SCALE —/— SHEET 1 OF 1

digital

TITLE: FLOW DIAGRAM M8315 FC5

SIZE D CODE FD NUMBER M8315-Ø-21 REV.

DFD M8315-Ø-21



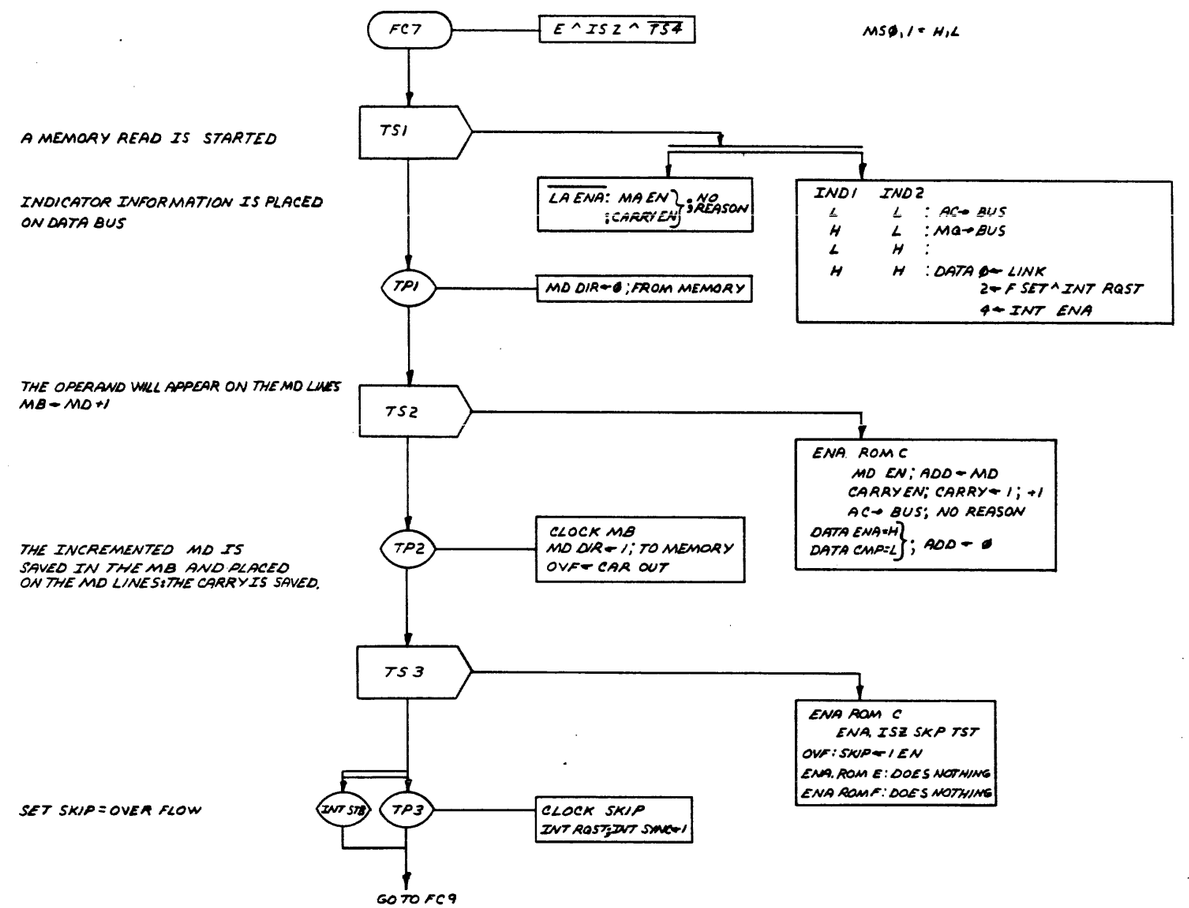
EXECUTION OF AN AND OR TAD

FIRST USED ON OPTION/MODEL	PDP8A
NEXT HIGHER ASSY.	B-DD-KK8A-Ø
TITLE	FLOW DIAGRAM M8315 FC6
SIZE / CODE / NUMBER	D / FD / M8315-Ø-22
SCALE	--
SHEET	1 OF 1

DIMENSIONAL TOLERANCE: DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY
THIRD ANGLE PROJECTION

digital

D FD M8315-Ø-22



EXECUTION OF AN ISZ

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

DIMENSIONAL TOLERANCE				
DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED				
MILLIMETERS	INCHES	ANGLES	DRN.	DATE 1-7-74
X.XX = ±0.10	.XXX = ±.005	±0° 30'	CHK'D.	DATE 1-25-74
XX = ±0.5	XX = ±.02		ENG.	DATE 1-31-75
X = ±2	X = ±.1		PROJ. ENG.	DATE 2-21-75
THIRD ANGLE PROJECTION	REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓		PROD.	DATE 10-3-75
	MATERIAL //		NEXT HIGHER ASSY.	
	FINISH //		B-DD-KK8A-0	
			SCALE //	
			SHEET 1 OF 1	

digital

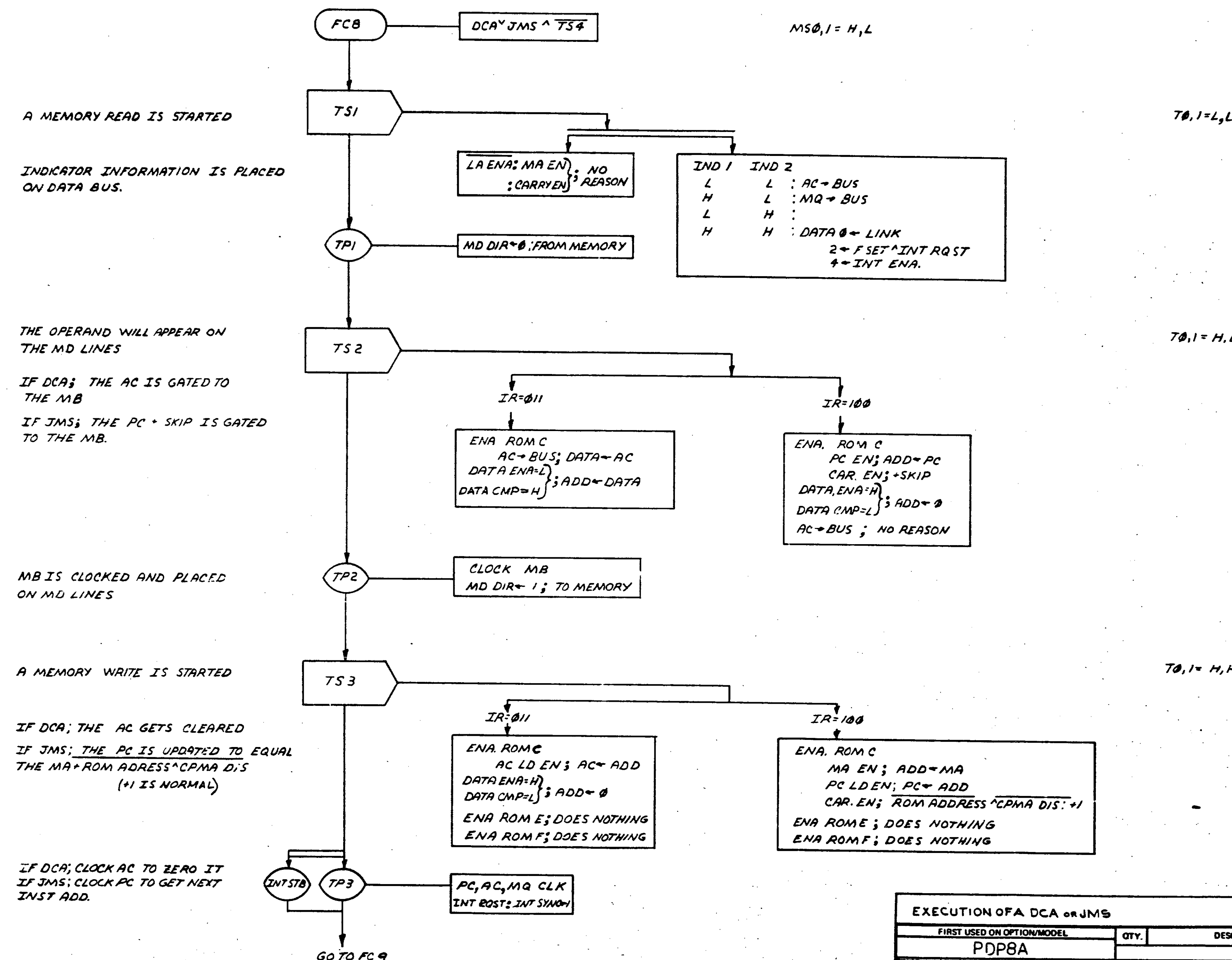
TITLE: FLOW DIAGRAM M8315 FC7

SIZE	CODE	NUMBER	REV.
D	FD	M8315-0-23	

DIST.

REVISIONS	CHANGE NO.	CHK	REV.

M8315-0-23



EXECUTION OF A DCA or JMS

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

DIMENSIONAL TOLERANCE — DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
.XXX = ±0.10	.XXX = ±.005	±0° 30'
.XX = ±0.5	.XX = ±.02	
.X = ±2.	.X = ±.1	

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —/—

FINISH —/—

DRN. / CHK'D / ENG. / PROJ. ENG. / PROD. — DATE

NEXT HIGHER ASSY. B-DD-KK8A-Ø

SCALE —/—

SHEET 1 OF 1

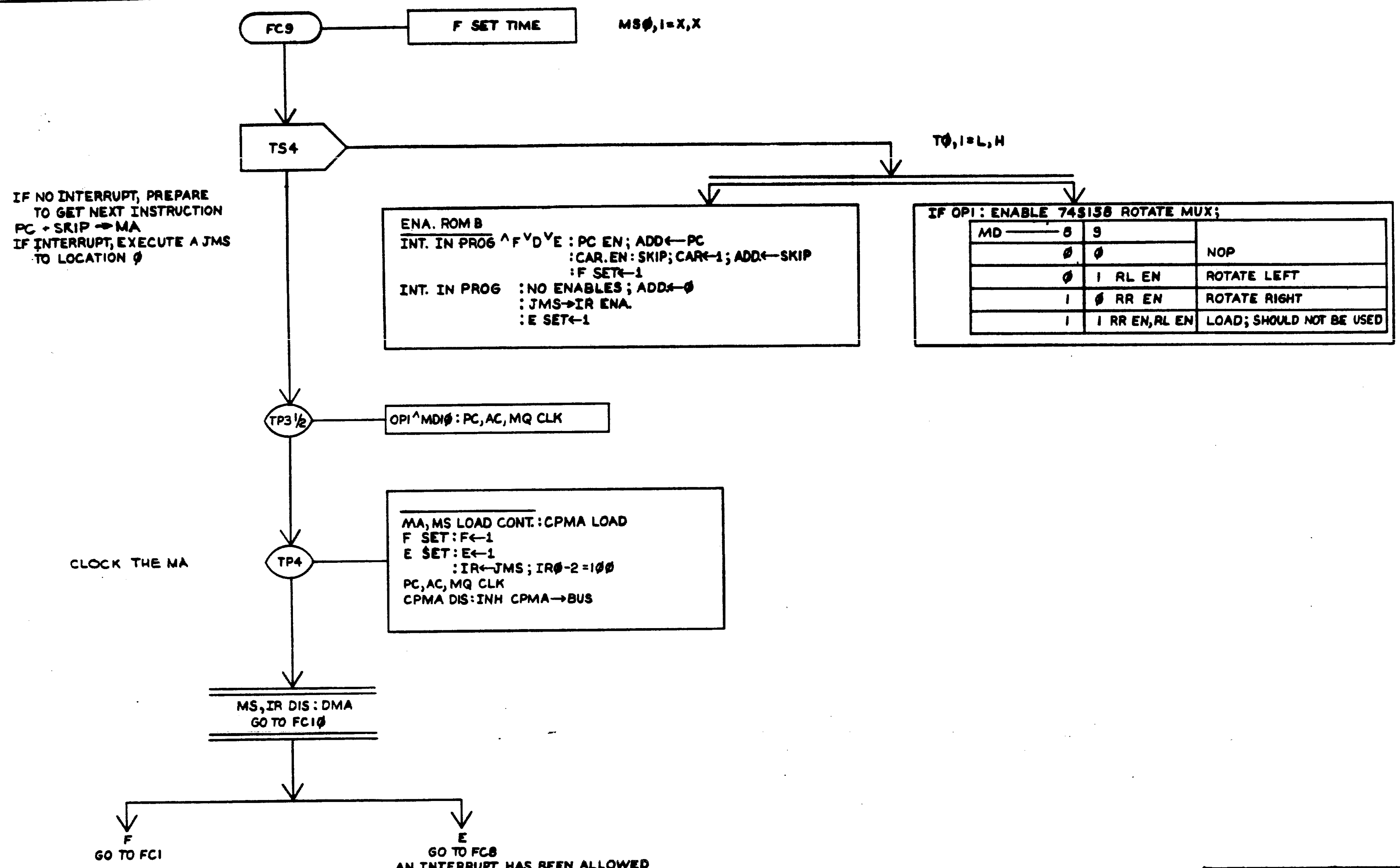
digital

TITLE FLOW DIAGRAM M8315 FC8

SIZE	CODE	NUMBER	REV.
D	FD	M8315-Ø-24	

DIST.

D FD M8315-Ø-24


FC9
F SET TIME
MSØ,1=X,X
TS4
TØ,1=L,H
IF NO INTERRUPT, PREPARE TO GET NEXT INSTRUCTION
PC + SKIP → MA
IF INTERRUPT, EXECUTE A JMS TO LOCATION Ø
ENA. ROM B
INT. IN PROG ^ F V D V E : PC EN; ADD←PC
:CAR. EN: SKIP; CAR←1; ADD←SKIP
:F SET←1
INT. IN PROG :NO ENABLES; ADD←Ø
:JMS→IR ENA.
:E SET←1
IF OPI: ENABLE 74S158 ROTATE MUX;
MD 8 9
Ø Ø NOP
Ø 1 RL EN ROTATE LEFT
1 Ø RR EN ROTATE RIGHT
1 1 RR EN, RL EN LOAD; SHOULD NOT BE USED
TP3½
OPI^MDIØ: PC, AC, MQ CLK
CLOCK THE MA
TP4
MA, MS LOAD CONT.: CPMA LOAD
F SET: F←1
E SET: E←1
:IR←JMS; IRØ-2=1ØØ
PC, AC, MQ CLK
CPMA DIS: INH CPMA→BUS
MS, IR DIS: DMA
GO TO FC1Ø
F
GO TO FC1
E
GO TO FC8
AN INTERRUPT HAS BEEN ALLOWED

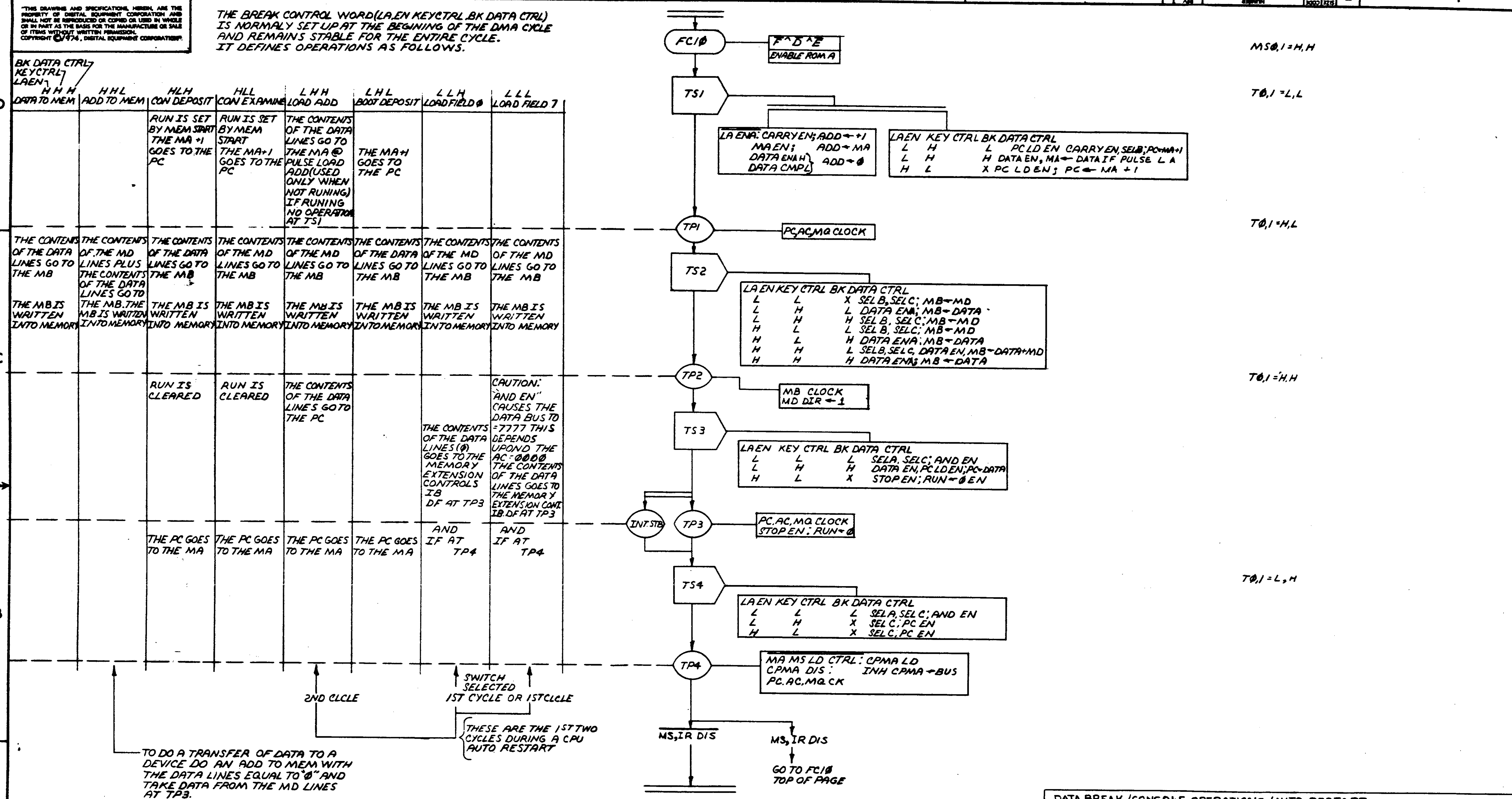
GETTING ADDRESS OF NEXT INSTRUCTION, OR ANSWERING INTERRUPT

FIRST USED ON OPTION/MODEL: PDP8A

TITLE: FLOW DIAGRM M8315 FC9

NEXT HIGHER ASSY: B-DD-KK8A-Ø

SIZE: D CODE: FD NUMBER: M8315-Ø-25


THE BREAK CONTROL WORD (LA.EN KEYCTRL BK DATA CTRL) IS NORMALY SET UP AT THE BEGINING OF THE DMA CYCLE AND REMAINS STABLE FOR THE ENTIRE CYCLE. IT DEFINES OPERATIONS AS FOLLOWS.
BK DATA CTRL
KEYCTRL
LAEN
H H H DATA TO MEM
H H L ADD TO MEM
H L H CON DEPOSIT
H L L CON EXAMINE
L H H LOAD ADD
L H L BOOT DEPOSIT
L L H LOAD FIELD Ø
L L L LOAD FIELD 7
RUN IS SET BY MEM START THE MA +1 GOES TO THE PC
RUN IS SET BY MEM START THE MA+1 GOES TO THE PC
THE CONTENTS OF THE DATA LINES GO TO THE MA @ PULSE LOAD ADD (USED ONLY WHEN NOT RUNING) IF RUNING NO OPERATION AT TS1
THE MA+1 GOES TO THE PC
THE CONTENTS OF THE DATA LINES GO TO THE MB
THE CONTENTS OF THE MD LINES PLUS THE CONTENTS OF THE DATA LINES GO TO THE MB. THE MB IS WRITTEN INTO MEMORY
THE CONTENTS OF THE DATA LINES GO TO THE MB
THE CONTENTS OF THE MD LINES GO TO THE MB
THE CONTENTS OF THE MD LINES GO TO THE MB
THE CONTENTS OF THE DATA LINES GO TO THE MB
THE CONTENTS OF THE MD LINES GO TO THE MB
THE CONTENTS OF THE MD LINES GO TO THE MB
THE MB IS WRITTEN INTO MEMORY
RUN IS CLEARED
RUN IS CLEARED
THE CONTENTS OF THE DATA LINE'S GO TO THE PC
THE CONTENTS OF THE DATA LINES (Ø) GOES TO THE MEMORY EXTENSION CONTROLS IB DF AT TP3
CAUTION: "AND EN" CAUSES THE DATA BUS TO =7777 THIS DEPENDS UPONO THE AC=0000 THE CONTENTS OF THE DATA LINES GOES TO THE MEMORY EXTENSION CONT IB DF AT TP3
THE PC GOES TO THE MA
THE PC GOES TO THE MA
THE PC GOES TO THE MA
THE PC GOES TO THE MA
AND IF AT TP4
AND IF AT TP4
2ND CLCLE
SWITCH SELECTED 1ST CYCLE OR 1STCLCLE
THESE ARE THE 1ST TWO CYCLES DURING A CPU AUTO RESTART
TO DO A TRANSFER OF DATA TO A DEVICE DO AN ADD TO MEM WITH THE DATA LINES EQUAL TO "Ø" AND TAKE DATA FROM THE MD LINES AT TP3.
FC1Ø
F^D^E
ENABLE ROM A
MSØ,1=H,H
TS1
TØ,1=L,L
LA ENA: CARRY EN; ADD←+1
MA EN; ADD←MA
DATA ENA H / DATA CMPL: ADD←Ø
LAEN KEY CTRL BK DATA CTRL
L H L PC LD EN CARRY EN, SELB; PC←MA+1
L H H DATA EN, MA←DATA IF PULSE L A
H L X PC LD EN; PC←MA+1
TP1
PC,AC,MQ CLOCK
TØ,1=H,L
TS2
LA EN KEY CTRL BK DATA CTRL
L L X SEL B, SEL C; MB←MD
L H L DATA ENA; MB←DATA
L H H SEL B, SEL C; MB←MD
H L L SEL B, SEL C; MB←MD
H L H DATA ENA; MB←DATA
H H L SEL B, SEL C, DATA EN, MB←DATA+MD
H H H DATA ENA; MB←DATA
TP2
TØ,1=H,H
MB CLOCK
MD DIR←1
TS3
LAEN KEY CTRL BK DATA CTRL
L L L SELA, SELC; AND EN
L H H DATA EN, PC LD EN; PC←DATA
H L X STOP EN; RUN←Ø EN
INT STB
TP3
PC,AC,MQ CLOCK
STOP EN; RUN←Ø
TS4
TØ,1=L,H
LA EN KEY CTRL BK DATA CTRL
L L L SELA, SEL C; AND EN
L H X SEL C; PC EN
H L X SEL C; PC EN
TP4
MA MS LD CTRL: CPMA LD
CPMA DIS: INH CPMA→BUS
PC,AC,MQ CK
MS, IR DIS
MS, IR DIS
GO TO FC1Ø TOP OF PAGE

DATA BREAK/CONSOLE OPERATIONS/AUTO RESTART

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

DIMENSIONAL TOLERANCE — DIMENSIONS ARE MILLIMETERS / INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
X.XX ±0.10	.XXX ±.005	±0° 30'
X.X ±0.5	.XX ±.02	
X ±2	.X ±.1	

THIRD ANGLE PROJECTION — REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL — / FINISH —

DRN. DATE 11-7-74 · CHK'D DATE · ENG. DATE 1-21-75 · PROJ. ENG. DATE · PROD. DATE 1-23-75

NEXT HIGHER ASSY.: B DD KK8A-Ø

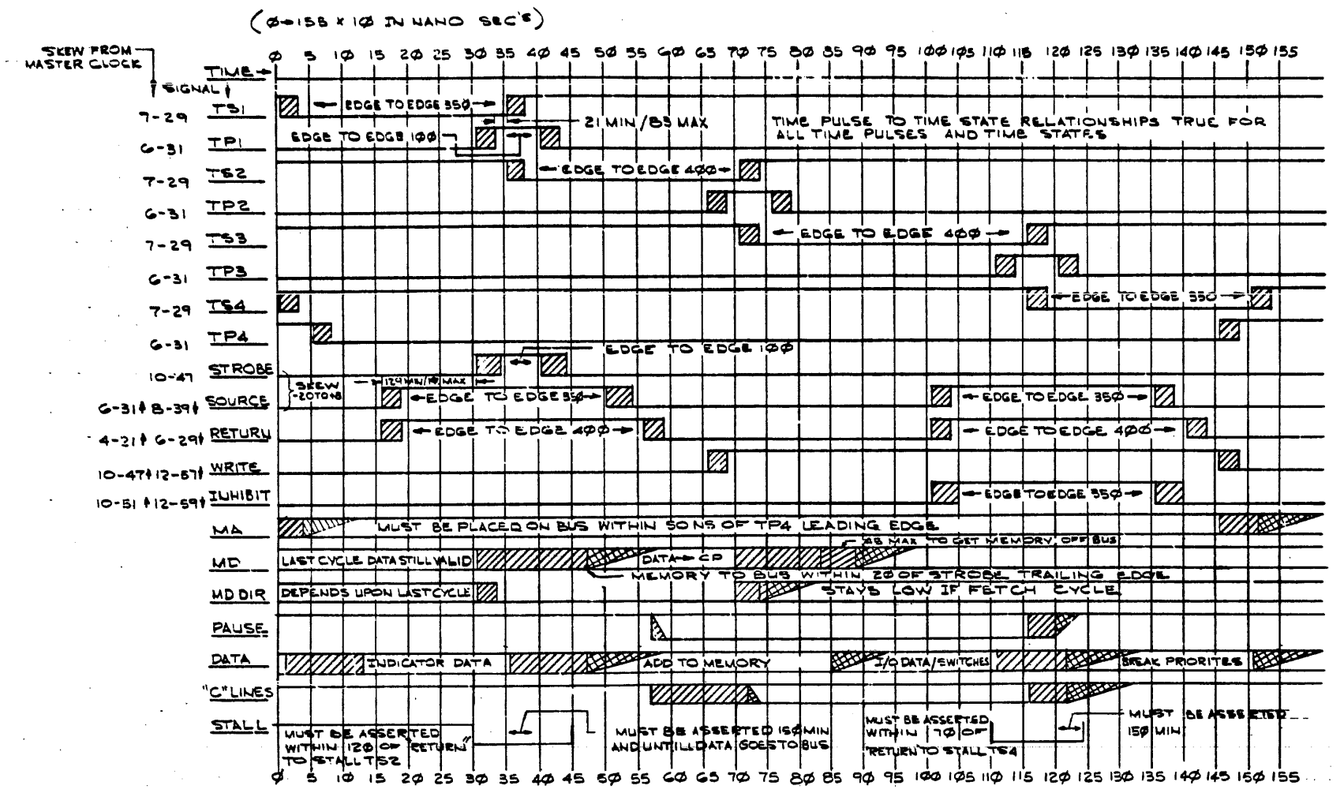
SCALE — · SHEET 1 OF 1

digital

TITLE: FLOW DIAGRAM M8315 FC1Ø

SIZE D · CODE FD · NUMBER M8315-Ø-26 · REV.

D FD M8315-Ø-26



8A DATA PATH FUNCTION TIMING

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDPBA		PARTS LIST		

DIMENSIONAL TOLERANCE
DIMENSIONS ARE MILLIMETERS / INCHES
UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
XXX = ±0.10	XXX = ±.005	±0° 30'
XX = ±0.5	XX = ±.02	
X = ±2.	X = ±.1	

THIRD ANGLE PROJECTION

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL —

FINISH —

DRN	George Smith	DATE 11/25/74
CHK	[illegible]	DATE 12/17/74
ENG	[illegible]	DATE 1-21-75
PROJ. ENG.	[illegible]	DATE 1-23-75
PROG	[illegible]	DATE 1-23-75

NEXT HIGHER ASSY.
B-DD-KK8A-J
SCALE —
SHEET 1 OF 2

digital

TITLE
FLOW DIAGRAM
M8315 BUS TIMING

SIZE	CODE	NUMBER	REV.
D	FD	M8315-Ø-27	

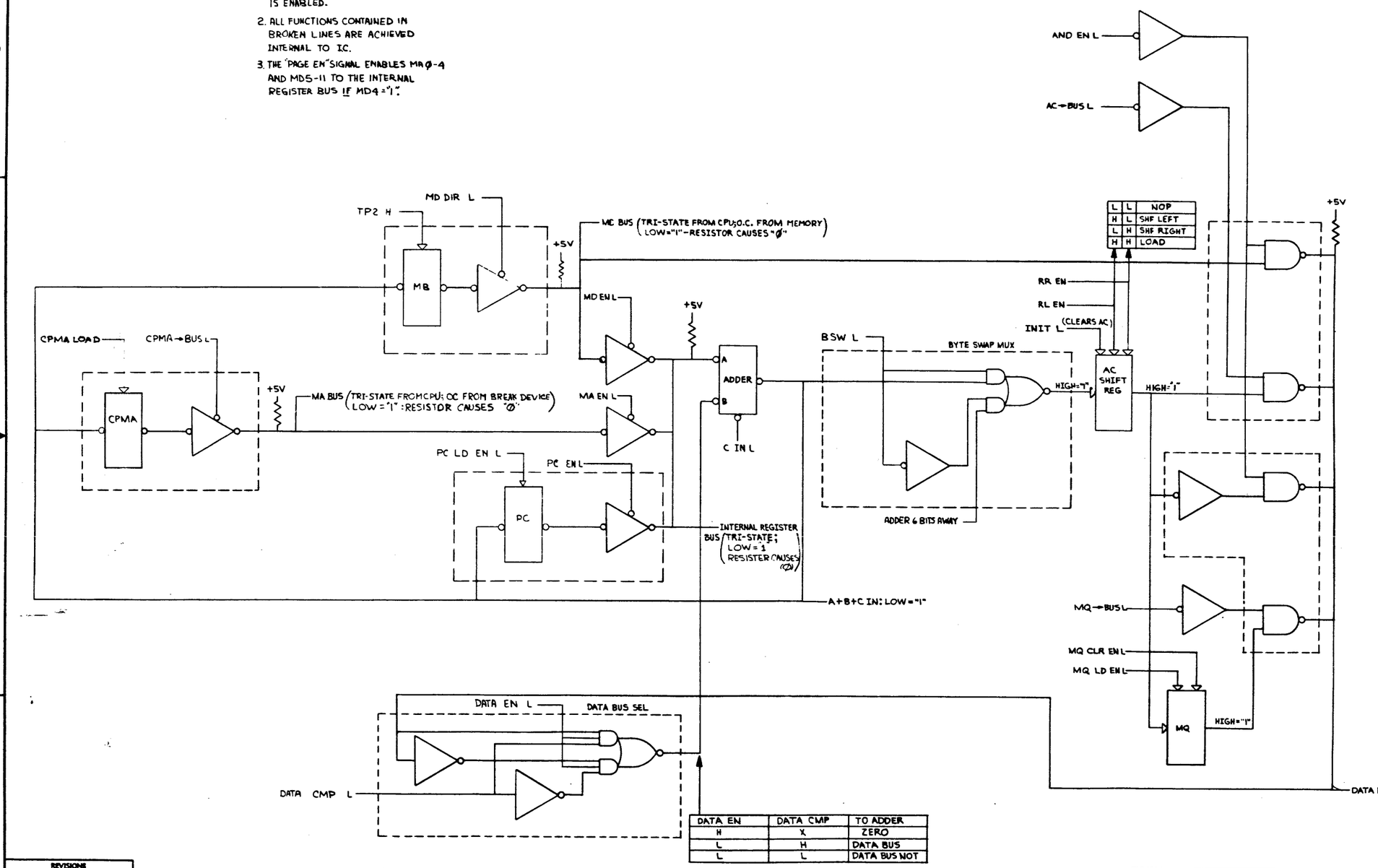
DIST.

REVISIONS		
REV.	CHANGE NO.	CHK

DATA CODE FICHE M8315-L27 REV.

NOTES:

1. THE PC, AC AND MQ ARE LOADED BY PC, AC, MQ CLK IF THE LOAD IS ENABLED.
2. ALL FUNCTIONS CONTAINED IN BROKEN LINES ARE ACHIEVED INTERNAL TO IC.
3. THE "PAGE EN" SIGNAL ENABLES MA Ø-4 AND MD 5-11 TO THE INTERNAL REGISTER BUS IF MD 4 = "1".



DATA EN	DATA CMP	TO ADDER
H	X	ZERO
L	H	DATA BUS
L	L	DATA BUS NOT

REVISIONS		
CHK	CHANGE NO.	REV.

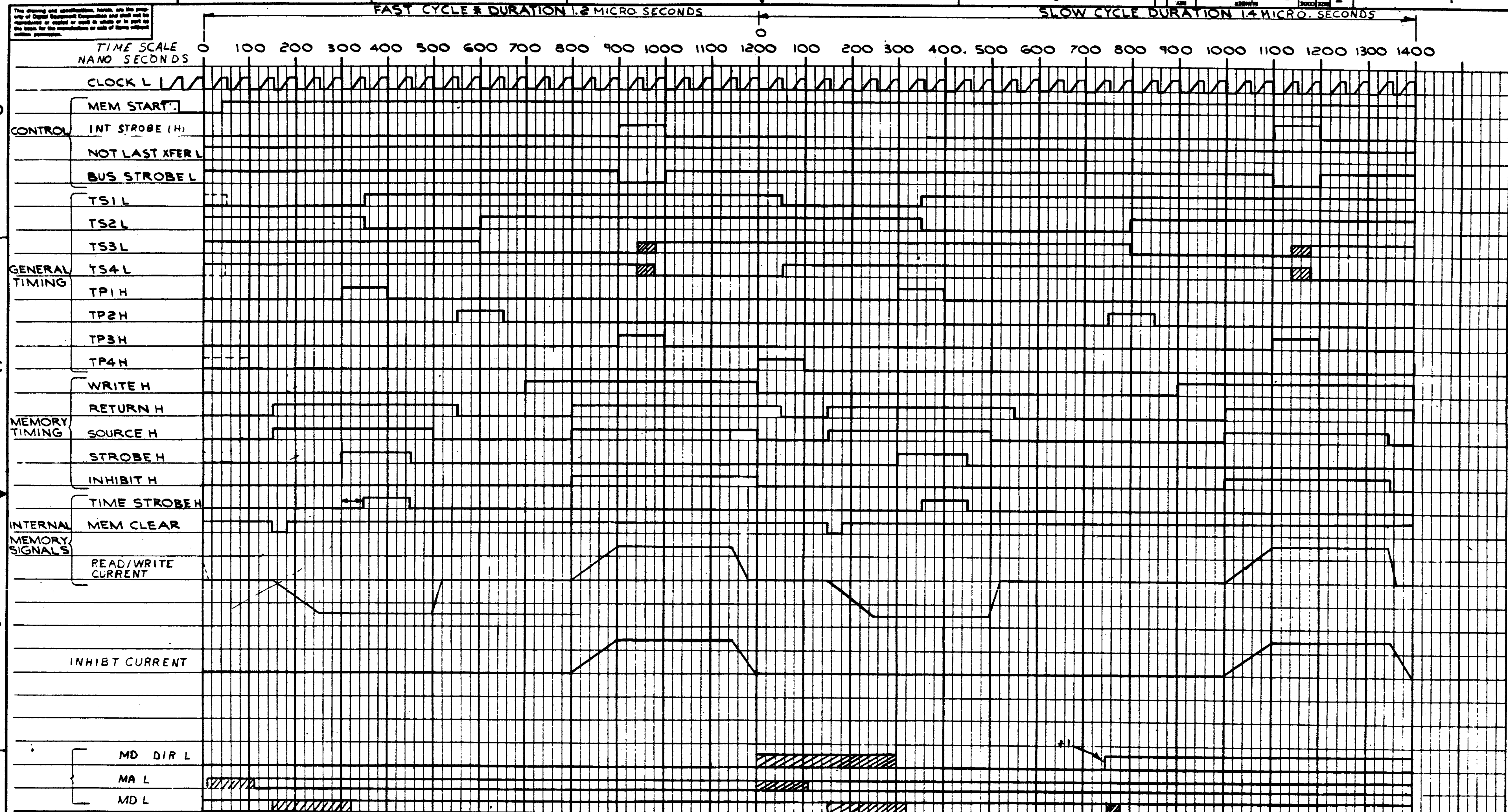
DATA PATH FUNCTIONS

TITLE FLOW DIAGRAM M8315 BUS TIMING

SIZE D | CODE FD | NUMBER M8315-Ø-27 | REV.

SCALE —//— | SHEET 2 OF 2 | DIST.

DFD M8315-Ø-27 REV.



FAST CYCLE * DURATION 1.2 MICRO SECONDS
SLOW CYCLE DURATION 1.4 MICRO SECONDS
TIME SCALE NANO SECONDS
0 100 200 300 400 500 600 700 800 900 1000 1100 1200 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400
CLOCK L
CONTROL
MEM START
INT STROBE (H)
NOT LAST XFER L
BUS STROBE L
GENERAL TIMING
TS1 L
TS2 L
TS3 L
TS4 L
TP1 H
TP2 H
TP3 H
TP4 H
MEMORY TIMING
WRITE H
RETURN H
SOURCE H
STROBE H
INHIBIT H
INTERNAL MEMORY SIGNALS
TIME STROBE H
MEM CLEAR
READ/WRITE CURRENT
INHIBT CURRENT
MD DIR L
MA L
MD L
#1

*THIS PLOT SHOWS AN INITIAL FAST CYCLE
THE DOTTED LINES INDICATE A REGULAR CYCLE

#1: MD DIR GOES LOW ONLY IF F+ [D-AUTO INDEX]

CIRCUIT DELAYS ARE NEGLECTED IN THIS TIMING DIAGRAM

REV.	CHANGE NO.			
A	8E-00012	NARHI		
B	8E-00049	L. KLOTZ	11-10-71	

FIRST USED ON OPT/MOD: PDP8/E

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES

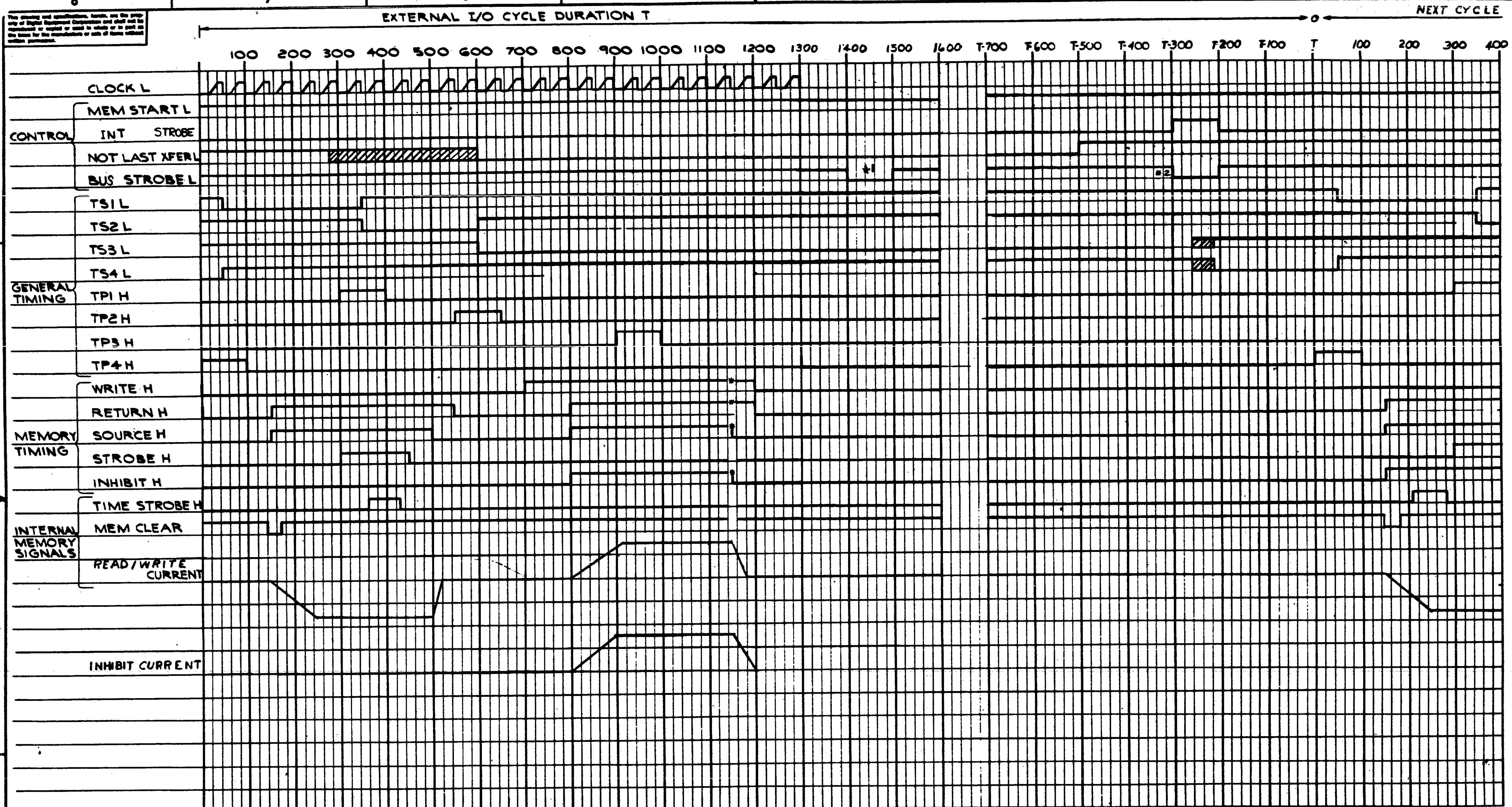
NEXT HIGHER ASSY: A-ML-PDP8/E-Ø

DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: TIMING (PDP8/E)

SIZE: D CODE: TD NUMBER: PDP8/E-Ø-Ø5 REV.: B

SCALE: NONE SHEET 1 OF 2



EXTERNAL I/O CYCLE DURATION T
NEXT CYCLE
100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 T-700 T-600 T-500 T-400 T-300 T-200 T-100 T 100 200 300 400
CONTROL
CLOCK L
MEM START L
INT STROBE
NOT LAST XFER L
BUS STROBE L
#1
#2
GENERAL TIMING
TS1 L
TS2 L
TS3 L
TS4 L
TP1 H
TP2 H
TP3 H
TP4 H
MEMORY TIMING
WRITE H
RETURN H
SOURCE H
STROBE H
INHIBIT H
INTERNAL MEMORY SIGNALS
TIME STROBE H
MEM CLEAR
READ/WRITE CURRENT
INHIBIT CURRENT

NOTE: * MEMORY SIGNALS TIME OUT, AS IN A FAST CYCLE

#1 GENERATED BY PERIPHERAL TO STROBE DATA

#2 GENERATED BY PERIPHERAL TO TERMINATE EXT. I/O CYCLE AND RESUME NORMAL OPERATION.

FIRST USED ON OPT/MOD: PDP8/E

DIGITAL EQUIPMENT CORPORATION

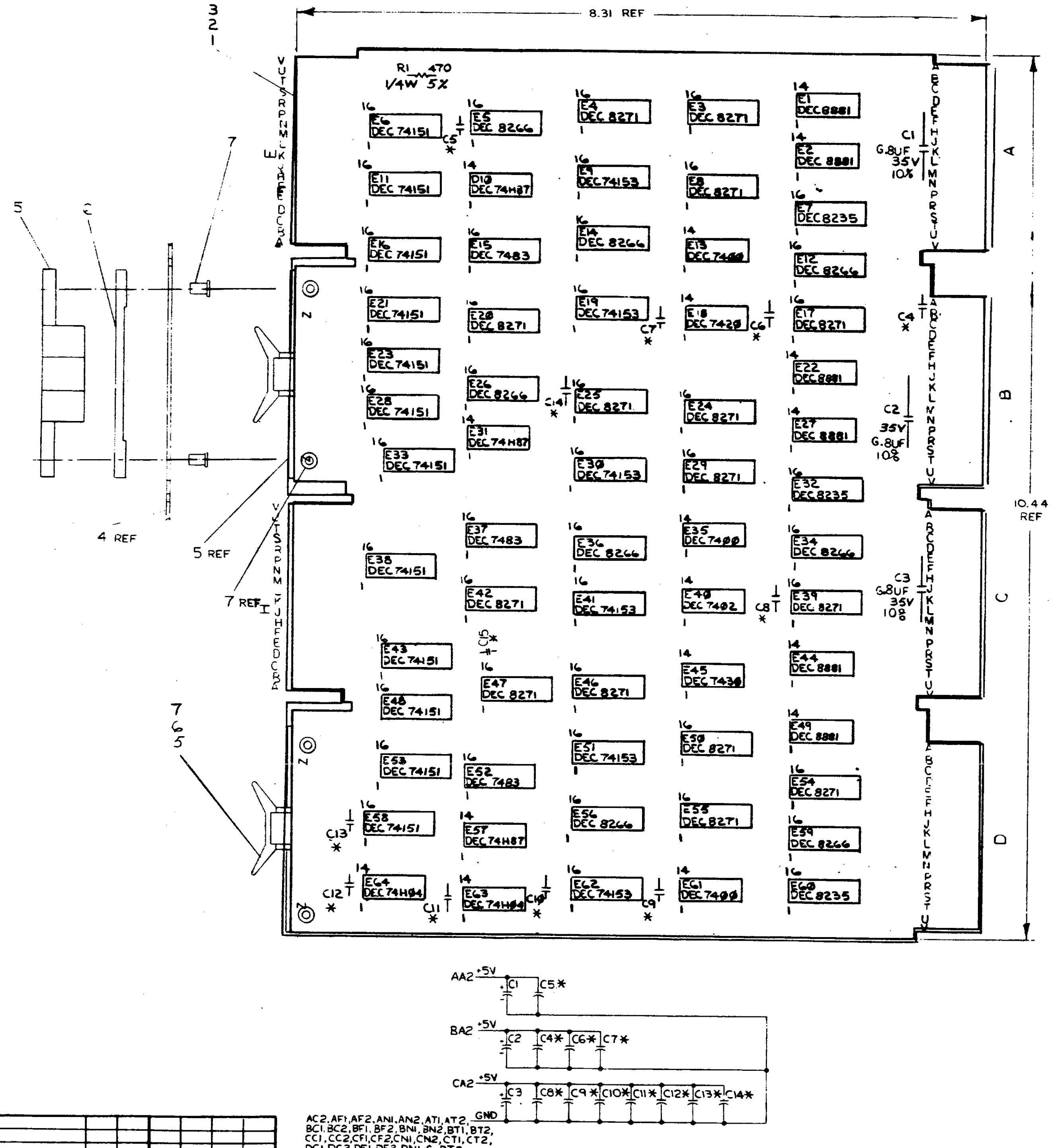
TITLE: TIMING (PDP8/E)

NEXT HIGHER ASSY: A-ML-PDP8/E-Ø

SCALE: NONE | SHEET 2 OF 2

D TD PDP8/E-Ø-05 REV. B

NOTES:
* THESE COMPONENTS MUST BE ON M8300 IF KL8-A/(M8313) IS USED ON SYSTEM.



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
* 1	C15	CAP 100PF D.M.	1000016	25
~~A/R~~		~~WIRE #30 AWG SOLID~~	[illegible]	24
6	E9, E19, E30, E41, E51, E62	I.C. DEC 74153	1909937	23
12	E6, E11, E16, E21, E23, E28, E33, E38, E43, E48, E53, E58	I.C. DEC 74151	1909936	22
3	E7, E32, E60	I.C. DEC 8235	1909935	21
8	E5, E12, E14, E26, E34, E36, E56, E59	I.C. DEC 8266	1909934	20
3	E15, E37, E52	I.C. DEC 7483	1909932	19
2	E63, E64	I.C. DEC 74H04	1909931	18
3	E10, E31, E57	I.C. DEC 74H87	1909927	17
6	E1, E2, E22, E27, E44, E49	I.C. DEC 8881	1909705	16
15	E3, E4, E8, E17, E20, E24, E25, E29, E39, E42, E46, E47, E50, E54, E55	I.C. DEC 8271	1909615	15
1	E40	I.C. DEC 7402	1909004	14
1	E45	I.C. DEC 7430	1905578	13
1	E18	I.C. DEC 7420	1905577	12
3	E13, E35, E61	I.C. DEC 7400	1905575	11
1	R1	RESISTOR 470 1/4W 5%	1300316	10
* 11	C4 - C14	CAP .22UF 50V CER	1010274-00	9
3	C1, C2, C3	CAP 6.8UF 35V 20% STANT	1000067	8
4		EYELETS GS4-11 STIMPSON	9006750	7
2		SPACER (CABLE CLAMP)	1202704	6
2		HANDLE FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009250	4
REF		MODULE HISTORY LIST	B-MH-M8300-0-6	3
REF		ASS'Y/DRILLING HOLE LAYOUT	D-AH-M8300-0-5	2
REF		X-Y COORDINATE HOLE LOC	K-CO-M8300-0-4	1

PARTS LIST

IC TYPE	GND	+5V
DEC 8235	8	16
DEC 7483	12	5
DEC 8271	8	16
DEC 8266	8	16
DEC 74153	8	16
DEC 74151	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT

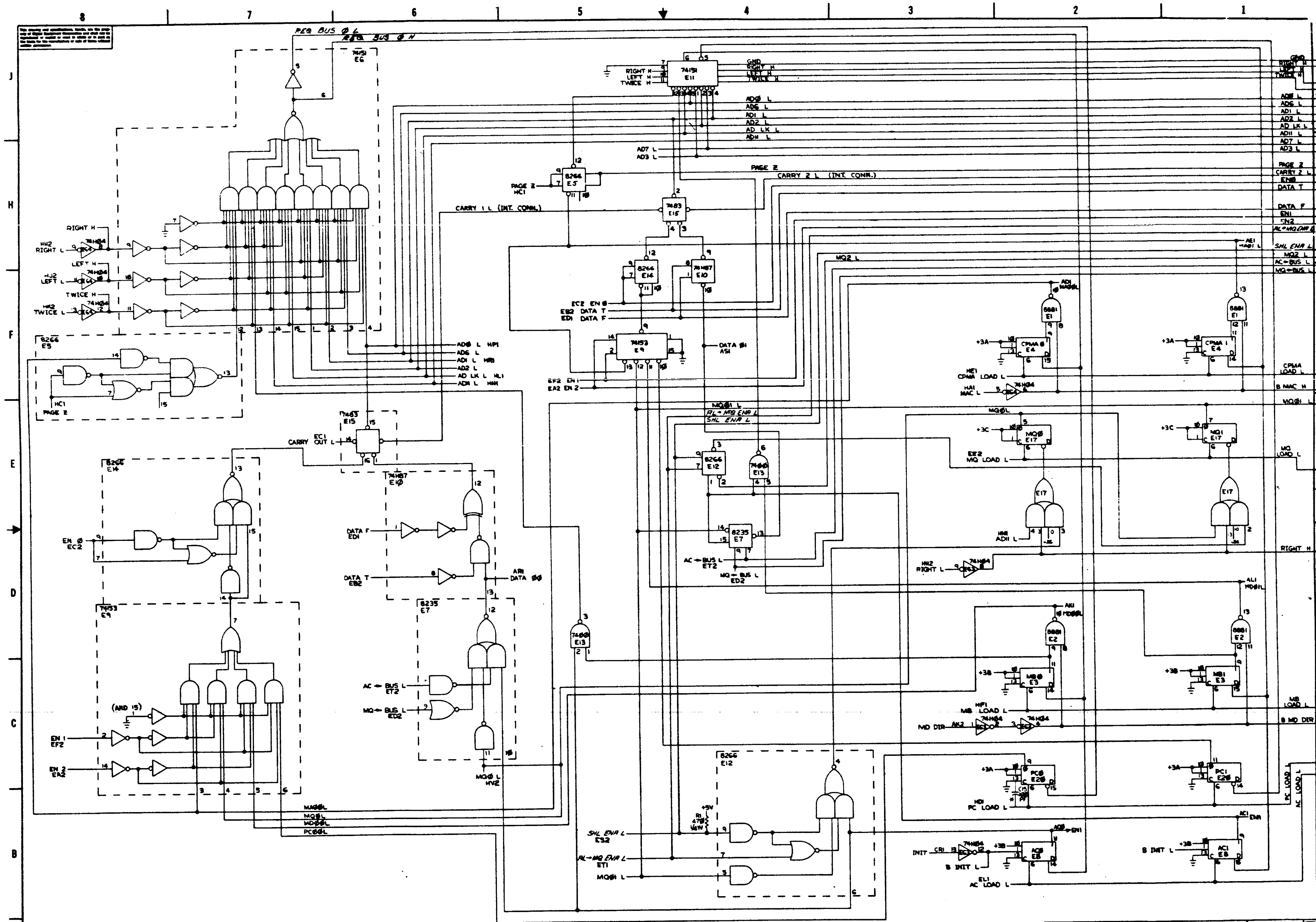
JUMPER LIST

EQUIPMENT CORPORATION

MAJOR REGISTERS (KK8/E)

D-UA-KK8-E-0

E CS M8300-0-1 F



CARRY IN TO A 7483 ADDER IS PIN 13
CARRY OUT OF A 7483 ADDER IS PIN 14 THUS

CARRY 2 L (INT CONN) — 7483 E15 | 7483 E15 | 7483 E37 | 7483 E37 — CARRY 6 L (INT CONN)

DENOTES CONN. BETWEEN E37 PIN 14 & E15 PIN 13
WHILE CARRY 6 L IS INTERNAL TO E37
AND CARRY 2 L IS INTERNAL TO E15

FOR SIMPLICITY OF DRAWING THE FOLLOWING
PROCEDURES HAVE BEEN USED TO ELIMINATE LINES:

14, 2 — 74153 E19 | 74153 E30 — 1, 15

THIS DENOTES A CONNECTION BETWEEN E19 PIN 14 AND
E30 PIN 14, E19 PIN 2 AND E30 PIN 2 (ALSO PINS
1 AND 15 ON EACH I.C.). THIS ALSO IS TRUE FOR
OTHER CASES SUCH AS 8266, 74H87, AND 74151.

