

## SERVICE

### 636CA, 636CAM, 637DA, AND 637DAM TELEPHONE SETS

#### 1. GENERAL

**1.01** This section contains connection and maintenance information for 636CA (MD), CAM (18-button) and 637DA (MD), DAM (30-button) CALL DIRECTOR® telephone sets equipped with headset jacks.

**1.02** This section is reissued to:

- Add information on 636CAM and 637DAM (modular) telephone sets, Fig. 1
- Show the 636CA and 637DA telephone set MD.

#### 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 line circuits by modifying the set as shown in Table A and B. Line circuits for 1A, 1A1, or 1A2 KTS may be connected to the same set under the following conditions:

- (a) 1A1 or 1A2 KTS lines must be connected to the first key units with 1A lines connected to supplementary key modules.
- (b) 1A, 1A1, or 1A2 KTS lines should not be connected to the same 6 line key module.
- (c) 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, CAM and 637DA, DAM 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. 2, sheets 1 through 5.

**2.04** Mounting cords of these CALL DIRECTOR 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 removing the Ⓢ12857738Ⓢ (P-28E773) screw detail from key positions involved and making the necessary wiring changes per Table C.

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

**2.07** The 636CA, CAM and 637DA, DAM telephone sets are factory-equipped with a KS-20419L1 (10 volt AC only) buzzer.

**2.08** When station busy lamp feature is required with these sets having 1A1 or 1A2 KTS line circuits, there are two optional circuits available. 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 jacks. This optional equipment must be ordered separately. If more than one busy lamp is required, a 6C KTU must

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be connected as shown in Fig. 5. For a single busy lamp, install a D-180463 Kit of Parts (ordered separately), consisting of a 819040338 (P-90D033) Printed Wiring Board Assembly and 840361836 plug assembly (light beige). Connect kit of parts as shown in Fig. 3. Install the wiring board and plug 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.
- (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. 3). Insulate and store unused plug leads.
- (6) Replace and secure dial mounting plate.

**Note:** If more than one busy lamp is required, order a 6C KTU and use busy lamp control circuit shown in Fig. 5.

**2.09** A D-180411 Kit of Parts is required when **Priority Hold** is to be furnished. Install as follows:

- (1) Connect contact strips to 635A5C key. Plug pink plug into hold position on key.

- (2) Disconnect all mounting cord plugs and the two contact strips [sets equipped with D120K (MD) or D200S (MD) mounting cords] from the second module, remove key and replace with 635A5C key.

- (3) Rereminate contact strip leads and connect mounting cord plugs with exception of white plug which is insulated and stored.

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

- (4) Rearrange wiring per Fig. 4.

Hold key in first module is used as regular hold or if required, **I Hold**. Second key is used for **Priority Hold**.

### 3. MAINTENANCE

**3.01** For maintenance information, refer to Division 502 section entitled 630, 1630, and 2630 Series Telephone Sets—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.

