

digital

KEII-B
Engineering Drawings
Digital Equipment Corporation

228

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[illegible]

PARTS LIST

MADE BY

DATE _____

ENG

DATE _____

CHECKED

DATE _____

PROD

DATE _____

SECTION

ISSUED SECT.

ITEM
NO.

DWG NO. / PART NO.

DESCRIPTION

1

M7840

ARITHMETIC UNIT

QUANTITY / VARIATION

KE11-B

1

TITLE

KEII-B ARITHMETIC UNIT

ASSY NO.	
----------	--

SHEET 1 OF 1

SIZE	CODE
------	------

A P L

NUMBER

KEII-B-O

REV.	ECO NO.
------	---------

[illegible]

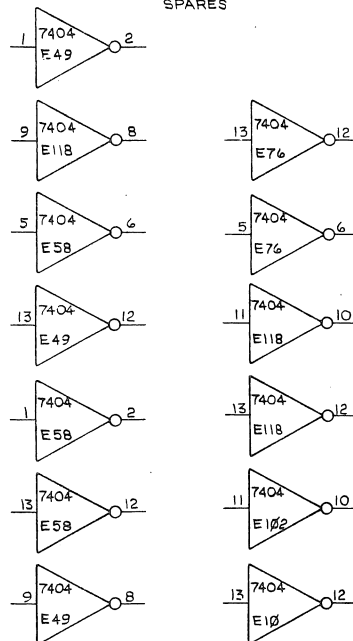
DIST.

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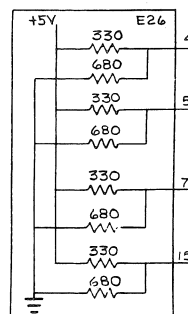
NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL RESISTORS ARE IN OHMS, 1/4W ± 5%.
2. ROM PATTERN SPEC/ROM FOR REFERENCE ONLY.

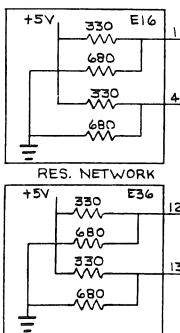
SPARES



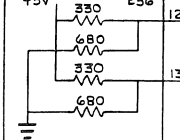
RES. NETWORK



RES. NETWORK

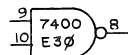
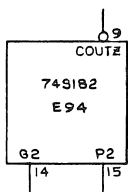
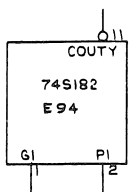
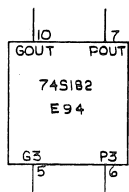
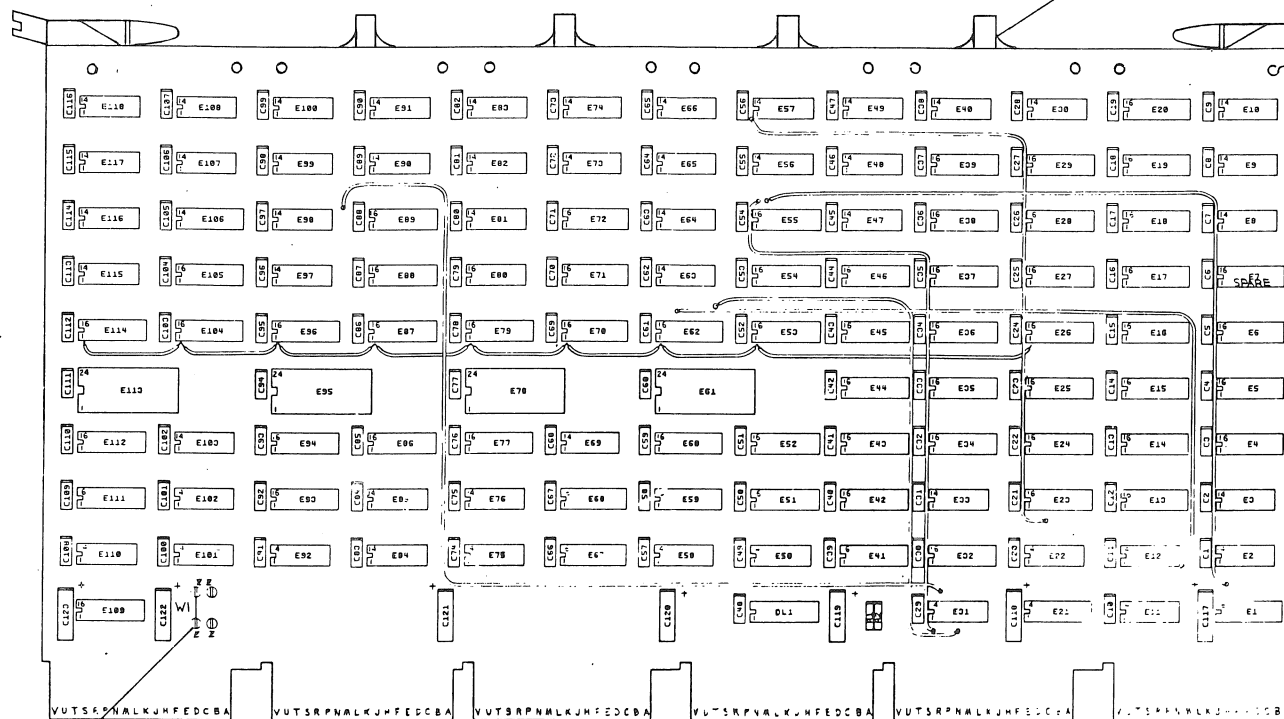


RES. NETWORK

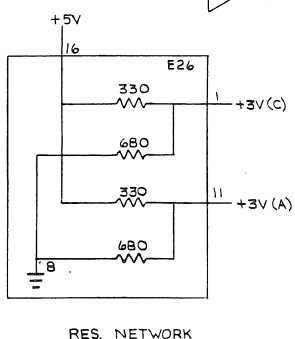
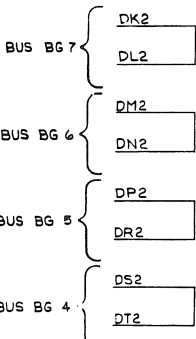
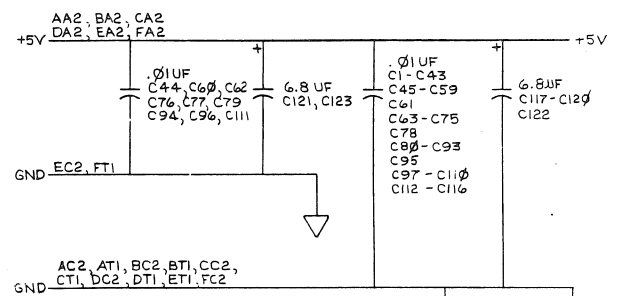
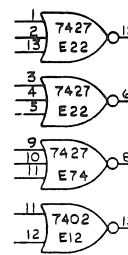