FIRST USED ON OPTION/MODEL: PDP 8/E

PARTS LIST

EQUIPMENT CORPORATION

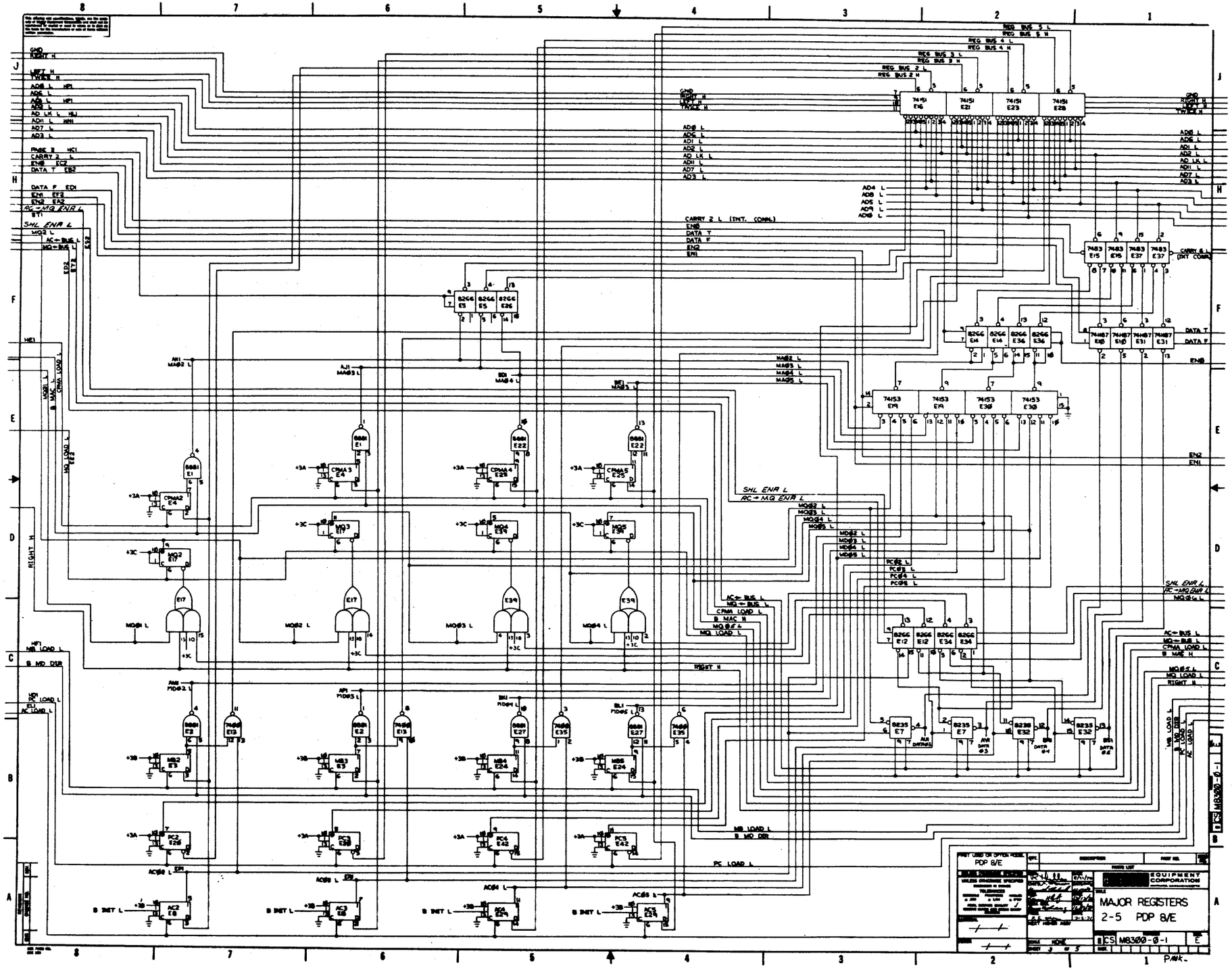
TITLE: MAJOR REGISTERS 0 & 1 PDP 8/E

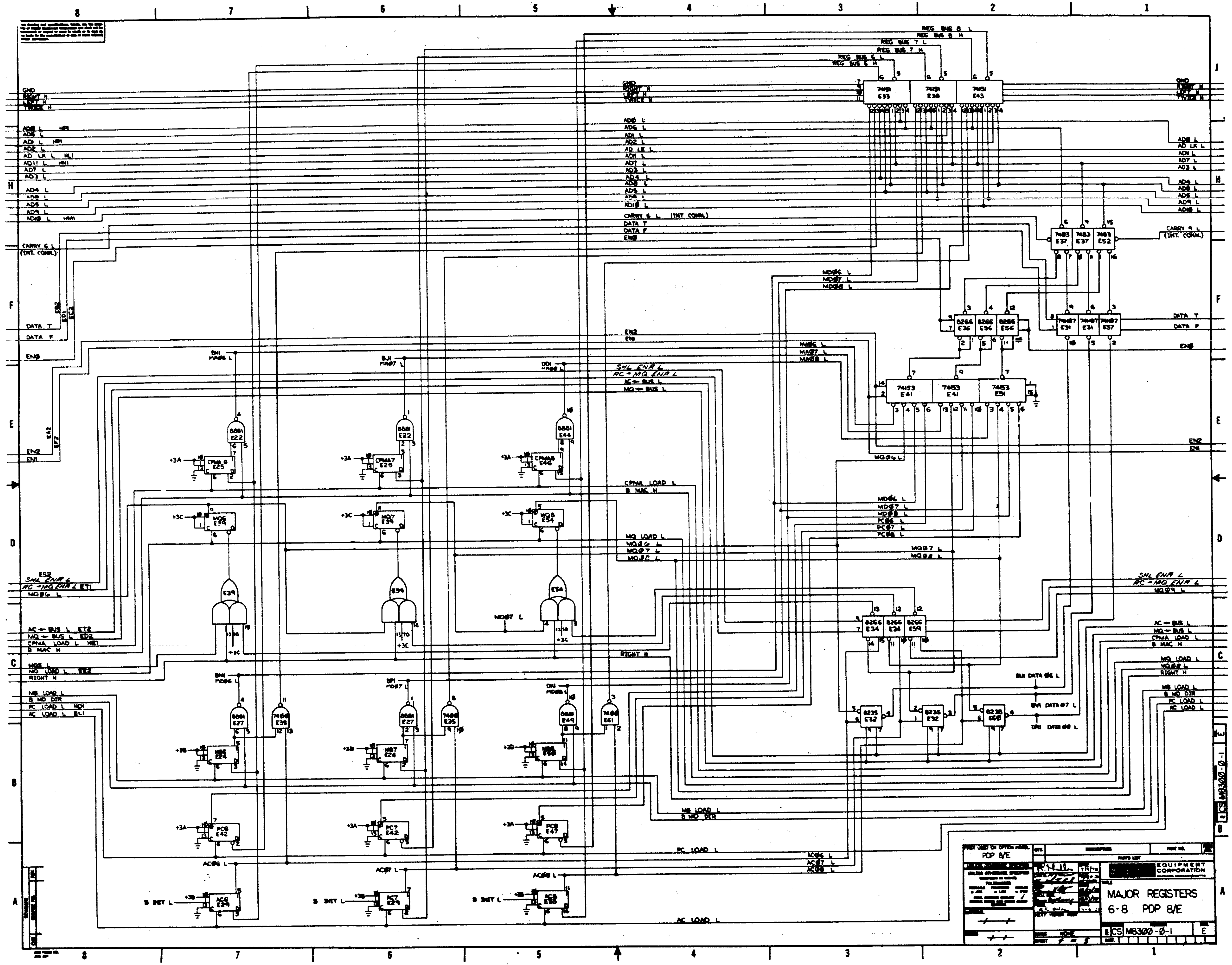
NEXT HIGHER ASSY: A-ML-KK8-E

SCALE: NONE

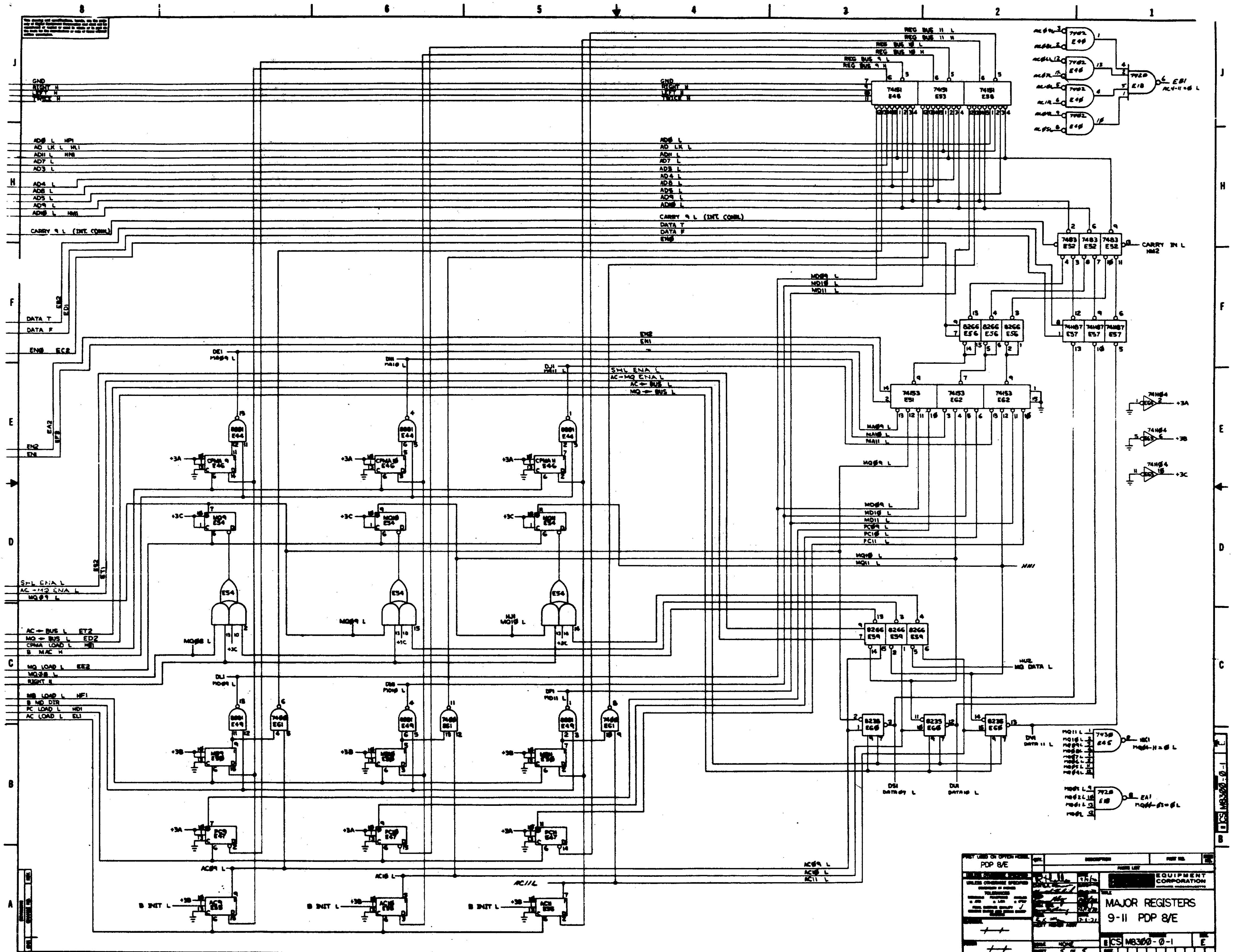
SHEET 2 OF 5

E CS M8300-0-1 REV. E


MAJOR REGISTERS
2-5 PDP 8/E
MAINDEC M8300-0-1
PDP 8/E
EQUIPMENT CORPORATION
SHL ENA L
AC→MQ ENA L
AC LOAD L
MQ LOAD L
PC LOAD L
MB LOAD L
B MD DIR
CPMA LOAD L
B MAC H
RIGHT H
AC→ BUS L
MQ→ BUS L



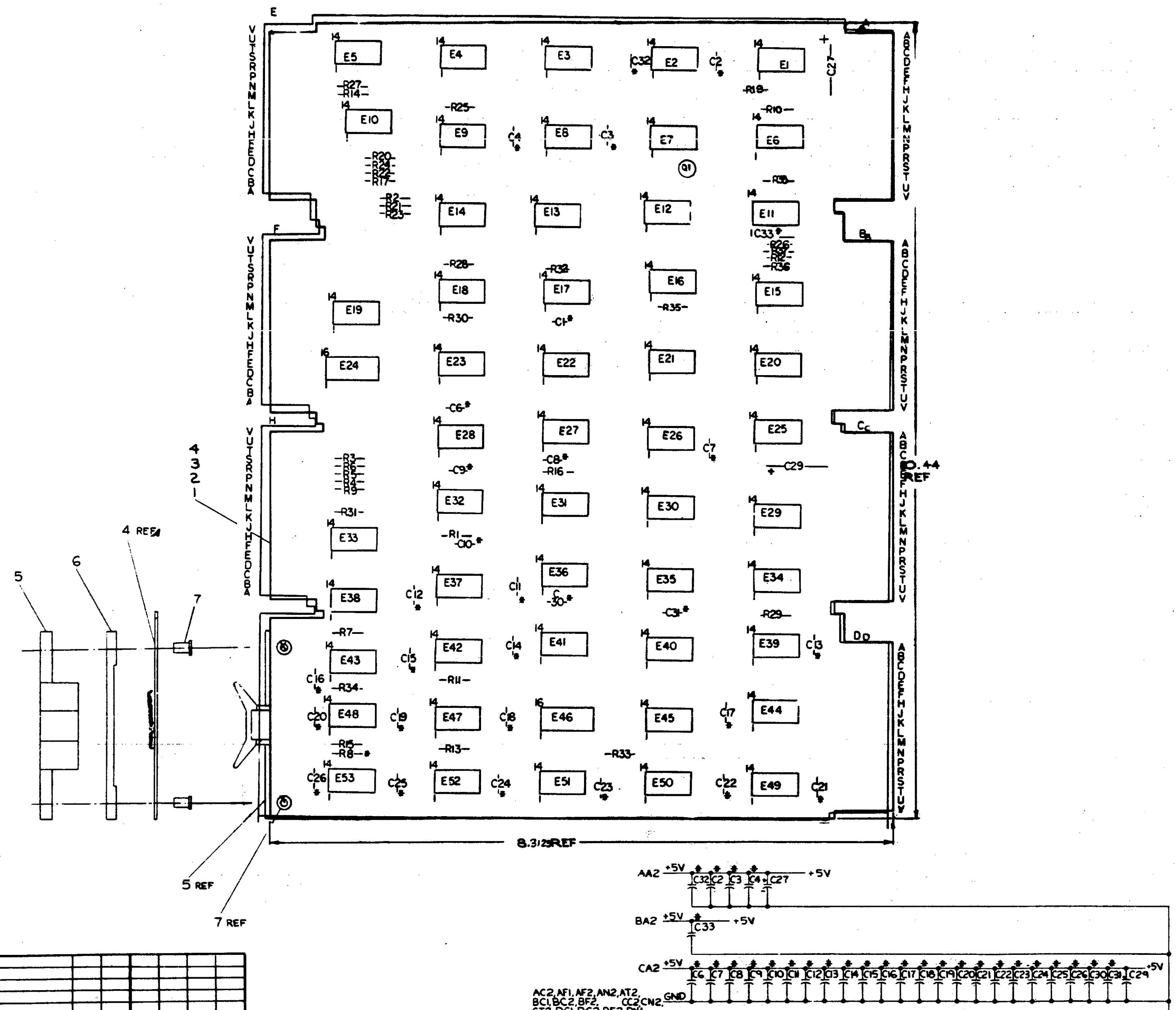
EQUIPMENT CORPORATION
MAJOR REGISTERS
6-8 PDP 8/E
CS M8300-0-1
E



PDP 8/E
EQUIPMENT CORPORATION
MAJOR REGISTERS
9-11 PDP 8/E
CS M8300-0-1
E
SCALE NONE
SHEET 5 OF 5
GND
RIGHT H
LEFT H
TWICE H
CARRY 9 L (INT. CONN.)
DATA T
DATA F
SHL ENA L
AC→MQ ENA L
AC←BUS L
MQ←BUS L
CPMA LOAD L
B MAC H
MQ LOAD L
MB LOAD L
B MQ DIR
PC LOAD L
AC LOAD L
B INIT L
CARRY IN L
MQ DATA L

(4Y)

NOTES:
* THESE COMPONENTS MUST BE ON THE M831Ø IF THERE IS A KL8-A(M8319) ON THE SYSTEM.



IC TYPE	GND	+5V
DEC 74151	8	16
DEC 8251	8	16
DEC 384	1	8

IC PIN LOCATIONS

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
* 1	R8	RES. 150, 1/4W, 5%	1300250	31
1	R37	RES. 3K, 1/4W, 5%	1300432	30
1	R38	RES. 100, 1/4W, 10%	1300231	29
1	Q1	TRANSISTOR DEC3009B	1503100	28
2	E40, E45	I.C. DEC 74H74	1909667	27
3	E18, E21, E35	I.C. DEC 74H00	1909056	26
2	E14, E36	I.C. DEC 74H04	1909931	25
1	R35	RES. CC, 1/4W, 5%	[illegible]	[illegible]
1	E38	I.C. DEC 7486	1910011	23
3	E9, E11, E13	I.C. DEC 7412	1909955	22
1	E24	I.C. DEC 74151	1909936	21
4	E8, E10, E27, E28	I.C. DEC 7405	1909930	20
12	E1-E5, E23, E43, E44, E49, E52, E53, E15	I.C. DEC 8881	1909705	19
7	E6, E16, E20, E26, E34, E47, E48	I.C. DEC 7404	1909686	18
1	E46	I.C. DEC 8251	1909594	17
1	E29	I.C. DEC 384	1909486	16
6	E19, E22, E25, E37, E41, E51	I.C. DEC 7402	1909004	15
2	E7, E30	I.C. DEC 7420	1905577	14
2	E12, E31	I.C. DEC 7410	1905576	13
3	E32, E39, E42	I.C. DEC 7400	1905575	12
3	E17, E33, E50	I.C. DEC 7474	1905547	11
33	R1-R7, R9-R17, R19-R34, R36	RES. 470, 1/4W, 5%	1300316	10
* 2.	C1-C4, C6-C26, C30-33	CAP. .22MFD 50V CER	1010274	9
2	C27, C29	CAP. 6.8UF, 35V, 20% S.TANT	1000067	8
2		EYELETS G64-11 STIMPSON	9006750	7
1		SPACER (CABLE CLAMP)	1202704	6
1		HANDLE, FLIP CHIP - MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009278	4
REF		MODULE ECO HISTORY	B-MH-M8310-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8310-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8310-0-4	1

PARTS LIST

DEC3009B	2N3646

REV COLUMN — PRINTED CIRCUIT BOARD REVISION

SEMICONDUCTOR CONVERSION CHART

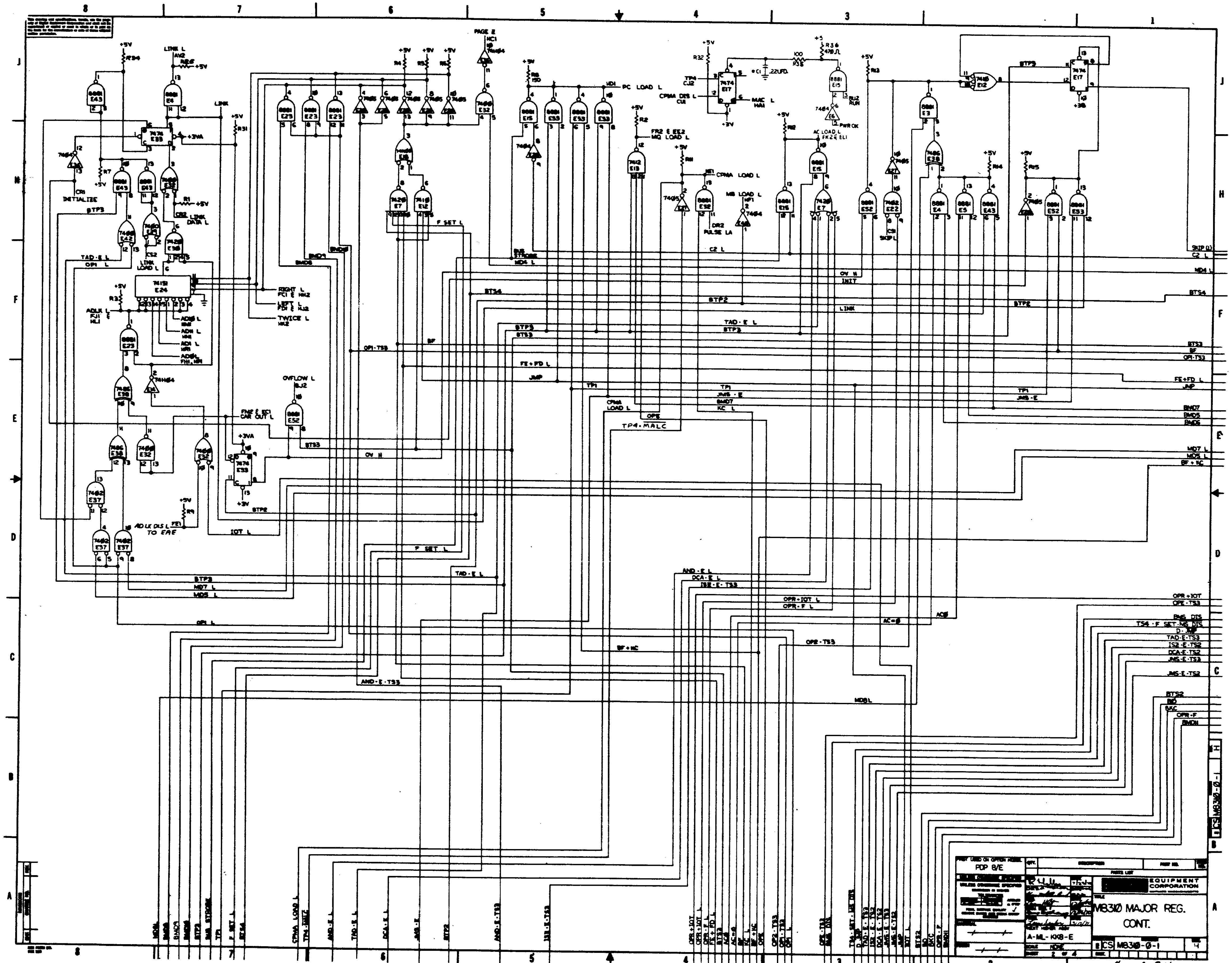
EQUIPMENT CORPORATION

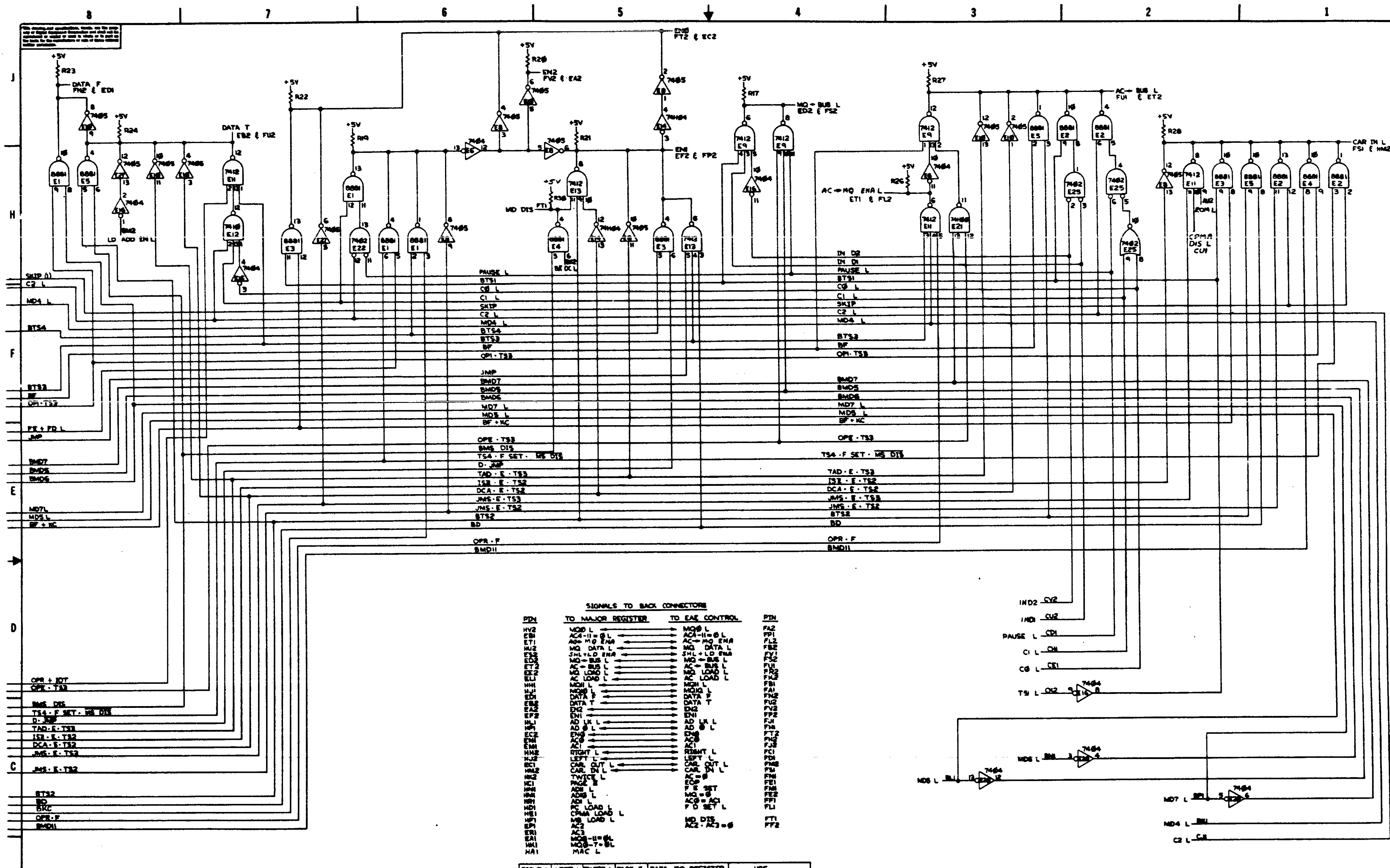
MAJOR REG. CONT. (M831Ø)

D-UA-KK8-E-Ø

SCALE 2/1 SHEET 1 OF 4

D CS M831Ø-Ø-1 H


PDP 8/E
EQUIPMENT CORPORATION
M8310 MAJOR REG. CONT.
A-ML-KK8-E
SCALE NONE
SHEET 2 OF 4
CS M8310-0-1
PC LOAD L
MQ LOAD L
INITIALIZE
LINK DATA L
RIGHT L
LEFT L
TWICE L
OVFLOW L
CAR OUT L
ADLK DIS L TO EAE
TP4 • MALC
PULSE LA
SKIP L
C2 L
MD4 L
BTS4
LINK
TAD • E L
FE + FD L
JMP
TP1
OV H
IOT L
F SET L
AND • E • TS3
MDBL



SIGNALS TO BACK CONNECTORS

PIN	TO MAJOR REGISTER	TO EAE CONTROL	PIN
HV2	MQ0 L ↔	MQ0 L	FA2
EB1	AC4-11 = 0 L ↔	AC4-11 = 0 L	FP1
ET1	AC ← MQ ENA ↔	AC ← MQ ENA	FL2
HU2	MQ DATA L ↔	MQ DATA L	FB2
ES2	SHL+LD ENA ↔	SHL+LD ENA	FV1
ED2	MQ ← BUS L ↔	MQ ← BUS L	FS2
ET2	AC ← BUS L ↔	AC ← BUS L	FU1
EE2	MQ LOAD L ↔	MQ LOAD L	FR2
EL1	AC LOAD L ↔	AC LOAD L	FK2
HH1	MQ11 L ↔	MQ11 L	FB1
HJ1	MQ10 L ↔	MQ10 L	FA1
ED1	DATA F ↔	DATA F	FN2
EB2	DATA T ↔	DATA T	FU2
EA2	EN2 ↔	EN2	FV2
EF2	EN1 ↔	EN1	FP2
HL1	AD LK L ↔	AD LK L	FJ1
HP1	AD 0 L ↔	AD 0 L	FM1
EC2	EN0 ↔	EN0	FT2
EN1	AC0 ↔	AC0	FN2
EM1	AC1 ↔	AC1	FJ2
HH2	RIGHT L ↔	RIGHT L	FC1
HJ2	LEFT L ↔	LEFT L	FD1
EC1	CAR. OUT L ↔	CAR. OUT L	FM2
HM2	CAR. IN L ↔	CAR. IN L	FS1
HK2	TWICE L	AC = 0	FN1
HC1	PAGE Z	EOP	FE1
HN1	ADII L	F E SET	FM1
HM1	AD10 L	MQ = 0	FE2
HR1	ADI L	AC0 = AC1	FF1
HD1	PC LOAD L	F D SET L	FL1
HE1	CPMA LOAD L		
HF1	MB LOAD L	MD DIS	FT1
EP1	AC2	AC2 · AC3 = 0	FF2
ER1	AC3		
EA1	MQ0-11=0L		
HK1	MQ0-7=0L		
HA1	MAC L		

RIGHT L	LEFT L	TWICE L	PAGE Z	DATA TO REGISTER	USE
L	L	L	L	MA ← 0-4 MD ← 5-11	PAGE ADDRESSING
L	L	H	X	MBX ∧ ACX	AND
L	H	L	X	ADDER (X-2)	RTR
L	H	H	X	ADDER (X-1)	RAR
H	L	L	X	ADDER (X+2)	RTL
H	L	H	X	ADDER (X+1)	RAL
H	H	L	X	ADDER (X+6)	BYTE SWAP
H	H	H	X	ADDER X	NO SHIFT
L	L	L	H	0 ← MA0-4 MD ← MA5-11	PG 0 ADDRESSING

EN0	EN1	EN2	INPUT TO ADDER
L	L	L	PC
L	L	H	MD
L	H	L	MQ
L	H	H	MA
H	X	X	H(ARITHMETIC ZERO)

DATA T	DATA F	INPUT TO ADDER
L	L	DATA BUS NOT
L	H	DATA BUS
H	L	H(ARITHMETIC ZERO)
H	H	L (ARITHMETIC ONE)

BIT X OF THE REGISTER SELECTED HERE → IS ADDED TO ← BIT X OF THE DATA BUS AS SELECTED HERE AND THE SUM (ADDER X) IS FED TO A MULTIPLEXER TO BE DECODED AS ABOVE. THE OUTPUT OF THIS MULTIPLEXER IS LOADED INTO WHICH EVER REGISTER IS CLOCKED.

SHL ENA L	AC←MQ ENA L	DATA ← MQ
L	L	MQX +1 0-10 MQ DATA ← MQ11
L	H	MQX +1 0-10 MQ DATA ← MQ11
H	L	AC (IN COMPLEMENT TO REDEFINE)
H	H	1 (0 ← MQ)

PART USED ON OPTION MODEL: PDP 8/E

EQUIPMENT CORPORATION

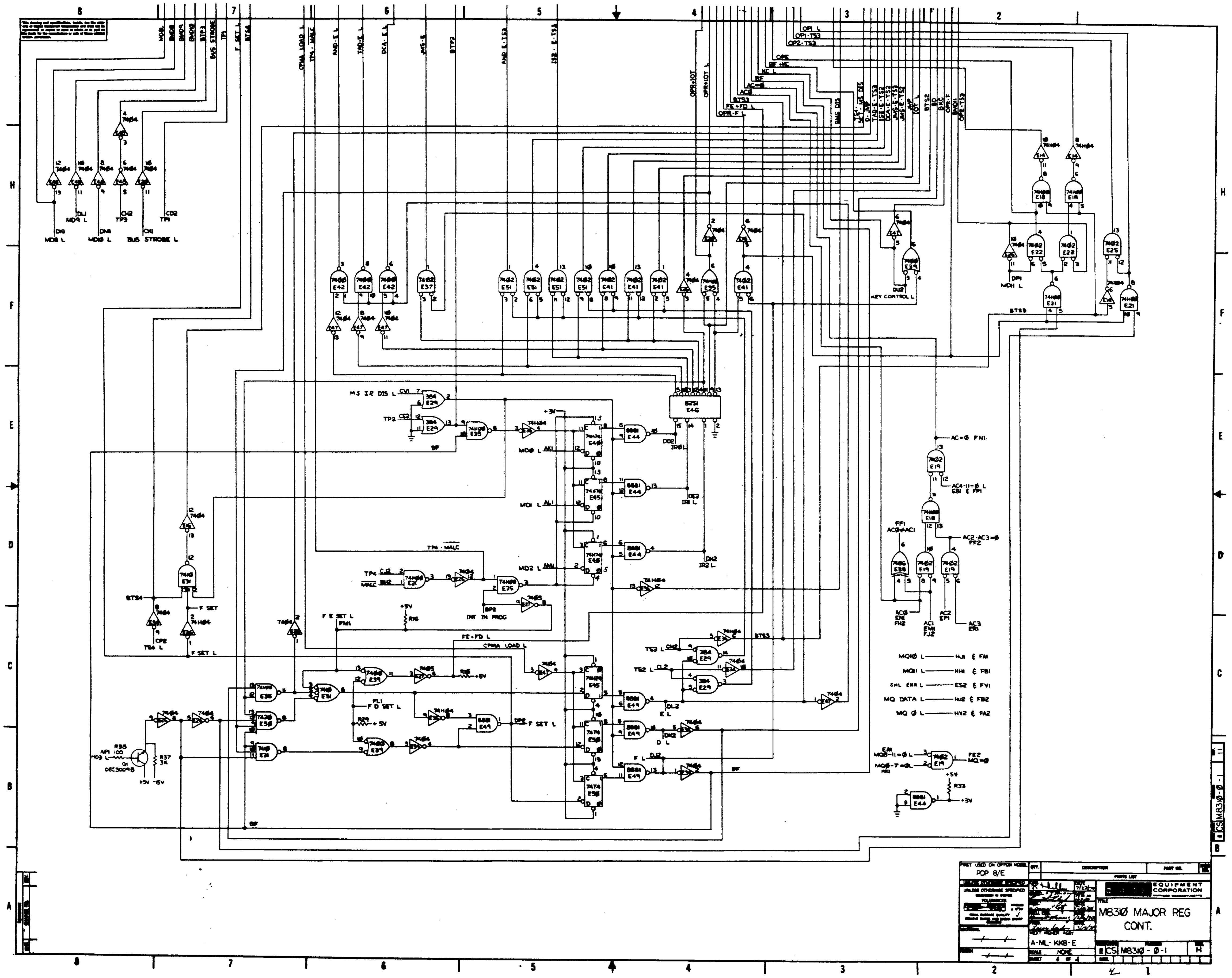
TITLE: M8310 MAJOR REG. CONT

NEXT HIGHER ASSY: A-ML-KK8-E

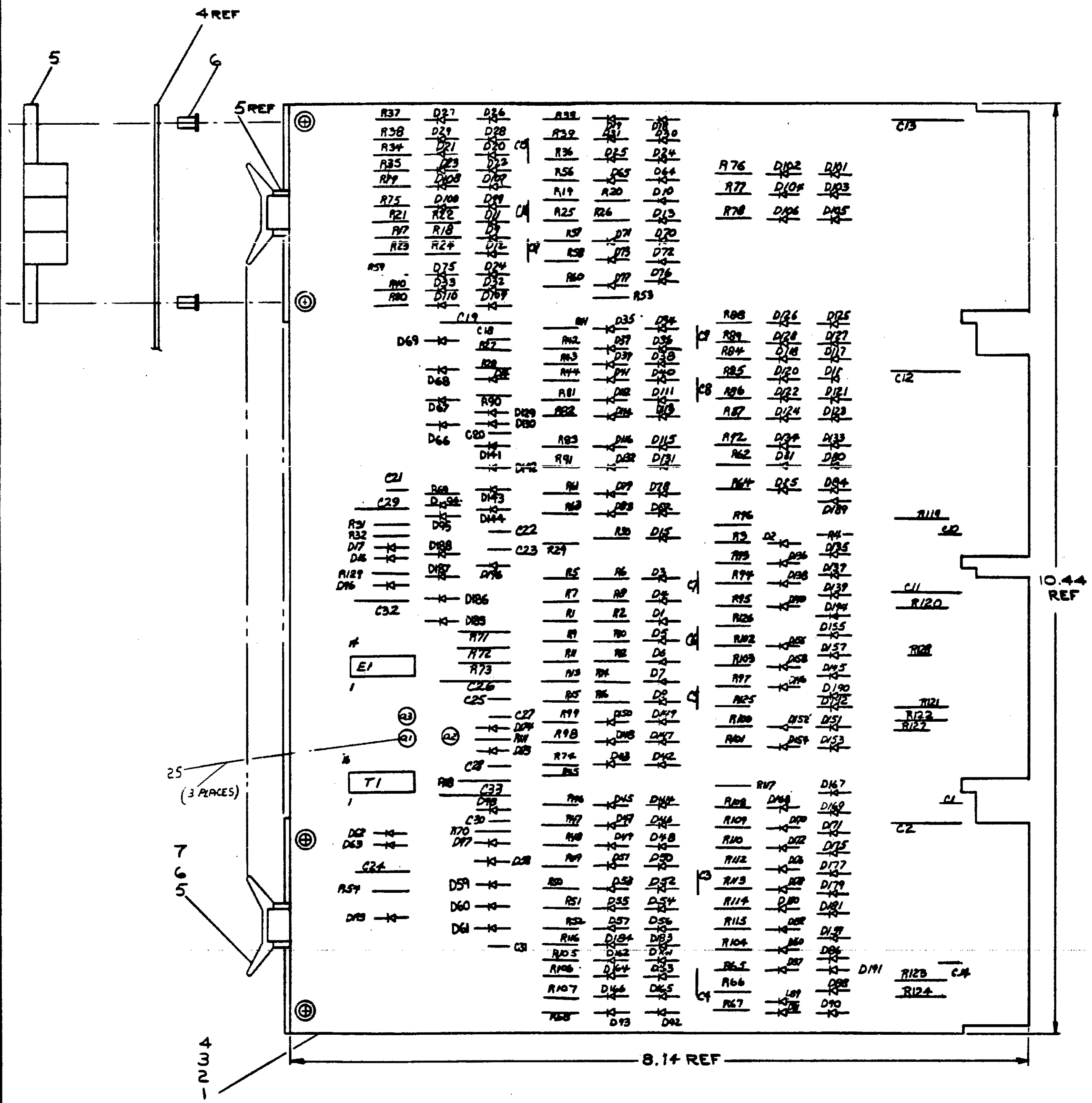
SCALE: NONE

SHEET 3 OF 4

E CS M8310-0-1 REV. H



FIRST USED ON OPTION MODEL
PDP 8/E
UNLESS OTHERWISE SPECIFIED
TOLERANCES
PARTS LIST
QTY.
DESCRIPTION
EQUIPMENT CORPORATION
TITLE
M831Ø MAJOR REG CONT.
A-ML-KK8-E
SCALE NONE
SHEET 4 OF 4
E CS M831Ø-Ø-1
H



NOTES:

1. UNLESS OTHERWISE SPECIFIED:
   CAPACITORS = .047UF 16V 15-20%
   RESISTORS = 1500 1/4W 5%
   DIODES = D664
2. CONNECT ALL PINS C, F, N, T (EXCEPT AC1) TOGETHER TO GROUND.
3. ITEM NO 8 (D664) MAY BE REPLACED WITH D600 P.N. 1105366 (REV C ONLY).
4. INSTALL ITEM 25 (TUBING) ON BASE LEAD OF EACH 2N3725.
5. ANY COLOR TUBING MAY BE USED FOR ITEM 25.

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
A/R		TUBING, 22 AWG	9107256-11	25
3		TRANS 2N3725	1510959	24
12	R57-R68	RES 1K 1/4 W 5%	1300365	23
[illegible]		GRIPLET	1212249-0	22
3	C24, C29, C32	CAP 330PF 100V 5%	1000023	21
7	C2, C11, C12, C13, C19, C26, C33	CAP 6.8UF 35V 20%	1000061	20
23	C1, C3-C10, C14-C18, C20-C23, C25, C27, C28, C30, C31	CAP .047UF 16V 15-20%	1009678	19
1	E1	IC DEC 7400	1905678	18
1	T1	PULSE XMFR 8010 DUAL INLINE	1609651	17
1	Q1	TRANS DEC 4008	1510015	16
6	R119-R124	RES 1K 1/2W 10%	1302137	15
4	R71-R73, R118	RES 1.2K 1/2W 10%	1300387	14
46	R53, R69, R74-R117	RES 1500 1/4W 5%	1300391	13
40	R2, R4, R6, R8, R10, R12, R14, R16, R18, R20, R22, R24, R26, R28, R30, R32-R52, R56, R70, R127, R128	RES 470 1/4W 10%	1300316	12
20	R1, R3, R5, R7, R9, R11, R13, R15, R17, R19, R21, R23, R25, R27, R29, R31, R54, R55, R125, R126	RES 150 1/4W 5%	1300250	11
2	D17, D97	DIODE D672	1105275	10
16	D58-D61, D66-D69, D141-D144, D185-D188	DIODE D662	1100113	9
177	D1-D16, D18-D57, D62-D65, D70-D96, D98-D140, D145-D184, D189-D196	DIODE D664	1100114	8
[illegible]		[illegible]	[illegible]	7
8		EYELET	9006732	6
4		HANDLE FLIP CHIP-MAGENTA	7008337-0	5
1		ETCHED CIRCUIT BOARD	5009486	4
REF		MODULE HISTORY LIST	B-MH-M8320-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8320-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8320-0-4	1

SEE NOTE 3 (item 8)

PARTS LIST

ETCH BOARD REV D

SEMICONDUCTOR CONVERSION CHART

DEC NO.	EIA NO.
DEC 4008	→
D664	1N3606
D672	1N3653
D662	1N645

EQUIPMENT CORPORATION

TITLE: BUS LOADS

D-UA-KK8-E-0

SCALE 2/1 SHEET 1 OF 2

E CS M8320-0-1 REV J

ORIGINATED M8320-00001 L. KLOTZ

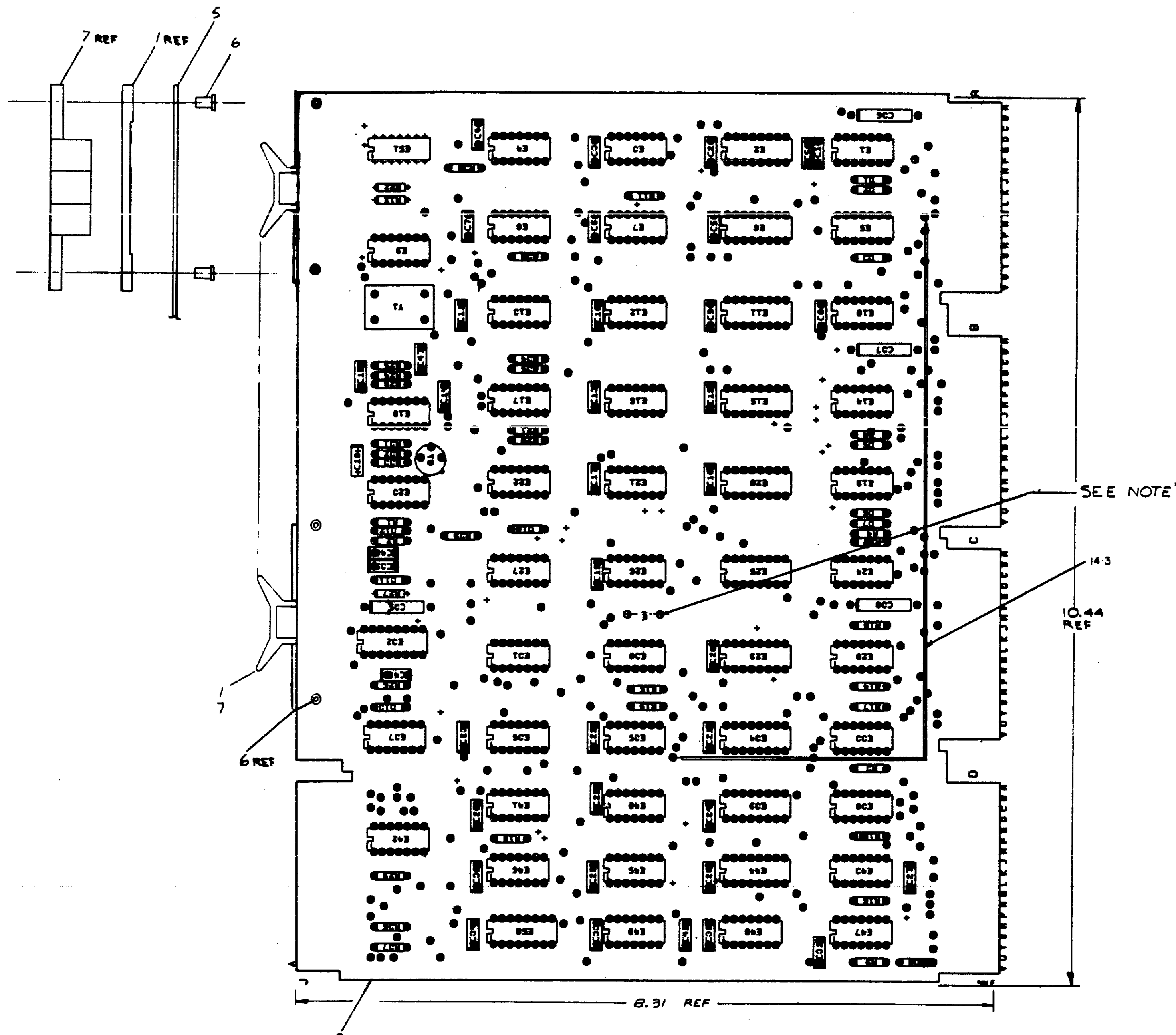
BUS LOADS

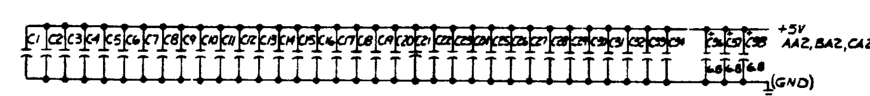
EQUIPMENT CORPORATION

DEC-M8320-0-1

NOTES:

1. W1 (JUMPER) TO BE INSERTED BY CUSTOMER ONLY.





GND = AC2, AF1, AN1, AN2, AT1, BC1, BC2, BF1, BN2, BT1, BT2, CC1, CC2, CF1, CF2, CN1, CT1, DC1, DF1, DN1, DT1, DT2.

DEC 74194	8	16	
DEC 8251	8	16	
DEC 5314	1	8	
DEC 5380	1	8	
DEC 5384	1	8	
IC TYPE	GND	+5V	

IC PIN LOCATIONS

ITEM NO	AWG	FROM PT	TO PT
—	—	W1	—

JUMPER LIST

SEE NOTE 1

QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	
AR		WIRE, 30 AWG	9105740-55	47
2	E47, E51	I.C. DEC 74S00	1910532-00	46
1	E27	I.C. DEC 7384	1910393	45
1	Y1	OSC 20 MHZ.	1811660-00	52
8	E9, E21, E26, E30, E31, E40, E45, E	I.C. DEC 74S74	1910544	51
1	E18	I.C. DEC 74S04	1910534	50
				49
2	R38, R39	RES 1K, 1/4W, 5%	1300365	48
2		SPLIT LUG	9008715	47
				46
1	E13	I.C DEC 8646	1911469	44
1	E4	I.C. DEC 5814	1910391	43
1	E50	I.C. DEC 82S18	1909594	42
1	E17	I.C. DEC 8881	1909705	41
1	E8	I.C DEC 74S11	1910537	40
2	E36, 41	I.C DEC 97401	1909973	39
10	E2, 6, 11, 15, 20, 25, 29, 34, 39, 44	I.C DEC 74194	1910625	38
1	E32	I.C DEC 74128	1910436	37
				36
12	E1, 3, 5, 7, 10, 14, 19, 24, 28, 33	I.C DEC 74S40	1910541	35
2	E12, E16	I.C DEC 7430	1905578	34
1	E46	I.C. DEC 7420	1905577	33
2	E37, E35	I.C. DEC 7417	1909929	32
1	E48	I.C. DEC 74S10	1910536	31
1	E42	I.C. DEC 7404	1909686	30
1	E22	I.C. DEC 7402	1909004	29
1	E23	I.C DEC 7400	1905576	28
				27
				26
1	Q1,	TRANSISTOR DEC 5???	1503100	25
1	R27	RES 47K 1/4W 5%	1302177	24
1	R26	RES 10K 1/4W 5%	1300479	23
1	R1	RES 3.3K 1/4W 5%	1300439	22
15	R2, 17, 11, 5, 18, R21, 22, 25, 29, 30, R32, R34, R36, R37	RES 470 1/4W, 5%	1300316	21
13	R3, 4, 9, 10, 13, 14, 16, 12, 20, ...	RES 150 1/4W, 5%	1300250	20
2	R31, R33	RES 27 1/4W, 5%	1301522	19
12	D1-D8, D10-D13	DIODE D664	1100114	18
				17
1	C35	CAP 39 µf, 10V, 10% S.TANT	1000076	16
3	C36-C38	CAP 6.8 µf, 35V, 10% S.TANT	1005508	15
				14
2	C39-C40	CAP .047 µf, 16V, -20% +50%	1009678	13
				12
37	C1-C34, C47, C49, C50	CAP .01 µf, 100V, 20% DISC	1001610	11
1	C48	CAP, 1000 PF, 100V 5% MICA	1000042	10
				9
				8
3		HANDLE FLIP-CHIP MAGENTA	9008537-06	7
6		EYELET SS4-11 STIMPSON	9006750	6
1		ETCHED CIRCUIT BOARD	5009707	5
REF		MODULE E C O HISTORY	B-IH-M8330-0-6	4
REF		ASSY/DRILLING HOLE LAYOUT	D-IA-M8330-0-5	3
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8330-0-4	2
3		SPACER CABLE CLAMP	1202704	1

PARTS LIST

FIRST USED ON OPTION/MODEL: MR8-F

ETCH BOARD REV: F

DEC NO.	EIA NO.	DEC NO.	EIA NO.
DEC 3009B	2N3646		
D664	1N3606		

SEMICONDUCTOR CONVERSION CHART

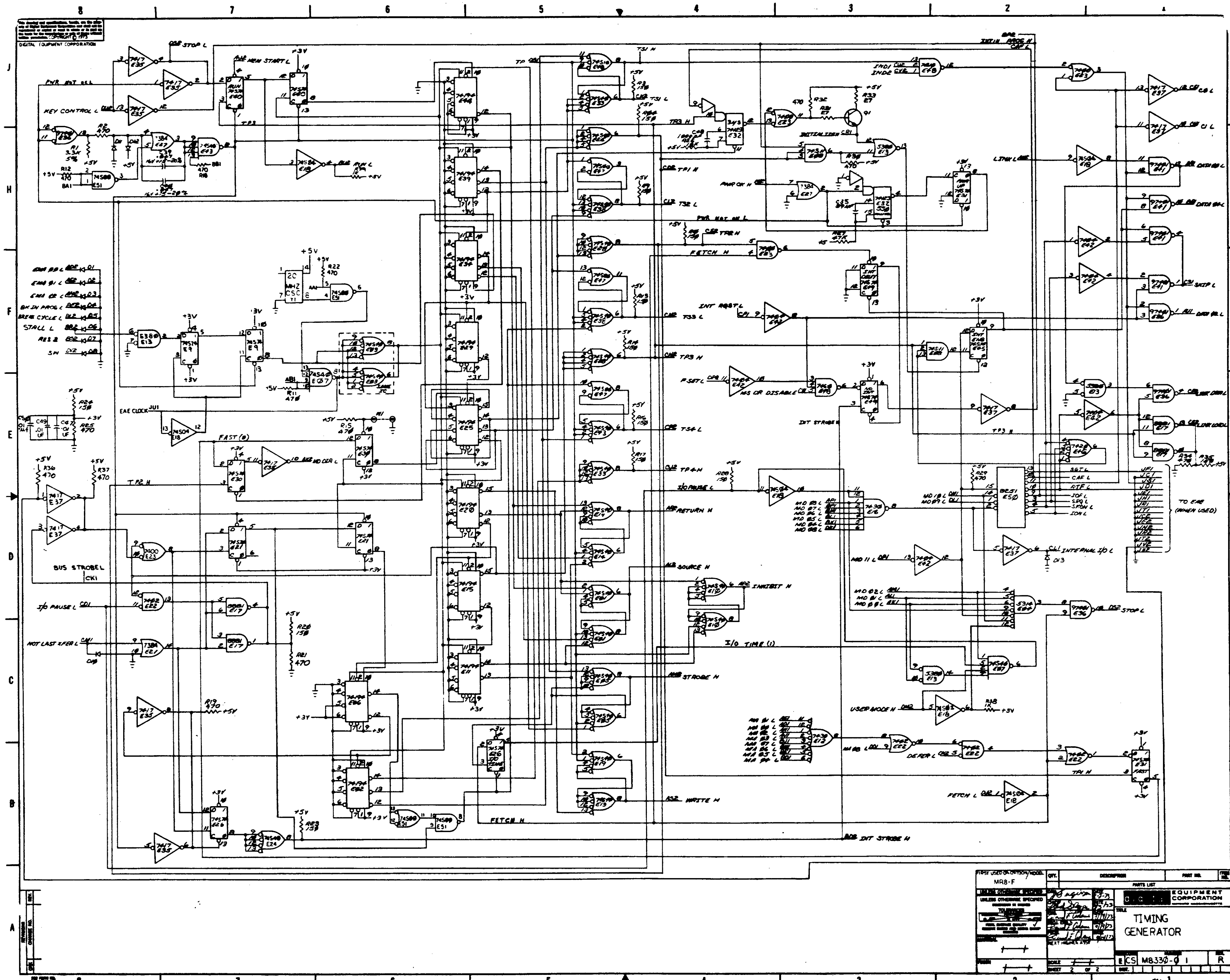
[redacted] EQUIPMENT CORPORATION

TIMING GENERATOR

E CS M8330-0-1 R

SHEET 1 OF 2

ECS M8330-0-1 R



EQUIPMENT CORPORATION
TIMING
GENERATOR
MR8-F
CS M8330-0 1 R
TO EAE (WHEN USED)
BUS STROBE L
INTERNAL I/O L
I/O TIME (1)
FETCH H
INT STROBE H
WRITE H
STROBE H
SOURCE H
RETURN H
INHIBIT H

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 11/19/74

TITLE FIELD INSTALLATION & ACCEPTANCE PROCEDURE FOR KM8-A

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
[signature] 12/20/74	[signature]	A	SP	KM8-A-1	

I GENERAL

This procedure defines the performance standards required of the KM8A*, option board #2. This procedure refers to both system and add-on acceptance.

NOTE: If KM8A was shipped as part of a PDP-8A system, then proceed to installation procedure.

* Memory Extension & Time Share
Bootstrap Loaders
Power Fail/Auto Restart

II INSPECTION

After removing the KM8A from the packing material, inspect the module for the following:

1. Inventory hardware against shipping list.
2. Inventory software against software list, if ordered.
3. Inventory prints against shipping list, if ordered.
4. Check module for loose or broken components.

III INSTALLATION PROCEDURE

Install the equipment using the following procedure:

1. Set the switches as indicated by the diagnostic write up.

NOTE: Refer to Operator's Handbook for switch setting descriptions.

2. Insure that the PDP-8A power is removed from the Omnibus™.

3. Insert the KM8A into the second or third slot of the Omnibus™.

4. Turn the power back "ON".

IV ACCEPTANCE PROCEDURE

Perform the acceptance procedure defined in Table A. If abnormal indications are encountered, refer to the diagnostic listing for the type of error. Reference the diagnostic write ups and Operator's Manual for instructions for loading diagnostics.

SIZE	CODE	NUMBER	REV
A	SP	KM8-A-1	

IV ACCEPTANCE PROCEDURE (continued)

Equipment required:

1. PDP-8A with 1K min. R/W Memory
2. Paper Tape Input Device
3. Diagnostic and Listings
4. Programmer's Console (KC8-A & DKC8-A)
5. W987 Quad Extender

NOTE: If the programmer's console and paper tape input device are not available as part of the system being used, they must be supplied in good working order by the customer.

TABLE A

Acceptance of KM8A with 4K of R/W Memory

Program Name	Maindec #	Accept Time	Restrictions
KM8A Option Test #2	08-DJKMA-PB	30 min	4K R/W Memory Min

Acceptance of KM8A with Less than 4K R/W Memory

KM8A Option Test #2 Segment #1 (RIM)	08-DJKMA -PM1	10 min	1K R/W memory min
KM8A Option Test #2 Segment #2 (RIM)	08-DJKMA -PM2	10 min	1K R/W Memory Min
KM8A Option Test #2 Segment #4 (RIM)	08-DJKMA -PM4	10 min	1K R/W Memory Min

BOOTSTRAP/AUTO RESTART FUNCTIONAL SWITCH SETTINGS

DESIRED FUNCTION	ACTIVATING SIGNAL	S1-4	S1-5	S1-6	S1-7	S1-8	S2-1
BOOTSTRAP ENABLED	"BOOT" SW	*	SPARE	OFF	OFF	ON	N/A
AUTO-RESTART DISABLED	N/A						
BOOTSTRAP ENABLED	"BOOT" SW	*		ON	ON	ON	N/A
AUTO-RESTART DISABLED	"AC LOW"						
BOOTSTRAP ENABLED	N/A	*		ON	ON	OFF	N/A
AUTO-RESTART DISABLED	"AC LOW"						
BOOTSTRAP ENABLED	"AC LOW"	*		ON	OFF	OFF	N/A
AUTO-RESTART DISABLED	N/A						
BOOTSTRAP ENABLED	"AC LOW" OR "BOOT" SW	*	SPARE	ON	OFF	ON	N/A
AUTO-RESTART DISABLED	N/A						
TIME SHARE DISABLED	N/A	N/A	N/A	N/A	N/A	N/A	ON
TIME SHARE DISABLED	N/A	N/A	N/A	N/A	N/A	N/A	OFF

NOTES: * S1-4 "OFF"—BOOTSTRAP CAN BE ACTIVATED BY "BOOT" SW EITHER IN THE RUN OR "RUN" STATE.
S1-4 "ON"—BOOTSTRAP CAN BE ACTIVATED BY "BOOT" SW IN THE RUN STATE.

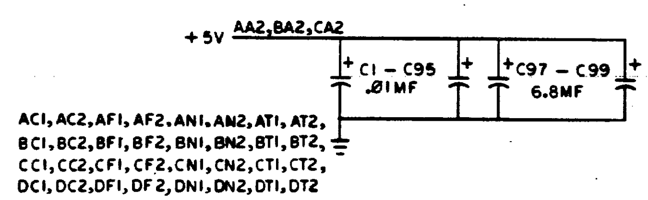
1. "AC LOW" WILL CAUSE AUTO-RESTART OR BOOTSTRAP DEPENDING ON SWITCH SETTINGS TO OCCUR ONLY IN THE "RUN" OR STOPPED STATE S1-6,7,8 "OFF"—BOOTSTRAP AND AUTO-RESTART DISABLED.
2. E76 AND E61 ARE NOT ON THE YC VARIATION KM8-AD. ALL OTHER PARTS REMAIN THE SAME.
3. IF AUTO-RESTART IS ENABLED, THE AUTO-START FEATURE OF THE CPU (M8315) MUST BE DISABLED.

BOOTSTRAP SELECT SWITCH SETTINGS FOR 158A2/159A2 ROMS

PROGRAM	S2-5	S2-6	S2-7	S2-8	S1-1	S1-2	S1-3	ROM ST ADD	MEM ADD START
HI-LO PT RDR	ON	ON	ON	OFF	ON	ON	ON	2Ø	7734
RK8E	ON	OFF	ON	OFF	ON	OFF	ON	124	24
RX8E	ON	OFF	OFF	ON	OFF	ON	ON	15Ø	33
RF08/DF32D	OFF	ON	OFF	ON	OFF	ON	ON	252	775Ø
TA8E	OFF	ON	OFF	OFF	OFF	ON	OFF	272	4ØØØ

3. BOOTSTRAP SELECT SWITCHES ARE DEFINED AS FOLLOWS:
   A. ROM ADDRESS RANGE: Ø-377
   B. ON=LOGIC Ø OR LOW; OFF=LOGIC 1 OR HIGH
   C. ORDER OF SIGNIFICANCE
      $S_2 5 = 2^7 = 200$
      $S_2 6 = 2^6 = 100$
      $S_2 7 = 2^5 = 40$
      $S_2 8 = 2^4 = 20$
      $S_1 1 = 2^3 = 10$
      $S_1 2 = 2^2 = 4$
      $S_1 3 = 2^1 = 2$

THE LSB OF ADDRESS IS CONTROLLED BY THE BOOTSTRAP/AUTO-RESTART LOGIC



BOOTSTRAP SELECT SWITCH SETTINGS FOR 465A2/469A2 ROMS

PROGRAM	S2-5	S2-6	S2-7	S2-8	S1-1	S1-2	S1-3	ROM ST ADD	MEM ST ADD
HI-LO PTR	ON	ON	ON	OFF	ON	ON	ON	20	7734
RK8E	ON	OFF	ON	OFF	ON	OFF	ON	124	24
* RX8E	ON	OFF	OFF	ON	OFF	ON	ON	150	33
RL8A	OFF	ON	OFF	OFF	OFF	ON	OFF	272	1

* RX8E BOOT FOR BOTH RXØ1 AND RXØ2

AUTO-RESTART SELECT SWITCH SETTINGS

RESTART ADDRESS	S2-2	S2-3	S2-4
Ø	OFF	OFF	OFF
2ØØ	OFF	ON	OFF
2ØØØ	ON	OFF	OFF
42ØØ	ON	ON	OFF

4. AUTO RESTART SELECT SWITCHES ARE DEFINED AS FOLLOWES:
   A. ROM ADDRESS RANG; Ø-16.
   B. ON=LOGIC 1 OR LOW; OFF=LOGIC Ø OR HIGH.
   C. ORDED OF SIGNIFICANCE
      $S_2 2 = 2^3 = 10$
      $S_2 3 = 2^2 = 4$
      $S_2 4 = 2^1 = 2$

5. TO CONFIGURE MODULE FOR USE WITH KT8-A OPTION, INSTALL JUMPERS AS SHOWN BELOW.

	W1	W2	W3	W4
NORMAL	IN	OUT	OUT	OUT
WITH KT8A	OUT	IN	IN	IN

PART CALLED FOR			SUBSTITUTE PART		
QTY	PART NO	DESCRIPTION	QTY	PART NO	DESCRIPTION
96	1001610-01	.01UF DISC	96	1001610-01	.01UF GLASS
3	1503100	DEC 3009B	3	1503338	DEC 6531
6	1911330	74173	6	1911711	8T10
1	1909704	314	1	1910391	5314
			1	1909972	6314
			1	1910389	7314
6	1909705	6661	6	1909973	97401
1	23158A2	ROM 1 (E76)	1	23465A2	ROM 1 (E76)
1	23159A2	ROM 2 (E61)	1	23469A2	ROM 2 (E61)

DRN: R. KOPPENAL	DATE: 27 AUG. 80
CHK: [signature]	DATE: 10-31-80
ENG: [signature]	DATE: 31 OCT 80
ENG. APP: [signature]	DATE: 31 OCT 80
MFG. ENG: E. Fadd	DATE: 31 OCT 80
B-DD-M8317-YB	

digital

TITLE: OPTION BOARD #2

DOCUMENT NUMBER: D CS M8317-YB-1 REV. T

SHEET 1 OF 6

INTERRUPT INHIBIT F/F

USER INTERRUPT FLIP-FLOP

MEMORY EXT/TIME SHARE REGISTER CONTROL

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BOARD #2 (KMTS 1)	D	CS	M8317-YB-1	T
SCALE NONE	SHEET 2 OF 6	DIST.		

