

## 630-, 631-, 632-, 634-, 635-, 2630-, 2631-, 2632-, 2634-, AND 2635-TYPE TELEPHONE SETS

### CONNECTIONS

#### SPEAKERPHONE SYSTEM—4A

##### 1. GENERAL

1.01 This section contains information for using 630-, 631-, 632-, 634-, 635-, 2630-, 2631-, 2632-, 2634-, and 2635-type telephone sets with the 4A speakerphone system.

1.02 This section is reissued to:

- Add 223D adapter and M16H cord
- Show 223A adapter and M16C cord MD
- Add safety information for the 85B1 power unit.

1.03 Refer to Section 512-700-100 for detailed information on the components of the 4A speakerphone system.

1.04 To provide 4A speakerphone feature at these CALL DIRECTOR® stations, refer to Fig. 1 for connector cable and plug-ended mounting cord connection arrangements and Fig. 2, 3, 4, or 5 for individual lead connections of the components required for the system.

1.05 Rotary telephone sets equipped with an 8R or 8RA dial must be equipped with 8C or 8CA dial when used with 4A speakerphone. The second set of off-normal contacts on 8C or 8CA dial shall connect to the same terminals as P3 and P4 leads from the speakerphone.

##### 2. CONNECTIONS

###### A. 223-Type Adapter

2.01 The cords from the 108-type loudspeaker set, 680-type transmitter, and 85B1 power

unit are installed in the proper receptacle of the 223A (MD) or 223D adapter. The cover must be fastened securely to assure proper mating of connectors.

2.02 These CALL DIRECTOR sets can be wired for *Ringer Cutoff* (Fig. 2, 3, 4, or 5). Ringer cutoff feature provides for cutting the telephone set ringer off through relay contacts located in the loudspeaker set while on speakerphone.

2.03 *Auxiliary Relay* feature (Fig. 2, 3, or 4) provides a relay 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. *Auxiliary Relay* feature cannot be provided in the 634-, 635-, 2634-, and 2635-type telephone sets due to insufficient mounting cord conductors.

2.04 When these telephone sets are multipled with sets furnishing speakerphone features, certain leads must be disconnected, insulated, and stored to avoid interference with working circuits. The designation of leads to be removed are as follows: T1 (V-G), R1 (G-V), P3 or IT (V-BR), P4 or IR (BR-V), AG (V-S), and LK (S-V).

###### B. 108-Type Loudspeaker Set

2.05 The loudspeaker set and transmitter must be a minimum of one foot apart.

###### C. 680-Type Transmitter

2.06 The transmitter must be at least two feet from transformer or any ac powered device.

##### NOTICE

Not for use or disclosure outside the  
Bell System except under written agreement

**D. 85B1 Power Unit**

2.07 Power can be supplied by connecting 85B1 power unit as shown in Fig. 1, 2, 3, 4, and 5.

2.08 The M2FG cord is furnished as part of the 223A(MD) or 223D adapter for connecting the 85B1 power unit.

2.09 Use an ac power outlet (not under control of a switch) located as close as possible to the system being installed. An 841050818 retaining clamp will be shipped with the 85B1 power unit and should be mounted to the ac receptacle to hold power unit securely.

**Danger:** For safety, securely attach retaining clamp to ac outlet using outlet cover screw BEFORE attempting to install 85B1 power unit. The power unit and any other cord plugged into the ac outlet should always be unplugged completely from outlet BEFORE attempting to attach or 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 retaining clamp 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 terminals of 85B1 power unit to assure that inadvertent connection to conducting surfaces or other power source does not occur. If more than one power unit is plugged into a multiple receptacle power strip, there must be at least one inch separation between power units. Only UL listed receptacle power strips with adequate power rating shall be used. Use of a continuous terminal power strip that allows the secondary output terminals of the power unit to be in close proximity to the ac line source is not recommended.

2.10 The 85B1 power unit should be located less than 125 feet from 108-type loudspeaker set when using 24 gauge wire or less than 85 feet when using 26 gauge wire. Refer to Section 512-700-100 for detailed information on power supply applications.

