

AO.OO.O

P/N 8156954

IBM

SYSTEMS DIAGRAMS

1011,1021
MAGNETIC TAPE
72 TYPEWRITER

EC	957519					
DATE	MAY 27-70					
TW						
DATE						
EC						
DATE						
TW						
DATE						

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A1.01.1
P/N 8156955

DESCRIPTION		LOGIC NO.	PART NO.	EC LEVEL
<u>GENERAL INFORMATION</u>				
Systems title page		A0.00.0	8156954	957519
Table of contents		A1.01.1	8156955	957519
Table of contents		A1.02.1	8156955	957519
Table of contents		A1.03.1	8156955	957519
Additional features		A1.20.1	8157076	957519
Additional features		A1.20.1	8157076	957519
Components		A1.30.1	1161307	70720
<u>SMS CARDS</u>				
Capacitor, filter	AET	A2.12.1	1161309	70720
NOR(N), 2-way	MX	A2.12.1	1161309	70720
Trigger-translator	ZKC	A2.10.1	1161308	70788-A
Write/erase driver	ZKD	A2.10.1	1161308	70788-A
Selector	ZKE	A2.10.1	1161308	70788-A
Sequence identif.	ZKF	A2.10.1	1161308	70788-A
Shaper, and-ET	ZKG	A2.11.1	1161308	70810
Thyratron	ZKH	A2.11.1	1161308	70810
And/or logic	ESZ	A2.11.1	1161308	70810
AMP/senser	ZKY	A2.11.1	1161308	70810
<u>REFERENCE DIAGRAMS</u>				
Card locations		A3.10.1	1161310	70810
Voltage distribution		A3.10.1	1161310	70810
Head displacement		A3.11.1	1161311	70788-A
Bit Distrib. on tape		A3.11.1	1161311	70788-A
Circuit breaker timing		A3.11.1	1161311	70788-A
<u>LOGIC DIAGRAMS</u>				
Title page		B0.00.0	1161312	70762
Signal locations		B0.01.1	1161313	70720
Signal locations		B1.02.1	1161313	70720
Electronic controls		B1.01.1	1161314	70762
Electronic controls		B1.02.1	1161314	70762
Magn. P.U. selection		B1.02.2	1161315	70762
Bit register logic		B1.03.1	1161315	70762
Record/check logic		B1.04.1	1161316	70762
Playback logic		B1.05.1	1161316	70762

MACHINE 1011, 1021

EC 957519

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A1.02.1
P/N 8156955

DESCRIPTION	LOGIC NO.	PART NO.	EC LEVEL
<u>RELAY WIRING DIAGRAM</u>			
Title page	C0.00.0	8156956	957519
Power supply 60 CPS (1-2)	C1.01.1	8156987	957519
Power supply 50 CPS (1-2)	C1.01.2	8157068	957519
Basic wiring (3-4)	C2.01.1	8156988	957519
Basic wiring (5-6)	C2.01.2	8156988	957519
Basic wiring (7-8)	C2.02.1	8156988	957519
Basic wiring (9-10)	C2.03.1	8156989	957519
Basic wiring (11-12)	C2.04.1	8156989	957519
Basic wiring (13-14)	C2.05.1	8157057	957519
Basic wiring (15-16)	C2.06.1	8157057	957519
Basic wiring (17-18)	C2.07.1	1161322	70885
Basic wiring (19-20)	C2.07.1	1161322	70788-A
Basic wiring (21-22)	C2.08.1	1161322	70820
Basic wiring (23-24)	C2.08.2	1161322	70810
Basic wiring (25-26)	C2.09.1	8157058	957519
Basic wiring (27-28)	C2.10.1	8157058	957519
Basic & search (29-30)	C2.11.1	8156991	957519
Basic wiring (31-32)	C2.12.1	8156991	957519
Basic wiring (33-34)	C2.13.1	1161325	70810
Basic wiring (35-36)	C2.14.1	1161325	70810
Search wiring (37-38)	C3.01.1	1161327	70885
Search wiring (39-40)	C3.02.1	1161327	70788-A
Search wiring (41-42)	C3.03.1	1161328	70830
Search wiring (43-44)	C3.04.1	1161328	70762
Search wiring (45-46)	C3.05.1	1161329	70796
Adjust wiring (47-48)	C4.01.1	1161330	70810
Encode wiring (49-50)	C5.01.1	8156992	957519
Encode wiring (51-52)	C5.01.2	8156992	957519
Bit relay wiring (53-54)	C6.01.1	8156992	957519
Electronic wiring (55-56)	C7.01.1	8157059	957519
I/O 775 (WT1-WT2)	C8.02.1	8158246	957446
I/O 775 (WT3-WT4)	C8.02.2	8158246	957441
I/O 775 (WT5-WT6)	C8.02.3	8158246	957441
Dual velocity (WT7-WT8)	C8.03.1	8157069	957519
Dual velocity (WT9-WT10)	C8.03.2	8157069	957519
Dual velocity (WT11-WT12)	C8.03.3	8157069	957519
Dual velocity (WT13-WT14)	C8.03.4	8157069	957519
Dual velocity (WT15-WT16)	C8.03.5	8157069	957519
Dual velocity (WT17-WT18)	C8.04.1	8156919	70885
Dual velocity (WT19-WT20)	C8.04.2	8156919	70885
Relay location chart	C9.01.1	8157060	957519
Adl. location chart	C9.02.1	8157000	957519
Adl. location chart	C9.02.2	8157000	957519
Adl. location chart	C9.03.1	8157000	957519
Adl. location chart	C9.03.2	8157000	957519
Adl. location chart	C9.04.1	8157000	957519

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A1.03.1
P/N 8156955

DESCRIPTION	LOGIC NO.	PART NO.	EC LEVEL
<u>SUPPLEMENTAL DIAGRAMS</u>			
MT72 Code sheet	D1.09.1	1161341	70865
MT72 Code sheet	D1.09.2	1161341	70830
MT72 Code sheet	D1.09.3	1161341	70830
MT72 Code sheet graphics		8156872	70885

MACHINE 1011, 1021
EC 957519
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ADDITIONAL AND SELECTIVE FEATURES

	CHECK ONE
60 CPS GROUP	
50 CPS GROUP	✓
R.I. FILTER GROUP	✓
*TRANSFER ADJUST WITH CODE CONVERSION	✓
REVERSED SEARCH	✓
COMPOSER COMPATIBILITY	
KEYBOARD GROUPS 775 FOR HYPHEN DECODING, DUAL VELOCITY AND DEAD KEY	
COUNTRY	CHECK ONE
001 - DOMESTIC, CANADA (ENGLISH)	
369 - UNITED KINGDOM	
370 - FRENCH / FRANCE	
372 - BRAZIL	
373 - PORTUGAL	
486 - GERMANY	✓
491 - CZECHOSLOVAKIA	
493 - CANADA (FRENCH)	
693 - GREECE	
948 - SPAIN	
971 - BRAZIL	
974 - UNITED KINGDOM	
975 - NORDIC	
976 - GERMANIC	
977 - LATIN	
978 - FRENCH / LATIN	
983 - FRANCE	
985 - ITALY	
986 - SWEDEN / FINLAND	
987 - DENMARK	
988 - NORWAY	
989 - SWITZERLAND (FRENCH)	
990 - SWITZERLAND (GERMAN)	
991 - THE NETHERLANDS	
992 - HUNGARY	
994 - PORTUGAL	
995 - PORTUGAL	

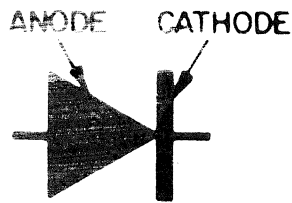
*MODEL 1021 ONLY

ADDITIONAL AND SELECTIVE FEATURES

FOR MACHINES WITH COMPOSER COMPATIBILITY (4K)		
		CHECK ONE
350	-	GERMANY
351	-	CANADA (FRENCH)
352	-	SPAIN
353	-	BRAZIL
354	-	FRANCE (LATIN)
355	-	UNITED KINGDOM
356	-	ITALY
357	-	SWEDEN / FINLAND
358	-	DENMARK
359	-	NORWAY
360	-	SWITZERLAND (FRENCH)
361	-	SWITZERLAND (GERMAN)
362	-	THE NETHERLANDS
363	-	PORTUGAL
370	-	FRENCH / FRANCE
371	-	FRANCE (FRENCH)
372	-	BRAZIL
373	-	PORTUGAL
374	-	ITALY (FRENCH)
377	-	HUNGARY
378	-	YUGOSLAVIA
379	-	YUGOSLAVIA
381	-	DOMESTIC , CANADA (ENGLISH)
384	-	YUGOSLAVIA (CYRILIC)
973	-	DOMESTIC
974	-	UNITED KINGDOM
975	-	NORDIC
976	-	GERMANIC
977	-	LATIN
978	-	FRENCH / LATIN

COMPONENTS

DIODES AND RECTIFIERS



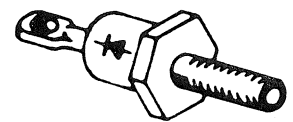
CONVENTIONAL CURRENT
FLOW IS FROM THE
ANODE TO THE CATHODE



A M DIODE

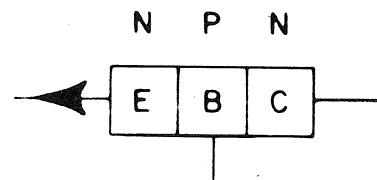
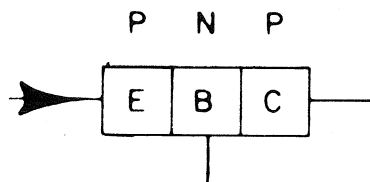


AA_S DIODE

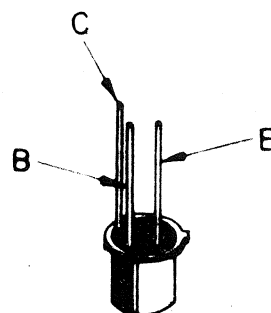


POWER RECTIFIER

TRANSISTORS

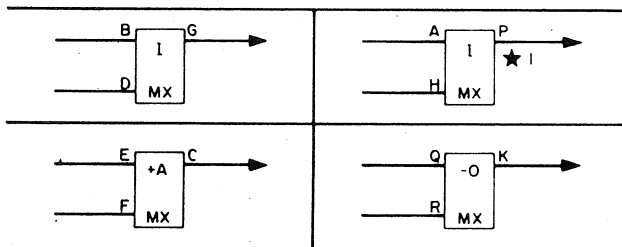
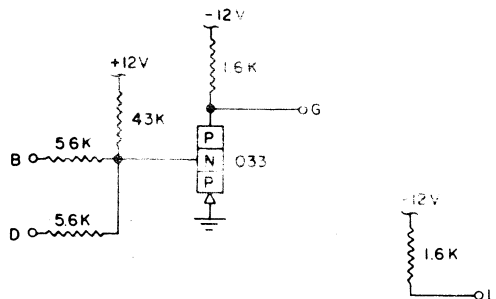


CONVENTIONAL CURRENT FLOW IS IN THE DIRECTION OF
THE ARROW WHEN THE TRANSISTOR IS IN CONDUCTION



TO 5 PACKAGE

NOR (N), 2-WAY, 4 CKTS

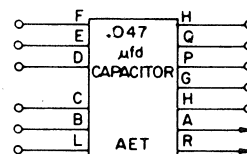
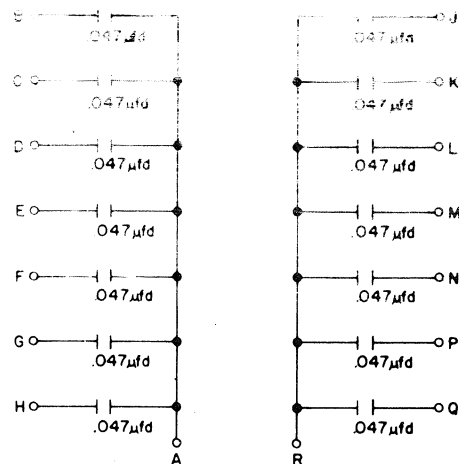


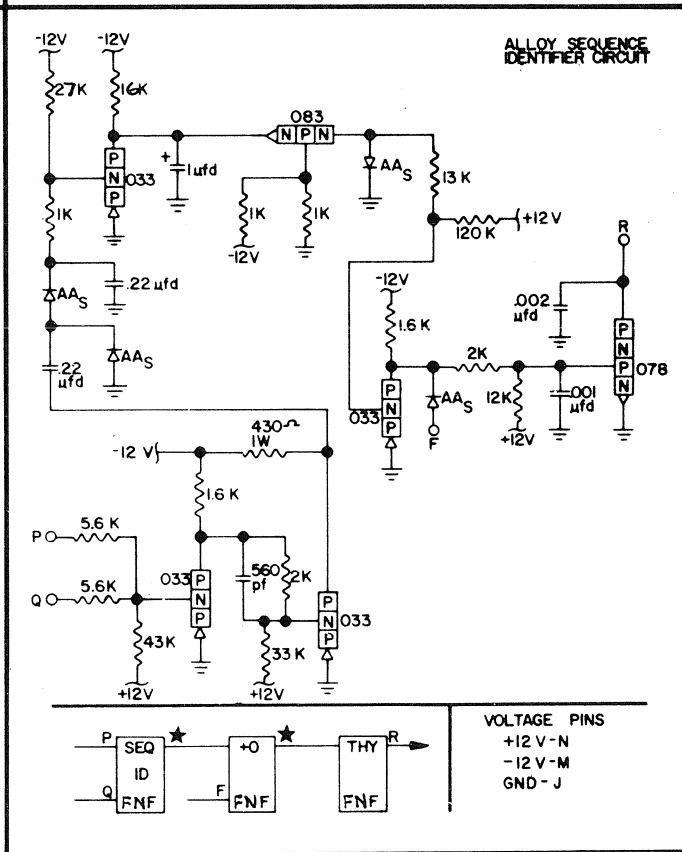
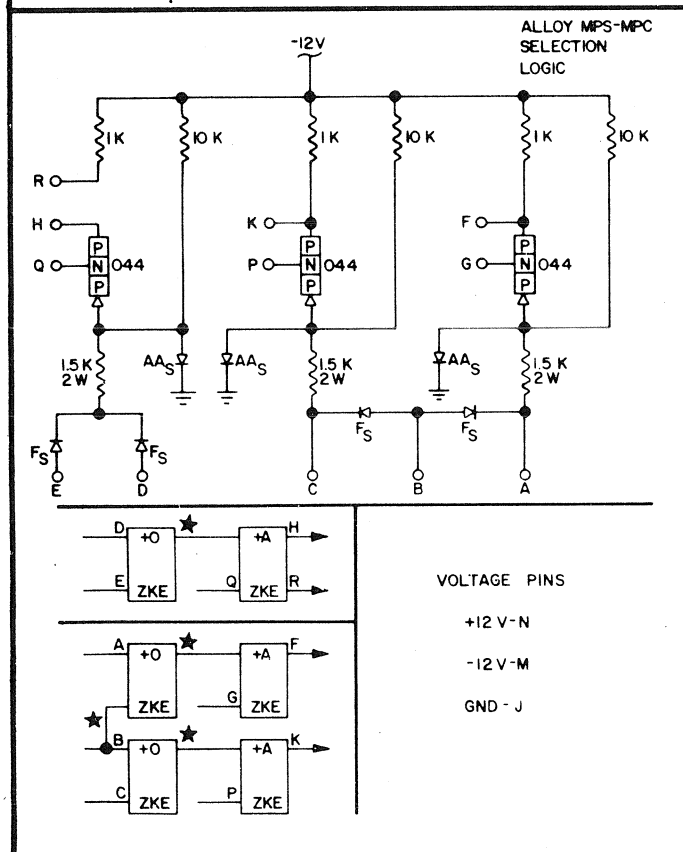
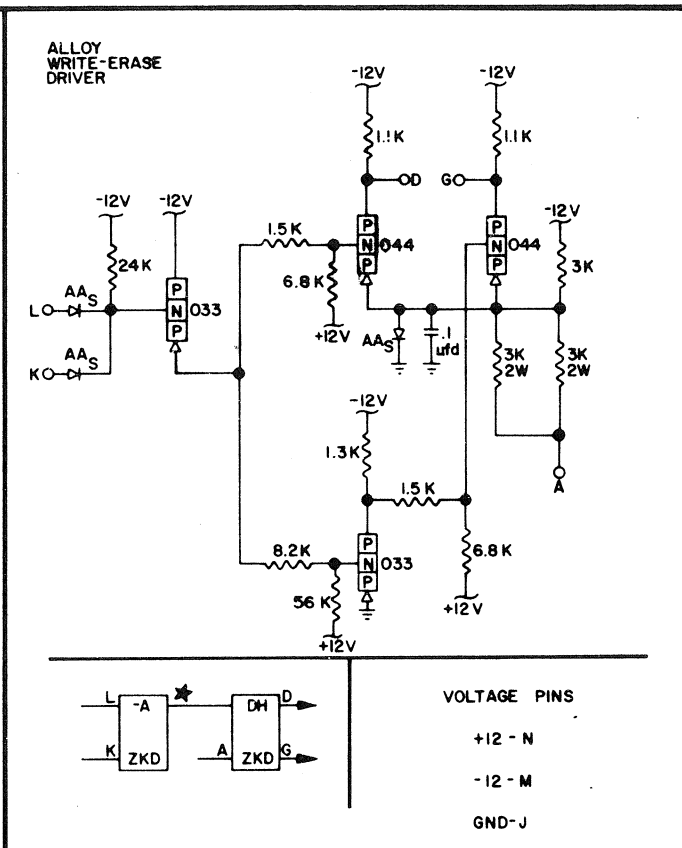
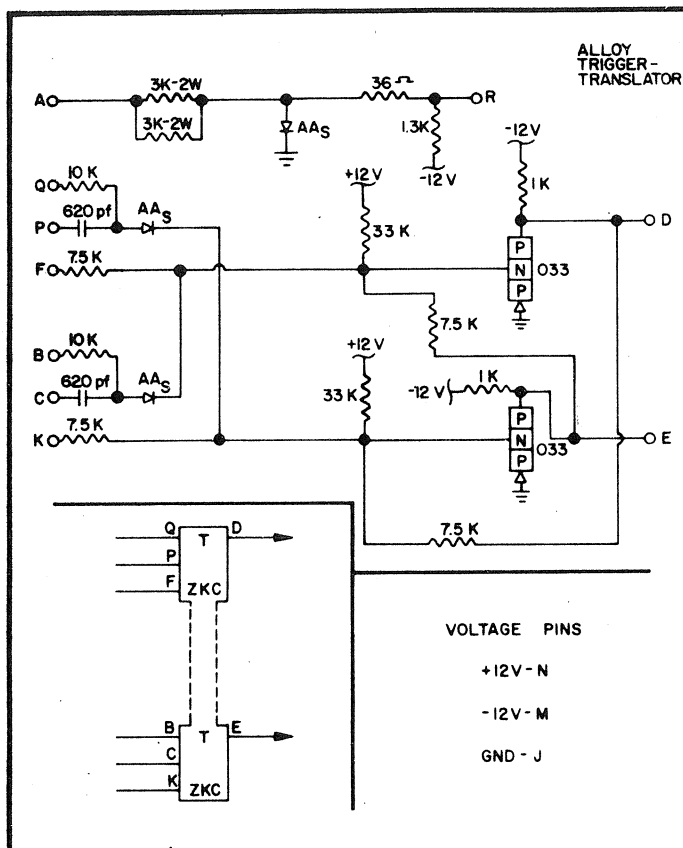
LOGIC
+ AND
- OR
INVERTER

NOTES
★ I
CKT DOES NOT
HAVE A COLL.
LOAD RESISTOR

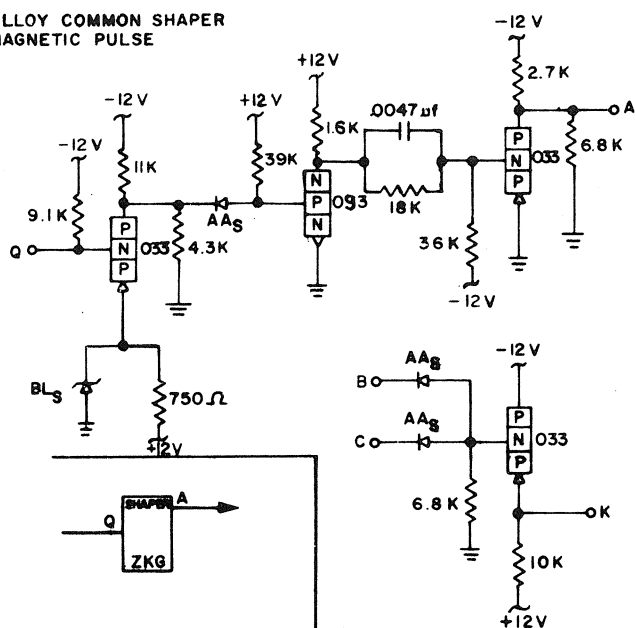
VOLTAGE PINS
+ 12V - N
- 12V - M
GND - J

CABLE FILTER CARD
14 CKTS





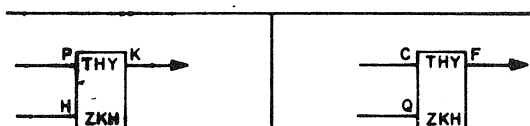
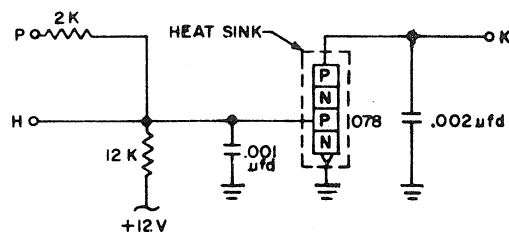
ALLOY COMMON SHAPER MAGNETIC PULSE



VOLTAGE PINS

+12V - N
-12V - M
GND - J

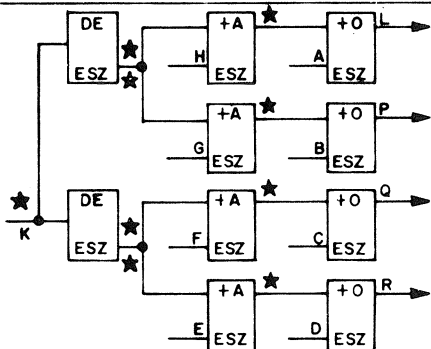
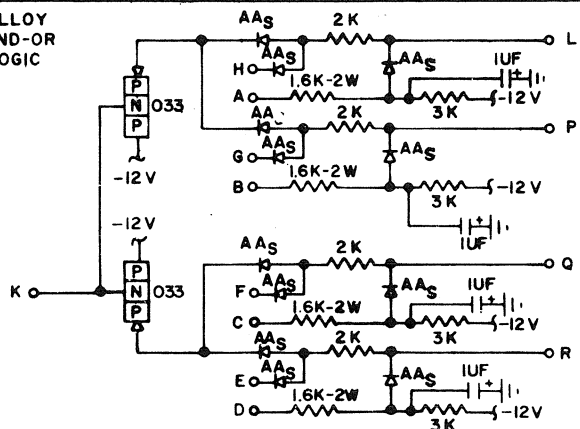
ALLOY THYRATRON DRIVER 3 CIRCUITS



VOLTAGE PINS

+12V - N
-12V - M
GND - J

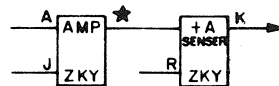
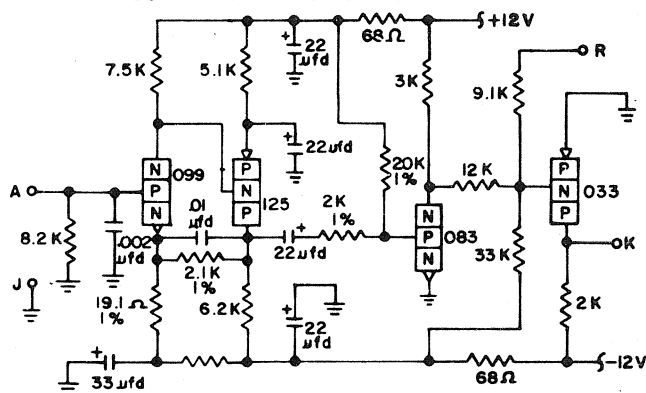
ALLOY AND-OR LOGIC



VOLTAGE PINS

+12V - N
-12V - M
GND - J

ALLOY AMPLIFIER - SENSING UNIT



VOLTAGE PINS

+12V - N
-12V - M
GND - J

CARD LOCATIONS AND USE

12	11	10	9	8	7	6	5	4	3	2	1
THY. ZKH	THY. ZKH	THY. ZKH	AND-OR ESZ	AND-OR ESZ	SELECT. ZKE	SELECT. ZKE	SELECT. ZKE	SELECT. ZKE	SHAPER ZKG	CAPACITOR AET	EMITTER PADDLE
PN 372674	PN 372674	PN 372674	PN 374932	PN 374932	PN 372671	PN 372671	PN 372671	PN 372671	PN 372673	PN 370255	PN 491349

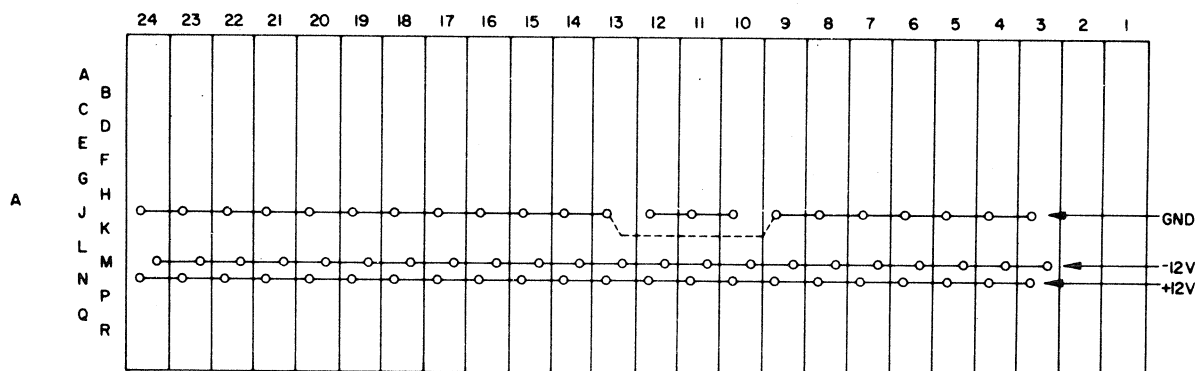
A

24	23	22	21	20	19	18	17	16	15	14	13
SEQ. ID. FNF		W/E ZKD	AMP ZKY	AMP ZKY	W/E ZKD	2-WAY MX	TR ZKC	TR ZKC		TR ZKC	
PN 375086		PN 372670	PN 372608	PN 372608	PN 372670	PN 371661	PN 372669	PN 372669		PN 372669	
		*	*					*			

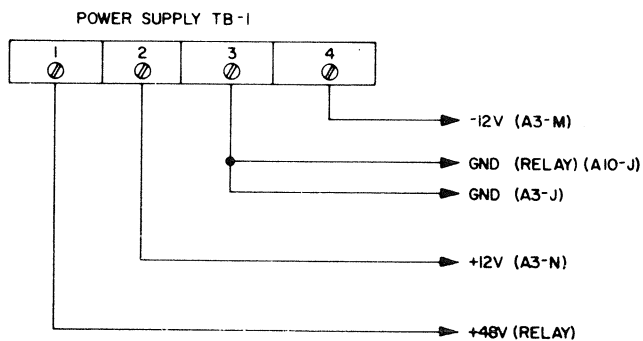
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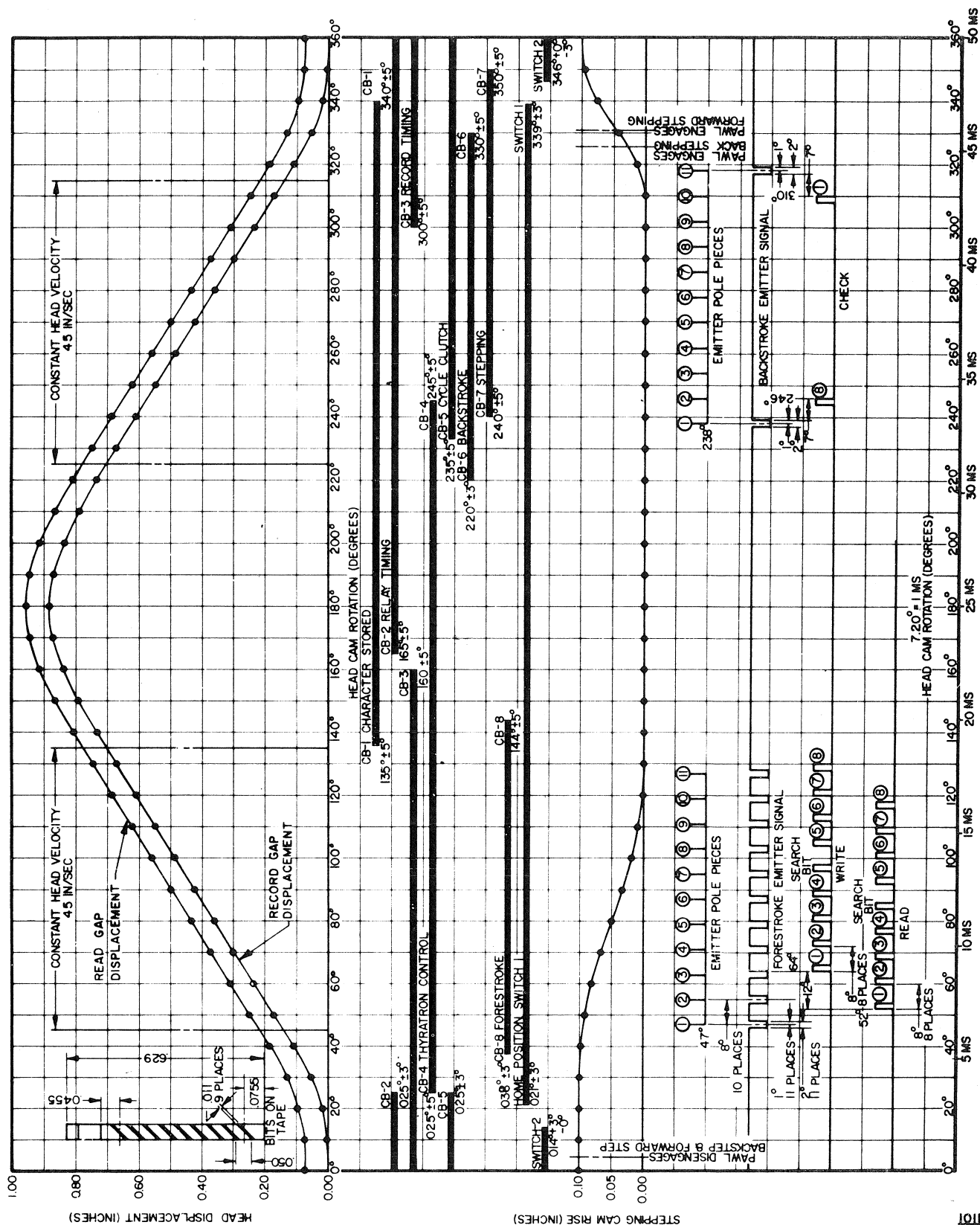
* CARDS 16, 21 AND 22 NOT USED FOR MODEL 1011

VOLTAGE DISTRIBUTION (SMS)



DENOTES VOLTAGE CHAIN ○—○
DENOTES JUMPER WIRE - - - -





IBM

LOGIC DIAGRAMS

1011,1021

MAGNETIC TAPE
72 TYPEWRITER

EC	505 397-A					
DATE	5-11-65					
TW	70762					
DATE	SEP 15-65					

SIGNAL LOCATIONS
+48V Signals

B0.01.1
P/N 1161313

SIGNAL	PRODUCED	SIGNAL	PRODUCED
Playback Select.	B1.01.1	Selection R1 Relay	B1.01.1
Encode Shift	B1.01.1	Selection R2 Relay	B1.01.1
Encode Check	B1.01.1	Selection R2A Relay	B1.01.1
Encode T2	B1.01.1	Selection R-5 Relay	B1.01.1
Encode T1	B1.01.1	Selection T1 Relay	B1.01.1
Encode R-5	B1.01.1	Selection T2 Relay	B1.01.1
Encode R2A	B1.01.1	Selection CK Relay	B1.01.1
Encode R2	B1.01.1	Selection SH Relay	B1.01.1
Encode Search	B1.01.1	Store R1	C5.01.1
Encode R1	B1.01.1	Store R2	C5.01.1
Address Right	B1.01.1	Store R2A	C5.01.1
Gate Record Right	B1.01.1	Store R-5	C5.01.1
Address Left	B1.01.1	Store T1	C5.01.1
Gate Record Left	B1.01.1	Store T2	C5.01.1
Record Set-Sample	B1.01.1	Store Check C5.01.1	C3.01.1
Condition Rec. Error	B1.01.1	Store Shift	C5.01.1
Read Trigger Inhibit	B1.01.1	Store Search	C3.01.1

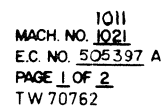
Machine 1011
1021
EC 504392
TW 70720
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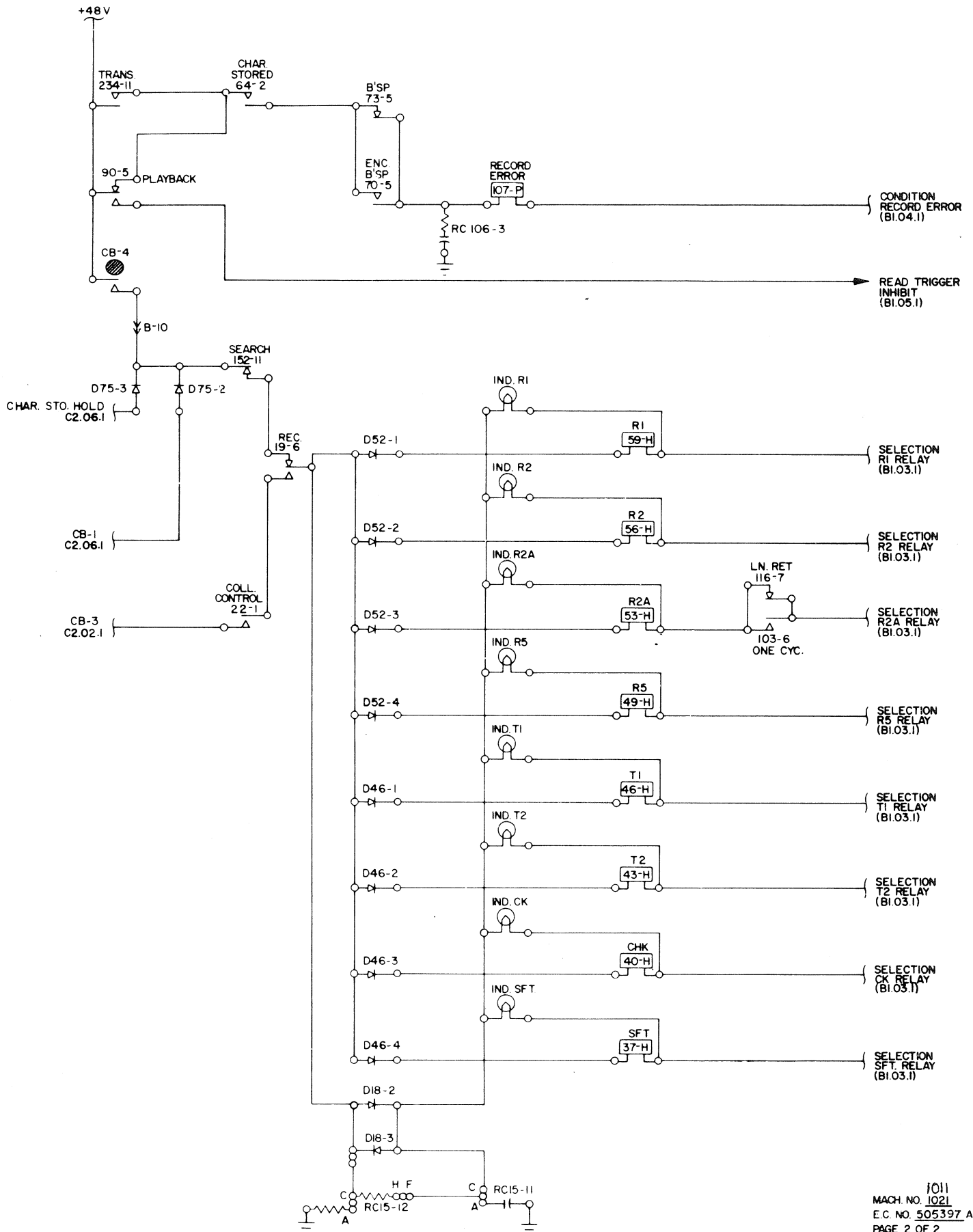
ELECTRONIC SIGNALS

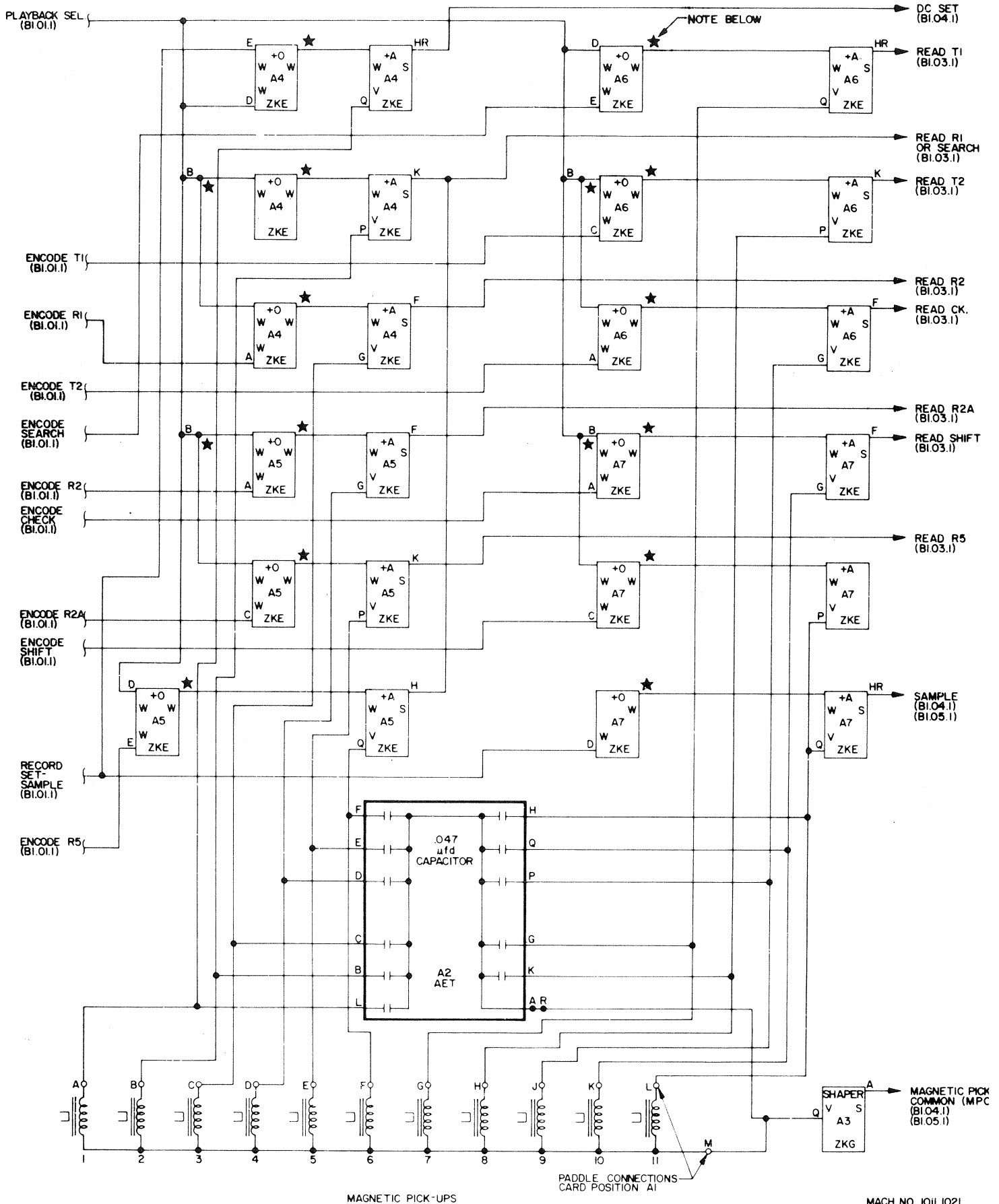
B1.02.1
P/N 1161313

SIGNAL	PRODUCED	SIGNAL	PRODUCED
DC Set	B1.02.1	CK Relay Selection	B1.03.1
Read T1	B1.02.1	SH Relay Selection	B1.03.1
Read R1 or Search	B1.02.1	Condition Record Error	B1.04.1
Read T2	B1.02.1	Bits Read	B1.05.1
Read R2	B1.02.1	Inhibit Delay	B1.05.1
Read Check	B1.02.1	Read Tr	B1.05.1
Read R2A	B1.02.1	Read Tr	B1.05.1
Read Shift	B1.02.1	Counter Step	B1.05.1
Read R-5	B1.02.1		
Sample	B1.02.1		
Magnetic Pick-up Common	B1.02.1		
R1 Relay Selection	B1.03.1		
R2 Relay Selection	B1.03.1		
R2A Relay Selection	B1.03.1		
R-5 Relay Selection	B1.03.1		
T1 Relay Selection	B1.03.1		
T2 Relay Selection	B1.03.1		

