

REFERENCE

2502-, 2510-, 2511-, 2515-, 2555-, AND 2558-TYPE TELEPHONE SETS

1. GENERAL

1.01 This section contains identification, installation, maintenance, and connection information for the 2502-, 2510-, 2511-, 2515-, 2555-, and 2558-type telephone sets. This information was formerly found in Sections 502-515-121, 502-515-125, 502-515-438, 502-515-440, 502-515-441, 502-515-445, 502-515-447, and 502-515-448 which are hereby canceled.

2. IDENTIFICATION

Purpose

2.01 Desk- and wall-type telephone sets having 12-button TOUCH-TONE® dials, exclusion or hold keys and/or 2-line pickup keys.

Ordering Guide

2.02 *Basic Telephone Sets:*

Set, Telephone, 2502B-* Single line with exclusion

Set, Telephone, 2510F-* Two-line/signaling

Set, Telephone, 2511F,H-* Two-line/signaling with exclusion and speakerphone

Set, Telephone, 2515B-* Two-line/signaling with hold

Set, Telephone 2555B-* Two-line/signaling with hold

Set, Telephone, 2558D-* Two-line/signaling with exclusion

*Add appropriate color suffix from Table A.

2.03 Replaceable components are listed in Table B.

2.04 *Replaceable Optional Components (ordered separately)*

● P-90D052 Guard Assembly (dial polarity guard/surge protector) 2502B, 2510F, 2511F and H, and 2515B, Table D

● P-90D053 Guard Assembly (dial polarity guard/surge protector) 2555B and 2558D, Table E

Application

2.05 For use with CO or PBX line circuits. Some sets may be used with 1A1 and 1A2 key telephone systems.

3. INSTALLATION

3.01 Desk-type sets are installed in accordance with standard procedures.

3.02 To install wall-type sets, proceed as follows:

(1) Using a KS-16750L2 releaser or equivalent, remove number card holder and number card.

(2) Loosen two captive screws located in the number card recess.

(3) Remove the housing.

(4) Secure base to flat surface using suitable fasteners. Connect inside wire to terminal strip as shown in appropriate connection figure.

(5) Press housing into place and tighten captive screws.

(6) Replace number card.

(7) Replace number card holder by inserting one end in the recess. Apply slight pressure on the free end to cause an outward bow. Snap free end into recess.

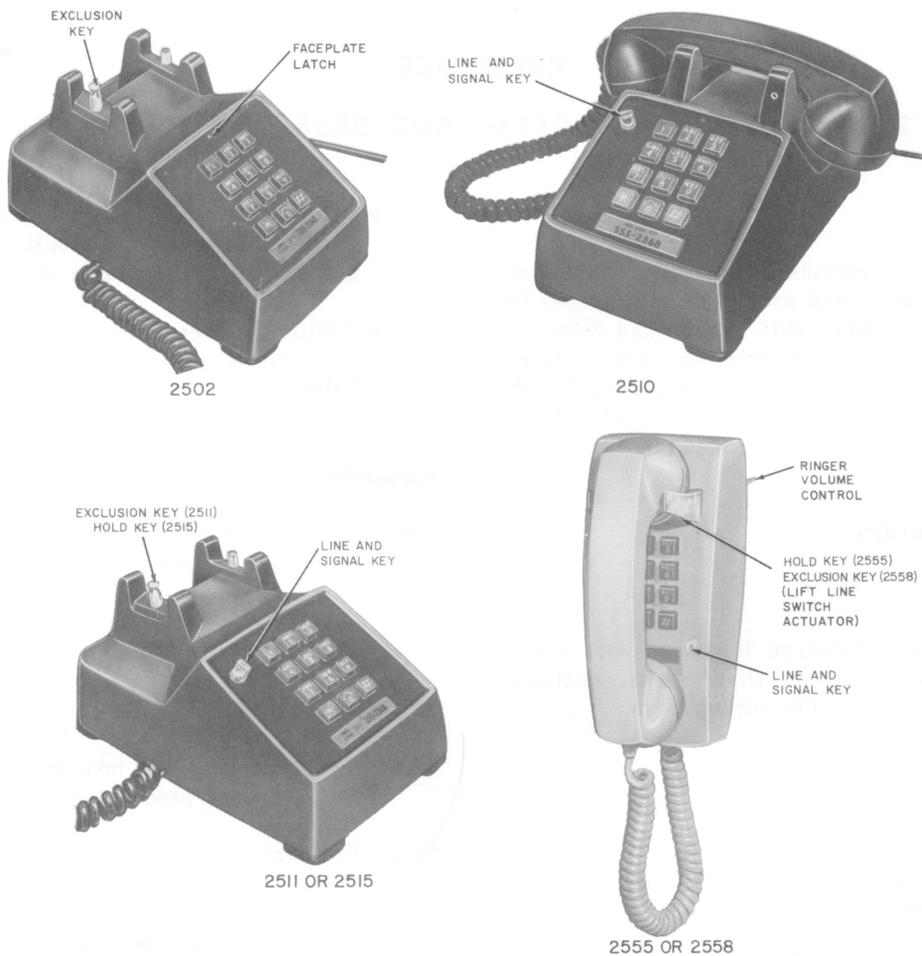


Fig. 1—2502-, 2510-, 2511-, 2515-, 2555-, and 2558- Type Telephone Sets

Polarity Guard (Optional, Ordered Separately)

Note: Polarity guards should be installed only when instructed by local administrative practices or procedures for end-to-end signaling purposes where battery-ground reversals are encountered.

3.03 To install polarity guard assembly in desk-type sets:

- (1) Remove set housing and loosen right-hand dial mounting screw.
- (2) Mount guard assembly to the dial upright with the component side of the board oriented to the rear of the set. The bracket is placed

under the dial mounting screw with its lip over the top of the dial upright.

- (3) Tighten dial mounting screw.
- (4) Connect polarity guard in accordance with the appropriate connection table.
- (5) Replace set housing.

3.04 To install polarity guard assembly in wall-type sets:

- (1) Remove set housing (see 3.02). If set is mounted on wall surface, remove set to gain access to rear of baseplate.

TABLE A
COLOR ORDERING GUIDE*

TEL SET, MTG CORD, HOUSING, HANDSET COLOR		COORDINATED FACEPLATE† COLOR	
Black	-03	Charcoal	-70
Ivory	-50	Muted Ivory	-80
Moss Green	-51	Lt. Green	-71
Red	-53	Muted Red	-69
Pastel Yellow	-56	Lt. Yellow	-72
White	-58	Lt. Gray	-73
Rose Pink	-59	Muted Pink	-74
Lt. Beige	-60	Muted Beige	-75
Lt. Gray	-61	Charcoal	-70
Aqua Blue	-62	Muted Blue	-76
Turquoise	-64	Muted Turquoise	-77

* Refer to Section 500-120-100 for promoted colors.

† Faceplates of same color as housing may be ordered separately (2502-, 2510-, 2511-, and 2515-type only).

- (2) Remove dial but do not disconnect dial leads.
- (3) From the rear of the baseplate, place two screws through the holes located below the ringer resonator. Place the guard assembly terminal board over the screws with its components facing the front of the set. Secure using two hex nuts furnished with the guard assembly.
- (4) Connect polarity guard in accordance with the appropriate connection section.
- (5) Replace dial.
- (6) Replace set (if removed from wall) and replace housing.

4. OPERATION

4.01 Exclusion or Hold Key: Pull up left-hand line switch plunger of desk-type sets or lift up line switch actuator (between arms of handset hanger) of wall sets to cutoff extension stations.

4.02 Line Pickup Key: Turnbutton portion of key. Turn to connect talking circuit to either of two lines as desired.

4.03 Signaling Key: Pushbutton portion of line pickup key. Depress to activate external signaling device, if provided.

4.04 Customer Instructions (2515B or 2555B):

If a call is received on one line and it is desired to hold the party while transferring to the other line:

- (1) Lift the hold key plunger and operate the line key to pick up second line (Fig. 1).
- (2) When call on second line is completed, operate line key back to first line position and depress hold key plunger.

Note: Failure to depress hold key plunger when a held line is reconnected will automatically place a hold on the unused line preventing its use for either incoming or outgoing calls. Reversal of this procedure (i.e. depressing the hold key before operating line key back to held line) will disconnect held line.

- (3) If the second line is to be held for pickup by an extension station, the hold key is left operated (lifted) until the extension is answered. After the extension handset is lifted, the hold key (first set) must be depressed to connect the talking path of the extension.

5. MAINTENANCE

5.01 Maintenance of 2500-series telephone sets consists of cleaning exterior surfaces, burnishing and adjusting key contacts, and replacing defective components.

5.02 Housings, handset, and dial pushbuttons can be cleaned with a clean KS-2423 cloth moistened with water. Do not use scouring powders or cleaners. Replace colored sets if cleaning procedures do not result in a satisfactory appearance.

5.03 Inspect exterior and interior surfaces of the set for obvious defects such as broken, loose, or displaced parts. Check for obstruction of moving parts or the presence of foreign material that may interfere with the proper operation of the set.

5.04 Check line and ground terminations and wiring dress before proceeding with maintenance procedures.

5.05 Maintenance of handsets, dials, and ringers is outlined in sections covering these components.

5.06 Networks and line switch assemblies are riveted to the baseplate and no attempt should be made to replace them in the field. If defective, replace complete telephone set.

5.07 Table C lists common troubles and their probable causes encountered with desk- or wall-type TOUCH-TONE sets. Also listed is recommended corrective action.

Exclusion or Hold Key and Plunger Unit



Do not perform any field maintenance other than cleaning contacts with a 265C tool.