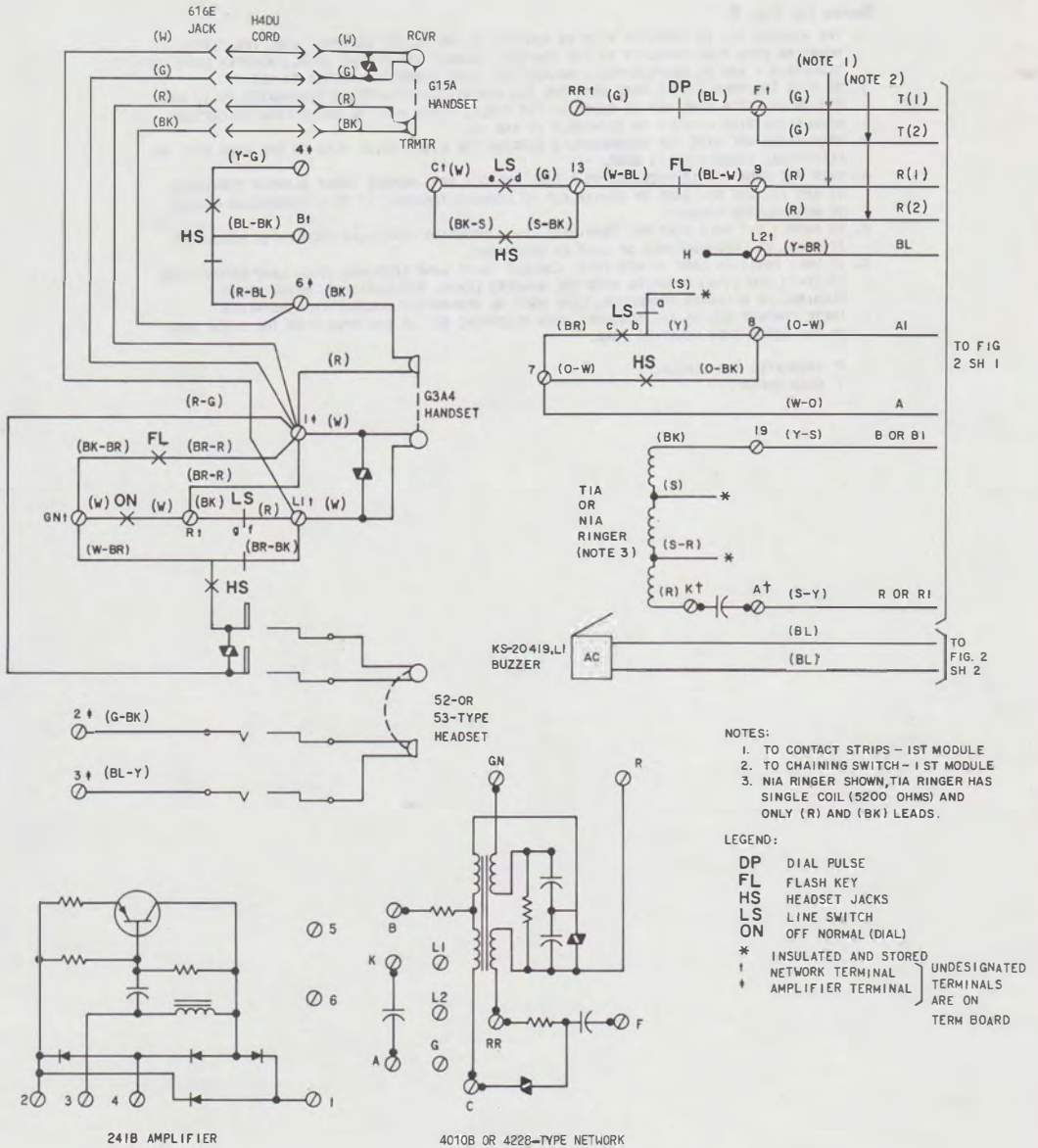


Fig. 1—636CA, CAM and 637DA, DAM Telephone Set, Connections

**Notes for Fig. 2:**

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 658C KEY, THE (G) CONTACT STRIP LEAD IS TERMINATED ON 17 AND (R) ON 18. IF A 658C KEY IS ADDED IN THE FIELD, LEADS MUST BE MOVED FROM PRECEDING MODULE CHAINING CIRCUIT 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 MIW CORD OR EQUIVALENT TO CONNECT TERMINAL 17 TO A DISSIMILAR GROUND OR NONGROUNDED CIRCUIT.
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.



