

PANELS

583- AND 584-TYPE

CONNECTIONS AND MAINTENANCE

1. GENERAL

1.01 This section is reissued to:

Add information on the 584D panel

Renumber terminals and change lead designations

Show the 584B panel (MD)

1.02 This issue of the section is based on the following drawings:

SD-69502-01

SD-69552-01

SD-69591-01

1.03 Station, power, and interpanel connections to 583A (MD) and 584A (MD) panels are provided with wire-wrap terminals. The KS-16363, List 1 hand grip wrapping tool should be used to wrap stripped wires. A KS-16492, List 2 unwrapping tool should be used to remove a wire-wrapped



See appropriate sections in Divisions 069, 074, and 075 which provide reference guides to tool identification, parts, operational requirements, and ordering information, plus approved preparation procedures for connecting wires to terminals.

1.04 Power and interpanel connections to 584B (MD) 584C and 584D panels are made to screw terminals. Station connections are made by using connector cables.

2. CONNECTIONS

2.01 Fig. 1 shows various typical arrangements using 583- and 584-type panels. Refer to Fig. 1 for power connection figure reference and interpanel wiring used with the selected arrangement.

2.02 Terminate station, CO, or PBX line connections directly to panels or to 66-type connecting blocks at the master distribution point or directly to panels (see Table A).

2.03 When 584-type panel arranged for Program A is used to provide interrupted lamp signals to a 597A or 598A panel, the maximum number of 51A lamps fed by each 2-ampere fuse shall not exceed 50. If 584-type panel is arranged for Program C, the maximum number of 51A lamps fed by each 2-ampere fuse shall not exceed 24.

2.04 Connection Index

Fig. 1—Block Diagram Showing Arrangements of 583A (MD), 584A (MD), 584B (MD), 584C and 584D Panels

Fig. 2—584A (MD) Panel Equipped with Interrupter (Panel can be used alone and also to control one other panel)

Fig. 3—583A (MD) or 584A (MD) Not Equipped With Interrupter or 412A KTU

Fig. 4—584B (MD) Panel Equipped With Interrupter (Panel not used to control other panels)

Fig. 5—584B (MD) Panel Equipped With Interrupter (Panel used to control one other panel)

Fig. 6—584B (MD) Panel Not Equipped With Interrupter or 412A KTU

Fig. 7—584C or 584D Panel Not Equipped With Interrupter or 412A KTU

Fig. 8—584C or 584D Panel Equipped With Interrupter (Panel not used to control other panels)

Fig. 9—584C or 584D Panel Equipped With Interrupter (Panel used to control one other panel)

Fig. 10—584B (MD) Panel Equipped With Interrupter (Master panel used to control up to 200 other panels each equipped with 412A KTU)

Fig. 11— 584B (MD) Panel Equipped With 412A KTU (Panel used to control one other panel)

Fig. 12- 584B (MD) Panel Equipped With 412A KTU (Panel not used to control other panels)

Fig. 13—584A (MD) Panel Equipped With 412A KTU (Panel used alone and also to control one other panel)

Fig. 14—584C or 584D Panel Equipped With 412A KTU (Panel not used to control other panels)

Fig. 15—584C or 584D Panel Equipped With Interrupter (Master panel used to control up to 200 other panels each equipped with 412A KTU)

Fig. 16—584C or 584D Panel Equipped With 412A KTU (Panel used to control one other panel)

Fig. 17—Modification of 584A (MD) Panel to Accept 412A KTU

Fig. 18—Manual Intercommunication Connections for 583A (MD) and 584A (MD) Panels

Fig. 19—Typical Functional Layout of 584B (MD) and 584C or D Panels Showing Line Circuit 1 Only

Table A—Connections to Distribution Points and/or Panels

3. MAINTENANCE

3.01 Maintenance on panels should be limited to tracing of wiring troubles, fuse replacement, and replacement of improperly operating KTUs.

3.02 When trouble is encountered, proceed as follows:

- (a) Visit station reporting trouble
- (b) Determine if trouble is located at the individual station or common to the system.
- (c) If common to the system:
 - (1) Check power supply and fuses
 - (2) Determine which KTU is not operating properly
 - (3) Replace KTU with one known to be in operating condition to determine whether trouble is located in the KTU or in external circuitry.

Note: Be sure that applicable options are correctly strapped on the replaced KTU.

(4) If replacement of the KTU does not correct the trouble, it is external to the KTU and the complete wiring should be verified.

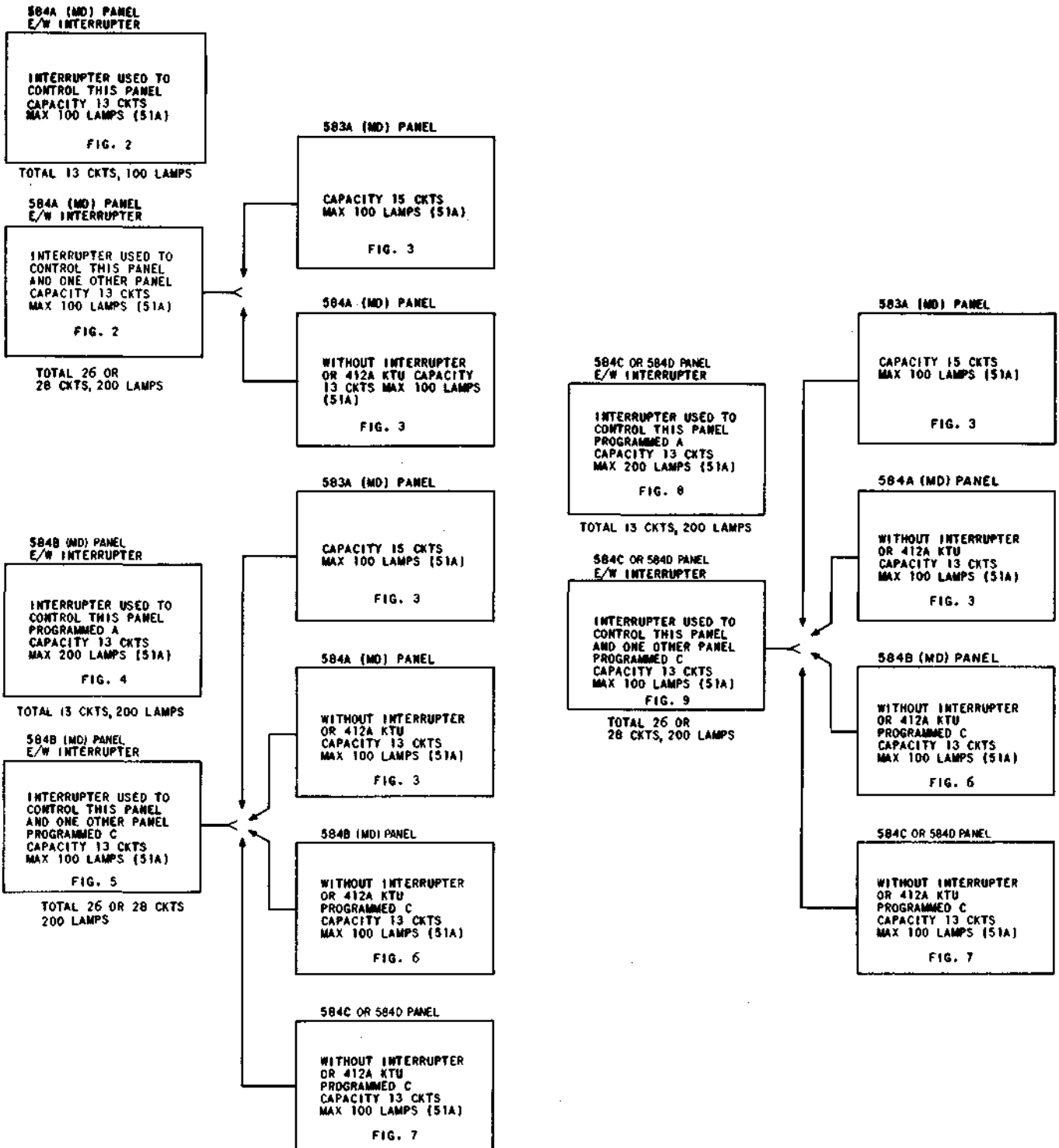


Fig. 1—Block Diagram Showing Arrangement of 583A (MD), 584A (MD), 584B (MD), 584C and 584D Panels (Sheet 1)

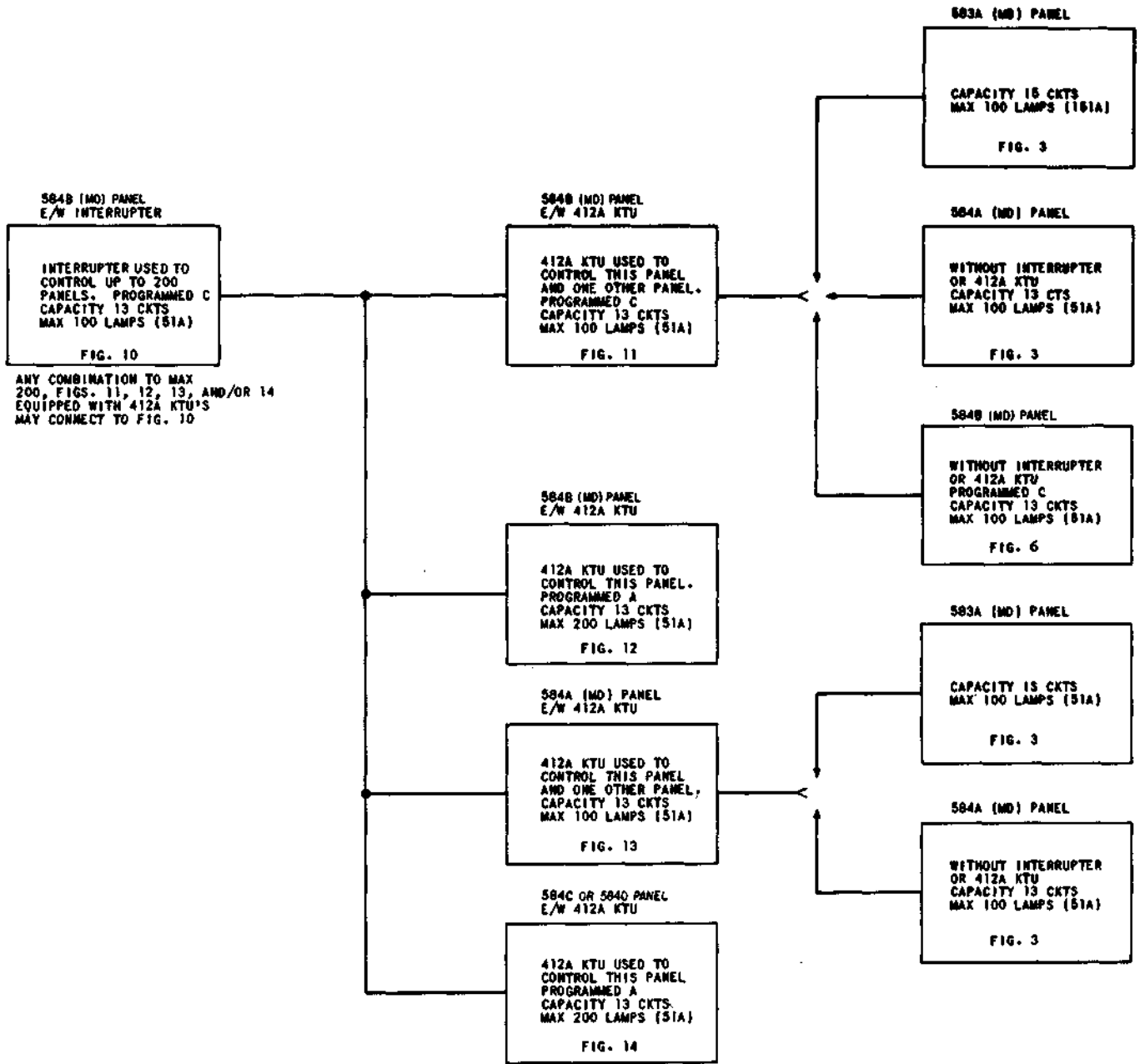


Fig. 1—Block Diagram Showing Arrangement of 583A (MD), 584A (MD), 584B (MD), 584C and 584D Panels (Sheet 2)

