

CHAMPAIGN, ILL. SD17C

COMPLETE SIGNAL CIRCUITS

OFFICE OF SIGNAL ENGINEER.

CHICAGO, ILLINOIS

I.C.R.R.

INDEX

SUBJECT

Index & Data Sheets
Track diagram, Commons, Annunciator Circuits.

SHEET No.

1-2.

3.

Switch Box Wiring for Control of K R Relays
Typical Wiring of Switch Machines

4.

5.

N & South Bound. Route locking "
Stick Circuits

6-7.

8.

Electric lever Lock Circuits on I.C.R.R.

9.

Detail Wiring of time Releases & Releasing Switch.

10

Wiring for Rotary Circuit Controller Contacts

11-12-13

" " Power Board

14

" " Charging Panel

15

Circuits on Wabash R.R.

16

Circuits on C.C.C. & St. L. R.R.

17

Champaign, Ill. SD17-C

Sheet 1

Checked:

R.B. Amador

Checked:

J.B. Morgan

Approved:

H.M. Vandenburg

Gen. Supt. Tel. & Sigs.

June 10, 1924.

July 10, 1924

July 24, 1924

Aug. 12, 1924.

Aug. 30, 1924.

Nov. 3, 1924.

Sept. 18, 1925.

Oct. 8, 1925

Dec. 18, 1925.

MAR. 1, 1927.

FEB. 12, 1929.

June 28, 1930

Mar. 9, 1931.

Mar. 3, 1933.

Jan. 21, 1935.

Sept. 22, 1937

Oct 13, 1939

April 22, 1943

Oct. 16, 1944.

Sept. 8, 1945.

Dec. 31, 1945.

Oct, 23, 1946.

Drawn by

E.F.P. & W.W.G.

Not to Scale

DATA SHEET

Battery 55 Cells Willard negative and Gould positive plates
120 A.H. Type E7, installed 7-4-15 in old plant.
Wire Specifications

2 #9 Solid Copper wires full length of plant on all roads for electric lighting of signals

Control And Indication

From Tower to Switch #23 : 2 #9 Solid Copper wires.

To all other Functions : #14 Solid Copper wires.

Main Commons

From Tower to Signal #1 : #2 Stranded Copper.

" " " #93 ; #2 " "

" " " Signal's 15-16-81-82 and 85 : #9 Solid Copper.

" Signal #1 to #10 : #9 Solid Copper.

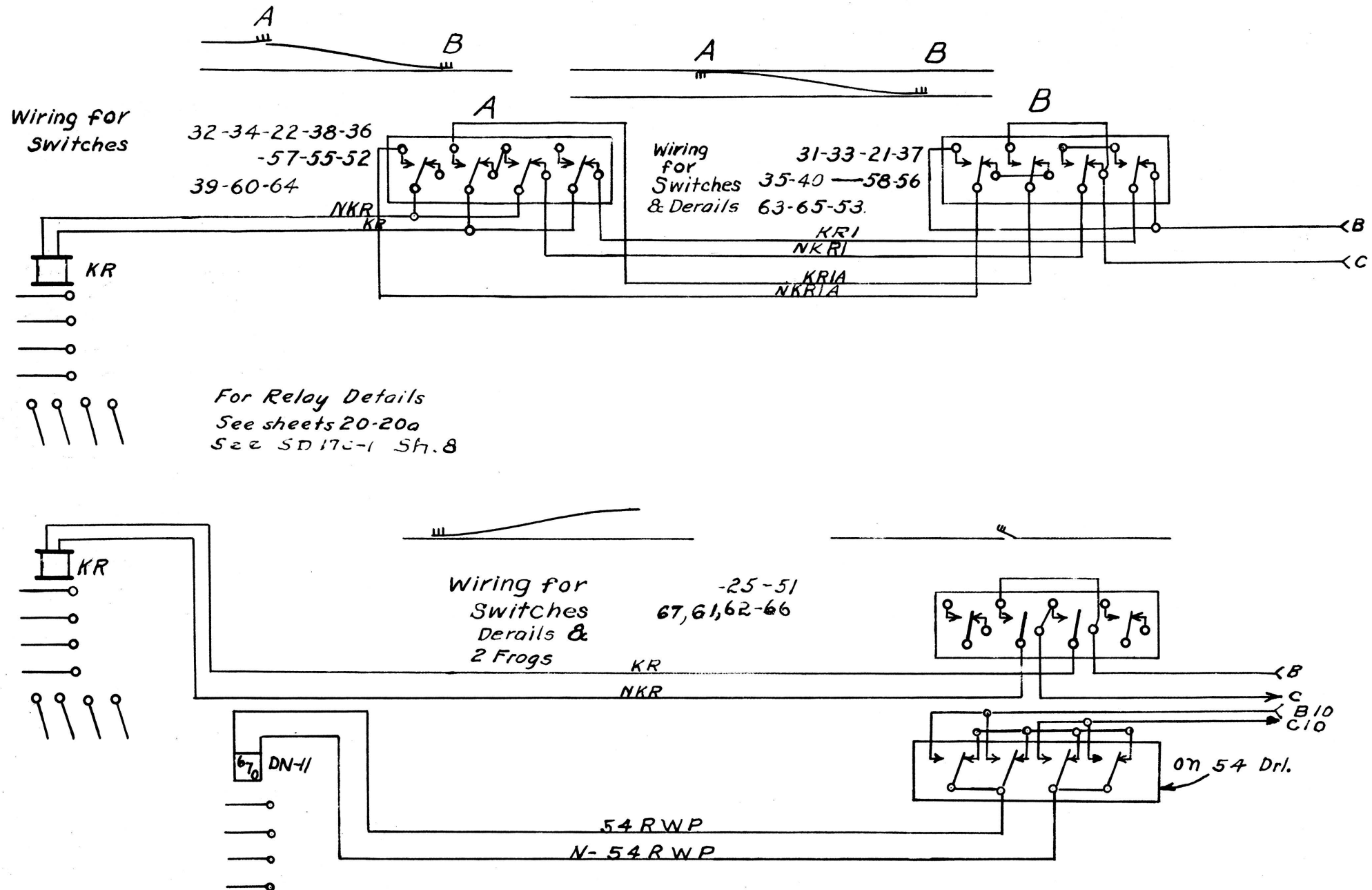
CIRCUIT BREAKER OPERATION FOR Mod.2A SIGNALS.