1ST MODULE 636CA, CAM OR 637DA, DAM

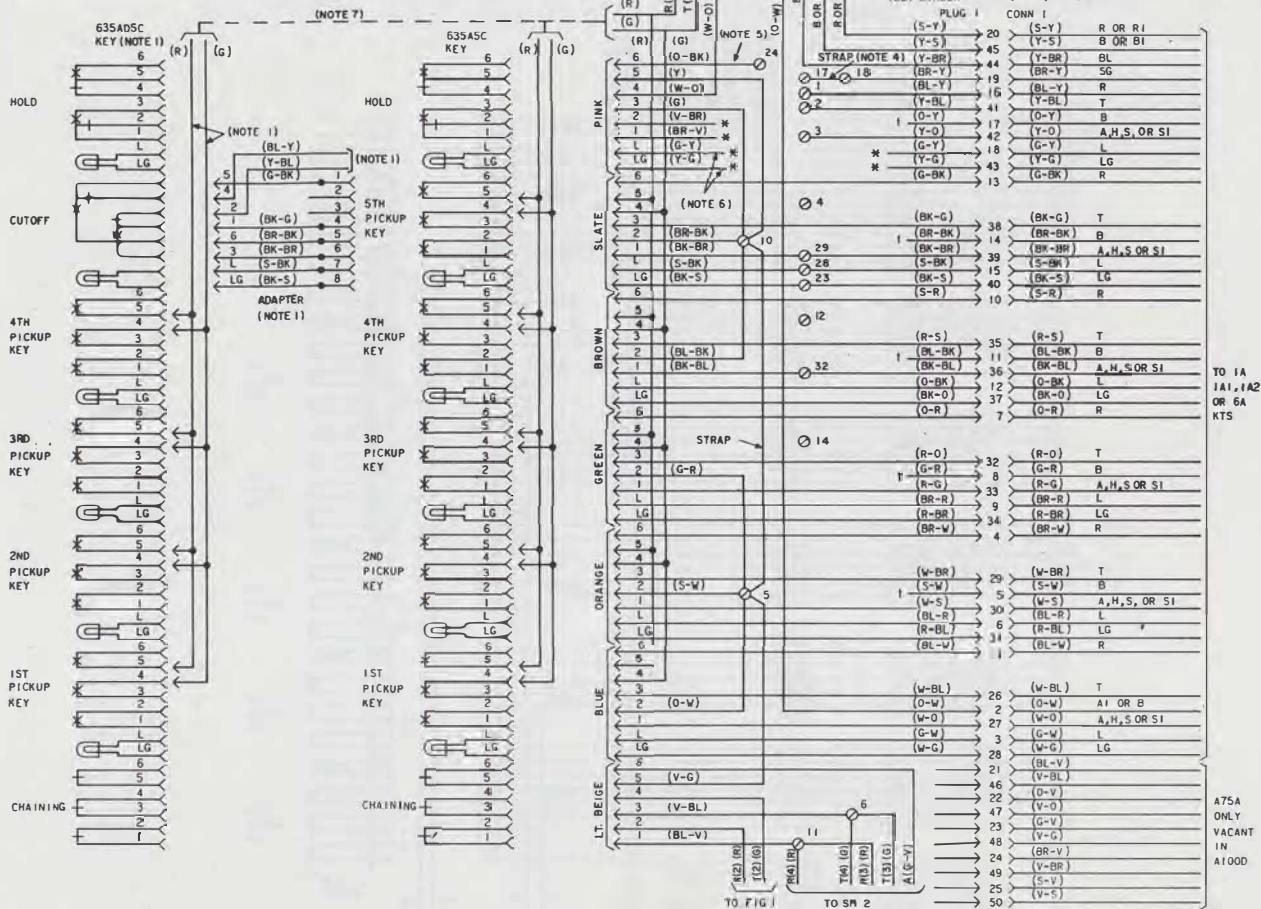


Fig. 2—Module and Connector Cable Arrangements (Sheet 1 of 5)

