

S-C 1800 AND 2800 SERIES, DESK, ROTARY-DIAL AND TONE-DIAL[®], 5-LINE TELEPHONES

CONNECTIONS AND MAINTENANCE



Figure 1. S-C 1800-5B5(LR)00 Series, Desk,
Rotary-Dial, 5-Line Telephone



Figure 2. S-C 2800-5B5(LR)00 Series, Desk,
TONE-DIAL, 5-Line Telephone

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1. INTRODUCTION

1.01 This section provides connections and maintenance information on the S-C 1800 and 2800 series, desk, 5-line, rotary-dial and TONE-DIAL telephones. These telephones are designed for use with S-C 1A2 or similar key telephone systems. Identification

and descriptions are covered in paragraph 3 (table 1). Figures 1 and 2 show models of the S-C 1800 and 2800 series, desk, 5-line telephones.

1.02 This section replaces issue 1, dated September 1974. This section has been updated to include new telephone wiring diagrams and delete references to obsolete or manufacture discontinued equipment.

2. RELATED INFORMATION

2.01 Telephones and Telephone Components Repair Parts Catalog T-917 provides parts information and lists for the S-C 1800 and 2800 series desk, 5-line, rotary-dial and TONE-DIAL telephones.

2.02 A Sales and Instructional Literature Index, which lists the latest publications available from Stromberg-Carlson Corporation, can be obtained from your Stromberg-Carlson sales representative or from Publications Services, Stromberg-Carlson Corporation, 100 Carlson Road, Rochester, New York 14603.

2.03 Sections or publications applicable to the equipment covered in this section, as well as others of particular interest, can be ordered from the Sales and Instructional Literature Index.

3. DESCRIPTION AND IDENTIFICATION

3.01 Description.

a. The S-C 1800 and 2800 series, desk, 5-line rotary-dial and TONE-DIAL telephones are equipped with a six pushbutton-type key assembly. Normally, operation of five of these pushbuttons (white) connects the telephone to five selected lines in a key telephone system. The sixth pushbutton (red) provides a hold control for any of five selected lines when receiving or initiating a call on another line.

b. Incoming calls are indicated by visual or visual and audible signals.

c. Lamps in pushbuttons light to indicate line-hold and line-busy conditions.

3.02 Identification.

The models, stock numbers, and features of the S-C 1800 and 2800 series, desk, 5-line, rotary-dial and TONE-DIAL telephones are listed in table 1. These

Table 1. S-C 1800 and 2800 Series, Desk, 5-Line Telephones

S-C MODEL NO. *	STOCK NO. **	5-LINE 6-BUTTON PLUG-IN KEY STRIP	5-LINE 6-BUTTON WIRED-IN KEY STRIP	WITH SERIES 20 STRAIGHT- LINE RINGER	WITH OPERATORS JACK	PUSHBUTTON-DIAL EQUIPPED	ROTARY-DIAL EQUIPPED
1800-5B5(LR)00	703070-1XX	X					X
1800-5B5(WA)00	703018-160/166	X		X			X
1806-5B5(LR)00	703069-5XX		X				X
1806-5B5(WA)00	703018-100/106		X	X			X
1807-5B5(LR)00	703070-7XX	X			X		X
1807-5B5(WA)00	703018-220/226	X		X	X		X
2800-5B5(LR)00	703070-2XX	X				X	
2800-5B5(WA)00	703018-170/176	X		X		X	
2806-5B5(LR)00	703069-6XX		X			X	
2806-5B5(WA)00	703018-110/116		X	X		X	
2807-5B5(LR)00	703070-8XX	X			X	X	
2807-5B5(WA)00	703018-230/236	X		X	X	X	

*All telephones listed are equipped with plug-ended line cords.

** XX in stock number represents color, see T-916 for current colors.

telephones are supplied normally less ringer (LR) but can be ordered with ringer (WA). Refer to current T-916 for color information. Refer to T-917 for parts information.

3.03 Application.

The S-C 1800 and 2800 series telephones are used with S-C 1A2 or similar key systems.

3.04 Additional Features.

NOTE. For stock number of equipment for the following features, available as optional equipment, refer to section 81-082-73.

a. Audible signal packages or parts.

1. S-C Series 20, straight-line ringer package.
2. S-C Series 20, 60-Hz ringer package.
3. S-C No. 95 tone ringer package.

4. S-C 687(T) external tone ringer package.

5. S-C 687(WA) external straight-line ringer package.

6. S-C 687(NJ) external 60-Hz ringer package without volume control.

7. S-C 687(WJ) external 60-Hz ringer package with volume control.

8. S-C No. Q-20 buzzer.

9. S-C No. Q-20HV high voltage buzzer.

b. Other special feature packages or parts.

1. S-C 827 diode for 24-Vdc busy-station number display.

2. Diode assembly package for 18-Vac busy-station number display.
3. Line cable assembly, 50-foot.
4. Line cable assembly, 100-foot.
5. Manual exclusion switch package.
6. Speakerphone package assembly.
7. Pushbutton transfer package assembly.
8. S-C HRA-500A handset with receiver-amplifier.
9. Amplifier for use with telephone headset.

4. INSTALLATION AND CONNECTIONS

4.01 Precautions.

When performing work on the S-C 1800 and 2800 series, desk, 5-line, rotary-dial or TONE-DIAL telephones, the following precautions should be taken:

- a. When removing or replacing housing, first remove bezel with facemat and faceplate (refer to par. 4.02).
- b. When removing or replacing housing, exercise caution to avoid bending parts or disarranging wiring.
- c. Spade-tips and skinned wires must make contact with their designated terminals only. Electrical contact with the metal base, network tabs, or other components could result in malfunctions in operation of telephone, and possible energizing of dial fingerstop with line or ringing voltages.
- d. Ensure that all wiring is dressed away from ringer gongs and all moving parts of telephone.
- e. Use electricians scissors or diagonal cutting pliers to remove insulating tubing used on spare leads to avoid breaking leads or pulling spade-tips from leads.
- f. When using a busy station number display with 18-Vac power, a diode or diode package assembly must be installed in each telephone (refer to par. 4.06).

4.02 Housing Removal and Replacement.

- a. To remove housing, proceed as follows:
 1. Remove bezel, facemat and faceplate by lifting bezel out from top of housing, then lift away from telephone, using an upward motion. Use care in removing the bezel to avoid marring housing.
 2. Loosen two housing screws, located at rear of the telephone.
 3. Lift housing out and down, disengaging housing clip from base at bottom of telephone.
- b. To replace housing, proceed as follows:

1. Hook housing clip into slot located at bottom of the telephone base.
2. Slide housing in and down over telephone until housing screws enter slots at rear of base. Tighten screws.
3. Insert bezel clips in slots at bottom of housing, swing bezel, facemat and faceplate to engage top clips on bezel into housing slots.
4. If bezel does not seat properly or is loose, check clips on the bezel and reform as necessary.

4.03 Telephone Line Connections.

All S-C 1800 and 2800 series, desk, 5-line, telephones described in this section are provided with plug-ended (Amphenol No. 57 or equivalent) line cords. Connections are made by inserting the plug into a house-wired type 66E-3 block or equivalent.

4.04 Ringer and Buzzer Installation.

- a. Mount ringers or buzzers (as required) as shown in the following illustrations.

NOTE: If necessary, remove the dial to provide easy access to ringer and buzzer mounting points.

1. S-C series 20 straight-line ringer (see fig. 3).
2. S-C No. 95 tone ringer (see fig. 4).
3. S-C No. Q-20 or S-C No. Q-20HV buzzer (see fig. 5).

b. Connections are made as follows:

NOTE. The S-C 1800 and 2800 series, 5-line telephones accommodate one ringer only.

1. The S-C series 20 straight-line ringer leads are normally wired to telephone terminal-board terminals 26 and 47. If it is required to block dc from the ringer, connect red wire from ringer to network terminal K and strap terminal 26 to network terminal A.

2. S-C No. 95 tone ringer leads (green and red) are also connected to terminal-board terminals 26 and 47 with the following options:

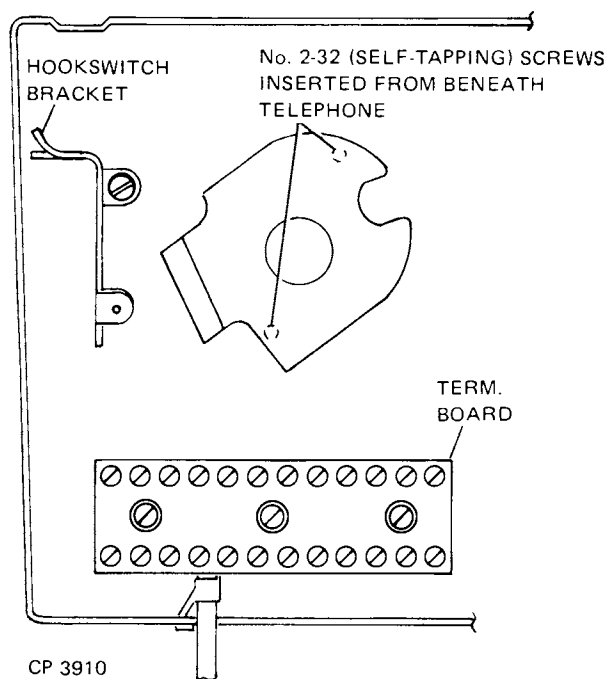


Figure 4. S-C No. 95 Tone Ringer Mounting

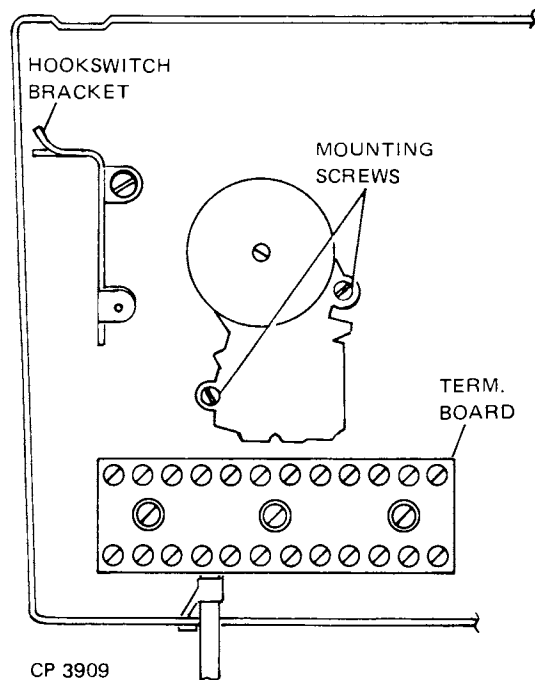


Figure 3. S-C Series 20 Straight-Line Ringer Mounting

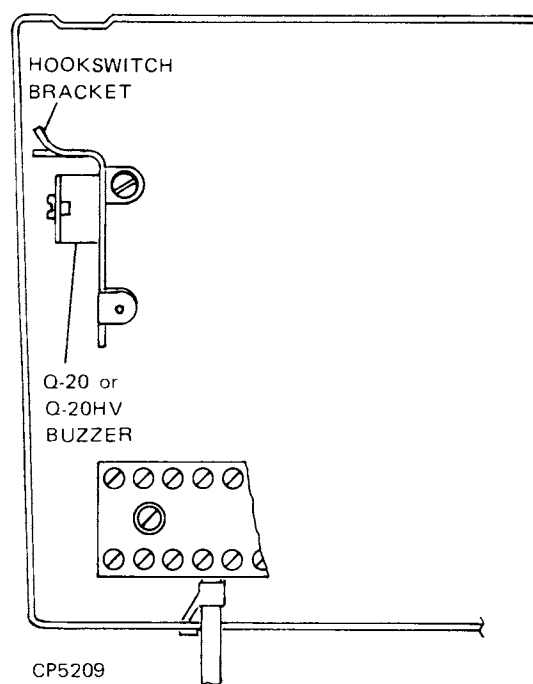


Figure 5. S-C No. Q-20 or S-C No. Q-20HV Buzzer Mounting

- a) For ground-connected ringing or insulated-generator ringing, remove black spade-tipped strap of tone ringer and replace resistor with a diode S-C 827, stock No. 202852-138. Make sure diode is insulated from all metallic parts.
- b) For battery connected ringing, install as received. When loop is heavily loaded, move red lead of tone ringer from terminal A to terminal B. If results are not satisfactory, move red lead back to terminal A and connect black lead to terminal B.
- c) To change the tone of the ringer, connect a 0.0047- μ F capacitor, stock No. 202864-345, between tone ringer terminals M and N.

NOTE. Most key system power supply ringing outputs are limited to a load of two high-impedance ringers with capacitors, or eight high-impedance ringers without capacitors.

3. Stromberg-Carlson provides the following buzzers for intercom service:

The S-C No. Q-20 buzzer operates from a source of 8 to 24 Vac. The S-C Q-20HV buzzer operates at 90 to 105 Vac. Their leads are normally connected to terminal-board terminals 25 and 48. If intercom buzzer is to be audible, when off-hook, move buzzer lead from terminal 25 to 21.

4.05 Polarity Guard.

A polarity-guard circuit is required for pushbutton telephones generating DTMF signaling beyond a PBX. The polarity-guard circuit prevents the tone oscillator from being disabled when reverse supervision occurs on tip and ring leads to the telephone. Installation and connections (see fig. 6) are as follows:

- a. Remove slate-yellow hookswitch lead from network terminal G and connect it to polarity guard terminal T.

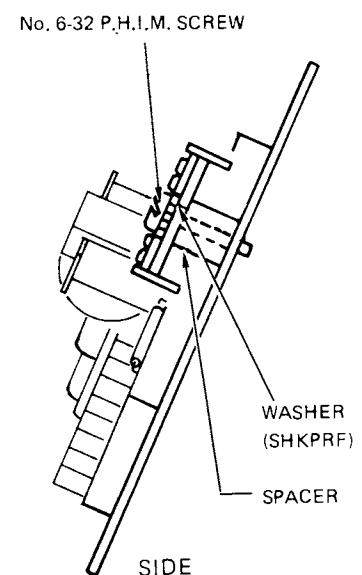
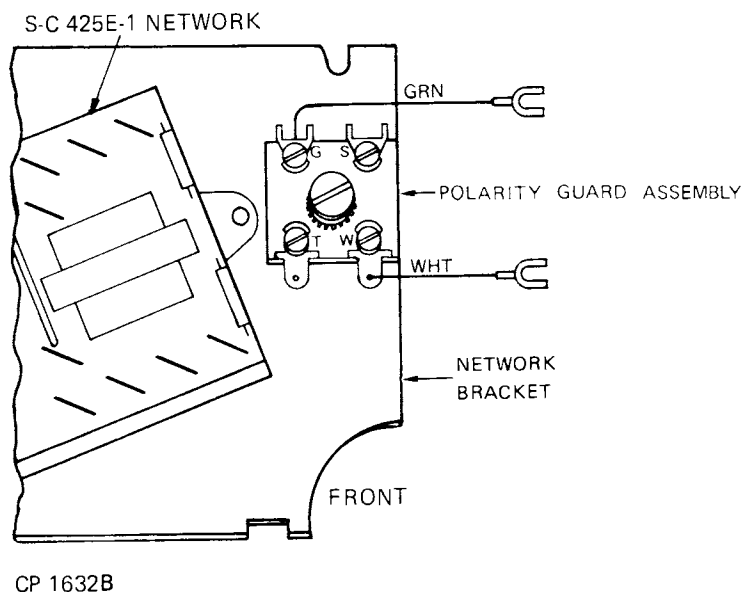


Figure 6. Polarity Guard Mounting

- b. Connect green polarity guard lead to network terminal G.
- c. Remove blue key strip lead from network terminal C and connect to polarity guard terminal S.
- d. Connect white polarity guard lead to network terminal C.

4.06 Busy Station Number Display.

To use the telephone with a busy station number display (BSND), a diode must be connected in each telephone as described below.

a. 24-Volt Lamps.

When the BSND uses 24-volt lamps and the power supply is 24 Vdc, make connections as follows:

- 1. Remove housing (refer to par. 4.02).
- 2. Remove slate-green hookswitch lead from terminal-board terminal 24 and reconnect it to terminal I.
- 3. Connect cathode (-) of an S-C 827 (1N1694) diode to terminal-board terminal 24. Connect anode (+) to terminal I.
- 4. Connect yellow-brown line cord lead (BL) from terminal-board terminal 1 (connector pin number 44) to assigned BL lead of BSND.
- 5. Replace housing (refer to par. 4.02).

b. 10-Volt Lamps.

When the BSND uses 10-volt lamps and the power supply is 18 Vac, diode package assembly 206286-451 is required. Make connections as follows:

- 1. Remove housing (refer to par. 4.02).
- 2. Connect slate lead of diode assembly to terminal-board terminal I.
- 3. Connect black lead of diode assembly to terminal-board terminal 24.

- 4. Connect red lead of diode assembly to network terminal L2.

- 5. Remove red key lead from terminal-board terminal 24 and reconnect it to network terminal L2.

- 6. Tie or tape diode assembly in telephone to prevent interference with moving parts or shorting to metal parts.

- 7. Connect yellow-brown line cord lead from terminal-board terminal 1 (connector pin number 44) to assigned BL lead of the BSND.

- 8. Replace housing (refer to par. 4.02).

4.07 Line Key to Signal Key Conversion.

- a. Remove housing (refer to par. 4.02).
- b. Remove key assembly (refer to par. 5.02).
- c. Remove locking screw from plunger shaft of key position being converted to signaling position. If more than one key position is to be converted to signaling, the locking screw must be removed for each position converted.
- d. Make connections as shown in table 2.
- e. If more than one key position is required for signaling, multiple the position leads on terminal 52.

NOTE. Store the key locking screw on telephone base using adhesive tape. This screw is special and would be necessary to restore key to normal line use.

- f. Replace key assembly (refer to par. 5.02).
- g. Replace housing (refer to par. 4.02).

Table 2. Line Key to Signal Key Conversion Wiring

KEY POSITION CONVERTED	CONDUCTOR COLOR	MOVE FROM TERMINAL	TO TERMINAL
1	White	51	52
2	Orange	51	52
3	Brown	50	52
4	Green	49	52
5	Slate	49	52

