

REFERENCE

2500D AND 2554B TELEPHONE SETS



2500 AND 2554 TYPE TELEPHONE SET

Fig. 1—2500D and 2554B Telephone Set

**I. GENERAL**

**1.01** This section provides identification, installation, maintenance, and connection information for the 2500D and 2554B general purpose telephone sets.

**1.02** This section is reissued to.

- Add 35Y3D dial
- Show line switch contacts shorted out
- Delete unavailable colors in Table A

## 2. IDENTIFICATION AND CONNECTIONS

### Purpose

**2.01** General purpose wall- and desk-type telephone sets equipped with a 12-button TOUCH-TONE® dial.

### Ordering Guide (Refer to Table B)

#### 2.02 Basic Telephone Sets:

- Set, Telephone, 2500D-\*
  - Set, Telephone, 2554B-\*
- \* Refer to Table A for colors.

◆ TABLE A ◆

COLOR ORDERING GUIDE\*

TEL SET, CORD HOUSING, HANDSET COLOR		COORDINATED FACEPLATE COLOR	
Black	-03	Charcoal	-70
Ivory	-50	Muted Ivory	-80
Moss Green	-51	Light Green	-71
Red	-53	Muted Red	-69
Pastel Yellow	-56	Light Yellow	-72
White	-58	Light Gray	-73
Light Beige	-60	Muted Beige	-75
Aqua Blue	-62	Muted Blue	-76

### Design Features and Application

**2.03** The 2500D and 2554B telephone sets are general purpose desk- and wall-type sets, respectively, for use in PBX, individual and party line service, and special service connections.

### Optional Features

**2.04 End-to-End Signaling:** Refer to Table C for installation of polarity guard assembly, if required. Guard location for the 2500D set is shown in Fig. 2. Guard location for the 2554B set is below the dial.

### Connections

**2.05** The 2500D and 2554B telephone set line and ringer connections are found in Fig. 3 through 7 and Tables D through H.



Fig. 2—2500D Telephone Set, Interior

## 3. MAINTENANCE

**3.01** ◆The 2554B telephone set has been modified to prevent a potential trouble condition by shorting the a-b line switch contacts. This modification consists of a (BK) strap placed between terminal A on the network and terminal 2 on the block. The 2554B telephone set can be modified (early version) in the field when trouble is encountered or at time of any field visit, by adding a strap as shown in Fig. 4, note 5.

**3.02** When this set is used on 1A1 or 1A2 KTS, insulate and store the (BK) strap together with other modification shown in Fig. 6, 7 and Tables G, H.◆

**3.03 Replaceable Apparatus:** (Refer to Table B for component ordering guide.) Component parts should be maintained in accordance with section covering the item.

**3.04** To remove housing on 2554-type telephone set:

- (1) Remove number card and number card holder with KS-16750 type releaser.
- (2) Loosen captive screws located beneath number card.
- (3) Remove housing.

◆ **TABLE B** ◆

**COMPONENT ORDERING GUIDE\***

REPLACEABLE COMPONENTS	TELEPHONE SETS	
	2500D	2554B
Cord, Mounting	D3BN or D4BT	
Dial	35A3A, 35Y3A, or 35Y3D	35A3A, 35Y3A, or 35Y3D
Housing	P-83A300	P-83H600
Plate, Face, Assy	P-86D500†	
Retainer, Card	P-25E803	P-25E803
Ringer	C4A	P1A
Set, Hand	G3-Type	G3-Type
Guard Assy	P-90D052	D-180190‡ D-180547§
Term. Board Assy	—	D-1800554¶

\* Refer to Table A for color selection.

† Includes P-25E803 card retainer.

‡ D-180190 guard assembly used with all fixed installation 2554-type wall sets.

§ D-180547 guard assembly used with all plug-in option 2554-type wall sets.

¶ D-180554 terminal board assembly for use in 2554B wall sets E/W 4228K networks when service on 1A1 or 1A2 key telephone systems is required.

