

## SERVICE

### 630DA AND 631DA TYPE TELEPHONE SETS

#### 1. GENERAL

**1.01** This section contains connection and maintenance information for 630DA and 631DA telephone sets. Mounting cords of these CALL DIRECTOR® type sets terminate in individual plugs connected to the rear of the keys.

#### 2. CONNECTIONS

**2.01** The 630DA and 631DA sets are equipped with a 635A5C (5 line pickup and hold) or 635AD5C (4 line pickup, cutoff, and hold) in the first module position. Contact strip assemblies 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 contact strip assemblies (840151039 and 840151047) must be separately ordered to replace the P-21F800 and P-21F801 assemblies.

**2.02** Termination of the mounting cord conductors on a per line basis in individual plugs permits rearrangement of line appearances either in the set or at the key equipment distribution point.

**2.03** Contact strips are not extended to the chaining circuit. This requires a second tip and ring conductor to each module (except the last). See Fig. 2, sheets 1 through 5.

**2.04** Sets may be equipped for speakerphone by the addition of a 679A transmitter in the 3rd (630DA) or 5th (631DA) module and replacement of the 8R dial with an 8C dial. Fig. 3 and Table D show wiring of sets with speakerphone and necessary field modifications.

**2.05** All line pickup key positions are convertible to signaling or common signaling arrangements by removing the P-28E773 detail from key positions involved and making the necessary wiring changes per Table C.

**2.06** A KS-8109 type or KS-20419 buzzer may be installed when a second audible signal is required. Use (S-Y) and (Y-S) mounting cord conductors from (O-W) binder stored in the second module.

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

- (1) Assemble kit of parts by connecting contact strips to 635A5C key. Plug pink plug into hold position on key.
- (2) Disconnect all mounting cord plugs and the two contact strip leads from the second module, remove key and replace with 635A5 key.
- (3) Reterminate contact strip leads and connect mounting cord plugs with exception of white plug which is insulated and stored.
- (4) Rearranged wiring per Fig. 4.  
Hold key in first module is used as regular hold or if required, **I Hold**. Second hold key is used for **Priority Hold**.

#### 3. MAINTENANCE

**3.01** Maintenance of components of these sets such as dials, ringers, etc. is covered in sections pertaining to the particular component.

