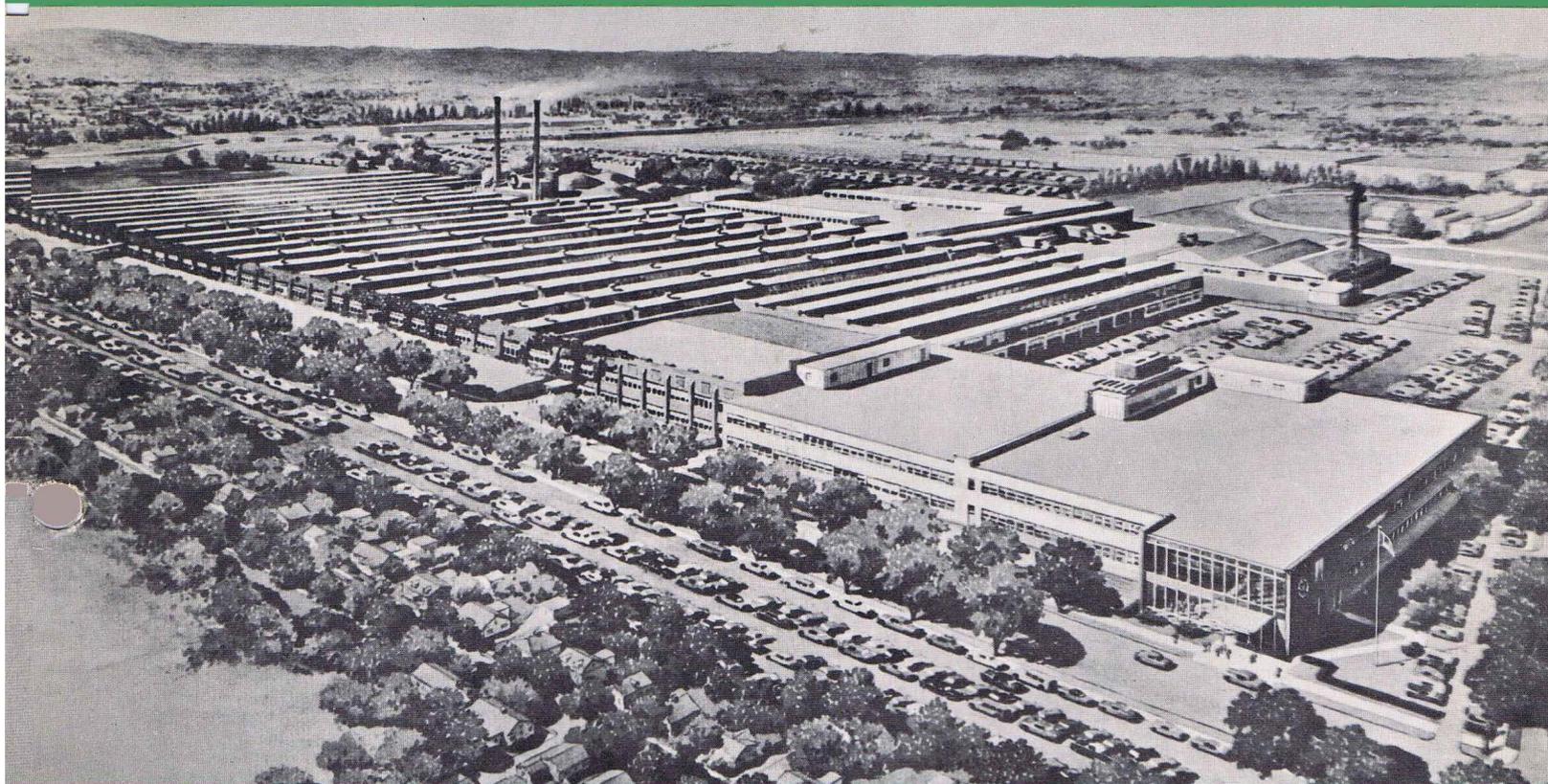


STROMBERG-CARLSON®

T-1077

6K-1 TELEPHONE SYSTEM
with
1706 MULTI-LINE TELEPHONES
installation and maintenance



GD

GENERAL DYNAMICS | TELECOMMUNICATION

ROCHESTER 3, NEW YORK

INSTALLATION AND MAINTENANCE

STROMBERG-CARLSON[®]
6K-1 TELEPHONE SYSTEM
WITH
1706 MULTI-LINE TELEPHONES

ADVANCE DATA

GENERAL DYNAMICS/TELECOMMUNICATION
Rochester 3, New York

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SECTION I GENERAL

1. DESCRIPTION

The STROMBERG-CARLSON[®] 6K-1 System provides a means for efficiently sharing one or more trunk connections between a number of telephones. The system is capable of handling a maximum of five incoming and/or outgoing calls at any one time and intercom service between all stations. These calls can be handled by any combination of central-office and PBX lines.

The basic system consists of a relay cabinet, power supply and telephones as required. The equipment supplied with the basic system is described in paragraph 2, BASIC SYSTEM COMPONENTS. The following additional features can be added to the basic system and are described in paragraph 3, OPTIONAL SYSTEM COMPONENTS.

Additional Line Circuits

Manual Exclusion

Intercommunication

(1) 10- or 15- Station, Dial-Selective

(2) Manual (Pushbutton Signaling)

Signal Flashing (Intercom)

Automatic Tie-Line

Audible Signals

2. BASIC SYSTEM COMPONENTS

a. Relay Cabinet.

The relay cabinet is 21-inches square and 7-inches deep. The cover is secured by four twist-lock screws. The circuit-plate frame is hinged to provide easy access to the wiring side. It is factory equipped and wired for one common and three line circuits. It also has the basic wiring from the common circuit to the two vacant panel spaces.

b. Power Supply.

The power supply is 11-3/4-inches high, 10-1/8-inches wide and 7-5/8-inches deep. It has a hinged cover for easy access to the power equipment. The power supply can be plugged into any convenient 105-125 volt ac outlet and supplies the required ac and dc voltages for operation of the system.

c. Multi-Line Telephones.

The 1700 series multi-line telephones are used with the 6K-1 system. The 1706 telephone is equipped with six illuminative push-button keys which are located to the right of the dial. The first five keys are used for line selecting, the sixth (red) key is used for line holding. All keys are locking type except for the hold key. The 1706 telephone is equipped with a 44-conductor line cord (WDV-44A) which is terminated with spade connections for ease in installation.

3. OPTIONAL SYSTEM COMPONENTS

The following features are optional and can be ordered with the basic unit. They are not mounted in the relay cabinet, but are shipped in separate cartons, and must be installed by the installer.

a. Line Circuits.

Two additional line circuits can be added to the system increasing the line capacity to five. The components of the line circuit are mounted on a circuit plate, which is installed in the space provided in the relay cabinet. See paragraph 7a for installation.

b. Manual Exclusion.

The manual exclusion feature provides conversation privacy by excluding all other telephones from the line in use. The excluding telephone must be modified by adding the manual exclusion switch and associated wiring. The parts for this conversion are supplied as a kit. This circuit requires a manual operation to exclude the other stations but is automatically restored by replacing the handset. See paragraph 7j for installation.

c. Dial-Selective Intercom 10- or 15- Station.

Dial-selective intercom provides a common talking circuit and a means of signaling any telephone in the system individually from any other telephone. The 10-station intercom is available for either relay cabinet mounting or as a separate wall-mounted cabinet. The 15-station intercom is available only in the wall-mounted cabinet. Both wall-mounted cabinets measure 7-3/4-inches wide, by 6-5/8-inches high, by 6-9/16-inches deep and should be mounted on the wall near the relay cabinet and power supply. A signal flashing feature is available for use with the dial-selective intercoms. See paragraphs 7c, 7d, and 7e for installation.

d. Signal Flashing.

The signal flashing feature available for use with the dial selective intercom provides a flashing-lamp signal in addition to the audible signal at the called telephone. Each station requiring this feature must be equipped with a signal-flashing terminal box. This circuit requires no keys, and therefore, does not reduce the capacity of the system. See paragraphs 7f and 7g for installation. This feature can only be used when a specific button is assigned for intercom.

e. Automatic Tie-Line.

The automatic tie-line provides a means of interconnecting two systems so that telephones of one system may call into the other system. The components of this circuit are mounted on a circuit plate to be installed in the relay cabinet when this feature is added. The automatic tie-line uses one of the five line keys, therefore, reduces the capacity of the system by one line. See paragraph 7h for installation.

f. Audible Signals.

Two methods of providing a common-line audible signal for incoming calls are available with the 6K-1 System. An internally mounted ringer or an externally-mounted buzzer may be used. One or both of these must be ordered with the basic unit.

The ringer should be installed inside each telephone that is to provide an audible signal. The buzzer, if used, must be installed externally at each station that is to provide an audible signal. The buzzer may be used with or without the regular ringer and is identical to the intercom buzzer provided in the telephone. See paragraph 7p for installation.

SECTION II INSTALLATION

4. LOCATION OF EQUIPMENT

The location of the components depends largely on the physical characteristics of the installation site. A plan should be drawn showing the floor layout of the site, telephone station positions, relay cabinet, and power supply. The relay cabinet and power supply should be located in a central, dirt-free site with enough unobstructed area around it for ease of installation and maintenance. In locating the telephone stations, it must be considered that the connecting cord is 8-feet long, limiting the distance between the telephone and the terminal block to less than 8-feet.

5. CABLING PLANS

The distribution cable provides a means of connecting the components of the system in parallel. The actual layout of the cable system will vary according to the location of the relay cabinet and the telephone stations. The two systems generally used are the "multiple" and "radial" systems. A combination of the two systems can be used if desired.

The cabling system used to interconnect the 6K-1 System is usually determined by planning the location of the components and then determining which wiring plan requires the least amount of cable. See chart below.

Cable Conductors Required

EQUIPMENT	PAIRS	SINGLES	TOTAL CONDUCTORS
Basic Unit:			
1 Common Circuit	3		6
3 CO or PBX Line Circuits	6	3	15
Additions:			
1 CO or PBX Line Circuit	2	1	5
2 CO or PBX Line Circuit	4	2	10
10-Station Dial-Selective Intercom	2	10*	14
15-Station Dial-Selective Intercom	2	15*	19
Manual Intercom	2		4
Automatic Tie-Line	2		4
Signal-Flashing Unit	2	16**	20

Note. 22-gauge switchboard cable is to be used.

* The number of single conductors required with 10- and 15-Station Dial-Selective Intercoms will be the same as the number of stations in the 6K-1 System. That is, if 12 stations are to be equipped, 12 single conductors will be required.

** The number of single conductors required with the signal flashing feature will be one more than the number of stations in the 6K-1 System. That is, if 12 stations are to be equipped, 13 single conductors will be required.

a. Multiple Cabling Plan.

If the multiple cabling plan is used, the cable is run from the relay cabinet to each telephone as shown in figure 11. When using this system two cables are connected at each telephone, except the last. One cable is connected to the preceding telephone and the other to the succeeding telephone.

