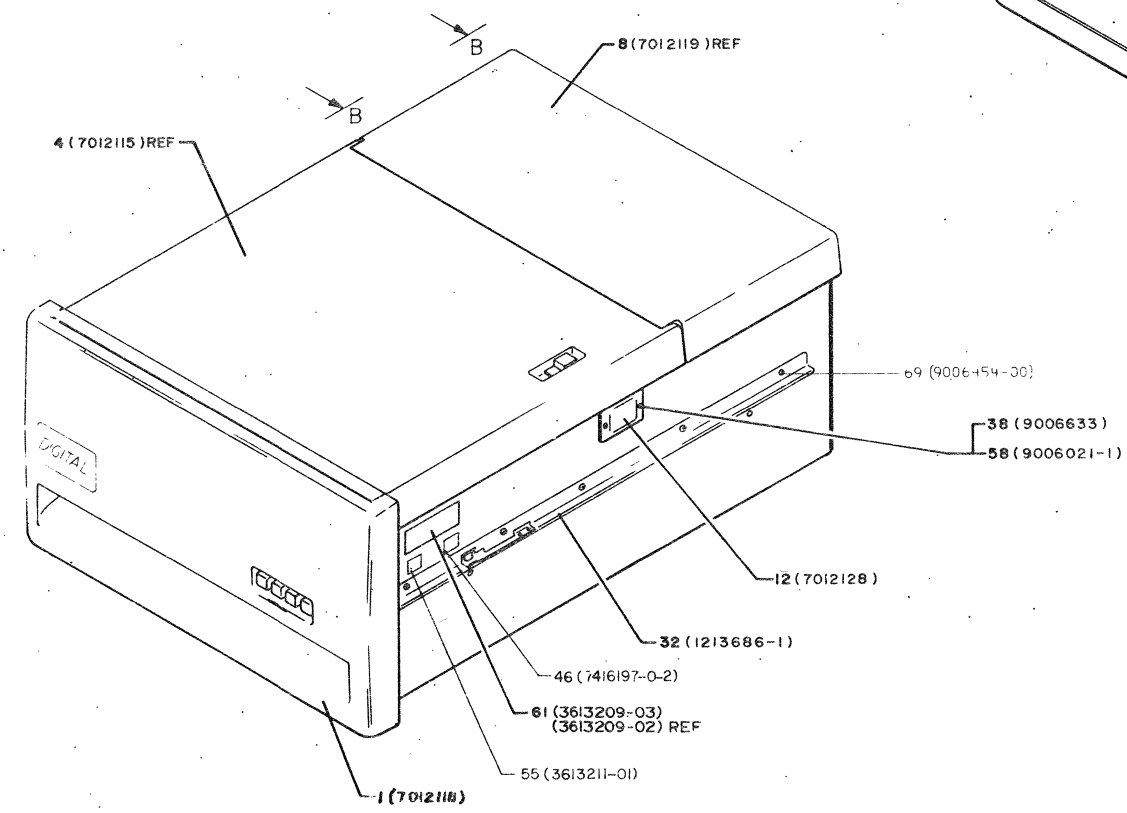
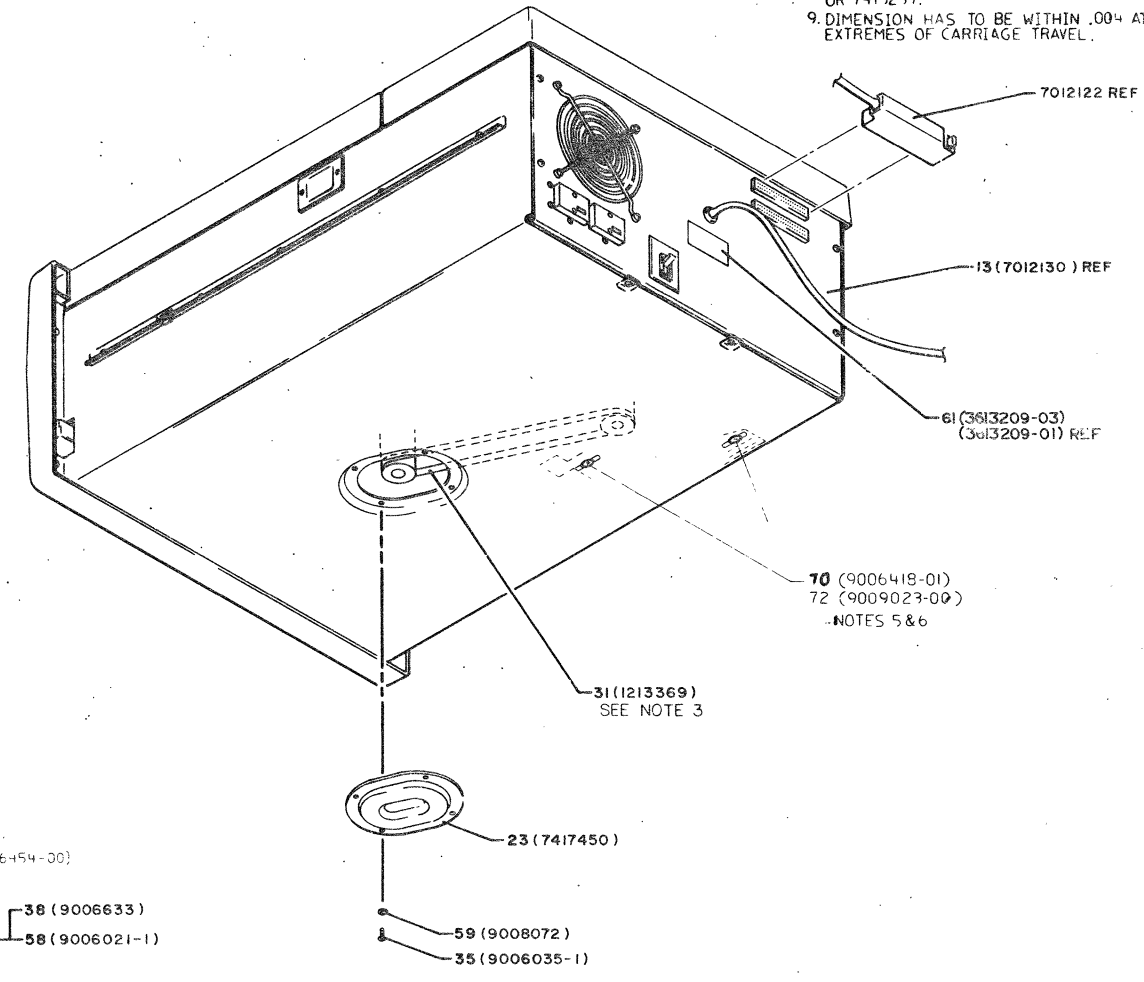
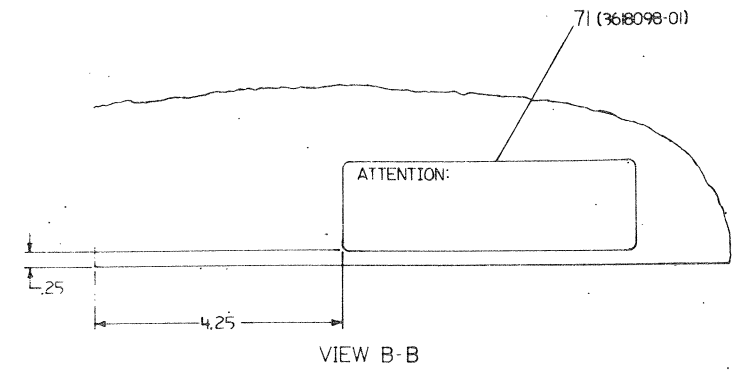


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- NOTES:**
1. LOWER HEAD (ITEM 65) SHALL BE POSITIONED REARWARDS AGAINST PIN IN CARRIAGE
 2. ALL SCREWS TO BE TIGHTENED AS FOLLOWS:
 4-40 SCREW, TORQUE 3.5 ± 0.5 IN LBS
 6-32 " " " 5.0 ± 1.0 " "
 8-32 " " " 10.0 ± 1.0 " "
 10-32 " " " 18.0 ± 2.0 " "
 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.



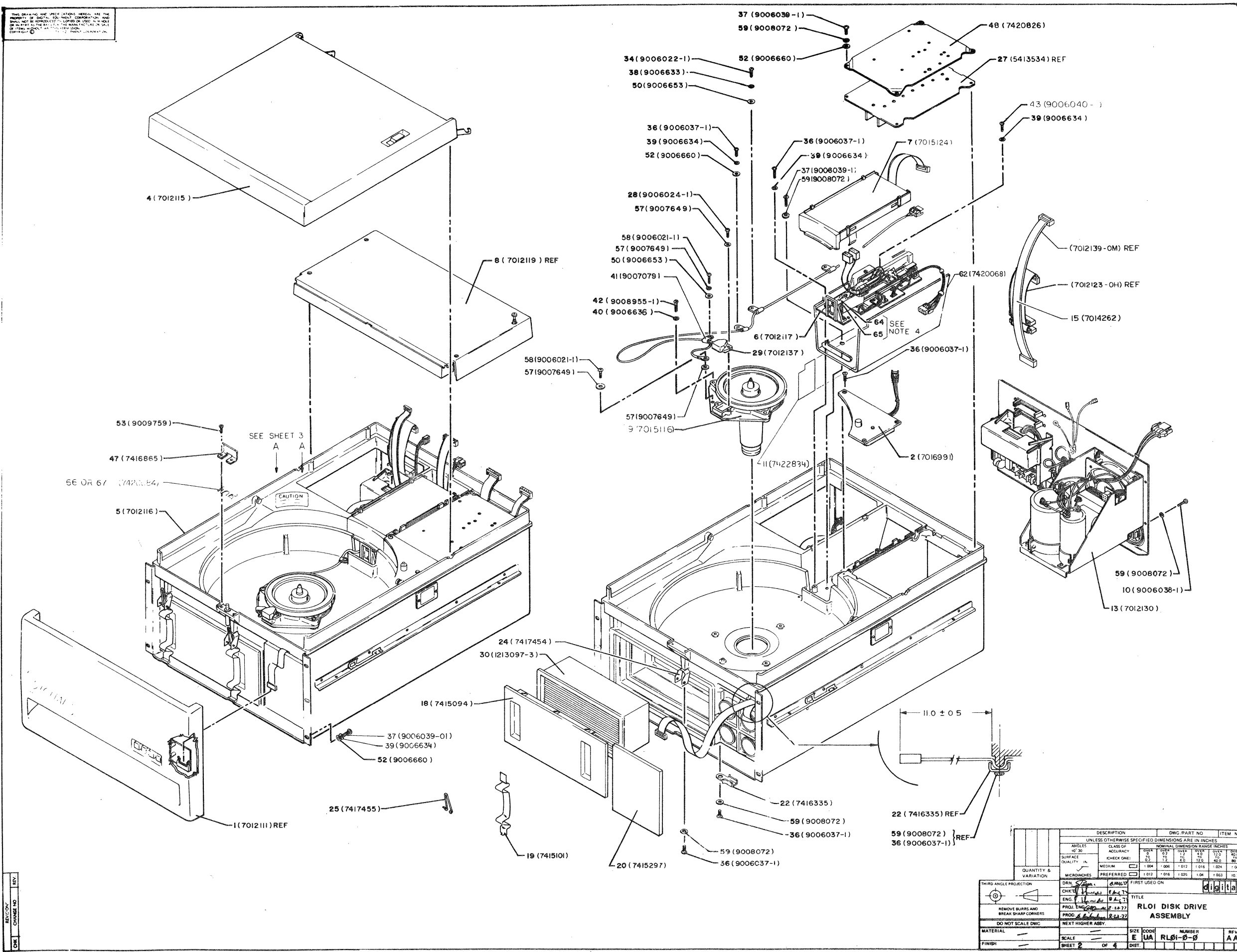
CAUTION: OFF-SHEET PARTS LIST EXISTS. SEE K-PL-RL01-0-DBP (21720A).

REV.	DATE	BY	CHK'D	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

REV.	DATE	BY	CHK'D	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

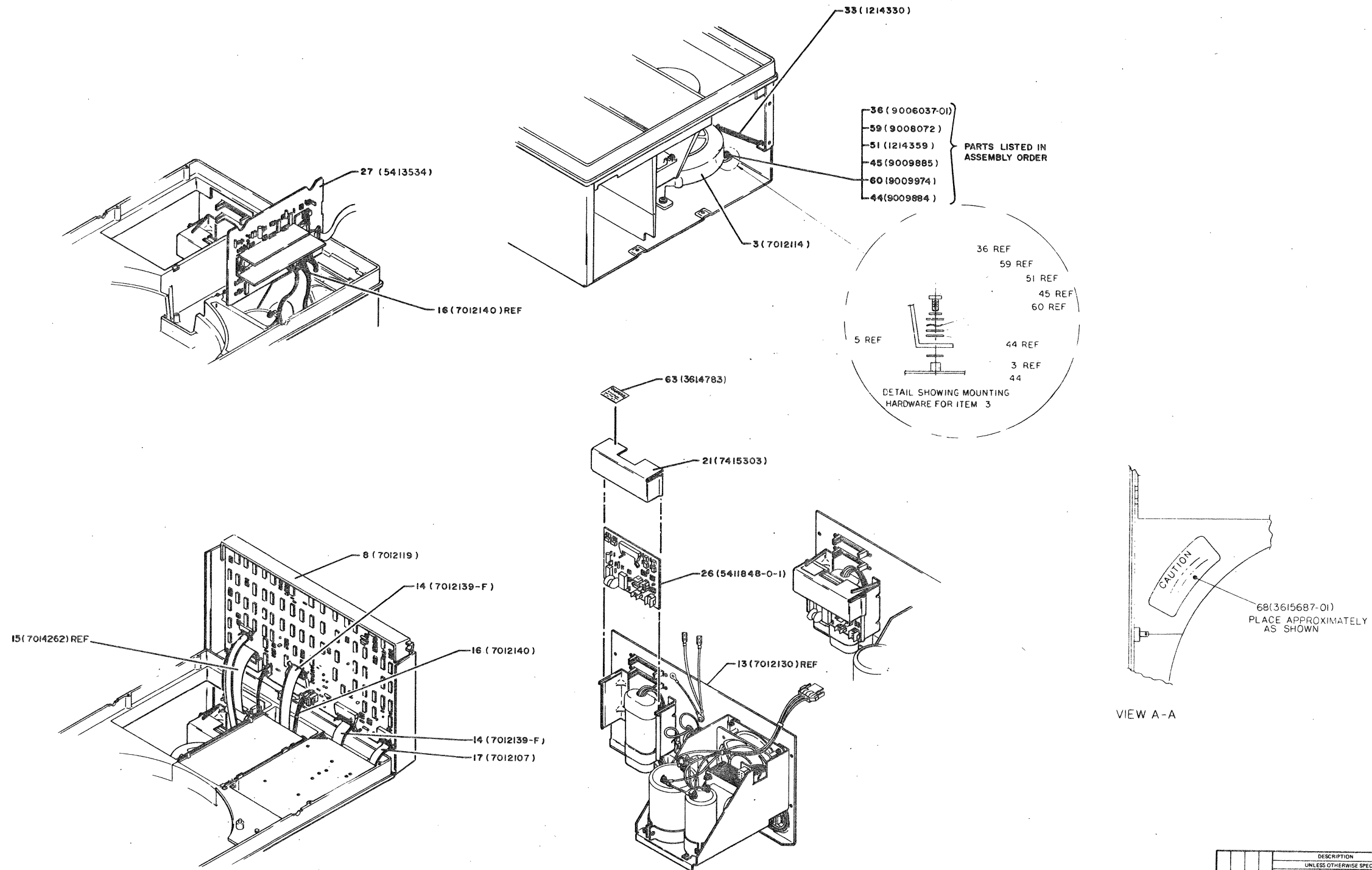
THIRD ANGLE PROJECTION	DRN: 0-0-77	FIRST USED ON:
CHK'D:	ENG:	TITLE: RLO DISK DRIVE ASSEMBLY
REMOVE BURRS AND BREAK SHARP CORNERS	PROJ. ENG: 0-0-77	SCALE: E
DO NOT SCALE DWG	NEXT HIGHER ASSY:	SIZE: AA
MATERIAL:	SCALE:	NUMBER: 1
FINISH:	SHEET: 1	OF: 4

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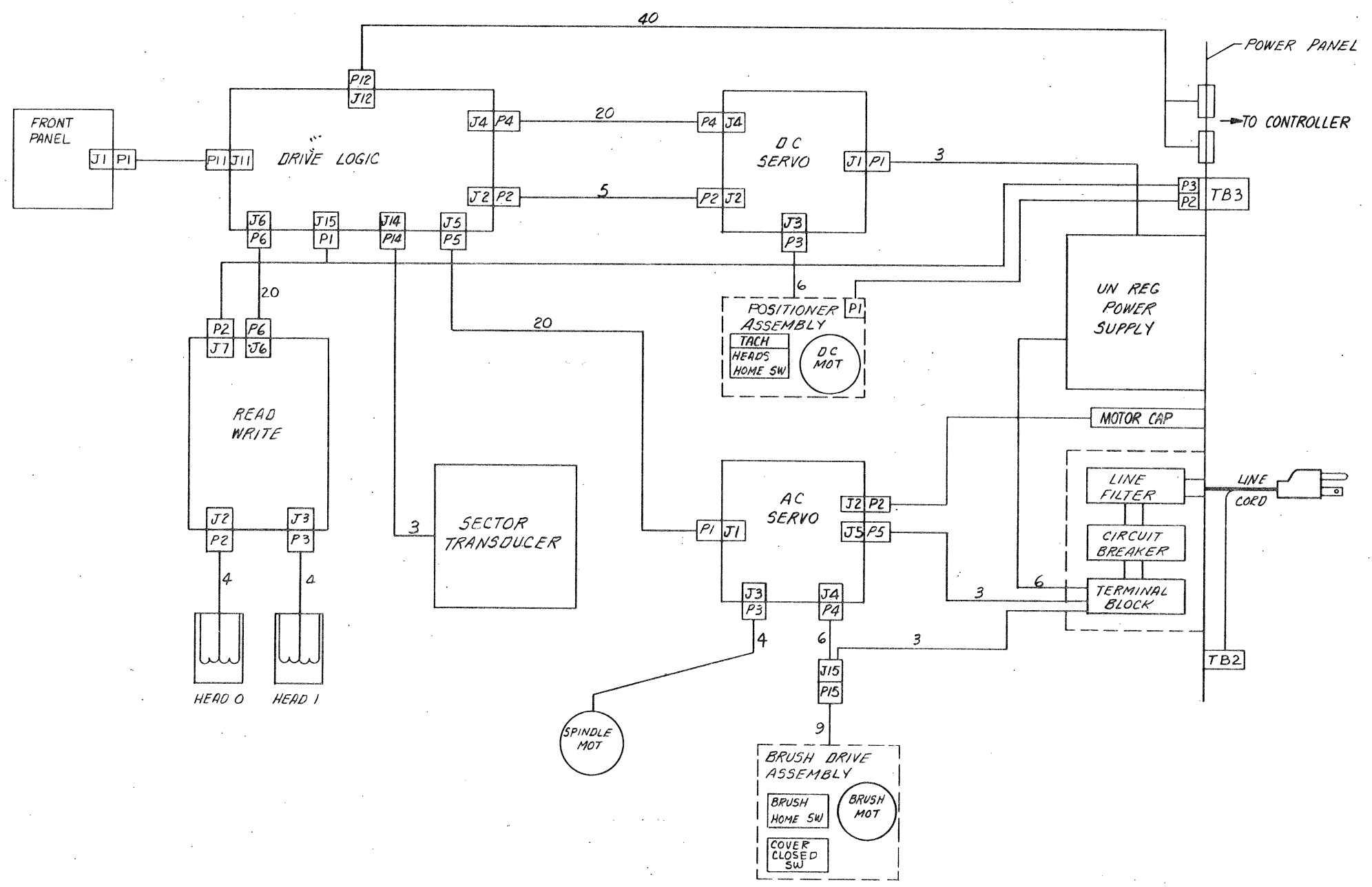
DESCRIPTION	DWG PART NO	ITEM NO
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
ANGLES	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
10° 30'	SEE NOTE 1	0.001 - 0.002
SURFACE QUALITY	CHECK ONE	0.002 - 0.005
FINISH	MEDIAN	0.005 - 0.010
QUANTITY & VARIATION	PREFERRED	0.010 - 0.020
		0.020 - 0.030
		0.030 - 0.040
		0.040 - 0.050
		0.050 - 0.060
		0.060 - 0.070
		0.070 - 0.080
		0.080 - 0.090
		0.090 - 0.100
		0.100 - 0.125
		0.125 - 0.150
		0.150 - 0.200
		0.200 - 0.300
		0.300 - 0.500
		0.500 - 1.000
		1.000 - 2.000
		2.000 - 3.000
		3.000 - 4.000
		4.000 - 6.000
		6.000 - 10.000
		10.000 - 15.000
		15.000 - 25.000
		25.000 - 50.000
		50.000 - 100.000
		100.000 - 200.000
		200.000 - 500.000
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DESCRIPTION		DWG. PART NO.		ITEM NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES					
ANGLES	GRADE OF	TOLERANCE DIMENSION RANGE MICRONS			
10° 30'	ACCURACY	SIZE	STEP	OVER	UNDER
SURFACE	CHECK ONE	0	0.5	1.2	1.5
QUALITY	IN	0.5	1.5	2.5	3.0
		1.004	1.008	1.012	1.016
		1.004	1.004	1.004	1.004
QUANTITY & VARIATION	MICRONCHES	PREFERRED	1.012	1.016	1.020
			1.04	1.063	1.08
THIRD ANGLE PROJECTION	DRN	DATE	FIRST USED ON		
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D	AP	TITLE		
DO NOT SCALE DWG	ENG	FA-17	RLO1 DISK DRIVE ASSEMBLY		
MATERIAL	PROJ. ENG	F-2277	REV. CODE		
FINISH	PROD. ENG	F-2277	E HA RLO1-5-5		
	SCALE	OF	REV. AA		
	SHEET	OF	DST.		

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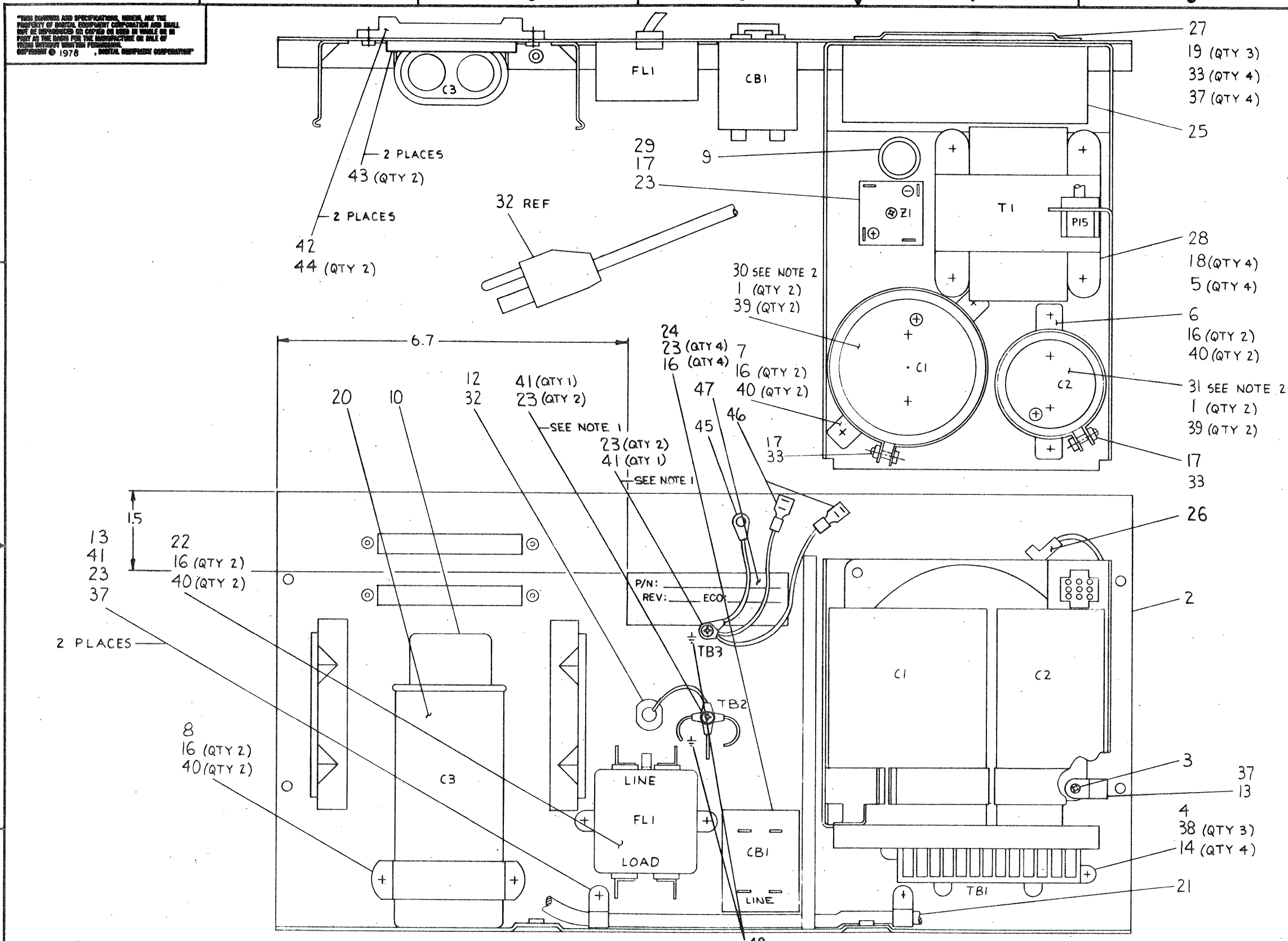
REV.	CHANGE NO.

