

TELEPHONE SETS  
608 AND 618 TYPES  
CONNECTIONS

1. GENERAL

1.01 This section shows connections for the 608-type (30-button) and 618-type (18-button) telephone sets (Fig. 1 and 2). It also shows connector cable conductor assignments.

1.02 This section is reissued to show connections on the 608C and 618B telephone sets (See Fig. 2).

1.03 These sets are used with either 2- or 4-wire central office or private line service.

1.04 The 608- and 618-type telephone sets are equipped with even-count color-coded mounting cords. The 608-type set uses a D200F and the 618-type set uses a D120C cord.

1.05 These sets may be equipped with optional modular units (Table A).

2. APPLICATION

Systems

2.01 The 608- and 618-type telephone sets are used with the following systems:

- (a) SD-69449-01 — 4-wire private line circuit arranged for 2- and 4-wire key telephone terminations.
- (b) SD-69294-01 — Visual and audible signal circuits in 1A, 1A1, 1A2, and 6A key telephone systems.
- (c) SD-69270-01 — No. 1A1, 1A2, CO, or PBX line circuit key telephone systems arranged for common battery operation.

(d) SD-69414-01 — 4-wire subscriber line circuits arranged for common battery operation.

(e) 3A speakerphone system — See appropriate sections covering these systems.

2.02 A special station busy-lamp control circuit for handset or headset operation is included in this section. Using a 6C KTU, the A1 ground is connected to one side of relay winding and controlled by the A battery from an operated line circuit. (See Fig. 7.)

Relay

2.03 The FW relay (Fig. 1 and 2) switches the receiver from 2- to 4-wire circuitry as follows:

- (a) On 2-wire lines, the nonoperated relay connects the receiver to the network.
- (b) On 4-wire lines, the relay operates and disconnects the receiver from the network and connects it to the RR and RT leads. The transmitter and network then function in the usual manner as a common battery transmitter circuit. The receiver leads are switched by the relay to impedance-matching repeating coils in associated line circuits.

Optional Conductors

2.04 Optional mounting cord conductors (Fig. 1, 2, 6, and 8) are insulated and stored in the telephone set.



*Use electrician scissors or diagonal pliers to remove insulators. Do not use long-nose pliers which may damage the conductor or pull off the spade tip.*

**Key Units**

2.05 Supplementary key units may be converted to common signaling and private or inter-communicating lines (Table B).

**3. CONNECTION FIGURES INDEX**

Fig. 1 — 608B or 618A Telephone Set Circuit

Fig. 2 — 608C or 618B Telephone Set Circuit

Fig. 3 — 599A Key

Fig. 4 — 599B Key

Fig. 5 — 598A Key

Fig. 6 — 667B Transmitter

Fig. 7 — Busy Lamp Control Circuit for 1A1 and 1A2 KTU

Fig. 8 — Cord and Cable Connections

Table A — Telephone Set Codes and Module Arrangements

Table B — Conversion of Pickup Keys to Signaling

Table C — Connections for 599B Key

**TABLE A**  
**TELEPHONE SET CODES**  
**AND MODULE ARRANGEMENTS**

Telephone Set		Set Equipped With										
		Face-Plate Assembly	Left Module		2nd Module		3rd Module		4th Module		5th Module	
Type	Code		Key	Fig.	Key	Fig.	Key	Fig.	Key	Fig.	Key	Fig.
618A or 618B	2	20E	599A	3	598A	5	598A	5				
	7		599B	4								
	11	20G	599A	3			667B*	6				
	13		599B	4								
608B or 608C	3	21G	599A	3	598A	5	598A	5	598A	5	598A	5
	12		599B	4								
	17	21M	599A	3			667B*	6				
	20		599B	4								

\* Used with 3A speakerphone system.

**TABLE B**  
**CONVERSION OF PICKUP KEYS TO**  
**SIGNALING (NONLOCKING)**

No. of Pickup Keys Remaining per Key	No. of Sig Keys Converted from Pickup Keys			No. of Private and Intercom Lines with Com Sig Keys	Key Lead Terminations						
	599A Orig Key	599B Orig Key	598A Supl Key		O-W	S-W	G-R	BL-BK	BR-BK	Y-O Supl Key Only	O-Y Supl Key Only
6					A-H*	A-H*	A-H*	A-H*	A-H*	A-H*	G*
5			1		A-H*	A-H*	A-H*	A-H*	A-H*	C	G*
4	1		2		A-H*	A-H*	A-H*	A-H*	C	C	G*
3	2	1	3		A-H*	A-H*	A-H*	C	C	C	G*
2	3	2	4		A-H*	A-H*	C	C	C	C	G*
1	4	3	5		A-H*	C	C	C	C	C	G*
			6		C	C	C	C	C	C	G*
5			1	2	A-H*	A-H*	A-H*	C	C	C	G*
5			1	3	A-H*	A-H*	C	C	C	C	G*
5			1	4	A-H*	C	C	C	C	C	G*
5			1	5	C	C	C	C	C	C	G*

**Note 1:** To convert a key position from pickup to signaling, remove screw detail P-10E837 from plunger at key position to be converted.

**Note 2:** The sixth key of any supplementary key unit may be converted for use as a common signaling key on several private or intercommunicating lines. The signaling is directed to the S or S1 lead of the lines to be signaled. The 1A1 or 1A2 system automatic cutoff feature cannot be used on a line connected to the common signaling key.

**Note 3:** Provide an M1W strap or equivalent between the SG and C terminals on TB6.

\*On terminal board associated with key.

TABLE C  
 CONNECTIONS FOR 599B KEY (TURN KEY)

Feature	5th and 6th Pickup Key Leads						Spade Tipped Leads in Set				
	R 5th G-BK	T 5th BK-G	A 5th BK-BR	R 6th BL-Y	T 6th Y-BL	A 6th Y-O	BL-Y	Y-BL	O-Y	Y-O	BR-BK
Cutoff Sta on 1A1 and 1A2 KTS	To Equip.			To Ext Sta			Insulate and Store		TB1 G	Insulate and Store	
Cutoff Sta on 4-Wire Line (Aux Relay Required)	To Equip. GRD	To Equip. Aux Rel				Insulate and Store	Insulate and Store		TB1 G	TB1 G	
Cutoff Ext Ring. or Buz	To Equip.			To Ext Ring. or Buz			Insulate and Store				
Cutoff Bell in Set	To Equip.			*	*		TB1† 7‡	TB1† 8‡	Insulate and Store		
Cutoff Buz in Set	To Equip.			*	*		D A Cap.	C C C	Insulate and Store		
Monitoring	To Mon Equip.						R TB1	T TB1			

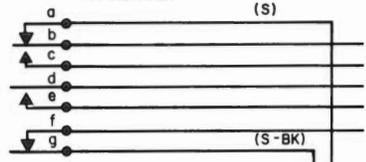
\* Insulate and store the BL-Y and Y-BL leads at the equipment when spade tipped leads are used in set.

† Insulate and store BZ and BZ1 leads from TB1.

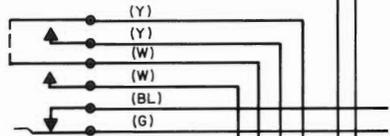
‡ Use screw terminals 7 and 8 on the 608B and 618A sets.

‡ Use screw terminals 7 and 8 on the 608B and 618A sets. Use screw terminal 12 and network terminal A on the 608C and 618B sets.

