

660A1, 2660A1, AND 2660A1M TELEPHONE SETS

CONNECTIONS

SPEAKERPHONE SYSTEM—4A

1. GENERAL

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

1.02 This section is reissued to:

- Add information to identify registered and typical grandfathered arrangements
- Add safety information for the 85B1 power unit
- Delete 4A speakerphone and key telephone system wiring figures for 660A1, 2660A1, and 2660A1M telephone sets
- Delete key telephone system modifications in Tables A through D.

1.03 This section provides information necessary to modify and connect the 660A1 (MD), 2660A1 (MD), and 2660A1M telephone set to provide speakerphone service (Fig. 1 and 2).

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

1.05 The D6AF or D4BT mounting cord furnished with 660A1 or 2660A1 sets must be replaced by a D10R mounting cord (ordered separately). In addition the telephone set must be modified per Tables A, B, or C.

1.06 The housing on earlier versions of the 2660A1M telephone set must be notched to accommodate the M16C (MD) or M16H adapter cord.

Refer to Section 503-100-100 for notching information. In addition the telephone set must be modified per Table D.

2. CONNECTIONS

A. 223-Type Adapter

2.01 Cords from the 108-type loudspeaker set, 680-type transmitter, and 85B1 power unit are installed in proper receptacle of the 223A (MD) or 223D adapter. The cover must be fastened securely to assure proper mating of connectors.

B. 108-Type Loudspeaker Set

2.02 Loudspeaker set and transmitter must be placed a minimum of one foot apart.

C. 680-Type Transmitter

2.03 Transmitter must be at least two feet from the transformer or any ac powered device.

D. 85B1 Power Unit

2.04 Power shall be supplied by connecting power unit as shown in Fig. 3 through 6.

2.05 Use an ac power outlet (not under control of a switch) located as close as possible to the system being installed. A retaining clamp will be shipped with power unit and should be mounted to the ac receptacle to hold power unit securely to prevent accidental loss of power (Fig. 1 and 2).

Caution: Never attempt to use the same power supply for the card dialer and the 4A speakerphone system.

2.06 The power unit should be located less than 125 feet from 108-type loudspeaker set when

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using 24 gauge wire or 85 feet when using 26 gauge wire. Refer to Section 512-700-100 for detailed information on power supply applications.

2.07 The M2FG cord is furnished as part of the 223-type adapter for connecting the power unit.

Danger: For safety, securely attach a 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 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 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. 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.

◆ TABLE A ◆

660A1 TELEPHONE SET EQUIPPED WITH C4B RINGER –
MODIFICATION FOR 4A SPEAKERPHONE

APPARATUS	WIRE OR LEAD		INDIVIDUAL OR BRIDGED (NOTE 3)	RING PARTY (NOTE 3)	TIP PARTY WITHOUT IDENT. (NOTE 3, 4)
	LEAD DESIG	COLOR			
Line Switch		(BR) [S-G] (Y) [S-W] (W) [S-BR]	* TBI-P2 C		
Ringer Straps		(R)	L1		
8CA Dial (Note 1)		(Y) (Y) (W) (W) (BL) (G) or (BL)	TBII 1 TBII 2 TBII 3 TBII 4 TBII 5 TBII 6		
Add Straps (M1W cord or equivalent)			TBII-1 to 41-type dial, terminal 1 TBII-2 to 41-type dial, terminal 2		
			K of Net. to F of Net.	K of Net. to P2 of TB1	
Strap		(G)	L1 of Net to L1 of TB1	L1 of Net. to F of Net.	
D10R Mounting Cord (Note 2)	R	(BL-W)	TBI-L1		
	T	(W-BL)	F		
	A1	(O-W)	TBI-P2		
	T1	(W-O)	41-type dial, terminal 6		
	P4	(G-W)	41-type dial, terminal 1		
	P3	(W-G)	41-type dial, terminal 2		
	A-AG	(BR-W)	*		
	LK	(W-BR)	TBI-L2		
	P1	(S-W)	41-type dial, terminal P1		
	P2	(W-S)	41-type dial, terminal P2		

Note 1. Replace 8RA dial with 8CA dial (order separately).