KMTS 1 ENA MUX OUT L
KMTS 2 AH
KMTS 2 B H
KMTS2 C H
KMTS1 RIF L
KMTS1 IBIN L
KMTS1 DF IN L
KMTS1 DF IB UB CLK H
KMTS1 DATA IN H
KMTS1 DF ON (Ø) H
KMTS1 EMA DIS (Ø) H
KMTS1 IF,DF OUT L
KMTS1 RDF L
BBUF MD 6 H
BBUF DATA 6 H
BBUF MD 7 H
BBUF DATA 7 H
BBUF MD 8 H
BBUF DATA 8 H
BBUF DATA 5 H
BBUF DATA 9 H
BBUF DATA 10 H
BBUF DATA 11 H
KMTS1 IF IN L
KMTS2 A H
KMTS2 B H
KMTS2 C H
KEY CONTROL L
KMTS1 CLK IF H
KMTS1 CLR/CLK H
KMTS2 USER MODE H
KMTS2 TIME SHARE DISA L
KMTS1 UB IN L
KMTS1 IB UB OUT L
KMTS1 IB IN L
BBUF TS1 H
+3VB
KMTS2+1 → INT IN H
DATA 6 L
DATA 7 L
DATA 8 L
DATA 9 L
DATA 10 L
DATA 11 L
DATA 5 L
EMA Ø L
EMA 1 L
EMA 2 L

REVISIONS		
CHK	CHANGE NO.	REV.

INSTRUCTION FIELD, DATA FIELD, IF & DF SAVE FIELD, INSTRUCTION BUFFER, USER BUFFER

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BOARD #2 (KMTS2)	D	CS	M8317-YB-1	T
SCALE NONE	SHEET 3 OF 6		DIST.	

INTERRUPT INHIBIT F/F

USER INTERRUPT FLIP-FLOP

MEMORY EXT/TIME SHARE REGISTER CONTROL

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BOARD #2 (KMTS 1)	D	CS	MB317-YB-1	T
SCALE NONE	SHEET 2 OF 6	DIST.		

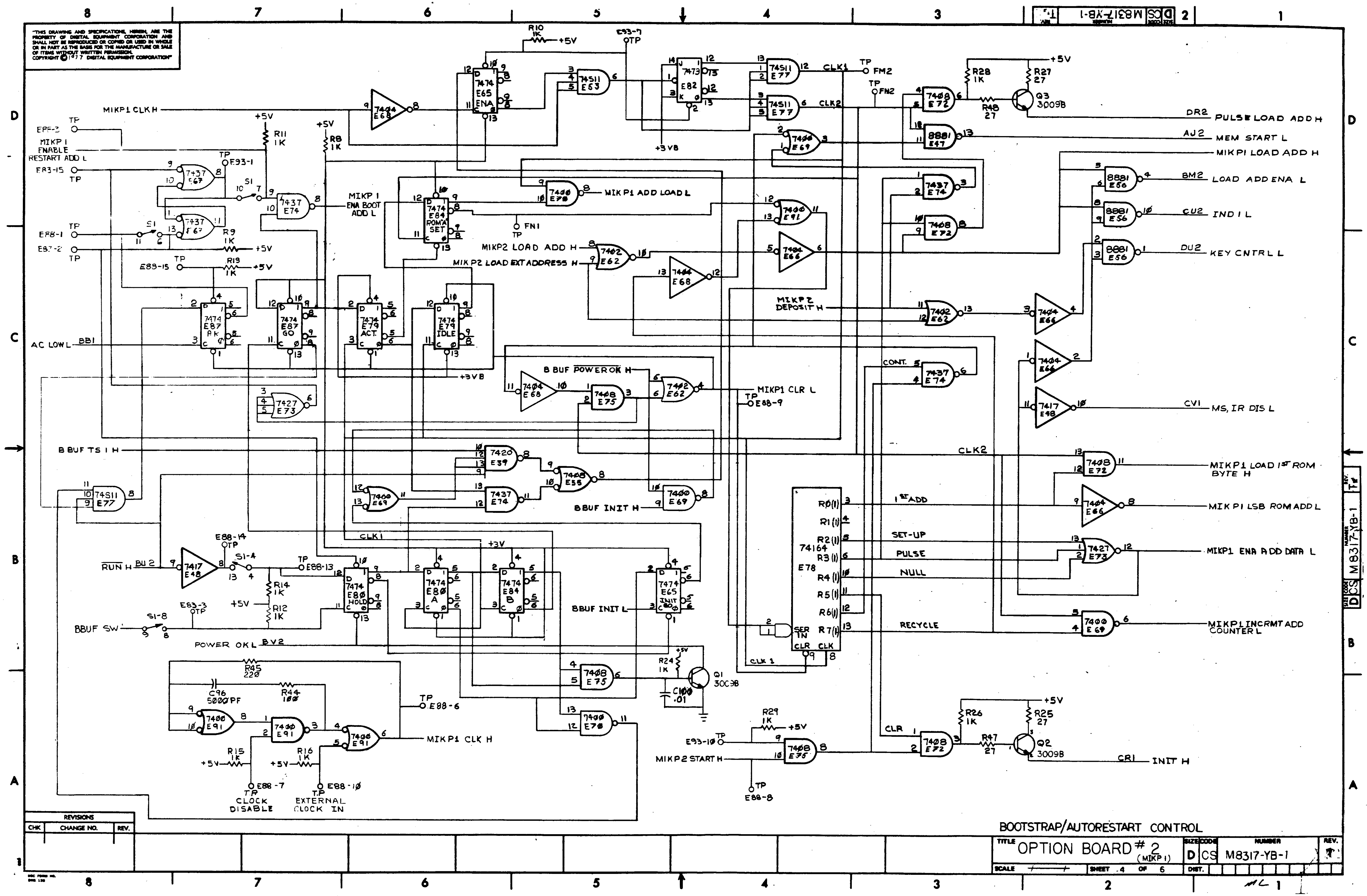
KMTS1 ENA MUX OUT L
KMTS2 AH
KMTS2 B H
KMTS2 C H
KMTS1 RIF L
KMTS1 IB IN L
KMTS1 DF IN L
KMTS1 DF IB UB CLK H
KMTS1 DATA IN H
KMTS1 DF ON (0) H
KMTS1 EMA DIS (0) H
KMTS1 IF, DF OUT L
KMTS1 RDF L
BBUF MD 6 H
BBUF DATA 6 H
BBUF MD 7 H
BBUF DATA 7 H
BBUF MD 8 H
BBUF DATA 8 H
BBUF DATA 5 H
BBUF DATA 9 H
BBUF DATA 10 H
BBUF DATA 11 H
KMTS1 IF IN L
KMTS2 A H
KMTS2 B H
KMTS2 C H
KEY CONTROL L
KMTS1 CLK IF H
KMTS1 CLR/CLK H
KMTS2 USER MODE H
KMTS2 TIMESHARE DISA L
BBUF TS1 H
KMTS1 IB IN L
KMTS1 UB IN L
KMTS1 IB UB OUT L
KMTS2+1 → INT IN H
+3VB
TIME SHARE DISA.

DATA 6 L
DATA 7 L
DATA 8 L
DATA 9 L
DATA 10 L
DATA 11 L
DATA 5 L
EMA 0 L
EMA 1 L
EMA 2 L

INSTRUCTION FIELD, DATA FIELD, IF & DF SAVE FIELD, INSTRUCTION BUFFER, USER BUFFER

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE OPTION BOARD #2 (KMTS2)
SIZE D CODE CS NUMBER M8317-YB-1 REV. T
SCALE NONE SHEET 3 OF 6 DIST.



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MIKP1 CLK H
MIKP1 ENABLE RESTART ADD L
E83-15
E88-1
E87-2
E89-15
E93-1
MIKP 1 ENA BOOT ADD L
MIKP1 ADD LOAD L
MIKP2 LOAD ADD H
MIKP2 LOAD EXT ADDRESS H
MIKP2 DEPOSIT H
AC LOW L
B BUF POWER OK H
MIKP1 CLR L
E88-9
B BUF TS 1 H
B BUF INIT H
BBUF INIT L
RUN H
BBUF SW
POWER OK L
CLK1
CLK2
TP FM2
TP FN2
PULSE LOAD ADD H
MEM START L
MIKP1 LOAD ADD H
LOAD ADD ENA L
IND 1 L
KEY CNTRL L
CONT.
MS, IR DIS L
MIKP1 LOAD 1ST ROM BYTE H
1ST ADD
SET-UP
PULSE
NULL
RECYCLE
MIKP1 LSB ROM ADD L
MIKP1 ENA ADD DATA L
MIKP1 INCRMT ADD COUNTER L
74164 E78
CLR
INIT H
MIKP2 START H
E93-10
E88-8
MIKP1 CLK H
E88-6
E88-7 CLOCK DISABLE
E88-10 EXTERNAL CLOCK IN
BOOTSTRAP/AUTORESTART CONTROL
TITLE OPTION BOARD # 2 (MIKP1)
SIZE D CODE CS NUMBER M8317-YB-1 REV. T
SHEET 4 OF 6

BBUF TS2 H
MIKP 1 ENA ADD DATA L
MIKP 1 LOAD 1ST ROM BYTE H
MIKP 1 CLR L
MIKP 2 DEPOSIT H
MIKP 2 LOAD ADD H
MIKP 2 LOAD EXT ADDRESS H
MIKP E START H
MIKP 1 LSB ROM ADD L
DATA Ø L
DATA 1 L
DATA 2 L
DATA 3 L
DATA 4 L
DATA 5 L
DATA 6 L
DATA 7 L
DATA 8 L
DATA 9 L
DATA 10 L
DATA 11 L
BATTERY EMPTY L
AC LOW L
BBUF POWER OR L
INT RQST L
SKIP L
INT I/O L
BBUF POWER OK H
BBUF TP5 H
BBUF MD11 H
BBUF MD9 H
BBUF MD8 H
BBUF MD7 H
BBUF MD6 H
BBUF MD5 H
BBUF I/O PAUSE H
MIKP 1 ENABLE RESTART ADD L
MIKP 1 ENA BOOT ADD L
MIKP 1 ADD LOAD L
MIKP 1 INCRMT ADD COUNTER L
BOOTSTRAP SELECT
AUTO RESTART SELECT
HI = "1"
LO = "Ø"

BOOTSTRAP/AUTO-RESTART ROMS & AC LOW AND BATTERY EMPTY FLAGS

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BOARD #2 (MKP 2)	D	CS	M8317-YB-1	T
SCALE NONE	SHEET 5 OF 6		DIST.	

M8317-YB-1 REV T

NOTE: SIGNALS WITH N/C HAVE NO CONNECTION

MD0 L AK1 — 8837 E6 — BBUF MD0 H
MD1 L AL1 — 8837 E6 — BBUF MD1 H
MD2 L AM1 — 8837 E6 — BBUF MD2 H
MD3 L AP1 — 8837 E6 — BBUF MD3 H
MD4 L BK1 — 8837 E6 — BBUF MD4 H
MD5 L BL1 — 8837 E6 — BBUF MD5 H
MD6 L BM1 — 8837 E21 — BBUF MD6 H
MD7 L BP1 — 8837 E21 — BBUF MD7 H
MD8 L DK1 — 8837 E21 — BBUF MD8 H
MD9 L DL1 — 8837 E21 — BBUF MD9 H
MD10 L DM1 — 8837 E21 — BBUF MD10 H
MD11 L DP1 — 8837 E21 — BBUF MD11 H

DATA 0 L AR1 — 8837 E11 — BBUF DATA 0 H N/C
DATA 1 L AS1 — 8837 E11 — BBUF DATA 1 H N/C
DATA 2 L AU1 — 8837 E11 — BBUF DATA 2 H N/C
DATA 3 L AV1 — 8837 E11 — BBUF DATA 3 H N/C
DATA 4 L BR1 — 8837 E11 — BBUF DATA 4 H N/C
DATA 5 L BS1 — 8837 E11 — BBUF DATA 5 H
DATA 6 L BU1 — 8837 E18 — BBUF DATA 6 H
DATA 7 L BV1 — 8837 E18 — BBUF DATA 7 H
DATA 8 L DR1 — 8837 E18 — BBUF DATA 8 H
DATA 9 L DS1 — 8837 E18 — BBUF DATA 9 H
DATA 10 L DU1 — 8837 E18 — BBUF DATA 10 H
DATA 11 L DV1 — 8837 E18 — BBUF DATA 11 H

INT IN PROG H BP2 — 8837 E41 — 74S64 E42 — BBUF INT IN PROG H

I/O PAUSE L CD1 — 8837 E36 — BBUF I/O PAUSE H
TS1 L CK2 — 8837 E36 — BBUF TS1 H
TS2 L CL2 — 8837 E36 — BBUF TS2 H
TS3 L CM2 — 8837 E36 — BBUF TS3 H N/C
TS4 L CP2 — 8837 E36 — BBUF TS4 H N/C
TP1 H CD2 — 8837 E36 — 74S64 E42 — BBUF TP1 H N/C
TP2 H CE2 — 8837 E41 — 74S64 E42 — BBUF TP2 H
TP3 H CH2 — 8837 E41 — 74S64 E42 — BBUF TP3 H

INITIALIZE H CR1 — R46 1K to +5V — 7437 E64 — BBUF INIT L
7437 E64 — BBUF INIT H

POWER OK L BV2 — 8837 E41 — BBUF POWER OK H
7437 E64 — BBUF POWER OK L

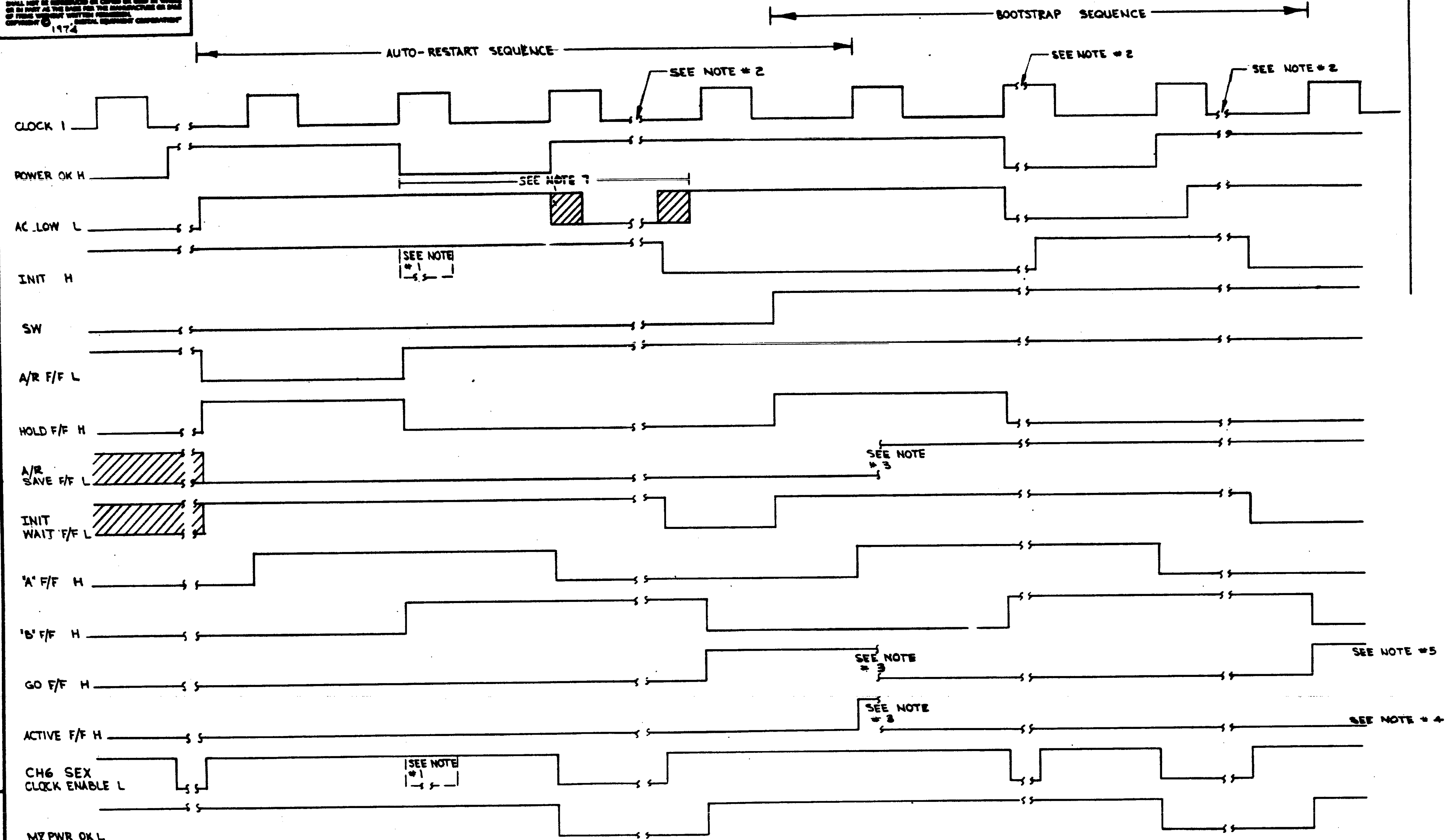
SW DV2 — C101 .022MF — 8837 E41 — 74S04 E42 — BBUF SW

BUS BUFFERS

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
8/A INTERNAL OPTION #2 (BBUF)	D	CS	M8317-YB-1	AT
SCALE NONE	SHEET 16 OF 16		DIST.	

M8317-YB-1 D CS



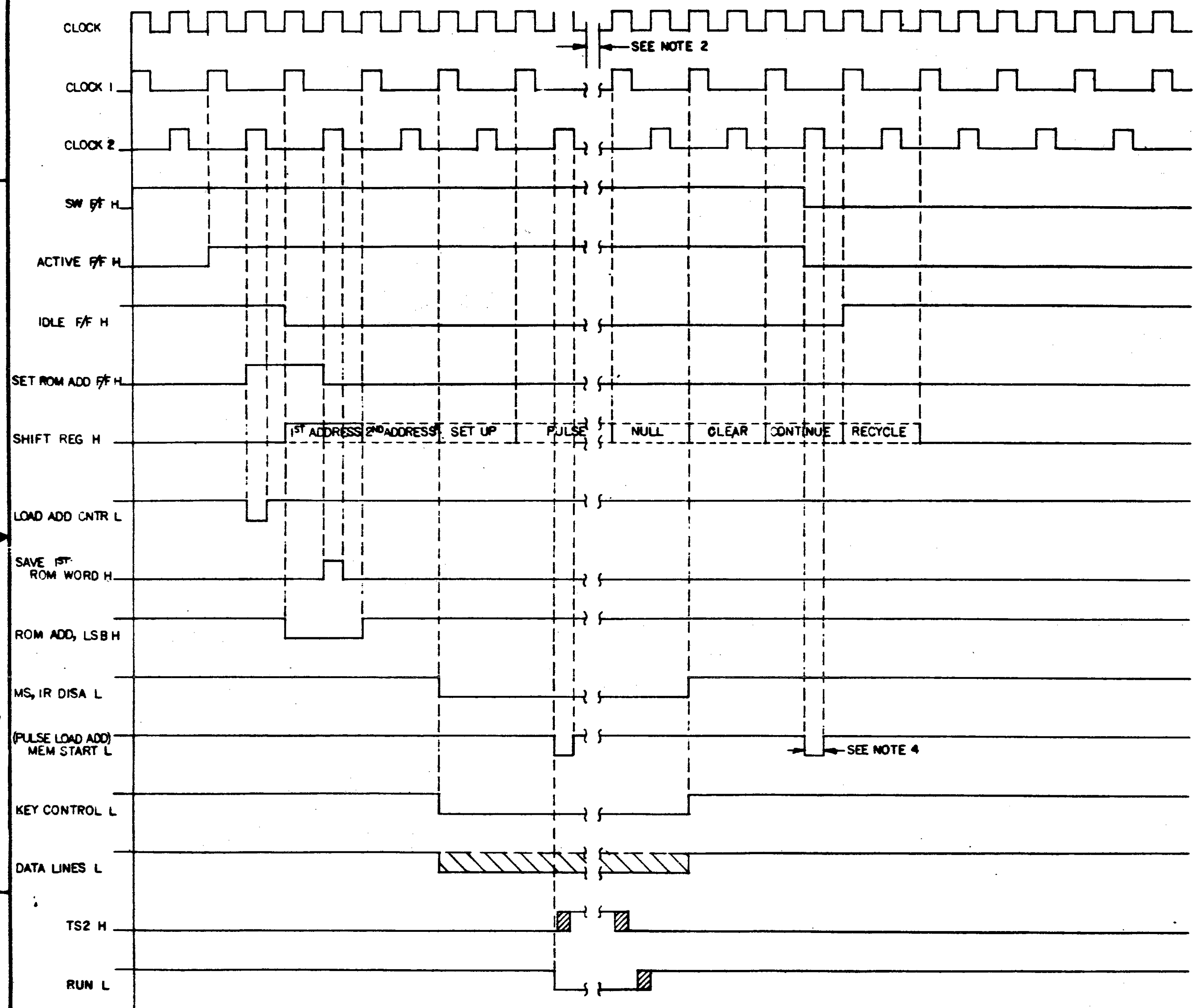
NOTES:

1. CLOCK ENABLE MAY BE FALSE AT THIS TIME, IF INIT H IS FALSE. CLOCK ENABLE THEN RETURNS HIGH (ASSERTED) WHEN INTH BECOMES TRUE
2. THE LOGIC WAITS FOR INITIALIZE TO START OR END BEFORE CONTINUING
3. THESE FLIP-FLOPS ARE CLEARED AT THE CONCLUSION OF THE AUTO RESTART CYCLE
4. ACTIVE SETS ON THE NEXT CLOCK PULSE THEN CLEARS AT THE END OF THE CYCLE
5. GO F/F CLEARS AT THE END OF CYCLE
6. SEE D-FD-KM8-A FOR DETAILED TIMING DATA AFTER AFTER ACTIVE IS SET
7. THE SWITCHING TIMES FOR AC LOW ARE A FUNCTION OF THE SLEW RATE OF THE CIRCUITS IN THE POWER SUPPLY

FIRST USED ON OPTION/MODEL	PDP8-A
NEXT HIGHER ASSY.	B-DD-KM8-A
TITLE	AUTO RESTART/ BOOTSTRAP START-UP SEQUENCE
SIZE / CODE / NUMBER	D / TD / KM8-A-4
SCALE	-//-
SHEET	1 OF 1

digital

D TD KM8-A-4



NOTES:

1. ONE "DEPOSIT" CYCLE IS SHOWN IN DIAGRAM.
2. WHEN "RUN" IS TRUE (LOW) ALL TIMING IS HELD OFF UNTIL THE NEXT CLOCK PULSE AFTER "RUN" GOES FALSE (HIGH).
3. FOR THE "LOAD ADD" CYCLE SIGNALS REMAIN THE SAME AS SHOWN EXCEPT THAT "PULSE LOAD ADD" REPLACES "MEM START" AND "KEY CONTROL" IS NEGATED. FOR "EXT. LOAD ADD" KEY CONTROL IS TRUE.
4. MEM START APPEARS HERE ONLY FOR THE "START" FUNCTION. THE EARLIER MEM START IS FOR "DEPOSITS" ONLY.

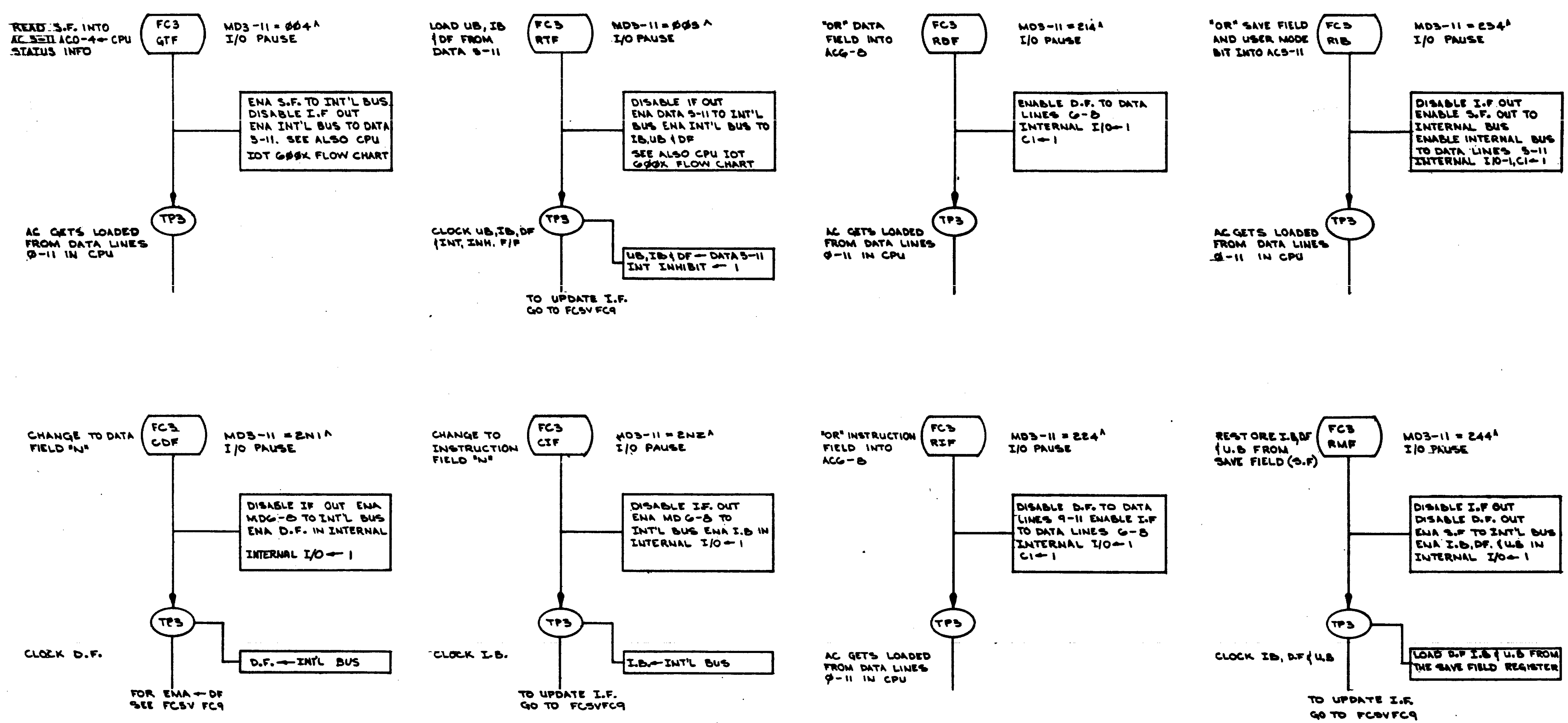
FIRST USED ON OPTION/MODEL: PDP8-A

NEXT HIGHER ASSY.: B-DD-KM8-A

SCALE: NONE

BOOTSTRAP TIMING DIAGRAM

SIZE: D CODE: TD NUMBER: KM8-A-5


READ S.F. INTO AC 5-11 AC0-4 ← CPU STATUS INFO
FC3 GTF
MD3-11 = ØØ4^
I/O PAUSE
ENA S.F. TO INT'L BUS. DISABLE I.F OUT ENA INT'L BUS TO DATA 5-11. SEE ALSO CPU IOT 6ØØX FLOW CHART
TP3
AC GETS LOADED FROM DATA LINES Ø-11 IN CPU
LOAD UB, IB & DF FROM DATA 5-11
FC3 RTF
MD3-11 = ØØ5^
I/O PAUSE
DISABLE IF OUT ENA DATA 5-11 TO INT'L BUS ENA INT'L BUS TO IB, UB & DF SEE ALSO CPU IOT 6ØØX FLOW CHART
TP3
CLOCK UB, IB, DF & INT. INH. F/F
UB, IB & DF ← DATA 5-11 INT INHIBIT ← 1
TO UPDATE I.F. GO TO FC5V FC9
"OR" DATA FIELD INTO AC6-8
FC3 RDF
MD3-11 = 214^
I/O PAUSE
ENABLE D.F. TO DATA LINES 6-8 INTERNAL I/O ← 1 C1 ← 1
TP3
AC GETS LOADED FROM DATA LINES Ø-11 IN CPU
"OR" SAVE FIELD AND USER MODE BIT INTO AC5-11
FC3 RIB
MD3-11 = 234^
I/O PAUSE
DISABLE I.F OUT ENABLE S.F. OUT TO INTERNAL BUS ENABLE INTERNAL BUS TO DATA LINES 5-11 INTERNAL I/O ← 1, C1 ← 1
TP3
AC GETS LOADED FROM DATA LINES Ø-11 IN CPU
CHANGE TO DATA FIELD "N"
FC3 CDF
MD3-11 = 2N1^
I/O PAUSE
DISABLE IF OUT ENA MD6-8 TO INT'L BUS ENA D.F. IN INTERNAL INTERNAL I/O ← 1
TP3
CLOCK D.F.
D.F. ← INT'L BUS
FOR EMA ← DF SEE FC5V FC9
CHANGE TO INSTRUCTION FIELD "N"
FC3 CIF
MD3-11 = 2N2^
I/O PAUSE
DISABLE I.F. OUT ENA MD 6-8 TO INT'L BUS ENA I.B IN INTERNAL I/O ← 1
TP3
CLOCK I.B.
I.B. ← INT'L BUS
TO UPDATE I.F. GO TO FC5V FC9
"OR" INSTRUCTION FIELD INTO AC6-8
FC3 RIF
MD3-11 = 224^
I/O PAUSE
DISABLE D.F. TO DATA LINES 9-11 ENABLE I.F TO DATA LINES 6-8 INTERNAL I/O ← 1 C1 ← 1
TP3
AC GETS LOADED FROM DATA LINES Ø-11 IN CPU
RESTORE I.B, DF & U.B FROM SAVE FIELD (S.F)
FC3 RMF
MD3-11 = 244^
I/O PAUSE
DISABLE I.F OUT DISABLE D.F. OUT ENA S.F TO INT'L BUS ENA I.B, DF, & U.B IN INTERNAL I/O ← 1
TP3
CLOCK IB, DF & U.B
LOAD D.F I.B & U.B FROM THE SAVE FIELD REGISTER
TO UPDATE I.F. GO TO FC5V FC9

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP8A		PARTS LIST		

UNLESS OTHERWISE SPECIFIED — DIMENSIONS IN INCHES — TOLERANCES: DECIMALS ±.005, FRACTIONS ±1/64, ANGLES ±0°30' — FINAL SURFACE QUALITY — REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: —//—
FINISH: —//—

DRN: K6 — DATE 12/27/74
CHK — DATE 12/27/74
ENG — DATE 1-8-75
PROJ. ENG. — DATE 1-8-75
PROD. — DATE 1-6-75

NEXT HIGHER ASSY: B-DD-KM8-A
SCALE: —//—
SHEET 1 OF 2

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

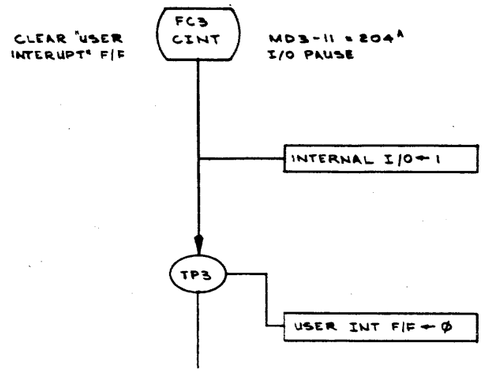
TITLE: FLOW CHART FOR OPTION BOARD #2 M8317

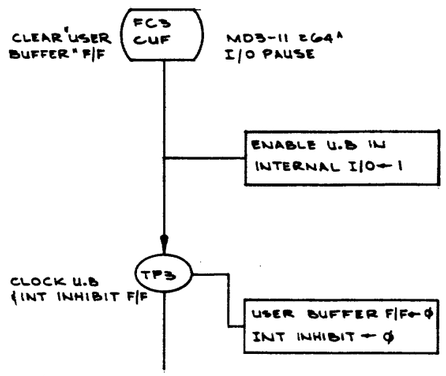
SIZE: D CODE: FD NUMBER: KM8-A -6 REV.

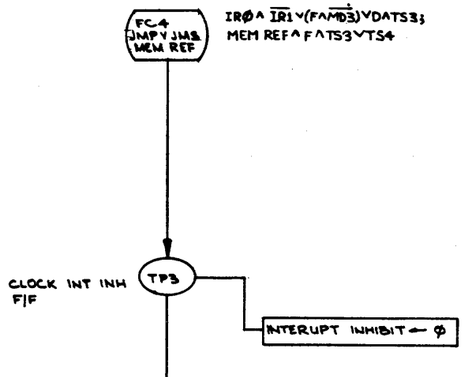
DIST.

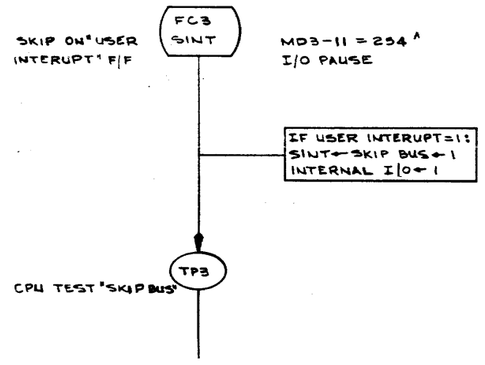
REVISIONS — REV. — CHANGE NO. — CHK

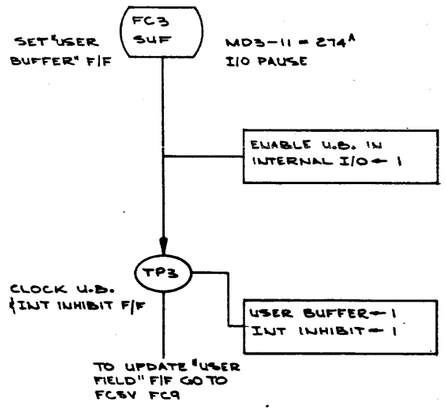
DEC FORM NO. DRD 102A

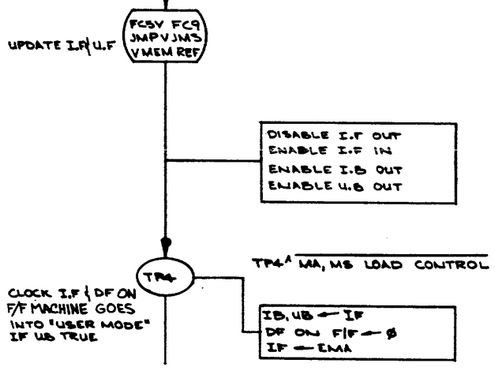












REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
FLOW CHART FOR OPTION BOARD #2 M8317	D	FD	KM8-A-6	-
SCALE —	SHEET 2 OF 2		DIST.	

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 5/8/74

TITLE ROM PROGRAMMING DIRECTIONS FOR 8A OPTION BOARD #2 KM8-AD (M8317-YC)

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	E.C.O. CHANGE	00001	L.NARHI	14 MAY 76	L. Narhi	21-MAY
B	E.C.O. CHANGE	00002	L.NARHI	12-14-77	L. Narhi	5-JAN-78

ENG	APPD	SIZE	CODE	NUMBER	REV
Larry Narhi	Larry Narhi 12/20/77	A	SP	KM8-A-7	B

DEC FORM NO. DRA 107

1. Introduction

This document describes the organization of the two 256 x 4 ROMs, hereafter called ROM #1 and ROM #2, that control and supply data for the Auto-Restart and Bootstrap portions of Option Board #2.

This information is made available to help users program their own ROMs for their specific Auto-Restart and/or Bootstrap program(s).

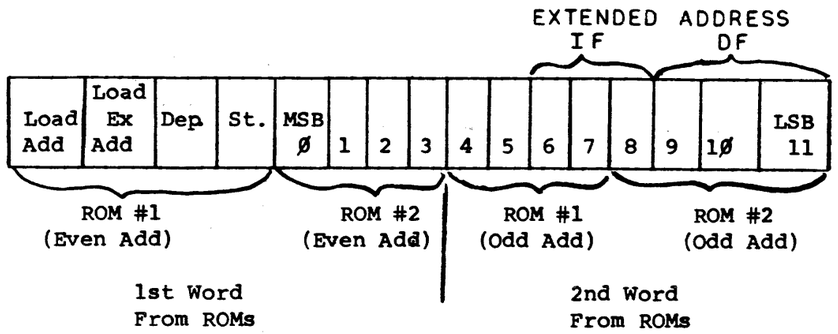
2. Organization

The two ROMs are connected as follows: the address lines are connected in parallel; i.e., two corresponding address lines of each ROM are connected together, the outputs are arranged in serial fashion forming an 8 bit word, 4 outputs from each ROM. Because 12 bits are required for data/address information, two sequential addresses must be accessed from the ROMs to form a 16 bit word. Where the first 8 bits are temporarily stored in a register, then the next 8 bits are accessed from the ROMs. At this point the control then decides what to do with 12 of the 16 bits. There are four possible actions that can take place at this time:

a) Load Address
b) Load Extended Address, IF AND DF
c) Deposit
d) Start

The remaining 4 bits of the 16 actually tell the control which of the four actions are to take place. So the 16 bit word would look like the word in Figure 1.

Figure 1



The use of ROMs that have 256 addressable locations allows up to 128 words of ROM storage. These 128 locations may be used for Bootstrap and/or Auto-restart programs. Any Auto-restart or Bootstrap program may be located anywhere in the ROMs so long as the program starts in an even address in the ROM. If it is required that both Bootstrap and Auto-restart programs be accessible at the same time, activated by different signals; of course the Auto-restart program(s) must be located in addresses Ø through 15 in the ROMs. This is due to the addressing limits of the Auto-restart select switches.

3. Auto-Restart/Bootstrap Sequence

The following events should take place when an auto-restart is initiated:

a) Load a 12 bit address
b) LOAD THE IF AND DF AND START.

The following events should take place when the Bootstrap is initiated:

a) Load a 12 bit initial address.
b) Load the IF AND DF
c) Deposit 12 bit data words repeating as required by length of program to be deposited.
d) Load a 12 bit starting address and start.

The decision to do a Bootstrap or an auto-restart is directed by a set of switches on the module. The Bootstrap may be actuated by the transition of the signal AC Low from a logic low to a logic high or by a similar transition of the SW line on the OMNIBUS.

AN AUTO-RESTART MAY ONLY BE INITIATED BY THE AC LOW SIGNAL. IT SHOULD BE OBVIOUS THAT BOTH THE BOOTSTRAP OR AUTO-RESTART SHOULD NOT BE ACTIVATED BY THE SAME INITIALIZING SIGNAL.

4. ROM Programming Examples

Auto-restart example:

a) Load address Ø2ØØ
b) Load field Ø, start

Starting at ROM address ØØ4

Bootstrap example:

a) Load address ØØ23
b) Load field 7 (BOTH IF AND DF)
c) Deposit 2ØØØ
d) Deposit 6745
e) Deposit ØØ23
f) Deposit 765Ø
h) Deposit 5Ø24
j) Deposit 6733
k) Deposit 5Ø31
l) Load address ØØ24 and start

Starting at ROM address 124.

Auto-Restart example:

Bit / Add	ROM #1 4	3	2	1	ROM #2 4	3	2	1	
4	1	0	0	0	0	0	0	0	Load Address Ø2ØØ
5	1	0	0	0	0	0	0	0	
6	0	1	0	1	0	0	0	0	Load Ext. Add Ø and Start
7	0	0	0	0	0	0	0	0	

NOTE: Logic one (1) = +3V

Bootstrap example:

Bit / Add	ROM #1 4	3	2	1	ROM #2 4	3	2	1	
124	1	0	0	0	0	0	0	0	Load Add ØØ23
125	0	0	0	1	0	0	1	1	
126	0	1	0	0	0	0	0	0	Load Ext Add 7
127	0	0	1	1	1	1	1	1	
130	0	0	1	0	0	1	0	0	Dep 2ØØØ
131	0	0	0	0	0	0	0	0	
132	0	0	1	0	1	1	0	1	Dep 6745
133	1	1	1	0	0	1	0	1	
134	0	0	1	0	0	0	0	0	Dep ØØ23
135	0	0	0	1	0	0	1	1	
136	0	0	1	0	1	1	1	1	Dep 765Ø
137	1	0	1	0	1	0	0	0	
140	0	0	1	0	1	0	1	0	Dep 5Ø24
141	0	0	0	1	0	1	0	0	
142	0	0	1	0	1	1	0	1	Dep 6733
143	1	1	0	1	1	0	1	1	
144	0	0	1	0	1	0	1	0	Dep 5Ø31
145	0	0	0	1	1	0	0	1	
146	1	0	0	1	0	0	0	0	Load Add 24 & Start
147	0	0	0	1	0	1	0	0	

5. ROMs

Unprogrammed ROMs should be purchased by the user from Digital Equipment Corporation. The part number for an unprogrammed 256 x 4 ROM is 23-000A2.

DIGITAL EQUIPMENT CORPORATION

MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 11/19/74

TITLE FIELD INSTALLATION & ACCEPTANCE PROCEDURE FOR DKC8-A

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
[illegible] 12/20/74	[illegible]	A	SP	DKC8-A-1	

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE FIELD INSTALLATION & ACCEPTANCE PROCEDURE FOR DKC8-A

I GENERAL

This procedure defines the performance standard required of the DKC8*, option board #1. This procedure refers to both system acceptance and add-on acceptance.

NOTE: If DKC8 was shipped as part of a PDP-8A system, proceed to installation procedure.

* Serial Line Unit
Real Time Clock
Parallel I/O
Programmer's Console Logic

II INSPECTION

After removing the DKC8 from the packing material, inspect the module for the following:

1. Inventory hardware against shipping list.
2. Inventory software against software list, if ordered.
3. Inventory prints against shipping list, if ordered.
4. Check hardware for loose or broken components.

III INSTALLATION PROCEDURE

Install the equipment using the following procedure:

1. Set up switches as indicated by the diagnostic write up.

S1-1 thru S1-3	"ON"	9600 baud
S1-4	"ON"	Normally "ON"
S1-5	"ON"	Real Time Clock Enable
S1-6	"ON"	Normally "ON"
S1-7	"ON"	One Stop Bit
S1-8	"OFF"	Disable TTY 20 MA Filter

NOTE: Reference Operator's Handbook for switch setting descriptions.

2. Insert TTY loop back cable (DEC Part #7008517) on DKC8.

3. Insert parallel I/O cable loop back cable (DEC Part # BC08R-1) on DKC8.

SIZE	CODE	NUMBER	REV
A	SP	DKC8-A-1	

III INSTALLATION PROCEDURE (continued)

4. Insert two programmer's console cables on DKC8.

5. Insure that the 8A Power is removed from the Omnibus™.

6. Insert DKC8 into the second or third slot of the Omnibus™.

7. Turn the power back "ON".

8. Check the operation of the programmer's console.

IV ACCEPTANCE PROCEDURE

Perform the acceptance procedure defined in Table A. If abnormal indications are encountered, refer to the diagnostic listing for type of error. Reference the diagnostic write ups and operator's manual for instructions on loading diagnostics.

Equipment Required:

1. PDP-8A with 1K or more R/W Memory
2. Paper Tape Input Device
3. Programmer's Console (KC8-A)
4. Diagnostic and Listings
5. TTY loop Back Cable
6. Parallel I/O Loop Back Cable
7. W987 Quad Extender

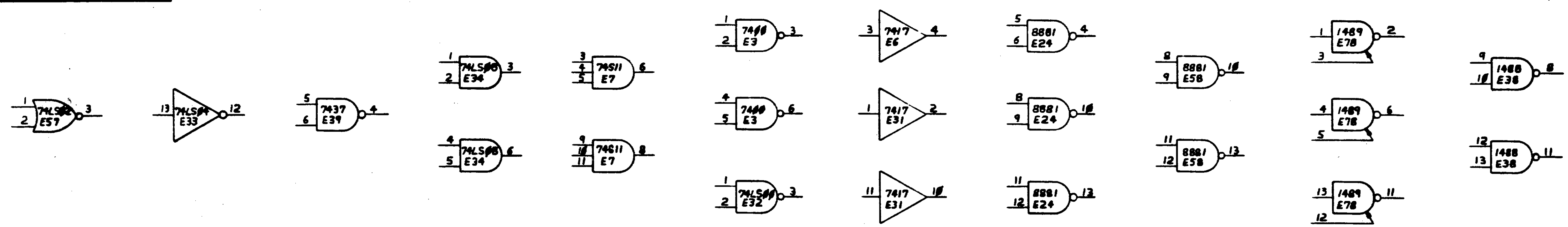
NOTE: If the programmer's console and paper tape input device are not available as part of the system being used, they must be supplied in good working order by the customer.

TABLE A

Acceptance of DKC8 with 4K or More R/W Memory

Program Name	Maindec #	Accept Time	Restriction
DKC8-AA Option Test #1	08-DJDKA-PB	30 min	4K R/W Memory
Acceptance of DKC8 with less than 1K of R/W Memory			
DKC8-AA Opteion Test #1 Segment #1 (RIM)	08-DJDKA -PM1	10 min	1K R/W Memory
DKC8-AA Option Test #1 Segment #2 (RIM)	08-DJDKA -PM2	10 min	1K R/W Memory
DKC8-AA Option Test #1 Segment #3 (RIM)	08-DJDKA -PM3	10 min	1K R/W Memory
DKC8-AA Option Test #1 Segment #4 (RIM)	08-DJDKA -PM4	10 min	1K R/W Memory

SPARES



M8316 SWITCH SETTINGS

S1-1, S1-2, S1-3, S1-4: SERIAL LINE BAUD RATE (SEE CHART)

S1-5 ON = REAL TIME CLOCK ENABLED
OFF = REAL TIME CLOCK DISABLED

S1-6 ON = TEST SWITCH (ALWAYS ON)

S1-7 ON = 1 STOP BIT IN SLU CHARACTER
OFF = 2 STOP BITS IN SLU CHARACTER

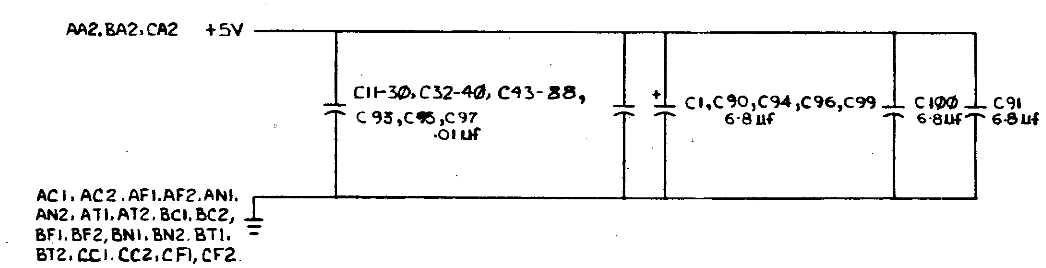
S1-8 ON = ASR/KSR 33 DR35 FILTER IN (ACROSS SLU 20 MA REC'V LEADS)
OFF = FILTER OUT

S1-9 ON = TS1 CLEARS "DATA AVAIL" F/F IN PARALLEL I/O SECTION
OFF = "DATA AVAIL" NOT CLEARED BY TS1

SLU BAUD RATE SELECT CHART

	S1-4	S1-3	S1-2	S1-1	BAUD RATE
	ON	ON	ON	ON	50 BAUD
	ON	ON	ON	OFF	75 BAUD
	ON	ON	OFF	ON	110 BAUD
	ON	ON	OFF	OFF	134.5 BAUD
	ON	OFF	ON	ON	150 BAUD
	ON	OFF	ON	OFF	300 BAUD
	ON	OFF	OFF	ON	600 BAUD
	ON	OFF	OFF	OFF	1200 BAUD
	OFF	ON	ON	ON	1800 BAUD
	OFF	ON	ON	OFF	2000 BAUD
	OFF	ON	OFF	ON	2400 BAUD
	OFF	ON	OFF	OFF	3600 BAUD
	OFF	OFF	ON	ON	4800 BAUD
	OFF	OFF	ON	OFF	7200 BAUD
	OFF	OFF	OFF	ON	9600 BAUD
*	OFF	OFF	OFF	OFF	19.2K BAUD

* SERIAL LINE WILL NOT RUN AT THIS BAUD RATE. THIS SETTING IS NOT TO BE USED



COMPONENT SUBSTITUTION CHART

PART CALLED P/N	DESCRIPTION	SUBSTITUTE PART P/N	DESCRIPTION
1001610-01	0.01 uf DISC.	1001610-00	0.01 uf GLASS
1909705	8881	1909973	97401
1911469	8640	1910392	5380
		1909971	6380
		1910390	7380
		1911113	11380
1912824	74LS74	1905547	7474
1912799	74LS00	1905575	7400
1912807	74LS10	1905576	7410
1912815	74LS30	1905578	7430
1912801	74LS02	1909004	7402
1912803	74LS04	1909686	7404
1912819	74LS42	1910046	7442
1912805	74LS08	1910155	7408
1912853	74LS175	1910651	74175
1912697	74LS174	1910652	74174

REVISIONS: REV. H — CHANGE NO. ORIGINATED M8316 00005 — P. SCANTLEBURY

DRN. 3-9-76 — CHK'D 3-30-76 — ENG. 7-2-76 — PROJ. ENG. 7-2-76 — PROD. 7-2-76

FIRST USED ON: DKC 8A

NEXT HIGHER ASSY.: D-UA-M8316-0-0

TITLE: OPTION BD #1

SIZE: D — CODE: CS — NUMBER: M8316-0-1 — REV.: H

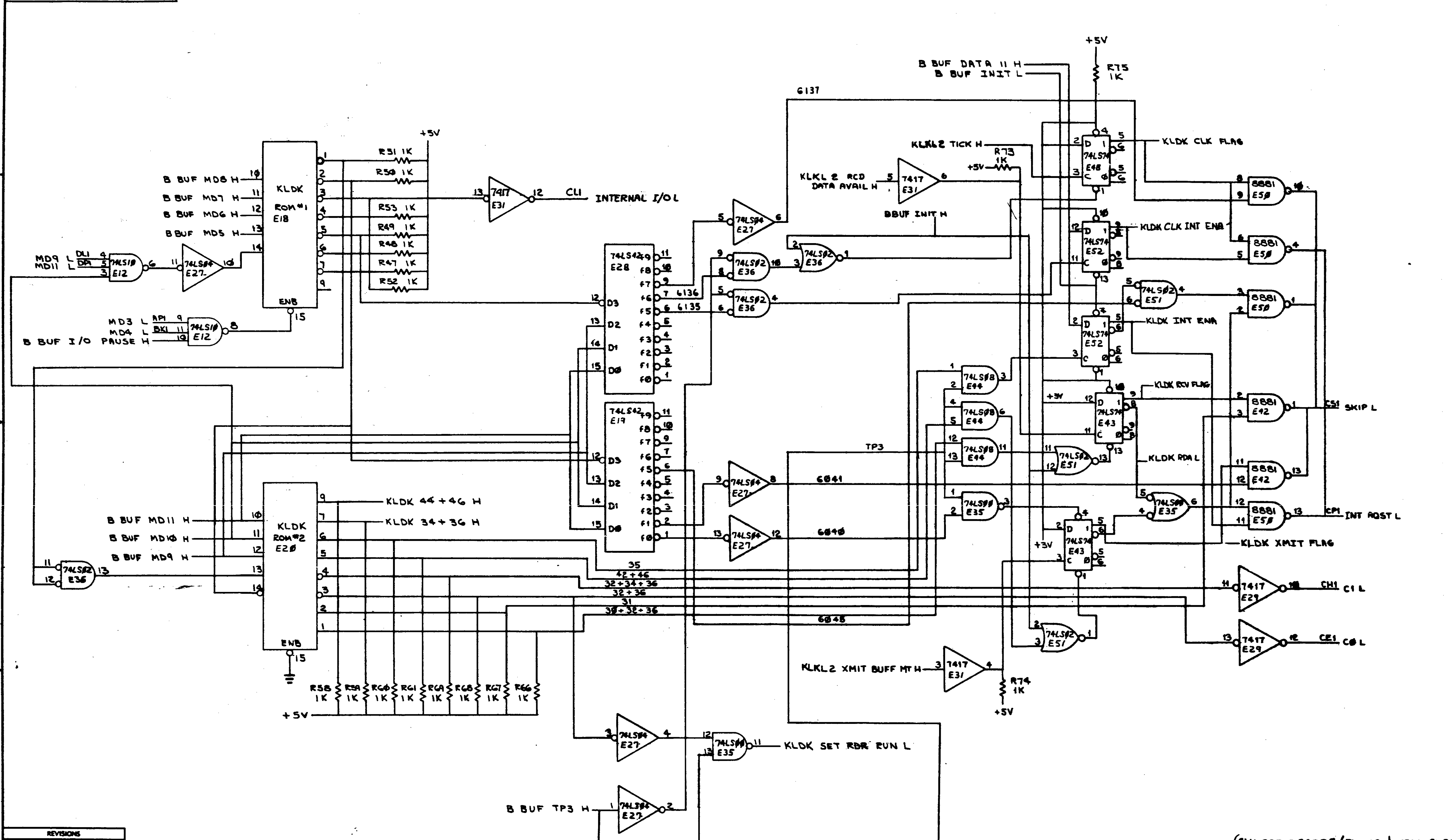
digital

BBUF MDII H
BBUF MDIØ H
BBUF MD9 H
BBUF MD8 H
BBUF MD7 H
BBUF MD6 H
BBUF MD5 H
MD4 L
BBUF MD3 H
BBUF I/O PAUSE H
INTERNAL I/O
BBUF TS1 H
BBUF INIT L
SKIP L
INT RQST L
BBUF INIT H
BBUF TS3 H
DATA ACCPTD OUT L
SET DATA READY L
DATA ACCPTD IN L
BBUF TP4 L
STROBE L
DATA AVAILABLE L
BBUF DATA Ø H
BBUF DATA 1 H
BBUF DATA 2 H
BBUF DATA 3 H
BBUF DATA 4 H
BBUF DATA 5 H
BBUF DATA 6 H
BBUF DATA 7 H
BBUF DATA 8 H
BBUF DATA 9 H
BBUF DATA 10 H
BBUF DATA 11 H
DATA OUT Ø L
DATA OUT 1 L
DATA OUT 2 L
DATA OUT 3 L
DATA OUT 4 L
DATA OUT 5 L
DATA OUT 6 L
DATA OUT 7 L
DATA OUT 8 L
DATA OUT 9 L
DATA OUT 10 L
DATA OUT 11 L
DATA IN Ø L
DATA IN 1 L
DATA IN 2 L
DATA IN 3 L
DATA IN 4 L
DATA IN 5 L
DATA IN 6 L
DATA IN 7 L
DATA IN 8 L
DATA IN 9 L
DATA IN 10 L
DATA IN 11 L
(12 BIT PARALLEL I/O)

NOTE: ALL UNUSED PINS ON J4, AND J5 ARE GROUNDED.

REVISIONS		
OK	CHANGE NO.	REV.

