

TELEPHONE SETS - THE CALL DIRECTOR

634 AND 635 TYPES (600C AND 601C)

USED WITH STATION LINE CONCENTRATOR

CONNECTIONS

1.00 INTRODUCTION

1.01 This section covers connections for the various arrangements of 634-type (18-button) and 635-type (30-button) telephone sets. It covers terminal strip connections in the sets, mounting cord and connector cable assignments, and their associated plugs and connectors.

1.02 This section is reissued to:

- Add information on the D50L and D80B mounting cords.
- Provide both old and new circuit designation from apparatus cabinet to keys in 634- and 635-type CALL DIRECTOR sets using either Manufacture Discontinued (MD) or even-count color-coded cords and connector cables.

1.03 To facilitate the use of this practice, the circuit leads follow a straight line pattern as near as possible from the apparatus cabinet to the key. Key connector pins (Fig. 1 through 6) are so placed in this section to overlay into corresponding module plug pins in the CALL DIRECTOR sets. (See Fig. 8 and 9.)

1.04 Fig. 7 shows the telephone set circuit using either (MD) or even-count color-coded cords for both 18- or 30-button sets.

1.05 Fig. 8 shows the 634-type CALL DIRECTOR and Fig. 9 shows the 635-type CALL DIRECTOR using the (MD) or even-count color-coded cords and connector cables.

1.06 Even-count color codes are shown in red and (MD) count in green.

1.07 Due to extensive changes marginal arrows have been omitted.

2.00 GENERAL

2.01 The 634-type telephone set replaces the 600C telephone set, and the 635-type telephone set replaces the 601C telephone set. Connection figures in this section show 634- and 635-type telephone sets only. However, these figures also apply to 600C and 601C telephone sets.

2.02 The 634-type telephone sets have been manufactured with D50A (metal terminal frame), D50B (molded plastic frame), and D50L (even count) mounting cords. The 635-type telephone sets have been manufactured with D80A (molded plastic terminal frame) and D80B (even count) mounting cords.



Some conductors of mounting cords are dead dressed with insulators (tubing). When necessary to use these conductors, do not use long-nose pliers to pull off the insulators. This may break the conductor or pull off the spade tip. The insulation should be cut off with electrician's scissors or diagonal pliers.

2.03 Connections to 235A and 236A key telephone units are covered in the section entitled Station Line Concentrators, 235A and 236A Key Telephone Units, Identification and Connections.

- 2.04 For connections to 1A1 and 6A line and signaling circuits, see the various sections covering connections for 1A1 and 6A key telephone systems.
- 2.05 For connections to 1A or 1A1 speakerphone system, see the section entitled 1A and 1A1 Speakerphone System, Connections.
- 2.06 For connections to 3A speakerphone system, see the section entitled 3A Speakerphone System, Connections.

3.00 APPLICATION OF 634- AND 635-
TYPE TELEPHONE SETS

- 3.01 A 235A KTU is associated with each 634-type telephone set. A 236A KTU is associated with each 635-type telephone set. Because of the single common talking and control lead path in these sets, a line concentrator unit must be associated with each telephone set installed and cannot be shared, even on a bridged station basis.
- 3.02 The 634- and 635-type telephone sets are for use with 1A1, 1A2, 6A, or electrically equivalent key telephone system line circuits.

4.00 INDEX OF TABLES AND CONNECTION FIGURES

Tables A and B identify module units and sets.

Table C shows combination of relays operated in station line concentrator.

Table D is a conversion table of 634- and 635-type CALL DIRECTOR equipped with (MD) cords.

Table E is a conversion table of 634- and 635-type CALL DIRECTORS equipped with even-count color-coded cords.

Fig. 1 is a 599A key.

Fig. 2 is a 598A key.

Fig. 3 is a 599B key.

Fig. 4 is a 661A transmitter.

Fig. 5 is a 667A transmitter.

Fig. 6 is a 617A key.

Fig. 7 is the telephone set circuit common to both sets.

Fig. 8 is the cord and cable connections for the 634-type sets equipped with (MD) or even-count cords.

Fig. 9 is the cord and cable connections for the 635-type sets equipped with (MD) or even-count cords.

TABLE A
DESCRIPTION OF MODULES

Module	Description
105B Blank	Apparatus blank
598A Key	6 pickup keys
599A Key	5 pickup keys and hold key
599B Key	Turnbutton key, 4 pickup keys, and hold key
617A Key	12 signal keys
661A Transmitter	For use with 1A or 1A1 speakerphone system
667A Transmitter	For use with 3A speakerphone system

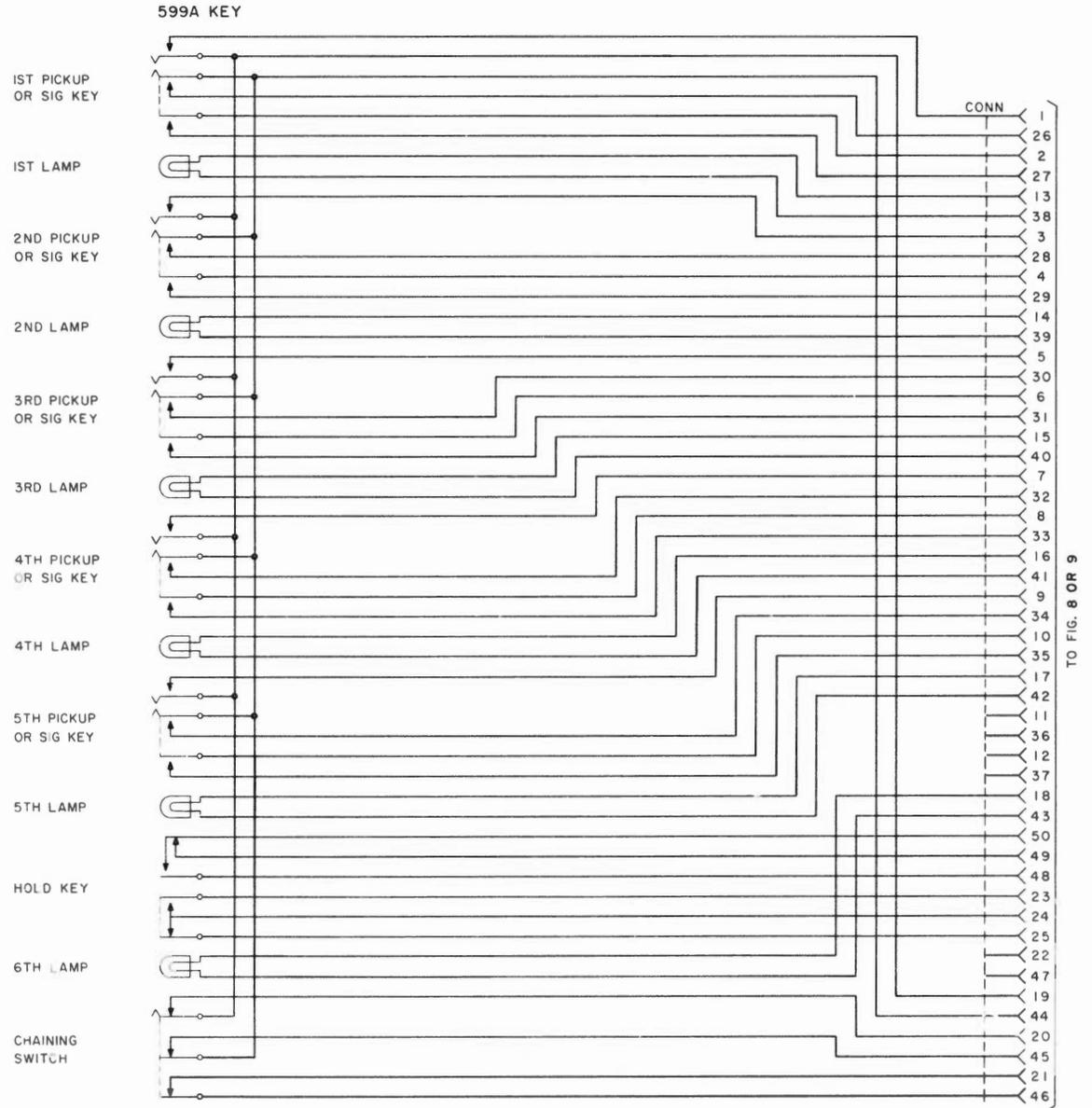


Fig. 1 - 599A Key

TABLE B
TELEPHONE SET CODES FOR
634- AND 635-TYPE TELEPHONE SETS

Telephone Set Codes		Set Equipped With													
		1st Module (left)		2nd Module		3rd Module		4th Module		5th Module					
		Key or Unit	Fig. No.	Key or Unit	Fig. No.	Key or Unit	Fig. No.	Key or Unit	Fig. No.	Key or Unit	Fig. No.				
634A, 634B, 634C	1	599A	1	598A	2	105B									
	2					598A	2								
	3 MD					661A	4								
	4					617A	6								
	5 MD					661A	4								
	6	599B	3	598A	2	105B									
	7					598A	2								
	8 MD					661A	4								
	9					105B									
	10	598A	2		598A	2									
	11	599A	1	617A	6	667A	5								
	12														
	13	599B	3	598A	2										
635A, 635C	1	599A	1	598A	2	598A	2	105B		105B					
	2							598A	2	598A	2	598A	2		
	3									617A	6				
	4														
	6 MD							599B	3					105B	
	7 MD	598A	2												
	8 MD	617A	7												
	10	105B													
	11	598A	2						105B						
	12	599A	1											598A	2
	16											105B			
	17											598A	2	667A	5
	18											617A	7		