THIRD ANGLE PROJECTION	QUANTITY & VARIATION	DESCRIPTION	DWG./PART NO.	ITEM NO.
	DRN. R. Smith 9-27-77 CHK'D. J. Smith 10/11/77 ENG. J. Smith 9-27-77 PROD. J. Smith 10/11/77	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES ANGLES 30° SURFACE QUALITY IN MICROINCHES	CLASS OF ACCURACY (CHECK ONE) MEDIUM <input type="checkbox"/> ±.004 ±.008 ±.012 ±.016 ±.024 ±.04 PREFERRED <input type="checkbox"/> ±.012 ±.016 ±.025 ±.04 ±.063 ±.1	NOMINAL DIMENSION RANGE INCHES 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
REMOVE BURRS AND BREAK SHARP CORNERS DO NOT SCALE DWG.	NEXT HIGHER ASSY. MATERIAL B-DD-RLØ1-Ø SCALE 1:1 FINISH	SIZE CODE D I C NUMBER RLØ1-Ø-3 REV. D	SHEET 2 OF 2	DIST.

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AD 7012130-0-DBP 2

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



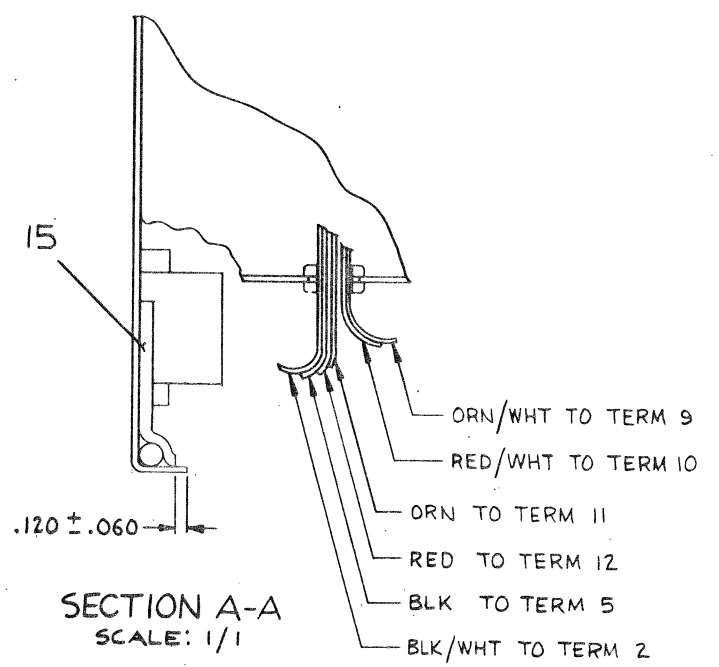
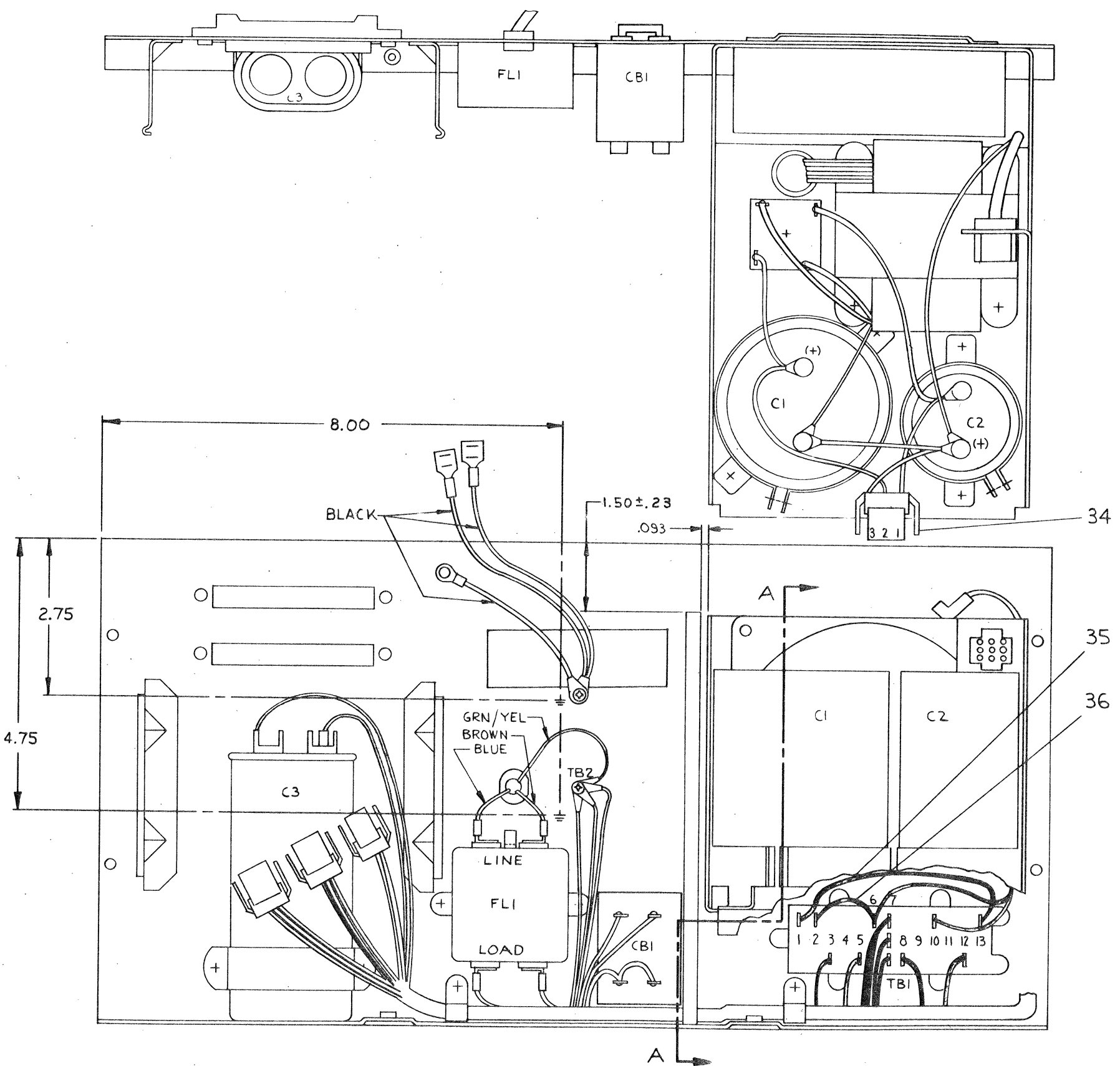
CAUTION: OFF SHEET PARTS LIST EXISTS. SEE K-PL-7012130-0-DBP (ZØ849)

REV.	DESCRIPTION	DATE
A	RELEASED AT	
B	PREVIOUS REV XØ8	
C	7012130-0001 G. REICHENBERG	
D	7012130-0002 G. SCHNEIDER	
E	RLØ1-00009 G. SCHNEIDER	
F	7012130-CXØ03 K. GUENZEL	
G	7012130-CXØ04 G. REICHENBERG	
H	7012130-CXØ05 G. REICHENBERG	
I	RLØ1-CØØ18 K. GUENZEL	
J	7012130-CØØ16 K. GUENZEL	
K	7012130-CØØ17 K. GUENZEL	
L	7012130-CØØ18 K. GUENZEL	
M	7012130-CØØ19 K. GUENZEL	
N	7012130-CØØ20 K. GUENZEL	
P	7012130-CØØ21 K. GUENZEL	
R	RLØ2-CØØ10 M. ZARICH	
S	7012130-CØØ12 D.C. 30 JUL 80	
T	7012130-CØØ13 I. WALENTA	

QUANTITY & VARIATION		DESCRIPTION	DWG./PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES				
ANGLES 90° 30'		CLASS OF ACCURACY (CHECK ONE)	NOMINAL DIMENSION RANGE TOLERANCES	
SURFACE QUALITY IN MICRONS		MEDIUM	OVER 0 TO 0.25	0.25 TO 1.2
PREFERRED			1.2 TO 4.0	4.0 TO 12.0
			12.0 TO 40.0	40.0 TO 80.0
			±.012	±.015
			±.025	±.04
			±.06	±.08
			±.1	
THIRD ANGLE PROJECTION		DRN. D. MELCHIOR	2/16/77	FIRST USED ON
REMOVE BURRS AND BREAK SHARP CORNERS		CHK'D G. SCHNEIDER	2/16/77	RLØ1
DO NOT SCALE DWG		ENG. G. SCHNEIDER	2/16/77	TITLE
MATERIAL SEE PARTS LIST		PROJ. ENG. R. ARNOLD	2/16/77	POWER PANEL ASSY
FINISH		PROD. B. RYLANDER	2/16/77	
		NEXT HIGHER ASSY.		
SCALE: 1/1		E-UA-RLØ1-Ø-Ø	SIZE CODE	NUMBER
SHEET OF 3		AD7012130-0-0	DIST.	REV. Y

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- NOTES:**
- INPUT VOLTAGE 50 OR 60 HZ
90-110, 105-128 VAC
180-220, 210-256 VAC
 - 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).
 - 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.
 - 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
RIPPLE AT 90 V RMS
+ 2.5 A 500 MV
- 3.75 A 2V
+ 6 A 900 MV
- .25 A 400 MV
 - 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	DAD7012130-0-0	NUMBER	2	REV.	V
SCALE:	1/1	SHEET	2 OF 3	DIST.			

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	DIGITAL			
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	L. ROOHR	DATE: 14-AUG-78	PARTS LIST			
---	INIT	A	SECTION VARIATION INDEX	CHK'D:	L. ROOHR	DATE: 14-AUG-78	READ/WRITE BOARD			
MZ	5413536-CX001	B	[A] 00	DES.ENG:	B. NOGUCHI	DATE:	DOCUMENT NUMBER			
	<i>M. ZARICH w.c.m.</i>		[B]	RESP.ENG.:	B. NOGUCHI	DATE: 14-AUG-78	SIZE	CODE	NUMBER	REV
	<i>17 JAN 80</i>		[C]	MFG.ENG.:	F. CHURCH	DATE:	K	PL	5413536-0-DBF	B
			[D]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:	FILE NAME:		EDIT #	
			[E]	D-UA-5413536-0-0		RL02	Z1091R,PLS		7	

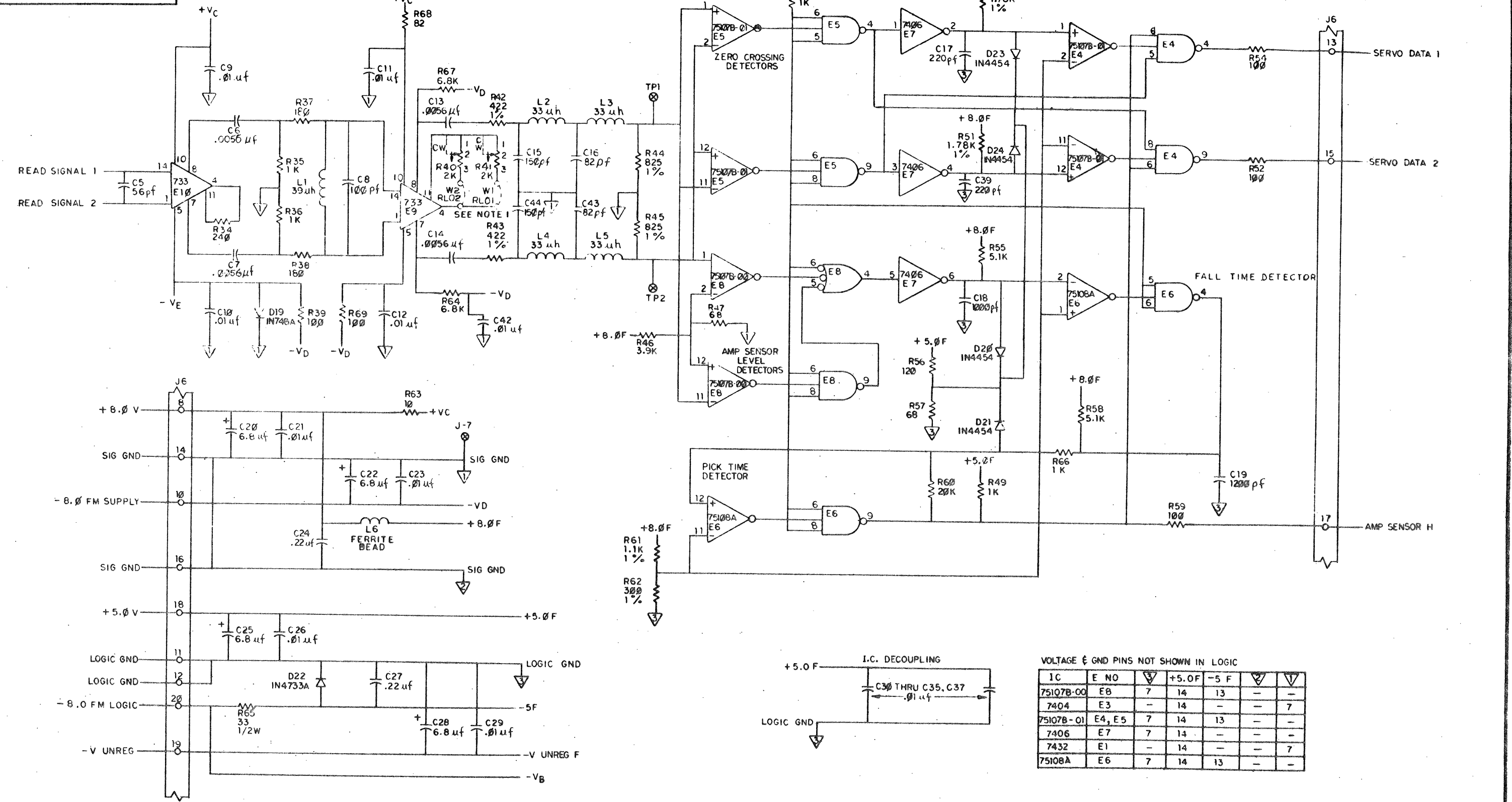
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LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					*00		
31	31		1302956-00	196 1/4W 1% RN55D-F 100PPM	3		R2,R3,R4
32	32		1300439-00	3.30 K .25 W 5.0 % CC	2		R20,R22
33	33		1305143-00	825 1/4W 1% RN55D-F 100PPM	2		R44,R45
34	34		1303303-00	2.61 K 1/4W 1% RN55D-F 100PPM	4		R24,R25,R28,R29
35	35		1302645-00	1.1 K 1/4W 1% RN55D-F 100PPM	1		R61
36	36		1301477-00	82.0 .25 W 5.0 % CC	1		R68
37	37		1301322-00	180.0 .25 W 5.0 % CC	2		R37,R38
38	38		1313469-00	240.0 .25 W 5.0 % CC	1		R34
39	39		1303045-00	3.16 K 1/4W 1% RN55D-F 100PPM	2		R26,R27
40	40		1501913-00	2N 2904A PNP 600MW SI 60 40 Y	3		Q1-Q3
41	41		1513489-00	2N 4401 NPN 350MW SI 40 20	3		Q6-Q8
42	42		1513490-00	2N 4403 PNP 350MW SI-40 30	2		Q4,Q5
43	43		1210001-00	HEAT SINK BLACK	3		
44	44		9007201-00	TRANSIPADS #10253	3		
45	45		9008268-00	COMPOUND, THERMAL JOINT \$	A/R		
46	46		1611257-01	CHOKE(CERAMIC BEAD)AXIAL LEAD,ON	1		L6
47	47		1613898-01	33.0 UH INDUCTOR	4		L2-L5
48	48		1613898-02	39.0 UH INDUCTOR	1		L1
49	49		1910268-00	DEC 75107B RECEIVER,LINE,DUAL,	1		E8
50	50		1909686-00	7404 INVERTER GATE-HEX 1I	1		E3
51	51		1910544-00	74S74 FF-D DUAL,EDGE TRIGG	1		E2
52	52		1910644-00	733 DIFFERENTIAL AMP,WID	2		E9,E10
53	53		1910741-00	7406 INVERTER GATE-HEX 1I	1		E7
54	54		1911521-00	7432 OR GATE-QUAD 2IN, PO	1		E1
55	55		1910268-01	DEC 75107B-01 RECEIVER,LINE,DUA	2		E5,E4
56	56		1910725-00	75108B RECEIVER,LINE,DUAL,	1		E6
57	57		1209941-06	HEADER.100 20POS RT ANGLE	1		J6
58	58		1209941-03	HEADER RT ANGLE LEFT L	1		
59	59		1209941-04	HEADER RT ANGLE,RIGHT	1		
60	60		1210385-01	PIN 1POS WIRE WRAP	8		
61	61		9007791-00	TERM PCB 2POS SOLDER,TURRET	2		TP1,TP2
62	62		1303067-00	422 1/4W 1% RN55D-F 100PPM	2		R42,R43
63	63		1300219-00	68.0 .25 W 5.0 % CC	4		R7,R8,R47,R57
64	64		1301423-00	6.80 K .25 W 5.0 % CC	3		R15,R64,R67
65	65		1300391-00	1.50 K .25 W 5.0 % CC	2		R17,R19
66	66		1114117-00	1N 4152 PIV=450 I=75M	3		D2-D4
67	67		1113003-00	IN 5282 PIV=55 I=500M D035	4		D11-D14
68	68		1015573-01	5600.0 MMF 50V 5% CER. \$	5		C3,C6,C7,C13,C14
69	69		1304857-00	237 1/4W 1% RN55D-F 100PPM	1		R1
70	70		1300309-00	390.0 .25 W 5.0 % CC	1		R53
71	71		1013466-17	150 MMF 50V 5% CER	2		C15,C44
72	72		1309150-07	2 K 1/2W10% POT 100PPM	2		R40,R41
73	73		9009185-00	JUMPER, WIRE, INSULATED, BLACK B	2		W1,W2
74	74		1217377-00	TERM QUICK 1POS TAB PC MNT	1		J7

***** UNDERGOING CHANGE *****

! D ! I ! G ! I ! I ! A ! L !	! TITLE	! SECTION A OF A	! ! SIZE ! CODE !	! DOCUMENT NUMBER	! REV
! ! ! ! ! ! ! !	! READ/WRITE BOARD	! ! ! ! ! ! ! !	! ! ! ! ! ! ! !	! 5413536-0-DRP	! B

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VOLTAGE & GND PINS NOT SHOWN IN LOGIC

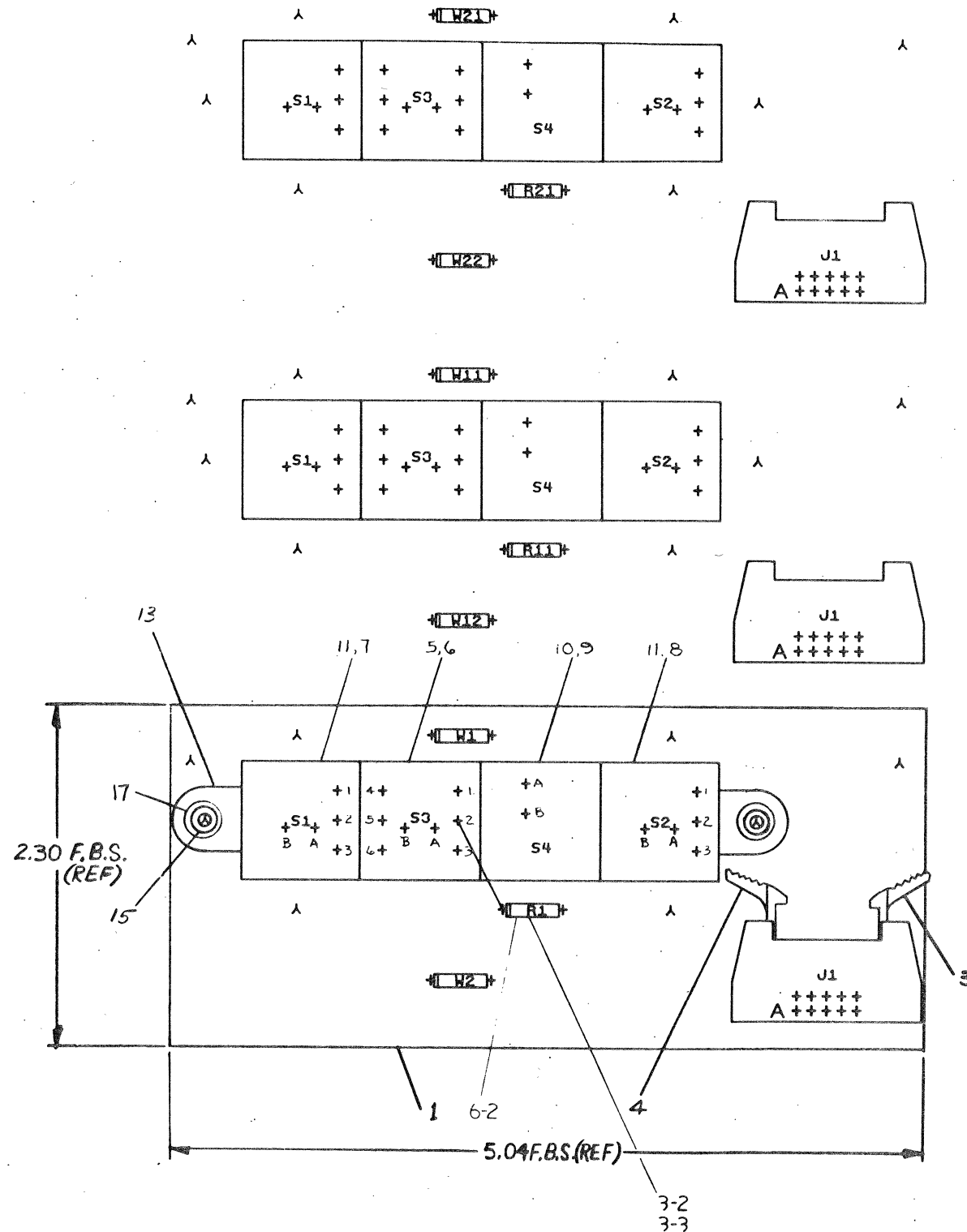
IC	E NO	V	+5.0F	-5 F	V	V
75107B-00	E8	7	14	13	-	-
7404	E3	-	14	-	-	7
75107B-01	E4, E5	7	14	13	-	-
7406	E7	7	14	-	-	-
7432	E1	-	14	-	-	7
75108A	E6	7	14	13	-	-

REVISIONS

CHK	CHANGE NO.	REV.