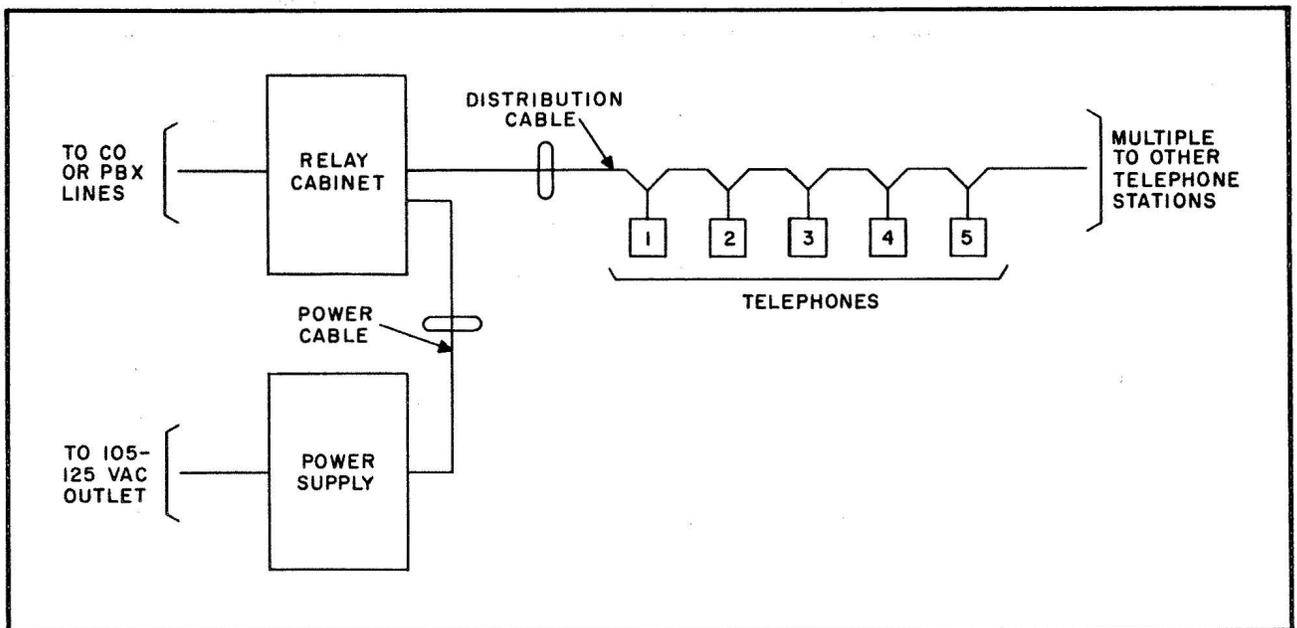


Figure 11. Typical Multiple Cabling System

b. Radial Cabling Plan.

If the radial cabling plan is used, the cable is run individually to each telephone from the relay cabinet, as shown in figure 12. A terminal board should be mounted on the wall to the right of the relay cabinet and used as a splicing point when the number of leads become excessive.

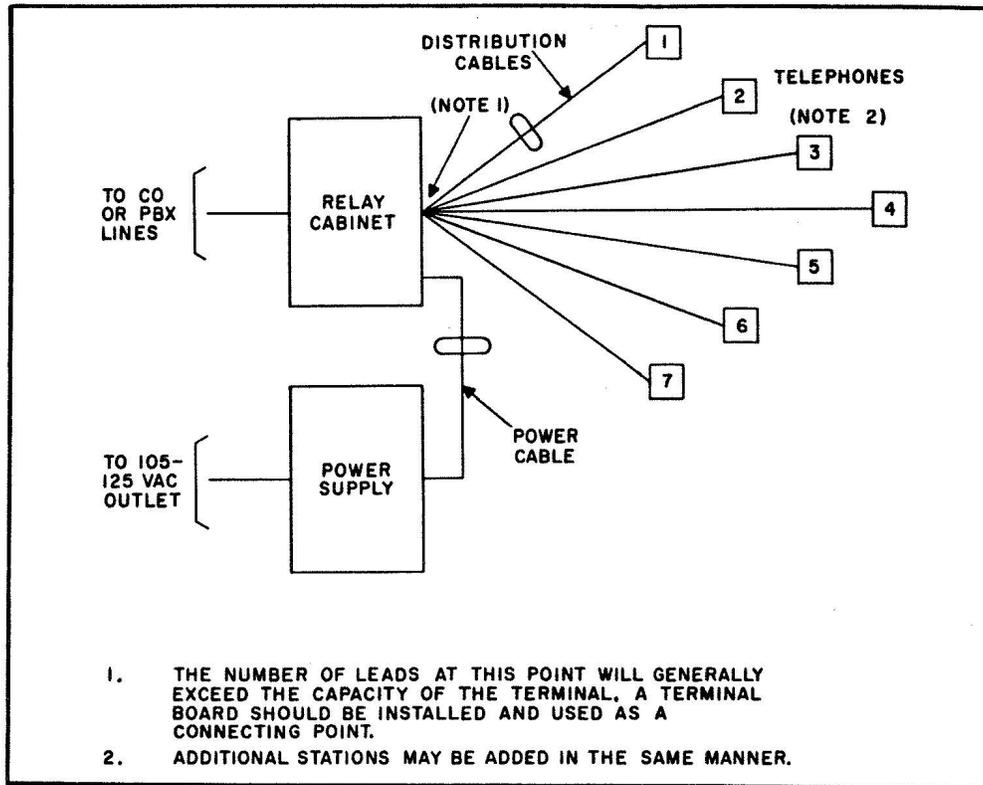


Figure 12. Typical Radial Cabling System

c. Multiple-Radial Cabling Plan.

If several stations are grouped together at one location and several others at different locations, the multiple-radial cabling plan should be used. Several telephones can be connected in multiple and radial feeder cables run from these telephones to telephones in the immediate area. See figure 13.

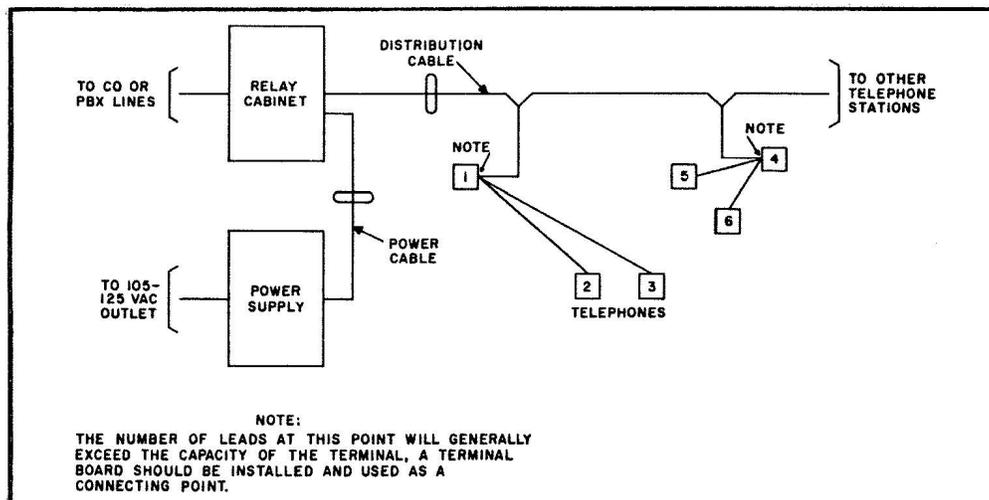


Figure 13. Typical Multiple-Radial Cabling System

6. BASIC EQUIPMENT-INSTALLATION

a. Mounting.

(1) Relay cabinet.

The relay cabinet is designed for wall mounting at a height that will permit installation of the interconnecting cable through the bottom of the cabinet. Proceed as follows:

(a) Place cabinet, back down, on a clean sheet of paper. Remove the cover and open the relay gate.

(b) Draw a template of the mounting holes and an outline of the cabinet.

(c) Hold the template in the desired position and mark the mounting holes. Install the three 1/4" x 1-1/2" lag screws in the wall.

(d) Place the cabinet over the screws and allow it to slide gently downward into place. Do not allow the cabinet to drop without supporting it.

(e) Tighten the three mounting screws.

(2) Power supply.

The power supply unit must be mounted near the relay cabinet and a 105-125 volt ac outlet. To prevent loss of telephone service due to power failure resulting from the blowing of fuses caused by overload or failure of other equipment, use of a separate power circuit is desirable. This separately fused power line should be independent of any branch circuits. It should be terminated in a convenience outlet at the relay cabinet location. To fasten the power supply unit to the wall, proceed as follows:

(a) Place the power unit, back down, on a clean sheet of paper. Draw a template of the mounting holes and an outline of the cabinet.

(b) Hold the template in the desired position and mark the mounting holes. Install the top two lag screws.

(c) Place the unit over the screws and allow it to slide gently downward into place. Do not allow the unit to drop without supporting it.

(d) Insert the other lag screws into the bottom holes of the unit.

(e) Tighten the four mounting screws.

(3) 44A Terminal blocks.

The 44A telephone terminal blocks must be mounted within 8 feet of the desired telephone location. Allow sufficient room for cable installation.

(4) 1706 Telephone.

The 1706 telephone can be located at any convenient location within 8 feet of the 44A terminal blocks.

b. Wiring.

The following charts show the connections that must be made between the relay cabinet, power supply, 44A terminal blocks, and the 1706 telephones.

(1) Power supply to common circuit plate (relay cabinet).

Make the following connections between power unit and the common circuit plate. Use the 8-foot color-coded cable supplied with the power unit. Mark the space in the chart as each wire is connected.

FROM POWER SUPPLY TERMINAL NO.	TO COMMON CIRCUIT TERMINAL NO.	COLOR	CHECK
-T	13	Red	
-S	25	White	
+	26	Black	
10 volts	17	Brown	
10 volts	18	Brown	
85 volts	22	Green	
85 volts	23	Green	

(2) 1706 Multi-line telephone to 44A terminal blocks.

Make the following connections between the 1706 line cord and the 44A terminal blocks. These connections must be made at each station. Mark the space in the chart as each wire is connected.

FROM 1706 LINE CORD	TO 44A TERMINAL BLOCKS	LEAD DESIGNATIONS	CHECK
BRN	A-1	R-1	
GRN	A-2	T-1	
BLU-WHT	A-3	R-3	
ORN-GRN	A-4	+24 vdc	
SL	A-5	H-1	
BLU-ORN	A-6	R-2	
RED	A-7	T-2	
BLU-BLK	A-8	T-3	
_____	A-9	-24 vdc	
BLU-GRN	A-10	H-2	
BLU-YEL	B-1	R-I-C	
BLU-RED	B-2	H-3	
BRN-WHT	B-3	External Common- Line Signal Buzzer	
ORN-WHT	B-4	R-4	
ORN-BLK	B-5	T-4	
ORN-YEL	B-6	T-I-C	
RED-ORN	B-7	H-4	
GRN-RED	B-8	H-5 or 10v (60~ NI)	
GRN-WHT	B-9	R-5	
GRN-BLK	B-10	T-5	
BRN-BLK, BRN-SL	C-1	I-C-1 and I-C-2	
_____	C-2	10v (60~ I) ex- ternal common-line buzzer	
YEL-BLK	C-3	L-I-C	
WHT-RED	C-4	1	
WHT-BLK	C-5	2	
BRN-YEL	C-6	R-1 (Manual Ex- clusion)	
WHT-YEL	C-7	T-1 (Manual Ex- clusion)	
YEL-BLK	C-8	C-I-C	
BRN-RED	C-9	± (60~)	

FROM 1706 LINE CORD	TO 44A TERMINAL BLOCKS	LEAD DESIGNATIONS	CHECK
GRN-YEL	C-10	H-1 (Manual Ex- clusion)	
BLU	D-1	L-1	
ORN	D-2	C-1	
GRN-BRN	D-3	L-5	
BLK	D-4	L-2	
WHT	D-5	C-2	
BLU-BRN	D-6	L-3	
BLU-SL	D-7	C-3	
GRN-SL	D-8	C-5	
ORN-BRN	D-9	L-4	
ORN-SL	D-10	C-4	
RED-BLK	Spare	-	
RED-YEL, YEL	Spare	-	
WHT-SL, RED-SL	Spare	-	

(3) Common circuit plate (relay cabinet) to 44A terminal blocks.

Make the following connections between the common circuit plate and the 44A terminal blocks. These connections must be made at each station. Mark the space in the chart as each wire is connected.

FROM COMMON CIRCUIT PLATE	TO 44A TERMINAL BLOCKS	LEAD DESIGNATION	COLOR	CHECK
26	A-4	+24 V		
12	A-9	-24 V		
17	C-9	±		
16	C-2	10 V (60~I)		
22	C-4	1		
24	C-5	2		

(4) Line circuit plate (relay cabinet) to 44A terminal blocks.

Make the following connections between the line circuit plate and the 44A terminal blocks. The chart lists the five leads of one circuit only. The leads of the distribution cable are connected to

all other line circuits in the same manner. Mark the space in the chart as each wire is connected.

FROM LINE CIRCUIT PLATE	TO 44A TERMINAL BLOCKS	LEAD DESIGNATION	COLOR	CHECK
3	A-2	T-1		
4	A-1	R-1		
5	A-5	H-1		
6	D-1	L-1		
7	D-2	C-1		

7. OPTIONAL FEATURES - INSTALLATION

a. CO or PBX Line Circuits.

(1) Mounting.

