

SERVICE

1636- AND 1637-TYPE TELEPHONE SETS

1. GENERAL

1.01 This section contains connection and maintenance information for the 1636- and 1637-type telephone sets. Connection information for these sets was formerly contained in Section 502-636-411 which is hereby canceled.

2. CONNECTIONS

2.01 These sets are factory-wired for use with 1A1, 1A2, or 6A KTS line circuits. They may also be used with 1A KTS by modifying the set as shown in Table B. 1A and 1A1 and 1A2 KTS line circuits may be connected to the same set under the following conditions:

- 1A1 or 1A2 KTS lines must be connected to the first key units, with 1A lines connected to supplementary key units (Table B).
- 1A, 1A1, or 1A2 KTS lines should not be connected to the same 6-line key unit.



Some spade-tipped conductors or mounting cord leads are insulated with tubing which should be cut off with electrician scissors or diagonal pliers. Other conductors are insulated with stiff plastic pockets. Pinch open the mouth to release the spade tips.

2.02 These sets are not intended for use with 3-type speakerphone systems.

2.03 Replacement or substitution of the key in the first module may require wiring changes as shown in the notes for Fig. 2.

2.04 When station busy lamp feature is required with these sets having 1A1 or 1A2 KTS line circuits, a P-90D033 Printed Wiring Board Assembly

must be ordered separately and installed in the 1636- or 1637-type telephone set. With this option, the busy lamp will light whenever a line pickup button is depressed and the handset is off-hook or the headset is plugged into the jack. Install the wiring board assembly as follows:

- (1) Remove set housing.
- (2) Loosen screws on dial mounting plate, move mounting to left and lift out.
- (3) Remove right-hand dial mounting screw.
- (4) Place dial mounting screw through hole in wiring board and replace screw in dial. Components on board should be positioned so as not to interfere with other set components when dial mounting plate is replaced.
- (5) Replace and secure dial mounting plate.
- (6) Connect printed wiring board as shown in Fig. 3.

2.05 Sets equipped with a D120C mounting cord manufactured prior to III 1968 must use circuit per Fig. 5 to provide station busy lamp feature.

2.06 Supplementary hold can be supplied in two configurations (Fig. 4). **Priority Hold** requires a 599H key in the first module. **I Hold** requires a wiring modification of the existing hold key. Refer to Division 518 and SD-69530-01 for detailed information on this feature.

2.07 When a polarity guard is required with these sets, install a P-90D197 Guard Assembly and connect as shown in Table A. Polarity guards should be installed only when authorized by local instructions to prevent battery and ground reversals encountered in end-to-end signaling.

3. MAINTENANCE

3.01 Maintenance of these sets should be limited to the replacement of complements easily obtained in the field.

3.02 Maintenance of individual components of these sets such as keys, ringers, etc, is covered in sections pertaining to that component.

3.03 No maintenance of the TOUCH-TONE® dials should be attempted. If dial is defective, replace dial.

TABLE A

**POLARITY GUARD CONNECTIONS
(P-90D197 GUARD ASSEMBLY)**

LEAD		REMOVE FROM		CONNECT TO		
		NET	TERM. BLOCK	NET	TERM. BLOCK	POLARITY GUARD
Dial	BK	RR				T
Switch Hook	W		7			S
Jacks	BK-S		7			S
Polarity Guard	W G			RR	7	

