NOTES: (UNLESS OTHERWISE SPECIFIED)

1. THIS DRAWING CONSISTS OF THE FOLLOWING SHEETS:
   1.0, 2.0, 3.0, 4.0, 4.1, 4.2, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, 18.0, 19.0, 20.0, 21.0, 22.0, 23.0, 24.0, 25.0, 26.0, 27.0
2. ALL RESISTORS ARE IN OHMS 1/4W, ±5%
3. PREFIX PART REFERENCE DESIGNATION NO. WITH CIRCUIT NO.
   EXAMPLE: CKT 1, R101; CKT 2 R201

REFERENCE DESIGNATIONS FOR TYP CIRCUITS		
CIRCUITS	LAST USED	NOT USED
1 & 2	A_04, R_09 CR_16	
3 & 4	A_04, R_09 CR_16	
5 & 6	A_04, R_09 CR_24	
7 & 8	A_04, R_09 CR_24	
9-16	A_04, R_08 CR_12, IC_02 C_02	
17	A_06, R_08 IC_02, C_02 CR_12	

REFERENCE DESIGNATIONS	
LAST USED	NOT USED
IC95	
R89	R33, R34
RT2	
Q23	Q1
D_1	
CR22	CR4
C110	
TP19	
A4	
L6	
E2	

REFERENCE DRAWINGS	
ASSEMBLY	44E0613
PARTS LIST	44P0613
BOARD DETAIL	40E0523
ART WORK	97E0745
SILKSCREEN	97E0746
SOLDERMASK	97E0747

DR MERCERETS	6-2-72
CHK	6-2-72
DSGN	7/7/72
ENGR	7/7/72
APPD	7-7-72
APPD	

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varian data machines, a varian subsidiary
2722 michelson drive / irvine / california / 92664

TITLE
LOGIC DIAGRAM
CORE MEMORY V73

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	91C0377	K
SCALE			1.0

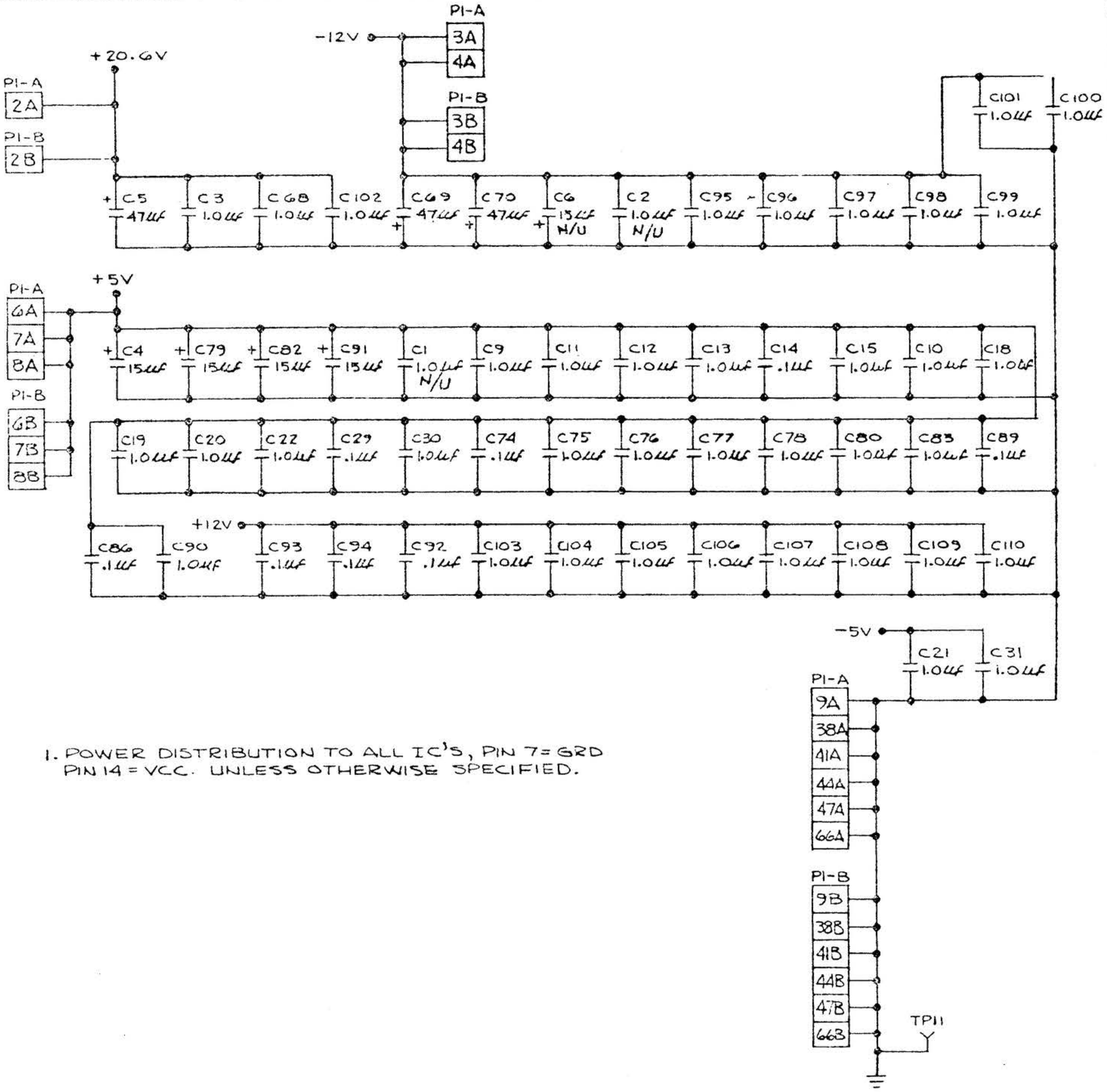
REVISIONS					
REV	EN NO.	CHG CODE	DESCRIPTION	DR	APPD
K	83161	1	REVISED SHT 9.0 AND R79,71,74,75,78, 79,81 & 82 ON SHT 19.0 WAS 150Ω		

CONCAT	REVISIONS				
	SYM	ZONE	DESCRIPTION	APPROVED	DATE
—	X		PILOT RELEASE PER EN 80753		4/1/74
—	A		PRODUCTION RELEASE PER EN 80980		4/15/74
—	B		REVISED PER EN 81078		5/21/74
—	C		REVISED PER EN 81252		6/12/74
—	D		R3 ON SHT 8 CHG'D IC WAS 68A PER EN 81441		7/19/74
—	E		DELETED Δ FROM R83 & R86 SHT 18.0. FROM R59, 79, 81, C13, 20, R21, 24, ON SHT 19, ADDED Δ TO R57. PER EN 81546		7/24/74
—	F		REVISED PER EN 81739		8/15/74
—	G		ADD R89 AND E1,2 TO SHT 7.0 PER EN 82278		9/25/74
3	H		SHTS 21 & 22 R-02 & 3 WAS 14Ω PER EN 83072		1/15/74
3	J		ADDED RESISTORS R-07 & 8 TO SHTS 21.0 & 22.0; NOTE 3 TO SHT 21.0 & 4 TO SHT 22.0; REVISED LAST USED IN DES. BLOCK. EN 83136		2/15/74

TABLE OF CONTENTS

DESCRIPTION	SHEET NO.
COVER	1.0
REVISION AND TABLE OF CONTENTS	2.0
POWER, GRD, AND DECOUPLING	3.0
CONNECTOR FUNCTION, P1-A AND P1-B	4.0
CONNECTOR FUNCTION, J1-A AND J1-B	4.1
CONNECTOR FUNCTION, J2-A AND J2-B	4.2
BANK SELECT, PORT A	5.0
BANK SELECT, PORT B	6.0
LOGIC CIRCUIT 1	7.0
LOGIC CIRCUIT 2	8.0
LOGIC CIRCUIT 3	9.0
LOGIC CIRCUIT 4	10.0
ADDRESS MUX. AND REG.	11.0
ADDRESS MUX. AND REG.	12.0
DRIVER SWITCHES POSITIVES	13.0
DRIVER SWITCHES NEGATIVE	14.0
SINK SWITCH NEGATIVE	15.0
SINK SWITCH POSITIVE	16.0
DRIVER LOGIC	17.0
SINK LOGIC	18.0
PRE DRIVER CIRCUITS X & Y	19.0
CURRENT SOURCES	20.0
SENSE INHIBIT	21.0
SENSE INHIBIT	22.0
DATA LOOP BIT 00 THRU 03	23.0
DATA LOOP BIT 04 THRU 07	24.0
DATA LOOP BIT 08 THRU 11	25.0
DATA LOOP BIT 12 THRU 15	26.0
DATA LOOP BIT 16 & 17	27.0

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE		SHEET 2.0	



1. POWER DISTRIBUTION TO ALL IC'S, PIN 7 = GRD
   PIN 14 = VCC. UNLESS OTHERWISE SPECIFIED.

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	91C0377	K
SCALE		SHEET 3.0	

CONNECTOR P1-A

PINS	FUNCTION	SHEET
1A	+22.5V MEM (NU)*	3.0
2A	+20.6V	3.0
3A	-12V	3.0
4A	-12V	3.0
5A	LFREC+ (NU)*	
6A	+5V	3.0
7A	+5V	3.0
8A	+5V	3.0
9A	GRD	3.0
10A	SPFA- (NU)*	
11A	MYAA00+	5.0
12A	MYAA01+	11.0
13A	MYAA02+	11.0
14A	MYAA03+	11.0
15A	MYAA04+	11.0
16A	MYAA05+	11.0
17A	MYAA06+	11.0
18A	MYAA07+	11.0
19A	MYAA08+	12.0
20A	MYAA09+	12.0
21A	MYMA09+ (NU)*	
22A	MYAA10+	5.0
23A	MYMA10+ (NU)*	
24A	MYAA11+	5.0
25A	MYMA11+ (NU)*	
26A	MYAA12+	5.0
27A	MYMA12+ (NU)*	
28A	MYAA13+	5.0
29A	MYMA13+ (NU)*	
30A	MYAA14+	5.0
31A	MYMA14+ (NU)*	
32A	MYAA15+	5.0
33A	MYMA15+ (NU)*	
34A	MYKA16+ (NU)*	
35A	MYKA17+ (NU)*	
36A	MYKA18+ (NU)*	
37A	MYKA19+ (NU)*	
38A	GRD	3.0
39A	MRQYA-	7.0
40A	MRMYA- (NU)*	
41A	GRD	3.0
42A	YDNMA-	9.0
43A	MHMY-	7.0
44A	GRD	3.0
45A	MWRYA+	10.0
46A	MWLYA+	10.0
47A	GRD	3.0
48A	MYDA00-	23.0
49A	MYDA01-	23.0
50A	MYDA02-	23.0
51A	MYDA03-	23.0
52A	MYDA04-	24.0
53A	MYDA05-	24.0
54A	MYDA06-	24.0
55A	MYDA07-	24.0
56A	MYDA08-	25.0
57A	MYDA09-	25.0
58A	MYDA10-	25.0
59A	MYDA11-	25.0
60A	MYDA12-	26.0
61A	MYDA13-	26.0
62A	MYDA14-	26.0
63A	MYDA15-	26.0
64A	MYDA16-	27.0
65A	MYDA17-	27.0
66A	GRD	3.0

CONNECTOR P1-B

PINS	FUNCTION	SHEET
1B	+20V MEM (NU)*	3.0
2B	+20.6V	3.0
3B	-12V	3.0
4B	-12V	3.0
5B	+5V MEM (NU)*	3.0
6B	+5V	3.0
7B	+5V	3.0
8B	+5V	3.0
9B	GRD	3.0
10B	SRST-	7.0
11B	MYAB00+	6.0
12B	MYAB01+	11.0
13B	MYAB02+	11.0
14B	MYAB03+	11.0
15B	MYAB04+	11.0
16B	MYAB05+	11.0
17B	MYAB06+	11.0
18B	MYAB07+	11.0
19B	MYAB08+	12.0
20B	MYAB09+	12.0
21B	MYMB09+ (NU)*	
22B	MYAB10+	6.0
23B	MYMB10+ (NU)*	
24B	MYAB11+	6.0
25B	MYMB11+ (NU)*	
26B	MYAB12+	6.0
27B	MYMB12+ (NU)*	
28B	MYAB13+	6.0
29B	MYMB13+ (NU)*	
30B	MYAB14+	6.0
31B	MYMB14+ (NU)*	
32B	MYAB15+	6.0
33B	MYMB15+ (NU)*	
34B	MYKB16+ (NU)*	
35B	MYKB17+ (NU)*	
36B	MYKB18+ (NU)*	
37B	MYKB19+ (NU)*	
38B	GRD	3.0
39B	MRQYB-	7.0
40B	MRMYB- (NU)*	
41B	GRD	3.0
42B	YDNMB-	9.0
43B	MHGY-	7.0
44B	GRD	3.0
45B	MWRYB+	10.0
46B	MWLYB+	10.0
47B	GRD	3.0
48B	MYDB00-	23.0
49B	MYDB01-	23.0
50B	MYDB02-	23.0
51B	MYDB03-	23.0
52B	MYDB04-	24.0
53B	MYDB05-	24.0
54B	MYDB06-	24.0
55B	MYDB07-	24.0
56B	MYDB08-	25.0
57B	MYDB09-	25.0
58B	MYDB10-	25.0
59B	MYDB11-	25.0
60B	MYDB12-	26.0
61B	MYDB13-	26.0
62B	MYDB14-	26.0
63B	MYDB15-	26.0
64B	MYDB16-	27.0
65B	MYDB17-	27.0
66B	GRD	3.0

NOTE:

1. (NU)*, NOT USED

CONNECTOR FUNCTION P.

