

SERVICE

636CA, 636CAM, 636CAMS 637DA, 637DAM, AND 637DAMS TELEPHONE SETS CONNECTIONS AND MAINTENANCE

1. GENERAL

1.01 This section contains information for the 636CA manufacture discontinued (MD), 636CAM (MD), 636CAMS (18-button) and 637DA (MD), 637DAM (MD), 637DAMS (30-button) CALL DIRECTOR® telephone sets (Fig. 1, 2, and 3) equipped with rotary dials and headset jacks.

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes.

- Remove polarity guard information (not required with rotary sets)
- Show that the 400H line units are not compatible with the busy lamp control circuit (Note 4, Fig. 6).

1.03 All four letter coded sets are now furnished from the factory in only the numerical code one (1), and all other numerical coded sets are rated MD. Sets may be equipped with different modular key arrangements by ordering the appropriate 635-, 658-type key, or 76A lamp socket. Refer to Section 502-601-101 for recommended layout arrangement of field-installed keys.

1.04 The 636CAMS1 and 637DAMS1 sets (Fig. 2) are furnished equipped with a new line switch which breaks both the tip and ring side of the line instead of the ring side only.

2. CONNECTIONS

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

- (a) The 1A1 or 1A2 KTS lines must be connected to the first key units with 1A lines connected to supplementary key modules.

- (b) The 1A, 1A1, or 1A2 KTS lines should not be connected to the same six line key module.

- (c) The 1A, 1A1, or 1A2 KTS lines appearing behind a manual switchboard should not be intermixed on a CALL DIRECTOR telephone set due to the different time out intervals provided by the associated KTU's.

2.02 The 636CA (MD), CAM (MD), CAMS and 637DA (MD), DAM (MD), DAMS sets are equipped with a 635A5C (5-line pickup and hold) or 635AD5C (4-line pickup, cutoff, and hold) key in the first module position. Contact strip assemblies [required with sets equipped with a D120K (MD) or D200S (MD) mounting cord] differ between the two keys. If ordered for field replacement, the 635AD5C is furnished with a piggy-back adapter to which the slate mounting cord plug is connected. The necessary contact strip assemblies (840151039 and 840151047) will be shipped with the 635AD5C key, and will replace the 840151120 and 840151138 assemblies supplied with the 635A5C key.

2.03 Because of the physical arrangement of the 635-type key, the contact strips do not extend to the chaining switch. This requires a second tip and ring to each module (except the last). See Fig. 3, Sheets 1 through 5.

Note: Contact strips are not required on sets equipped with D120M or D200AA mounting cords.

2.04 Mounting cords of these CALL DIRECTOR telephone sets terminate in individual plugs connected to the rear of the keys. This permits rearrangement of line appearance either in the set or at the key equipment distribution point. Current production sets are equipped with a satin-silver (-87) mounting cord.

2.05 All line key positions are convertible to signaling or common signaling arrangements by

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removing the 812857738 (P-28E773) screw detail from key positions involved and making the necessary wiring changes per Table C. Refer to Table D for ringer cutoff feature using 635AD5C key in first module.

2.06 These sets are not intended for use with speakerphone systems.

2.07 The 636CA (MD), CAM (MD), CAMS and 637DA (MD), DAM (MD), DAMS sets are factory-equipped with a KS-20419L1 or KS-20419L2 (10 volt ac only) buzzer.

2.08 When station busy lamp feature is required, install a D-180463 Kit of Parts (Fig. 4) (ordered separately), consisting of a 840362909 printed wiring board assembly and 840361836 plug assembly (light beige). Connect kit of parts as shown in Fig. 5. Install the wiring board and plug assembly as follows.

(1) Remove set housing. If the set has a "clip-in" dial mounting plate, omit Steps (2), (3), (4), and (6). Tape and store the printed wiring board assembly at an appropriate location in the set and perform Step (5).

(2) Loosen screws on dial mounting plate. Move mounting to left and lift out. If the set is equipped with an 814454104 buzzer mounting bracket the bracket must be removed before lifting the dial mounting plate out.

(3) Remove right-hand dial mounting screw.

(4) Place dial mounting screw through hole in wiring board and replace screw in dial.

(5) Connect plug assembly to chaining switch of third module (636-type) or fifth module (637-type) and terminate (G-V) and (V-G) leads of plug (Fig. 4). Insulate and store unused plug leads.

(6) Replace and secure dial mounting plate.

2.09 For multiple busy lamps, a 6B or 6C KTU must be connected as shown in Fig. 6. These circuits may also be used for a single busy lamp feature. For

sets associated with 1A1 or 1A2 KTS line circuits the busy lamp(s) will light whenever a line pickup button is depressed and the handset is off-hook or the headset is plugged into the jack (Fig. 6). Optional equipment (6B or 6C KTU) must be ordered separately.

Note: For additional information on station busy lamps, refer to Section 502-110-100.

2.10 The hold key in the first module is used for normal hold functions or if required **I Hold**. An additional hold key can be installed in the second key module location for **Priority Hold**. The D-180411 Kit of Parts consisting of a 635A5C key, two contact strip assemblies, and a pink plug assembly must be ordered separately for **Priority Hold**.

2.11 Install key as follows.

(1) Unplug and remove existing key from second module.

(2) Install contact strips and associated leads if applicable (see note).

Note: Contact strips are not required with sets equipped with D120M or D200AA mounting cord or sets equipped with a modified D120K or D200S mounting cord.