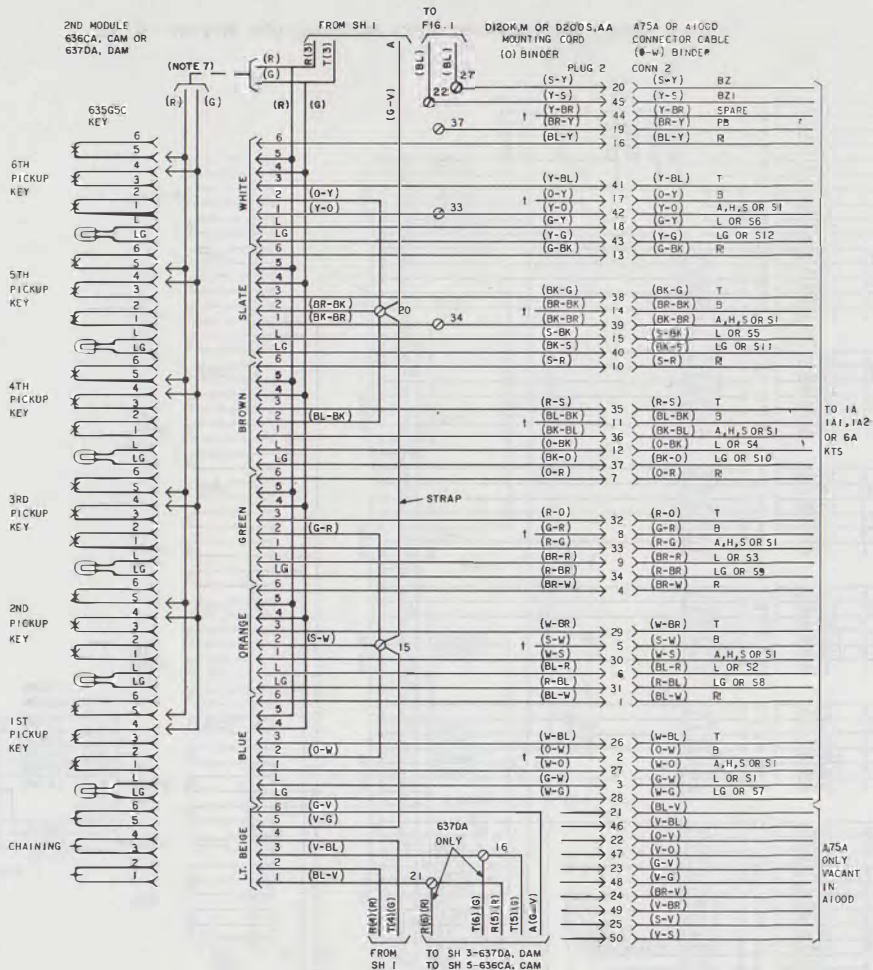


Fig. 2—Module and Connector Cable Arrangements (Sheet 2 of 5)