5.08 The exclusion plunger shall:

- (1) Remain in operated position when pulled up to the full extent of its stroke.
- (2) Return to fully depressed position when the handset is placed on the cradle of desk-type sets or on the hook of wall-mounted sets.
- (3) Drop by its own weight from the mid position to the fully depressed position when the right plunger is depressed (desk-type sets only).

5.09 With set housing removed:

- (1) Normally closed contacts of exclusion switch shall have perceptible follow when the switch is operated manually.
- (2) Normally open contacts shall have a minimum separation of 0.015 inch; gauge by eye.

Turnbutton/Pushbutton Key



Adjust this key only if replacement of the complete telephone set is impracticable.

5.09 Use a 363 tool to adjust key. Be sure there is adequate light. Pay particular attention to turnbutton contact operating sequence. If any adjustment is made on the contact springs, recheck

all requirements applicable to the key. If springs cannot be adjusted, replace the telephone set.

5.10 Requirements of the key include:

- (1) The pushbutton shall operate freely in either turnbutton position and return to normal after being depressed to the limit of its stroke.
- (2) When plunger is fully depressed, there shall be perceptible clearance between bottom pushbutton contacts and set baseplate.
- (3) Contacts for turnbutton operation shall not be made or broken by operation of the plunger as a pushbutton.
- (4) The pushbutton contacts shall have a minimum separation of 0.030 inch. Gauge by eye.
- (5) It shall not be possible to make or break the contacts by any side thrust against the plunger in either the operated or unoperated position.
- (6) All springs, including those which make when the key is unoperated, shall have perceptible follow (approximately 0.010 inch).
- (7) All normally closed contacts shall break before any normally open contact makes.
- (8) Normally closed turnbutton contacts shall have a break of at least 0.015 inch. Normally open contacts shall have a break of at least 0.025 inch.

Plungers (Desk-Type Housings)

5.11 Plungers should move freely throughout entire travel without binding or squeaking. They are accessible from the underside of the housing when the handhold cover is removed.

5.12 Clean plungers with KS-2423 cloth moistened with KS-7860 petroleum spirits and lubricate with a No. 2 or softer graphite pencil. Replace housing if plungers do not move freely after cleaning.



KS-7860 petroleum spirits are flammable. Use safety precautions when handling.

Line Switch Assembly

Do not perform any field maintenance other than replacing cover, cleaning contacts, and lubricating bearing points.

5.13 Remove switch cover by depressing sides between thumb and index finger and tilting cover away from mounting.

5.14 Clean contacts with a 265C tool.

5.15 The operating bracket assembly of desk-type sets and the line switch operating assembly of wall-mounted sets should function without binding or squeaking.

5.16 To eliminate any binding or squeaking, clean bosses on operating bracket arms, spring anchor points, operating brackets, shaft bearing points, and pins with a KS-2423 cloth moistened with KS-7860 petroleum spirits. Lubricate bearing surfaces (Fig. 2) with a No. 2 or softer graphite pencil.

6. CONNECTION INDEX

Table D—2502-, 2510-, 2511-, and 2515-Type Telephone Sets Polarity Guard Connections (P-90D052 Guard Assembly)

Table E—2555- and 2558-Type Telephone Sets Polarity Guard Connections (P-90D053 Guard Assembly)

Table F—2510F Line and Ringer Connections

Table G—2511F/H Wiring Changes To Provide 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer

Table H—2511F/H Wiring Changes To Provide 2-Line Pickup, Hold on Line 1, and Signaling (Used Without 1A1 or 1A2 KTS)

Table I—2511F/H Wiring Changes To Provide 1-Line Pickup, Hold, and Secretarial Service

Table J—2558D Wiring Changes To Provide 1-Line Pickup, Cutoff Extension Station or Extension Ringer

TABLE B
COMPONENT ORDERING GUIDE

REPLACEABLE COMPONENTS	TELEPHONE SET						
	2502B	2510F	2511F	2511H	2515B	2555B	2558D
Cord, Mounting	D6AA-*	D6AA-*	D20J- (Spade-tipped)	D20K- (Plug-ended)	D6AA-*	None	None
Dial	35A3A	35A3A	35C3A	35C3A	35A3A	35A3A	35A3A
Housing	P-86C6*	P-83A3*	P-86C6*	P-86C6*	P-86C6*	P-80H9*	P-80H9*
Key, Line	None	631A	631A	631B	631C	P-21F227	P-27E058
Plate, Face, Assembly	P-86D5*†	P-86D6*†	P-86D6*†	P-86D6*†	P-86D6*†	None	None
Ringer	C4A	C4A	H1A	H1A	C4A	P1A	P1A
Set, Hand	G3AR-*	G3AR-*	G3AR-*	G3AR-*	G3AR-*	G3AR-*	G3AR-*
Switch, Exclusion	P-19A410	None	P-20F139	P-20F139	P-21F195	P-27E053	P-27E053

*Refer to Table A for color selection.

†Includes P-25E803 card retainer.

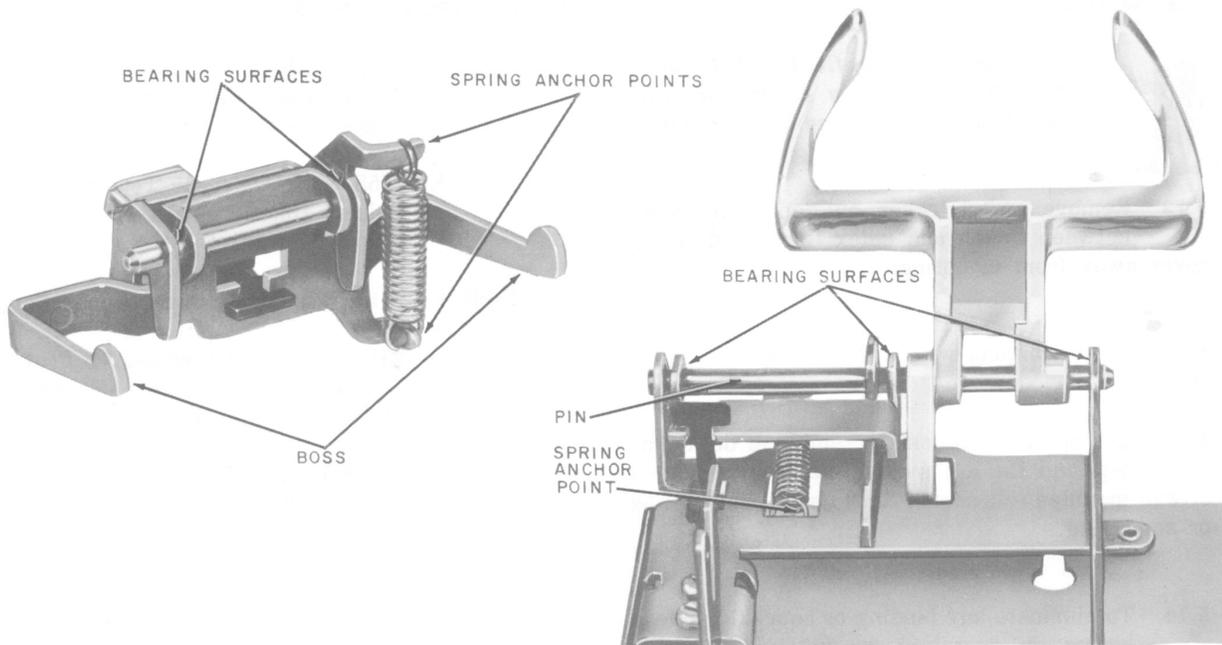


Fig. 2—Line Switch Assembly

Table K—2558D Wiring Changes To Provide 2-Line Pickup Hold on Line 1, Nonkey System Use

Table L—Wiring Changes To Provide Secretarial Service With Hold

Fig. 3—2502B Telephone Set, Connections

Fig. 4—2510F Telephone Set Connections, 2-Line Pickup and Signaling (Factory Wired)

Fig. 5—2510F Telephone Set Connections, 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer and Signaling

Fig. 6—2511F/H Telephone Set Connections, 2-Line Pickup With Exclusion on Line 1, Signaling, and 3-Type Speakerphone (Factory Wired)

Fig. 7—2511F/H Telephone Set Connections, 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer

Fig. 8—2511F/H Telephone Set Connections, 2-Line Pickup, Hold on Line 1, and Signaling

Fig. 9—2511F/H Telephone Set Connections, 1-Line Pickup, Hold, and Secretarial Service

Fig. 10—2515B Telephone Set Connections

Fig. 11—2555B Telephone Set Connections

Fig. 12—2558D Telephone Set Connections, 2-Line Pickup With Exclusion on Line 1, Signaling, Wired For 1A1 or 1A2 Key Telephone Systems (Factory Wired)

Fig. 13—2558D Telephone Set Connections, 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer

Fig. 14—2558D Telephone Set Connections, 2-Line Pickup, Hold on Line 1, Nonkey System Use

