

REFERENCE

212-TYPE HAND TELEPHONE SETS

1. GENERAL

1.01 This section provides identification, installation, maintenance, and connection information for the 212LR and 212MR hand telephone sets. This information was formerly found in Sections 502-120-201, 502-200-404, 502-200-406, 502-300-100, 502-300-300, and 502-303-403. Section 502-303-403 is hereby canceled.

2. IDENTIFICATION

Ordering Guide

2.01 *Basic Hang-Up Type Hand Telephone Sets:*

- Set, Telephone, Hand, 212LR-3
- Set, Telephone, Hand, 212MR-3

Note: These sets are available in black (-03) only.

2.02 *Replaceable Components are Listed in Table A:*

2.03 *Associated Apparatus:*

- Set, Subscriber, 685A—Refer to Table B.
- Set, Subscriber, 686A—Refer to Table B.

2.04 These sets are primarily designed for wall or desk mounting. For use on CO and PBX lines, and with 1A1 and 1A2 Key Telephone Systems.

2.05 Refer to Table B for class of service.

3. INSTALLATION

Fastening Station Sets

3.01 Telephone sets, subscriber sets, and associated station apparatus should be fastened securely to a substantial mounting surface. Refer to Table C for recommended fasteners.

TABLE A
COMBINATION OF APPARATUS

HAND TELEPHONE SET	REPLACEABLE COMPONENTS				
	HANDSET	HANDSET MTG	DIAL OR APPARATUS BLANK	DIAL MTG	HANDSET CORD
212LR MODIFIED	G3AR-3	G7-3	NUMBER CARD HOLDER		H4CJ-3
212MR MODIFIED					
212LR			6A	43A-3	
212MR			6D-3		

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212MR MODIFIED					
212LR			6A	43A-3	
212MR			6D-3		

TABLE C
FASTENERS USED FOR MOUNTING STATION APPARATUS

MOUNTING SURFACE	NUMBER OF FASTENERS (NOTE 1)		SIZE AND TYPE OF FASTENERS
	200 SERIES HANG-UP TYPE TEL SETS	SUB. SETS	
	P-80G603 OR 33A BRACKETS	685A OR 686A	
Hardwood (including Wooden Backboards)	4	2	1-1/4 in., No. 8 RH blued wood screws
Softwood	4	4	1-1/2 in., No. 8 RH blued wood screws
Plaster on Wood Lath	4	4	2-in., No. 8 RH blued wood screws (Note 3)
Side of Wood-paneled Desk (place fastener in frame around panel when possible)	4	3	See type of wood sur- face above.
Metal Desks	4	2	1-in., No. 8 RH self- tapping screws
Plaster on Masonry or Plaster Block	4	4	2-1/2 in., No. 8 RH blued wood screws No. 10 plastic anchor
Masonry	4	4	1-1/2 in., No. 8 RH blued wood screws No. 10 plastic anchor
Sheetrock, Beaver, or Similar Composition Board	4	4	Wall screw anchor
Solid Metal	4	2	10-24 x 1 in., FH bright machine screws
Plaster on Metal Lath; Plaster on Plaster Board	4	2 (Note 2)	Wall screw anchor or 2-in. No. 8 RH blued wood screw (Note 3)
Metal Sheath on Solid Wood	4	4	1-1/2 in., No. 8 RH blued wood screws
Metal Sheath over Furring on Brick	4	4	1-1/4 in., No. 8 RH blued wood screws
Metal Sheath over Furring or Plaster on Lath	4	4	1-1/2 or 2-in., No. 8 RH blued wood screws

Notes:

1. Where two fasteners are specified, place fasteners diagonally opposite each other, locate one fastener near the handset cord.
2. Additional fasteners may be required for secure mounting.
3. When mounting on plasterboard, plaster on lath, etc. fasteners must be embedded in stud at least 1 inch.