Note 2. Replace D6AF mounting cord with D10R mounting cord (order separately).

Note 3. Terminals on network unless otherwise noted.

Note 4. 4A speakerphone system is not designed for tip party identification service.

* Insulate and store.

() Current color code.

[] MD color code.

♦ TABLE B ♦

660A1 TELEPHONE SET EQUIPPED WITH C4A RINGER –
MODIFICATION FOR 4A SPEAKERPHONE

APPARATUS	WIRE OR LEAD		INDIVIDUAL OR BRIDGED (NOTE 3)	RING PARTY (NOTE 3)	TIP PARTY WITHOUT IDENT. (NOTE 3, 4)
	LEAD DESIG	COLOR			
Line Switch		(BR) [S-G] (Y) [S-W] (W) [S-BR]		*	TBI-P2 C
Ringer Straps		(R) (BK)	L1 F		L1 TBI-P2
8CA Dial (Note 1)		(Y) (Y) (W) (W) (BL) (G) or (BL)			TBII 1 TBII 2 TBII 3 TBII 4 TBII 5 TBII 6
Add Straps (M1W cord or equivalent)					TBII-1 to 41-type dial, terminal 1 TBII-2 to 41-type dial, terminal 2
D10R Mounting Cord (Note 2)	R	(BL-W)			TBI-L1
	T	(W-BL)			F
	A1	(O-W)			TBI-P2
	T1	(W-O)			41-type dial, terminal 6
	P4	(G-W)			41-type dial, terminal 1
	P3	(W-G)			41-type dial, terminal 2
	A-AG	(BR-W)			*
	LK	(W-BR)			TBI-L2
	P1	(S-W)			41-type dial, terminal P1
	P2	(W-S)			41-type dial, terminal P2

Note 1. Replace 8RA dial with 8CA dial (order separately).

Note 2. Replace D6AF mounting cord with D10R mounting cord (order separately).

Note 3. Terminals on network unless otherwise noted.

Note 4. 4A speakerphone system is not designed for tip party identification service.

* Insulate and store.

() Current color code.

[] MD color code.

♦ TABLE C ♦

2660A1 TELEPHONE SET EQUIPPED WITH M1A OR M1B RINGER –
MODIFICATION FOR 4A SPEAKERPHONE

APPARATUS	WIRE OR LEAD		INDIVIDUAL OR BRIDGED (NOTE 1)	RING PARTY (NOTE 1)	TIP PARTY WITHOUT IDENT. (Note 1, 4)
	LEAD DESIG	COLOR			
Line Switch		(BK)	*	*	*
		(Y)	G	A	G
		(S)	Connect to (S-W) mounting cord lead †		
Dial		(G)	L2		
		(W)	C		
Ringer Strap		(G)	A	G	A
		(G)	TBI-7 to L2		TBI-7 to G
D10R Mounting Cord (Note 2, 3)	R	(BL-W)	L2	L2	L2
	T	(W-BL)	A	G	A
	A1	(O-W)	G	A	G
	A-AG	(W-O)	*	*	*
	T1	(W-G)	Connect to (O) dial lead †		
	IR	(BR-W)	Connect to (V) dial lead †		
	IT	(W-BR)	*		
	LK	(S-W)	Connect to (S) line switch lead †		

Note 1. Terminals on network unless otherwise noted.

Note 2. Replace D6AF mounting cord with D10R mounting cord (order separately).

Note 3. Insulate and store (G-W) and (W-S) mounting cord leads.

Note 4. 4A speakerphone system is not designed for tip party identification service.

* Insulate and store.

† Use D-161488 connector.