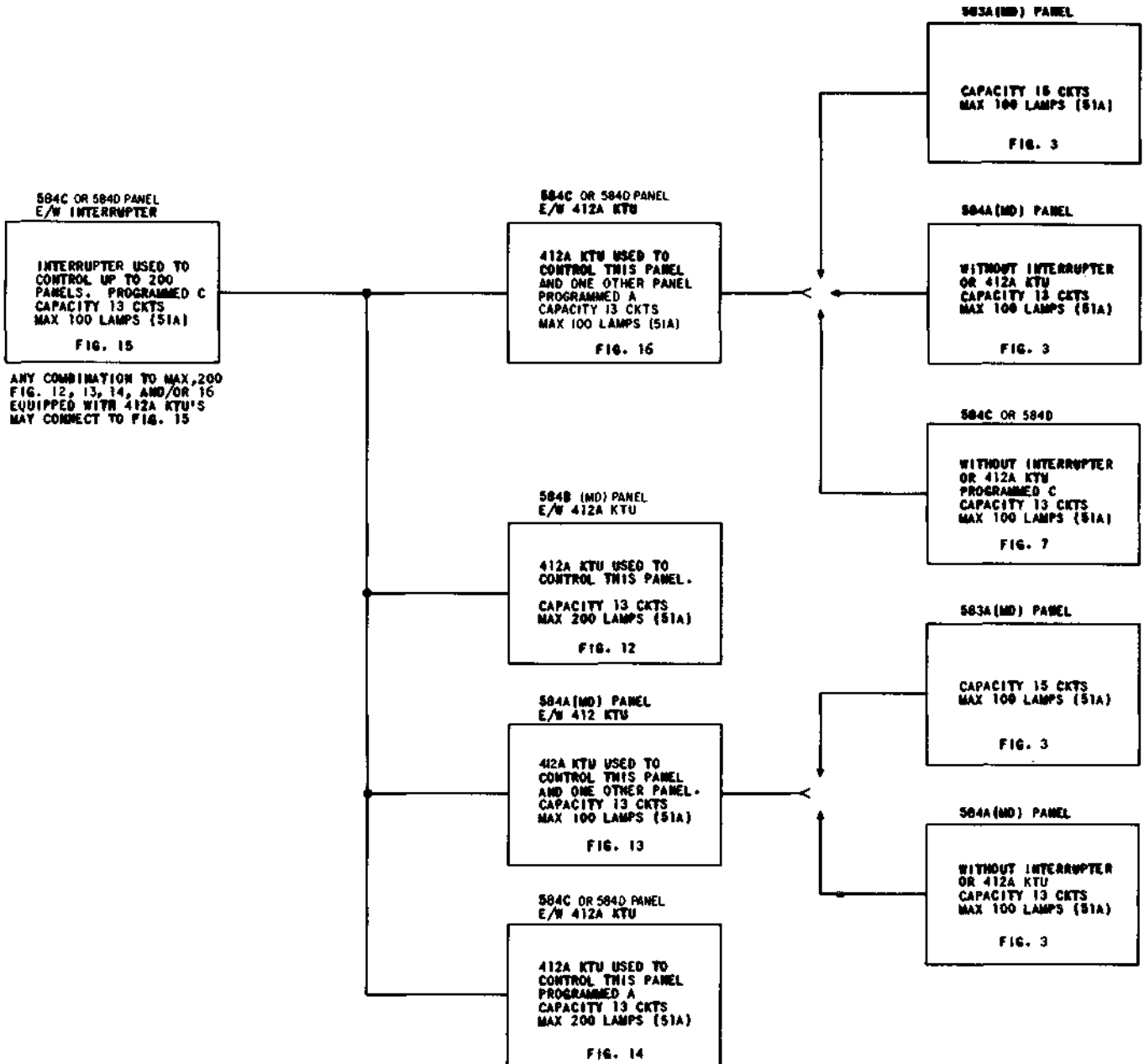


Fig. 1—Block Diagram Showing Arrangement of 583A (MD), 584A (MD), 584B (MD), 584C and 584D Panels (Sheet 3)

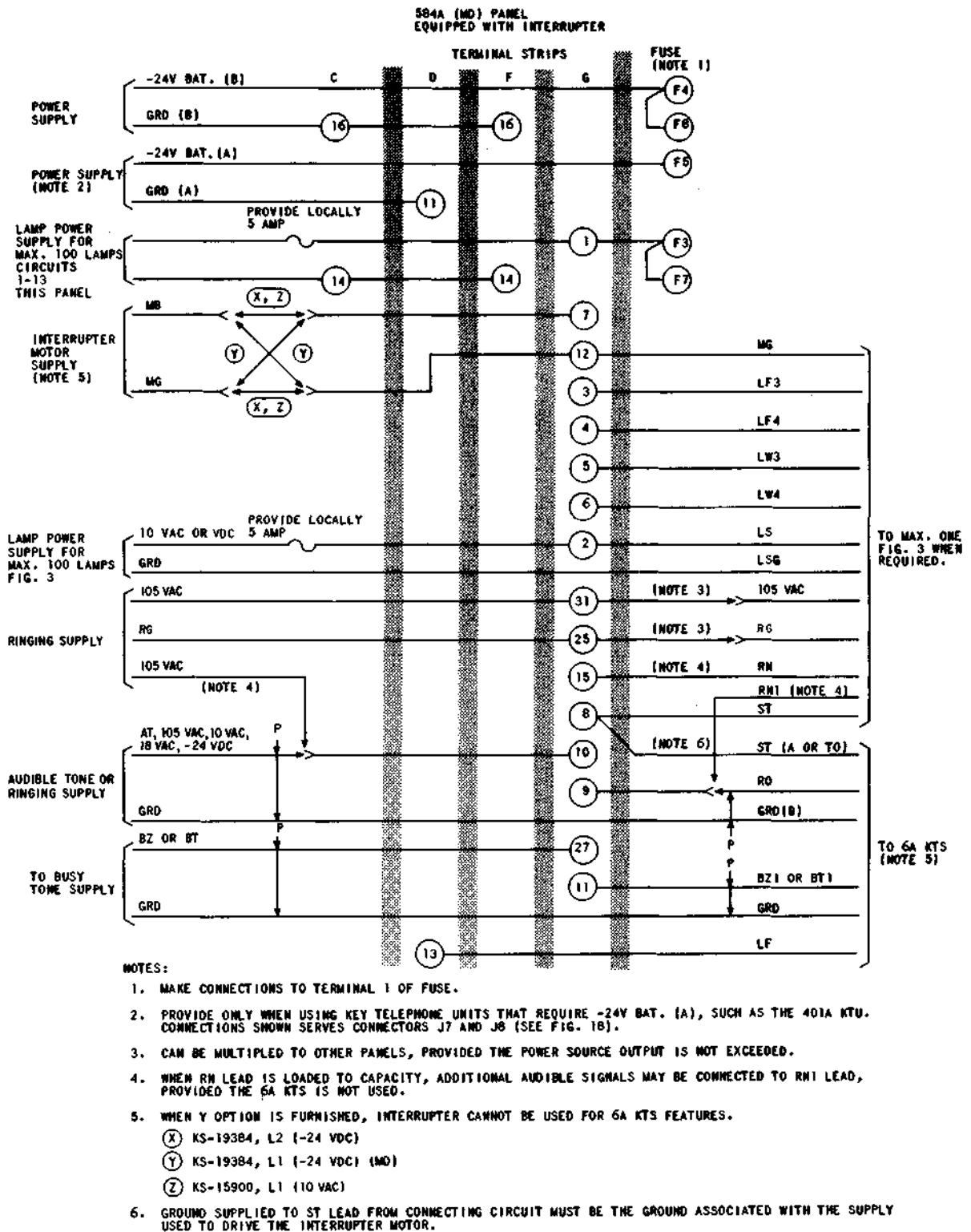
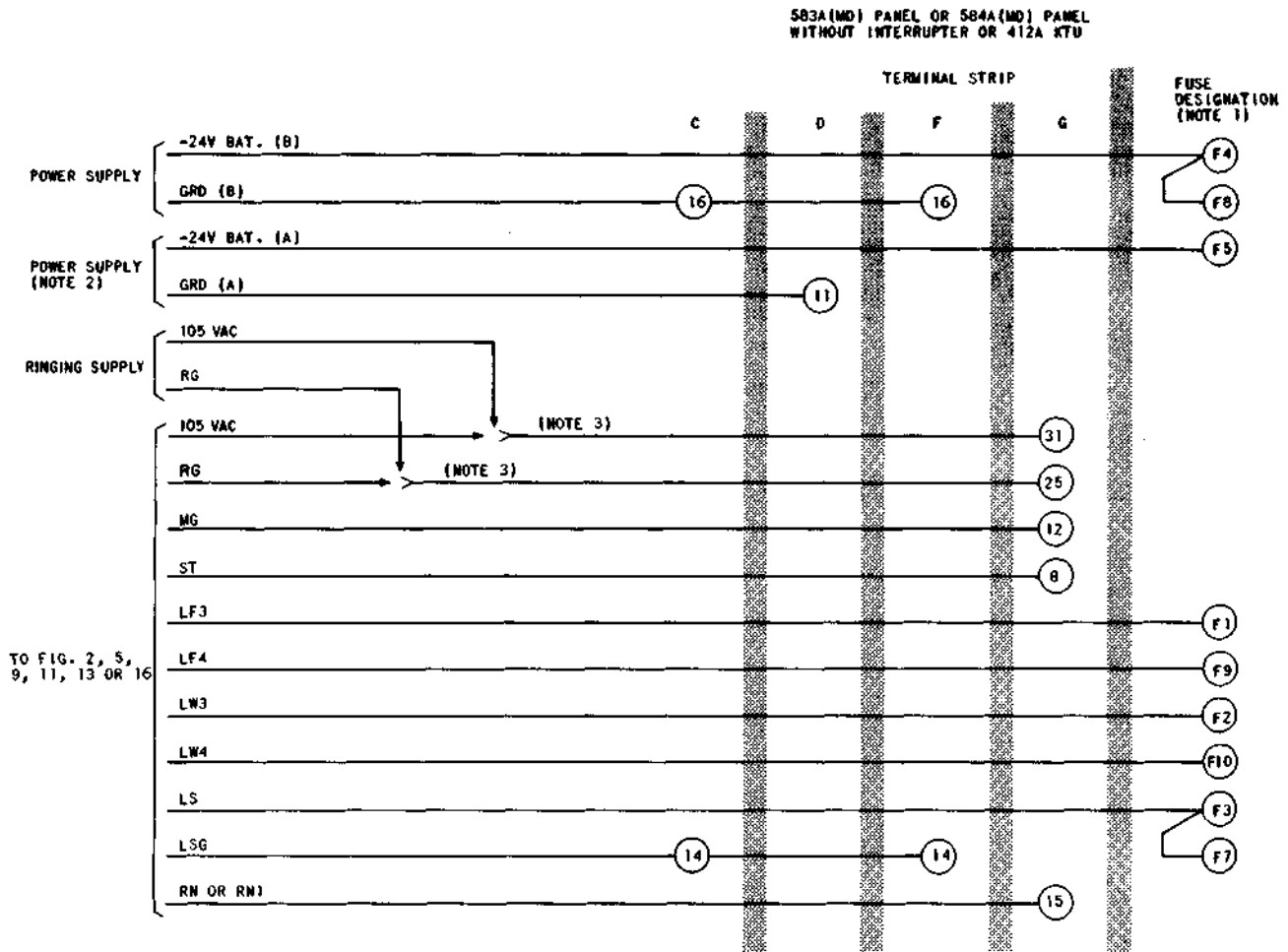


