

## REFERENCE

### 751-TYPE TELEPHONE SETS

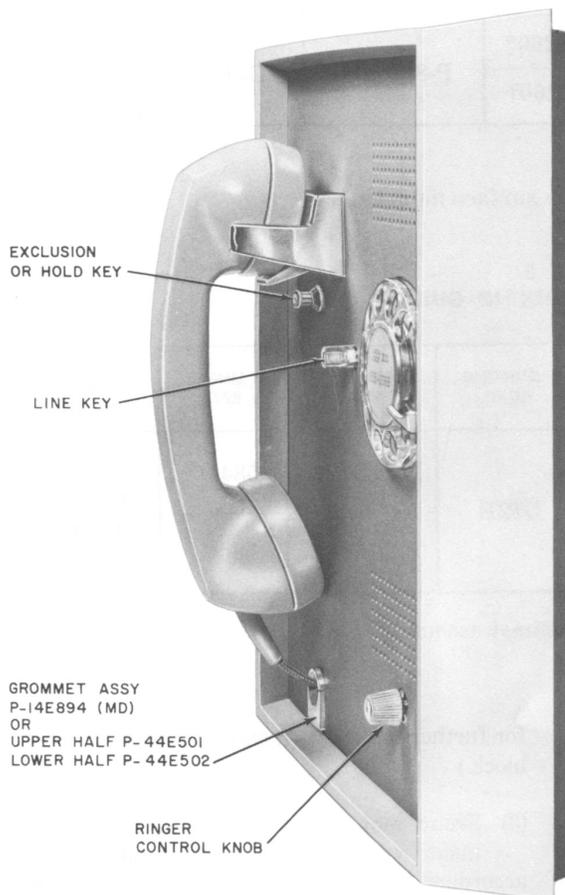


Fig. 1—751-Type Telephone Set Installed in D-180071  
or D-180072 Kit of Parts

#### 1. GENERAL

1.01 This section contains identification, installation, maintenance, and connection information for the 751-type telephone sets. This information was formerly contained in Sections 502-750-100 and 502-750-401 which are hereby canceled.

#### 2. IDENTIFICATION

##### Ordering Guide

2.01 Set, Telephone, 751A-58 (MD), 751B-60 (MD), 751C-58, 751D-60

*Note:* —58 includes white handset, aluminum mat, and light gray plastic frame. —60 includes light beige handset, copper mat, and light beige plastic frame.

2.02 *Replaceable set components are listed in Tables A and B.*

2.03 *Associated Apparatus or Equipment (ordered separately):*

- Apparatus Box, 113-type or 114A (recessed mounting)
- D-180071 or D-180072 Kit of Parts (surface mounting)
- Connecting Block, 71B

2.04 *Loose Parts Furnished With Set:*

- Cord, Mounting, D12E
- P-160828 Mounting Screws (4)
- P-25E803 Card Retainer

##### Design Features

2.05 The 751-type telephone sets may be recess mounted or adapted for surface mounting using a D-180071 or D-180072 Kit of Parts.

2.06 Component parts of these sets are mounted on a steel panel. An aluminum mat retained by a plastic frame covers the panel and gives the installation a finished appearance.

**TABLE A**  
**COMPONENT ORDERING GUIDE (COLOR SIGNIFICANT)**

TELEPHONE SET	MAT	FRAME (MAT)	LINE SWITCH	HANDSET
751A-58	P-26E928	P-84A261*	P-89A461	G3K-58
751C-58		P-89C261†		
751B-60	P-26E929	P-84A260*	P-89A460	G3K-60
751D-60		P-89C260†		

\* Furnished with telephone set.

† Furnished with kit of parts used for surface mounting.

**TABLE B**  
**COMPONENT ORDERING GUIDE**

TYPE TELEPHONE SET	DIAL	RINGER	CORD REEL	MOUNTING CORD	EXCLN KEY	LINE KEY	GROMMET (HANDSET CORD)
751A and B	8A	D1E	3A or 3B	D12E	P-24E121	584D	P-44E501* (Upper Half)
751C and D					P-26E909	584G	P-44E502* (Lower Half)

\* These components replace the P-14E894 (MD) grommet assembly used in early production 751-type sets.

### Application

**2.07** 751A (MD) and 751B (MD) telephone sets can be used on CO or PBX line circuits and 751C and 751D telephone sets on CO, PBX, and 1A1 or 1A2 KTS.

### 3. INSTALLATION

#### Apparatus Boxes

**3.01** Refer to Division 463 for information on installing apparatus boxes.

**3.02** To install telephone set in box:

- (1) Remove cover of apparatus box, if so equipped (see section covering apparatus boxes).
- (2) Install 71B connecting block (ordered separately) to mounting bracket located in upper right corner of apparatus box. (Consult Division 461

for further information on this type of connecting block.)