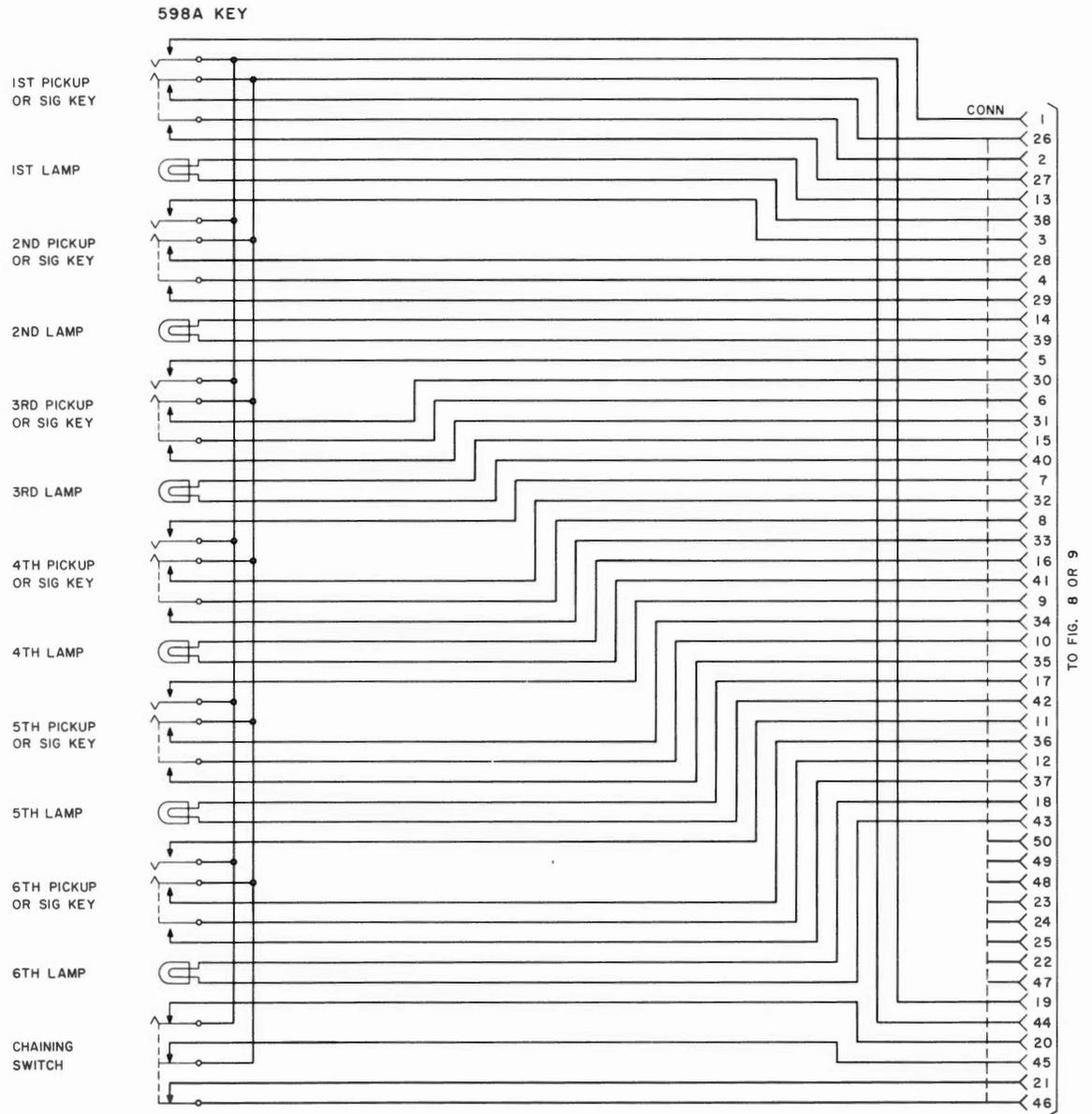


Fig. 2 - 598A Key

TABLE C
COMBINATIONS OF RELAYS OPERATED IN STATION
LINE CONCENTRATOR WHEN ASSOCIATED KEY POSITION IS OPERATED*

Key Pos	Relays															
	236A KTU										235A KTU					
	A	B	C	CA1	D	E	F	G	H	J	A	B	C	D	E	F
1	x	x									+	+				
2	x		x								+		+			
3		x	x									+	+			
4	x				x						+			+		
5		x			x							+		+		
6				x					x				+	+		
7			x		x						+				+	
8		x				x						+			+	
9			x			x							+		+	
10					x	x								+	+	
11			x				x				+					+
12					x		x					+				+
13						x	x						+			+
14					x			x						+		+
15						x		x			+					+
16							x	x				+				+
17	x								x				+			+
18		x							x					+		+
19			x						x							
20					x				x							
21						x			x							
22							x		x							
23								x	x							
24	x									x						
25		x								x						
26			x							x						
27					x					x						
28						x				x						
29							x			x						
30								x		x						

* Symbols denote relay operated.