(3) Place the pink plug assembly from the kit of parts into the hold position on the 635A5C key. Insulate and store the white set plug. Place the remaining set plugs into their proper positions on the key.

(4) Make the necessary wiring connections and modifications as shown in Fig. 7.

3. MAINTENANCE

3.01 For maintenance information, refer to Section 502-600-100 entitled 630, 1630, and 2630 Common Installation and Maintenance Information. Individual components such as dials, keys, ringers, etc. are covered in sections pertaining to the particular item.

3.02 Do not use solvents to clean plastic parts of these sets. Use a damp cloth only. If discolored, replace part.

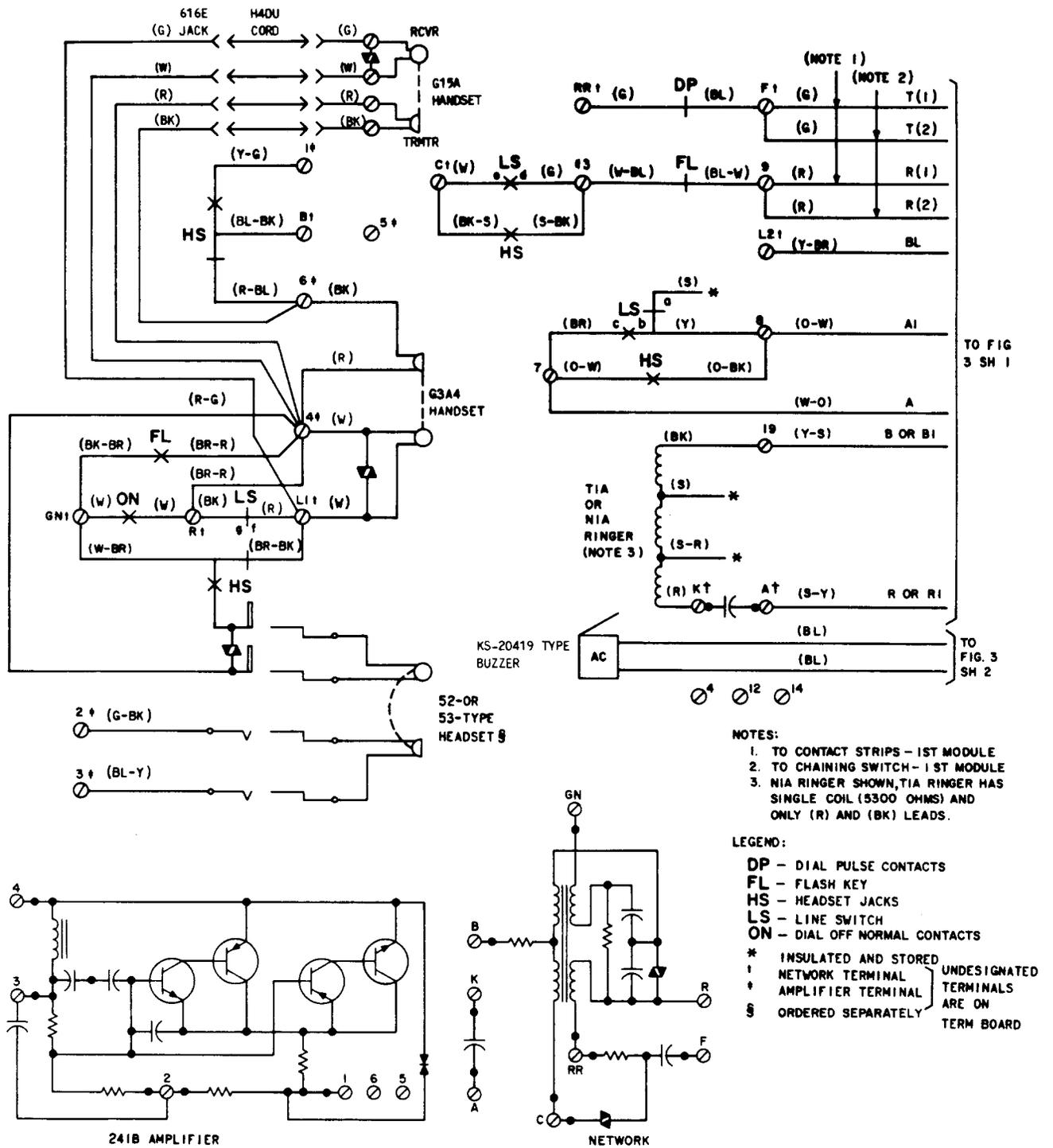


Fig. 1—636CA (MD), CAM (MD) and 637DA (MD), DAM (MD) Telephone Set, Connections

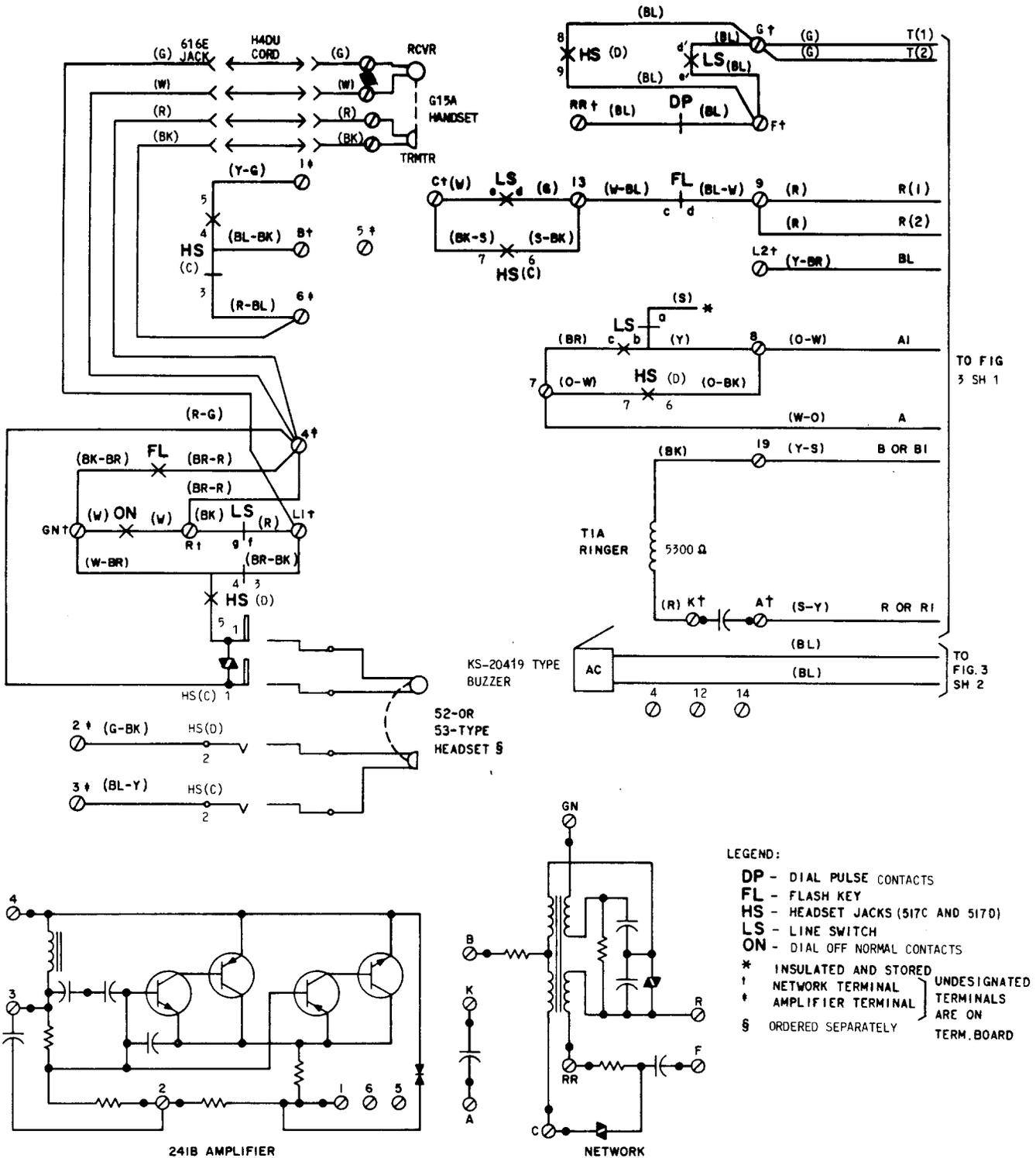


Fig. 2—636CAMS and 637DAMS Telephone Set, Connections

NOTES FOR FIG. 3:

1. THE 635AD5C KEY IS SUPPLIED WITH AN ADAPTER IN THE CUTOFF KEY POSITION. THE SLATE MOUNTING CORD PLUG CONNECTS TO THE ADAPTER. CONNECT (BL-Y) AND (Y-BL) ADAPTER LEADS TO TERMINALS 1 AND 2, RESPECTIVELY. BALANCE OF PLUGS CONNECT DIRECTLY TO KEY.