Fig. 2—584A (MD) Panel Equipped with Interrupter (Panel can be used alone and also to control one other panel)



NOTES:

1. MAKE CONNECTIONS TO TERMINAL 1 OF FUSE.
2. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V BAT. (A), SUCH AS THE 401A KTU. CONNECTION AS SHOWN SERVES CONNECTORS J7 AND J8 (SEE FIG. 18).
3. IF LEADS FROM PRECEDING PANEL ARE LOADED TO CAPACITY, PROVIDE SEPARATE RINGING SUPPLY TO THIS PANEL.

Fig. 3—583A (MD) or 584A (MD) Panel Not Equipped With Interrupter or 412A KTU

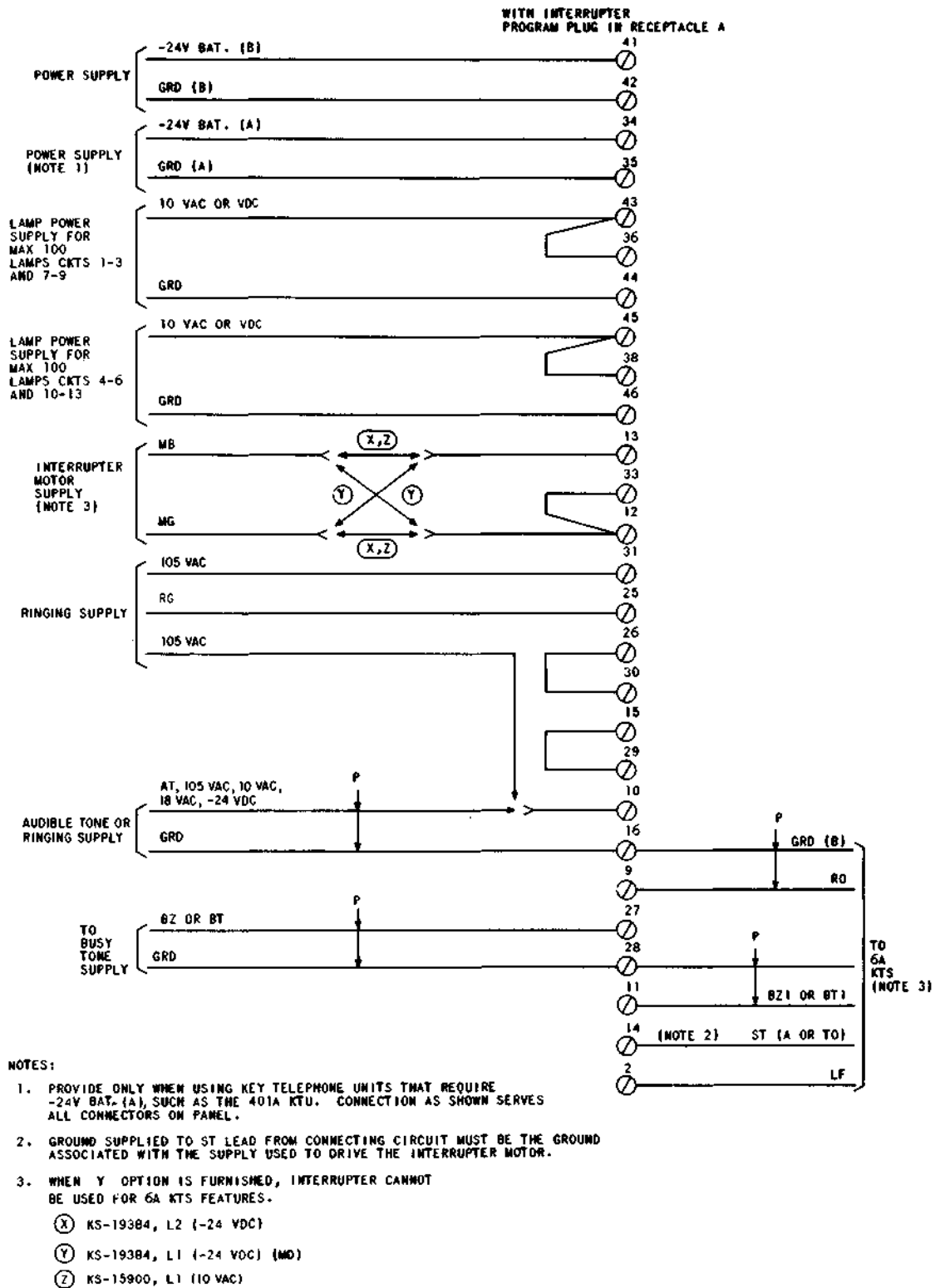


Fig. 4—584B (MD) Panel Equipped With Interrupter (Panel not used to control other panels)

584B (MD) PANEL
WITH INTERRUPTER
PROGRAM PLUG IN RECEPTACLE C

NOTES:

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V BAT.(A), SUCH AS THE 401A KTU. CONNECTIONS AS SHOWN ARE FOR ALL CONNECTORS ON PANEL.
 2. WHEN RM LEAD IS LOADED TO CAPACITY, ADDITIONAL AUDIBLE SIGNALS MAY BE CONNECTED TO RM1 LEAD, PROVIDED THE 6A KTS IS NOT USED.
 3. CAN BE MULTIPLIED TO OTHER PANELS, PROVIDED THE POWER SOURCE OUTPUT IS NOT EXCEEDED.
 4. WHEN Y OPTION IS FURNISHED, INTERRUPTER CANNOT BE USED FOR 6A KTS FEATURES.
- (X) KS-19384, L2 (-24 VDC)
 (Y) KS-19384, L3 (-24 VDC) (MD)
 (Z) KS-15900, L1 (10 VAC)
5. GROUND SUPPLIED TO ST LEAD FROM CONNECTING CIRCUIT MUST BE THE GROUND ASSOCIATED WITH THE SUPPLY USED TO DRIVE THE INTERRUPTER MOTOR.

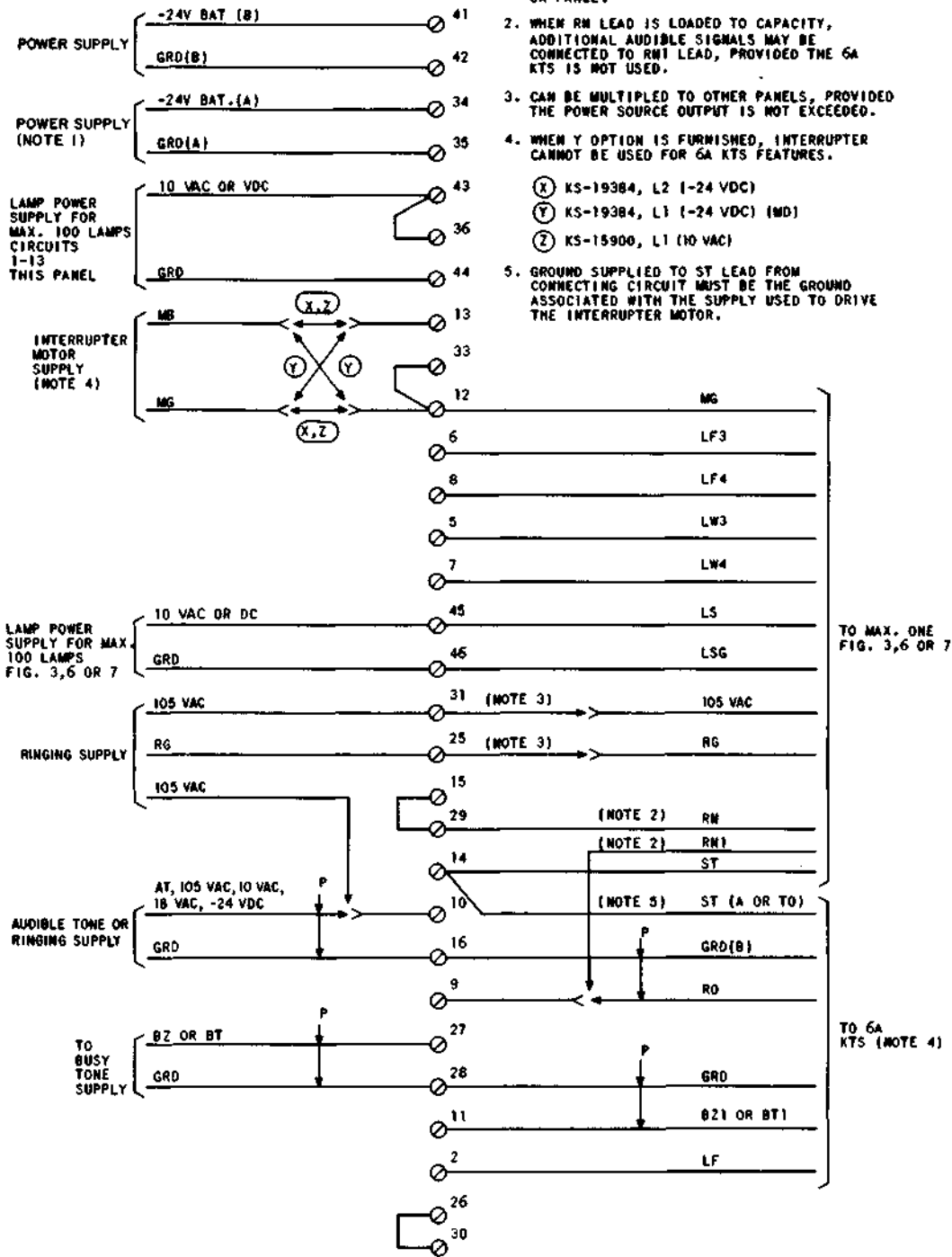
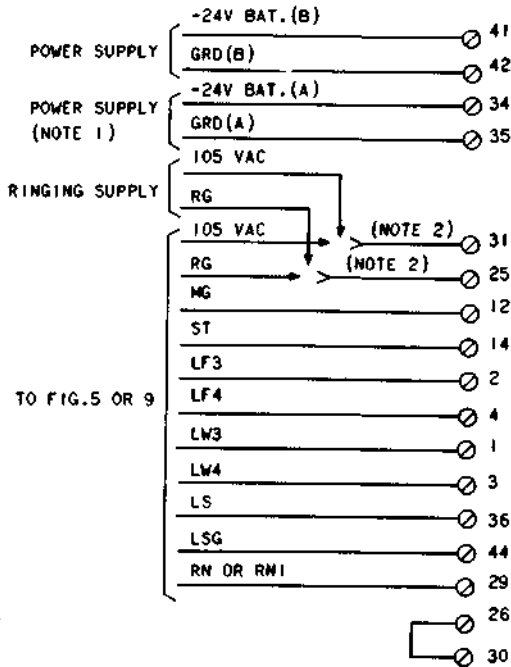