21101	C	91C0377	K
		SHEET 4.0	

CONNECTOR J1-A			CONNECTOR J1-B		
PINS	FUNCTION	SHEET	PINS	FUNCTION	SHEET
1A	GRD		1B	GRD	
2A	CA4A	17.0	2B	CA4A	17.0
3A	CC4A	17.0	3B	CC4A	17.0
4A	CA5A	17.0	4B	CA5A	17.0
5A	CC5A	17.0	5B	CC5A	17.0
6A	CA6A	17.0	6B	CA6A	17.0
7A	CC6A	17.0	7B	CC6A	17.0
8A	CA7A	17.0	8B	CA7A	17.0
9A	CC7A	17.0	9B	CC7A	17.0
10A	GRD		10B	GRD	
11A	GRD		11B	GRD	
12A	GRD		12B	GRD	
13A	X36A	18.0	13B	X37A	18.0
14A	X34A	18.0	14B	X35A	18.0
15A	X32A	18.0	15B	X33A	18.0
16A	X30A	18.0	16B	X31A	18.0
17A	GRD		17B	GRD	
18A	GRD		18B	GRD	
19A	GRD		19B	GRD	
20A	S15A	26.0	20B	S15A	26.0
21A	I15A	26.0	21B	S14A	26.0
22A	S14A	26.0	22B	I14A	26.0
23A	S13A	26.0	23B	S13A	26.0
24A	I13A	26.0	24B	S12A	26.0
25A	S12A	26.0	25B	I12A	26.0
26A	S11A	25.0	26B	S11A	25.0
27A	I11A	25.0	27B	S10A	25.0
28A	S10A	25.0	28B	I10A	25.0
29A	S09A	25.0	29B	S09A	25.0
30A	I09A	25.0	30B	S08A	25.0
31A	S08A	25.0	31B	I08A	25.0
32A	S17A	27.0	32B	S17A	27.0
33A	I17A	27.0	33B	S16A	27.0
34A	S16A	27.0	34B	I16A	27.0
35A	S07A	24.0	35B	S07A	24.0
36A	I07A	24.0	36B	S06A	24.0
37A	S06A	24.0	37B	I06A	24.0
38A	S05A	24.0	38B	S05A	24.0
39A	I05A	24.0	39B	S04A	24.0
40A	S04A	24.0	40B	I04A	24.0
41A	S03A	23.0	41B	S03A	23.0
42A	I03A	23.0	42B	S02A	23.0
43A	S02A	23.0	43B	I02A	23.0
44A	S01A	23.0	44B	S01A	23.0
45A	I01A	23.0	45B	S00A	23.0
46A	S00A	23.0	46B	I00A	23.0
47A	GRD		47B	GRD	
48A	GRD		48B	GRD	
49A	GRD		49B	GRD	
50A	YS1A	18.0	50B	YS0A	18.0
51A	YS3A	18.0	51B	YS2A	18.0
52A	YS5A	18.0	52B	YS4A	18.0
53A	YS7A	18.0	53B	YS6A	18.0
54A	GRD		54B	GRD	
55A	GRD		55B	GRD	
56A	GRD		56B	GRD	
57A	CA3A	17.0	57B	CA3A	17.0
58A	CC3A	17.0	58B	CC3A	17.0
59A	CA2A	17.0	59B	CA2A	17.0
60A	CC2A	17.0	60B	CC2A	17.0
61A	CA1A	17.0	61B	CA1A	17.0
62A	CC1A	17.0	62B	CC1A	17.0
63A	CA0A	17.0	63B	CA0A	17.0
64A	CC0A	17.0	64B	CC0A	17.0
65A	GRD		65B	GRD	

CONNECTOR FUNCTION

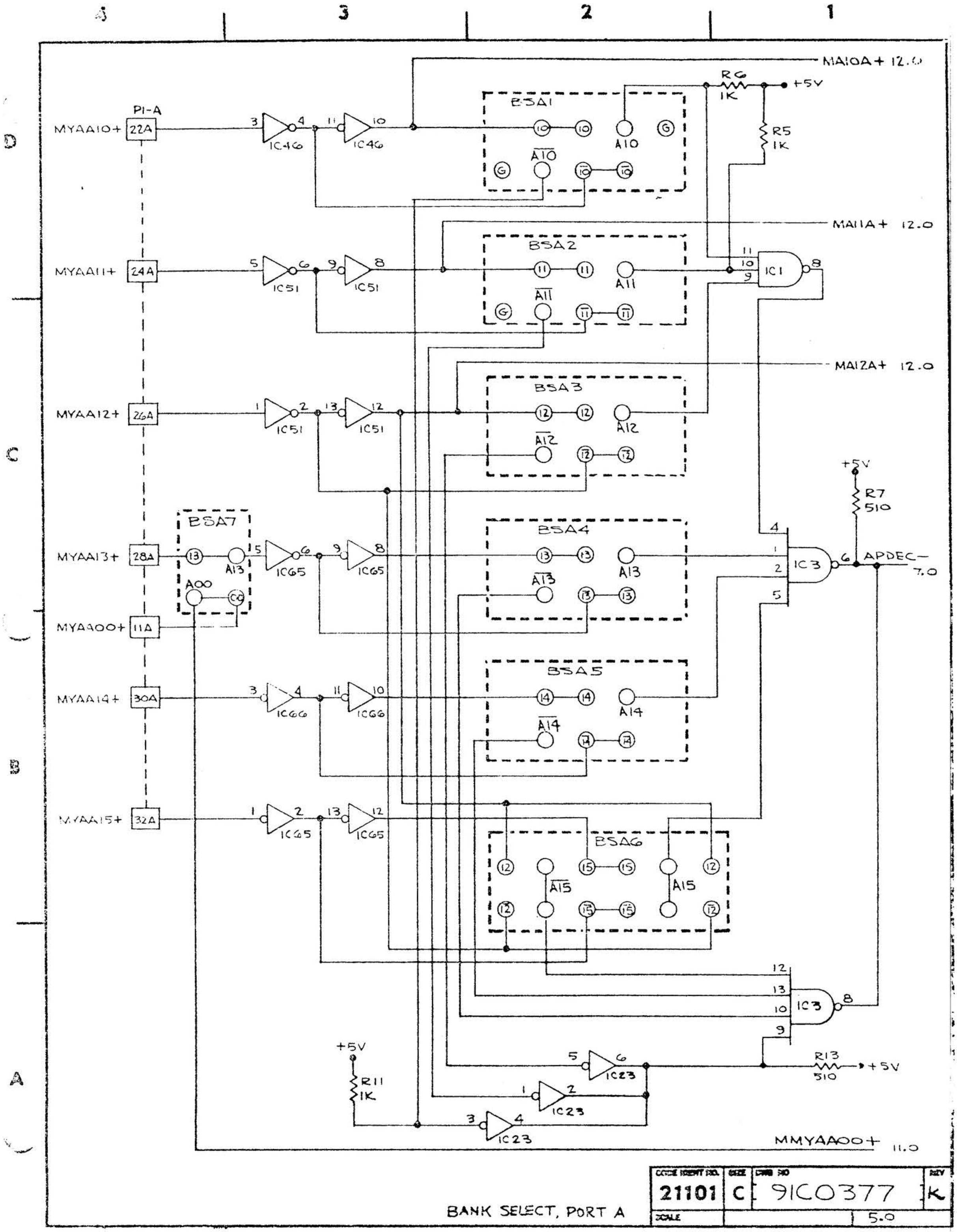
21101	C	9100377	K
SIZE			SHEET 4:1

D C B A

CONNECTOR J2-A			CONNECTOR J2-B		
PINS	FUNCTION	SHEET	PINS	FUNCTION	SHEET
1A			1B		
2A	CA4B	17.0	2B	CA4B	17.0
3A	CC4B	17.0	3B	CC4B	17.0
4A	CA5B	17.0	4B	CA5B	17.0
5A	CC5B	17.0	5B	CC5B	17.0
6A	CA6B	17.0	6B	CA6B	17.0
7A	CC6B	17.0	7B	CC6B	17.0
8A	CA7B	17.0	8B	CA7B	17.0
9A	CC7B	17.0	9B	CC7B	17.0
10A	GRD		10B	GRD	
11A	GRD		11B	GRD	
12A	GRD		12B	GRD	
13A	X36B	18.0	13B	X37B	18.0
14A	X34B	18.0	14B	X35B	18.0
15A	X32B	18.0	15B	X33B	18.0
16A	X30B	18.0	16B	X31B	18.0
17A	GRD		17B	GRD	
18A	GRD		18B	GRD	
19A	GRD		19B	GRD	
20A	S00B	23.0	20B	S00B	23.0
21A	I00B	23.0	21B	S01B	23.0
22A	S01B	23.0	22B	I01B	23.0
23A	S02B	23.0	23B	S02B	23.0
24A	I02B	23.0	24B	S03B	23.0
25A	S03B	23.0	25B	I03B	23.0
26A	S04B	24.0	26B	S04B	24.0
27A	I04B	24.0	27B	S05B	24.0
28A	S05B	24.0	28B	I05B	24.0
29A	S06B	24.0	29B	S06B	24.0
30A	I06B	24.0	30B	S07B	24.0
31A	S07B	24.0	31B	I07B	24.0
32A	S16B	27.0	32B	S16B	27.0
33A	I16B	27.0	33B	S17B	27.0
34A	S17B	27.0	34B	I17B	27.0
35A	S08B	25.0	35B	S08B	25.0
36A	I08B	25.0	36B	S09B	25.0
37A	S09B	25.0	37B	I09B	25.0
38A	S10B	25.0	38B	S10B	25.0
39A	I10B	25.0	39B	S11B	25.0
40A	S11B	25.0	40B	I11B	25.0
41A	S12B	26.0	41B	S12B	26.0
42A	I12B	26.0	42B	S13B	26.0
43A	S13B	26.0	43B	I13B	26.0
44A	S14B	26.0	44B	S14B	26.0
45A	I14B	26.0	45B	S15B	26.0
46A	S15B	26.0	46B	I15B	26.0
47A	GRD		47B	GRD	
48A	GRD		48B	GRD	
49A	GRD		49B	GRD	
50A	YS1B	18.0	50B	YS0B	18.0
51A	YS3B	18.0	51B	YS2B	18.0
52A	YS5B	18.0	52B	YS4B	18.0
53A	YS7B	18.0	53B	YS6B	18.0
54A	GRD		54B	GRD	
55A	GRD		55B	GRD	
56A	GRD		56B	GRD	
57A	CA3B	17.0	57B	CA3B	17.0
58A	CC3B	17.0	58B	CC3B	17.0
59A	CA2B	17.0	59B	CA2B	17.0
60A	CC2B	17.0	60B	CC2B	17.0
61A	CA1B	17.0	61B	CA1B	17.0
62A	CC1B	17.0	62B	CC1B	17.0
63A	CA0B	17.0	63B	CA0B	17.0
64A	CC0B	17.0	64B	CC0B	17.0
65A	GRD		65B	GRD	

CONNECTOR FUNCTION

CODE IDENT NO.	SIZE	DWG NO
21101	C	9100377
SCALE		SHEET 4.2



BANK SELECT, PORT A

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9IC0377	K
SCALE			5.0

MAI0B+ 12.0

MAI1B+ 12.0

MAI2B+ 12.0

MMYAB00+ 11.