DELAY LINE	-	-
RESISTOR NETWORK	-	-
8640	1	8
5600	8	16
8838	8	16
74120	8	16
74151	8	16
74153	8	16
74157	8	16
74174	8	16
74175	8	16
74191	8	16
74193	8	16
74194	8	16
74298	8	16
74S157	5	16
74S131	12	24
74S182	8	16

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



SPARES



QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
FIRST USED ON OPTION MODEL				
ETCH BOARD REV. B				
PARTS LIST				
DRY P. DAUPHINAIS DATE 5/74				
CHKD. H. POCHINI DATE 6/74				
ENG. W. WISE DATE 10/74				
PROJ. ENG. W. WISE DATE 10/74				
PROJ. L. BORNSTEIN DATE 12/74				
NEXT HIGHER ASSY				
SCALE NONE				
SHEET 1 OF 12				
SEMICONDUCTOR CONVERSION CHART				
DEC NO.	EIA NO.	DEC NO.	EIA NO.	REV.
TITLE KE11-B				
SIZE CODE DCS				
NUMBER M7840-0-1				
DIST.				

digital

KE11-B

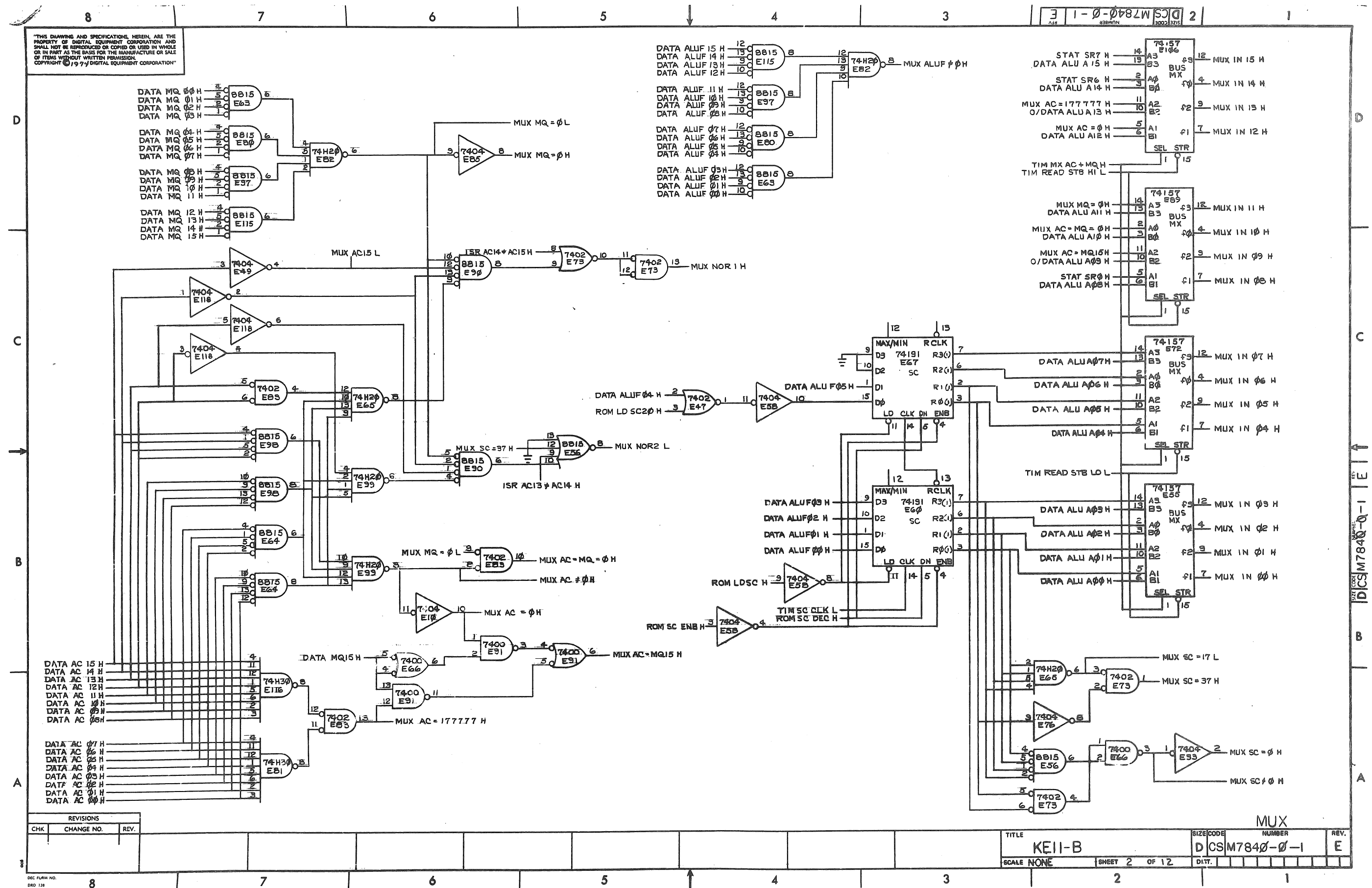
SIZE CODE DCS

NUMBER M7840-0-1

DIST.