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

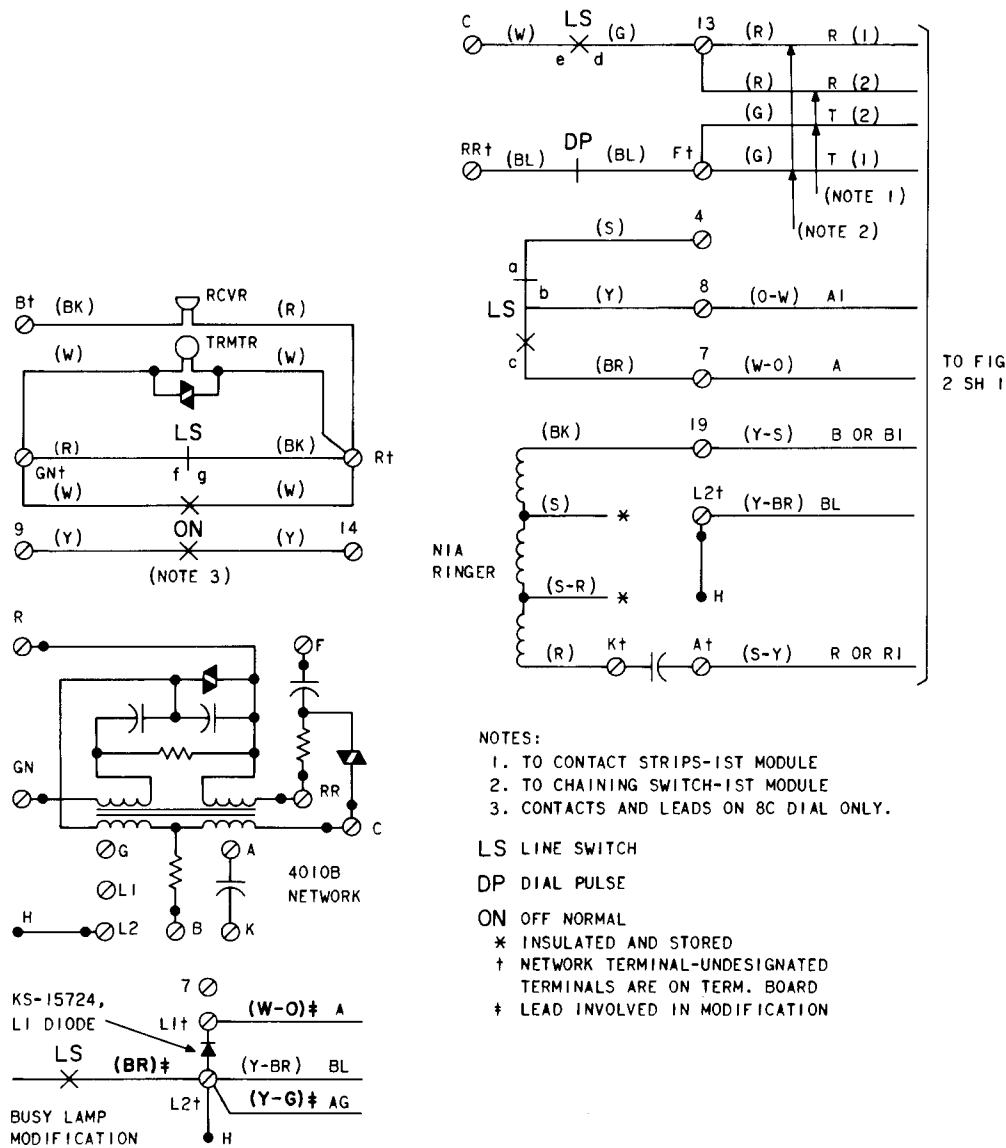


Fig. 1—630DA and 631DA Telephone Set, Connections

**TABLE A**  
**1A, 1A1, AND 1A2 CONVERSION — 630DA TELEPHONE SET**

| KEY<br>MODULE<br>ARRANGE-<br>MENT         | LEAD     |    |      |      |                   |                   |                 |                 |                 |                 |                 |             |
|-------------------------------------------|----------|----|------|------|-------------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------|
|                                           | HOLD KEY |    |      |      | CHAINING PLUG     |                   |                 |                 | CONTACT STRIP   |                 |                 | LINE<br>SW. |
|                                           | Y        | G  | BR-V | V-BR | V-G<br>1ST<br>MOD | V-G<br>2ND<br>MOD | R<br>1ST<br>MOD | R<br>2ND<br>MOD | R<br>1ST<br>MOD | R<br>2ND<br>MOD | R<br>3RD<br>MOD | Y           |
| 1A1/1A2<br>Only                           | 10       | 10 | *    | *    | 5                 | 15                | 13              | 11              | 13              | 11              | 21              | 8           |
| 1A1/1A2-<br>1st, 2nd Mod<br>1A-3rd Mod    | 10       | 35 | 21   | 40   | 5                 | 35                | 13              | 11              | 13              | 11              | 40              | 8           |
| 1A1/1A2-<br>1st Mod<br>1A-2nd,<br>3rd Mod | 10       | 35 | 11   | 40   | 35                | 15                | 13              | 40              | 13              | 40              | 21              | 8           |
| 1A<br>Only                                | *        | 10 | 26   | 13   | 5                 | 15                | 26              | 11              | 26              | 11              | 21              | 18          |

\* Insulated and stored.

**Notes for Fig. 2:**

1. The 635AD5C key is supplied with an adapter in the cutoff key position. Contact strip assemblies 840151039 and 840151047 must be separately ordered to replace the P-21F800 and P-21F801 used with the 635A5C key. The slate mounting cord plug connects to the adapter. Balance of plugs connect directly to key.
2. In 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 preceeding 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 M1W cord or equivalent to connect terminal 17 to a dissimilar ground or nongrounded circuit.
5. Module may also be equipped with a 679A transmitter for speakerphone. See Fig. 3 and Table D.
6. To supply "I" hold feature, terminate (O-Y) mounting cord lead from first module on terminal 24. Lead becomes SP lead at equipment.
7. If hold position lamp is required, connect (G-Y) and (Y-G) from (BL-W) binder at equipment. Lamp must be separately ordered and installed.

\* Insulated and stored.