MYAB10+ P1-B 22B — IC46 — BSB1 (A10, $\overline{A10}$) — R8 1K, R9 1K, +5V

MYAB11+ 24B — IC46 — BSB2 (A11, $\overline{A11}$) — IC1

MYAB12+ 26B — IC51 — BSB3 (A12, $\overline{A12}$)

MYAB13+ 28B — IC65 — BSB4 (A13, $\overline{A13}$) — IC26 — R4 510, +5V, RPDEC- 7.0

MYAB00+ 11B — BSB7 (A00)

MYAB14+ 30B — IC66 — BSB5 (A14, $\overline{A14}$)

MYAB15+ 32B — IC66 — BSB6 (A15, $\overline{A15}$)

IC26 — IC23 — R10 510, +5V

+5V — R12 1K

BANK SELECT, PORT B

CODE IDENT NO.	SIZE	DWG NO	
21101	C	91C0377	K.
SCALE			6.0

5.0 APDEC-
MRQYA- P1 39A
IC29
R1 51Ω
C7 150 PF
IC44
IC24
TP1
IC25
APRT- 8.0,10.0
SRST- P1 12B
IC29 IC29
8.0 TEND-
C8 150 PF
MRQYB- P1 5B2
R2 51Ω
IC44
IC1
IC2
IC25
BPRT- 8.0,10.0
MHGY- 43B
6.0 BPDEC-
+6V R37 5.1K
MHMY- P1 43A E2 E1
IC44

12.0 L12+
10.0 SASL-
IC67 TP8 SASAL+ 25.0,26.0,27.0
10.0 SASR-
IC67 TP7 SASAR+ 23.0,24.0,27.0
12.0 L12-
IC67 TP10 SASBL+ 25.0,26.0,27.0
IC67 TP9 SASBR+ 23.0,24.0,27.0
9.0 INHT-

IC87 TP15 INHTBL+ 25.0,26.0 27.0
IC87 TP12 INHTBR+ 23.0,24.0 27.0
IC87 TP14 INHTAL+ 25.0,26.0 27.0
IC87 TP13 INHTAR+ 23.0,24.0 27.0
+5V

+20.6V
R37 200Ω
R35 100Ω 1/2W
R36 14Ω 3W,1%
CR6 CR5 12V
Q2
+12V
C84 47 µf 20V

CR1 5.1V
C16 1.0 µf
R15 33Ω 2W
R16 56Ω 1W
1
-5V -12V

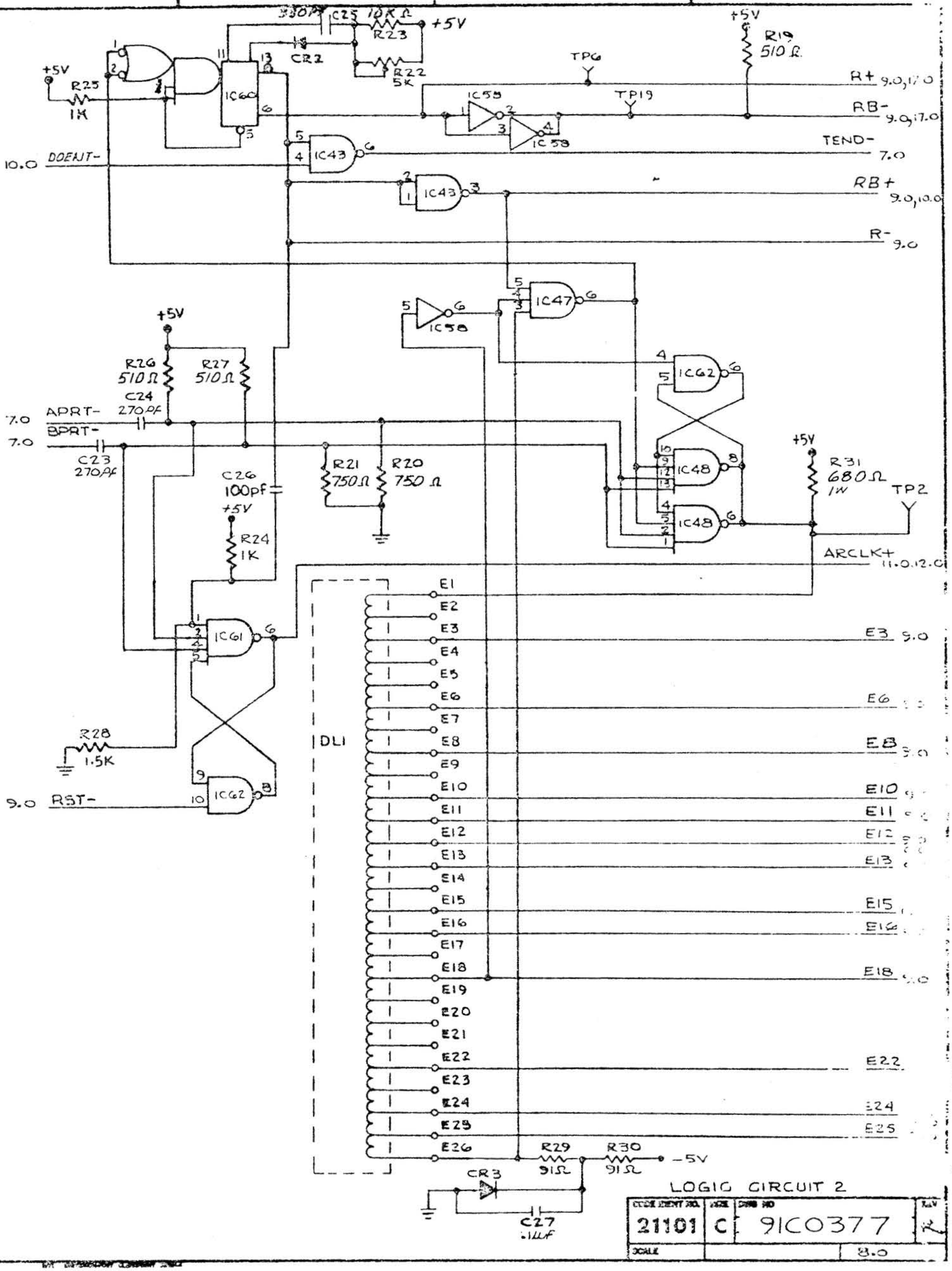
-000 } N/U
-001 }
-002 750Ω
-003 750Ω
R87 ±5% ¼W
R14 100Ω 1/8W,1%
SASTHA 23.0
C17 .1µf 50V

