

## REFERENCE

### 500E/F, 500H, 500L/M, 500P, 500R/S, 500U, 500W, 500Y, 500AD, 501F, 501P, 501U, AND 514B TELEPHONE SETS

#### GENERAL

**1.01** This section provides identification, installation, maintenance, and connection information for special purpose telephone sets previously contained in Sections 502-510-100, 502-510-402, 502-510-403, 502-510-405, 502-510-406, 502-510-407, 502-510-408, 502-510-409, 502-512-101, 502-512-401, 502-520-101, and 502-520-401 which are hereby canceled.

**1.02** Code numbers such as 500E/F cover both manual and dial versions, respectively, of the same type telephone set to permit converting to either type without changing the code number stamped on the base. The letter **R** was added to the code number at one time to indicate the set was equipped with a retractile handset cord.

#### 2. IDENTIFICATION

##### Purpose

**2.01** The 500- and 501-type telephone sets are single line sets for use in common battery areas, manual or dial.

##### Ordering Guide

**2.02** All parts of the set enclosed by the housing mount on the metal base. The network and line switch are riveted to the base and are not replaceable. Table A lists components of these sets.

**2.03** These sets are available in all standard colors as indicated in Section 500-120-100. Components available in color include the dial or apparatus blank, handset, mounting cord, and housing. Components other than the housing must have the code completed by adding the desired color suffix. The housing P- number must have the desired color suffix substituted for its last two digits.

#### Design Features

**2.04** 501-type telephone sets are identical to a similarly coded 500-type set except for the addition of a 3-element, cold-cathode, gas-filled tube, coded 426A. The 514B set provides headset jacks.

##### (a) 500E/F and 501F:

- Equipped with P-19A411 plunger switch (Fig. 5) to avoid interference with dialing or talking of another customer on a party line.
- With set off hook, only the receiver is bridged on the line as a monitor until the plunger switch is lifted to connect the talking and dialing circuits.

##### (b) 500L/M:

- Supplied wired for 1A1 or 1A2 key telephone system. Can be wired for separate ringer circuit.
- Earlier sets which were converted for 1A1 or 1A2 key telephone system use will have an asterisk (\*) stamped on the base after the code number.
- Equipped with 4-conductor mounting cord.
- Current model sets are not equipped with a terminal strip (Fig. 6).

##### (c) 500H, P, and 501P (MD):

- Includes GE46 dial lamp which lights when the handset is lifted.
- A 6-8 volt ac or dc power source must be provided.

**TABLE A**  
**TELEPHONE SET COMPONENT PARTS**

SET	CODE	COMPONENT							
		DIAL	APP BLANKS§	NET.	RINGER	HANDSET	MTG CORD	TUBE	HOUSING ASSY
500	E/F	9C†	95C	425E**	C4A††	G1A or G3A	D3BN		P-80D500
	H*								P-80E100
	L/M		95C				D4BJ		P-80D200
	P*								P-80E100
	R/S	9H‡	95C				D10P		P-80D200
	U*	9C†					D4BJ		P-80E300
	W		95C						P-80K000
	Y	9C†					D3BN		P-80E100
	AD	9H					N1A		G3AR
501	F	9C†			C4A‡‡	G1A or G3A	D3BN	426A	P-80D500
	P*						D4BJ		P-80E100
	U*								P-80E300
514	B			425E	N1A	G3AR	D10P		P-87C100

\* MD  
 † Replaces 7C or 7D dial  
 ‡ Replaces 7G or 7H dial  
 § Replaces 95A or 95B apparatus blank

\*\* Replaces 425B network  
 †† Early models had C2A ringer  
 ‡‡ Early models had C3A ringer  
 §§ N1A ringer included



Fig. 1—500F, M, S, or 501F Telephone Set



Fig. 2—500U or 501U Telephone Set

(d) 500U and 501U (MD):

- Equipped with 584C key, a GE46 lamp, and a resistor to provide dial-light/night-light



Fig. 3—500W/Y Telephone Set

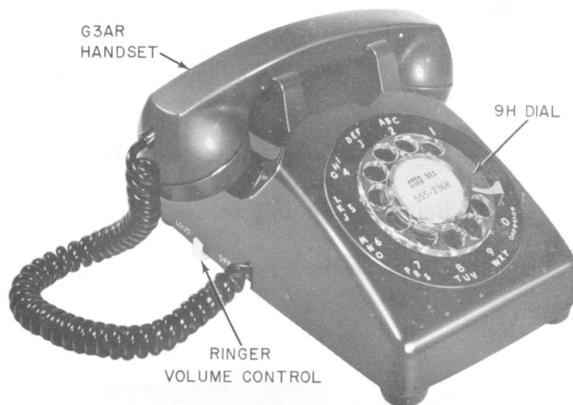


Fig. 4—500AD Telephone Set

feature. When key is in ON position, lamp operates at reduced brilliance for night light.

- When handset is lifted off hook, lamp lights at full brilliance.
- A 6-8 volt ac or dc power source must be provided.

(e) **500R/S:** Factory-wired for speakerphone.

(f) **500W/Y:** Equipped with a KS-19527L1 neon lamp to provide message waiting service.



Fig. 5—500F or 501F Telephone Set, Plunger Switch

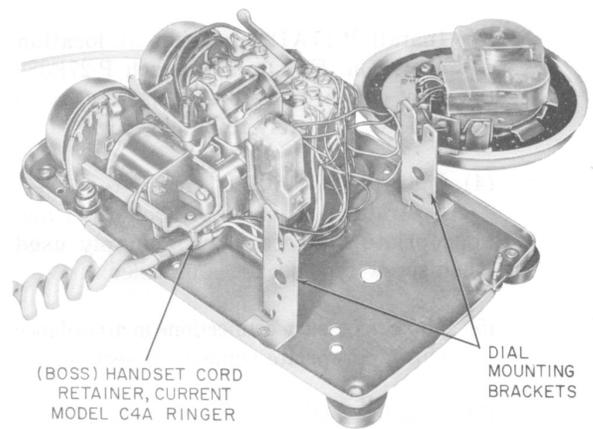


Fig. 6—500L/M Telephone Set, Interior View, Current Model

(g) **500AD:**

- Factory-wired for use with 4-wire private line circuits and 3-type speakerphone.
- Can be modified for use on 2-wire line such as individual lines or 1A1 and 1A2 key telephone system.
- Individual or common line ringer.
- Plug-ended mounting cord.

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- Expanded line switch with spare transfer and two spare make contacts.
- (h) **514B:** Equipped with headset jacks, a 637A key for headset ON-OFF function (TURN) and flash function (PUSH) for operator recall.
- (i) **Kits of Parts (Optional):**

● The 514B telephone set may be equipped with a neon indicator lamp by using a D-179969 Kit of Parts or a filament type lamp using a D-179968 Kit of Parts. When required install kits as follows:

- (1) Remove housing from set.
- (2) Remove cap (Fig. 18) from housing by removing screw and clamp located inside housing assembly, discard cap.
- (3) Install P-17A123 bracket at location shown in (Fig. 3) and attach P-27E389 (bayonet base) or P-13A264 (screw base) lamp socket assembly to bracket arm.
- (4) Install KS-19527L1 lamp (ordered separately) in bayonet type socket and appropriate lamp for power supply used when screw type socket is installed.
- (5) Make necessary connections in accordance with appropriate connection section.
- (6) Install P-11E100 lamp cap assembly on housing of set.

**Note:** To prevent pilferage of the lamp cap assembly a P-14E582 retainer ring (Fig. 16) may be installed. Order separately. Install ring by pressing two tabs together and inserting into the lamp cap slots (Fig. 17). This prevents normal rotation and removal of the lamp cap.

- (7) Replace housing on set.
- (j) **P-44E420 Jack and Component Assembly** (includes 241A amplifier, and N1A ringer).
- (k) **GN-2416 Instruction Booklet (shipped loose)**

### 3. INSTALLATION

(a) **Housings:** 500- and 501-type sets—housings are secured to the base by two P-44E734 captive screws.

(b) **Mounting Cords:**



**Spade tips or skinned wires should contact only the terminal to which the connection is made. Electrical contact with the metal tab of the network housing may cause the exposed dial finger stop to become energized with ringing voltage or dc line voltage.**

- Dress cord leads to avoid interference with moving parts and ringer gongs.
- 9-, 13-, and 25-foot extra length mounting cords (3- or 4-conductor only) are installed by:
  - (1) Remove ringer mounting screw (Fig. 7).
  - (2) Insert cord stay under ringer frame.
  - (3) Reinsert mounting screw.
  - (4) Position cord grommet so that cord is protected where it enters set.

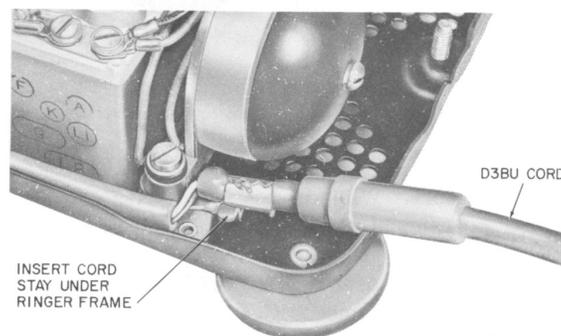
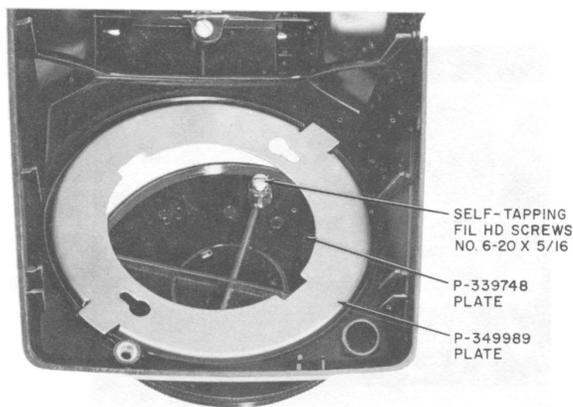


Fig. 7—Installing Extra Length Cord

(c) **Apparatus Blanks:**

- (1) 95A (MD)—Used only on sets with three-point dial mountings (Fig. 8).



**Fig. 8—500-Type Telephone Set With 95A (MD) Apparatus Blank**

(2) 95B—Can be used in all sets (Fig. 9).