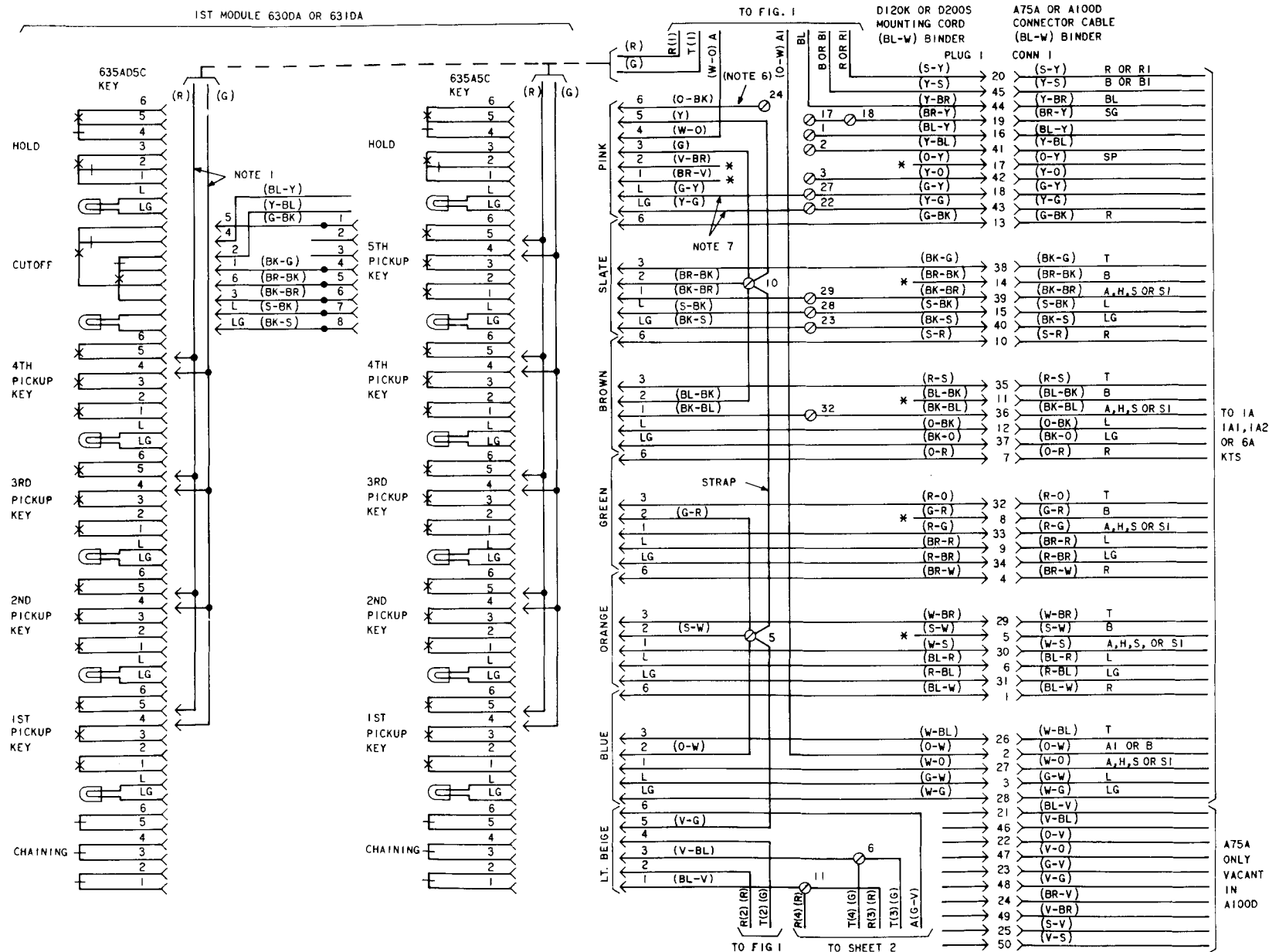


Fig. 2—Module and Connector Cable Arrangements (Sheet 1 of 5)