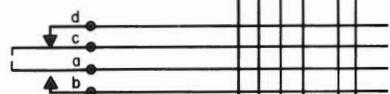
**SWITCHHOOK ASSEMBLY**



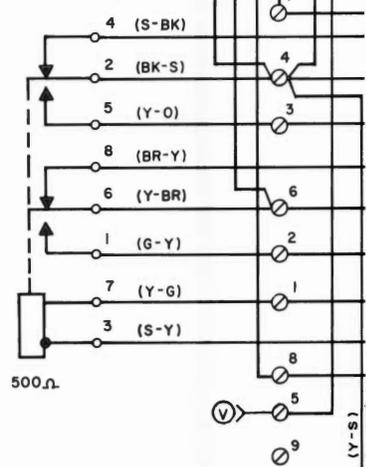
**8C DIAL**



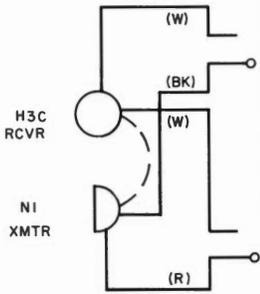
**FLASH KEY**



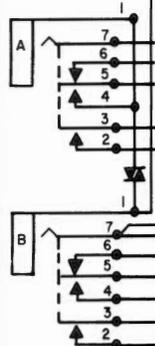
