

## REFERENCE

### 500A/B, 500C/D, 500J/K, 501A/B, 501C/D, 501J/K, 554A/B, 554F, AND 556A/B TELEPHONE SETS

#### 1. GENERAL

**1.01** This section provides identification and connection information for general purpose 500-type telephone sets.

**1.02** This section is reissued to:

- Include D4BT mounting cord
- Revise Fig. 8 and Table F

Changes or additions in the body of tables are indicated by shaded areas.

**1.03** Code numbers such as 500C/D 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

**2.01** The 500-, 501-, 554-, and 556-type telephone sets are single line sets for use in common battery areas, manual or dial.

**2.02** 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.

**2.03** 554A/B, F, and 556A/B are standard, wall mounted telephone sets. The 556A/B is the same as the 554A/B except for the addition of a 426A tube.

**2.04** The 554F is factory equipped with a 9-foot handset cord.

**2.05** The 554-type sets are suitable for **A** lead control with wiring modifications.

**2.06** 500C or 554A manual telephone sets can be ordered modified per D-180405 or D-180406 Kit of Parts, respectively. The kit modifies the set for use with semipublic single slot coin telephone set as an extension station.

**2.07** 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 list components of these sets.

**2.08** Ringers are mounted to base with two P-43A456 washer head mounting screws in rubber grommets.

**2.09** 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.

**2.10** The G1- or G3-type handsets in these sets may be replaced by a G6AR (MD), G6B, or D-180413 handset for impaired hearing, a G7AR (MD) or G7B for weak speech, or a G8A (MD) or G8B for noisy locations. Refer to section covering these handsets.

**2.11** 425A, 4-element tube may be substituted for 426A, to care for cases of excessive power induction. See section entitled Inductive Noise for additional information concerning inductive interference.

**2.12** For negative stations in offices without ANI, (R) lead from 426A tube may be connected to G if ringer operation is marginal.

**2.13** Tube assembly is held to base of set with single screw (Fig. 3).

**2.14** 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.

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

SET	CODE	COMPONENT							
		DIAL	APP BLK§§	NET.	RINGER	HANDSET	MTG CORD	ELECTRON TUBE	HOUSING ASSY
500	A/B*	9C†	95C	425A**	C4A‡‡	G1- or G3-Type	D3BN or D4BT	426A	P-80D200
	C/D			425E††					
	J/K*			425A					
501	A/B*			425A**	C4A§				
	C/D			425E††					
	J/K*			425A					
554	A/B, F†		425E††	C4A				P-80F400	
556	A/B						426A		

\* MD

† 554F factory equipped with 9-foot handset cord

‡ Replaces 7C or 7D dial

§ Early models had C3A ringer

\*\* Includes 311A equalizer

†† Replaces 425B network

‡‡ Early models had C2A ringer

§§ Replaces 95A or 95B apparatus blank



**Fig. 1—500B, D, K, or 501B, D, K Telephone Set**

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.

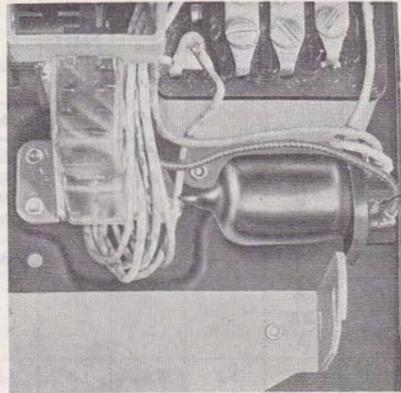
**Note:** ♦The D4BT universal mounting cord is available in (-29) transparent only.♦