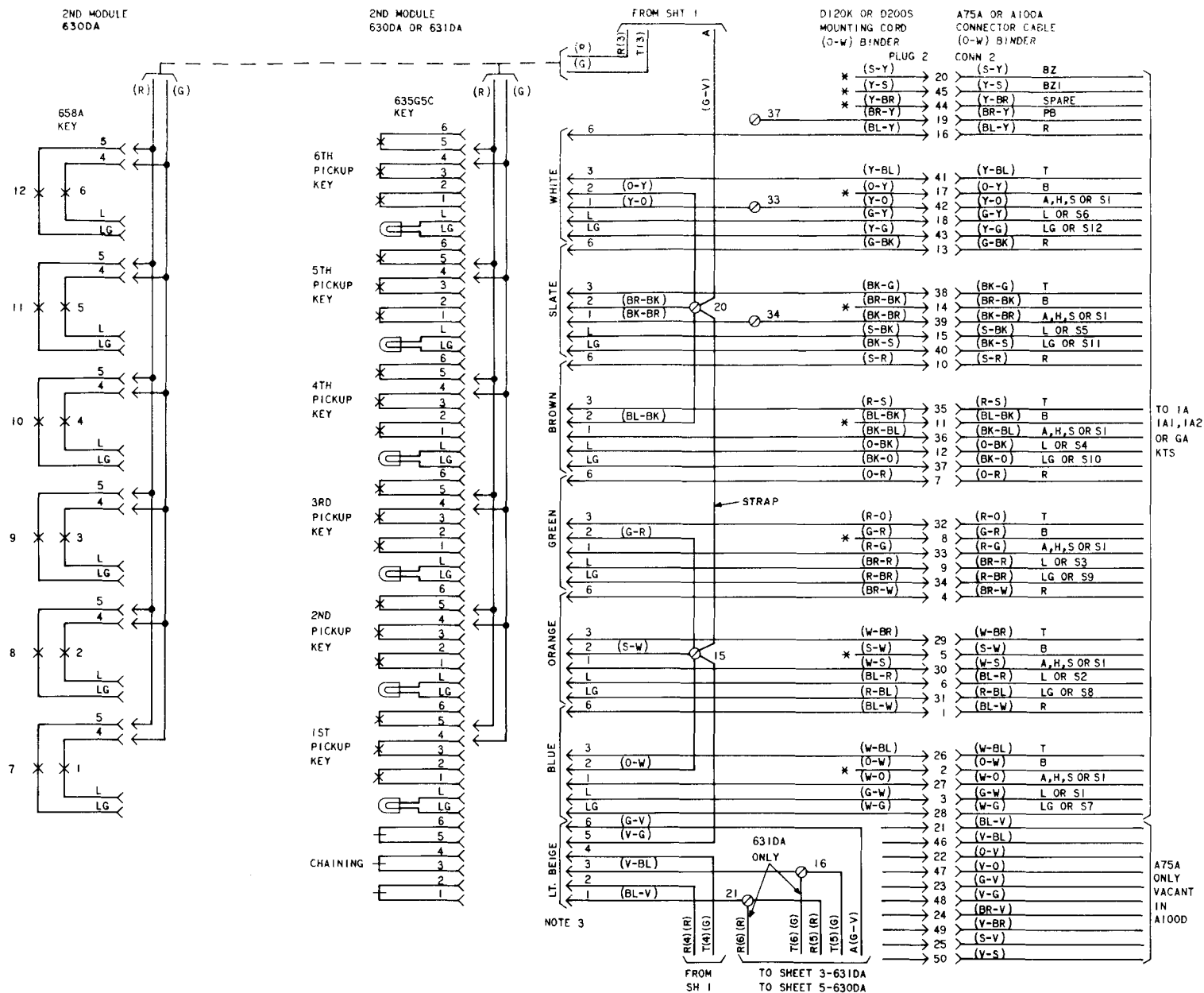


Fig. 2—Module and Connector Cable Arrangements (Sheet 2 of 5)