Machine 1011
1021
EC 504392
TW 70720
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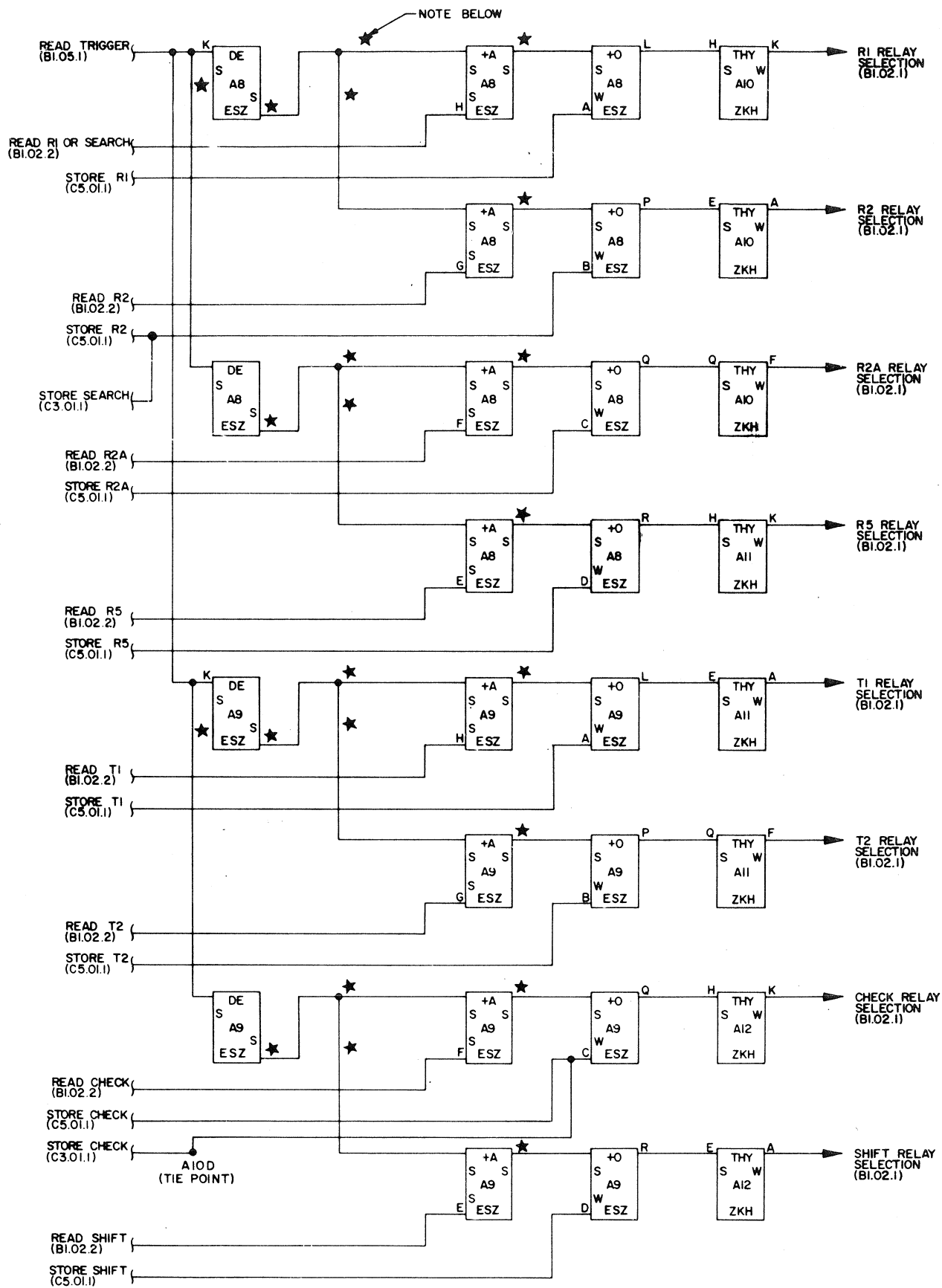




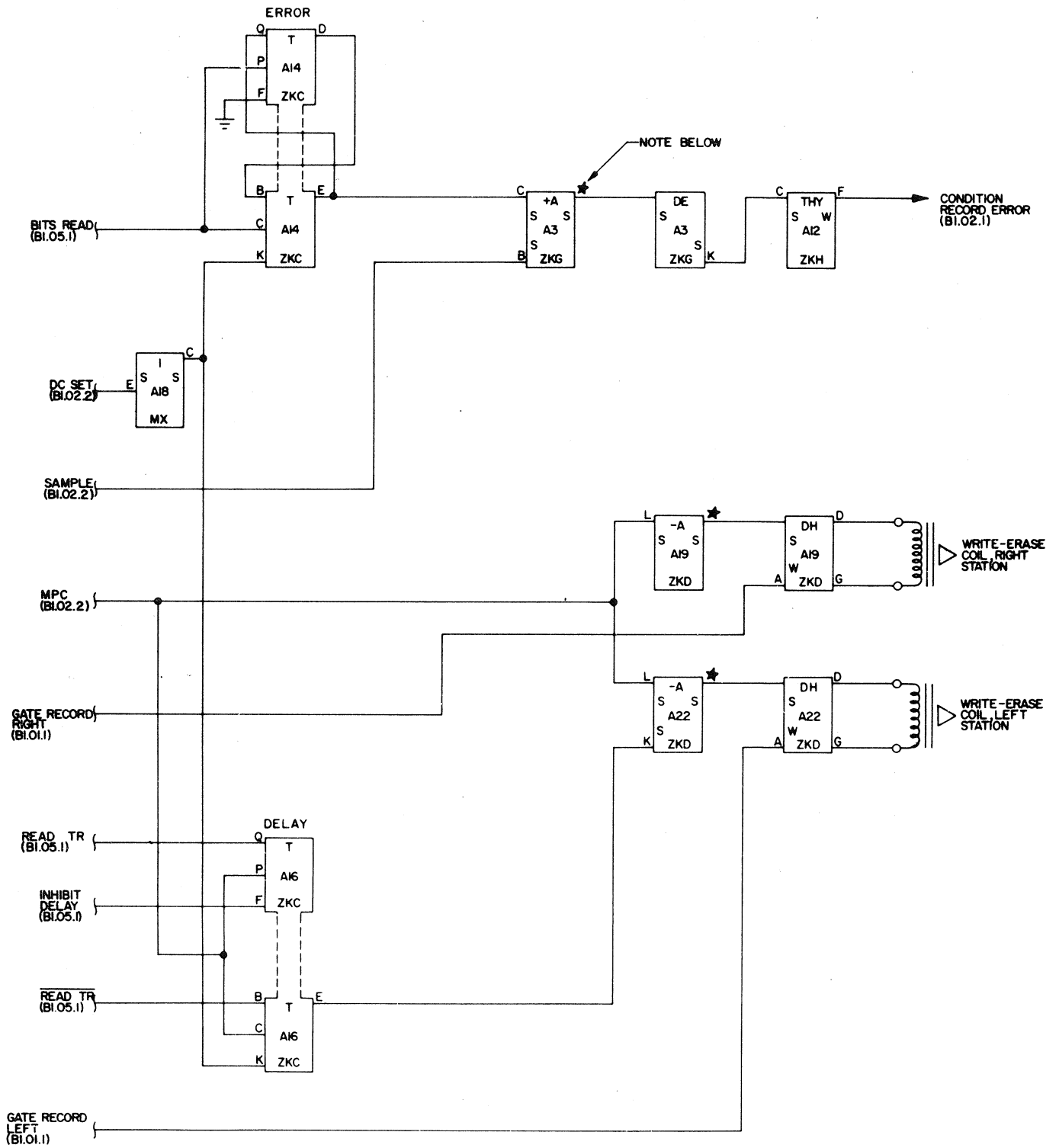


★ - INTERNAL CONNECTION ON CARD

BIT REGISTER LOGIC



★ - INTERNAL CONNECTION ON CARD





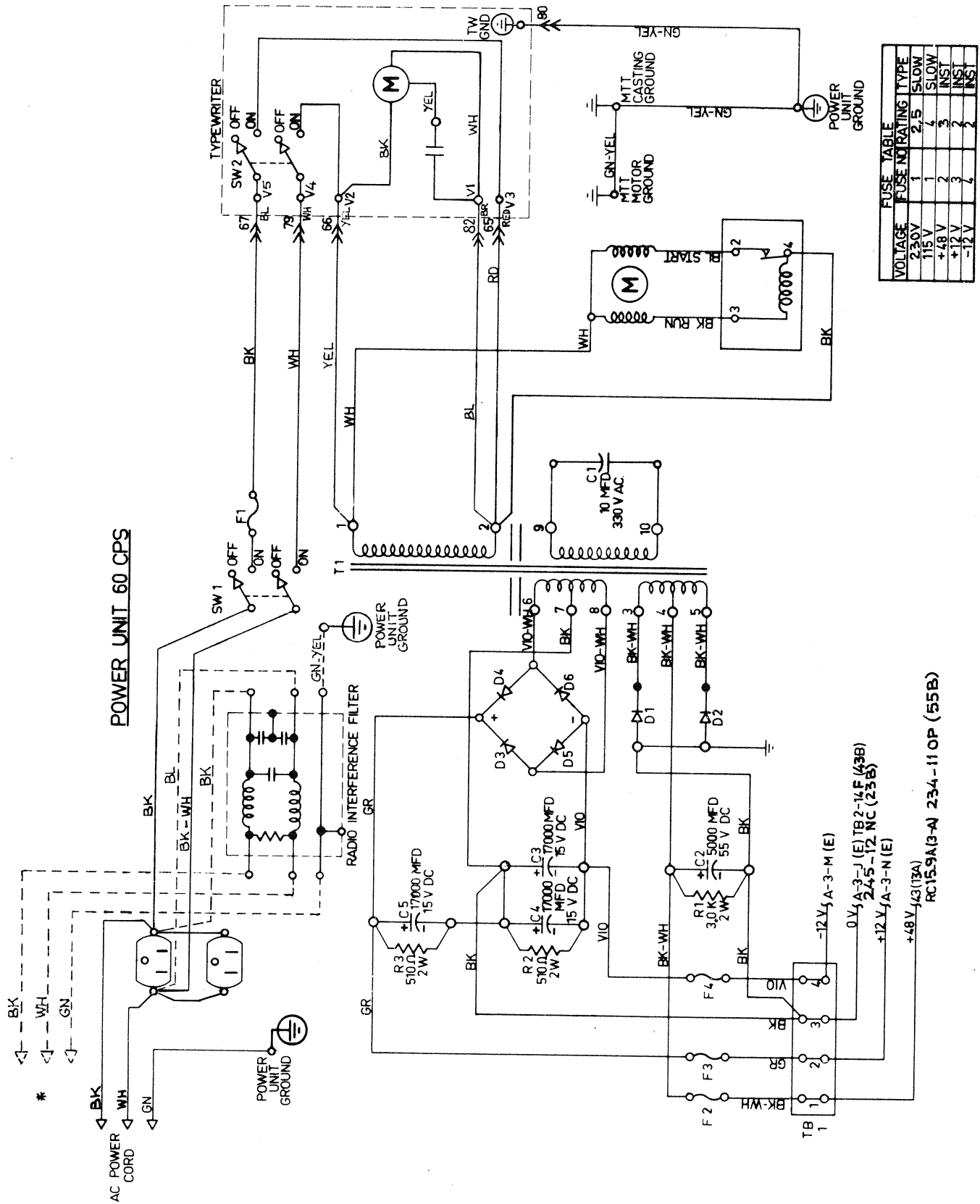
IBM

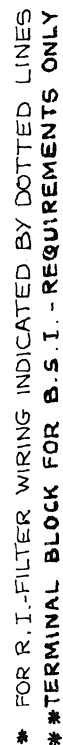
RELAY WIRING DIAGRAMS

1011.1021
MAGNETIC TAPE
72 TYPEWRITER

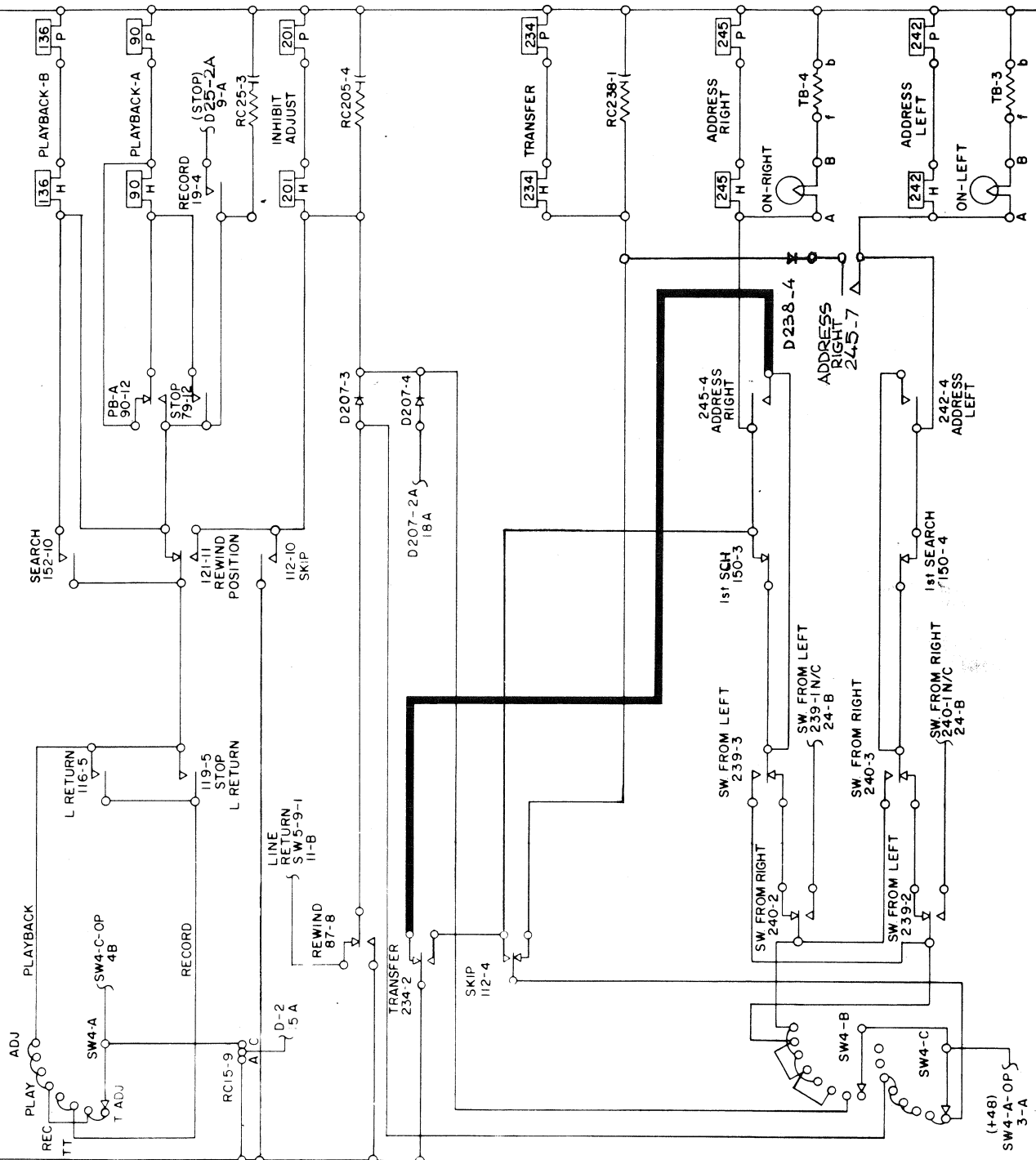
EC	957519					
DATE	MAY 27-70					
TW						
DATE						

EC						
DATE						
TW						
DATE						





MODEL 1011 ONLY



[illegible]

REMOVE FOR COMPOSER COMPATIBILITY

RECORD
19-1 OP
103-12 N/C
5-B

STOP SEARCH
139-7 N/O
37-A

CR FEED
68-5 N/O
5-B

COLL
13-A
D8-4C
13A

FEED
82-1 N/O
26B

ONE CYCLE
103-1 N/O
28-A

SKIP
112-7

CR INTLK
65-1 N/O
16-A

PLAYBACK B
136-11 OP
37-A

LINE RETURN

STOP
79-8

B-25°
M-235°
CB-5

B-8

REWIND
87-12

D75-4

PLAYBACK A
90-6

D107-2A
28-A

D86-1

D86-2A
10A

DI07-2A
28-A

D85-1

COLLECTOR CONTROL

RC25-1

RC25-2

TH

22

22-3

RECORD
19-12

COLLECTOR CONTROL
22-10P
53-A

(CB-3)

(SHIFT MODE -3)
39
14A

82-5 FEED

B-5

REW POS
121-10 N/O
28A

B-165°
M-300°
CB-3

De 110Ω

.25

CY CL

D8

D8-4C

D86-4C
9-A

D70-1

D86-1

D86-2A
10A

D85-1

COLLECTOR CONTROL

RC25-1

RC25-2

TH

22

22-3

RECORD
19-12

COLLECTOR CONTROL
22-10P
53-A

(CB-3)

(SHIFT MODE -3)
39
14A

82-5 FEED

B-5

REW POS
121-10 N/O
28A

B-165°
M-300°
CB-3

De 110Ω

.25

CY CL

D8

D8-4C

D86-4C
9-A

D70-1

D86-1

D86-2A
10A

D85-1

COLLECTOR CONTROL

RC25-1

RC25-2

TH

22

22-3

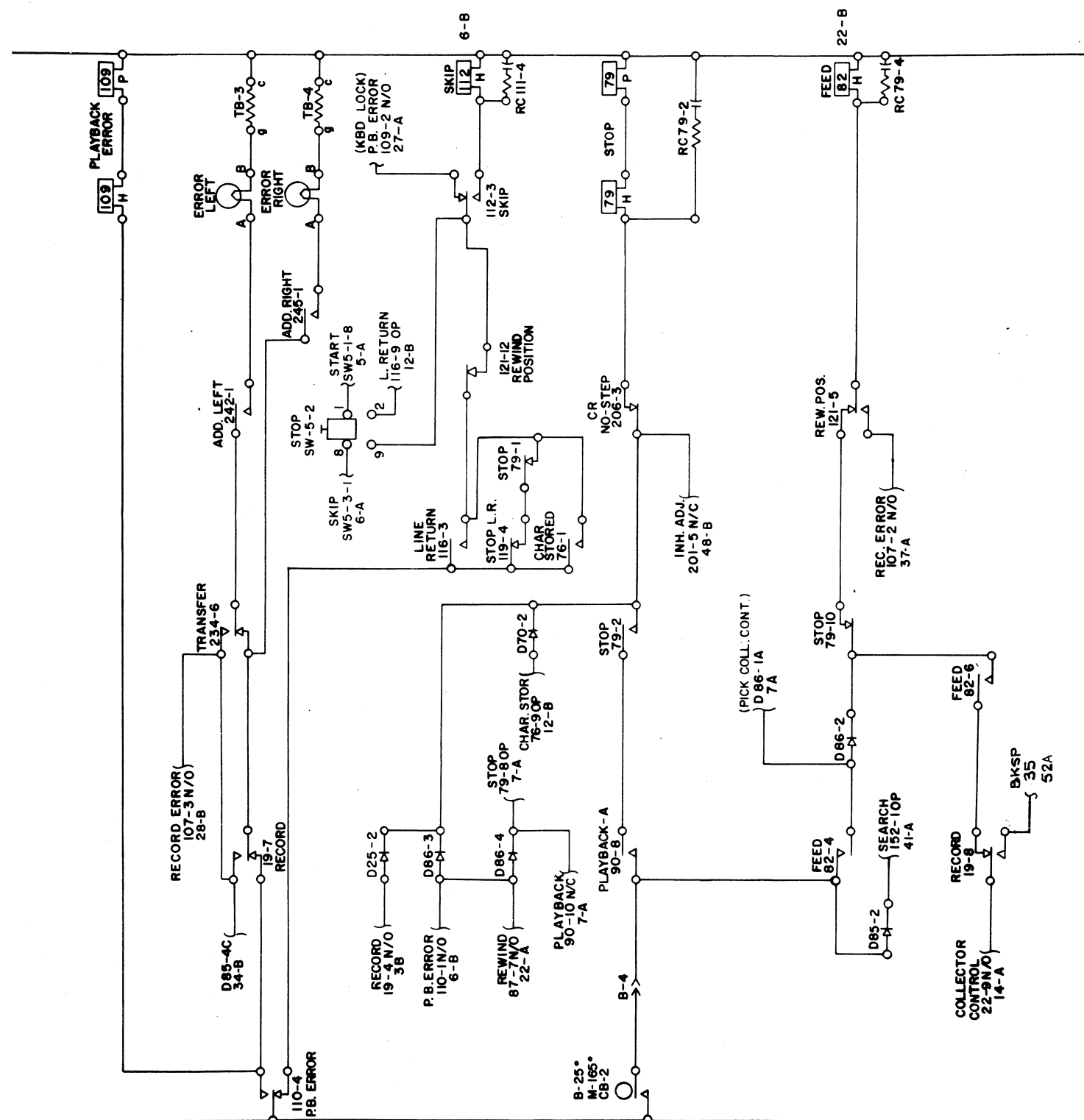
RECORD
19-12

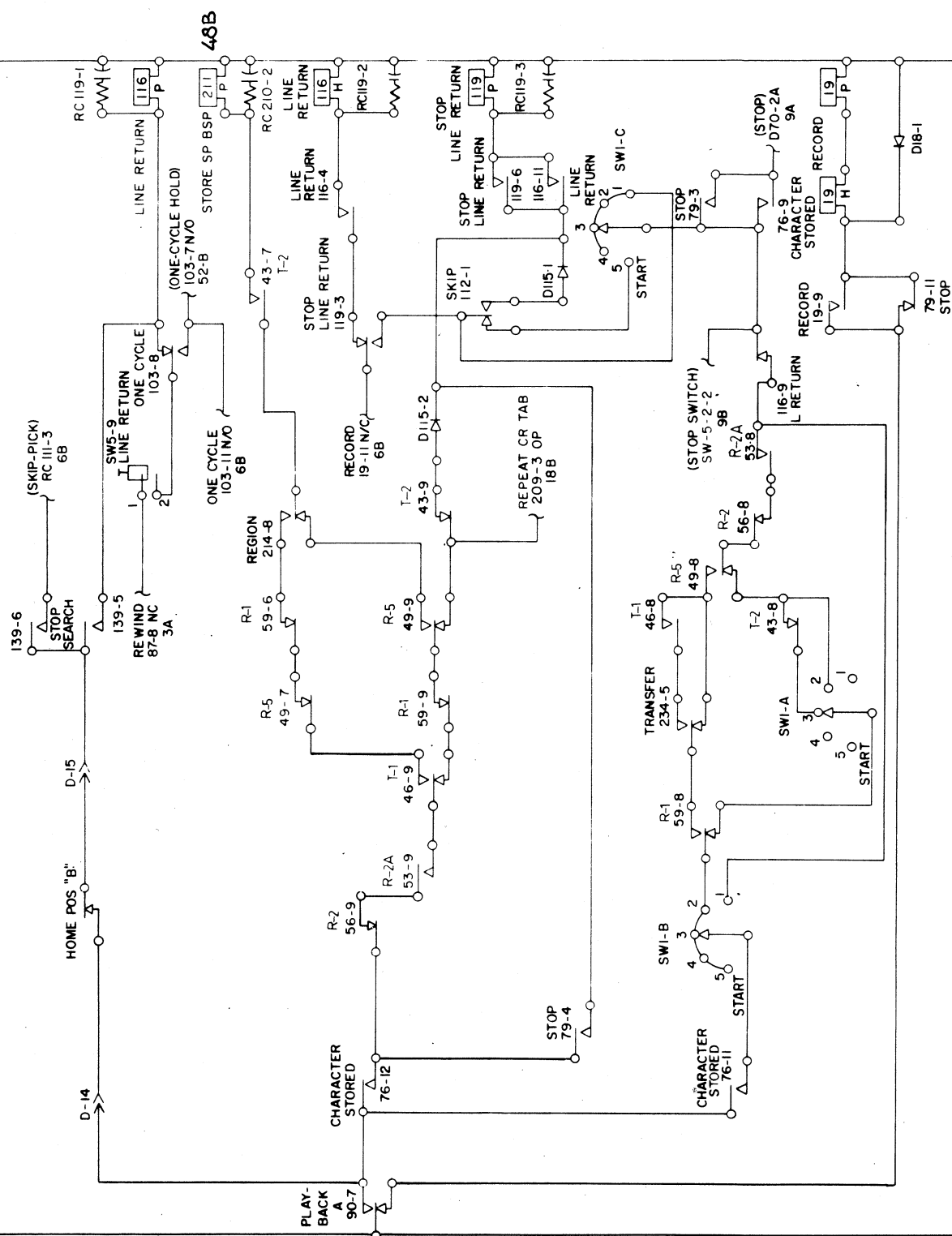
COLLECTOR CONTROL
22-10P
53-A

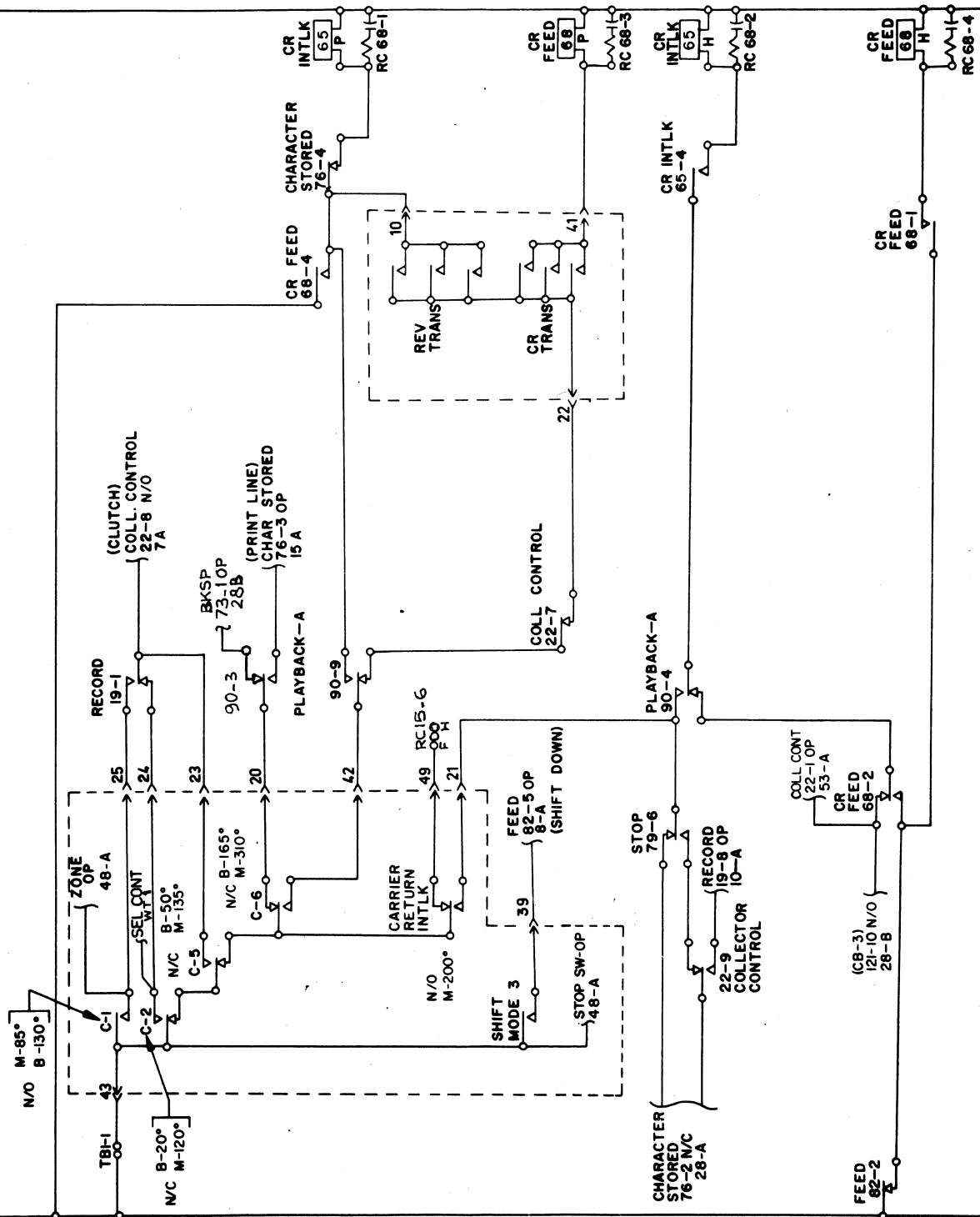
(CB-3)

