

SERVICE

1634- AND 1635-TYPE TELEPHONE SETS

1. GENERAL

1.01 This section contains connection and maintenance information for 18- and 30-button telephone sets equipped with 10-button TOUCH-TONE[®] dials and used with station line concentrators.

1.02 The 1634- and 1635-type telephone sets are rated MD.

1.03 Connection information for these sets was formerly contained in Section 502-634-411 which is hereby canceled.

2. CONNECTIONS

2.01 See SD-69498-01 (key telephone systems, 6A, 1A1, and 1A2, station line concentrator) and appropriate sections in Division 518 for connections to station line concentrator using 235B or 236B key telephone units.

2.02 A 235B KTU is associated with each 1634-type (MD) telephone set and a 236B KTU with each 1635-type (MD) telephone set. Because of the single common talking and control lead pattern in these sets, a line concentrator KTU must be associated with each telephone set installed and cannot be shared, even on a bridged station basis.

2.03 Connections for the station busy lamp feature are provided on the 235- or 236-type KTU. Refer to the section on station line concentrators in Division 518 for connection information.

2.04 A 599B or 657B key may be used in the first key position to provide ringer or line cutoff (Fig. 2 and 3). When other uses are required, they must be provided for by means of an auxiliary relay separately mounted and controlled by the turn key contacts since there are insufficient mounting cord conductors to permit full switching at the key.

2.05 Because of insufficient leads from the first module plug for use with a 599H key, the supplemental hold feature cannot be used in these sets.

2.06 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 wiring changes as shown in Table B. When converting a key for signaling, place a P-11E977 insulating detail over the 2 key contacts adjacent to key plunger.

TABLE A

P-90D197 POLARITY GUARD CONNECTIONS

LEAD	COLOR	REMOVE FROM	CONNECT TO
Line Switch	(W)	C*	S†
Dial	(G-W)‡		
		(BK)	RR*
Polarity Guard	(W)		C*
	(G)		RR*

* Network terminal.

† Polarity guard terminal.

‡ 25Y3 dial only.

Notes:

1. Polarity guards shall be installed only when specified by local instructions for end-to-end signaling when battery and ground reversals may be encountered.
2. The polarity guard is located to the right and rear of the TOUCH-TONE dial.