◆ TABLE D ◆

2660A1M TELEPHONE SET EQUIPPED WITH M1A OR M1B RINGER –
MODIFICATION FOR 4A SPEAKERPHONE (NOTE 3)

WIRE OR LEAD			INDIVIDUAL OR BRIDGED (NOTE 1)	RING PARTY (NOTE 1)	TIP PARTY WITHOUT IDENT. (NOTE 1, 4)
APPARATUS	LEAD DESIG	COLOR			
623P4 Jack Assy	R	(R)	L2 G L1 *		
	T	(G)			
	A1-SG	(Y)			
	A	(BK)			
Line Switch		(BR)	*		
		(S)			
Dial		(G)	G		
Ringer Strap		(G)			TBI-7 to G
M16C or M16H Adapter Cord (Note 2, 3)	R1	(BL-W)	L2 L1 *		
	A1	(W-BR)			
	AG	(W-O)			
	T1	(W-BL)	Connect to (O) dial lead † Connect to (V) dial lead †		
	IR	(G-W)			
IT	(W-G)	*			
LK	(O-W)	Connect to (S) line switch lead †			
Strap Between Net. Term		(G)			A to L1

Note 1. Terminals on network unless otherwise noted.

Note 2. Insulate and store unused leads in adapter cord.

Note 3. If housing must be notched to accommodate the adapter cord, refer to Section 503-100-100 for notching information.

Note 4. 4A speakerphone system is not designed for tip party identification service.

* Insulate and store.

† Use D-161488 connector.

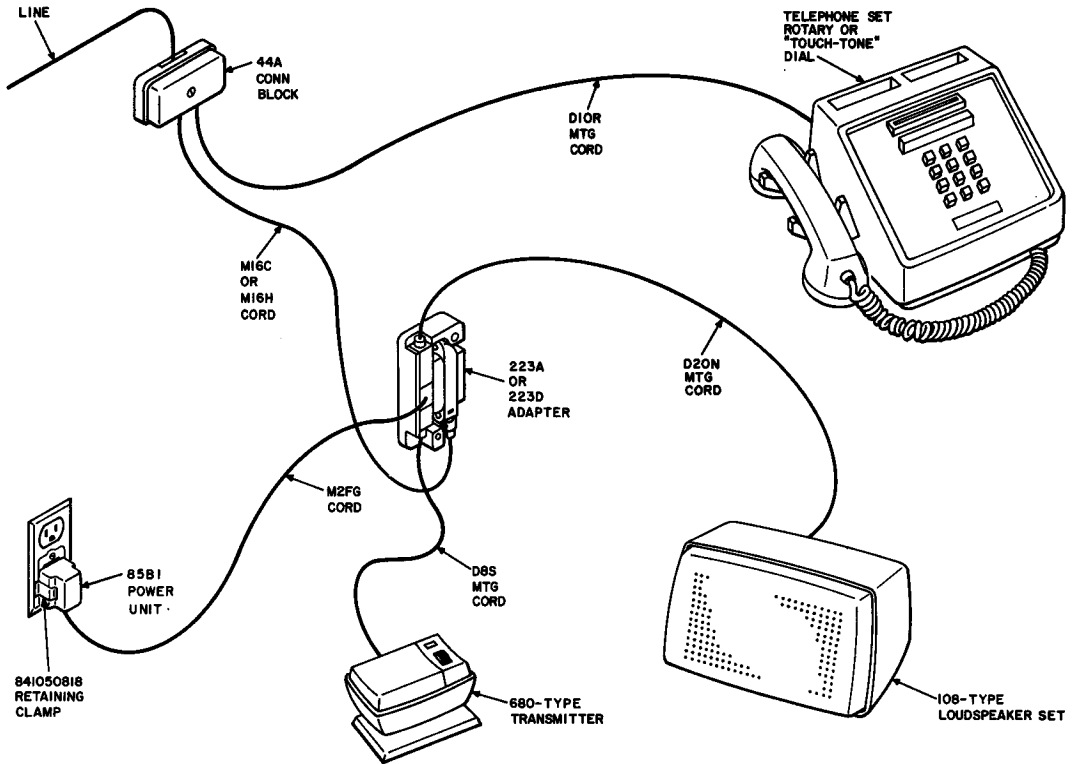


Fig. 1—Typical Grandfathered 4A Speakerphone System Arrangement, 660A1 (MD) or 2660A1 (MD) Telephone Sets Using 223A (MD) or 223D Adapter