Fig. 1—Handset in Front

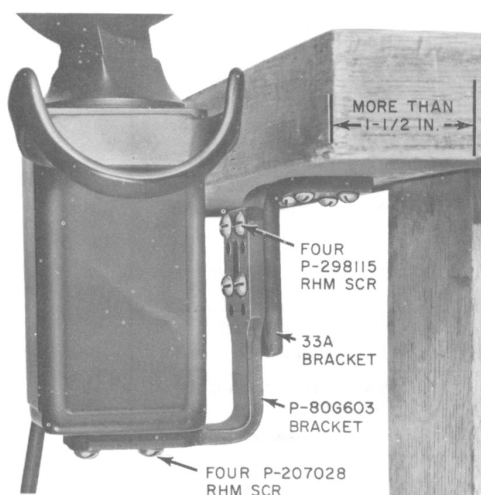


Fig. 2—Installed with 33A Auxiliary Bracket

4.02 On G-type mountings, the operating stud shall not touch the operating springs when the line switch is in its extreme upward position.

4.03 All contact springs shall have a perceptible follow. In case of mounting having twin contacts, both contacts on the same spring shall make at approximately the same time.

4.04 Binding of line switch may be caused by either a bent line switch or bent pin. If this trouble is encountered replace the set.

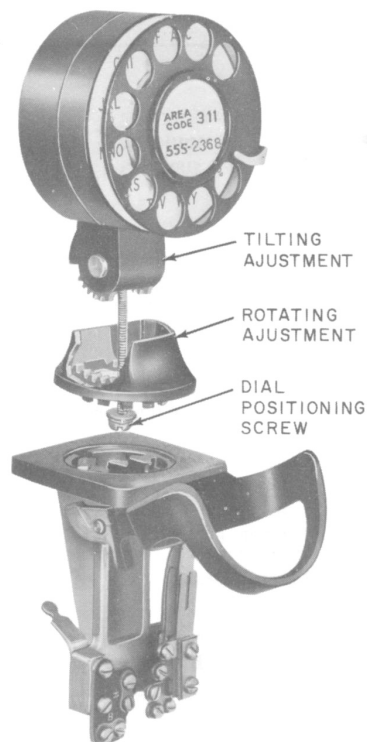


Fig. 3—Positioning Adjustments of 43A Dial Mounting

4.05 Refer to Division 501 for maintenance of dials, ringers, and handsets and to Division 502 for maintenance of subscriber sets.

5. CONNECTIONS

5.01 The 212-type is arranged for, but not equipped with, a 61M filter for radio frequency suppression. When this filter is required, remove the dial cord between Y of the dial and BK of the line switch and connect as follows:

- (1) Connect (BK) filter lead to BK of dial.
- (2) Connect (Y) filter lead to Y of dial.
- (3) Connect (R) filter lead to BK of line switch.

