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E-UA-RLL1-AK-Ø
A-PL-RLL1-AK
A-PL-ZJ256-RB

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RL11-AK SHIPPING LIST
SOFTWARE LIST RL11-AK

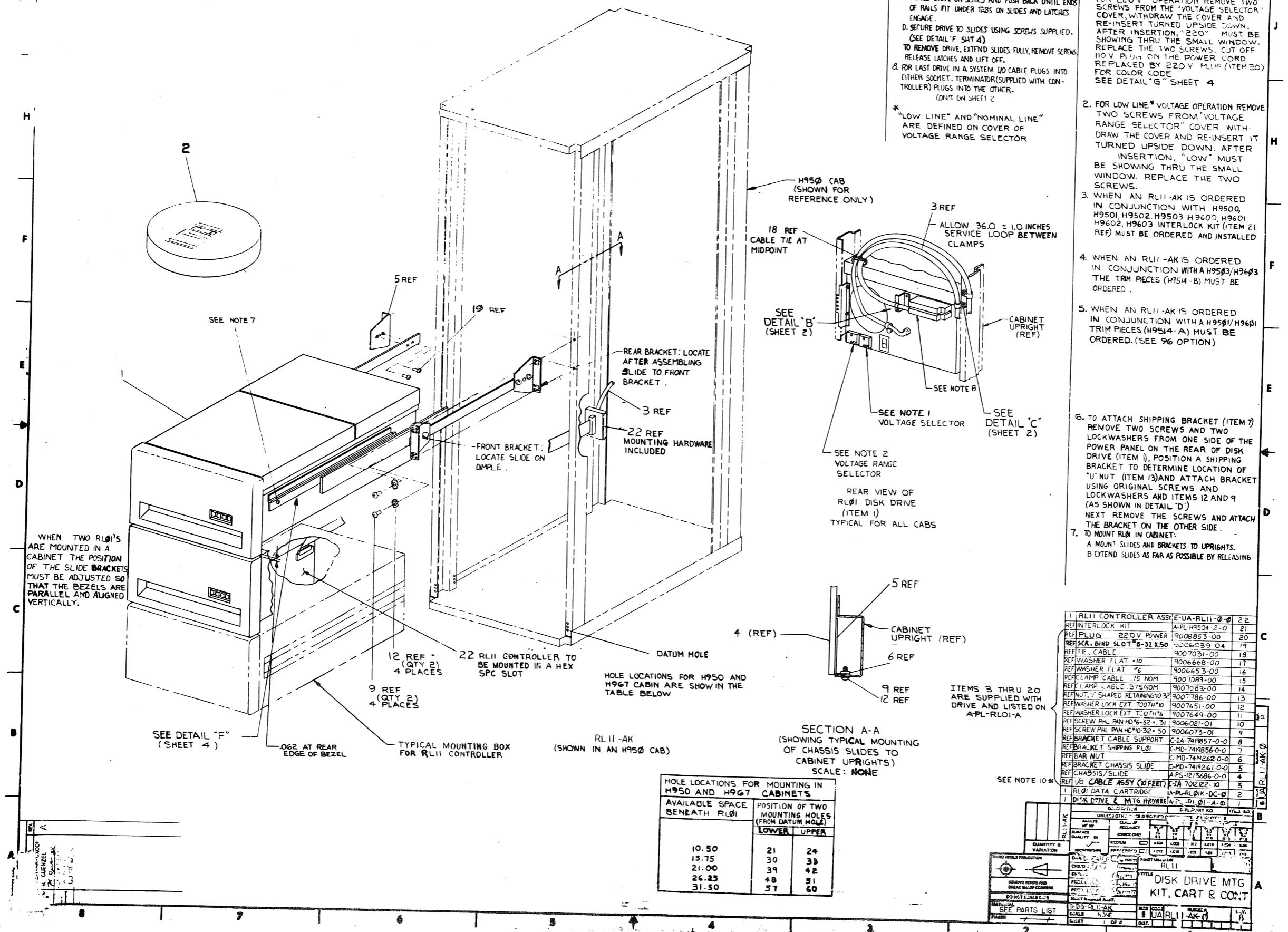
UNIT VARIATIONS
COVERED BY THIS
PRINT SET

RL11-AK
**Field Maintenance
Print Set**

**Digital Equipment
Corporation**

PRINT SET ORDER NO.
MP00526

REVISIONS	REV.	CHG. NO.	RL11-AK- CZ ØØ2 W. MAJOR R. Nichols	USED ON OPTION/MODEL	DRN.	DATE	TITLE: DISK DRIVE, MTG. KIT, CART. AND CONT.			REV.
							SIZE B	CODE TC	NUMBER RL11-AK-1	
				RL11-AK	B.K. NICHOLS	13 OCT 77				
					CHK'D	DATE 16 NOV 77				
					PROJ. ENG.	DATE 16 NOV 77				
					FIELD SERV.	DATE 16 NOV 77				
				SHEET 1 OF 1	P. Nichols	16 NOV 77	DIST.			



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HOLE LOCATIONS (FROM BOTTOM OF CAB) FOR CHASSIS SLIDE MOUNTING BRACKETS (5 REF) MUST BE USED FOR LOBOY CABINETS. OPTION FOR HIBOYS.

HOLE 62

HOLE 59

SECTION A-A SHOWN ON SHEET 1

5 REF
OPTIONAL LOCATION FOR HIBOYS ONLY
HOLE 53
HOLE 50

1 REF (QTY 2)
4 PLACES

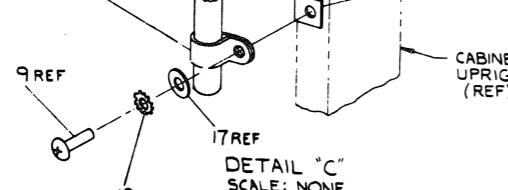
DATUM HOLE 1

21 REF
SEE INSTRUCTIONS ON EAD7013G88-0-0
ON HOW TO INSTALL INTERLOCK KIT (ITEM 2)

SEE DETAIL "F"
(SHEET 4)

12 REF
(QTY 2)
4 PLACES

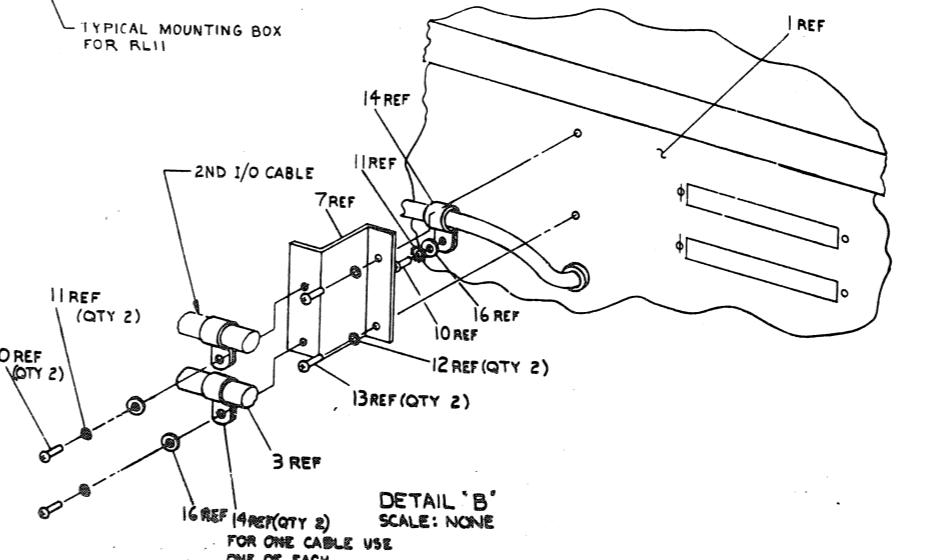
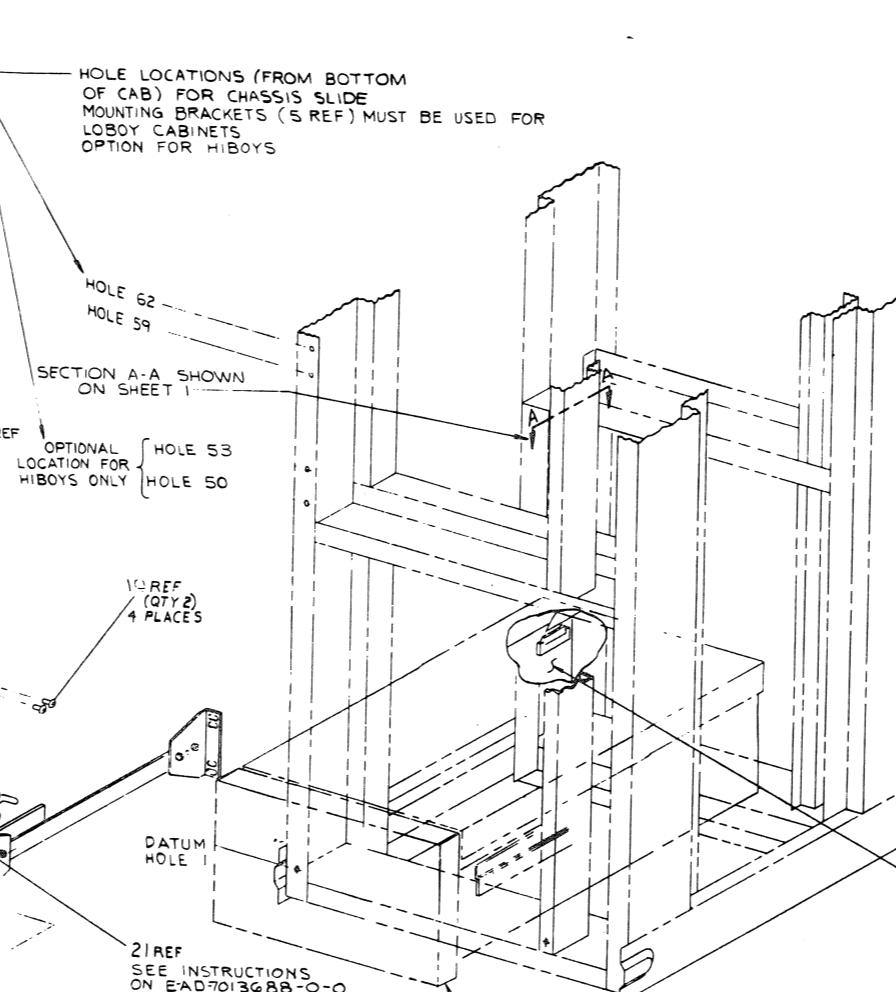
9 REF
(QTY 2)
4 PLACES



DETAIL "C"
SCALE: NONE
ONE CLAMP FOR I/O CABLE ITEM 3 REF
ONE CLAMP FOR POWER CORD

RLII-AK
(SHOWN IN A SINGLE WIDTH CAB)

FOR 220 V VARIATION SEE NOTE 1,
REAR VIEW OF DRIVE ON SHEET 1
AND ITEM 20 IN CALL OUT.
FOR LOW LINE VOLTAGE VARIATION SEE NOTE 2.

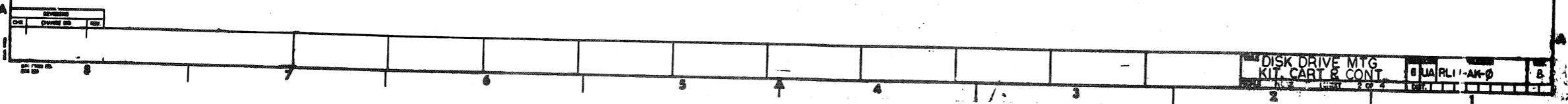


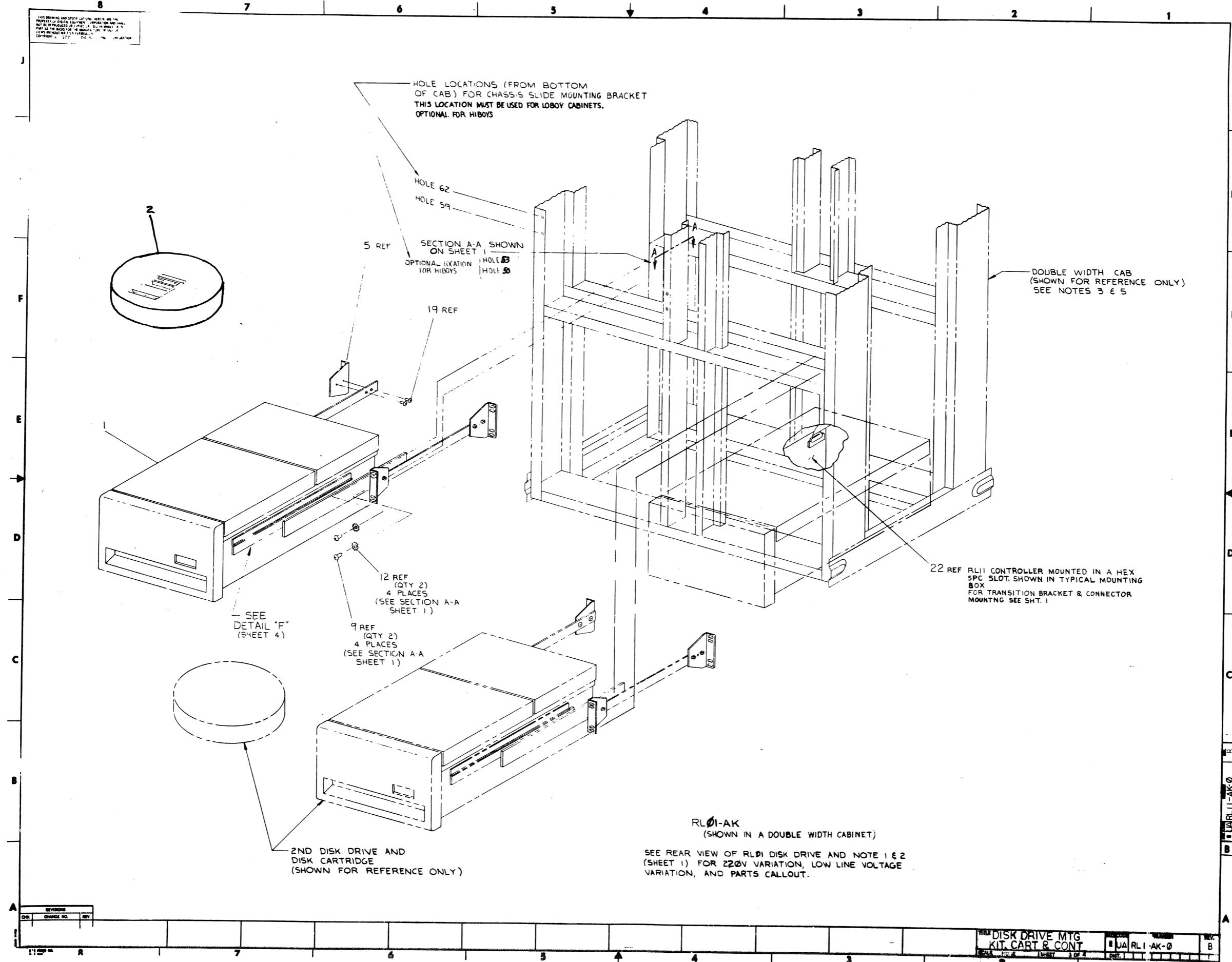
DETAIL 'B'
SCALE: NONE
FOR ONE CABLE USE
ONE OF EACH

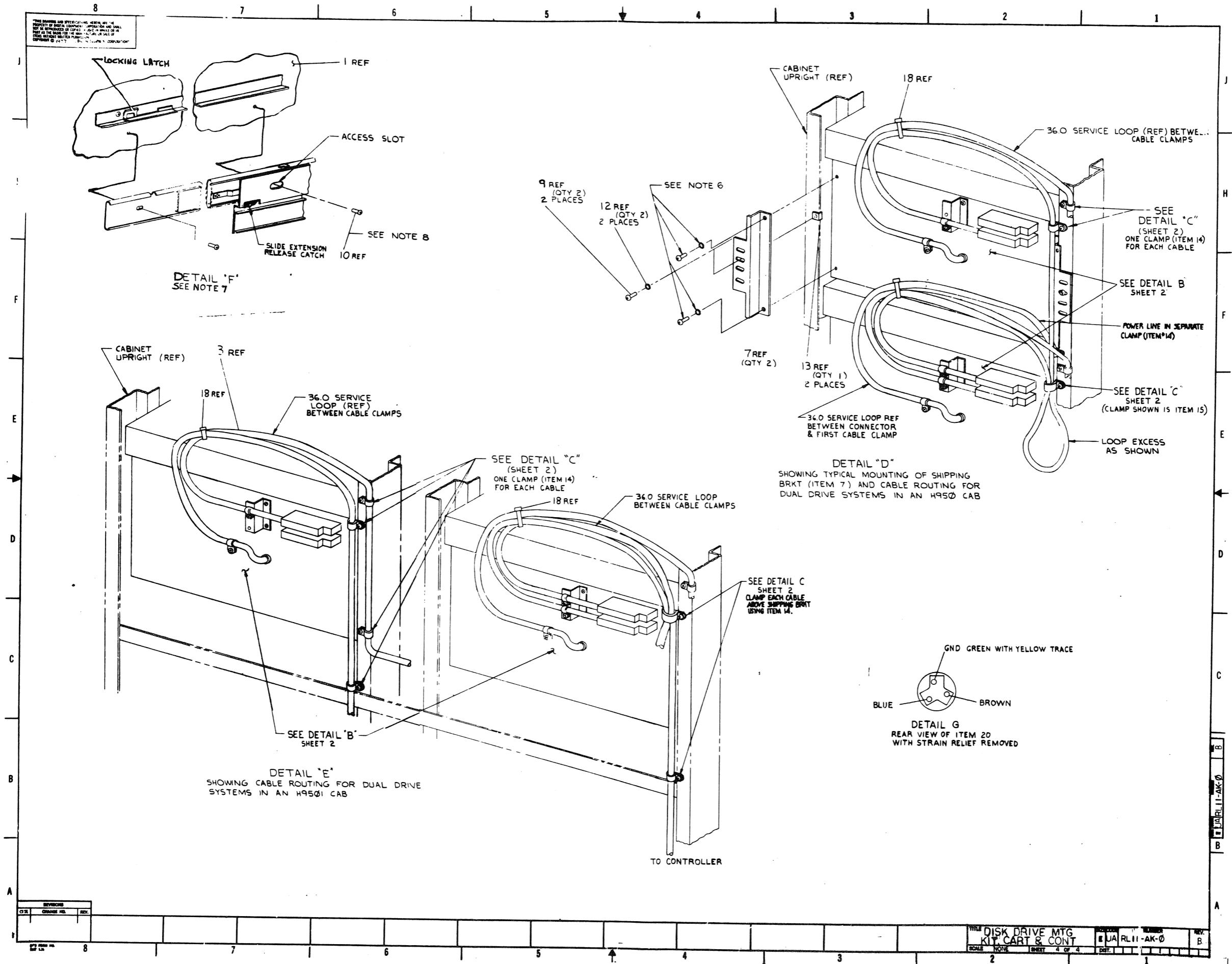
NOTES: CONT
9. CABINET OPTIONS INCLUDE SKINS, DOORS, COVERS, TRIM, AND POWER CONTROLLERS.

TYPE	VOLTS	DWG	REMARKS
H950	110	H960 BC	INCLUDES FIVE 10.5 IN HIGH PANELS
	220	H960 BD	
H967	110	H967 BA	10.5 IN COVER PANELS (H950-Q) MUST BE ORDERED IF REQUIRED.
	220	H967 BB	
H9500	110	H963 ED	SUBL WITH H9514-B TOP COVERS
	220	H963 EE	
	110	H9601 ED	SUBL WITH H9514-A TOP COVERS
	220	H9601 EE	
	110	H9602 EA	WHB COMPLETE HIBOY CABINET
	220	H9600 EA	
	110	H9600 EB	DNWB COMPLETE HIBOY CABINET
	220	H9602-B-C	SWHB OPT ARRANGEMENT DWG AS REQUIRED
		H9600-A-D	DNWB OPT ARRANGEMENT DWG ORDER AS REQUIRED
		H9603-B-D	SUBL OPT ARRANGEMENT DWG ORDER AS REQUIRED
		H9601-A-D	DNWB OPT ARRANGEMENT DWG ORDER AS REQUIRED

10. WHERE A LONGER CABLE IS REQUIRED THAN ITEM #3 USE ONE OF THE FOLLOWING:
LENGTH PART NO.
20 FEET 7012122-20
40 FEET 7012122-40
60 FEET 7012122-60
TOTAL LENGTH OF CABLE IS NOT TO EXCEED 100 FEET







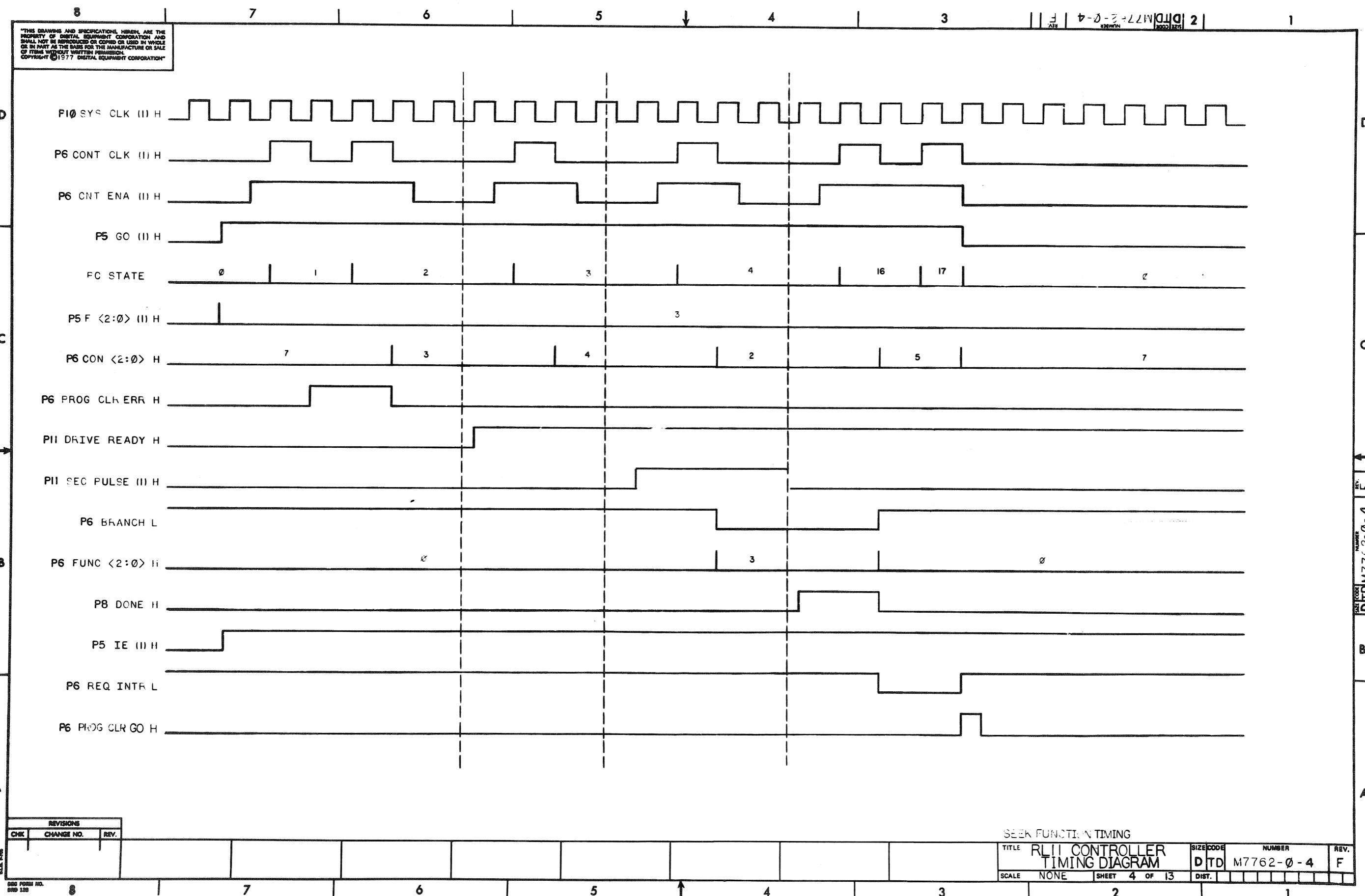
**DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST**