(4) To replace housing, reverse procedure.

**3.05** Plungers, operating bracket switch and line switch shall move freely without binding or squeaking.

- Clean with KS-2423 cloth moistened with KS-7860 petroleum spirits.

- Lubricate plungers and bearing surfaces with No. 2 or softer graphite pencil.

**3.06** Clean line switch contacts when required with a 265C tool. Replace set if other trouble exists in the line switch assembly.

**TABLE C**

**2500D AND 2554B TELEPHONE SETS  
POLARITY GUARD CONNECTIONS**

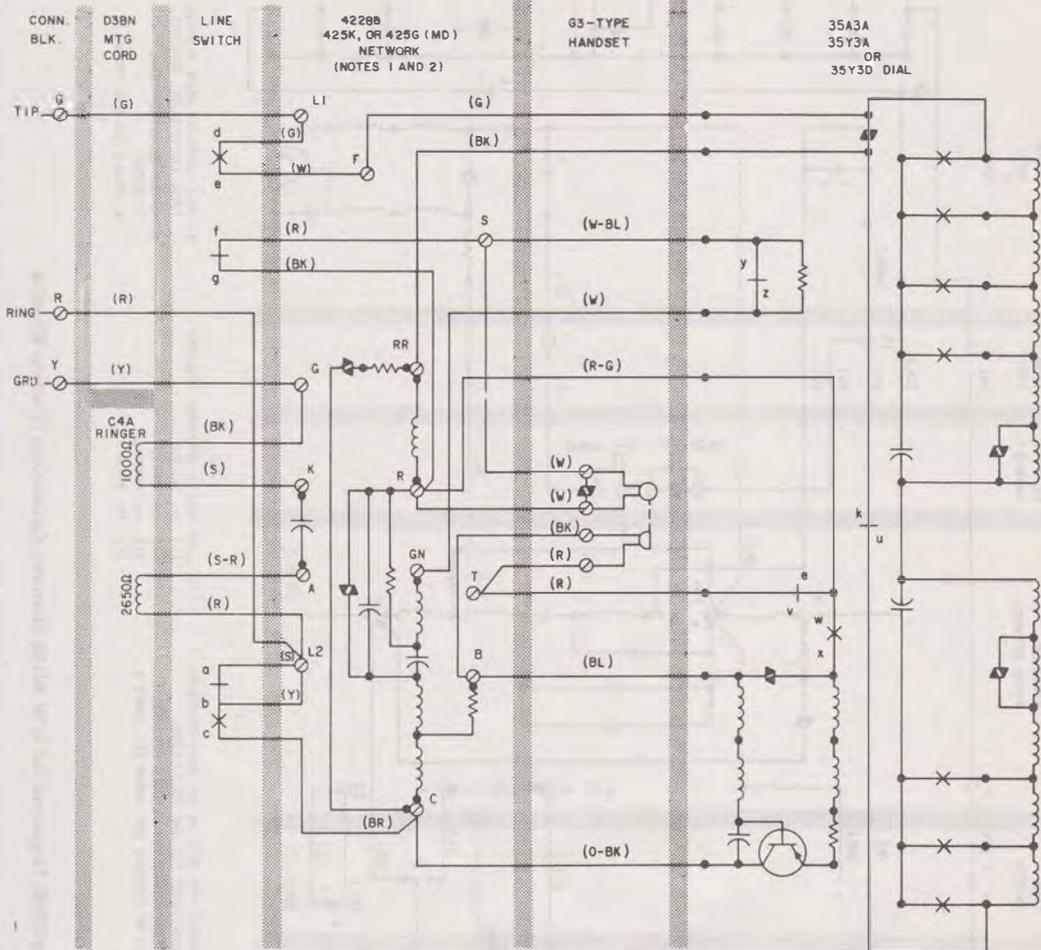
WIRE OR LEAD		REMOVE FROM	CONNECT TO
Dial	(BK)	RR net.	T of guard assembly
Line Switch	(BR)* (BL)†	C net.	S of guard assembly
M1W Cord‡			
Guard Assembly	(G)		Term. RR net.
	(W)		Term. C net.