Fig. 15—2558D Telephone Set Connections For Secretarial Service With Hold

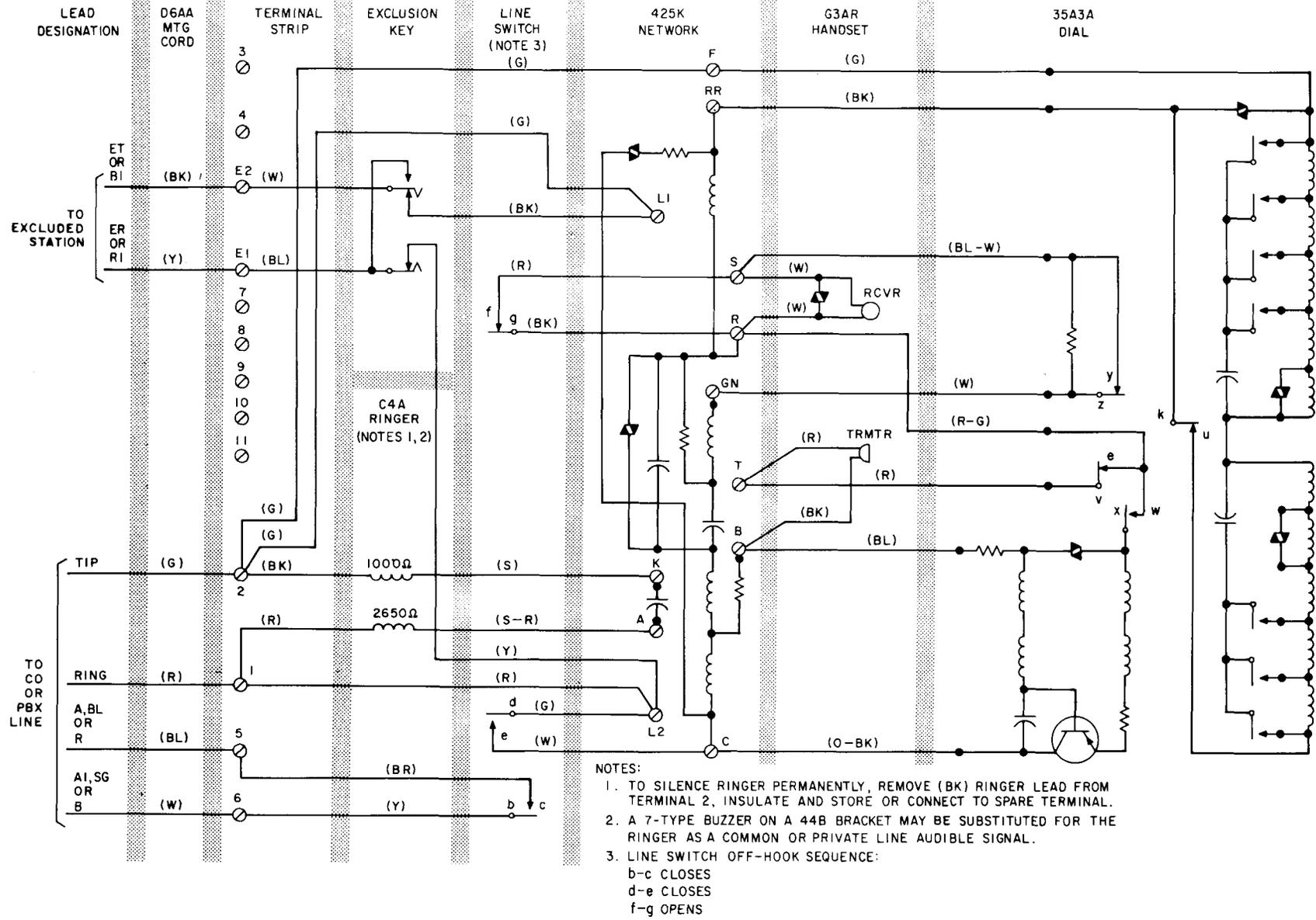
TABLE C
TROUBLES, PROBABLE CAUSES, AND CORRECTIVE ACTION

TROUBLE	PROBABLE CAUSE	CORRECTIVE MEASURE
Bell does not ring	Ringer disconnected or incorrectly wired in set	Connect correctly
	Volume control in cutoff position	Move control wheel to ring position and instruct customer
	Open winding	Replace ringer
	Metal particles in armature gap	Remove with Scotch tape or approved equivalent
	Faulty capacitor	Replace telephone set
No dial tone or set dead	Open mounting cord or handset cord	Replace cord
	Defective receiver unit or varistor shorted	Replace receiver unit
	Dial common switch receiver contacts open	Replace dial
	Open network	Replace set
	Line switch contacts do not operate	Check line switch cover for interference.
Cannot break dial tone	TOUCH-TONE dial inoperative	Replace dial: See section on 35-type dial
	TOUCH-TONE dial leads reversed	Check dial lead polarity. See section on 35-type dial
	Depressing more than one button	Instruct customer on correct dialing procedures
Bell too loud	Volume control in wrong position	Move to softer position and advise customer on proper use
Bell too soft	Volume control in wrong position	Move to louder position and advise customer on proper use
	Set on sound-absorbent material	Place set on hard surface
	Cord or wiring touching gong	Dress cord and wiring properly

TABLE C (Cont)

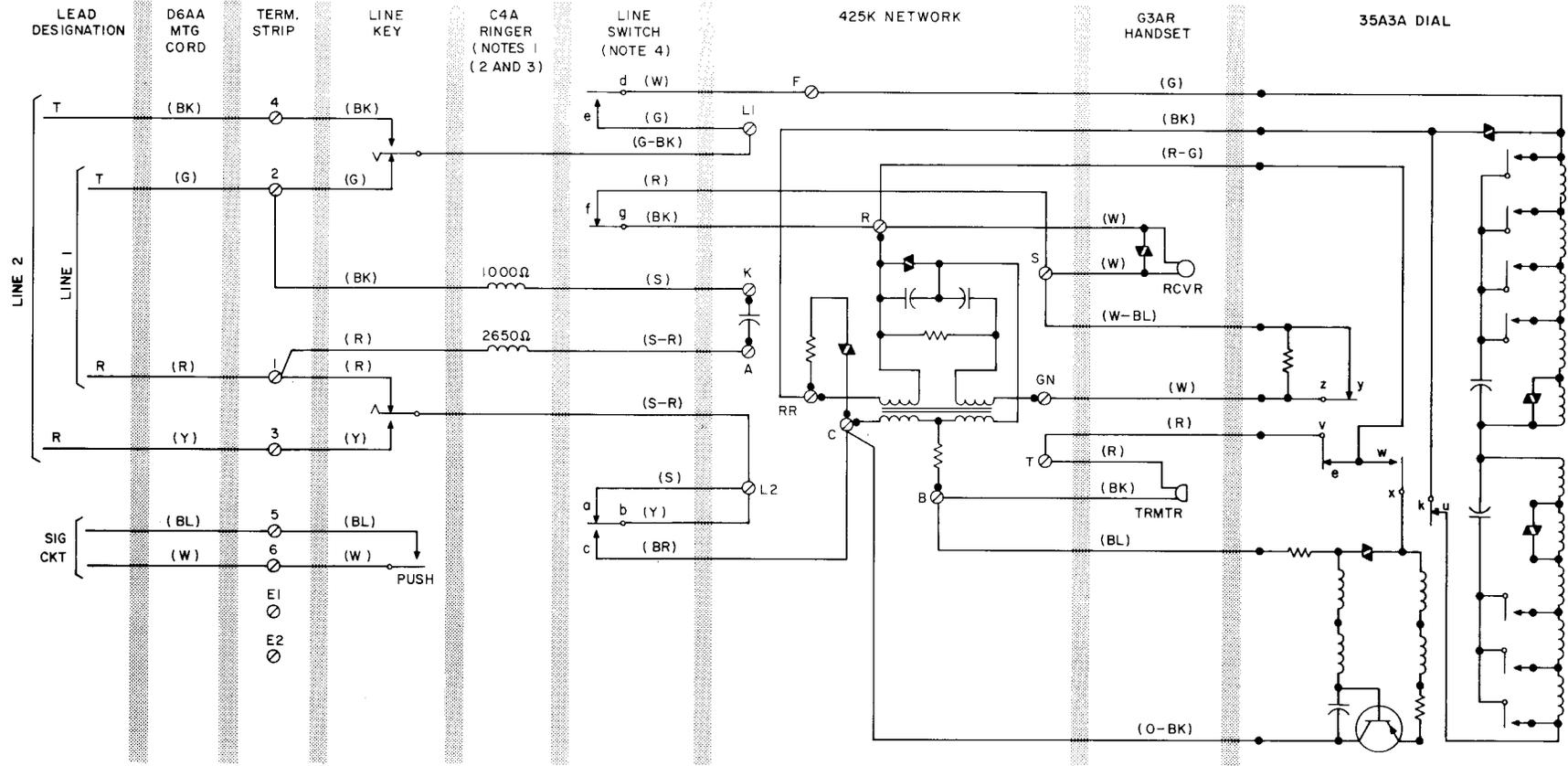
TROUBLES, PROBABLE CAUSES, AND CORRECTIVE ACTION

TROUBLE	PROBABLE CAUSE	CORRECTIVE MEASURE
Bell taps while operating switch hook	Incorrect wiring	Check cord and ringer connections
	Loose gong	Tighten screw as required
Bell rings when other party is called; Cross-ring or false ring.	Incorrect wiring	Check cord and ringer connections
	Biasing tension too low	Place bias spring in high tension notch If ringer still cross-rings, replace ringer
Bell keeps ringing when handset is removed	Open handset cord or dial common switch	Replace handset cord or dial
	Defective network or open set wiring	Replace set
	Contacts on line switch do not close	Check switch cover; Ears of cover should fit into notches on frame
Calling party cannot hear	Open or shorted receiver unit or handset cord	Replace receiver unit or handset cord
	Dial common switch receiver contacts do not close	Replace dial
	Open network	Replace telephone set
	Line switch receiver contacts do not open	Check line switch cover for interference
Called party cannot hear	Defective transmitter unit or handset cord	Replace transmitter unit or handset cord
High sidetone	Defective sidetone balancing network	Replace telephone set
Cannot transfer between lines using 2-line pick-up key	Turnbutton/pushbutton key contacts do not close	Check key contacts (see 5.10) Replace set if key contacts cannot be cleaned or adjusted
Pushbutton key will not operate signaling circuit	Incorrect wiring	Check wiring and connections
	Pushbutton key contacts do not close	Check key contacts (see 5.10)
	Defective signal device	Replace bell or buzzer.
Cannot exclude extension station or cutoff external ringer	Exclusion switch contacts do not close	Check exclusion switch (see 5.08) Replace set if switch contacts cannot be cleaned or adjusted