**FW RELAY**



**52A OR 53A HEAD SET**

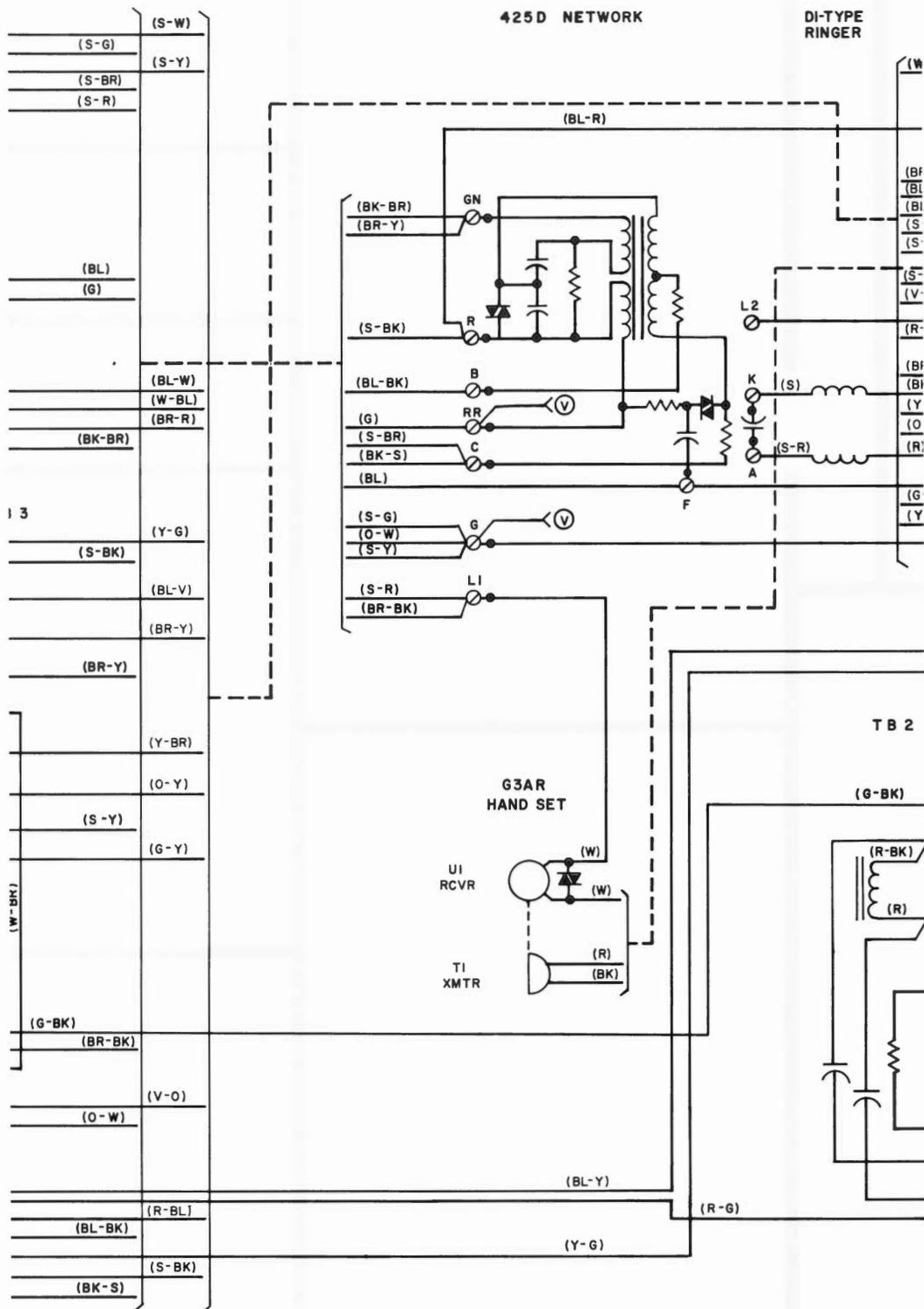


**517A JACKS**



425D NETWORK

DI-TYPE RINGER



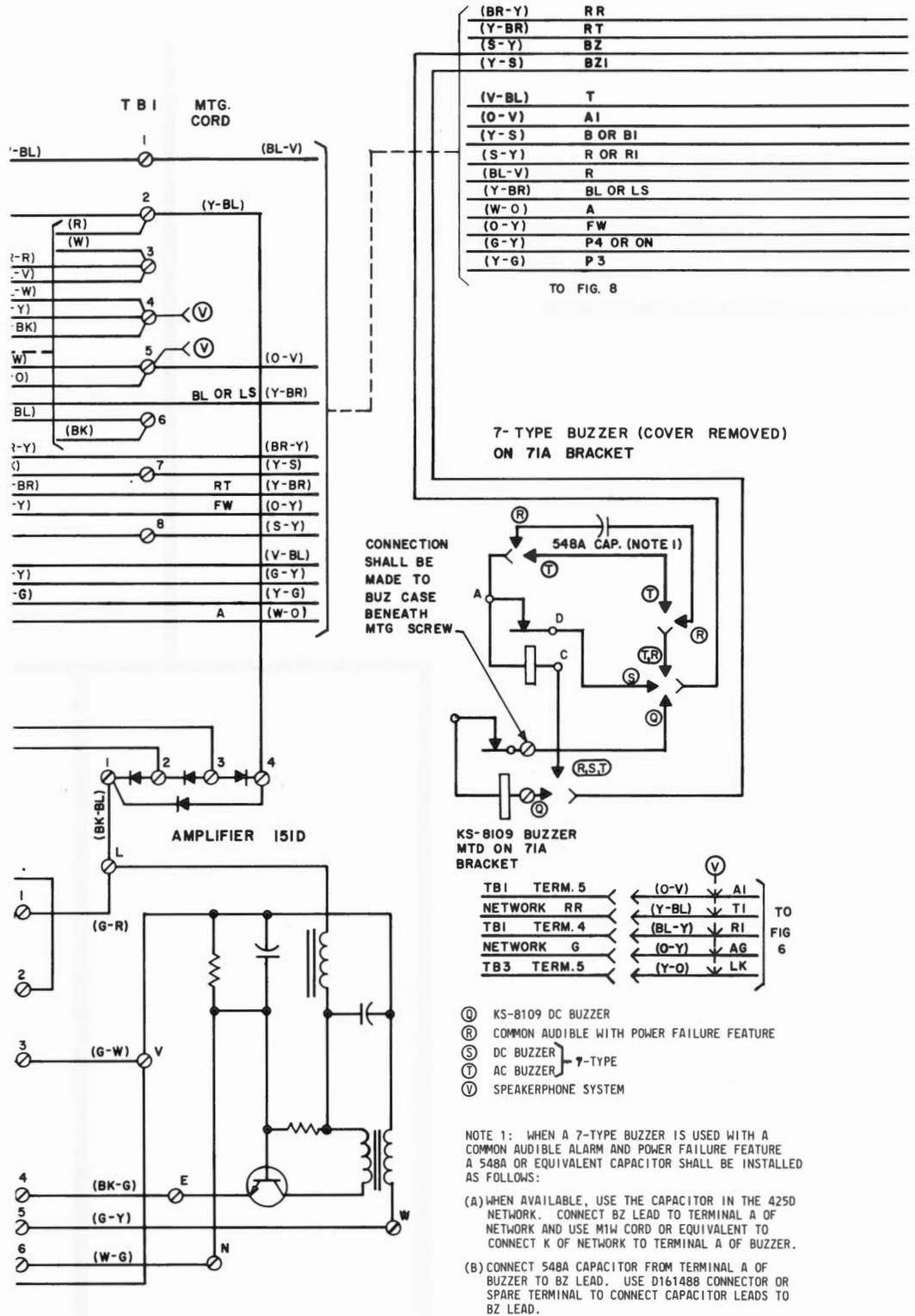
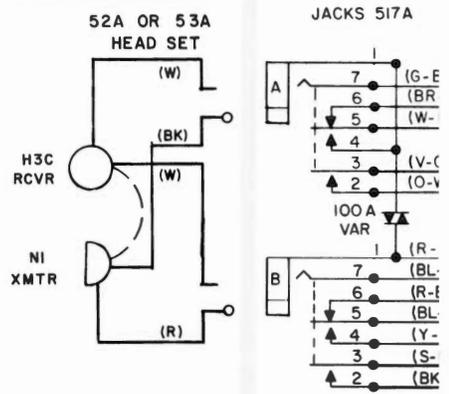
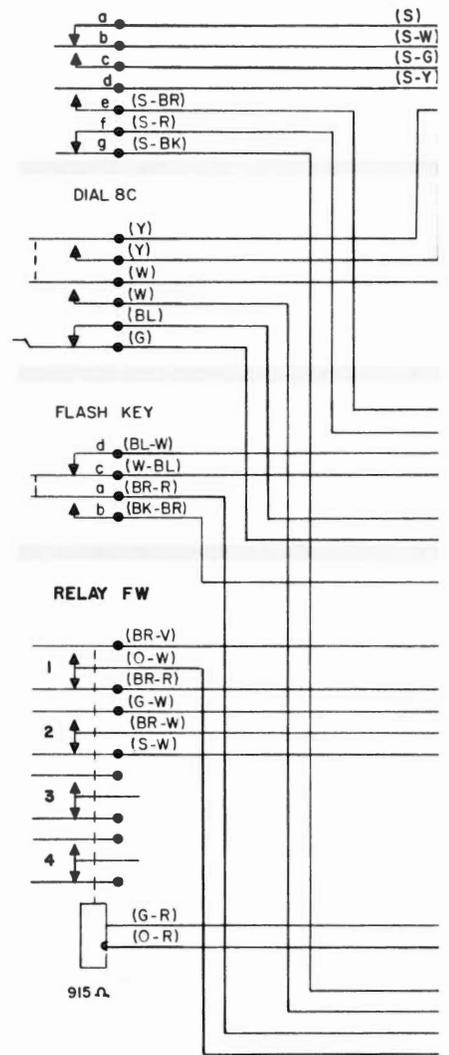
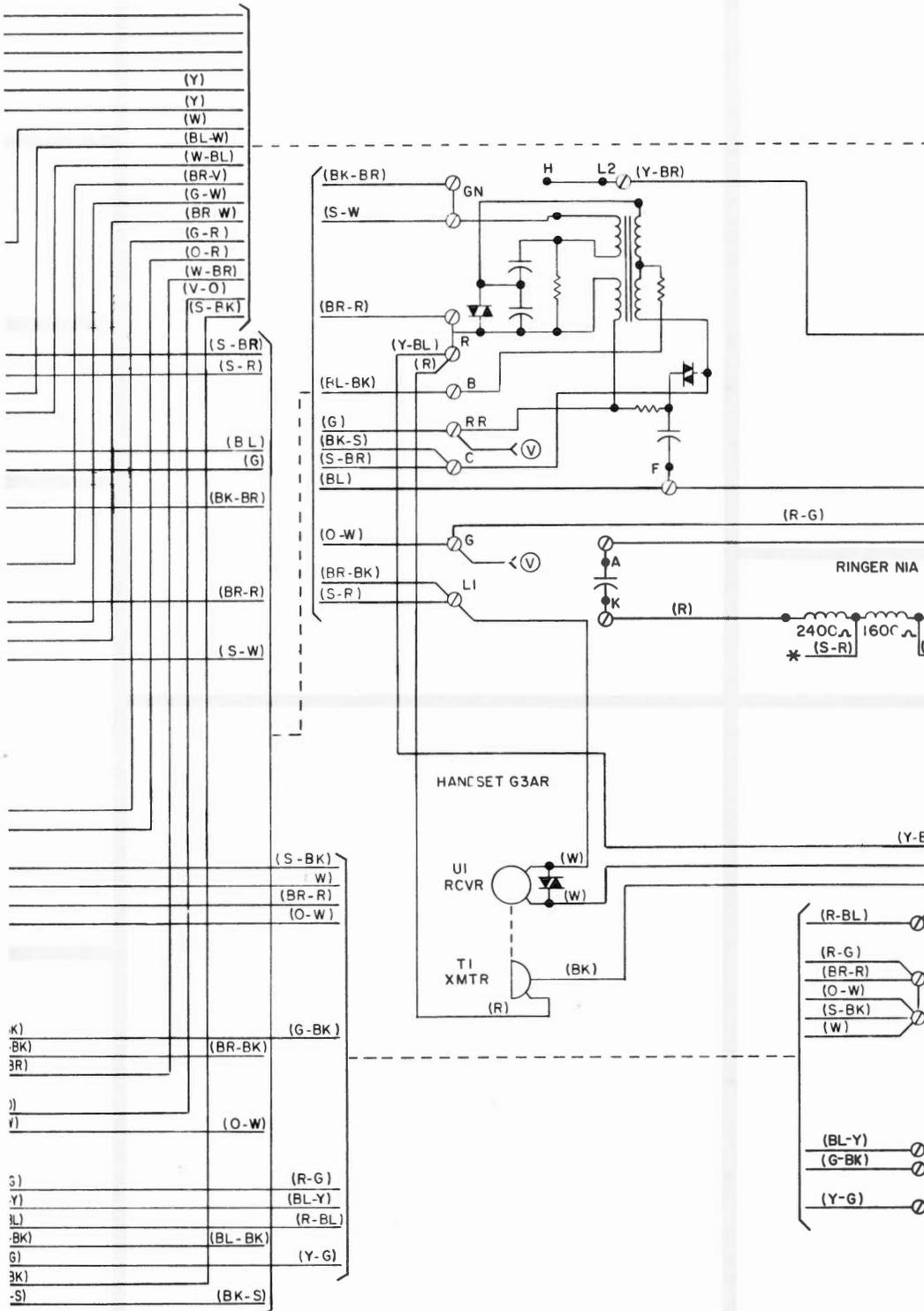