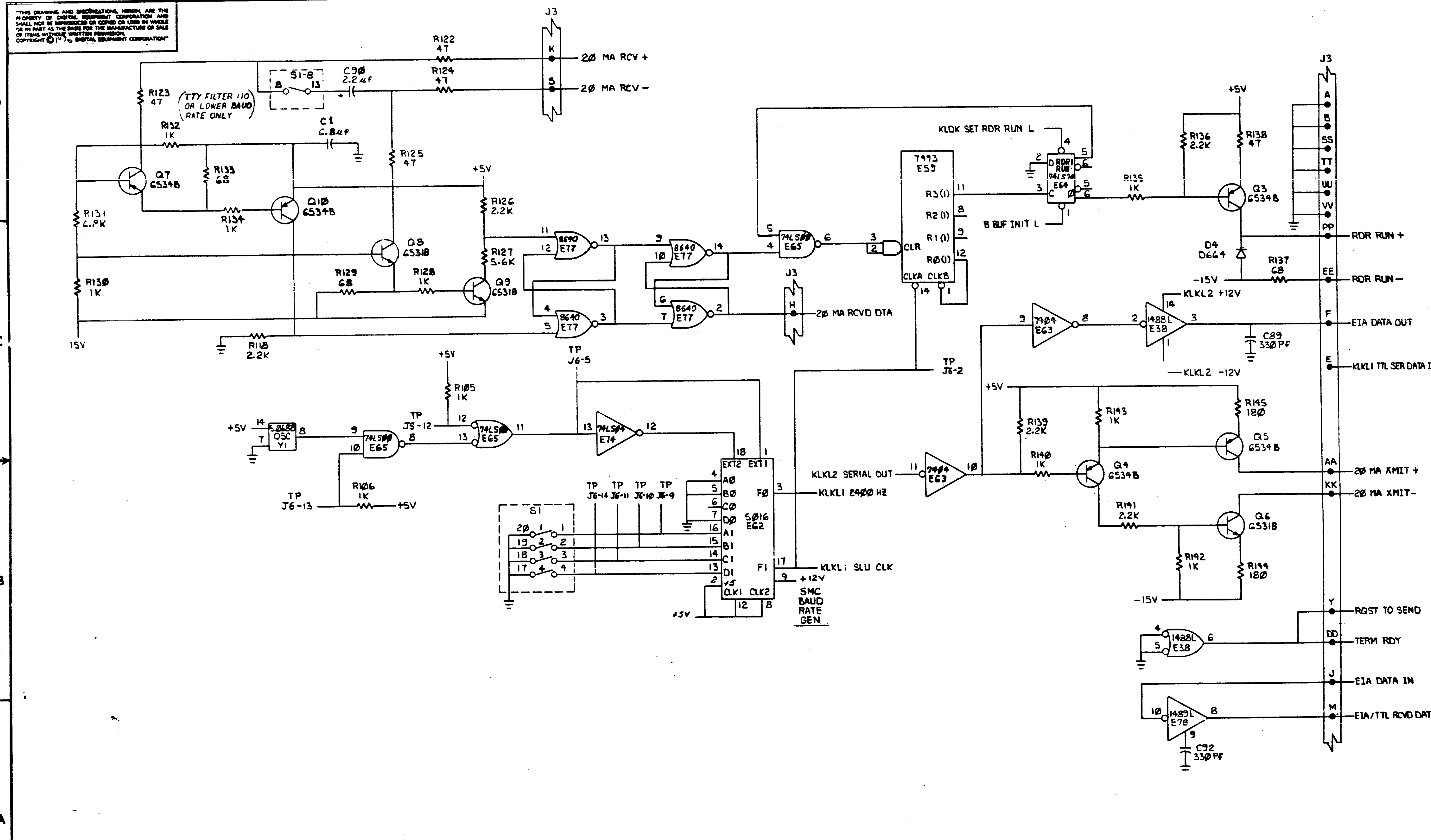
TITLE	SIZE	CODE	NUMBER	REV.
OPTION BD #1	D	CS	M8316-Ø-1	H
SCALE	SHEET 2 OF 8		DIST.	



(SLU IOT DECODE/FLAGS & XTAL CLOCK)

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BD #1 (KLDK)	D	CS	M8316-Ø-1	H

SCALE — SHEET 3 OF 8



J3
20 MA RCV +
20 MA RCV −
(TTY FILTER 110 OR LOWER BAUD RATE ONLY)
S1-8
C90 2.2 µf
C1 6.8 µf
R122 47
R124 47
R123 47
R132 1K
R133 68
R125 47
R126 2.2K
R127 5.6K
R131 6.8K
R134 1K
R130 1K
R129 68
R128 1K
R118 2.2K
Q7 6534B
Q10 6534B
Q8 6531B
Q9 6531B
+5V
15V
8640 E77
74LS00 E65
20 MA RCVD DTA
7493 E59
R3(1) R2(1) R1(1) R0(1)
CLR
CLKA CLKB
KLDK SET RDR RUN L
RDR1 RUN 74LS74 E64
B BUF INIT L
R135 1K
R136 2.2K
R138 47
Q3 6534B
D4 D664
R137 68
−15V
RDR RUN +
RDR RUN −
KLKL2 +12V
7404 E63
1488L E38
C89 330 PF
EIA DATA OUT
KLKL2 −12V
KLKL1 TTL SER DATA IN
TP J6-2
TP J6-5
R105 1K
5.0688 OSC Y1
TP J5-12
74LS04 E74
R106 1K
TP J6-13
R139 2.2K
R143 1K
R145 180
Q5 6534B
R140 1K
Q4 6534B
20 MA XMIT +
20 MA XMIT −
R141 2.2K
Q6 6531B
R142 1K
R144 180
KLKL2 SERIAL OUT
S1
TP J6-14 J6-11 J6-10 J6-9
EXT2 EXT1
A0 B0 C0 D0 A1 B1 C1 D1
5016 E62
F0 F1
CLK1 CLK2
KLKL1 2400 HZ
KLKL1 SLU CLK
+12V
SMC BAUD RATE GEN
RQST TO SEND
TERM RDY
1488L E38
EIA DATA IN
1489L E78
C92 330 PF
EIA/TTL RCVD DATA

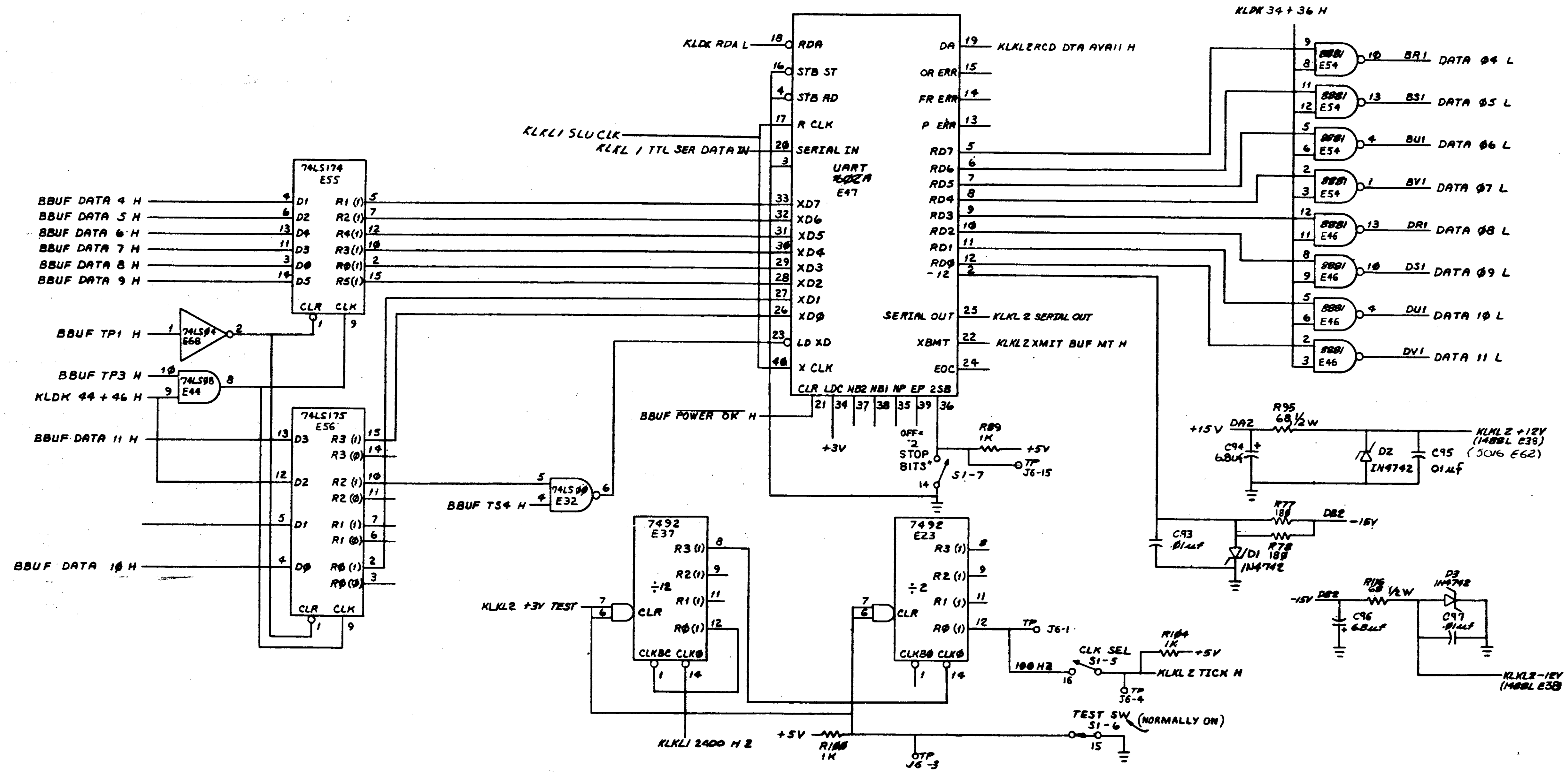
(BAUD RATE GEN & 20 MA, EIA DRIVERS / RECEIVERS)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE OPTION BD #1 (KLKL1)

SIZE D | CODE CS | NUMBER M8316-0-1 | REV. H

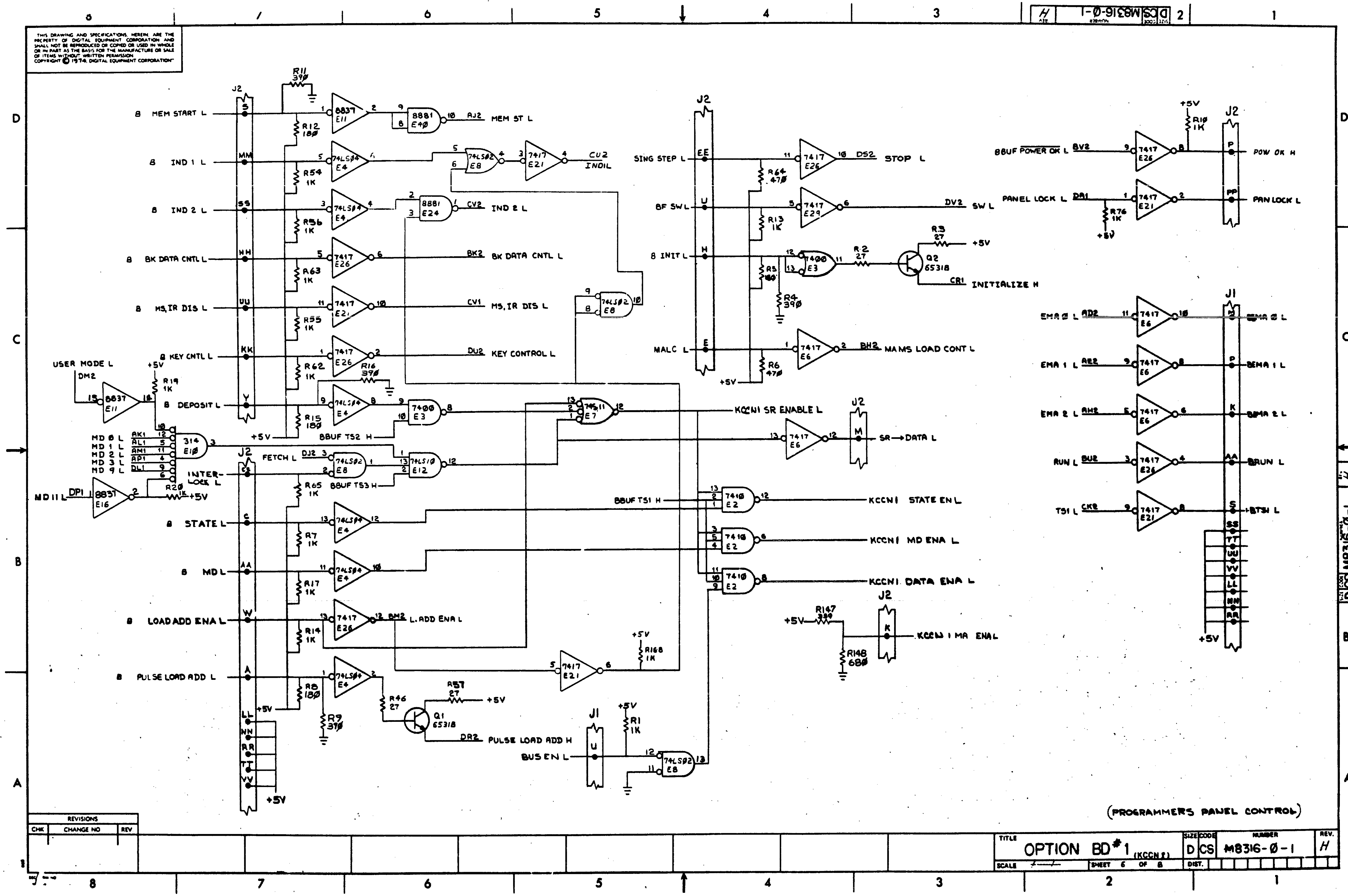
SCALE — | SHEET 4 OF 8



(UART & XTAL CLK FREQ SOURCE)

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BD #1 (KLKL 2)	D	CS	M8316-Ø-1	H

SCALE —/— SHEET 5 OF 8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MEM START L
IND 1 L
IND 2 L
BK DATA CNTL L
MS,IR DIS L
KEY CNTL L
USER MODE L
DEPOSIT L
INTER-LOCK L
STATE L
MD L
LOAD ADD ENA L
PULSE LOAD ADD L
MEM ST L
INDIL
IND 2 L
BK DATA CNTL L
MS,IR DIS L
KEY CONTROL L
KCCN1 SR ENABLE L
SR→DATA L
FETCH L
BBUF TS2 H
BBUF TS3 H
BBUF TS1 H
KCCN1 STATE EN L
KCCN1 MD ENA L
KCCN1 DATA ENA L
KCCN1 MA ENAL
L.ADD ENA L
PULSE LOAD ADD H
BUS EN L
SING STEP L
BF SW L
INIT L
MALC L
STOP L
SW L
INITIALIZE H
MA MS LOAD CONT L
BBUF POWER OK L
PANEL LOCK L
POW OK H
PAN LOCK L
EMA 0 L
EMA 1 L
EMA 2 L
RUN L
TS1 L
(PROGRAMMERS PANEL CONTROL)
REVISIONS
CHK
CHANGE NO
REV
TITLE
OPTION BD #1 (KCCN1)
SIZE D
CODE CS
NUMBER M8316-0-1
REV. H
SCALE
SHEET 6 OF 8

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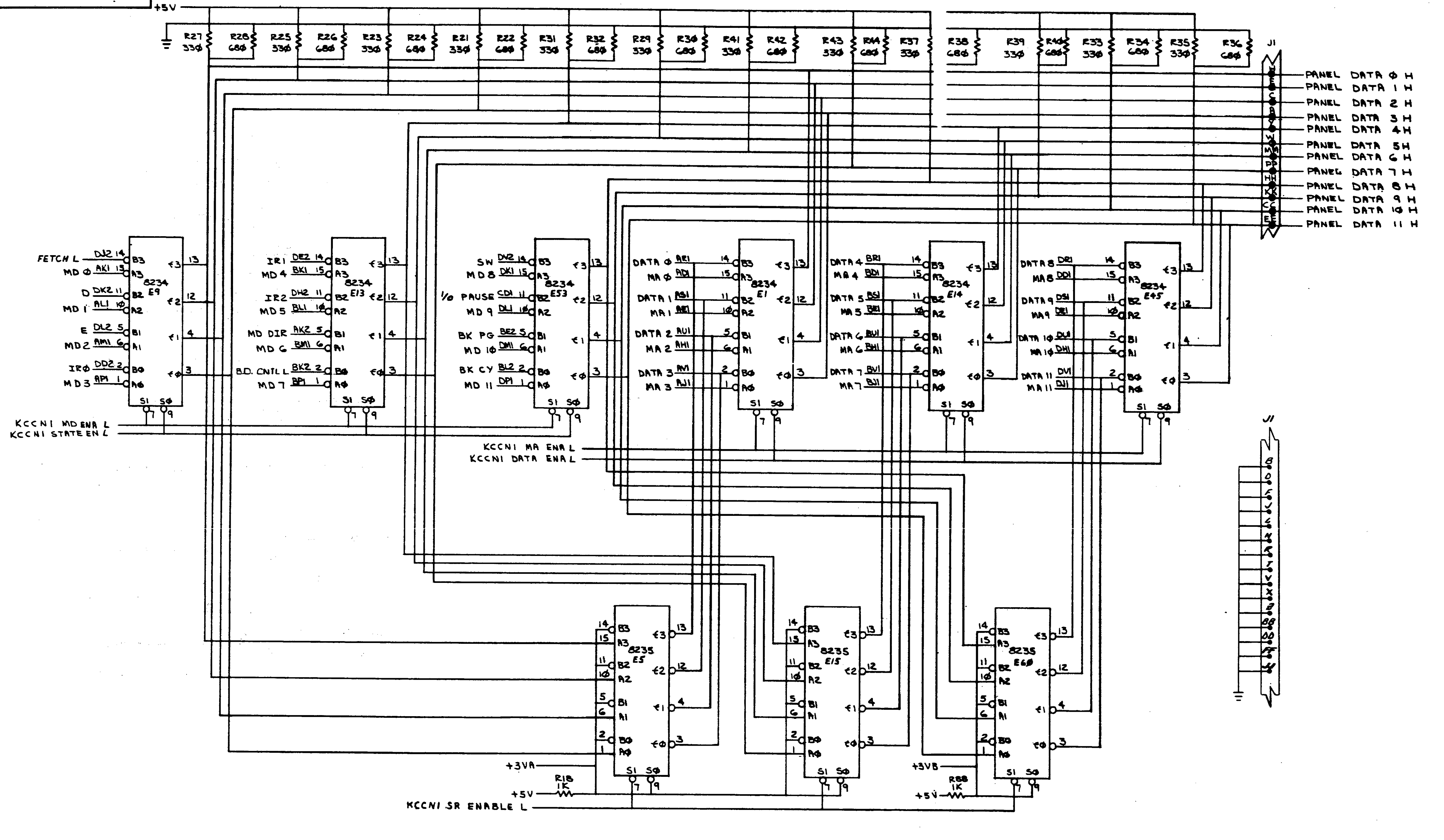


+5V
R27 33Ø
R28 68Ø
R25 33Ø
R26 68Ø
R23 33Ø
R24 68Ø
R21 33Ø
R22 68Ø
R31 33Ø
R32 68Ø
R29 33Ø
R30 68Ø
R41 33Ø
R42 68Ø
R43 33Ø
R44 68Ø
R37 33Ø
R38 68Ø
R39 33Ø
R40 68Ø
R33 33Ø
R34 68Ø
R35 33Ø
R36 68Ø
J1
PANEL DATA Ø H
PANEL DATA 1 H
PANEL DATA 2 H
PANEL DATA 3 H
PANEL DATA 4 H
PANEL DATA 5 H
PANEL DATA 6 H
PANEL DATA 7 H
PANEL DATA 8 H
PANEL DATA 9 H
PANEL DATA 10 H
PANEL DATA 11 H
FETCH L
MD Ø
D
MD 1
E
MD 2
IR Ø
MD 3
8234 E9
IR 1
MD 4
IR 2
MD 5
MD DIR
MD 6
B.D. CNTL L
MD 7
8234 E13
SW
MD 8
I/O PAUSE
MD 9
BK PG
MD 10
BK CY
MD 11
8234 E53
DATA Ø
MA Ø
DATA 1
MA 1
DATA 2
MA 2
DATA 3
MA 3
8234 E1
DATA 4
MA 4
DATA 5
MA 5
DATA 6
MA 6
DATA 7
MA 7
8234 E14
DATA 8
MA 8
DATA 9
MA 9
DATA 10
MA 10
DATA 11
MA 11
8234 E45
KCCNI MD ENA L
KCCNI STATE EN L
KCCNI MA ENA L
KCCNI DATA ENA L
8235 E5
8235 E15
8235 E60
+3VA
+3VB
R18 1K
R88 1K
+5V
KCCNI SR ENABLE L

(PROGRAMMERS PANEL MULTIPLEXERS)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE OPTION BOARD #1 (KCGN)

SIZE D | CODE CS | NUMBER M8316-Ø-1 | REV. H

SCALE — | SHEET 7 OF 8 | DIST.

MD0 L AK1 → 8837 E11 → BBUF MD0 H (N.C.)
MD1 L AL1 → 8837 E11 → BBUF MD1 H (N.C.)
MD2 L AM1 → 8837 E11 → BBUF MD2 H (N.C.)
MD3 L AP1 → 8837 E11 → BBUF MD3 H
MD4 L BK1 → 8837 E16 → BBUF MD4 H (N.C.)
MD5 L BL1 → 8837 E16 → BBUF MD5 H
MD6 L BM1 → 8837 E16 → BBUF MD6 H
MD7 L BP1 → 8837 E16 → BBUF MD7 H
MD8 L DK1 → 8837 E22 → BBUF MD8 H
MD9 L DL1 → 8837 E22 → BBUF MD9 H
MD10 L DM1 → 8837 E22 → BBUF MD10 H
MD11 L DP1 → 8837 E22 → BBUF MD11 H

DATA 0 L AR1 → 8837 E73 → BBUF DATA 0 H
DATA 1 L AS1 → 8837 E73 → BBUF DATA 1 H
DATA 2 L AU1 → 8837 E73 → BBUF DATA 2 H
DATA 3 L AV1 → 8837 E73 → BBUF DATA 3 H
DATA 4 L BR1 → 8837 E73 → BBUF DATA 4 H
DATA 5 L BS1 → 8837 E73 → BBUF DATA 5 H
DATA 6 L BU1 → 8837 E69 → BBUF DATA 6 H
DATA 7 L BV1 → 8837 E69 → BBUF DATA 7 H
DATA 8 L DR1 → 8837 E69 → BBUF DATA 8 H
DATA 9 L DS1 → 8837 E69 → BBUF DATA 9 H
DATA 10 L DU1 → 8837 E69 → BBUF DATA 10 H
DATA 11 L DV1 → 8837 E69 → BBUF DATA 11 H

I/O PAUSE L CP1 → 8837 E38 → BBUF I/O PAUSE H
TS1 L CK2 → 8837 E38 → BBUF TS1 H
TS2 L CL2 → 8837 E38 → BBUF TS2 H
TS3 L CM2 → 8837 E38 → BBUF TS3 H
TS4 L CP2 → 8837 E22 → BBUF TS4 H
TP4 H CJ2 → 8837 E16 → BBUF TP4 L
TP1 H CD2 → 7417 E29 → BBUF TP1 H (RB2 1K to +5V)
TP3 H CH2 → 7417 E29 → BBUF TP3 H (E78 330)
INITIALIZER H CR1 → 8837 E22 → BBUF INIT L → 7437 E39 → BBUF INIT H
POWER OK L BV2 → 8837 E38 → BBUF POWER OK H → 7437 E39 → BBUF POWER OK L

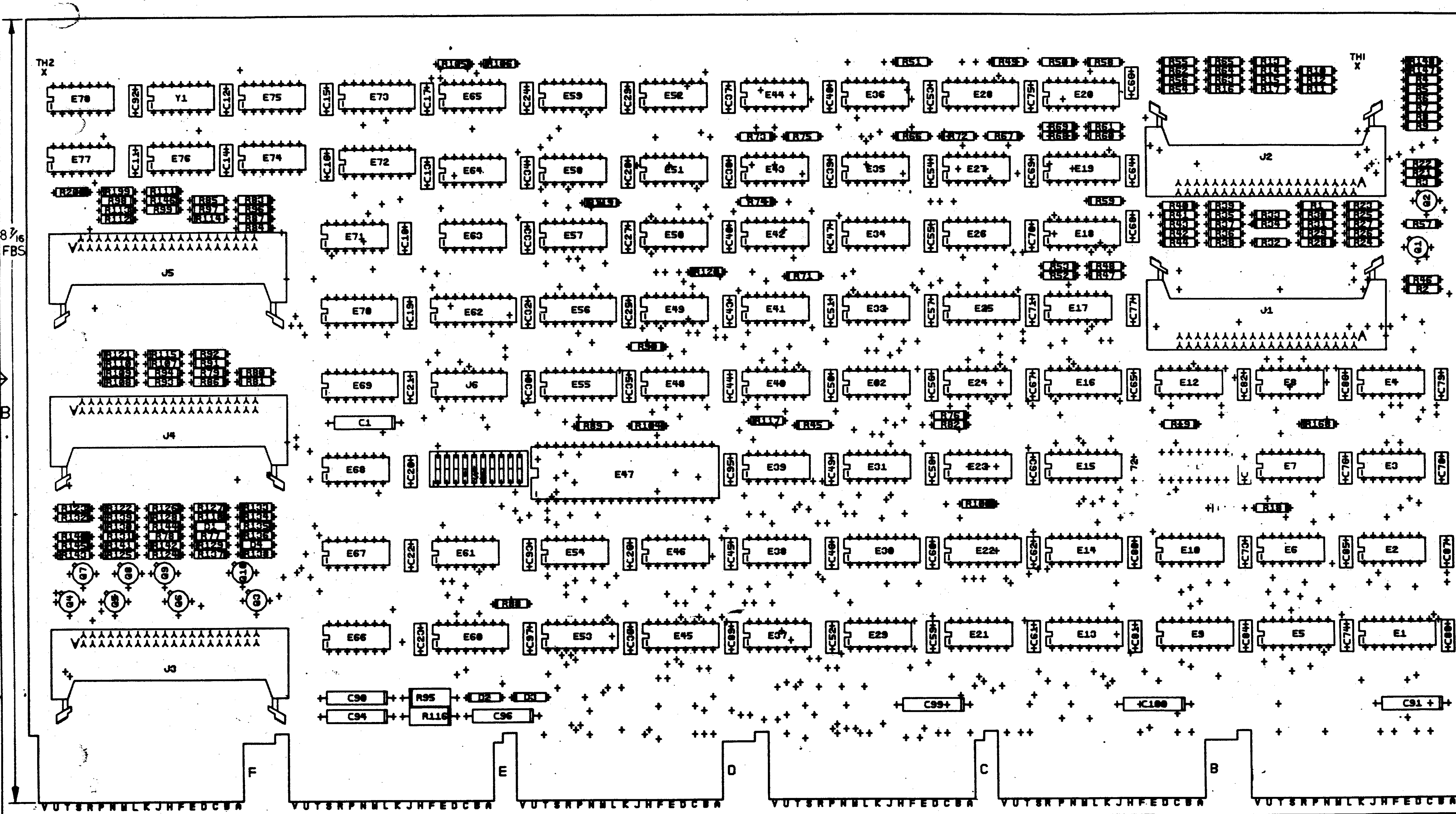
(BUS BUFFERS)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
8/A INTERNAL OPTIONS (BUFF)	D	CS	M8316-0-1	H
SCALE 1=1	SHEET 8 OF 8	DIST.		

M3816-0-1

COMPONENT SIDE VIEW



NOTES:

SIGNATURES	DATE
DRN.	
CHK.	
ENG.	7-2-76
PROJ. ENG.	7-2-76
PROD.	7-2-76

digital

TITLE OPTION BOARD #1

SIZE	CODE	NUMBER	REV
D	UA	M8316-0-0	*

SCALE 2/1

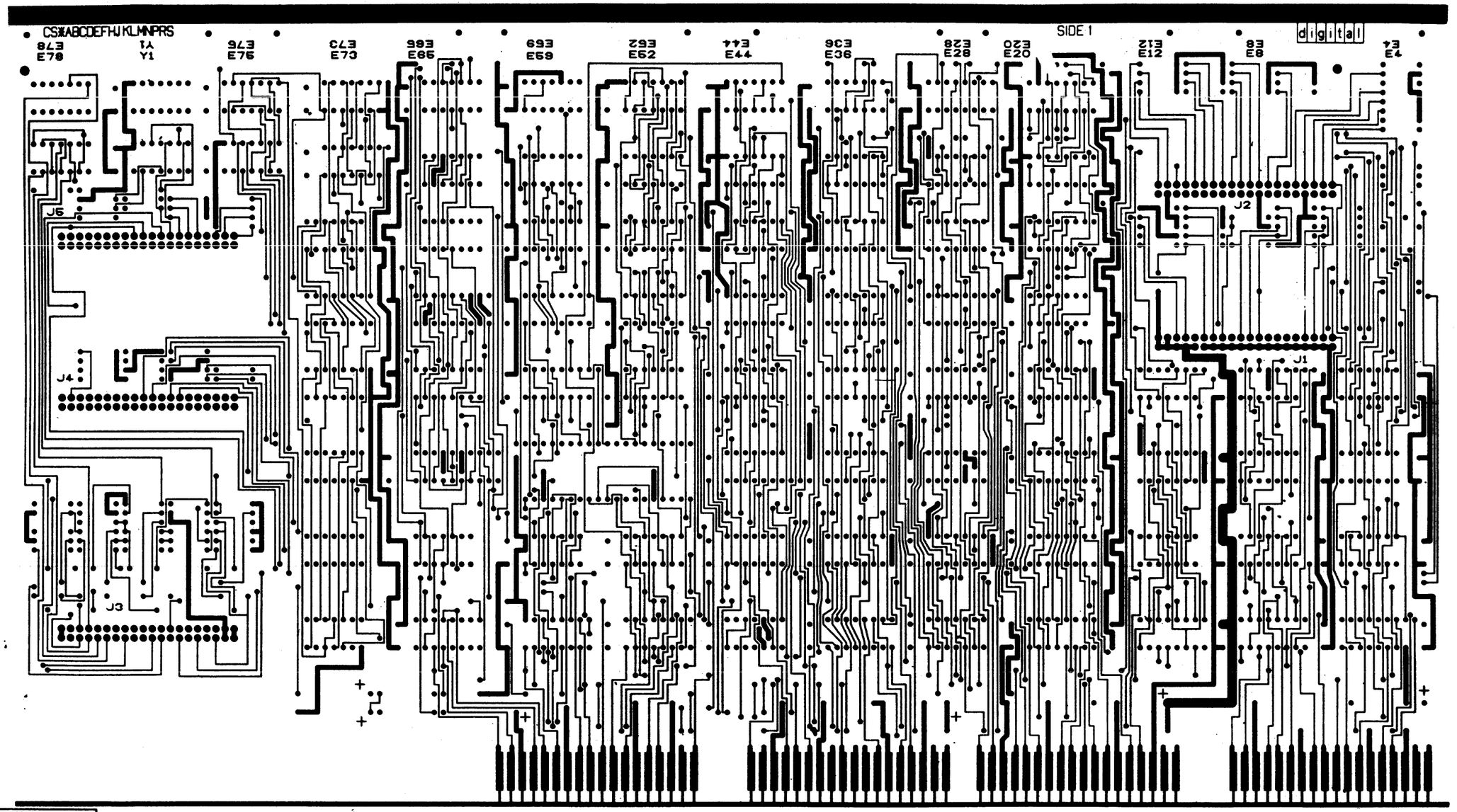
SHT. 1 OF 3

NEXT HIGHER ASSY. B-DD-M8316-0

ETCH REV.

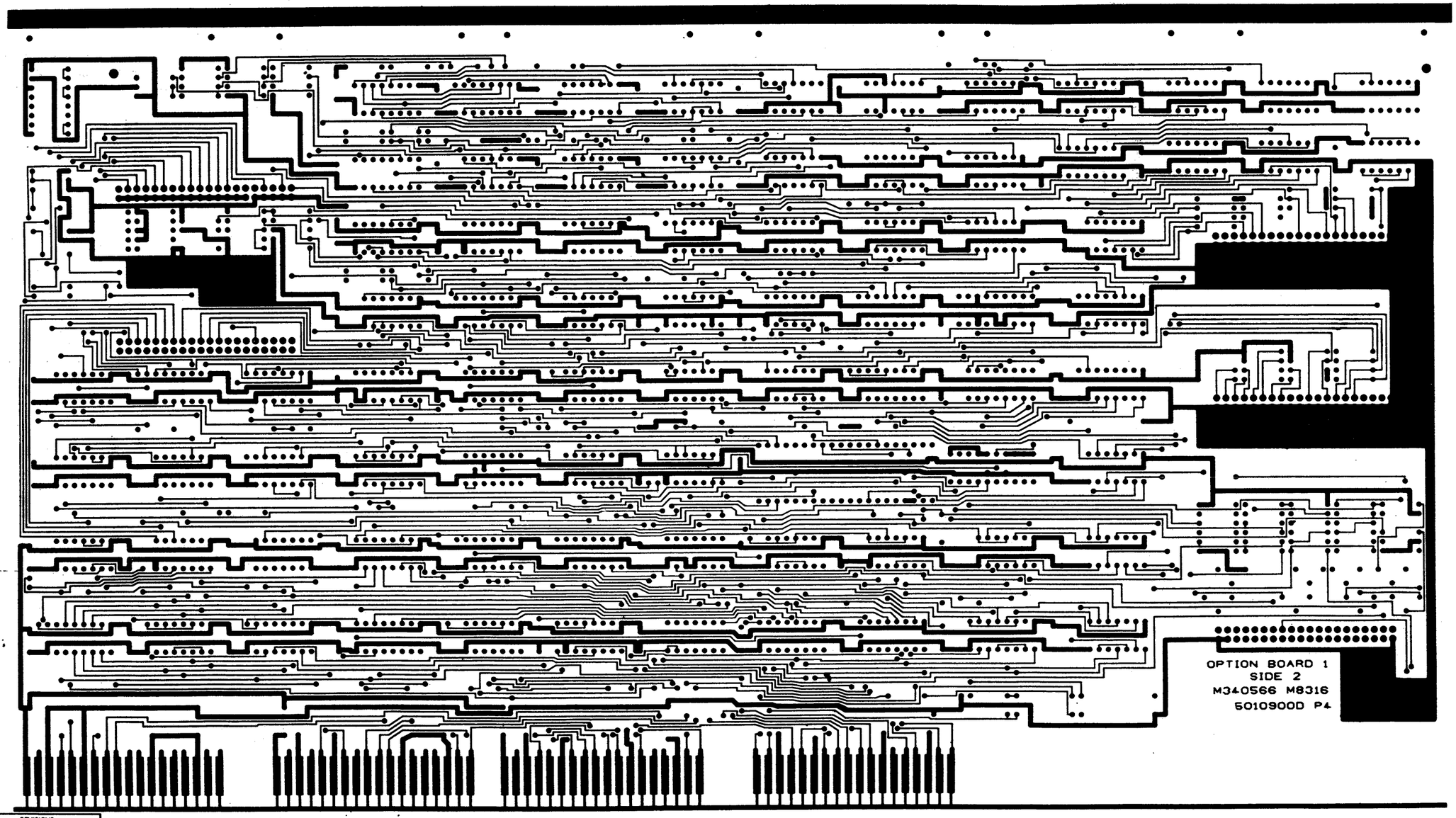
P.C. DESIGN DATA BASE REV.

MS# 40566



REVISIONS		
CHK	CHANGE NO	REV.

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BOARD *1	D	UA	M8316-0-0	*
SCALE 2/1	SHEET 2 OF 3	DIST.		



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
OPTION BOARD *1	D	UA	M8316-0-0	*
SCALE 2/1 SHEET 3 OF 3	DIST.			

DIGITAL EQUIPMENT CORPORATION

PARTS LIST

MADE BY BOB KOPPENAL DATE 3-31-76	CHECKED K. Koppenal DATE 3-30-76	SECTION 1	NOTES:
ENG P. Heathberg DATE 7-2-76	PROD K. Sternhard DATE 7-2-76	ISSUED SECTION 1	

QUANTITY/VARIATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8316-Ø-Ø	REF DESIGNATION
1	D-MD-5010900-0-0	5010900	ETCHED CIRCUIT BOARD	1	
2		1001610-01	CAP, .Ø1 Uf, 1ØØV, 10%	78	C11-C3Ø, C32-C4Ø, C43-C88, C93, C95, C97
3		1000023	CAP, 33Ø Pf, 1ØØV, 5%	2	C89, C92
4		1002431	CAP, 2.2 UF, 35V, 10%	1	C9Ø
5		1005306	CAP. 6.8 Uf, 35V, 10%	8	C91, C94, C96, C99-C1ØØ, C1,
6		1109502	DIODE, IN4742	3	D1-D3
7		1100114	DIODE, D664	1	D4
8		1211164-06	SWITCH PACK (1Ø POS DIP)	1	S1
9		1211813-02	IC SOCKET (16 PIN)	1	J6
10		1210711-02	HANDLE ASSY	1	
11		1209941-02	CONNECTOR 4Ø P. RT. ANG. HD	5	J1-J5
12		1209941-03	LATCH LEFT 4Ø P. RT. ANG. HD	5	
13		1209941-04	LATCH RIGHT 4Ø P RT. ANG. HD	5	
14		1300202	RES., 47, 1/4W, 5%	5	R122-R125, R138
15		1300219	RES., 68, 1/4W, 5%	3	R129, R133, R137
16		1301424	RES., 68Ø, 1/4W, 5%	13	R22, R24, R26, R28, R3Ø, R32, R34, R36 R38, R4Ø, R42, R44, R148
17		1300417	RES., 2.2K, 1/4W, 5%	5	R118, R126, R136, R139, R141
18		1301874	RES., 5.6K, 1/4W, 5%	1	R127
19		1301423	RES., 6.8K, 1/4W, 5%	1	R131
20		1301522	RES., 27, 1/4W, 5%	4	R2, R3, R46, R57

E.C.O. NO.

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
OPTION BOARD #1	D-UA-M8316-Ø-Ø	B	PL	M8316-Ø-Ø	*
	SHEET 1 OF 4	INSERTION PARTS LIST DATA BASE REV D			

EN-01140A-16-R276(326) DRB 125

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY BOB KOPPENAL	CHECKED	SECTION 1
DATE 3-31-76	DATE	
ENG	PROD	ISSUED SECTION 1
DATE	DATE	

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8316-Ø-Ø												REF DESIGNATION
				QUANTITY / VARIATION												NOTES:
21		1301322	RES., 18Ø, 1/4W, 5%	8												R5, R8, R12, R15, R77, R78, R144, R145
22		1300295	RES., 33Ø, 1/4W, 5%	15												R21, R23, R25, R27, R29, R31, R33, R35, R37, R39, R41, R43, R147, R2ØØ, R72
23		1300309	RES., 39Ø, 1/4W, 5%	4												R4, R9, R11, R16
24		1300316	RES., 47Ø, 1/4W, 5%	2												R6, R64
25		1300365	RES., 1K, 1/4W, 5%	83												R1, R7, R1Ø, R13, R14, R17-R20, R45, R47-R56, R71, R58-R63, R65-R69, R73-R76, R79-R81, R82-R94, R117, R96-R1ØØ, R104-R115, R119-R121, R128, R13Ø, R132, R135, R14Ø, R142, R143, R146, R168, R134
26		1309405	RES., 68, 1/2W, 5%	2												R116, R95
27		1300250	RES., 15Ø, 1/4W, 5%	1												R199
28		1509338	TRANSISTOR, DEC 6531B	5												Q1, Q2, Q6, Q8, Q9
29		1503409-01	TRANSISTOR, DEC 6534B	5												Q3, Q4, Q5, Q7, Q1Ø
30		1811660-02	CRYSTAL OSCILLATOR, 5.Ø688 MHZ	1												Y1
31		1912824	IC., 74LS74	6												E41, E43, E52, E64, E48, E49
32		1912799	IC., 74LSØØ	3												E32, E35, E65
33		1912807	IC., 74LS1Ø	1												E12
34		1912815	IC., 74LS3Ø	1												E17
35		1912801	IC., 74LSØ2	4												E8, E36, E51, E57
36		1909053	IC., 7492	2												E23, E37
37		1909054	IC., 7493	1												E59
38		1910537	IC., 74S11	1												E7
39		1912803	IC., 74LSØ4	5												E4, E27, E33, E74, E68,

E.C.O. NO.

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
OPTION BOARD #1	D-UA-M8316-Ø-Ø	B	PL	M8316-Ø-Ø	*
	SHEET 2 OF 4	INSERTION PARTS LIST DATA BASE REV D			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY BOB KOPPENAL	CHECKED	SECTION
DATE 4 NOV 76	DATE	
ENG	PROD	ISSUED SECTION
DATE	DATE	

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M8316-Ø-Ø	REF DESIGNATION
40		1909705	IC., 8881	10	E4Ø, E24, E54, E42, E46, E5Ø, E66, E61, E75, E58
41		1909928	IC., 7416	2	E71, E76
42		1909929	IC., 7417	5	E6, E26, E31, E29, E21
43		1909935	IC., 8235	3	E5, E15, E6Ø
44		1912819	IC., 74LS42	3	E19, E28, E25
45		1912805	IC., 74LSØ8	2	E34, E44
46		1910322	IC., 1488L	1	E38
47		1910323	IC., 1489L	1	E78
48		1909704	IC., 314A	1	E1Ø
49		1911469	IC.,8640	1	E77
50		1910459	IC., 16Ø2A (UART)	1	E47
51		1912853	IC., 74LSI75	1	E56
52		1912697	IC., 74LSI74	3	E55, E7Ø, E72
53		1910091	IC., 7437	1	E39
54		1911315	IC., 8234	6	E1, E9, E14, E13, E45, E53
55		1911116	IC., 8837	6	E11, E16, E3Ø, E22, E69, E73
56		2112623	IC., 5016 (BAUD RATE GEN.)	1	E62
57		23062A1	ROM #1 KLDK #1, 32 X8	1	E18
58		23063A1	ROM #2 KLDK #2, 32 X 8	1	E2Ø
59		1905575	IC.,7400	1	E3

QUANTITY / VARIATION

NOTES:

E.C.O. NO.

TITLE: OPTION BOARD #1	ASSY NO. D-UA-M8316-Ø-Ø	SIZE B	CODE PL	NUMBER M8316-Ø-Ø	REV. *
	SHEET 3 OF 4	INSERTION PARTS LIST DATA BASE REV D			

DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY JACK MASON	CHECKED	SECTION 1
DATE 13 APRIL 76	DATE	
ENG	PROD	ISSUED SECTION 1
DATE	DATE	

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION M8316-Ø-Ø	NOTES: / REF DESIGNATION
60		1905576	IC., 7410	1	E2
61		1909686	IC., 7404	2	E63, E67
62		9006732	EYELET	12	

E.C.O. NO.

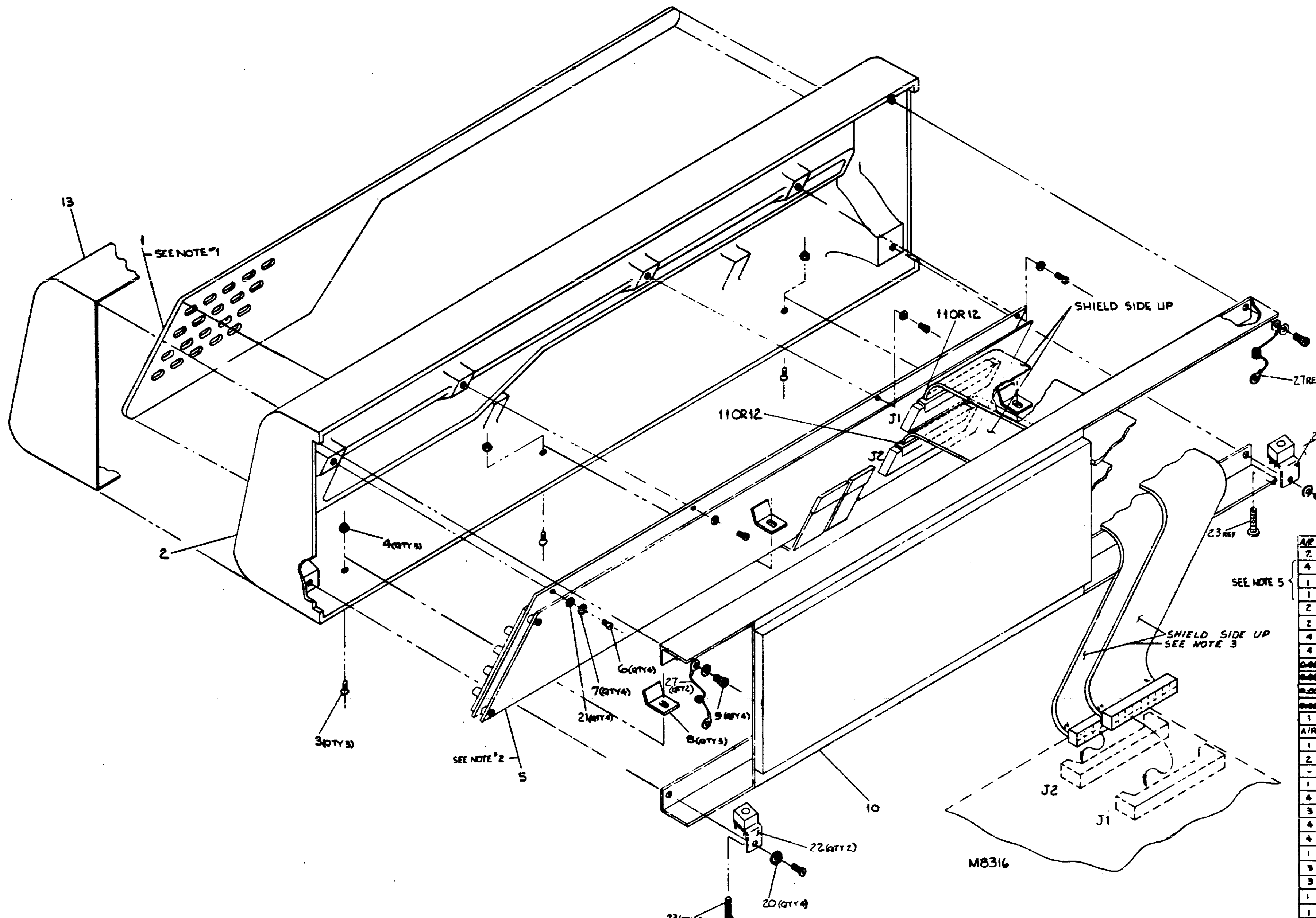
TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.
OPTION BOARD #1	D-UA-M8316-Ø-Ø	B	PL	M8316-Ø-Ø	*
	SHEET 4 OF 4	INSERTION PARTS LIST DATA BASE REV D			

DO NOT SCALE DRAWING

LEGEND	
PART. NO	VARIATION
KC8-AA	PROG'S CONSOLE(SEE PL)
KC8-AB	REMOTE PROG'S CONSOLE(SEE PL)

NOTES:

1. ASSEMBLE ITEM #1 (PANEL) TO ITEM #2 (BEZEL) USING SILASTIC ADHESIVE ITEM #14
2. FOR PROPER ALIGNMENT OF KEYPAD OF MODULE ASSEMBLY (ITEM #5) INTO BEZEL (ITEM #2), DO THE FOLLOWING:
   - PLACE MODULE ASSEMBLY (ITEM #5) INTO BEZEL (ITEM #2).
   - START MOUNTING HARDWARE, ITEMS 6, 7 AND 21 INTO BEZEL.
   - BEFORE TIGHTENING DOWN ITEMS 6, 7 AND 21, PUSH MODULE ASSEMBLY TOWARDS THE TOP OF BEZEL. THE KEYPAD, WHEN VIEWED FROM THE FRONT OF BEZEL, SHOULD JUST TOUCH THE TOP EDGE OF THE KEYPAD CUTOUTS IN BEZEL.
   - TIGHTEN ITEMS 6, 7 AND 21.
   - NOW SECURE MODULE ASSEMBLY BOTTOM TO BEZEL WITH ITEMS 3, 4 AND 8; BEING SURE THAT CLIPS (ITEM #8) ARE PRESSED FIRMLY AGAINST MODULE ASSEMBLY.
3. MATE BC08R CABLES J1 (KC8-A) TO J1 (M8316) J2 (KC8-A) TO J2 (M8316)
4. SEE SHEET 2 FOR INSTRUCTIONS OF MOUNTING BEZEL TO BOX AND CABINET
5. LOOSE SHIP ITEMS 24, 25 & 26 WITH ASSY



PARTS LIST

KC8-AB QTY.	KC8-AA QTY.	DESCRIPTION	PART NO.	ITEM NO.
A/R	A/R	INSTRUCTIONS, PKG.	3700187	28
2	2	CABLE ASSY, FLEX	1212907-01	27
4	4	SCR PPH 10-32X.50	9006073-03	26
1	1	BRKT CABINET	7419709-1	25
1	1	BRKT, CABINET	7419709-0	24
2	2	SCR, SOC. HD, 10 32X 1.0	9006350-08	23
2	2	BRK'T, BEZEL	C-IA-7014524	22
4	4	WASHER FLAT	9006653	21
4	4	WASH, EXT TOOTH LOCK #8	9008151	20
[illegible]	[illegible]	[illegible]	[illegible]	19
[illegible]	[illegible]	[illegible]	[illegible]	18
[illegible]	[illegible]	[illegible]	[illegible]	17
[illegible]	[illegible]	[illegible]	[illegible]	16
1	1	SHIPPING LIST	A-PL-KC8-A-2	15
A/R	A/R	ADHESIVE, SILASTIC	9009158	14
1	1	COVER, PROTECTIVE BEZEL	D-MD-7419361-0-0	13
2	-	I/O CABLE BC08R	C-UA-BC08R-12	12
-	2	I/O CABLE BC08R	C-UA-BC08R-01	11
1	1	BRACKET BEZEL	C-IA-7411987-0-0	10
4	4	SCR PHL HD PAN #8-32 X.38	9006087-1	9
3	3	CLIP	B-MD-7412352-0-0	8
4	4	WASH EXT TOOTH LOCK #6	9007649	7
4	4	SCR PHL HD PAN #6-32 X.25	9006020-1	6
1	1	KEYBOARD ASSY	D-AD-7010644-0-0	5
3	3	NUT KEPS #4-40	9006557	4
3	3	SCR PHL HD FLAT #4-40 X.375	9006011-2	3
1	1	BEZEL (MACHINED DIE CAST)	E-MD-7412349-3-0	2
1	1	PANEL	D-IA-7412393-1-0	1

SEE NOTE 5 (items 24–26)

FIRST USED ON OPTION/MODEL: 8/A

digital

TITLE: BEZEL ASSY

NEXT HIGHER ASSY: B-DD-KC8-A

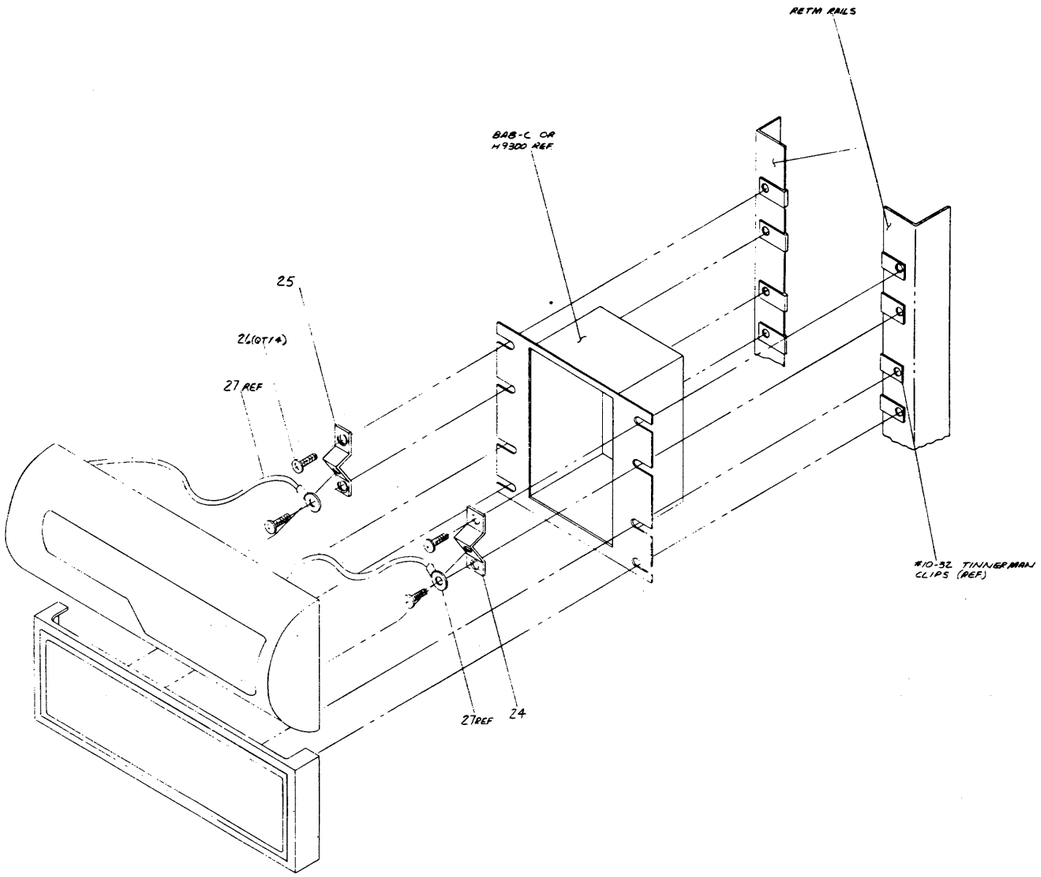
MATERIAL: SEE PARTS LIST

SCALE: NONE

SHEET 1 OF 2

SIZE: E | CODE: UA | NUMBER: KC8-A-Ø | REV: J

E UA KC8-A-Ø



REVISIONS		
ENG	CHANGE NO.	REV

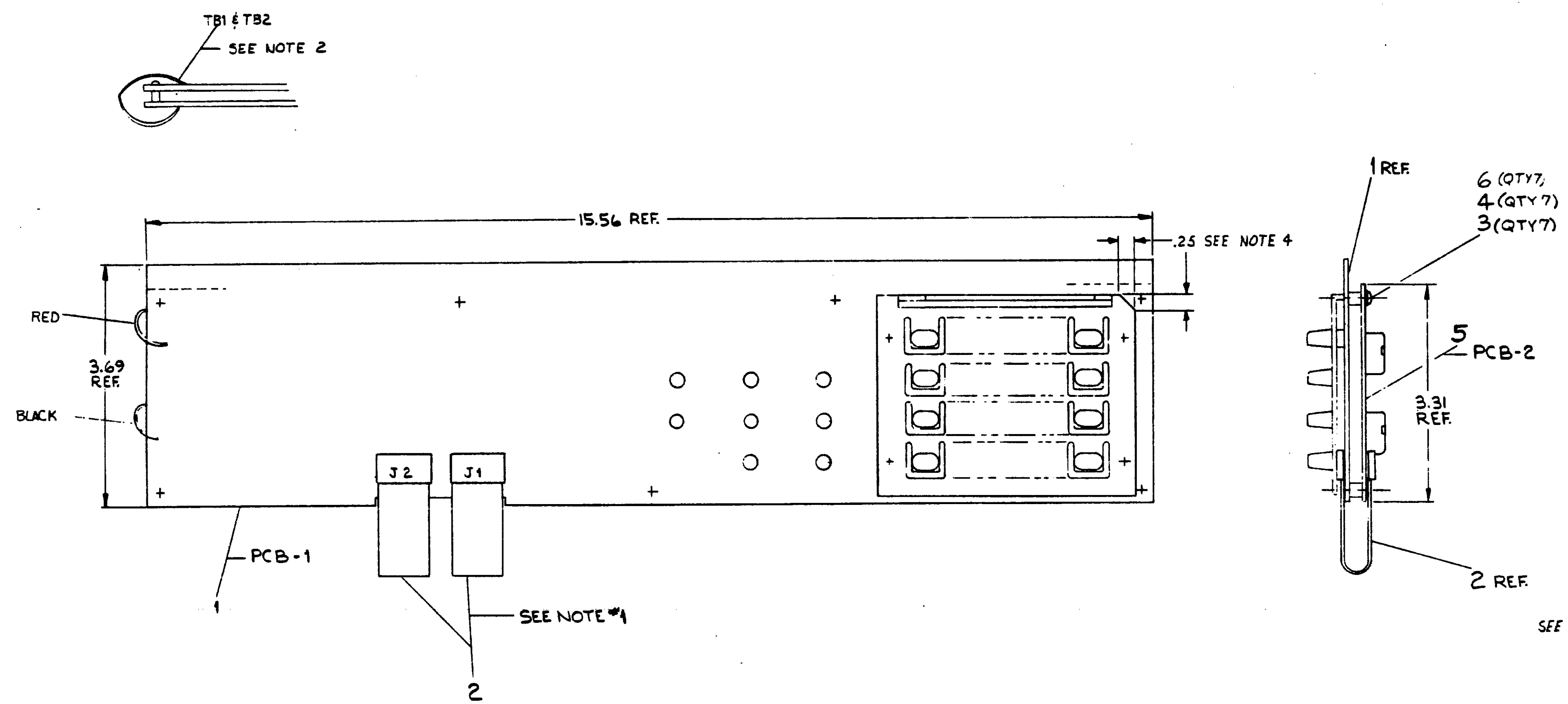
TITLE: BEZEL ASSY.		SIZE/CODE: E UA	NUMBER: KC8-A-Ø	REV: J
SCALE	SHEET 2 OF 2	DIST		

KC8-A-Ø

DO NOT SCALE DRAWING

NOTES:

1. INSTALL ITEM #2 (CABLE) AS FOLLOWS.
   PCB-1-J1 TO PCB-2-J3
   PCB-1-J2 TO PCB-2-J4
2. CONNECT RED WIRE FROM PCB-1 TO TB1 ON PCB-2. CONNECT BLACK WIRE FROM PCB-1 TO TB2 ON PCB-2.
3. ITEM #7 MAY BE RECYCLED WHEN USED FOR INTERPLANT SHIPMENT.
4. CLIP UPPER RIGHT HAND LIP OF KEYPAD OFF TO ALLOW PROPER ALIGNMENT INTO BEZEL.



SEE NOTE 3 →

QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	PACKAGING INSTRUCTIONS	A-SP-3700188-0-0	7
7	WASHER, FLAT #4	9006655	6
1	REGISTERS AND CONTROL	D-CS-5411316-0-1	5
7	WASH INT LOCK #4	9006632	4
7	SCR PHL HD PAN #4-40X.25	9008301-1	3
2	CABLE, KEYBOARD	C-IA-7008612-ØD	2
1	INDICATOR DISPLAY	D-CS-5411241-0-1	1

PARTS LIST

REVISIONS

CHK	CHANGE NO.	REV.
[illegible]	7010644-00001	A
[illegible]	7010644-00002	B
[illegible]	7010644-00003	C

G. LORD 15-MAR-76
P. SCANTLEBURY 11 MAY 76 / 15-MAY-76
P. SCANTLEBURY 10 AUG 76 / 12 AUG 76

FIRST USED ON OPTION/MODEL: 8/A

DIMENSIONAL TOLERANCE
DIMENSIONS ARE INCHES UNLESS OTHERWISE SPECIFIED

MILLIMETERS	INCHES	ANGLES
(crossed out)	.XXX = ±.005 .XX = ±.02 .X = ±.1	±0° 30'

THIRD ANGLE PROJECTION
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓
MATERIAL: SEE PARTS LIST
FINISH: —

DRN. [illegible] DATE 12-13-74
CHK'D [illegible] DATE 1-23-75
ENG. [illegible] DATE 1-23-75
PROJ. ENG. [illegible] DATE 1-23-75
PROD. [illegible] DATE 1-23-75

NEXT HIGHER ASSY.: E-UA-KC8-A-Ø
SCALE 1/1
SHEET OF

digital

TITLE: KEYBOARD ASSY.