REV. E

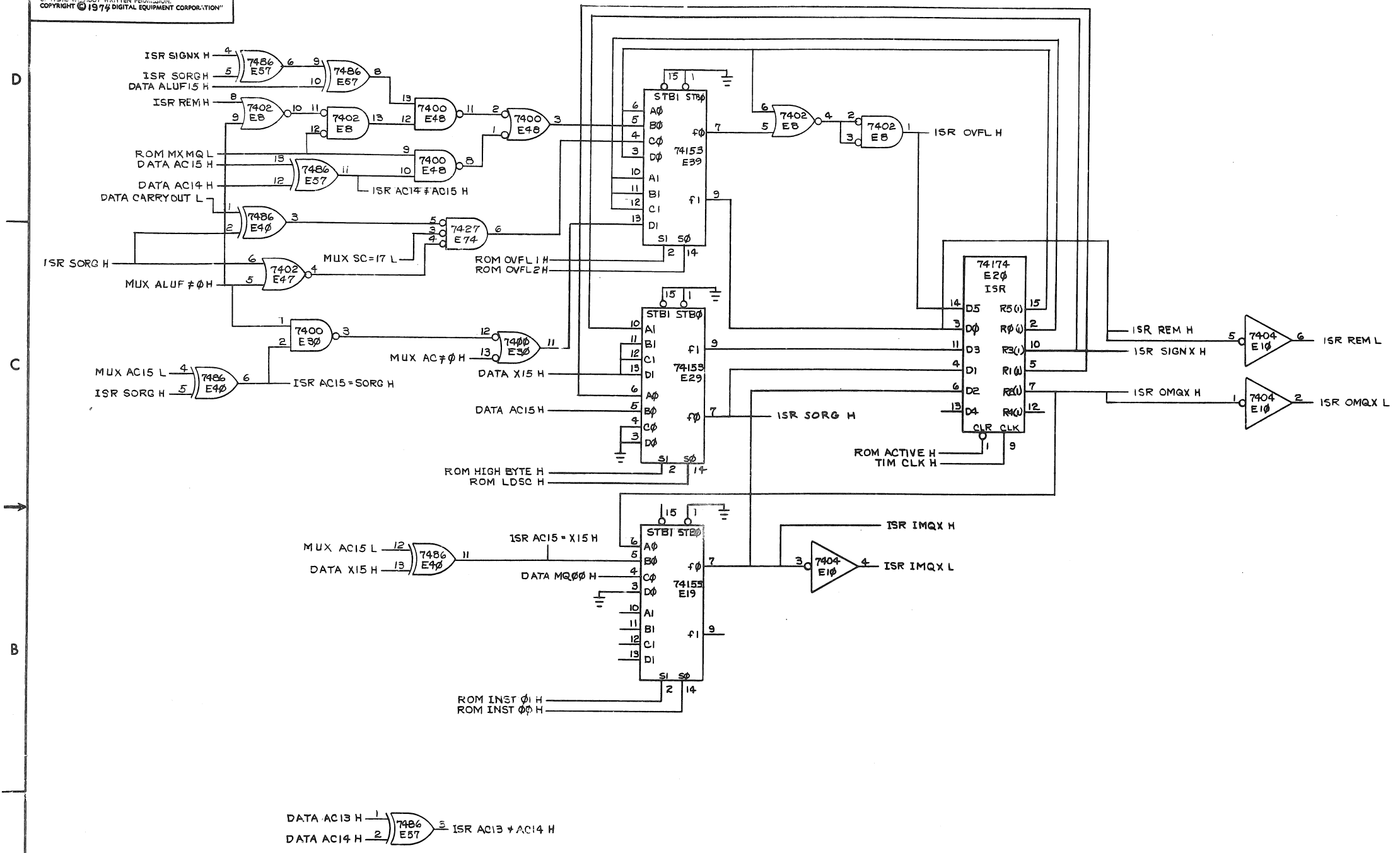
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REVISIONS		
CHK	CHANGE NO.	REV.

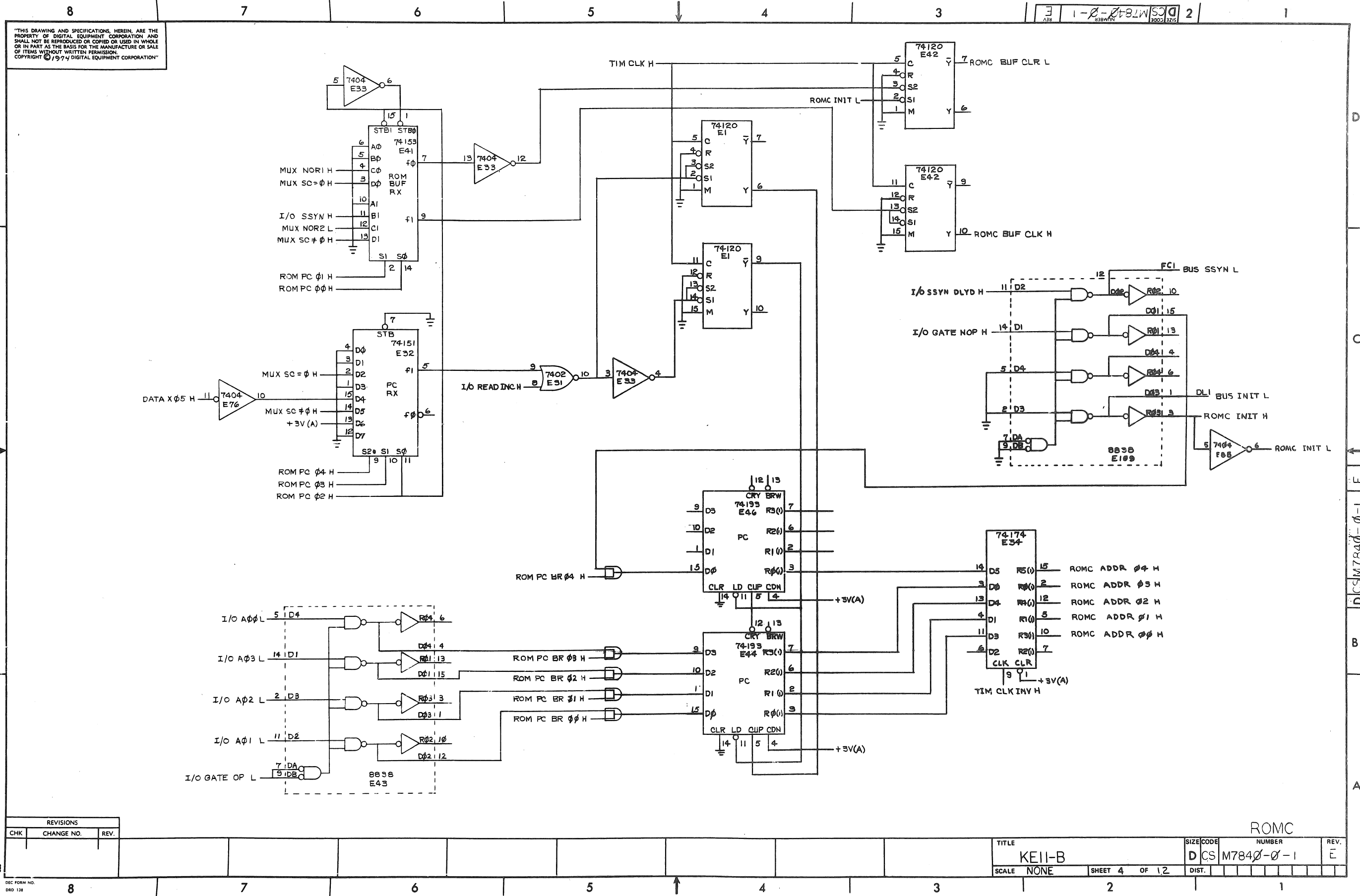
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TITLE				SIZE CODE		NUMBER		REV.	
KE11-B				D CS		M7840-0-1		E	
SCALE NONE		SHEET 2 OF 12		DIT.					