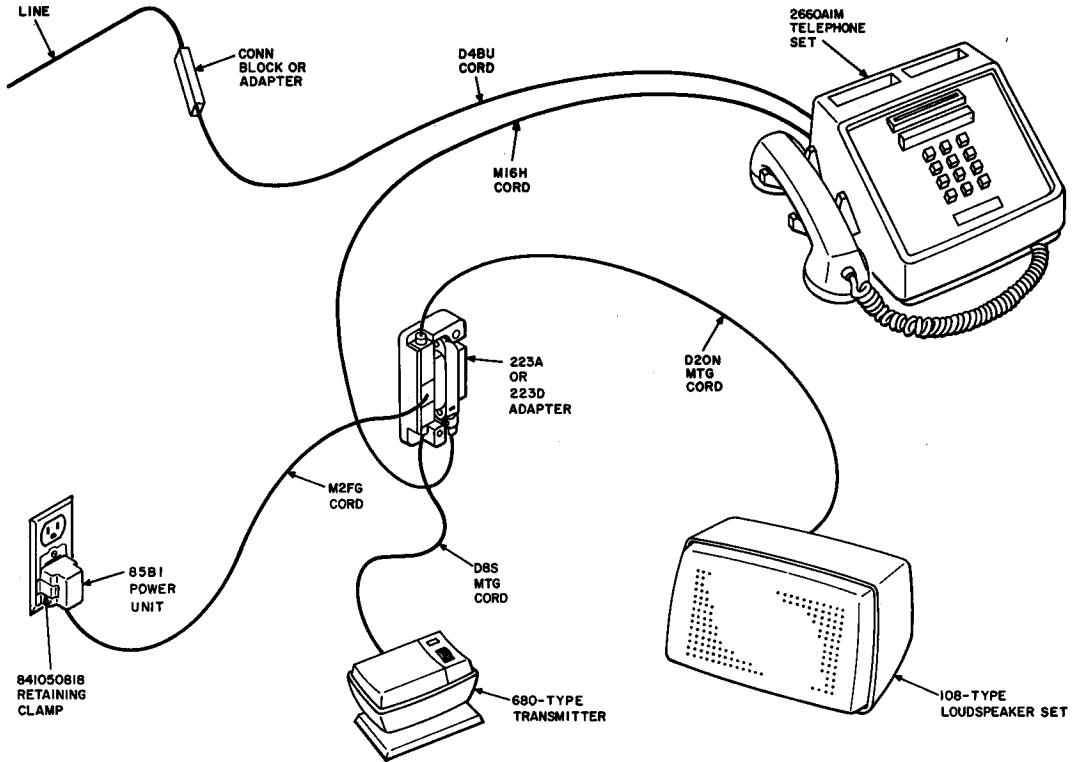