- NOTES:
1. TO SILENCE RINGER PERMANENTLY, REMOVE (BK) RINGER LEAD FROM TERMINAL 2, INSULATE AND STORE OR CONNECT TO SPARE TERMINAL.
 2. A 7-TYPE BUZZER ON A 44B BRACKET MAY BE SUBSTITUTED FOR THE RINGER AS A COMMON OR PRIVATE LINE AUDIBLE SIGNAL.
 3. LINE SWITCH OFF-HOOK SEQUENCE:
 b-c CLOSES
 d-e CLOSES
 f-g OPENS

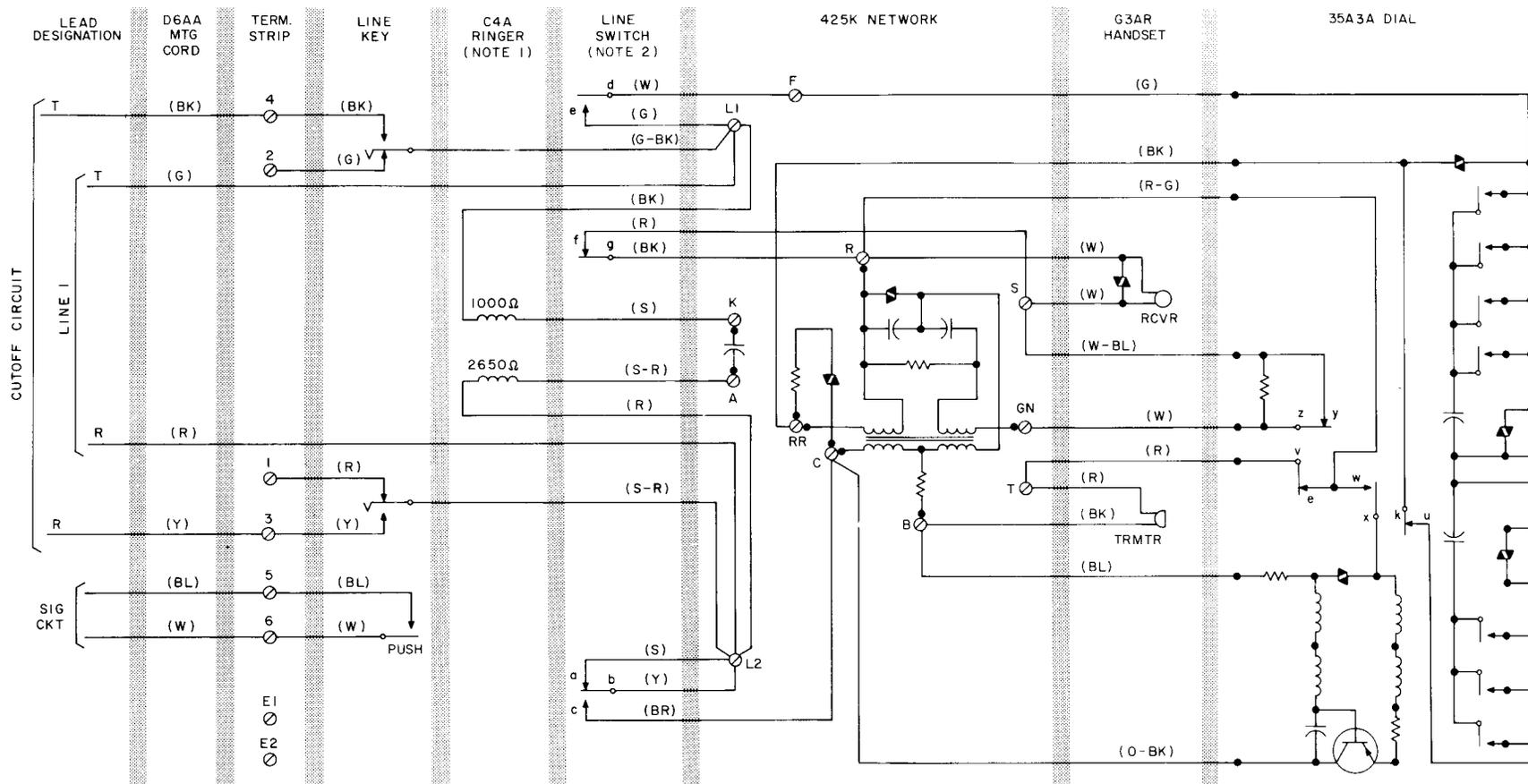
Fig. 3—2502B Telephone Set Connections



NOTES:

1. CONNECTIONS SHOWN ARE FOR RINGING ON LINE 1. TO RING ON LINE 2, MOVE (R) AND (BK) RINGER LEADS TO TERMINALS 3 AND 4.
2. TO SILENCE RINGER PERMANENTLY, REMOVE (BK) RINGER LEAD FROM TERMINAL 2, INSULATE AND STORE OR CONNECT TO SPARE TERMINAL.
3. WHERE COMMON OR PRIVATE LINE RINGERS ARE REQUIRED, CONNECT (BL), (W) MTG CORD LEADS AND (R), (BK) RINGER LEADS TO E1 AND E2.
4. LINE SWITCH OFF-HOOK SEQUENCE:
 b-c CLOSES
 d-e CLOSES
 a-b OPENS
 f-g OPENS

Fig. 4—2510F Telephone Set Connections, 2-Line Pickup and Signaling (Factory Wired)



- NOTES:
1. TO SILENCE RINGER PERMANENTLY, REMOVE (BK) RINGER LEAD FROM TERMINAL 2, INSULATE AND STORE OR CONNECT TO SPARE TERMINAL.
 2. LINE SWITCH, OFF-HOOK SEQUENCE:
 - b-c CLOSES
 - d-e CLOSES
 - a-b OPENS
 - f-g OPENS

Fig. 5—2510F Telephone Set Connections, 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer and Signaling

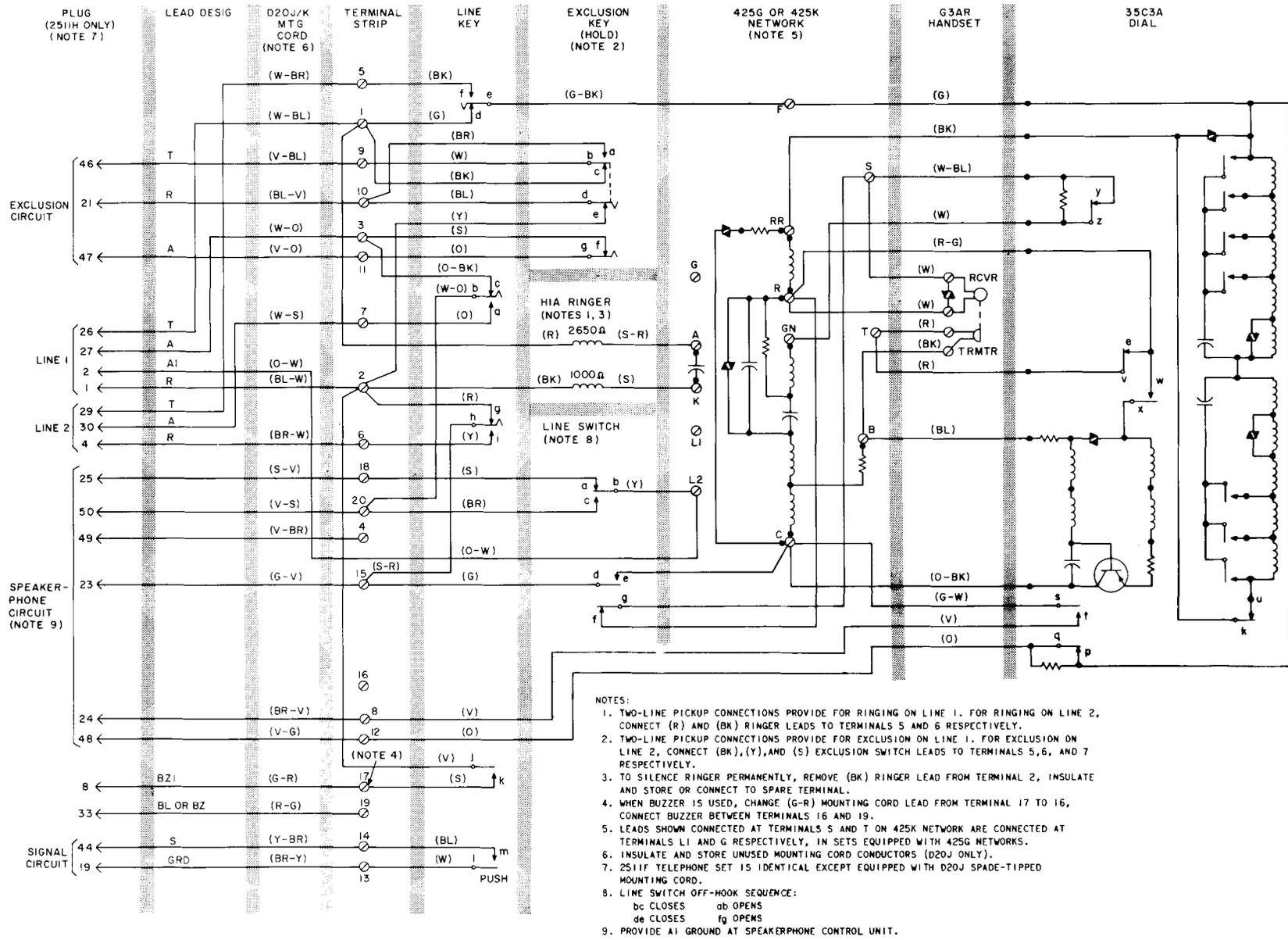


Fig. 6—2511F/H Telephone Set Connections, 2-Line Pickup With Exclusion On Line 1, Signaling, and 3-Type Speakerphone (Factory Wired)