SIZE	CODE	NUMBER	REV.
D	AD	7010644-0-0	C

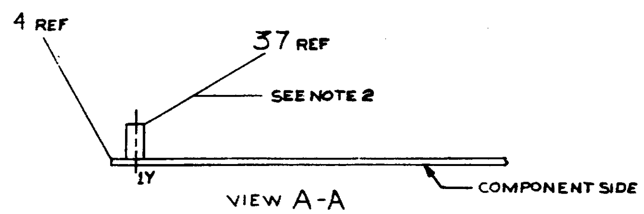
DIST.

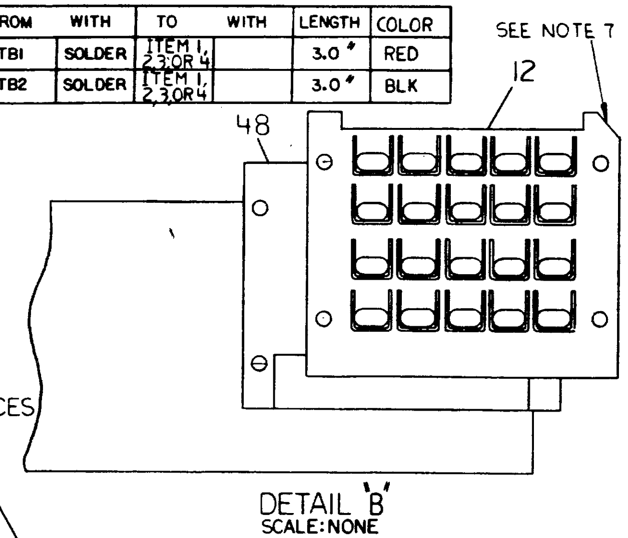
NOTES:

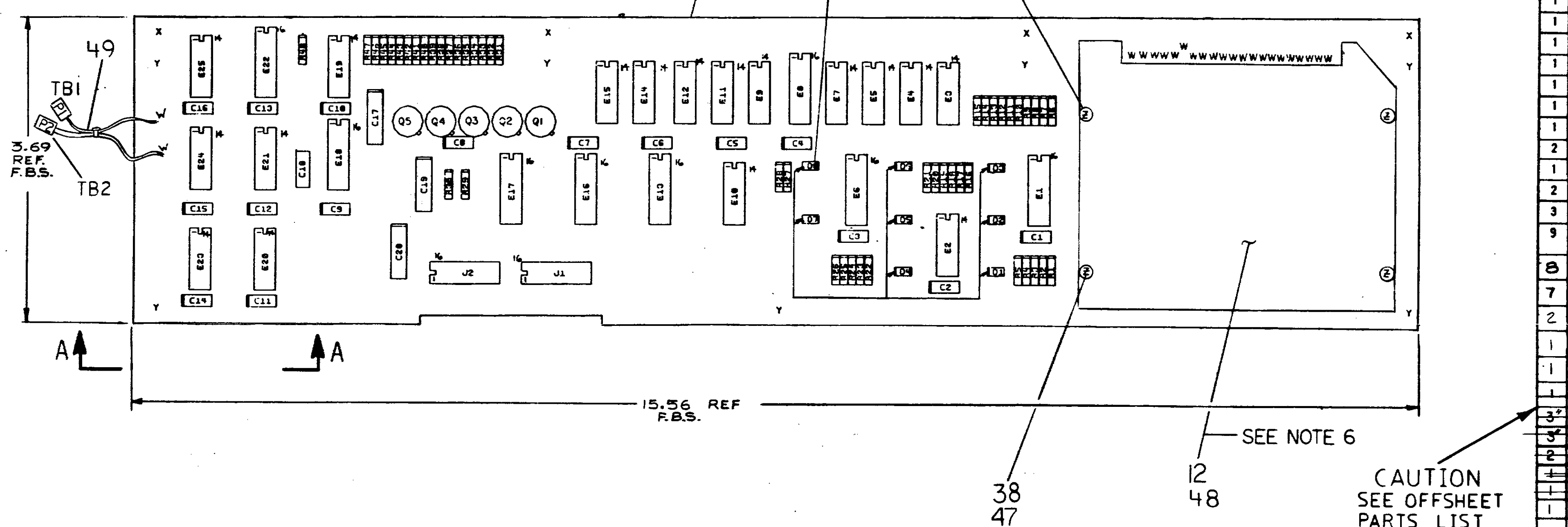
1. HAND INSERT KEYPAD AFTER WAVE SOLDERING
2. MOUNT ITEM #37 (INSERTS) IN 7 HOLES, AFTER COMPONENTS HAVE BEEN MOUNTED.
3. DEC PART NUMBER 1210054 MAY BE SUBSTITUTED FOR DEC 1211813-01 ON THIS BOARD.
4. USE #4 HARDWARE ITEMS (38, 39 & 40) TO MOUNT ITEMS 12 & 48 TO SIDE 1, EXCEPT AT LOWER LEFT CORNER.
5. USE ITEM 36 BETWEEN ITEM 9 (LED) AND BOARD BEFORE SOLDERING.
6. SEE DETAIL 'B' FOR ASSEMBLY OF KEYPAD.
7. CLIP OFF CORNER BEFORE ASSEMBLY TO BOARD.

WIRE TABLE

ITEM	FROM	WITH	TO	WITH	LENGTH	COLOR
49	TB1	SOLDER	ITEM 1, 2,3 OR 4		3.0"	RED
	TB2	SOLDER	ITEM 1, 2,3 OR 4		3.0"	BLK







CAUTION
SEE OFFSHEET PARTS LIST

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-Y COORDINATE HOLE LOCATION	K-CO-5411241-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AN-5411241-0-5	2
REF		MODULE ECO HISTORY	B-MH-5411241-0-8	3
1		ETCHED CIRCUIT BOARD	5011248	4
1	C18	CAPACITOR, 82pf, 100V, 5%	1000015	5
16	C1 THRU C16	CAPACITOR, .01uf, 50V, AXIAL	1001610-00	6
1	C17	CAPACITOR, 1.0uf, 35V, 10%	1001778-00	7
2	C19, C20	CAPACITOR, 6.8uf, 35V, 10%	1005306	8
8	D1 THRU D8	LED	1110064	9
9	E3, E5, E7, E9, E11, E12, E14, E15, E4	14 PIN I.C. SOCKET	1211813-01 SEE NOTE #3	10
2	J1, J2	16 PIN I.C. SOCKET	1211813-02	11
1		KEYPAD ASSY.	1211058	12
1	R29	RESISTOR, 220, 1/4W, 5%	1300271	13
8	R16 THRU R21, R27, R28	RESISTOR, 330, 1/4W, 5%	1300295	14
5	R32, R35, R38, R41, R44	RESISTOR, 470, 1/4W, 5%	1300310	15
21	R1 THRU R15, R22 THRU R26, R46	RESISTOR, 1K, 1/4W, 5%	1300365	16
1	R48	RESISTOR, 10K, 1/4W, 5%	1300479	17
4	R36, R39, R42, R45	RESISTOR, 10, 1/4W, 5%	1301317	18
1	R30	RESISTOR, 750, 1/4W, 5%	1301401	19
6	R31, R33, R34, R37, R40, R43	RESISTOR, 27, 1/4W, 5%	1301522	20
1	R47	RESISTOR, 6.8K, 1/4W, 5%	1301423	21
5	Q1 THRU Q5	TRANSISTOR, MPSA05	1510705	22
1	E23	I.C. DEC 7474	1905547	23
1	E21	I.C. DEC 7420	1905577	24
1	E25	I.C. DEC 7490	1909051	25
1	E24	I.C. DEC 7495	1909055	26
1	E22	I.C. DEC 8251	1909594	27
1	E20	I.C. DEC 7404	1909686	28
1	E19	I.C. DEC 7416	1909928	29
1	E17	I.C. DEC 74145	1910047	30
2	E2, E10	I.C. DEC 7408	1910155	31
1	E18	I.C. DEC 74123	1910438	32
2	E1, E6	I.C. DEC 9318	1910454	33
3	E8, E13, E16	I.C. DEC 7447A	1911295	34
9	E3, E4, E5, E7, E9, E11, E12, E14, E15	7 SEG. DISPLAY	1911297	35
8		WASHER, SHOULDER	9008518	36
7		INSERTS, P.C. BOARD	9009113-2	37
2		SCREW PHILIPS 4-40 x 5/8	9006014-01	38
1		NUT, KEP 4-40	9006557	39
1		WASHER, FLAT .312 X .125 ID X .027	9006655	40
~~1~~		~~SPACER KEY PAD~~	~~B-MD-7413722-0~~	41
~~3"~~		~~WIRE #22 AWG (RED)~~	~~9107350-22~~	42
~~3"~~		~~WIRE #22 AWG (BLACK)~~	~~9107350-00~~	43
~~2~~		~~CONN, SOLDERLESS (RED)~~	~~9007970~~	44
~~1~~		~~SPACER, FIBER 4-40, .250 X .312 LG~~	~~9007623~~	45
~~1~~		~~RETAINER, KEYBOARD ASSY.~~	~~C-IA-7013177-0-0~~	46
1		SPACER, HEX, NYLON 4-40 X 1/4	9009237	47

PARTS LIST

IC TYPE	GND	+5V
DEC I.C. 8251	8	16
DEC I.C. 7490	10	5
DEC I.C. 74145	8	16
DEC I.C. 7495	8	14
DEC I.C. 9318	8	16
DEC I.C. 74123	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

FIRST USED ON OPTION MODEL: KC8AA

ETCH BOARD REV. D

REVISIONS: K, J, H, G, F, E, D, C, B, A — CHANGE NO. / ORIGINATED / CHK

SEMICONDUCTOR CONVERSION CHART (DEC NO. / EIA NO.)

NEXT HIGHER ASSY: D-AD-70106440-0

SCALE — SHEET 1 OF 3

TITLE: INDICATOR DISPLAY

SIZE D, CODE CS, NUMBER 5411241-0-1, REV K

KEY PAD

BOOT

DISP

LSR

LA

LXA

INIT

RUN

E NEXT

E THIS

D NEXT

D THIS

HLT

BRUN H

DISP1 H

DISP2 H

DISP4 H

DISP INH H

MD

STATE

SR

STATUS

BUS

MQ

AC

RUN

KFUN Ø L

KFUN 1 L

KFUN 2 L

NUM H

BPWR OK H

FUN L

KE/F L

KEY STB H

MCLOCK H

EXT PULL

+5V

GND

MCLOCK L

STHIS L

SHLT L

TB1 TB2

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
INDICATOR DISPLAY	D	CS	5411241-0-1	K
SCALE	SHEET 2 OF 3	DIST.		

J2
MPX A
MPX B
8251 E22
7490 E25
SET9
CLR
CLK8Ø CLKØ
M CLOCKH
7416 E19
R31 27
R32 47Ø
R33 27
AØ5 Q1
R43 27
R44 47Ø
R45 1Ø
AØ5 Q5
R40 27
R41 47Ø
R42 1Ø
AØ5 Q4
R37 27
R39 47Ø
R39 1Ø
AØ5 Q3
R34 27
R35 47Ø
R36 1Ø
AØ5 Q2
+5V
J1
7447A E8
DISPLAY 2H
DISPLAY 1H
DISPLAY ØH
LT BI/RB RB
+3V
DISP3 E7
DISP2 E5
DISP1 E4
DISPØ E3
7447A E16
BEMA 2 H
BEMA 1 H
BEMAØ H
ADDR4 E15
ADDR3 E14
ADDR2 E12
ADDR1 E11
ADDRØ E9
7447A E13
ADDR2 H
ADDR1 H
ADDRØ H

REVISIONS		
CHK	CHANGE NO.	REV.

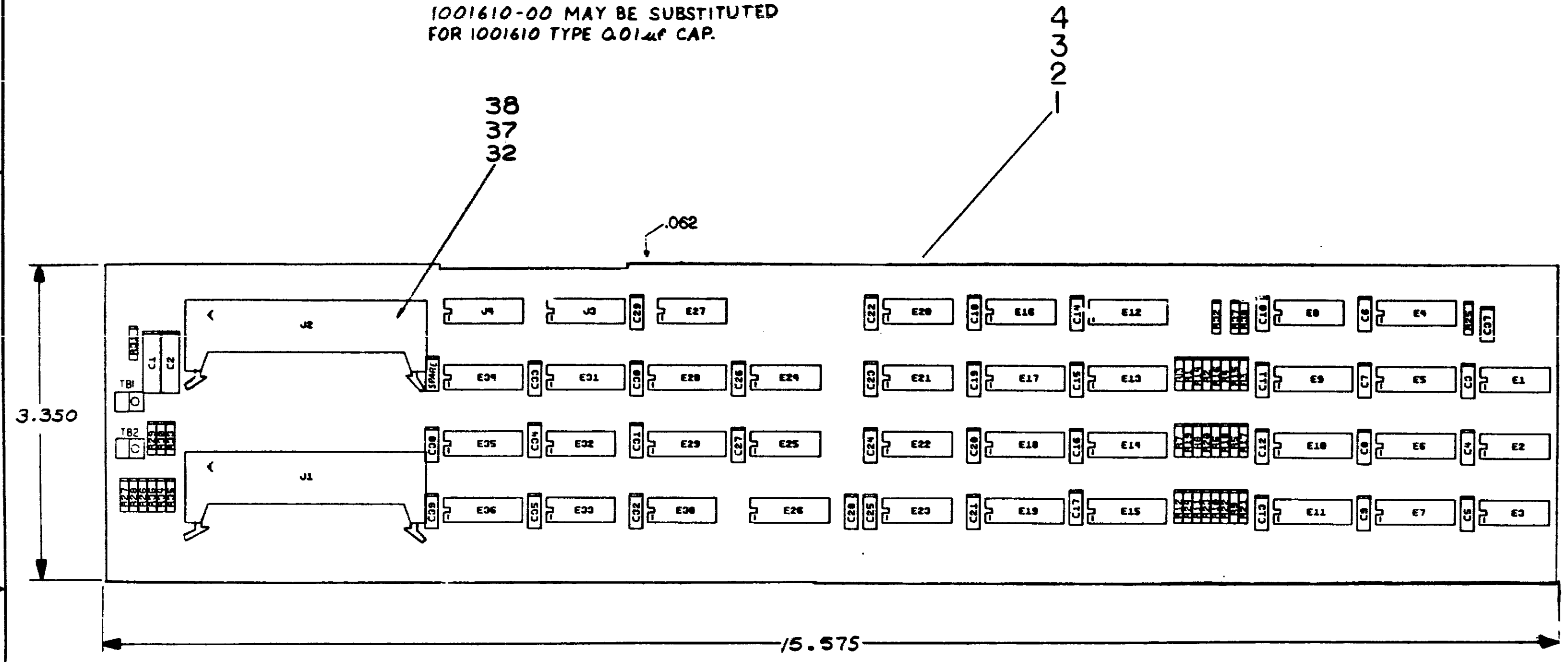
TITLE	SIZE	CODE	NUMBER	REV.
INDICATOR DISPLAY	D	CS	5411241-0-1	K
SCALE —/—	SHEET 3 OF 3		DIST.	

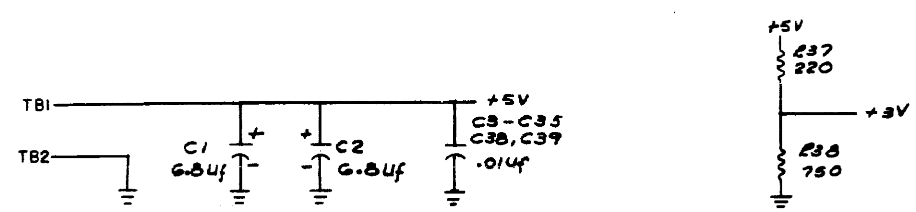
mk

NOTES:

J1		J2	
GND	+5V	GND	+5V
B, D, F, J, L, N, R, T, V, X, Z, BB, DD, FF, JJ	LL, NN, RR, SS, TT, UU, VV	B, D, F, J, L, N, R, T, V, X, Z, BB, DD, FF, JJ	LL, NN, RR, TT, VV

1001610-00 MAY BE SUBSTITUTED FOR 1001610 TYPE 0.01μf CAP.





I.C DEC 74174	8	16
I.C DEC 7475	12	5
I.C DEC 8251	8	16
I.C DEC 8235	8	16
I.C DEC 74153	8	16
I.C DEC 74123	8	16
I.C DEC 74175	8	16
I.C DEC 8097	8	16
IC TYPE	GND	+ 5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

PARTS LIST

QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF		X-YCOORDINATE HOLE LOCATION	K-CO-5411316-0-4	1
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-5411316-0-5	2
REF		MODULE ECO HISTORY	B-MH-5411316-0-6	3
1		ETCHED CIRCUIT BOARD	5011315	4
1	C37	CAP 56MMF 100V	1000012	5
35	C3 - C35, C38, C39	CAP .01 uf 100V 20%	1001610-01	6
2	C1, C2	CAP 6.8 uf 35V	1005306	7
2	E16, E20	I.C DEC 7474	1905547	8
2	E8, E30	I.C DEC 7400	1905575	9
2	E22, E33	I.C DEC 7402	1909004	10
1	E26	I.C DEC 7475	1909050	11
3	E1, E2, E3	I.C DEC 7495	1909055	12
2	E29, E35	I.C DEC 8251	1909594	13
2	E24, E27	I.C DEC 7404	1909686	14
1	E23	I.C DEC 7416	1909928	15
3	E9, E10, E11	I.C DEC 8235	1909935	16
3	E17, E18, E19	I.C DEC 74153	1909937	17
1	E32	I.C DEC 7408	1910155	18
1	E4	I.C DEC 74123	1910436	19
3	E5, E6, E7	I.C DEC 74175	1910651	20
5	E12, E13, E14, E15, E36	I.C DEC 74174	1910652	21
2	E21, E25	I.C DEC 7427	1910878	22
3	E28, E31, E34	I.C DEC 8097	1911527	23
12	R5 - R16	RES 330 1/4W 5%	1300295	24
1	R37	RES 220 1/4W 5%	1300271	25
2	R27 R30	RES 390 1/4W 5%	1300309	26
7	R28, R31 - R36	RES 1K 1/4W 5%	1300365	27
2	R26, R29	RES 180 1/4W 5%	1301322	28
1	R38	RES 750 1/4W 5%	1301401	29
1	R25	RES 6.8K 1/4W 5%	1301423	30
12	R1 - R4, R17 - R24	RES 680 1/4W 5%	1301424	31
2	J1, J2	CONN 40 PIN	1209941-02	32
2	J3, J4	SOCKET I.C 16 PIN	1211813-02	33
N/R		WIRE, #30AWG, GREEN	9105740-55	34
2	TB1, TB2	TAB FASTON (OFFSET)	9007112	35
2	TB1, TB2	EYELET	9009000	36
2		LATCH, LEFT 40P. RT. ANG. HD.	1209941-03	37
2		LATCH, RIGHT 40P. RT. ANG. HD	1209941-04	38

FIRST USED ON OPTION MODEL: KC8-AA

ETCH BOARD REV: B C

REVISIONS — REV / CHANGE NO. / CHK: F 5411316-00004; E 5411316-00003; D 5411316-00002; C 5411316-00001; B ORIGINATED

SEMICONDUCTOR CONVERSION CHART — DEC NO. / EIA NO. / DEC NO. / EIA NO.

DRN DATE 1/10/75 — CHK'D DATE 1/23/75 — ENG. DATE 1/24/75 — PROJ. ENG. DATE 1/24/75 — PROD. DATE 1/27/75

NEXT HIGHER ASSY: D-AD-7010644-0-0

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: REGISTERS & CONTROL

SIZE D CODE CS NUMBER 5411316-Ø-1 REV. F

SCALE —— SHEET 1 OF 3

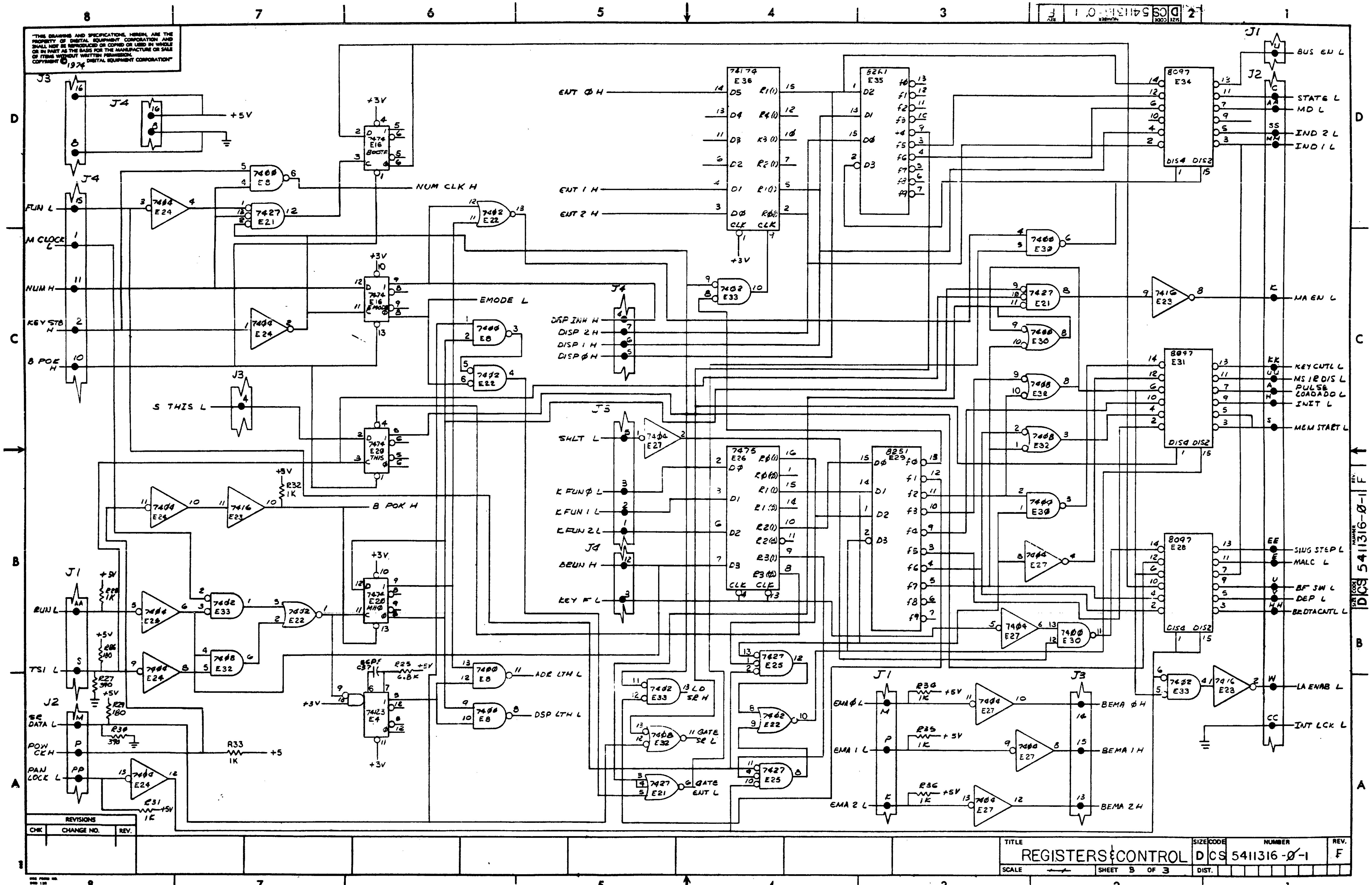
D CS 5411316-Ø-1 F

SIZE D CODE CS NUMBER 5411316-Ø-1 REV F

K FUN Ø L
E MODE L
ENT Ø H
K FUN 1 L
ENT 1 H
K FUN 2 L
LUM CLK H
ENT 2 H
BPOE H
LD SE H
9 GATE SR L
GATE ENT L
DSP LTH L
ADR LTH L
MPX-B
MPX-A
DISPLAY Ø H
DISPLAY 1 H
DISPLAY 2 H
ADDR Ø H
ADDR 1 H
ADDR 2 H
BUS Ø
BUS 3
BUS 6
BUS 9
BUS-1
BUS
BUS-7
BUS-10
BUS-11
BUS-5
BUS-8
BUS-2

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
REGISTERS & CONTROL	D	CS	5411316-Ø-1	F
SCALE	SHEET 2 OF 3	DIST.		



REVISIONS

CHK	CHANGE NO.	REV.

TITLE: REGISTERS & CONTROL

SIZE: D | CODE: CS | NUMBER: 5411316-Ø-1 | REV.: F

SCALE: — | SHEET 3 OF 3 | DIST.

DIGITAL EQUIPMENT CORPORATION

MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 22 MARCH 78

TITLE KT8A FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	00001	A.TSHUDY	4-78	[signature]	5-2-78
B	ECO CHANGE	ML002	P.GARDNER	12-78	[signature]	29 Dec 78

ENG	APPD	SIZE	CODE	NUMBER	REV
[signature]	R B Regan	A	SP	KT8A-3	B

EN-10 -16-R873-(382)
DRA 107A

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE KT8A FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

I General

This document will define the hardware requirements and tests to be preformed to: #1) install, #2) configure and #3) accept a KT8-AA system or KT8-AB add-on to an existing system.

Because the KT8-A Memory Management options has several possible hardaware configurations, the Hardware Rules/Restrictions (appendix A), General Configuration Guide (appendix B) and Configuration Examples (appendix C) should be referenced before installing this option.

A. If the KT8-AA was shipped as part of a system, refer only to the Acceptance procedure.

B. If the KT8-AB is an add-on installation to upgrade an existing system, then refer to the Installation and Acceptance Procedures.

II Hardware

This section defines the required hardware to install and accept a KT8-A and also defines the three hardware designations of the KT8-A option.

A. The KT can be installed and accepted on any 8A/420 or 620 machine.

B. The KC8A Programmer's Console is not required, as the KT diagnostics have a console package.

C. Program loading media is via: Paper tape, Floppy, or RK05.

D. The Three designations of the KT are as follows:

1. KT8A-A - the KT Memory Management option shipped as part of a system configured by a DEC Manufacturing facility.

2. KT8A-B - the required hardware to upgrade an 8A/420 or 8A/620 system. The KM8-AC (M8317YB or YC) is part of this option.

SIZE	CODE	NUMBER	REV
A	SP	KT8A-3	B

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

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE KT8A FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

3. KT8-EX - this option is required any time the memories are located is two seperate boxes (BA8C's). If required as part of an add-on, both the KT8-AB and KT8-EX must be ordered as seperate line items.

III Installation

Before proceding with your installation refer to Appendix A and B to familarize yourself with the rules and configurations. Also refer to the configuration example that most represents your particular installation.

1. Install all memory in the system, refer to Congiguration guide (appendix B).

2. Install the KT8-AB in any vacant OMNIBUS slot with an "E" connector.

3. If the system is comprised of two (2) BA8C boxes and memory will be located in each box than install the M9020, terminator module, in any available "E" connector of the box not containing the KT8-A (M8416). Now connect the cable (70-11411-1J) between the two berg connectors of the M8416 and M9020.

SIZE	CODE	NUMBER	REV
A	SP	KT8A-3	B

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

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE KT8A FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

IV Acceptance

The time to accept a KT8-A configuration depends upon the amount of memory installed.

1. Load and run the KT8-A Memory Management Diagnostic, Maindec 08-DJKTA-A, for five min. with NO errors.

2. Load and run the Extended Address Test Maindec 08-DHKMC-C, for one pass with NO errors.

3. Load and run the Extended Memory Data and Checkerboard Test, Maindec 08-DHKMA-D, for one pass with NO errors.

4. To insure system integrity, load and build a DEC/X8 program using version 2, which will exercise up to 128K of memory. It is important that the program is build using the latest DEC/X8 modules.

NOTE: Reference should be made to the latest write-up for DEC/X8 (version 2) as further parameters must be inputted to support break devices.

SIZE	CODE	NUMBER	REV
A	SP	KT8A-3	B

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

APPENDIX A

HARDWARE RULES/RESTRICTIONS

1. Any OMNIBUS CPU (KK8A or KK8F) using a BA8C box (20 slot box) is acceptable.
2. The KT6-A system can only be configured using any combination of MM8AB (16K core) and MS8C (16K or 32K MOS) memories.

   NOTE: MM8AA, MR8A, MS8A, MM8E, MM8EJ and MR8F memories cannot be used to configured a KT8A system.
3. If the system is made up of MM8AB core memories (16K), then they must be modified per ECO MM8AB #7, refer to table 1 for instructions.
4. If the system is made up of MS8C type memories (16Kor 32K MOS), them refer to table 2 for switch configuration.
5. The PDP/8E chassis cannot be used as part of a KT8-A system.
6. If Power Fail/Auto Restart and/or Bootstraps are required as part of the system, then a KM8-AC (M8317YB or YC) must be used with the Memory Extension and Timeshare option disabled via the jumper configuration in table 3.

   NOTE: The M8317 and M8317YA are incompatable with the KT8A system.

TABLE 1 MM8-AB 16K CORE MEMORY CONNECTIONS

MEMORY		CONNECTIONS	
BANK	FIELD	WIRE	JUMPER
0	0-3 (0-16K)	AB1 to EB2	1-3, 3-4 in
	4-7 (16-32)	AB1 to EB2	2-4, 3-4 in
1	0-3 (32-48)	AB1 to ED2	1-3, 3-4 in
	4-7 (48-64)	AB1 to ED2	2-4, 3-4 in
2	0-3 (64-80)	AB1 to EL2	1-3, 3-4 in
	4-7 (80-96)	AB1 to EL2	2-4, 3-4 in
3	0-3 (96-112)	AB1 to ER2	1-3, 3-4 in
	4-7 (112-128)	AB1 to ER2	2-4, 3-4 in

TABLE 2A MS8-CA 16K MOS MEMORY SWITCH SETTINGS

MEMORY		SWITCHES SET TO "OFF"
BANK	FIELD	ALL OTHERS "ON"
0	0-3 (0-16K)	S1-1
	4-7 (16-32K)	S1-2
1	0-3 (32-48K)	S1-3
	4-7 (48-64K)	S1-4
2	0-3 (64-80K)	S1-5
	4-7 (80-96K)	S1-6
3	0-3 (96-112)	S1-7
	4-7 (112-128)	S1-8

TABLE 2B MS8-CB 32K MOS MEMORY SWITCH SETTING

MEMORY		SWITCHES SET TO "OFF"
BANK	FIELD	ALL OTHERS "ON"
0	0-7 (0-32K)	S1-1 and S1-2
1	0-7 (32-64K)	S1-3 and S1-4
2	0-7 (64-96K)	S1-5 and S1-6
3	0-7 (96-128)	S1-7 and S1-8

TABLE 3 JUMPER CONFIGURATION TO DISABLE MEMORY EXTENSION AND TIMESHARE

JUMPERS

W1 OUT
W2 IN
W3 IN
W4 IN

APPENDIX B

General Configuration Rules

1. All memories must be physically located in the OMNIBUS where an "E" connector is present.
2. Remembering the above rule, place the memories as far away as posible from the CPU.
3. Direct Memory Address interfaces can only be located between the CPU and the first memory element. With one exception, in a two box system (2 BA8C's) where memory is located in both boxes a DMA interface may be located in any vacant slot of the box containing the CPU.
4. Programmed I/O interfaces may be located in any vacant slot of the system.
5. When memories are located in two BA8C chassis then the KT8-EX option must be used to extend the memory management option bank bits. The M9020 terminator card must be located in an "E" connector of the BA8C not containing the M8416. The 70-11411-1J cable is then connected between the M9020 and the M8416.

APPENDIX C

Configration Examples

Because the KT8-A is limited to use in the BA8C chassis (20 slot box) there are only four possible configurations.

1. The entire system located in one BA8C with a KK8A CPU as shown below.

SLOT	OPTION	DEFINITION
1	KK8A	CPU (M8315)
2	DKC8A	OPTION ONE (M8316), IF REQUIRED
3	KM8-AC	OPTION TWO (M8317YB or YC), IF REQUIRED
4	KT8-A	MEMORY MANAGEMENT OPTION (M8416)
5	-----	DMA DEVICES CONFIGURED FROM THIS POINT TOWARD MEMORY
6	-----	
7	-----	
8	-----	
9	-----	
10	-----	
11	MEMORY	MEMORY CONGIGURED FROM THIS POINT TOWARD THE CPU
12	-----	ONLY I/O INTERFACES
13	-----	
14	-----	
15	-----	
16	-----	
17	-----	
18	-----	
19	-----	
20	-----	ONLY I/O INTERFACES

2. The entire system located in one BA8C with a KK8F CPU as shown below.

SLOT	OPTION	DEFINITION
1	KK8F	TERMINATOR, M8320
2	DKC8A	OPTION ONE (M8316), IF REQUIRED
3	KM8-AC	OPTION TWO (M8317YB orYC), IF REQUIRED
4	KT8-A	MEMORY MANAGEMENT OPTION (M8416)
5	MEMORY	MEMORY CONFIGURED FROM THIS POINT TOWARD CPU
6	-----	
7	-----	
8	-----	
9	-----	
10	-----	
11	-----	
12	-----	
13	-----	
14	-----	
15	-----	
16	-----	
17	-----	DMA AND I/O INTERFACES CONFIGURED FROM THIS POINT TOWARD MEMORY
18	KK8F	CPU, M8310
19	KK8F	CPU, M8300
20	KK8F	CPU, M8330

3. The KT8-A system made up of two BA8C boxes with the KK8F CPU in one box and all the memory located in the other box as shown below.

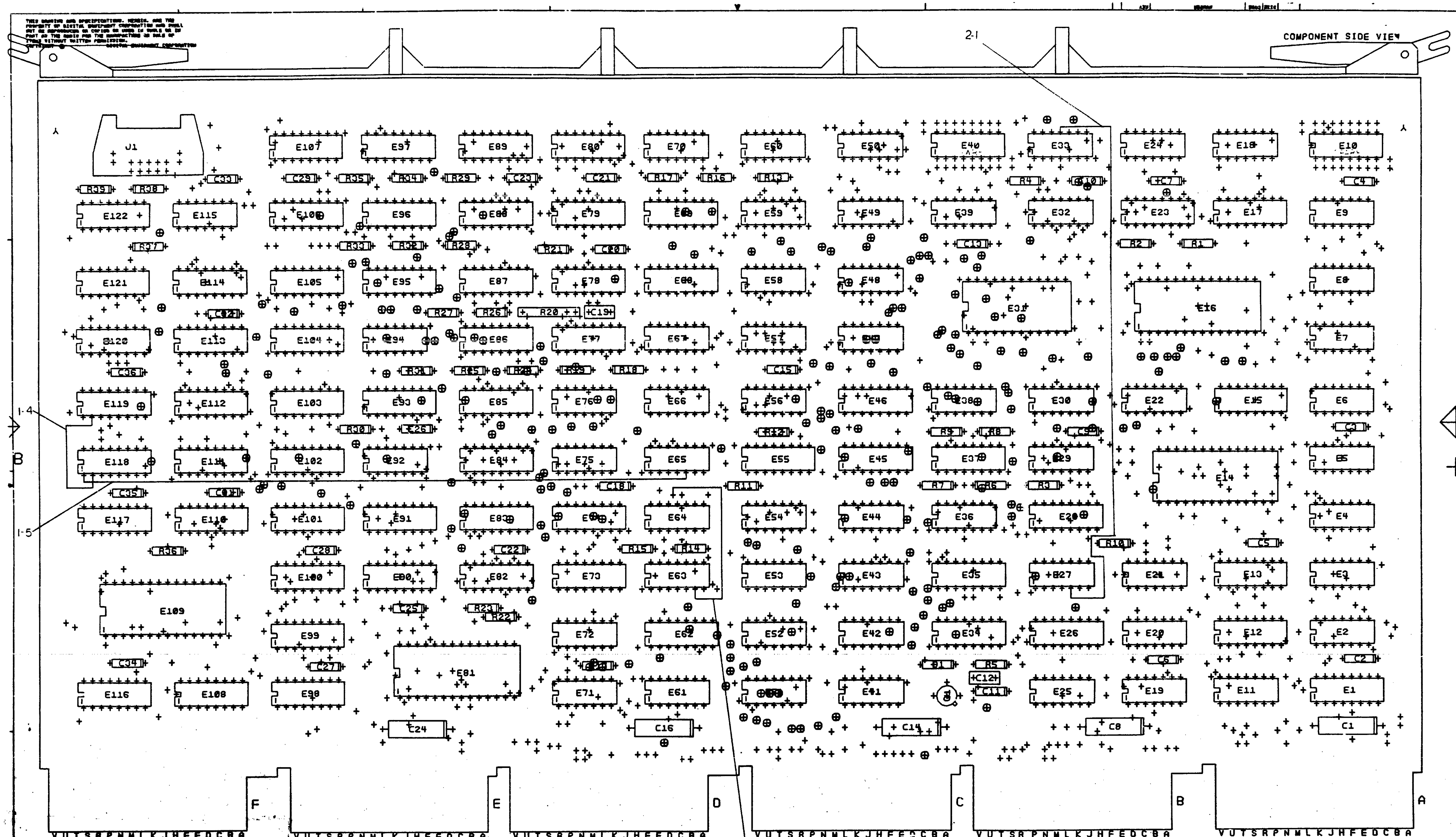
SLOT	OPTION	DEFINITION (TOP BA8C)
1	KK8F	TERMINATOR, M8320
2	-----	ANY I/O INTERFACE
3	-----	ANY I/O INTERFACE
4	KT8-A	MEMORY MANAGEMENT OPTION (M8416)
5	MEMORY	MEMORY CONFIGURED FROM THIS POINT TOWARD THE CPU
6	-----	
7	-----	
8	-----	
9	-----	
10	-----	
11	-----	LAST POSSIBLE MEMORY IN THIS CONFIGURATION
12	-----	ANY DMA OR I/O INTERFACES
13	-----	
14	-----	
15	-----	
16	-----	
17	-----	
18	-----	
19	-----	
20	BC09H-3	OMNIBUS EXPANDER CABLES

SLOT	OPTION	DEFINITION (BOTTOM BA8C)
1	BC08H-3	OMNIBUS EXPANDER CABLES
2	DKC8A	OPTION ONE (M8316), IF REQUIRED
3	KM8-AC	OPTION TWO (M8317YB or YC), IF REQUIRED
4	-----	
5	-----	
6	-----	
7	-----	
8	-----	
9	-----	
10	-----	
11	-----	
12	-----	
13	-----	
14	-----	
15	-----	
16	-----	
17	-----	DMA AND I/O INTERFACES CONFIGURED FROM THIS POINT TOWARD MEMORY
18	KK8F	CPU, M8310
19	KK8F	CPU, M8300
20	KK8F	CPU, M8330

4. The KT8-A system made up of two BA8C boxes with a KK8F in one box and memories located in both boxes as shown below:

SLOT	OPTION	DEFINITION (TOP BA8C)
1	KK8F	TERMINATOR, M8320
2	-----	ANY I/O INTERFACE
3	-----	ANY I/O INTERFACE
4	M9020	KT8A TERMINATOR, LOCATE IN SLOT "E" OF OMNIBUS
5	MEMORY	MEMORY CONFIGURED FROM THIS POINT TOWARD CPU
6	-----	
7	-----	
8	-----	
9	-----	
10	-----	
11	MEMORY	LAST MEMORY ELEMENT IN THIS BA8C!
12	-----	ANY I/O INTERFACES
13	-----	
14	-----	
15	-----	
16	-----	
17	-----	
18	-----	
19	----	ANY I/O INTERFACES
20	BC06H-3	OMNIBUS EXPANDER CABLES

SLOT	OPTION	DEFINITION (BOTTOM BA8C)
1	BC08H-3	OMNIBUS EXPANDER CABLES
2	DKC8A	OPTION ONE (M8316), IF REQUIRED
3	KM8-AC	OPTION TWO (M8317YB or YC), IF REQUIRED
4	KT8-A	MEMORY MANAGEMENT OPTION, M8416
5	MEMORY	CONTINUE CONFIGURING MEMORY FROM THIS POINT TOWARD THE CPU
6	-----	
7	-----	
8	-----	
9	-----	
10	-----	
11	-----	LAST POSSIBLE MEMORY IN THIS CONFIGURATION!
12	-----	
13	-----	
14	-----	
15	-----	
16	-----	
17	-----	DMA AND I/O INTERFACES CONFIGURATED FROM THIS POINT TOWARD MEMORY
18	KK8F	CPU, M8310
19	KK8F	CPU, M8300
20	KK8F	CPU, M8330



NOTES: MODULE REWORK AT RELEASE
ETCH CUT-SIDE 2 Q-1 BETWEEN
DA2 & 2 FEEDTHRUS NEAR C16

CHK	CHANGE NO	REV
JA	M8146-00001	C
	S.KLIEN	
	M8416-ML002	D
	A TSHUDY	

ETCH REV. C

P.C. DESIGN DATA BASE REV. C

SIGNATURES	DATE
DRN.	10/11/77
CHK'D.	10/12/77
ENG.	12/7/77
PROJ.ENG.	12/7/77
PROD.	12/7/77

SCALE 2/1

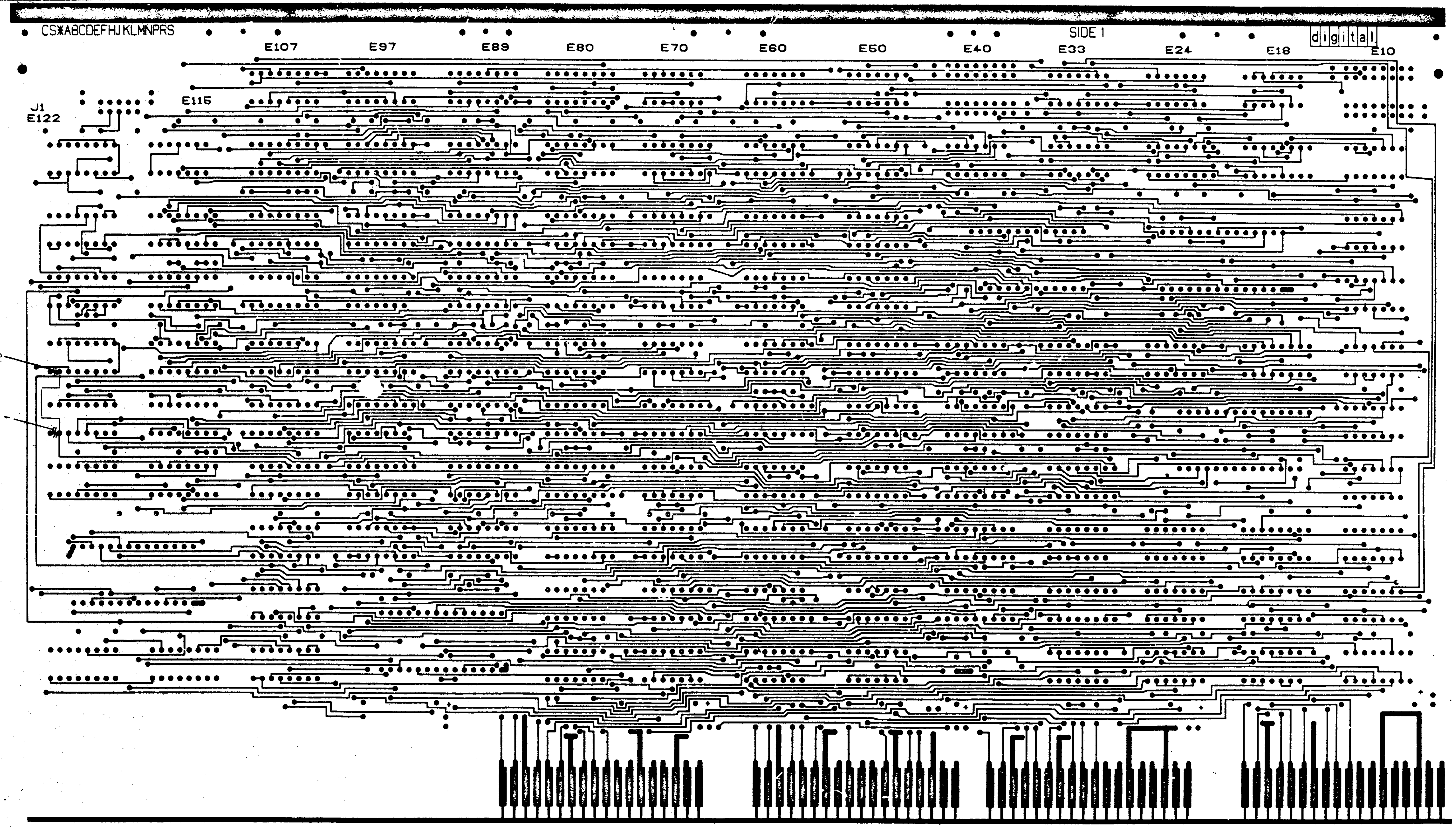
SHT. 1 OF 6

NEXT HIGHER ASSY. KM8B

digital

TITLE PDP8 MEMORY MANAGEMENT BOARD

SIZE	CODE	NUMBER	REV
D	UA	M8416-Ø-Ø	D



VIEWED FROM SIDE 1

REVISIONS		
CHK	CHANGE NO	REV

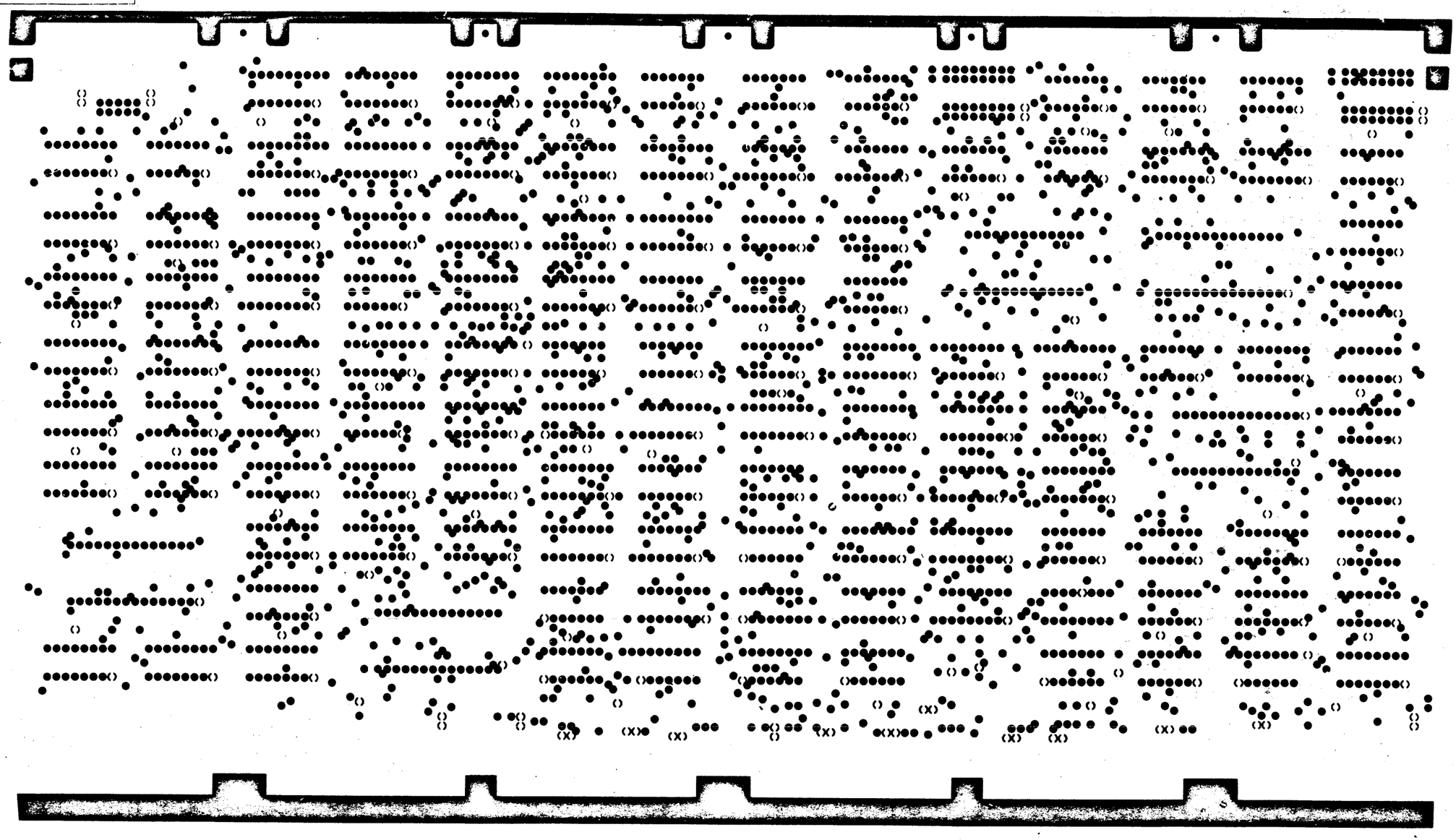
TITLE MAN- EMENT BOARD

SCALE

SHEET OF 6

SIZE D CODE UA NUMBER M8416-0-0 REV D

DIST



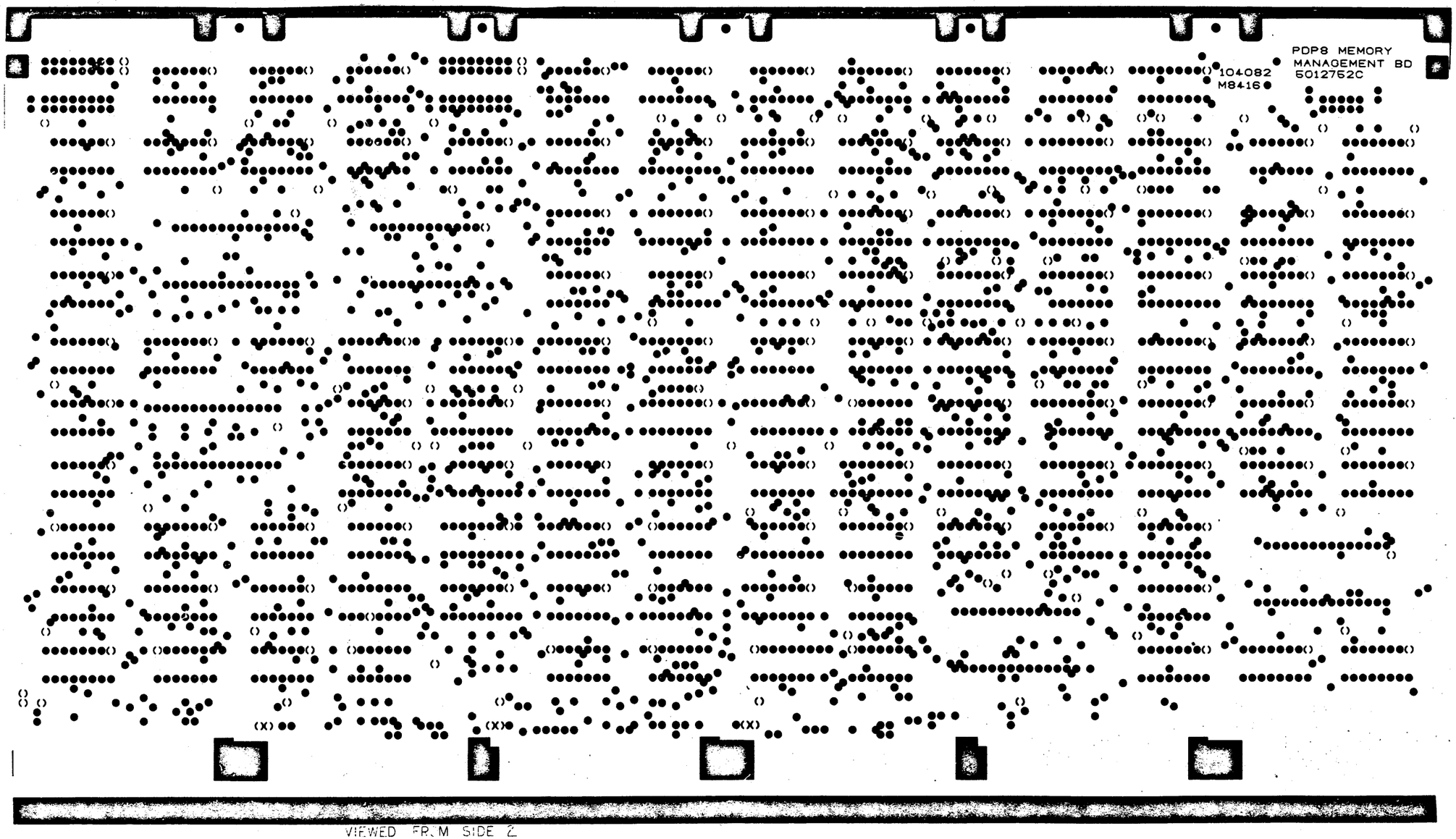
VIEWED FROM SIDE 1

REVISIONS									
SYM	CHANGE NO								

TITLE	SIZE	CODE	NUMBER	REV
[illegible]	D	UA	M8416-0-0	D
SCALE	SHEET 3 OF 6			

PDP8 MEMORY
MANAGEMENT BD
5012752C

104082
M8416



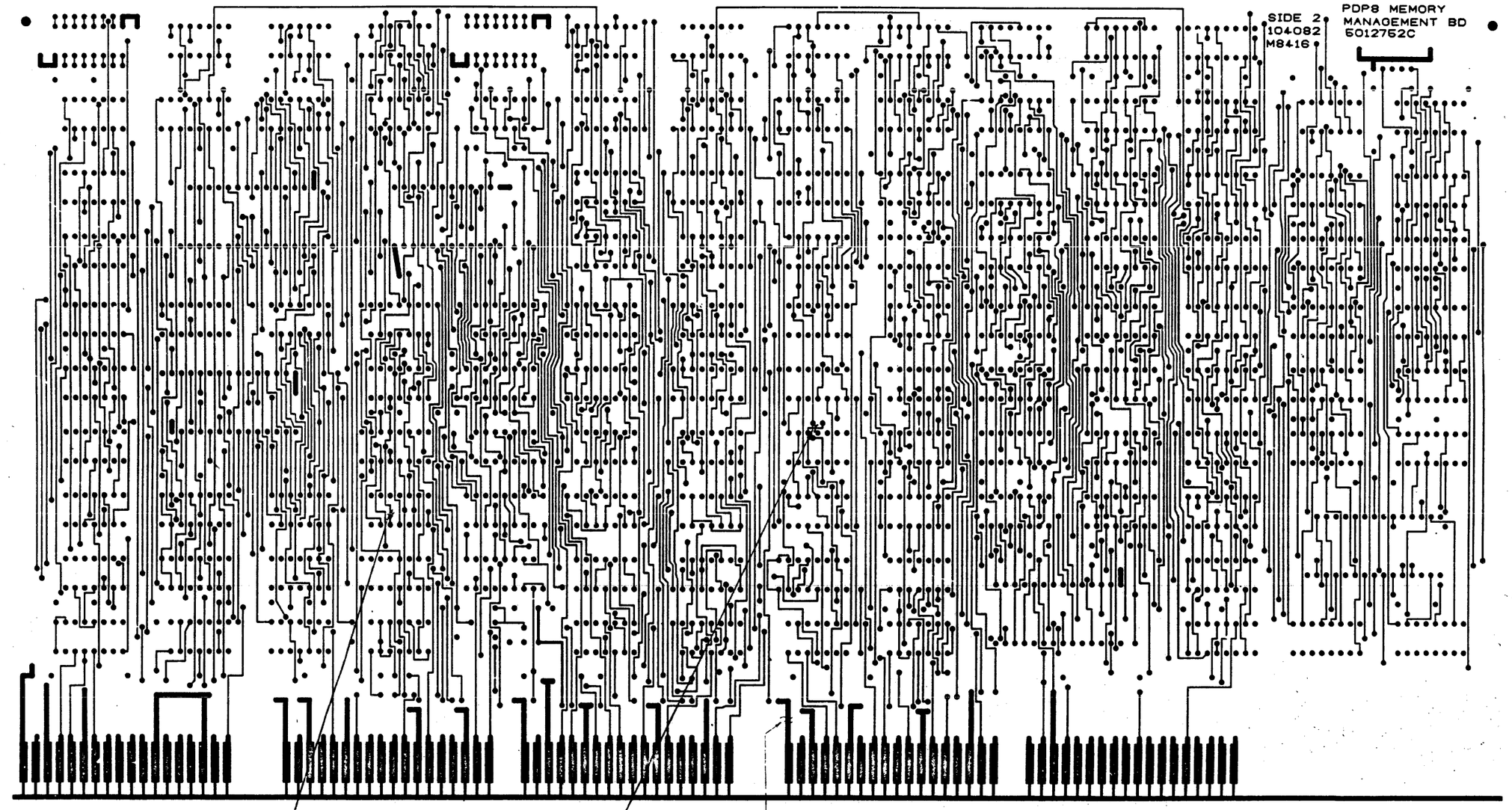
VIEWED FROM SIDE 2

REVISIONS										
LTR	CHANGE NO.	DATE								

TITLE: PDP8 MEMORY MANAGEMENT BD

SIZE D | CODE | NUMBER: 104 M8416 -0-0 | REV D

SCALE | SHEET 4 OF 6



REVISIONS										
CHR	CHANGE NO	BY								

TITLE	SIZE	CODE	NUMBER	REV
MANAGEMENT BOARD	D	UA	M8416 -0-C	D
SCALE 2:1 SHEET 5 OF 6	DIST			

REWORK INSTRUCTIONS

E.C.O. #1

ETCH CUTS SIDE 1

1-1: BETWEEN E118 PIN1 & E118 PIN2
1-2: BETWEEN E119 PIN1 & E119 PIN2

ETCH CUTS SIDE 2

1-3: BETWEEN E64 PIN10 & FEED THRU
ABOVE AND BETWEEN E64 PINS11,12

WIRE ADDS SIDE 1

1-4: FROM E118 PIN2 TO E119 PIN2
1-5: FROM E118 PIN1 TO E65 PIN 5-7
1-6: FROM E63 PIN6 TO FEED THRU
THAT WAS CUT FROM E64-10

ECO #2:

ETCH CUTS SIDE2
2-1: E27-5
WIRE ADDS SIDE1
2-2: E33-11 TO E27-5

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MEMORY MANAGEMENT BOARD	
SIZE	D	
CODE	UA	
NUMBER	M8416-0-0	
REV.	D	
SCALE		SHEET 6 OF 6
DIST.		