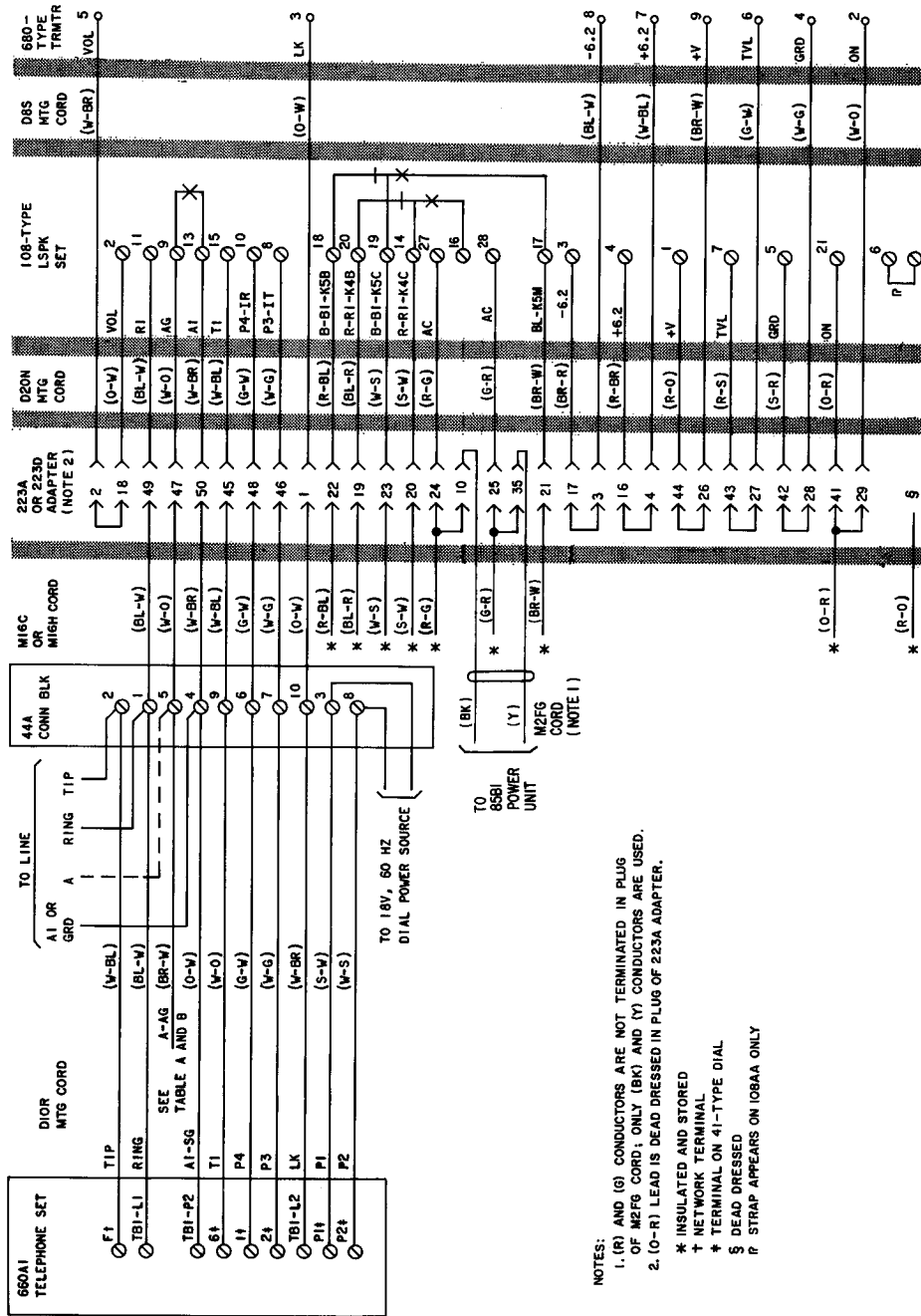