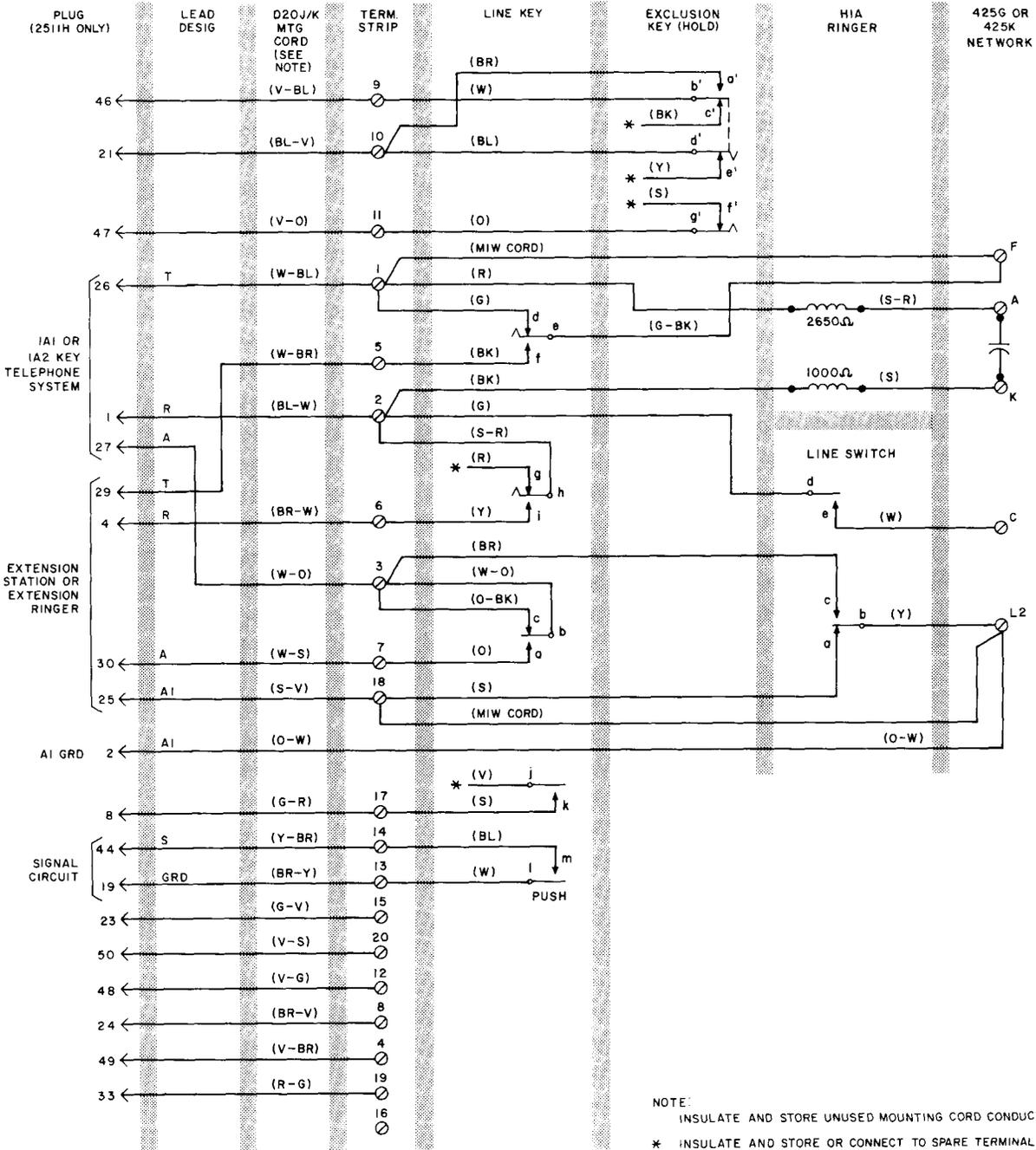


Fig. 7—2511FH Telephone Set Connections, 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer