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

\* Factory-wired telephone set.

† 2554B set wired for 1A1 or 1A2 KTS.

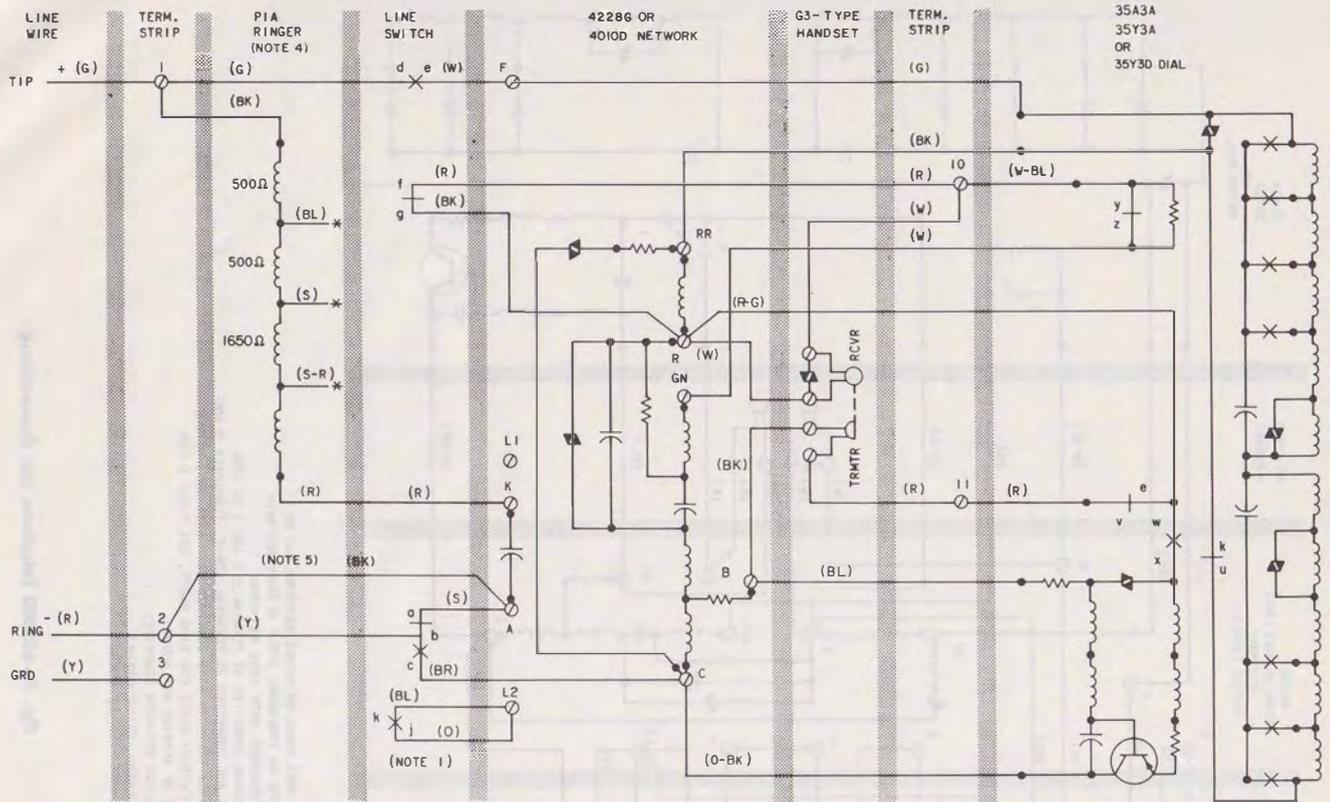
‡ 2554B set not equipped with j-k switch contacts and associated (O) and (BL) leads.