- (3) Secure mounting cord stayhook and terminate inside wire or cable and mounting cord in accordance with appropriate connection figure.
- (4) Remove plastic mat retainer frame and mat from telephone set.
- (5) Position panel on lower edge of apparatus box with top tilted outward. Connect mounting cord plug to connector on set panel. Dress mounting cord to avoid interference with telephone set components. Align panel of set with mounting brackets on box and secure with four mounting screws furnished with set.
- (6) Position mat on panel and secure using the mat retainer frame. If necessary, the projecting tabs may be adjusted to insure a snug fit.

**D-180071 or D-180072 Kit of Parts**

**3.03** To surface mount telephone set:

(1) The D-180071 (light gray frame) or D-180072 (light beige frame) Kit of Parts, ordered separately, permits mounting these sets on the surface of a wall (Fig. 2).

(2) The base pan assembly is arranged for mounting on a 63A or KS-19407L1 bracket or a standard electrical outlet box.

*Note:* Additional mounting holes in the base pan assembly provide for securing to wall surface using nails or screws as required.

(3) After securing the base pan to the wall fasten the 71B connecting block (ordered separately) to the bracket provided. Terminate inside wire or cable and telephone set mounting cord as shown in appropriate connection figure.

(4) Connect mounting cord plug to connector on set panel. Dress mounting cord to avoid interference with telephone set components.

(5) Align panel of set with mounting screws furnished with the set.

(6) Position mat on panel and secure using plastic frame (P-89C260 or P-89C261) from kit of parts.

*Note:* The frame furnished with the telephone set is not required for this installation.

**Installation of Cold-Cathode Tube**

**3.04** A 425A or 426A cold-cathode electron tube may be required to provide selective or semiselective ringing service when set is installed for 4- or 8-party service. The tubes are not furnished with the set and must be ordered and installed separately.

**3.05** To install in an apparatus box, obtain a 1/4-inch Tinnerman clamp and a No. 10 by 3/4-inch long self-tapping screw. Secure the clamp to the tube base using the mounting screw furnished with the tube. Insert the self-tapping screw through the cable clamp loop and fasten tube to the apparatus box using an existing nailing hole or a hole drilled at required location (Fig. 3).

**3.06** To install on the base pan assembly, secure the tube to an existing nailing hole using the mounting screw furnished with the tube (Fig. 4).

**3.07** Use M1W cords or equivalent and D-161488 connectors to extend tube leads sufficiently to reach terminal block. Make connections as shown in appropriate connection table.

*Note:* Select a location for the tube which will not interfere with telephone set components when the panel set is installed.

**4. MAINTENANCE**

**4.01** Work done on customer's premises should be limited to replacement of accessible parts which are available through supply channels; refer to ordering guide tables.

*Note:* Early production 751-type sets were equipped with a three piece metal grommet assembly (Fig. 5). It is recommended that the metal grommet assembly be replaced when any maintenance is performed on these sets. (See Table B, Fig. 5 and 6.)

**4.02** Ringers, handsets, dials, etc. used in these sets should be maintained in accordance with section covering the particular item.

**4.03** The exterior of these sets should be clean and not marred or chipped. The vinyl-faced mat may be cleaned with a water-dampened KS-2423 or equivalent cloth. Replace defective mat as follows:

- (1) Grasp mat retainer frame at top, lift upward and out to release frame from panel of set.
- (2) Remove handset from hook of set.
- (3) Pull out handset cord to allow working slack.
- (4) Remove mat from face of panel.
- (5) Remove grommet from mat as shown in Fig. 6.
- (6) Install grommet in new mat by reversing procedure used in removal.
- (7) Position mat on panel and secure using the mat retainer frame.