(3) 95C

- Same external appearance as 95B (Fig. 10).

- Install by placing one leg of dial mounting bracket into slot on back side of apparatus blank, spring other leg apart so it snaps into other slot of apparatus blank.

- Tilt blank forward and replace housing on set.

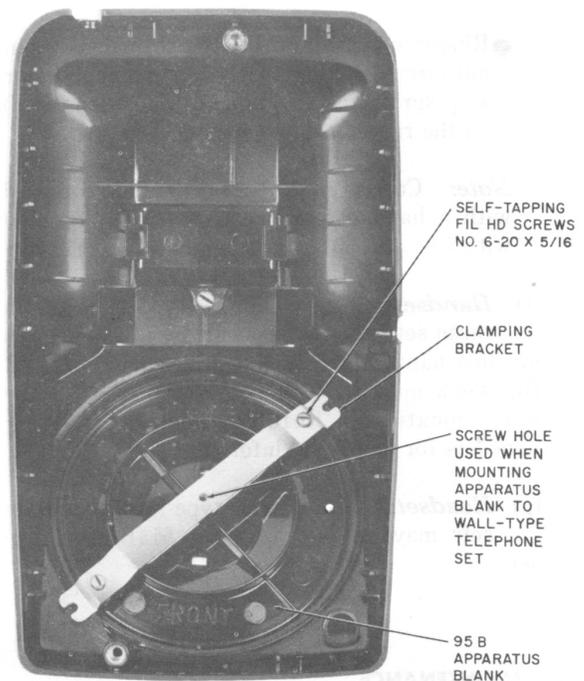
- Place P-298106 card retainer group containing station number card on apparatus blank (Fig. 10).

- Not for use on sets with three-point dial mountings.

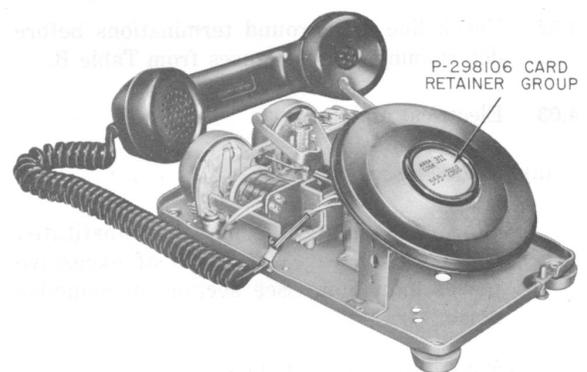
(d) **Buzzer:**

- In the 500AD telephone set install the KS-8109L2 buzzer, ordered separately, on the arm of P-20F185 bracket assembly. Mount the buzzer with hardware provided with assembly so that the frame is insulated from the metal base of the set.

- Connect the plug-ended mounting cord to the appropriate connector cable.



**Fig. 9—500- and 501-Type Telephone Set With 95B Apparatus Blank, Interior**



**Fig. 10—95C Apparatus Blank on Dial Mounting Bracket in 500- or 501-Type Telephone Set**

(e) **Ringer:**

- Mounted to base with two P-43A456 washerhead mounting screws in rubber grommets.

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- Ringer off position can be provided, when authorized locally, by bending back ringer stop spring to provide a fifth position (OFF) on the ringer volume control.

**Note:** Current model C4A ringers are equipped with a handset cord retainer (boss) for use with 500- and 501-type telephone sets (Fig. 6).

- (f) **Handsets:** The G1- or G3-type handsets in these sets may be replaced by a G6AR (MD) or G6B handset for impaired hearing, a G7AR for weak speech, or a G8A (MD) or G8B for noisy locations. Refer to section covering handsets for additional information.
- (g) **Headset:** The 52- or 53-type head telephone sets may be used with the 514B telephone set.

### 4. MAINTENANCE

**4.01** Inspect exterior and interior of the sets for obvious defects such as loose, displaced, or broken parts. Check also for obstruction of moving parts or the presence of foreign matter that may interfere with the proper operation of the set.

**4.02** Check line and ground terminations before determining trouble causes from Table B.

**4.03** Electrical Maintenance:

(a) **Tube Assembly:**

- 425A, 4-element tube may be substituted for 426A, to care for cases of excessive power induction. See section on inductive noise.
- Tube assembly is held to base of set with single screw (Fig. 11).

**4.04** Mechanical Maintenance:

(a) **Plungers:**

- Should move freely throughout entire travel without binding or squeaking.
- Accessible when handhold cover is removed (Fig. 12).

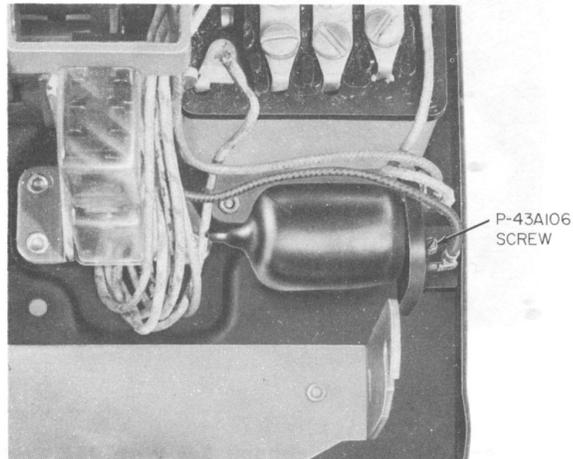


Fig. 11—501-Type Telephone Set, Tube Assembly

- Clean 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 and lubricating.

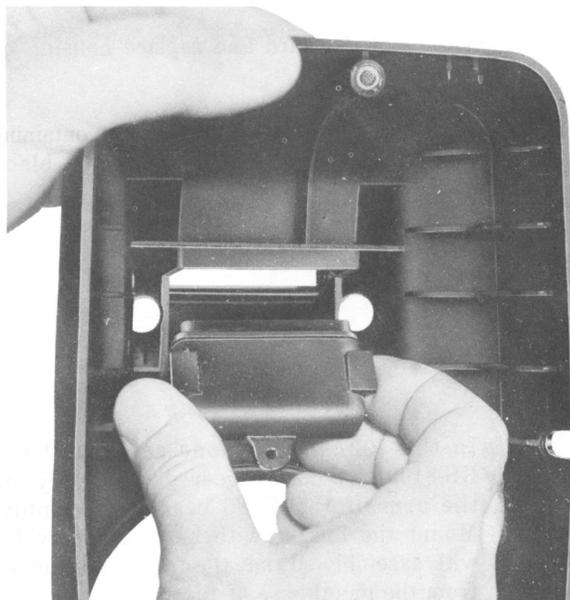
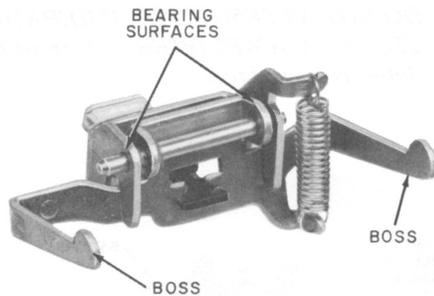


Fig. 12—Removing Handhold Cover

(b) **Operating Bracket Switch Assembly:**

- Should function throughout entire travel without binding or squeaking.
- Clean bosses on operating bracket arms, spring anchor points, operating bracket, and shaft bearing points with KS-2423 cloth moistened in KS-7860 petroleum spirits and lubricate bearing surfaces with a No. 2 or softer graphite pencil (Fig. 13).



**Fig. 13—Operating Bracket Switch Assembly, 500- and 501-Type Telephone Sets**

(c) **Switch Contacts:**

## (1) Line Switch

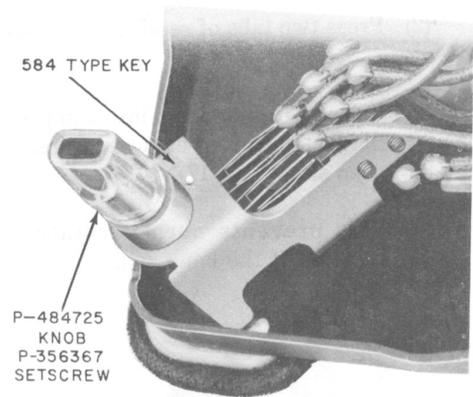
Remove line switch cover by depressing sides between thumb and index finger and tilting cover up and away from mounting.

Clean contacts with 265C tool.

(2) 584C Key (500U<sup>®</sup> and 501U telephone sets only)

Clean contacts of key with 265C.

P-484725 knob may be replaced by removing P-356367 setscrew (use jeweler's screwdriver) and lifting knob off shaft (Fig. 14).

(d) **Dial Light:** To remove, turn lamp cap and lamp counterclockwise (Fig. 15) and lift out.

**Fig. 14—Typical Turn Key**



**Fig. 15—Lamp Assembly, 500H/P Telephone Set**

(e) **Lamp Cap Retainer Ring:**

- 500W/Y and 514B telephone sets can be equipped with P-14E582 retainer ring (Fig. 16) to prevent pilferage of the lamp cap assembly.

- Install retainer ring as follows:

- (1) Remove set housing with lamp cap in place.

- (2) Press two tabs of retainer ring together.
- (3) Insert retainer ring into lamp cap so that retainer ring engaging pins fit into lamp cap slots (Fig. 17).
- (4) This prevents normal rotation and removal of the lamp cap.