Mount the first CO or PBX line circuit to be added in position 5 of the relay cabinet. If a second is added it should be mounted in position 6. Slide the circuit plate under the screws on the left side. Insert the screws in the right end and tighten all screws securely.

(2) Wiring.

The following charts show the connections that must be made between the relay cabinet, line circuit plate, and 44A terminal blocks. Mark the space in the chart as each wire is connected.

(a) Relay cabinet to line circuit plate.

FROM RELAY CABINET CABLE		TO LINE CIRCUIT PLATE		CHECK
POSITION 5	POSITION 6	POSITION 5	POSITION 6	
BRN	SL	8	8	
BRN-WHT	SL-WHT	9	9	
2 RED	RED	13	13	
2 ORN	ORN	14	14	
2 GRN **	GRN *	15	15	
2 BRN	BRN	16	16	
2 GRN **	GRN *	17	17	
2 WHT †	WHT †	18	18	
2 BLU	BLU	20	20	
2 BLU-GRN	BLU-GRN	21	21	
2 WHT ‡	WHT ‡	23	23	
2 BLK	BLK	26	26	

* Leads designated as "2" may be a loop. Connect both leads to the same terminal.

** The green leads must be buzzed to insure proper terminal connections. A Buzz should be heard when the buzzer is connected between terminal 15 of line-circuit plate no. 3 and terminal 15 of line-circuit plate no. 4. If a buzz is not heard, reverse the two green leads. Do not split green leads.

† Paired with green lead.

‡ Paired with blue lead.

(b) Line circuit plate (relay cabinet) to 44A terminal block.

The leads shown in the chart must be connected in multiple at each terminal block in the same manner.

FROM LINE CIRCUIT PLATE		TO 44A TERMINAL BLOCK		COLOR	CHECK
POSITION 5	POSITION 6	POSITION 5	POSITION 6		
3	3	B-5 (T-4)	B-10 (T-5)		
4	4	B-4 (R-4)	B-9 (R-5)		
5	5	B-7 (H-4)	B-8 (H-5)		
6	6	D-9 (L-4)	D-3 (L-5)		
7	7	D-10(C-4)	D-8 (C-5)		

b. Audible Signals.

The audible signaling device should be installed at the time the basic unit is installed. This device may be an internally mounted ringer, or externally mounted buzzer or both. To install the ringer or buzzer, follow the procedures described below.

(1) Internally mounted ringer.

(a) Mount the ringer to the base with the screws provided.

(b) Connect the red lead of the ringer to terminal 16.

(c) Connect the black lead of the ringer to terminal 17.

(2) Externally mounted buzzer.

(a) Mount the buzzer near the station with which it is to be associated.

(b) Connect one lead to C-2 of the 44A terminal block.

(c) Connect second lead to B-3 of the 44A terminal block.

c. 10-Station Dial-Selective Intercom - Circuit Plate Mounted.

(1) Mounting.

The 10-station dial-selective intercom circuit plate, is mounted in position 6 of the relay cabinet. Slide the circuit plate under the screws on the left side. Insert the screws in the right end and tighten all screws securely. When the circuit plate mounted intercom is used, the number of lines is reduced by one.

(2) Wiring.

The following charts show the connections that must be made between the relay cabinet cable, intercom circuit plate, and 44A terminal blocks. Mark the space in the chart as each wire is connected.

(a) Relay cabinet cable to intercom circuit plate.

FROM RELAY CABINET CABLE	TO INTERCOM CIRCUIT PLATE	CHECK
SL-WHT	13	
RED	15	
GRN *	17	
WHT *	18	
BLU-GRN	20	
BLK	31	
RED-BLK **	32	

* The green and white leads are paired.

** The red-black wire must be connected to terminal 25 of the common circuit plate.

(b) Intercom circuit plate to 44A terminal blocks.

FROM INTERCOM CIRCUIT PLATE	TO 44A TERMINAL BLOCKS	COLOR	CHECK
1 (T)	B-6 (T-I-C)		
2 (R)	B-1 (R-I-C)		
17 (C)	C-8 (C-I-C)		
14 (L)	C-3 (L-I-C)		
2 (G1)	C-1 (I-C-2)		

FROM INTERCOM CIRCUIT PLATE	TO 44A TERMINAL BLOCKS	COLOR	CHECK
4 (G2)	C-1 (I-C-2)		
5 (G3)	C-1 (I-C-2)		
6 (G4)	C-1 (I-C-2)		
7 (G5)	C-1 (I-C-2)		
8 (G6)	C-1 (I-C-2)		
9 (G7)	C-1 (I-C-2)		
10 (G8)	C-1 (I-C-2)		
11 (G9)	C-1 (I-C-2)		
12 (G0)	C-1 (I-C-2)		

Note. The number of "G" leads used will be the same as the number of stations. Each "G" lead is carried throughout the entire system and is opened only at the station to which it is connected.

d. 10-Station Dial-Selective Intercom - Cabinet Mounted.

(1) Mounting.

Mounting hardware is supplied with the unit. This 10-station dial-selective intercom equipment is supplied as a separate unit and requires a separate mounting. It should be mounted near the relay cabinet and fastened to the wall with four lag screws. A three-pair cable is required between the relay cabinet and the intercom unit.

(2) Wiring.

The following charts show the connections that must be made between the common circuit plate (relay cabinet), intercom terminal board, and the 44A terminal blocks.

(a) Common circuit plate to intercom terminal board.

FROM COMMON CIRCUIT PLATE	TO INTERCOM TERMINAL BOARD	LEAD DESIGNATION	COLOR	CHECK
13	15	-T		
25	32	-S		
26	31	+		
17	17	±		
18	18	10 v 60~		

(b) Intercom terminal board to 44A terminal blocks.

FROM INTERCOM TERMINAL BOARD	TO 44A TERMINAL BLOCKS	COLOR	CHECK
1 (T)	B-6 (T-I-C)		
2 (R)	B-1 (R-I-C)		
17 (C)	C-8 (C-I-C)		
14 (L)	C-3 (L-I-C)		
3 (G1)	C-1 (I-C-2)		
4 (G2)	C-1 (I-C-2)		
5 (G3)	C-1 (I-C-2)		
6 (G4)	C-1 (I-C-2)		
7 (G5)	C-1 (I-C-2)		
8 (G6)	C-1 (I-C-2)		
9 (G7)	C-1 (I-C-2)		
10 (G8)	C-1 (I-C-2)		
11 (G9)	C-1 (I-C-2)		
12 (G0)	C-1 (I-C-2)		

Note. The number of "G" leads will be the same as the number of stations. Each "G" lead is carried throughout the entire system and is opened at the station to which it is connected.

e. 15-Station Dial-Selective Intercom.

(1) Mounting.

Mounting hardware is supplied with the unit. The 15-station dial-selective intercom equipment is supplied as a separate unit and requires a separate mounting. It should be mounted near the relay cabinet and fastened to the wall with four lag screws. A three pair cable is required between the relay cabinet and the intercom unit.

(2) Wiring.

The following charts show the connections that must be made between the common circuit plate (relay cabinet) intercom terminal board, and the 44A terminal blocks. Mark the space in the chart as each wire is connected.

(a) Common circuit plate to intercom terminal board.

FROM COMMON CIRCUIT PLATE	TO INTERCOM TERMINAL BOARD	LEAD DESIGNATION	COLOR	CHECK
13	22	-T		
25	10	-S		
26	11	+		
17	31	±		
18	32	10 v 60~		

(b) Intercom terminal board to 44A terminal blocks.

FROM INTERCOM TERMINAL BOARD	TO 44A TERMINAL BLOCKS	COLOR	CHECK
29 (T)	B-6 (T-I-C)		
30 (R)	B-1 (R-I-C)		
31 (C)	C-8 (C-I-C)		
42 (L)	C-3 (L-I-C)		
1 (G1)	C-1 (I-C-2)		
2 (G2)	C-1 (I-C-2)		
3 (G3)	C-1 (I-C-2)		
4 (G4)	C-1 (I-C-2)		
5 (G5)	C-1 (I-C-2)		
6 (G6)	C-1 (I-C-2)		
7 (G7)	C-1 (I-C-2)		
8 (G8)	C-1 (I-C-2)		
9 (G9)	C-1 (I-C-2)		
23 (G01)	C-1 (I-C-2)		
24 (G02)	C-1 (I-C-2)		
25 (G03)	C-1 (I-C-2)		
26 (G04)	C-1 (I-C-2)		
27 (G05)	C-1 (I-C-2)		
28 (G06)	C-1 (I-C-2)		

Note. The number of "G" leads will be the same as the number of stations. Each "G" lead is carried throughout the entire system and is opened only at the station to which it is connected.

f. Signal Flashing for 10-Station Dial-Selective Intercom.

(1) Mounting.

Mounting hardware is supplied with the signal-flashing terminal box. Mount one terminal box at each station where this feature is required.

(2) Wiring.

The following charts show the connections that must be made between the signal-flashing unit, intercom terminal board, and the 44A terminal blocks. Mark the space in the chart as each wire is connected.

(a) Intercom terminal board to signal flashing unit.

FROM INTERCOM TERMINAL BOARD	TO SIGNAL FLASHING UNIT	LEAD DESIGNATION	COLOR	CHECK
20	10 (all stations)	SF		
19	2 (all stations)	N		
13	5 (all stations)	FL		
14	6 (all stations)	BY		
21	4 (station no.1)	S1		
22	4 (station no.2)	S2		
23	4 (station no.3)	S3		
24	4 (station no.4)	S4		
25	4 (station no.5)	S5		
26	4 (station no.6)	S6		
27	4 (station no.7)	S7		
28	4 (station no.8)	S8		
29	4 (station no.9)	S9		
30	4 (station no.0)	S0		

Note. The number of "S" leads will be the same as the number of stations. Each "S" lead is carried throughout the entire system and is opened only at the station to which it is to be connected.

(b) Signal flashing unit to 44A terminal blocks.

FROM SIGNAL FLASHING UNIT	TO 44A TERMINAL BLOCKS	LEAD DESIGNATION	COLOR	CHECK
11	A-4	+24 V		
13	A-9	-24 V		
12	B-8	H-5		
7	D-3	L-5		

Note. Interconnect the signal flashing unit and the 44A terminal blocks at each station.

g. Signal Flashing for 15-Station Dial-Selective Intercom.

(1) Mounting.

Mounting hardware is supplied with the signal-flashing terminal box. Mount one terminal box at each station where this feature is required.

(2) Wiring.

The following charts show the connections that must be made between the signal-flashing unit, intercom terminal board, and the 44A terminal blocks. Mark the space in the chart as each wire is connected.

(a) Intercom terminal board to signal flashing unit.

FROM INTERCOM TERMINAL BOARD	TO SIGNAL FLASHING UNIT	LEAD DESIGNATION	COLOR	CHECK
41	10 (all stations)	SF		
43	2 (all atations)	N		
40	5 (all stations)	FL		
42	6 (all stations)	BY		
12	4 (station no. 1)	S1		
13	4 (station no. 2)	S2		
14	4 (station no. 3)	S3		
15	4 (station no. 4)	S4		
16	4 (station no. 5)	S5		
17	4 (station no. 6)	S6		
18	4 (station no. 7)	S7		
19	4 (station no. 8)	S8		
20	4 (station no. 9)	S9		
34	4 (station no. 01)	S01		

FROM INTERCOM TERMINAL BOARD	TO SIGNAL FLASHING UNIT	LEAD DESIGNATION	COLOR	CHECK
35	4 (station no. 02)	S02		
36	4 (station no. 03)	S03		
37	4 (station no. 04)	S04		
38	4 (station no. 05)	S05		
39	4 (station no. 06)	S06		

Note. The number of "S" leads will be the same as the number of stations. Each "S" lead is carried throughout the entire system, and is opened only at the station to which it is to be connected.

(b) Signal flashing unit to 44A terminal blocks.

FROM SIGNAL FLASHING UNIT	TO 44A TERMINAL BLOCKS	LEAD DESIGNATION	COLOR	CHECK
11	A-4	+24 V		
13	A-9	-24 V		
12	B-8	H-5		
7	D-3	L-5		

Note. Interconnect the signal flashing unit and the 44A terminal blocks at each station.

h. Automatic Tie-Line.

(1) Mounting.

When dial-selective intercom is used, the automatic tie-line is mounted in position 5 in the relay cabinet, otherwise it is mounted in position 6. Slide the circuit plate under the screws on the left side. Insert the screws in the right end and tighten all screws securely.