Fig. 5—584B (MD) Panel Equipped With Interrupter (Panel used to control one other panel)

584B (MD) PANEL
WITHOUT INTERRUPTER OR 412A KTU
PROGRAM PLUG IN RECEPTACLE C

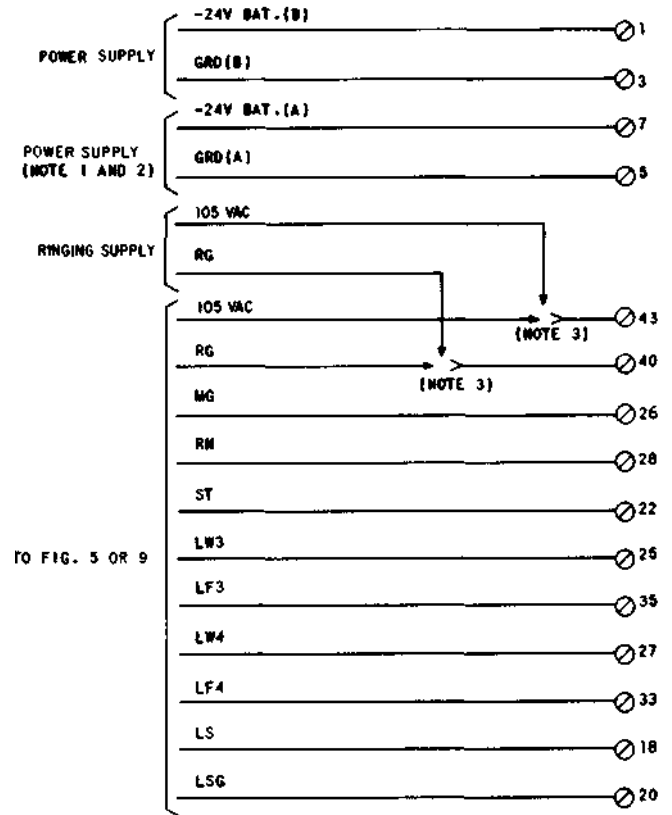


NOTES:

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V BAT. (A), SUCH AS THE 401A KTU. CONNECTION AS SHOWN SERVES ALL CONNECTORS ON PANEL.
2. IF LEADS FROM PRECEDING PANEL ARE LOADED TO CAPACITY, PROVIDE SEPARATE RINGING SUPPLY TO THIS PANEL.

Fig. 6—584B (MD) Panel Not Equipped With Interrupter or 412A KTU

584C OR 584D PANEL
WITHOUT INTERRUPTER
OR 412A KTU
USING PROGRAM C PLUG

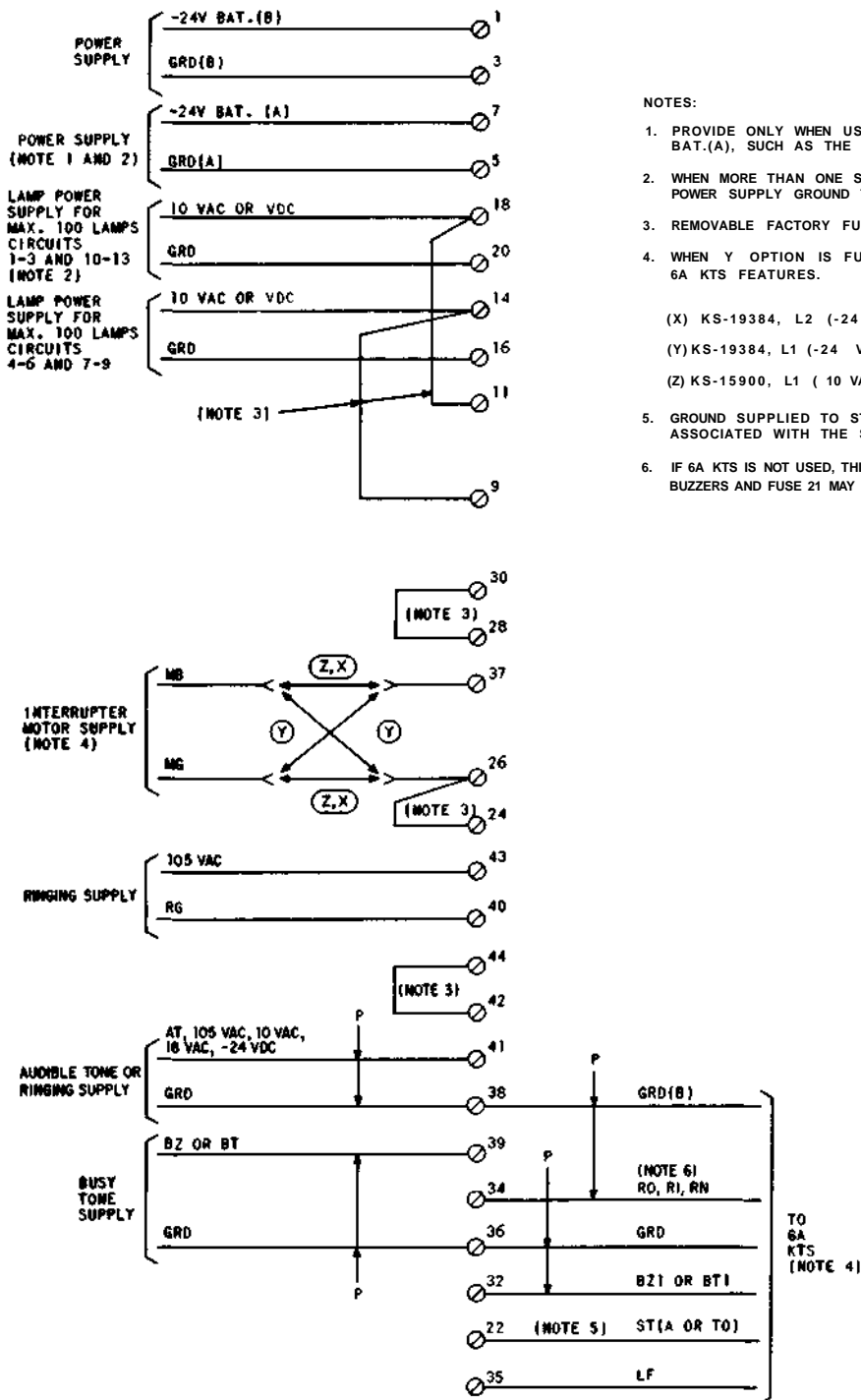


NOTES:

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V BAT. (A), SUCH AS THE 401A KTU.
2. WHEN MORE THAN ONE SUPPLY IS USED TO PROVIDE -24 VDC AND 10 VAC, POWER SUPPLY GROUND TERMINALS ARE BONDED TOGETHER.
3. IF LEADS FROM PRECEDING PANEL ARE LOADED TO CAPACITY, PROVIDE SEPARATE RINGING SUPPLY TO THIS PANEL.

Fig. 7—584C or 584D Panel Not Equipped With Interrupter or 412A KTU

584C OR 584D PANEL
EQUIPPED WITH INTERRUPTER
USING PROGRAM A PLUG



NOTES:

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V BAT.(A), SUCH AS THE 401A KTU.
2. WHEN MORE THAN ONE SUPPLY IS USED TO PROVIDE -24 VDC AND 10 VAC, POWER SUPPLY GROUND TERMINALS ARE BONDED TOGETHER.
3. REMOVABLE FACTORY FURNISHED FIELD STRAP.
4. WHEN Y OPTION IS FURNISHED, INTERRUPTER UN NOT BE USED FOR 6A KTS FEATURES.
 - (X) KS-19384, L2 (-24 VDC)
 - (Y) KS-19384, L1 (-24 VDC) [MD]
 - (Z) KS-15900, L1 (10 VAC)
5. GROUND SUPPLIED TO ST LEAD FROM CONNECTING CIRCUIT MUST BE THE GROUND ASSOCIATED WITH THE SUPPLY USED TO DRIVE THE INTERRUPTER MOTOR.
6. IF 6A KTS IS NOT USED, THIS LEAD MAY BE USED TO ACCOMODATE ADDITIONAL RINGERS OR BUZZERS AND FUSE 21 MAY BE INCREASED TO A 2 AMP FUSE.

Fig. 8—584C or 584D Panel Equipped With Interrupter (Panel not used to control other panels)

