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FIELD MAINTENANCE PRINT SET

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D-IA-7012953-0-0 BACK PLANE ASSY (KD11-K)
 K-WL-KD11-K-1 (sheet 1 only) WIRE AND ETCH LIST

UNIT VARIATIONS COVERED BY THIS PRINT SET


1160W
1160K

11/60 BASIC
**Field Maintenance
 Print Set**

**Digital Equipment
 Corporation**

PRINT SET ORDER NO.
 MPO0409

EN-01124-18-N875 (3/77)

REVISIONS			USED ON OPTION/MODEL	DRN.	DATE	TITLE:	<table border="1"> <tr><td>SIZE</td><td>CODE</td><td>NUMBER</td><td>REV.</td></tr> <tr><td>B</td><td>TC</td><td>11/60-0-1</td><td>B</td></tr> <tr><td>DIST.</td><td></td><td></td><td></td></tr> </table>				SIZE	CODE	NUMBER	REV.	B	TC	11/60-0-1	B	DIST.			
SIZE	CODE	NUMBER			REV.																	
B	TC	11/60-0-1	B																			
DIST.																						
DATE	CHG. NO.	REV.																				
6-77	11/60-1	A	11S60	B. BLODGETT	5/12/77	PDP11/60 BASIC COMPUTER																
			11T60	CHK'D J.																		
			11X60	O'LOUGHLIN	5/12/77																	
3-78	11/60-4	B		PROJ. ENG. J.	5/12/77																	
				O'LOUGHLIN	5/12/77																	
				FIELD SERV. G. ENGMAN	5/9/77																	
			SHEET 1 OF 2																			

CONSOLE

B-DD-KY11-P
D-UA-KY11-P-Ø
D-CS-5412173-0-1
D-UA-5412173-0-0 (sheet 1 only)
B-PL-5412173-0-0
D-CS-5412245-0-1
D-UA-5412245-0-0 (sheet 1 only)
B-PL-5412245-0-0
B-DD-5412245-0

CONSOLE KY11-P
CONSOLE (KY11-P) UNIT ASSY
KY11-P CONSOLE BOARD
KY11-P CONSOLE BOARD
KY11-P CONSOLE BOARD
KY11-P CONSOLE FILTER BOARD
KY11-P CONSOLE FILTER BOARD
KY11-P CONSOLE FILTER BOARD
KY11-P CONSOLE FILTER BOARD

UNIBUS COMPONENTS

B-TC-M93Ø1-YH (complete)
D-CS-M93Ø2
B-TC-DL11-W (complete)
D-UA-M92Ø2-Ø-Ø
D-UA-BC11A-Ø-Ø

UNIBUS TERMINATOR/BOOTSTRAP
UNIBUS TERMINATOR
SERIAL LINE INTERFACE
CABLE, UNIBUS (JUMPER)
CABLE ASSY (BC11A)

MODEL SPECIFIC

B-DD-116ØW-Ø
A-PL-116ØW-Ø-Ø
B-DD-116ØK-Ø
A-PL-116ØK-Ø-Ø
B-TC-MF11-W-2
B-TC-MF11S-K
BOX AND POWER SUPPLY

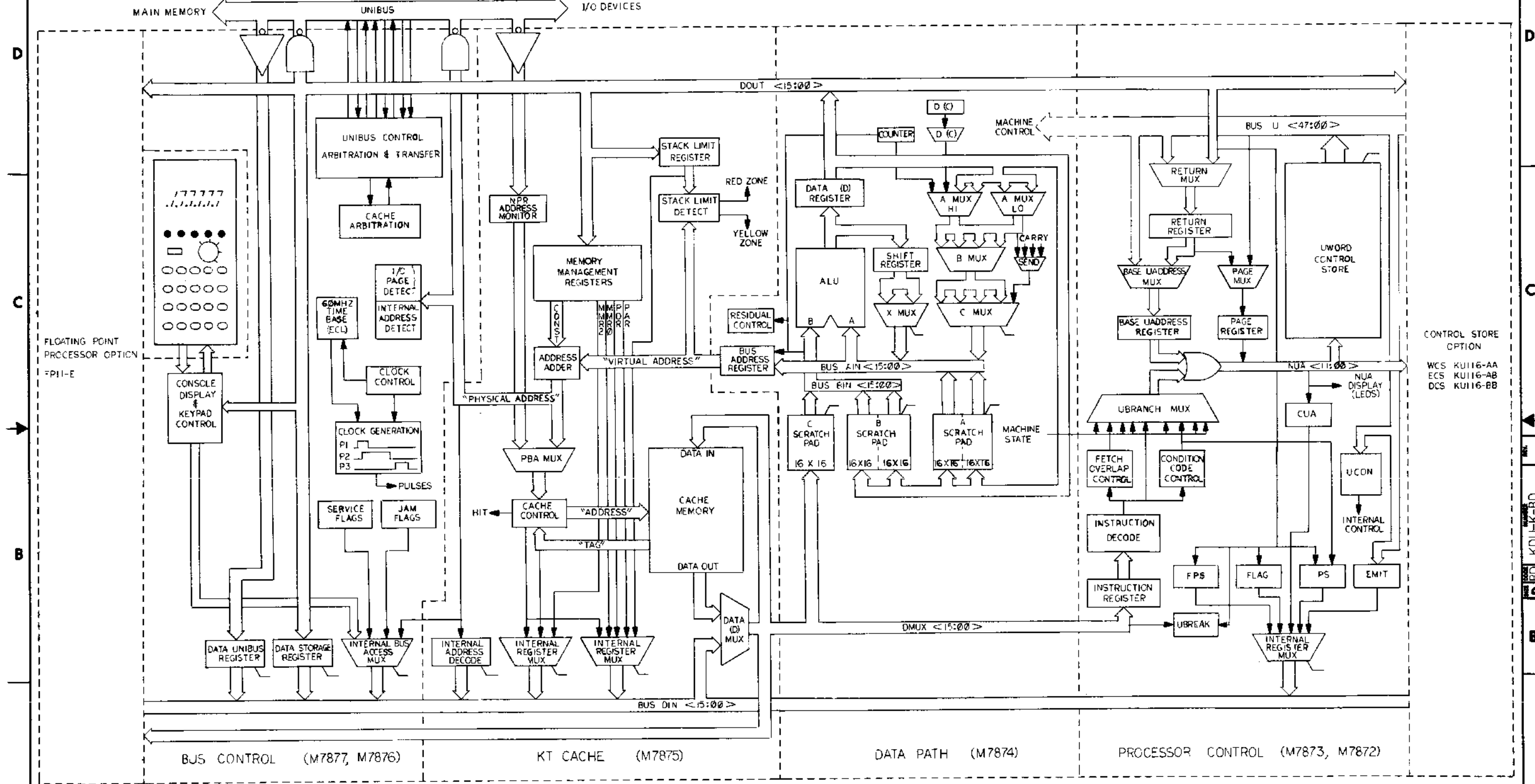
UNIT ASSY 116ØW
UNIT ASSY 116ØW
UNIT ASSY 116ØK
UNIT ASSY 116ØK
MF11-W/WP MEMORY
MF11S-K MOS MEMROY SYS.

B-TC-BALL-P-1

BALL-P BOX AND POWER SUPPLY

TITLE	SIZE	CODE	NUMBER	REV
PDP11/6Ø BASIC COMPUTER	B	TC	11/6Ø-Ø 1	B

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CONTROL STORE OPTION
 WCS KUI16-AA
 ECS KUI16-AB
 DCS KUI16-BB

REV.	
CHANGE NO.	
DATE	
BY	
CHK	

DRN M. STECALAIR 14 MAR 77	FIRST USED ON PDP 11/60	digital
CHK D. STECALAIR 16 MAY 77	TITLE PDP 11/60 BLOCK DIAGRAM	
ENG. H. STECALAIR 16 MAY 77	SIZE CODE NUMBER	REV.
PROD. H. STECALAIR 16 MAY 77	D BD KD11-K-BD	
NEXT HIGHER ASSY.	SHEET 1 OF 1	

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NOTES:

- OPTIONAL MODULES FOR SLOT 14 A,B ARE: BC11 UNIBUS CABLES; OR M902 UNIBUS JUMPER CABLE FOR CONNECTION OF ADJACENT SYSTEM UNITS.
- | | | |
|---|---|-------------------------------|
| ▨ | A | I/O (STANDARD UNIBUS) SLOT 14 |
| ▨ | B | NO MEMORY ON THIS BUS. |

ALL INTERRUPTING AND DMA UNIBUS OPTIONS MUST BE ON THIS BUS.
- | | | |
|---|---|----------------------------------|
| ▨ | A | MEMORY (MODIFIED) UNIBUS SLOT 13 |
| ▨ | B | ALL MEMORY ON THIS BUS. |

NO INTERRUPTING OR DMA UNIBUS OPTIONS CAN BE ON THIS BUS.
- OPTIONAL MODULES FOR SLOT 13 A,B ARE BC11 UNIBUS CABLES.
- SMALL PERIPHERAL CONTROLLER (SPC) SLOTS M3,2 ARE CONNECTED TO THE I/O UNIBUS OF SLOT 14 A,B. G727 GRANT CONTINUITY CARDS ARE REQUIRED IN ANY UNUSED SPC SLOTS.
- OPTIONAL MODULES FOR SLOT 1 ARE: M7870, WRITABLE CONTROL STORE; M7871, DIAGNOSTIC CONTROL STORE; M7871-YA, EXTENDED CONTROL STORE.
- EITHER M9301-YH OR M9302.

VIEW FROM MODULE SIDE

VIEW FROM MODULE SIDE

1	WCS, ECS, DCS (OPTIONAL)	NOTE: 6
2	DECODE U WORD	M7872
3	DECODE U WORD	M7873
4	DATA PATH	M7874
5	KIT/CACHE	M7875
6	TIMING	M7876
7	STATUS	M7877
8	FNUA	M7878
9	EXPONENT	M7879
10	MULNET	M7880
11	FALL	M7881
12	SPC	NOTE: 5
13	MEMORY UNIBUS OR BOOT LOADER	NOTE: 7
14	I/O UNIBUS OR TERMINATOR	NOTE: 5

DL11-W (OPTIONAL)
 SPC (OPTIONAL)
 F111-E (OPTIONAL)
 PROCESSOR MODULES
 WCS, ECS, DCS (OPTIONAL)

11/60

REV.	CHANGE NO.	DESCRIPTION
A	1	INITIAL ISSUE

KD11-K-BASIC PROCESSOR OPTIONAL MODULES

KD11-K-BASIC PROCESSOR OPTIONAL MODULES

DRN. NO.	11-278	FIRST USED ON	PDP 11/60	digital
CHK'D BY	J. P. ...	DATE	11/8/76	
ENG. NO.	11/8/76	TITLE	MODULE UTILIZATION	
PROJ. ENG. NO.	11/8/76			
PROJ. NO.	11/8/76			
NEXT HIGHER ASSY.				
SIZE	A-PL-KD11-K-0	NUMBER		
SCALE		REV.	A	
SHEET	1 OF 1	DIST.		

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NOTES:

1 THE PDP 11/60 MICROCODE IS AVAILABLE UNDER A DIAGNOSTIC MAINDEC NUMBER AS FOLLOWS.

PAPER: MAINDEC DQMCA-D

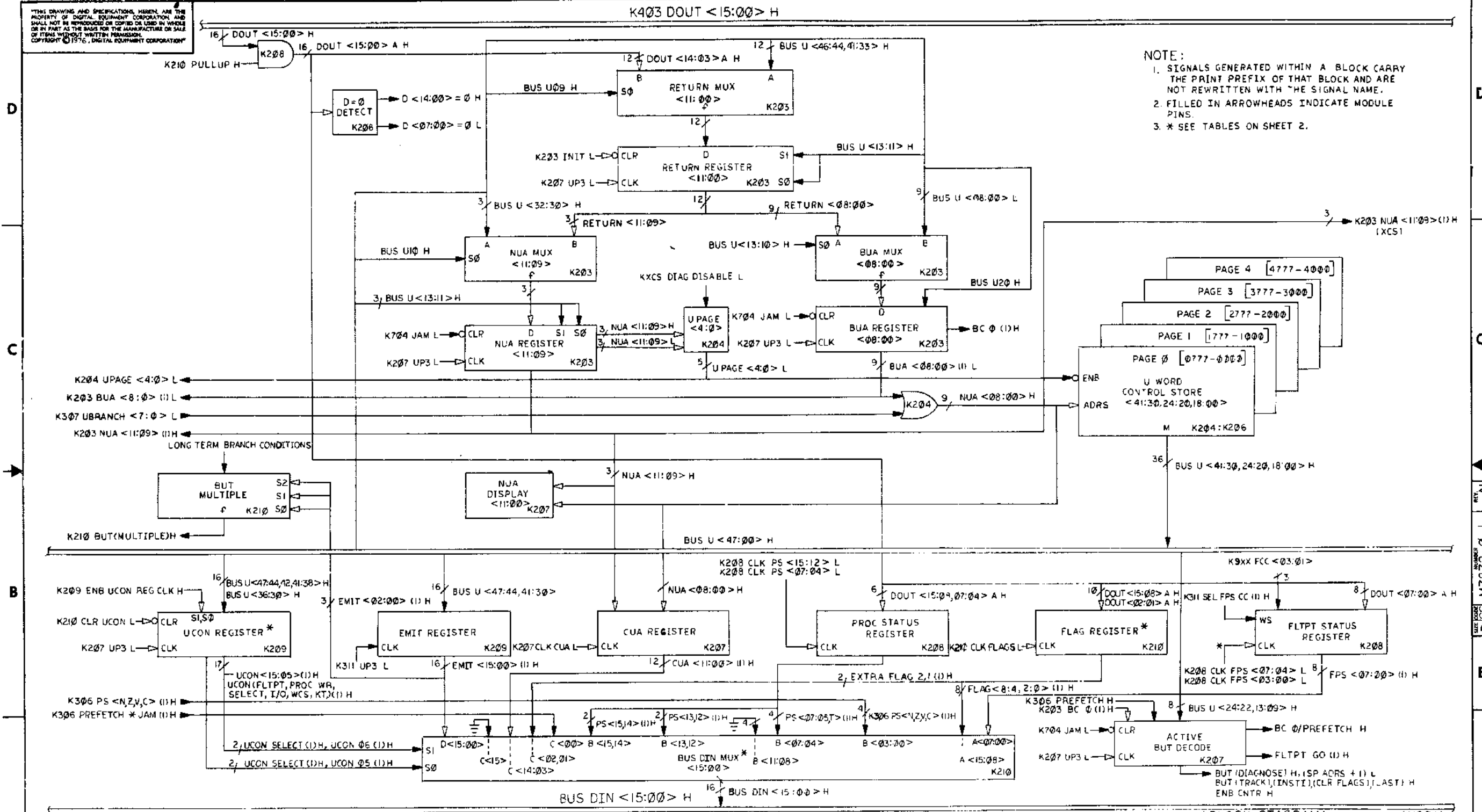
ROM REVISION	M7872 ECO#/CS REV/UA REV	M7873 ECO#/CS REV/UA REV	DESCRIPTION (#ROMS M7872,M7873)
A	#1/D/D #1A/D/D	#1/F/F	ROM 48 thru 50 PURGE-RETRO(45) (23) CORRECTION TO #1-RETRO(2) (0) DOCUMENTATION ON #1A (0) (0)
A	#2/D/E	-	
B	#3/D/F	-	FP SHARED CODE-RETRO(2) (0)
C	#4/D/H	#2/H/H	(IR)=FP AND INT FROM CON-RETRO(7) (2)
C	-	#3/H/J	D(C) ← D(C)-RETRO (0) (0)
D W/#4, #5	#5/D/J	#4/H/K	#4-CLKD U29-RETRO (0) (2) #5-WCS PASSIVE RELEASE-RETRO(1) (0) DOCUMENTATION (0) (0)
D	#6/K/K	#5/L/L	
E	#7/L/L	#6/M/M	CPU ERR REG-RETRO (9) (2)
F	#8/M/M	#7/N/N	XCS 0-IN (8) (3)

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
11/60				
PARTS LIST				
DRN. <i>J. Blodgett</i>	DATE 10 MAY 77	digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small> TITLE PDP 11/60 MICROCODE		
CHK'D. <i>J. Blodgett</i>	DATE 10 MAY 77			
ENG. <i>J. Blodgett</i>	DATE 11 MAY 77			
PROJ. ENG. <i>J. Blodgett</i>	DATE 11 MAY 77			
PROD. <i>D. P. ...</i>	DATE 11 MAY 77			
NEXT HIGHER ASSEMBLY KD11-K		SIZE CODE K FD	NUMBER KD11-K-FD	REV. A
SCALE ---	SHEET 1 OF 1		DIST.	

REVISIONS	CHANGE NO.	REV.
CHK	KD11K-00003	A

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NOTE:
 1. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK AND ARE NOT REWRITTEN WITH THE SIGNAL NAME.
 2. FILLED IN ARROWHEADS INDICATE MODULE PINS.
 3. * SEE TABLES ON SHEET 2.



REV.	DATE	BY	CHKD	REVISIONS
1	11/10/76	D. FRENIERE	L. CONDON	INITIAL DESIGN
2	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE
3	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE
4	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE
5	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE
6	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE
7	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE
8	11/10/76	D. FRENIERE	L. CONDON	REVISED FOR MANUFACTURE

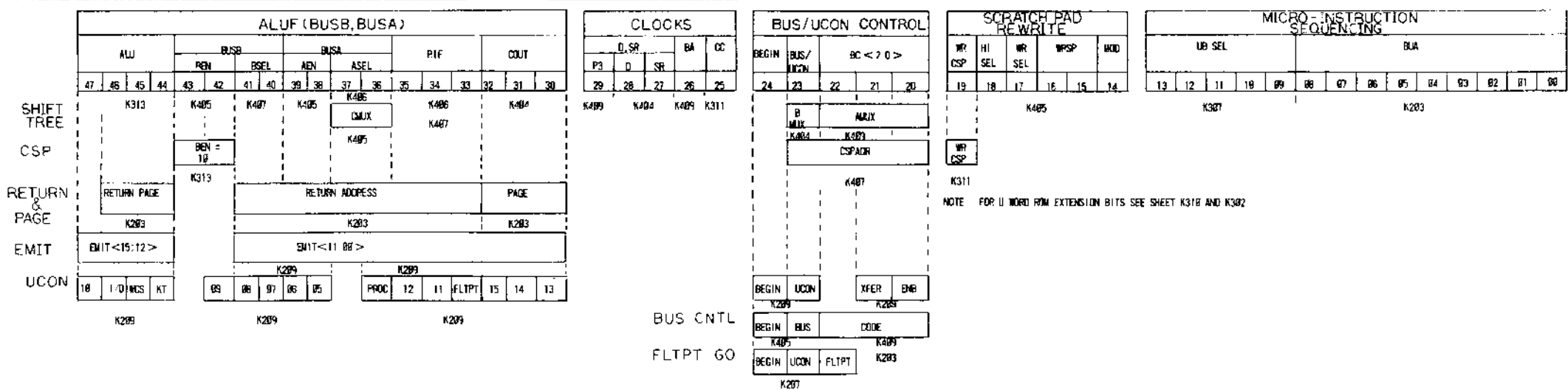
(BLOCK DIAGRAM) (K201)	
DRN: 11/10/76	FIRST USED ON: PDP 11/60 digital
CHK'D: 11/10/76	TITLE: U WORD
ENG: 11/10/76	SCALE: DCS
PROJ. ENG: 11/10/76	NUMBER: M7872-0-1
NEXT HIGHER ASSY:	REV: N
B-DD-M7872-0	SHEET 1 OF 12

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UCON REGISTER TABLE		
INPUT BUS UCON H	OUTPUT K209 UCON XX (1) H	DESTINATION(S) & FUNCTION (NOTE: SOME FUNCTIONS REQUIRE MORE THAN ONE UCON SIGNAL)
32	15	K209 - CLOCK 1P, K210 - BUS DIN MUX DISABLE K707 - CONSOLE SIGNALS, DATA STORE REG CONTROL
31	14	K209 - PS<15:12>CLOCK, K101 - WCS, K505 - INHIBIT RELOCATE, K707 - CONSOLE SIGNALS
30	13	K210 - CLOCK FLAGS, K507 - DETERMINE INT ADRS TYPE K707 - CONSOLE SIGNALS
35	12	K209 - FPS<7:4>CLOCK, K507 - ENABLE INT ADRS ROM K707 - CONSOLE SIGNALS
34	11	K209 - PS<7:4>CLOCK, K707 - CONSOLE SIGNALS K507 - READ ONLY REG MUX ENABLE
47	10	K305 - PS<N,Z,V,C>LOAD ENABLE, K709-BUS DIN MUX (STATUS) SELECT, K509-BUS DATA MUX ENABLE
42	09	K311 - U BREAK CLOCK, K709 - BUS DIN MUX (STATUS) SELECT K507 - READ ONLY REG MUX SELECT
41	09	K707 - SELECT CACHE AS DMUX OUTPUT K514 - WR REG DECODE INPUT
40	07	K707 - CLEAR ERROR SIGNALS, ALLOW BG K514 WR REG DECODE INPUT
39	06	K210 - BUS DIN MUX SELECT, K508 - BUS DATA MUX SELECT, K514 - WR REG DECODE SELECT, K707 - CLEAR ERROR SIGNALS, ALLOW-BG, K508 - AMUX SELECT
33	FLTPT	
36	PROC	K210 - BUS DIN MUX ENABLE, K209 - CLOCK 1P & ASSERT PROC WRITE SIGNAL
45	1/0	K210 BUS DIN MUX DISABLE, K707 - REMOTE CONSOLE CNTL REG, ENABLE CONSOLE SIGNALS, SELECT CACHE AS DMUX OUTPUT, DATA STORE REG CONTROL
	WCS	WCS, ECS, DCS, MODULES
44	KT	K505 INHIBIT RELOCATE, SELECT MUX0 INPUT, K507, K508 - ENABLE CACHE ROMS MUXES TO BUS DIN, K506 AMUX SELECT
+3V	SELECT	K210 - CAUSES BUS DIN ← EMIT (DEFAULT INPUT TO BUS DIN WHEN UCON REG CLEARED BY BUT (CLEAR FLAGS)

U WORD BUS DIN MUX				
BUS DIN	MUX PORT			
	A	B	C	D
15	FLAG 3 (1) H	PS <15:14> (1) H	B	EMIT15 (1) H
14	FLAG 7 (1) H	PS <15:14> (1) H	DM11 (1) H	EMIT14 (1) H
13	FLAG 6 (1) H	PS <13:12> (1) H	DM10 (1) H	EMIT13 (1) H
12	FLAG 5 (1) H	PS <13:12> (1) H	DM09 (1) H	EMIT12 (1) H
11	FLAG 4 (1) H	B	DM08 (1) H	EMIT11 (1) H
10	FLAG 2 (1) H	B	DM07 (1) H	EMIT10 (1) H
09	FLAG 1 (1) H	B	DM06 (1) H	EMIT09 (1) H
08	FLAG 0 (1) H	B	DM05 (1) H	EMIT08 (1) H
07	FPS07 (1) H	PS07 (1) H	DM04 (1) H	EMIT07 (1) H
06	FPS06 (1) H	PS06 (1) H	DM03 (1) H	EMIT06 (1) H
05	FPS05 (1) H	PS05 (1) H	DM02 (1) H	EMIT05 (1) H
04	FPS04 (1) H	PS(1) (1) H	DM01 (1) H	EMIT04 (1) H
03	FPS03 (1) H	PS(0) (1) H	DM00 (1) H	EMIT03 (1) H
02	FPS02 (1) H	PS(2) (1) H	EXTRA FLAG 2 (1) H	EMIT02 (1) H
01	FPS01 (1) H	PS(V) (1) H	EXTRA FLAG 2 (1) H	EMIT01 (1) H
00	FPS00 (1) H	PS(C) (1) H	PREFETCH JAM(1)H	EMIT00 (1) H

ACTIVE BUT DECODE		
DIGITAL CODE BUS U<13 0>H	OUTPUT SIGNAL ASSERTED	FUNCTIONS
20	BUT (LAST) H	K409 CLEAR COUNTER REG K606 CLEAR DATIP BUS BUSY F/F
13 } 17 } 25 }	END CNTR H	K409 ENABLE COUNTER REG
32	BUT (CLR FLAGS) H	K408 CLEARS PES CONTROL REG K210 CLEAR SHORT TERM FLAGS K209 CLR UCON REG, BUS DIN ← EMIT
06	BUT (INST 1) H	K305 INHIBIT AIB SPLD (WORDS 20 ₀ - 37 _g) K706 LED RUN H, INDICATES MACHINE IS IN RUN STATE
31	BUT (TRACK) H	K207 ALLOW TRACKING OF U CODE FLOW (DMA) BY DMA REG
22	SPADRS 1 L	K406 ADDRESSING OF ASP MUX
33	BUT (DIAGNOSE) H	K101 TRANSFER CONTROL TO FROM DCS

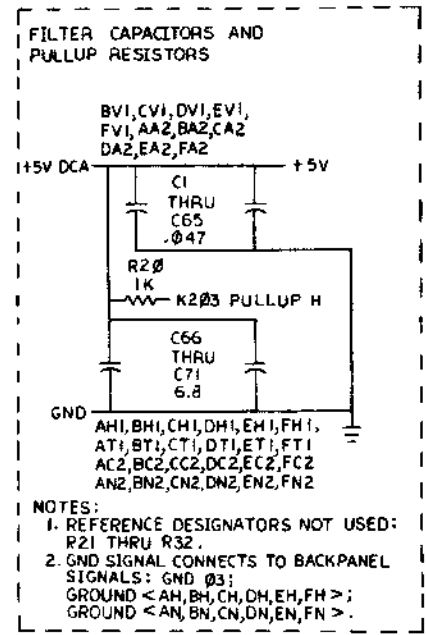
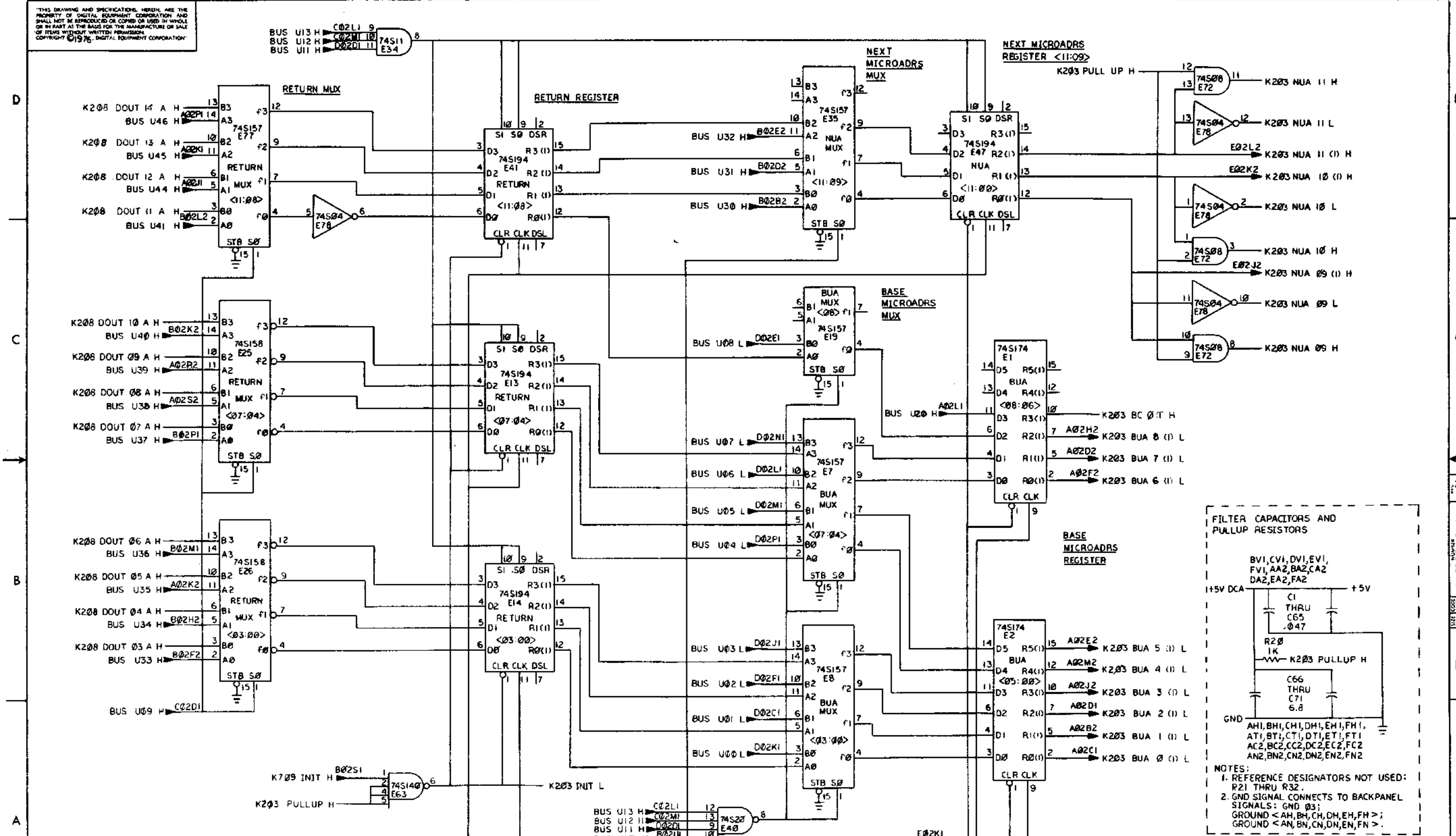


REVISIONS		
CHK	CHANGE NO	REV.

(TABLES)		(K202)	
TITLE	U WORD	SIZE CODE	NUMBER
SCALE		DCS	M7872-0-1
SHEET	2 OF 10	DIST.	

REV N
DCS M7872-0-1

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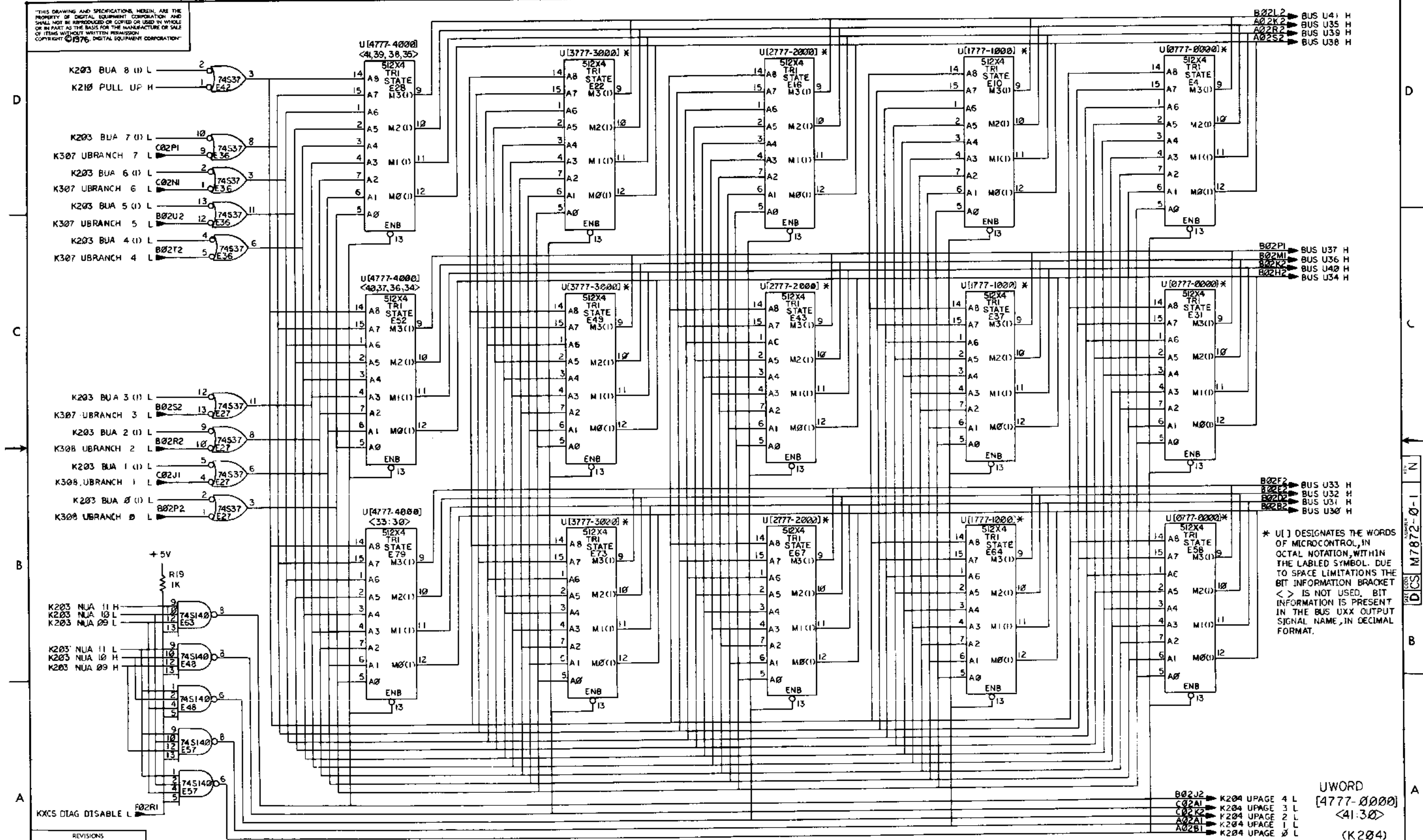
(RETURN, NEXT MICROADRS, BASE MICROADRS, REGISTERS) (K203)

REVISIONS		
CHK	CHANGE NO	REV

TITLE	U WORD	SIZE CODE	D	CS	NUMBER	M7872-0-1	REV.	N
SCALE		SHEET	3	OF	10	DIST.		

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1-0-2182W DCS M7872-0-1

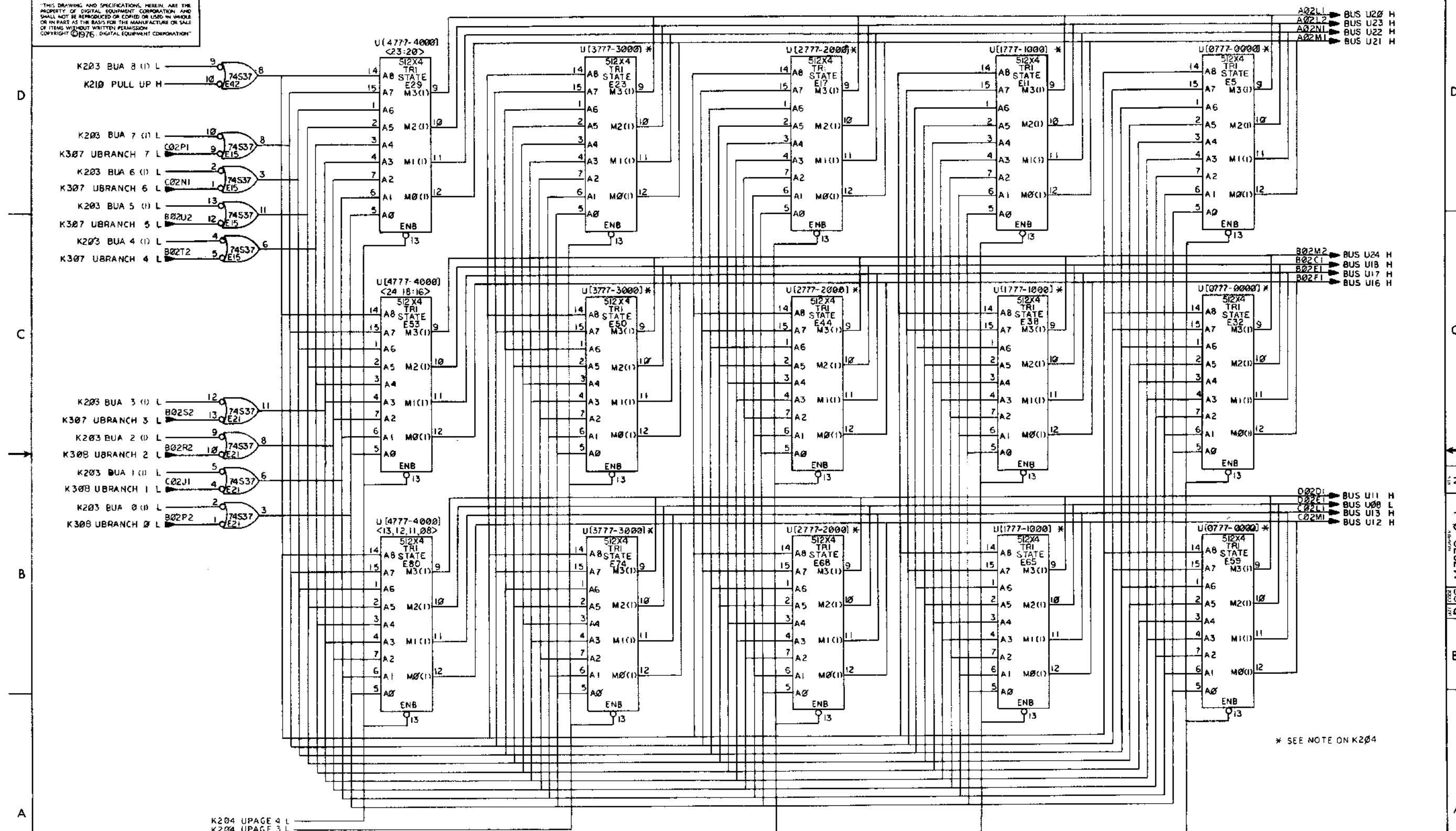


REVISIONS		
CHK	CHANGE NO	REV

UWORD
[4777-0000]
<4130>
(K204)

TITLE	U WORD	SIZE/CODE	D CS	NUMBER	M7872-0-1	REV.	N
SCALE	1/8	SHEET	4 OF 10	DIST.			

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* SEE NOTE ON K204

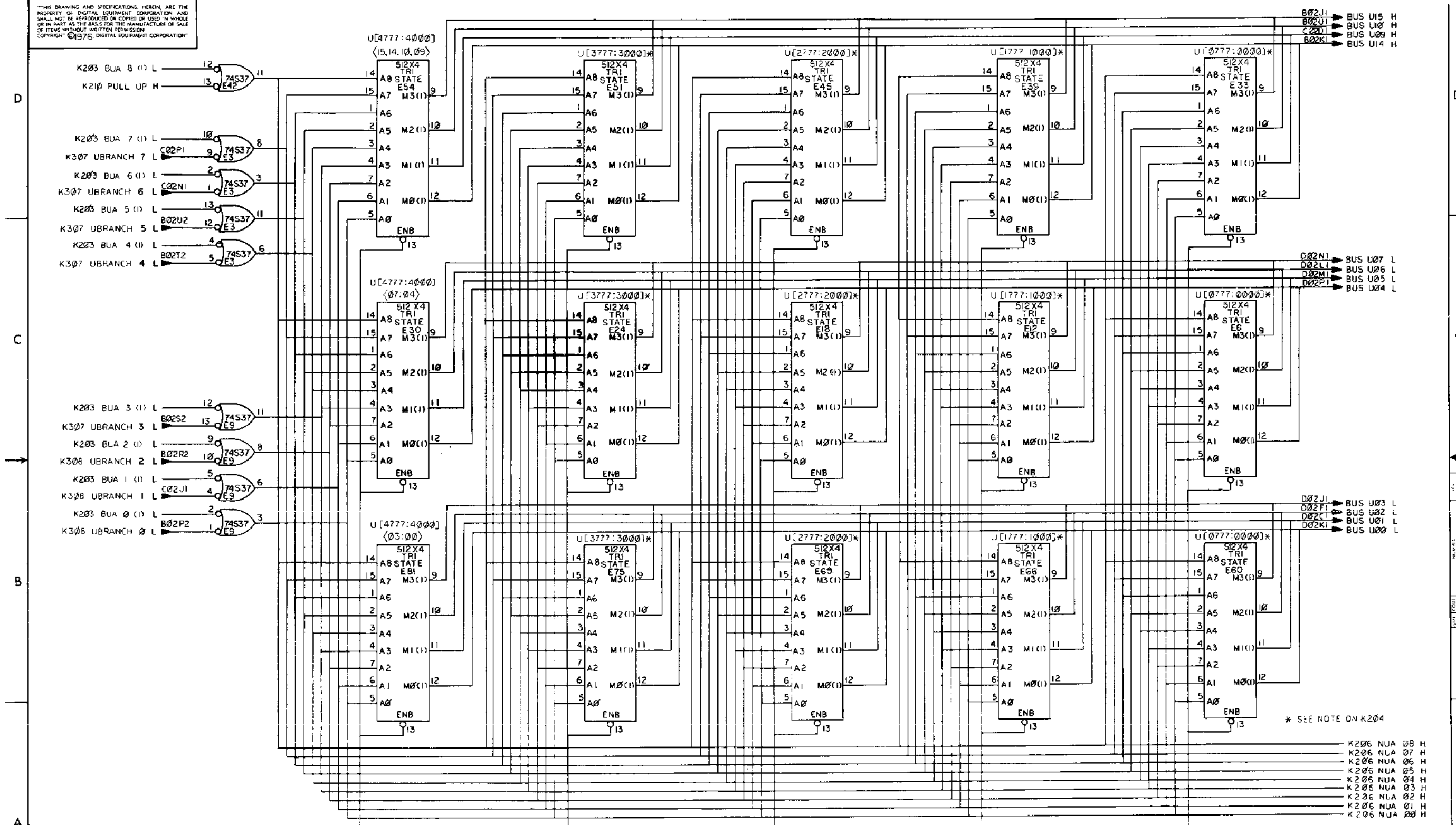
K204 UPAGE 4 L
K204 UPAGE 3 L
K204 UPAGE 2 L
K204 UPAGE 1 L
K204 UPAGE 0 L

U WORD [4777-0000]
<24:20,18:16,13:11,08> (K205)

REVISIONS		
CHK	CHANGE NO	REV

TITLE	U WORD	SIZE/NO	D CS	NUMBER	M7872-0-1	REV.	N
SCALE		SHEET	5	OF	10	DIST.	

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K204 UPAGE 4 L
 K204 UPAGE 3 L
 K204 UPAGE 2 L
 K204 UPAGE 1 L
 K204 UPAGE 0 L

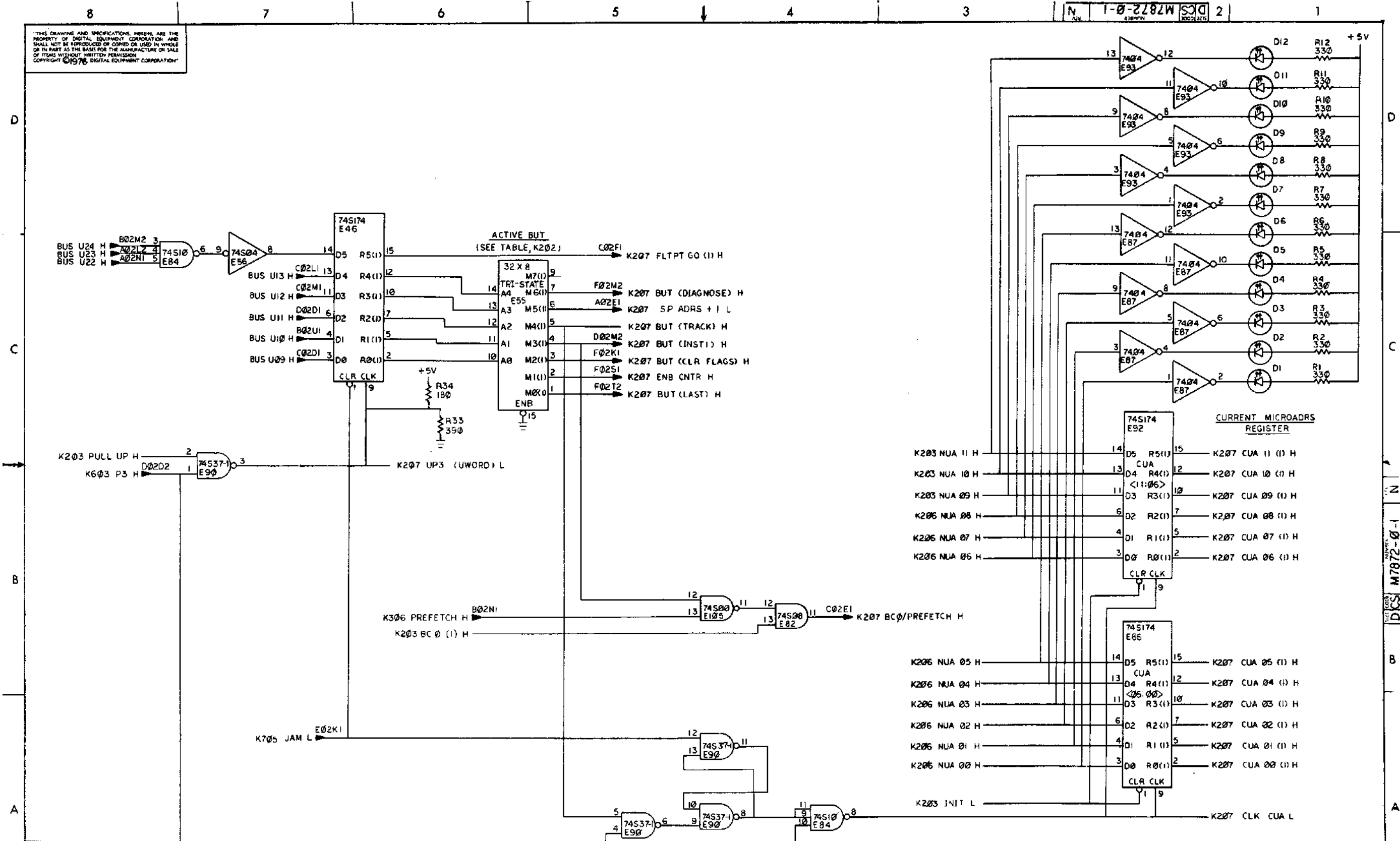
U WORD [4777-0000]
 (15,14,10,09,07:00) (K206)

CHK	CHANGE NO	REV

TITLE	SIZE CODE	NUMBER	REV.
U WORD	DCS	M7872-01	N

SCALE: SHEET 6 OF 0

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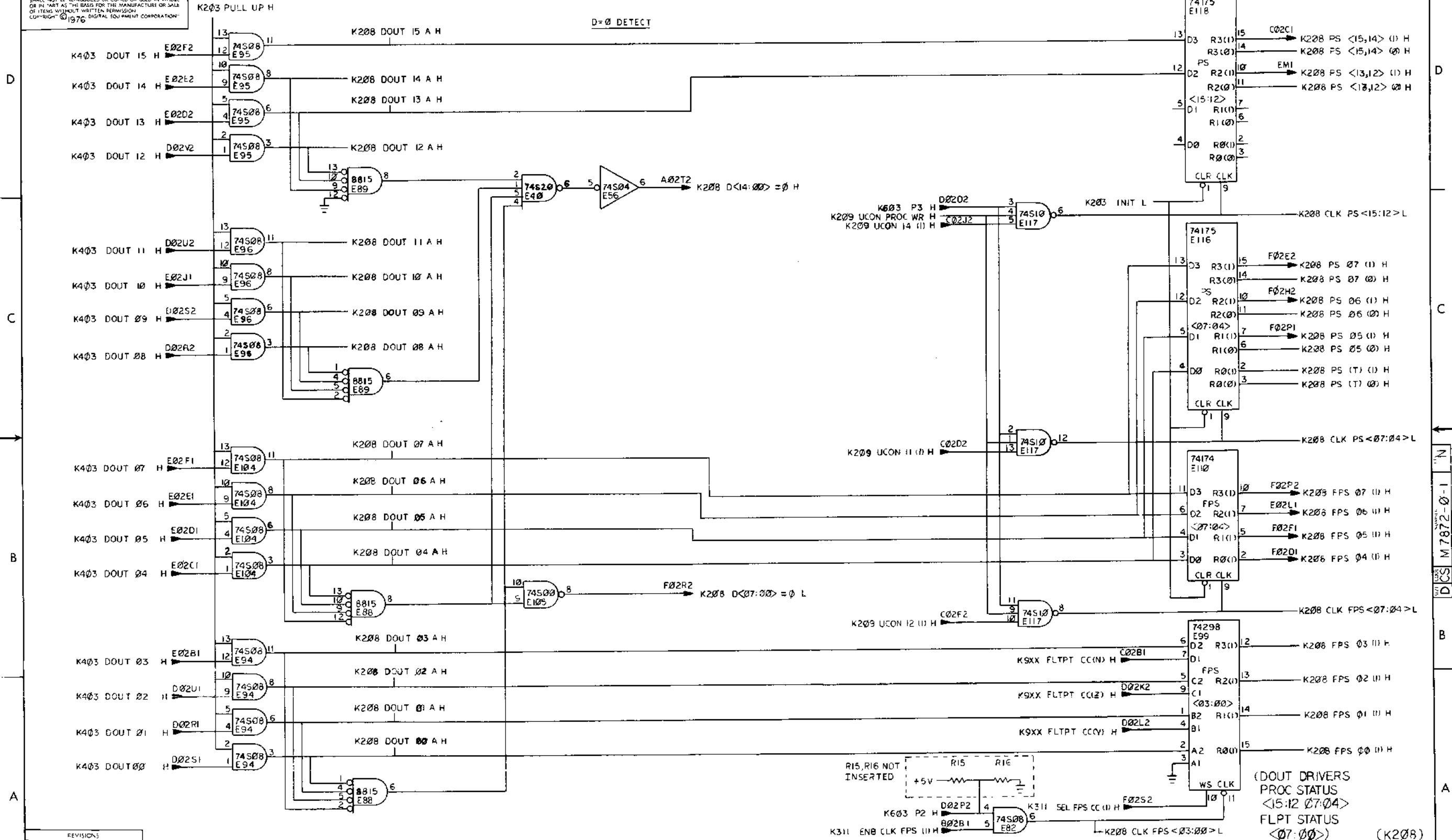
(ACTIVE BUT, CURRENT MICROADRS REG, NUA DISPLAY) (K207)

REVISIONS		
CHK	CHANGE NO	REV

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SCALE		SHEET	7	OF	10	DIST.	

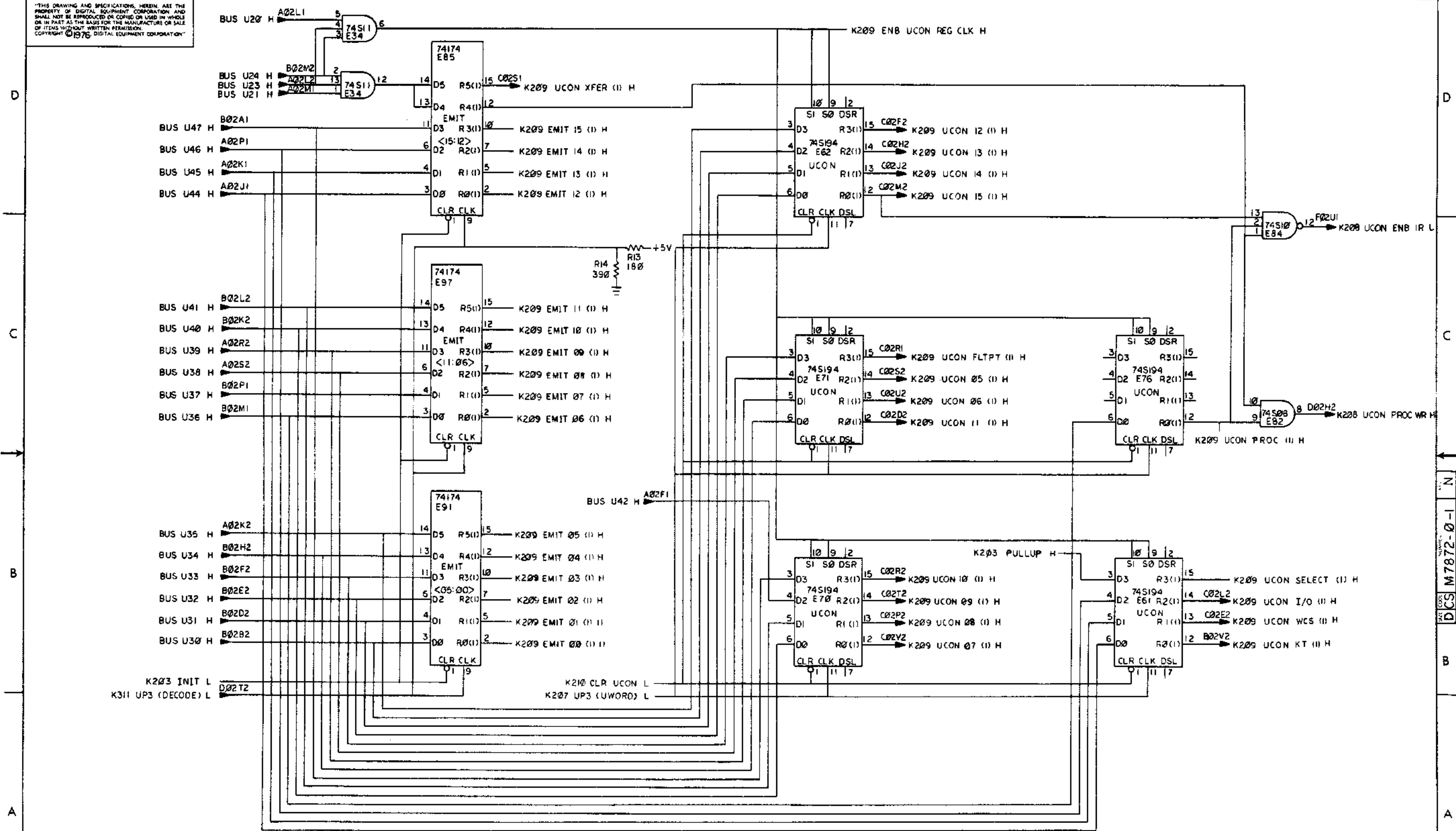
DCS M7872-0-1 N

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REVISIONS		
CHK	CHANGE NO.	REV.

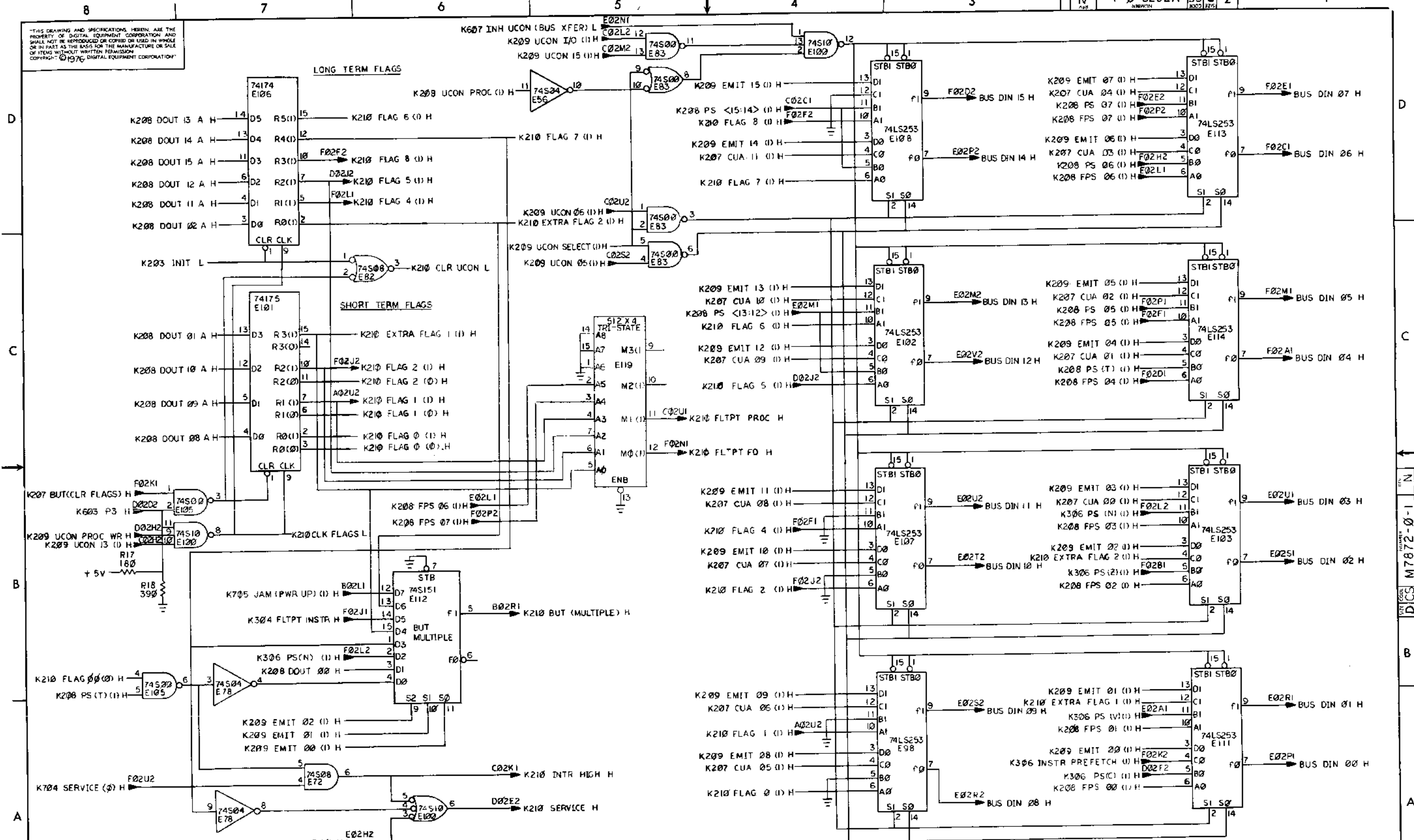
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REVISIONS		
CHK	CHANGE NO	REV

TITLE		NUMBER		REV.
U WORD		DCS M7872-0-1		N
SCALE	SHEET	OF	DIST.	TW
	9	10		1

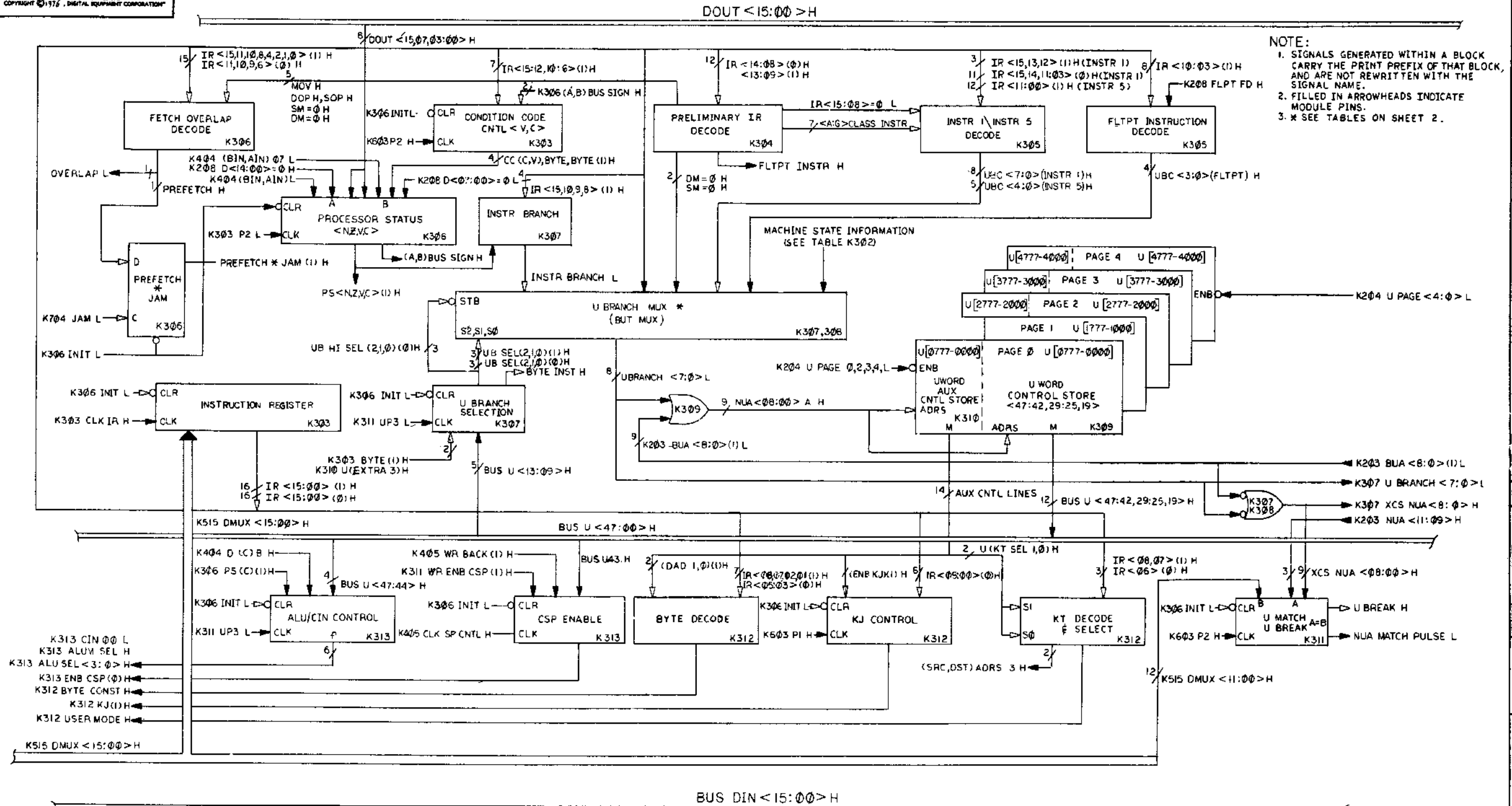
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REVISIONS		
CHK	CHANGE NO	REV

TITLE	U WORD	SIZE CODE	DCS	NUMBER	M7872-0-1	REV.	N
SCALE		SHEET	12	OF	12	DIST.	

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NOTE:
 1. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK, AND ARE NOT REWRITTEN WITH THE SIGNAL NAME.
 2. FILLED IN ARROWHEADS INDICATE MODULE PINS.
 3. * SEE TABLES ON SHEET 2.

REV	CHG	NO	BY	DATE	DESCRIPTION
1					
2					
3					
4					
5					
6					
7					
8					

(BLOCK DIAGRAM) (K301)

DRN	W. J. 11/27/76	FIRST USED ON	PDP 11/60
CHK'D	W. J. 11/27/76	TITLE	DECODE
ENGR	W. J. 11/27/76	SIZE	D
PROJ ENGR	W. J. 11/27/76	CODE	CS
PROD	W. J. 11/27/76	NUMBER	M7873-0-1
NEXT HIGHER ASSY.		REV	R
B-D-M7873-0		SHEET	1 OF 13

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UCON TABLE FOR DECODE

UCON SIGNAL	DECODE FUNCTION	OTHER CONDITIONS
K289 UCON 15	UCON ENBR	K289 UCON PRDC(1) H
K289 UCON 16	SEL FOR P.S. N,Z,V,C	K289 UCON XFER
K289 UCON 18	MICRO BREAK	K289 UCON PRDC WR H
		K289 UCON PRDC WR H
		NEBS P2 H

OTHER INSTRUCTION DECODE *USED FOR DCS

INSTRUCTION INPUT	UBC <4:9> (INSTR) H	OCTAL OUTPUT ROM 888
RESERVED		0
FAST A I		1
EIS, (MUL, DIV, ETC.)		2
EIS		3
SXT		4
*FLPT(3256), *INC(4528)		5
VERPM H		6
VERPM L		7
SDB		10
MARK		11
*FLPT(7526), FLPT(7256)		12
MFP, MFD		13
MTP, MFD		14
ENT		15
TRP		16
JRS		17
RESERVED		OCTAL OUTPUT ROM 878
		20
WAIT		21
RTI		22
RPT		23
LOT		24
*JMP(1528)		25
RTS		26
RESET		27
SZC, OCC, NOP		30
SWAP*IM		31
*JMP(1258)		32
SWAP*IM		33
HALT		34
NOT USED		35
RTT		36
NOT USED		37

U BRANCH (BUT MUX) TABLE

BUT NAME	UBF FIELD	BIT 7	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BUT(CASE)	00				0	K488 SHIFT 03(1) H	K488 SHIFT 02(1) H	K488 SHIFT 01(1) H	K288 SHIFT 00(1) H
BUT(BOP)	01				0	K385 IR 15(1) H	K385 IR 14(1) H	K385 IR 13(1) H	K385 IR 12(1) H
BUT(INSTR)	02				K385 UBC 4(INSTR) H	K385 UBC 3(INSTR) H	K385 UBC 2(INSTR) H	K385 UBC 1(INSTR) H	K385 UBC 0(INSTR) H
BUT(FLPCODE)	03				K385 IR 11(1) H	K385 UBC 3(FLPT) H	K385 UBC 2(FLPT) H	K385 UBC 1(FLPT) H	K385 UBC 0(FLPT) H
BUT(SOP)	04				0	K385 IR 08(1) H	K385 IR 07(1) H	K385 IR 06(1) H	K385 IR 05(1) H
BUT(MOPMOM)	05				0	K385 IR 05(1) H	K385 IR 04(1) H	K385 IR 03(1) H	K385 IR 02(1) H
BUT(INSTR)	06	K385 UBC 7(INSTR) H	K385 UBC 6(INSTR) H	K385 UBC 5(INSTR) H	K385 UBC 4(INSTR) H	K385 UBC 3(INSTR) H	K385 UBC 2(INSTR) H	K385 UBC 1(INSTR) H	K385 UBC 0(INSTR) H
BUT(07)	07				0	K484 D(C) H	K484 D(C) H	FLPT RETURN I H	FLPT RETURN 0 H
BUT(PORIM)	08					K484 D(C) H	K484 D(C) H	K388 DOUT 07(1) H	K388 DOUT 07 A H
BUT(DMF SHF BYTE)	11					K384 DM 0 H	K384 DM 0 H	K388 DOUT 07(1) H	K388 DOUT 07 A H
BUT(GUARD)	12					0	K488 GUARD 03(1) H	K488 GUARD 02(1) H	K488 GUARD 01(1) H
BUT(MULSTEP)	13					K481 SHIFT 01(1) H	K481 SHIFT 00(1) H	K311 CNTR 0NES(1) H	K311 CNTR 0NES(1) H
BUT(MULTIPLE)	14					K784 06 SERVICE(0) H	K312 06 SERVICE(0) H	K288 D 14:08 0 H	K218 BUT (MULTIPLE) H
BUT(D ZERO)	15					0	0	K288 D 14:08 0 H	K386 DOUT 15 A H
BUT(IMP JSR)	16					0	0	K383 IR 11(1) H	K288 PS 15,14 (1) H
BUT(IR 11 P5)	16					0	0	K383 IR 11(1) H	K288 PS 15,14 (1) H
BUT(ASBR)	17					0	0	K311 CNTR 0NES(1) H	K484 D(C) B H
BUT(SERVICE)	20					0	0	K311 PREFETCH 0 H	K218 SERVICE H
BUT(21)	21					0	0	K784 VECTOR LOAD(1) H	K312 DST REG 6,7 L
BUT(RORI)	22					0	0	0	0
BUT(D(C) ODD ADDRESS)	23					0	0	K484 D(C) B H	K483 BA 00(1) H
BUT(OTHER JAMPP NOT INVM)	24					0	0	K785 OTHER JAM H	K218 FLPT PRDC H
BUT(COUNT)	25					0	0	0	K311 CNTR 0NES(1) H
BUT(26)	26					0	0	K218 INTR HIGH H	K387 INSTR BRANCH L
BUT(27)	27					0	0	K386 PREFETCH JAM(1) H	K288 FPS 07(1) H

PROCESSOR STATUS WORD (77776)

15	14	13	12	11	07	5	4	3	2	1	0
CURRENT MODE	PREVIOUS MODE				PRIORITY	T	N	Z	V	C	

FLOATING POINT INSTRUCTION DECODE

INPUT IR <10:03>	FLPT FD H	ROM OUTPUT	OTHER CONDITIONS INSTRUCTION IR11 = 0 INSTRUCTION IR11 = 1
00 000 xxx	x	00	SET CLASS
00 00x xxx	x	01	STATUS
00 1xx 000	x	02	OTAMP
00 1xx xxx	x	03	OTAMP-DMP
01 0xx 000	0	04	MULP-DMP
01 0xx 00x	1	05	MULP-DMP
01 0xx xxx	x	06	MULP-DMP
01 1xx 000	x	07	MOPD
10 0xx 000	x	10	ADDP-DMP
10 0xx xxx	x	11	ADDP-DMP
10 1xx 000	0	12	LDFP-DMP
10 1xx 110	x	13	LDFP-DMP
10 1xx xxx	x	14	LDFP-DMP (DMP) (DMS)
11 0xx 000	x	15	SUP-DMP
11 0xx xxx	x	16	SUP-DMP
11 1xx xxx	x	17	OMP

U WORD AUXILIARY CONTROL BITS

U BIT	NAME	PAGE 4	PAGE 3	PAGE 2	PAGE 0
59	U (FLPT ADPS)	x	x	x	x
58	U (FPS CLK)	x	x	x	x
57	U (FPS SEL)	x	x	x	x
56	NOT IMPLEMENTED				
55	U (KT STACK)	x			x
54	U (ENB KT)	x			x
53,52	J (DAD <1-0>)	x			x
51	J (ALLOW DATTIP)	x			x
50	U (ENB KT MAIN)	x			x
48,49	U (KT SEL <1-0>)	x			x

REVISIONS

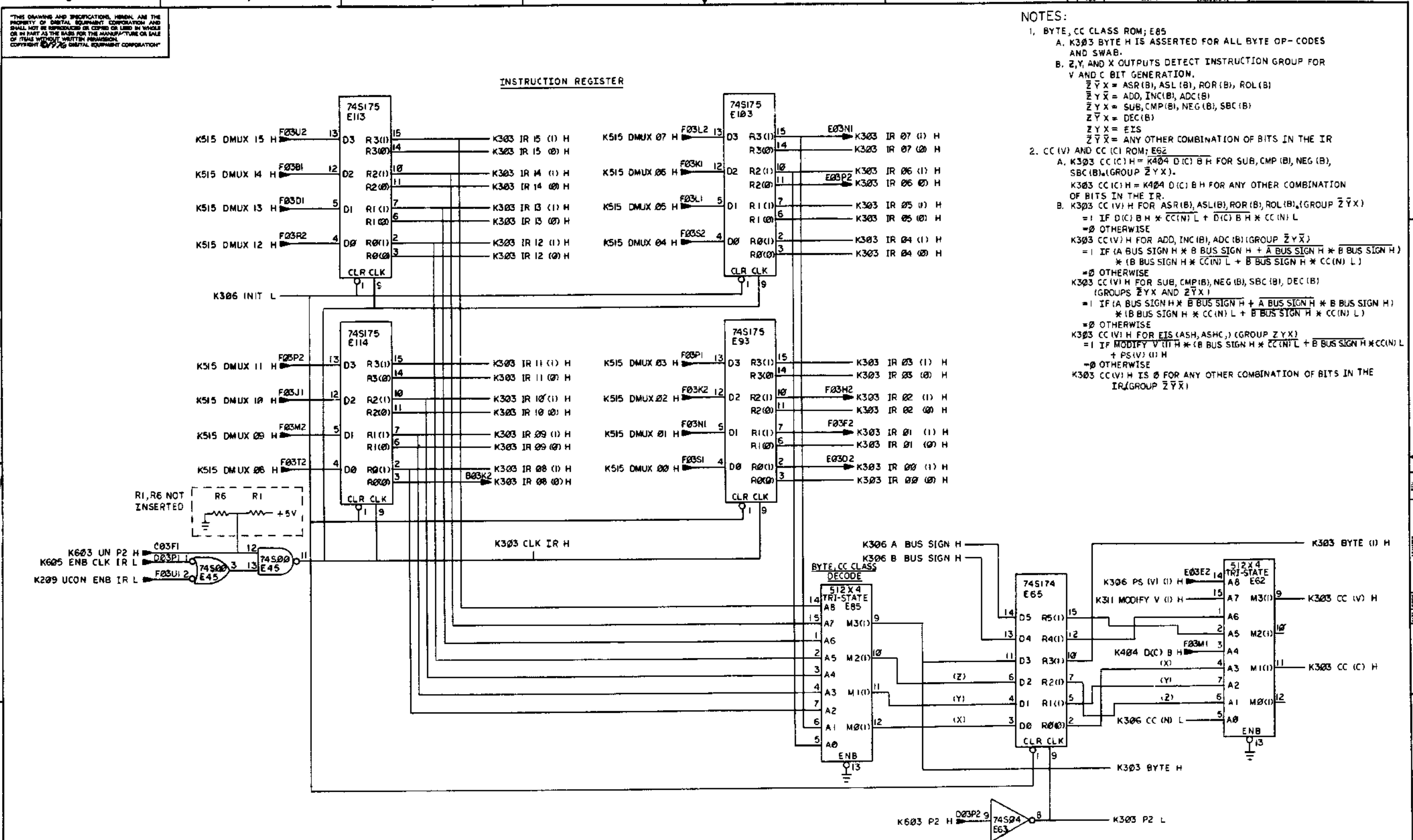
CHK	CHANGE NO.	REV.