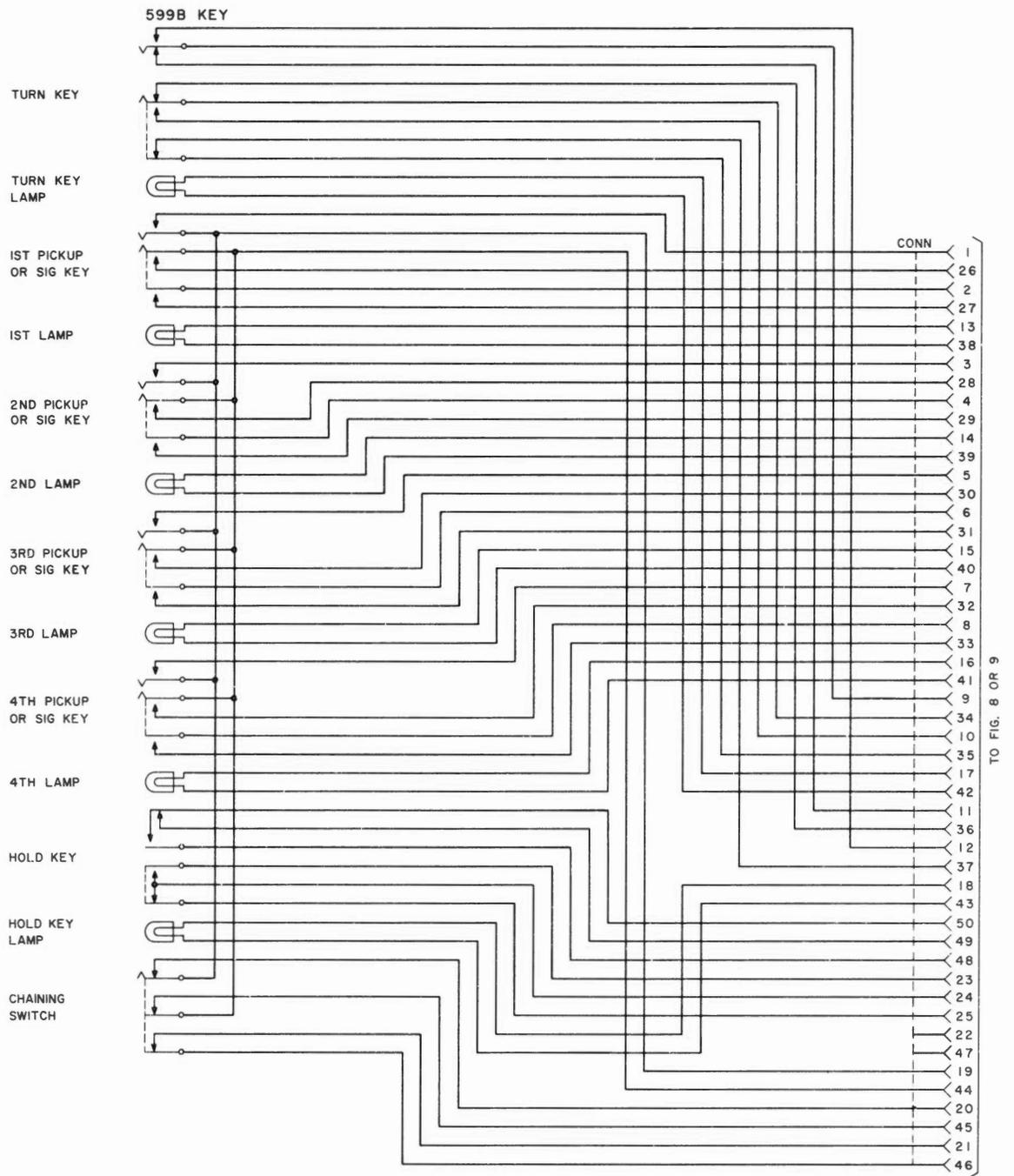


Fig. 3 - 599B Key

TABLE D

CONVERSIONS OF 634- AND 635-TYPE TELEPHONE SET
EQUIPPED WITH MANUFACTURE DISCONTINUED (MD) CORDS

Feature	Work Operation	Key Position							18	6
		1-7-13-19-25	2-8-14-20-26	3-9-15-21-27	4-10-16-22-28	5-11-17-23-29	12-24-30			
Buzzer Signal	Connect stored spade-tipped lead indicated to term. SG of TB VI.	BK	BR-G	BR-W	R-BL	G-BL	S-BR	S-BR	634 — Not convertible.	
	Disconnect spade-tipped lead indicated from assoc TB. Tape and store.	S-BK	S-W	BR	BK-W	S	O-W	O-W	635 — Connect S-BR to term. SG of TB VI. Connect one of two spares from Fig. 9 to term. 6 of TB I.	
6A Add-on	Connect stored spade-tipped lead indicated to term. PB of TB VI.	BK	BR-G	BR-W	R-BL	G-BL	S-BR	S-BR	634 — Not convertible.	
	Disconnect spade-tipped lead indicated from assoc TB. Tape and store.	S-BK	S-W	BR	BK-W	S	O-W	O-W	635 — Connect S-BR to term. PB of TB VI. Connect one of two spares from Fig. 9 to term. 6 of TB I.	
6A Pushbutton	Connect stored spade-tipped lead indicated to term. A (634) or to term. 1A (635) of TB VI.	BK	BR-G	BR-W	R-BL	G-BL	S-BR	S-BR	634 — Not convertible.	
	Disconnect spade-tipped lead indicated from assoc TB. Tape and store.	S-BK	S-W	BR	BK-W	S	O-W	O-W	635 — Connect S-BR to term. 1A of TB VI. Connect one of two spares from Fig. 9 to term. 6 of TB I.	
Locked-in Lamp Release	Connect stored spade-tipped lead indicated to term. SG of TB VI.	BK	BR-G	BR-W	R-BL	G-BL	S-BR	S-BR (635) (634 — Not convertible.)	634 — Not convertible.	
	Move spade-tipped lead indicated from assoc TB to avail. lamp grd.	S-BK	S-W	BR	BK-W	S	O-W	O-W (635) (634 — Not convertible.)	635 — Connect S-BR to term. SG of TB VI. Connect one of two spares from Fig. 9 to term. 6 of TB I. Connect O-W to avail. lamp grd.	
Line Pickup		Factory Equipped and Wired						635 — Factory equipped. 634 — Connect O-W to avail. lamp grd.	Replace 599A key with 598A key. Connect O-W to avail. lamp grd. Connect BR-BL to term. A (634) or to term. 1A (635) of TB VI.	

Note: All pickup key positions converted to nonlocking for features in Table D must have P-11E977 insulating details placed over the two key contacts adjacent to the key plunger. Insulating details are furnished with the telephone set. Remove the screw detail P-10E837 entirely from the plunger at the key position to be converted.

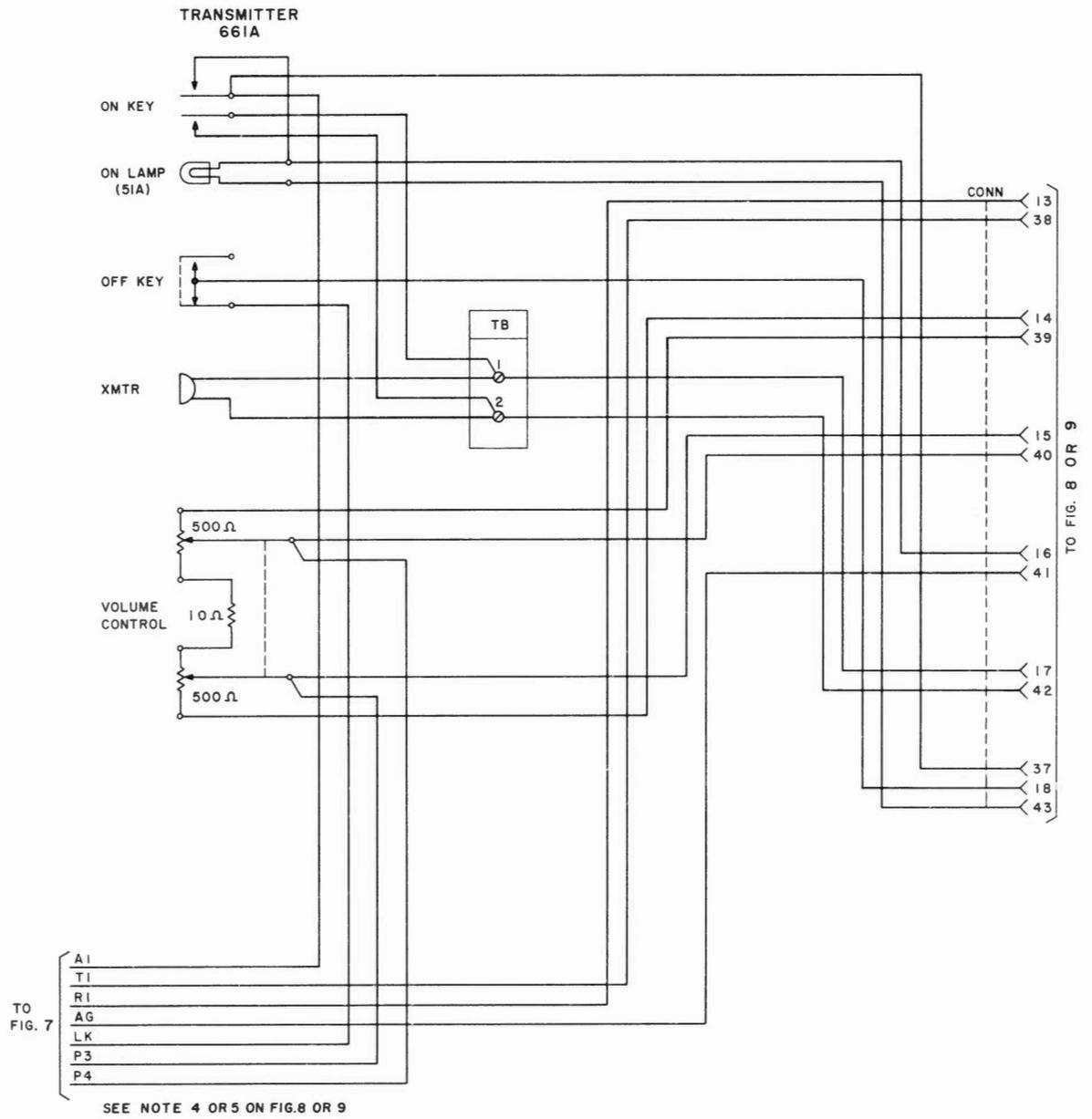


Fig. 4 - 661A Transmitter

TABLE E
 CONVERSION OF 634- AND 635-TYPE TELEPHONE SETS
 EQUIPPED WITH EVEN-COUNT COLOR-CODED CORDS

Key Position	Key Feature Options								Line Pickup
	Buzzer Signal		6A Add-on		6A Pushbutton		Locked-in Lamp Release		
	Connect Stored Spade-tipped Lead Indicated to Term. SG of TB VI.	Disconnect Spade-tipped Lead Indicated From Assoc TB. Tape and Store.	Connect Stored Spade-tipped Lead Indicated to Term. PB of TB VI.	Disconnect Spade-tipped Lead Indicated From Assoc TB. Tape and Store.	Connect Stored Spade-tipped Lead Indicated to Term. A (634) or to Term. IA (635) of TB VI.	Disconnect Spade-tipped Lead Indicated From Assoc TB. Tape and Store.	Connect Stored Spade-tipped Lead Indicated to Term. SG of TB VI.	Move Spade-tipped Lead Indicated From Assoc TB to Avail. Lamp GRD.	
1	BL	R BR	BL	R BR	BL	R BR	BL	R BR	634 and 635 Factory Equipped and Wired
2	O	R S	O	R S	O	R S	O	R S	
3	G	BK BL	G	BK BL	G	BK BL	G	BK BL	
4	BR	BK O	BK	BK O	BR	BK O	BR	BK O	
5	S	BK-G	S	BK G	S	BK G	S	BK G	
6	634 Not Convertible. 635 Connect W to Term. SG of TB VI. Connect One of Two Spares From Fig. 9 to Term. 6 of TB I.		634 Not Convertible. 635 Connect W to Term. PB of TB VI. Connect One of Two Spares From Fig. 9 to Term. 6 of TB I.		634 Not Convertible. 635 Connect W to Term. IA of TB VI. Connect One of Two Spares From Fig. 9 to Term. 6 of TB I.		634 Not Convertible. 635 Connect W to Term. SG of TB VI. Connect One of Two Spares From Fig. 9 to Term. 6 of TB I. Connect G-R to Avail. Lamp GRD.		Replace 599A Key With 598A Key. Connect G-R to Avail. Lamp GRD. Connect W-O to Term. A (634) or to Term. IA or TB VI.
7	BL	BK BR	BL	BK BR	BL	BK BR	BL	BK BR	634 and 635- Factory Equipped and Wired.
8	O	BK S	O	BK S	O	BK S	O	BK S	
9	G	Y BL	G	Y BL	G	Y BL	G	Y BL	
10	BR	Y O	BR	Y O	BR	Y O	BR	Y O	
11	S	Y G	S	Y G	S	Y G	S	Y G	
12	W	Y BR	W	Y BR	W	Y BR	W	Y BR	
13	BL	W BL	BL	W BL	BL	W BL	BL	W BL	
14	O	W O	O	W O	O	W O	O	W O	
15	G	W G	G	W G	G	W G	G	W G	
16	BR	W BR	BR	W BR	BR	W BR	BR	W BR	
17	S	W S	S	W S	S	W S	S	W S	
18	W	R BL	W	R BL	W	R BL	W (635) (634 Not Convertible)	R BL (635) (634 Not Convertible)	635-Factory Equipped. 634-Connect R BL to Avail. Lamp GRD.
19	BL	R O	BL	R O	BL	R O	BL	R O	635-Factory Equipped and Wired.
20	O	R G	O	R G	O	R G	O	R G	
21	G	R BR	G	R BR	G	R BR	G	R BR	
22	BR	R S	BR	R S	BR	R S	BR	R S	
23	S	BK BL	S	BK BL	S	BK BL	S	BK BL	
24	W	BK O	W	BK O	W	BK O	W	BK O	
25	BL	Y S	BL	Y S	BL	Y S	BL	Y S	
25	O	V BL	O	V BL	O	V BL	O	V BL	
27	G	V O	G	V O	G	V O	G	V O	
28	BR	V G	BR	V G	BR	V G	BR	V G	
29	S	V BR	S	V BR	S	V BR	S	V BR	
30	W	V S	W	V S	W	V S	W	V S	