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	REFERENCE DESIGNATOR
1	1	D-MD-5012752-0-0	5012752-00	M8416	1	
2	2		1000016-00	100.0 MMF 100V 5%200PPM DM15S	2	C12,C19
3	3		1005306-00	6.8MFD 35V 10% S.TANT	5	C1,C8,C14,C16,C24
4	4		1012784-00	.047 MFD 50V -20+80 CER	28	C2-C7,C9,C10,C11,C13,C15,C17,C18,C20-C23,
					CONT	C25-C29,C31-C36
5	5		1110603-00	1N 5711 TN=100PS PIV= 70V HMS	1	D1
6	6		1209941-05	HEADER,100 10POS RT ANGLE	1	J1
7	7		1210711-02	HANDLE,MODULE,HEX	1	
8	8		1300316-00	470 1/4W 5% CC	1	R5
9	9		1300365-00	1 K 1/4W 5% CC	25	R1,R2,R3,R6-R10,R12,R14,R16,R17,R22-R29,
					CONT	R31-R35
10	10		1300479-00	10 K 1/4W 5% CC	12	R4,R11,R13,R15,R18,R19,R21,R30,R36-R39
11	11		1302941-00	14.7 K 1/4W 1% PN55D-F 100PPM	1	R20
12	12		1501999-00	DEC3009A NPN 300MW SI 20 25 M	1	Q1
13	13		1909701-00	74154 1 OF 16,RINA	1	E31
14	14		1909705-00	DEC 8881 NAND GATE-QUAD 2IN O	4	E4,E8,E19,E42
15	15		1909934-00	8266 MUS 1 OF 2 (QUAD)	2	E69,E79
16	16		1910393-00	DEC 7384 OR GATE-QUAD 2IN,UTI	4	E52,E53,E72,E75
17	17		1910537-00	74S11 AND GATE-TRIPLE 3INP	1	E27
18	18		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	3	E32,E63,E65
19	19		1911330-01	74173N FF-D QUAD,TRI-STATE	11	E1,E62,E73,E90,E97,E98,E99,E118,E119,E121,
					CONT	E122
20	20		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	7	E3,E11,E25,E41,E51,E61,E71
21	21		1911527-00	8097 BUFFER GATE-HEX 2INP	10	E37,E55,E83,E84,E91,E100,E101,E104,E105,
					CONT	E107
22	22		1911579-00	8641 TRANSCEIVER,BUS,QUA	3	E12,E13,E45
23	23		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E120
24	24		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	1	E64
25	25		1912649-00	LS75 LATCH 4BIT,BISTABLE	1	E26
26	26		1912661-00	74S189 MEMORY READ/WRITE	1	E82

REVISION HISTORY			
ENG	ECO NUMBER	REV	
J.A	00001	C	
A.T	M8416-ML002	D	

SECTION 1 OF 1

SECTION, VARIATION INDEX

1.00
2.
3.
4.
5.
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11.
12.

RESP,ENG,: R,REGAN — DATE: 27-OCT-77

MADE BY: TED KELLEY — DATE: 29-AUG-77

CHECKED: N, GELARDERES — DATE:

DSN,ENG,: R, REGAN — DATE: 14-NOV-77

PROD,: MELVIN SCHENKE — DATE: 14-NOV-77

ASSEMBLY NUMBER: D-UA-M8416-0-0

	D	I	G	I	T	A	L

TITLE: PARTS LIST

PDP8 MEMORY MANAGEMENT BOARD

SIZE	CODE	DOCUMENT NUMBER	REV
K	PL	M8416-0-DBP	D

EDIT #: 36

PART NUMBER: M8416

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION		QTY	REFERENCE DESIGNATOR
27	27		1912697-00	LS174	FF-D HEX W/CLEAR	5	E15,E17,E85,E88,E103
28	28		1912796-00	74148	ENCODER,PRIORITY,8 T	1	E89
29	29		1912799-00	LS00	NAND-GATE-QUAD 2IN,P	8	E6,E18,E50,E54,E57,E66,E70,E94
30	30		1912800-00	LS01	NAND-GATE-QUAD 2IN,P	1	E20
31	31		1912801-00	LS02	NOR-GATE-QUAD 2IN	3	E29,E47,E48
32	32		1912803-00	LS04	INVERTER GATE-HEX 1I	8	E2,E5,E7,E22,E39,E44,E58,E115
33	33		1912805-00	LS08	AND GATE-QUAD 2IN,PO	2	E33,E67
34	34		1912807-00	LS10	NAND GATE-TRIPLE 3IN	5	E21,E24,E49,E56,E92
35	35		1912810-00	LS20	NAND GATE-DUAL 4IN	3	E9,E36,E43
36	36		1912815-00	LS30	NAND GATE-SINGLE 8IN	1	E30
37	37		1912817-00	LS37	NAND GATE-QUAD 2IN,P	1	E38
38	38		1912819-00	LS42	DECODER,BCD-DECIMAL	1	E34
39	39		1912824-00	LS74	FF-D DUAL,EDGE TRIGG	3	E59,E60,E76
40	40		1912828-00	LS85	COMPARATOR,4BIT MAGN	2	E68,E78
41	41		1912853-00	LS175	FF-D QUAD	8	E35,E46,E93,E102,E108,E110,E116,E117
42	42		1912858-00	LS221	ONE SHOT-DUAL,SCHMTT	1	E77
43	43		1912859-00	LS256	MUX 1 OF 2 (DUAL),	1	E23
44	44		1914087-00	8098	BUFFER GATE-HEX 2IN,	4	E86,E95,E96,E106
45	45		23211A1-00	A1-07		1	E80
46	46		23440A2-00	A2-05		1	E28
47	47		23441A2-00	A2-05		1	E74
48	48		23442A2-00	A2-05		2	E87,E113
49	49		23621A9-00	A9-01		3	E111,E112,E114
50	50		23007C6-00	C6-01		1	E14
51	51		23008C6-00	C6-01		1	E16
52	52		23009C6-00	C6-01		1	E81
53	53		23010C6-00	C6-01		1	E109
54	54		9000024-01	EYELET, ROLLED FLANGE, .121 OD X		12	
55	55		9105740-55	WIRE(WRAP)30AWG	UL1423	A/R	

56 NOTE: LINE 18: PARTS SUBSTITUTION LIST
57 NOTE: ITEM #18 1910544-01 74S74 FF-D DUAL (60 VERSION) QTY 3
58 NOTE: ITEM #18 1910950-00 74S74 FF-D DUAL (45 VERSION) QTY 3

D	I	G	I	T	A	L	TITLE	SECTION 1 OF 1	SIZE	CODE	DOCUMENT NUMBER	R
							PUP8 MEMORY MANAGEMENT BOARD		K	PL	M8416-0-DBP	D

USER SIZE REG
74LS174 E88
P3 BD6 H
P3 BD7 H
P3 BD8 H
P3 BD9 H
P3 BDIØ H
P3 BDII H
D5 R5(I)
DØ RØ(I)
D1 R1(I)
D4 R4(I)
D2 R2(I)
D3 R3(I)
CLR CLK
P2 RST L
P3 BTP3 L
P4 LUSR L
74LSØ2 E29

P4 RUSR L
8Ø98 E1Ø6
RD5 L
RD7 L
RD8 L
RD9 L
RDIØ L
RDII L

74LS85 E68
74LS85 E78
A>B A=B A<B
IN< IN= IN>
P3 BM5 H
P3 BM9 H
P3 BM6 H
P3 BM7 H
P3 BM8 H
74LSØ2 E48
74LS04 E39
P1 OVER H
+5V
R21 1ØK

RELOCATION REG
74LS174 E85
P3 BD7 H
P3 BD8 H
P3 BD9 H
P3 BDIØ H
P3 BDII H
P2 RST L
P3 BTP3 L
P4 LRR L
74LSØ2 E47

P4 RRR L
P1 RRØ H
P1 RRI H
8Ø98 E86
RD7 L
RD8 L
RD9 L
RDIØ L
RDII L

RELOCATION ROM
23442A2 E87
P6 USM H
ME1 ME2
D4 D3 D2 D1
P1 BFLØ H
P1 BFL1 H
P1 BFL2 H

RELOCATION ROM
23442A2 E113
P1 BBØ H
P1 BBI H

READ VIRTUAL FIELD ROM
23621A9 E114
P6 USM H
P4 RDF L
P2 IFC H
P2 DFC H
P1 CRF H
RD6 L

READ VIRTUAL FIELD ROM
23621A9 E112
P2 DFA H
P2 IFA H
P2 DFB H
P2 IFB H
RD7 L
RD8 L

P4 RIF L
P4 RDF L
74LSØØ E33
P1 ENRF L
E27 PIN 5

REVISIONS		
CHK	CHANGE NO.	REV.
JA	M8416-00001	C
	M8416-NIL002	D

S. KLEIN
A. TSHUDY
12-22-77

DRN. TESLA	11-4-77	FIRST USED ON KT8-A
CHK	12/5/77	digital
ENG.	12-7-77	TITLE PDP8 MEMORY MANAGEMENT BOARD (P1)
PROJ. ENG.	12-7-77	
PROD.	12-7-77	
NEXT HIGHER ASSY.		
D-UA-M8416-0-0		SIZE D CODE CS NUMBER M8416-0-1 REV. D
SCALE		
SHEET 1 OF 7		DIST.

INSTRUCTION FIELD BUFFER

INSTRUCTION FIELD REG

DATA FIELD REG

MAINT REG

EMA BUFF B

EMA BUFF B

SAVE FIELD REG

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MEMORY MANAGEMENT BOARD (P2)	D	CS	M8416-0-1	D
SCALE	SHEET 2 OF 7	DIST.		

+5V

MD00 L AK1 — 8640 E11 — 74LS04 E5 — P3 BM0 H / P3 BM0 L
MD01 L AL1 — 8640 E11 — P3 BM1 H / P3 BM2 H
MD02 L AM1 — 8640 E11 — 74LS04 E5 — P3 BM2 L
MD03 L AP1 — 8640 E11 — 74LS04 E7 — P3 BM3 H / P3 BM3 L
MD04 L BK1 — 8640 E25 — 74LS04 E7 — P3 BM4 H / P3 BM4 L
MD05 L BL1 — 8640 E25 — P3 BM5 H
MD06 L BM1 — 8640 E25 — P3 BM6 H
MD07 L BP1 — 8640 E25 — P3 BM7 H
MD08 L DK1 — 8640 E71 — P3 BM8 H / P3 BM9 H
MD09 L DL1 — 8640 E71 — 74LS04 E44 — P3 BM9 L
MD010 L DM1 — 8640 E71 — P3 BM10 H / P3 BM11 H
MD011 L DP1 — 8640 E71 — 74LS04 E44 — P3 BM11 L

R12 1K — RD0 L — 74LS04 E5 — ARI DATA 00 L — P3 BD0 H
R9 1K — RD1 L — 74LS04 E5 — ASI DATA 01 L — P3 BD1 H
R8 1K — RD2 L — 74LS04 E5 — AUI DATA 02 L — P3 BD2 H
R2 1K — RD3 L — 74LS04 E5 — AVI DATA 03 L — P3 BD3 H
8641 E13 — DATA BUS XCEIVER

R1 1K — RD4 L — 74LS04 E7 — BRI DATA 04 L — P3 BD4 H
R6 1K — RD5 L — 74LS04 E7 — BSI DATA 05 L — P3 BD5 H
R7 1K — RD6 L — 74LS04 E7 — BUI DATA 06 L — P3 BD6 H
R31 1K — RD7 L — 74LS04 E7 — BVI DATA 07 L — P3 BD7 H
8641 E12 — DATA BUS XCEIVER

R25 1K — RD8 L — 74LS04 E44 — DRI DATA 08 L — P3 BD8 H
R24 1K — RD9 L — 74LS04 E44 — DSI DATA 09 L — P3 BD9 H
R26 1K — RDI0 L — 74LS04 E44 — DUI DATA 10 L — P3 BD10 H
R27 1K — RDI1 L — 74LS04 E44 — DVI DATA 11 L — P3 BD11 H
INITIALIZE H
8641 E45 — DATA BUS XCEIVER

AC BUFFER
74LS174 E17
P3 BD0 H — D0 R0 (I)
P3 BD1 H — D1 R1 (I)
P3 BD2 H — D2 R2 (I)
P3 BD3 H — D3 R3 (I)
P3 BD4 H — D4 R4 (I)
P3 BD5 H — D5 R5 (I)
CLR CLK

AC BUFFER
74LS174 E15
P3 BD6 H — D0 R0 (I)
P3 BD7 H — D1 R1 (I)
P3 BD8 H — D2 R2 (I)
P3 BD9 H — D3 R3 (I)
P3 BD10 H — D4 R4 (I)
P3 BD11 H — D5 R5 (I)
CLR CLK

74LS258 E23
A1 B1 A2 B2 A3 B3 A4 B4 SEL O/C
Y1 → RD3 L
Y2 → RD4 L
Y3 → RD10 L
Y4 → RD11 L

REARRANGE PLA
82S100 E16
DI5 DI4 DI3 DI2 DI1 DI0 D9 D8 D7 D6 D5 D4 D3 D2 D1 D0
R7 R6 R5 R4 R3 R2 R1 R0
FE EN
RD0 L, RD1 L, RD2 L, RD5 L, RD6 L, RD7 L, RD8 L, RD9 L

P4 RACA L
P4 RACC L
P4 RACB L
P3 BINIT L
74LS20 E9
74LS04 E22
MBCT4 L — 74LS08 E33

TP2 H — CE2 10 — 7384 E53 — 74LS04 E22 — P3 BTP2 L
CR1 — 7384 E53 — P3 BINIT H — 74LS04 E22
P3 BTP3 H — 74LS00 E6
P4 MBC L — 74LS04 E22
TS4 L — CP2 — 8640 E51 — P3 BTS4 H
PAUSE L — CD1 — 8640 E41 — P4 BTS4 H

74LS75 E26
D0 R0(1) R0(0) R1(1) R1(0) D1 ENB!
P3 BPAUSE H
P3 E2CFROM L
P3 BTP3 L

P3 MBK H
8881 E19 — CV1 — MSIROIS L
8881 E19 — CU1 — CPMADIS L
8881 E4 — BE2 — BREAK IN PROG L

INSTRUCTION DECODE PLA
82S100 E14
P3 BM0 H, P3 BM1 H — 74LS10 E21
F L — DJ2 — 8640 E61 — P3 BF H
P4 LXA H — D L — DK2 — 8640 E61 — P3 BD H
P3 BM2 H, P3 BM3 H, P3 BM4 H, P3 BM5 H, P3 BM6 H, P3 BM7 H, P3 BM8 H, P3 BM9 H, P3 BM0 H, P3 BM11 H, P3 BPAUSE H, P6 RVFEN H, P6 EEM H, P6 USM H, P6 DI0I H
DI5 DI4 DI3 DI2 DI1 DI0 D9 D8 D7 D6 D5 D4 D3 D2 D1 D0
R7 R6 R5 R4 R3 R2 R1 R0
FE EN
P3 INIOEN H
P3 DECEN L
P3 CFROM L
P3 CI7EN L
P3 HOS L
8881 E19 — CE1 — CE0 L
8881 E19 — 10 CHI — CI L
74LS01 E20 — P3 BTS3 H

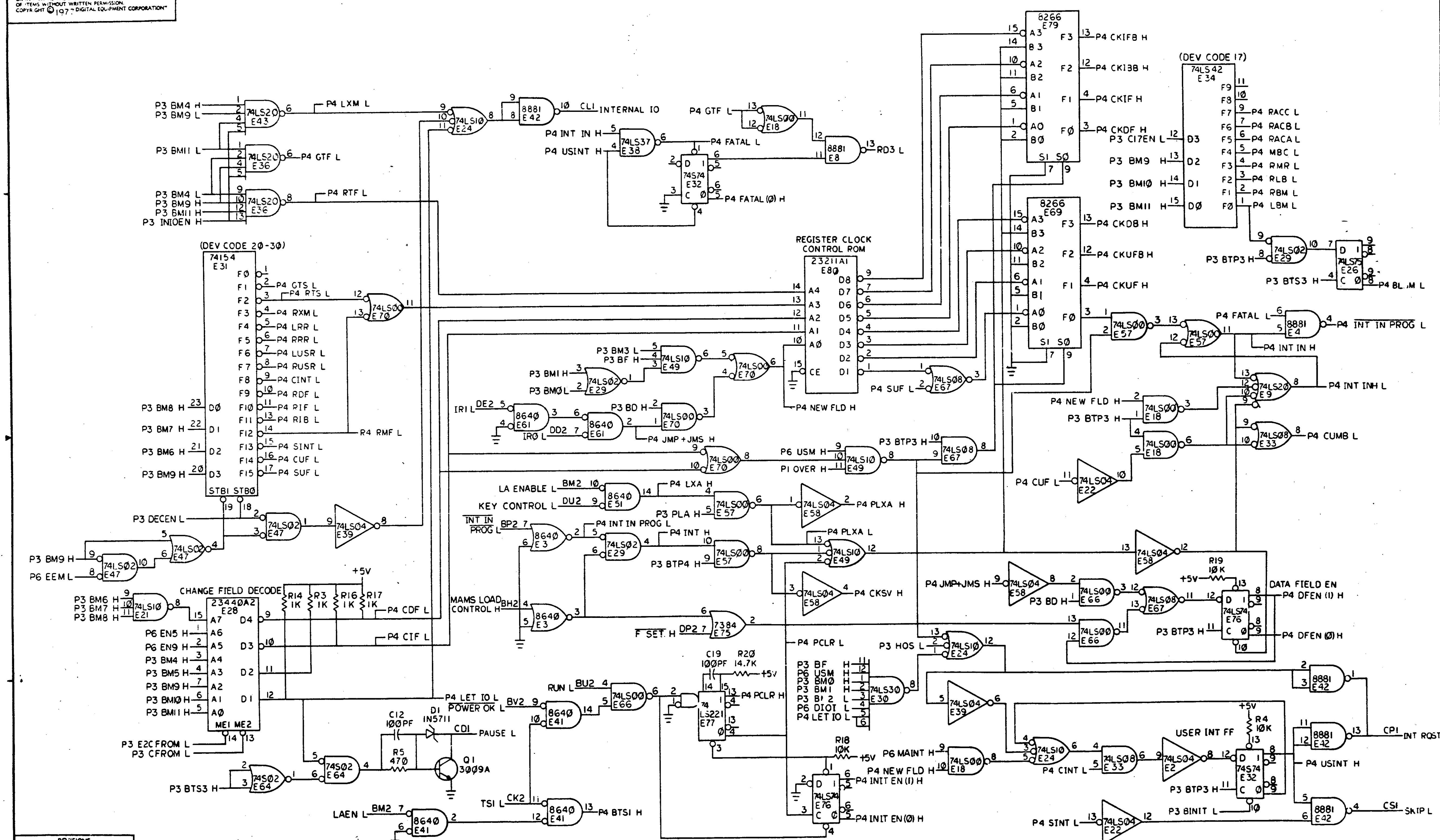
RI0 1K — +5V
74LS01 E20 — P3 BTS4 H
74LS01 E20 — P3 MBK H
74LS01 E20 — P4 BTS1 H
74LS01 E20 — P6 BIND2 H

TP4 H — CJ2 — 74S11 E27 — P3 BTP4 H
TP3 H — CH2 — 8640 E51 — 74LS37 E38 — P3 BTP3 H / P3 BTP3 L
TS3 L — CM2 — 8640 E51 — P3 BTS3 H
PULSELA H — DR2 — 7384 E53 — P3 BPLA H
TP1 H — CD2 — 7384 E53 — P3 BTP1 H

REVISIONS

CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MEMORY MANAGEMENT BOARD (P3)	D	CS	M8416-0-1	D
SCALE —	SHEET 3 OF 7	DIST.		



TITLE	PDP8 MEMORY MANAGEMENT BOARD (P4)
SIZE	D
CODE	CS
NUMBER	M8416-Ø-1
SHEET	4 OF 7

BANK SELECT ROM
2344IA2 E74
P4 INT IN PROG L
P4 DFEN (1) H
P4 INIT EN (0) H
P2 BCPMAD L
P3 BTS4 H
P3 BPAUSE H
P6 EBM H
IBS L
P5 DBS L
P5 BMEN L
FORCE 0 L
ME1 ME2
LBM + RBMN

74148 E89
P4 NEW FLD H
P4 LXA H
74LS04 E115
74LS04 E39
P4 CIF L
P4 CDF L
P4 RTS L
P4 RMF L
MUX C0 H
MUX C1 H
MUX C2 H
SB0 L
SB1 L
SB2 L
SB3 L
IBB 0 H
IBB 1 H

BANK SELECT MUX PLA
82S100 E109
P1 BB0 H
P1 BB1 H
P3 BD1 H
P3 BD2 H
P3 BD3 H
P3 BD4 H
P3 BD5 H
FE EN

INSTRUCTION BANK REG
74LS175 E110
P4 CKIF H
CLR CLK

DATA BANK REG
74LS175 E108
P4 CKDB H

INSTRUCTION BANK BUFF
74LS175 E116
R36 10K
+5V
P4 CKIBB H

8097 E101
8097 E91
P6 DISPB L
RD1 L
RD2 L
RD4 L
RD5 L

74S139 E120
P5 IBS0 L
P5 IBS1 L
P5 IBS2 L
P5 IBS3 L
ENB1

SAVE BANK REG
74LSI75 E117
P4 CKSV H

READ VIRTUAL FIELD ROM
2362IA9 E111
P1 RR1 H
P1 RR0 H
P1 CRF H
P4 RDF L
P6 USM H
P1 ENRF L
RD9 L
RD5 L

P2 RSB L
8097 E100
RD4 L
RD3 L
RD2 L
RD1 L
P4 RBM L
RD10 L
RD11 L

BREAK MAP ADDRESS PLA
82S100 E61
P3 BTS4 H
P4 RBM L
P4 LBM L
P3 BD0 H
P3 BD1 H
P3 BD2 H
P3 BD3 H
P3 BD4 H
P3 BD5 H
P3 BD6 H
P3 BD7 H
P3 BD8 H
P3 BD9 H
P3 BD10 H
P3 BD11 H
FE EN

BREAK MAP
74S189 E82
EN R/W
P4 BLBM L

R22 1K
R23 1K
+5V

LAST BREAK REG
74173 E90
DATA ENA
CLK CLR
P4 RLB L
P3 BTP4 H
P3 BINIT H
RD6 L
RD7 L
RD8 L
RD9 L

REVISIONS		
CHK	CHANGE NO.	REV.

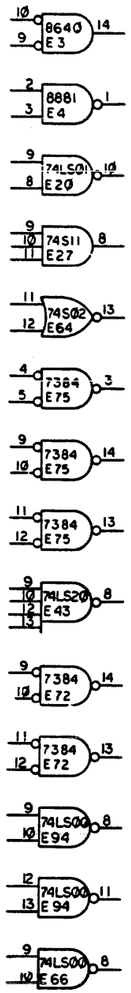
TITLE	PDP8 MEMORY MANAGEMENT BOARD (P5)	SIZE	CODE	NUMBER	REV.
		D	CS	M8416-0-1	D
SCALE	SHEET 5 OF 7	DIST.			

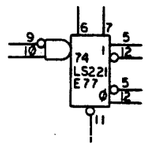
REMOTE BANK SELECT REG B
74173 E119
P5 IBS0 L
P5 IBS1 L
P5 IBS2 L
P5 IBS3 L
P6 EMAEN H
74S02 E64
P3 BTP4 H
LOCAL BANK SELECT REG B
74173 E118
P6 PRUPL
P2ENBSL
EB2 P6 BS0 L
ED2 P6 BS1 L
EL2 P6 BS2 L
EP2 P6 BS3 L
J1
RBSJ L
RBS1 L
RBS2 L
RBS3 L
R37 10K R38 10K R39 10K R11 10K
+5V
AA2. BA2. CA2
C1. C8. C14. C16. C24. 6.8UF. 35V
C2 THRU C7. C9. C10. C11. C13. C15. C17. C18. C20 THRU C23. C25 THRU C29. C31 THRU C36 .047UF. 50V
AC1. AT1. AF1. AN1.
AC2. AT2. AF2. AN2.
BC1. BT1. BF1. BN1.
BC2. BT2. BF2. BN2.
CC1. CT1. CF1. CN1.
CC2. CT2. CF2. CN2.
DC1. DT1. DF1. DN1.
DC2. DT2. DF2. DN2.
EC2. FC2. ET1. FT1.
MAINT REG
74173 E99
P4 RMR L
RD1 L
RD2 L
RD3 L
RD4 L
MAINT REG
74173 E98
RD5 L
RD6 L
RD7 L
RD8 L
P6 CKMR L
P3 BINIT H
REMOTE BANK SELECT REG A
74173 E122
P2 ELAR L
74173 E121
74S139 E120
P3 BD1 H
P3 BD2 H
LOCAL BANK SELECT REG A
P4 PLXA H
P4 PCLR H
P4 PCLR L
74S74 E65
P3 BTP4 H
P6PRUPL
P4 PLXA L
8097 E55
8097 E37
EXTENDED MODE REG
74LS175 E35
P3 BD0 H
P3 BD1 H
P3 BD2 H
P3 BD3 H
P6 EEM H
P6 EEM L
P6 EN5 H
P6 EN5 L
P6 EN9 H
P6 EN9 L
P6 RVFEN H
P6 RVFEN L
EXTENDED MODE REG
74LS175 E46
P3 BD4 H
P3 BD5 H
P3 BD6 H
P6 DIOI H
P6 DIOI L
P6 EBM H
P6 EBM L
P4 LXM L
P3 BTP3 L
74LS02 E48
P2 RST L
P6 MAINT L
P4 INT INH L
P6 MAINT H
LINK L
AV2
P4 GTF L
P4 GTS L
8640 E3
74LS00 E5
8881 E4
RD0 L
P4 RXM L
P6 EEM L
P6 EN5 L
P6 EN9 L
P6 RVFEN L
P6 DIOI L
P6 EBM L
P6 MAINT L
INDI L
IND2 L
CU2
CV2
7384 E72
74LS04 E115
74LS10 E92
74LS00 E94
P6 DISPB L
P6 DISF L
P6 BIND2 H
P4 BTSI H
P4 FATAL (0) H
P6 USM L
P3 BTP2 L
P5 DBS L
P5 BMEN L
P3 BTP4 H
P3 BTP3 H
P6 MAINT H
P4 NEW FLD H
P3 BTPI H
P6 CKMR L
P3 BD5 H
P4 RMF L
P4 SUF L
74LS04 E39
74LS00 E50
P4 CKUFB H
P3 BTP3 H
74LS74 E60
UMB
P4 CKUF H
P4 CUMB L
74LS74 E59
UMFF
P6 USM H
+5V
R13 10K
SVUF
P4 CKSV H
P2 SUF OUT H
P6 DIOI L
PI ENR L
MSI1 E27
P3 BM2 H
DM2
USER MODE L

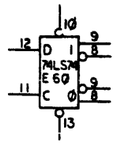
REVISIONS		
CHK	CHANGE NO.	REV.

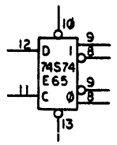
TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MEMORY MANAGEMENT BOARD (P6)	D	CS	M8416-0-1	D
SCALE —	SHEET 6 OF 7	DIST.		

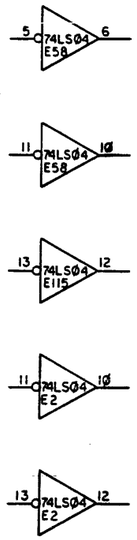
SPARES

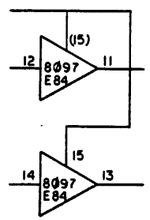






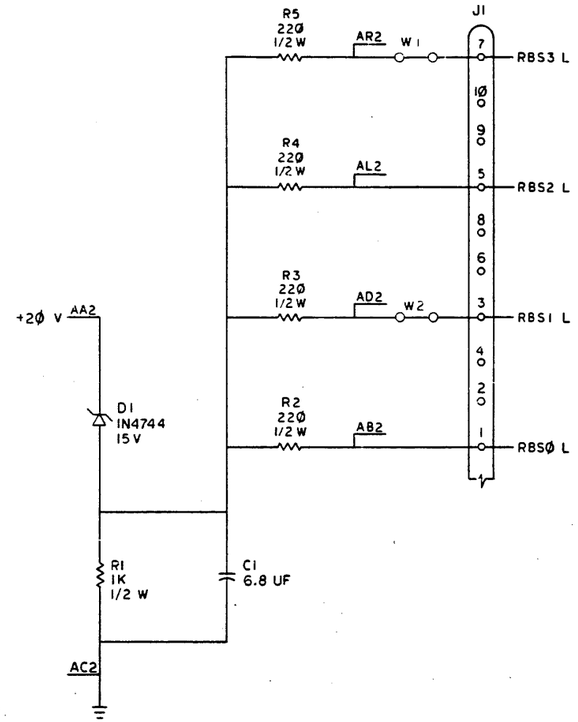






REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MEMORY MANAGEMENT BOARD	D	CS	M8416-0-1	D
SCALE — SHEET 7 OF 7	DIST.			



DRN.	11-9-77	FIRST USED ON: KT8-A	digital
CHK	12-7-77	TITLE: KT8-A TERMINATOR	
ENG.	12-7-77		
PROJ. ENG.	12-7-77		
PROD.	12-7-77		
NEXT HIGHER ASSY.			
D-UA-M9020-0-0		SIZE D / CODE CS / NUMBER M9020-0-1 / REV. *	
SCALE		DIST.	
SHEET 1 OF 1			

REVISIONS: REV. | CHANGE NO. | CHK

M9020-0-1 D CS

M9020-0-H CS

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 14 JUNE 77

TITLE MS8C Field Installation and Acceptance Procedure

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG 8/29/77 APPD 8/25/77 SIZE A CODE SP NUMBER MS8-C-3 REV

DEC 16-(392)-1079A-R873
DRA 107A

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

TITLE MS8C Field Installation and Acceptance Procedure

I. General

This procedure defines the performance standards required of the MS8CA and MS8CB Memories. The MS8C can be installed in any PDP8A series computers. The Memory may be an add-on to PDP8E systems if a BA8C expander is used.

II. Inspection Add-on

After removing the M8417 from the packing material, inspect the module for the following:

1. Loose or broken components.
2. Inventory against shipping lists.

III. Installation

1. Switch/Field Selection

MS8-CA (1)One switch(only)must be off.
MS8-CB (2)Two switch(only)must be off.

Set-up switch as defined in the following table. Switchs off are the enable.

	Address	Bank	Field
S1-1	0-16K	0	0-3
S1-2	16-32K	0	4-7
*S1-3	32-48K	1	0-3
*S1-4	48-64K	1	4-7
*S1-5	64-80K	2	0-3
*S1-6	80-96K	2	4-7
*S1-7	96-112K	3	0-3
*S1-8	112-128K	3	4-7

*NOTE: KT8A must be installed for these settings. Refer to the KT8A Installation and Acceptance Procedures for KT8A systems acceptance.

2. Install

Ensure power to PDP8A is off.
Insert the M8417 into slot 4 of the PDP8A.
If two memories are to be installed, install the second in slot 5.

IV. Acceptance

Preform the acceptance test as indicated in the following table. If problems are encountered, refer to the diagnostic listings for the type of error and for information on how to read the error printouts.

SIZE A CODE SP NUMBER MS8-C-3 REV

DEC FORM NO DEC 16-(381)-1022-N370
DRA 108

Equipment Required:

1. 03,04 Console Terminal
2. PDP8A with MS8C Memory
*3. Input device, either paper tape or OS8.
4. Diagnostics and listings.

*Programmers console is required to make Switch register settings on the paper tape version of the diagnostic.

Program Name	Maindec #	Accept Time
Extended Memory Address Test	08-DHKMA	30 Minutes
Extended Memory Checkerboard	08-DHKMC	30 Minutes

No Errors are Acceptable.

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

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

NOTES:
1. MODULE DESIGNATION: M8417-AA = M8417-AB,-AC,-AD,-AE, ETC.
   16K MOS MEMORY
   REFERENCE DESIGNATIONS NOT USED:
   E1Ø1 E2Ø1 E3Ø1 E4Ø1
   E1Ø3 E2Ø3 E3Ø3 E4Ø3
   E1Ø5 E2Ø5 E3Ø5 E4Ø5
   E1Ø7 E2Ø7 E3Ø7 E4Ø7
   E1Ø9 E2Ø9 E3Ø9 E4Ø9
   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 G423
2. MODULE DESIGNATION: M8417-BA = M8417-BB,-BC,-BD,-BE, ETC.
   32K MOS MEMORY
3. ALL 8837'S HAVE PINS 7 & 9 GROUNDED.
4. TIMING RESISTORS R87 AND R32 MAY BE REMOVED AT MODULE TEST FOR TIMING ADJUSTMENTS.
5. TIMING RESISTORS R88, R1Ø0, R14Ø MAY BE INSTALLED AT MODULE TEST FOR TIMING ADJUSTMENTS.

R88	3.16K 1/4W 1% MF	13-Ø3Ø45-ØØ
R1ØØ	604Ω 1/4W 1% MF	13-13155-Ø4
R14Ø	1.21K 1/4W 1% MF	13-Ø2871-ØØ

JUMPER CONFIGURATIONS

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

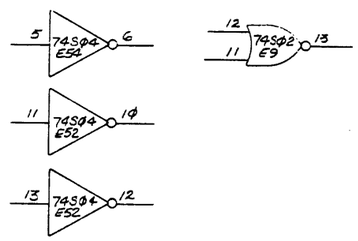
ALL JUMPERS ARE MACHINE INSERTABLE.

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



REVISIONS	CHK.	CHANGE NO.	REV.
		M8417-00001	B
		M8417-00002	C
		M8417-00003	D
		M8417-ML004	E
		M8417-ML007	F

J. STEGEMAN 22 Apr 77
STEVE AMBE 10 MAR 78
J. STEGEMAN 17 MAR 78
STEVE AMBE 6 JUL 78
J. STEGEMAN 18 DEC 78
J. STEGEMAN 9 JAN 79
W. Hickey 4-28-80
J. STEGAMAN 4-21-80

DRN. ANGEL COLON	4/28/77	FIRST USED ON MS8-C
CHK'D	7/7/77	digital
ENG.		TITLE PDP8 MOS MEMORY
PROJ. ENGR.		
PROD.		
NEXT HIGHER ASSY.	B-DD-M8417-Ø	SIZE D CODE CS NUMBER M8417-Ø-1 REV. F
SCALE	NONE	
SHEET	1 OF 14	DIST.

REF OSC

REF COUNTER

REF SYNCHRONIZATION

I/O STALL DETECTION

REF IN PROGRESS

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY (TIM B)				
SCALE	NONE	SHEET 2 OF 14	SIZE D	CODE CS	NUMBER M8417-Ø-1 REV F
			DIST.		

ML

* 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.

TIMING GO LOGIC

POWER UP INIT

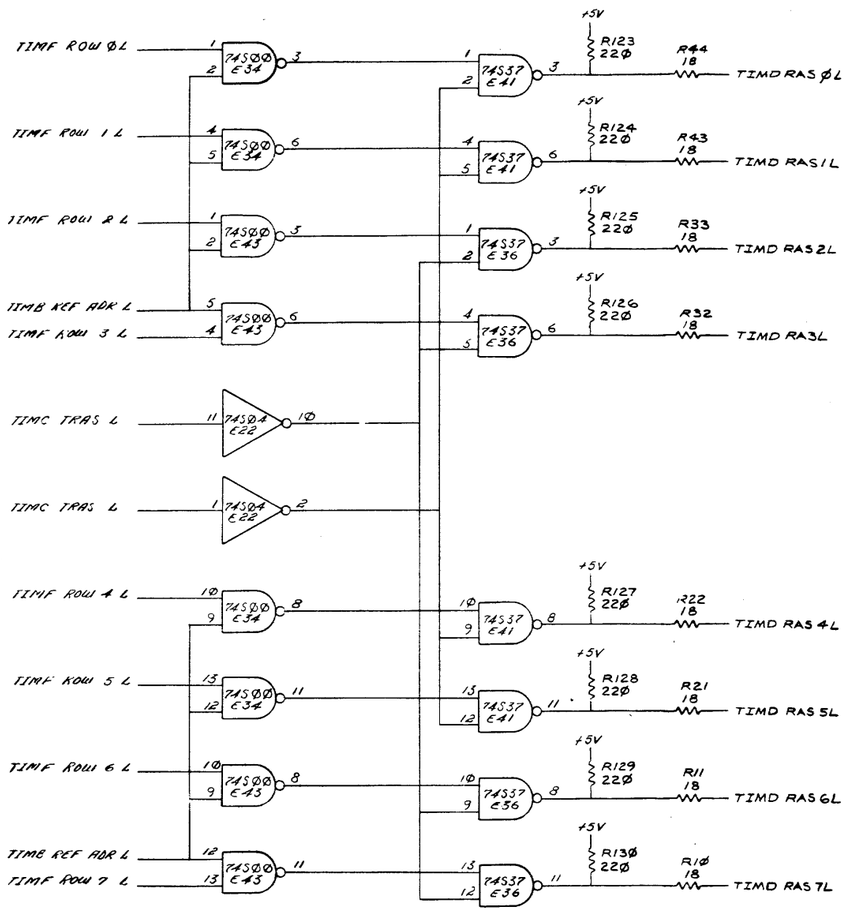
MD LATCH CLR

HOLD OFF CKT

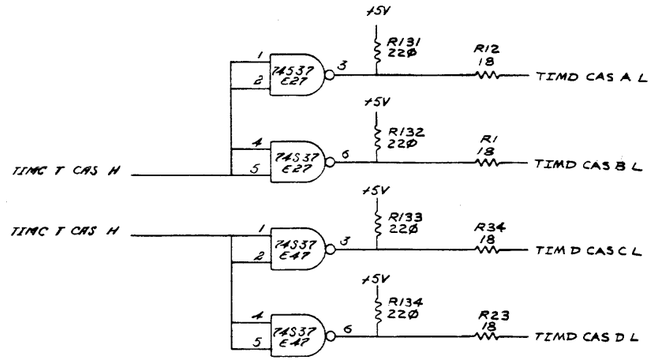
TIMING GENERATORS

REVISIONS		
CHK	CHANGE NO.	REV.

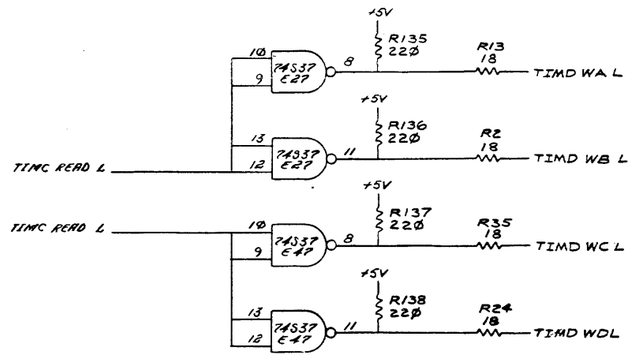
TITLE	PDP8 MOS MEMORY (TIMC)	SIZE D	CODE DCS	NUMBER M8417-Ø-1	REV. F
SCALE NONE	SHEET 3 OF 14	DIST.			



RAS DRIVERS & SELECT



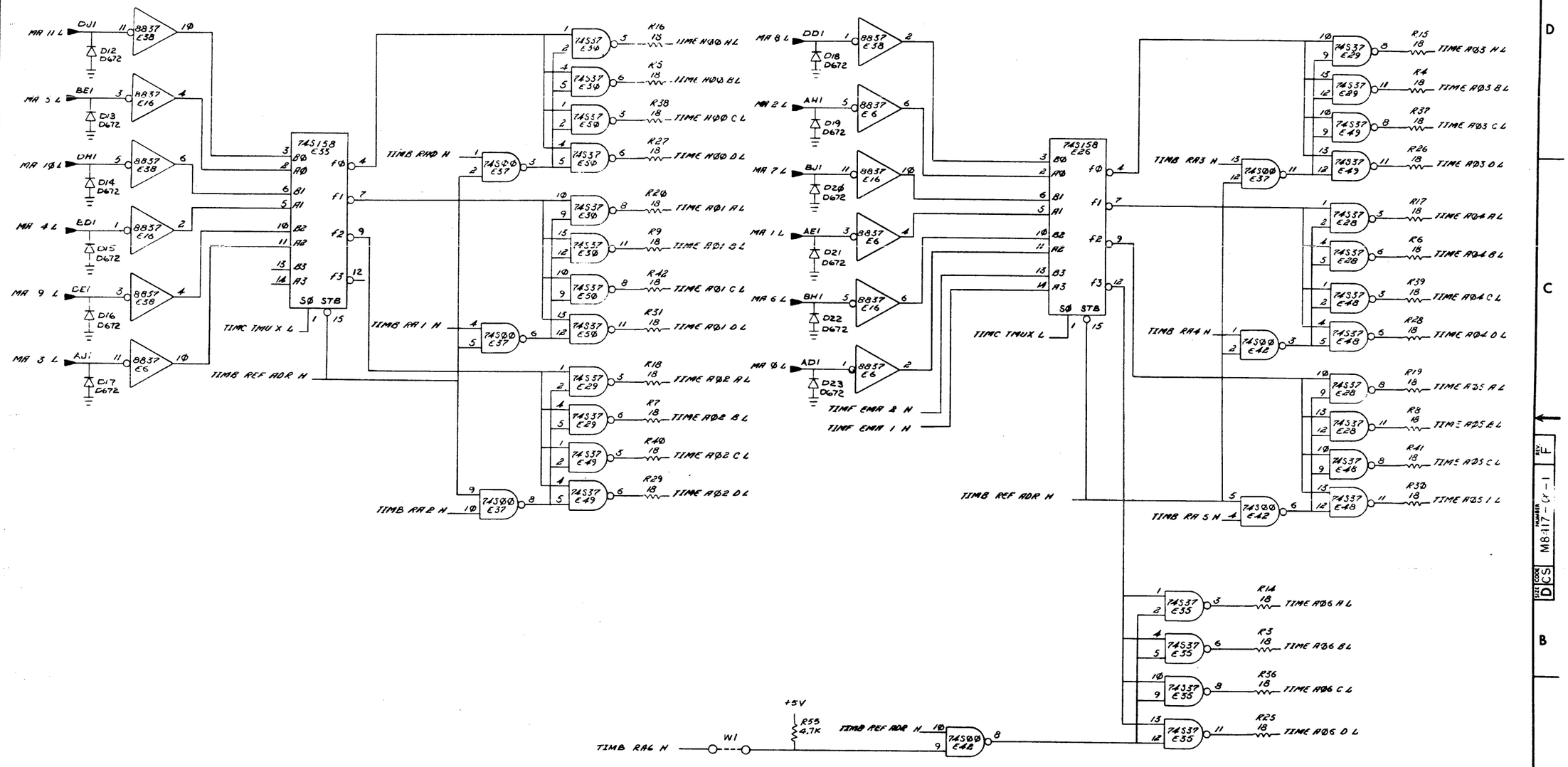
CAS DRIVERS



WRITE ENABLE DRIVERS

REVISIONS		
CHK	CHANGE NO.	REV.

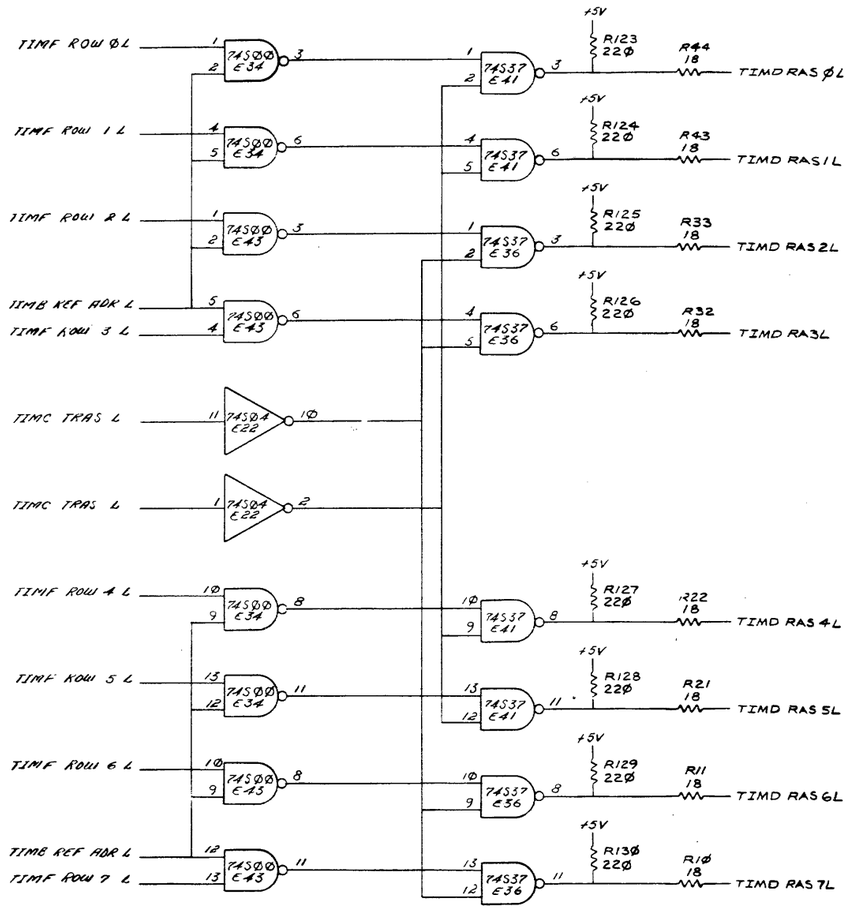
TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY (TIM D)	D	CS	M8417-Ø-1	E
SCALE NONE SHEET 4 OF 14	DIST.			



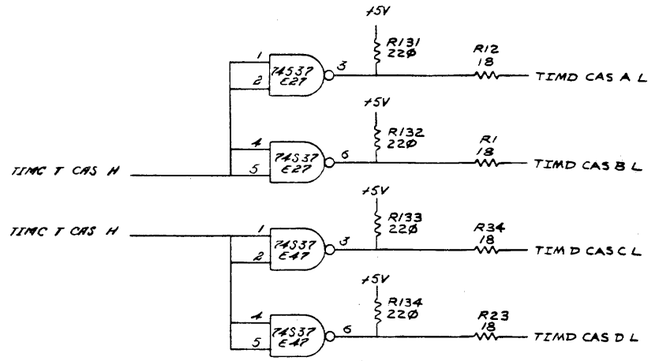
ROW, COLUMN & REF ADR MUX & ADR DRIVERS

REVISIONS		
CHK	CHANGE NO.	REV.

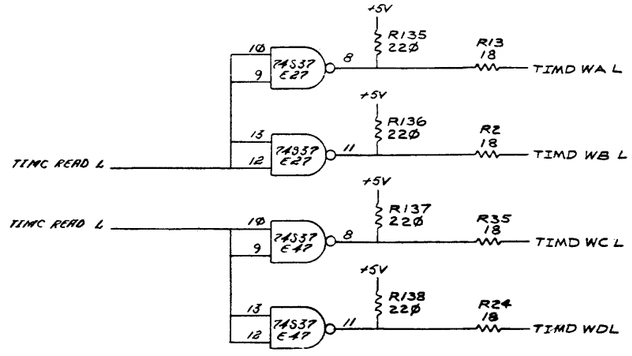
TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY (TIME)	D	CS	M8417-Ø-1	F
SCALE NONE	SHEET 5 OF 14	DIST.		



RAS DRIVERS & SELECT



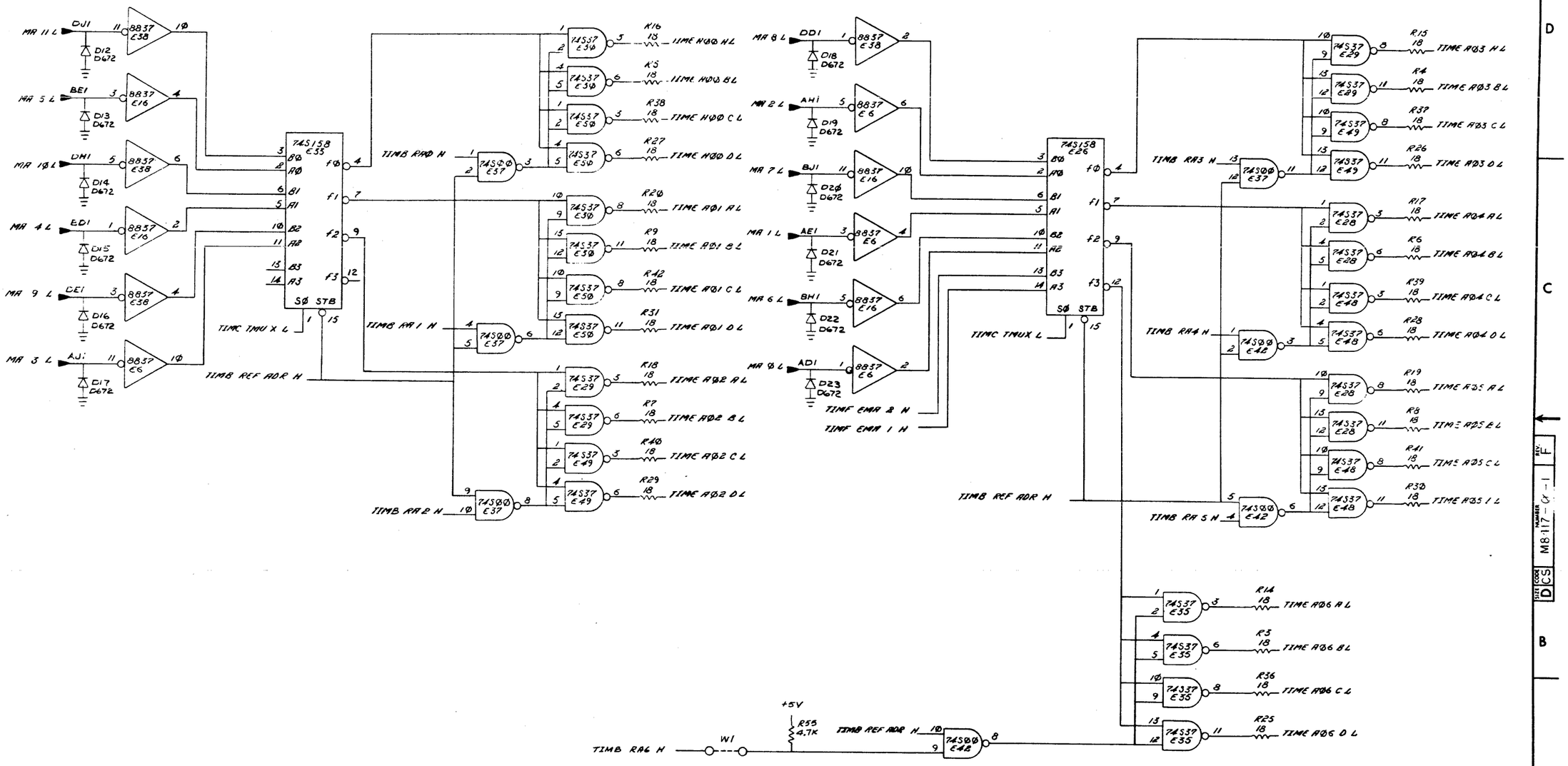
CAS DRIVERS



WRITE ENABLE DRIVERS

REVISIONS		
CHK	CHANGE NO.	REV.

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



ROW, COLUMN & REF ADR MUX & ADR DRIVERS

REVISIONS		
CHK	CHANGE NO.	REV.

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

EMA 2 L — AH2 — D25 D672 — 8837 E8 — W13 W12 W11 — TIMF EMA 2 N, TIMF EMA 1 N
+5V — RP7 4.7K

EMA 1 L — AE2 — D26 D672 — 8837 E8 — W2 W3 W4

EMA Ø L — AD2 — D27 D672 — 8837 E8 — W6

BANK SEL Ø L — EB2 — +5V RP4 10K — 8837 E57 — 74S02 E46 — W7
BANK SEL 2 L — EL2 — +5V RP2 10K — 8837 E57 — W14
BANK SEL 3 L — ER2 — +5V R71 10K — 8837 E57 — W15
BANK SEL 1 L — ED2 — +5V R73 10K — 8837 E57

+5V — R64 4.7K — 74S04 E54 — W8

+5V — R65 4.7K — W16 — 74S51 E58 — W5
+5V — R78 4.7K — W19 — 74S08 E55 — W9
74S08 E46
74S04 E54

74S139 E56 — TIMF ROW Ø L, TIMF ROW 1 L, TIMF ROW 2 L, TIMF ROW 3 L, TIMF ROW 4 L, TIMF ROW 5 L, TIMF ROW 6 L, TIMF RW 7 L
74S04 E54
ROW DECODE

74S20 E59
74S133 E48 — TIMF BDEN H

E62 — E62-1 … E62-8 — +5V — RS8 4.7K … RS3 4.7K — EM1, EL1, EK1, EJ1, EH1, EE1, ED1, EB1

74S10 E61
74S10 E63
74S10 E65
BD ENABLE DECODE

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY (TIMF)	D	CS	M8417-Ø-1	E
SCALE NONE	SHEET 6 OF 14	DIST.		

MD BUS TRANSCEIVERS

8881 E44 — DPI → MD 11 L; DMI → MD 10 L

74LS75 E53 — MTX Ø DOUT 11 H; MTX Ø DOUT 10 H; MTX 1 DOUT 9 H; MTX 1 DOUT 8 H

TIMG DI 11 H; TIMG DI 10 H; TIMG DI 9 H; TIMG DI 8 H

8641 E51

MD BUS LATCH

TIMC MDDIRA L

TIMC TO SIB 1 L → 74S02 E25

8881 E44 — DLI → MD 9 L; DKI → MD 8 L

TIMC PULL2 H

TIMC TO SIB 2 L → PASIL2 E20

TIMC CLR L

MD BUS LATCH CONTROL

8881 E14 — BPI → MD 7 L; BMI → MD 6 L

74LS75 E12 — MTX 2 DOUT 7 H; MTX 2 DOUT 6 H; MTX 3 DOUT 5 H; MTX 3 DOUT 4 H

TIMG DI 7 H; TIMG DI 6 H; TIMG DI 5 H; TIMG DI 4 H

8641 E11

MD BUS LATCH

8881 E14 — BLI → MD 5 L; BKI → MD 4 L

MD BUS TRANSCEIVERS

8881 E3 — API → MD 3 L; AMI → MD 2 L

74LS75 E2 — MTX 4 DOUT 3 H; MTX 4 DOUT 2 H; MTX 5 DOUT 1 H; MTX 5 DOUT Ø H

TIMG DI 3 H; TIMG DI 2 H; TIMG DI 1 H; TIMG DI Ø H

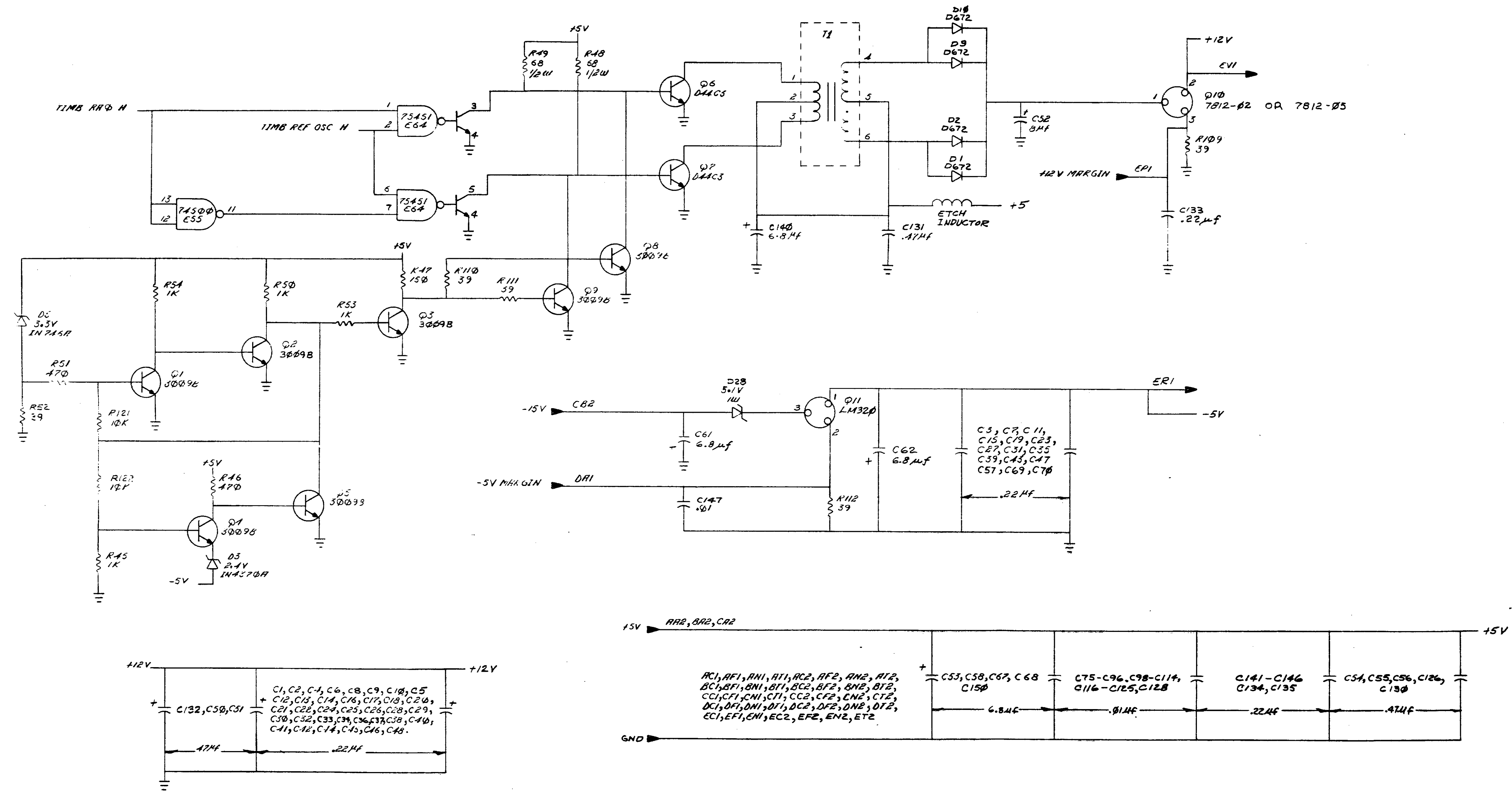
8641 E1

MD BUS LATCH

8881 E3 — ALI → MD 1 L; AKI → MD Ø L

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	PDP8 MOS MEMORY (TIMG)	SIZE CODE	NUMBER / REV.
		D CS	M8417-Ø-1 F
SCALE NONE	SHEET 7 OF 14	DIST.	