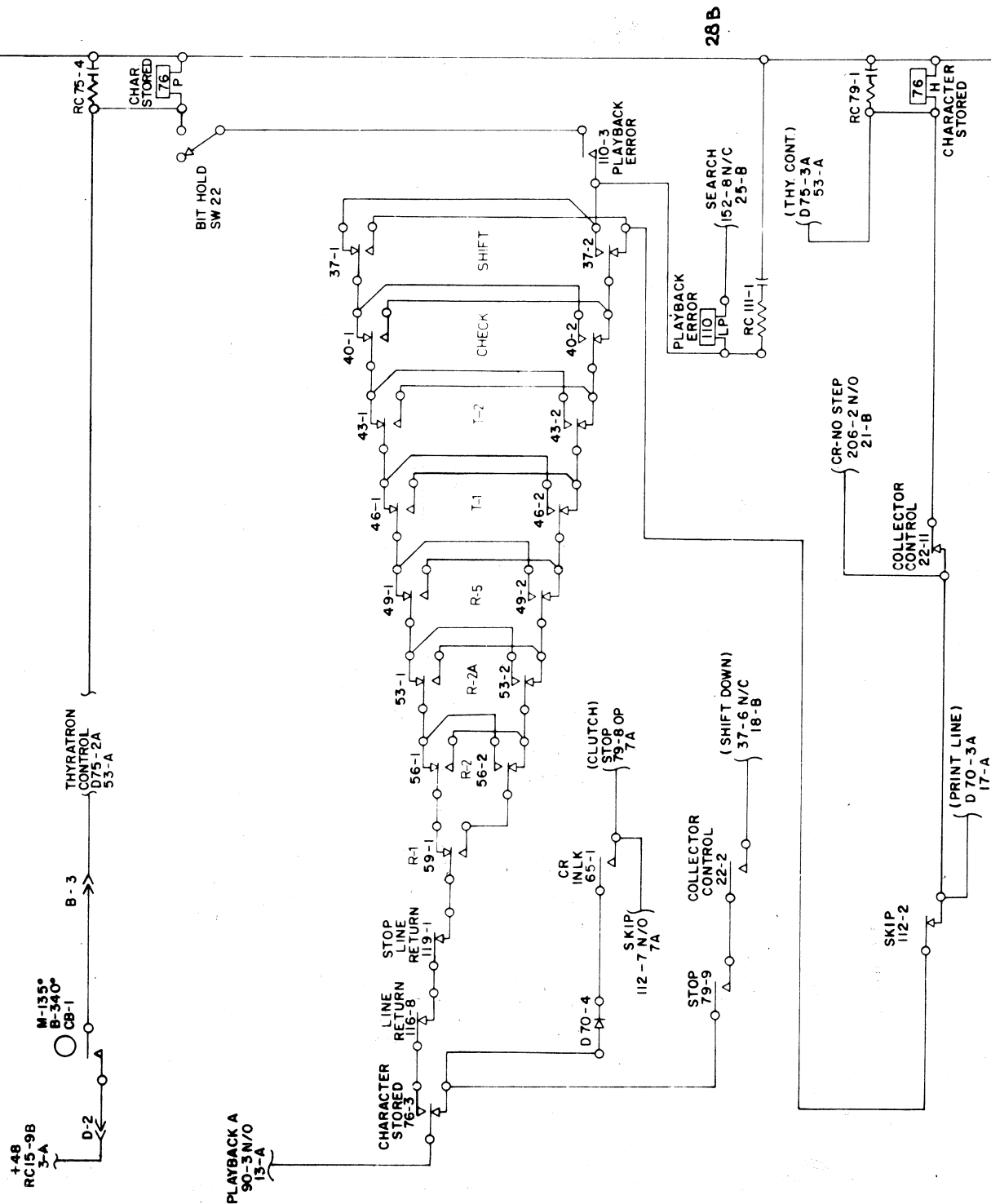
(SHIFT MODE -3)
39
14A

82-5 FEED



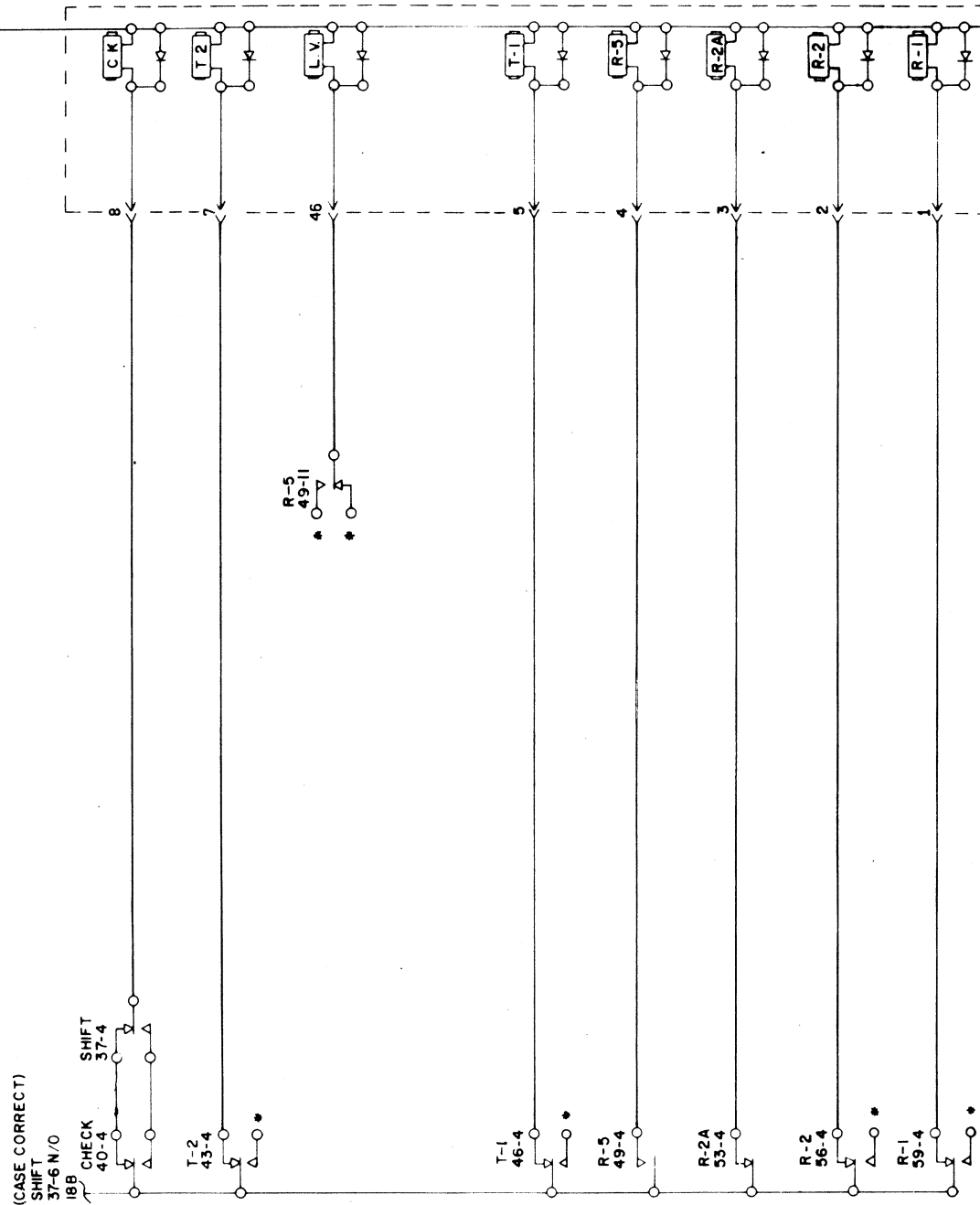


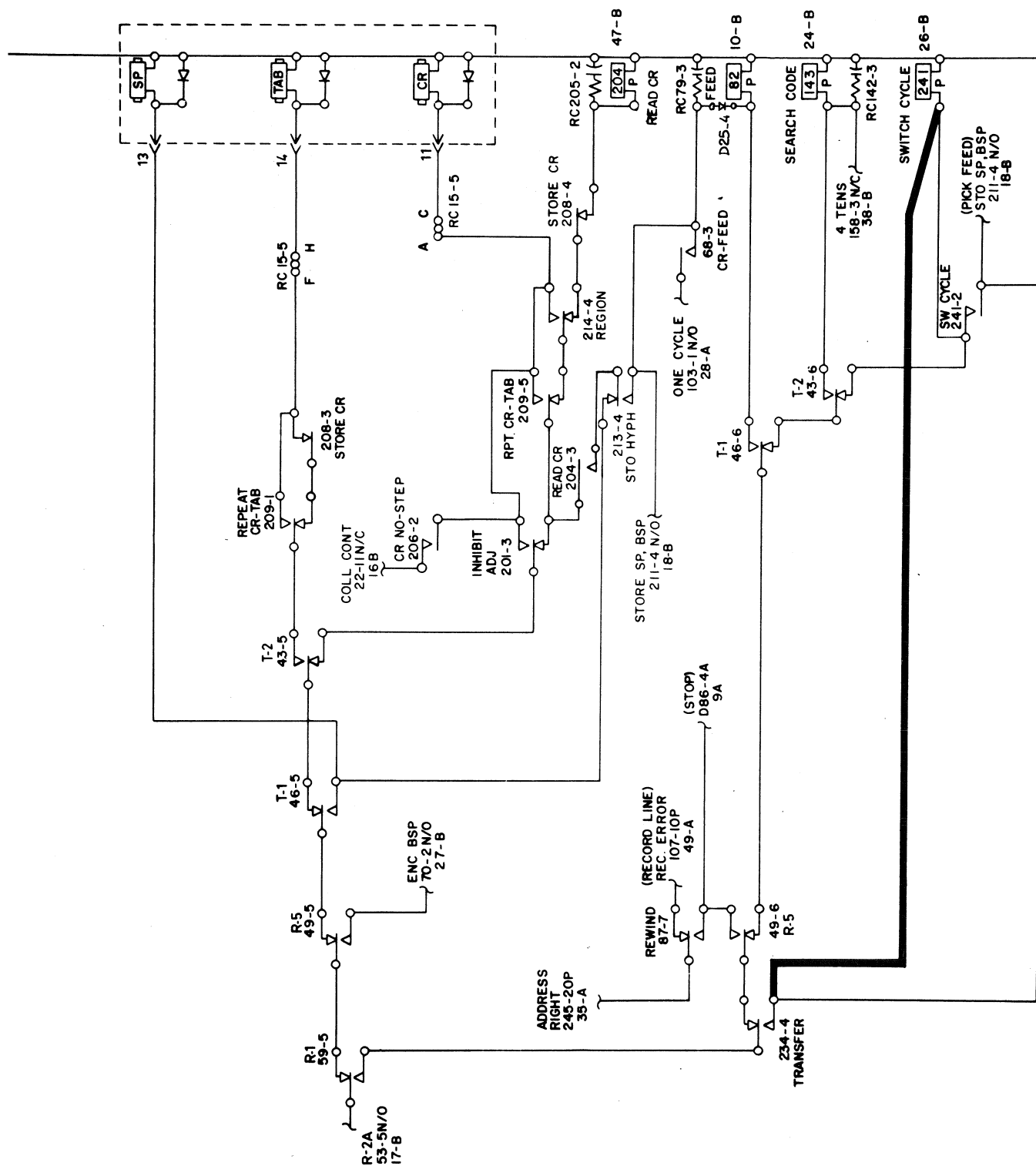


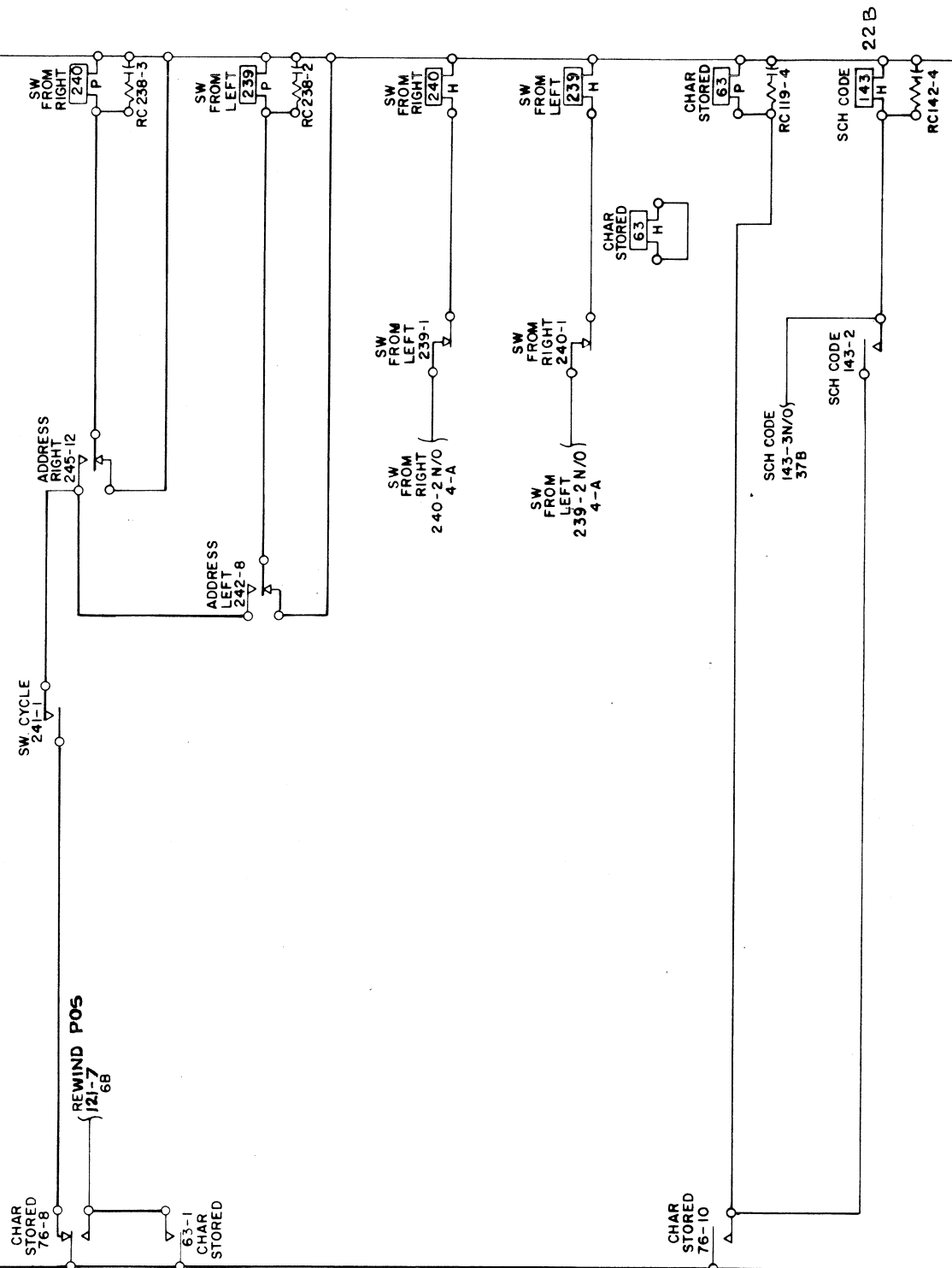


C2.07.1

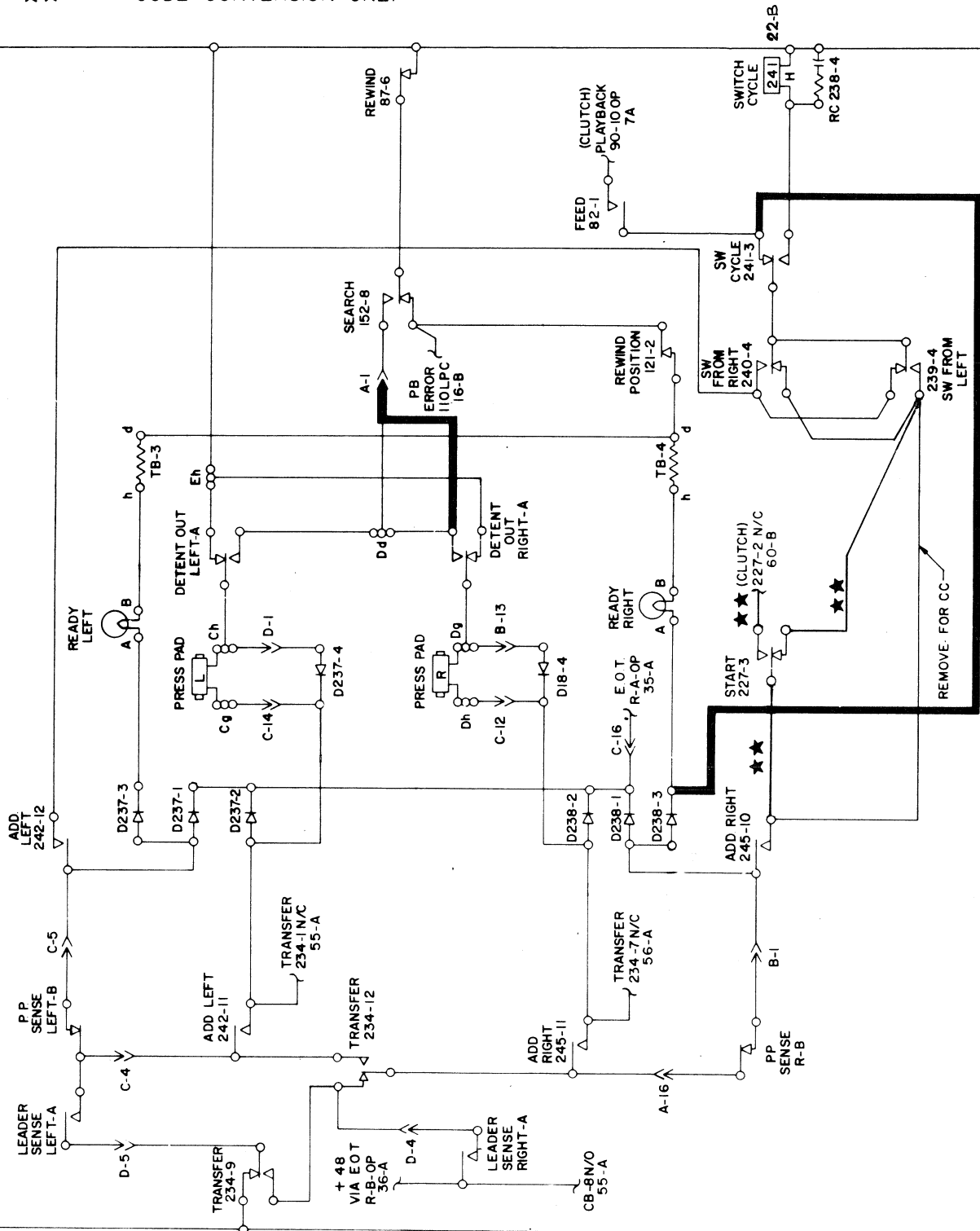
[illegible]