2. ON SETS EQUIPPED WITH A 658A KEY, THE (G) CONTACT STRIP LEAD OR BUSS LEAD IS TERMINATED ON 17 AND (R) ON 18. IF A 658A KEY IS ADDED IN THE FIELD, LEADS MUST BE MOVED FROM THE FACTORY WIRED TERMINALS TO TERMINALS 17 AND 18.
3. PROVISIONS ARE MADE FOR MECHANICALLY STORING THE LIGHT BEIGE PLUG ON THE 658A KEY. NO ELECTRICAL CONNECTION IS MADE.
4. WHEN THE 658A KEY IS REQUIRED AS A DUAL PURPOSE KEY, REMOVE STRAP BETWEEN TERMINALS 17 AND 18. USE M1W CORD OR EQUIVALENT TO CONNECT TERMINAL 17 TO A GROUND OTHER THAN THE SIGNAL GROUND.
5. TO SUPPLY "I" HOLD FEATURE, TERMINATE (O-Y) MOUNTING CORD LEAD FROM FIRST MODULE ON TERMINAL 24. LEAD BECOMES SP LEAD AT EQUIPMENT.
6. IF HOLD POSITION LAMP IS REQUIRED, CONNECT (G-Y) LAMP LEAD AND (Y-G) LAMP GROUND LEAD TO (G-Y) AND (Y-G) MOUNTING CORD (BL BINDER) LEADS, RESPECTIVELY, USING SPARE TERMINAL OR D-161488 CONNECTOR. LAMP MUST BE SEPARATELY ORDERED AND INSTALLED.
7. THESE CONTACT STRIPS ARE REQUIRED WHEN TELEPHONE SET IS EQUIPPED WITH THE D120K (MD) OR THE D200S (MD) MOUNTING CORD.