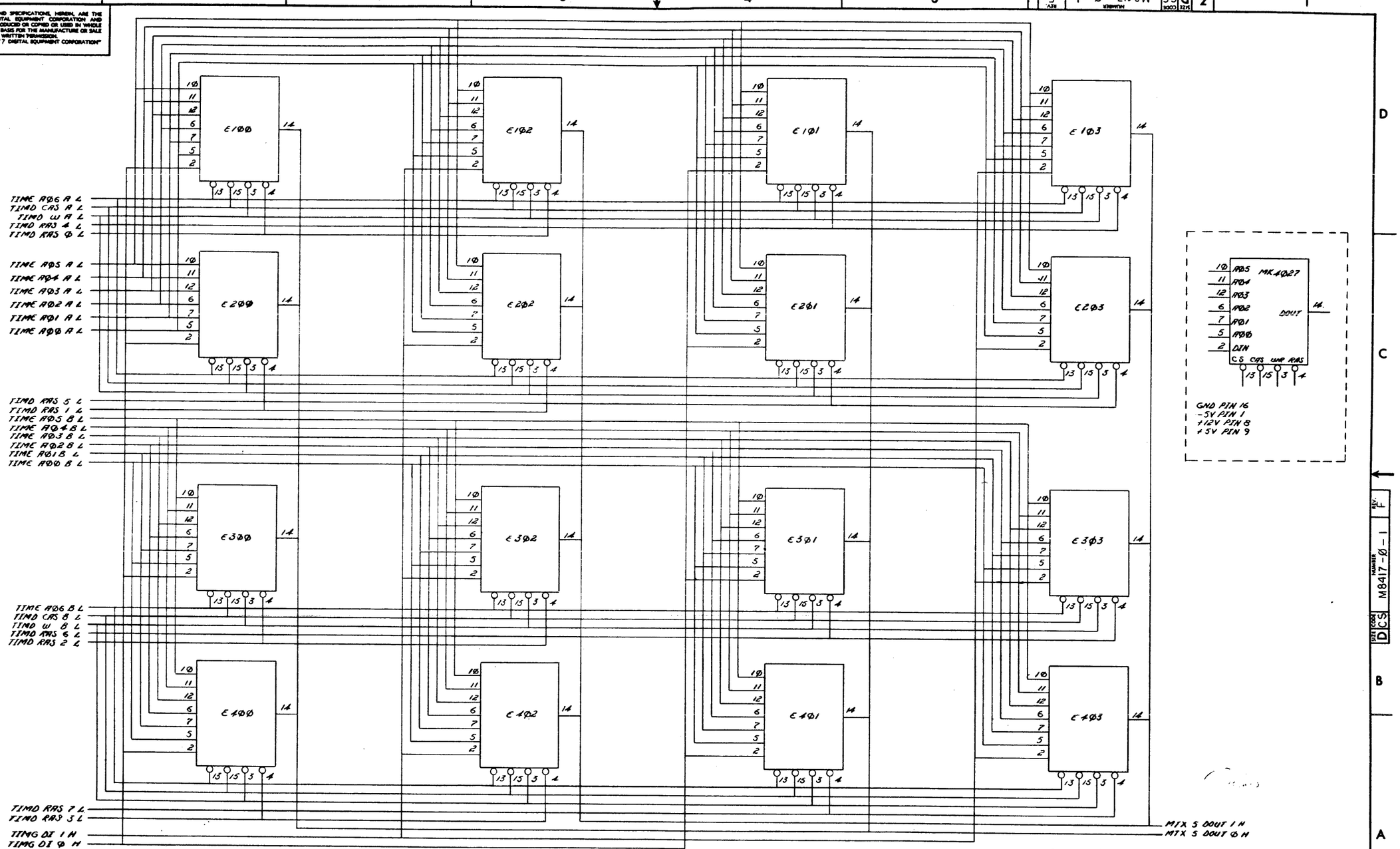


+5V
R49 68 1/2W
R48 68 1/2W
TIMB RAØ H
TIMB REF OSC H
75451 E64
7450Ø E55
Q6 D44C5
Q7 D44C5
T1
D1Ø D672
D9 D672
D2 D672
D1 D672
C52 8μf
+12V
EV1
Q1Ø 7812-Ø2 OR 7812-Ø5
R1Ø9 39
+12V MARGIN
EP1
C133 .22μf
C14Ø 6.8μf
C131 .47μf
ETCH INDUCTOR
+5
Q8 3ØØ98
Q9 3ØØ98
R47 15Ø
R11Ø 39
R111 39
R53 1K
Q3 3ØØ98
R54 1K
R5Ø 1K
Q2 3ØØ98
3.3V IN746A
R51 47Ø
R52 39
Q1 3ØØ98
R121 1ØK
D28 5.1V 1W
Q11 LM32Ø
ER1
-5V
-15V
CB2
C61 6.8μf
C62 6.8μf
C3, C7, C11, C15, C19, C23, C27, C31, C35, C39, C43, C47, C57, C69, C7Ø
.22μf
-5V MARGIN
DR1
C147 .Ø1
R112 39
R46 47Ø
Q5 3ØØ93
Q4 3ØØ98
D3 2.4V IN4370A
R45 1K
+5V
AA2, BA2, CA2
AC1, AF1, AN1, AT1, AC2, AF2, AN2, AT2, BC1, BF1, BN1, BT1, BC2, BF2, BN2, BT2, CC1, CF1, CN1, CT1, CC2, CF2, CN2, CT2, DC1, DF1, DN1, DT1, DC2, DF2, DN2, DT2, EC1, EF1, EN1, EC2, EF2, EN2, ET2
C53, C58, C67, C68 C15Ø
6.8μf
C75-C96, C98-C114, C116-C125, C128
.Ø1μf
C141-C146 C134, C135
.22μf
C54, C55, C56, C126, C13Ø
.47μf
GND
+12V
C132, C5Ø, C51
.47μf
C1, C2, C4, C6, C8, C9, C1Ø, C5, C12, C13, C14, C16, C17, C18, C2Ø, C21, C22, C24, C25, C26, C28, C29, C3Ø, C32, C33, C34, C36, C37, C38, C4Ø, C41, C42, C44, C45, C46, C48.
.22μf

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY (TIM)	D	CS	M8417-Ø-1	F

SCALE NONE | SHEET 8 OF 14 | DIST.



(ARRAY) DATA BITS 0,1
MTX 5

REVISIONS		
CHK	CHANGE NO.	REV.

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

TIME ADS A L
TIMD CAS A L
TIMD W A L
TIMD RAS 4 L
TIMD RAS Ø L

TIME AØ5 A L
TIME AØ4 A L
TIME AØ3 A L
TIME AØ2 A L
TIME AØ1 A L
TIME AØØ A L

TIMD RAS 5 L
TIMD RAS 1 L
TIME AØ5 B L
TIME AØ4 B L
TIME AØ3 B L
TIME AØ2 B L
TIME AØ1 B L
TIME AØØ B L

TIME AØ6 B L
TIMD CAS B L
TIMD W B L
TIMD RAS 6 L
TIMD RAS 2 L

TIMD RAS 7 L
TIMD RAS 3 L
TIMG DI 3 H
TIMG DI 2 H

E104 E106 E105 E107
E204 E206 E205 E207
E304 E306 E305 E307
E404 E406 E405 E407

4027: AØ5 AØ4 AØ3 AØ2 AØ1 AØØ DIN CS CAS WR RAS → DOUT

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

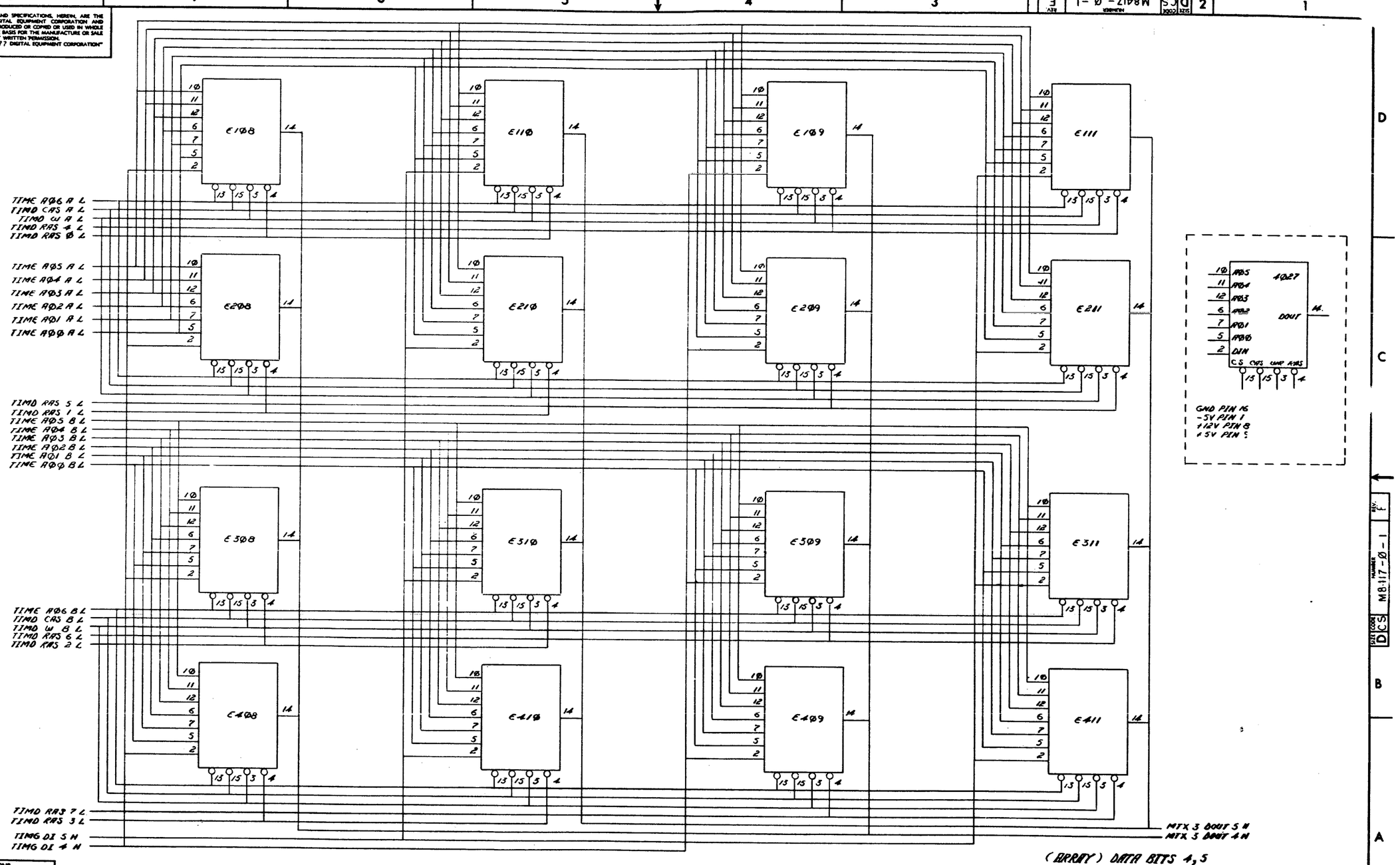
MTX 4 DOUT 3 H
MTX 4 DOUT 2 H

(ARRAY) DATA BITS 2,3
MTX 4

REVISIONS

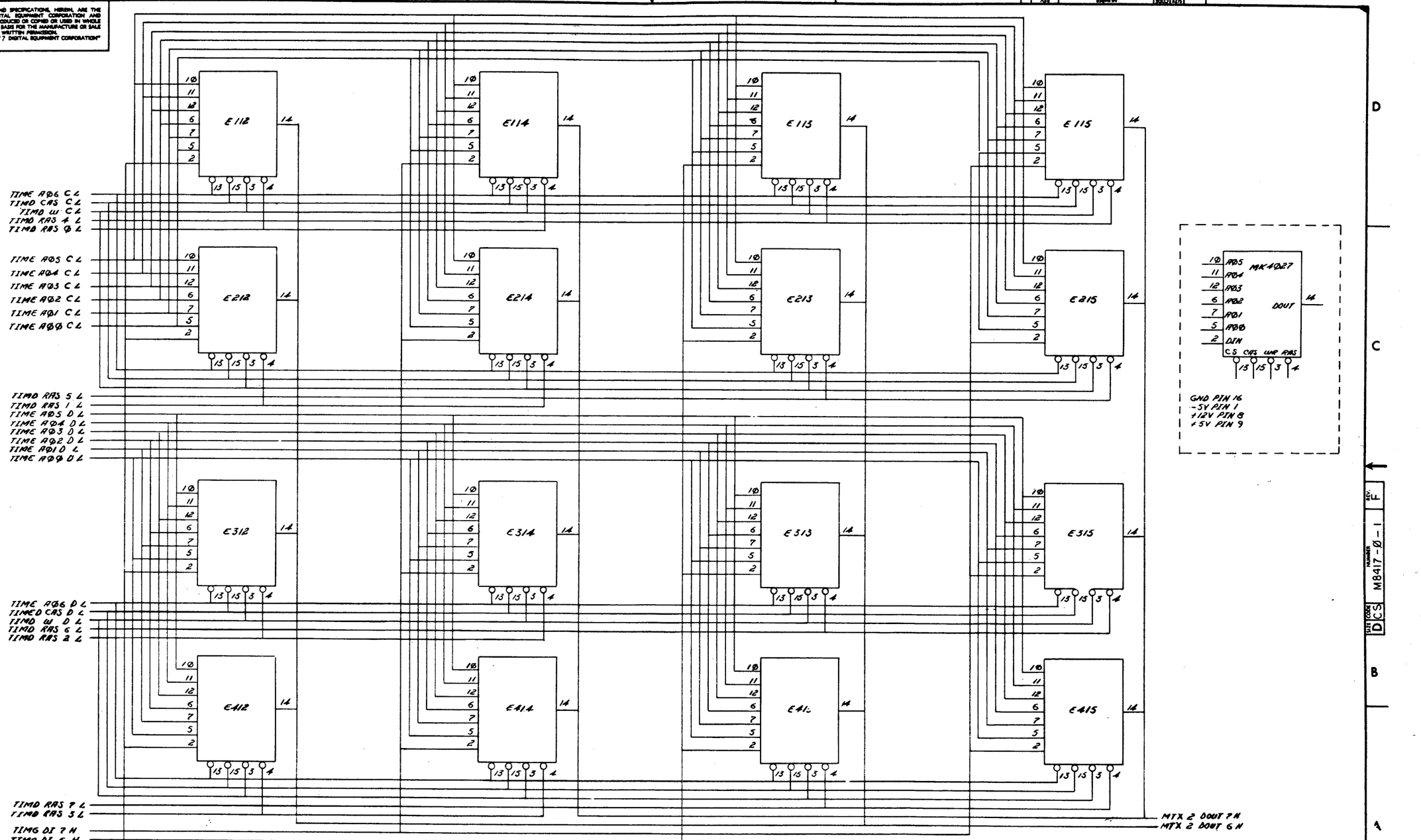
CHK	CHANGE NO.	REV.

TITLE: PDP8 MOS MEMORY
SIZE D CODE CS NUMBER M8417-Ø-1 REV F
SCALE NONE SHEET 1Ø OF 14 DIST.



REVISIONS		
CHK	CHANGE NO.	REV.

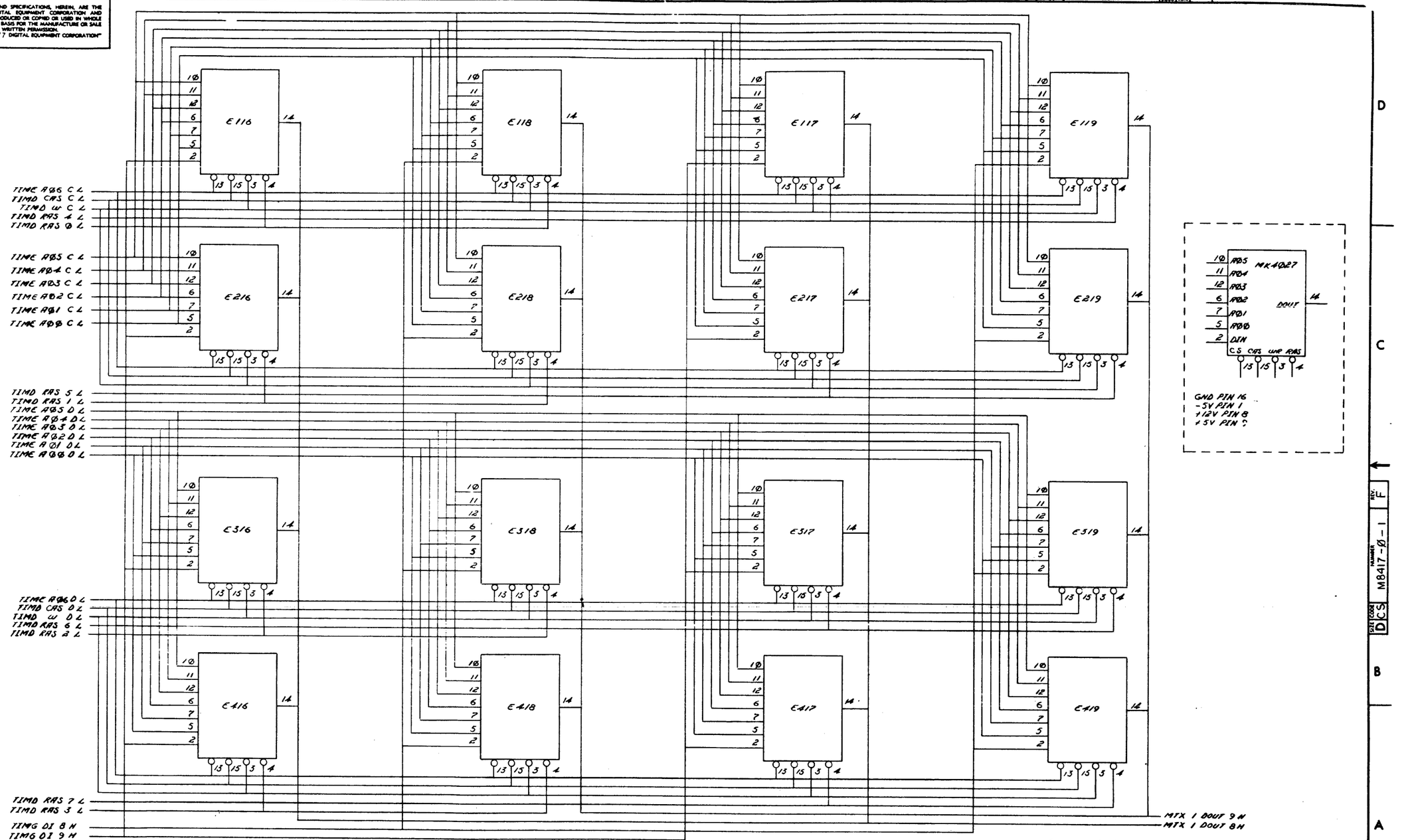
TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY	D	DCS	M8417-Ø-1	F
SCALE NONE	SHEET 11 OF 11	DIST.		



(ARRAY) DATA BITS 6,7
MTX 2

REVISIONS		
CHK	CHANGE NO.	REV.

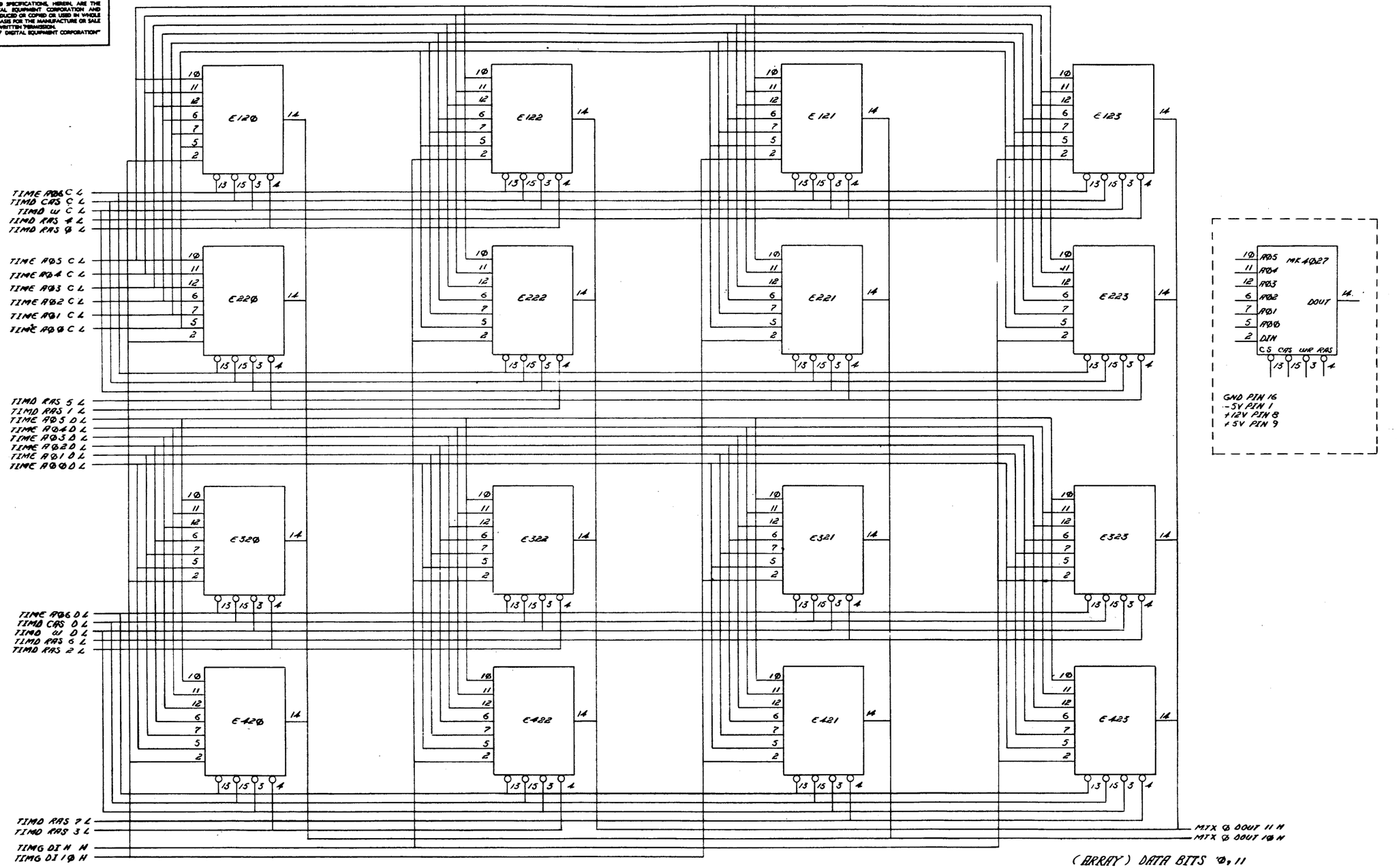
TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY	D	CS	M8417-Ø-1	F
SCALE NONE	SHEET 12 OF 14	DIST.		



(ARRAY) DATA BITS 8,9
MTX 1

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY	D	CS	M8417-Ø-1	F
SCALE NONE	SHEET 13 OF 14		DIST.	



(ARRAY) DATA BITS 0, 11
MTX 0

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY	D	CS	M8417-0-1	F
SCALE NONE	SHEET 14 OF 14	DIST.		

MODULE VARIATION M8417-AA

COMPONENT SIDE VIEW

NOTES:
1. R100, R140 & R88 WILL NOT BE INSTALLED AT ASSEMBLY, BUT AT MEMORY TEST, IF NEEDED.
2. M8417-AA = M8417-AB, AC ETC. = (16KX12 BIT MEMORY).

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

CHK	CHANGE NO	REV
CHK M8417-0001		B
J.STEGEMAN	M8417-0002	C
J.STEGEMAN	M8417-0003	D
J.STEGEMAN	M8417ML004	E
J.STEGEMAN		

ETCH REV. B
P.C. DESIGN DATA BASE REV. BL

SIGNATURES	DATE
DRN. R. Griffin	5-19-77
CHK'D. Stephen Severson	5-19-77
ENG. J. Stegeman	7-7-77
PROJ. ENG. J. Stegeman	7-7-77
PROD. R. Johnson	7-8-77

digital

TITLE: PDP 8 MOS MEMORY

SCALE 2/1 | SHT. 1 OF 8 | SIZE D | CODE UA | NUMBER M8417-0-0 | REV E

NEXT HIGHER ASSY. B-DD-M8417-0

MS# 104718

D UA M8417-0-0 E

MODULE VARIATION M8417-BA

COMPONENT SIDE VIEW

17

81

1

SEE NOTE 1

2.44 REF

TYP 3 PLACES

82,84

1-3

1-4

3-2

1-5

1-6

83

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

NOTES:
1. R100, R140 & R88 WILL NOT BE INSTALLED AT ASSEMBLY, BUT AT MEMORY TEST, IF NEEDED.
2. M8417-BA = M8417-BB, BC ETC = (32K X 12 BIT MEMORY).

CHK	CHANGE NO	REV

ETCH REV. B
P.C. DESIGN DATA BASE REV. BL

SIGNATURES	DATE
DRN. B. Sullivan	5-19-77
CHK'D. [illegible]	5-19-77
ENG. [illegible]	7-8-77
PROJ. ENG. [illegible]	7-8-77
PROD. [illegible]	7-8-77
SCALE 2:1	
SHT. 2 OF 8	
NEXT HIGHER ASSY. B-CD-M8417-0	

digital

TITLE PDP 8 MOS MEMORY

SIZE	CODE	NUMBER	REV
D	UA	M8417-0-0	E

DUA M8417-0-0 E

MS# 104718

L1

LAYER 1

M8417 5012701B

CS*ABCDEFHJKLMNPRS

E423 E422 E421 E420 E419 E418 E417 E416 E415 E414 E413 E412 E50 E37 E30 E411 E410 E409 E408 E407 E406 E405 E404 E403 E402 E401 E400

SIDE 1

digital

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

REVISIONS		
CHK	CHANGE NO	LTR

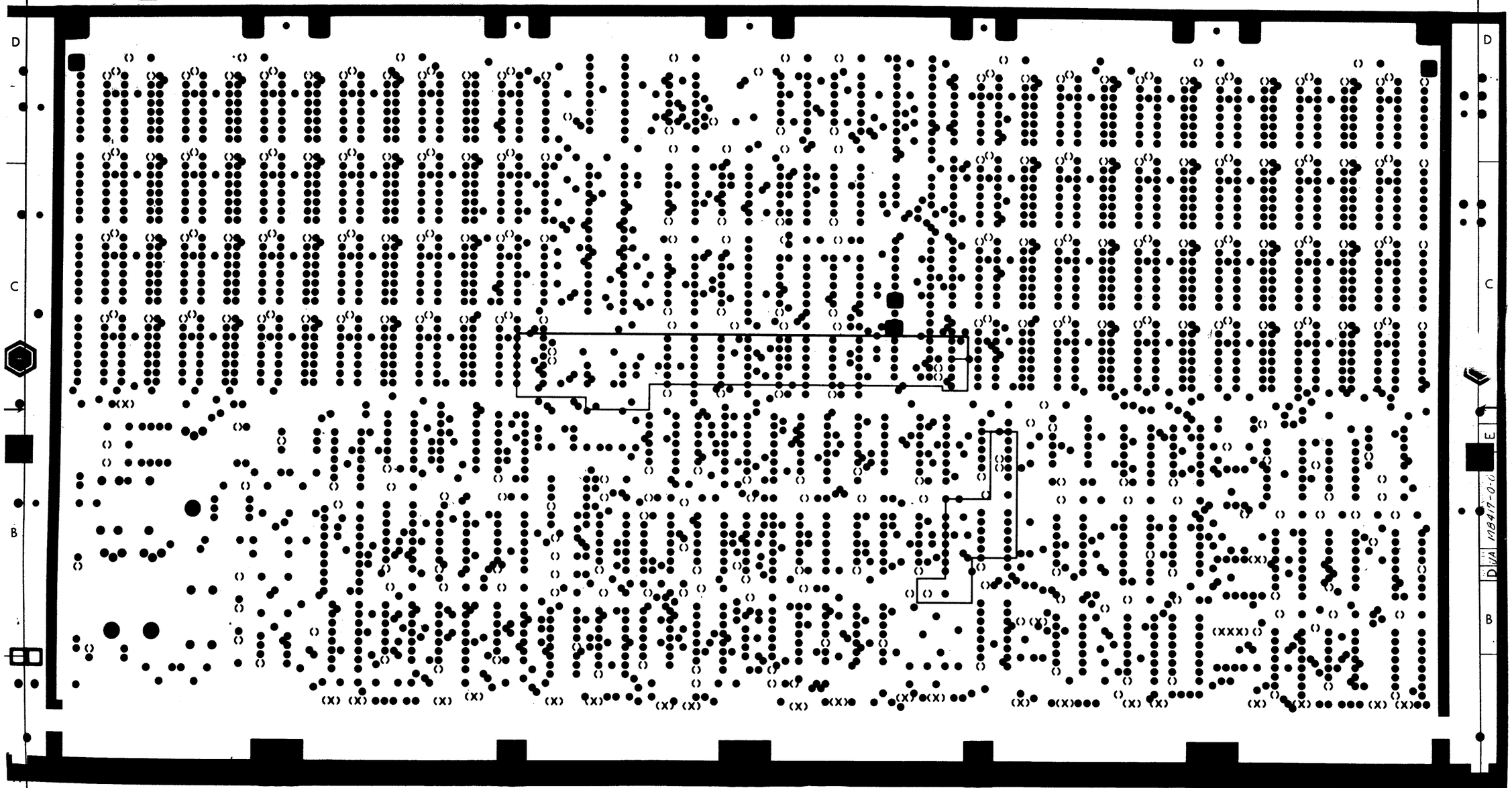
TITLE	PDP8 MOS MEMORY		SIZE CODE	NUMBER
SCALE 2/1	SHEET 3 OF 8		D UA	M8417-0-0
DIST.				REV. E

L2 M8417B

M8417 6012701B

LAYER 2

D UA M8417-0-0 E



REVISIONS

CHK	CHANGE NO	REV

TITLE	PDP8 MOS MEMORY	
SIZE	D	
CODE	UA	
NUMBER	M8417-0-0	
REV.	E	
SCALE	2/1	
SHEET	4 OF 8	
DIST.		

M8417-0-0 E

mc

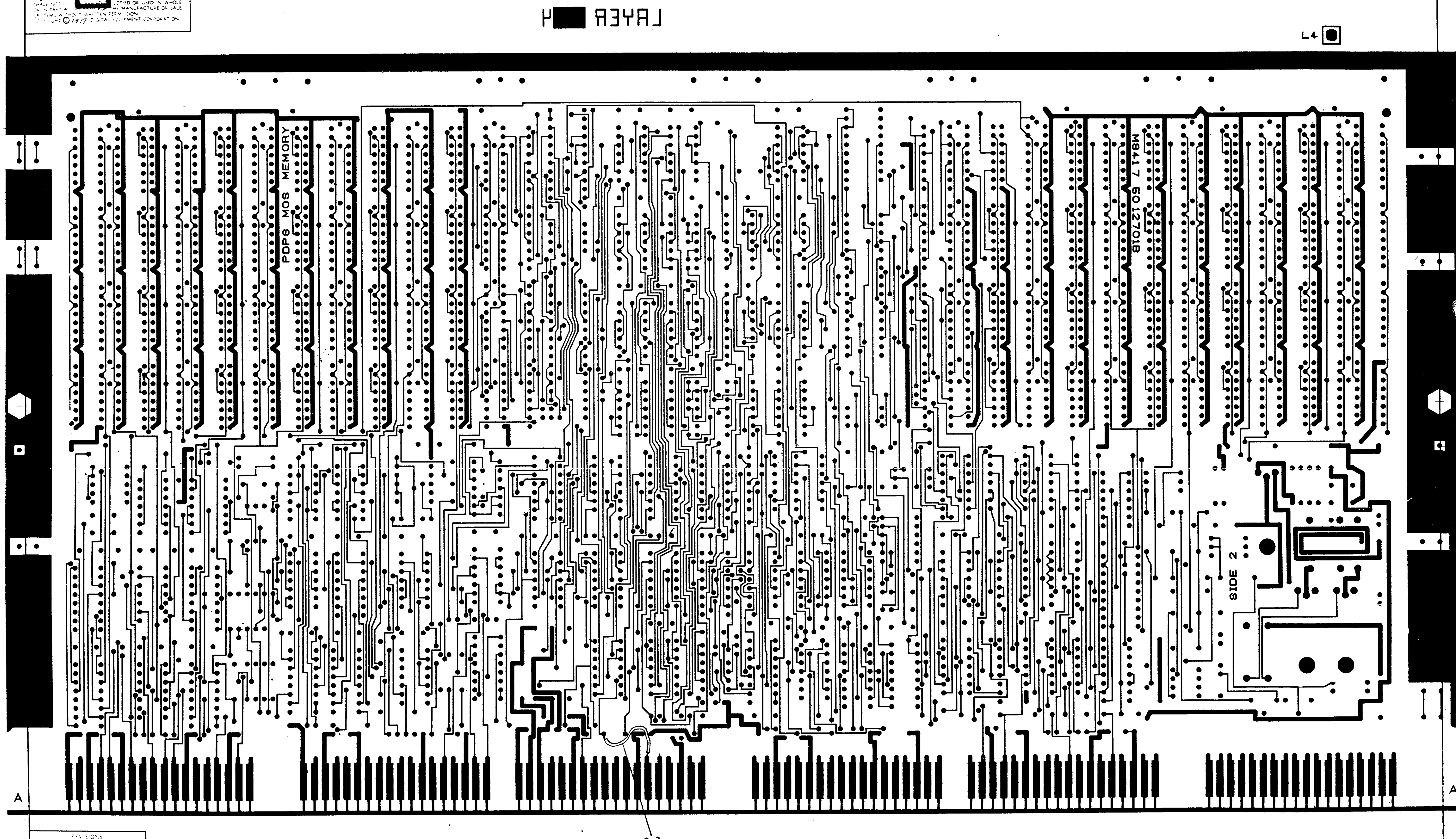
LAYER 3

M8417B L3

REVISIONS		
CHK	CHANGE NO	REV

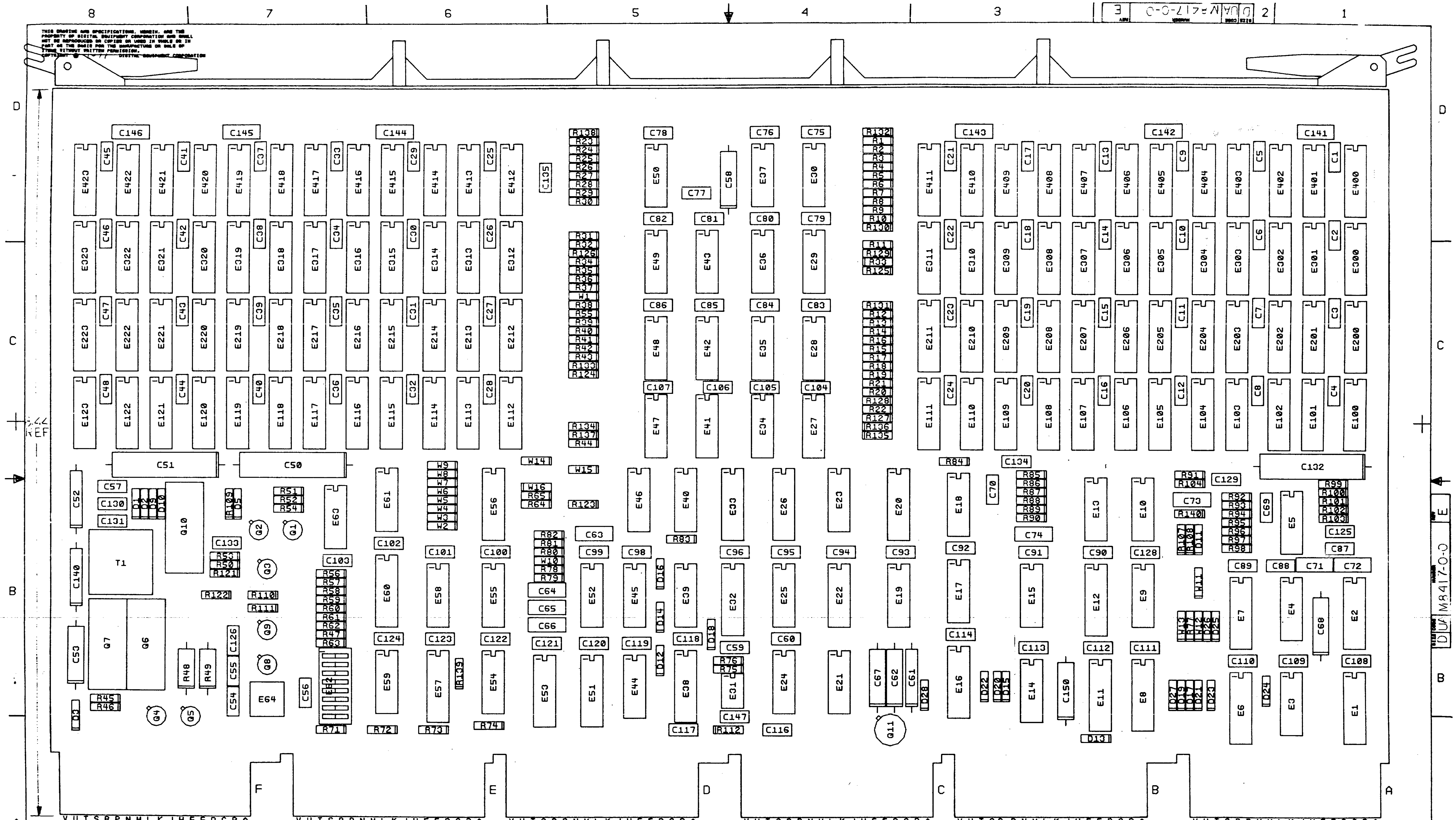
TITLE	PDP8 MOS MEMORY	SIZE D	CODE UA	NUMBER M8417-0-0
SCALE 2/1	SHEET 5 OF 8	DIST.		REV. E

ML



REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE	CODE	NUMBER	REV.
PDP8 MOS MEMORY	D	UA	M8417-0-0	E
SCALE 2/1	SHEET 6 OF 8		DIST.	



NOTES:

CHANGE NO	REV

DWG-REF ONLY

SIGNATURES	DATE
DRN.	5-19-77
CHK'D.	5-19-77
ENG.	7/8/77
PROJ. ENG.	7/8/77
PROD.	7-8-77

digital

TITLE PDP 8 MOS MEMORY

SCALE 2:1

SHT. 7 OF 8

SIZE	CODE	NUMBER	REV
D	UA	M8417-0-0	E

NEXT HIGHER ASSY. B-DD-M8417-0

1 MS# 104715

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	NUMBER / REV.
SCALE	SHEET 8 OF 8	D UA	M8417-0-0 / E
		DIST.	

2 ML

AUTOMATED BY PRTLST.2D(16) — P A R T S L I S T — SHEET A1 OF A4

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION AB	AD	AC	AE	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY	REF	REF	REF	REF	
2	2	D-UA-M8417-0-0		UNIT ASSY	REF	-	-	-	
3	3		5012701-00	ETCH BOARD (M8418)	1	1	1	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM MICA	1	1	1	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM MICA	1	1	1	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM MICA	1	1	1	1	C65
7	7		1001610-01	.01 MFD50/100V +80-20% DISC	53	53	53 CONT	53	C60,C75-C96,C98-C114,C116-C125, C128,C129,C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	8	8 CONT	8	C53,C58,C67,C61,C62,C68,C140, C150
9	9		1010274-00	.22 MFD 50V +80-20% Z5U CER	60	60	60 CONT	60	C1-C48,C57,C69,C70,C133-C135, C141-C146
10	10		1010279-00	.47 MFD 25V 20% CER	6	6	6	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V +75-10% AL EL	1	1	1	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM MICA	6	6	6	6	C59,C63,C71-C74
13	13		1012219-00	47 MFD 30V +75-10% AL EL	3	3	3	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	1	1	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	1	1	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	21	21	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	1	1	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	1	1	1	E62
19	19		1210711-02	/REPLACED BY 12-16988-02	1	1	1	1	
20	20		1300250-00	150.0 .25 W 5.0 % CC	1	1	1	1	R47
21	21		1300271-00	220.0 .25 W 5.0 % CC	16	16	16	16	R123-R138
22	22		1300316-00	470.0 .25 W 5.0 % CC	2	2	2	2	R46,R51
23	23		1300365-00	1.0 K .25 W 5.0 % CC	9	9	9 CONT	9	R45,R50,R53,R54,R82-R84,R103, R104
24	24		1300447-00	4.70 K .25 W 5.0 % CC	15	15	15	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10.0 K .25 W 5.0 % CC	6	6	6	6	R71-R74,R121,R122
26	26		1302124-00	18.0 .25 W 5.0 % CC	46	46	46	46	R1-R44,R90,R98

REVISION HISTORY			BASIC PART NO: M8417
ENG	ECO NUMBER	REV	SECTION A OF C
E.R	CJ003	D	SECTION.VARIATION INDEX
J.S	M8417-ML004	E	[A] AB,AD,AC,AE
JS	M8417-ML005	F	[B] BB,BC,BD,BE
JS	M8417-ML006	H	[C] AF,BF
			[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

DRN: L. METZGER — DATE: 30-MAY-78

CHK'D: P.BOSSMAN — DATE: 30-MAY-78

DES.ENG: J.STEGEMAN — DATE: 30-MAY-78

RESP.ENG.: J.STEGEMAN — DATE: 30-MAY-78

MFG.ENG.: C.TANNER — DATE: 30-MAY-78

ASSEMBLY NUMBER: D-UA-M8417-0-0

TOP DOCUMENT NUMBER: MS8-C

SIZE	CODE	NUMBER	REV
K	PL	M8417-0-DBP	H

FILE NAME: Z0189H.PLS — EDIT #: 6

D	I	G	I	T	A	L

TITLE: PARTS LIST

PDP8 MOS MEMORY

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION AB	AD	AC	AE	REFERENCE DESIGNATOR
27	27		1302377-00	39.0 .25 W 5.0 % CC	5	5	5	5	R52,R109-R112
28	28		1302859-00	5.76 K .25 W 1.0 % RN55D-F10	1	1	1	1	R96
29	29		1302871-00	1.21 K .25 W 1.0 % RN55D-F10	2	2	2	2	R80,R108
30	30		1302872-00	681.0 .25 W 1.0 % RN55D-F1	1	1	1	1	R89
31	31		1302956-00	196.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R94
32	32		1302957-00	121.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R101
33	33		1303045-00	3.16 K .25 W 1.0 % RN55D-F10	1	1	1	1	R76
34	34		1303067-00	422.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R99
35	35		1303110-00	19.60 .25 W 1.0 % RN55D-F10	1	1	1	1	R93
36	36		1303226-00	68.10 .25 W 1.0 % RN55D-F10	1	1	1	1	R86
37	37		1303311-00	46.40 K .25 W 1.0 % RN55D-F10	1	1	1	1	R75
38	38		1303313-00	12.10 K .25 W 1.0 % RN55D-F10	1	1	1	1	R97
39	39		1304725-00	300.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K .25 W 1.0 % RN55D-F10	1	1	1	1	R92
41	41		1305122-00	51.10 .25 W 1.0 % RN55D-F10	1	1	1	1	R85
42	42		1305123-00	215.0 .25 W 1.0 % RN55D-F10	2	2	2	2	R91,R102
43	43		1305143-00	825.0 .25 W 1.0 % RN55D-F10	2	2	2	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K .25 W 1.0 % RN55D-F10	1	1	1	1	R87
45	45		1309405-00	68.0 .50 W 5.0 % CC	2	2	2	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	7	7	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	2	2	2	Q6,Q7
48	48		1614234-00	XFMR,CONVERTER,RATIO 1:3 300UH	1	1	1	1	T1
49	49		1909054-00	7493 COUNTER,ASYNCH UP,BI	2	2	2	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN O	4	4	4	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER,LINE,DUA	3	3	3	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER,PERIPH,DUAL,	1	1	1	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2IN	6	6	6	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN,O	1	1	1	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	2	2	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	3	3	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	1	1	1	E59
58	58		1910542-00	74S64 A-O-I GATE 4-2-3-2	1	1	1	1	E15
59	59		1910544-01	74S74-6DGG-D DUAL,EDGE TRIG	1	1	1	1	E39
60	60		1910545-00	74S112 FF-JK DUAL,EDGE TRIG	3	3	3	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	2	2	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER,BUS,HEX,UN	5	5	5	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	1	1	1	1	E45
64	64		1911579-00	8641 TRANSCEIVER,BUS,QUA	3	3	3	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	1	1	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	1	1	1	E58
67	67		1911944-00	555CN TIMER,FUNCT.BLOCK	1	1	1	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	1	1	1	E60
69	69	SEE NOTE 93	1912048-06	DEC 7812 VOLT REG,FIX +12V	1	1	1	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	3	3	3	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN,PO	1	1	1	1	E23
72	72		1912541-00	79M05 VOLT REG,FIX -5V	1	1	1	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT,BISTABLE	3	3	3	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	11	11	11	E27-E30,E35,E36,E41,E47-E50

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

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION BB	BC	BD	BE	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY	REF	REF	REF	REF	
2	2	D-UA-M8417-0-0		*** THIS ITEM IS NOT USED ***	-	-	-	-	
3	3		5012701-00	ETCH BOARD (M8418)	1	1	1	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM MICA	1	1	1	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM MICA	1	1	1	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM MICA	1	1	1	1	C65
7	7		1001610-01	.01 MFD50/100V +80-20% DISC	53	53	53	53 CONT	C60,C75-C96,C98-C114,C116-C125, C128,C129,C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	8	8	8 CONT	C53,C58,C67,C61,C62,C68,C140, C150
9	9		1010274-00	.22 MFD 50V +80-20% Z5U CER	60	60	60	60 CONT	C1-C48,C57,C69,C70,C133-C135, C141-C146
10	10		1010279-00	.47 MFD 25V 20% CER	6	6	6	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V +75-10% AL EL	1	1	1	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM MICA	6	6	6	6	C59,C63,C71-C74
13	13		1012219-00	47 MFD 30V +75-10% AL EL	3	3	3	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .10W	1	1	1	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	1	1	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	21	21	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	1	1	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	1	1	1	E62
19	19		1210711-02	/REPLACED BY 12-16988-02	1	1	1	1	
20	20		1300250-00	150.0 .25 W 5.0 % CC	1	1	1	1	R47
21	21		1300271-00	220.0 .25 W 5.0 % CC	16	16	16	16	R123-R138
22	22		1300316-00	470.0 .25 W 5.0 % CC	2	2	2	2	R46,R51
23	23		1300365-00	1.0 K .25 W 5.0 % CC	9	9	9	9 CONT	R45,R50,R53,R54,R82-R84,R103, R104
24	24		1300447-00	4.70 K .25 W 5.0 % CC	15	15	15	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10.0 K .25 W 5.0 % CC	6	6	6	6	R71-R74,R121,R122
26	26		1302124-00	18.0 .25 W 5.0 % CC	46	46	46	46	R1-R44,R90,R98

REVISION HISTORY			BASIC PART NO: M8417
ENG	ECO NUMBER	REV	SECTION B OF C
E.R	00003	D	SECTION.VARIATION INDEX
J.S	M8417-ML004	E	[A] AB,AD,AC,AE
JS	M8417-ML005	F	[B] BB,BC,BD,BE
JS	M8417-ML006	H	[C] AF,BF
			[D]
			[E]
			[F]
			[H]
			[J]
			[K]
			[L]
			[M]
			[N]

DRN: L. METZGER	DATE: 30-MAY-78		D	I	G	I	T	A	L	
CHK'D: P.BOSSMAN	DATE: 30-MAY-78	TITLE PARTS LIST PDP8 MOS MEMORY								
DES.ENG: J.STEGEMAN	DATE: 30-MAY-78									
RESP.ENG.: J.STEGEMAN	DATE: 30-MAY-78	DOCUMENT NUMBER								
MFG.ENG.: C.TANNER	DATE: 30-MAY-78	SIZE: K	CODE: PL	NUMBER: M8417-0-DBP					REV: H	
ASSEMBLY NUMBER: D-UA-M8417-0-0	TOP DOCUMENT NUMBER: MS8-C	FILE NAME: Z0189H.PLS							EDIT #: 6	

AUTOMATED BY PRTLST.2D(16)

P A R T S L I S T

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION BB	BC	BD	BE	REFERENCE DESIGNATOR
27	27		1302377-00	39.0 .25 W 5.0 % CC	5	5	5	5	R52,R109-R112
28	28		1302859-00	5.76 K .25 W 1.0 % RN55D-F10	1	1	1	1	R96
29	29		1302871-00	1.21 K .25 W 1.0 % RN55D-F10	2	2	2	2	R80,R108
30	30		1302872-00	681.0 .25 W 1.0 % RN55D-F1	1	1	1	1	R89
31	31		1302956-00	196.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R94
32	32		1302957-00	121.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R101
33	33		1303045-00	3.16 K .25 W 1.0 % RN55D-F10	1	1	1	1	R76
34	34		1303067-00	422.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R99
35	35		1303110-00	19.60 .25 W 1.0 % RN55D-F10	1	1	1	1	R93
36	36		1303226-00	68.10 .25 W 1.0 % RN55D-F10	1	1	1	1	R86
37	37		1303311-00	46.40 K .25 W 1.0 % RN55D-F10	1	1	1	1	R75
38	38		1303313-00	12.10 K .25 W 1.0 % RN55D-F10	1	1	1	1	R97
39	39		1304725-00	300.0 .25 W 1.0 % RN55D-F10	1	1	1	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K .25 W 1.0 % RN55D-F10	1	1	1	1	R92
41	41		1305122-00	51.10 .25 W 1.0 % RN55D-F10	1	1	1	1	R85
42	42		1305123-00	215.0 .25 W 1.0 % RN55D-F10	2	2	2	2	R91,R102
43	43		1305143-00	825.0 .25 W 1.0 % RN55D-F10	2	2	2	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K .25 W 1.0 % RN55D-F10	1	1	1	1	R87
45	45		1309405-00	68.0 .50 W 5.0 % CC	2	2	2	2	R48,R49
46	46		1503100-00	DEC30098 NPN 200MW SI 20 25	7	7	7	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	2	2	2	Q6,Q7
48	48		1614234-00	XFMR,CONVERTER,RATIO 1:3 300UH	1	1	1	1	T1
49	49		1909054-00	7493 COUNTER,ASYNCH UP,BI	2	2	2	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN O	4	4	4	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER,LINE,DUA	3	3	3	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER,PERIPH,DUAL,	1	1	1	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2IN	6	6	6	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN,O	1	1	1	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX II	2	2	2	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	3	3	3	E19,E51,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	1	1	1	E59
58	58		1910542-00	74S64 A-O-I GATE 4-2-3-2	1	1	1	1	E15
59	59		1910544-01	74S74-60GG-D DUAL,EDGE TRIG	1	1	1	1	E39
60	60		1910545-00	74S112 FF-JK DUAL,EDGE TRIG	3	3	3	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	2	2	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER,BUS,HEX,UN	5	5	5	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	1	1	1	1	E45
64	64		1911579-00	8641 TRANSCEIVER,BUS,QUA	3	3	3	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	1	1	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	1	1	1	E58
67	67		1911944-00	555CN TIMER,FUNCT.BLOCK	1	1	1	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	1	1	1	E60
69	69	SEE NOTE 93	1912048-06	DEC 7812 VOLT REG,FIX +12V	1	1	1	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	3	3	3	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN,PO	1	1	1	1	E23
72	72		1912541-00	79M05 VOLT REG,FIX -5V	1	1	1	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT,BISTABLE	3	3	3	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	11	11	11	E27-E30,E35,E36,E41,E47-E50

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

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION BB	BC	BD	BE	REFERENCE DESIGNATOR
75	75		1912803-00	74LS04 INVERTER GATE,HEX	1	1	1	1	E52
76	76		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	1	1	1	1	E40
77	77		2113735-01	4K MOS RAM 200NS 1	96	-	-	- CONT	E100-E123,E200-E223,E300-E323, E400-E423
78	78		2114114-01	4K MOS RAM 200NS 1	-	96	-	- CONT	E100-E123,E200-E223,E300-E323, E400-E423
79	79		2113914-01	4K MOS RAM 200NS 1	-	-	96	- CONT	E100-E123,E200-E223,E300-E323, E400-E423
80	80	SEE NOTE 91	2114475-01	4K MOS RAM 200NS 1	-	-	-	96 CONT	E100-E123,E200-E223,E300-E323, E400-E423
81	81		9000024-01	EYELET,ROLL FLANGE .121ODX .192	12	12	12	12	
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP 4-40X 1/4 AF	3	3	3	3	
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	1	1	1	
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN,PHIL 4-40X 1/4 SS	3	3	3	3	
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	5	5	5	5	W2,W3,W4,W9,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	A/R	A/R	A/R	
87	87		2113789-01	*** THIS ITEM IS NOT USED ***	-	-	-	-	

88 NOTE: M8417-AA=M8417-AB,AC,AD,AE,AF,(16KX12)
89 NOTE: M8417-BA=M8417-BB,BC,BD,BE,BF(32KX12)
90 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
91 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
92 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
93 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-06.
94 NOTE: ----------

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

AUTOMATED BY PRTLST.2D(16) — P A R T S L I S T — SHEET C1 OF C3

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION AF	QTY PER VARIATION BF	REFERENCE DESIGNATOR
1	1	D-UA-M8417-0-0		UNIT ASSY	REF	REF	
2	2	D-UA-M8417-0-0		UNIT ASSY	REF	REF	
3	3		5012701-00	ETCH BOARD (M8418)	1	1	
4	4		1000006-00	10.0 MMF 100V 5%200PPM MICA	1	1	C66
5	5		1000016-00	100.0 MMF 100V 5%200PPM MICA	1	1	C64
6	6		1000042-00	1000.0 MMF 100V 5%200PPM MICA	1	1	C65
7	7		1001610-01	.01 MFD50/100V +80-20% DISC	53	53	C60,C75-C96,C98-C114,C116-C125,
							CONT C128,C129,C147
8	8		1005306-00	6.8MFD 35V 10% S.TANT	8	8	C53,C58,C67,C61,C62,C68,C140,
							CONT C150
9	9		1010274-00	.22 MFD 50V +80-20% Z5U CER	60	60	C1-C48,C57,C69,C70,C133-C135,
							CONT C141-C146
10	10		1010279-00	.47 MFD 25V 20% CER	6	6	C54-C56,C126,C130,C131
11	11		1012084-01	8 MFD 25V +75-10% AL EL	1	1	C52
12	12		1012121-00	220.0 MMF 100V 1%200PPM MICA	6	6	C59,C63,C71-C74
13	13		1012219-00	47 MFD 30V +75-10% AL EL	3	3	C50,C51,C132
14	14		1101938-00	1N 4370A VZ= 2.4 5% .40W	1	1	D3
15	15		1104860-00	1N 746A VZ= 3.3 5%	1	1	D5
16	16		1105275-00	D 672 TR= 15NS PIV= 60V SI	21	21	D1,D2,D9-D27
17	17		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	1	1	D28
18	18		1211164-04	SW,DIP 1P 1A 8POS	1	1	E62
19	19		1210711-02	/REPLACED BY 12-16988-02	1	1	
20	20		1300250-00	150.0 .25 W 5.0 % CC	1	1	R47
21	21		1300271-00	220.0 .25 W 5.0 % CC	16	16	R123-R138
22	22		1300316-00	470.0 .25 W 5.0 % CC	2	2	R46,R51
23	23		1300365-00	1.0 K .25 W 5.0 % CC	9	9	R45,R50,R53,R54,R82-R84,R103,
							CONT R104
24	24		1300447-00	4.70 K .25 W 5.0 % CC	15	15	R55-R65,R77,R78,R81,R139
25	25		1300479-00	10.0 K .25 W 5.0 % CC	6	6	R71-R74,R121,R122
26	26		1302124-00	18.0 .25 W 5.0 % CC	46	46	R1-R44,R90,R98

REVISION HISTORY		
ENG	ECO NUMBER	REV
E.R	00003	D
J.S	M8417-ML004	E
JS	M8417-ML005	F
JS	M8417-ML006	H

BASIC PART NO: M8417

SECTION C OF C

SECTION.VARIATION INDEX
[A] AB,AD,AC,AE
[B] BB,BC,BD,BE
[C] AF,BF
[D]
[E]
[F]
[H]
[J]
[K]
[L]
[M]
[N]

DRN: L. METZGER — DATE: 30-MAY-78

CHK'D: P.BOSSMAN — DATE: 30-MAY-78

DES.ENG: J.STEGEMAN — DATE: 30-MAY-78

RESP.ENG.: J.STEGEMAN — DATE: 30-MAY-78

MFG.ENG.: C.TANNER — DATE: 30-MAY-78

ASSEMBLY NUMBER: D-UA-M8417-0-0

TOP DOCUMENT NUMBER: MS8-C

D	I	G	I	T	A	L

TITLE: PARTS LIST

PDP8 MOS MEMORY

DOCUMENT NUMBER

SIZE	CODE	NUMBER	REV
K	PL	M8417-0-DBP	H

FILE NAME: Z0189H.PLS — EDIT #: 6

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION AF	BF	REFERENCE DESIGNATOR
27	27		1302377-00	39.0 .25 W 5.0 % CC	5	5	R52,R109-R112
28	28		1302859-00	5.76 K .25 W 1.0 % RN55D-F10	1	1	R96
29	29		1302871-00	1.21 K .25 W 1.0 % RN55D-F10	2	2	R80,R108
30	30		1302872-00	681.0 .25 W 1.0 % RN55D-F1	1	1	R89
31	31		1302956-00	196.0 .25 W 1.0 % RN55D-F10	1	1	R94
32	32		1302957-00	121.0 .25 W 1.0 % RN55D-F10	1	1	R101
33	33		1303045-00	3.16 K .25 W 1.0 % RN55D-F10	1	1	R76
34	34		1303067-00	422.0 .25 W 1.0 % RN55D-F10	1	1	R99
35	35		1303110-00	19.60 .25 W 1.0 % RN55D-F10	1	1	R93
36	36		1303226-00	68.10 .25 W 1.0 % RN55D-F10	1	1	R86
37	37		1303311-00	46.40 K .25 W 1.0 % RN55D-F10	1	1	R75
38	38		1303313-00	12.10 K .25 W 1.0 % RN55D-F10	1	1	R97
39	39		1304725-00	300.0 .25 W 1.0 % RN55D-F10	1	1	R107
40	40	SEE NOTE 90	1304833-00	1.96 K .25 W 1.0 % RN55D-F10	1	1	R92
41	41		1305122-00	51.10 .25 W 1.0 % RN55D-F10	1	1	R85
42	42		1305123-00	215.0 .25 W 1.0 % RN55D-F10	2	2	R91,R102
43	43		1305143-00	825.0 .25 W 1.0 % RN55D-F10	2	2	R95,R79
44	44	SEE NOTE 90	1305253-00	7.15 K .25 W 1.0 % RN55D-F10	1	1	R87
45	45		1309405-00	68.0 .50 W 5.0 % CC	2	2	R48,R49
46	46		1503100-00	DEC3009B NPN 200MW SI 20 25	7	7	Q1-Q5,Q8,Q9
47	47		1510171-00	D 44C3 NPN 30WT SI 30 20 Y	2	2	Q6,Q7
48	48		1614234-00	XFMR,CONVERTER,RATIO 1:3 300UH	1	1	T1
49	49		1909054-00	7493 COUNTER,ASYNCH UP,BI	2	2	E21,E24
50	50		1909705-00	DEC 8881 NAND GATE-QUAD 2IN O	4	4	E3,E14,E17,E44
51	51		1910268-01	DEC 75107B-01 RECEIVER,LINE,DUA	3	3	E5,E10,E18
52	52		1910406-00	75451 DRIVER,PERIPH,DUAL,	1	1	E64
53	53		1910532-00	74S00 NAND GATE-QUAD 2IN	6	6	E4,E34,E37,E42,E43,E55
54	54		1910533-00	74S03 NAND GATE-QUAD 2IN,O	1	1	E13
55	55		1910534-00	74S04 INVERTER GATE-HEX 1I	2	2	E22,E54
56	56		1910536-00	74S10 NAND GATE-TRIPLE 3IN	3	3	E19,E61,E63
57	57		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	1	E59
58	58		1910542-00	74S64 A-O-I GATE 4-2-3-2	1	1	E15
59	59		1910544-01	74S74-60GG-D DUAL,EDGE TRIG	1	1	E39
60	60		1910545-00	74S112 FF-JK DUAL,EDGE TRIG	3	3	E7,E20,E32
61	61		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	2	E26,E33
62	62		1911116-00	DEC 8837 RECEIVER,BUS,HEX,UN	5	5	E6,E8,E16,E38,E57
63	63		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	1	1	E45
64	64		1911579-00	8641 TRANSCEIVER,BUS,QUA	3	3	E1,E11,E51
65	65		1911676-00	74S139 DECODER-DUAL TWO-INP	1	1	E56
66	66		1911712-00	74S51 AND-OR GATE-INVERT D	1	1	E58
67	67		1911944-00	555CN TIMER,FUNCT BLOCK	1	1	E31
68	68		1911983-00	74S133 NAND GATE-POSITIVE 1	1	1	E60
69	69	SEE NOTE 93	1912048-06	DEC 7812 VOLT REG,FIX +12V	1	1	Q10
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	3	3	E9,E25,E46
71	71		1912389-00	74S08 AND GATE-QUAD 2IN,PO	1	1	E23
72	72		1912541-00	79M05 VOLT REG,FIX -5V	1	1	Q11
73	73		1912649-00	LS75 LATCH 4BIT,BISTABLE	3	3	E2,E12,E53
74	74		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	11	11	E27-E30,E35,E36,E41,E47-E50

D	I	G	I	T	A	L	TITLE	SECTION C OF C	SIZE	CODE	DOCUMENT NUMBER	REV
							PDP8 MOS MEMORY		K	PL	M8417-0-0BP	H

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER AF	QTY PER BF	VARIATION	REFERENCE DESIGNATOR
75	75		1912803-00	74LS04 INVERTER GATE,HEX	1	1		E52
76	76		1912824-00	LS74 FF-D DUAL,EDGE TRIGG	1	1		E40
77	77		2113735-01	*** THIS ITEM IS NOT USED ***	-	-		
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,ROLL FLANGE .1210DX .192	12	12		
82	82	USE WITH Q6,Q7,Q10	9006557-00	NUT,KEP 4-40X 1/4 AF	3	3		
83	83	USE WITH Q11	9007254-00	TRANSIPADS #10146	1	1		
84	84	USE WITH Q6,Q7,Q10	9008301-01	SCREW,PAN,PHIL 4-40X 1/4 SS	3	3		
85	85		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	6	6		W2,W3,W4,W9,W10,W11
86	86		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	A/R		
87	87		2113789-01	4K MOS RAM 200NS 1	48	-		E100,E102,E104,E106,E108,E110,
							CONT	E112,E114,E116,E118,E120,E122,
							CONT	E200,E202,E204,E206,E208,E210,
							CONT	E212,E214,E216,E218,E220,E222,
							CONT	E300,E302,E304,E306,E308,E310,
							CONT	E312,E314,E316,E318,E320,E322,
							CONT	E400,E402,E404,E406,E408,E410,
							CONT	E412,E414,E416,E418,E420,E422
			CONT		-	96		E100-E123,E200-E223,E300-E323,
							CONT	E400-E423

88 NOTE: M8417-AA=M8417-AB,AC,AD,AE,AF,(16KX12)
89 NOTE: M8417-BA=M8417-BB,BC,BD,BE,BF(32KX12)
90 NOTE: USED ON:OPTION/MODEL MS8-CA,MS8-CB
91 NOTE: R87,R92 MAY BE REMOVED AT MODULE TEST IF NEEDED.
92 NOTE: MIXING OF MOS RAMS IS NOT PERMITTED.
93 NOTE: REF ITEM #69 19-12048-05 ACCEPTABLE SUBSTITUTE FOR 19-12048-06.
94 NOTE: ----------

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION DATE 10/3/73

TITLE MR8-F FIELD INSTALLATION AND ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	MR8F-00001	ADAMS	1-74	David F Adams	7/27/74
B	UPDATE TO ADD PDP8A	MR8F 00004	REGAN	12-74	R. Regan	12/30/74

ENG	APPD	SIZE	CODE	NUMBER	REV
Richard Morris	David F Adams 10/11/73	A	SP	MR8-F-2	B

DEC FORM NO.
DRA 107

ENGINEERING SPECIFICATION [redacted] CONTINUATION SHEET

1. Shipping Hardware

   1.1 See A-PL-MR8-F-5 (Shipping List)

2. Shipping Software

   2.1 See A-PL-MR8-F-6 (Software List)
   NOTE: Prom Diagnostics are not used in this Acceptance Procedure. These Maindecs are used to diagnose the MR8-FB after the MR8-FB has been programmed to the customers specifications.