Contact Space Number	Going Reverse		Going Normal		REMARKS
	closes	Opens	Closes	Opens	
2		40°	10°		Snap Open & Closed
4	40°	85°	{ 10° 40°	10° 10°	Snap Open & Closed for Stick Sig. " " " " " Auto "
6	37°	43°	43°	37°	Drag 40° Hold Clear 0° Blade.
8	83°	88°	88°	83°	" 85° " " 45° "
10	127°			127°	" 135° " " 90° "
12	37°	41°	41°	37°	" Snub 0° Pos of Blade
	83°	88°	88°	83°	" " 45° " " "
	127°			127°	" " 90° " " "
1	85°	130°	85°	80°	Snap Open & Closed for Stick
			85°	40°	" " " " " Auto.
14		43°	43°		
5	80°			80°	
7	80°			80°	
9		75°	75°		

Mechanism has 40° Free Run For Indicating Purposes
Before Blade is Moved.



SWITCH BOX WIRING FOR CONTROL OF KR, RELAYS



Terminal Numbers for Switch and Derail Controls

Terminal Numbers	Control	Terminal Numbers	Control
2B-101	23N	2B-126	34R
102	23R	127	37N
		128	37R
		129	38N
105	25N	2B-130	38R
106	25R		
107	31N		
108	31R		

113	32N	135	
114	32R	136	
115	33N	137	
116	33R	138	
		139	
		2B-140	

119	21N		
2B-120	21R		
121	22N		
122	22R		

125	34N		
-----	-----	--	--

Circuits for Mod. 2 & 4 Switch Machines

Reverse Control.
Normal Control.

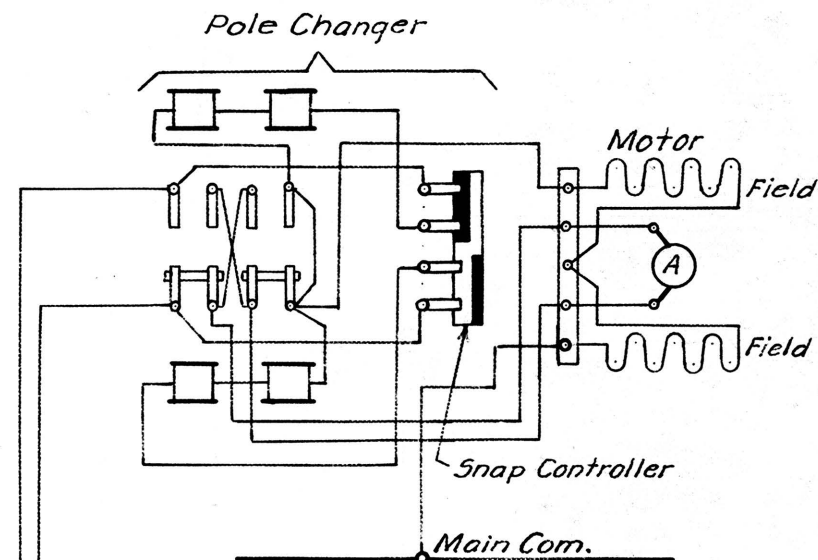
Terminal Numbers	Control	Terminal Numbers	Control
1B-101	50N	2B-513	66N
102	50R	514	66R
103	51N	515	67N
104	51R	516	67R
105	52N	517	62N
106	52R	518	62R
107	53N	519	61N
108	53R	2B-520	61R
109	54N	521	60N
1B-110	54R	522	60R
		523	58N
		524	58R