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COMPONENT SIDE VIEW



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

CHG	NO	REV	DATE	BY	CHK'D
E	1				
F	1				
H	1				
J	1				

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

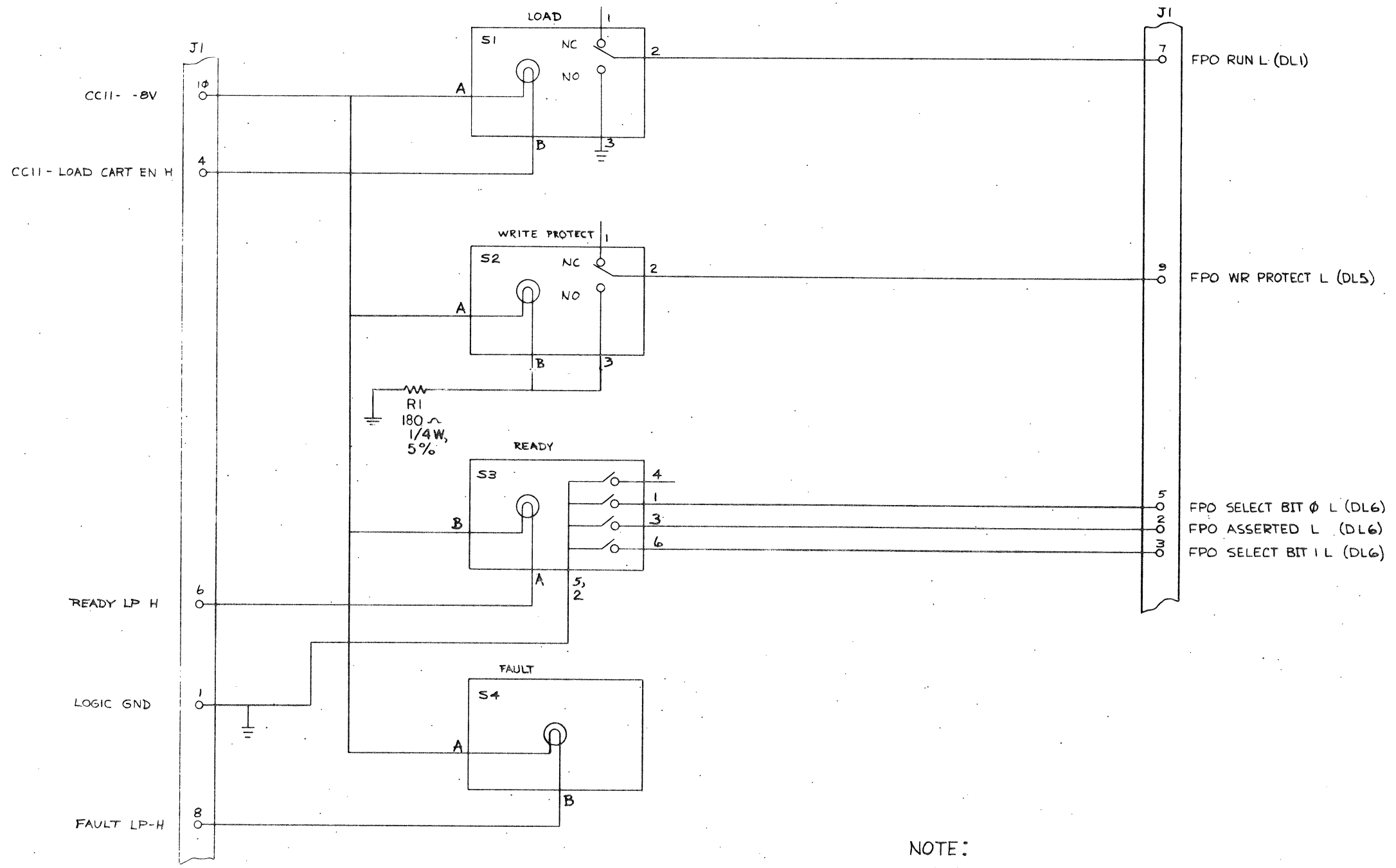
SIGNATURES	DATE	digital
DRN. M. [Signature]	11/5/76	
CHK'D. [Signature]	1-11-77	TITLE FRONT PANEL
ENG. [Signature]	3/2/77	
PROJ. ENG. [Signature]	5/2/77	SIZE CODE NUMBER REV D JUA 5411846-0-0 J
SCALE 2/1		
SHT. 1 OF 3		
NEXT HIGHER ASSY. B-DD-54-11846-0		

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								
ENG	ECO NUMBER	REV	SECTION A OF A	DRN:	S. MARLOW	DATE:	7-APR-76	DIGITAL			
MZ	5411846-CX005	J	SECTION.VARIATION INDEX	CHK'D:	P. BURNELL	DATE:	10-JAN-77	TITLE PARTS LIST			
			[A] 00					FRONT PANEL			
			[B]	DES.ENG:	G. REICHENBERG	DATE:	7-MAR-77	DOCUMENT NUMBER			
			[C]								
			[D]	RESP.ENG.:	G. REICHENBERG	DATE:	7-MAR-77	SIZE!CODE! NUMBER ! REV			
			[E]								
			[F]								
			[G]								
			[H]								
			[I]	MFG.ENG.:	L. KIRK	DATE:	9-MAR-77	K	PL	5411846-0-DBP	J
			[J]								
			[K]	ASSEMBLY NUMBER:		TOP DOCUMENT NUMBER:		FILE NAME:	EDIT #		
			[L]	D-UA-5411846-0-0		# B-DD-5411846-0		Z1580J.PLS	3		
			[M]								
			[N]								

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NOTE:
1. ALL LAMPS ARE GE-73 TYPE

REV.	CHG. NO.	DATE	BY	CHK'D
E	5411846-0-001	9-2-77	G. REICHENBERG	
F	5411846-CZ002	7-2-77	G. REICHENBERG	
H	5411846-CZ003		M. ZARICH	
J	5411846-CX005	DC. 4 AUG 80	M. ZARICH	
K	5411846-CX006	DC. 3 OCT 80	M. ZARICH	

DRN. <i>H. Harigan</i>	27 Feb 76	FIRST USED ON	
CHK'D <i>G. Reich</i>	1-11-77	TITLE	FRONT PANEL
ENG. <i>G. Reich</i>	3-7-77	SCALE	D CS 5411846-0-1
PROD. ENG. <i>ML</i>	3-10-77	SHEET	OF
PROJ. <i>ML</i>	5-9-77	DIST.	
NEXT HIGHER ASSY.		NUMBER	REV. K

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 6028 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

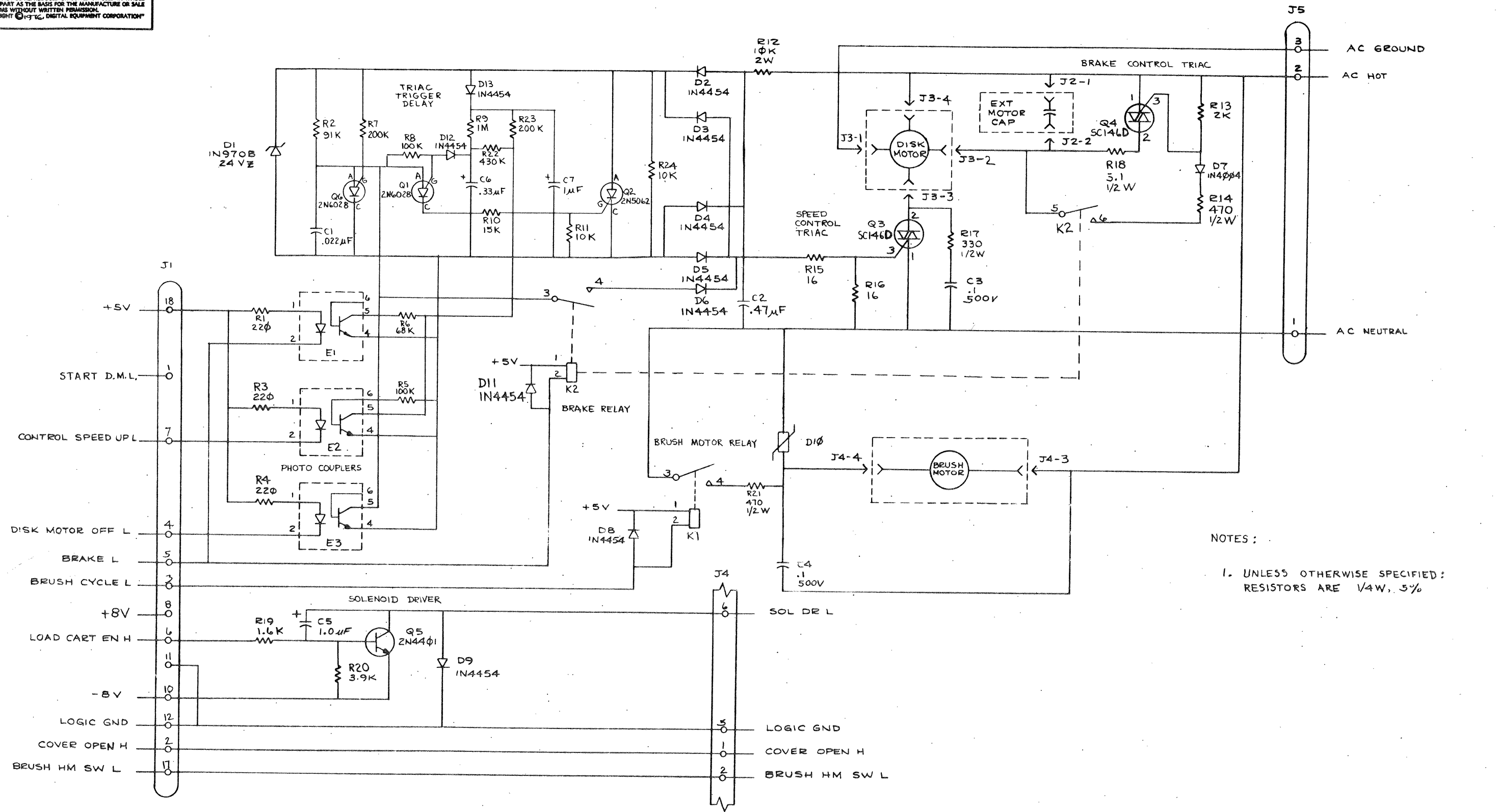
D	I	G	I	T	A	L	TITLE	SECTION A OF A	SIZE	CODE	DOCUMENT NUMBER	REV
							AC SERVO				5411848-0-DBP	F

LINE	ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
					00		
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		DIGITAL	
ENG	ECO NUMBER	REV	SECTION A OF A	CHK'D:	F. BURNELL	DATE:	10 JAN 77	TITLE	PARTS LIST
	INITIAL	E	SECTION VARIATION INDEX	CHK'D:	F. BURNELL	DATE:	10 JAN 77	AC SERVO	
MZ	5411848-CZ003	F	[A] 00	DES. ENG:	F. BADUM	DATE:	7 JUN 77		
			[B]						
			[C]	RESP. ENG.:	F. BADUM	DATE:	7 JUN 77	DOCUMENT NUMBER	
			[D]						
			[E]					SIZE	CODE
			[F]					NUMBER	REV
			[G]	MFG. ENG.:	D. LESAGE	DATE:	7 JUN 77	K	PL
			[H]					5411848-0-DBP	F
			[I]	ASSEMBLY NUMBER:				FILE NAME:	EDIT #
			[J]	D-UA-5411848-0-0				Z0491.PLS	3
			[K]						
			[L]						
			[M]						
			[N]						

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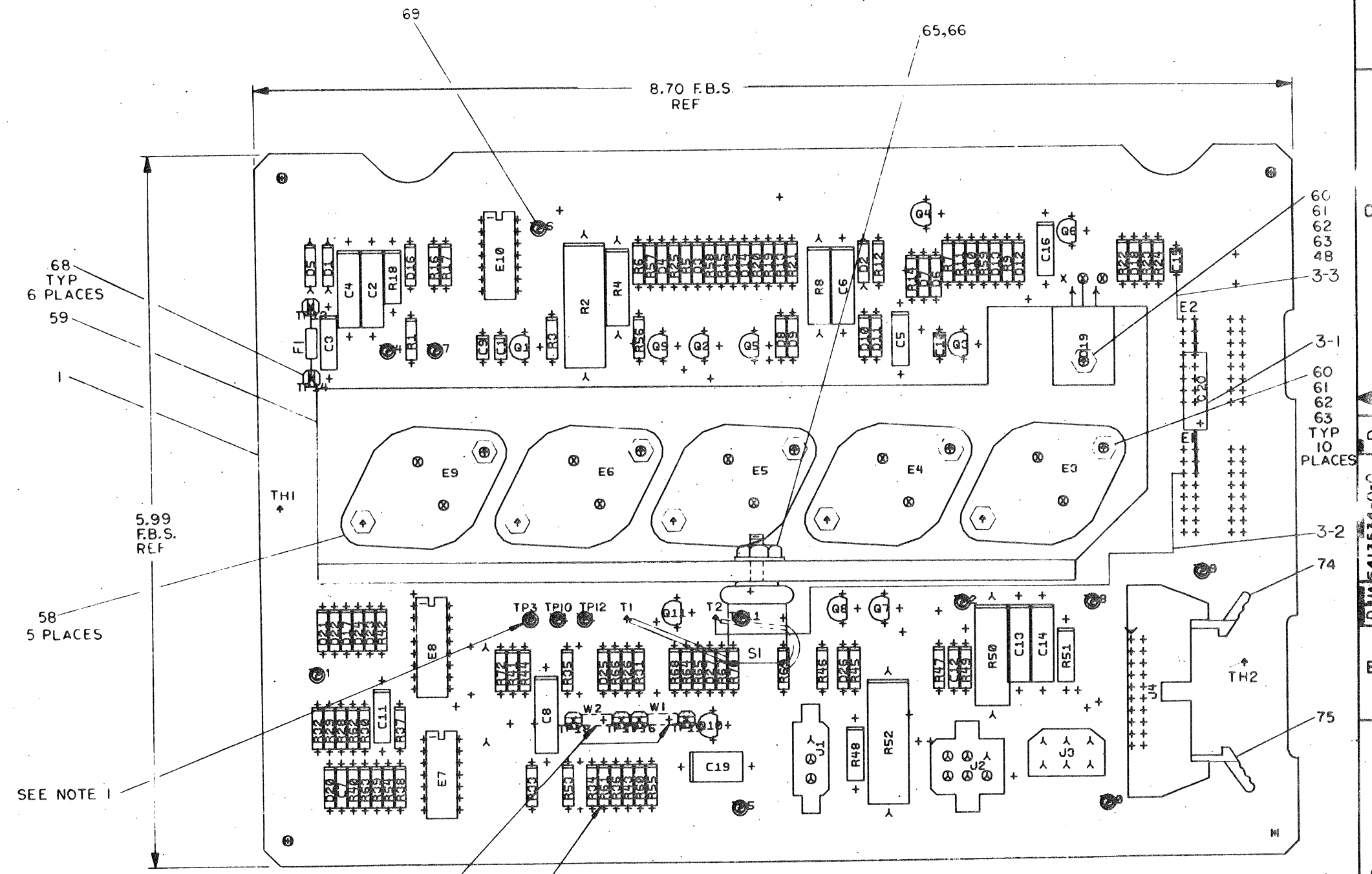
NOTES:
 1. UNLESS OTHERWISE SPECIFIED:
 RESISTORS ARE 1/4W, 5%

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

DRN. <i>W. J. ...</i>	8/16/70	FIRST USED ON	RLO1
CHK'D <i>B. ...</i>	1-14-71	TITLE	AC SERVO
ENG. <i>...</i>	6-8-77	SIZE	D
PROJ. ENG. <i>...</i>	6/7/77	CODE	CS 5411848-0-1
PROD. <i>...</i>	6/7/77	NUMBER	1
NEXT HIGHER ASSY.		REV.	F
D-UA-5411848-0-0		SCALE	1 OF 1
SHEET 1	OF 1	DIST.	

COMPONENT SIDE VIEW

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- NOTES:
1. TP3, TP11, TP12 & TP15 THRU TP18 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	DATE	BY	APP
	5413534-001	E			
	5413534-002	F			
	5413534-003	G			
	5413534-004	H			

SEE NOTE 3
 SEE NOTE 2

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

SIGNATURES	DATE	TITLE	DC SERVO & POWER SUPPLY
DRN. Paul R. Kordach	8/15/78		
CHK'D. Al W. ...	8/15/78		
ENG. ...	8/15/78		
PROJ. ENG. ...	8/15/78		
PROD. ...	8/15/78		
SCALE 2/1		SIZE CODE	NUMBER
SHT. 1 OF 2		D UA 5413534-0-0	REV D
NEXT HIGHER ASSY. B-DD-5413534-0			

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,
22	22		1303179-00	8.20 K .25 W 5.0 % CC	3	CONT	R68
23	23		1300488-00	12.0 K .25 W 5.0 % CC	4		R9,R16,R17
24	24		1305346-00	27.0 K .25 W 5.0 % CC	1		R25,R26,R45,R56
25	25		1305131-00	*** THIS ITEM IS NOT USED ***	-		R21
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		
ENG	ECO NUMBER	REV	SECTION A OF A	DRN: JERRY BEST	DATE: 26-JUL-78
INIT		A	SECTION VARIATION INDEX	CHK'D: JERRY BEST	DATE: 26-JUL-78
BN	5413534-CZ001	B	[A] 00	DES.ENG: R. NOGUCHI	DATE:
MZ	5413534-CX003	C	[B]	RESP.ENG.: R. NOGUCHI	DATE: 26-JUL-78
			[C]	MFG.ENG.: P. CHURCH	DATE:
			[D]	ASSEMBLY NUMBER:	TOP DOCUMENT NUMBER:
			[E]	D-UA-5413534-0-0	IRLO2
			[F]		FILE NAME:
			[G]		Z0494C.PLS
			[H]		EDIT #:
			[I]		18
			[J]		
			[K]		
			[L]		
			[M]		
			[N]		

REV
10 U2V
30

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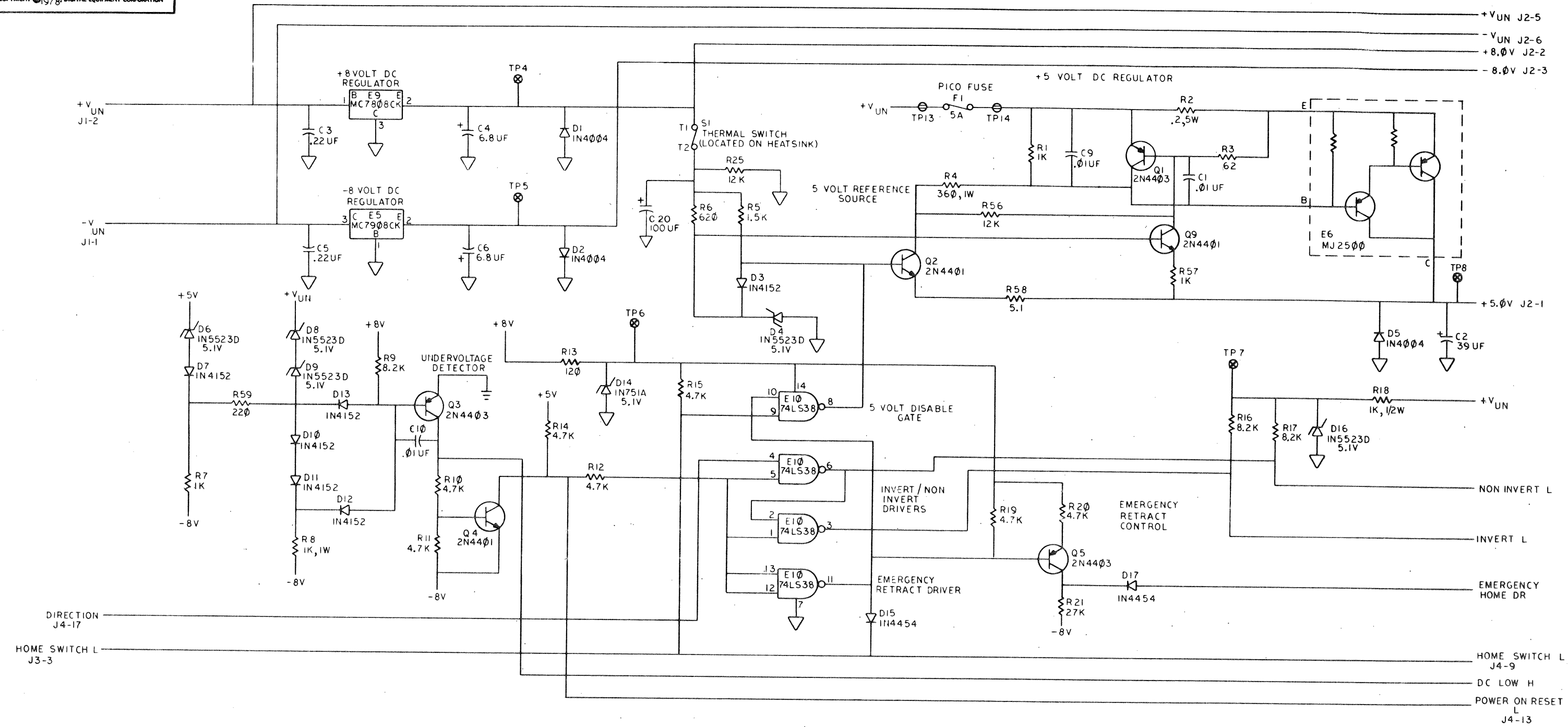
LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
30	30	1312924-00	10.70 K .25 W 1.0 % RN55D-F10	1	R32
31	31	1309412-00	18.20 K .25 W 1.0 % RN55D-F10	1	R33
32	32	1315436-00	52.30 K .25 W 1.0 % RN55D-F10	1	R54
33	33	1304843-00	243.0 K .25 W 1.0 % RN55D-F10	1	R72
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 F	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 DARLNGT	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,0@215,C@156,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

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION 00	REFERENCE DESIGNATOR
78	78	1312618-00	16.90 K .25 W 1.0 % RN55D-F10	1	R40
79	79	1300229-00	100.0 .25 W 5.0 % CC	1	R63
80	80	1305336-00	*** THIS ITEM IS NOT USED ***	-	
81	81	1309416-00	31.60 K .25 W 1.0 % RN55D-F10	1	R65
82	82	1002781-00	100 MFD 25V +75-10% AL EL	1	C20
83	83	9009185-00	JUMPER, WIRE, INSULATED, BLACK B	2	W1,W2
84	84	1303044-00	100.0 K .25 W 1.0 % RN55D-F10	1	R64
85	85	1015574-00	*** THIS ITEM IS NOT USED ***	-	
86	86	1315435-00	25.50 K .25 W 1.0 % RN55D-F10	1	R66
87	87	1312930-00	5.10 K .25 W 5.0 % CC	1	R67
88	88	1015520-00	1 MFD 100V 5% MET. MYLR	1	C19
89	89	1513697-00	2N 5640 FET N CHNNL	1	Q10
90	70	1300479-00	10.0 K .25 W 5.0 % CC	1	R69
91	91	1302466-00	100.0 K .25 W 5.0 % CC	1	R70
92	92	9105740-55	WIRE(WRAP)30AWG UL1423	A/R	

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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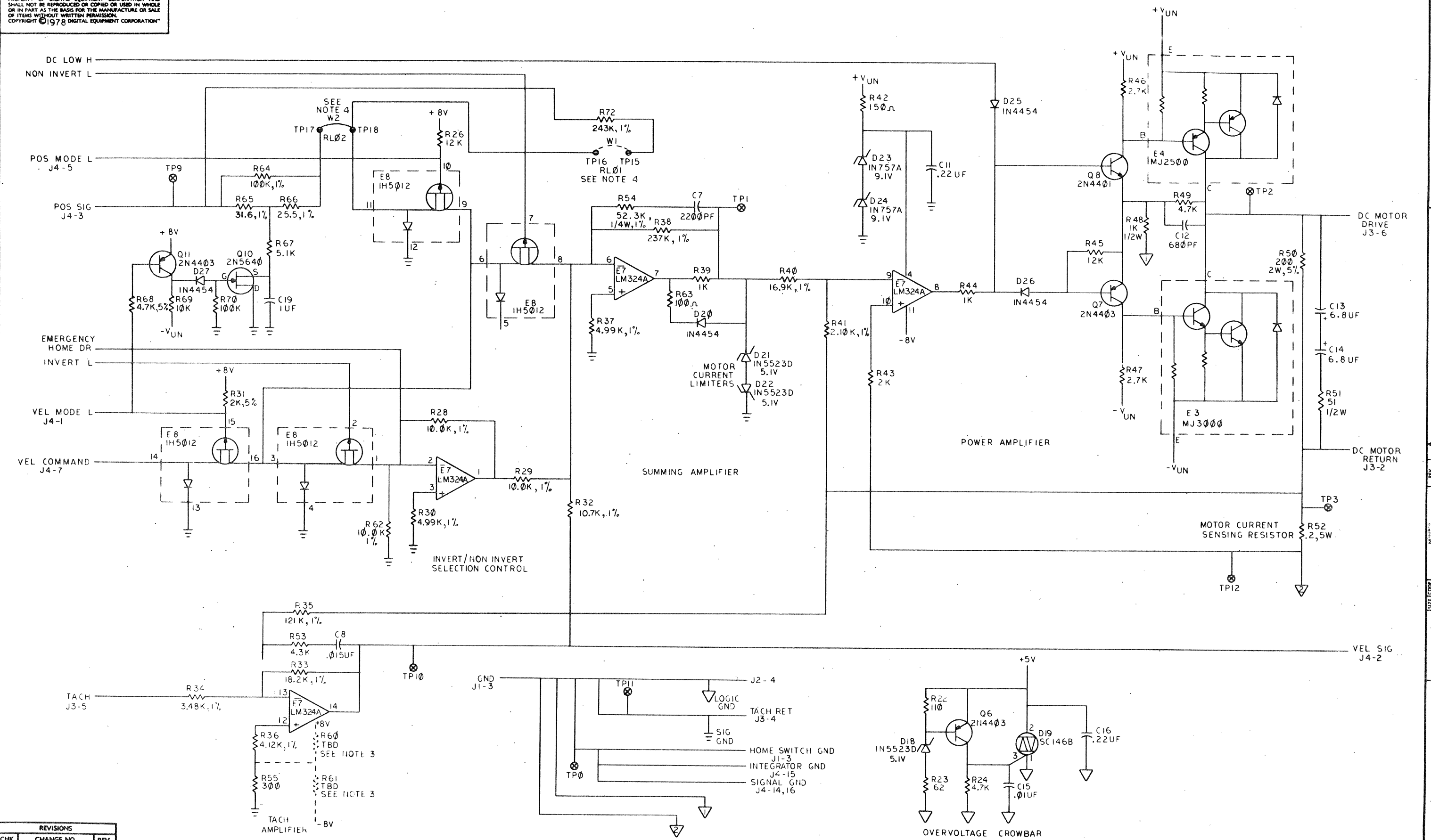


- NOTES:
1. ALL RESISTORS TO BE 1/4W, 5%; UNLESS OTHERWISE SPECIFIED.
 2. ~~E1 AND E2 ARE SPARES.~~
 3. VALUE OF R60 OR R61 WILL BE DETERMINED IN TESTING.
 4. INSTALL W1 AND W2 FOR RL01 ON SIDE 2. INSTALL W2 ONLY FOR RL02 ON SIDE 2.