Note: All pickup key positions converted to nonlocking for features in Table E must have P-11E977 insulating details placed over the two key contacts adjacent to the key plunger. Insulating details are furnished with the telephone set. Remove the screw detail P-10E837 entirely from the plunger at the key position to be converted.

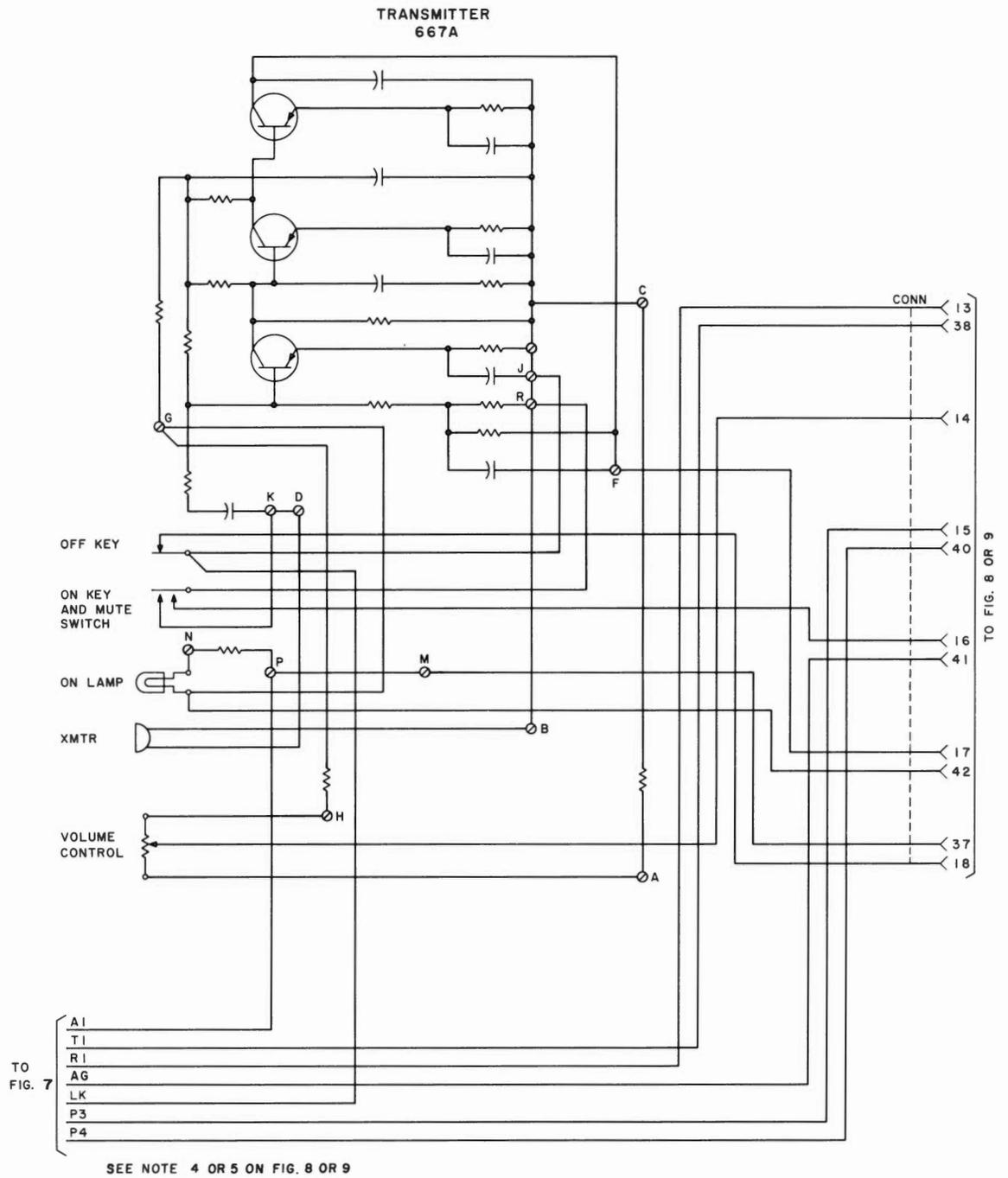
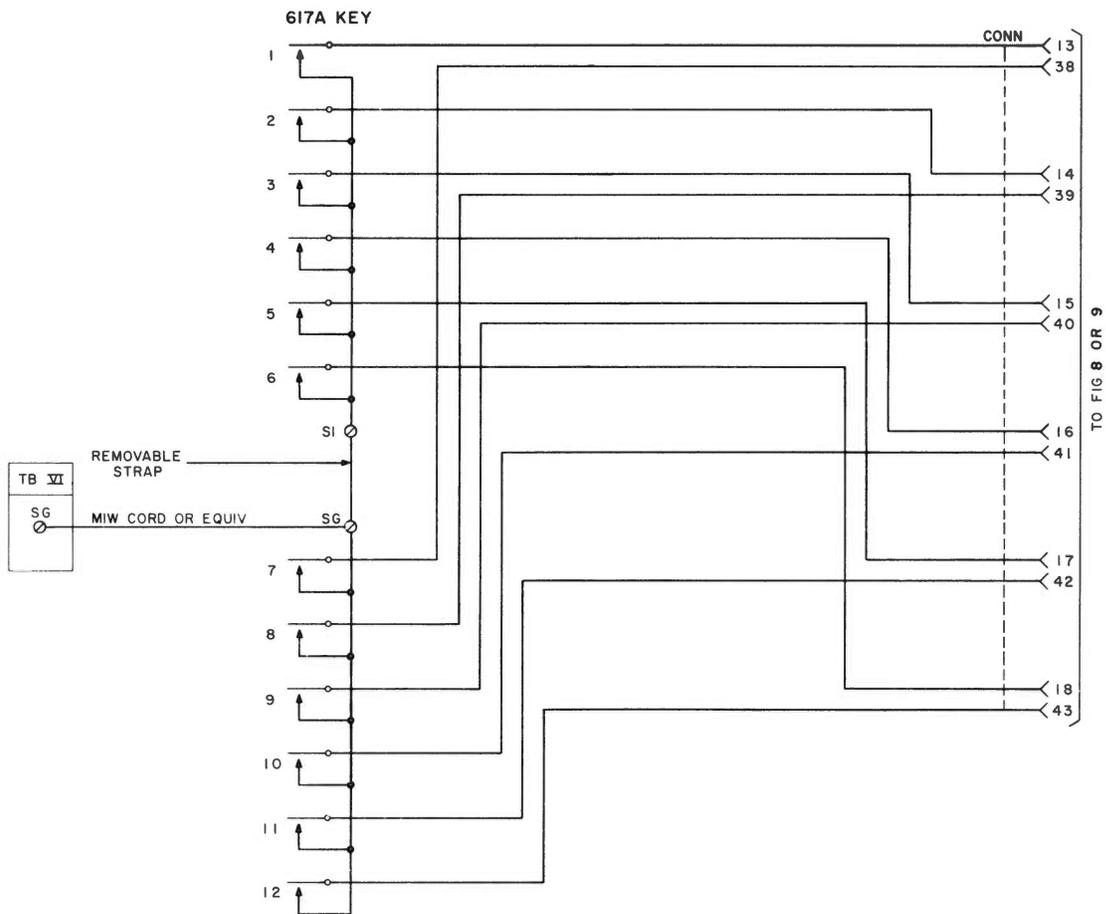
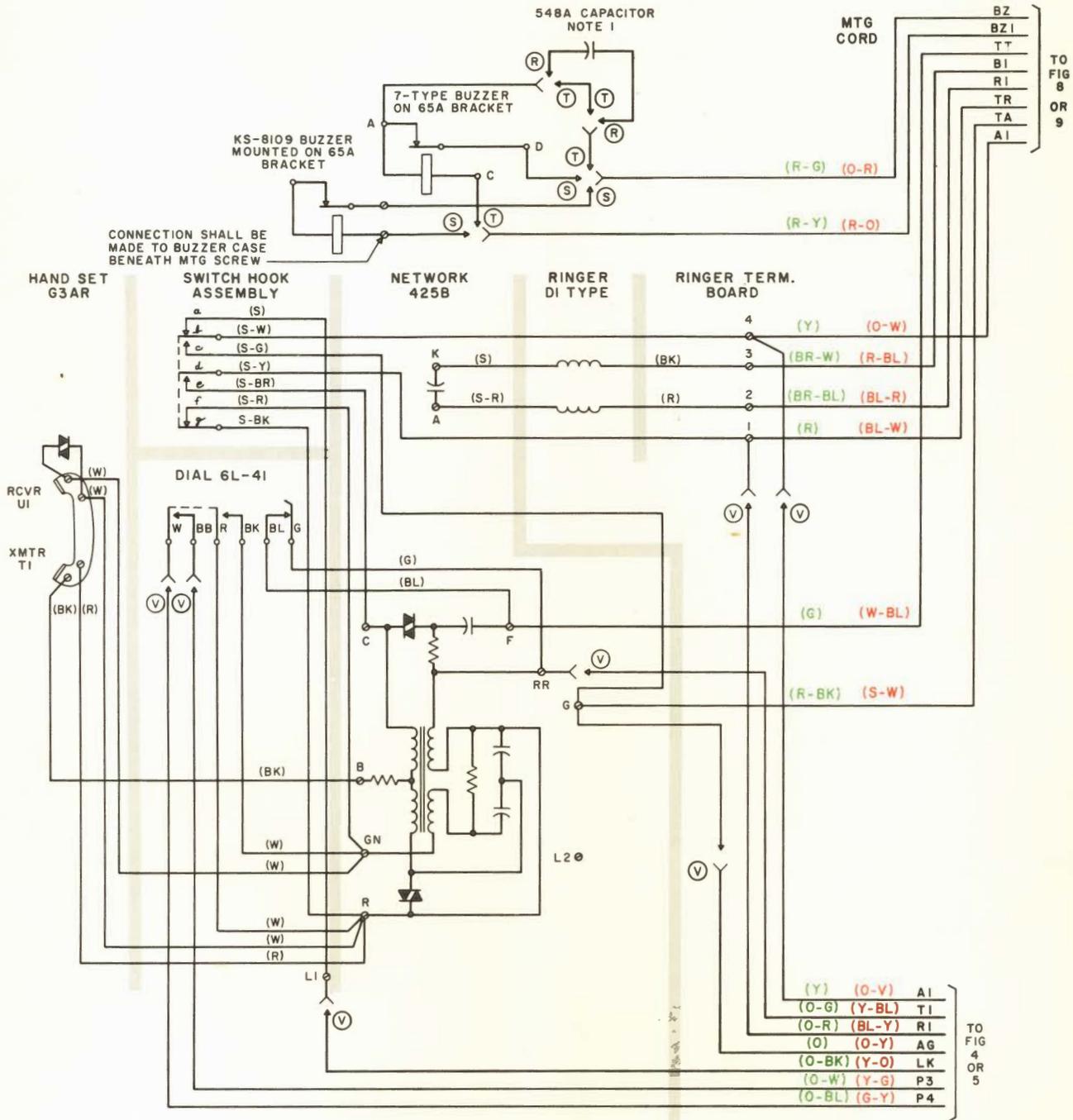