**3. INSTALLATION AND MAINTENANCE**

**3.01** Refer to Section 502-500-110 for common installation and maintenance information



**Fig. 2—554- or 556-Type Telephone Set With Handset in Waiting Position**



**Fig. 3—501-Type Telephone Set, Tube Assembly**

**TABLE B**  
**LINE, RINGER, AND TUBE CONNECTIONS FOR 500A/B, J/K, AND 501A/B, J/K TELEPHONE SETS**  
**(NOTE 3)**

WIRE OR LEAD	COLOR	INDIV OR BRIDGED	RING PARTY	TIP PARTY NO IDENT GRD	TIP PARTY IDENT GROUND				NEGATIVE (—) PARTIES (NOTE 4)		POSITIVE (+) PARTIES	
					NORMAL CONNECTIONS		RINGER REV. WHEN CONN TO L.L. EQUIP. (NOTE 2)		RING (1-5)	TIP (2-6)	RING (3-7)	TIP (4-8)
					1000Ω	2650Ω	1000Ω	2650Ω				
Ringer Leads	R	K	K	K	K	M	R	G	E	E	A	A
	BK	G	G	G	G	R	M	K	E	E	K	K
	S	E	E	E	M	K	G	R	K	K	E	E
	S-R	E	E	E	R	G	K	M	A	A	E	E
Line Switch	S	L2-A	L2-A	L2-A	A	A	A	A	A	A	A	A
426A Tube (3-Element)	R BK Y								L1 or G G E	L1 or G G E	A E G	A E G
Mtg Cord in Set	R G Y	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G
Mtg Cord at Conn Blk	R G Y	R G G	R G Y	G R Y	G R Y	G R Y	G R Y	G R Y	R G Y	G R Y	R G Y	G R Y
Line Wire at Conn Blk	Ring	R	R	R	R	R	R	R	R	R	R	R
	Tip	G	G	G	G	G	G	G	G	G	G	G
	Grd	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

**Notes:**

## 1. To silence ringer permanently:

- (a) For all classes except tip party identification, connect (Y) mounting cord to same terminal as (R) mounting cord lead at connecting block.
- (b) Tip party identification:
  - For 1000Ω ground remove (R) from K of network and insulate and store on unused terminal.
  - For 2650Ω ground remove (S) from K of network and insulate and store on unused terminal.

2. If bell taps on stations connected to long line equipment, use these connections to retain party ground identification.
3. When grounded ringer arrangements are used with 96 volt long line circuits, a D-180036 ringer isolator must be used.
4. See Note 5, Fig. 4.

**TABLE C**  
**500C/D AND 501C/D TELEPHONE SET LINE, RINGER, AND TUBE CONNECTIONS**  
**(NOTE 3)**

WIRE OR LEAD	COLOR	INDIV OR BRIDGED	RING PARTY	TIP PARTY NO IDENT GRD	TIP PARTY IDENT GROUND				NEGATIVE (-) PARTIES (NOTE 4)		POSITIVE (+) PARTIES	
					NORMAL CONNECTIONS		RINGER REV. WHEN CONN TO L.L. EQUIP. (NOTE 2)		RING (1-5)	TIP (2-6)	RING (3-7)	TIP (4-8)
					1000Ω	2650Ω	1000Ω	2650Ω				
Ringer Leads	R	L2	L2	L2	K	B	B	G	G	G	L2	L2
	BK	G	G	G	G	B	B	K	G	G	L2	L2
	S	K	K	K	B	K	G	B	A	A	A	A
	S-R	A	A	A	B	G	K	B	K	K	K	K
Line Switch Lead	S	L2	L2	L2	A	A	A	A	L2	L2	L2	L2
426A Tube (3-element)	R BK Y								L1 or G K L2	L1 or G K L2	L2 K G	L2 K G
Mtg Cord in Set	R G Y	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G	L2 L1 G
Mtg Cord at Conn Block	R G Y	R G G	R G Y	G R Y	G R Y	G R Y	G R Y	G R Y	R G Y	G R Y	R G Y	G R Y
Line Wire at Conn Block	Ring	R	R	R	R	R	R	R	R	R	R	R
	Tip	G	G	G	G	G	G	G	G	G	G	G
	Grd	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

**Notes:**

## 1. To silence ringer permanently:

- (a) For all classes of service except tip party identification, connect (Y) mounting cord to same terminal as (R) mounting cord lead at connecting block.
- (b) For tip party with 1000 ohms identification ground; remove (R) ringer from K of network and insulate and store on unused terminal.
- (c) For tip party with 2650 ohms identification ground; remove the (S) ringer lead from K of network and insulate and store on unused terminal.
- (d) For the 501C/D telephone set connect (Y) mounting cord lead to same terminal as (R) mounting cord lead at the connecting block.

2. If bell taps on stations connected to long line equipment, use these connections to retain party ground identification.