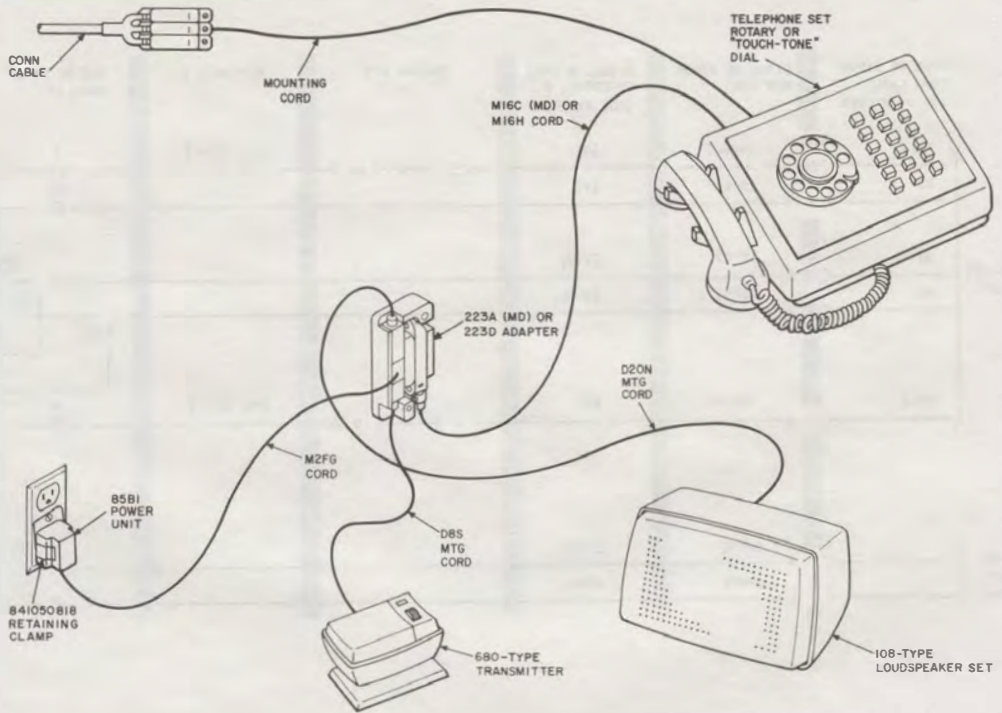
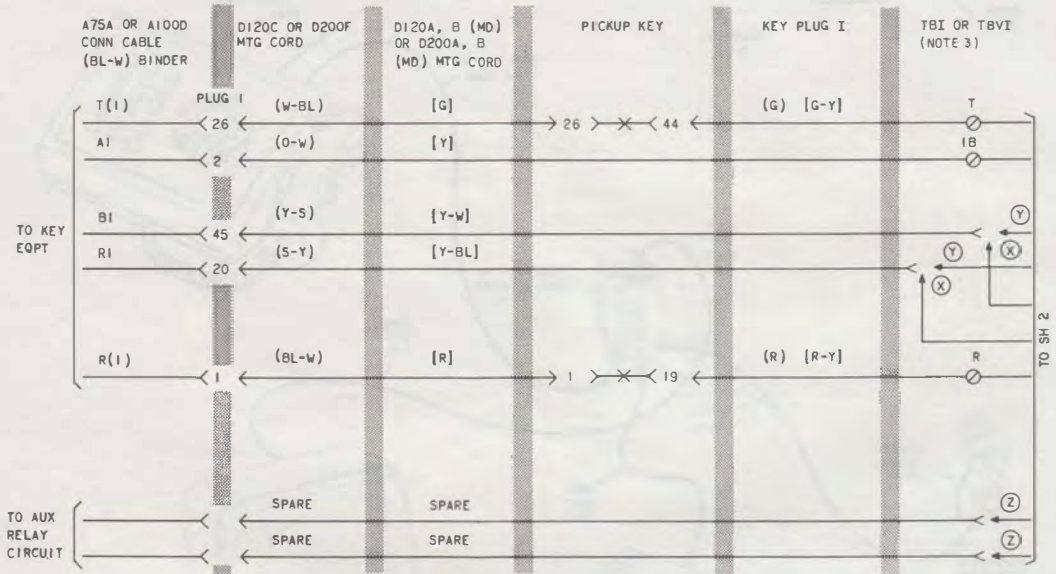