Fig. 16—P-14E582 Retainer Ring

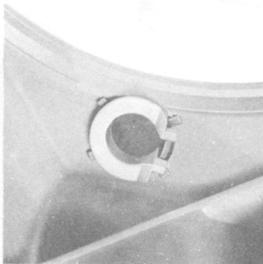


Fig. 17—Retainer Ring Mounted in Set Housing

(f) **Other Components:**

- For maintenance of handsets, dials, and ringers refer to the sections covering these components.
- Maintenance of the headset ON key consists of cleaning contacts and checking for contact follow. Do not attempt any other maintenance.
- A defective 241A amplifier will cause loss of or low output from the headset transmitter. **DO NOT ATTEMPT FIELD REPAIRS ON THE 241A AMPLIFIER. If amplifier is defective, replace.**

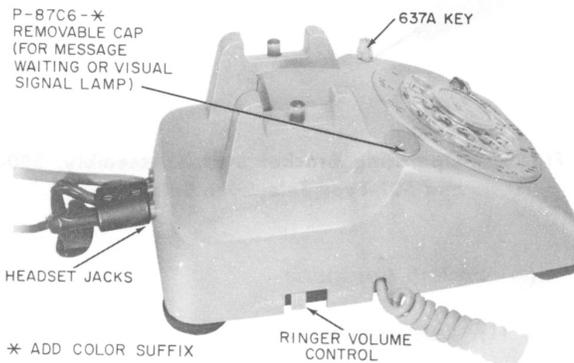


Fig. 18—514B Telephone Set

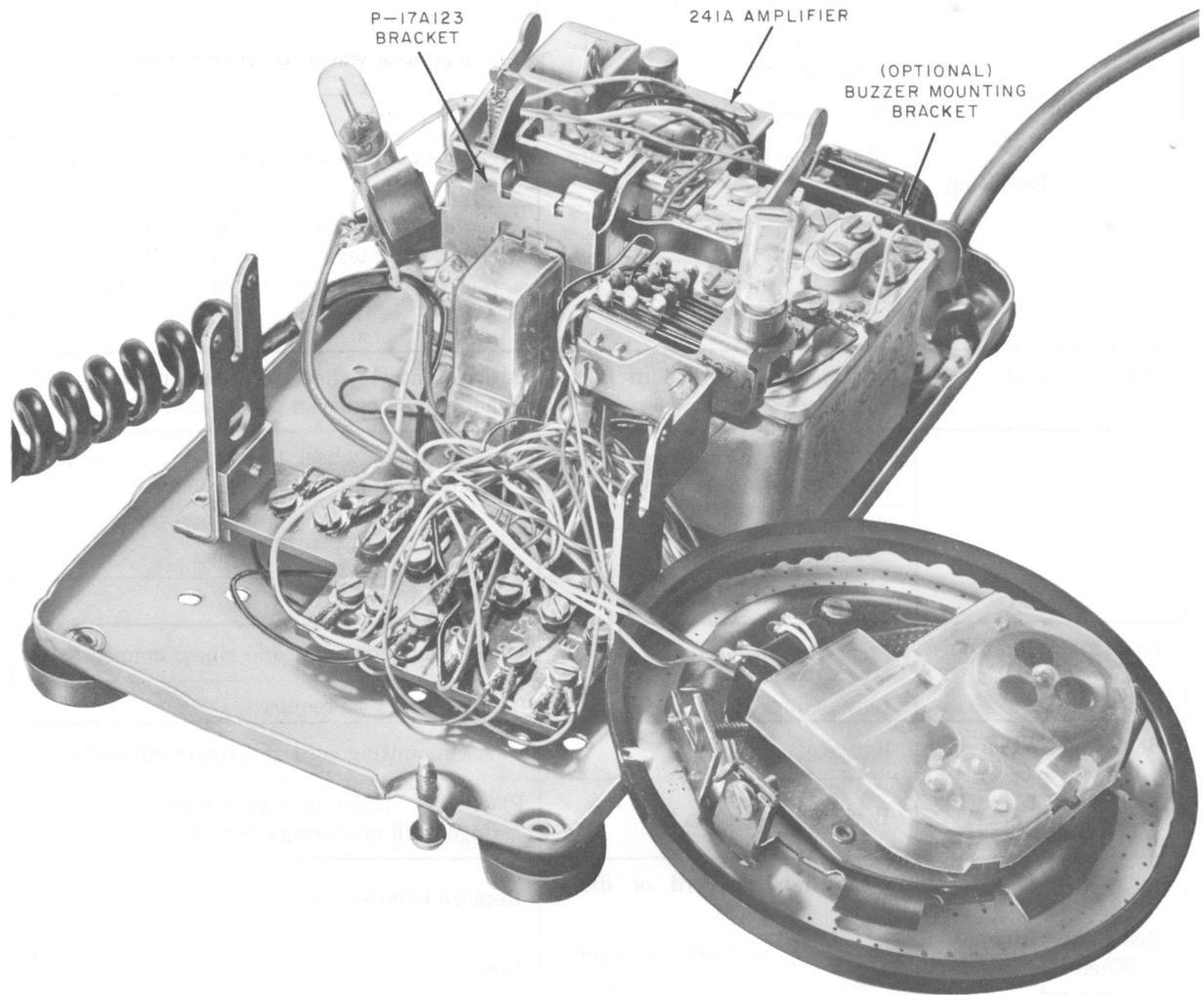


Fig. 19—514B Telephone Set, Interior View

**TABLE B**  
**TROUBLES, PROBABLE CAUSES, AND CORRECTIVE MEASURES**

TROUBLE	PROBABLE CAUSE	CORRECTIVE MEASURE
Bell Does Not Ring	Ringer disconnected or incorrectly wired in set.	Connect correctly.
	Volume control wheel in cut-off position.	Move control wheel to ring position.
	Open winding.	Replace ringer.
	Metal particles in armature gap.	Remove with Scotch tape or approved equivalent.
	Open tube.	Short-circuit yellow and black tube leads. If ringer operates when ringing voltage of correct polarity is applied, replace tube.
Bell Too Loud	Volume control wheel in wrong position.	Move control wheel to softer position and advise customer on proper use.
Bell Too Soft	Volume control wheel in wrong position	Move control wheel to louder position and advise customer on proper use.
	Set on sound-absorbent material.	Place set on hard surface.
	Cord touching gong.	Dress cord properly.
Bell Taps While Dialing or Operating Switch	Incorrect wiring.	Check mounting 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 mounting 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 pulse contacts.	Replace handset cord or dial.
	Defective network or open set wiring.	Replace set.
	Line contacts on switch do not close.	Check switch cover and ears. Ears should fit into notches.
No Dial Tone or Set Dead	Open mounting cord or handset cord.	Replace cord.
	Defective receiver unit or varistor shorted.	Replace receiver unit.
	Dial pulse contacts open or off-normal shunt contacts closed.	Replace dial.

TABLE B (Cont)

## TROUBLES, PROBABLE CAUSES, AND CORRECTIVE MEASURES

TROUBLE	PROBABLE CAUSE	CORRECTIVE MEASURE
No Dial Tone or Set Dead	Open induction coil.	Replace telephone set.
	Switch contacts do not operate.	Check switch cover for proper installation.
Cannot Break Dial Tone	Dial pulse contacts do not open.	Replace dial.
	Dial filter capacitor shorted.	Replace telephone set.
Loud Clicks While Dialing	Dial off-normal shunt contacts do not close.	Replace dial.
Cannot Hear	Open or shorted receiver unit or handset cord.	Replace receiver unit or handset cord.
	Dial off-normal shunt contacts closed.	Replace dial.
	Open induction coil or network.	Replace telephone set.
	Switch receiver contacts do not open.	Check switch cover for interference.
Cannot Be Heard	Defective transmitter or open handset cord.	Replace transmitter or handset cord.
High Sidetone	Defective sidetone balancing network.	Replace telephone set.
Dial Lamp Does Not Light	Lamp burned out.	Replace lamp.
	Transformer plug is out of receptacle.	Replace plug.
	Defective transformer.	Replace transformer.
	No power at ac receptacle.	Check with customer for possible blown fuse or for a power-control switch.

