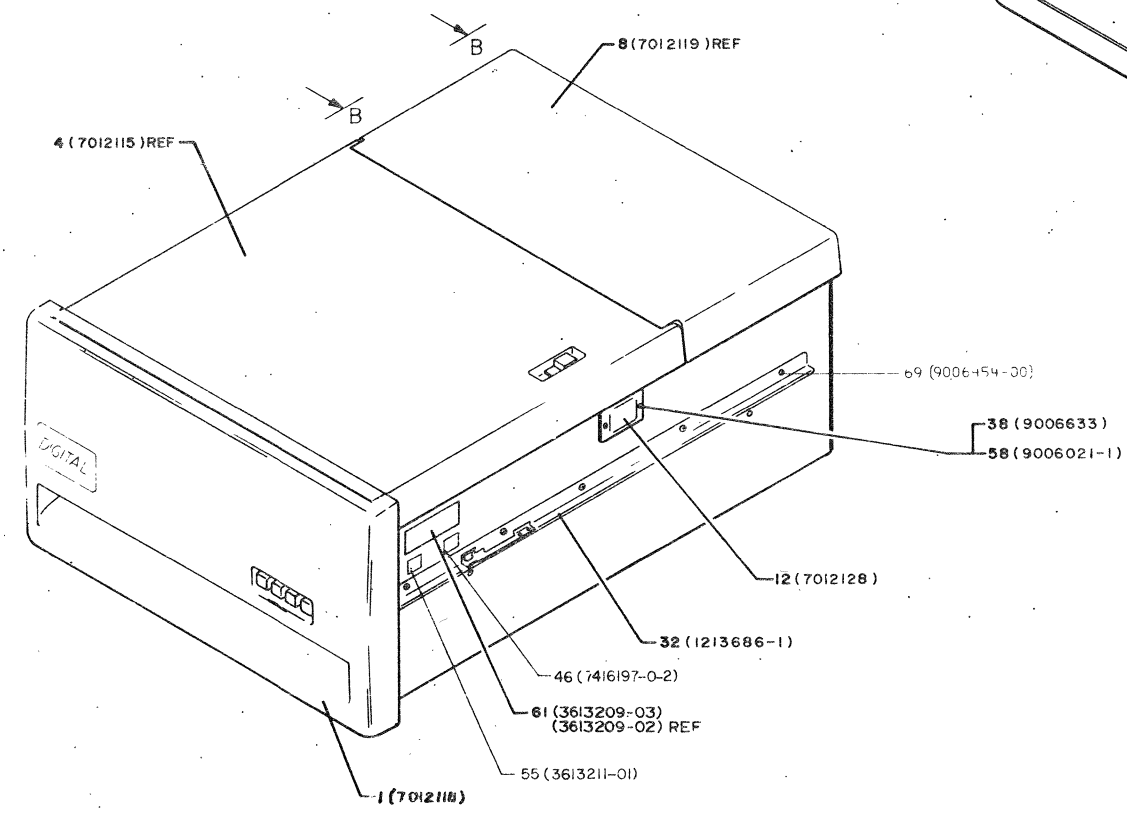
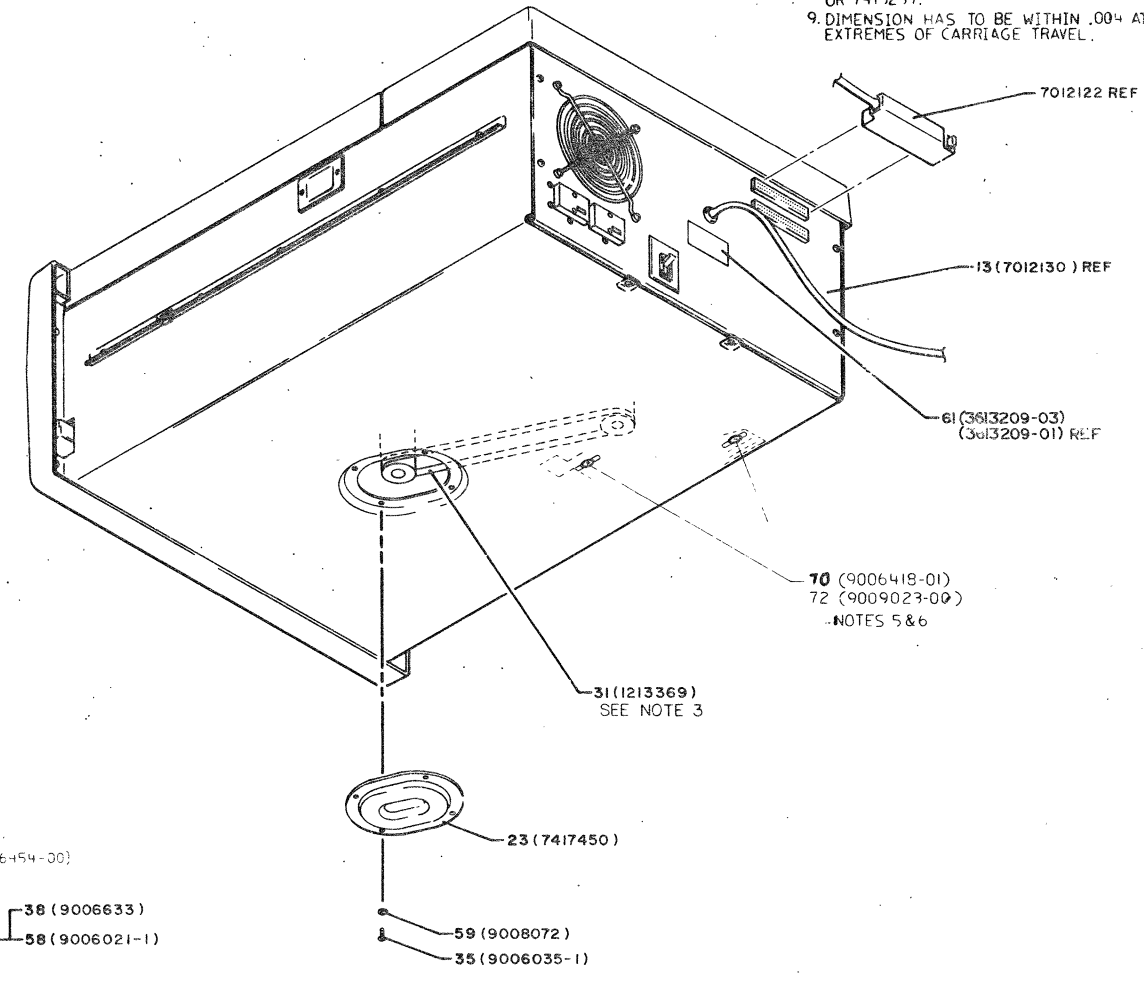
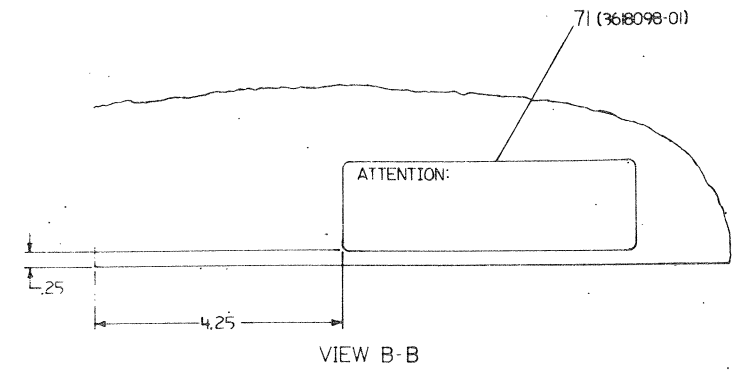




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- NOTES:**
1. LOWER HEAD (ITEM 65) SHALL BE POSITIONED REARWARDS AGAINST PIN IN CARRIAGE
  2. ALL SCREWS TO BE TIGHTENED AS FOLLOWS:  
 4-40 SCREW, TORQUE 3.5 ± 0.5 IN LBS  
 6-32 " " " 5.0 ± 1.0 " "  
 8-32 " " " 10.0 ± 1.0 " "  
 10-32 " " " 18.0 ± 2.0 " "
  3. DRIVE BELT TENSION 10.0 ± 1.0 LBS
  4. 4-40 HEAD MTG BOLTS TO BE TIGHTENED TO 5.0 ± 0.5 IN LBS.
  5. TORQUE B 32 SELF TAPPING HARDWARE (ITEM 70) TO 16-18 IN-LBS.
  6. BLOWER HOUSING SECURING HARDWARE TO BE REMOVED BEFORE OPERATING UNIT.
  7. DIMENSION APPLIES TO HIGHEST OR LOWEST POINT ALONG BRUSH ARM OR BLOCK OF BRUSH.
  8. THREE (3) TOOLING POINTS, SEE DRAWING 7416846 OR 7415237.
  9. DIMENSION HAS TO BE WITHIN .004 AT BOTH EXTREMES OF CARRIAGE TRAVEL.

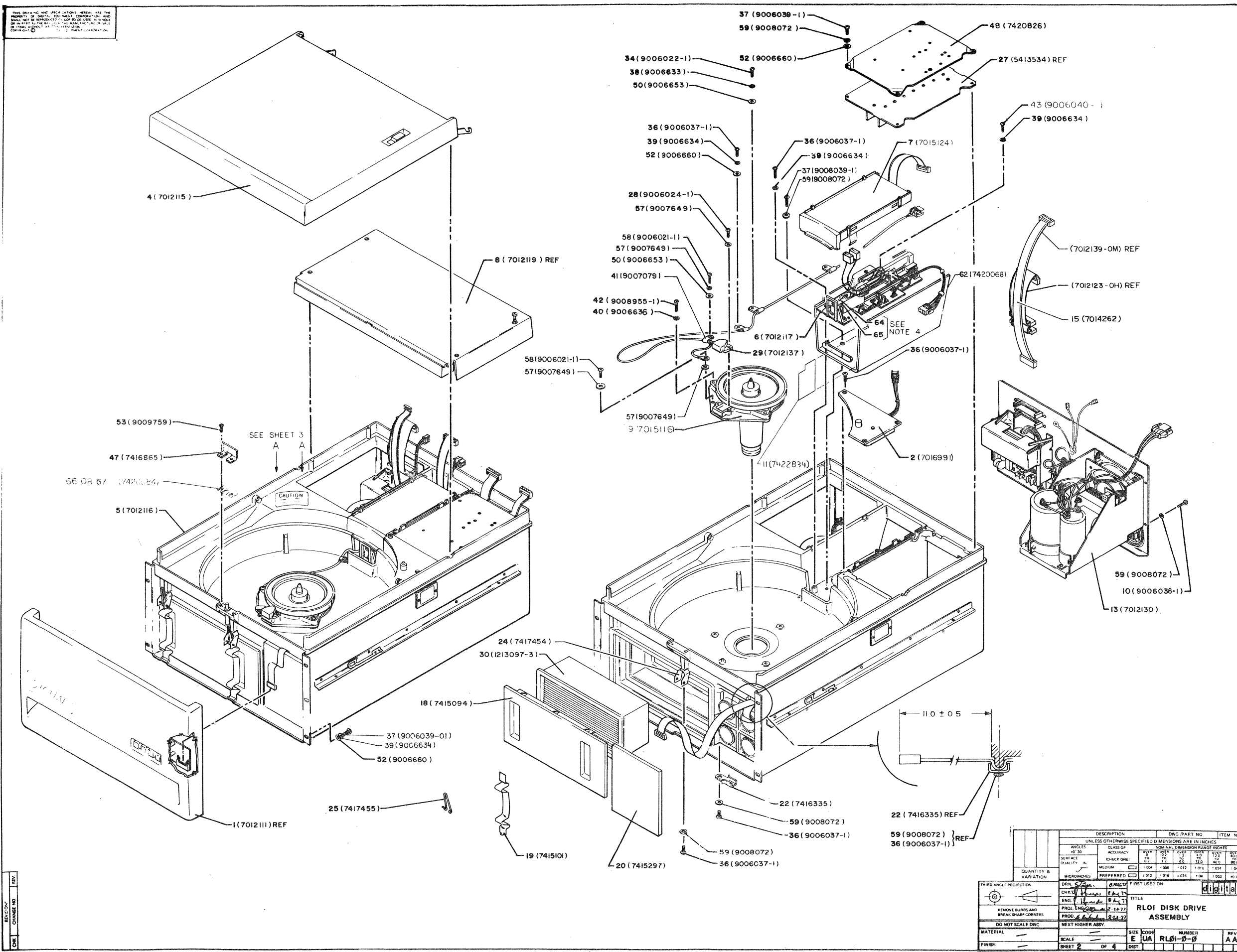


CAUTION: OFF-SHEET PARTS LIST EXISTS. SEE K-PL-RL01-0-DBP (21720A).

REV.	DATE	BY	CHKD	DESCRIPTION
A		RL01-0001		RELEASED
B		RL01-0002		REV A
C		RL01-0003		REV B
D		RL01-0004		REV C
E		RL01-0005		REV D
F		RL01-0006		REV E
G		RL01-0007		REV F
H		RL01-0008		REV G
I		RL01-0009		REV H
J		RL01-0010		REV I
K		RL01-0011		REV J
L		RL01-0012		REV K
M		RL01-0013		REV L
N		RL01-0014		REV M
O		RL01-0015		REV N
P		RL01-0016		REV O
Q		RL01-0017		REV P
R		RL01-0018		REV Q
S		RL01-0019		REV R
T		RL01-0020		REV S
U		RL01-0021		REV T
V		RL01-0022		REV U
W		RL01-0023		REV V
X		RL01-0024		REV W
Y		RL01-0025		REV X
Z		RL01-0026		REV Y
AA		RL01-0027		REV Z

QUANTITY & VARIATION	DESCRIPTION	DWG PART NO	ITEM NO.
1	DRIVE BELT	7012122	
1	SCREW	13	
1	SCREW	61	
1	SCREW	70	
1	SCREW	31	
1	SCREW	23	
1	SCREW	59	
1	SCREW	35	
1	SCREW	4	
1	SCREW	8	
1	SCREW	69	
1	SCREW	38	
1	SCREW	58	
1	SCREW	12	
1	SCREW	32	
1	SCREW	46	
1	SCREW	61	
1	SCREW	55	
1	SCREW	1	

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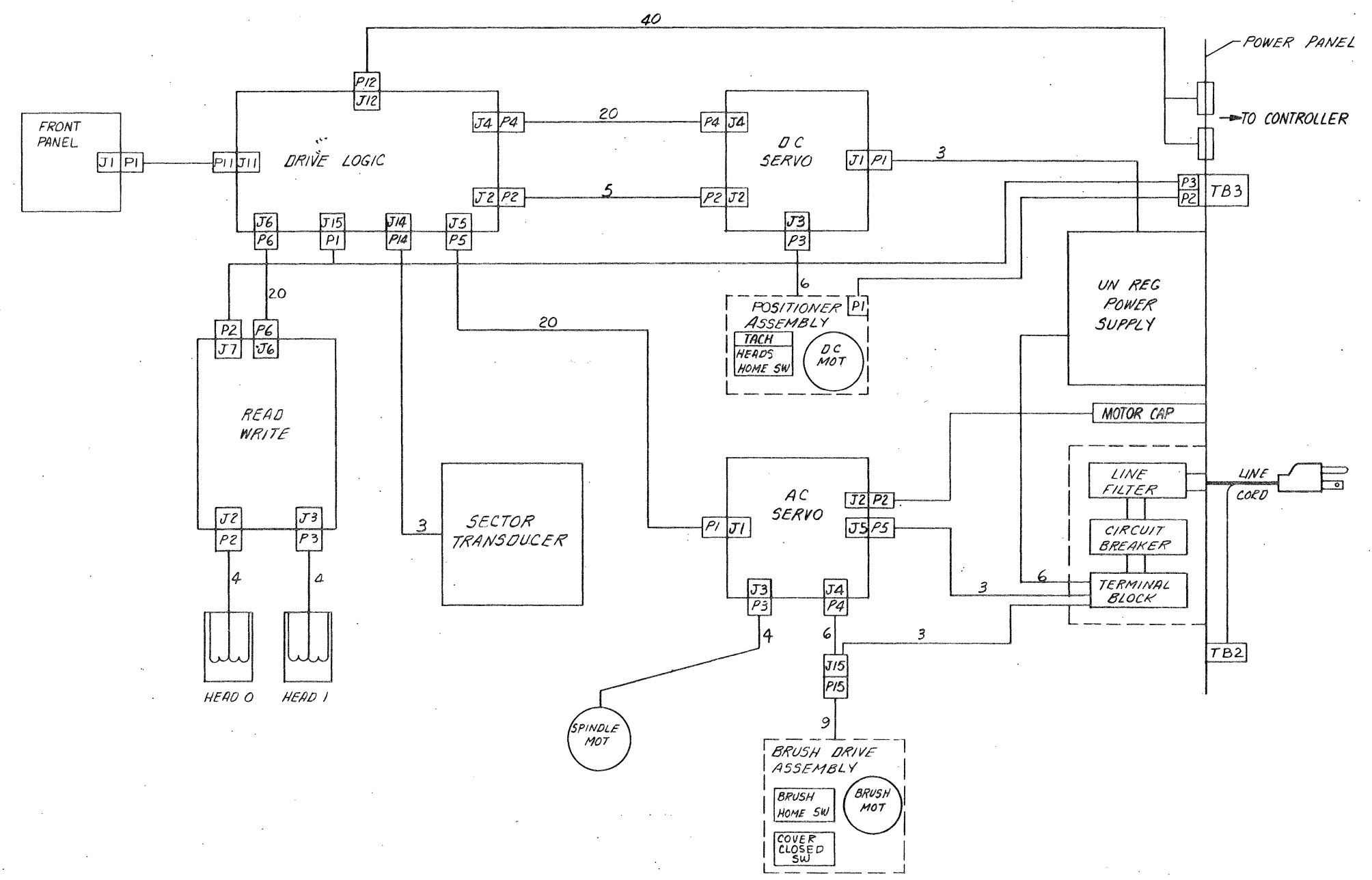
REV. NO. CHANGE NO. BY

DESCRIPTION		DWG. PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
ANGLES	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES	
SURFACE	CHECK ONE	0.015	0.015
QUALITY	IN	0.005	0.005
	MEDIUM	0.004	0.004
	PREFERRED	0.003	0.003
		0.002	0.002
		0.001	0.001
THIRD ANGLE PROJECTION	DRN	FIRST USED ON	
REMOVE BURRS AND BREAK SHARP CORNERS	CHKD	TITLE	
DO NOT SCALE DWG	ENGR	RLOI DISK DRIVE ASSEMBLY	
MATERIAL	SCALE	SIZE	NUMBER
FINISH	SHEET 2 OF 4	E UA	RL01-0-0
		REV	AA





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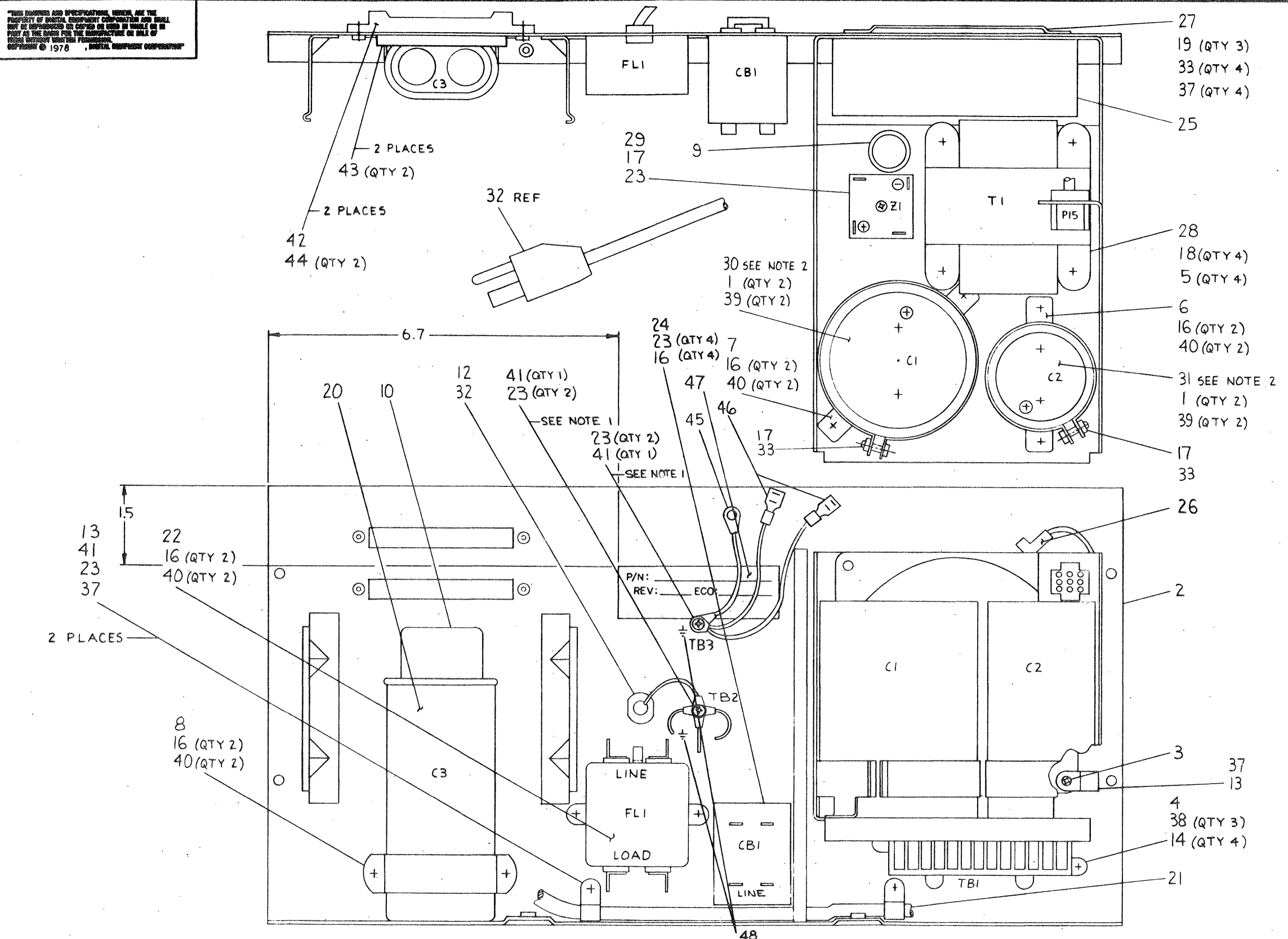


REV.	
CHANGE NO.	
CHK	

QUANTITY & VARIATION	DESCRIPTION	DWG./PART NO.	ITEM NO.												
THIRD ANGLE PROJECTION	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES														
REMOVE BURRS AND BREAK SHARP CORNERS	ANGLES ±0° 30'	CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE INCHES												
DO NOT SCALE DWG	SURFACE QUALITY IN	MEDIUM	<table border="1"> <tr> <th>OVER 0 TO 0.2</th> <th>OVER 0.2 TO 1.2</th> <th>OVER 1.2 TO 4.0</th> <th>OVER 4.0 TO 12.0</th> <th>OVER 12.0 TO 40.0</th> <th>OVER 40.0 TO 80.0</th> </tr> <tr> <td>±.004</td> <td>±.008</td> <td>±.012</td> <td>±.016</td> <td>±.024</td> <td>±.04</td> </tr> </table>	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	±.004	±.008	±.012	±.016	±.024	±.04
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										
±.004	±.008	±.012	±.016	±.024	±.04										
MATERIAL	MICROINCHES	PREFERRED	<table border="1"> <tr> <td>±.012</td> <td>±.016</td> <td>±.025</td> <td>±.04</td> <td>±.063</td> <td>±0.1</td> </tr> </table>	±.012	±.016	±.025	±.04	±.063	±0.1						
±.012	±.016	±.025	±.04	±.063	±0.1										
FINISH	DRN. R. H. 9-27-77	CHK'D. 10/11/77	ENG. 9-30-77												
	PROJ. ENG. 10/11/77	PROD. 10/11/77													
	FIRST USED ON RL01														
	TITLE RL01 SYSTEM CABLING														
	NEXT HIGHER ASSY.														
	B-DD-RL01-0														
	SCALE														
	SHEET 2 OF 2														
	SIZE	CODE	NUMBER												
	D	IC	RL01-03												
	DIST.		REV. D												

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NOTES:  
 1. INT TOOTH LOCK WASHERS (ITEM 23) ARE USED OVER AND UNDER GROUND TERMINALS.  
 2. ORIENT TERMINALS AS SHOWN.



CAUTION: OFF SHEET PARTS LIST EXISTS. SEE K-PL-7012130-0-DBP (ZØ849)

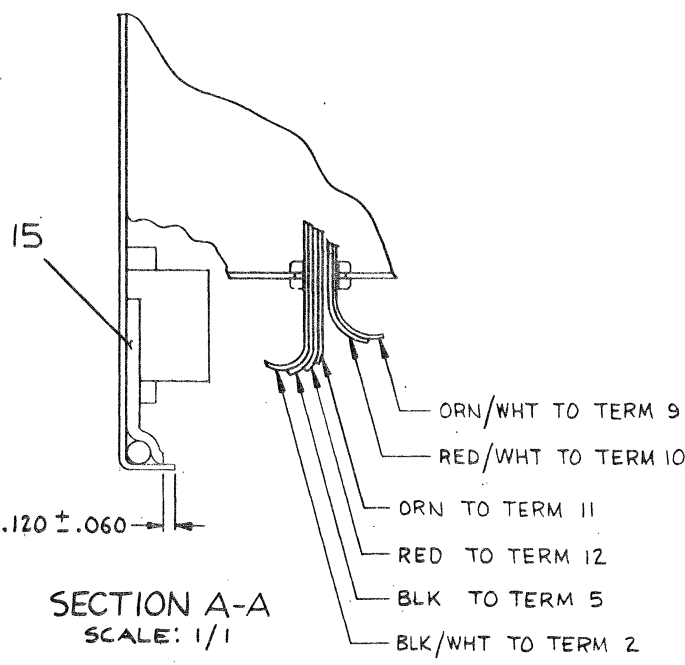
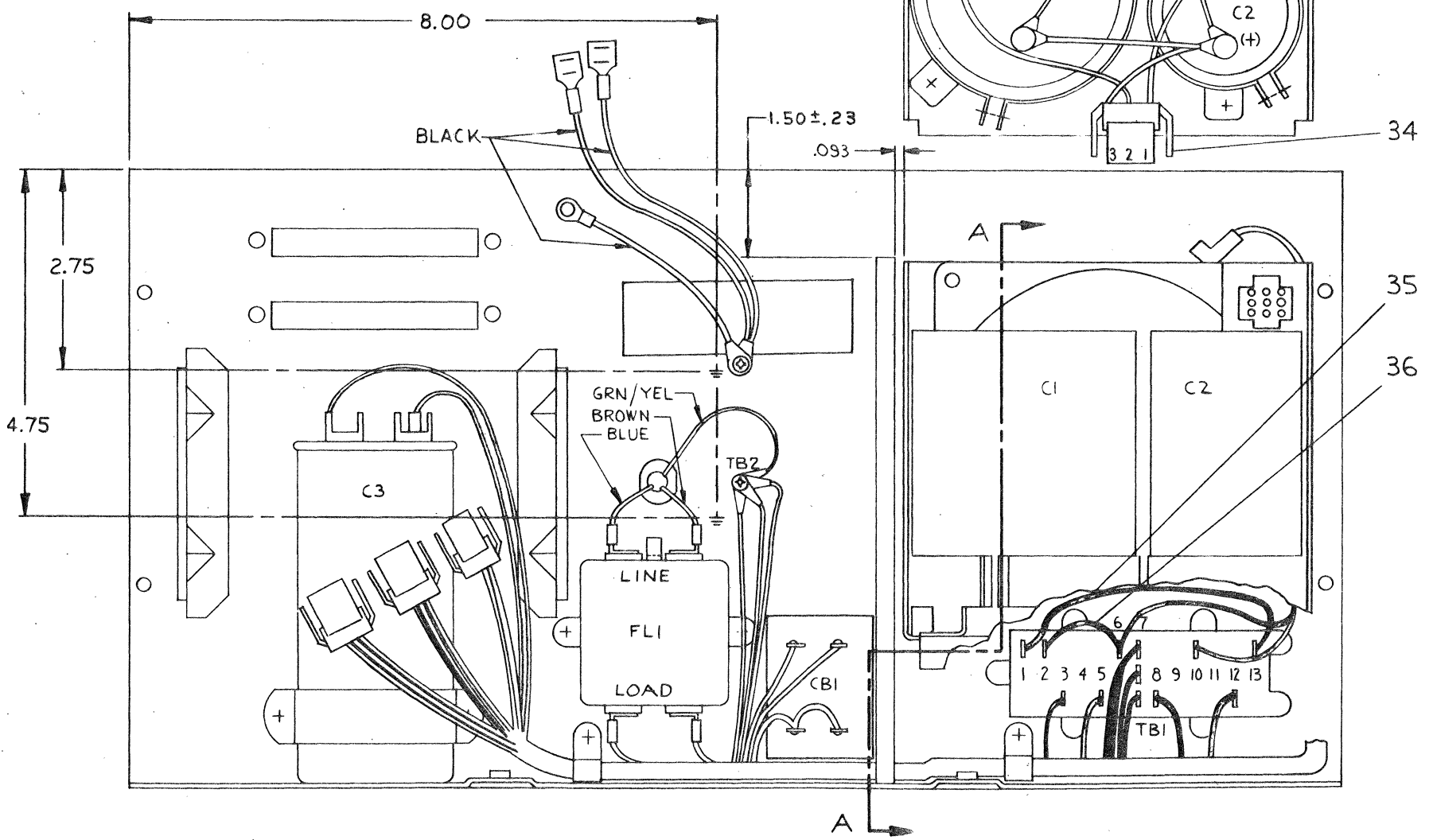
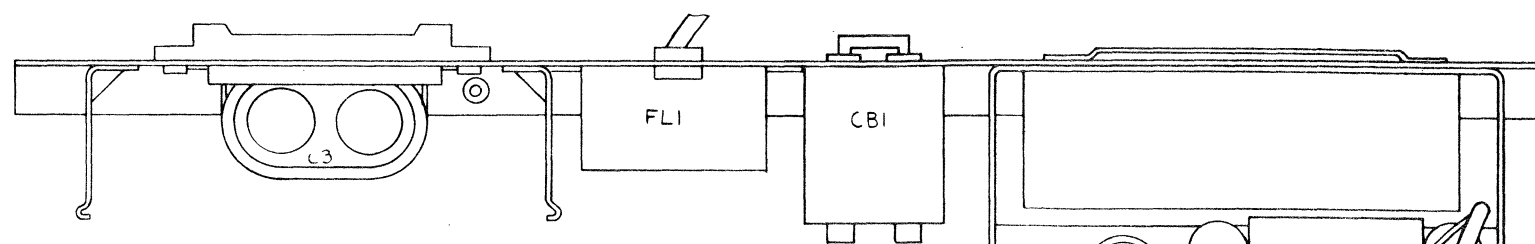
REV.	DESCRIPTION	DATE
A	RELEASED AT	
B	PREVIOUS REV	
C	X08	
D	7012130-0001	
E	G. REICHENBERG	
F	7012130-0002	
G	G. SCHNEIDER	
H	RL01-00009	
I	G. SCHNEIDER	
J	7012130-CX003	
K	K. GUENZEL	
L	7012130-CX004	
M	G. REICHENBERG	
N	7012130-CX005	
O	G. REICHENBERG	
P	RL01-CZ018	
Q	K. GUENZEL	
R	7012130-CZ006	
S	K. GUENZEL	
T	7012130-CX007	
U	K. GUENZEL	
V	7012130-CX008	
	K. GUENZEL	
	7012130-CX009	
	K. GUENZEL	
	7012130-CX010	
	K. GUENZEL	
	7012130-CX011	
	K. GUENZEL	
	RL02-CX010	
	M. ZARICH	
	7012130-CX012	
	D.C. 30 JUL 80	
	K. GUENZEL	
	7012130-CX013	
	I. WALENTA	
	72-5-80	