Fig. 1—4A Speakerphone System Arrangement, CALL DIRECTOR Telephone Sets Using 223A (MD) or 223D Adapter



NOTES:

1. SINGLE LETTER CODED TELEPHONE SETS ARE MD
2. WHEN POWER IS SUPPLIED VIA A SPARE PAIR IN CONNECTOR CABLE AND SET MOUNTING CORD, CONNECT THAT PAIR TO THE (R-G) AND (G-R) LEADS IN ADAPTER CORD USING SPARE TERMINALS OR D-161488 CONNECTORS AND REMOVE M2FG PLUG FROM THE ADAPTER.
3. (Y) AND (Z) OPTIONS CANNOT BE PROVIDED SIMULTANEOUSLY.
4. (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2FG CORD; ONLY (BK) AND (Y) CONDUCTORS ARE USED.
5. THE 223A(MD) OR 223D ADAPTER CONSISTS OF A M16C(MD) OR M16H CORD, M2FG CORD, AND A PLASTIC COVER AND BASE. THE PLUG OF THE ADAPTER CORD INTERCONNECTS THE M2FG, D8S, AND D20N CORD CONNECTORS.
6. (O-R) LEAD IS DEAD DRESSED IN PLUG OF 223A (MD) ADAPTER

- (X) WITHOUT RINGER CUTOFF
- (Y) WITH RINGER CUTOFF
- (Z) AUXILIARY RELAY OPERATION

- \* INSULATED AND STORED
- 1 NETWORK TERMINAL
- ‡ SPARE TERMINAL OR D-161488 CONNECTOR
- § DIAL TERMINAL
- ¶ DEAD DRESSED
- \*\* STRAP BETWEEN TERMINALS 6 AND 12 ON 108AA LOUDSPEAKER SET ONLY.

Fig. 2—4A Speakerphone System Arrangement, Connections to 630A, B, C, D; 631A, B, C, D; 2630D; or 2631D Telephone Set (Sheet 1 of 2)