Fig. 1 — 608B or 618A Telephone Set Circuit

**SWITCHHOOK ASSEMBLY**



NETWORK 4010B



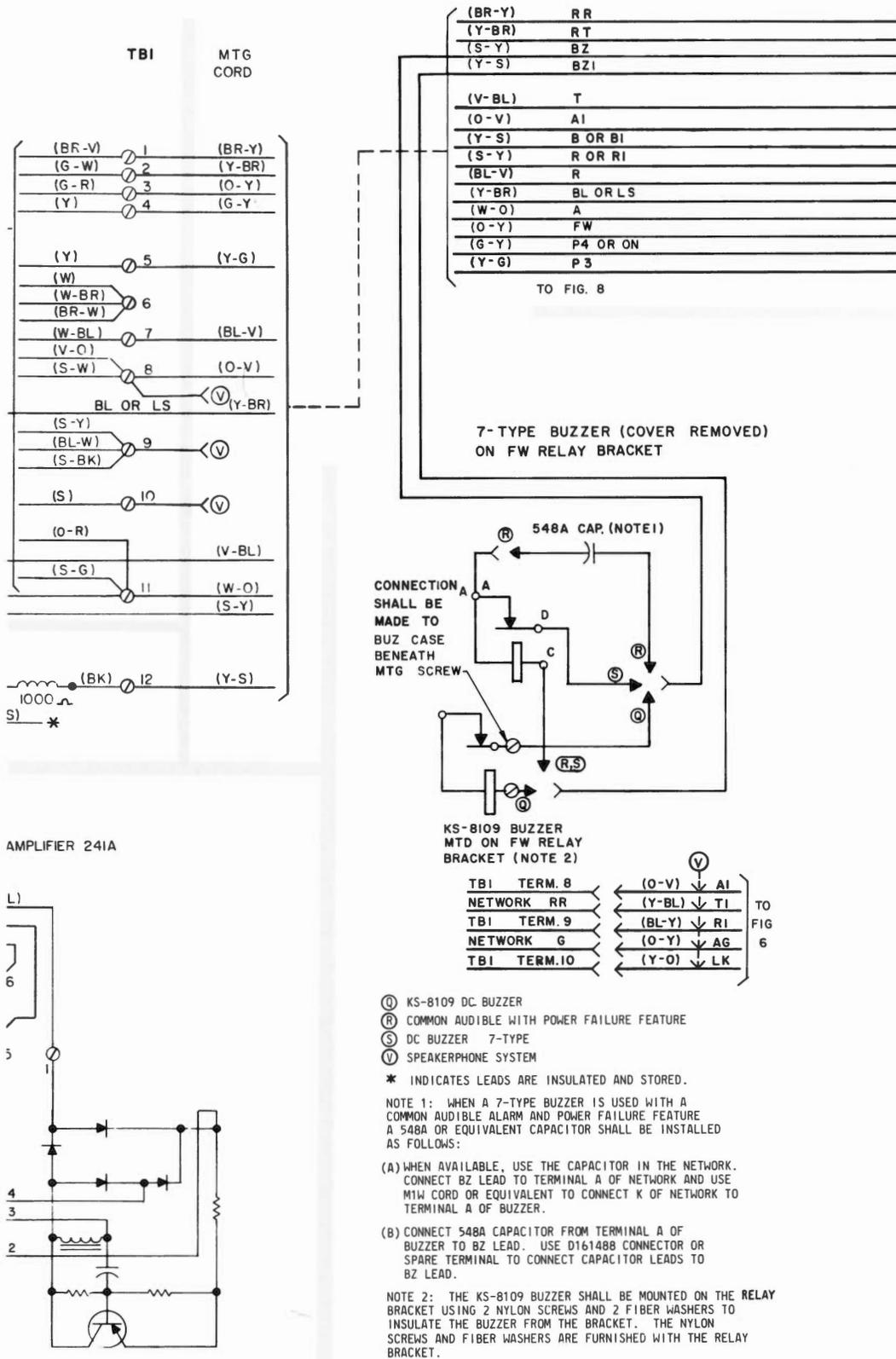


Fig. 2 — 608C and 618B Telephone Set Circuit

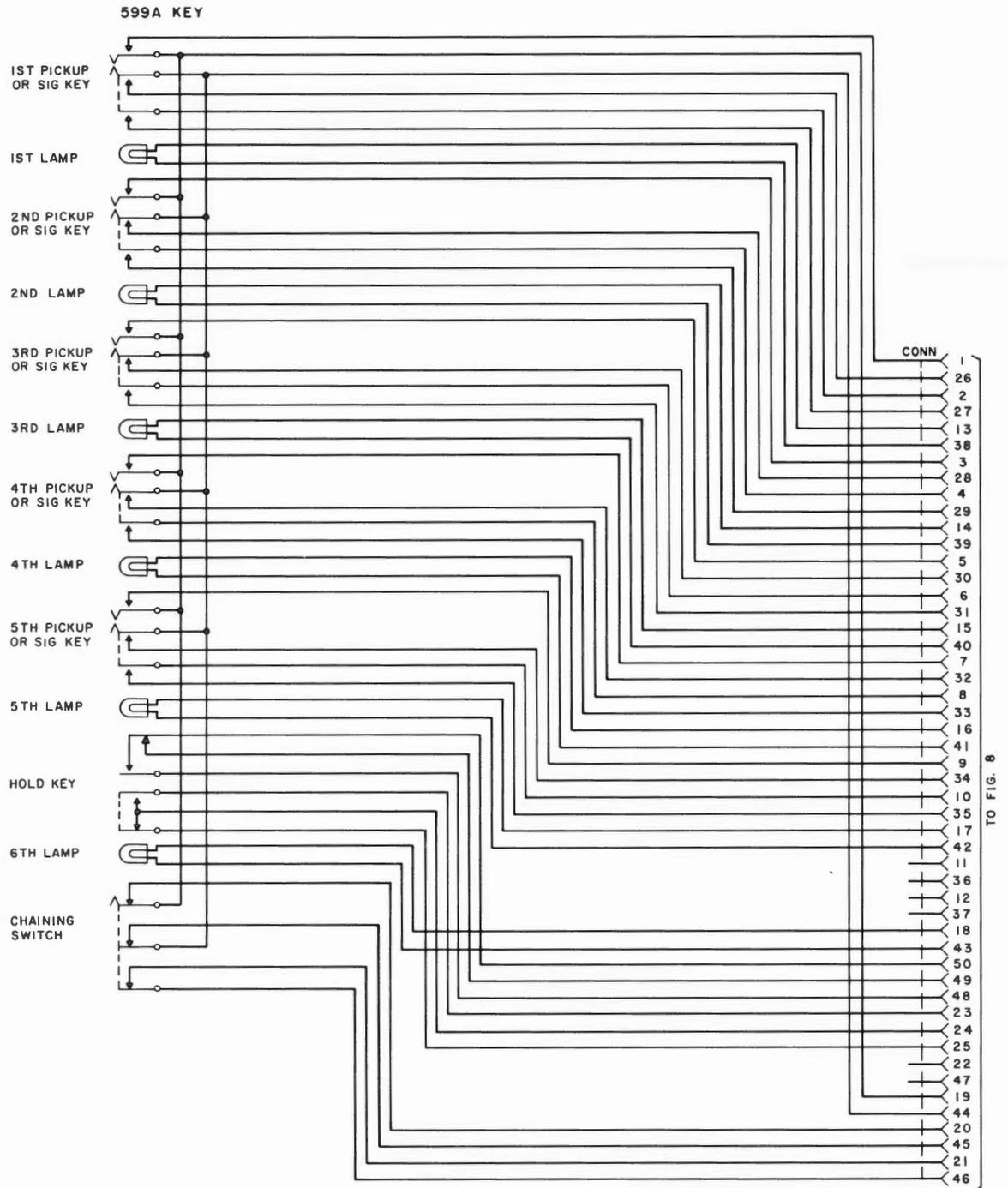


Fig. 3 - 599A Key—First Key Unit for 608- and 618-Type Telephone Sets

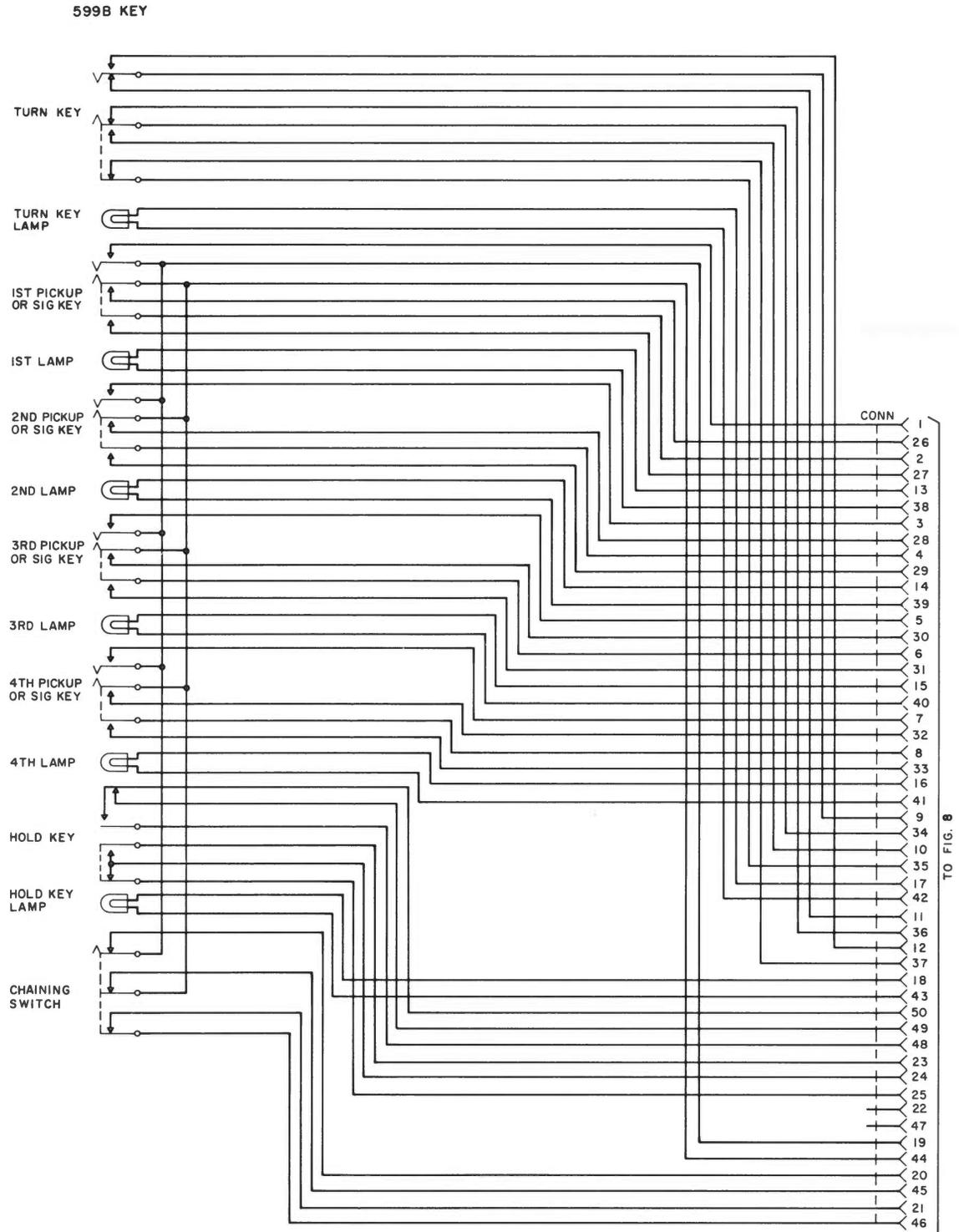