* INSULATED AND STORED.

† DEAD DRESSED.

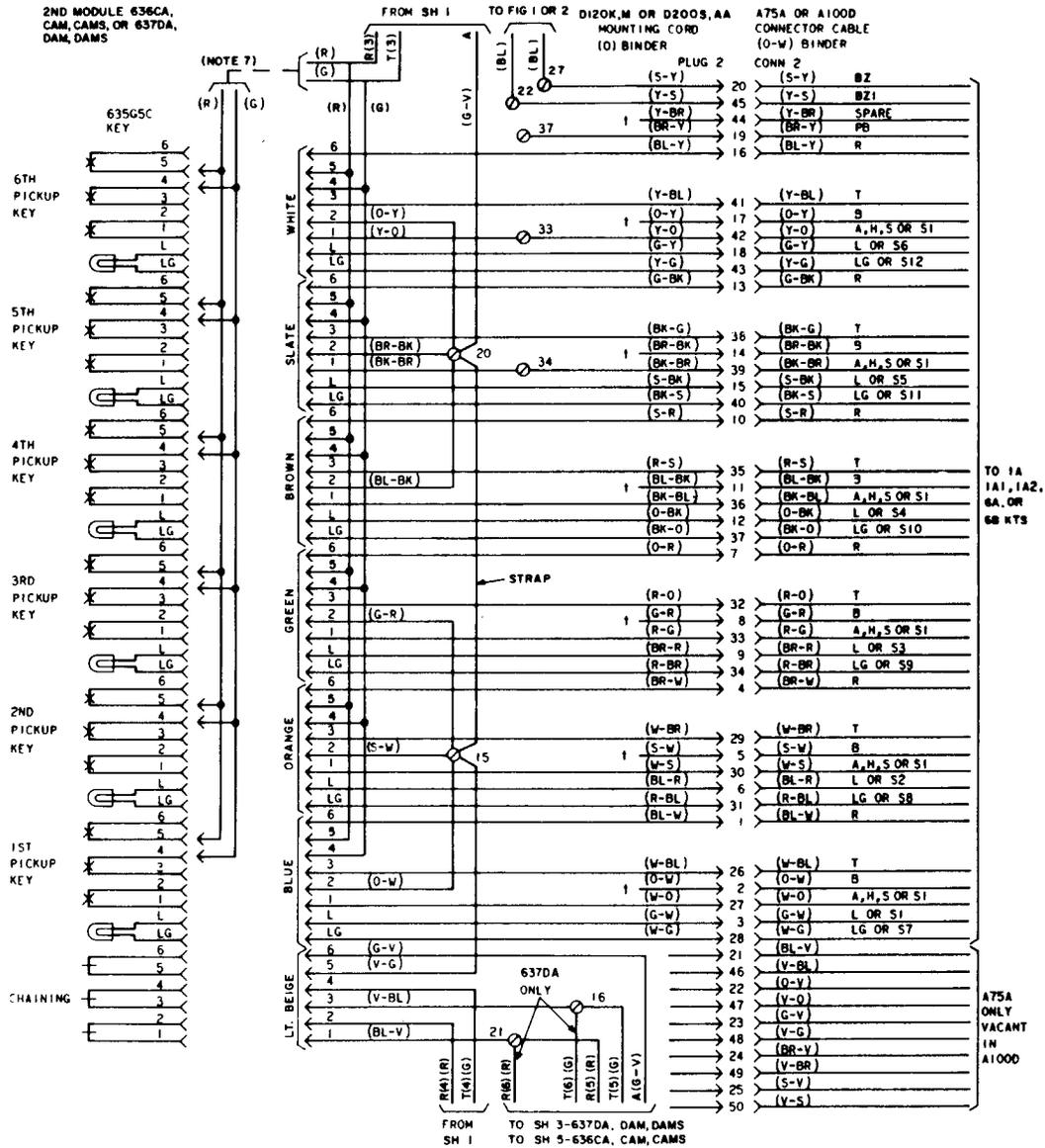


Fig. 3—Module and Connector Cable Arrangements (Sheet 2 of 5)