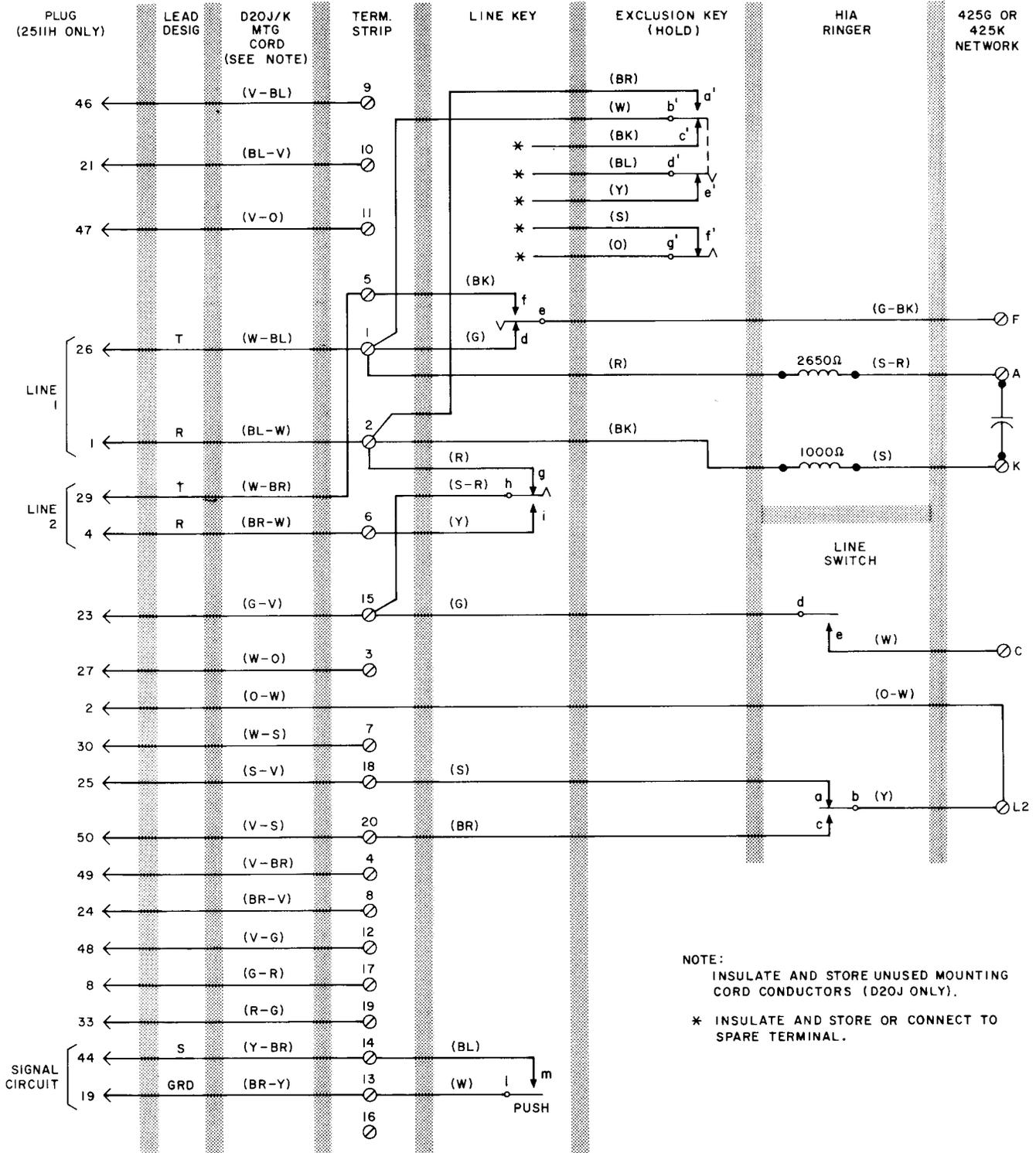
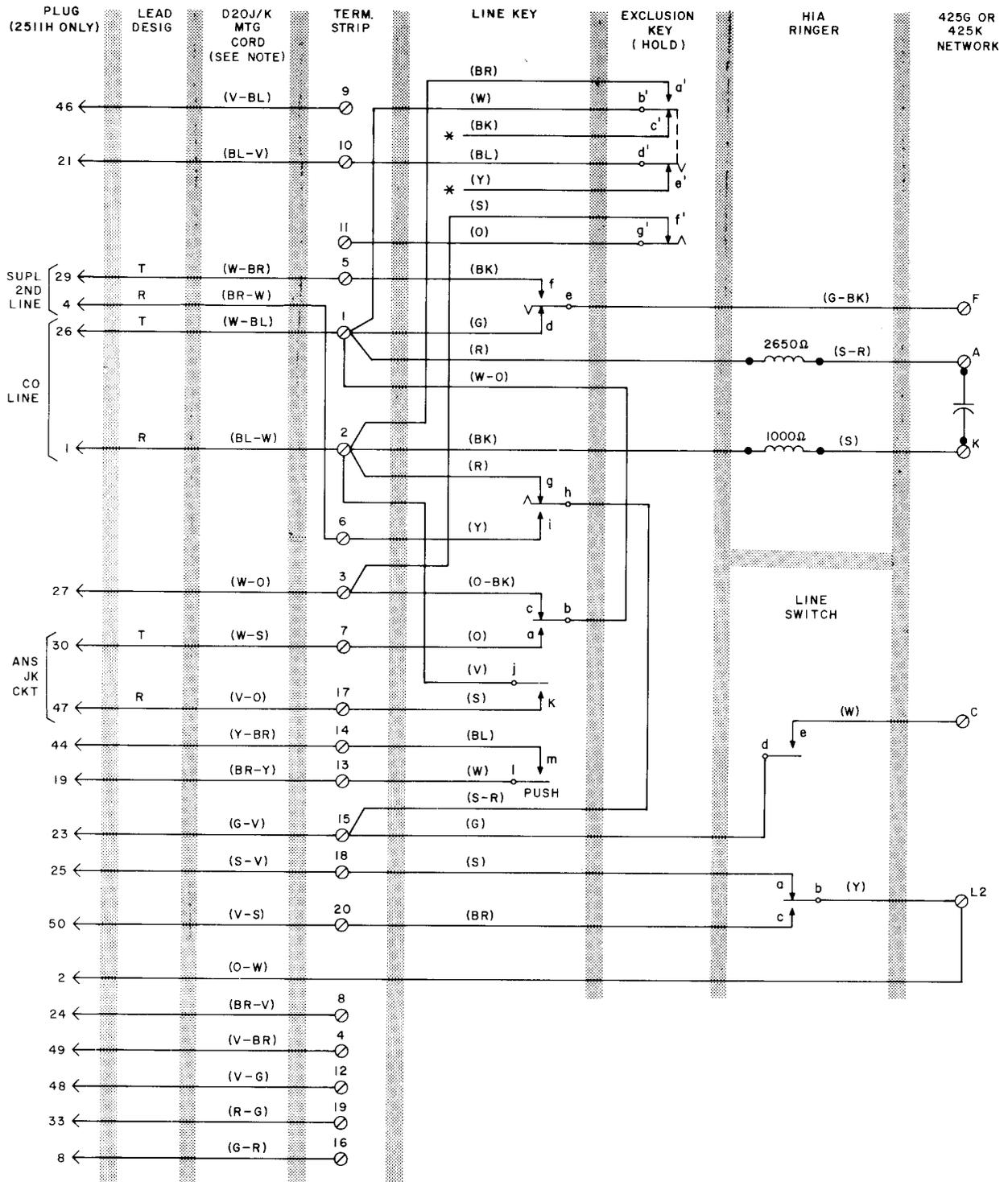
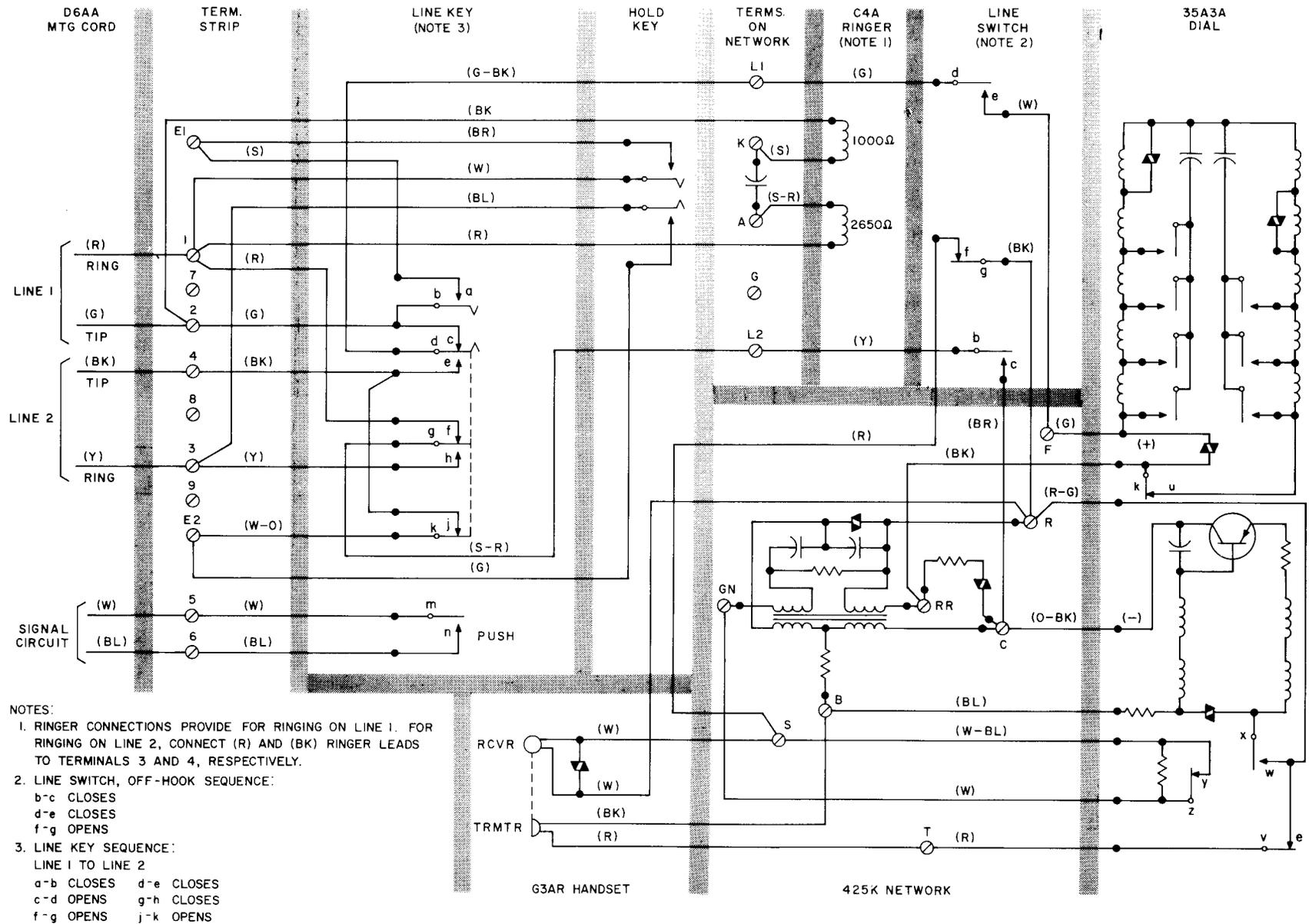


Fig. 8—2511F/H Telephone Set Connections, 2-Line Pickup, Hold on Line 1, and Signaling



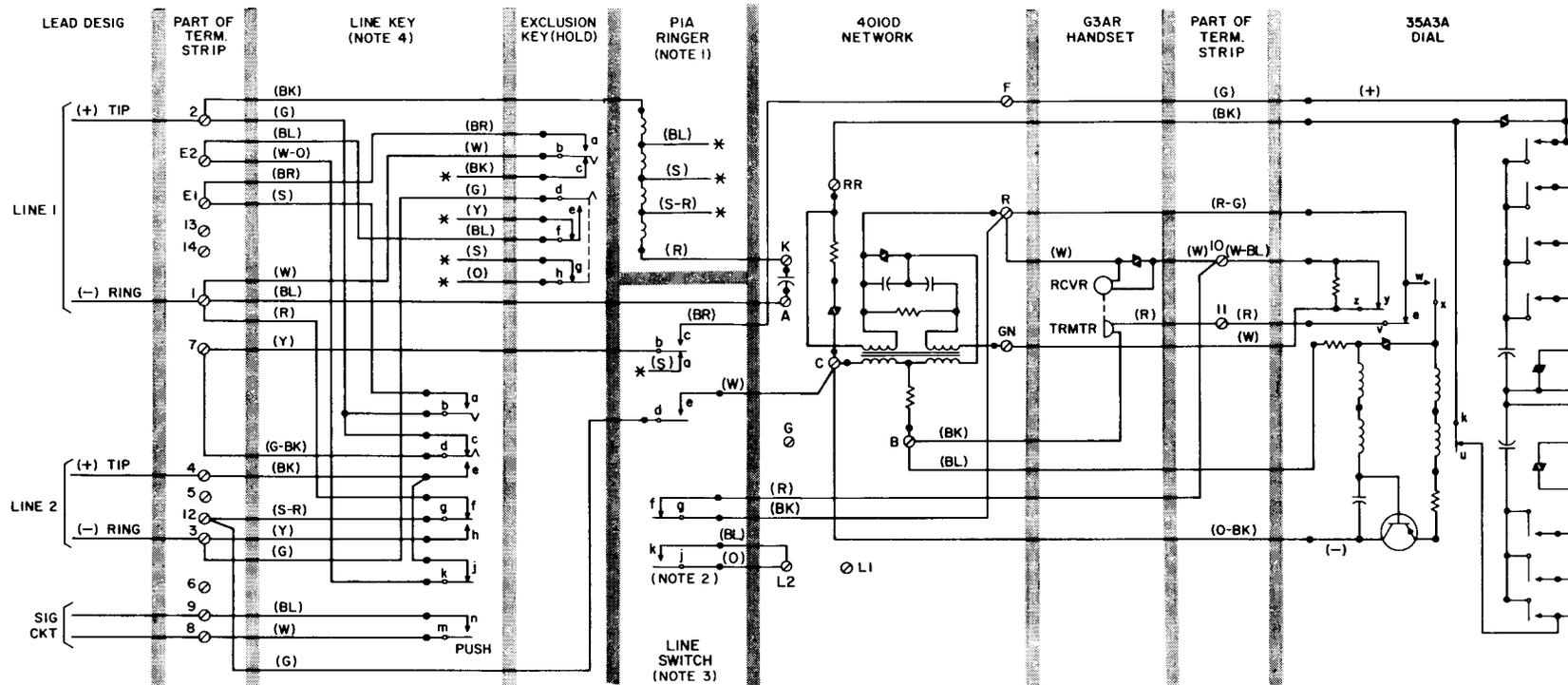
NOTE:
 INSULATE AND STORE UNUSED MOUNTING
 CORD CONDUCTORS (D20J ONLY).
 * INSULATE AND STORE OR CONNECT TO SPARE TERMINAL.