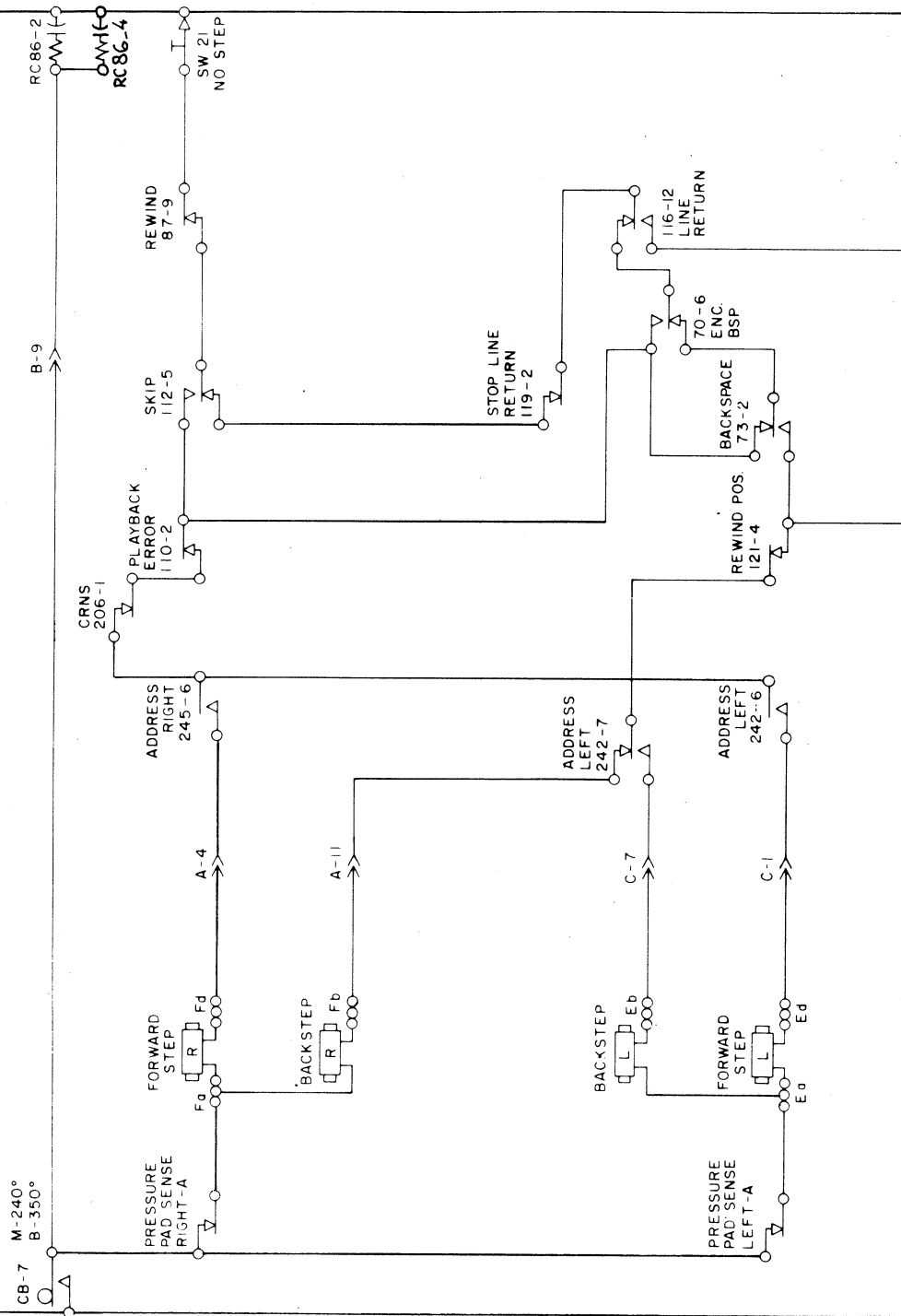


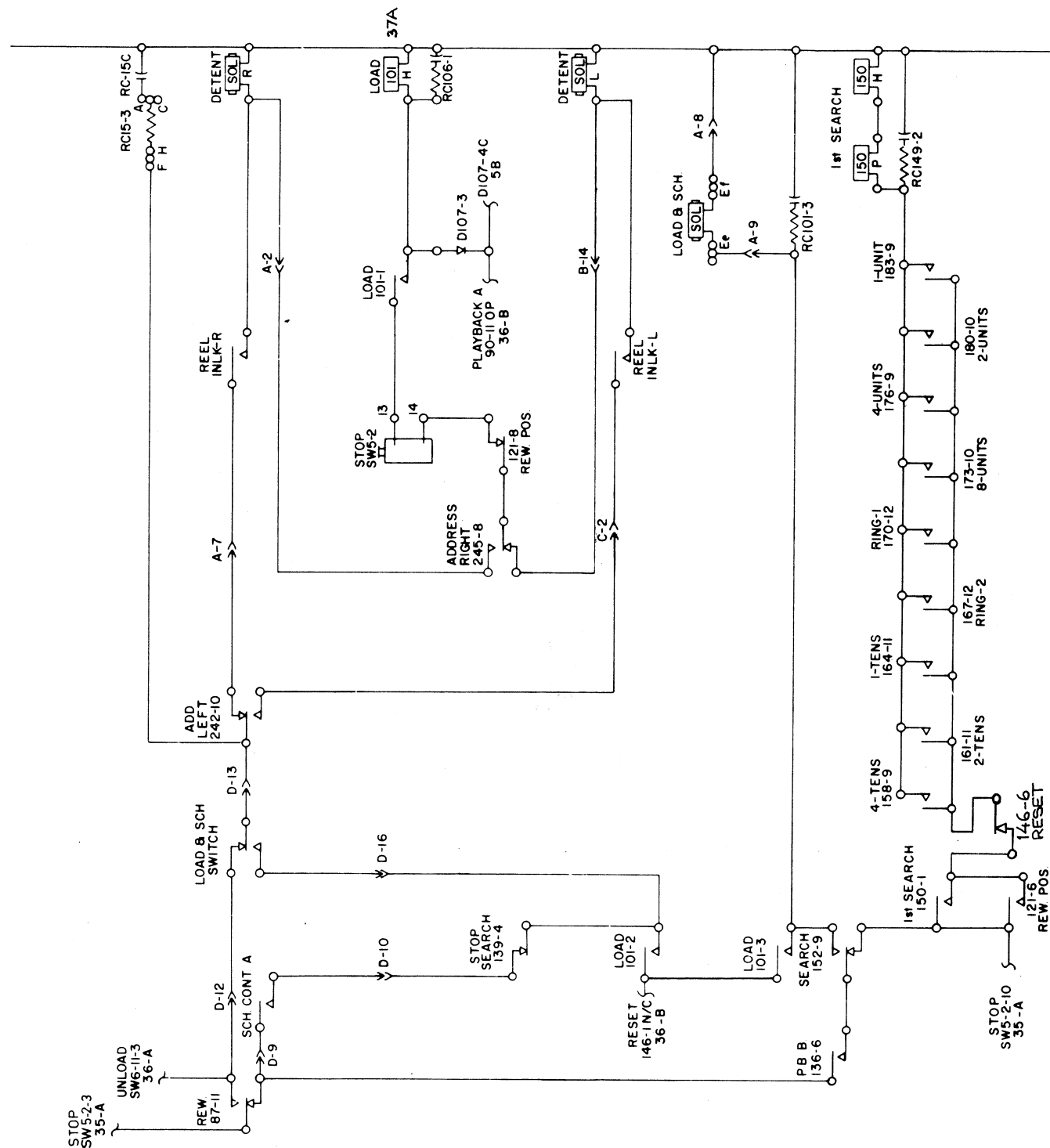


C2.09.1

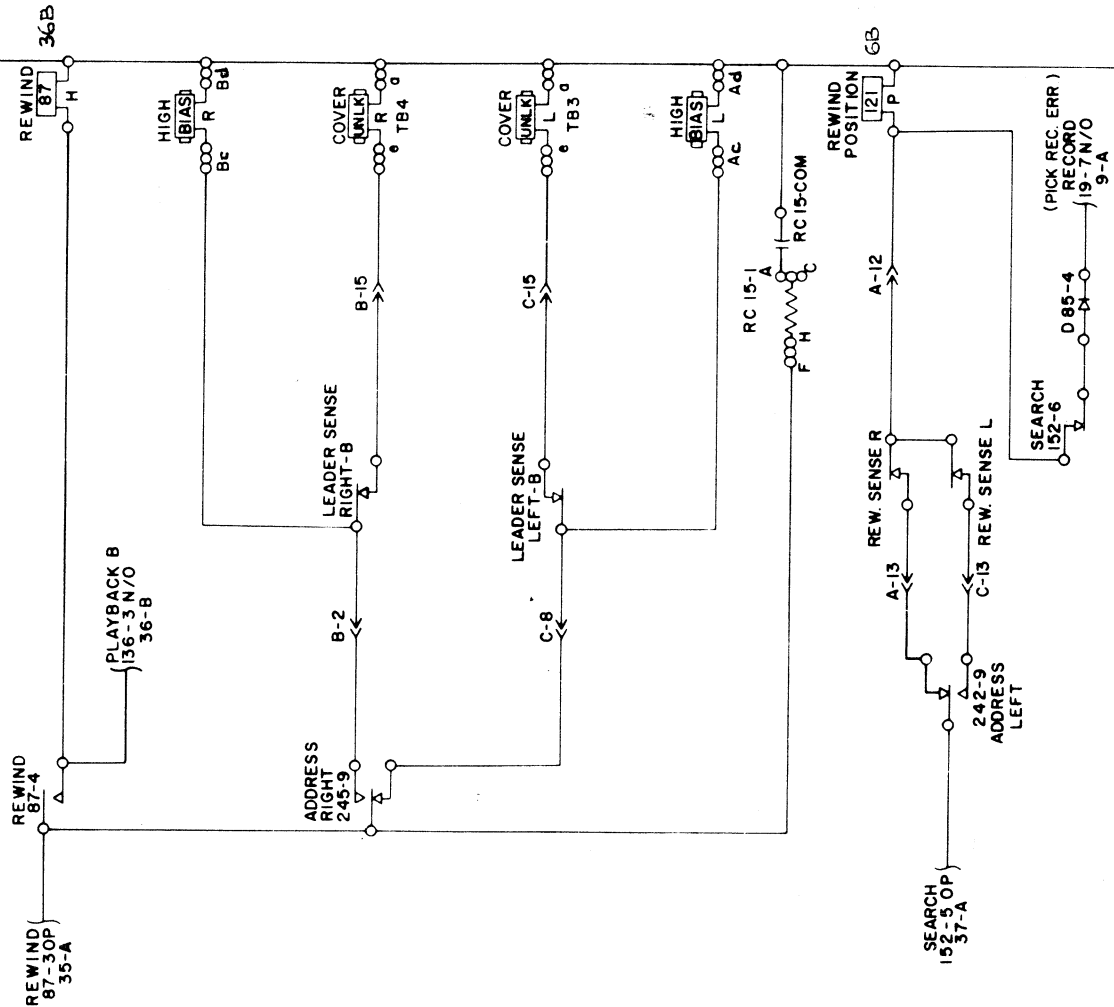


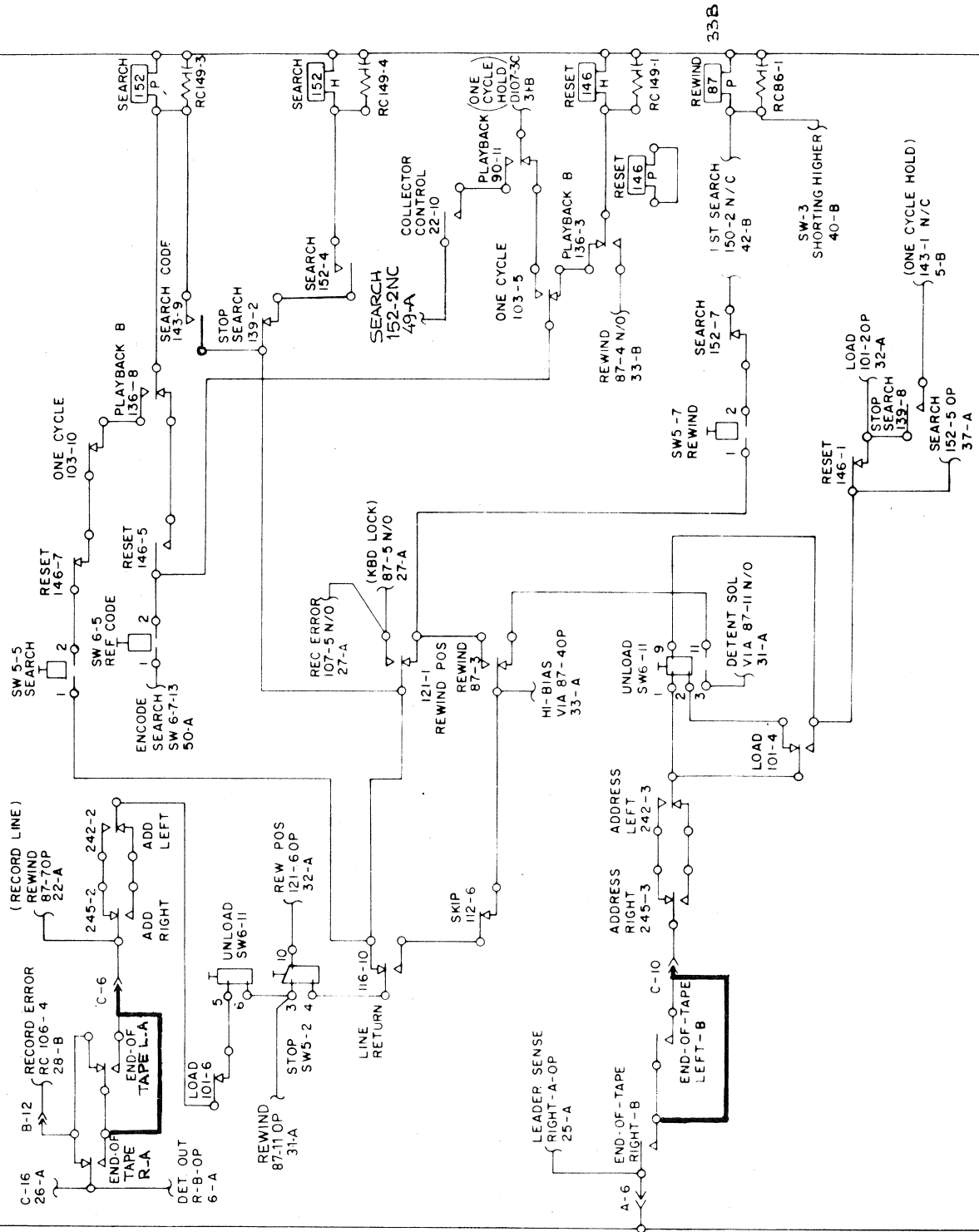
C2.10.1



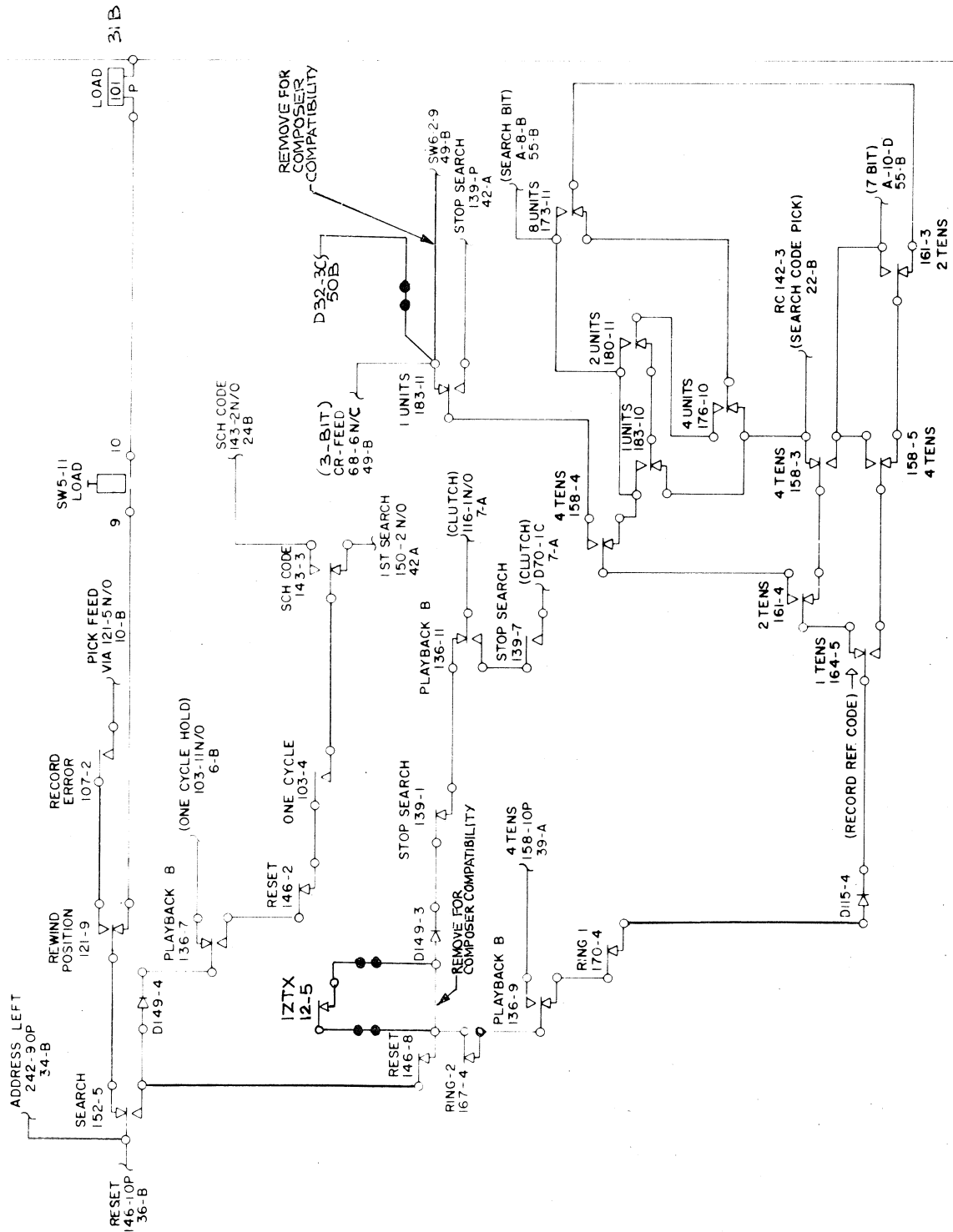


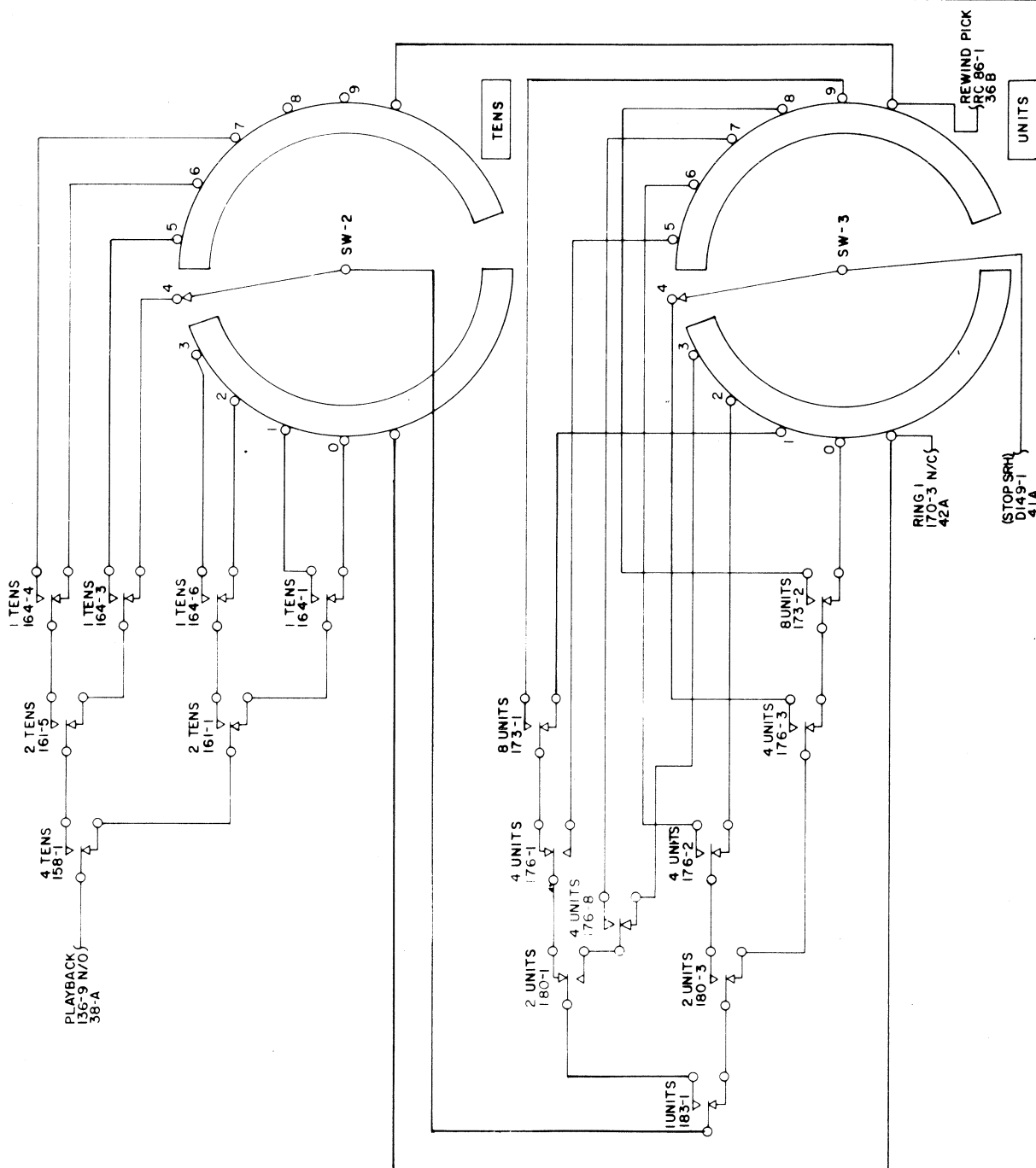
C2.13.1



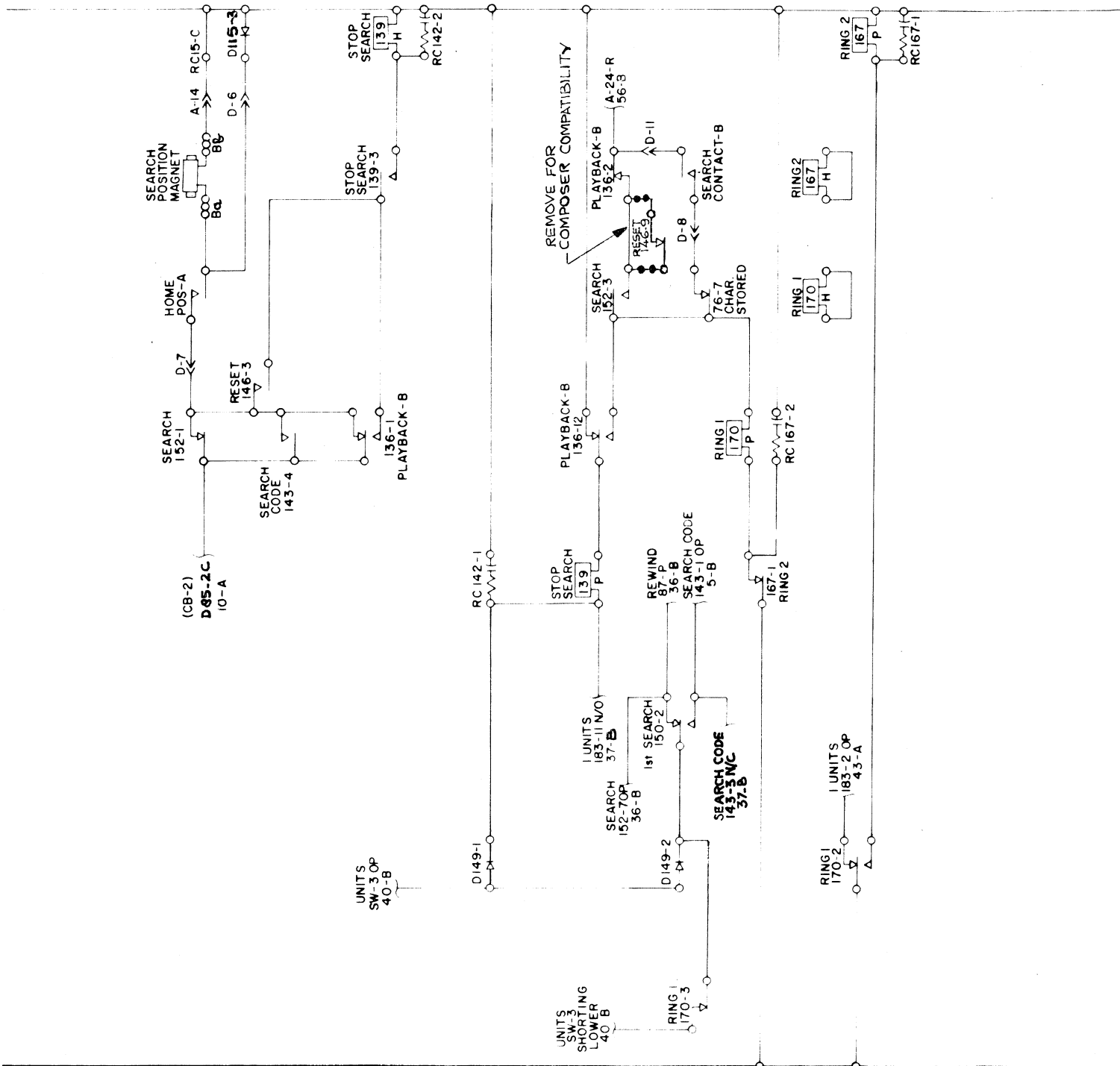


●● COMPOSER COMPATIBILITY ONLY

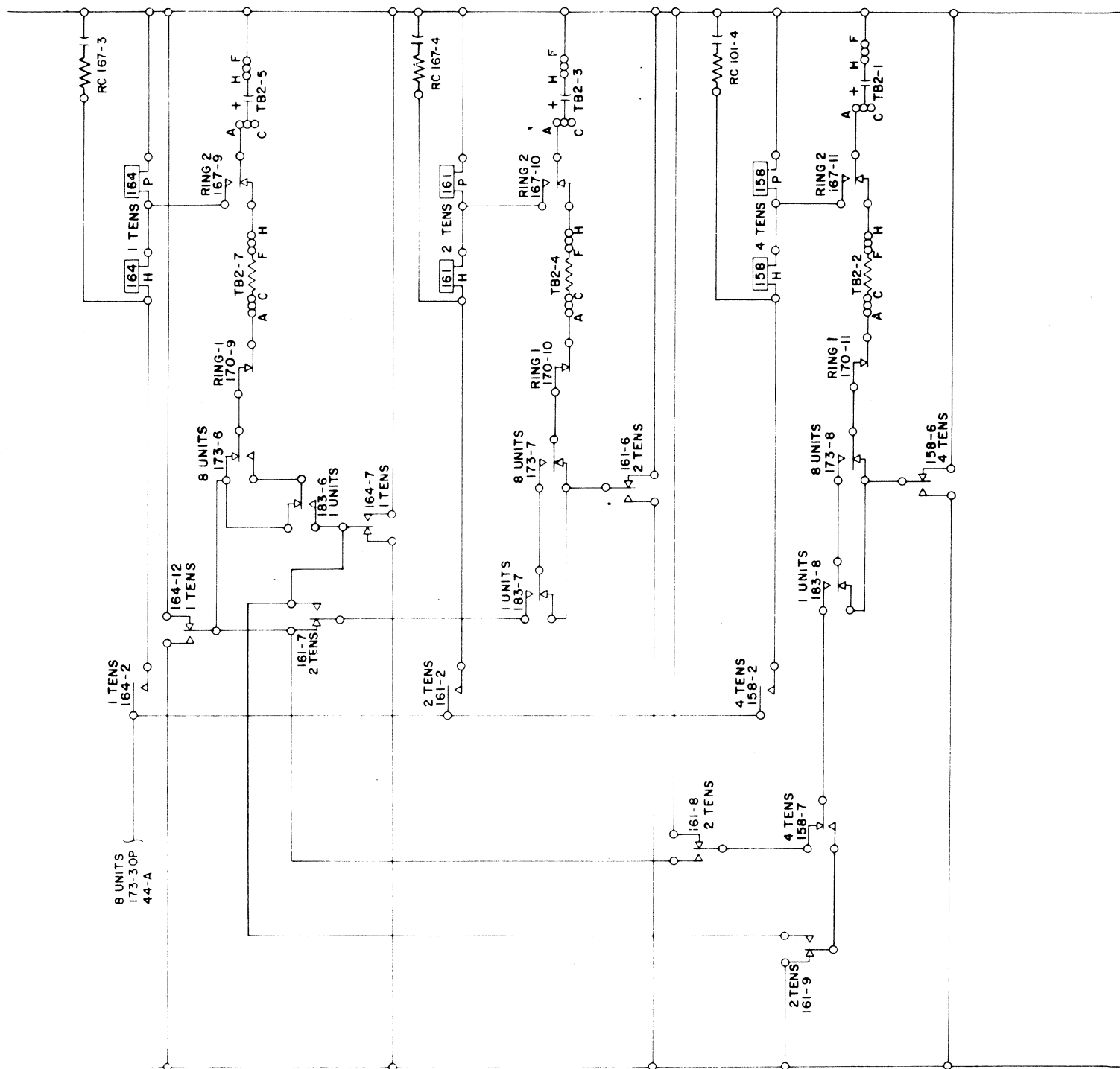


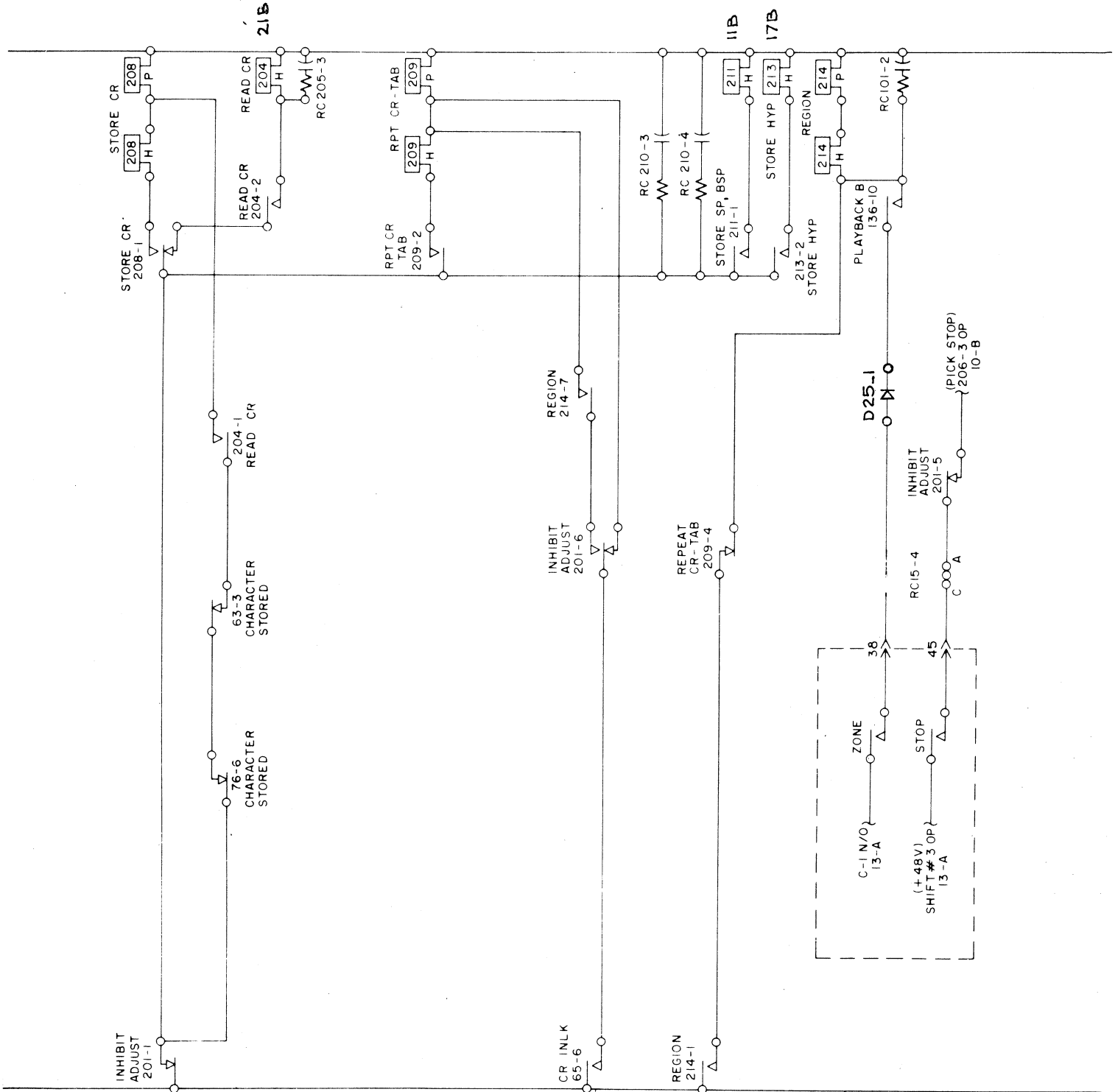


● ● COMPOSER COMPATIBILITY ONLY



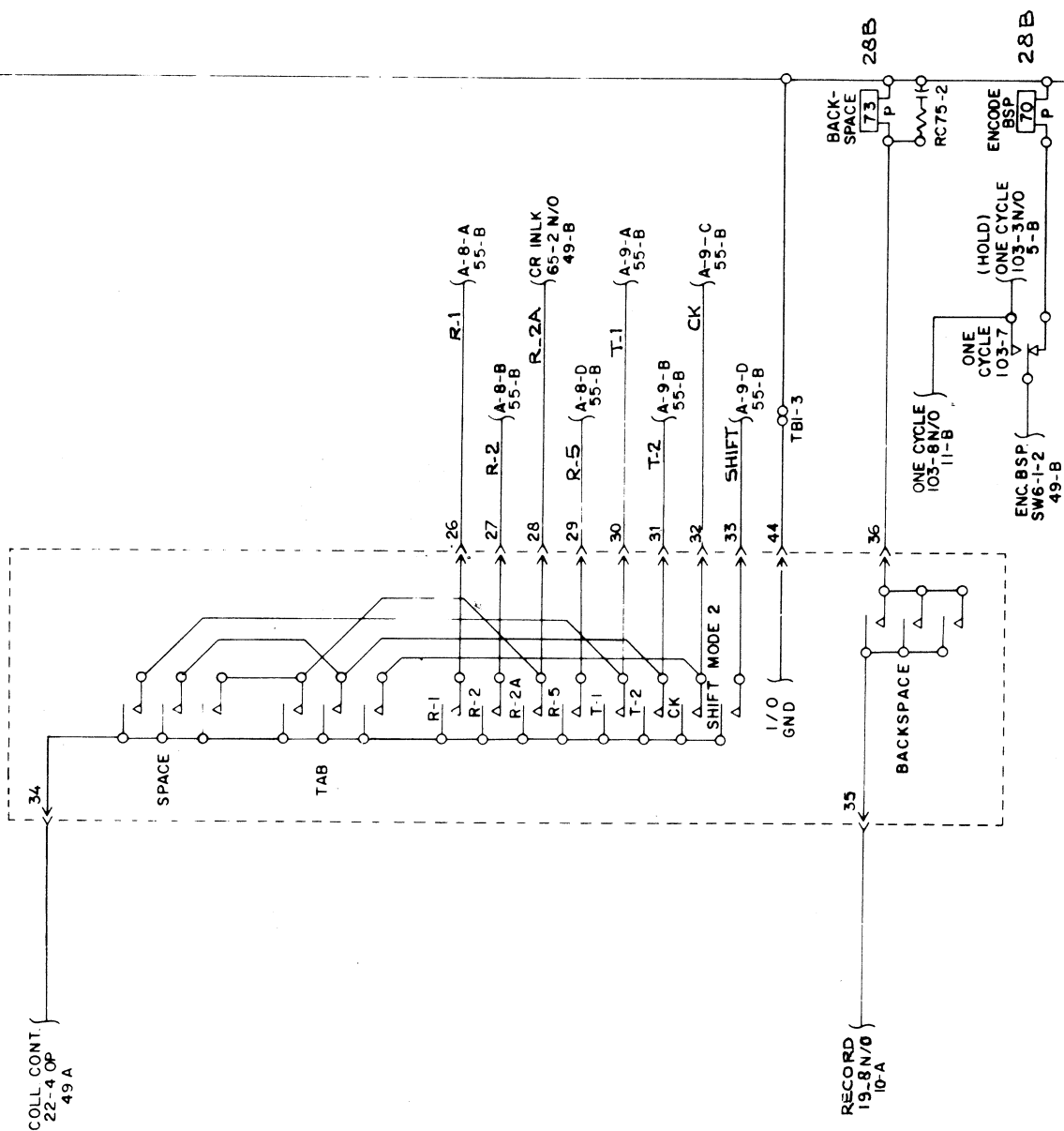




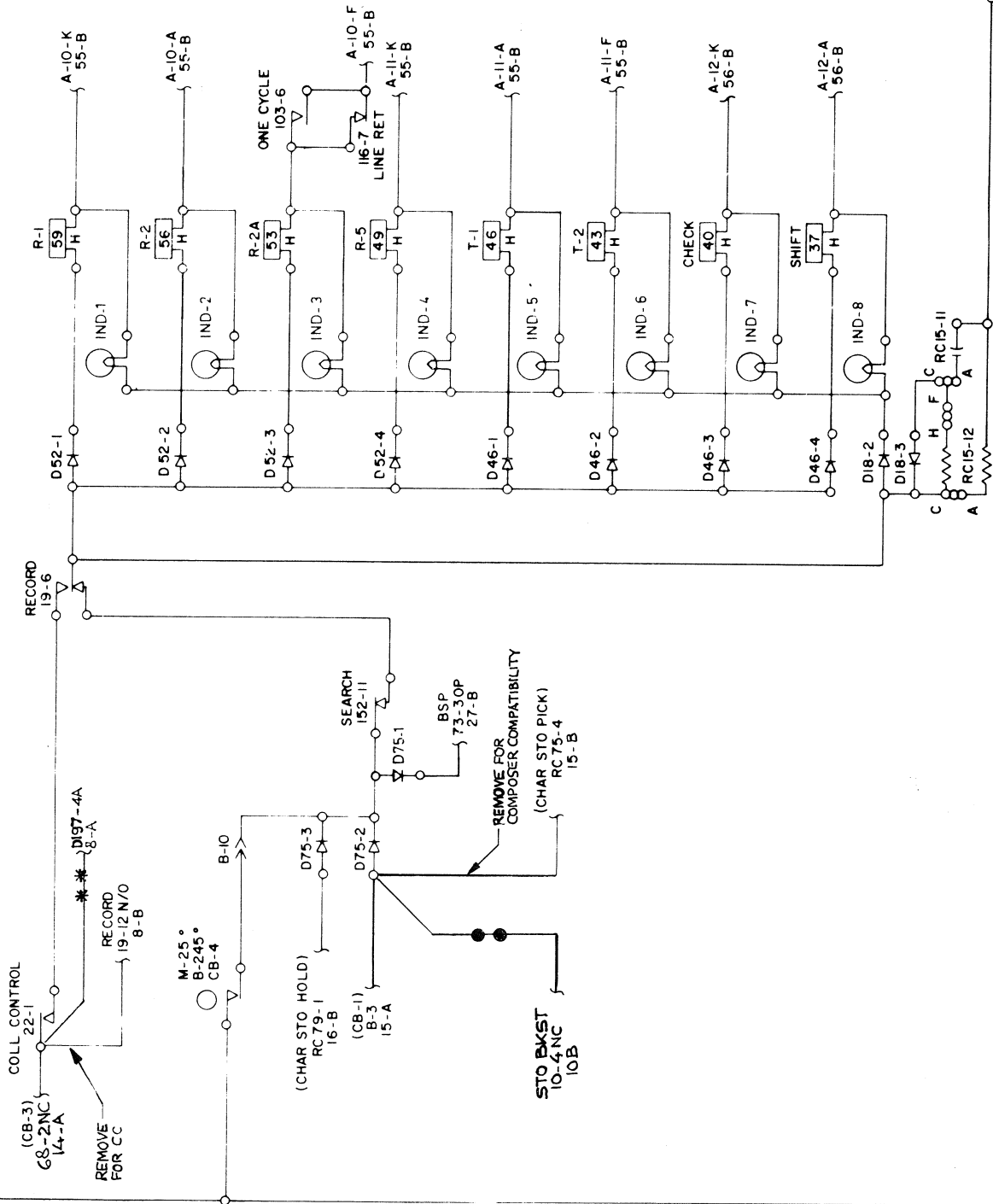


C5.01.1

50



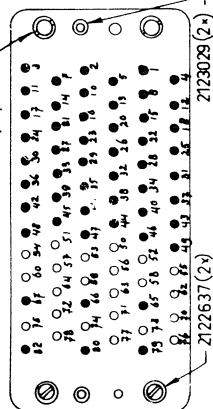
- ** CODE CONVERSION ONLY
- COMPOSER COMPATIBILITY ONLY



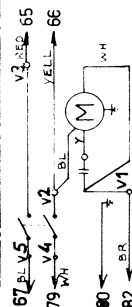


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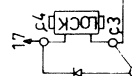
PRINT SELECTION



75 POSITION CONNECTOR - NOTE X



KEYBOARD



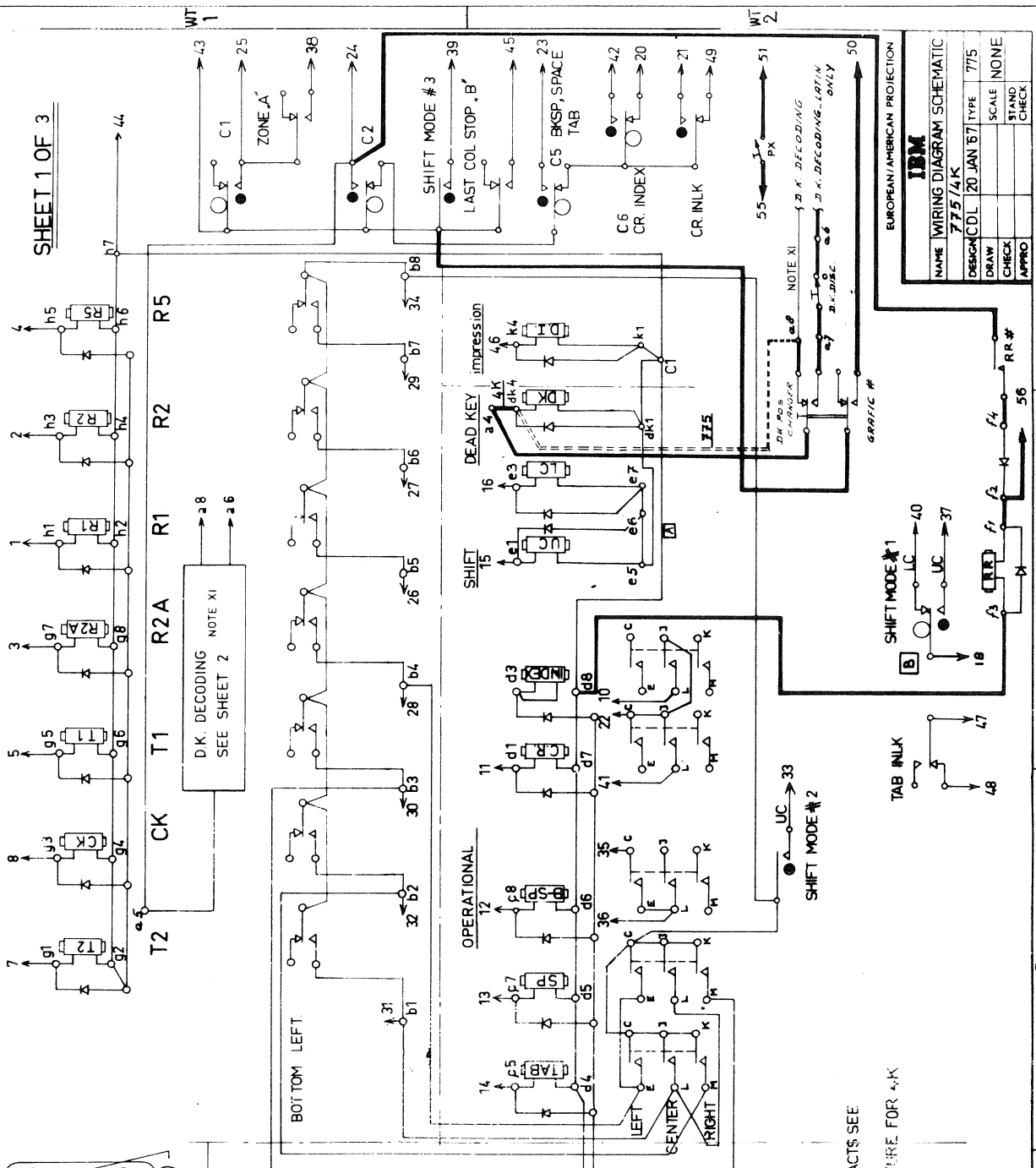
NOTES:

X: CONNECTIONS AS SEEN FROM OUTSIDE OF CONNECTOR

CONNECTION
XI: FOR WIRING OF D.K. DECODING CONTACTS; SEE
SHEET 2

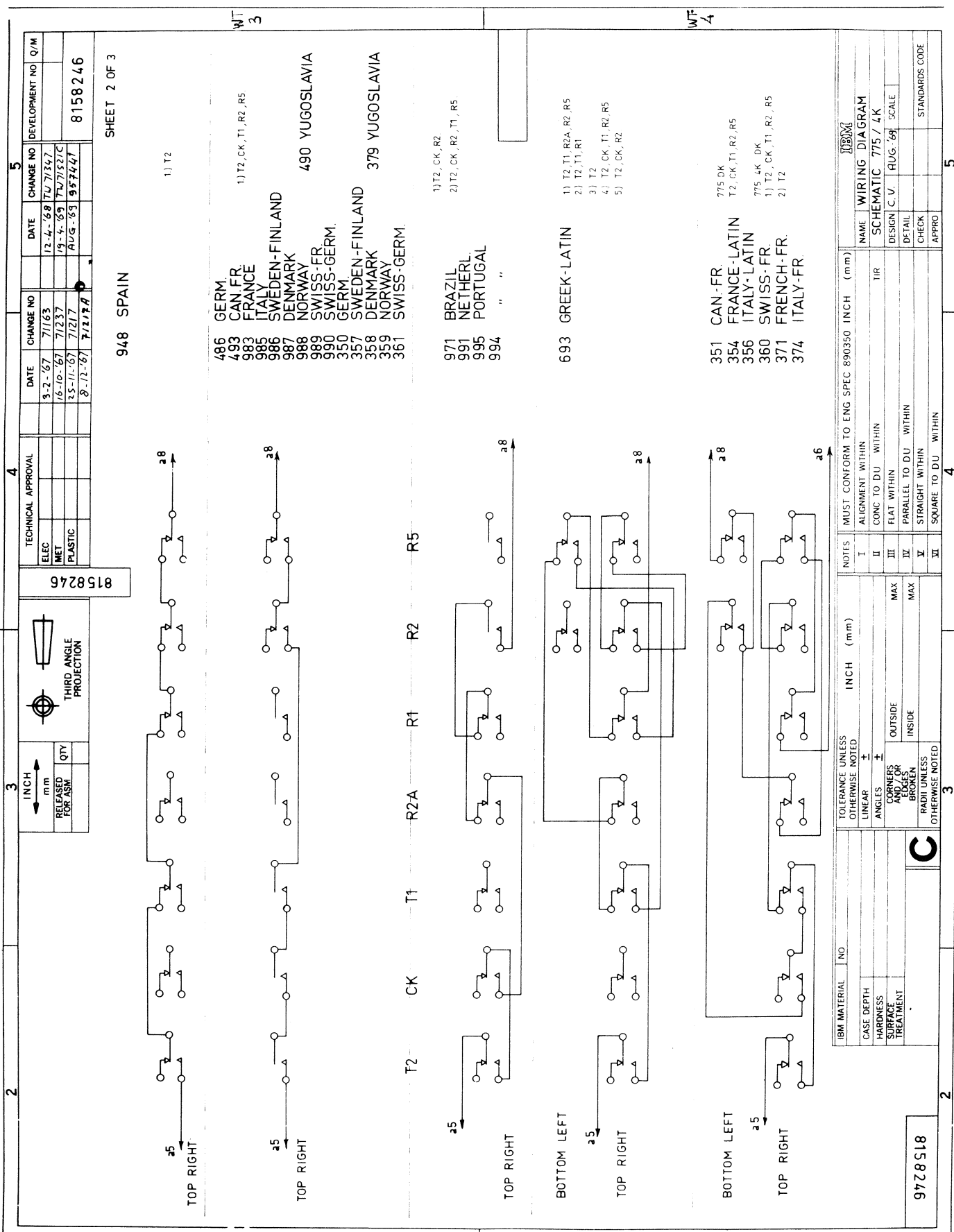
XII. THICK LINES INDICATES OPTIONAL FEATURE FOR 4K

● DENOTES TUNGSTEN CONTACTS



IBM
EUROPEAN / AMERICAN PROJECTION

WIRING DIAGRAM SCHEMATIC				
775/4K				
NAME	DESIGN	CDL	20 JAN 67	TYPE
	DRAW			SCALE
	CHECK			STAND
	APPRO			CHECK
				NONE



WT 3

WT 4

WT 3

WT 4

WT 3

WT 4

WT 3

WT 4

WT 3

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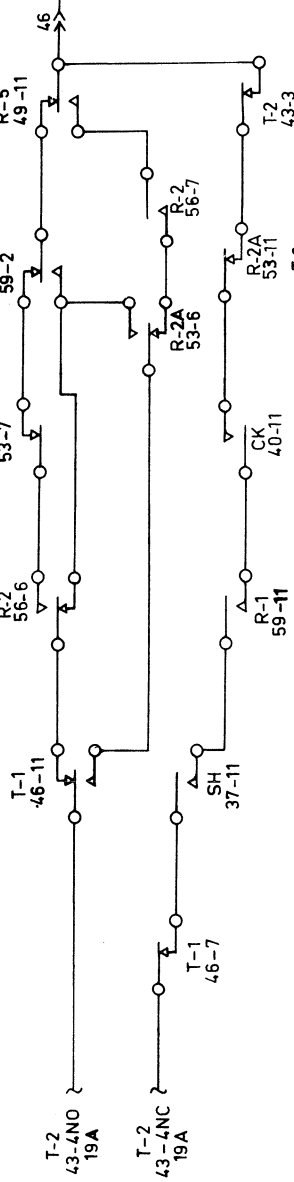
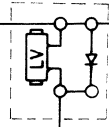
WT 3

WT 4

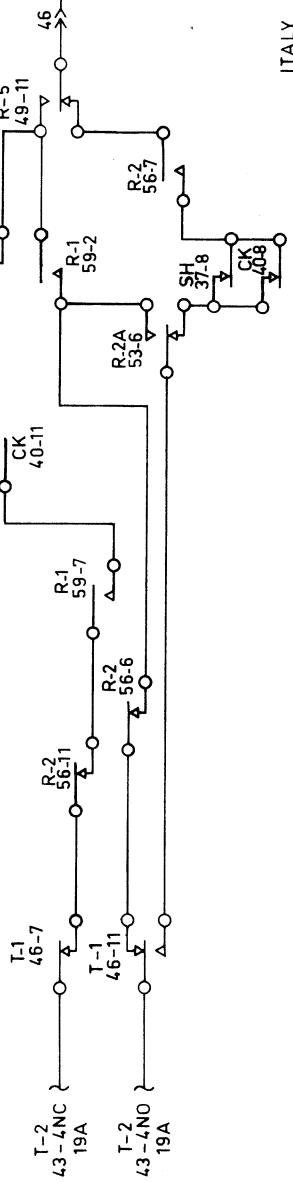
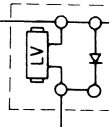
WT 3

WT 4

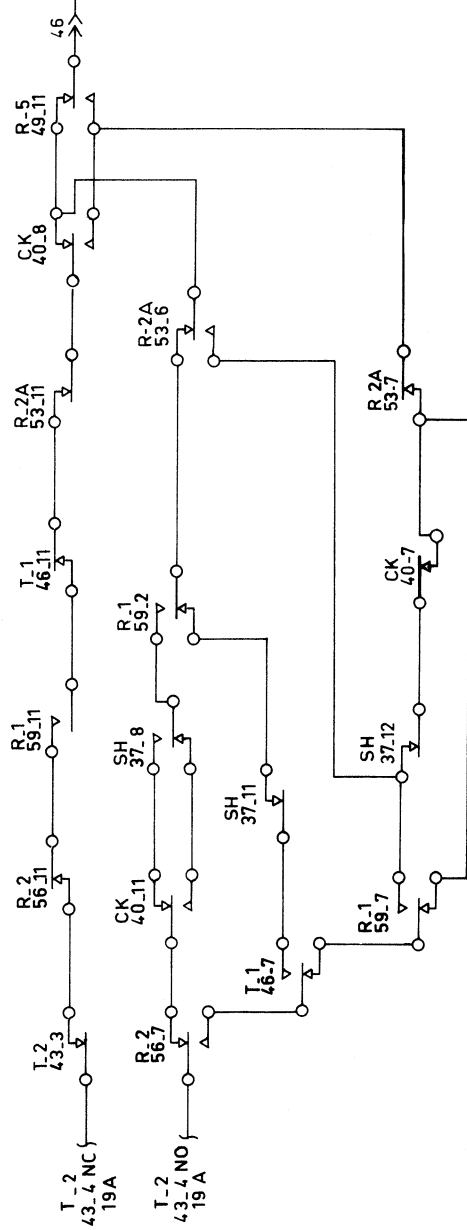
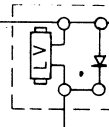
PORTUGAL AND BRAZIL

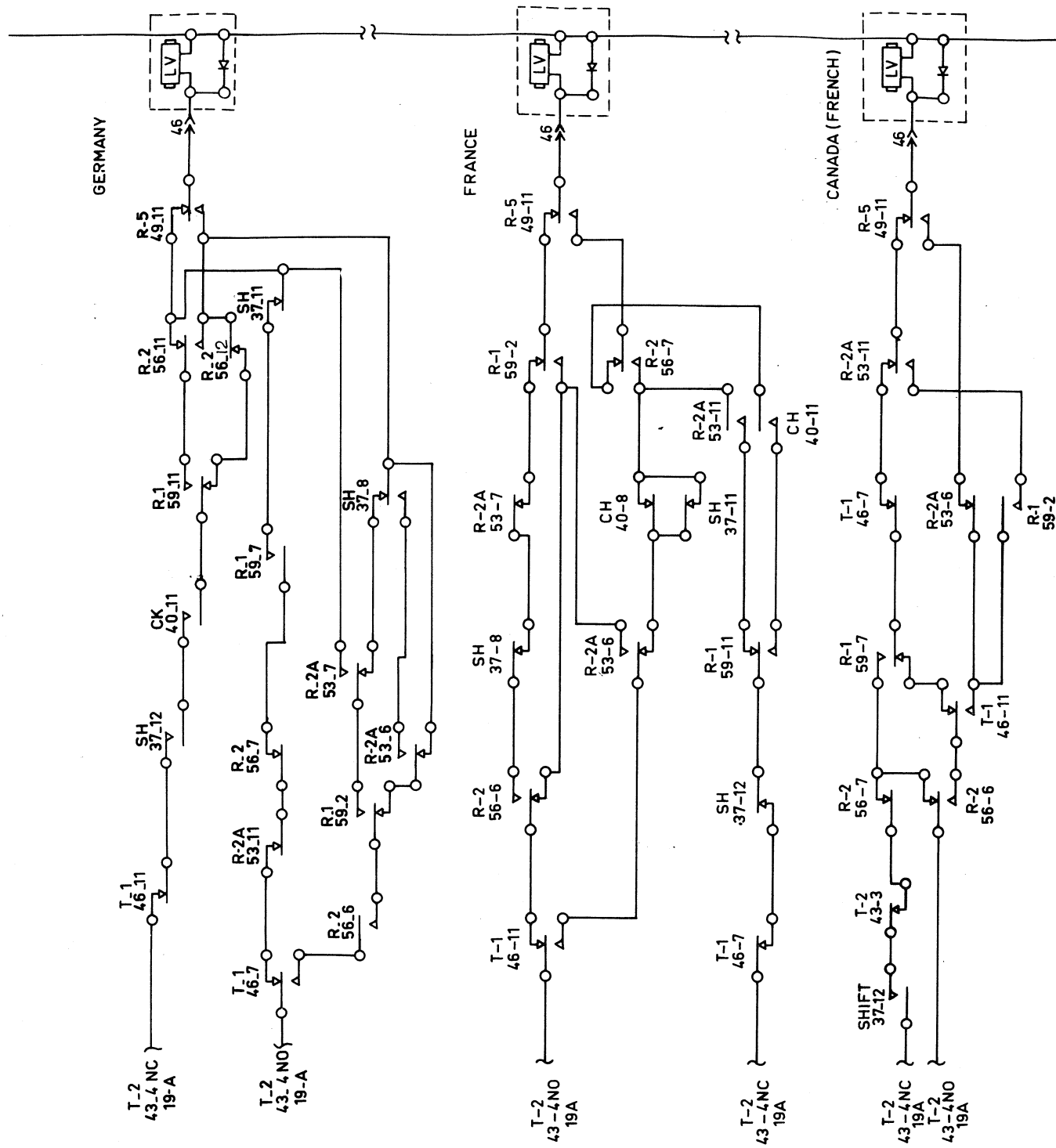


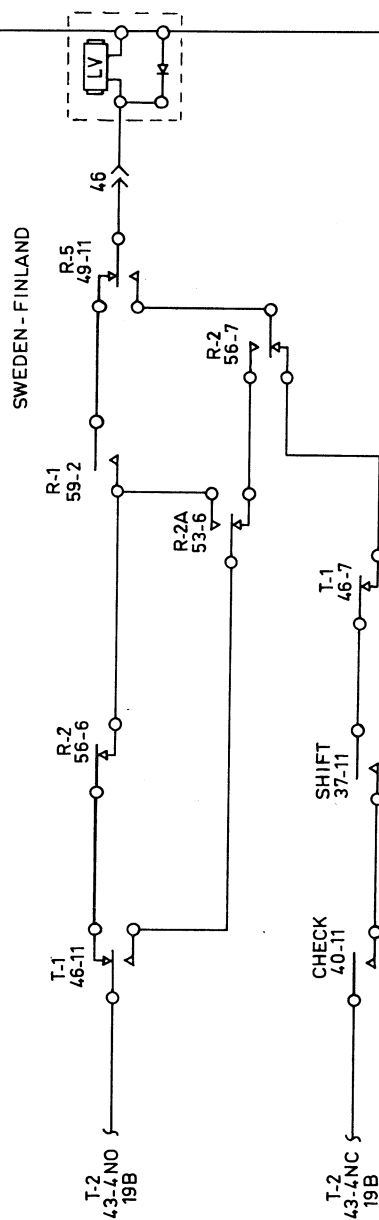
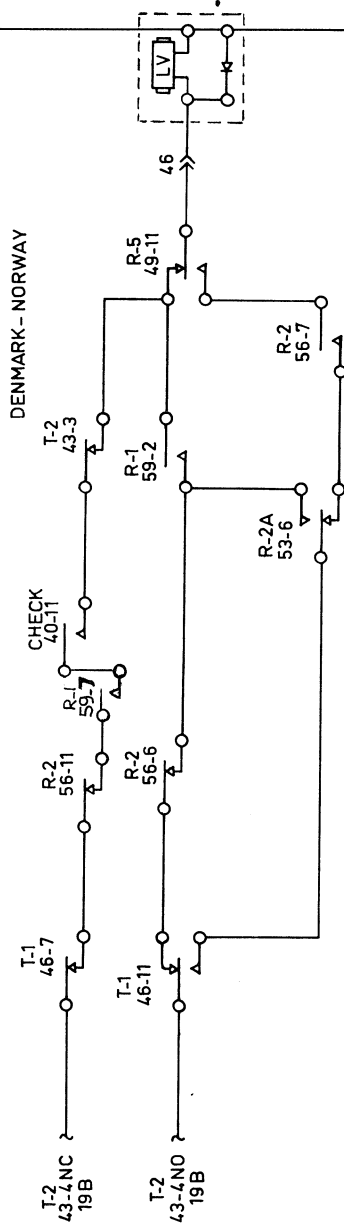
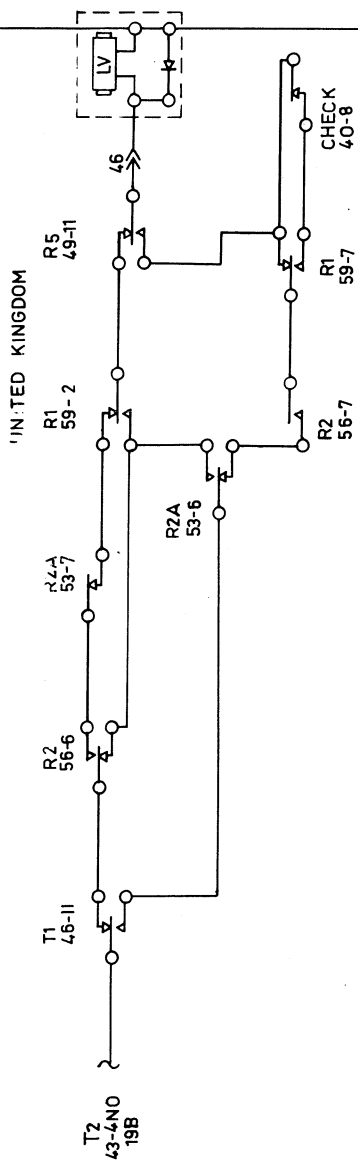
YUGOSLAVIA



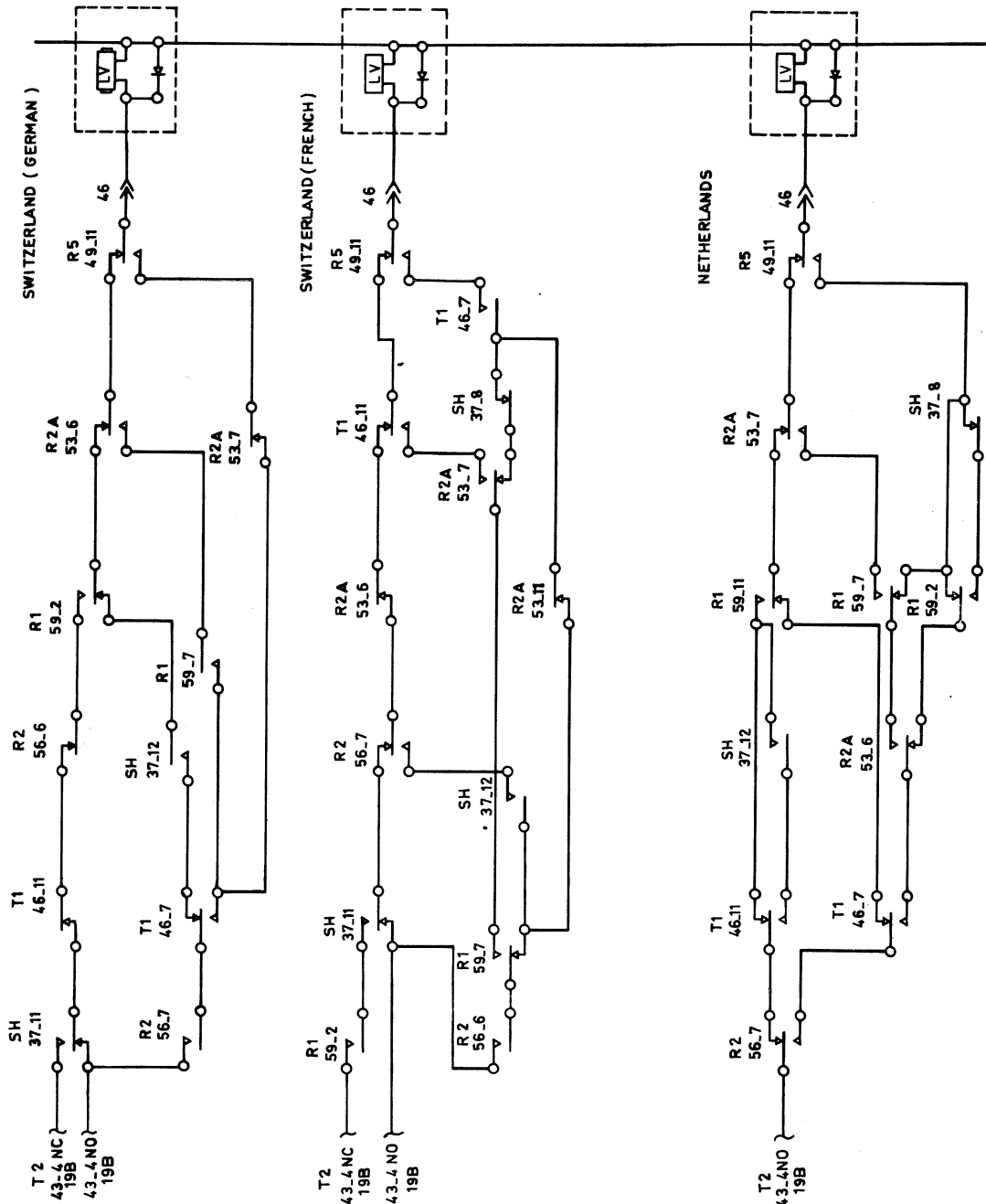
ITALY



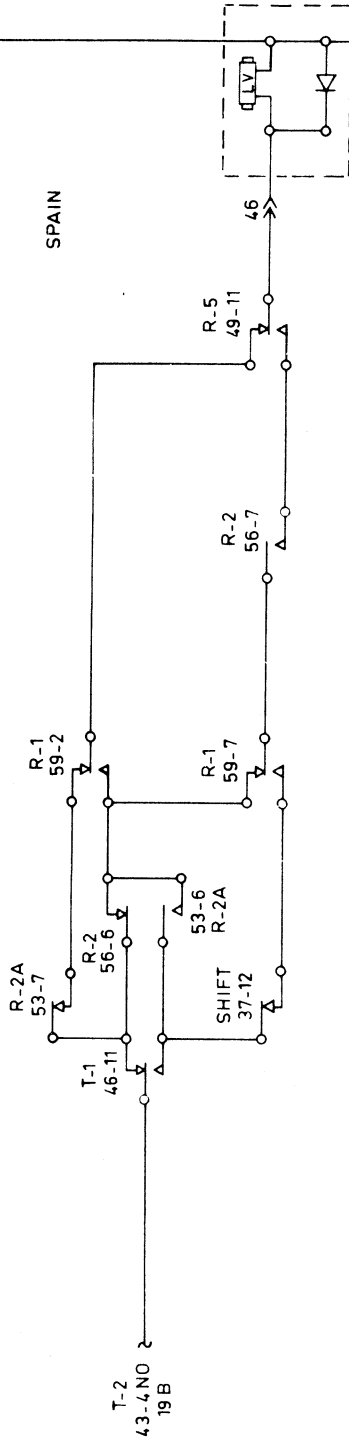




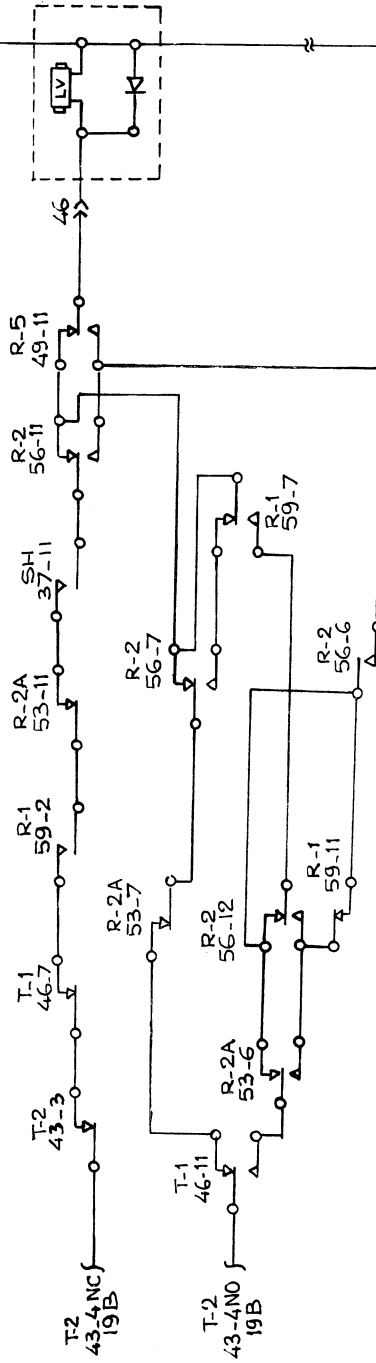
C8.034



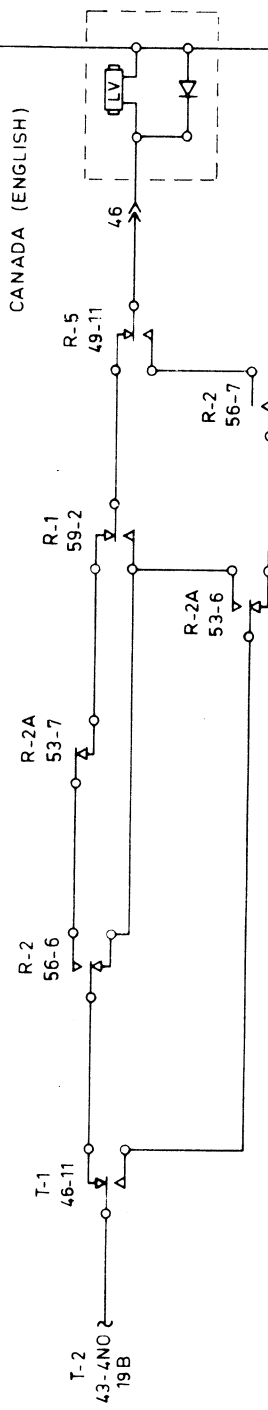
SPAIN



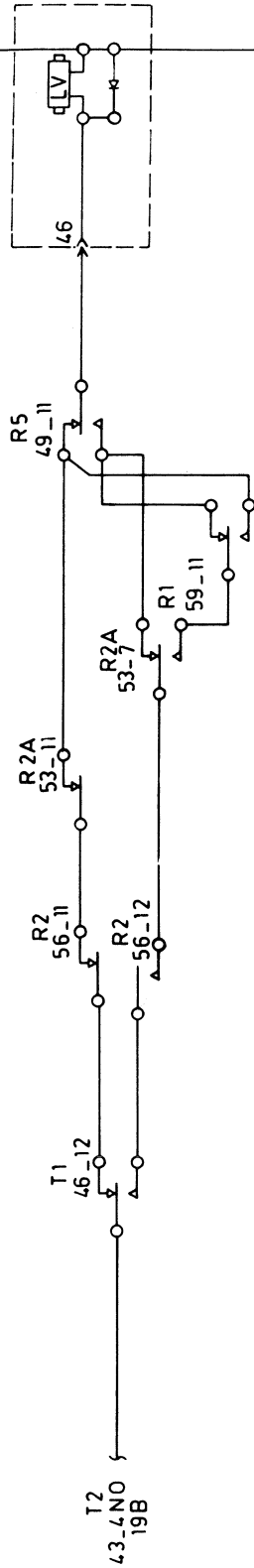
GREECE



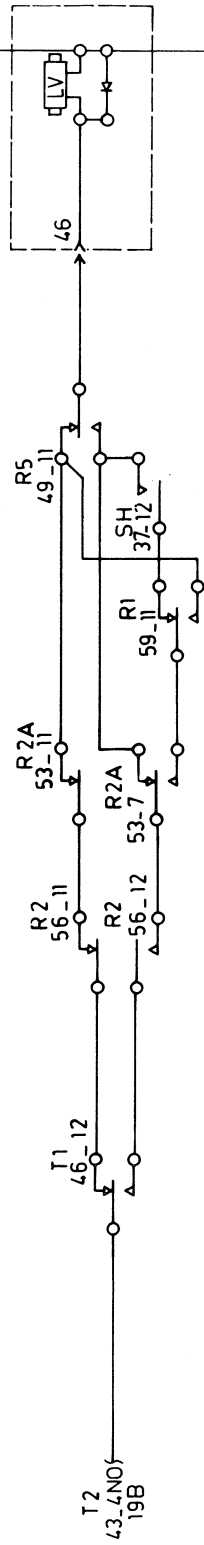
CANADA (ENGLISH)



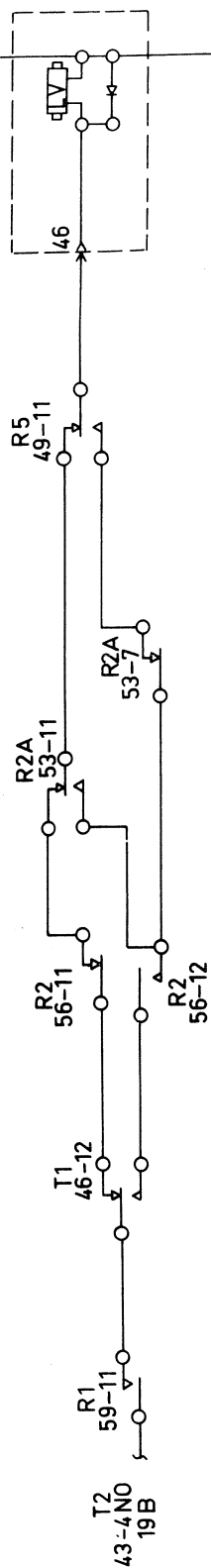
LATIN_FRENCH LATIN



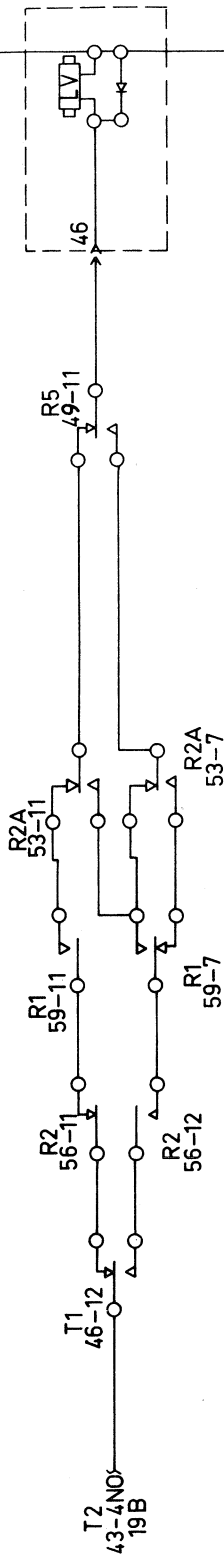
FRENCH / FRANCE



NORDIC



DOMESTIC-UNITED KINGDOM-GERMANIC-YUGOSLAVIA.