QUANTITY & VARIATION	DESCRIPTION	DWG. PART NO.	ITEM NO.
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
THIRD ANGLE PROJECTION	ANGLES	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
	30° 30'	(CHECK ONE)	OVER 0 TO 0.25
REMOVE BURRS AND BREAK SHARP CORNERS	SURFACE QUALITY	MEDIUM	0.25 TO 1.25
	IN	PREFERRED	1.25 TO 4.0
DO NOT SCALE DWG	MICRONICHES	2.004	2.008
		2.012	2.016
MATERIAL	DRN. D. MELCHIOR	6/24/77	FIRST USED ON
	CHK'D G. SCHNEIDER	6/16/77	RL01
FINISH	ENG. G. SCHNEIDER	6/16/77	TITLE
	PROJ. ENG. R. ARNO	6/16/77	POWER PANEL ASSY
SEE PARTS LIST	PROD. B. RYLANDER	6/16/77	SIZE
	NEXT HIGHER ASSY.		D
			AD7012130-0-0
			REV.
			v

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NOTES:

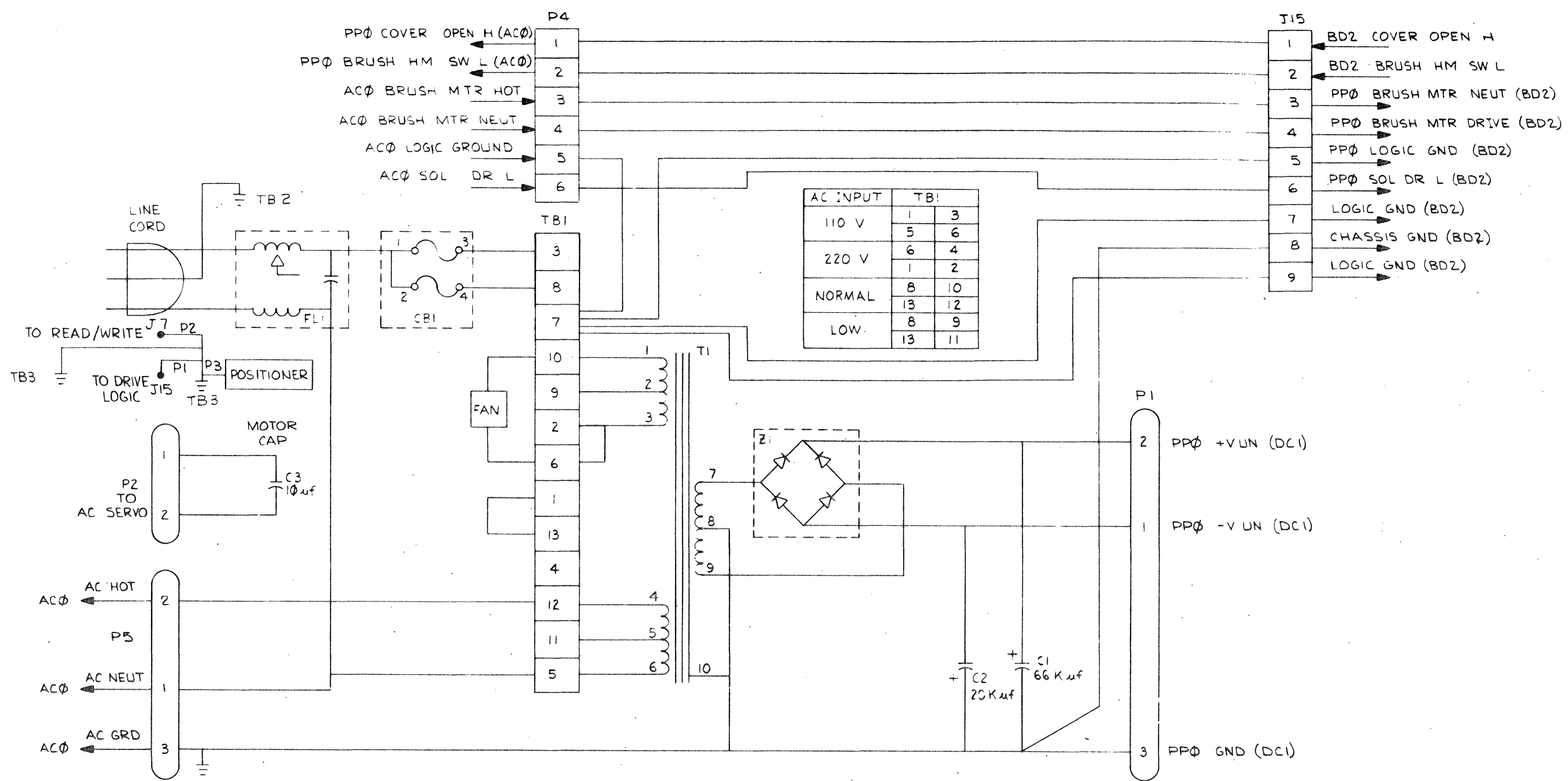
1. INPUT VOLTAGE 50 OR 60 HZ  
90-110, 105-128 VAC  
180-220, 210-256 VAC
2. OUTPUT VOLTAGE ±11.5 VDC MIN AT MIN POINT OF THE RIPPLE. 18 VDC MAX AT HIGH LINE. (MAX OF 25 VDC AT HIGH LINE NO LOAD).
3. OUTPUT CURRENT: POSITIVE OUTPUT  
2.5 AMP CONTINUOUS  
3.5 AMP PULSE "25 MS"  
NEGATIVE OUTPUT  
.25 AMP CONTINUOUS  
3.5 AMP PULSE "25 MS"  
PULSE CURRENT ON ALTERNATE OUTPUT AT A 65 MS OUT CYCLE.
4. OUTPUT RIPPLE AT 110 VOLTS  
A. NO LOAD 100 MV P/P  
B. +2.5 A 600 MV P/P  
-.25 A 300 MV P/P  
C. +2.5 A 600 MV P/P  
-3.75 A 1.5 V DURING PULSE
5. RIPPLE AT 90 V RMS  
+2.5 A 500 MV  
-3.75 A 2V  
+6 A 900 MV  
-.25 A 400 MV
5. HIGH POT TEST PER UL 478  
CONNECT BOTH AC LEADS TO THE POSITIVE TERMINAL OF THE SUPPLY AND GRN WIRE GROUND TO THE NEGATIVE TERMINAL OF THE SUPPLY. CLOSE CIRCUIT BREAKER AND INCREASE VOLTAGE TO 1750 VDC, ANY CURRENT INDICATES FAILURE.



REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	POWER PANEL ASSY	SIZE CODE	D AD 7012130 - 0 - 0	NUMBER	2 OF 3	REV.	V
SCALE:	1/1	SHEET	2 OF 3	DIST.			

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REVISIONS		
CHK	CHANGE NO.	REV.



LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION *00	REFERENCE DESIGNATOR
1	D-MD-5013535-0-0	5013535-00	ETCHED CIRCUIT BD	1	
2		1001610-00	.01 MFD 50V -20+80 Z5U AXIAL	17	C9-C12,C21,C23,C26,C29-C37,C42
3		1005306-00	6.8MFD 35V 10% S.TANT	4	C20,C22,C25,C28
4		1013466-14	82.0 MMF 50V 5% CER.	2	C16,C43
5		1013466-06	100.0 MMF 50V 5% CER.	1	C8
6		1013466-05	56.0 MMF 50V 5% CER.	1	C5
7		1013466-07	220.0 MMF 50V 5% CER.	5	C1,C2,C4,C17,C39
8		1013466-09	1000.0 MMF 50V 10% CER.	1	C18
9		1013466-11	.22 MFD 50V +80/-20% CER.	2	C24,C27
10		1013466-15	1200.0 MMF 50V 5% CER.	3	C19,C40,C41
11		1109943-00	1N 4733A VZ= 5.1 5% 1W Y	2	D16,D22
12		1113953-00	1N 5523D VZ= 5.1 1%	1	D1
13		1100122-00	1N 748A VZ= 3.9 5%	1	D19
14		1111577-00	1N 4454 TR= 4NS PIV= 50 S	11	D5-D10,D15,D20,D21,D23,D24
15		1300250-00	150.0 .25 W 5.0 % CC	1	R5
16		1300229-00	100.0 .25 W 5.0 % CC	5	R39,R52,R54,R59,R69
17		1300232-00	100.0 1.0 W 5.0 % CC	2	R11,R12
18		1300247-00	120.0 .25 W 5.0 % CC	1	R56
19		1300365-00	1.0 K .25 W 5.0 % CC	8	R13,R14,R35,R36,R48,R49,R66,R70
20		1300444-00	3.90 K .25 W 5.0 % CC	1	R46
21		1300447-00	4.70 K .25 W 5.0 % CC	3	R9,R10,R32
22		1301775-00	820.0 .25 W 5.0 % CC	1	R31
23		1301317-00	10.0 .25 W 5.0 % CC	1	R63
24		1302612-00	1.78 K 1/4W 1% RN55D-F 100PPM	2	R50,R51
25		1300195-00	33.0 .50 W 5.0 % CC	2	R6,R65
26		1304725-00	300 1/4W 1% RN55D-F 100PPM	1	R62
27		1312930-00	5.10 K .25 W 5.0 % CC	2	R55,R58
28		1301424-00	680.0 .25 W 5.0 % CC	4	R16,R18,R21,R23
29		1302391-00	20.0 K .25 W 5.0 % CC	1	R60
30		1300426-00	2.70 K .25 W 5.0 % CC	1	R33

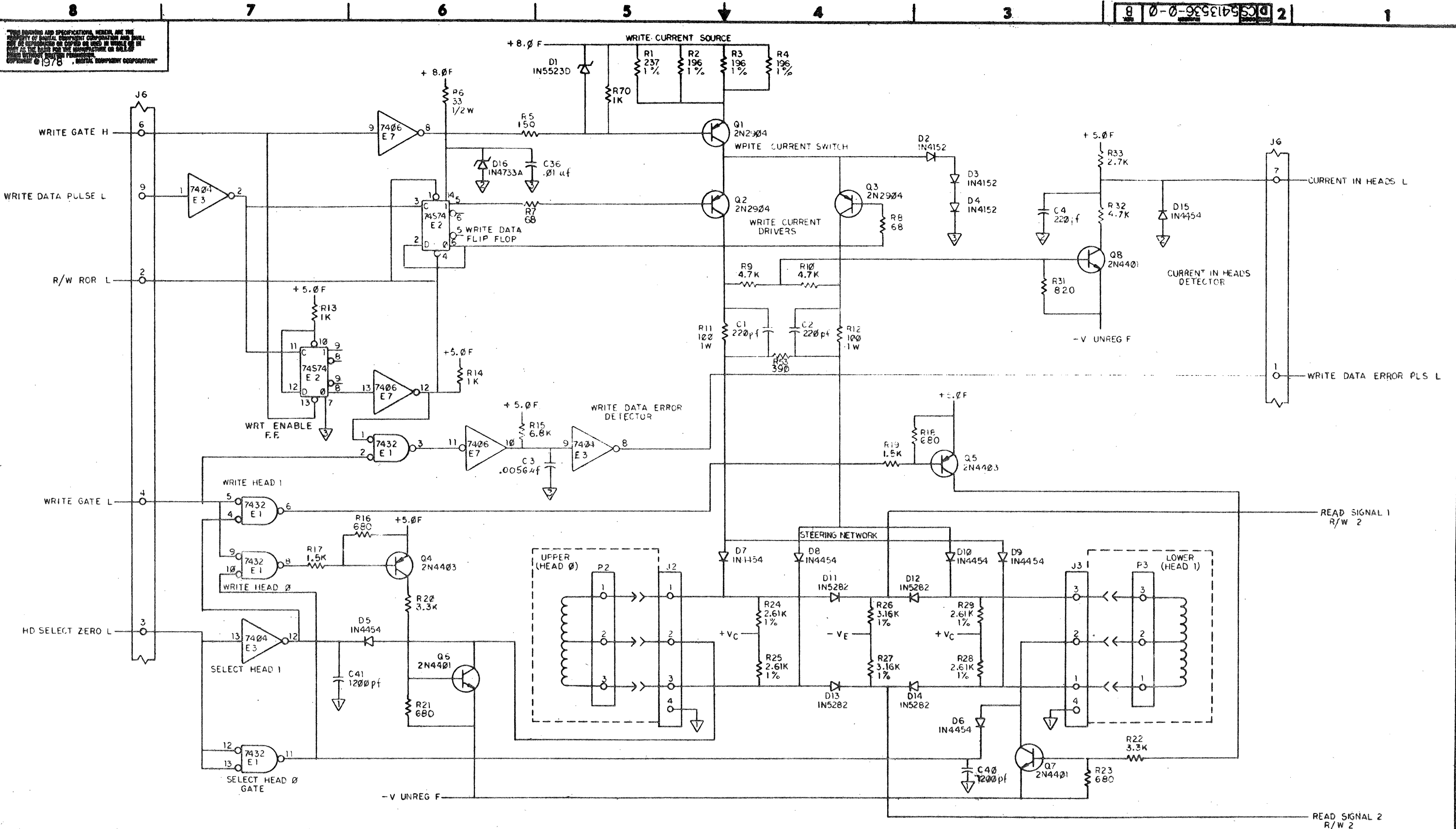
REVISION HISTORY		BASIC PART NO: 13536		DRN:	JERRY BEST	DATE: 14-AUG-78	D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	L. ROOHR	DATE: 14-AUG-78	TITLE	PARTS LIST	
---	INIT	A	SECTION VARIATION INDEX	CHK'D:	L. ROOHR <td>DATE: 14-AUG-78</td> <td></td> <td></td> <td></td>	DATE: 14-AUG-78			
IMZ	5413536-CX001	B	[A] 00				READ/WRITE BOARD		
	M. ZAPICH W.C.M.		[B]	DES.ENG:	B. NOGUCHI	DATE:			
	17 JAN 80		[C]	RESP.ENG.:	B. NOGUCHI	DATE: 14-AUG-78			
			[D]				DOCUMENT NUMBER		
			[E]				SIZE	CODE	NUMBER
			[F]						REV
			[G]	MFG.ENG.:	P. CHURCH	DATE:	K	PL	5413536-0-DBP
			[H]						B
			[I]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:	FILE NAME:		EDIT #
			[J]	ID-UA-5413536-0-0		IRL02	Z1091B,PLS		7
			[K]						
			[L]						
			[M]						
			[N]						

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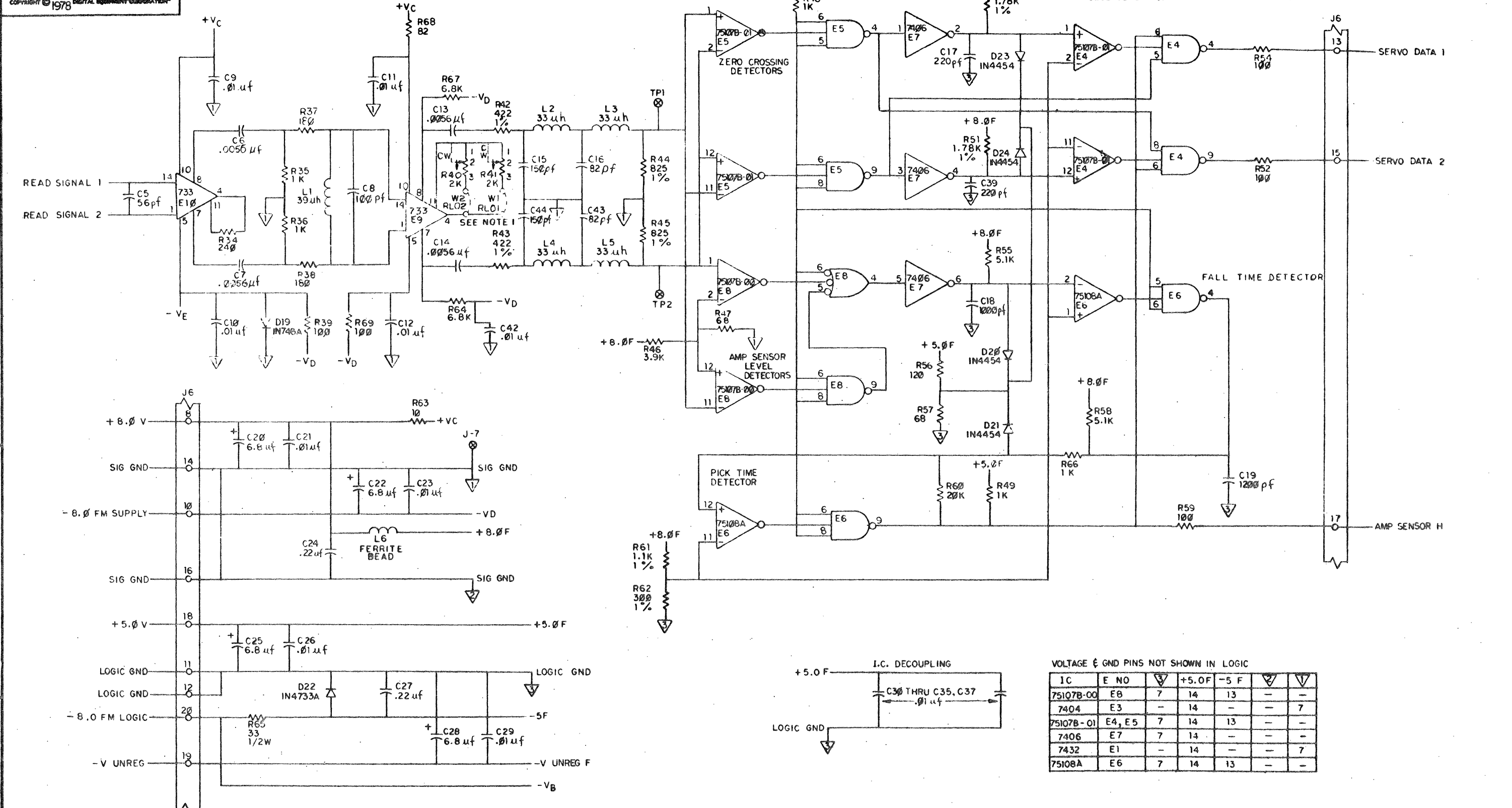


NOTE:  
 1. FOR RLO1 CUT W2 AND LEAVE IN W1.  
 FOR RLO2 CUT W1 AND LEAVE IN W2.

5413536-0001  
 M. ZARICH  
 11/18/78

DRN. <i>G. Nichols</i>	4/1/78	FIRST USED ON	RLO2
CHK'D <i>R. Levin</i>	5/15/78	TITLE	READ/WRITE BOARD
ENG. <i>R. Z...</i>	5/16/78	SIZE	D
PROJ. ENG. <i>M. ...</i>	6/16/78	CODE	CS 5413536-0-1
PROD. <i>...</i>	9/2/78	NUMBER	B
NEXT HIGHER ASSY.		REV.	
SCALE	OF 2	DIST.	

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VOLTAGE & GND PINS NOT SHOWN IN LOGIC

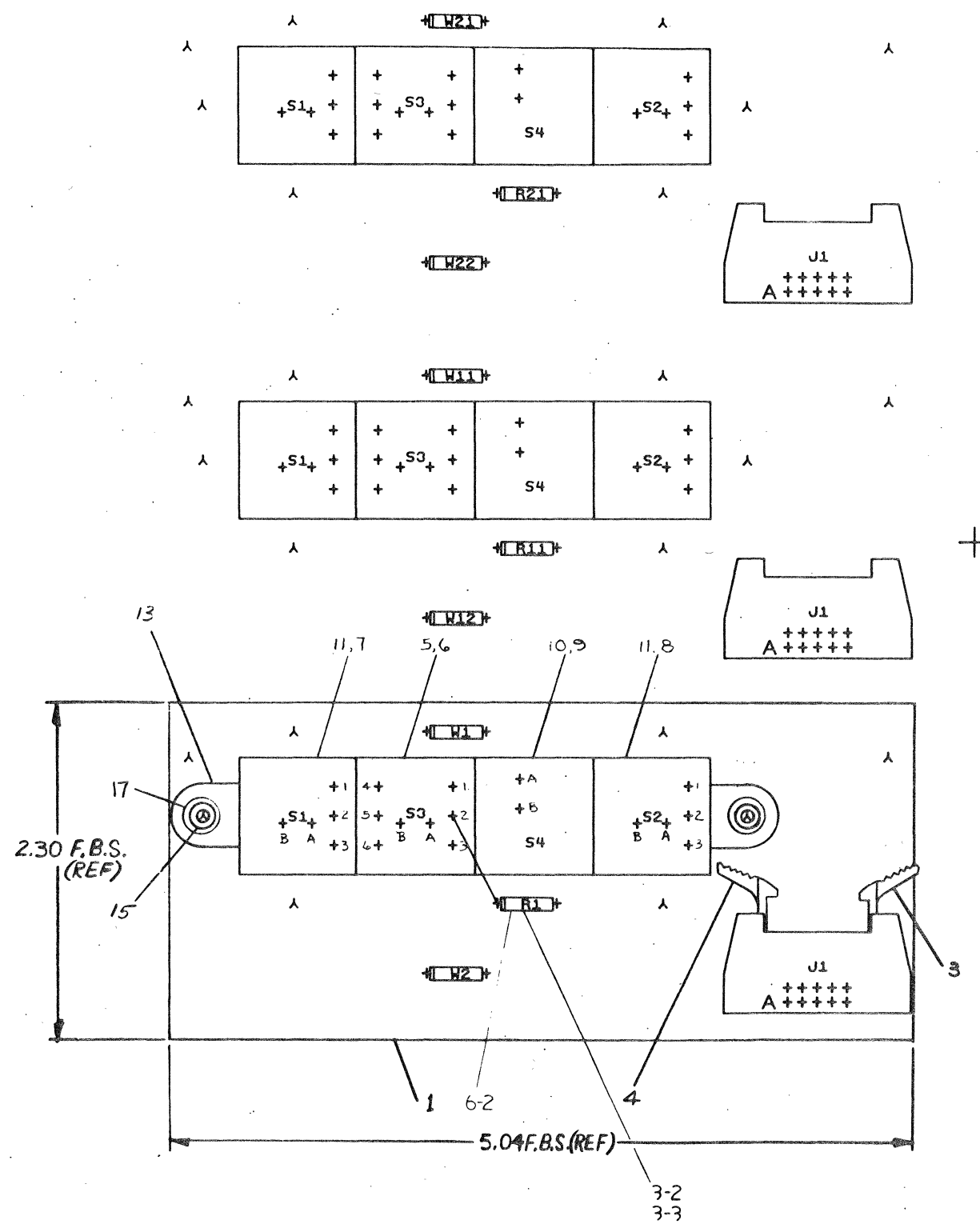
IC	E NO	+5.0F	-5 F		
75107B-00	E8	7	14	13	-
7404	E3	-	14	-	7
75107B-01	E4, E5	7	14	13	-
7406	E7	7	14	-	-
7432	E1	-	14	-	7
75108A	E6	7	14	13	-

REVISIONS

CHK	CHANGE NO.	REV.

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COMPONENT SIDE VIEW



NOTES:  
 1. ALL MANUFACTURING INFORMATION DATE CODE, CIRCUIT SCHEMATIC REV, QUALITY CONTROL STAMPS, ETC. ARE TO BE STAMPED ON ETCH SIDE (SIDE 2) OF MODULE.