3. When grounded ringer arrangements are used on 96 volt long line circuits, a D-180036 ringer isolator must be used.

4. See Note 4, Fig. 6.

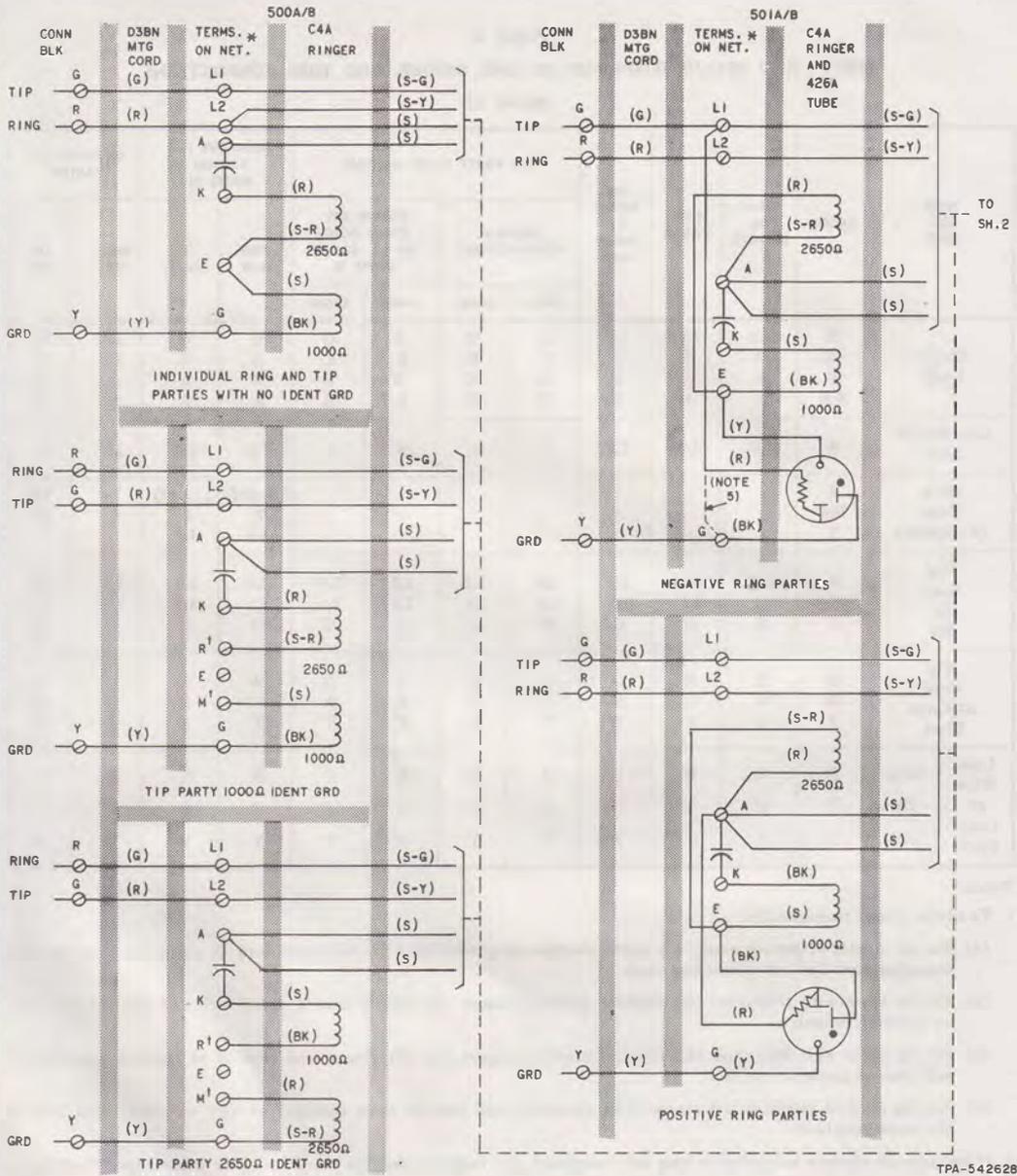
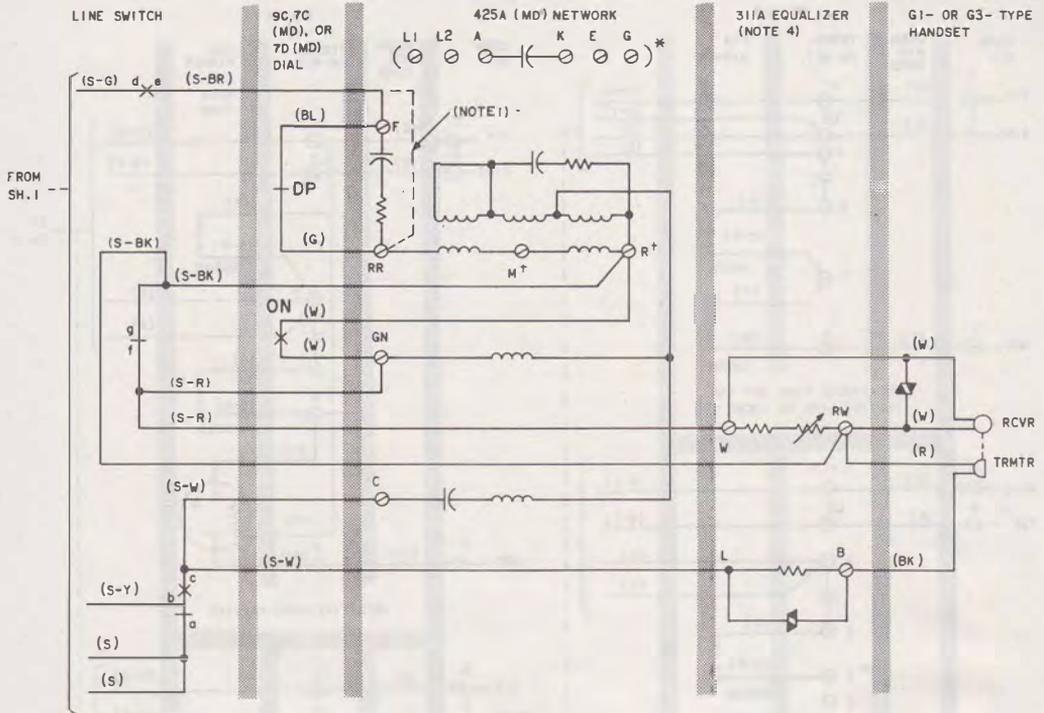