WIRE CONTACT RELAYS

RELAY	P	H	1	2	3	4	5	6	7	8	9	10	11	12	SIZE	CODE	NAME	RELAY
19	12 B	12 B	13 A	56 B		3 B	5 B	53 A	9 A	10 A	12 B	55 A	6 B	8 B	12	C	RECORD	19
22	7 B	8 B	53 A	16 A	8 B	49 A	CC	CC	13 B	7 A	14 A	35 B	16 B	5 B	12	C	COLLECTOR CONTROL	22
37		54 B	15 B	16 B		19 A	18 B	18 B	18 A	*		55 A	*	*	12	C	SHIFT BIT 8	37
40		54 B	15 B	16 B		19 A			*	*		55 A	*	17 B	12	C	CHECK BIT 7	40
43		54 B	15 B	16 B	*	19 A	21 A	22 B	11 B	12 B	11 B	55 A	CC	17 B	12	C	T2 BIT 6	43
46		53 B	15 B	16 B		19 A	21 A	22 B	*	12 B	11 A	55 A	*	17 A	12	C	T1 BIT 5	46
49		53 B	15 B	16 B		20 A	21 A	22 A	11 A	12 B	11 A	55 A	*	17 A	12	C	R5 BIT 4	49
53		53 B	15 A	16 A		20 A	17 B	*	*	12 B	11 A	55 A	*	17 A	12	C	R2A BIT 3	53
56		53 B	15 A	16 A		20 A	17 B	*	*	12 B	11 A	55 A	*	*	12	C	R2 BIT 2	56
59		53 B	15 A	*		20 A	21 A	11 B	*	12 A	11 A	55 A	*	17 A	12	C	R1 BIT 1	59
63	24 B	24 B	23 A	55 B	47 B		CC	CC							6	B	CHARACTER STORED	63
65	13 B	14 B	16 A	49 B	50 A	14 B	17 A	48 A							12	C	CR INTERLOCK	65
68	13 B	14 B	14 A	22 B	13 B	5 B	49 A								6	B	CR FEED	68
70	52 B	28 B	27 A	27 B	27 A	56 B	55 B	30 B	49 B	49 B	49 B				12	C	ENCODE BACKSPACE	70
73	52 B	28 B	28 B	30 B	27 B	56 B	55 B	28 A							6	B	BACKSPACE	73
76	15 B	16 B	9 B	28 A	15 A	13 B	5 B	47 B	42 B	23 A	12 B	24 A	12 A	11 A	12	C	CHARACTER STORED	76
79	10 B	10 B	9 B	10 A	12 B	12 A	5 A	14 A	27 A	7 A	16 A	10 A	12 B	3 B	12	C	STOP	79
82	22 B	10 B	26 B	14 A		10 A	8 A	10 A	49 B	49 B	49 B	CC			12	C	FEED	82
87	36 B	33 B		28 A	35 A	33 A	27 A	25 B	22 A	3 A	29 B		31 A	7 B	12	C	REWIND	87
90	3 B	3 B	49 A	27 A	13 A	14 A	56 B	7 B	11 A	10 A	13 A	7 A	36 B	3 B	12	C	PLAYBACK-A	90
101	37 A	31 B	31 B	32 A	32 A	36 A	49 A	35 A							6	B	LOAD	101
103	5 B	5 B	27 A	28 A	5 B	37 A	36 B	53 B	52 B	11 B	49 B	35 B	6 B	5 B	12	C	ONE CYCLE	103
107	56 B	28 B	49 A	37 A	28 B	6 B	27 A								6	B	RECORD ERROR	107
109	9 B	9 B	28 A	27 A	CC										6	B	PLAYBACK ERROR	109
110	16 B	28 B	6 B	29 B	16 B	9 A									4	D	PLAYBACK ERROR	110
112	6 B	9 B	11 B	16 A	9 B	4 B	29 B	35 A	7 A	5 A	6 A	3 B			12	C	SKIP	112
116	11 B	11 B	7 A	5 A	9 B	11 B	3 A	CC	53 B	15 A	12 B	35 A	12 B	30 B	12	C	LINE RETURN	116
119	11 B		15 A	30 B	11 B	9 B	3 A	11 B							6	B	STOP LINE RETURN	119
121	34 B	6 B	35 A	26 B	43 A	30 B	10 B	32 A	6 B	31 B	37 A	28 B	3 A	9 B	12	C	REWIND POSITION	121
136	3 B	3 B	41 B	42 B	36 B			32 A	37 A	35 B	38 A	48 B	37 A	42 B	12	C	PLAYBACK-B	136
139	42 A	41 B	37 A	35 B	41 B	31 A	11 A	11 A	38 A	36 B					12	C	STOP SEARCH	139
143	22 B	24 B	5 B	24 B	37 A	41 B	49 B	49 B	49 B		35 B				12	C	SEARCH CODE	143
146	36 B	36 B	36 B	37 A	41 B	43 A	35 B	32 A	35 B	37 B					12	C	RESET	146
150	32 B	32 B	32 A	42 A	4 B	4 B									4	A	1st SEARCH	150
152	35 B	35 B	41 B	49 A	42 B	35 B	37 A	34 B	36 B	25 B	32 A	3 B	53 A	55 A	12	C	SEARCH	152
158	46 B	46 B	39 A	46 A	38 B	38 B	38 B	46 B	46 A	RS	32 A				12	C	4 TENS	158
161	45 B	45 B	39 A	45 A	38 B	38 B	39 A	46 B	45 A	46 A	46 A		32 A		12	C	2 TENS	161
164	45 B	45 B	39 A	45 A	39 A	39 A	38 B	39 A	45 B		RS	32 A	45 A		12	C	1 TENS	164
167	42 B	42 B	42 A		RS	38 A	43 B	43 B	43 B	44 B	45 B	45 B	46 B	32 A	12	C	RING 2	167
170	42 B	42 B	RS	42 A	42 A	38 A	43 B	43 B	43 B	44 B	45 B	45 B	46 B	32 B	12	C	RING 1	170
173	44 B	44 B	40 A	40 B	44 A	43 A	44 A	45 B	45 B	46 B	RS	32 B	38 B	RS	12	C	8 UNITS	173
176	43 B	43 B	40 A	40 A	40 A	43 A	43 B	44 A	RS	40 A	32 B	38 B	RS	RS	12	C	4 UNITS	176
180	43 B	43 B	40 A		40 A	43 A	43 B	43 A	43 A	44 A		32 B	38 B	RS	12	C	2 UNITS	180
183	43 B	43 B	40 A	43 A	43 A	43 A	44 B	45 B	45 A	46 A	32 B	38 B	37 B	RS	12	C	1 UNITS	183
201	3 B	3 B	47 A	CC	21 B	18 B	48 B	48 B							6	B	INHIBIT ADJUST	201
204	21 B	47 B	47 B	47 B	21 B		CC	CC							6	B	READ CR	204
206	18 B		30 B	21 B	10 B	CC	CC	CC							6	B	CR NO STEP	206
208	47 B	47 B	47 B	18 B	21 B	21 B									4	A	STORE CR	208
209	47 B	47 B	21 B	47 B	18 B	48 B	21 B	CC							6	B	REPEAT CR TAB	209
211	11 B	48 B	48 B		18 A	18 A									4	A	STORE SP, B'SP	211
213	17 B	48 B	CC	48 B	18 A	22 B									4	A	STORE HYPHEN	213
214	48 B	48 B	48 A	18 A		21 B	18 A		48 B	11 B					12	C	REGION	214
234	4 B	4 B	55 A	3 A	RS	22 A	12 A	9 A	56 A	6 B	25 A	56 B	55 B	25 A	12	C	TRANSFER	234
239	23 B	24 B	24 B	4 B	4 B	26 B									4	A	SWITCH FROM LEFT	239
240	23 B	24 B	24 B	4 B	4 B	26 B									4	A	SWITCH FROM RIGHT	240
241	22 B	26 B	23 A	22 B	26 B										4	A	SWITCH CYCLE	241
242	4 B	4 B	9 B	35 A	36 A	4 B	56 B	30 A	30 A	23 B	34 A	31 A	25 A	25 A	12	C	ADDRESS LEFT	242
245	4 B	4 B	9 B	35 A	36 A	4 B	56 B	29 A	4 B	31 B	33 A	26 A	25 A	23 B	12	C	ADDRESS RIGHT	245
RELAY	P	H	1	2	3	4	5	6	7	8	9	10	11	12	SIZE	CODE	NAME	RELAY

E.T. CONTACTS		
C-1, C-2, C-5, C-6		13A
CARRIER RETURN INTERLOCK		13A
STOP & ZONE CONTACTS		48A
SHIFT MODE # 1		18B
SHIFT MODE # 2		52A
SHIFT MODE # 3		13A
TAB INTERLOCK		17A
TRANSMITTING CONTACTS		51B
CR & REV TRANSMITTING CONTACTS		13B

MTST CONTACTS, MAGNETS & CB'S		
CB-1	CHARACTER STORED	15A
CB-2	RELAY HOLD TIMING	10A
CB-3	RECORD HOLD TIMING	8A
CB-4	THYRATRON CONTROL	53A
CB-5	MTT CYCLE CLUTCH	7B
CB-6	BACKSTROKE	55A
CB-7	STEPPING	29A
CB-8	FORESTROKE	55A
	COVER UNLOCK-RIGHT	33B
	COVER UNLOCK-LEFT	34B
	CYCLE CLUTCH MAGNET	7B
	DETENT SOLENOIDS	31B
	HIGH BIAS SOLENOIDS	33B
	LOAD SEARCH SOLENOID	32B
	PRESSURE PAD SOLENOIDS	25A
	SEARCH POSITION MAGNET	41B
	STEPPING MAGNETS	29
	DETENT OUT - A	25B
	DETENT OUT - B	6A
	END OF TAPE - A	35A
	END OF TAPE - B	36A
	HOME POSITION - A	41B
	HOME POSITION - B	11A
	LEADER SENSE - A	25A
	LEADER SENSE - B	33B
	LOAD SEARCH SWITCH	31A
	PRESSURE PAD SENSE - A	29A
	PRESSURE PAD SENSE - B	25A
	REEL INTERLOCK SWITCHES	31B
	REWIND POSITION SWITCHES	34B
	SEARCH CONTACT - A	31A
	SEARCH CONTACT - B	42B

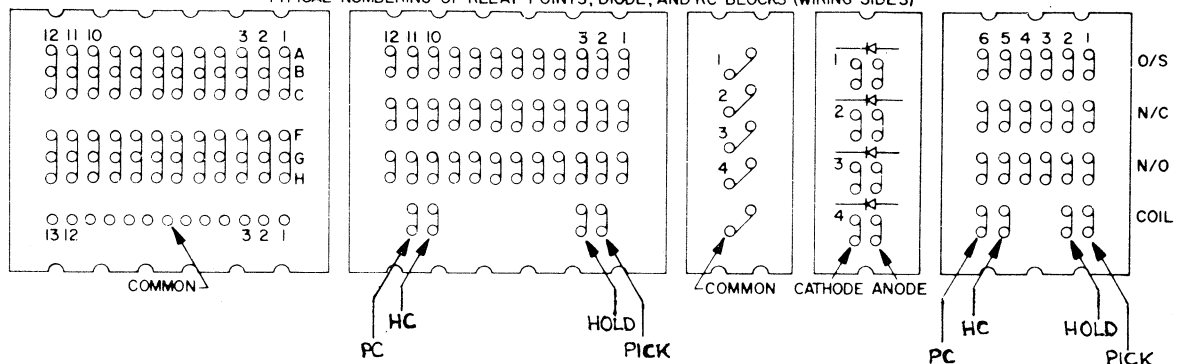
E.T. MAGNETS		
SELECTION MAGNETS		19/20
SPACE		21B
BACKSPACE		28B
CARRIER RETURN		21B
TAB		21B
SHIFT MODE		18B
KEYBOARD LOCK		27B

I/O CONNECTOR POINTS	
1	20B
2	20B
3	20B
4	20B
5	19B
7	19B
8	19B
10	13B
11	21B
12	27B
13	21B
14	21B
15	18B
16	18B
17	27B
18	18A
20	13A
21	13A
22	13B
23	13A
24	13A
25	13A
26	51B
27	51B
28	51B
29	51B
30	52B
31	52B
32	52B
33	52B
34	51A
35	52A
36	52B
37	18B
38	48A
39	13A
40	18B
41	13B
42	13A
43	13A
44	52B
45	48A
46	19B
47	17A
48	17A
49	13B
65	1B
66	1B
67	1B
79	1B
80	1B
82	1B

SWITCH CONTROL		
SW1-A	START CONDITION	12A
SW1-B	START CONDITION	12A
SW1-C	START CONDITION	12B
SW2	SEARCH-TENS	39B
SW3	SEARCH-UNITS	40B
SW4-A	MODE OF OPERATION	3A
SW4-B	MODE OF OPERATION	4A
SW4-C	MODE OF OPERATION	4A
SW5-1	START	5A
SW5-2	STOP	9B
SW5-2	STOP REWIND-UNLOAD	35A
SW5-2	STOP LOAD	31B
SW5-3	SKIP	6A
SW5-5	SEARCH	35A
SW5-7	REWIND	36B
SW5-9	LINE RETURN	11B
SW5-11	LOAD TAPE	37A
SW6-1	BACKSPACE CODE	49A
SW6-2	STOP CODE	49A
SW6-3	FEED CODE	49A
SW6-5	REFERENCE CODE	35A
SW6-7	AUTO SEARCH CODE	49A
SW6-8	STOP TRANSFER CODE	50A
SW6-9	SWITCH CODE	50A
SW6-11	UNLOAD TAPE	35A, 36A
SW21	STEPPING CONTROL	29B
SW22	BIT HOLD	15B

TRANSPORT CONNECTOR					
CONN	LOC	CONN	LOC	CONN	LOC
A-1	25B	B-11	7A	D-4	25A
A-2	31B	B-12	35A	D-5	25A
A-3		B-13	25A	D-6	41B
A-4	29A	B-14	31B	D-7	41B
A-5		B-15	33B	D-8	42B
A-6	36A	B-16		D-9	31A
A-7	31B			D-10	31A
A-8	32B	C-1	30A	D-11	42B
A-9	32B	C-2	31B	D-12	31A
A-10	7B	C-3		D-13	31A
A-11	29A	C-4	25A	D-14	11A
A-12	34B	C-5	25A	D-15	11A
A-13	34B	C-6	35A	D-16	31A
A-14	41B	C-7	30A		
A-15		C-8	34B		
A-16	26A	C-9	6A		
		C-10	36A		
B-1	26A	C-11	6B		
B-2	33B	C-12	25A		
B-3	15A	C-13	34B		
B-4	10A	C-14	25A		
B-5	8A	C-15	34B		
B-6	55A	C-16	26A		
B-7	55A				
B-8	7B	D-1	25A		
B-9	29A	D-2	15A		
B-10	53A	D-3			

TYPICAL NUMBERING OF RELAY POINTS, DIODE, AND RC BLOCKS (WIRING SIDES)



RC-15							
POS	LOCATION	RES. NO	RES. VAL	CAP. NO	CAP. VAL	DIODE NO	DIODE TP
1	34B	1160691	110 Ω	1127455	.25 μ f		
2	5CB/55A						
3	31B	1160691	110 Ω	1127455	.25 μ f		
4	48B						
5	21B						
6	18A/13A						
7	28B	1160691	110 Ω				
8							
9	3A	(+48V)					
10							
11	54B			1127455	.25 μ f		
12	54B	1160691	110 Ω				
		1119111	18K Ω				

X "C" CONTACT TIMING SHOWN IN DIAGRAMS IS NOMINAL FOR TOLERANCES SEE I/O REFERENCE MANUAL.

XI LOCATION INDICATED BESIDE RELAY COIL IS FOR ITS OTHER COIL WHEN THE OTHER COIL IS ON ANOTHER PAGE.

MOLDED RC BLOCKS					
•	328601	680 Ω - .047 μ f			
•	328602	330 Ω - .1 μ f			
NO	CODE	SECTION AND LOCATION			
		1	2	3	4
25	•	7B	8B	3B	
68	•	13B	14B	14B	14B
75	•	28B	52B	28B	15B
79	•	16B	10B	22B	10B
86	•	36B	29B	7B	29B
101	•		48B	32B	46B
106	•	31B	5B	55B	28B
111	•	16B	28B	6B	9B
119	•	11B	11B	11B	24B
142	•	41A	41B	22B	24B
149	•	36B	32B	35B	35B
167	•	42B	42B	45B	45B
205	•	18B	22B	47B	3B
210	•	17B	11B	48B	48B
238	•	4B	23B	23B	26B
179	•	43B	43B	43B	44B

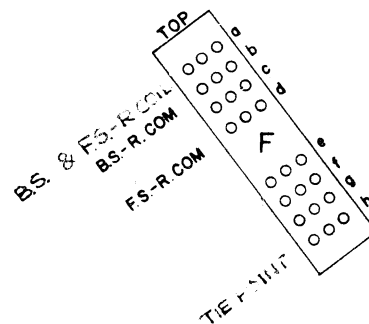
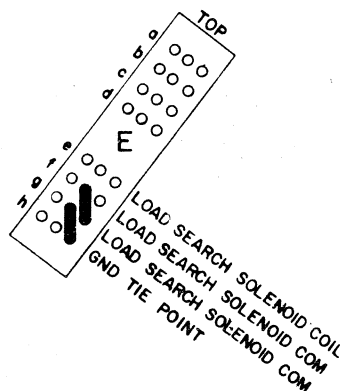
DIODE BLOCK					
NO	PART NO 1160915				
	1	2	3	4	
18	12B	54B	54B	25A	
46	54B	54B	54B	54B	
52	53B	53B	53B	53B	
70	7A	9A	17A	16A	
75	53A	53A	53A	7B	
85	7B	10A	6B	34B	
86	7A	10A	9A	9A	
107	5B	28A	31B	5B	
115	12B	11B	41B	38A	
149	41B	42B	37A	37A	
207	17B	18A	3B	3B	
237	25A	25A	25A	25A	
238	25A	25A	26A	4A	
25	48B	9A		22B	

SEARCH CAP-RES TERM BOARD				
POS	VALUE	PAGE	PART #	
TB2-1	30 μ f - 55V	46B	1160690	
TB2-2	110 Ω - 1W	46B	1160691	
TB2-3	30 μ f - 55V	45B	1160690	
TB2-4	110 Ω - 1W	45B	1160691	
TB2-5	30 μ f - 55V	45B	1160690	
TB2-6				
TB2-7	110 Ω - 1W	45B	1160691	
TB2-8	30 μ f - 55V	44B	1160690	
TB2-9	110 Ω - 1W	44B	1160691	
TB2-10	30 μ f - 55V	44B	1160690	
TB2-11	110 Ω - 1W	44B	1160691	
TB2-12	30 μ f - 55V	43B	1160690	
TB2-13	110 Ω - 1W	43B	1160691	
TB2-14	30 μ f - 55V	43B	1160690	
TB2-15				
TB2-16	110 Ω - 1W	43B	1160691	

RELAYS, SOLENOIDS & MAGNETS				
CODE	PART #	DESCRIPTION	RATED D.C. RES	
A	196208	4 POS RELAY	624 Ω P	1735 Ω H
B	196198	6 POS RELAY	622 Ω P	1080 Ω H
C	255735	12 POS RELAY	395 Ω P	600 Ω H
D	186685	4 POS LATCH RELAY	295 Ω P	332 Ω LT
E	196207	4 POS 2 PICK RELAY	624 Ω	
	1160931	CYCLE CLUTCH	171 Ω	
	1135689	PRESSURE PAD	358 Ω	
	1128964	STEP	240 Ω	
	343761	LOAD & SEARCH	185 Ω	
	343761	HIGH BIAS	185 Ω	
	1128964	COVER UNLOCK	240 Ω	
	315189	SEARCH POS	171 Ω	
	306375	DETENT	120 Ω	

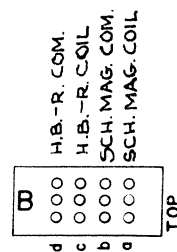
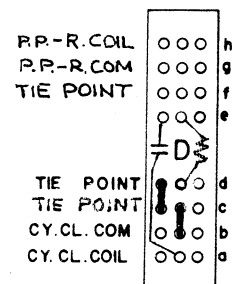
MODEL 1011

CASTING



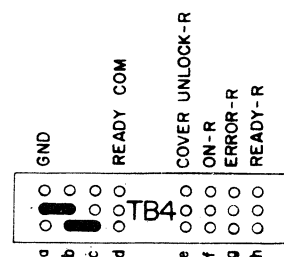
L/S

R/S



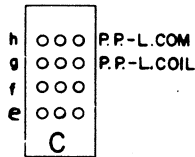
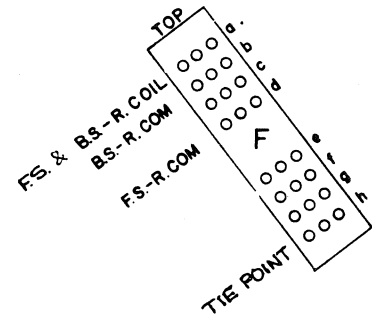
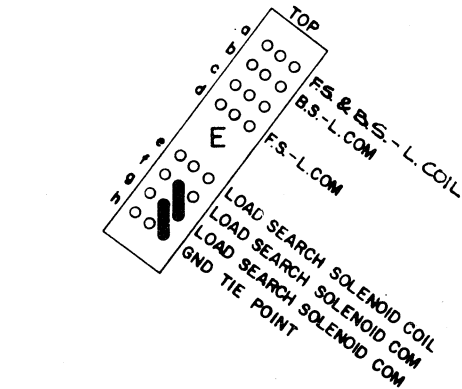
"FRONT"

PANEL



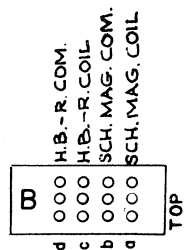
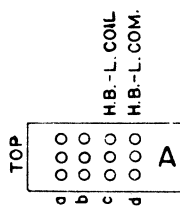
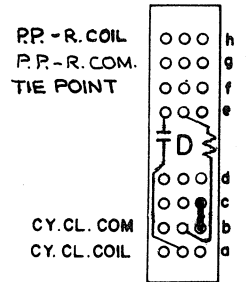
MODEL 1021

CASTING



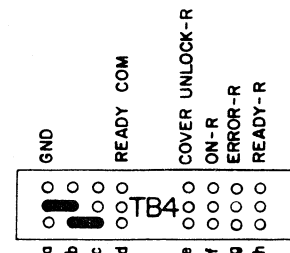
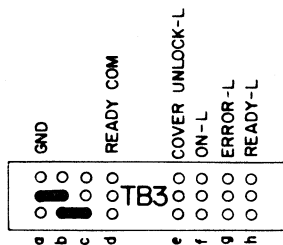
L/S

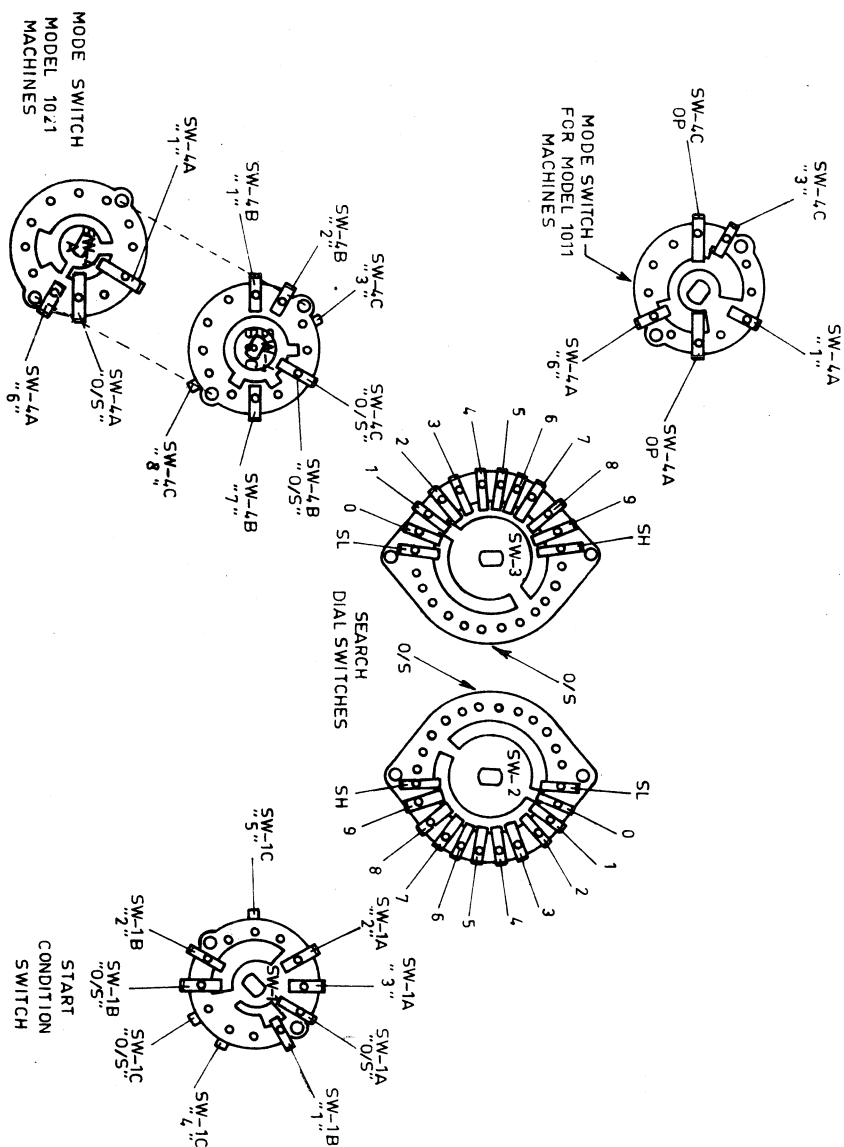
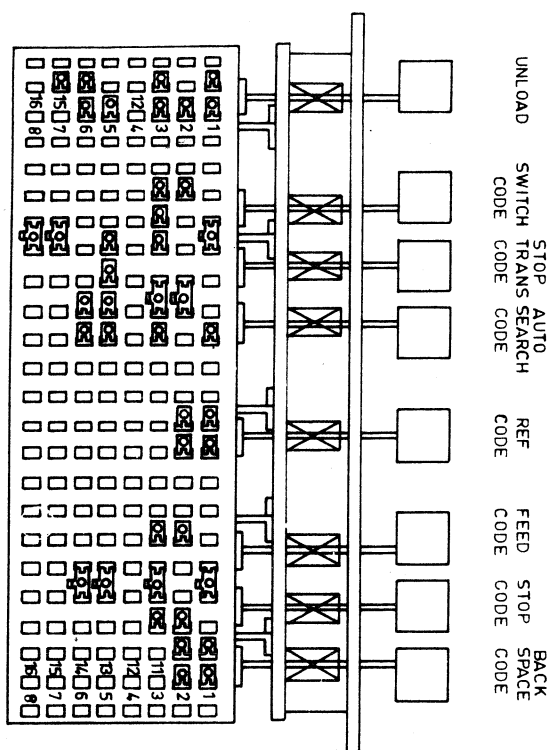
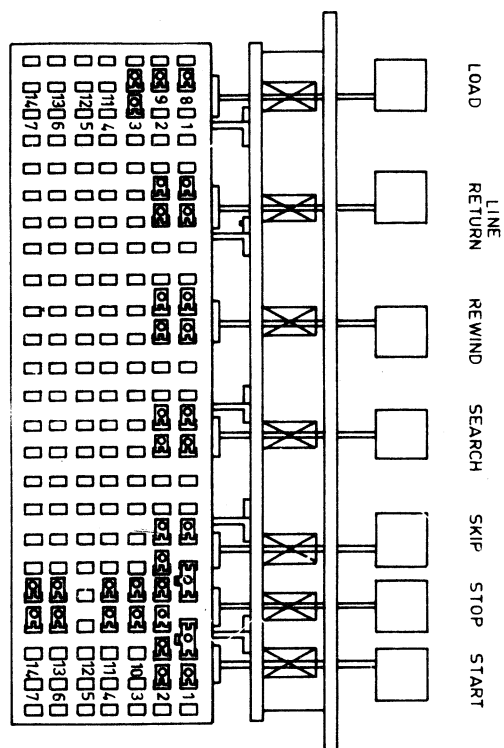
R/S



"FRONT"

PANEL





MT 72 CODE SHEET

D1.09.1
P/N 1161341

	R1	R2	R2A	R5	T1	T2	CK	SH	US	FR	SF	SG	NL	GB	G	SwF	DN	I	SP	CF	BR + PO
1	1	-	-	-	-	-	-	-	2@	é2	2"	2"	2½	2*	2"	2+	2"	"2	2½	2"	2"
2	-	2	-	-	-	-	-	-	5%	(5	5&	5&	5%	5£	5&	5%	5\$	5	5%	5%	5£
3	1	2	-	-	-	-	7	-	6¢	\$6	6(	6(	6f	6\$	6(	6?	6&	é6	6/	6?	6?
4	-	2	3	-	-	-	7	-	0)	à&	0¼	0/	0½	¼)	+/	0/	0/	é°	0)	0)	0)
5	1	2	3	-	-	-	-	-	9(	ç9	9½	9¼	9)	9(	9\$	9)	9)	à9	9(	9(	9(
6	-	-	-	-	-	-	7	-	zZ	zZ	zZ	zZ	zZ	zZ	zZ	zZ	zZ	zZ	zZ	zZ	zZ
7	-	2	3	4	-	-	-	-	4\$	'4	4%	4%	4\$	4@	4%	4=	4?	(4	4\$	4\$	4\$
8	1	2	-	4	-	-	-	-	8*	!8	8?	8?	8(	8½	8'	8(	8(	+8	8*	8½	8'
9	-	2	-	4	-	-	7	-	7&	è7	7)	7)	7&	7&	7)	7&	7£	)7	7&	7&	7&
10	1	-	-	4	-	-	7	-	3#	"3	3*	3*	3£	3/	3=	3\$	3%	'3	3#	3/	3/
11	-	-	-	4	-	-	-	-	l[	\$£	\$£	\$£	1¼	=+	1;	ü'	=	&½	li	ç*	=*
12	1	-	-	-	5	-	7	-	nN	nN	nN	nN	nN	nN	nN	nN	nN	nN	nN	nN	nN
13	-	2	-	-	5	-	7	-	eE	eE	eE	eE	eE	eE	eE	eE	eE	eE	eE	eE	eE
14	1	2	-	-	5	-	-	-	kK	kK	kK	kK	kK	kK	kK	kK	kK	kK	kK	kK	kK
15	-	2	3	-	5	-	-	-	hH	hH	hH	hH	hH	hH	hH	hH	hH	hH	hH	hH	hH
16	1	2	3	-	5	-	7	-	bB	bB	bB	bB	bB	bB	bB	bB	bB	bB	bB	bB	bB
17	-	-	-	-	5	-	-	-	tT	tT	tT	tT	tT	tT	tT	tT	tT	tT	tT	tT	tT
18	-	2	3	4	5	-	7	-	lL	lL	lL	lL	lL	lL	lL	lL	lL	lL	lL	lL	lL
19	1	2	-	4	5	-	7	-	cC	cC	cC	cC	cC	cC	cC	cC	cC	cC	cC	cC	cC
20	-	2	-	4	5	-	-	-	dD	dD	dD	dD	dD	dD	dD	dD	dD	dD	dD	dD	dD
21	1	-	-	4	5	-	-	-	uU	uU	uU	uU	uU	uU	uU	uU	uU	uU	uU	uU	uU
22	-	-	-	4	5	-	7	-	xX	xX	xX	xX	xX	xX	xX	xX	xX	xX	xX	xX	xX
23	1	-	-	-	-	6	7	-	..	.;	..	..	..	..	..	..	..	..	..	..	..
24	-	2	-	-	-	6	7	-	:"	:/	à:	à:	à:	à:	à:	à:	à:	à:	à:	à:	à:
25	1	2	-	-	-	6	-	-	iI	iI	iI	iI	iI	iI	iI	iI	iI	iI	iI	iI	iI
26	-	2	3	-	-	6	-	-	sS	sS	sS	sS	sS	sS	sS	sS	sS	sS	sS	sS	sS
27	1	2	3	-	-	6	7	-	wW	wW	wW	wW	wW	wW	wW	wW	wW	wW	wW	wW	wW
28	-	-	-	-	-	6	-	-	!°	=+	'/	üs	+=	z&	üÜ	\$£	½+	ì=	··	#@	%+
29	-	2	3	4	-	6	7	-	oO	oO	oO	oO	oO	oO	oO	oO	oO	oO	oO	oO	oO
30	1	2	-	4	-	6	7	-	aA	aA	aA	aA	aA	aA	aA	aA	aA	aA	aA	aA	aA
31	-	2	-	4	-	6	-	-	rR	rR	rR	rR	rR	rR	rR	rR	rR	rR	rR	rR	rR
32	1	-	-	4	-	6	-	-	vV	vV	vV	vV	vV	vV	vV	vV	vV	vV	vV	vV	vV
33	-	-	-	4	-	6	7	-	mM	mM	mM	mM	mM	mM	mM	mM	mM	mM	mM	mM	mM
34	1	-	-	-	5	6	-	-	=+	)°	èù	ö+	/:	ä&	öÜ	øØ	ø!	=+	¼	\$°	
35	-	2	-	-	5	6	-	-	pP	pP	pP	pP	pP	pP	pP	pP	pP	pP	pP	pP	pP
36	1	2	-	-	5	6	7	-	qQ	qQ	qQ	qQ	qQ	qQ	qQ	qQ	qQ	qQ	qQ	qQ	qQ
37	-	2	3	-	5	6	7	-	yY	yY	yY	yY	yY	yY	yY	yY	yY	yY	yY	yY	yY
38	1	2	3	-	5	6	-	-	jJ	jJ	jJ	jJ	jJ	jJ	jJ	jJ	jJ	jJ	jJ	jJ	jJ
39	-	-	-	-	5	6	7	-	/?	ù%	éç	éç	"	z%	ß:	äA	äA	ü%	jJ	éç	çç
40	-	2	3	4	5	6	-	-	;;	z?	z+	z~	z?	z?	z?	z?	z?	z?	z?	z?	z?
41	1	2	-	4	5	6	-	-	;;	z?	z+	z~	z?	z?	z?	z?	z?	z?	z?	z?	z?
42	-	2	-	4	5	6	7	-	fF	fF	fF	fF	fF	fF	fF	fF	fF	fF	fF	fF	fF
43	1	-	-	4	5	6	-	-	gG	gG	gG	gG	gG	gG	gG	gG	gG	gG	gG	gG	gG
44	-	-	-	4	5	6	-	-													

NOTE: LOWER CASE LATCH CODES INDICATED ONLY.

FOR UPPER CASE ADD SHIFT AND ADD/REMOVE CHECK BIT.

TW 70865

PAGE 1 OF 3

MT 72 CODE SHEET

D1.09.2
P/N 1161341

	R1	R2	R2A	R5	T1	T2	CK	SH	I	GR
1	1	-	-	-	-	-	-	-	2"	2"
2	-	2	-	-	-	-	-	-	5f	5f
3	1	2	-	-	-	-	7	-	6?	6?
4	-	2	3	-	-	-	7	-	0)	0)
5	1	2	3	-	-	-	-	-	9(	9(
6	-	-	-	-	-	-	7	-	zZ	zZ
7	-	2	3	4	-	-	-	-	4\$	4\$
8	1	2	-	4	-	-	-	-	8'	8'
9	-	2	-	4	-	-	7	-	7/	7/
10	1	-	-	4	-	-	7	-	3%	3%
11	-	-	-	4	-	-	-	-	1+	1+
12	1	-	-	-	5	-	7	-	nN	vN
13	-	2	-	-	5	-	7	-	eE	eE
14	1	2	-	-	5	-	-	-	kK	xK
15	-	2	3	-	5	-	-	-	hH	nH
16	1	2	3	-	5	-	7	-	bB	βB
17	-	-	-	-	5	-	-	-	tT	τT
18	-	2	3	4	5	-	7	-	lL	λL
19	1	2	-	4	5	-	7	-	cC	ψψ
20	-	2	-	4	5	-	-	-	dD	δΔ
21	1	-	-	4	5	-	-	-	uU	θθ
22	-	-	-	4	5	-	7	-	xX	χX
23	1	-	-	-	-	6	7	-	∴	∴
24	-	2	-	-	-	6	7	-	∴	∴
25	1	2	-	-	-	6	-	-	iI	ιI
26	-	2	3	-	-	6	-	-	sS	σΣ
27	1	2	3	-	-	6	7	-	wW	ς*
28	-	-	-	-	-	6	-	-	--	--
29	-	2	3	4	-	6	7	-	oO	οO
30	1	2	-	4	-	6	7	-	aA	αA
31	-	2	-	4	-	6	-	-	rR	ρP
32	1	-	-	4	-	6	-	-	vV	ωΩ
33	-	-	-	4	-	6	7	-	mM	μM
34	1	-	-	-	5	6	-	-	--	--
35	-	2	-	-	5	6	-	-	pP	πΠ
36	1	2	-	-	5	6	7	-	qQ	=@
37	-	2	3	-	5	6	7	-	yY	υY
38	1	2	3	-	5	6	-	-	-	-
39	-	-	-	-	5	6	7	-	jJ	ξΞ
40	-	2	3	4	5	6	-	-	∴	∴
41	1	2	-	4	5	6	-	-	,:	,:
42	-	2	-	4	5	6	7	-	~	~
43	1	-	-	4	5	6	7	-	fF	φΦ
44	-	-	-	4	5	6	-	-	gG	γΓ

NOTE: LOWER CASE LATCH CODES INDICATED ONLY.
FOR UPPER CASE ADD SHIFT AND ADD/REMOVE CHECK BIT.