584C OR 584D PANEL
WITH INTERRUPTER
USING PROGRAM C PLUG

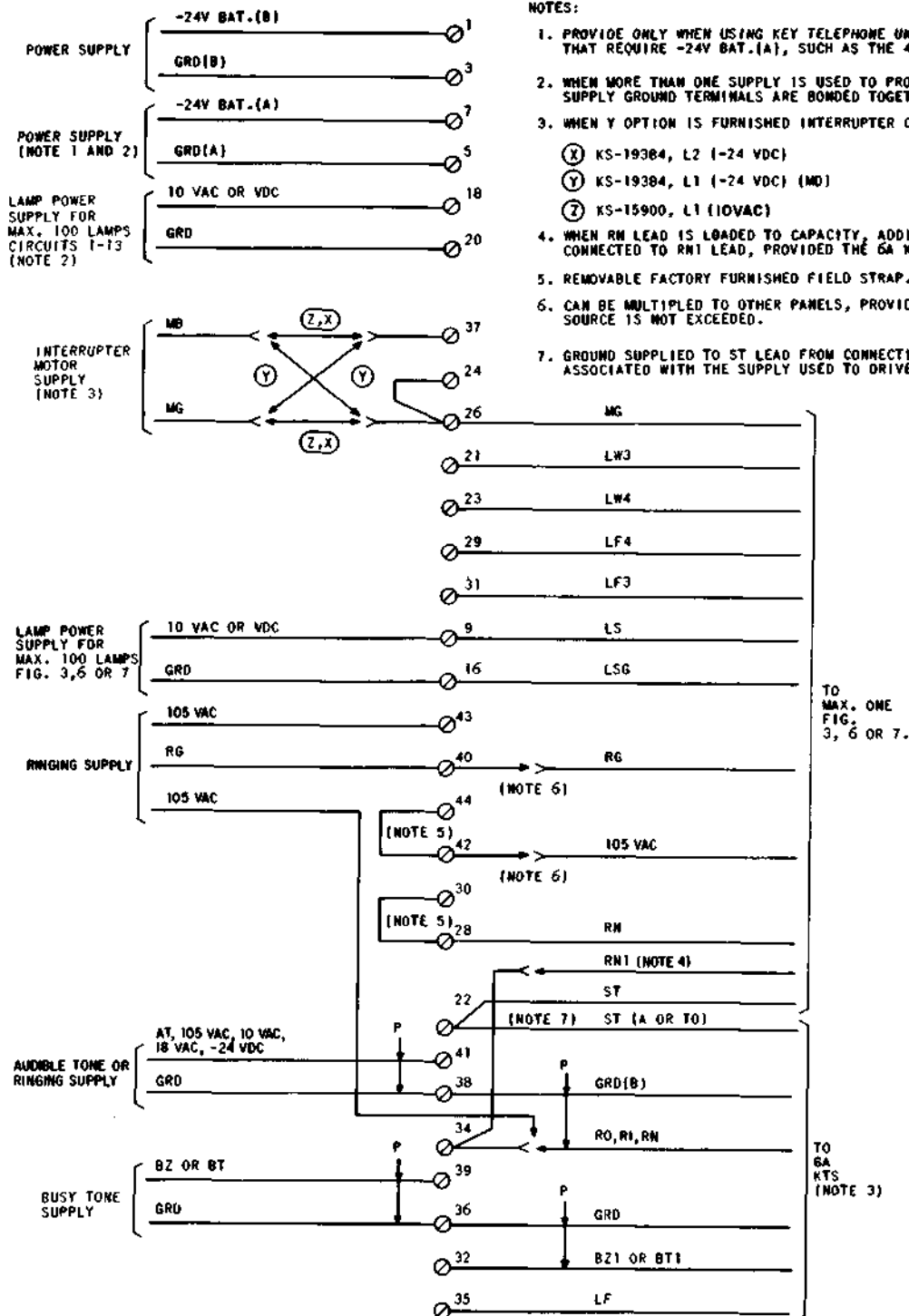


Fig. 9—584C or 584D Panel Equipped With Interrupter (Panel used to control one other panel)

5848 (MD) PANEL
EQUIPPED WITH INTERRUPTER
PROGRAM PLUG IN RECEPTACLE C

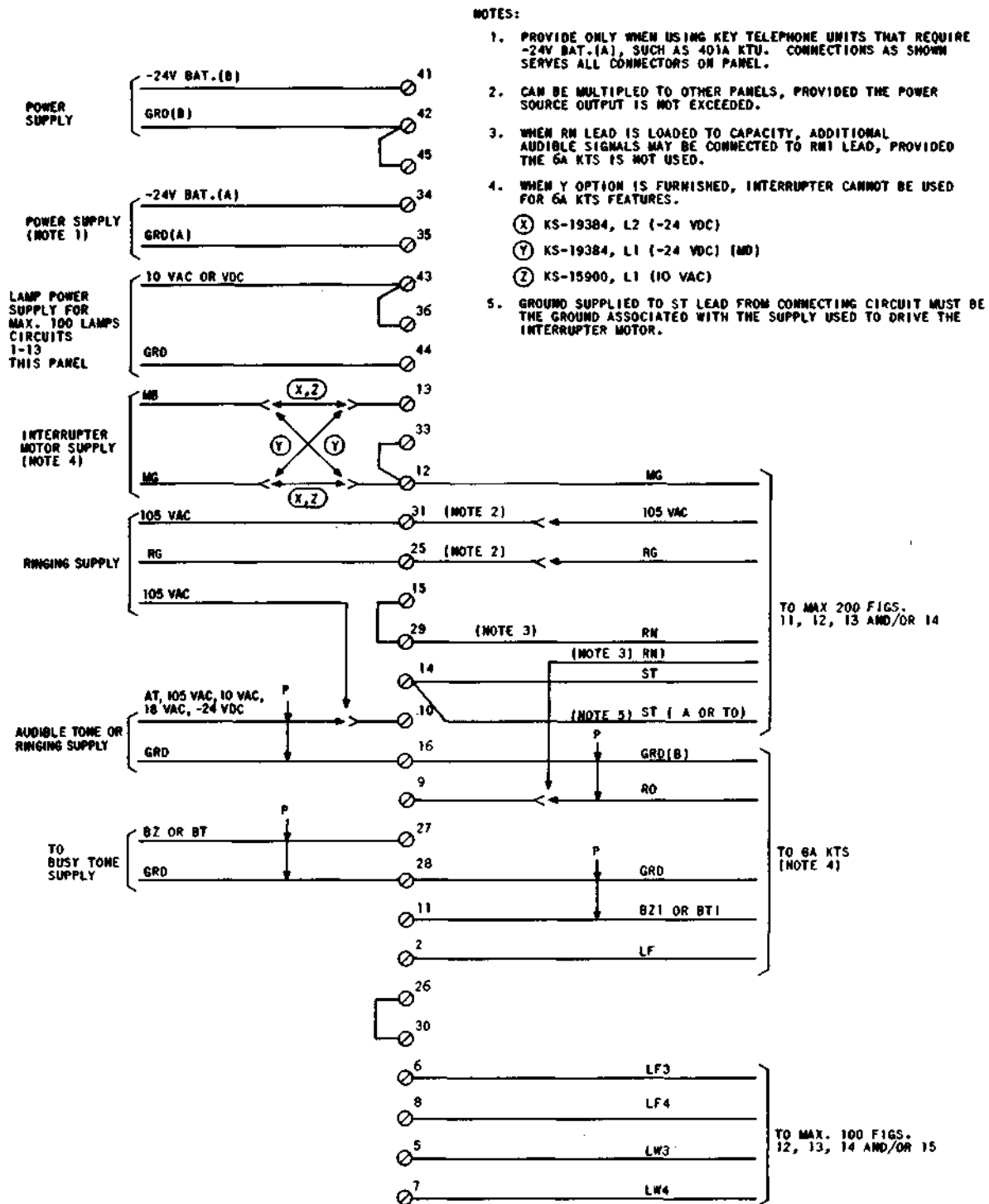


Fig. 10—584B (MD) Panel Equipped With Interrupter (Master panel used to control up to 200 other panels each equipped with 412A KTU)

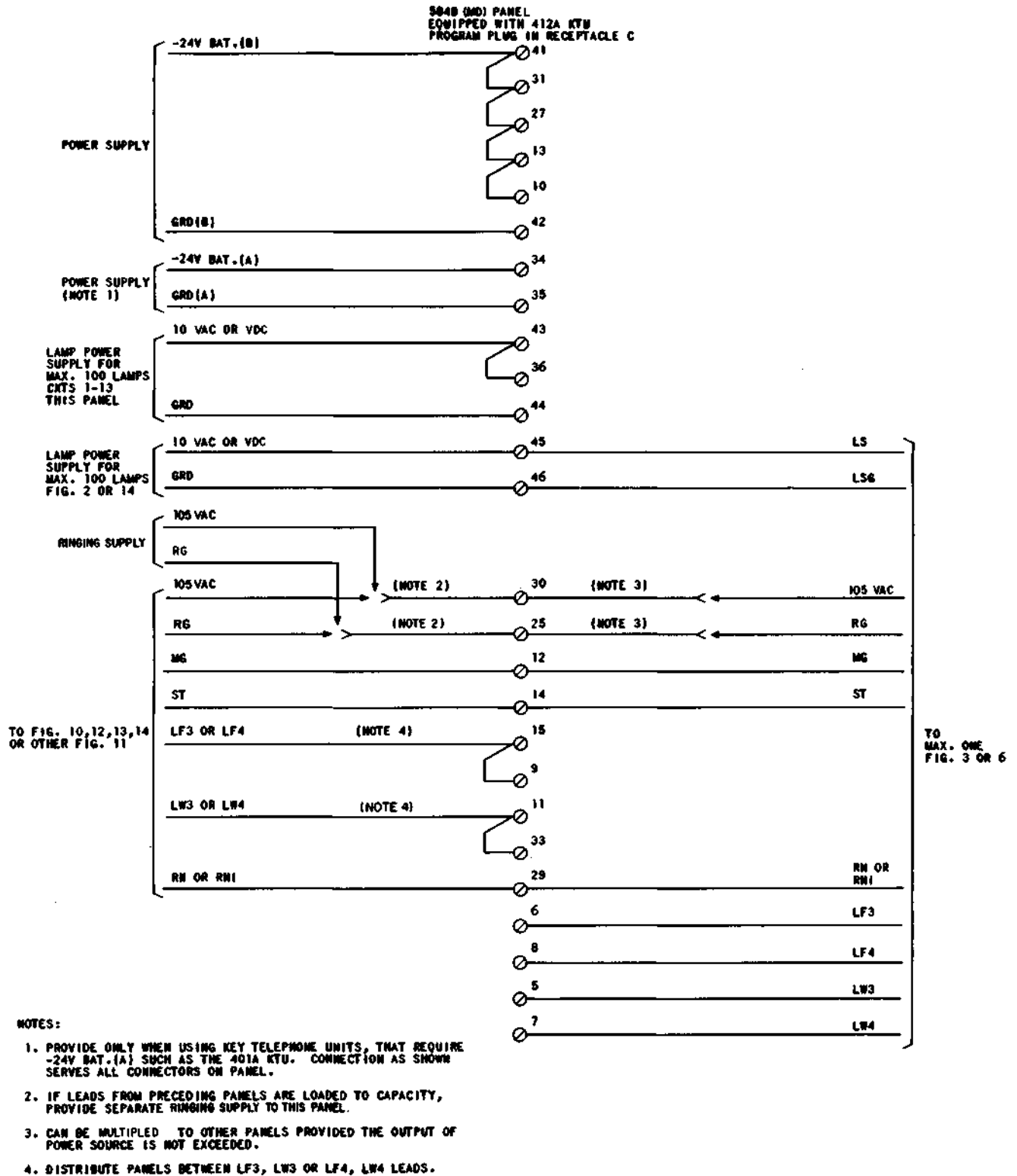
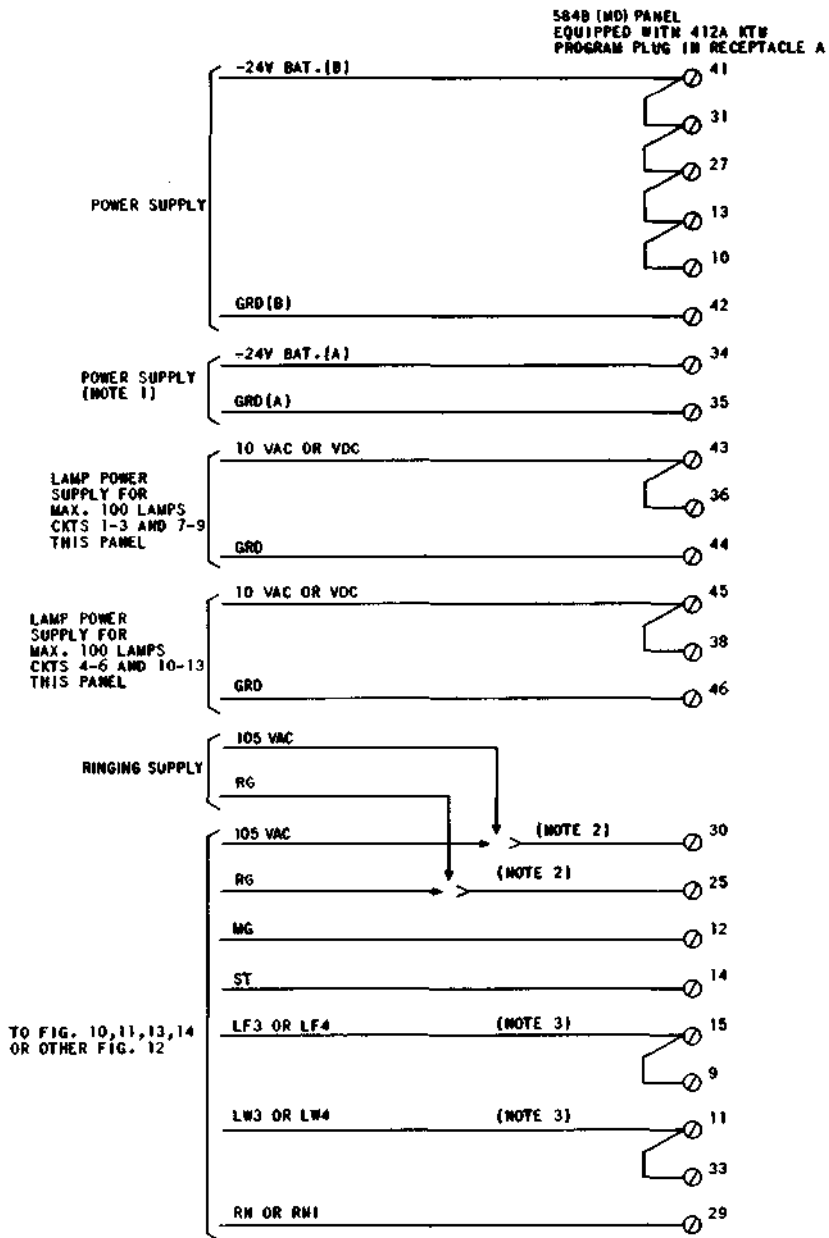