Fig. 4—500A/B (MD) and 501A/B (MD) Telephone Sets, Connections (Sheet 1 of 2)



## NOTES:

1. FOR MANUAL SERVICE, MOVE (S-BR) LEAD FROM F TO RR TERMINAL.
  2. 500 A/B SET FACTORY-WIRED FOR RING PARTY.  
501 A/B SET FACTORY-WIRED FOR NEGATIVE RING PARTY.  
SEE TABLE B FOR CLASSES OF SERVICE NOT SHOWN.
  3. LINE SWITCH OFF-HOOK SEQUENCE:
    - (1) ab BREAKS
    - (2) de MAKES
    - (3) bc MAKES
    - (4) fg BREAKS
  4. 425A NETWORK INCLUDES 311A EQUALIZER.
  5. STATIONS WITHOUT ANI, (R) TUBE LEAD MAY BE CONNECTED TO G IF RINGER OPERATION IS MARGINAL. AT NEGATIVE STATIONS ON 96V LONG LINE CIRCUITS, (R) TUBE LEAD SHOULD BE CONNECTED TO G.
- + SAME TERMINALS MAY APPEAR ON RINGER CONNECTION.

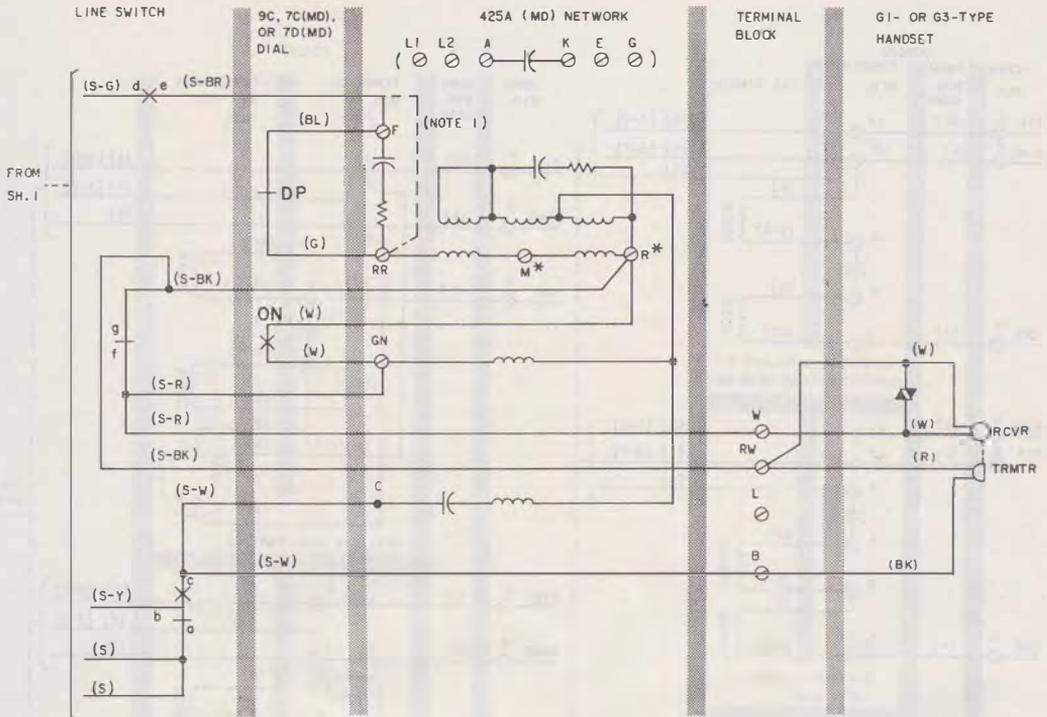
DP - DIAL PULSE CONTACTS

ON - DIAL OFF - NORMAL CONTACTS

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Fig. 4—500A/B (MD) and 501A/B (MD) Telephone Sets, Connections (Sheet 2 of 2)





## NOTE:

1. (S-BR) SWITCH LEAD IS CONNECTED TO F TERMINAL IN DIAL SETS AND TO RR TERMINAL IN MANUAL SETS.
2. 500 J/K SET FACTORY-WIRED FOR RING PARTY.  
501 J/K SET FACTORY-WIRED FOR NEGATIVE RING PARTY  
SEE TABLE B FOR CLASSES OF SERVICE NOT SHOWN.
3. LINE SWITCH OFF-HOOK SEQUENCE:
  - (1) ob - BREAKS
  - (2) de - MAKES
  - (3) bc - MAKES
  - (4) fg - BREAKS

\* SAME TERMINALS MAY APPEAR ON RINGER CONNECTION.

DP - DIAL PULSE CONTACT  
ON - DIAL OFF-NORMAL CONTACT

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Fig. 5—500J/K (MD) and 501J/K (MD) Telephone Sets, Connections (Sheet 2 of 2)