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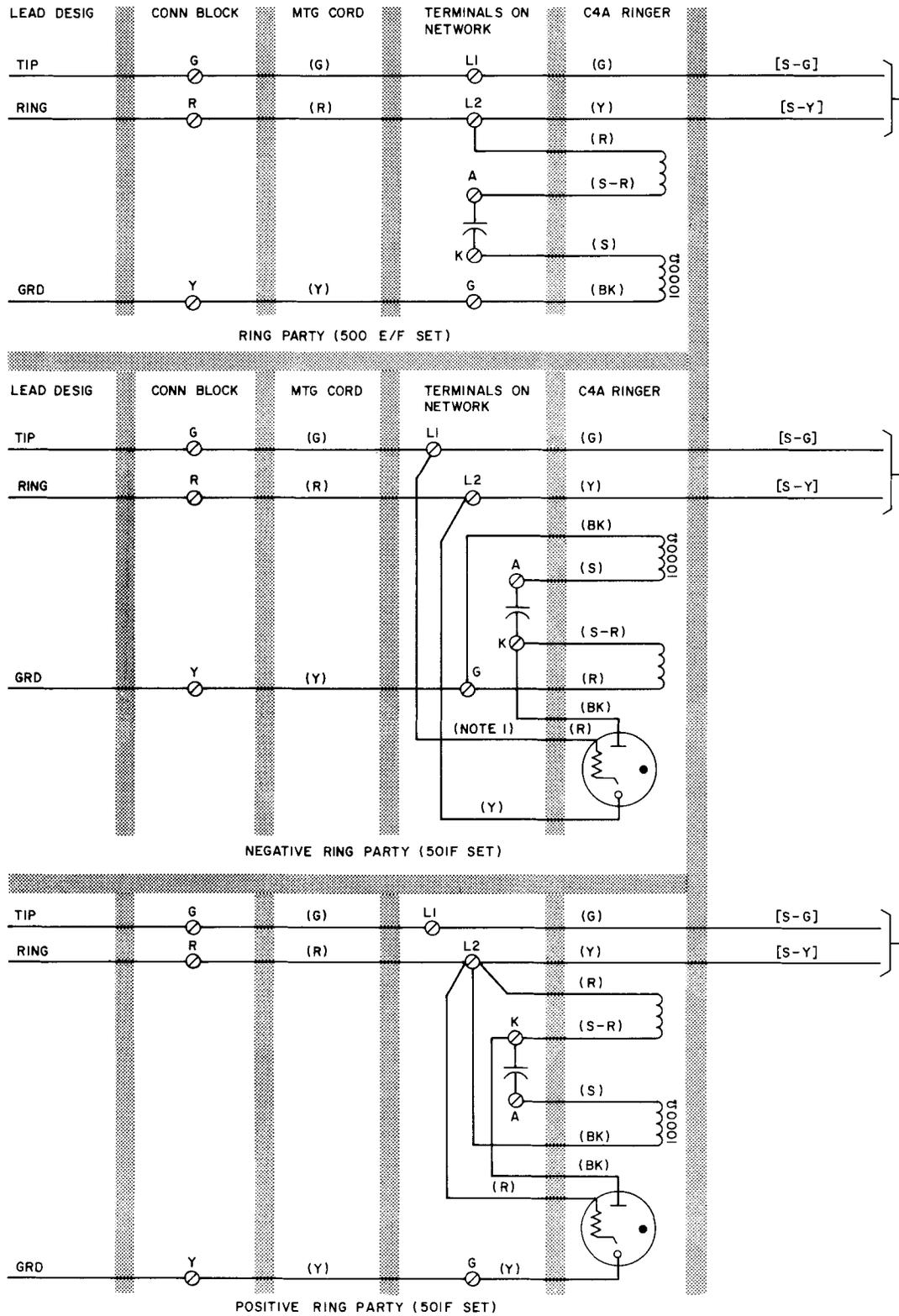
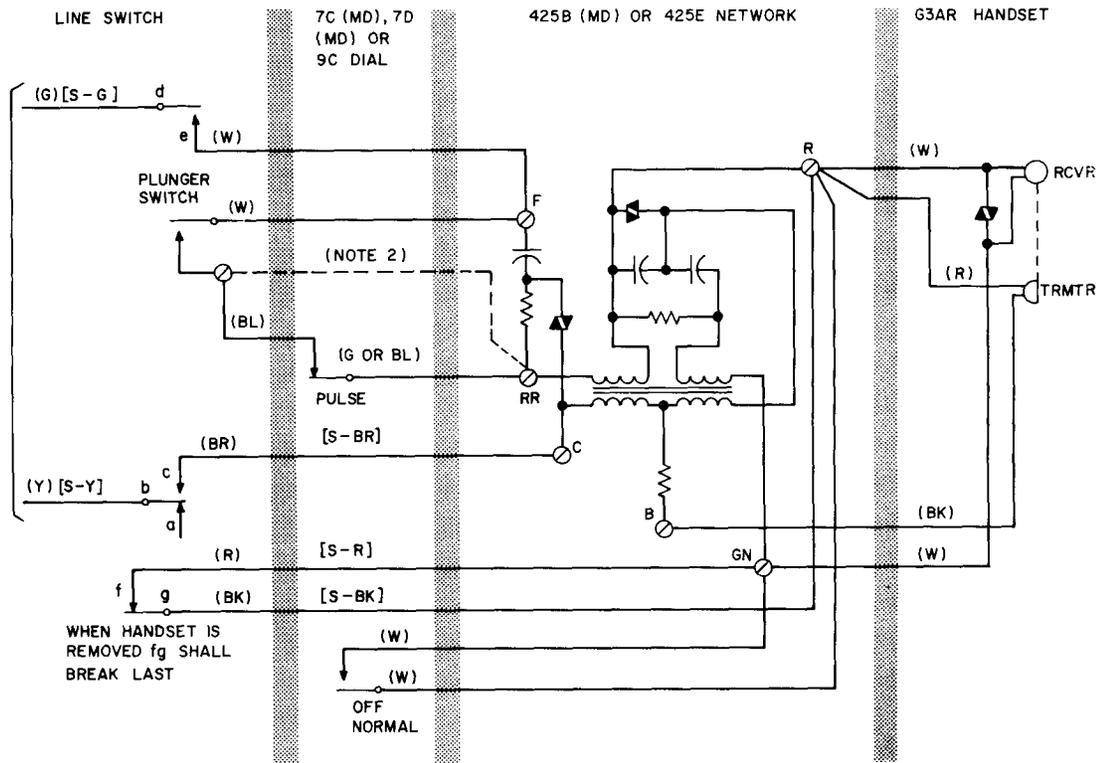


Fig. 20—500E/F and 501F Telephone Set, Connections (Sheet 1 of 2)



NOTES:

1. FOR NEGATIVE STATIONS IN OFFICES WITHOUT ANI, (R) LEAD FROM 426A TUBE MAY BE CONNECTED TO G IF RINGER OPERATION IS MARGINAL.
  2. FOR MANUAL SERVICE REMOVE DIAL AND ADD STRAP.
- ( ) CURRENT COLOR CODE.  
 [ ] MD COLOR CODE.

Fig. 20—500E/F and 501F Telephone Set, Connections (Sheet 2 of 2)

TABLE C

## LINE AND RINGER CONNECTIONS FOR 500E/F, 501F, AND 500H TELEPHONE SETS

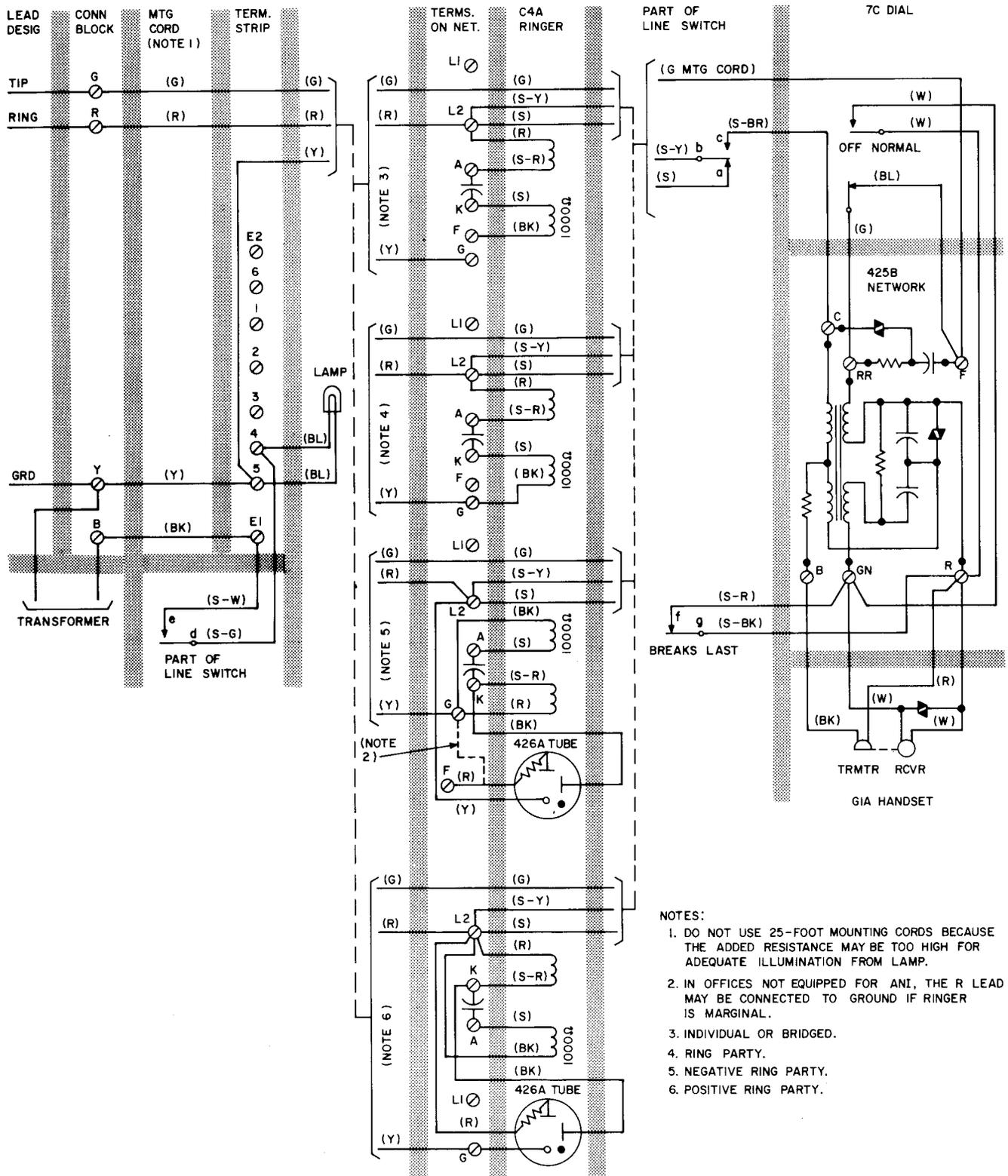
WIRE OR LEAD	COLOR	BRIDGED	RING PARTY	TIP PARTY NO IDENT GRD	NEG(-) PARTIES		POS(+) PARTIES	
					RING	TIP	RING	TIP
					1 AND 5	2 AND 6	3 AND 7	4 AND 8
Ringer (Note)	R	L2	L2	L2	G	G	L2	L2
	BK	G	G	G	G	G	L2	L2
	S	K	K	K	A	A	A	A
	S-R	A	A	A	K	K	K	K
426A Tube (501F and 500H)	R				*	*	L2	L2
	BK				K	K	K	K
	Y				L2	L2	G	G
Mtg Cord Set End	R	L2	L2	L2	L2	L2	L2	L2
	G	†	†	†	†	†	†	†
	Y	‡	‡	‡	‡	‡	‡	‡
	BK	E1	E1	E1	E1	E1	E1	E1
Mtg Cord Conn Block End	R	R	R	G	R	G	R	G
	G	G	G	R	G	R	G	R
	Y	†	Y	Y	Y	Y	Y	Y
	BK	B	B	B	B	B	B	B
Inside Wire at Conn Block	Ring							
	Tip	R	R	R	R	R	R	R
	GRD	G	G	G	G	G	G	G
Trnsf Leads at Conn Block								
		Y	Y	Y	Y	Y	Y	Y
		B	B	B	B	B	B	B

*Note:* To silence ringer permanently disconnect R and BK ringer leads and insulate and store.

\* L1 or G terminal for 501F set (Fig. 20, Note 1). F or G terminal for 500H set (Fig. 21, Note 2).

† L1 terminal for 500E/F or 501F sets and F terminal for 500H set.

‡ G terminal for 500E/F or 501F sets and terminal 5 for 500H set.



- NOTES:
1. DO NOT USE 25-FOOT MOUNTING CORDS BECAUSE THE ADDED RESISTANCE MAY BE TOO HIGH FOR ADEQUATE ILLUMINATION FROM LAMP.
  2. IN OFFICES NOT EQUIPPED FOR ANI, THE R LEAD MAY BE CONNECTED TO GROUND IF RINGER IS MARGINAL.
  3. INDIVIDUAL OR BRIDGED.
  4. RING PARTY.
  5. NEGATIVE RING PARTY.
  6. POSITIVE RING PARTY.

