# 511- AND 2511-TYPE TELEPHONE SETS

#### CONNECTIONS

## SPEAKERPHONE SYSTEM-4A

#### 1. GENERAL

- 1.01 This section contains information for the 511- and 2511-type telephone sets used with the 4A speakerphone system.
- 1.02 This section is reissued to:
  - Add safety information for installing or removing the 85B1 power unit
  - Add information to identify typical grandfathered arrangements
  - Revise Fig. 6.
- 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 for these telephone sets, refer to Fig. 1 and 2 for layout arrangement of the components required, and Fig. 3 through 7 for individual connections.
- 1.05 The 511D (MD) telephone set is factory-wired for non-KTS use (Fig. 3). The 511F (MD), 511H (MD), 511HM, 2511F (MD), 2511H (MD), and 2511HM telephone sets are factory-wired for use with 1A1 or 1A2 KTS (Fig. 4, 5, and 6).
- 1.06 These sets are not registered under the Federal Communication Commission Registration Program for direct connection to CO or PBX lines. Unless the arrangement involving these sets qualifies for grandfather status, it may only be installed at a station associated with a KTS.

#### 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.

### B. 108-Type Loudspeaker Set

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

#### C. 680-Type Transmitter

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

#### D. 85B1 Power Unit

- 2.04 Power shall be supplied by connecting 85B1 power unit as shown in Fig. 1, 2, 3, and 7.
- 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 the power unit and should be mounted to the ac receptacle to hold power unit securely to prevent accidental loss of power.

Danger: For safety, securely attach a 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

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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 sources do 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.

2.06 The M2FG cord is furnished as part of the 223-type adapter for connecting the 85B1 power unit.

2.07 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 application.

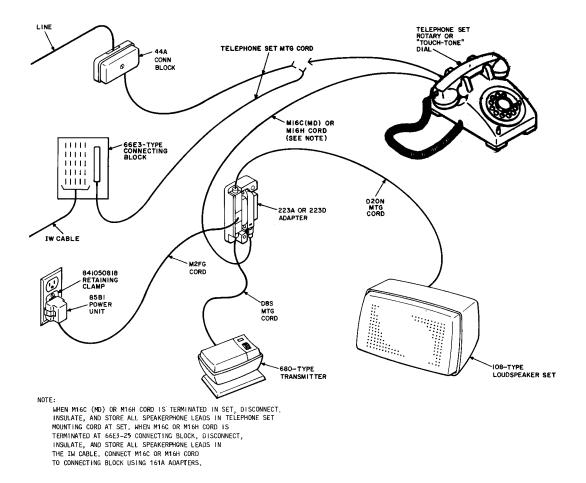
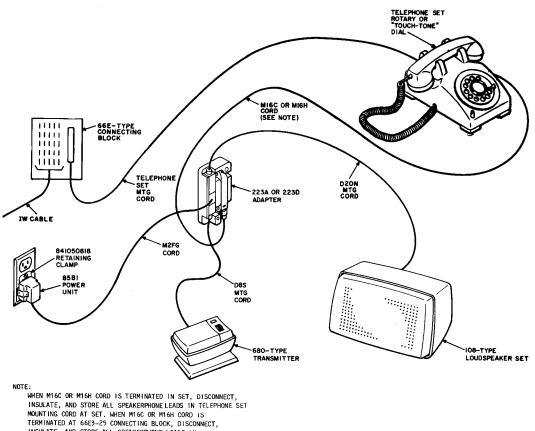


Fig. 1—₱Typical Grandfathered 4A Speakerphone System Arrangement, 511- and 2511- (Nonmodular) Type
Telephone Set Using 223A or 223D Adapter

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INSULATE, AND STORE ALL SPEAKERPHONE LEADS IN THE IW CABLE. CONNECT M16C OR M16H CORD TO CONNECTING BLOCK USING 161A ADAPTERS.

Fig. 2—\$Typical Grandfathered 4A Speakerphone System Arrangement, 511HM and 2511HM Telephone Set Using 223A or 223D Adapter

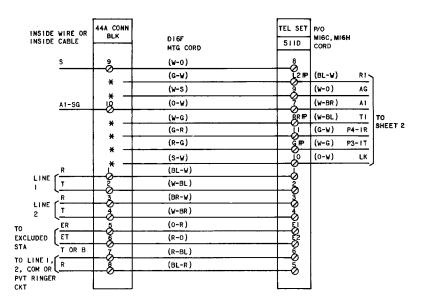
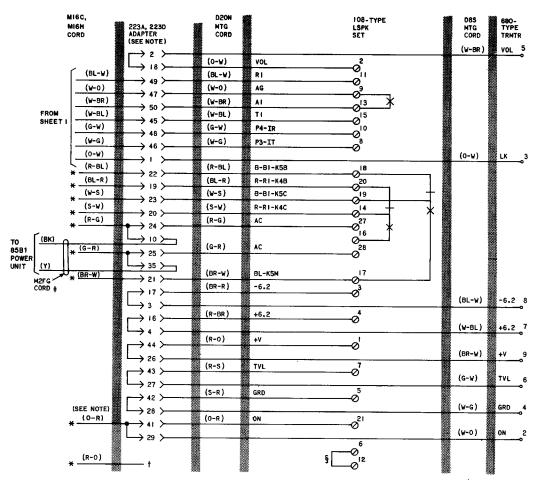