Fig. 11—584B (MD) Panel Equipped With 412A KTU (Panel used to control one other panel)



NOTES:

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V SAT.(A), SUCH AS THE 401A KTU. CONNECTION AS SHOWN SERVES ALL CONNECTORS ON PANEL.
2. IF LEADS FROM PRECEDING PANELS ARE LOADED TO CAPACITY, PROVIDE SEPARATE RINGING SUPPLY TO THIS PANEL.
3. DISTRIBUTE PANELS BETWEEN LF3, LW3 OR LF4, LW4 LEADS.

Fig. 12—584B (MD) Panel Equipped With 412A KTU (Panel not used to control other panels)

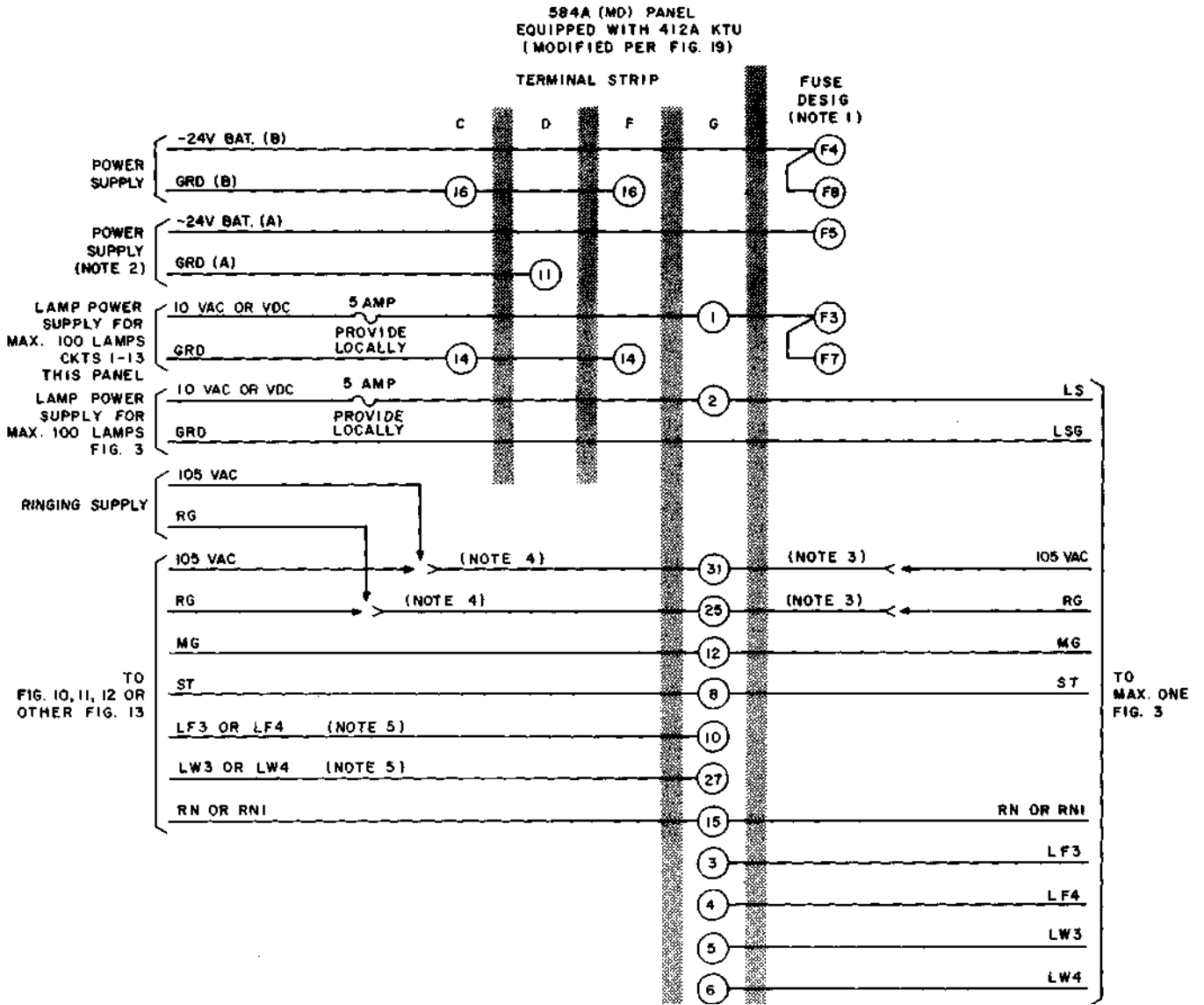
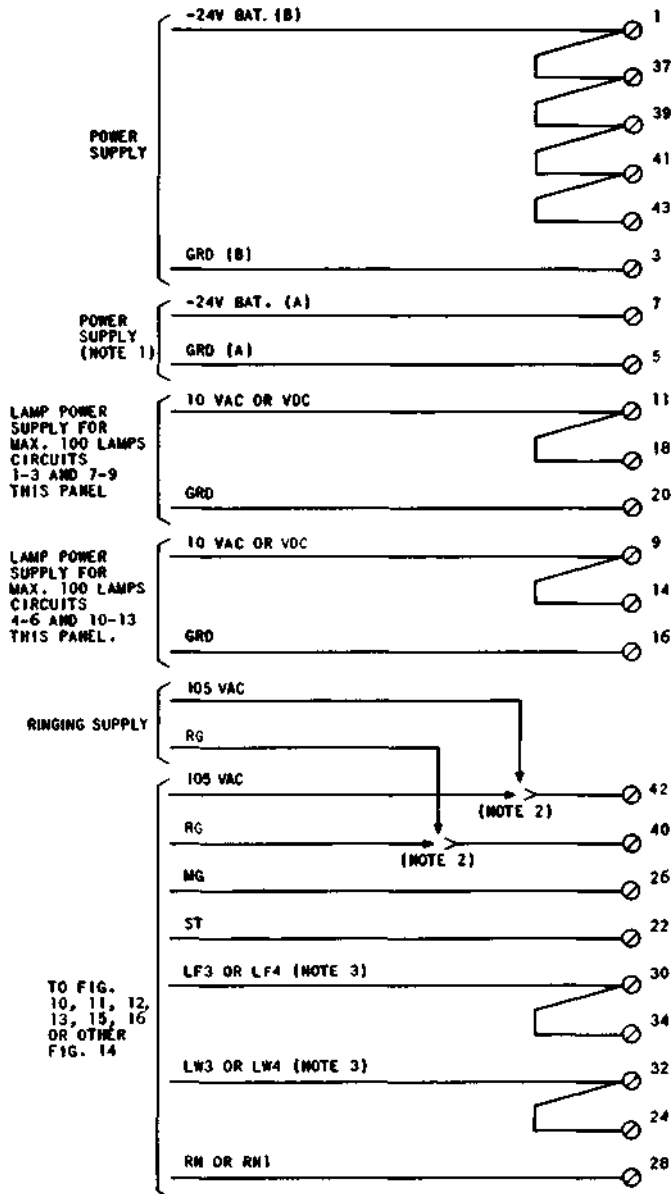


Fig. 13—584A (MD) Panel Equipped With 412A KTU (Panel used alone and also to control one other panel)

584C OR 584D PANEL
EQUIPPED WITH 412A KTU
USING PROGRAM A PLUG



NOTES

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V RAT.(A), SUCH AS 401A KTU.
2. IF LEADS FROM PRECEDING PANEL ARE LOADED TO CAPACITY. PROVIDE SEPARATE RINGING SUPPLY TO THIS PANEL.
3. DISTRIBUTE PANELS BETWEEN LF3, LW3 OR LF4, LW4 LEADS.

TO FIG.
10, 11, 12,
13, 15, 16
OR OTHER
FIG. 14

Fig. 14—584C or 584D Panel Equipped With 412A KTU (Panel not used to control other panels)