Fig. 21—500H and 501H Telephone Set, Connections

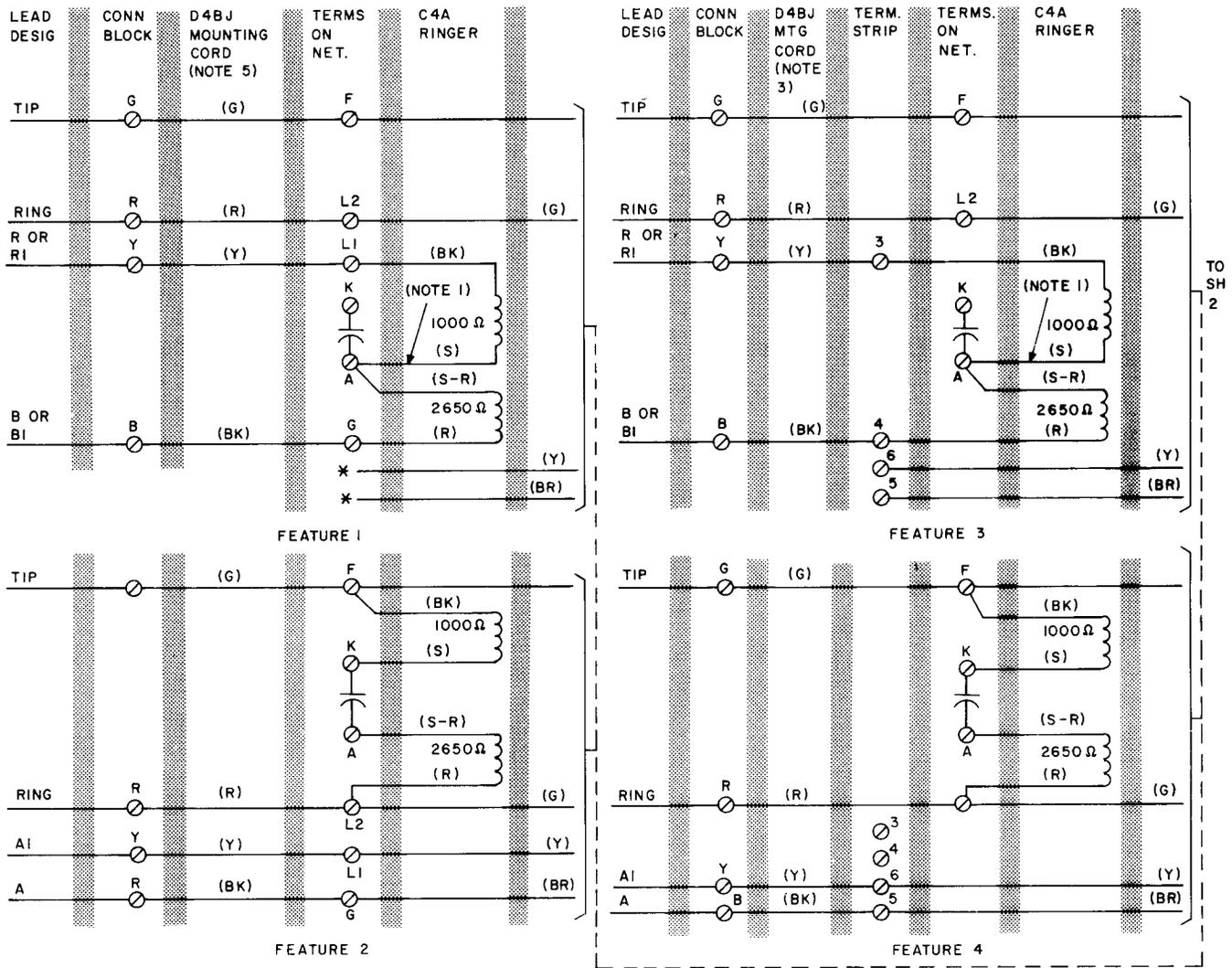
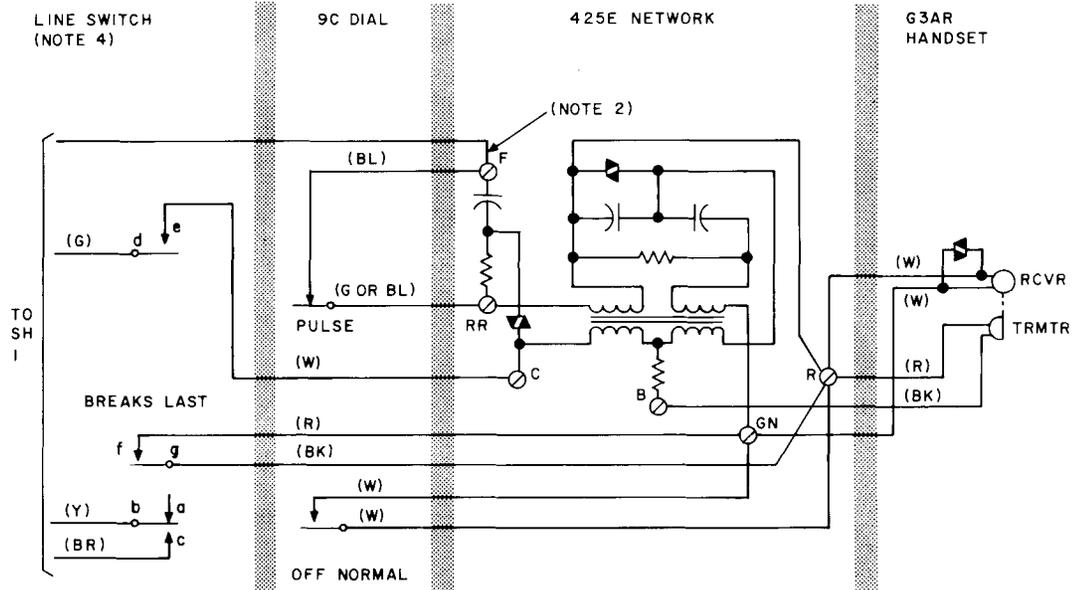


Fig. 22—500L/M Telephone Set, Current Connections With and Without Terminal Strips (Sheet 1 of 2)



## NOTES:

1. WHEN RINGER CAPACITOR IS REQUIRED IN SERIES WITH RINGER ON FEATURE 1, OR 3 TRANSFER (S) RINGER LEAD TO TERMINAL K ON NETWORK.
2. FOR MANUAL SERVICE:  
 FEATURES 1 AND 3 - MOVE MOUNTING CORD CONDUCTOR (G) FROM TERMINAL F TO RR ON NETWORK.  
 FEATURES 2 AND 4 - MOVE MOUNTING CORD CONDUCTOR (G) AND (BK) RINGER LEAD FROM TERMINAL F TO RR ON NETWORK. REPLACE DIAL WITH APPROPRIATE APPARATUS BLANK.
3. WHEN BOTH FEATURES ARE REQUIRED, REPLACE 4-CONDUCTOR MOUNTING CORD WITH 6-CONDUCTOR MOUNTING CORD AND TERMINATE (BL) AND (W) LEADS ON TERMINALS 5 AND 6, RESPECTIVELY.
4. TO PREVENT FALSE HOLD CONDITION WHEN HANDSET IS RESTORED, SWITCH CONTACTS d, e MUST BREAK BEFORE b, c BREAK.
5. WHEN BOTH FEATURES ARE REQUIRED, REPLACE 4-CONDUCTOR MOUNTING CORD WITH 6-CONDUCTOR MOUNTING CORD AND CONNECT (BL) AND (W) LEADS TO (BK) AND (R) RINGER LEAD RESPECTIVELY. USE DI61488 CONNECTORS.

\* INSULATE AND STORE

Fig. 22—500L/M Telephone Set, Current Connections With and Without Terminal Strips (Sheet 2 of 2)

**TABLE D**  
**LINE AND RINGER CONNECTIONS FOR 500L/M TELEPHONE SET**

	FEATURES (SEE NOTE 3 AND 5 FIG. 22 AND NOTE 3 FIG. 23)	TERM. STRIP	CONNECTIONS TO TERMINALS IN SET								MTG CORD CONNECTIONS ON CONN BLOCK					
			MTG CORD				RINGER LEADS				LINE		RINGER		CONTROL LEAD	
			R	G	Y	BK	R	BK	S	S-R	RING	TIP	RING	TIP	A1	A
3 1	Ringer Circuit Brought Out Separately in Mounting Cord	With			3†	4†	4†	3†								
		With- out	L2	F	L1*	G*	G	L1	A	A	R	G	Y	BK		
4 2	Control Leads for 1A1, 1A2 Key Telephone Systems and 101-Type Key Equipment	With			5†	6†										
		With- out	L2	F	L1	G	L2	F	K	A	R	G			Y	BK
	To Permanently Silence Ringer	With														
		With- out					A	K	K	A						

\* Remove, insulate, and store (BR) and (Y) line switch leads.

† On term. strip.



TABLE E

## LINE, RINGER, AND TUBE CONNECTIONS FOR 500P AND 501P TELEPHONE SETS

WIRE OR LEAD	COLOR	BRIDGED *	RING PARTY *	TIP PARTY NO IDENT GRD*	TIP PARTY IDENT GROUND						NEG(-) PARTIES†		POS(+) PARTIES†			
					NORMAL CONNECTIONS		RINGER REV. WHEN CONN TO L.L. EQUIP.		TO SILENCE RINGER PERMANENTLY		RING	TIP	RING	TIP		
					1000Ω	2650Ω	1000Ω	2650Ω	1000Ω	2650Ω	1 AND 5	2 AND 6	3 AND 7	4 AND 8		
Ringer	R BK S S-R	L2 L1 K A	L2 G K A	L2 G K A	K G B B	B B K G	B B G K	G K B B	K G B K	B K K G	G G A K	G G A K	L2 L2 A K	L2 L2 A K		
Line Switch	S	L2	L2	L2	A	A	A	A	L2	L2	L2	L2	L2	L2		
426A Tube (501P Set)	R BK Y										L1 or G K L2	L1 or G K L2	L2 K G	L2 K G		
Mtg Cord Set End	R G Y BK	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1	L2 L1 5 E1		
Mtg Cord Conn Block End	R G Y BK	R G Y B	R G Y B	G R Y B	G R Y B	G R Y B	G R Y B	G R Y B	G R Y B	G R Y B	R G Y B	G R Y B	R G Y B	G R Y B		
Inside Wire Conn Block	Ring Tip GRD	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y	R G Y		
Trnsf Leads at Conn Block		Y B	Y B	Y B	Y B	Y B	Y B	Y B	Y B	Y B	Y B	Y B	Y B	Y B		
4 ELEMENT ELECTRON TUBE CONNECTIONS TO REDUCE SERVICE INDUCTION																
425A Tube (501P Set)	R G BK Y												L1 L2 K L2	L1 L2 K L2	L2 L1 K G	L2 L1 K G

\* To silence ringer permanently for these classes of service, connect BK ringer lead to K terminal on network.