(TABLES AND REGISTERS) (K302)

TITLE	SIZE CODE	NUMBER	REV.
DECODE	DCS M7873-0-1	R	

SCALE: SHEET 2 OF 13

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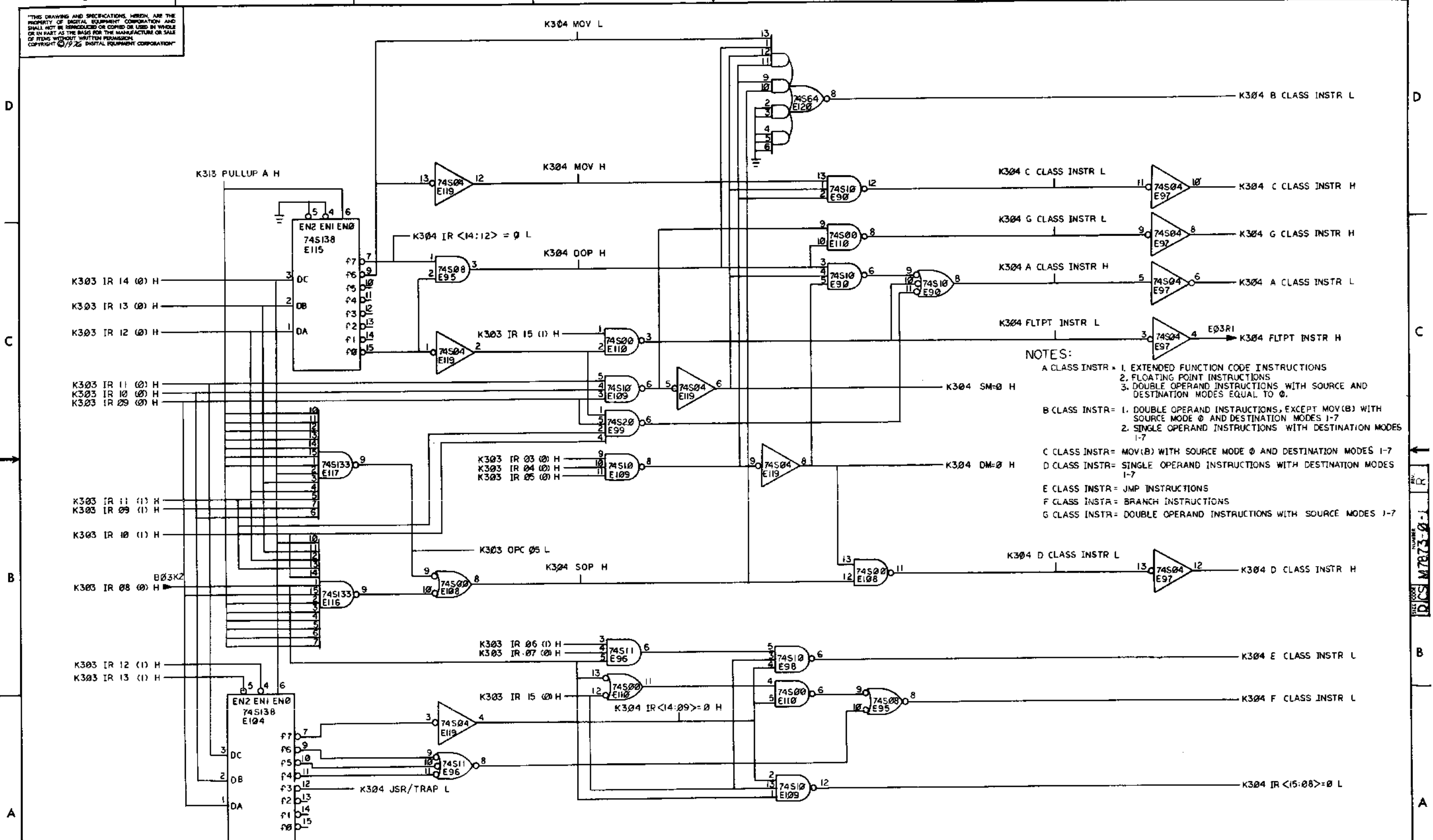
NOTES:

1. BYTE, CC CLASS ROM; E85
 - A. K303 BYTE H IS ASSERTED FOR ALL BYTE OP-CODES AND SWAB.
 - B. Z, Y, AND X OUTPUTS DETECT INSTRUCTION GROUP FOR V AND C BIT GENERATION.
 - Z Y X = ASR (B), ASL (B), ROR (B), ROL (B)
 - Z Y X = ADD, INC (B), ADC (B)
 - Z Y X = SUB, CMP (B), NEG (B), SBC (B)
 - Z Y X = DEC (B)
 - Z Y X = EIS
 - Z Y X = ANY OTHER COMBINATION OF BITS IN THE IR
2. CC (V) AND CC (C) ROM; E62
 - A. K303 CC (C) H = K404 D (C) B H FOR SUB, CMP (B), NEG (B), SBC (B), (GROUP Z Y X).
 - B. K303 CC (C) H = K404 D (C) B H FOR ANY OTHER COMBINATION OF BITS IN THE IR.
 - C. K303 CC (V) H FOR ASR (B), ASL (B), ROR (B), ROL (B), (GROUP Z Y X)
 - = 1 IF $D(C) B H * CC(N) L + D(C) B H * CC(N) L$
 - = 0 OTHERWISE
 - D. K303 CC (V) H FOR ADD, INC (B), ADC (B), (GROUP Z Y X)
 - = 1 IF $(A \text{ BUS SIGN } H * B \text{ BUS SIGN } H + A \text{ BUS SIGN } H * B \text{ BUS SIGN } H) * (B \text{ BUS SIGN } H * CC(N) L + B \text{ BUS SIGN } H * CC(N) L)$
 - = 0 OTHERWISE
 - E. K303 CC (V) H FOR SUB, CMP (B), NEG (B), SBC (B), DEC (B) (GROUPS Z Y X AND Z Y X)
 - = 1 IF $(A \text{ BUS SIGN } H * B \text{ BUS SIGN } H + A \text{ BUS SIGN } H * B \text{ BUS SIGN } H) * (B \text{ BUS SIGN } H * CC(N) L + B \text{ BUS SIGN } H * CC(N) L)$
 - = 0 OTHERWISE
 - F. K303 CC (V) H FOR EIS (ASH, ASHC), (GROUP Z Y X)
 - = 1 IF $MODIFY V (IT H * (B \text{ BUS SIGN } H * CC(N) L + B \text{ BUS SIGN } H * CC(N) L) + PS(V) (I) H$
 - = 0 OTHERWISE
 - G. K303 CC (V) H IS 0 FOR ANY OTHER COMBINATION OF BITS IN THE IR (GROUP Z Y X)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		DECODE		NUMBER		REV.	
SCALE		SHEET 3 OF 13		D CS M7873-0-1		R	

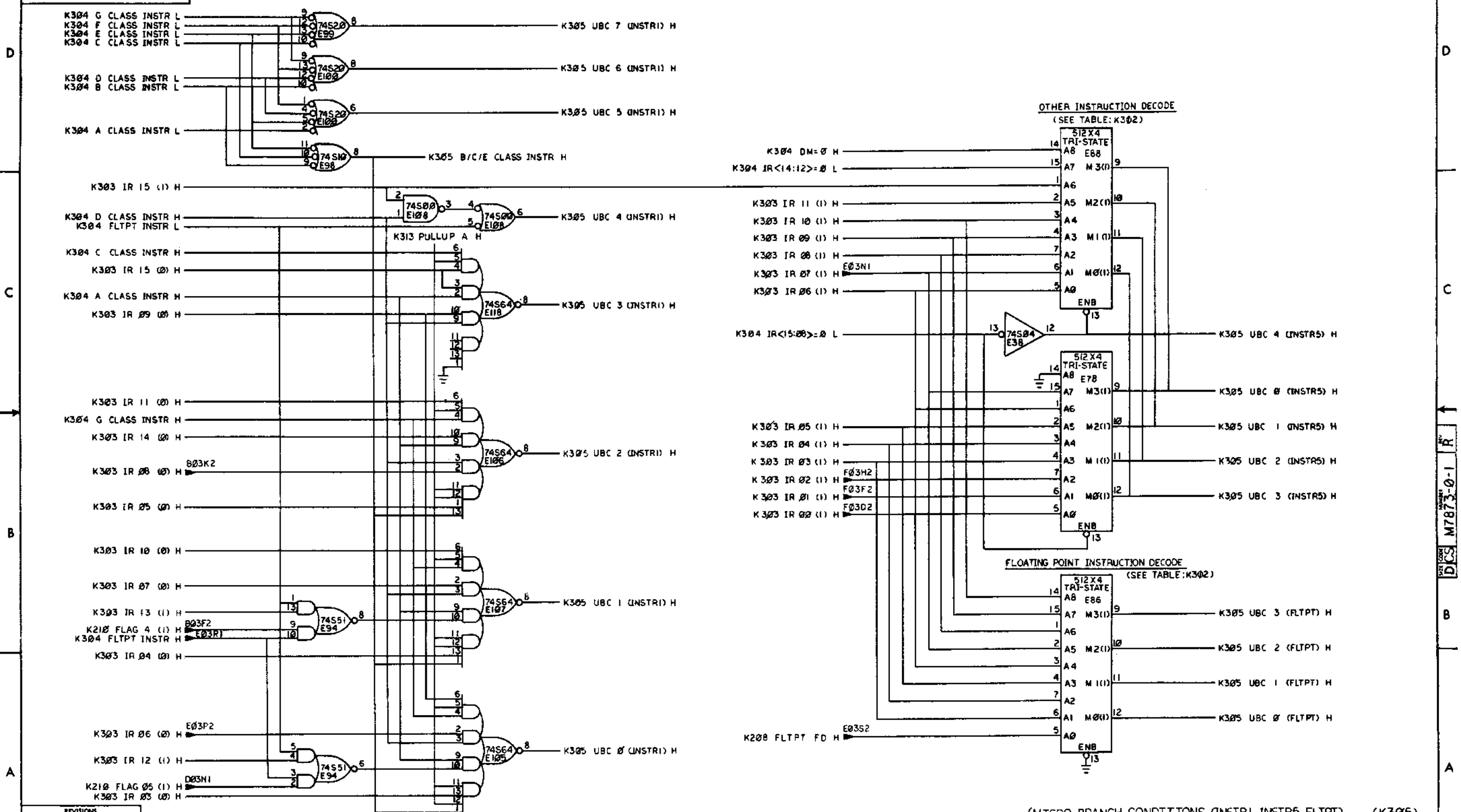
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- NOTES:
- A CLASS INSTR = 1. EXTENDED FUNCTION CODE INSTRUCTIONS
2. FLOATING POINT INSTRUCTIONS
3. DOUBLE OPERAND INSTRUCTIONS WITH SOURCE AND DESTINATION MODES EQUAL TO 0.
 - B CLASS INSTR = 1. DOUBLE OPERAND INSTRUCTIONS, EXCEPT MOV(B) WITH SOURCE MODE 0 AND DESTINATION MODES 1-7
2. SINGLE OPERAND INSTRUCTIONS WITH DESTINATION MODES 1-7
 - C CLASS INSTR = MOV(B) WITH SOURCE MODE 0 AND DESTINATION MODES 1-7
 - D CLASS INSTR = SINGLE OPERAND INSTRUCTIONS WITH DESTINATION MODES 1-7
 - E CLASS INSTR = JMP INSTRUCTIONS
 - F CLASS INSTR = BRANCH INSTRUCTIONS
 - G CLASS INSTR = DOUBLE OPERAND INSTRUCTIONS WITH SOURCE MODES 1-7

REVISIONS			(PRELIMINARY IR DECODE)				(K304)					
CHK	CHANGE NO.	REV.	TITLE	SIZE	CODE	NUMBER	REV.	TITLE	SIZE	CODE	NUMBER	REV.
			DECODE	D	CS	M7873-0-1	R	DECODE	D	CS	M7873-0-1	R
			SCALE	SHEET	4	OF	13					

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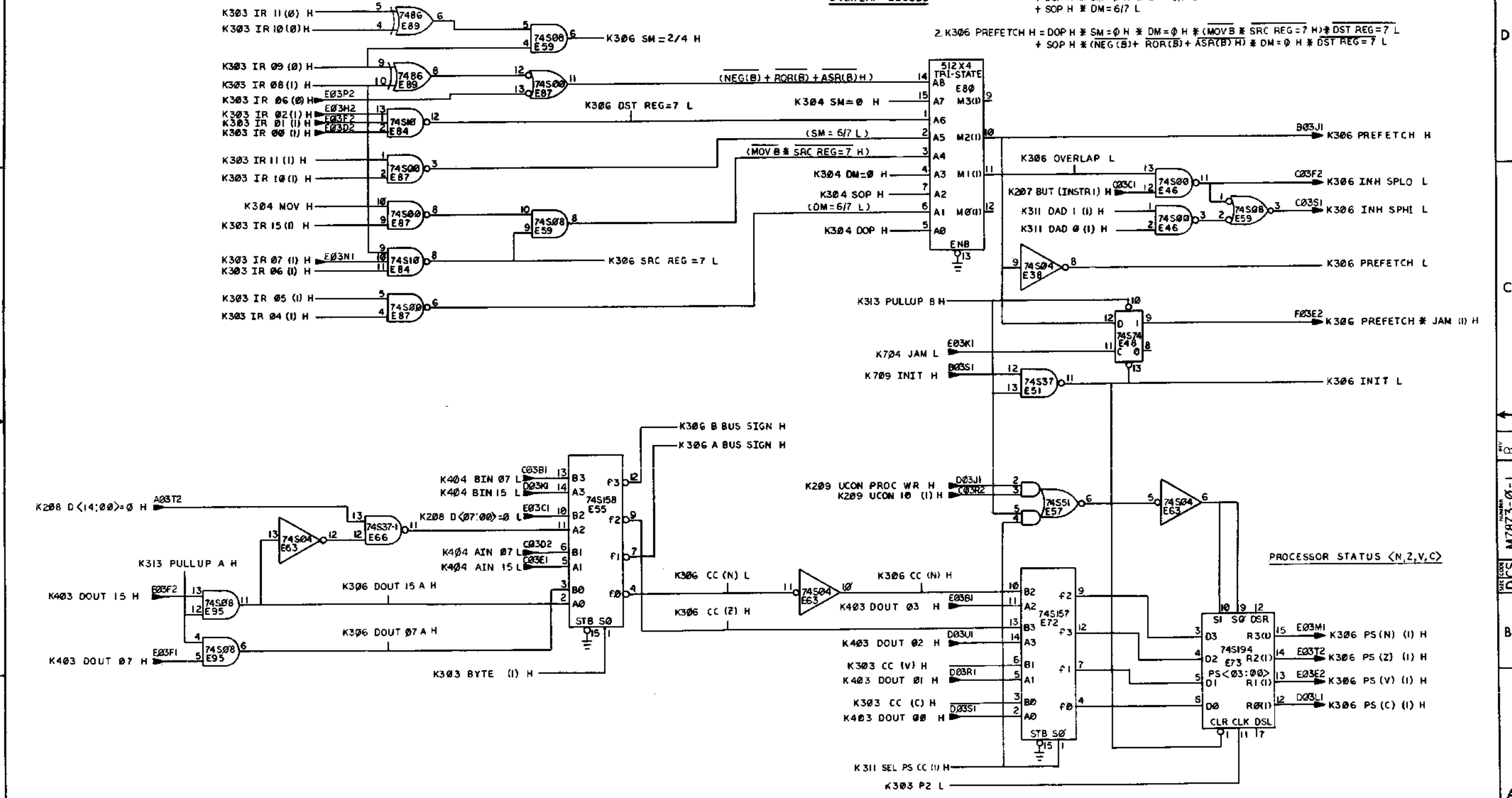
REVISIONS		
CHK	CHANGE NO.	REV.

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NOTES:

1. K306 OVERLAP L = DOP H * SM=0 H * DM=0 H * (MOV B * SRC REG=7 H) * DST REG=7 L + SOP H * (NEG(B) + ROR(B) + ASR(B) H) * DM=0 H * DST REG=7 L + DOP H * SM=6/7 L + DOP H * SM=0 H * DM=6/7 L + SOP H * DM=6/7 L
2. K306 PREFETCH H = DOP H * SM=0 H * DM=0 H * (MOV B * SRC REG=7 H) * DST REG=7 L + SOP H * (NEG(B) + ROR(B) + ASR(B) H) * DM=0 H * DST REG=7 L

OVERLAP DECODE



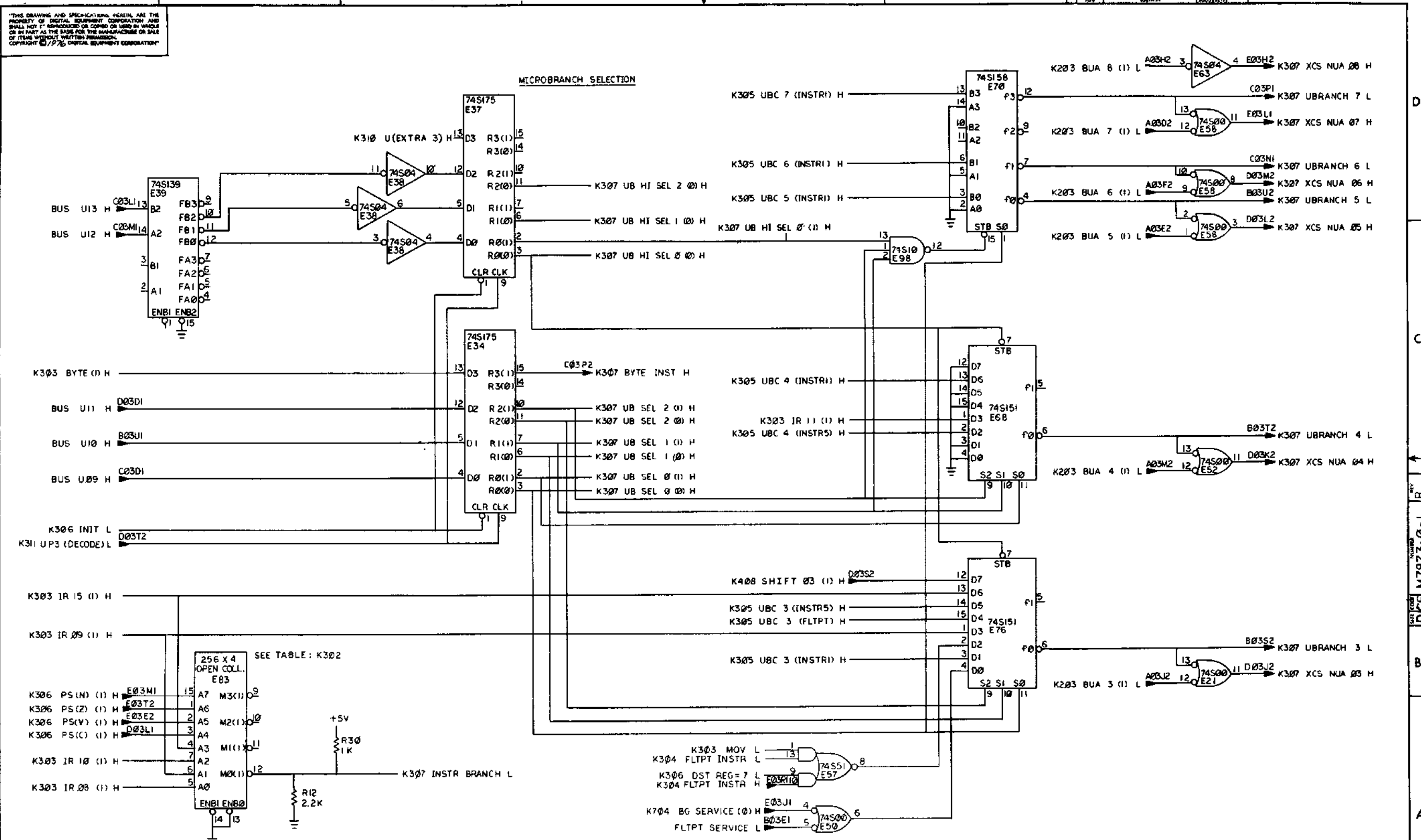
REVISIONS		
CHK	CHANGE NO.	REV.

(OVERLAP & PROCESSOR STATUS <N,Z,V,C>) (K306)

TITLE	DECODE	SIZE CODE	D CS	NUMBER	M7873-0-1	REV.	R
SCALE		SHEET	6 OF 13	DIST.			

REV. R
NUMBER M7873-0-1
SIZE CODE DCS

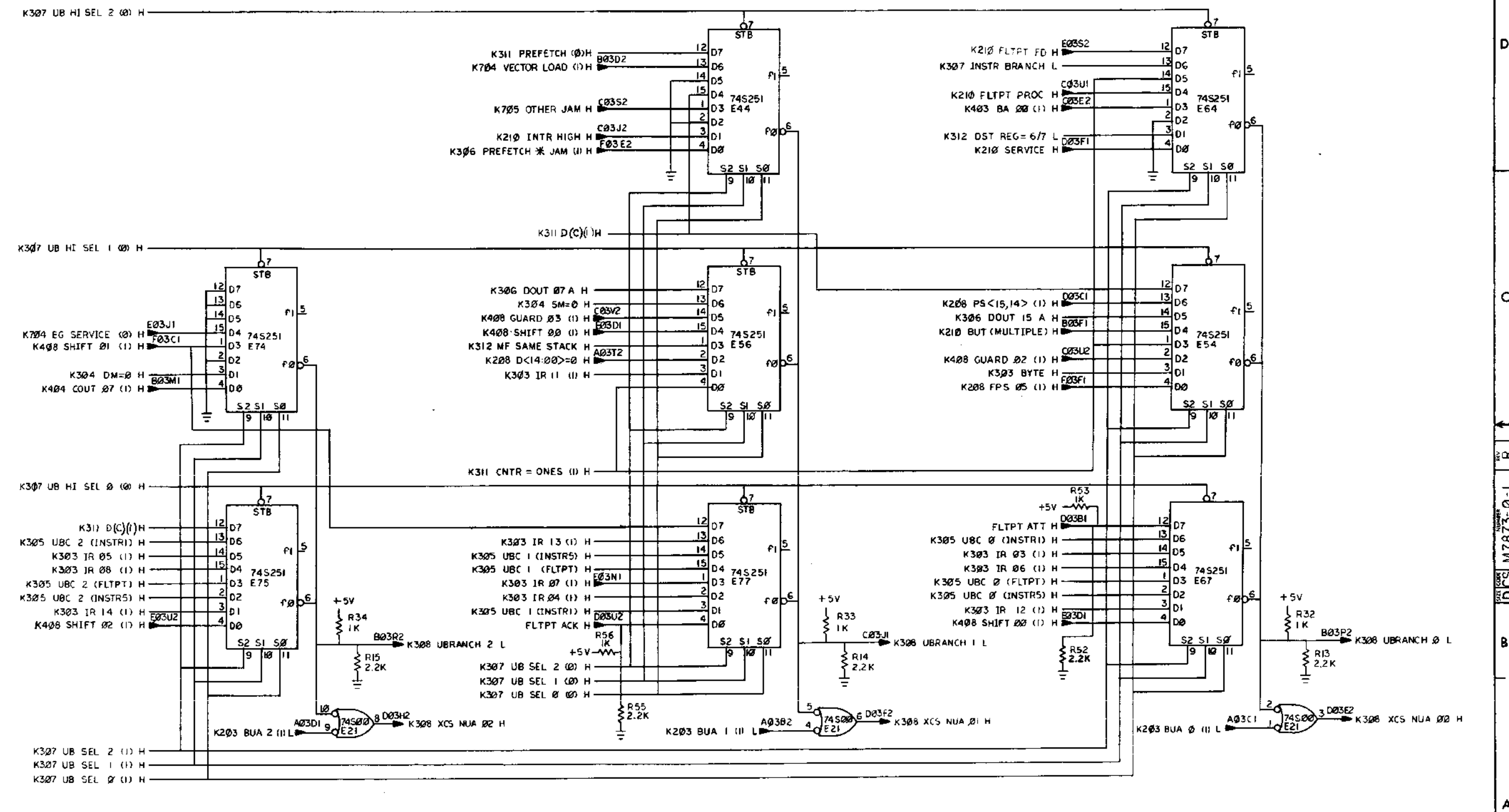
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REVISIONS		
CHK	CHANGE NO.	REV.

(MICROBRANCH <7:3> XCS NEXT MICROADRS <08:03>)		(K307)
TITLE	DECODE	SIZE/CODE
NUMBER	DCS M7873-0-1	REV.
SHEET	7 OF 13	DIST.

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REVISIONS		
CHK	CHANGE NO.	REV.

(MICROBRANCH <2:0>
XCS NEXT MICROADRS <02:00>) (K308)

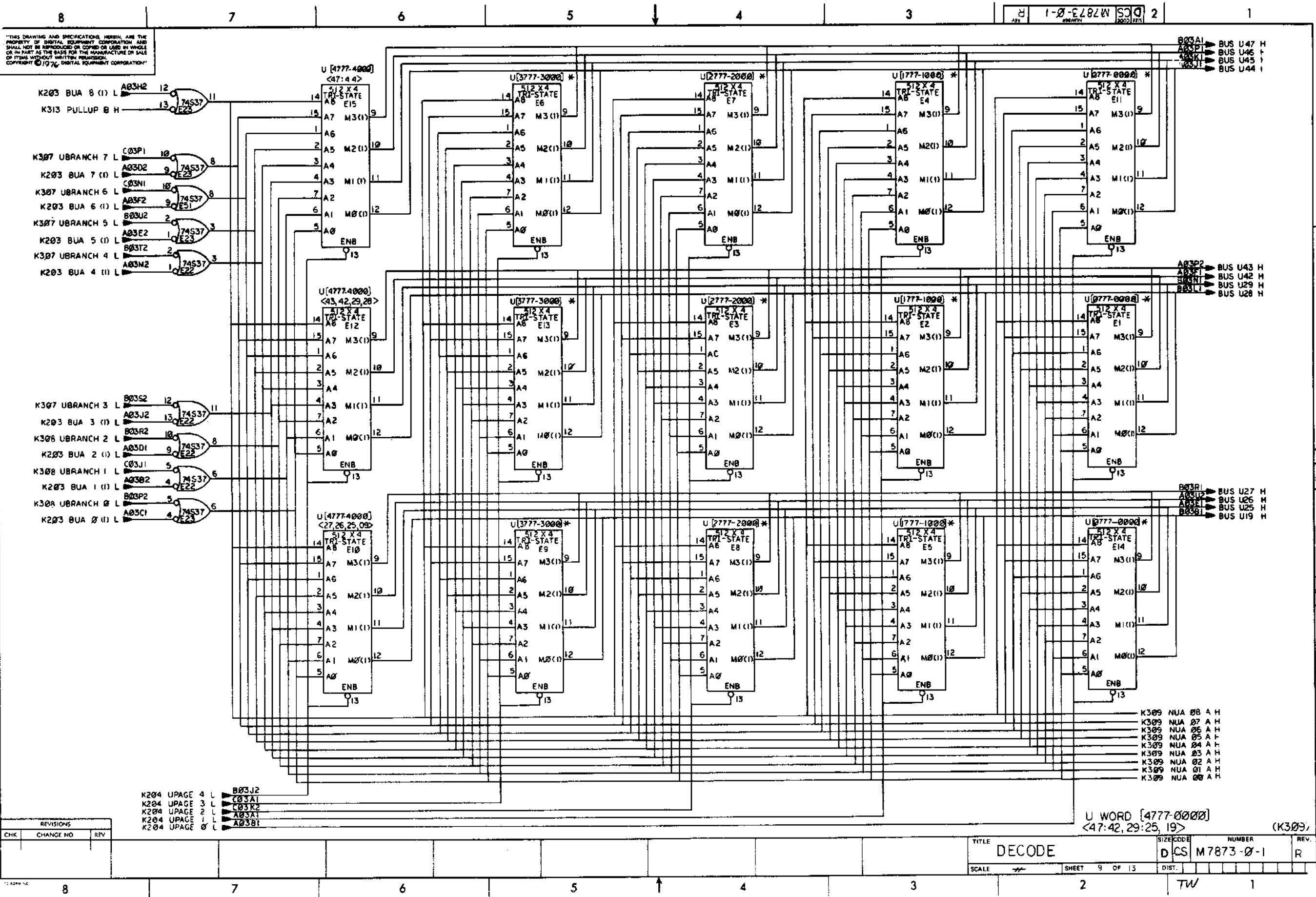
TITLE: DECODE

SCALE: --- SHEET: 8 OF 13

SIZE CODE: DCS NUMBER: M7873-0-1 REV: R

DCS M7873-0-1 R

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REVISIONS		
CHK	CHANGE NO	REV

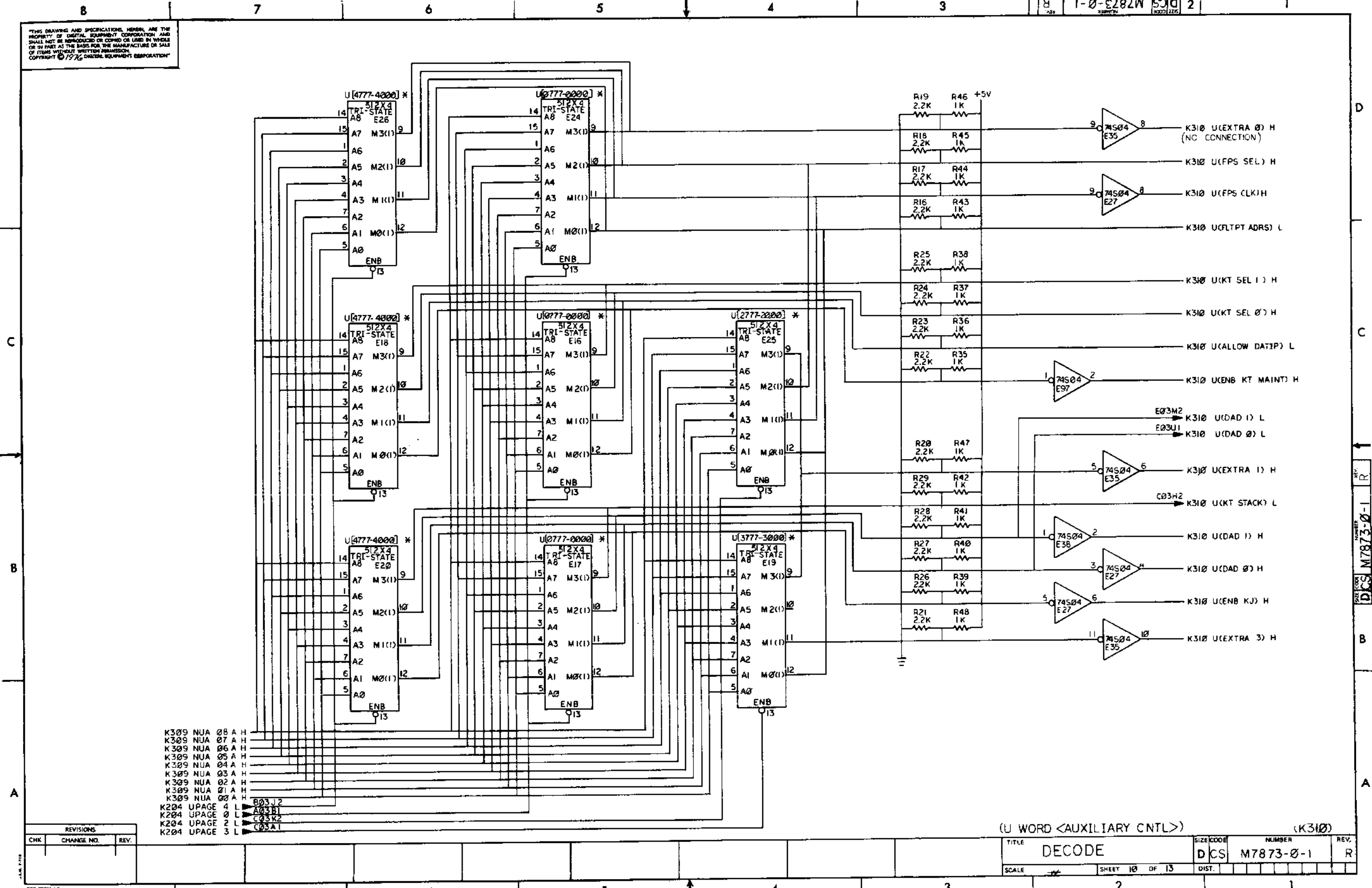
- K204 UPAGE 4 L B03J2
- K204 UPAGE 3 L C03A1
- K204 UPAGE 2 L C03K2
- K204 UPAGE 1 L A03AT
- K204 UPAGE 0 L A03B1

- K309 NUA 08 A H
- K309 NUA 07 A H
- K309 NUA 06 A H
- K309 NUA 05 A H
- K309 NUA 04 A H
- K309 NUA 03 A H
- K309 NUA 02 A H
- K309 NUA 01 A H
- K309 NUA 00 A H

U WORD [4777-0000]
<47:42, 29:25, 19> (K309)

TITLE	DECODE	SIZE CODE	D CS	NUMBER	M 7873-0-1	REV.	R
SCALE		SHEET	9 OF 13	DIST.			

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- K309 NUA 08 A H
- K309 NUA 07 A H
- K309 NUA 06 A H
- K309 NUA 05 A H
- K309 NUA 04 A H
- K309 NUA 03 A H
- K309 NUA 02 A H
- K309 NUA 01 A H
- K309 NUA 00 A H
- K204 UPAGE 4 L
- K204 UPAGE 0 L
- K204 UPAGE 2 L
- K204 UPAGE 3 L

REVISIONS		
CHK	CHANGE NO.	REV.

(U WORD <AUXILIARY CNTL>)		(K310)	
TITLE	DECODE	SIZE CODE	DCS
NUMBER	M7873-0-1	REV.	R
SCALE	SHEET 10 OF 13	DIST.	

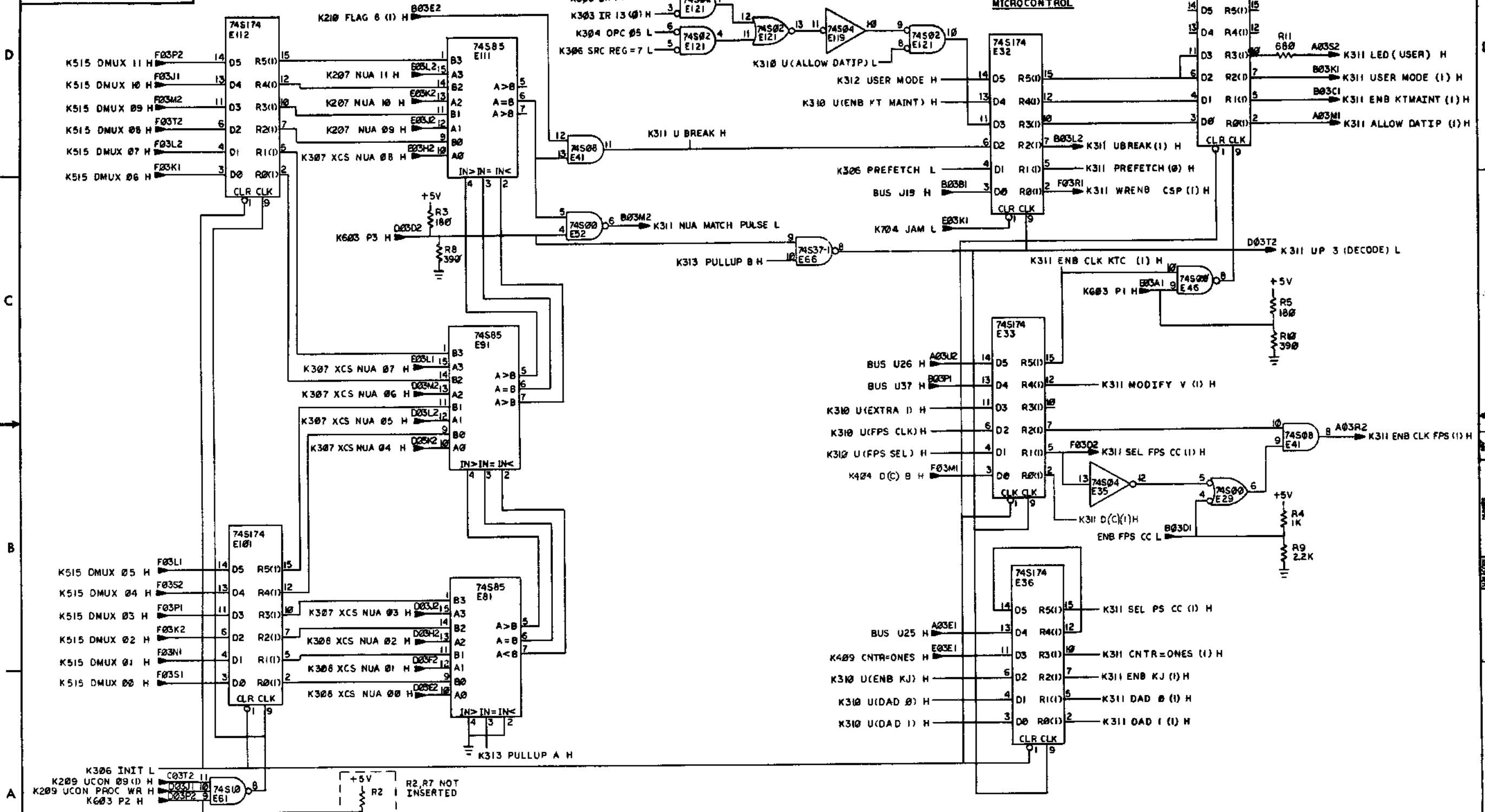
DCS M7873-0-1 R

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MICROADRS MATCH & MICROBREAK

MICROCONTROL

KT CONTROL

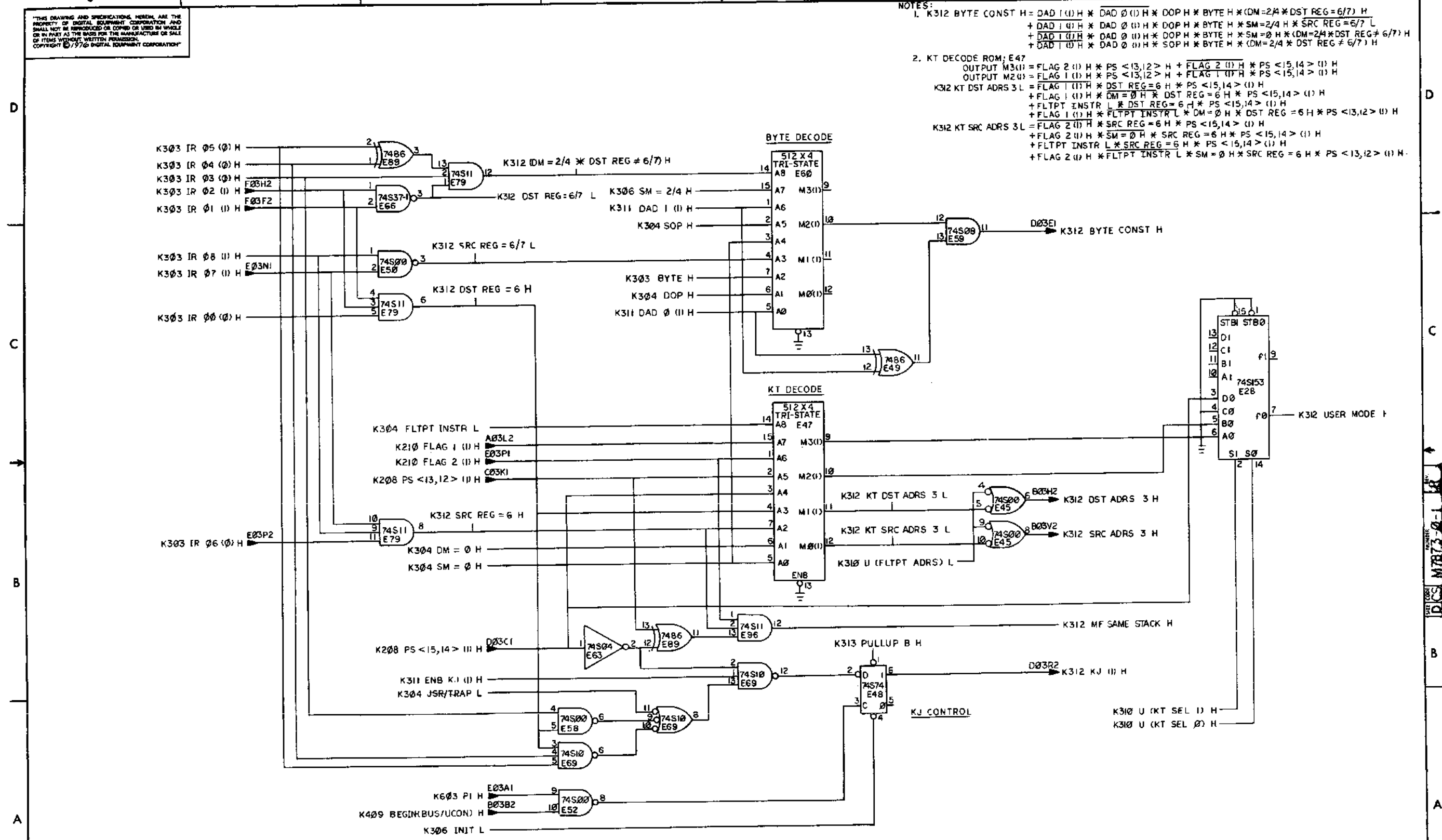


REVISIONS		
CHK	CHANGE NO.	REV.

(MICROADRS MATCH, MICROBREAK, KT CNTL)		(K311)
TITLE	DECODE	NUMBER
SIZE	DCS	M7873-0-1
SCALE	SHEET 11 OF 13	DIST.

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NOTES:
 1. K312 BYTE CONST H = DAD 1 (1) H * DAD 0 (1) H * DOP H * BYTE H * (DM=2/4 * DST REG=6/7) H
 + DAD 1 (1) H * DAD 0 (1) H * DOP H * BYTE H * SM=2/4 H * SRC REG=6/7 L
 + DAD 1 (1) H * DAD 0 (1) H * DOP H * BYTE H * SM=0 H * (DM=2/4 * DST REG=6/7) H
 + DAD 1 (1) H * DAD 0 (1) H * SOP H * BYTE H * (DM=2/4 * DST REG=6/7) H
 2. KT DECODE ROM: E47
 OUTPUT M3(1) = FLAG 2 (1) H * PS <13,12> H + FLAG 2 (1) H * PS <15,14> (1) H
 OUTPUT M2(1) = FLAG 1 (1) H * PS <13,12> H + FLAG 1 (1) H * PS <15,14> (1) H
 K312 KT DST ADRS 3 L = FLAG 1 (1) H * DST REG=6 H * PS <15,14> (1) H
 + FLAG 1 (1) H * DM=0 H * DST REG=6 H * PS <15,14> (1) H
 + FLTPT INSTR L * DST REG=6 H * PS <15,14> (1) H
 + FLAG 1 (1) H * FLTPT INSTR L * DM=0 H * DST REG=6 H * PS <13,12> (1) H
 K312 KT SRC ADRS 3 L = FLAG 2 (1) H * SRC REG=6 H * PS <15,14> (1) H
 + FLAG 2 (1) H * SM=0 H * SRC REG=6 H * PS <15,14> (1) H
 + FLTPT INSTR L * SRC REG=6 H * PS <15,14> (1) H
 + FLAG 2 (1) H * FLTPT INSTR L * SM=0 H * SRC REG=6 H * PS <13,12> (1) H

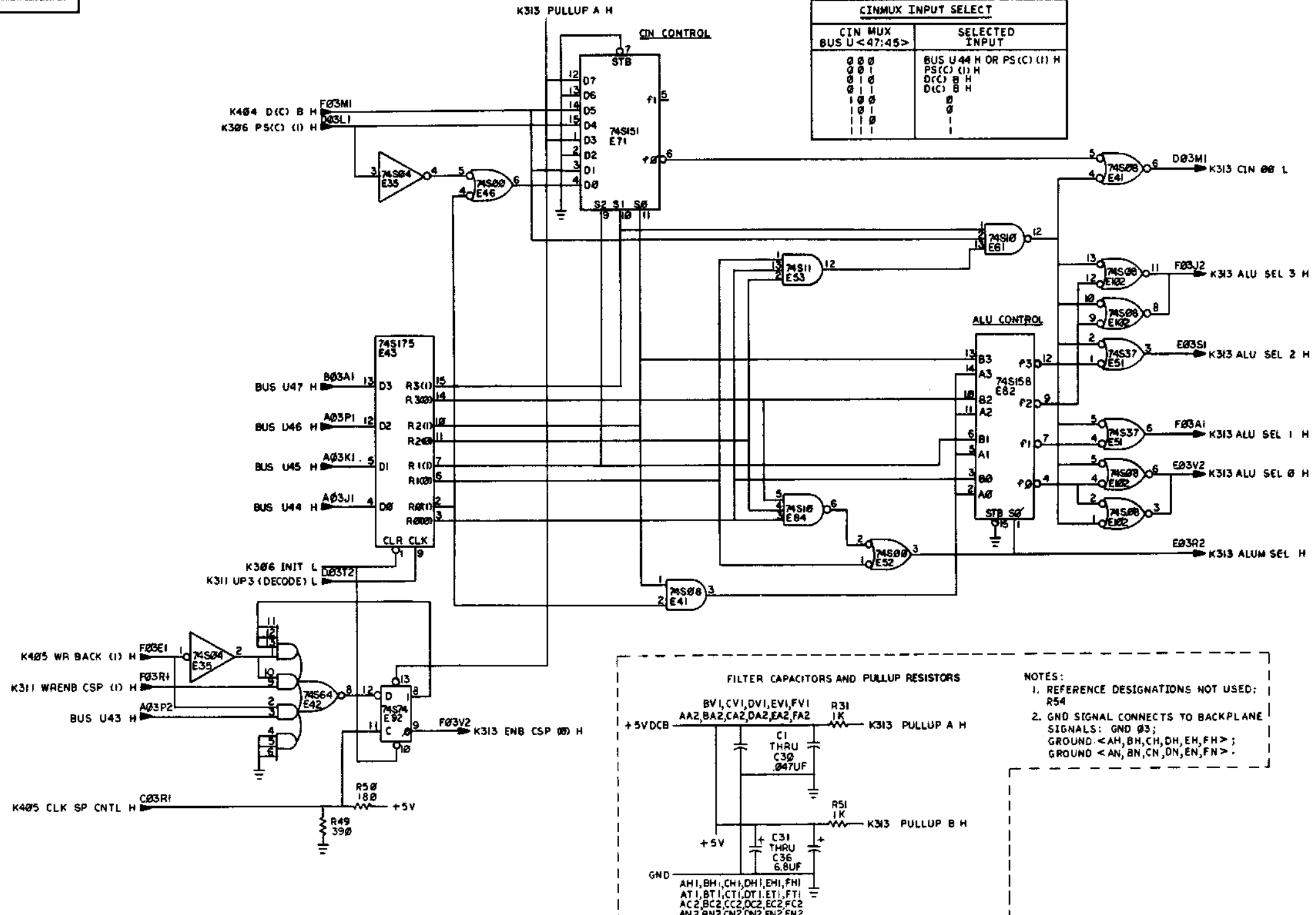


REVISIONS		
CHK	CHANGE NO.	REV

(BYTES & KT DECODE, KT SELECTION)		(K312)	
TITLE	DECODE	SIZE/CODE	NUMBER
SCALE	SHEET 12 OF 13	DICS	M7873-0-1
DIST.		REV	R

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CINMUX INPUT SELECT	
CIN MUX BUS U <47:45>	SELECTED INPUT
0 0 0	BUS U44 H OR PS(C) (I) H
0 0 1	PS(C) (I) H
0 1 0	DC(C) B H
0 1 1	DC(C) B H
1 0 0	0
1 0 1	0
1 1 0	0
1 1 1	0

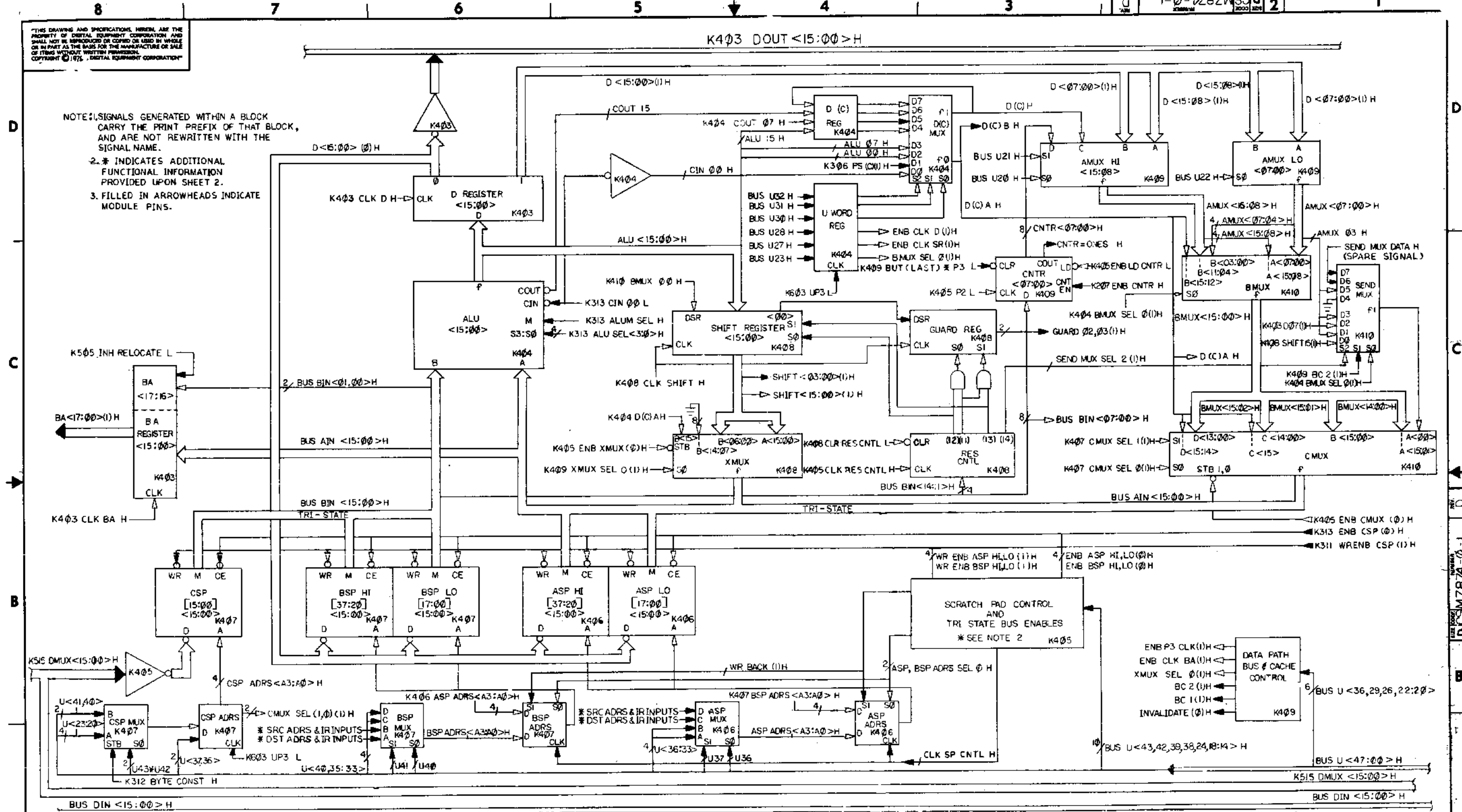


REVISIONS		
CHK	CHANGE NO.	REV.

(CSP, ALU & CIN CNTL)		(K313)	
TITLE	DECODE	SIZE CODE	NUMBER
SCALE	---	D CS	M7873-0-1
SHEET	13 OF 13	DIST.	REV.
			R

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NOTE: 1. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK, AND ARE NOT REWRITTEN WITH THE SIGNAL NAME.
 2. * INDICATES ADDITIONAL FUNCTIONAL INFORMATION PROVIDED UPON SHEET 2.
 3. FILLED IN ARROWHEADS INDICATE MODULE PINS.



REV.	CHG	BY	DATE	DESCRIPTION
1		J. O'LOUGHLIN	11/10/76	INITIAL DESIGN
2		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60
3		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60
4		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60
5		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60
6		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60
7		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60
8		J. O'LOUGHLIN	11/10/76	REVISED FOR PDP-11/60

(BLOCK DIAGRAM) (K401)

DRN. 01/10/76	FIRST USED ON	PDP-11/60	digital
CHKD. 11/10/76	DATE	11/10/76	
ENG. 11/10/76	TITLE	DATA PATH	
PROD. 11/10/76	NUMBER	B-DD-M7874-0	
NEXT HIGHER ASSY.	SCALE	D CS M7874-0-1	
SHEET 1 OF 10	DIST.		

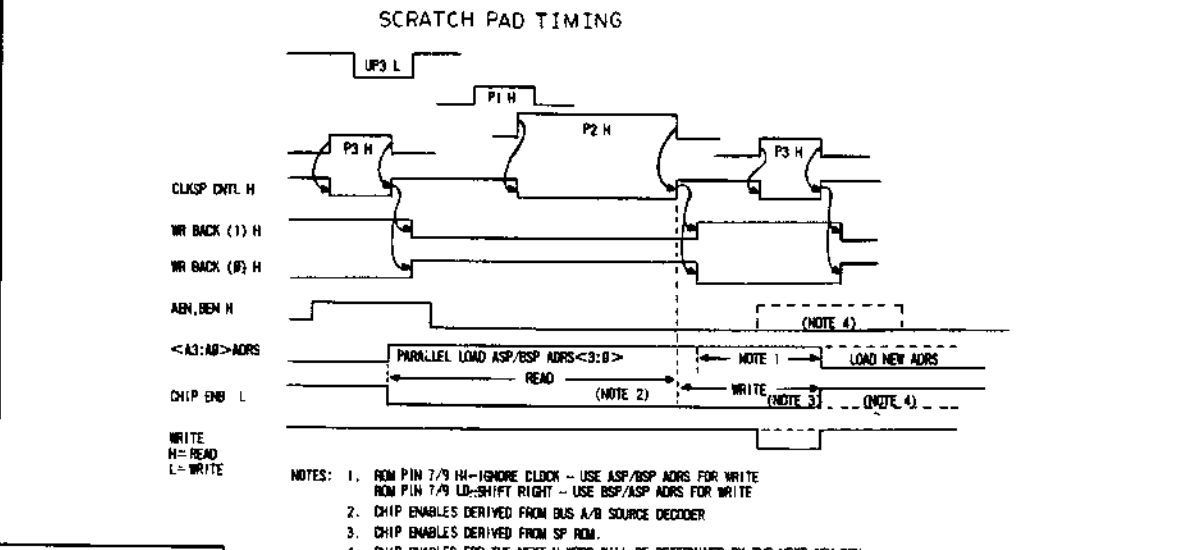
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SCRATCH PAD ADDRESSING

CSP				BSPLO		ASPLO	
SPADRS	BASE (R/W)	FLPT	CONTENTS	BASE (R/W)	BASE (R/W)		
0	LOG IAM (100/300)	EXPMASK	078000	R0 (040/240)	R0 (000/200)	200 ALSO WRITES BSPLO R0	
1	LOG SERVICE (101/301)	CNST 10	000010	R1 (041/241)	R1 (001/201)	201 ALSO WRITES BSPLO R1	
2	LOG PBA (102/302)	RESRRIGHT	020000	R2 (042/242)	R2 (002/202)	202 ALSO WRITES BSPLO R2	
3	LOG CUA (103/303)	CNST #	000004	R3 (043/243)	R3 (003/203)	203 ALSO WRITES BSPLO R3	
4	LOG FLAG/INTR (104/304)	RESLEFT D(C)	050000	R4 (044/244)	R4 (004/204)	204 ALSO WRITES BSPLO R4	
5	LOG WHAM 1 (105/305)	RESLEFT B	054000	R5 (045/245)	R5 (005/205)	205 ALSO WRITES BSPLO R5	
6	LOG CACHE DATA (106/306)	EMITCON		R6 (046/246)	R6 (006/206)	206 ALSO WRITES BSPLO R6	
7	LOG TAG/CPU (107/307)	RESRRIGHT	024000	R7 (047/247)	R7 (007/207)	207 ALSO WRITES BSPLO R7	
10	CNST CNST 100000 (110/310)	H1BYTEMASK	177400	FAC2(0) (050/250)	FAC3(0) (010/210)		
11	LOG DS REGISTER (111/311)	SEXPMASK	177600	FAC2(1) (051/251)	FAC3(1) (011/211)		
12	CNST CNST 30000 (112/312)	SIGNBIT, CNST 100,000	100000	FAC2(2) (052/252)	FAC3(2) (012/212)		
13	CONSOLE (113/313)	CNST 200	0000200	FAC2(3) (053/253)	FAC3(3) (013/213)		
14	CONST 2 (114/314)	CNST 2	000002	FAC2(4) (054/254)	FAC3(4) (014/214)		
15	MD (115/315)	MD	*****	FAC2(5) (055/255)	FAC3(5) (015/215)		
16	CONST 0 (116/316)	CNST 0	000000	USER R6 (056/256)	USER R6 (016/216)		
17	CONST 1 (117/317)	CNST 1	000001	POST 2 (057/257)	POST 3 (017/217)		

BSPHI		ASPHI	
SPADRS	BASE (R/W)	BASE (R/W)	
0	WCSB (0) (060/260)	WCSA (0) (020/220)	
1	WCSB (1) (061/261)	WCSA (1) (021/221)	
2	R (VECT SAV) (062/262)	GEN-WHAM1 (022/222)	
3	R (ZERO) (063/263)	CNST, TMP SW (023/223)	
4	R (T1B) (SRC) (064/264), R (ES), R (MAND 1), R (DSOR 3), (064/264)	R (T1A) (SRC) (024/224), R (ES), R (MAND 1), R (DSOR 3), (024/224)	
5	R (T2B) (DST) (065/265), R (ED), R (DSTX), R (EDIFF), R (GR14C), R (MAND 3), R (DSOR 1), (065/265)	R (T2A) (DST) (025/225), R (ED), R (DSTX), R (EDIFF), R (DST1), R (MAND 2), R (MAND 1), (025/225)	
6	FPA (066/266)	CNST, SW (026/226)	
7	CNST CNST (067/267)	CNST, SW (027/227)	
10	FAC 0 (0) (070/270)	FAC 1 (0) (030/230)	
11	FAC 0 (1) (071/271)	FAC 1 (1) (031/231)	
12	FAC 0 (2) (072/272)	FAC 1 (2) (032/232)	
13	FAC 0 (3) (073/273)	FAC 1 (3) (033/233)	
14	FAC 0 (4) (074/274)	FAC 1 (4) (034/234)	
15	FAC 0 (5) (075/275)	FAC 1 (5) (035/235)	
16	FEA (076/276)	FPSH-FEC (036/236)	
17	FDSO, DSOR 0 (077/277)	POST 1, RWOR2, (037/237)	

BSP MUX CONTROL				ASP MUX CONTROL			
SP ADRS	INPUT PORT			INPUT PORT			
	A	B	C	D	A	B	C
A3	DSTADRS 3 H	SRCADRS 3 H	BUS U35 H	BUS U35 H	BUS U35 H	BUS U35 H	DSTADRS 3 H
A2	IRW2 (1) H	IRBB/FLTPY 1H H	BUS U34 H	BUS U34 H	BUS U34 H	BUS U34 H	IRW2 (1) H
A1	IRP1 (1) H	IRB7 (1) H	BUS U33 H	BUS U33 H	BUS U33 H	BUS U33 H	IRP1 (1) H
A0	IRP0 (1) H	IRB6/SPADRS+1 H	BUS U40 H	BUS U40 H	BUS U36 H	BUS U36 H	IRP0 (1) H



ALU CONTROL

NOTE: LOGIC ON DECODE, M7873

ALU FIELD BUS U<47:44>	ALU OPERATION	CIN MUX
0000	X	1
0001	ADD A+B+PS (C)	PS (C)
0010	X*B	PS (C)
0011	GENERATE #	PS (C)
0100	ADD A+B+D(C)	D(C) B
0101	SUB W/CARRY	D(C) B
0110	XOR A WITH B	D(C) B
0111	A*B	D(C) B
1000	DIVIDE	0
1001	ADD A+B	0
1010	SELECT 0	0
1011	A*B	0
1100	ADD A+B+1	1
1101	SUB B FROM A	1
1110	A OR B	1
1111	SELECT A	1

D(C) SELECT

COUT FIELD BUS U<32:30>	D(C) SOURCE	DESCRIPTION
000	CINMUX L	OUTPUT OF CINMUX
001	PS 00 (1) H	C BIT OF PSW
010	ALU 00 H	ODD OR EVEN RESULT
011	ALU 07 H	BYTE SIGN BIT
100	ALU 15 H	WORD SIGN BIT
101	COUT 07 L	BYTE CARRY
110	COUT 15 L	WORD CARRY
111	D(C) H	CARRY OUT FROM PREVIOUS OPERATION

BUS BTN & BUS ATN ENABLES

BUS AEN BUS U<39:38>	BUS A ENABLES (LOW WHEN ASSERTED)	FUNCTION
00	ENB XMUX (0) H	XMUX OUTPUT CONTROL
01	ENB CMUX (0) H	CMUX OUTPUT CONTROL
10	ENB ASPLO (0) H	ASPLO CHIP ENABLE
11	ENB ASPHI (0) H	ASPHI CHIP ENABLE

BUS BEN BUS U<43:42>	BUS B ENABLES (LOW WHEN ASSERTED)	FUNCTION
00	ENB BSPLO (0) H	BSPLO CHIP ENABLE
01	ENB BSPHI (0) H	BSPHI CHIP ENABLE
10	ENB CSP (0) H	SELECT ARBITRARY CSP LOCATION
11	ENB CDP (0) H	SELECT BASE CONSTANTS IN CSP

SHIFT REGISTER (74S194)

SI	SF	FUNCTION
0	0	DO NOTHING (IGNORE CLOCK)
0	1	SHIFT RIGHT
1	0	SHIFT LEFT
1	1	PARALLEL LOAD

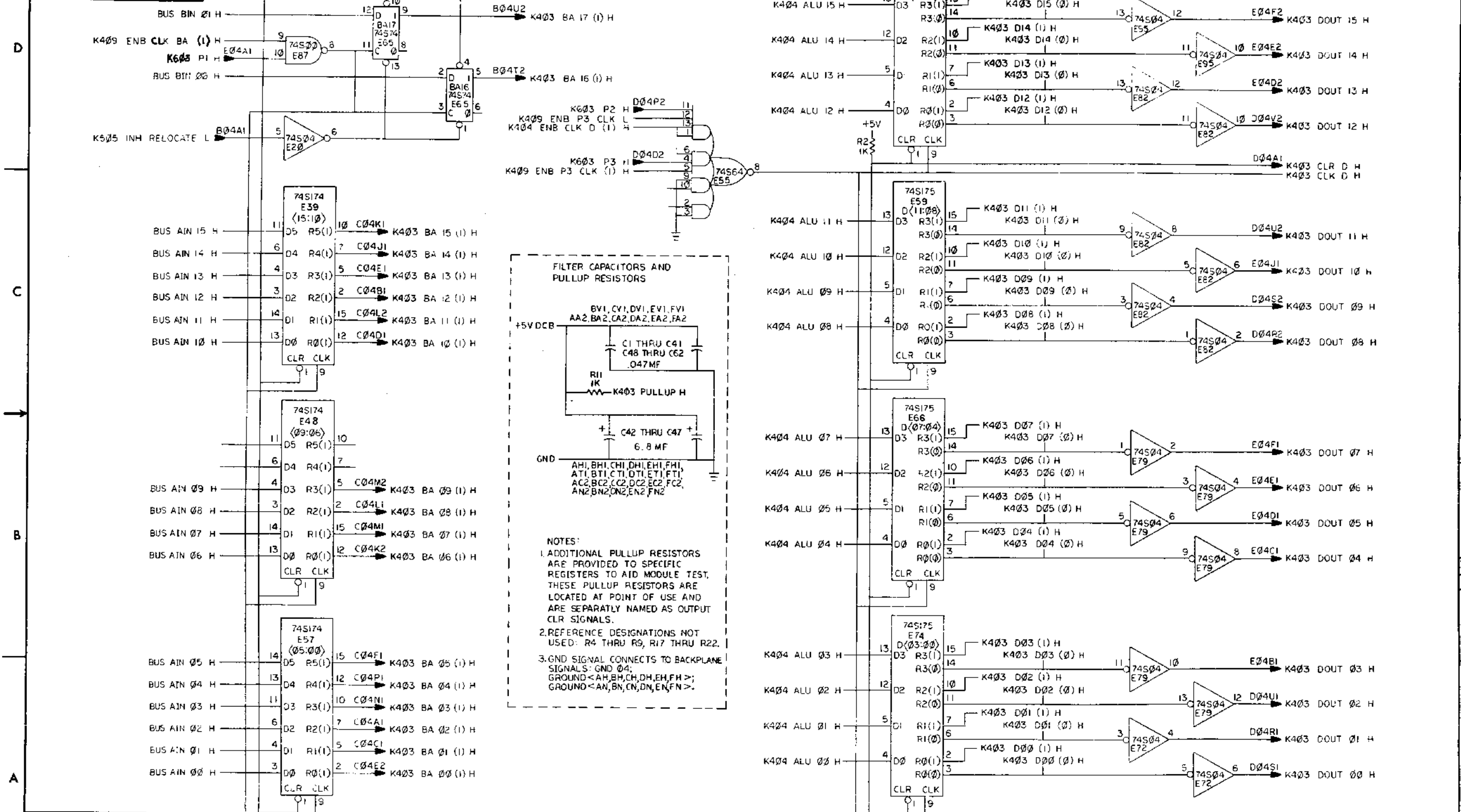
SCRATCH PAD REWRITE FIELD		ROM OUTPUTS AND RESULTANT SIGNALS										WRITE OPERATION							
MEMORIC	WDO	WRSP	WR HI	WR SE	BSP ADRS SEL H										EFFECTED SP (ADRS USED)				
BUS U BIT	14	15	16	17	18	ASP		ADRS		SEL		H		NOT USED		USED			
	B=ENB	WR	WR	WR	B=A	B=LO	WR		WR		WR		WR		WR		WR		
	I=ENB	A	B	T=B	I=HI	WR		WR		WR		WR		WR		WR			
CHIP INPUT	A4	A3	A2	A1	A0	M7	M6	M5	M4	M3	M2	M1	M0	WR ENB BSPLO		WR ENB ASPHI		WR ENB ASPLO	
	0	0	0	0	0	1	1	0	0	0	0	0	0	NOT USED					
	0	0	0	0	1	1	1	0	0	0	0	0	0	BSP ADRS S0H, WREN B BSPLO(1)H, ENB BSPLO(0)H		BSPLO (ASP ADRS)			
	0	0	0	1	0	1	1	0	0	0	0	0	0	BSP ADRS S0H, WREN B BSPHI(1)H, ENB BSPHI(0)H		BSPHI (ASP ADRS)			
	0	0	1	0	0	1	1	0	0	0	0	0	0	WREN B BSPLO(1)H, ENB BSPLO(0)H		BSPLO (BSP ADRS)			
	0	0	1	1	0	1	1	0	0	0	0	0	0	WREN B ASPHI(1)H, ENB ASPHI(0)H		BSPHI (ASP ADRS)			
	0	1	0	0	0	1	1	0	0	0	0	0	0	WREN B ASPLO(1)H, ENB ASPLO(0)H		ASPLO (ASP ADRS)			
	0	1	0	1	0	1	1	0	0	0	0	0	0	ASP ADRS S0H, WREN B ASPHI(1)H, ENB ASPHI(0)H		ASPHI (ASP ADRS)			
	0	1	1	0	0	1	1	0	0	0	0	0	0	ASP ADRS S0H, WREN B ASPLO(1)H, ENB ASPLO(0)H		ASPLO (BSP ADRS)			
	0	1	1	1	0	0	1	0	0	0	0	0	0	WREN B BSPLO(1)H, ENB BSPLO(0)H		ASPLO & BSPLO (ASP ADRS)***			
	0	1	1	1	1	0	1	0	0	0	0	0	0	WREN B BSPHI(1)H, ENB BSPHI(0)H		ASPHI & BSPHI (ASP ADRS)***			
	0	1	1	1	1	1	0	0	0	0	0	0	0	ASP ADRS S0H, WREN B ASPLO(1)H, ENB ASPLO(0)H		ASPLO & BSPLO (BSP ADRS)***			
	0	1	1	1	1	1	1	0	0	0	0	0	0	ASP ADRS S0H, WREN B ASPHI(1)H, ENB ASPHI(0)H		ASPHI & BSPHI (BSP ADRS)***			
	1	0	0	0	0	1	1	0	0	0	0	0	0	WREN B BSPHI(1)H, ENB BSPHI(0)H		NOT USED			
	1	0	1	0	0	1	1	0	0	0	0	0	0	NOT USED					

NOTE: *THE HIGH OR HIGH+LOW BYTES OF THE REGISTERS IN ASPLO & BSPLO CAN BE INHIBITED

**ALL SIGNALS ARE GENERATED ON RADS

***USED WHEN A GENERAL REGISTER (RG-R7) IS INCLUDED IN AN INSTRUCTION

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FILTER CAPACITORS AND PULLUP RESISTORS

+5VDCB

AA2, BA2, CA2, DA2, EA2, FA2

C1 THRU C41
C48 THRU C62
.047 MF

R11
1K

K403 PULLUP H

6.8 MF

GND

AH1, BH1, CH1, DH1, EH1, FH1,
AT1, BT1, CT1, DT1, ET1, FT1,
AC2, BC2, CC2, DC2, EC2, FC2,
AN2, BN2, CN2, EN2, FN2

NOTES:

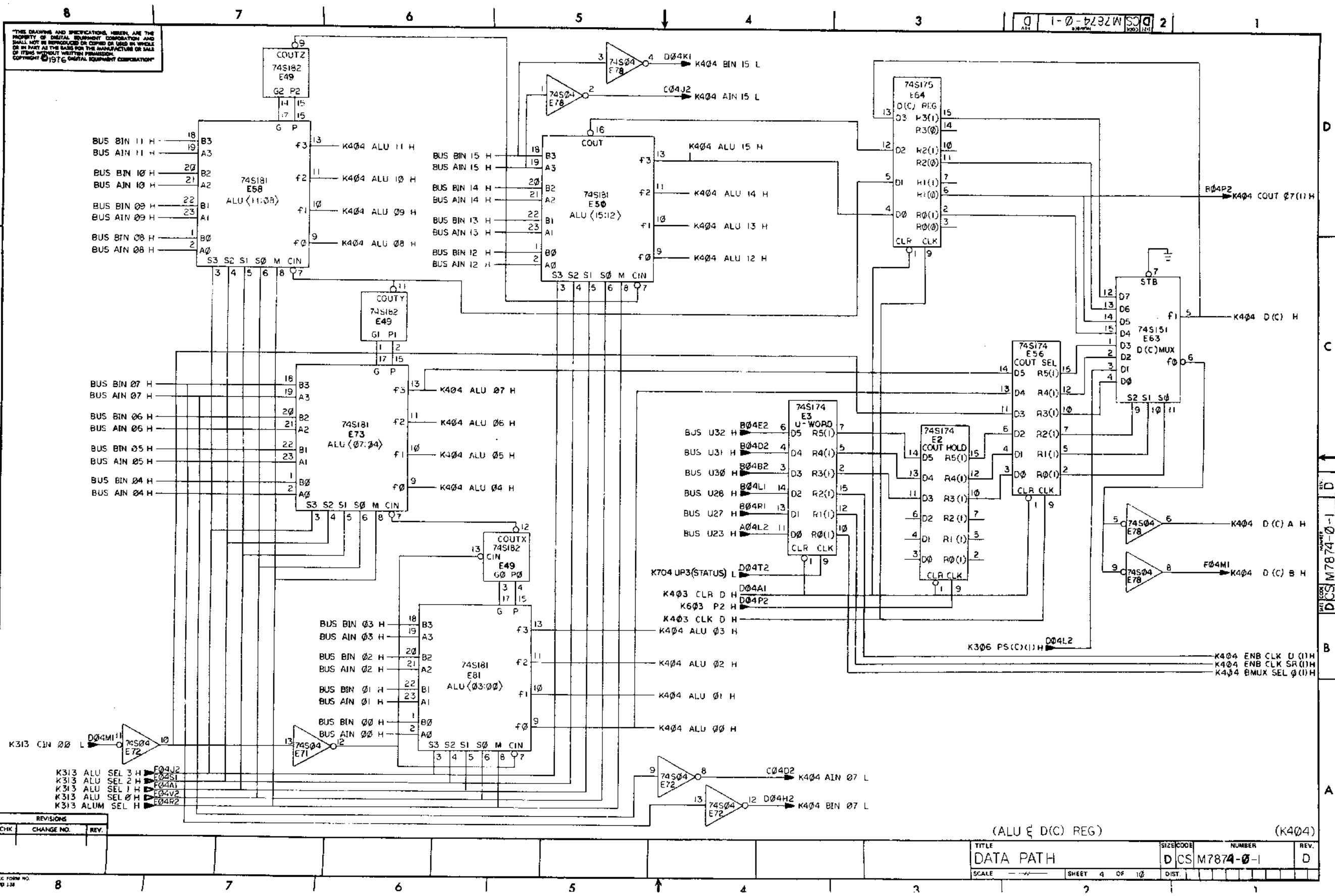
- ADDITIONAL PULLUP RESISTORS ARE PROVIDED TO SPECIFIC REGISTERS TO AID MODULE TEST. THESE PULLUP RESISTORS ARE LOCATED AT POINT OF USE AND ARE SEPARATELY NAMED AS OUTPUT CLR SIGNALS.
- REFERENCE DESIGNATIONS NOT USED: R4 THRU R9, R17 THRU R22.
- GND SIGNAL CONNECTS TO BACKPLANE SIGNALS: GND 04;
GROUND < AH, BH, CH, DH, EH, FH >;
GROUND < AN, BN, CN, DN, EN, FN >.

REVISIONS		
CHK	CHANGE NO.	REV.

(BA REG & D REG) (K403)

TITLE	DATA PATH	SIZE CODE	D CS M7874-0-1	NUMBER	D	REV.	D
SCALE		SHEET	3 OF 10	DIST.			