Fig. 5 - 667A Transmitter



NOTE: WHEN THE 617A KEY IS REQUIRED AS A DUAL-PURPOSE KEY, THE BRASS STRAP BETWEEN THE SI AND SG TERMINALS OF THE KEY MAY BE REMOVED. USE MIW CORD OR EQUIVALENT TO CONNECT SI TERMINAL OF 617A KEY TO A DISSIMILAR GROUND OR A NONGROUNDED CIRCUIT.

Fig. 6 - 617A Key



NOTE 1: WHEN HANDSET IS LIFTED, CONTACTS b AND c CLOSE BEFORE d AND e; AND CONTACTS f AND g OPEN LAST. WHEN HANDSET IS REPLACED, CONTACTS a AND b CLOSE BEFORE CONTACTS b AND c OPEN.

NOTE 2: BZ LEAD CONNECTS TO BUZZER CASE UNDER MOUNTING SCREW.

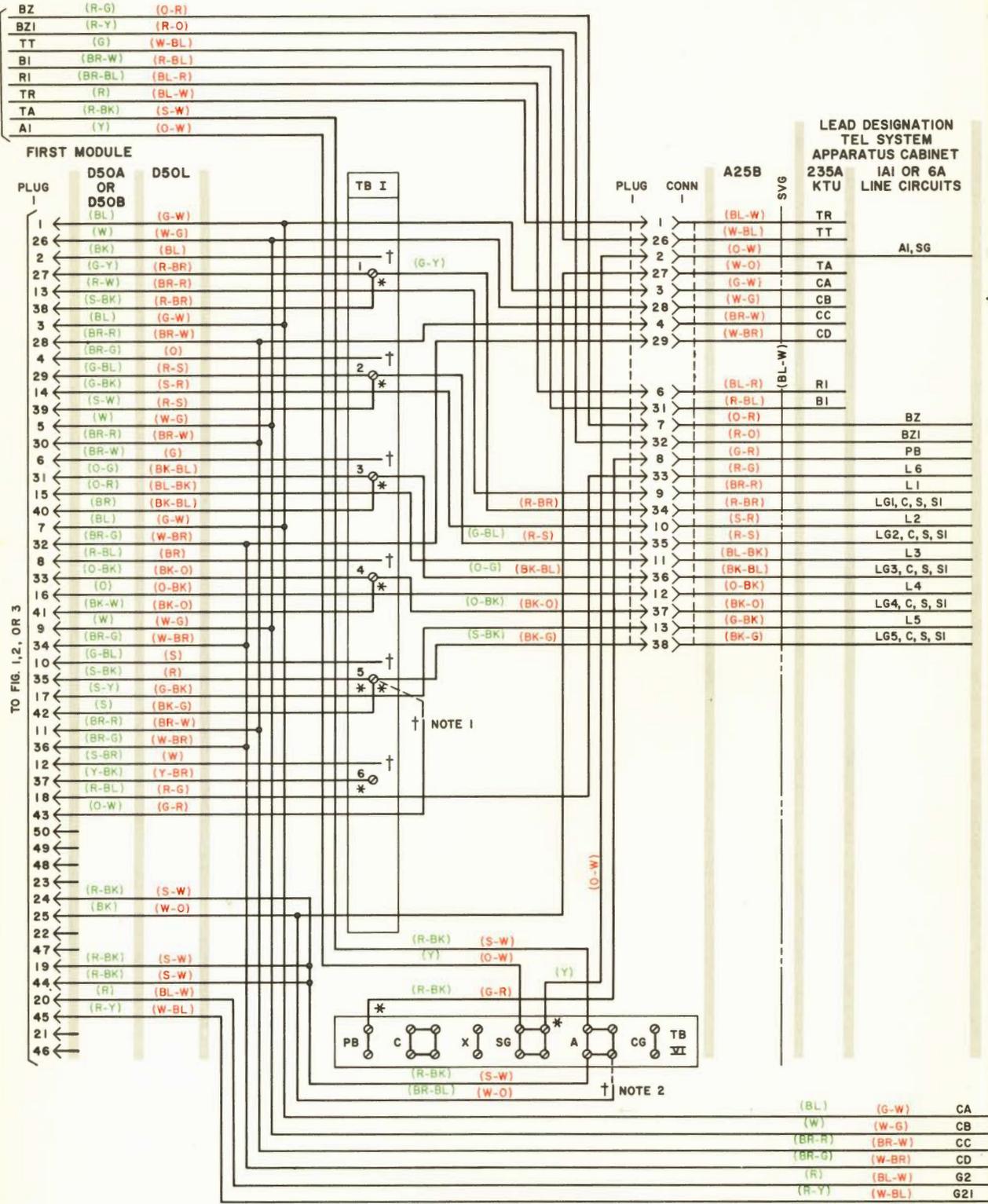
RED INDICATES EVEN-COUNT COLOR CODE.
GREEN INDICATES (MD) COLOR CODE.

NOTE 3: CAPACITOR IS CONNECTED FROM A TERMINAL OF BUZZER TO BZ LEAD. USE A D-161488 CONNECTOR OR SPARE TERMINAL TO CONNECT CAPACITOR LEAD TO BZ LEAD. CAPACITOR IN 425B NETWORK MAY BE USED INSTEAD OF 548A CAPACITOR IF NETWORK CAPACITOR IS AVAILABLE. IN THIS CASE, CONNECT BZ LEAD TO A TERMINAL OF NETWORK, AND USE M1W STRAP, OR EQUIVALENT, TO CONNECT K TERMINAL OF NETWORK TO A TERMINAL OF BUZZER.