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

TABLE B

WIRING MODIFICATIONS FOR COMBINING 1A AND 1A1 OR 1A2 KTS LINES

KEY TELEPHONE SYSTEM	MOUNTING CORD LEADS												SET SWITCH HOOK (BR)
	HOLD KEY					CHAINING SWITCH					TEL SET CONTROL		
						18- AND 30-BUTTON SETS			30-BUTTON SETS ONLY				
						1ST KEY	2ND KEY	3RD KEY	4TH KEY	5TH KEY	RING	A1	
	(Y-G)	(G-Y)	(V-O)	(BR-V)	(V-BR)	(V-G)	(V-G)	(V-G)	(V-G)	(V-G)	(BL-V)	(O-V)	
1A1 or 1A2 (shop wiring)	A-H I	A-H I	*	*	*	A-H I	A-H II	A-H III	A-H IV	A-H V	R I	1B VI	5 Note 1
1A1 or 1A2 on 1st key unit; 1A on remaining units.	A-H I	Y VI	*	1† I	R II	(Y) VI	A-H II	A-H III	A-H IV	A-H V	R I	1B VI	5 Note 1
1A1 or 1A2 on 1st and 2nd key units; 1A on remaining key units	A-H I	Y VI	*	1† II	R III	A-H I	Y VI	A-H III	A-H IV	A-H V	R I	1B VI	5 Note 1
1A1 or 1A2 on 1st, 2nd, and 3rd key units; 1A on remaining key units (30-button sets)	A-H I	Y VI	*	1† III	R IV	A-H I	A-H II	(Y) VI	A-H IV	A-H V	R I	1B VI	5 Note 1
1A1 or 1A2 on 1st through 4th key units; 1A on fifth key unit (30-button sets)	A-H I	Y VI	*	1† IV	R V	A-H I	A-H II	A-H III	Y VI	A-H V	R I	1B VI	5 Note 1
1A only	Y VI	A-H I	*	R1 VI	R I	A-H I	A-H II	A-H III	A-H IV	A-H V	R1 VI	SG VI	6

*Insulate and store.

†Disconnect, insulate, and store (BL-Y) chaining switch lead at this terminal.

Notes:

1. See (X), (Y), and (Z) options, Fig. 1 or 2. Terminals referred to are on telephone set terminal board.
2. Roman numerals refer to terminal board number.

TABLE C
PICKUP-SIGNAL KEY CONVERSION (NOTE)

NO. OF PICKUP KEYS	NO. OF PICKUP KEYS CONVERTED TO SIGNAL KEYS			NO. OF PRIVATE AND INTERCOM LINES WITH COM SIG KEYS (PER KEY UNIT)	KEY LEADS AND TERMINALS OF KEY UNITS INVOLVED						
	599A OR 657A	599B OR 657B	598A OR 656A		(O-W)	(S-W)	(G-R)	(BL-BK)	(BR-BK)	SUPL KEY ONLY	
										(Y-O)	(O-Y)
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	SG*	G
4	1		2		A-H	A-H	A-H	A-H	SG*	SG*	G
3	2	1	3		A-H	A-H	A-H	SG*	SG*	SG*	G
2	3	2	4		A-H	A-H	SG*	SG*	SG*	SG*	G
1	4	3	5		A-H	SG*	SG*	SG*	SG*	SG*	G
			6		SG*	SG*	SG*	SG*	SG*	SG*	G
3			1	2	A-H	A-H	A-H	C*	C*	A-H	C*
2			1	3	A-H	A-H	C*	C*	C*	A-H	C*
1			1	4	A-H	C*	C*	C*	C*	A-H	C*
			1	5	C*	C*	C*	C*	C*	A-H	C*

* Terminal on TBVI.

Note: Table E shows conversion for one 6-button key unit. Convert buttons on right-hand unit first (module 3 or 5). When more than six buttons are used for common signaling, move spade-tipped leads of the additional buttons from terminal A-H of unit involved to terminal C. If additional terminals are required, use X or Y if idle and strap to C.