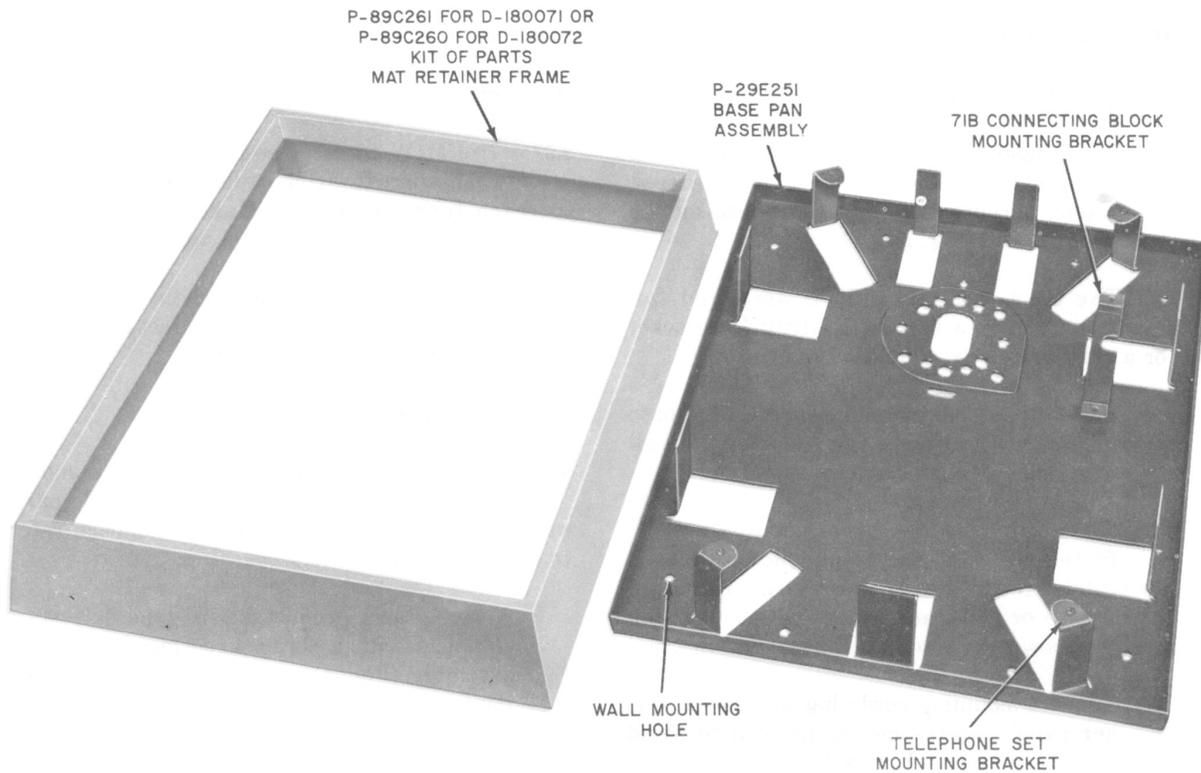


Fig. 2—D-180071 or D-180072 Kit of Parts For Surface Mounting

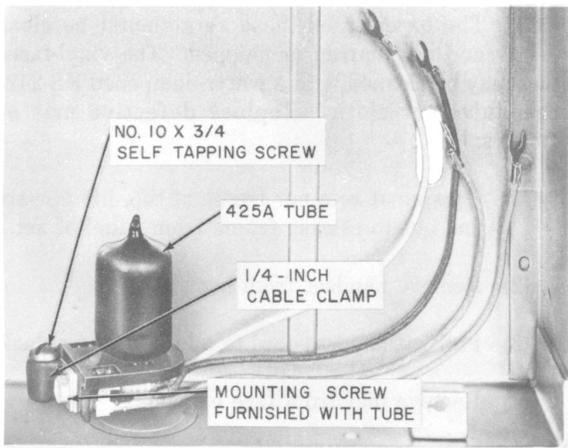


Fig. 3—Installation of Cold-Cathode Tube in Apparatus Box

4.04 To test the cord reel, pull the handset cord out to its maximum length. With the cord maintained perpendicular to the panel, the cord should retract fully. Any twists in the cord should be removed before making test.

4.05 Replace the cord reel if the cord will not retract or if the cord is frayed, kinked, or noisy. Field maintenance of the cord reel or replacement of the cord is not recommended.



*The 3A cord reel shall be used in all locations where the telephone set is subject to temperatures below 40 degrees F. When the telephone set is not subjected to temperatures below 40 degrees F, the 3B cord reel shall be used.*

4.06 The ringer volume control should operate without restriction when the knob is turned. Replace set if the control mechanism is worn or defective.

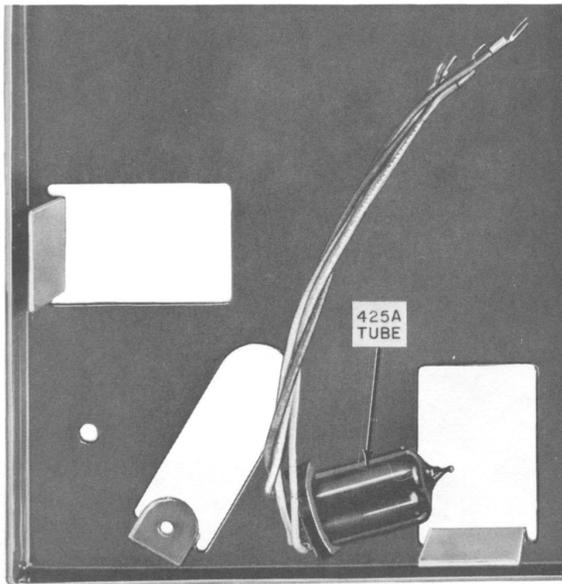


Fig. 4—Installation of Cold-Cathode Tube on Base Pan Assembly

TABLE C  
LINE CONNECTIONS

LEAD		71B CONN. BLOCK TERMINAL	D12E MTG CORD
1st Line	R	1	BL-W
	T	2	W-BL
	A	3	R-BL
2nd Line	R	4	O-W
	T	5	W-O
	A	6	S-W
Signal	S	7	W-S
Excluded Station Line	A	8	BL-R
	ER	9	W-G
	ET	10	G-W
Ground	A1/SG	11	W-BR
	GRD	12	BR-W