- (R) COMMON AUDIBLE WITH POWER FAILURE FEATURE
- (S) 7-TYPE BUZZER AC
- (T) 7-TYPE BUZZER DC
- (V) SPEAKERPHONE LEADS PART OF 661A OR 667A TRANSMITTER UNIT

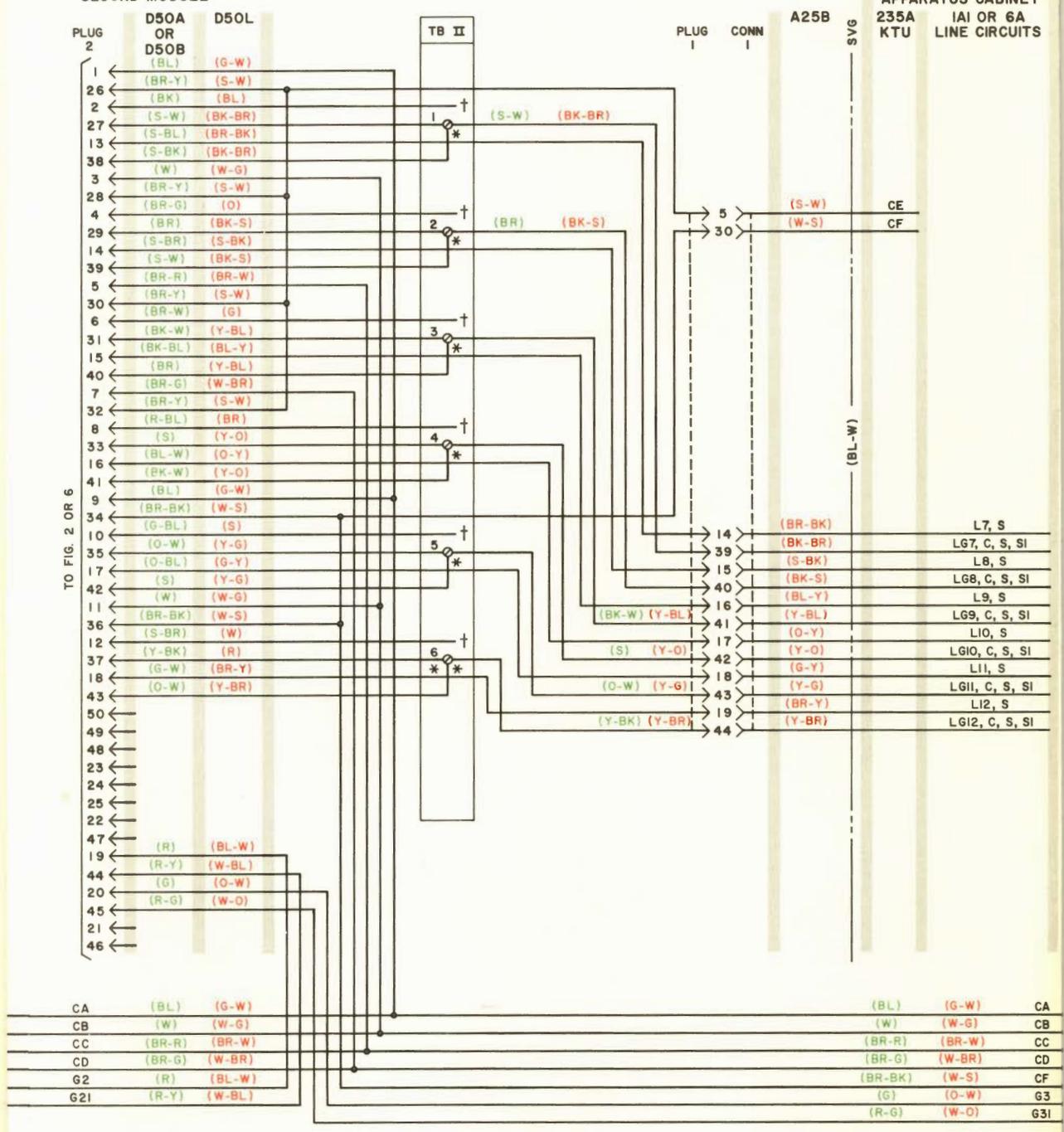
Fig. 7 - Telephone Set Circuit

70
16.
7



SECOND MODULE

LEAD DESIGNATION
TEL SYSTEM
APPARATUS CABINET
235A
KTV IAI OR 6A
LINE CIRCUITS



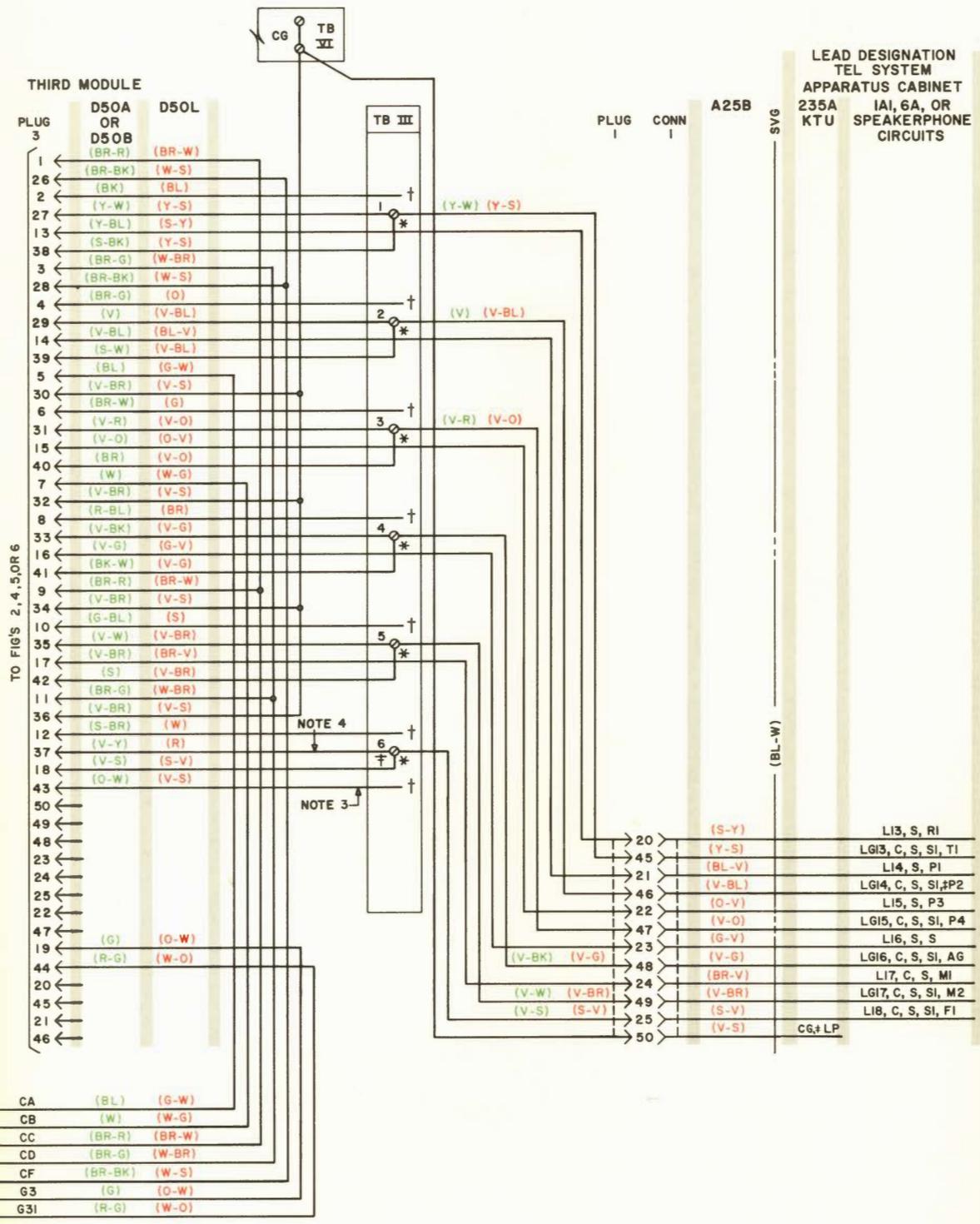
TO FIG. 2 OR 6

(BL-W)

CE
CF

L7, S
LG7, C, S, SI
L8, S
LG8, C, S, SI
L9, S
LG9, C, S, SI
L10, S
LG10, C, S, SI
L11, S
LG11, C, S, SI
L12, S
LG12, C, S, SI

CA	(BL)	(G-W)	(BL)	(G-W)	CA
CB	(W)	(W-G)	(W)	(W-G)	CB
CC	(BR-R)	(BR-W)	(BR-R)	(BR-W)	CC
CD	(BR-G)	(W-BR)	(BR-G)	(W-BR)	CD
G2	(R)	(BL-W)	(BR-BK)	(W-S)	CF
G21	(R-Y)	(W-BL)	(G)	(O-W)	G3
			(R-G)	(W-O)	G31



CIRCUIT SYMBOLS:

- ✕ INDICATES LEADS ARE SPADE TIPPED.
- † INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS-19147, L1 INSULATOR, AND STORED.
- ‡ INSULATE WITH KS-19147, L1 INSULATOR AND STORE WHEN 661 OR 667 TRANSMITTER IS USED.
- ‡ NOT REQUIRED FOR SPEAKERPHONE SYSTEM 3A.