(2) Wiring.

The following charts show the connections that must be made between the tie-line circuit plate, relay cabinet cable, 44A terminal blocks, and systems. Mark the space in the chart as each wire is connected.

(a) Relay cabinet cable to tie-line circuit plate.

* RELAY CABINET CABLE	FROM TIE-LINE	TO CIRCUIT PLATE	CHECK
	BRN	16	
	GRN	17	
	WHT †	18	
	BLU	19	
	WHT ‡	20	
	BLU-GRN	21	
	BLK	22	
	RED	11	
	BRN-WHT **	10	
	SL-WHT **	10	

* Connect both leads of the looped wires to same terminals.

** Connect the brown-white wire to terminal 10 at position 5 only. Connect the slate-white wire to terminal 10 at position 6 only.

† Paired with green.

‡ Paired with blue.

(b) Automatic tie-line to 44A terminal blocks.

FROM TIE-LINE CIRCUIT PLATE	TO *44A TERMINAL BLOCKS		LEAD DESIGNATION	COLOR	CHECK
	A	B			
3	B-5 (T-4)	B-10 (T-5)	T		
4	B-4 (R-4)	B-9 (R-5)	R		
17	D-10 (C-4)	D-8 (C-5)	C		
6	D-9 (L-4)	D-3 (L-5)	L		

* If automatic tie-line is mounted in position 5 connect wires as shown in column A. If however, the tie-line is mounted in position 6 connect wires as shown in column B.

(c) Tie-line circuit to tie-line circuit.

FROM 1st SYSTEM TIE-LINE CIRCUIT	TO 2nd SYSTEM TIE-LINE CIRCUIT	LEAD DESIGNATION	CHECK
1	1	T-1	
2	2	R-1	

i. Manual Intercom.

(1) Wiring.

When manual intercom is used, CO or PBX line circuit no. 5 cannot be used. Convert line key no. 5 of each telephone to a signal key by removing the locking screw from the key plunger making it a non-locking key.

The following charts show the connections that must be made between the common circuit plate and the 44A terminal blocks. They also show the wiring changes that must be made within the telephone itself.

(a) Common circuit plate to 44A terminal blocks.

FROM COMMON CIRCUIT PLATE	TO 44A TERMINAL BLOCKS	LEAD DESIGNATION	COLOR	CHECK
18	B-8	H-5		
20	C-1	I-C-1		
11	B-5	T-4		
19	B-4	R-4		

(b) 1706 Telephone wiring changes.

FROM TERMINAL	TO TERMINAL	COLOR	KEY POSITION	CHECK
19	22	SL	5	

j. Manual Exclusion.

(1) Mounting.

Mount the manual exclusion switch to the telephone base (lower left corner) with the screws provided.

(2) Wiring.

Line no. 1 is the excluded line and must be connected directly from the relay cabinet to the excluding station.

(a) Extend the T-1, R-1, and H-1 leads from terminals C-7, C-6, and C-10 of the 44A terminal block of the excluding station to the 44A terminal blocks of each excluded station, terminals A-2, A-1, and A-5 respectively.

(b) Connect the wires of the exclusion switch, at the excluding station to the terminal block (inside the telephone) as follows:

FROM EXCLUSION SWITCH	TO TELEPHONE TERMINAL BOARD	CHECK
YELLOW	Terminal 4	
SLATE	Terminal 5	
RED	Terminal 6	
BROWN	Terminal 7	
GREEN	Terminal 9	
WHITE	Terminal 8	

SECTION III TESTING

8. OPERATIONAL TEST

a. Preliminary Inspection.

(1) Visually inspect all work for proper installation and connections.

(2) Turn on the ac power supply. Check for blown fuses.

b. Testing the Common and Line Circuits - Dial.

(1) Operate the line no. 1 key at station no. 1.

(2) Lift the handset, the lamp associated with line no. 1 should light at all stations. Dial tone should be heard in the receiver.

(3) Dial the directory number associated with line no. 2.

(a) The lamp associated with line no. 2 should flash at all stations.

(b) The common line ringer or the common line buzzer should sound.

(4) Answer the call at station no. 2 by operating the line no. 2 key. Lift the handset. The lamp associated with line no. 2 should stop flashing and remain lighted.

(5) Check for transmission between stations no. 1 and 2.

(6) Operate and release the HOLD key at station no. 1.

(a) The line no. 1 key should restore when the HOLD key is released.

(b) The lamp associated with line no. 1 should "wink" at all stations.

(7) Operate the line no. 1 key at station no. 1. The lamp associated with line no. 1 should stop "winking" and remain lighted at all stations.

(8) Check the transmission between stations no. 1 and 2 again.

(9) Operate and release the HOLD key at station no. 2.

(a) The line no. 2 key should restore when the HOLD key is released.

(b) The lamp associated with line no. 2 should "wink" at all stations.

(10) Operate the line no. 2 key at station no. 2. The lamp associated with line no. 2 should stop "winking" and remain lighted at all stations.

(11) Check the transmission between stations no.1 and 2 again.

(12) Repeat steps (1) through (11) at each station and on each line until all lines are tested at all stations.

c. Testing the Common and Line Circuits - Manual.

(1) Operate the line no. 1 key at station no. 1.

(2) Lift the handset, the lamp associated with line no. 1 should light at all stations. The central office or PBX operator should answer.

(3) Ask the operator to connect you to line no. 2 (give directory number of line no. 2).

(a) The lamp associated with line no. 2 should flash at all stations.

(b) The common line ringer or common line buzzer should sound.

(4) Test the transmission and hold circuit as described in b (4) through (11) above.

(5) Repeat steps (1) through (4) at each station and on each line until all lines are tested at all stations.

d. Testing the Dial-Selective Intercom.

The following procedures are used for testing the 10- or 15-station dial-selective intercom with the signal flashing unit. If signal flashing is not used, the operation is the same with the exception that the intercom lamp does not flash at the called station.

(1) Operate the hold-intercom key at station no. 1.

(2) Lift the handset, the lamp associated with the hold-intercom key should light at all stations.

(a) Dial tone should not be heard if the station lines are dial.

(b) The operator should not answer if the station lines are manual.

(3) Dial the digit 2.

(a) The intercom buzzer at station no. 2 should sound for a period of approximately 3 seconds.

- (b) The hold-intercom lamp at station no. 2 should flash.
 - (c) The hold-intercom lamp at all other station should remain lighted.
- (4) Operate the hold-intercom key at station no. 2.
 - (5) Lift the handset, the hold-intercom lamp should stop flashing and remain lighted.
 - (6) Check for transmission between stations no. 1 and 2.
 - (7) Replace the handsets at both stations. The hold-intercom lamps should go out at all stations.
 - (8) Lift the handset at station no. 1. The hold-intercom lamp should light at all stations.
 - (9) Dial the digit 2.
 - (a) The intercom buzzer at station no. 2 should sound for a period of approximately 3 seconds.
 - (b) Adjust the slide of the variable resistor on the dial selective intercom circuit plate to regulate the length of time that the buzzer sounds.
 - (c) The hold-intercom lamp at station no. 2 should flash.
 - (10) After the buzzer sounds at station no. 2, test for re-ring.
 - (a) Do not replace the handset at station no. 1.
 - (b) Dial the digit 2 again.
 - (c) The buzzer at station no. 2 should sound for a period of approximately 3 seconds.
 - (11) Replace the handset at station no. 1. The hold-intercom lamp should go out.
 - (12) Repeat steps (1) through (9) and (11) at station no. 1 using the intercom numbers of the other stations (3 through 06) until all stations are tested.
 - (13) Place a call through the intercom to one other station from each of the remaining stations until all stations have originated and received at least one call.
- e. Testing the Automatic Tie-Line.
- (1) Outgoing Call.
 - (a) Operate the tie-line key at station no. 1.
 - (b) Lift the handset. The lamp associated with the tie-line should light at all stations.

(c) When the called party at the distant end of the tie-line answers, check the transmission.

(d) Replace the handset at station no. 1. The tie-line lamp should go out.

(e) Repeat steps (a) through (d) at all stations.

(2) Incoming calls.

An incoming call causes the tie-line lamp to flash and the buzzer or the common line ringer to sound for a period of approximately 3 seconds. To answer the call, follow the procedures listed below.

(a) Operate the tie-line key at station no. 1.

(b) Lift the handset. The tie-line lamp should stop flashing and remain lighted.

(c) Check the transmission circuit.

(d) Replace the handset at station no. 1.

(e) Answer the call at each of the other stations by operating the tie-line key and then lifting the handset.

(f) When the last station is tested, notify the party at the distant end that the testing is completed.

f. Testing the Manual Intercom.

(1) Operate the intercom key at station no. 1.

(2) Lift the handset.

(3) Operate the signal key. The intercom buzzer should sound at all stations.

(4) Operate the intercom key at station no. 2.

(5) Lift the handset.

(6) Check the transmission path between the stations.

(7) Restore the handsets at both stations.

(8) Repeat steps (1) through (7) at the other stations until the intercom talking and signaling is checked at all stations.

g. Testing the Power Failure Circuit.

(1) Disconnect the ac power supply plug from 105-125 volt ac outlet.

(2) Operate the line no. 1 key at station no. 1.

(3) Lift the handset, the line lamp will not light.

(a) If the line terminates at a dial exchange, dial tone should be heard in the receiver.

(b) If the line terminates at a manual exchange the operator should answer.

(4) Test the other external lines as described in (2) and (3) above.

h. Testing the Manual Exclusion.

(1) Remove the handset, operate the manual exclusion switch, and depress line key no. 1 at the excluding station. Dial tone should be heard.

(2) Remove the handset and depress line key no. 1 at any of the excluded stations, dial tone should not be heard.

(3) Replace the handset at all stations. The manual exclusion switch should restore when the handset is replaced at the excluding stations.

i. Release (Time Out).

(1) Originate a call from any station to any other line in the system (b (1) through (3) above).

(2) Restore the handset at the originating station. The lamp associated with the incoming call will continue to flash for a period of about 2 minutes.

SECTION IV MAINTENANCE

9. PREVENTIVE MAINTENANCE

The STROMBERG-CARLSON 6K-1 System requires a minimum amount of preventive maintenance to keep the equipment in proper working order. The normal use of the system will determine the operating condition of the equipment. This eliminates the need for any operational tests.

a. Cleaning.

The inside of the relay cabinet requires cleaning only if the equipment is located in an extremely dirty or dusty location. If the inside of the relay cabinet is cleaned, extreme care should be taken to avoid brushing or blowing dirt or dust into the relay and switch contacts.

b. Lubrication.

The following points of the XY[®] Deca Switch should be lubricated approximately every 6 months. A small amount of XY Brand Universal Switch Oil Number 204806-000 should be applied to each of the following points.

- (1) "X" gear assembly bushing.
- (2) "X" magnet hinge and pawl pin.
- (3) Release magnet hinge pin.
- (4) "X" retaining pawl assembly bearings.
- (5) Switching lever gear and pin.
- (6) Locking lever bushing, spring, and cam.
- (7) Rack (oil generously at rack teeth).
- (8) Rack rod (oil generously).

c. Relays.

The relays of the 6K-1 Telephone System do not require preventive maintenance. The adjustment of the relays should not be changed unless the circuit fails to operate due to faulty relay adjustment.

10. TROUBLE LOCATION

Most of the troubles that are encountered in the 6K-1 System can be localized by analyzing the symptom of the trouble in relation to the normal operation of the system. This process will, in most cases, narrow the source of trouble to an individual or common section of the equipment. A small amount of time spent in analyzing troubles will reduce

the time spent actually checking the equipment. After the trouble has been localized to a particular circuit or unit, the actual trouble can usually be located by referring to the circuit diagrams (figs. 14 through 20) and making a point-to-point continuity check. The following trouble location charts are included as an aid to localizing the trouble. These charts include the probable locations but do not include all the possible locations.

a. Incoming Calls.