D CS M7874-0-1

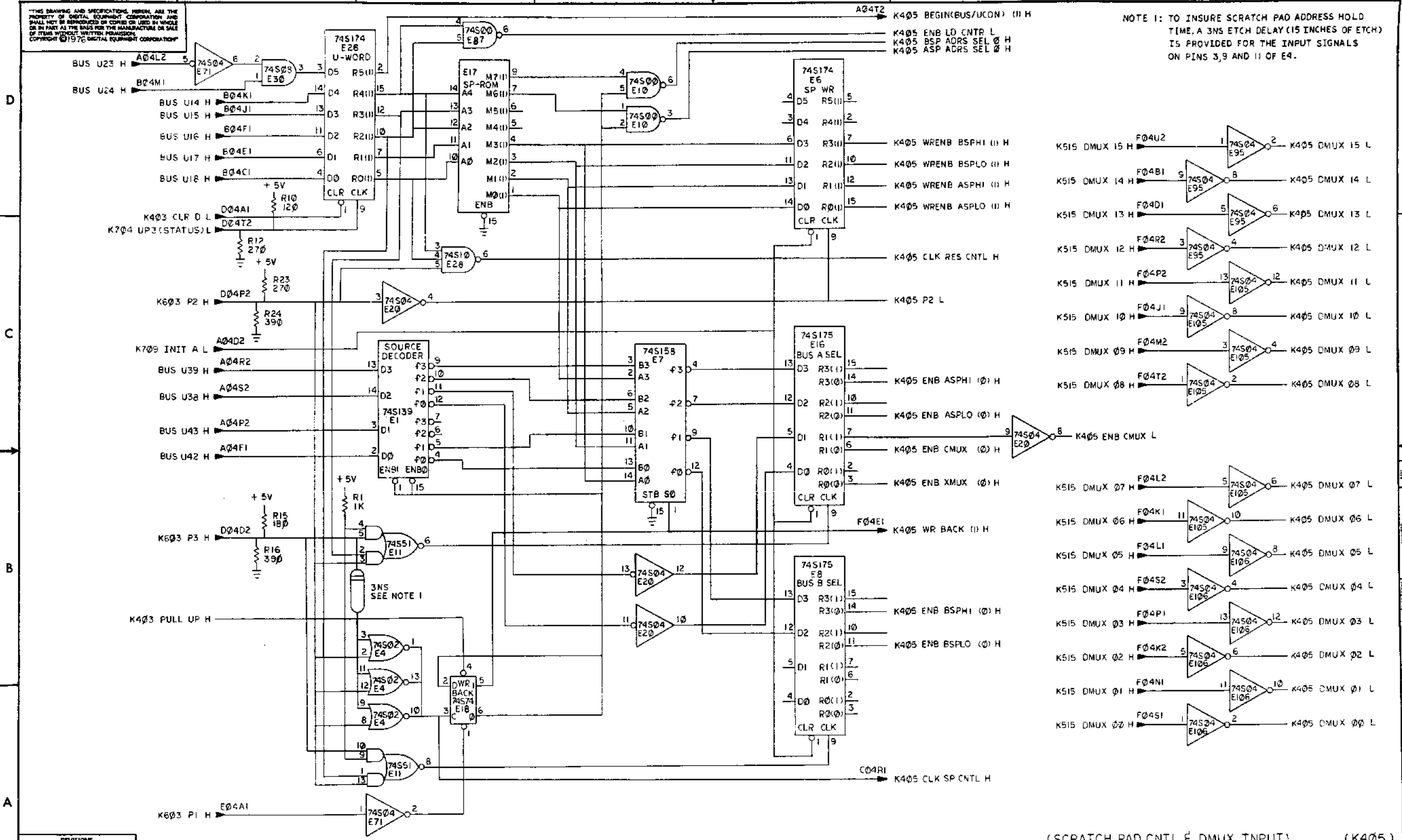


(ALU & D(C) REG) (K404)

TITLE	SIZE/COO	NUMBER	REV.
DATA PATH	DCS M7874-0-1	D	D

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NOTE 1: TO INSURE SCRATCH PAD ADDRESS HOLD TIME, A 3NS ETCH DELAY (15 INCHES OF ETCH) IS PROVIDED FOR THE INPUT SIGNALS ON PINS 3, 9 AND 11 OF E4.



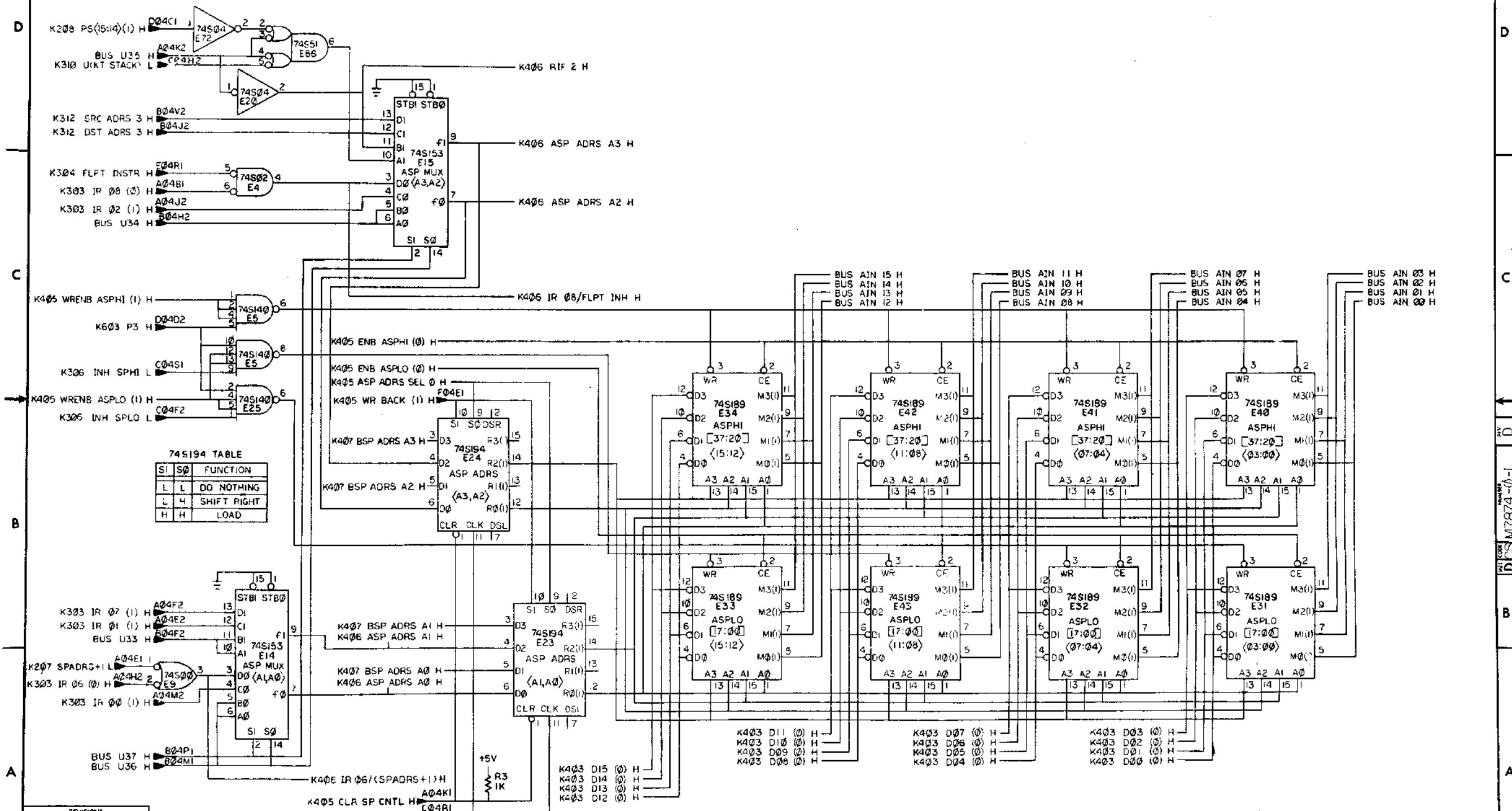
(SCRATCH PAD CNTL & DMUX INPUT) (K405)

TITLE	DATA PATH	SIZE CODE	D CS	NUMBER	M7874-0-1	REV.	D
SCALE		SHEET	5 OF 10	DIST.			

REVISIONS		
CHK	CHANGE NO.	REV.

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NOTE:
REFER TO THE TABLE ON K402 FOR THE SP ADDRESS ASSIGNMENTS WITHIN THE ASP.



74S194 TABLE

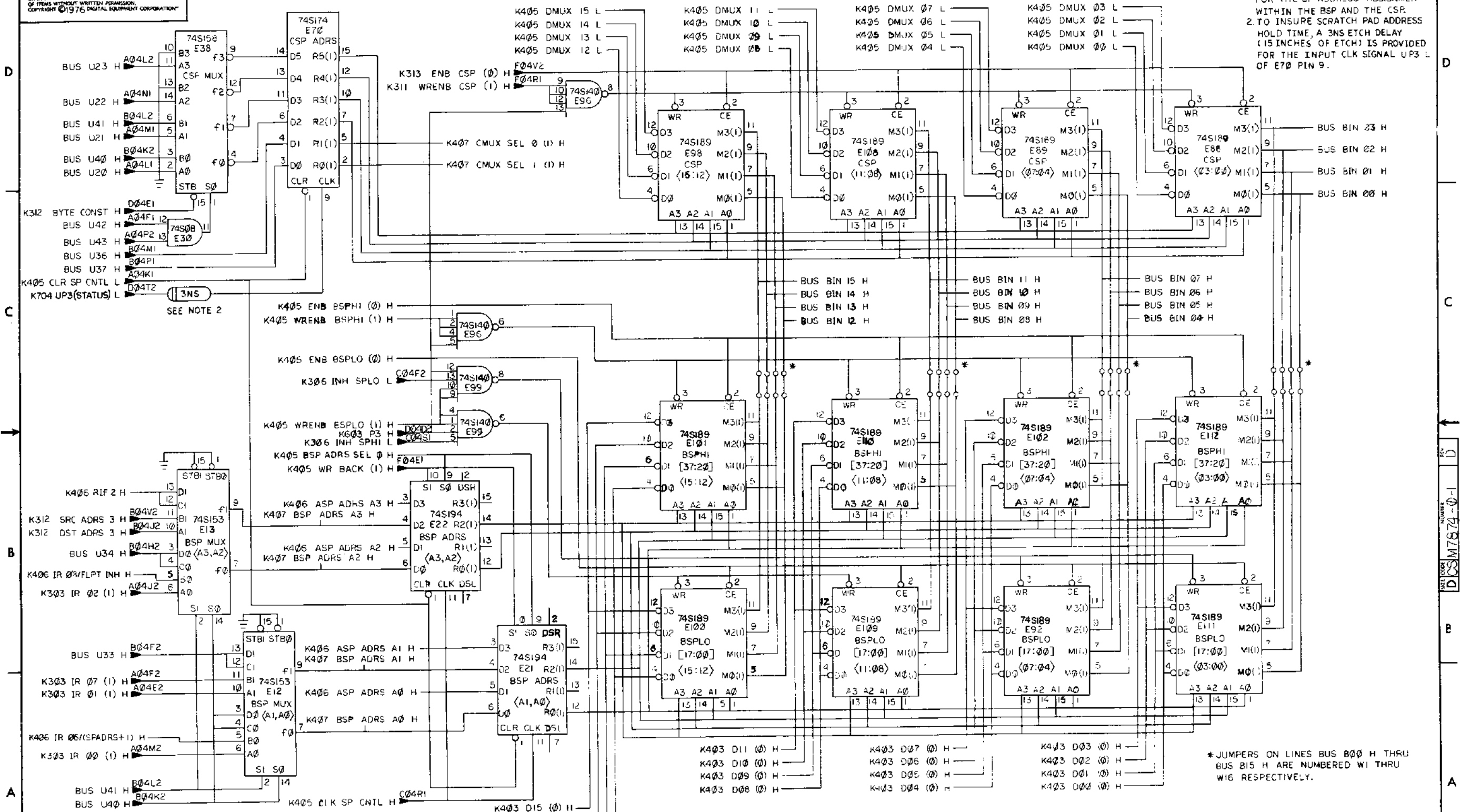
SI	S0	FUNCTION
L	L	DO NOTHING
L	H	SHIFT RIGHT
H	H	LOAD

REVISIONS

CHK	CHANGE NO	REV

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NOTES:
1. REFER TO THE TABLE ON K402 FOR THE SP ADDRESS ASSIGNMENT WITHIN THE BSP AND THE CSP.
2. TO INSURE SCRATCH PAD ADDRESS HOLD TIME, A 3NS ETCH DELAY (15 INCHES OF ETCH) IS PROVIDED FOR THE INPUT CLK SIGNAL UP3 L OF E70 PIN 9.



REVISIONS

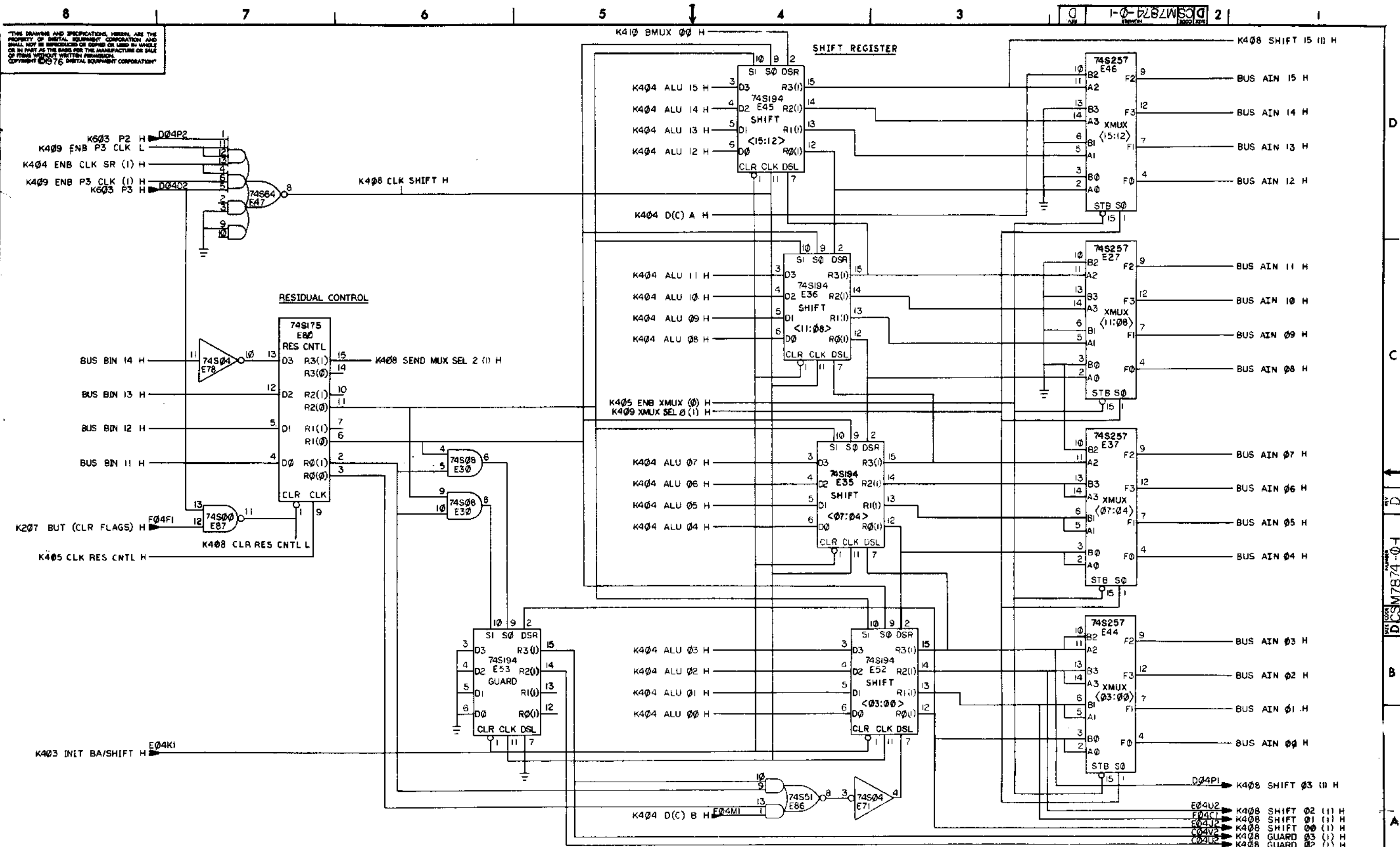
CHR	CHANGE NO.	REV.

(B,C SCRATCH PADS & ADRS) (K407)

TITLE	SIZE/SCALE	NUMBER	REV.
DATA PATH	D	CSM7874-0-1	D

SHEET 7 OF 10

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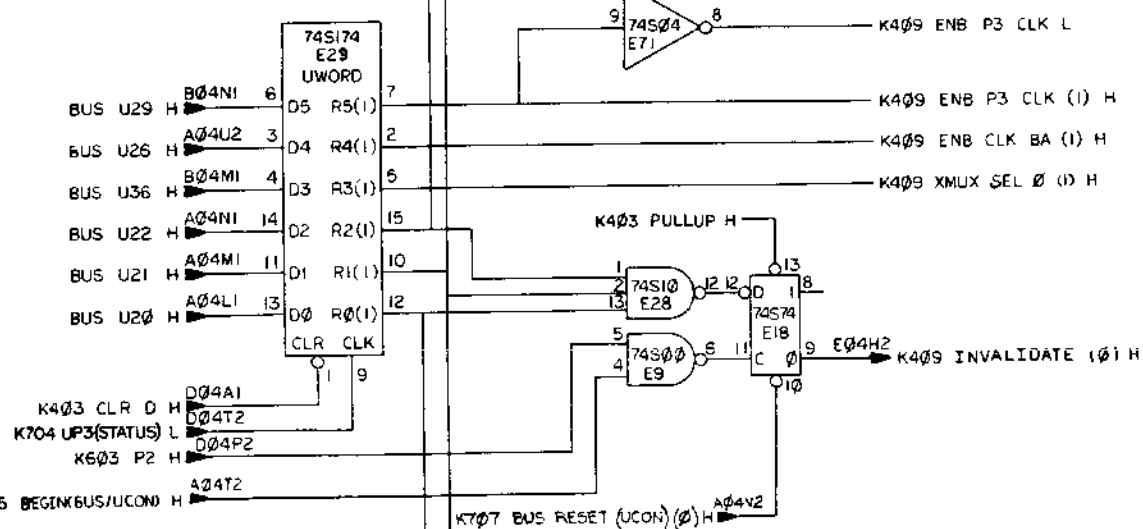
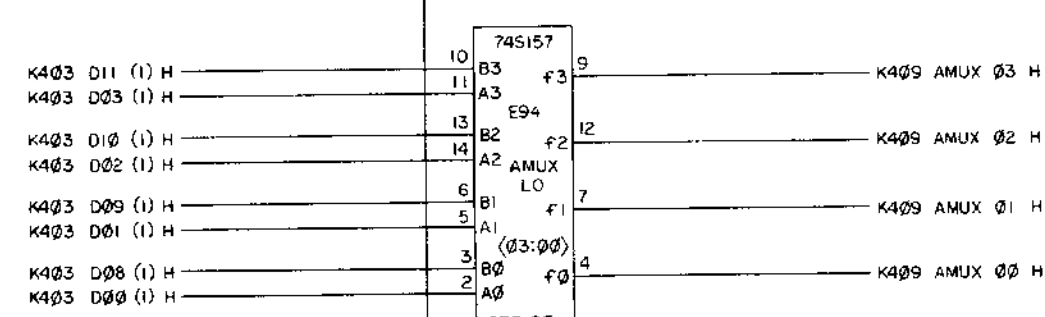
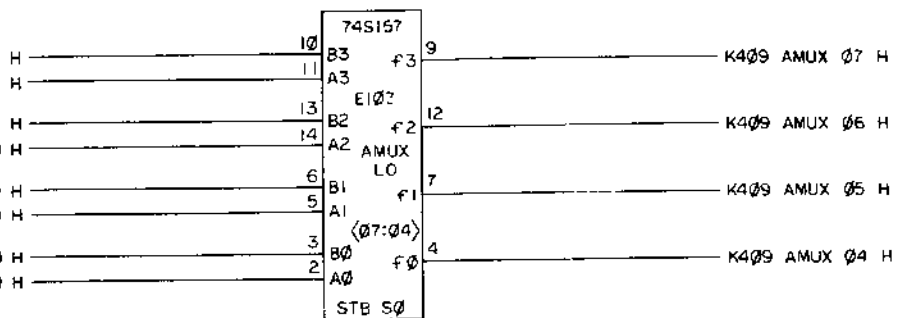
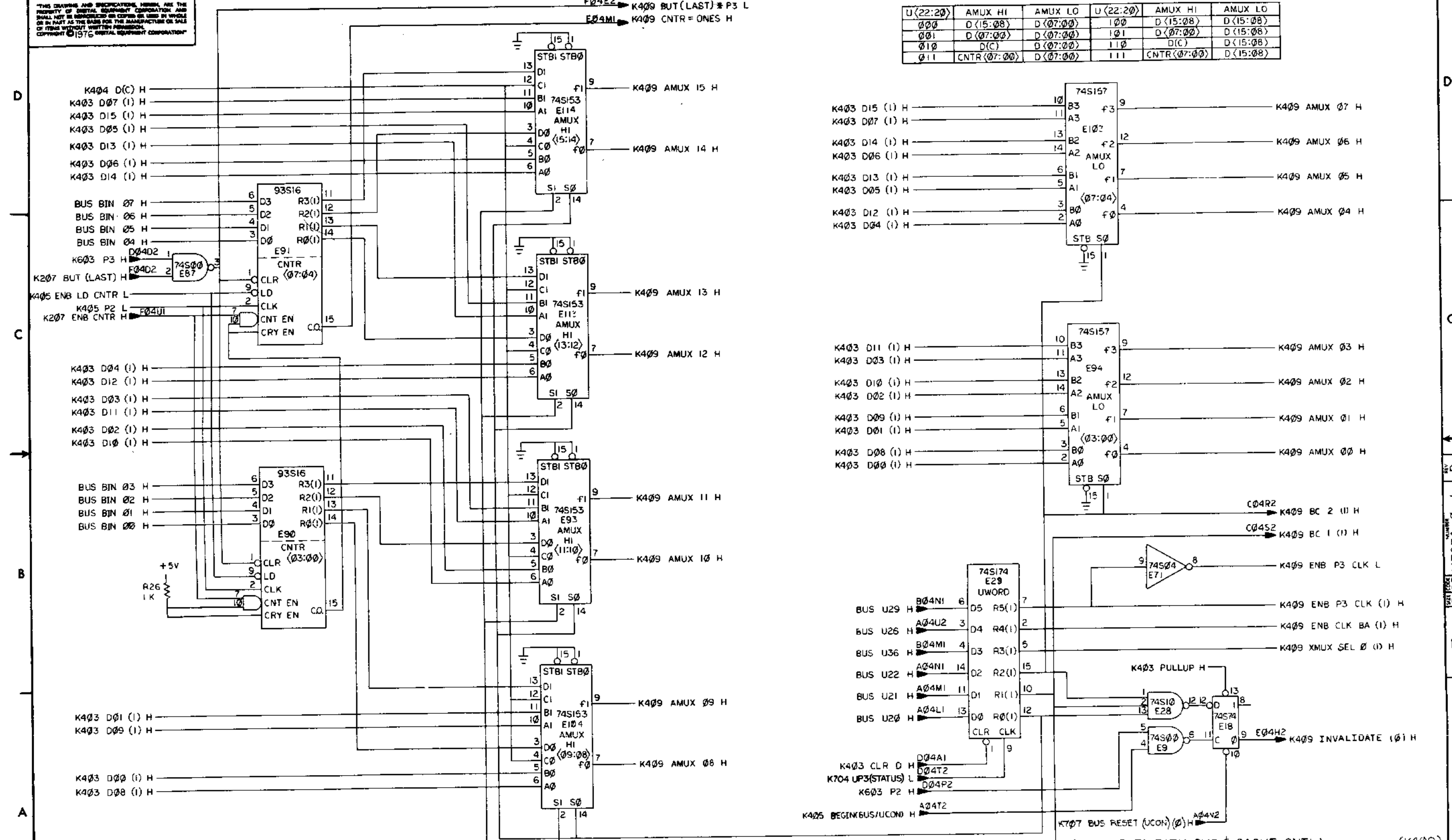
REVISIONS		
CHK	CHANGE NO.	REV.

(SHIFT & GUARD REG, XMUX AND RES CNTL) (K408)

TITLE	SIZE CODE	NUMBER	REV.
DATA PATH	D	CSM7874-0-1	D
SCALE	SHEET	OF	TOTAL
	8	10	

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U(22:20)	AMUX HI	AMUX LO	U(22:20)	AMUX HI	AMUX LO
000	D(15:08)	D(07:00)	100	D(15:08)	D(15:08)
001	D(07:00)	D(07:00)	101	D(07:00)	D(15:08)
010	D(C)	D(07:00)	110	D(C)	D(15:08)
011	CNTR(07:00)	D(07:00)	111	CNTR(07:00)	D(15:08)



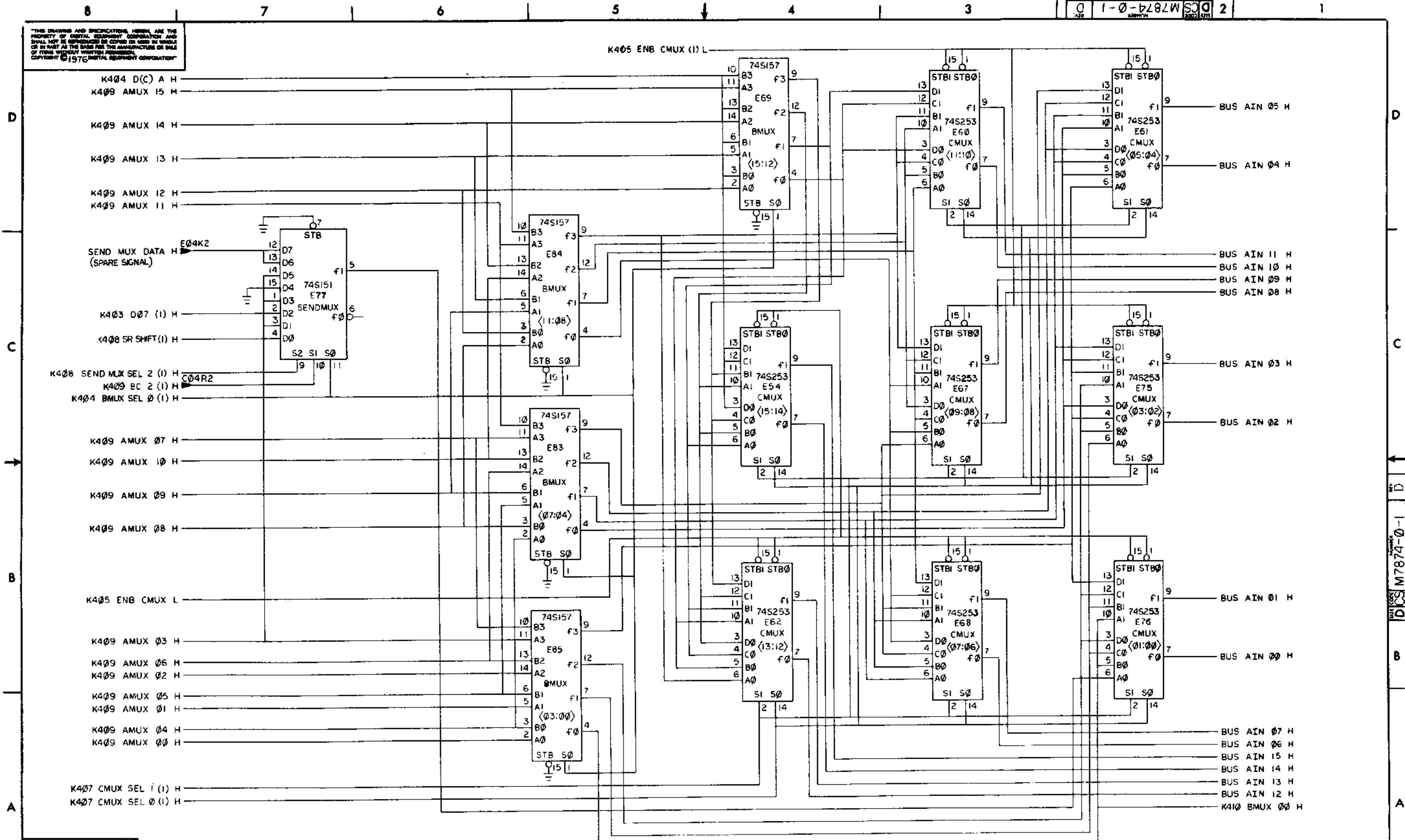
REVISIONS		
CHK	CHANGE NO.	REV.

(AMUX; DATA PATH BUS & CACHE CNTL) (K409)

TITLE	DATA PATH	SIZE CODE	D CS M7874-0-1	NUMBER		REV	D
SCALE		SHEET	9 OF 10	DIST.			

DCS M7874-0-1 D

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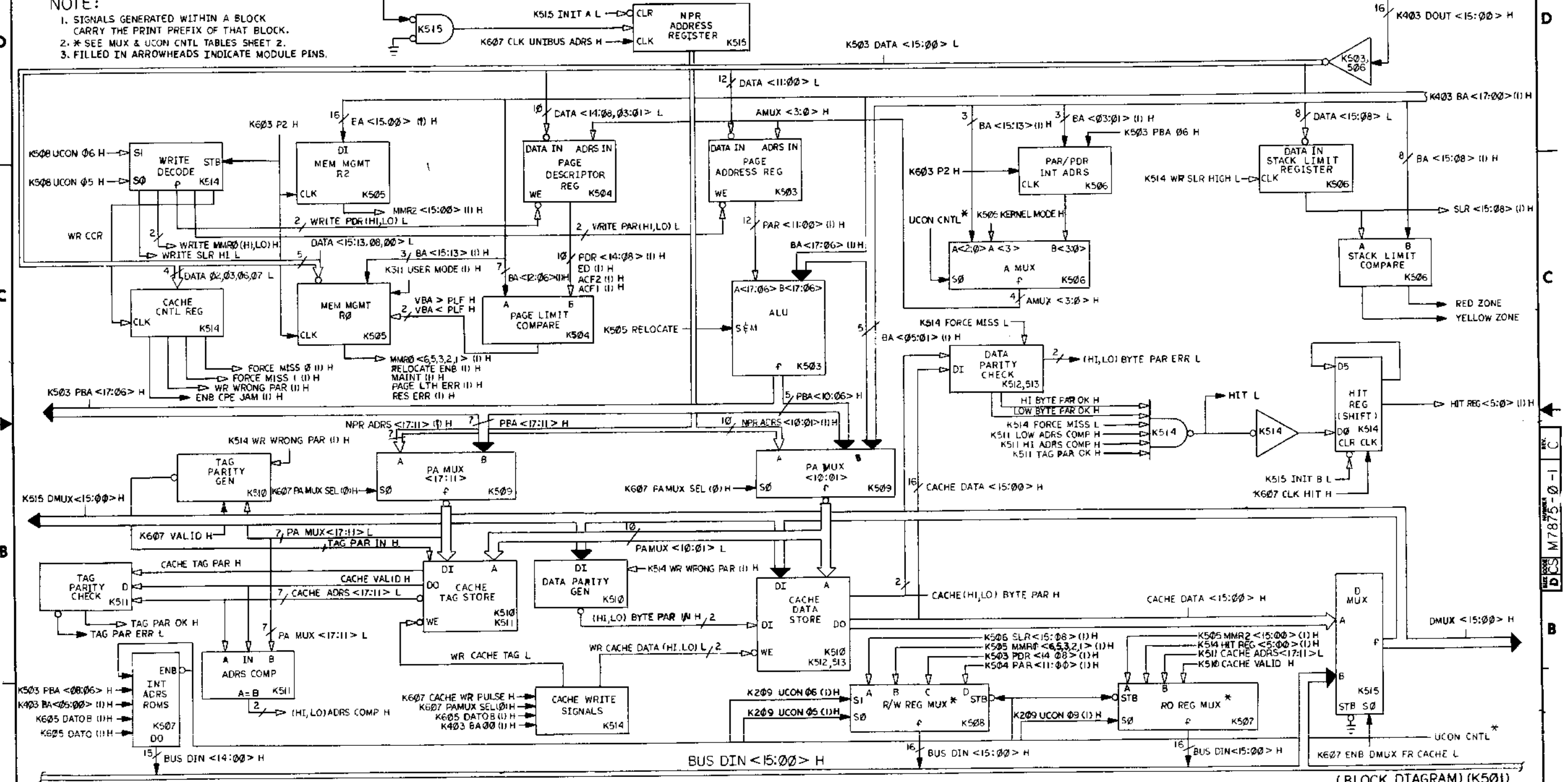
REVISIONS		
CHK	CHANGE NO.	REV.

(BMUX, CMUX, AND SENDMUX) (K410)

TITLE	SIZE/CODE	NUMBER	REV.
DATA PATH	D CS	M7874-0-1	D
SCALE	SHEET	OF	DIST.
	10	12	

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NOTE:
 1. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK.
 2. * SEE MUX & UCON CNTL TABLES SHEET 2.
 3. FILLED IN ARROWHEADS INDICATE MODULE PINS.



(BLOCK DIAGRAM) (K501)

REV.	CHG.	NO.	DATE	BY	CHKD.
1					
2					
3					

DRN. 9-23-76	FIRST USED ON	PDP 11/60	digital
CHK'D 10/21/76	ENG. D.C. 11/10/76	TITLE	
PROJ. ENG. 11/10/76	PROD. 11/10/76	KT/CACHE	
NEXT HIGHER ASSY.			
B-DO-M7875-0	SCALE	SIZE	CODE
SHEET 1 OF 15	DIST.	NUMBER	REV.
		M7875-0-1	C

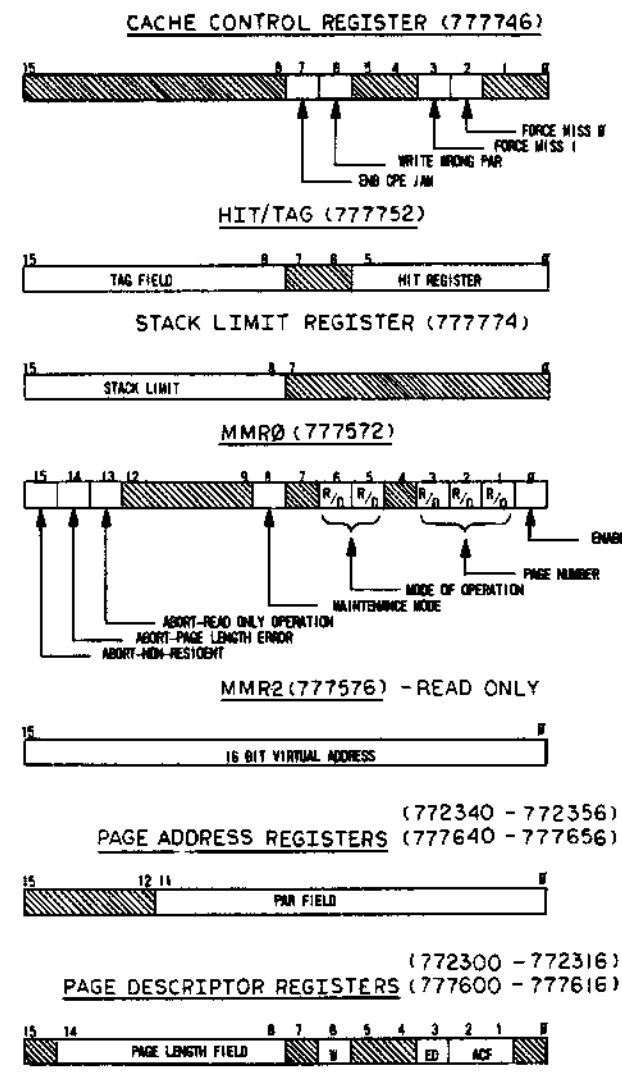
REV. 1 CS M7875-0-1 C

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KT/CACHE UCON FUNCTIONS		
SIGNALS	KT FUNCTION	OTHER CONDITIONS
UCON14	INHIBIT KT RELOCATE, 0 NO INHIBIT	UCON KT(1) H AND NOT MAINT (1) H *BIB KT MAINT (1) H
UCON13	1-DECODE MICROADDRESS DISPATCH FOR INTERNAL ADDRESSES 0-DECODE MICROADDRESS, DISPATCH FOR UNIBUS ADDRESSES	NO OTHER CONDITION ALTHOUGH INFORMATION IS GATED ONTO BUS DIN BY UCON12
UCON12	EN DIN ← DISPATCH, (ENABLES ADRS DISPATCH SELECTED BY UCON13 TO BUS DIN)	UCON KT(1) H * INH UCON(BUS XFER) L
UCON11	EN DIN ← KT REGS 1, (ENABLES REGISTERS SELECTED BY UCON09 TO BUS DIN)	UCON KT(1) H * INH UCON(BUS XFER) L
UCON10	EN DIN ← KT REGS 2, (ENABLES REGISTERS SELECTED BY UCON08, 05 TO BUS DIN)	UCON KT(1) H * INH UCON(BUS XFER) L
UCON09	1-SELECTS TAG, HIT FOR GATING TO BUS DIN BY UCON11 BUS DIN15 ← CACHE VALID BUS DIN<14:06> ← CACHE ADRS<17:11> L, BUS DIN<07:06> ← W, BUS DIN<05:06> ← HIT<5:0> W SELECTS MMR2 FOR GATING TO BUS DIN BY UCON11, BUS DIN<15:06> ← MMR2<15:06>	NO OTHER CONDITION
UCON08, 07	ENABLES HIGH OR LOW BYTE WRITE TO KT REGISTERS SELECTED BY UCON06, 05 1 1 WRITE HIGH AND LOW BYTES 1 0 WRITE HIGH BYTE 0 1 WRITE LOW BYTE 0 0 NULL (NO WRITE)	UCON KT(1) H * UCON XFER(1) H * PDI
UCON06, 05	SELECTS KT REGISTERS WRITTEN INTO BY UCON08, 07 OR REGISTERS GATED TO BUS DIN BY UCON10. (BIT POSITIONS DIRECTLY RELATE TO BUS DIN, EXCEPT WHERE NOTED) 1 1 SEL. PAR<11:06> FOR WRITE OR READ PAR<15:12> UNUSED AND 0 1 0 SEL. PDR<14:08, 03:01> FOR WRITE OR READ PDR 06 READ ONLY PDR<15, 07, 05, 04, 00> UNUSED AND 0 0 1 MMR0<15:13, 05, 00> FOR WRITE OR READ MMR0<06, 05, 03:00> READ ONLY MMR0<12:09, 07, 04> UNUSED AND 0 0 0 SEL. SLR<10:00> FOR WRITE OR READ BIT1: ENB CPE JMW(1) H BIT0: WRITE WRONG PAR(1) H BIT3: FORCE MISS 1(1) H BIT2: FORCE MISS 0(1) H BIT5: 4, 1, 0 UNUSED AND 0	WRITE ENABLE OF UCON08, 07 OR BUS DIN ENABLE OF UCON10

READ/WRITE REGISTER MUX TO BUS DIN				
BUS DIN	INPUT PORT			
	A	B	C	D
15	SLR15(1) H	NON RES ERROR (1) H	0	0
14	SLR14(1) H	PAGE LTH ERROR (1) H	PDR14(1) H	0
13	SLR13(1) H	READ ONLY ERROR (1) H	PDR13(1) H	0
12	SLR12(1) H	0	PDR12(1) H	0
11	SLR11(1) H	0	PDR11(1) H	PAR11(1) H
10	SLR10(1) H	0	PDR10(1) H	PAR10(1) H
09	SLR09(1) H	0	PDR09(1) H	PAR09(1) H
08	SLR08(1) H	MAINT (1) H	PDR08(1) H	PAR08(1) H
07	ENB CPE JMW (1) H	0	0	PAR07(1) H
06	WRITE WRONG PAR (1) H	MMR0 06 (1) H	W (1) H	PAR06(1) H
05	0	MMR0 05 (1) H	0	PAR05(1) H
04	0	0	0	PAR04(1) H
03	FORCE MISS 1 (1) H	MMR0 03 (1) H	ED (1) H	PAR03(1) H
02	FORCE MISS 0 (1) H	MMR0 02 (1) H	ACF2(1) H	PAR02(1) H
01	0	MMR0 01 (1) H	ACF1(1) H	PAR01(1) H
00	0	RELOCATE ENB (1) H	0	PAR00(1) H

READ ONLY REG MUX TO BUS DIN		
BUS DIN	INPUT PORT	
	A	B
15	MMR2 15 (1) H	CACHE VALID H
14	MMR2 14 (1) H	CACHE ADRS 17 L
13	MMR2 13 (1) H	CACHE ADPS 16 L
12	MMR2 12 (1) H	CACHE ADRS 15 L
11	MMR2 11 (1) H	CACHE ADRS 14 L
10	MMR2 10 (1) H	CACHE ADRS 13 L
09	MMR2 09 (1) H	CACHE ADRS 12 L
08	MMR2 08 (1) H	CACHE ADRS 11 L
07	MMR2 07 (1) H	0
06	MMR2 06 (1) H	0
05	MMR2 05 (1) H	HIT REG 5 (1) H
04	MMR2 04 (1) H	HIT REG 4 (1) H
03	MMR2 03 (1) H	HIT REG 3 (1) H
02	MMR2 02 (1) H	HIT REG 2 (1) H
01	MMR2 01 (1) H	HIT REG 1 (1) H
00	MMR2 00 (1) H	HIT REG 0 (1) H



NOTE:
 1. MMR1(777574) READS AS ALL 0'S
 2. MMR3(777516) NOT USED
 3. TERM R/O - READ ONLY BIT.

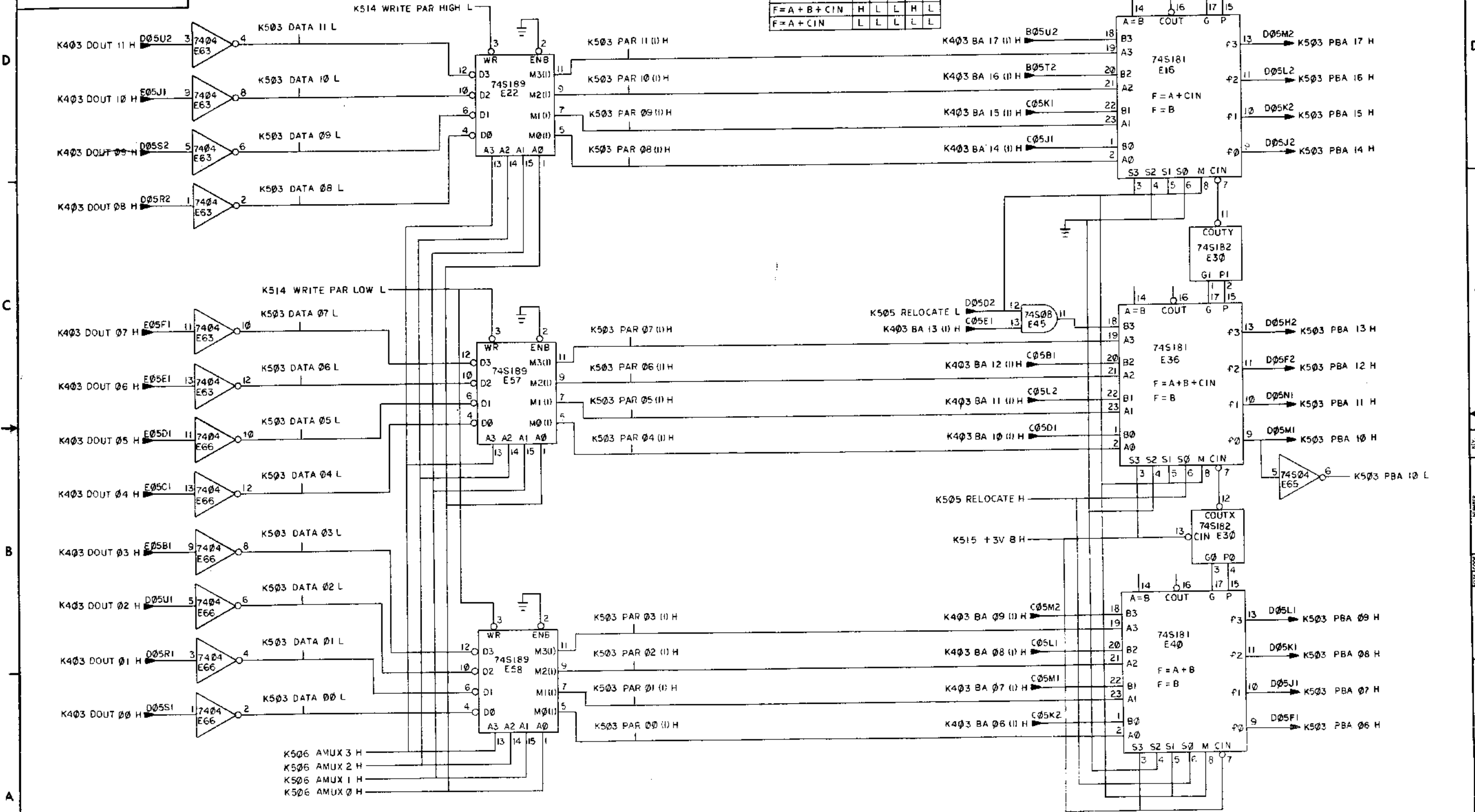
REVISIONS		
CHK	CHANGE NO.	REV.

(TABLES)		(K502)	
TITLE	KT/CACHE	SIZE CODE	NUMBER
SCALE	SHEET 2 OF 15	D CS	M7875-0-1
DIST.		REV. C	

REV. C
 M7875-0-1
 DCS

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ALU FUNCTION	S3	S2	S1	S0	M
F = B	H	L	H	L	H
F = A + B + CIN	H	L	L	H	L
F = A + CIN	L	L	L	L	L



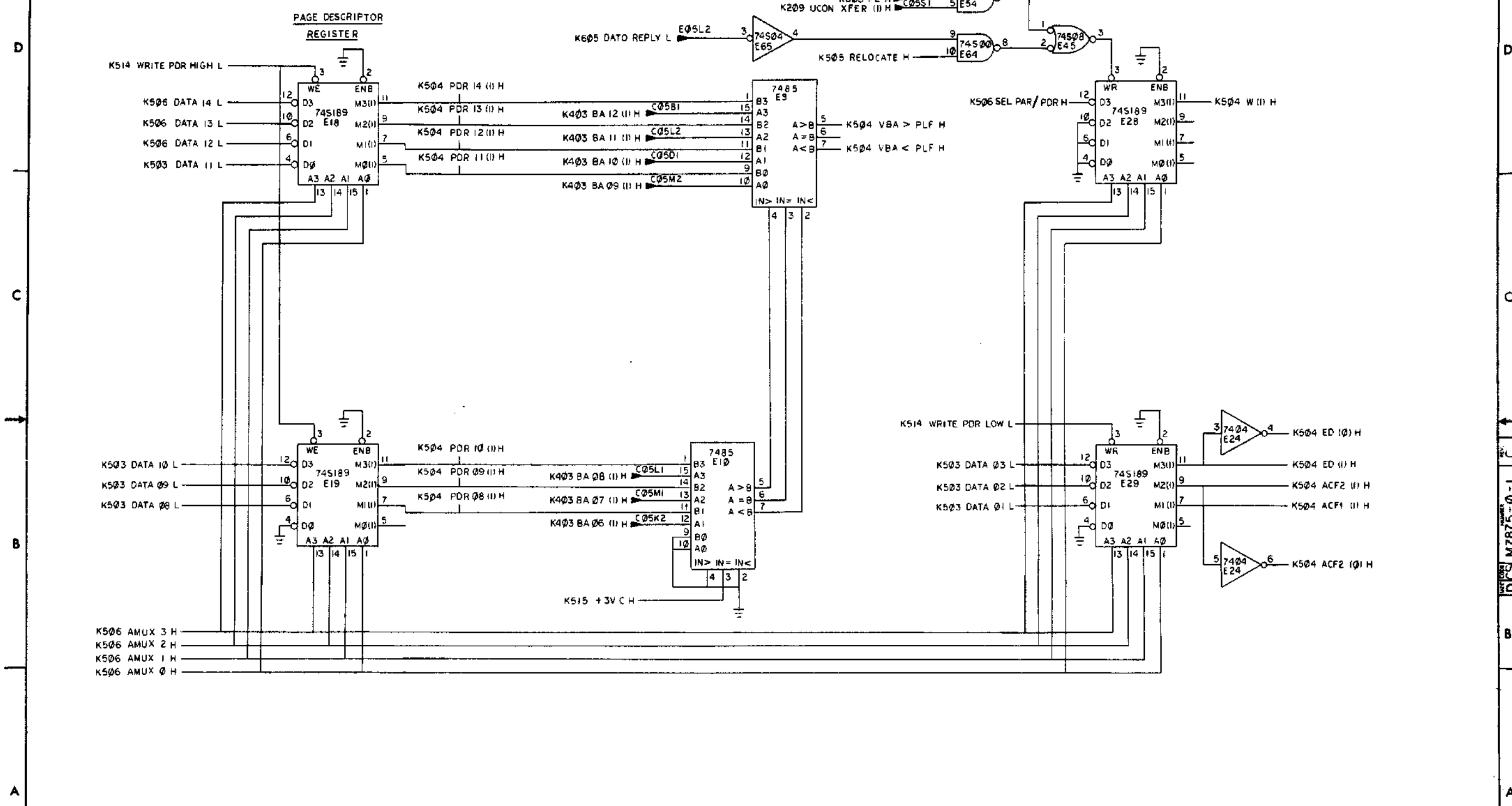
(PAGE ADDRESS REG. & ALU) (K503)

REVISIONS		
CHK	CHANGE NO	REV.

TITLE	KT/CACHE	SIZE CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE	---	SHEET	3 OF 15	DIST.			

REV. C NUMBER DCS M7875-0-1

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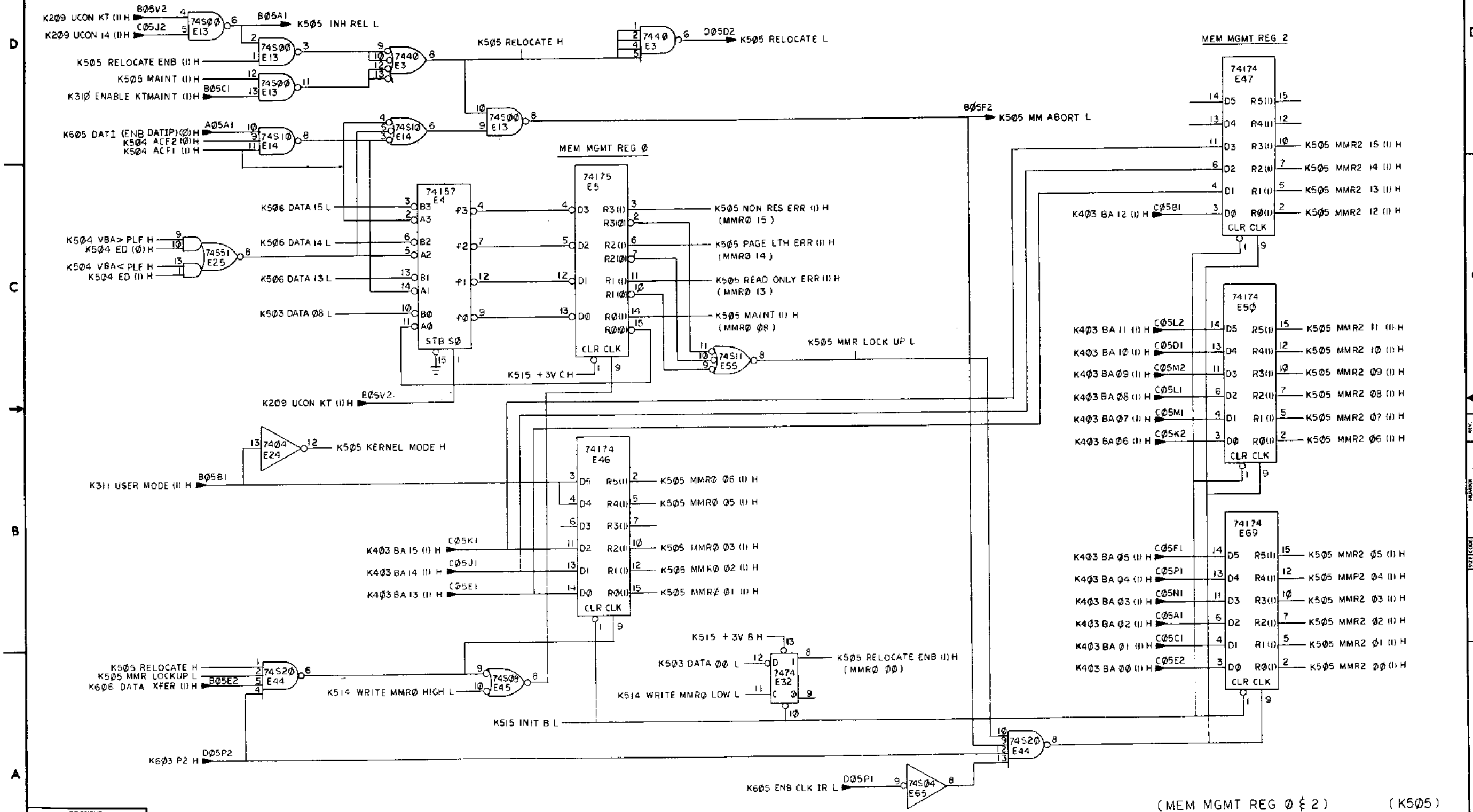
REVISIONS		
CHK	CHANGE NO.	REV.

(PAGE DESCRIPTOR REGISTERS) (K504)

TITLE	KT/CACHE	SIZE/CODE	D/CS	NUMBER	M7875-0-1	REV.	C
SCALE		SHEET	4 OF 15	DIST.			

DCS M7875-0-1 C

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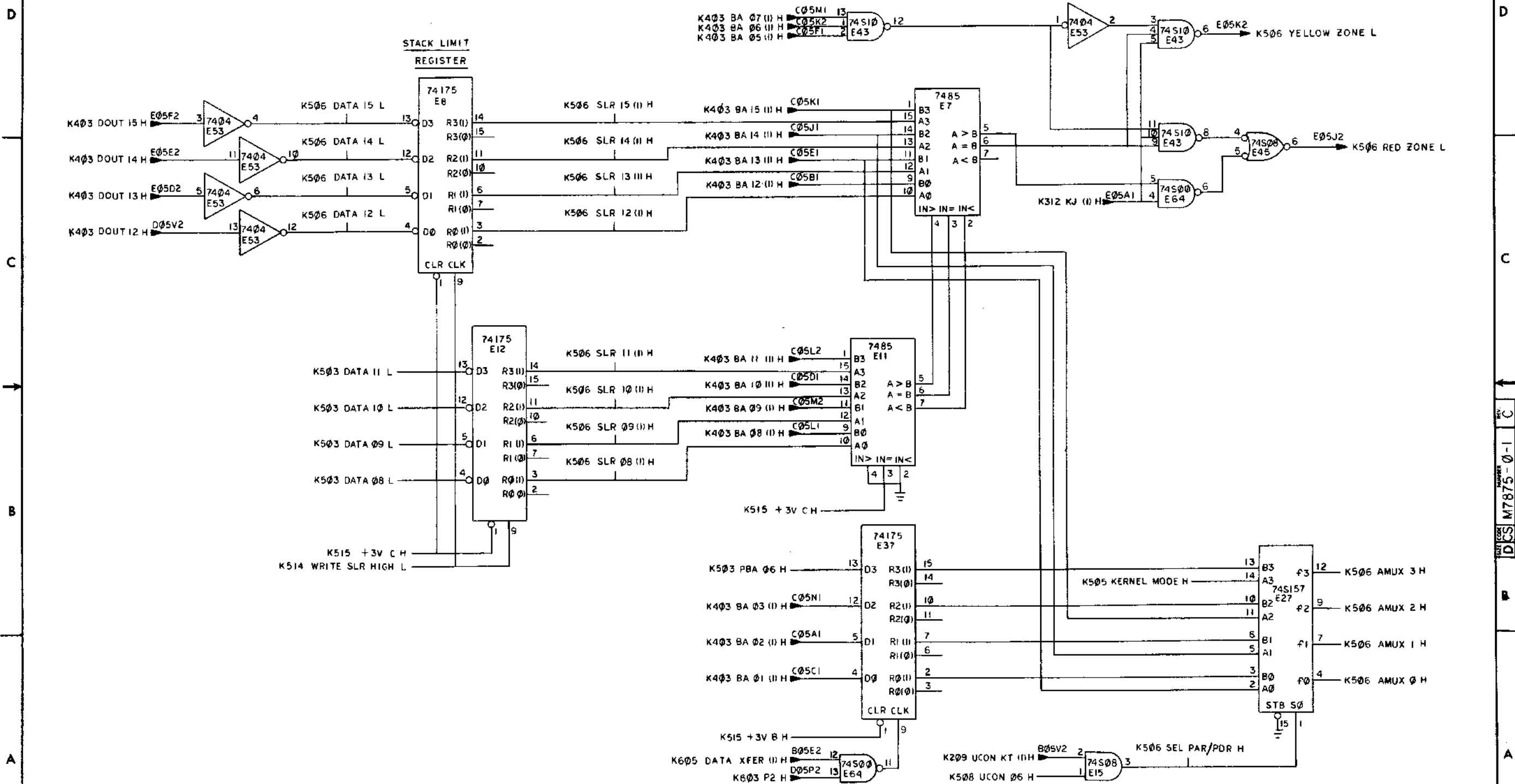
(MEM MGMT REG 0 & 2) (K505)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KT/CACHE	SIZE CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE		SHEET	5 OF 15	DIST.			

REV. 1-1-75 DCS M7875-0-1 C

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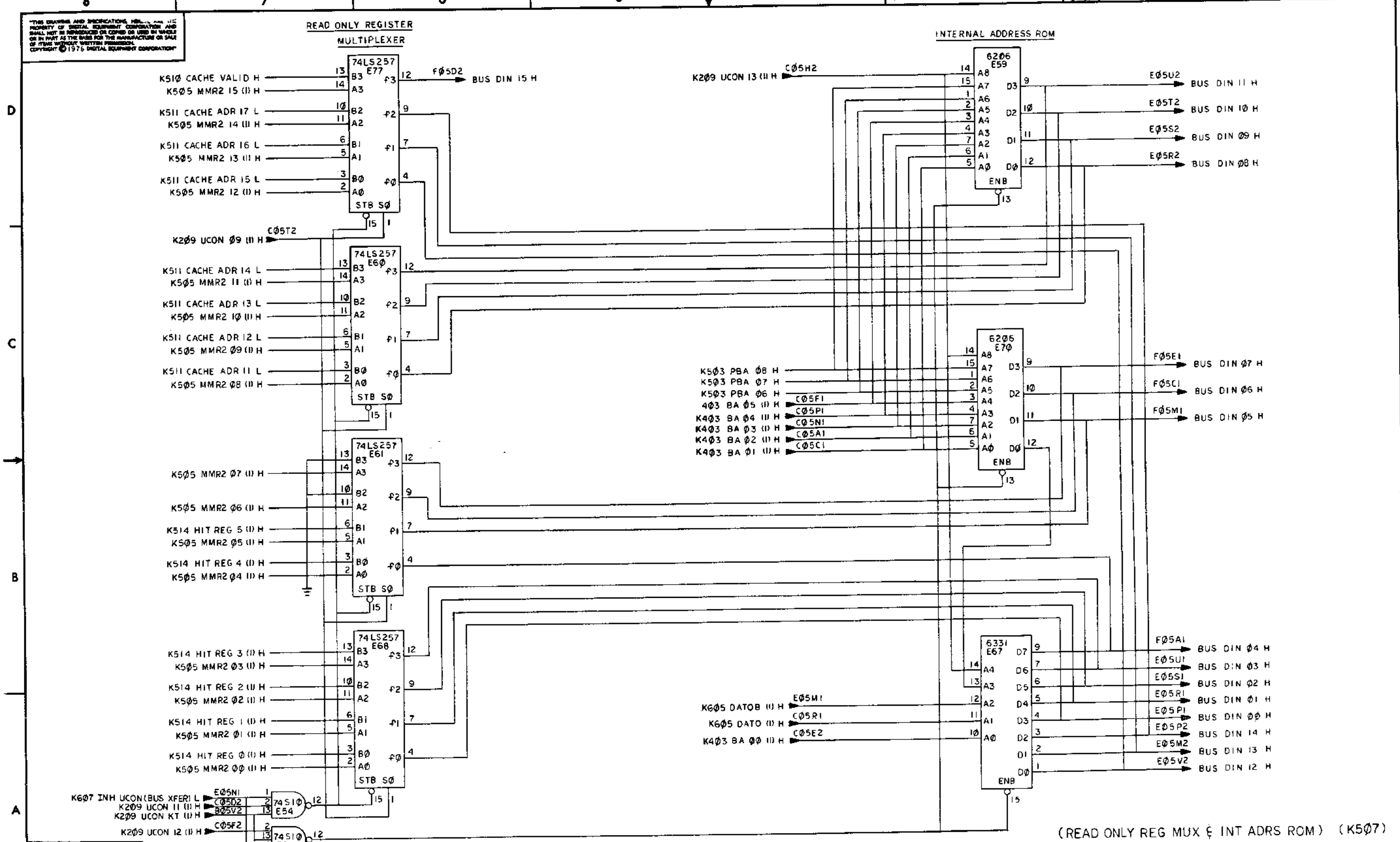


(STACK LIMIT REG & AMUX) (K506)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE CODE	NUMBER	REV.
KT/CACHE	DCS	M7875-0-1	C
SCALE	SHEET	DIST.	
	6 OF 15		

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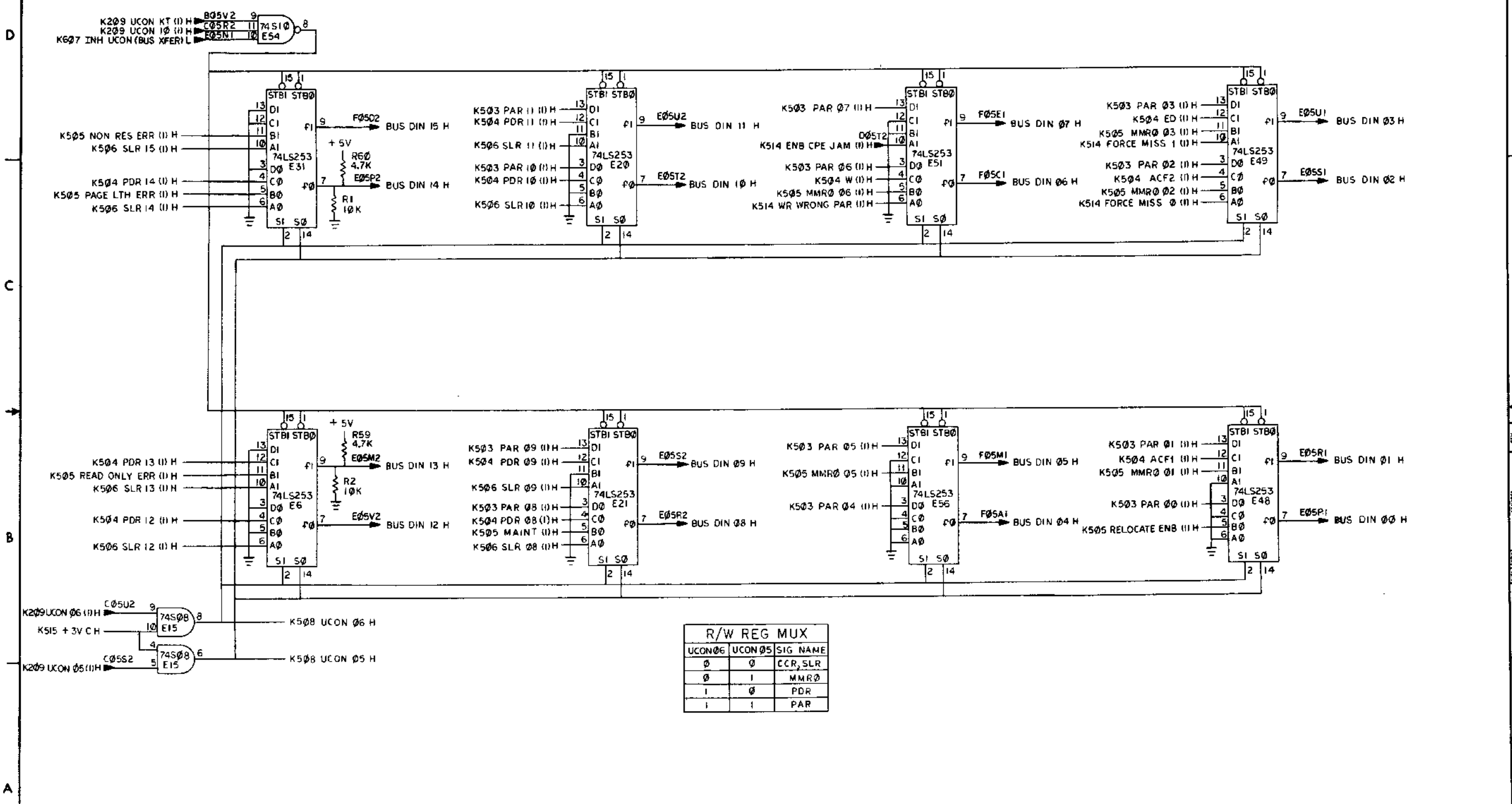
(READ ONLY REG MUX & INT ADRS ROM) (K507)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KT/CACHE	SIZE/CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE		SHEET	7 OF 15	DIST.			

DIGITAL EQUIPMENT CORPORATION
M7875-0-1

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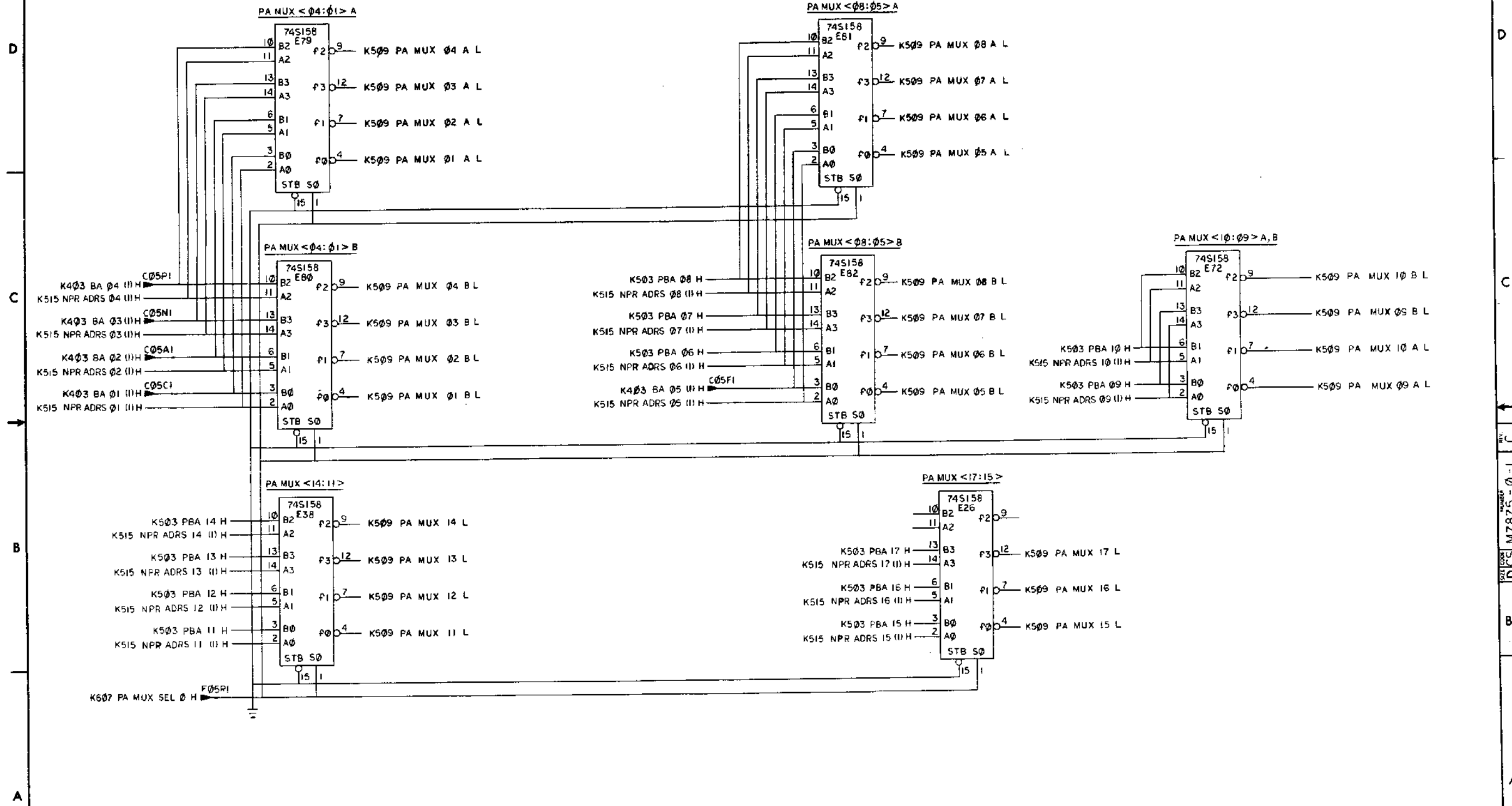
UCON06	UCON05	SIG NAME
0	0	CCR, SLR
0	1	MMR0
1	0	PDR
1	1	PAR

(READ/WRITE REGISTER MULTIPLEXER) (K508)

REVISIONS		
CHK	CHANGE NO	REV.

TITLE	KT/CACHE	SIZE CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE	1/1	SHEET	8 OF 15	DIST.			

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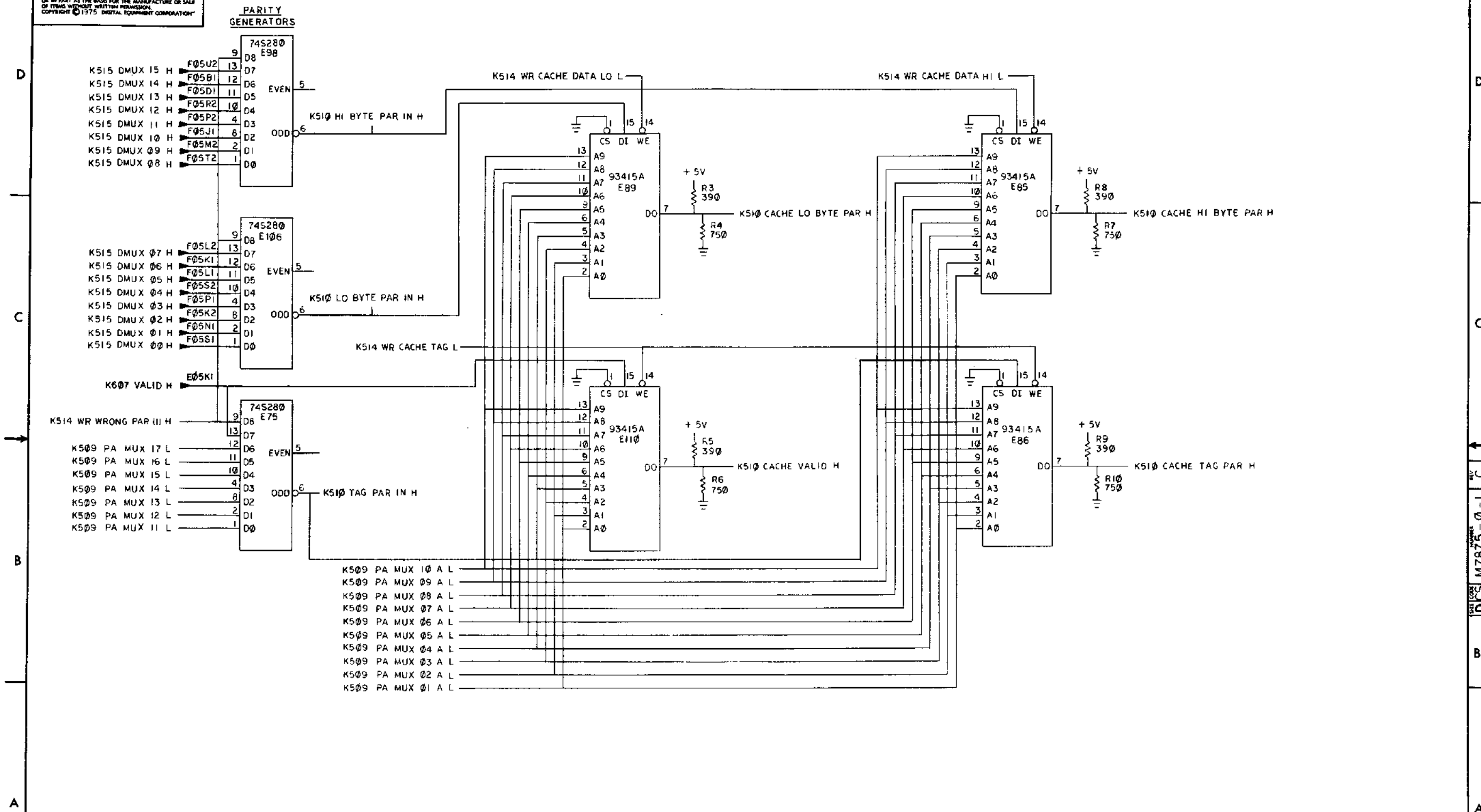


(PHYSICAL ADRS MUX) (K509)

REVISIONS		
CHK	CHANGE NO	REV

TITLE	KT/CACHE	SIZE	000B	NUMBER	D CS M7875-0-1	REV.	C
SCALE	---	SHEET	9 OF 15	DIST.			

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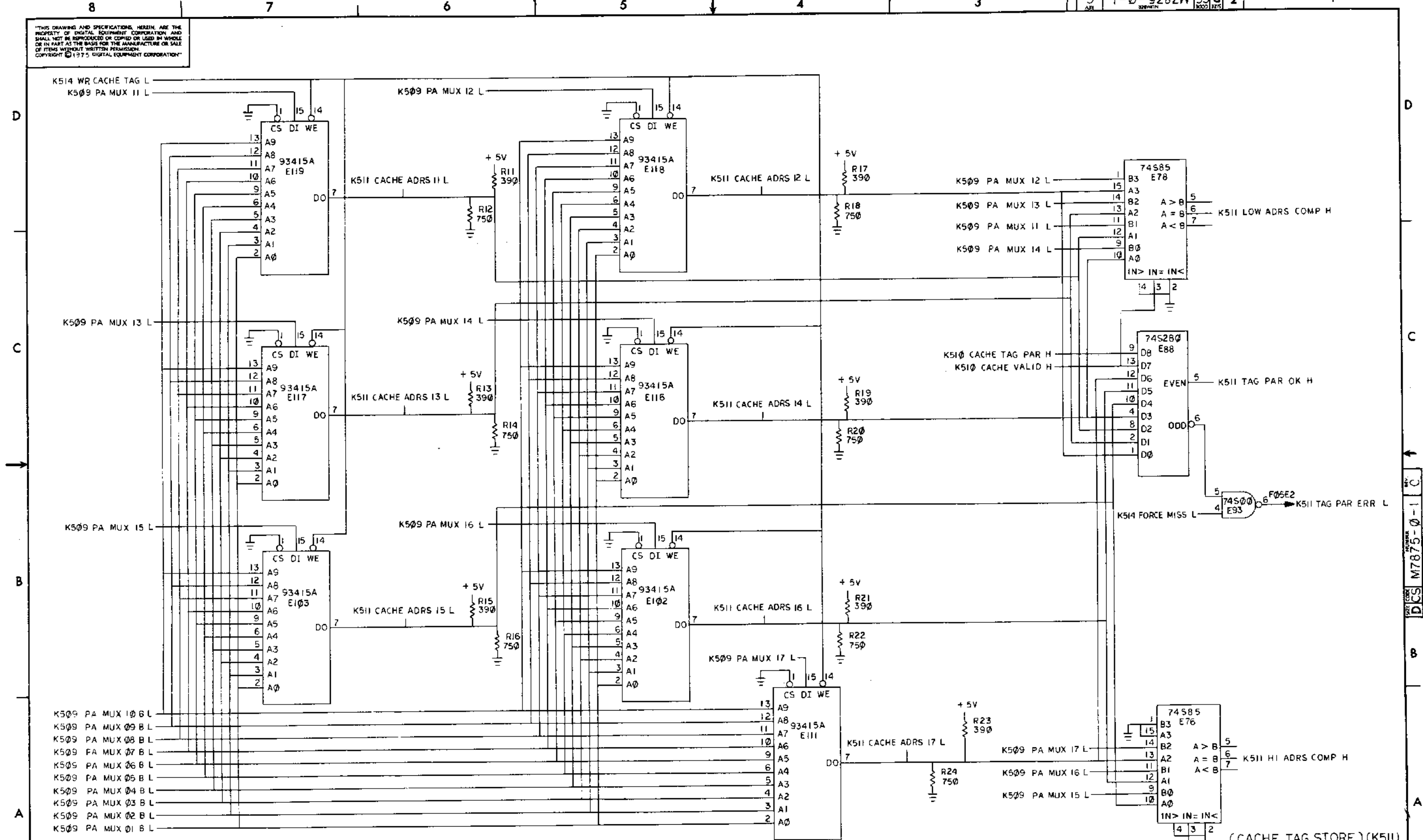


(CACHE VALID & PARITY) (K510)

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	KT/ CACHE	SIZE CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE	1/1	SHEET	10	OF	15	DIST.	