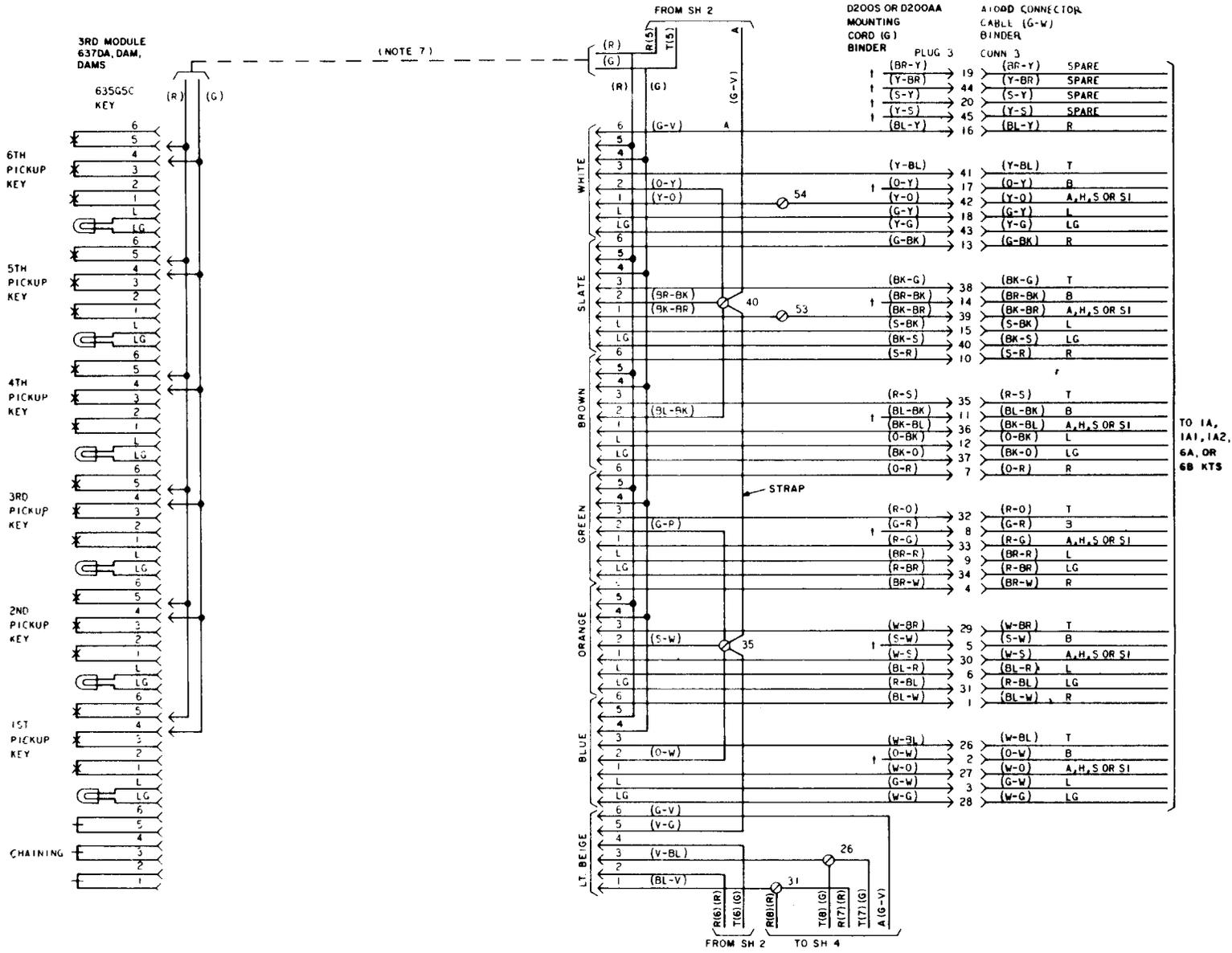


Fig. 3—Module and Connector Cable Arrangements (Sheet 3 of 5)