† To silence ringer permanently for negative and positive parties, connect yellow strip to terminal 6 instead of terminal 5 on terminal strip.

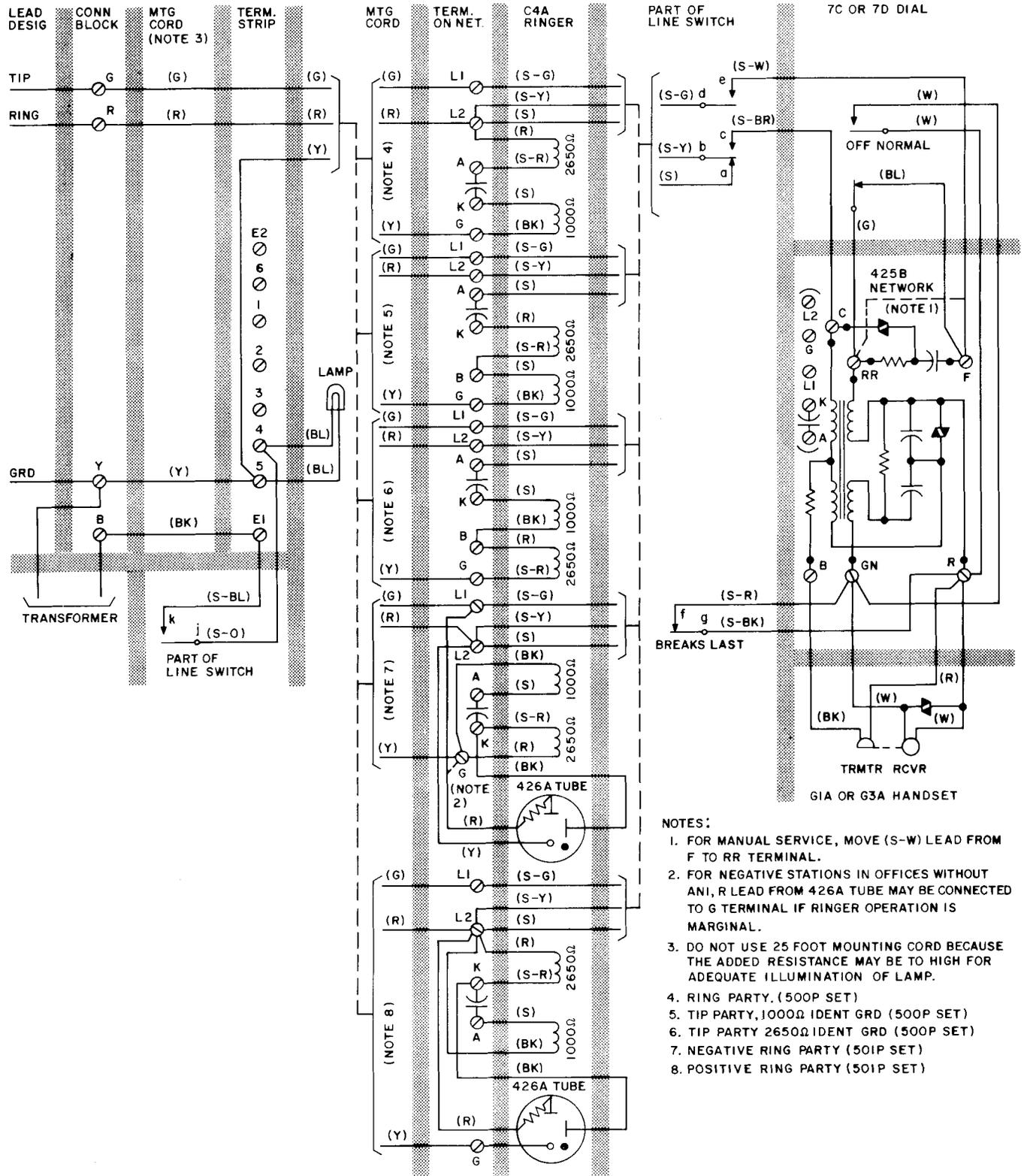


Fig. 24—500P and 501P Telephone Set, Connections

**TABLE F  
LINE AND RINGER CONNECTIONS FOR 500R/S TELEPHONE SET**

WIRE OR LEAD	COLOR	INDIV OR BRIDGED		RING PARTY		TIP PARTY NO IDENT GROUND		TIP PARTY IDENT GROUND*													
								NORMAL CONNECTIONS (NOTE)				RINGER REVERSAL WHEN CONNECTED TO LONG LINE EQUIP. (NOTE)				TO SILENCE RINGER PERMANENTLY					
								1000Ω		2650Ω		1000Ω		2650Ω		1000Ω		2650Ω			
								DIAL	MAN.	DIAL	MAN.	DIAL	MAN.	DIAL	MAN.	DIAL	MAN.	DIAL	MAN.	DIAL	MAN.
Mtg Cord in Set†	(W-BL) [G]	G	G	F	E2	F	E2	F	E2	F	E2	F	E2	F	E2	F	E2	F	E2	F	E2
Strap from G Term. on Net. to	(G)	F	E2	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1	E1
Ringer	(R) (BK) (S) (S-R)	L2 G K A	L2 G K A	L2 G K A	K G B B	B B K G	B B K G	G L1 B A	B L1 K G												
Line Switch	(W-S) [S-BR]	Term. 2	Term. 2	Term. 2	A of Net.	A of Net.	A of Net.	A of Net.	Term. 2	Term. 2											
Mtg Cord at Conn Block† (Line Only)	(G-W) [R] (W-BL) [G] (BL-W) [BR-G]	Ring Tip Ring	Ring Tip Ring	Tip Ring Tip	Tip Ring Tip	Tip Ring Tip	Tip Ring Tip	Tip Ring Tip	Tip Ring Tip												

**Note:** Use normal connections on a tip party identification ground stations. If bell taps on stations connected to long line equipment, use ringer reversal column in Table F to retain tip party identification.

\* Tip party identification connections can be made using long line equipment in a No. 5 crossbar central office ONLY if SD-26129-01 long line equipment is used, or in any type office ONLY if SD-96588-01 long line equipment is used.

† Only the optional mounting cord leads are shown in the table. Connections for the remaining mounting cord leads are shown in Fig. 24.

( ) Current color code.

[ ] MD color code.

**TABLE G  
RINGER LEAD CONNECTIONS  
TO SILENCE RINGER PERMANENTLY  
FOR 500U AND 501U TELEPHONE  
SETS**

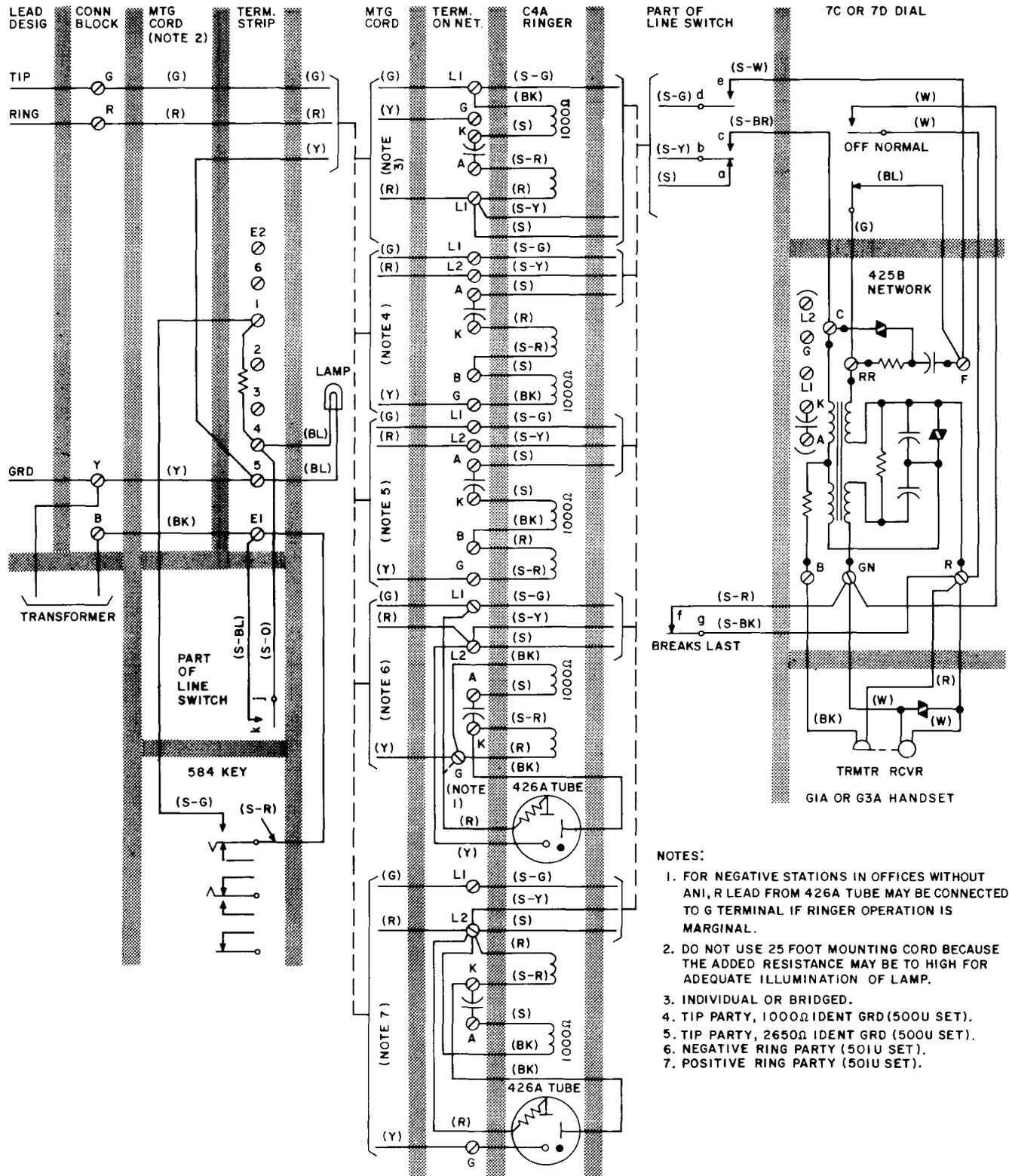
CLASS OF RINGING SERVICE	RINGER LEAD			
	R	BK	S	S-R
Individual or Bridged	A	K	K	A
Tip Party Message Rate Zone Registration XBR with AMA	K	G	B	K
Tip Party S X S with AT S X S with AMA MOD XBR with AMA	B	K	K	G
For all classes of service except those listed above: Connect (Y) strap to terminal 6 instead of terminal 5 on terminal strip.				