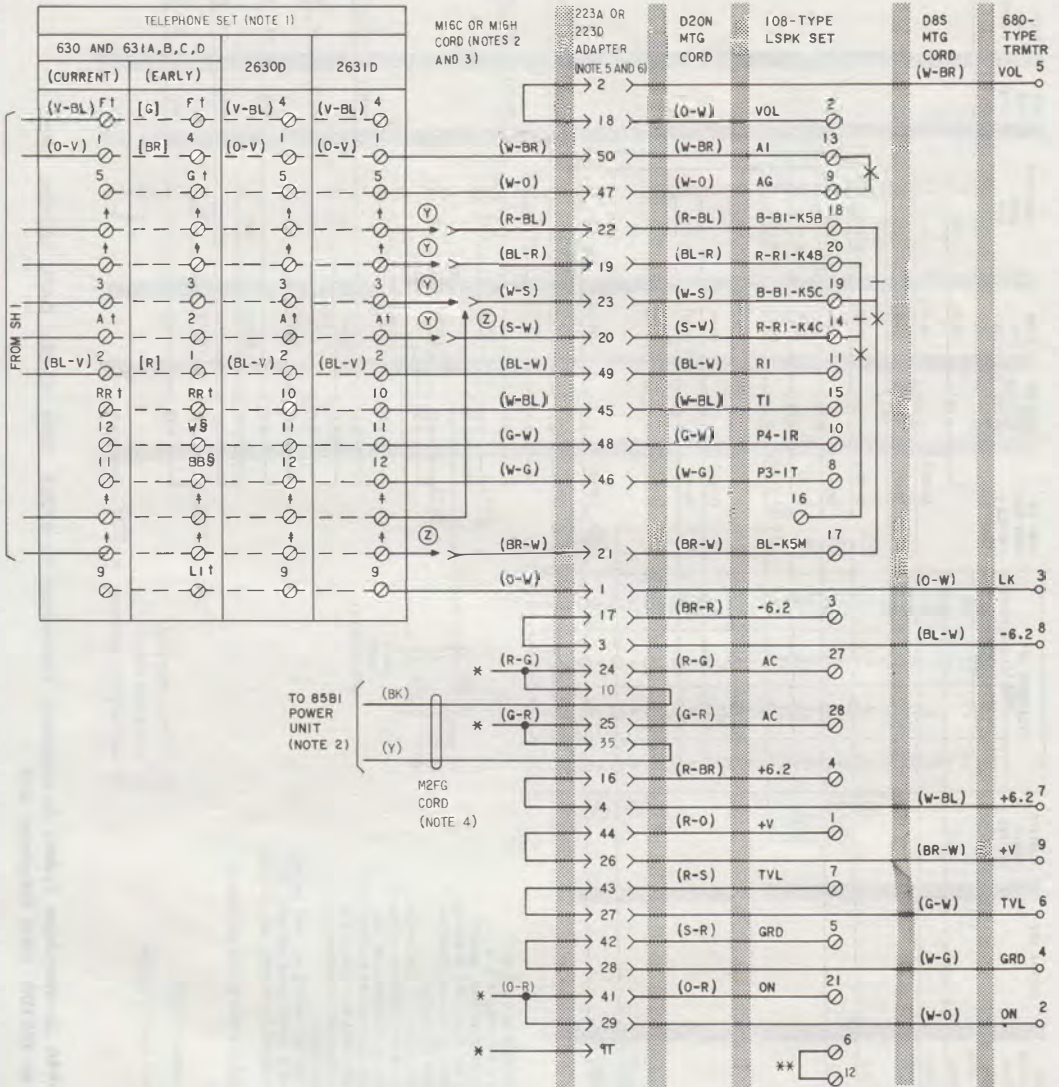


Fig. 2—4A Speakerphone System Arrangement, Connections to 630A, B, C, D; 631A, B, C, D; 2630D; or 2631D Telephone Set (Sheet 2 of 2)