S84C OR 584D PANEL
EQUIPPED WITH INTERRUPTER
USING PROGRAM C PLUG

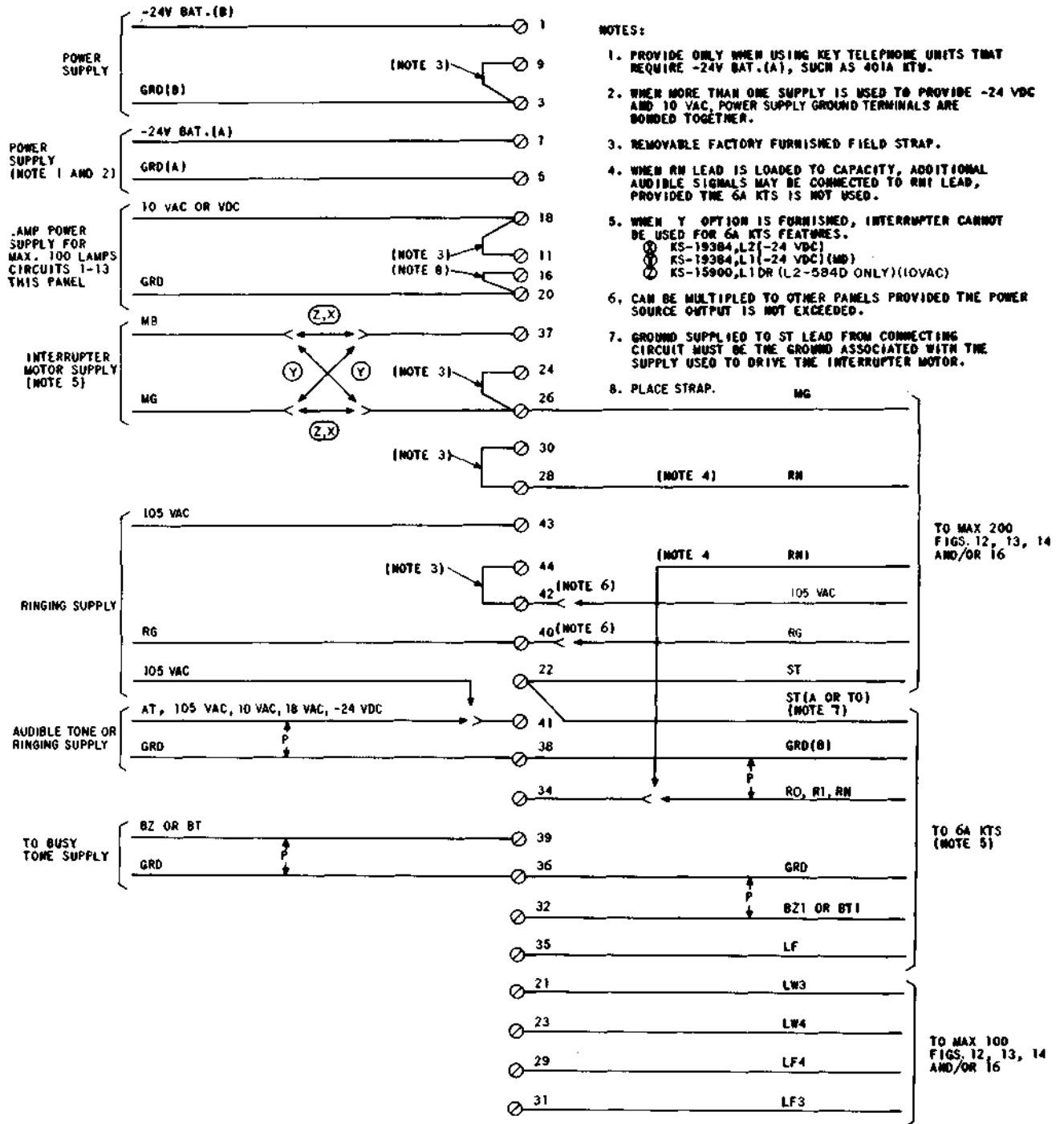
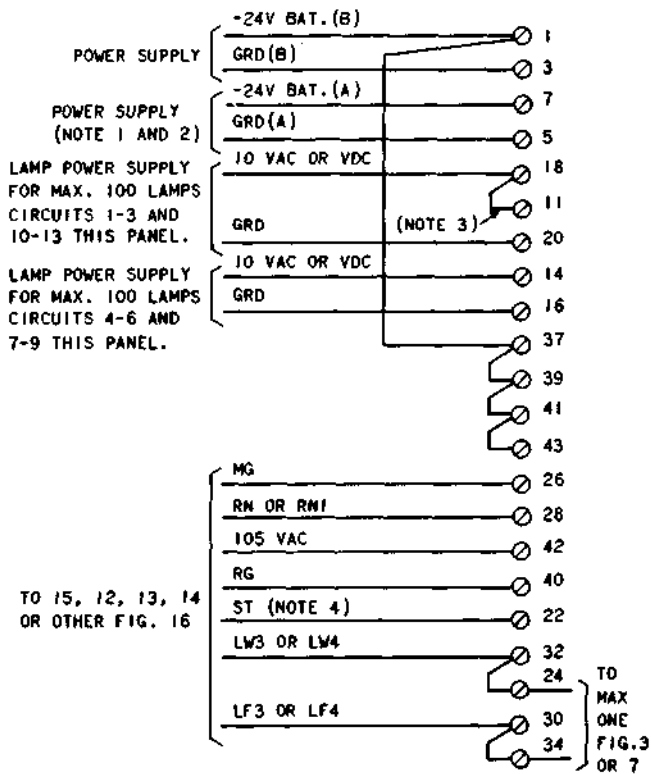


Fig. 15—584C or 584D Panel Equipped With Interrupter (Master panel used to control up to 200 other panels each equipped with 412A KTU)



NOTES:

1. PROVIDE ONLY WHEN USING KEY TELEPHONE UNITS THAT REQUIRE -24V BAT. (A), SUCH AS THE 401A KTU.
2. WHEN MORE THAN ONE SUPPLY IS USED TO PROVIDE -24 VDC AND 10 VAC, POWER SUPPLY GROUND TERMINALS ARE BONDED TOGETHER.
3. REMOVABLE FACTORY FURNISHED FIELD STRAP.
4. GROUND SUPPLIED TO ST LEAD FROM CONNECTING CIRCUIT MUST BE THE GROUND ASSOCIATED WITH THE SUPPLY USED TO DRIVE THE INTERRUPTER MOTOR.

Fig. 16—584C or 584D Panel Equipped With 412A KTU (Panel used to control one other panel)

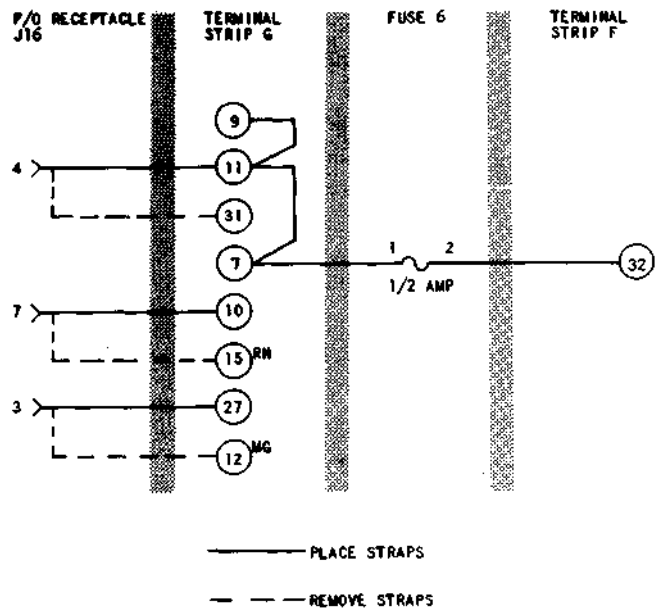
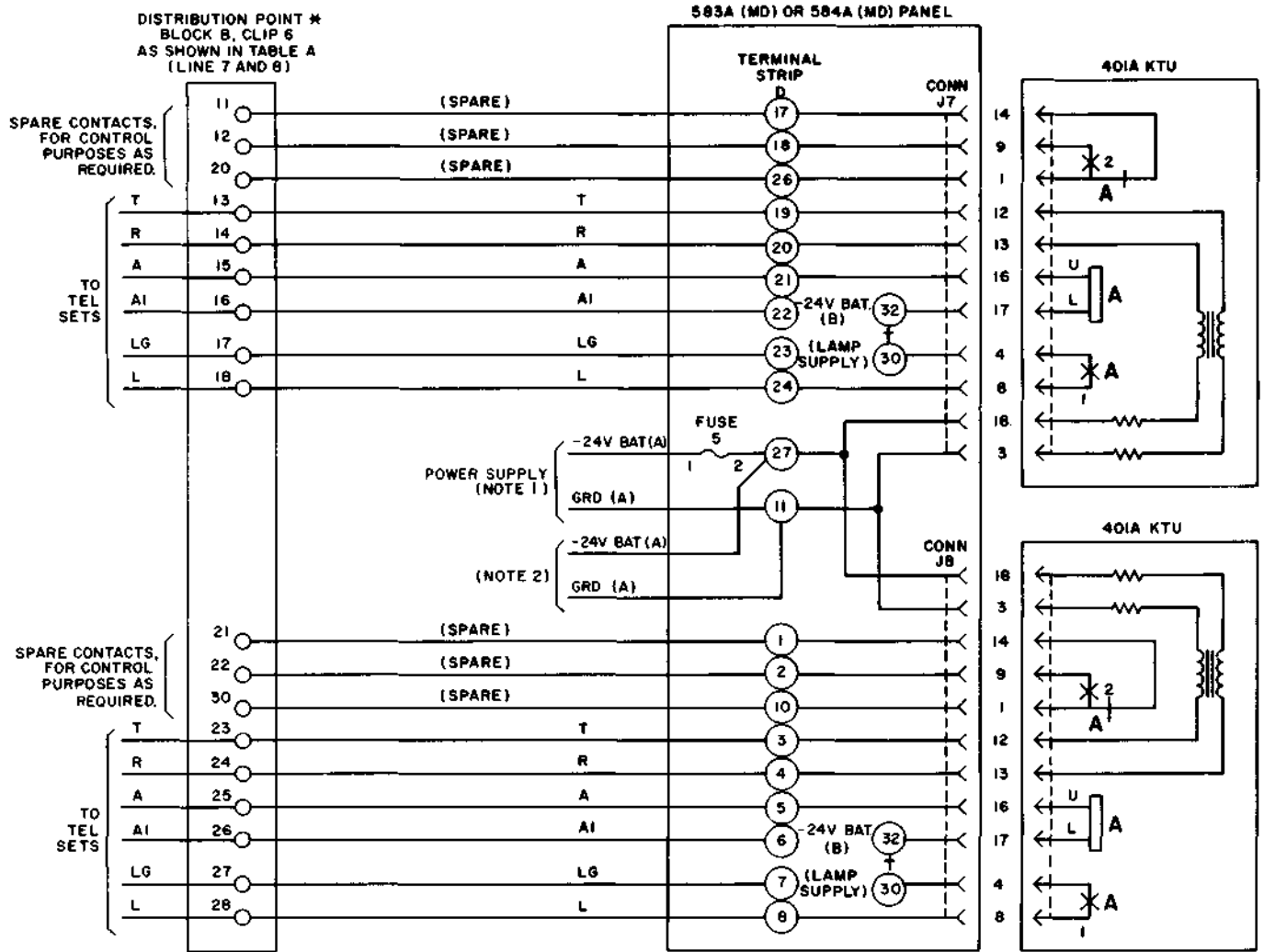


Fig. 17—Modification of 584A (MD) Panel to Accept 412A KTU



NOTES:

1. A MAXIMUM OF SIX 401A KTU'S CAN BE SERVED THROUGH FUSE 5. IF ADDITIONAL 401A KTU'S ARE REQUIRED, -24V BAT (A) MUST BE SUPPLIED THROUGH A SPARE FUSE.
 2. IF ADDITIONAL 401A KTU'S ARE REQUIRED, MULTIPLE TO ANY DESIRED TERMINAL STRIP EXCEPT TERMINAL STRIP G (CONN J13), WITHIN THE LIMITATIONS OF NOTE 1.
- X A MAXIMUM OF 3 STATION CABLES OR 2 STATION CABLES AND A DISTRIBUTING CABLE CAN CONNECT DIRECTLY TO PANEL.
- + FURNISHED WITH BASIC WIRING OF PANEL. FOR CLARITY, SAME TERMINAL SHOWN TWICE.