1 NOT USED FOR 4K VERSIONS (-000 & -002)

+5V
-000 }
-001 } N/U
-002
-003 750Ω
R88 ±5% ¼W
R32 1 100Ω 1/8W,1%
SASTHB 23.0
C28 1 .1µf 50V

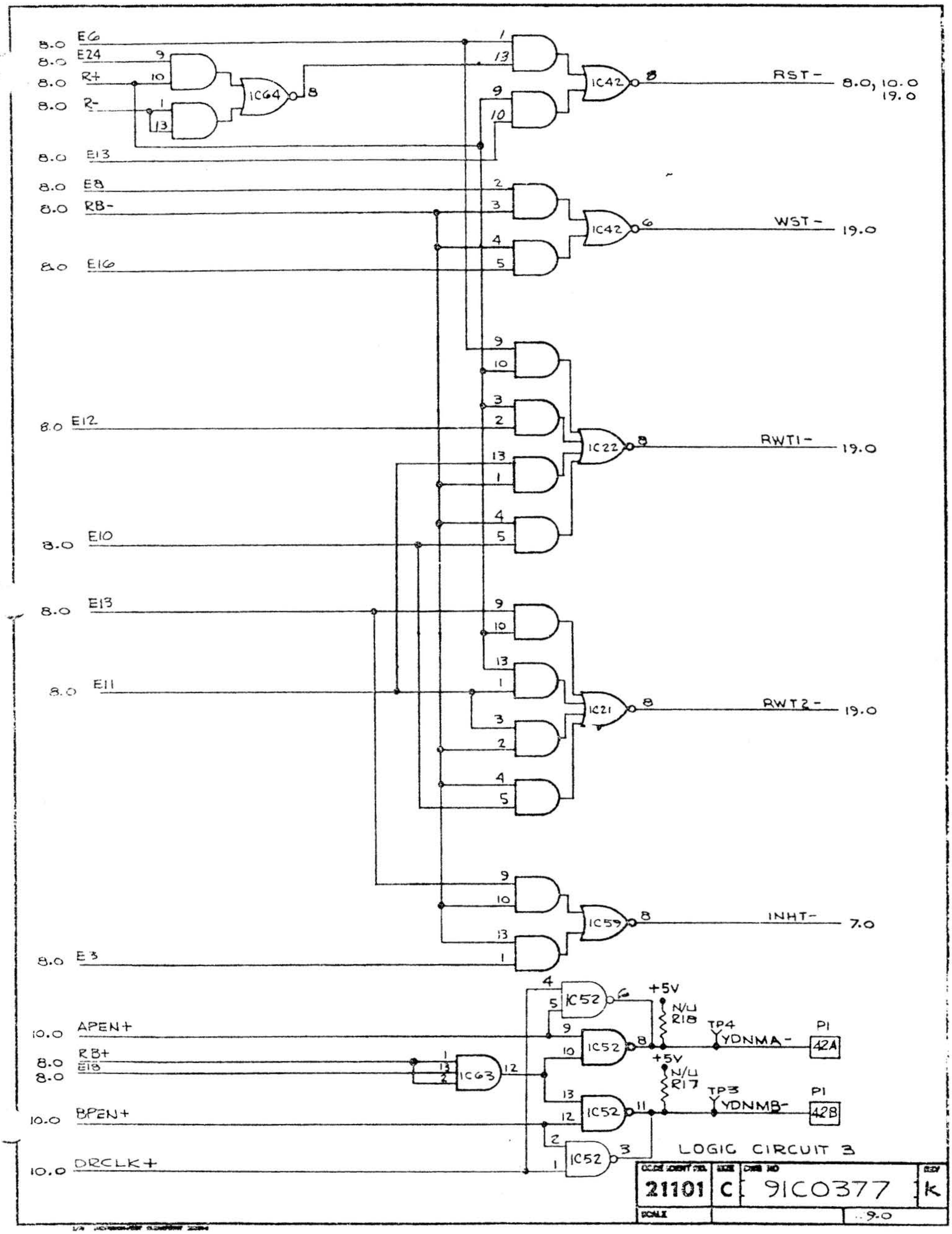
LOGIC CIRCUIT 1

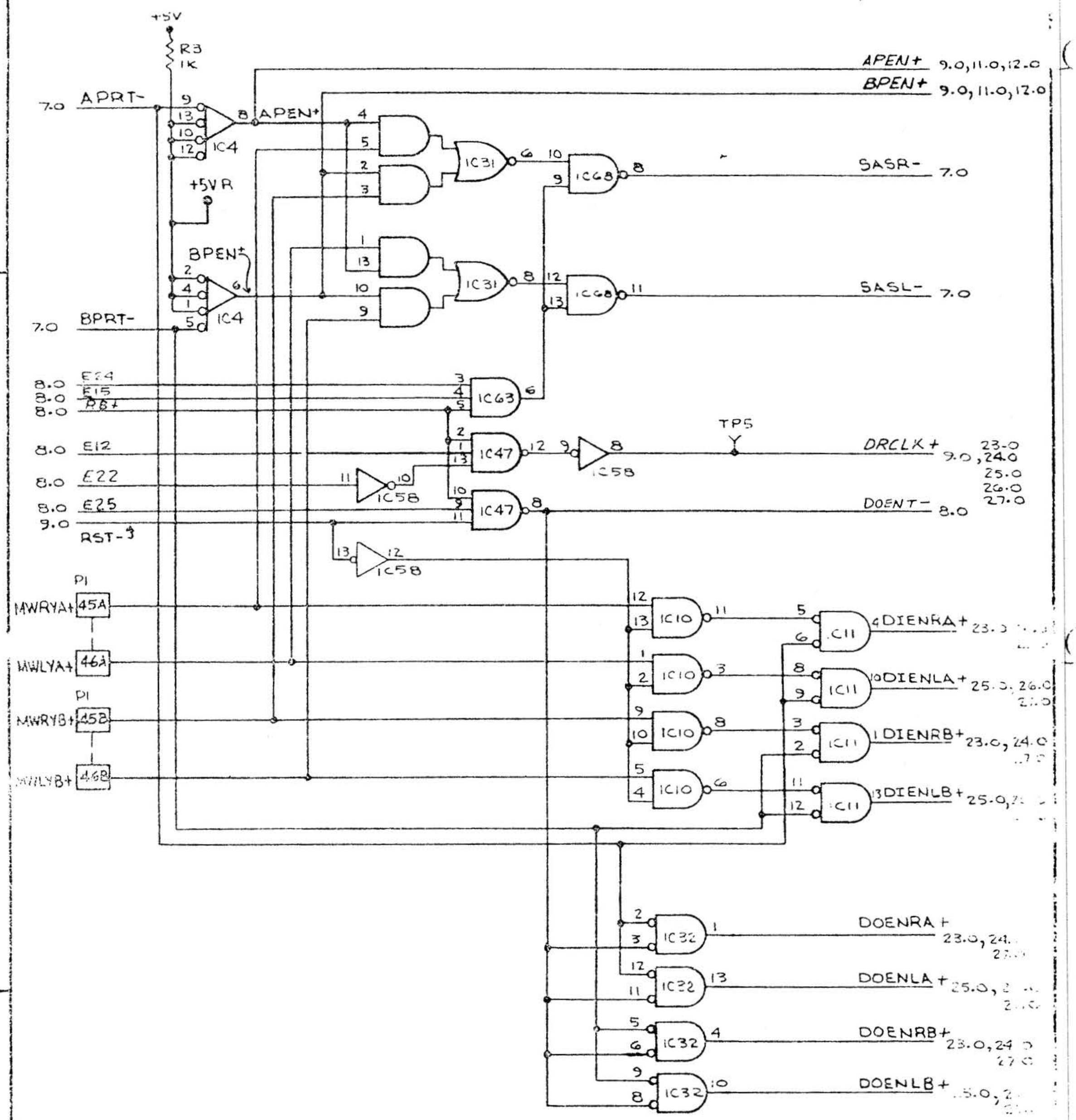
CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE			7.0



LOGIC CIRCUIT 2

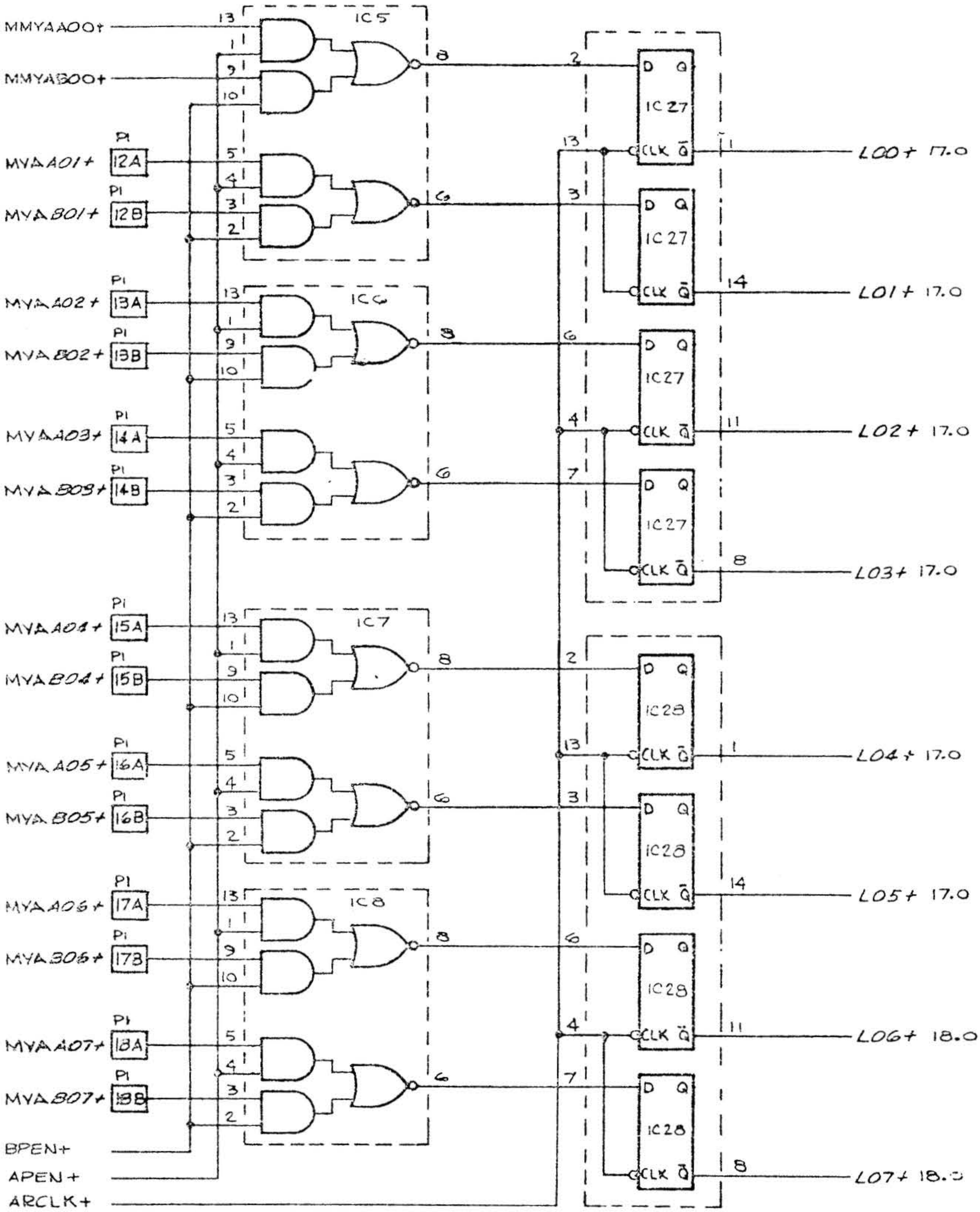
21101	C	9C0377	
SCALE			8.0


8.0 E6
8.0 E24
8.0 R+
8.0 R-
8.0 E13
8.0 E8
8.0 RB-
8.0 E16
8.0 E12
8.0 E10
8.0 E13
8.0 E11
8.0 E3
10.0 APEN+
8.0 RB+
8.0 E18
10.0 BPEN+
10.0 DRCLK+
IC64
IC42
IC42
IC42
IC22
IC21
IC59
IC52
IC52
IC52
IC63
RST-
8.0, 10.0 19.0
WST-
19.0
RWT1-
19.0
RWT2-
19.0
INHT-
7.0
+5V
N/U R18
TP4 YDNMA-
P1 42A
+5V
N/U R17
TP3 YDNMB-
P1 42B
LOGIC CIRCUIT 3
21101
C
91C0377
K
9.0