4.08 All Buttons Released Intercom.

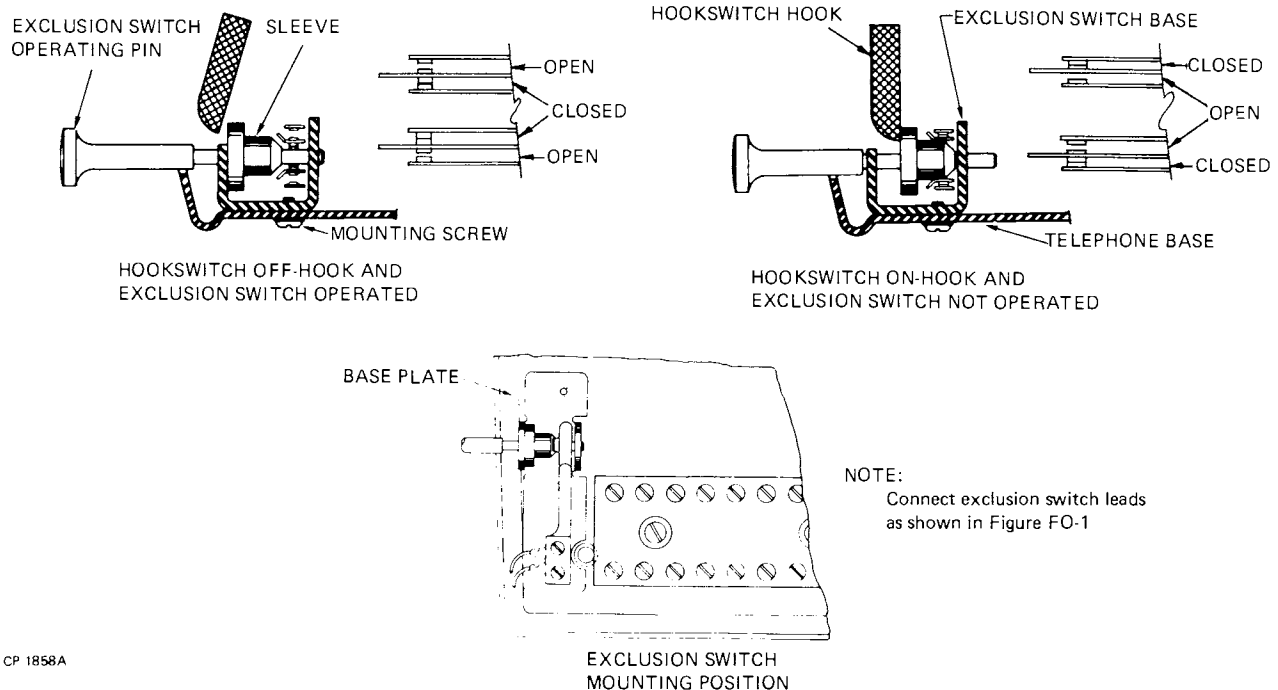
To provide all-buttons-released intercom on S-C No. 1A2, W.E. 1A1, or other 1A2 systems, proceed as follows:

- a. Remove housing (refer to par. 4.02).
- b. Connect T, R, A, L, and LG to dial or manual intercom circuit (see fig. FO-1 to FO-3, as required).
- c. Insulate and store slate-yellow, yellow-slate, and yellow-brown leads.
- d. Replace housing (refer to par. 4.02).

4.09 Manual Exclusion Switch Installation.

NOTE. For multiline exclusion, refer to section 66-128-80.

- a. Remove housing (refer to par. 4.02).
- b. To mount manual exclusion switch, proceed as follows:
 1. Assemble exclusion switch to base using two mounting screws provided. Do not tighten screws securely (see fig. 7).



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Figure 7. Manual Exclusion Switch Mounting and Operation

2. Adjust exclusion switch position so that hookswitch assembly rests against its stop before exclusion switch operating pin stops against exclusion switch base.

3. Tighten mounting screws.

4. With handset off-hook and exclusion switch operating pin pulled out, sleeve attached to the operating pin should move between pile-up springs sufficiently to open and close contacts.

5. When the handset is replaced on-hook, the end of the hookswitch assembly should move the sleeve between the pile-up springs and operate the contacts.

6. If the exclusion switch does not operate as described in steps 4 and 5 above, loosen the mounting screws, realign the exclusion switch, and retighten the screws.

c. Exclusion switch connections.

1. Any one of the five lines can be wired for manual exclusion.

2. Connect leads from exclusion switch, as shown in table 3.

3. Connect excluded station wires of line cord as shown in wiring diagram (see fig. FO-1 to FO-3).

d. Check operation of exclusion switch for affected line.

e. Replace housing (refer to par. 4.02).

4.10 Pushbutton Transfer.

a. Order transfer pushbutton package assembly.

b. Remove housing (refer to par. 4.02).

c. With housing removed, place cutout template as shown in figure 8.

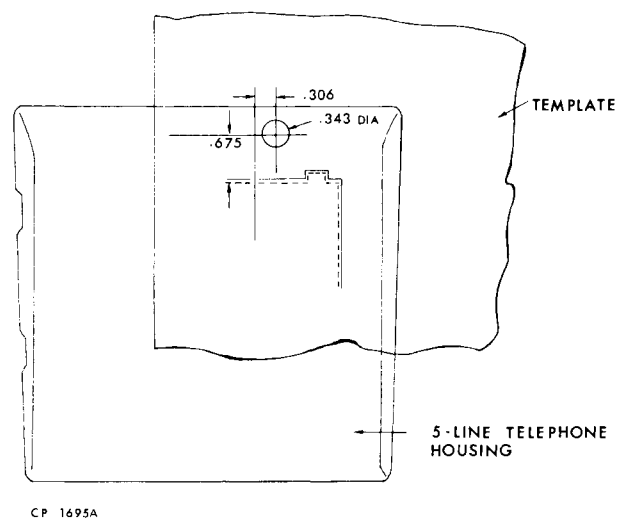


Figure 8. Locating Transfer Switch on Housing Face

d. Locate center of 0.343-inch diameter hole perpendicular to face.

e. Drill a pilot hole; increase size of hole to 0.343-inch diameter.

Table 3. Manual Exclusion Switch Connections

EXCLUSION SWITCH TERMINAL LEADS	TELEPHONE TERMINAL STRIP				
	LINE 1	LINE 2	LINE 3	LINE 4	LINE 5
Red	6	6	6	6	6
Brown	27	32	37	42	8
Green	28	33	38	43	9
White	5	5	5	5	5
Yellow	7	7	7	7	7
Slate	29	34	39	44	10

- f. Mount switch assembly to network bracket with two screws provided (see fig. 9).

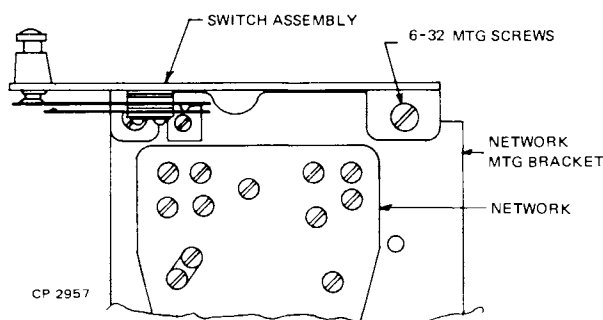


Figure 9. Transfer Switch Assembly Mounting

- g. Connect black lead of switch assembly to network terminal L1.
- h. Connect yellow lead of switch assembly to network terminal L2.
- i. Connect one end of spare line cord conductor to network terminal L2. Connect other end of spare line cord conductor to earth ground.
- j. Replace housing (refer to par. 4.02).

4.11 Speakerphone Connections.

The S-C 1800 and 2800 series, desk, 5-line telephones can be used with a W.E.-type speakerphone. It is necessary to add an appropriate dial and provide connections to the speakerphone by way of an adapter cable or spare telephone line cord leads. However, if telephone line cord leads are used for this application, the all-buttons-released intercom feature cannot be used. To make connections, proceed as follows:

- a. Remove housing (refer to par. 4.02).
- b. Remove dial (refer to par. 5.04).
- c. Replace with appropriate dial.

- d. Connect dial leads as indicated in table 4 or 5 and figure 10 or 11.
- e. Connect telephone to speakerphone as indicated in table 6 or 7 and figure 10 or 11.
- f. Replace housing (refer to par. 4.02).

Table 4. S-C 1800 Series Telephone Connections for W.E. Speakerphone

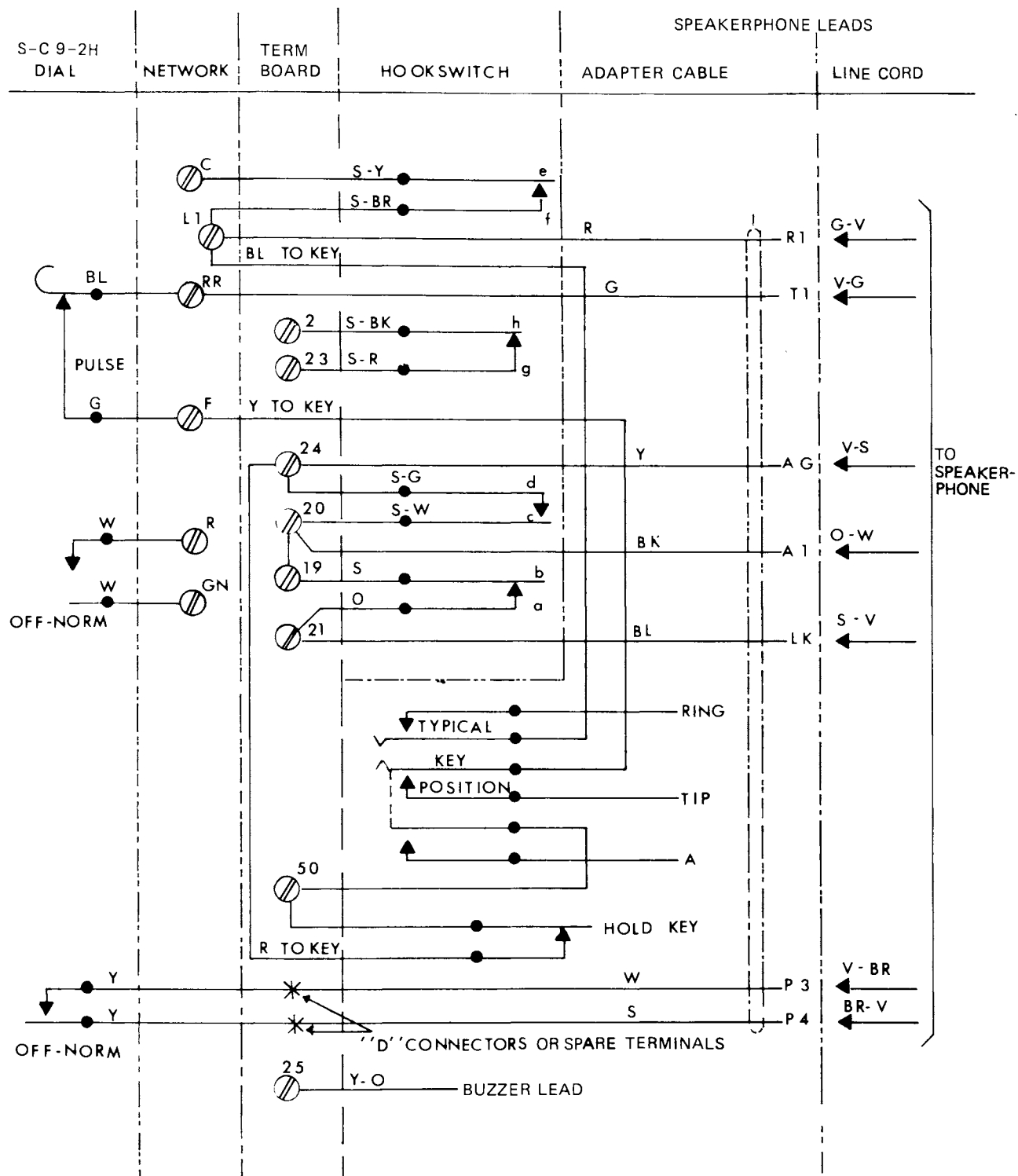
DIAL LEAD	CONNECT TO TERMINAL
Blue	Network RR
Green	Network F
White	Network R
White	Network GN
Yellow	*
Yellow	*

*Use D connector or spare terminal.