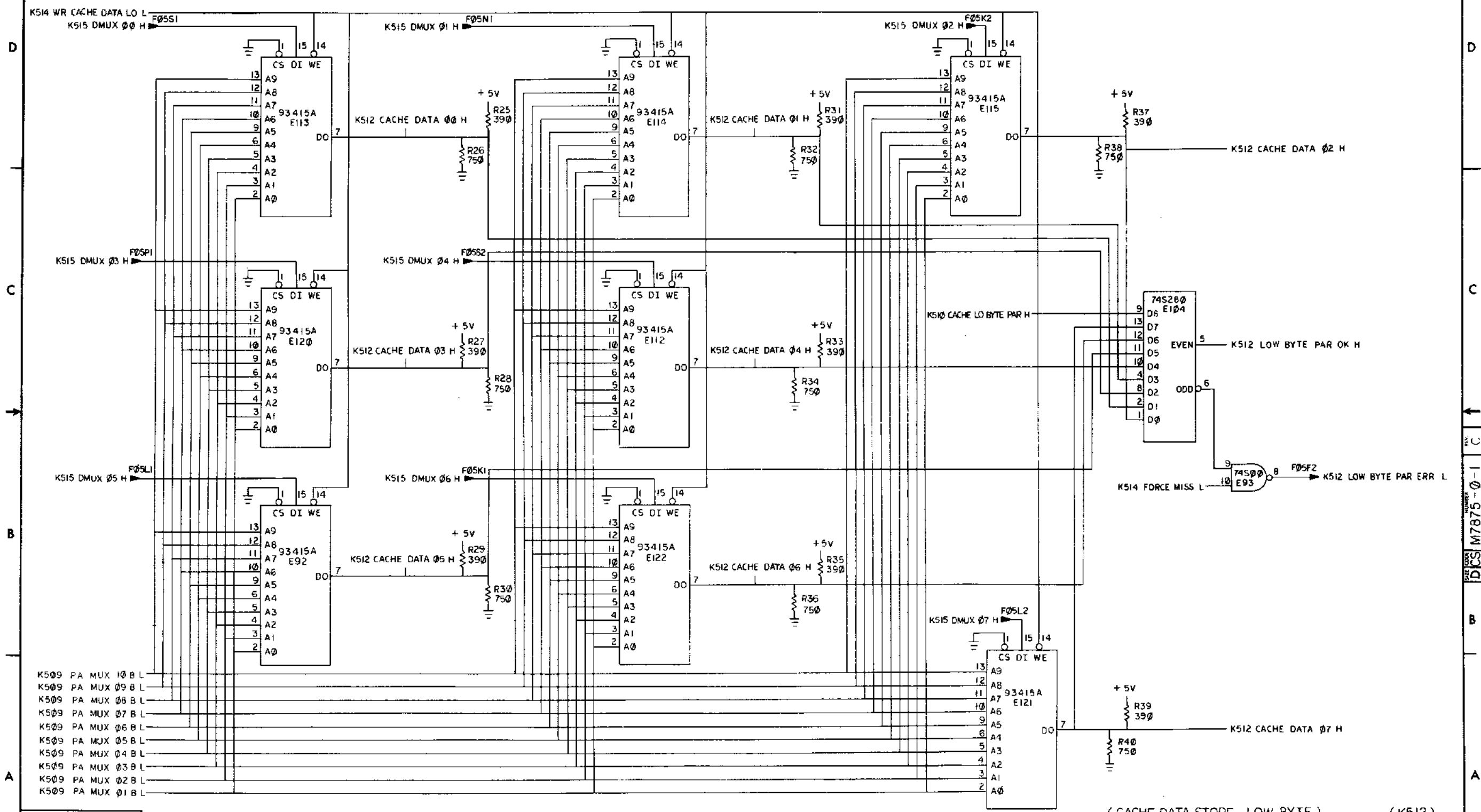
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REVISIONS		
CHK	CHANGE NO	REV.

DCS M7875-0-1 C

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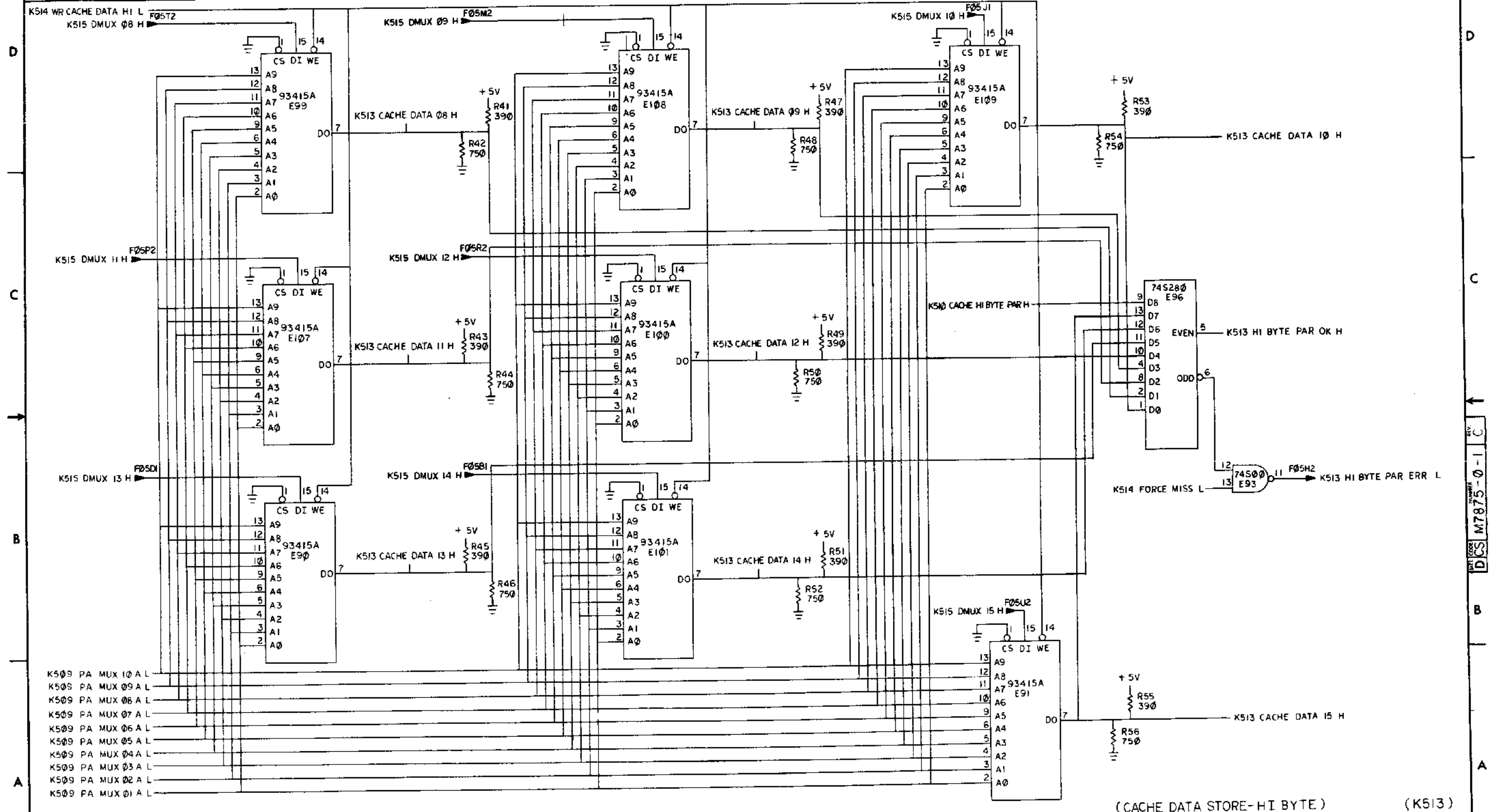
- K509 PA MUX 10 B L
- K509 PA MUX 09 B L
- K509 PA MUX 08 B L
- K509 PA MUX 07 B L
- K509 PA MUX 06 B L
- K509 PA MUX 05 B L
- K509 PA MUX 04 B L
- K509 PA MUX 03 B L
- K509 PA MUX 02 B L
- K509 PA MUX 01 B L

(CACHE DATA STORE- LOW BYTE) (K512)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KT/CACHE	SIZE CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE		SHEET	12 OF 15	DIST.			

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- K509 PA MUX 10 A L
- K509 PA MUX 09 A L
- K509 PA MUX 06 A L
- K509 PA MUX 07 A L
- K509 PA MUX 06 A L
- K509 PA MUX 05 A L
- K509 PA MUX 04 A L
- K509 PA MUX 03 A L
- K509 PA MUX 02 A L
- K509 PA MUX 01 A L

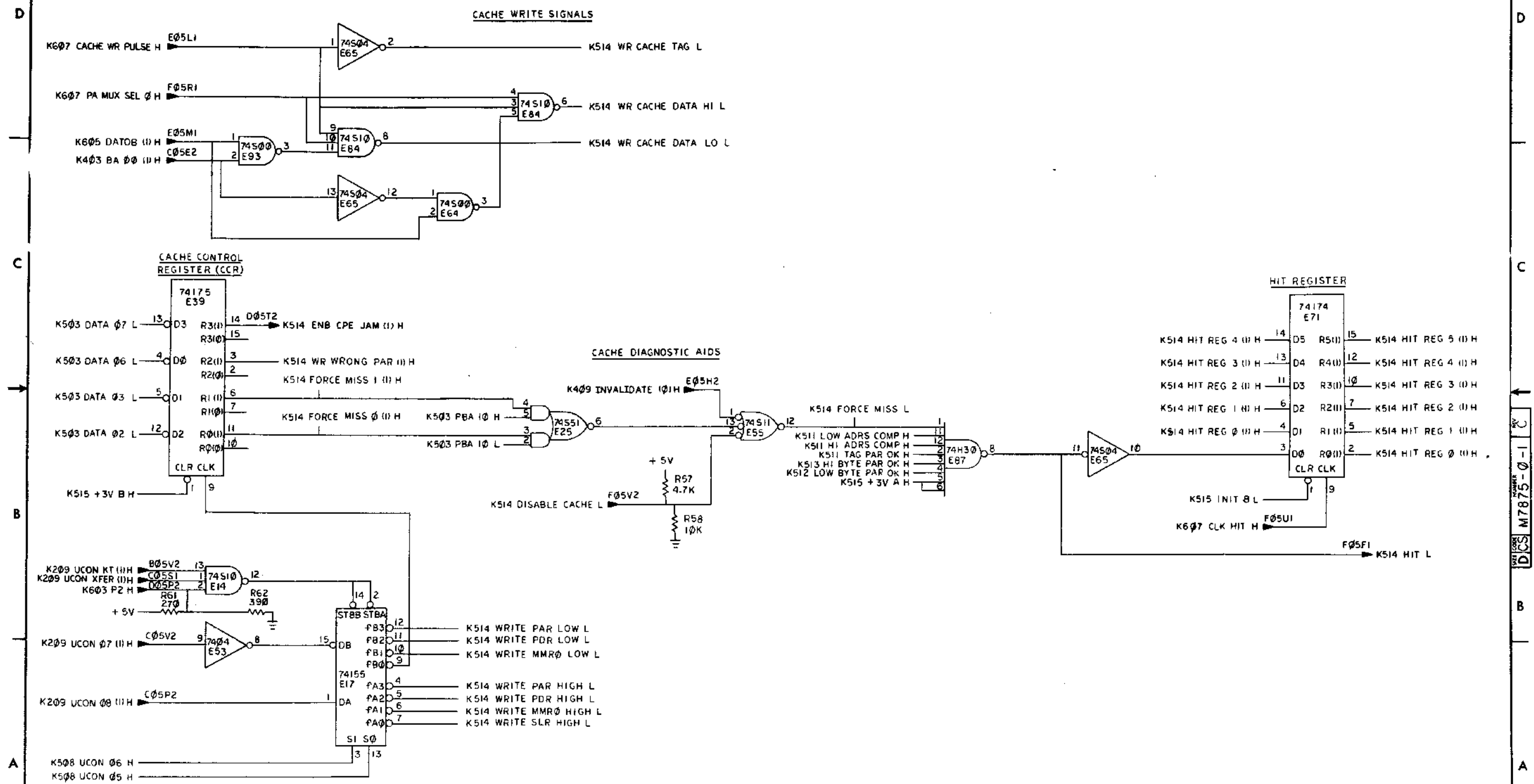
(CACHE DATA STORE-HI BYTE) (K513)

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	KT/CACHE	SIZE/CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE	1/1	SHEET	13 OF 15	DIST.			

REV. C
D CS M7875-0-1

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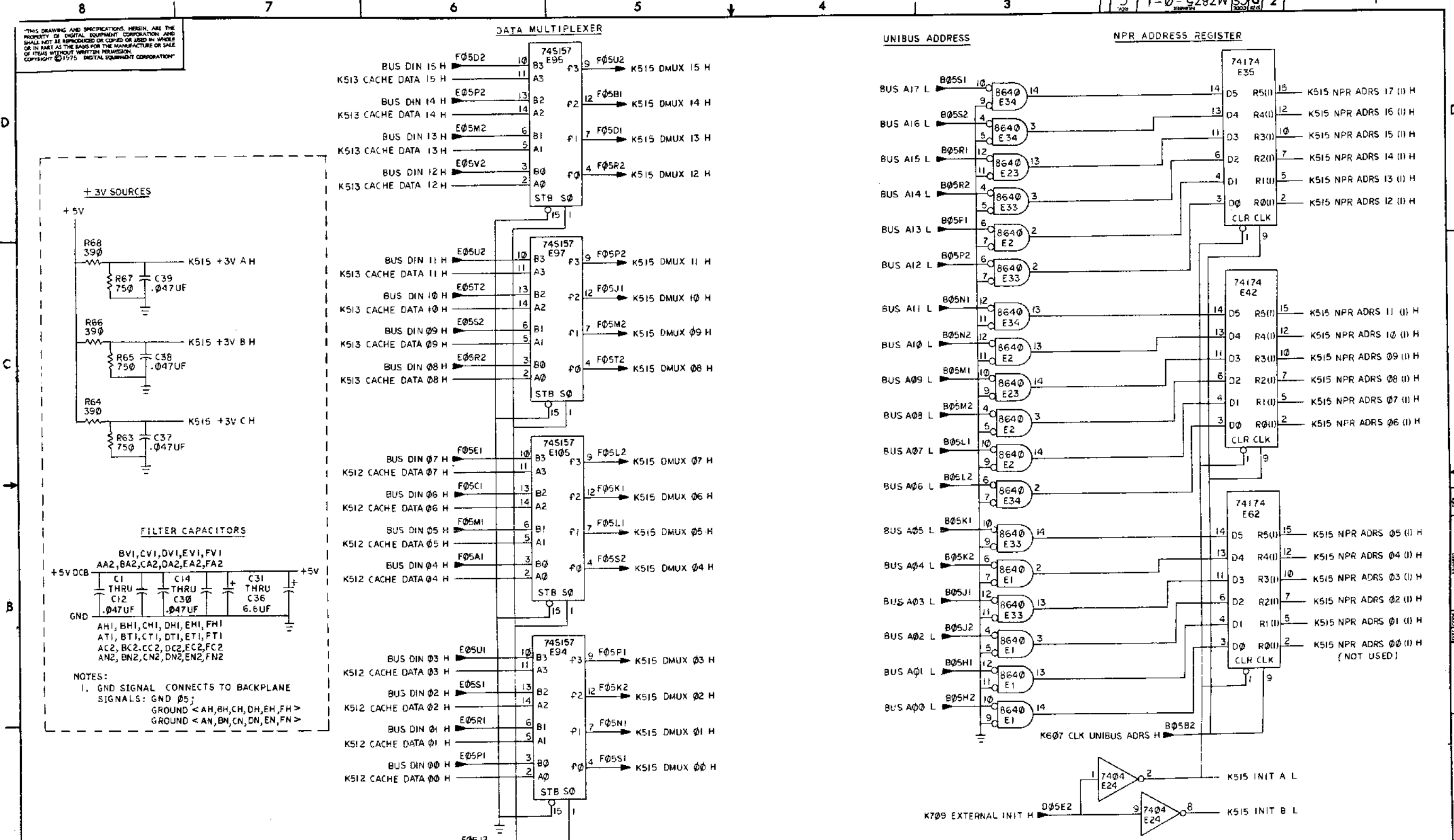
(CACHE CONTROL) (K514)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	KT/CACHE	SIZE CODE	D CS	NUMBER	M7875-0-1	REV.	C
SCALE		SHEET	14 OF 15	DIST			

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1-0-5182W 21



REVISIONS	
CHK	CHANGE NO.

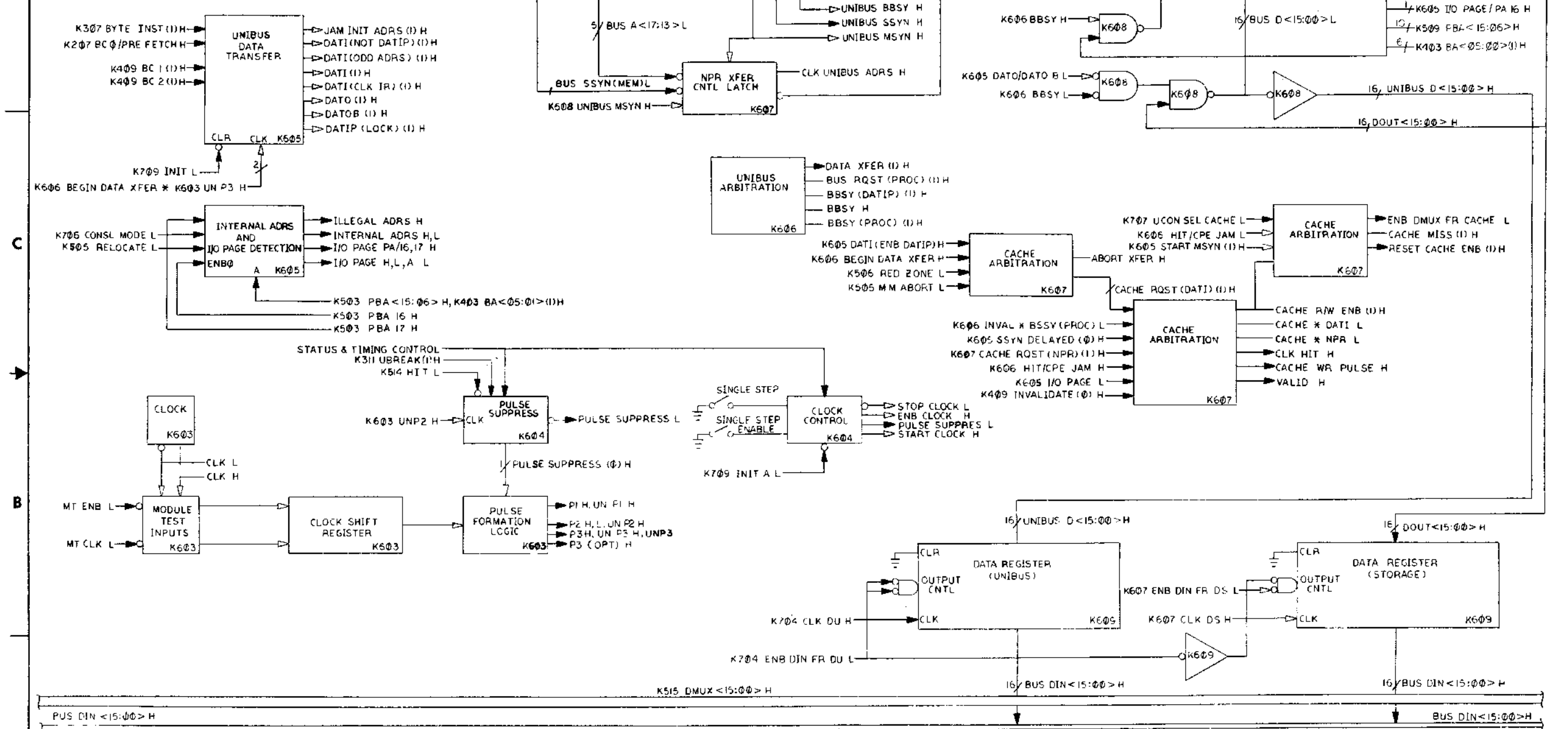
(DMUX & NPR ADRS REG) (K515)

TITLE	KT/CACHE	SIZE CODE	DCS	NUMBER	M7875-0-1	REV.	C
SCALE	1:1	SHEET	15 OF 15	DIST.			

REV. 10-1-75 DCS M7875-0-1-C

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NOTES: 1. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK, AND ARE NOT REWRITTEN WITH THE SIGNAL NAME.
 2. * INDICATES ADDITIONAL FUNCTIONAL INFORMATION PROVIDED UPON SHEET 2.
 3. FILLED IN ARROWHEADS INDICATE MODULE PINS.

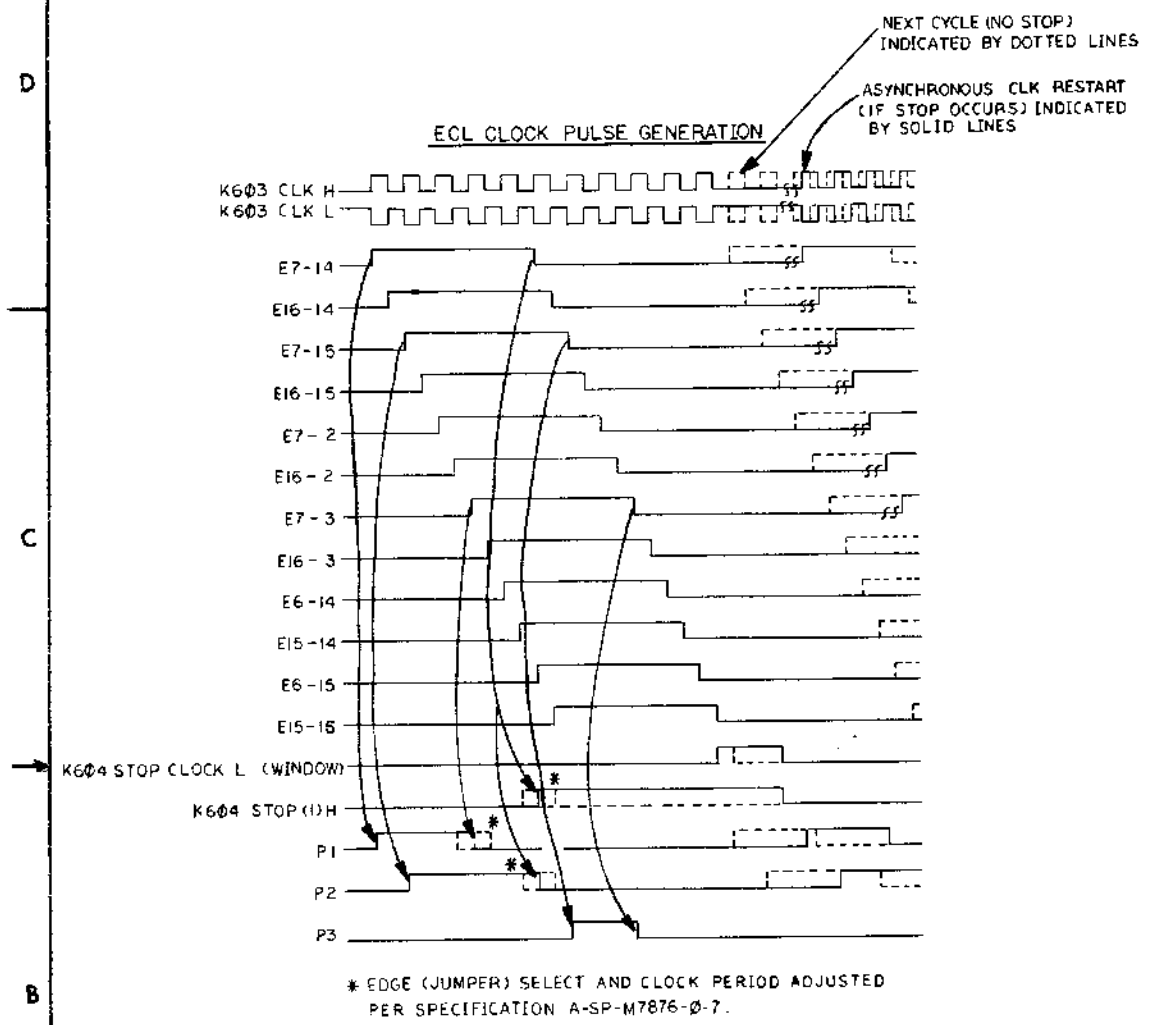


REV.	CHANGE NO.	DATE	BY	CHKD.
1	00001	11/13/76	J. O'LOUGHLIN	J. O'LOUGHLIN
2	00002	11/13/76	J. O'LOUGHLIN	J. O'LOUGHLIN
3	00003	11/13/76	J. O'LOUGHLIN	J. O'LOUGHLIN
4	00004	11/13/76	J. O'LOUGHLIN	J. O'LOUGHLIN
5	00005	11/13/76	J. O'LOUGHLIN	J. O'LOUGHLIN

(BLOCK DIAGRAM) (K601)

DRN. NO.	11/13/76	FIRST USED ON	PDP 11/60	digital
CHKD. BY	J. O'LOUGHLIN	TITLE	TIMING	
PROJ. ENG. BY	J. O'LOUGHLIN	SCALE	1 - - -	REV.
PROD. BY	J. O'LOUGHLIN	SIZE CODE	D CS	NUMBER
NEXT HIGHER ASSY.		SHEET	1 OF 9	DIST.
FILE NO.	B DO-M7876-0			

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BUS CONTROL CODE TABLE	
INPUTS	OUTPUTS
A4-K307 BYTE INST. (1) H A3-K207 BC 0-PREFETCH H A2-K409 BC 1 (1) H A1-K409 BC 2 (1) H AE-END	
A4 A3 A2 A1 A0 X 0 0 0 0	NSBS JAN INT ADRS (1) H NSBS DAT1 (ENB DATIP) (1) H NSBS DAT1 (CLK IP) (1) H
X 0 0 1 0	NSBS DATIP (LOCK) (1) H NSBS DAT1 (ENB DATIP) (1) H
0 0 1 0 0 0 1 0 1 0 X 1 1 1 0	NSBS DAT0 (1) H
0 1 1 0 0 X 0 1 1 0	NSBS DAT1 (ENB DATIP) (1) H NSBS DAT1 (1) H NSBS DAT1 (ENB DATIP) (1) H
X 1 0 0 0	NSBS JAN INT ADRS (1) H NSBS DAT1 (ENB DATIP) (1) H NSBS DAT1 (1) H
1 1 0 1 0 1 1 1 0 0	NSBS DAT0B (1) H NSBS DAT1 (ENB DATIP) (1) H NSBS DAT1 (ODD ADRS) (1) H

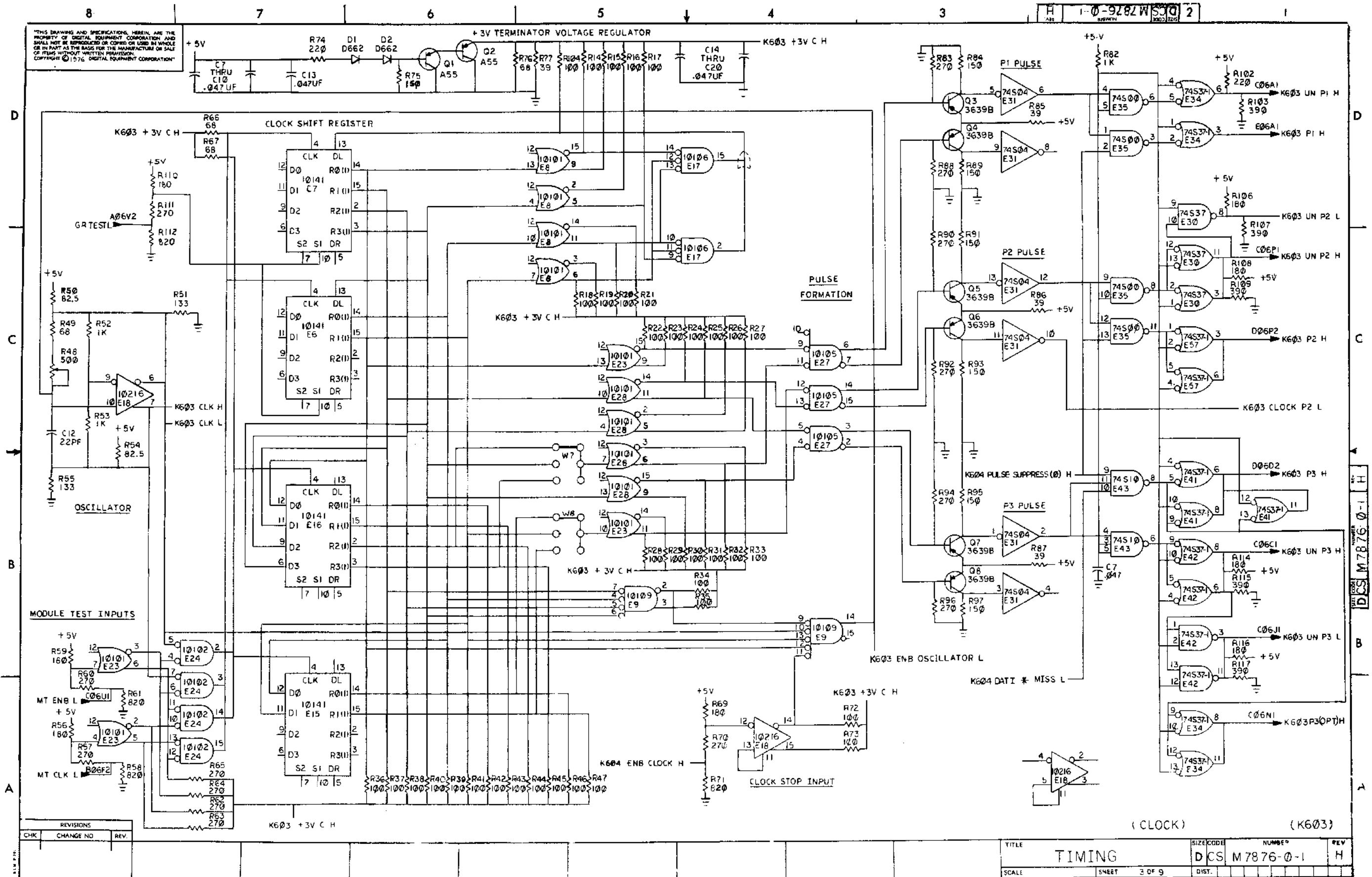
INTERNAL ADDRESS DETECTION		
INPUT E50, E40 K503 PA<15:06> (1) H K409 BA<05:07> (1) H	OUTPUT E50, E40 ASSERTED LO	REGISTER
ADDRESS	M1 (1)	PSW
177776	M1 (1)	STACK LIMIT
177774	M1 (1)	UBREAK
177770	M1 (1)	CPU ERROR
177766	M1 (1)	HIT TAG
177752	M1 (1)	CACHE CONTROL
177746	M1 (1)	MDM ERROR
177744	M1 (1)	USER PAR
177640-56	M1 (1)	USER PAR
177600-16	M1 (1)	USER PAR
177576	M1 (1)	MAR2
177574	M1 (1)	MAR1
177572	M1 (1)	MARP
177544	M1 (1)	WCS DATA
177542	M1 (1)	WCS ADDRESS
177540	M1 (1)	WCS STATUS
172340-56	M0 (1)	KERNEL PAR
172300-16	M0 (1)	KERNEL PAR
172570	M1 (1)	SWTCH/DISPLAY

REVISIONS		
CHK	CHANGE NO.	REV.

(TABLES) (K602)

TITLE	NUMBER	REV.
TIMING	M7876-0-1	H
SCALE	SHEET	DIST.
2 OF 9		

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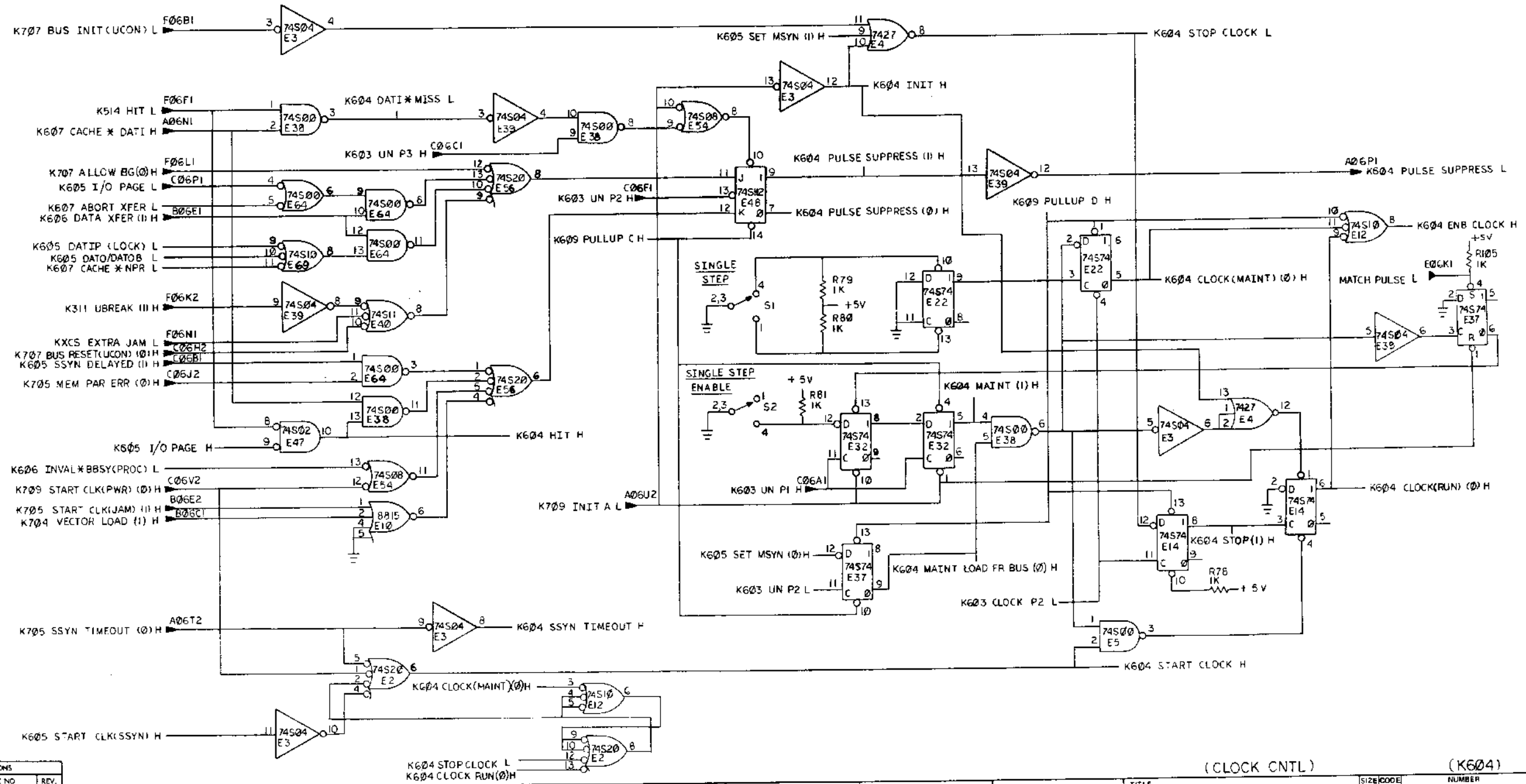


REV.	CHANGE NO.	REVISIONS

TITLE	TIMING	SIZE CODE	DCS	NUMBER	M7876-0-1	REV	H
SCALE	5/8" = 1"	3 OF 9	DIST.				

DCS M7876-0-1

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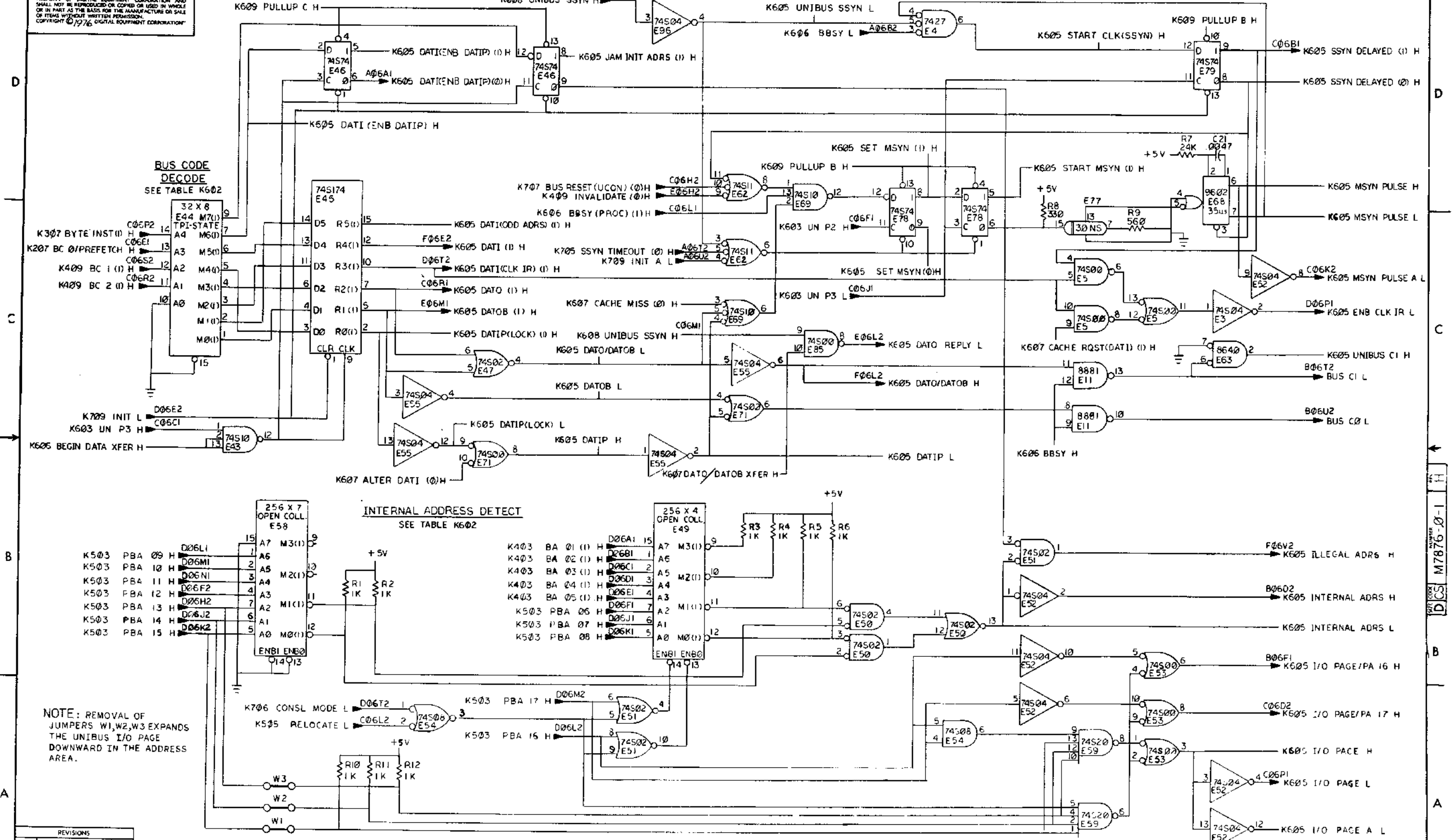
REVISIONS		
CHK	CHANGE NO	REV.

(CLOCK CNTL) (K604)

TITLE	TIMING	SIZE/CODE	D CS	NUMBER	M7876-0-1	REV.	H
SCALE	#	SHEET	4	OF	9	DIST.	1

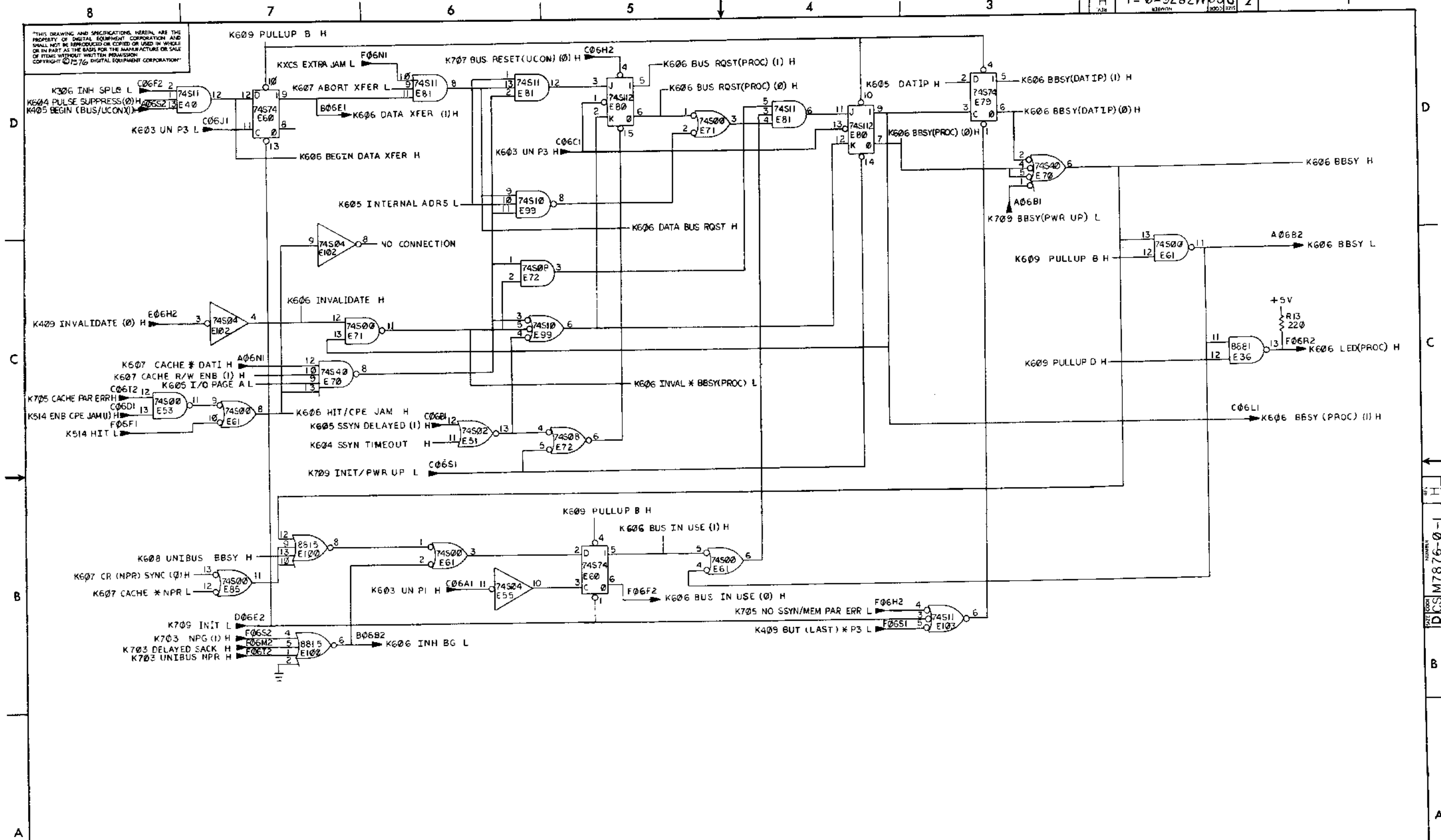
REV. H
NUMBER
DCS M7876-0-1

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REVISIONS		
CHK	CHANGE NO	REV

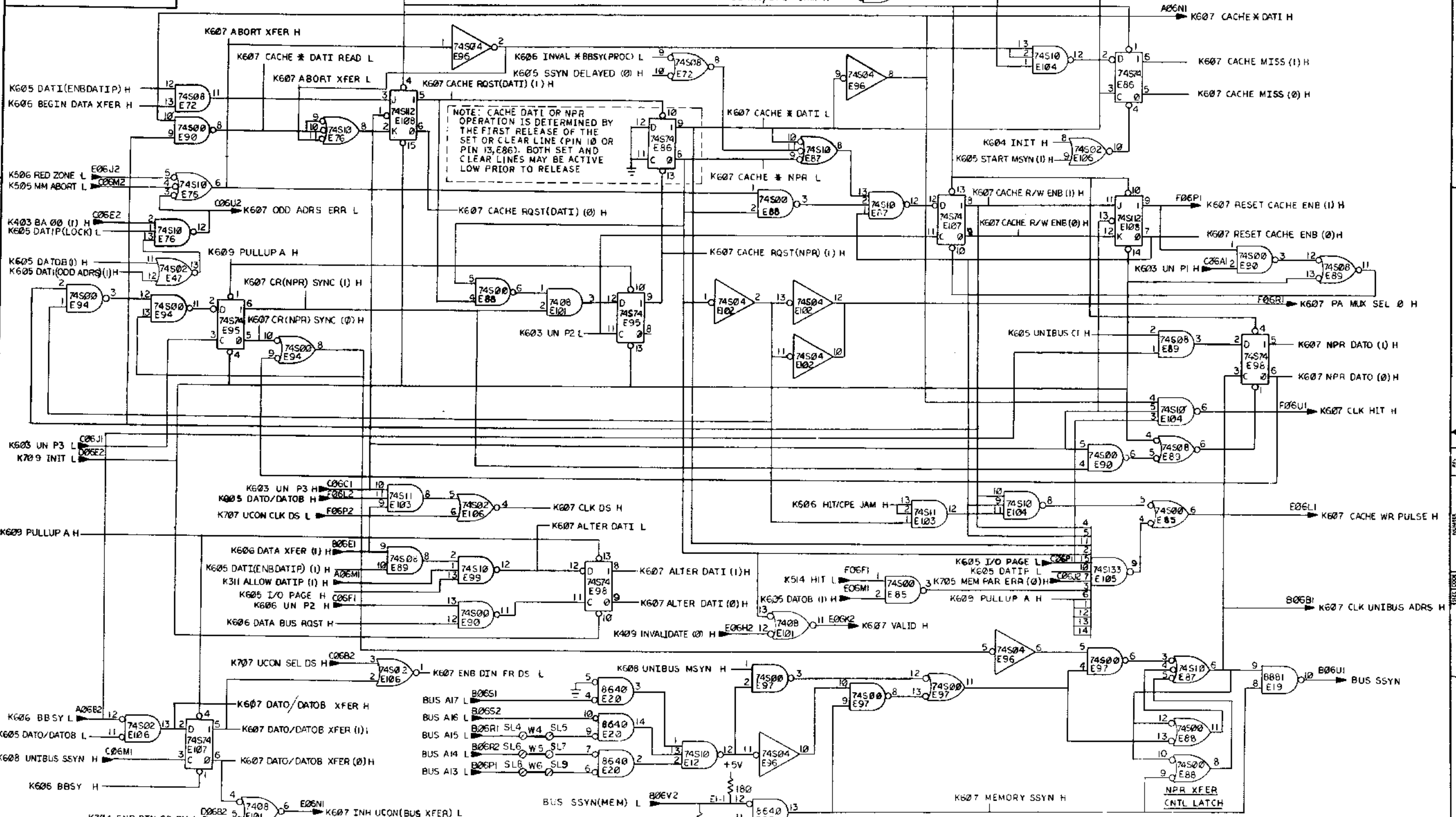
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(UNIBUS ARBITRATION) (K606)

REVISIONS			TITLE		SIZE CODE		NUMBER		REV.
CHK	CHANGE NO	REV	TIMING		DCS M7876-0-1		H		H
			SCALE	SHEET	6 OF 9	DIST.			

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REVISIONS		
CHK	CHANGE NO.	REV.

(CACHE ARBITRATION & DATA CNTL) (K607)

TITLE TIMING

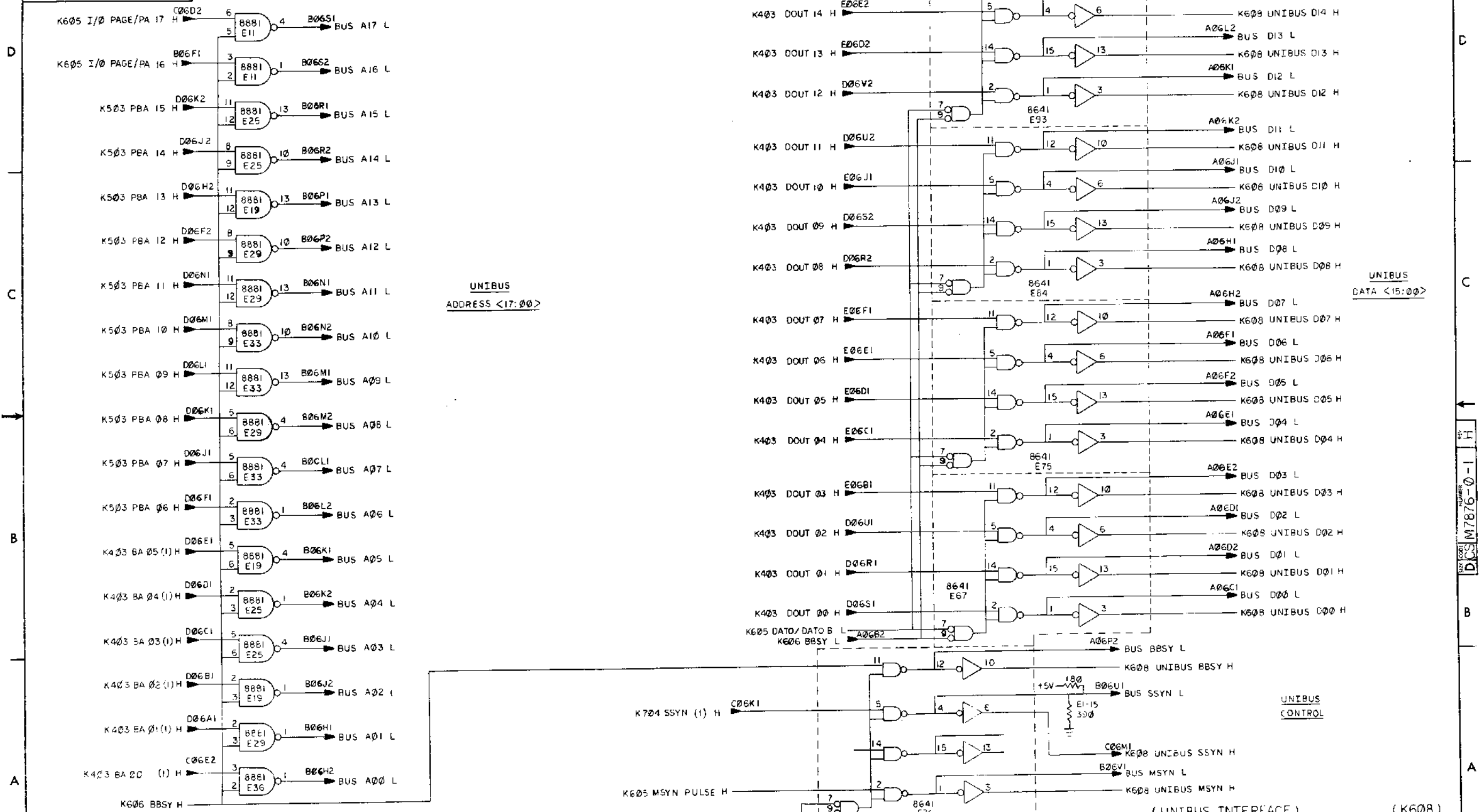
SCALE SHEET 7 OF 9

SIZE CODE DCS NUMBER M7876-0-1

REV. 11

DCS M7876-0-1

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UNIBUS
ADDRESS <17:00>

UNIBUS
DATA <15:00>

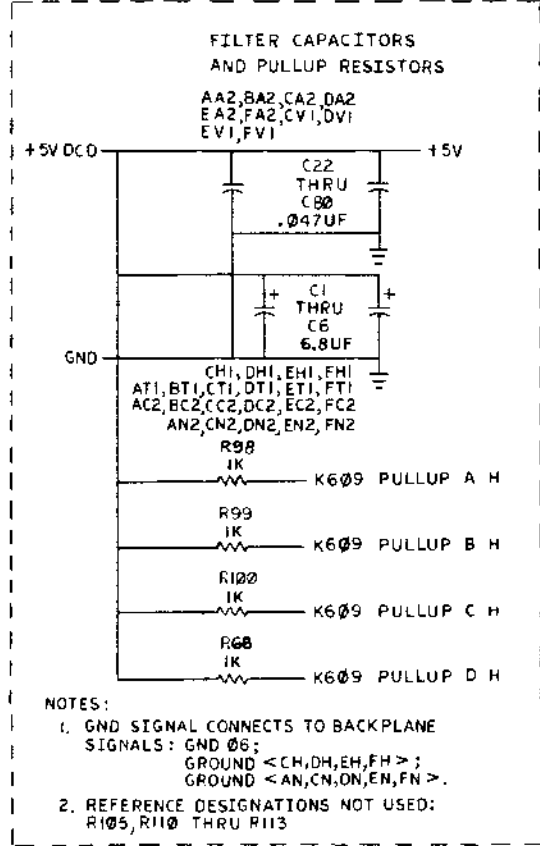
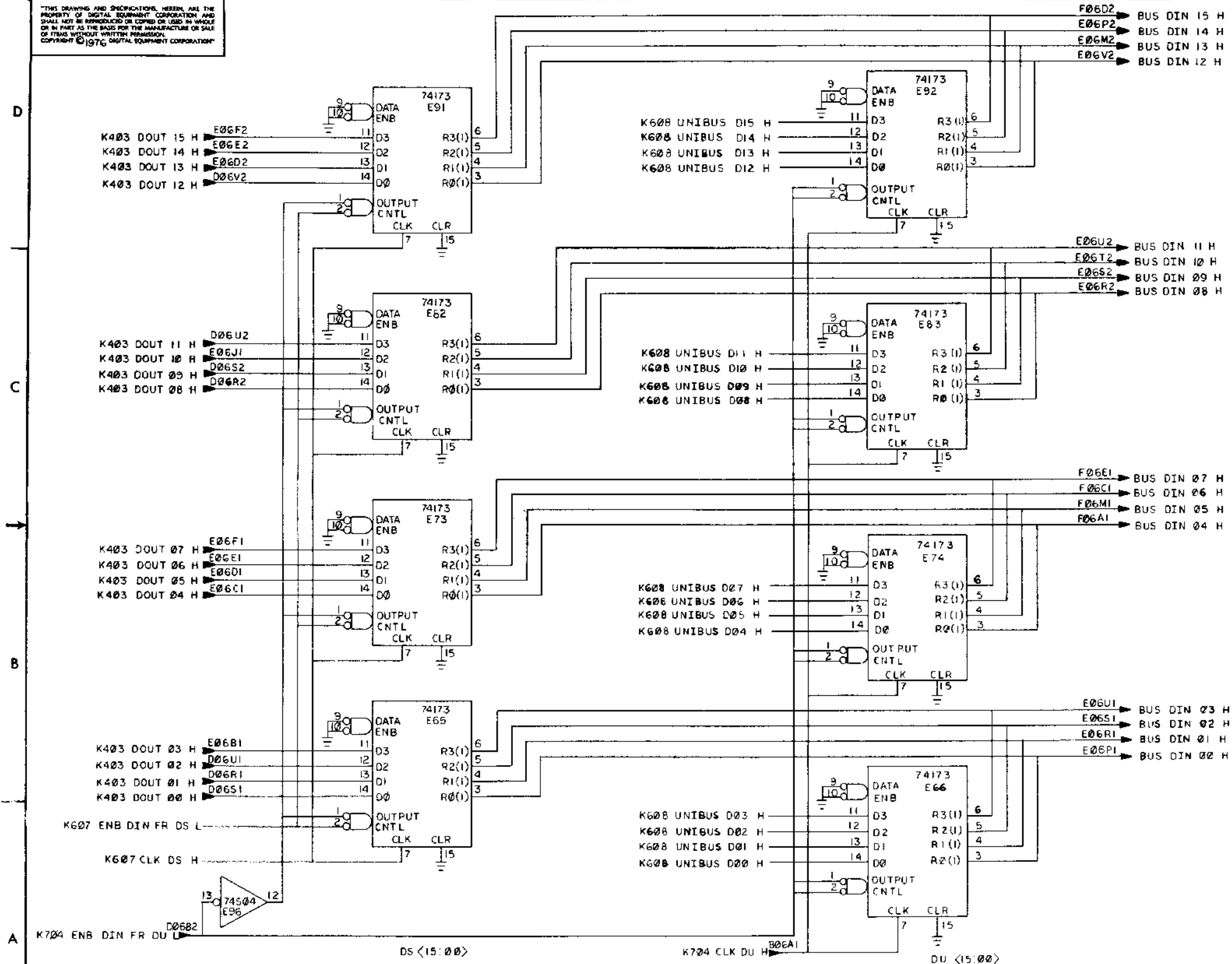
UNIBUS
CONTROL

(UNIBUS INTERFACE) (K608)

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	TIMING	SIZE CODE	DCS M7876-0-1	NUMBER	1	REV.	H
SCALE		SHEET	8	OF	9	DIST.	

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REVISIONS		
CHK	CHANGE NO.	REV.

DS <15:00>
 DATA (STORAGE) REGISTER

K704 CLK DU H
 DU <15:00>
 DATA (UNIBUS) REGISTER

(DATA (STORAGE) & DATA (UNIBUS) REGISTERS) (K609)

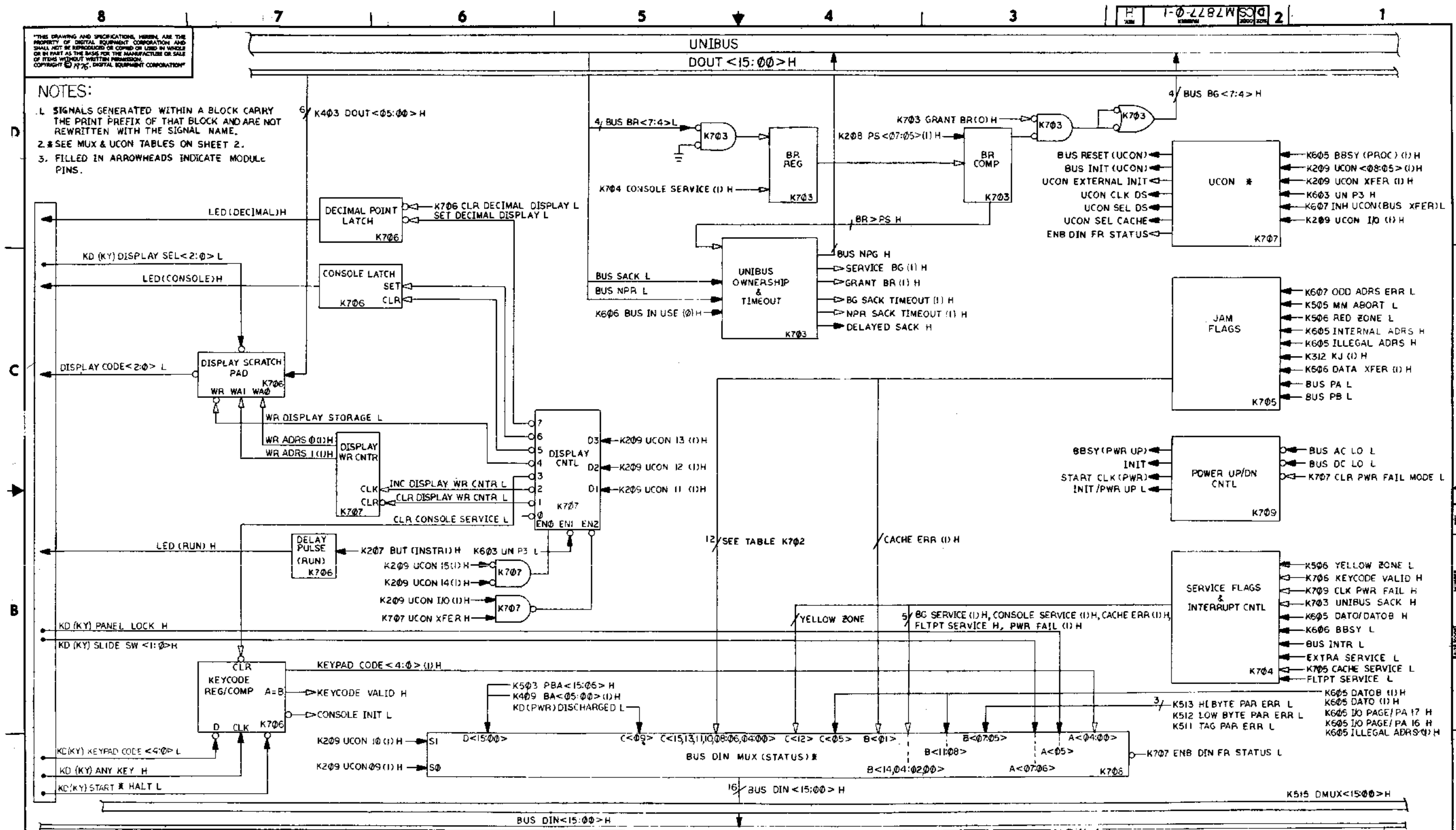
TITLE	NUMBER	REV.
TIMING	D CS M7876-0-1	H
SCALE	SHEET 9 OF 9	DIST.

NUMBER
 DCS M7876-0-1 H

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NOTES:

1. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK AND ARE NOT REWRITTEN WITH THE SIGNAL NAME.
2. *SEE MUX & UCON TABLES ON SHEET 2.
3. FILLED IN ARROWHEADS INDICATE MODULE PINS.



REV.	REVISED
1	10-22-76
2	11-15-76
3	11-15-76
4	11-15-76
5	11-15-76
6	11-15-76
7	11-15-76
8	11-15-76
9	11-15-76
10	11-15-76
11	11-15-76
12	11-15-76
13	11-15-76
14	11-15-76
15	11-15-76
16	11-15-76
17	11-15-76
18	11-15-76
19	11-15-76
20	11-15-76

(BLOCK DIAGRAM) (K701)

DRN	10-22-76	FIRST USED ON	POP 11/60
CHK'D	11/15/76	TITLE	STATUS
ENG.	11/15/76		
PROJ. ENG.	11/15/76		
PROD.	11/15/76		
NEXT HIGHER ASSY.			
B-00-M7877-0	SIZE	CODE	NUMBER
SCALE	D	CS	M7877-0-1
SHEET	1 OF 9	DIST.	

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UCON TABLE (STATUS)		
SIGNALS	STATUS FUNCTION	OTHER SIGNALS
UCON 15	K707 UCON SEL OSH K707 ENB DIN FR STATUS L ENB FOR CONSOLE DISPLAYS	K209 UCON 1/O(1) H K209 UCON 1/O(1) H K507 INH UCON(BUS XFER) L K209 UCON 14(1) H
UCON 14	K707 REMOTE LOAD L ENB FOR CONSOLE DISPLAYS	K209 UCON 15(1) H
UCON 13	CONSOLE DISPLAY DECODE	
UCON 12	K707 REMOTE SEL 1 L CONSOLE DISPLAY DECODE	
UCON 11	K707 REMOTE SEL 0 L CONSOLE DISPLAY DECODE	
UCON 10	S1-BUS DIN MUX	
UCON 09	S0-BUS DIN MUX	
UCON 08	K707 UCON SEL CACHE L	K209 UCON 1/O(1) H
UCON 07	K707-CLEAR ERROR SIGNALS K707-ALLOW BG L	K209 UCON 1/O(1) H K707 UCON XFER H
UCON 06	K707-CLEAR ERROR SIGNALS ALLOW BG L	
UCON 05	K707-CLEAR ERROR SIGNALS ALLOW BG L	
UCON 1-0	K707-REMOTE CONSOLE, CONTRL REG, ENABLE CONSOLE SIGNALS, SELECT CACHE, DATA STORE REG, CONTRL	

BUS DIN	INPUT PORT			
	A	B	C	D
15	0	0	ODD ADRS ERR(1) H	PBA 05 H
14	0	BG SERVICE (1) H	0	PBA 14 H
13	0	0	SSYN TIMEOUT (1) H	PBA 13 H
12	0	HPR TIMEOUT (1) H	YELLOW ZONE (1) H	PBA 12 H
11	0	DATOB (1) H	RED ZONE (1) H	PBA 11 H
10	0	DATO (1) H	WCS PAR ERR H	PBA 10 H
09	0	1/O PAGE/ PA 17 H	NO(PWR) DISCHARGED L	PBA 09 H
08	0	1/O PAGE/ PA 16 H	MEN PAR ERR (1) H	PBA 08 H
07	SLIDE SW 1 L	HIBYTE PAR ERR L	SSYN TIMEOUT (1) H	PBA 07 H
06	SLIDE SW 0 L	LOWBYTE PAR ERR L	CACHE ERR (1) H	PBA 06 H
05	PANEL LOCK L	TAG PAR ERR L	ILLEGAL ADRS (1) H	BA 05 (1) H
04	KEYPAD CODE 4 (1) H	CONSOLE SERVICE (1) H	MM ABORT (1) H	BA 04 (1) H
03	KEYPAD CODE 3 (1) H	FLTPT SERVICE H	RED ZONE (1) H	BA 03 (1) H
02	KEYPAD CODE 2 (1) H	PWR FAIL (1) H	ODD ADRS ERR (1) H	BA 02 (1) H
01	KEYPAD CODE 1 (1) H	CACHE ERR (1) H	WCS PAR ERR H	BA 01 (1) H
00	KEYPAD CODE 0(1) H	YELLOW ZONE (1) H	U BREAK (1) H	BA 00 (1) H

74SI38 FUNCTION TABLE												
ENABLE		SELECT			OUTPUTS							
EN0	EN1	D3	D2	D1	F0	F1	F2	F3	F4	F5	F6	F7
X	H	X	X	X	H	H	H	H	H	H	H	H
L	X	X	X	X	H	H	H	H	H	H	H	H
H	L	L	L	L	L	H	H	H	H	H	H	H
H	L	L	L	H	H	L	H	H	H	H	H	H
H	L	L	H	L	H	H	L	H	H	H	H	H
H	L	L	H	H	H	H	L	L	H	H	H	H
H	L	H	L	L	H	H	H	H	H	L	H	H
H	L	H	L	H	H	H	H	H	H	L	L	H
H	L	H	H	L	H	H	H	H	H	H	H	L

EN1 = EN1 + EN2
H = HIGH LEVEL, L = LOW LEVEL, X = IRRELEVANT

BUS REQUEST COMPARISON TABLE	
RQM ADDRESS INPUTS	BUS GRANT LINE ASSERTED (ASSERTED L0)
A7 K209 PS 05 (1) H	
A6 BR 5 H	
A5 BR 1 H	
A4 BR 4 H	
A3 BR 6 H	
A2 CONSOLE STATUS H	
A1 K209 PS 06 (1) H	
A0 K209 PS 07 (1) H	
XX HXX XXL	BG 7
XX HXX XLH	
LX HXX X0H	
XX L0H X0L	BG 6
XX L0H XLH	
LH LXL XLH	BG 5
XL LHL XXL	BG 4

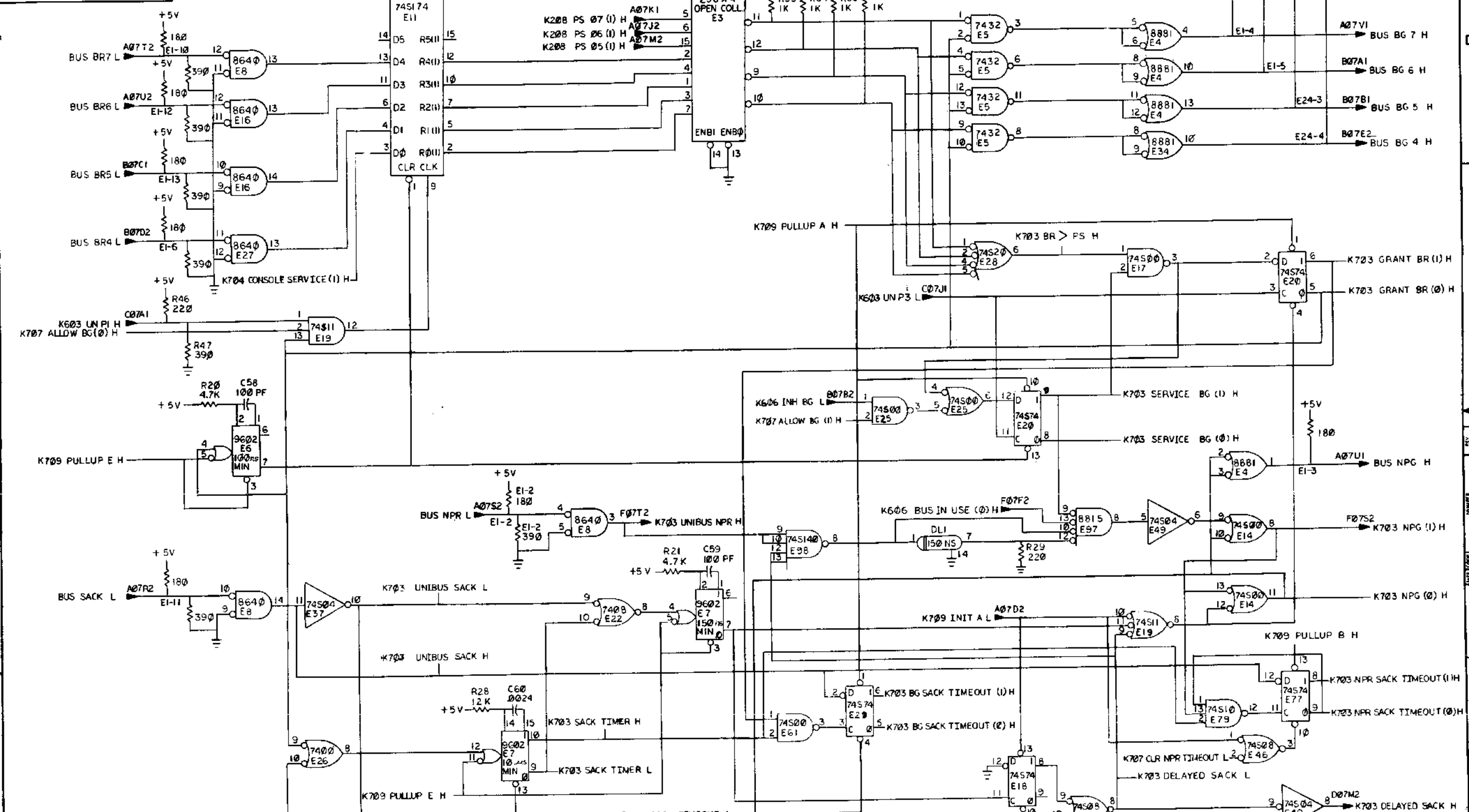
H HIGH LEVEL, L LOW LEVEL, X IRRELEVANT

REVISIONS		
CHK	CHANGE NO.	REV.

(TABLES)		(K702)	
TITLE	STATUS	SIZE CODE	NUMBER
SCALE	SHEET 2 OF 9	DCS	M7877-0-1
DIST.		REV.	H

REV H
M7877-0-1
DCS

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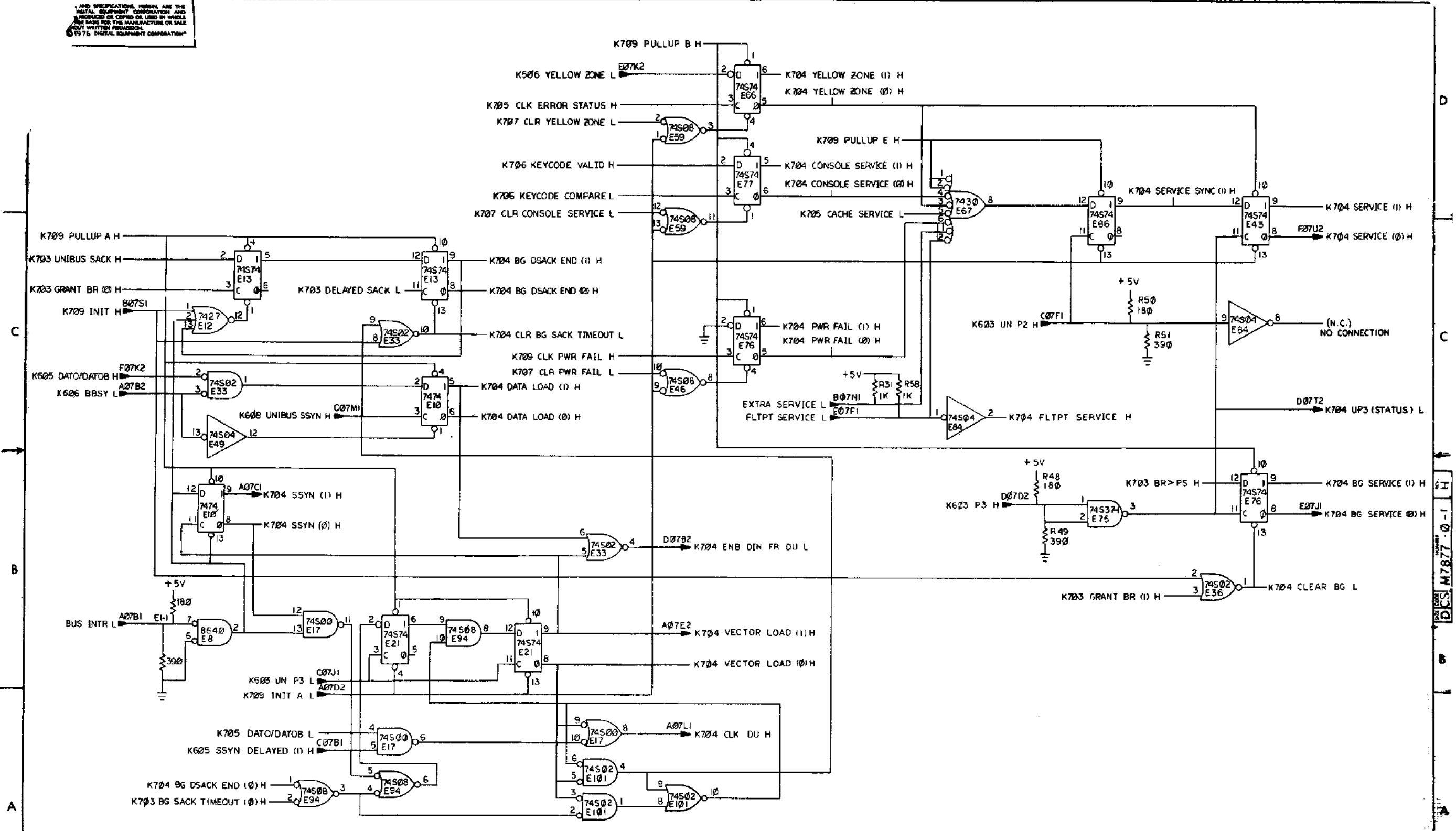
REVISIONS		
CHK	CHANGE NO.	REV.