REV.	CHG.	BY	DATE
B	5413534-02001	BOB NOGUCHI	
C	5413534-0X02A	M. ZARICH	
D	5413534-0X003	M. ZARICH	

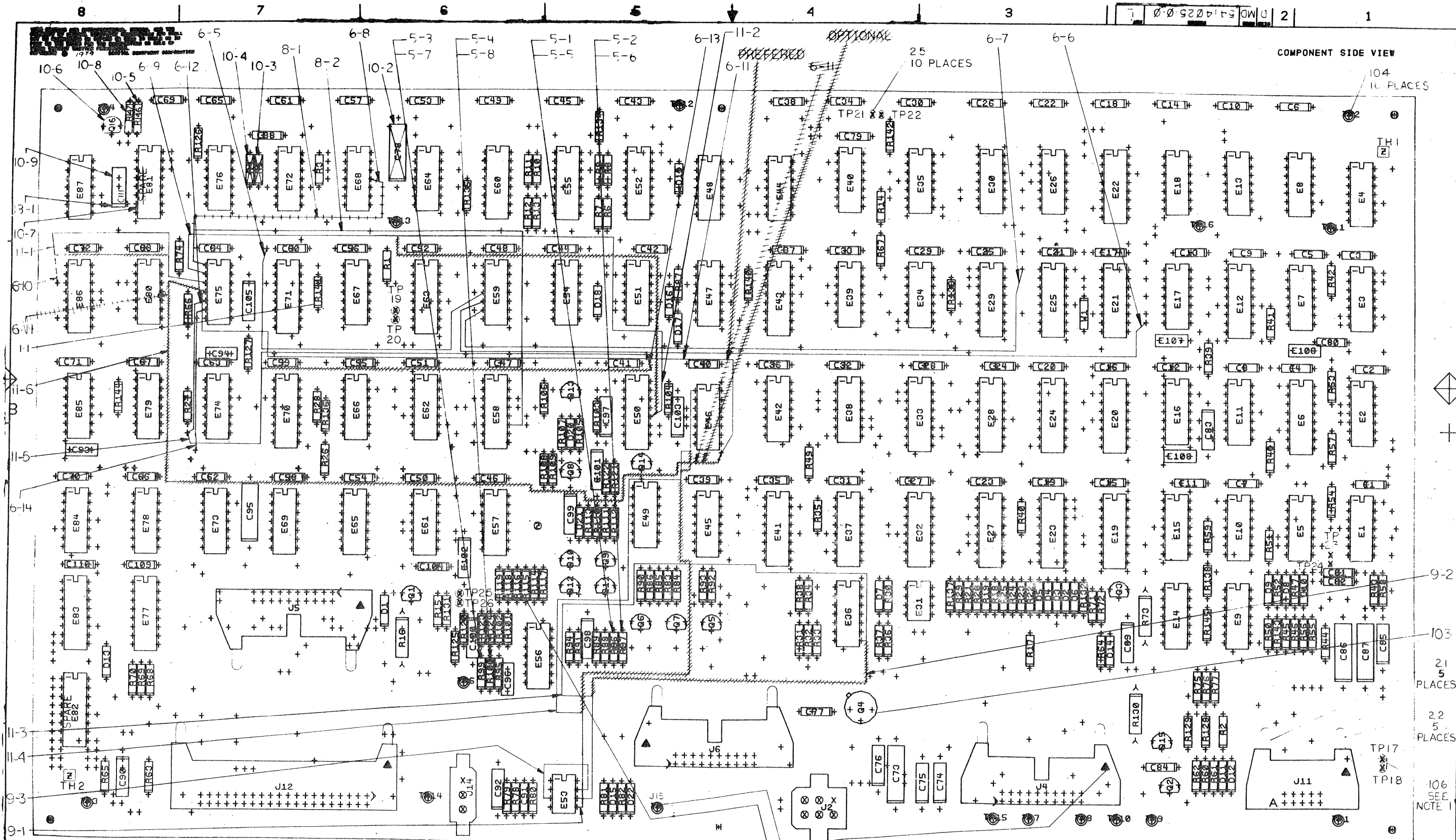
QUANTITY & VARIATION	DESCRIPTION	DWG./PART NO.	ITEM NO.
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
	ANGLES 30° 30'	CLASS OF ACCURACY	NOMINAL DIMENSION RANGE INCHES
	SURFACE QUALITY IN	(CHECK ONE)	OVER 0 TO 1.2 ±.004
			OVER 1.2 TO 4.0 ±.008
			OVER 4.0 TO 12.0 ±.012
			OVER 12.0 TO 40.0 ±.016
			OVER 40.0 TO 80.0 ±.020
			OVER 80.0 TO 160.0 ±.025
			OVER 160.0 TO 320.0 ±.031
			OVER 320.0 TO 640.0 ±.037
			OVER 640.0 TO 1280.0 ±.043
			OVER 1280.0 TO 2560.0 ±.049
			OVER 2560.0 TO 5120.0 ±.055
			OVER 5120.0 TO 10240.0 ±.061
			OVER 10240.0 TO 20480.0 ±.067
			OVER 20480.0 TO 40960.0 ±.073
			OVER 40960.0 TO 81920.0 ±.079
			OVER 81920.0 TO 163840.0 ±.085
			OVER 163840.0 TO 327680.0 ±.091
			OVER 327680.0 TO 655360.0 ±.097
			OVER 655360.0 TO 1310720.0 ±.103
			OVER 1310720.0 TO 2621440.0 ±.109
			OVER 2621440.0 TO 5242880.0 ±.115
			OVER 5242880.0 TO 10485760.0 ±.121
			OVER 10485760.0 TO 20971520.0 ±.127
			OVER 20971520.0 TO 41943040.0 ±.133
			OVER 41943040.0 TO 83886080.0 ±.139
			OVER 83886080.0 TO 167772160.0 ±.145
			OVER 167772160.0 TO 335544320.0 ±.151
			OVER 335544320.0 TO 671088640.0 ±.157
			OVER 671088640.0 TO 1342177280.0 ±.163
			OVER 1342177280.0 TO 2684354560.0 ±.169
			OVER 2684354560.0 TO 5368709120.0 ±.175
			OVER 5368709120.0 TO 10737418240.0 ±.181
			OVER 10737418240.0 TO 21474836480.0 ±.187
			OVER 21474836480.0 TO 42949672960.0 ±.193
			OVER 42949672960.0 TO 85899345920.0 ±.199
			OVER 85899345920.0 TO 171798691840.0 ±.205
			OVER 171798691840.0 TO 343597383680.0 ±.211
			OVER 343597383680.0 TO 687194767360.0 ±.217
			OVER 687194767360.0 TO 1374389534720.0 ±.223
			OVER 1374389534720.0 TO 2748779069440.0 ±.229
			OVER 2748779069440.0 TO 5497558138880.0 ±.235
			OVER 5497558138880.0 TO 10995116277760.0 ±.241
			OVER 10995116277760.0 TO 21990232555520.0 ±.247
			OVER 21990232555520.0 TO 43980465111040.0 ±.253
			OVER 43980465111040.0 TO 87960930222080.0 ±.259
			OVER 87960930222080.0 TO 175921860444160.0 ±.265
			OVER 175921860444160.0 TO 351843720888320.0 ±.271
			OVER 351843720888320.0 TO 703687441776640.0 ±.277
			OVER 703687441776640.0 TO 1407374883553280.0 ±.283
			OVER 1407374883553280.0 TO 2814749767106560.0 ±.289
			OVER 2814749767106560.0 TO 5629499534213120.0 ±.295
			OVER 5629499534213120.0 TO 11258999068426240.0 ±.301
			OVER 11258999068426240.0 TO 22517998136852480.0 ±.307
			OVER 22517998136852480.0 TO 45035996273704960.0 ±.313
			OVER 45035996273704960.0 TO 90071992547409920.0 ±.319
			OVER 90071992547409920.0 TO 180143985094819840.0 ±.325
			OVER 180143985094819840.0 TO 360287970189639680.0 ±.331
			OVER 360287970189639680.0 TO 720575940379279360.0 ±.337
			OVER 720575940379279360.0 TO 1441151880758558720.0 ±.343
			OVER 1441151880758558720.0 TO 2882303761517117440.0 ±.349
			OVER 2882303761517117440.0 TO 5764607523034234880.0 ±.355
			OVER 5764607523034234880.0 TO 11529215046068469760.0 ±.361
			OVER 11529215046068469760.0 TO 23058430092136939520.0 ±.367
			OVER 23058430092136939520.0 TO 46116860184273879040.0 ±.373
			OVER 46116860184273879040.0 TO 92233720368547758080.0 ±.379
			OVER 92233720368547758080.0 TO 184467440737095516160.0 ±.385
			OVER 184467440737095516160.0 TO 368934881474191032320.0 ±.391
			OVER 368934881474191032320.0 TO 737869762948382064640.0 ±.397
			OVER 737869762948382064640.0 TO 1475739525896764129280.0 ±.403
			OVER 1475739525896764129280.0 TO 2951479051793528258560.0 ±.409
			OVER 2951479051793528258560.0 TO 5902958103587056517120.0 ±.415
			OVER 5902958103587056517120.0 TO 11805916207174113034240.0 ±.421
			OVER 11805916207174113034240.0 TO 23611832414348226068480.0 ±.427
			OVER 23611832414348226068480.0 TO 47223664828696452136960.0 ±.433
			OVER 47223664828696452136960.0 TO 94447329657392904273920.0 ±.439
			OVER 94447329657392904273920.0 TO 188894659314785808547840.0 ±.445
			OVER 188894659314785808547840.0 TO 377789318629571617095680.0 ±.451
			OVER 377789318629571617095680.0 TO 755578637259143234191360.0 ±.457
			OVER 755578637259143234191360.0 TO 1511157274518286468382720.0 ±.463
			OVER 1511157274518286468382720.0 TO 3022314549036572936765440.0 ±.469
			OVER 3022314549036572936765440.0 TO 6044629098073145873530880.0 ±.475
			OVER 6044629098073145873530880.0 TO 12089258196146291747061760.0 ±.481
			OVER 12089258196146291747061760.0 TO 24178516392292583494123520.0 ±.487
			OVER 24178516392292583494123520.0 TO 48357032784585166988247040.0 ±.493
			OVER 48357032784585166988247040.0 TO 96714065569170333976494080.0 ±.499
			OVER 96714065569170333976494080.0 TO 193428131138340667952988160.0 ±.505
			OVER 193428131138340667952988160.0 TO 386856262276681335905976320.0 ±.511
			OVER 386856262276681335905976320.0 TO 773712524553362671811952640.0 ±.517
			OVER 773712524553362671811952640.0 TO 1547425049106725343623905280.0 ±.523
			OVER 1547425049106725343623905280.0 TO 3094850098213450687247810560.0 ±.529
			OVER 3094850098213450687247810560.0 TO 6189700196426901374495621120.0 ±.535
			OVER 6189700196426901374495621120.0 TO 12379400392853802748991242240.0 ±.541
			OVER 12379400392853802748991242240.0 TO 24758800785707605497982484480.0 ±.547
			OVER 24758800785707605497982484480.0 TO 49517601571415210995964968960.0 ±.553
			OVER 49517601571415210995964968960.0 TO 99035203142830421991929937920.0 ±.559
			OVER 99035203142830421991929937920.0 TO 198070406285660843983859875840.0 ±.565
			OVER 198070406285660843983859875840.0 TO 396140812571321687967719751680.0 ±.571
			OVER 396140812571321687967719751680.0 TO 792281625142643375935439503360.0 ±.577
			OVER 792281625142643375935439503360.0 TO 1584563250285286751870879006720.0 ±.583
			OVER 1584563250285286751870879006720.0 TO 3169126500570573503741758013440.0 ±.589
			OVER 3169126500570573503741758013440.0 TO 6338253001141147007483516026880.0 ±.595
			OVER 6338253001141147007483516026880.0 TO 12676506002282294014967032053760.0 ±.601
			OVER 12676506002282294014967032053760.0 TO 25353012004564588029934064107520.0 ±.607
			OVER 25353012004564588029934064107520.0 TO 50706024009129176059868128215040.0 ±.613
			OVER 50706024009129176059868128215040.0 TO 101412048018258352119736256430080.0 ±.619
			OVER 101412048018258352119736256430080.0 TO 202824096036516704239472512860160.0 ±.625
			OVER 202824096036516704239472512860160.0 TO 405648192073033408478945025720320.0 ±.631
			OVER 405648192073033408478945025720320.0 TO 811296384146066816957890051440640.0 ±.637
			OVER 811296384146066816957890051440640.0 TO 1622592768292133639157800102881280.0 ±.643
			OVER 1622592768292133639157800102881280.0 TO 3245185536584267278315600205762560.0 ±.649
			OVER 3245185536584267278315600205762560.0 TO 6490371073168534556631200411525120.0 ±.655
			OVER 6490371073168534556631200411525120.0 TO 12980742146337071113262400223050240.0 ±.661
			OVER 12980742146337071113262400223050240.0 TO 25961484292674142226524800446100480.0 ±.667
			OVER 25961484292674142226524800446100480.0 TO 5192296858534828445304960093220960.0 ±.673
			OVER 5192296858534828445304960093220960.0 TO 10384593717069656890609920186441920.0 ±.679
			OVER 10384593717069656890609920186441920.0 TO 20769187434139313781219840372883840.0 ±.685
			OVER 20769187434139313781219840372883840.0 TO 4153837486827862756243968074576640.0 ±.691
			OVER 4153837486827862756243968074576640.0 TO 8307674973655725512487936149153280.0 ±.697
			OVER 8307674973655725512487936149153280.0 TO 16615349947311451024975872298306560.0 ±.703
			OVER 16615349947311451024975872298306560.0 TO 3323069989462290204995174459661120.0 ±.709
			OVER 3323069989462290204995174459661120.0 TO 6646139978924580409990348919322240.0 ±.715
			OVER 6646139978924580409990348919322240.0 TO 13292279957849160819980697838644480.0 ±.721
			OVER 13292279957849160819980697838644480.0 TO 26584559915698321639961395677288960.0 ±.727
			OVER 26584559915698321639961395677288960.0 TO 5316911983139664327992279135457920.0 ±.733
			OVER 5316911983139664327992279135457920.0 TO 1063382396627932865594455826915840.0 ±.739
			OVER 1063382396627932865594455826915840.0 TO 2126764793255865731188911653831680.0 ±.745
			OVER 2126764793255865731188911653831680.0 TO 4253529586511731462377823307663360.0 ±.751
			OVER 4253529586511731462377823307663360.0 TO 8507059173023462924755646615326720.0 ±.757
			OVER 8507059173023462924755646615326720.0 TO 17014118346046925849511293230653440.0 ±.763
			OVER 17014118346046925849511293230653440.0 TO 34028236692093851699022586461306880.0 ±.769
			OVER 34028236692093851699022586461306880.0 TO 68056473384187703398045172922613760.0 ±.775
			OVER 68056473384187703398045172922613760.0 TO 136112946768375406796090345845227520.0 ±.781
			OVER 136112946768375406796090345845227520.0 TO 27222589353675081359218069169045040.0 ±.787
			OVER 27222589353675081359218069169045040.0 TO 54445178707350162718436138338090080.0 ±.793
			OVER 54445178707350162718436138338090080.0 TO 108890357414700325436872276676180160.0 ±.799
			OVER 108890357414700325436872276676180160.0 TO 217780714829400650873744553352360320.0 ±.805
			OVER 217780714829400650873744553352360320.0 TO 435561429658801301747489106704720640.0 ±.811
			OVER 435561429658801

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REVISIONS		
CHK	CHANGE NO.	REV.

8	7	6	5	4	3	2	1		
TITLE DC SERVO AND POWER SUPPLY							SIZE CODE D	NUMBER CS 5413534-0-1	REV. D
SCALE							SHEET 2 OF 2	DIST.	



NOTES:
 1. INSTALL ITEM 106 AFTER TEST (BETWEEN TP17 & TP18 ONLY).
 2. VALUE OF ITEM 2 TO BE DETERMINED AT NEXT HIGHER ASSEMBLY.
 3. STAMP ORIENTATION TRIANGLES ON CONNECTORS AS SHOWN WITH INDELIBLE RED INK.

CHK	CHANGE NO	REV
B	5414025-CX001	M. BROWN
C	5414025-CX003	M. ZARICH
D	5414025-CX005	M. BROWN
E	5414025-CX006A	M. BROWN
F	5414025-CX008	M. BROWN
H	5414025-CX009	M. ZARICH
J	5414025-CX010	M. BROWN
K	5414025-CX011	M. ZARICH
L	5414025-CX013	M. ZARICH

SEE NOTE 3
 3-1
 3-2
 SEE NOTE 2

ETCH REV. B	P.C. DESIGN DATA BASE REV. BL
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SIGNATURES	DATE	digital
DRN. C. J.	4/7/73	
CHK'D. M. BROWN	4/27/73	TITLE
ENG. M. ZARICH	3/27/73	
PROD. M. BROWN	3/27/73	SIZE
SHT. 1 OF 2	D	CODE
NEXT HIGHER ASSY. B-DD-5414025-0	UA	NUMBER
		REV
		L

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
1	D-MD-5014024-0-0	5014024-00	DRILL AND ETCH BRD	1	
2	EWS		RESISTOR, FINAL TEST, 1/4W, 1%	4	R115, R116, R118, R119
3		1000023-00	330.0 MMF 100V 5%200PPM MICA	4	C93, C106-C108
4		1000024-00	470.0 MMF 100V 5%200PPM MICA	1	C94
5		1000064-00	3.9MFD 10V 10% S.TANT	2	C76, C85
6		1000076-00	39 MFD 10V 10% S.TANT	3	C73, C86, C95
7		1001610-00	.01 MFD 50V +80-20% Z5U CER	74	C1-C6, C8-C39, C40-C45, C47-C49, C51-C53, C55-C68, C70, C71, C77, C79-C82, C84, C88, C104
8		1001776-00	1 MFD 35V 10% S.TANT	4	C74, C75, C92, C97
9		1004812-00	15 MFD 20V 10% S.TANT	1	C87
10		1005784-00	.01 MFD 100V 200V 10% MYL	1	C101
11		1010978-32	.047 MFD 50V 10% CER	1	C96
12		1013466-07	220.0 MMF 50V 5% CER	1	C91
13		1013466-08	680.0 MMF 50V 10% X7R CER	2	C89, C90
14		1013466-09	1000.0 MMF 50V 10% X7R CER	1	C83
15		1013466-10	3300.0 MMF 50V 5% CER	4	C98, C100, C103, C105
16		1013466-11	.22 MFD 50V +80-20% Z5U CER	2	C99, C102
17		1111577-00	1N 4454 TR= 4NS PIV= 50 S	16	D1, D7-D20, D22
18		1113953-00	1N 5523D VZ= 5.1 1%	1	D21
19		1114117-00	1N 4152 PIV=40 I=75	5	D2-D6
20		1209941-02	HEADER 100 40POS RT ANGLE	1	J12
21		1209941-03	HEADER RT ANGLE LEFT L	5	
22		1209941-04	HEADER RT ANGLE, RIGHT	5	
23		1209941-05	HEADER.100 10POS RT ANGLE	1	J11
24		1209941-06	HEADER.100 20POS RT ANGLE	3	J4-J6
25		1210385-01	PIN 1POS WIRE WRAP	10	TP17-TP26
26		1213922-02	HEADER 3POS	1	J14
27		1213922-04	HEADER 6POS	1	J2
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]						
MZ	5414025-CX014	H	[F]						
			[G]						
			[H]						
			[I]						
			[J]						
			[K]						
			[L]						
			[M]						
			[N]						

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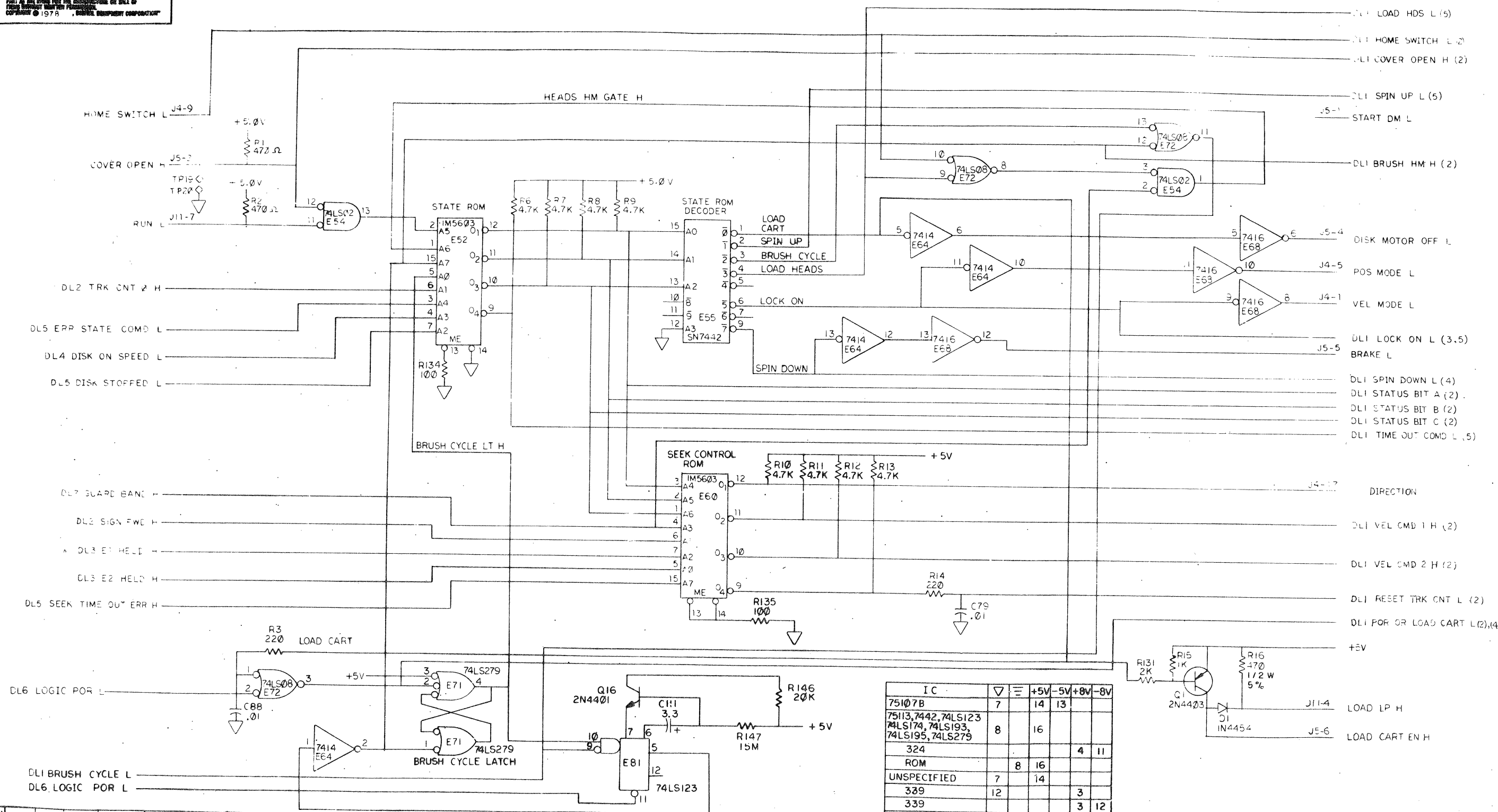
LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY	PER VARIATION	REFERENCE DESIGNATOR
				00		
29	29	1300271-00	220.0 .25 W 5.0 % CC	4		R3, R14, R41, R143
30	30	1300315-00	470.0 .50 W 5.0 % CC	3		R16, R73, R130
31	31	1300316-00	470.0 .25 W 5.0 % CC	4		R1, R2, R79, R142
32	32	1300365-00	1.0 K .25 W 5.0 % CC	15		R15, R39, R40, R42, R47, R52, R54, R56, R61, R72, R74, R101, R106, R129, R140, R144
33	33	1300411-00	2.0 K .25 W 1.0 % RN55D-F10	1	CONT	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	CONT	R70, R107
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	CONT	R59
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 11	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 CMPTR, 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, E75
					CONT
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	7	8	12	14	13	4	11
75107B							
75113, 7442, 74LS123							
74LS174, 74LS193, 74LS195, 74LS279							
324						4	11
ROM		8	16				
UNSPECIFIED	7		14				
339		12				3	
339						3	12
339		12				3	

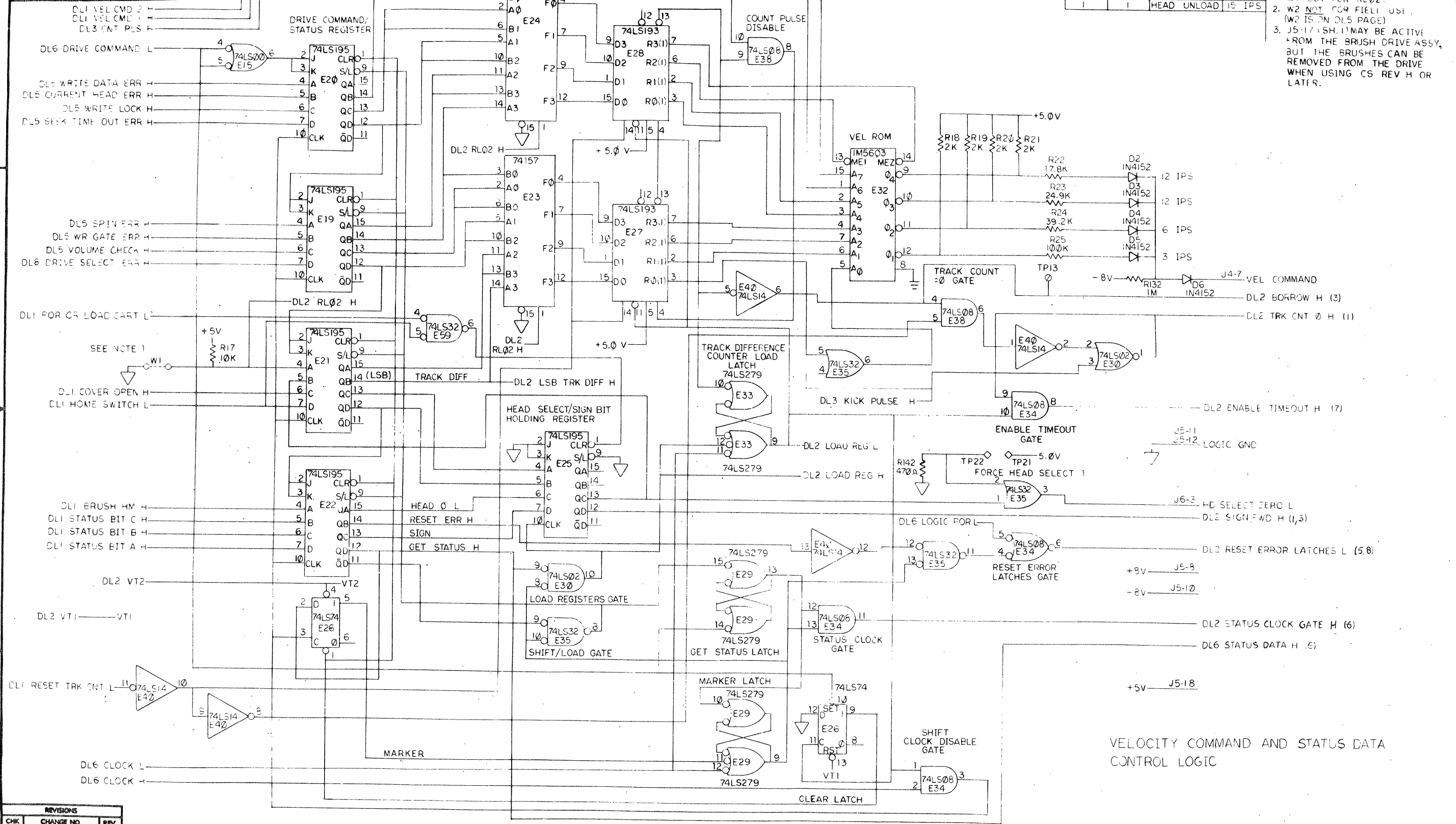
REV.	BY	DATE	DESCRIPTION
1	M. BROWN	5/14/75	INITIAL DESIGN
2	M. BROWN	5/14/75	REVISED FOR MIB
3	M. ZARICH	5/14/75	REVISED FOR MIB
4	M. BROWN	5/14/75	REVISED FOR MIB
5	M. BROWN	5/14/75	REVISED FOR MIB
6	M. ZARICH	5/14/75	REVISED FOR MIB
7	M. ZARICH	5/14/75	REVISED FOR MIB
8	M. BROWN	5/14/75	REVISED FOR MIB
9	M. ZARICH	5/14/75	REVISED FOR MIB
10	M. ZARICH	5/14/75	REVISED FOR MIB
11	M. ZARICH	5/14/75	REVISED FOR MIB
12	M. ZARICH	5/14/75	REVISED FOR MIB
13	M. ZARICH	5/14/75	REVISED FOR MIB
14	M. ZARICH	5/14/75	REVISED FOR MIB
15	M. ZARICH	5/14/75	REVISED FOR MIB
16	M. ZARICH	5/14/75	REVISED FOR MIB
17	M. ZARICH	5/14/75	REVISED FOR MIB
18	M. ZARICH	5/14/75	REVISED FOR MIB
19	M. ZARICH	5/14/75	REVISED FOR MIB
20	M. ZARICH	5/14/75	REVISED FOR MIB

DRN. 5/14/75	5/14/75	FIRST USED ON	Digital
CHK'D. 5/14/75	5/14/75	TITLE	DRIVE LOGIC (STATE CONTROL LOGIC) (DLI)
ENG. 5/14/75	5/14/75	PROJ. ENG.	
PROD.		NEXT HIGHER ASSY.	
B-DD-5414025-0	SIZE	CODE	NUMBER
SCALE	D	CS	5414025-0-1
SHEET 1 OF 8	DIST.		

