TELEPHONE SETS

630, 631, 1630, AND 1631 TYPES

CONNECTIONS

1. GENERAL

1.01 This section contains connection data for various service-feature arrangements of 18- and 30-button general purpose Call Director telephone sets. It includes terminal board connections in the set, mounting cord and connector cable conductors, and their associated plugs and connectors. See Table A for telephone set codes and module arrangements.

1.02 This section is reissued to add Table B, as well as connections for TOUCH-TONE dialing (Fig. 8A), and new set components (Fig. 8B and C). Issue 4 had a limited distribution.

1.03 Connection figures in this section pertain to 630- and 631-type rotary dial sets, and 1630- and 1631-type TOUCH-TONE dial sets. However, these figures also apply to preceding 600A and 601A types which are rated Manufacture Discontinued (MD).

1.04 Even-count color codes and lead designations are shown in red and MD color codes and lead designations are shown in green.

1.05 Fig. 9 shows the even-count color-coded cords using either MD or even-count connector cables for both 18- or 30-button sets. Fig. 10 shows the MD color-coded cords using either MD or even-count connector cables.

1.06 Conversion to even-count color codes and lead designations should be accomplished whenever practicable.

1.07 To facilitate use of this practice, the circuit leads follow a straight line pattern as nearly as possible from apparatus cabinet to key. Key connector pins (Fig. 1 through 7) are so placed to overlay into corresponding module plug pins in the new even-count Call Director sets. (See Fig. 9.) However, when keys (Fig. 1 through 7) are overlaid into the old (MD) Call Director sets (Fig. 10), it is necessary to match key connector pins to module plug pins.

Some conductors of mounting cords are dead dressed with insulators (tubing). When necessary to use these conductors, do not use long-nose pliers to pull off insulators. This may break the conductor or pull off the spade tip. The insulation should be cut off with electrician scissors or diagonal pliers.

2. APPLICATION

2.01 These telephone sets may be used with 1A, 1A1, 1A2, and 6A key telephone systems. The sets are factory wired for use with 1A1 or 1A2 key telephone systems. When connected to line circuits of both 1A and 1A1 systems, 1A1 system lines must be connected to originating key units, with 1A system lines connected to supplementary key units as required. ***Line circuits of both 1A and 1A1 key telephone systems must not be connected to the same 6-button key unit. Due to differing line circuit time-out functions, 1A2 system lines should not be mixed with either 1A or 1A1 system line circuits of a Call Director station.***

2.02 Tables C, D, and E show connections necessary for combining different key telephone system line circuits within a Call Director set.

TABLE A

TELEPHONE SET CODES AND MODULE ARRANGEMENTS

Telephone Set		Set Equipped With									
		Left Module		2nd Module		3rd Module		4th Module		5th Module	
Type	Code	Key	Fig.	Key	Fig.	Key	Fig.	Key	Fig.	Key	Fig.
630A* 630B* 630C* 630D 1630D	1	599A	1	598A	2	105B					
	2					598A	2				
	3 (MD)					661A	4				
	4					617A	6				
	5 (MD)			617A	6	661A	4				
	6	599B	3	598A	2	105B					
	7					598A	2				
	8 (MD)					661A	4				
	9	598A	2			105B					
	10					598A	2				
	11	599A	1			667 type	5				
	12			617A	6						
	13	599B	3	598A	2						
	14	599A	1								
	15	599B	3			59A†	7				
631A* 631B* 631C* 631D 1631D	1	599A	1	598A	2	598A	2	105B		105B	
	2							598A	2	598A	2
	3									617A	6
	4										
	5							617A	6	59A†	7
	6 (MD)							105B		661A	4
	7 (MD)							598A	2		
	8 (MD)							617A	6		
	9							105B		59A†	7
	10	599B	3							105B	
	11							598A	2		
	12									598A	2
	13	598A	2					105B		105B	
	14							598A	2		
	15									598A	2
	16	599A	1					105B		667 type	5
	17							598A	2		
	18							617A	6		
	19							598A	2	59A†	7

Note: For key identification, see Table B.

* These sets are rated Manufacture Discontinued.

† 59A is a lamp socket (use 51A lamps).

2.03 Tables F, G, and H show connections for various pickup signaling options within a Call Director set.

2.04 When using a 599B key in first module:

(a) See Table J for connections of various key features.

(b) Use auxiliary relay arrangement (such as 5A or 17B key telephone unit) to control circuit leads.

(c) External speakerphone system equipment cannot be provided at the station.

2.05 A 661A or 667-type speakerphone transmitter unit may be used in the third key position of an 18-button set or fifth key position of a 30-button set. See appropriate sections for connections to speakerphone systems.

TABLE B

KEY IDENTIFICATION

Type	Features
105B	Apparatus blank
598A	6 pickup keys
599A	5 pickup keys and 1 hold key
599B	1 turnbutton key, 4 pickup keys, and 1 hold key
617A	12 signal keys
661A	Used with 1A1 speakerphone (MD)
667	Used with 3A speakerphone

TABLE C

1A1 AND 1A SYSTEM CONVERSIONS
CONNECTIONS FOR SETS USING D120A (MD) OR D200A (MD) CORD

Key Telephone System Central Office or PBX Line Feature		Leads												
		Hold Key					Chaining Switch: 630 and 631, 600A and 601, 1630 and 1631 Sets			Chaining Switch: 601, 631, 1631 Sets Only		Switchhook		
		BK-BL	BK-W	S-W	S-Y	S-BK	BL-W 1st Key	BL-W 2nd Key	BL-W 3rd Key	BL-W 4th Key	BL-W 5th Key	R*	BR*	S-G
1A1 only (as furnished by shop)		A1 (I)	H1 (I)	†	†	†	A1 (I)	A2 (II)	A3 (III)	A4 (IV)	A5 (V)	R (I)	1B (VI)	‡
First key unit 1A1; remaining key units 1A		A1 (I)	H1 (I)	†	1§ (I)	R (II)	H1 (I)	A2 (II)	A3 (III)	A4 (IV)	A5 (V)	R (I)	1B (VI)	‡
First and second key units 1A1; remaining key units 1A		A1 (I)	H1 (I)	H2 (II)	1§ (II)	R (III)	A1 (I)	H2 (II)	A3 (III)	A4 (IV)	A5 (V)	R (I)	1B (VI)	‡
First, second, and third key units 1A1; remaining key units 1A	601A, 631, 1631 sets only	A1 (I)	H1 (I)	H3 (III)	1§ (III)	R (IV)	A1 (I)	A2 (II)	H3 (III)	A4 (IV)	A5 (V)	R (I)	1B (VI)	‡
First through fourth key units 1A1; fifth key unit 1A	601A, 631, 1631 sets only	A1 (I)	H1 (I)	H4 (IV)	1§ (IV)	R (V)	A1 (I)	A2 (II)	A3 (III)	H4 (IV)	A5 (V)	R (I)	1B (VI)	‡
1A only (see connection note 3 in Fig. 9)		H1 (I)	A1 (I)	†	R1§ (VI)	R (I)	A1 (I)	A2 (II)	A3 (III)	A4 (IV)	A5 (V)	R1 (VI)	SG (VI)	L2

Note: Roman numerals in parentheses indicate terminal board designations.

* *R* lead connects to *S-Y* switch lead at terminal 1 of ringer terminal board.
BR lead connects to *S-W* switch lead at terminal 4 of ringer terminal board.

† Lead is spade tipped, insulated, and stored.

‡ *S-G* lead connects to terminal G of network with no connection to station busy-lamp circuit or to terminal L2 of network when station busy lamp is used.

§ Disconnect, insulate, and store *R* (R-W) chaining lead.

TABLE D

1A AND 1A1 SYSTEM CONVERSIONS
CONNECTIONS FOR SETS USING D120B (MD) OR D200B (MD) MOUNTING CORD

Key Telephone System Central Office or PBX Line Feature		Leads												
		Hold Key					Chaining Switch: 630 and 631 1630 and 1631 Sets			Chaining Switch: 631, 1631 Sets Only		Switchhook		
		BK-BL	BK-W	S-W	S-Y	S-BK	BL-W 1st Key	BL-W 2nd Key	BL-W 3rd Key	BL-W 4th Key	BL-W 5th Key	R*	Y*	S-G
1A1 only (as furnished by shop)		A-H (I)	A-H (I)	†	†	†	A-H (I)	A-H (II)	A-H (III)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First key unit 1A1; remaining key units 1A		A-H (I)	X (VI)	†	1§ (I)	R (II)	X (VI)	A-H (II)	A-H (III)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First and second key units 1A1; remaining key units 1A		A-H (I)	X (VI)	†	1§ (II)	R (III)	A-H (I)	X (VI)	A-H (III)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First, second, and third key units 1A1; remaining key units 1A	601A, 631, 1631 sets only	A-H (I)	X (VI)	†	1§ (III)	R (IV)	A-H (I)	A-H (II)	X (VI)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First through fourth key units 1A1; fifth key unit 1A	601A, 631, 1631 sets only	A-H (I)	X (VI)	†	1§ (IV)	R (V)	A-H (I)	A-H (II)	A-H (III)	X (VI)	A-H (V)	R (I)	1B (VI)	‡
1A only (see connection note 3 in Fig. 9)		X (VI)	A-H (I)	†	R1 (VI)	R (I)	A-H (I)	A-H (II)	A-H (III)	A-H (IV)	A-H (V)	R1 (VI)	SG (VI)	L2

Note: Roman numerals in parentheses indicate terminal board designations.