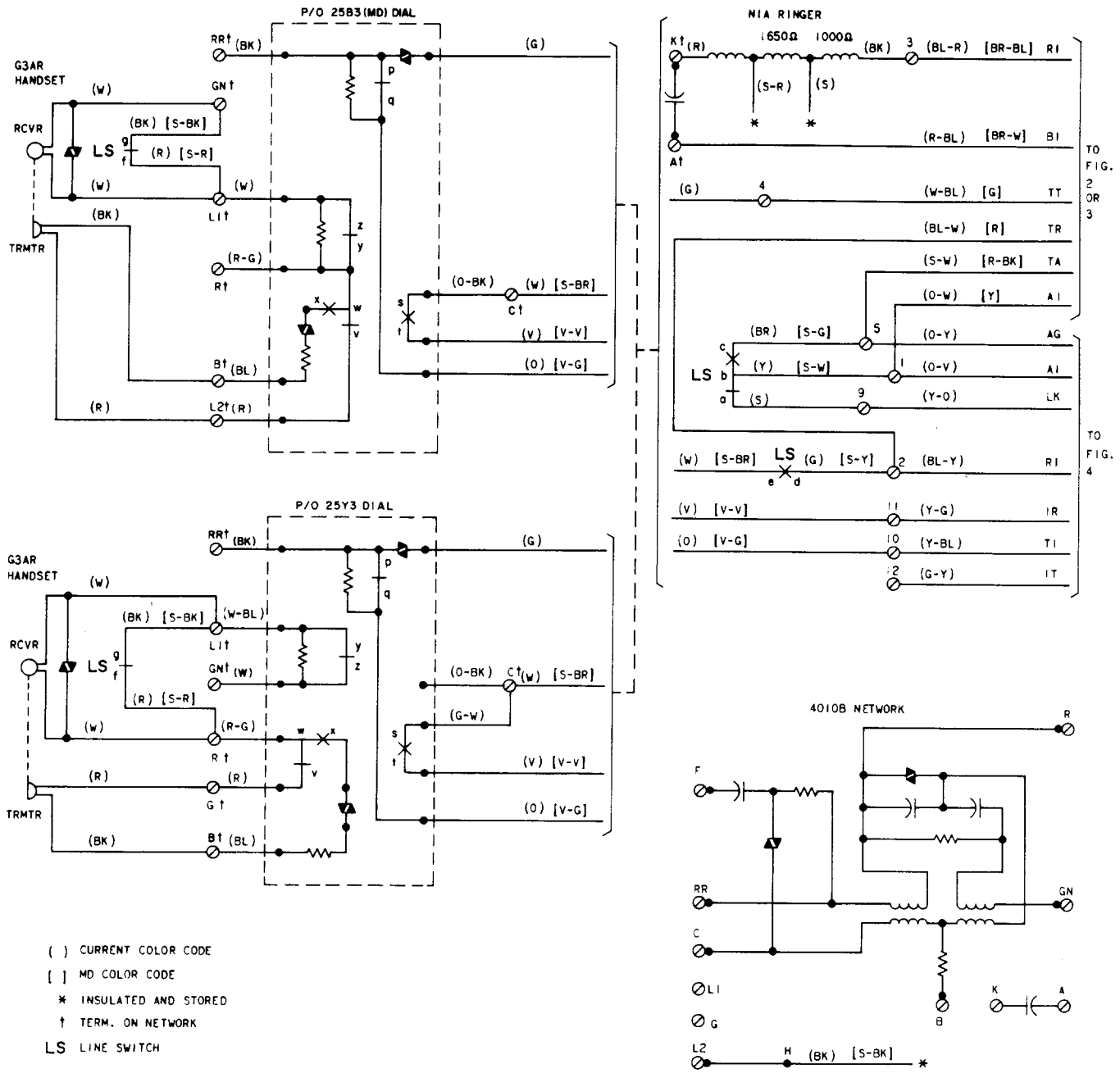


Fig. 1—1634- and 1635-Type (MD) Telephone Set, Connections

TABLE B — FEATURE CONVERSION OF TELEPHONE SETS

KEY POSITION		SERVICE FEATURE OPTIONS								LINE PICKUP
1634 TEL SET	1635 TEL SET	BUZZER SIGNALING		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. INSULATE AND STORE.	CONNECT STORED SPADE-TIPPED LEAD INDICATED TO TERM. PB OF TB VI.	DISCONNECT SPADE-TIPPED LEAD INDICATED FROM ASSOC TB. INSULATE AND STORE.	CONNECT STORED SPADE-TIPPED LEAD INDICATED TO TERM. A OR 1A OF TB VI.	DISCONNECT SPADE-TIPPED LEAD INDICATED FROM ASSOC TB. INSULATE 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	1	BL	R-BR	BL	R-BR	BL	R-BR	BL	R-BR	Factory equipped and wired
2	2	O	R-S	O	R-S	O	R-S	O	R-S	
3	3	G	BK-BL	G	BK-BL	G	BK-BL	G	BK-BL	
4	4	BR	BK-O	BR	BK-O	BR	BK-O	BR	BK-O	
5	5	S	BK-G	S	BK-G	S	BK-G	S	BK-G	
6	6	1635—Connect W to term. SG of TB VI. Connect one of two spares (S-BK or BK-S) from Plug 2 to term. 6 of TBI.		1635—Connect W to term. PB of TB VI. Connect one of two spares (S-BK or BK-S) from Plug 2 to term. 6 of TBI.		1635—Connect W to term. 1A of TB VI. Connect one of two spares (S-BK or BK-S) from Plug 2 to term. 6 of TBI.		1635—Connect W to term. SG of TB VI. Connect one of two spares (S-BK or BK-S) from Plug 2 to term. 6 of TBI. Connect G-R to avail. lamp grd.		Replace 599A or 657A key with 598A or 656A key. Connect G-R to avail. lamp grd. Connect W-O to term. A or 1A of TBVI.
7	7	BL	BK-BR	BL	BK-BR	BL	BK-BR	BL	BK-BR	Factory equipped and wired
8	8	O	BK-S	O	BK-S	O	BK-S	O	BK-S	
9	9	G	Y-BL	G	Y-BL	G	Y-BL	G	Y-BL	
10	10	BR	Y-O	BR	Y-O	BR	Y-O	BR	Y-O	
11	11	S	Y-G	S	Y-G	S	Y-G	S	Y-G	
12	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	R-BL	
	19	BL	R-O	BL	R-O	BL	R-O	BL	R-O	
	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	
13	25	BL	Y-S	BL	Y-S	BL	Y-S	BL	Y-S	
14	26	O	V-BL	O	V-BL	O	V-BL	O	V-BL	
15	27	G	V-O	G	V-O	G	V-O	G	V-O	
16	28	BR	V-G	BR	V-G	BR	V-G	BR	V-G	
17	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	
18		W	V-S	W	V-S	W	V-S	W	V-S	Connect R-BL to avail. lamp grd.

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NOTES FOR FIG. 2 AND 3:

1. WHEN 657A, 599A OR 657B, 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 656A OR 598A KEY IS USED IN FIRST MODULE, INDICATED LEAD IS CONNECTED TO GROUND ON TERMINAL 5 OF TB1.
2. WHEN 656A OR 598A KEY IS USED IN FIRST MODULE, INDICATED LEAD IS CONNECTED TO TERMINAL A (1634 SET) AND TERMINAL 1A (1635 SET) OF TBVI.
3. WHEN 656A OR 598A KEY IS USED IN THIRD MODULE OF 1634 SET, INDICATED LEAD IS CONNECTED TO TERMINAL 5 OF TB3.
4. TO CONVERT A PICKUP KEY FROM LOCKING TO NONLOCKING THE CONVERSIONS SHOWN IN TABLE B MUST BE FOLLOWED. A P-11E977 INSULATING DETAIL MUST BE PLACED OVER THE TWO KEY CONTACTS ADJACENT TO THE KEY PLUNGER. REMOVE THE SCREW DETAIL P-10E837 ENTIRELY FROM THE PLUNGER AT THE KEY POSITION TO BE CONVERTED.
5. CUTOFF OF THE INTERNAL RINGER CAN BE PROVIDED USING THE 657B OR 599B KEY IN FIRST MODULE. TRANSFER B1 (R-BL) [BR-W] LEAD FROM TERMINAL A OF TERMINAL BOARD (TEL. SET) TO TERMINAL 6 OF TB1. TRANSFER (R) [S-BK] LEAD FROM TERMINAL 5 OF TB1 TO TERMINAL 3 VACATED B1 LEAD.
6. WHEN 657B OR 599B KEY IS USED IN FIRST MODULE TO PROVIDE CUTOFF, SWITCHING, OR TRANSFER FEATURES, TRANSFER (Y-BR) [Y-BK] LEAD FROM TERMINAL 6 OF TB1 TO TERMINAL SG OF TBVI. THESE SERVICE FEATURES ARE PROVIDED BY AN AUXILIARY RELAY (229B KTU OR EQUIVALENT) SEPARATELY MOUNTED AND CONTROLLED BY THE TURN KEY CONTACTS THROUGH THE LG5, C, S, S1 LEAD.
7. CONTACTS OF TURN KEY CONNECTED TO PINS 9 AND 11 MUST BE ISOLATED FROM EACH OTHER WITH INSULATING DETAIL P-13E443 (FURNISHED WITH 657B OR 599B KEY) TO PREVENT INTERFERENCE WITH WORKING CIRCUITS.
8. THE TURN KEY LAMP CAN BE ILLUMINATED IN ACCORDANCE WITH OR INDEPENDENT OF TURN KEY OPERATION.
9. WHEN THE 617A KEY IS REQUIRED AS A DUAL PURPOSE KEY, THE BRASS STRAP BETWEEN THE S1 AND SG TERMINALS OF THE KEY MAY BE REMOVED. USE M1W CORD OR EQUIVALENT TO CONNECT S1 TERMINAL OF 617A TO A DISSIMILAR GROUND OR A NONGROUNDED CIRCUIT.
10. CORDS MANUFACTURED BEFORE APRIL 1968 HAVE SOME LEADS SOLDERED TO THE TB.
11. WHEN 661- OR 667-TYPE TRANSMITTER IS USED IN THIRD MODULE OF 1634-SETS, REMOVE INDICATED LEAD AND INSULATE.
12. WHEN SPEAKERPHONE CONTROL UNIT IS LOCATED NEAR TELEPHONE SET, A 148A (MD) OR 148B ADAPTER MAY BE INSERTED BETWEEN CONNECTOR 1 AND PLUG 1 OF THE 1634- OR 1635-TYPE TELEPHONE SET.

* LEADS ARE SPADE TIPPED, INSULATED, AND STORED.