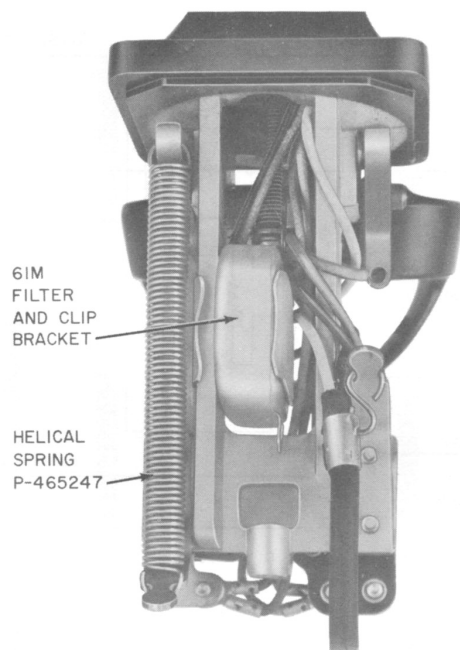


Fig. 4—Assembly of Filter on G-Type Handset Mounting

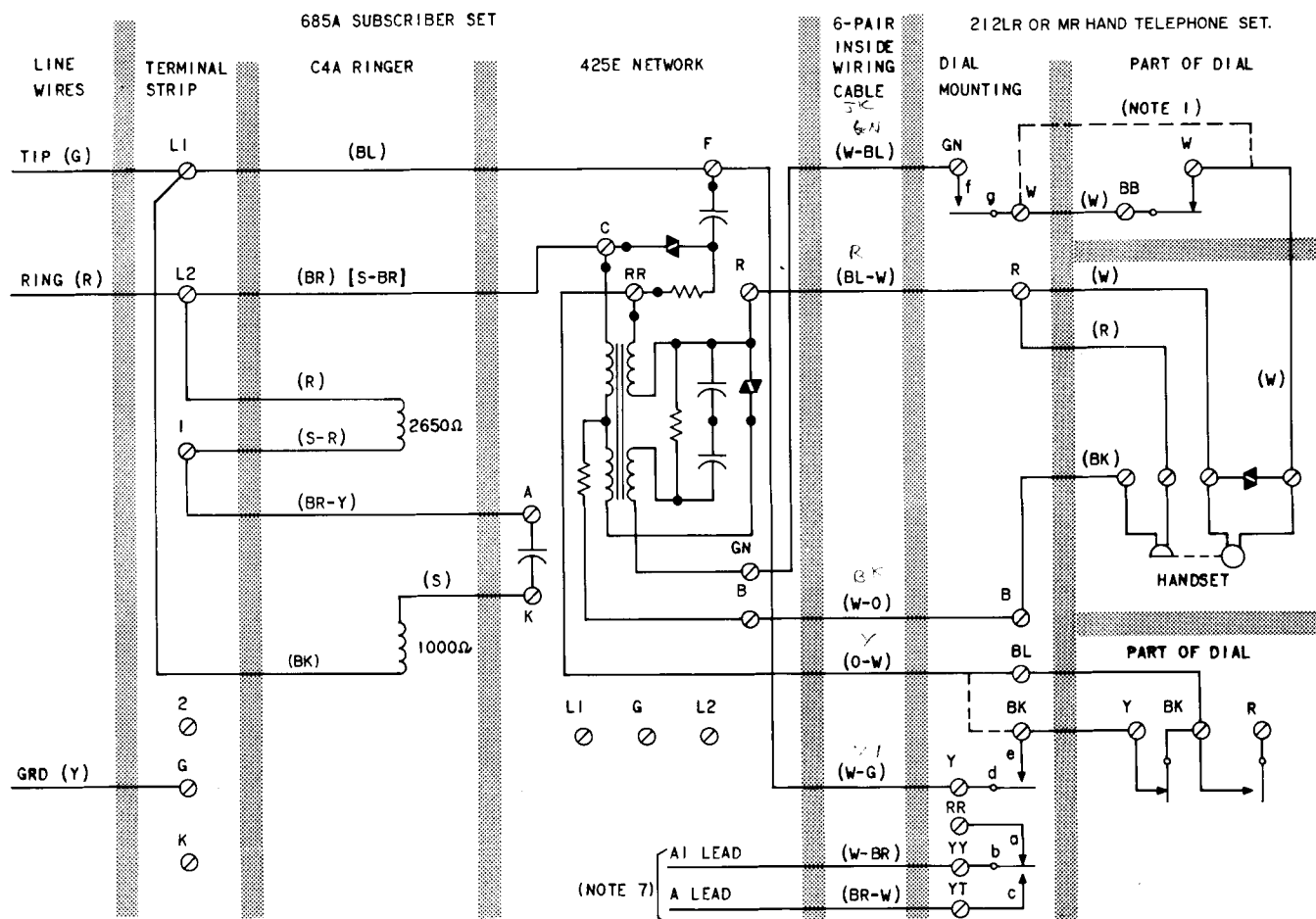
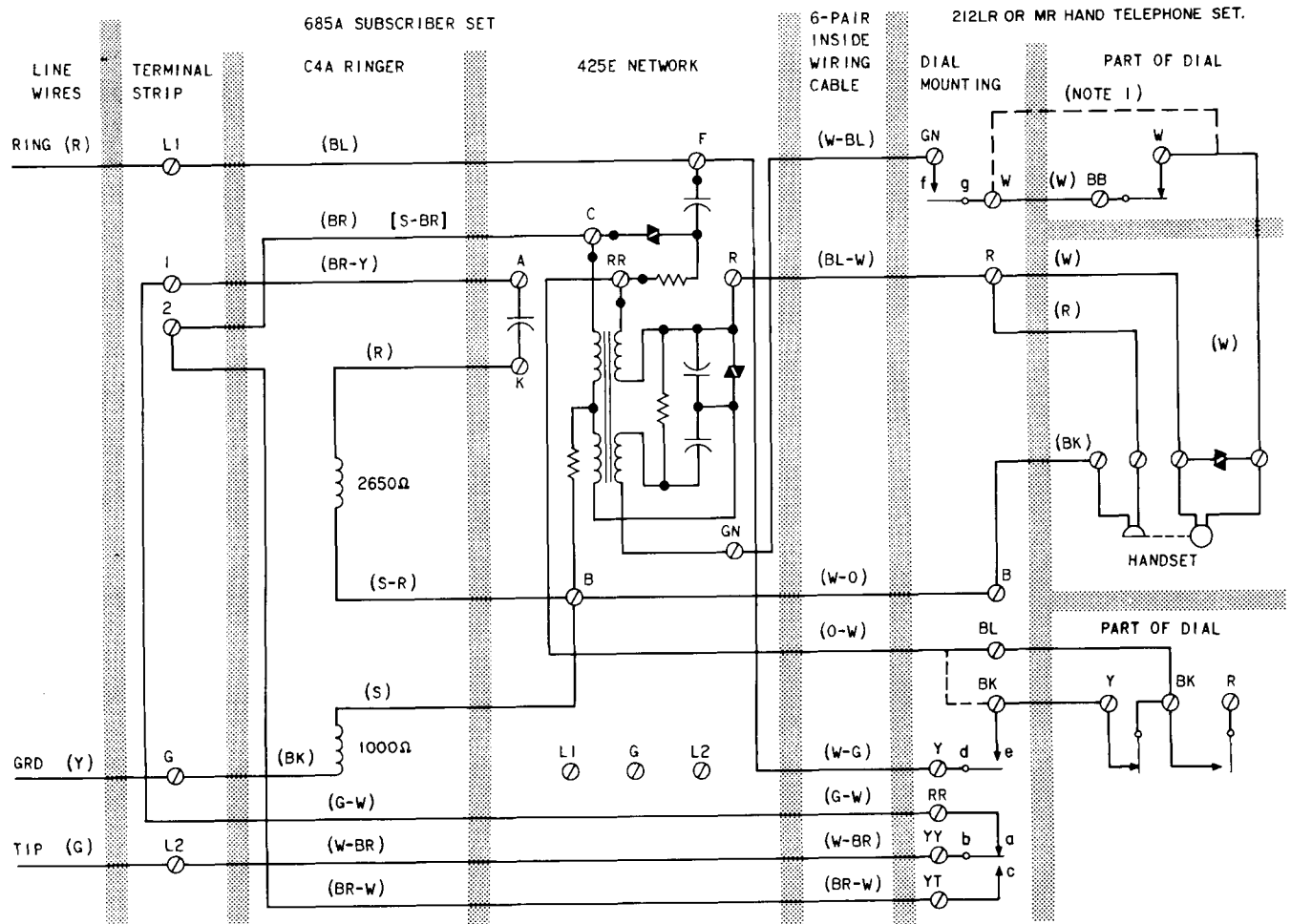