SYMPTOM	POSSIBLE LOCATION
1. Line lamps of all lines do not light at any station.	a. Common Circuit b. Power Supply
2. Line lamp of one line does not light at any station.	a. Line Circuit b. Common Circuit
3. Line lamp of one line does not light at one station only.	Telephone
4. Ringer or buzzer does not sound on any line.	a. Power Supply b. Ringer or Buzzer
5. Ringer or buzzer does not sound on one line only.	Line Circuit
6. Line lamp continues to flash after line key is operated at any station.	Line Circuit
7. Line lamp continues to flash after line key is operated at one station only.	Telephone
8. No transmission on one line from one station only.	Telephone

b. Holding Calls.

SYMPTOM	POSSIBLE LOCATION
1. HOLD key fails to hold connection at any station on one line.	Line Circuit
2. HOLD key fails to hold connection at one station on one line only.	Telephone
3. Line lamp goes out (instead of "winking") when HOLD key is operated.	Line Circuit

c. Outgoing Calls.

SYMPTOM	POSSIBLE LOCATION
1. Line lamps of all lines fail to light when lines are seized.	Power Supply
2. Line lamp of one fails to light at all stations when line is seized.	Line Circuit
3. Line lamp of one line fails to light at one station only when line is seized.	Telephone
4. One station cannot call out.	Telephone

d. Dial-Selective Intercom Calls.

SYMPTOM	POSSIBLE LOCATION
1. Intercom lamp fails to light at any station when intercom key is operated.	Dial Selective Intercom Circuit
2. Intercom lamp fails to light at one station only when intercom key is operated.	a. Telephone b. Signal Flashing Unit
3. Intercom lamp fails to flash at called station.	a. Dial Selective Intercom Circuit b. Signal Flashing Unit
4. Wrong station is signaled after dialing.	a. Dial Selective Intercom Circuit b. Telephone Dial
5. Intercom buzzer fails to sound at any station.	Dial Selective Intercom Circuit
6. Intercom buzzer fails to sound at one station only.	a. 44A Terminal Block b. Intercom Buzzer
7. One station cannot call any other station.	Telephone

e. Manual Exclusion.

SYMPTOM	POSSIBLE LOCATION
1. Other atations are not excluded when manual exclusion switch is operated.	Telephone

11. CORRECTIVE MAINTENANCE

After the trouble has been isolated and located, the repair of the particular unit should be accomplished according to the applicable Stromberg-Carlson literature. The following subparagraphs list the reference literature for repair of the components of the 6K-1 Telephone System.

a. Drawings.

(1) Schematic diagrams.

The schematic diagrams (S drawings) for each unit of the 6K-1 Telephone System are shipped with the equipment.

(2) Description sheets.

The description sheets (DS drawings) for each circuit are shipped with the equipment.

(3) Wiring diagram.

The wiring diagram of the relay cabinet (E-45850) is shipped with the equipment.

(4) Relay adjustment sheets.

The relay adjustment sheets (AS drawings) for each circuit are shipped with the equipment.

b. Repair Instructions.

The following list describes the publications covering the maintenance and repair of the parts of the 6K-1 System. These publications are available from your Stromberg-Carlson representative.

(1) Field Adjustment for Type "A" Relays.

This drawing (B-1749) lists the mechanical requirements and illustrates the methods used to adjust Stromberg-Carlson Type "A" Relays.

(2) Service and Maintenance Adjustments for Stromberg-Carlson
Twin Type "C" Relays.

This drawing (E-75918) lists the mechanical requirements and illustrates the methods used to adjust Stromberg-Carlson Type "C" Relays.

(3) Field Handbook - 1706 Multi-line Telephone.

This handbook lists the installation, repair, lubrication, and maintenance of the Stromberg-Carlson 1706 Multi-Line Telephone.

(4) Field Handbook - Series D Dials.

This handbook lists the construction and maintenance of the Stromberg-Carlson Series D Dials used with the 1706 Multi-Line Telephone.

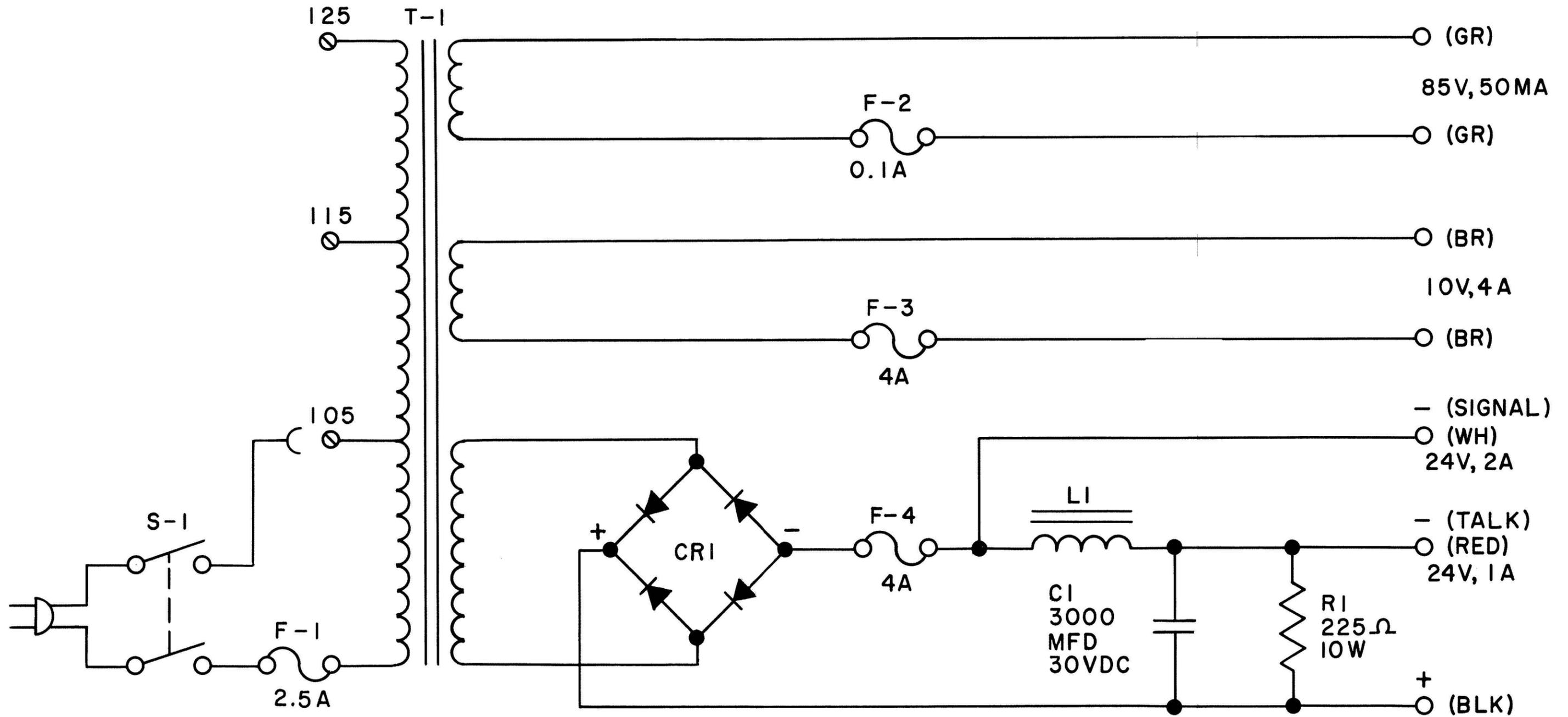


Figure 14. Power Supply, Schematic Diagram

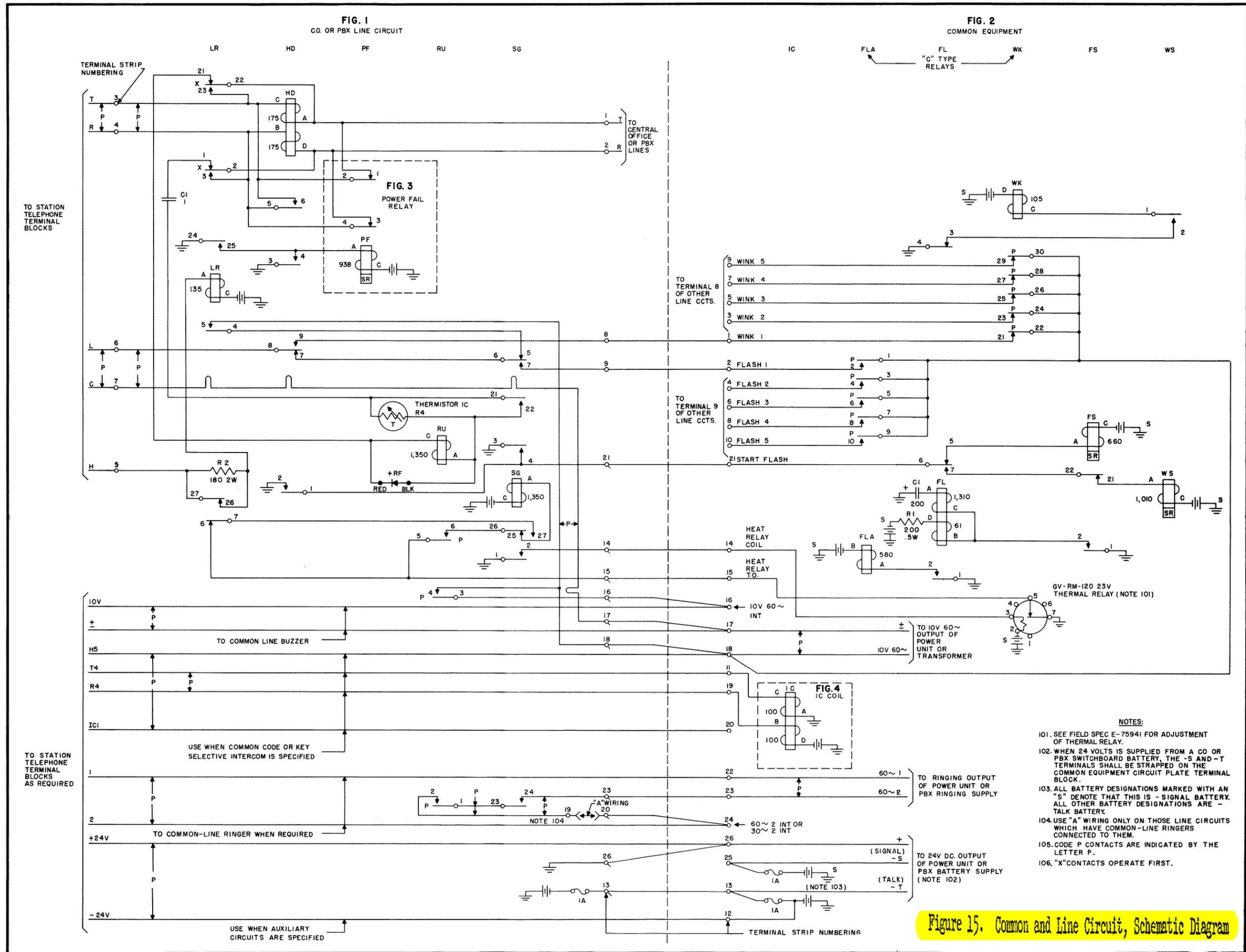


Figure 15. Common and Line Circuit, Schematic Diagram

FIG. 2
SIGNAL FLASHING CIRCUIT
(1 PER STATION)