* *R* lead connects to *S-Y* switch lead at terminal 1 of ringer terminal board.
Y lead connects to *S-W* switch lead at terminal 4 of ringer terminal board.

† Lead is spade tipped, insulated, and stored.

‡ *S-G* lead connects to terminal G of network with no connection to station busy-lamp circuit or to terminal L2 of network when station busy lamp is used.

§ Disconnect, insulate, and store *R* (R-W) chaining lead.

TABLE E

1A1 AND 1A SYSTEM CONVERSIONS
CONNECTIONS FOR SETS USING D120C OR D200F CORD

Key Telephone System Central Office or PBX Line Feature		Leads												
		Hold Key					Chaining Switch					Switchhook		
							630 and 631 1630 and 1631 Sets			631, 1631 Sets Only				
		Y-G	G-Y	V-O	BR-V	V-BR	V-G 1st Key	V-G 2nd Key	V-G 3rd Key	V-G 4th Key	V-G 5th Key	BL-V *	O-V *	S-G
1A1 only (as furnished by shop)		A-H (I)	A-H (I)	†	†	†	A-H (I)	A-H (II)	A-H (III)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First key unit 1A1 remaining key units 1A		A-H (I)	X (VI)	†	1§ (I)	R (II)	X (VI)	A-H (II)	A-H (III)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First and second key units 1A1; remaining key units 1A		A-H (I)	X (VI)	†	1§ (II)	R (III)	A-H (I)	X (VI)	A-H (III)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First, second, and third key units 1A1; remaining key units 1A	631, 1631 sets only	A-H (I)	X (VI)	†	1§ (III)	R (IV)	A-H (I)	A-H (II)	X (VI)	A-H (IV)	A-H (V)	R (I)	1B (VI)	‡
First through fourth key units 1A1; fifth key unit 1A		A-H (I)	X (VI)	†	1§ (IV)	R (V)	A-H (I)	A-H (II)	A-H (III)	X (VI)	A-H (V)	R (I)	1B (VI)	‡
1A only (see connection note 3 in Fig. 8A, B, and C.)		X (VI)	A-H (I)	†	R1 (VI)	R (I)	A-H (I)	A-H (II)	A-H (III)	A-H (IV)	A-H (V)	R1 (VI)	SG (VI)	L2

Note: Roman numerals in parentheses indicate terminal board designations.

* *BL-V* lead connects to *S-Y* switch lead at terminal 1 of board. *O-V* lead connects to *S-W* switch lead at terminal 4 of ringer terminal board.

† Lead is spade tipped, insulated, and stored.

‡ *S-G* lead connects to terminal G of network with no connection to station busy-lamp circuit or to terminal L2 of network when station busy lamp is used.

§ Disconnect, insulate, and store *R* (BL-V) chaining lead.

TABLE F

PICKUP-SIGNALING KEY CONVERSION FROM LOCKING TO NONLOCKING OPERATION FOR SETS USING D120A (MD) OR D200A (MD) CORD

(See Connection Notes 5 and 6 in Fig. 9 and 10 and Change Set Leads as Follows)

No. of Pickup Keys	No. of Signal Keys Converted from Pickup Keys			No. of Private and Intercom Lines with Com Sig Keys (per Key Unit)	Key Leads and Terminals of Key Units Involved						
	599A	599B	598A		BK	BR-G	BR-W	R-BL	G-BL	S-BR Supl Key Only	BR Supl Key Only
6					A	A	A	A	A	A	G
5			1		A	A	A	A	A	S	G
4	1		2		A	A	A	A	S	S	G
3	2	1	3		A	A	A	S	S	S	G
2	3	2	4		A	A	S	S	S	S	G
1	4	3	5		A	S	S	S	S	S	G
			6		S	S	S	S	S	S	G
5			1	2	A	A	A	C	C	C	S
5			1	3	A	A	C	C	C	C	S
5			1	4	A	C	C	C	C	C	S
5			1	5	C	C	C	C	C	C	S