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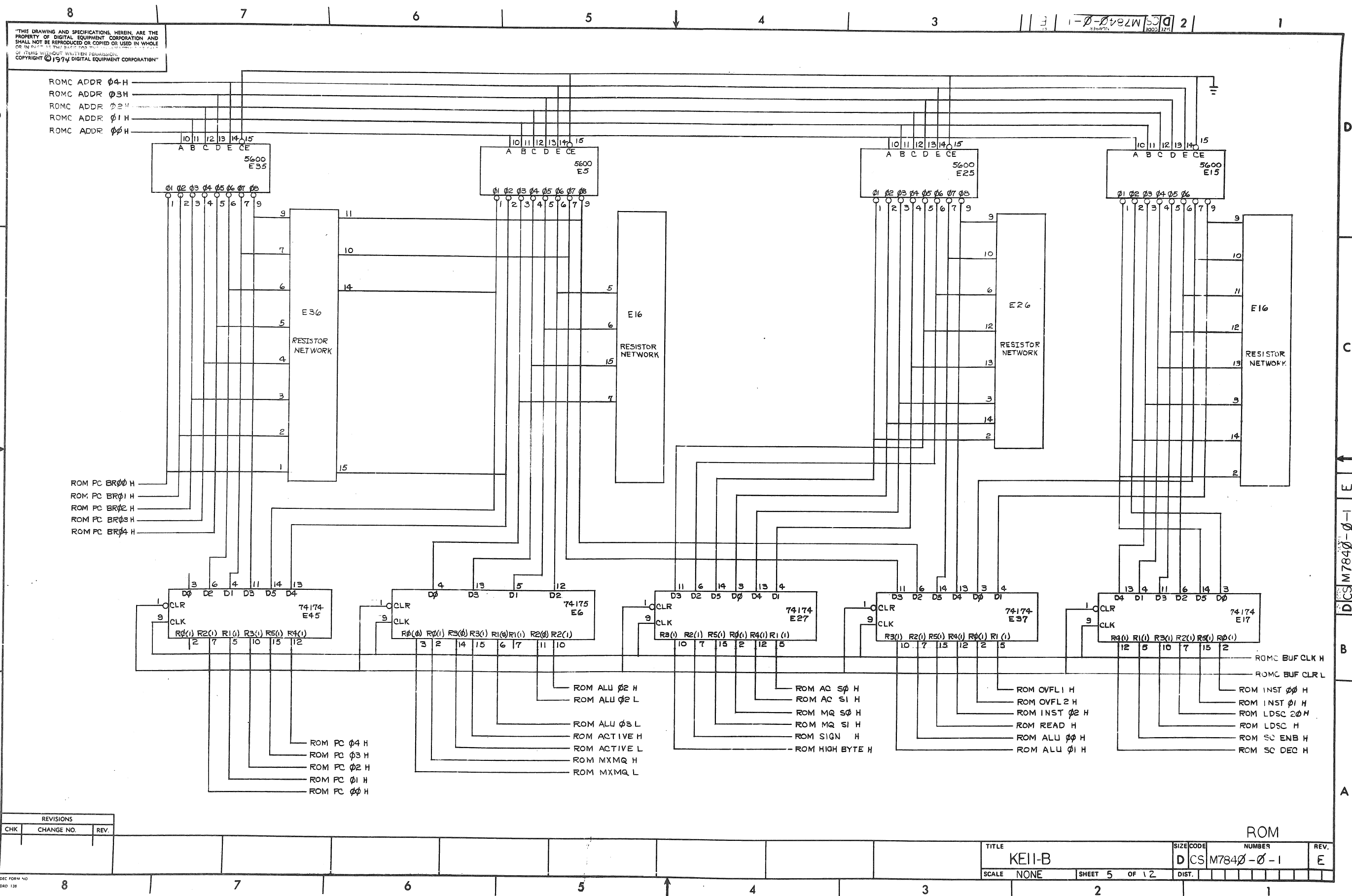
REVISIONS		
CHK	CHANGE NO.	REV.