Fig. 4 - 599B Key—First Key Unit for 608- and 618-Type Telephone Sets

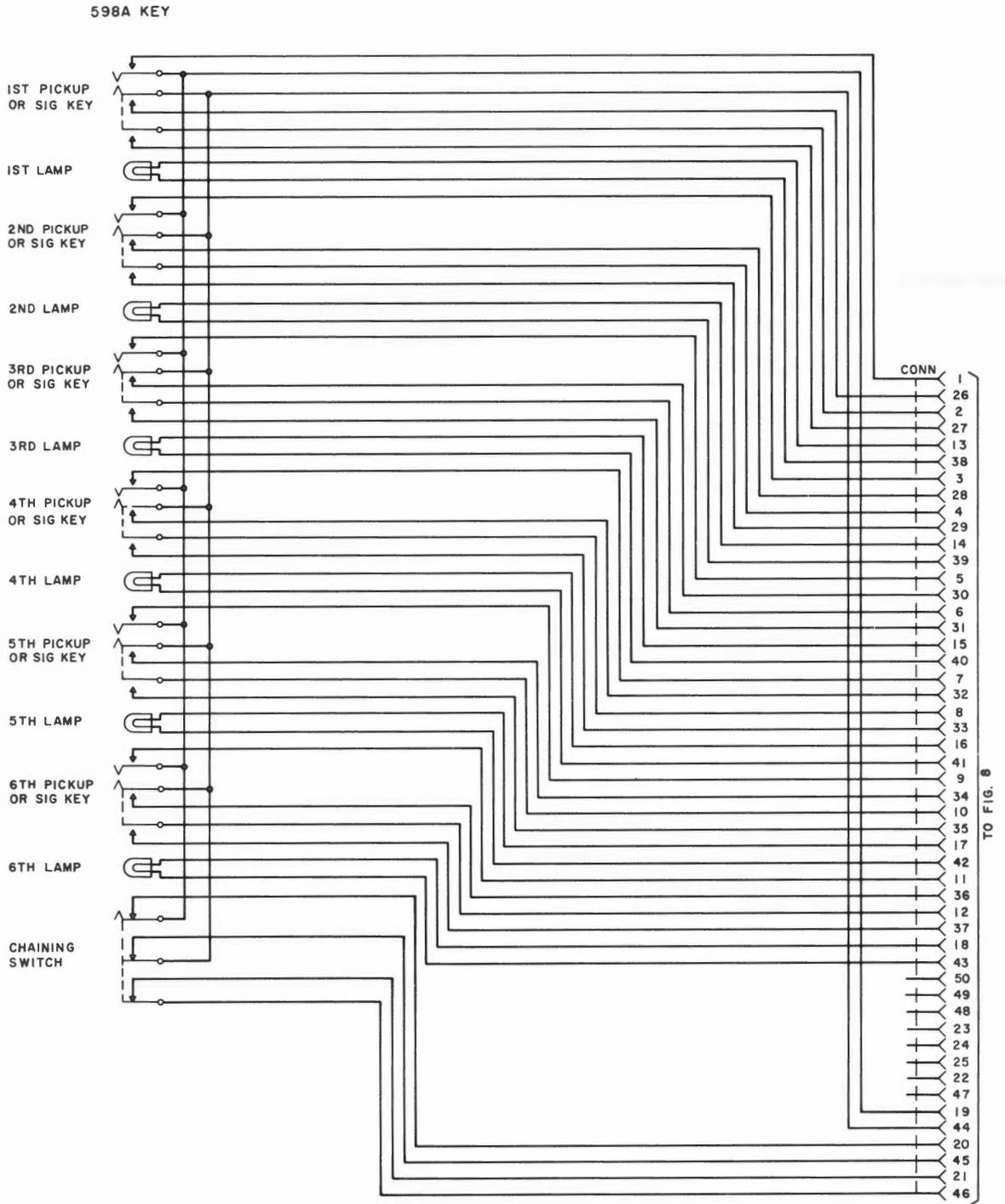


Fig. 5 — 598A Key—Second and Third Key Units for 618-Type and Second through Fifth Key Units for 608-Type Telephone Sets

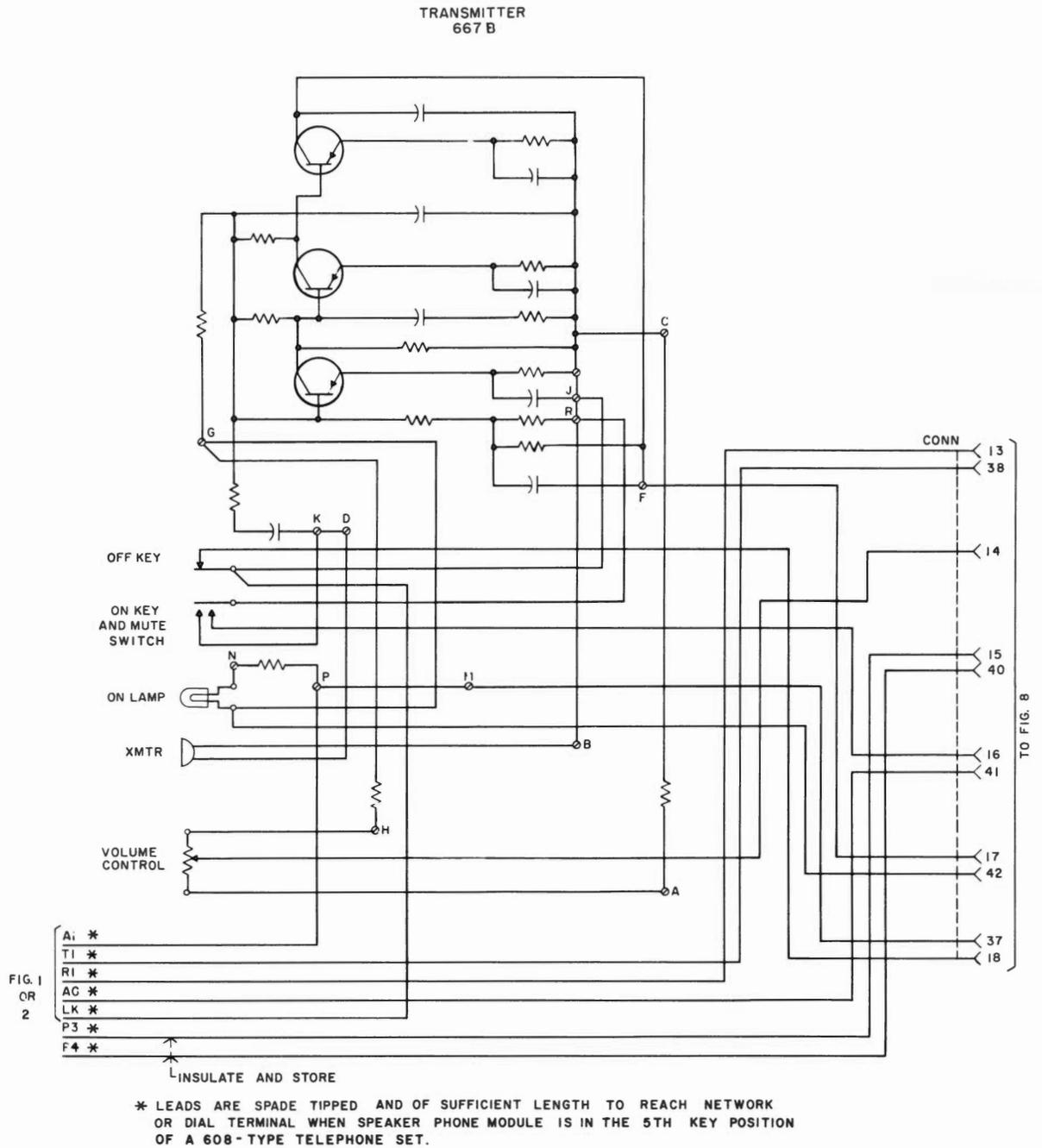
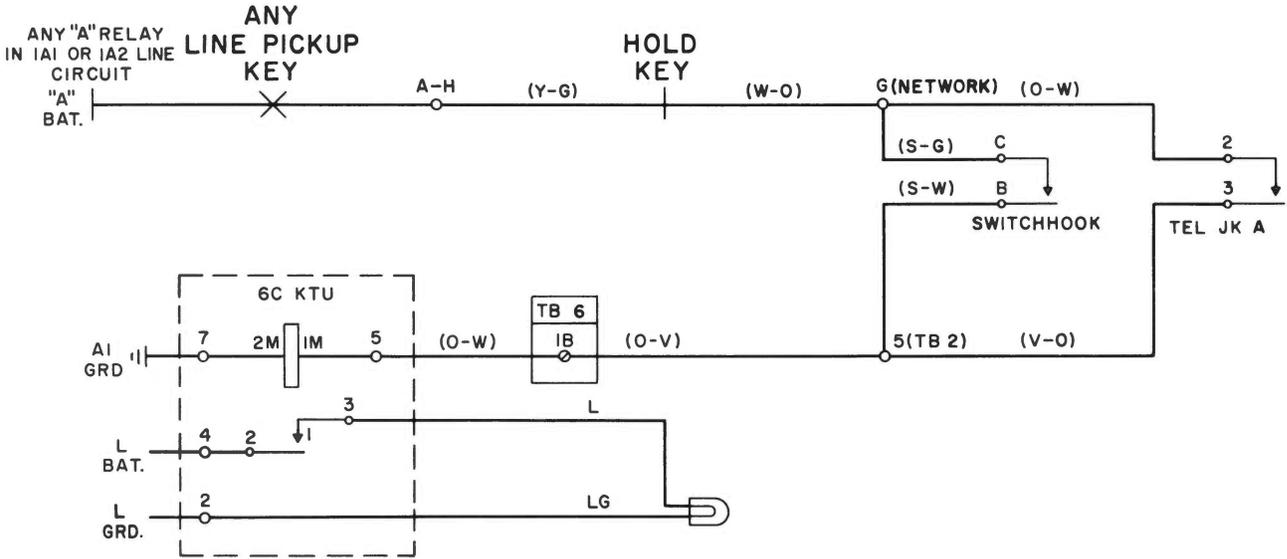