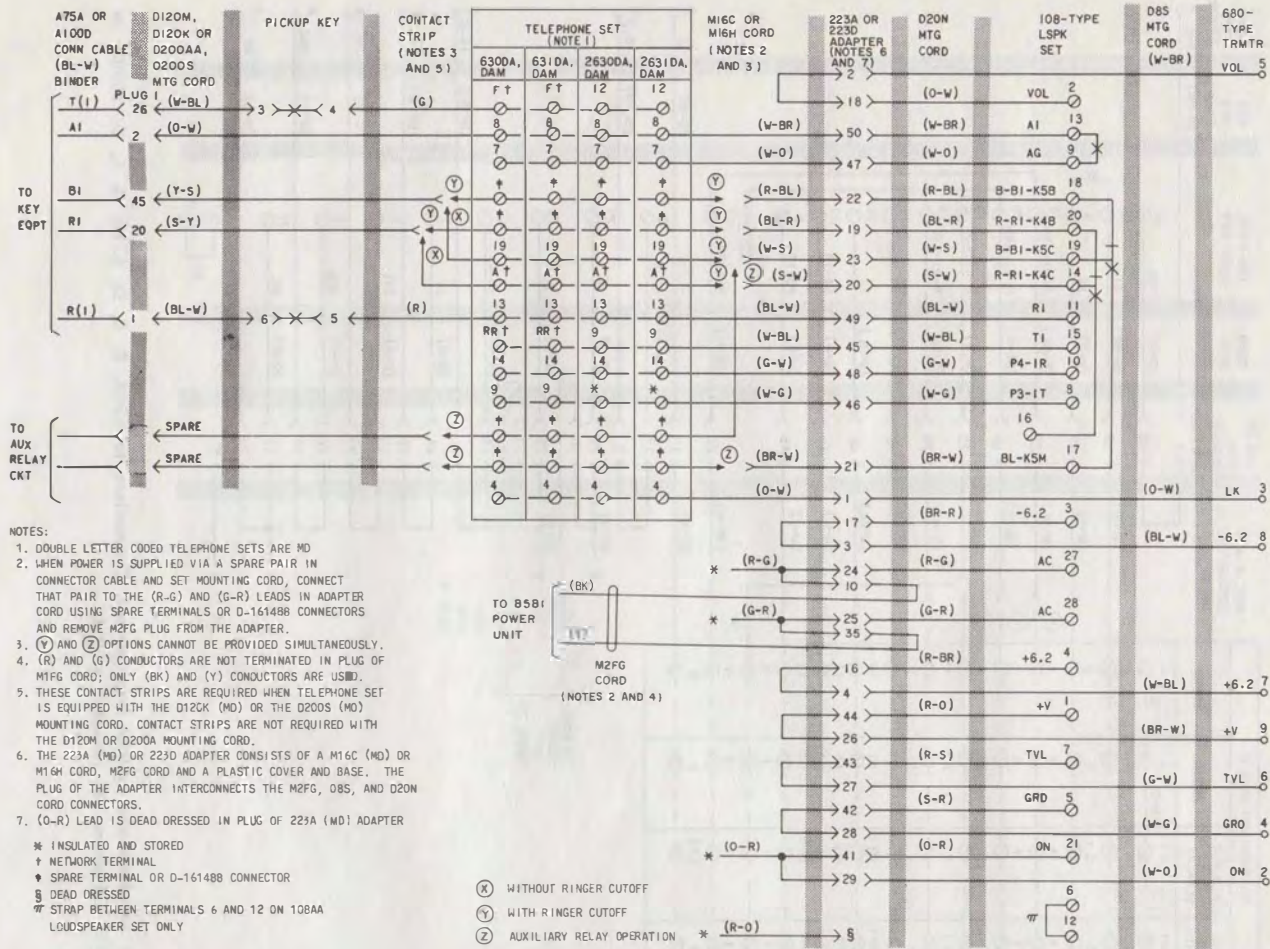
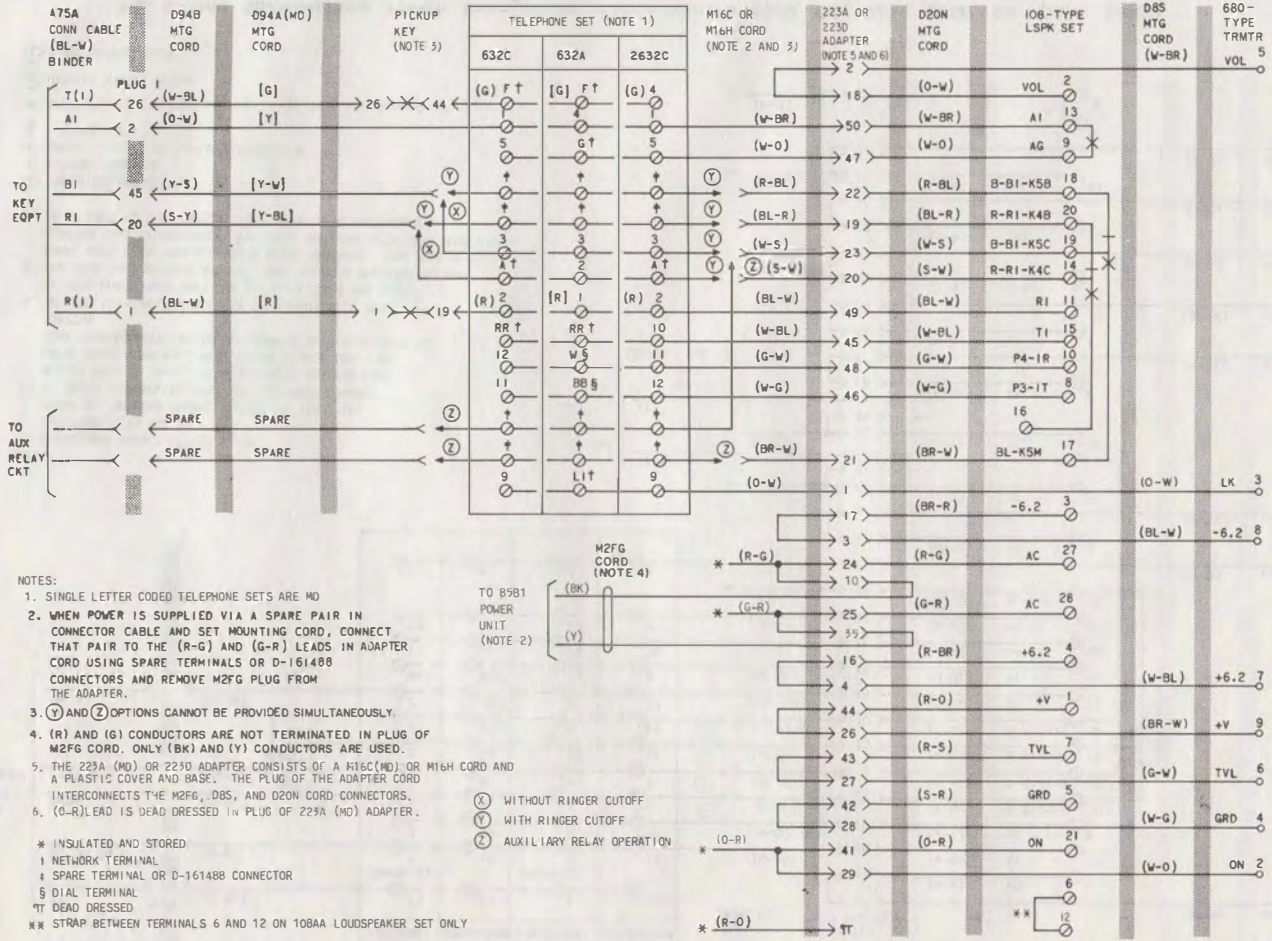


