

## SPEAKERPHONE SYSTEM—4A

### 662- AND 2662-TYPE TELEPHONE SETS

#### 1. GENERAL

**1.01** This section contains connection and modification information for using 662- and 2662-type telephone sets with the 4A speakerphone system. Refer to Section 512-700-100 for detailed information on the 4A speakerphone.

**1.02** This section is reissued to:

- Show 662A1 and 2662A1 telephone sets MD
- Add safety information for installing and removing 85B1 power unit
- Add 223D adapter and M16H Cord
- Show 223A adapter and M16C cord MD
- Revise Fig. 1, 4, and 5.

**1.03** Rotary telephone sets equipped with an 8RA dial must be equipped with an 8CA dial when connected for 4A speakerphone. ♦The second set of off-normal contacts on the 8CA dial must be connected in the set to the same terminals as the speakerphone, P3 and P4 leads (Table A).♦

#### 2. CONNECTIONS

**2.01** Mounting cord leads must be connected as shown in Table A, except when M16C (MD) or M16H cord is terminated inside telephone set (Fig. 1B).

**2.02** To provide speakerphone at stations supplied by A25B connector cable, use an 82-type connecting block (Fig. 1A). Those stations supplied by inside wiring cable require a 223A (MD) or 223D adapter and 66E3-25 or equivalent connecting block (Fig. 1B).

#### 82-Type Connecting Block

**2.03** The connector cable and cords from the telephone set, 108-type loudspeaker set, and 680-type transmitter are installed in the proper receptacles of the connecting block (Fig. 1A and 2).

**2.04** The option plug, furnished as part of the 82-type connecting block (Fig. 1 and 3) must be positioned depending on services required. The arrow on the plug of the D20N cord points to the option selected on the option plug. RING CUTOFF provides cut off of the telephone set ringer through the loudspeaker relay contacts while on speakerphone (Fig. 3A). AUX RELAY provides a contact closure for operation of an auxiliary relay key telephone unit when it is desired to cut off several signals. The signal circuits, must be wired through the contacts of the auxiliary relay (Fig. 3B). The option block should be in this position also if no ringer cut off is desired. In this case the auxiliary relay is not required.

**Caution:** Do not use the (S-V), (V-S) pair for any other purpose as it is designated for auxiliary relay operation.

**2.05** The cover must be fastened securely to assure proper mating of connectors.

#### ♦223A (MD) or 223D Adapter♦

**2.06** Cords from the loudspeaker set, transmitter, and power unit are plugged into the adapter in same relative positions as on the 82-type connecting block. The cover must be fastened securely to assure proper mating of connectors. The telephone set mounting cord is plugged into the 66E3-25 connecting block (Fig. 1B). Access to speakerphone leads is obtained through the ♦M16C (MD) or M16H♦ cord, either in the set (Fig. 4) or at the connecting block (Fig. 5). At the 66E3-25 connecting block, 161A adapters must be used to

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connect the spade tips of the M16C or M16H cord. Install the adapters as outlined in Section 461-604-100.

**2.07** The same options are available using the 223A or 223D adapter as with the 82-type connecting block. Unused speakerphone leads in the mounting cord, or IW cable shall be disconnected as near the telephone set as possible to prevent interface with working circuits (refer to Table A). These leads shall never be multiplied between telephone sets. Refer to Section 502-110-100 for more detailed information.

**108-Type Loudspeaker Set**

**2.08** Loudspeaker set and transmitter must be a minimum of one foot apart.

**680-Type Transmitter**

**2.09** Transmitter must be at least two feet from transformer or any ac powered device.

**85B1 Power Unit**

**2.10** Use an ac power outlet (not under control of a switch) as close as possible to the system being installed. A retaining clamp (841050818) will be shipped with the 85B1 power unit.