Fig. 9—2511F/H Telephone Set Connections, 1-Line Pickup, Hold, and Secretarial Service



- NOTES:
- RINGER CONNECTIONS PROVIDE FOR RINGING ON LINE 1. FOR RINGING ON LINE 2, CONNECT (R) AND (BK) RINGER LEADS TO TERMINALS 3 AND 4, RESPECTIVELY.
 - LINE SWITCH, OFF-HOOK SEQUENCE:
 b-c CLOSES
 d-e CLOSES
 f-g OPENS
 - LINE KEY SEQUENCE:
 LINE 1 TO LINE 2
 a-b CLOSES d-e CLOSES
 c-d OPENS g-h CLOSES
 f-g OPENS j-k OPENS

Fig. 10—2515B Telephone Set Connections



NOTES:

1. RINGER CONNECTIONS PROVIDE FOR RINGING ON LINE 1. FOR RINGING ON LINE 2, CONNECT (BL) STRAP FROM A OF NETWORK AND (BK) RINGER LEAD TO TERMINALS 3 AND 4, RESPECTIVELY.
2. CURRENT PRODUCTION SETS DO NOT HAVE CONTACTS j-k AND ASSOCIATED (O) AND (BL) LEADS.
3. LINE SWITCH, OFF-HOOK SEQUENCE:
 b-c CLOSES a-b OPENS
 d-e CLOSES f-g OPENS

4. LINE KEY SEQUENCE:
 LINE 1 TO LINE 2
 a-b CLOSES d-e CLOSES
 c-d OPENS g-h CLOSES
 f-g OPENS j-k OPENS
- * INSULATED AND STORED.

Fig. 11—2555B Telephone Set Connections

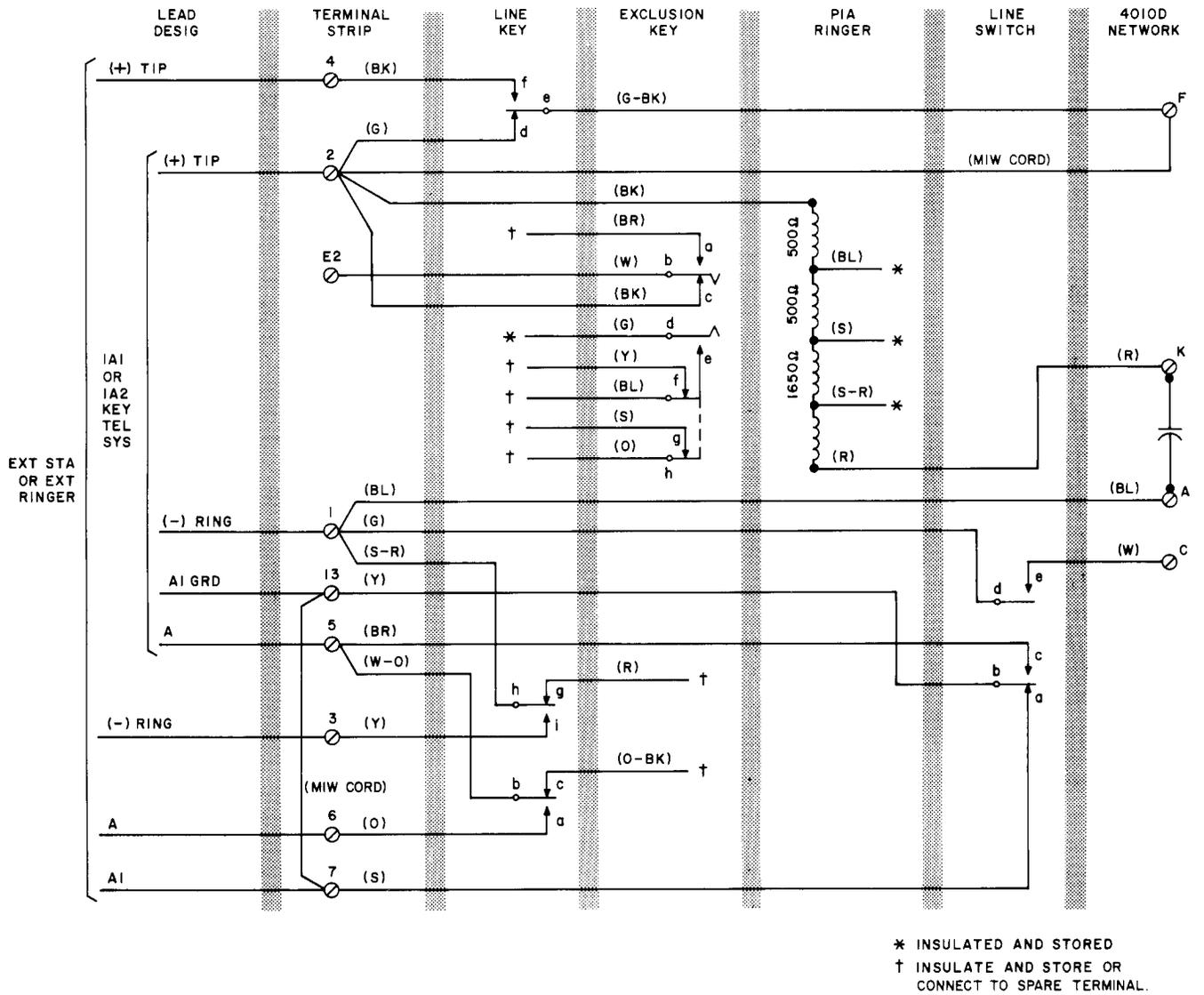
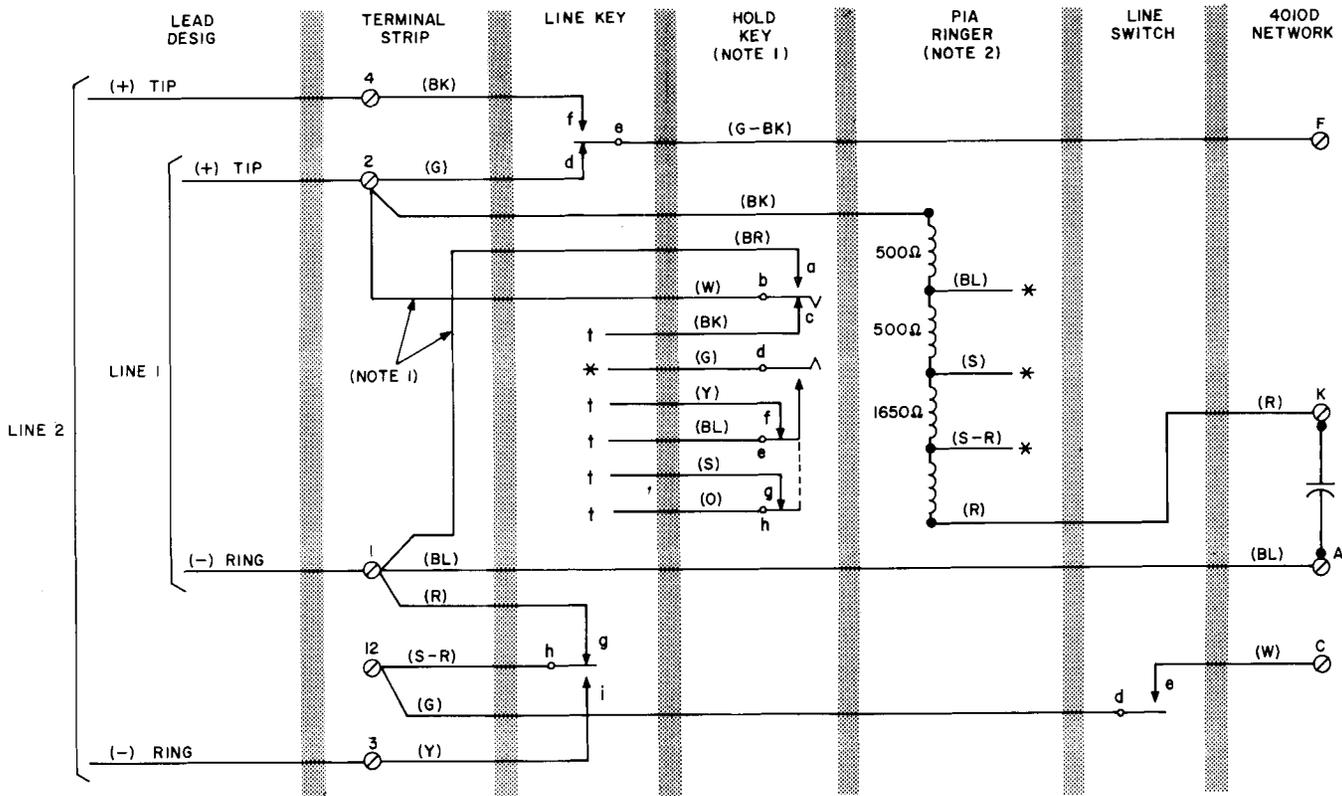


Fig. 13—2558D Telephone Set Connections, 1-Line Pickup, Cutoff Extension Station or Extension Line Ringer