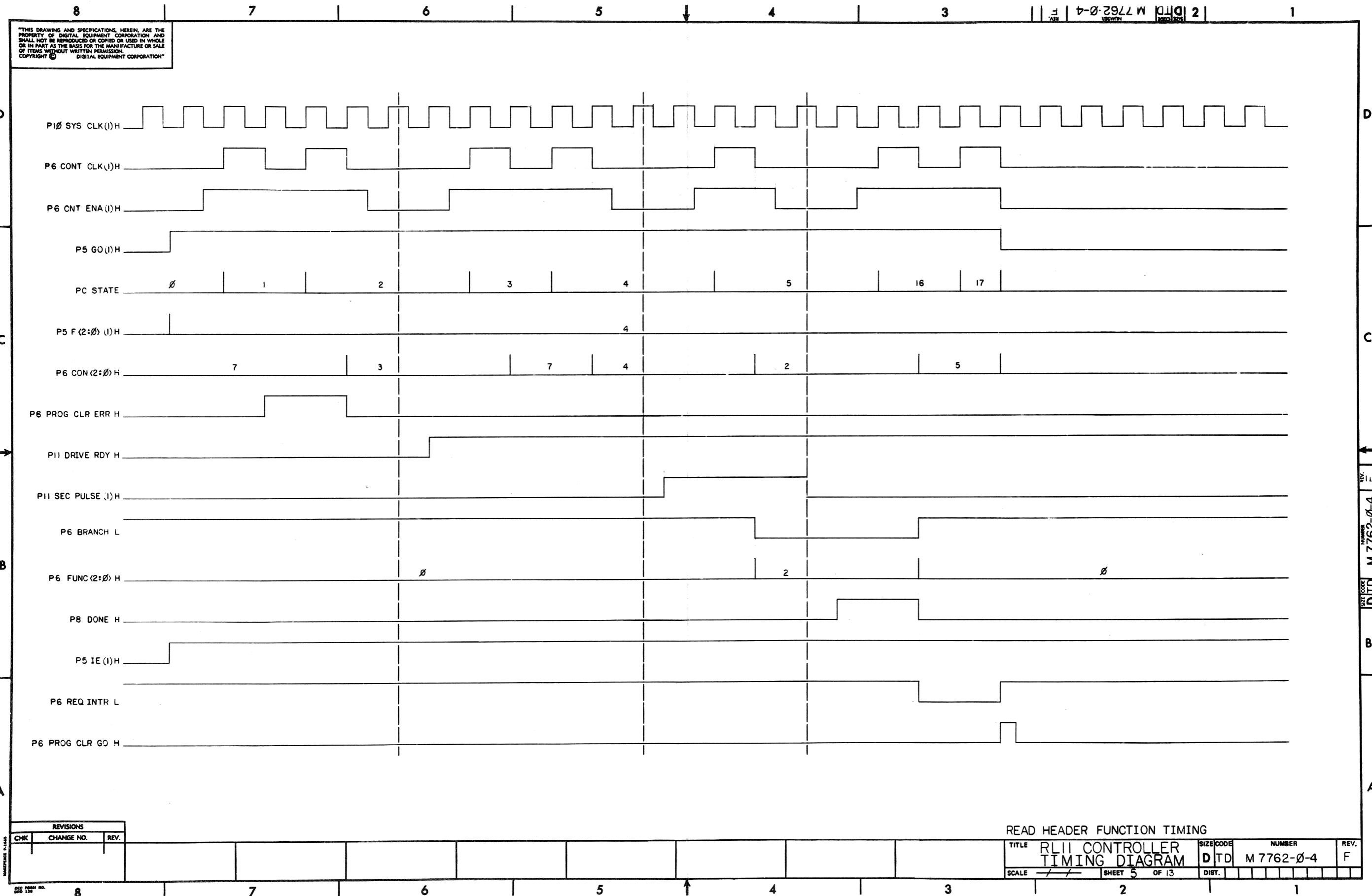
MADE BY	B. K. NICHOLS
DATE	13 OCT 77
ENG	D. ELLIS
DATE	16 NOV 77

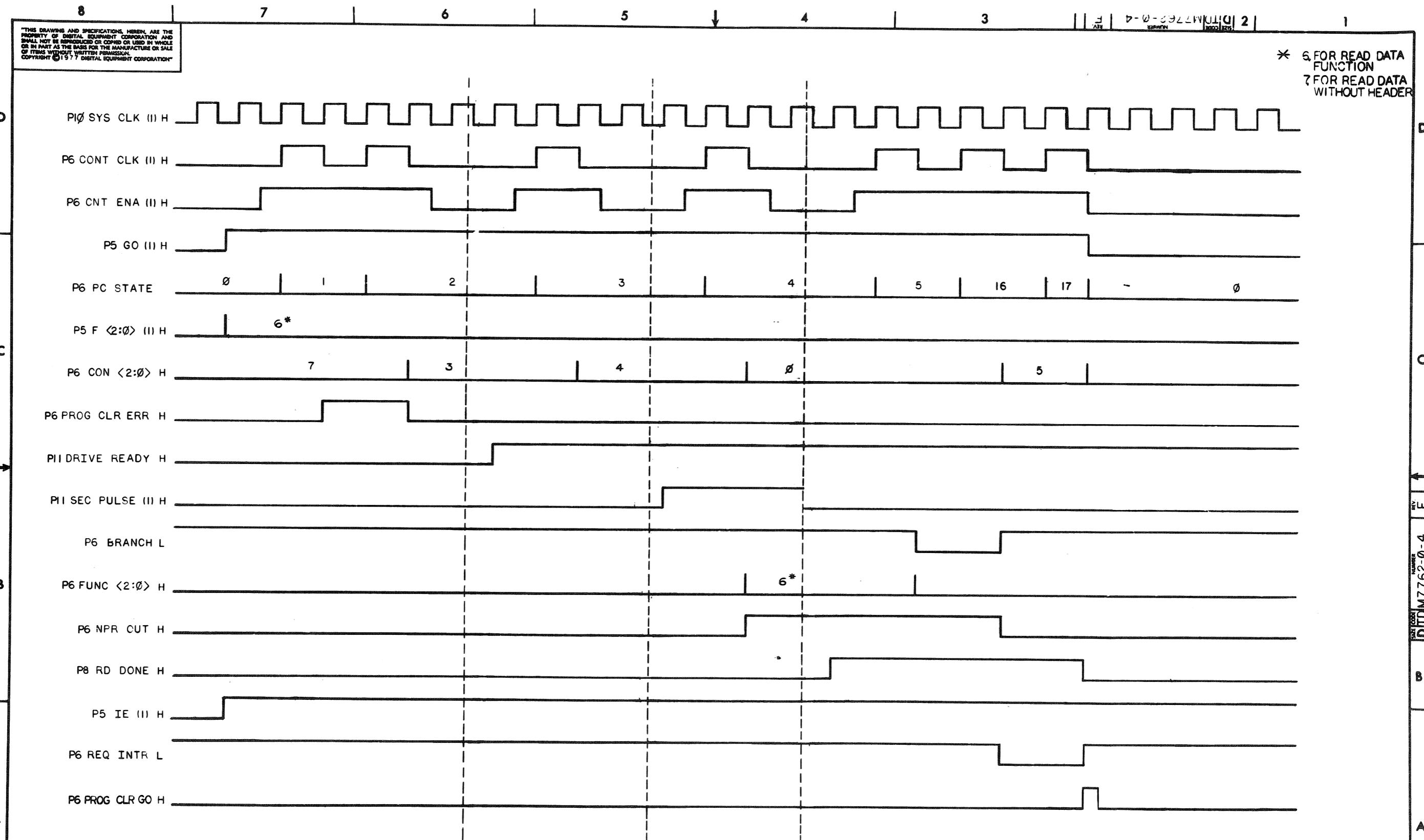
CHECKED	R.E. THELLEN	SECTION
DATE	16 NOV 77	
PROD	H.T. ZIBALO	ISSUED SEC
DATE	17 NOV 77	

TITLE	RL11-AK SHIPPING LIST	ASSY NO.	SIZE A	CODE PL	NUMBER RL11-AK	REV B	ECO NO. RL11-AK- CZ002
		B-DD-RL11-AK					
SHEET 1 OF 1		DIST					
DEC FORM							

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST				QUANTITY VARIATION									
MADE BY	B. K. NICHOLS	CHECKED	R.E. Miller	SECTION									
DATE	13 OCT 77	DATE	16 NOV 77	1									
ENG	D. Elts	PROD	A.T. Gibilo	ISSUED SECT.									
DATE	16 Nov 77	DATE	17 NOV 77	1									
ITEM NO.	DWG NO./PART NO.	DESCRIPTION											
1	MAINDEC-11-DZRLA-D	RL11/RLV11 RLØ1 CONT. TEST (PT.1) DOCUMENT											
2	MAINDEC-11-DZRLA-PB	RL11/RLV11 RLØ1 CONT. TEST (PT.1) BIN. TAPE											
3	MAINDEC-11-DZRLB-D	RL11/RLV11 RLØ1 CONT. TEST (PT.2) DOCUMENT											
4	MAINDEC-11-DZRLB-PB	RL11/RLV11 RLØ1 CONT. TEST (PT.2) BIN. TAPE											
5	MAINDEC-11-DZRLC-D	RLØ1 DRIVE TEST (PT.1) DOCUMENT											
6	MAINDEC-11-DZRLC-PB	RLØ1 DRIVE TEST (PT.1) BINARY TAPE											
7	MAINDEC-11-DZRLD-D	RLØ1 DRIVE TEST (PT.2) DOCUMENT											
8	MAINDEC-11-DZRLD-PB	RLØ1 DRIVE TEST (PT.2) BINARY TAPE											
9	MAINDEC-11-DZRLE-D	RLØ1 PERFORMANCE EXERCISER DOCUMENT											
10	MAINDEC-11-DZRLE-PB	RLØ1 PERFORMANCE EXERCISER BINARY TAPE											
11	MAINDEC-11-DZRLF-D	RLØ1 DRIVE COMPATABILITY PROG. DOCUMENT											
12	MAINDEC-11-DZRLF-PB	RLØ1 DRIVE COMPATABILITY PROG. BINARY TAPE											
TITLE	ASSY NO.	SIZE	CODE	NUMBER		REV	ECO NO.						
SOFTWARE LIST RL11-AK	A-PL-RL11-AK-2	A	PL	ZJ256-RB									
	SHEET 1 OF 1	DIST											







REVISIONS		
CHK	CHANGE NO.	REV.

DEC FORM NO. DRD 128

8

7

6

5

4

3

2

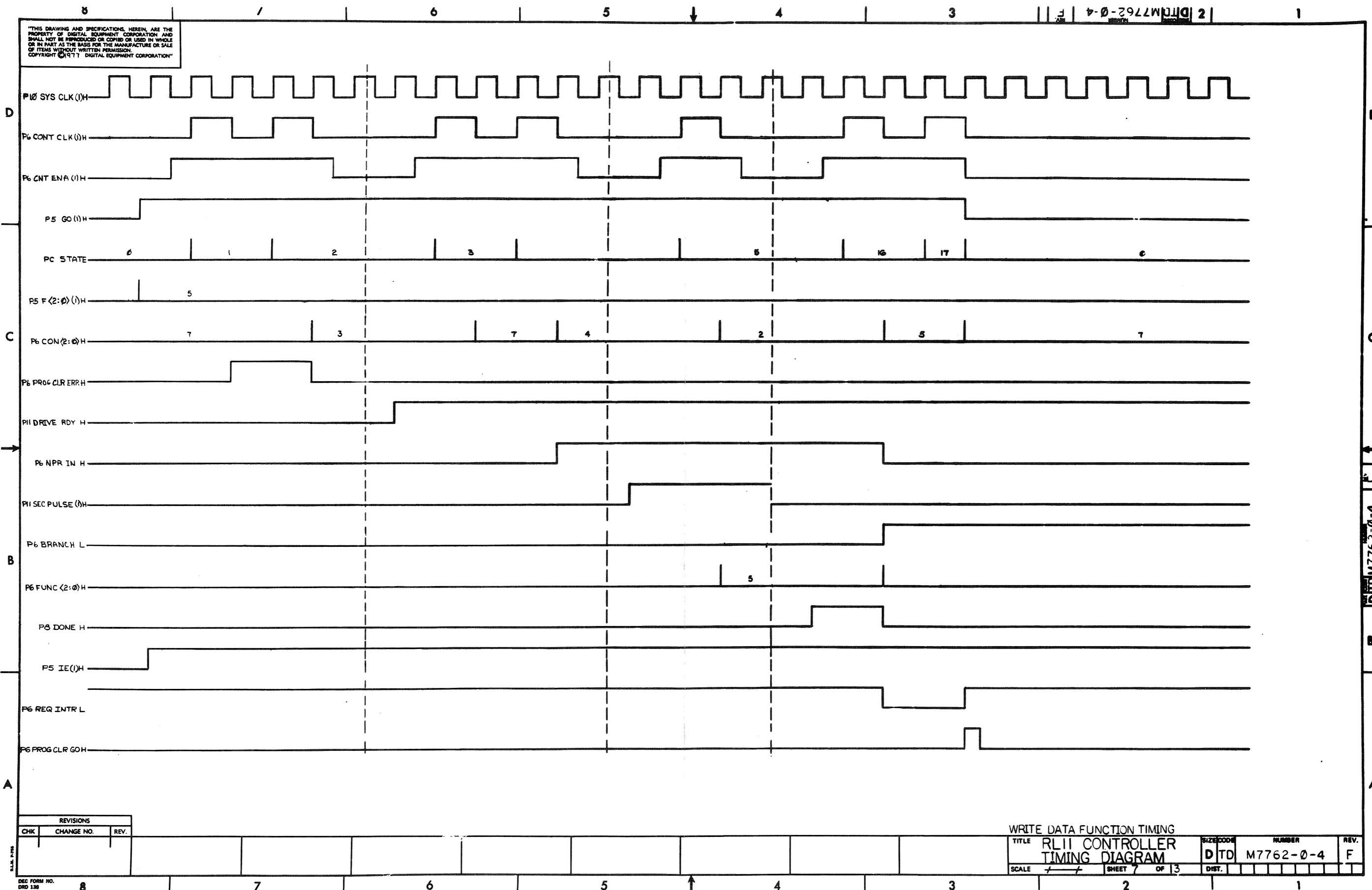
1

READ DATA FUNCTION TIMING
TITLE RL11 CONTROLLER
TIMING DIAGRAM

SCALE NONE SHEET 6 OF 13

SIZE CODE D TD NUMBER M7762-0-4 REV. F

DIST.



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GET STATUS

D

P2 WRT DAR L

P8 DAR <15:00> | MARKER & GET STATUS(& DRIVE RESET)

P5 GO (II) H

PI0 SYS CLK (II) H

P6 SEND STATUS H

P7 SEND DR CMD H

P7 ENA SCLK (II) H

P7 BC CLK H | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P8 MUX OUT | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P8 DRV CMD (II) H | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P6 RD STATUS H

PI STATUS IN H

PI STATUS CLK H | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P4 IRF 4 L

P7 STIN SILE (II) H

SEEK

PI0 SYS CLK (II) H

P2 WRT DAR L

P8 DAR <15:00> | MARKER & HEAD SELECT & CYLINDER DIFFERENCE

P5 GO (II) H

PII SEC PULSE(II) H

P6 FUNC <2:0> | 3

P7 WCNT | 0

5|6

7

B

P7 ENA BC CLK H

P7 ENA SCLK (II) H | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P7 BC CLK H