CS 5414025-0-1			
CMD 2	CMD 1	MODE	VEL
0	0	OFF	0
0	1	GUARD BAND	3 IPS
1	0	HEAD LOAD	2 IPS
1	1	HEAD UNLOAD	15 IPS

- NOTES:
- W1 IN FOR RL01.
 - W1 OUT FOR RL02.
 - W2 NOT FOR FIELD USE (W2 IS ON DL5 PAGE)
 - J5-17 (SH.11) MAY BE ACTIVE FROM THE BRUSH DRIVE ASSY, BUT THE BRUSHES CAN BE REMOVED FROM THE DRIVE WHEN USING CS REV H OR LATER.

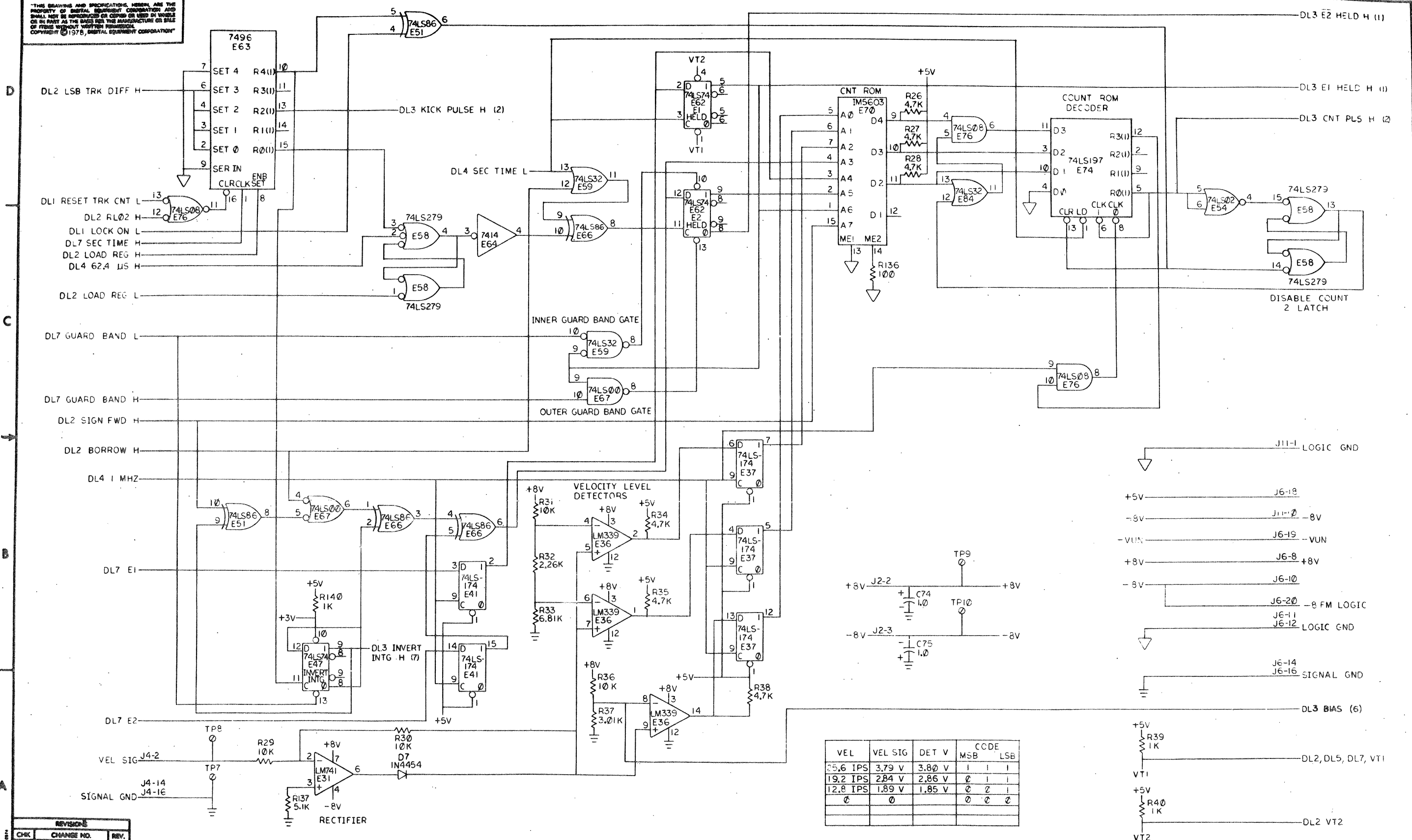
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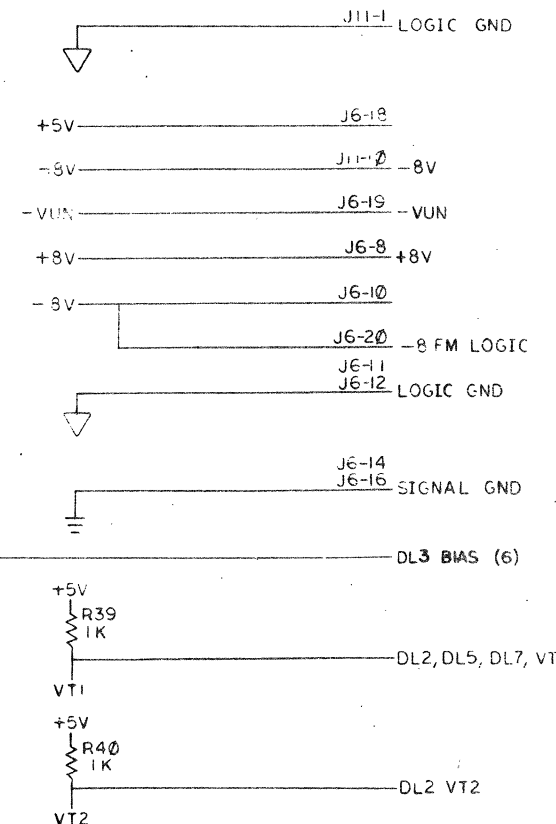
CHK	CHANGE NO.	REV.

TITLE	DRIVE LOGIC (DL2)	SIZE CODE	D CS 5414025-0-1	NUMBER	L	REV.	
SCALE		SHEET	2 OF 8	DIST.			

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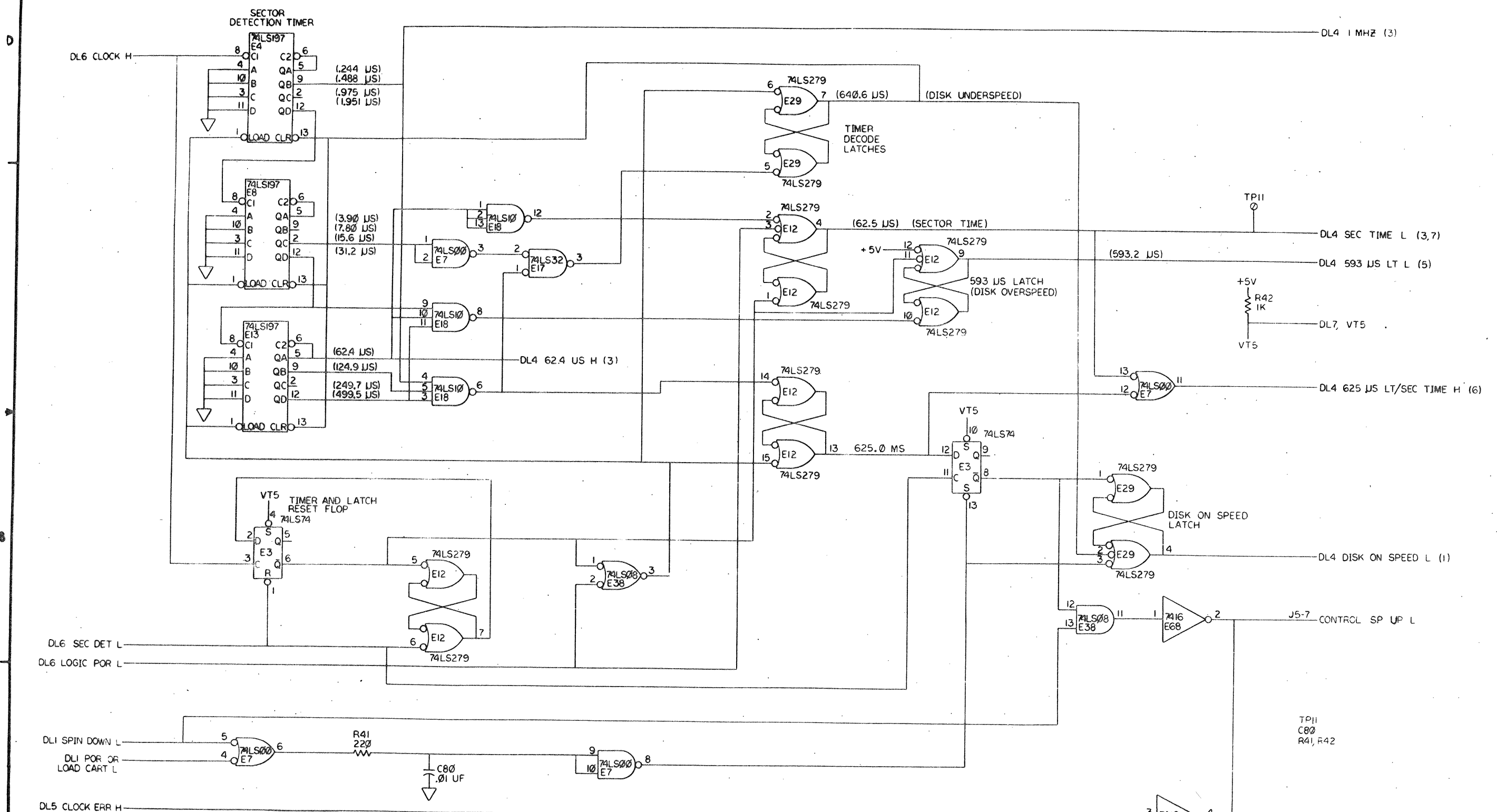


VEL	VEL SIG	DET V	CCDE	MSB	LSB
25.6 IPS	3.79 V	3.80 V	1	1	1
19.2 IPS	2.84 V	2.86 V	0	1	1
12.8 IPS	1.89 V	1.85 V	0	0	1
0	0	0	0	0	0



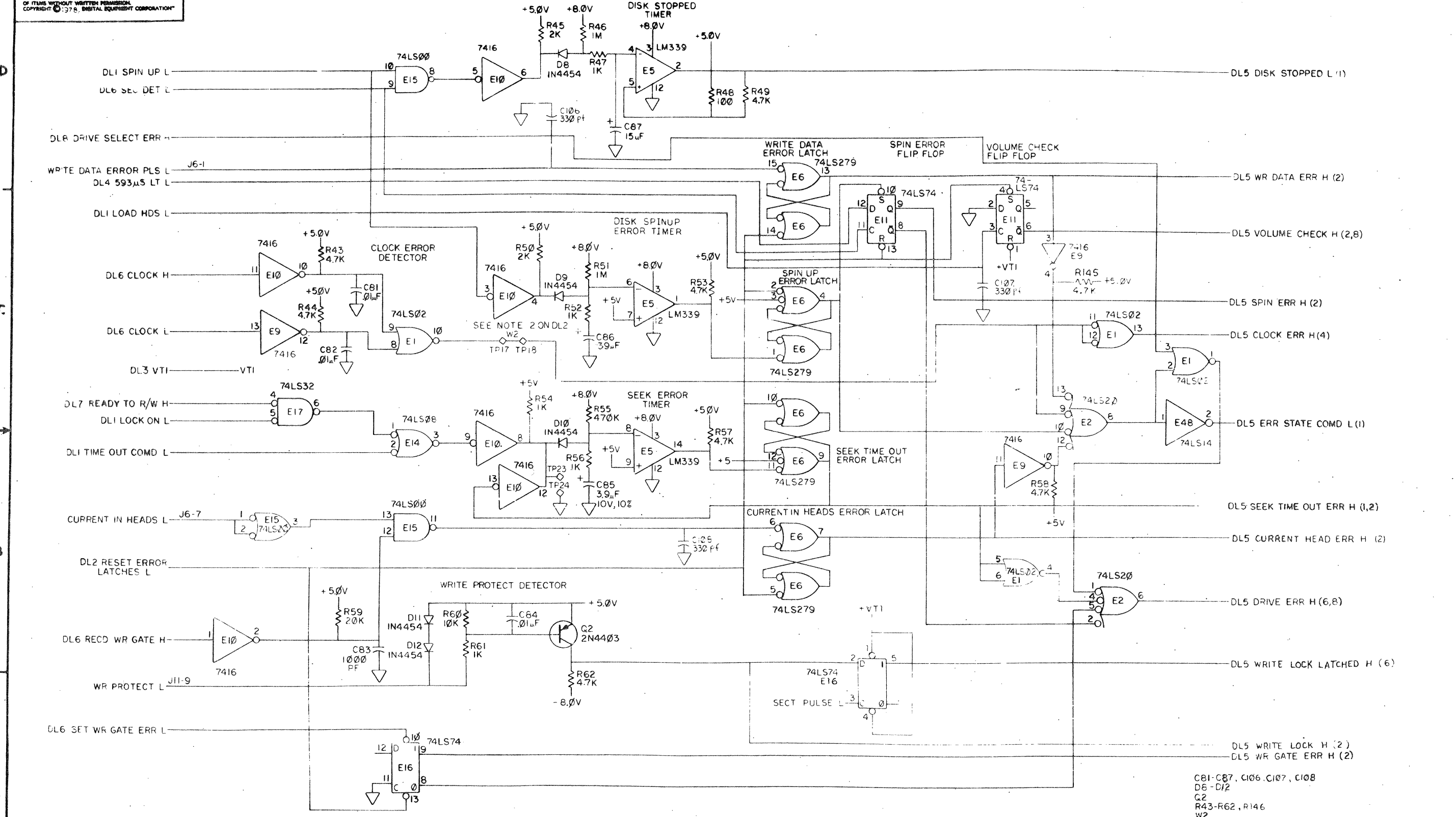
REV.	CHANGE NO.	REV.

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REVISIONS		
CHK	CHANGE NO.	REV.

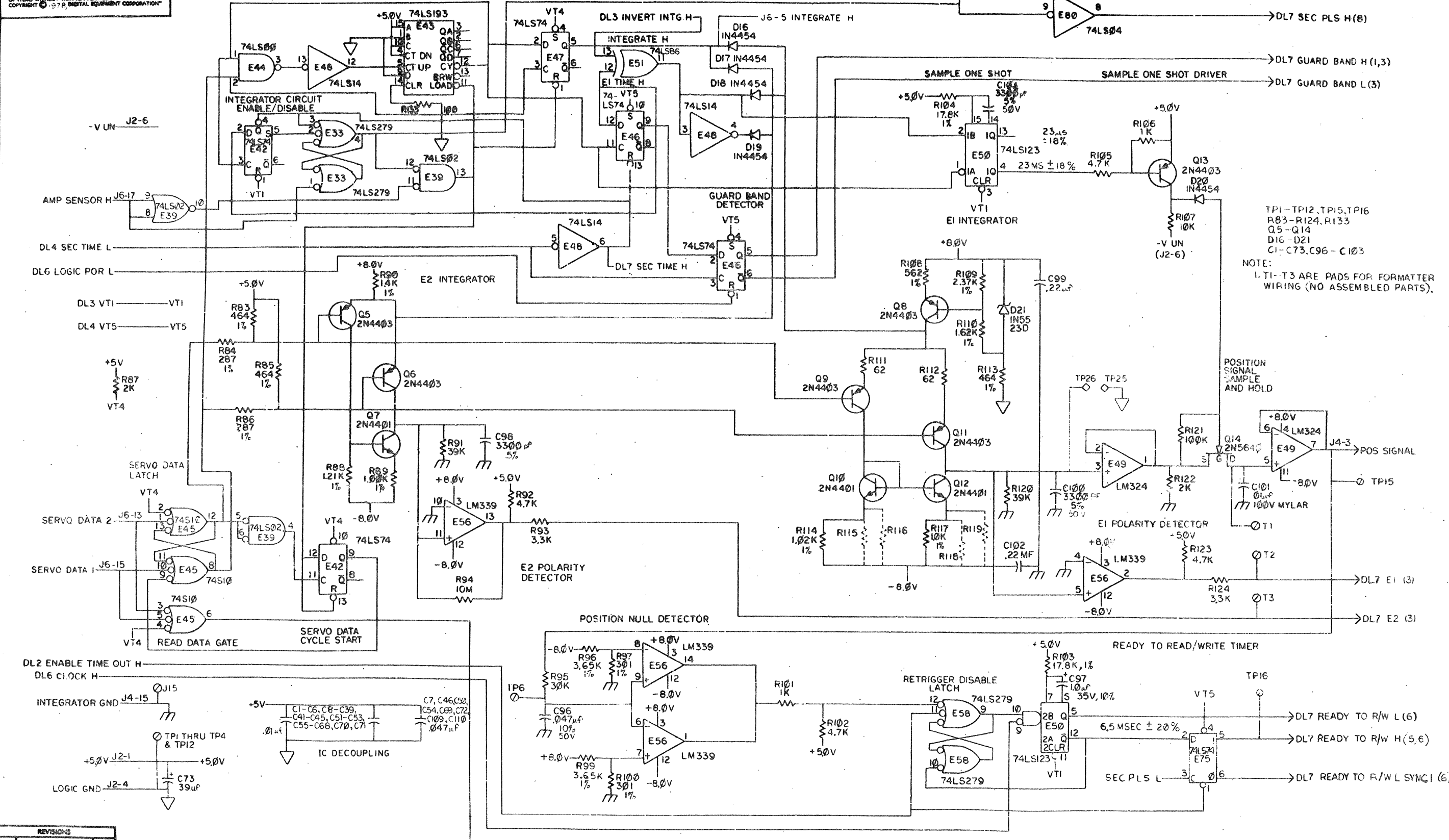
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C81-C87, C106, C107, C108
 D8-D12
 Q2
 R43-R62, R146
 W2
 TP17, TP18, TP23, TP24

REVISIONS		
CHK	CHANGE NO.	REV.

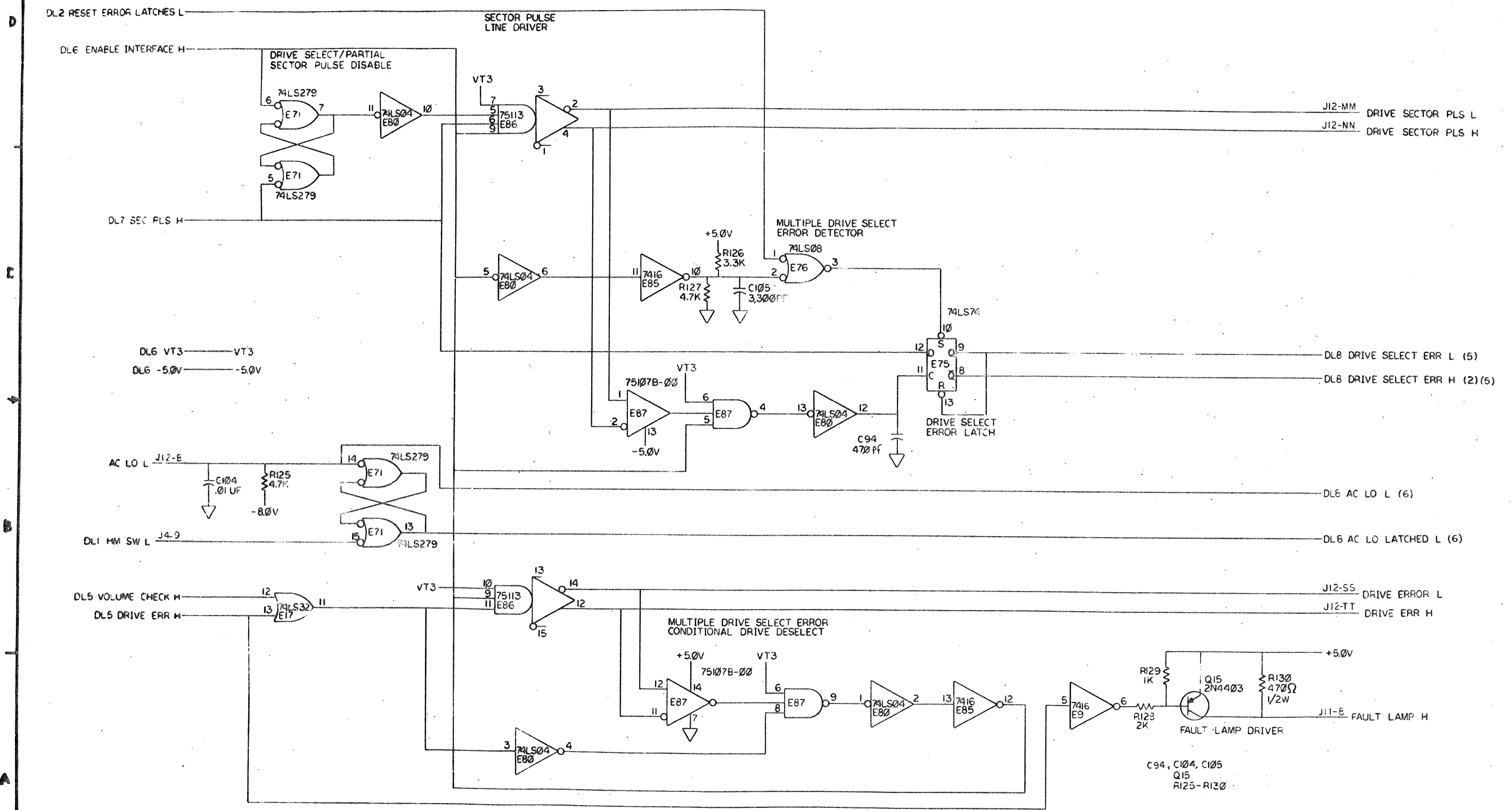
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NOTE:
 1. T1-T3 ARE PADS FOR FORMATTER WIRING (NO ASSEMBLED PARTS).