RED INDICATES EVEN-COUNT COLOR CODE.

GREEN INDICATES (MD) COLOR CODE.

CIRCUIT NOTES:

NOTE 1 WHEN 599A OR 599B KEYS ARE USED IN FIRST MODULE, HOLD KEY LAMP (6th LAMP) MAY BE USED FOR A MISCELLANEOUS VISUAL SIGNAL. CONNECT INDICATED LEAD TO AN AVAILABLE LAMP GROUND. WHEN 598A KEY IS USED IN FIRST MODULE, INDICATED LEAD IS CONNECTED TO GROUND ON TERMINAL 5 OF TB1.

NOTE 2 WHEN 598A KEY IS USED IN FIRST MODULE, INDICATED LEAD IS CONNECTED TO TERMINAL A OF TB6.

NOTE 3 WHEN 598A KEY IS USED IN THIRD MODULE, INDICATED LEAD IS CONNECTED TO TERMINAL 5 OF TB3 IN 634 SET AND TO TERMINAL 6 OF TB3 IN 635 SET.

NOTE 4 WHEN 661 OR 667 TYPE TRANSMITTERS ARE USED IN MODULE THREE, REMOVE INDICATED LEAD AND INSULATE WITH A KS-19147, L1 INSULATOR AND STORE.

NOTE 5 WHEN A SPEAKERPHONE IS REQUIRED, A 148A ADAPTER MAY BE INSERTED BETWEEN CONNECTOR ONE AND PLUG ONE OF THE 634-TYPE SET.

NOTE 6 TO CONVERT A KEY POSITION FROM PICKUP (LOCKING) TO SIGNALING (NONLOCKING) REMOVE THE SCREW DETAIL P-10E837 ENTIRELY FROM THE PLUNGER AT THE KEY POSITION TO BE CONVERTED. MAKE THE NECESSARY CHANGES AS SHOWN IN CONVERSION TABLES D OR E. TO CONVERT A KEY POSITION FROM NONLOCKING TO LOCKING, INSERT SCREW DETAIL P-10E837. WHEN CONVERTING A KEY FOR SIGNALING, PLACE A P-11E977 INSULATING DETAIL OVER THE 2 KEY CONTACTS ADJACENT TO KEY PLUNGER.

Fig. 8 - Cord and Cable Connections for 634-Type Telephone Sets Equipped With Manufacture Discontinued (MD) or Even-Count Color-Coded Cords

CIRCUIT SYMBOLS:

- * INDICATES LEADS ARE SPADE TIPPED
- † INDICATES LEADS ARE SPADE TIPPED, INSULATED AND STORED.
- ‡ INSULATE WITH KS-19147, L1 INSULATOR AND STORE WHEN 661 OR 667 TRANSMITTER IS USED.
- ‡ NOT REQUIRED FOR SPEAKERPHONE SYSTEM 3A.

RED INDICATES EVEN-COUNT COLOR CODE.

GREEN INDICATES (MO) COLOR CODE.

CIRCUIT NOTES:

NOTE 1 WHEN 599A OR 599B KEYS ARE USED IN FIRST MODULE, HOLD KEY LAMP (6th LAMP) MAY BE USED FOR A MISCELLANEOUS VISUAL SIGNAL. CONNECT INDICATED LEAD TO AN AVAILABLE LAMP GROUND. WHEN 598A KEY IS USED IN FIRST MODULE, INDICATED LEAD IS CONNECTED TO GROUND ON TERMINAL 5 OF TB1.

NOTE 2 WHEN 598A KEY IS USED IN FIRST MODULE, INDICATED LEAD IS CONNECTED TO TERMINAL 1A OF TB6.

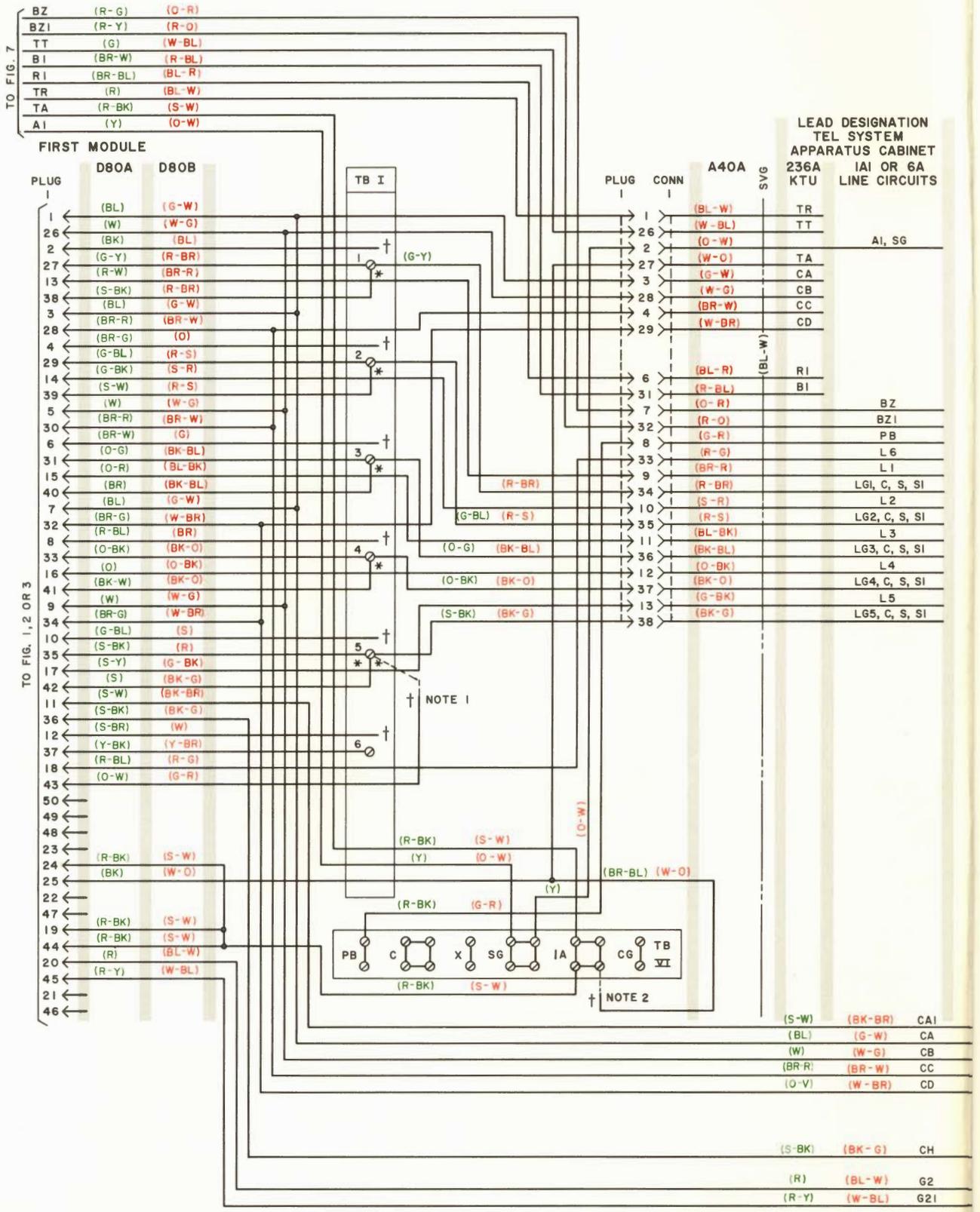
NOTE 3 WHEN 598A KEY IS USED IN THIRD MODULE, INDICATED LEAD MAY BE CONNECTED TO TERMINAL 5 OF TB3 IN 634 SET AND TO TERMINAL 6 OF TB3 IN 635 SET.

NOTE 4 WHEN 661 OR 667 TYPE TRANSMITTERS ARE USED IN MODULE FIVE, REMOVE INDICATED LEAD AND INSULATE WITH A KS-19147, L1 INSULATOR AND STORE.

NOTE 5 WHEN A SPEAKERPHONE IS REQUIRED, A 148A ADAPTER MAY BE INSERTED BETWEEN CONNECTOR ONE AND PLUG ONE OF THE 635-TYPE SET.