CHG	NO	REV	DATE	BY	CHK	APP
633	5411846-	F	11/5/76	ICHT-MPERG		
633	5411846-	H	11/5/76	DC, HAUGRO		
633	5411846-	J	11/5/76	M. ZARICH		

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

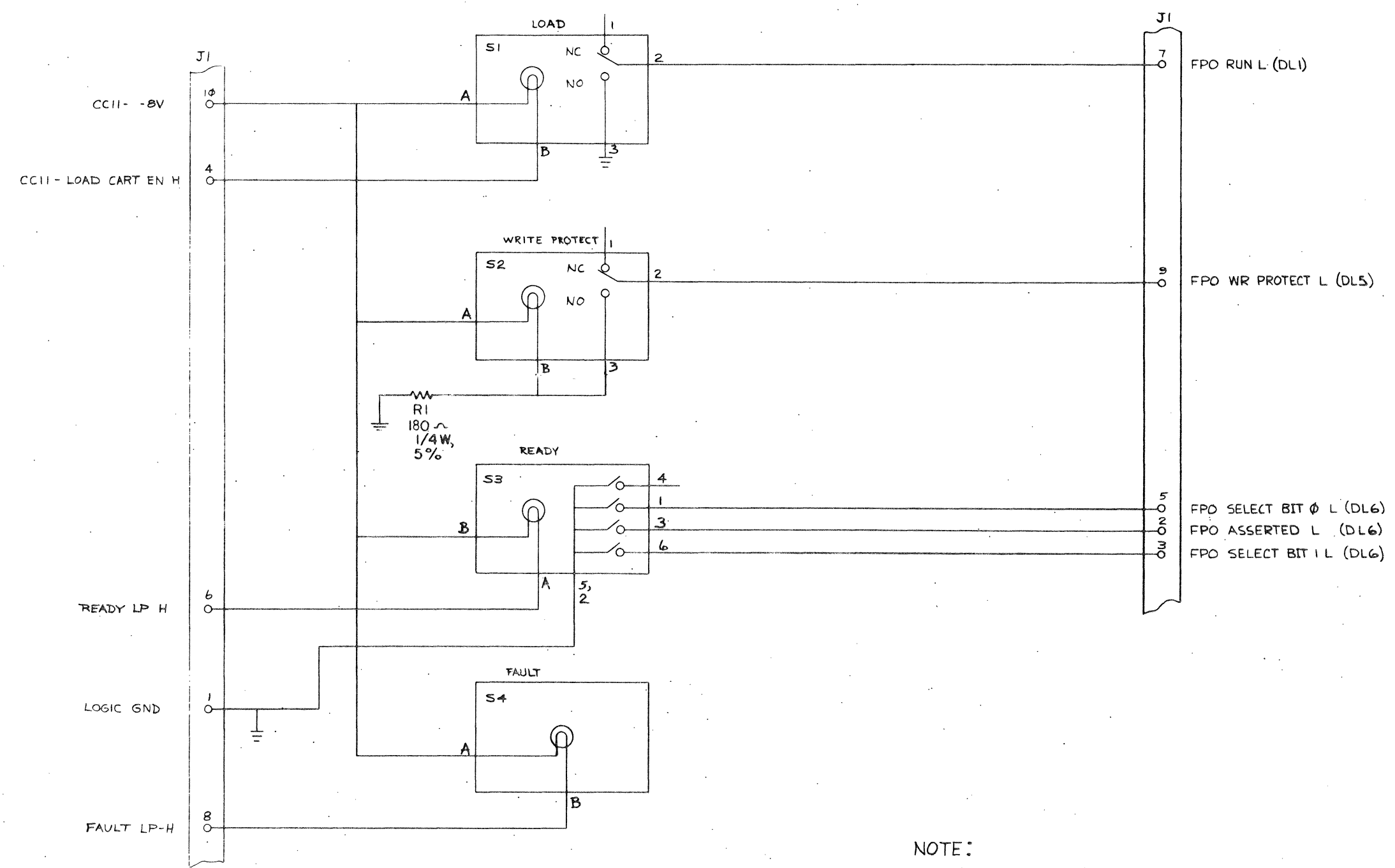
SIGNATURES	DATE	digital
DRN. MR. [Signature]	11/5/76	
CHK'D. [Signature]	1-11-77	TITLE
ENG. [Signature]	3/2/77	
PROJ. ENG. [Signature]	5/2/77	FRONT PANEL
SCALE 2/1	SIZE CODE	NUMBER
SHT. 1 OF 3	DUA	5411846-0-0 J
NEXT HIGHER ASSY. B-DD-5411846-0		

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
1	1	D-MD-5011845-0-0	5011845-00	54-11846 ETCH CRKT BRD	1	
2	2		1209941-05	HEADER.100 10POS RT ANGLE	1	J1
3	3		1209941-04	HEADER RT ANGLE,RIGHT	1	
4	4		1209941-03	HEADER RT ANGLE LEFT L	1	
5	5		1212690-02	SW,PB 1P RK06 UNIT SELECT	1	S3
6	6		1212691-00	SW,PP CAP "O/READY" FOR 12-1	1	
7	7		1212714-05	SW,PB CAP,YEL/BLK,"LOAD"	1	
8	8		1212714-01	SW,PB CAP,YEL/BLK,"WRITE PROT"	1	
9	9		1212714-02	SW,PB CAP,RED/BLK,"FAULT"	1	
10	10		1212715-02	INDICATOR,DISPLAY PANEL,W/14V LA	1	S4
11	11		1212717-05	SW,PB 1P 3A W/14V LAMP	2	S1,S2
12	12		1212716-01	LAMP,WEDGE,14V	1	
13	13		1213188-01	MOUNTING BRACKET,SWITCH	1	
14	14		1301322-00	180.0 .25 W 5.0 % CC	1	R1
15	15		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	2	
16	16		9107560-01	WIRE,BUSS,22AWG	2	W1,W2
17	17		9006655-00	WASHER, FLAT, .312 O.D. X .125 I	2	

REVISION HISTORY			BASIC PART NO: 5411846			DRN: S. MARLOW			DATE: 7-APR-76			D I G I T A L		
ENG	ECO NUMBER	REV	SECTION A OF A			CHK'D: P. BURNELL			DATE: 10-JAN-77			TITLE PARTS LIST		
MZ	5411846-CX005	J	SECTION VARIATION INDEX			DES.ENG: G. REICHENBERG			DATE: 7-MAR-77			FRONT PANEL		
			[A]	00		RESP.ENG.: G. REICHENBERG			DATE: 7-MAR-77			DOCUMENT NUMBER		
			[B]			MFG.ENG.: L. KIRK			DATE: 9-MAR-77			K PL 5411846-0-DBP J		
			[C]			ASSEMBLY NUMBER:			TOP DOCUMENT NUMBER:			FILE NAME:		
			[D]			D-UA-5411846-0-0			# B-DD-5411846-0			Z1580J.PLS		
			[E]									EDIT #		
			[F]									3		
			[G]											
			[H]											
			[I]											
			[J]											
			[K]											
			[L]											
			[M]											
			[N]											

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NOTE:  
1. ALL LAMPS ARE 6E-73 TYPE

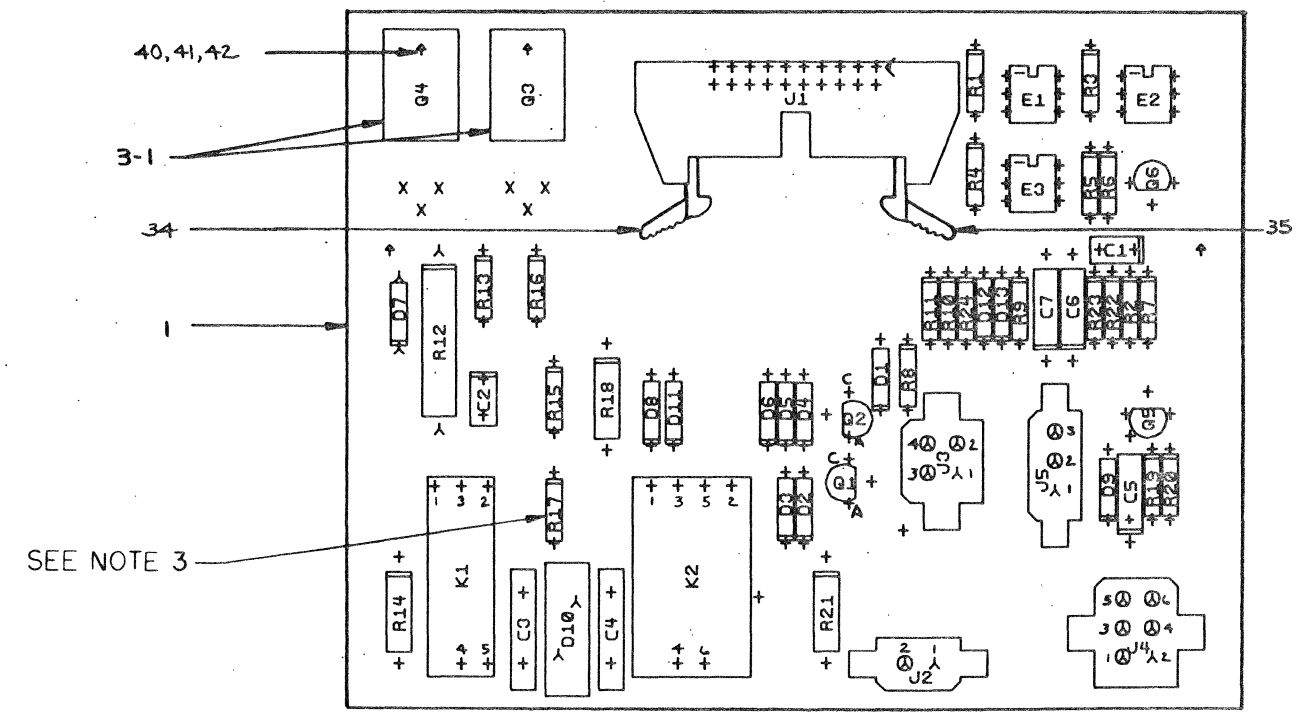
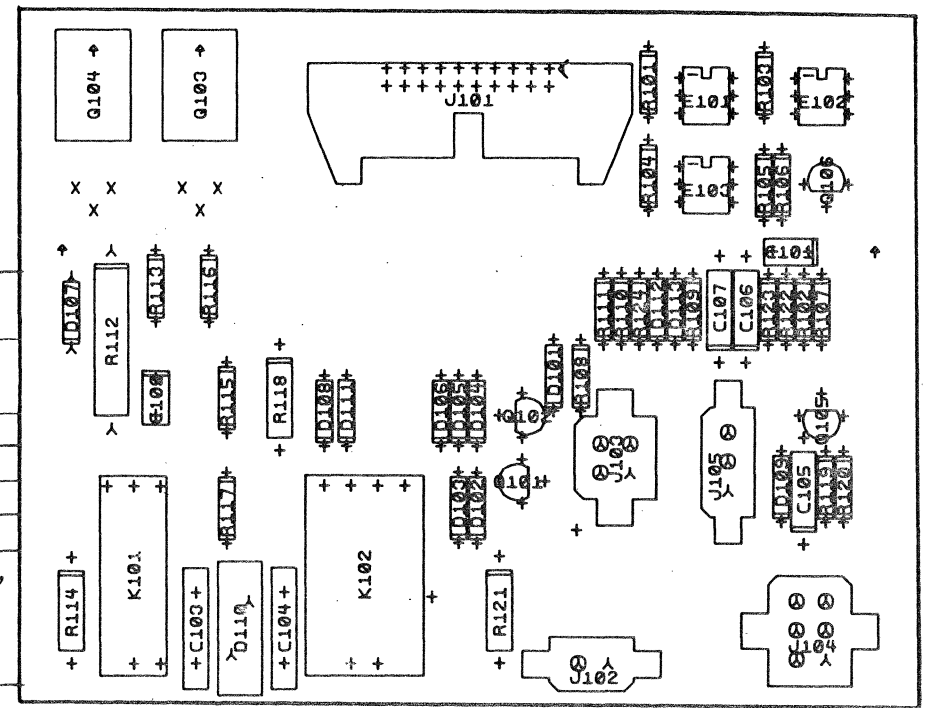
REV.	CHG. NO.	DATE	BY	CHK'D
E	5411846-0001	9-2-77	G. REICHENBERG	G. REICHENBERG
F	5411846-CZ002	9-2-77	G. REICHENBERG	G. REICHENBERG
H	5411846-CZ003	9-2-77	M. ZARICH	M. ZARICH
J	5411846-CX005	DEC 4, AUG 80	M. ZARICH	M. ZARICH
K	5411846-CX006	OCT 3, OCT 80	M. ZARICH	M. ZARICH

DRN	27 Feb 76	FIRST USED ON	
CHK'D	1-11-77	TITLE	FRONT PANEL
ENG	3-7-77	SIZE	D
PROJ. ENG	3-10-77	NUMBER	CS 5411846-0-1
PROD	5-9-77	REV.	K
NEXT HIGHER ASSY.		DIST.	
SCALE		OF	

COMPONENT SIDE VIEW

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ACTUAL REF DESIGNATOR	SUPERFICIAL REF DESIGNATORS
C1,C2,C3,C4,C5,C6,C7	C101,C102,C103,C104,C105,C106,C107
D1,D2,D3,D4,D5,D6,D7,D8,D9,D10 D11,D12,D13	D101,D102,D103,D104,D105,D106,D107,D108,D109,D110,D111,D112, D113
E1,E2,E3	E101,E102,E103
K1,K2,K3	K101,K102,K103
J1,J2,J3,J4,J5	J101,J102,J103,J104,J105
Q1,Q2,Q3,Q4,Q5,Q6	Q101,Q102,Q103,Q104,Q105,Q106
R1,R2,R3,R4,R5,R6,R7,R8,R9,R10 R11,R12,R13,R14,R15,R16,R17,R18,R19, R20,R21,R22	R101,R102,R103,R104,R105,R106,R107,R108,R109,R110,R111,R112, R113,R114,R115,R116,R117,R118,R119,R120,R121,R122



- NOTES:
- 8 HOLES .0465 (+.000-.0045) MAYNARD ONLY
  - U/L APPROVAL REQUIRED
  - REWORK INSTRUCTIONS:
    - REMOVE R17 (330R, 1/4W, 5%)
    - INSTALL R17 (330R, 1/2W, 5%)

CHKCHANGE NO	REV	D	E	F
23	5411848-0071	P. BURNELL		
		G. FEIGENBERG		
		SAIBARFCX 102		
		P. BURNELL		
		5411848-C2003		
		M. ZARICH		
		M. J. J. J.		

ETCH REV.	E-P2
P.C. DESIGN DATA BASE REV.	E-P2

SIGNATURES	DATE	digital
DRN. <i>[Signature]</i>	<i>[Date]</i>	
CHK'D. <i>[Signature]</i>	<i>[Date]</i>	TITLE AC
ENG. <i>[Signature]</i>	<i>[Date]</i>	SERV
PROJ. ENG. <i>[Signature]</i>	<i>[Date]</i>	REV
PROD. <i>[Signature]</i>	<i>[Date]</i>	SCALE 2/1
NEXT HIGHER ASSY. B-DD-5411848-0		SIZE CODE
		NUMBER
		REV

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30		1300296-00	330 1/2W 5% CC	1	R17
31	31		1302388-00	2 K 1/4W 5% CC	1	R13
32	32		1309595-00	1 M 1/4W 5% CC	1	R9
33	33		1303176-00	1.6 K 1/4W 5%	1	R19
34	34		1209941-03	HEADER RT ANGLE LEFT L	1	J1
35	35		1209941-04	HEADER RT ANGLE,RIGHT	1	J1
36	36		1510877-00	2N 602B UJT 300MW R67B	2	Q1,Q6
37	37		1110968-00	2N 5062 SCR@100V I=.8A T092	1	Q2
38	38		1510070-00	TRIAC@400V,I> 8A #RCA40669 M	2	Q3,Q4
39	39		1513489-00	2N 4401 NPN 350MW SI 40 20	1	Q5
40	40		9006557-00	NUT,KEP , 4-40X 1/4 AF	2	Q3,Q4
41	41		9006010-01	SCREW,PAN ,PHIL, 4-40X 5/16	2	Q3,Q4
42	42		9006655-00	WASHER, FLAT, .312 O.D. X .125 I	2	Q3,Q4
43	43			*** THIS ITEM IS NOT USED ***	-	
44	44		1000002-04	.33 MFD 35V 10% .150D S.TA	1	C6
45	45		1314650-00	91 K 1/4W 5% CC	1	R2

D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							AC SERVO		K	PL	5411848-0-DBP	F

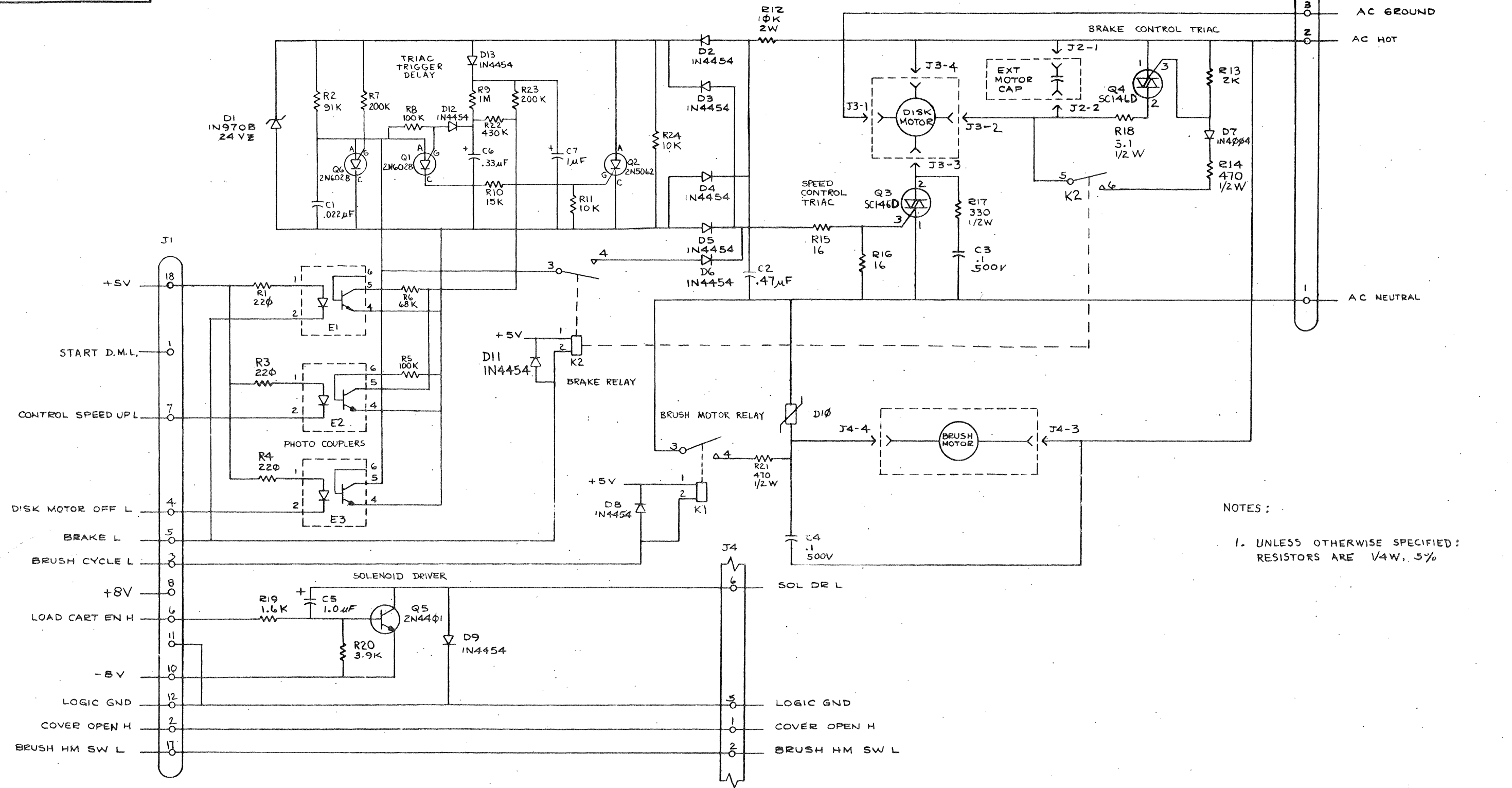


LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR	
1	1	D-MD-5011847-0-0	5011847-00	ETCH CRKT BRD	1	
2	2		1011683-00	.022 MFD 50V 10% 2C067 CER.	1	C1
3	3		1012312-01	.47 MFD 50V XZ	1	C2
4	4		1013682-00	.1 MFD 500V +80 -20% CER.	2	C3,C4
5	5		1001776-00	1 MFD 35V 10% S.TANT	2	C5,C7
6	6		1110856-00	1N 970B VZ= 24.0 5% .40W Y	1	D1
7	7		1111577-00	1N 4454 TR= 4NS PIV= 50 S	10	D2-D6,D8,D9,D11-D13
8	8		1105796-00	1N 4004 PIV=400 I= 1A D041 SP	1	D7
9	9		1510727-01	OPTO COUPLED ISOLATOR	3	E1-E3
10	10		1213917-00	RLY, REED 5V COIL, DPDT	1	K2
11	11		1213915-00	RLY, REED, 5V COIL, SPDT	1	K1
12	12		1110997-00	VP 130A10 VOLT. SUPPRESS. 130VAC	1	D10
13	13		1209941-06	HEADER.100 20POS RT ANGLE	1	J1
14	14		1213922-00	HEADER 2POS	1	J2
15	15		1213922-01	HEADER 3POS	1	J5
16	16		1213922-03	HEADER 4POS	1	J3
17	17		1213922-04	HEADER 6POS	1	J4
18	18		1300315-00	470 1/2W 5% CC	2	R14,R21
19	19		1300271-00	220 1/4W 5% CC	3	R1,R3,R4
20	20		1311220-00	5.1 1/2W 5% CC	1	R18
21	21		1301327-00	68 K 1/4W 5% CC	1	R6
22	22		1302466-00	100 K 1/4W 5% CC	2	R5,R8
23	23		1300444-00	3.9 K 1/4W 5% CC	1	R20
24	24		1314516-00	200 K 1/4W 5% CC	2	R7,R23
25	25		1300496-00	15 K 1/4W 5% CC	1	R10
26	26		1300479-00	10 K 1/4W 5% CC	2	R11,R24
27	27		1300482-00	10 K 2W 10% CC	1	R12
28	28		1312927-00	16 1/4W 5% CC	2	R15,R16
29	29		1314649-00	430 K 1/4W 5% CC	1	R22

REVISION HISTORY		BASIC PART NO: 5411848		DRN:	H. RICHER	DATE:	23 MAR 76	D I G I T A L			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	F. BURNELL	DATE:	10 JAN 77	TITLE PARTS LIST			
	INITIAL	E	SECTION VARIATION INDEX					AC SERVO			
MZ	5411848-CZ003	F	[A] 00	DES.ENG:	P. BADUM	DATE:	7 JUN 77				
			[B]					DOCUMENT NUMBER			
			[C]	RESP.ENG.:	P. BADUM	DATE:	7 JUN 77	SIZE	CODE	NUMBER	REV
			[D]					K	PL	5411848-0-DBP	F
			[E]	MFG.ENG.:	D. LESAGE	DATE:	7 JUN 77	FILE NAME: EDIT #			
			[F]	ASSEMBLY NUMBER:				Z0491.PLS 3			
			[G]	D-UA-5411848-0-0							

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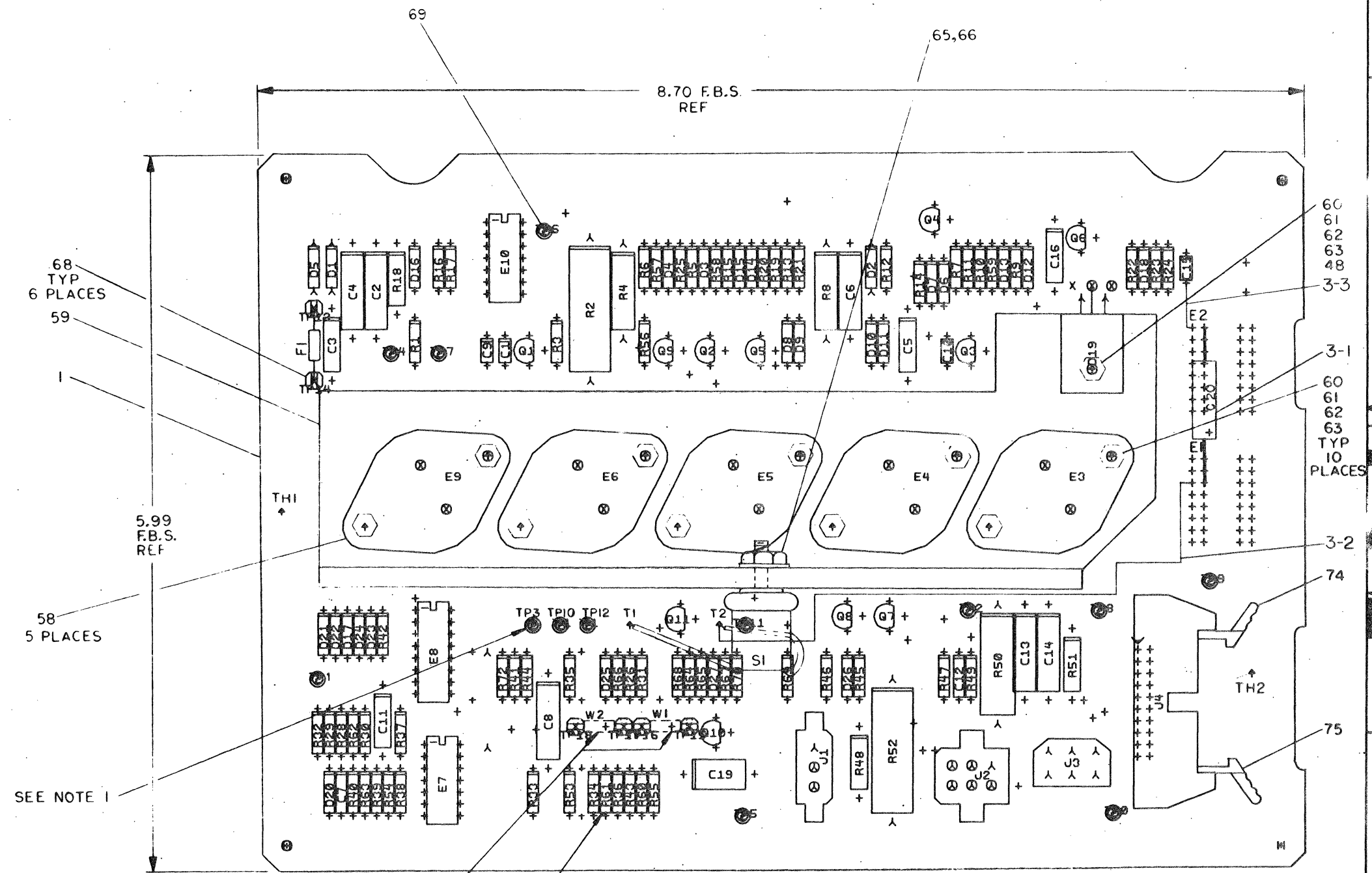
NOTES:  
 1. UNLESS OTHERWISE SPECIFIED:  
 RESISTORS ARE 1/4W, 5%

REV.	CHANGE NO.	DATE	BY	CHK'D
U				
	1			
	2			
	3			
	4			
	5			
	6			
	7			
	8			

DRN. <i>[Signature]</i>	FIRST USED ON	<b>digital</b>
CHK'D <i>[Signature]</i>	RLOI	
ENG. <i>[Signature]</i>	TITLE	<b>AC SERVO</b>
PROJ. ENG. <i>[Signature]</i>		
PROD. <i>[Signature]</i>		
NEXT HIGHER ASSY.		
D-UA-5411848-0-0	SIZE CODE	NUMBER
SCALE	D CS 5411848-0-1	REV. F
SHEET 1 OF 1	DIST.	

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COMPONENT SIDE VIEW



- NOTES:
1. TP3, TP11, TP12 & TP15 THRU TP19 TO BE MOUNTED ON SIDE 2.
  2. R60 AND R61 ARE TO BE INSTALLED AFTER FINAL TEST.
  3. INSTALL W1 AND W2 FOR RL01. INSTALL W2 ONLY FOR RL02. W1 & W2 ARE LOCATED ON SIDE 2.

CHK	CHANGE	NO	REV	BY	DATE	DESCRIPTION

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

SIGNATURES		DATE	digital	TITLE DC SERVO & POWER SUPPLY	
DRN. Paul R. Kordach		8/19/78			
CHK'D. [Signature]		8/19/78			
ENG. [Signature]		8/19/78			
PROJ. ENG. [Signature]		8/19/78			
SCALE 2/1	SHT. 1 OF 2	NEXT HIGHER ASSY. B-00-5413534-0	SIZE CODE 0 UA	NUMBER 5413534-0-0	REV D

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
1	1	D-MD-5013533-0-0	5013533-00	ETCHED CIRCUIT BOARD	1		
2	2		1013466-08	680.0 MMF 50V 10% X7R CER	1		C12
3	3		1016009-00	2200.0 MMF 50V 5% CER	1		C7
4	4		1001610-00	.01 MFD 50V +80-20% 25U CER	4		C1,C9,C10,C15
5	5		1002630-00	.015 MFD 100V 10% MYLR	1		C8
6	6		1013466-11	.22 MFD 50V +80-20% Z5U CER	4		C3,C5,C11,C16
7	7		1005306-00	6.8MFD 35V 10% S.TANT	4		C4,C6,C13,C14
8	8		1000076-00	39 MFD 10V 10% S.TANT	1		C2
9	9		1309422-00	5.10 .25 W 5.0 % CC	1		R58
10	10		1312929-00	62.0 .25 W 5.0 % CC	2		R3,R23
11	11		1311523-00	110.0 .25 W 5.0 % CC	1		R22
12	12		1300247-00	120.0 .25 W 5.0 % CC	1		R13
13	13		1300271-00	220.0 .25 W 5.0 % CC	1		R59
14	14		1301425-00	300.0 .25 W 5.0 % CC	1		R55
15	15		1303178-00	620.0 .25 W 5.0 % CC	1		R6
16	16		1300365-00	1.0 K .25 W 5.0 % CC	5		R1,R7,R39,R44,R57
17	17		1300391-00	1.50 K .25 W 5.0 % CC	1		R5
18	18		1302388-00	2.0 K .25 W 5.0 % CC	2		R31,R43
19	19		1300426-00	2.70 K .25 W 5.0 % CC	2		R46,R47
20	20		1302389-00	4.30 K .25 W 5.0 % CC	1		R53
21	21		1300447-00	4.70 K .25 W 5.0 % CC	10		R10-R12,R14,R15,R19,R20,R24,R49, R68
22	22		1303179-00	8.20 K .25 W 5.0 % CC	3	CONT	R9,R16,R17
23	23		1300488-00	12.0 K .25 W 5.0 % CC	4		R25,R26,R45,R56
24	24		1305346-00	27.0 K .25 W 5.0 % CC	1		R21
25	25		1305131-00	*** THIS ITEM IS NOT USED ***	-		
26	26		1312923-00	2.10 K .25 W 1.0 % RN55D-F10	1		R41
27	27		1305114-00	3.48 K .25 W 1.0 % RN55D-F10	1		R34
28	28		1314763-00	4.12 K .25 W 1.0 % RN55D-F10	1		R36
29	29		1303312-00	10.0 K .25 W 1.0 % RN55D-F10	3		R28,R29,R62