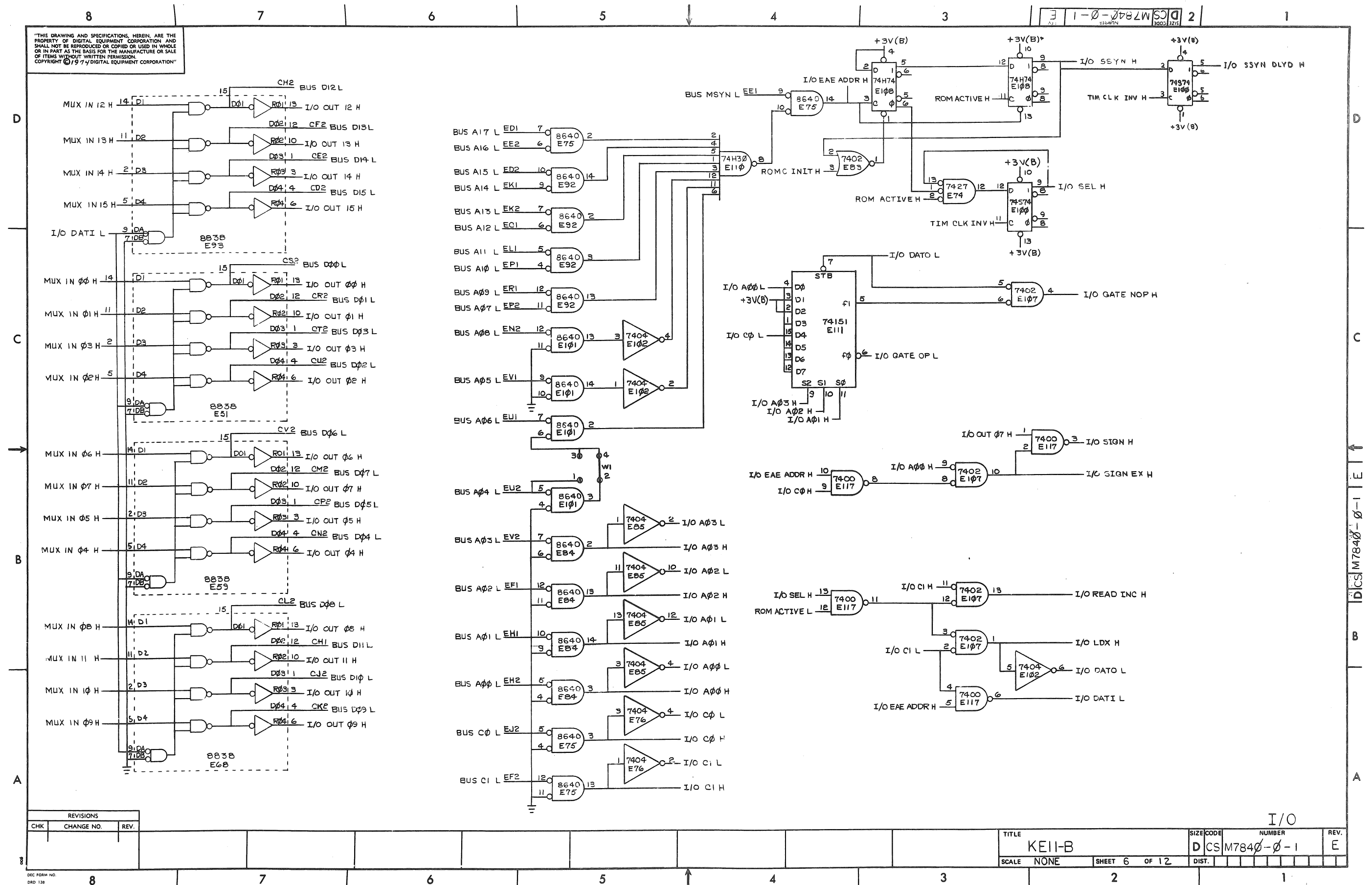
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KE11-B		D CS	M7840-0-1	E
SCALE NONE		SHEET 3	OF 12	DIST.

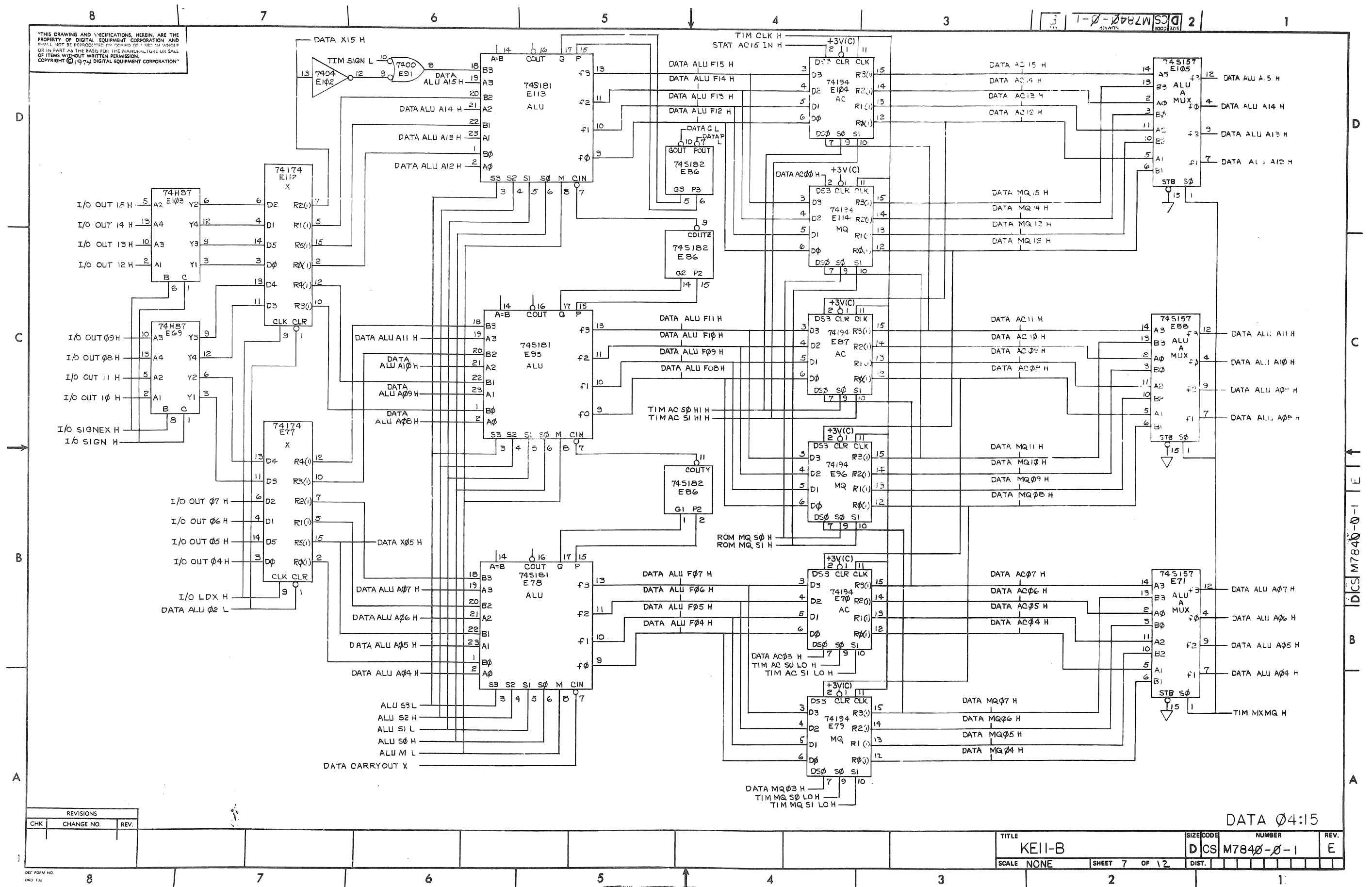


REVISIONS		
CHK	CHANGE NO.	REV.