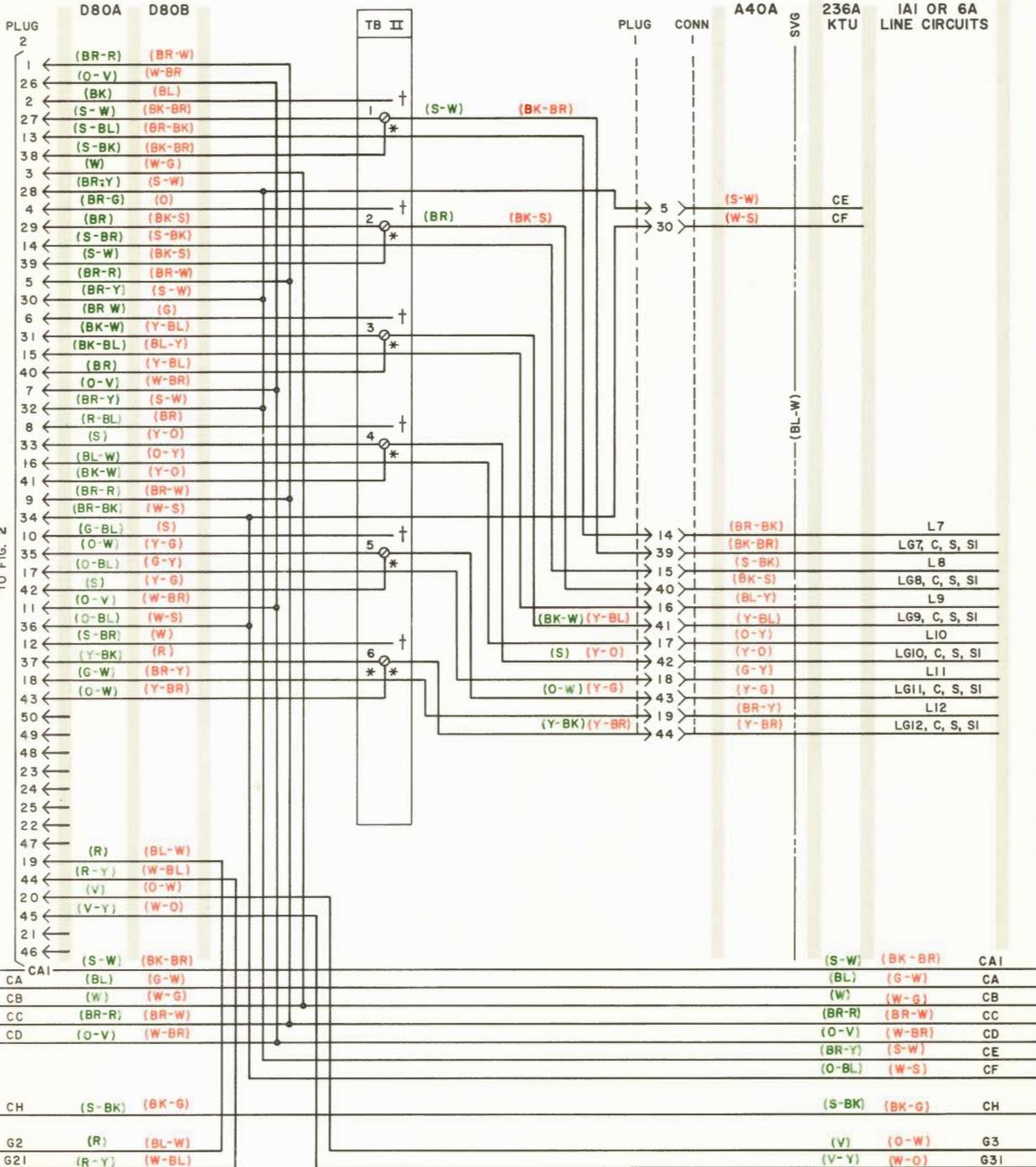
NOTE 6 TO CONVERT A KEY POSITION FROM PICKUP (LOCKING) TO SIGNALING (NONLOCKING) REMOVE THE SCREW DETAIL P-10E837 ENTIRELY FROM THE PLUNGER AT THE KEY POSITION TO BE CONVERTED. MAKE THE NECESSARY CHANGES AS SHOWN IN TABLES D OR E. TO CONVERT A KEY POSITION FROM NON-LOCKING TO LOCKING, INSERT SCREW DETAIL P-10E837. WHEN CONVERTING A KEY FOR SIGNALING, PLACE A P-11E979 INSULATING DETAIL OVER THE 2 KEY CONTACTS ADJACENT TO KEY PLUNGER.

TO FIG. 7



SECOND MODULE

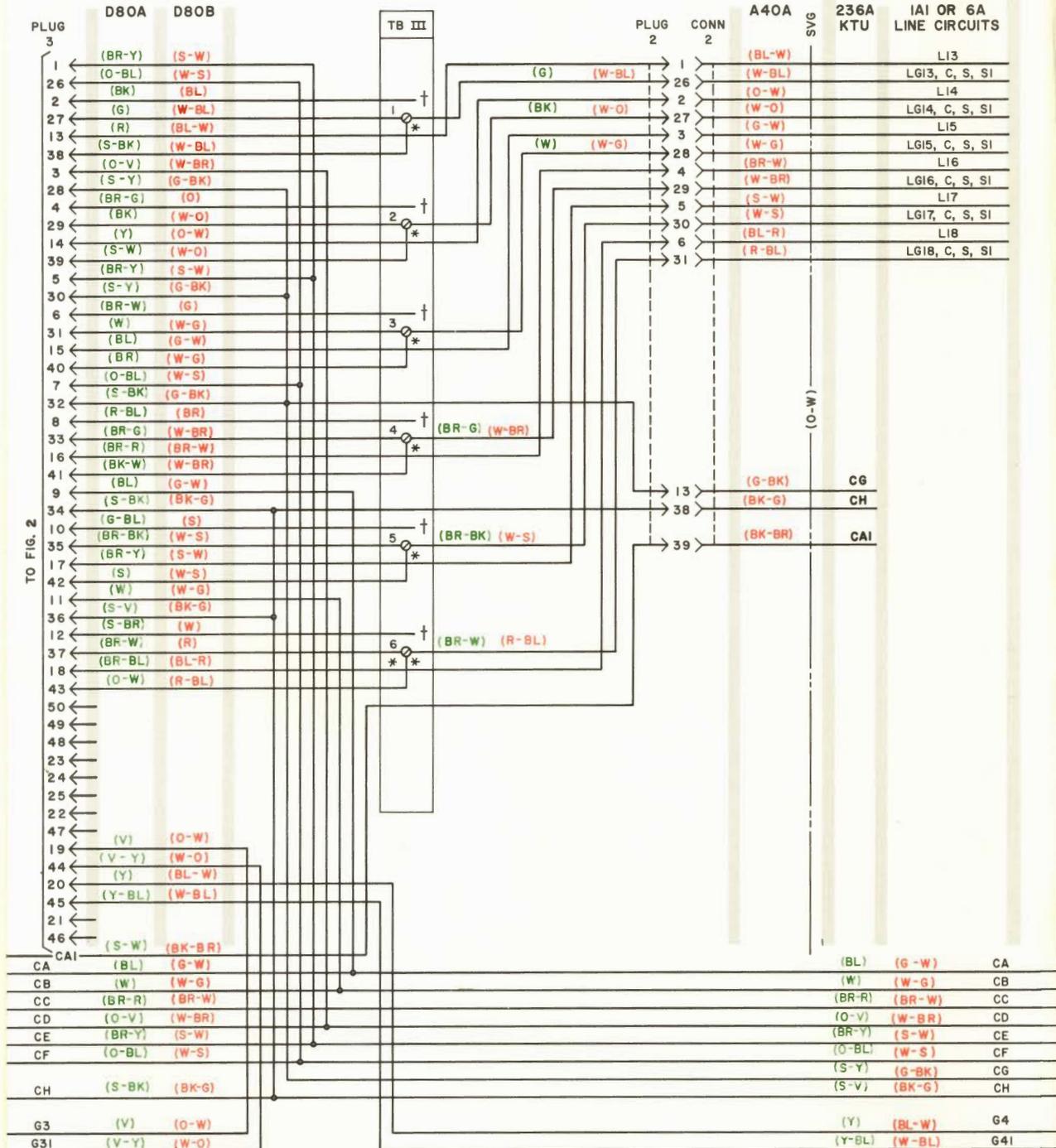
LEAD DESIGNATION
TEL SYSTEM
APPARATUS CABINET
236A IAI OR 6A
KTU LINE CIRCUITS



TO FIG. 2

TO FIG. 7

THIRD MODULE



LEAD DESIGNATION
TEL SYSTEM
APPARATUS CABINET
236A IAI OR 6A
KTU LINE CIRCUITS

TO FIG. 2

(O-W)

1	(BL-W)	L13
26	(W-BL)	LG13, C, S, SI
2	(O-W)	L14
27	(W-O)	LG14, C, S, SI
3	(G-W)	L15
28	(W-G)	LG15, C, S, SI
4	(BR-W)	L16
29	(W-BR)	LG16, C, S, SI
5	(S-W)	L17
30	(W-S)	LG17, C, S, SI
6	(BL-R)	L18
31	(R-BL)	LG18, C, S, SI

CG
CH
CAI

(BL)	(G-W)	CA
(W)	(W-G)	CB
(BR-R)	(BR-W)	CC
(O-V)	(W-BR)	CD
(BR-Y)	(S-W)	CE
(O-BL)	(W-S)	CF
(S-Y)	(G-BK)	CG
(S-V)	(BK-G)	CH
(Y)	(BL-W)	G4
(Y-BL)	(W-BL)	G4I