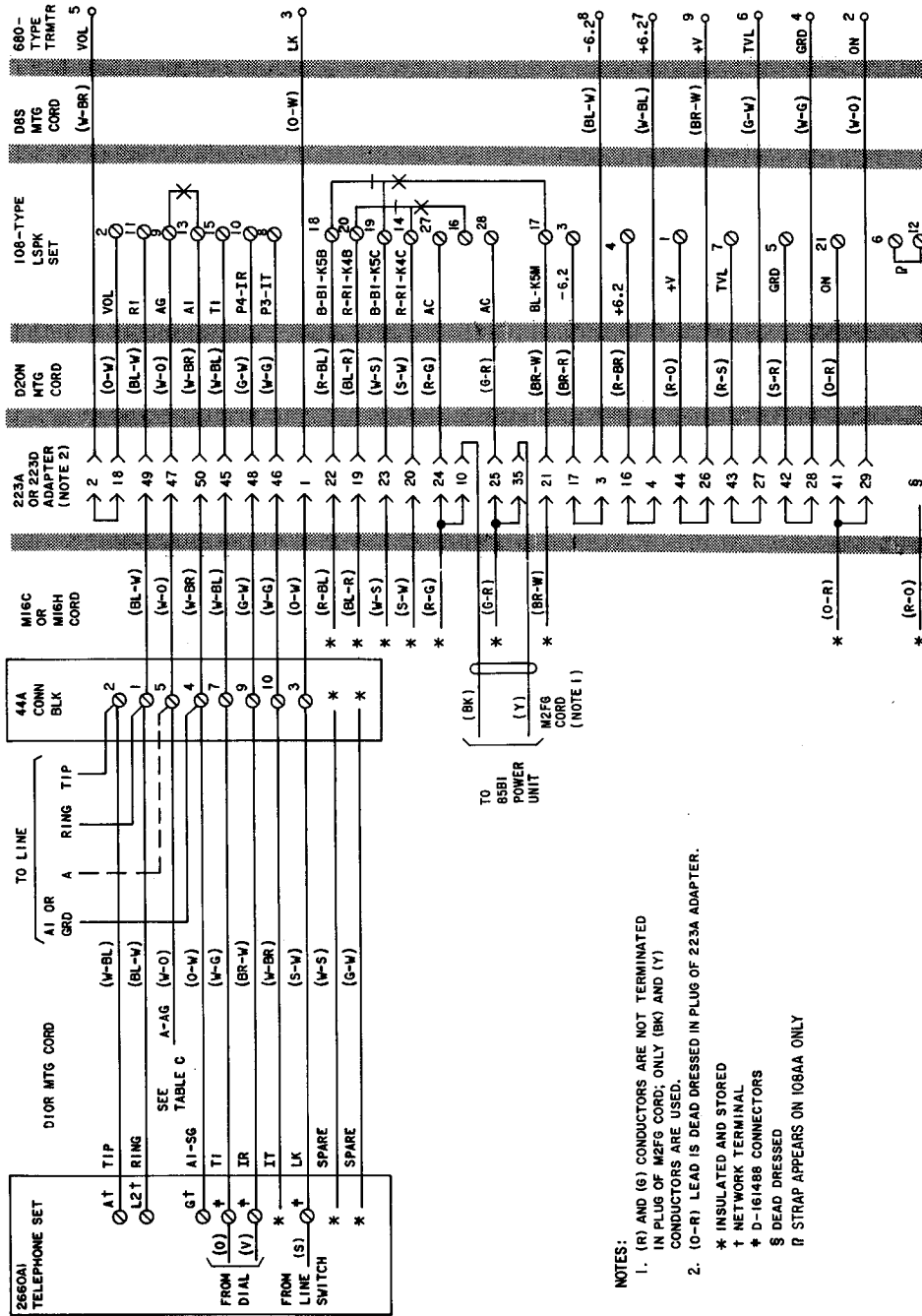