Table 5. S-C 2800 Series Telephone Connections for W.E. Speakerphone

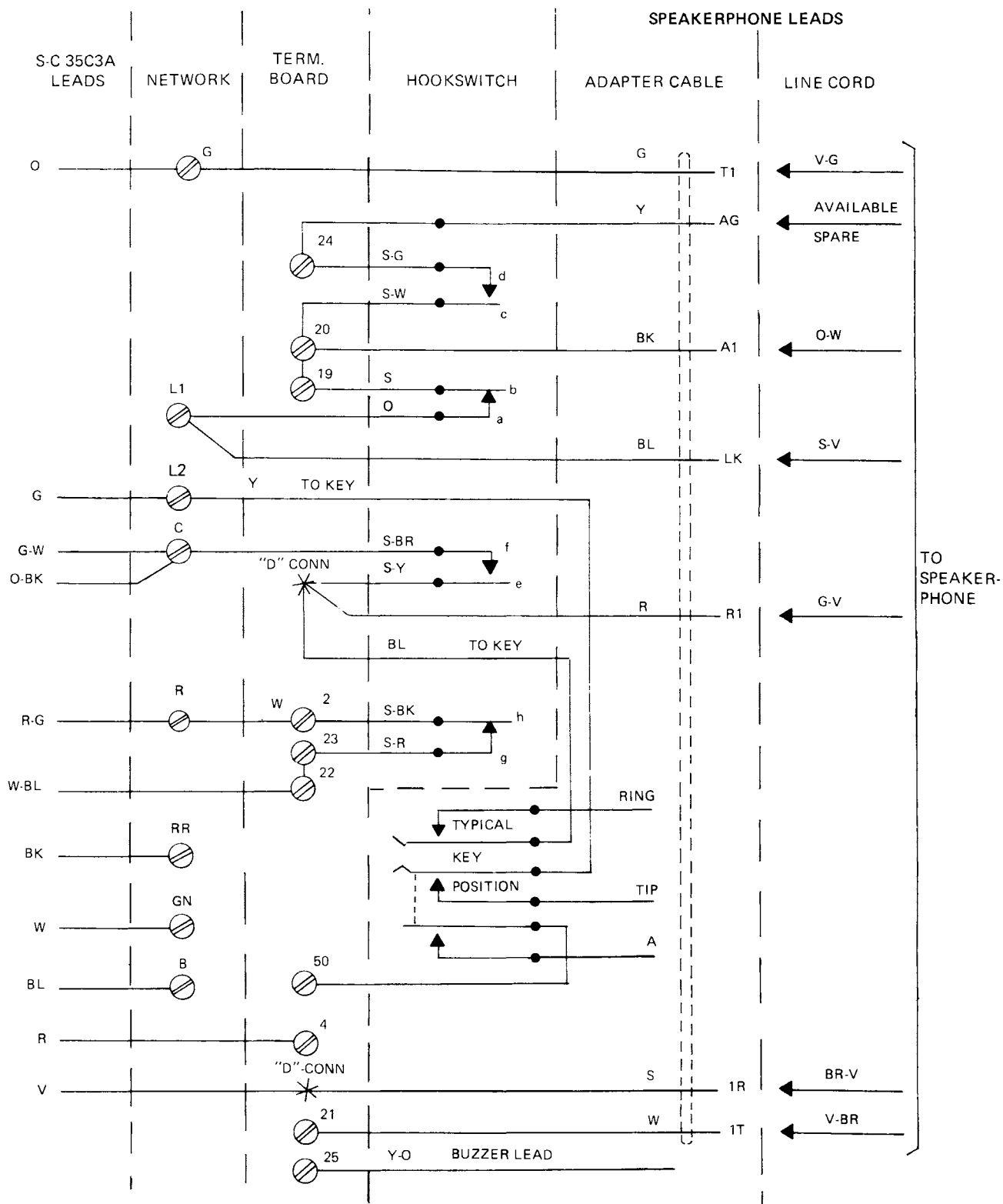
DIAL LEAD	CONNECT TO TERMINAL
Green	Network L2
Black	Network RR
Orange	Network G
Red-Green	Network R
White	Network GN
Green-White	Network C
Orange-Black	Network C
Blue	Network B
White-Blue	Term. Bd. 22
Red	Term. Bd. 4
*Violet	Slate Lead (Adapter Cable) or Brown-Violet Lead (Line Cord)

*Use D connector or spare terminal.



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Figure 10. Speakerphone Connections for S-C 1800 Series Telephones



CP 3878

Figure 11. Speakerphone Connections for S-C 2800 Series Telephones

Table 6. Speakerphone and Telephone Connections for S-C 1800 Series Telephones

<i>LEAD DESIGNATION AND COLOR</i>		<i>REMOVE FROM TERMINAL</i>	<i>CONNECT TO TERMINAL</i>
Key	Yellow	Network L1	Network F
Key	Blue	Network C	Network L1
Hookswitch	Slate	Term. Bd. 25	Term. Bd. 19
Buzzer	Yellow-Orange	Term. Bd. 21	Term. Bd. 25
Hookswitch	Slate-Yellow	Network F	Network C
Adapter Cable:			
R1	Red		Network L1
T1	Green		Network RR
AG	Yellow		Term. Bd. 24
A1	Black		Term. Bd. 20
LK	Blue		Term. Bd. 21
P3	White		Dial off-normal yellow lead*
P4	Slate		Dial off-normal yellow lead*
Line Cord:			
R1	Green-Violet		Network L1
T1	Violet-Green		Network RR
AG	(Use Spare Lead)		Term. Bd. 24
A1	Orange-White		Term. Bd. 20
LK	Slate-Violet		Term. Bd. 21
P3	Violet-Brown		Dial off-normal yellow lead*
P4	Brown-Violet		Dial off-normal yellow lead*

*Use D connector.

Table 7. Speakerphone and Telephone Connections for S-C 2800 Series Telephones

<i>LEAD DESIGNATION AND COLOR</i>		<i>REMOVE FROM TERMINAL</i>		<i>CONNECT TO TERMINAL</i>	
Hookswitch	Slate-Yellow	Network	G	*Key	Blue
Key	Blue	Network	C	*Hookswitch	Slate-Yellow
Key	Yellow	Network	L1	Network	L2
Hookswitch	Slate-Brown	Network	L1	Network	C
Hookswitch	Slate	Term. Bd.	25	Term. Bd.	19
Hookswitch	Orange	Term. Bd.	25	Network	L1
Buzzer	Yellow-Orange	Term. Bd.	21	Term. Bd.	25
Terminal Board:					
Term. No. 2	White (Strap)	Network	GN	Network	R
Adapter Cable:					
R1	Red			*Key and	Blue
				*Hookswitch	Slate-Yellow
T1	Orange			Network	G
AG	Yellow			Term. Bd.	24
A1	Black			Term. Bd.	20
LK	Blue			Network	L1
IT	White			Term. Bd.	21
1R	Slate			*Dial	Violet
—	Brown			Insulate and Store	
Line Cord:					
R1	Green-Violet			*Key	Blue
				*Hookswitch	Slate-Yellow
T1	Violet-Green			Network	G
AG	**Spare			Term. Bd.	24
A1	Orange-White			Term. Bd.	20
LK	Slate-Violet			Network	L1
IT	Violet-Brown			Term. Bd.	21
1R	Brown-Violet			*Dial	Violet-Orange

*Use D connector.

**Use available spare.

4.12 Make-Busy Feature, Series 5R PAX.

- a. Remove housing (refer to par. 4.02).
- b. Move BLK lead from terminal-board terminal 50 to 52.

NOTE. If black lead is not long enough to be moved to terminal 52, add a wire lead and use a D connector. If terminal 52 is not available, move BLK lead to any spare terminal and use a spare lead to connect the spare terminal to the PAX make-busy terminals. For instance, figure 12 shows spare terminal 20 and spare B lead being used in place of terminal 52 and lead SG.

- c. Add an S-C 827 diode between terminal 50 and 52. (If a spare terminal was used instead of terminal 52, add the diode between terminal 50 and the spare terminal.) Note the polarity of the diode as shown in figure 12.
- d. Connect tip and ring of any key position (including hold position) to tip and ring, respectively, of the Series 5R PAX System.

- e. Connect SG lead (or spare lead as shown in figure 12) to the station make-busy terminal of the Series 5R PAX.