TABLE H

## LINE, RINGER AND TUBE CONNECTIONS FOR 500U AND 501U TELEPHONE SETS

WIRE OR LEAD	COLOR	BRIDGED	RING PARTY	TIP PARTY NO IDENT GRD	TIP PARTY		NEGATIVE(-) PARTIES		POSITIVE(+) PARTIES	
					MESSAGE RATE	SXS WITH AT	RING	TIP	RING	TIP
					ZONE REGISTRATION	SXS WITH AMA				
					XBR WITH AMA	MOD XBR WITH AMA				
Ringer	R	L2	L2	L2	K	B	G	G	L2	L2
	BK	L1	G	G	G	B	G	G	L2	L2
	S	K	K	K	B	K	A	A	A	A
	S-R	A	A	A	B	G	K	K	K	K
Line Switch	S	L2	L2	L2	A	A	L2	L2	L2	L2
426A Tube (501U Set)	R BK Y						L1 or G K L2	L1 or G K L2	L2 K G	L2 K G
Mtg Cord Set End	R	L2	L2	L2	L2	L2	L2	L2	L2	L2
	G	L1	L1	L1	L1	L1	L1	L1	L1	L1
	Y	5	5	5	5	5	5	5	5	5
	BK	E1	E1	E1	E1	E1	E1	E1	E1	E1
Mtg Cord Conn Block End	R	R	R	G	G	G	R	G	R	G
	G	G	G	R	R	R	G	R	G	R
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	BK	B	B	B	B	B	B	B	B	B
Inside Wire at Conn Block	Ring Tip GRD	R	R	R	R	R	R	R	R	R
		G	G	G	G	G	G	G	G	G
		Y	Y	Y	Y	Y	Y	Y	Y	Y
Trnsf Leads at Conn Block		Y	Y	Y	Y	Y	Y	Y	Y	Y
		B	B	B	B	B	B	B	B	B
4 ELEMENT ELECTRON TUBE CONNECTIONS TO REDUCE SEVERE INDUCTION										
425A Tube (501U Set)	R G BK Y						L1 L2 K	L1 L2 K	L2 L1 K	L2 L1 K



- NOTES:
1. FOR NEGATIVE STATIONS IN OFFICES WITHOUT ANI, R LEAD FROM 426A TUBE MAY BE CONNECTED TO G TERMINAL IF RINGER OPERATION IS MARGINAL.
  2. DO NOT USE 25 FOOT MOUNTING CORD BECAUSE THE ADDED RESISTANCE MAY BE TOO HIGH FOR ADEQUATE ILLUMINATION OF LAMP.
  3. INDIVIDUAL OR BRIDGED.
  4. TIP PARTY, 1000Ω IDENT GRD (500U SET).
  5. TIP PARTY, 2650Ω IDENT GRD (501U SET).
  6. NEGATIVE RING PARTY (501U SET).
  7. POSITIVE RING PARTY (501U SET).

Fig. 26—500U and 501U Telephone Set, Connections

**TABLE I**  
**LINE AND RINGER CONNECTIONS**  
**FOR 500W AND 500Y TELEPHONE SETS**

WIRE OR LEAD	COLOR	INDIV OR BRIDGED	RING PARTY	TIP PARTY
Mtg Cord in Set	R G Y	L2 L1 G	L2 L1 G	L2 L1 G
Ringer	R BK S S-R	L2 G K A	L2 G K A	L2 G K A
Neon Lamp	BL	L1	L1	L1
Mtg Cord at Conn Block	R G Y	R G G	R G Y	G R Y
Inside Wire at Conn Block	R G Y	R G Y	R G Y	R G Y

*Note:* To silence ringer permanently for all classes of service, connect (Y) mounting cord lead to the same terminal as (R) mounting cord lead at connecting block.

**TABLE J**  
**MODIFICATION TO PROVIDE STATION BUSY LAMP**  
**IN 514B TELEPHONE SET**

LEAD	COLOR	REMOVE FROM	CONNECT TO
Line Switch	(BR) [S-W]	5	E1
Headset On-Off Key	(BR)	5	E1
KS-15724, L1 Diode			E1  5