2B-501	65N		
502	65R		
503	64N		
504	64R		

511	63N		
512	63R		

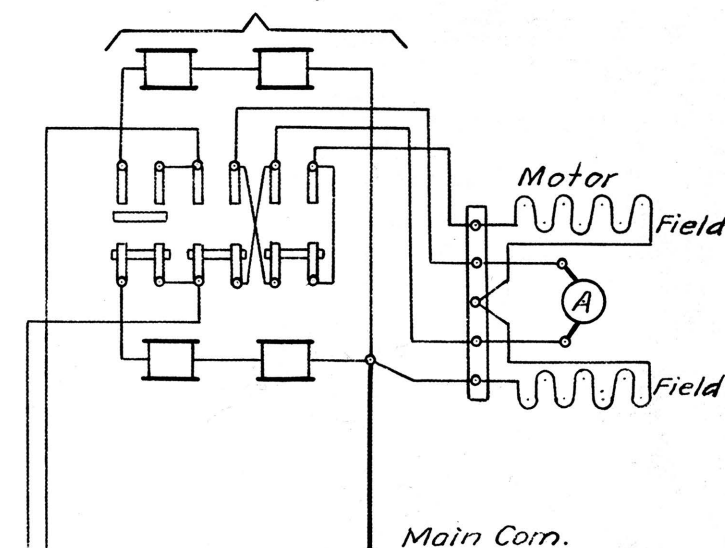
Reverse Control
Normal Control

TYPICAL WIRING FOR SWITCH MACHINES



Levers 30-41-59-69 & 70 to have indication removed and polar relay disconnected.