CHK	CHANGE NO.	REV.

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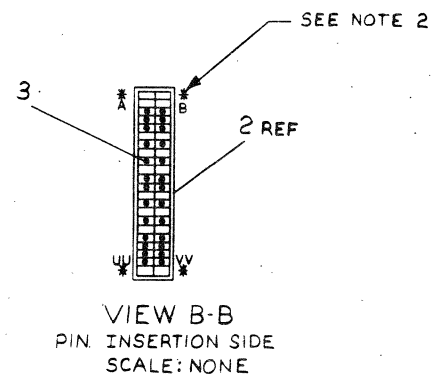
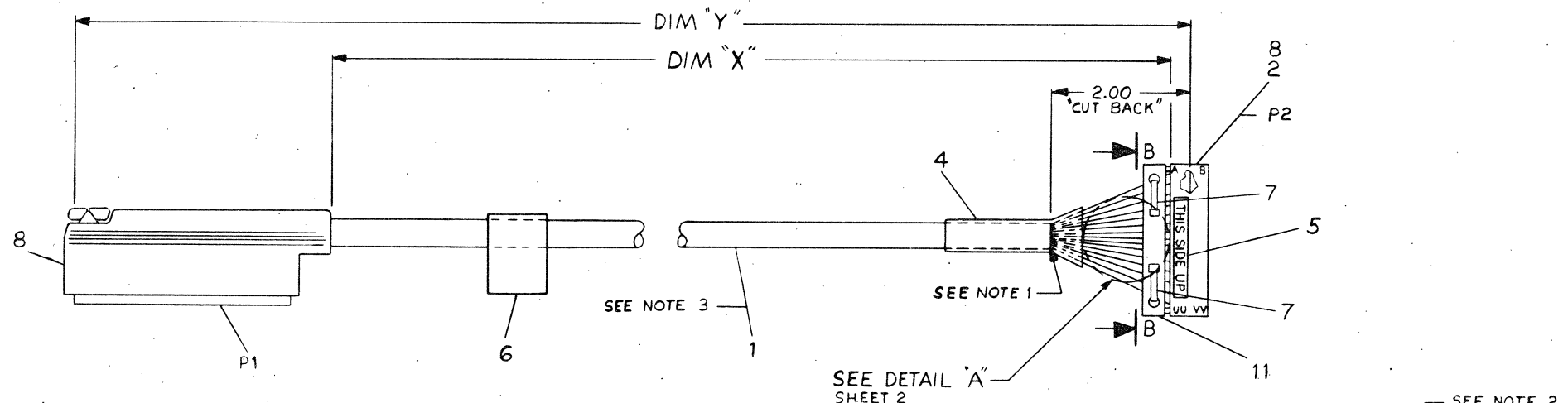


REVISIONS		
CR	CHANGE NO	REV.

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

- NOTES:
- CUT BACK ALL UNUSED WIRES
 - * DENOTES CAVITIES NOT BEING USED OR DESIGNATED BY LETTERS.
 - ITEM #1 IS TO BE USED TO FABRICATE 2 RLØ1/MNC CABLES (7016462-06).
 - REMOVE OUTER JACKET & MYLAR SHIELD BACK TO THIS POINT.
 - 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).



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

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
ANGLES	CLASS OF ACCURACY
40° 30'	
SURFACE QUALITY	(CHECK ONE)
	MEDIUM
	PREFERRED
QUANTITY & VARIATION	

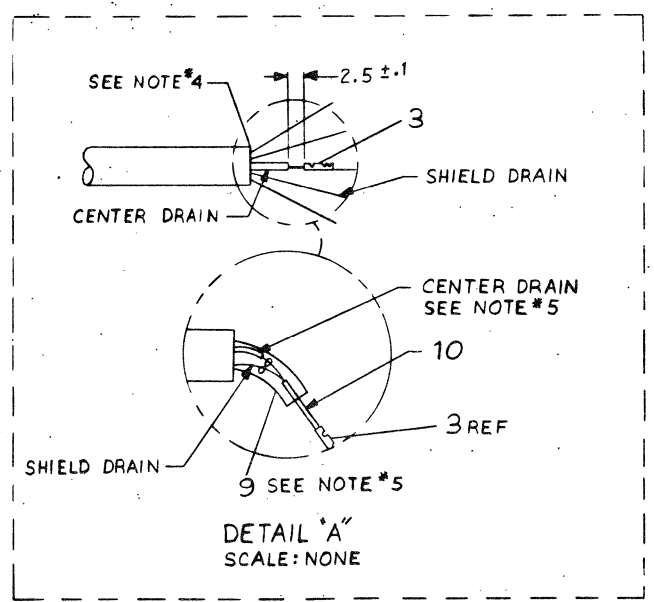
THIRD ANGLE PROJECTION	DRN: <i>[Signature]</i> 7-1007-78	FIRST USED ON	MNCII-J
REMOVE BURRS AND BREAK SHARP CORNERS	CHK'D: <i>[Signature]</i> 11 JAN 79	TITLE	CABLE, REWORK RLØ1/MNC
DO NOT SCALE DWG	PROJ. ENG: <i>[Signature]</i> 7-1007-78	SIZE	D IA
MATERIAL SEE PARTS LIST	PROD: <i>[Signature]</i> 7-1007-78	NUMBER	7016462-0-0
FINISH NONE	SCALE 1/1	REV.	B
	SHEET OF 2	DIST.	

REV.	CHANGE NO.	DESCRIPTION
A	1	7016462-MR001
B	1	7016462-MR002

DIA 7016462-0-0

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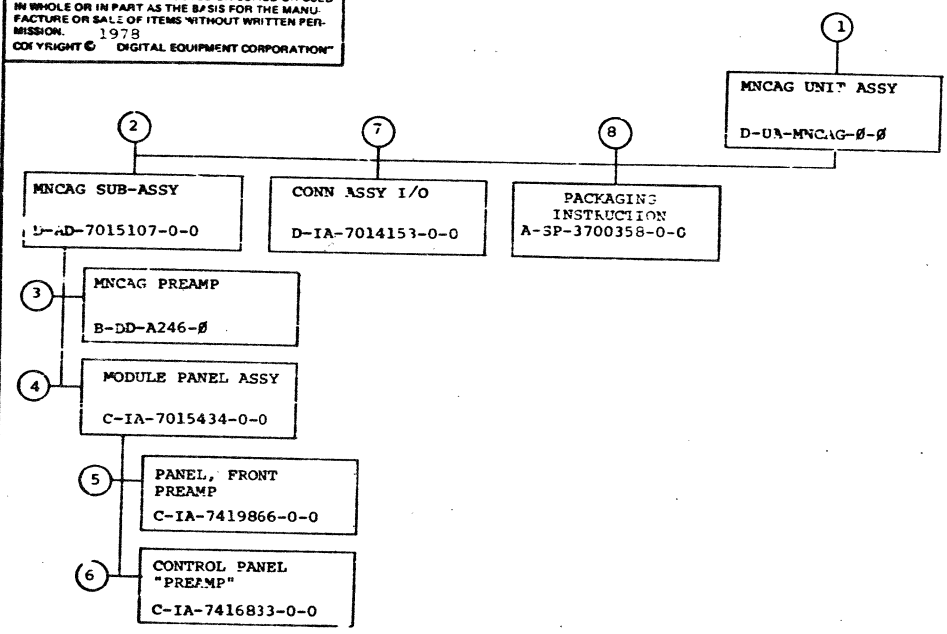
WIRE TABLE									
ITEM NO.	BASIC COLOR	TRACER COLOR	FROM			TO			REMARKS
			POINT	CONNECTION	WITH	POINT	CONNECTION	WITH	
1	RED	---	---	P1-3	---	---	P2-C	ITEM*3	TWP 1
	WHT	RED	---	P1-4	---	---	P2-D	↑	
	RED	---	---	P1-5	---	---	P2-E		TWP 2
	WHT	GRN	---	P1-6	---	---	P2-F		
	RED	---	---	P1-7	---	---	P2-H		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.

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REV A
 NUMBER MNCAG-β
 CODE DD
 SIZE 8

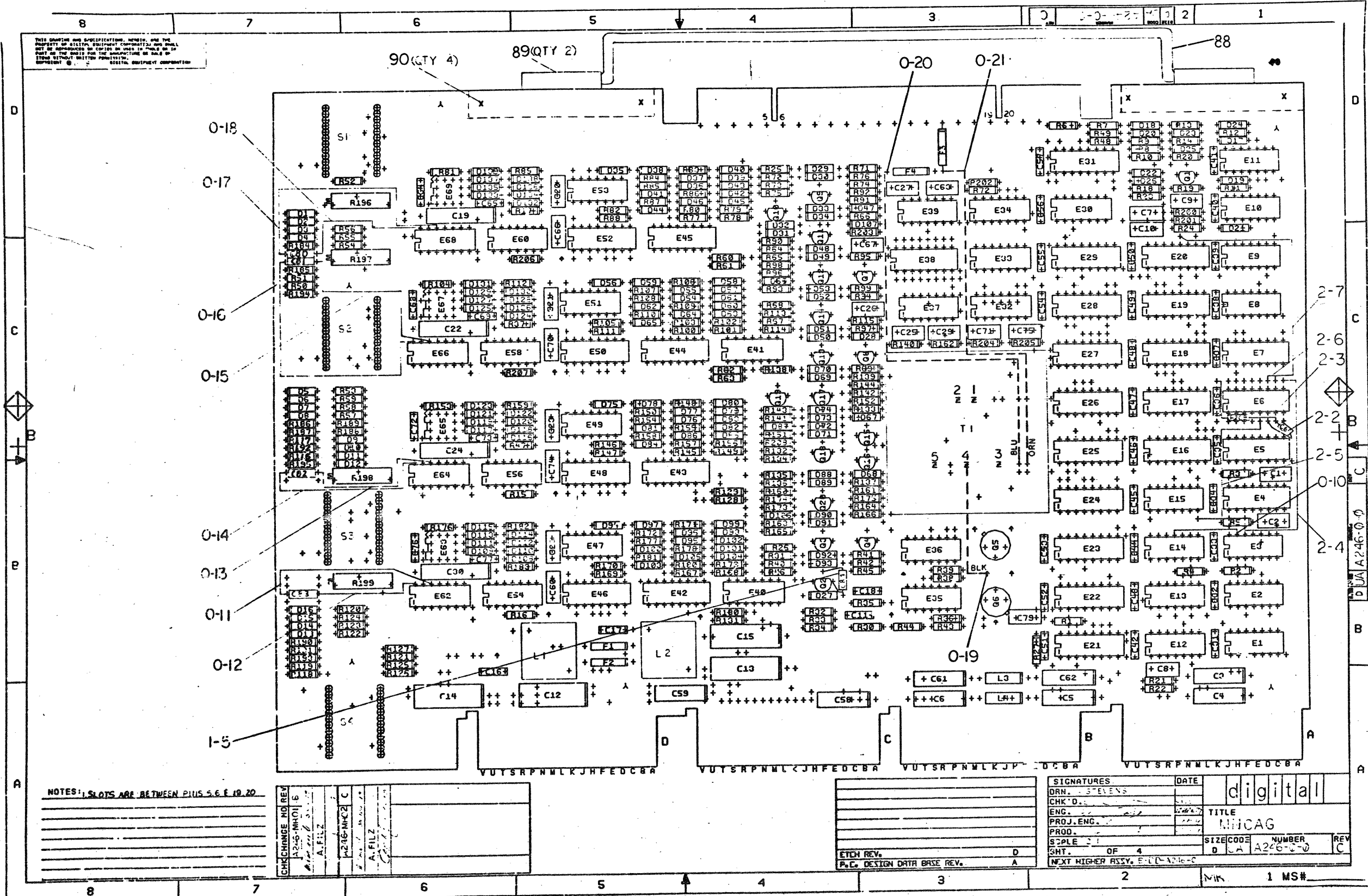


TITLE	MNCAG UNIT ASSY	SHEET 2 OF 3	SIZE CODE B DD	NUMBER MNCAG-β	REV A
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DRS 107

MR

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NOTES: 1. SLOTS ARE BETWEEN PLUS 5.6 & 19.20

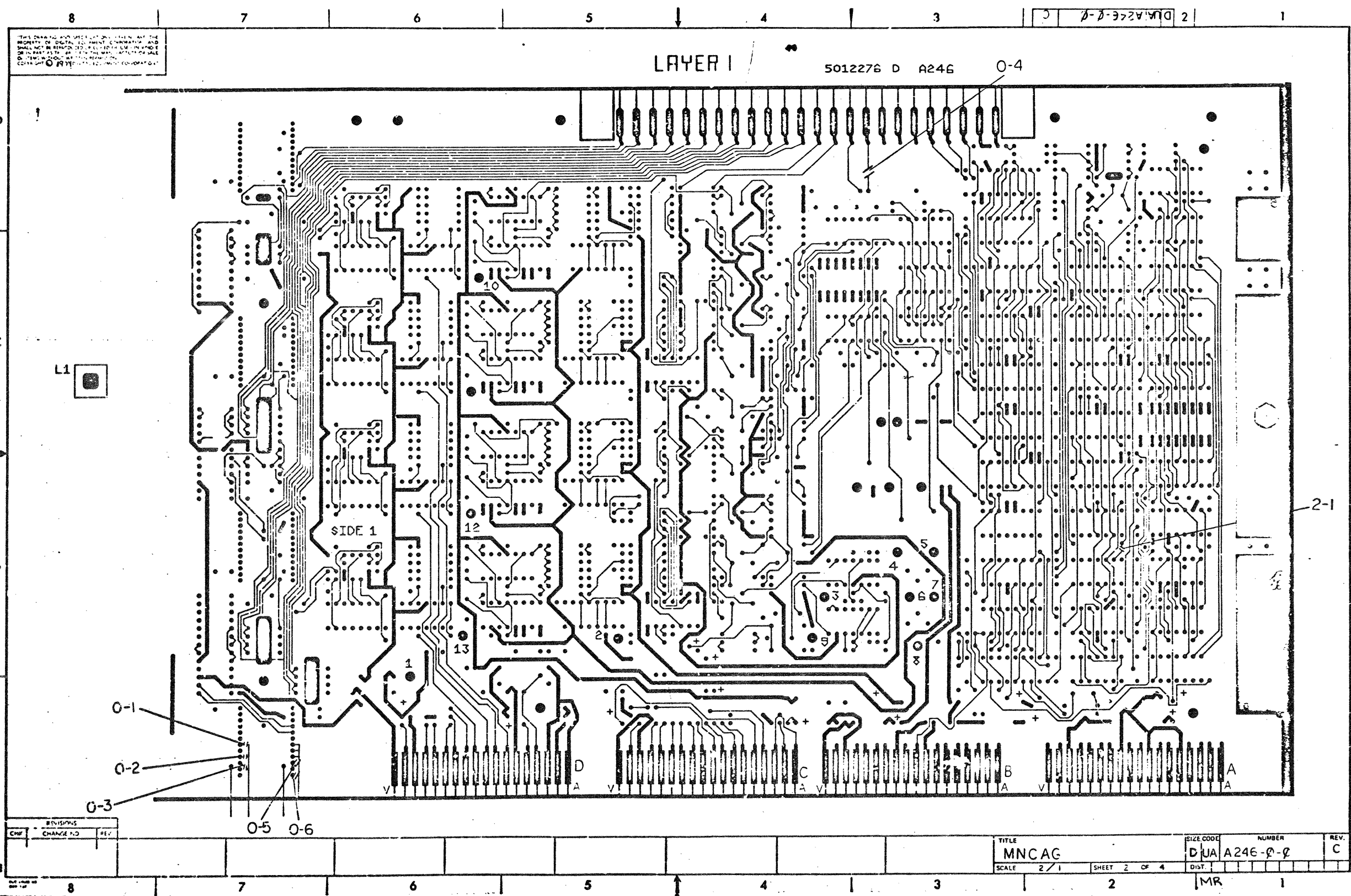
CHANGE NO	REV	DATE	BY	CHK'D
A245	MA01	6	A.FILZ	
M216	MC2	C	A.FILZ	
A.FILZ				

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

SIGNATURES		DATE
DRN.	STEVENS	
CHK'D.		
ENG.		
PROJ. ENG.		
PROD.		
SCALE	1	
SHT.	OF 4	
NEXT HIGHER ASSY. E-11-A246-C		

digital	
TITLE	
MICAG	
SIZE CODE	NUMBER
D CA	A246-C-0
REV	C

Mik 1 MS#



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REVISIONS		
CHG	CHANGE NO	REV

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

8 7 6 5 4 3 2 1

LAYER 1

5012276 D A246

0-4

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SIDE 1

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13

1

2

3

4

5

6

7

0-1

0-2

0-3

0-5

0-6

2-1

D

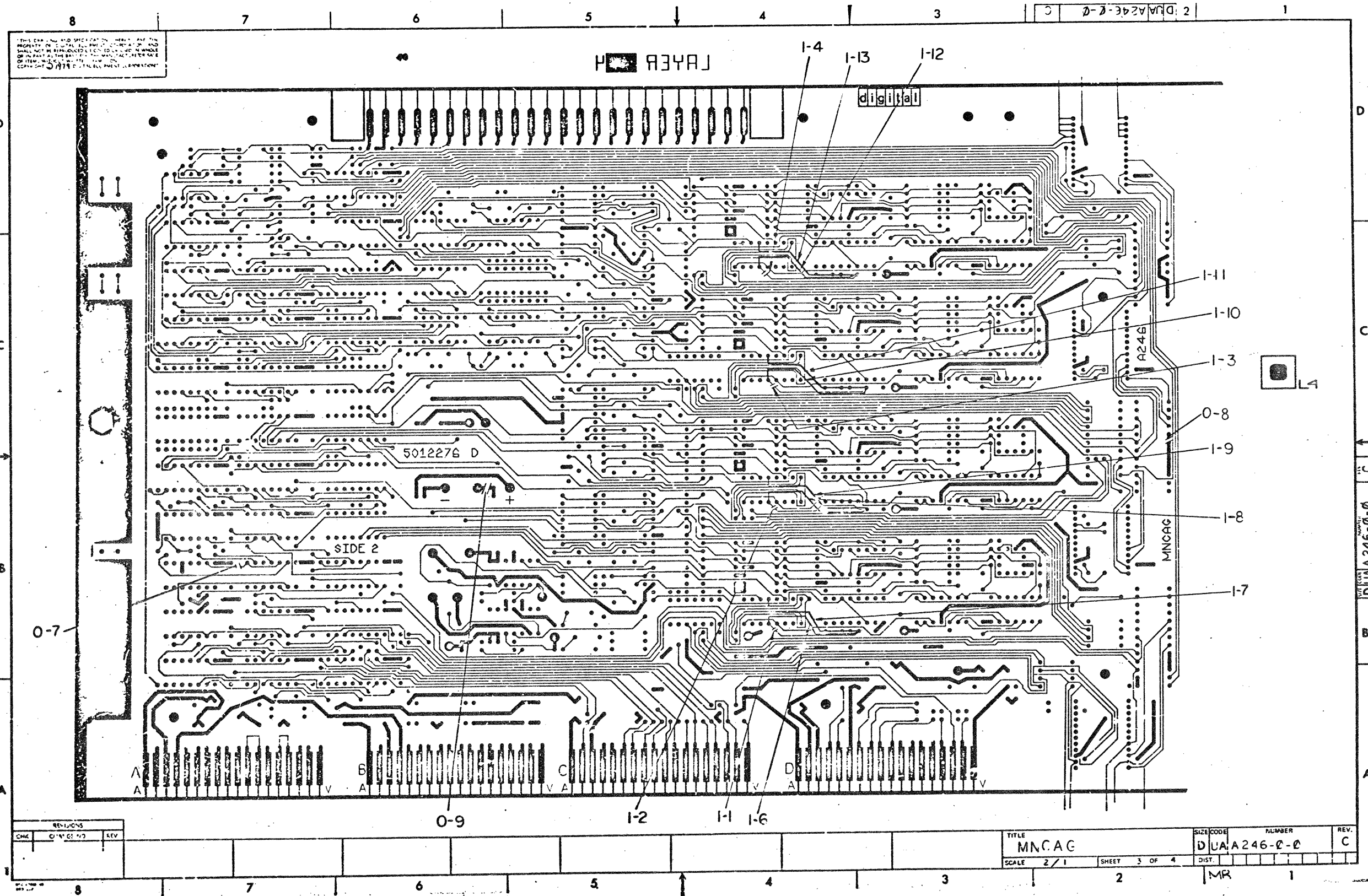
C

B

A

DUA246-0-0-C

8 7 6 5 4 3 2 1



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LAYER

DUA A246-0-0 2

REVISIONS		
CHK	QTY	REV

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

0 0-0-9724 0 2

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REWORK INSTRUCTIONS FIRST RELEASE

ETCH CUTS, SIDE 1, AS SHOWN

- 0-1 AT S4 (7)
- 0-2 AT S4 (9)
- 0-3 AT S4 (12)
- 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(4)
- 0-8 AT LEFT SIDE OF F18C
- 0-9 AT T1(4)

WIRE ADDS, SIDE 1, AS SHOWN

- 0-10 FROM E3(18) TO E1C(1)
- 0-11 FROM E2(12) TO D13
- 0-12 FROM E2(14) TO L83
- 0-13 FROM E4(17) TO 182
- 0-14 FROM E4(14) TO 282
- 0-15 FROM E6(12) TO C81
- 0-16 FROM E6(14) TO C81
- 0-17 FROM E8(12) TO C88
- 0-18 FROM E4(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 E45-8 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 C85 (100C 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	+	SHEET	4 OF 4	DIST.			