FL LR
TYPE "C" RELAYS

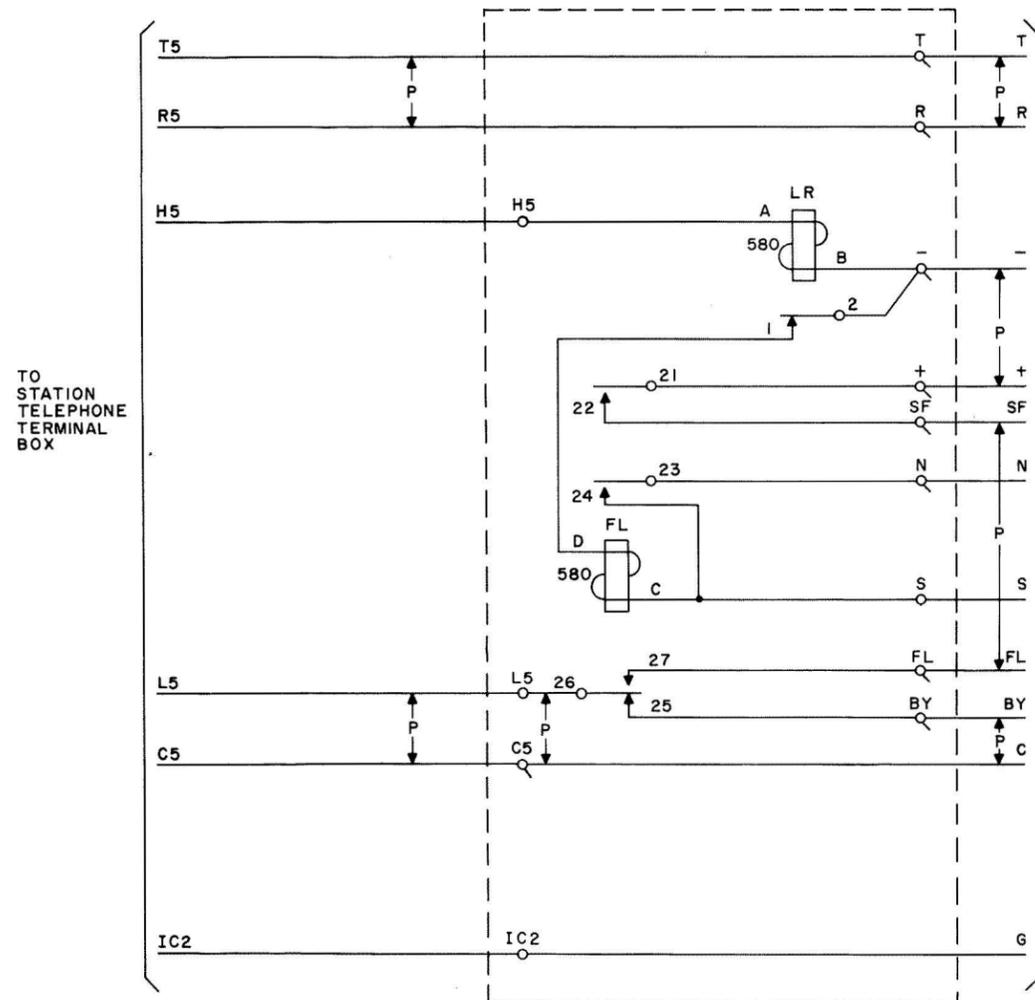


FIG. 3
INTERCOM CIRCUIT
(WITHOUT SIGNAL FLASHING)

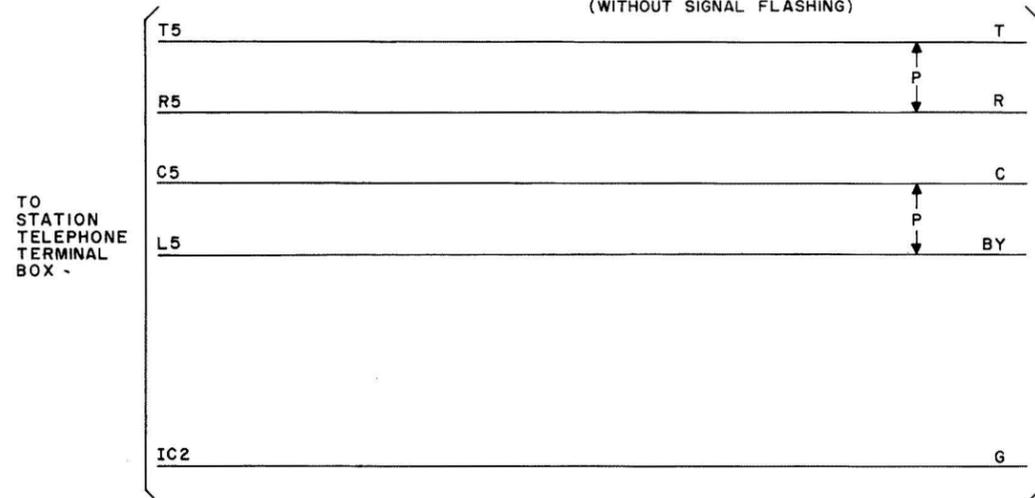
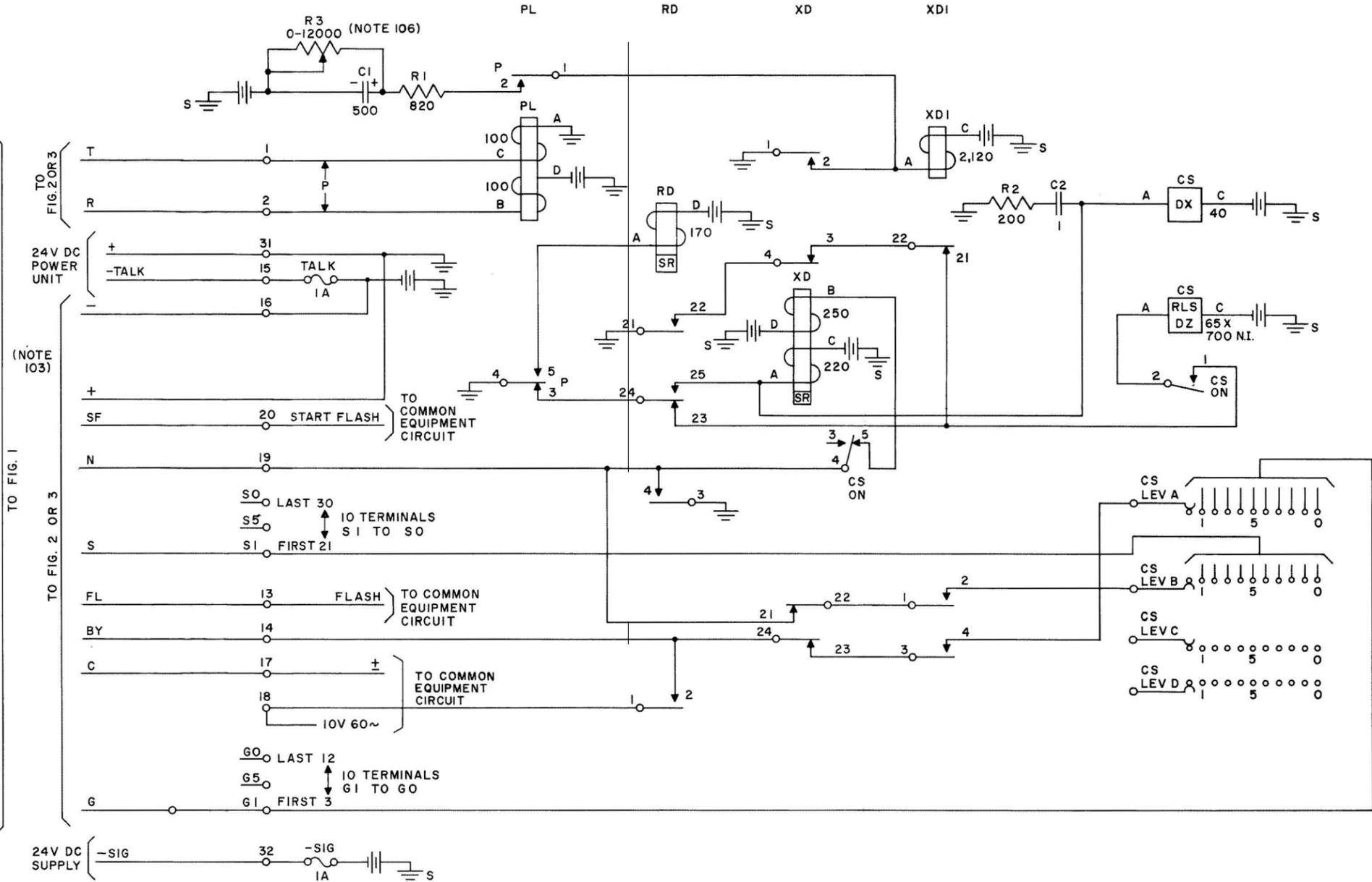


FIG. 1
INTERCOM CIRCUIT
DIAL SELECTION OF STATION



NOTES:

- 101. FIG. 2 WILL BE EQUIPPED PER TELEPHONE REQUIRING LAMP FLASHING ON INTERCOM CALLS.
- 102. CABLE PER FIG. 3 WHEN LAMP FLASHING CIRCUIT IS NOT REQUIRED.
- 103. IF FIG. 2 IS LOCATED AT THE EQUIPMENT CABINET, THE + AND - 24V SHOULD BE TAKE FROM FIG.1 AS SHOWN. IF FIG. 2 IS LOCATED AT THE STATION THE + AND - 24V SHOULD BE TAKEN FROM THE STATION TERMINAL BLOCK (+ AND -). THIS SUPPLY IS FUSED AT THE EQUIPMENT PLATE.
- 104. CODE "P" CONTACTS ARE INDICATED BY THE LETTER "P."
- 105. ALL BATTERY DESIGNATIONS MARKED WITH AN "S" DENOTE THAT THIS IS - SIGNAL BATTERY. ALL OTHER BATTERY DESIGNATIONS ARE - TALK BATTERY.
- 106. ADJUST RESISTOR R3 TO REGULATE THE LENGTH OF TIME THE BUZZER SOUNDS.

Figure 16. 10-Station Dial-Selective Intercom, Schematic Diagram

FIG. 2
SIGNAL FLASHING CIRCUIT
(1 PER STATION)