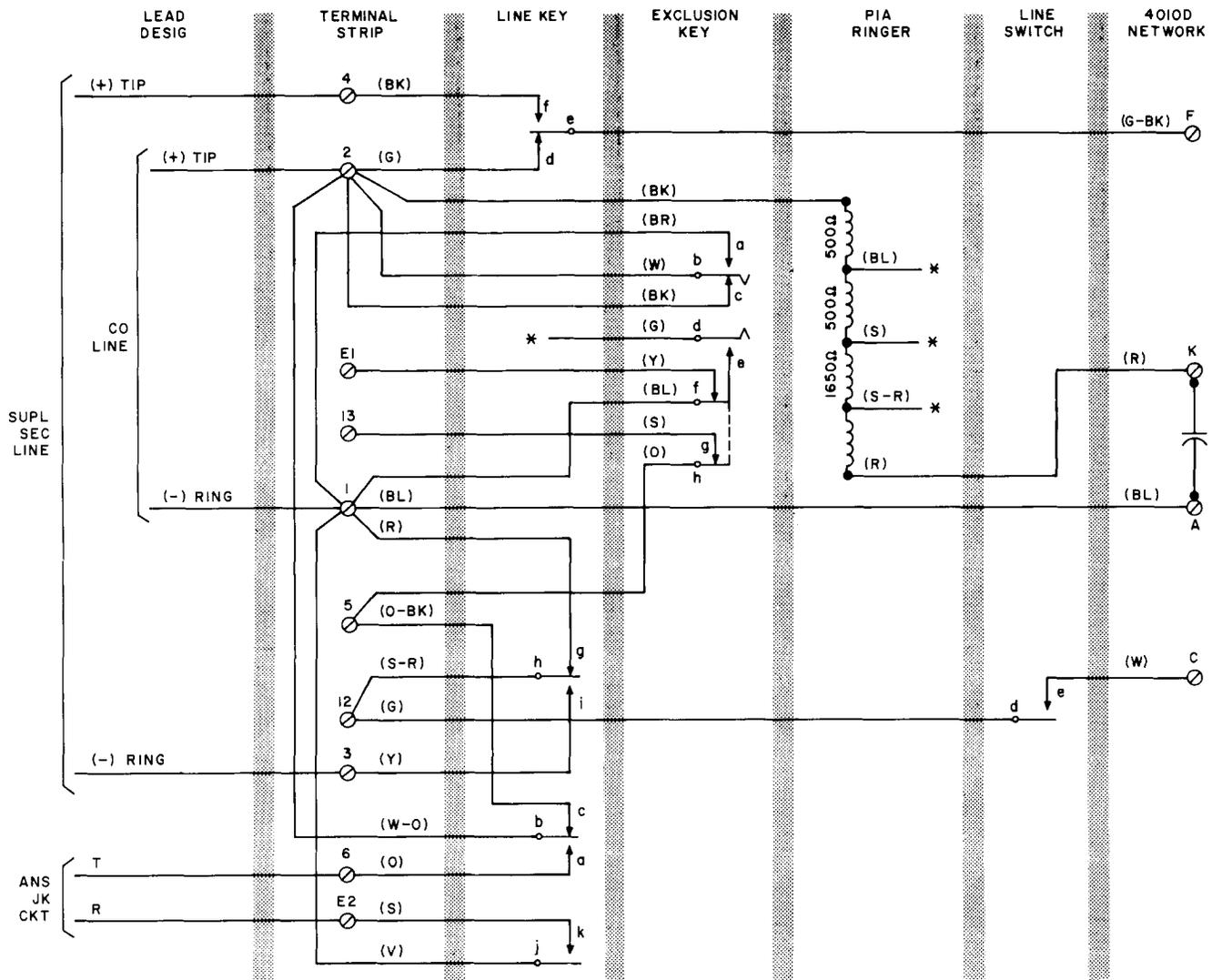
NOTES:

1. HOLD IS ON LINE 1: TO HOLD ON LINE 2, MOVE (W) AND (BR) HOLD KEY LEADS TO TERMS. 3 AND 4 RESPECTIVELY.
2. RINGER CONNECTIONS PROVIDE FOR RINGING ON LINE 1. FOR RINGING ON LINE 2, CONNECT (BK) RINGER LEAD TO TERM. 4 AND (BL) STRAP FROM A OF NETWORK TO TERM. 3.

* INSULATED AND STORED.

↑ INSULATE AND STORE OR CONNECT TO SPARE TERMINAL.

Fig. 14—2558D Telephone Set Connections, 2-Line Pickup, Hold on Line 1, Nonkey System Use



* INSULATED AND STORED.

Fig. 15—2558D Telephone Set Connections for Secretarial Service With Hold

TABLE D

2502-, 2510-, 2511-, AND 2515-TYPE
TELEPHONE SETS
POLARITY GUARD CONNECTIONS
(P-90D052 GUARD ASSEMBLY)

LEAD	COLOR	REMOVE FROM	CONNECT TO	
		NET.	NET.	POLARITY GUARD
Dial	(BK)	RR		T
Line Switch	(W)* [S-BR]	C		S
Polarity Guard	(G)		RR	
	(W)		C	

* This lead is (BR) in 2510- and 2515-type telephone sets.

Note: For use when specified by local instructions for end-to-end signaling installations.

() Current color code

[] MD color code

TABLE E

2555- AND 2558-TYPE TELEPHONE SETS
POLARITY GUARD CONNECTIONS
(P-90D053 GUARD ASSEMBLY)

LEAD	COLOR	REMOVE FROM	CONNECT TO	
		NET.	NET.	POLARITY GUARD
Line Switch	W	C		S
Dial	BK	RR		T
Polarity Guard	W		C	
	G		RR	

Note: For use when specified by local instructions for end-to-end signaling installations.

TABLE F

2510 F LINE AND RINGER CONNECTIONS

FEATURES							CONNECTIONS TO TERMINALS INSIDE SET										EXTERNAL CONNECTIONS FOR MOUNTING CORD													
NUMBER OF LINES PICKED UP	SIGNALING	RINGER IN SET USED AS		TURNKEY USED IN CUT OFF			MOUNTING CORD LEADS						LINE TURN-KEY LEADS				RINGER LEADS SEE NOTES 1, 2, AND 3 ON FIG. 4				LINE 1		LINE 2		SIGNAL CIRCUIT		CUTOFF CIRCUIT		COM OR PVT LINE RINGER CIRCUIT	
		LINE RINGER	COM OR PVT LINE RINGER	EXT STA OR EXT LINE RINGER	RINGER IN SET	AUX RCVR	R	G	Y	BK	BL	W	S-R	G-BK	R	BK	S	S-R	RING	TIP	RING	TIP	S	GRD	RING	TIP	R	B		
		1	•	•		•			L2	L1	3	4	5	6	L2	L1	L2	L1	K	A	R	G			BL	W	Y	BK		
1	•	•		•	•		L2	L1	3	4	5	6	L2	L1	1	2	K	A	R	G			BL	W	Y	BK				
1	•	•				•	L2	L1	3	4	5	6	G	R	L2	L1	K	A	R	G			BL	W	Y	BK				
2	•	•					1	2	3	4	5	6	L2	L1	1	2	K	A	R	G	Y	BK	BL	W						
2			•				1	2	3	4	E1	E2	L2	L1	E1	E2	A	A	R	G	Y	BK					BL	W		

TABLE G
2511F/H

**WIRING CHANGES TO PROVIDE 1-LINE PICKUP,
CUTOFF EXTENSION STATION OR EXTENSION LINE
RINGER**

LINE KEY			LINE SWITCH			EXCLUSION KEY			MIW STRAP	
LEAD	FROM	TO	LEAD	FROM	TO	LEAD	FROM	TO	FROM	TO
V	2	*	BR	20	3	BK	1	*	1	F
R	2	*	G	15	2	Y	2	*	18	L2
W-O	20	3				S	3	*		
S-R	15	2								

* Insulate and store or connect to spare terminal.

TABLE H
2511F/H

**WIRING CHANGES TO PROVIDE 2-LINE PICKUP,
HOLD ON LINE 1, AND SIGNALING
(USED WITHOUT 1A1 OR 1A2 KTS)**

EXCLUSION KEY							
LEAD	BR	W	BK	BL	Y	S	O
FROM	10	9	1	10	2	3	11
TO	2	1	*	*	*	*	*

* Insulate and store or connect to spare terminal.

TABLE I
2511F/H

**WIRING CHANGES TO PROVIDE 1-LINE
PICKUP, HOLD, AND SECRETARIAL SERVICE**

EXCLUSION KEY			LINE KEY			MTG CORD		
LEAD	FROM	TO	LEAD	FROM	TO	LEAD	FROM	TO
BR	10	2	W-O	20	1	V-O	11	17
W	9	1				G-R	17	16
BK	1	*						
Y	2	*						

* Insulate and store or connect to spare terminal.

TABLE J
2558D

**WIRING CHANGES TO PROVIDE 1-LINE PICKUP,
CUTOFF EXTENSION STATION OR EXTENSION RINGER**

LINE KEY			EXCLUSION KEY			LINE SWITCH		
LEAD	FROM	TO	LEAD	FROM	TO	LEAD	FROM	TO
(R)	1	*	(BR)	E1	*	(G)	12	1
(S-R)	12	1	(Y)	E1	*	(Y)	7	13
(O-BK)	5	*	(BL)	1	*	(S)	14	7
(W-O)	G	5	(S)	13	*	(BR)	G	5
			(O)	5	*			

STRAP 7 TO 13 ON TERMINAL STRIP
STRAP F OF NETWORK TO 2 ON TERMINAL STRIP

* Insulate and store or connect to spare terminal.

TABLE K
2558D

**WIRING CHANGES TO PROVIDE 2-LINE PICKUP
HOLD ON LINE 1, NONKEY SYSTEM USE**

HOLD KEY (EXCLUSION KEY)							
LEAD	(BK)	(W)	(BR)	(Y)	(BL)	(S)	(O)
FROM	2	E2	E1	E1	1	13	5
TO	*	2	1	*	*	*	*

* Insulate and store or connect to spare terminal.

TABLE L
2558D

**WIRING CHANGES TO PROVIDE
SECRETARIAL SERVICE WITH HOLD**

LINE KEY			EXCLUSION KEY		
LEAD	FROM	TO	LEAD	FROM	TO
(W-O)	G	2	(W)	E2	2
(S)	*	E2	(BR)	E1	1
(V)	*	1			

* Insulate and store or connect to spare terminal.