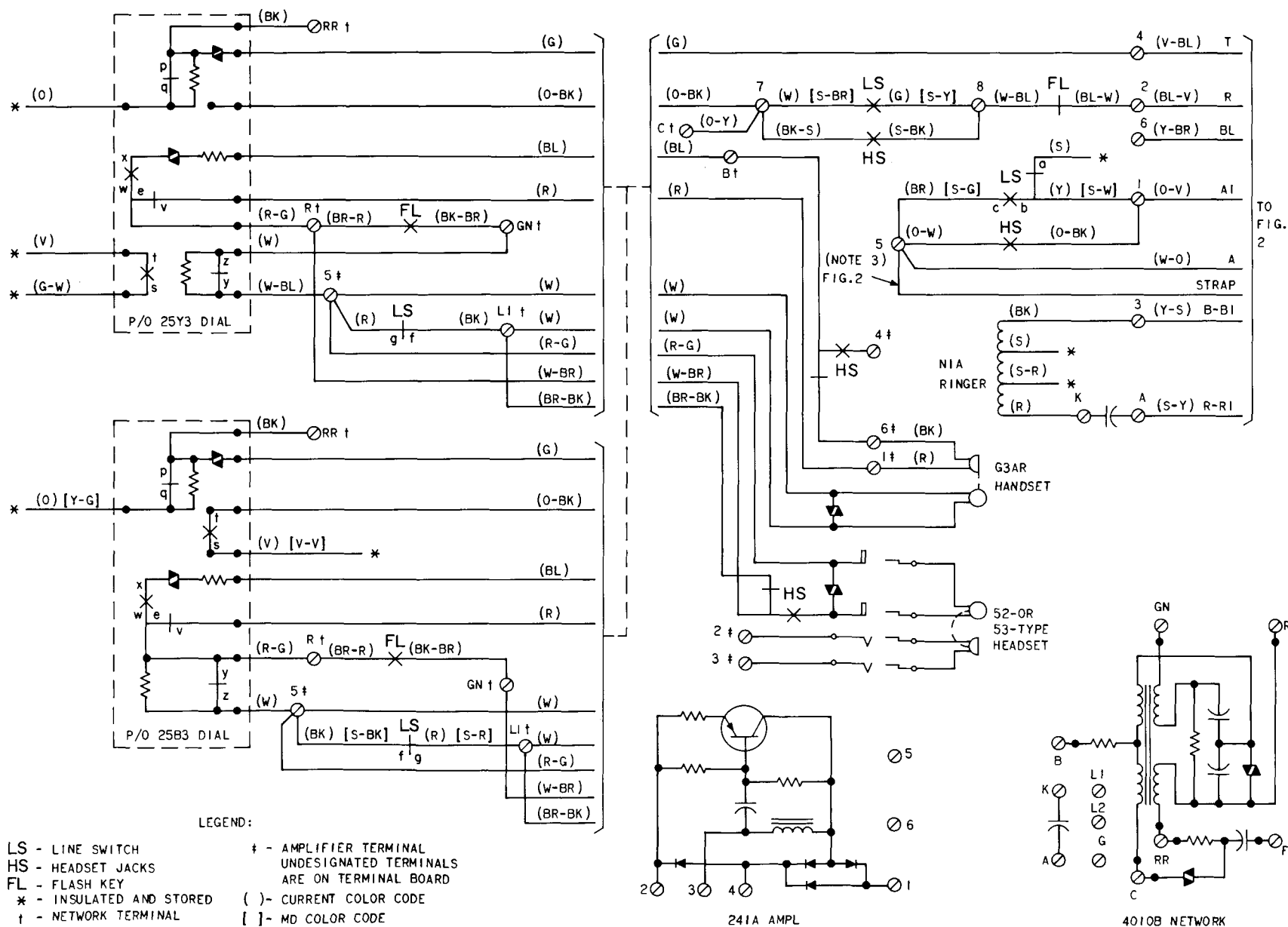


Fig. 1—1636- and 1637-Type Telephone Set, Connections

Notes for Fig. 2:

1. When necessary to install a 599A or 599B key in the 1st module, the following leads must be insulated and stored:

- Mounting cord leads — (G-Y), (Y-G)
- Module plug leads — (Y-O)
- Plug straps — (Y-BL), (BL-Y)

In addition, for a 599B key, insulate and store the (BR-BK) module plug lead.

2. When installing 598A key in 1st module:

- Place strap from terminal 5 of telephone set terminal block to A-H of TBI or use stored (V-O) strap.
- Connect (G-Y) (Y-G) to (S-V) (V-S) respectively, using spare terminals or D-161488 connectors.
- Connect (Y-O) and (BR-BK) to A-H of TBI.

3. When providing station busy lamp with 1A1 or 1A2 KTS using P-90D033 Printed Wiring Board, connect A or H lead (G-V) from last module to terminal X of TBVI. Insulate and store (BL-V) and (V-BL) leads from last module. To provide busy lamp with 1A KTS, move (O-V) from 1B to SG of TBVI.
4. T, R, A, and L leads of lines wired for supplementary hold feature must be routed per SD-69530-01 rather than directly to line circuits.
5. The PB lead (BR-Y) is used for add-on conference control of the 6A KTS.
6. These leads are insulated and stored in the second and last modules and dead-ended in the third and fourth modules.
7. In the D120C mounting cord the A or H lead (G-V) in the third module is missing from cords manufactured prior to III 1968.