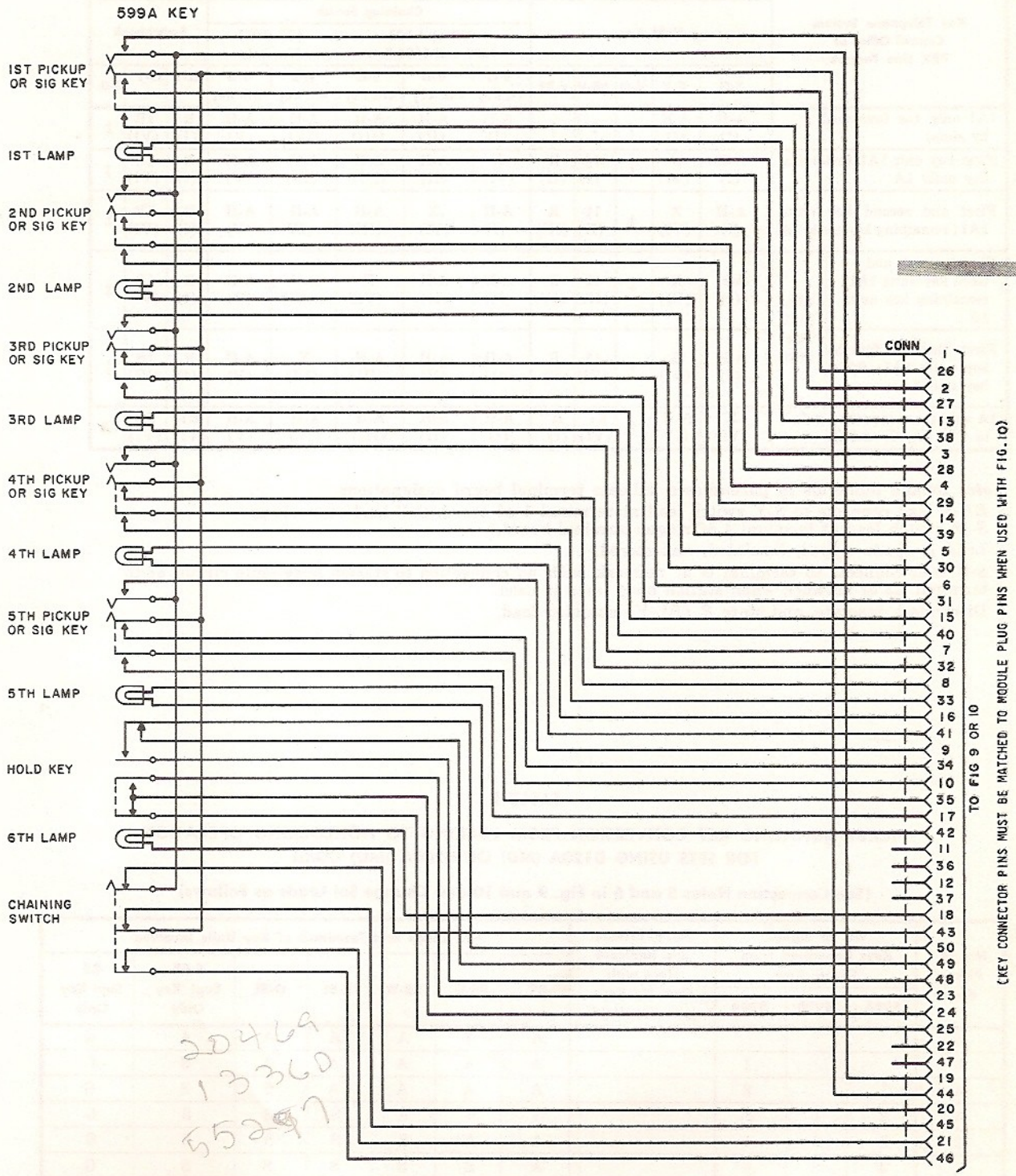


Fig. 1 — 599A Key

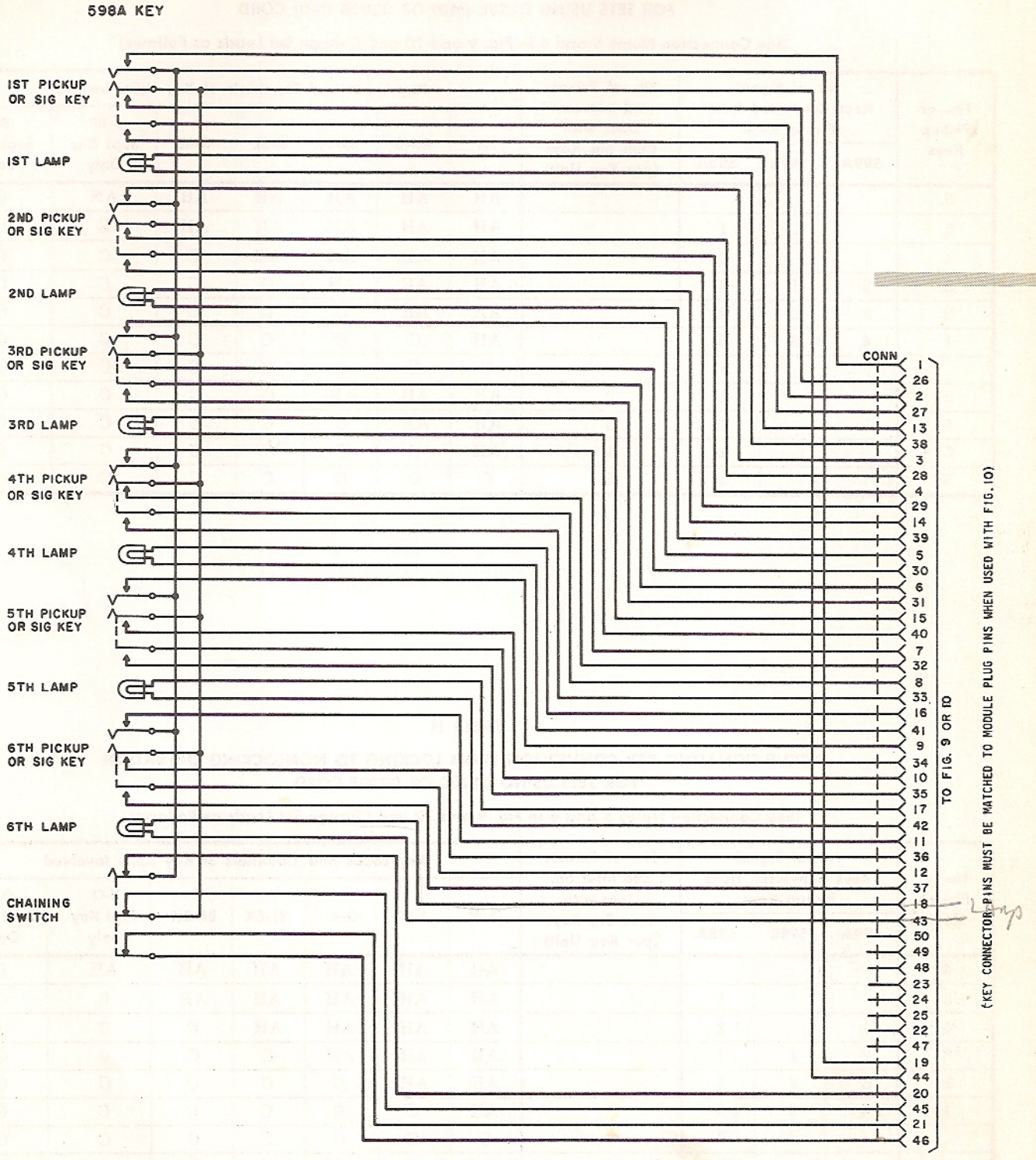


Fig. 2 — 598A Key

TABLE G

PICKUP-SIGNALING KEY CONVERSION FROM LOCKING TO NONLOCKING OPERATION FOR SETS USING D120B (MD) OR D200B (MD) CORD

(See Connection Notes 5 and 6 in Fig. 9 and 10 and Change Set Leads as Follows)

No. of Pickup Keys	No. of Signal Keys Converted from Pickup Keys			No. of Private and Intercom Lines with Com Sig Keys (per Key Unit)	Key Leads and Terminals of Key Units Involved						
	599A	599B	598A		BK	BR-G	BR-W	R-BL	G-BL	S-BR Supl Key Only	BR Supl Key Only
6					AH	AH	AH	AH	AH	AH	G
5			1		AH	AH	AH	AH	AH	C	G
4	1		2		AH	AH	AH	AH	C	C	G
3	2	1	3		AH	AH	AH	C	C	C	G
2	3	2	4		AH	AH	C	C	C	C	G
1	4	3	5		AH	C	C	C	C	C	G
			6		C	C	C	C	C	C	G
5			1	2	AH	AH	AH	C	C	C	G
5			1	3	AH	AH	C	C	C	C	G
5			1	4	AH	C	C	C	C	C	G
5			1	5	C	C	C	C	C	C	G

TABLE H

PICKUP-SIGNALING KEY CONVERSION FROM LOCKING TO NONLOCKING OPERATION FOR SETS USING D120C OR D200F CORD

(See Connection Notes 5 and 6 in Fig. 9 and 10 and Change Set Leads as Follows)

No. of Pickup Keys	No. of Signal Keys Converted from Pickup Keys			No. of Private and Intercom Lines with Com Sig Keys (per Key Unit)	Key Leads and Terminals of Key Units Involved						
	599A	599B	598A		O-W	S-W	G-R	BL-BK	BR-BK	Y-O Supl Key Only	O-Y Supl Key Only
6					AH	AH	AH	AH	AH	AH	G
5			1		AH	AH	AH	AH	AH	C	G
4	1		2		AH	AH	AH	AH	C	C	G
3	2	1	3		AH	AH	AH	C	C	C	G
2	3	2	4		AH	AH	C	C	C	C	G
1	4	3	5		AH	C	C	C	C	C	G
			6		C	C	C	C	C	C	G
5			1	2	AH	AH	AH	C	C	C	G
5			1	3	AH	AH	C	C	C	C	G
5			1	4	AH	C	C	C	C	C	G
5			1	5	C	C	C	C	C	C	G