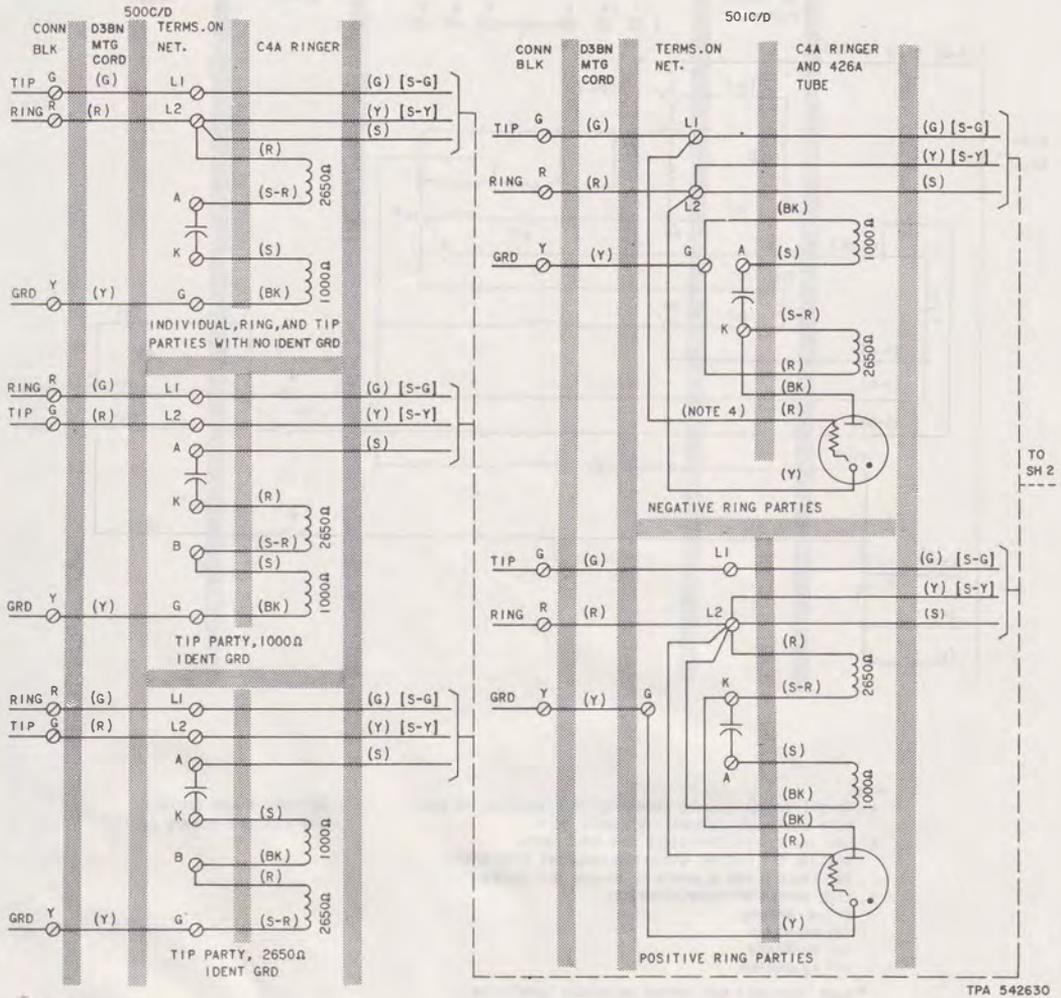


Fig. 6—500C/D and 501C/D Telephone Sets, Connections (Sheet 1 of 2)