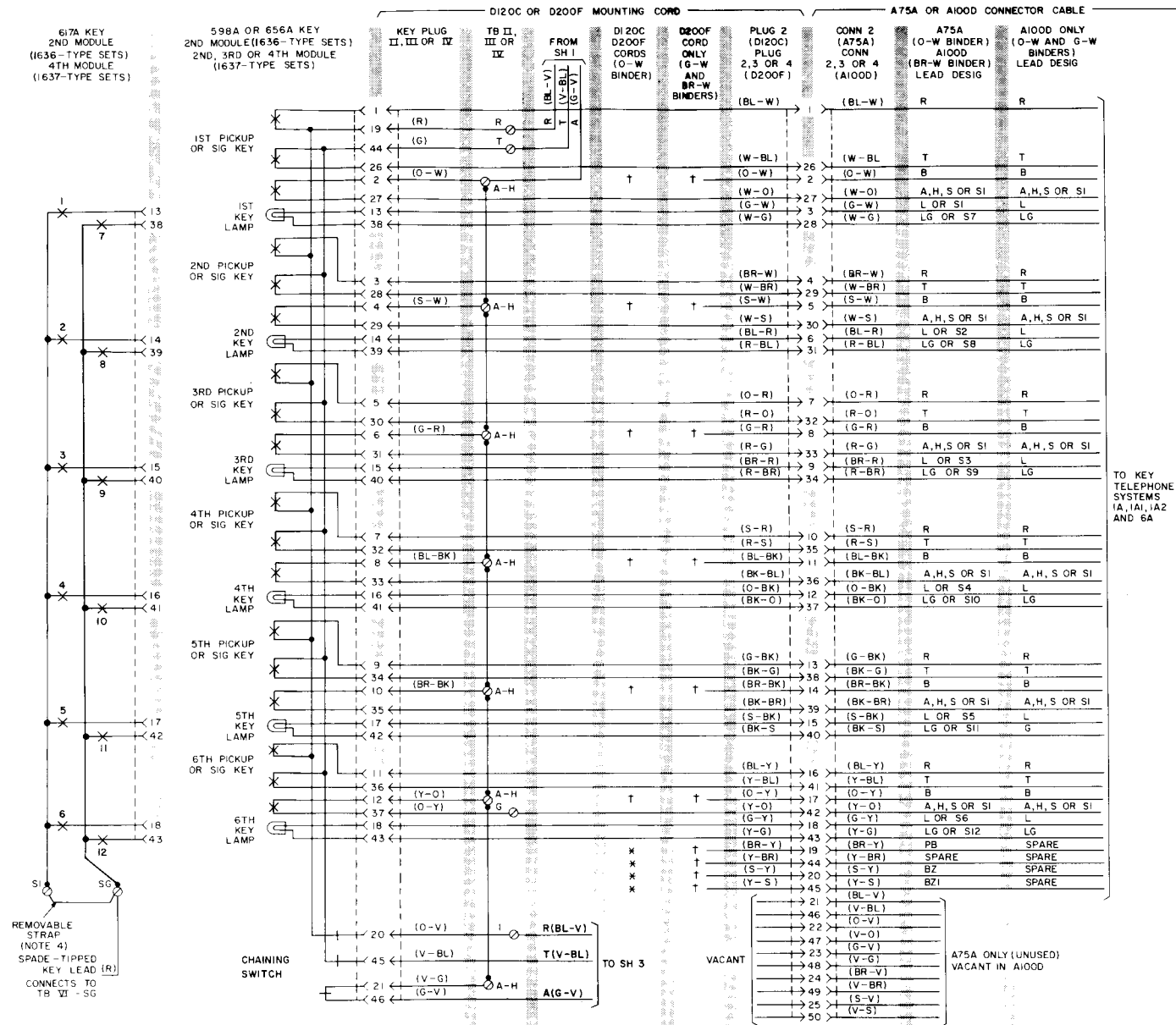


Fig. 2—Module Arrangements and Cord and Cable Connections (Sheet 2 of 3)