REVISION HISTORY		BASIC PART NO: 5413534		DRN:	JERRY BEST	DATE:	26-JUL-78	DIGITAL			
ENG:	ECO NUMBER	REV	SECTION A OF A	CHK'D:	JERRY BEST	DATE:	26-JUL-78	PARTS LIST			
---	INIT	A	SECTION VARIATION INDEX	CHK'D:	JERRY BEST	DATE:	26-JUL-78	D.C. SERVO AND POWER SUPPLY			
BN	5413534-CZ001	B	[A] 00	DES.ENG:	R. NOGUCHI	DATE:		DOCUMENT NUMBER			
MZ	5413534-CX003	C	[B]	RESP.ENG.:	R. NOGUCHI	DATE:	26-JUL-78	SIZE	CODE	NUMBER	REV
			[C]	IMFG.ENG.:	P. CHURCH	DATE:		K	PL	5413534-0-DBF	C
			[D]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:		EDIT #	
			[E]	ID-UA-5413534-0-0		IRL02		Z0494C.PLS		18	
			[F]								
			[G]								
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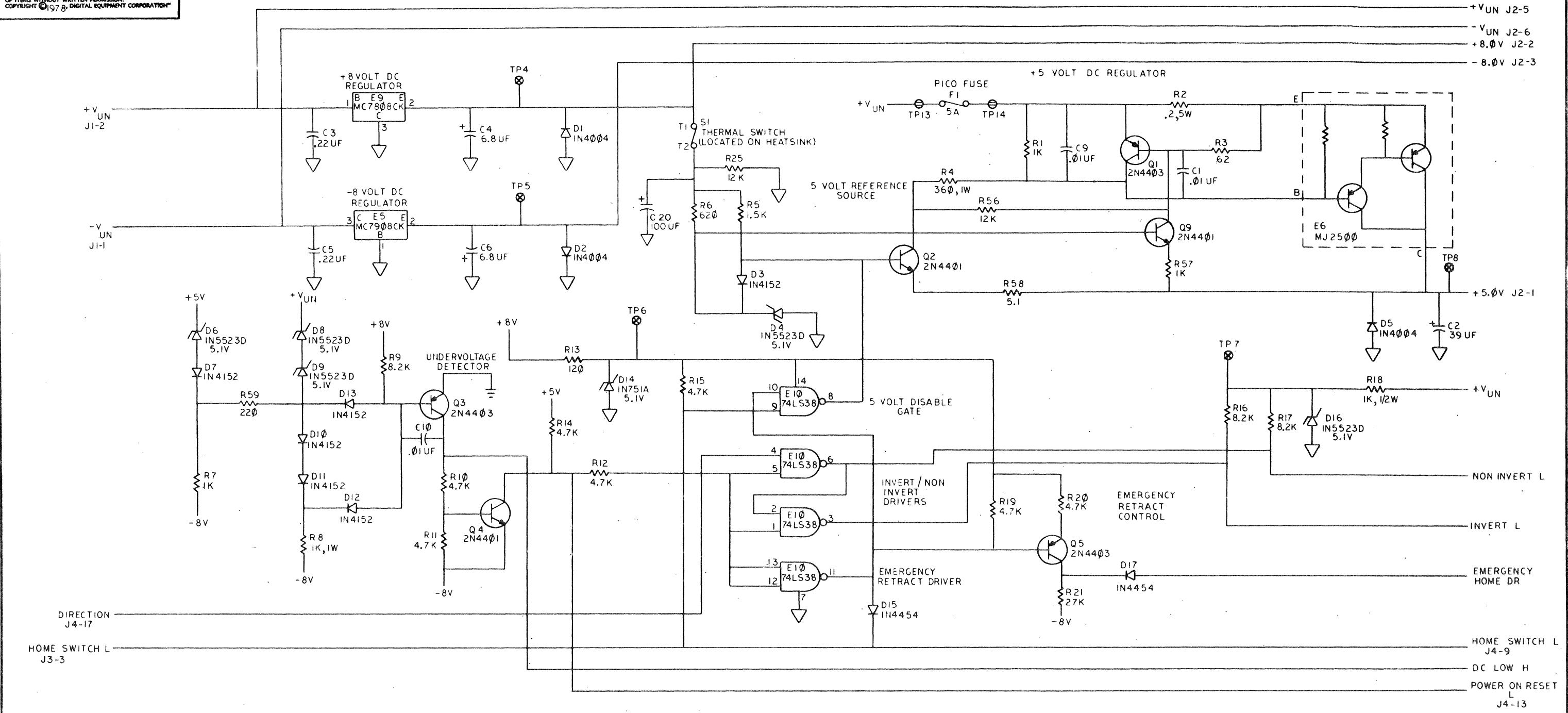
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30		1312924-00	10.70 K .25 W 1.0 % RN55D-F10	1	R32
31	31		1309412-00	18.20 K .25 W 1.0 % RN55D-F10	1	R33
32	32		1315436-00	52.30 K .25 W 1.0 % RN55D-F10	1	R54
33	33		1304843-00	243.0 K .25 W 1.0 % RN55D-F10	1	R72
34	34		1315437-00	237.0 K .25 W .10% RN55D-F10	1	R38
35	35		1302378-00	51.0 .50 W 5.0 % CC	1	R51
36	36		1300364-00	1.0 K .50 W 5.0 % CC	2	R18,R48
37	37		1314068-00	360.0 1.0 W 5.0 % CC	1	R4
38	38		1300368-00	1.0 K 1.0 W 5.0 % CC	1	R8
39	39		1301494-00	200.0 2.0 W 5.0 % CC	1	R50
40	40		1313358-00	.20 5.0 W 3.0 % WW	2	R2,R52
41	41		1105796-00	1N 4004 PIV=400 I= 1A D041 SP	3	D1,D2,D5
42	42		1113953-00	1N 5523D VZ= 5.1 1%	8	D4,D6,D8,D9,D16,D18,D21,D22
43	43		1109990-00	1N 757A VZ= 9.1 5% .40W P	2	D23,D24
44	44		1110994-00	1N 751A VZ= 5.1 5% .40W	1	D14
45	45		1114117-00	1N 4152 PIV=450 I=75M	6	D3,D7,D10,D11,D12,D13
46	46		1111577-00	1N 4454 TR= 4NS PIV= 50 S	6	D15,D17,D20,D25-D27
47	47		1513698-00	TRIAC@200V,I>14A	1	D19
48	48		9009597-00	INSULATOR, THERMA-FILM	1	
49	49		1513489-00	2N 4401 NPN 350MW SI 40 20	4	Q2,Q4,Q8,Q9
50	50		1513490-00	2N 4403 PNP 350MW SI-40 30	6	Q1,Q3,Q5-Q7,Q11
51	51		1511282-00	MJ2500 PNP 150WC SI 60 5 1K 5A	2	E4,E6
52	52		1511349-00	TIP 640 (OR MJ3000) NPN DARLINGT	1	E3
53	53		1911706-00	5012 ANALOG SWITCH,4CHNL	1	E8
54	54		1912818-00	LS38 NAND BUFFER-QUAD 2IN	1	E10
55	55		1912107-01	324ANOP AMP,QUAD	1	E7
56	56		1913695-00	7808 VOLT REG,FIX +8V	1	E9
57	57		1913694-00	7908 VOLT REG,FIX -8V	1	E5
58	58		9008419-00	WASHER, FLAT, THERMAFILM .002THK	5	
59	59		7418595-00	HEATSINK ASSEMBLY	1	
60	60		9008033-01	SCREW,PAN,PHIL 4-40X 9/16 SS	11	
61	61		9006557-00	NUT,KEP , 4-40X 1/4 AF	11	
62	62		9006655-00	WASHER, FLAT, .312 O.D. X .125 I	11	
63	63		9008268-00	COMPOUND, THERMAL JOINT	A/R	
64	64		1210824-00	THERMOSTAT,00215,C0156,SPST,NORM	1	S1
65	65		9008185-00	NUT,KEP , 6-32X1/4 AF	1	
66	66		9006653-00	WASHER, FLAT, .375 O.D. X .156 I	1	
67	67		1205747-00	FUSE, SUB-MINI, 5.000A, 125V, A	1	F1
68	68		9006735-00	EYELET, FUNNEL FLANGE, .059 OD X	6	TP13-TP18
69	69		9007791-00	TERM PCB 2POS SOLDER,TURRET	13	TP0-TP12
70	70		1213922-01	HEADER 3POS	1	J1
71	71		1213922-04	HEADER 6POS	1	J2
72	72		1213900-00	CONN,RCPT 6POS	1	J3
73	73		1209941-06	HEADER.100 20POS RT ANGLE	1	J4
74	74		1209941-04	HEADER RT ANGLE,RIGHT	1	
75	75		1209941-03	HEADER RT ANGLE LEFT L	1	
76	76		1305324-00	4.99 K .25 W 1.0 % RN55D-F10	2	R37,R30
77	77		1300250-00	150.0 .25 W 5.0 % CC	1	R42

D	I	G	I	T	A	L	TITLE	SECTION A	OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							D.C. SERVO AND POWER SUPPLY			K	PL	5413534-0-DBP	C



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NOTES:

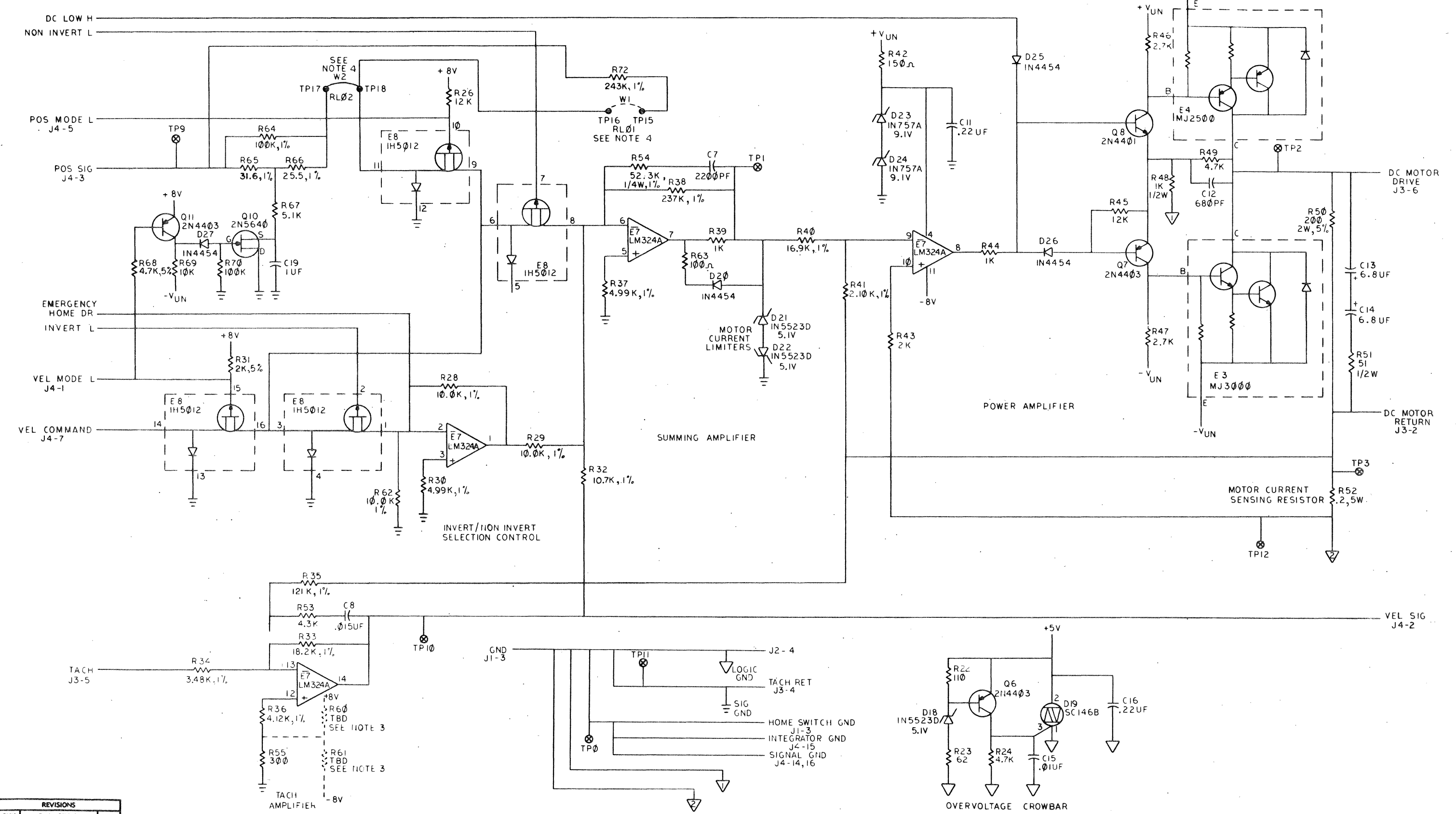
1. ALL RESISTORS TO BE 1/4W, 5%; UNLESS OTHERWISE SPECIFIED.
2. ~~E1 AND E2 ARE SPARES~~
3. VALUE OF R60 OR R61 WILL BE DETERMINED IN TESTING.
4. INSTALL W1 AND W2 FOR RL01 ON SIDE 2. INSTALL W2 ONLY FOR RL02 ON SIDE 2.

REV.	CHG.	BY	DATE
1	5413534-CZ001	BOB INOUCHE	10/1/78
2	5413534-CX02A	M. ZARICH	10/1/78
3	5413534-CX003	M. ZARICH	10/1/78

DESCRIPTION		DWG./PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES			
ANGLES 10° 30°	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES	
SURFACE QUALITY IN	(CHECK ONE)	OVER 0 TO 0.2	OVER 0.2 TO 0.4
QUANTITY & VARIATION	MEDIUM	OVER 0.4 TO 1.2	OVER 1.2 TO 4.0
MICROINCHES	PREFERRED	OVER 4.0 TO 12.0	OVER 12.0 TO 40.0
		±.004 ±.008 ±.012 ±.016 ±.024 ±.04	±.004 ±.008 ±.012 ±.016 ±.024 ±.04
THIRD ANGLE PROJECTION	DRN. R. Richard	0/15/78	FIRST USED ON
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D		
DO NOT SCALE DWG	PROJ. ENG.		TITLE
MATERIAL	PROD.		DC SERVO AND POWER SUPPLY
FINISH	NEXT HIGHER ASSY.		SIZE CODE NUMBER REV.
			D CS 5413534-0-1 D
	SHEET 1 OF 2	DIST.	



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REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	DC SERVO AND POWER SUPPLY	SIZE CODE	D	NUMBER	CS 5413534-0-1	REV.	D
SCALE	SHEET 2 OF 2		DIST.				



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 MICA	4		C93, C106-C108
4	4		1000024-00	470.0 MMF 100V 5%200PPM MICA	1		C94
5	5		1000064-00	3.9MFD 10V 10% S.TANT	2		C76, C85
6	6		1000076-00	39 MFD 10V 10% S.TANT	3		C73, C86, C95
7	7		1001610-00	.01 MFD 50V +80-20% Z5U CER	74	CONT	C1-C6, C8-C39, C40-C45, C47-C49, C51-C53, C55-C68, C70, C71, C77, C79-C82, C84, C88, C104
8	8		1001776-00	1 MFD 35V 10% S.TANT	4	CONT	C74, C75, C92, C97
9	9		1004812-00	15 MFD 20V 10% S.TANT	1		C87
10	10		1005784-00	.01 MFD 100V 200V 10% MYL	1		C101
11	11		1010978-32	.047 MFD 50V 10% CER	1		C96
12	12		1013466-07	220.0 MMF 50V 5% CER	1		C91
13	13		1013466-08	680.0 MMF 50V 10% X7R CER	2		C89, C90
14	14		1013466-09	1000.0 MMF 50V 10% X7R CER	1		C83
15	15		1013466-10	3300.0 MMF 50V 5% CER	4		C98, C100, C103, C105
16	16		1013466-11	.22 MFD 50V +80-20% Z5U CER	2		C99, C102
17	17		1111577-00	1N 4454 TR= 4NS PIV= 50 S	16		D1, D7-D20, D22
18	18		1113953-00	1N 5523D VZ= 5.1 1%	1		D21
19	19		1114117-00	1N 4152 PIV=40 I=75	5		D2-D6
20	20		1209941-02	HEADER 100 40POS RT ANGLE	1		J12
21	21		1209941-03	HEADER RT ANGLE LEFT L	5		
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	100.0 .25 W 5.0 % CC	5		R48, R133-R136

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	CHK'D: P. KENDRICK		DATE: 18-APR-79		TITLE PARTS LIST	
--	INITIAL	A	SECTION VARIATION INDEX	DES.ENG: MIKE BROWN		DATE: 18-APR-79		DRIVE LOGIC	
MB	5414025-CX001	B	[A] 00	RESP.ENG.: MIKE BROWN		DATE: 18-APR-79		DOCUMENT NUMBER	
MB	5414025-CX002	C	[B]	MFG.ENG.: D. LICK		DATE: 18-APR-79		K PL 5414025-0-DBP H	
MZ	5414025-CX003	D	[C]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME: EDIT #	
MB	5414025-CX005	E	[D]	D-UA-5414025-0-0		#RLO2		Z0496H.PLS 31	
MB	5414025-CX010A	F	[E]	"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 (C) 1981. DIGITAL EQUIPMENT CORPORATION"					
MZ	5414025-CX014	H	[F]						

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
29	29	1300271-00	220.0 .25 W 5.0 % CC	4		R3, R14, R41, R143
30	30	1300315-00	470.0 .50 W 5.0 % CC	3		R16, R73, R130
31	31	1300316-00	470.0 .25 W 5.0 % CC	4		R1, R2, R79, R142
32	32	1300365-00	1.0 K .25 W 5.0 % CC	15		R15, R39, R40, R42, R47, R52, R54, R56, R61, R72, R74, R101, R106, R129, R140, R144
					CONT	
33	33	1300411-00	2.0 K .25 W 1.0 % RN55D-F10	1		R93, R124, R126
34	34	1300439-00	3.30 K .25 W 5.0 % CC	3		R6-R13, R26-R28, R34, R35, R38, R43, R44, R49, R53, R57, R58, R62, R75-R78, R80, R82, R92, R102, R105, R123, R125, R127, R138, R145
35	35	1300447-00	4.70 K .25 W 5.0 % CC	35		R70, R107
					CONT	
					CONT	
					CONT	
36	36	1300479-00	10.0 K .25 W 5.0 % CC	2		R18-R21, R45, R50, R66, R67, R71, R87, R122, R128, R131
37	37	1302388-00	2.0 K .25 W 5.0 % CC	13		R59
					CONT	
38	38	1302391-00	20.0 K .25 W 5.0 % CC	1		R95
39	39	1302394-00	30.0 K .25 W 5.0 % CC	1		R55
40	40	1302398-00	470.0 K .25 W 5.0 % CC	1		R121
41	41	1302466-00	100.0 K .25 W 5.0 % CC	1		R91, R120
42	42	1302514-00	39.0 K .25 W 5.0 % CC	2		R94
43	43	1302666-00	10.0 M .25 W 5.0 % CC	1		R88
44	44	1302871-00	1.21 K .25 W 1.0 % RN55D-F10	1		R25
45	45	1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1		R64, R65, R83, R85, R113
46	46	1303047-00	464.0 .25 W 1.0 % RN55D-F10	5		R89, R117
47	47	1303114-00	1.0 K .25 W 1.0 % RN55D-F10	2		R17, R29-R31, R36, R60, R63
48	48	1303312-00	10.0 K .25 W 1.0 % RN55D-F10	7		R108
49	49	1304693-00	562.0 .25 W 1.0 % RN55D-F10	1		R81
50	50	1304841-00	75.0 K .25 W 5.0 % CC	1		R110
51	51	1304862-00	1.62 K .25 W 1.0 % RN55D-F10	1		R33
52	52	1304870-00	6.81 K .25 W 1.0 % RN55D-F10	1		R84, R86
53	53	1305124-00	287.0 .25 W 1.0 % RN55D-F10	2		R24
54	54	1305265-00	39.20 K .25 W 1.0 % RN55D-F10	1		R96, R99
55	55	1305337-00	3.65 K .25 W 1.0 % RN55D-F10	2		R23
56	56	1305405-00	24.90 K .25 W 1.0 % RN55D-F10	1		R46, R51, R132
57	57	1309595-00	1.0 M .25 W 5.0 % CC	3		R109
58	58	1310632-00	2.37 K .25 W 1.0 % RN55D-F10	1		R97, R100
59	59	1317303-00	301.0 .25 W 1.0 % RN55D-F10	2		R111, R112
60	60	1312929-00	62.0 .25 W 5.0 % CC	2		R68, R69, R137
61	61	1312930-00	5.10 K .25 W 5.0 % CC	3		R22, R103, R104
62	62	1312989-00	17.80 K .25 W 1.0 % RN55D-F10	3		R90
63	63	1313589-00	1.40 K .25 W 1.0 % RN55D-F10	1		R32
64	64	1313846-00	2.26 K .25 W 1.0 % RN55D-F10	1		R37
65	65	1314041-00	3.01 K .25 W 1.0 % RN55D-F10	1		R114
66	66	1314491-00	1.02 K .25 W 1.0 % RN55D-F10	1		Q7, Q10, Q12
67	67	1513489-00	2N 4401 NPN 350MW SI 40 20	3		Q1-Q3, Q5, Q6, Q8, Q9, Q11, Q13, Q15
68	68	1513490-00	2N 4403 PNP 350MW SI-40 30	10		Q14
69	69	1513697-00	2N 5640 FET N CHNNL	1		E9, E10, E68, E85
70	70	1909928-00	7416 INVERTER GATE-HEX 1I	4		E55
71	71	1910046-00	7442 DECODER-1 OF 10, BCD	1		

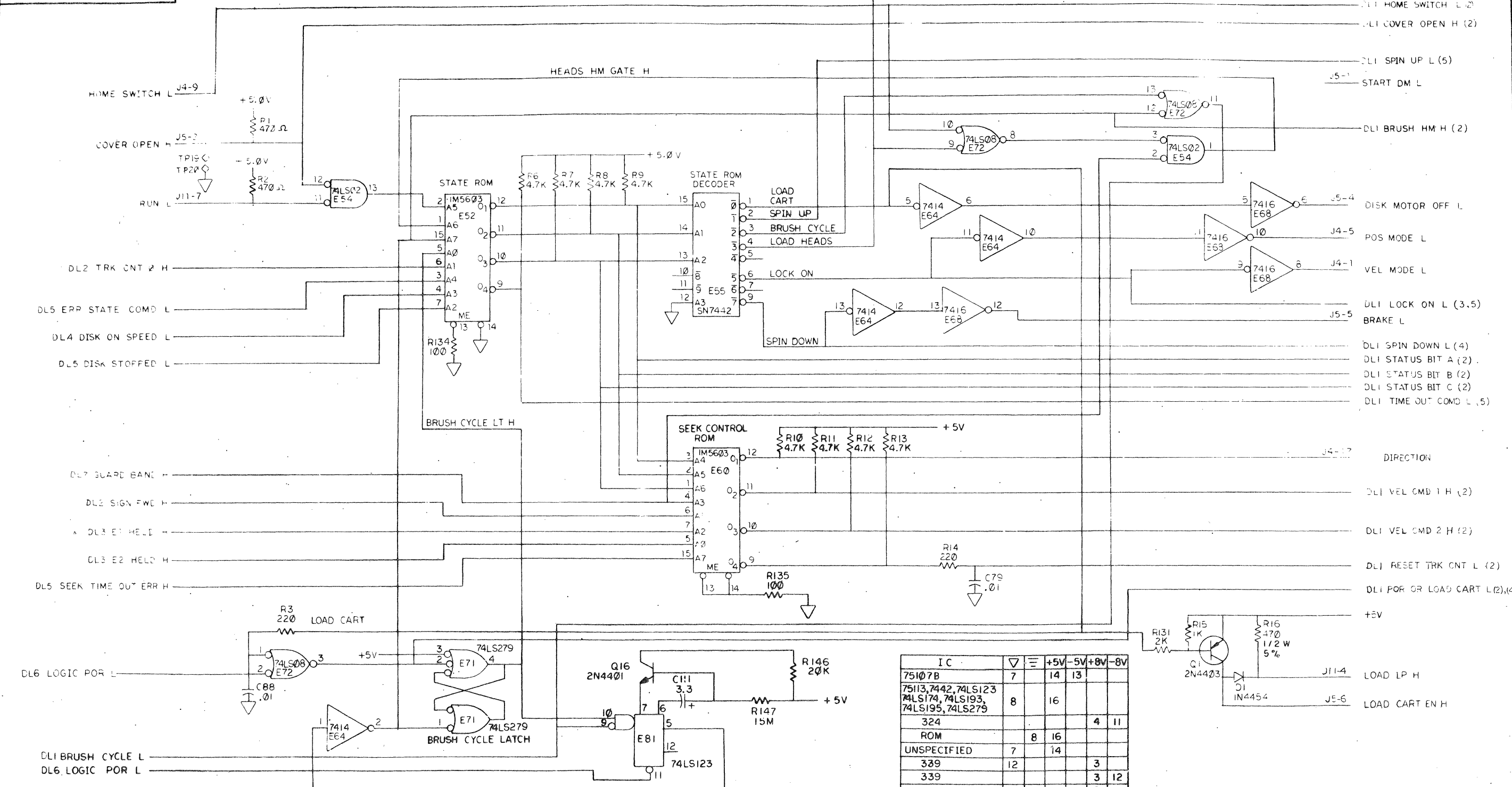
D	I	G	I	T	A	L	TITLE	DRIVE LOGIC	SECTION A	OF A	SIZE	CODE	DOCUMENT NUMBER	REV
											K	PL	5414025-0-DBP	H

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
72	72		1910268-00	DEC 75107B RECEIVER, LINE, DUAL,	4		E57, E61, E65, E87
73	73		1910298-00	741 OP AMP GEN PURP. COM	1		E31
74	74		1910363-00	7496 SHIFT REG. 5BIT	1		E63
75	75		1910536-00	74510 NAND GATE-TRIPLE 3IN	1		E45
76	76		1910655-00	74157 MUX 2 TO 1 QUAD	2		E23, E24
77	77		1911341-00	75113 DRIVER, LINE, DUAL, MA	3		E77, E83, E86
78	78		1912107-01	324ANOP AMP, QUAD	1		E49
79	79		1912108-00	339 VOLT CMPRTR, QUAD	3		E5, E36, E56
80	80		1912541-00	79M05 VOLT REG, FIX -5V	1		Q4
81	81		1912697-00	LS174 FF-D HEX W/CLEAR	2		E37, E41
82	82		1912799-00	LS00 NAND-GATE-QUAD 2IN, P	4		E7, E15, E44, E67
83	83		1912801-00	LS02 NOR-GATE-QUAD 2IN	4		E1, E30, E39, E54
84	84		1912803-00	74LS04 INVERTER GATE, HEX	2		E79, E80
85	85		1912805-00	LS08 AND GATE-QUAD 2IN, PO	6		E14, E34, E38, E69, E72, E76
86	86		1912807-00	LS10 NAND GATE-TRIPLE 3IN	1		E18
87	87		1912810-00	LS20 NAND GATE-DUAL 4IN	1		E2
88	88		1912813-00	LS27 NOR GATE-TRIPLE 3IN	1		E73
89	89		1912816-00	LS32 OR GATE-QUAD 2IN, POS	4		E17, E35, E59, E84
90	90		1912824-00	LS74 FF-D DUAL, EDGE TRIGG	9		E3, E11, E16, E26, E42, E46, E47, E62,
						CONT	E75
91	91		1912829-00	LS86 X-OR GATE-QUAD 2IN	3		E51, E66, E78
92	92		1912837-00	LS123 ONE SHOT-DUAL, RETRIG	1		E50
93	93		1912854-00	LS193 COUNTER, SYNCHR, 4BIT,	3		E27, E28, E43
94	94		1912855-00	LS195 SHIFT REG. 4BIT PARA	5		E19, E22, E25
95	95		1912857-00	LS197 COUNTER, BINARY, PRESET	4		E4, E8, E13, E74
96	96		1912864-00	LS279 LATCH, QUAD-S-R	6		E6, E12, E29, E33, E58, E71
97	97		1913414-00	LS14 INVERTER GATE-HEX SC	2		E40, E48
98	98		1914156-00	LM 393 VOLT. COMPARATOR DUAL	1		E53
99	99		23368A2-00	A2-02, A2-04	1		E52
100	100		23371A2-00	A2-02, A2-04	1		E60
101	101		23444A2-00	A2-02, A2-04	1		E70
102	102		23445A2-00	A2-02, A2-04	1		E32
103	103		9007201-00	TRANSIPADS #10253	1		
104	104		9007791-00	TERM PCB 2POS SOLDER, TURRET	15		TP1-TP4, TP6-TP16
105	105		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	1		W1
106	106		9105740-55	WIRE(WRAP)30AWG UL1423	A/R		
107	107		1012784-00	.047 MFD 50V +80-20% CER	8		C7, C46, C50, C54, C69, C72, C109, C110
108	108		1911324-00	7414 INVERTER, HEX 1IN SCH	1		E64
109	109		1217377-00	TERM QUICK 1POS TAB PC MNT	1		J15
110	110		1005334-00	*** THIS ITEM IS NOT USED ***	-		
111	111		1305608-00	*** THIS ITEM IS NOT USED ***	-		

D	I	G	I	T	A	L	TITLE	DRIVE LOGIC	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
										K	PL	5414025-0-DBP	H



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IC	Q	V	+5V	-5V	+8V	-8V
75107B	7		14	13		
75113, 7442, 74LS123	8		16			
74LS174, 74LS193, 74LS195, 74LS279					4	11
324						
ROM		8	16			
UNSPECIFIED	7		14			
339	12				3	
339					3	12
339		12			3	

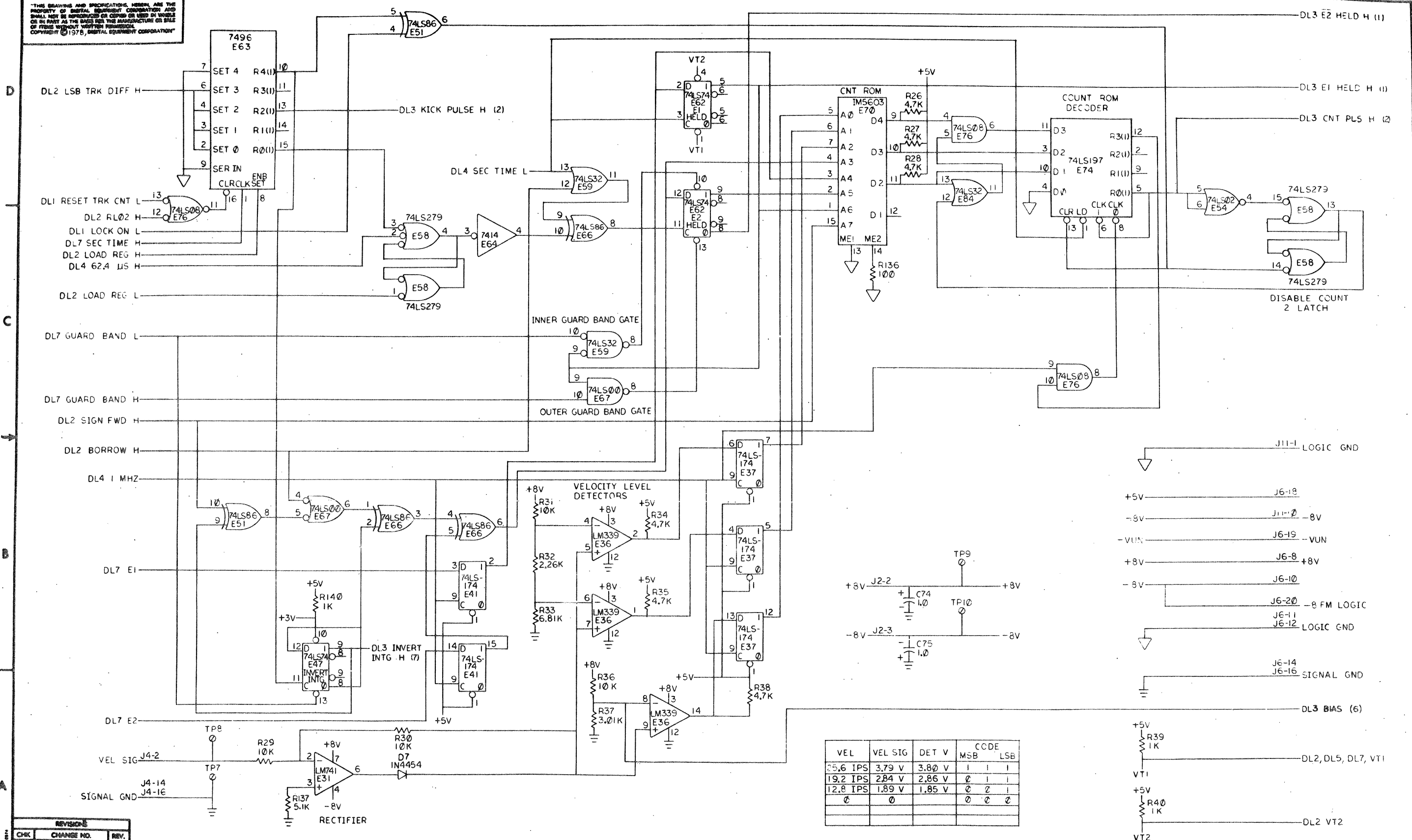
REV	BY	DATE	DESCRIPTION
1	M. BROWN	5/1/78	INITIAL DESIGN
2	M. BROWN	5/1/78	REVISED FOR MOUNTING
3	M. ZARICH	5/1/78	REVISED FOR MOUNTING
4	M. BROWN	5/1/78	REVISED FOR MOUNTING
5	M. BROWN	5/1/78	REVISED FOR MOUNTING
6	M. BROWN	5/1/78	REVISED FOR MOUNTING
7	M. BROWN	5/1/78	REVISED FOR MOUNTING
8	M. BROWN	5/1/78	REVISED FOR MOUNTING
9	M. BROWN	5/1/78	REVISED FOR MOUNTING
10	M. BROWN	5/1/78	REVISED FOR MOUNTING
11	M. BROWN	5/1/78	REVISED FOR MOUNTING
12	M. BROWN	5/1/78	REVISED FOR MOUNTING
13	M. BROWN	5/1/78	REVISED FOR MOUNTING
14	M. BROWN	5/1/78	REVISED FOR MOUNTING
15	M. BROWN	5/1/78	REVISED FOR MOUNTING
16	M. BROWN	5/1/78	REVISED FOR MOUNTING
17	M. BROWN	5/1/78	REVISED FOR MOUNTING
18	M. BROWN	5/1/78	REVISED FOR MOUNTING
19	M. BROWN	5/1/78	REVISED FOR MOUNTING
20	M. BROWN	5/1/78	REVISED FOR MOUNTING

DRN. 7/1/78	5/1/78	FIRST USED ON	Digital
CHK'D W. J. [Signature]	5/1/78	TITLE	DRIVE LOGIC (STATE CONTROL LOGIC) (DLI)
ENG. [Signature]	5/1/78	PROJECT	B-DD-5414025-C
PROD. [Signature]	5/1/78	SCALE	1 OF 3
NEXT HIGHER ASSY.		SIZE	CODE
B-DD-5414025-C		D	CS 5414025-0-1
REV. L		NUMBER	1
SHEET 1 OF 3		DIST.	