**Caution: Do Not Ground Power Unit, and never attempt to use the same power supply for the card dialer and 4A speakerphone system.**

**2.11** Power can be supplied by making connections as shown in Fig. 1, 2, 4, or 5.

**2.12** The M2FG cord is furnished as part of the 223A or 223D adapter for connecting the 85B1 power unit.

**2.13** The 85B1 power unit should be located less than 125 feet from 108-type loudspeaker set when using 24 gauge wire. Refer to Section 512-700-100 for detailed information on power supply

**Danger: Securely attach retaining clamp to ac outlet using outlet cover screw BEFORE attempting to install 85B1 power unit. When removing 85B1 power unit, always unplug the power unit completely from the outlet BEFORE attempting to remove the retaining clamp. This will prevent the possibility of a loosened retainer clamp or metallic outlet cover making contact with the ac prongs of the 85B1 power unit when partially withdrawn from outlet. Do not use an 841050818 or similar retaining clamps on outlets where the cover mounting screw holds the duplex outlet in the box.**

**Warning: Care should be taken to trim and dress leads connecting to low voltage output of 85B1 power unit to assure that inadvertent connection to conducting surfaces or other power sources does not occur.**

♦TABLE A♦

## TELEPHONE SET MODIFICATIONS FOR 4A SPEAKERPHONE

LEAD DESIG	LEAD COLOR¶	FROM	TO 662(MD) TELSET	TO 2662A1 (MD) OR 2662A1M TELSET
R1	G-V	*	R-TBII	
T1	V-G		2-TBI	9-TBII
P4-IR	BR-V		2-41 Dial†	10-TBII§
P3-IT	V-BR		1-41 Dial‡	*
LK	S-V		LK-TBII	
AG	V-S		A-TBII	

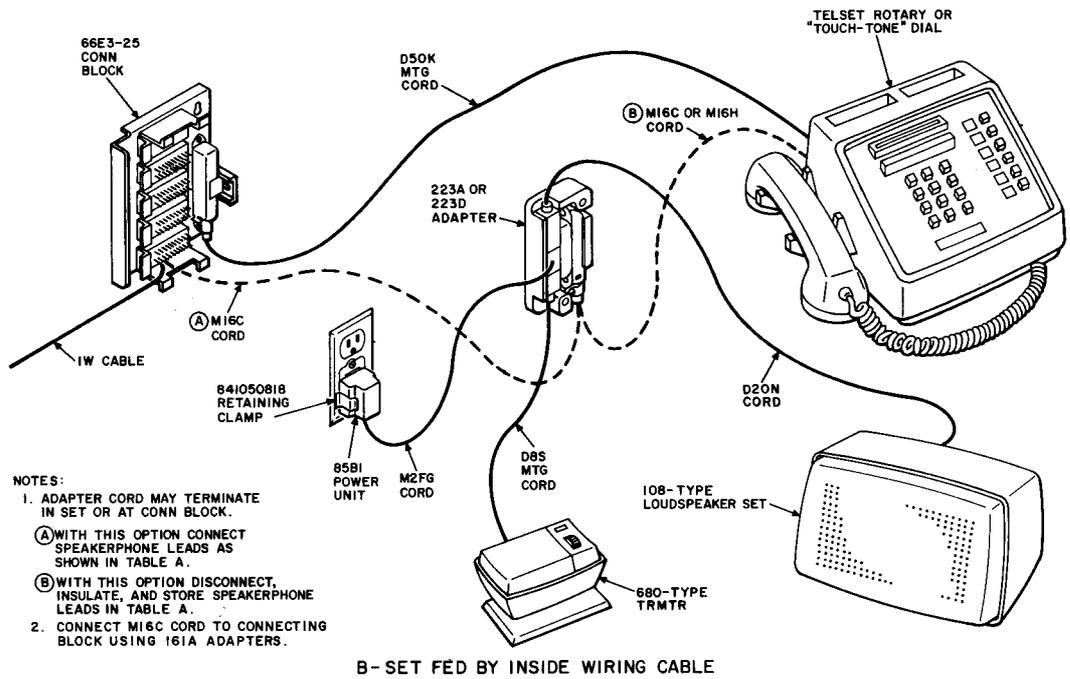
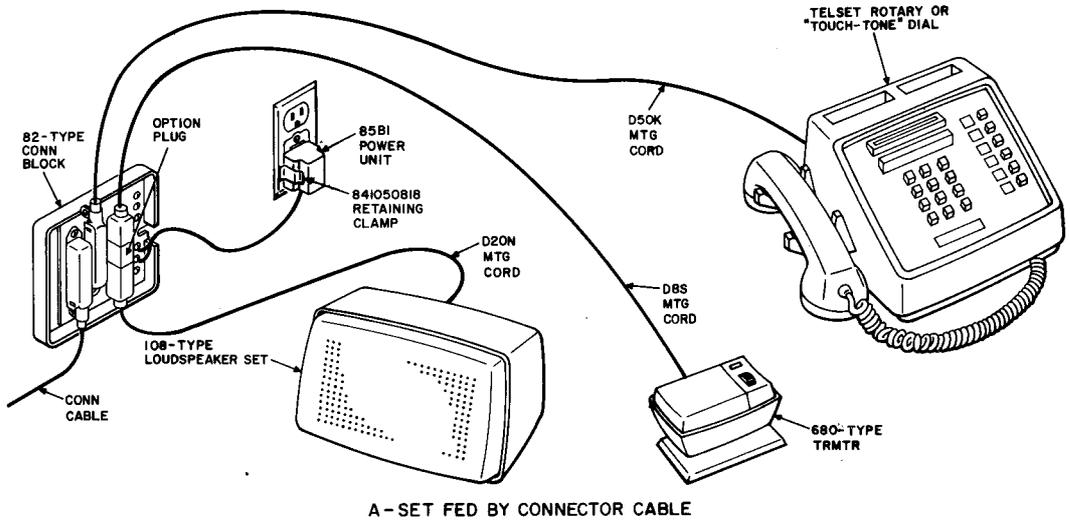
\* Insulated and stored.