Fig. 6 — 667B Transmitter—Third Key Unit for 618-Type Telephone Set and Fifth Key Unit for 608-Type Telephone Set



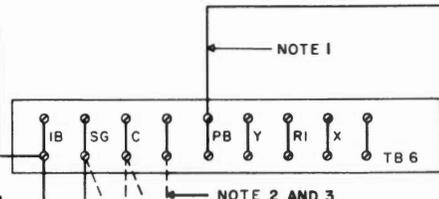
RANGE OF "A" RELAY AND 6C KTU  
 14 VOLTS FOR 190 Ω MAX TO OPERATE BOTH RELAYS IN SERIES  
 20VOLTS FOR 520 Ω MAX TO OPERATE BOTH RELAYS IN SERIES  
 26VOLTS FOR 840 Ω MAX TO OPERATE BOTH RELAYS IN SERIES  
 LEAD (Y-BR) DESIGNATION BL OR LS NOT USED

Fig. 7 – Busy Lamp Control Circuit for 1A1 and 1A2 KTs

(BR-Y)	RR
(Y-BR)	RT
(S-Y)	BZ
(Y-S)	BZI

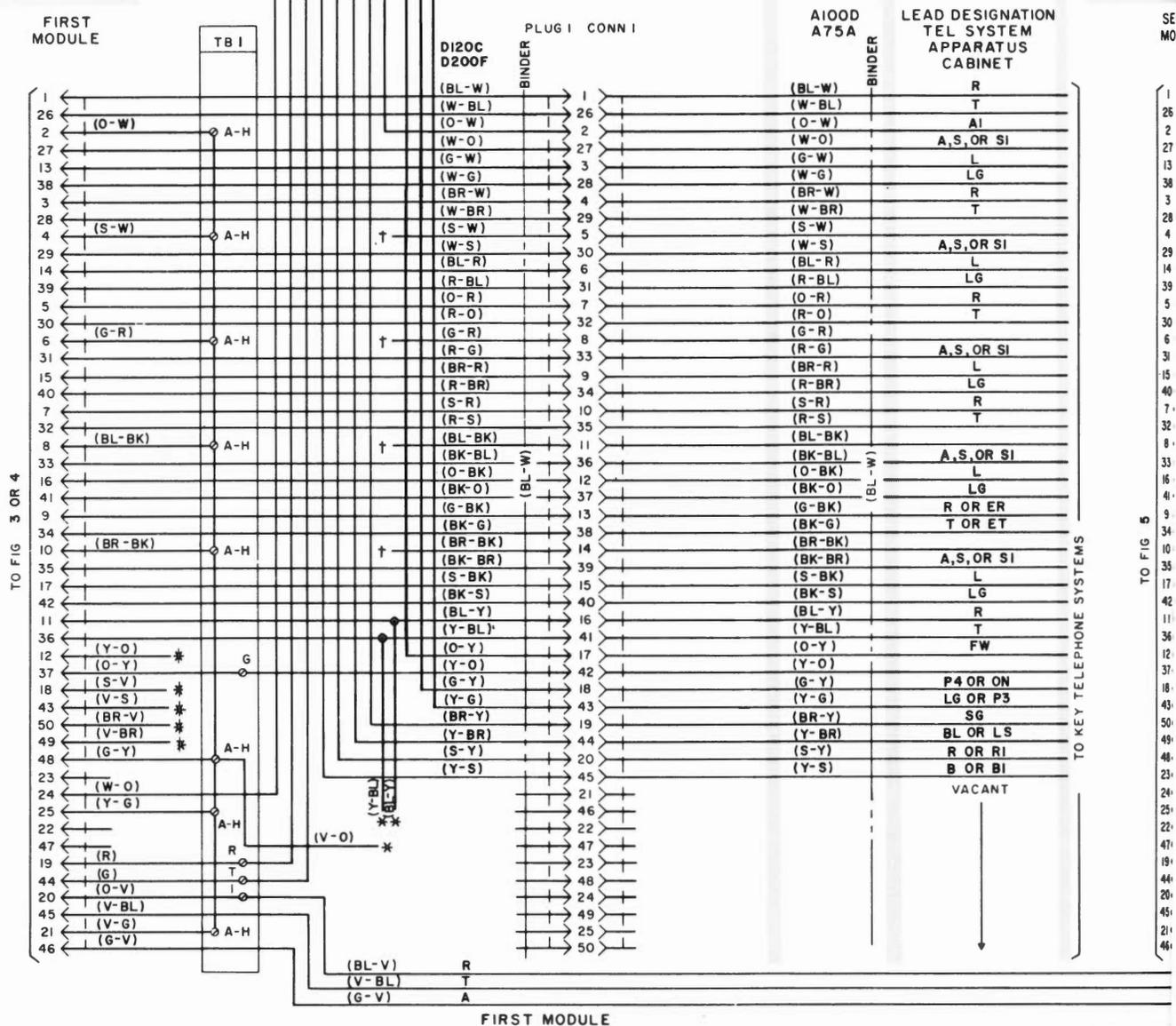
(V-BL)	T
(O-V)	A1
(Y-S)	B OR BI
(S-Y)	R OR RI
(BL-V)	R
(Y-BR)	BL OR LS
(W-O)	A
(O-Y)	FW
(G-Y)	P4 OR ON
(Y-G)	P3