Pole Changer

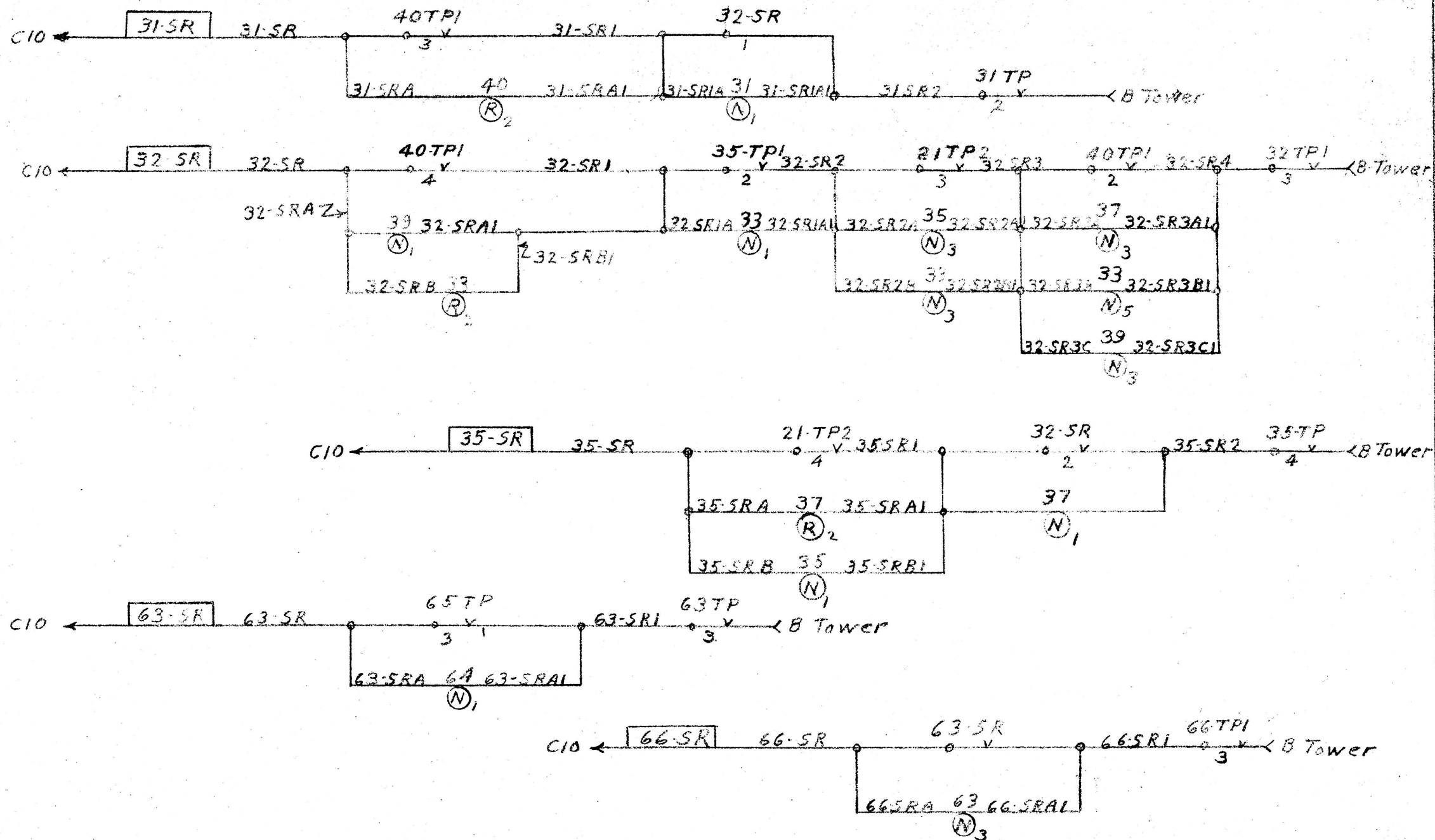


Circuit for Mod. 5 Sw. Machine

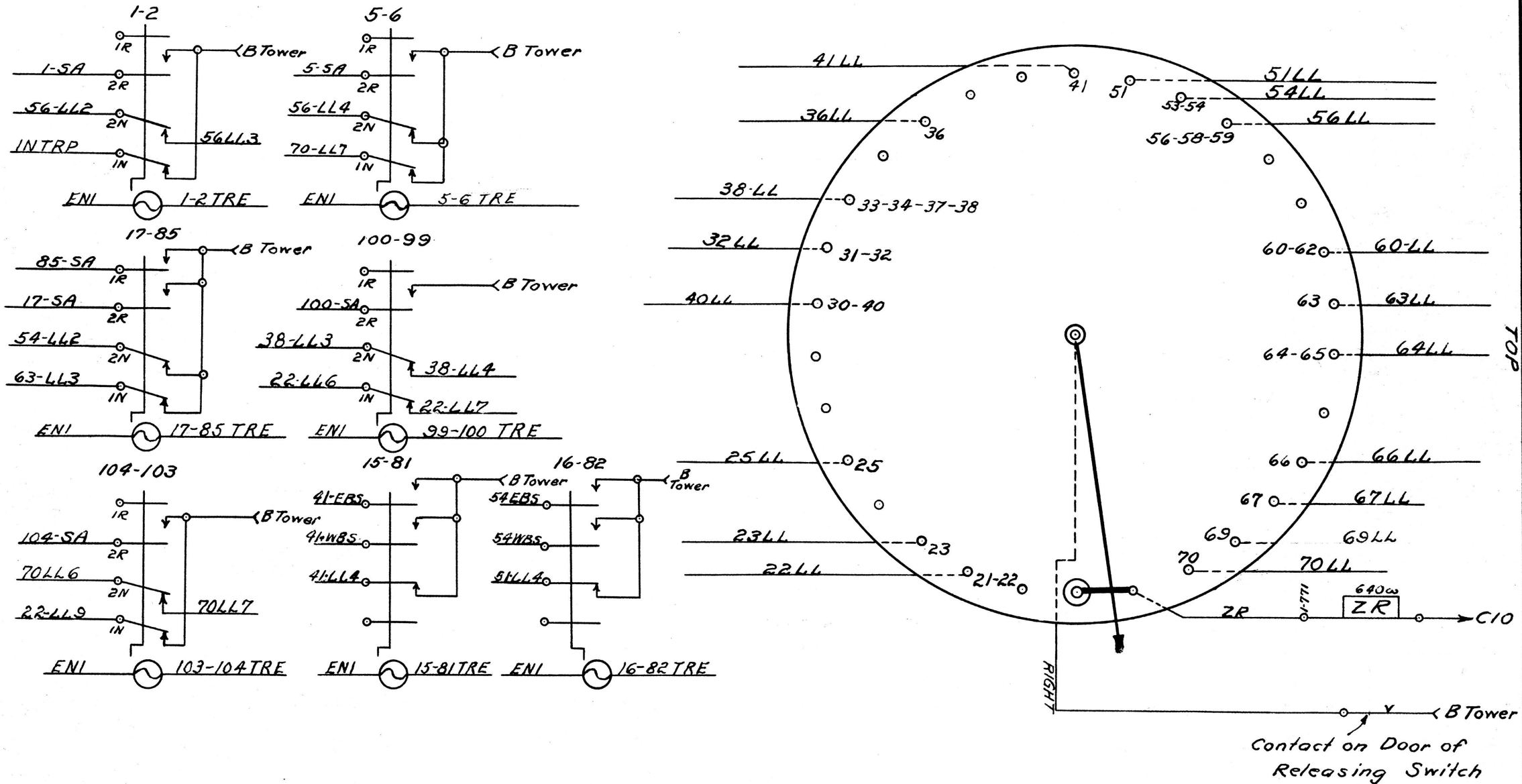
The diagram illustrates a power distribution system with the following components and connections:

- Top Section (32-NR):**
 - Input: C10 ← 32-NR
 - Components: 32-NR1, 32-NR2, 32-NR3, 32-NR4, 32-NR5, 32-NR6, 32-NR7, 32-NR8, 32-NR9, 32-NR10, 32-NR11, 32-NR12, 32-NR13, 32-NR14, 32-NR15, 32-NR16, 32-NR17, 32-NR18, 32-NR19, 32-NR20, 32-NR21, 32-NR22, 32-NR23, 32-NR24, 32-NR25, 32-NR26, 32-NR27, 32-NR28, 32-NR29, 32-NR30, 32-NR31, 32-NR32, 32-NR33, 32-NR34, 32-NR35, 32-NR36, 32-NR37, 32-NR38, 32-NR39, 32-NR40, 32-NR41, 32-NR42, 32-NR43, 32-NR44, 32-NR45, 32-NR46, 32-NR47, 32-NR48, 32-NR49, 32-NR50, 32-NR51, 32-NR52, 32-NR53, 32-NR54, 32-NR55, 32-NR56, 32-NR57, 32-NR58, 32-NR59, 32-NR60, 32-NR61, 32-NR62, 32-NR63, 32-NR64, 32-NR65, 32-NR66, 32-NR67, 32-NR68, 32-NR69, 32-NR70, 32-NR71, 32-NR72, 32-NR73, 32-NR74, 32-NR75, 32-NR76, 32-NR77, 32-NR78, 32-NR79, 32-NR80, 32-NR81, 32-NR82, 32-NR83, 32-NR84, 32-NR85, 32-NR86, 32-NR87, 32-NR88, 32-NR89, 32-NR90, 32-NR91, 32-NR92, 32-NR93, 32-NR94, 32-NR95, 32-NR96, 32-NR97, 32-NR98, 32-NR99, 32-NR100.
- Second Section (35-NR):**
 - Input: C10 ← 35-NR
 - Components: 35-NR1, 35-NR2, 35-NR3, 35-NR4, 35-NR5, 35-NR6, 35-NR7, 35-NR8, 35-NR9, 35-NR10, 35-NR11, 35-NR12, 35-NR13, 35-NR14, 35-NR15, 35-NR16, 35-NR17, 35-NR18, 35-NR19, 35-NR20, 35-NR21, 35-NR22, 35-NR23, 35-NR24, 35-NR25, 35-NR26, 35-NR27, 35-NR28, 35-NR29, 35-NR30, 35-NR31, 35-NR32, 35-NR33, 35-NR34, 35-NR35, 35-NR36, 35-NR37, 35-NR38, 35-NR39, 35-NR40, 35-NR41, 35-NR42, 35-NR43, 35-NR44, 35-NR45, 35-NR46, 35-NR47, 35-NR48, 35-NR49, 35-NR50, 35-NR51, 35-NR52, 35-NR53, 35-NR54, 35-NR55, 35-NR56, 35-NR57, 35-NR58, 35-NR59, 35-NR60, 35-NR61, 35-NR62, 35-NR63, 35-NR64, 35-NR65, 35-NR66, 35-NR67, 35-NR68, 35-NR69, 35-NR70, 35-NR71, 35-NR72, 35-NR73, 35-NR74, 35-NR75, 35-NR76, 35-NR77, 35-NR78, 35-NR79, 35-NR80, 35-NR81, 35-NR82, 35-NR83, 35-NR84, 35-NR85, 35-NR86, 35-NR87, 35-NR88, 35-NR89, 35-NR90, 35-NR91, 35-NR92, 35-NR93, 35-NR94, 35-NR95, 35-NR96, 35-NR97, 35-NR98, 35-NR99, 35-NR100.
- Third Section (63-NR):**
 - Input: C10 ← 63-NR
 - Components: 63-NR1, 63-NR2, 63-NR3, 63-NR4, 63-NR5, 63-NR6, 63-NR7, 63-NR8, 63-NR9, 63-NR10, 63-NR11, 63-NR12, 63-NR13, 63-NR14, 63-NR15, 63-NR16, 63-NR17, 63-NR18, 63-NR19, 63-NR20, 63-NR21, 63-NR22, 63-NR23, 63-NR24, 63-NR25, 63-NR26, 63-NR27, 63-NR28, 63-NR29, 63-NR30, 63-NR31, 63-NR32, 63-NR33, 63-NR34, 63-NR35, 63-NR36, 63-NR37, 63-NR38, 63-NR39, 63-NR40, 63-NR41, 63-NR42, 63-NR43, 63-NR44, 63-NR45, 63-NR46, 63-NR47, 63-NR48, 63-NR49, 63-NR50, 63-NR51, 63-NR52, 63-NR53, 63-NR54, 63-NR55, 63-NR56, 63-NR57, 63-NR58, 63-NR59, 63-NR60, 63-NR61, 63-NR62, 63-NR63, 63-NR64, 63-NR65, 63-NR66, 63-NR67, 63-NR68, 63-NR69, 63-NR70, 63-NR71, 63-NR72, 63-NR73, 63-NR74, 63-NR75, 63-NR76, 63-NR77, 63-NR78, 63-NR79, 63-NR80, 63-NR81, 63-NR82, 63-NR83, 63-NR84, 63-NR85, 63-NR86, 63-NR87, 63-NR88, 63-NR89, 63-NR90, 63-NR91, 63-NR92, 63-NR93, 63-NR94, 63-NR95, 63-NR96, 63-NR97, 63-NR98, 63-NR99, 63-NR100.
- Fourth Section (21-NR):**
 - Input: C10 ← 21-NR
 - Components: 21-NR1, 21-NR2, 21-NR3, 21-NR4, 21-NR5, 21-NR6, 21-NR7, 21-NR8, 21-NR9, 21-NR10, 21-NR11, 21-NR12, 21-NR13, 21-NR14, 21-NR15, 21-NR16, 21-NR17, 21-NR18, 21-NR19, 21-NR20, 21-NR21, 21-NR22, 21-NR23, 21-NR24, 21-NR25, 21-NR26, 21-NR27, 21-NR28, 21-NR29, 21-NR30, 21-NR31, 21-NR32, 21-NR33, 21-NR34, 21-NR35, 21-NR36, 21-NR37, 21-NR38, 21-NR39, 21-NR40, 21-NR41, 21-NR42, 21-NR43, 21-NR44, 21-NR45, 21-NR46, 21-NR47, 21-NR48, 21-NR49, 21-NR50, 21-NR51, 21-NR52, 21-NR53, 21-NR54, 21-NR55, 21-NR56, 21-NR57, 21-NR58, 21-NR59, 21-NR60, 21-NR61, 21-NR62, 21-NR63, 21-NR64, 21-NR65, 21-NR66, 21-NR67, 21-NR68, 21-NR69, 21-NR70, 21-NR71, 21-NR72, 21-NR73, 21-NR74, 21-NR75, 21-NR76, 21-NR77, 21-NR78, 21-NR79, 21-NR80, 21-NR81, 21-NR82, 21-NR83, 21-NR84, 21-NR85, 21-NR86, 21-NR87, 21-NR88, 21-NR89, 21-NR90, 21-NR91, 21-NR92, 21-NR93, 21-NR94, 21-NR95, 21-NR96, 21-NR97, 21-NR98, 21-NR99, 21-NR100.
- Fifth Section (65-NR):**
 - Input: C10 ← 65-NR
 - Components: 65-NR1, 65-NR2, 65-NR3, 65-NR4, 65-NR5, 65-NR6, 65-NR7, 65-NR8, 65-NR9, 65-NR10, 65-NR11, 65-NR12, 65-NR13, 65-NR14, 65-NR15, 65-NR16, 65-NR17, 65-NR18, 65-NR19, 65-NR20, 65-NR21, 65-NR22, 65-NR23, 65-NR24, 65-NR25, 65-NR26, 65-NR27, 65-NR28, 65-NR29, 65-NR30, 65-NR31, 65-NR32, 65-NR33, 65-NR34, 65-NR35, 65-NR36, 65-NR37, 65-NR38, 65-NR39, 65-NR40, 65-NR41, 65-NR42, 65-NR43, 65-NR44, 65-NR45, 65-NR46, 65-NR47, 65-NR48, 65-NR49, 65-NR50, 65-NR51, 65-NR52, 65-NR53, 65-NR54, 65-NR55, 65-NR56, 65-NR57, 65-NR58, 65-NR59, 65-NR60, 65-NR61, 65-NR62, 65-NR63, 65-NR64, 65-NR65, 65-NR66, 65-NR67, 65-NR68