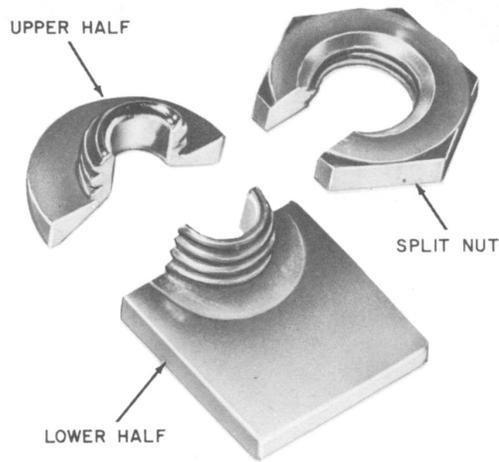


Fig. 5—P-14E894 (MD) Grommet Assembly

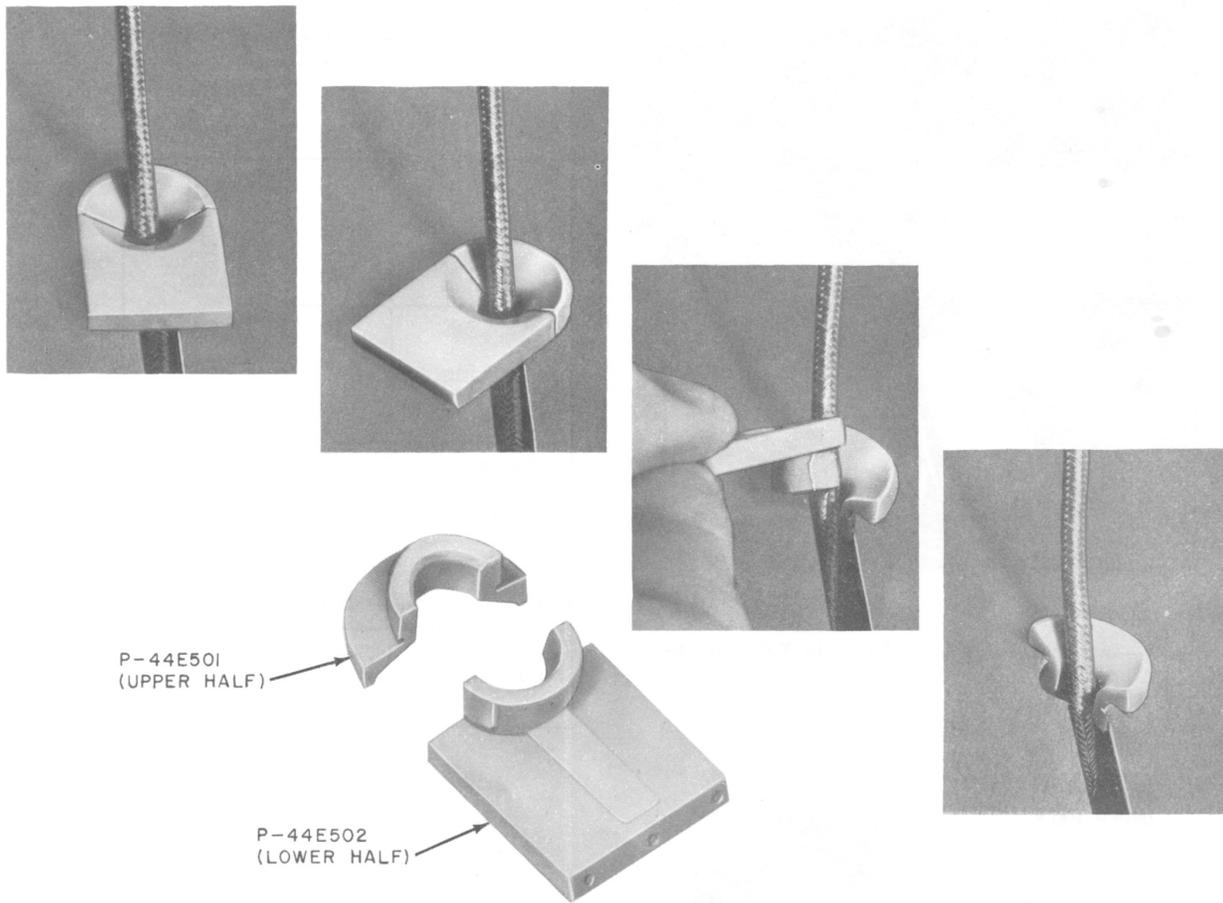


Fig. 6—Removal of Handset Cord Grommet

**TABLE D**  
**RINGER CONNECTIONS—751A (MD) AND 751B (MD) TELEPHONE SETS**

WIRE OR LEAD	COLOR	INDIV OR BRIDGED (NOTE 1)			RING PARTY (NOTE 1)			TIP PARTY NO INDENT GRD (NOTE 1)			TIP PARTY WITH IDENTIFICATION GROUND											
											NORMAL CONNECTIONS						RINGER COIL REVERSAL					
											1000Ω			2650Ω			1000Ω			2650Ω		
											TB1	TB3	NET.	TB1	TB3	NET.	TB1	TB3	NET.	TB1	TB3	NET.
Ringer (Note 1)	R	1			1			2			SR			E2			E2				11	
	S-R	SR			SR			SR			E2			11			SR			E2		
	S			K			K			K	E2			SR				11		E2		
	BK	2				11			11			11		E2			E2				SR	
Line Switch	S	E2			E2			E2					K			K			K			K
	S-Y		7			7			7		2			2			2			2		
Strap	BK	E2 ↕ E2			E2 ↕ E2			E2 ↕ E2			E2	→	B	E2	→	B	E2	→	B	E2	→	B
<b>751C AND 751D TELEPHONE SETS</b>																						
		TB1		NET.	TB1		NET.	TB1		NET.	TB1		NET.	TB1		NET.	TB1		NET.	TB1		NET.
Ringer (Note 1)	R	1			1			2					K			B			B	12		
	S-R			L1			L1			L1			B*	12					K*			B*
	S			K			K			K			B			K	12					B
	BK	2			12			12			12					B*			B*			K
Strap	S-R			A ↕ L1			A ↕ L1			A ↕ L1	2	→	A	2	→	A	2	→	A	2	→	A

\* Use M1W Cord or equivalent and D-161488 connectors to extend leads as necessary.

**Notes:**

1. To silence ringer permanently for all classes of service: connect ringer leads in the normal manner for the class of service involved and move the S-R strap lead from terminal A of network to terminal SR of TB1 (751A/B) or terminal L1 of network (751C/D).
2. 751C and 751D, leads connected to terminals 3 through 12 of TB1 were connected to terminals 3 through 12 of TB2 in early model sets.

**TABLE E  
RINGER AND TUBE CONNECTIONS FOR SELECTIVE RINGING SERVICE**