## NOTES:

1. A 425G (MD), 425K, OR 4220B NETWORK MAY BE INSTALLED. NO TERMINAL STRIP IS PROVIDED WITH SETS FURNISHED WITH 425K NETWORK.
2. LEADS SHOWN CONNECTED AT TERMINALS S AND T ON 425K NETWORK ARE CONNECTED AT TERMINAL STRIP, TERMINALS 10 AND 11 RESPECTIVELY, IN SETS EQUIPPED WITH 425G (MD) NETWORKS.
3. SET IS FACTORY WIRED FOR RING PARTY. SEE TABLE D FOR CLASSES OF SERVICE NOT SHOWN.
4. LINE SWITCH OFF-HOOK SEQUENCE:  
 (1) bc MAKES (3) ab BREAKS  
 (2) de MAKES (4) fg BREAKS

Fig. 3—2500D Telephone Set, Connections



NOTES:

1. CURRENT PRODUCTION SETS DO NOT HAVE CONTACTS j-k AND ASSOCIATED (O) AND (BL) LEADS.
2. SET IS FACTORY WIRED FOR BRIDGED SERVICE. FOR CLASSES OF SERVICE NOT SHOWN SEE TABLE E.

3. LINE SWITCH OFF-HOOK SEQUENCE:

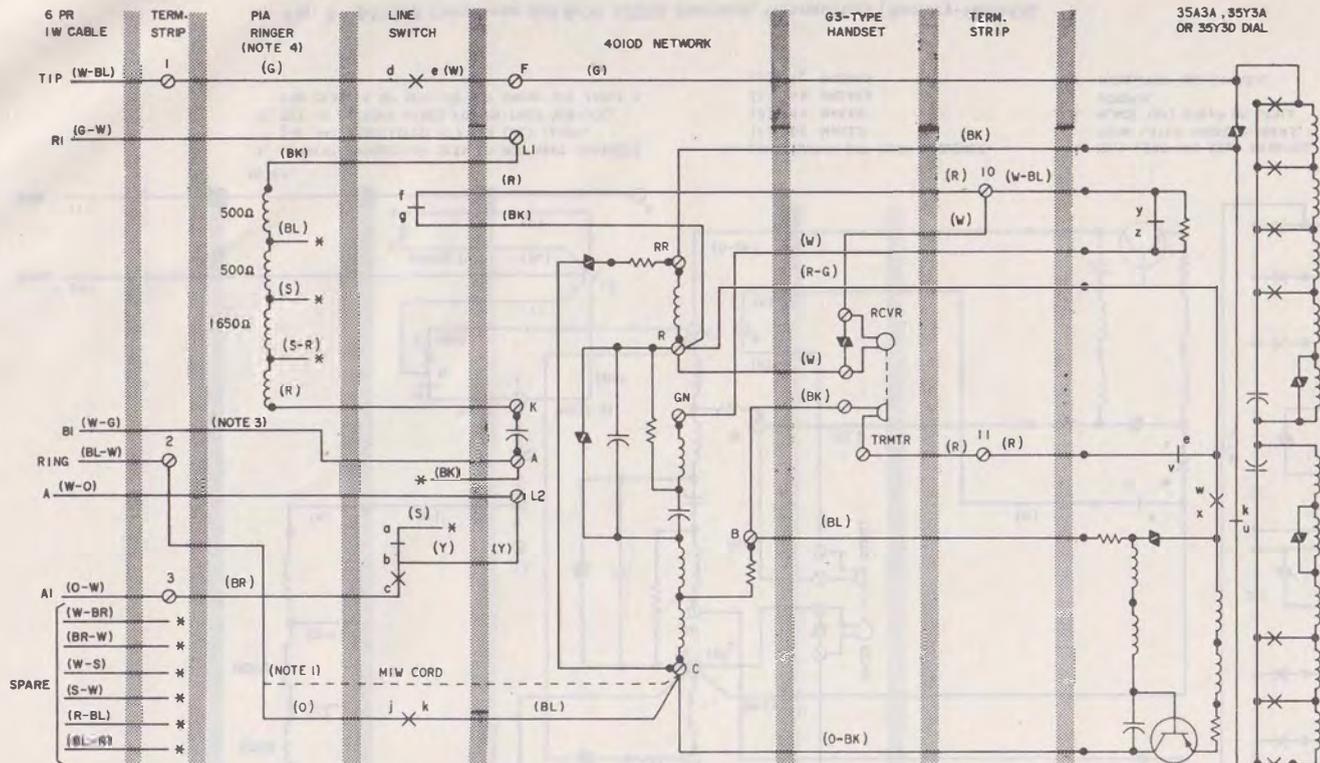
- (1) bc MAKES
- (2) de MAKES
- (3) ab BREAKS
- (4) fg BREAKS