TITLE STATUS		SIZE CODE DCS	NUMBER M7877-0-1	REV. H
SCALE	SHEET 3 OF 9	DIST.	1	

DCS M7877-0-1 H

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 METAL EQUIPMENT CONSTRUCTION AND
 FINISHES SHALL BE AS SHOWN ON THE
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H 1-0-2282W53D 2 |

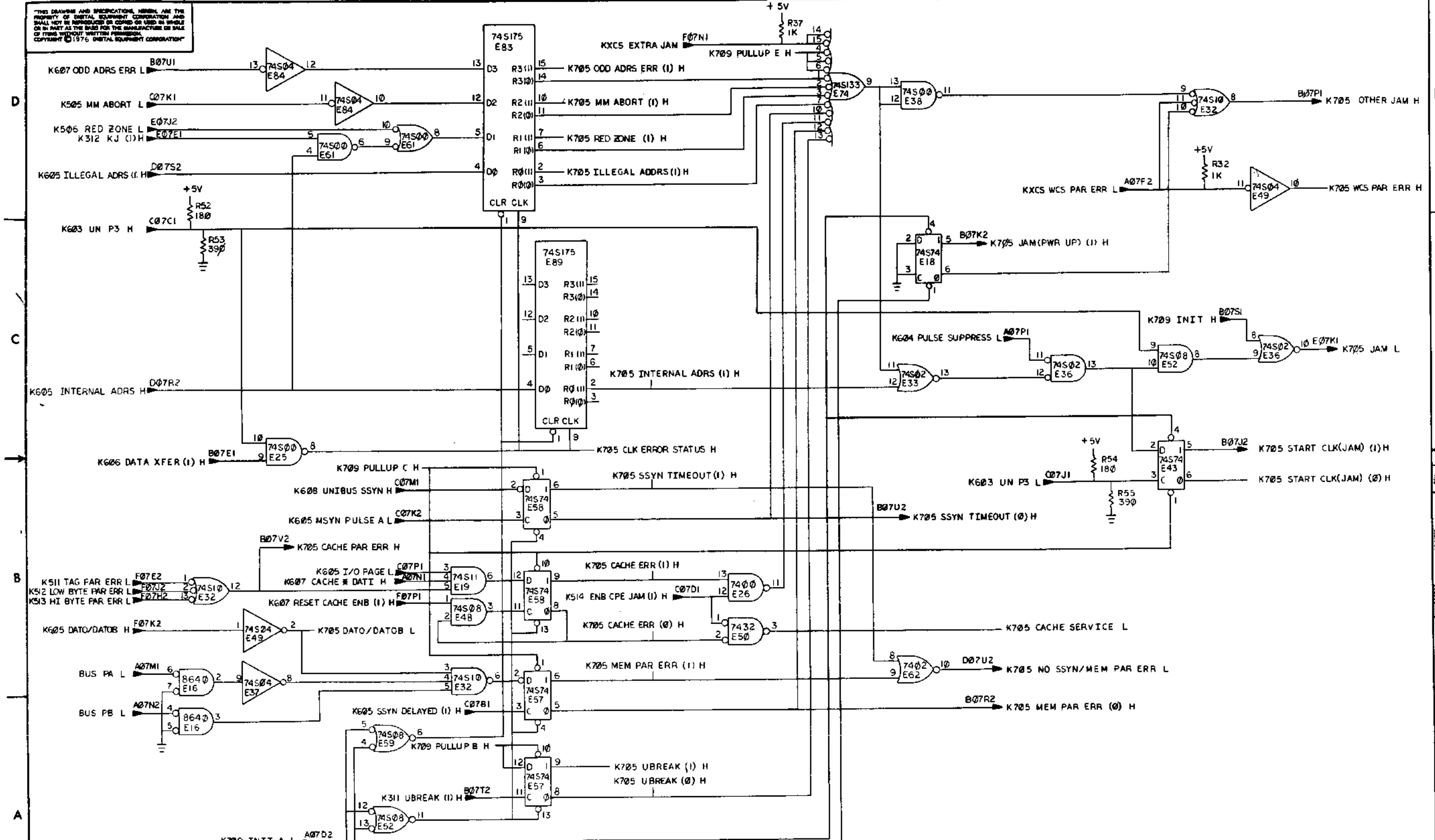


DCS M7877-0-1 H

REVISIONS		
CHK	CHANGE NO.	REV.

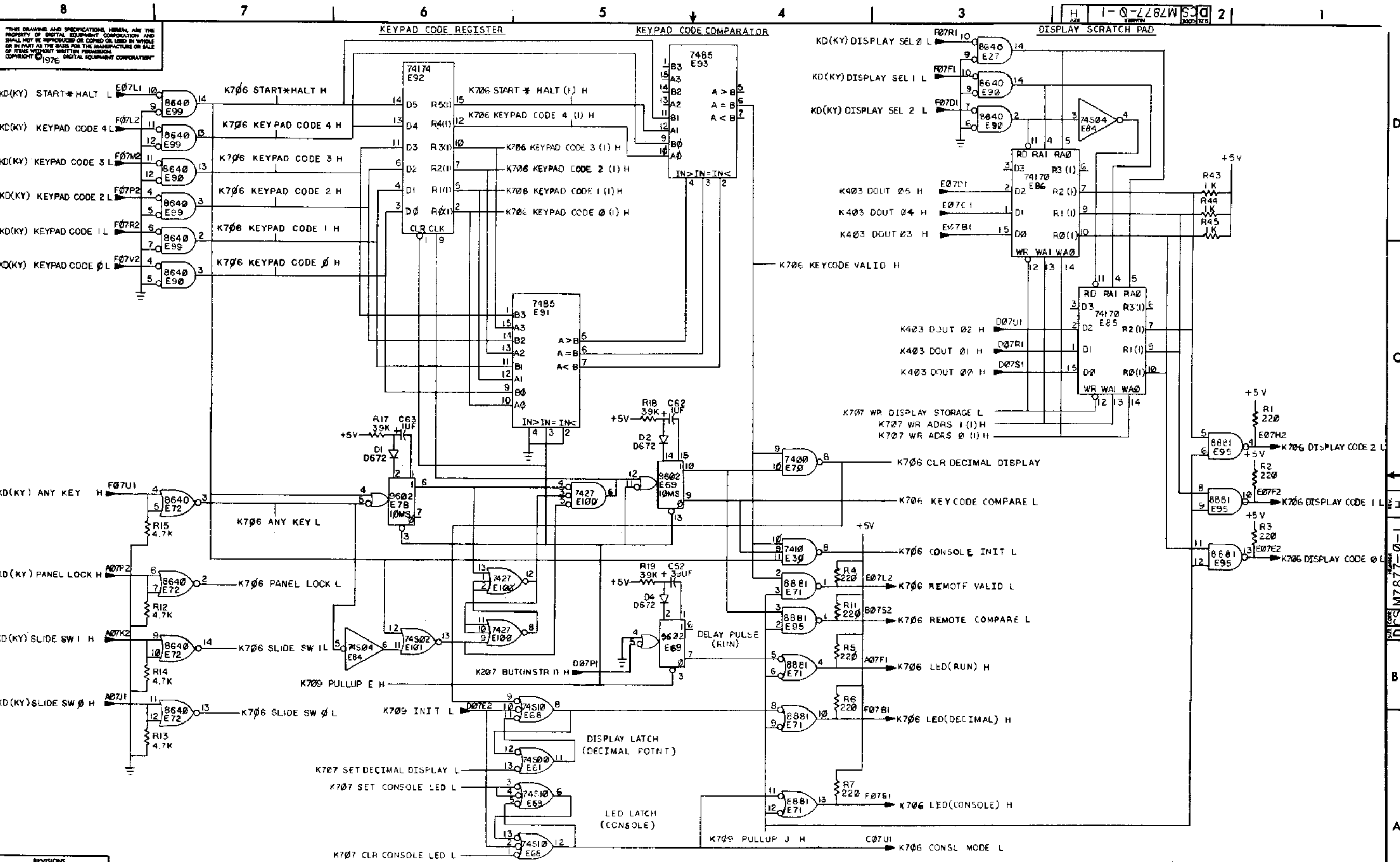
(SERVICE FLAGS & INTERRUPT CNTL) (K704)
TITLE: STATUS
SIZE/COOE: DCS M7877-0-1
NUMBER: H
 SCALE: -- / -- SHEET: 4 OF 9 DIST: -- / --

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CHK	CHANGE NO.	REV.

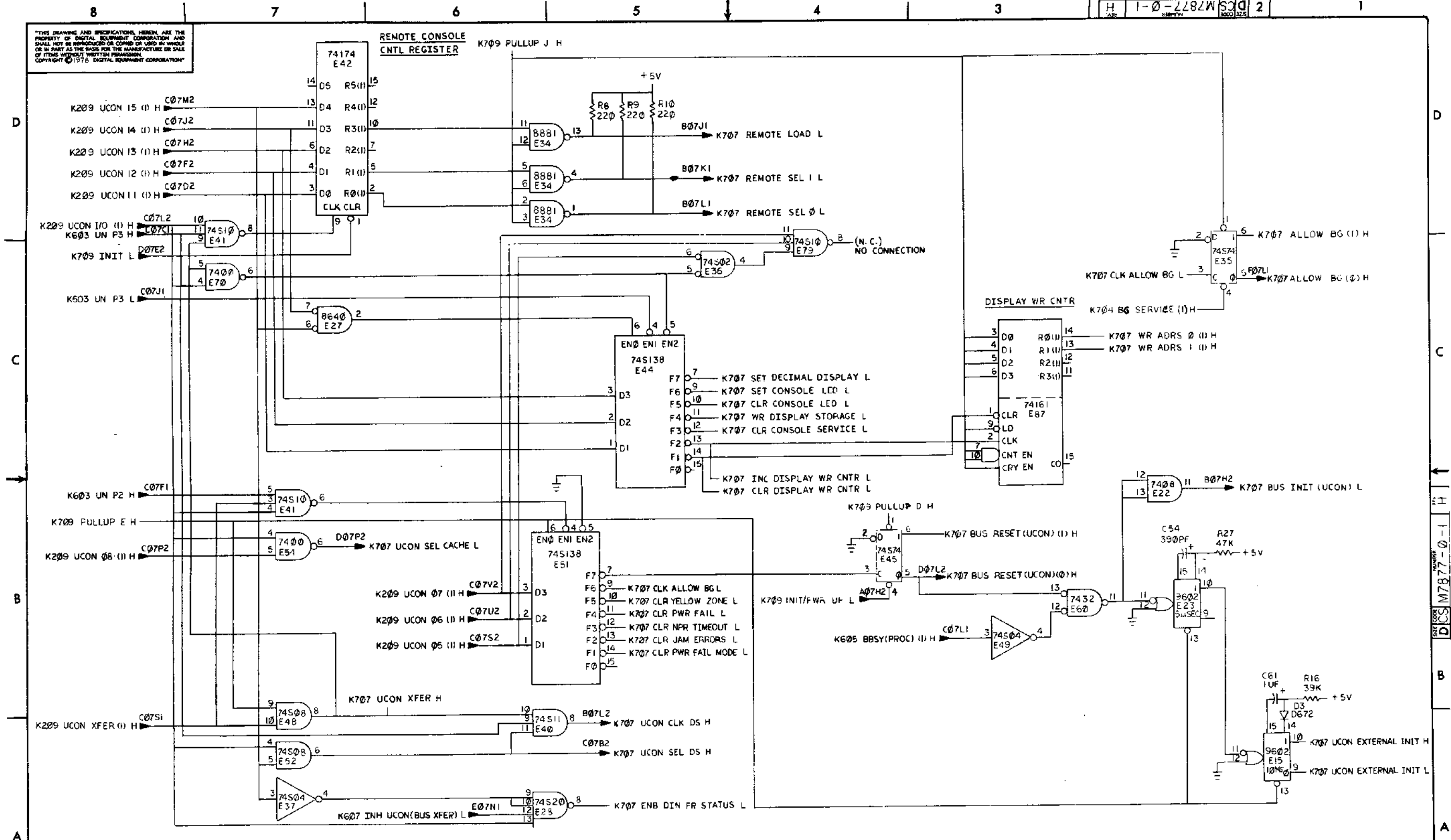
TITLE		STATUS		SIZE/SCALE	NUMBER	REV.
					D CS M7877-0-1	H
SHEET		5 OF 9		DIST.		



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE		STATUS	SIZE CODE	NUMBER	REV.
SCALE		SHEET	OF	9	DIST.

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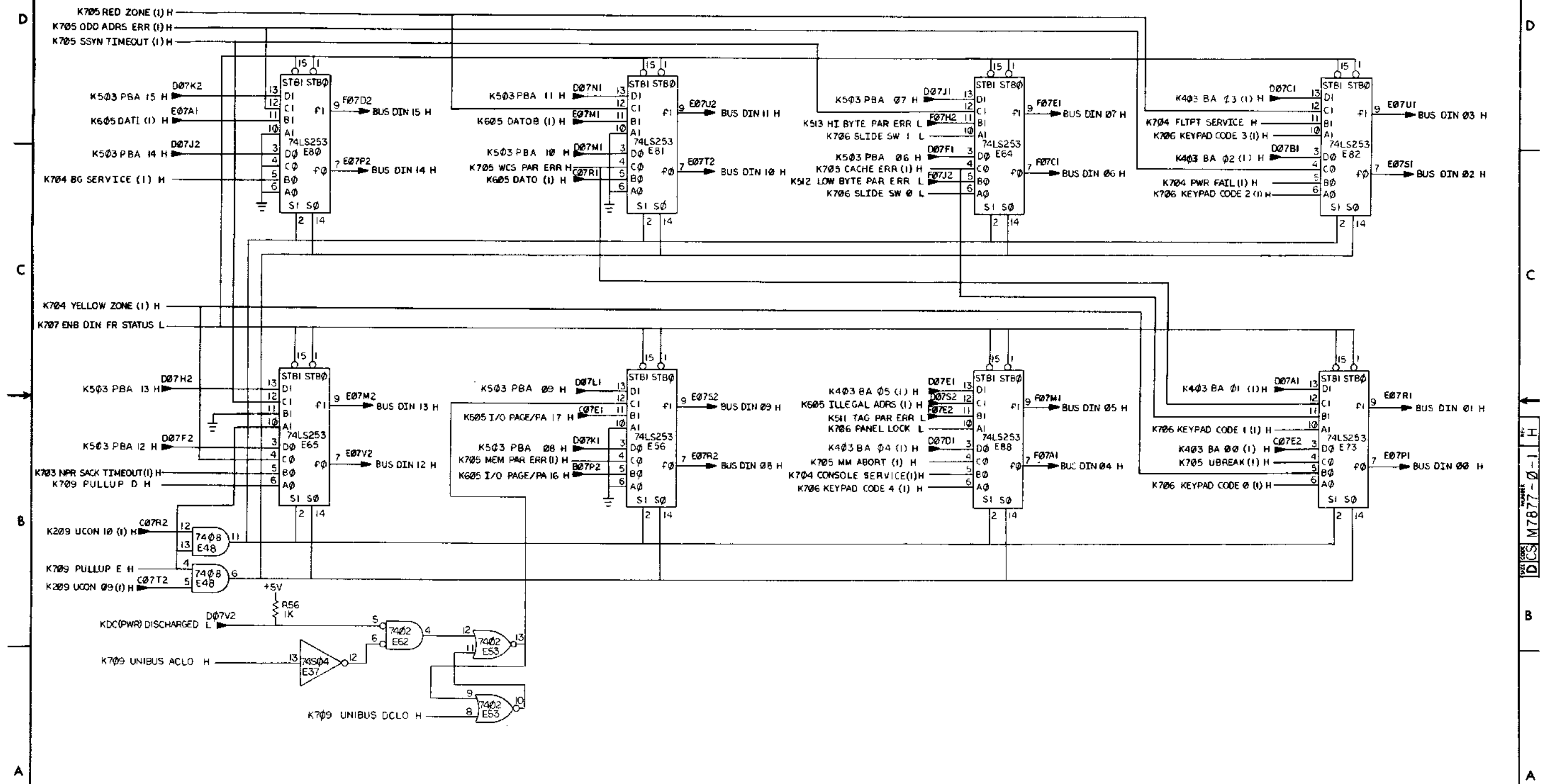


(UCON & REMOTE CONSOLE CNTL) (K707)

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	STATUS	SIZE/CODE	D CS	NUMBER	M7877-0-1	REV.	H
SCALE	---	SHEET	7 OF 9	DIST.			

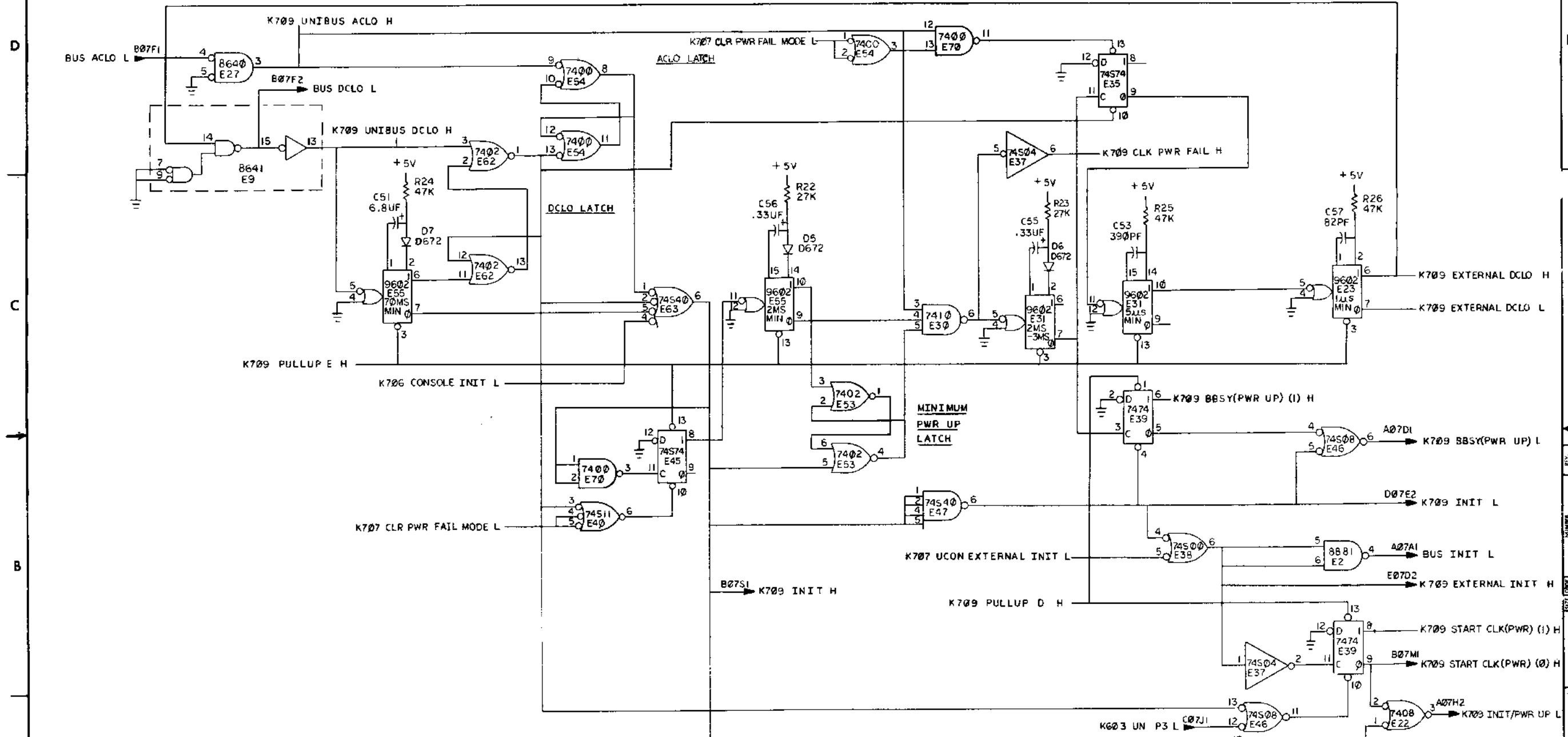
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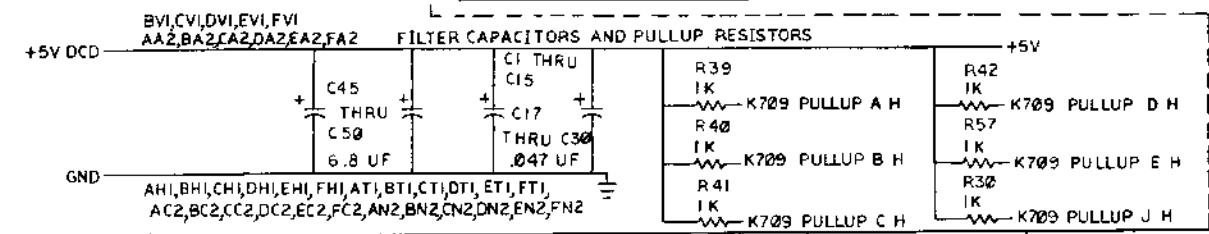
REVISIONS		
CHK	CHANGE NO.	REV.

(BUS DIN MUX (STATUS))		(K708)	
TITLE	STATUS	SIZE CODE	NUMBER
SCALE	---	D CS	M7877-0-1
SHEET	8 OF 9	DIST.	

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NOTES:
 1. GND SIGNAL CONNECTS TO BACKPLANE SIGNALS: GND 07;
 GROUND <AH, BH, CH, DH, EH, FH >;
 GROUND <AN, BN, CN, DN, EN, FN >.



REVISIONS		
CHK	CHANGE NO.	REV.

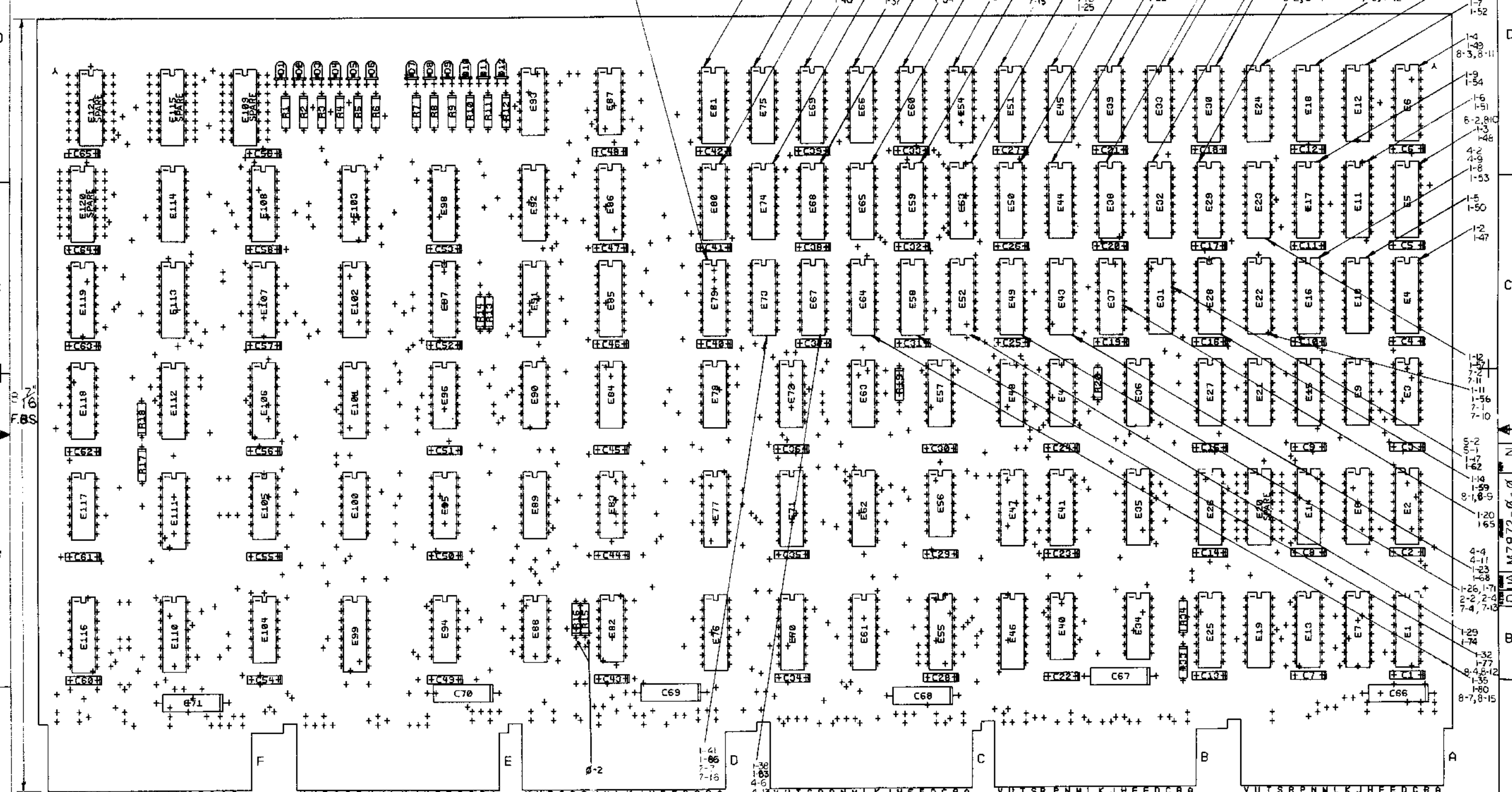
TITLE		SIZE CODE	NUMBER	REV.
STATUS		DCS	M7877-0-1	H
SCALE	SHEET	OF	DIST.	
	9	9		

DCS M7877-0-1

FORM NO. 8

FORM NO. 8

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NOTES:
 1- MAKE ETCH CUT FROM E71-1 TO FEED-THRU BY C36 AS SHOWN ON SHEET 3.
 2- R15, R16 NOT INSERTED.
 (SEE SHEET 4)

CHK	NO	REV	BY	DATE
1	1	1	J. O'LOUGHLIN	11/10/76
2	1	1	J. O'LOUGHLIN	11/10/76
3	1	1	J. O'LOUGHLIN	11/10/76
4	1	1	J. O'LOUGHLIN	11/10/76
5	1	1	J. O'LOUGHLIN	11/10/76
6	1	1	J. O'LOUGHLIN	11/10/76
7	1	1	J. O'LOUGHLIN	11/10/76
8	1	1	J. O'LOUGHLIN	11/10/76
9	1	1	J. O'LOUGHLIN	11/10/76
10	1	1	J. O'LOUGHLIN	11/10/76
11	1	1	J. O'LOUGHLIN	11/10/76
12	1	1	J. O'LOUGHLIN	11/10/76
13	1	1	J. O'LOUGHLIN	11/10/76
14	1	1	J. O'LOUGHLIN	11/10/76
15	1	1	J. O'LOUGHLIN	11/10/76
16	1	1	J. O'LOUGHLIN	11/10/76
17	1	1	J. O'LOUGHLIN	11/10/76
18	1	1	J. O'LOUGHLIN	11/10/76
19	1	1	J. O'LOUGHLIN	11/10/76
20	1	1	J. O'LOUGHLIN	11/10/76

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

SIGNATURES	DATE	digital
DRN. <i>[Signature]</i>	11/10/76	
CHK'D. <i>[Signature]</i>	11/10/76	TITLE
ENG. <i>[Signature]</i>	11/10/76	U WORD
PROD. <i>[Signature]</i>	11/10/76	SIZE CODE
SCALE 2:1		NUMBER
SHT. 1 OF 4		DUA M7872-0-0
NEXT HIGHER ASSY. B-DD-M7872-0		

DIGITAL EQUIPMENT CORPORATION

PARTS LIST

QUANTITY / VARIATION

NOTES:

MADE BY DATE	F. MALANSON 11 MAR 76	CHECKED DATE	F. SEIDMAN 26 MAR 76	SECTION
ENG DATE	M.W. [Signature] 11/10/76	PROD DATE	K.K. [Signature] 11/10/76	ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY	VARIATION	REF DESIGNATION
1	D-MD-5011838-0-0	5011838	ETCHED CIRCUIT BOARD	1		
2		1012784	CAPACITOR .047 UF	65		C1 THRU C65
3		1005306	CAPACITOR, 6.8 uf, 35V, 10%	6		C66 thru C71
4		1110864	DIODE, LED	12		D1 thru D12
5		1300309	RESISTOR, 390, 1/4W, 5%	3		R14, R18, R33 (SEE NOTES ON PAGE 4)
6		1301322	RESISTOR, 180, 1/4W, 5%	4		R34, R13, R17
7		1300365	RESISTOR, 1K, 1/4W, 5%	2		R19, R20
8		1300295	RESISTOR, 330 OHM, 1/4W, 5%	12		R1 thru R12
9		1910550	I.C. DEC 74S174	5		E1, E2, E46, E86, E92
10		1910548	I.C. DEC 74S157	5		E7, E8, E19, E77, E35
11		1910537	I.C. DEC 74S11	1		E34
12		1910549	I.C. DEC 74S158	2		E25, E26
13		1910552	I.C. DEC 74S194	9		E13, E14, E41, E47, E61, E70, E76, E62, E71
14		1910534	I.C. DEC 74S04	2		E56, E78
15		1909686	I.C. DEC 7404	2		E87, E93
16		1910956	I.C. DEC 74S151	1		E112
17		1910539	I.C. DEC 74S20	1		E40
18		1912389	I.C. DEC 74S08	6		E72, E82, E94, E95, E96, E104
19		1910532	I.C. DEC 74S00	2		E105, E83
20		1910536	I.C. DEC 74S10	3		E100, E117, E84
21		1910651	I.C. DEC 74175	3		E101, E118, E116
22		1910652	I.C. DEC 74174	5		E106, E85, E97, E91, E110

ECO. NO.
0001
0002
0003
0004
0005
0006
0007
0008

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TITLE
U WORD

ASSY NO.
D-UA-M7872-0-0
SHEET 1 OF 4

SIZE CODE NUMBER
B PL M7872-0-0
INSERTION PARTS LIST DATA BASE REV

REV
M

DIGITAL EQUIPMENT CORPORATION

PARTS LIST

QUANTITY / VARIATION

NOTES:

MADE BY DATE	F. MALANSON 11 MAR 76	CHECKED DATE	F. SEIDMAN 26 MAR 76	SECTION
ENG DATE	M.W. Sullivan 11/10/76	PROD DATE	R.V. [Signature] 11/10/76	ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M7872-Ø	QUANTITY / VARIATION												REF DESIGNATION
23		1912646	I.C. DEC 74LS253	8													E98,E1Ø2,E1Ø3,E1Ø7,E1Ø8,E111,E113,E114
24		1912746	I.C. DEC 74S37	7													E15,E21,E42,E3,E9,E27,E36
25		1910546	I.C. DEC 74S14Ø	3													E48,E57,E63
26		1911271	I.C. DEC 74298	1													E99
27		1909713	I.C. DEC 8815	2													E88,E89
28		1912746-Ø1	I.C. DEC 74S37-1	1													E9Ø
29		23152A1-ØØ	I.C. DEC 32 x 8 TRI-STATE ROM/PROM	1													E55
3Ø		23275A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E119
31																	
32			I.C. SPARE	5													E2Ø,E1Ø9,E115, ,E12Ø,E121
33		9006732	EYELET	12													
34		1210711-Ø2	ASSY, HANDLE	1													
35		1212385-Ø2	SOCKET, 16 PIN LOW PROFILE	45													E4,E5,E6,E1Ø,E11,E12,E16,E17,E18,E22,E23,E24,E28,E29,E3Ø,E31,E32,E33,E37,E38,E39,E43,E44,E45,E49,E5Ø,E51,E52,E53,E54,E58,E59,E6Ø,E64,E65,E66,E67,E68,E69,E73,E74,E75,E79,E8Ø,E81
36		23287A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E4
37		23716A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E5
38		23717A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E6
39		2329ØA9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E1Ø
40		23291A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E11
41		23292A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E12
42		23568A9-ØØ	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1													E16

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DIGITAL EQUIPMENT CORPORATION
PARTS LIST

MADE BY F. MALANSON	CHECKED F. SEIDMAN	SECTION
DATE 11 MAR 76	DATE 26 MAR 76	
ENG <i>W.W. [unclear]</i>	PROD <i>[unclear]</i>	ISSUED SECTION
DATE <i>11/10/76</i>	DATE <i>11/10/76</i>	

QUANTITY / VARIATION									
M7872-0									

NOTES:

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY	VAR	REF. DESIGNATION
43		23294A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E17
44		23569A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E18
45		23704A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E22
46		23705A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E23
47		23706A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E24
48		23715A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E28
49		23528A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E29
50		23301A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E30
51		23338A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E31
52		23303A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E32
53		23304A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E33
54		23305A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E37
55		23306A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E38
56		23307A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E39
57		23570A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E43
58		23379A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E44
59		23571A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E45
60		23707A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E49
61		23708A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E50
62		23709A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E51
63		23314A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E52
64		23529A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1		E53

E.C.O. NO.	THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1976 DIGITAL EQUIPMENT CORPORATION.			TITLE U WORD	ASSY NO. D-UA-M7872-0-0	SIZE B	CODE PL	NUMBER M7872-0-0	REV. M
					SHEET 3 OF 4	DIST			

DIGITAL EQUIPMENT CORPORATION					QUANTITY / VARIATION													NOTES:				
PARTS LIST			M7872-0																			
MADE BY		CHECKED		SECTION																		
DATE		DATE		ISSUED SECTION																		
ENG		PROD																				
DATE		DATE																				
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION																			REF. DESIGNATION
65		23316A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E54
66		23718A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E58
67		23719A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E59
68		23720A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E60
69		23733A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E64
70		23321A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E65
71		23734A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E66
72		23572A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E67
73		23573A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E68
74		23574A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E69
75		23710A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E73
76		23711A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E74
77		23712A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E75
78		23329A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E79
79		23330A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E80
80		23331A9-00	I.C. DEC 512 x 4 TRI-STATE PROM/ROM	1																		E81
																	NOTES: 1. R15, R16 NOT INSERTED 2. REFERENCE DESIGNATIONS NOT USED: R21 thru R32					

ECO. NO.

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		D-UA-M7872-0-0 SHEET 4 OF 4	B	PL	M7872-0-0	M

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISONS																										
		M7872-Ø	MODULE (U WORD)	C	D	E	F	H	J	K	L	M	N																	
		50-11838	ETCHED BOARD	D	C	D	D	D	D	D	D	D	D																	
D-CS-M7872-Ø-1	1Ø		CIRCUIT SCHEMATIC	C	D	D	D	D	D	K	L	M	N																	
K-PL-M7872-Ø-DBP	3		PARTS LIST DATA BASE	C	D	E	F	H	J	K	L	M	N																	
B-MH-M7872-Ø-6	1		MODULE HISTORY	*	A	B	C	D	E	F	H	J	K																	
D-UA-M7872-Ø-Ø	3		UNIT ASSEMBLY	C	D	E	F	H	J	K	L	M	N																	
D-MD-5011838-Ø-Ø	5		MECHANICAL DRAWING	D	D	D	D	D	D	D	D	D	D																	
M-7872-Ø-L			P.C. DESIGN DATA BASE	D	D	D	D	D	D	D	D	D	D																	
M-7872-Ø-PL			INSERTION P/L DATA BASE	C	C	C	C	C	C	C	C	C	C	D																
DEMINS LISTING	-		MODULE TEST TECHNIQUE	REF	-	-	-	-	-	-	-	-	-																	
* CS REVS E,F,H AND J DO NOT EXIST. THEY HAVE BEEN JUMPED OVER TO MAKE UA, CS AND MODULE REVS MATCH.																														

NOTES:

- THE MODULE REVISION REFLECTS CHANGES IN THE HARDWARE AND IS SEPARATE FROM THE CIRCUIT SCHEMATIC REVISION WHICH REFLECTS BOTH HARDWARE AND DOCUMENT CHANGES.
- THIS DRAWING DIRECTORY DOCUMENTS THE RELATIONSHIP BETWEEN REVISIONS, THE CS REV UPON THE ETCHED BOARD IS NOT TO BE USED.

REVISIONS	DATE	CHG NO	REV
	2-77	M7872-1	B
	3-77	M7872-2	C
	4-77	M7872-3	D
	4-77	M7872-4	E
	7-77	M7872-5	F
	9-77	M7872-6	H
	12-77	M7872-7	J
	1-78	M7872-8	K
	9-78	M7872-9	L

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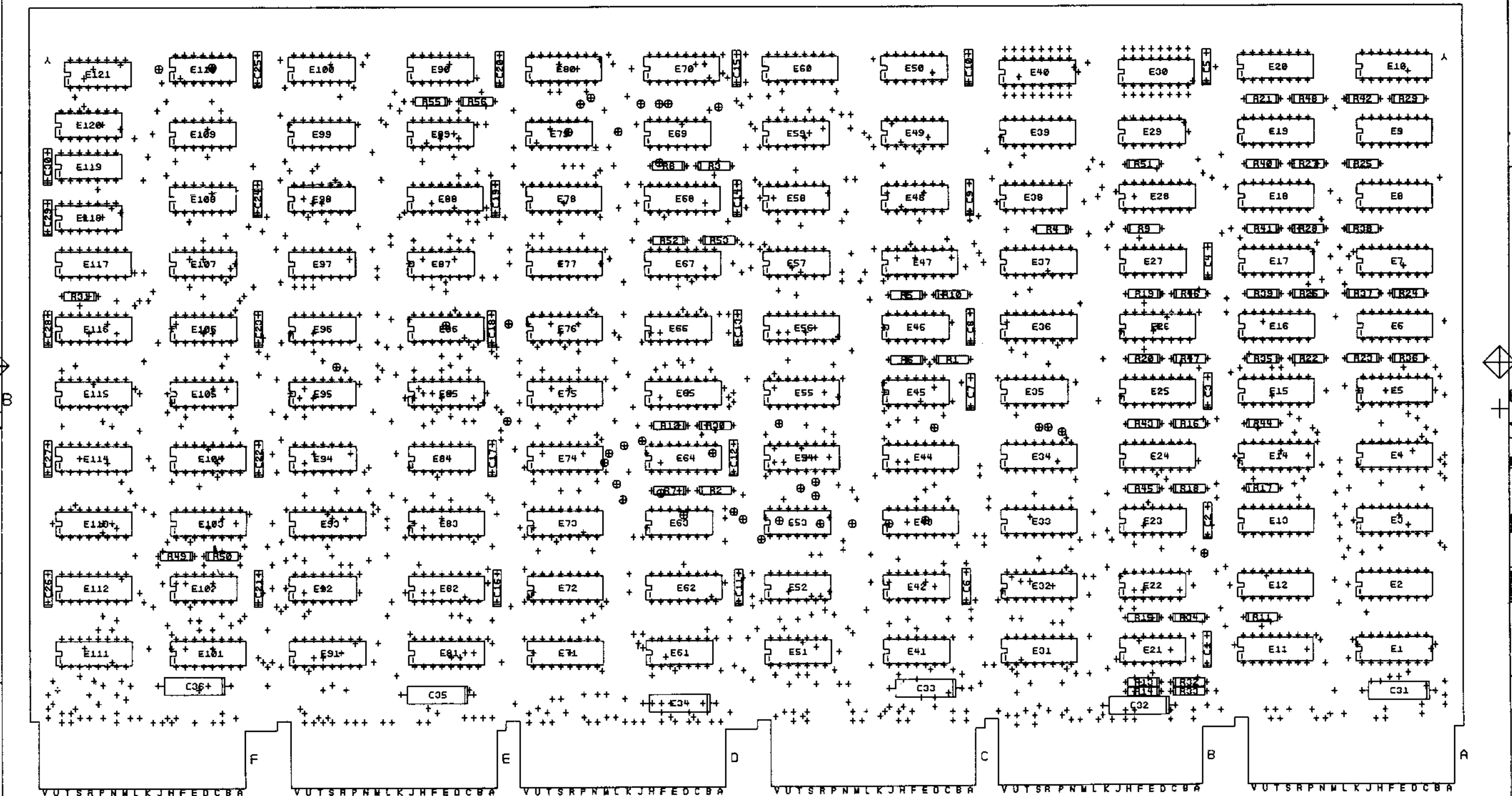


USED ON OPTION/MODEL	DRN: <i>J.H. Randall</i> 11/10/76	TITLE	U WORD		
KD11-K	CHK'D: <i>J.H. Randall</i> 11/10/76	SIZE CODE	BDD	NUMBER	M7872-Ø
	ENG: <i>J.H. Randall</i>	REV.	L	SHEET	1 OF 1
	PROD. <i>J.H. Randall</i> 11/10/76				

TW

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COMPONENT SIDE VIEW



NOTES:

CHANGE NO	REV	DATE	BY	CHK'D	DATE
1	1				
2	1				

ETCH REV.	DATE	BY	CHK'D	DATE
1				

SIGNATURES	DATE
DRW. [Signature]	10-20-77
CHK'D. [Signature]	10/20/77
ENG. M.W. STECKLAIR	10/20/77
PROJ. ENG. J.F. O'LOUGHLIN	10/20/77
PROD. DON RANDALL	10/20/77

digital			
TITLE			
DECODE			
SCALE	2/1	SIZE	CODE
SHT.	1 OF 5	NUMBER	0 UA M7873-0-6
NEXT HIGHER ASSY. B-DD-M7873-0-6			

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	D-MD-5011879-0-0	5011879-00	M7873	1	
2		1012784-00	.047 MFD 50V -20+80 CER	30	C1-C30
3		1005306-00	6.8MFD 35V 10% S.TANT	6	C31-C36
4	BLANK			0	
5		1301322-00	180 1/4W 5% CC	3	R3,R5,R50
6		1301424-00	680 1/4W 5% CC	1	R11
7		1300417-00	2.2 K 1/4W 5% CC	21	R12-R29,R52,R55,R9
8		1300365-00	1 K 1/4W 5% CC	23	R30-R40,R51,R53,R56,R4
9		1300309-00	390 1/4W 5% CC	3	R8,R10,R49
10		1910532-00	74S00 NAND GATE-QUAD 2INS	10	E21,E45,E46,E52,E58,E100,E110, E50,E87,E29
11		1910534-00	74S04 INVERTER GATE-HEX 1I	6	E27,E35,E38,E63,E97,E119
12		1912389-00	74S08 AND GATE-QUAD 2IN,PO	4	E41,E59,E95,E102
13		1910536-00	74S10 NAND GATE-TRIPLE 3IN	6	E61,E69,E84,E90,E98,E109
14		1910537-00	74S11 AND GATE-TRIPLE 3INP	3	E53,E79,E96
15		1910539-00	74S20 NAND GATE-QUAD 4INPU	2	E99,E100
16		1912746-00	DEC 74S37 NAND GATE-QUAD 2IN	3	E22,E23,E51
17		1911712-00	74S51 AND-OR GATE-INVERT D	2	E57,E94
18		1910542-00	74S64 A-C-I GATE 4-2-3-2	6	E42,E105,E106,E107,E118,E120
19		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	2	E48,E92
20		1912089-00	74S85 CMPRTR-4BIT MAGNITUD	3	E81,E91,E111
21		1910011-00	DEC 7486 X-OR GATE-QUAD 2INPU	2	E49,E89
22		1911983-00	74S133 NAND GATE-POSITIVE 1	2	E116,E117
23		1911675-00	74S138 DECODER/DEMUX 3-8 LIN	2	E104,E115
24		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E39
25		1910956-00	74S151 MUX 1 OF 8	3	E68,E71,E76
26		1910547-00	74S153 MUX 1 OF 4 (DUAL)	1	E28
27		1910548-00	74S157 MUX 1 OF 2 (QUAD)	1	E72
28		1910549-00	74S158 MUX 1 OF 2 (QUAD)	3	E55,E70,E92

CONT

REVISION HISTORY		BASIC PART NO: 20375		DRN:	R,BARILONE	DATE: 18-MAY-78	D I G I T A L				
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	B,PUZZO	DATE: 18-MAY-78	TITLE PARTS LIST				
---	INITIAL	R	SECTION VARIATION INDEX				DECODE				
			[A] 00								
			[B]								
			[C]	DES.ENG:	M,STECKLAIR	DATE: 18-MAY-78					
			[D]								
			[E]								
			[F]	RESP.ENG.:	M,STECKLAIR	DATE: 18-MAY-78	DOCUMENT NUMBER				
			[G]								
			[H]								
			[J]								
			[K]	MFG.ENG.:	R,PETERS	DATE: 18-MAY-78	K	PL	M7873-0-DBP	REV	R
			[L]								
			[M]	ASSEMBLY NUMBER:			FILE NAME: M7073.PLS				
			[N]	ID-DA-M7873-0-0			EDIT # 4				

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TW

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
29	29		1910550-00	74S174 FF-D HEX	7	E33,E36,E65,E31,E32,E101,E112
30	30		1910957-00	74S175 FF-D QUAD COMMON CLO	7	E34,E37,E43,E93,E103,E113,E114
31	31		1910552-00	74S194 SHIFT REG.,4BIT RIGH	1	E73
32	32		1912728-00	74S251 MUX 1 OF 8 TRI-STA	8	E44,E54,E64,E56,E67,E74,E75,E77
33	33		23319A2-00	A2-02,A2-04	1	E83
34	34		1912746-01	74S37-1BUFFER-GATE	1	E66
35	35		23192A9-00	A9-01	1	E70
36	36		23193A9-00	A9-01	1	E88
37	37	BLANK		SPARE I.C.	2	E30,E40
38	38		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	12	
39	39		1210711-02	HANDLE,MODULE,HEX	1	
40	40		23194A9-00	A9-01	1	E85
41	41		23195A9-00	A9-01	1	E86
42	42		23196A9-00	A9-01	1	E60
43	43		23197A9-00	A9-01	1	E47
44	44		23198A9-00	A9-01	1	E80
45	45		23199A9-00	A9-01	1	E62
46	46		23721A9-00	A9-01	1	E1
47	47		23489A9-00	A9-01	1	E2
48	48		23575A9-00	A9-01	1	E3
49	49		23491A9-00	A9-01	1	E4
50	50		23492A9-00	A9-01	1	E5
51	51		23714A9-00	A9-01	1	E6
52	52		23576A9-00	A9-01	1	E7
53	53		23495A9-00	A9-01	1	E8
54	54		23496A9-00	A9-01	1	E9
55	55		23497A9-00	A9-01	1	E10
56	56		23498A9-00	A9-01	1	E11
57	57		23499A9-00	A9-01	1	E12
58	58		23713A9-00	A9-01	1	E13
59	59		23722A9-00	A9-01	1	E14
60	60		23502A9-00	A9-01	1	E15
61	61		23723A9-00	A9-01	1	E16
62	62		23504A9-00	A9-01	1	E17
63	63		23505A9-00	A9-01	1	E18
64	64		23506A9-00	A9-01	1	E19
65	65		23507A9-00	A9-01	1	E20
66	66		23508A9-00	A9-01	1	E24
67	67		23509A9-00	A9-01	1	E25
68	68		23510A9-00	A9-01	1	E26
69	69		1212385-02	*** THIS ITEM IS NOT USED ***	-	
70	70		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	1	E121

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE/CODE	DOCUMENT NUMBER	REV
							DECODE		K PL	M7073-0-DDP	R

TW

AUTOMATED BY PRTLST,3J(25)

PARTS LIST

SHEET A3 OF A3

LINE ITEM DOCUMENT NUMBER

PART NUMBER

DESCRIPTION

QTY PER VARIATION
00

REFERENCE DESIGNATOR

0 NOTE: R1,R2,R6,R7 NOT INSERTED.

1 NOTE: REFERENCE DESIGNATIONS NOT USED:R54.

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							DECODE		K	PL	M7073-0-DDP	R

-AN/

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS															
				E	F	H	J	K	L	M	N	P	P						
		M7873-0	MODULE (DECODE)	E	F	H	J	K	L	M	N	P	P						
		5011879	ETCHED BOARD	F	F	F	F	F	F	F	F	H	H						
D-CS-M7873-0-1	13		CIRCUIT SCHEMATIC	E	F	F	H	H	L	M	N	P	R						
K-PL-M7873-0-DBP	2		PARTS LIST DATA BASE	E	F	H	J	K	L	M	N	P	R						
B-MH-M7873-0-6	1		MODULE HISTORY	*	A	B	C	D	E	F	H	J	K						
D-UA-M7873-0-0	4		UNIT ASSEMBLY	E	F	H	J	K	L	M	N	P	R						
D-MD-5011879-0-0	5		MECHANICAL DRAWING	F	F	F	F	F	F	F	F	H	H						
K-PC-M7873-0-DBC			P.C. DESIGN DATA BASE	F	F	F	F	F	F	F	F	H	H						
DEMINS LISTING	-		MODULE TEST TECHNIQUE	REF	-	-	-	-	-	-	-	-	-						
*CS REVS J AND K DO NOT EXIST. THEY HAVE BEEN JUMPED OVER TO MAKE UA,CS,AND MODULE REVS MATCH.																			

NOTES:

1. THE MODULE REVISION REFLECTS CHANGES IN THE HARDWARE AND IS SEPARATE FROM THE CIRCUIT SCHEMATIC REVISION WHICH REFLECTS BOTH HARDWARE AND DOCUMENT CHANGES.
2. THIS DRAWING DIRECTORY DOCUMENTS THE RELATIONSHIP BETWEEN REVISIONS, THE CS REV UPON THE ETCHED BOARD IS NOT TO BE USED.

REVISIONS		DATE	CHG NO.	REV.
	ORIG.	2-77	00001	B
		4-77	00002	C
		7-77	00003	D
		8-77	00004	E
		9-77	00005	F
		12-77	00006	H
		1-78	00007	J
		6-78	TW008	K
		10-78	TW009	L

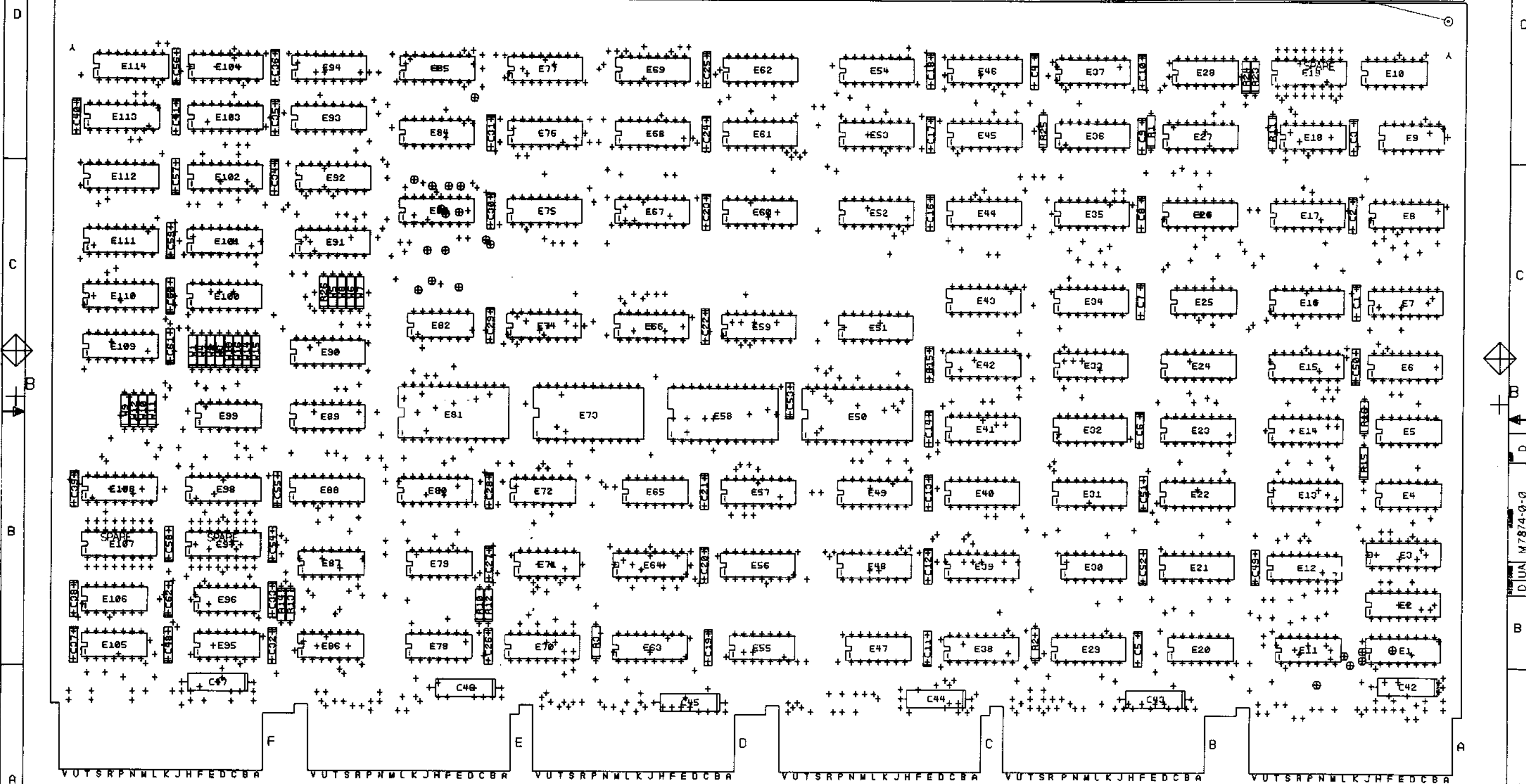
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USED ON OPTION/MODEL	DRN	DATE	TITLE
KD11-K	J. O'Loughlin	11/10/76	DECODE
	J. O'Loughlin	11/10/76	
	M. W. Steinhilber	11/10/76	
	D. J. ...	11/10/76	

SIZE CODE	NUMBER	REV.
BDD	M7873-0	L
SHEET 1 OF 1		

TW



NOTES:

CHK	CHANCE NO	REV	DATE	BY
	M7874	1		
	M7874	1		
	M7874	1		

ETCH REV.	DATE	BY
0		
0		

SIGNATURES	DATE
DRN.	
CHK'D.	
ENG.	
PROJ. ENG.	
SCALE	2/1
SHT.	1 OF 3
NEXT HIGHER ASSY. 6-DD M7874-0	

TITLE	SIZE	CODE	NUMBER	REV
digital	0	JA	M7874-0-0	D
DATA PATH				

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
					00	
1	1	DBD-5012170-0-0	5012170-00	ETCH BOARD (M7874	1	
2	2	BLANK			0	
3	3		1005306-00	6.8MFD 35V 10% S,TANT	6	C42-C47
4	4		1012784-00	.047 MFD 50V -20+80 CER	56	C1-C41,C48-C62
5	5	BLANK			0	
6	6	BLANK			0	
7	7		1910531-00	DEC 74S181 4IN-4BIT	4	E50,E58,E73,E81
8	8		1910532-00	74S00 NAND GATE-QUAD 2IN	3	E9,E87,E10
9	9		1910534-00	74S04 INVERTER GATE-HEX 1I	9	E20,E71,E72,E78,E79,E82,E95,
						CONT E105,E106
10	10		1910536-00	74S10 NAND GATE-TRIPLE 3IN	1	E28
11	11		1910542-00	74S64 A-O-I GATE 4-2-3-2	2	E47,E55
12	12		1910546-00	74S140 NAND GATE-DUAL 4INPU	4	E5,E25,E96,E99
13	13		1910547-00	74S153 MUX 1 OF 4 (DUAL)	8	E12-E15,E104,E93,E113,E114
14	14		1910548-00	74S157 MUX 1 OF 2 (QUAD)	6	E69,E83,E84,E85,E94,E103
15	15		1910549-00	74S158 MUX 1 OF 2 (QUAD)	2	E38,E7
16	16		1910550-00	74S174 FF-O HFX	10	E2,E3,E6,E26,E29,E39,E48,E56,
						CONT E70,E57
17	17		1910552-00	74S194 SHIFT REG.,4BIT RIGH	9	E21-E24,E35,E36,E45,E52,E53
18	18		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	2	E18,E65
19	19		1910956-00	74S151 MUX 1 OF 8	2	E63,E77
20	20		1910957-00	74S175 FF-D QUAD COMMON CLO	8	E8,E16,E51,E59,E64,E66,E74,E80
21	21		1911641-00	SN 74S257 MUX,QUAD 2 TO 1	4	E27,E37,E44,E46
22	22		1911676-00	74S139 DECODER-DUAL TWO-INP	1	E1
23	23		1911712-00	74S51 AND-OR GATE-INVERT D	2	E11,E86
24	24		1912097-00	SN 74S182 LOOK AND CARRY GEN	1	E49
25	25		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	1	E4
26	26		1912389-00	74S08 AND GATE-QUAD 2IN,PO	1	E30
27	27		1912660-00	74S253 MUX 1 OF 4 (DUAL)	8	E54,E60,E61,E62,E67,E68,E75,E76

REVISION HISTORY		BASIC PART NO: M7874		DRN:	E. DANCAUSE	DATE:	18-MAY-78	D I G I T A L			
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	R. PUZZO	DATE:	18-MAY-78	TITLE PARTS LIST			
	101T	D	SECTION VARIATION INDEX					DATA PATH			
			(A) NO								
			(B)								
			(C)	DES.ENG:	L. CONDON	DATE:	18-MAY-78				
			(D)								
			(E)					DOCUMENT NUMBER			
			(F)	RESP.ENG.:	L. CONDON	DATE:	18-MAY-78				
			(G)					SIZE:	CODE:	NUMBER	REV
			(H)					K	PL	M7874-0-DBP	D
			(I)	MFG.ENG.:	R. PETERS	DATE:	18-MAY-78				
			(J)								
			(K)	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			(L)					M7874D,PLS		7	
			(M)								
			(N)								

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SIZE CODE BDD
 NUMBER M7874-Ø
 REV. C

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS																			
				B	C	D																	
		M7874-Ø	MODULE (DATA PATH)	B	C	D																	
		5012170	ETCHED BOARD	C	C	D																	
D-CS-M7874-Ø-DEF	1Ø		CIRCUIT SCHEMATIC	B	C	D																	
K-PL-M7874-Ø-ØBP	2		PARTS LIST	B	C	D																	
B-MH-M7874-Ø-Ø	1		MODULE HISTORY	* A	B																		
D-UA-M7874-Ø-Ø	3		UNIT ASSEMBLY	B	C	D																	
D-MD-M7874-Ø-Ø	5		MECHANICAL DRAWING	B	C	D																	
M7874-Ø-L			P.C. DESIGN DATA BASE	B	C	D																	
M7874-Ø-PL			INSERTION P/L DATA BASE	B	B	C																	
DENIMS LISTING	-		MODULE TEST TECHNIQUE	REF	REF	REF																	

NOTES:

- THE MODULE REVISION REFLECTS CHANGES IN THE HARDWARE AND IS SEPARATE FROM THE CIRCUIT SCHEMATIC REVISION WHICH REFLECTS BOTH HARDWARE AND DOCUMENT CHANGES.
- THIS DRAWING DIRECTORY DOCUMENTS THE RELATIONSHIP BETWEEN REVISIONS, THE CS REV UPON THE ETCHED BOARD IS NOT TO BE USED.

DATE	CHG NO.	REV.	ORIG.		
			A	B	C
4-77	ØØØØ1	B			
5-78	ØØØØ2	C			

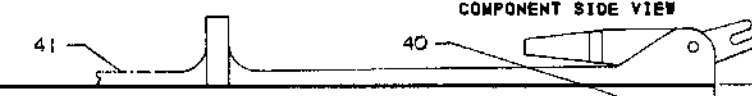
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USED ON OPTION/MODEL	DRN.	TITLE	
KØ11-K	<i>[Signature]</i>	11/10/76	DATA PATH
	CHK'D	<i>[Signature]</i>	11/10/76
	ENG.	<i>[Signature]</i>	11/10/76
	PROD.	<i>[Signature]</i>	11/10/76

SIZE CODE	NUMBER	REV.
B DD	M7874-Ø	C
SHEET 1 OF 1		

COMPONENT SIDE VIEW



8.42 IN
213.92
MM
F. B. S.

DUA M7875-0-0



NOTES:

CHANGE NO	REV	DATE	BY	APP
1	1	01-28-76	KT	
2	1	01-28-76	KT	
3	1	01-28-76	KT	

ETCH REV.	D-P2
P.C. DESIGN ORTR BRSE REV.	DL - D.1

SIGNATURES	DATE
DRM. TC. SURETTE	01-28-76
CHK'D. SEIDMAN	01-28-76
ENC. D. J. S.	01-28-76
PROJ. ENG. D. J. S.	01-28-76
PROD. D. J. S.	01-28-76

digital	
TITLE KT/CACHE	
SIZE	CODE
0	UA
NUMBER	REV
M7875-2-0	C

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	1	0-MD-5011655-0-0	5011655-00	M7875	1	
2	2		1005306-00	6.8MFD 35V 10% S.TANT	6	C31-C36
3	3		1012784-00	.047 MFD 50V -20+80 CER	32	C1-C12,C14-C30,C37-C39
4	4		1300447-00	4.7 K 1/4W 5% CC	3	R59,R60,R57
5	5		1300309-00	390 1/4W 5% CC	31	R3,R5,R8,R9,R11,R13,R15,R17,R19, CONT R21,R23,R25,R27,R29,R31,R33,R35, CONT R37,R39,R41,R43,R45,R47,R49,R51, CONT R53,R55,R64,R66,R68,R62
6	6		1301401-00	750 1/4W 5% CC	30	R4,R6,R7,R10,R12,R14,R16,R18, CONT R20,R22,R24,R26,R28,R30,R32,R34, CONT R36,R38,R40,R42,R44,R46,R48,R50, CONT R52,R54,R56,R63,R65,R67
7	7		1909686-00	7404 INVERTER GATE-HEX 1I	4	E24,E63,E66,E53
8	8		1905579-00	DEC 7440 NAND GATE-DUAL 4INPU	1	E3
9	9		1905547-00	7474 FF-D DUAL,EDGE TRIGG	1	E32
10	10		1910224-00	DEC 7485 COMPARATOR-4BIT	4	E7,E9,E10,E11
11	11		1910656-00	74155 DECODER-2 OF 4(DUAL)	1	E17
12	12		1910655-00	74157 MUX 2 TO 1 QUAD	1	E4
13	13		1910652-00	74174 FF-D HEX	8	E42,E46,E47,E50,E69,E35,E62,E71
14	14		1910651-00	DEC 74175 FF-D QUAD	5	E8,E12,E37,E39,E5
15	15		1910532-00	74S00 NAND GATE-QUAD 2INS	3	E13,E64,E93
16	16		1910534-00	74S04 INVERTER GATE-HEX 1I	1	E65
17	17		1910536-00	74S10 NAND GATE-TRIPLE 3IN	4	E14,E43,E54,E84
18	18		1910537-00	74S11 AND GATE-TRIPLE 3INP	1	E55
19	19		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E44
20	20		1909059-00	DEC 74H30 NAND GATE-SINGLE 8IN	1	E87
21	21		1300479-00	10 K 1/4W 5% CC	3	R1,R2,R58
22	22		1301972-00	270 1/4W 5% CC	1	R61
23	23	BLANK			0	

REVISION HISTORY		BASIC PART NO: M7875		DRN:	D. BILODEAU	DATE:	18-MAY-78	DIGITAL			
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	F. SEIDMAN	DATE:	18-MAY-78	TITLE PARTS LIST			
---	INITIAL	C	SECTION VARIATION INDEX	DES. ENG:	D.C. IVES <td>DATE:</td> <td>18-MAY-78</td> <td colspan="4">KT/CACHE</td>	DATE:	18-MAY-78	KT/CACHE			
			(A) 00					DOCUMENT NUMBER			
			(B)					SIZE:	CODE:	NUMBER	REV
			(C)	RESP. ENG.:	D.C. IVES <td>DATE:</td> <td>18-MAY-78</td> <td></td> <td></td> <td></td> <td></td>	DATE:	18-MAY-78				
			(D)								
			(E)								
			(F)								
			(G)								
			(H)	MFG. ENG.:	D.C. IVES <td>DATE:</td> <td>19-MAR-79</td> <td>K</td> <td>PL</td> <td>M7875-0-DBP</td> <td>C</td>	DATE:	19-MAR-79	K	PL	M7875-0-DBP	C
			(I)								
			(J)	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			(K)	D-0A-M7875-0-0				20366.PLS		4	
			(L)								
			(M)								
			(N)								

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AUTOMATED BY PHILIST,3J(25)

PARTS LIST

SHEET A2 OF A2

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
24	24	1911712-00	74S51 AND-OR GATE-INVERT D	1	E25
25	25	1912389-00	74S08 AND GATE-QUAD 2IN,PO	2	E45,E15
26	26	1912089-00	74S85 CMPRTR-4BIT MAGNITUD	2	E76,E78
27	27	1910548-00	74S157 MUX 1 OF 2 (QUAD)	5	E27,E94,E95,E97,E105
28	28	1910549-00	74S158 MUX 1 OF 2 (QUAD)	7	E79,E80,E38,E81,E82,E26,E72
29	29	1910531-00	DEC 74S181 ALU-4BIT	3	E16,E36,E40
30	30	1912097-00	SN 74S182 LOOK AND CARRY GEN	1	E30
31	31	1912661-00	74S189 MEMORY READ/WRITE	7	E18,E19,E28,E29,E22,E57,E58
32	32	1911573-00	74S280 PARITY GEN/CHKR,9BIT	6	E88,E98,E106,E75,E104,E96
33	33	1912646-00	LS253 MUX 1 OF 4 (DUAL)	8	E51,E56,E49,E48,E31,E6,E20,E21
34	34	1912647-00	LS257 MUX 1 OF 2 (QUAD)	4	E77,E60,E61,E68
35	35	1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	5	E34,E23,E33,E1,E2
36	36	1912459-01	MEMORY READ/WRITE,10	27	E119,E117,E103,E116,E118,E102, CONT E89,E110,E85,E86,E113,E120,E92, CONT E114,E112,E122,E115,E121,E99, CONT E107,E90,E108,E100,E101,E109, CONT E91,E111
37	37	23286A9-00	A9-01	1	E70
38	38	23285A9-00	A9-01	1	E59
39	39	23149A1-00	A1-07	1	E67
40	40	9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
41	41	1210711-02	HANDLE,MODULE,HEX	1	

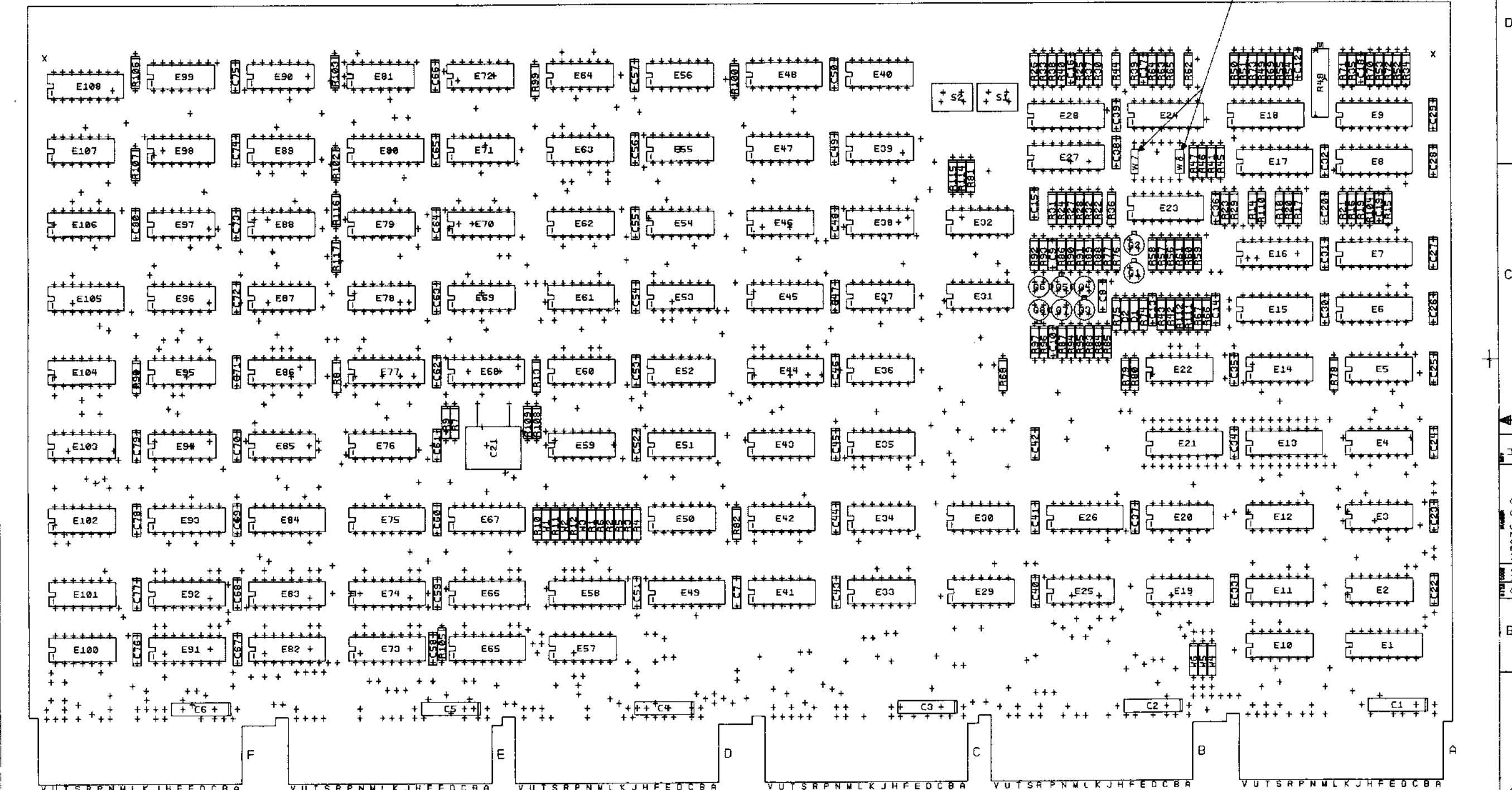
NOTE: E41,E52,E74,E83,E73 ARE SPARE I.C.'S.

DI	GI	IT	AL	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
				KT/CACHE		K	PL	M7875-0-DBP	C

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS			
				DATE	CHG NO.	REV.	
		M7875-Ø	MODULE (KT/CACHE)			B	C
		5011655	ETCHED BOARD			C	D
B-DD-M7875-Ø	1		DRAWING DIRECTORY			A	B
B-CS-M7875-Ø-1	15		CIRCUIT SCHEMATIC			B	C
K-PL-M7875-Ø-ØBP	2		PARTS LIST DATA BASE			B	C
B-MH-7875-Ø-6	1		MODULE HISTORY			*	A
D-UA-M7875-Ø-Ø	3		UNIT ASSEMBLY			B	C
D-MD-M7875-Ø-Ø	5		MECHANICAL DRAWING			C	D
K-PC-M7875-Ø-DBC			P.C. DESIGN DATA BASE			C	D
DEMINS LISTING	-		MODULE TEST TECHNIQUE				REF
NOTES: 1. THE MODULE REVISION REFLECTS CHANGES IN THE HARDWARE AND IS SEPARATE FROM THE CIRCUIT SCHEMATIC REVISION WHICH REFLECTS BOTH HARDWARE AND DOCUMENT CHANGES. 2. THIS DRAWING DIRECTORY DOCUMENTS THE RELATIONSHIP BETWEEN REVISIONS, THE CS REV UPON THE ETCHED BOARD IS NOT TO BE USED.							
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COMPONENT SIDE VIEW



NOTES: 0-1 INSERT W7, W8 ALTHOUGH NOT IN INSERTION P/L DATA BASE.

CHANGE NO.	REV.

ETCH REV. F-01
P.C. DESIGN DATA BASE REV. F

SIGNATURES	DATE	TITLE
DRN. <i>[Signature]</i>	5-3-77	digital
CHK'D. <i>[Signature]</i>	5-2-77	
ENG. <i>[Signature]</i>	5-14-77	TIMING
PROJ. ENG. <i>[Signature]</i>	6-14-77	
PROD.		
SCALE 2/		
SHT. OF 3		
NEXT HIGHER ASSY. B-02-M7876-0		

DIGITAL EQUIPMENT CORPORATION PARTS LIST

QUANTITY / VARIATION

NOTES:

MS 116448
CS REV F
ETCH REV F-P2

MADE BY DATE	F. SMART 3 MAY 77	CHECKED DATE	F. SMART 3 MAY 77	SECTION
ENG DATE		PROD DATE		ISSUED SECTION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M7876-Ø-Ø								
1	D-MD-5011884-Ø-Ø	5011884	ETCHED BOARD	1								
2		1001383	CAPACITOR, .0047UF, 100V	1								
3		1012784	CAPACITOR, .047UF, 50V	71								
4		1005306	CAPACITOR, 6.8UF, 35V, 10%	6								
		1100113	DIODE, D662	2								
		1304837	RESISTOR, 24K, 1/4 W, 5%	1								
		1300295	RESISTOR, 330, 1/4 W, 5%	1								
		1301890	RESISTOR, 560, 1/4 W, 5%	1								
		1300365	RESISTOR, 1K, 1/4 W, 5%	21								
		1300271	RESISTOR, 220, 1/4 W, 5%	3								
		1300309	RESISTOR, 390, 1/4 W, 5%	5								
		1301775	RESISTOR, 820, 1/4 W, 5%	4								
		1300219	RESISTOR, 68, 1/4 W, 5%	4								
		1302377	RESISTOR, 39, 1/4 W, 5%	4								
		1301972	RESISTOR, 270, 1/4 W, 5%	14								

REF DESIGNATION

C21
C7-C10, C13-C20, C22-C80
C1-C6
D1, D2
R7
R8
R9
R1-R6, R10, R11, R12, R52, R53, R79, R80, R81, R98, R99, R100, R68, R82, R78, R105
R13, R74, R102
R103, R107, R109, R115, R117
R58, R61, R71, R112
R66, R67, R76, R49
R85, R86, R87, R77
R57, R60, R62, R63, R64, R65, R70, R83, R88, R90, R92, R94, R96, R111

E.C.O. NO.