TO FIG 1 OR 2



CORD CONNECTIONS

CONNECTOR CABLE



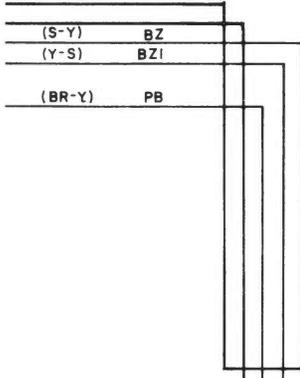
TO FIG 3 OR 4

TO FIG 5

FIRST MODULE

SE MO

TO KEY TELEPHONE SYSTEMS

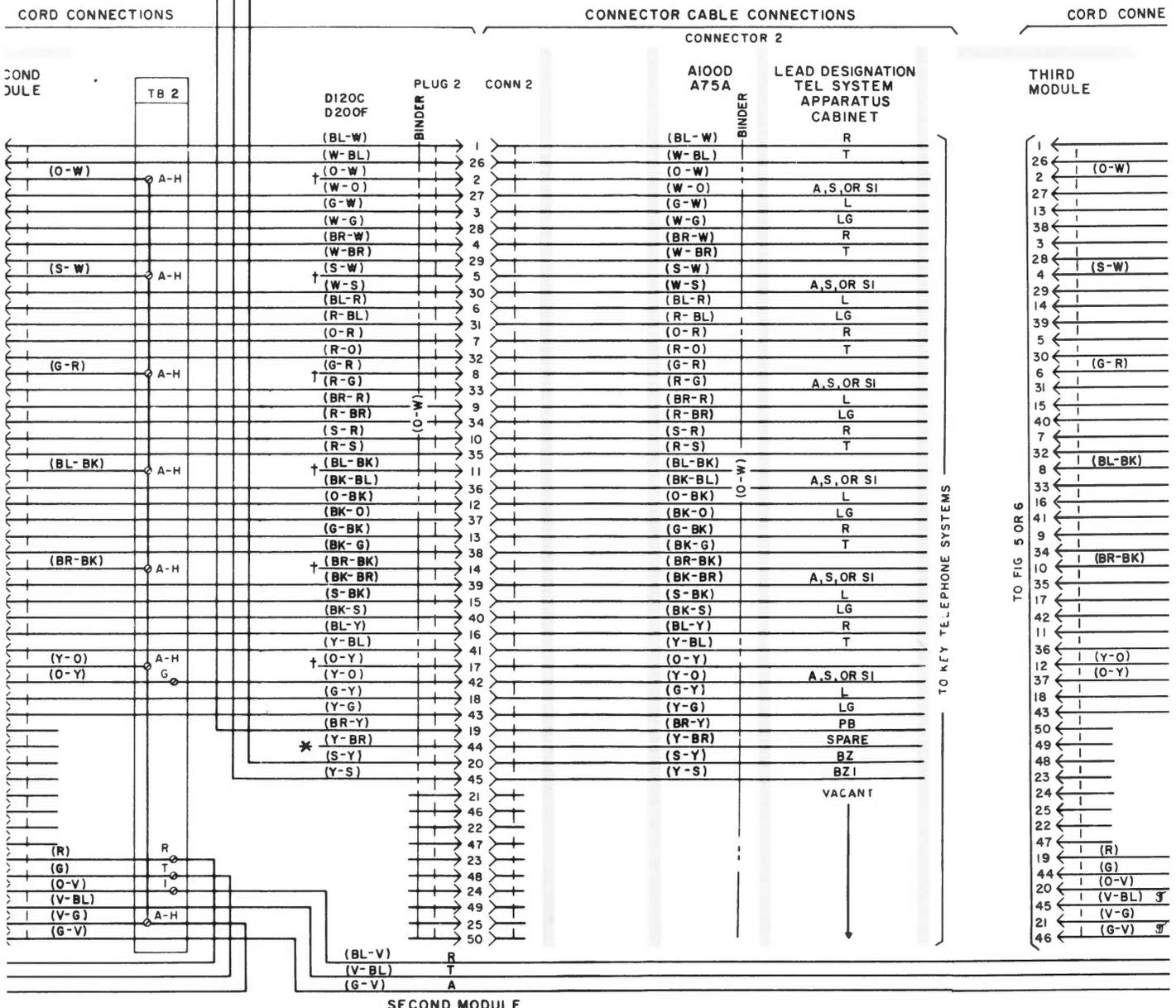


CIRCUIT SYMBOLS:  
 \* INDICATES LEADS ARE SPADE TIPPED, INSULATED AND STORED.  
 † INDICATES LEADS ARE DEAD ENDED  
 ‡ INDICATES LEADS ARE SPADE TIPPED, INSULATED AND STORED IN THIRD MODULE OF 18 BUTTON SETS AND DEAD ENDED IN 30-BUTTON SETS.  
 § DEAD ENDED IN 30-BUTTON SETS.  
 ¶ LEADS NOT PROVIDED IN 18-BUTTON SETS.

OPTIONS:  
 USE "M" WIRING WITH 18-BUTTON SETS.  
 USE "N" WIRING WITH 30-BUTTON SETS.

NOTE 1: THE PB LEAD IS FOR KEY TELEPHONE SYSTEM.  
 NOTE 2: WHEN SIGNALING KEY THE SPADE TIPPED LEADS AS THE SG TERMINAL ON TERMINAL PROVIDE AN M1W STRAP, OR E TERMINAL BLOCK 6.  
 NOTE 3: WHEN MORE THAN F COMMON SIGNAL KEY ARE REQUIRED IS NOT USED, STRAP TOGETHER REQUIRING COMMON SIGNAL IN