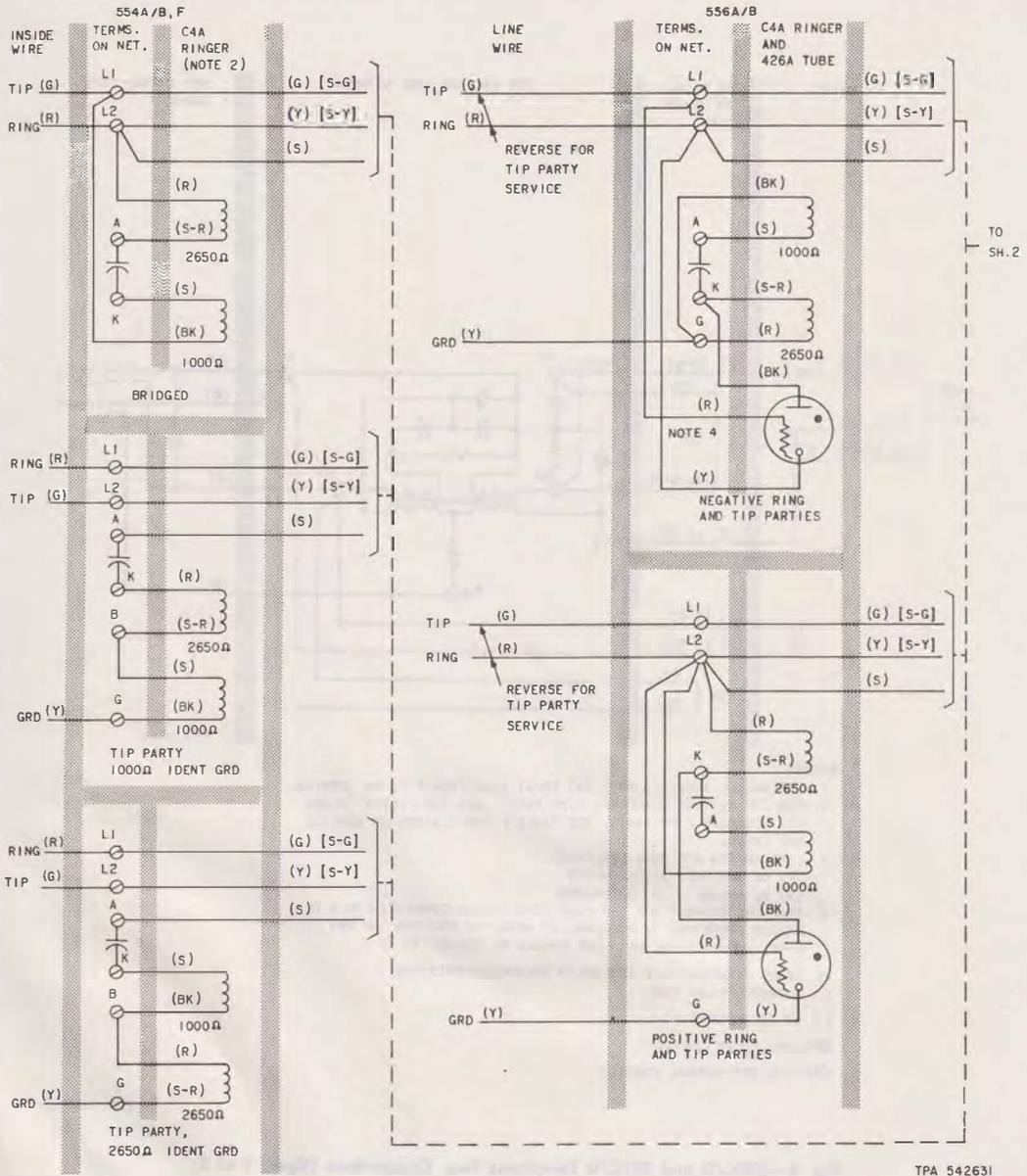
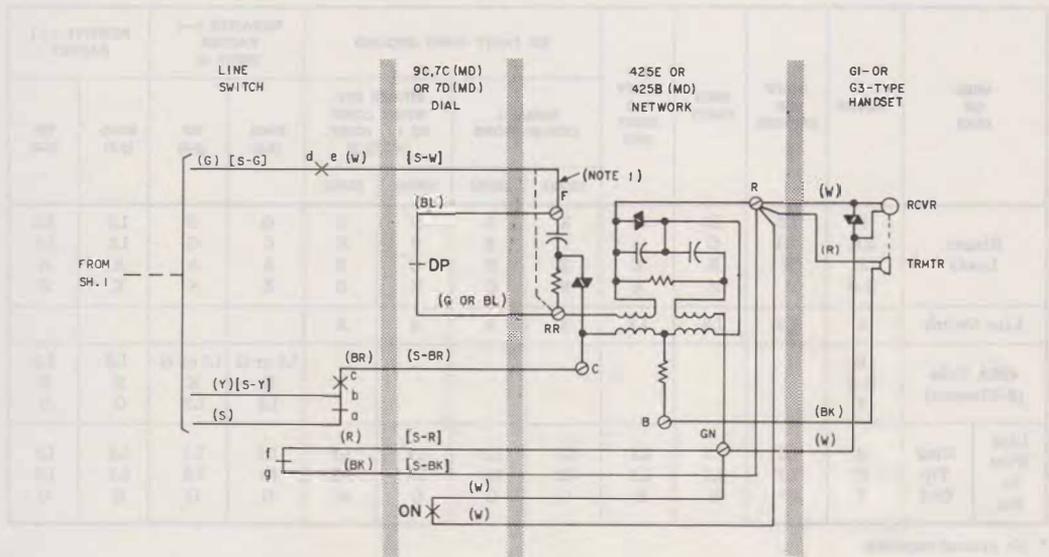


Fig. 7—554A/B, F and 556A/B Telephone Sets, Connections (Sheet 1 of 2)



## NOTES:

1. FOR MANUAL SERVICE, MOVE (W) [S-W] LEAD FROM F TO RR TERMINAL.
2. 554A/B, F IS FACTORY WIRED FOR BRIDGED SERVICE, 556A/B IS FACTORY WIRED FOR NEGATIVE RING PARTY, FOR CLASSES OF SERVICE NOT SHOWN, REFER TO TABLE D.
3. LINE SWITCH OFF-HOOK SEQUENCE:  
(1) bc-MAKES (3) ab-BREAKS  
(2) de-MAKES (4) gf-BREAKS
4. STATIONS WITHOUT ANI, (R) TUBE LEAD MAY BE CONNECTED TO G IF RINGER OPERATION IS MARGINAL. AT NEGATIVE STATIONS ON 96V LONG LINE CIRCUITS, (R) LEAD SHOULD BE CONNECTED TO G.