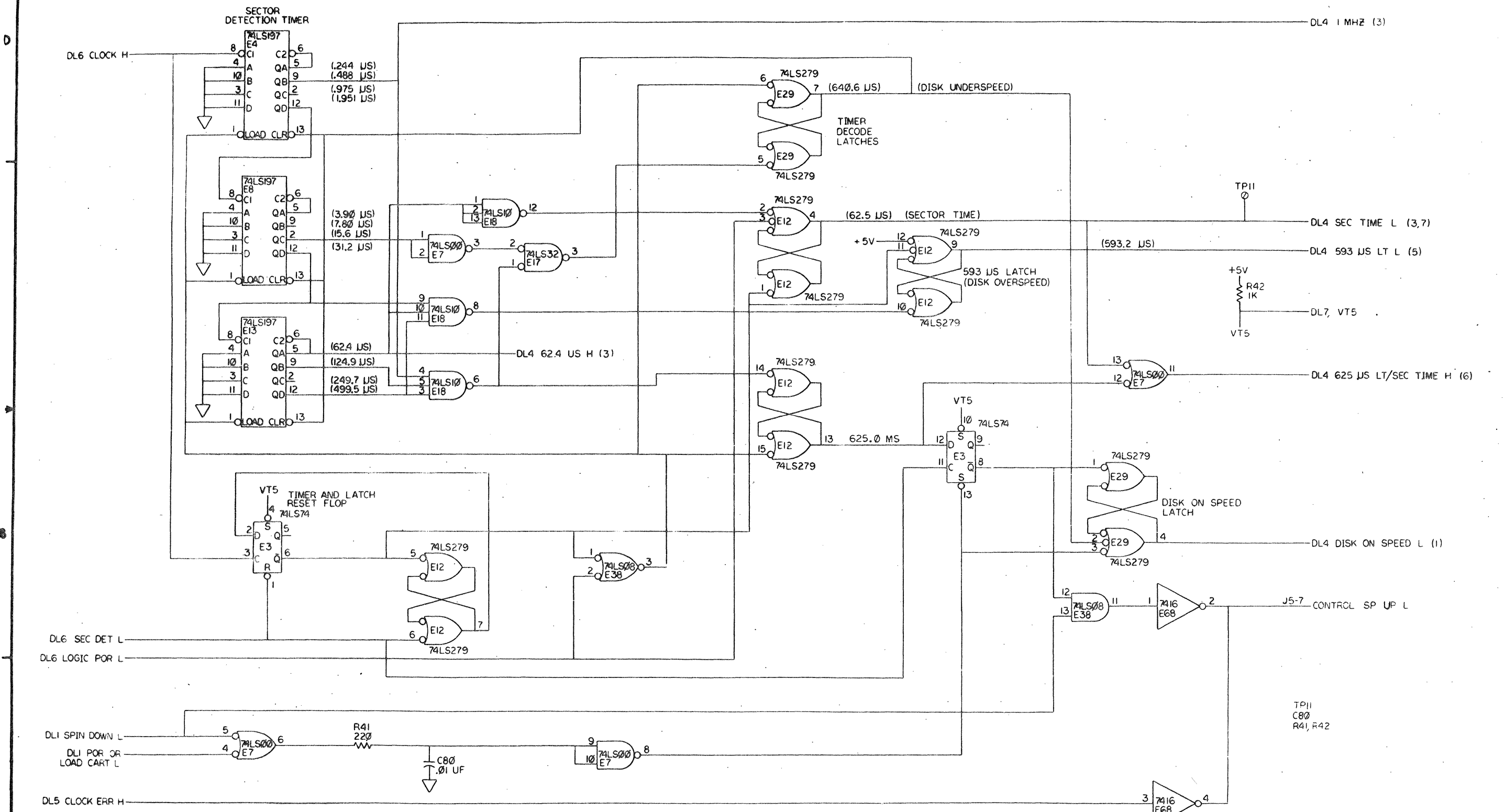


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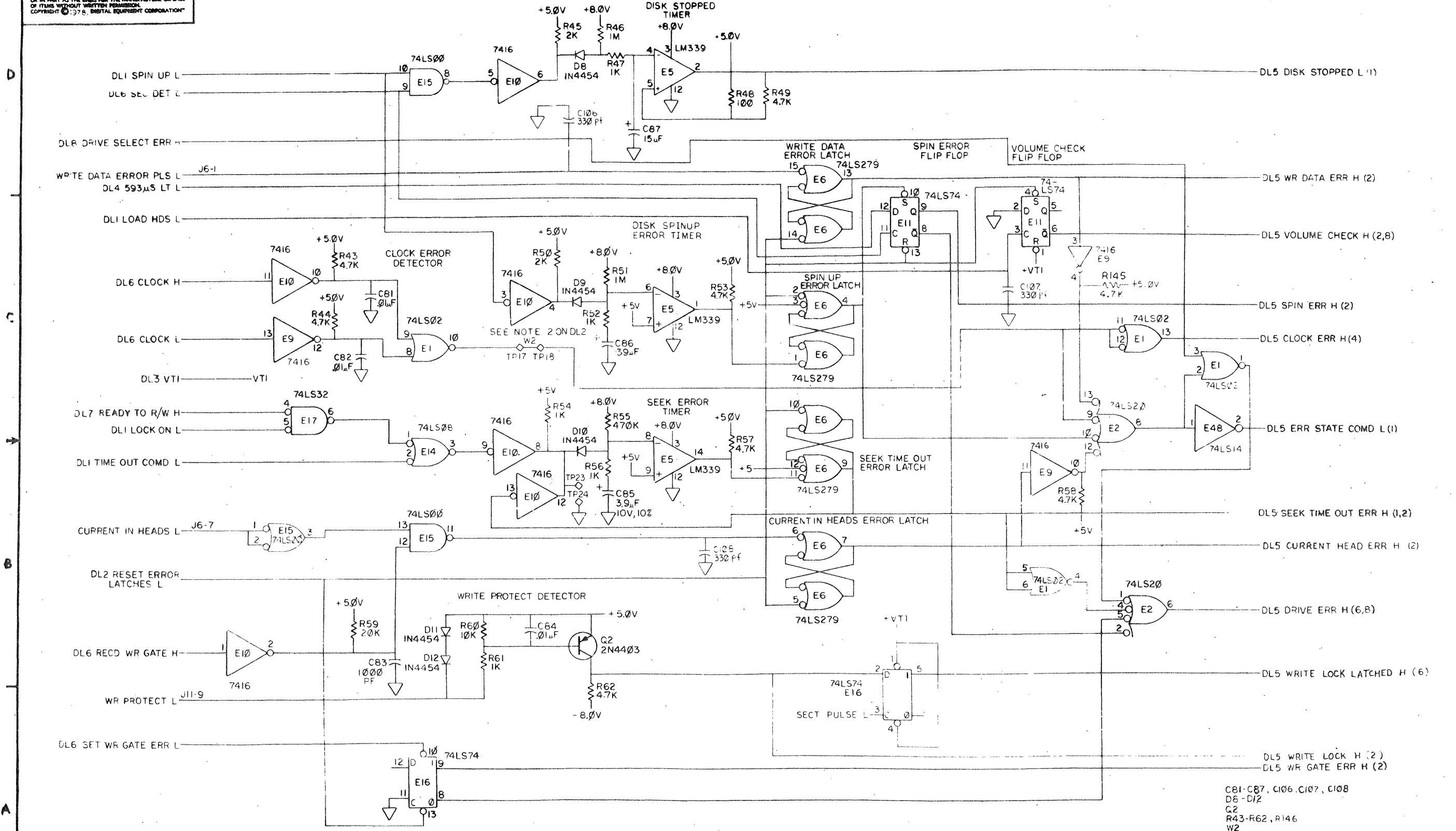
REVISIONS		
CHK	CHANGE NO.	REV.

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REVISIONS		
CHK	CHANGE NO.	REV.

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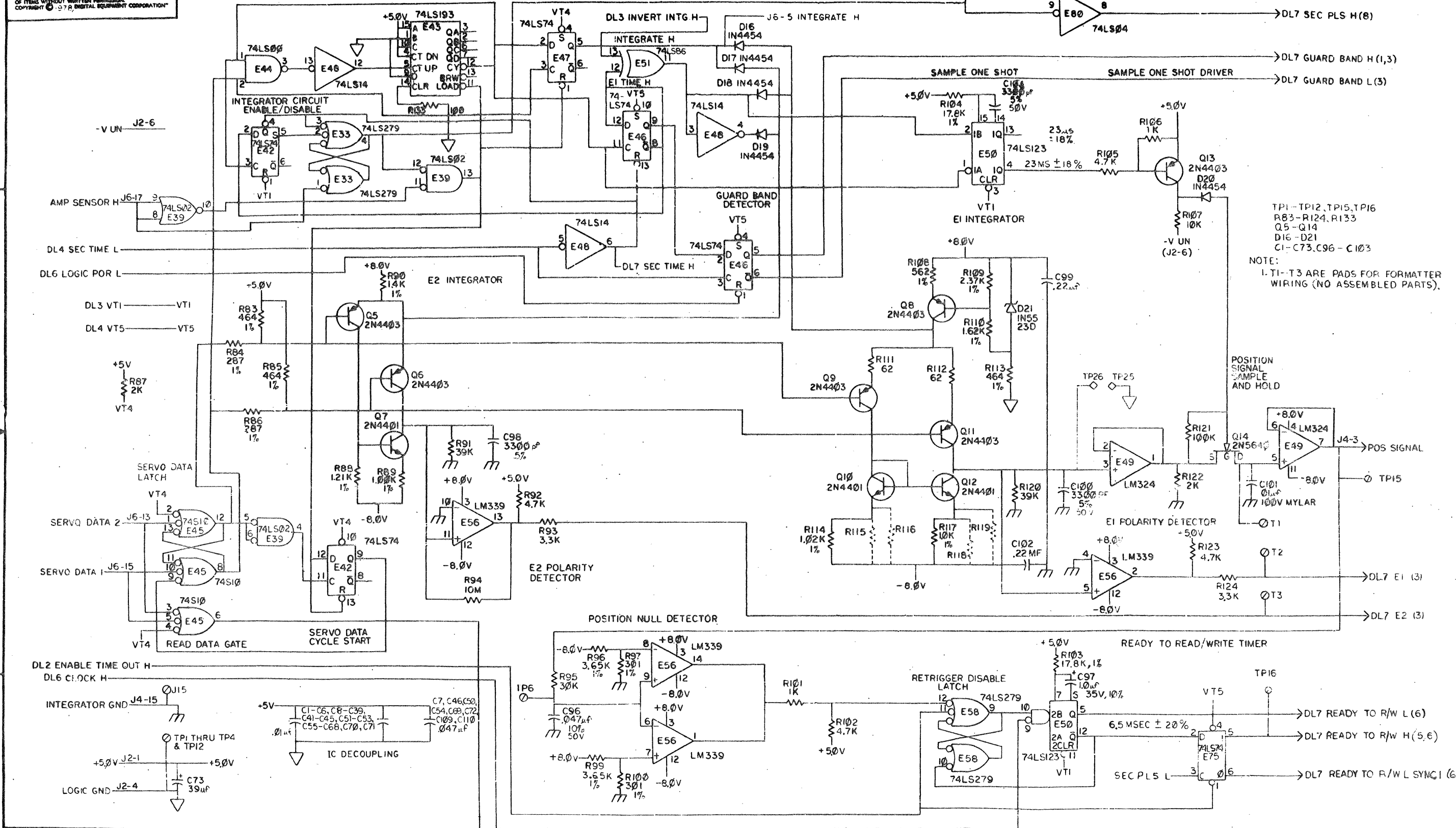


C81-C87, C106, C107, C108  
 D8-D12  
 Q2  
 R43-R62, R146  
 W2  
 TP17, TP18, TP23, TP24

REVISIONS		
CHK	CHANGE NO.	REV.

TITLE	DRIVE LOGIC (ERROR LOGIC) (DL5)	SIZE CODE	D CS	NUMBER	5414025-0-1	REV.	L
SCALE		SHEET	5	OF	8	DIST.	

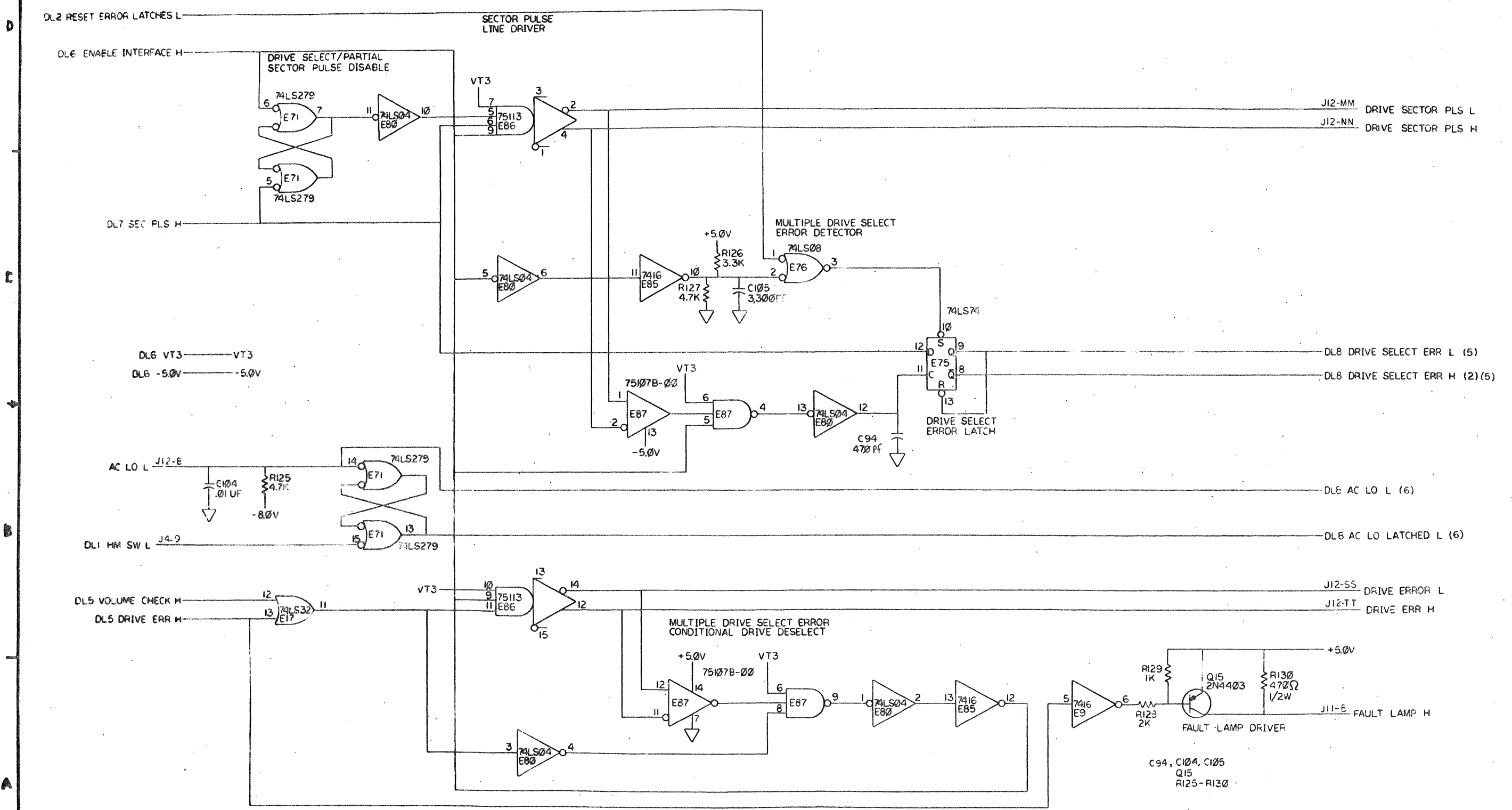
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NOTE:  
1. T1-T3 ARE PADS FOR FORMATTER WIRING (NO ASSEMBLED PARTS).

REVISIONS		
CHK	CHANGE NO.	REV.

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REVISIONS		
CHK	CHANGES MD	REV.

REV. 1  
DCS 5414025-0-1

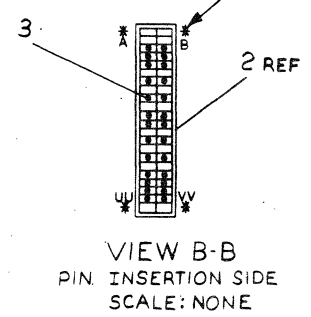
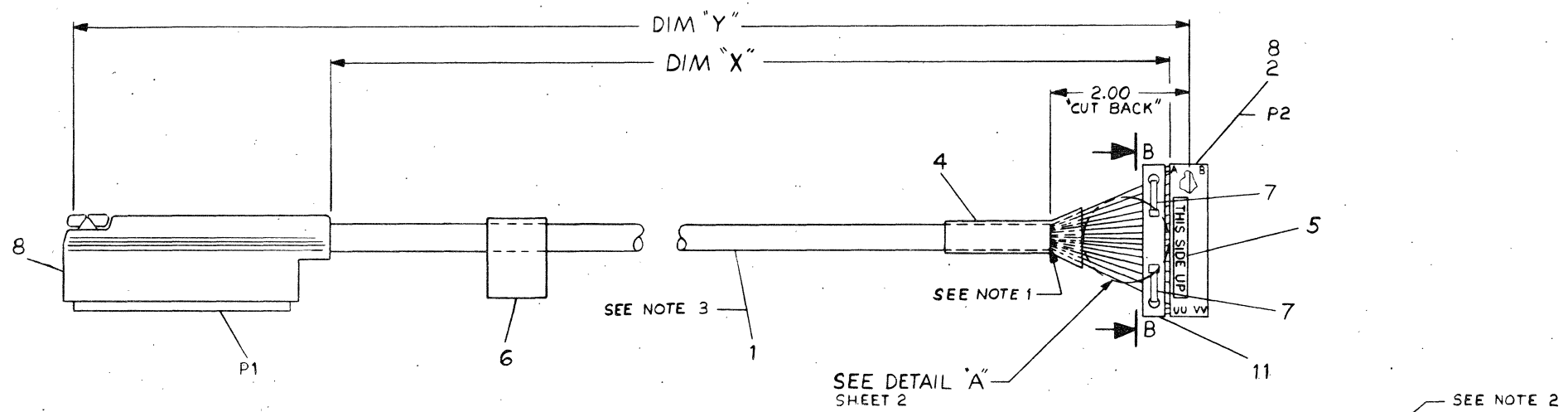




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LEGEND		
NUMBER	DIM "X"	DIM "Y" PRECUT REF
7016462-06	6FT. ±2IN	6FT 4IN ±2IN

- NOTES:
1. CUT BACK ALL UNUSED WIRES
  2. \* DENOTES CAVITIES NOT BEING USED OR DESIGNATED BY LETTERS.
  3. ITEM #1 IS TO BE USED TO FABRICATE 2 RLØ1/MNC CABLES (7016462-06).
  4. REMOVE OUTER JACKET & MYLAR SHIELD BACK TO THIS POINT.
  5. CUT CENTER & SHIELD DRAIN BACK TO 1 INCH FROM JACKET & STRIP INSULATION OFF CENTER DRAIN BACK TO JACKET, CUT A PIECE OF ITEM #10 (BLK WIRE) 2 INCHS LONG & STRIP ONE END .25 LONG. TWIST SHIELD DRAIN, CENTER DRAIN, & BLK WIRE TOGETHER AND SOLDER CAREFULLY AT TWISTED JOINT. NEXT SLIP A PIECE SHRINK TUBING AS FAR AS POSSIBLE OVER THE SOLDERED JOINT AND SHRINK. (SEE DETAIL "A"). CUT BLACK WIRE TO 2 IN. ±.1 IN. AND ATTACH PIN (ITEM #3).



ITEM NO.	DESCRIPTION	DWG/PART NO.	ITEM NO.
1	STRAIN RELIEF	1211166	11
A/R	WIRE, 28 AWG (BLK) STRD	9107350-00	10
A/R	TUBING, SHRINK	9107255-00	9
2	DECALS, PWR HARNESS	A-DC-7409872-1-0	8
2	TIE, CABLE	9007031-00	7
1	LABEL, CABLE IDENT	3616073-00	6
1	LABEL	3611567-00	5
A/R	TUBING, SHRINK	9107252-00	4
26	SOCKET, CRIMP	1210089-05	3
1	HOUSING, TERMINATION	1210918-15	2
1	I/O CABLE ASSEMBLY	E-IA-7012122-20	1

QUANTITY & VARIATION		DESCRIPTION		DWG/PART NO.		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES							
ANGLES	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES					
30° 30'		OVER 0	OVER 0.2	OVER 0.5	OVER 1.0	OVER 1.5	OVER 40.0
		±.004	±.005	±.006	±.008	±.010	±.015
SURFACE QUALITY	IN (CHECK ONE)	MICRONCHES					
	MEDIUM	±.012	±.016	±.020	±.024	±.028	±.031
THIRD ANGLE PROJECTION		DRN. <i>[Signature]</i> 73-00-776		FIRST USED ON		MNCII-J	
REMOVE BURRS AND BREAK SHARP CORNERS		CHK'D <i>[Signature]</i> 11 JAN 77		TITLE		CABLE, REWORK	
DO NOT SCALE DWG		ENG. <i>[Signature]</i> 2542-77		REV.		B	
MATERIAL		PROD. <i>[Signature]</i> 2542-77		NUMBER		7016462-0-0	
SEE PARTS LIST		NEXT HIGHER ASSY.		SCALE		1/1	
FINISH NONE		D-UA-MNCII-J-Ø		SIZE		D	
		D		DIST.		2	

REV.	CHG	NO.	DATE	BY	APP	DESCRIPTION
A		1	11/11/77	A.FILZ		REWORK
B		2	11/11/77	A.FILZ		REWORK

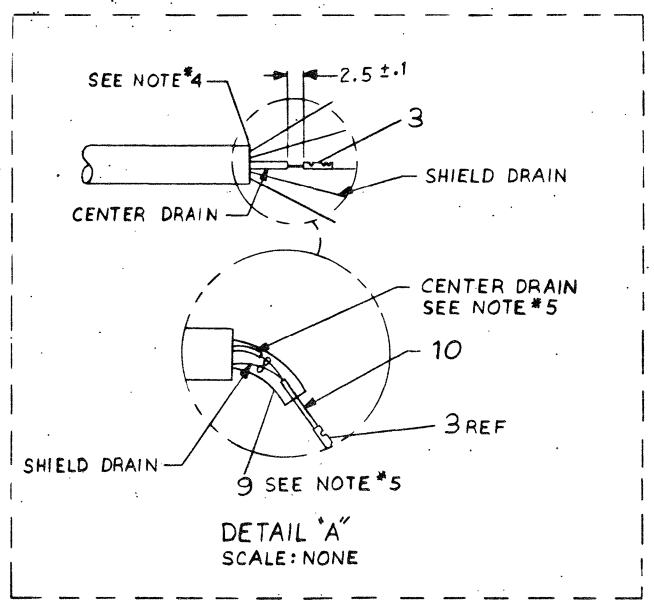


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DIA 7016462-0-0 2

WIRE TABLE

ITEM NO.	BASIC COLOR	TRACER COLOR	FROM			TO			REMARKS
			POINT	CONNECTION	WITH	POINT	CONNECTION	WITH	
1	RED			P1-3			P2-C	ITEM*3	TWP 1
	WHT	RED		P1-4			P2-D		
	RED			P1-5			P2-E		TWP 2
	WHT	GRN		P1-6			P2-F		
	RED			P1-7			P2-H		TWP 3
	WHT	ORN		P1-8			P2-J		
	RED			P1-11			P2-M		TWP 4
	WHT	YEL		P1-12			P2-N		
	RED			P1-15			P2-S		TWP 5
	WHT	BLK/RED		P1-16			P2-T		
	RED			P1-19			P2-W		TWP 6
	WHT	BLK/ORN		P1-20			P2-X		
	RED			P1-21			P2-Y		TWP 7
	WHT	BLK/BLU		P1-22			P2-Z		
	RED			P1-25			P2-CC		TWP 8
	WHT	BLK/BRN		P1-26			P2-DD		
	RED			P1-29			P2-HH		TWP 9
	WHT	GRN/RED		P1-30			P2-JJ		
	RED			P1-33			P2-MM		TWP 10
	WHT	GRN/BLU		P1-34			P2-NN		
	RED			P1-35			P2-PP		TWP 11
	WHT	GRN/YEL		P1-36			P2-RR		
	RED			P1-37			P2-SS		TWP 12
	WHT	GRN/BRN		P1-38			P2-TT		
	YEL			P1-39			P2-UU		
	BLK			P1-40			P2-VV	ITEM*3	



REVISIONS		
CHK	CHANGE NO.	REV.