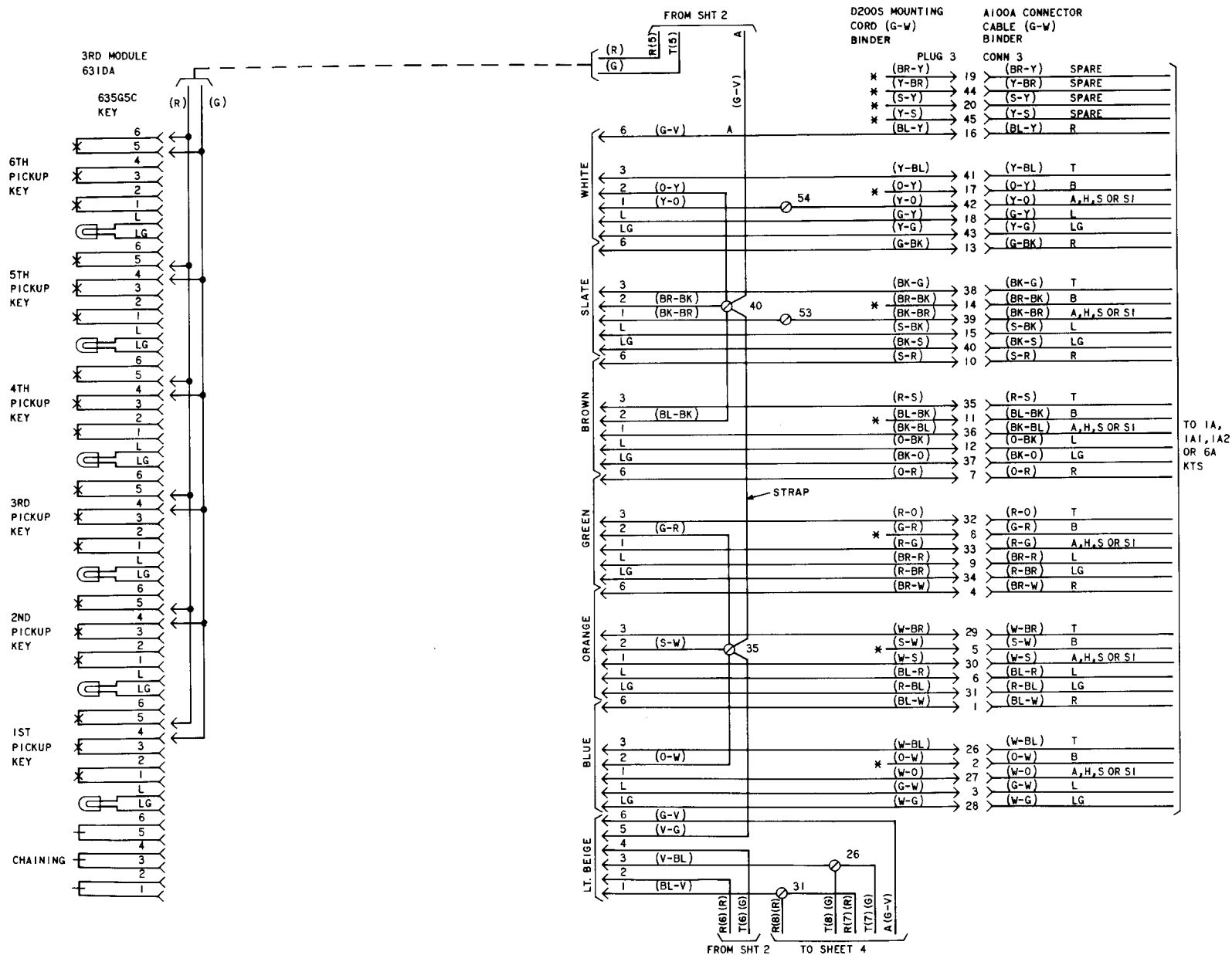


Fig. 2—Module and Connector Cable Arrangements (Sheet 3 of 5)