3. Equipment required for acceptance

   3.1 PDP8E, 8M, or 8A with a programmers console. If 4K of read/write memory is present, the system must have a KM8-E (M837), or KM8-A (M8317), extended memory control. All these options must be customer supplied.

4. Unpacking and Installation

   4.1 Unpack and inspect the modules for physical damage.

   4.2 Make sure all four top edge connectors on the M8349 are fitted correctly.

   4.3 Turn power off in the PDP8E, 8M, 8F, or 8A.

   4.4 If the MR8-FB is a PDP8E, 8F, or 8M, add-on remove M8330 and insert the new M8330-YB in the same slot. The MR8-FB requires an M8330-YB inorder to operate.

   4.5 Insert the M8349 in the OMNIBUS behind the RFI shield (M849) in the PDP8E, 8F, or 8M, and in the lowest available Omnibus slot in the PDP8A.

   4.6 Remove or disable all other options in PDP8E, 8M, 8F, or 8A that use the "SW" or "BOOT" switch option.

5. Acceptance

5.1 The MR8-FB is shipped with Prom Internal test Maindec-08-DHMRE programmed in the Prom chips.

5.2 Turn PDP8E, 8M, 8F, or 8A, power on.

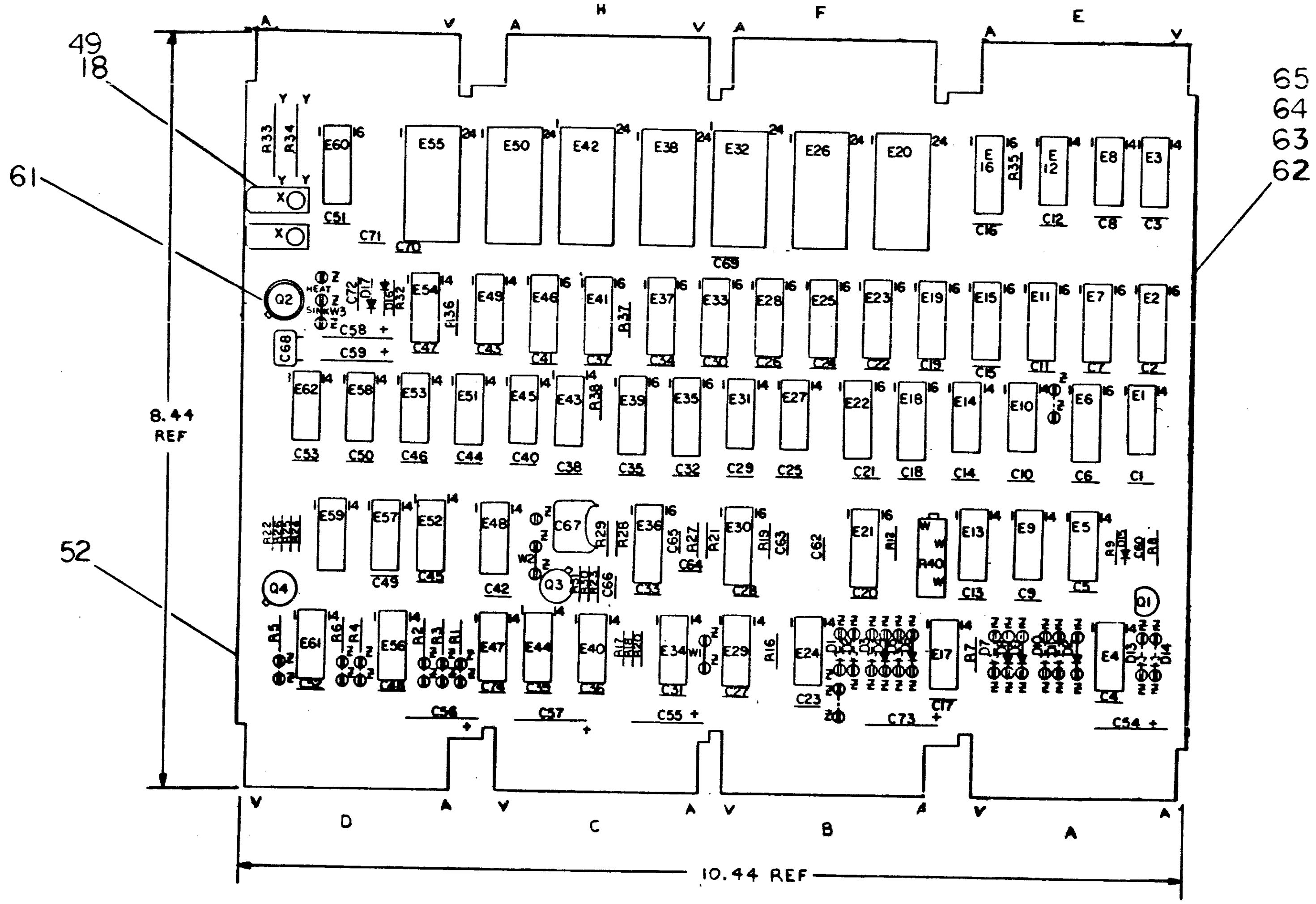
5.3 If the MR8-FB is an add-on and an M8330-YB was installed, run all basic 8E diagnostics and EAE diagnostics if applicable.

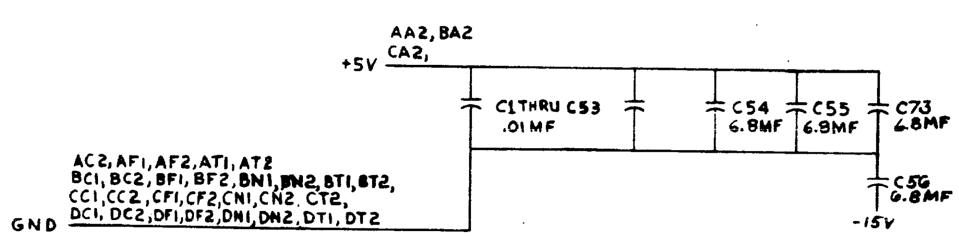
5.4 Toggle "SW" or "BOOT" switch. The Prom Internal Test should be running. Refer to MAINDEC-08-DHMRE writeup if there are any errors. With the switch register = ØØØØ the test will halt in approx. 3 min. Repeat the test 4 times.

5.5 If no errors have occurred the MR8-FB is ready to be erased and reprogrammed by the customer.

NOTES:

1. JUMPERS IN FOR Ø OUT FOR 1
2. DIODES ON OUTPUT OF INVERTERS ARE IN FOR 1
   DIODES ON INPUT OF INVERTERS ARE IN FOR Ø
   SOME DIODES ARE INSTALLED IN PRODUCTION TO FACILITATE CHECKOUT. A CUSTOMER WILL RE-ARRANGE DIODES TO HIS REQUIREMENTS
3. DELAY OUTPUT IS ADJUSTED TO 2 2 S + 50 NS.
4. DIODES AND JUMFERS SHOWN IN DOTTED LINES ARE NOT PUT ON THE BOARD DURING MANUFACTURE. THEY ARE ADDED DURING CHECKOUT AS REQUIRED. SOLID LINE JUMPERS ARE PUT IN WHEN BOARD IS ASSEMBLED.
5. UNLESS OTHER WISE NOTED RESISTANCE IS IN OHMS 1/4W 5%.
6. YA1 JUMPER (ROM ADDRESS) IS ONLY INSTALLED IF THE PROM ADDRESSES OVERLAY CORE MEMORY ADDRESSES.
7. UNLESS OTHER WISE SPECIFIED ALL DELAY TIMES ARE ± 20%.





M8349-YA QTY	M8349-YC QTY	M8349-YD QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
			1	C64	CAP 68 PF 100V 5% DM	1000014	5
			1	C65	.047 CAP.	1009678	6
2	6	3	7	SEE Y VARIATION CHART	IC DEC 1702 A	23041A4	7
			1	C66	CAP 1000 PF 100V 5% DM	1000042	8
			1	C57	CAP 39 MF 10V 10F S.TANT	1000076	9
			58	C1-C53, C69, C70, C71, C72, C74	CAP .01 MF 100V 20% DISC	1001610	10
			1	C60.	CAP 390 PF 100V 5% DM	1001631	11
			1	C67	CAP 2700 PF 100V 5% DM	1001637	12
			2	C63, C68	CAP 27 PF 100V 5% DM	1001739	13
			6	C54, C55, C56, C58, C59, C73	CAP 6.8 MF 35V 10% S TANT	1005308	14
			1	D15	DIODE D662	1100113	15
			6	D16, D4, D6, D8, D9, D12.	DIODE D664	1100114	16
			1	D17	DIODE IN757A	1109999	17
			2		FASTON TABS	9007112	18
			2	R8, R29	RES 100 OHMS 1/4W 5%	1300229	19
			1	R32	RES 220 OHMS 1/4W 5%	1300271	20
			2	R24, R28	RES 470 OHMS 1/4W 5%	1300316	21
			6	R7, R16, R17, R22, R36, R38	RES 1K OHMS 1/4W 5%	1300385	22
			1	R35	RES 1.5K OHMS 1/4W 5%	1300391	23
			1	R31	RES 2 2K OHMS 1/4W 5%	1300417	24
			1	R18	RES 3K OHMS 1/4W 5%	1300432	25
			1	R9	RES 3.3K OHMS 1/4W 5%	1300439	26
			7	R1-R6, R12	RES 4 7K OHMS 1/4W 5%	1300447	27
			3	R19, R21, R23	RES 10K OHMS 1/4W 5%	1300479	28
			2	R20, R37	RES 15K OHMS 1/4W 5%	1300496	29
							30
			2	R25, R26	RES 27 OHMS 1/4W 10%	1301420	31
			1	R27	RES 22K OHMS 1/4W 5%	1301800	32
			1	R30	RES 270 OHMS 1/4W 5%	1301972	33
							34
			2	R33, R34	RES 4.7 OHMS 1W 5%	1304983	35
			2	Q3, Q4	TRANSISTOR 3009B	1503100	36
			1	Q1	TRANSISTOR 6531B	1508330	37
			1	Q2	TRANSISTOR 3762	1509840	38
			2	E29, E58	I.C DEC 7474	1905547	39
			1	E57	I.C. DEC 7400	1905575	40
			2	E48, E50	I.C. DEC 7402	1909004	41
			1	E12	I.C. DEC 74H00	1909056	42
			1	E13	I.C. DEC 74H10	1909057	43
			2	E9, E62	I.C. DEC 74H11	1909287	44
			7	E14, E31, E44, E45, E47, E56, E61	I.C. DEC 8881	1909705	45
			3	E1, E17, E40	I.C. DEC 74H04	1909931	46
Ø	Ø	Ø	1	SEE Y VARIATION CHART	I.C. DEC 74151	1909938	47
			3	E49, E53, E54	I.C. DEC 7408	1910155	48
			2		EYELETS-(65-4-7)	9006732	49
			5	E34, E52, E3, E5, E8	I.C. DEC 5380 (CAN USE 11380)	1910382 (1911113)	50
3	3	3	6	SEE Y VARIATION CHART	I.C. DEC 5384 (CAN USE 384)	1910394 (1909406)	51
			56		SPLIT LUGS -4-7)	9006735	52
			3	E21, E30, E36	I.C. DEC 74123	1910438	53
			2	E22, E39	I.C. DEC 74174	1910852	54
			3	W1, W2, W3	BUS WIRE #22 AWG	9107560-01	55

PARTS LIST

FIRST USED ON OPTION MODEL: MR8-F

ETCH BOARD REV: C

IC TYPE	GND	+5V
DEC 1702A	–	12
DEC 5380	1	8
DEC 7384	1	8
DEC 74151	8	16
DEC 74123	8	16
DEC 74157	8	16
DEC 74174	8	16
DEC 74200	8	16

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

DEC FORM NO. LPD-138A

REV	CHANGE NO.	ORIGINATED	CHK
A			/
B	M8349-00002	H. Demmons 12-5-73	
C	M8349-00003	D. ADAMS 12/10/73	
D	M8349-00004	D. ADAMS 1/11/74	
E	M8349-00005	H. Demmons 1-2-75	
F	M8349-00006	B. REGAN 1-6-75	

REVISIONS

DEC NO.	EIA NO.
3762	NONE
6531B	NONE
IN757A	NONE
D664	IN3606
D662	IN645

SEMICONDUCTOR CONVERSION CHART

DRN DATE 3-1-73
CHK'D DATE 1/73
ENG. DATE 10/11/73
PROJ. ENG. DATE 10/11/73
PROD. DATE 10/16/73

NEXT HIGHER ASSY: C-UA-MR8-F-Ø

SCALE: NONE
SHEET 1 OF 7

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: PROM IK

SIZE	CODE	NUMBER	REV.
D	CS	M8349-Ø-1	F

DIST.

QTY M8349-YA	QTY M8349-YC	QTY M8349-YD	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
Ø	Ø	Ø	12	SEE Y VARIATION CHART	I.C. DEC 74288 (3108)	1818818-2	56
			4	E8,E18,E36,E80	I.C. DEC 74157	1818805	57
			1	.C82	CAP 560PF 100V 5%	1000525	58
							59
			1	.R40	RES. 10K POT 3/4 W 10%	1309143-10	60
			1		HEAT SINK: TRANSISTOR	1210001	61
			REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8349-Ø-4	62
			REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8349-Ø-5	63
			REF		ECO MODULE HISTORY	B-MH-M8349-Ø-6	64
			1		ETCH CIRCUIT BOARD	5010426	65

Y VARIATION CHART

COMPONENTS	M8349 YA	M8349 YC	M8349 YD	M8349
I.C. DEC 1702A	E26,E50	E26,E32,E38 E42,E50,E55	E26,E32,E50	E20,E26,E32, E38,E42,E50, E55,
I.C. DEC 5384	E4,E24,E51	E4,E24,E51	E4,E24,E51	E4,E10,E24, E27,E43,E51
JUMPER YA1 SEE NOTE 6	IN	IN	IN	OUT
JUMPER YA2	IN	IN	IN	OUT
I.C. DEC 74151	0	0	0	E16
I.C. DEC 74200	0	0	0	E2 E7 E11 E15 E19 E23 E25 E28 E33 E37 E41 E46

* DIODE & JUMPER SETTINGS FOR ADDRESS DEFINITIONS

MEMORY FIELD SELECT	DIODE D3	D4	D5	D6	D9	D10
Ø	1	–	1	–	–	1
1	–	1	1	–	–	1
2	1	–	1	–	1	–
3	–	1	1	–	1	–
4	1	–	–	1	–	1
5	–	1	–	1	–	1
6	1	–	–	1	1	–
7	–	1	–	1	1	–

FIRST MEMORY ADDRESS	DIODE D7	D8	D11	D12
ØØØØ	–	1	–	1
2ØØØ	1	–	–	1
4ØØØ	–	1	1	–
6ØØØ	1	–	1	–

STARTING MEMORY ADDRESS	JUMPERS BELOW R1	R2	R3
ØØØØ	1	1	1
Ø2ØØ	1	1	–
2ØØØ	1	–	1
22ØØ	1	–	–
4ØØØ	–	1	1
42ØØ	–	1	–
6ØØØ	–	–	1
62ØØ	–	–	–

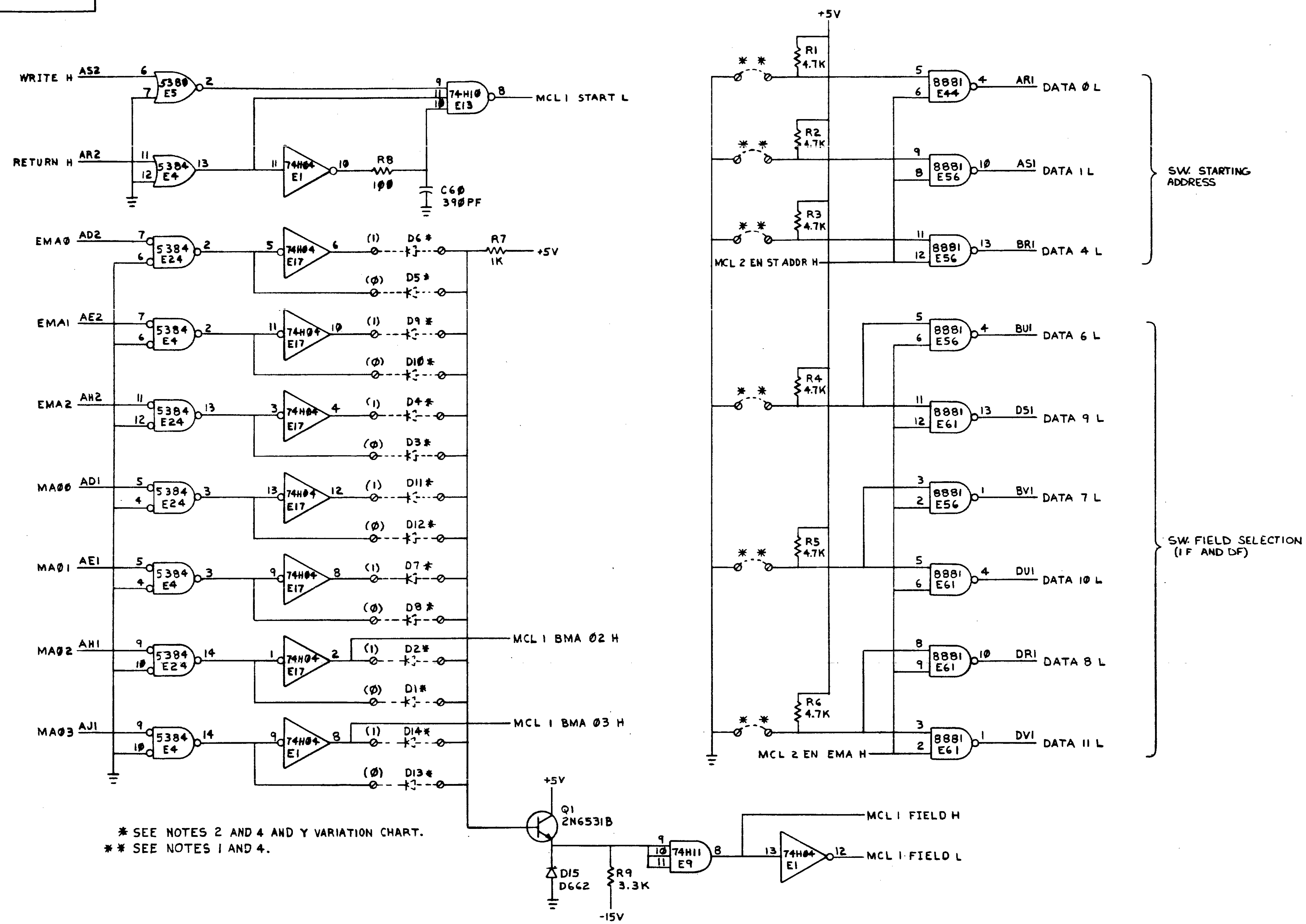
"SW" OR "BOOT" FIELD SELECT	JUMPER BELOW R4	R5	R6
Ø	1	1	1
1	1	1	–
2	1	–	1
3	1	–	–
4	–	1	1
5	–	1	–
6	–	–	1
7	–	–	–

* "1" = DIODE OR JUMPER IN
"–" = DIODE OR JUMPER OUT

REVISIONS CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PROM IK	D	CS	M8349-Ø-1	F
SCALE	SHEET 2 OF 7	DIST.		

DEC FORM NO. DRD 1**



* SEE NOTES 2 AND 4 AND Y VARIATION CHART.
** SEE NOTES 1 AND 4.

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (MCL1)	D	CS	M8349-Ø-1	F

SCALE —/— SHEET 3 OF 7

7474 E29 ROM ADDR — 8881 E44 — YA1 — AU2 ROM ADDRESS L

TP4 CJ2 — 5380 E34

7474 E58 IOC KC — 74H11 E62 — MCL 2 EN ST ADDR H

74H04 E40 — 74H11 E62 — MCL 2 EN EMA H

TP2 H CE2 — 5380 E52 — 7408 E53

8881 E47 — DU2 KEY CONTL L

+5V R22 1K — 7474 E29 — MCL 2 GO (1) H

+5V R19 10K — C63 27PF — 74123 E30 DLY 2 100NS

+5V R21 10K — C64 68PF — 74123 E38 DLY 3 250NS

+5V R23 10K — C66 27PF — 74123 E36 DLY 4 100NS

7474 E58 IOC LA — 8881 E47 — CU2 IND 1 L

8881 E47 — BM2 LA EN L

INIT H CR1 — 5380 E34

8881 E47 — CV1 MS, IR DIS L

MCL2 STALL PL L

7402 E59 — R24 470 — +5V — R26 27 1/4W 10% — R25 27 1/4W 10% — Q4 DEC 3009 — DR2 PULSE LA H

8881 E44 — AU2 MEM START L

8881 E44 — BR2 NTS STALL L

MCL 1 START L — C62 .047MF — 74123 E21 STALL DLY 22 MS — MCL 1 FIELD H

R40 10K +5V — R12 4.7K

SW DV2 — R17 1K — ** W1 SW DIS

C57 39MF +5V — R18 3K — 5380 E34 — 74H04 E40 — R20 15K

R16 1K +5V

C65 .047 PF — 74123 E36 DLY 1 .3MS

R29 100 — C67 2700PF — R28 470 — R27 22K +5V

7402 E48 — 7408 E57 — 7402 E48 — R31 2.2K — R30 270 +5V — 5380 E52 — BV2 PWR OK H — Q3 DEC 3009 — 7402 E59 — MCL 2 RUN H

ON W2 ** RUN — OFF

RUN L BU2 — 5380 E52

* SEE NOTE 3

** SEE NOTE 4

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (MCL2)	D	CS	M8349-0-1	F
SCALE —	SHEET 4 OF 7	DIST.		

DCSM8349-0-1 F

+5V JP2 JP1 C71 .01MF

-9V C72 .01MF C58 6.8MF JS2 JS1 JR2 JR1 IN7574 D16 D17 D664 Q2 3762 R32 220 R33 4.7 1W R34 4.7 1W

-15V

MA04 L BD1 5380 E3 MCL1 FIELD L

MA05 L BE1 5380 E3

MA06 L BH1 5380 E3

MA07 L BJ1 5380 E3

MA08 L DD1 5380 E8

MA09 L DE1 5380 E8

MA10 L DH1 5380 E8

MA11 L DJ1 5380 E8

+5V R35 1.5K

POWER INTERLOCK

JC1 JD1 HA1 HB1 FA1 FC1 EC1 EB1

EP2 EN2 EM2 EL2 EK2 EF2 EH2 EJ2 ER2

EP1 EN1 EM1 EL1 EK1 EF1 EH1 EJ1 ER1

JE1 JF1 JH1 JJ1 JK1 JL1 JM1 JN1 JU1

JE2 JF2 JH2 JJ2 JK2 JL2 JM2 JN2 JU2

E55 A7 A6 (1400-1777) A5 A4 A3 A2 A1 (1000-1377) A0 17Ø2A VCC VBB VGG VDD P D7 D6 D5 D4 D3 D2 D1 D0

74157 E60 B0 A0 B1 A1 B2 A2 B3 A3 STB S0 f0 f1 f2 f3

ROM ØØ H
ROM Ø1 H
ROM Ø2 H
ROM Ø3 H

E50 A6 (400-777) A1 (Ø-377) HJ1 HJ2

E42 (1400-1777) HR1 HR2

E20 13TH BIT FU1 FT1 FT2 FS1 FS2 FR1 FR2 FP1 FP2 EDI ED2

74151 E16 STB D7 D6 D5 D4 D3 D2 D1 D0 52 S1 S0 f f

ROM H
ROM L

E38 (1000-1377) FDI FD2

EE1 EE2 +5V

E32 (400-777)

E26 (Ø-377) FMI FM2 FNI FN2

+5V C69 .01MF

R36 1K

7408 E49 E54

ROM Ø4 H
ROM Ø5 H
ROM Ø6 H
ROM Ø7 H
ROM Ø8 H
ROM Ø9 H
ROM 10 H
ROM 11 H

HN1 HM1 HL1 HK1 HH1 HF1 HE1 HD1 HN2 HM2 HL2 HK2 HH2 HF2 HE2 HD2

MCL1 BMA02 H
MCL1 BMA03 H

74H00 E12 FH2 FH1 (1400-1777)
FJ2 FJ1 (1000-1377)
FK2 FK1 (400-777)
FL2 FL1 (000-377)

74H04 E1

FE2 FE1 FF2 FF1

* SEE Y VARIATION CHART

REVISIONS

CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PROM IK (ROM)	D	CS	M8349-Ø-1	F
SCALE —	SHEET 5 OF 7	DIST.		

NEXT ASSY DCS M8349-Ø-1

MCL 1 FIELD L
ROM L

MD0 L AK1 10 — 5384 E10 — 9 / 14
MD1 L AL1 12 — 5384 E10 — 11 / 13
MD2 L AM1 6 — 5384 E10 — 7 / 2

ROM 04 H
ROM 05 H
ROM 06 H
ROM 07 H
ROM 08 H
ROM 09 H
ROM 10 H
ROM 11 H

MD0 E2 74200 — A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0; WE VCC; DØ 6
MD1 E7 74200 — A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0; WE VCC; DØ 6
MD2 E11 74200 — A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0; WE VCC; DØ 6

+5V — GND — FAST ON TABS
BAT.
W3
C59 6.8MF
C68 1000PF
R37 15K
+5V

RAM 1 +5 H
RAM 2 WRT EN L

MD3 L API 4 — 5384 E10 — 5 / 3
MD4 L BK1 10 — 5384 E27 — 9 / 14
MD5 L BL1 12 — 5384 E27 — 11 / 13

MD3 E15 74200 — A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0; WE VCC; DØ 6
MD4 E19 74200 — A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0; WE VCC; DØ 6
MD5 E23 74200 — A7 DI CS3 CS2 CS1; A6 A5 A4 A3 A2 A1 A0; WE VCC; DØ 6

74157 E6
RAM 1ØØ H — ROM ØØ H — B0 A0 — f0
RAM 1Ø1 H — ROM Ø1 H — B1 A1 — f1
RAM 1Ø2 H — ROM Ø2 H — B3 A3 — f3
RAM 1Ø3 H — ROM Ø3 H — B2 A2 — f2
STB S0

74157 E18
RAM 1Ø4 H — ROM Ø4 H — B0 A0 — f0
RAM 1Ø5 H — ROM Ø5 H — B1 A1 — f1
RAM 2 Ø6 H — ROM Ø6 H — B3 A3 — f3 — RAM 1 Ø6 H
RAM 2 Ø7 H — ROM Ø7 H — B2 A2 — f2 — RAM 1 Ø7 H
STB S0

YA2
ROM H
MCL 2 STALL PL L

74174 E22
D0 D1 D2 D3 D4 D5 — R0(I) R1(I) R2(I) R3(I) R4(I) R5(I)
CLR CLK
RAM 2 RD EN H
RAM 1 PULL UP H
R38 1K
+5V

8881 E14 — AK1 MD0 L
8881 E14 — AL1 MD1 L
8881 E14 — AM1 MD2 L
8881 E14 — API MD3 L
8881 E31 — BK1 MD4 L
8881 E31 — BL1 MD5 L

* SEE NOTE 4
* * SEE Y VARIATION CHART

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (RAM 1)	D	CS	M8349-Ø-1	F
SCALE — — — SHEET 6 OF 7	DIST.			

RAM 2 Ø6 H
RAM 2 Ø7 H
MCL1 FIELD L
ROM L
MD6 L
MD7 L
MD8 L
ROM Ø4 H
ROM Ø5 H
ROM Ø6 H
ROM Ø7 H
ROM Ø8 H
ROM Ø9 H
ROM 1Ø H
ROM 11 H
RAM 1 +5 H
MD9 L
MDIØ L
MD11 L
RAM 2 Ø8 H
RAM 2 Ø9 H
RAM 2 1Ø H
RAM 2 11 H
RAM 1 Ø6 H
RAM 1 Ø7 H
ROM H
RAM 1 PULL UP H
MCL2 STALL PL L
MCL 1 FIELD H
MD DIR L
TP3
RAM 2 RD EN H
RAM 2 MD DIR H
RAM 2 WRT EN L
BMI
BPI
DKI
DLI
DMI
DPI
MD6 L
MD7 L
MD8 L
MD9 L
MDIØ L
MD11 L

* SEE Y VARIATION CHART

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
PROM 1K (RAM 2)	D	CS	M8349-Ø-1	F
SCALE —	SHEET 7 OF 7	DIST.		

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 11/19/74

TITLE MS8-A FIELD INSTALLATION & ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
John Kirk 20 Dec '74		A	SP	MS8-A-1	

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE MS8-A FIELD INSTALLATION & ACCEPTANCE PROCEDURE

I GENERAL

This procedure defines the performance standards required of an MS8A* RAM memory.

NOTE: If MS8A was shipped as part of a PDP-8A system, proceed to installation procedure.

*MS8AA (M8311YA) 1K Semiconductor Random Access Memory
MS8AB (M8311YB) 2K Semiconductor Random Access Memory
MS8AD (M8311YD) 4K Semiconductor Random Access Memory

II INSPECTION

After removing the MS8A from packing material, inspect the module for the following:

1. Check for loose or broken components.
2. Inventory software against software list, if ordered.
3. Inventory prints against shipping list, if ordered.
4. Inventory hardware against shipping list.

III INSTALLATION PROCEDURE

Install the equipment using the following procedure:

1. Set up switches as indicated below for the particular variation being accepted.

M8311YA 1K
M8311YB 2K
M8311YD 4K

	M8311 YA	M8311 YB	M8311 YD	
S1-1	ON	ON	ON	= field Ø
S1-2	ON	ON	ON	= field Ø
S1-3	ON	ON	ON	= field Ø
S1-4	ON	ON	ON	ST Add
S1-5	ON	ON	ON	ST Add
S1-6	OFF	OFF	ON	On for 4K
S1-7	OFF	OFF	OFF	
S1-8	OFF	ON	OFF	On for 2K
S1-9	ON	OFF	OFF	On for 1K
S1-10	ON	ON	ON	Normally On

NOTE: Reference Operator's Handbook for complete description of switch settings.

SIZE	CODE	NUMBER	REV
A	SP	MS8-A-1	

DEC FORM NO DEC 16-(383)-1022-N370 DRA 108

SHEET 2 OF 3

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE MS8-A FIELD INSTALLATION & ACCEPTANCE PROCEDURE

III INSTALLATION PROCEDURE (continued)

2. Insure that the PDP-8A power is removed from the Omnibus TM.

3. Insert the MS8A into the last slot vacant in the Omnibus TM.

4. Turn power on.

IV ACCEPTANCE PROCEDURE

Perform the Acceptance Test as indicated in Table B. If problems are encountered, refer to the diagnostic listing for type of error. Reference Operator's Manual and Diagnostic Write-up for instructions on loading diagnostic.

Equipment required:

1. PDP-8A with MS8A R/W Memory
2. Programmer's Console
3. Paper Tape input Device
4. Diagnostic and Listings

NOTE: If the Programmer's console and paper tape input device are not available as part of the system being used, they must be supplied in good working order by the customer.

Table B

Acceptance of MS8A: YA or YB

Program Name	Maindec #	Accept Time	Restrictions
1-4K MOS Memory Test (RIM)	08-DJMSA-PM	30 min	1K or 2K MS8A R/W Memory

Acceptance of MS8A:YD

1-4K MOS Memory Test	08-DJMSA-PM	15 min.	4K MS8A R/W Memory
4-32K Memory Test	08-DJMMA-PB	15 min.	4K MS8A R/W Memory

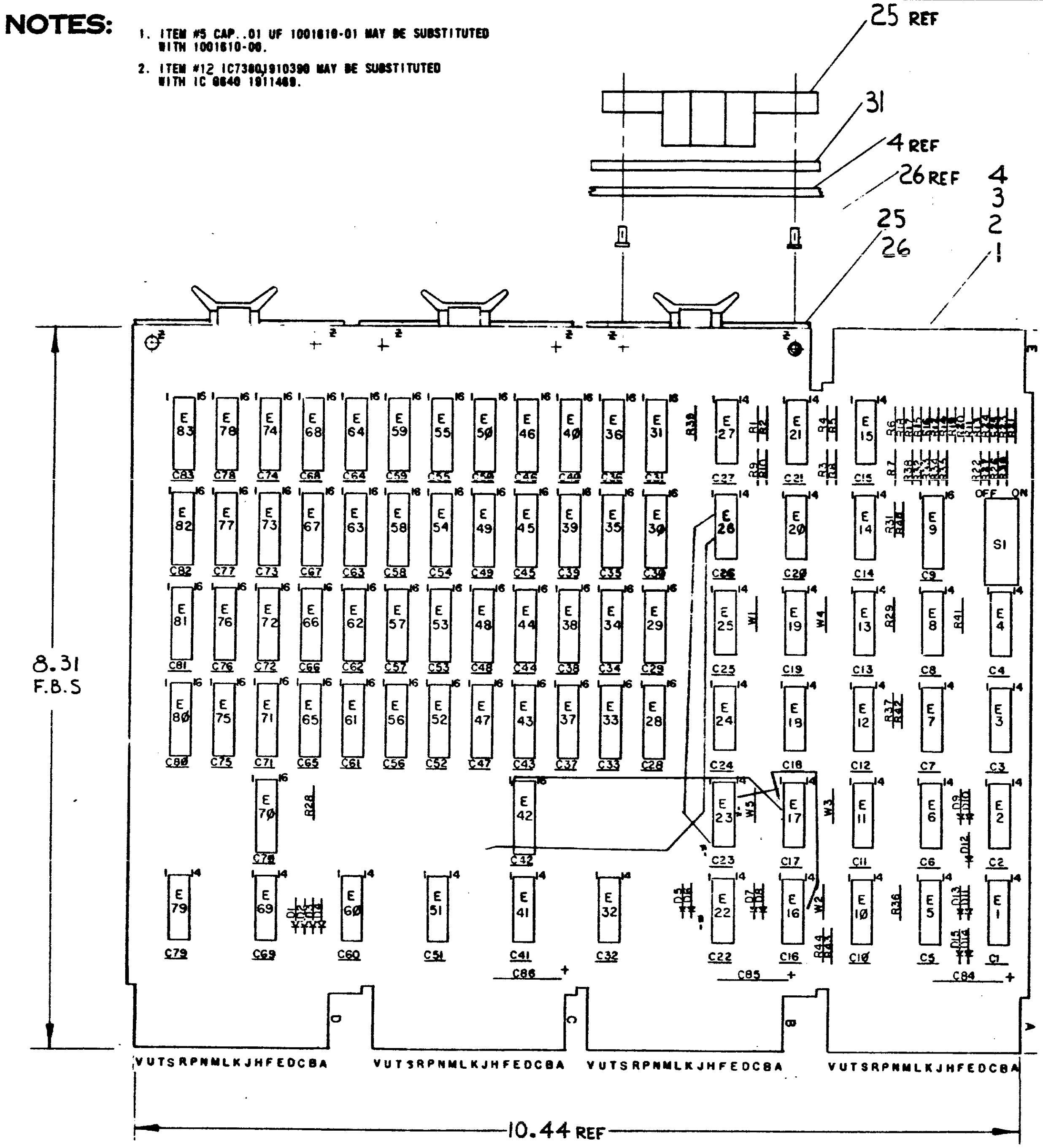
SIZE	CODE	NUMBER	REV
A	SP	MS8-A-1	

DEC FORM NO DEC 16-(383)-1022-N370 DRA 108

SHEET 3 OF 3

NOTES:

1. ITEM #5 CAP. .01 UF 1001610-01 MAY BE SUBSTITUTED WITH 1001610-00.
2. ITEM #12 IC7380 1910390 MAY BE SUBSTITUTED WITH IC 8640 1911460.



IC TYPE	GND	+5V
8223	8	16
2102	9	10
74174	8	16
7384	1	8
7380	1	8

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

PARTS LIST

FIRST USED ON OPTION MODEL: PDP8A

QTY M8311-YA	QTY M8311-YB	QTY M8311-YC	QTY M8311-YD	QTY M8311-YE	QTY M8311-YF	QTY M8311-YH	QTY M8311-YJ	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
REF	REF	REF	REF	REF	REF	REF	REF		X-Y COORDINATE HOLE LOCATION	K-CO-M8311-0-4	1
REF	REF	REF	REF	REF	REF	REF	REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8311-0-5	2
REF	REF	REF	REF	REF	REF	REF	REF		MODULE ECO HISTORY	B-MH-M8311-0-6	3
1	1	1	1	1	1	1	1		ETCHED CIRCUIT BOARD	5010506	4
-	-	71	-	-	-	71	-	C1-C27,C29-C32,C34-C36,C38; C42,C44-C46,C48-C51,C53-C55, C57-C80,C82-C84,C86-C70,C72, C74,C76-C79,C81-C83	CAP .01 UF 100V 20% (SEE NOTE #1)	1001610-01	5
-	59	-	-	-	59	-	-	C1-C27,C30-C32,C35,C36,C39, C40,C41,C42,C45,C46,C49,C50, C51,C54,C55,C58,C59,C60, C63,C64,C67-C70,C73,C74,C77, C78,C79,C82,C83			
47	-	-	-	47	-	-		C1-C27,C31,C32,C36,C40-C42, C46,C50,C51,C55,C59,C60,C64, C68-C70,C74,C78,C79,C83			
			83				83	C1 - C83			
15	15	15	15	15	15	15	15	D1-D15	DIODE D664	1100114	6
11	11	11	11	11	11	11	11	R1-R10,R38	RES. 180 1/4W 5%	1301322	7
5	5	5	5	5	5	5	5	R39-R43	RES. 220 1/4W 5%	1300271	8
13	13	13	13	13	13	13	13	R11-R20,R30,R31,R37	RES. 2.2K 1/4W 5%	1300417	9
1	1	1	1	1	1	1	1	S1	SWITCH 10 POS	1211164-06	10
1	1	1	1	1	1	1	1	E7	IC 7402	1909004	11
6	6	6	6	6	6	6	6	E22,E23,E41,E60,E79,E1	IC 7380 (SEE NOTE #2)	1910390	12
4	4	4	4	4	4	4	4	E5,E32,E51,E69	IC 8881	1909705	13
3	3	3	3	3	3	3	3	E4,E6,E17	IC 7400	1905575	14
1	1	1	1	1	1	1	1	E19	IC 7410	1905576	15
1	1	1	1	1	1	1	1	E2	IC 8242	1909712	16
1	1	1	1	1	1	1	1	E13	IC 74164	1910041	17
1	1	1	1	1	1	1	1	E18	IC 7486	1910155	18
5	5	5	5	5	5	5	5	E8,E10,E15,E21,E27	IC 7437	1910081	19
4	4	4	4	4	4	4	4	E3,E14,E20,E26	IC 7384	1910393	20
4	4	4	4	4	4	4	4	E11,E12,E16,E24	IC 7474	1905547	21
2	2	2	2	2	2	2	2	E42,E7Ø	IC 74174	1910652	22
-	-	-	48	-	-	-	-	E28-E31,E33-E40,E43-E50, E52;E59,E61-E68,E71-E78, E80-E83	IC DEC 2102-0	2111318-0C	23
-	-	36	-	-	-	-	-	E29-E31,E34-E36,E38-E40, E44;E46,E48-E50,E53-E55, E57-E59,E62-E64,E66-E68, E72-E74,E76-E78,E81-E83			
-	24	-	-	-	-	-	-	E30,E31,E35,E36,E39,E40, E45,E46,E49,E50,E54,E55, E58,E59,E63,E64,E67,E68, E73,E74,E77,E78,E82,E83			
12	-	-	-	-	-	-	-	E31,E36,E40,E46,E50, E55,E59,E64,E68,E74,E78, E83.			
--	-	-	-	-	-	-	48	E28-E31,E33;E40,E43-E50, E52-E59,E61-E68,E71-E78, E80-E83	IC DEC 2102 -1	211318-01	24
-	-	-	-	-	-	36	-	E29-E31,E34-E36,E38-E40, E44-E46,E48-E50,E53-E55, E57-E59,E62-E64,E66-E68, E72-E74,E76-E78,E81-E83			

ETCH BOARD REV. E

REV.	CHANGE NO.	ORIGINATED	CHK		
D		ORIGINATED			
E	M8311-00001	B. TARPLEY	9-6-74		
F	M8311-00002	B. TARPLEY	10/4/74	R. Rogers	10/23/74

REVISIONS

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

SEMICONDUCTOR CONVERSION CHART

DRN.	George Draper	DATE 5/24/74
CHKD.		DATE 6/5/74
ENG.		DATE 6/6/74
PROJ. ENG.		DATE 6/6/74
PROD.		DATE 6/6/74

NEXT HIGHER ASSY: D-DD-PDP8A-Ø

SCALE: NONE

SHEET 1 OF 6

digital

TITLE: 4K X 12 MOS. MEMORY

SIZE: D CODE: CS NUMBER: M8311-Ø-1 REV.: F

DIST.

M8311-YA	M8311-YB	M8311-YC	M8311-YD	M8311-YE	M8311-YF	M8311-YH	M8311-YJ			
-	-	-	-	-	24	-	-	E30, E31, E35, E36, E39, E40 E45, E46, E49, E50, E54, E55 E50, E59, E83, E84, E87, E88, E73, E74, E77, E78, E82, E83.	IC DEC 2102-1	2111318-0-1	24
-	-	-	-	12	-	-	-	E31, E38, E40, E46, E50, E55, E59, E64, E68, E74, E78, E83			
3	3	3	3	3	3	3	3		HANDLE FLIP CHIP MAGENTA	9008337-00	25
8	8	8	8	8	8	8	8		EYELET GS4-7	9006750	26
1	1	1	1	1	1	1	1	E8	IC DEC 8223 OR EQUIVALENT	23083A1	27
5	5	5	5	5	5	5	5	W1-W5	INSULATED JUMPER	9009185	28
3	3	3	3	3	3	3	3	C84, C85, C86	CAP 6.8 MF 35 V. 10% TAPT	IC05366	29
14	14	14	14	14	14	14	14	R21-R29, R32-R35, R38	RES. 3.3K 1/4W 5%	1300439	30
3	3	3	3	3	3	3	3		SPACER (CABLE CLAMP)	1202704	31
1	1	1	1	1	1	1	1	R44	RES. 39Ω 1/4W 5%	1300308	32
1	1	1	1	1	1	1	1	E25	CRYSTAL OSCILLATOR 18 MHZ	1811660-01	33
QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO	ITEM NO

SWITCH DEFINITIONS

SWI-1	EMA2	FIELD SELECTION 'ON' IS Ø
SWI-2	EMA1	
SWI-3	EMAØ	
SWI-4	SELØ	STARTING ADDRESS SELECT 'ON' IS Ø
SWI-5	SEL1	
SWI-6	4K	MEMORY SIZE SELECT CORRECT SIZE - 'ON' OTHERS - 'OFF'
SWI-7	3K	
SWI-8	2K	
SWI-9	1K	
SWI-10		USED FOR TEST ONLY, ALWAYS 'ON'

JUMPER CONFIGURATION

YA, YB, YC AND YD — W1, W2, W3 ARE IN	W4 AND W5 ARE OUT
YE, YF, YH AND YJ — W4 AND W5 ARE IN	W1, W2 AND W3 ARE OUT

REVISIONS		
CHK	CHANGE NO	REV

TITLE 4K X 12 MOS MEMORY		SIZE D	CODE CS	NUMBER M8311-Ø-1
SCALE NONE	SHEET 2 OF 6	DIST.		REV. F

M8311-Ø-1 F
DCS M8311-Ø-1 F

TITLE	SIZE	CODE	NUMBER	REV.
4K X12 MOS MEMORY (MMI)	D	CS	M8311-0-1	F
SCALE —— SHEET 3 OF 6	DIST.			

MMI RAM SEL H
MA 11 DJ1 D1 D664
MA 10 DH1 D2 D664
MA 9 DE1 D3 D664
MA 8 DD1 D4 D664
MA 7 BJ1 D5 D664
MA 6 BH1 D6 D664
MA 5 BE1 D7 D664
MA 4 BD1 D8 D664
MA 3 AJ1 D9 D664
MA 2 AH1 D10 D664

RMA 11 EL1 — +5V R11 2.2K — 7437 E27 — +5V R1 180
RMA 10 EM1 — +5V R12 2.2K — 7437 E21 — +5V R2 180
RMA 9 EP1 — +5V R13 2.2K — 7437 E21 — +5V R3 180
RMA 8 EN1 — +5V R14 2.2K — 7437 E21 — +5V R4 180
RMA 7 EA1 — +5V R15 2.2K — 7437 E15 — +5V R5 180
RMA 6 ED1 — +5V R16 2.2K — 7437 E15 — +5V R6 180
RMA 5 EE1 — +5V R17 2.2K — 7437 E15 — +5V R7 180
RMA 4 EB1 — +5V R18 2.2K — 7437 E15 — +5V R8 180
RMA 3 EF1 — +5V R19 2.2K — 7437 E27 — +5V R9 180
RMA 2 EH1 — +5V R20 2.2K — 7437 E21 — +5V R10 180

7384 E26, 7384 E20, 7384 E14, 7384 E26, 7384 E14, 7384 E14, 7384 E26, 7384 E20

MMI CE0 L
MMI CE1 L
MMI CE2 L
MMI CE3 L

21Ø2 E31, 21Ø2 E30, 21Ø2 E29, 21Ø2 E34, 21Ø2 E30, 21Ø2 E35, 21Ø2 E34, 21Ø2 E33

MM2 A9
MM2 A8
MM2 A7
MM2 A6
MM2 A5
MM2 A4
MM2 A3
MM2 A2
MM2 A1
MM2 AØ

MMI B WRITE L
MMI MEM DATA CLK H

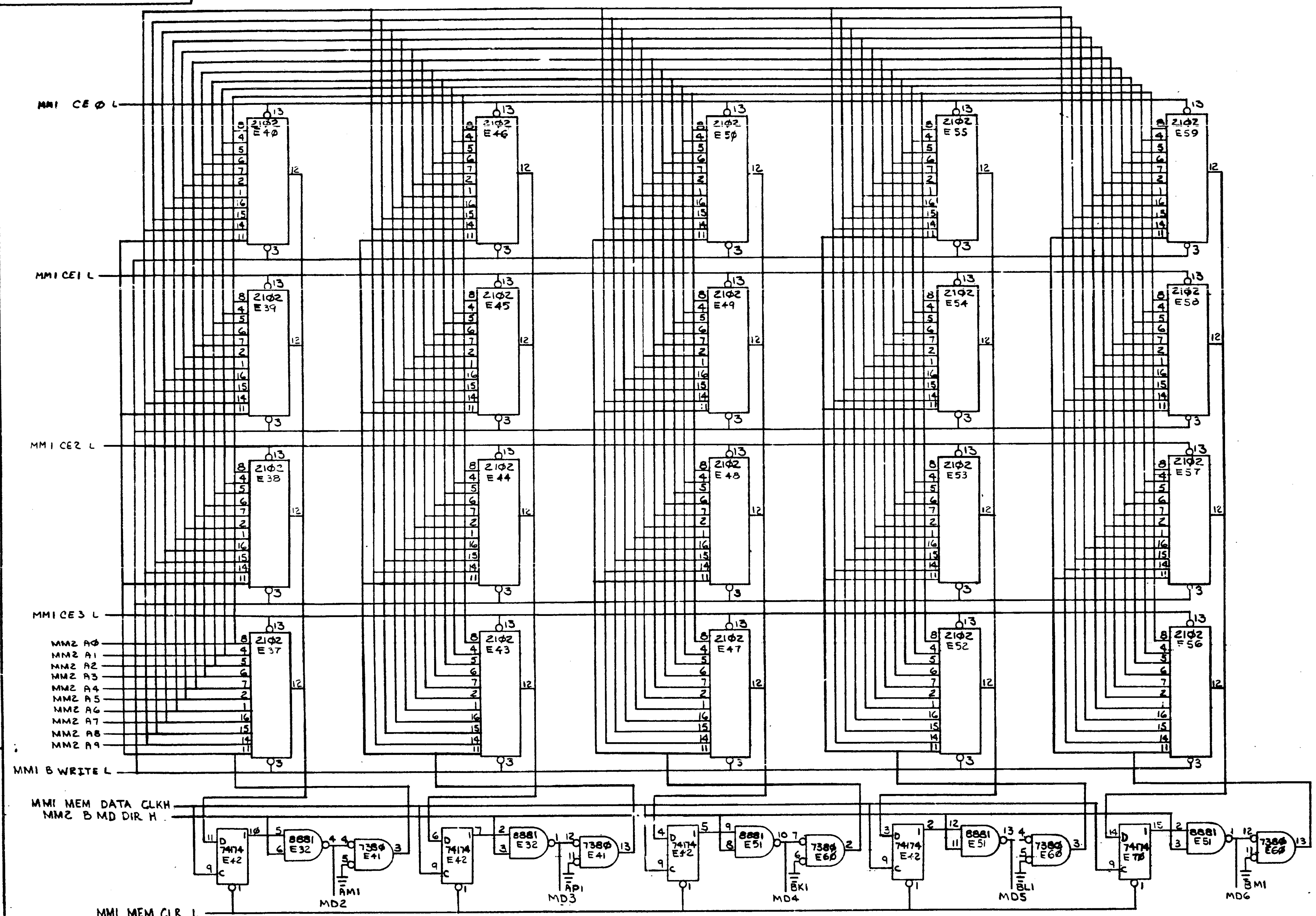
MD DIR AK2 — 7384 E3 — MM2 MD DIR L — 7437 E10 — MM2 BMD DIR H
+3V

74174 E42, 8881 E32, 7386 E41, 74174 E42, 8881 E32, 7386 E41
AK1 — MDØ
AL1 — MD1

MMI MEM CLR L

REVISIONS		
CHK	CHANGE NO.	REV

TITLE			SIZE	CODE	NUMBER	REV.
4K X 12 MOS MEMORY (MM2)			D	CS	M8311-Ø-1	F
SCALE	SHEET 4 OF 6		DIST.			


MM1 CE Ø L
MM1 CE1 L
MM1 CE2 L
MM1 CE3 L
MM2 AØ
MM2 A1
MM2 A2
MM2 A3
MM2 A4
MM2 A5
MM2 A6
MM2 A7
MM2 A8
MM2 A9
MM1 B WRITE L
MM1 MEM DATA CLK H
MM2 B MD DIR H
MM1 MEM CLR L
2102 E40
2102 E39
2102 E38
2102 E37
2102 E46
2102 E45
2102 E44
2102 E43
2102 E5Ø
2102 E49
2102 E48
2102 E47
2102 E55
2102 E54
2102 E53
2102 E52
2102 E59
2102 E58
2102 E57
2102 E56
7474 E42
8881 E32
7380 E41
MD2
MD3
MD4
MD5
MD6
AM1
AP1
BK1
BL1
BM1
8881 E51
7380 E6Ø

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE 4K X 12 MOS MEMORY (MM3)

SIZE	CODE	NUMBER	REV.
D	CS	M8311-Ø-1	F

SCALE NONE — SHEET 5 OF 6