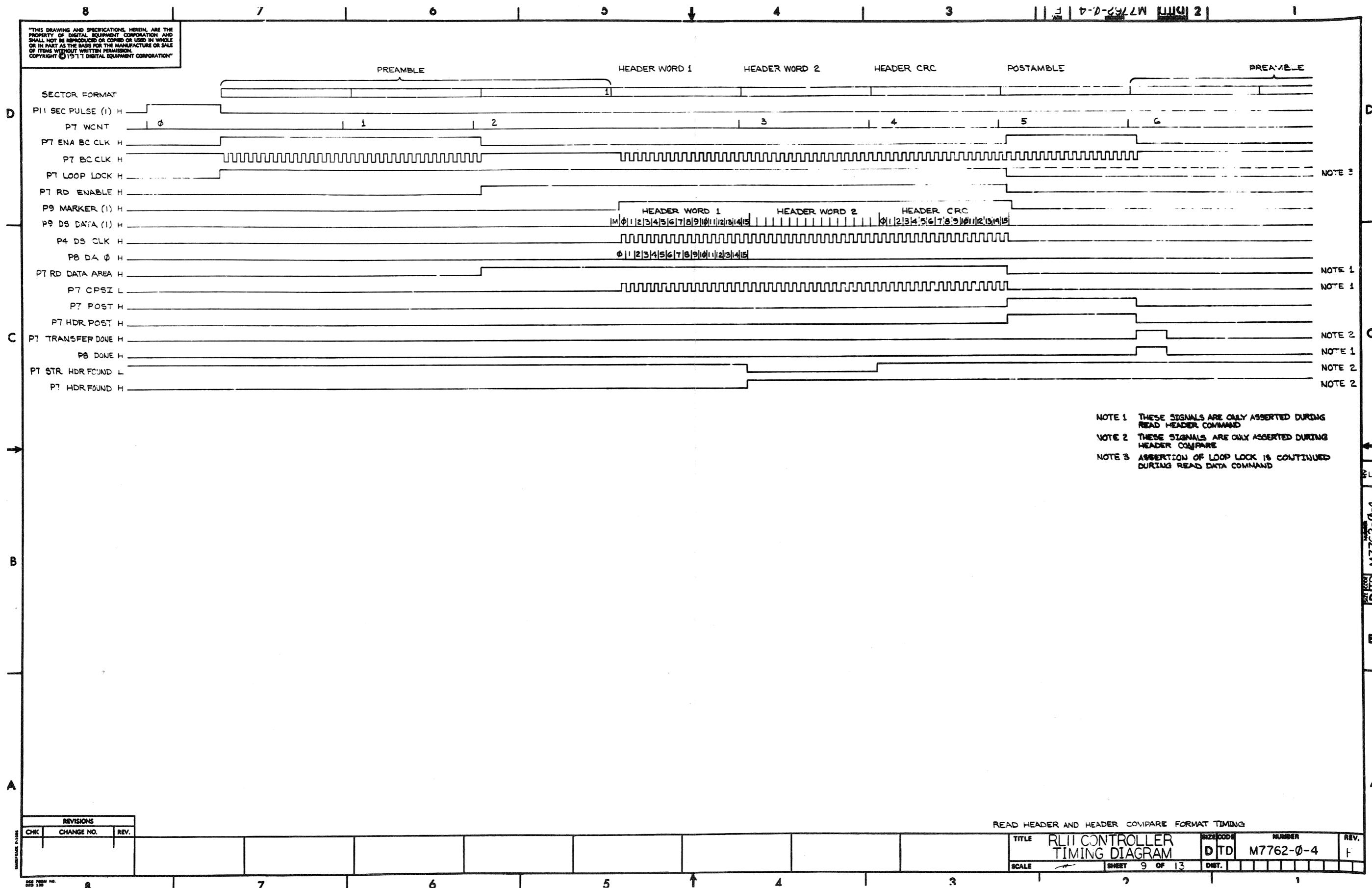
P7 WC CLK H

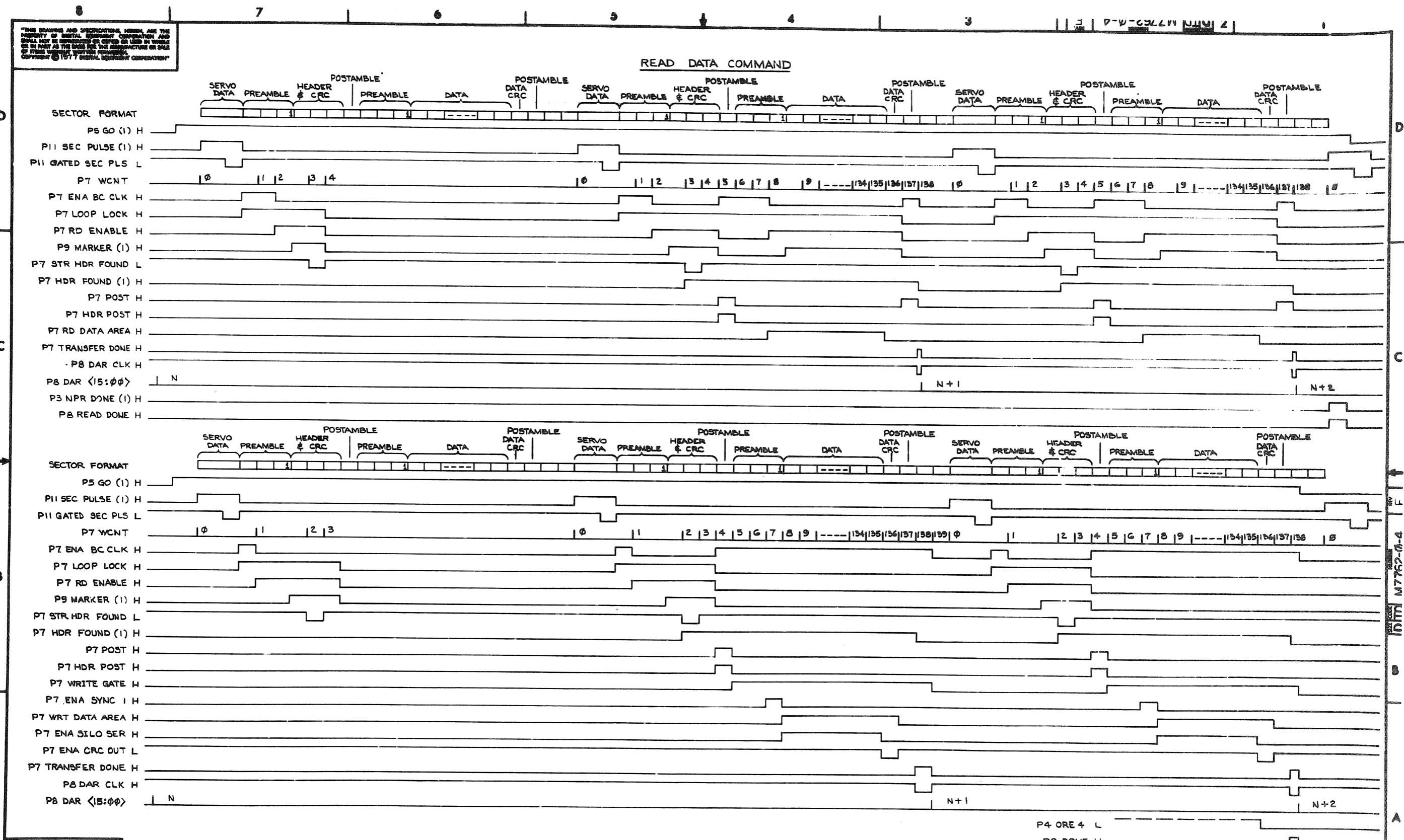
P7 ENA DIFF CLK H

P7 SEND DR CMD H

P8 MUX OUT | 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

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1

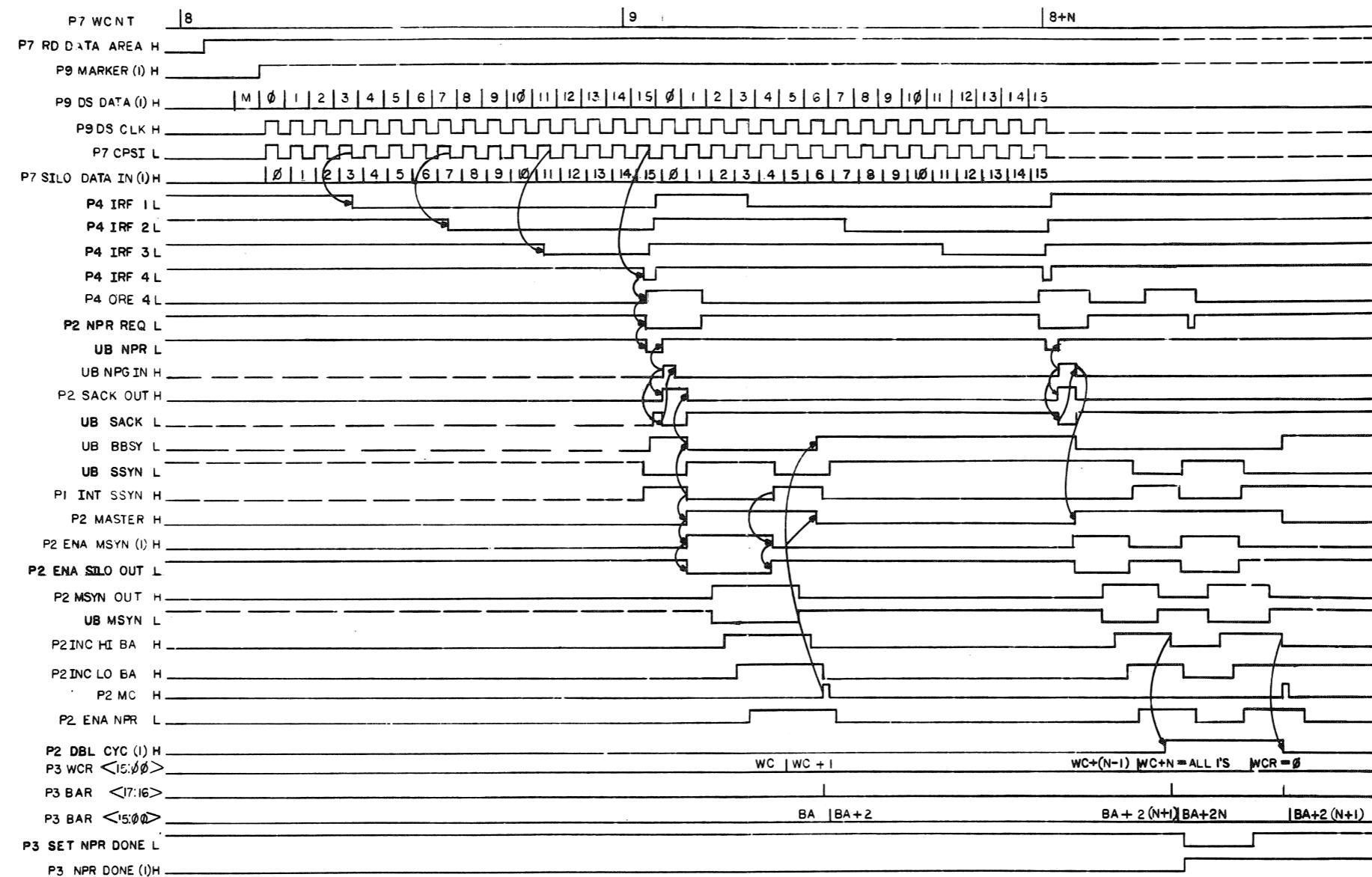
D

C

B

A

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READ DATA NPR & SILO TIMING

TITLE RLII CONTROLLER
TIMING DIAGRAM

SCALE	1/1	SHEET	11	OF 13	DIST.	
REV.	F	NUMBER	M 7762-Ø-4	SIZE CODE	D TD	

REVISIONS	
CHK	CHANGE NO.

8

7

6

5

4

3

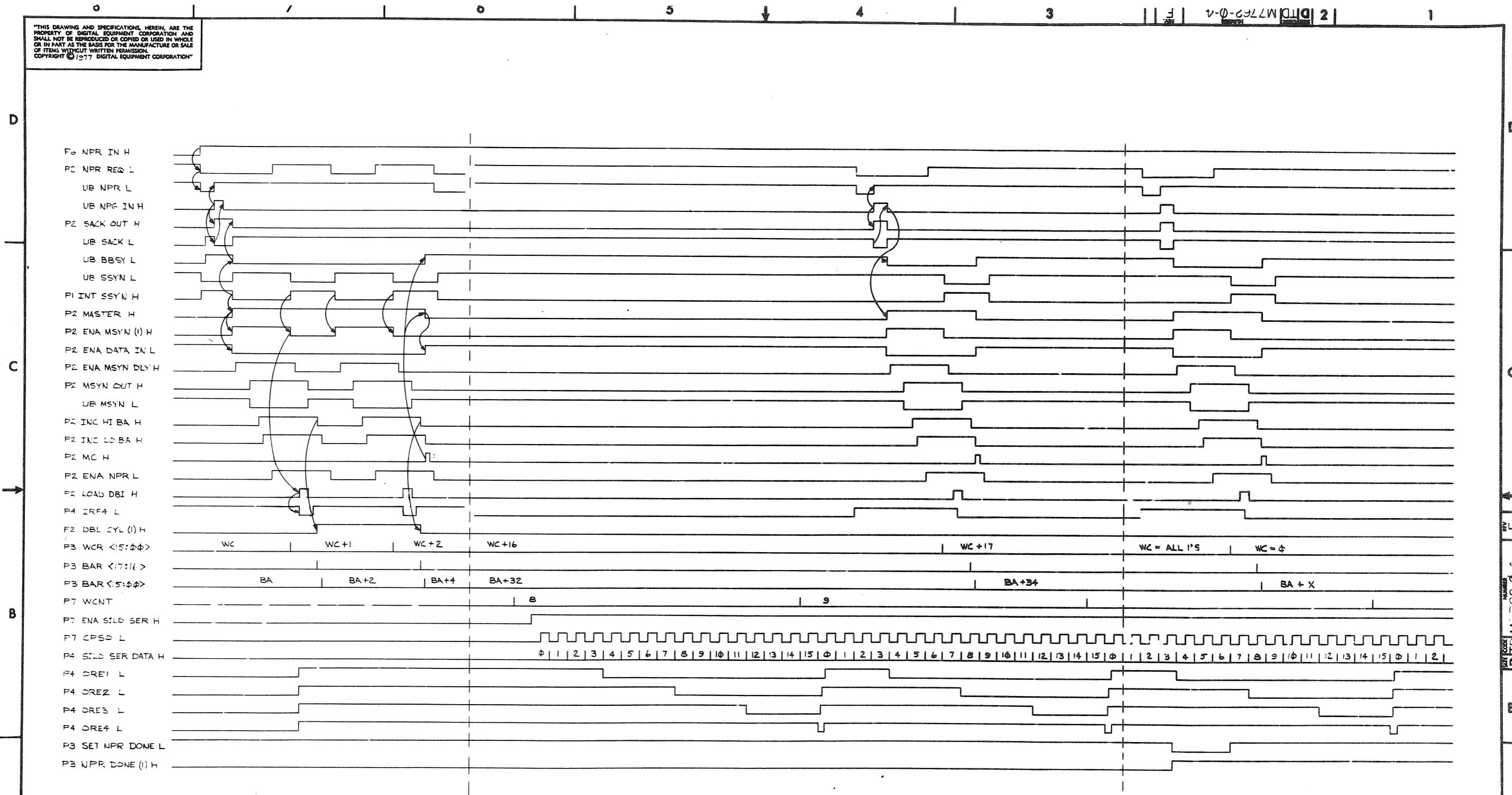
2

1

A

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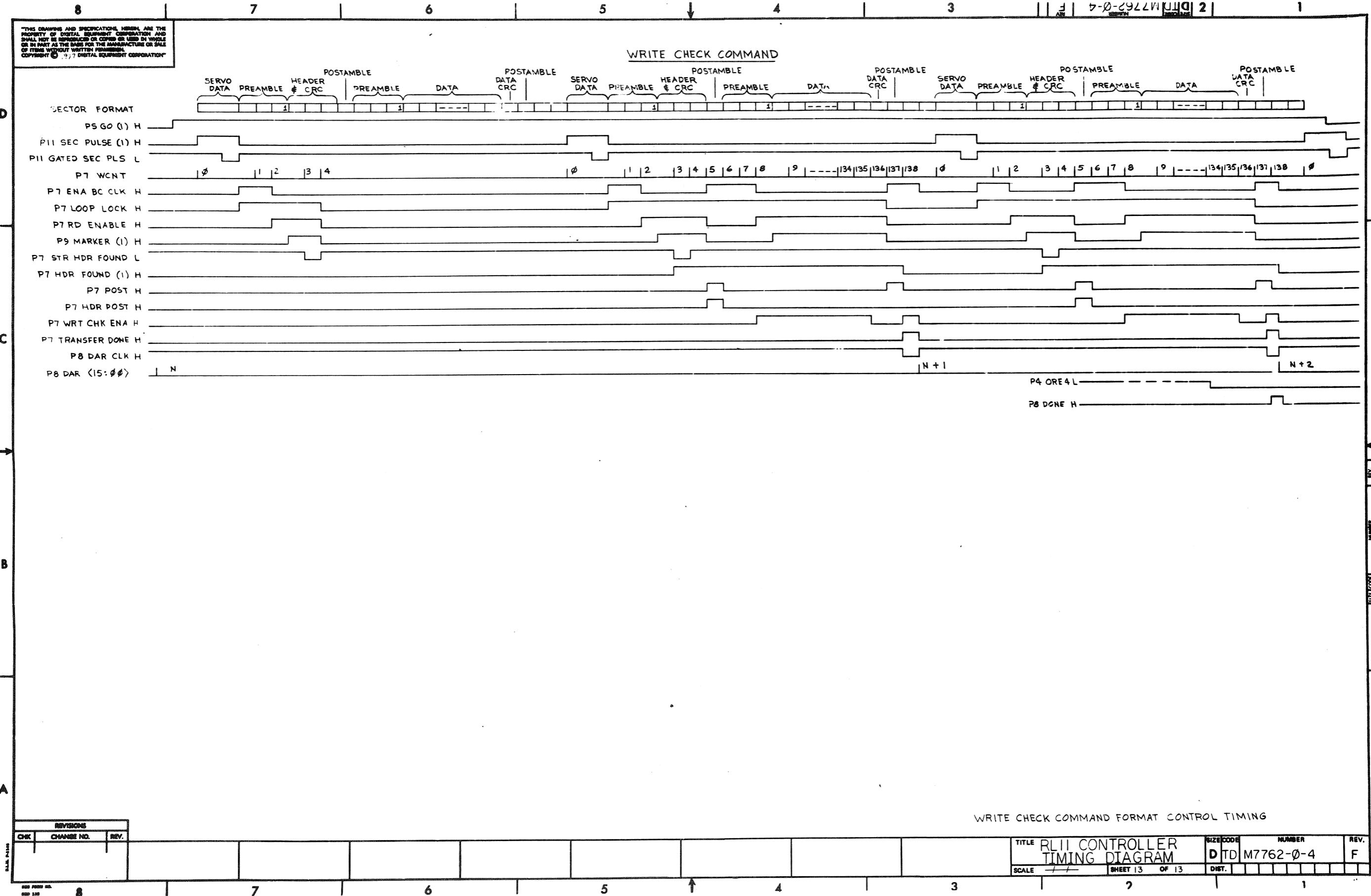
2 DTD M7762-0-4



REVISIONS

WRITE DATA NPR & SILO TIMING

TITLE	RLII CONTROLLER TIMING DIAGRAM	SIZE CODE	NUMBER	REV.
D	TD	M7762-0-4	F	
SCALE	+	SHEET 12 OF 13.	DIST.	



**DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
PARTS LIST**

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS PARTS LIST				QUANTITY VARIATION									
MADE BY	F. CARBERRY	CHECKED	R. CARBERRY	SECTION									
DATE	2 JUN 76	DATE	2 JUN 76	1									
ENG	C. LIU	PROD	R. STROTT	ISSUED SECT.									
DATE	12 APR 77	DATE	12 APR 77	1									
ITEM NO.	DWG NO./PART NO.	DESCRIPTION											
1	E-UA-RL11-0-0	RL11 CONTROLLER ASSEMBLY											
2	MPO0526	FIELD MAINTENANCE PRINT SET (RL11-AK)											
3	MPO0153	FIELD MAINTENANCE PRINT SET (RL11-O)											
4	23-751A9	M9312 ROM (BOOT STRAP BOARD)											
5	9906228	PACKAGING CONTAINER (FOR ITEM 4)											

**DEC FORM
DRA 110**

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B-PL-M7762-Ø-Ø
D-CS-M7762-Ø-1
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D-FD-M7762-Ø-3
D-TD-M7762-Ø-4
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TERMINATOR ASSY
(DD) R111 CONTROLLER
R111 CONTROLLER
(PL)R111 CONTROLLER
(CS)R111 CONTROLLER
R111 BLOCK DIAGRAM
R111 FLOW DIAGRAM
R111 TIMING DIAGRAM
SHIPPING LIST

RLII
Field Maintenance
Print Set

**Digital Equipment
Corporation**

PRINT SET ORDER

NO. MPØØ153

REVISIONS	REV.			USED ON OPTION/MODEL	DRN.	DATE	TITLE: RL11 CONTROLLER ASSY			
	CHG. NO.	REV.		RL11	F. CARBERRY	2 JUN 76				
					CHK'D <i>F. Carberry</i>	DATE 7 APR 77				
					PROJ. ENG. <i>D. F. Eller</i>	DATE 12 Apr 77				
					FIELD SERV. <i>F. Carberry</i>	DATE 12 Apr 77	SIZE B	CODE TC	NUMBER RL11-0-2	REV. *
				SHEET 1 OF 1			DIST.			

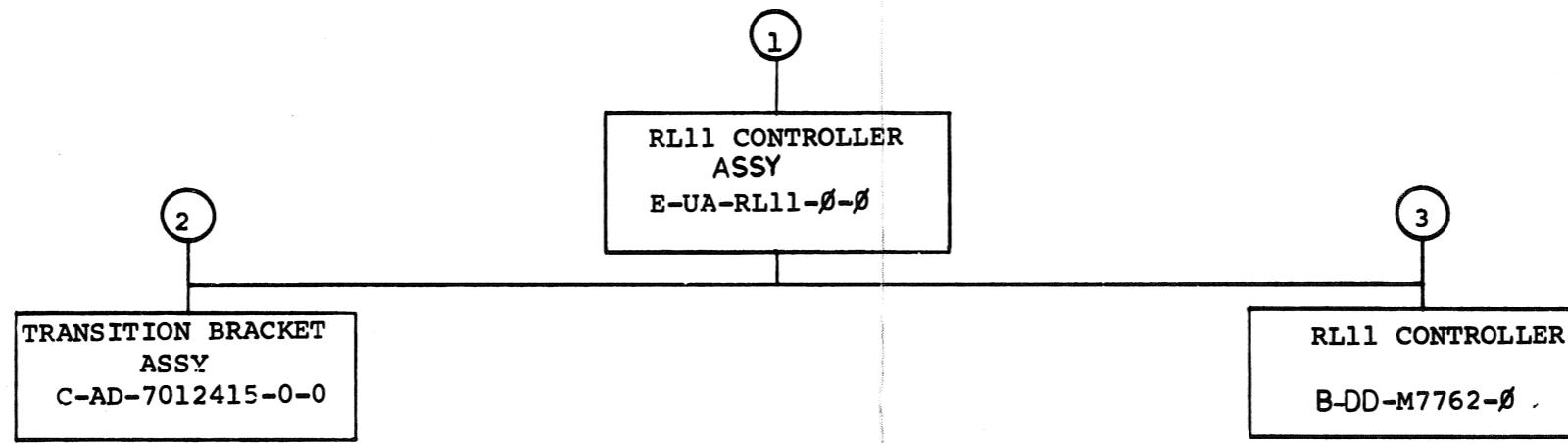
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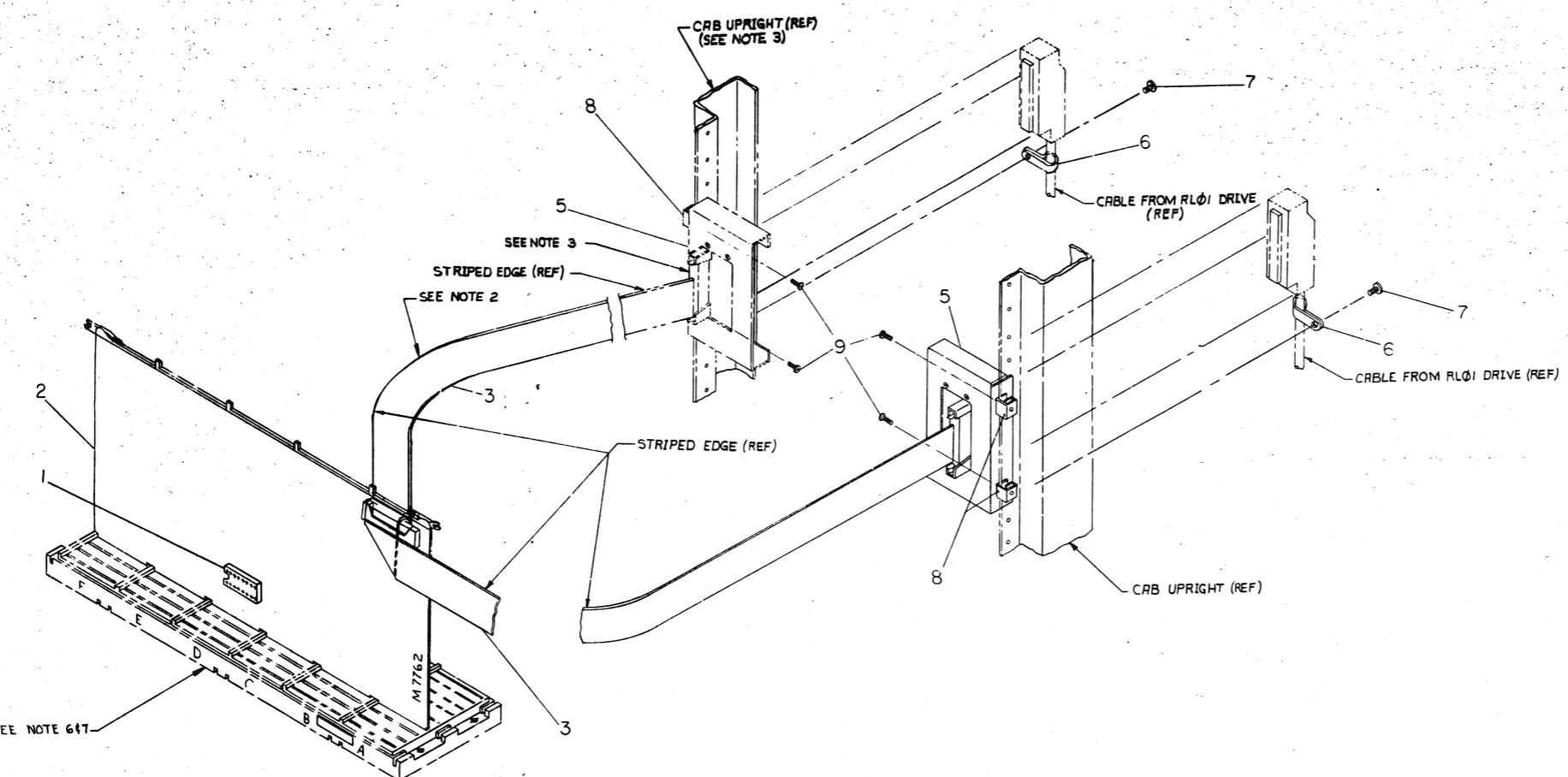
NOTE: FOR FIELD MAINTENANCE PRINT SET
SEE B-TC-RL11-Ø-2

REVISIONS		USED ON OPTION/MODEL		DRN.	DATE	TITLE			
CHK	CHANGE NO.	RL11		F. Carberry	2 JUN 76	digital			
				CHK'D.	DATE				
				<i>F. Carberry</i>	2 JUN 76	RL11 CONTROLLER ASSY			
				PROJ. ENG.	DATE				
				<i>D.T. Ellis</i>	12 APR 77				
				PROD	DATE				
				<i>F. Carberry</i>	12 APR 77				
		SHEET 1 OF 3				SIZE	CODE	: NUMBER	REV
					B	DD	RL11-0	*	
					DIST.				



TITLE	SHEET ² OF 3	SIZE CODE	NUMBER	REV
RL11 CONTROLLER ASSY		B DD	RL11-Ø	*

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NOTES:

1. TERMINATOR ASSY (ITEM #4) TO BE INSTALLED IN CABLE CUT LOCATION IN LAST DRIVE OF SUB-SYSTEM.
2. WHEN INSTALLED IN BACK OF BAIL EXPANSION BOX, BC08R CABLE (ITEM #3) SHOULD BE FOLDED 90° AND ROUTED UP OUT OF THE BOX AS SHOWN.
3. WHEN ALTERNATE MOUNTING POSITION IS USED, CONNECTOR IN TRANSITION BRACKET MUST BE INVERTED SO THAT I/O CABLE FROM DRIVE WILL HANG IN A DOWNWARD POSITION AS SHOWN.
4. ITEM #3 THRU ITEM #10 ARE NOT ASSEMBLED AT THIS POINT BUT MUST BE SHIPPED WITH UNIT FOR ASSEMBLY AT INSTALLATION.
5. PRIORITY JUMPER ASSY (ITEM #1) TO BE PLUGGED INTO M7762 AT FINAL ASSY.
6. THE RLII MODULE (M7762) WILL OCCUPY ONE HEX SPC SLOT.
7. JUMPER WIRE FROM CA1 TO CB1 ON THE SPC BACKPLANE MUST BE REMOVED AT INSTALLATION.