4. (BL) LEAD HAS BEEN REMOVED FROM LATER MODEL RINGERS.

5. PLACE (BK) STRAP (EARLY VERSION)
- \* INSULATED AND STORED

Fig. 4—2554B Telephone Set E/W 4010D Network, Connections (Factory-Wired)





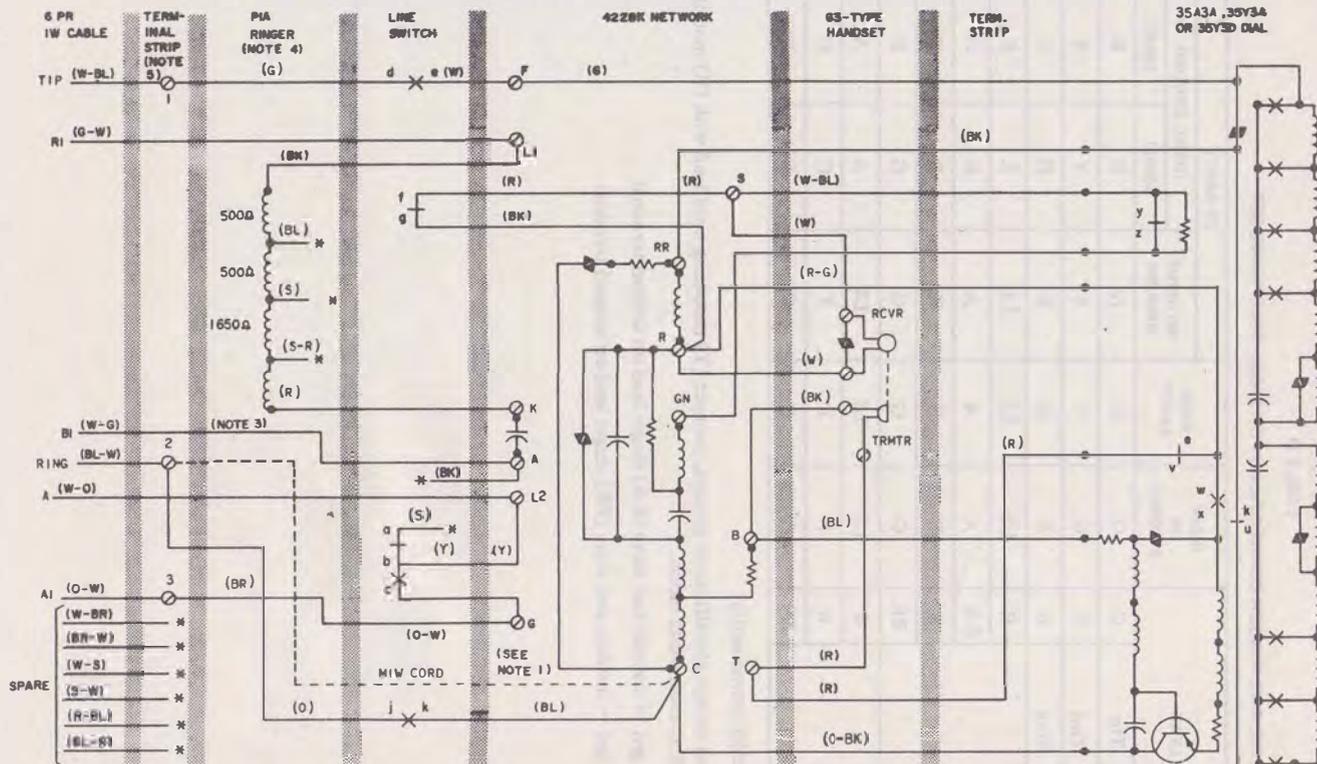
NOTES:

1. CONNECT MIW CORD FROM TERMINAL 2 TO C OF NETWORK IN SETS NOT EQUIPPED WITH LINE SWITCH CONTACTS j-k AND ASSOCIATED (O) AND (BL) LEADS.
2. LINE SWITCH OFF-HOOK SQUENCE (1) bc MAKES (2) de MAKES (3) ab BREAKS (4) fg BREAKS.
3. RINGER IS SHOWN FOR INDIVIDUAL LINE RINGING. WHEN COMMON RINGER WITHOUT CAPACITOR IS REQUIRED CONNECT BI (W-G) LEAD TO K OF NETWORK.

4. (BL) LEAD HAS BEEN REMOVED FROM LATER MODEL RINGERS.

\* INSULATE AND STORE.

Fig. 6—25548 Telephone Set E/W 4010D Network, Connections for 1A1 or 1A2 Key Telephone System



## NOTES:

1. CONNECT MIW CORD FROM TERMINAL 2 TO C OF NETWORK IN SETS NOT EQUIPPED WITH LINE SWITCH CONTACTS j-k AND ASSOCIATED (O) AND (BL) LEADS.
2. LINE SWITCH OFF-HOOK SEQUENCE (1) bc MAKES (2) de MAKES (3) ob BREAKS (4) fg BREAKS.
3. RINGER IS SHOWN FOR INDIVIDUAL LINE RINGING. WHEN COMMON RINGER WITHOUT CAPACITOR IS REQUIRED CONNECT BI (W-G) LEAD TO K OF NETWORK.

4. (BL) LEAD HAS BEEN REMOVED FROM LATER MODEL RINGERS.
5. TERMINAL STRIP AND FASTENERS FROM D-180554 KIT OF PARTS (TERMINAL STRIP ASSEMBLY)

\* INSULATE AND STORE.

Fig. 7—2554B Telephone Set E/W 4228K Network, Connections for 1A1 or 1A2 Key Telephone Systems

TABLE D  
LINE AND RINGER CONNECTIONS FOR 2500D TELEPHONE SET

WIRE OR LEAD		INDIV OR BRIDGED	RING PARTY	TIP PARTY			
				NO IDENT. GROUND	IDENT. GROUND		
					1000 $\Omega$	2650 $\Omega$	
Mtg. Cord at Conn Block	Tip	G	G	G	G	R	R
	Grd	Y	G	Y	Y	Y	Y
	Ring	R	R	R	R	G	G
Ringer Leads		R	L2	L2	L1	K	B
		S-R	A	A	A	B	G
		S	K	K	K	B	K
		BK	G	G	G	G	B
Line Switch Leads		S	L2	L2	L2	A	A
		W	F	F	F	C	C
		BR	C	C	C	F	F

*Note:* To silence ringer permanently:

- For all classes except identification ground, connect (Y) mounting cord lead with (R) mounting cord lead at connecting block.
- For 1000 $\Omega$  grd — insulate and store (S-R) ringer lead on unused terminal.
- For 2650 $\Omega$  grd — insulate and store (BK) ringer lead on unused terminal.