Fig. 3—♦Grandfathered 4A Speakerphone System Arrangement, Connections to 511D Telephone Set With 2-Line Pickup, Signaling and Exclusion (Not to be used with 1A1 or 1A2 KTS) (Sheet 1 of 2)♦



<sup>#</sup> INSULATE AND STORE † DEAD DRESSED

NOTE:

Fig. 3—♦Grandfathered 4A Speakerphone System Arrangement, Connections to 511D Telephone Set With 2-Line Pickup, Signaling and Exclusion (Not to be used with 1A1 or 1A2 KTS) (Sheet 2 of 2)♠

<sup># (</sup>R) AND (G) CONDUCTORS ARE NOT TERMINATED IN PLUG OF M2FG CORD. ONLY (BK) AND (Y) CONDUCTORS ARE USED.

STRAP APPEARS ON IOBAA ONLY

P NETWORK TERMINAL

<sup>(</sup>O-R) LEAD IS DEAD DRESSED IN PLUG OF 223A ADAPTER.

INSIDE WIRE		N BLKS		TELEPHONE SET				
INSIDE CABLE	1	2	D2OJ MTG CORD	511F	2511F			
TO SIG (GRD		٦	(BR-Y) (Y-BR)	<sup>13</sup>	-∞ <sup>13</sup>	P/O MISC, MISH		
CONTROL S				-0 <u>1</u> 4	P 4	CORD		
скт \		* -	(g-v)	15	15	(BL-W) RI ~	1	
	1	* -	(v-s)	~20	20	(W-0) AG		
AI-SG	100	* -	(0-M)	-0 <u>-</u> 2+	L2+	(W-BR) AI		
•		* -	(v-G)	RR+	12	(W-BL) TI	TO FIG.	
		· * —	(BR-V)	_&_	_o*	(G-W) P4-IR	7	
		*	(V-BR)	_o_	_o4_	(W-G) P3-IT		
		*	(s-v)		_ 10	(0-W) LK	]	
( <u>R</u>			(BL-W)	$-0\frac{18}{2}$	-02 10 10 10 10 10 10 10 10 10 10 10 10 10			
LINE T	-O <sup>2</sup>		(W-BL)					
1 <u>A</u>	-Ø <u>-</u>		(w-o)	-Ø-3	-⊘' <sub>3</sub>			
	Ø <sub>4</sub>		(BR-W)	<u>∞</u> 6	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
LINE T	5		(W-BR)	-Ø₅ 5	o° o°			
L <u>A</u>			(w-s)	Ø <sup>7</sup>	-0, -0,			
TO ER	7		(BL-V)	$-0^{\frac{10}{9}}$	-ø¹°			
EXCLUDED ET			(V-BL)		-ø°			
STA EA	°		(v-o)	<u>~''</u>	-ø''			
TO BZI		Ø <sup>3</sup>	(G-R)	0-17	-Ø''			
BUZZER BZ		-04	(R-G)	—Ø <sup>19</sup>	-Ø <sup>19</sup>			
<b></b>			*INSULATE AND STORE +NETWORK TERMINAL	_				

Fig. 4—♦511F and 2511F Telephone Set Connections, 2-Line Pickup With Exclusion on Line 1, Signaling, and 4A Speakerphone (Used With 1A1 or 1A2 KTS)♦

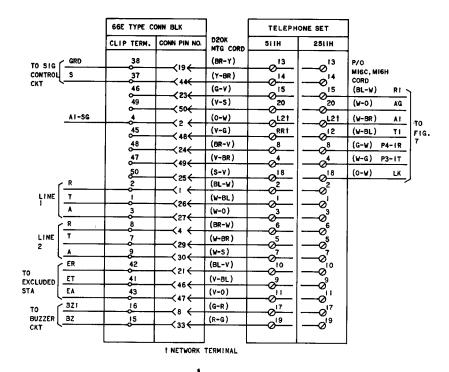
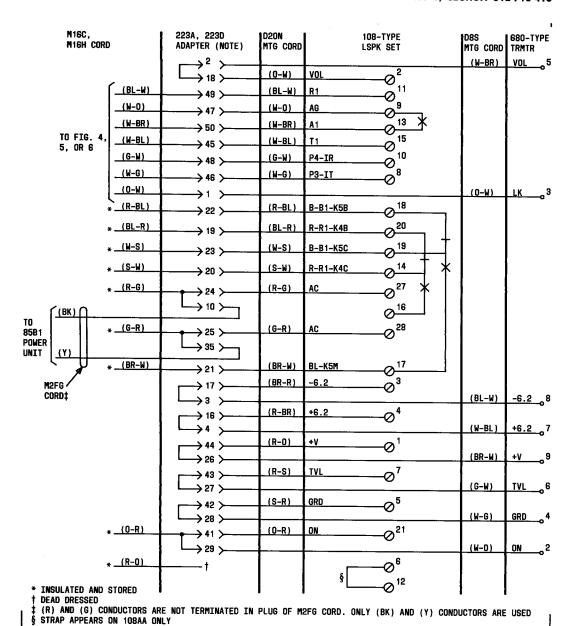