Fig. 18—Manual Intercommunication Connections for 583A (MD) and 584A (MD) Panels

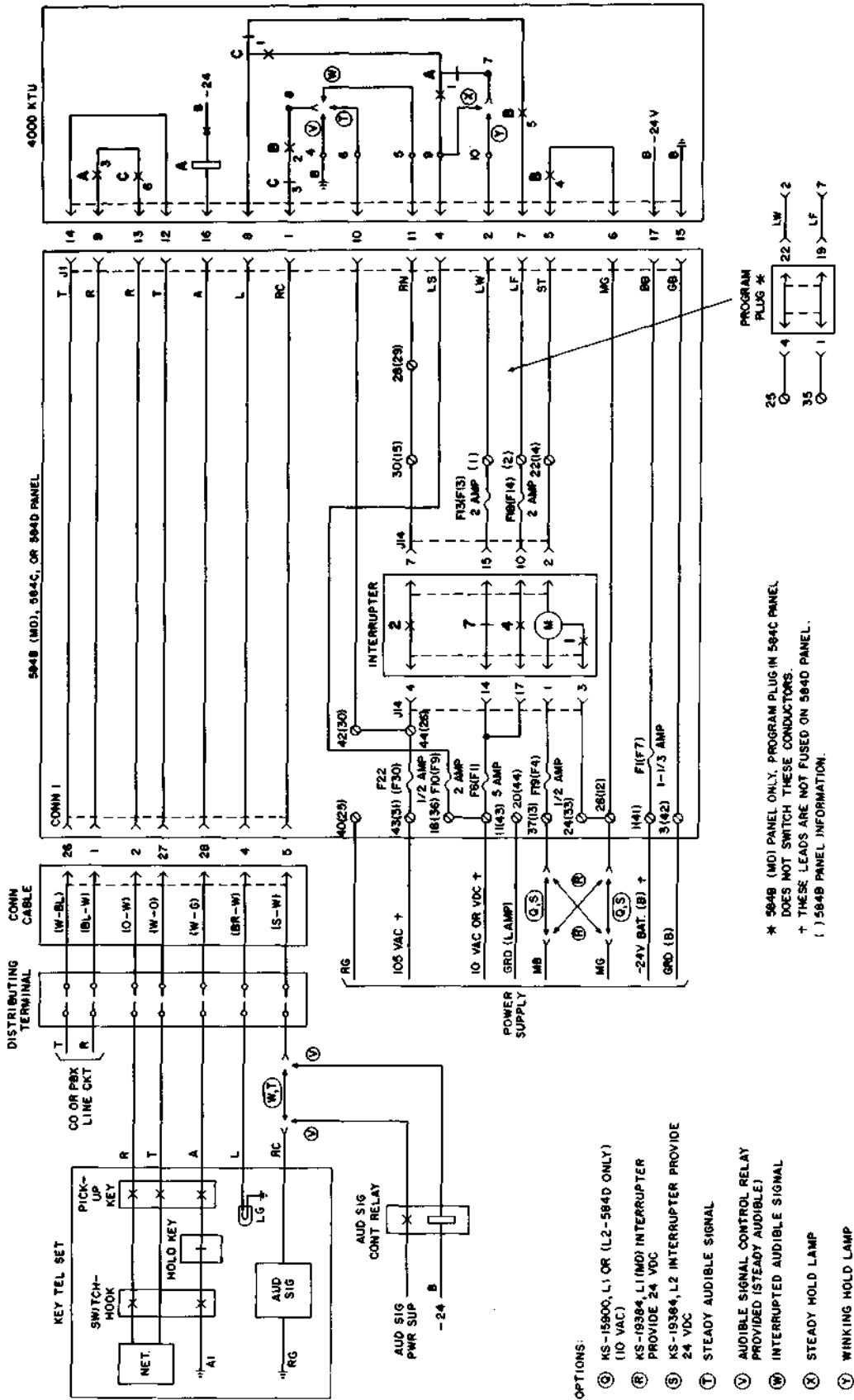


Fig. 19—Typical Functional Layout of 584B (MD) and 584C or D Panels Showing Line Circuit 1 Only

TABLE A

CONNECTIONS TO DISTRIBUTION POINT AND/OR THE PANELS

CIRCUIT	LEAD DESIG	DISTRIBUTION POINT BLOCK A 66-TYPE CONNECTING BLOCK			TERMINAL ON PANEL			
		ROW	COL	COLOR BL-W BINDER	583A (MO)	S84A (MD)	S84B (MD) 584C AND 584D	
							PIN	CONNECTOR
Line 1	CO PBX	T	1	F	W-BL	17A	26	1
		R	2		BL-W	18A	1	
	STA	T	3		W-0	19A	27	
		R	4		O-W	20A	2	
		A	5		W-G	21A	28	
		A1	6		G-W	22A	3	
		LG	7		W-BR	23A	29	
	L	8	BR-W		24A	4		
	RG	9	W-S		25A	30		
	RC	10	S-W		26A	5		
CO PBX	T	11	R-BL		1A	31		
	R	12	BL-R		2A	6		
Line 2	STA	T	13		R-0	3A	32	
		R	14		OR	4A	7	
		A	15		R-G	5A	33	
		A1	16		G-R	6A	8	
		LG	17		R-BR	7A	34	
		L	18		BR-R	8A	9	
RG	19	R-S	9A		35			
RC	20	S-R	10A		10			
Line 3	CO PBX	T	21	BK-BL	17B	36		
		R	22	BL-BK	18B	11		
	STA	T	23	BK-0	19B	37		
		R	24	O-BK	20B	12		
		A	25	BK-G	21B	38		
		A1	26	G-BK	22B	13		
LG	27	BK-BR	23B	39				
L	28	BR-BK	24B	14				
RG	29	BK-S	25B	40				
RC	30	S-BK	26B	15				
Line 4	CO PBX	T	31	Y-BL	1B	41		
		R	32	BL-Y	2B	16		
	STA	T	33	Y-0	3B	42		
		R	34	O-Y	4B	17		
		A	35	Y-G	5B	43		
		A1	36	G-Y	6B	18		
LG	37	Y-BR	7B	44				
L	38	BR-Y	8B	19				
RG	39	Y-S	9B	45				
RC	40	S-Y	10B	20				
Line 5	CO PBX	T	41	V-BL	17C	46		
		R	42	BL-V	18C	21		
	STA	T	43	V-0	19C	47		
		R	44	O-V	20C	22		
		A	45	V-G	21C	48		
		A1	46	G-V	22C	23		
LG	47	V-BR	23C	49				
L	48	BR-V	24C	24				
RG	49	V-S	25C	50				
RC	50	S-V	26C	25				

TABLE A (Cont)

CONNECTIONS TO DISTRIBUTION POINT AND/OR THE PANELS

CIRCUIT		LEAD DESIG	DISTRIBUTION POINT BLOCK B 66-TYPE CONNECTING BLOCK			TERMINAL ON PANEL			
			ROW	COL	COLOR O-W BINDER	583A (MD)	S84A (MD)	584B (MD) 584C AND 584D	
								PIN	CONNECTOR
Line 6	CO PBX	T	1	A	W-BL	1C	26	2	
		R	2		BL-W	2C	1		
	STA	T	3		W-0	3C	27		
		R	4		O-W	4C	2		
		A	5		W-G	5C	28		
		A1	6		G-W	6C	3		
		LG	7		W-BR	7C	29		
		L	8		BR-W	8C	4		
		RG	9		W-S	9C	30		
		RC	10		S-W	10C	5		
Line 7	CO PBX	T	11		R-BL	17D	31		
		R	12		BL-R	18D	6		
	STA	T	13		R-0	19D	32		
		R	14		O-R	20D	7		
		A	15		R-G	21D	33		
		A1	16		G-R	22D	8		
		LG	17		R-BR	23D	34		
		L	18		BR-R	24D	9		
RG	19	R-S	25D		35				
RC	20	S-R	26D		10				
Line 8	CO PBX	T	21		BK-BL	1D	36		
		R	22		BL-BK	2D	11		
	STA	T	23		BK-0	3D	37		
		R	24		O-BK	4D	12		
		A	25		BK-G	5D	38		
		A1	26		G-BK	6D	13		
		LG	27		BK-BR	7D	39		
		L	28		BR-BK	8D	14		
RG	29	BK-S	9D		40				
RC	30	S-BK	10D		15				
Line 9	CO PBX	T	31	Y-BL	17E	41			
		R	32	BL-Y	18E	16			
	STA	T	33	Y-0	19E	42			
		R	34	O-Y	20E	17			
		A	35	Y-G	21E	43			
		A1	36	G-Y	22E	18			
		LG	37	Y-BR	23E	44			
		L	38	BR-Y	24E	19			
RG	39	Y-S	25E	45					
RC	40	S-Y	26E	20					
Line 10	CO PBX	T	41	V-BL	1E	46			
		R	42	BL-V	2E	21			
	STA	T	43	V-0	3E	47			
		R	44	O-V	4E	22			
		A	45	V-G	5E	48			
		A1	46	G-V	6E	23			
		LG	47	V-BR	7E	49			
		L	48	BR-V	8E	24			
RG	49	V-S	9E	50					
RC	50	S-V	10E	25					

TABLE A (Cont)

CONNECTIONS TO DISTRIBUTION POINT AND/OR THE PANELS

CIRCUIT		LEAD DESIG	DISTRIBUTION POINT BLOCK C 66-TYPE CONNECTING BLOCK			TERMINAL ON PANEL			
			ROW	COL	COLOR G-W BINDER	583A (MD)	584A (MO)	584B (MD) 584C AND 584D	
							PIN	CONNECTOR	
Line 11	CO PBX	T	1	F	W-BL	17F	26	3	J
		R	2		BL-W	18F			
	STA	T	3		W-0	19F	27		
		R	4		O-W	20F			
		A	5		W-G	21F	28		
		A1	6		G-W	22F			
		LG	7		W-BR	23F	29		
		L	8		BR-W	24F			
		RG	9		W-S	25F	30		
		RC	10		S-W	26F			
Line 12	CO PBX	T	11		R-BL	1F	31		
		R	12		BL-R	2F			
	STA	T	13		R-O	4F	32		
		R	14		O-R	3F			
		A	15		R-G	5F	33		
		A1	16		G-R	6F			
		LG	17		R-BR	7F	34		
		L	18		BR-R	8F			
		RG	19		R-S	9F	35		
		RC	20		S-R	10F			
Line 13	CO PBX	T	21		BK-BL	17G	36		
		R	22		BL-BK	18G			
	STA	T	23		BK-0	19G	37		
		R	24		O-BK	20G			
		A	25		BK-G	21G	38		
		A1	26		G-BK	22G			
		LG	27		BK-BR	23G	39		
		L	28		BR-BK	24G			
		RG	29		BK-S	25G	40		
		RC	30		S-BK	26G			
Line 14	CO PBX	T	31	Y-BL	17H	41			
		R	32	BL-Y	18H		16		
	STA	T	33	Y-O	19H	42			
		R	34	O-Y	20H		17		
		A	35	Y-G	21H	43			
		A1	36	G-Y	22H		18		
		LG	37	Y-BR	23H	44			
		L	38	BR-Y	24H		19		
		RG	39	Y-S	25H	45			
		RC	40	S-Y	26H		20		
Line 15	CO PBX	T	41	V-BL	1H	46			
		R	42	BL-V	2H		21		
	STA	T	43	V-0	3H	47			
		R	44	O-V	4H		22		
		A	45	V-G	5H	48			
		A1	46	G-V	6H		23		
		LG	47	V-BR	7H	49			
		L	48	BR-V	8H		24		
		RG	49	V-S	9H	50			
		RC	50	S-V	10H		25		

Note: When using other than A65A connector cable with the 584B (MD). panel, these leads are spare and are dead-dressed long enough to reach any screw terminal and stored behind back panel.