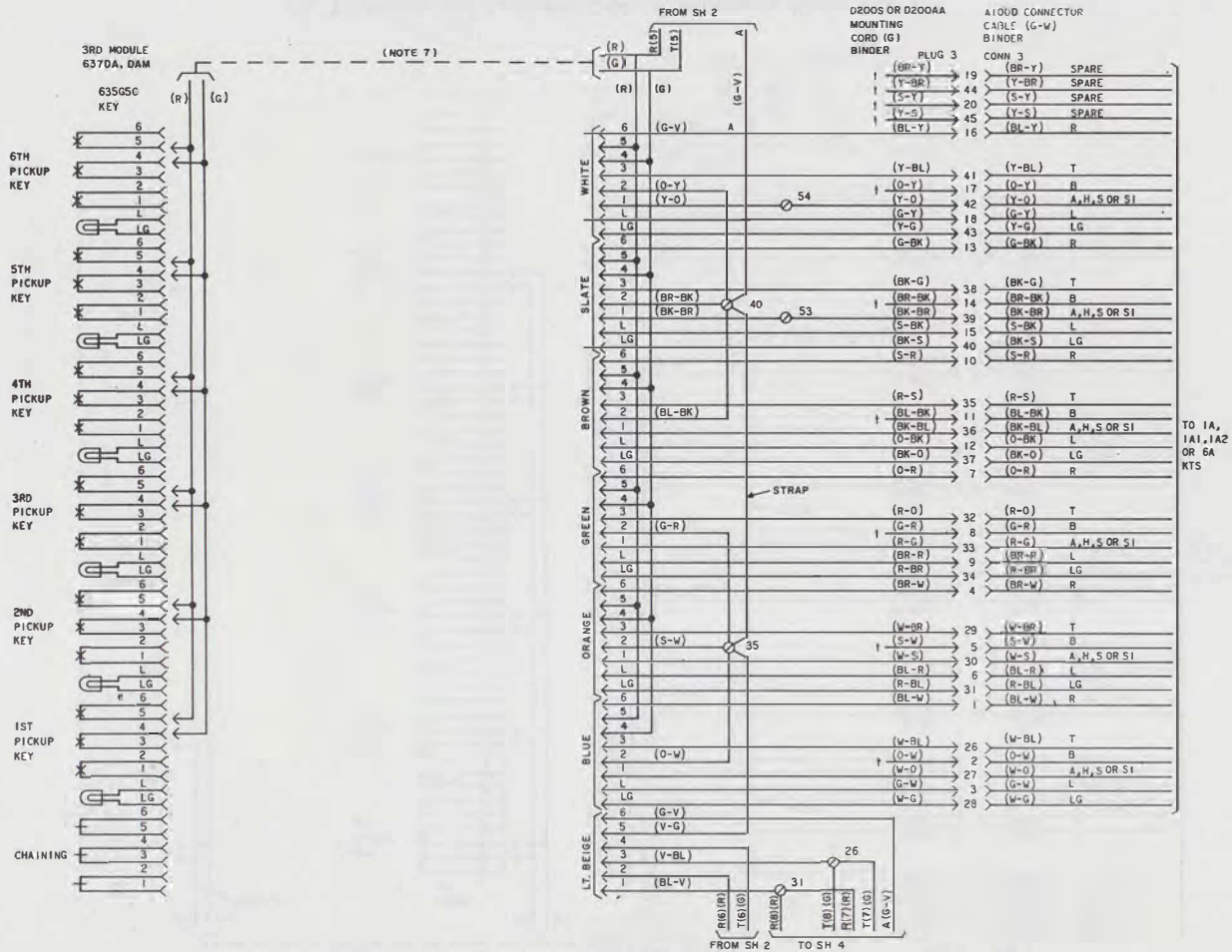


Fig. 2—Module and Connector Cable Arrangements (Sheet 3 of 5)



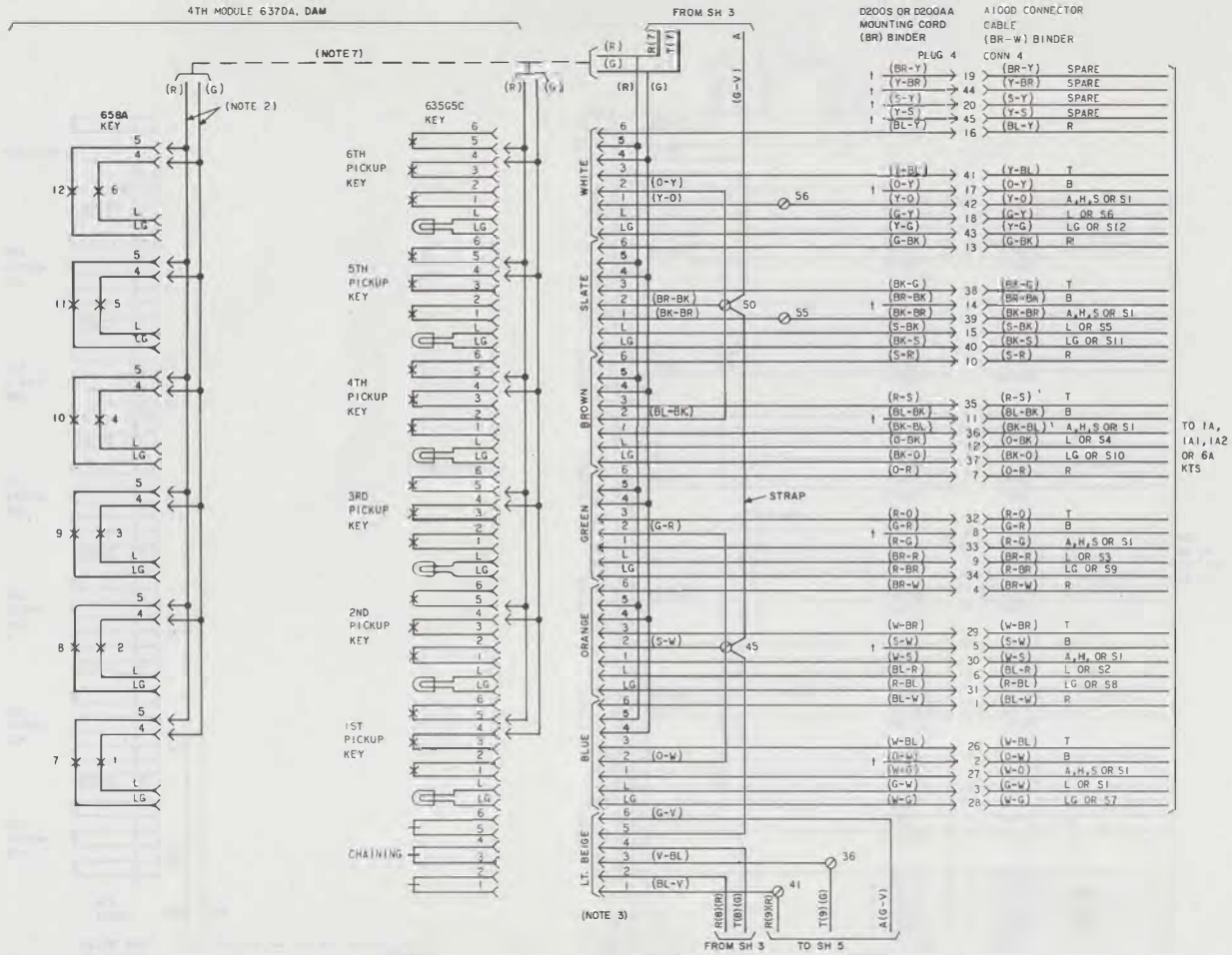
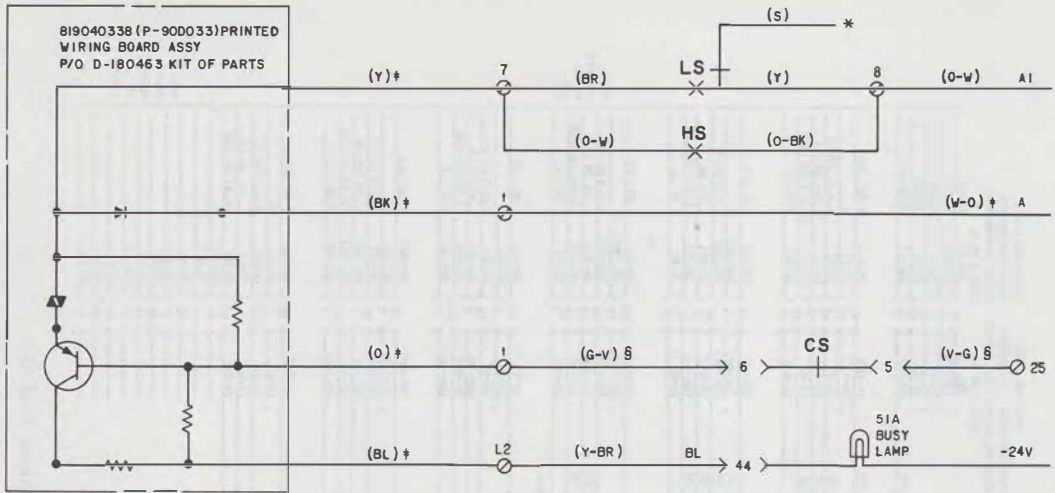