Fig. 5—₱511H and 2511H Telephone Set 2-Line Pickup With Exclusion on Line 1, Signaling, and 4A Speakerphone (Used With 1A1 or 1A2 KTS)◀

	Γ	66E-TYPE CONN BLK		D16J TELEPHONE		E SET			
	F	CLIP TERM. C	ONN PIN NO.	MTG CORD	511HM	2511HM			
TO SIG (CONTROL	GRD	38	<b>√</b> 19 <b>←</b>	(BR-Y)	——Ø <sup>13</sup>	——Ø <sup>13</sup>	P/O M16C,		
CKT	s	37	<b>←</b> 44 <b>←</b>	(Y-BR)	O <sup>14</sup>	Ø <sup>14</sup>	M16H Cord		
·	`	46	<b>&lt;</b> 23		Ø <sup>15</sup>	Q <sup>15</sup>	(BL-W)	R1	
		49	<b>—</b> < 50		Ø <sup>20</sup>	Ø <sup>20</sup>	(W-O)	AG	
	A1-SG	4	-< 2 ← <sup>-</sup>	(D-W)	——⊘ <sup>L2†</sup>	O <sup>L2†</sup>	(W-BR)	A1_	TO
		45	<b></b> < 48		Ø <sup>RR†</sup>	Ø <sup>12</sup>	(W-BL)	<u>T1</u>	FIG. 7
		48	<b>—</b> < 24		Ø <del></del>	Ø <sup>8</sup>	(G-W)	P4-1R	
	l	47	<b>&lt; 49</b>	[	Ø <del>4</del>	Ø <del>⁴</del>	(W-G)	P3-1T	
	[	50	<b>—</b> < 25		0 18	Ø <sup>18</sup>	(O-W)	LK.	
ſ	<u>R</u>	2	<b>~</b> (1 ←	(BL-W)					
LINE 1	<u>T</u>	1	<b>—</b> < 26 <b>←</b> —	(W-BL)	O <sup>1</sup>	Ø <sup>1</sup>			
	<u> </u>	3	<b>—</b> < 27 <b>←</b> —	(W-O)	س	⊘³			
	R	8	<b>~ 4 ←</b>	(BR-W)	— ⊘ <sup>6</sup>	——⊘ <sub>e</sub>			
LINE 2	<u>T</u>	7	<b>—</b> < 29 <b>←</b>	(W-BR)	——⊘ <sup>5</sup> —	⊘ <sup>5</sup>			
	<u> </u>	9	<b>─</b> < 30 <b>←</b>	(W-S)	<b>─</b> Ø <sup>7</sup> ─	Ø <sup>7</sup>	ŀ		
	ER	42	<b>—</b> < 21 ←—	(BL-V)	Ø <sup>10</sup>	<b>—</b> ⊘ <sup>10</sup>	!		
TO EXCLUDED	ET	41	<b>—</b> < 46 <b>←</b> —	(V-BL)	9	Ø <sup>9</sup>			
STA	EA	43	<b>—</b> < 47 ←—	(V-O)	<del>011</del>	Ø <sup>11</sup>			
	`	, <u>16</u>	<b>—≺8</b> ←—	(G-R)	‡ ⊘ 17	-‡ Ø <sup>17</sup>			
		,15 o	< 33 ←	(R-G)	<u> </u> *	<b> </b> *			
TO Buffer	BZ	36	<b>—</b> < 18 ←	(G-Y)	Ø <sup>16</sup>	Ø <sup>16</sup>			
CKT	EZ1	35	<b>—</b> < 43 ←—	(Y-G)	Ø <sup>19</sup>	<b></b> ⊘ <sup>19</sup>			
		LL			L	<u> </u>	_1		

Fig. 6—\$511HM and 2511HM Telephone Set Connections, 2-Line Pickup With Exclusion on Line 1, Signaling, and 4A Speakerphone (Used With 1A1 or 1A2 KTS)

<sup>\*</sup> INSULATE AND STORE † NETWORK TERMINAL ‡ INSULATED AND STORED IN SET. CONNECT TO TERMINAL NO. 17 WHEN SET IS USED WITH 1A KTS.



NOTE: (0-R) LEAD IS DEAD DRESSED IN PLUG OF 223A ADAPTER

Fig. 7—14A Speakerphone Connections Using 223A (MD) or 223D Adapter

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