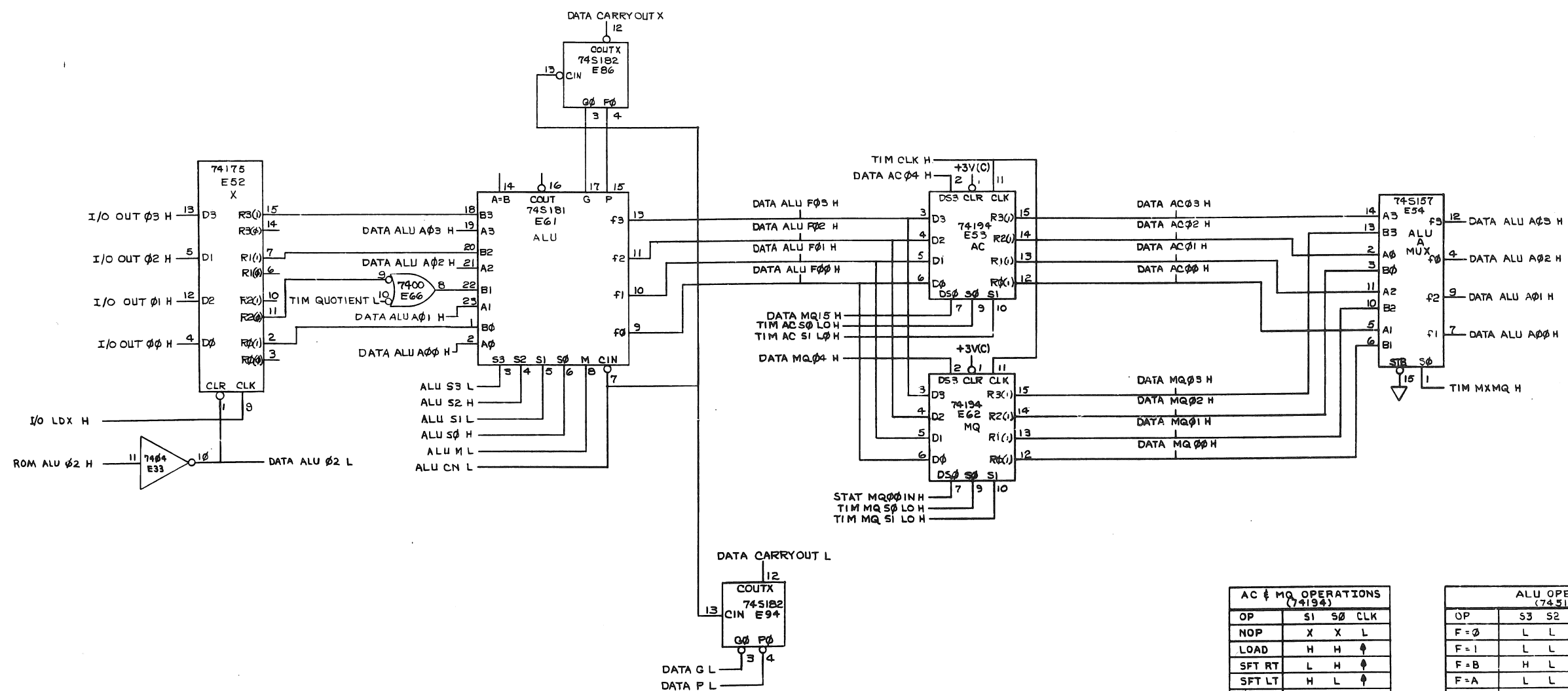
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KEII-B		D	CS	M7840-0-1	E
SCALE	NONE	SHEET	4	OF	12
DIST.					







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AC & MQ OPERATIONS (74194)			
OP	SI	S0	CLK
NOP	X	X	L
LOAD	H	H	↑
SFT RT	L	H	↑
SFT LT	H	L	↑
NOP	L	L	X

ALU OPERATIONS (74-5181)						
OP	S3	S2	S1	S0	M	Cn
F = 0	L	L	H	H	L	L
F = 1	L	L	H	H	L	H
F = B	H	L	H	L	L	X
F = A	L	L	L	L	L	H
F = A + B	H	L	L	H	H	H
F = A - B	L	H	H	L	H	L

REVISIONS		
CHK	CHANGE NO.	REV.

DEC FORM NO.
DRD 138

DATA 00:03

TITLE	KE11-B
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SIZE	CODE	NUMBER
D	CS	M784Ø-Ø-1