( ) CURRENT COLOR CODE

[ ] MD COLOR CODE

DP-DIAL PULSE CONTACT

ON-DIAL OFF-NORMAL CONTACT

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Fig. 7—554A/B, F and 556A/B Telephone Sets, Connections (Sheet 2 of 2)

**TABLE D**  
**554A/B, F AND 556A/B TELEPHONE SET6 LINE, RINGER, AND TUBE CONNECTIONS**  
**(NOTE 3)**

WIRE OR LEAD	COLOR	INDIV OR BRIDGED	RING PARTY	TIP PARTY NO IDENT GRD	TIP PARTY IDENT GROUND				NEGATIVE (—) PARTIES (NOTE 4)		POSITIVE (+) PARTIES		
					NORMAL CONNECTIONS		RINGER REV. WHEN CONN TO LL. EQUIP. (NOTE 2)		RING (3-5)	TIP (2-6)	RING (3-7)	TIP (4-8)	
					1000Ω	2650Ω	1000Ω	2650Ω					
Ringer Leads	R	L2	L2	L2	K	B	B	G	G	G	L2	L2	
	BK	L1	G	G	G	B	B	K	G	G	L2	L2	
	S	K	K	K	B	K	G	B	A	A	A	A	
	S-R	A	A	A	B	G	K	B	K	K	K	K	
Line Switch	S	L2	L2	L2	A	A	A	A					
426A Tube (3-Element)	R BK Y								L1 or G K L2	L1 or G K L2	L2 K G	L2 K G	
Line Wire in Set	Ring Tip Grd	R	L2	L2	L1	L1	L1	L1	L1	L2	L1	L2	L1
		G	L1	L1	L2	L2	L2	L2	L2	L1	L2	L1	L2
		Y	G*	G	G	G	G	G	G	G	G	G	G

\* No ground required

**Notes:**

1. To silence ringer:

- (a) For the 554A/B and F telephone sets for all classes of service except tip party grd. identification, connect (S) and (BK) ringer leads on K terminal of 424E network.
- (b) For tip party with 1000Ω identification ground, remove the (R) ringer lead from K of network and insulate and store or connect to spare terminal.
- (c) For tip party with 2650Ω identification ground, remove the (S) ringer lead from K of network and insulate and store or connect to spare terminal.
- (d) For the 556A/B telephone set, connect (R) and (BK) ringer leads to K terminal of network.

2. If bell taps on stations connected to long line equipment, use these connections to retain party ground identification.

3. When grounded ringer arrangements are used on 96 volt long line circuits, a D-180086 ringer isolator must be used.

4. See Note 4, Fig. 7.



**TABLE E**  
**554A/B AND F TELEPHONE SETS**  
**MODIFICATION FOR**  
**"A" LEAD CONTROL**  
**CURRENT COLOR CODE**

WIRE OR LEAD		REMOVE FROM NET.	CONNECT TO	
			NET.	TERM. STRIP
Line Switch	W BR	F C	C G	
Ringer Leads	R BK	L2 G		3 4
Line Wire in Set	Ring Tip "A" Lead A1-Grd		L1 F L2 G	

**TABLE F**  
**554A/B TELEPHONE SET**  
**MODIFICATIONS FOR**  
**"A" LEAD CONTROL**  
**MD COLOR CORE**

WIRE OR LEAD		REMOVE FROM NET.	CONNECT TO	
			NET.	TERM. STRIP
Line Switch	[S-W]	F	G	
Ringer Leads	(R) (BK)	L2 L1		3 4
Line Wire in Set	Ring Tip "A" Lead A1-Grd		L2 F L1 G	

( ) Current color code

[ ] MD color code.