WIRE OR LEAD	COLOR	751A AND 751B TELEPHONE SETS												751C AND 751D TELEPHONE SETS								
		NEGATIVE (-) PARTIES						POSITIVE (+) PARTIES						NEGATIVE (-) PARTIES				POSITIVE (+) PARTIES				
		RING (1 AND 5)			TIP (2 AND 6)			RING (3 AND 7)			TIP (4 AND 8)			RING (1 AND 5)		TIP (2 AND 6)		RING (3 AND 7)		TIP (4 AND 8)		
		TB1	TB3	NET.	TB1	TB3	NET.	TB1	TB3	NET.	TB1	TB3	NET.	TB1	NET.	TB1	NET.	TB1	NET.	TB1	NET.	
Ringer	R			G			G			G			G		L1		L1		L1		L1	
	S-R	SR			SR			SR			SR			SR		K		K		K		K
	S			K			K			K			K		A		A		A		A	
	BK			G			G			G			G		L1		L1		L1		L1	
Line Switch	S	E2			E2			E2			E2											
	S-Y		7			7			7			7										
Strap	BK	E2 ↕ E2			E2 ↕ E2			E2 ↕ E2			E2 ↕ E2											
426A Tube (3-element) Notes 1, and 2	R	2			1			1				11		2		1		1		2		
	BK	SR			SR			SR			SR			K		K		K		K		
	Y	1			2				11		2			1		2		12		12		
Strap*			11 ↔ G		11 ↔ G			1 ↔ G		1 ↔ G			12 ↔ L1		12 ↔ L1		1 ↔ L1		2 ↔ L1			
425A Tube (4-element) Notes 1, and 3	R	2								G			G			1		1		2		
	BK		11			11				K			K	2		12		K		K		
	Y			K			K		11			11		2	K		K		12		12	
	G	1			2			2			1			1		2		2		1		
Strap*			1 ↔ G		1 ↔ G			1 ↔ G		2 ↔ G			1 ↔ L1		2 ↔ L1		1 ↔ L1		2 ↔ L1			

\* Use M1W cord or equivalent and D-161488 connectors to extend tube leads as necessary.

**Notes:**

1. For additional information on inductive noise and cold-cathode electron tubes, see section on inductive noise.
2. For negative stations in offices without ANI R lead from tube may be connected to terminal 11 of TB2 (751A/B), terminal 12 of TB2 (751C/D), or G of networks if ringer operation is marginal.
3. Use four element (425A) tubes in cases of severe inductive noise.
4. 751C and 751D, leads connected to terminals 3 through 12 of TB1 were connected to terminals 3 through 12 of TB2 in early model sets.