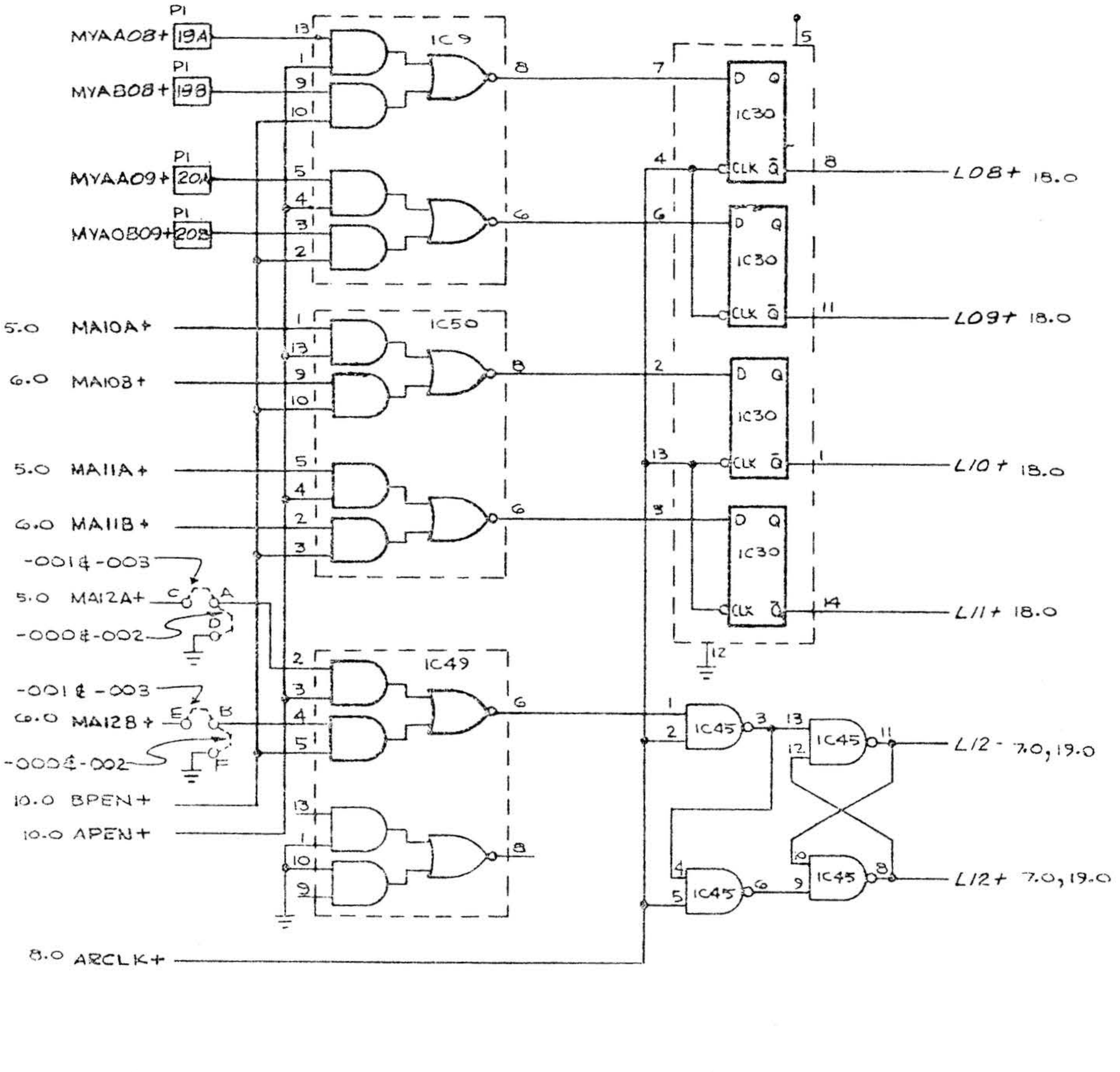
LOGIC CIRCUIT 4

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	91C0377	A
SCALE			10.0



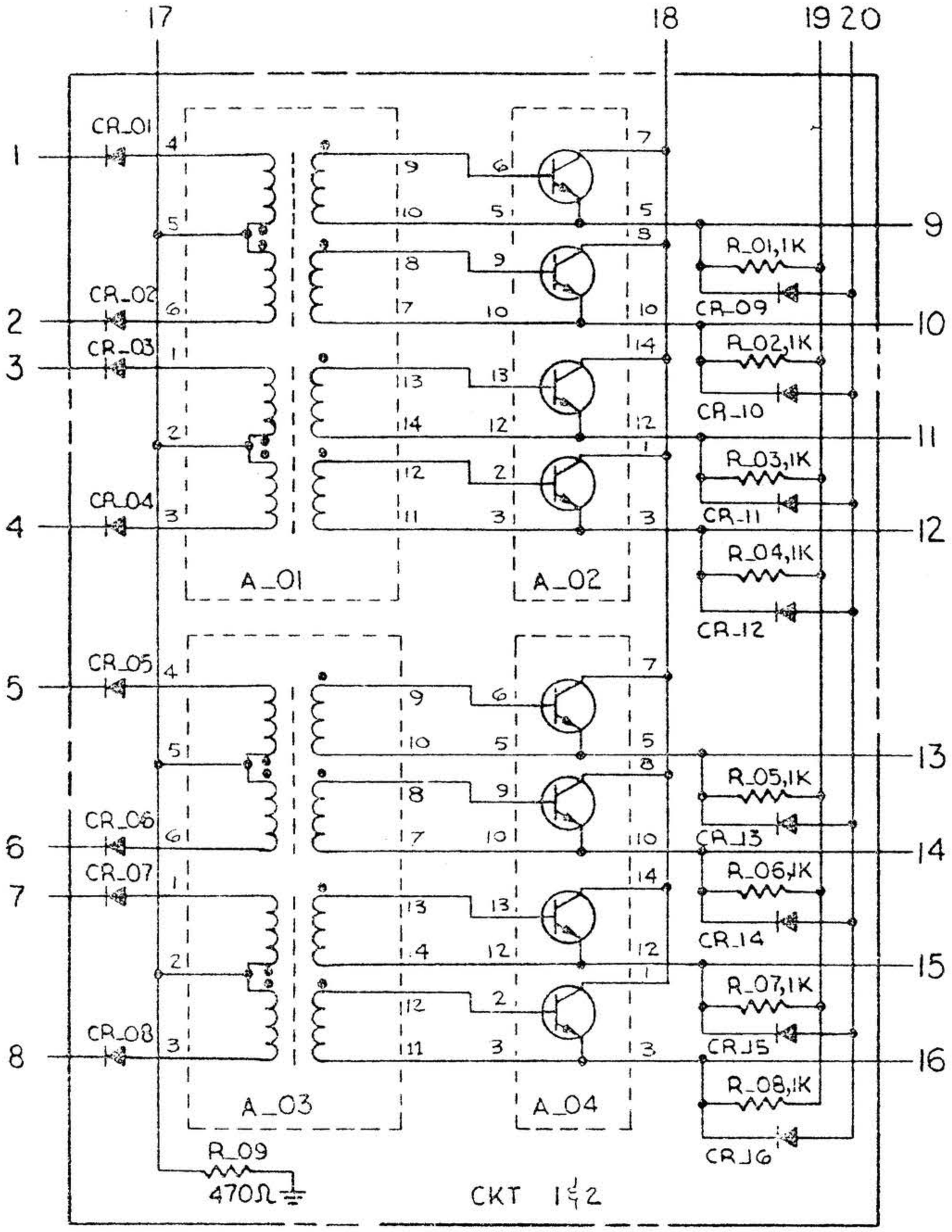
ADDRESS MUX. AND REG.

21101	C	9IC0377	K
SCALE			11.0



ADDRESS MUX. AND REG

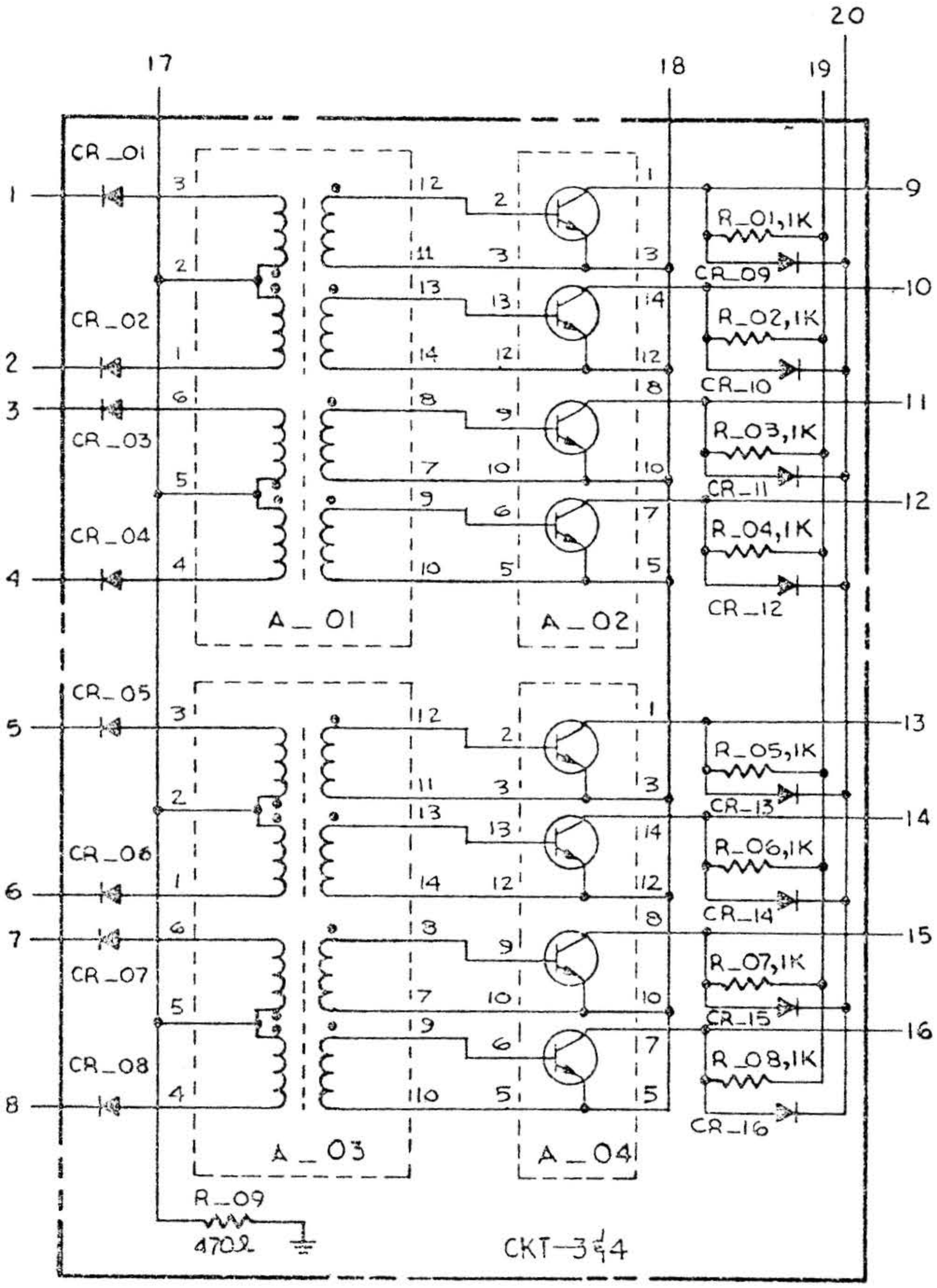
CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE			12.0



NUMBERS OUTSIDE PHANTOM LINES CORRESPOND TO CIRCUIT BLOCKS 1 & 2 ON SHT. 17.0

DRIVER SWITCHES POSITIVE

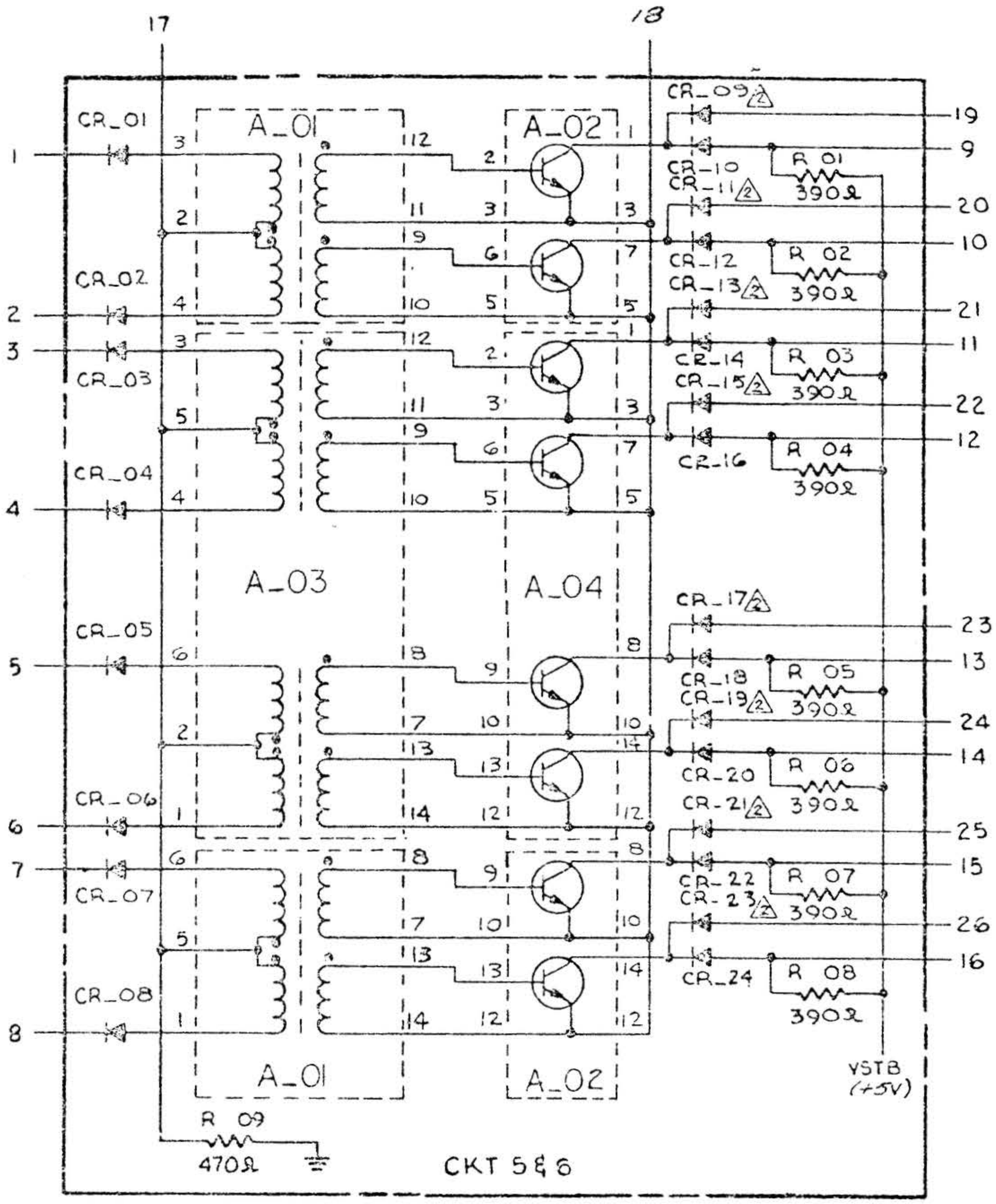
CAGE IDENT NO.	SIZE	DWG NO	REV
21101	C	9IC0377	K
SCALE			13.0