Fig. 5—Connections for 212LR and 212MR Hand Telephone Sets Used with 685A Subscriber Set, Bridged Ringing

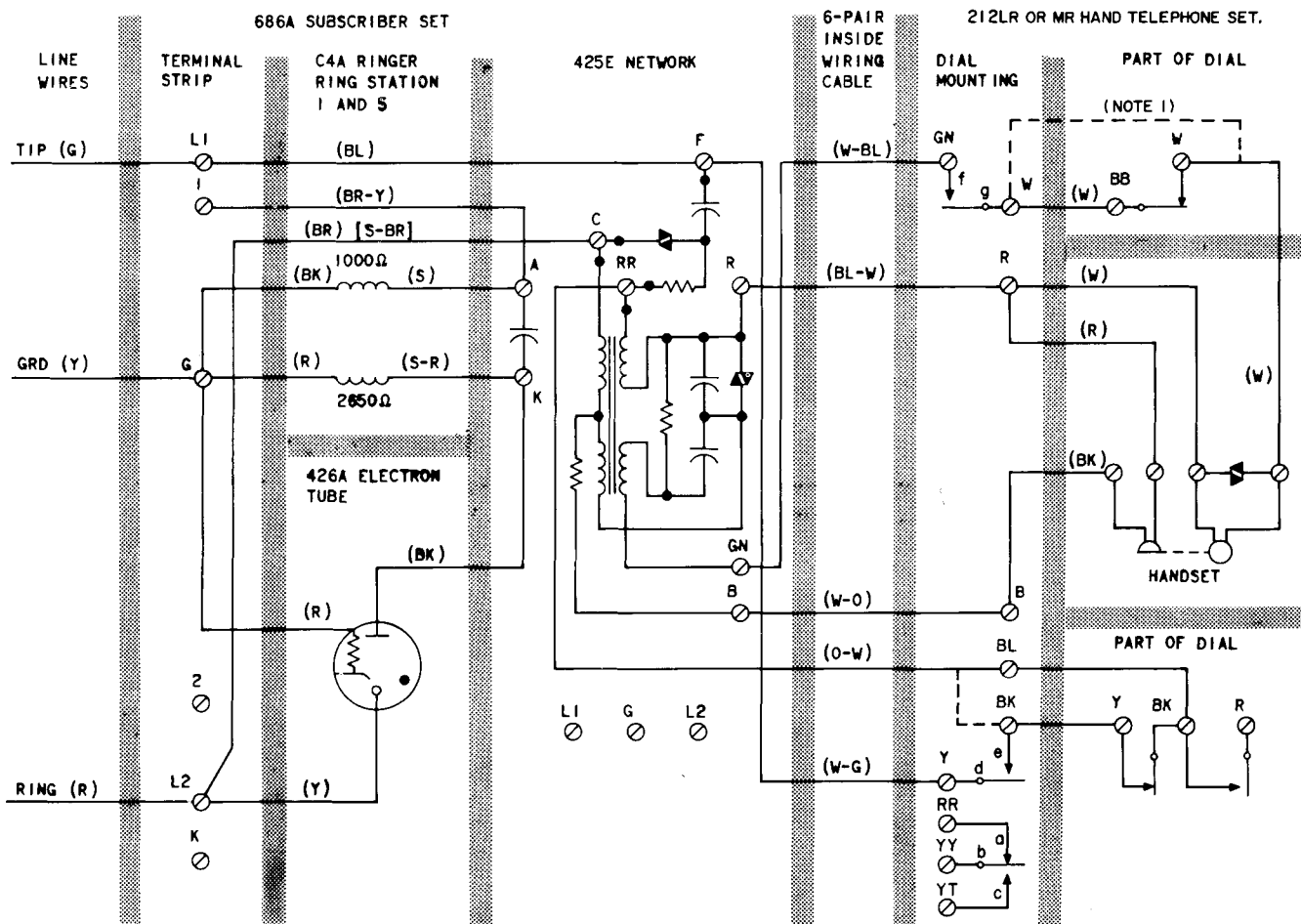


NOTES:

1. DOTTED LINES SHOW MANUAL CONNECTIONS.
2. ON EARLIER SETS (BL) STRAP MUST BE MOVED FROM RR TO F OF NETWORK.
3. MOVE (BR) [S-BR] STRAP FROM L2 TO 2 OF TERMINAL STRIP. ON EARLIER SETS (BR) [S-BR] IS ON 2.
4. CONNECTIONS SHOWN ARE FOR TIP-PARTY 1000Ω IDENTIFICATION GROUND, REFER TO TABLE D FOR ALL SERVICES PROVIDED.
5. LINE SWITCH CONTACTS b AND c MAKE FIRST, CONTACTS f AND g MAKE LAST.
6. USE TABLE D TO SILENCE RINGER PERMANENTLY AND RETAIN TIP-PARTY GROUND IDENTIFICATION.
7. USE NORMAL CONNECTIONS ON TIP-PARTY IDENTIFICATION GROUND STATIONS. IF BELL TAPS ON STATIONS CONNECTED TO LONG LINE EQUIPMENT, USE RINGER REVERSAL COLUMN IN TABLE D.

() CURRENT COLOR CODE
 [] MD COLOR CODE

Fig. 6—Connections for 212LR and 212MR Hand Telephone Sets Used with Modified 685A Subscriber Set, Tip-Party Identification



NOTES:

1. DOTTED LINES SHOW MANUAL CONNECTIONS.
2. ON EARLIER SETS (BL) STRAP MUST BE MOVED FROM RR TO F OF NETWORK.
3. ON EARLIER SETS (BR) [S-BR] STRAP MUST BE MOVED FROM 2 TO L2 OF TERMINAL STRIP.
4. CONNECTIONS SHOWN ARE FOR (-) RING PARTY REFER TO TABLE E FOR ALL SERVICES PROVIDED.