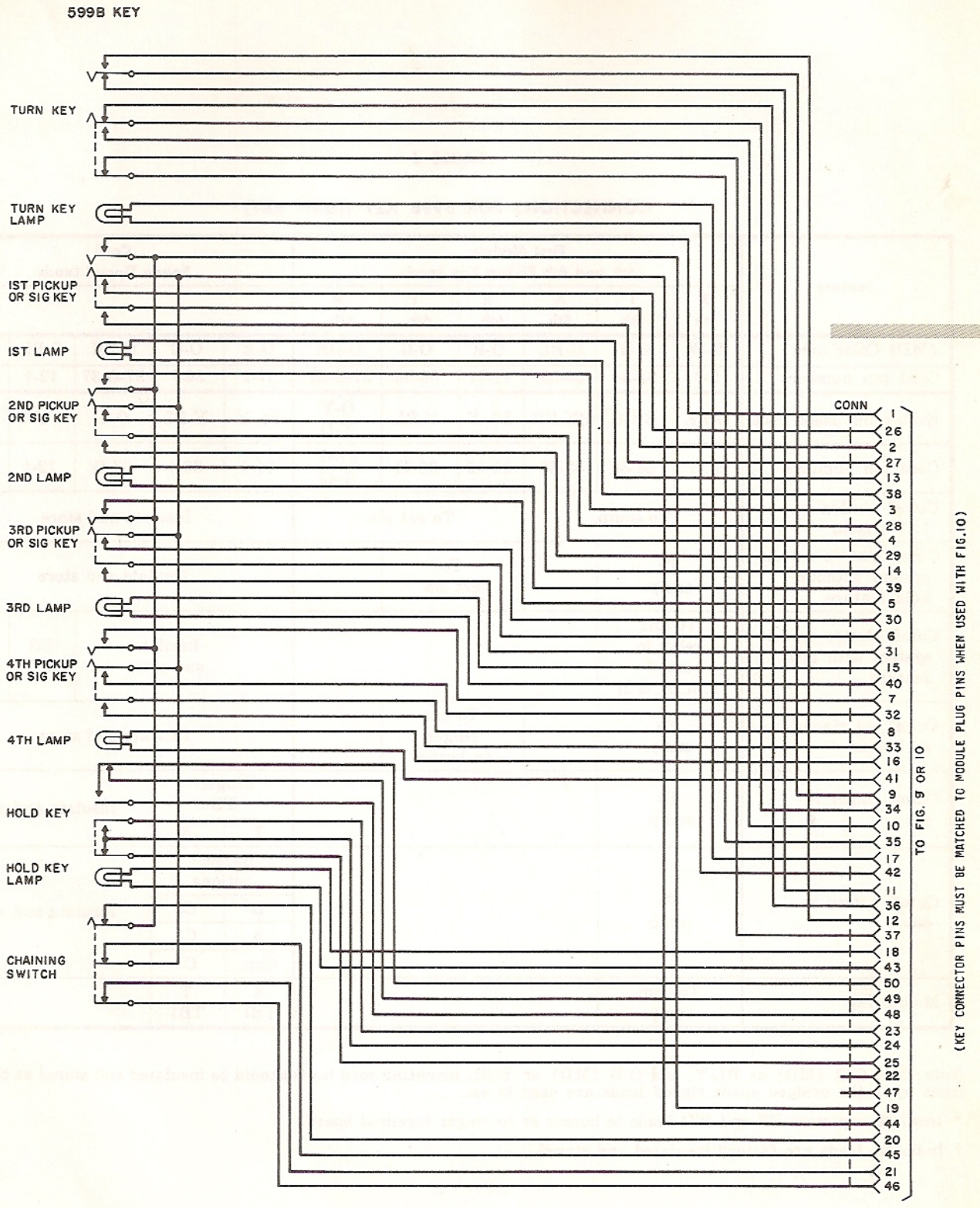


Fig. 3 — 599B Key

TABLE J

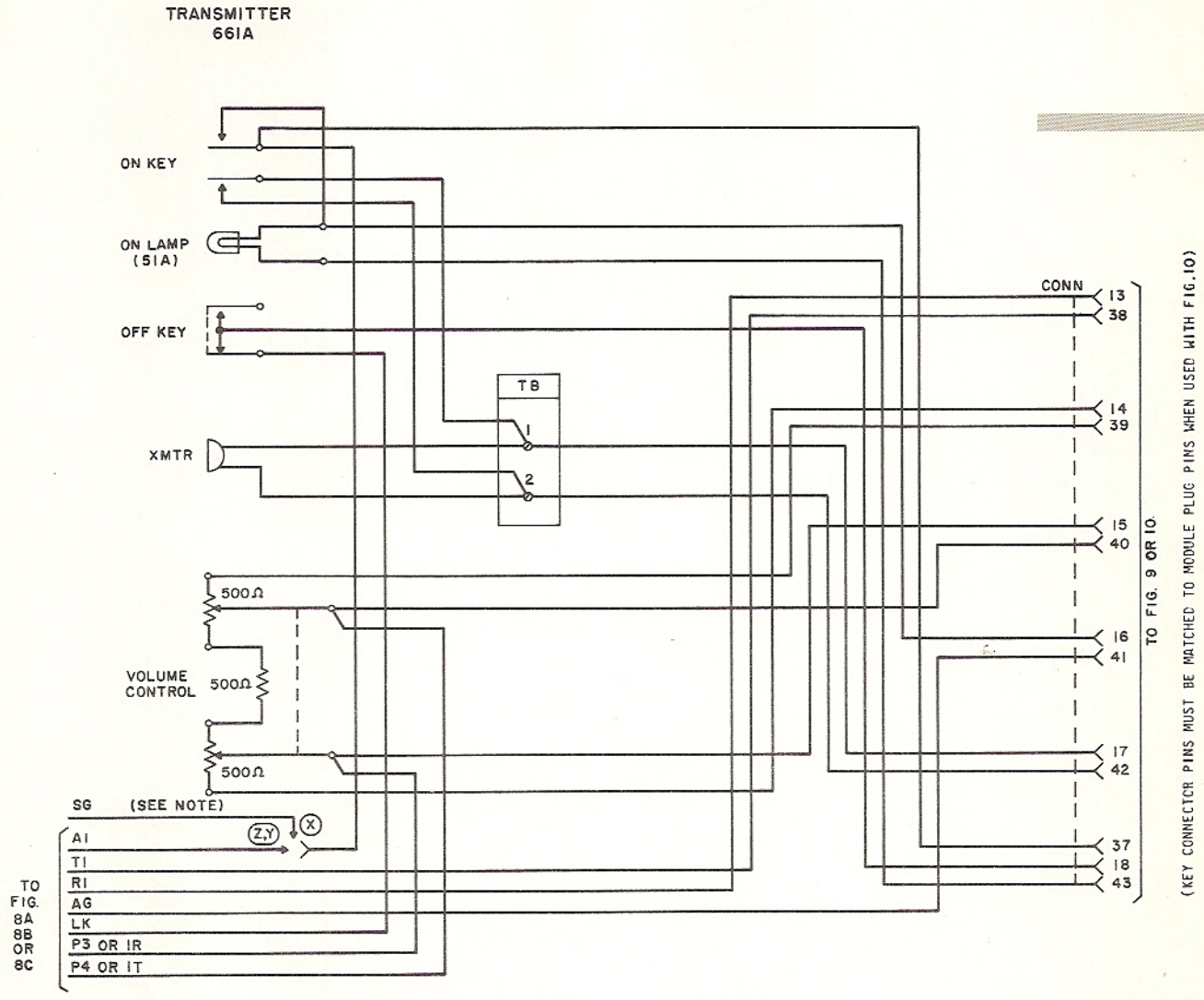
CONNECTIONS FOR 599B KEY (TURN KEY)

Feature	First Module 5th and 6th Pickup Key Leads						Cord Spade Tipped Leads				
	R 5th	T 5th	A 5th	R 6th	T 6th	A 6th					
(MD) Color code	R-W	G-Y	G-BL	O-R	O-G	O-BK	O-R	O-G	O-BK	S-BR	G-BL
Cord pin numbers	9-9	34-34	35-35	11-11	36-36	37-G-37	37-†	36-†	37-G-37	12-†	10-AH
Even-count color code	G-BK	BK-G	BK-BR	BL-Y	Y-BL	O-Y Y-O	BL-Y	Y-BL	O-Y	Y-O	BR-BK
Cord pin numbers	9-13	34-38	38-39	11-16	36-41	37-G G-42	11-†	36-†	37-G	12-†	10-AH
Cutoff station on 1A1 system	To equip.			To ext sta			Insulate and store				
Cutoff station on 1A system without hold feature	To equip.			To ext sta			Insulate and store				
Cutoff station on 1A system with hold feature	To aux relay to cutoff T, R, B, & H						Insulate and store			SG TB VI	SG TB VI
Cutoff ext ringer or buzzer	To equip.			To ext ringer or buzzer			Insulate and store				
Cutoff ringer in set	To equip.						Ringer* TB 7	Ringer* TB 8	Insulate and store		
Cutoff buzzer in set	To equip.						Buzzer* options D	C	Insulate and store		
							A	C			
							Cap.	C			
Monitoring	To mon equip.						R TB1	T TB1			

Note: The O-R (MD) or BL-Y, and O-G (MD) or Y-BL mounting cord leads should be insulated and stored at the equipment when the bridged spade tipped leads are used in set.

* Insulate and store BZ and BZ1 leads to buzzer or to ringer terminal board.

† Indicates leads are factory insulated and stored.



NOTE: WHEN SPEAKERPHONE NO. 1A1 IS USED WITH LINES OF KEY TELEPHONE SYSTEM NO. 1A, TERMINATE ON SG (TB V1).