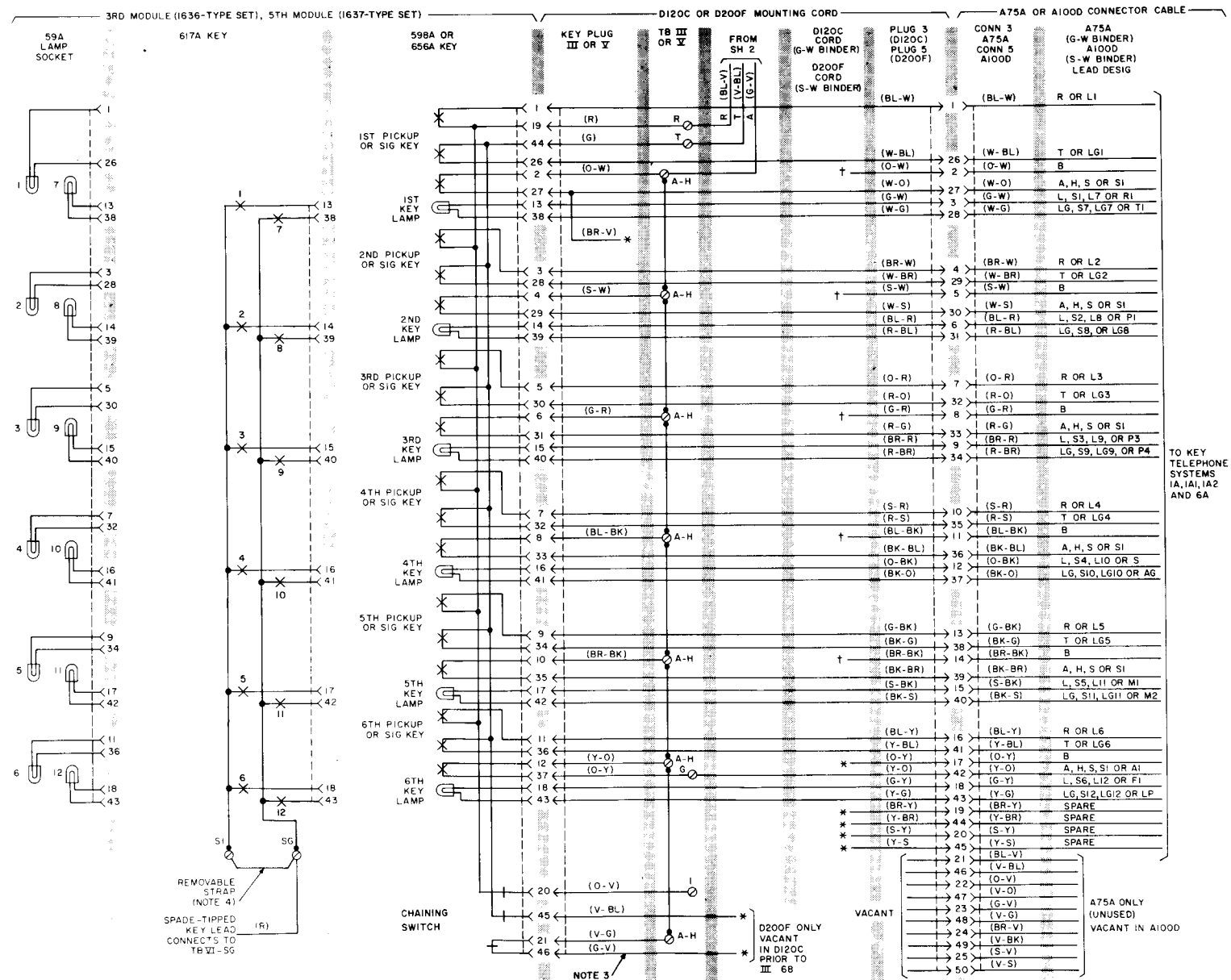


Fig. 2—Module Arrangments and Cord and Cable Connections (Sheet 3 of 3)