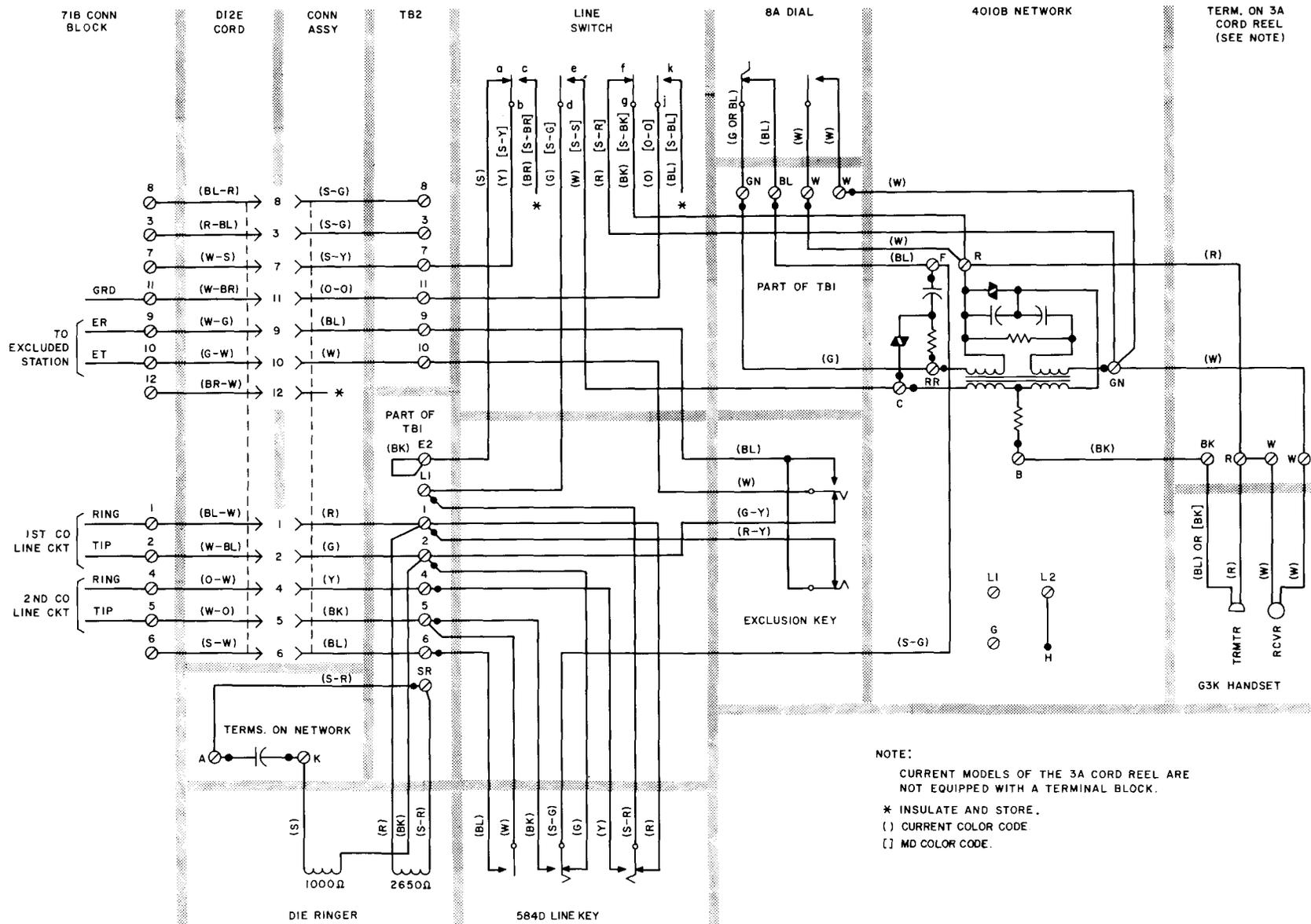


Fig. 7—751A (MD) and 751B (MD) Telephone Set, Connections

**TABLE F**  
**751C AND 751D TELEPHONE SETS—CONNECTIONS FOR SECRETARIAL SERVICE, SIGNALING, AND HOLD (NONKEY SYSTEM)**

APPARATUS	LEAD	REMOVE FROM TERMINAL		CONNECT TO TERMINAL TB1
		TB1	NET.	
Line Switch	Y	11	G	*
	BR			*
Exclusion Key	BR	9		1
	W	10		2
	BK	2		*
	Y	1		*
	BL	9		*
	S	3		*
584G Line Key	O	6	G	10
	W-O			2
	O-BK	3		*
	V			1
	S			9
	W	11		6

**Note:** Leads connected to terminals 3 through 12 of TB1 were connected to terminals 3 through 12 of TB2 in early model sets.