Fig. 4 — 661A Transmitter

TRANSMITTER
667 TYPE

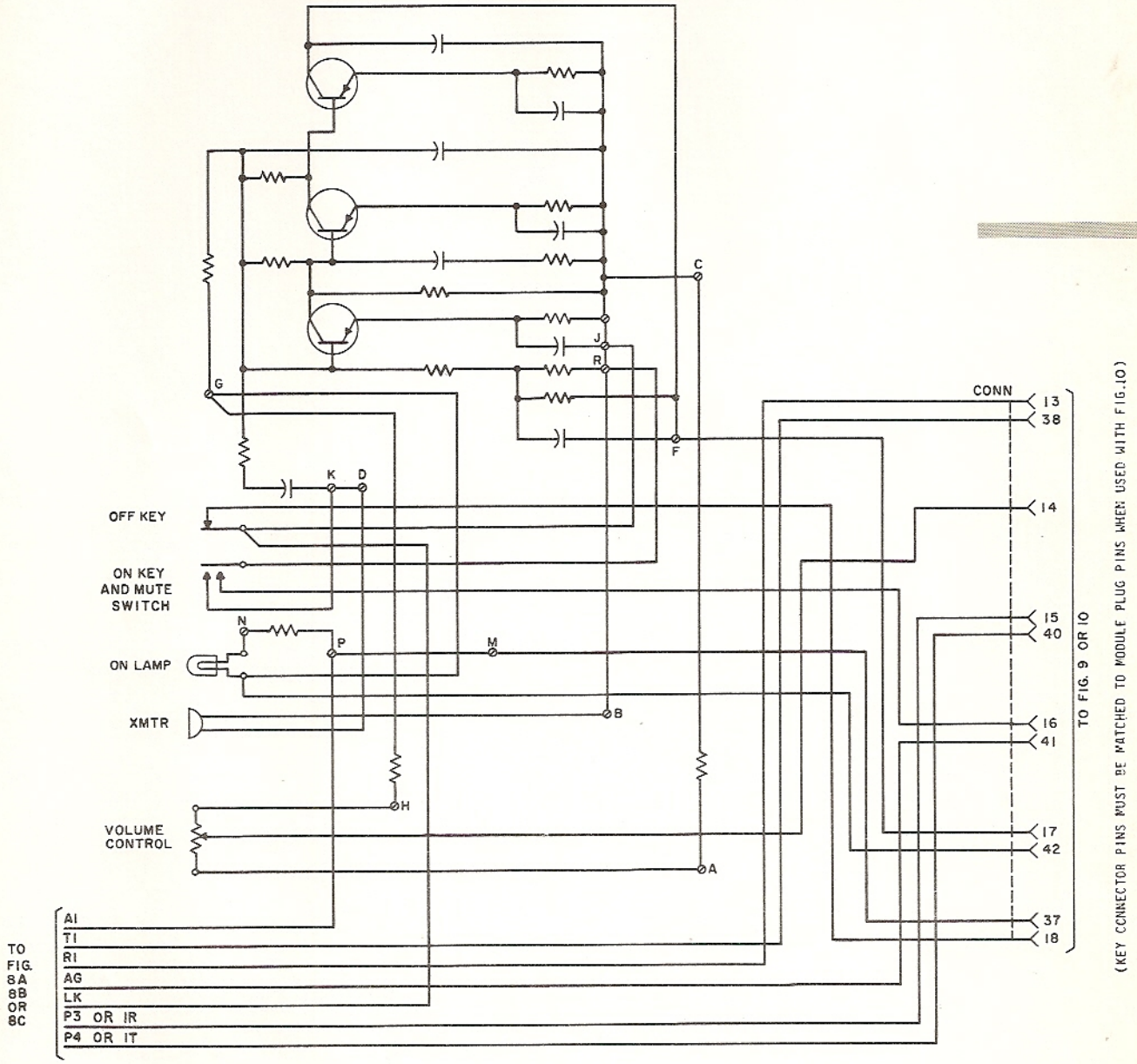


Fig. 5 — 667-Type Transmitter

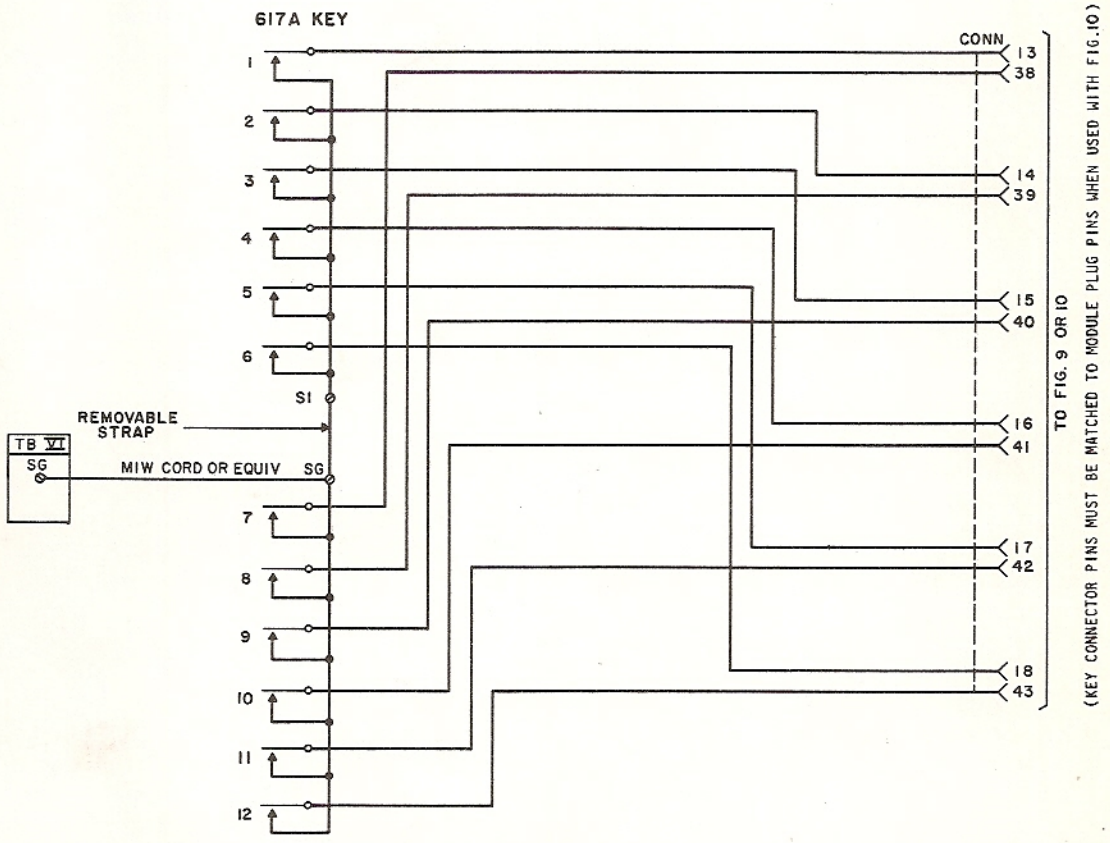


Fig. 6 — 617A Key

59A LAMP SOCKET (USE 51A LAMPS)

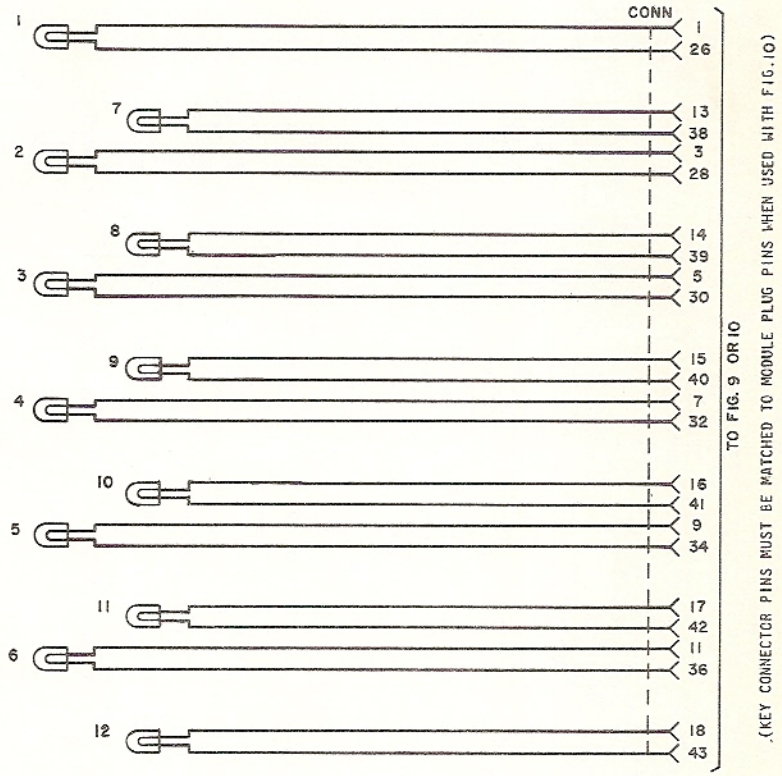


Fig. 7 — 59A Lamp Socket (Use 51A Lamps)

NOTE 1: SETS ARE FACTORY WIRED WITH (Z) WIRING FOR USE WITH 1A1 OR 1A2 KEY TELEPHONE SYSTEMS WITHOUT STATION BUSY LAMPS.

NOTE 2: FOR 1A1 OR 1A2 KEY TELEPHONE SYSTEM WITH STATION BUSY LAMP, USE (X) AND (Y) WIRING. (SEE FIG. 11)

NOTE 3: FOR 1A KEY TELEPHONE SYSTEM, WITH OR WITHOUT STATION BUSY LAMP, USE (X) WIRING.

(B) DC BUZZER (KS-8109 OR EQUIVALENT 65A BRACKET)
(S) DC. BUZZER (7-TYPE ON 65A BRACKET)
(T) AC BUZZER
(U) COMMON AUDIBLE WITH POWER FAILURE
(V) SPEAKERPHONE SYSTEM
(X) 1A KEY TELEPHONE SYSTEM
(Y) STATION BUSY LAMP
(Z) 1A1 OR 1A2 KEY TELEPHONE SYSTEM WITHOUT STATION BUSY LAMP
} SEE NOTE 1,2,3

RED INDICATES EVEN COUNT COLOR CODE AND LEAD DESIGNATIONS

548A CAP.

7 TYPE BUZZER (COVER REMOVED) IN PLACE OF P-26E586 BRACKET

KS-8100 TYPE BUZZER MTD UNDER DIAL

CONNECT TO BUZZER BENEATH MTG SCREW

( ) INDICATES CURRENT COLOR CODE
[ ] INDICATES MD COLOR CODE

SWITCHHOOK ASSEMBLY
HANDSET G3AR
25B3 DIAL
NETWORK 4010B
RINGER N1A
TERM BLOCK
MOUNTING CORD

(S-Y) BZ
(Y-S) BZI
(V-BL) T
(O-V) AI
(Y-S) B OR BI
(S-Y) R OR RI
(BL-V) R
(Y-BR) BL OR LS
(W-O) A
STRAP
TO FIG. 9

TO FIG 4 OR 5

Fig. 8A - TOUCH-TONE Dial Circuit

NOTE 1: SETS ARE FACTORY WIRED WITH (Z) WIRING FOR USE WITH 1A1 OR 1A2 KEY TELEPHONE SYSTEMS WITHOUT STATION BUSY LAMPS.

NOTE 2: FOR 1A1 OR 1A2 KEY TELEPHONE SYSTEM WITH STATION BUSY LAMP, USE (X) AND (Y) WIRING. (SEE FIG. 11)

NOTE 3: FOR 1A KEY TELEPHONE SYSTEM, WITH OR WITHOUT STATION BUSY LAMP, USE (X) WIRING.

(R) DC BUZZER (KS-8109 OR EQUIVALENT 65A BRACKET)
(S) DC BUZZER (7-TYPE ON 65A BRACKET)
(T) AC BUZZER
(U) COMMON AUDIBLE WITH POWER FAILURE
(V) SPEAKERPHONE SYSTEM
(X) 1A KEY TELEPHONE SYSTEM
(Y) STATION BUSY LAMP
(Z) 1A1 OR 1A2 KEY TELEPHONE SYSTEM WITHOUT STATION BUSY LAMP

} SEE NOTE 1,2,3

RED INDICATES EVEN COUNT COLOR CODE AND LEAD DESIGNATIONS

548A CAP.

7 TYPE BUZZER (COVER REMOVED) IN PLACE OF P-26E586 BRACKET

KS-8100 TYPE BUZZER MTD UNDER DIAL

CONNECT TO BUZZER BENEATH MTG. SCREW.

( ) INDICATES CURRENT COLOR CODE
[ ] INDICATES MD COLOR CODE

SWITCHHOOK ASSEMBLY

NETWORK 4010B

RINGER N1A

TERM BLOCK

MOUNTING CORD

HANDSET G3AR

8C DIAL

1600Ω 1000Ω

(S-Y) BZ
(Y-S) BZI
(V-BL) T
(O-V) AI
(Y-S) B OR BI
(S-Y) R OR RI
(BL-V) R
(Y-BR) BL OR LS
(W-O) A
STRAP
TO FIG. 9

(O-V) AI
(Y-BL) TI
(BL-Y) RI
(O-Y) AG
(Y-O) LK
(Y-G) P3
(G-Y) P4
TO FIG 4 OR 5

Fig. 8B - 8C Dial Circuit

RED INDICATES EVEN COUNT COLOR CODE AND LEAD DESIGNATIONS
GREEN INDICATES (MD) COLOR CODE AND LEAD DESIGNATIONS

NOTE 1: SETS ARE FACTORY WIRED WITH (Z) WIRING FOR USE WITH 1A1 OR 1A2 KEY TELEPHONE SYSTEMS WITHOUT STATION BUSY LAMPS.