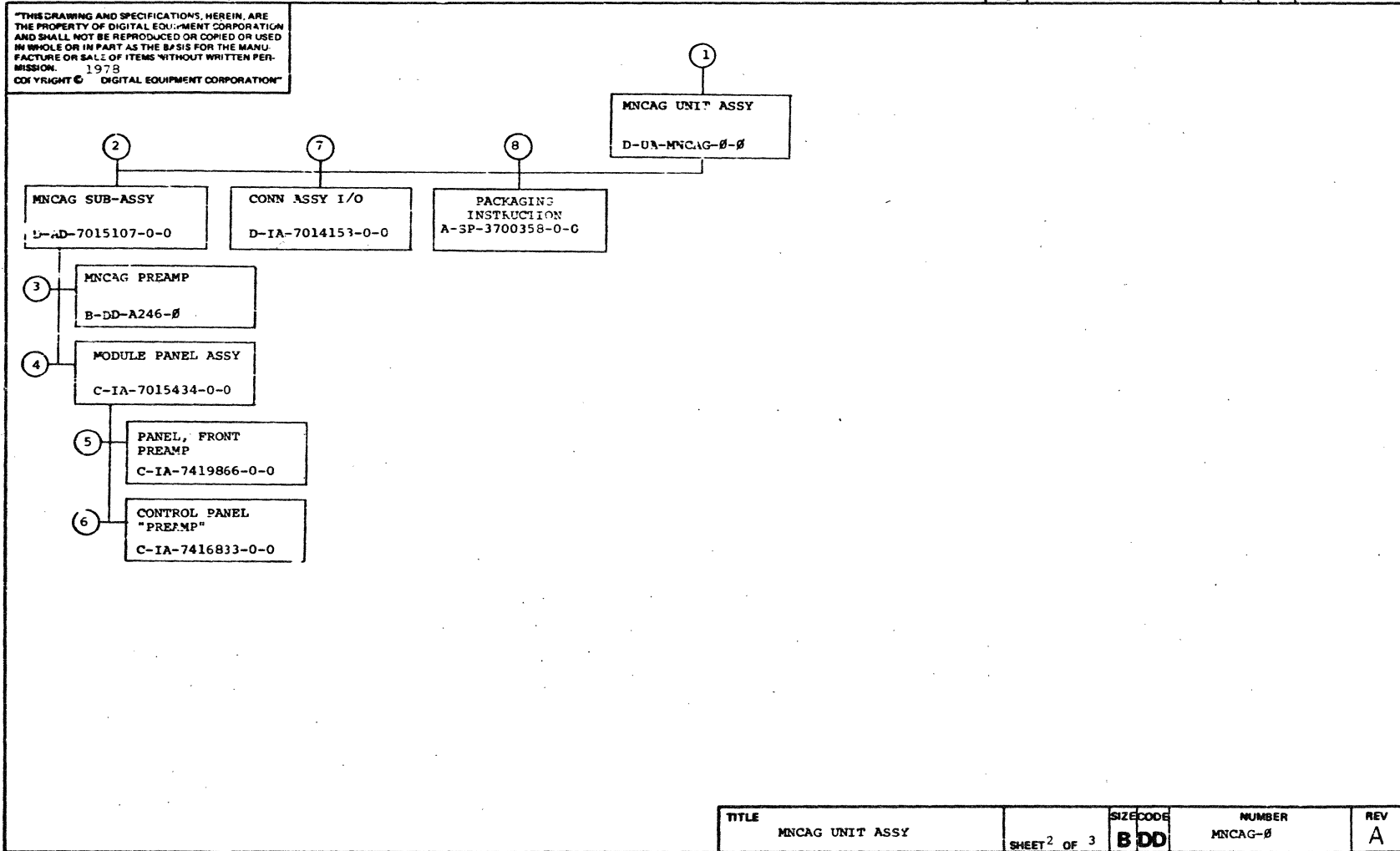
TITLE: CABLE, REWORK RLØ1/MNC  
 SIZE CODE: D IA  
 NUMBER: 7016462-0-0  
 SCALE: NONE  
 SHEET: 2 OF 2  
 DIST.:





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REV. A  
 NUMBER B-DD  
 SIZE 8



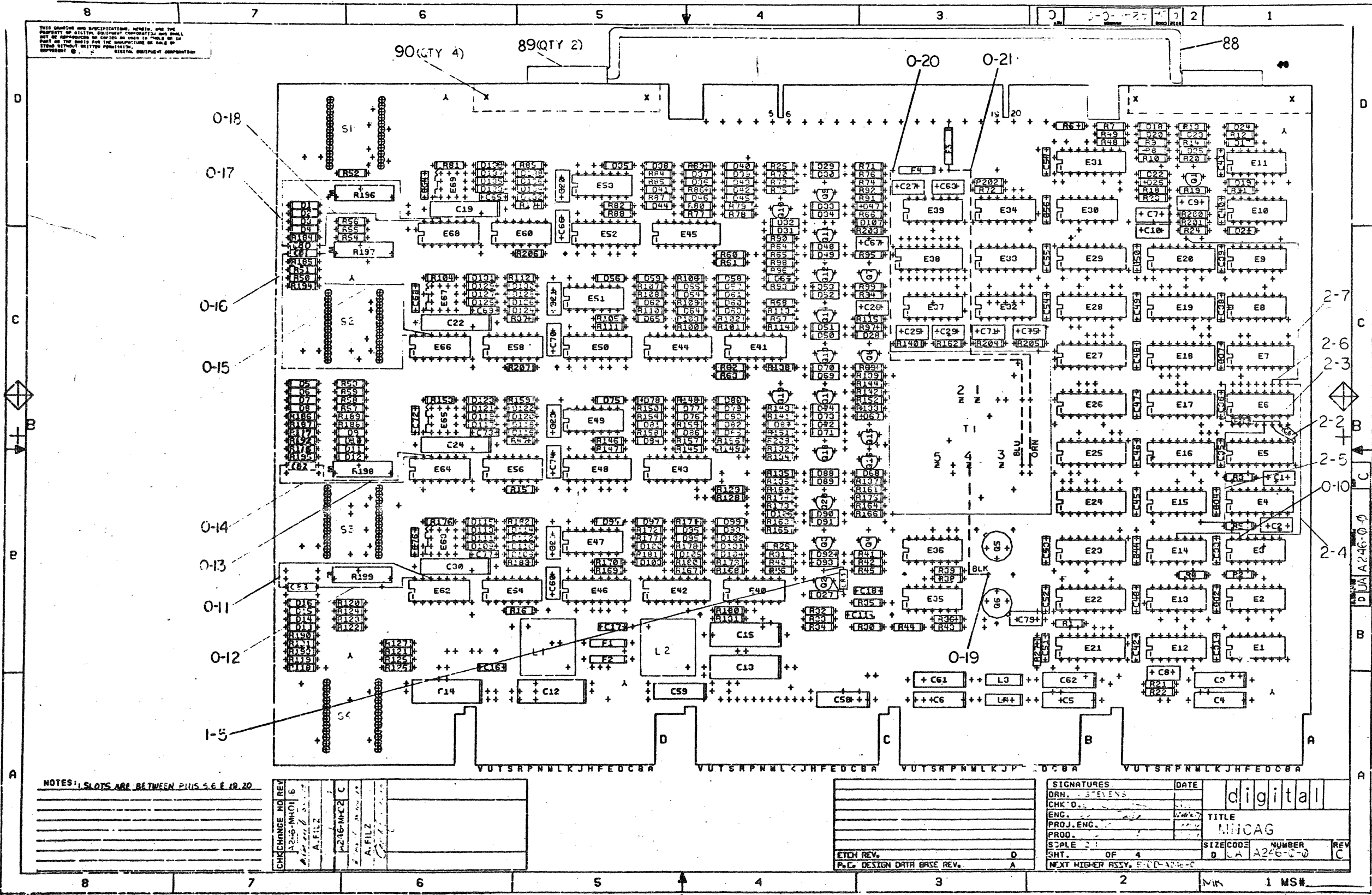
TITLE	MNCAG UNIT ASSY	SHEET 2 OF 3	SIZE CODE	B DD	NUMBER	MNCAG-β	REV	A
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DRB 107

MR



THIS DRAWING AND SPECIFICATIONS, HEREIN, AND THE CONTENTS OF ALL ATTACHED DRAWINGS, CONSTITUTE THE ENTIRE AGREEMENT BETWEEN THE MANUFACTURER AND THE BUYER. THE BUYER'S SOLE REMEDY IN THE EVENT OF A DEFECTIVE PRODUCT SHALL BE REPAIR OR REPLACEMENT AT THE MANUFACTURER'S OPTION. THE BUYER'S SOLE REMEDY IN THE EVENT OF A DEFECTIVE PRODUCT SHALL BE REPAIR OR REPLACEMENT AT THE MANUFACTURER'S OPTION.



NOTES: 1. SLOTS ARE BETWEEN PLUS 5.6 & 10.20

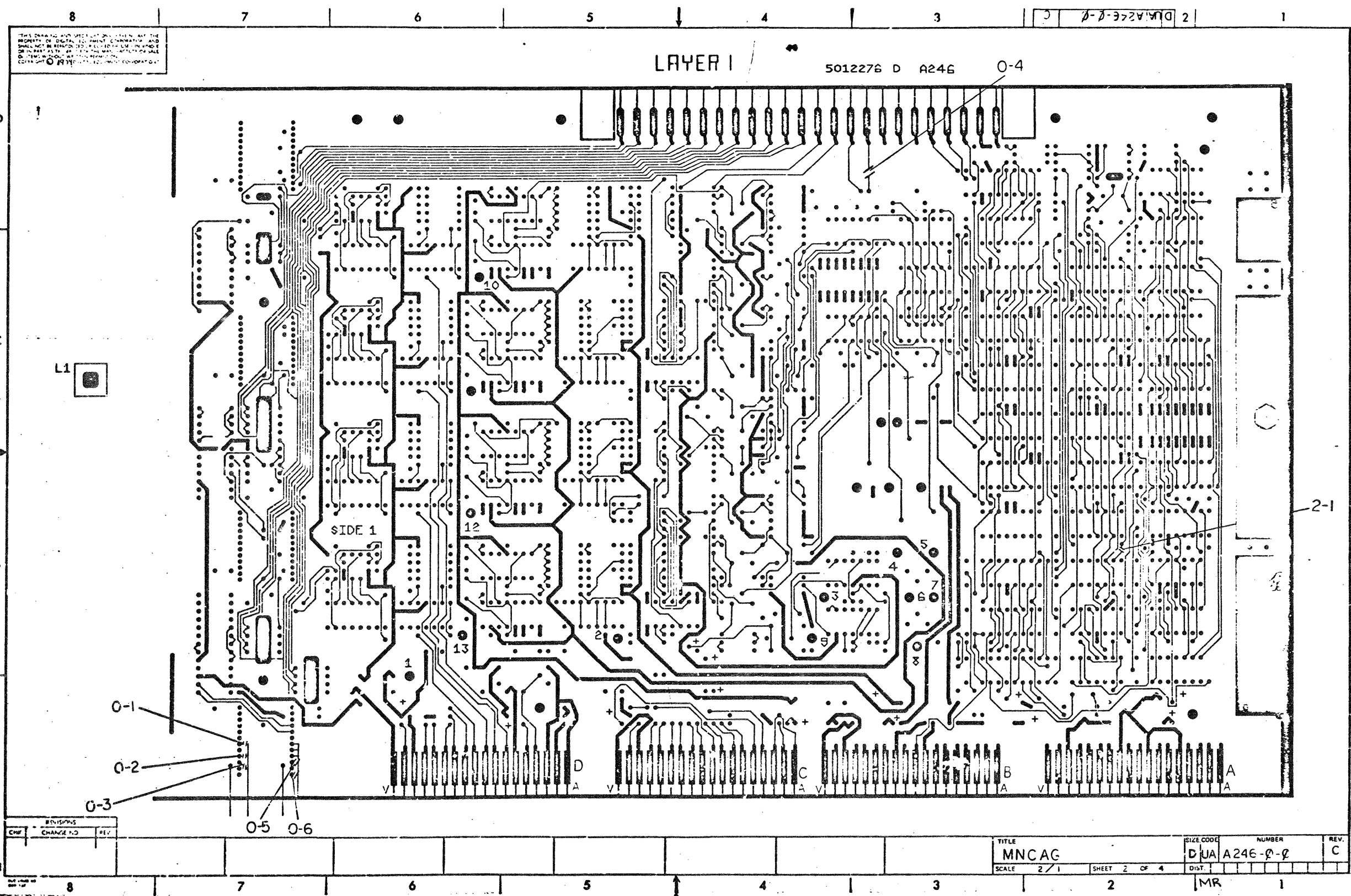
CHANGE NO	REV	DATE	BY	CHKD
1	A	12-15-68	W. J. STEVENS	
2	B	1-10-69	W. J. STEVENS	
3	C	1-10-69	W. J. STEVENS	

SIGNATURES		DATE
DRN.	W. J. STEVENS	
CHK'D.		
ENG.		
PROJ. ENG.		
PROD.		
SCALE		
SHT.	OF 4	
NEXT HIGHER ASSY. ECU-A246-C		

TITLE	
DIGITAL	
MHCAG	
SIZE CODE	NUMBER
D LA	A246-C-0
REV	C

1 MS#





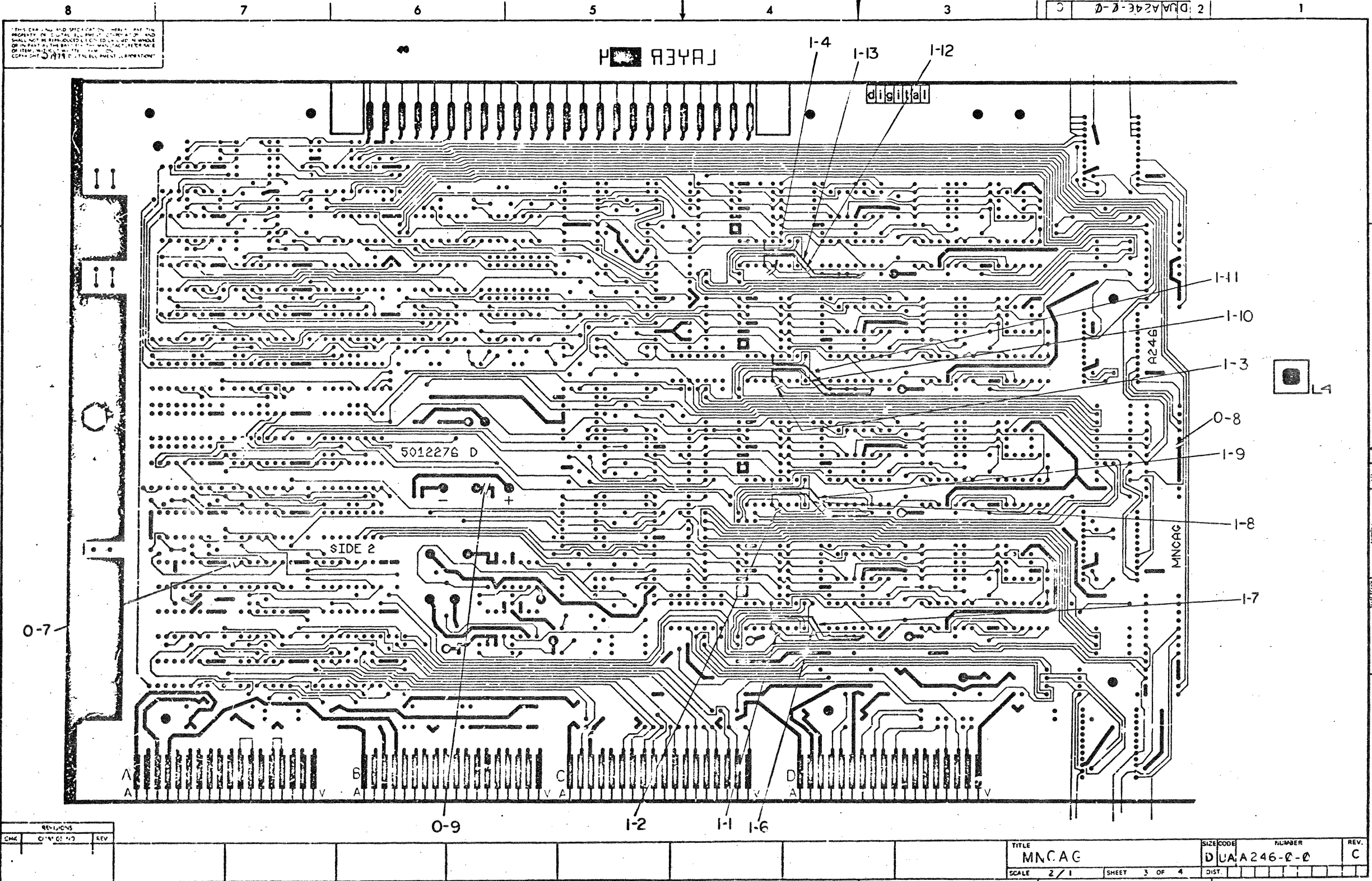
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LAYER 1  
5012276 D A246 0-4

REVISIONS		
CHG	CHANGE NO.	REV.

TITLE	SIZE CODE	NUMBER	REV.
MNCAG	D UA	A246-0-0	C
SCALE 2/1	SHEET 2 OF 4	DIST.	MR





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PCB A3YA1

2 DUA A246-E-0

REVISIONS		
CHK	DATE	REV

TITLE MNCAG		SIZE CODE DUA A246-E-0	NUMBER C
SCALE 2/1	SHEET 3 OF 4	DIST.	REV. C

MR

DUA A246-E-0

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0-0-5224 2

**REWORK INSTRUCTIONS  
FIRST RELEASE**

**ETCH CUTS, SIDE 1, AS SHOWN**

- 0-1 AT S4 (7)
- 0-2 AT S4 (8)
- 0-3 AT S4 (10)
- 0-4 AT BOTTOM LEAD OF F3
- 0-5 AT S4(13)
- 0-6 AT S4(15)

**ETCH CUTS, SIDE 2, AS SHOWN**

- 0-7 AT E14(9)
- 0-8 AT LEFT SIDE OF R18C
- 0-9 AT T1(4)

**WIRE ADDS, SIDE 1, AS SHOWN**

- 0-10 FROM E3(13) TO E14 (1)
- 0-11 FROM E2 (12) TO C43
- 0-12 FROM E2 (14) TO C83
- 0-13 FROM E64 (17) TO C82
- 0-14 FROM E64 (14) TO C52
- 0-15 FROM E66 (12) TO C81
- 0-16 FROM E66 (14) TO C51
- 0-17 FROM E68 (12) TO C58
- 0-18 FROM E67 (12) TO C99

**WIRE ADDS, SIDE 2, AS SHOWN**

- 0-19 FROM T1(4) TO PTH BELOW AND TO THE RIGHT OF Q5 (WITH P/N 9107776-00 BLK)
- 0-20 FROM FIRST PTH TO THE LEFT OF T1(3) TO THE RIGHT LEAD OF F4 (WITH P/N 9107776-66 BLU)
- 0-21 FROM SECOND PTH TO THE LEFT OF T1(3) TO BOTTOM LEAD OF F3 (WITH P/N 9107776-33 ORN)

**ECO #1**

**ETCH CUTS SIDE 2 AS SHOWN**

- 1-1 AT E42-5
- 1-2 AT E43-5
- 1-3 AT E44-5
- 1-4 AT E45-5

**COMPONENT ADD SIDE 1**

- 1-5 C64 (15 PF)

**WIRE ADDS SIDE 2 AS SHOWN**

- 1-6 FROM E42-5 TO PTH BELOW E46-4
- 1-7 FROM E42-12 TO PTH BELOW E46-4
- 1-8 FROM E43-5 TO PTH BELOW E48-3
- 1-9 FROM E43-12 TO PTH BELOW E48-3
- 1-10 FROM E44-5 TO PTH BELOW E50-3
- 1-11 FROM E44-12 TO PTH BELOW E50-3
- 1-12 FROM E45-5 TO PTH BELOW E52-3
- 1-13 FROM E45-12 TO PTH BELOW E52-3

**ECO 2**

**ETCH CUT, SIDE 1, AS SHOWN:**

- 2-1 AT PTH BELOW E15-7

**COMPONENT ADDS, SIDE 1, AS SHOWN:**

- 2-2 C65 (1000 NMF)
- 2-3 R209 (2.15K)

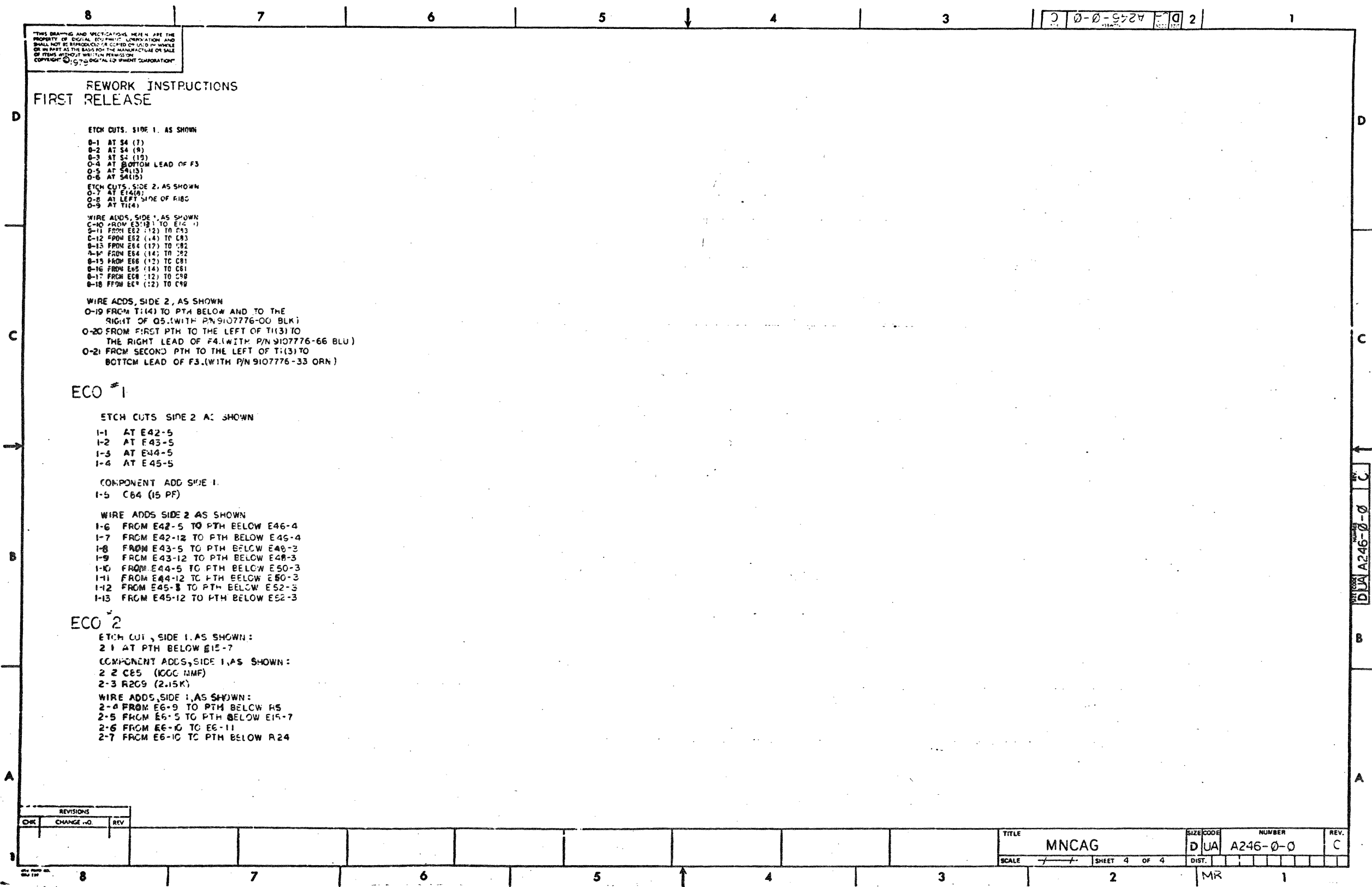
**WIRE ADDS, SIDE 1, AS SHOWN:**

- 2-4 FROM E6-9 TO PTH BELOW R5
- 2-5 FROM E6-5 TO PTH BELOW E15-7
- 2-6 FROM E6-10 TO E6-11
- 2-7 FROM E6-10 TO PTH BELOW R24

REVISIONS		
CHK	CHANGE NO.	REV

TITLE	MNCAG	SIZE CODE	D UA	NUMBER	A246-0-0	REV.	C
SCALE	1/1	SHEET	4	OF	4	DIST.	

D UA A246-0-0



MR

AUTOMATED BY PRLST, JG(17)      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	D=MD=2012274=0=0	5012274=00	A246	1	
2		1000015=00	82.0 MMF 100V 5%200PPM DM155	2	C1,C2
3		1000012=00	15 MFD 20V 10% S.TAHT	8	C3=C6,C58,C59,C61,C62
4		1000042=00	1000.0 MMF 100V 5%200PPM DM155	12	C7,C10,C20,C21,C23,C28,C60,C66, C70,C74,C79,C85
5		1000016=00	100.0 MMF 100V 5%200PPM DM155	1	CONT C8
6		1000025=00	560.0 MMF 100V 5%200PPM DM155	1	C9
7		1010274=01	.22 MFD 50V -20+80 Z5U CER	39	CONT C11,C16=C18,C31=C57,C64,C65,C68, C69,C72,C73,C76,C77
8		1002433=00	22 MFD 35V 20% S.TAHT	4	C12=C15
9		1009939=00	1000.0 MMF 100V 10% 863H=PLYST	4	C19,C22,C24,C30
10		1000022=00	270.0 MMF 100V 5%200PPM DM155	8	C25=C27,C29,C63,C67,C71,C75
11		1105275=00	D 672 TR= 15% S PIV= 60V SI	82	D1=D26,D28,D35=D47,D54=D68, CONT D75=D87,D94=D107
12		1110994=00	1N 751A VZ= 5.1 5% .40M	1	D27
13		1105610=00	MCL1301 CL#1MA FROM10=ROV	12	CONT D29,D31,D33,D48,D50,D52,D70,D71, D73,D88,D90,D92
14		1113117=00	1N 4745A VZ=16.0 5% 1M A	12	CONT D30,D32,D34,D49,D51,D53,D69,D72, D74,D89,D91,D93
15		1100114=00	D 664 QS175PCB PIV= 25V SP	32	D108=D139
16		1214353=00	SW,ROT 3P 4A 2 SECTIONS	4	S1=S4
17		1210929=04	FUSE, SUB=MTM1, .250A, 125V, A	2	F1,F2
18		9009122=00	FUSE, SUB=MTM1, .062A, 125V, A	2	F3,F4
19		1300365=00	1.0 K .25 W 5.0 % CC	32	R1,P2,R4,R14=R16,R18,R22,R23, CONT R48=R51,R116=R119,R184=R195, CONT R200,R206,R207
20		1304854=00	5.11 K 1/4W 1% RN55D-F 100PPM	2	R3,R5
21		1310881=02	47.0 .25 W 1.0 % FUSE	5	R6,R8,R10,R12,R20
22		1312930=00	5.10 K .25 W 5.0 % CC	12	R7,R9,R11,R13,R84,R87,R107,R110, CONT R150,R158,R172,R181

REVISION HISTORY		BASIC PART NO: A246		DRN: L, NILSON	DATE: 16-JAN-79	D I G I T A L	
ENGR	ECO NUMBER	REV	SECTION A OF A	CHK'D BY	DATE	TITLE	PART LIST
	INITIAL	A	SECTION VARIATION INDEX	R, S, CAUNTER	16-JAN-79	A246	
	ACF/A246-MR001	A	(A) 00			MNCAG	
	ACF/A246-MR002	C	(B)	DES, ENGR: G, SIROIS	26-MAR-79		
			(C)	RESP, ENGR: A, C, FILZ	26-MAR-79		DOCUMENT NUMBER
			(D)				SIZE CODE NUMBER REV
			(E)	MFG, ENGR: A, G, BAILEY	27-MAR-79	K PL A246-0-DBP	C
			(F)				
			(G)	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:	FILE NAME:	EDIT #
			(H)	D=UA=A246-0=0		Z0445C.PLS	20
			(I)				
			(J)				
			(K)				
			(L)				
			(M)				
			(N)				