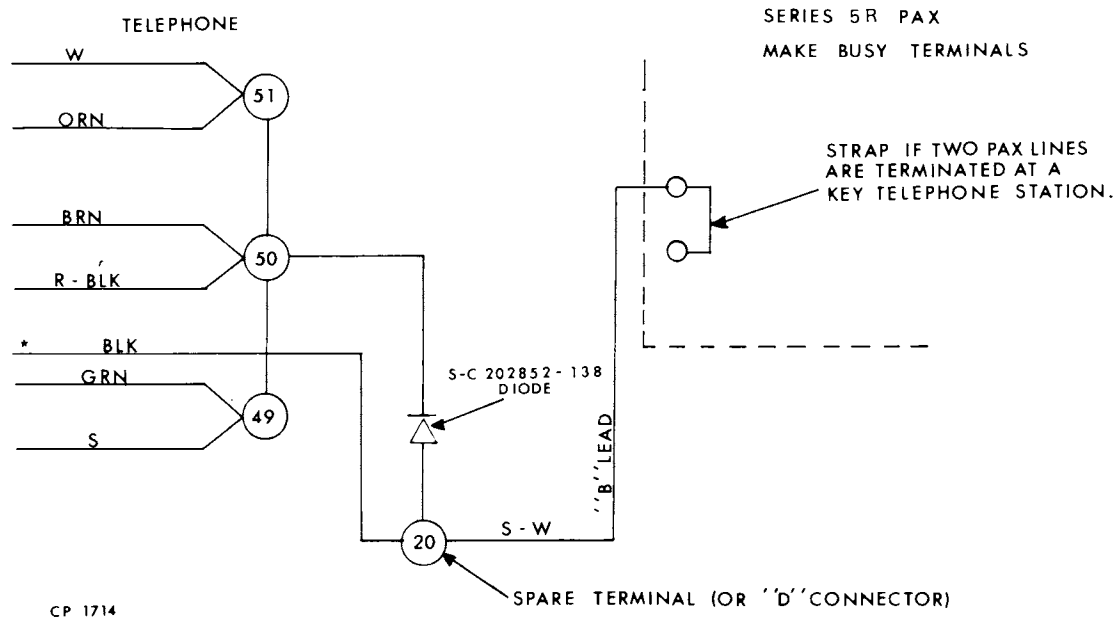
- f. When telephone is off-hook on the trunk, PAX station shows busy.

- g. If two intercom lines are required on a telephone the associated make-busy leads must be tied together at make-busy terminals in the Series 5R PAX cabinet (see fig. 12).

- h. Replace housing (refer to par. 4.02).

4.13 Headset Amplifier.

- a. An amplifier may be required for the S-C 1807 and 2807 series, desk, 5-line, rotary-dial or pushbutton-dial telephones equipped with an operators jack to correct for headsets with low output.
- b. The recommended amplifier can be obtained by ordering S-C package assembly No. 206290-761.



* IF BLACK LEAD IS NOT LONG ENOUGH - ADD STRAP USING A "D" CONNECTOR

Figure 12. S-C Series 5R PAX Intercom, Make-Busy Wiring Diagram

Connections are indicated in figures FO-2 or FO-3 (and package assembly instructions).

- c. The amplifier is stored in the telephone housing away from moving parts of telephone.

5. MAINTENANCE

NOTE. For S-C stock number of components required to maintain telephone instrument, refer to T-917.

5.01 Network Assembly Replacement.

- a. Remove housing (refer to par. 4.02).
- b. Disconnect all leads on old network assembly.
- c. Remove two network mounting screws located at upper left and lower right of network assembly.
- d. Remove old network and replace with new one and secure the network bracket.
- e. Connect telephone leads as shown in figure FO-1.
- f. Replace housing (refer to par. 4.02).

5.02 Line and Hold Key Assembly Replacement.

- a. Remove housing (refer to par. 4.02).
- b. Loosen two screws holding key assembly to key mounting bracket.
- c. Disconnect the key assembly from connector plug.
- d. Lift key assembly forward and up removing it from bracket assembly.
- e. Place new key in position, reconnect connector plug, and tighten two captive screws holding the key assembly to mounting bracket.
- f. Replace housing (refer to par. 4.02).
- g. Test each key to ensure that any depressed key restores when another line key (or hold key) is depressed.

5.03 Hookswitch Replacement and Adjustment.

a. Replacement.

- 1. Order hookswitch assembly.
- 2. Remove housing (refer to par. 4.02).
- 3. Disconnect hookswitch leads at terminal board and network assembly.
- 4. Remove hookswitch mounting screws. Remove top screws. Remove top screw first and slide network bracket back to expose bottom mounting screws.
- 5. Remove hook and hookswitch assembly.
- 6. Turn assembly upside down and hold in an operated position.
- 7. Lift spring pusher out. Care must be taken so as not to damage contact springs.
- 8. Remove hook tension spring and shaft, and remove handset cradle hook.
- 9. Connect leads from new hookswitch to network and terminal board terminals (see fig. FO-1 to FO-3 as appropriate).
- 10. Assemble hookswitch assembly and handset cradle hook by reversing process of step 8.
- 11. Operate hookswitch assembly and insert spring pusher.
- 12. Mount complete assembly to base with the three screws removed in step 4.
- 13. Replace housing (refer to par. 4.02).

b. Hookswitch Tension Spring Adjustment.

- 1. Remove housing (refer to par. 4.02).
- 2. Remove handset from hook. Hook should move to off-hook position. If not, increase tension on-hook by reforming upper spring tab.

3. Place handset on-hook to ascertain that hookswitch restores fully.

4. Replace housing (refer to par. 4.02).

c. Contact Spring Adjustment.

1. Remove housing (refer to par. 4.02).

2. Check operation of contact springs. Contact should have a slight follow in operation. Contacts on the lower and upper spring of a combination must engage simultaneously.

3. If necessary, reform contact springs with standard relay adjusting tool so that c-d contacts make first, e-f contacts make second, and g-h contacts break last. Refer to figures FO-1 to FO-3 as appropriate.

4. Replace housing (refer to par. 4.02).

5.04 Dial Replacement.

NOTE. For repair and replacement parts of S-C 35-type pushbutton dials refer to section 89-922-70. For repair and replacement parts of S-C rotary-dials refer to section 89-925-70.

a. Remove housing (refer to par. 4.02).

b. Loosen wing screw on right side of dial and slotted screw on left side of dial.

c. Disconnect dial leads from network and terminal board.

d. Replace with new dial and connect leads to network as shown in figures FO-1 to FO-3 as appropriate.

e. Replace housing (refer to par. 4.02).

5.05 Line Lamp Replacement.

a. Remove bezel (refer to par. 4.02).

b. Remove plastic retaining collar around key buttons.

c. Remove key designation cap.

d. Remove key lamp cover.

e. Carefully remove lamp with lamp extractor (S-C stock No. 896264 or equivalent).

f. Clean metal contact surface of new lamp and check spring tension and alignment of lamp contact springs.

g. Insert new lamp with glass end towards key button.

h. Replace items removed in steps a through d in reverse order.

5.06 Handset Replacement.

NOTE. For handset repair and replacement parts refer to section 89-903-70.

a. Order handset in applicable color.

b. Remove housing (refer to par. 4.02).

c. Remove dial (refer to par. 5.04).

d. Remove terminal-board mounting screws; make certain that terminal-board spacers and lockwashers are not lost.

e. Disconnect handset cord leads from terminals 2, 3, 22, and 23.

f. Replace with new handset assembly or handset cord, and reconnect leads to terminals 2, 3, 22, and 23. (See figure FO-1 to FO-3 as appropriate.)

g. Reposition top terminal board, secure with screws, spacers, and lockwashers removed in step d.

h. Replace housing (refer to par. 4.02).

* INCLUDES

1800-5B5	1810-5B5	1810-5L5
1806-5B5	1816-5B5	1816-5L5
2800-5B5	2810-5B5	2810-5L5
2806-5B5	2816-5B5	2816-5L5

NOTES:

1. WHEN A COMMON SIGNAL IS REQUIRED USING STANDARD RINGING VOLTAGE, THE FOLLOWING OPTIONS ARE AVAILABLE:
 - A. S-C SERIES 20 STRAIGHT-LINE RINGER. ORDER PACKAGE ASSEMBLY 702100-244, AND WIRE AS SHOWN. EXCEPTION - WHEN CAPACITOR IS REQUIRED TO BLOCK DC FROM RINGER, CONNECT RED RINGER WIRE TO NETWORK TERMINAL K AND STRAP TERMINAL 26 TO NETWORK TERMINAL A.
 - B. S-C SERIES 20 RINGER FOR 60 HZ. ORDER PACKAGE ASSEMBLY 702100-260. CONNECT BLK WIRE TO TERMINAL 47 AND RED WIRE TO TERMINAL 26. DO NOT WIRE IN CAPACITOR A-K.
 - C. TONE RINGER. ORDER PACKAGE ASSEMBLY 202100-488 AND WIRE PER INSTRUCTION SHEET IN PACKAGE USING TERMINALS 26 AND 47.
2. WHEN 8-24 VAC BUZZER IS REQUIRED, ORDER S-C Q-20 BUZZER (S-C 703504-023) AND MOUNT PER INSTRUCTION SHEET ENCLOSED.
3. FOR INTERCOM SIGNAL TO BE AUDIBLE WHEN OFF HOOK, CONNECT SIGNAL LEAD TO TERMINAL-BOARD TERMINAL 21 INSTEAD OF 25.
4. WHEN TELEPHONE IS USED WITH BUSY STATION NUMBER DISPLAY (24-VOLT LAMPS), MOVE THE SLT-WHT HOOKSWITCH WIRE FROM TERMINAL-BOARD TERMINAL 24 TO 1 AND ADD AN S-C 827 DIODE (202852-138) AS SHOWN. WHEN 10-VOLT LAMPS (AND 18-VAC POWER) ARE USED, ORDER DIODE PACKAGE ASSEMBLY 206286-451 AND CHANGE WIRING PER INSTRUCTION SHEET IN PACKAGE ASSEMBLY.
5. "B" LEADS MAY BY USED AS SPARES OR MULTIPLIED TOGETHER AS A1 LEADS ON TERMINAL-BOARD TERMINALS 19 AND 20.
6. TO CONVERT LINE KEY FROM "PICKUP" TO "SIGNAL" FUNCTION, REMOVE PLUNGER LOCKING SCREW TO MAKE KEY NON LOCKING, AND MOVE THE FOLLOWING WIRE:
 - A. POSITION 1 - WHT FROM TERMINAL-BOARD TERMINAL 51 TO 52.
 - B. POSITION 2 - ORN FROM TERMINAL-BOARD TERMINAL 51 TO 52.
 - C. POSITION 3 - BRN FROM TERMINAL-BOARD TERMINAL 50 TO 52.
 - D. POSITION 4 - GRN FROM TERMINAL-BOARD TERMINAL 49 TO 52.
 - E. POSITION 5 - SLT FROM TERMINAL-BOARD TERMINAL 49 TO 52.
7. TO PROVIDE "ALL BUTTONS RELEASED INTERCOM", CONNECT CHAINING SWITCH T, R, LG AND L LEADS TO INTERCOM CIRCUIT AS SHOWN.
8. TO PROVIDE MANUAL EXCLUSION (DESK MODELS ONLY), ORDER PACKAGE ASSEMBLY 206289-781 AND WIRE AS SHOWN. (EXAMPLE: LINE 1: CONNECT EXCLUSION SWITCH BRN, GRN, SLT LEADS TO TERMINAL-BOARD TERMINALS 27, 28, 29 RESPECTIVELY AND LINE CORD EXCLUSION R, T, A LEADS TO EXCLUDED STATION(S) LINE 1).
9. WHEN POLARITY GUARD IS REQUIRED FOR TONE-DIAL ® SIGNALING UNDER REVERSED BATTERY CONDITIONS, ORDER PACKAGE ASSEMBLY 703016-852 AND WIRE PER INSTRUCTION SHEET IN PACKAGE ASSEMBLY.

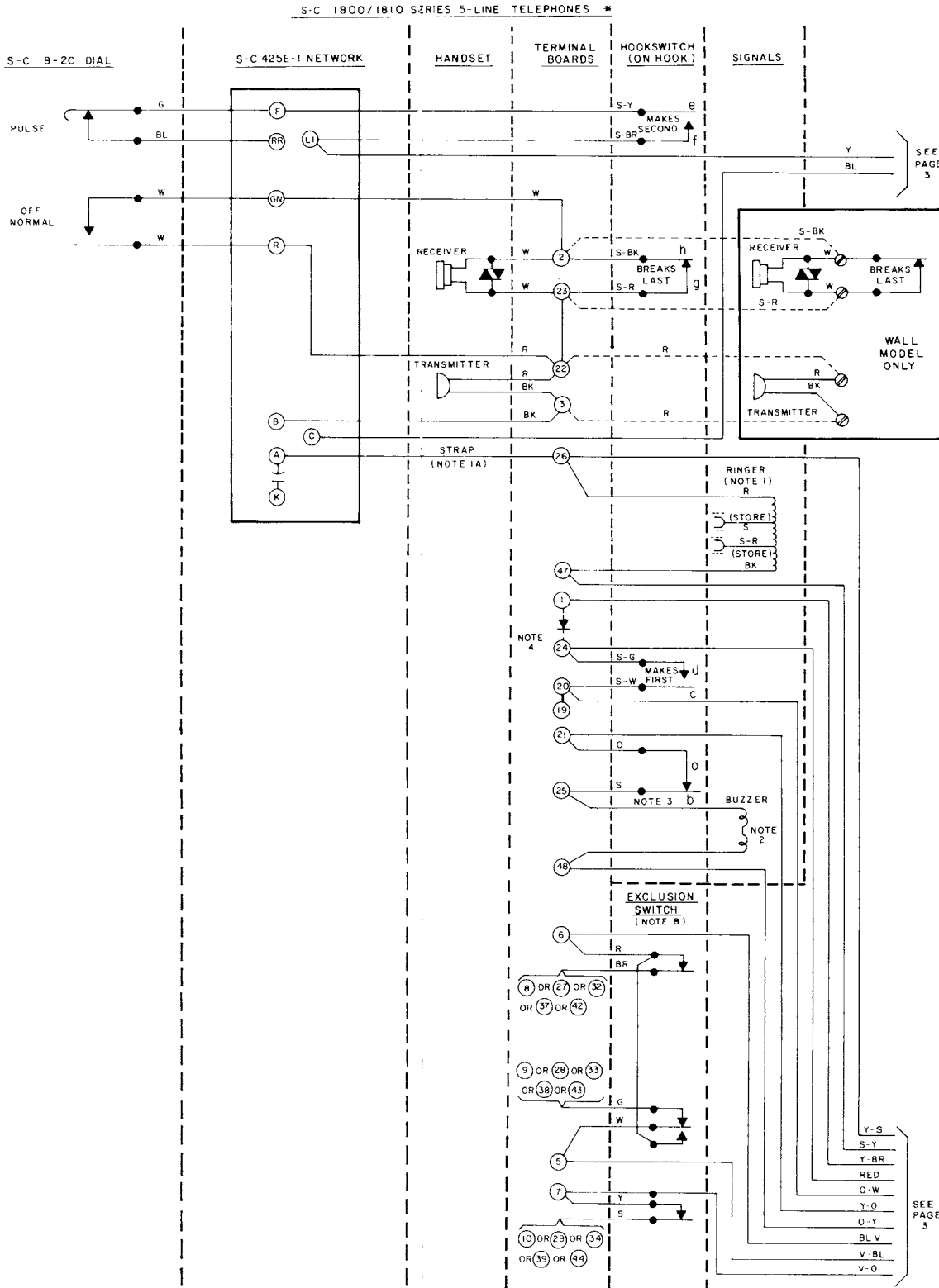


Figure FO-1. S-C 5-Line Telephone, Wiring Diagram (Sheet 1 of 2)