NOTE 2: FOR 1A1 OR 1A2 KEY TELEPHONE SYSTEM WITH STATION BUSY LAMP, USE (X) AND (Y) WIRING. (SEE FIG. 11)

NOTE 3: FOR 1A KEY TELEPHONE SYSTEM, WITH OR WITHOUT STATION BUSY LAMP, USE (X) WIRING.

( ) INDICATES CURRENT COLOR CODE

[ ] INDICATES MD COLOR CODE

(R) DC BUZZER (KS-8109 OR EQUIVALENT 65A BRACKET)
(S) DC BUZZER (7-TYPE ON 65A BRACKET)
(T) AC BUZZER
(U) COMMON AUDIBLE WITH POWER FAILURE
(V) SPEAKERPHONE SYSTEM
(X) 1A KEY TELEPHONE SYSTEM
(Y) STATION BUSY LAMP
(Z) 1A1 OR 1A2 KEY TELEPHONE SYSTEM WITHOUT STATION BUSY LAMP

SEE NOTE 1,2,3

548A CAP

7-TYPE BUZZER (COVER REMOVED) ON 65A BRACKET

KS-8100 TYPE BUZZER OR EQUIV. MTD. ON 65A BRACKET

CONNECT TO BUZZER BENEATH MTG SCREW

SWITCHHOOK ASSEMBLY

NETWORK 425 B

RINGER DI TYPE

TB I

MOUNTING CORD

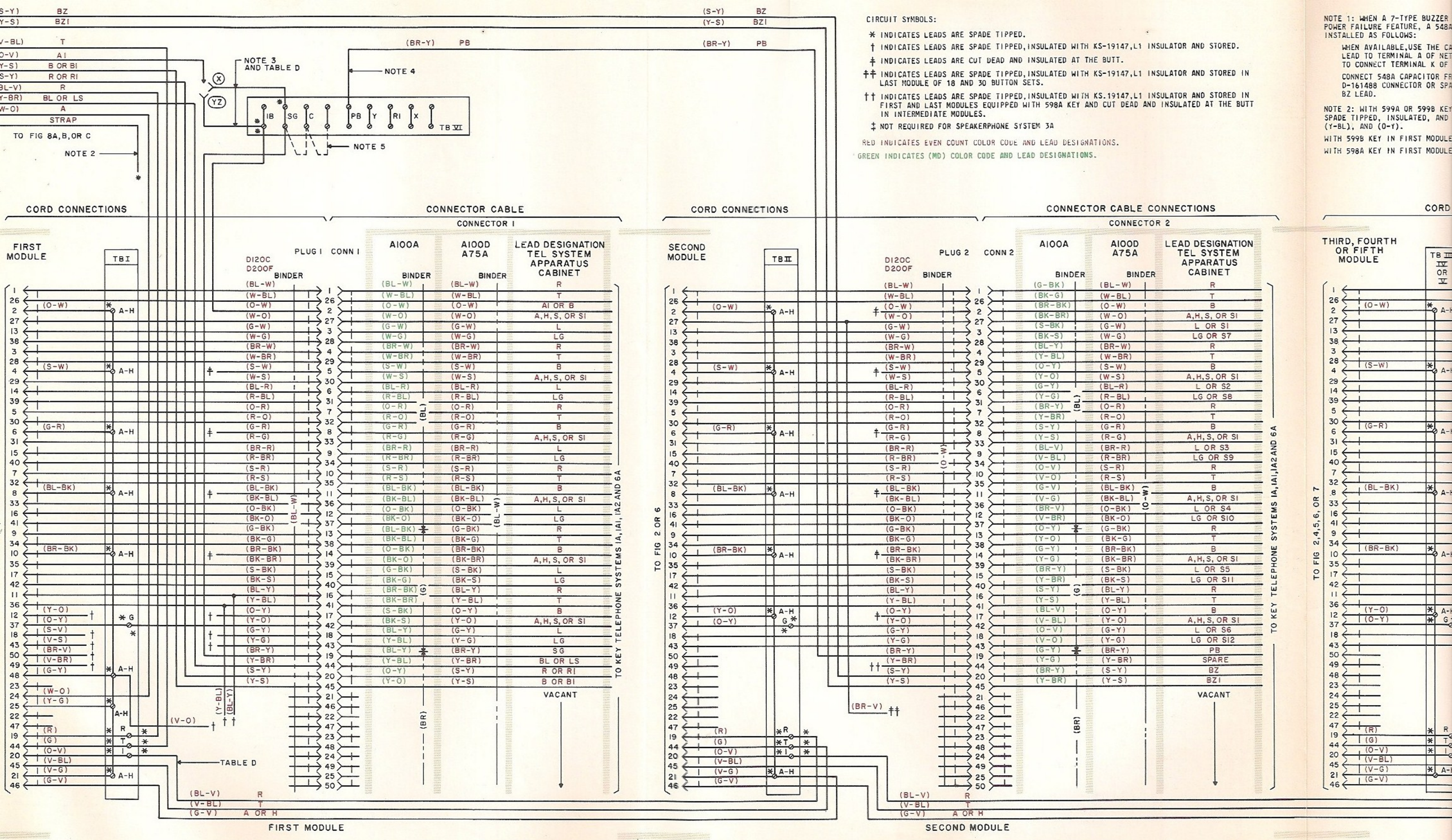
HANDSET G3AR

6L-41 DIAL

(Y-BL) (S-Y) BZ
(Y-W) (Y-S) BZI
(G) (V-BL) T
(Y) (O-V) AI
(Y-W) (Y-S) B OR BI
(Y-BL) (S-Y) R OR RI
(R) (BL-V) R
(Y-BK) (Y-BR) BL OR LS
(R-BK) (W-O) A
STRAP
TO FIG 9 OR 10

(Y) (O-V) AI
(O-G) (Y-BL) TI
(O-R) (BL-Y) RI
(O) (O-Y) AG
(O-BK) (Y-O) LK
(O-W) (Y-G) P3
(O-BL) (G-Y) P4
TO FIG 4 OR 5

Fig. 8C - 6L Dial Circuit


(S-Y) BZ
(Y-S) BZI
(V-BL) T
(O-V) AI
(Y-S) B OR BI
(S-Y) R OR RI
(BL-V) R
(Y-BR) BL OR LS
(W-O) A
STRAP
TO FIG 8A,B,OR C
NOTE 2
NOTE 3 AND TABLE D
NOTE 4
NOTE 5
(X)
(YZ)
IB SG C PB Y RI X TB VI
(BR-Y) PB
CIRCUIT SYMBOLS:
* INDICATES LEADS ARE SPADE TIPPED.
† INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS-19147,L1 INSULATOR AND STORED.
‡ INDICATES LEADS ARE CUT DEAD AND INSULATED AT THE BUTT.
‡‡ INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS-19147,L1 INSULATOR AND STORED IN LAST MODULE OF 18 AND 30 BUTTON SETS.
†† INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS.19147,L1 INSULATOR AND STORED IN FIRST AND LAST MODULES EQUIPPED WITH 598A KEY AND CUT DEAD AND INSULATED AT THE BUTT IN INTERMEDIATE MODULES.
‡ NOT REQUIRED FOR SPEAKERPHONE SYSTEM 3A
RED INDICATES EVEN COUNT COLOR CODE AND LEAD DESIGNATIONS.
GREEN INDICATES (MD) COLOR CODE AND LEAD DESIGNATIONS.
NOTE 1: WHEN A 7-TYPE BUZZER POWER FAILURE FEATURE, A 548A INSTALLED AS FOLLOWS:
WHEN AVAILABLE, USE THE CA LEAD TO TERMINAL A OF NET TO CONNECT TERMINAL K OF
CONNECT 548A CAPACITOR FR D-161488 CONNECTOR OR SPA BZ LEAD.
NOTE 2: WITH 599A OR 599B KEY SPADE TIPPED, INSULATED, AND (Y-BL), AND (O-Y).
WITH 599B KEY IN FIRST MODULE
WITH 598A KEY IN FIRST MODULE
CORD CONNECTIONS
FIRST MODULE
TBI
CONNECTOR CABLE
CONNECTOR I
PLUG I CONN I
D120C D200F BINDER
A100A BINDER
A100D A75A BINDER
LEAD DESIGNATION TEL SYSTEM APPARATUS CABINET
(BL-W) R
(W-BL) T
(O-W) AI OR B
(W-O) A,H,S, OR SI
(G-W) L
(W-G) LG
(BR-W) R
(W-BR) T
(S-W) B
(W-S) A,H,S, OR SI
(BL-R) L
(R-BL) LG
(O-R) R
(R-O) T
(G-R) B
(R-G) A,H,S, OR SI
(BR-R) L
(R-BR) LG
(S-R) R
(R-S) T
(BL-BK) B
(BK-BL) A,H,S, OR SI
(O-BK) L
(BK-O) LG
(G-BK) R
(BK-G) T
(BR-BK) B
(BK-BR) A,H,S, OR SI
(S-BK) L
(BK-S) LG
(BL-Y) R
(Y-BL) T
(O-Y) B
(Y-O) A,H,S, OR SI
(G-Y) L
(Y-G) LG
(BR-Y) SG
(Y-BR) BL OR LS
(S-Y) R OR RI
(Y-S) B OR BI
VACANT
TO KEY TELEPHONE SYSTEMS IA, IAI, IA2 AND 6A
TABLE D
(BL-V) R
(V-BL) T
(G-V) A OR H
FIRST MODULE
CORD CONNECTIONS
SECOND MODULE
TBII
TO FIG 2 OR 6
CONNECTOR CABLE CONNECTIONS
CONNECTOR 2
PLUG 2 CONN 2
D120C D200F BINDER
A100A BINDER
A100D A75A BINDER
LEAD DESIGNATION TEL SYSTEM APPARATUS CABINET
(G-BK) R
(BK-G) T
(BR-BK) B
(BK-BR) A,H,S, OR SI
(S-BK) L OR SI
(BK-S) LG OR S7
(BL-Y) R
(Y-BL) T
(O-Y) B
(Y-O) A,H,S, OR SI
(G-Y) L OR S2
(Y-G) LG OR S8
(BR-Y) R
(Y-BR) T
(S-Y) B
(Y-S) A,H,S, OR SI
(BL-V) L OR S3
(V-BL) LG OR S9
(O-V) R
(V-O) T
(G-V) B
(V-G) A,H,S, OR SI
(BR-V) L OR S4
(V-BR) LG OR SIO
(O-Y) R
(Y-O) T
(G-Y) B
(Y-G) A,H,S, OR SI
(BR-Y) L OR S5
(Y-BR) LG OR SII
(S-Y) R
(Y-S) T
(BL-V) B
(V-BL) A,H,S, OR SI
(O-V) L OR S6
(V-O) LG OR SI2
(G-Y) PB
(Y-G) SPARE
(BR-Y) BZ
(Y-BR) BZI
VACANT
TO KEY TELEPHONE SYSTEMS IA, IAI, IA2 AND 6A
(BR-V)
SECOND MODULE
THIRD, FOURTH OR FIFTH MODULE
TB III IV OR V
TO FIG 2,4,5,6, OR 7