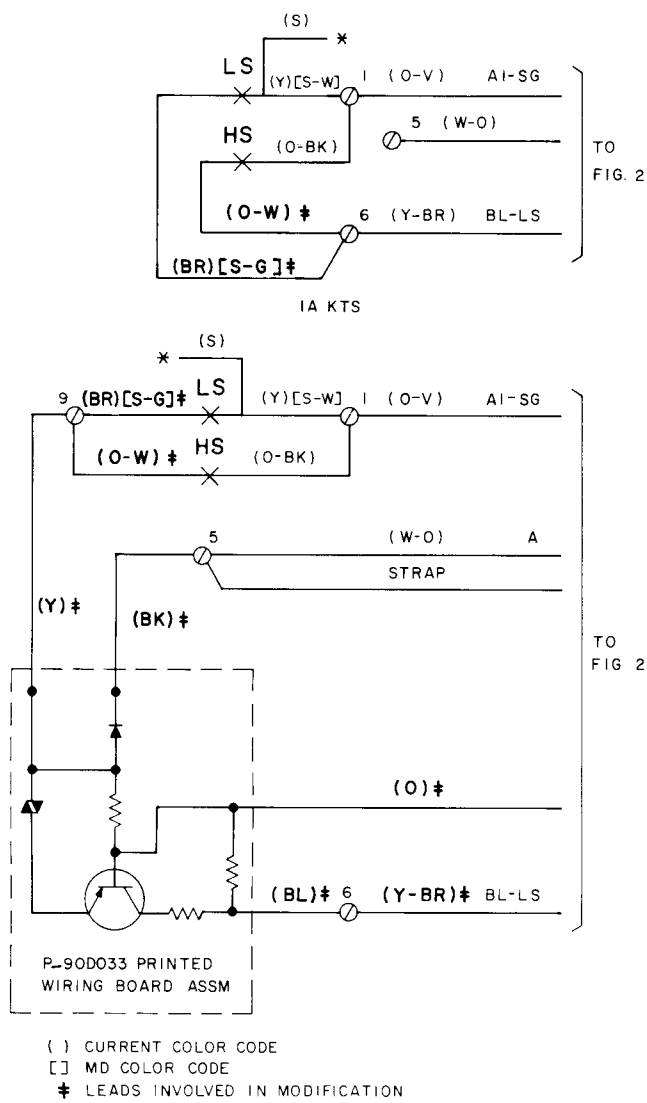


Fig. 3—Station Busy Lamp Modification 1A1-1A2 KTS

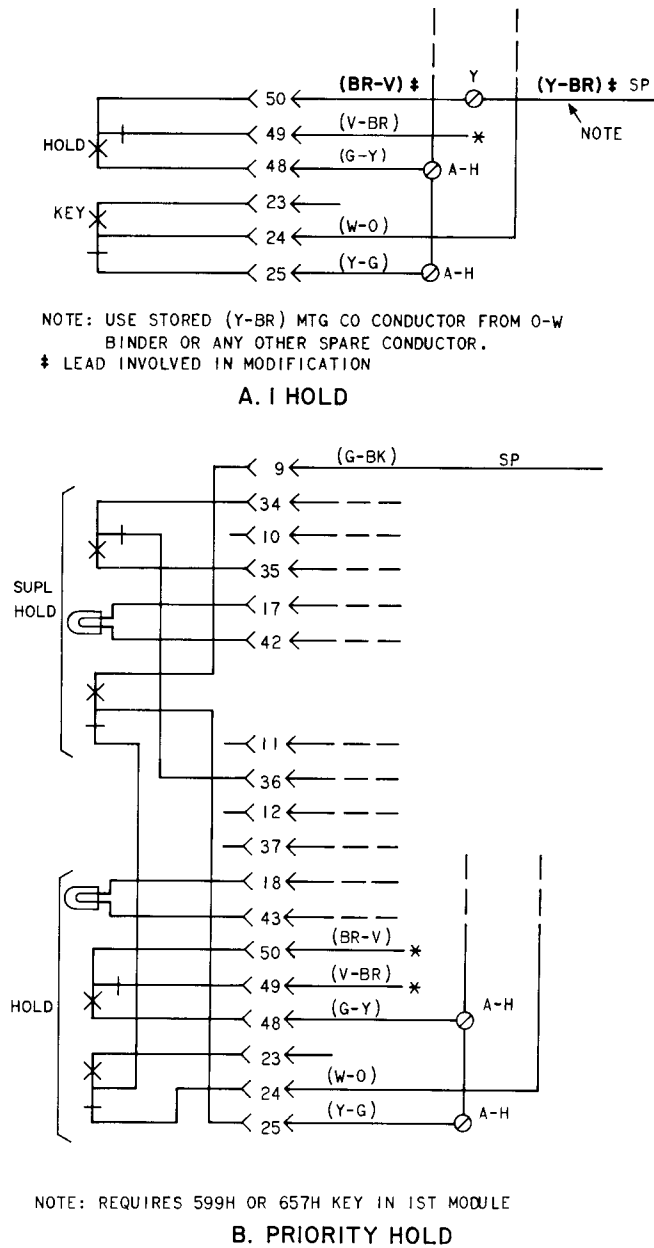


Fig. 4—Supplementary Hold Arrangements

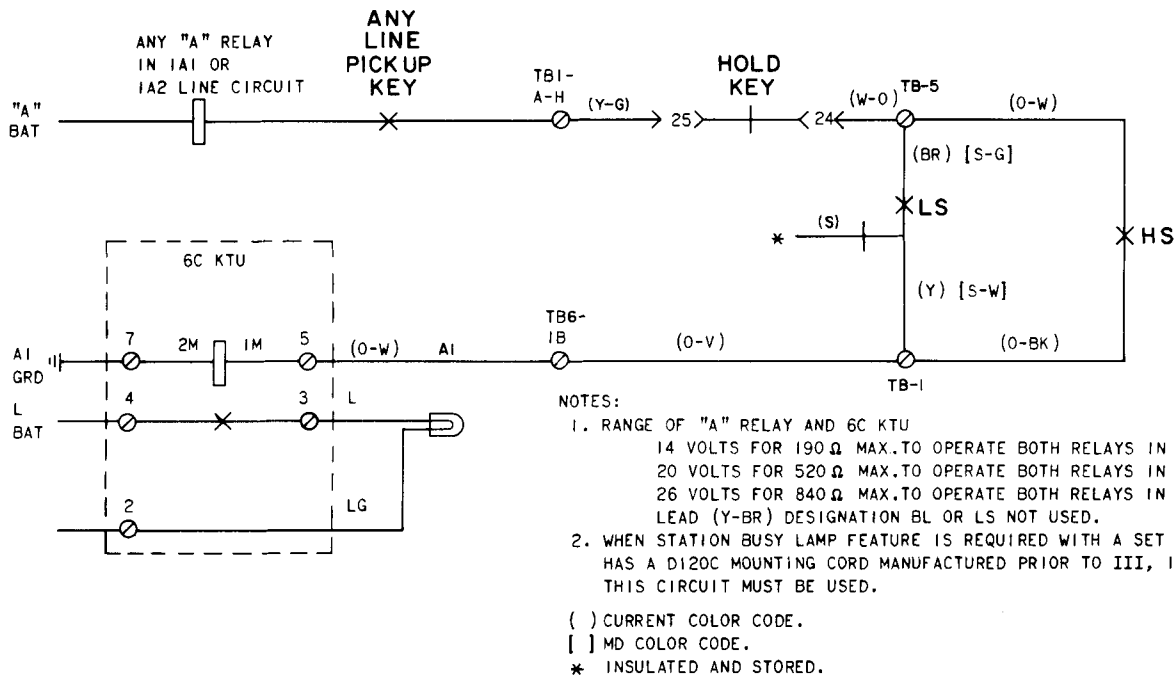


Fig. 5—Busy Lamp Control Using 6C KTU

TABLE D
599B (TURNKEY) KEY CONNECTIONS

FEATURE		FIRST MODULE KEY LEADS						SPADE-TIPPED LEADS OF MOUNTING CORD				
		5TH			6TH							
		R	T	A	R	T	A					
		(G-BK)	(BK-G)	(BK-BR)	(BL-Y)	(Y-BL)	(Y-O)					
Cutoff sta on 1A1 or 1A2 sys		To KTS Equip		To Ext Sta		Insulate and store						
Cutoff sta on 1A sys without hold feature		To KTS Equip		To Ext Sta		Insulate and store						
Cutoff station on 1A system with hold feature		To Aux Relay used to cut off T, R, B, and H				Insulate and Store			SG*	SG*		
Cutoff external ringer or buzzer		To KTS Equip		To Ext Ringer or Buzzer		Insulate and store						
Cutoff ringer in set (Note 1)		To KTS Equip				3† (Note 2)	A‡ (Note 2)	Insulate and Store				
Cutoff Buzzer in Set (Note 1 and 2)	AC Buzzer	To BZ and BZ1 at KTS Equip				A	C	Insulate and Store				
	DC Buzzer					D	C					
	Com. Audible					Cap.	C					
Monitoring		To MON Equip			R TBI	T TBI						

*Terminal on TBVI.

†Telephone set terminal board.

‡Network terminal.

Notes:

1. Insulate and store BZ and BZ1 leads at buzzer or telephone set terminal board.
2. The (BL-Y) and (Y-BL) mounting cord leads should be insulated and stored at the equipment end when the bridged spade-tipped leads are used in the set.