† NOT REQUIRED FOR 3-TYPE SPEAKERPHONE SYSTEM.

‡ IF CONNECTED TO 148-TYPE ADAPTER. INSULATE AND STORE THESE LEADS AT TERMINAL.

() CURRENT COLOR CODE.

[] MD COLOR CODE.

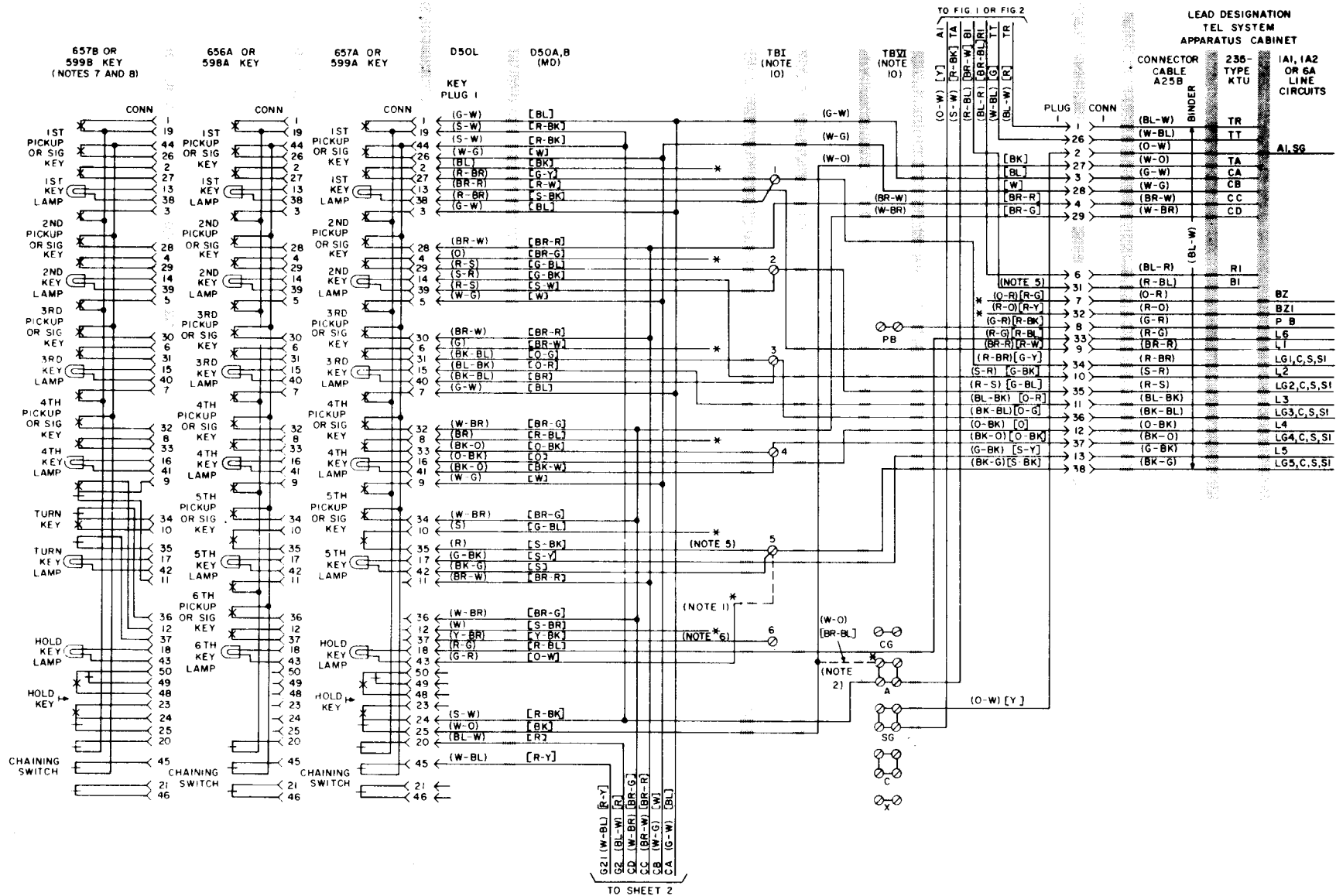


Fig. 2—Module Arrangements and Cord and Cable Connections for 1634-Type (MD) Telephone Sets (Sheet 1 of 3)