NOTE 1: WHEN A 7-TYPE BUZZER IS USED WITH A COMMON AUDIBLE ALARM AND POWER FAILURE FEATURE, A 548A OR EQUIVALENT CAPACITOR SHALL BE INSTALLED AS FOLLOWS:

WHEN AVAILABLE, USE THE CAPACITOR IN THE 425B NETWORK, CONNECT BZ LEAD TO TERMINAL A OF NETWORK AND USE A M1W STRAP OR EQUIVALENT TO CONNECT TERMINAL K OF NETWORK TO TERMINAL A OF BUZZER.

CONNECT 548A CAPACITOR FROM TERMINAL A OF BUZZER TO BZ LEAD. USE A D-161488 CONNECTOR OR SPARE TERMINAL TO CONNECT CAPACITOR LEAD TO BZ LEAD.

NOTE 2: WITH 599A OR 599B KEY IN FIRST MODULE, THE FOLLOWING LEADS ARE SPADE TIPPED, INSULATED, AND STORED: (G-Y),(S-V),(Y-G),(V-S),(Y-O),(BL-Y), (Y-BL), AND (O-Y).

WITH 599B KEY IN FIRST MODULE (BR-BK) SHOULD BE INSULATED AND STORED.

WITH 598A KEY IN FIRST MODULE, THESE SAME LEADS ARE CONNECTED AS FOLLOWS:

TO EXTEND A LEAD CONTROL, STRAP TERMINAL G OF NETWORK TO A-H TERMINAL ON TB1.

TO EXTEND LAMP LEADS, CONNECT (G-Y) TO (S-V) AND (Y-G) TO (V-S) USING D-161488 CONNECTORS OR SPARE TERMINALS.

CONNECT (Y-O) AND (BR-BK) (IF STORED) TO A-H TERMINAL ON TB1.

(BL-Y),(Y-BL), AND (O-Y) LEADS REMAIN STORED.

NOTE 3: WHEN 1A KEY SYSTEM ONLY IS USED, MOVE STRAP A1 (O-V) FROM 1B TO 5G AND MAKE CONVERSIONS IN TABLE D.

NOTE 4: THE PB LEAD IS FOR ADD-ON CONFERENCE CONTROL OF THE 6A KEY TELEPHONE SYSTEM.

NOTE 5: WHEN SIGNALING KEYS OTHER THAN THE 617A ARE TO BE PROVIDED, THE SPADE-TIPPED LEADS ASSOCIATED WITH THE CONVERTED PICKUP KEYS SHALL BE CONNECTED TO THE SG TERMINAL ON TB VI. IF ADDITIONAL TERMINALS ARE REQUIRED, PROVIDE AN M1W STRAP, OR EQUIVALENT, BETWEEN THE C OR S AND SG TERMINALS ON TB VI.

NOTE 6: WHEN MORE THAN FIVE PRIVATE AND INTERCOMMUNICATING LINES WITH COMMON SIGNAL KEY ARE REQUIRED PER TELEPHONE SET AND WHERE THE 617A KEY IS NOT USED, STRAP TOGETHER C TERMINALS OF RESPECTIVE 6-BUTTON KEY UNITS REQUIRING COMMON SIGNALING FEATURE.

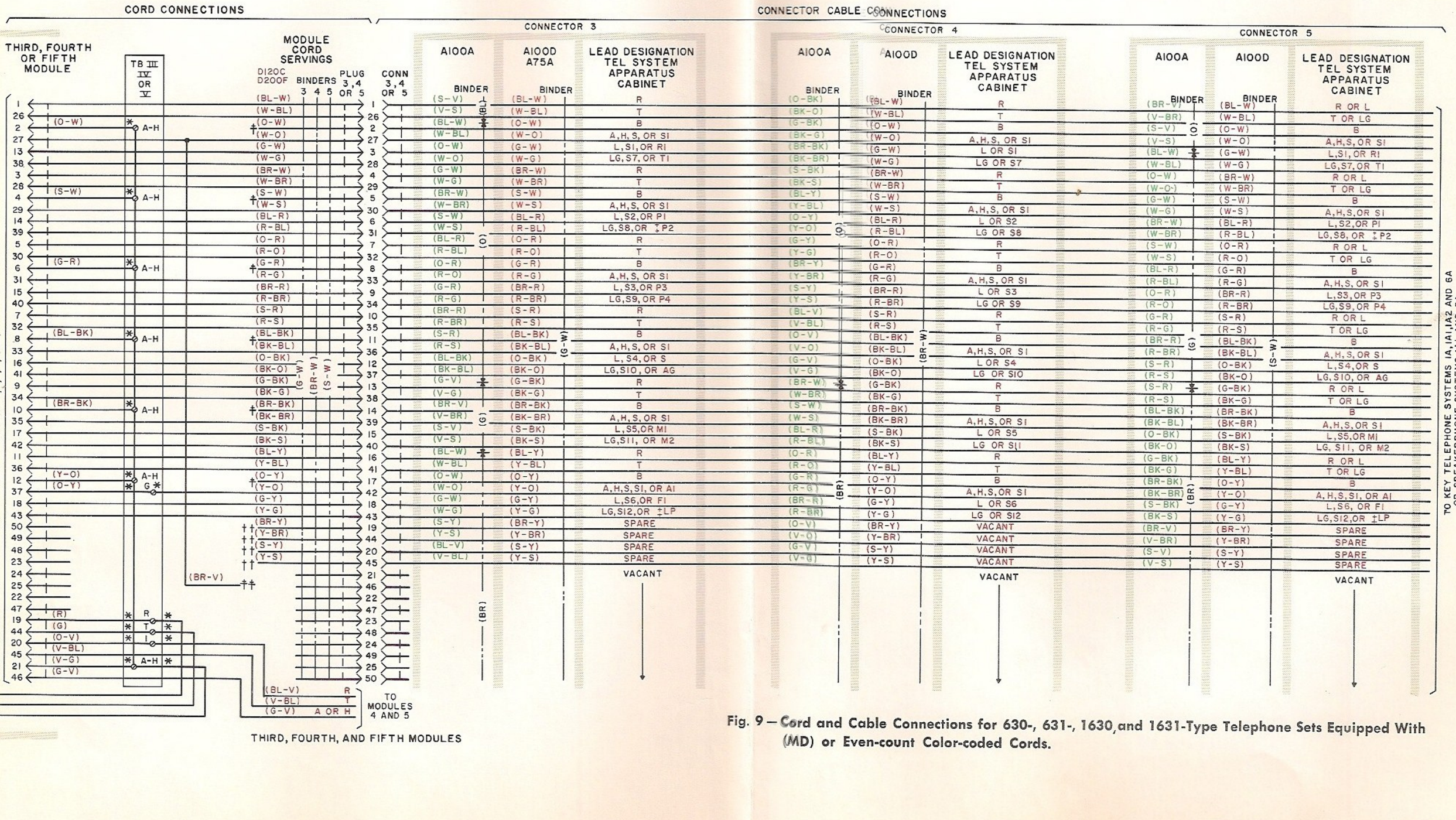


Fig. 9 — Cord and Cable Connections for 630-, 631-, 1630, and 1631-Type Telephone Sets Equipped With (MD) or Even-count Color-coded Cords.