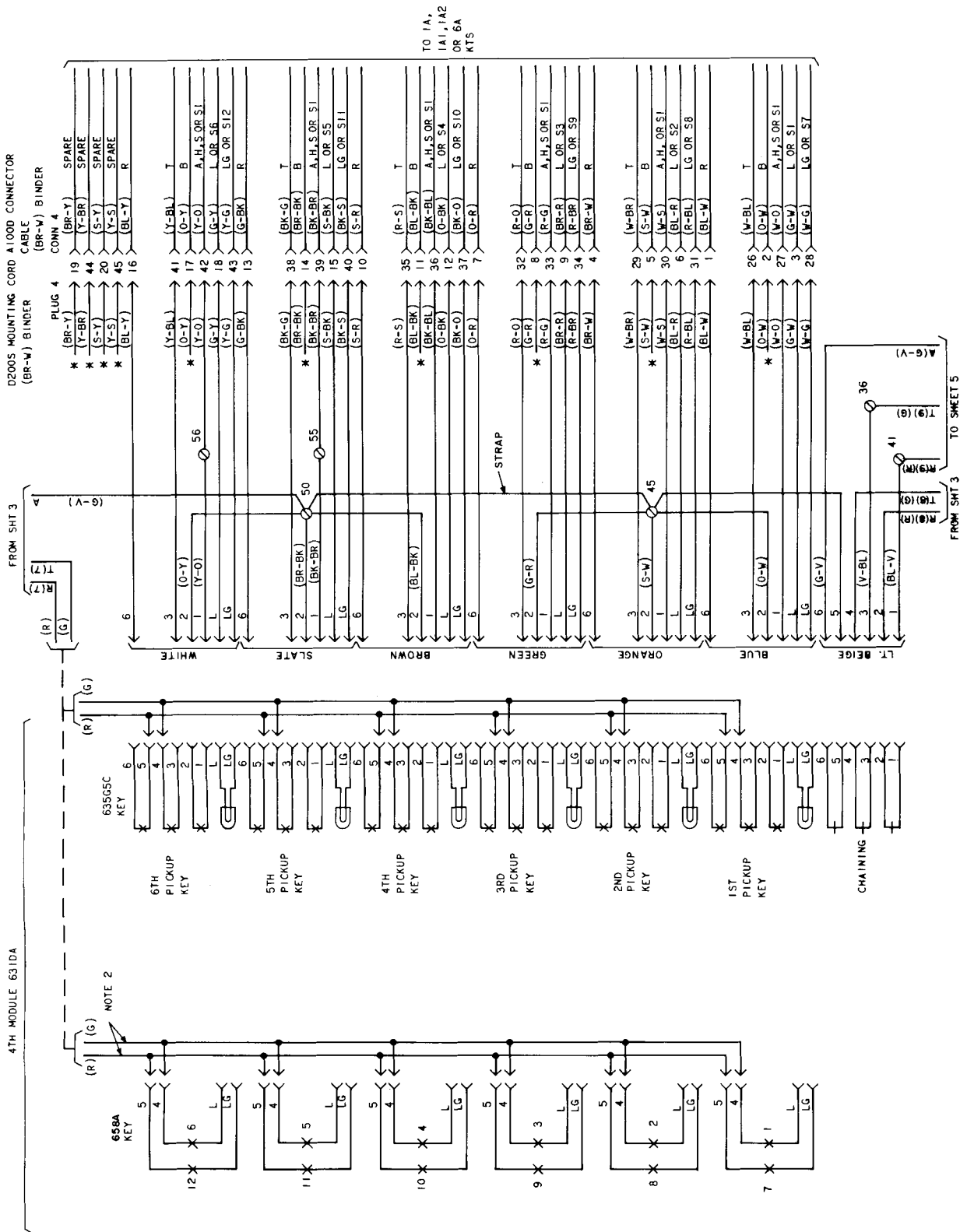


Fig. 2—Module and Connector Cable Arrangements (Sheet 4 of 5)