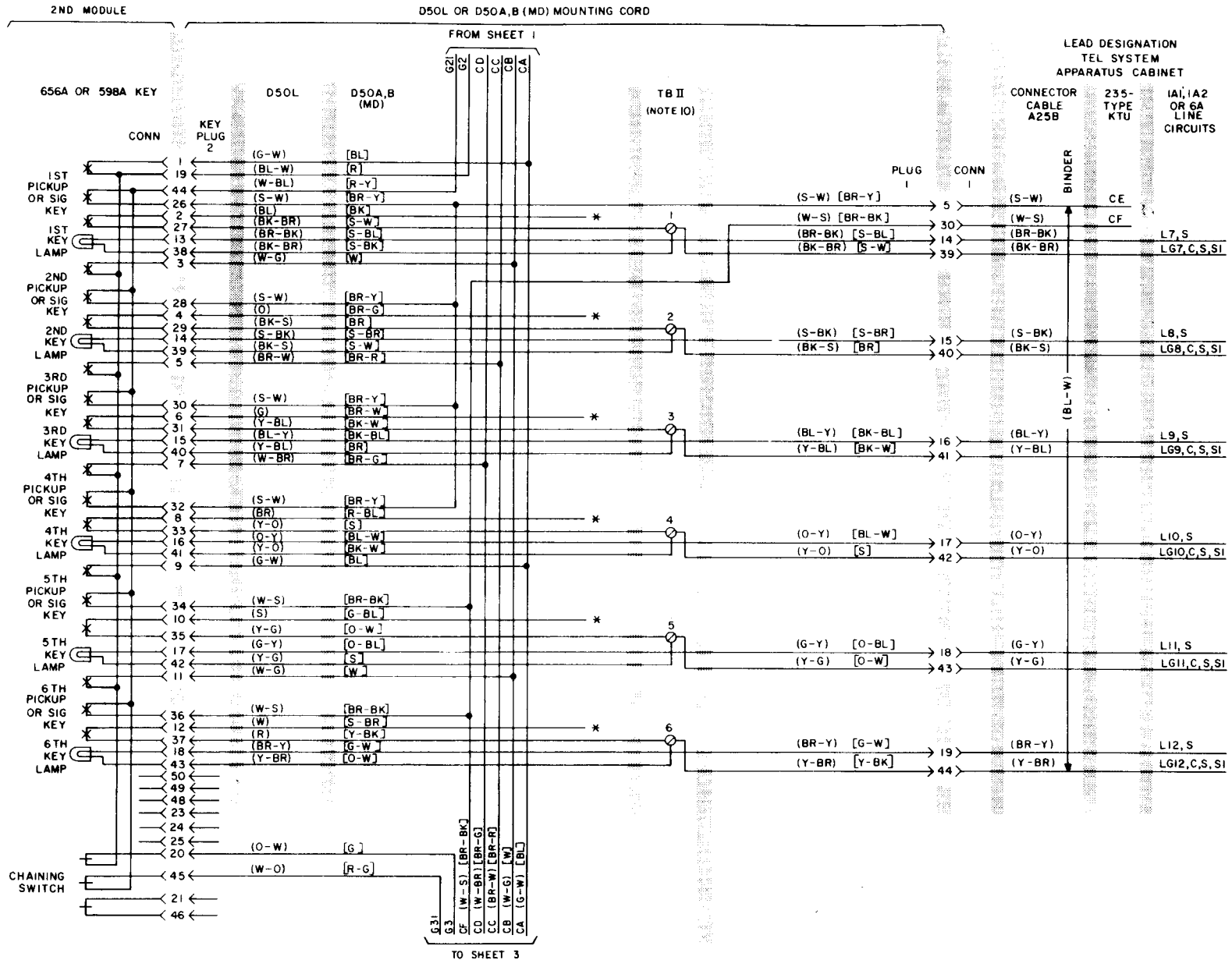


Fig. 2—Module Arrangements and Cord and Cable Connections for 1634-Type (MD) Telephone Sets (Sheet 2 of 3)

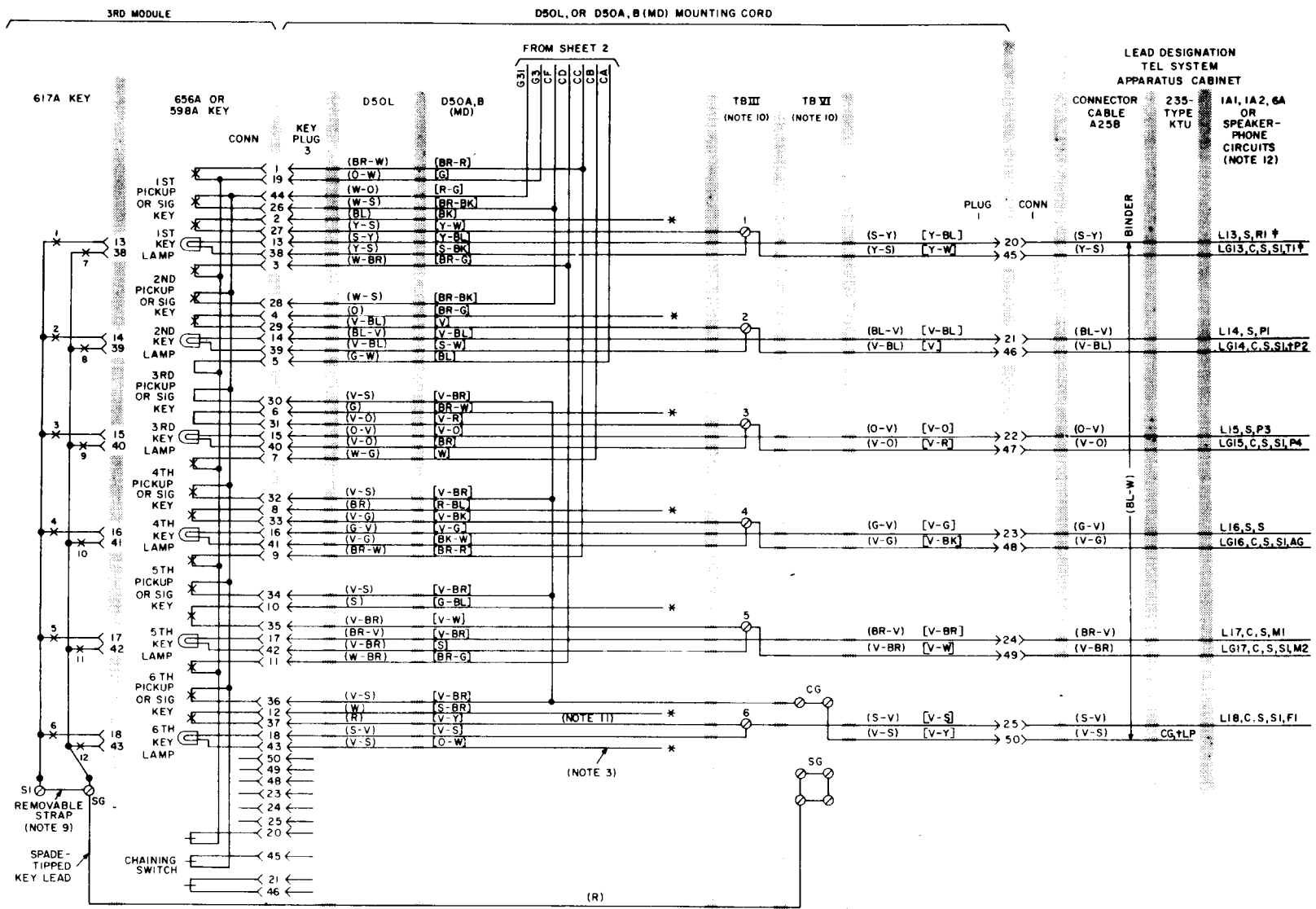


Fig. 2—Module Arrangements and Cord and Cable Connections for 1634-Type (MD) Telephone Sets (Sheet 3 of 3)