1 NUMBERS OUTSIDE PHANTOM LINES CORRESPOND TO CIRCUIT BLOCKS 3 & 4 ON SHT. 17.0

DRIVER SWITCHES NEGATIVE

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE			-14.0

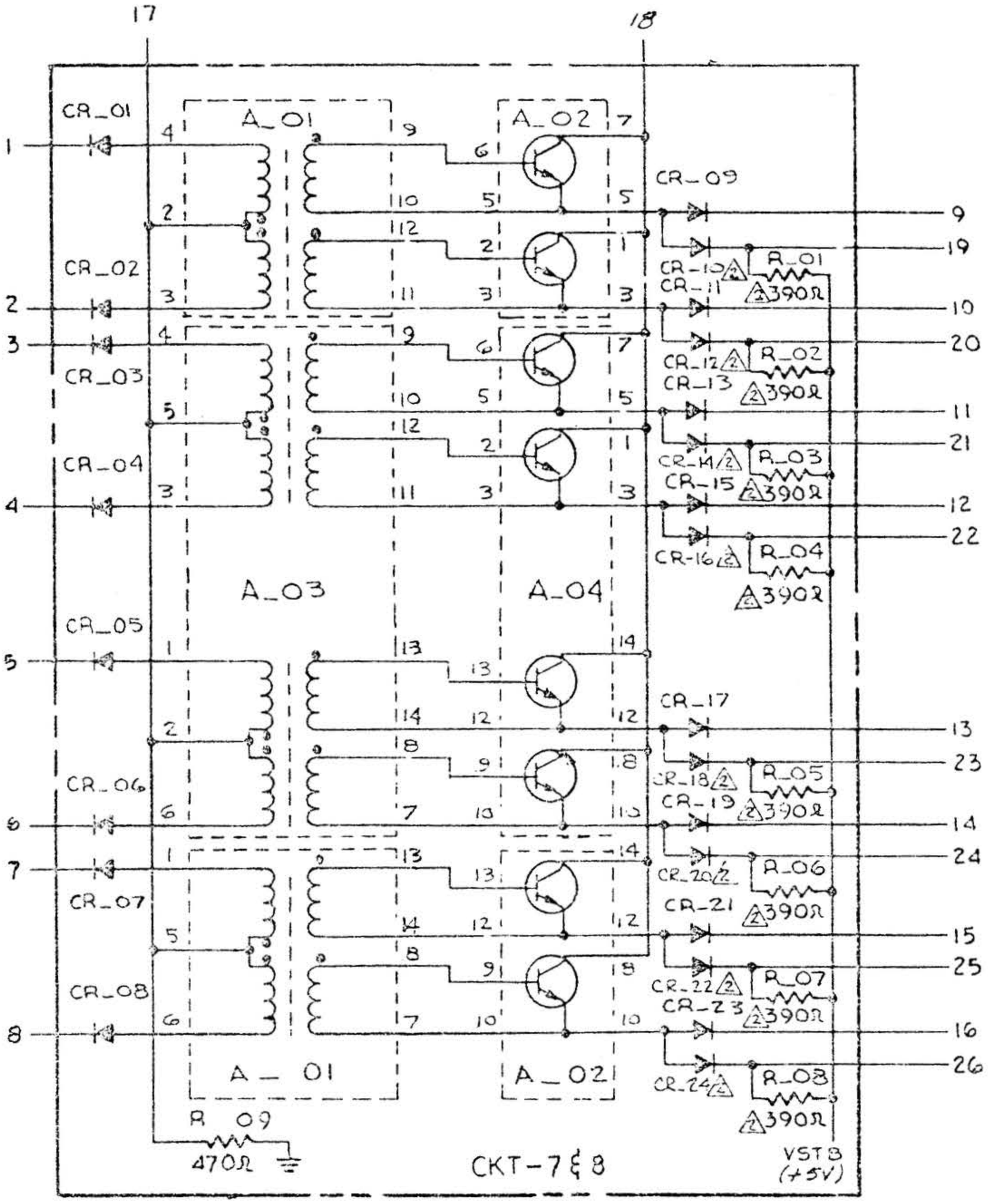


1. NUMBERS OUTSIDE PHANTOM LINES CORRESPOND TO CIRCUIT BLOCKS 5 & 6 ON SHT. 15.0

(2) NOT USED FOR 4K VERSION (-000 & -002)

SINK SWITCH NEGATIVE

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	91C0377	K
SCALE			15.0

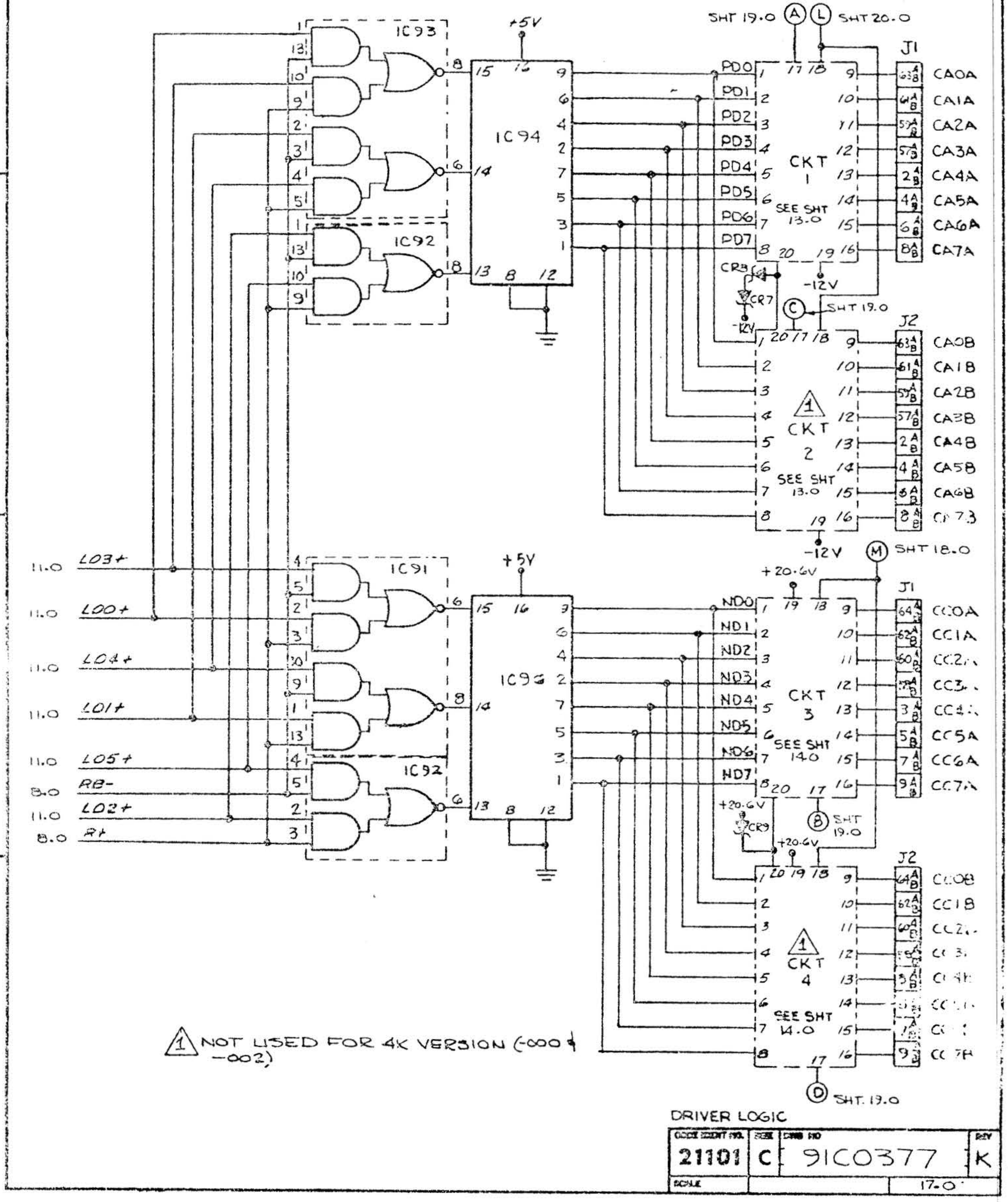


1. NUMBERS OUTSIDE PHANTOM LINES CORRESPOND TO CIRCUIT BLOCKS 7 & 8 ON SHT. 18.0

△2 NOT USED FOR 4K VERSION (-000 & -002)

SINK SWITCH POSITIVE

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE			16.0


IC93
IC92
IC94
+5V
SHT 19.0
SHT 20.0
J1
PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
CKT 1
SEE SHT 13.0
CA0A
CA1A
CA2A
CA3A
CA4A
CA5A
CA6A
CA7A
CR8
CR7
-12V
SHT 19.0
J2
CA0B
CA1B
CA2B
CA3B
CA4B
CA5B
CA6B
CA7B
CKT 2
SEE SHT 13.0
-12V
SHT 18.0
+20.6V
IC91
IC92
IC96
LO3+
LO0+
LO4+
LO1+
LO5+
RB-
LO2+
R+
11.0
11.0
11.0
11.0
11.0
8.0
11.0
8.0
ND0
ND1
ND2
ND3
ND4
ND5
ND6
ND7
CKT 3
SEE SHT 14.0
CC0A
CC1A
CC2A
CC3A
CC4A
CC5A
CC6A
CC7A
CR9
SHT 19.0
CC0B
CC1B
CC2B
CC3B
CC4B
CC5B
CC6B
CC7B
CKT 4
SEE SHT 14.0
SHT. 19.0
1 NOT USED FOR 4K VERSION (-000 & -002)
DRIVER LOGIC
21101
C
9100377
K
17.0

4 3 2 1

+5V

LO6 + 11.0 — 15

LO7 + 11.0 — 14

LO8 12.0 — 13

IC95

16 1 2 3 4 5 6 7 9 8 12

DX50 DX51 DX52 DX53 DX54 DX55 DX56 DX57

-12V

L3

R84 10Ω 1/2W

C73 1.0μF

+20.6V

L4

R83 10Ω 1/2W

H SHT 17.0, 20.0

SHT. 19.0 E

17 18

CKT 6 SEE SHT 15

CKT 8 SEE SHT 16

J1

16A X50A
16B X51A
15A X52A
15B X53A
14A X54A
14B X55A
13A X56A
13B X57A

J2 1

13B X57B
13A X56B
14B X55B
14A X54B
15B X53B
15A X52B
16B X51B
16A X50B

+5V

LO9+ 12.0 — 15

LO10+ 12.0 — 14

LO11+ 12.0 — 13

IC97

16 1 2 3 4 5 6 7 9 8 12

DY50 DY51 DY52 DY53 DY54 DY55 DY56 DY57

-12V

L5

R85 10Ω 1/2W

R86 10Ω 1/2W

L6

C81 1.0μF

+20.6V

F SHT 19.0

SHT 19.0 K

17 18

CKT 5 SEE SHT 15

CKT 7 SEE SHT 16

J1

50B YS0A
50A YS1A
51B YS2A
51A YS3A
52B YS4A
52A YS5A
53B YS6A
53A YS7A

J2 1

53A YS7B
53B YS6B
52A YS5B
52B YS4B
51A YS3B
51B YS2B
50A YS1B
50B YS0B

1 NOT USED FOR 4K VERSION (-000 & -002)

SINK LOGIC

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE			SHEET 19.0

4 3 2 1

+5V +12V

N/U R63 1.3K
N/U R65 910Ω
N/U Q13
Q14 N/U
N/U R67 51Ω
N/U R68 3K
N/U Q16
R69 2.4K
N/U R61 620Ω
N/U Q11
N/U Q12
N/U R66 3K
N/U Q15
N/U R60 3.3K
N/U R62 10K
N/U R64 510Ω
N/U C88 0.1UF 50V

+5V
R71 270Ω
CR18
R70 270Ω
R72 2.4K
CR17
CR16
R56 620Ω
Q17
Q21
TP17
SHT 17.0 (B)
SHT 17.0 (A)

+12V
R76 2.4K
R75 270Ω
R73 2.4K
R74 270Ω
CR20
Q22
CR19
Q18
SHT 17.0 (D)
SHT 17.0 (C)