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TITLE
TIMING

ASSY NO.
D-UA-7876-Ø-Ø

SIZE	CODE	NUMBER	REV.
B	PL	M7876-Ø-Ø	H

SHEET 1 OF 5

INSERTION PARTS LIST DATA BASE REV

DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:						
MADE BY DATE		F. SMART 3 MAY 77		CHECKED DATE		F. SMART 3 MAY 77		SECTION												
ENG DATE		PROD DATE		ISSUED SECTION																
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M7876-0-0														REF DESIGNATION		
16		1302975	RESISTOR, 82.5, 1/4 W, 1%	2														R50, R54		
17		1303038	RESISTOR, 133, 1/4 W, 1%	2														R51, R55		
18		1301322	RESISTOR, 180, 1/4 W, 5%	8														R56, R59, R69, R106, R108, R114, R110, R116		
19		1300250	RESISTOR, 150, 1/4 W, 5%	7														R75, R84, R89, R91, R93, R95, R97		
20		1300229	RESISTOR, 100, 1/4 W, 5%	37														R14-R47, R72, R73, R104		
21		1005820	CAPACITOR, 22PF	1														C12		
22		1309143-06	POT, 500, 3/4 W, 10%	1														R48		
23		1502762-00	TRANSISTOR, 3639B	6														Q3, Q4, Q5, Q6, Q7, Q8		
24		1510706-00	TRANSISTOR, A55	2														Q1, Q2		
25		1210209	SWITCH, TOGGLE	2														S1, S2		
26		1610033	DELAY LINE, 100NS, 9 TAPS	1														E77		
27		1911398	I.C. DEC 10101	3														E8, E23, E28		
28		1911402	I.C. DEC 10105	1														E27		
29		1911405	I.C. DEC 10109	1														E9		
30		1911403	I.C. DEC 10106	1														E17		
31		1911501	I.C. DEC 10141	4														E6, E7, E15, E16		

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				TIMING	D-UA-M7876-0-0	B	PL	M7876-0-0	H
					SHEET 2 OF 5	INSERTION PARTS LIST DATA BASE REV			

DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:
MADE BY DATE		CHECKED DATE		F. SMART 3 MAY 77		F. SMART 3 MAY 77		SECTION						
ENG DATE		PROD DATE		ISSUED SECTION										
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M7876-0-0									REF DESIGNATION	
32		1913220	I.C. DEC 10216	1									E18	
33		1911399	I.C. DEC 10102	1									E24	
34		1912746	I.C. DEC 74S37	1									E30	
35		1911330	I.C. DEC 74173	8									E65, E66, E73, E74, E82, E83, E91, E92	
36		1911579	I.C. DEC 8641	5									E26, E67, E75, E84, E93	
37		1910550	I.C. DEC 74S174	1									E45	
38		1910541	I.C. DEC 74S40	1									E70	
39		1910951	I.C. DEC 9602	1									E68	
40		1909705	I.C. DEC 8881	6									E11, E19, E25, E29, E33, E36	
41		1911469	I.C. DEC 8640	2									E20, E63	
42		1910532	I.C. DEC 74S00	12									E5, E35, E38, E53, E61, E64, E71, E88, E85, E90, E94, E97	
43		1910534	I.C. DEC 74S04	7									E31, E39, E52, E55, E96, E102, E3	
44		1910155	I.C. DEC 7408	1									E101	
45		1910545	I.C. DEC 74S112	3									E48, E80, E108	
46		1910537	I.C. DEC 74S11	4									E40, E62, E81, E103	

E.C.O. NO.

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TITLE
TIMING

ASSY NO.
D-UA-M7876-0-0
SHEET 3 OF 5

SIZE CODE
B PL
NUMBER
M7876-0-0
INSERTION PARTS LIST DATA BASE REV

REV.
H

DIGITAL EQUIPMENT CORPORATION PARTS LIST

QUANTITY / VARIATION

NOTES:

MADE BY DATE	F. SMART 3 MAY 77	CHECKED DATE	F. SMART 3 MAY 77	SECTION
ENG DATE	PROD DATE		ISSUED SECTION	

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M7876-Ø-Ø									REF DESIGNATION	
47		1910539	I.C. DEC 74S20	3										E56,E59,E2
48		1909713	I.D. DEC 8815	2										E100,E10
49		1912746-1	I.C. DEC 74S37-1	4										E34,E41,E42,E57
50		1910878	I.C. DEC 7427	1										E4
51		1912389	I.C. DEC 74S08	3										E54,E72,E89
52		1910536	I.C. DEC 74S10	7										E12,E43,E87,E76,E99,E104,E69
53		1911983	I.C. DEC 74S133	1										E105
54		1912388	I.C. DEC 74S02	4										E47,E50,E51,E106
55		1910544-0	I.C. DEC 74S74	11										E14,E22,E60,E78,E86,E95,E98,E107,E37,E46,E79
56		23374A2-00	I.C. DEC 256 X 4 OPEN COLL. PROM/ROM	1										E49
57		23316A2-00	I.C. DEC 256 X 4 OPEN COLL. PROM/ROM	1										E58
58		1910544-1	I.C. DEC 74S74-60	1										E32
59		9000024-01	EYELET	12										
60		1210711-02	ASSY/HANDLE	1										

E.C.O. NO.	TITLE TIMING		ASSY NO. D-UA-M7876-Ø-Ø	SIZE B	CODE PL	NUMBER M7876-Ø-Ø	REV. H
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DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:						
MADE BY DATE		F. SMART 3 MAY 77		CHECKED DATE		F. SMART 3 MAY 77		SECTION												
ENG DATE		PROD DATE		ISSUED SECTION																
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	M7876-0-0																REF DESIGNATION
61		9009185	JUMPER, INSULATED	6																W1-W8,
62			SPARE I.C.	2																E13,E21.
63		23150A1-00	I.C. DEC 32 X 8 TRISTATE PROM/ROM	1																E44
64		1312628	RESISTOR PACK	1																E1

E.C.O. NO.

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TITLE
TIMING

ASSY NO.
D-UA-M7876-0-0
SHEET 5 OF 5

SIZE CODE
B PL
NUMBER
M7876-0-0
INSERTION PARTS LIST DATA BASE REV

REV.
H

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS																			
		M7876-Ø	MODULE (TIMING)	D	E	F	H	H															
		5011884	ETCHED BOARD	E	E	E	F	F															
D-CS-M7876-Ø-1	9		CIRCUIT SCHEMATIC	D	E	E	F	H															
B-PL-M7876-Ø-Ø	5		PARTS LIST	D	E	F	H	H															
B-MH-M7876-Ø-6	1		MODULE HISTORY	*	A	B	C	D															
D-UA-M7876-Ø-Ø	3		UNIT ASSEMBLY	D	E	F	H	H															
D-MD-5011884-Ø-Ø	5		MECHANICAL DRAWING	E	E	E	F	F															
M7876-Ø-L			P.C. DESIGN DATA BASE	E	E	E	F	F															
M7876-Ø-PL			INSERTION P/L DATA BASE	D	D	D	E	E															
DEMINS LISTING	-		MODULE TEST TECHNIQUE	REF																			

NOTES:

- THE MODULE REVISION REFLECTS CHANGES IN THE HARDWARE AND IS SEPARATE FROM THE CIRCUIT SCHEMATIC REVISION WHICH REFLECTS BOTH HARDWARE AND DOCUMENT CHANGES.
- THIS DRAWING DIRECTORY DOCUMENTS THE RELATIONSHIP BETWEEN REVISIONS, THE CS REV UPON THE ETCHED BOARD IS NOT TO BE USED.

DATE	CHG NO.	REV	REVISIONS				
			ORIG.	B	C	D	E
2-77	00001		B				
4-77	00002		C				
5-77	00003		D				
9-77	00004		E				

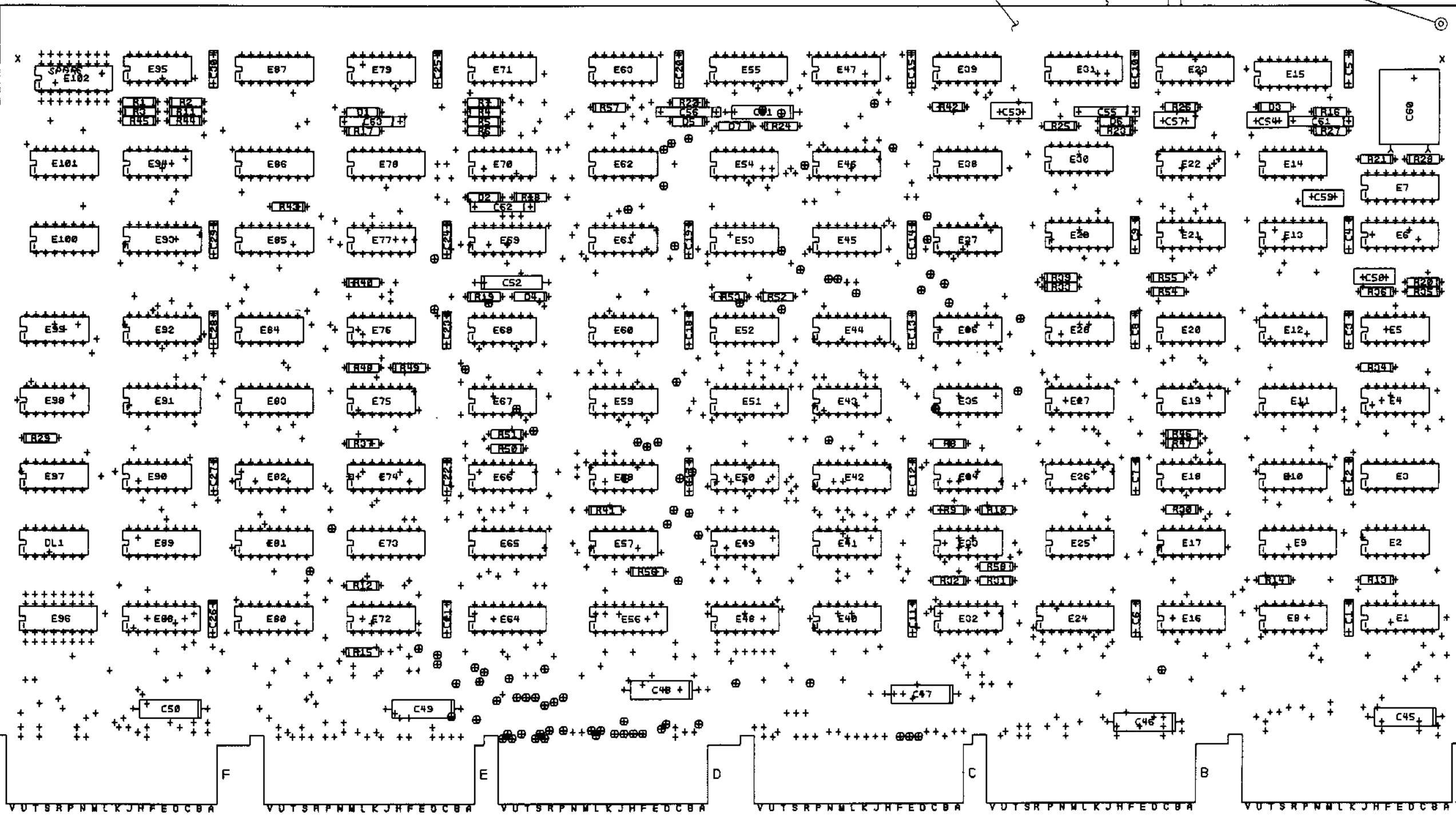
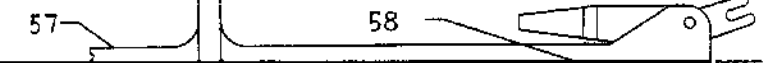
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USED ON OPTION/MODEL	DRN. <i>John Randall</i>	11/10/76	TITLE
KD11-K	CHK'D <i>John Randall</i>	11/10/76	TIMING
	ENG. <i>John Randall</i>	11/10/76	SIZE CODE
	PROD. <i>John Randall</i>	11/10/76	BDD
			NUMBER
			M7876-Ø
			REV.
			E
			SHEET 1 OF 1

THIS BOARD IS APPROVED FOR USE IN THE...
 © 1978

COMPONENT SIDE VIEW



8.42 IN
 213.92
 MM
 F.B.S.

DIAM 7877-0-0

NOTES:

CHG	NO	REV	DATE	BY
1	1	1		
2	2	1		
3	3	1		
4	4	1		
5	5	1		

ETCH REV. D-P2
 P.C. DESIGN DATA BRSE REV. D-P2

SIGNATURES	DATE
DRN <i>[Signature]</i>	9-27-78
CHK'D <i>[Signature]</i>	9-27-78
ENG. M. STECKLAIR	11-10-76
PROJ. ENG. D. RANDALL	11-10-76
PROD. E. RANDALL	11-10-76

digital	
TITLE STATUS BOARD	
SIZE CODE	NUMBER
0 UA	M7877-0-0
REV	H

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	D-MD-5011885-0-0	5011885-00	M7877	1	
2		1012784-00	.047 MFD 50V -20+80 CER	29	C1-C15,C17-C30
3		1005306-00	6.8MFD 35V 10% S.TANT	7	C45-C51
4		1000076-00	39 MFD 10V 10% 150D S.TA	1	C52
5		1001631-00	390.0 MMF 100V 5%200PPM DM15S	2	C53,C54
6		1005328-00	.33 MFD 20V 10% 150D S.TA	2	C55,C56
7		1000015-00	82.0 MMF 100V 5%200PPM DM15S	1	C57
8		1000016-00	100.0 MMF 100V 5%200PPM DM15S	2	C58,C59
9		1001636-00	2400.0 MMF 100V 5%200PPM DM19S	1	C60
10		1001776-00	1 MFD 35V 10% S.TANT	3	C61-C63
11		1105275-00	D 672 TR= 15NS PIV= 60V SI	7	D1-D7
12		1300271-00	220 1/4W 5% CC	13	R1-R11,R29,R46
13		1302514-00	39 K 1/4W 5% CC	4	R16-R19
14		1300447-00	4.7 K 1/4W 5% CC	6	R12-R15,R20,R21
15		1305346-00	27 K 1/4W 5% CC	2	R22,R23
16		1302177-00	47 K 1/4W 5% CC	4	R24-R27
17		1300488-00	12 K 1/4W 5% CC	1	R28
18		1300365-00	1 K 1/4W 5% CC	18	R30-R37,R39-R45,R56-R58
19		1312628-00	R NETWORK 14-170.5 14-375	2	E1,E24
20		1012463-00	DELAY= 150NS,10TAPS	1	DL1
21		1301322-00	180 1/4W 5% CC	4	R48,R50,R52,R54
22		1300309-00	390 1/4W 5% CC	5	R47,R49,R51,R53,R55
23		1905575-00	7400 NAND GATE-QUAD 2IN	3	E26,E54,E70
24		1910532-00	74S00 NAND GATE-QUAD 2INS	5	E17,E25,E61,E14,E38
25		1909004-00	DEC 7402 NOR GATE-QUAD 2IN	2	E53,E62
26		1912388-00	74S02 NOR GATE-QUAD 2IN,PO	3	E33,E36,E101
27		1910534-00	74S04 INVERTER GATE-HEX 1I	3	E37,E49,E84
28		1910155-00	DEC 7408 AND GATE,POS,QUAD 2I	1	E22
29		1912389-00	74S08 AND GATE-QUAD 2IN,PO	5	E46,E48,E52,E59,E94

REVISION HISTORY			BASIC PART NO: Z0384		DRN: T.REYNOLDS		DATE: 05-JUL-78		D I G I T A L	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	B.PUZZO	DATE:	05-JUL-78	TITLE	PARTS LIST	
---	INITIAL	H	SECTION VARIATION INDEX	CHK'D:	B.PUZZO	DATE:	05-JUL-78	STATUS		
			(A) 00	DES.ENG:	M.W.STECKLAIR	DATE:	05-JUL-78	DOCUMENT NUMBER		
			(B)	RESP.ENG.:	M.W.STECKLAIR	DATE:	05-JUL-78	SIZE	CODE	NUMBER
			(C)	MFG.ENG.:	M.W.STECKLAIR	DATE:	05-JUL-78	K	PL	M7877-0-DBP
			(D)	ASSMPLY NUMBER:		FILE NAME:		EDIT #		
			(E)	D-0A-M7877-0-0		M7877.PLS		2		
			(F)							
			(G)							
			(H)							
			(I)							
			(J)							
			(K)							
			(L)							
			(M)							
			(N)							

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PARTS LIST

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30		1905576-00	7410 NAND GATE-TRIPLE 3IN	1	E30
31	31		1910536-00	74S10 NAND GATE-TRIPLE 3IN	4	E41,E68,E79,E32
32	32		1910537-00	74S11 AND GATE-TRIPLE 3INP	2	E19,E40
33	33		1910539-00	74S20 NAND GATE-DUAL 4INPU	1	E28
34	34		1910678-00	7427 NOR GATE-TRIPLE 3IN	2	E12,E100
35	35		1905578-00	7430 NAND GATE-SINGLE 8IN	1	E67
36	36		1911521-00	7432 OR GATE-QUAD 2IN, PO	3	E5,E50,E60
37	37		1910541-00	74S40 NAND GATE-DUAL 4IN,B	2	E47,E63
38	38		1905547-00	7474 FF-D DUAL,EDGE TRIGG	2	E10,E39
39	39		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	11	E13,E18,E21,E29,E35,E43,E45,E57, E58,E76,E77
40	40		1910224-00	DEC 7485 COMPARATOR-4BIT	2	CONT E91,E93
41	41		1911983-00	74S133 NAND GATE-POSITIVE 1	1	E74
42	42		1911675-00	74S138 DECODER/DEMUX 3-8 LIN	2	E44,E51
43	43		1910659-00	74161 COUNTER,SYNCHR. UP	1	E87
44	44		1910657-00	74174 FF-D HEX	2	E42,E92
45	45		1910559-00	74S174 FF-D HEX	1	E11
46	46		1910957-00	74S175 FF-D QUAD COMMON CLO	2	E83,E89
47	47		1912646-00	LS253 MUX 1 OF 4 (DUAL)	8	E56,E64,E65,E73,E80,E82,E88,E81
48	48		1910546-00	74S140 NAND GATE-DUAL 4INPU	1	E98
49	49		1912746-01	74S37-1 BUFFER-GATE	1	E75
50	50		1910738-00	DEC 74170 MEMORY READ/WRITE	2	E85,E86
51	51		1911469-00	DEC 8640 RECEIVER,BUS,QUAD,U	6	E8,E16,E27,E72,E90,E99
52	52		1911579-00	8641 TRANSCEIVER,BUS,QUA	1	E9
53	53		1909713-00	DEC 8815 NOR GATE-DUAL 4IN	1	E97
54	54		1909705-00	DEC 8881 NAND GATE-QUAD 2IN O	5	E4,E34,E95,E2,E71
55	55		1910951-00	9602 ONE SHOT-DUAL	8	E6,E7,E15,E23,E31,E55,E69,E78
56	56		23318A2-00	A2-02,A2-04	1	E3
57	57		1210711-02	HANDLE,MODULE,HEX	1	
58	58		9000024-01	EYELET, ROLLED FLANGE, .121 OD X	12	
59	59		1910544-01	74S74-60GG-D DUAL,EDGE TRIG	2	E20,E66

NOTE: SPARE I.C. LOCATIONS ARE: E96,E102.

DI	GI	TI	AI	LI	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
					STATUS		K	PL	M7877-0-DBP	H

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS														
				B	C	D	E	F	H									
		M7877-0	MODULE (STATUS)	B	C	D	E	F	H									
		5011885	ETCHED BOARD	C	C	C	C	C	D									
D-CS-M7877-0-1	9		CIRCUIT SCHEMATIC	B	C	D	E	F	H									
K-PL-M7877-0-DBP	2		PARTS LIST	B	C	D	E	F	H									
R-MH-M7877-0-6	1		MODULE HISTORY	*	A	B	C	D	E									
D-UA-M7877-0-0	3		UNIT ASSEMBLY	B	C	D	E	F	H									
D-MD-5011885-0-0	5		MECHANICAL DRAWING	C	C	C	C	C	D									
M7877-0-L			P.C. DESIGN DATA BASE	C	C	C	C	C	D									
M7877-0-PL			INSERTION P/L DATA BASE	B	B	B	B	B	C									
DEMINS LISTING	-		MODULE TEST TECHNIQUE	REF	REF	REF	REF	REF	REF									

NOTES:

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DATE	CHG NO	REV	REVISIONS					
			ORIG	B	C	D	E	F
-	-	-	ORIG	B	C	D	E	F
2-77	00001	B						
5-77	00002	C						
7-77	00003	D						
9-77	00004	E						
7-78	TV005	F						

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USED ON OPTION/MODEL	DRN. 770109/10	11/10/76	TITLE
KD11-K	CHK'D 770109/10	11/10/76	STATUS
	ENG. 770109/10	11/10/76	SIZE CODE
	PROD. 770109/10	11/10/76	B DD
			NUMBER
			M7877-0
			REV.
			1
			SHEET 1 OF 1

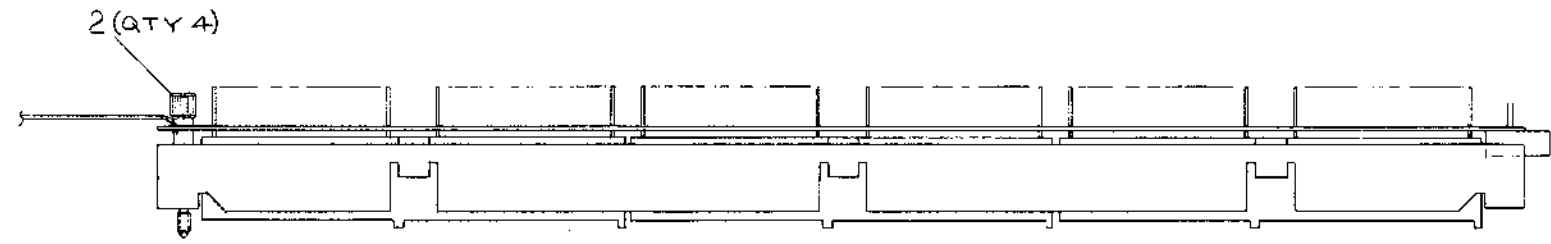
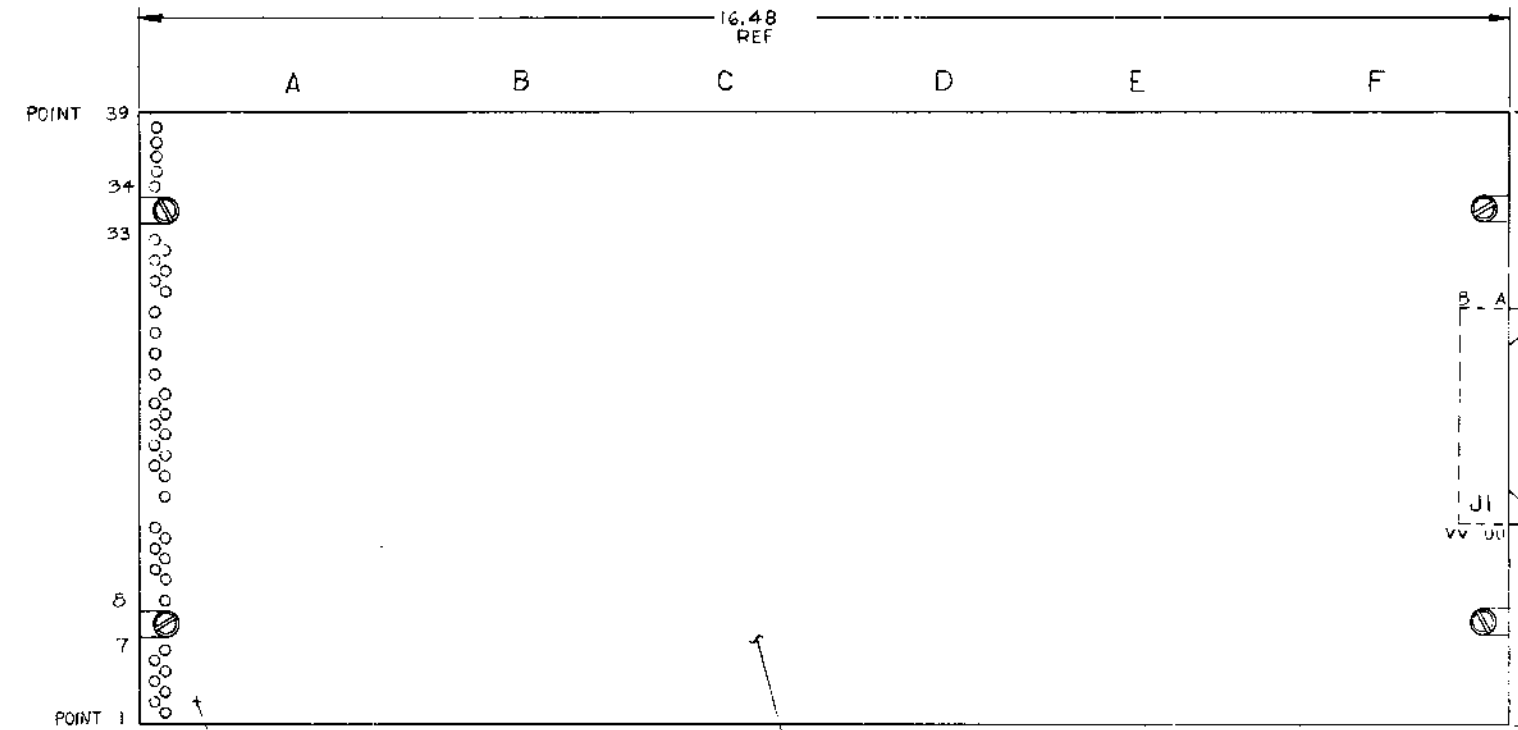
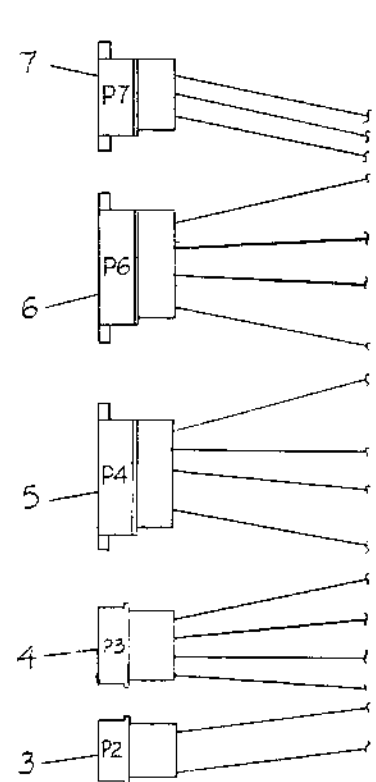
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NOTES:
1. REVISION LEVELS OF COMPONENT PARTS ARE CORRELATED ON B-DD-KDII-K.

+5 VDCB	B	A	GROUND BERG
REMOTE SEL	L	D	REMOTE LOAD L
REMOTE Z	L	F	REMOTE SEL - I L
REMOTE VALID	L	J	REMOTE I L
GROUND BERG	L	K	REMOTE COMPARE H.
SLIDE SW	I	H	+5VDCB
SW CLOSURE	I	R	SLIDE SW ϕ H
LED(BATT OK)	H	T	SW CLOSURE ϕ L
LED(CONSOLE)	H	V	LED (PROG) H
LED(USER)	H	X	LED (RUN) H
LED(DEGIMAL)	H	Z	GROUND BERG
DISPLAY CODE	I	BB	AA DISPLAY CODE Z L
PANEL LOCK	H	DD	CC DISPLAY CODE ϕ L
DISPLAY SEL	I	FF	EE DISPLAY SEL Z L
+5 VDCB	I	JJ	HH DISPLAY SEL ϕ L
ANY KEY	H	LL	KK GROUND BERG
KEYPAD CODE	4	INN	MM START+HALT L
KEYPAD CODE	Z	L	RR PP KEYPAD CLDE 3 L
KEYPAD CODE	ϕ	L	TT SS KEYPAD CODE 1 L
GROUND BERG	I	VV	UU +5VDCB

DETAIL A
SCALE: NONE

SEE DETAIL A



REV	NO	DATE	BY	CHKD
1	A	16 FEB 77	J. O'LOUGHLIN	J. O'LOUGHLIN
2	B	28 MAR 77	D. IVES	J. O'LOUGHLIN
3	C	28 MAR 77	J. O'LOUGHLIN	J. O'LOUGHLIN

ITEM NO.	DESCRIPTION	DWG/PART NO.	ITEM NO.
1	HARNESS #5 (P7)	C-IA-7012958-0-0	7
1	HARNESS #4 (P6)	C-IA-7012955-0-0	6
1	HARNESS #3 (P4)	C-IA-7012957-0-0	5
1	HARNESS #2 (P3)	C-IA-7012954-0-0	4
1	HARNESS #1 (P2)	C-IA-7012956-0-0	3
4	SCREW, CAPTIVE PANEL	C-MD-7415639-0-0	2
1	WIRED ASSY (KDII-K)	D-IA-7012980-0-0	1

THIRD ANGLE PROJECTION		FIRST USED ON	
REMOVE BURRS AND BREAK SHARP CORNERS		KDII-K	
DO NOT SCALE DWG		NEXT HIGHER ASSY	
MATERIAL SEE PARTS LIST		SCALE NONE	
FINISH		SHEET 1 OF 2	

CLASS OF ACCURACY	ANGLE	NOMINAL DIMENSION RANGE INCHES				
CHECK ONE	IN	OVER 0 TO 0.2	OVER 0.2 TO 0.4	OVER 0.4 TO 0.6	OVER 0.6 TO 0.8	OVER 0.8 TO 1.0
<input type="checkbox"/> MEDIUM	<input checked="" type="checkbox"/> IN	±.004	±.006	±.012	±.018	±.024
<input type="checkbox"/> TIGHT	<input type="checkbox"/> MICROINCHES	±.002	±.003	±.005	±.008	±.012

TITLE		REV.	
BACK PLANE ASSY (KDII-K)		C	
SIZE CODE		NUMBER	
D IA 7012953-0-0		1	

DRAWING NUMBER D-IA-7012953-0-0

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WIRE TABLE

ITEM NO	DESCRIPTION			FROM			TO			BACK PANEL SIGNALS
	AWG	COLOR	POINT	CONNECTION	TERM	POINT	CONNECTION	TERM		
P2	18	WHT	4	P2-1	-	8	ITEM #1	SOLDER	SW CLOSURE 0 L	
	18	BLK	3	P2-3	↑	15	↑	↑	SW CLOSURE 1 L	
P3	14	RED	13	P3-1		5			+5VDC A	
	↑	↑	14	P3-2		12			+5VDC B	
	↑	↑	15	P3-3		13			+5VDC B	
	↑	↑	16	P3-4		6			+5VDC A	
	↓	↓	17	P3-5		7			+5VDC A	
	RED	18	P3-6		14				+5VDC B	
	BLK	19	P3-7		9				GND PWR DISTRIBUTION	
	↑	↑	20	P3-8		10				
	↑	↑	21	P3-9		11				
	↑	↑	22	P3-10		18				
	↓	↓	23	P3-11		19				
	P4	BLK	12	P4-1		32				GND PWR DISTRIBUTION
RED		11	P4-3		29				+5V FLT PT	
BLK		10	P4-4		33				GND PWR DISTRIBUTION	
RED		9	P4-6		30				+5V FLT PT	
BLK		8	P4-7		34				GND PWR DISTRIBUTION	
RED		7	P4-9		31				+5V FLT PT	
RED		12	P6-1		16				+5VDC D	
RED		13	P6-2		17				+5VDC D	
GRY		14	P6-3		4				+15VDC	
P6	14	BLK	15	P6-4		3			GND PWR DISTRIBUTION	
	18	BRN	16	P6-5		1			LED (BATT OK) H	
	14	BLK	17	P6-6		21			GND PWR DISTRIBUTION	
	14	BLK	18	P6-7		22			GND PWR DISTRIBUTION	
	18	GRN	19	P6-8		2			DISCHARGED L	
	18	ORN	20	P6-9		25			DC ON	
	14	BLK	21	P6-10		24			GND PWR DISTRIBUTION	
	14	BLU	22	P6-11		38			-15VDC	
	14	BLK	8	P7-1		23			GND PWR DISTRIBUTION	
	18	BRN	7	P7-2		39			LTC L	
P7	18	VIO	6	P7-3	↓	36	↑	↑	BUS DC LO L	
	18	YEL	5	P7-4	-	37	ITEM #1	SOLDER	BUS AC LO L	
						26			SPARE	
						27			SPARE	
						28			SPARE	
					35				SPARE	

REVISIONS		
CHK	CHANGE NO.	REV.

4

3

REV. B
NUMBER KD11-K-1
SIZE CODE WL K


2

1

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WIRE LIST FORMAT (BY COLUMN HEADING)

- 1. RUN NAME - CONTAINS THE SIGNAL NAME AS IT APPEARS IN THE CIRCUIT SCHEMATICS MINUS THE PRINT PREFIX.
- 2. PIN NAME - THREE TYPES OF NOTATION FOR ALL PINS IN A GIVEN RUN:
 - A) STANDARD PINS-(ROWS A-F, SLOTS 1-14), THE AREA WHERE THE MODULE IS INSTALLED,
 - B) J1 PINS-(BERG HEADER PINS ONLY), CONSIST OF J, 2 ZERO-FILLED POSITIONS, 1, AND A ONE OR TWO PIN DESIGNATION (EX. J001A, J001AA).
 - C) J2 PINS-(POWER DISTRIBUTION CONNECTIONS ONLY), SAME FORMAT AS J1 PINS EXCEPT THE LAST TWO CHARACTERS ARE THE CONNECTION NUMBER (EX. J00205, J00215).
- 3. BAY ORDER - SPECIFIES THE RUN CONNECTION SEQUENCE, IF A STAR (*) IS NEXT TO THE BAY ORDER NUMBER THEN THE RUN HAS BEEN FORCED TO BE IN THAT ORDER.
- 4. Q COLUMN - HOW THE CONNECTION FROM THE PIN NAME ON THAT LINE TO THE PIN NAME ON THE NEXT LINE IS MADE:
 - A) BLANK SPACE-30 GAUGE WIRE
 - B) "H"-120 OHM TWISTED PAIR
 - C) "K"-J1 OR J2 PINS
 - D) "P"-ETCH CONNECTIONS
- 5. DRAW - ADDITIONAL (WITH Q) INFORMATION ABOUT THE CONNECTION FROM THE PIN NAME ON THAT LINE TO THE PIN NAME ON THE FOLLOWING LINE:
 - A) WR-30 GAUGE WIRE
 - B) TW-120 OHM TWISTED PAIR
 - C) ETCH 1-SIDE 1 ETCH (NEXT TO CONNECTOR BLOCKS)
 - D) ETCH 2-SIDE 2 ETCH (PIN SIDE)
 - E) PWR-POWER (INNER) LAYER
 - F) GND-GROUND (INNER) LAYER
 - G) TSTP T-MODULE TEST POINT ONLY
- 6. REMARKS - 12 CHARACTER CIRCUIT SCHEMATIC REFERENCE:
 - A) SPC-SMALL PERIPHERAL CONTROLLER SLOTS
 - B) PWR DIST-POWER DISTRIBUTION BOARD
 - C) CONSOLE PWR-CONSOLE (BERG) POWER
 - D) CONSOLE GND-CONSOLE (BERG) GROUND
 - E) XCS-(SLOT 1), EITHER WCS, DCS, OR ECS
 - F) IO UNIBUS-THE UNIBUS WITH SIGNALS FOR DMA AND INTERRUPTING DEVICES.
 - G) MEM UNIBUS-THE UNIBUS SECTION FOR MEMORY ONLY.
 - H) CS PAGES WITH (*) FOR SOURCE-EX. K603, 04*,07 MEANS THE SIGNAL IS ON CS'S K603, K604 (SOURCE), AND K607. WHEN THE NUMBER OF PAGES CAN'T BE REPRESENTED WITH 12 OR LESS CHARACTERS FIRST THE LEADING ZERO'S ARE DROPPED (K603,4*,7,8) AND THEN THE FIRST THREE CHARACTERS (3,4*7,8,9,). THE MODULE REFERENCED CAN BE DETERMINED BY THE SLOT PORTION OF PIN NAME

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11/60		PARTS LIST		
CAUTION: THE PRODUCTION AND FIELD INFORMATION FOR THE KD11-K HAS BEEN GENERATED FROM FOUR SEPARATE FILES. ECO ORIGINATORS AND THOSE UPDATING THE FILES MUST READ A-SP-KD11-K-2 FOR PROPER PROCEDURE.		DRN. B. Blodgett	DATE 6-14-76	 TITLE WIRE LIST KD11-K
	CHK'D.	DATE		
	ENG.	DATE		
	PROJ. ENG.	DATE		
	PROD.	DATE 11/22/76		
NEXT HIGHER ASSEMBLY				
D-1A-7012980-0-0		SIZE CODE	NUMBER	REV.
SCALE		K WL	KD11-K-1	B
SHEET 1 OF 1		DIST.		

REVISIONS	CHANGE NO.	REV.
CHK	KD11-K-00001	A
	KD11-K-00002	B

4

3

2

1

digitalEQUIPMENT
CORPORATION
MAYNARD MASSACHUSETTS**DRAWING DIRECTORY**

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SEQUENCE 7 7 CUSTOMER PRINT SET INDEX

SEQUENCE 7 7

THIS IS PRINT SET

UNIT VARIATIONS

PRINT SET

VAR	TITLE	PRINT SET	
KY11-P	PROGRAMMERS CONSOLE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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		<input type="checkbox"/>	<input type="checkbox"/>
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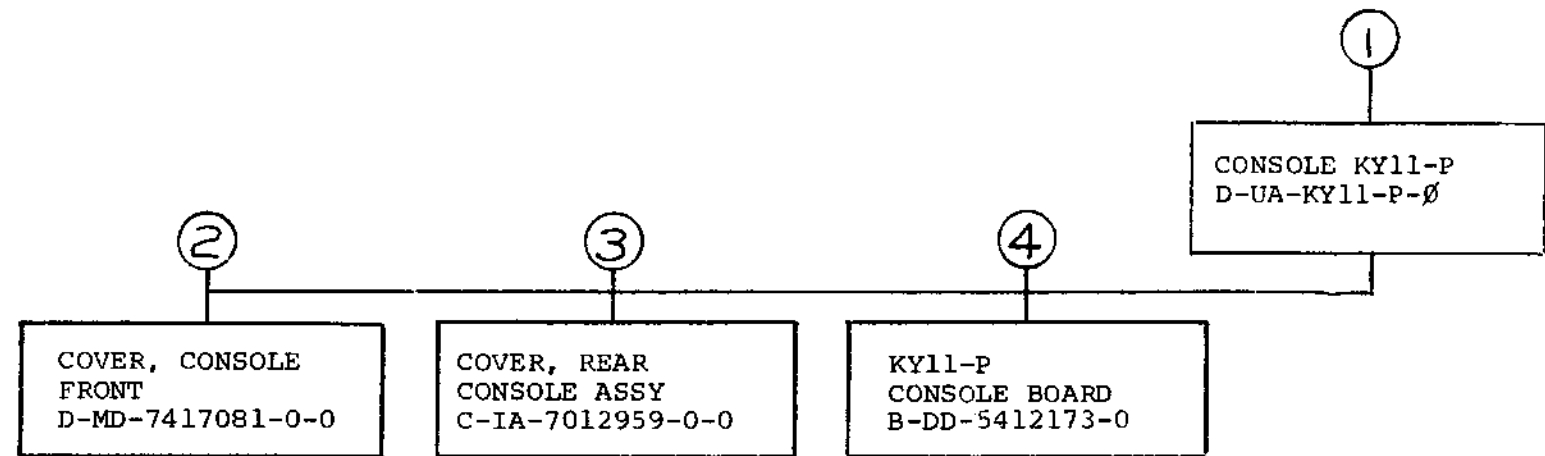
REV	CHG. NO.	DATE

USED ON OPTION/MODEL	DRN.	DATE	TITLE
	D. HEALY	JUL 76	CONSOLE KY11-P
	CHK'D.	DATE	
1160W	D. HEALY	DEC 76	
11/60	PROJ. ENG.	DATE	
	PROD.	DATE	
	FIELD SERV.	DATE	

SIZE	CODE	NUMBER	REV
B	DD	KY11-P	
DIST			

SHEET 1 OF 3

FN-01062-1A-16-R972-1325



TITLE	SHEET 2 OF 3	SIZE CODE	NUMBER	REV
CONSOLE KY11-P		B	KY11-P	

FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	D-UA-KY11-P-0	CONSOLE KY11-P	M				
	D-MD-7416868-0-0	CASTING CONSOLE	M				
	C-MD-7416956-0-0	STRAP GROUND	M				
	D-UA-BC05L-0-0	CABLE, BC05L	E/M				
2	D-MD-7417081-0-0	COVER, CONSOLE FRONT	M				
	B-SS-7417081-0-1	SILK SCREEN	M				
	B-SS-7417081-0-2	SILK SCREEN	M				
	B-SS-7417081-0-3	SILK SCREEN	M				
	B-SS-7417081-0-4	SILK SCREEN	M				
3	C-IA-7012959-0-0	COVER, REAR CONSOLE ASSY	M				
	C-MD-7417080-0-0	COVER, REAR CONSOLE	M				
	C-MD-7417088-0-0	COVER, SWITCH PROTECTION	M				
	B-MD-7417165-0-0	SHIELD, BACK PANEL	M				
4	B-DD-5412173-0	CONSOLE BOARD KY11-P	E/M				

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



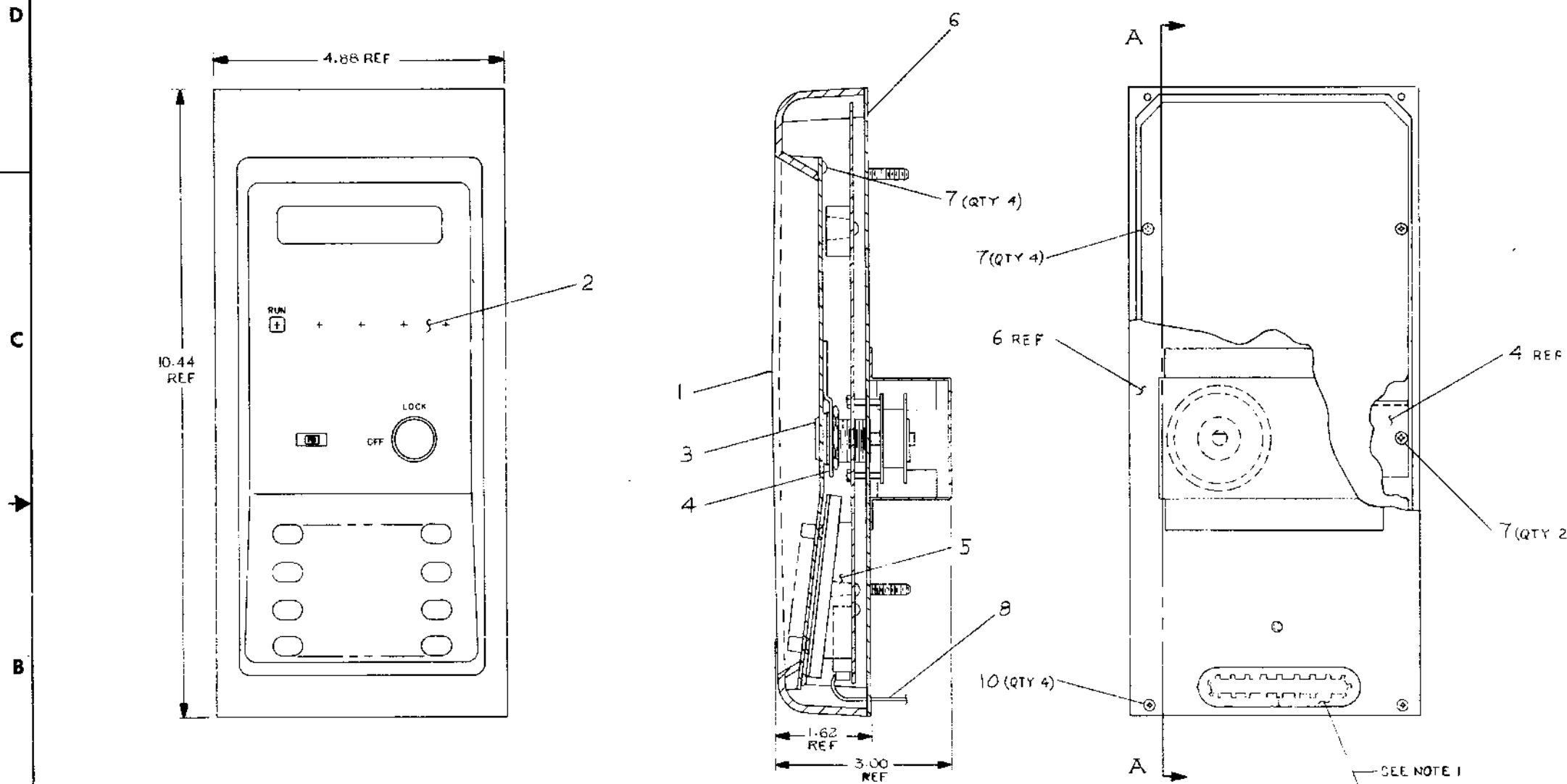
TITLE	CONSOLE KY11-P	SHEET 3 OF 3	SIZE	CODE	NUMBER	REV
			B	DD	KY11-P	

FN-01062-2C-16-N-376-(325)

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NOTES:

1. ITEM #9 GROMMET STRIP TO EXTEND COMPLETELY AROUND SLOT IN ITEM #6.



SECTION A-A
SCALE: 1/1

QTY	DESCRIPTION	DWG PART NO	ITEM NO.
4	SCR, PHL, FL, HD, #4 X .25	9006009 02	10
10	GROMMET CATERPILLAR	9007036	9
1	CABLE, BC05L	D-UA-BL05L-1C-0	8
10	SCR, PHL, PAN, HD #4 X .25	9008301-1	7
1	COVER, REAR CONSOLE ASSY	D-1A-7012959-0-0	6
1	CONSOLE BOARD (KYII-P)	D-UA-5412173-0-0	5
1	STRAP, GND	D-MD-7416956-0-0	4
1	SWITCH, KEYLOK	1213203	3
1	COVER, CONSOLE FRONT	D-MD-7417081-0-0	2
1	CASTING, CONSOLE	D-MD-7416868-1-0	1

THIRD ANGLE PROJECTION		DRN. <i>[Signature]</i> 23 Nov 76	FIRST USED ON	digital
REMOVE BURRS AND BREAK SHARP CORNERS		CHK'RS <i>[Signature]</i> 7 Nov 76	PDP 11/02	
DO NOT SCALE DWG		PROJ. ENG. <i>[Signature]</i> 22 Nov 76	TITLE	
MATERIAL SEE PARTS LIST		PROD. <i>[Signature]</i> 23 Nov 76	CONSOLE (KYII-P) UNIT ASSY	
FINISH		NEXT HIGHER ASSY.	SIZE CODE NUMBER REV	
SHEET 2 OF 2		E-JA-1116-0-2	D UA KYII-P-0 A	

REV	DESCRIPTION	DATE
1	ISSUED FOR MANUFACTURE	11/23/76
2	REVISION	11/23/76

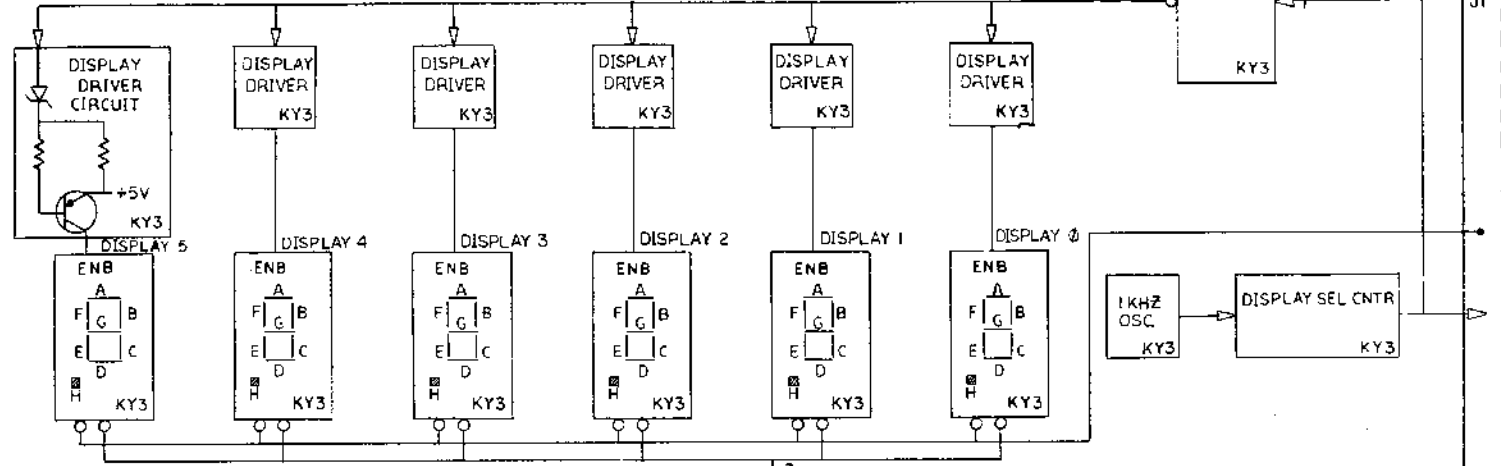
DRAWING NUMBER DUA KYII-P-0

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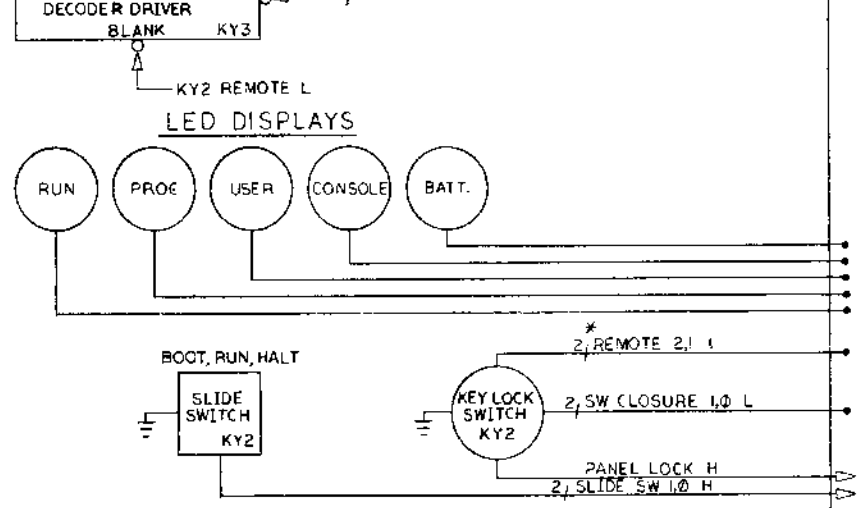
- NOTES:**
1. ALL CABLE SIGNALS HAVE RECEIVERS AND DRIVERS.
 2. * THESE SIGNALS FOR REMOTE CONSOLE OPTION.
 3. ** FOR DETAIL CONNECTIONS SEE CONSOLE FILTER PRINT 5412245-0-1.
 4. FILLED IN ARROWHEADS INDICATE MODULE PINS.
 5. SIGNALS GENERATED WITHIN A BLOCK CARRY THE PRINT PREFIX OF THAT BLOCK, AND ARE NOT REWRITTEN WITH THE SIGNAL NAME.

CONSOLE LOGIC ON KY11-P CONSOLE

DECIMAL DISPLAYS



LED DISPLAYS

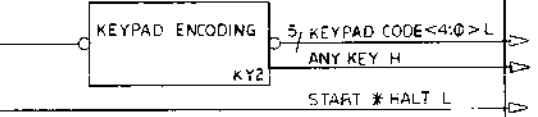


KEYPAD CODE TABLE

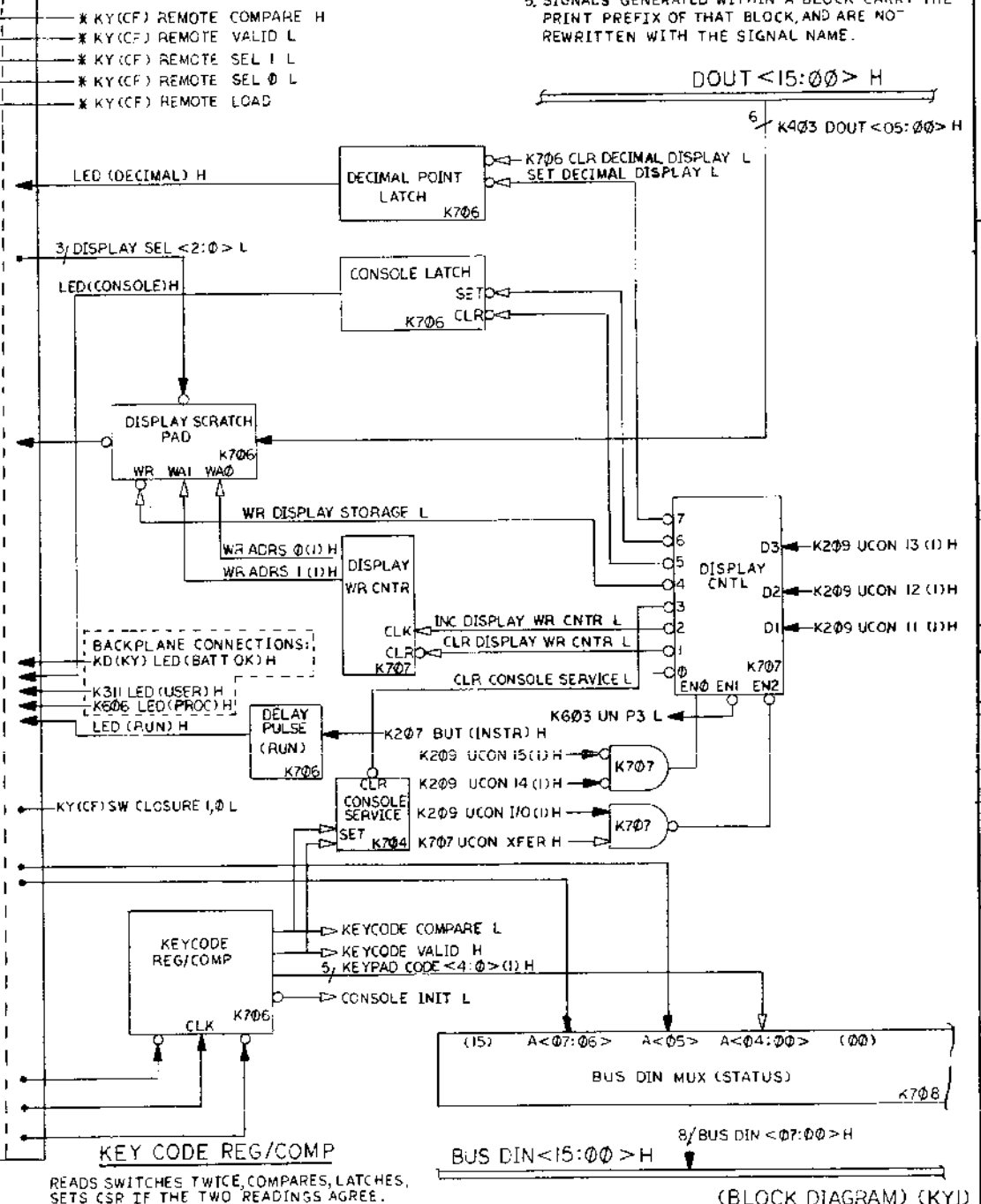
KEY PAD CODE <4:0> L	FUNCTION
0000	NOT USED
0001	NOT USED
0002	NOT USED
0003	NOT USED
0004	DIAG
0005	BOOT
0006	START
0007	CONT
0008	DEP
0009	MAINT
0010	(L)ADRS
0011	EXAM
0012	(Q)ADRS
0013	(M)ADRS
0014	(L)SWR
0015	HALT/SI
0016	NMRC 0
0017	NMRC 1
0018	NMRC 2
0019	NMRC 3
0020	NMRC 4
0021	NMRC 5
0022	NMRC 6
0023	NMRC 7

DATA ENTRY KEYPAD

(Q)ADRS	7	EXAM	DEP	HALT/SI
(M)ADRS	(I)	(E)	(A)	
(L)ADRS	4	5	6	CONT
(R)	(N)	(J)	(F)	(B)
(D)SWR	1	2	3	BOOT
(L)SWR	(S)	(O)	(K)	(G)
(C)				
MAINT	(T)	(P)	(L)	(H)
(D)				



CABLE TO CONSOLE
5412245 CONSOLE FILTER
CABLE TO BACKPLANE
KDII-K BACKPLANE
** SEE NOTE 3
CONSOLE LOGIC ON STATUS MODULE M7877



KEY CODE REG/COMP
READS SWITCHES TWICE, COMPARES, LATCHES, SETS CSR IF THE TWO READINGS AGREE.

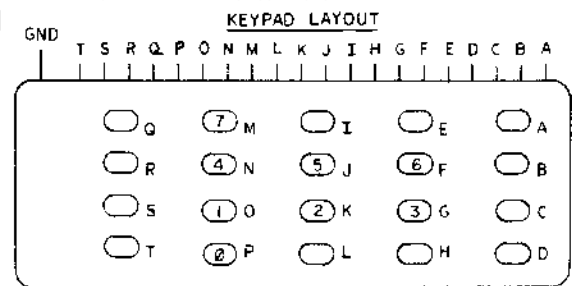
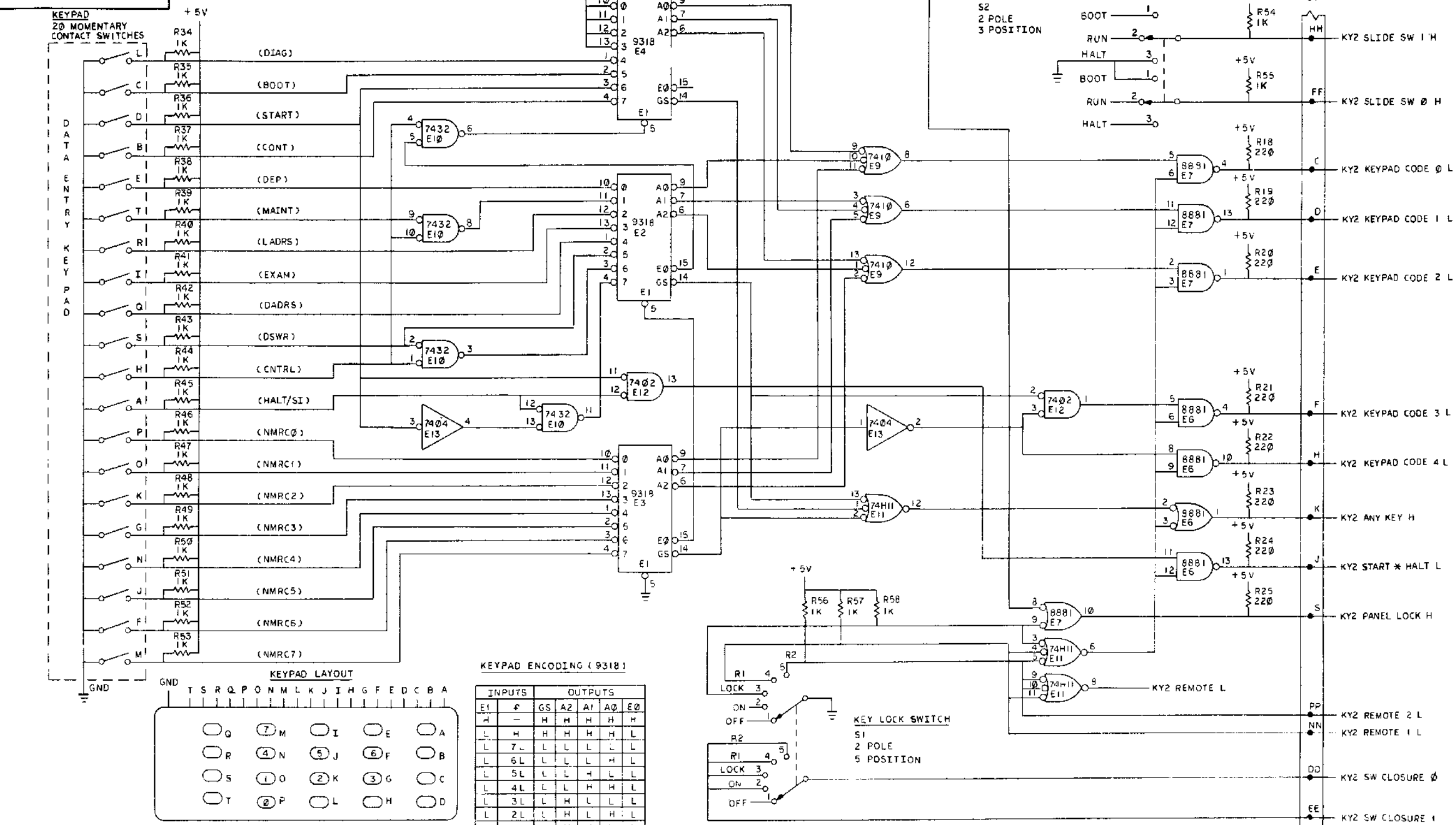
(BLOCK DIAGRAM) (KY1)

DRN	11-12-76	FIRST USED ON	PDP 11/60
CHK'D		TITLE	KY11-P CONSOLE BOARD
ENG	11/10/76	SIZE	CODE NUMBER
PROJ. ENG	11/10/76	SCALE	D CS 5412173-0-1
PROD.	11/10/76	SHEET	1 OF 3
NEXT HIGHER ASSY.		DIST.	

REVISIONS
CHANGE NO.
CHK

REV. 1 B
D CS 5412173-0-1

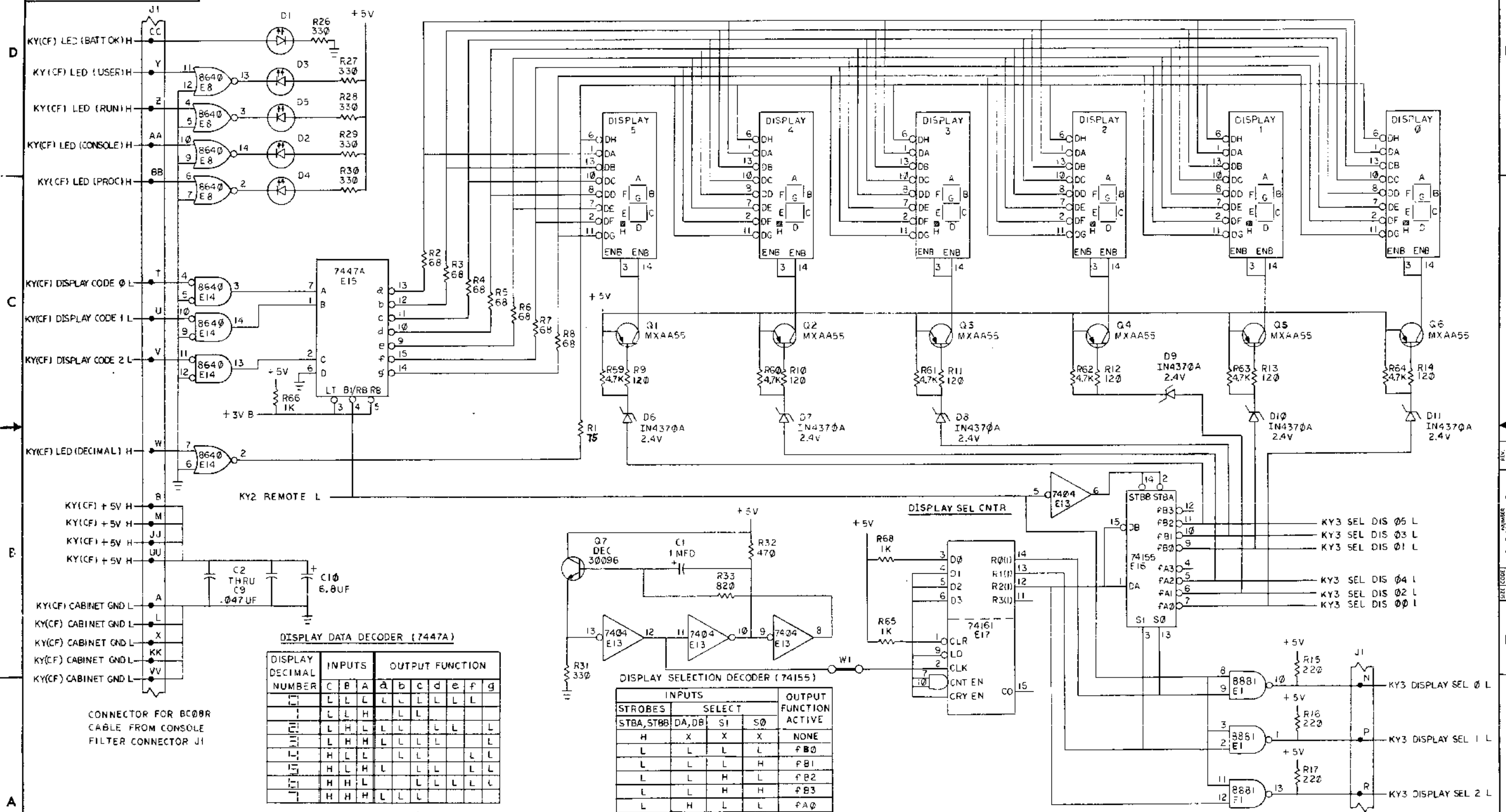
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KEYPAD ENCODING (9318)

INPUTS		OUTPUTS					
E1	GS	A2	A1	A0	E0		
L	H	H	H	H	H	L	
L	L	L	L	L	L	L	
L	L	L	L	L	H	L	
L	L	L	L	H	H	L	
L	L	L	L	H	L	L	
L	L	L	H	L	L	L	
L	L	L	H	L	H	L	
L	L	L	H	H	L	L	
L	L	L	H	H	H	L	

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DISPLAY DATA DECODER (7447A)

DISPLAY DECIMAL NUMBER	C	B	A	a	b	c	d	e	f	g
0	L	L	L	L	L	L	L	L	L	L
1	L	L	H	L	L	L	L	L	L	L
2	L	H	H	L	L	L	L	L	L	L
3	L	L	L	L	L	L	L	L	L	L
4	H	L	L	L	L	L	L	L	L	L
5	H	L	H	L	L	L	L	L	L	L
6	H	H	H	L	L	L	L	L	L	L

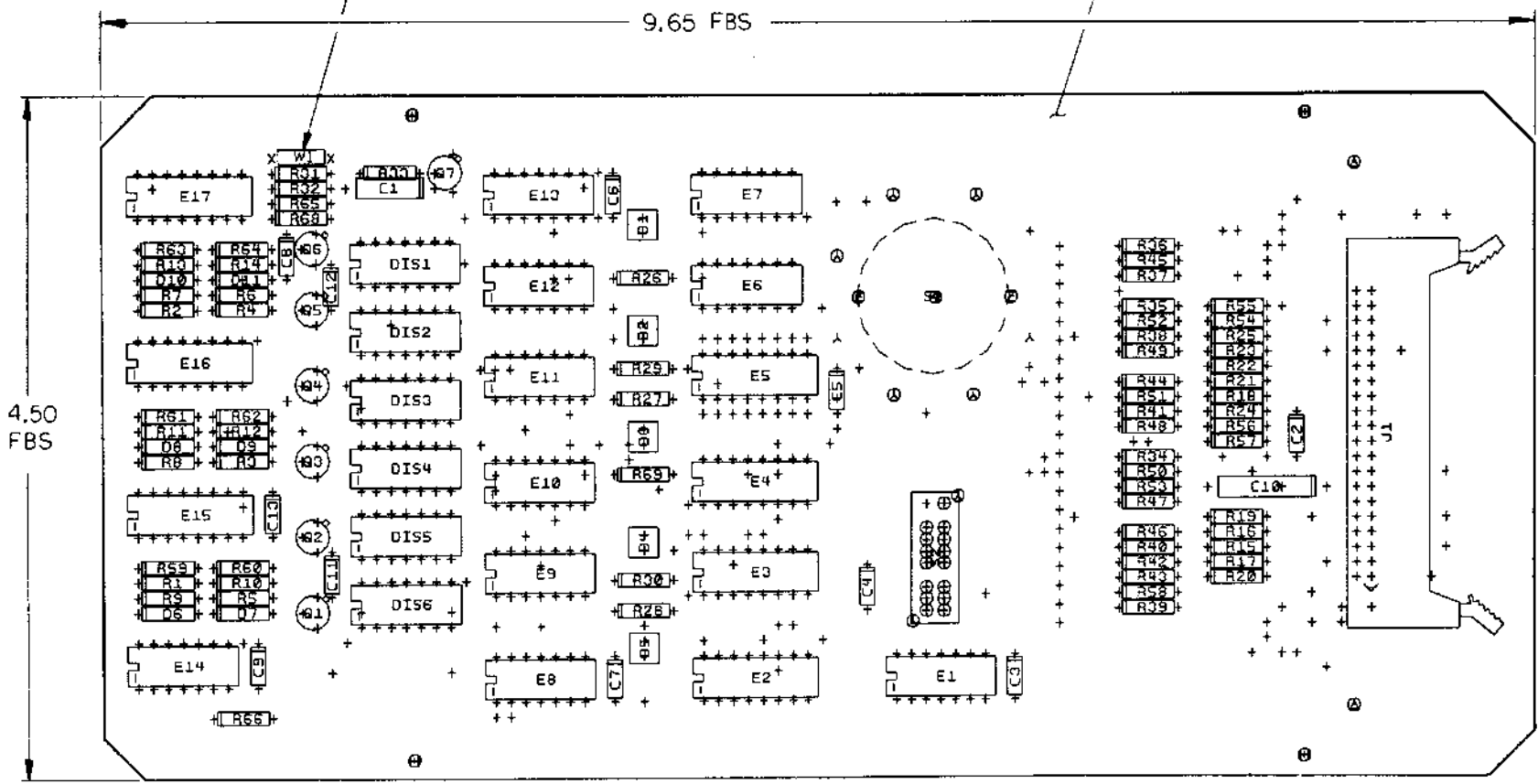
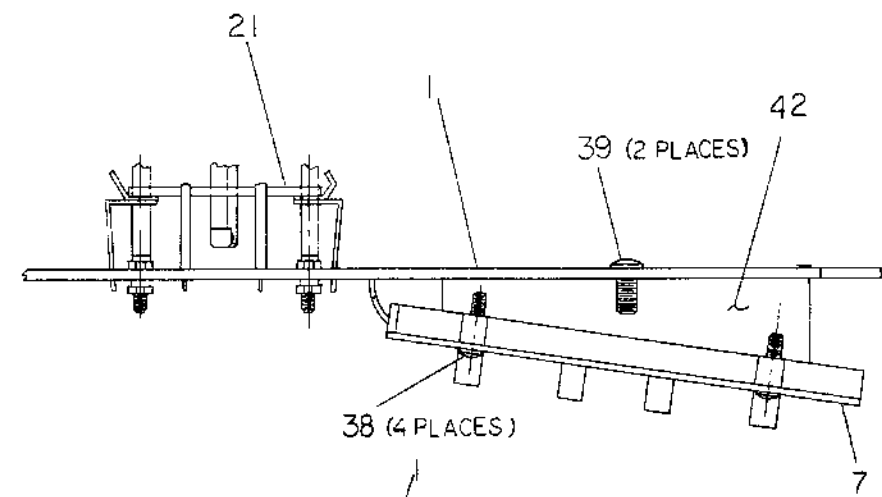
NOTE: OUTPUT FUNCTION "L" INDICATES WHICH SEGMENT OF THE DISPLAY IS ACTIVE.

DISPLAY SELECTION DECODER (74155)

INPUTS		SELECT				OUTPUT FUNCTION ACTIVE
STROBES	STBA, STBB	DA, DB	SI	S0		
H	X	X	X	X	NONE	
L	L	L	L	L	F B0	
L	L	L	L	H	F B1	
L	L	L	H	L	F B2	
L	L	L	H	H	F B3	
L	H	L	L	L	F A0	
L	H	L	L	H	F A1	
L	H	H	L	L	F A2	
L	H	H	H	L	F A3	

REVISIONS		
CHK	CHANGE NO	REV.