DESCRIPTION	ITEM NO.
UNIT SELECT PLUG KIT	A-RL-7012938-0-0 10
SCREW, PHILIPS #10-32X.300	9006073-03 9
NUT, SPRING #10-32	9007786-00 8
SCREW, TAP-TITE #8-36 LG	900641R-01 7
CLAMP CABLE	9007083-00 6
TRANSITION BRACKET ASSY	C-RD-7C12415-0-0 5
TERMINATOR ASSY	D-IA-7012293-0-0 4
CABLE ASSY	D-U~BC08R-0-0 3
RLII CONTROLLER	D-U-A-M7762-0-0 2
PRIORITY JUMPER ASSY	1403778 1

QUANTITY & VARIATION	ITEM NO.
1	1
ANGLE OF SWING	CLASS OF ACCURACY
10°	±10°
SURFACE FINISH	FINISHED SURFACE REQUIREMENTS
RA 12.5	RA 12.5
QUALITY	INDIVIDUAL
MANUFACTURER	ASTM
MANUFACTURER	1.000
MANUFACTURER	0.995
MANUFACTURER	0.990
MANUFACTURER	0.985
MANUFACTURER	0.980
MANUFACTURER	0.975
MANUFACTURER	0.970
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MANUFACTURER	0.825
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MANUFACTURER	0.535
MANUFACTURER	0.530
MANUFACTURER	0.525
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MANUFACTURER	0.255
MANUFACTURER	0.250
MANUFACTURER	0.245
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MANUFACTURER	0.235
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MANUFACTURER	0.225
MANUFACTURER	0.220
MANUFACTURER	0.215
MANUFACTURER	0.210
MANUFACTURER	0.205
MANUFACTURER	0.200
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MANUFACTURER	0.190
MANUFACTURER	0.185
MANUFACTURER	0.180
MANUFACTURER	0.175
MANUFACTURER	0.170
MANUFACTURER	0.165
MANUFACTURER	0.160
MANUFACTURER	0.155
MANUFACTURER	0.150
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MANUFACTURER	0.140
MANUFACTURER	0.135
MANUFACTURER	0.130
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MANUFACTURER	0.120
MANUFACTURER	0.115
MANUFACTURER	0.110
MANUFACTURER	0.105
MANUFACTURER	0.100
MANUFACTURER	0.095
MANUFACTURER	0.090
MANUFACTURER	0.085
MANUFACTURER	0.080
MANUFACTURER	0.075
MANUFACTURER	0.070
MANUFACTURER	0.065
MANUFACTURER	0.060
MANUFACTURER	0.055
MANUFACTURER	0.050
MANUFACTURER	0.045
MANUFACTURER	0.040
MANUFACTURER	0.035
MANUFACTURER	0.030
MANUFACTURER	0.025
MANUFACTURER	0.020
MANUFACTURER	0.015
MANUFACTURER	0.010
MANUFACTURER	0.005
MANUFACTURER	0.000

THIRD ANGLE PROJECTION	FIRST USED ON
CHART	RLII
REMOVE BURRS AND BREAK SHARP CORNERS	
PROVIDE SMOOTH SURFACES	
DO NOT SCALE LINES	
NEXT HIGHER ASY.	
SIZE PARTS LIST	
MATERIAL	RD-RLII-0
FINISH	SCALE NAME
	E UARLII 2
	SWEEP
	4 OF 1
	BLW

8

7

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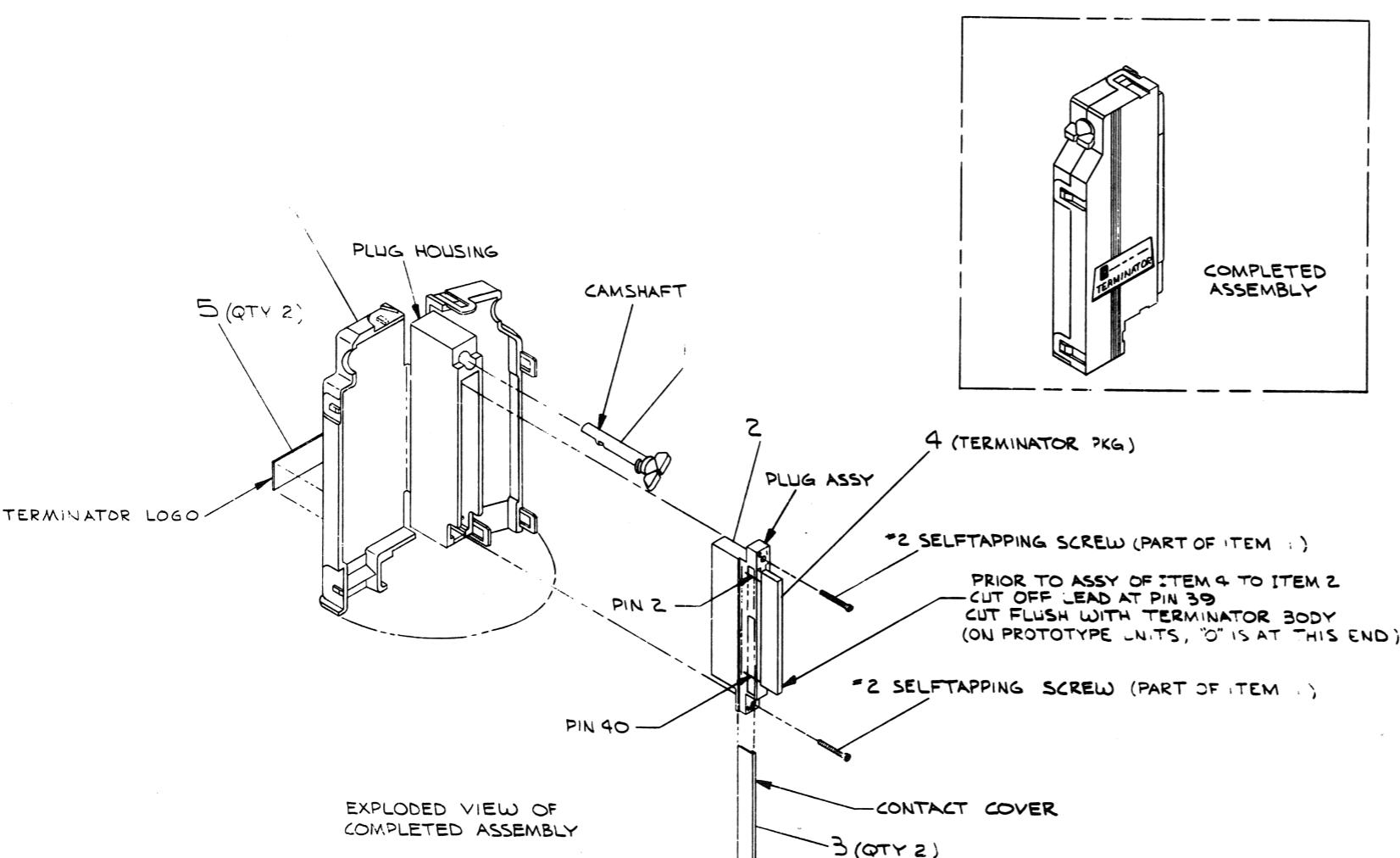
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1

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ITEM NO.	DESCRIPTION	DWG./PART NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
2	LOGO, TERMINATOR	A-DL-7416678-0-0
1	TERMINATOR PKG	1313242-00
2	COVER, CONTACT	1211591-11
1	PLUG ASSY	1211591-07
1	CONN PLUG HSG & CAMSHAFT KIT	1211591-34

ITEM NO.	DESCRIPTION	DWG./PART NO.
ANGLES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
45° 30'	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
SURFACE QUALITY IN	CHECK ONE	OVER .005 TO .010
MEDIUM	.004	.008 ±.012 ±.016 ±.024 ±.04
MICRONICHES	PREFERRED	.002 ±.016 ±.025 ±.04 ±.032 ±.01

REV. A	DRWGS BY [Signature]	7-7416678	FIRST USED ON	RK06	digital
TITLE					
ENG. BY [Signature]	ENG. DATE	7/10/76	PROJ. ENG.	514774	
PROD. [Signature]	PROD. DATE	6/1/76	PROD.		
DO NOT SCALE DWG	NEXT HIGHER ASSY		MATERIAL	E-LA-RKG1-Φ-Φ	SIZE CODE
SEE PARTS LIST			SCALE	None	NUMBER
FINISH	++		SHEET	1 OF 1	REV.
			DIST.		

REV. A	CHNGE NO.	REV.
C	1012293-00001	A
J	2	2-047776
W.	DUNHAM	
		7-2976

8

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6

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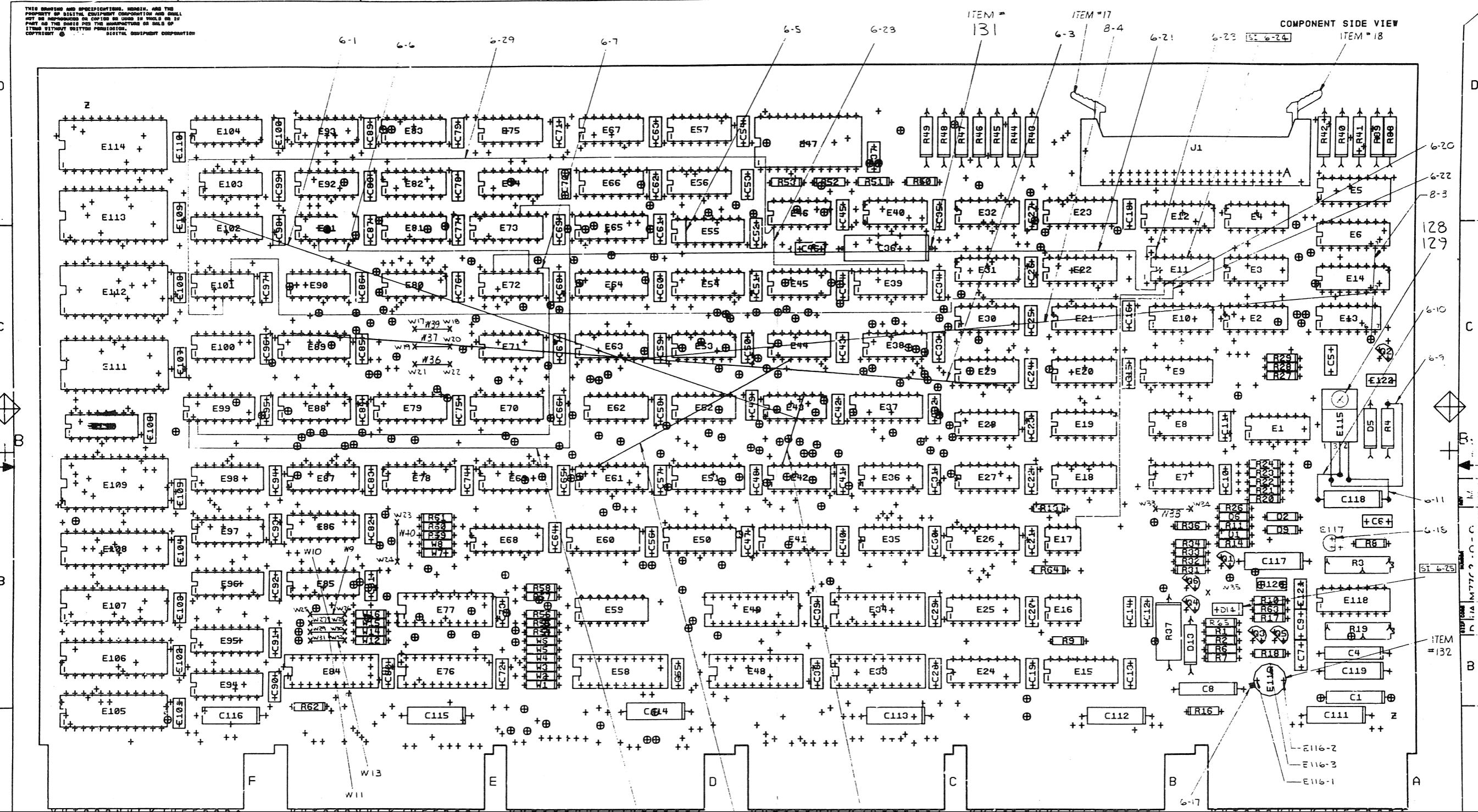
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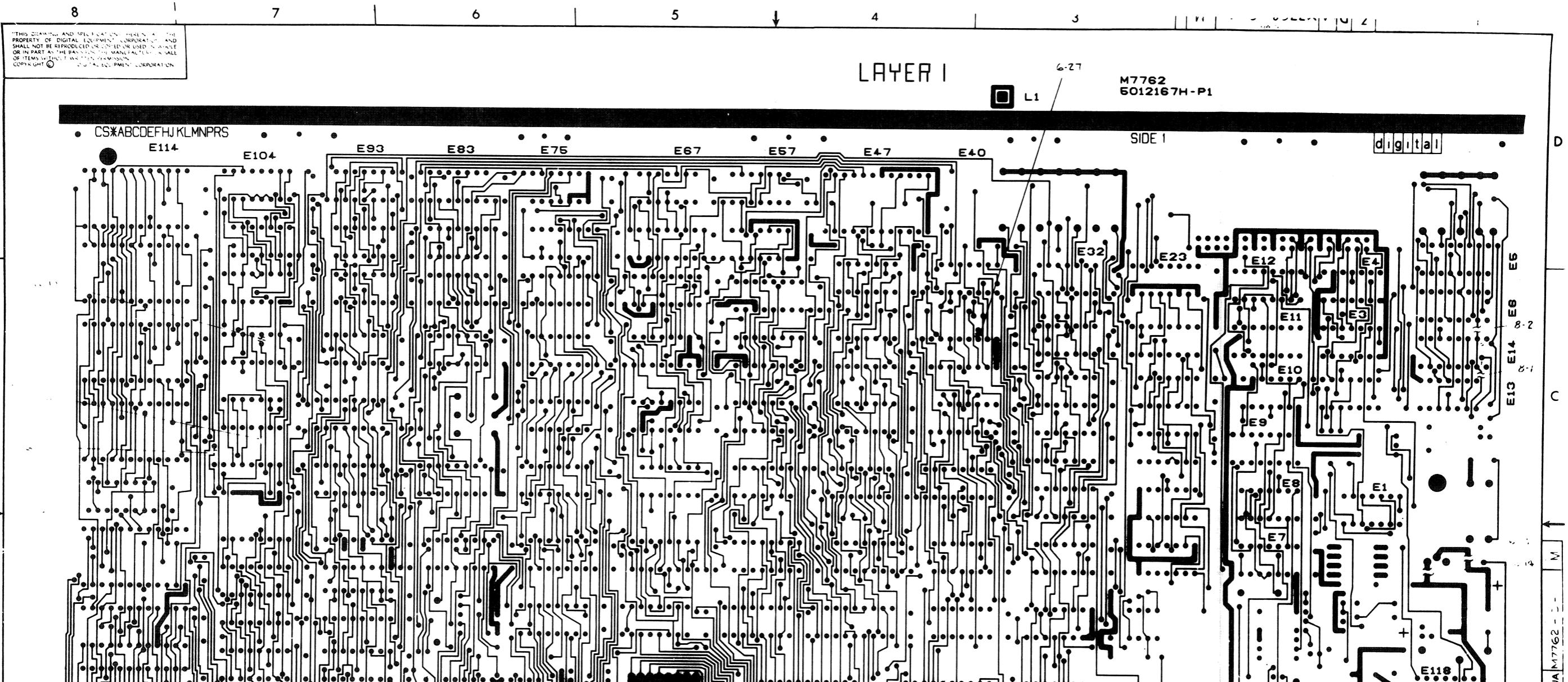
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A rectangular barcode label with a black border. The text is arranged in four rows: 'H' and 'REV.' in the top-left corner; 'M7762-6' in the top-right corner; 'NUMS-A' in the bottom-left; and 'B700' and 'SIZE CODE' in the bottom-right.

8 | 7 | 6 | 5 | 4 | 3 | M-0-O | 1 | 2 | DIA 17750-0-0 | 2 |

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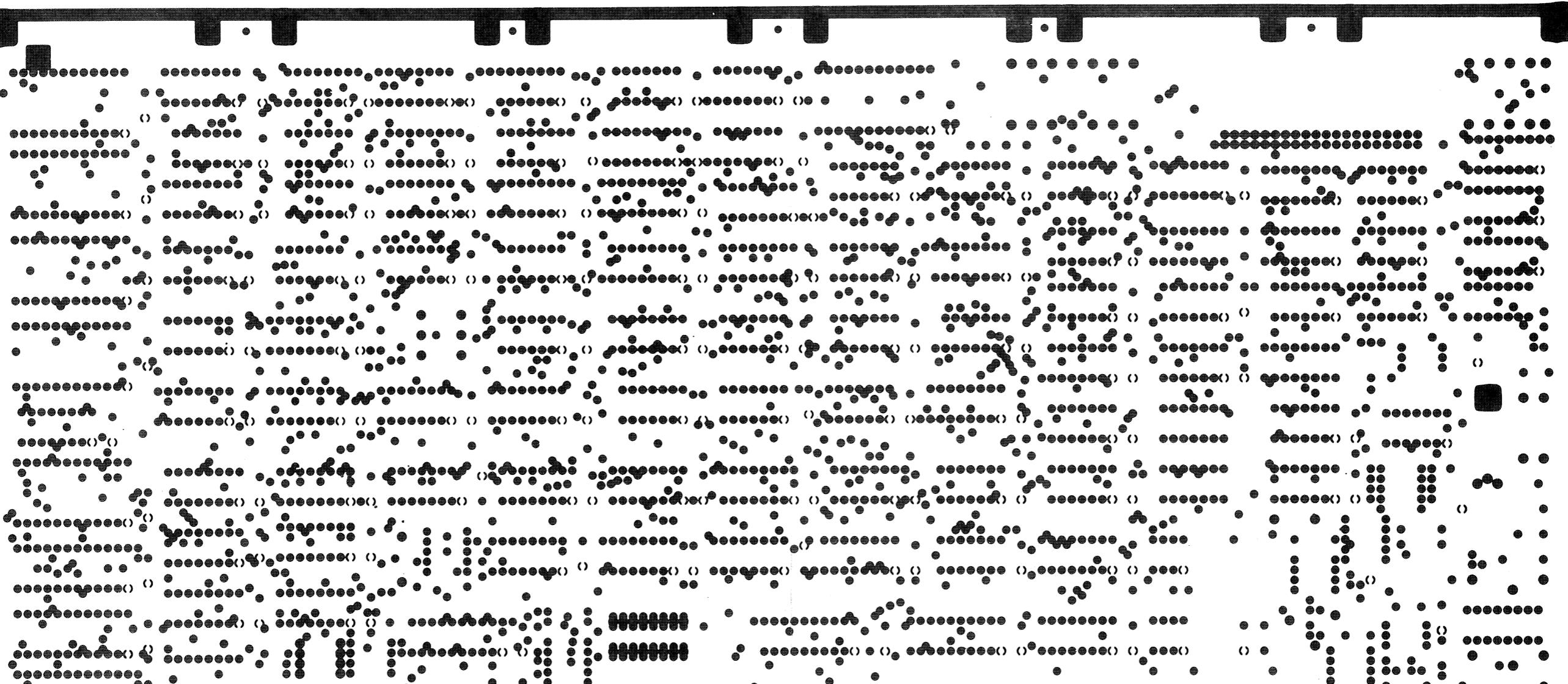
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LAYER 12

M7762
6012167H-P1

L2



D

C

B

D

A

M7762

3

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LAYER 3

2

1

1

C

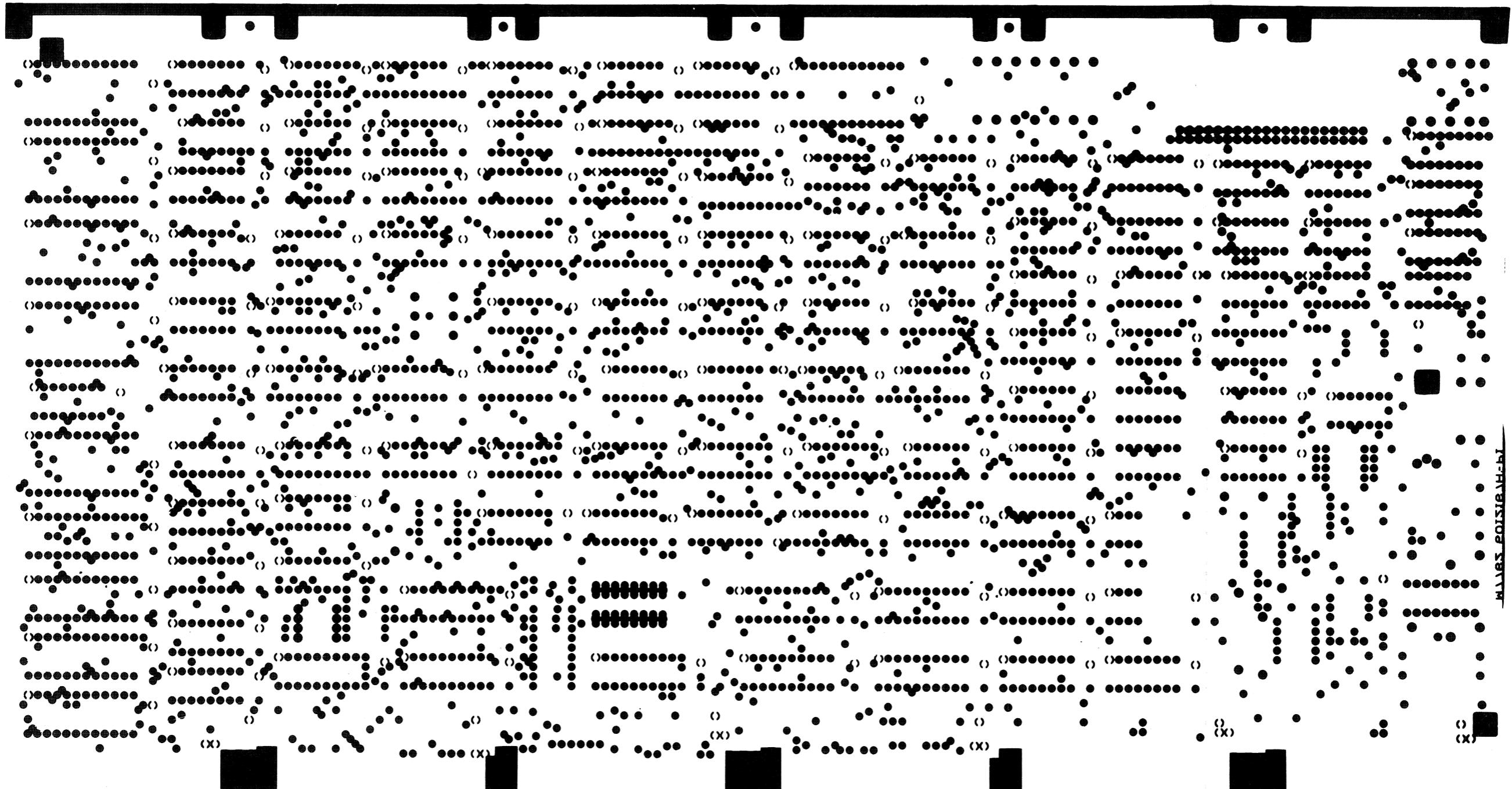
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C-1