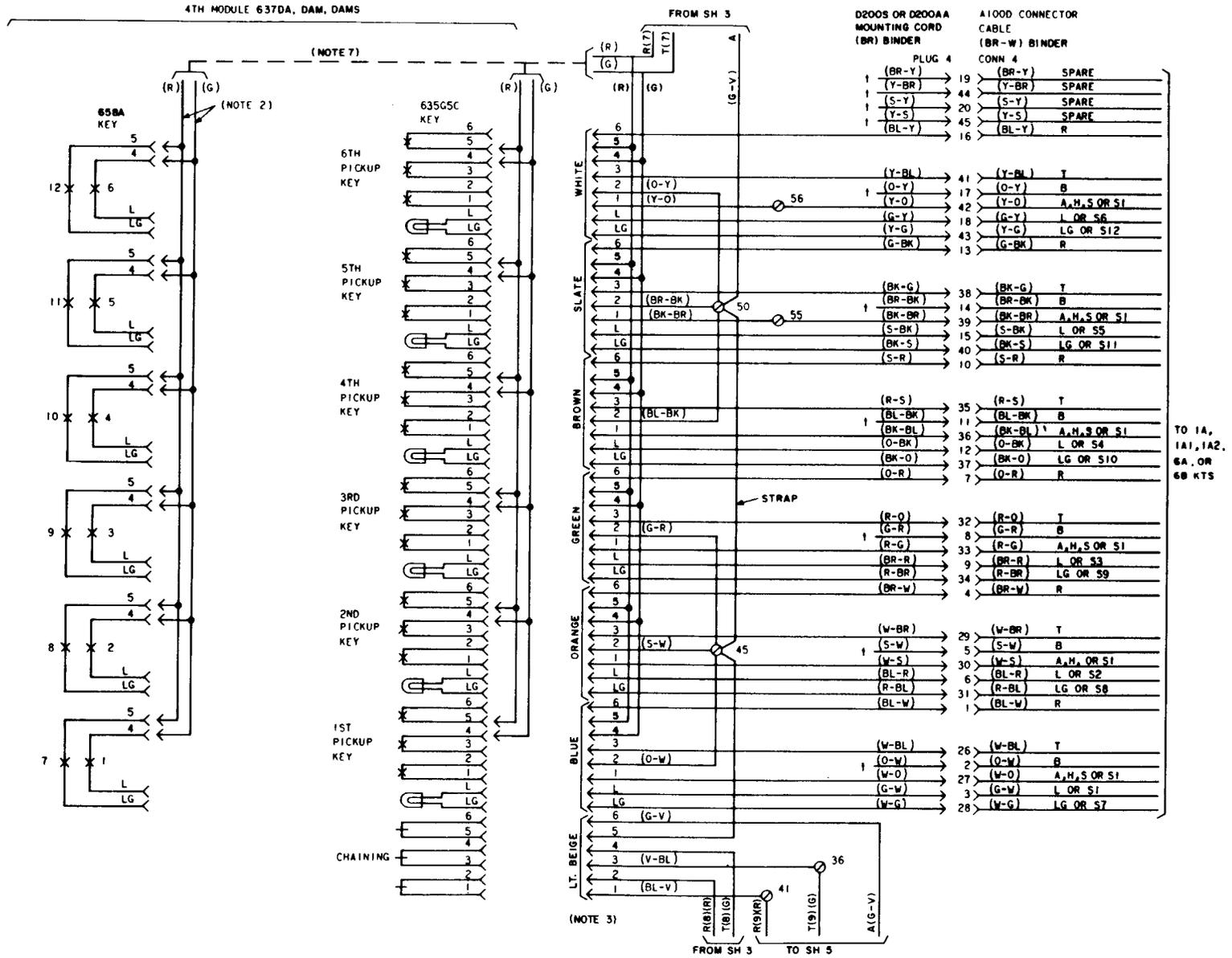


Fig. 3—Module and Connector Cable Arrangements (Sheet 4 of 5)

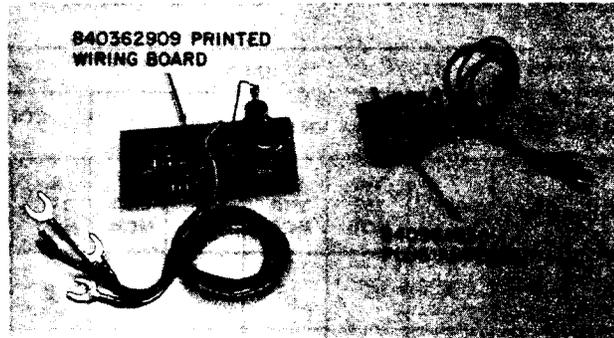
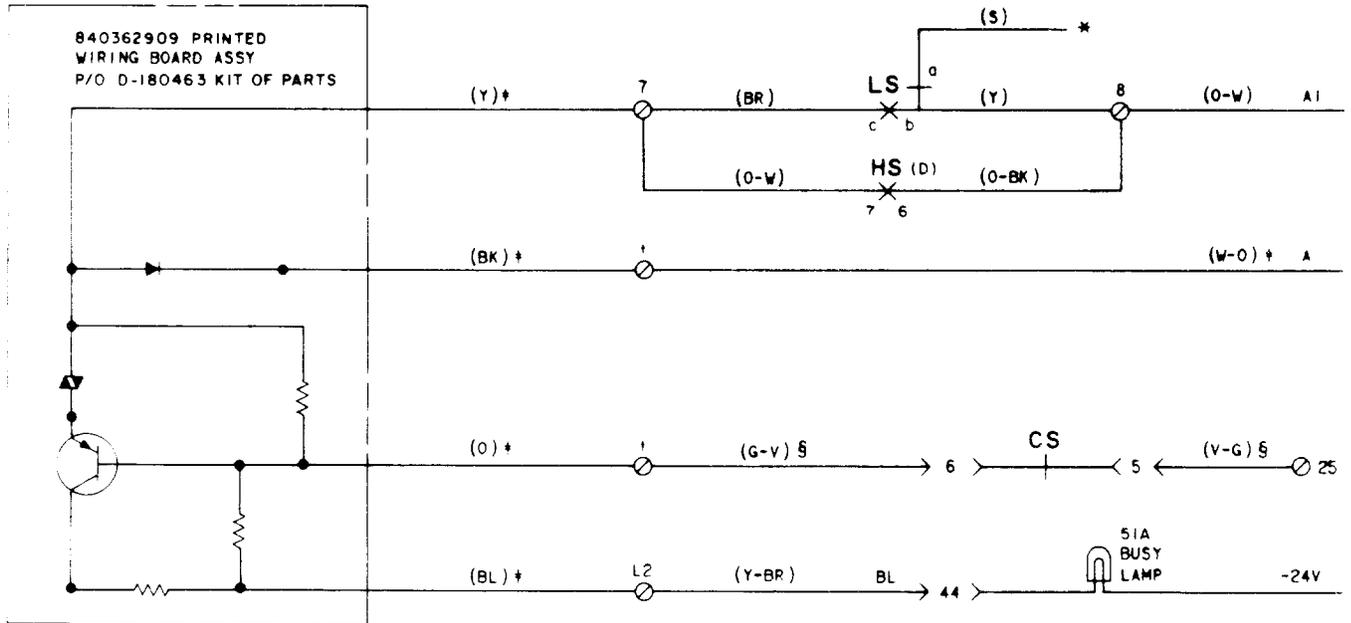


Fig. 4—D-180463 Kit of Parts—Station Busy Lamp Feature



LEGEND:

- LS- LINE SWITCH
- HS- HEADSET JACKS
- CS- CHAINING SWITCH
- * INSULATED AND STORED
- † USE D-161488 CONNECTOR OR SPARE TERMINAL
- * LEADS INVOLVED IN MODIFICATION
- § 840361836 PLUG ASSEMBLY LEADS,
P/O D-180463 KIT OF PARTS