TABLE E  
LINE AND RINGER CONNECTIONS FOR 2554B TELEPHONE SET EQUIPPED WITH 4010D NETWORK

WIRE OR LEAD			INDIV. OR BRIDGED	RING PARTY	TIP PARTY		
					NO IDENT. GROUND	IDENT. GRD. †	
						1000Ω	2650Ω
Inside Wire	Tip	G	1	1	2	2	2
	Ring	R	2	2	1	1	1
	Grd	Y		3	3	3	3
Ringer Leads	BK		1	3	3	3	3
	BL		*	*	*	*	*
	S		*	*	*	B	*
	S-R		*	*	*	*	B
	R		K	K	K	K	K
Line Switch	W		F	F	C	C	C
	S		A	A	A	A	A
	BR		C	C	F	F	F

\*Insulate and store.

† Remove BK strap for tip party service with identifying ground.

Notes: To silence ringer permanently:

1. For all classes except identification ground insulate and store (BK) ringer lead on unused terminal.
- ◆ 2. For tip party with 1000 ohm or 2650 ohm identification ground remove the (R) ringer lead at K of the network; insulate and store.
3. (BL) lead has been removed from later model ringers. ◆

◆ TABLE F ◆

## LINE AND RINGER CONNECTIONS FOR 2554B TELEPHONE SET EQUIPPED WITH 4228K NETWORK

WIRE OR LEAD		INDIV. OR BRIDGED	RING PARTY	TIP PARTY			
				NO IDENT. GROUND	IDENT. GRD†		2650Ω
			1000Ω				
Inside Wire	Tip	G	L1	L1	L2	L2	L2
	Ring	R	L2	L2	L1	L1	L1
	Grd	Y		G	G	G	G
Ringer Leads		BK	L1	G	G	G	G
		BL	*	*	*	*	*
		S	*	*	*	B	*
		S-R	*	*	*	*	B
		R	K	K	K	K	K
Line Switch		W	F	F	C	C	C
		S	A	A	A	A	A
		BR	C	C	F	F	F

\*Insulate and store.

†Remove BK strap for Tip Party service with identifying ground.

Notes: To silence ringer permanently:

1. For all classes except identification ground insulate and store (BK) ringer lead on unused terminal.
2. For tip party with 1000 ohm or 2650 ohm identification ground remove the (R) ringer lead at K of the network; insulate and store.
3. (BL) lead has been removed from later model ringers.

◆ TABLE G ◆

MODIFICATION FOR USE WITH 1A1 OR 1A2 KEY TELEPHONE SYSTEM  
FOR 2554B TELEPHONE SET EQUIPPED WITH 4010D NETWORK

WIRE OR LEAD		REMOVE FROM		CONNECT TO	
		TERM. STRIP	NET.	TERM. STRIP	NET.
Line Switch	S		A	Insulate and store	
	Y	2			L2
	O†		L2	2	
	BR		C	3	
	BL†		L2		C
P1A Ringer ‡	R				K
	BK	1			L1
Inside Wire	W-BL Tip			1	
	BL-W Ring			2	
	W-O A				L2
	O-W A1			3	
	G-W R1				L1
	W-G B1				A†
Strap	BK*	2			

\* Insulate and store.

† Connect these leads as shown in sets equipped with j-k line switch contacts, otherwise connect M1W cord from terminal 2 to C or network.

‡ Ringer is shown for individual line ringing. When common ringer without capacitor is required, connect B1 lead (W-G) to terminal K of network.

6

◆ TABLE H ◆

MODIFICATION FOR USE WITH 1A1 OR 1A2 KEY TELEPHONE SYSTEM  
FOR 2554B TELEPHONE SET EQUIPPED WITH 4228K NETWORK

WIRE OR LEAD		REMOVE FROM		CONNECT TO	
		TERM. STRIP	NET.	TERM. STRIP	NET.
Line Switch	S		A	Insulate and store	
	Y				L2
	O†		L2	2	
	BR		C		G
	BL†		L2		C
P1A Ringer ‡	R				K
	BK				L1
Inside Wire	W-BL Tip			1	
	BL-W Ring			2	
	W-O A				L2
	O-W A1				G
	G-W R1				L1
	W-G B1				A†
Strap	BK*				L2

\* Insulate and store.