1

A

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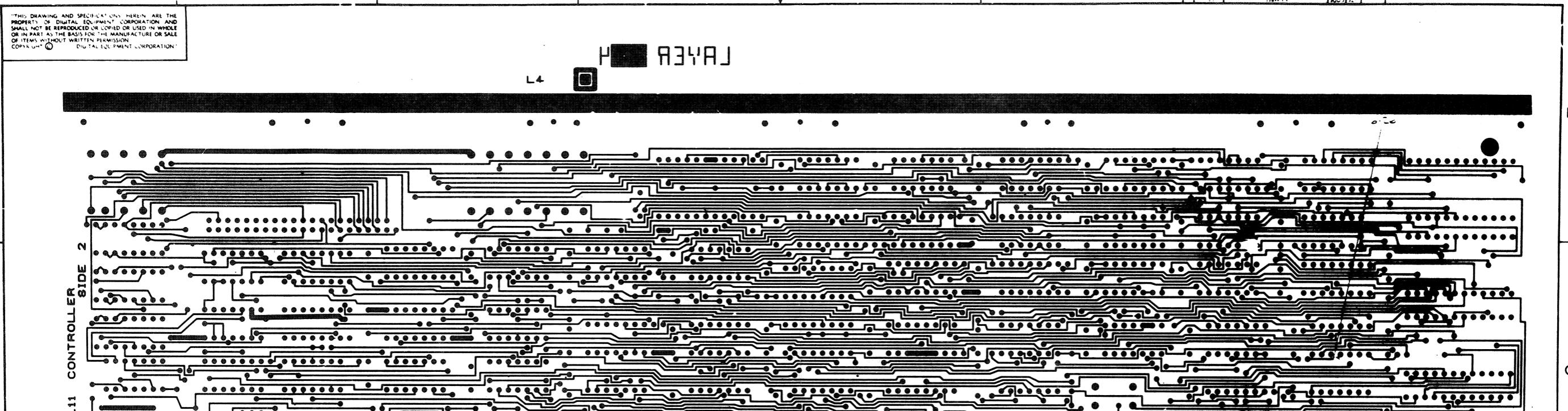
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8	7	6	5	↓	4	↑	3	↓	2	↑	1																																				
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D REF WORK. INSTRUCTIONS: <p>WIRE ADDS:</p> <p>6-1.E43-5 TO E102-15 6-2.E42-13 TO E43-10 6-3.E29-6 TO E89-15 6-4.E61-14 TO E44-3 6-5.E55-2 TO E55-15 6-6.E91-3 TO E72-9 6-7.F72-8 TO E99-2 6-8.E99-1 TO E73-11 6-9.E115-1 TO TOP OF R4 6-10.E115-3 TO GROUND SIDE (LEFT) OF C118 6-11.E115-2 TO POSITIVE SIDE (RIGHT) OF C118</p> <p>ETCH CUTS:</p> <p>6-12.SIDE 2 AT E115-PIN 2 6-13.SIDE 1 AT E115-PIN 3 (CENTER PIN) 6-14.SIDE 1 AT E115-PIN 1 6-15.SIDE 1 FROM E99-1 TO E64-1(AT FEED-THRU ABOVE E99-16) 6-16.SIDE 1 FROM E100-5 TO E99-2(AT E100-5) 6-17.FOR PROPER INSTALLATION OF E116 REFER TO ORIENTATION TAB AND PINNING CALLOUT ON PAGE ONE OF DIA-M7762-0-0 REV K. 6-18.INSTALL E117 WITH ORIENTATION FLAT TOWARD RB. CENTER TERMINAL OF E117 GOES INTO HOLE CLOSEST TO RB. 6-19.SIDE 1 FROM E101-10 TO E46-1 AT E101-10 UNDER CHIP BETWEEN FEED-THRU (NOTE: PERFORM CUT BEFORE ASSEMBLING COMPONENTS TO BOARD).</p> <p>WIRE ADDS (CONT):</p> <p>6-20.E11-2 TO E17-5 6-21.E11-1 TO E72-13 6-22.E11-3 TO E101-10 6-23.E11-14 TO PIN 16 OF E11 LOCATION</p> <p>SPECIAL INSTRUCTIONS:</p> <p>6-24.INSTALLATION OF E11 MUST BE MADE SO PIN 1 OF IC(74S32) IS AT PIN 2 OF E11 LOCATION. 6-25.D14 MUST BE HAND INSERTED DUE TO HOLE SPACING IN BOARD (NOTE ORIENTATION MARK ON D14)</p> <p>ETCH CUTS:</p> <p>6-26.SIDE 2 AT E101-4 6-27.SIDE 1 AT E39-11</p> <p>WIRE ADDS:</p> <p>6-28.E46-1 TO E39-11 6-29.E46-1 TO E101-4</p> <p>ETCH CUTS:</p> <p>8-1. SIDE 1 AT E14-7 BETWEEN E13 & E14 8-2. SIDE 1 AT E14-10 BETWEEN E14 & E6</p> <p>WIRE ADDS:</p> <p>8-3. FROM FEED THRU NEAR E13-6 & E13-7 TO E6-7 8-4. E63-6 TO E14-7</p>																																															
A <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">REVISIONS</th> <th colspan="3"></th> <th colspan="3"></th> <th colspan="3"></th> </tr> <tr> <th>CHK</th> <th>CHANGE NO.</th> <th>REV.</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td></td> </tr> </tbody> </table>												REVISIONS												CHK	CHANGE NO.	REV.																					
REVISIONS																																															
CHK	CHANGE NO.	REV.																																													
<small>DEC FORM NO. 100-120 MAY 1964</small>																																															
<small>TITLE: RL74 CONTROLLER SIZE CODE: D U A NUMBER: M7762 - 0 - 0 REV. M SCALE: 2/1 SHEET 6 OF 6 DIST.:</small>																																															

**DIGITAL EQUIPMENT CORPORATION
PARTS LIST**

DIGITAL EQUIPMENT CORPORATION PARTS LIST			QUANTITY / VARIATION									NOTES:		
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION									REF DESIGNATION		
MADE BY	D. MAYUSKI	CHECKED	P. BOSSMAN	SECTION	1							USED ON: OPTION/MODEL RL11		
DATE	7 MAR 77	DATE	29 MAR 77											
ENG	C. LIU	PROD	R. STROTT	ISSUED SECTION	1									
DATE	8 APR 77	DATE	8 APR 77											
1	D-CS-M7762-0-1		CIRCUIT SCHEMATIC	REF										
2	D-UA-M7762-0-0		UNIT ASSEMBLY	REF										
3	D-DD-M7762-0		DRAWING DIRECTORY	REF										
4	D-MD-5012167-0-0		DRILL AND ETCH DRAWING	REF										
5		5012167	ETCHED CIRCUIT BOARD	1										
6														
7		1001610-00	CAP., 01UF, 50V	103								C5, C6, C7, C10-C16, C18-C35, C47-C110, C120, C17-C45, C1, C8, C111-C116		
8		1005306-00	CAP., 6.8UF, 35V, 10%	8								C121		
9		1000042-00	CAP., 1000PF, +5%, 100V, DIPPED MICA	1								C46		
10		1004812-00	CAP., 15MF, 20V	3								C117, C118, C119		
11		1000010-00	CAP., 39PFD, 100V	1								C9		
12		11-1411-	DIODE, 1N4152	1								D14		
13		1012121-00	CAP., 220PFD, 100V	+								C13		
14												C4		
15		1000050-00	CAP., .033UF, 100V, 10%	1								D1, D2, D6, D9		
16		1111577-00	DIODE, 1N4454	4								D5, D13		
17		1110994-00	DIODE, 1N751A	2										
18												E59		
19		1209838-00	SOCKET, PRIORITY JUMPER, 16 PIN	1								J1		
20		1209941-02	CONN., 40 PIN	1										
21		1209941-03	CONN., LATCH LEFT	1										
22		1209941-04	CONN., LATCH RIGHT	1										
23		1210711-02	HANDLE, ASSEMBLY	1								E13		
		1300005-05	RES., NETWORK 13-82 RES. 5%	1								R3, R19		
		1309143-09	RES. POT, 3/4W, 5K, 10%	2								R38-R49		
		1301781-00	RES., 82, 1/2W, 5%	12								R16, R20, R53, R60, R61, R52		
		1301424-00	RES., 680, 1/4W, 5%	6										
E.C.O. NO.	M7762-0001	M7762-0002	M7762-0003	M7762-0004	M7762-0005	M7762-0006	M7762-0007	M7762-0008	M7762-0009	M7762-0010	M7762-0011	M7762-0012	M7762-0013	
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TITLE				ASSY NO.				SIZE		CODE		NUMBER		REV.
RL11 CONTROLLER				D-UA-M7762-0-0				B		PL		M7762-0-0		L
				SHEET 1 OF 5				INSERTION PARTS LIST DATA BASE REV						

DIGITAL EQUIPMENT CORPORATION PARTS LIST

MADE BY D. MAYUSKI
DATE 7 MAR 77

CHECKED P. BOSSMA
DATE 29 MAR 7

SECTION

ENG C. LIU
DATE 8 APR 77

29 MAR 7
PROD R. STROT
DATE 8 APR 77

ISSUED SECTION 1

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	REF DESIGNATION	
24		1300295-00	RES., 330, $\frac{1}{4}$ W, 5%	3	R27, R34, R62
25		1311522-00	RES., 200, $\frac{1}{4}$ W, 5%	1	R28
26		1311422-00	RES., 178, $\frac{1}{4}$ W, 1%	4	R54, R55, R58, R59
27		1305125-00	RES., 383, $\frac{1}{4}$ W, 1%	2	R56, R57
28		1300229-00	RES., 100, $\frac{1}{4}$ W, 5%	2	R29, R13
29		1300262-00	RES., 180, 1W, 5%	1	R37
30					
31					
32		1302858-00	RES., 100, $\frac{1}{4}$ W, 1%	2	R2, R6
33		1303226-00	RES., 68.1, $\frac{1}{4}$ W, 1%	1	R1
34		1300274-00	RES., 220, $\frac{1}{4}$ W, 5%	1	R4
35		1310630-00	RES., 1.33K, $\frac{1}{4}$ W, 1%	1	R7
36		1302871-00	RES., 1.21K, $\frac{1}{4}$ W, 1%	1	R10
37		1302685-00	RES., 909, $\frac{1}{4}$ W, 1%	1	R11
38		1300417-00	RES., 2.2K, $\frac{1}{4}$ W, 5%	±	R12
39					
40		1301972-00	RES., 270, $\frac{1}{4}$ W, 5%	±	R15
41		1300411-00	RES., 2K, $\frac{1}{4}$ W, 1%	2	R17, R63
42					
43		1300365-00	RES., 1K, $\frac{1}{4}$ W, 5%	1	R33
44					
45					
46		1300447-00	RES., 4.7K, $\frac{1}{4}$ W, 5%	1	R31
47		1300271-00	RES., 220, $\frac{1}{4}$ W, 5%	1	R32
48		1302388-00	RES., 2K, $\frac{1}{4}$ W, 5%	±	R35
49		1302177-00	RES., 47K, $\frac{1}{4}$ W, 5%	1	R50
50		1302397-00	RES., 180K, $\frac{1}{4}$ W, 5%	1	R51

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TITLE

ASSY NO.
D-1A-M7762-0-0

SIZE B	CODE PL
------------------	-------------------

NUMBER
M7762-0-0

REV.
L

DIGITAL EQUIPMENT CORPORATION PARTS LIST				QUANTITY / VARIATION										NOTES:	
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION											REF DESIGNATION	
51															
52		1503409-01	TRANS., 2N6534B	1										Q2	
53		15-03121-00	TRANS., 2N2369	1										Q3	
54		1513490-00	TRANS., 2N4403	4										Q1, Q4, Q5, Q6	
55		1614666-00	DELAY LINE, 500 NS 10 TAP	1										E18	
56		1610033-00	DELAY LINE, 100 NS 9 TAP	1										E9	
57		1611243-00	DELAY LINE, 250 NS 10 TAP	1										E19	
58		1614159-00	DELAY LINE, 50 NS 10 TAP	1										E22	
59		1811660-1	MOTOROLA OSC., 8.2MHz	1										E35	
60															
61		1905547-00	I.C., DEC 7474	1										B67	
62		1910153-00	I.C., 74150	1										E109	
63		1914072-00	I.C., 74159	1										E47	
64		1910650-00	I.C., DEC 74161	4										E98, E99, E104, E110	
65		1909061-00	I.C., DEC 74H52	1										E80	
66		1910532-00	I.C., DEC 74S00	2										E7, E32	
67		1913312-00	I.C., 7428	1										E29	
68		1910534-00	I.C., DEC 74S04	4										E20, E27, E30, E43	
69		1910536-00	I.C., DEC 74S10	1										E8	
70		1911712-00	I.C., 74S51	1										E74	
71		1910544-00	I.C., DEC 74S74	6										E21, E31, E66, E53, E56, E28	
72		1910545-00	I.C., DEC 74S112	1										E63	
73		1911911-00	I.C., DEC 74S124	1										E118	
74		1912799-00	I.C., DEC 74LS00	3										E38, E45, E2	
75		1912801-00	I.C., DEC 74LS02	2										E46, E81	
76		1912803-00	I.C., DEC 74LS04	2										E72, E92	
77		1912805-00	I.C., DEC 74LS08	3										E1, E40, E71	
E.C.O. NO.															
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								SHEET 3 OF 5	INSERTION PARTS LIST DATA BASE REV						

**DIGITAL EQUIPMENT CORPORATION
PARTS LIST**

MADE BY D. MAYUSKI DATE 7 MAR 77			CHECKED P. BOSSMAN DATE 29 MAR 77	SECTION 1	QUANTITY / VARIATION								NOTES: USED ON: OPTION/MODEL RL11
ENG C. LIU DATE 8 APR 77		PROD R. STROTT DATE 8 APR 77	ISSUED SECTION 1										REF DESIGNATION
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION										
78		1912808-00	I.C., DEC 74LS11		1								E36
79		1912810-00	I.C., DEC 74LS20		1								E62
80		1912816-00	I.C., DEC 74LS32		3								E42, E52, E91
81		1912820-00	I.C., DEC 74LS51		3								E44, E82, E93
82		1912824-00	I.C., DEC 74LS74		3								E57, E90, E103
83		1912829-00	I.C., DEC 74LS86		1								E83
84		1912834-00	I.C., DEC 74LS112		2								E12, E54
85		1912837-00	I.C., DEC 74LS123		1								E39
86		1911676-00	I.C., DEC 74S139		2								E37, E70
87		1912844-00	I.C., DEC 74LS151		1								E102
88		1912845-00	I.C., DEC 74LS153		2								E23, E65
89		1912697-00	I.C., DEC 74LS174		1								E88
90		1912854-00	I.C., DEC 74LS193		4								E24, E25, E85, E86
91		1912696-00	I.C., DEC 74LS194A		1								E64
92		1912864-00	I.C., 74LS279		1								E73
93		1910268-00	I.C., DEC 75107B		3								E3, E4, E10
94		1911341-00	I.C., DEC 75113		3								E5, E6, E14
95		1911527-00	I.C., DEC 8097		3								E61, E87, E89
96		1912951-00	I.C., 8556		9								E50, E51, E60, E68, E78, E94-E97
97		1911579-00	I.C., DEC 8641		3								E15, E26, E69
98		1912083-00	I.C., DEC 8647		2								E41, E79
99		1909713-00	I.C., DEC 8815		1								E100
100		1913474-00	I.C., 9401		1								E75
101		1913475-00	I.C., 9403		4								E105-E108
102		1913040-00	I.C., DC005		8								E33, E34, E49, E48, E58, E76, E77, E84
103		23-018B8	I.C., 82S114		1								E112
104		23-016B8	I.C., 82S114		1								E113

E.C.O. NO.

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TITLE
RL11 CONTROLLER

ASSY NO.
D-UA-M7762-0-0

SIZE
B

CODE
PL

NUMBER
M7762-0-0

REV.
L

SHEET 4 OF 5

INSERTION PARTS LIST DATA BASE REV

DIGITAL EQUIPMENT CORPORATION PARTS LIST

MADE BY D. MAYUSKI
DATE 7 MAR 77

CHECKED P. BOSSMAN
DATE 29 MAR 77

SECTION

ENG C. LIU
DATE 8 APR 77

DATE 29 MAR 77
PROD R. STROTT
DATE 8 APR 77

ISSUED SECTION

QUANTITY / VARIATION

NOTES:

USED ON: OPTION/MODEL RL11

REF DESIGNATION

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION				REF DESIGNATION
105		23-017B8	I.C., 82S114	1			E114
106		23-020D1	I.C., 82S115	1			E111
107		9000024-01	EYELET	12			
108		12-10385-01	PIN, 1 POS GOLD WIRE WRAP	19			W17-W35
109		9009185-00	JUMPER, INSULATED	12			W1-W8, W12, W14, W15, W16
110		1910544-01	I.C., 74S74-60	1			E101
111		9008085-00	TERMINAL, TURBO	1			E11
112		9105740-55	WIRE, #30 AWG, GRN	A/R			
113		1302862-00	RES., 50Ω, ½W, 1%	1			R36
114		13-13583-00	RES., 150Ω, ½W, 1%	1			R65
115		1912536-00	REGULATOR, +5V, 7805	1			E115
116		1000064-00	CAP., 3.9MFD, 10V, 10%	1			C36
117		1912541-00	REGULATOR, -5V	1			E116
118		1914471-00	REGULATOR, +8V, 71281	1			E117
119							
120		1311465-00	RES., 43 Ω ½W, 5%	1			R64
121		19-10645-00	I.C., DEC 75452	2			E16, E17
122		1302873-00	RES., 261Ω, ½W, 1%	1			R9
123		1302874-00	RES., 147Ω, ½W, 1%	2			R14, R26
124		1912834-00	I.C., DEC 74LS112	1			E55
125		10-12783-00	CAP., .022MFD, 50V	1			C122
126		13-03177-00	RES., 2.4K, ½W, 5%	1			R8
127		13-00316-00	RES., 470Ω, ½W, 5%	1			R18
128		90-06021-01	Scr. Phí Pan Hd #6-32 x 5/16	1			For mounting E115
129		90-08185-00	KEPNUT #6	1			
130		19-13340-00	I.C., DEC 74S32	1			E11
131		9107295-11	SLEEVING	A/R			
132		90-07201-00	TRANSIPAD	1			

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TITLE

ASSY NO.
D-UA-M7762-0-0

	SIZE	COD
	B	P

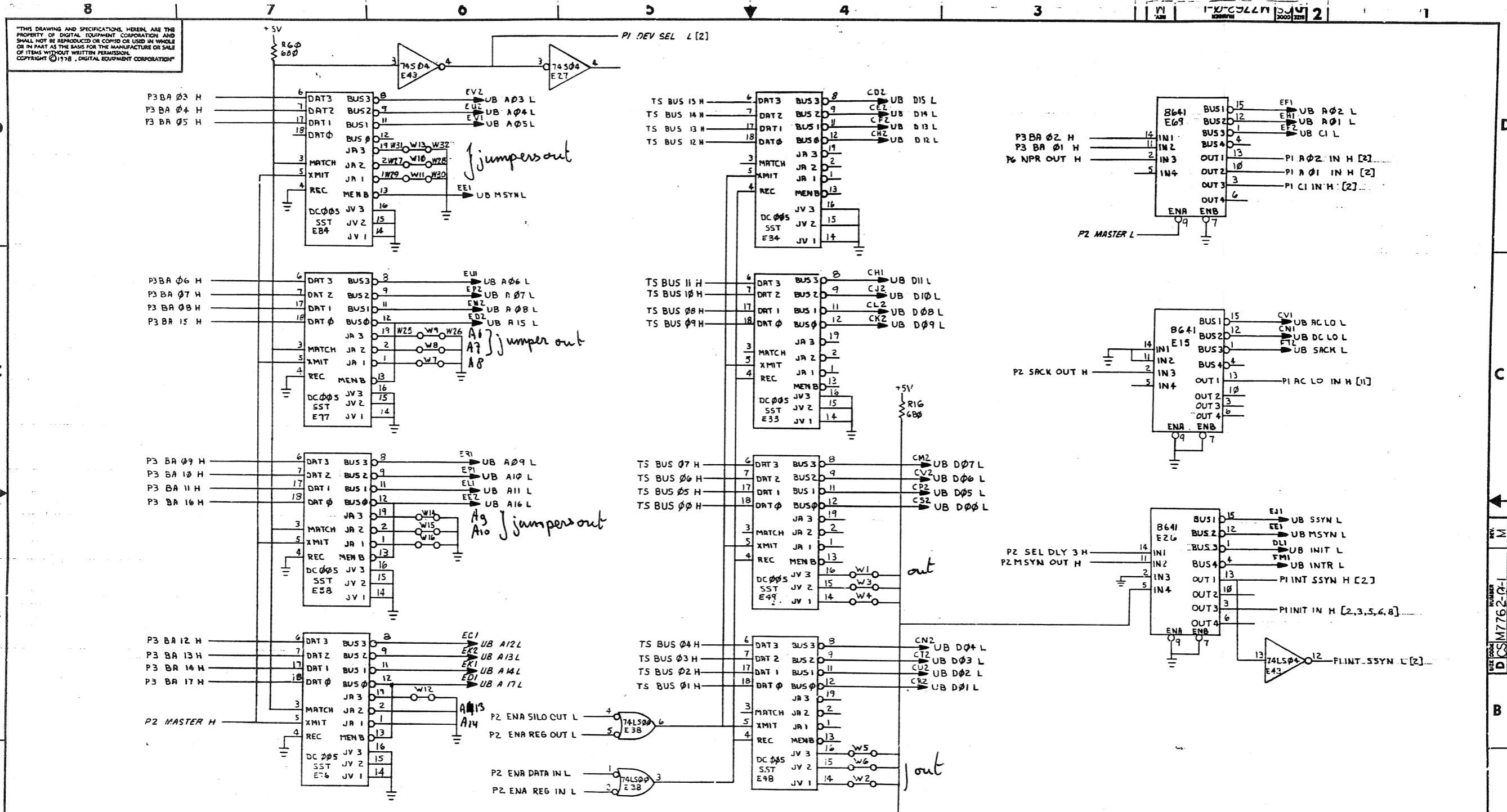
NUMBER
M7762-0-0

**REV.
L**

SHEET 5 OF 5

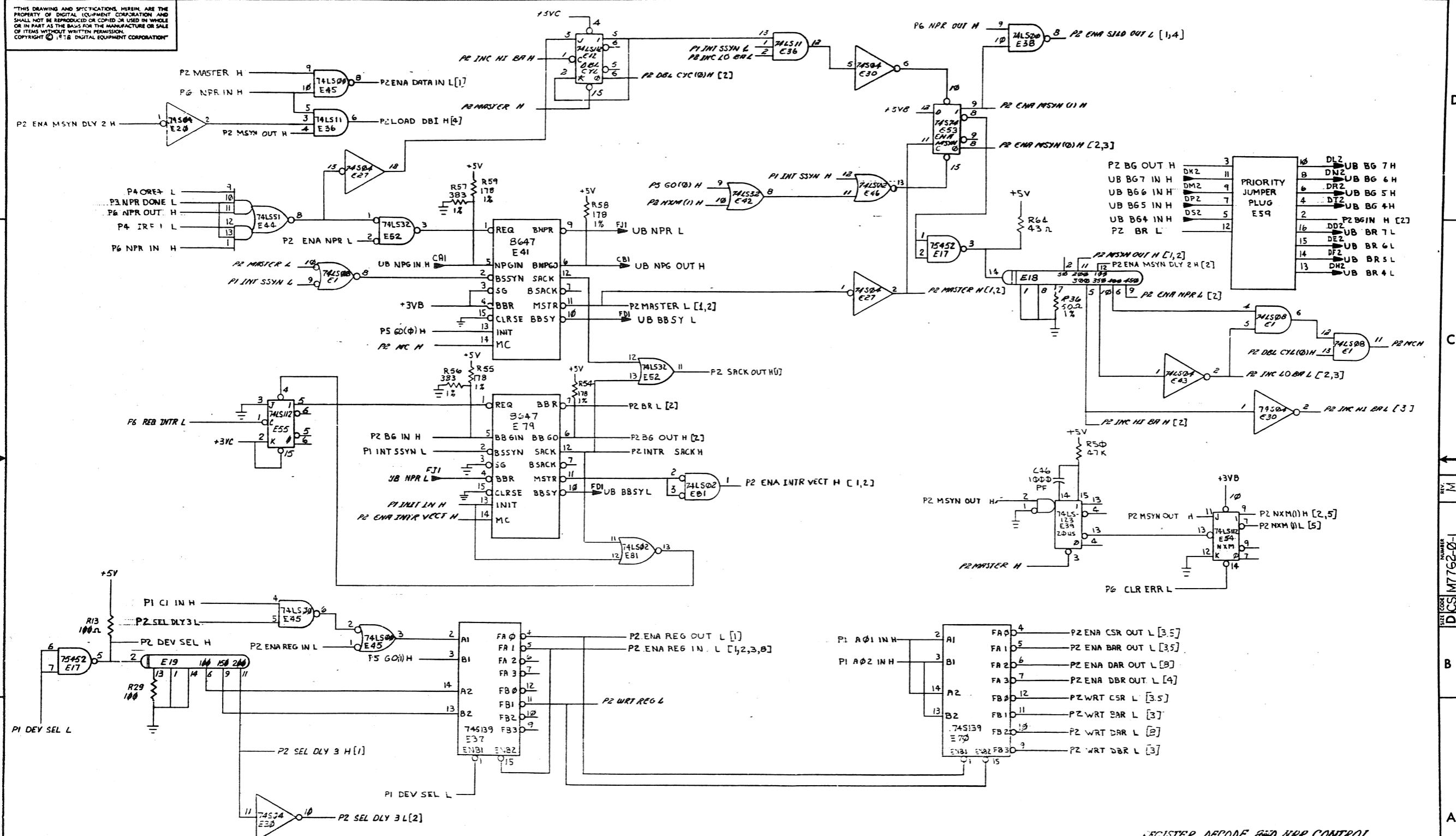
STREET 5 51 5

WWW.EASY-DRAW.BEST



UNIBUS TRANSCEIVERS

DRN. <i>See Part</i>	FIRST USED ON RLII	digital
CHK'D. <i>Initials</i>	TITLE (PI)	
ENG. <i>Initials</i>	RLII	
PROJ. ENG. <i>Initials</i>	CONTROLLER	
PROD. <i>Initials</i>		
NEXT HIGHER ASSY.		
SHEET 1 OF 11		SIZE D CODE CS NUMBER M7762-0-1 REV. B
DIST.		