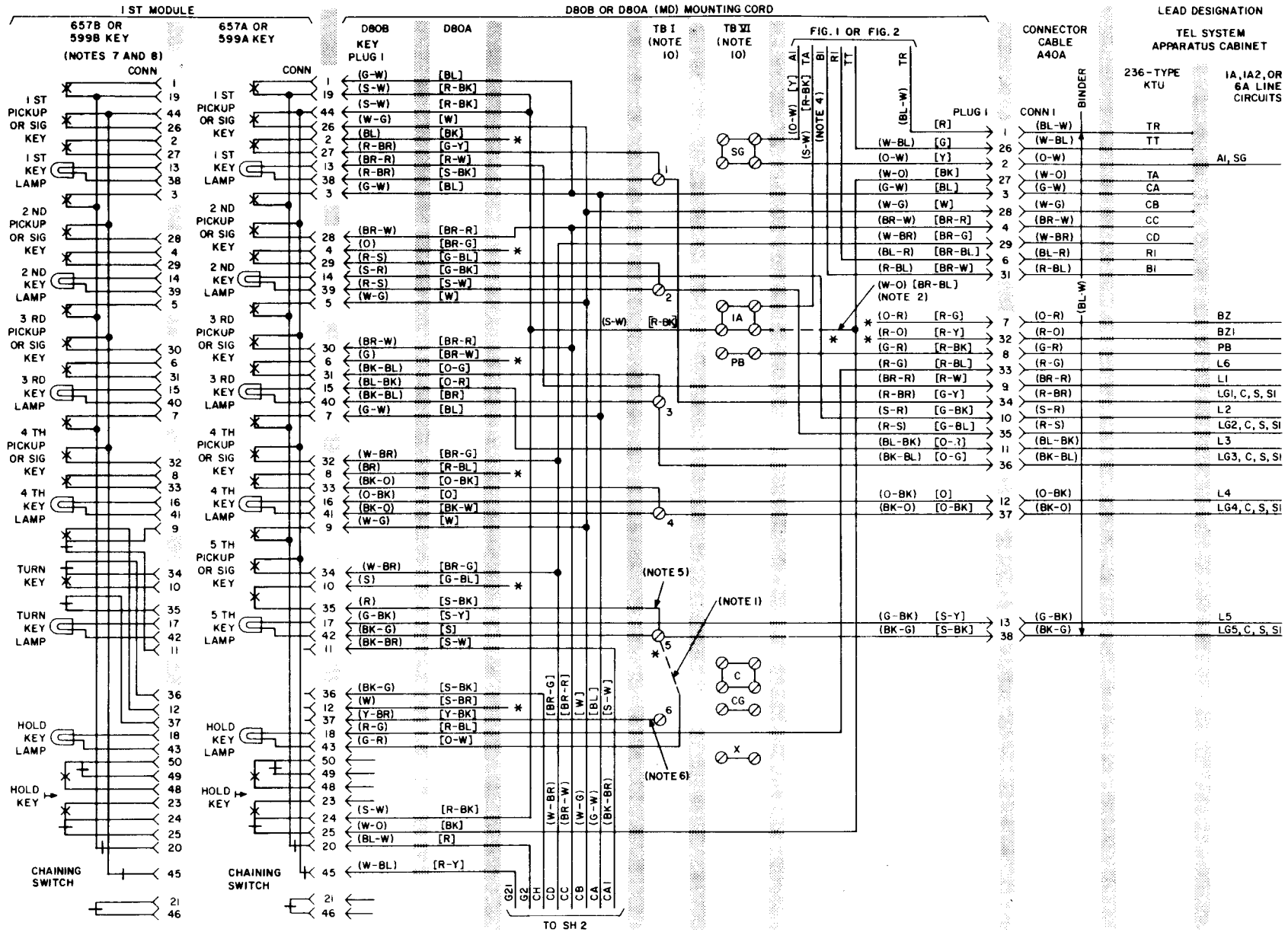


Fig. 3—Module Arrangements and Cord and Cable Connections for 1635-Type (MD) Telephone Sets (Sheet 1 of 5)

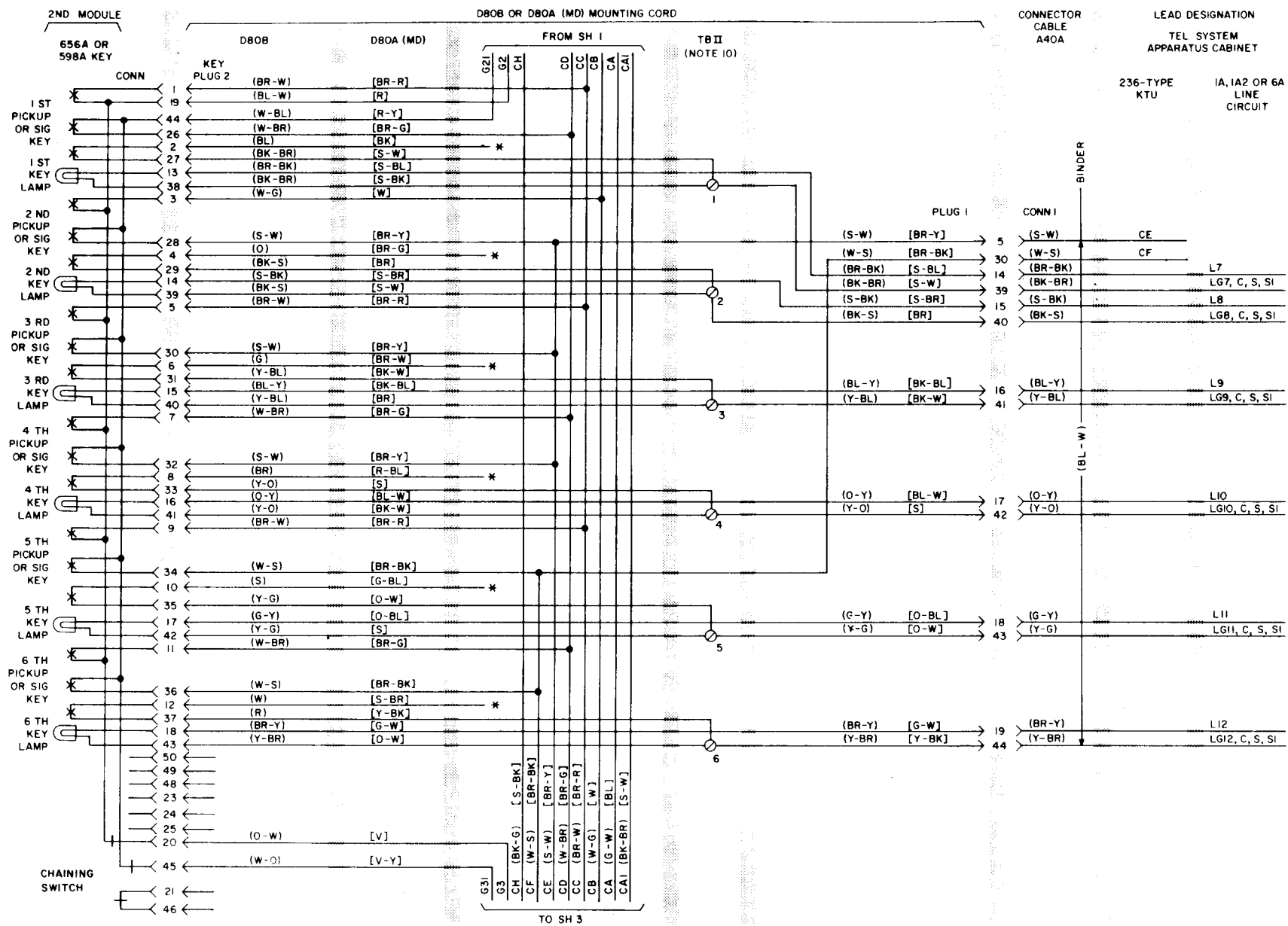


Fig. 3—Module Arrangements and Cord and Cable Connections for 1635-Type (MD) Telephone Sets (Sheet 2 of 5)