5. LINE SWITCH CONTACTS b AND c MAKE FIRST, CONTACTS f AND g MAKE LAST.
6. TO SILENCE RINGER PERMANENTLY CONNECT (R) AND (BK) RINGER LEADS TO K OF TERMINAL STRIP.

() CURRENT COLOR CODE

[] MD COLOR CODE

Fig. 7—Connections for 212LR and 212MR Hand Telephone Sets Used with 686A Subscriber Set, (-) Ring Party

TABLE D
CONNECTIONS USING 685A SUBSCRIBER SET

WIRE OR LEAD	COLOR	BRIDGED	RING PARTY	TIP PARTY NO IDENT GROUND	TIP-PARTY IDENT GROUND					
					NORMAL CONN		RINGER REVERSAL WHEN CONN TO L.L. EQUIP		TO SILENCE RINGER PERMANENTLY	
					1000Ω	2650Ω	1000Ω	2650Ω	1000Ω	2650Ω
Local Wiring (Note)	W-BL	GN*	GN*	GN*	GN*	GN*	GN*	GN*	GN*	GN*
	BL-W	R*	R*	R*	R*	R*	R*	R*	R*	R*
	W-O	B*	B*	B*	B*	B*	B*	B*	B*	B*
	O-W	RR*	RR*	RR*	RR*	RR*	RR*	RR*	RR*	RR*
	W-G	F*	F*	F*	F*	F*	F*	F*	F*	F*
	G-W				1	1	1	1	1	1
	W-BR				L2	L2	L2	L2	L2	L2
	BR-W				2	2	2	2	2	2
Ringer Leads	R	L2	L2	L2	K*	B*	B*	G	L1*	B*
	BK	L1	G	G	G	B*	B*	K*	G	B*
	S	K*	K*	K*	B*	K*	G	B*	B*	L1*
	S-R	1	1	1	B*	G	K*	B*	B*	G
Straps Net. to Term. Strip	BR†	L2-C*	L2-C*	L2-C*	2-C*	2-C*	2-C*	2-C*	2-C*	2-C*
	BL	L1-F*	L1-F*	L1-F*	L1-F*	L1-F*	L1-F*	L1-F*	L1-F*	L1-F*
	BR-Y	1-A*	1-A*	1-A*	1-A*	1-A*	1-A*	1-A*	1-A*	1-A*
Line Wires	Ring	R	L2	L2	L1	L1	L1	L1	L1	L1
	Tip	G	L1	L1	L2	L2	L2	L2	L2	L2
	Grd	Y	G	G	G	G	G	G	G	G

* Network terminal.

† S-BR strap used on earlier sets.

Note: For local wiring connections to hand telephone set refer to Fig. 5 and 6.

TABLE E
CONNECTIONS USING 686A SUBSCRIBER SET

WIRE OR LEAD	COLOR	NEGATIVE (−) PARTIES		POSITIVE (+) PARTIES	
		RING 1 AND 5	TIP 2 AND 6	RING 3 AND 7	TIP 4 AND 8
Local Wiring (Note)	W-BL	GN*	GN*	GN*	GN*
	BL-W	R*	R*	R*	R*
	W-O	B*	B*	B*	B*
	O-W	RR*	RR*	RR*	RR*
	W-G	F*	F*	F*	F*
Straps — Net. to Term. Strip	BL	L1-F*	L1-F*	L1-F*	L1-F*
	BR-Y	1-A*	1-A*	1-A*	1-A*
	BR†	L2-C*	L2-C*	L2-C*	L2-C*
Ringer Leads	S	A*	A*	A*	A*
	BK	G	G	L2	L2
	R	G	G	L2	L2
	S-R	K*	K*	K*	K*
426A Tube Leads (3-Element)	BK	K*	K*	K*	K*
	Y	L2	L2	G	G
	R	G	G	L2	L2
Inside Wire from Pro- tector or Line	R	L2	L1	L2	L1
	G	L1	L2	L1	L2
	Y	G	G	G	G

* Network terminal.

† S-BR strap used on earlier sets.

Note: For local wiring connections to hand telephone set refer to Fig. 7.