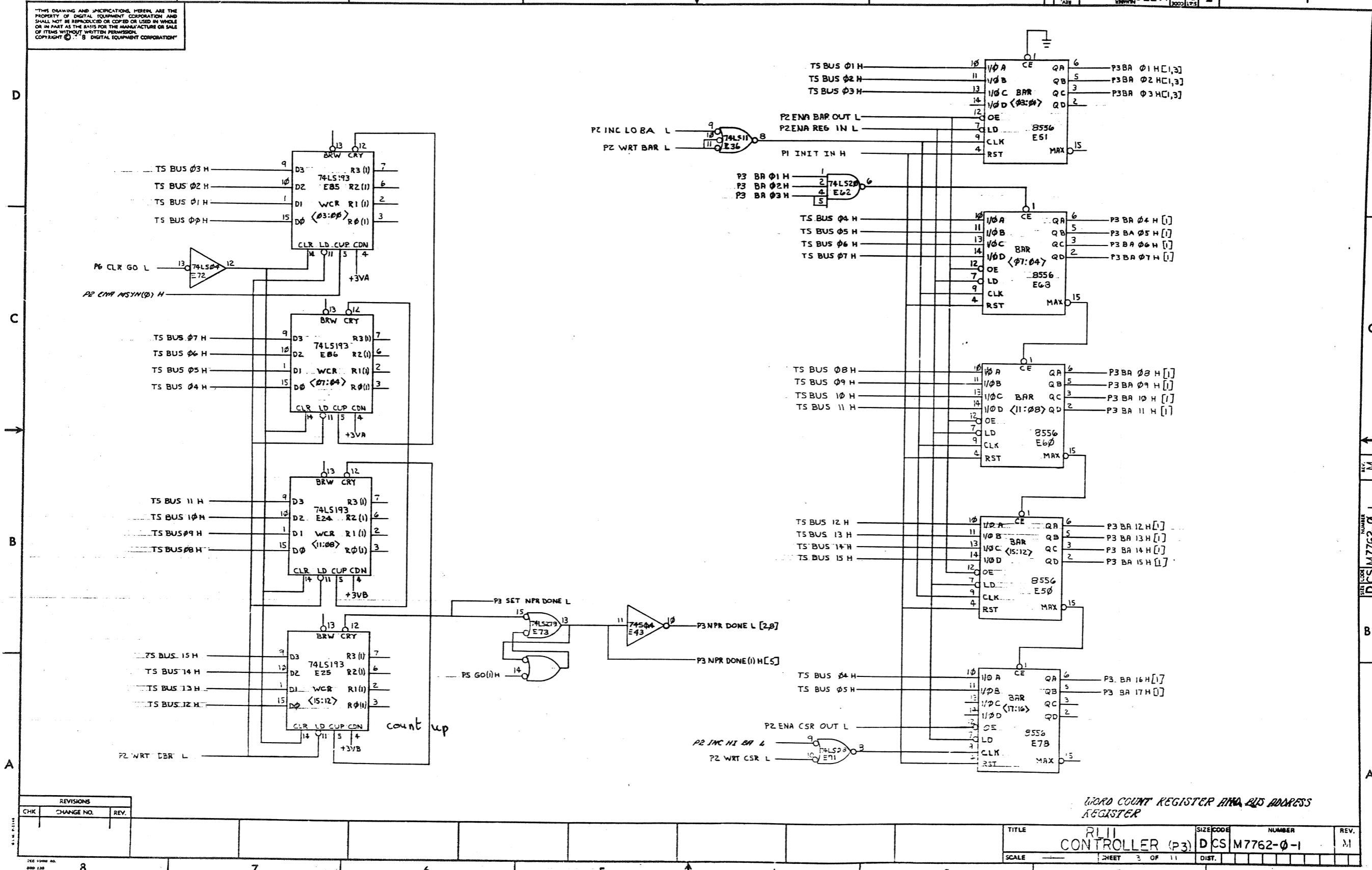


REGISTER DECODE AND NRP CONTROL

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	SIZE	CODE	NUMBER	REV.
RLII CONTROLLER (P2)	D	CS	M7762-0-1	A

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D CSM7762-0-1

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PL = parallel load
 TTS = transfer to store
 CPSI = clock pulse serial in
 MR = master reset
 DS = serial data in
 TOP = transfer out parallel
 TOS = transfer out serial
 CPSO = clock pulse serial out
 EO = enable output
 QS = serial out

IRF = input reg full } assertion = L
 ORE = output reg empty }
 IES = input enable serial low
 OES = output enable serial low

D

D

D

D

C

C

B

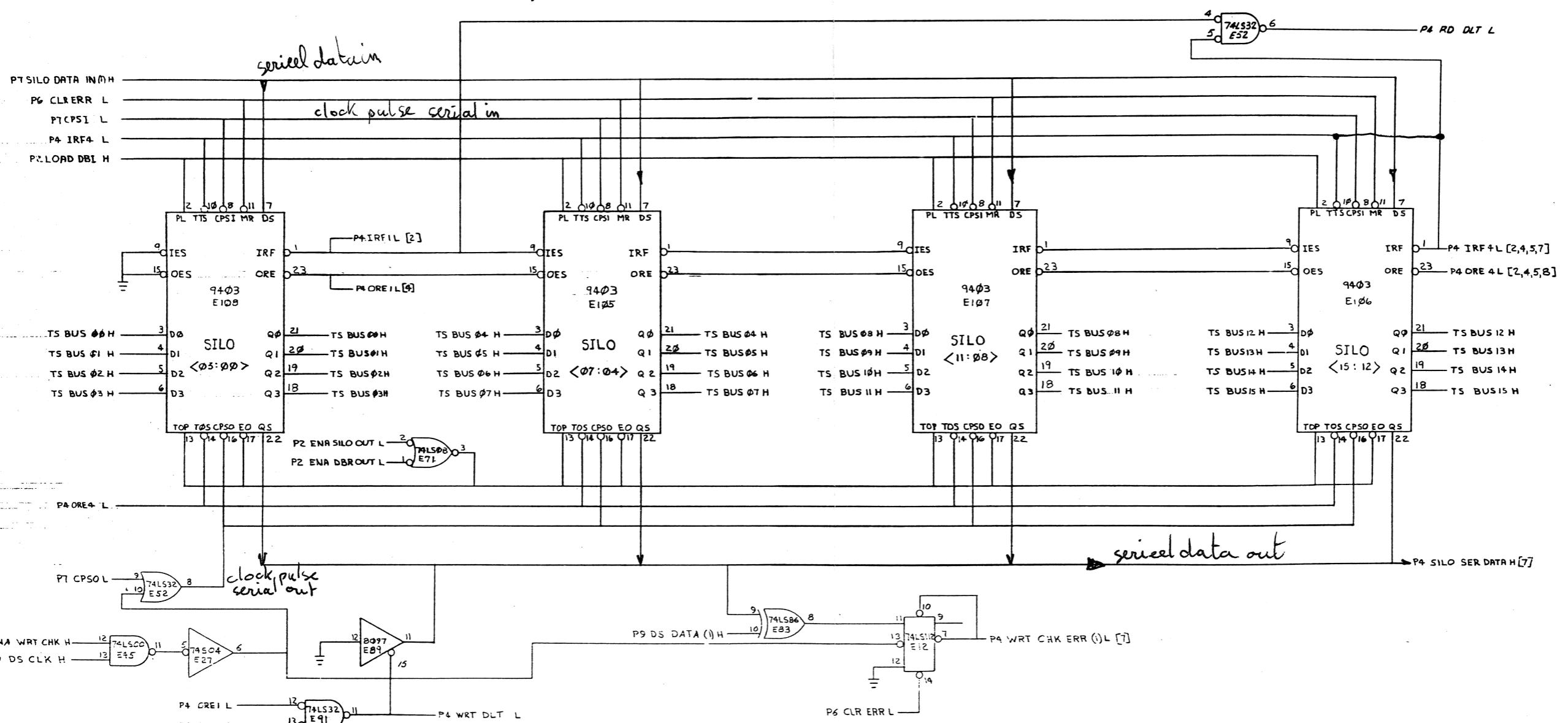
B

B

B

A

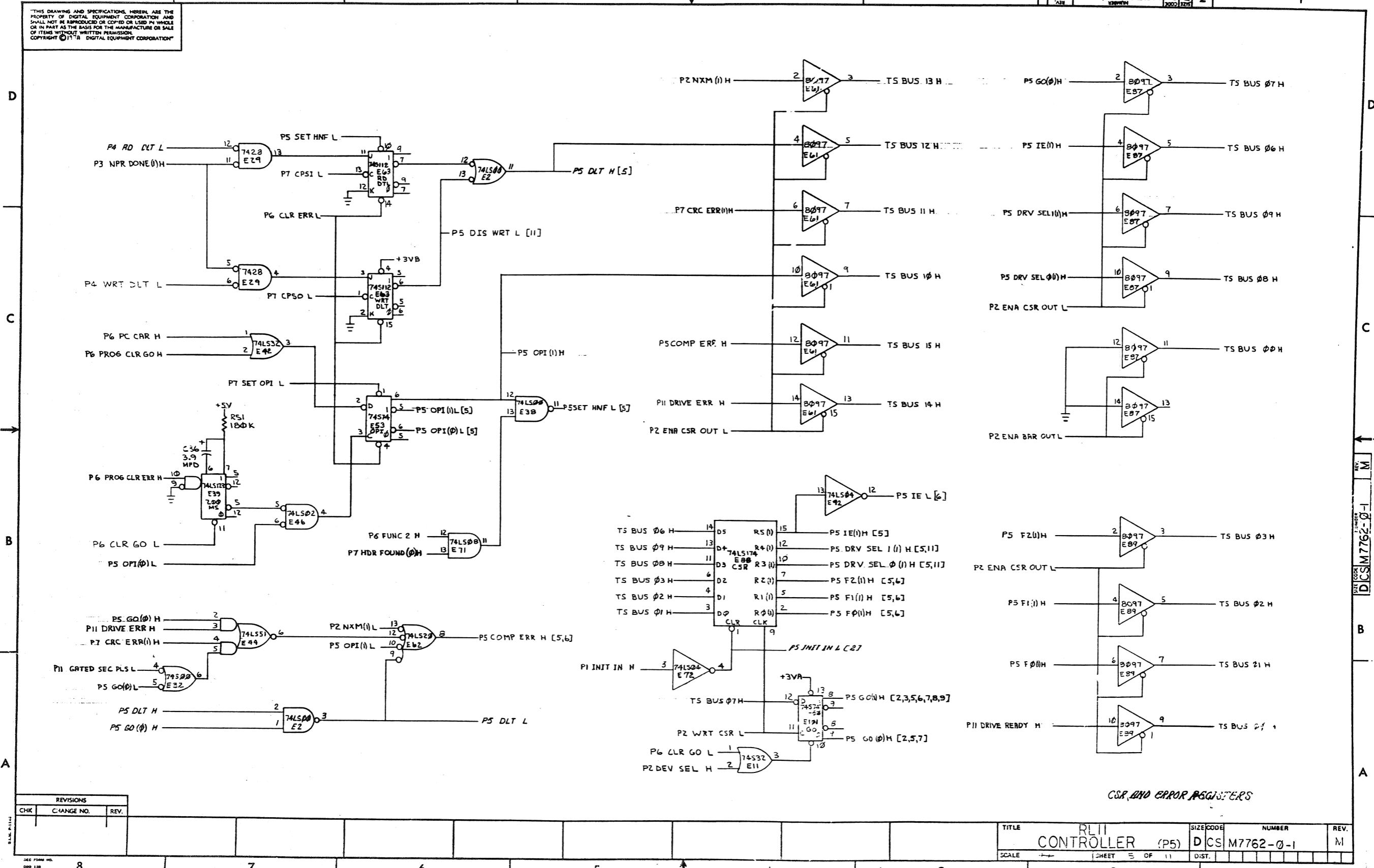
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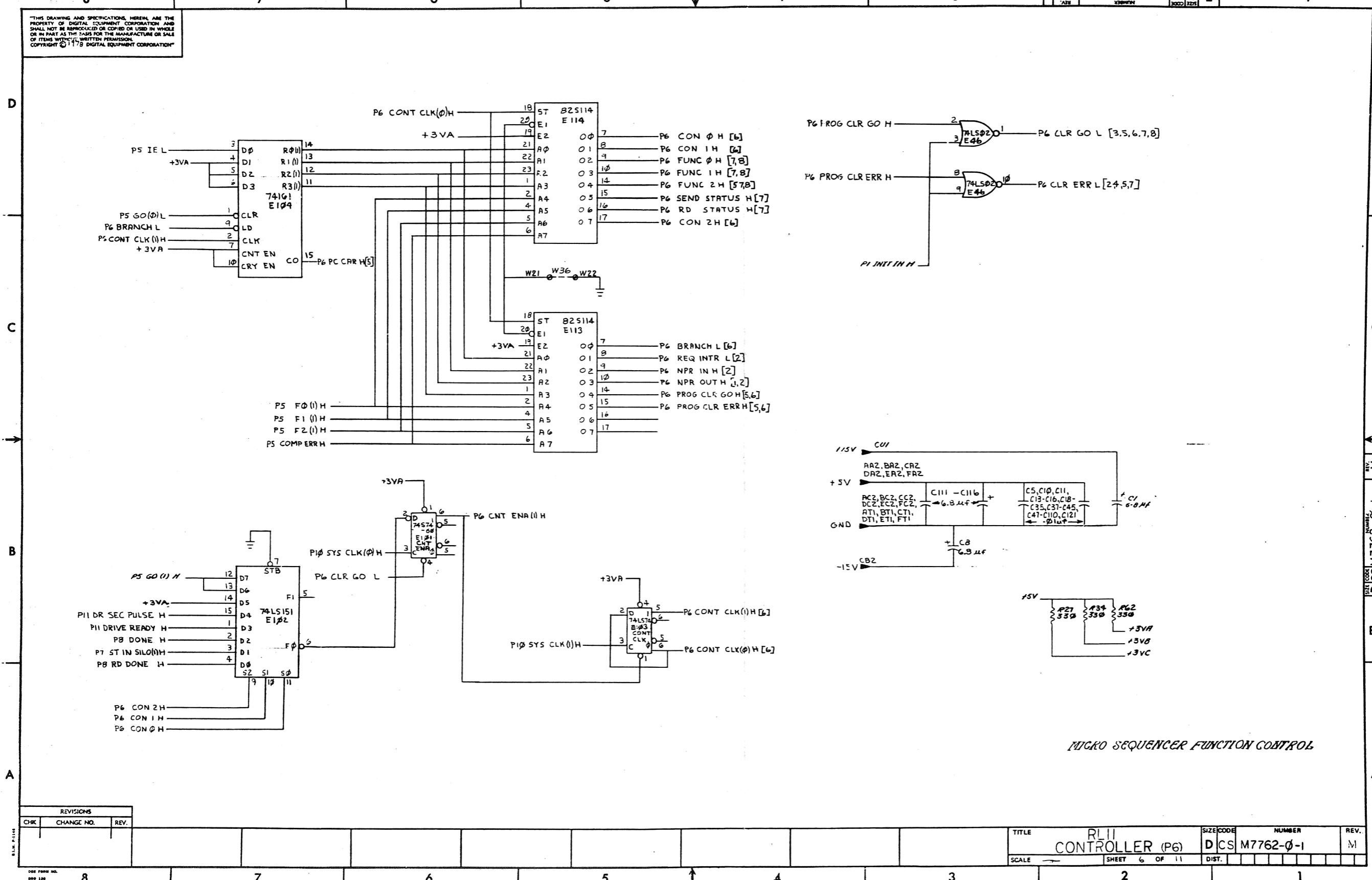
REVISED		
CHK	CHANGE NO.	REV.

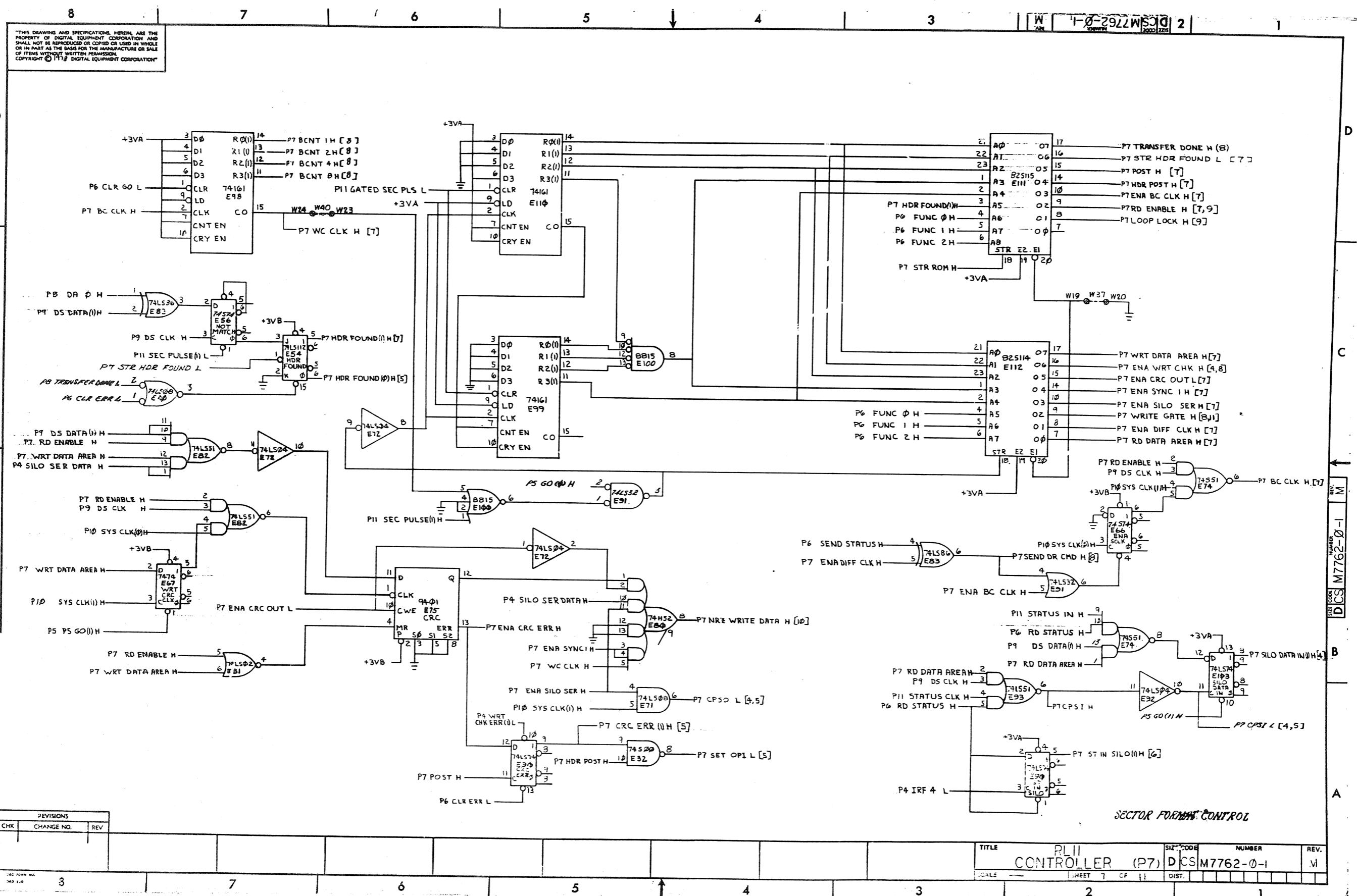
TITLE RLII CONTROLLER (P4)
 SIZE CODE DCS M7762-0-1
 SHEET 4 OF 11 DIST. 1
 SCALE 1:100 REV. V1