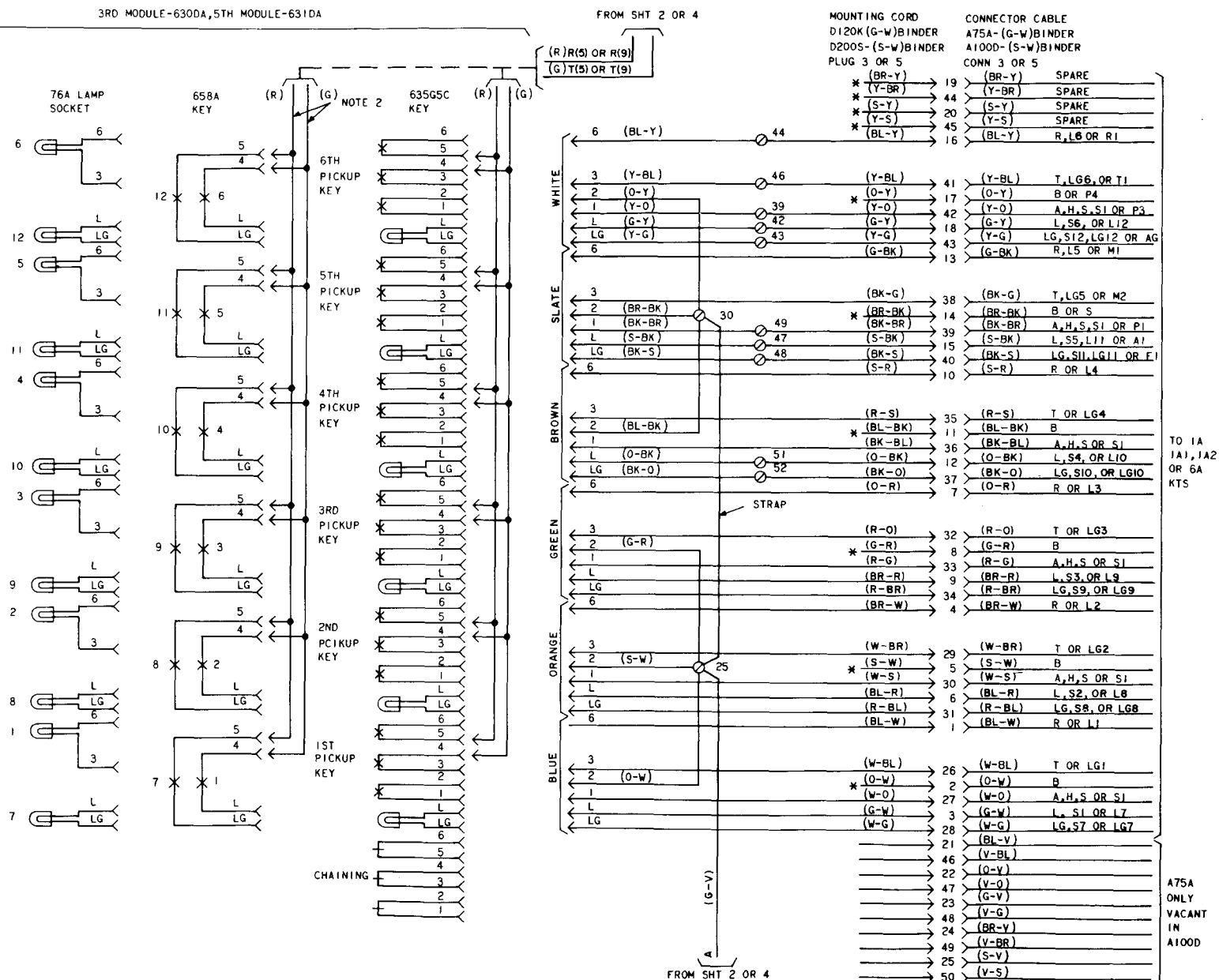
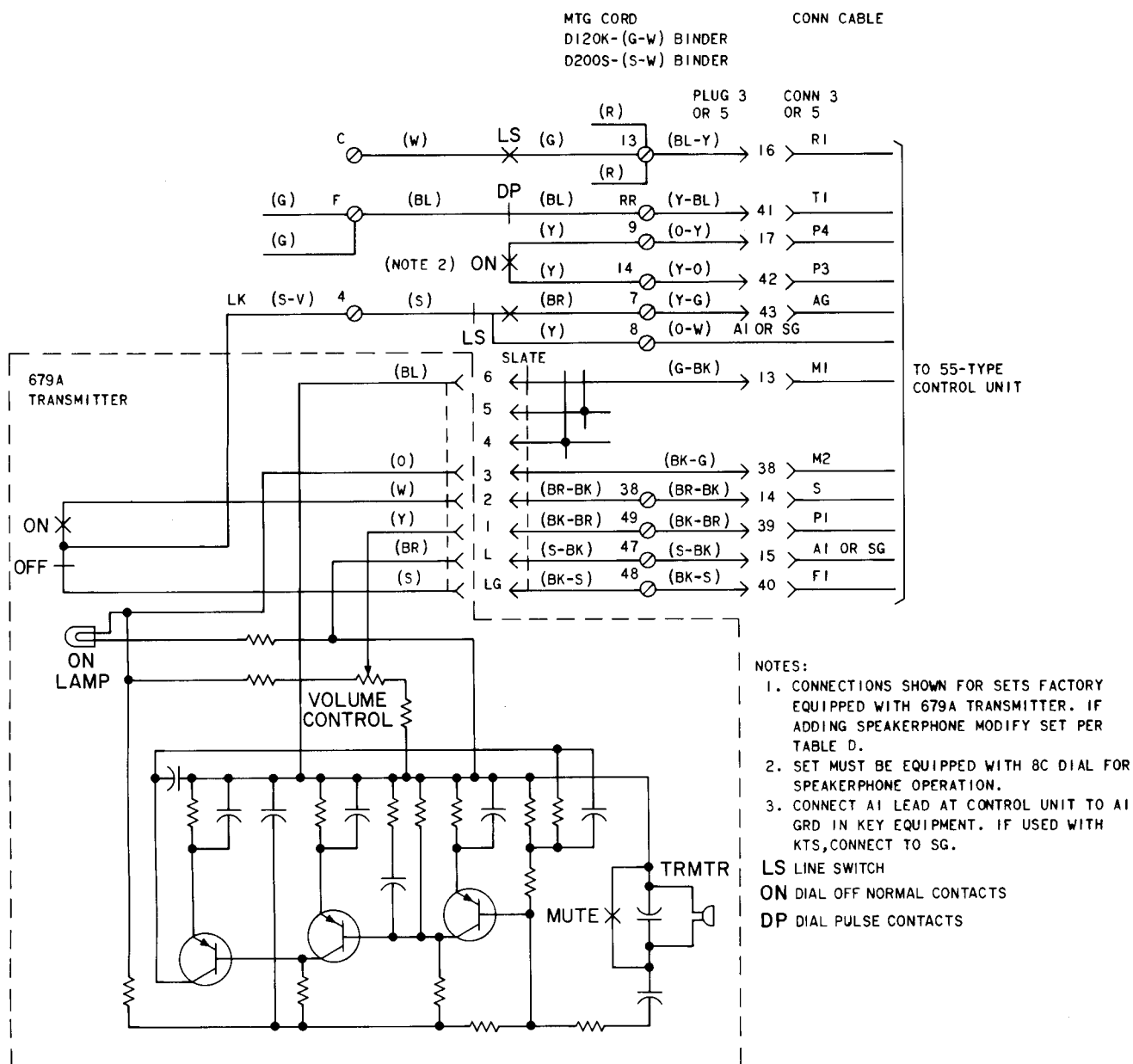


Fig. 2—Module and Connector Cable Arrangements (Sheet 5 of 5)



### Fig. 3—Speakerphone Connections

**TABLE B**  
**1A, 1A1, AND 1A2 CONVERSION — 631DA TELEPHONE SET**

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

‡ Remove (Y-O) mounting cord lead from terminal 3. Insulate and store.