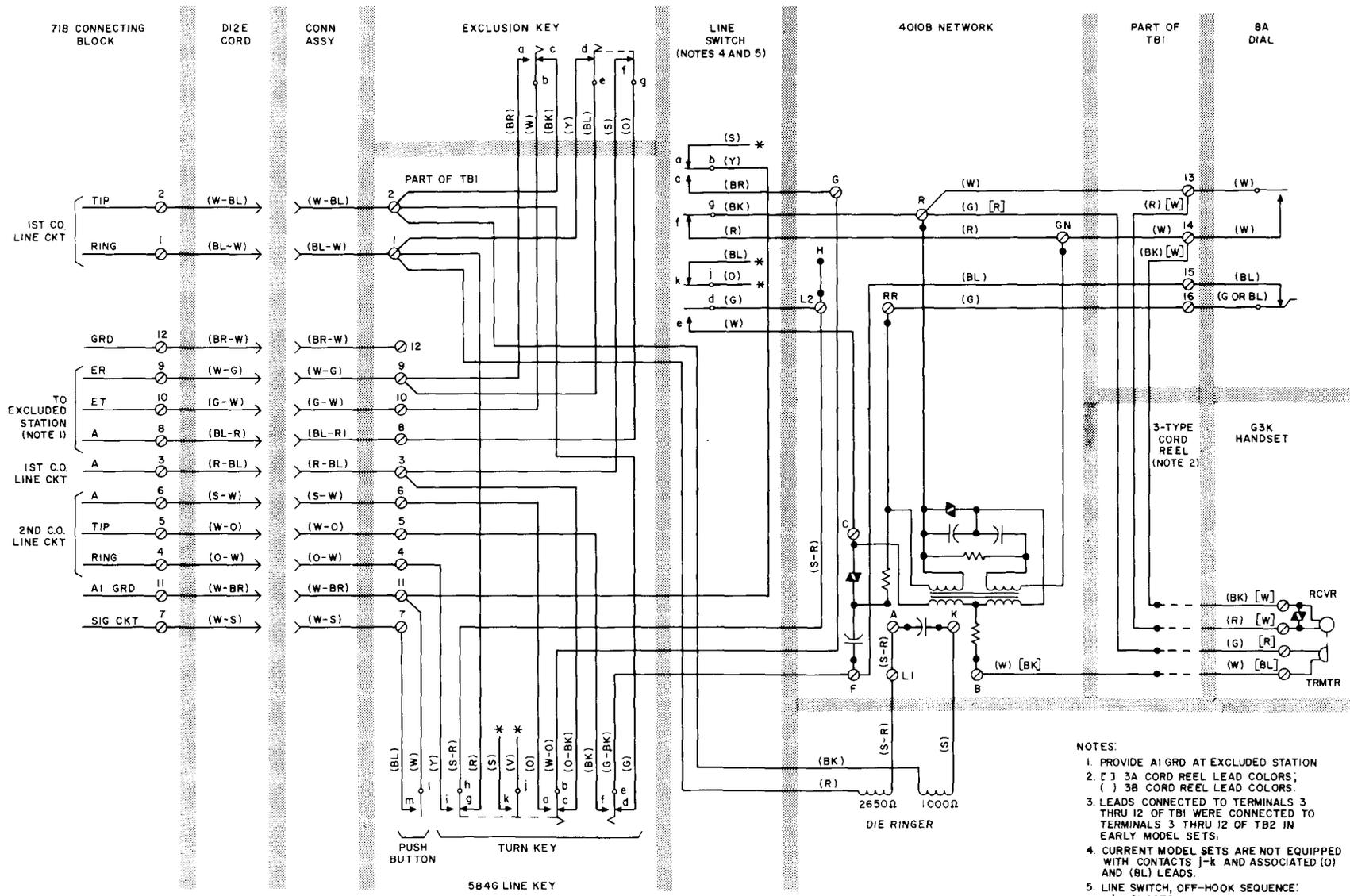
\* Insulate and store.

**TABLE G**  
**751C AND 751D TELEPHONE SETS—CONNECTIONS FOR 1-LINE PICKUP, SIGNALING, AND CUTOFF FEATURE FOR EXTENSION STATION OR EXTERNAL RINGER**

APPARATUS	LEAD	REMOVE FROM TERMINAL		CONNECT TO TERMINAL	
		TB1	NET.	TB1	NET.
Line Switch	BR		G	3	
	G		L2	1	
Exclusion Key	BR	9			*
	W	10			*
	BK	2			*
	Y	1			*
	BL	9			*
	S	3			*
584G Line Key	O	8			*
	G-BK		F	2	*
	G	2			*
	O-BK	3			*
	W-O		G	3	*
	R	1			*
M1W Cord or Equivalent	S-R		L2	1	
	W	11		10	
	BL	7		9	
	STRAP			2	F

**Note:** Leads connected to terminals 3 through 12 of TB1 were connected to terminals 3 through 12 of TB2 in early model sets.