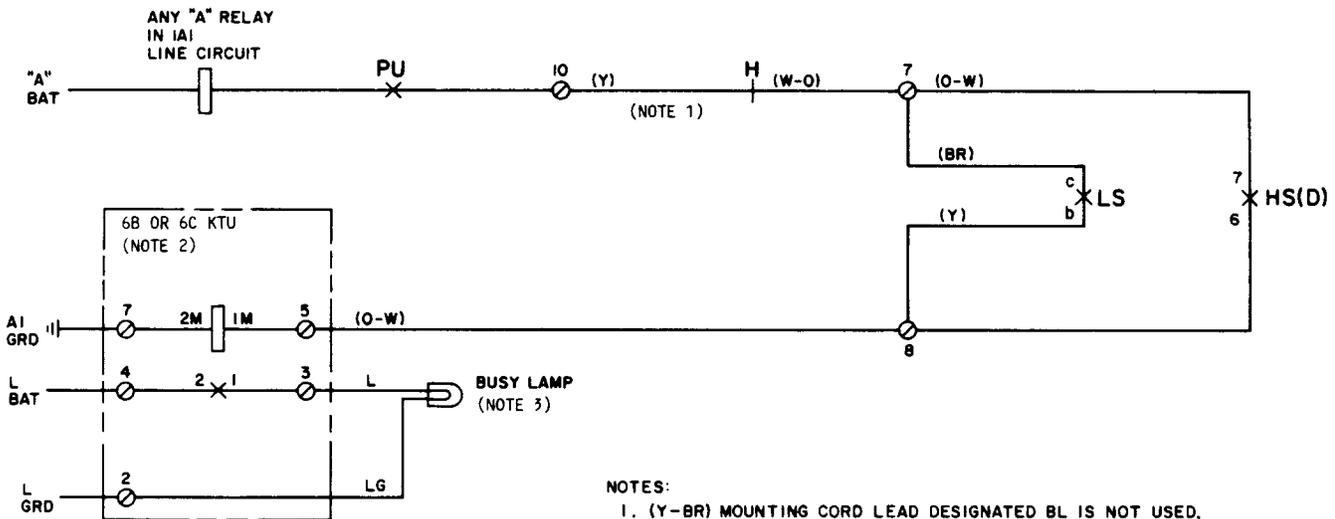
Fig. 5—Single Busy Lamp Circuit Using Printed Wiring Board Assembly

TABLE A

1A, 1A1, AND 1A2 CONVERSION—636-TYPE TELEPHONE SET

KEY MODULE ARRANGEMENT	LEAD											
	HOLD KEY				CHAINING PLUG				CONTACT STRIP OR PLUG			LINE SW.
	Y	G	BR-V	V-BR	V-G 1ST MOD	V-G 2ND MOD	R 1ST MOD	R 2ND MOD	R 1ST MOD	R 2ND MOD	R 3RD MOD	Y
1A1/1A2 Only	10	10	*	*	5	15	9	11	9	11	21	8
1A1/1A2-1st, 2nd Mod 1A-3rd Mod	10	35	21	40	5	35	9	11	9	11	40	8
1A1/1A2-1st Mod 1A-2nd, 3rd Mod	10	35	11	40	35	15	9	40	9	40	21	8
1A Only	*	10	26	9	5	15	26	11	26	11	21	18

* Insulated and stored.



LEGEND:
 PU - PICKUP KEY
 H - HOLD KEY
 LS - LINE SWITCH
 HS(D) - HEADSET JACK D

- NOTES:
1. (Y-BR) MOUNTING CORD LEAD DESIGNATED BL IS NOT USED.
 2. WHEN USING 6 TYPE KTU, THE STATION CABLE LOOP MUST BE LIMITED TO 25Ω OR 500 FEET OF 24 GA. WIRE.
 3. WHEN A LAMP INDICATOR IS USED FOR BUSY LAMP, EITHER A 51A (10V) OR 52A (24V) LAMP MAY BE USED. IF THE LAMPS OF A KEY OR LAMP SOCKET INSTALLED IN A TELEPHONE SET ARE USED, ONLY 51A (10V) LAMPS SHALL BE USED TO AVOID OVERHEATING.
 4. THE 400H LINE UNITS ARE NOT COMPATIBLE WITH THIS CIRCUIT.

Fig. 6—Busy Lamp Control Circuit Associated With 1A1 and 1A2 KTS (Note 4)