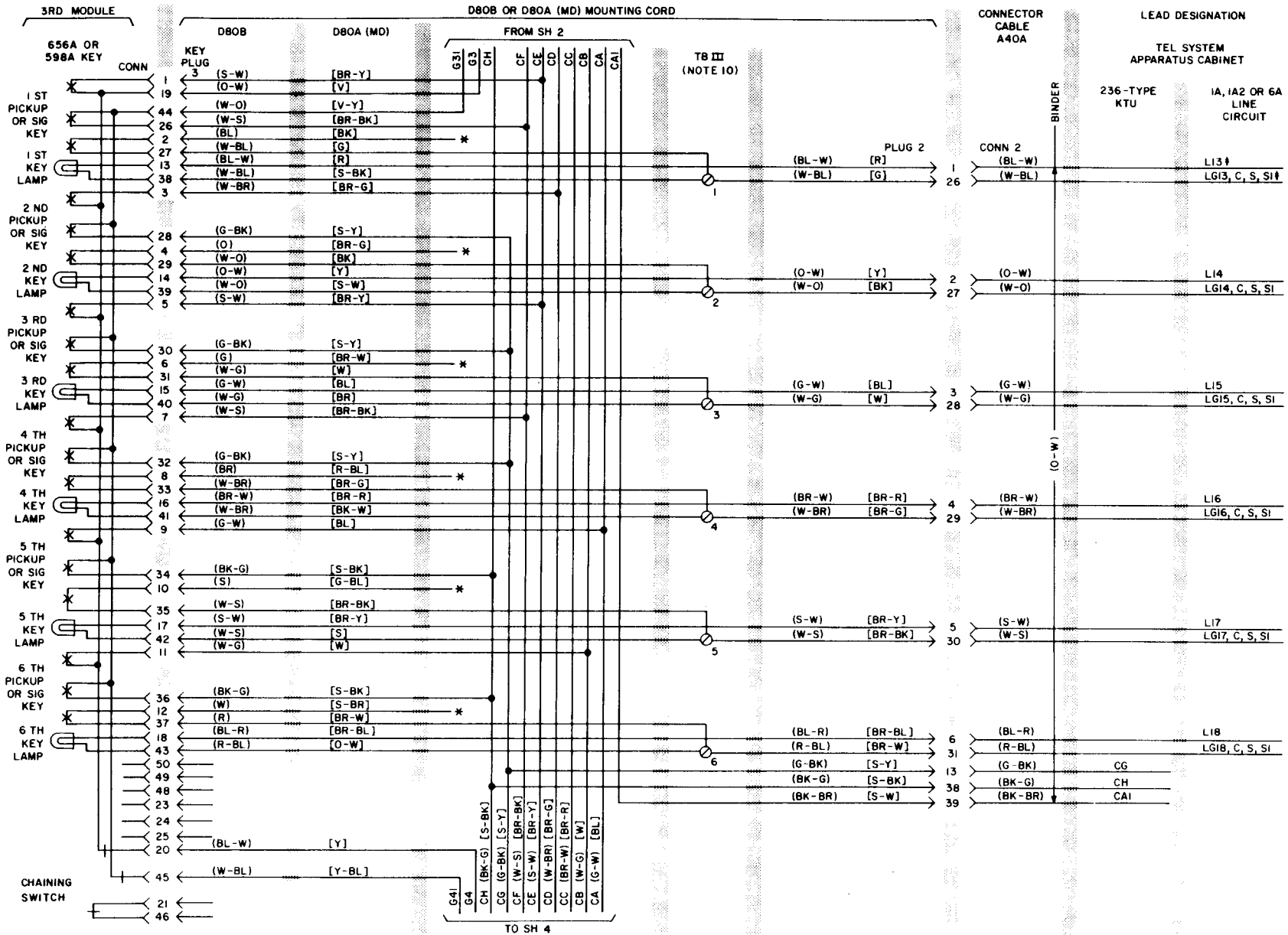


Fig. 3—Module Arrangements and Cord and Cable Connections for 1635-Type (MD) Telephone Sets (Sheet 3 of 5)