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AUTOMATED BY PRLST,JG(17)		PARTS LIST				SHEET A2 OF A3	
LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	00	REFERENCE DESIGNATOR	
23	23	1300271-0	220.0 .25 W 5.0 % CC	4		R17,R37,R47,R103	
24	24	1300197-0	32.0 .25 W 5.0 % CC	5		R19,R88,R111,R147,R169	
25	25	1303313-0	12.1 K 1/4W 1% RN55D-F 100PPM	1		R21	
26	26	1305421-0	35.7 K 1/4W 1% RN55D-F 100PPM	2		R24,R201	
27	27	1303207-0	100 K 1/4W 1% RN55C-B 50PPM	1		R25	
28	28	1312931-0	6.20 K .25 W 5.0 % CC	1		R26	
29	29	1303311-0	46.4 K 1/4W 1% RN55D-F 100PPM	1		R27	
30	30	1303044-0	100 K 1/4W 1% RN55D-F 100PPM	1		R30	
31	31	1305515-0	64 K 1/4W 1% RN55E-B 25PPM	6		R31,R32,R65,R68,R134,R136	
32	32	1305514-0	32 K 1/4W 1% RN55E-B 25PPM	1		R33	
33	33	1305351-0	4 K 1/4W 1% RN55C-B 50PPM	1		R34	
34	34	1305253-0	7.15 K 1/4W 1% RN55D-F 100PPM	1		R35	
35	35	1305431-0	10 K 1/4W 1% RN55E-B 25PPM	1		R36	
36	36	1304835-0	3.65 K 1/4W 1% RN55D-F 100PPM	1		R38	
37	37	1304858-0	348 K 1/4W 1% RN55D-F 100PPM	1		R39	
38	38	1300479-0	10.0 K .25 W 5.0 % CC	44		R40=R42,R45,R64,R66,R67,R69-R71, R73=R76,R85,R86,R93,R95-R99, R108,R109,R132,R133,R135, R137=R139,R141-R144,R154,R155, R160,R161,R163=R166,R177,R178	
39	39	1312987-0	10.5 K 1/4W 1% RN55D-1052F	1		R43	
40	40	1305114-0	3.48 K 1/4W 1% RN55D-F 100PPM	1		R44	
41	41	1302389-0	4.30 K .25 W 5.0 % CC	1		R46	
42	42	1310891-0	1.0 K .25 W 1.0 % FUSE	16		R52=R59,R120=R127	
43	43	1300229-0	100.0 K .25 W 5.0 % CC	8		R60=R63,R128=R131	
44	44	1301475-0	1.10 K .25 W 5.0 % CC	8		R72,R94,R140,R162,R202=R205	
45	45	1313349-0	33.0 K .25 W 5.0 % CC	16		R77=R80,R100=R103,R145,R149, R156,R157,R167,R168,R179,R180	
46	46	1309595-0	1.0 M .25 W 5.0 % CC	4		R81,R104,R153,R176	
47	47	1300496-0	15.0 K .25 W 5.0 % CC	4		R82,R105,R146,R170	
48	48	1301427-0	7.50 K .25 W 5.0 % CC	4		R83,R106,R148,R171	
49	49	1300447-0	4.70 K .25 W 5.0 % CC	4		R89,R112,R159,R182	
50	50	1301809-0	22.0 K .25 W 5.0 % CC	4		R90,R113,R151,R173	
51	51	13.5346-00	27.0 K .25 W 5.0 % CC	4		R91,R114,R174,R208	
52	52	1303219-0	82.0 K .25 W 5.0 % CC	4		R92,R115,R152,R175	
53	53	1305143-12	25 K 3/4W 1% POT 100PPM	4		R196=R199	
54	54	1503409-01	DEC65346 PNP 310M SI 40 90 P	1		Q1	
55	55	1509142-00	DEC4250 PNP 200M SI 40250	5		Q2,Q7,Q8,Q15,Q16	
56	56	1509587-00	SE 4020 MPN 200M SI 60120 M	12		Q3,Q4,Q9-Q14,Q17-Q20	
57	57	1501742-00	DEC2904 PNP 600M SI 40 40 P	1		Q5	
58	58	1501681-00	DEC2219 NPN 3W SI 30100	1		Q6	
59	59	1610963-10	400 UH 900MA,.30HMS	2		L1,L2	
60	60	1602723-12	270 UH 5% 260MA	2		L3,L4	
61	61	1916193-00	PS 4210 DC-DC CONVERTER,12V,	1		T1	
62	62	1909004-00	DEC 7402 NOR GATE-QUAD 2IN	1		E1	
63	63	1911521-00	7432 OR GATE-QUAD 2IN, PO	1		E2	
64	64	1905547-00	7474 FF-D DUAL,EDGE TRIGG	2		E3,E13	
65	65	1910430-00	DEC 74123 ONE SHOT-DUAL,RETRIG	2		E4,E21	

D	T	C	I	T	A	L	TITLE	A246	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							ANCAG			K	PL	A246-0=0BP	C

MR

AUTOMATED BY PRTLST,JC(17)

PARTS LIST

SHEET A3 OF A3

MR

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
66	66		1910656-00	74155 DECODER=2 OF 4(DUAL)	2	E5,E7
67	67		1910937-00	8093 BUFFER GATE=QUAD 2IN	1	E8
68	68		1910155-00	DEC 7408 AND GATE, POS, QUAD 2I	2	E9,E14
69	69		1912824-00	LS74 FF=0 DUAL, EDGE TRIGG	2	E10,E11
70	70		1905376-00	7410 NAND GATE=TRIPLE 3IN	1	E12
71	71		1909686-00	7404 INVERTER GATE=HEX 1I	1	E15
72	72		1911330-00	74173 FF=D QUAD, TRISTATE	4	E16,E18,E25,E28
73	73		1910047-00	74145 DECODER&DRIVER	4	E17,E24,E26,E27
74	74		1910651-00	DEC 74175 FF=D QUAD	1	E19
75	75		1912858-00	LS221 ONE SHOT=DUAL, SCHMIT	2	E6,E20
76	76		1910652-00	74174 FF=D HEX	1	E22
77	77		1911527-00	8097 BUFFER GATE=HEX 2INP	1	E23
78	78		1909937-00	74153 MUX 1 OF 4 (DUAL)	2	E29,E31
79	79		1910741-00	7406 INVERTER GATE=HEX 1I	3	E30,E37,E39
80	80		1910236-00	DEC 7426 NAND GATE=QUAD 2IN,0	2	E32,E33
81	81		1909629-00	7417 BUFFER GATE=HEX 1INP	1	E34
82	82		1912107-00	324 OP AMP, QUAD	2	E35,E36
83	83		1910010-01	DEC 2501-1 2501 WITH VR=40V	2	F40,E41
84	84		1914570-00	SD 5000 ANALOG SWITCH=QUAD D	8	E42-E46,E48,E50,E52
85	85		1914485-01	TL 084ACNOP AMP, QUAD JFET	8	E47,E49,E51,E53,E54,E55,E58,E60
86	86		1316392-0	R NETWORK MULTI=VALUE	4	E62,E64,E66,E68
87	87		1915034-00	LF 257H OP AMP=JFET	4	E63,E65,E67,F69
88	88	C=MD=7420191-0=0	7420191-00	HANDLE	1	
89	89	C=MD=7420192-0=0	7420192-00	HANDLE RETAINER	2	
90	90		9006732-00	EYELET, ROLLED FLANGE, .121 OD X	4	
91	91		1000009-00	33.0 MMF 100V 5%200PPM DM155	4	C80-C83
92	92		9105740-55	WIRE(WRAP)30AWG UL1423	A/R	
93	93		9107776-33	WIRE(WRAP)22AWG, IPVC UL1429 OR	A/R	
94	94		9107776-56	WIRE(WRAP)22AWG, IPVC UL1429 BL	A/R	
95	95		9107776-00	WIRE(WRAP)22AWG, IPVC UL1429	A/R	
96	96		9006735-00	EYELET, FUNNEL FLANGE, .059 OD X	13	
97	97		1002477-0	15.0 MMF 100V 5%200PPM DM155	1	C84
98	98		9107689-44	WIRE(WRAP)24AWG UL1327	A/R	
99	99		1311653-00	2.15 K 1/4W 1% RN55D-F 100PPM	1	R209
100	100		9107256-11	TUBING, THIN WALL, .027ID	A/R	

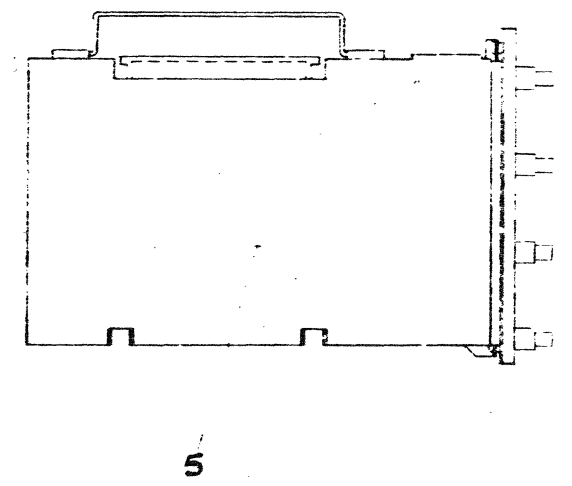
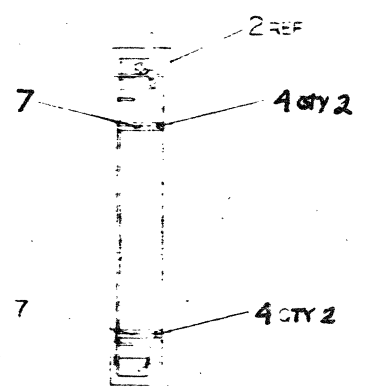
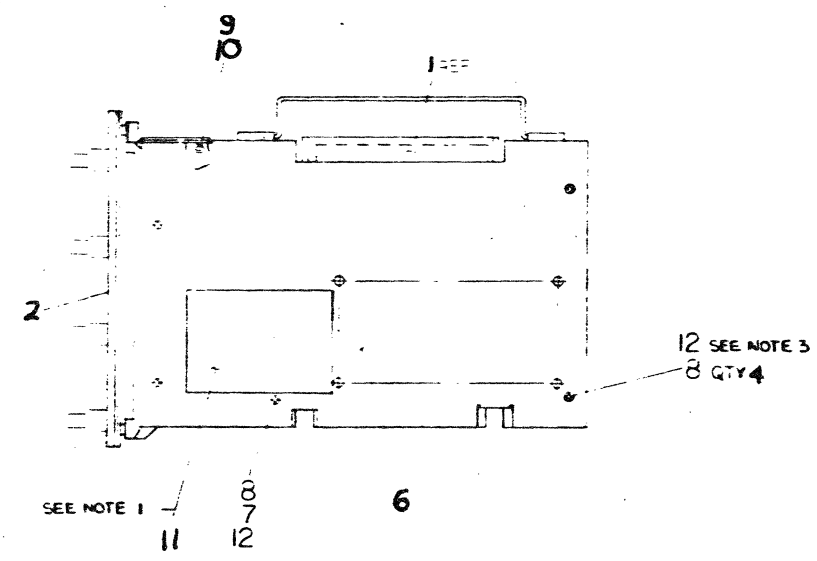
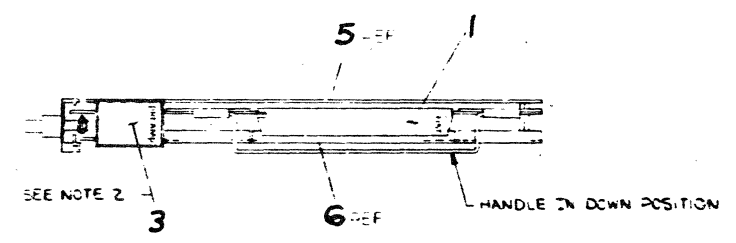
D	I	C	I	T	A	L	TITLE	SECTION A OF A	SIZE/	DOCUMENT NUMBER	REV
							A246 MHCAG		K PL	A246-0-DHP	C

MR



**NOTES:**

- ITEM "11" IS PUT ON BY ALIGNING THE RIGHT HAND EDGE OF DECAL UP AGAINST HOLES AND BOTTOM EDGE JUST ABOVE MOUNTING HOLE.
- ITEM "3" IS PUT ON BY ALIGNING THE TOP EDGE AND RIGHT HAND EDGE EVEN WITH THE TOP EDGE AND RIGHT HAND EDGE OF ITEM "5".
- USING ITEM "12" ADD ONE DROP TO EACH LOCATION.



DESCRIPTION	DWG. PART NO.	ITEM NO.
1 PACKAGING INSTRUCTION	A-SP-370058-05	14
REF. CHECKOUT / ACCEPT PROCEDURE	A-SP-MNCAG-0-3	13
A/R LOCKTITE	900932	12
1 DECAL INFORMATION (MNCAG)	A-DC-3615264-0-0	11
1 NUT KEPS #6-32	9003185	10
1 WASHER, FLAT	9006653	9
5 SCR, FLAT HD #6-32 x .25	9006020-02	8
3 SPACER, THREADED #6-32 x .88	9006861	7
1 PLATE, COMP SIDE	D-MD-7419869-0-0	6
1 PLATE, ETCH SIDE	D-1A-7419868-0-0	5
4 SPACER, THREADED #6-32 x .25	9006841	4
1 DECAL, I/O SCHEMATIC	A-DC-3615260-0-0	3
1 MNCAG SUB-ASSY	DAD-7015107-0-0	2
1 CONN ASSY, I/O	D-1A-7014153-2-0	1

QUANTITY & VARIATION		CLASS OF ACCURACY		NOMINAL DIMENS. ON RANGE INCHES						
ANGLES	±30	CHECK ONE		0	12	25	49	75	125	250
SURFACE FINISH				0	12	25	49	75	125	250
CAPABILITY				0	12	25	49	75	125	250
MICROINCHES				0	12	25	49	75	125	250

THIRD ANGLE PROJECTION	DRN	FIRST USED ON	DWG. digital
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D	TITLE	MNCAG UNIT ASSY
DO NOT SCALE DWG	PROJ. ENG.	SCALE	1/2
MATERIAL	SIZE	CODE	NUMBER
FINISH	SHEET	OF	DIST.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES

REVISIONS:

NO.	DATE	DESCRIPTION
1		ISSUED FOR MANUFACTURE
2		REVISED
3		REVISED



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<b>DIGITAL EQUIPMENT CORPORATION</b> MAYNARD, MASSACHUSETTS							
<b>ENGINEERING SPECIFICATION</b>				DATE 5-15-79			
TITLE MNCAG INSTALLATION, ACCEPTANCE PROCEDURE							
REVISIONS							
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE	
A	ECO CHANGE	MNCAG-MR002	A. FILZ	OCT-75	OCF	7/1/79	
ENG	5-15-79	APPD	A. P. Filz	SIZE	CODE	NUMBER	REV
				A	SP	MNCAG-0-4	A
				SHEET 1 OF 7			

<b>ENGINEERING SPECIFICATION</b>				CONTINUATION SHEET			
TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE							
1.0 GENERAL							
1.1 Scope							
This document describes the procedure for the installation and field acceptance of the MNCAG (pre-amplifier) option for the MINC-11 System. This procedure will be used for in-house PA&T, field add-on and new system installation, and periodic verification testing.							
1.2 EQUIPMENT							
MINC-11 MNCAG-TA 7014153-2-0				SYSTEM Test Module (optional) I/O Connector			
Reference MNCAD MNCAM				Precision Voltage Source A/D converter Analog MUX (optional)			
1.3 DOCUMENTATION							
MD-11-CVMNA * D-CS-A246-0-1 AA-DS72A-PC A-SP-MNCAG-0-4				MNCAD Diagnostic Program Circuit Schematics Manual-"Working with MINC Devices" MNCAD Installation/Acceptance Procedure			
* LATEST REV. LEVEL							
DEC FORM NO	EN-01089-16-0370-001	SIZE	CODE	NUMBER	REV		
DRA 108		A	SP	MNCAG-0-4	A		
				SHEET 2 OF 7			

<b>ENGINEERING SPECIFICATION</b>				CONTINUATION SHEET			
TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE							
1.4 PROCEDURE							
<pre> graph TD     A[INSTALL OPTION] --&gt; B{ }     B -- YES --&gt; C[MOUNT TEST MODULE]     B -- NO --&gt; D[MOUNT I/O CONNECTOR]     C --&gt; E[POWER UP]     D --&gt; E     E --&gt; F[LOAD &amp; START DIAGNOSTIC]     F --&gt; G{ }     G -- YES --&gt; H[TYPE "Y"]     G -- NO --&gt; I[TYPE "H"]     H --&gt; J[TESTS]     I --&gt; J     J --&gt; K{PASS}     K -- YES --&gt; L[ACCEPT]     K -- NO --&gt; M[REJECT]           </pre>							
*TEST MODULE AVAILABLE							
DEC FORM NO	EN-01089-16-0370-001	SIZE	CODE	NUMBER	REV		
DRA 108		A	SP	MNCAG-0-4	A		
				SHEET 3 OF 7			

<b>ENGINEERING SPECIFICATION</b>				CONTINUATION SHEET			
TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE							
2.0 INSTALLATION							
2.1 LOCATION							
Only one MNCAG may be plugged into the slot immediately to the left of the MNCAD (A/D converter) option. One or two MNCAG's may be plugged into the slots to the immediate left of each MNCAM (MUX) option with no intervening empty slot.							
With power off, insert the MNCAG(s) into the required slot(s) for the selected channels.							
2.2 TEST MODULE							
If the MNCAG test module is available it should be plugged onto the I/O connector fingers on the MNCAG(s) at this point before power to the system is applied. The A/D and MUX's that have MNCAG's must <u>not</u> have their test modules mounted. If no MNCAG test module is present plug-on an I/O connector having the amplifier inputs jumpered to analog ground.							
2.3 POWER UP							
All other options to be tested should be mounted in the system, the power may be applied. Allow a 5 minute warm-up period before continuing.							
DEC FORM NO	EN-01089-16-0370-001	SIZE	CODE	NUMBER	REV		
DRA 108		A	SP	MNCAG-0-4	A		
				SHEET 4 OF 7			

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE

3.0 TESTS

3.1 DIAGNOSTIC

Load and start the diagnostic program. If the MNCAD option is set for a CSR address other than 171000 or a vector other than 400, use the test character B to enter the correct address or vector. Any of the following tests may be exited by entering CTRL C.

3.2 CALIBRATION

It is assumed that the MNCAD is calibrated. If it is not, it should be calibrated (ref MNCAD installation/acceptance procedure) before proceeding.

The rotary switches on the test module should be in position 2; the MNCAG front panel controls should be in program (P) position and voltage (V) mode.

3.3 LOGIC TESTS

Enter test character "L". Terminate this test after the END PASS statement.

3.4 WPAAROUND TESTS

Enter test character "W", and proceed as directed by the diagnostic program. Again, terminate this test after the END PASS statement.

3.5 COMMON MODE TEST (FIGURE 3-1)

Connect an external common mode source between the MNCAG analog inputs and analog ground (using the test module jacks with the test module rotary switches in position 1 if present). Enter test character "M" and proceed as instructed.

Repeat this test for each channel.

3.6 ACCURACY (FIGURE 3-2)

Connecting an external source to one amplifier input and grounding the other input USING THE I/O CONNECTOR, ENTER TEST CHARACTER "P", CHANNEL NUMBER AND GAIN. SET THE EXTERNAL SOURCE TO THE FOLLOWING TABLE. THE AVERAGE VALUE SHOULD BE WITHIN ONE OF THE TWO SETS OF VALUES SHOWN ACCORDING TO WHAT INPUT IS USED AND THE SOURCE POLARITY.

SIZE	CODE	NUMBER	REV
A	SP	MNCAG-0-4	A

DEC FORM NO EN-01009-10-N1370-1011  
DRA 100

MR SHEET 5 OF 7

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE

CALIBRATION TABLE

GAIN	INPUT(V)	CODES
0.5	5.120V	1777-2001 or 5777-6001
5.0	0.512	1777-2001 or 5777-6001
50.0	0.0512	1776-2002 or 5776-6002
500.0	0.00512	1774-2004 or 5774-6004

3.7 FRONT PANEL TESTS

Enter test character "F" and proceed as directed. Repeat these tests for each MNCAG channel.

3.8 LOOP TESTS

Enter test character "T" and proceed as instructed.

3.9 LINEARITY (OPTIONAL)

This test may be done with the test module rotary switches in positions 4 or 5. This test is optional only because of the time required for one pass on each of the channels (1 hr/AG).

Enter test character "D" and proceed as directed. At the completion of one pass, repeat for the next MNCAG channel. Continue until all channels have been tested.

Note: If a VT55 or VT105 terminal is used set the SWR to 2000 before entering this test to halt for each graph. Enter P return to continue after each graph.

SIZE	CODE	NUMBER	REV
A	SP	MNCAG-0-4	A

DEC FORM NO EN-01009-10-N1370-1011  
DRA 100

MR SHEET 6 OF 7

ENGINEERING SPECIFICATION CONTINUATION SHEET

TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE

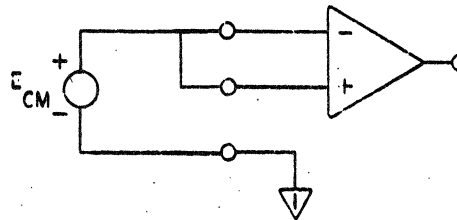


FIGURE 3-1: COMMON MODE TEST

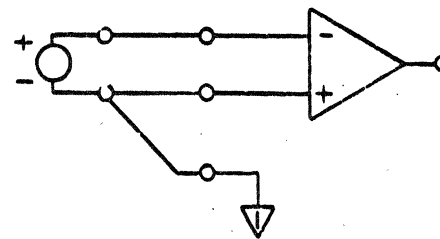
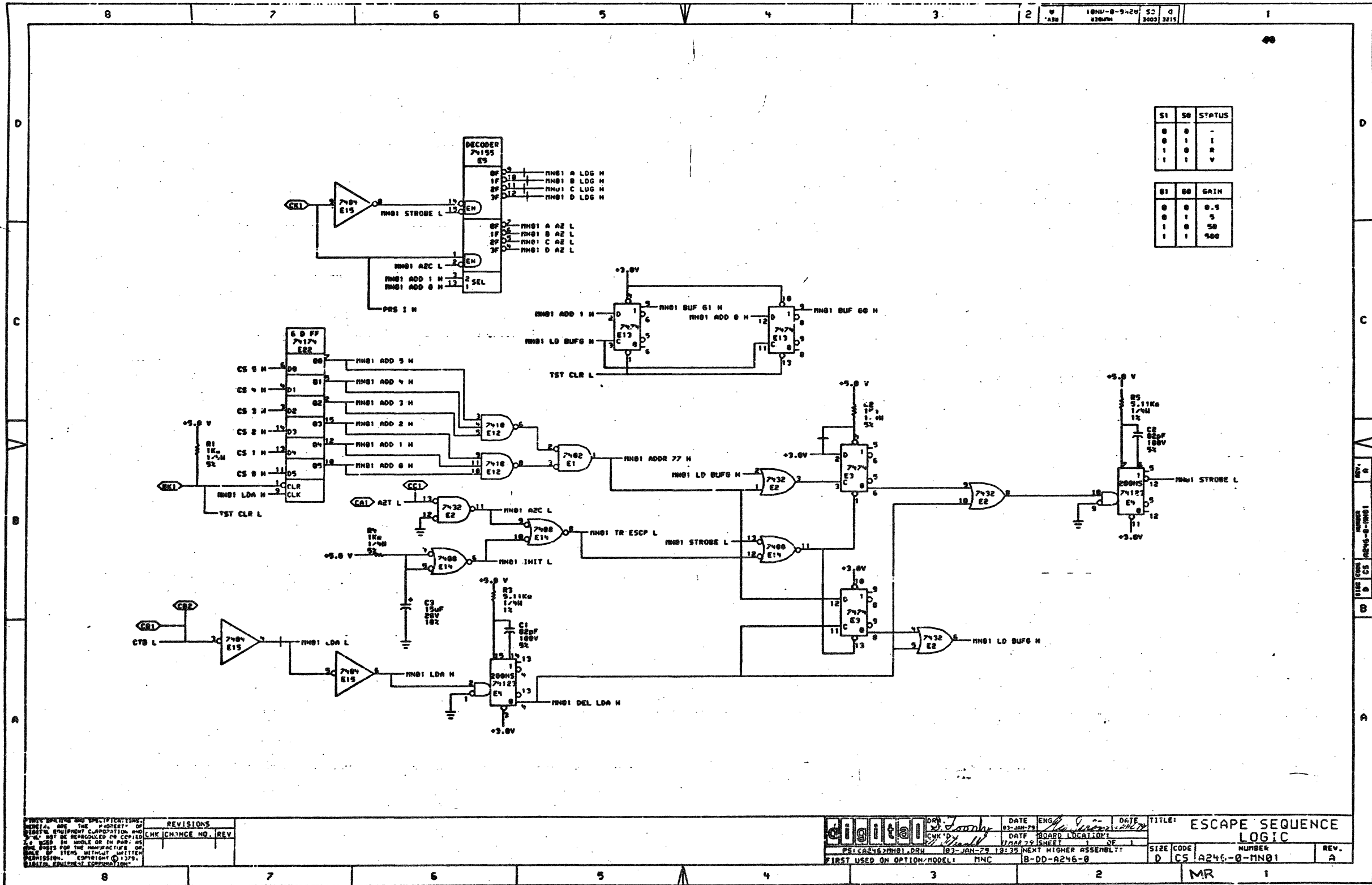


FIGURE 3-2: ACCURACY TEST

SIZE	CODE	NUMBER	REV
A	SP	MNCAG-0-4	A

DEC FORM NO EN-01009-10-N1370-1011  
DRA 100

MR SHEET 7 OF 7



S1	S0	STATUS
0	0	-
0	1	1
1	0	2
1	1	V

G1	G0	GAIN
0	0	0.5
0	1	5
1	0	50
1	1	500

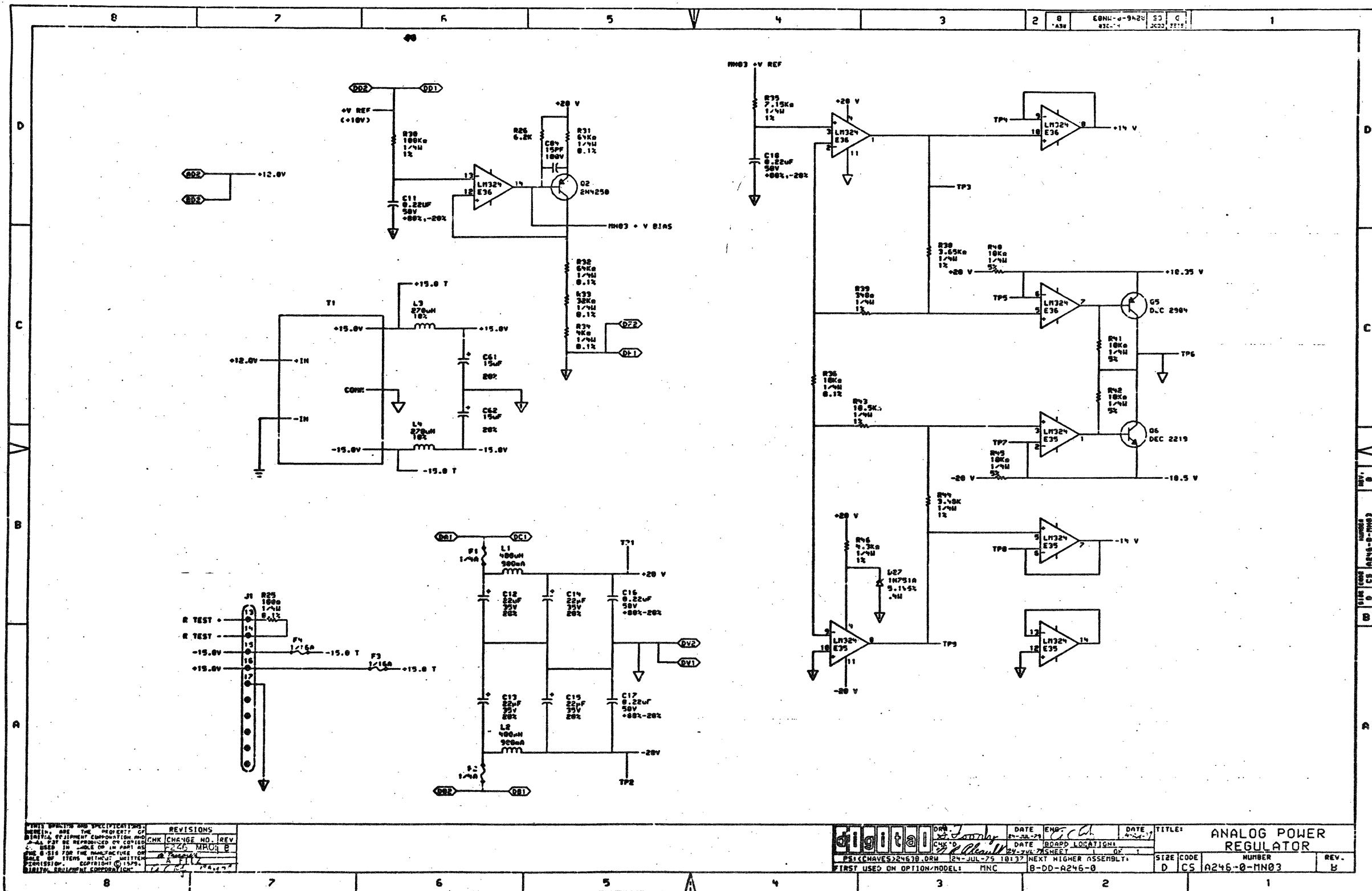
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REVISIONS		
CHK	CHANGE NO.	REV.