TW 70830
PAGE 2 OF 3

MT 72 CODE SHEET

D1.09.3
P/N 1161341

FUNCTION	R1	R2	R2A	R5	T1	T2	CK	SH
CR	-	-	3	-	-	-	-	-
Tab	-	-	3	-	-	6	7	-
Space	-	-	3	-	5	6	-	-
Back Space	-	-	3	4	-	6	-	-
Stop	1	-	3	4	-	-	-	-
Feed	1	-	3	-	5	-	-	-
Auto Search	1	-	3	-	-	6	-	-
Switch	1	-	3	-	-	-	7	-
Stop Transfer	1	-	3	4	5	6	-	-

For upper case characters, add a SH (shift) bit in every case and add or delete a check bit in order to obtain an odd number of bits.

The following typehead abbreviations have been used:

US	American
FR	French
SF	Swiss (French)
SG	Swiss (German)
NL	Netherlands
GB	British
G	German
SwF	Swedish/Finnish
DN	Danish/Norwegian
I	Italian
SP	Spanish
CF	Canada (French)
BR	Brazil
PO	Portugal
GR	Greece

Machine	1011,1021
E.C.	
T.W.	70830
Page	3 of 3

MT-72 CODE SHEET WITH GRAPHICS TYPE ELEMENT

	R1	R2	R2A	R5	T1	T2	CK	SH	NOR	GER	DOM	UK	FF	LAT
1	1	-	-	-	-	-	-	-	2!	2=	2†	2†	2«	2¿
2	-	2	-	-	-	-	-	-	5%	5%	5%	5%	5%	5!
3	1	2	-	-	-	-	7	-	6/	6/	6/	6/	6!	6/
4	-	2	3	-	-	-	7	-	0)	0)	0)	0)	0)	0)
5	1	2	3	-	-	-	-	-	9(	9(	9(	9(	9(	9(
6	-	-	-	-	-	-	7	-	zZ	zZ	zZ	zZ	zZ	zZ
7	-	2	3	4	-	-	-	-	4\$	4\$	4\$	4£	4£	4\$
8	1	2	-	4	-	-	-	-	8=	8*	8*	8*	8*	8*
9	-	2	-	4	-	-	7	-	7&	7&	7&	7&	7&	7&
10	1	-	-	4	-	-	7	-	3?	3+	3+	3+	3»	3;
11	-	-	-	4	-	-	-	-	1»	1!	1!	1!	1!	1!
12	1	-	-	-	5	-	7	-	nN	nN	nN	nN	nN	nN
13	-	2	-	-	5	-	7	-	eE	eE	eE	eE	eE	eE
14	1	2	-	-	5	-	-	-	kK	kK	kK	kK	kK	kK
15	-	2	3	-	5	-	-	-	hH	hH	hH	hH	hH	hH
16	1	2	3	-	5	-	7	-	bB	bB	bB	bB	bB	bB
17	-	-	-	-	5	-	-	-	tT	tT	tT	tT	tT	tT
18	-	2	3	4	5	-	7	-	lL	lL	lL	lL	lL	lL
19	1	2	-	4	5	-	7	-	cC	cC	cC	cC	cC	cC
20	-	2	-	4	5	-	-	-	dD	dD	dD	dD	dD	dD
21	1	-	-	4	5	-	-	-	uU	uU	uU	uU	uU	uU
22	-	-	-	4	5	-	7	-	xX	xX	xX	xX	xX	xX
23	1	-	-	-	-	6	7	-	..	..	..	..	..	..
24	-	2	-	-	-	6	7	-	äÄ	äÄ	[½	[½	é?	ç?
25	1	2	-	-	-	6	-	-	iI	iI	iI	iI	iI	iI
26	-	2	3	-	-	6	-	-	sS	sS	sS	sS	sS	sS
27	1	2	3	-	-	6	7	-	wW	wW	wW	wW	wW	wW
28	-	-	-	-	-	6	-	-	öÖ	öÖ	]¼	]¼	˘	˘
29	-	2	3	4	-	6	7	-	oO	oO	oO	oO	oO	oO
30	1	2	-	4	-	6	7	-	aA	aA	aA	aA	aA	aA
31	-	2	-	4	-	6	-	-	rR	rR	rR	rR	rR	rR
32	1	-	-	4	-	6	-	-	vV	vV	vV	vV	vV	vV
33	-	-	-	4	-	6	7	-	mM	mM	mM	mM	mM	mM
34	1	-	-	-	5	6	-	-	øØ	ß?	=@	=@	àœ	ñÑ
35	-	2	-	-	5	6	-	-	pP	pP	pP	pP	pP	pP
36	1	2	-	-	5	6	7	-	qQ	qQ	qQ	qQ	qQ	qQ
37	-	2	3	-	5	6	7	-	yY	yY	yY	yY	yY	yY
38	1	2	3	-	5	6	-	-	--	--	--	--	--	--
39	-	-	-	-	5	6	7	-	jJ	jJ	jJ	jJ	jJ	jJ
40	-	2	3	4	5	6	-	-	æ	;	;	;	;/	;
41	1	2	-	4	5	6	-	-	,	,	,	,	;	,
42	-	2	-	4	5	6	7	-	åÄ	üÜ	?¾	?¾	ˆ	ˆ
43	1	-	-	4	5	6	7	-	fF	fF	fF	fF	fF	fF
44	-	-	-	4	5	6	-	-	gG	gG	gG	gG	gG	gG

NOTE LOWER CASE LATCH CODES INDICATED ONLY
FOR UPPER CASE ADD SHIFT BIT AND ADD REMOVE CHECK BIT

IBM

FEATURE DIAGRAMS

CODE CONVERSION

EC	957519					
DATE	JUN 4 - 70					
EC						
DATE						

TRANSFER ADJUST WITH CODE CONVERSION

P/N 8157001TABLE OF CONTENTS P/N 8157001

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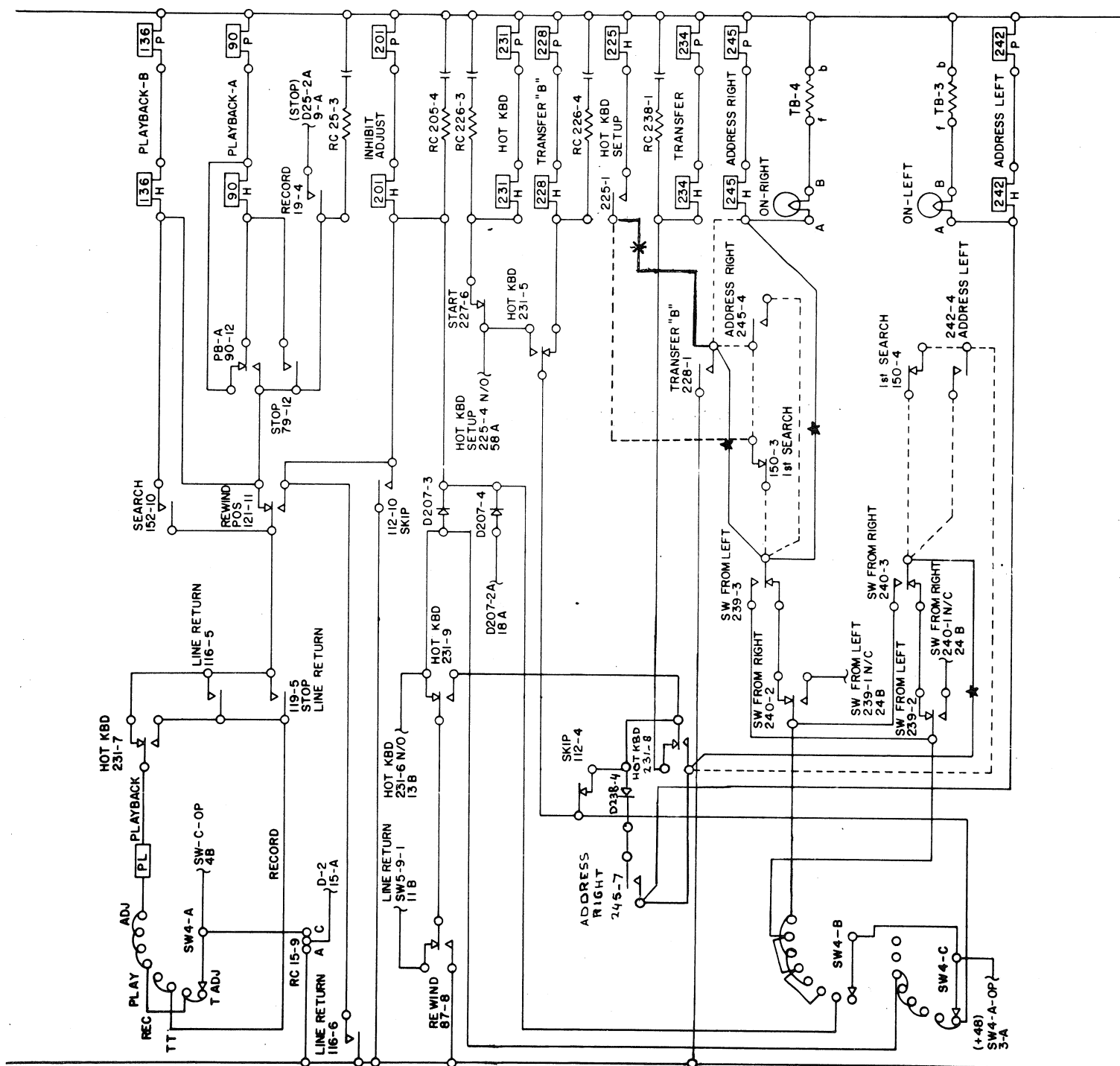
PART NO. EC LEVEL

TITLE PAGE	8157001	957519
TABLE OF CONTENTS	8157001	957519
CODE CONVERSION (3-4)	8157002	957519
CODE CONVERSION (5-6)	8157002	957519
CODE CONVERSION (7-8)	8157002	957519
CODE CONVERSION (9-10)	8157003	957519
CODE CONVERSION (11-12)	8157003	957519
CODE CONVERSION (13-14)	8157004	957519
CODE CONVERSION (15-16)	8157004	957519
CODE CONVERSION (21-22)	8157005	957519
CODE CONVERSION (23-24)	8157005	957519
CODE CONVERSION (29-30)	8157006	957519
CODE CONVERSION (31-32)	8157006	957519
CODE CONVERSION (47-48)	8157007	957519
CODE CONVERSION (57-58)	8157008	957519
CODE CONVERSION 59-60)	8157008	957519
RELAY LOCATION CHART (CC)	8157009	957519
ADL. LOCATION CHART (CC)	8157009	957519

MACHINE 1021
 EC 957519
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CODE CONVERSION WITH OR
WITHOUT REVERSE SEARCH

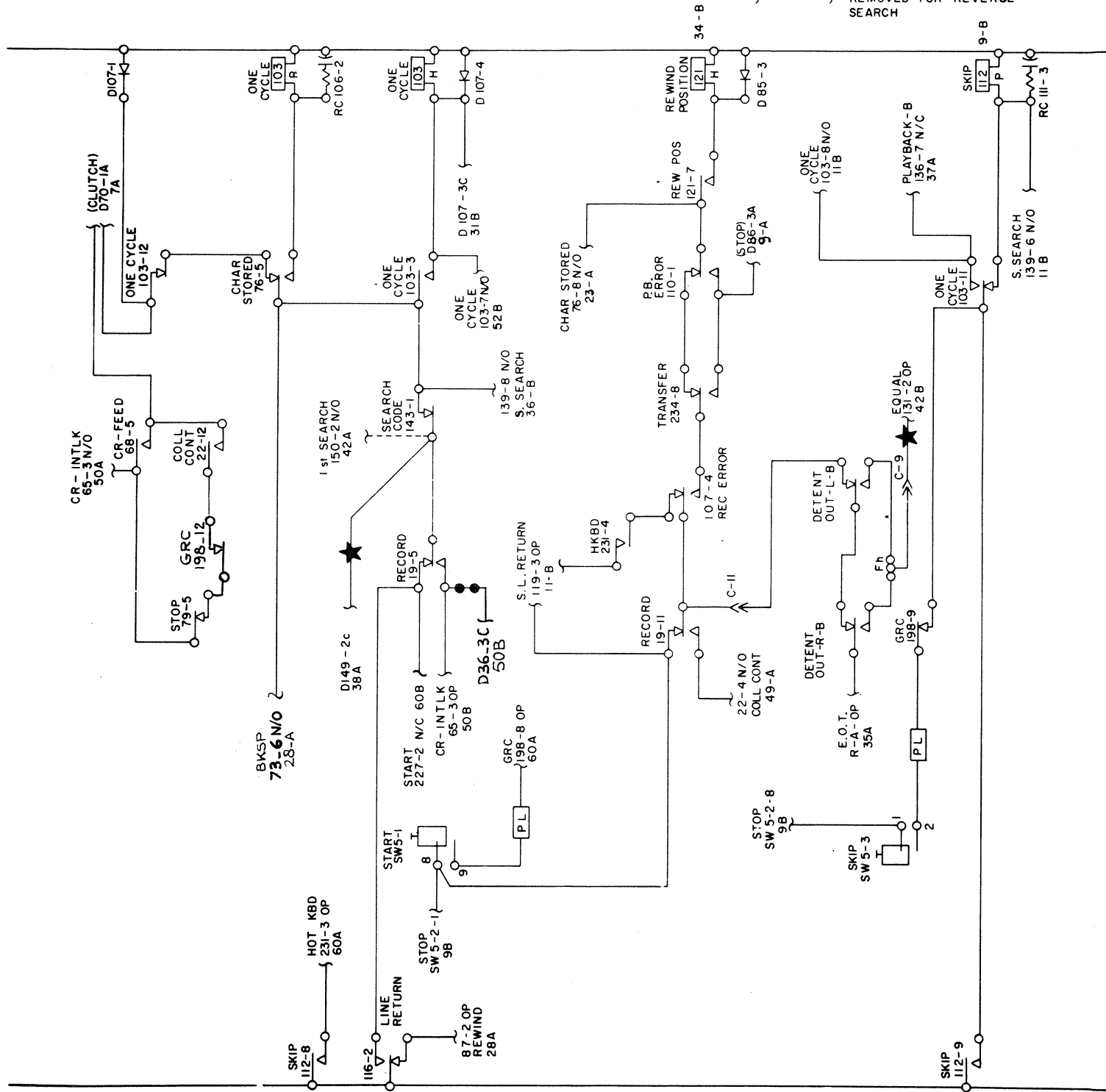
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 {---} REMOVED FOR REVERSE SEARCH



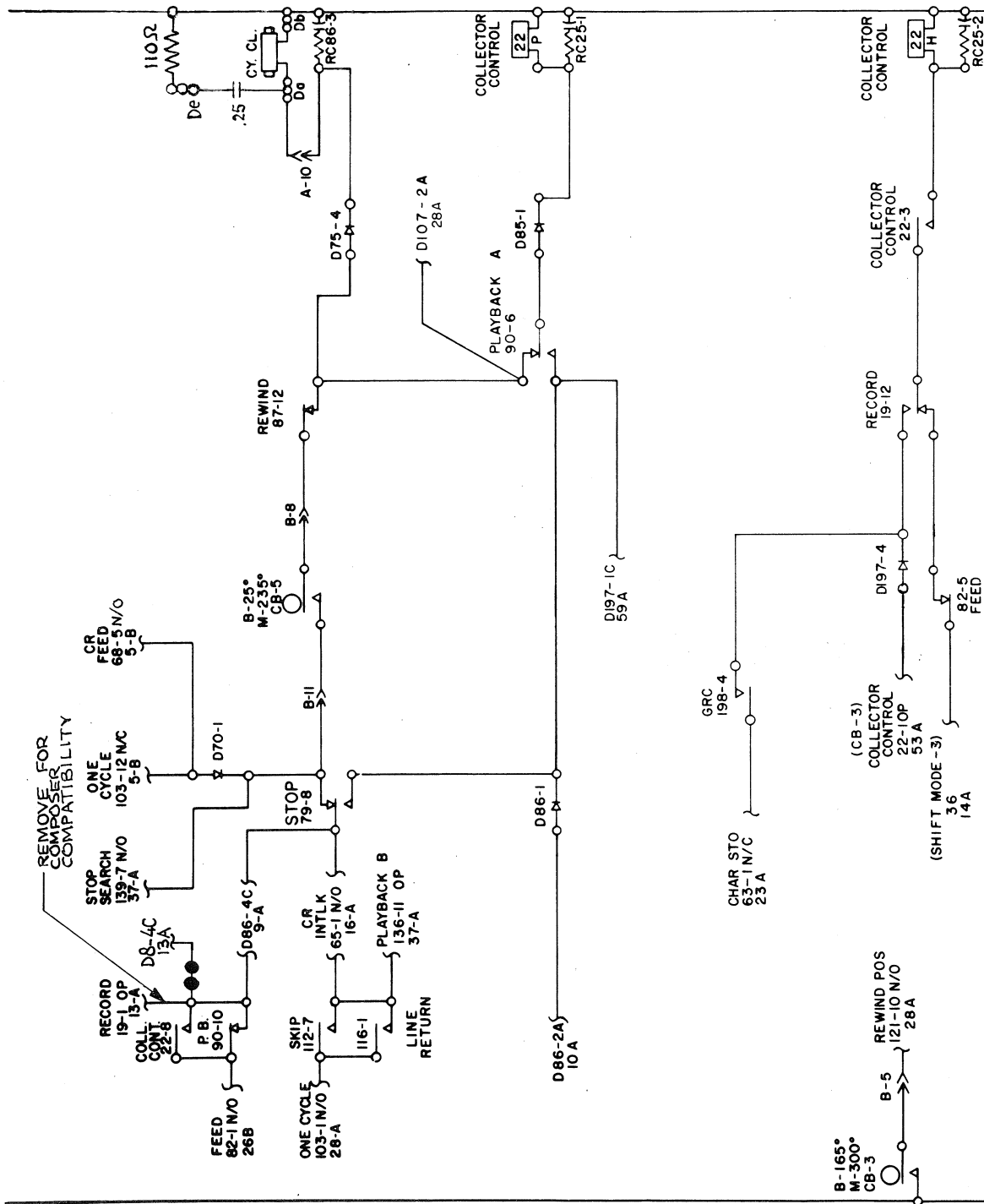
● ● COMPOSER COMPATIBILITY ONLY



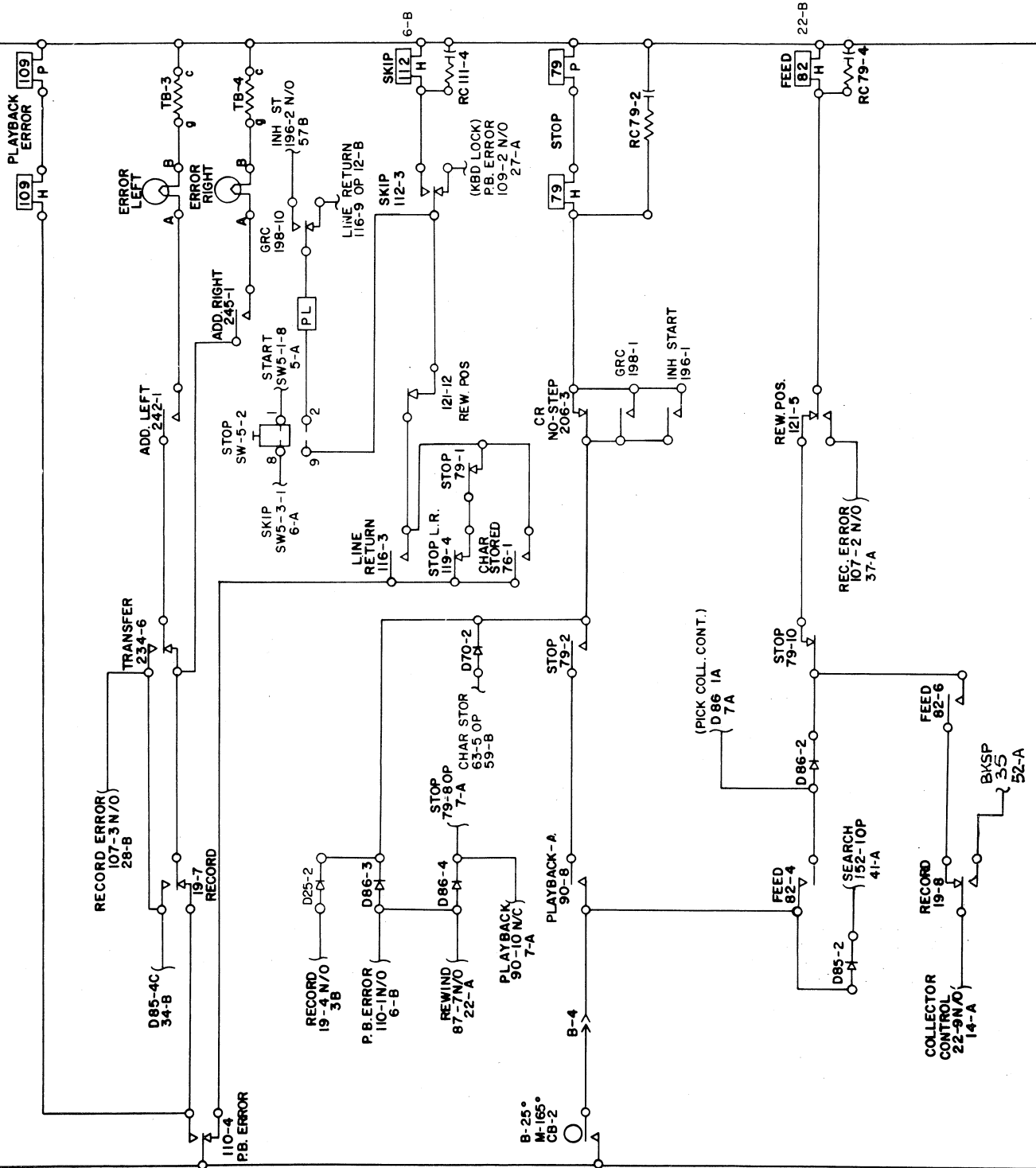
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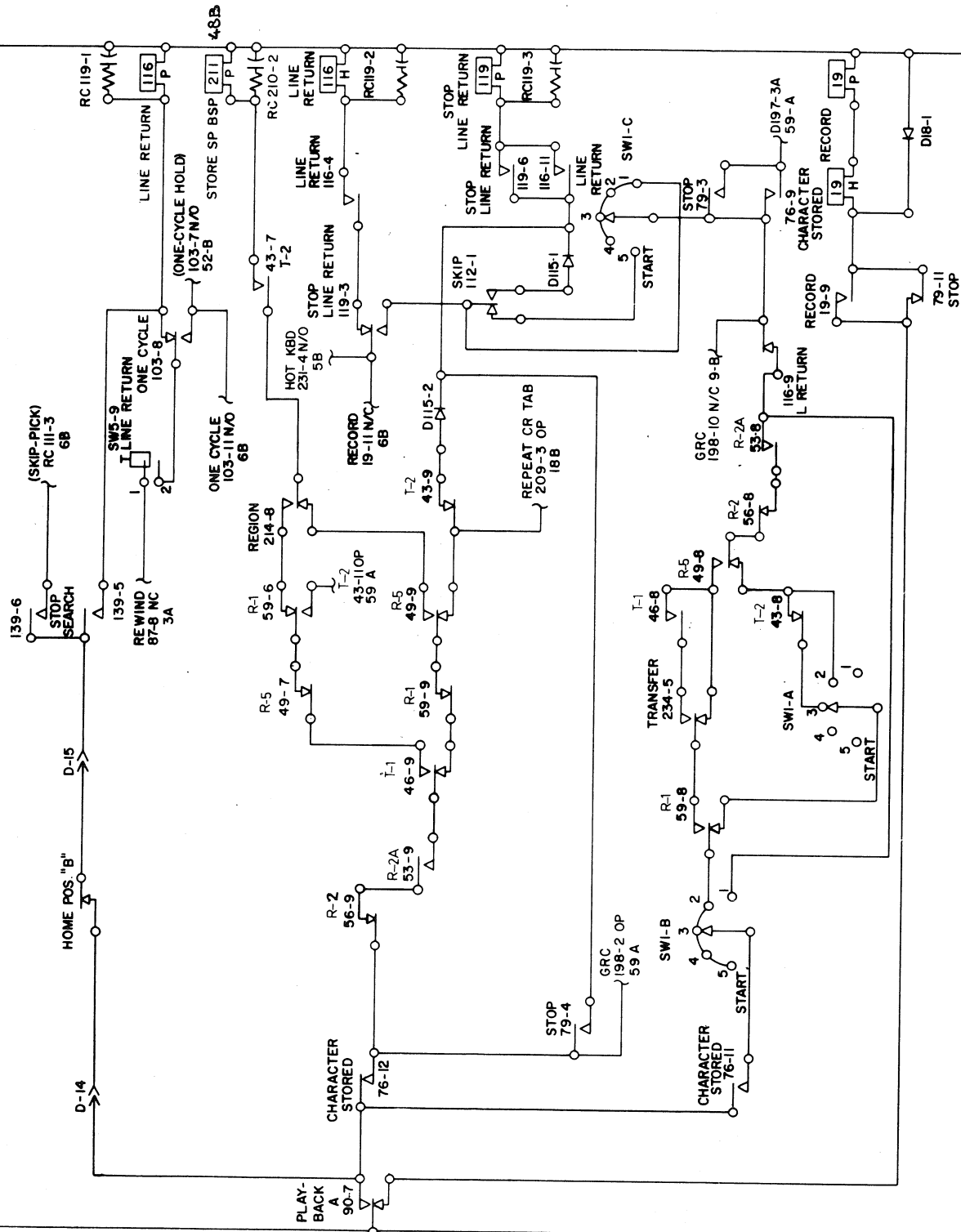


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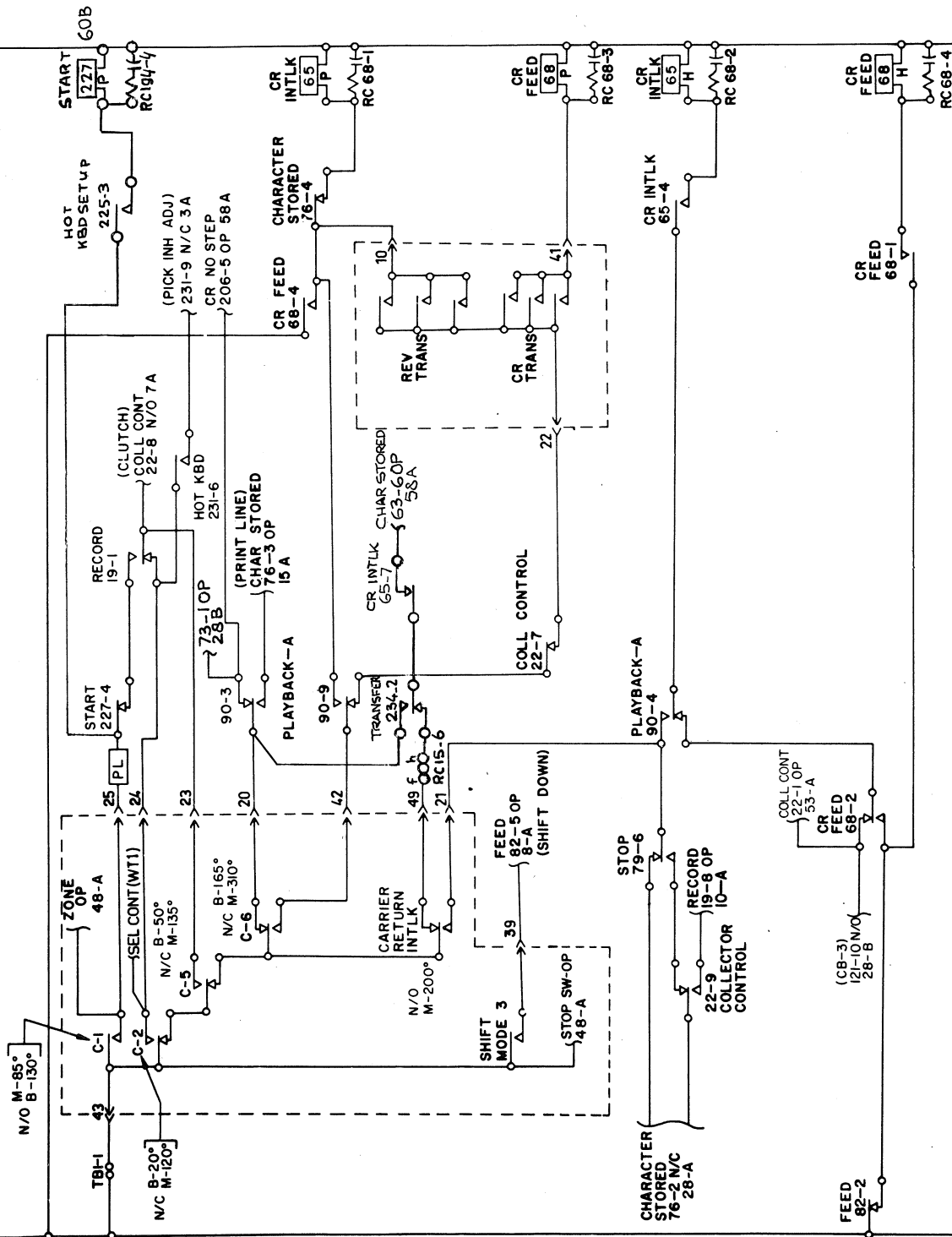


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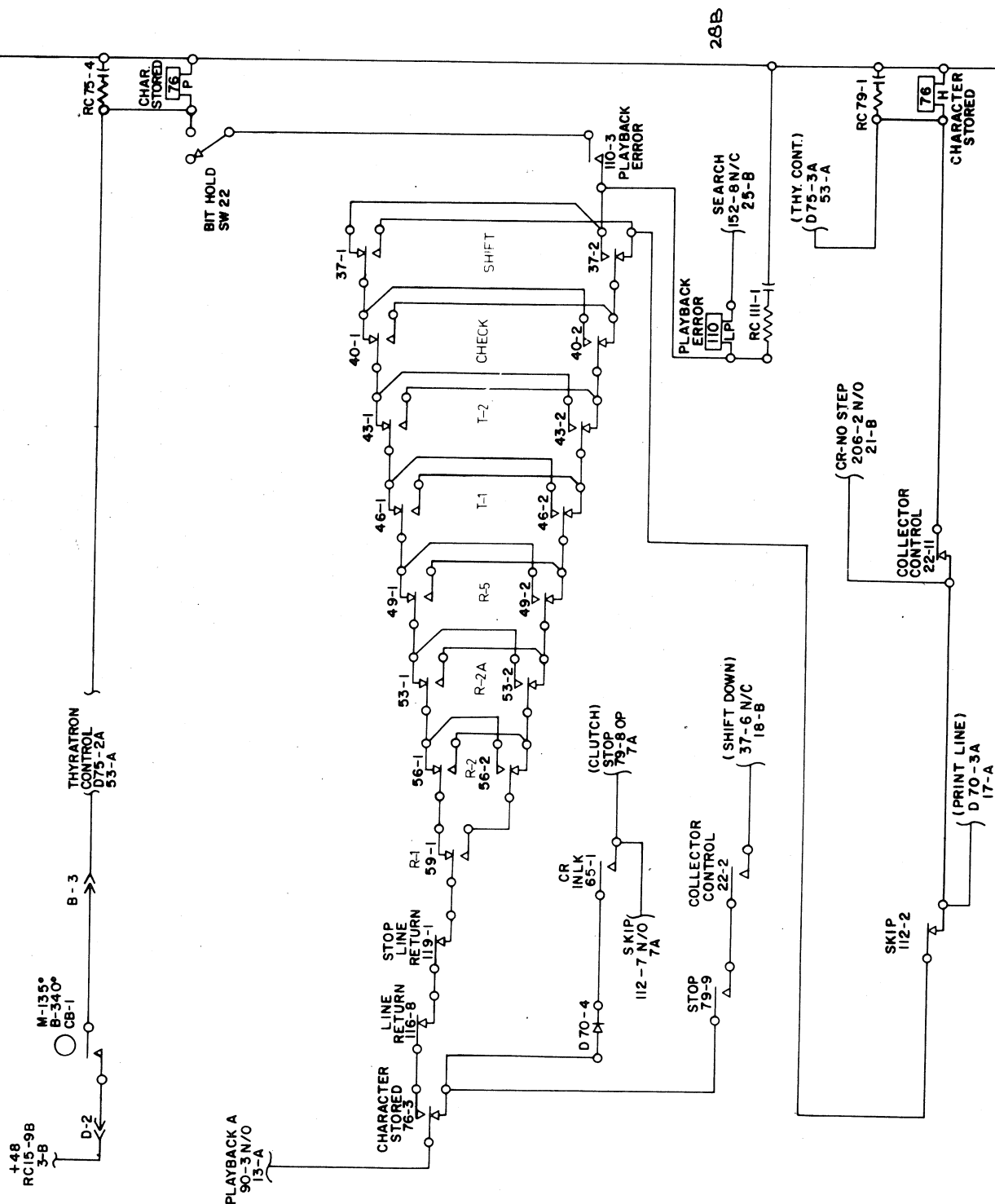


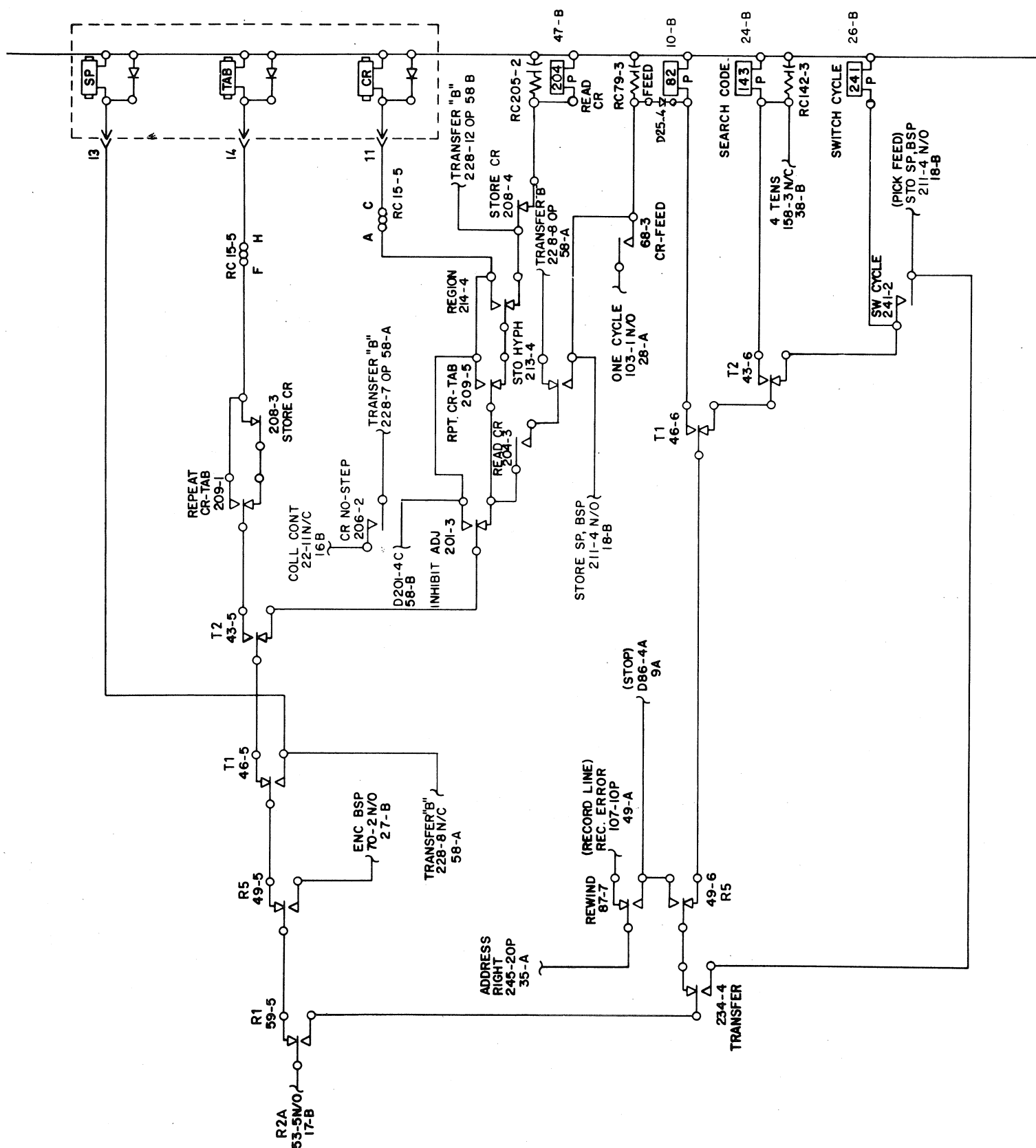


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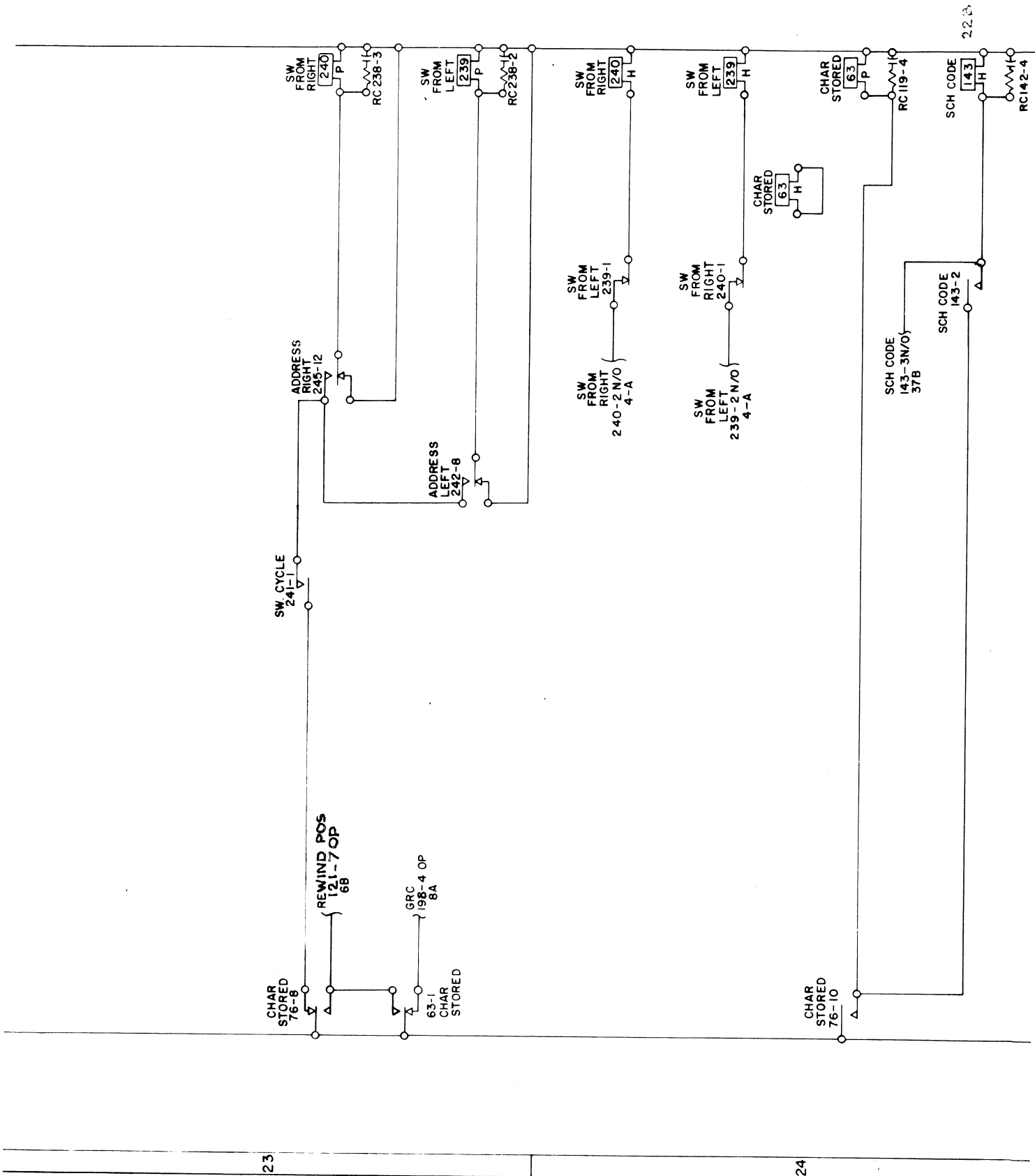