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NOTES:
 0-1 INSERT W/1 ALTHOUGH NOT IN
 INSERTION P/L DATA BASE

CHK	CHANGE	NO	REV
RED	W		
5412173-0001	C		

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

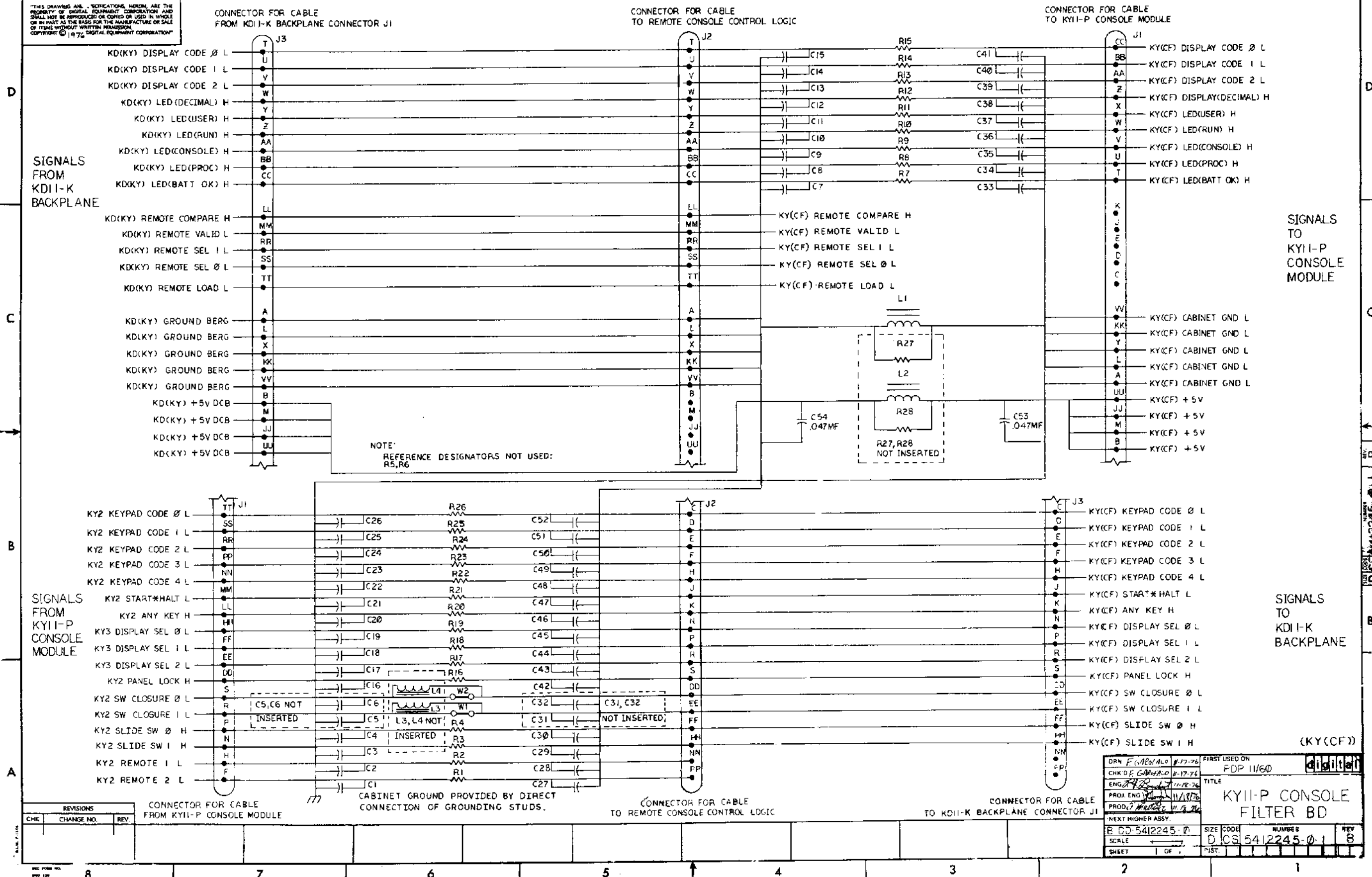
SIGNATURES	DATE	digital
DRN. <i>[Signature]</i>	5-2-77	
CHK'D. <i>[Signature]</i>	11/14/76	TITLE
ENG. <i>[Signature]</i>	11/19/76	
PROD. <i>[Signature]</i>	11/19/76	K711-P CONSOLE BOARD
SCALE 2/1		
SHT. 1 OF 3		SIZE CODE NUMBER
NEXT HIGHER ASSY. B 22-64 2173-0		D. UA 5412173-0-0 C

DIGITAL EQUIPMENT CORPORATION				QUANTITY / VARIATION												NOTES:		
PARTS LIST			SECTION															
MADE BY D. BILODEAU		CHECKED B. PUZZO																
DATE 21 FEB 76		DATE 10 JUNE 76																
ENG RICHARD BOUDROT		PROD R.K. Pelt																
DATE 23 JUNE 76		DATE 11/11/76																
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	5412173-0														REF DESIGNATION
1	D-MD-5012172-0-0	5012172	ETCH BOARD	-														
2		101776	CAPACITOR 1.0 uf, 35V, 10% TANT	1														C1
3		1012784	CAPACITOR, .047uf	10														C2 thru C9,C11,C12
4		1005306	CAPACITOR, 6.8uf, 35V, 10% TANT	1														C10
5		1101938	DIODE, ZENER 2.4V, 5%, 4370A	6														D6 thru D11
6		1110864	DIODE, LIGHT EMITTING	5														D1 thru D5
7		1211856-05	KEYBOARD, 20 KEY MATRIX	1														SEE ITEM 7 ON UA DRAWING
8		1211813-01	SOCKET, 14 PIN	6														used under DIS1 thru DIS6
9		1302379	RESISTOR, 75 OHM, 1/4W, 5%	1														R1
10		1300219	RESISTOR, 68 OHM, 1/4W, 5%	7														R2 thru R8
11		1300247	RESISTOR, 120 OHM, 1/4W, 5%	6														R9 thru R14
12		1300271	RESISTOR, 220 OHM, 1/4W, 5%	11														R15 thru R25
13		1300295	RESISTOR, 330 OHM, 1/4W, 5%	6														R26 thru R31
14		1300316	RESISTOR, 470 OHM, 1/4W, 5%	1														R32
15		1301775	RESISTOR, 820 OHM, 1/4W, 5%	1														R33
16		1300365	RESISTOR, 1K OHM, 1/4W, 5%	29														R34 thru R58,R65,R66,R68,R69
17		1300447	RESISTOR, 4.7K, 1/4W, 5%	6														R59 thru R64
18		1510706-00	TRANSISTOR, MXAA55	6														Q1 thru Q6
19		1503100	TRANSISTOR, DEC 3009B	1														Q7
20		1213285	SWITCH, 4 POLE, 3 POS (MSS-4300G)	1														S2
21		1213284-00	SWITCH, ROTARY	1														S1, SEE ITEM 21 ON UA DRAWING
22		1911297	7 SEGMENT DISPLAY	6														DIS0 thru DIS5

E.C.O. NO. 00001	THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1976 DIGITAL EQUIPMENT CORPORATION.	TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV
		KY11-P CONSOLE BOARD		B	PL	5412173-0-0	C
		SHEET 1 OF 2	INSERTION PARTS LIST DATA BASE REV B				

DIGITAL EQUIPMENT CORPORATION				QUANTITY / VARIATION												NOTES:		
PARTS LIST																		
MADE BY D. BILODEAU		CHECKED B. PUZZO		SECTION														
DATE 21 FEB 76		DATE 10 JUNE 76		ISSUED SECTION														
ENG <i>RFB</i> RICHARD BOUDROT		PROD <i>RK</i> DATE <i>11/12</i>																
DATE 23 JUNE 76		DATE																
ITEM NO	DRAWING NO.	PART NO.	DESCRIPTION	5412173-0														REF DESIGNATION
23		1909705	I.C. DEC 8881	3														E1,E6,E7
24		1910454	I.C. DEC 9318	3														E2,E3,E4
25		1911469	I.C. DEC 8640	2														E8,E14
26		1905576	I.C. DEC 7410	1														E9
27		1911521	I.C. DEC 7432	1														E10
28		1909267	I.C. DEC 74H11	1														E11
29		1909004	I.C. DEC 7402	1														E12
30		1909686	I.C. DEC 7404	1														E13
31		1911295	I.C. DEC 7447A	1														E15
32		1910656	I.C. DEC 74155	1														E16
33		1910650	I.C. DEC 74161	1														E17
34			I.C SPARE 16 PIN	1														E5
35		1209941-02	CONNECTOR, RIGHT ANGLE HEADER, 40 PIN	1														J1
36		1209941-03	CONNECTOR, RIGHT ANGLE HEADER LEFT LATCH	1														J1 ASSEMBLY
37		1209941-04	CONNECTOR, RIGHT ANGLE HEADER RIGHT LATCH	1														J1 ASSEMBLY
38		9006401-04	SCREW, NYLON #4-40X3/8 SLTD BINDER HD	4														SEE ITEM 38 ON UA DRAWING
39		9006022-01	SCREW, #6-32 x 3/8 PHILLIPS	2														SEE ITEM 39 ON UA DRAWING
40		9009185	JUMPER	1														W1
41		7416954	SUPPORT, KEYBOARD	2														SEE ITEM 42 ON UA DRAWING
E.C.O. NO																		
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				SHEET 2 OF 2				INSERTION PARTS LIST DATA BASE REV B										

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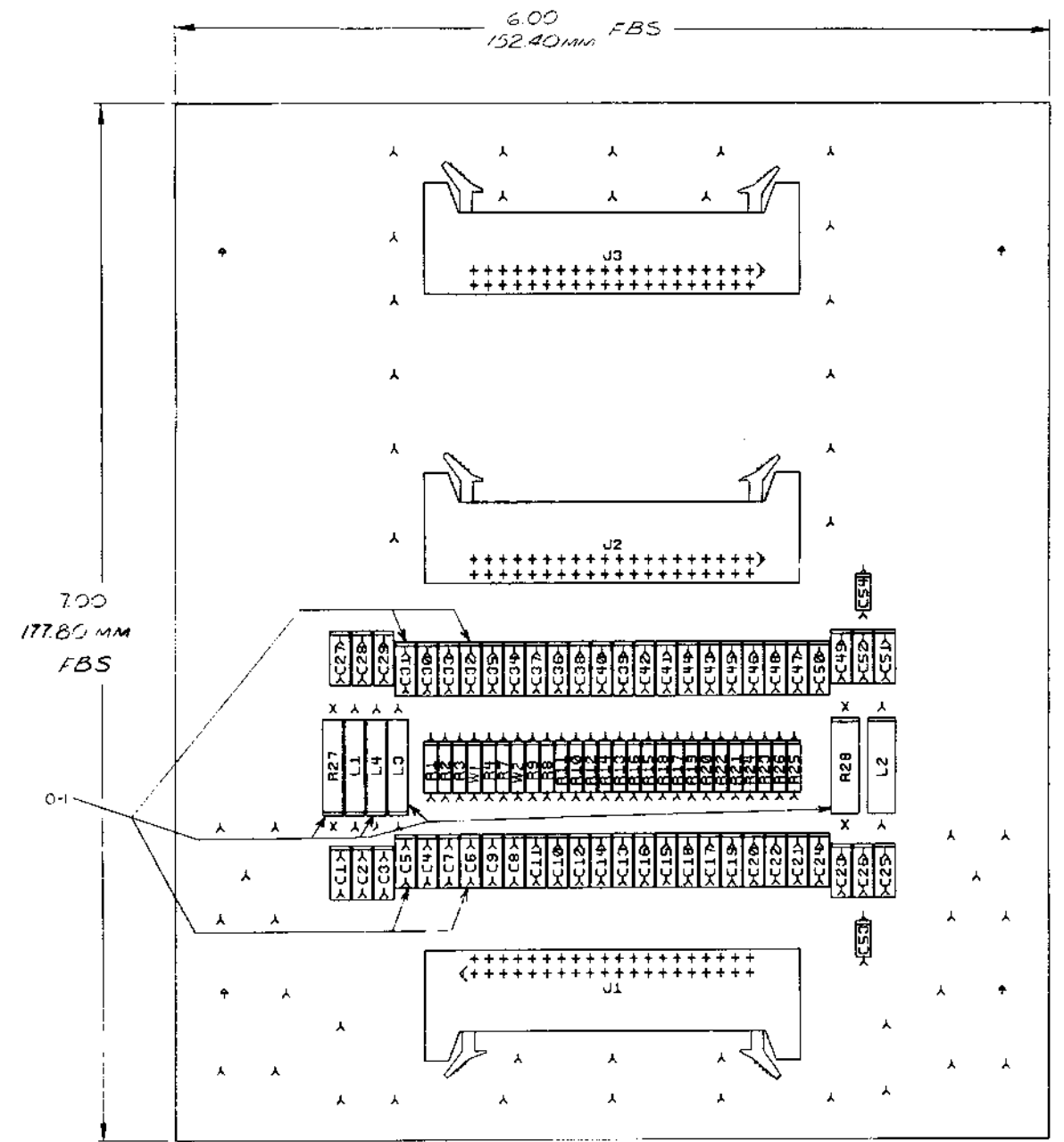


REVISIONS		
CHK	CHANGE NO.	REV.

DRN F. G. A. B. A. L. O. #17-76	FIRST USED ON	digital
CHK D. E. G. A. H. A. L. O. #17-76	FDP 11/60	
ENG. J. R. S. #11-18-76	TITLE	KY11-P CONSOLE FILTER BD
PROJ. ENG. J. R. S. #11/18/76	NUMBER	
PROD. J. R. S. #11/18/76	SCALE	D CS 5412245-01
NEXT HIGHER ASSY.	REV	
B D 5412245-01	SIZE	REV 8
SCALE	NUMBER	
SHEET 1 OF 1	LIST	

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 SPECTRA EQUIPMENT CORPORATION
 COPYRIGHT © 1976

COMPONENT SIDE VIEW



NOTES:
 Q-1 PARTS NOT INSERTED: C5, C6, C31, C32, R27, R28, L3, L4.

CHANGE NO	REV	DATE	BY	CHK'D
1	1	11/18/76	J. CLOV. HILIN	

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

SIGNATURES	DATE
DRN. <i>[Signature]</i>	11/18/76
CHK'D. <i>[Signature]</i>	11/18/76
ENG. <i>[Signature]</i>	11-18-76
PROJ. ENG. <i>[Signature]</i>	11/18/76
PROD. <i>[Signature]</i>	11/18/76

digital	
TITLE KYH-P CONSOLE FILTER BD	
SCALE 2/1	SIZE CODE
SHT. 1 OF 3	NUMBER
NEXT HIGHER ASSY. B-DD-5412245-0	d UA 5412245-0-0 C

DUA 5412245-0-0 C
 B
 A

DIGITAL EQUIPMENT CORPORATION

PARTS LIST

MADE BY <i>J. F. Long</i>	CHECKED <i>J. F. Long</i>	SECTION
DATE <i>11/18/76</i>	DATE <i>11/18/76</i>	
ENG <i>R. L. Boudier</i>	PROD <i>J. F. Long</i>	ISSUED SECTION
DATE <i>11/18/76</i>	DATE <i>11-18-76</i>	

QUANTITY / VARIATION

NOTES:

- PARTS NOT INSERTED: C5, C6
C31, C32, R27, R28, L3, L4
- REFERENCE DESIGNATORS NOT
USED: R5, R6

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QUANTITY / VARIATION										REF DESIGNATION			
				5412245-0													
1	D-MD-5012244-0-0	5012244	ETCH BOARD	1													
2		1000019	CAPACITOR, 150pf, 100V DM	48													C1 THRU C4, C7 THRU C30, C33 THRU C52
3		1012784	CAPACITOR, .047uf	2													C53, C54
4		1209941-02	CONNECTOR, RIGHT ANGLE HEADER, 40 PIN	3													J1, J2, J3
5		1209941-03	CONNECTOR, RIGHT ANGLE HEADER, LEFT LATCH	3													J1, J2, J3 ASSEMBLIES
6		1209941-04	CONNECTOR, RIGHT ANGLE HEADER, RIGHT LATCH	3													J1, J2, J3 ASSEMBLIES
7		1300365	RESISTOR, 1K, 1/2W, 5%	24													R1 THRU R4, R7 THRU R26
8		1611257-01	CHOKE, CERAMIC BEAD	2													L1, L2
9		9009185	JUMPER	2													W1, W2

E.C.O. NO. 10000	THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. COPYRIGHT © 1976 DIGITAL EQUIPMENT CORPORATION.		TITLE KY11-P CONSOLE FILTER BD	ASSY NO. D-UA-5412245-0-0	SIZE B	CODE PL	NUMBER 5412245-0-0	REV. C
				SHEET 1 OF 1	INSERTION PARTS LIST DATA BASE REV B			

DRAWING NO.	NO. OF SHTS	PART NO.	DESCRIPTION	REVISIONS	
		5412245-0	MODULE (KY11-P CONSOLE FILTER BD)	B	B
		5012244	ETCHED BOARD	C	C
B-DD-5412245-Ø	1		DRAWING DIRECTORY	A	B
D-CS-5412245-Ø-1	1		CIRCUIT SCHEMATIC	B	B
B-PL-5412245-Ø-Ø	1		PARTS LIST	B	C
B-MH-5412245-Ø-6	1		MODULE HISTORY	*	A
D-UA-5412245-Ø-Ø	3		UNIT ASSEMBLY	B	C
D-MD-5412245-Ø-Ø	3		MECHANICAL DRAWING	C	C
5412245-Ø-L			P.C. DESIGN DATA BASE	C	C
5412245-Ø-PL			INSERTION P/L DATA BASE	B	B
			MODULE TEST		

NOTES:

- THE MODULE REVISION REFLECTS CHANGES IN THE HARDWARE AND IS SEPARATE FROM THE CIRCUIT SCHEMATIC REVISION WHICH REFLECTS BOTH HARDWARE AND DOCUMENT CHANGES.
- THIS DRAWING DIRECTORY DOCUMENTS THE RELATIONSHIP BETWEEN REVISIONS, THE CS REV UPON THE ETCHED BOARD IS NOT TO BE USED.

DATE	CHG NO.	REV.	REVISIONS
			ORIG
	6-7700001		A
			B

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USED ON OPTION/MODEL	DRN	TITLE
KY11-P	11/18/76	KY11-P CONSOLE FILTER BD
	11/18/76	
	11/18/76	
	11/18/76	
SIZE CODE B DD NUMBER 5412245-Ø		REV. B
SHEET 1 OF 1		

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

FIELD MAINT. PRINT SET M9301
 BOOTSTRAP/TERMINATOR M9301
 DRAWING DIRECTORY M9301

B-TC-M9301-0-3
 D-CS-M9301-0-1
 B-DD-M9301-0

UNIT VARIATIONS COVERED BY THIS PRINT SET
M9301 - YA
M9301 - YB
M9301 - YC
M9301 - YD
M9301 - YF
M9301 - YH
M9301 - YE
M9301 - YJ

**Field Maintenance
Print Set** MP00196

**Digital Equipment
Corporation**

REVISIONS	CHG. NO.	REV.	USED ON OPTION/MODEL	DRN.	DATE	TITLE: FIELD MAINTENANCE PRINT SET M9301	digital		
					W. HAMEL			8-3-76	
			CHK'D	DATE					
			<i>E. De... 7sep76</i>						
			PROJ. ENG.	DATE					
			<i>John Bloen 9/7/76</i>						
			FIELD SERV.	DATE					
			SHEET I OF I			SIZE D	CODE TC	NUMBER M9301-0-3	REV. C

EN-01124 (6/675 (327)

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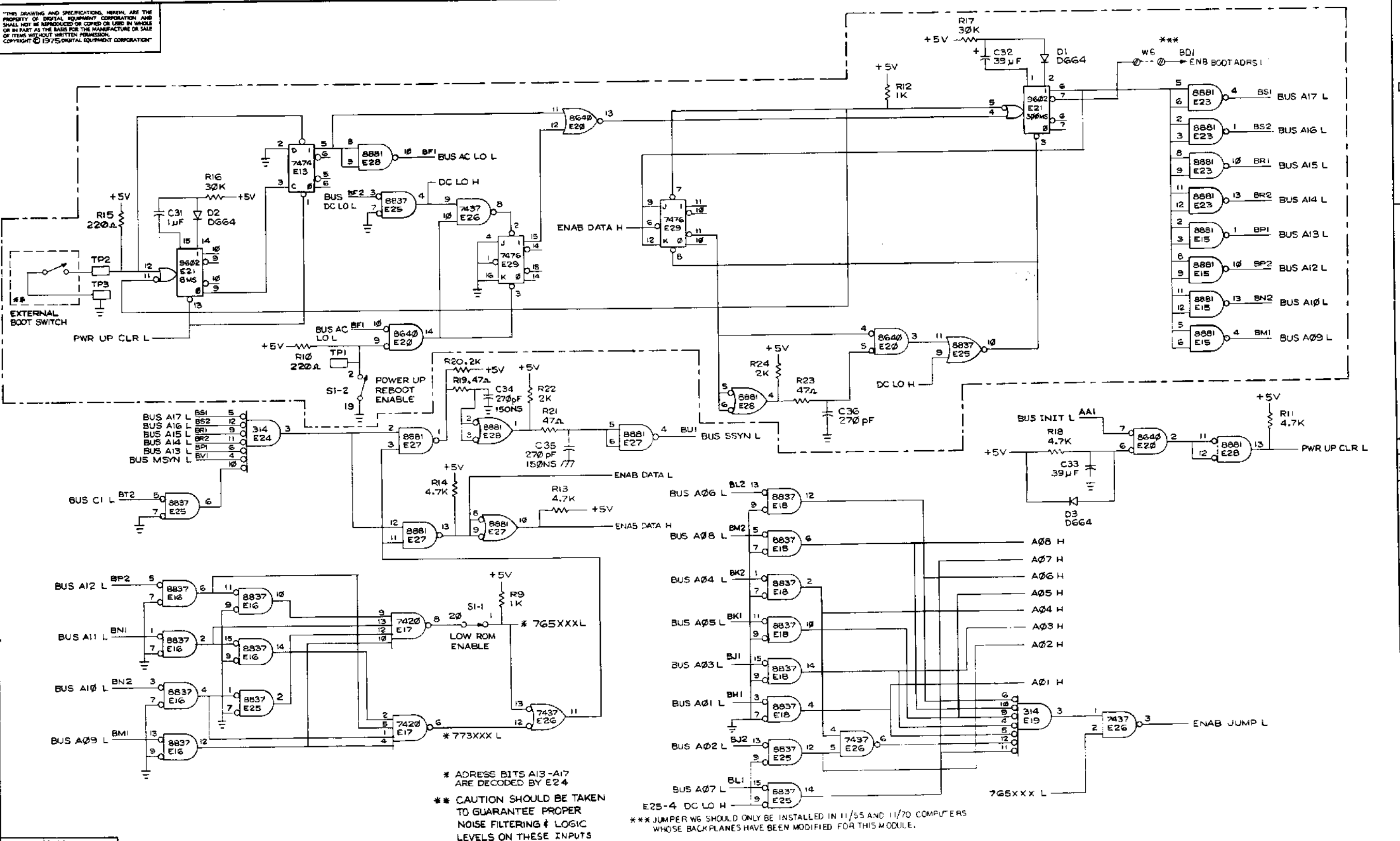
REWORK INSTRUCTIONS
FIELD SERVICE DEPOT: REMOVE THE INNER HANDLE LOCATED ABOVE C31 BY DRILLING OUT THE TWO EYELETS WITH A .125 INCH DRILL.

QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4	4	4	4	4	4	4	4	4	4	E5, E6, E11, E12	SOCKET, 16 PIN, I.C.	1211813	37
0	0	0	0	0	0	0	0	0	1	E5	I.C. DEC TRI-STATE 2048 ROM	23034A9	38
0	0	0	0	0	0	0	0	0	1	E6	I.C. DEC TRI-STATE 2048 ROM	23035A9	39
0	0	0	0	0	0	0	0	0	1	E11	I.C. DEC TRI-STATE 2048 ROM	23036A9	40
0	0	0	0	0	0	0	0	0	1	E12	I.C. DEC TRI-STATE 2048 ROM	23037A9	41
0	0	0	0	0	0	0	0	0	1	E5	I.C. DEC TRI-STATE 2048 ROM	23038A9	42
0	0	0	0	0	0	0	0	0	1	E6	I.C. DEC TRI-STATE 2048 ROM	23039A9	43
0	0	0	0	0	0	0	0	0	1	E11	I.C. DEC TRI-STATE 2048 ROM	23040A9	44
0	0	0	0	0	0	0	0	0	1	E12	I.C. DEC TRI-STATE 2048 ROM	23041A9	45
0	0	0	0	0	0	0	0	0	1	E5	I.C. DEC TRI-STATE 2048 ROM	23042A9	46
0	0	0	0	0	0	0	0	0	1	E6	I.C. DEC TRI-STATE 2048 ROM	23043A9	47
0	0	0	0	0	0	0	0	0	1	E11	I.C. DEC TRI-STATE 2048 ROM	23044A9	48
0	0	0	0	0	0	0	0	0	1	E12	I.C. DEC TRI-STATE 2048 ROM	23045A9	49
0	0	0	0	0	0	0	0	0	1	E5	I.C. DEC TRI-STATE 2048 ROM	23046A9	50
0	0	0	0	0	0	0	0	0	1	E6	I.C. DEC TRI-STATE 2048 ROM	23047A9	51
0	0	0	0	0	0	0	0	0	1	E11	I.C. DEC TRI-STATE 2048 ROM	23123A9	52
0	0	0	0	0	0	0	0	0	1	E12	I.C. DEC TRI-STATE 2048 ROM	23049A9	53
0	0	0	0	0	0	0	0	0	0	W1 THRU W5	JUMPER, WIRE, WHITE INSULATION	9009185	54
2	2	2	2	2	2	2	2	2	2	R10, R15	RES 220A, 1/4W, 5%	1300271	55
2	2	2	2	2	2	2	2	2	2		SPLIT WIG	9006735	56
0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC TRI-STATE 2048 ROM	23480A9	57
0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC TRI-STATE 2048 ROM	23481A9	58
0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC TRI-STATE 2048 ROM	23482A9	59
0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC TRI-STATE 2048 ROM	23483A9	60
0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC TRI-STATE 2048 ROM	23332A9	61
0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC TRI-STATE 2048 ROM	23333A9	62
0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC TRI-STATE 2048 ROM	23334A9	63
0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC TRI-STATE 2048 ROM	23335A9	64
0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC TRI-STATE 2048 ROM	23538A9	65
0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC TRI-STATE 2048 ROM	23539A9	66
0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC TRI-STATE 2048 ROM	23540A9	67
0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC TRI-STATE 2048 ROM	23541A9	68
0	0	0	0	0	0	0	0	0	0	E5	I.C. DEC TRI-STATE 2048 ROM	23520A9	69
0	0	0	0	0	0	0	0	0	0	E6	I.C. DEC TRI-STATE 2048 ROM	23521A9	70
0	0	0	0	0	0	0	0	0	0	E11	I.C. DEC TRI-STATE 2048 ROM	23522A9	71
0	0	0	0	0	0	0	0	0	0	E12	I.C. DEC TRI-STATE 2048 ROM	23523A9	72
AMP	NR	NR	NR	NR	NR	NR	NR	NR	NR		WIRE 30 GA.	9105740-55	73
1	0	0	0	0	0	0	0	0	0	E5	I.C. DEC TRI-STATE 2048 ROM	23744A9	74
1	0	0	0	0	0	0	0	0	0	E6	I.C. DEC TRI-STATE 2048 ROM	23745A9	75
1	0	0	0	0	0	0	0	0	0	E11	I.C. DEC TRI-STATE 2048 ROM	23746A9	76
1	0	0	0	0	0	0	0	0	0	E12	I.C. DEC TRI-STATE 2048 ROM	23747A9	77
AR	AR	AR	AR	AR	AR	AR	AR	AR	AR		CEMENT PERMABOND	9009157	78

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE UNIBUS TERMINATOR/BOOTSTRAP
SCALE
SHEET 2 OF 5
SIZE CODE DCS
NUMBER M9301-0-1
REV. W

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

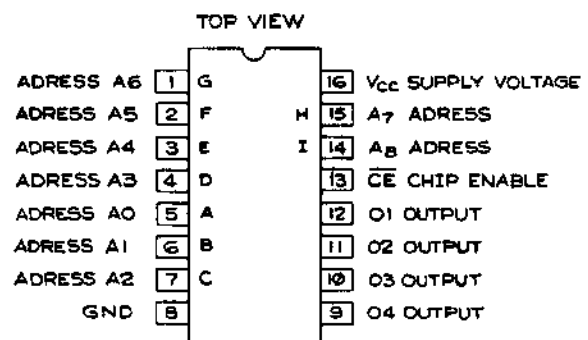
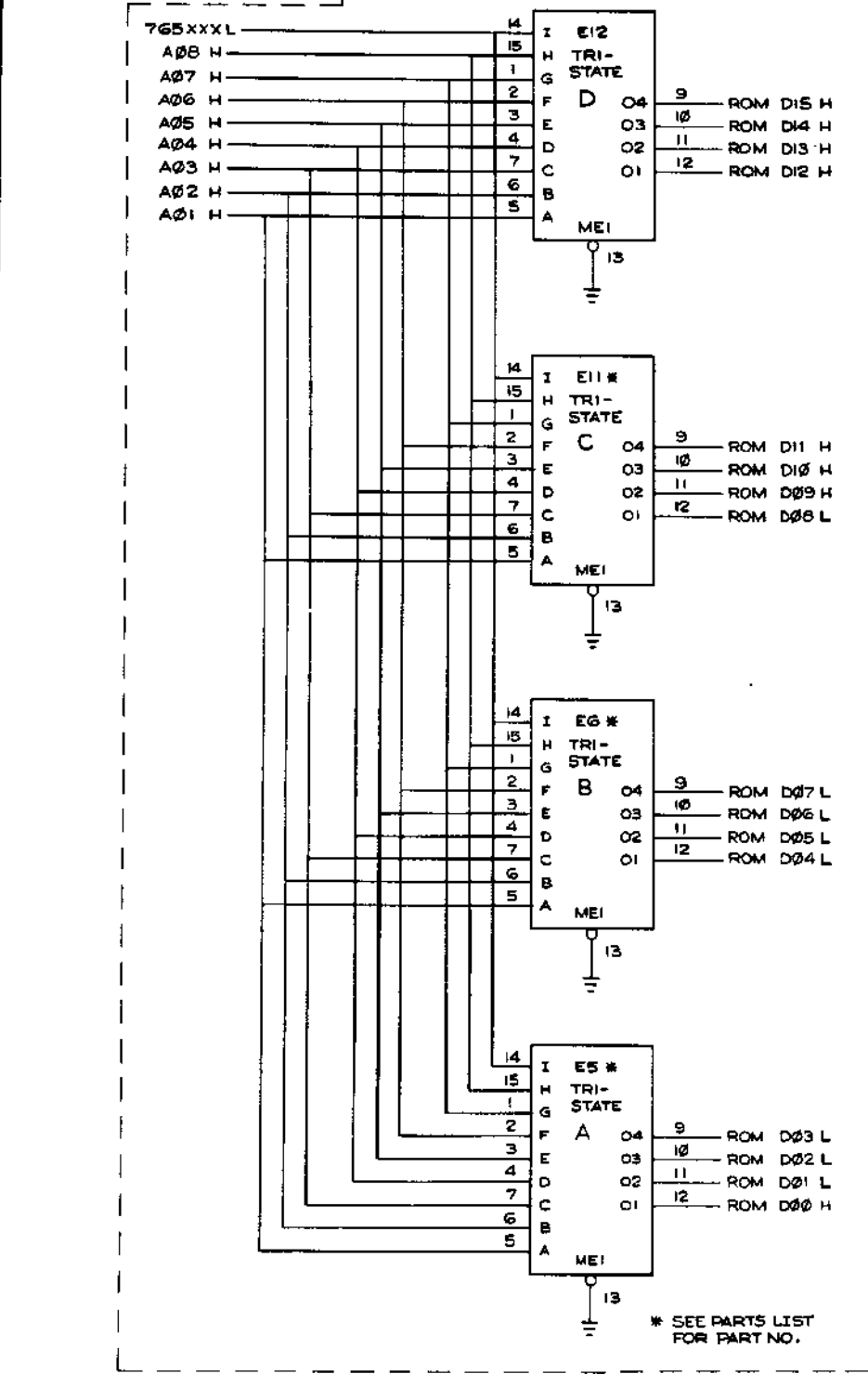
*** JUMPER W6 SHOULD ONLY BE INSTALLED IN 11/55 AND 11/70 COMPUTERS WHOSE BACKPLANES HAVE BEEN MODIFIED FOR THIS MODULE.

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	UNIBUS TERMINATOR/BOOTSTRAP	SIZE CODE	D CS	NUMBER	M9301-0-1	REV.	W
SCALE	SHEET 3 OF 5		DIST.				

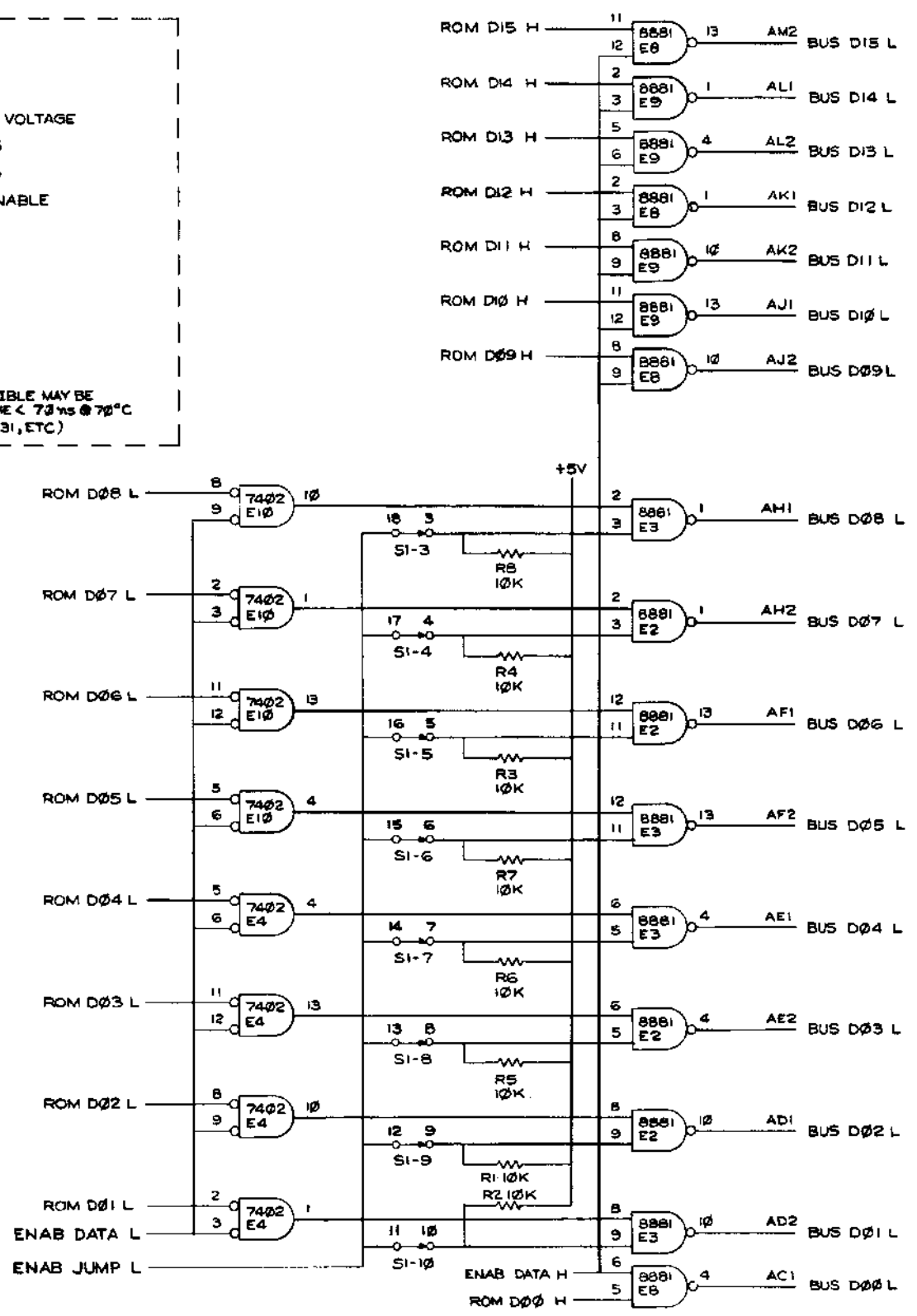
REV. W
 NUMBER M9301-0-1
 DIST. CODE D CS

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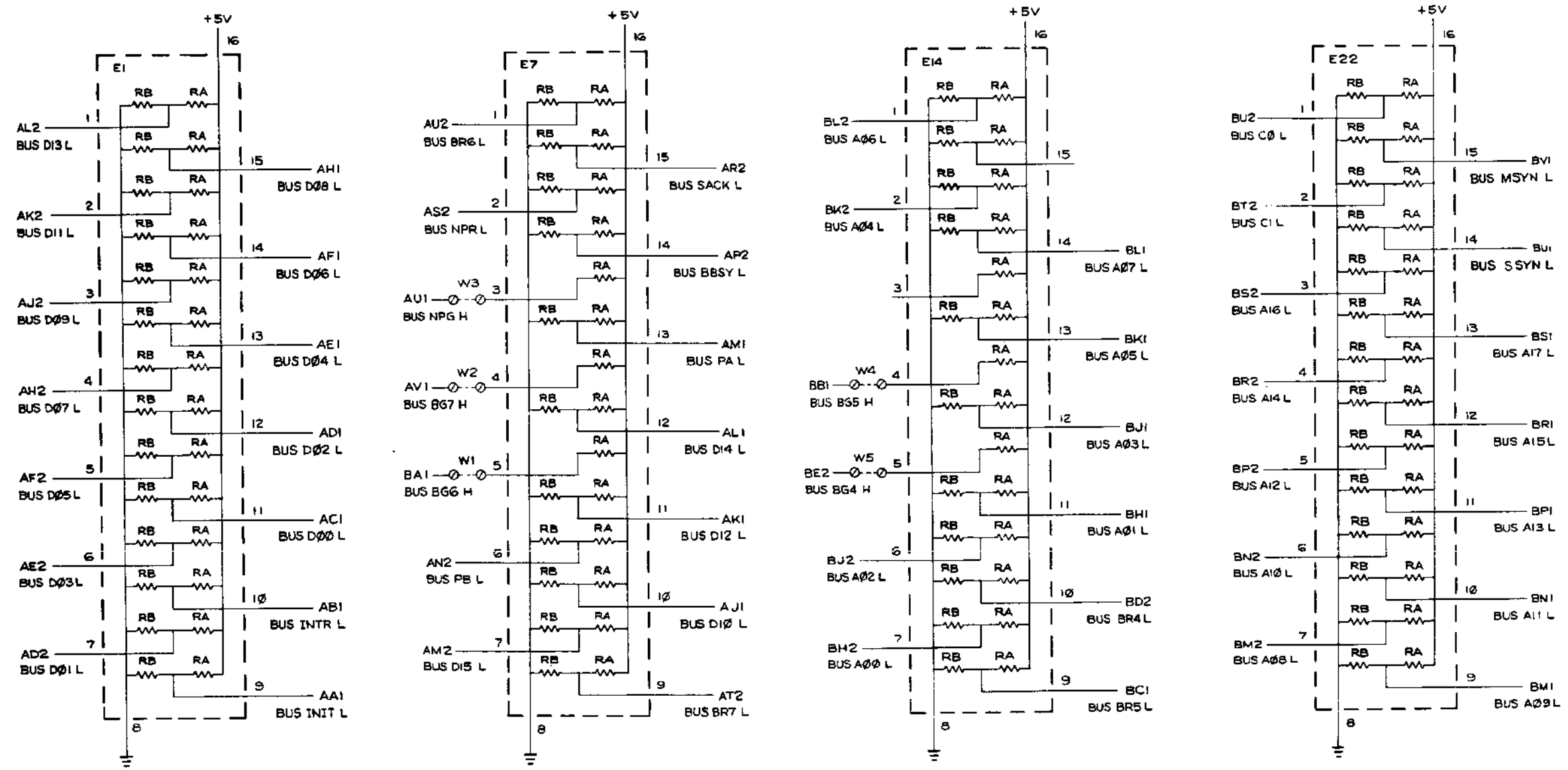
23-002A901
 3. BLANK PROMS HAVE DEC PART NO. 23-000A901
 4. BIPOLAR 2048 (512 X 4) BIT PROMS PIN COMPATIBLE MAY BE USED WITH TRI-STATE OUTPUTS AND ACCESS TIME < 70 ns @ 70°C (INTERISL 5624, MMI 6306, SIGNETICS 82531, ETC)

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

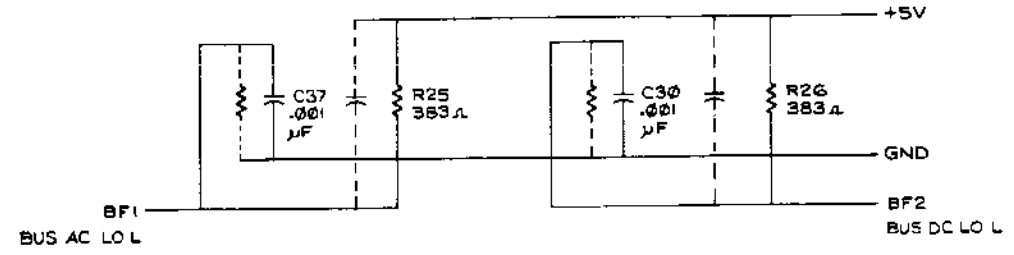


REVISIONS		
CHK	CHANGE NO.	REV.

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



REVISIONS		
CHK	CHANGE NO.	REV.

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE

SEQUENCE

NOTE:
FOR FIELD MAINTENANCE
PRINT SET, REFER TO:
B-TC-M9301-0-3

UNIT VARIATIONS		PRINT SET	
VAR	TITLE		
M9301-YA	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YB	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YC	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YD	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YE	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YF	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YG	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YH	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YI	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YJ	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YK	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YL	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YM	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YN	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YO	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YP	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YQ	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YR	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YS	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YT	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YU	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YV	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YW	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YX	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YY	UNIBUS TERMINATOR/BOOTSTRAP		
M9301-YZ	UNIBUS TERMINATOR/BOOTSTRAP		

REVISIONS		USED ON OPTION/MODEL	DRN.	DATE	TITLE			
DATE	CHG. NO.		W. Hamel	3AUG76	UNIBUS TERMINATOR, BOOTSTRAP			
8-76	M9301-6		CHK'D.	DATE				
	ORIGINATED		E. Remond	3AUG76				
	M9301-7		PROJ ENG.	DATE	SIZE	CODE	NUMBER	REV
	M9301-8		John Elser	9-7-76	B	DD	M9301-0	L
2-76	M9301-9		PROD.	DATE				
2-77	M9301-10		FIELD SERV.	DATE				
3-77	M9301-11							
4-77	M9301-12							
6-77	M9301-13							
7-77	M9301-14							
8-77	M9301-15							
12-77	M9301-16							
10-78	M9301-17							
		SHEET 1 OF 2						

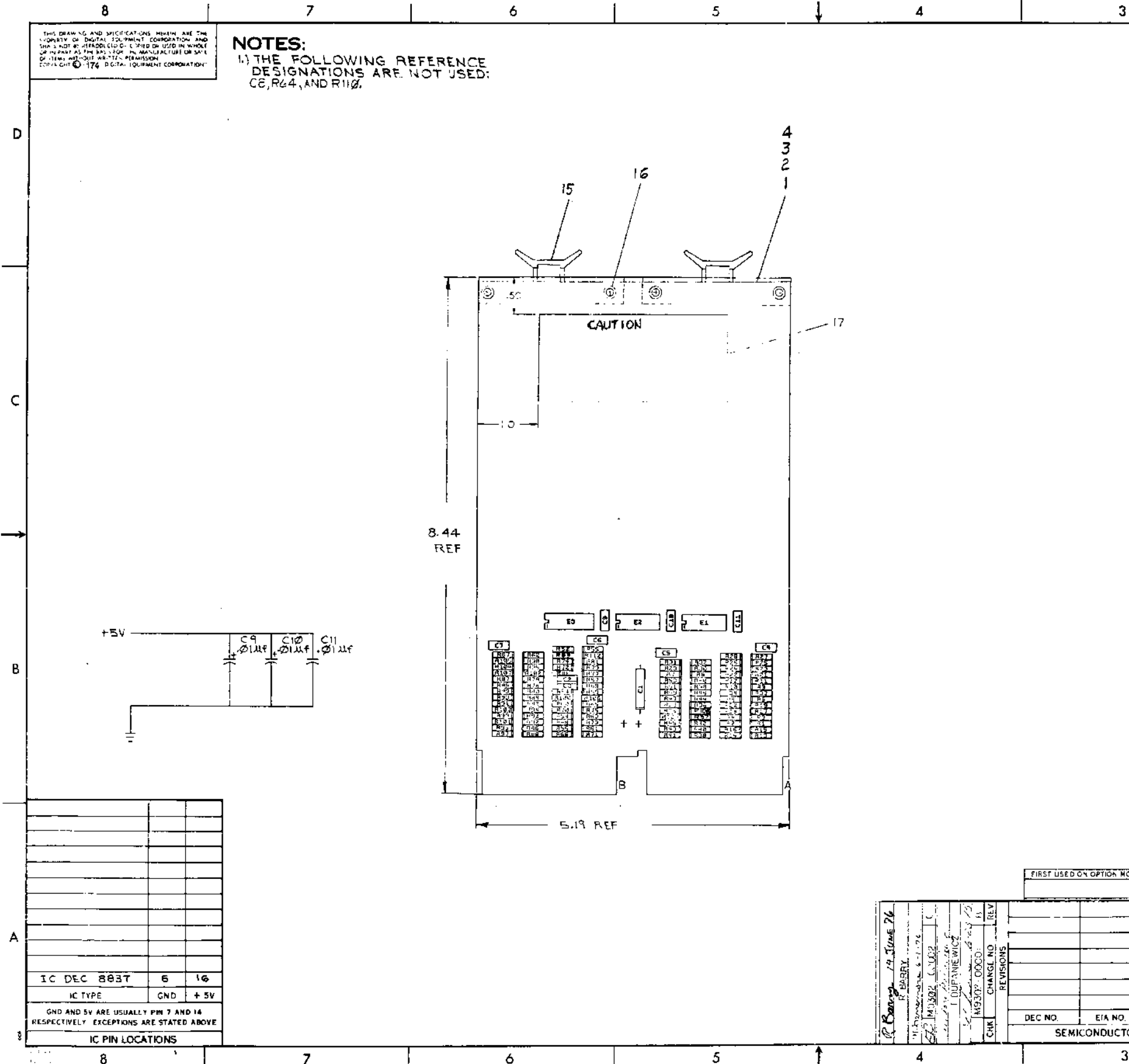
EN-01002-1A-10-R972-1325

CUSTOMER PRINT SET				REVISION CONTROL SHEET																						
MFG SET				REVISIONS																						
DRAWING NO	NO OF SHT	DESCRIPTION	OPTION NO/FILE DATE																							
MP00196	1	FIELD MAINT. PRINT SET (MP)																								
B-TC-M9301-0-3	1	FIELD MAINT. PRINT SET (TC)						B	B	B	C	C	C	C	C	C										
D-CS-M9301-0-1	5	UNIBUS TERMINATOR/BOOTSTRAP		L	M	N	P	R	S	S	T	U	V	W												
B-CS-M9301-0-9		M9301-YA ROM LISTING																								
B-CS-M9301-0-10		M9301-YB ROM LISTING																								
B-CS-M9301-0-11		M9301-YF ROM LISTING						A	A	A	A	A	A	A	A											
D-AH-M9301-0-5	1	UNIBUS TERMINATOR/BOOTSTRAP		L	L	L	L	L	L	L	L	L	L	L	L											
B-MH-M9301-0-6	1	MODULE ECO HISTORY		H	J	K	L	M	N	P	R	S	T	U												
K-CO-M9301-0-4		X-Y COORDINATE HOLE LOCATION																								
A-SP-M9301-0-8		M9301 PRODUCT SPECIFICATION		A	A	A	B	C	C	D	D	D	D	D												
5011208		ETCHED CIRCUIT BOARD		F	F	F	F	F	F	F	F	F	F	F												
A-PL-M9301-0-7		SHIPPING LIST M9301		-	A	B	B	B	B	B	B	B	B	B												
B-CS-M9301-0-12		M9301-YH ROM LISTING		-	-	*	*	A	A	A	A	A	A	A												
B-CS-M9301-0-13		M9301-YJ ROM LISTING								*	*	*	*	*												
B-CS-M9301-0-14		M9301-YE ROM LISTING								*	*	*	*	*												
B-CS-M9301-0-15		M9301-YX ROM LISTING												*	*											
CUSTOMER PRINT SET CODES X = PRINT OF DOCUMENT INCLUDED IN PRINT SET C = INCLUDES ALL PRINTS INDICATED ON DOCUMENT S = CONFIDENTIAL AUTHORIZED SIGNATURE REQUIRED				ECO NO	0006	0007	0008	0009	0010	0011	0012	0013	0014	0015	TWO16											
				TITLE	UNIBUS TERMINATOR/BOOTSTRAP											SHEET 2 OF 2	SIZE CODE	B DD		NUMBER	M9301-0		PCV	L		

TW

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NOTES:
 1) THE FOLLOWING REFERENCE DESIGNATIONS ARE NOT USED: C6, R64, AND R110.



REF	X-Y HOLE COORDINATE HOLE LOCATION	K-CO M9302-0-4	1
REF	ASSY/DRILLING HOLE LAYOUT	D-AH-M9302-0-5	2
REF	MODULE ECO HISTORY	B-MH-M9302-0-6	3
1	ETCHED CIRCUIT BOARD	50.1311	4
3	C9, C10, C11	CAP .01 uf 100V 20% DISC	5
1	C1	CAP 33 uf 10V 10%	6
1	C2	CAP 0.2 uf 35V 10%	7
4	G4 THRU G7	CAP .22 uf 50V 1%	8
2	C2, C3	CAP .001 uf 250V 20% DISC	9
56	R2, R4, R6, R8, R10, R12, R14, R16, R18, R20, R22, R24, R26, R28, R30, R32, R34, R36, R38, R40, R42, R44, R46, R48, R50, R52, R54, R56, R58, R60, R62, R64, R66, R68, R70, R72, R74, R76, R78, R80, R82, R84, R86, R88, R90, R92, R94, R96, R98, R100, R102, R104, R106, R108, R110	RES 353 OHM 1/4W 1%	10
54	R1, R3, R5, R7, R9, R11, R13, R15, R17, R19, R21, R23, R25, R27, R29, R31, R33, R35, R37, R39, R41, R43, R45, R47, R49, R51, R53, R55, R57, R59, R61, R63, R65, R67, R69, R71, R73, R75, R77, R79, R81, R83, R85, R87, R89, R91, R93, R95, R97, R99, R101, R103 THRU R107, R109, R112	RES 178 OHM 1/4W 1%	11
1	E2	I.C. DEC 7430	12
1	E1	I.C. DEC 8881	13
1	E3	I.C. DEC 8837	14
2		HANDLE, FLIP-CHIP (MAGENTA)	15
4		EYELETS	16
1		DECAL	17

IC	DEC 8881	6	16
IC TYPE	GND	+5V	
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.			
IC PIN LOCATIONS			

PARTS LIST

ETCH BOARD REV B

DRN: *Maple* DATE: 10/1/74
 CHKD: DATE: 10/1/74
 ENG: DATE: 10/1/74
 PROJ. ENG. DATE: 10/1/74
 PROD. DATE: 3/2/75
 NEXT HIGHER ASSY:

digital EQUIPMENT CORPORATION

TITLE: **UNIBUS TERMINATOR**

SIZE/CODE: DCS M9302-0-1 REV. C

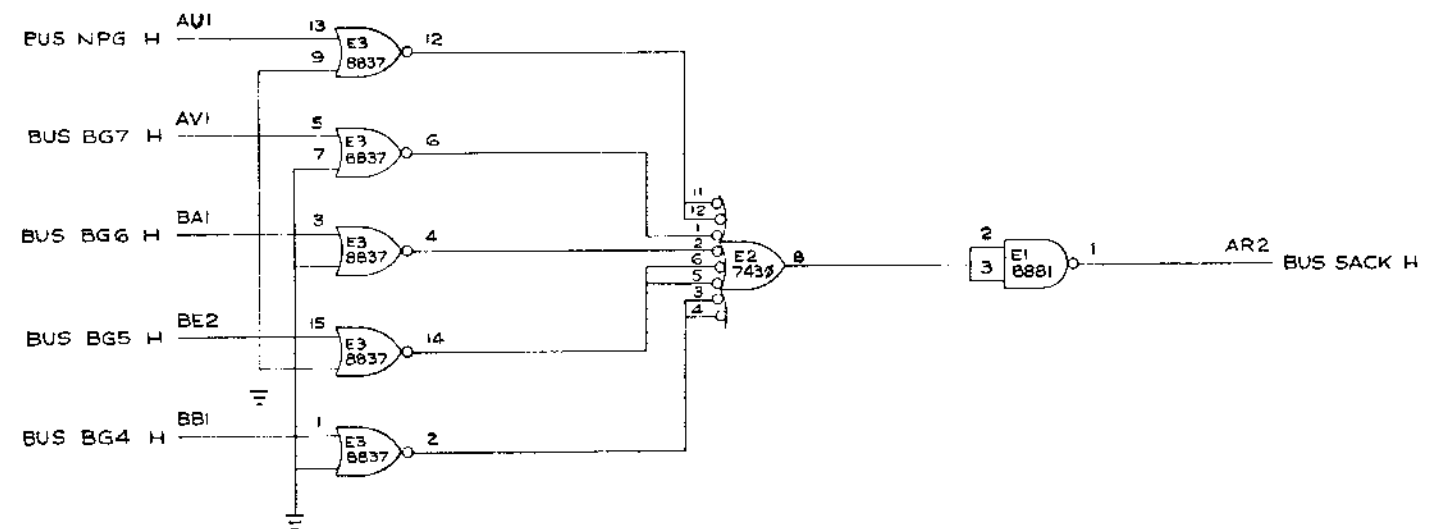
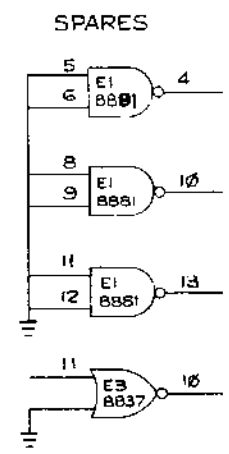
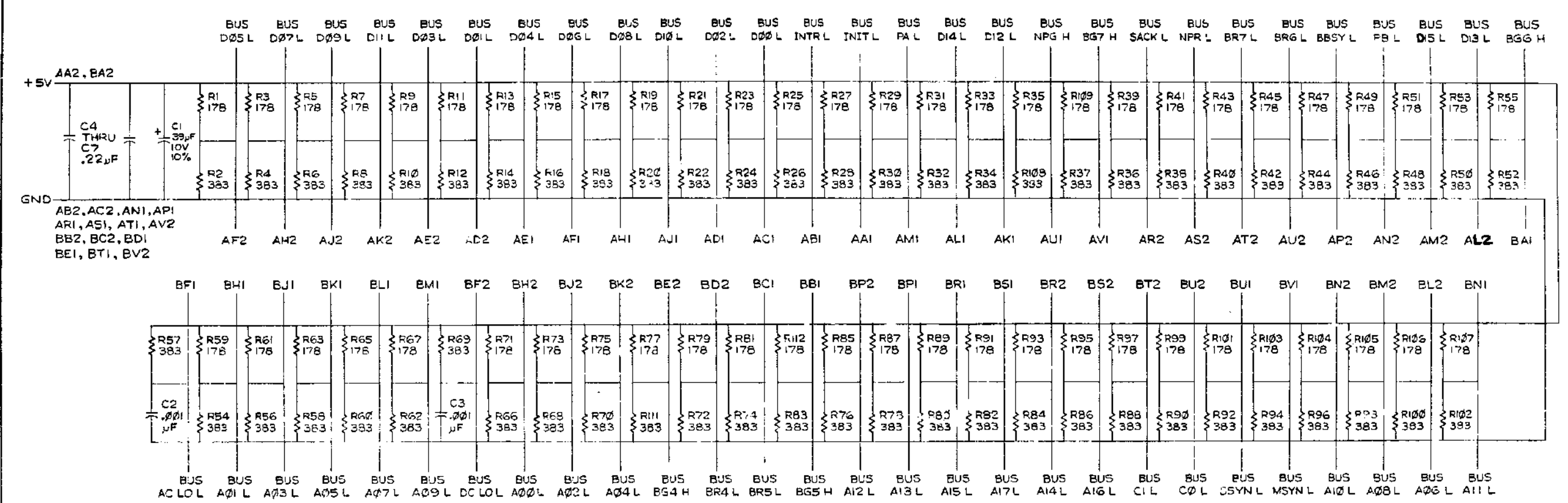
SCALE: 1 OF 2

SEMICONDUCTOR CONVERSION CHART

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

DCS M9302-0-1 C

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REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	UNIBUS TERMINATOR	SIZE	D CS	NUMBER	M9302-0-1	REV.	C
SCA E	SHEET 2 OF 2	DIST					

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FIELD MAINTENANCE PRINT SET

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TABLE OF CONTENTS

FIELD MAINTENANCE PRINT SET DL11-W
SERIAL LINE/LINE CLOCK
SLU/RTC OPTION
SLU/RTC OPTION
CABLE ASSY (KL8-E)
CABLE MODEM BCØ5C
CABLE ASSY
INSTALLATION PROCEDURE

B-TC-DL11-W-1
A-PL-DL11-W-Ø
D-CS-M7856-Ø-1
K-CS-M7856-Ø-9
D-IA-7008360-0-0
D-UA-BCØ5C-Ø-Ø
D-UA-BC03L-0-0
A-SP-DL11-W-2

UNIT VARIATIONS COVERED BY THIS PRINT SET

DL11-W
DL11-WA
DL11-WB
DL11-WC

DL11-W

Field Maintenance Print Set

Digital Equipment Corporation

PRINT SET ORDER NO. MPØØ1Ø6

REVISIONS			USED ON OPTION/MODEL	DRN.	DATE	TITLE: FIELD MAINTENANCE PRINT SET DL11-W	digital				
DATE	CHG. NO.	REV.		CHK'D	DATE		SIZE	CODE	NUMBER	REV.	
NOV-76	DL11W-1	A		<i>D. Neely</i>	26-MAR-76	B	TC	DL11-W-1	B		
8-77	DL11-W-2	B		<i>D. Neely</i>	26-MAR-76						
				PROJ. ENG. <i>RB Pratt</i>	29-MAR-1976						
				FIELD SERV. <i>M. Crane</i>	14-APR-1976						

SHEET 1 OF 1

EN-01124-16-N878-(327)

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST

MADE BY D. HEALY	CHECKED D. HEALY	SECTION 1
DATE 25 MAR 76	DATE 25 MAR 76	
ENG R.E. BRATT	PROD K. MACDONALD	ISSUED SECT. 1
DATE 1 APR 76	DATE 7-APR-76	

QUANTITY / VARIATION

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	DL11-W	DL11-WA	DL11-WB	DL11-WC												
1	D-CS-M7856-0=1	SLU/RTC OPTION	1	1	1	1												
2	D-1A-7008360-1-0	CABLE ASSY (KL8-E)	-	1	-	-												
3	D-UA-BC05C-25-0	CABLE MODEM BC05C	-	-	1	-												
4	D-UA-BC03L-10-0	CABLE ASSY	-	-	-	1												
5	23760A9 *	BOOTSTRAP ROM	1	1	-	1												
6	9906228 *	BOX ROM	1	1	-	1												
7	D-CS-H315-0-1	MODEM TEST CONNECTOR (SEE NOTE 3.)	-	-	1	1												
		* 1. THE ROM AND ROM BOX WILL BE ADDED AT FA+T.																
		2. THE ROM AND ROM BOX ARE TO BE SHIPPED ONLY IF																
		AN LT33 OPTION IS SHIPPED WITH A UNIBUS 11 SYS-																
		TEM.																
		3. ONE H315 PER PDP-11 SYS. OR ONE PER																
		DL-11/WB OR WC LOOSE PIECE/ADD ON.																

TITLE SERIAL LINE/LINE CLOCK DL11-W	ASSY NO. NONE	SIZE A	CODE PL	NUMBER DL11-W-0	REV. D	ECO NO D11W MK005
SHEET 1 OF 1		DIST				

MK

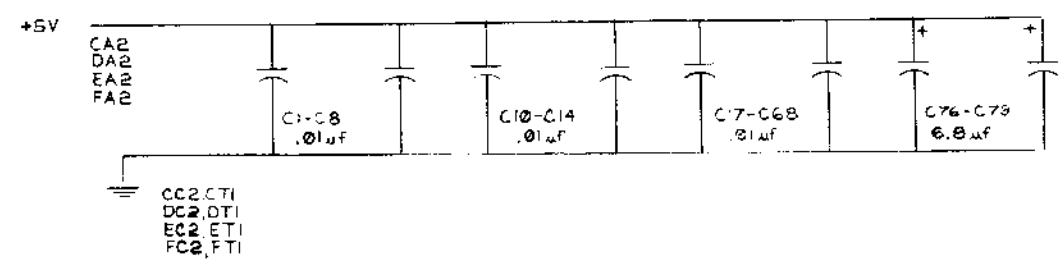
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NOTES:

H 1-0-9582W 50 2

D
C
B
A

C
B
A



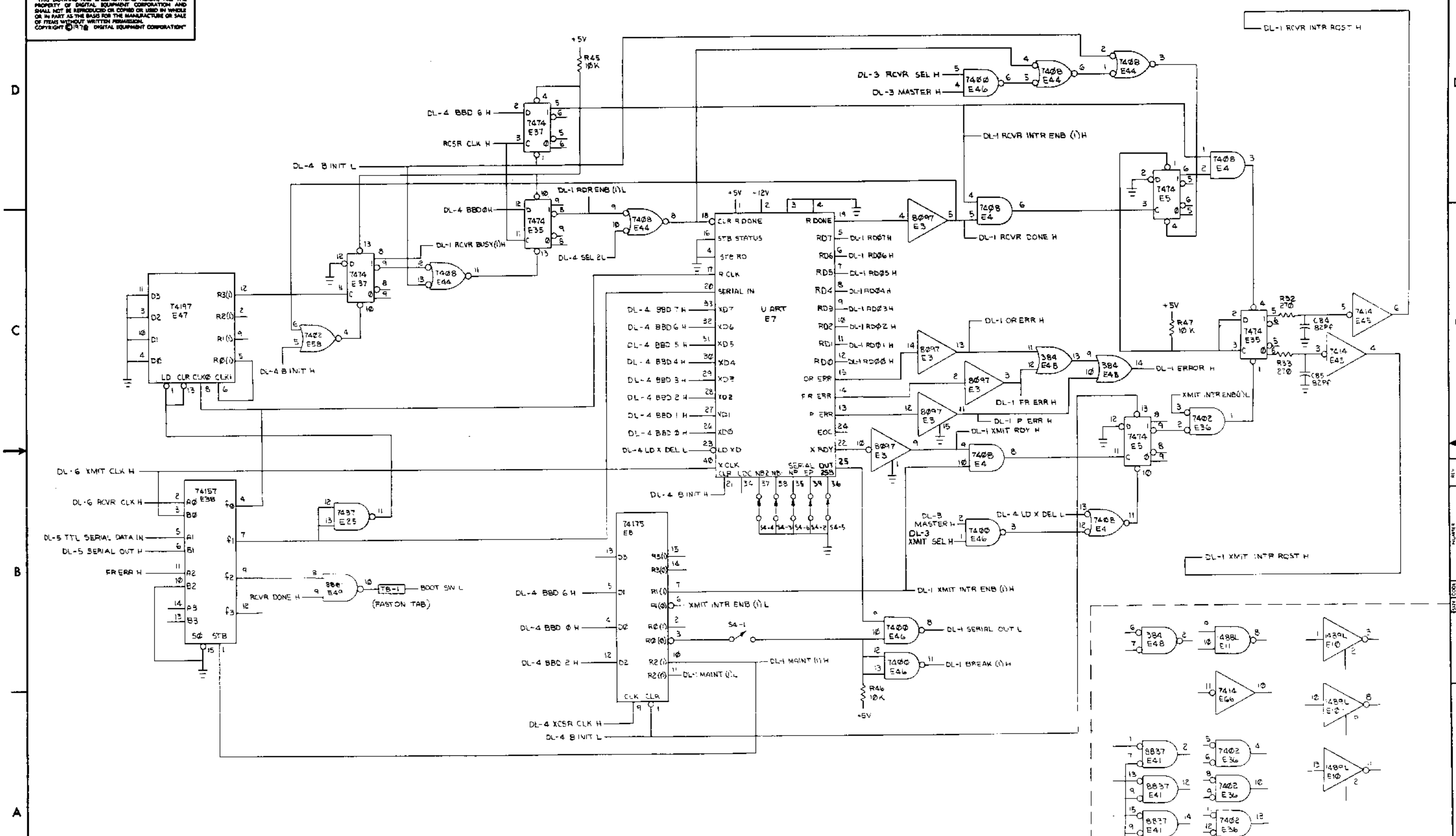
IC 8641	8	16
IC 84	1	8
IC 88-7	8	16
IC 14A	1	8
IC 7412	8	16
IC 74157	8	16
IC 74153	8	16
IC 749-	10	5
IC 7492	10	5
IC 74151	8	16
IC 74175	8	16
IC UART	1	3
IC 8097	8	16
IC TYPE	GND	+5V
GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE.		
IC PIN LOCATIONS		

QTY	REF. DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
FIRST USED ON OPTION MODEL				
ETCH BOARD REV. E				
PARTS LIST				
DRN. <i>B. Cramm</i>	DATE 2/23/78	<div style="text-align: center; border: 1px solid black; padding: 5px;"> digital </div> <p>TITLE SLU/RTC OPTION</p> <p>SIZE CODE D CS NUMBER M7856-0-1 REV. H</p>		
CHK'D. <i>L. J. ...</i>	DATE 3-2-78			
ENG. <i>...</i>	DATE 4-2-78			
PROJ. ENG. <i>...</i>	DATE 7-7-78			
PROD. <i>...</i>	DATE 8-1-78			
NEXT HIGHER ASSY		SEMICONDUCTOR CONVERSION CHART		
DEC NO.	EIA NO.	DEC NO.	EIA NO.	SCALE
SHEET OF 8		DIST.		

REV. H
 PART NO. M7856-0-1
 D CS

8 7 6 5 4 3 2 1

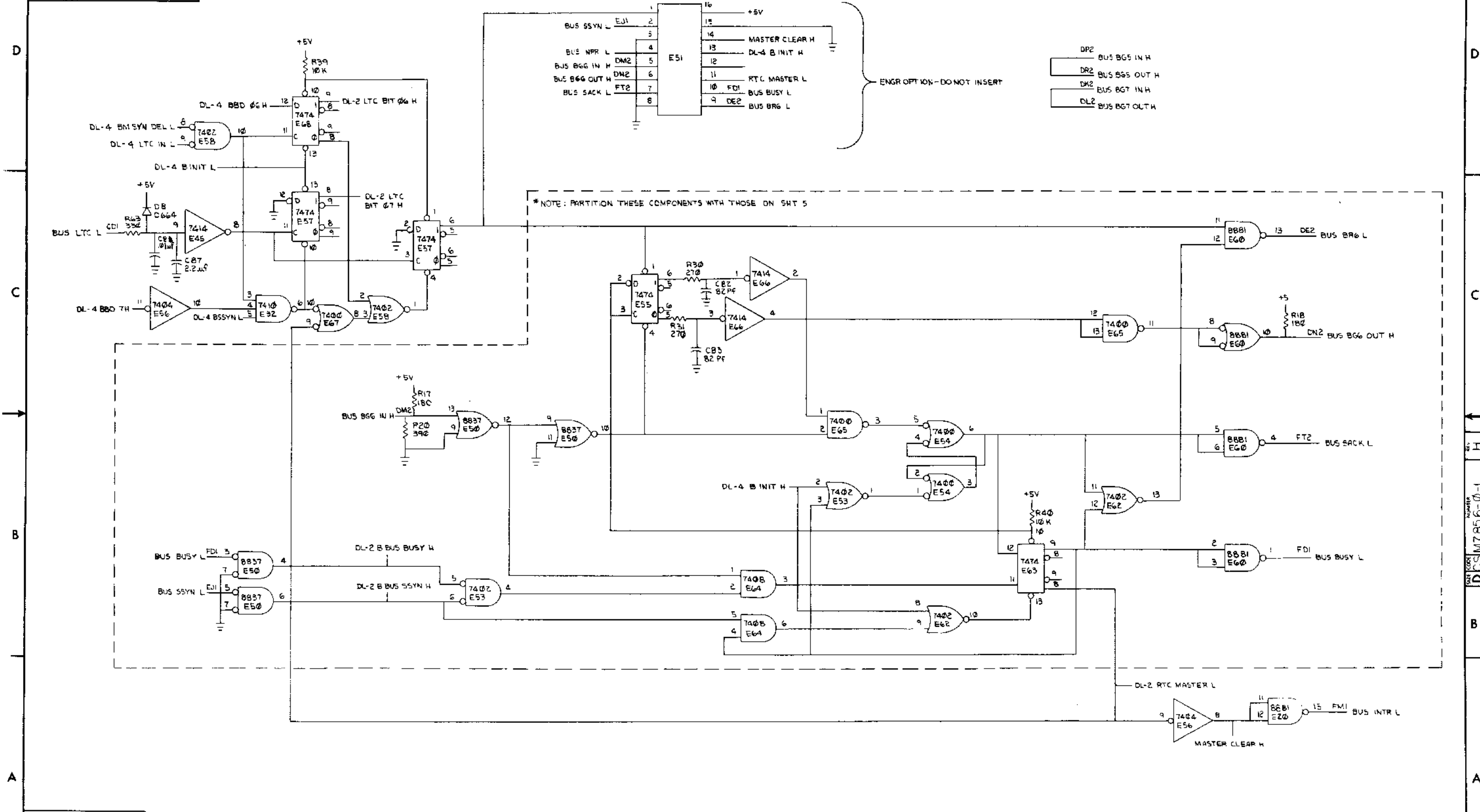
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REVISIONS		
CHK	CHANGE NO.	REV

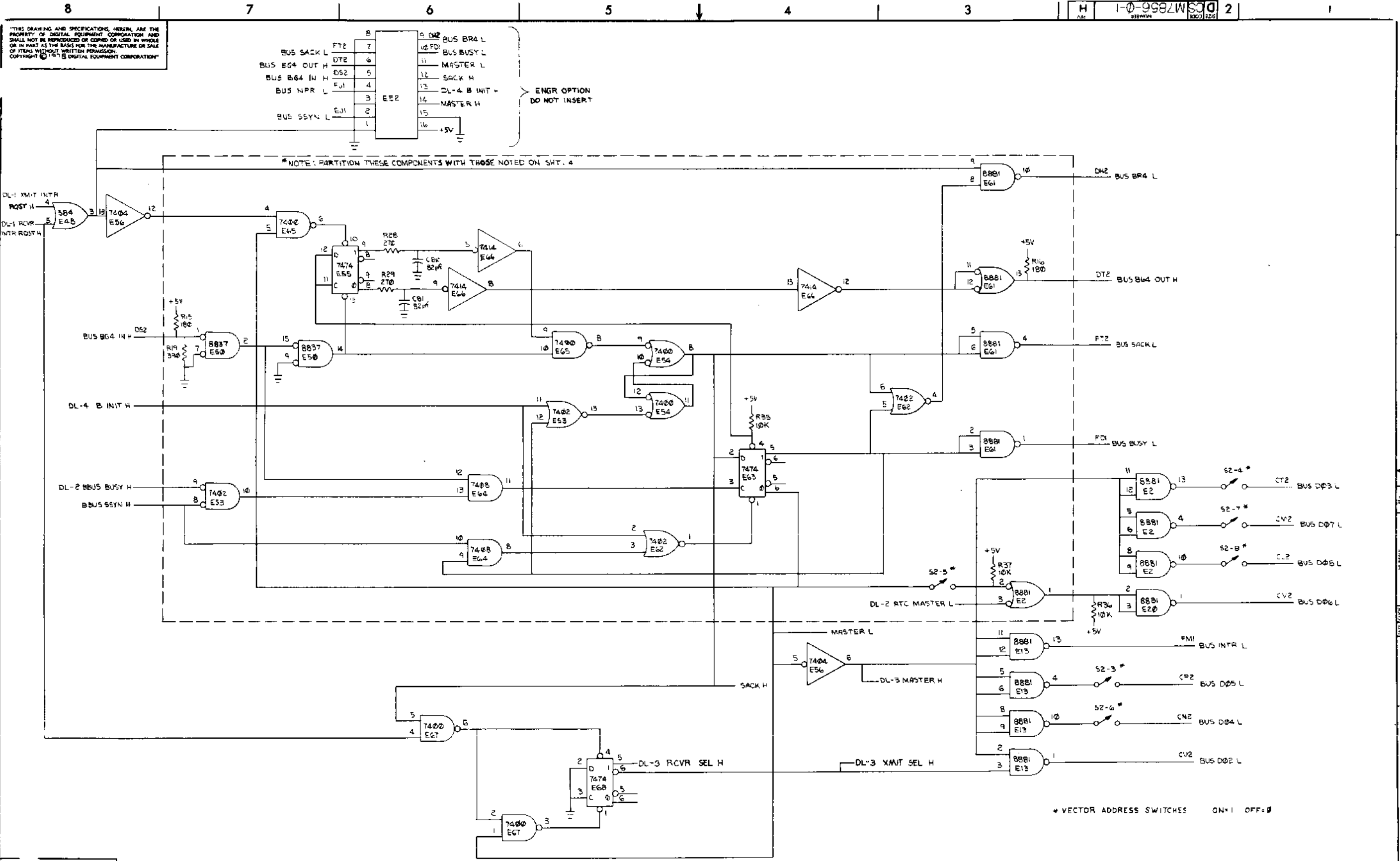
TITLE	SLU/RTC OPTION (DL-1)	SIZE CODE	D 05	NUMBER	V7856-0	REV.	H
SCALE	+	SHEET	2	OF	8	DIST.	

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REVISIONS		
CHK	CHANGE NO	REV

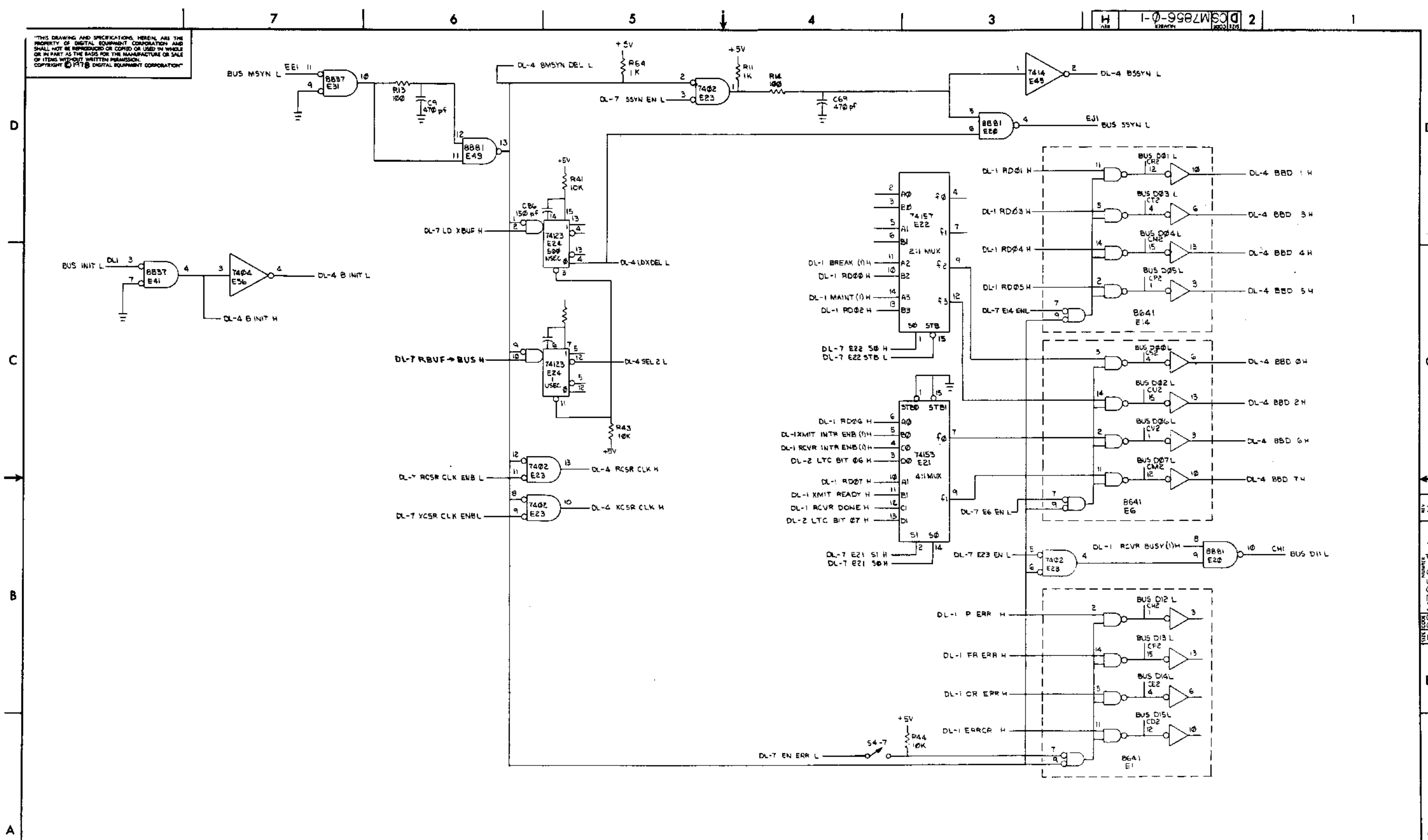
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REVISIONS		
CHK	CHANGE NO	REV.