SOUTH BOUND ROUTE LOCKING CIRCUITS

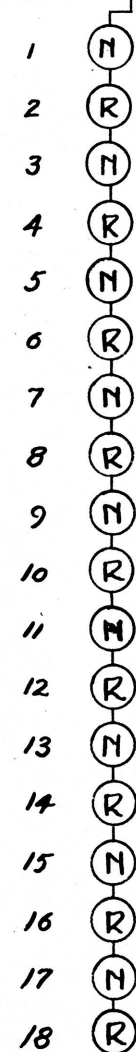


WIRING OF TIME RELEASES
AND RELEASING SWITCH

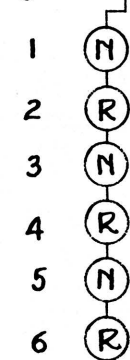


WIRING FOR ROTARY CIRCUIT CONTROLLER CONTACTS

*Contact Numbers
18 Way Circuit
Controllers on 5w.
& Drl. Levers*



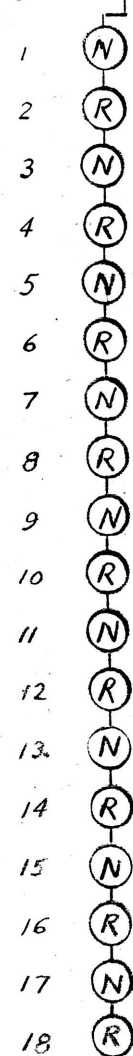
6 Way Circuit
- Controllers on
Signal Levers.



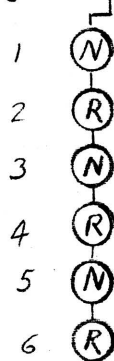
LEVER NUMBER	SIGNAL LEVER	SWITCH OR DEBRILLE CONTACT	LEVER NUMBER	NORMAL	REVERSE	CIRCUIT TAGGING		LEVER NUMBER	SIGNAL LEVER	SWITCH OR DEBRILLE CONTACT	LEVER NUMBER	NORMAL	REVERSE	CIRCUIT TAGGING		LEVER NUMBER	SIGNAL LEVER	SWITCH OR DEBRILLE CONTACT	LEVER NUMBER	NORMAL	REVERSE	CIRCUIT TAGGING		
1	X		1	NB		C10-1S1	C10-1S	14	X							30	X							
			2	R		CL-1277-HR4A	B5 Tower																	
2	X		1	NB		C10	C10-1S1	15	X	1	NB				B-Tower	46-EB-SA	31	X	1	N			24-SRIA	24-SRIA1
3	X							16	X	1	NB				B Tower	54-EB-SA	32	X	1	N			26-NRA	26-NRA1
4	X							17	X	1	NB				C10	C10-17S		X	3	N			26-NRIB	26-NRIB1
5	X		1	NB		C10-5S1	C10-5S	18	X									X	5	N			27-NR2B	27-NR2B1
6	X		1	NB		C10	C10-5S1	19										X	7	N			68-LL3	68-LL3
			2	R		CL-1277-HR4B	B5 Tower	20										X	1	N			26-SRIA	26-SRIA1
7	X							21	X	1	N							X	2	N			26-SRB	26-SRB1
8	X							22	X	1	N				27-NRB	27-NRBI	33	X	3	N			26-SR2B	26-SR2B1
9	X							23	X	2	NB				38-LL4	38-LL5		X	5	N			26-SR3B	26-SR3B1
10	X							24	X						38-LL5A	38-LL5		X	7	N			B Tower	
11	X							25	X						38-LL6	38-LL4A	34	X	1	N			26-NRB	26-NRB1
12	X							26	X								27-NRA	27-NRIA	2	N			27-NR2A	27-NR2A1
13	X							27	X	2							68-LL2	27-NRIA	3	N			68-LL3	68-LL3
								28	X	1	N						34-LL4A	27-NRIA	5	N			34-LL4A	34-LL4A1
								29	X	3	N						68-LL3A	27-NRIA	7	N			68-LL4A	68-LL4A1
										5	N						27-SRB	27-SRB1	9	N			26-SR2A	26-SR2A1
																	26-SR2A	26-SR2A1	3	N				