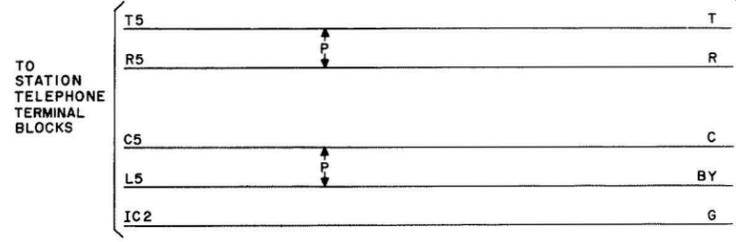
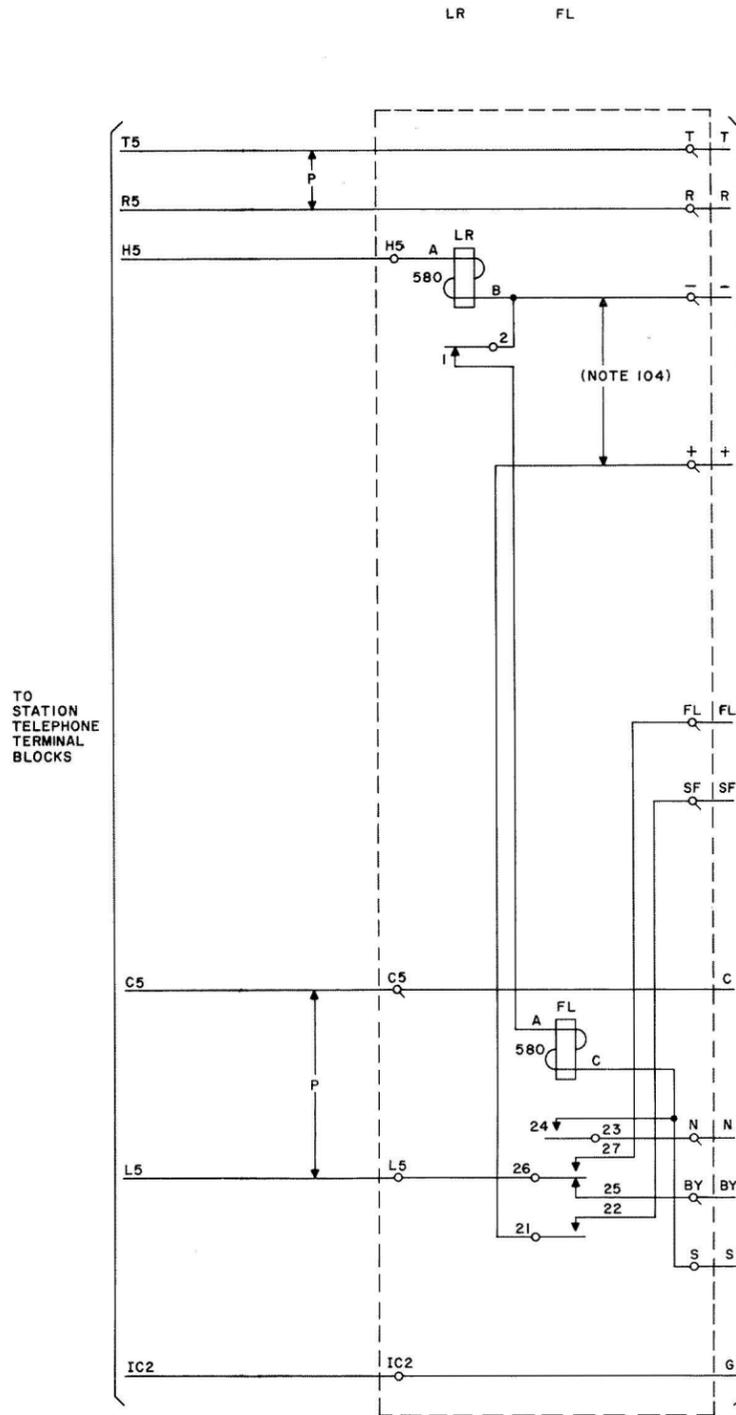
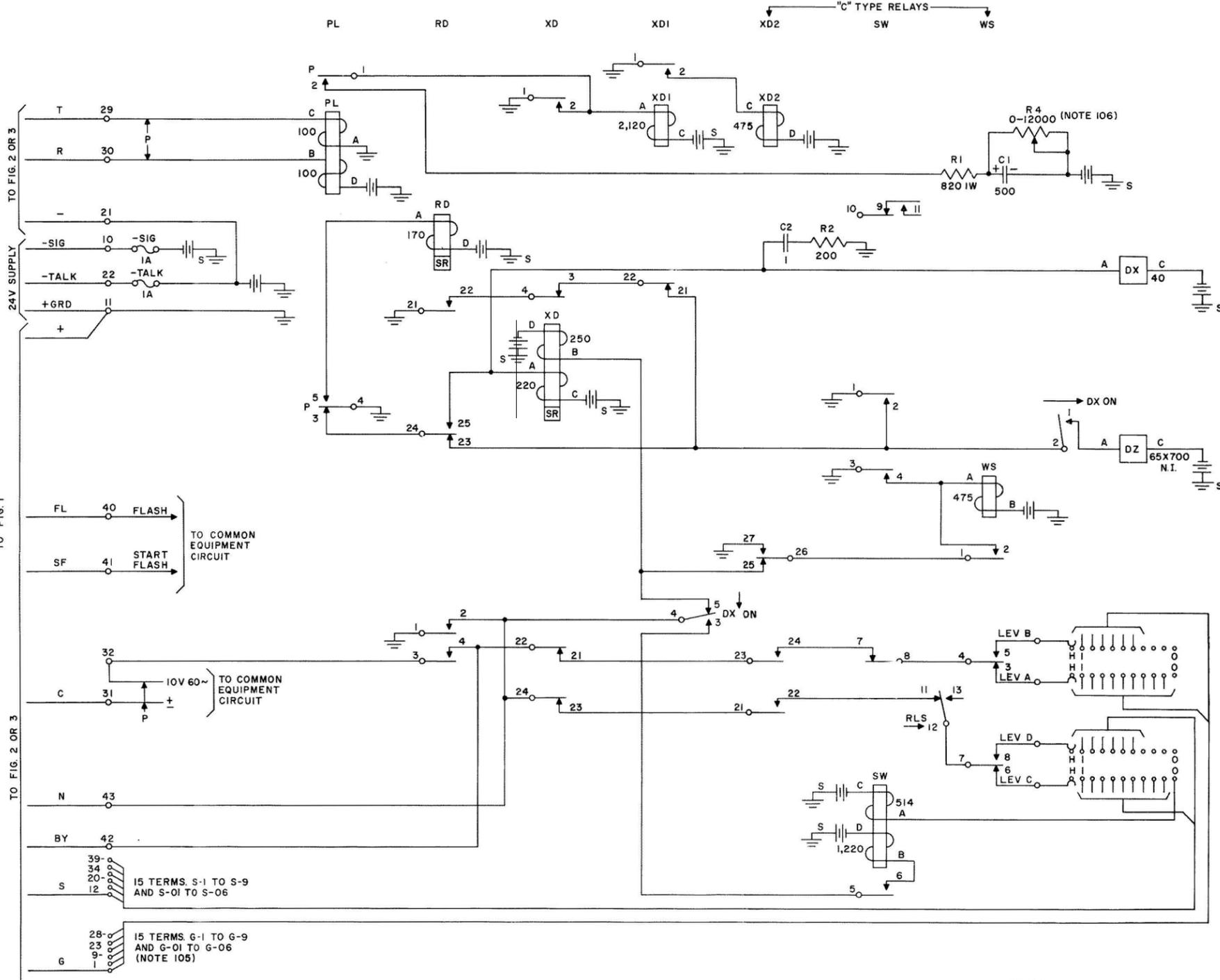


FIG. 1
DIAL SELECTIVE INTERCOM
15 STATIONS



- NOTES:**
101. ONE FIG. 2 TO BE EQUIPPED PER STATION REQUIRING FLASHING LINE SIGNALS.
 102. CABLE PER FIG. 3 WHEN FLASHING LINE SIGNALS ARE NOT REQUIRED.
 103. ALL BATTERY DESIGNATIONS MARKED WITH AN "S" DENOTE THAT THIS IS - SIGNAL BATTERY. ALL OTHER BATTERY DESIGNATIONS ARE - TALK BATTERY.
 104. IF FIG. 2 IS LOCATED NEAR A TELEPHONE STATION, THE - AND + 24V SUPPLY SHOULD BE TAKEN FROM THE STATION TERMINAL BOX - AND + TERMINALS. THIS IS FUSED AS - TALK ON THE COMMON EQUIPMENT CIRCUIT PLATE. IF FIG. 2 IS LOCATED NEAR RELAY CABINET, THE - AND + 24V SUPPLY SHOULD BE TAKEN FROM FIG. 1 AS SHOWN.
 105. STATIONS 1 TO 9 ARE SELECTED BY DIALING DIGITS 1 TO 9. STATIONS 01 TO 06 (ACTUALLY 10 TO 15) ARE SELECTED BY DIALING DIGIT 0 FOLLOWED BY 1 TO 6, AS REQUIRED.
 106. ADJUST RESISTOR R4 TO REGULATE THE LENGTH OF TIME THE BUZZER SOUNDS.

TO FIG. 1

15 TERMS S-1 TO S-9 AND S-01 TO S-06

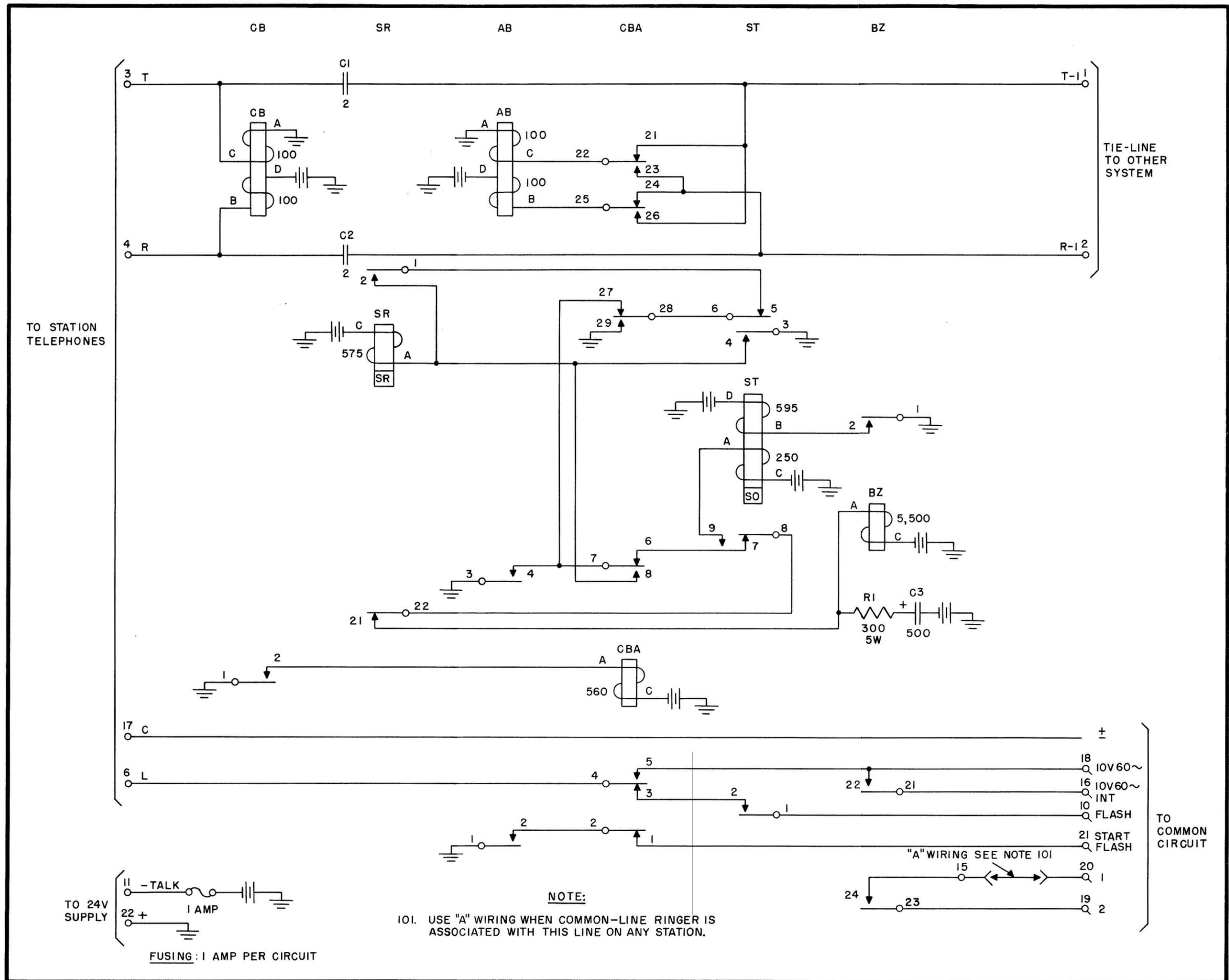
15 TERMS G-1 TO G-9 AND G-01 TO G-06 (NOTE 105)