Fig. 3—4A Speakerphone System Arrangement, Connections to 630DA, DAM; 631DA, DAM, 2630DA, DAM; or 2631DA, DAM Telephone Set



- NOTES:
- SINGLE LETTER CODED TELEPHONE SETS ARE MD
  - WHEN POWER IS SUPPLIED VIA A SPARE PAIR IN CONNECTOR CABLE AND SET MOUNTING CORD, CONNECT THAT PAIR TO THE (R-G) AND (G-R) LEADS IN ADAPTER CORD USING SPARE TERMINALS OR D-16148B CONNECTORS AND REMOVE M2FG PLUG FROM THE ADAPTER.
  - (Y) AND (Z) OPTIONS CANNOT BE PROVIDED SIMULTANEOUSLY.
  - (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUS OF M2FG CORD. ONLY (BK) AND (Y) CONDUCTORS ARE USED.
  - THE 223A (MD) OR 223D ADAPTER CONSISTS OF A #15C(MD) OR #16H CORD AND A PLASTIC COVER AND BASE. THE PLUG OF THE ADAPTER CORD INTERCONNECTS THE M2FG, DBS, AND D20N CORD CONNECTORS.
  - (O-R) LEAD IS DEAD DRESSED IN PLUG OF 223A (MD) ADAPTER.
- \* INSULATED AND STORED  
 † NETWORK TERMINAL  
 ‡ SPARE TERMINAL OR D-16148B CONNECTOR  
 § DIAL TERMINAL  
 ¶ DEAD DRESSED  
 \*\* STRAP BETWEEN TERMINALS 6 AND 12 ON 108AA LOUDSPEAKER SET ONLY
- (X) WITHOUT RINGER CUTOFF  
 (Y) WITH RINGER CUTOFF  
 (Z) AUXILIARY RELAY OPERATION

Fig. 4—4A Speakerphone System Arrangement, Connections to 632A, 632C, or 2632C Telephone Set