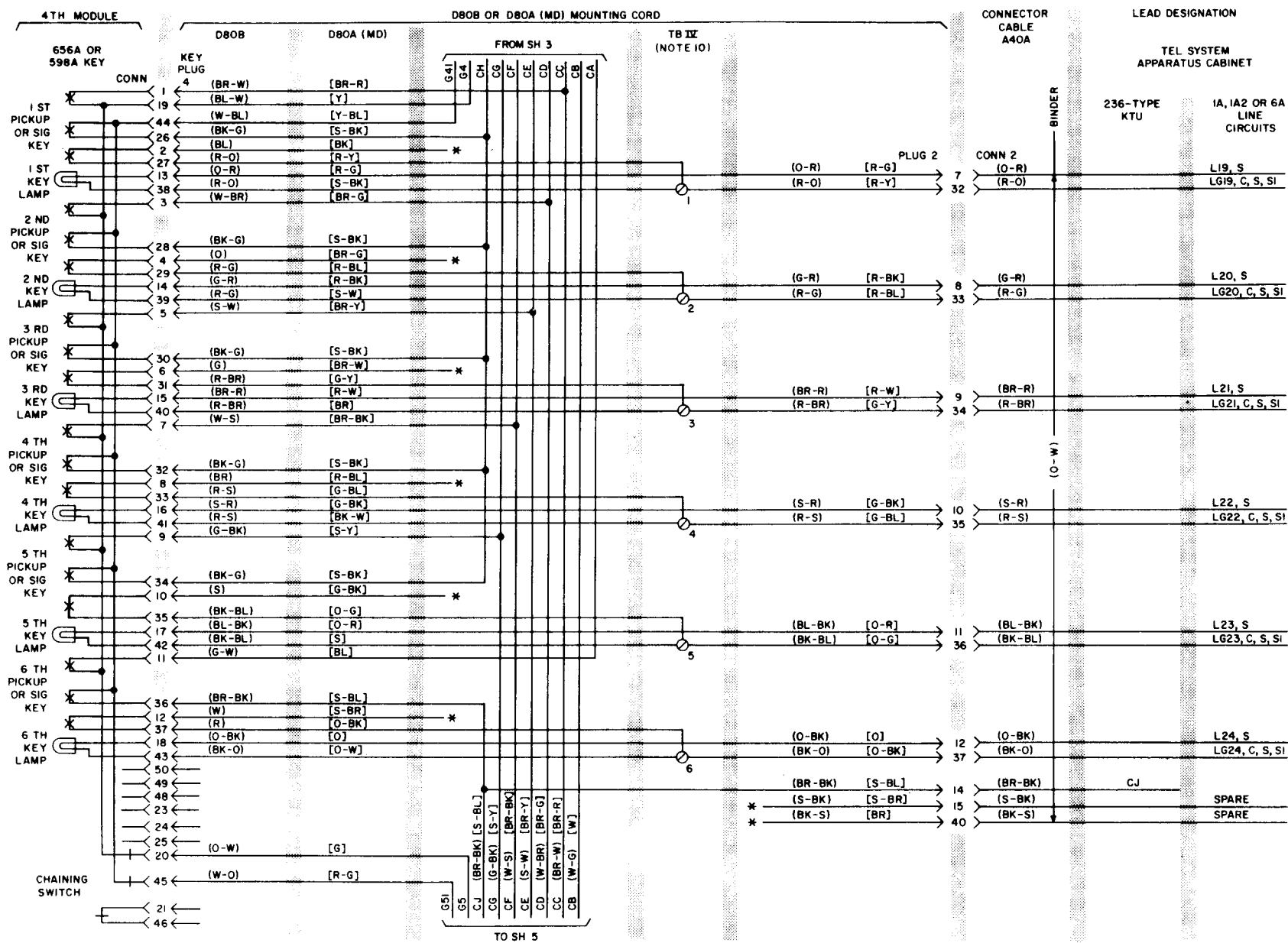


Fig. 3—Module Arrangements and Cord and Cable Connections for 1635-Type (MD) Telephone Sets (Sheet 4 of 5)

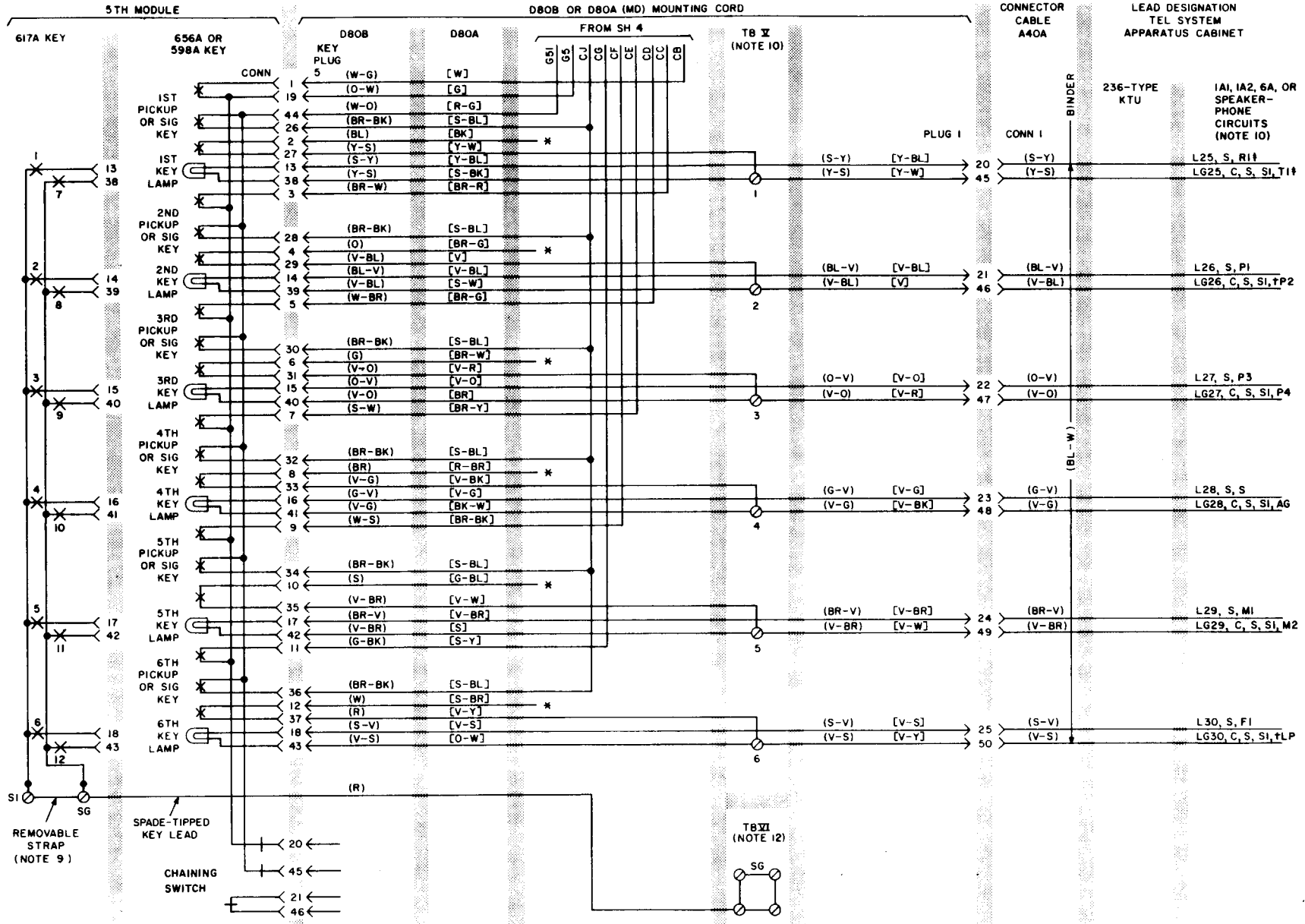
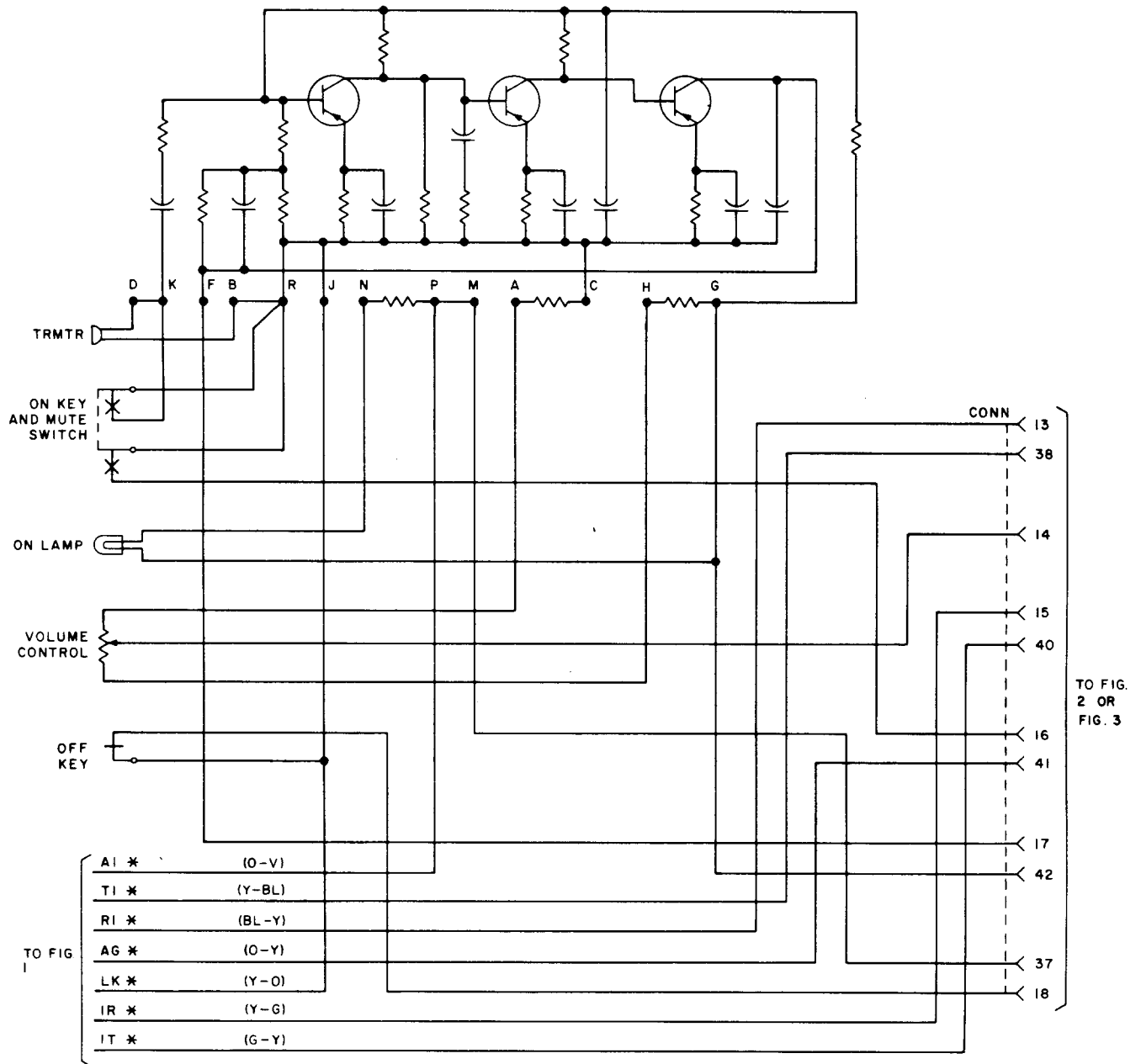