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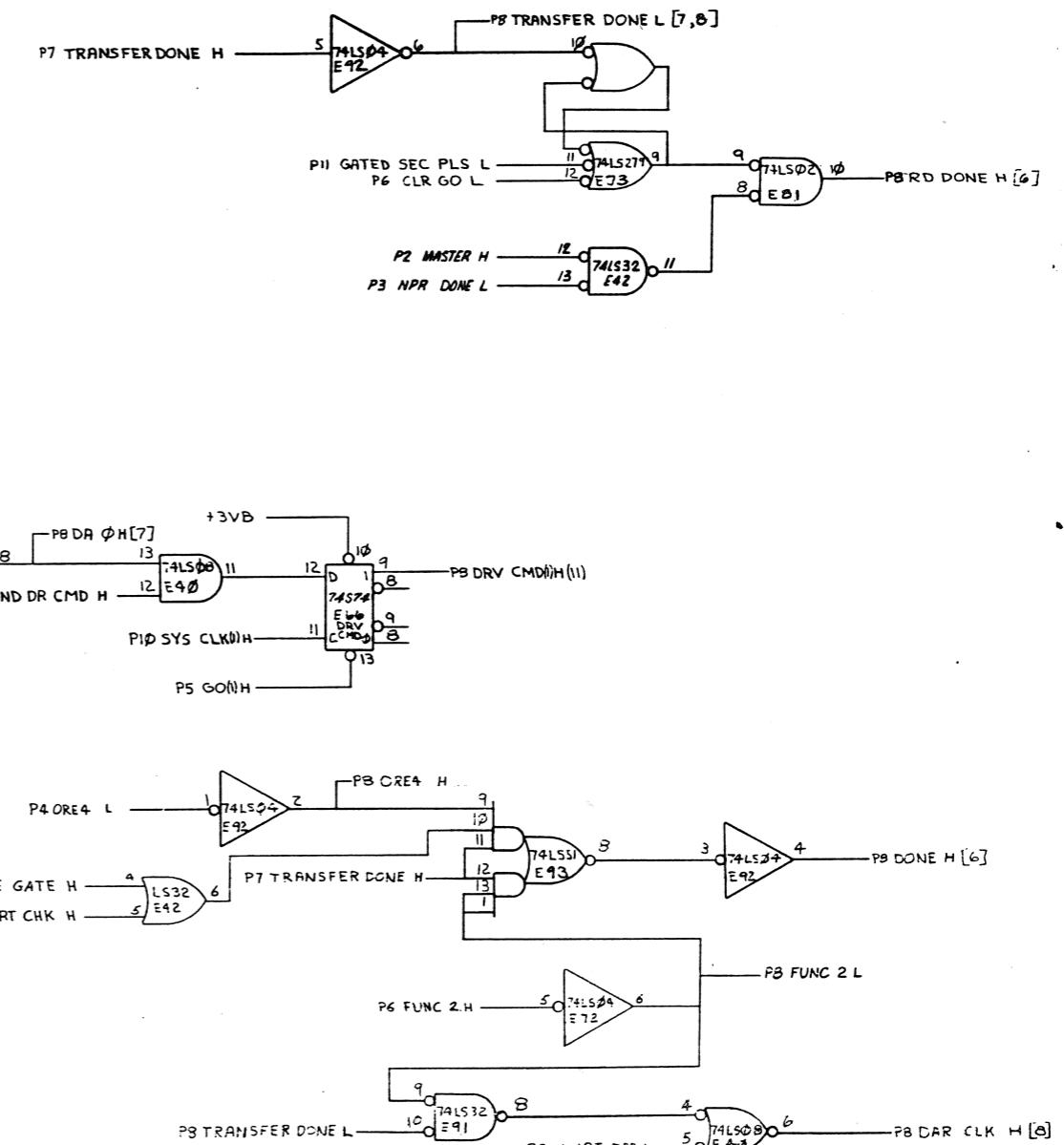
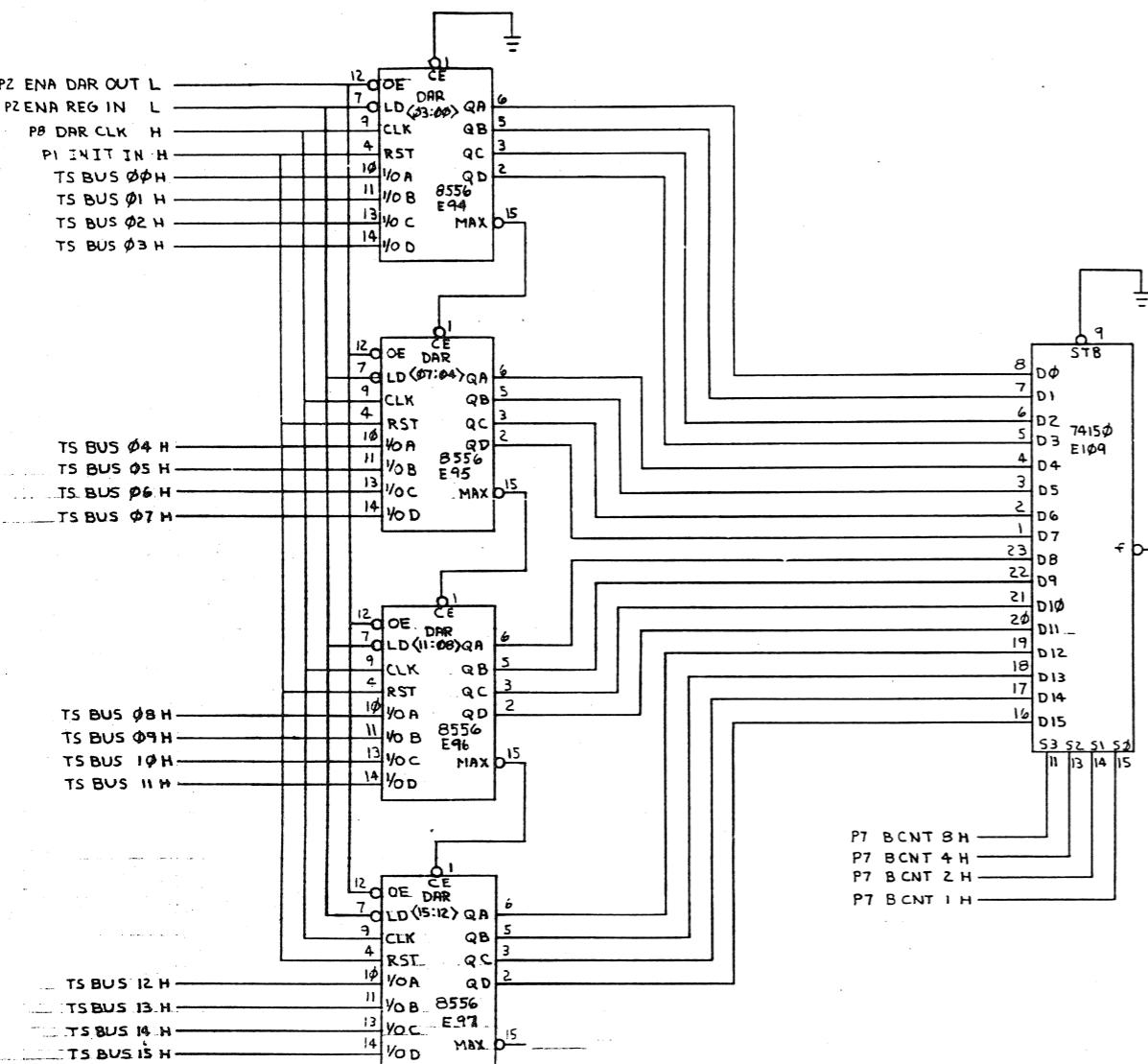
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D



DATA AND DRIVE COMMAND; FUNCTION TERMINATION

par → ser conv

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE PLII
CONTROLLER PAGE 1 DCS M7762-0-1
SCALE 1:1 SHEET 8 OF 11 DIST.

PRINTED BY DCS M7762-0-1

A

D

C

B

A

1

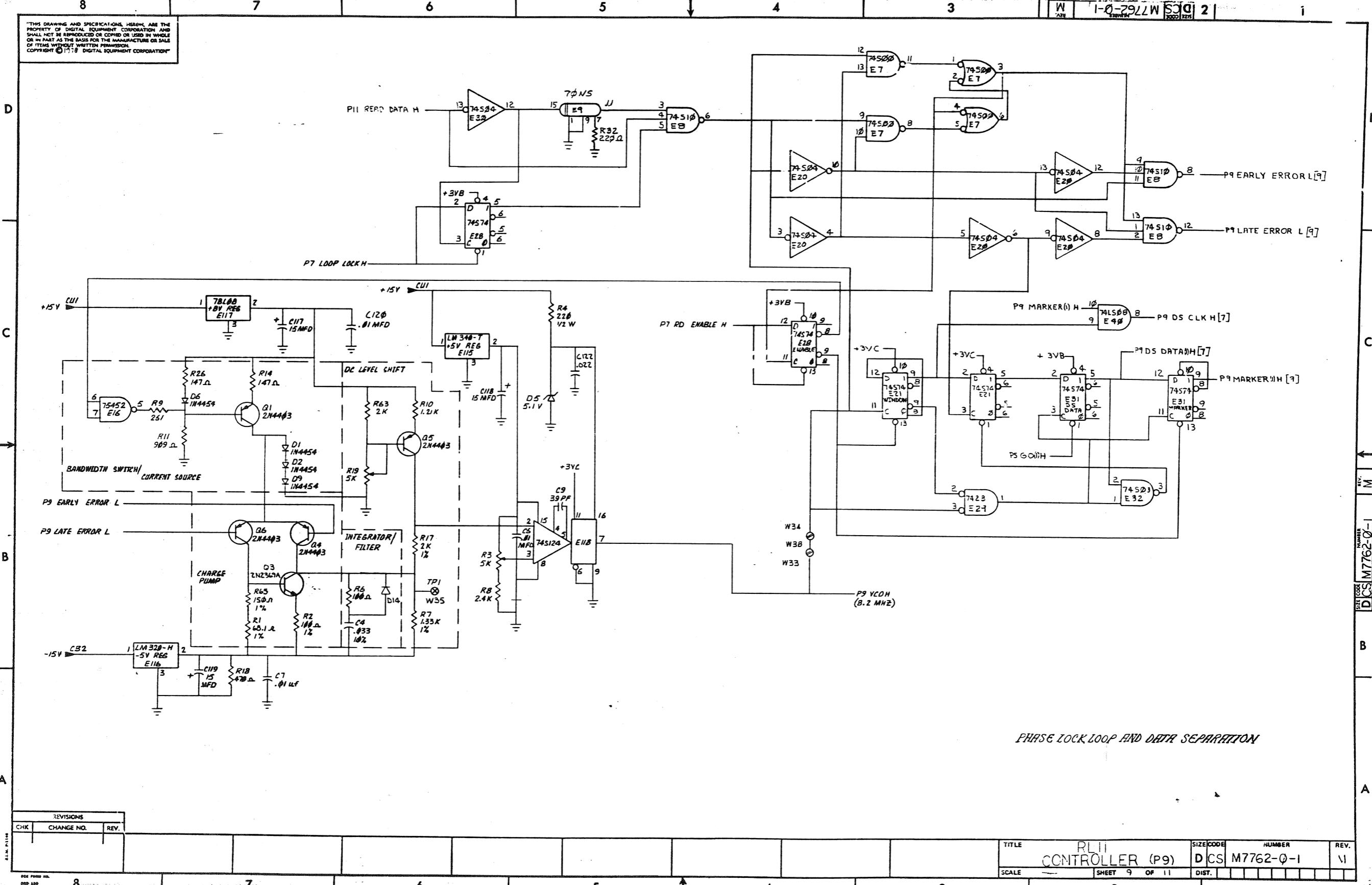
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M

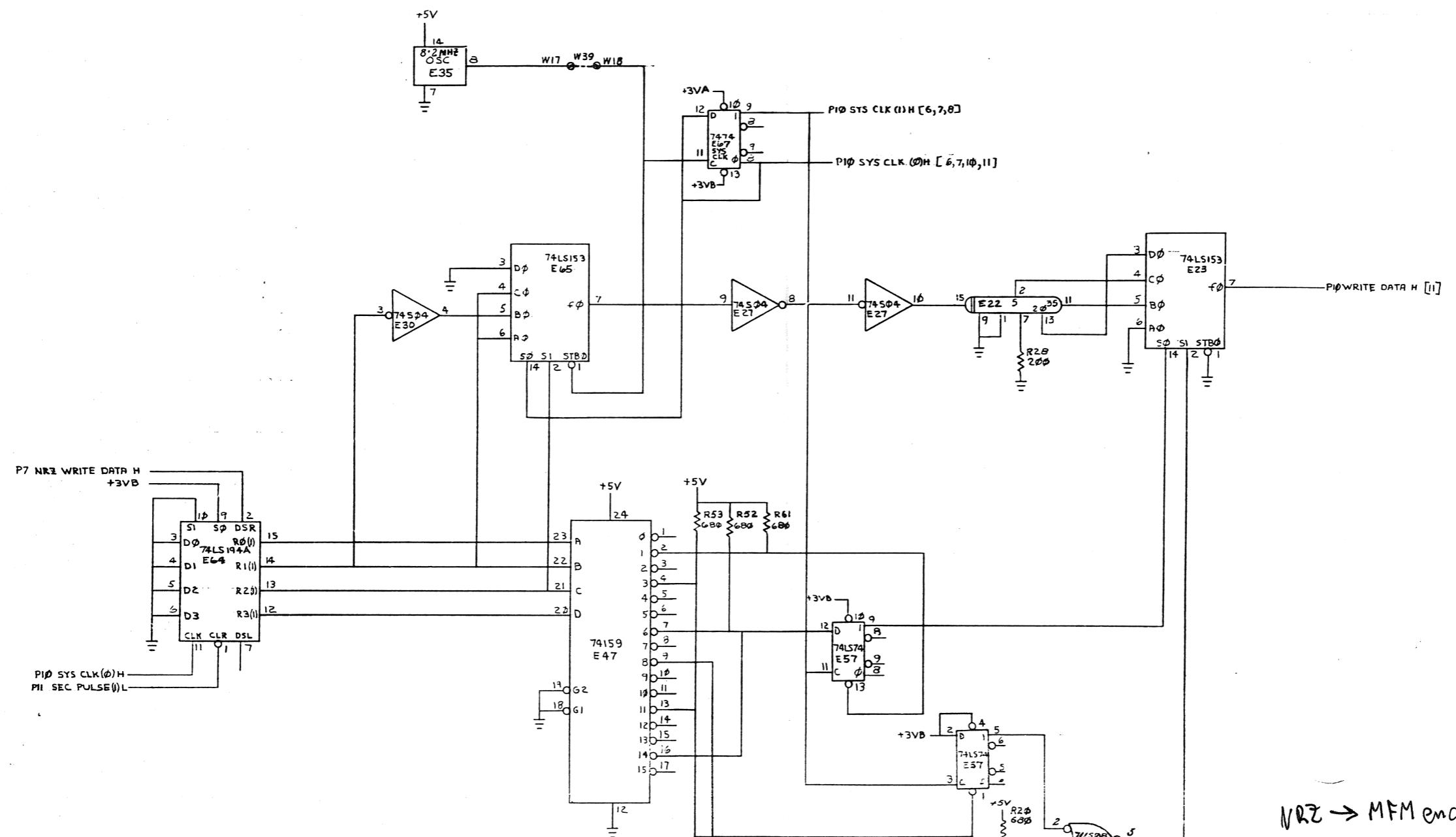
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1



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8 7 6 5 4 3 2 DCSM776-1 M 1



NRZ → MFM encoder

WRITE DATA ENCODE AND PRECOMPENSATION

REVISIONS		
CHK	CHANGE NO.	REV.

R-11 SIZE CODE NUMBER REV.
CONTROLLER (P1) D CS M 7762-0-1 M

AUTOMATED BY PRTLST, 3H(20)

P A R T S L I S T

SHEET A1 OF A3

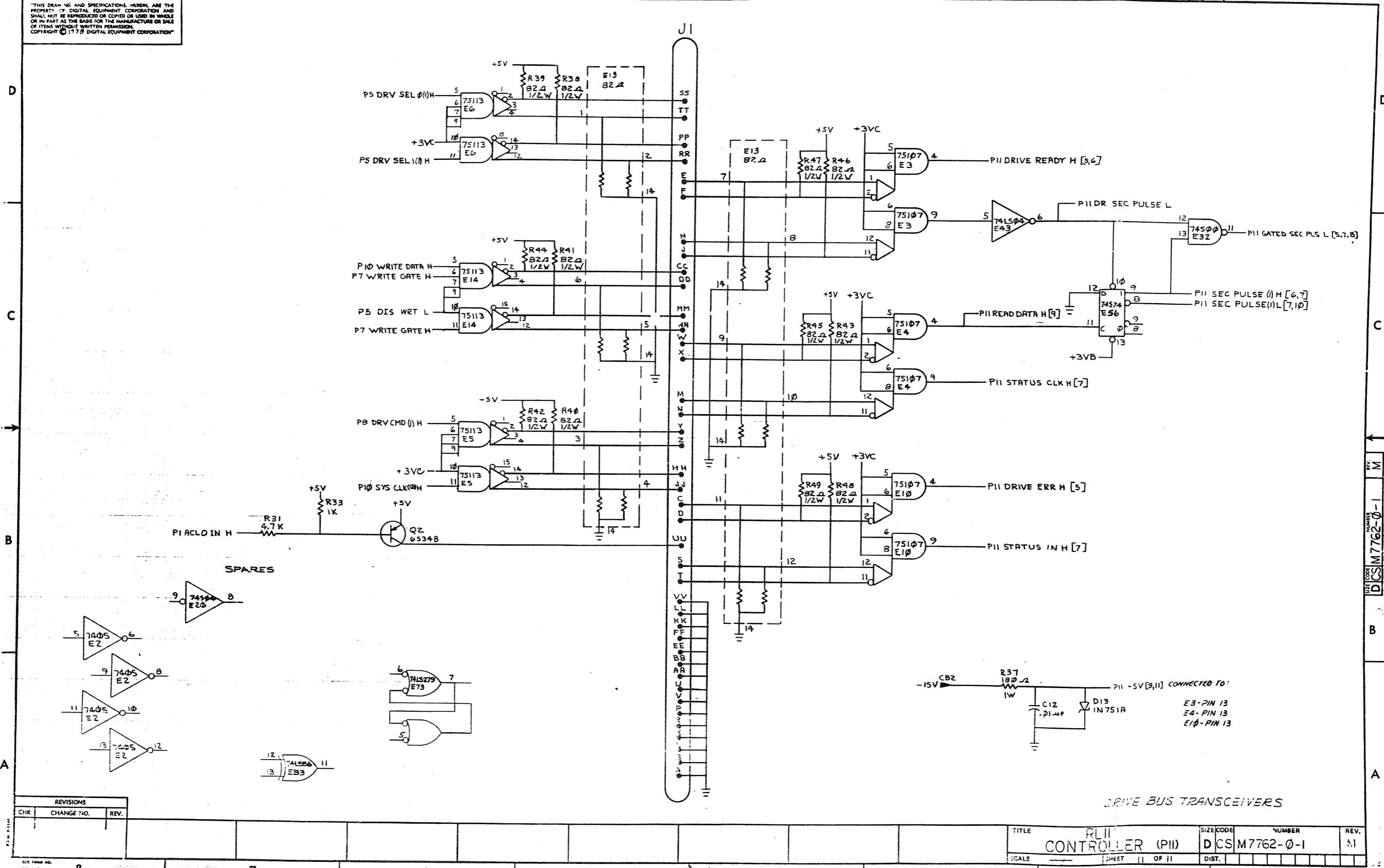
LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
1	1	D-MD-5014024-0-0	5014024-00	DRILL AND ETCH BRD	1		
2	2	EWS		RESISTOR,FINAL TEST, 1/4W, 1%	4		R115,R116,R118,R119
3	3		1000023-00	330.0 MMF 100V 5%200PPM DM158	4		C93,C106-C108
4	4		1000024-00	470.0 MMF 100V 5%200PPM DM158	1		C94
5	5		1000064-00	3.9MFD 10V 10% 150D S.TA	2		C76,C85
6	6		1000076-00	39 MFD 10V 10% 150D S.TA	4		C73,C78,C86,C95
7	7		1001610-00	.01 MFD 50V -20+80 Z5U AXIAL	74		C1-C6,C8-C39,C40-C45,C47-C49, C51-C53,C55-C68,C70,C71,C77, C79-C82,C84,C88,C104 C74,C75,C92,C97
8	8		1001776-00	1 MFD 35V 10% S.TANT	4	CONT	
9	9		1004812-00	15 MFD 20V 10% S.TANT	1	CONT	
10	10		1005784-00	.01 MFD 100V 10% 663VW MYLR	1		C87
11	11		1010978-32	.047 MFD 50V 10% 2C067CER.	1		C101
12	12		1013466-07	220.0 MMF 50V 5% CER.	1		C96
13	13		1013466-08	680.0 MMF 50V 10% CER.	2		C91
14	14		1013466-09	1000.0 MMF 50V 10% CER.	1		C89,C90
15	15		1013466-10	3300.0 MMF 50V 5% CER.	4		C83
16	16		1013466-11	.22 MFD 50V +80/-20% CER.	2		C98,C100,C103,C105
17	17		1111577-00	1N 4454 TR= 4NS PIV= 50 S	16		C99,C102
18	18		1113953-00	1N 5523D VZ= 5.1 1%	1		D1,D7-D20,D22
19	19		1114117-00	1N 4152 PIV=450 I=75M	5		D21
20	20		1209941-02	HEADER 100 40POS RT ANGLE	1		D2-D6
21	21		1209941-03	HEADER RT ANGLE LEFT L	5		J12
22	22		1209941-04	HEADER RT ANGLE,RIGHT	5		
23	23		1209941-05	HEADER 100 10POS RT ANGLE	1		J11
24	24		1209941-06	HEADER 100 20POS RT ANGLE	3		J4-J6
25	25		1210385-01	PIN 1POS WIRE WRAP	10		TP17-TP26
26	26		1213922-02	HEADER 3POS	1		J14
27	27		1213922-04	HEADER 6POS	1		J2
28	28		1300229-00	100 1/4W 5%	CC 5		R48,R133-R134

REVISION HISTORY		BASIC PART NO: 5414025	DRN:	ART SIMM	DATE: 18-APR-79	D	I	G	I	T	A	L					
ENG	ECO NUMBER	REV	SECTION A OF A			TITLE		PARTS LIST									
INITIAL	A	SECTION.VARIATION INDEX	CHK'D:	P. KENDRICK	DATE: 18-APR-79	DRIVE LOGIC											
		[A]				DOCUMENT NUMBER											
		[B]				SIZE CODE NUMBER											
		[C]		DES.ENG: MIKE BROWN	DATE: 18-APR-79												
		[D]				REV											
		[E]															
		[F]		RESP.ENG.: MIKE BROWN	DATE: 18-APR-79												
		[G]															
		[H]															
		[I]															
		[J]															
		[K]		MFG.ENG.: D. LICK	DATE: 18-APR-79	K	PL	5414025-0-DBP			A						
		[L]															
		[M]		ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:			FILE NAME:			EDIT #						
		[N]		D-UA-5414025-0-0	#RL02			Z0496A.PLS			16						

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D
size 2



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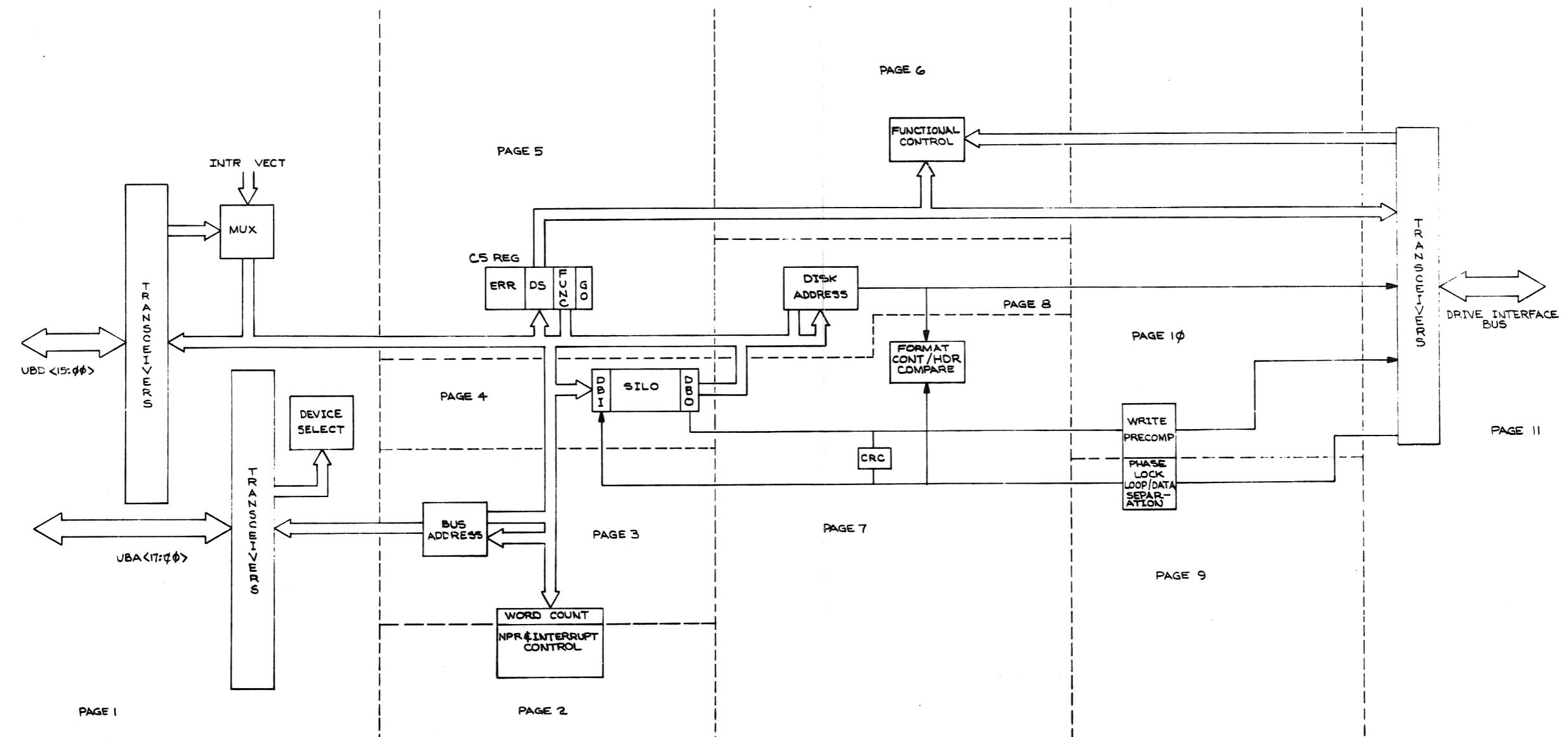
NOTES:

- SIGNAL NAMES HAVE THE FORM
PP NAME X [N]

PREFIX PP \Rightarrow UB - UNIBUS SIGNAL LINE
TS - TRISTATE SIGNAL WITH MORE THAN ONE ORIGIN
PM - INTERNAL SIGNAL WHOSE ORIGIN IS ON PAGE NUMBER M

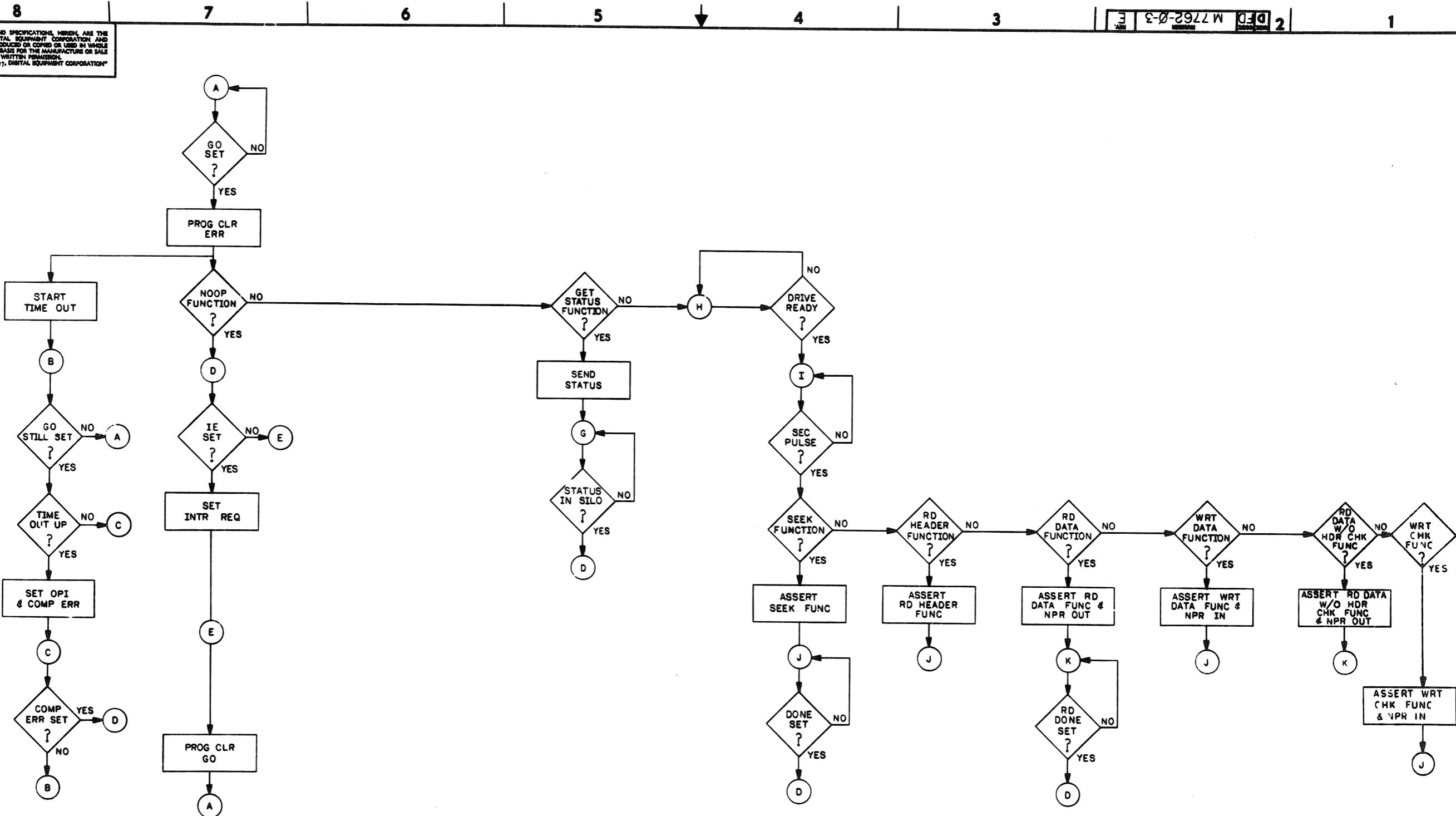
SUFFIX X \Rightarrow ASSERTED LEVEL OF SIGNAL (H OR L)

[N] \Rightarrow APPEARS AT SIGNAL ORIGIN.
N IS PAGE NUMBER OF DESTINATION.



DRN: DD-Ang-12	3/3/77	FIRST USED ON	RLII	digital
CHK'D: John Sire	3/3/77	TITLE		
ENG: John Sire	3/3/77		RLII CONTROLLER	
PROJ. ENG: N. T. C. H. T.			BLOCK DIAGRAM	
PROD: P. A. F. A. T.				
NEXT HIGHER ASSY:				
B-DD-M7762-0		SIZE	CODE	NUMBER
SCALE		D	BD	M7762-0-2
SHEET	1	OF	1	REV. D
			DIST.	

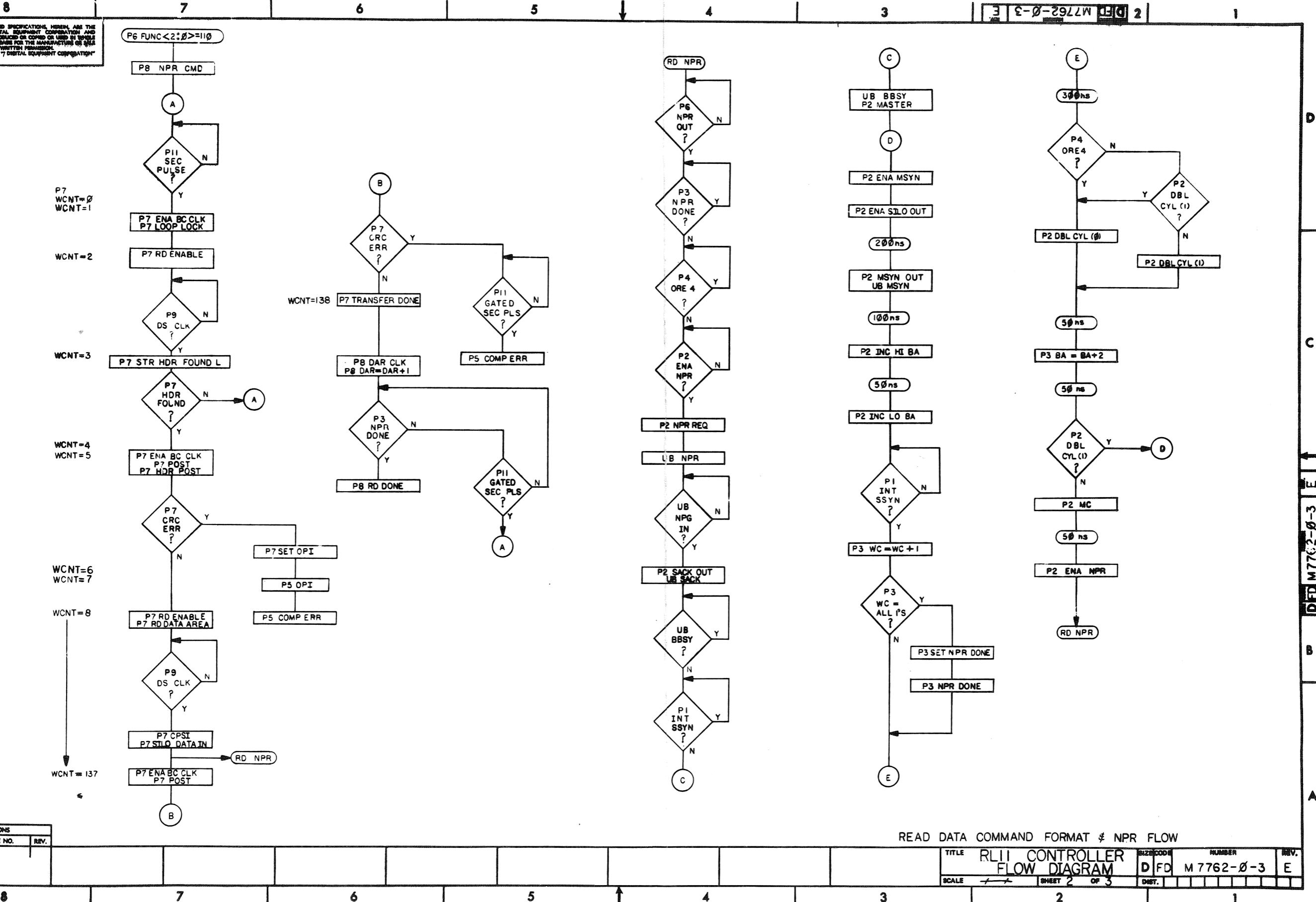
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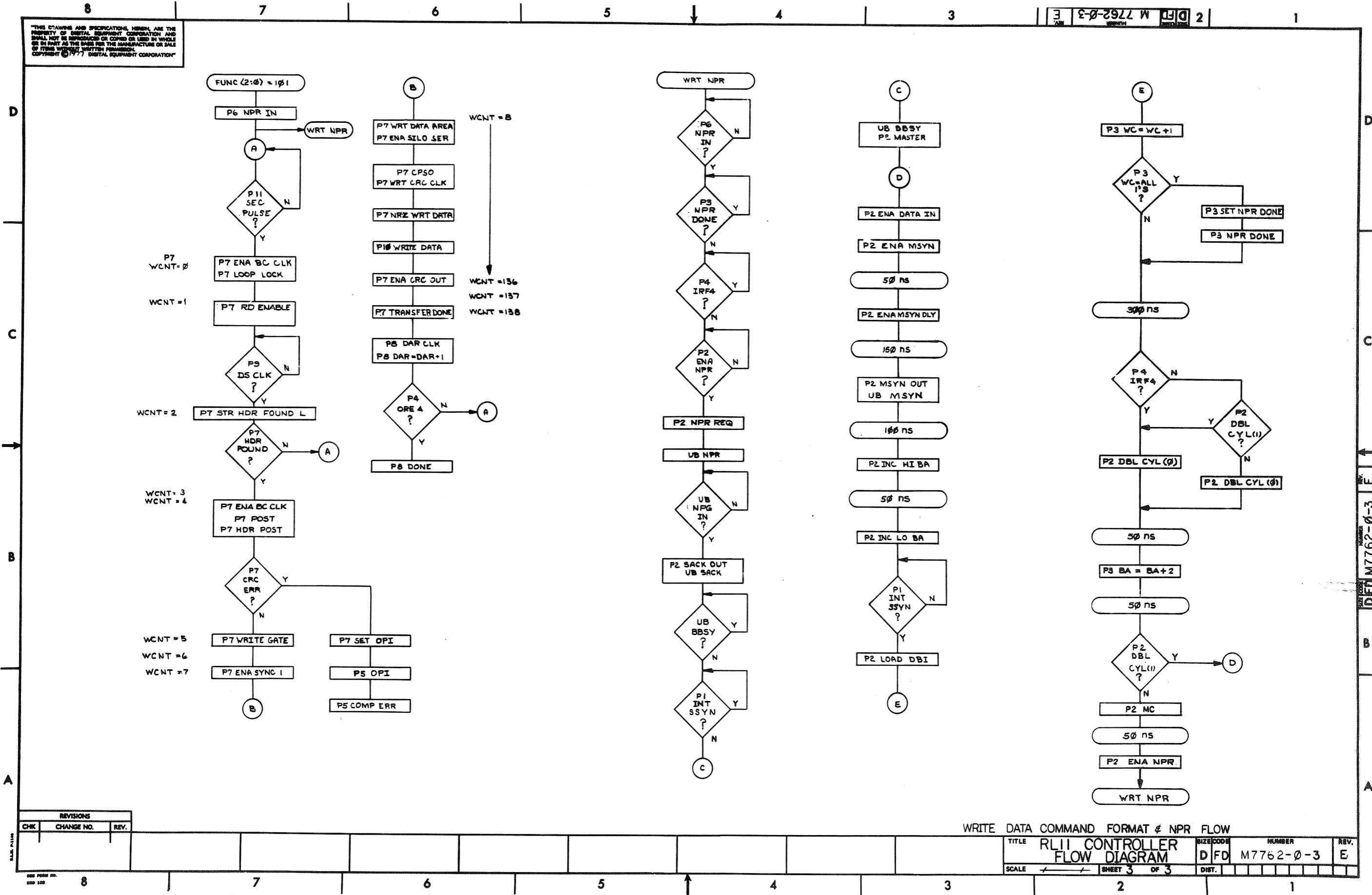


REVISIONS	
CHE	CHNAGE NO. 00001
CHE	DATE 23 SEPT 77
C. LIU	C. LIU
C. LIU	C. LIU

FUNCTION CONTROL FLOW

DRN. 01	3-4-77	FIRST USED ON	RLII	Digitized
CHKD	John Liu	8/6/77		
ENG.	John Liu	8/6/77	TITLE	RLII CONTROLLER FLOW DIAGRAM
PROJ. ENG.	John Liu	8/6/77		
PROD.	John Liu	8/6/77		
NEXT HIGHER ASY.				
B-00-M7762-0	SIZE	CODE	NUMBER	
SCALE	D	FD	M7762-0-3	REV E
SHEET	OF 3			DIST.





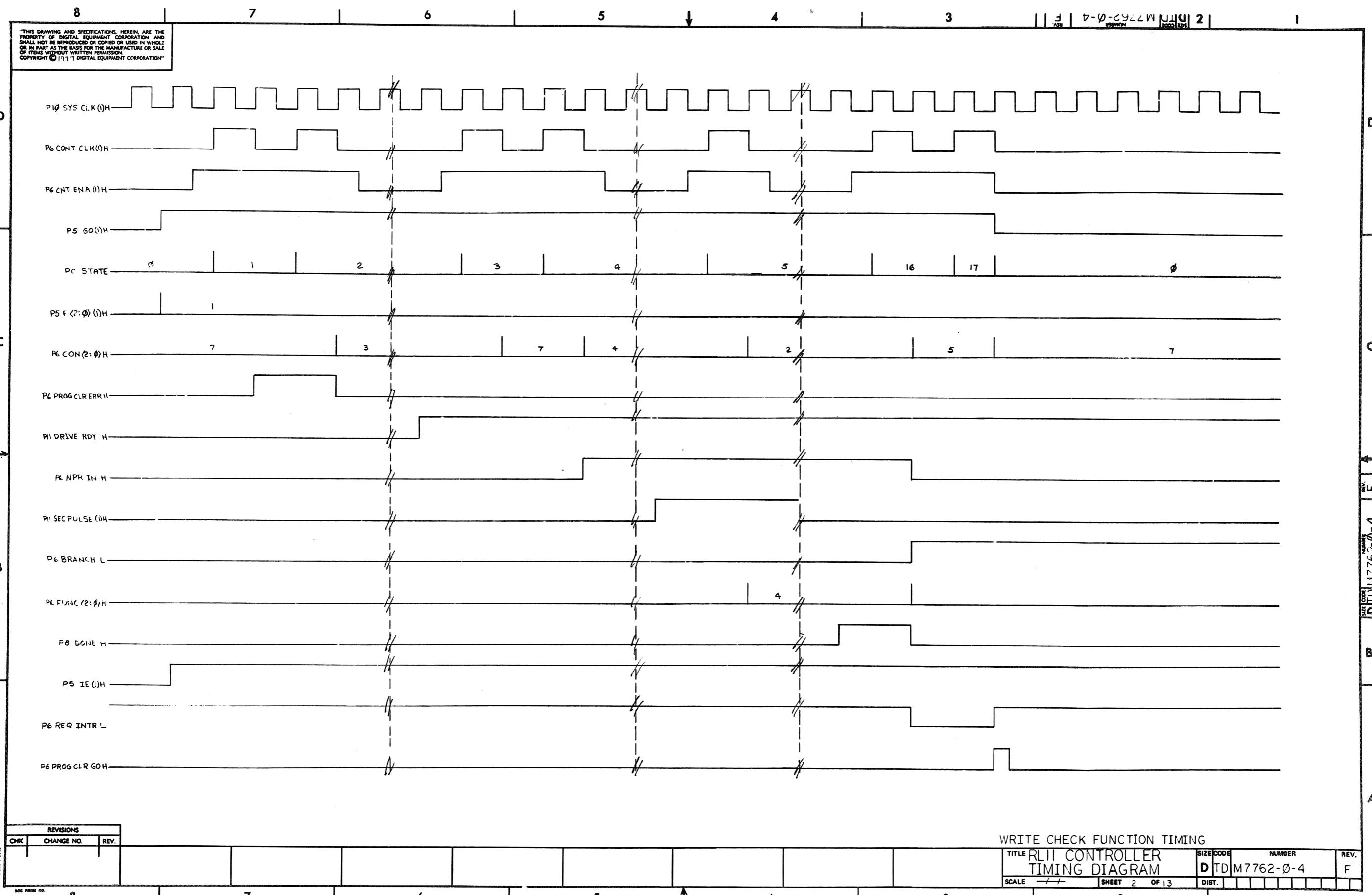
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The figure displays a series of digital signal waveforms. The top row shows P10 SYS CLK (I) H and P6 CONT CLK (I) H. P10 SYS CLK is a continuous square wave. P6 CONT CLK has four active-low pulses. Below these are P6 CNT ENA (I) H, P5 GO (I) H, and PC STATE. P6 CNT ENA is high during the P6 CONT CLK pulses. P5 GO is high during the P6 CONT CLK pulses. PC STATE is labeled with states 0, 1, 16, 17, and 0. Below these are F5 F<2:0> (I) H, P6 CON<2:0> H, P6 BRANCH L, P6 FROG CLR ERR H, P5 IE (I) H, P6 REL INTR L, and P6 FROG CLR GO H. F5 F<2:0> has two high-to-low transitions. P6 CON<2:0> has three high-to-low transitions. P6 BRANCH L has two low-to-high transitions. P6 FROG CLR ERR H has one high-to-low transition. P5 IE is high during the P6 CONT CLK pulses. P6 REL INTR L has two low-to-high transitions. P6 FROG CLR GO H has one high-to-low transition.

WITH IE SET

WITHOUT IE SET

NO OP FUNCTION TIMING		RLII		200000
DRN. S.D.	3-4-77			
CHK'D	John Doe			
ENG.	John Doe			
PROJ. ENG.	John Doe			
PROD.	John Doe			
TITLE				
RLII CONTROLLER TIMING DIAGRAM				
NEXT HIGHER ASSY.				
S-DD-M7762-0		SIZE	CODE	NUMBER
SCALE		D	TD	M7762-0-4
SHEET		DRAFT.		REV. F
1 OF 13				1



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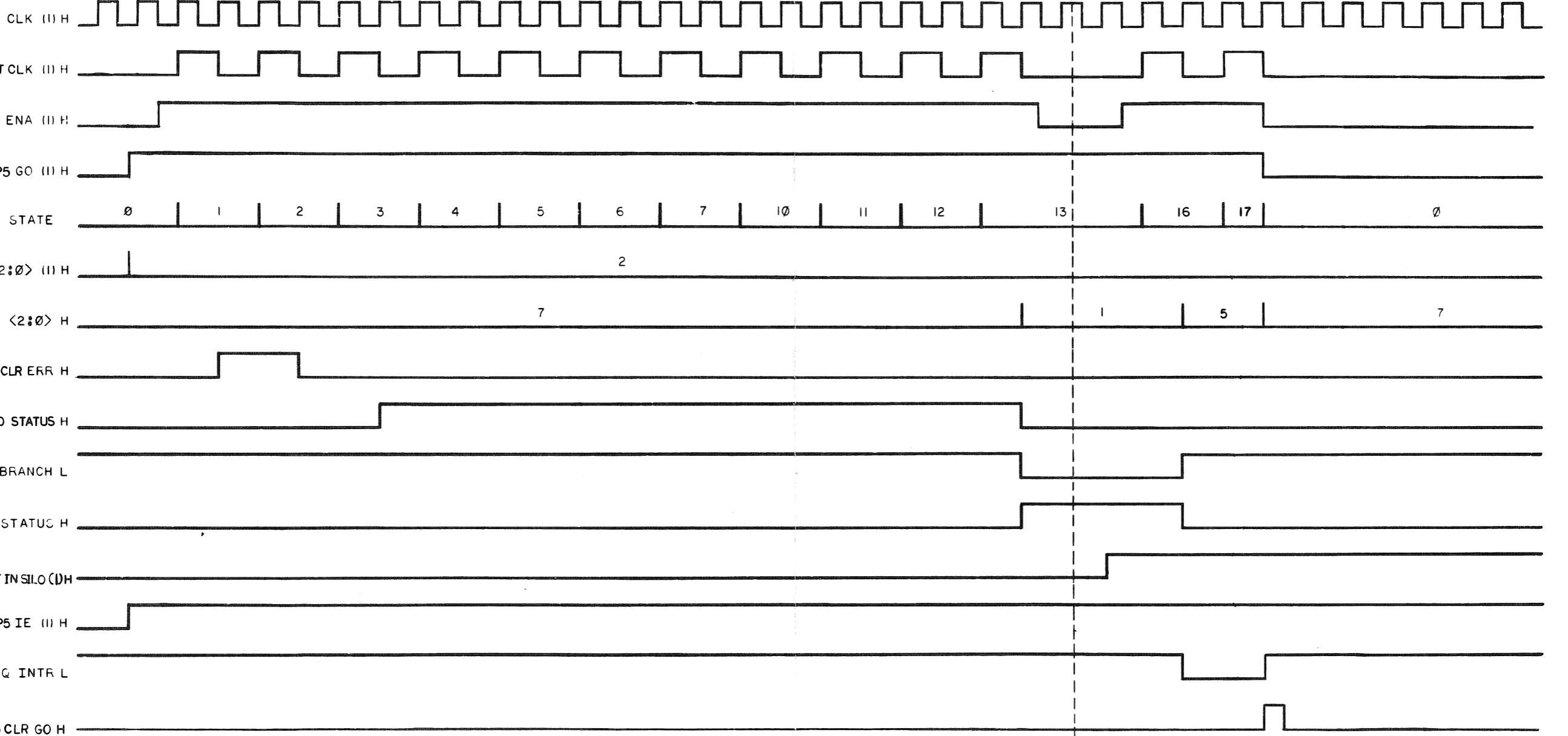
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REVISIONS		
CHK	CHANGE NO.	REV.

GET STATUS FUNCTION TIMING

RLLI CONTROLLER
TIMING DIAGRAM

SCALE / / / SHEET 3 OF 13 DIST. / / /

SIZE CODE D TD M7762-0-4 NUMBER F