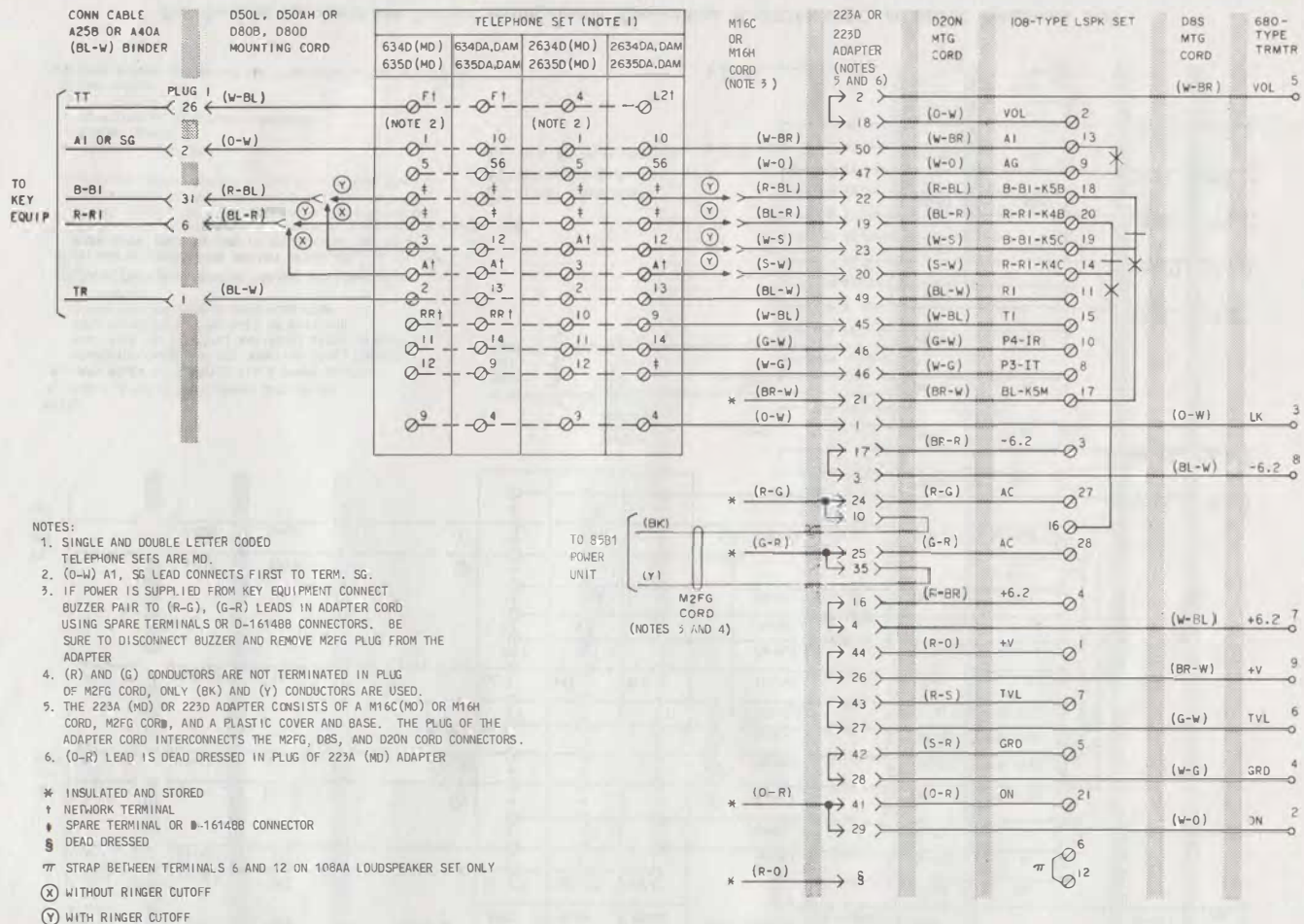


Fig. 5—4A Speakerphone System Arrangement, Connections to 634D, DA, DAM; 635D, DA, DAM; 2634D, DA, DAM; or 2635D, DA, DAM Telephone Set

NOTES:

1. SINGLE AND DOUBLE LETTER CODED TELEPHONE SETS ARE MD.
2. (O-W) A1, SG LEAD CONNECTS FIRST TO TERM. SG.
3. IF POWER IS SUPPLIED FROM KEY EQUIPMENT CONNECT BUZZER PAIR TO (R-G), (G-R) LEADS IN ADAPTER CORD USING SPARE TERMINALS OR D-16148B CONNECTORS. BE SURE TO DISCONNECT BUZZER AND REMOVE M2FG PLUG FROM THE ADAPTER
4. (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2FG CORD, ONLY (BK) AND (Y) CONDUCTORS ARE USED.
5. THE 223A (MD) OR 223D ADAPTER CONSISTS OF A M16C(MD) OR M16H CORD, M2FG CORD, AND A PLASTIC COVER AND BASE. THE PLUG OF THE ADAPTER CORD INTERCONNECTS THE M2FG, DBS, AND D20N CORD CONNECTORS.
6. (O-R) LEAD IS DEAD DRESSED IN PLUG OF 223A (MD) ADAPTER

- \* INSULATED AND STORED
- † NETWORK TERMINAL
- ‡ SPARE TERMINAL OR D-16148B CONNECTOR
- § DEAD DRESSED

TT STRAP BETWEEN TERMINALS 6 AND 12 ON 108AA LOUDSPEAKER SET ONLY

(X) WITHOUT RINGER CUTOFF

(Y) WITH RINGER CUTOFF