Fig. 3—Module Arrangements and Cord and Cable Connections for 1635-Type (MD) Telephone Sets (Sheet 5 of 5)



* LEADS ARE SPADE TIPPED AND OF SUFFICIENT LENGTH TO REACH NETWORK OR DIAL TERMINAL WHEN SPEAKERPHONE MODULE IS IN THE FIFTH KEY POSITION.

Fig. 4—667B Transmitter

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3. MAINTENANCE

3.01 Maintenance of handset, dials, ringers, and modular keys is outlined in sections covering these components.

3.02 Refer to the appropriate Reference section in Division 502 for replaceable components.

3.03 Improper operation of 667-type transmitters may be caused by interference between the printed circuit board and terminal screw of TBVI of the cord assembly. This condition can be corrected by replacing P-180801 5/16-inch machine screw with P-180800 1/4-inch binder head machine screw.

Note: The longer screws were used in D50B and D80B cord assemblies.

3.04 To eliminate mechanical vibration pickup in the 667-type transmitter install a modified 667B transmitter which includes a 1-inch vinyl sleeve which is to be placed over the pivot bar spring. Order as "Transmitter, 667B modified per D-180196."

3.05 To remove a defective N1A ringer from current production sets complete the following steps:

- (1) Remove housing.
- (2) Loosen dial mounting plate and move to left.
- (3) Disconnect ringer leads.
- (4) Remove 3 ringer mounting screws from underside of baseplate (Fig. 5).

(5) Lift out ringer.

3.06 When an operated pickup key does not remain depressed or release any previously operated key:

- (1) Check that key latch arm is properly inserted in the pivot bar.
- (2) Minor adjustment of the key can be made by loosening the mounting screws and shifting the key within limits of oversized hole provided for the mounting screws before refastening mounting screws.
- (3) If malfunction is related to one key module test key for proper operation.

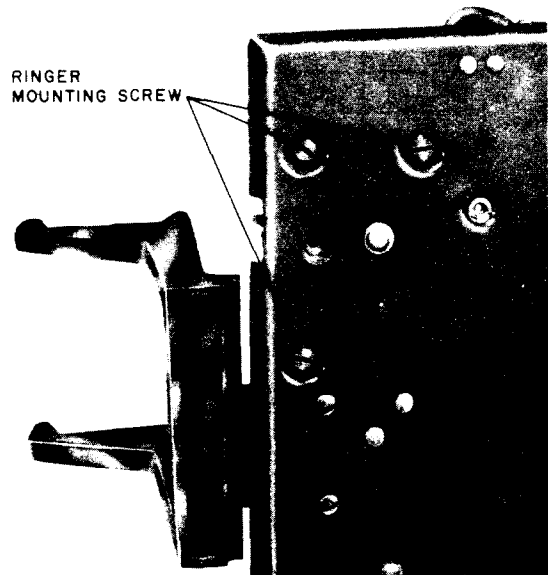


Fig. 5—Location of Mounting Screws for N1A Ringer