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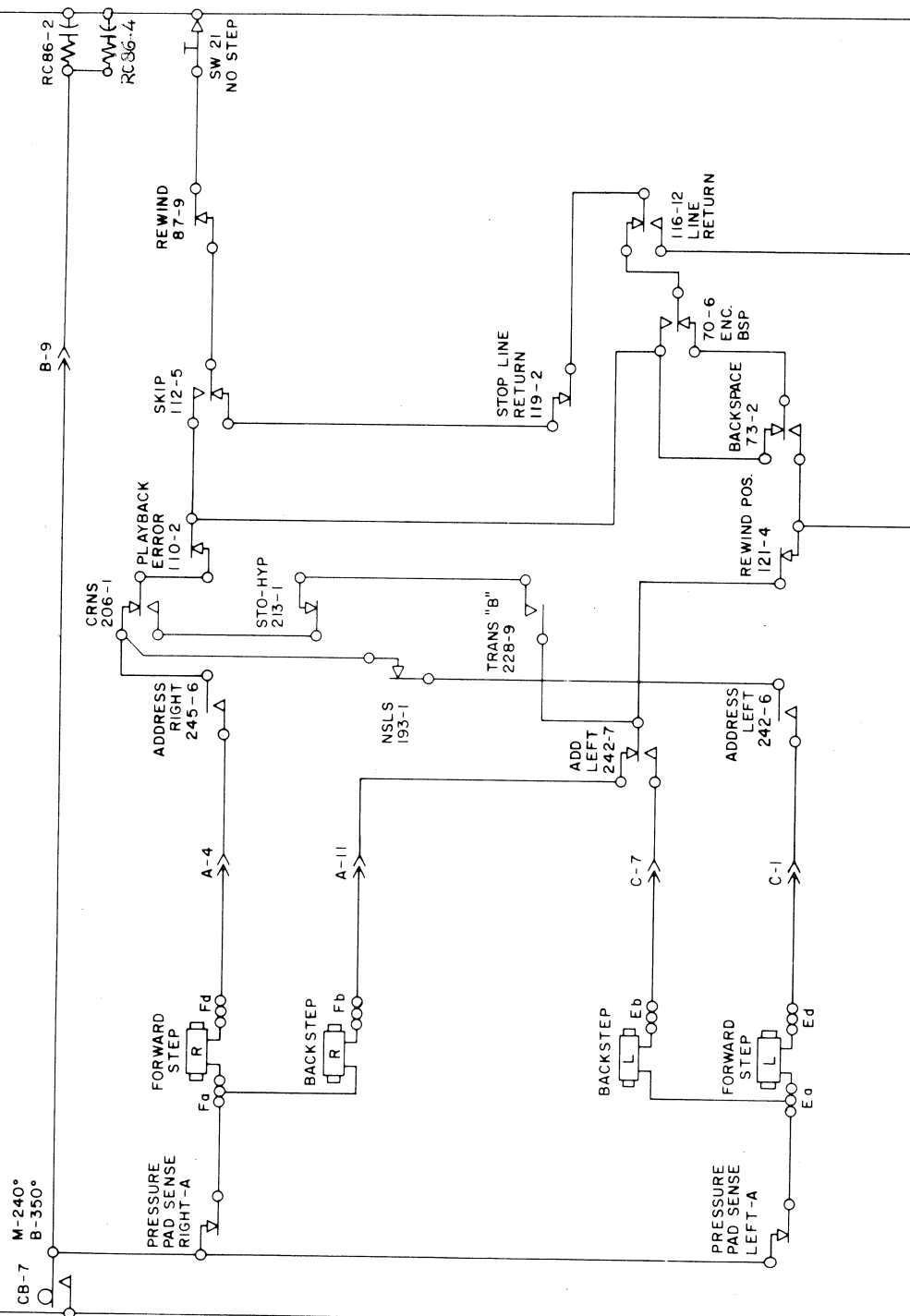


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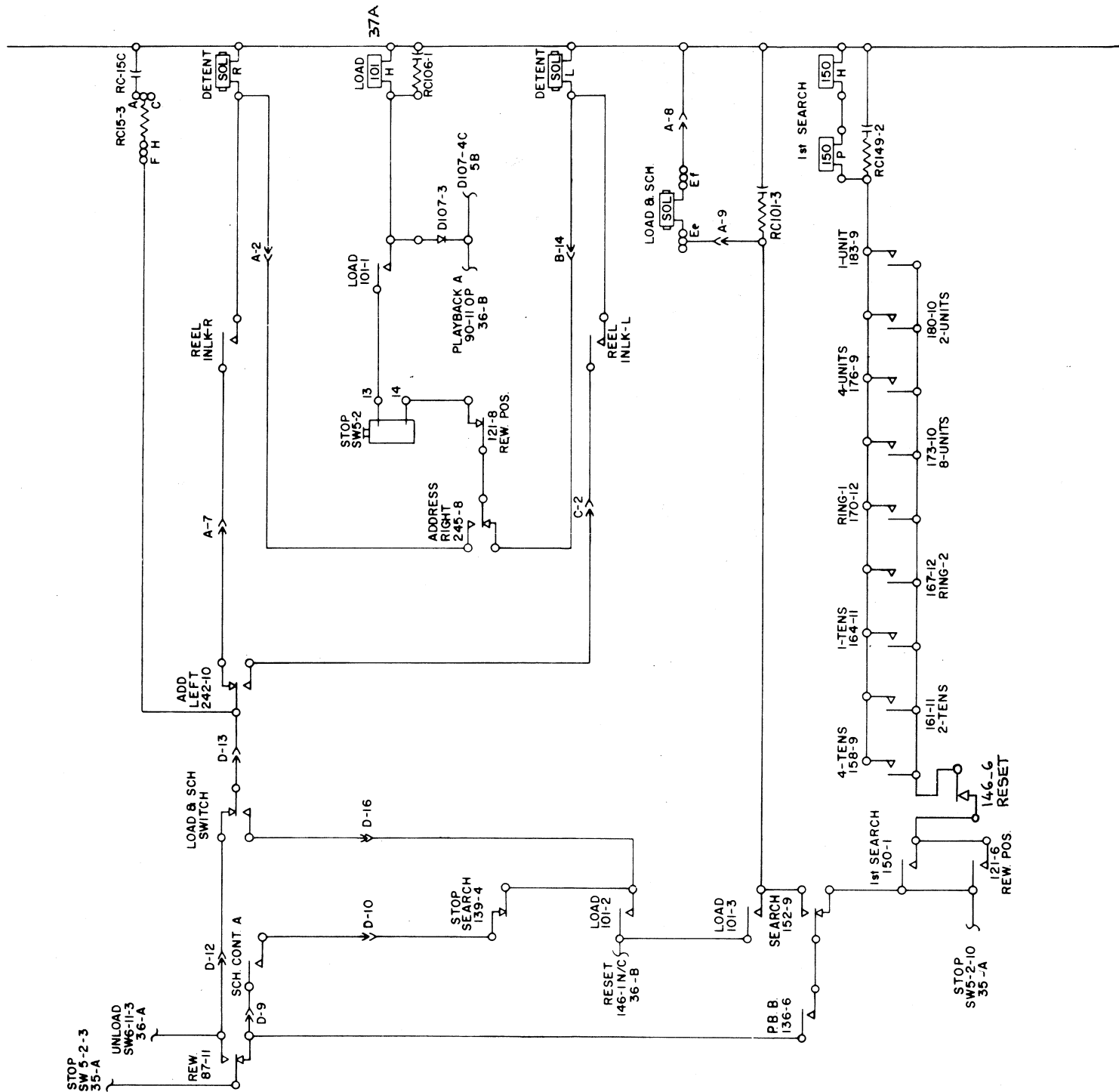
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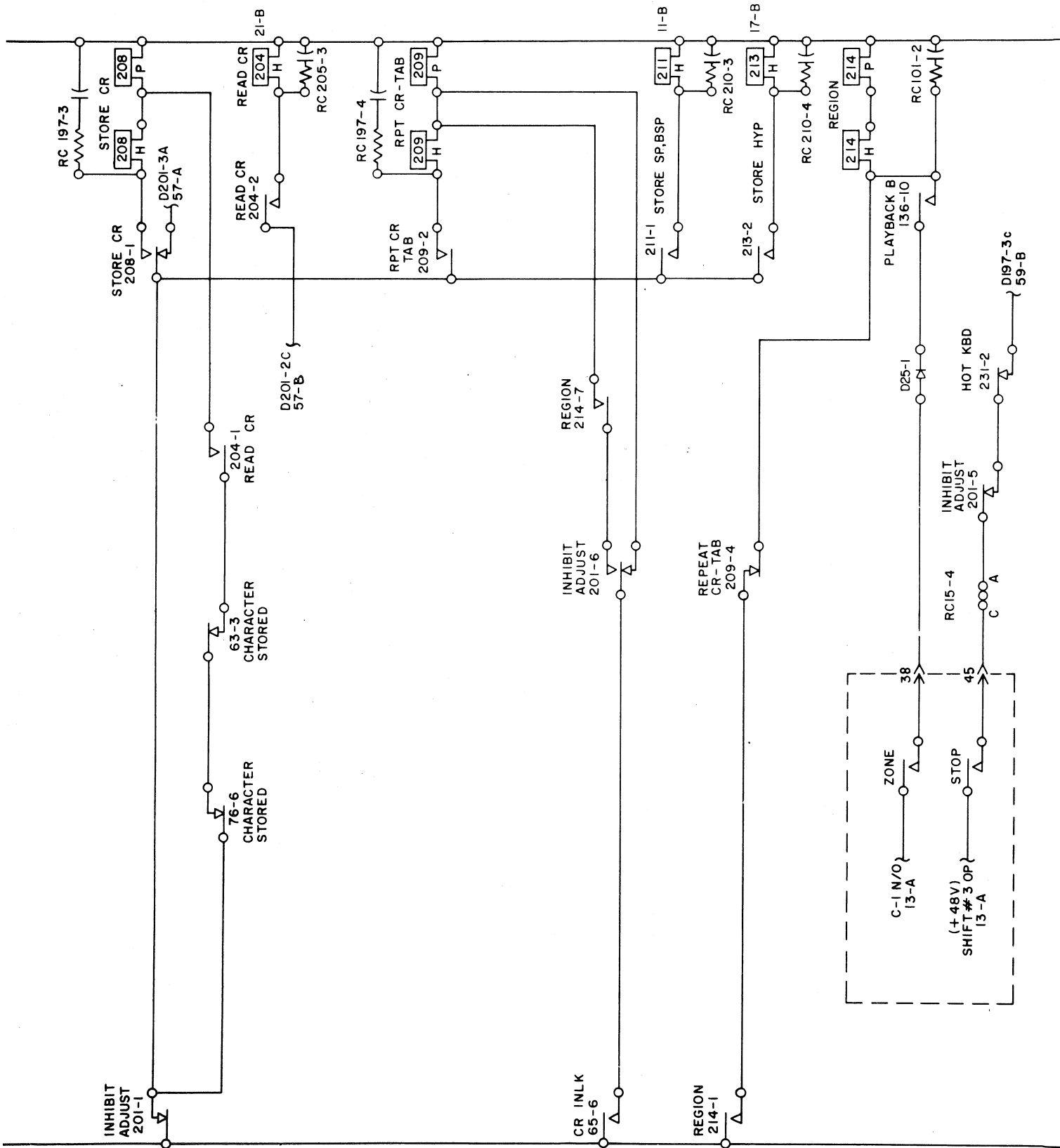


CODE CONVERSION WITHOUT REVERSE SEARCH



IBM 8157007 EC 957519

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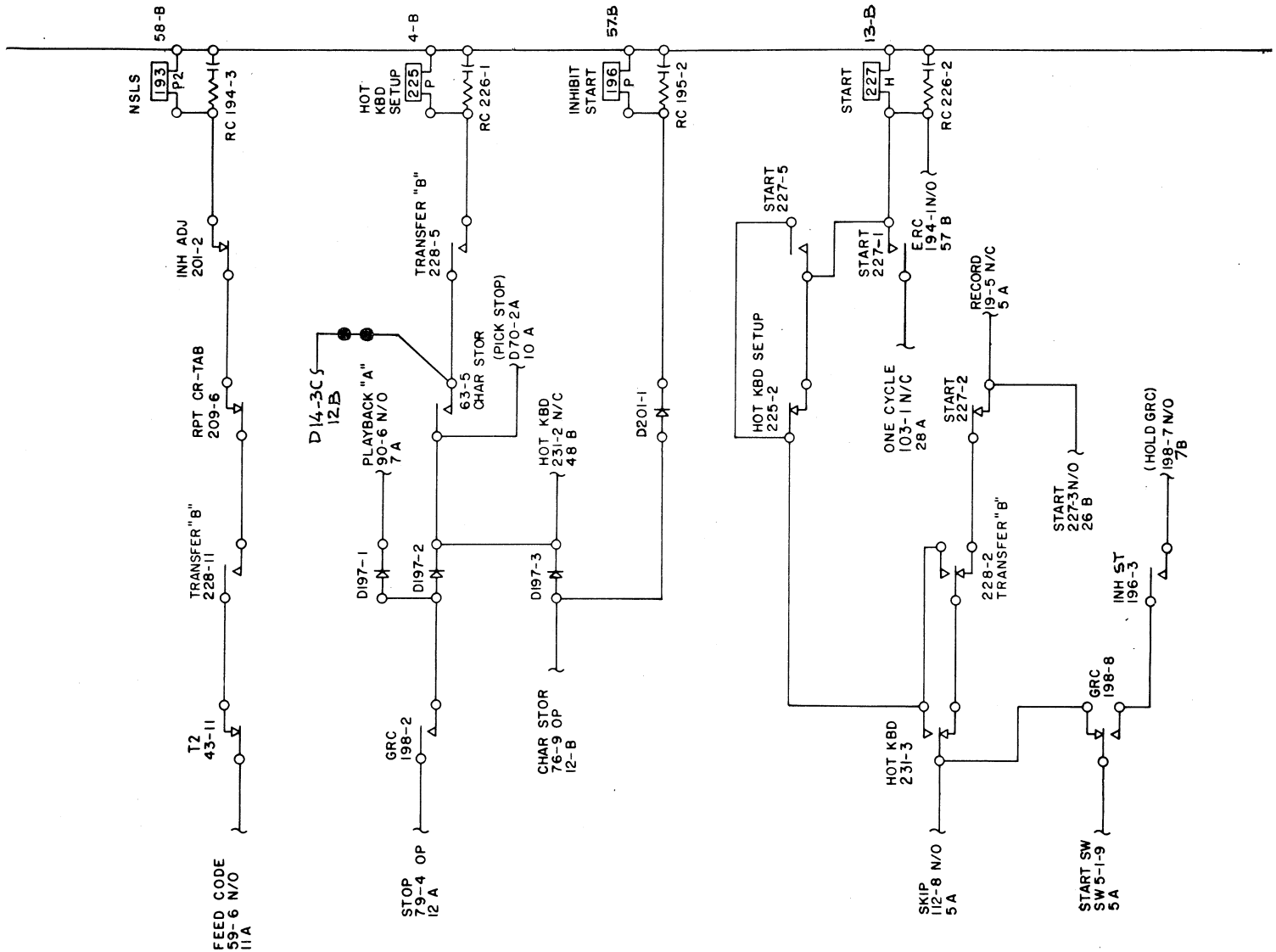
CODE CONVERSION WITH OR
WITHOUT REVERSE SEARCH

CODE CONVERSION WITH OR
WITHOUT REVERSE SEARCH



CODE CONVERSION WITH OR
WITHOUT REVERSE SEARCH

COMPOSER COMPATIBILITY ONLY • •



WIRE CONTACT RELAYS

RELAY	P	H	I	2	3	4	5	6	7	8	9	10	11	12	SIZE	CODE	NAME	RELAY
19	12B	12B	13A	56B		3B	5B	53A	9A	10A	12B	55A	6B	8B	12	C	RECORD	19
22	7B	8B	53A	16A	8B	49A	58A	57A	13B	7A	14A	35B	16B	5B	12	C	COLLECTOR CONTROL	22
37		54B	15B	16B		19A	18B	18B	18A	**		55A	**	**	12	C	SHIFT 8-BIT	37
40		54B	15B	16B		19A			*	**		55A	**	17B	12	C	CHECK 7-BIT	40
43		54B	15B	16B	**	19A	21A	22B	11B	12B	11B	55A	59A	17B	12	C	T2 6-BIT	43
46		53B	15B	16B		19A	21A	22B	**	12B	11A	55A	**	17A	12	C	T1 5-BIT	46
49		53B	15B	16B		20A	21A	22A	11A	12B	11A	55A	**	17A	12	C	R5 4-BIT	49
53		53B	15A	16A		20A	17B	**	**	12B	11A	55A	**	17A	12	C	R2A 3-BIT	53
56		53B	15A	16A		20A	17B	**	**	12B	11A	55A	**	**	12	C	R2 2-BIT	56
59		53B	15A	**		20A	21A	11B	**	12A	11A	55A	**	17A	12	C	R1 1-BIT	59
63	24B	24B	23A	55B	47B		59B	58A							6	B	CHARACTER STORED	63
65	13B	14B	16A	49B	50A	14B	17A	48A	13B					13B	12	C	CR INTERLOCK	65
68	13B	14B	14B	14A	22B	13B	5B	49A							6	B	CR FEED	68
70	52B	28B	27A	27B	27A	56B	55B	30B	49B	49B	49B				12	C	ENCODE BACKSPACE	70
73	52B	28B	28B	30B	27B	56B	55B	28A							6	B	BACKSPACE	73
76	15B	16B	9B	28A	15A	13B	5B	47B	42B	23A	12B	24A	12A	11A	12	C	CHARACTER STORED	76
79	10B	10B	9B	10A	12B	12A	5A	14A	27A	7A	16A	10A	12B	3B	12	C	STOP	79
82	22B	10B	26B	14A		10A	8A	10A	49B	49B	58A				12	C	FEED	82
87	36B	33B		28A	35A	33A	27A	25B	22A	3A	29B		31A	7B	12	C	REWIND	87
90	3B	3B	49A	27A	13A	14A	56B	7B	11A	10A	13A	7A	36B	3B	12	C	PLAYBACK-A	90
101	37A	31B	31B	32A	32A	36A	49A	35A							6	B	LOAD	101
103	5B	5B	27A	28A	5B	37A	36B	53B	52B	11B	49B	35B	6B	5B	12	C	ONE CYCLE	103
107	56B	28B	49A	37A	28B	6B	27A	50A							6	B	RECORD ERROR	107
109	9B	9B	28A	27A	57A										6	B	PLAYBACK ERROR	109
110	16B	28B	6B	29B	16B	9A									4	D	PLAYBACK ERROR	110
112	6B	9B	11B	16A	9B	4B	29B	35A	7A	5A	6A	3B			12	C	SKIP	112
116	11B	11B	7A	5A	9B	11B	3A	3A	53B	15A	12B	35A	12B	30B	12	C	LINE RETURN	116
119	11B		15A	30B	11B	9B	3A	11B							6	B	STOP LINE RETURN	119
121	34B	6B	35A	26B	43A	30B	10B	32A	6B	31B	37A	28B	3A	9B	12	C	REWIND POSITION	121
136	3B	3B	41B	42B	36B		32A	37A	35B	38A	48B	37A	42B		12	C	PLAYBACK-B	136
139	42A	41B	37A	35B	41B	31A	11A	11A	38A	36B					12	C	STOP SEARCH	139
143	22B	24B	5B	24B	37A	41B	49B	49B		35B					12	C	SEARCH CODE	143
146	36B	36B	36B	37A	41B	43A	35B		35B	37B					12	C	RESET	146
150	32B	32B	32A	42A	4B	4B									4	A	1st SEARCH	150
152	35B	35B	41B	49A	42B	35B	37A	34B	36B	25B	32A	3B	53A	55A	12	C	SEARCH	152
158	46B	46B	39A	46A	38B	38B	38B	46B	46A	RS	32A				12	C	4 TENS	158
161	45B	45B	39A	45A	38B	38B	39A	46B	45A	46A	46A		32A		12	C	2 TENS	161
164	45B	45B	39A	45A	39A	39A	38B	39A	45B		RS	32A	45A		12	C	1 TENS	164
167	42B	42B	42A		RS	38A	43B	43B	43B	44B	45B	45B	46B	32A	12	C	RING 2	167
170	42B	42B	RS	42A	42A	38A	43B	43B	43B	44B	45B	45B	46B	32B	12	C	RING 1	170
173	44B	44B	40A	40B	44A	43A	44A	45B	45B	46B	RS	32B	38B	RS	12	C	8 UNITS	173
176	43B	43B	40A	40A	40A	43A	43B	44A	RS	40A	32B	38B	RS	RS	12	C	4 UNITS	176
180	43B	43B	40A		40A	43A	43B	43A	43A	44A		32B	38B	RS	12	C	2 UNITS	180
183	43B	43B	40A	43A	43A	43A	44B	45B	45A	46A	32B	38B	37B	RS	12	C	1 UNITS	183
* 193	58B	59B	29A												4	E	NO STEP LEFT STA	193
* 194	58B	57B	57A	57B	57A										4	A	END RECORD CYCLE	194
* 196	60B	57B	10B	57B	60A	57A									4	A	INHIBIT START	196
* 198	58B	57B	10B	59A	57A	8A	49A	58B	57B	60A	6A	9B	57A	5A	12	C	GENERATE REC CYCLE	198
201	3B	3B	47A	59B	21B	18B	48B	48B							6	B	INHIBIT ADJUST	201
204	21B	47B	47B	47B	21B		58B	58A							6	B	READ CR	204
206	18B	57B	30B	21B	10B	58B	58A	58B							6	B	CR NO STEP	206
208	47B	47B	47B	18B	21B	21B									4	A	STORE CR	208
209	47B	47B	21B	47B	18B	48B	21B	59B							6	B	REPEAT CR TAB	209
211	11B	48B	48B		18A	18A									4	A	STORE SP B'SP	211
213	17B	48B	29B	48B	18A	22B									4	A	STORE HYPHEN	213
214	48B	48B	48A	18A		21B	18A		48B	11B					12	C	REGION	214
* 225	59B	4B	4B	60B	13B	58A									4	A	HOT KBD SET UP	225
* 227	13B	60B	60B	60A	26A	13A	60B	3B							6	B	START	227
* 228	3B	3B	4B	60A	57B		59B		58A	58A	30B	57A	59B	58B	12	C	TRANSFER "B"	228
* 231	3B	3B		48B	60A	5B	3B	13A	3A	4A	3A			57B	12	C	HOT KEYBOARD	231
234	4B	4B	55A	13A	RS	22A	12A	9A	56A		25A	56B	55B	25A	12	C	TRANSFER	234
239	23B	24B	24B	4B	4B	26B									4	A	SWITCH FROM LEFT	239
240	23B	24B	24B	4B	4B	26B									4	A	SWITCH FROM RIGHT	240
241	22B	26B	23A	22B	26B										4	A	SWITCH CYCLE	241
242	4B	4B	9B	35A	36A	4B	56B	30A	30A	23B	34A	31A	25A	25A	12	C	ADDRESS LEFT	242
245	4B	4B	9B	35A	36A	4B	56B	29A	4A	31B	33A	26A	25A	23B	12	C	ADDRESS RIGHT	245
RELAY	P	H	I	2	3	4	5	6	7	8	9	10	11	12	SIZE	CODE	NAME	RELAY

* ADDITIONAL RELAYS FOR CODE CONVERSION FEATURE

* * USED FOR DUAL VELOCITY SEE PAGES WT7 THRU WT20

RC-15							
POS	LOCATION	RES NO.	RES VAL	CAP NO.	CAP VAL	DIODE NO.	DIODE TP
1	34B	1160691	110 Ω	1127455	.25 μ f		
2	50B						
3	31B	1160691	110 Ω	1127455	.25 μ f		
4	48B						
5	21B						
6	18A/13A						
7	28B	1160691	110 Ω				
8							
9	3A	(+48V)					
10							
11	54B			1127455	.25 μ f		
12	54B	1160691	110 Ω				
		1119111	18K Ω				

[PL] DENOTES PINK LADY (P/N 321051)

X "C" CONTACT TIMING SHOWN IN DIAGRAM IS NOMINAL
FOR TOLERANCES SEE I/O REFERENCE MANUAL

XI LOCATION INDICATED BESIDE RELAY COIL IS
FOR ITS OTHER COIL WHEN THE OTHER COIL
IS ON ANOTHER PAGE

SECTION AND LOCATION					
NO.	CODE	1	2	3	4
25	•	7B	8B	3B	
68	•	13B	14B	14B	14B
75	•	28B	52B	28B	15B
79	•	16B	10B	22B	10B
86	•	36B	29B	7B	29B
101	•		48B	32B	46B
106	•	31B	5B	55B	28B
111	•	16B	28B	6B	9B
119	•	11B	11B	11B	24B
142	•	41A	41B	22B	24B
149	•	36B	32B	35B	35B
167	•	42B	42B	45B	45B
179	•	43B	43B	43B	44B
194	•	58B	58B	59B	13B
195	•	58B	60B	57B	57B
197	•	57B	58B	47B	47B
205	•	18B	22B	47B	3B
210	•	17B	11B	48B	48B
226	•	59B	60B	3B	4B
238	•	4B	23B	23B	26B

DIODE BLOCK					
PART NO. 1160915					
NO.	1	2	3	4	
18	12B	54B	54B	25A	
46	54B	54B	54B	54B	
52	53B	53B	53B	53B	
70	7A	9A	17A	16A	
75	53A	53A	53A	7B	
85	7B	10A	6B	34B	
86	7A	10A	9A	9A	
107	5B	28A	31B	5B	
115	12B	11B	41B	38A	
149	41B	42B	37A	37A	
197	59A	59A	59A	8B	
201	60B	57B	57B	58B	
207	17B	18A	3B	3B	
237	25A	25A	25A	25A	
238	25A	25A	26A	3B	
25	48B	9A	RS	22B	

SEARCH CAP-RES TERM BOARD			
POS	VALUE	PAGE	PART NO.
TB2-1	30 μ f - 55V	46B	1160690
TB2-2	110 Ω - 1W	46B	1160691
TB2-3	30 μ f - 55V	45B	1160690
TB2-4	110 Ω - 1W	45B	1160691
TB2-5	30 μ f - 55V	45B	1160690
TB2-6			
TB2-7	110 Ω - 1W	45B	1160691
TB2-8	30 μ f - 55V	44B	1160690
TB2-9	110 Ω - 1W	44B	1160691
TB2-10	30 μ f - 55V	44B	1160690
TB2-11	110 Ω - 1W	44B	1160691
TB2-12	30 μ f - 55V	43B	1160690
TB2-13	110 Ω - 1W	43B	1160691
TB2-14	30 μ f - 55V	43B	1160690
TB2-15			
TB2-16	110 Ω - 1W	43B	1160691

RELAYS, SOLENOIDS & MAGNETS			
CODE	PART NO.	DESCRIPTION	RATED D.C. RES
A	196208	4POS RELAY	624 Ω P/1735 Ω H
B	196198	6POS RELAY	622 Ω P/1080 Ω H
C	255735	12POS RELAY	395 Ω P/600 Ω H
D	186685	4POS LATCH RELAY	395 Ω LP/332 Ω LT
E	196207	4POS 2 P RELAY	624 Ω
	1160931	CYCLE CLUTCH	171 Ω
	1135084	PRESSURE PAD	358 Ω
	1128964	STEP	240 Ω
	343761	LOAD & SEARCH	185 Ω
	343761	HIGH BIAS	185 Ω
	1128964	COVER UNLOCK	240 Ω
	315189	SEARCH POS	171 Ω
	306375	DETENT	120 Ω

* ADDITIONAL RC AND DIODE BLOCKS FOR CODE CONVERSION FEATURE

IBM

FEATURE DIAGRAMS
REVERSE SEARCH

EC	957519					
DATE	JUN 4-70					
TW						
DATE						

REVERSE SEARCH

P/N 8157010

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DESCRIPTION:

PART NO. EC LEVEL

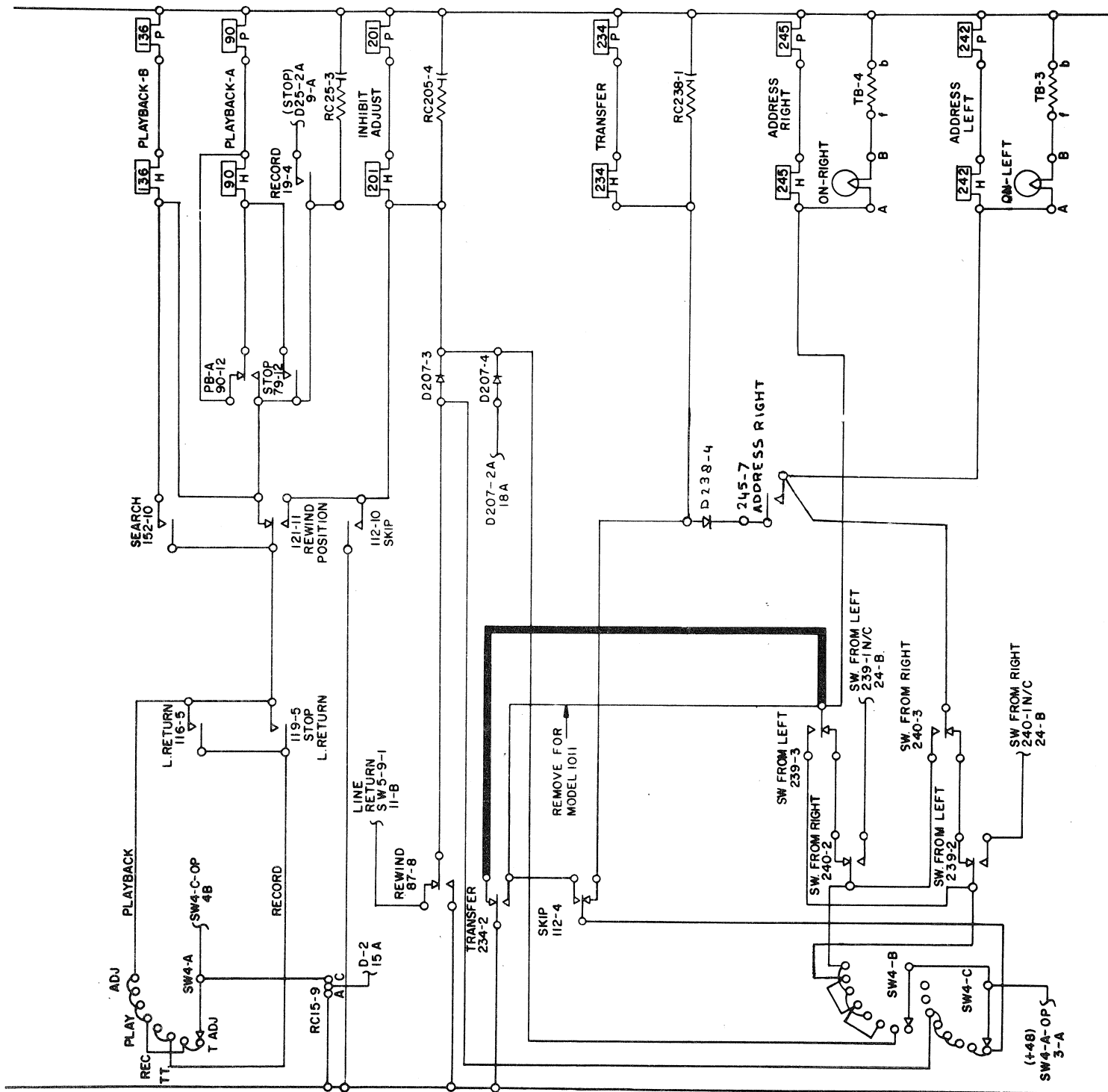
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REVERSE SEARCH (3-4)	1161361	580781-A
REVERSE SEARCH (5-6)	1161361	580781-A
REVERSE SEARCH (29-30)	8157011	957519
REVERSE SEARCH (31-32)	8157011	957519
REVERSE SEARCH (33-34)	1161363	580510
REVERSE SEARCH (35-36)	1161363	580510
REVERSE SEARCH (37-38)	1161364	580781-A
REVERSE SEARCH (39-40)	1161364	580781-A
REVERSE SEARCH (41-42)	1161365	507957
REVERSE SEARCH (43-44)	1161365	507957
REVERSE SEARCH (45-46)	1161366	507259
RELAY LOCATION CHART (RS)	8157012	957519
ADL. LOCATION CHART (RS)	8157012	957519

MACHINE: 1011, 1021
 EC 957519
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IBM 1161361 E.C. 580781-A
PAGE 1 OF 2

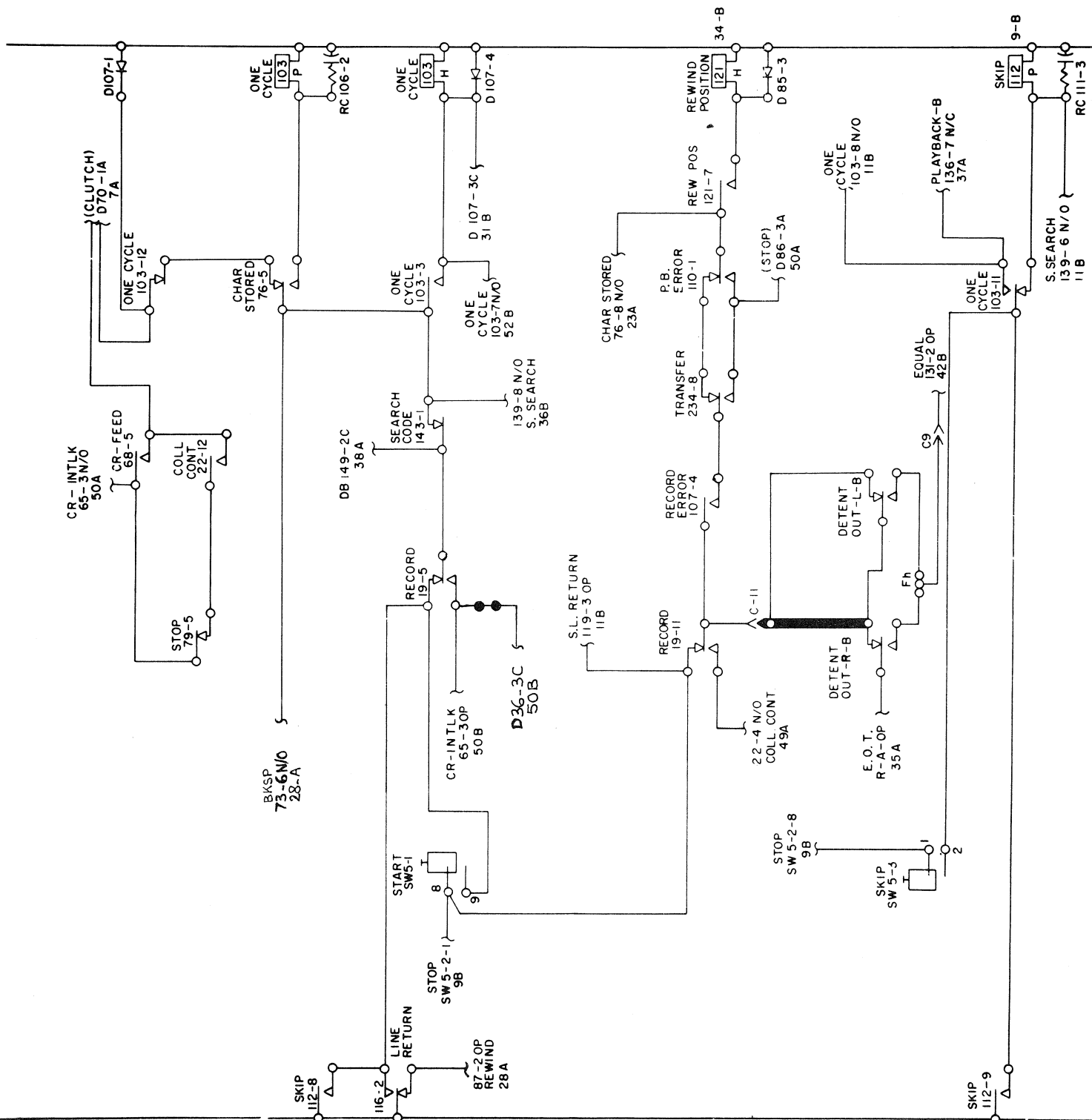
REVERSE SEARCH WITHOUT
CODE CONVERSION

 MODEL 1011 ONLY



REVERSE SEARCH WITHOUT
CODE CONVERSION

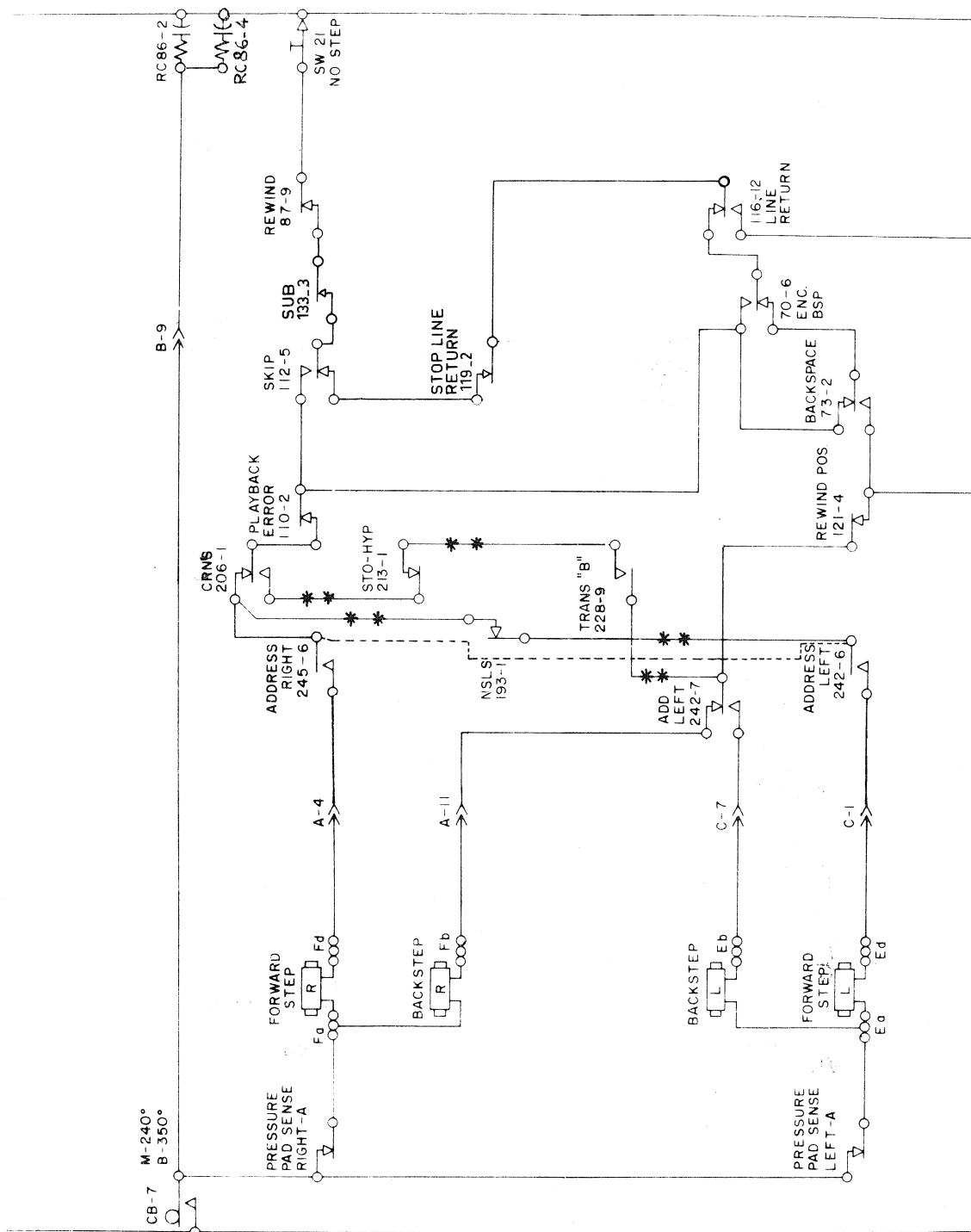
●● COMPOSER COMPATIBILITY ONLY
MODEL 1011 ONLY