Fig. 2—Module and Connector Cable Arrangements (Sheet 4 of 5)







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

NOTE:

WHEN A SINGLE BUSY LAMP IS REQUIRED, EITHER THIS STATION BUSY LAMP CONTROL CIRCUIT OR THE BUSY LAMP CONTROL CIRCUIT WITH 6C KTU SHOWN IN FIG.5 MAY BE USED. WHEN MORE THAN ONE BUSY LAMP IS REQUIRED, ONLY THE 6C KTU BUSY LAMP CONTROL CIRCUIT SHOWN IN FIG.5 MAY BE USED.

Fig. 3—Station 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	
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.



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, CAM) OR 5TH (637DA, DAM) MODULE**

NO. OF SIGNAL KEYS	NO. OF PVT OR INTER-COM LINES (COM. SIG) NOTE 1	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

**Notes:**

- 1 When using converted 6th pickup button as common signaling key, remove, insulate and store (Y-O) mounting cord lead from terminal 39.
- 2 If more than six signal keys are required, replace 635G5C key with a 658A key. If more than five private or intercom lines are required, convert keys in 2nd (636CA, CAM) or 4th (637DA, DAM) 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 (Note 1)	TB1-1	TB1-2	*	*	Note 2			TB1-1	A (Net.) to TB1-2
Cutoff Ext Ringer or Buzzer (Note 1)	TB1-1	TB1-2	TB1-1	TB1-2	Note 3				
Cutoff Ext Station (Note 4)	*	*	TB1-1	TB1-2		To Aux. Relay	To Relay Grd		

\* Insulate and store.

Notes:

1. Remove (BR-BK) and (BK-BR) slate plug leads from terminals 10 and 29, insulate and store.
2. To individual line or common ringer circuit at equipment.
3. To external ringer or buzzer. Connect ringer or buzzer circuit to (BL-Y) (Y-BL) connector cable leads at equipment.
4. 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.