Fig. 2—Registered or Typical Grandfathered 4A Speakerphone System Arrangement, 2660A1M Telephone Set Using 223A (MD) or 223D Adapter



- NOTES:
1. (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2FG CORD; ONLY (BK) AND (Y) CONDUCTORS ARE USED.
 2. (O-R) LEAD IS DEAD DRESSED IN PLUG OF 223A ADAPTER.
- * INSULATED AND STORED
 - † NETWORK TERMINAL
 - ‡ TERMINAL ON 41-TYPE DIAL
 - \$ DEAD DRESSED
 - P STRAP APPEARS ON 108AA ONLY

Fig. 3—Typical Grandfathered 4A Speakerphone System Arrangement, Connections to 660A1 (MD) Telephone Set



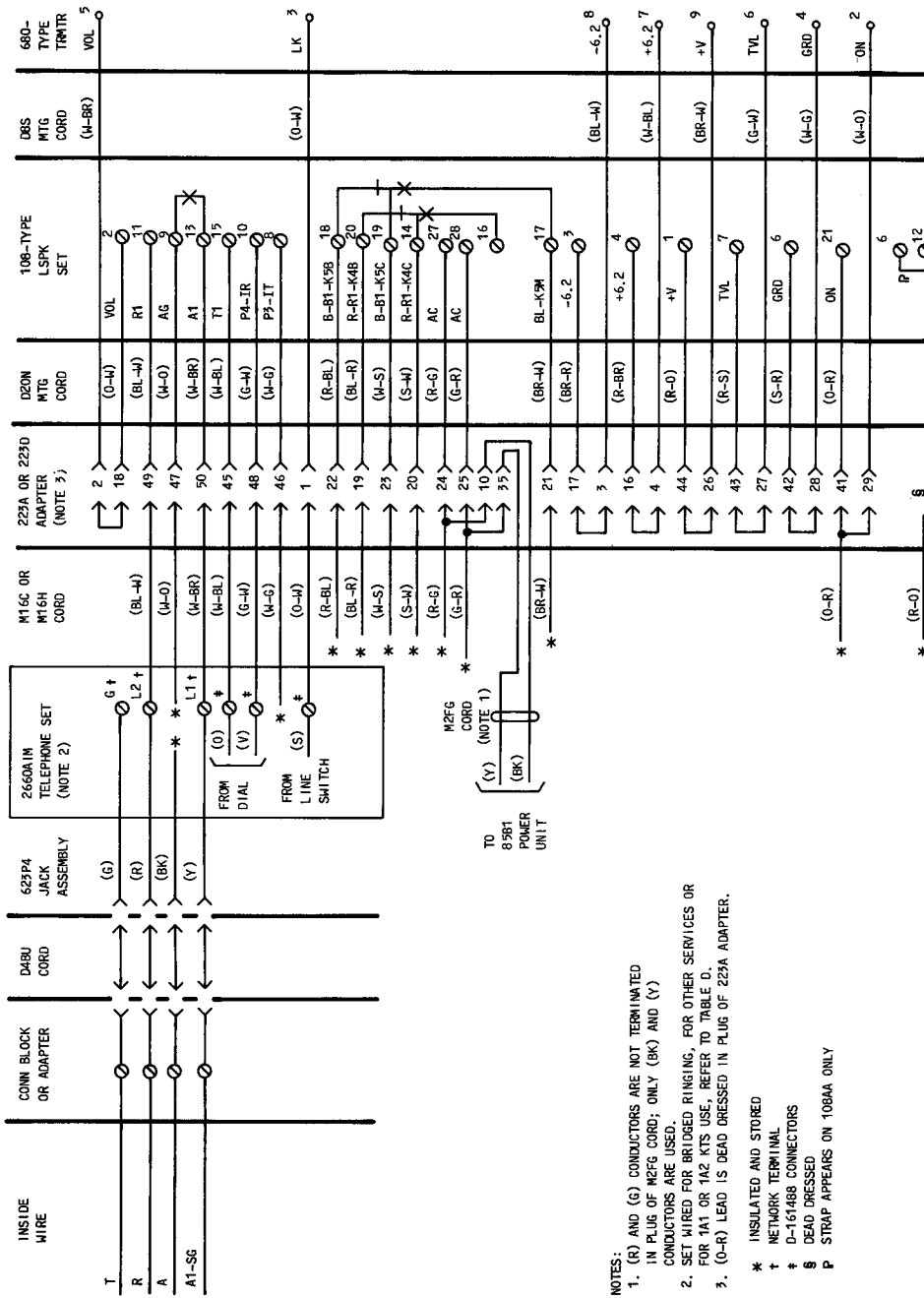
NOTES:

1. (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2FG CORD; ONLY (BK) AND (Y) CONDUCTORS ARE USED.

2. (O-R) LEAD IS DEAD DRESSED IN PLUG OF 223A ADAPTER.