TABLE C

**PICKUP-SIGNAL KEY CONVERSION  
3RD (630DA) OR 5TH (631DA) MODULE**

| NO. OF<br>SIGNAL<br>KEYS | NO. OF PVT<br>OR INTER-<br>COM LINES<br>(COM. SIG)<br>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 (630DA) or 4th (631DA) 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

## SPEAKERPHONE MODIFICATION

| WIRE OR LEAD              | COLOR | FROM | TO |
|---------------------------|-------|------|----|
| Mounting Cord<br>(Note 1) | Y-O   | 39   | 14 |
|                           | O-Y   | *    | 9  |
|                           | BL-Y  | 44   | 13 |
|                           | Y-BL  | 46   | RR |
|                           | Y-G   | 43   | 7  |
|                           | BR-BK | *    | 38 |
| Plug Strap                | BR-BK | 30   | 38 |
| 679A Trmtr                | S-V   |      | 4  |

\* Insulated and stored.

**Notes:**

- 1 Mounting cord conductors from G-W (630DA) or S-W (631DA) binder.
- 2 Connect the slate plug from the 3rd or 5th module to the 679A transmitter (Fig. 3). All other plugs in the module are insulated and stored.
- 3 Set intended for speakerphone use must be equipped with an 8C dial for the second set of off-normal contacts (P3 and P4 leads).

TABLE E

## CUTOFF KEY (635AD5C) CONNECTIONS

| FEATURE<br>(NOTE 1)     | 635AD5 KEY<br>ADAPTER |      | MTG. CD. LEADS<br>BL-W BINDER |      |      |      | RNGR | STRAP |
|-------------------------|-----------------------|------|-------------------------------|------|------|------|------|-------|
|                         | BL-Y                  | Y-BL | G-BK                          | BK-G | BL-Y | Y-BL | BK   |       |
| Cutoff Ringer in Set    | 1                     | 2    | Note 2                        |      | *    | *    | 1    | A-2   |
| Cutoff Ext Rngr or Buz  | 1                     | 2    | Note 3                        |      | 1    | 2    |      |       |
| Cutoff Ext Sta (Note 4) | 18                    | 2    | To Aux Relay                  |      | 1    | 2    |      |       |

\* Insulated and stored.

**Notes:**

- 1 Remove (BR-BK) and (BK-BR) leads of slate plug from terminals 10 and 29. Insulate and store.
- 2 To individual line or common audible circuit at equipment.
- 3 To external ringer or buzzer. Connect ringer or buzzer circuit to (BL-Y) and (Y-BL) at equipment.
- 4 Connect T, R, and A leads from equipment and to station to be cut off through contacts of auxiliary relay. Supply battery to relay winding.

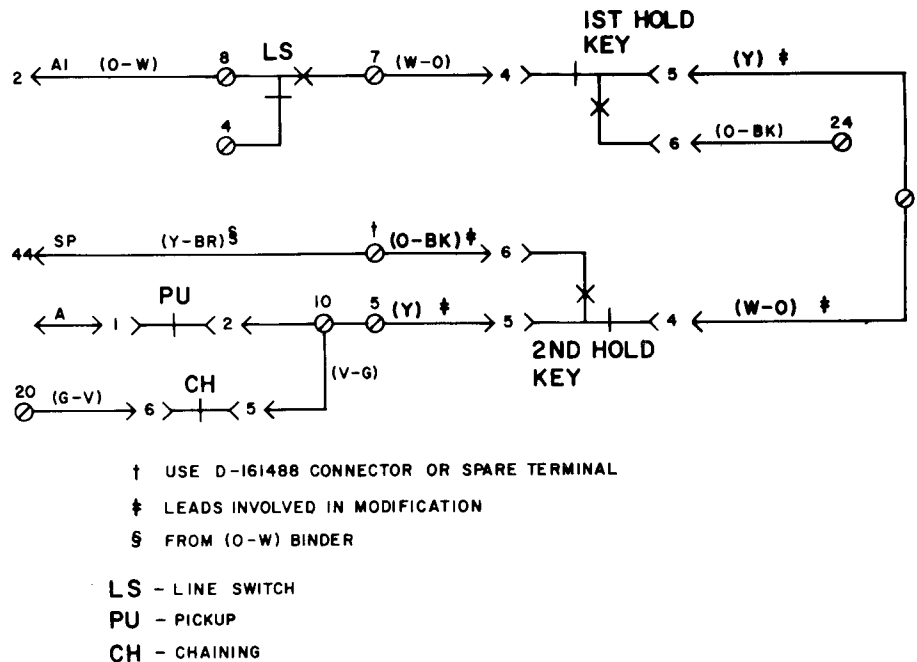


Fig. 4—Modification for Priority Hold