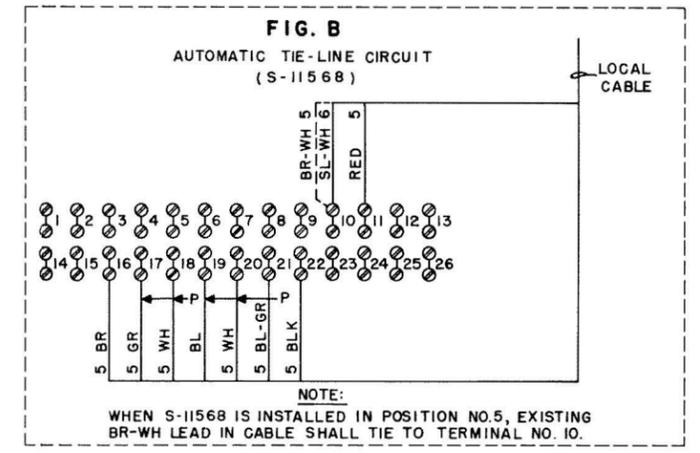
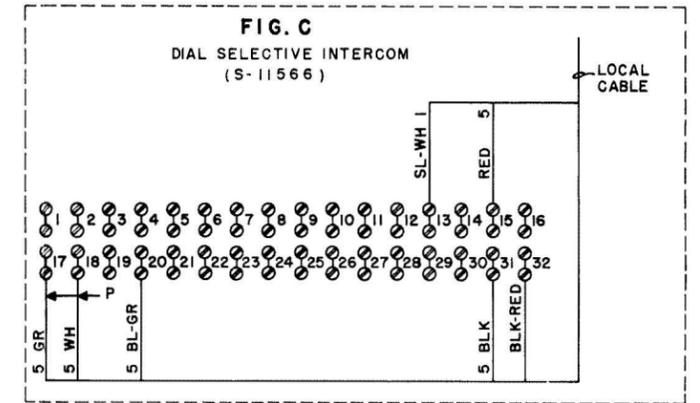
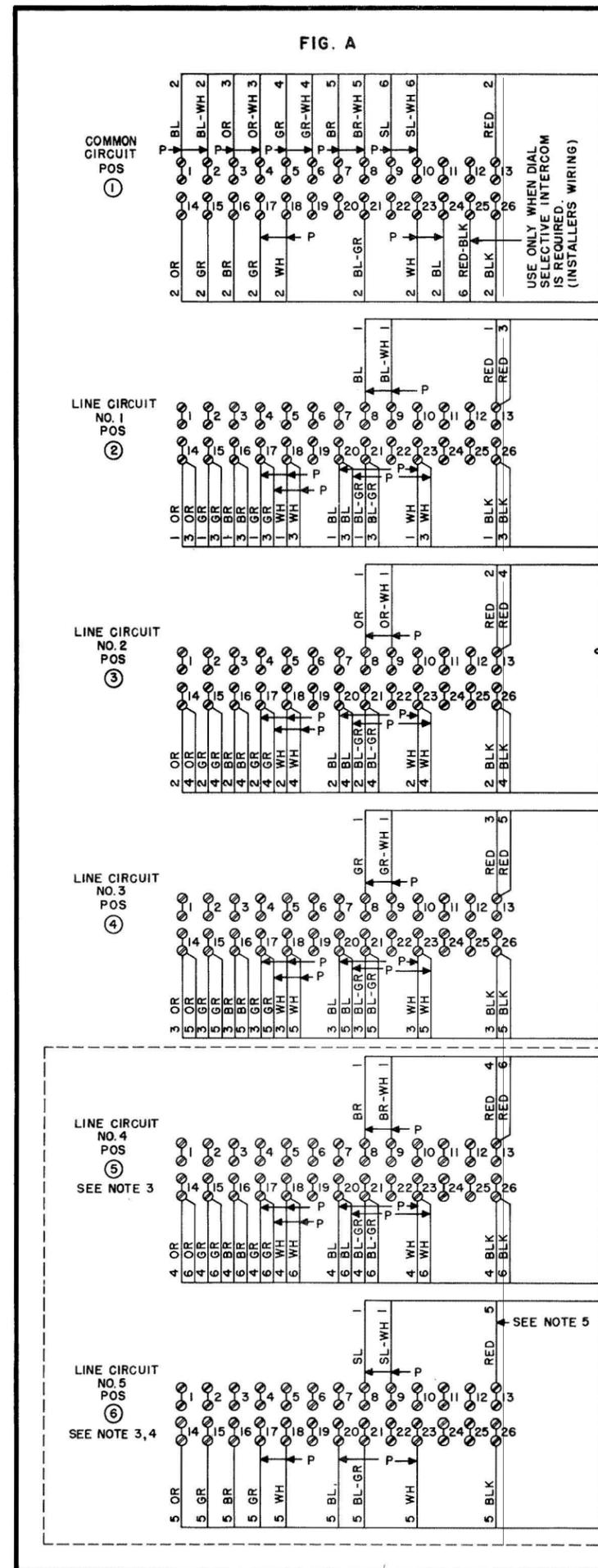
TO COMMON EQUIPMENT CIRCUIT

TO COMMON EQUIPMENT CIRCUIT

TO FIG. 2 OR 3

TO FIG. 1

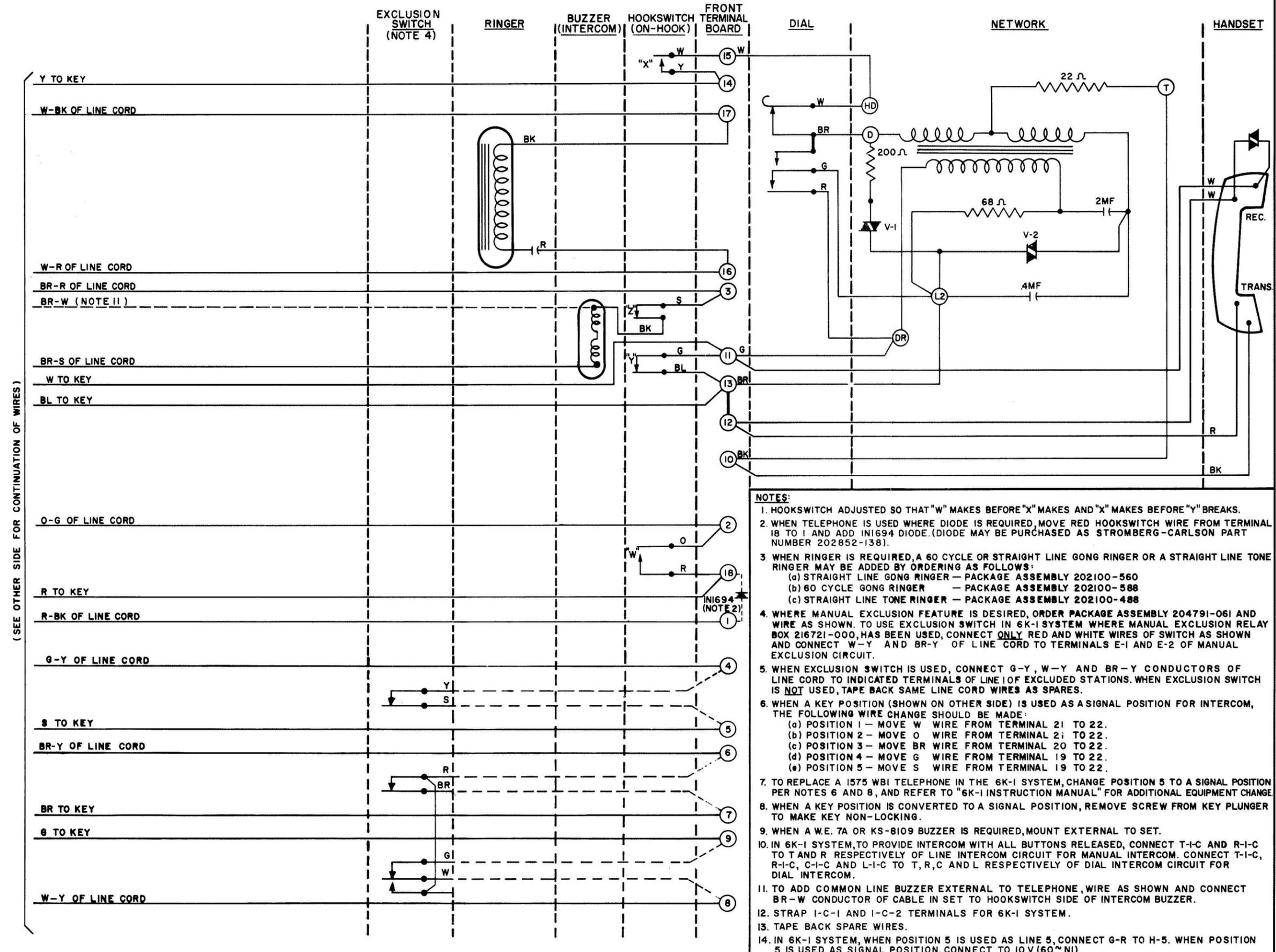




- NOTES:
1. SEE FIG. "B" FOR TYPICAL CABLING OF AUTO TIE-LINE CIRCUIT.
 2. SEE FIG. "C" FOR TYPICAL CABLING OF DIAL SELECTIVE INTERCOM CIRCUIT.
 3. INSTALLER SHALL WIRE POSITION 5 OR 6 PER FIG. "A" OR "B" AS REQUIRED.
 4. INSTALLER SHALL WIRE POSITION 6 PER A, B OR C AS REQUIRED.
 5. RED WIRE TO BE TAPED IN UNEQUIPPED POSITION BEFORE PLACING CABLE IN INSULATING TUBE.

Figure 19. Relay Cabinet, Wiring Diagram

STROMBERG-CARLSON® 1706 TELEPHONE WIRING DIAGRAM



(SEE OTHER SIDE FOR CONTINUATION OF WIRES)

- NOTES:**
1. HOOKSWITCH ADJUSTED SO THAT "W" MAKES BEFORE "X" MAKES AND "X" MAKES BEFORE "Y" BREAKS.
 2. WHEN TELEPHONE IS USED WHERE DIODE IS REQUIRED, MOVE RED HOOKSWITCH WIRE FROM TERMINAL 18 TO 1 AND ADD IN1694 DIODE. (DIODE MAY BE PURCHASED AS STROMBERG-CARLSON PART NUMBER 202852-138).
 3. WHEN RINGER IS REQUIRED, A 60 CYCLE OR STRAIGHT LINE GONG RINGER OR A STRAIGHT LINE TONE RINGER MAY BE ADDED BY ORDERING AS FOLLOWS:
 - (a) STRAIGHT LINE GONG RINGER — PACKAGE ASSEMBLY 202100-560
 - (b) 60 CYCLE GONG RINGER — PACKAGE ASSEMBLY 202100-588
 - (c) STRAIGHT LINE TONE RINGER — PACKAGE ASSEMBLY 202100-488
 4. WHERE MANUAL EXCLUSION FEATURE IS DESIRED, ORDER PACKAGE ASSEMBLY 204791-061 AND WIRE AS SHOWN. TO USE EXCLUSION SWITCH IN 6K-1 SYSTEM WHERE MANUAL EXCLUSION RELAY BOX 216721-000, HAS BEEN USED, CONNECT ONLY RED AND WHITE WIRES OF SWITCH AS SHOWN AND CONNECT W-Y AND BR-Y OF LINE CORD TO TERMINALS E-1 AND E-2 OF MANUAL EXCLUSION CIRCUIT.
 5. WHEN EXCLUSION SWITCH IS USED, CONNECT G-Y, W-Y AND BR-Y CONDUCTORS OF LINE CORD TO INDICATED TERMINALS OF LINE 1 OF EXCLUDED STATIONS. WHEN EXCLUSION SWITCH IS NOT USED, TAPE BACK SAME LINE CORD WIRES AS SPARES.
 6. WHEN A KEY POSITION (SHOWN ON OTHER SIDE) IS USED AS A SIGNAL POSITION FOR INTERCOM, THE FOLLOWING WIRE CHANGE SHOULD BE MADE:
 - (a) POSITION 1 — MOVE W WIRE FROM TERMINAL 21 TO 22.
 - (b) POSITION 2 — MOVE O WIRE FROM TERMINAL 21 TO 22.
 - (c) POSITION 3 — MOVE BR WIRE FROM TERMINAL 20 TO 22.
 - (d) POSITION 4 — MOVE G WIRE FROM TERMINAL 19 TO 22.
 - (e) POSITION 5 — MOVE S WIRE FROM TERMINAL 19 TO 22.
 7. TO REPLACE A 1575 WBI TELEPHONE IN THE 6K-1 SYSTEM, CHANGE POSITION 5 TO A SIGNAL POSITION PER NOTES 6 AND 8, AND REFER TO "6K-1 INSTRUCTION MANUAL" FOR ADDITIONAL EQUIPMENT CHANGE.
 8. WHEN A KEY POSITION IS CONVERTED TO A SIGNAL POSITION, REMOVE SCREW FROM KEY PLUNGER TO MAKE KEY NON-LOCKING.
 9. WHEN A W.E. 7A OR KS-8109 BUZZER IS REQUIRED, MOUNT EXTERNAL TO SET.
 10. IN 6K-1 SYSTEM, TO PROVIDE INTERCOM WITH ALL BUTTONS RELEASED, CONNECT T-I-C AND R-I-C TO T AND R RESPECTIVELY OF LINE INTERCOM CIRCUIT FOR MANUAL INTERCOM. CONNECT T-I-C, R-I-C, C-I-C AND L-I-C TO T, R, C AND L RESPECTIVELY OF DIAL INTERCOM CIRCUIT FOR DIAL INTERCOM.
 11. TO ADD COMMON LINE BUZZER EXTERNAL TO TELEPHONE, WIRE AS SHOWN AND CONNECT BR-W CONDUCTOR OF CABLE IN SET TO HOOKSWITCH SIDE OF INTERCOM BUZZER.
 12. STRAP I-C-1 AND I-C-2 TERMINALS FOR 6K-1 SYSTEM.
 13. TAPE BACK SPARE WIRES.
 14. IN 6K-1 SYSTEM, WHEN POSITION 5 IS USED AS LINE 5, CONNECT G-R TO H-5. WHEN POSITION 5 IS USED AS SIGNAL POSITION, CONNECT TO 10V (60~NI).