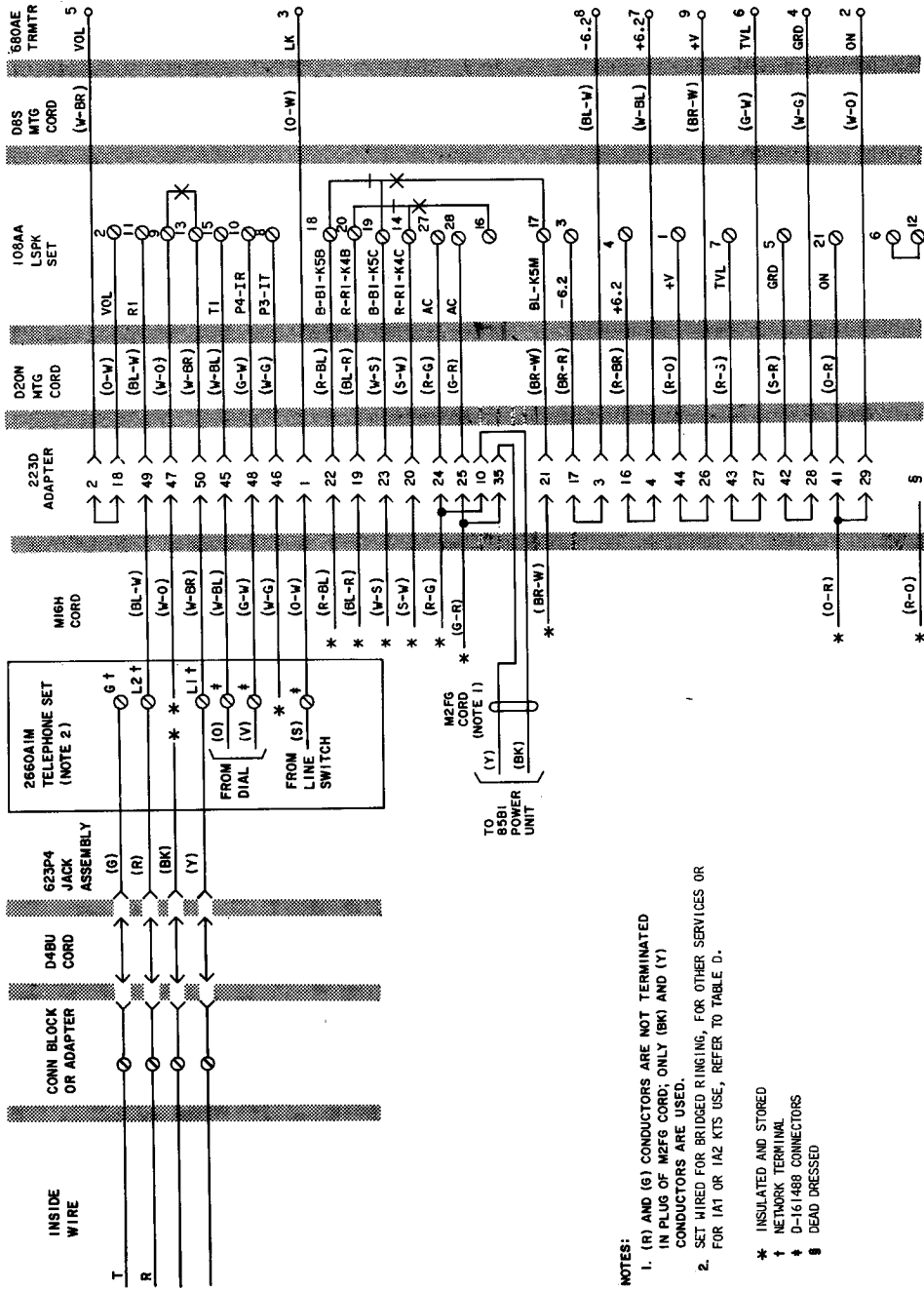
- * INSULATED AND STORED
- † NETWORK TERMINAL
- ‡ D-161488 CONNECTORS
- § DEAD DRESSED
- ¶ STRAP APPEARS ON 106AA ONLY

Fig. 4—Typical Grandfathered 4A Speakerphone System Arrangement, Connections to 2660A1 (MD) Telephone Set†



- NOTES:
1. (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2FG CORD; ONLY (BK) AND (Y) CONDUCTORS ARE USED.
 2. SET WIRED FOR BRIDGED RINGING. FOR OTHER SERVICES OR FOR 1A1 OR 1A2 KTS USE, REFER TO TABLE D.
 3. (O-R) LEAD IS DEAD DRESSED IN PLUG OF 225A ADAPTER.
- * INSULATED AND STORED
 † NETWORK TERMINAL
 ‡ D-161468 CONNECTORS
 § DEAD DRESSED
 P STRAP APPEARS ON 108AA ONLY

Fig. 5 — Typical Grandfathered 4A Speakerphone Arrangement, Connections to 2660A1M Telephone Set†



- NOTES:**
1. (R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2EG CORD; ONLY (BK) AND (Y) CONDUCTORS ARE USED.
 2. SET WIRED FOR BRIDGED RINGING. FOR OTHER SERVICES OR FOR IA1 OR IA2 KTS USE, REFER TO TABLE D.
- * INSULATED AND STORED
 - † NETWORK TERMINAL
 - ‡ D-161488 CONNECTORS
 - § DEAD DRESSED

Fig. 6—Registered 4A Speakerphone System Arrangement, Connection to 2660A1M Telephone Set