† Place strap between terminal 2 of 41-type dial and 4 of TBI.

‡ Place strap between terminal 1 of 41-type dial and 3 of TBI.

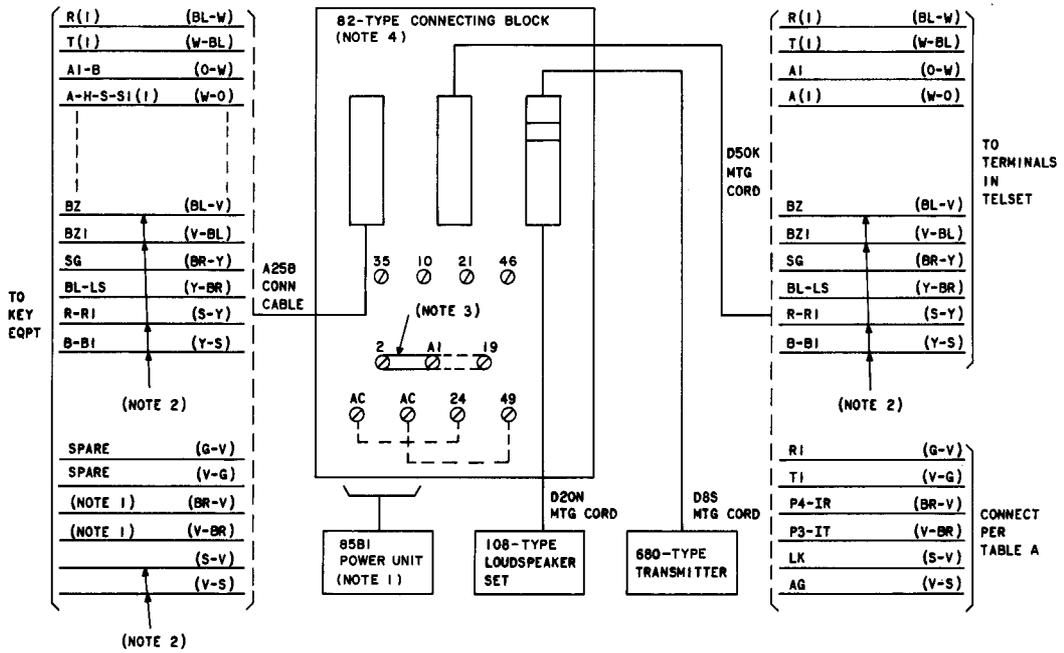
§ Move (V) dial lead from insulated and stored to terminal 10 of TBII.

¶ These leads shall never be multiplied between telephone sets. For more detailed information see Section 502-110-100.



- NOTES:**
1. ADAPTER CORD MAY TERMINATE IN SET OR AT CONN BLOCK.
  - Ⓐ WITH THIS OPTION CONNECT SPEAKERPHONE LEADS AS SHOWN IN TABLE A.
  - Ⓑ WITH THIS OPTION DISCONNECT, INSULATE, AND STORE SPEAKERPHONE LEADS IN TABLE A.
  2. CONNECT M16C CORD TO CONNECTING BLOCK USING 161A ADAPTERS.