DCS M7856-Q-1

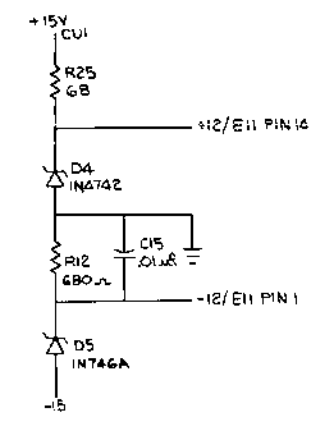
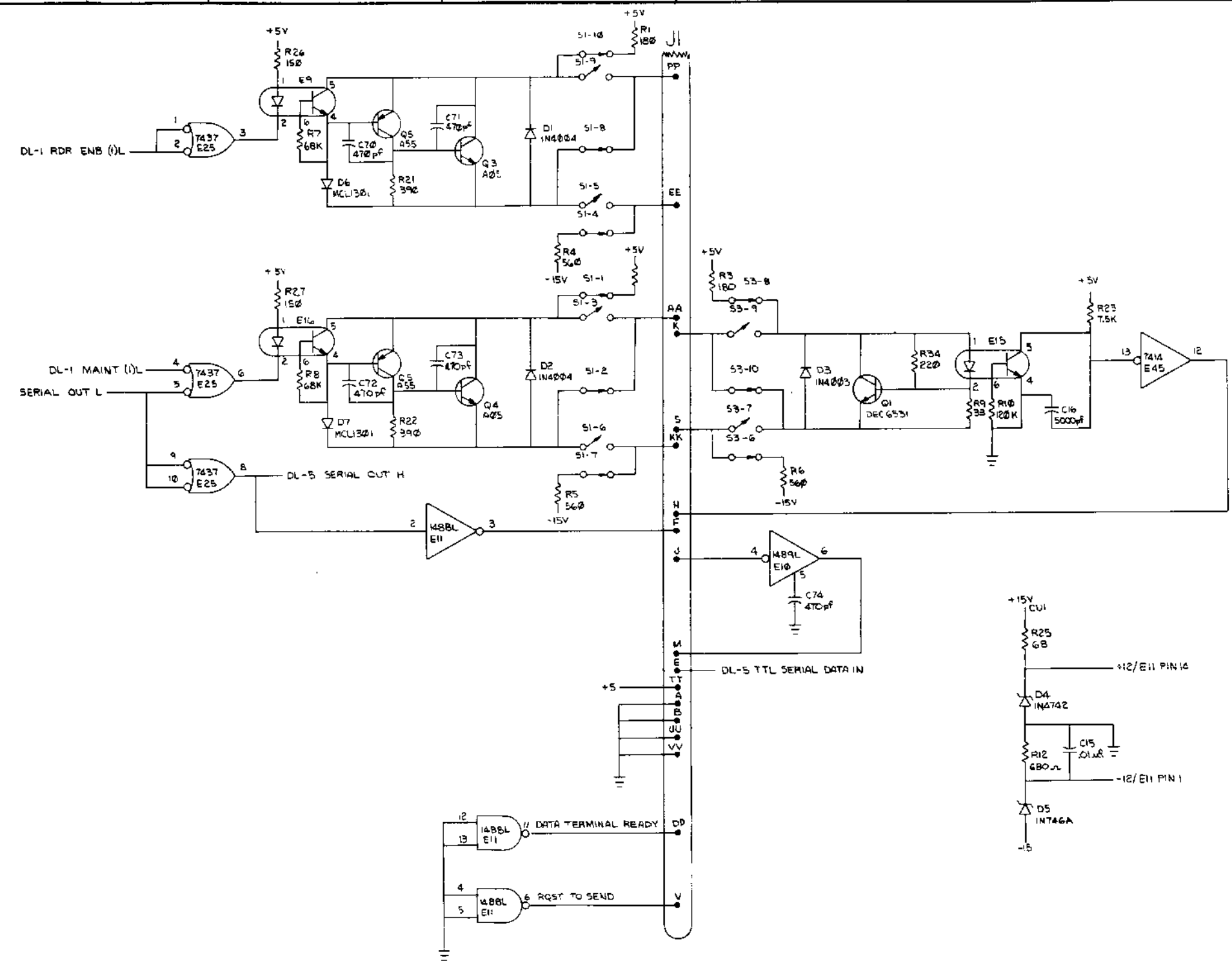
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REVISIONS		
CHK	CHANGE NO	REV

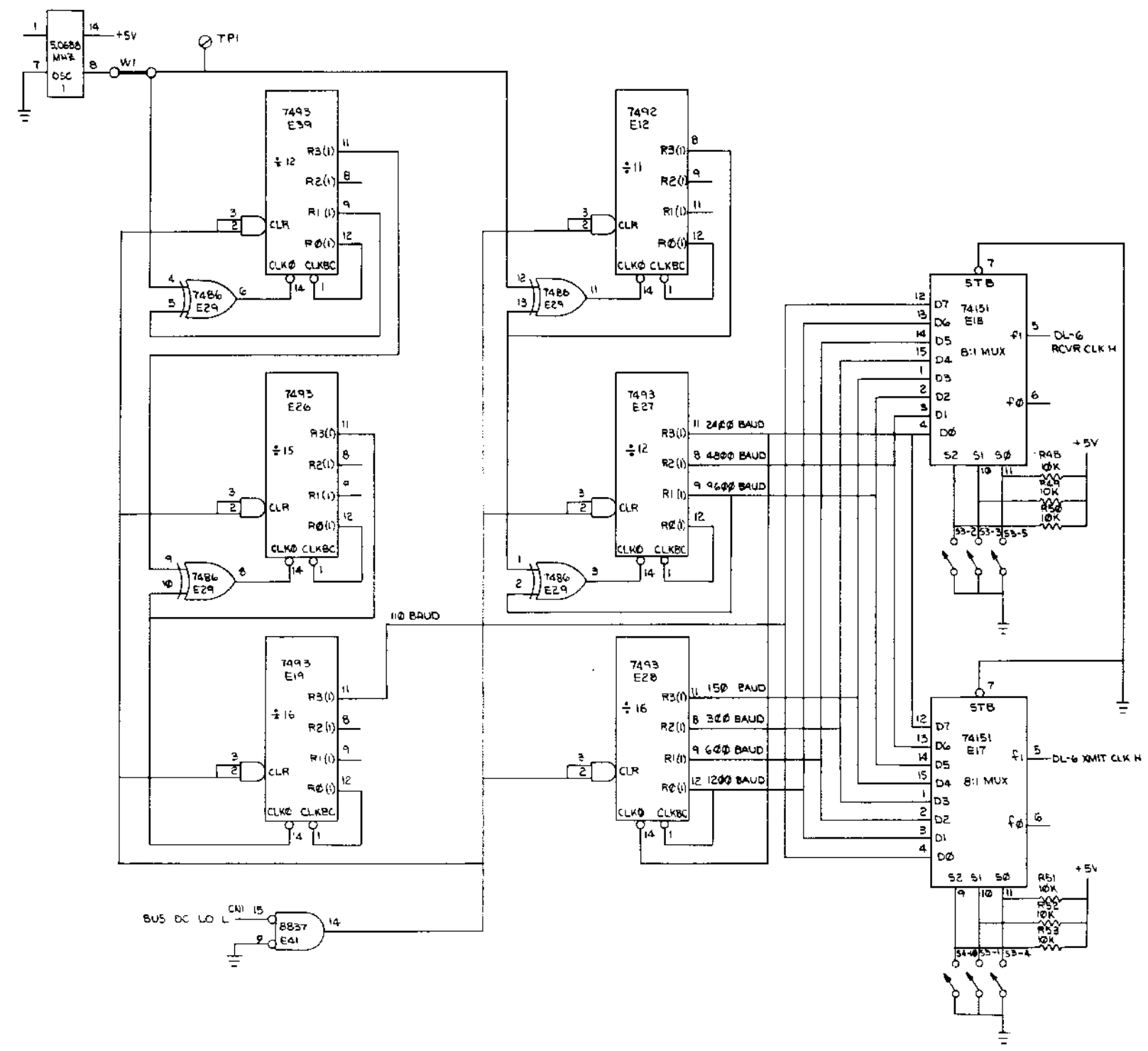
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NOTE:
1. SWITCHES ARE SHOWN IN ACTIVE MODE.
2. D7, D6 ARE MCL1301 1 MA CONSTANT CURRENT DIODES.



REVISIONS		
CHK	CHANGE NO.	REV

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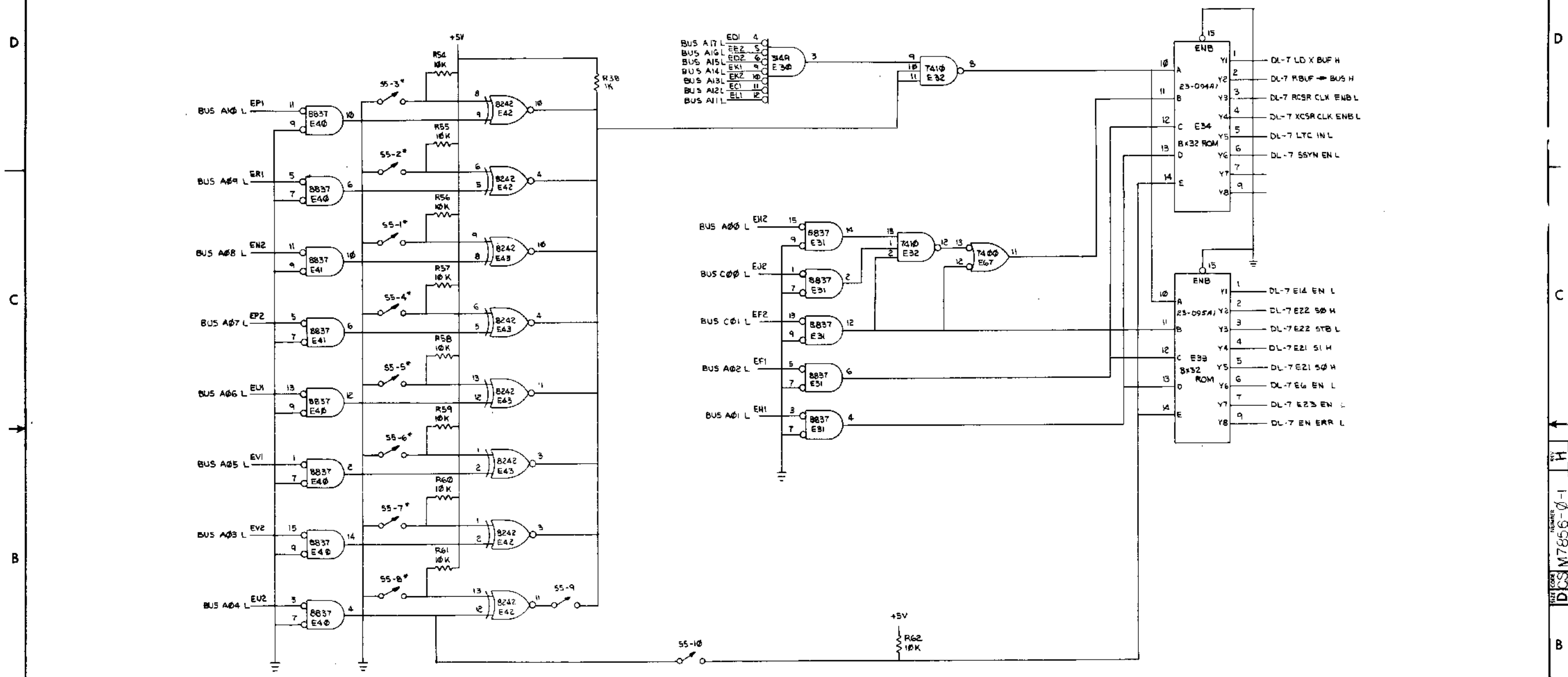


BAUD RATE	RCVR			XMIT		
	S3-2	S3-3	S3-5	S4-10	S3-1	S3-4
110	OFF	OFF	OFF	ON	ON	ON
150	ON	OFF	OFF	OFF	ON	ON
300	OFF	ON	ON	ON	OFF	OFF
600	OFF	ON	OFF	ON	OFF	ON
1200	OFF	OFF	ON	ON	ON	OFF
2400	ON	ON	ON	OFF	OFF	ON
4800	ON	ON	OFF	OFF	OFF	ON
9600	ON	OFF	ON	OFF	ON	OFF

REVISIONS		
CHK	CHANGE NO	REV

REV. H
 DRAWING NUMBER
 DCS M7856-0-1

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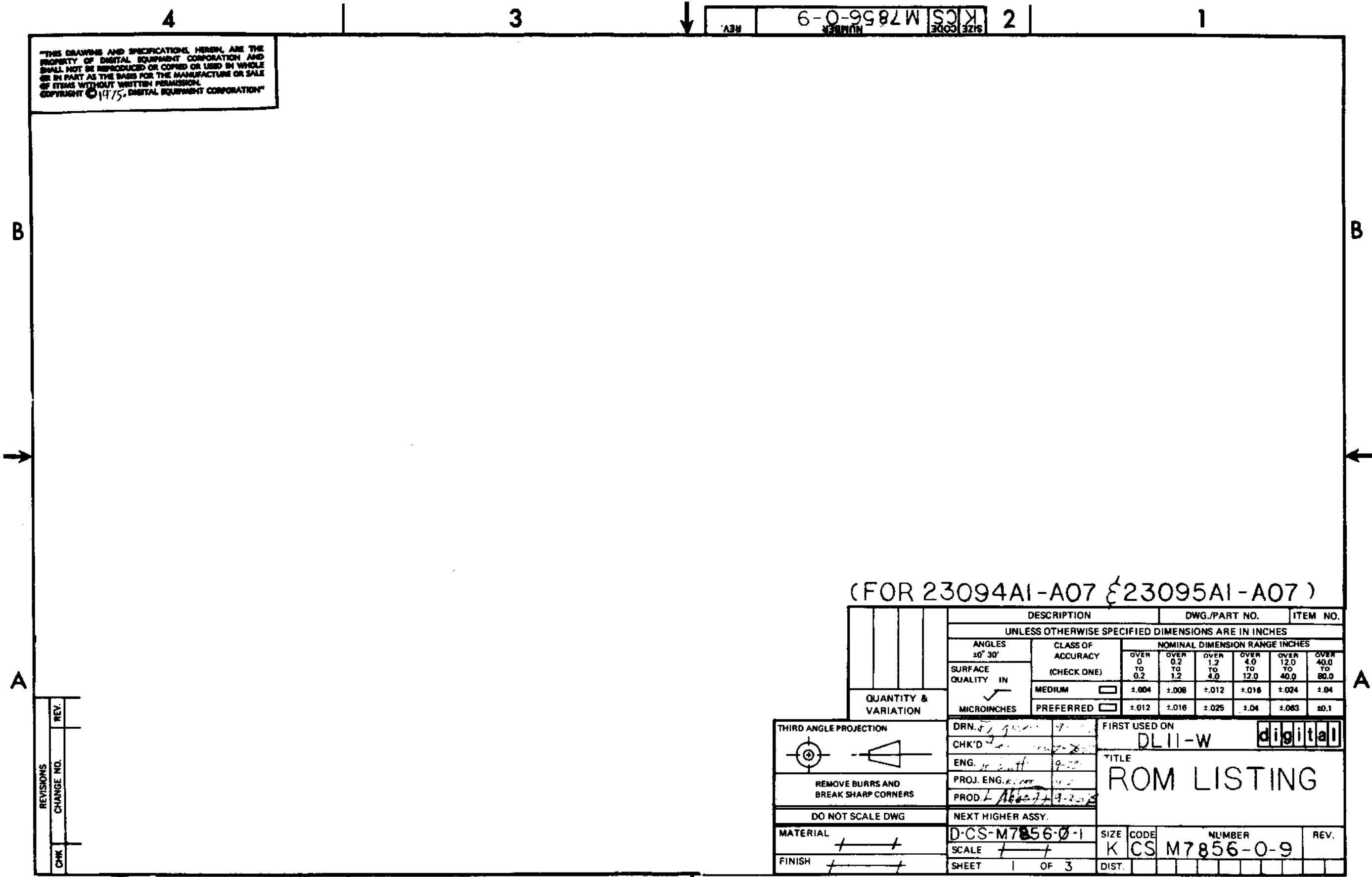


* ADDRESS SELECTION SWITCHES - OFF=1 ON=0

REVISIONS		
CHK	CHANGE NO	REV.

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REV. NUMBER SIZE CODE
 6-0-9987W SKK 2



(FOR 23094A1-A07 & 23095A1-A07)

DESCRIPTION		DWG./PART NO.		ITEM NO.			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES							
ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES					
SURFACE QUALITY IN		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 <input type="checkbox"/>	±.004	±.008	±.012	±.016	±.024	±.04
	PREFERRED <input type="checkbox"/>	±.012	±.016	±.025	±.04	±.063	±.1
THIRD ANGLE PROJECTION 	DRN. <i>g...</i>	FIRST USED ON DL11-W digital		TITLE ROM LISTING			
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D <i>...</i>	PROJ. ENG. <i>...</i>		PROD. <i>...</i>			
DO NOT SCALE DWG	NEXT HIGHER ASSY.		MATERIAL <i>+</i>		D-CS-M7856-0-1		
FINISH <i>+</i>	SCALE <i>+</i>	SIZE CODE K CS	NUMBER M7856-0-9	REV.			
	SHEET	1	OF 3	DIST.			

ROM PATTERN SPEC

1 DEC PART NUMB: 2309401-A07
ORIGINATOR: ROB PRATT
DATE OF ORIGIN: 2/28/75

DECIMAL LOC	OCTAL LOC	BINARY DATA	OCTAL DATA
0	00	00111100	074
1	01	00111100	074
2	02	00111100	074
3	03	00111100	074
4	04	00111100	074
5	05	00111100	074
6	06	00111100	074
7	07	00111100	074
8	10	00111100	074
9	11	00111100	074
10	12	00111100	074
11	13	00111100	074
12	14	00001100	014
13	15	00111100	074
14	16	00011100	034
15	17	00111100	074
16	20	00011000	030
17	21	00111100	074
18	22	00011100	034
19	23	00111100	074
20	24	00010100	024
21	25	00111100	074
22	26	00011100	034
23	27	00111100	074
24	30	00011100	034
25	31	00111100	074
26	32	00011110	036
27	33	00111100	074
28	34	00011101	035
29	35	00111100	074
30	36	00011100	034
31	37	00111100	074

ROM PATTERN SPEC

1
 DEC PART NUMB: 23-095A1-A07
 ORIGINATOR: BOB PRATT
 DATE OF ORIGIN: 2/28/75

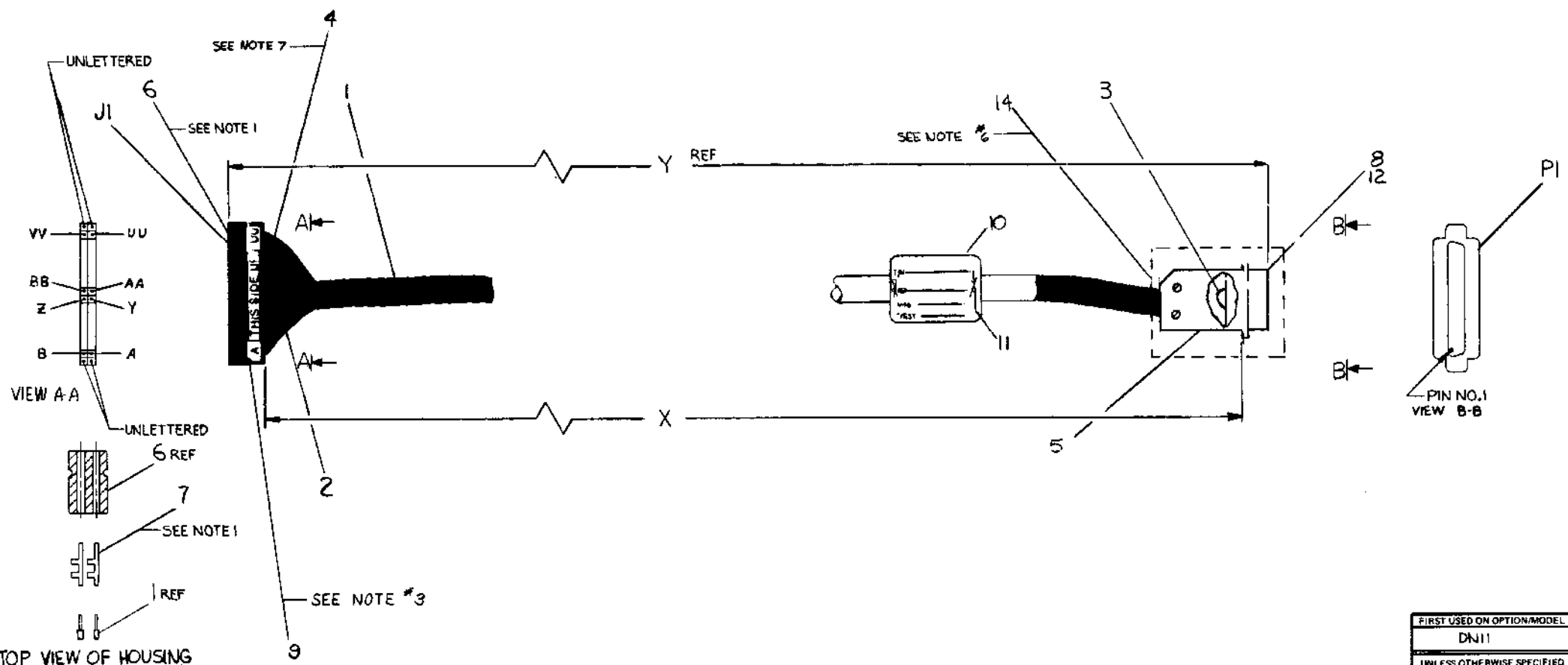
DECIMAL LOC	OCTAL LOC	BINARY DATA	OCTAL DATA
0	00	11111111	377
1	01	11111111	377
2	02	11111111	377
3	03	11111111	377
4	04	11111111	377
5	05	11111111	377
6	06	11111111	377
7	07	11111111	377
8	10	11111111	377
9	11	11111111	377
10	12	11111111	377
11	13	11111111	377
12	14	11011111	337
13	15	11111111	377
14	16	11111111	377
15	17	11111111	377
16	20	10001111	217
17	21	11111111	377
18	22	11111111	377
19	23	11111111	377
20	24	11010001	321
21	25	11111111	377
22	26	11111111	377
23	27	11111111	377
24	30	01000010	102
25	31	11111111	377
26	32	11111111	377
27	33	11111111	377
28	34	11111111	377
29	35	11111111	377
30	36	11111111	377
31	37	11111111	377

WIRE TABLE															
ITEM NO.	DESCRIPTION	FROM			TO			ITEM NO.	DESCRIPTION	FROM			TO		
		AWG	COLOR	CONNECTION	WITH	CONNECTION	WITH			AWG	COLOR	CONNECTION	WITH	CONNECTION	WITH
1	26	BLU/WHT	PI-1	*	12	J1-VV	7	1	26	RED/BRN	PI-1G	8	J1-NN	7	
		WHT/BLU	PI-2		8	J1-F				SLA	PI-17		J1-R		
		ORN/WHT	PI-3			J1-J				RED/SLA	PI-18		J1-U		
		WHT/ORN	PI-4			J1-V				BLU/BLK	PI-19		J1-P		
		GRN/WHT	PI-5			J1-T				BLK/BLU	PI-20		J1-DD		
		WHT/GRN	PI-6			J1-Z				ORN/BLK	PI-21		J1-MM		
		BRN/WHT	PI-7	**	12	J1-UU				BLK/ORN	PI-22		J1-X		
		WHT/BRN	PI-8		8	J1-BB				GRN/BLK	PI-23		J1-RR		
		SLA/WHT	PI-9			J1-Y				BRN/RED	PI-24		J1-L		
		WHT/SLA	PI-10			J1-W				RED/ORN	PI-25	8	J1-C		
		BLU/RED	PI-11			J1-FF				SHIELD	PI-1	*	12	J1-A	
		RED/BLU	PI-12			J1-JJ				SHIELD	PI-7	**	12	J1-B	
		ORN/RED	PI-13			J1-D				BLK	PI-1	*	12	PI-7 **	
		SLA/RED	PI-14			J1-LL				2	26	RED	J1-E	7	
		SLA/GRN	PI-15		8	J1-N									

NUMBER	VARIATION	
	DIM X	DIM Y (PRE CUT)
BC05C-25	25 ± 3"	25 ± 1.8"
BC05C-50	50 ± 2%	50 ± 1.8"
BC05C-09	9 ± 3"	9 ± 1.8"
BC05C-1F	18 ± 1"	19.8"

- NOTES:**
- MANUFACTURING SHOULD USE MACHINE CRIMPER TOOL FOR CRIMPING PINS (ITEM #7) MUST BE HT68 FROM BERG ELECT
 - ONLY DEC PART # 1210918-15 MAY BE USED AS J1.
 - PLACE ITEM #9 ("THIS SIDE UP" STICKER) ON LETTERED SIDE OF ITEM #6 (BERG HOUSING) AS SHOWN.
 - USE ITEM #13 (9107302-11) IN TWO PLACES (PI-1, PI-7) TO PREVENT SHORTING
 - USE ITEM #12 (9107295-11) ON ALL REMAINING SOLDER CUPS TO PREVENT SHORTING
 - DUE TO ± TOLERANCES WITH DIFFERENT VENDORS THE HOOD (ITEM #5) MAY VARY IN OUTSIDE DIAMETER CAUSING POTENTIAL STRAIN RELIEF GRIPPING PROBLEM. SHOULD THIS CONDITION BE PRESENT USE ITEM #4 (9107834) AT JUNCTION OF CABLE AND HOOD
 - PLACE ITEM #4 (9107256) OVER SHIELD WIRE J1-A, J1-B, PI-1, PI-7.

* DENOTES THREE WIRES ARE SOLDERED INTO THE PI-1 SOLDER CUP
 ** DENOTES THREE WIRES ARE SOLDERED INTO THE PI-7 SOLDER CUP



QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	HOOD	121049330	15
A/R	TAPE, DOUBLE SIDED	9007834	14
1	MALE SCREW	1210493-51	13
2	PIN CONTACT	1215241	12
2	TIE WRAPS	9007031	11
1	CABLE LABEL	9009532	10
1	LABEL, THIS SIDE UP	3611567	9
25	PIN 24-28 AWG	1210493-43	8
29	SOCKET, #HT-68	1210089-5	7
1	HOUSING, #20383 BERG	1210918-15	6
1	SHELL AND INSERT MALE	1210493-31	5
A/R	TUBING, #22 AWG TEF BLK	9107256-00	4
A/R	WIRE, #26 AWG STRD TEF BLK	9107636-00	3
A/R	WIRE, #26 AWG STRD TEF RED	9107636-22	2
A/R	CABLE, 25 CONDUCTOR #26 AWG	9107736	1

CHK	CHANGE NO.	REV
	BC05C-0001	A
	BC05C-0002	B
	BC05C-0003	C
	BC05C-0004	D
	BC05C-0005	E
	BC05C-0006	F
	BC05C-0007	G
	BC05C-0008	H
	BC05C-0009	I
	BC05C-0010	J

FIRST USED ON OPTION/MODEL		PARTS LIST	
DN11		PARTS LIST	
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		digital EQUIPMENT CORPORATION	
DECIMALS	ANGLES	TITLE	
XXX - .006	10° 30'	CABLE, MODEM	
XX - .02		BC05C	
X - .1		SIZE CODE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		NUMBER	
MATERIAL		BC05C-0-0 H	
NEXT HIGHER ASSY.		REV.	
FINISH		DUA	
SCALE NONE		SHEET	
SHEET 1 OF 1		DIST.	

MK

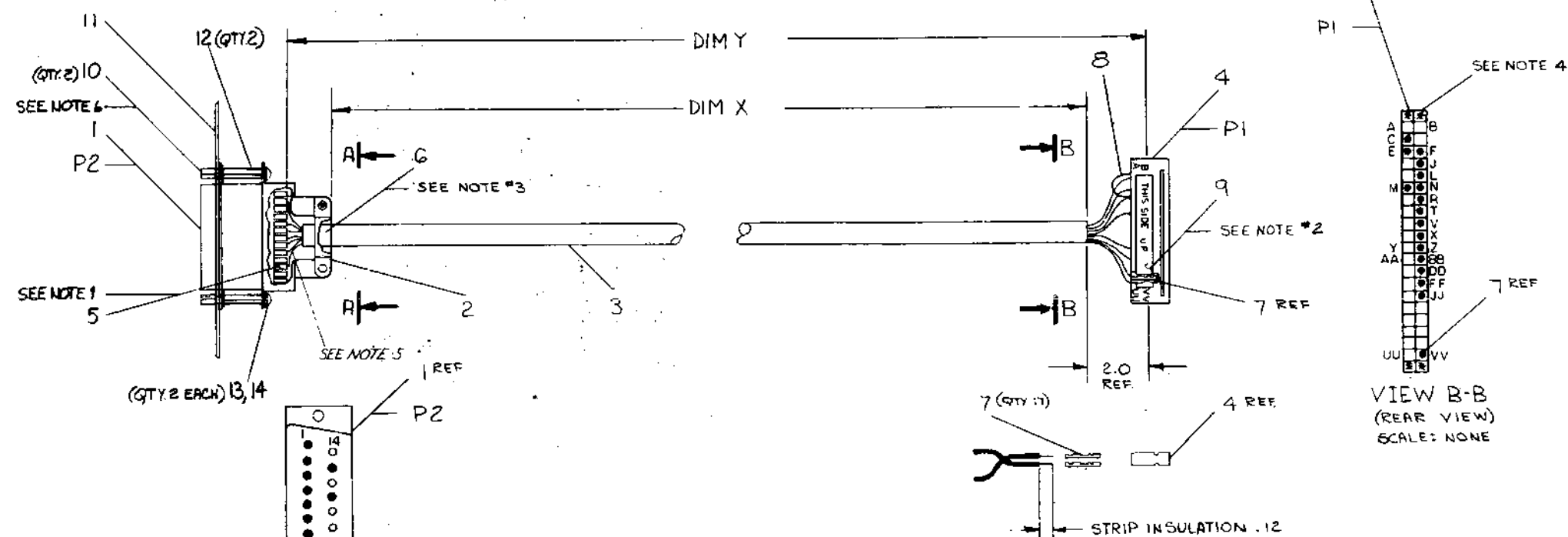
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WIRE TABLE						
ITEM NO	DESCRIPTION	FROM	TO			
NO	AWG	COLOR	CONNECTION	WITH	CONNECTION	WITH
3	22	BLK	P1-VV	7	P2-7	SOLDER
		GRN/WHT	P1-C		P2-25	
		GRN/BLK	P1-JJ		P2-12	
		GRN/BLK	P1-FF		P2-11	
		RED	P1-DD		P2-20	
		GRN	P1-BB		P2-8	
		BLU/WHT	P1-E		P2-6	
		ORN	P1-X		P2-22	
		BLU	P1-V		P2-4	
		WHT	P1-T		P2-5	
		BLU/BLK	P1-R		P2-17	
		BLK/WHT	P1-N		P2-15	
		RED/WHT	P1-L		P2-24	
		WHT/BLK	P1-J		P2-3	
3		RED/BLK	P1-F		P2-2	SOLDER
8		BLK	P1-E	7	P1-M	7
8	22	BLK	P2-1	SOLDER	P2-7	SOLDER

LEGEND		
NUMBER	VARIATION	
	DIM "X"	DIM "Y" PRECUT
BC03L-10	10FT ± 2IN	10FT, 5IN
BC03L-5	5FT ± 2IN	5FT, 5IN
BC03L-1K	1FT 9IN ± 1IN	2FT
BC03L-21	1FT ± 1IN	1FT, 3IN

NOTES

- EACH SOLDERED CONN ON P2 SHALL BE INSULATED WITH A .25 PIECE OF SHRINK TUBING (ITEM#5)
- PLACE ITEM#9 (THIS SIDE UPSTICKER) ON LETTERED SIDE OF ITEM#4 (CONN HOUSING) AS SHOWN.
- FOR STRAIN RELIEF WRAP 2 TURNS OF TAPE (ITEM#6) AROUND CABLE (ITEM#3) AS SHOWN.
- PINS MARKED * IN VIEW B-B ARE NOT USEABLE
- WIRES COMING FROM CENTER OF PLUG CONN SHOULD BE 5/8" LG., ALL OTHERS SHOULD BE CONFINED INTO HOOD OF CONN SO THAT THEY'RE NOT BUNCHED.
- PLACE LOCK WASHER (SUPPLIED WITH ITEM#10) BETWEEN SPACER AND CONNECTOR FLANGE. DISCARD NUT (QTY: 2) SUPPLIED WITH ITEM#10.



QTY	DESCRIPTION	QTY	DESCRIPTION	QTY	DESCRIPTION
2	WASHER, LOCK#4	9006688	13		
2	SCR, PHL PAN HD#4-40X.25	9008301-1	13		
2	SPACER, THREADED, HEX	9008833	12		
1	PLATE, CONN. MFG.	B-MD-741417200	11		
2	SCREW LOCK ASSY	9008451-00	10		
1	LABEL (THIS SIDE UP)	3611567	9		
30M	WIRE, STRANDED #22 AWG (PVC) (BLK)	9107350-00	8		
17	SOCKET, CRIMP	1210089-07	7		
A/R	TAPE, DOUBLE SIDED .50 WD	9007034	6		
16	TUBING, HEAT SHRINK .12	9107253-09	5		
1	CONN, 44 POS, HSG.	1210918-15	4		
A/R	CABLE, 15 COND, 22 AWG.	9107672-00	3		
1	HOOD, CONN.	1212516-00	2		
1	CONNECTOR, PLUG, FILTERED	1214031-00	1		

REV	DATE	BY	CHKD	DESCRIPTION
1				
2				
3				
4				
5				
6				
7				
8				

DESCRIPTION		DWG/PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
ANGLES	CLASS OF ACCURACY	TOLERANCES UNLESS OTHERWISE SPECIFIED	
1/2 3/4	(CHECK ONE)	OVER	UNDER
SURFACE QUALITY	IN	0	12.0
MEDIUM	0.004	0.2	0.050
PREFERRED	1.012	0.5	0.010
QUANTITY & VARIATION	FIRST USED ON		
THIRD ANGLE PROJECTION			
REMOVE BURRS AND BREAK SHARP CORNERS			
DO NOT SCALE DWG			
NEXT HIGHER ASSY.			
MATERIAL	SIZE	CODE	NUMBER
SEE PARTS LIST	SCALE 1/1	DUA	BC03L-00
FINISH	SHEET 1 OF 1	DIST.	MP-BC03L-00

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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

TITLE DL11-W Installation Procedure DATE 2-28-77

REVISIONS	
REV	DESCRIPTION
A	ECO CHANGE
8-77	8-77
8-77	8-77

ENGINEERING SPECIFICATION

TITLE DL11-W Installation Procedure

DL11-W Installation Procedure

Installation of the M7856 module consists of the following preparations:

- 1) Switch selection of the address mode and register addresses.
- 2) Switch selection of vector address.
- 3) Switch selection of data format.
- 4) Switch selection of receiver and transmitter baud rates.
- 5) Switch selection of operation mode for the current loops.
- 6) Additional switch selections for compatibility.
- 7) Installation of G8000 in systems where +15V is not available.

NOTE: The notation used to indicate a particular switch is as follows: SX-Y where X denotes the particular switch pack and Y denotes the individual switch in the pack. The switch pack is labeled on the P. C. board with an SX(#S2) and the individual switches are labeled on the switch pack as are the on-off positions.

A. Register Address Assignments:

The DL11-W can respond to addresses with the following format:

17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0

Selects 1 of 4 Registers

Byte Control

The DL11-W can be operated in one of three different address selection modes. Normally, a DL11-W used as console terminal control would operate in the first mode, whereas additional DL11-W's would be operated in the second mode. The third mode is not normally used, but is included here for completeness.

ENG Rob Pratt
DEC 16-1981-1079-071
DRA 107

DEC FORM NO DEC 16-1981-1022-0370
DRA 108

NUMBER DL11-W-2
REV A

SIZE CODE A SP
NUMBER DL11-W-2
REV A

SHEET 1 OF 8

SHEET 2 OF 8

ENGINEERING SPECIFICATION

TITLE DL11-W Installation Procedure

Mode 1: Both the serial line unit and the real-time clock sections can be addressed. Due to common address selection logic, operation in this mode requires that the serial line unit addresses be restricted to 77756X. The line clock address is 777546.

Mode 2: Only the serial line unit section can be addressed. Address selection ranges from 74000 to 77777. Line clock is disabled and does not respond to address 777546.

Mode 3: Only the line clock section can be addressed at 777546. The serial line unit section does not respond to any address.

ADDRESS AND MODE SELECTION

Address Bit	A10	A09	A08	A07	A06	A05	A04	A03	A02	A01	A00
Switch	S5-3	S5-2	S5-1	S5-4	S5-5	S5-6	S5-8	S5-7	S5-9	S5-10	N/A
Mode 1	Off	Off	Off	On	Off	Off	Off	Off	On	Off	On
Mode 2*	Off	Off	Off	On	Off	Off	Off	Off	On	On	Off
Mode 3	Off	Off	Off	On	Off	Off	Off	On	On	On	On

*Address 77756X selected for serial line interface. Other addresses may be selected using SWITCH-OFF = 1 and SWITCH-ON = 0.

Note: Remove R63 from DL11-W's operated in Mode 2 to allow proper operation of a line frequency clock or DL11-W operated in Mode 1 or Mode 3.

Address assignments for serial lines are normally made in the ranges from 77650X to 77667X and from 77561X to 77617X.

B. Vector Address Assignments:

The line clock, if enabled, has a fixed vector address of 100 and cannot be changed. The serial line assignments are to floating vectors produced in the form XX0 (Receiver) and XX4 (Transmitter) where XX ranges from 00 to 77.

For a DL11-W used as the console device, the vector is 060/064. Additional DL11-W's vector addresses are floating.

DEC FORM NO DEC 16-1981-1022-0370
DRA 108

NUMBER DL11-W-2
REV A

SIZE CODE A SP
NUMBER DL11-W-2
REV A

SHEET 3 OF 8

ENGINEERING SPECIFICATION

TITLE DL11-W Installation Procedure

V8 V7 V6 V5 V4 V3 V2 V1 V0

0/1 0 0

Switch Selectable for Serial Line

Vector Bit V8 V7 V6 V5 V4 V3

Switch S2-8 S2-7 S2-5 S2-3 S2-6 S2-4

060/064 Off Off Off On On Off

On = 1, Off = 0

C. Selection of Data Format:

1. Data Bits

Switches S4-3 and S4-4 control the number of data bits in the serial character as follows:

S4-4	S4-3	# of Data Bits
On	On	5
On	Off	6
Off	On	7
Off	Off	8

2. Parity

Parity is controlled by switches S4-2 and S4-6 as follows:

S4-2	S4-6	Parity
Off	Off	Off
On	Off	Off
Off	On	Even
On	On	Odd

3. Stop Bits

Switch S4-5 controls the number of stop bits selected in the serial character as follows:

DEC FORM NO DEC 16-1981-1022-0370
DRA 108

NUMBER DL11-W-2
REV A

SIZE CODE A SP
NUMBER DL11-W-2
REV A

SHEET 4 OF 8

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE DLI1-W Installation Procedure

S4-5 # of Stop Bits
 On 1
 Off 2 (or 1.5 if 5 data bits are selected)

D. Baud Rate Selection:
 Receiver and Transmitter baud rates are independent, so any combination may be selected.

Baud Rate		Receiver		Transmitter	
	S3-2	S3-3	S3-5	S4-10	S3-1 S3-4
110	Off	Off	Off	On	On
150	On	Off	Off	On	On
300	Off	On	On	On	Off
600	Off	On	Off	On	On
1200	Off	Off	On	On	Off
2400	On	On	On	Off	Off
4800	On	On	Off	Off	On
9600	On	Off	On	Off	On

E. Current Loop Operation Mode:
 Normally, current loops should be in active mode, unless interfaced to another active loop, such as to another DLI1.

Transmitter		S1-2		S1-3		S1-6		S1-7	
	S1-1	S1-2	S1-3	S1-6	S1-7	S1-8	S1-9	S1-10	S1-10
Active	On	Off	Off	On	On	Off	On	On	On
Passive	Off	On	On	On	Off	On	Off	On	Off
Receiver	S3-6	S3-7	S3-8	S3-9	S3-10				
Active	On	Off	On	Off	On				
Passive	Off	On	Off	On	Off				
Reader Enable	S1-4	S1-5	S1-8	S1-9	S1-10				
Active	On	Off	On	Off	On				
Passive	Off	On	Off	On	Off				

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE DLI1-W Installation Procedure

F. Compatibility Selection:
 Switches S4-1 and S4-7 allow the DLI1-W to be configured to replace DLI1-A, B, C, and D options in most applications.

DLI1-W Compatibility Switches		Description	
Selectable	Switch	Break Bit	Description
	S4-1	S4-1	Enabled in the ON position. Should be disabled (switch OFF) if replacing a DLI1-A, or DLI1-B. Should be enabled (switch ON) if replacing a DLI1-C or DLI1-D.
	S4-7	S4-7	Error bit reporting is enabled in the ON position. Should be disabled if replacing DLI1-A or DLI1-B, and should be enabled if replacing DLI1-C or DLI1-D.

Note: Both EIA level and current loop signals are available at the berg connector on the module. No selection is necessary. The proper cable will pick up the correct signals.

G. G8000 Installation:
 For DLI1-W EIA operation, a positive voltage is required between 9 and 15 volts to operate the EIA drivers. For PDP-11/20 and PDP-11/15 systems with the H720 power supply, a G8000 module must be installed to provide this voltage. Using a filter network, this module converts the full-wave rectified "+8V" signal to a positive DC voltage.

- Install G8000 into slot A02 or DD11-A.
- Wire A03V2 to A02V2.
- Wire A02N2 to CXX01 where XX is the slot location of the M7850.

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE DLI1-W Installation Procedure

H. DLI1-W Systems with +15V Available Using DD11-A
 There is a special situation of using a DLI1-A to mount a DLI1-W in systems with +15V available. These systems have +15V available, and it appears at pin A03V2 of the DD11-A when using power harness such as 7009177, 7008855, or 7008909. In this situation, no G8000 is necessary, and +15V can be wired directly from A03V2 to CXX01, where XX is the slot number of the DLI1.

I. When using the DLI1-W in an 11/05 processor pin CXX01 has +15V available on it so no G8000 or no jumpers are required.

J. INSTALLATION
 The DLI1-W module plugs into an SPC slot. A wire must be installed to pick up the LTC L signal from the power supply and apply it to the line frequency input of the DLI1-W.
 When installed, the LTC L input to the DLI1-W is located on pin CDI. Connect a length of 30 AWG wire from pin CDI on the backplane to the pin on the backplane, as designated in Table 1-1, for each application.

PDP Computer	Processor	Pin Number
11/04	WD11-D (4 slot)	C02DI, C03DI, C04DI
11/04	WD11-D (9 slot)	C02DI, C03DI, C04DI, C05DI, C06DI, C07DI, C08DI, or C09DI
11/05	WD11-A w/8K memory	C01DI, C02DI, C03DI, C04DI, or F08V2
11/05	WD11-A w/16K memory	C01DI or F08V2
11/20	WD11	A13P2 or B12R1
11/34	WD11-E	C03DI, C04DI, C05DI, C06DI, C07DI, C08DI, or C09DI
11/35	WD11-A	F03R1 or C09DI
11/40	WD11-A	F03R1 or C09DI
11/45	KB11-A	C26DI, C27DI, or C28DI
11/55	KB11-D	C26DI, C27DI, or C28DI
11/70	KB11-B	C40DI, C41DI, C42DI, C43DI, or C44DI
11/70	KB11-C	C40DI, C41DI, C42DI, C43DI, or C44DI

DD11-B Peripheral Mounting Panel
 DD11-D Peripheral Mounting Panel
 DD11-A Peripheral Mounting Panel

NOTE: A wire connection is not necessary for backplane pin numbers ending in DI. LTC L is already connected to the line frequency input of the DLI1-W.

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE DLI1-W Installation Procedure

K. Installation
 The DLI1-W module plugs into an SPC slot. A wire must be installed to pick up the DCLOL signal from the power supply and apply it to the DCLOL input of the DLI1-W.
 When installed, the DCLOL input to the DLI1-W is located on pin CNI. Connect a length of 30 AWG wire from pin CNI on the backplane to the pin on the backplane, as designated in Table 1-2 for each application.

PDP Computer	Processor	Pin Number
11/04*	WD11-D (4 slot)	C03NI, C04NI
11/04*	WD11-D (9 slot)	C03NI thru C09NI
11/05*	WD11-A w/8K Memory	C03NI, C02NI, C03NI, C04NI
11/05*	WD11-A w/16K Memory	C03NI
11/20	WD11	B1F2, B1F2, A13P2, A08N2, A03I2, B04D2, F06B2
11/34*	WD11-E	C03NI thru C09NI
11/35	WD11-A	B09F2
11/40	WD11-A	B09F2
11/45*	KB11-A	C26NI, C26NI, C28NI
11/55*	KB11-D	C26NI, C26NI, C28NI
11/70*	KB11-B	C40NI, C41NI, C42NI, C43NI, C44NI
11/70*	KB11-C	C40NI, C41NI, C42NI, C43NI, C44NI

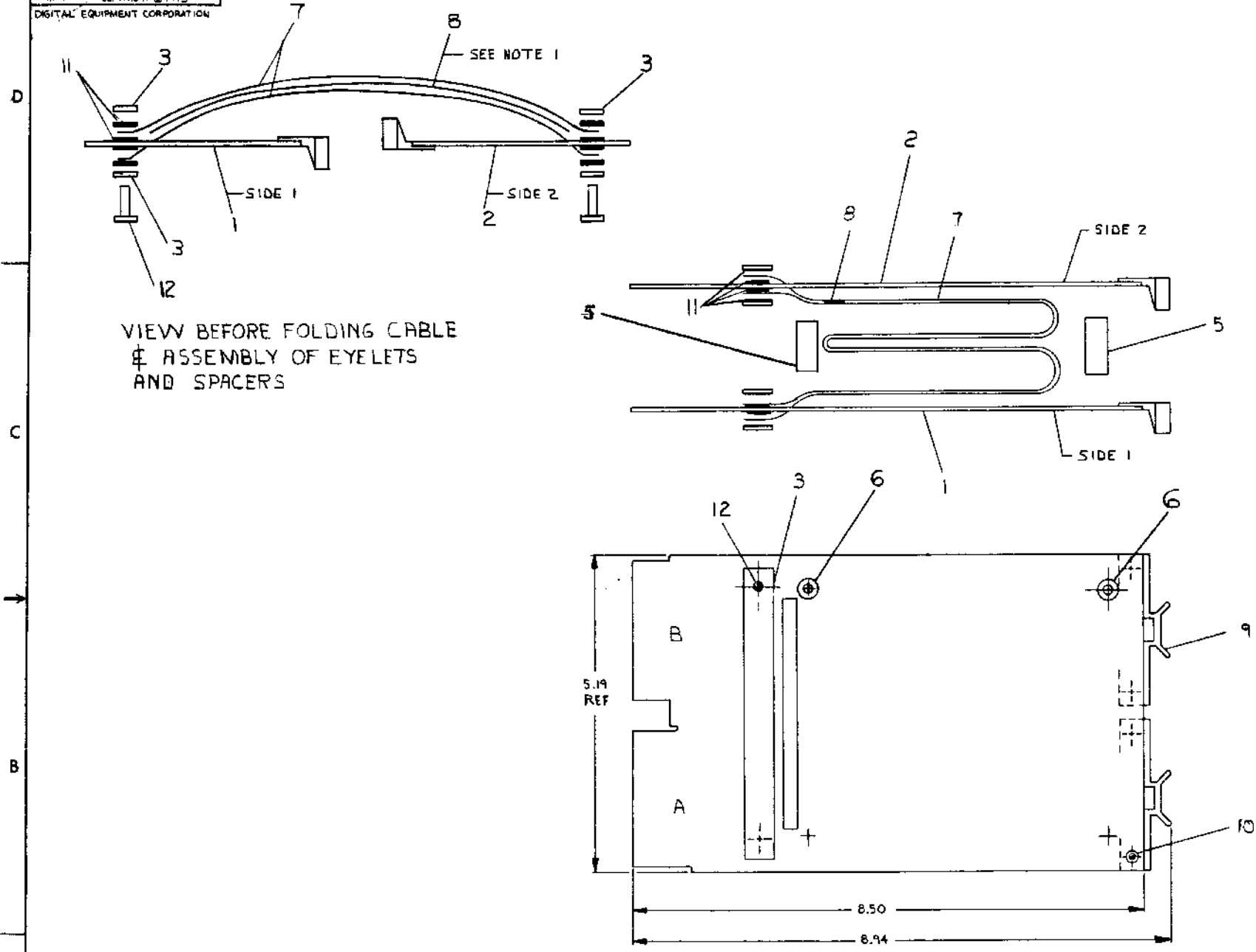
DD11-B Peripheral Mounting Panel
 DD11-D Peripheral Mounting Panel
 DD11-A Peripheral Mounting Panel

*NOTE: A wire connection is not necessary for backplane pin numbers ending in NI DCLOL. Is already connected to the input of the DLI1-W.

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DIGITAL EQUIPMENT CORPORATION

NOTES:

1. FORM (ITEM#8) TO BE PLACED BETWEEN CABLES (ITEM#7) AND ALL FOLDS.
2. FLEX PRINTS TO BE BOUND TOGETHER BY WRAPPING WITH BLACK ELECTRICAL TAPE (ITEM#11) EVERY 8 INCHES.



QTY	DESCRIPTION	PART NO.	ITEM NO.
4	EYELET	9006745	12
A/R	TAC, ADHESIVE TRANSFER	9009347-01	11
8	EYELET	9006732	10
4	HANDLE, FLIP-CHIP MAGENTA	9008337-06	9
A/R	FORM, GRAY	9008881	8
2	CABLE, FLEXPRINT (2'LG)	1700002-01	7
4	EYELET	9008223	6
4	SPACER	B*MD-7413488-0-0	5
A/R	BLACK ELECTRICAL TAPE	9009507	4
4	CLAMP, CABLE	B*MD-7413489-0-0	3
1	ETCHED CIRCUIT BOARD	D-CS-5411579-0-1	2
1	ETCHED CIRCUIT BOARD	D-CS-5411577-0-1	1

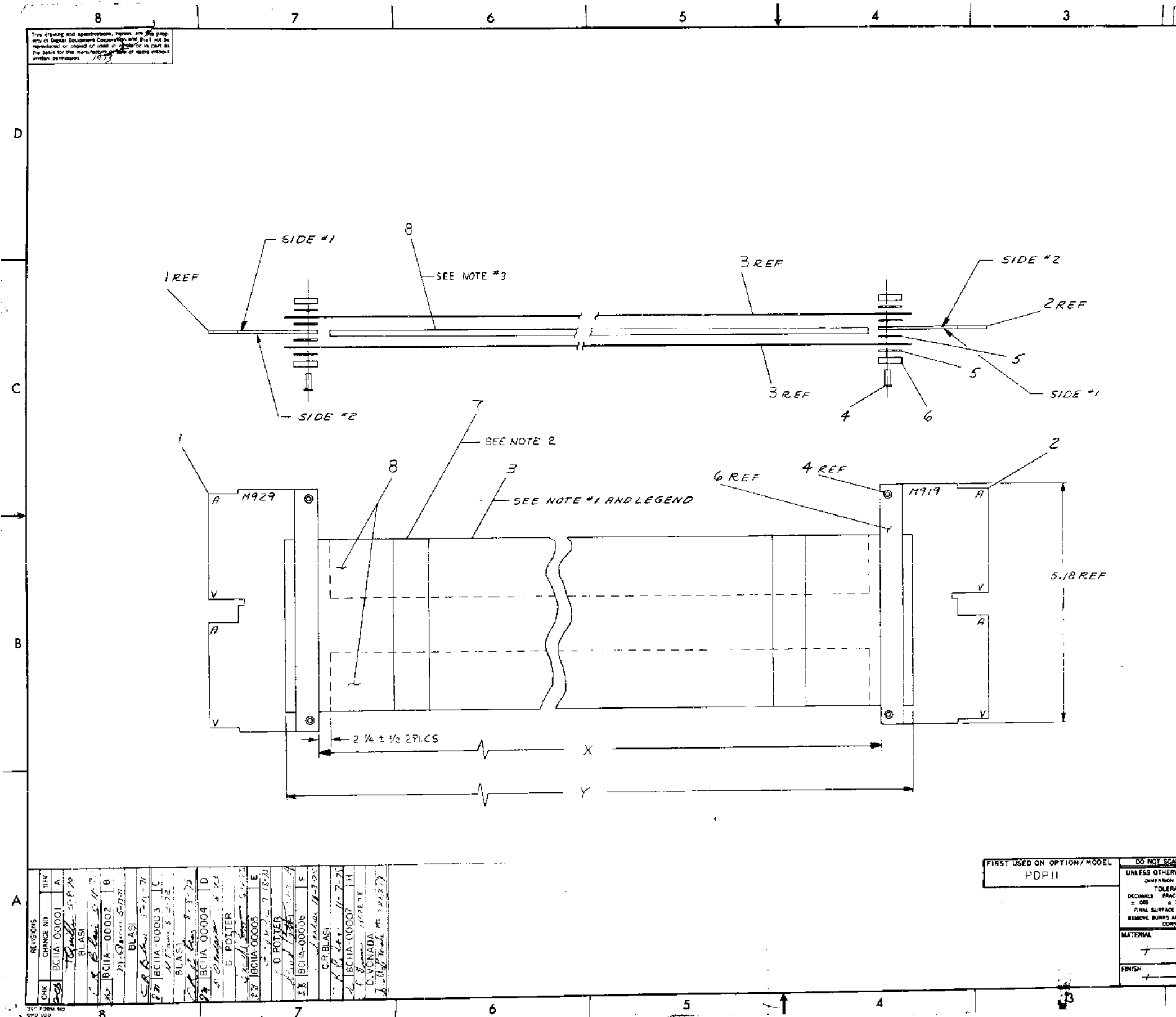
FIRST USED ON OPTION/MODEL	QTY	DESCRIPTION	PART NO.	ITEM NO.
PDP/11				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES		DRN	DATE	DIGITAL EQUIPMENT CORPORATION
		CHK'D	DATE	
DECIMALS	ANGLES	ENG	DATE	CABLE, UNIBUS (JUMPER)
XXX - 005	10' 30'	PROJ	DATE	
XX - 02		PROD	DATE	
X - 1				
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY		NEXT HIGHER ASSY.		
MATERIAL		SEE PARTS LIST	SIZE CODE	NUMER
FINISH		SCALE NONE	D/LA	M9202-0-0
		SHEET 1 OF 1		B

REV	CHG NO.	DATE	BY	APP
A	00001	15 April 77	K. SARGENT	
B	00002	18 April 77	K. SARGENT	
	00003	28 May 78	D. VONAUER	

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NOTES:

- VARIATIONS AND LENGTHS SHOWN IN LEGEND ARE STANDARD. OTHER THAN STANDARD VARIATIONS WILL BE SPECIFIED BY ALPHANUMERIC DESIGNATION. FOR LENGTHS OTHER THAN FOOT INCREMENTS FROM ONE (1) FOOT THRU NINE (9) FEET, ELEVEN (11) INCHES.
 A=1" G=7"
 B=2" H=8"
 C=3" J=9"
 D=4" K=10"
 E=5" L=11"
 F=6"
 EXAMPLE: BC11A-3D=3'4". LENGTHS WILL BE IN FOOT INCREMENTS FROM TEN (10) FEET ON, AND WILL BE SPECIFIED BY THE CORRESPONDING NUMERICAL DESIGNATION.
 EXAMPLE: BC11A-11=11 FEET. THE TOLERANCE ON DIMENSION "A" WILL BE 2% OF THE FOOT INCREMENT.
- FLEXPRINTS TO BE BOUND TOGETHER BY WRAPPING WITH ELECTRICAL TAPE (ITEM 7) EVERY 18 INCHES.
- INSTALL 2 PIECES OF FOAM TAPE (ITEM 8) BETWEEN FLEX PRINT CABLES AS SHOWN.



QTY.	DESCRIPTION	PART NO.	ITEM NO.
8	GRAY FOAM - 3" WIDE	9008281-01	8
7	ELECTRICAL TAPE	8005260	7
4	CLAMP CABLE	C-SC-12076A-2A	6
5	TAPE #4032 1/4 X 3/4 X 608	9007834-01	5
4	EYELET GS-4-11 (111301)	9006750	4
3	CABLE FLEXPRINT	700002-C	3
2	EXT. BUS CANN	A-PL-M919-0-0	2
1	BUS CANN	A-PL-M927-0-0	1

DATE	BY	DESCRIPTION
11/14/69	S. M. Smith	DESIGNED
11/19/69	K. Hines	CHG'D
11/16/69	A. G. G. G.	ENG.
11/16/69	A. G. G. G.	PROJ. ENG.
11/16/69	A. G. G. G.	DRW'G

PARTS LIST	
digital EQUIPMENT CORPORATION	WILMINGTON, MASSACHUSETTS
TITLE: CABLE ASSY (BC1A)	
SIZE CODE: DUA	NUMBER: BC1A-0-0
SCALE: 1/1	SHEET: 2 OF 2

REV.	CHANGE NO.	REV.
A	BC1A-00001	A
B	BC1A-00002	B
C	BC1A-00003	C
D	BC1A-00004	D
E	BC1A-00005	E
F	BC1A-00006	F
G	BC1A-00007	G
H	BC1A-00008	H

FIRST USED ON OPTION/MODEL
PDP11

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES DECIMALS FRACTIONS ANGLES
± .005 ± .004 ± .003
FINISH REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
FINISH

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LEGEND		
NUMBER	DIM X VARIATION	DIM Y (PRECUT) REF.
BC11A-02	2'0" ± 0.5"	2'1.5"
BC11A-03	3'0" ± 1.0"	3'1.5"
BC11A-04	4'0" ± 1.0"	4'1.5"
BC11A-05	5'0" ± 1.0"	5'1.5"
BC11A-06	6'0" ± 1.0"	6'1.5"
BC11A-07	7'0" ± 2.0"	7'1.5"
BC11A-08	8'0" ± 2.0"	8'1.5"
BC11A-09	9'0" ± 2.0"	9'1.5"
BC11A-10	10'0" ± 2.0"	10'1.5"
BC11A-11	11'0" ± 3.0"	11'1.5"
BC11A-12	12'0" ± 3.0"	12'1.5"
BC11A-13	13'0" ± 3.0"	13'1.5"
BC11A-14	14'0" ± 3.0"	14'1.5"
BC11A-15	15'0" ± 4.0"	15'1.5"
BC11A-16	16'0" ± 4.0"	16'1.5"
BC11A-17	17'0" ± 4.0"	17'1.5"
BC11A-18	18'0" ± 4.0"	18'1.5"
BC11A-19	19'0" ± 5.0"	19'1.5"
BC11A-20	20'0" ± 5.0"	20'1.5"
BC11A-21	21'0" ± 5.0"	21'1.5"
BC11A-22	22'0" ± 5.0"	22'1.5"
BC11A-23	23'0" ± 6.0"	23'1.5"
BC11A-24	24'0" ± 6.0"	24'1.5"
BC11A-25	25'0" ± 6.0"	25'1.5"
BC11A-0F	0'6" ± 0.5"	0'7.5"
BC11A-8F	8'6" ± 2.0"	8'7.5"

H 0-0 V108 DUA BC11A-0-0 2

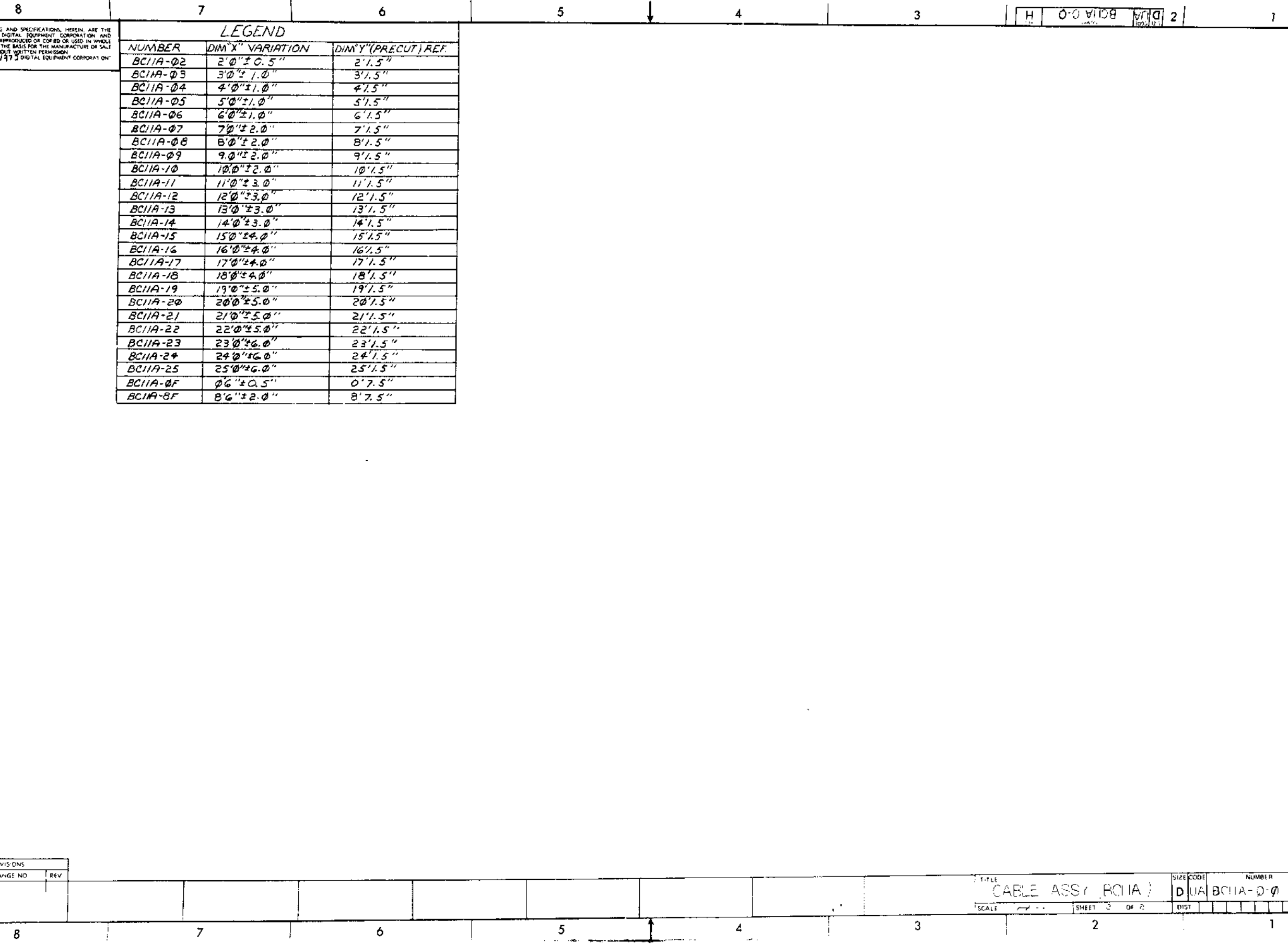
D
C
B
A

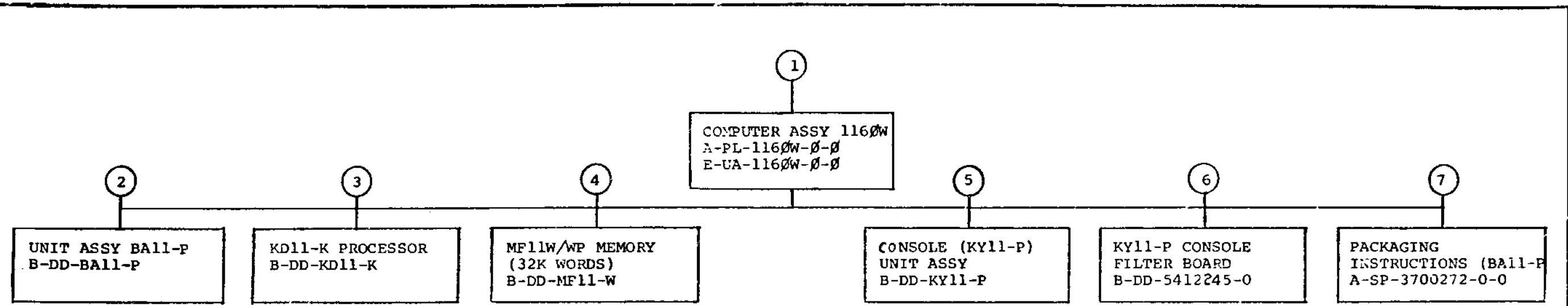
D
C
B
A

H
BC11A-0-0
DUA

REVISIONS		
CHK	CHANGE NO	REV

TITLE	SIZE CODE	NUMBER	REV
CABLE ASSY (BC11A)	D U A	BC11A-0-0	H
SCALE	SHEET 2 OF 2	DIST	





TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
COMPUTER ASSY 1160W	2	3	D	DD	1160W-0	B

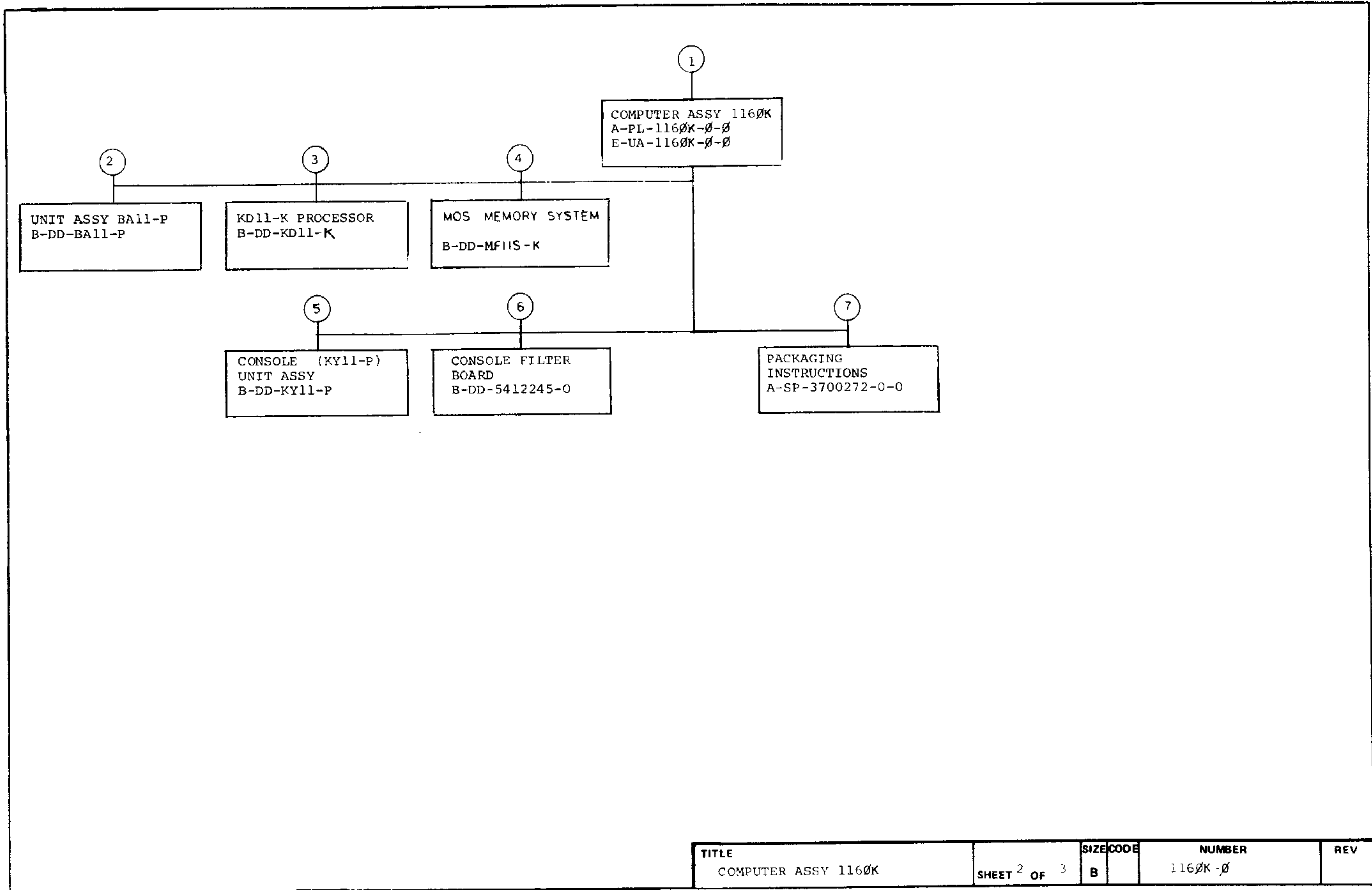
FIND NO.	DRAWING NO.	DESCRIPTION	TYPE	FIND NO.	DRAWING NO.	DESCRIPTION	TYPE
1	E-UA-1160W-0-0	COMPUTER ASSY 1160W	E/M				
	A-PL-1160W-0-0	COMPUTER ASSY 1160W (PL)	E/M				
	D-UA-BC06R-0-0	BC06R I/O CABLE	E/M				
	D-UA-BC11A-0-0	CABLE ASSY (BC11-A)	E/M				
	A-SP-BALL-P-2	BALL-P VOLTAGE CONVERSION PROCEDURE	E/M				
	A-SP-11/60-0-2	COMPUTER SPECIFICATION (PDP11/60)	E/M				
	D-MU-MM11-W-MU	MODULE UTILIZATION	E/M				
	D-MU-KD11-K-MU	MODULE UTULIZATION	E/M				
2	B-DD-BALL-P	UNIT ASSY BALL-P	E/M				
3	B-DD-KD11-K	KD11-K PROCESSOR	E/M				
4	B-DD-MF11-W	MF11W/WP MEMORY (32K OWRDS)	E/M				
5	B-DD-KY11-P	CONSOLE (KY11-P) UNIT ASSY	E/M				
6	B-DD-5412245-0	KY11-P CONSOLE FILTER BOARD	E/M				
7	A-SP-3700272-0-0	PACKAGING INSTRUCTIONS (BALL-P)	M				

EN-010623-C-16-R

digital

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

TITLE	COMPUTER ASSY 1160W	SHEET 3 OF 3	SIZE	B	CODE	DD	NUMBER	1160W-0	REV
-------	---------------------	--------------	------	---	------	----	--------	---------	-----



TITLE	SHEET	OF	SIZE	CODE	NUMBER	REV
COMPUTER ASSY 1160K	2	3	B		1160K-0	

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST				QUANTITY VARIATION										
MADE BY B. BLODGETT		CHECKED D. HEALY		SECTION										
DATE 7 JUN 76		DATE 30 JUN 76		1										
ENG DATE <i>J. Buzynick 10 May 77</i>		PROD <i>R. P. Peters</i>		ISSUED SECT.										
DATE 22 May 77				1										
ITEM NO.	DWG NO./PART NO.	DESCRIPTION	1160K-AA	1160K-AB										
1	E-UA-Ball-PK-Ø	UNIT ASSY BALL-P (12ØV)	1	-										
2	E-UA-Ball-PL-Ø	UNIT ASSY BALL-P (24ØV)	-	1										
3	A-PL-KD11-K-Ø	KD11-K PROCESSOR	1	1										
4	A-PL-MF11S-KF	MOS MEMORY SYSTEM	1	1										
5	D-UA-BC11A-Ø2-Ø	CABLE ASSY (BC11A)	1	1										
6	D-UA-KY11-P-Ø	CONSOLE (KY11-P) UNIT ASSY	1	1										
7	D-UA-5412245-Ø-Ø	KY11-P CONSOLE FILTER BOARD	1	1										
8	D-UA-BCØ6R-Ø6-Ø	BCØ6R, I/O CABLE	1	1										
9	A-SP-Ball-P-2	BALL-P VOLTAGE CONVERSION PROCEDURE	REF	REF										
10	A-SP-11/6Ø-Ø-2	COMPUTER SPECIFICATION (PDP11/6Ø)	REF	REF										
11	D-MU-MF11S-K-2	MODULE UTILIZATION	REF	REF										
12	D-MU-KD11-K-MU	MODULE UTILIZATION	REF	REF										
13	A-SP-37ØØ272-Ø-Ø	PACKAGING INSTRUCTIONS (BALL-P)	1	1										
14	A-PS-361321Ø-ØØ	LABEL ADHESIVE BACKED ELEC. DATA	1	1										
TITLE			ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.						
COMPUTER ASSY 116ØK			D-UA-116ØK-Ø-Ø	A	PL	116ØK-Ø-Ø	A	116ØK-TWOØ1						
SHEET 1 OF 1			DIST											