DUA A246-0-0

MR

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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)	ASSEMBLY NUMBER:			FILE NAME: EDIT #
			(G)	D=UA=A246-0=0			Z0445C.PLS 20
			(H)				
			(I)				
			(J)				
			(K)				
			(L)				
			(M)				
			(N)				

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PARTS LIST

SHEET A2 OF A3

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
23	23	1300271-00	220.0 .25 W 5.0 % CC	4	R17,R37,R47,R103
24	24	1300197-00	33.0 .25 W 5.0 % CC	5	R19,R88,R111,R147,R169
25	25	1303313-00	12.1 K 1/4W 1% RN55D-F 100PPM	1	R21
26	26	1305421-00	35.7 K 1/4W 1% RN55D-F 100PPM	2	R24,R201
27	27	1303207-00	100 K 1/4W 1% RN55C-B 50PPM	1	R25
28	28	1312931-00	6.20 K .25 W 5.0 % CC	1	R26
29	29	1303311-00	46.4 K 1/4W 1% RN55D-F 100PPM	1	R27
30	30	1303044-00	100 K 1/4W 1% RN55D-F 100PPM	1	R30
31	31	1305515-00	64 K 1/4W 1% RN55E-B 25PPM	6	R31,R32,R65,R68,R134,R136
32	32	1305514-00	32 K 1/4W 1% RN55E-B 25PPM	1	R33
33	33	1305351-00	4 K 1/4W 1% RN55C-B 50PPM	1	R34
34	34	1305253-00	7.15 K 1/4W 1% RN55D-F 100PPM	1	R35
35	35	1305431-00	10 K 1/4W 1% RN55E-B 25PPM	1	R36
36	36	1304835-00	3.65 K 1/4W 1% RN55D-F 100PPM	1	R38
37	37	1304858-00	348 K 1/4W 1% RN55D-F 100PPM	1	R39
38	38	1300479-00	10.0 K .25 W 5.0 % CC	44	R40=R42,R45,R64,R66,R67,R69-R71, CONT R73=R76,R85,R86,R93,R95-R99, CONT R108,R109,R132,R133,R135, CONT R137=R139,R141-R144,R154,R155, CONT R160,R161,R163-R166,R177,R178
39	39	1312987-00	10.5 K 1/4W 1% RN55D-1052F	1	R43
40	40	1305114-00	3.48 K 1/4W 1% RN55D-F 100PPM	1	R44
41	41	1302389-00	4.30 K .25 W 5.0 % CC	1	R46
42	42	1310891-00	1.0 K .25 W 1.0 % FUSE	16	R52=R59,R120=R127
43	43	1300229-00	100.0 K .25 W 5.0 % CC	8	R60=R63,R128=R131
44	44	1301475-00	1.10 K .25 W 5.0 % CC	8	R72,R94,R140,R162,R202=R205
45	45	1313349-00	33.0 K .25 W 5.0 % CC	16	R77=R80,R100=R103,R145,R149, CONT R156,R157,R167,R168,R179,R180
46	46	1309595-00	1.0 M .25 W 5.0 % CC	4	R81,R104,R153,R176
47	47	1300496-00	15.0 K .25 W 5.0 % CC	4	R82,R105,R146,R170
48	48	1301427-00	7.50 K .25 W 5.0 % CC	4	R83,R106,R148,R171
49	49	1300447-00	4.70 K .25 W 5.0 % CC	4	R89,R112,R159,R182
50	50	1301809-00	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	1303219-00	82.0 K .25 W 5.0 % CC	4	R92,R115,R152,R175
53	53	1309143-12	25 K 3/4W 1% POT 100PPM	4	R196=R199
54	54	1503409-01	DEC65346 PNP 310Mw SI 40 90 P	1	Q1
55	55	1509142-00	DEC4250 PNP 200Mw SI 40250	5	Q2,Q7,Q8,Q15,Q16
56	56	1509587-00	SE 4020 MPN 200Mw SI 60120 M	12	Q3,Q4,Q9-Q14,Q17-Q20
57	57	1501742-00	DEC2904 PNP 600Mw SI 40 40 P	1	Q5
58	58	1501681-00	DEC2219 NPN 3W SI 30100	1	Q6
59	59	1610963-00	400 UH 900MA,.30HMS	2	L1,L2
60	60	1602723-12	270 UH 5% 260MA	2	L3,L4
61	61	1916393-00	PS 4210 DC-DC CONVERTER,12V,	1	T1
62	62	1909004-00	DEC 7402 NOR GATE=QUAD 2IN	1	E1
63	63	1911521-00	DEC 7432 OR GATE=QUAD 2IN, PO	1	E2
64	64	1905547-00	DEC 7474 FF=D DUAL,EDGE TRIGG	2	E3,E13
65	65	1910436-00	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-DBP	C

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PARTS LIST

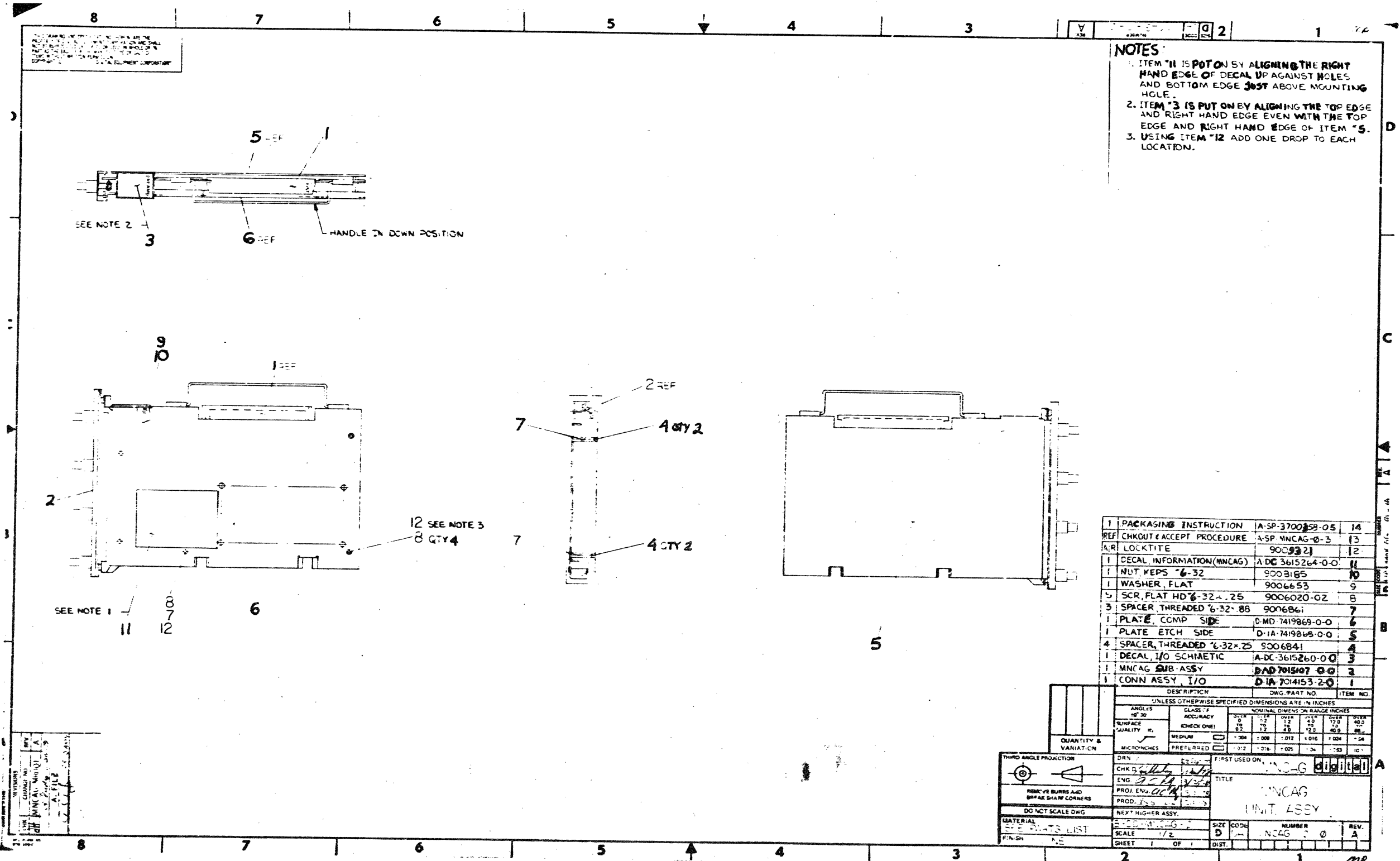
SHEET A3 OF A3

MR

LINE ITEM	DOCUMENT NUMBER	PART NUMBER	DESCRIPTION	QTY PER VARIATION	REFERENCE DESIGNATOR
				00	
66	66	1910656-00	74155 DECODER=2 OF 4(DUAL)	2	E5,E7
67	67	1910837-00	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	L874 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	1912854-00	L8221 ONE SHOT=DUAL,SCHMIT	2	E6,E20
76	76	1910652-00	74174 FF=D HEX	1	E22
77	77	1911927-00	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	1909829-00	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	1914571-00	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,E56,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	7420191-00	HANDLE	1	
89	89	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	910574-55	WIRE(WRAP)30AWG UL1423	A/R	
93	93	910777-33	WIRE(WRAP)22A+G,IPVC UL1429 OR	A/R	
94	94	910777-56	WIRE(WRAP)22AWG,IPVC UL1429 BL	A/R	
95	95	910777-00	WIRE(WRAP)22AWG,IPVC UL1429	A/R	
96	96	9006735-00	EYELET, FUNNEL FLANGE, .059 OD X	13	
97	97	1002427-00	15.0 MMF 100V 3%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 UL	A/R	

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

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NOTES:
 1. ITEM "11" IS PUT ON BY ALIGNING THE RIGHT HAND EDGE OF DECAL UP AGAINST HOLES AND BOTTOM EDGE JUST ABOVE MOUNTING HOLE.
 2. 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".
 3. USING ITEM "12" ADD ONE DROP TO EACH LOCATION.

1	PACKAGING INSTRUCTION	A-SP-3700-58-05	14
REF	CHKOUT & ACCEPT PROCEDURE	A-SP-MNCAG-0-3	13
A/R	LOCKTITE	9009921	12
1	DECAL INFORMATION(MNCAG)	A-DC-3615264-0-0	11
1	NUT KEPS #6-32	9003185	10
1	WASHER, FLAT	9006653	9
4	SCR, FLAT HD #6-32x.25	9006020-02	8
3	SPACER, THREADED #6-32x.88	9006861	7
1	PLATE, COMP SIDE	D-MD-7419869-0-0	6
1	PLATE, ETCH SIDE	D-1A-7419869-0-0	5
4	SPACER, THREADED #6-32x.25	9006841	4
1	DECAL, I/O SCHEMATIC	A-DC-3615260-0-0	3
1	MNCAG SUB ASSY	DAD7015107-0-0	2
1	CONN ASSY, I/O	D-1A-7014153-2-0	1

QUANTITY & VARIATION		DESCRIPTION		DWG. PART NO.	ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES					
ANGLES	CLASS. F	NOMINAL DIMENS. IN RANGE INCHES			
90° 30'	ACC-RADY	0	12	48	120
SURFACE (CHECK ONE)		0.005	0.010	0.015	0.020
QUALITY #		0.005	0.010	0.015	0.020
MICRONCHES		0.005	0.010	0.015	0.020
PREFERRED		0.005	0.010	0.015	0.020
THIRD ANGLE PROJECTION		FIRST USED ON: MNCAG digital			
DRY	CHKD. <i>[Signature]</i>	TITLE: MNCAG UNIT ASSY			
REMOVE BURRS AND BREAK SHARP CORNERS	ENG. <i>[Signature]</i>	SCALE: 1/2			
DO NOT SCALE DWG	PROJ. ENG. <i>[Signature]</i>	SHEET 1 OF 1			
MATERIALS LIST	PROD. <i>[Signature]</i>	REV. A			

REVISIONS
 CHANGE NO. 1
 MNCAG UNIT ASSY
 A
 A FILE

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		DATE 6-15-79				
ENGINEERING SPECIFICATION						
TITLE MNCAG INSTALLATION, ACCEPTANCE PROCEDURE						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE			0-11-79	OCF	7/1/79

ENG <i>App. S. 5-15-79</i>	APPD. <i>OCF</i>	DATE <i>7/1/79</i>	REV <i>A</i>
DEC FORM NO EN-1082-14-1374-1(81)	SIZE CODE <i>A</i>	SP <i>1</i>	NUMBER <i>1</i>
DNA 108	SHEET <i>1</i> OF <i>1</i>		

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE			
1.0 GENERAL	This document describes the procedure for the installation and field acceptance of the MNCAG (pre-amplifier) option for the MNC-11 system. This procedure will be used for in-house FACT, field add-on and new system installation, and periodic verification testing.		
1.1 Scope	<p>1.1.1 Scope</p> <p>This document describes the procedure for the installation and field acceptance of the MNCAG (pre-amplifier) option for the MNC-11 system. This procedure will be used for in-house FACT, field add-on and new system installation, and periodic verification testing.</p>		
1.2 EQUIPMENT	<p>1.2.1 EQUIPMENT</p> <p>MNC-11 MNCAG-TA 7014153-2-0</p> <p>Reference MNCAD MNCAM</p> <p>1.2.2 DOCUMENTATION</p> <p>MD-11-CV/MNA * D-CS-A246-0-1 AA-D572A-7C AA-SP-MNCAD-0-4</p>		
1.3 DOCUMENTATION	<p>1.3.1 DOCUMENTATION</p> <p>MNCAD Diagnostic Program Circuit Schematics Manual-"Working with MNC Devices" MNCAD Installation/Acceptance Procedure</p>		
* LATEST REV. LEVEL			
SIZE CODE <i>A</i>		NUMBER <i>1</i>	
SP <i>1</i>		SHEET <i>2</i> OF <i>1</i>	
DEC FORM NO EN-1082-14-1374-1(81)			
DNA 108			

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE			
1.4 PROCEDURE	<pre> graph TD A[INSTALL OPTION] --> B{ } B -- NO --> C[MOUNT I/O CONNECTOR] B -- YES --> D[MOUNT TEST MODULE] C --> E[POWER UP] D --> E E --> F[LOAD & START DIAGNOSTIC] F --> G{ } G -- NO --> H[TYPE "M"] G -- YES --> I[TYPE "N"] H --> J[TEST] I --> J J --> K{ } K -- PASS --> L[ACCEPT] K -- NO --> M[REJECT] </pre>		
*TEST MODULE AVAILABLE			
SIZE CODE <i>A</i>		NUMBER <i>1</i>	
SP <i>1</i>		SHEET <i>3</i> OF <i>1</i>	
DEC FORM NO EN-1082-14-1374-1(81)			
DNA 108			

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE			
2.0 INSTALLATION	<p>2.0.1 LOCATION</p> <p>Only one MNCAG may be plugged into the slot immediately to the left of the MNCAG (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.</p> <p>With power off, insert the MNCAG(s) into the required slot(s) for the selected channels.</p>		
2.2 TEST MODULE	<p>2.2.1 TEST MODULE</p> <p>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 not 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.</p>		
2.3 POWER UP	<p>2.3.1 POWER UP</p> <p>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.</p>		
SIZE CODE <i>A</i>		NUMBER <i>1</i>	
SP <i>1</i>		SHEET <i>4</i> OF <i>1</i>	
DEC FORM NO EN-1082-14-1374-1(81)			
DNA 108			

ENGINEERING SPECIFICATION

TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE

CONTINUATION SHEET

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 WFAROUND 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-0088-16437(141)
ORA 100

MK SHEET 5 OF 7

ENGINEERING SPECIFICATION

TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE

CONTINUATION SHEET

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 "P" and proceed as directed. Repeat these tests for each MNCAG channel.

3.8 LOOP TESTS

Enter test character "P" 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 "P" 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 VPS5 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-0088-16437(141)
ORA 100

MK SHEET 6 OF 7

ENGINEERING SPECIFICATION

TITLE MNCAG INSTALLATION/ACCEPTANCE PROCEDURE

CONTINUATION SHEET

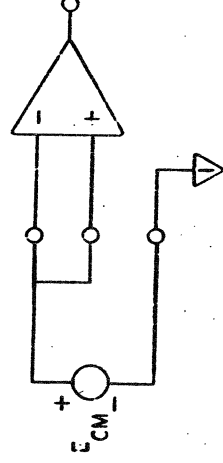


FIGURE 3-1: COMMON MODE TEST

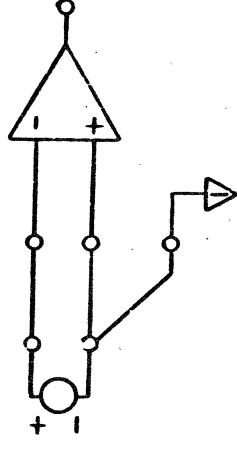
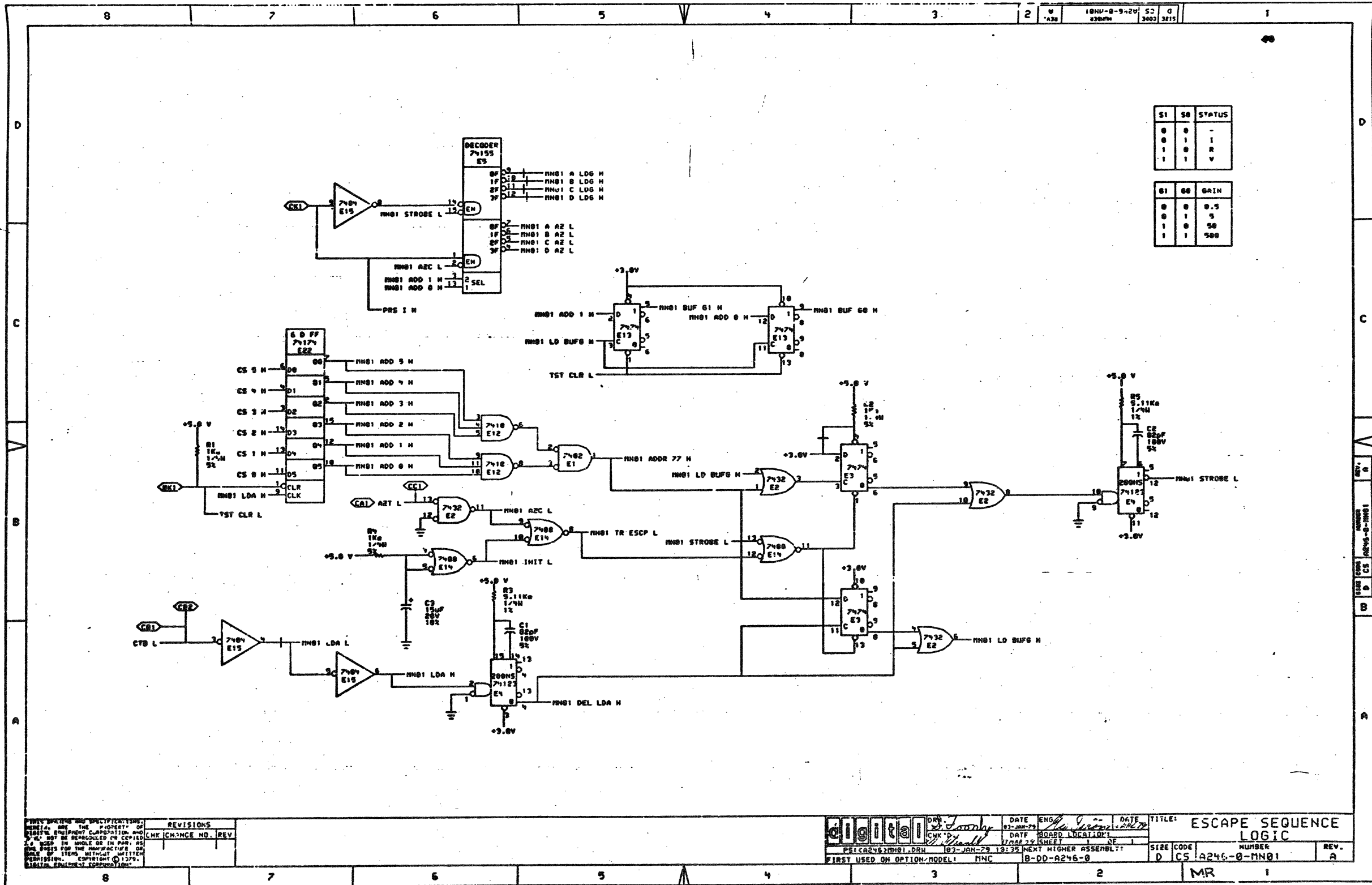


FIGURE 3-2: ACCURACY TEST

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

DEC FORM NO EN-0088-16437(141)
ORA 100

MK SHEET 7 OF 7



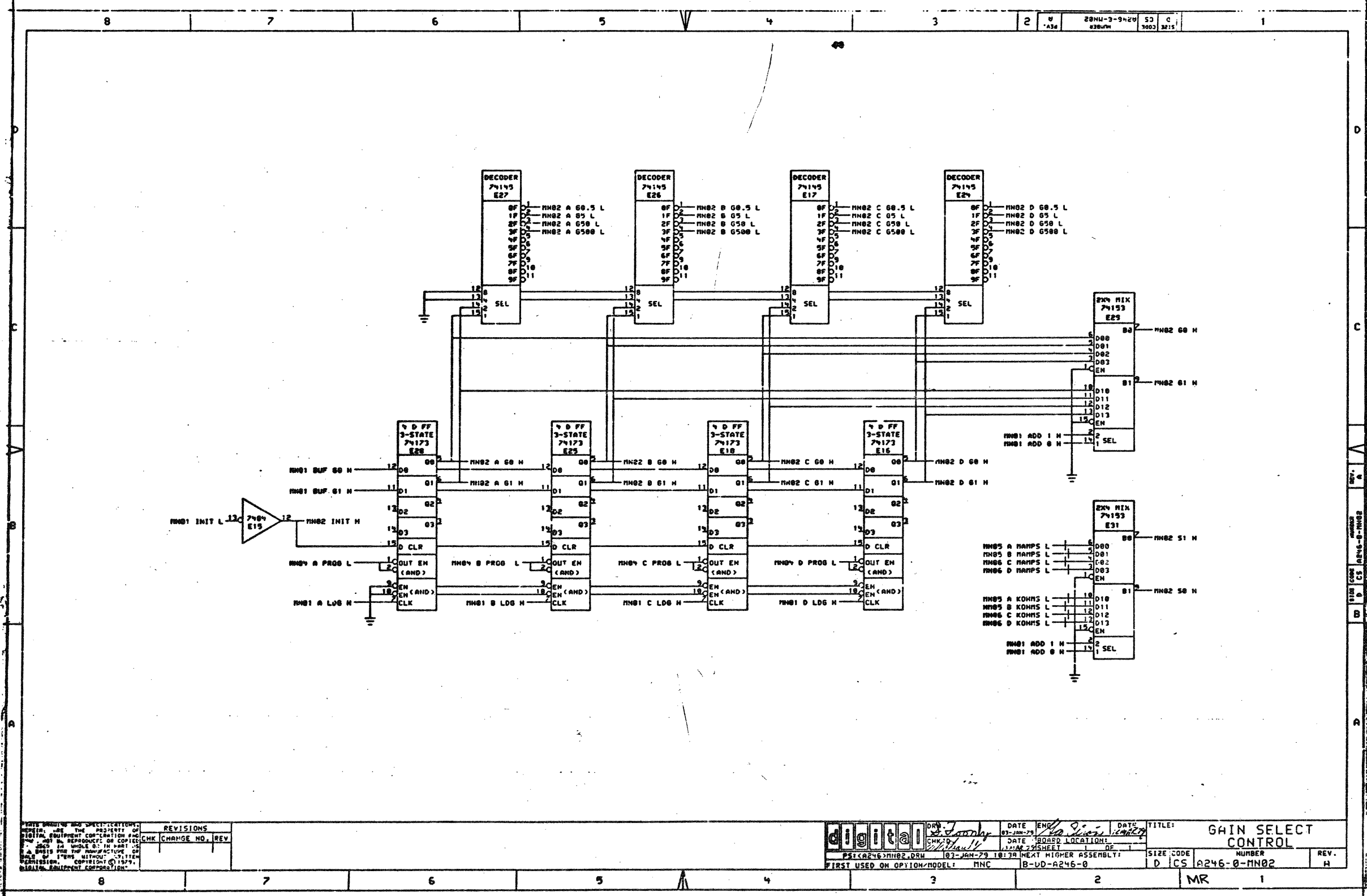
S1	S0	STATUS
0	0	-
0	1	1
1	0	2
1	1	V

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.

DRW: <i>J. Smith</i>	DATE: 03-JAN-79	ENG: <i>J. Smith</i>	DATE: <i>03-01-79</i>	TITLE: ESCAPE SEQUENCE LOGIC
CHK: <i>J. Smith</i>	DATE: <i>03-01-79</i>	BOARD LOCATION: <i>1</i>	SHEET: <i>1</i>	REV: <i>A</i>
PRICED BY: <i>J. Smith</i>	10-JAN-79 10:35	NEXT HIGHER ASSEMBLY: <i>MNC</i>	SIZE CODE: <i>D</i>	NUMBER: <i>CS A246-Q-MN01</i>
FIRST USED ON OPTION: <i>MNC</i>	MODEL: <i>B-DD-A246-Q</i>			

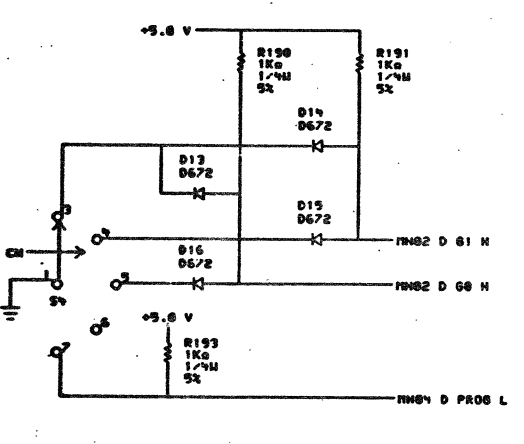
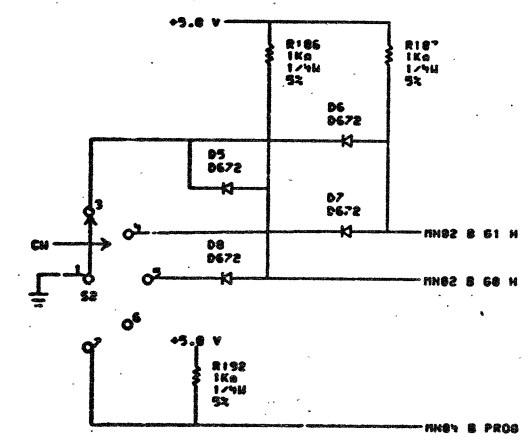
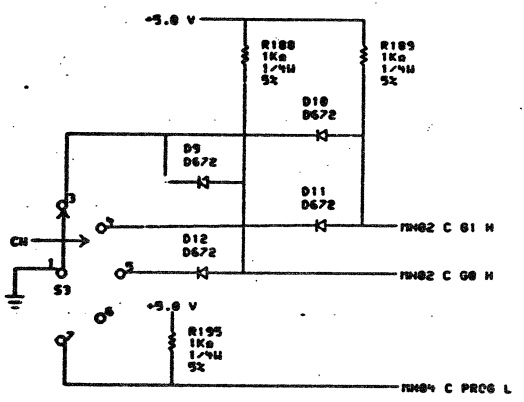
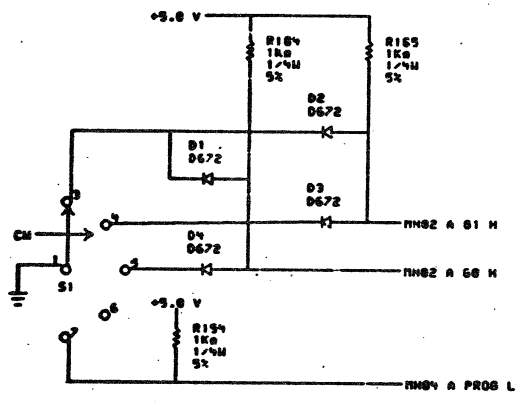


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REVISIONS	
CHK	CHANGE NO. REV