	DATE	ENG	DATE	TITLE
	03-JAN-79			ESCAPE SEQUENCE LOGIC
DATE	BOARD LOCATION	SIZE CODE	NUMBER	REV.
07-MAR-79	1	D CS A246-0-MN01		A
FIRST USED ON OPTION MODEL		NEXT HIGHER ASSEMBLY		
B-DD-A246-0		MNC		

REV. B  
 18046-0-MN01  
 SHEET 1 OF 1



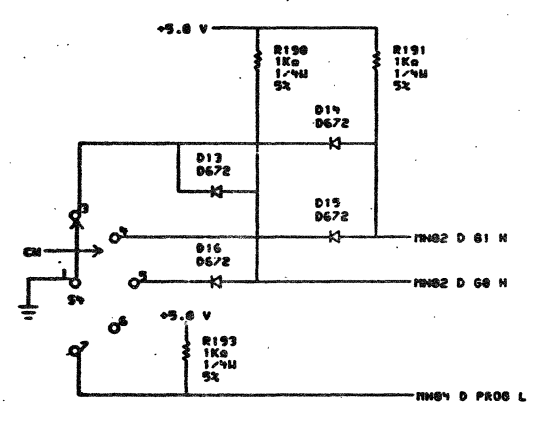
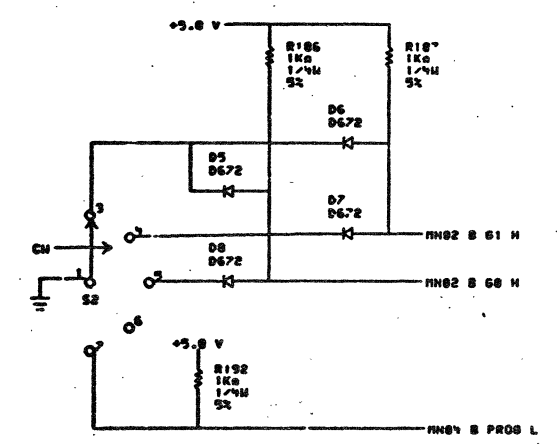
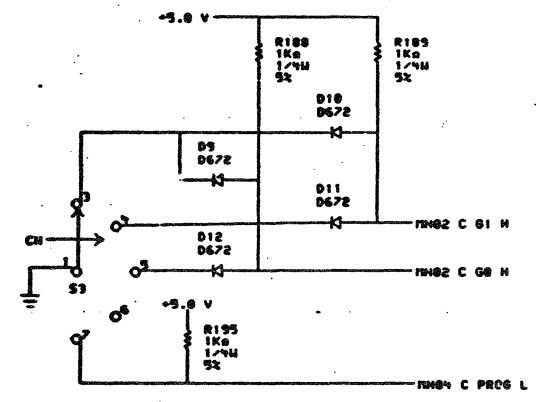
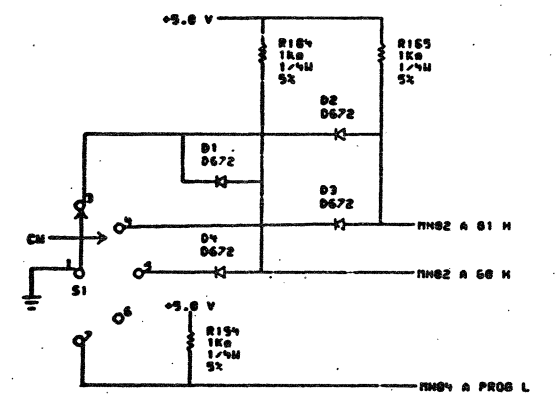


REVISIONS
1. ORIGINAL DESIGN
2. CHANGE NO. REV
3. CHANGE NO. REV
4. CHANGE NO. REV
5. CHANGE NO. REV
6. CHANGE NO. REV
7. CHANGE NO. REV
8. CHANGE NO. REV

DATE: 2-28-71	DATE: 9-2-71	TITLE: ANALOG POWER REGULATOR
DATE: 2-28-71	DATE: 2-28-71	BOARD LOCATION: 1-02
DATE: 2-28-71	DATE: 2-28-71	SIZE CODE: D CS
DATE: 2-28-71	DATE: 2-28-71	NUMBER: A246-0-MN03
DATE: 2-28-71	DATE: 2-28-71	REV: B

MR

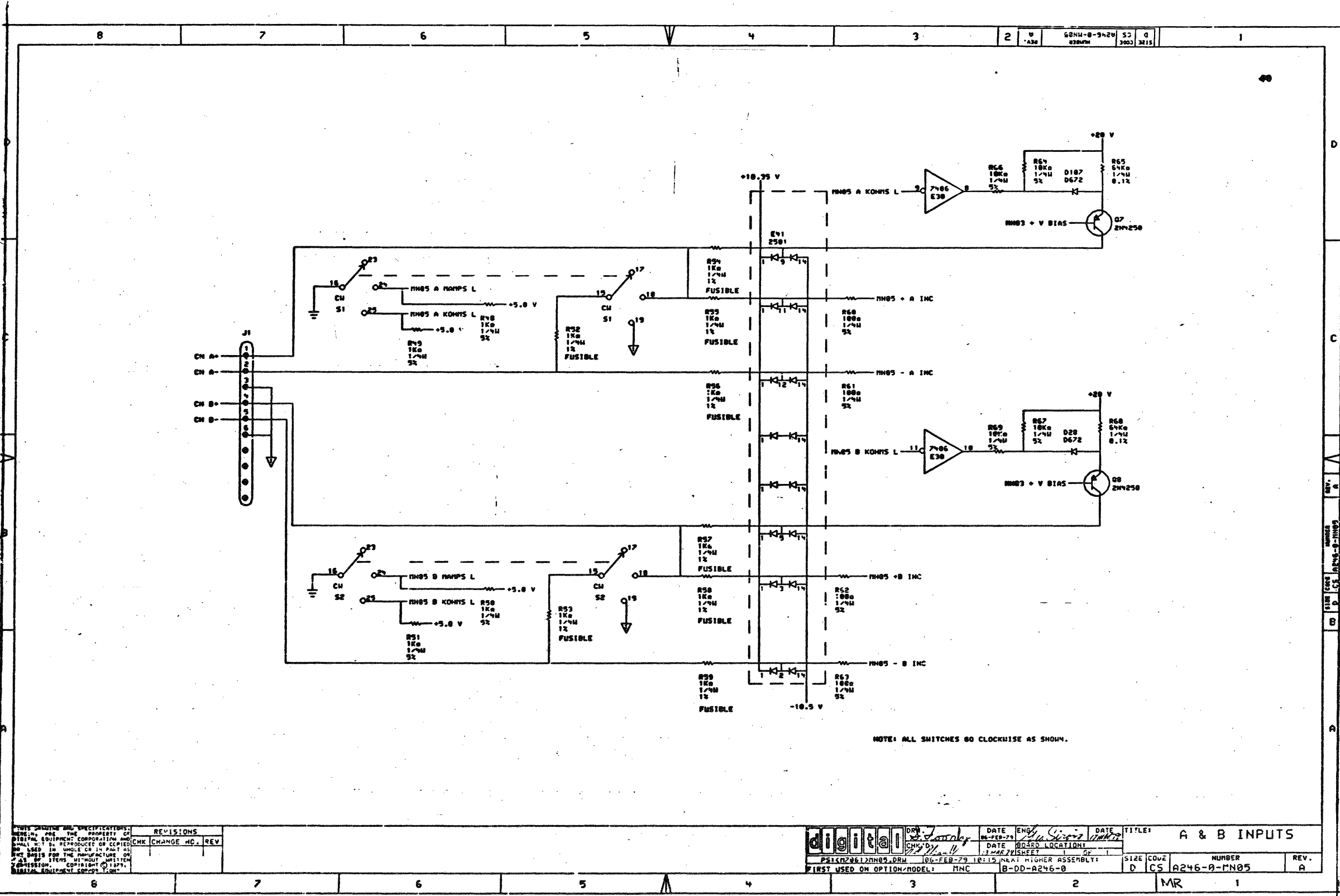
4844-0-9420 SC D  
3304M 3003 3215



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REVISIONS	
CHK	CHANGE NO. REV.

digit@l	DRN	DATE	ENG	DATE	WSE	TITLE	SWITCH GAIN CONTROLS
	<i>J. J. J.</i>	01-JAN-79	<i>John Simon</i>	1/2/79	<i>1/2/79</i>		
P&L 4246 MN04 DRW		107-JAN-79	107-JAN-79	107-JAN-79	107-JAN-79	107-JAN-79	
FIRST USED ON OPTION-MODEL: MNC		NEXT NUMBER ASSEMBLY: B-DD-A246-0		SIZE CODE	NUMBER	REV.	
				D CS	A246-0-MN04	A	

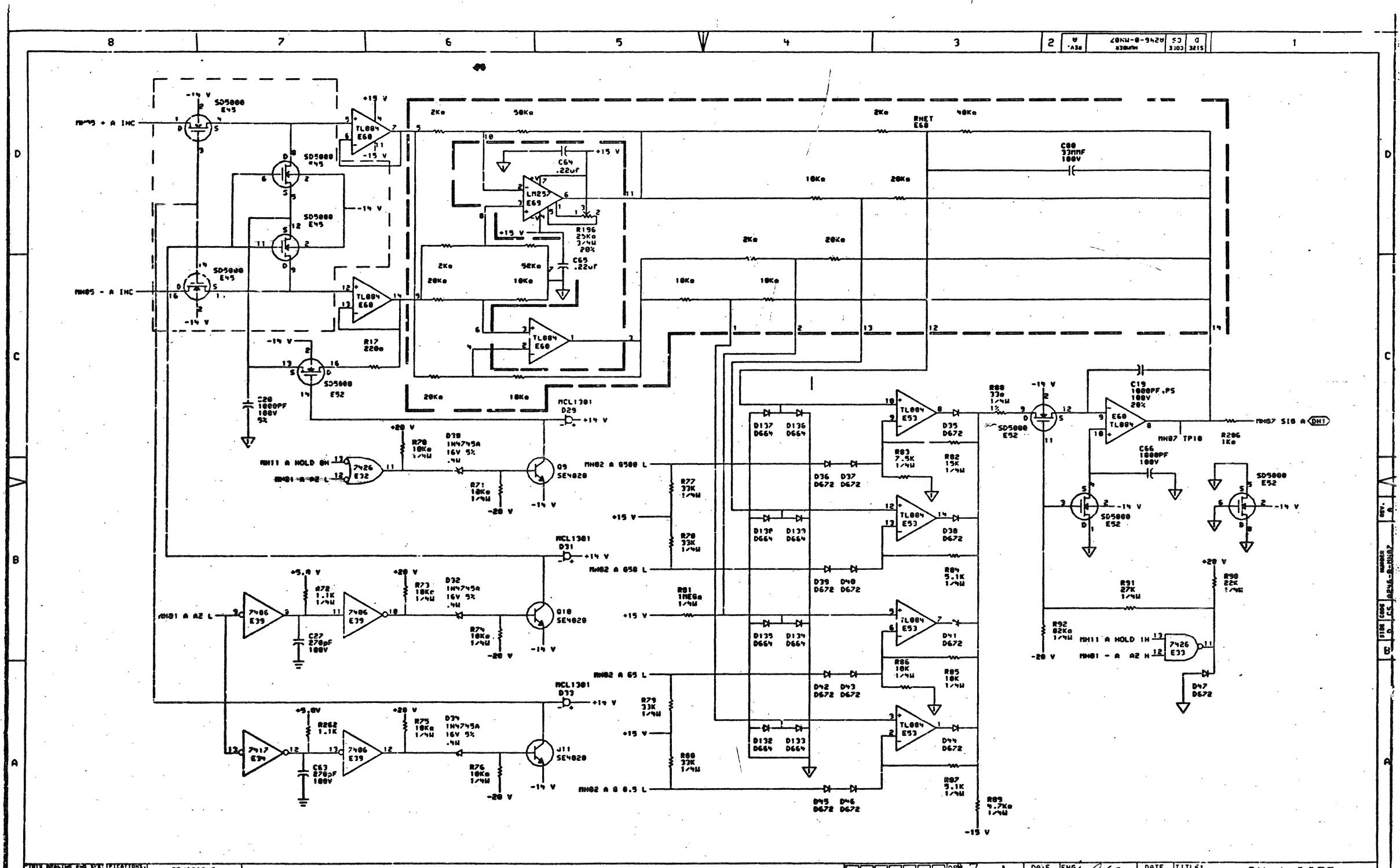


REVISIONS	CHK	CHANGE	NO.	REV.

<b>digital</b> DRN. <i>[Signature]</i> DATE: 86-FEB-79 DESIGNED BY: <i>[Signature]</i> DATE: 86-FEB-79 FIRST USED ON OPTION/MODEL: MNC	DATE: 86-FEB-79 DESIGNED BY: <i>[Signature]</i> DATE: 86-FEB-79 FIRST USED ON OPTION/MODEL: MNC	DATE: 86-FEB-79 DESIGNED BY: <i>[Signature]</i> DATE: 86-FEB-79 FIRST USED ON OPTION/MODEL: MNC	DATE: 86-FEB-79 DESIGNED BY: <i>[Signature]</i> DATE: 86-FEB-79 FIRST USED ON OPTION/MODEL: MNC	TITLE: A & B INPUTS SIZE: D COVE: CS NUMBER: A246-9-MN05 REV.: A
	MR	1	2	3





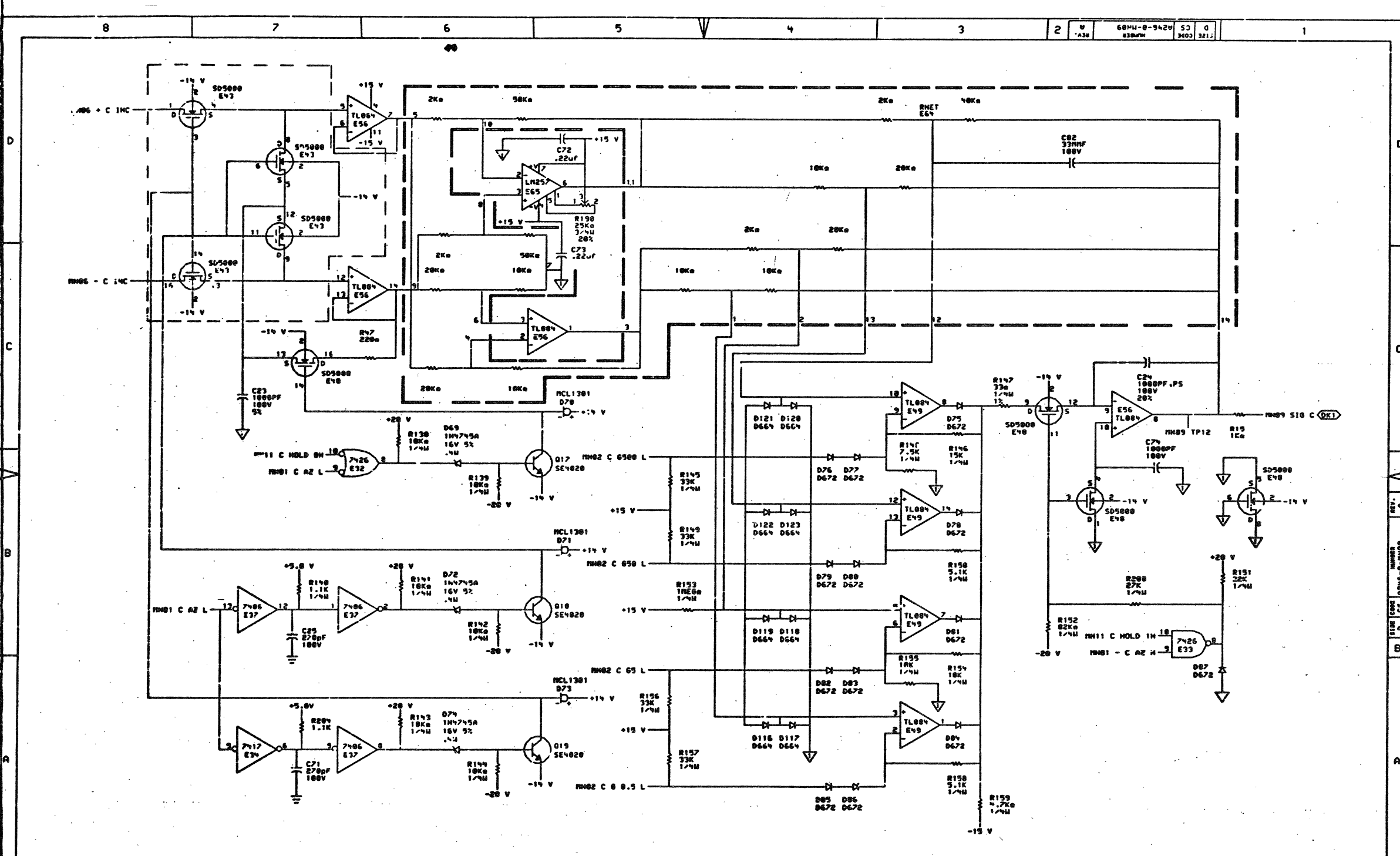


REVISIONS	
CHG	NO. REV

DATE	ENG	DATE	TITLE
07-MAR-79			CH A DIFF AMPLIFIER
DATE	BOARD LOCATION	DATE	BOARD LOCATION
DATE		DATE	

PS: CA246-0-M1107.DRW	07-MAR-79 13:44	NEXT HIGHER ASSEMBLY:	SIZE CODE
FIRST USED ON OPTION/MODEL:	MNC	B-DD-A246-0	D CS A246-0-M1107



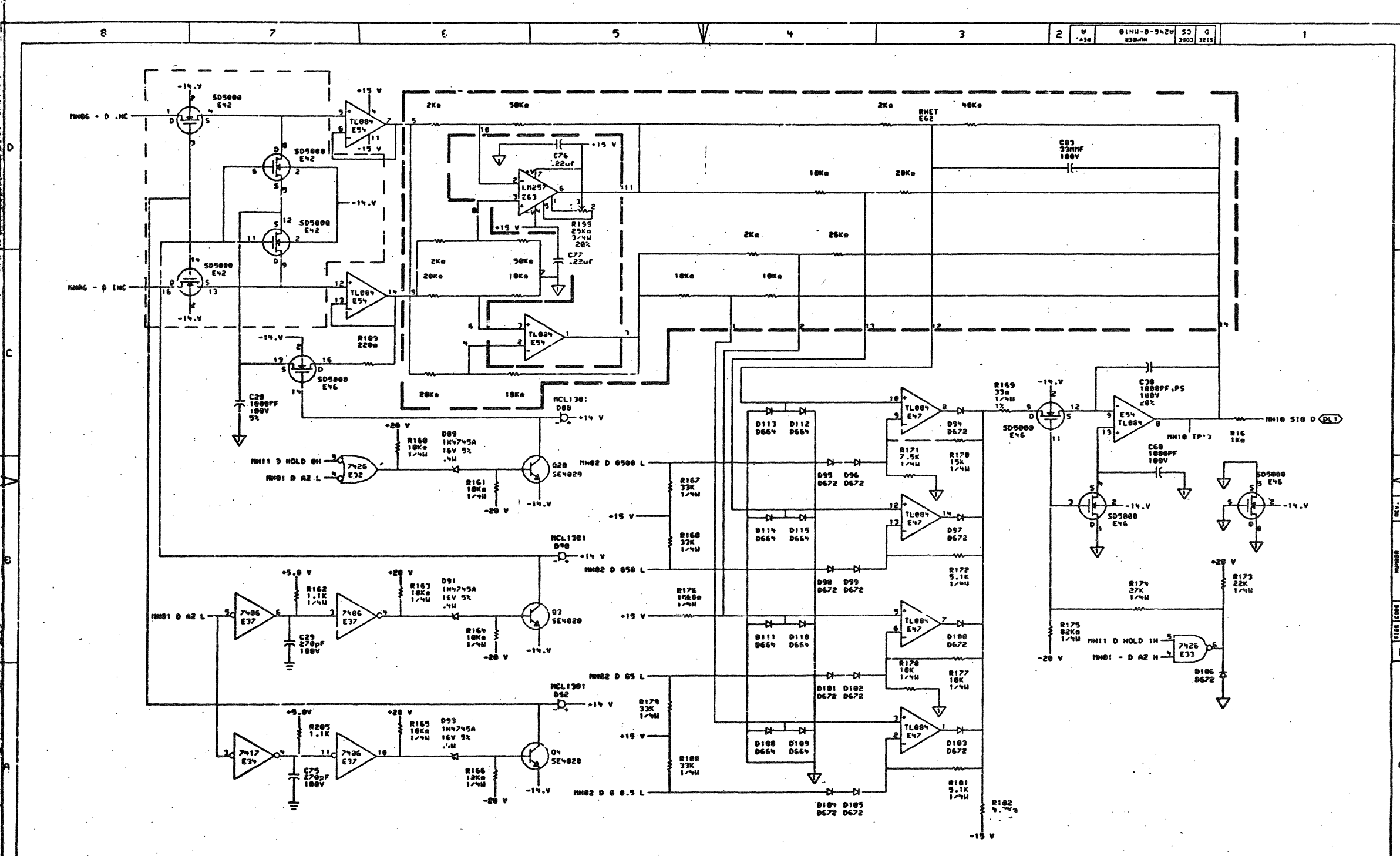


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REVISIONS	
CHK	CHANGE NO. REV

DATE	ENG	DATE	TITLE
28-MAR-79		10P-79	CH C DIFF AMPLIFIER
DATE	BOARD LOCATION	SHEET	OF
		1	1
PS:K246JN89A.CDW	128-MAR-79 15:11	NEXT HIGHER ASSEMBLY:	
FIRST USED ON OPTION/MODEL:	MNC	B-DD-A246-0	

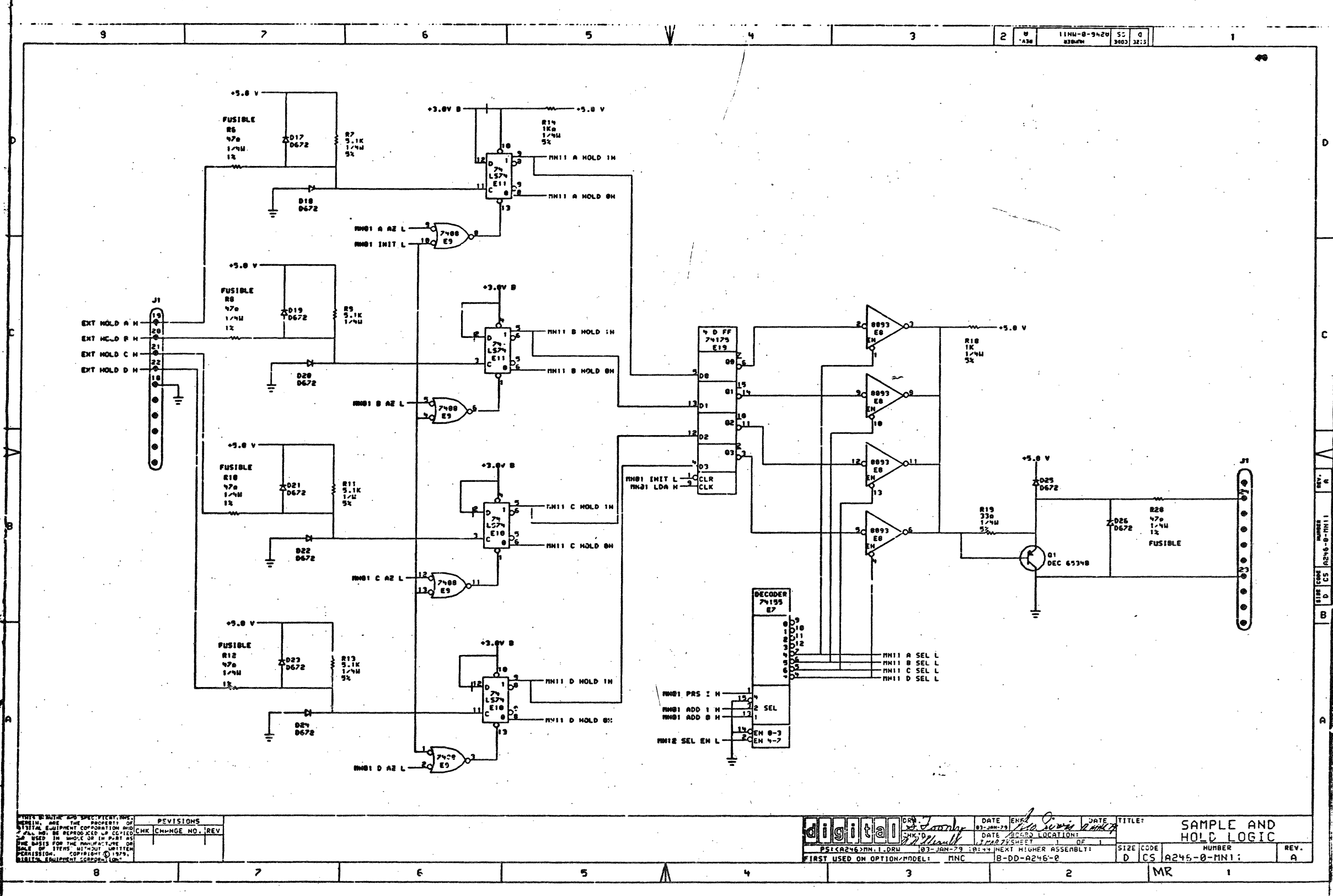
SIZE	CODE	NUMBR	REV.
D	CS	A246-0-MN09	A
MR			1



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REVISIONS	
CHK	CHANGE NO. REV

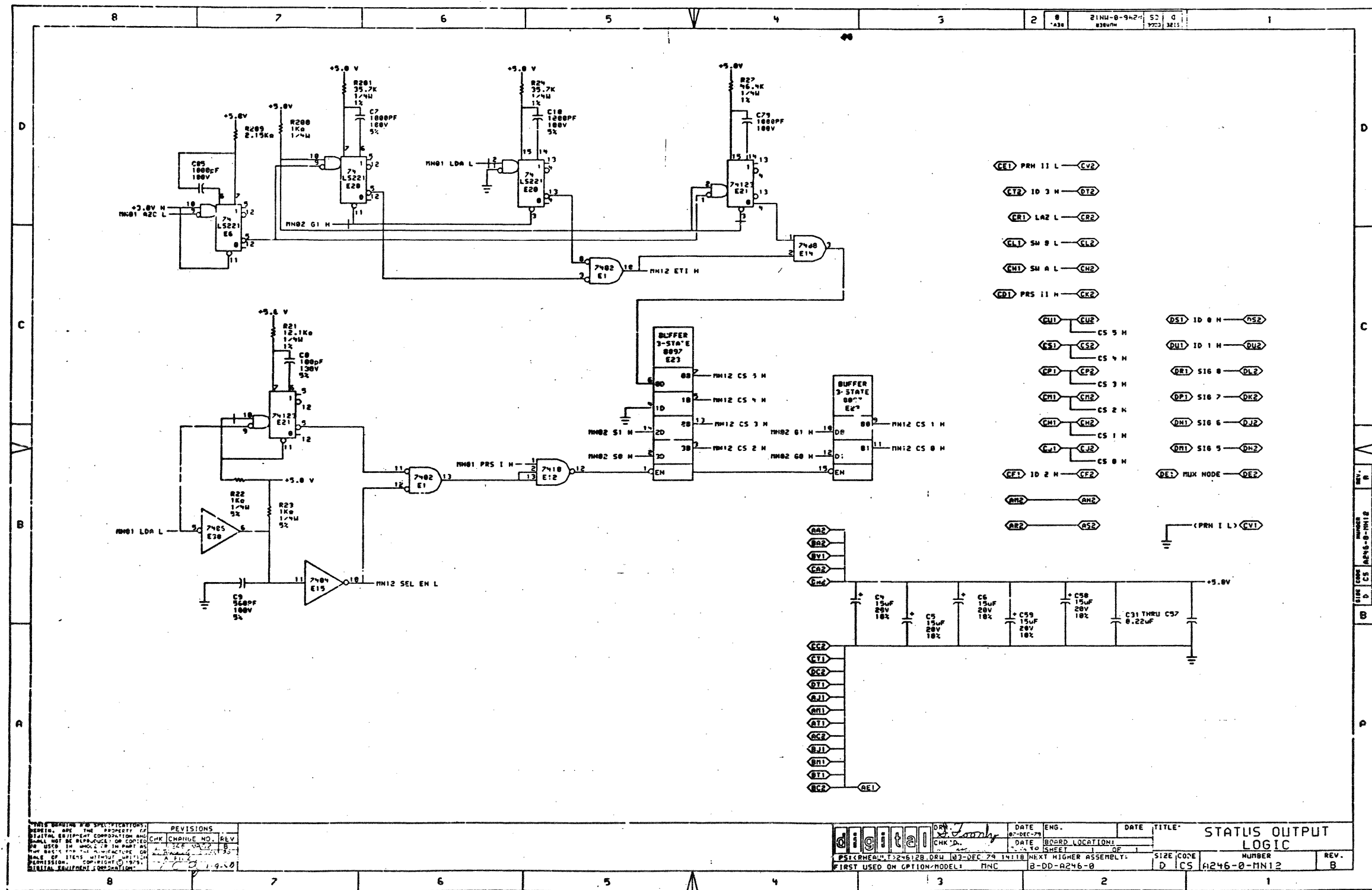
	DATE: 21-MAR-79	ENG: S. J.	DATE: 11-DEC-78	TITLE: CH D DIF AMPLIFIER	
	CHK'D: J. J.	DATE: 27-MAR-79	DATE: 11-DEC-78		
PS: A246-MN10A.DRW FIRST USED ON OPTION MODEL: MNC	DATE: 26-MAR-79 15:18 NEXT HIGHER ASSEMBLY: B-DD-A246-0	SHEET 1 OF 1	SIZE: D CODE: CS	NUMBER: A246-0-MN10	REV: A



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REVISIONS	
NO.	DESCRIPTION

	DATE ENG: 03-JAN-79	DATE DES: 03-JAN-79	TITLE: SAMPLE AND HOLD LOGIC
	DATE CHK'D: 03-JAN-79	DATE APP'D: 03-JAN-79	NUMBER: 1
PSIC246 JAN 1 DRW FIRST USED ON OPTION/MODEL: RNC	103-JAN-79 10:44 NEXT HIGHER ASSEMBLY: B-DD-A246-E	SIZE CODE: D CS NUMBER: A245-0-MN1	REV: A



REVISIONS	CHANGE NO.	REV.
1	1	1

DATE	ENG.	DATE	TITLE
08-DEC-79	J. Family		STATUS OUTPUT LOGIC
DATE	BOARD LOCATION	DATE	SIZE
13-DEC-79		14-DEC-79	D CS
DATE	BOARD LOCATION	DATE	SIZE
13-DEC-79		14-DEC-79	D CS
DATE	BOARD LOCATION	DATE	SIZE
13-DEC-79		14-DEC-79	D CS
DATE	BOARD LOCATION	DATE	SIZE
13-DEC-79		14-DEC-79	D CS

MR