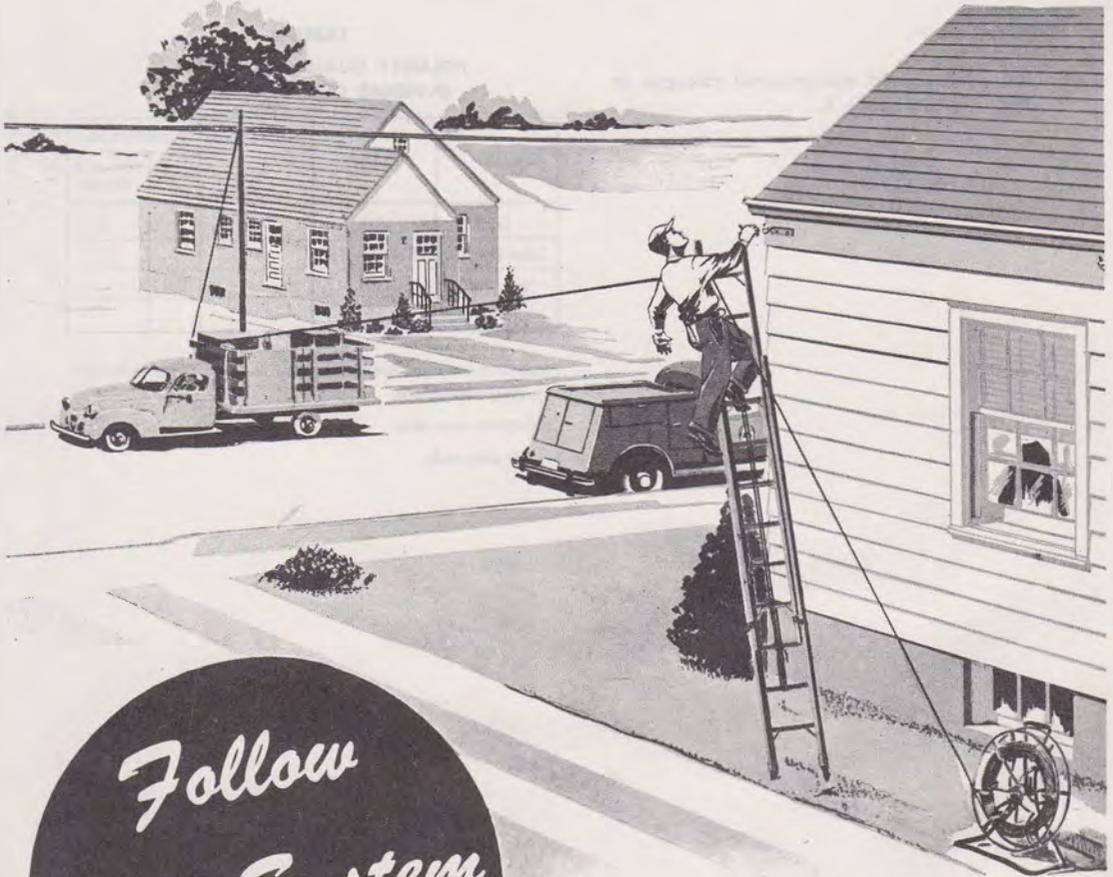
† Connect these leads as shown in sets equipped with j-k line switch contacts, otherwise connect M1W cord from terminal 2 to C of network.

‡ Ringer is shown for individual line ringing. When common ringer without capacitor is required, connect B1 lead (W-G) to terminal K of network.

# LEARNING

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7



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