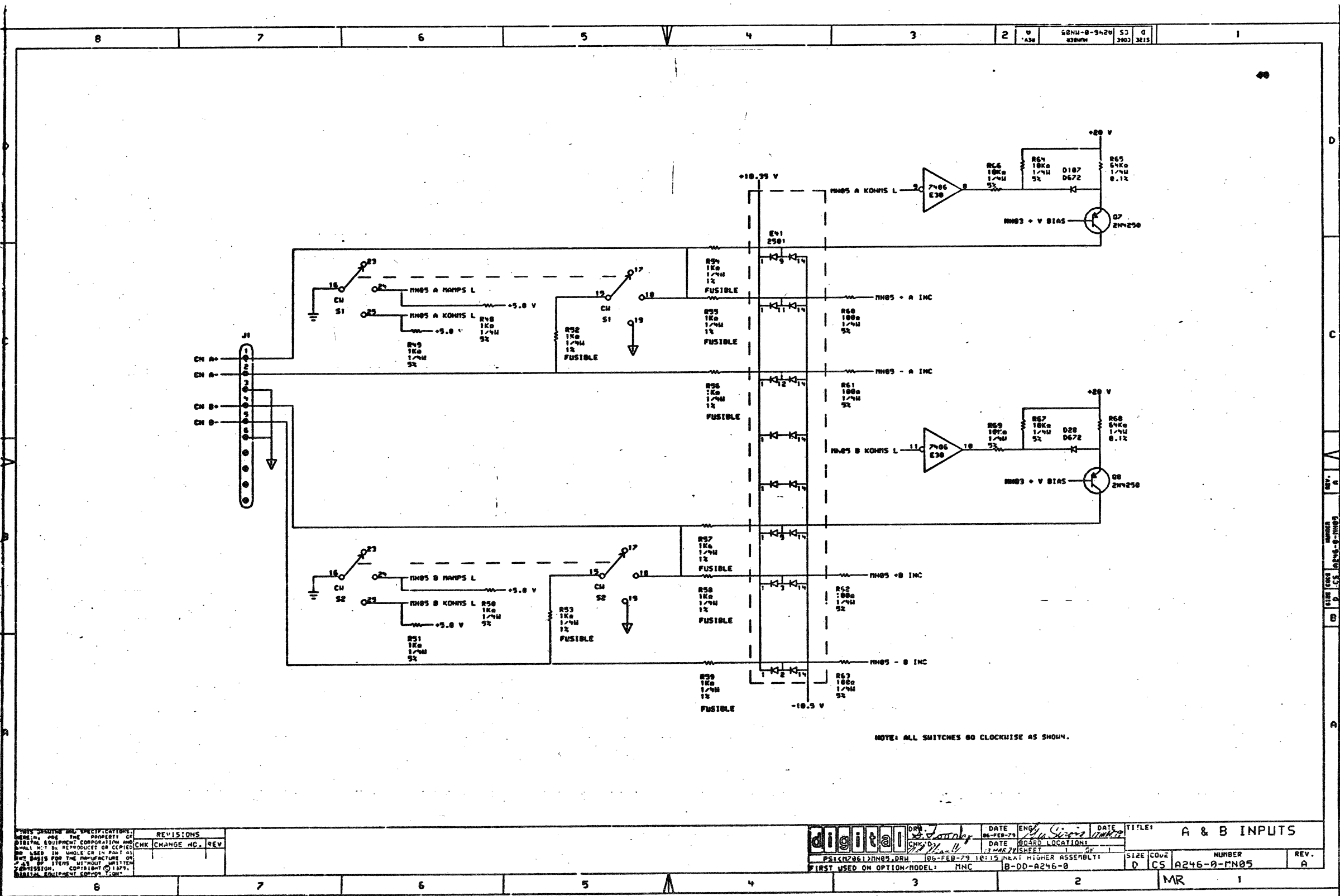
digital DRW: *Janey* DATE: 07-28-79
 CHKD: *Janey* DATE: 08-01-79
 DATE: 08-01-79 BOARD LOCATION: 12-A-R-25 SHEET: 1 OF 1
 FIRST USED ON OPTION/MODEL: MNC 18-UD-A246-0

TITLE: **GAIN SELECT CONTROL**
 SIZE CODE: D 1CS
 NUMBER: A246-0-MNO2
 REV: A



REVISIONS	
CHK	CHNGE NO. REV

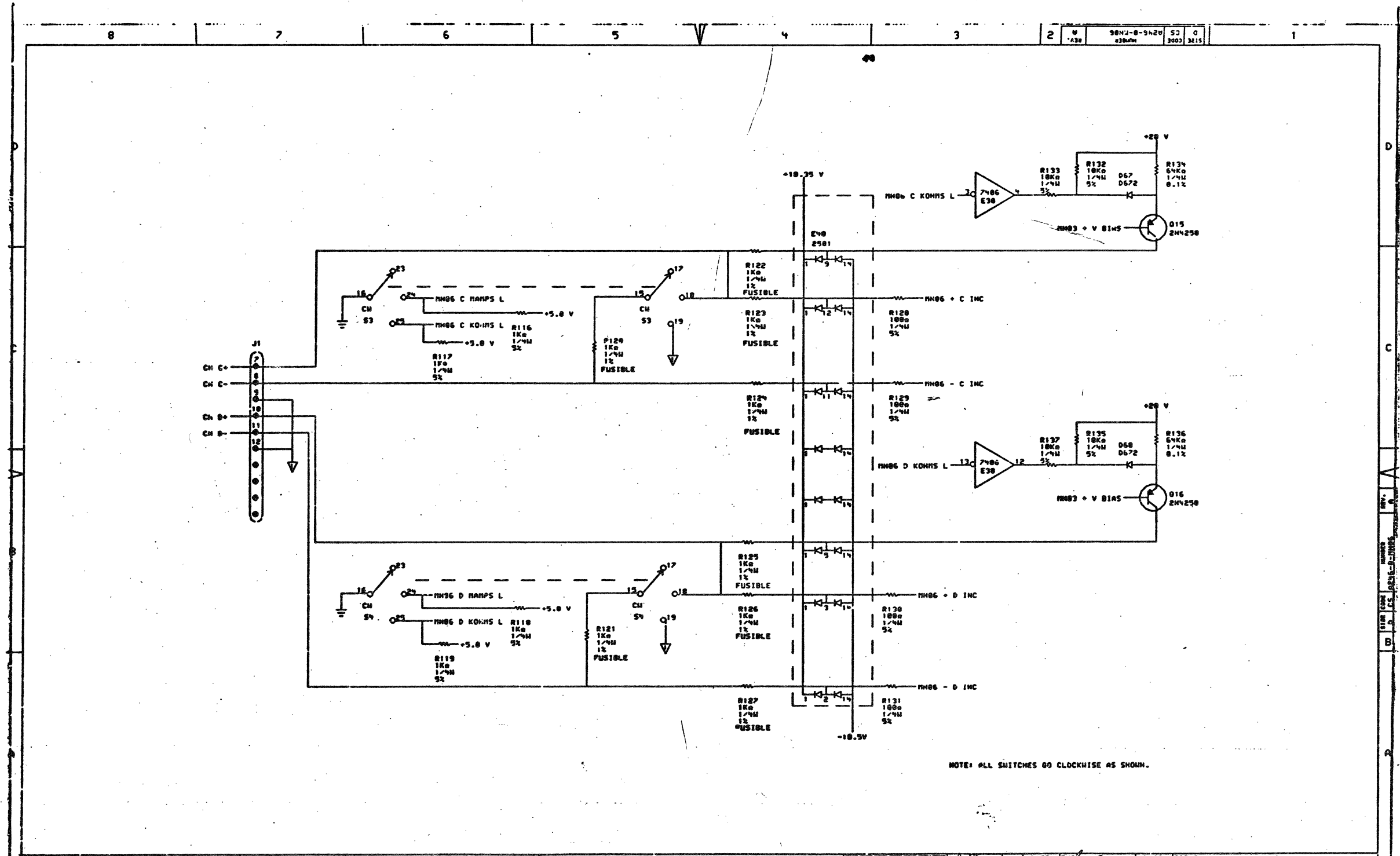
	DATE	ENG	DATE	REV.	TITLE
	01-JAN-79	MR. SERRIN	12/27/78	1	SWITCH GAIN CONTROLS
FIRST USED ON OPTION/MODEL:		NEXT HIGHER ASSEMBLY:		SIZE	CODE
B-1A246-0-2420		B-DD-A246-0		D	CS
				NUMBER	REV.
				A246-0-MN04	A
				MR	1



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REVISIONS	
CHK	CHANGE NO. REV

	DRY. <i>Jan 1979</i>	DATE: 06-FEB-79	ENG: <i>John...</i>	DATE: <i>06-FEB-79</i>	TITLE: A & B INPUTS
	PS102961ZIN05.DRM	06-FEB-79 12:12	NEAT HIGHER ASSEMBLY:	SIZE: D	COVE: CS
FIRST USED ON OPTION/MODEL: MNC	B-DD-A246-0	NUMBER: A246-0-MN05	REV: A	MR	1

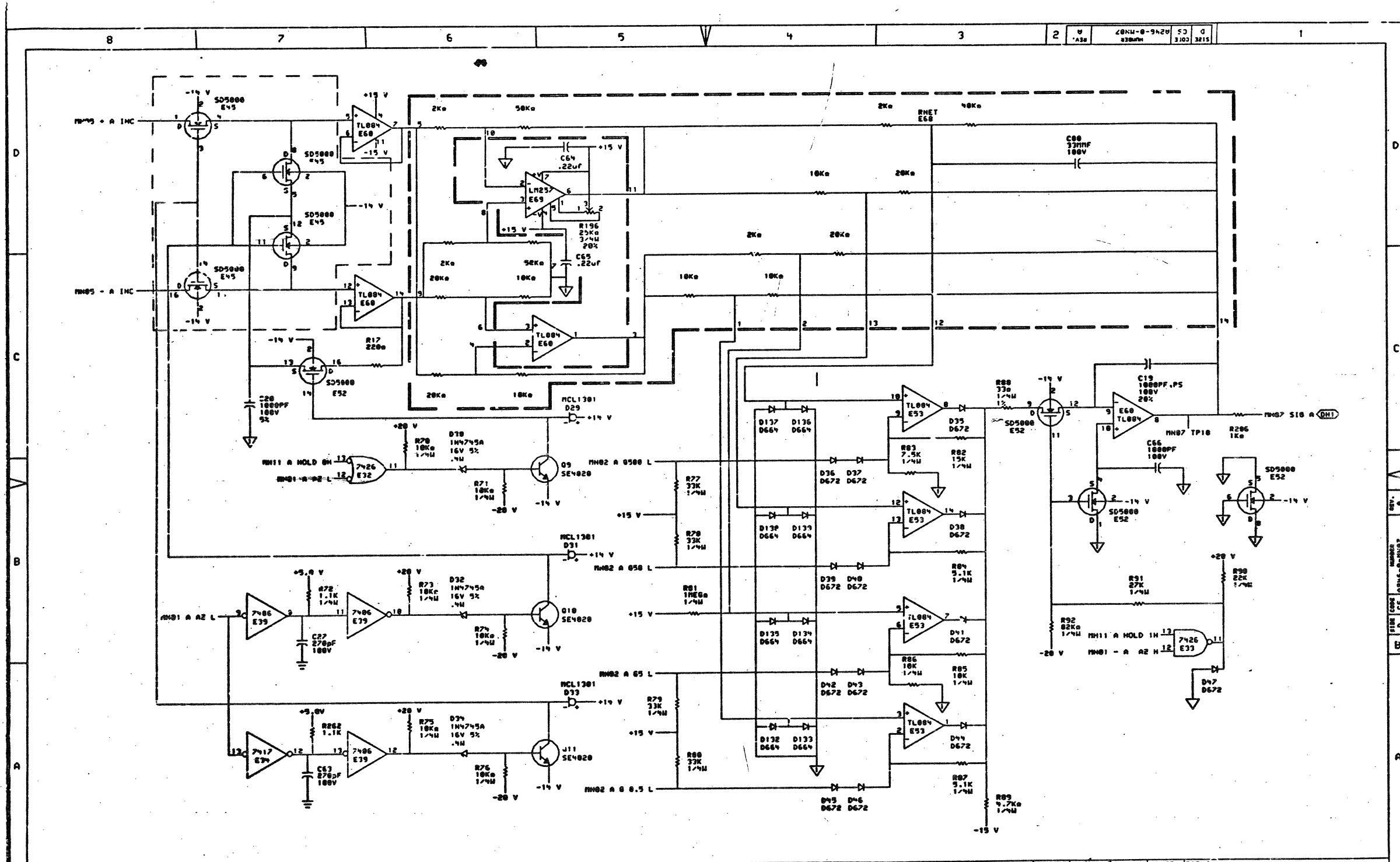


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REVISIONS		
CHK	CHANGE NO.	REV.

DATE	ENG	DATE	TITLE
01-JAN-79	Joe Simon		C & D INPUT
DATE	DESIGNED BY	DATE	REV.
12-28-78			A
DATE	CHECKED BY	DATE	REV.
12-28-78			
DATE	APPROVED BY	DATE	REV.
12-28-78			
DATE	DESIGNED BY	DATE	REV.
12-28-78			
DATE	CHECKED BY	DATE	REV.
12-28-78			
DATE	APPROVED BY	DATE	REV.
12-28-78			

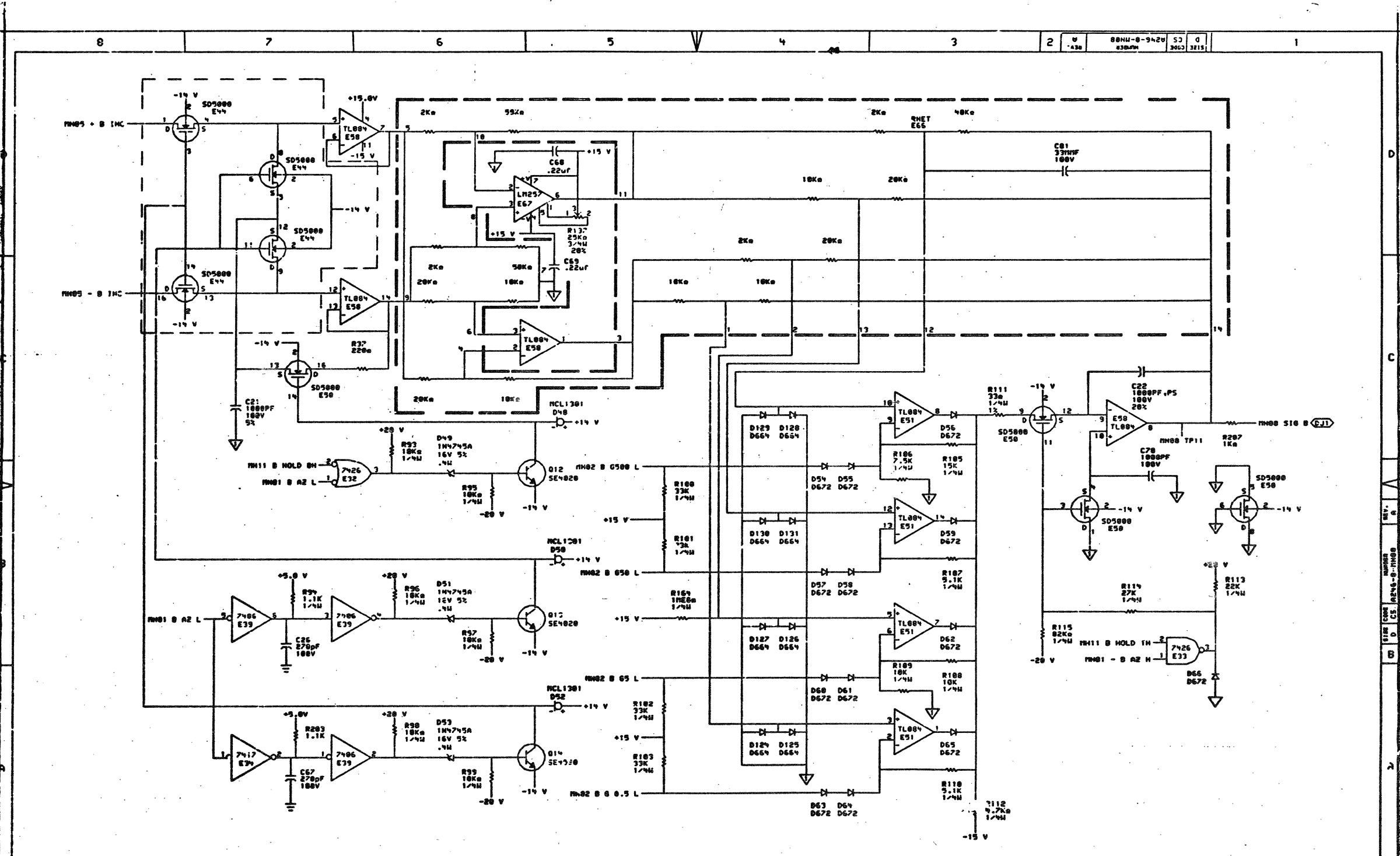
PS: A246-MN05-DRM	183	JAN-79	183	NEXT HIGHER ASSEMBLY:	SIZE CODE	NUMBER	REV.
FIRST USED ON OPTION/MODEL:	MNC	B-DD-A246+8	D	CS	A246-0-MN05	A	



REV.	DATE	DESCRIPTION
1		INITIAL DESIGN

REV.	DATE	DESCRIPTION
1		INITIAL DESIGN

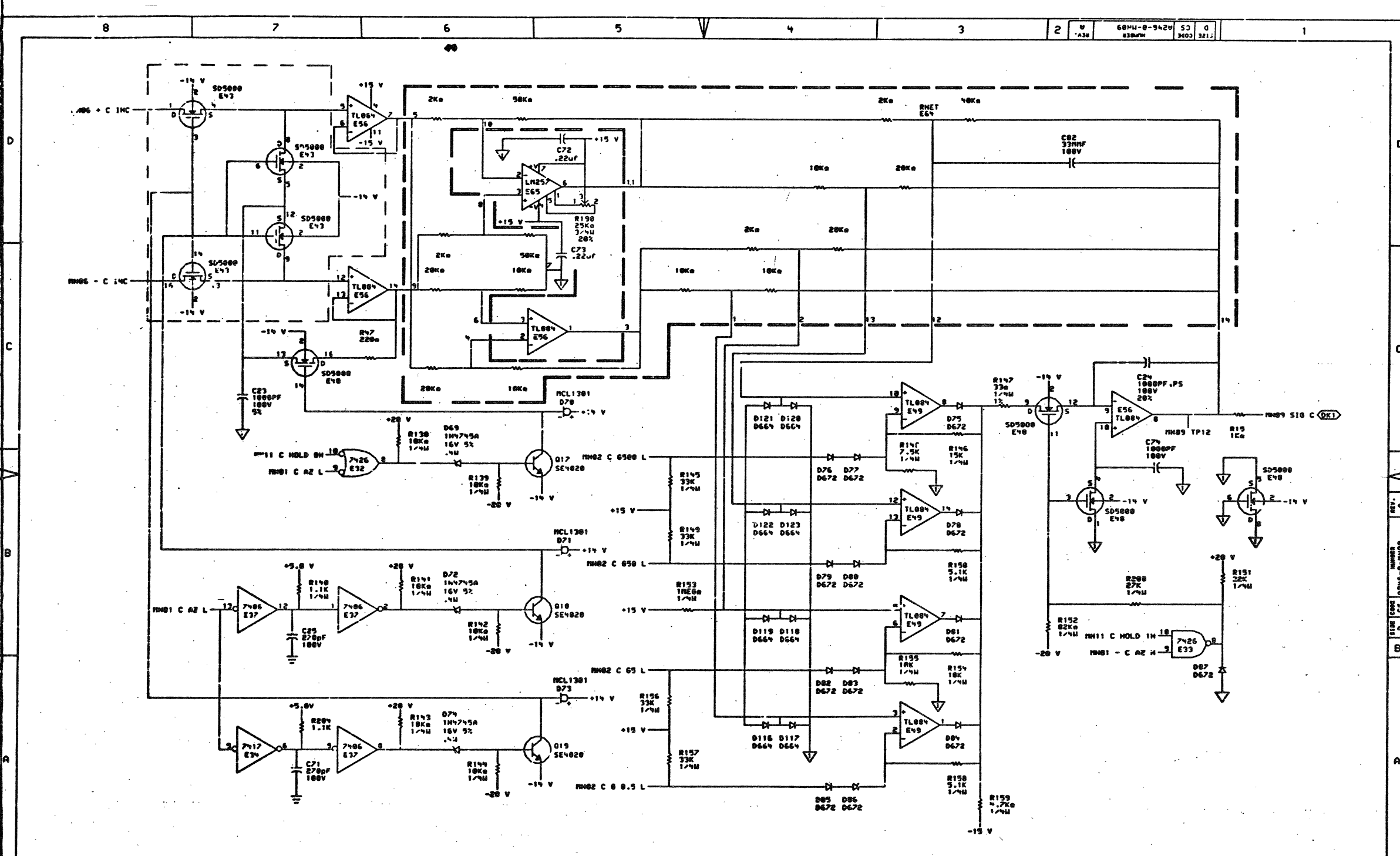
DATE	ENG.	DATE	TITLE
07-MAR-79	J. J. ...	07-MAR-79	CH A DIFF AMPLIFIER
DATE	BOARD LOCATION	DATE	BOARD LOCATION
07-MAR-79	1	07-MAR-79	1
DATE	SIZE	CODE	NUMBER
07-MAR-79	D	CS	A246-0-M1107
DATE	REV.	DATE	REV.
07-MAR-79	A	07-MAR-79	A



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REVISIONS	
CHK	CHANGE NO. REV.

	DATE: 07-04-79 ENG: <i>[Signature]</i> DATE: <i>[Signature]</i> SHEET: 1 OF 1	TITLE: CH B DIFF AMPLIFIER
	DATE: 07-04-79 LOCATION:	SIZE: CODE NUMBER: A246-0-MN08
	FIRST USED ON OPTION/MODEL: MNC	NEXT HIGHER ASSEMBLY: B-DD-A246-0 REV. A

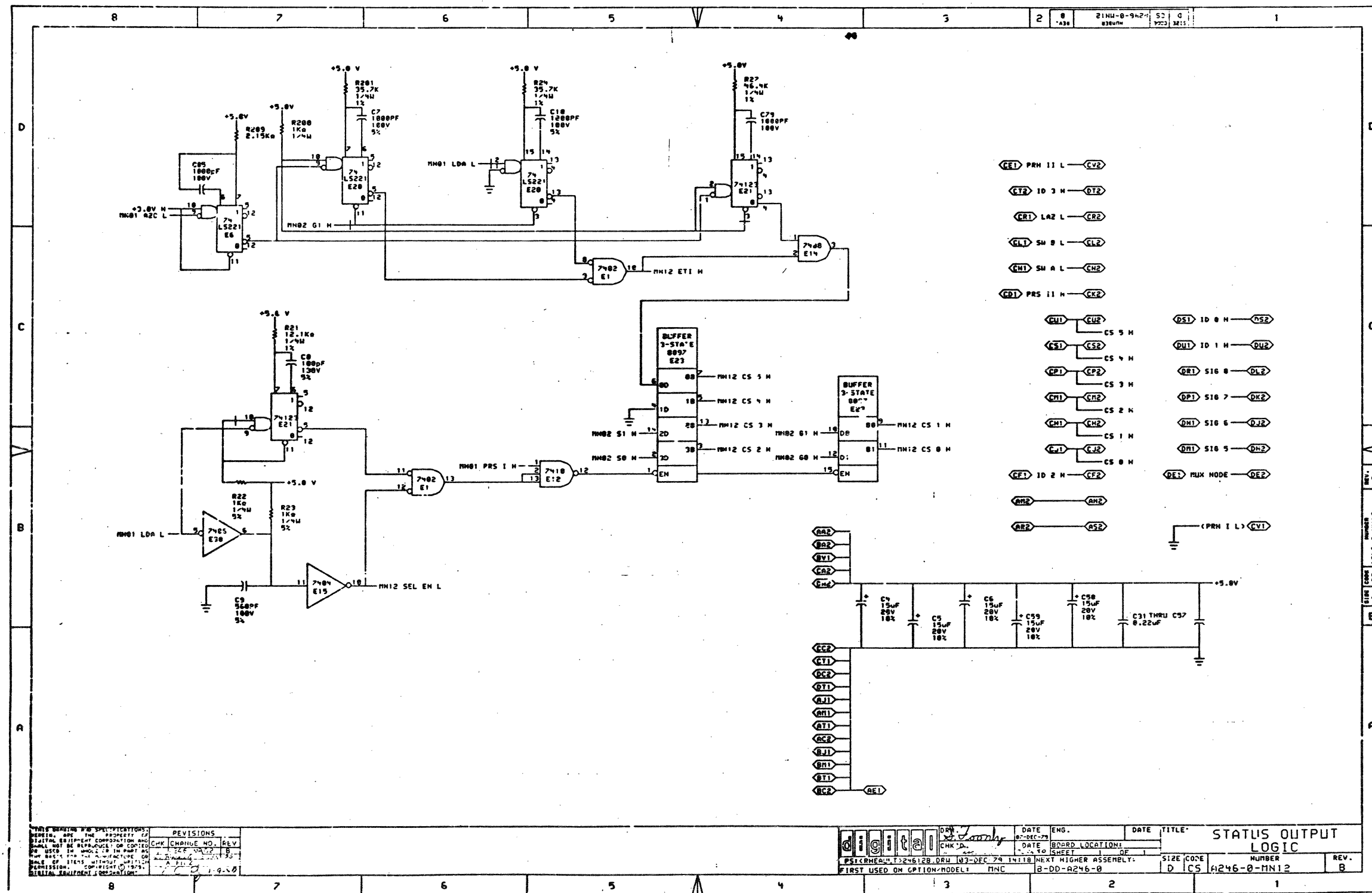


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REVISIONS	
CHK	CHANGE NO. REV

DATE	ENG	DATE	TITLE
28-MAR-79		10P-79	CH C DIFF AMPLIFIER
DATE	BOARD LOCATION	SHEET	OF
		1	1
DATE	NEXT HIGHER ASSEMBLY	SIZE	CODE
128-MAR-79 15:11		D	CS
FIRST USED ON OPTION/MODEL	MNC	NUMBLR	REV.
		A246-0-MN09	A

8	7	6	5	4	3	2	1
						MR	



MR