REVERSE SEARCH AND WITH OR
WITHOUT CODE CONVERSION

(-----) REMOVED FOR CODE CONV

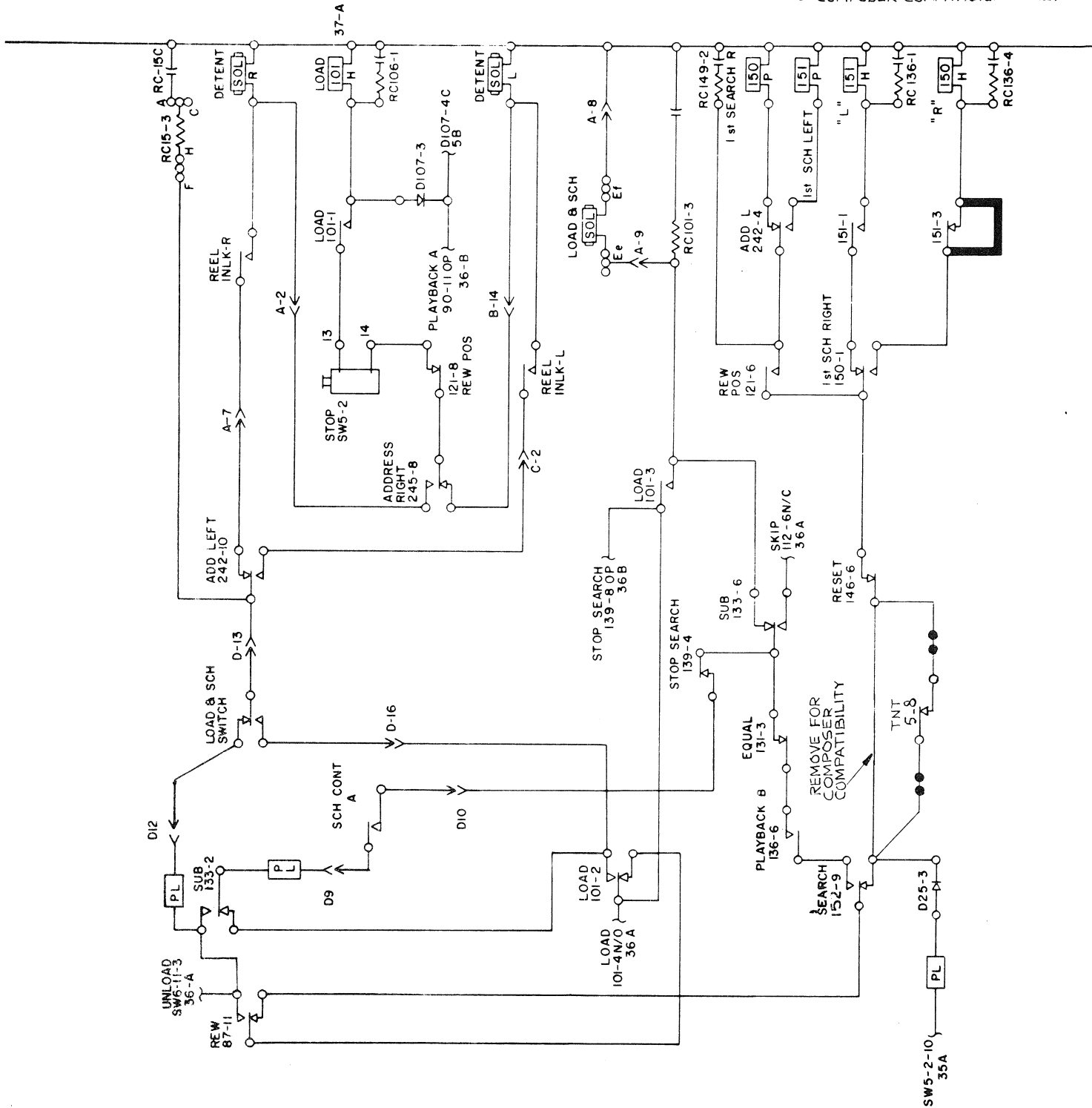
** ADDED FOR CODE CONV



REVERSE SEARCH
WITH OR WITHOUT CODE CONVERSION AND
WITH OR WITHOUT COMPOSER COMPATIBILITY

MODEL 1011 ONLY

● COMPOSER COMPATIBILITY ONLY

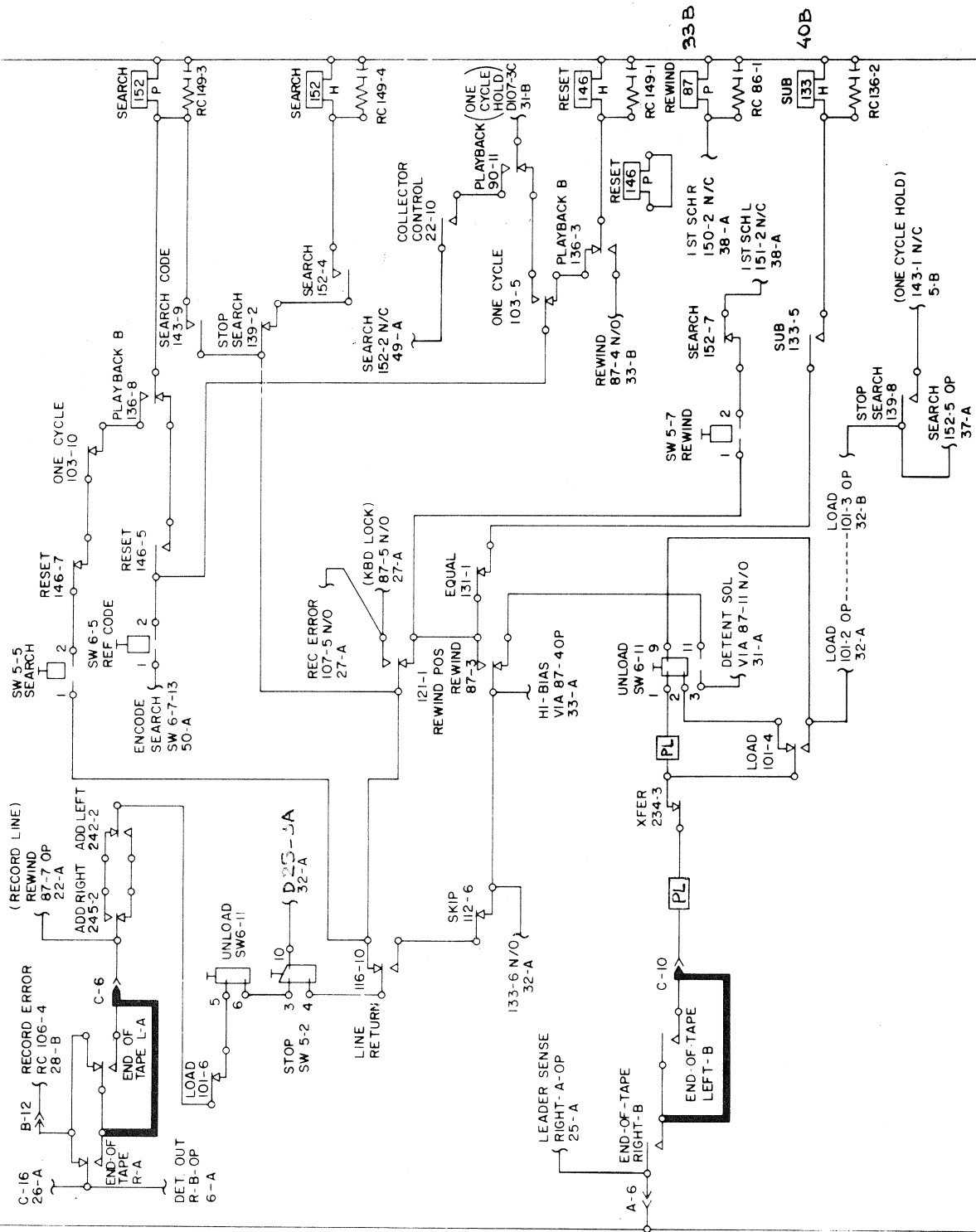


EC 580510

[illegible]

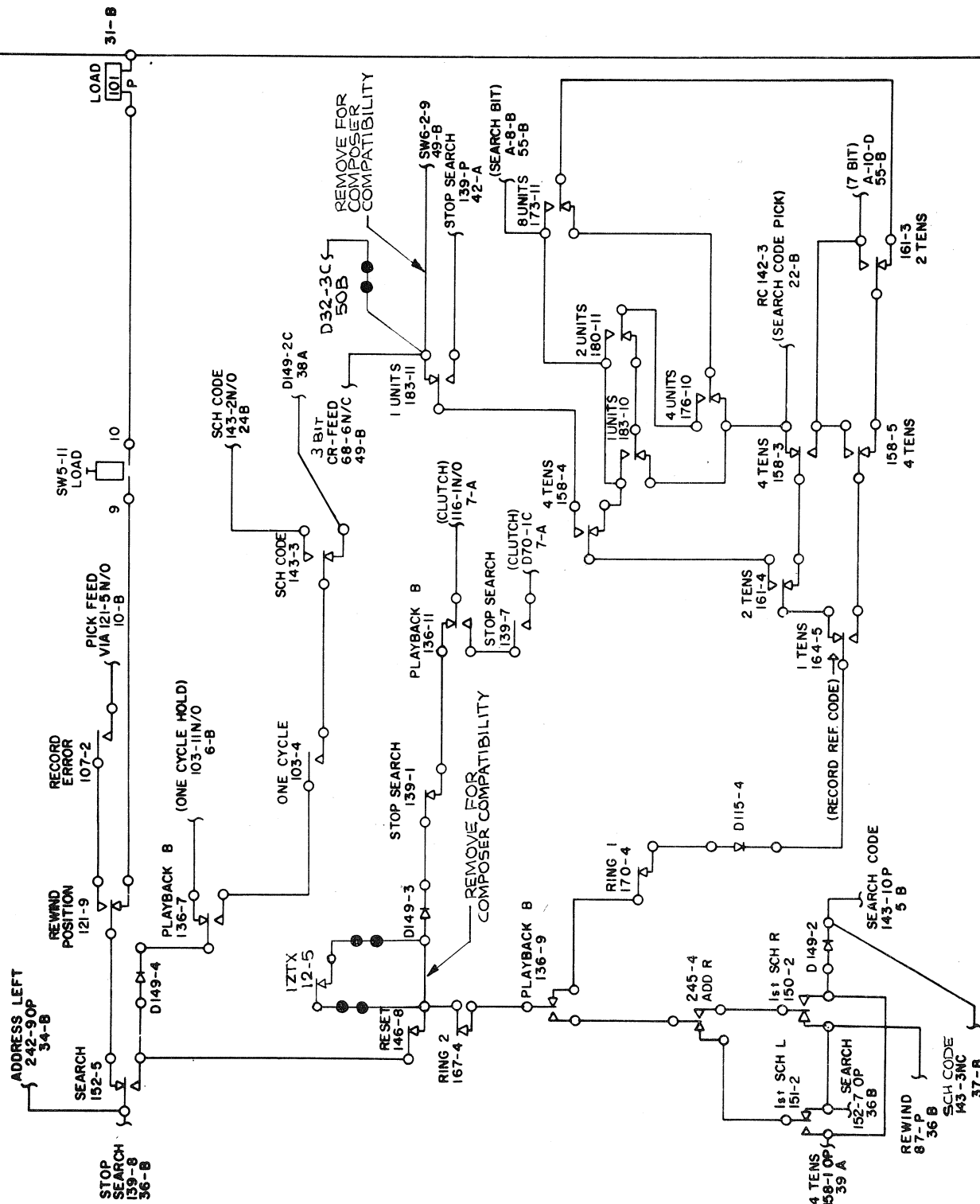
REVERSE SEARCH WITH OR
WITHOUT CODE CONVERSION

MODEL 1011 ONLY



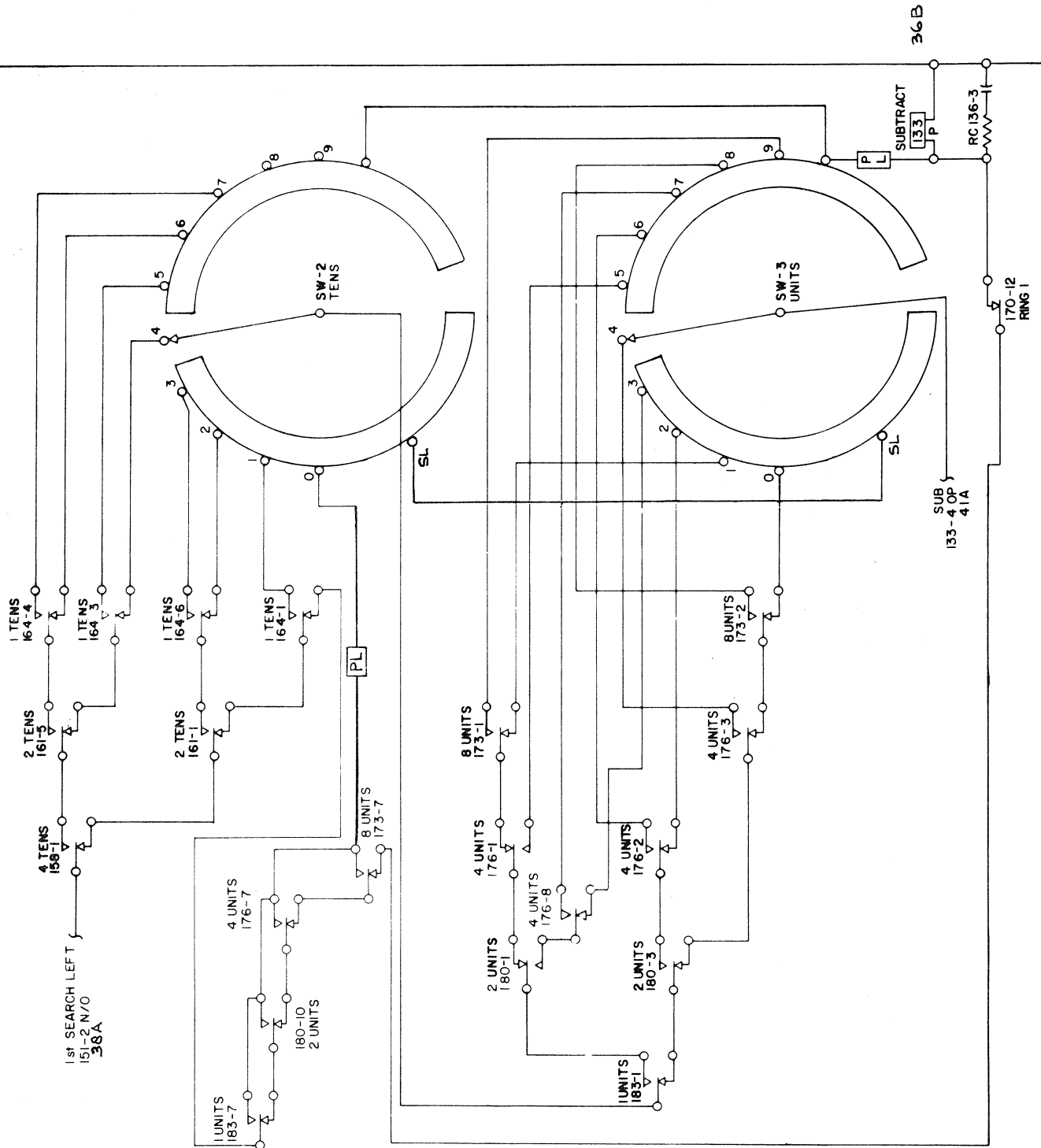
REVERSE SEARCH WITH OR
WITHOUT CODE CONVERSION

●● COMPOSER COMPATIBILITY ONLY



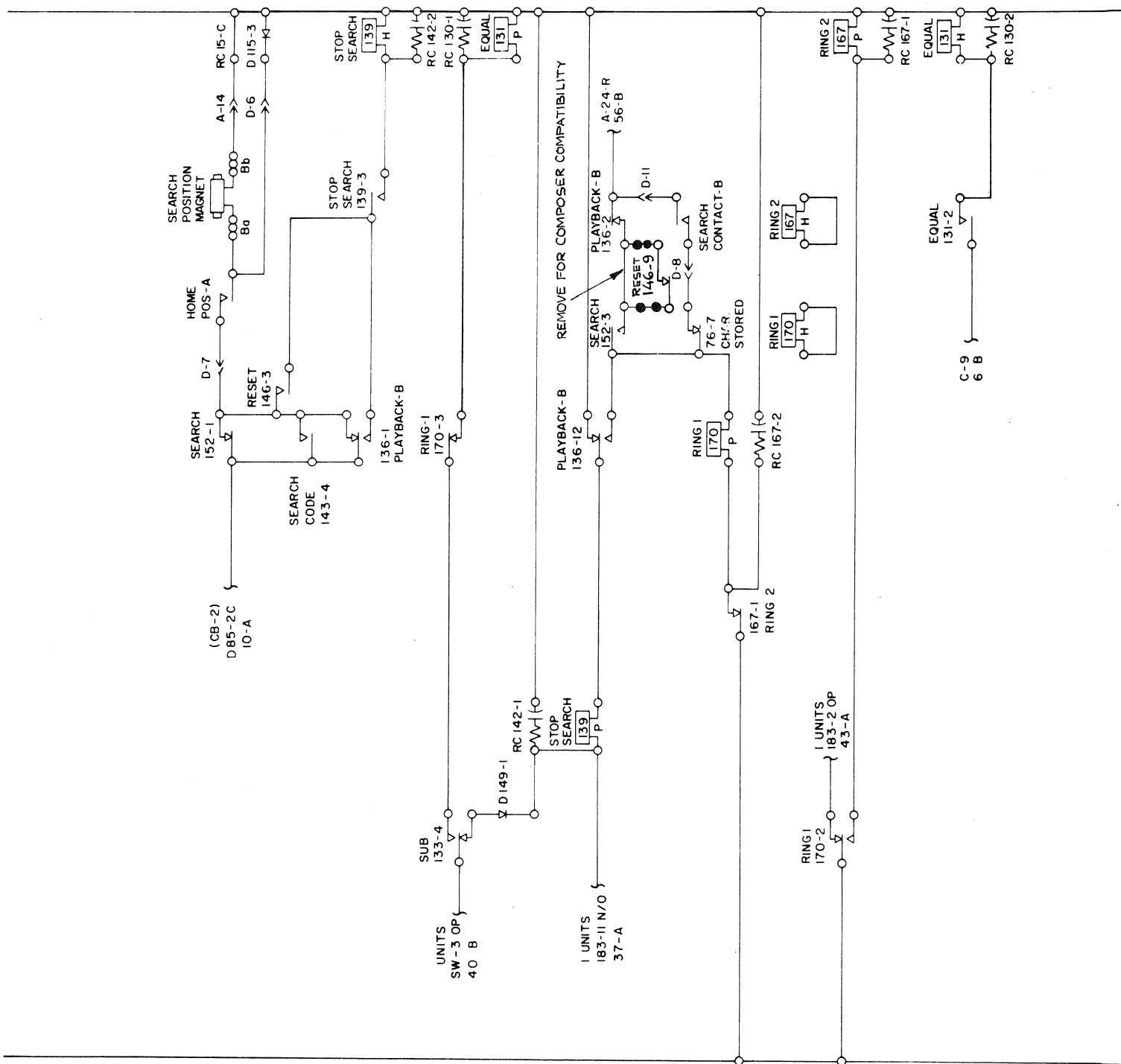
IBM1161364 E.C.580781-A
PAGE 2 OF 2

REVERSE SEARCH WITH OR
WITHOUT CODE CONVERSION

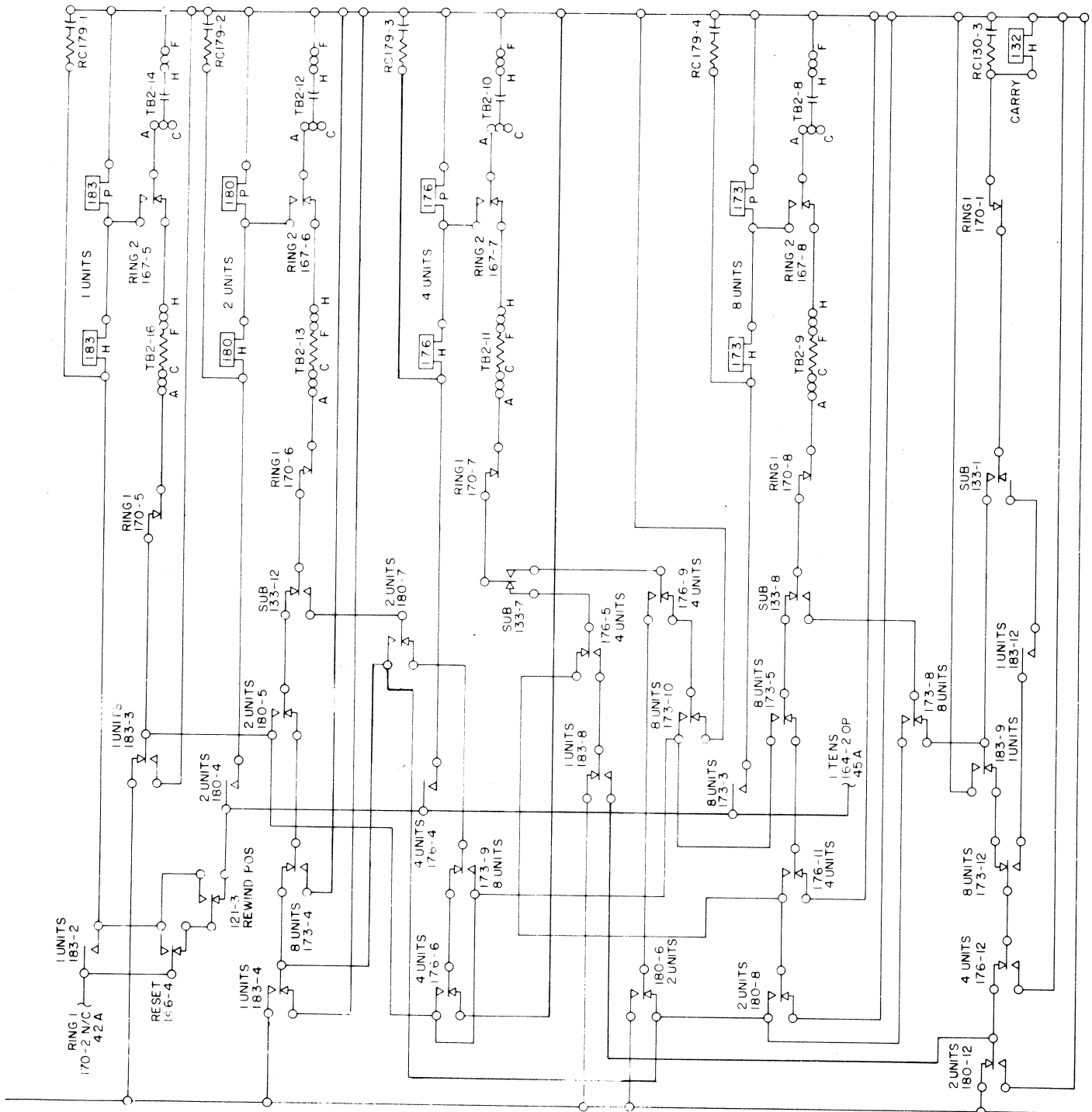


REVERSE SEARCH WITH OR
WITHOUT CODE CONVERSION

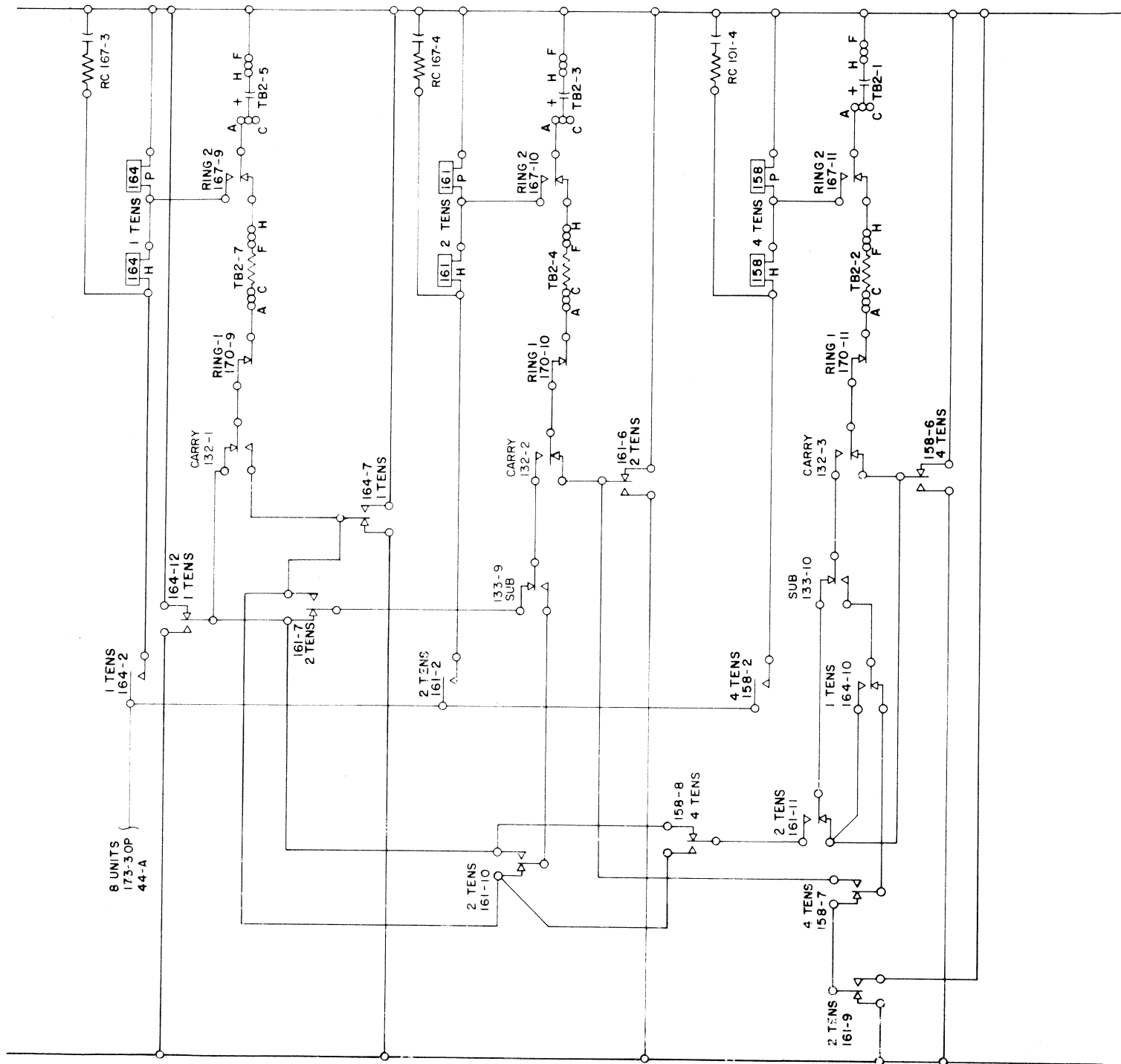
•• COMPOSER COMPATIBILITY ONLY



REVERSE SEARCH WITH OR
WITHOUT CODE CONVERSION



REVERSE SEARCH WITH OR
WITHOUT CODE CONVERSION



WIRE CONTACT RELAYS

	RELAY	P	H	1	2	3	4	5	6	7	8	9	10	11	12	SIZE	CODE	NAME	RELAY
	19	12B	12B	13A	56B		3B	5B	53A	9A	10A	12B	55A	6B	8B	12	C	RECORD	19
	22	7B	8B	53A	16A	8B	49A	58A	57A	13B	7A	14A	35B	16B	5B	12	C	COLLECTOR CONTROL	22
	37		54B	15B	16B		19A	18B	18B		*		55A	*	*	12	C	SHIFT 8-BIT	37
	40		54B	15B	16B		19A			*	*		55A	*	17B	12	C	CHECK 7-BIT	40
	43		54B	15B	16B	*	19A	21A	22B	11B	12B	11B	55A	59A	17B	12	C	T2 6-BIT	43
	46		53B	15B	16B		19A	21A	22B	*	12B	11A	55A	*	17A	12	C	T1 5-BIT	46
	49		53B	15B	16B		20A	21A	22A	11A	12B	11A	55A	*	17A	12	C	R5 4-BIT	49
	53		53B	15A	16A		20A	17B	*	*	12B	11A	55A	*	17A	12	C	R2A 3-BIT	53
	56		53B	15A	16A		20A	17B	*	*	12B	11A	55A	*	*	12	C	R2 2-BIT	56
	59		53B	15A	*		20A	21A	11B	*	12A	11A	55A	*	17A	12	C	R1 1-BIT	59
	63	24B	24B	23A	55B	47B		59B	58A							6	B	CHARACTER STORED	63
	65	13B	14B	16A	49B	50A	14B	17A	48A	13A					13B	12	C	CR INTERLOCK	65
	68	13B	14B	14B	14A	22B	13B	5B	49A							6	B	CR FEED	68
	70	52B	28B	27A	27B	27A	56B	55B	30B	49B	49B	49B				12	C	ENCODE BACKSPACE	70
	73	52B	28B	28B	30B	27B	56B	55B	28A							6	B	BACKSPACE	73
	76	15B	16B	9B	28A	15A	13B	5B	47B	42B	23A	12B	24A	12A	11A	12	C	CHARACTER STORED	76
	79	10B	10B	9B	10A	12B	12A	5A	14A	27A	7A	16A	10A	12B	3B	12	C	STOP	79
	82	22B	10B	26B	14A		10A	8A	10A	49B	49B	49B	58A			12	C	FEED	82
	87	36B	33B		28A	35A	33A	27A	25B	22A	3A	29B		31A	7B	12	C	REWIND	87
	90	3B	3B	49A	27A	13A	14A	56B	7B	11A	10A	13A	7A	36B	3B	12	C	PLAYBACK-A	90
	101	37A	31B	31B	32A	32B	36A	49A	35A							6	B	LOAD	101
	103	5B	5B	27A	28A	5B	37A	36B	53B	52B	11B	49B	35B	6B	5B	12	C	ONE CYCLE	103
	107	56B	28B	49A	37A	28B	6B	27A								6	B	RECORD ERROR	107
	109	9B	9B	28A	27A	57A										6	B	PLAYBACK ERROR	109
	110	16B	28B	6B	29B	16B	9A									4	D	PLAYBACK ERROR	110
	112	6B	9B	11B	16A	9B	4B	29B	35A	7A	5A	6A	3B			12	C	SKIP	112
	116	11B	11B	7A	5A	9B	11B	3A	3A	53B	15A	12B	35A	12B	30B	12	C	LINE RETURN	116
	119	11B		15A	30B	11B	9B	3A	11B							6	B	STOP LINE RETURN	119
	121	34B	6B	35A	26B	43A	30B	10B	32B	6B	31B	37A	28B	3A	9B	12	C	REWIND POSITION	121
RS	131	41B	42B	35B	42B	32A										4	A	EQUAL	131
RS	132		44B	45B	45B	46B										4	A	CARRY	132
RS	133	40B	36B	44B	31A	29B	41A	36B	32A	43B	44B	45A	46A		43B	12	C	SUBTRACT	133
	136	3B	3B	41B	42B	36B			32A	37A	35B	38A	48B	37A	42B	12	C	PLAYBACK-B	136
	139	42A	41B	37A	35B	41B	31A	11A	11A	38A	36B					12	C	STOP SEARCH	139
	143	22B	24B	5B	24B	37A	41B	49B	49B		35B					12	C	SEARCH CODE	143
	146	36B	36B		41B	43A	35B	32B	35B	37A						12	C	RESET	146
RS	150	32B	32B	32B	38A											4	A	1st SEARCH RIGHT	150
	151	32B	32B	32B	38A	32B										4	A	1st SEARCH LEFT	151
	152	35B	35B	41B	49A	42B	35B	37A	34B	36B	25B	32A	3B	53A	55A	12	C	SEARCH	152
	158	46B	46B	39A	46A	38B	38B	38B	46B	46A	46A					12	C	4 TENS	158
	161	45B	45B	39A	45A	38B	38B	39A	46B	45A		46A	45A	46A		12	C	2 TENS	161
	164	45B	45B	39A	45A	39A	39A	38B	39A	45B		46A		45A		12	C	1 TENS	164
	167	42B	42B	42A		38A	43B	43B	43B	44B	45B	45B	46B			12	C	RING 2	167
	170	42B	42B	44B	42A	42A	38A	43B	43B	43B	44B	45B	45B	46B	40B	12	C	RING 1	170
	173	44B	44B	40A	40B	44A	43A	44A		39A	44A	43A	44A	38B	44A	12	C	8 UNITS	173
	176	43B	43B	40A	40A	40A	43A	43B	43A	39A	40A	44B	38B	44A	44A	12	C	4 UNITS	176
	180	43B	43B	40A		40A	43A	43B	44A	43A	44A		39A	38B	44A	12	C	2 UNITS	180
	183	43B	43B	40A	43A	43A	43A			39A	44A	44A	38B	37B	44A	12	C	1 UNITS	183
CC	193	58B	59B	29A												4	E	NO STEP LEFT STA	193
CC	194	58B	57B	57A	57B	57A										4	A	END RECORD CYCLE	194
CC	196	60B	57B	10B	57B	60A	57A									4	A	INHIBIT START	196
CC	198	58B	57B	10B	59A	57A	8A	49A	58B	57B	60A	6A	9B	57A		12	C	GENERATE RECORD CY	198
	201	3B	3B	47A	59B	21B	18B	48B	48B							6	B	INHIBIT ADJUST	201
	204	21B	47B	47B	47B	21B		58B	58A							6	B	READ CR	204
	206	18B	57B	30B	21B	10B	58B	58A	58B							6	B	CR NO STEP	206
	208	47B	47B	47B	18B	21B	21B									4	A	STORE CR	208
	209	47B	47B	21B	47B	18B	48B	21B	59B							6	B	REPEAT CR TAB	209
	211	11B	48B	48B		18A	18A									4	A	STORE SP, B'SP	211
	213	17B	48B	29B	48B	18A	22B									4	A	STORE HYPHEN	213
	214	48B	48B	48A	18A		21B	18A		48B	11B					12	C	REGION	214
CC	225	59B	4B	4B	60B	3B	58A									4	A	HOT KBD SETUP	225
CC	227	13B	60B	60B	60A	26A	13A	60B	3B							6	B	START	227
CC	228	3B	3B	4B	60A	57B		59B		58A	58A	30B	57A	59B	58B	12	C	TRANSFER "B"	228
	231	3B	3B		48B	60A	5B	3B	13A	3A	4A	3A			57B	12	C	HOT KEYBOARD	231
	234	4B	4B	55A	**	36A	22A	12A	9A	56A	6B	25A	56B	55B	25A	12	C	TRANSFER	234
	239	23B	24B	24B	4A	4A	26B									4	A	SWITCH FROM LEFT	239
	240	23B	24B	24B	4A	4A	26B									4	A	SWITCH FROM RIGHT	240
	241	22B	26B	23A	22B	26B										4	A	SWITCH CYCLE	241
	242	4B	4B	9B	35A		32B	56B	30A	30A	23B	34A	31A	25A	25A	12	C	ADDRESS LEFT	242
	245	4B	4B	9B	35A		38A	56B	29A	4A	31B	33A	26A	25A	23B	12	C	ADDRESS RIGHT	245
	RELAY	P	H	1	2	3	4	5	6	7	8	9	10	11	12	SIZE	CODE	NAME	RELAY

CC ADDITIONAL RELAYS FOR CODE CONVERSION FEATURE

RS ADDITIONAL RELAYS FOR REVERSE SEARCH FEATURE

* USED FOR DUAL VELOCITY SEE PAGES WT 5 THRU WT 20

** 3A WITHOUT CC 13A WITH CC

RC-15							
POS	LOCATION	RES NO.	RES VAL	CAP NO.	CAP VAL	DIODE NO.	DIODE TP
1	34B	1160691	110 Ω	1127455	.25 μ f		
2	50B/55A						
3	31B	1160691	110 Ω	1127455	.25 μ f		
4	48B						
5	21B						
6	18A/13A						
7	28B	1160691	110 Ω				
8							
9	3A	(+ 48V)					
10							
11	54B			1127455	.25 μ f		
12	54B	1160691	110 Ω				
		1119111	18K Ω				

PL DENOTES PINK LADY (P/N 321051)

X "C" CONTACT TIMING SHOWN IN DIAGRAMS IS NOMINAL.
FOR TOLERANCES SEE I/O REFERENCE MANUAL.

XI LOCATION INDICATED BESIDE RELAY COIL IS
FOR ITS OTHER COIL WHEN THE OTHER COIL
IS ON ANOTHER PAGE.

MOLDED RC BLOCKS					
• 328601 680 Ω -.047 μ f					
• 328602 330 Ω -.1 μ f					
NO.	CODE	SECTION AND LOCATION			
		1	2	3	4
25	•	7B	8B	3B	
68	•	13B	14B	14B	14B
75	•	28B	52B	28B	15B
79	•	16B	10B	22B	10B
86	•	36B	29B	7B	
101	•		48B	32B	46B
106	•	31B	5B	55B	28B
111	•	16B	28B	6B	9B
119	•	11B	11B	11B	24B
RS 130	•	41B	42B	44B	
RS 136	•	32B	36B	40B	32B
142	•	41A	41B	22B	24B
149	•	36B	32B	35B	35B
167	•	42B	42B	45B	45B
179	•	43B	43B	43B	44B
CC 194	•	58B	58B	59B	13B
CC 195	•	58B	60B	57B	57B
CC 197	•	57B	58B	47B	47B
205	•	18B	22B	47B	3B
210	•	17B	11B	48B	48B
CC 226	•	59B	60B	3B	4B
238	•	4B	23B	23B	26B

DIODE BLOCK					
PART NO. 1160915					
NO.	1	2	3	4	
18	12B	54B	54B	25A	
46	54B	54B	54B	54B	
52	53B	53B	53B	53B	
70	7A	9A	17A	16A	
75	53A	53A	53A	7B	
85	7B	10A	6B	34B	
86	7A	10A	9A	9A	
107	5B	28A	31B	5B	
115	12B	11B	41B	38A	
149	41A	38A	37A	37A	
CC 197	59A	59A	59A	8B	
CC 201	60B	57B	57B	58B	
207	17B	18A	3B	3B	
237	25A	25A	25A	25A	
238	25A	25A	26A	4A	
25	48B	9A	32A	22B	

SEARCH CAP-RES TERM BOARD				
POS	VALUE	PAGE	PART NO.	
TB2-1	30 μ f - 55V	46B	1160690	
TB2-2	110 Ω - 1W	46B	1160691	
TB2-3	30 μ f - 55V	45B	1160690	
TB2-4	110 Ω - 1W	45B	1160691	
TB2-5	30 μ f - 55V	45B	1160690	
TB2-6				
TB2-7	110 Ω - 1W	45B	1160691	
TB2-8	30 μ f - 55V	44B	1160690	
TB2-9	110 Ω - 1W	44B	1160691	
TB2-10	30 μ f - 55V	43B	1160690	
TB2-11	110 Ω - 1W	43B	1160691	
TB2-12	30 μ f - 55V	43B	1160690	
TB2-13	110 Ω - 1W	43B	1160691	
TB2-14	30 μ f - 55V	43B	1160690	
TB2-15				
TB2-16	110 Ω - 1W	43B	1160691	

RELAYS, SOLENOIDS & MAGNETS			
CODE	PART NO.	DESCRIPTION	RATED D.C. RES
A	196208	4POS RELAY	624 Ω P/1735 Ω H
B	196198	6POS RELAY	622 Ω P/1080 Ω H
C	255735	12POS RELAY	395 Ω P/600 Ω H
D	186685	4POS LATCH RELAY	395 Ω LP/332 Ω LT
E	196207	4POS 2PICK RELAY	624 Ω
	1160931	CYCLE CLUTCH	171 Ω
	1135089	PRESSURE PAD	358 Ω
	1128964	STEP	240 Ω
	343761	LOAD & SEARCH	185 Ω
	343761	HIGH BIAS	185 Ω
	1128964	COVER UNLOCK	240 Ω
	315189	SEARCH POS.	171 Ω
	306375	DETENT	120 Ω

RS ADDITIONAL RC BLOCK FOR REVERSE SEARCH FEATURE
CC ADDITIONAL RC AND DIODE BLOCKS FOR CODE CONVERSION FEATURE