Fig. 1—Speakerphone Arrangement, 662- or 2662- Type Telephone Set



NOTES:

1. LEADS FROM 85BI POWER UNIT MAY BE CONNECTED DIRECTLY TO 82-TYPE CONNECTING BLOCK OR FED THROUGH CONNECTOR CABLE USING (BR-V) AND (V-BR) LEADS. IF CONNECTOR CABLE IS USED STRAP TERMINAL 24 TO ONE AC TERMINAL AND 49 TO OTHER AC TERMINAL AT 82-TYPE CONNECTING BLOCK.
2. LEADS INVOLVED IN OPTIONS. SEE FIG. 3.
3. METAL STRAP FACTORY WIRED FOR 1A1/1A2 KTS, (A1-2). MOVE TO TERMINAL 19 FOR 1A KTS, (A1-19), ONLY WHEN BUSY LAMP OPTION IS PROVIDED.
4. TERMINALS 10, 21, 35, AND 46 ON 82B CONNECTING BLOCK ONLY.

Fig. 2—Speakerphone Connections Using 82-Type Connecting Block

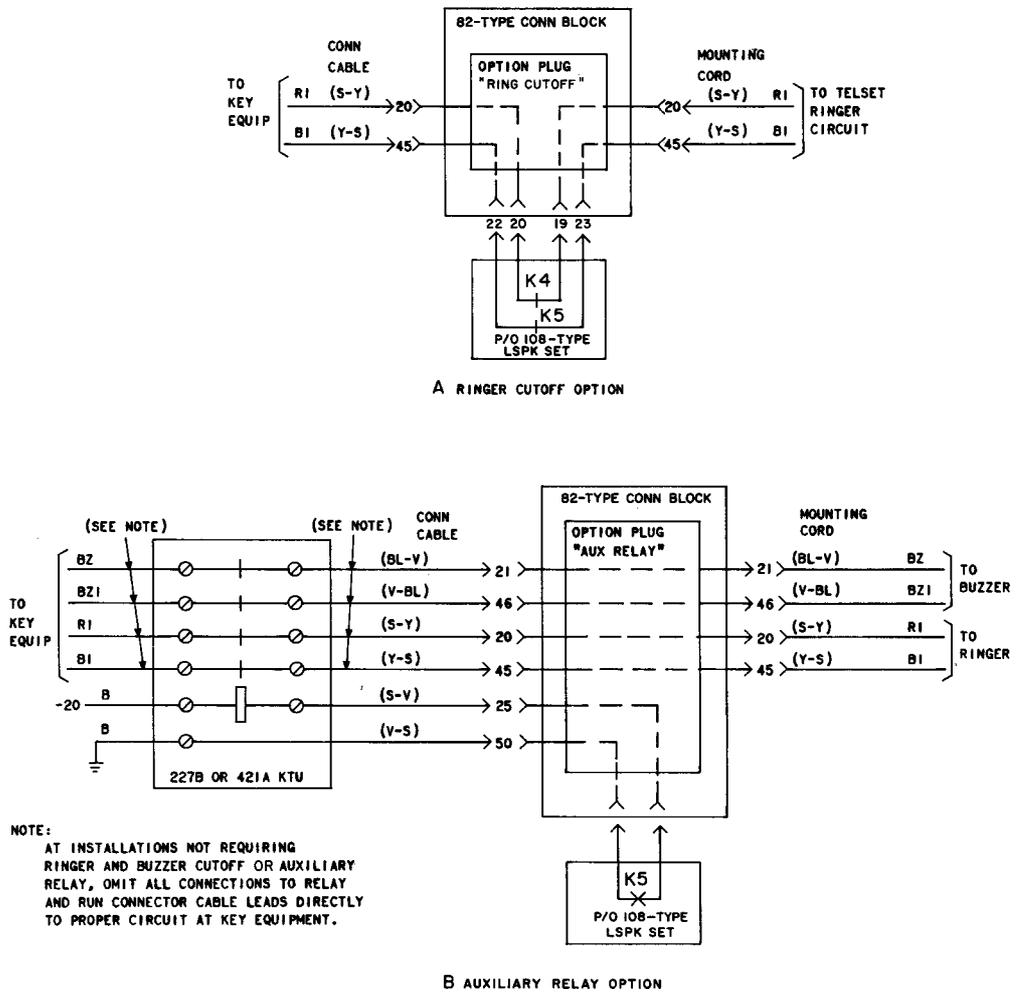


Fig. 3—Wiring Involved In Options at 82-Type Connecting Block

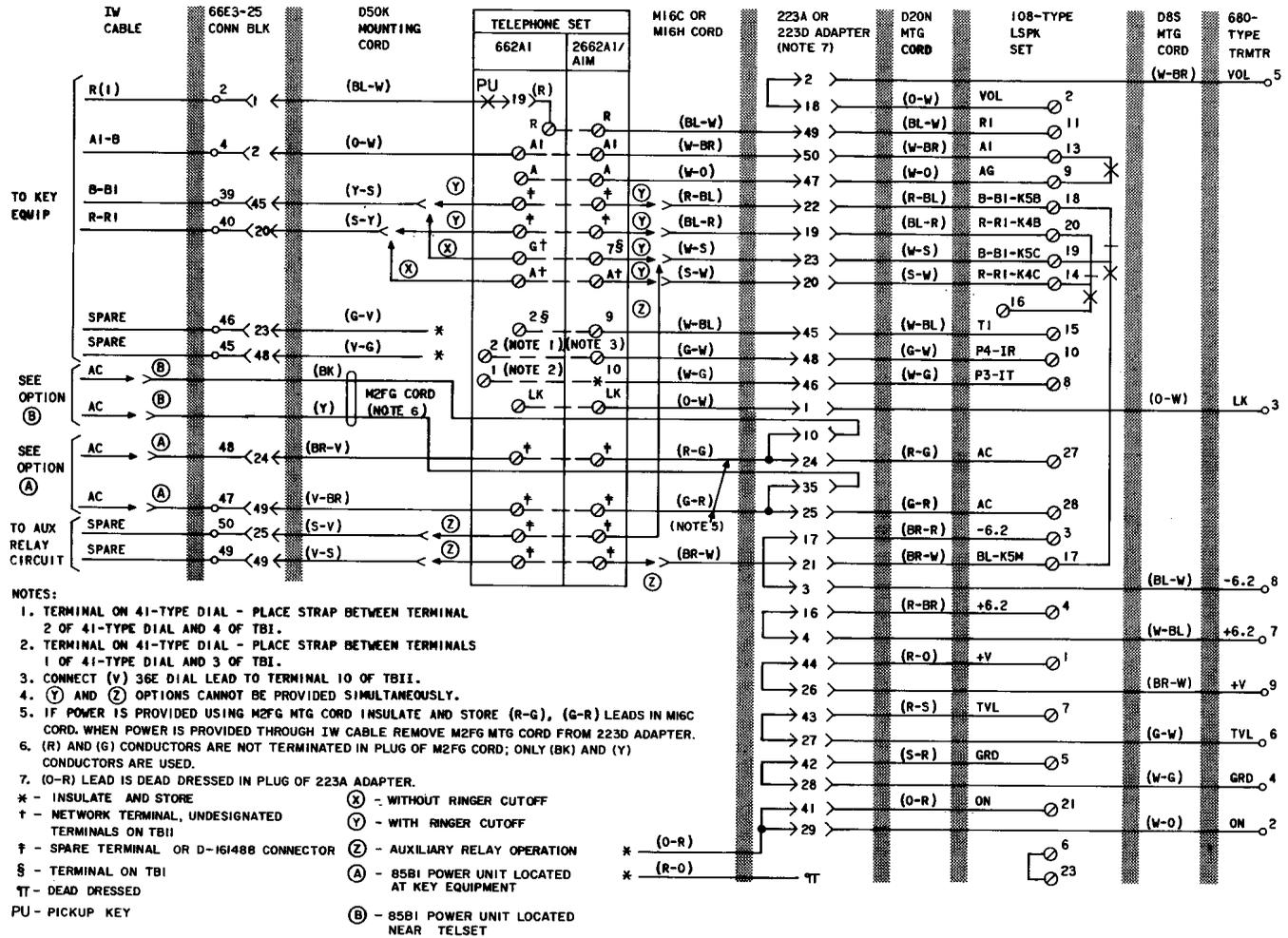


Fig. 4—Speakerphone Connections, Adapter Terminated In Set

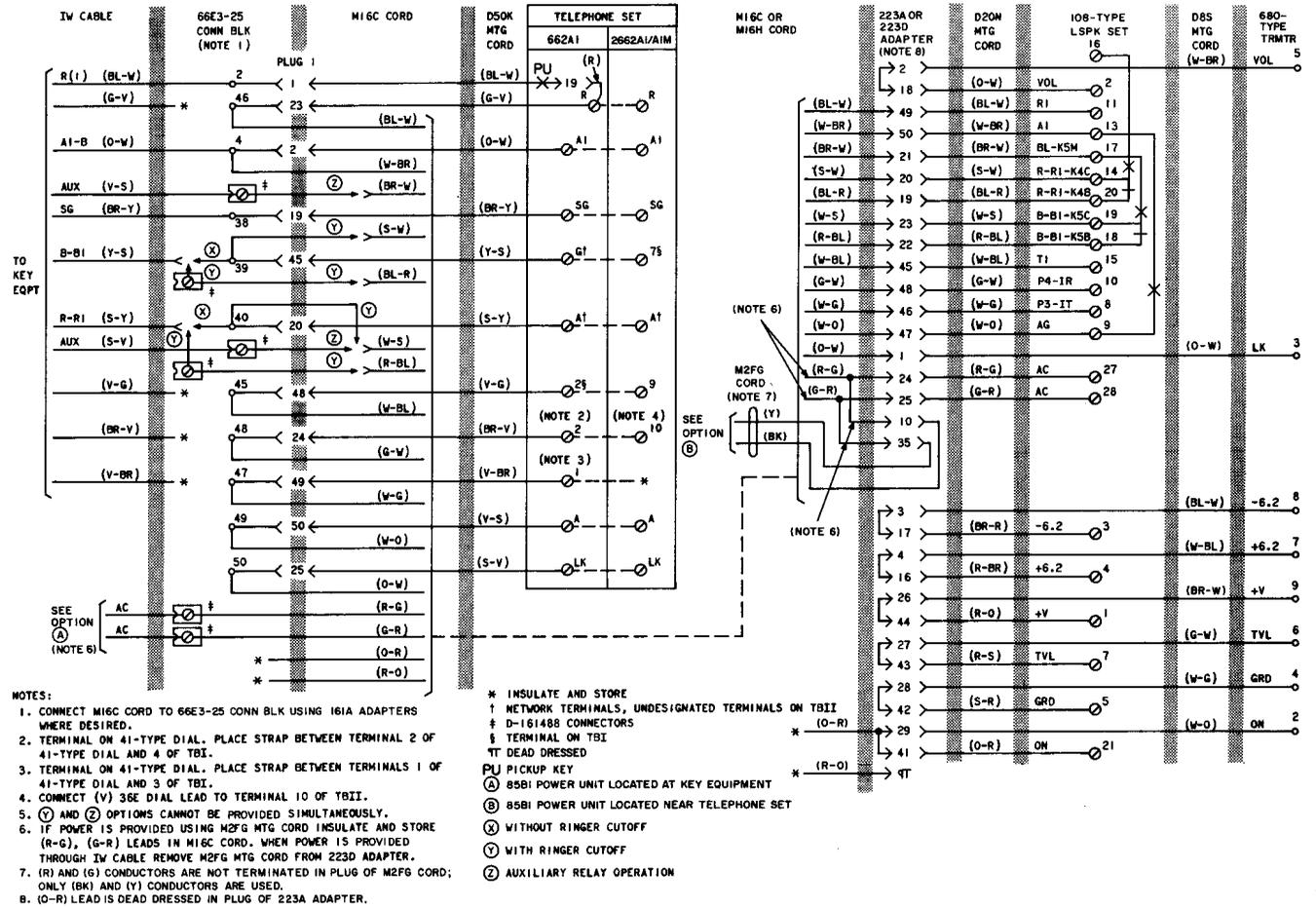


Fig. 5—Speakerphone Connections, Adapter Terminated at 66E3-25 Connecting Block