9.0 RWT1− 1 2 IC88
12.0 L12− 9 10 IC89 8
2 1 IC89 3 R58 620Ω
9.0 RWT2− 5 6 IC88
4 5 IC89 6 R59 620Ω
12 13 IC89 11 R57 620Ω
12.0 L12+

+12V
R80 1.2K
R81 270Ω
R82 270Ω
CR23
CR24
Q20
Q24
SHT 18.0 (E)
SHT 18.0 (F)

9.0 WST− 13 12 IC88
9 10 IC90 8 R54 300Ω

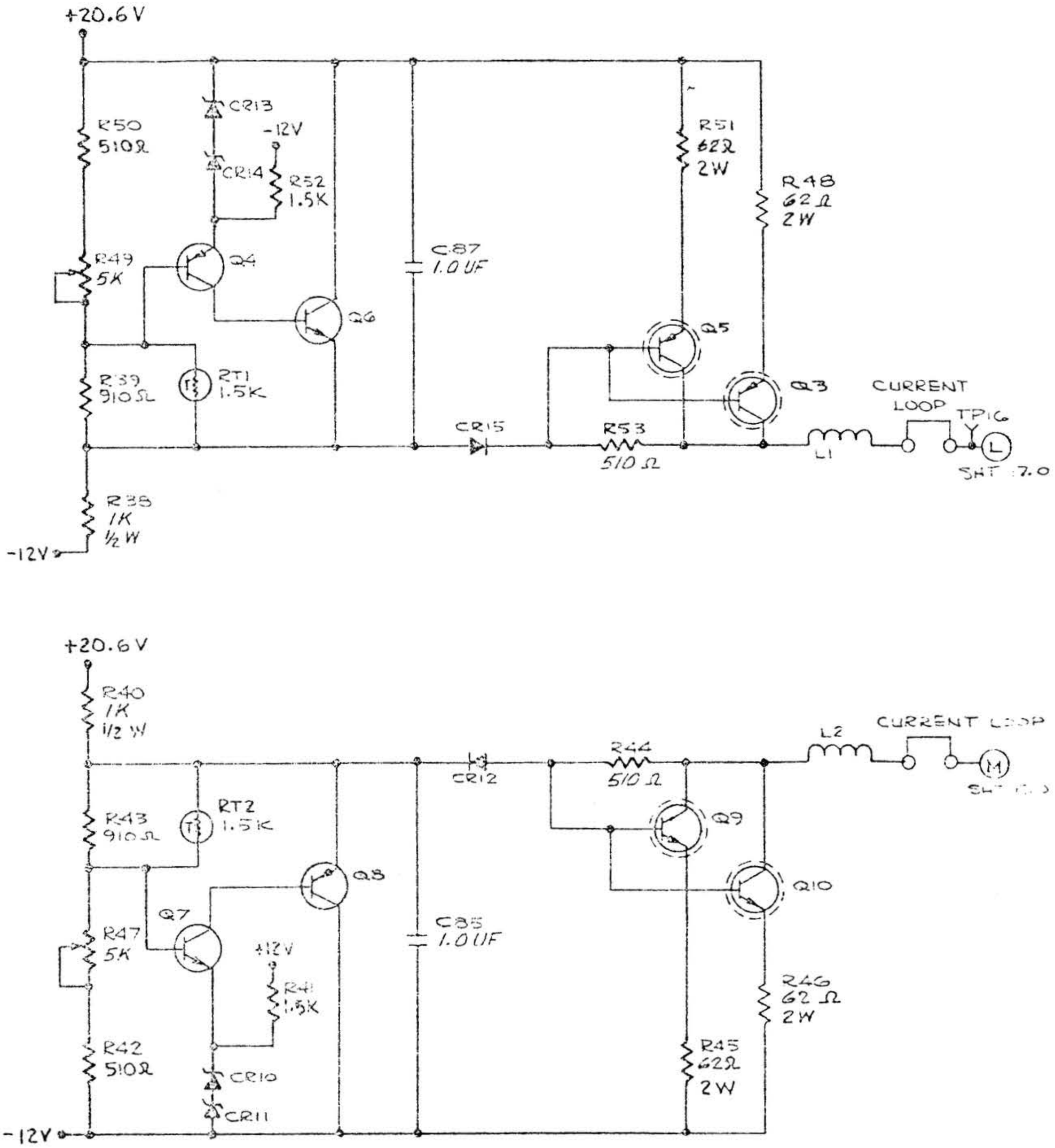
+12V
R77 1.2K
R78 270Ω
R79 270Ω
CR22
Q23
TP18
Q19
SHT 18.0 (G)
SHT 18.0 (H)

9.0 RST− 9 8 IC88
12 13 IC90 11 R55 300Ω

1 NOT USED FOR 4K VERSION (-000 & -002)

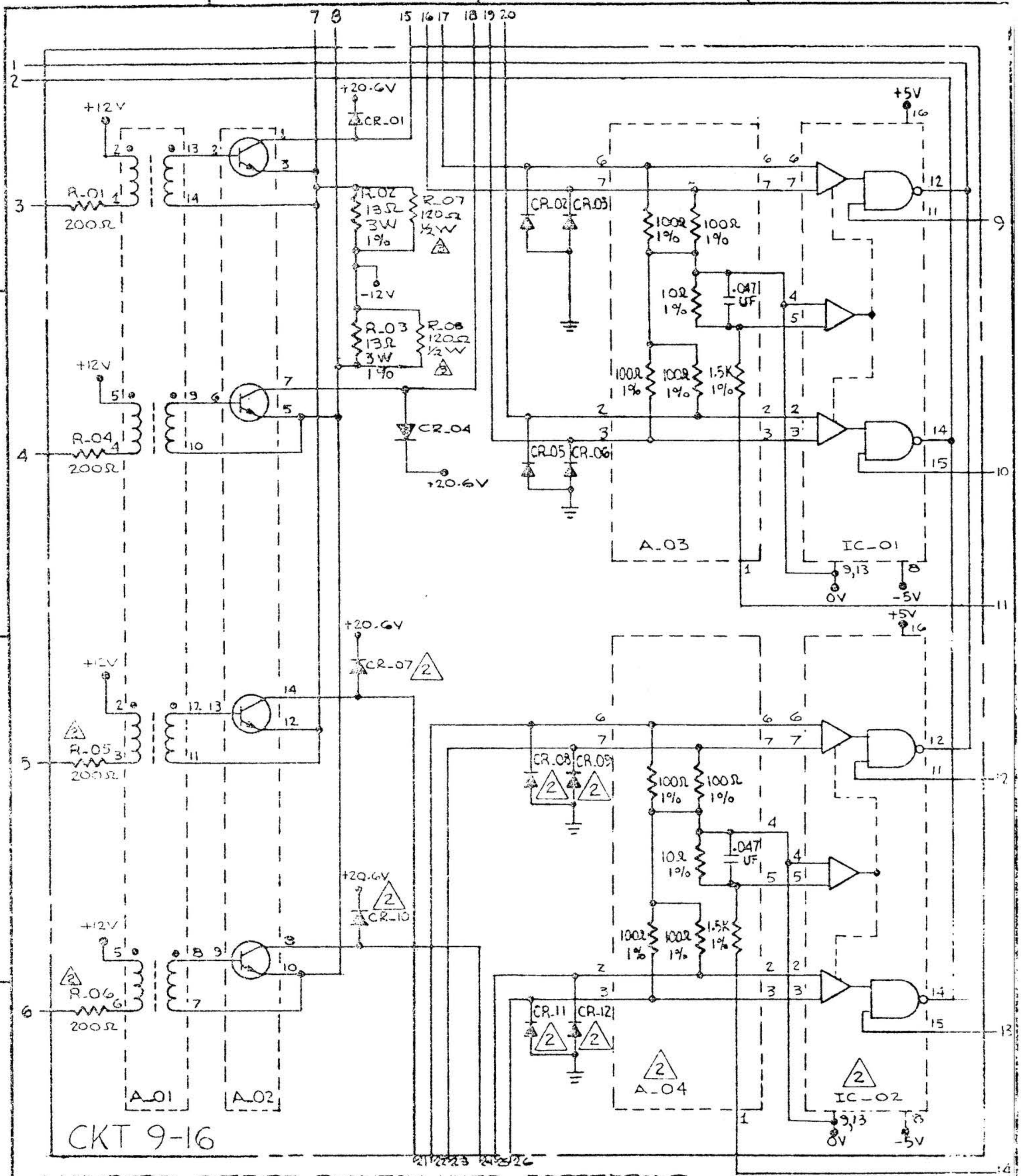
PRE DRIVER CIRCUITS, X & Y

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	K
SCALE			19.0



CURRENT SOURCES

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9100377	A
SCALE			20-0



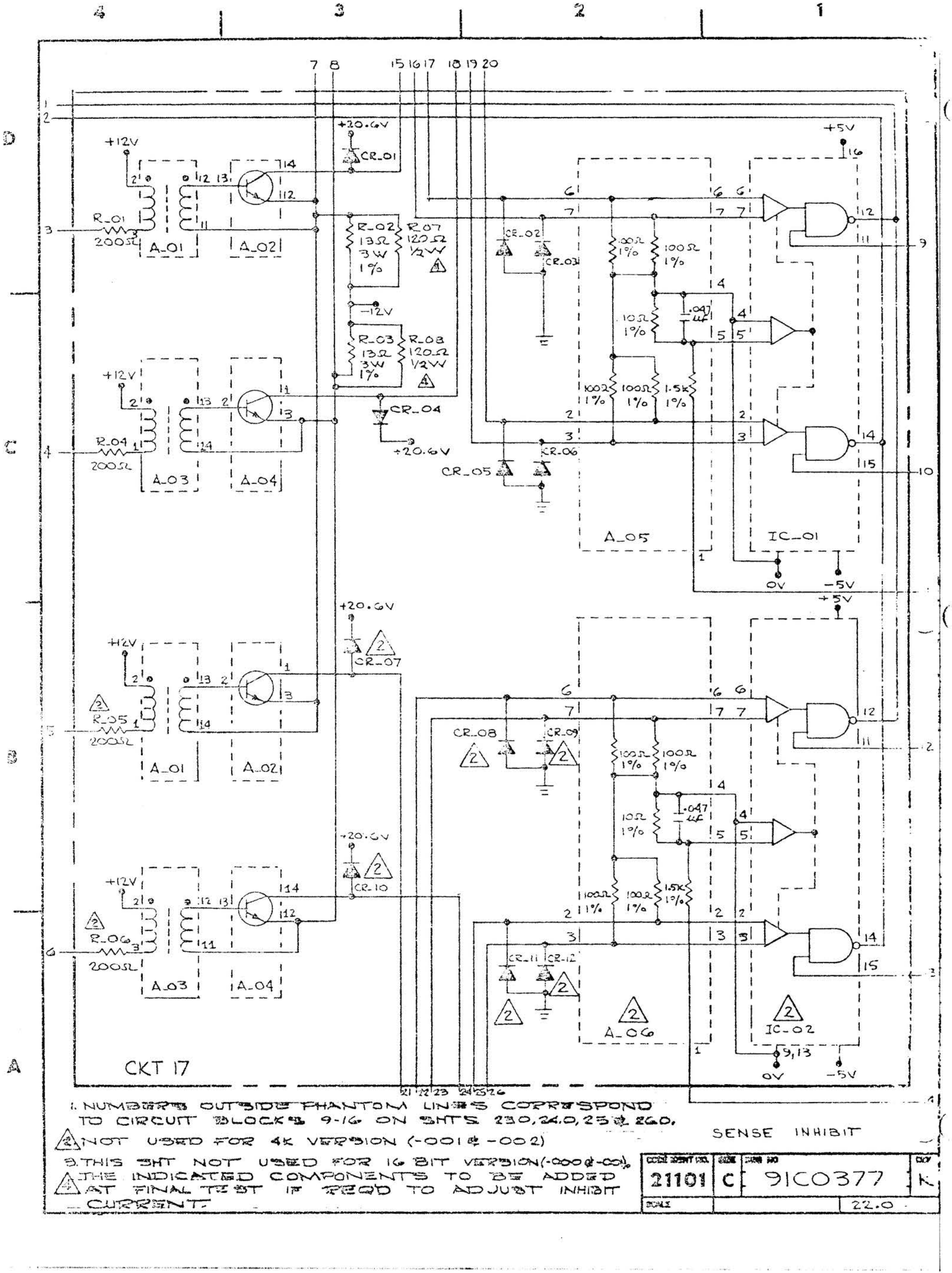
1. NUMBERS OUTSIDE PHANTOM LINES CORRESPOND TO CIRCUIT BLOCKS 9-16 ON SHTS 23.0, 24.0, 25.0 & 26.0.