WIRING FOR ROTARY CIRCUIT CONTROLLER CONTACTS

Contact Numbers
18 way Circuit
Controllers on SW.
& DRI Levers.



Contact Numbers
6 Way Circuit
- Controllers on
Signal Levers

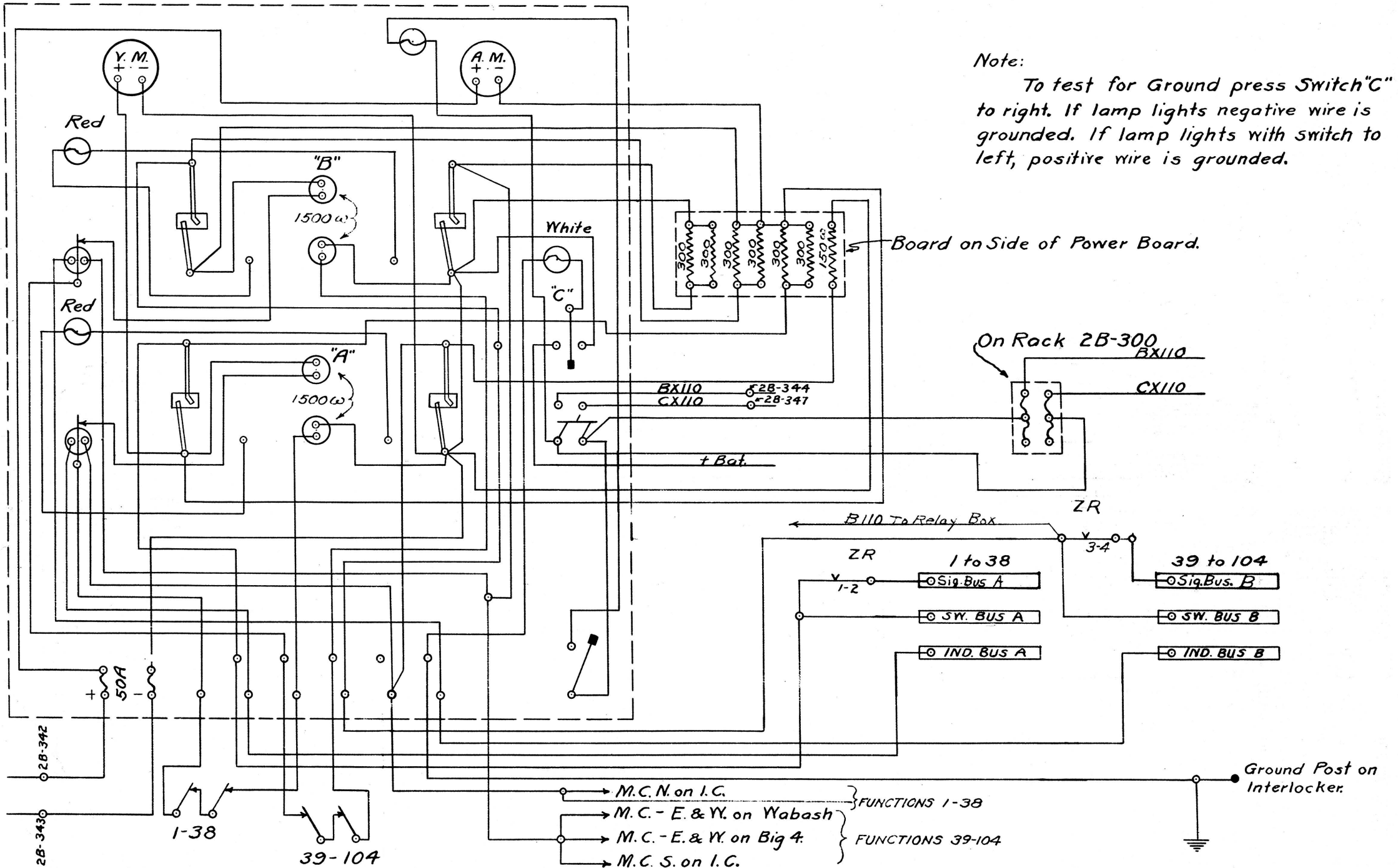
[illegible]