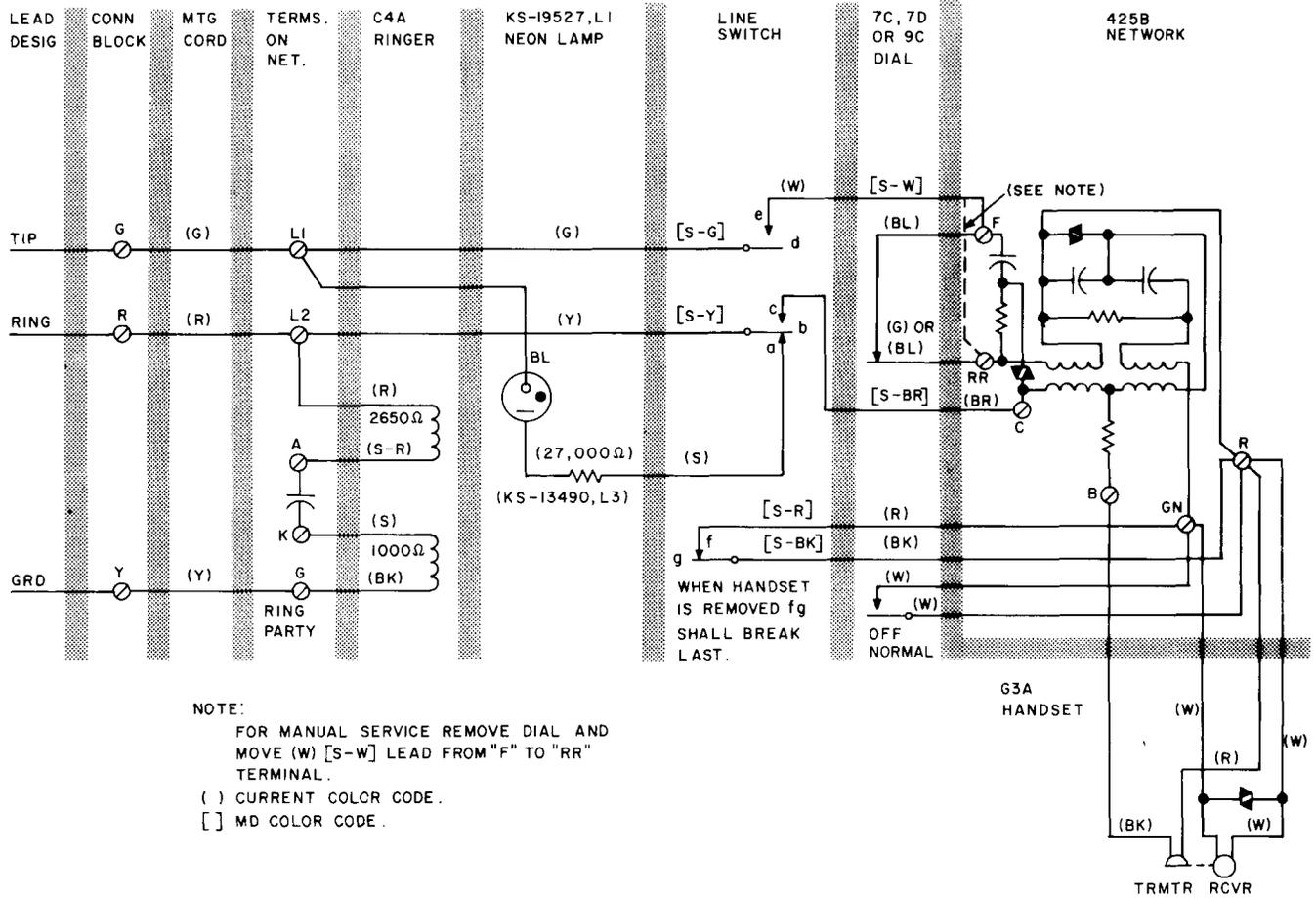


Fig. 27—500W and 500Y Telephone Set, Connections

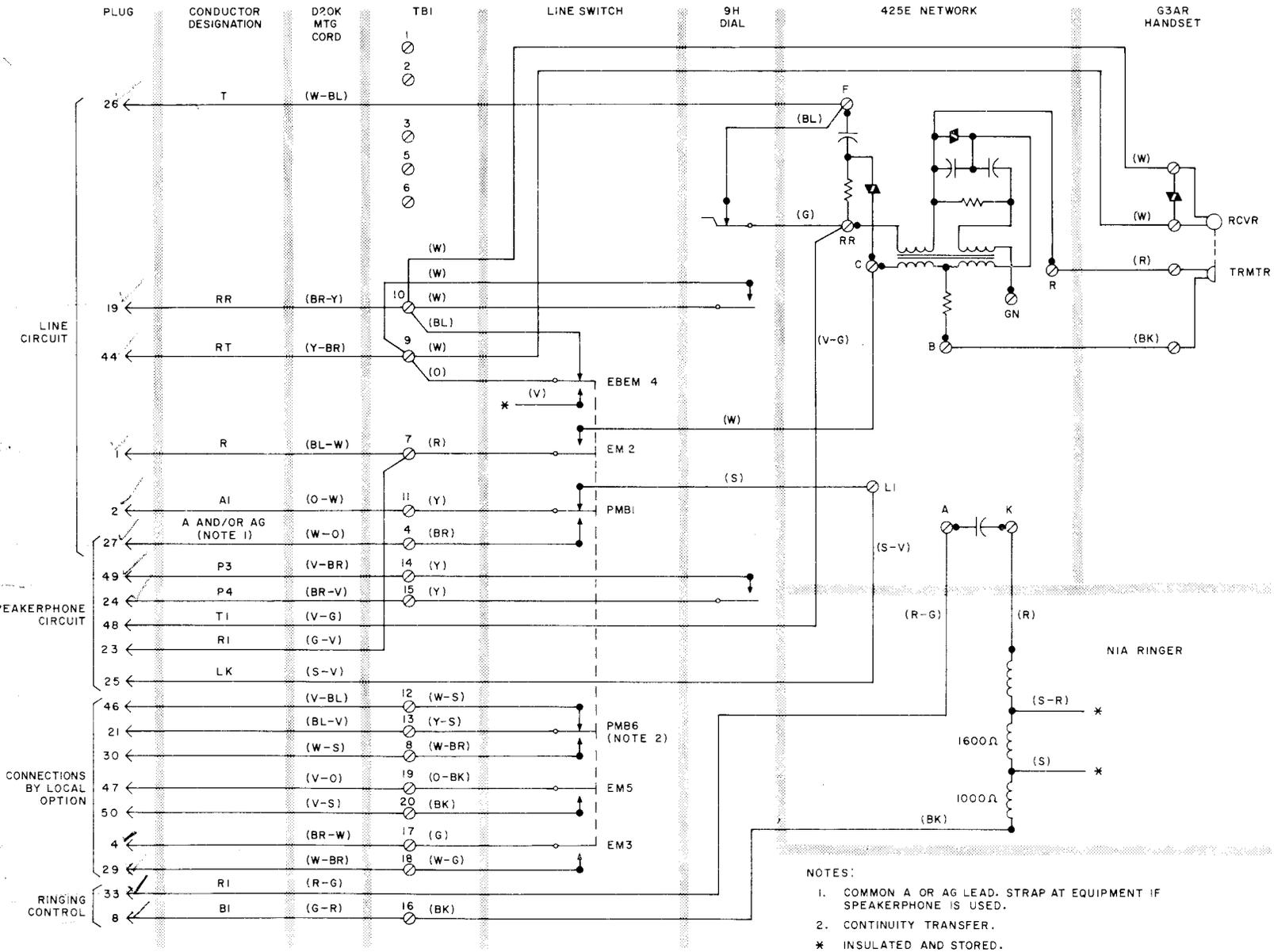


Fig. 28—500AD Telephone Set, Connections

*BN W*  
*W BN*  
*SLW*

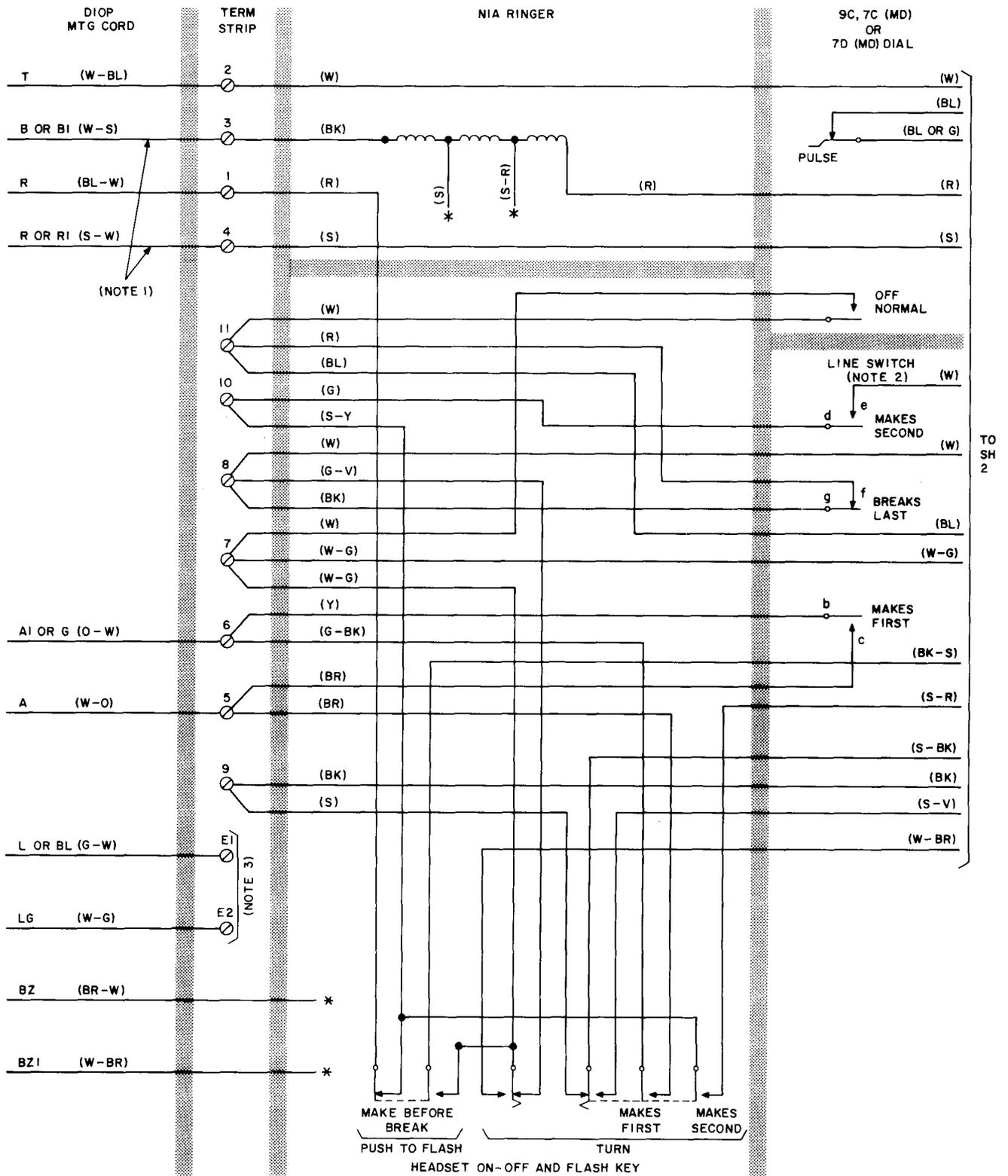


Fig. 29—514B Telephone Set, Connections (Sheet 1 of 2)

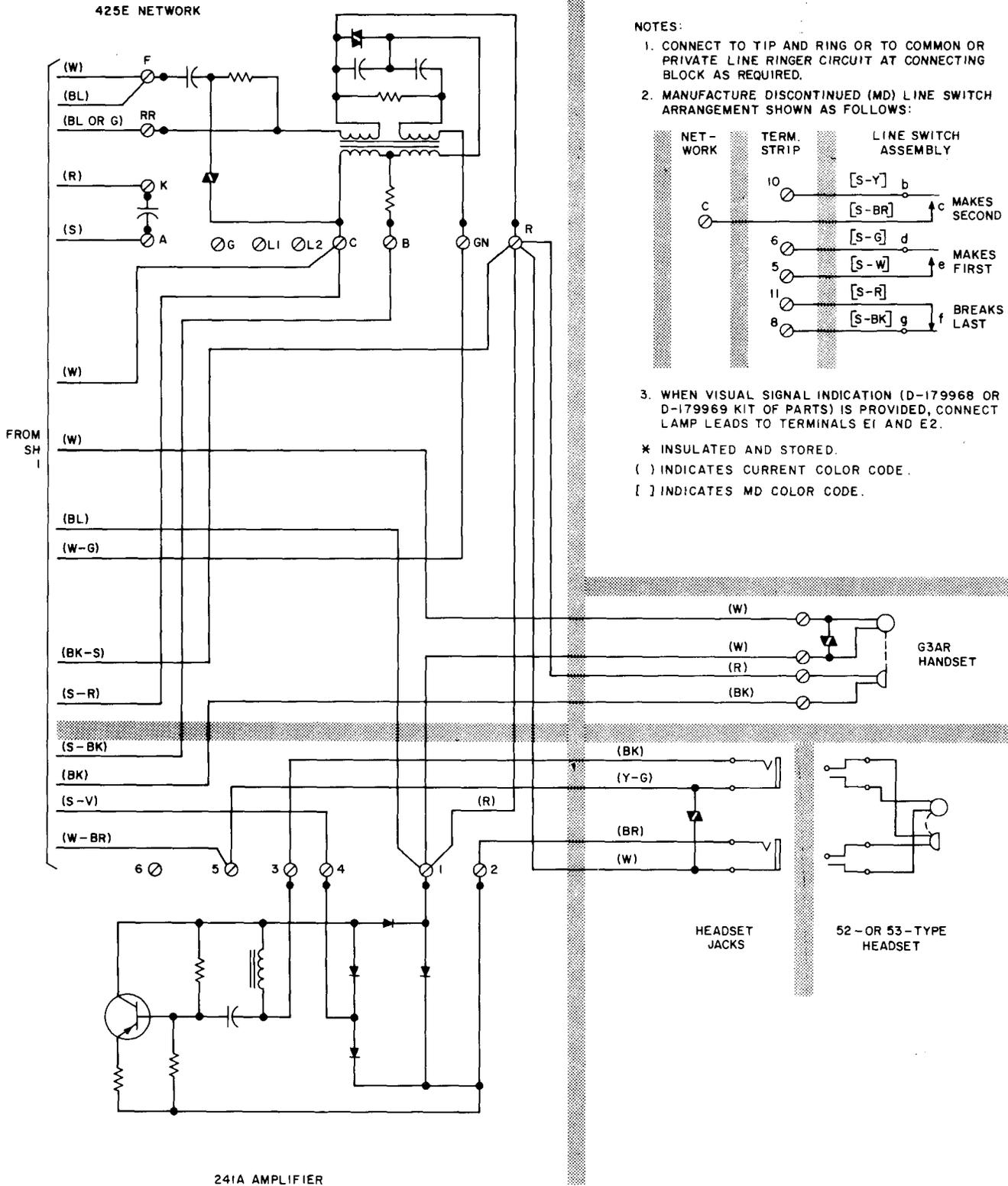


Fig. 29—514B Telephone Set, Connections (Sheet 2 of 2)