△2 NOT USED FOR 4K VERSION (-000 & -002)

△3 THE INDICATED COMPONENTS TO BE ADDED AT FINAL TEST IF REQD TO ADJUST INHIBIT CURRENT.

SENSE INHIBIT

DRAWING NO.	SIZE	DWG NO	REV
21101	C	9C0377	K
SCALE			21.0



1. NUMBERS OUTSIDE PHANTOM LINES CORRESPOND TO CIRCUIT BLOCKS 9-16 ON SHTS 23.0, 24.0, 25 & 26.0.

△2 NOT USED FOR 4K VERSION (-001 & -002)

3. THIS SHT NOT USED FOR 16 BIT VERSION (-000 & -00)

△1 THE INDICATED COMPONENTS TO BE ADDED AT FINAL TEST IF REQD TO ADJUST INHIBIT CURRENT.

21101	C	9IC0377	K
			22.0

10.0 DOENRA+
10.0 DOENRB+
7.0 INHTAR+
7.0 INHTBR+
DRCLK+ 10.0
7.0 SASBR+
7.0 SASAR+
10.0 DIENRB+
10.0 DIENRA+

MYDA00- P1 48A
MYDB00- P1 48B
MYDA01- P1 49A
MYDB01- P1 49B
MYDA02- P1 50A
MYDB02- P1 50B
MYDA03- P1 51A
MYDB03- P1 51B

IC 12
IC 53
IC 13
IC 53

IC 33
IC 69
IC 70
IC 33
IC 34
IC 79
IC 79
IC 34

-12V
A1 T.0018 T.0018
A3 T.0018 T.0018

CKT 9
SEE SH 21
CKT 10
SEE SH 21

IOOA SOOA SOOA IO1A SO1A
IOOB SOOB SOOB IO1B SO1B SO1B
IO2A SO2A SO2A IO3A SO3A SO3A
IO2B SO2B SO2B IO3B SO3B SO3B

J1 46B 46A 45B 45A 44A 44B
J2 21A 20A 20B 22B 22A 21B
J1 43B 43A 42B 42A 41A 41B
J2 24A 23A

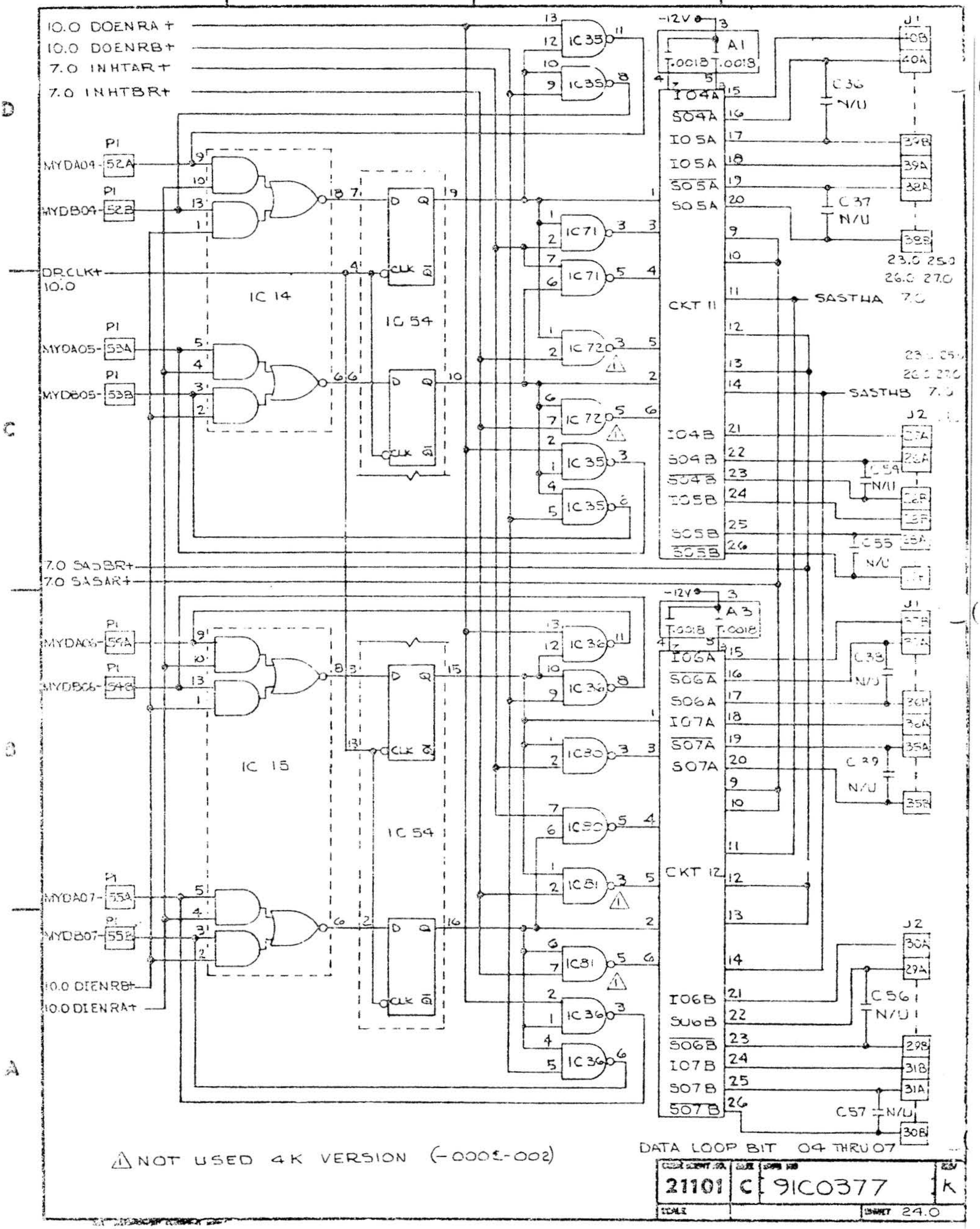
C32 N/U
C33 N/U
C50 N/U
C51 N/U
C34 N/U
C35 N/U
C52 N/U
C53 N/U

27.0 26.0 25.0 24.0 7.0 SASTHA
27.0 26.0 25.0 24.0 7.0 SASTHB

⚠1 NOT USED FOR 4K VERSION (-000 & -002)

DATA LOOP BIT CONTROL 03

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	91C0377	K
SCALE		SHEET 23.0	


10.0 DOENRA+
10.0 DOENRB+
7.0 INHTAR+
7.0 INHTBR+
MYDA04-
MYDB04-
MYDA05-
MYDB05-
DR CLK+
10.0
IC 14
IC 54
IC 15
IC 54
7.0 SADBR+
7.0 SASAR+
MYDA06-
MYDB06-
MYDA07-
MYDB07-
10.0 DIENRB+
10.0 DIENRA+
-12V
A1
A3
T.001B
C36 N/U
C37 N/U
C39 N/U
C59 N/U
C55 N/U
C38 N/U
C29 N/U
C56 N/U
C57 N/U
SASTHA 7.0
SASTHB 7.0
CKT 11
CKT 12
DATA LOOP BIT 04 THRU 07
NOT USED 4K VERSION (-0001-002)
21101
C
91C0377
K
24.0

10.0 DOENLA+
10.0 DOENLB+
7.0 INHTAL+
7.0 INHTBL+
MYDA03-
MYDB03-
DRCLK+ 10.0
IC 17
IC 55
MYDA09-
MYDB09-
7.0 SASBL+
7.0 SASAL+
MYDA10-
MYDB10-
IC 18
IC 56
MYDA11-
MYDB11-
10.0 DIENLB+
10.0 DIENLA+
IC 38
IC 74
IC 75
IC 39
IC 83
IC 84
-12V
A2
A4
.0018
IO8A
SO8A
SO8A
IO9A
SO9A
IO8B
SO8B
SO8B
IO9B
SO9B
SO9B
IIOA
SIOA
SIOA
IIIA
SIIA
SIIA
IIOB
SIOB
SIOB
IIIB
SIIB
SIIB
CKT 13
CKT 14
SEE SH 21
J1
J2
C42 N/U
C43 N/U
C60 N/U
C61 N/U
C44 N/U
C45 N/U
C62 N/U
C63 N/U
23.0 24.0 26.0 27.0
SASTHA 7.0
SASTHB 7.0
NOT USED 4K VERSION (-0001-002)
DATA LOOP BIT 08 THRU 11
21101
C
9IC0377
K
SHEET 25.0

4 3 2 1

10.0 DOENLA+
10.0 DOENLB+
10.0 INHTAL+
7.0 INHTBL+

P1 MYDA12- 60A
P1 MYDB12- 60B
DRCLK+ 10.0
P1 MYDA13- 61A
P1 MYDB13- 61B
7.0 SASBL+
7.0 SASAL+
P1 MYDA14- 62A
P1 MYDB14- 62B
P1 MYDA15- 63A
P1 MYDB15- 63B
10.0 DIENLB+
10.0 DIENLA+

IC 19 — IC56
IC 20 — IC57

IC40 IC76 IC77 IC40 IC41 IC85 IC86 IC41

-12V 3 — A2 — .0018 .0018 — 7 5 8

I12A S12A S12A I13A S13A S13A
I12B S12B S12B I13B S13B S13B
I14A S14A S14A I15A S15A S15A
I14B S14B S14B I15B S15B S15B

C46 N/U
C47 N/U
C64 N/U
C65 N/U
C48 N/U
C49 N/U
C66 N/U
C67 N/U

J1 25B 25A 24B 24A 23A 23B
J2 42A 41A 41B 43B 43A 42B
J1 22B 22A 21B 21A 20A 20B
J2 45A 44A 44B 45B

23.0 24.0 25.0 27.0 7.0

CKT 15 SASTHA
SEE SH 21
SASTHB 7.0
CKT 16 SEE SH 21

△1 NOT USED 4K VERSION (-0001-002)

DATA LOOP BIT 12 THRU 15

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	91C0377	K
SCALE		SHEET 26.0	

7.0 SASABR+
7.0 SASAR+

-12V
C71 .0018uF
C72 .0018uF

10.0DOENRA+
10.0DOENRB+
7.0 INHTAR+
7.0 INHTBR+

IC37 IC37 IC73 IC82 IC73 IC82 IC37 IC37

P1 64A MYDA16-
P1 64B MYDB16-
10.0 DIENRA+
10.0 DIENRB+
10.0 DRCLK+

IC16 IC55

P1 65A MYDA17-
P1 65B MYDB17-
10.0 DIENLA+
10.0 DIENLB+

7.0 INHTAL+
7.0 INHTBL+
10.0DOENLA+
10.0DOENLB+

7.0 SASAL+
7.0 SASBL+

J1 34B 34A N/U C40 75pF
J1 33B 33A 32A N/U C41 75pF 32B
J2 33A 32A 32B N/U C58 75pF
J1 34B 34A N/U C59 75pF 33B

I16A S16A S16A I17A S17A S17A
I16B S16B S16B I17B S17B S17B

CKT17

SEE SH 22

SASTHA 7.0 23.0 24.0 25.0 26.0
SASTHB 7.0 23.0 24.0 25.0 26.0

1. THIS SHEET FOR 18 BIT VERSION ONLY(-002 & -003)

DATA LOOP BIT 16 & 17

CODE IDENT NO.	SIZE	DWG NO	REV
21101	C	9IC0377	K
SCALE			27.0