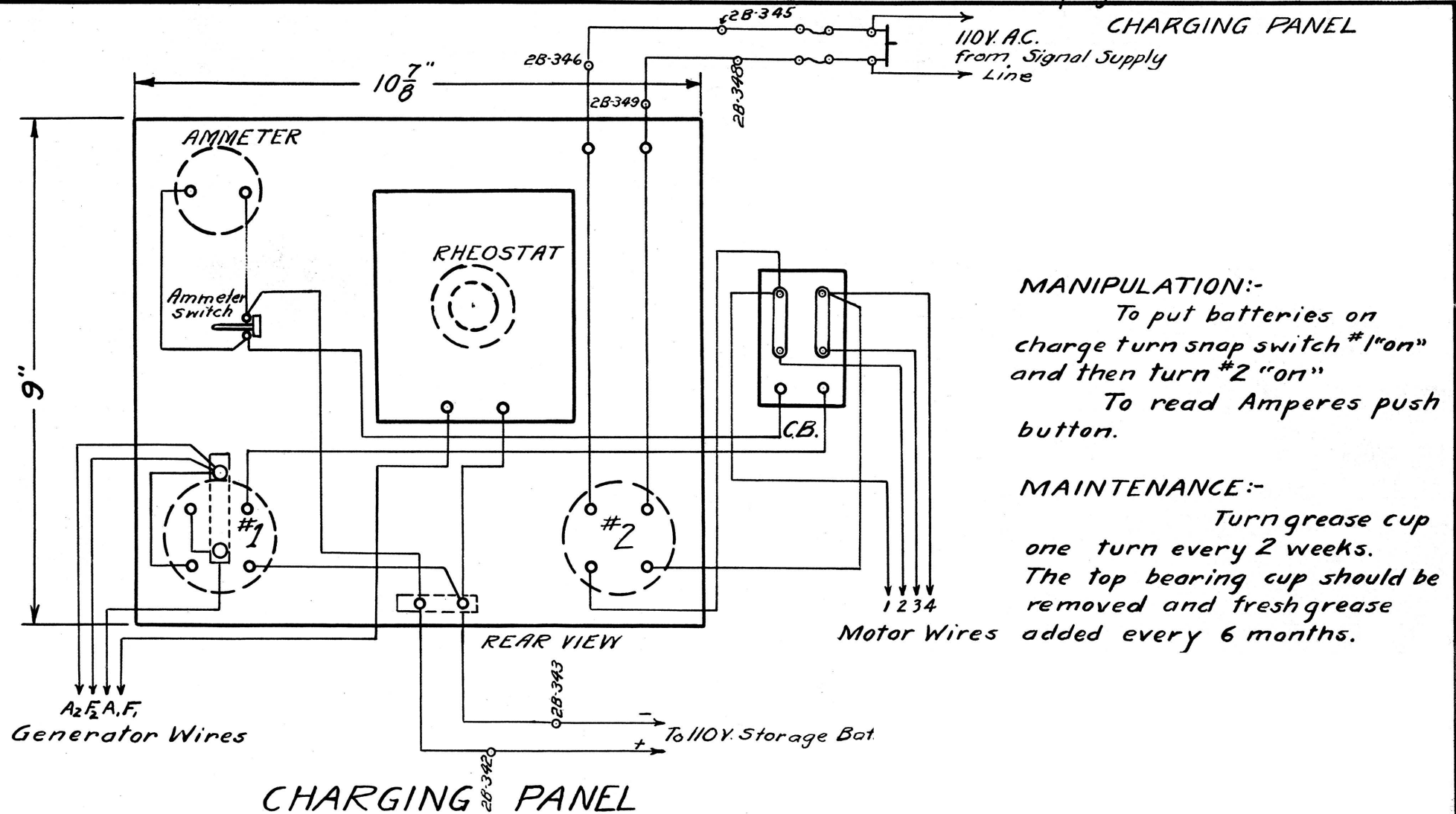
WIRING FOR ROTARY CIRCUIT CONTROLLER CONTACTS

LEVER NUMBER	SIGNAL LEVER	SWITCH OR DERAIL LEVER	CONTACT NUMBER	NORMAL	REVERSE	CIRCUIT TAGGING
LEVER NUMBER	SIGNAL LEVER	SWITCH OR DERAIL LEVER	CONTACT NUMBER	NORMAL	REVERSE	CIRCUIT TAGGING
42	x					SPARE LEVER
43	x					SPARE LEVER
44	x					SPARE LEVER
45	x					SPARE LEVER
46	x					SPARE LEVER
47	x					SPARE LEVER
48	x					SPARE LEVER
49	x					SPARE LEVER
50	x					SPARE LEVER
51	x	I N		B Tower	Wab TPAI	
52	x					
53	x					
54	x					
55	x	I N		CL-1277-HR6	CL-1277-HR5	
56	x					
57	x	I N		CL-1277-HR5	CL-1277-HR4	
58	x					
59	x	2 R		CL-1277HR3	CL-1277HR4	
60						
61						

REAR VIEW OF BOARD

WIRING FOR POWER BOARD.





2- Panels required wired in multiple.

Wotton Motor Generator sets charging lead
Storage cells, generators 125-145 V. 25-1.6 A
D.C. Motors 110 V. 60 Cycles single phase A.C.
Electric Products Co.