REV
E

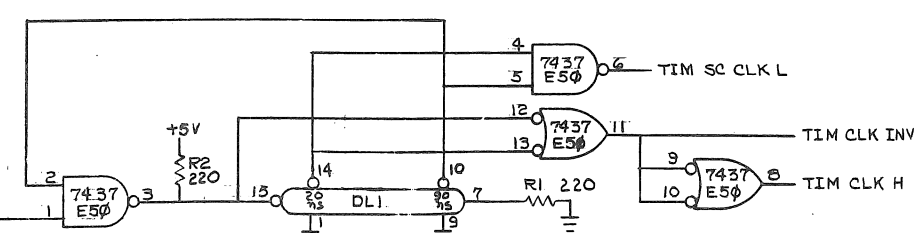
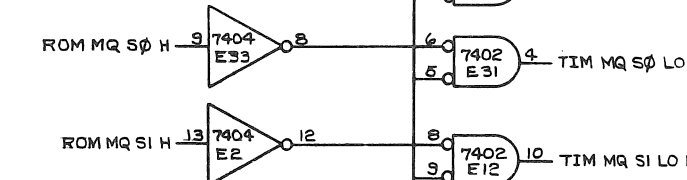
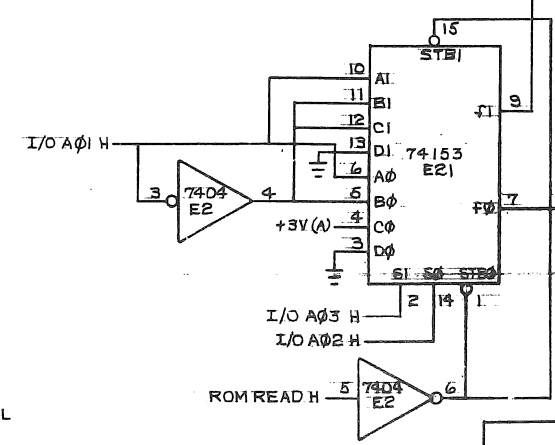
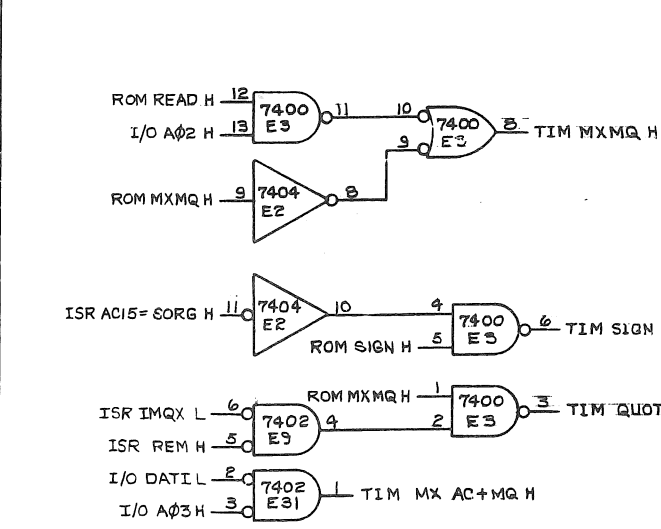
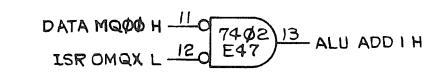
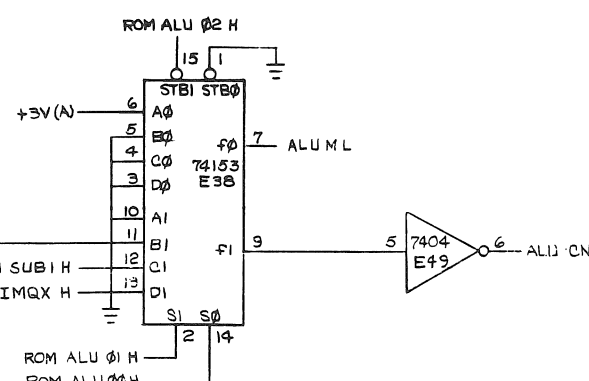
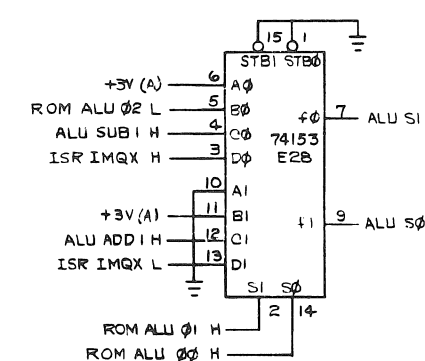
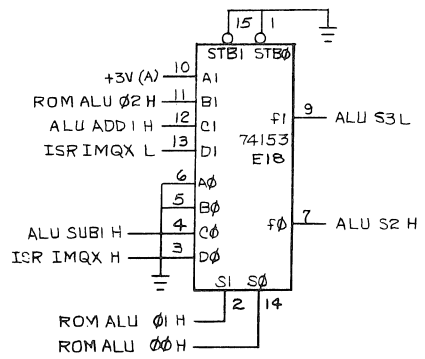
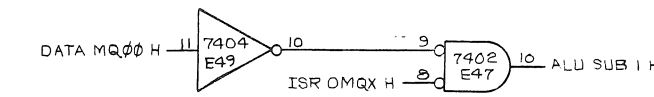
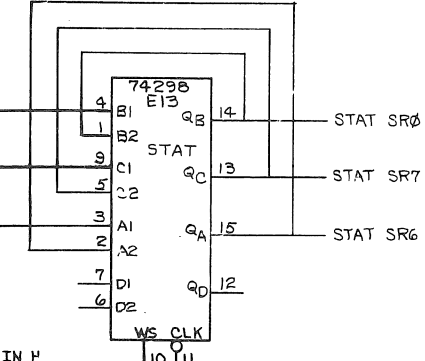
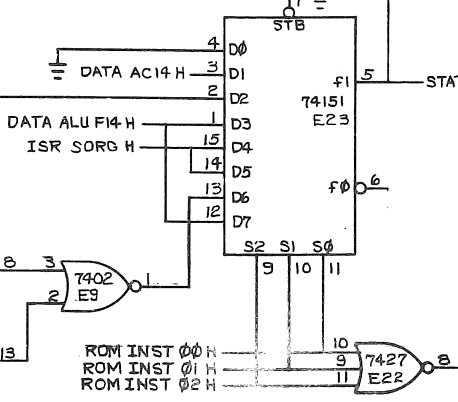
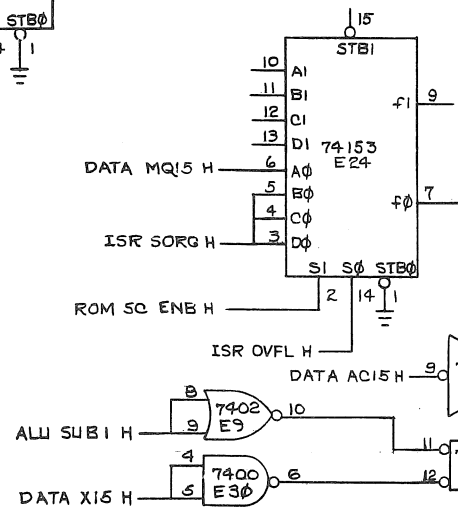
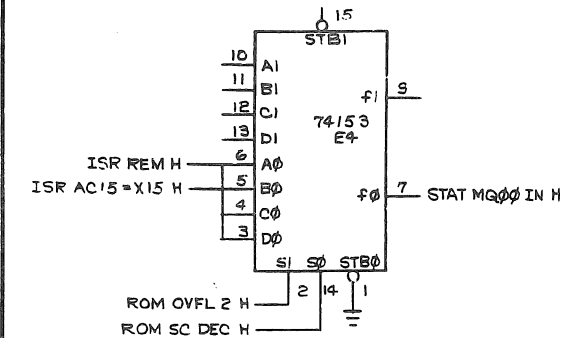
SCALE NONE	SHEET 8 OF 12
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	DIST.
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[illegible]

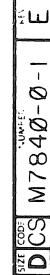
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REVISIONS		
CHK	CHANGE NO.	REV.

```

graph TD
    IDLE([IDLE]) --> StateBox
    subgraph StateBox [ ]
        direction TB
        IDLE_L[IDLE]
        IDLE_R[<37>]
        AWAIT[AWAIT CPU RQST]
        LIST["1) DATO-VALID RQST  
ADDR <03:00> -> (PC)  
2) DATO INVALID RQST  
20g -> (PC)  
3) DATI-(PC+1) -> (PC)  
4) ELSE -37g -> (PC)"]
        ADDR_CALC["b2 (PC) -> ADDR <03:00> +  
... + 20g + (PC+1) +  
... + 37g"]
        ROMBUF["(ROMBUF) <- (ROM)"]
    end
  
```



TITLE KEII-B				SIZE CODE D CS		NUMBER M7840-0-1				REV E	
SCALE NONE		SHEET 10 OF 12		DIST.							