(BR-Y) RR  
 (Y-BR) RT



SECOND MODULE

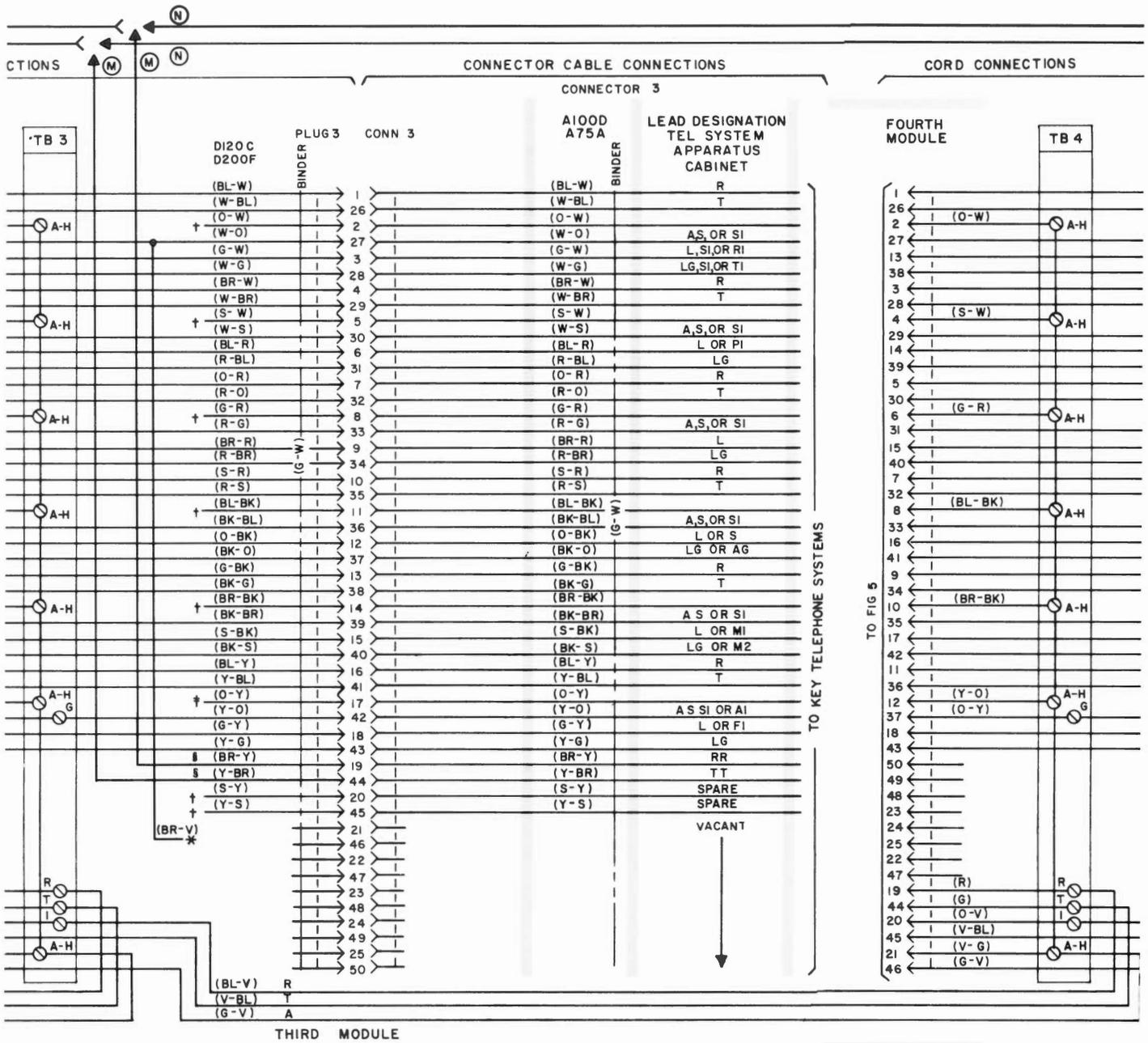
TO KEY TELEPHONE SYSTEMS

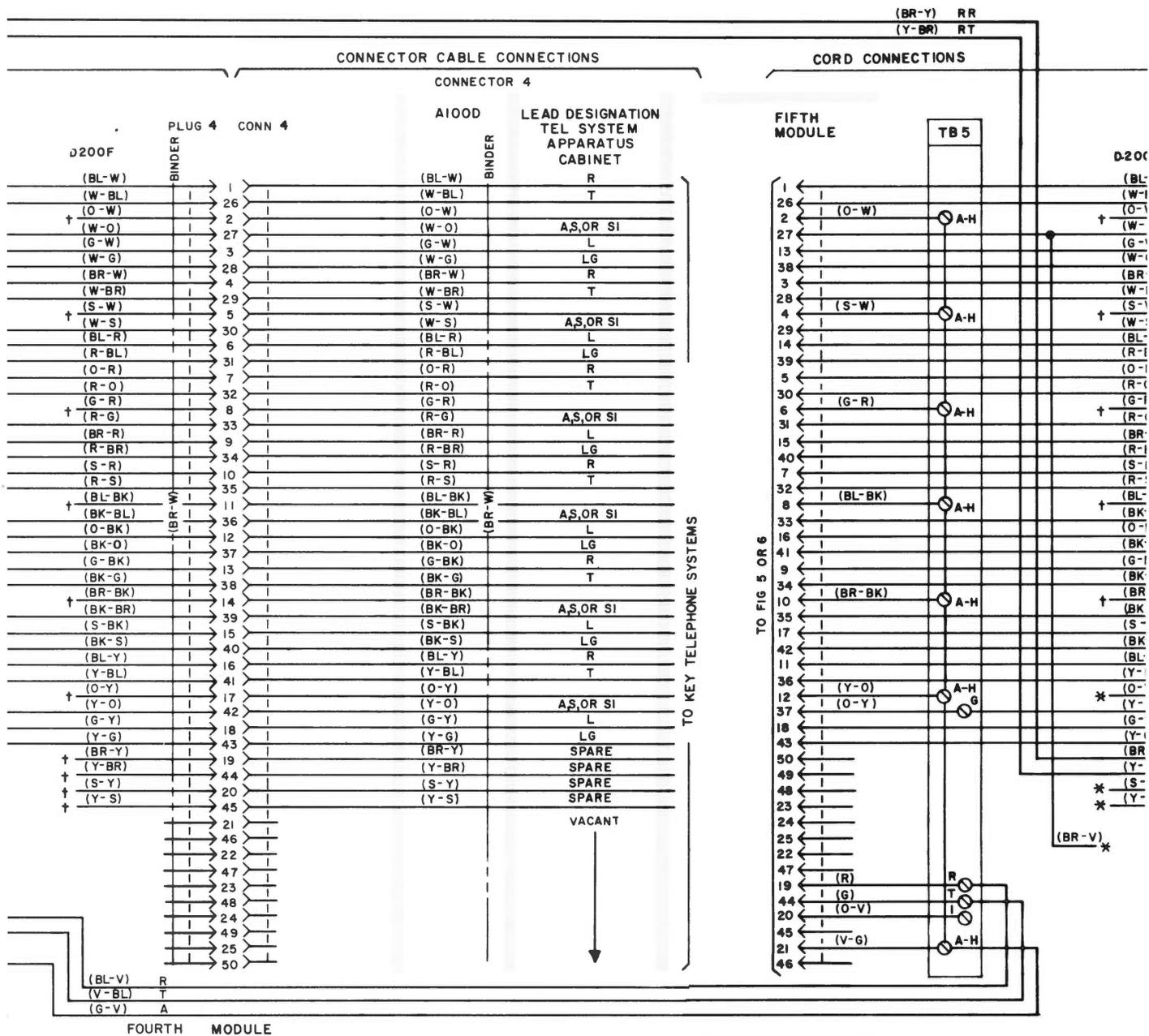
TO FIG 5 OR 6

OR ADD-ON CONFERENCE CONTROL OF THE 6A

KEYS OTHER THAN THE 617A ARE PROVIDED, CONNECT ASSOCIATED WITH THE CONVERTED PICKUP KEYS TO PLUG BLOCK 6. IF ADDITIONAL TERMINALS ARE REQUIRED, EQUIVALENT, BETWEEN THE C OR S AND SG TERMINALS ON

FOR PRIVATE AND INTERCOMMUNICATING LINES WITH WIRELESS PER TELEPHONE SET, AND WHERE THE 617A KEY IS USED, CONNECT C TERMINALS OF RESPECTIVE 6-BUTTON KEY UNITS TO THE 617A KEY FEATURE.





TO FIG 5 OR 6

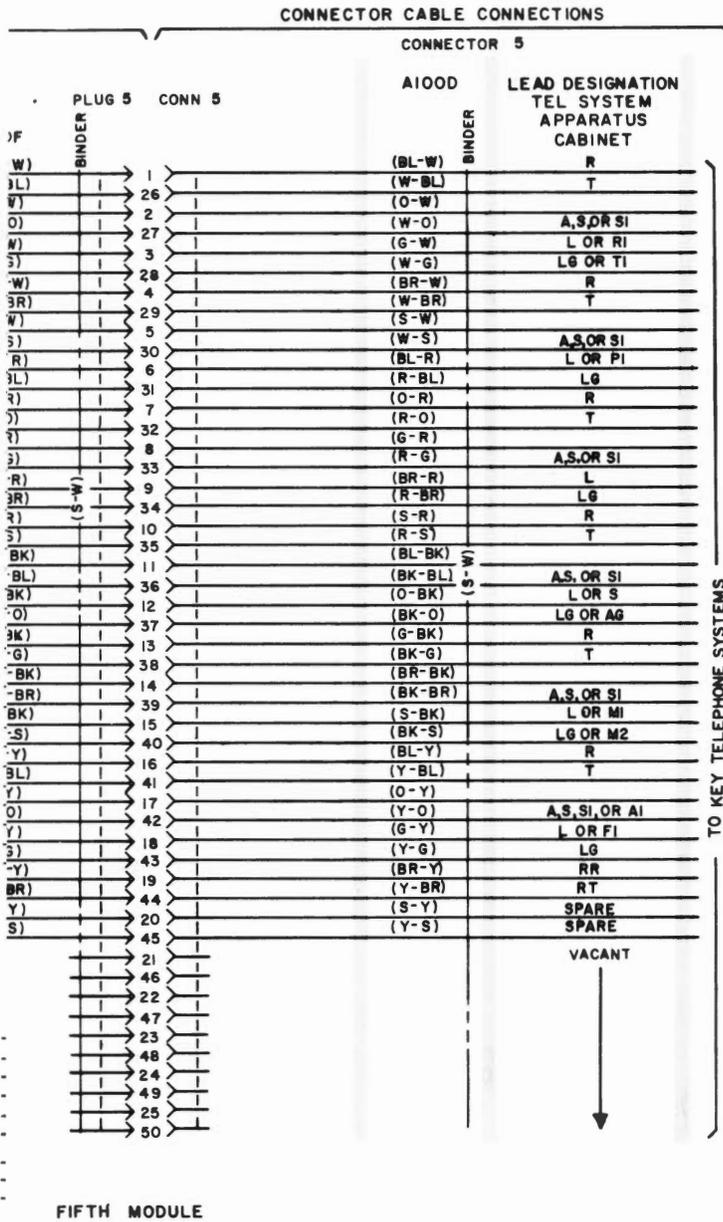


Fig. 8 — Card and Cable Connections for 608- and 618-Type Telephone Sets