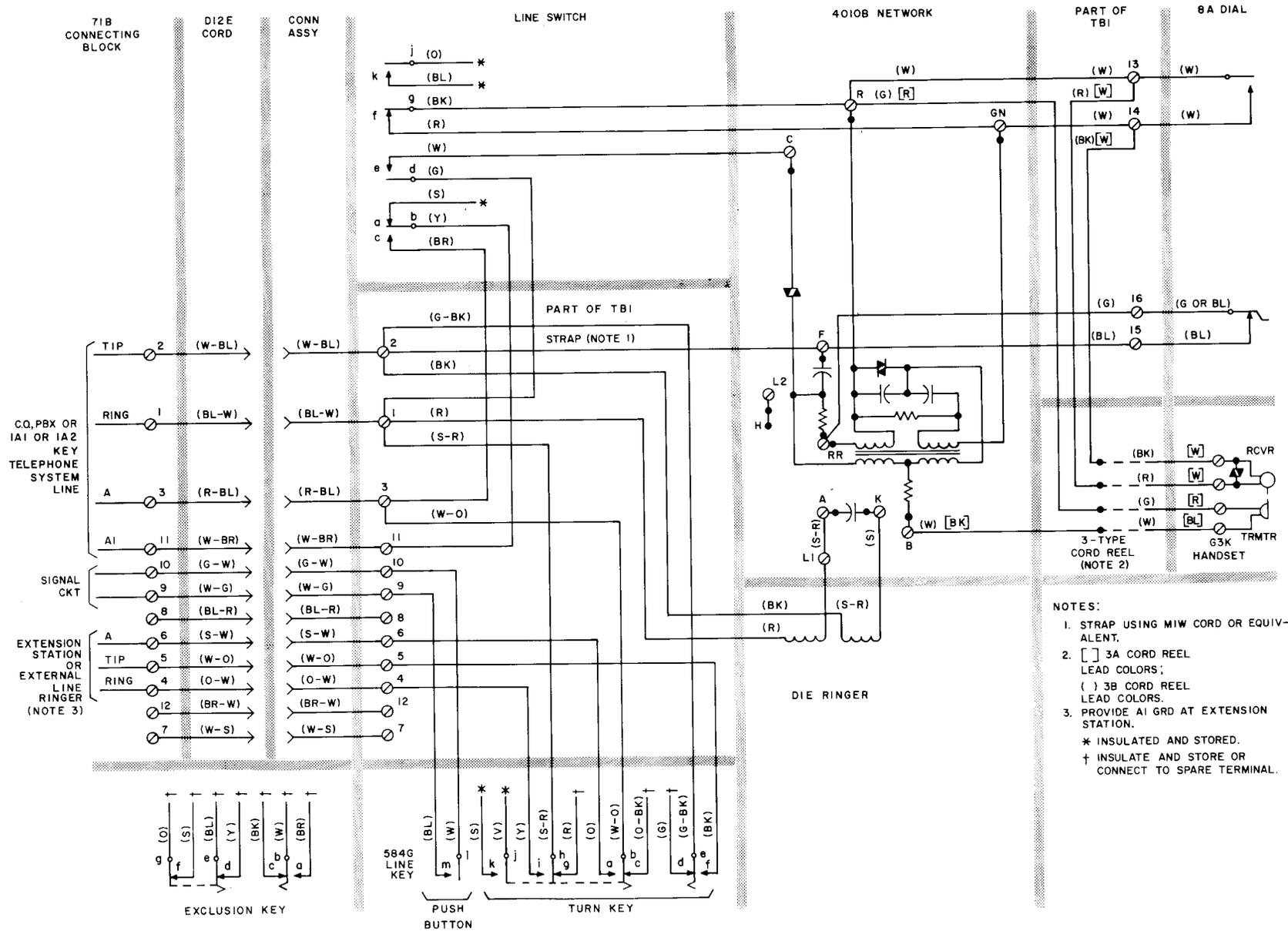
\* Insulate and store.



- NOTES:
1. PROVIDE A1 GRD AT EXCLUDED STATION
  2. [ ] 3A CORD REEL LEAD COLORS, ( ) 3B CORD REEL LEAD COLORS.
  3. LEADS CONNECTED TO TERMINALS 3 THRU 12 OF TBI WERE CONNECTED TO TERMINALS 3 THRU 12 OF TB2 IN EARLY MODEL SETS.
  4. CURRENT MODEL SETS ARE NOT EQUIPPED WITH CONTACTS j-k AND ASSOCIATED (O) AND (BL) LEADS.
  5. LINE SWITCH, OFF-HOOK SEQUENCE:  
bc CLOSES  
de CLOSES  
fg OPENS
- \* INSULATED AND STORED.

Fig. 8—751C and 751D Telephone Set Connections (Factory Wired)





- NOTES:
1. STRAP USING MIW CORD OR EQUIVALENT.
  2. [ ] 3A CORD REEL LEAD COLORS; ( ) 3B CORD REEL LEAD COLORS.
  3. PROVIDE A1 GRD AT EXTENSION STATION.
- \* INSULATED AND STORED.  
 † INSULATE AND STORE OR CONNECT TO SPARE TERMINAL.

Fig. 10—751C and 751D Telephone Set Connections for 1-Line Pickup, Signaling, and Cutoff Feature for Extension Station or External Ringer