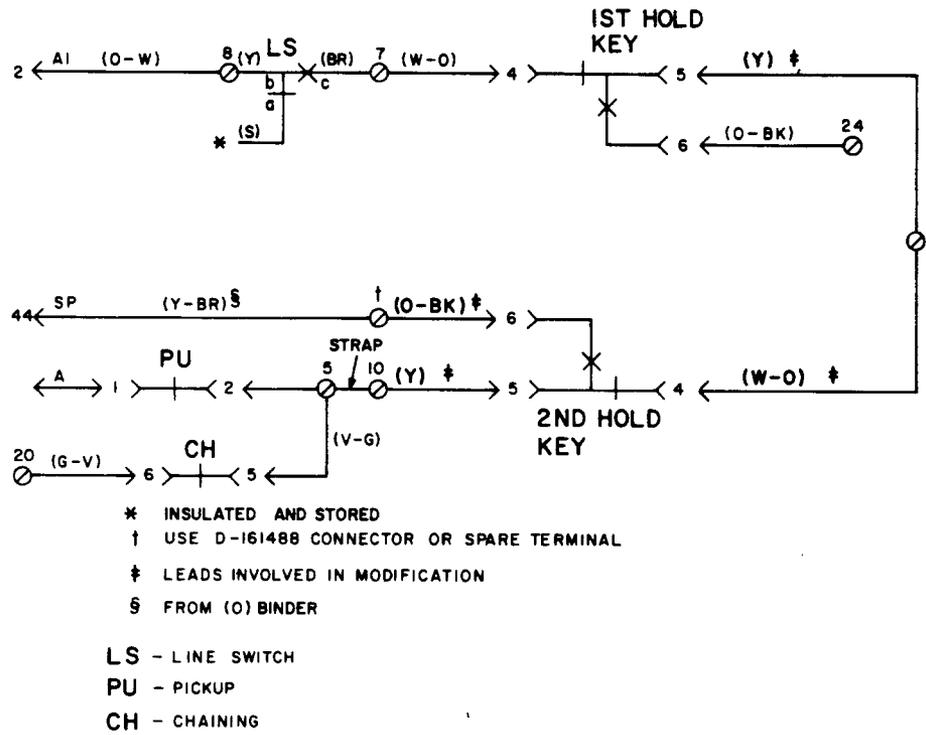


Fig. 7—Modification for Priority Hold

TABLE B

1A, 1A1, AND 1A2 CONVERSION—637-TYPE TELEPHONE SET

KEY MODULE ARRANGE- MENT	LEAD																	
	HOLD KEY				CHAINING PLUG								CONTACT STRIP OR PLUG					LINE SW.
	Y	G	BR-V	V-BR	V-G 1ST MOD	V-G 2ND MOD	V-G 3RD MOD	V-G 4TH MOD	R 1ST MOD	R 2ND MOD	R 3RD MOD	R 4TH MOD	R 1ST MOD	R 2ND MOD	R 3RD MOD	R 4TH MOD	R 5TH MOD	Y
1A1/1A2 Only	10	10	*	*	5	15	35	45	9	11	21	31	9	11	21	31	41	8
1A1/1A2- 1st, 2nd, 3rd, 4th, Mod 1A-5th Mod	10	12	41	14	5	15	35	12	9	11	21	31	9	11	21	31	14	8
1A1/1A2- 1st, 2nd, 3rd Mod 1A-4th, 5th Mod	10	12	31	14	5	15	12	45	9	11	21	14	9	11	21	14	41	8
1A1/1A2-1st, 2nd, Mod 1A-3rd, 4th, 5th Mod	10	12	21	14	5	12	35	45	9	11	14	31	9	11	14	31	41	8
1A1/1A2- 1st Mod 1A-2nd, 3rd 4th, 5th Mod	10	12	11	14	12	15	35	45	9	14	21	31	9	14	21	31	41	8
1A Only	*	10	37†	13	5	15	35	45	37	11	21	31	37	11	21	31	41	18

* Insulated and stored.

† Remove (BR-Y) mounting cord lead. Insulate and store.

TABLE C

**PICKUP-SIGNAL KEY CONVERSION 3RD [636CA (MD), CAM (MD), CAMS] OR 5TH
[637DA (MD), 637DAM (MD), DAMS] MODULE (NOTE 1 AND 2)**

NO. OF SIGNAL KEYS	NO. OF PVT OR INTER-COM LINES (COM. SIG)	KEY PLUG LEADS AND TERMINALS						
		O-W	S-W	G-R	BL-BK	BR-BK	O-Y	Y-O
1		25	25	25	30	30	18	39
2		25	25	25	30	18	18	39
3		25	25	25	18	18	18	39
4		25	25	18	18	18	18	39
5		25	18	18	18	18	18	39
6		18	18	18	18	18	18	39
	2	25	25	25	39	39	30	39
	3	25	25	39	39	39	30	39
	4	25	39	39	39	39	30	39
	5	39	39	39	39	39	30	39

Note 1: When using converted 6th pickup button as common signaling key, remove, insulate and store (Y-O) mounting cord lead from terminal 39.

Note 2: If more than six signal keys are required, replace 635G5C key with a 658 key. If more than five private or intercom lines are required, convert keys in 2nd [636CA (MD), CAM (MD), CAMS] or 4th [637DA (MD) DAM (MD), DAMS] module in same order. Connect plug leads to terminal 39 to utilize common signal key. If additional terminals are required, use any spare terminal and strap to 39.

TABLE D
CUT OFF KEY (635AD5C) CONNECTIONS

FEATURE	635AD5C KEY ADAPTER		MOUNTING CORD (BL) BINDER		CONNECTOR CABLE (BL-W) BINDER			RINGER	PLACE STRAP
	BL-Y	Y-BL	BL-Y	Y-BL	G-BK	BK-G	BK-BR	BK	
Cutoff Ringer in Set *	TB1-1	TB1-2	‡	‡	§			TB1-1	A (Net.) to TB1-2
Cutoff Ext Ringer or Buzzer *	TB1-1	TB1-2	TB1-1	TB1-2	¶				
Cutoff Ext Station †	‡	‡	TB1-1	TB1-2		To Aux. Relay	To Relay Grd		

* Remove (BR-BK) and (BK-BR) slate plug leads from terminals 10 and 29, insulate and store.

† Connect T, R, and A leads from equipment and station to be cut off through contacts of auxiliary relay. Connect battery to relay winding. Use 227B or 421A KTU.

‡ Insulate and store.

§ To individual line or common ringer circuit at equipment.

¶ To external ringer or buzzer. Connect ringer or buzzer circuit to (BL-Y) (Y-BL) connector cable leads at equipment.