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SIZE CODE NUMBER REV. DCS M 7840-0-1 E 2

.TITLE ROM PATTERN SPEC/ROM E05

DEC PART NUMBER: 23-085AI
ORIGINATOR: BILL WISE X636I
DATE OF ORIGIN: SEPT. 15, 1974

DECIMAL LOC	OCTAL LOC	BINARY DATA	OCTAL DATA
00	00	00001000	010
01	01	00001001	011
02	02	11001011	313
03	03	11001011	313
04	04	11001011	313
05	05	10101100	254
06	06	00001000	010
07	07	00001010	012
08	10	00001001	011
09	11	00001011	013
10	12	00001000	010
11	13	00001000	010
12	14	01001010	112
13	15	00001000	010
14	16	00001000	010
15	17	00001000	010
16	20	10011011	233
17	21	00001000	010
18	22	00001000	010
19	23	10011000	230
20	24	00001000	010
21	25	10011000	230
22	26	00001010	012
23	27	00001010	012
24	30	10001000	210
25	31	00001000	010
26	32	00001000	010
27	33	00001010	012
28	34	00001000	010
29	35	00001011	013
30	36	10101000	250
31	37	00000000	000
		ROM ALU00	H
		ROM ALU01	H
		ROM ALU02	H
		ROM ALU03	H
		ROM ACTIVE	H
		ROM MXMQ	H
		ROM PC04	H
		ROM PC03	H

.TITLE ROM PATTERN SPEC/ROM E15

DEC PART NUMBER: 23-086AI
ORIGINATOR: BILL WISE X636I
DATE OF ORIGIN: SEPT. 15, 1974

DECIMAL LOC	OCTAL LOC	BINARY DATA	OCTAL DATA
00	00	00000000	000
01	01	00001110	016
02	02	10000000	200
03	03	11000010	302
04	04	00000000	000
05	05	01000000	100
06	06	00000001	001
07	07	00000000	000
08	10	01001110	116
09	11	00000000	000
10	12	00000000	000
11	13	00000001	001
12	14	00001100	014
13	15	00001001	011
14	16	00001000	010
15	17	00000000	000
16	20	00111011	073
17	21	00000000	000
18	22	00000000	000
19	23	00111011	073
20	24	00011011	033
21	25	00011001	031
22	26	00011001	031
23	27	00011011	033
24	30	00000000	000
25	31	00000000	000
26	32	00000000	000
27	33	00000011	003
28	34	01001100	114
29	35	00000000	000
30	36	00000010	002
31	37	00000000	000
		ROM OVFL1	H
		ROM OVFL2	H
		ROM LDSC20	H
		ROM LDSC	H
		ROM SCENB	H
		ROM SCDEC	H
		ROM INST00	H
		ROM INST01	H

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KEII-B	SIZE CODE	D CS	NUMBER	M 7840-0-1	REV.	E
SCALE	NONE	SHEET	11	OF	12	DIST.	

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REV. E 1-0-1 M7840-0-1 DCS

TITLE ROM PATTERN SPEC/ROM E25

DEC PART NUMBER: 23-087AI
ORIGINATOR: BILL WISE X 6361
DATE OF ORIGIN: SEPT. 15, 1974

DECIMAL LOC	OCTAL LOC	BINARY DATA	OCTAL DATA
00	00	01000000	100
01	01	10000101	205
02	02	00001100	014
03	03	10000001	201
04	04	00001100	014
05	05	00000011	003
06	06	00000000	000
07	07	00010000	020
08	10	00000101	005
09	11	00000000	000
10	12	00000000	000
11	13	10001010	212
12	14	00001100	014
13	15	00000101	005
14	16	10001010	212
15	17	00000000	000
16	20	10000000	200
17	21	00001100	014
18	22	00000011	003
19	23	10001100	214
20	24	10000000	200
21	25	00000000	000
22	26	00000000	000
23	27	10000000	200
24	30	00001100	014
25	31	00011100	034
26	32	00010011	023
27	33	10000000	200
28	34	00000101	005
29	35	00000000	000
30	36	10101100	254
31	37	00000000	000

↑□□□□□ ROM INST02 H
↑□□□□□ ROM READ H
↑□□□□□ ROM SIGN H
↑□□□□ ROM HIGH BYTE H
↑□□□ ROM ACS0 H
↑□□ ROM ACS1 H
↑□ ROM MQS0 H
↑ ROM MQS1 H

TITLE ROM PATTERN SPEC/ROM E35

DEC PART NUMBER: 23-088AI
ORIGINATOR: BILL WISE X 6361
DATE OF ORIGIN: SEPT. 15, 1974

DECIMAL LOC	OCTAL LOC	BINARY DATA	OCTAL DATA
00	00	00111111	077
01	01	00011111	037
02	02	00000001	001
03	03	00011111	037
04	04	00011111	037
05	05	00011111	037
06	06	00011111	037
07	07	11101110	356
08	10	01111111	177
09	11	00001001	011
10	12	11111111	377
11	13	00011111	037
12	14	10001011	213
13	15	01011111	137
14	16	01111111	177
15	17	00011111	037
16	20	00000001	001
17	21	00011111	037
18	22	00011000	030
19	23	00001100	014
20	24	00011111	037
21	25	11001101	315
22	26	00000111	007
23	27	00011011	033
24	30	00011111	037
25	31	00011111	037
26	32	00011000	030
27	33	11101110	356
28	34	01111111	177
29	35	00011101	035
30	36	00011111	037
31	37	00011111	037

↑□□□□□ ROM PC02 H
↑□□□□□ ROM PC01 H
↑□□□□ ROM PC00 H
↑□□□ (PC BR04)
↑□□□ (PC BR03)
↑□□ (PC BR02)
↑□ (PC BR01)
↑ (PC BR00)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KEII-B	SIZE CODE	NUMBER	REV.
SCALE	NONE	SHEET	12 OF 12	DIST.
DCS		M7840-0-1		E

DIGITAL EQUIPMENT CORPORATION

MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY	R. LEWIS	CHECKED	R. LEWIS	SECTION
DATE	2/25/75	DATE	3/10/75	
ENG	R. LEWIS	PROD	J. BORNSTEIN	ISSUED SECT.
DATE	3/10/75	DATE	3/10/75	

QUANTITY / VARIATION

[illegible]