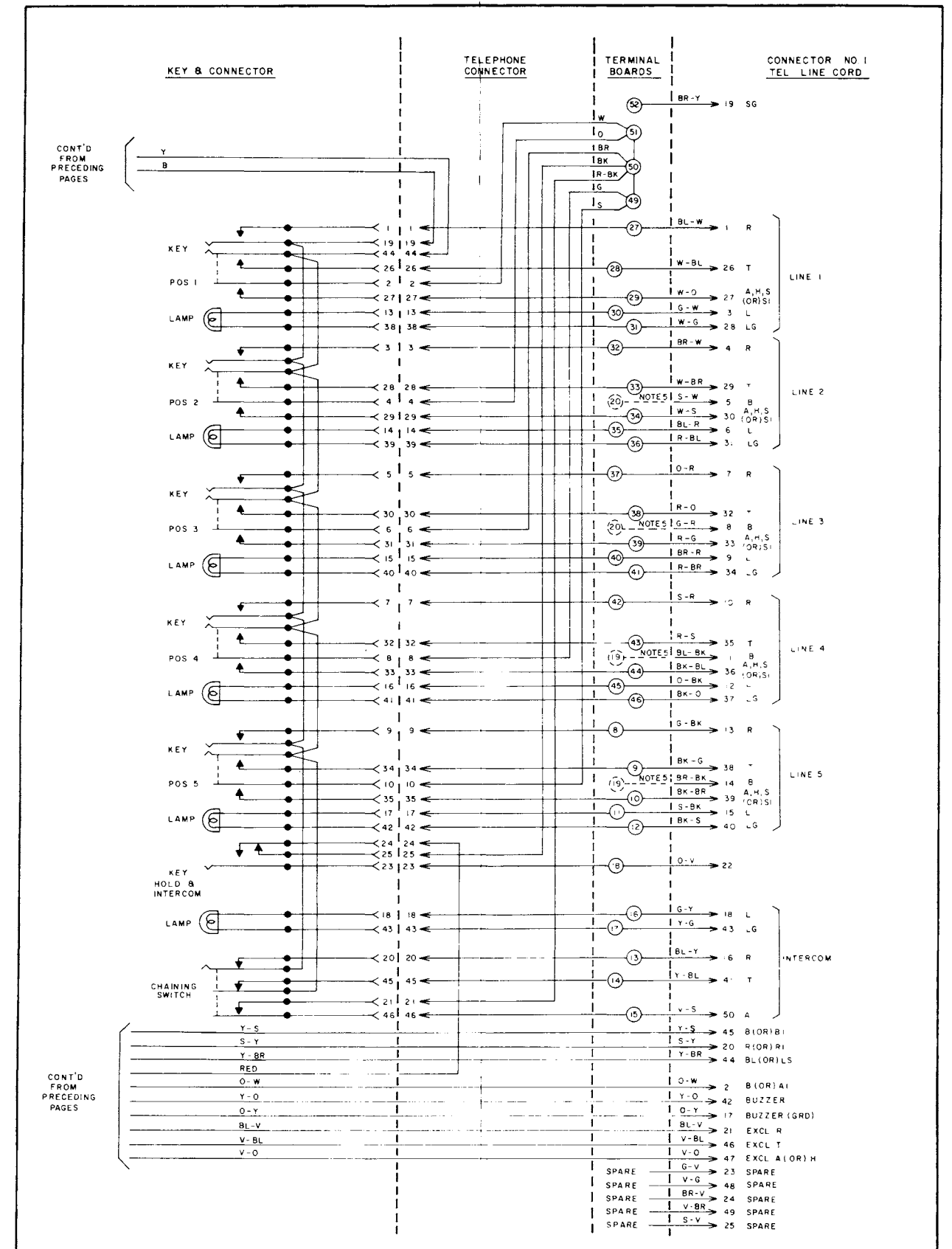
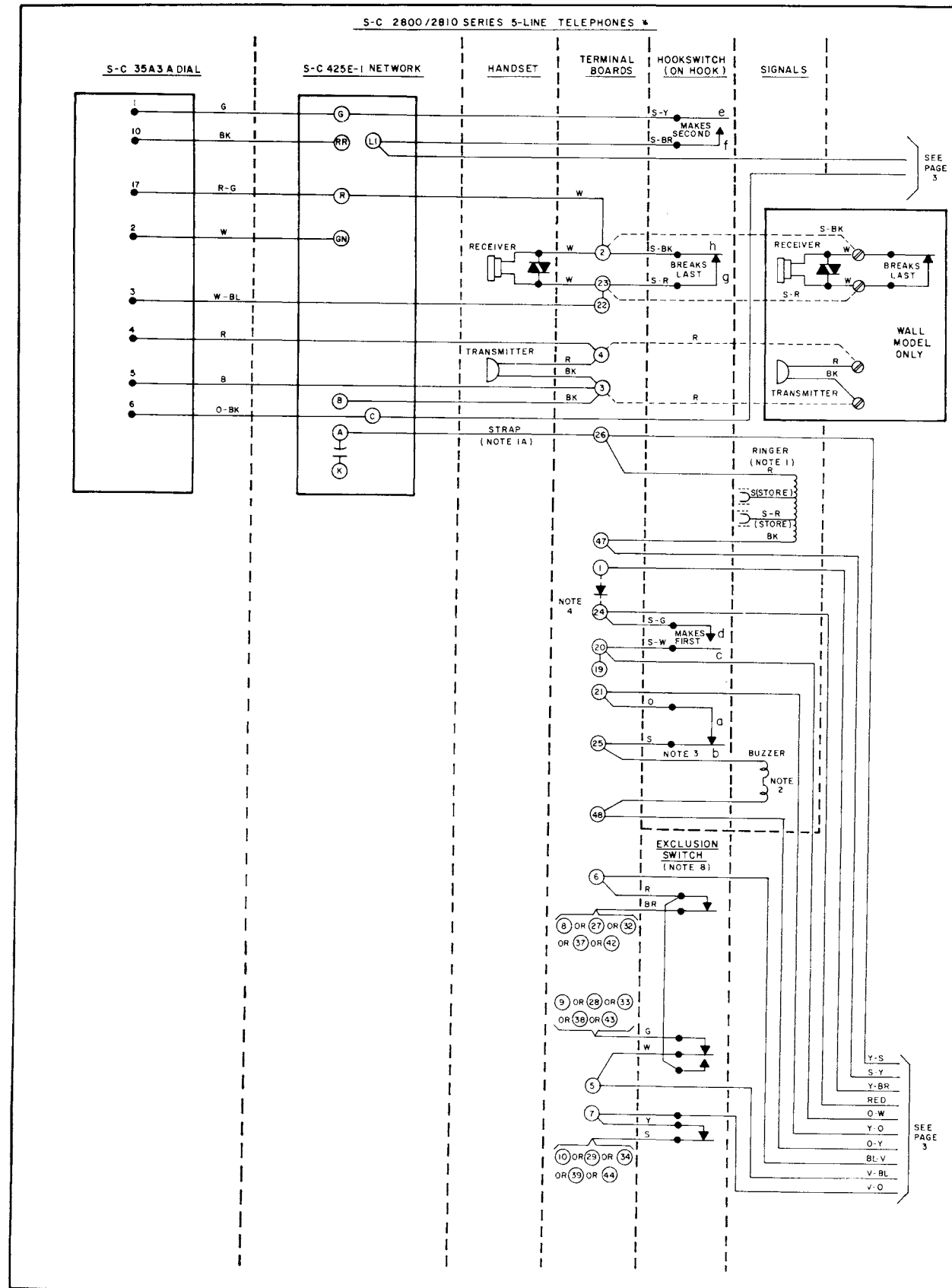


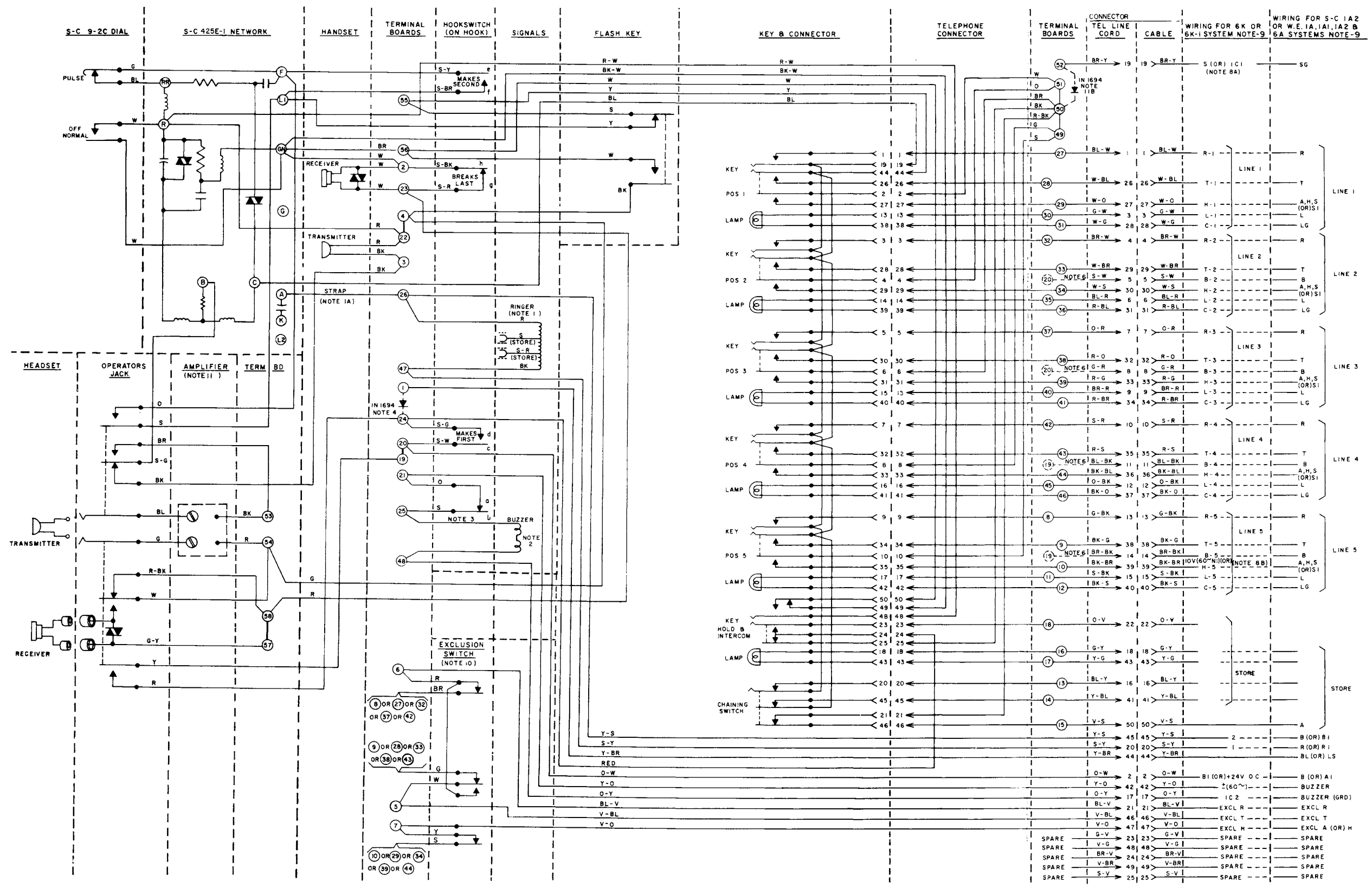
Figure FO-1. S-C 5-Line Telephone, Wiring Diagram (Sheet 1 of 2)

STROMBERG-CARLSON 1807-5B5 TELEPHONE WIRING DIAGRAM

NOTES:

1. When a COMMON SIGNAL is required using standard ringing voltage, the following options are available.
- A. S-C series 20 straight line ringer. Order package assembly 702100-244, and wire as shown. Exception-when capacitor is required to block D.C. from ringer, connect red ringer wire to network terminal K and strap terminal 26 to network terminal A.
 - B. S-C series 20 ringer for 60 Hz. Order package assembly 702100-260. Connect black wire to terminal 47 and red wire to terminal 26. Do not wire in capacitor A-K.
 - C. Tone ringer. Order package assembly 202100-488 and wire per instruction sheet in package assembly using terminals 26 and 47.
 - D. S-C No.2A buzzer. Connect red wire to terminal 47 and brown wire to terminal 26.
2. When an INTERCOM BUZZER is required, the following options may be used.
- A. Type 7 (A.C. or D.C.) buzzer. Requires mounting plate package assembly 206289-671.
 - B. S-C No.Q-20 buzzer. Mounted per instruction sheet 300981-191
3. For INTERCOM BUZZER to be audible when off-hook, move buzzer lead from terminal 25 to 21.
4. When telephone is used with W.E. BUSY LAMP FIELD, move slate-green hookswitch wire from terminal 24 to 1 and add 1 IN1694 diode (S-C part no. 202852-138) as shown.
5. When telephone is used with S-C 1A2 BUSY STATION NUMBER DISPLAY, order diode package assembly 206286-451 and change wiring per instruction sheet in package assembly.
6. When "B" LEADS are NOT REQUIRED, "B" lead wires may be used as spares or multipled together as A1 leads on terminals 19 and 20.
7. When a KEY POSITION is used as a SIGNALING POSITION, remove screw from key plunger to make key position non-locking and make the following wiring change.
- A. Position 1 - move white wire from terminal 51 to 52.
 - B. Position 2 - move orange wire from terminal 51 to 52.
 - C. Position 3 - move brown wire from terminal 50 to 52.
 - D. Position 4 - move green wire from terminal 49 to 52.
 - E. Position 5 - move slate wire from terminal 49 to 52.
8. To use telephone with 6K-1 SYSTEM.
- A. Strap terminals IC1 and IC2.
 - B. When position 5 is used as line 5 connect BK-BR to H5. When position 5 is used as a signaling position connect to 10V (60~N1) and remove screw from key plunger to make key position non-locking.
9. To convert telephone for use with S-C 6K or W.E. 1A SYSTEMS, the following changes are required. (No changes are required for S-C 6K-1 or W.E. 1A1 Systems).
- | | |
|--|---|
| <ul style="list-style-type: none">A. Remove all wires except yellow from terminals 19 and 20 and store.B. Move slate-yellow hookswitch wire from terminal F to 19.C. Move white key wire from terminal GN to 20.D. Move black-white key wire from terminal GN to F. | <ul style="list-style-type: none">E. Remove black key wire from terminal 50 and store.F. Move red-white key wire from terminal R to 50.G. Remove orange wire from terminal F, slate wire from terminal L1 and store. Move red operators jack wire from terminal 24 to L1. |
|--|---|
10. When MANUAL EXCLUSION feature is desired, order package assembly 206289-781 and wire as shown. Use terminals 27, 28 and 29 for exclusion on line 1; 32, 33 and 34 for exclusion on line 2; 37, 38 and 39 for exclusion on line 3; 42, 43 and 44 for exclusion on line 4; or 8, 9 and 10 for exclusion on line 5. Connect BL-V, V-BL and V-O conductors of cable to excluded line of excluded stations.
11. AMPLIFIER is required when headset is used. Order package assembly 206290-761.

Figure FO-2. S-C 1807-5B5(LR)00 5-Line Telephone
Wiring Diagram (Sheet 1 of 2)



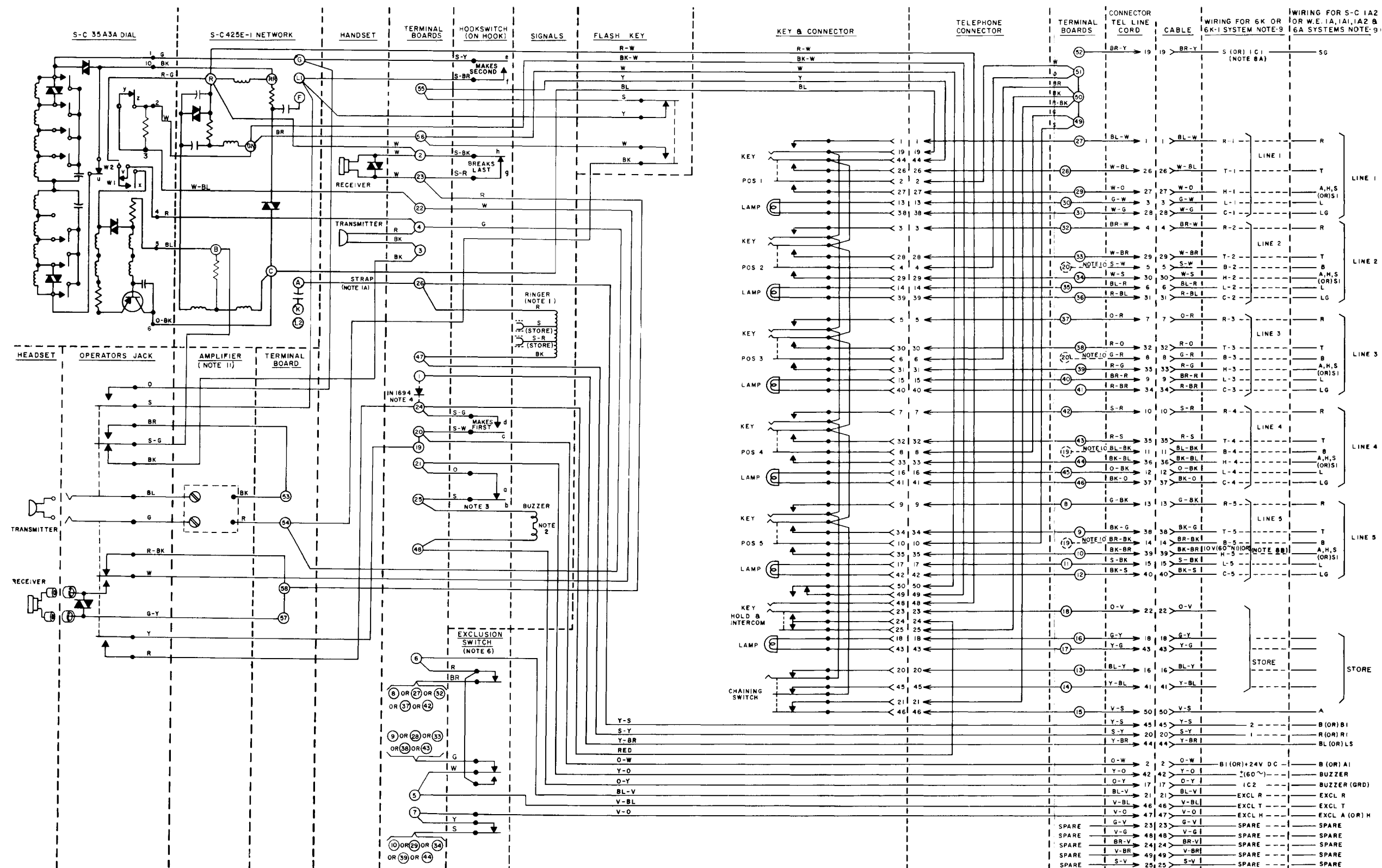


Figure FO-3. S-C 2807-5B5(LR)00 5-Line Telephone
Wiring Diagram (Sheet 2 of 2)

STROMBERG-CARLSON 2807-5B5 TELEPHONE WIRING DIAGRAM

NOTES:

1. When a COMMON SIGNAL is required using standard ringing voltage, the following options are available.
 - A. S-C series 20 straight line ringer. Order package assembly 702100-244 and wire as shown. Exception when capacitor is required to block D.C. from ringer, connect red ringer wire to network terminal K and strap terminal 26 to network terminal A.
 - B. S-C series 20 ringer for 60 Hz. Order package assembly 702100-260. Connect black to terminal 47 and red to terminal 26. Do not wire in capacitor A-K.
 - C. Tone ringer. Order package assembly 202100-488 and wire per instruction sheet in package assembly using terminals 26 and 47.
 - D. S-C No. 2A buzzer. Connect red wire to terminal 47 and brown wire to terminal 26.
2. When an INTERCOM BUZZER is required, the following options may be used.
 - A. Type 7 (A.C. or D.C.) buzzer. Requires mounting plate package assembly 206289-671.
 - B. S-C No. Q-20 buzzer. Mounted per instruction sheet 300981-191
3. For INTERCOM BUZZER to be audible when off-hook, move buzzer lead from terminal 25 to 21.
4. When telephone is used with W.E. BUSY LAMP FIELD, move slate-green hookswitch wire from terminal 24 to 1 and add 1N1694 diode (S-C part no. 202852-138) as shown.
5. When telephone is used with S-C 1A2 BUSY STATION NUMBER DISPLAY, order diode package assembly 206286-451 and change wiring per instruction sheet in package assembly.
6. When MANUAL EXCLUSION feature is desired, order package assembly 206289-781 and wire as shown. Use terminals 27, 28 and 29 for exclusion on line 1; 32, 33 and 34 for exclusion on line 2; 37, 38 and 39 for exclusion on line 3; 42, 43 and 44 for exclusion on line 4; or 8, 9 and 10 for exclusion on line 5. Connect BL-V, V-BL and V-O conductors of cable to excluded line of excluded stations.
7. When a KEY POSITION is used as a SIGNALING POSITION, remove screw from key plunger to make key position non-locking and make the following wiring change.
 - A. Position 1 - move white wire from terminal 51 to 52.
 - B. Position 2 - move orange wire from terminal 51 to 52.
 - C. Position 3 - move brown wire from terminal 50 to 52.
 - D. Position 4 - move green wire from terminal 49 to 52.
 - E. Position 5 - move slate wire from terminal 49 to 52.
8. To use telephone with 6K-1 SYSTEM
 - A. Strap terminals IC1 and IC2.
 - B. When position 5 is used as line 5 connect BK-BR to H5. When position 5 is used as a signaling position, connect to 10V (60~NI) and remove screw from key plunger to make key position non-locking.
9. To convert telephone for use with S-C6K or W.E. 1A SYSTEMS, the following changes are required. (No changes are required for S-C 6K-1 or W.E. 1A1 Systems).
 - A. Remove all wires except yellow from terminals 19 and 20 and store.
 - B. Move slate-yellow hookswitch wire from terminal G to terminal 19.
 - C. Move white key wire from terminal GN to terminal 20.
 - D. Move black-white key wire from terminal GN to terminal G.
 - E. Move black key wire from terminal 50 and store.
 - F. Move red-white key wire from terminal R to terminal 50.
 - G. Remove orange wire from terminal G, slate wire from terminal L1 and store. Move red operators jack wire from terminal 24 to L1.
10. When "B" leads are NOT REQUIRED, "B" lead wires may be used as spares or multiplied together as A1 leads on terminals 19 and 20.
11. When AMPLIFIER is required, order package assembly 206290-761 and wire as shown. When AMPLIFIER is not required, connect BL operator's jack wire to terminal 53 and G operator's jack wire to terminal 54.
12. When POLARITY GUARD is REQUIRED for TONE DIAL SIGNALING under reverse battery conditions order package assembly 703016-852.