(Y-BL) BZ
(Y-W) BZI
(G) T
(Y) AI
(Y-W) B OR BI
(Y-BL) R OR RI
(R) R
(Y-BK) BL OR LS
(R-BK) A
STRAP

TO FIG 8A,B, AND C

NOTE 2

NOTE 3 AND TABLES B OR C

NOTE 4

NOTE 5

X

YZ

IB SG C PB Y RI X TB VI

CORD CONNECTIONS

CONNECTOR CABLE

CONNECTOR 1

FIRST MODULE

TB I

D120A,B(MD) D200A,B(MD)

PLUG 1 CONN 1

BINDER		A100A BINDER	A100D A75A BINDER	LEAD DESIGNATION TEL SYSTEM APPARATUS CABINET
(R)	1	(BL-W)	(BL-W)	R
(G)	26	(W-BL)	(W-BL)	T
(Y)	2	(O-W)	(O-W)	AI OR B
(BK)	27	(W-O)	(W-O)	A, H, S, OR SI
(BL)	3	(G-W)	(G-W)	R
(W)	28	(W-G)	(W-G)	T
(BR-R)	4	(BR-W)	(BR-W)	B
(BR-G)	29	(W-BR)	(W-BR)	A, H, S, OR SI
(BR-Y)	5	(S-W)	(S-W)	R
(BR-BK)	30	(W-S)	(W-S)	T
(BR-BL)	6	(BL-R)	(BL-R)	B
(BR-W)	31	(R-BL)	(R-BL)	A, H, S, OR SI
(R-G)	7	(O-R)	(O-R)	R
(R-Y)	32	(R-O)	(R-O)	T
(R-BK)	8	(G-R)	(G-R)	B
(R-BL)	33	(R-G)	(R-G)	A, H, S, OR SI
(R-W)	9	(BR-R)	(BR-R)	R
(G-Y)	34	(R-BR)	(R-BR)	T
(G-BK)	10	(S-R)	(S-R)	B
(G-BL)	35	(R-S)	(R-S)	A, H, S OR SI
(O-R)	11	(BL-BK)	(BL-BK)	R
(O-G)	36	(BK-BL)	(BK-BL)	T
(O)	12	(O-BK)	(O-BK)	B
(O-BK)	37	(BK-O)	(BK-O)	A, H, S, OR SI
(S-Y)	13	(BL-BK)	(G-BK)	LI
(S-BK)	38	(BK-BL)	(BK-G)	LGI
(S-BL)	14	(O-BK)	(BR-BK)	L2
(S-W)	39	(BK-O)	(BK-BR)	LG2
(S-BR)	15	(G-BK)	(S-BK)	L3
(BR)	40	(BK-G)	(BK-S)	LG3
(BK-BL)	16	(BR-BK)	(BL-Y)	L4
(BK-W)	41	(BK-BR)	(Y-BL)	LG4
(BL-W)	17	(BK-S)	(O-Y)	L5
(S)	42	(BK-S)	(Y-O)	LG5
(O-BL)	18	(BL-Y)	(G-Y)	L6
(O-W)	43	(Y-BL)	(Y-G)	LG6
(G-W)	19	(BL-Y)	(BR-Y)	SG
(Y-BK)	44	(Y-BL)	(Y-BR)	BL OR LS
(Y-BL)	20	(O-Y)	(S-Y)	R OR RI
(Y-W)	45	(Y-O)	(Y-S)	B OR BI
	21			VACANT
	46			
	22			
	47			
	23			
	48			
	24			
	49			
	25			
	50			

TO KEY TELEPHONE SYSTEMS IA,IAI, AND 6A

(BK) A-H
(BR-G) A-H
(BR-W) A-H
(R-BL) A-H
(G-BL) A-H
(S-BR) (O-BK) G
(BR-Y) (BR-BK) (S-Y) (S-BK) (BK-W) A-H
(R-BK) (BK-BL) A-H
(R-Y) R
(G-Y) T
(BL) I
(W)
(BL-W) A-H
(S-BL)
(S-W)

TABLES B OR C

(R-W)
(W)
(S-BL)

FIRST MODULE

(Y-BL) BZ
(Y-W) BZI
(G-W) PB

CORD CONNECTIONS

SECOND MODULE

TB II

(BK) A-H
(BR-G) A-H
(BR-W) A-H
(R-BL) A-H
(G-BL) A-H
(S-BR) (O-BK) A-H
(R-Y) R
(G-Y) T
(BL) I
(W)
(BL-W) A-H
(S-BL)
(S-W)

TO FIG 2 OR 6

CONNECTOR CABLE CONNECTIONS

CONNECTOR 2

D120A,B(MD) D200A,B(MD)

PLUG 2 CONN 2

BINDER		A100A BINDER	A100D A75A BINDER	LEAD DESIGNATION TEL SYSTEM APPARATUS CABINET
(R)	1	(G-BK)	(BL-W)	R
(G)	26	(BK-G)	(W-BL)	T
(Y)	2	(BR-BK)	(O-W)	B
(BK)	27	(BK-BR)	(W-O)	A, H, S, OR SI
(BL)	3	(S-BK)	(G-W)	R
(W)	28	(BK-S)	(W-G)	T
(BR-R)	4	(BL-Y)	(BR-W)	B
(BR-G)	29	(Y-BL)	(W-BR)	A, H, S, OR SI
(BR-Y)	5	(O-Y)	(S-W)	R
(BR-BK)	30	(Y-O)	(W-S)	T
(BR-BL)	6	(G-Y)	(BL-R)	B
(BR-W)	31	(Y-G)	(R-BL)	A, H, S, OR SI
(R-G)	7	(BR-Y)	(O-R)	R
(R-Y)	32	(Y-BR)	(R-O)	T
(R-BK)	8	(S-Y)	(G-R)	B
(R-BL)	33	(Y-S)	(R-G)	A, H, S, OR SI
(R-W)	9	(BL-V)	(BR-R)	R
(G-Y)	34	(V-BL)	(R-BR)	T
(G-BK)	10	(O-V)	(S-R)	B
(G-BL)	35	(V-O)	(R-S)	A, H, S, OR SI
(O-R)	11	(G-V)	(BL-BK)	R
(O-G)	36	(V-G)	(BK-BL)	T
(O)	12	(BR-V)	(O-BK)	B
(O-BK)	37	(V-BR)	(BK-O)	A, H, S, OR SI
(S-Y)	13	(O-Y)	(G-BK)	LI OR SI
(S-BK)	38	(Y-O)	(BK-G)	LGI OR S7
(S-BL)	14	(G-Y)	(BR-BK)	L2 OR S2
(S-W)	39	(Y-G)	(BK-BR)	LG2 OR S8
(S-BR)	15	(BR-Y)	(S-BK)	L3 OR S3
(BR)	40	(Y-BR)	(BK-S)	LG3 OR S9
(BK-BL)	16	(S-Y)	(BL-Y)	L4 OR S4
(BK-W)	41	(Y-S)	(Y-BL)	LG4 OR SIO
(BL-W)	17	(BL-V)	(O-Y)	LS5 OR S5
(S)	42	(V-BL)	(Y-O)	LG5 OR SII
(O-BL)	18	(O-V)	(G-Y)	L6 OR S6
(O-W)	43	(V-O)	(Y-G)	LG6 OR SI2
(G-W)	19	(G-Y)	(BR-Y)	PB
(Y-BK)	44	(Y-G)	(Y-BR)	SPARE
(Y-BL)	20	(BR-Y)	(S-Y)	BZ
(Y-W)	45	(Y-BR)	(Y-S)	BZI
	21			VACANT
	46			
	22			
	47			
	23			
	48			
	24			
	49			
	25			
	50			

TO KEY TELEPHONE SYSTEMS IA,IAI, AND 6A

(BK) A-H
(BR-G) A-H
(BR-W) A-H
(R-BL) A-H
(G-BL) A-H
(S-BR) (O-BK) A-H
(R-Y) R
(G-Y) T
(BL) I
(W)
(BL-W) A-H
(S-BL)
(S-W)

(R-W)
(W)
(S-BL)

SECOND MODULE

CIRCUIT SYMBOLS:

* INDICATES LEADS ARE SPADE TIPPED.

† INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS-19147,L1 INSULATOR, AND STORED.

‡ INDICATES LEADS ARE CUT DEAD AND INSULATED AT THE BUTT.

‡‡ INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS-19147,L1 INSULATOR, AND STORED IN LAST MODULE OF 18 AND 30 BUTTON SETS.

†† INDICATES LEADS ARE SPADE TIPPED, INSULATED WITH KS-19147,L1 INSULATOR, AND STORED IN FIRST AND LAST MODULES EQUIPPED WITH 598A KEY AND CUT DEAD AND INSULATED AT THE BUTT IN INTERMEDIATE MODULES.

‡ NOT REQUIRED FOR SPEAKERPHONE SYSTEM 3A

RED INDICATES EVEN COUNT COLOR CODE AND LEAD DESIGNATIONS.

GREEN INDICATES (MD) COLOR CODE AND LEAD DESIGNATIONS.

NOTE 1: WHEN A 7-TYPE BUZZE
POWER FAILURE FEATURE, A 54
INSTALLED AS FOLLOWS:

WHEN AVAILABLE USE THE
LEAD TO TERMINAL A OF N
TO CONNECT TERMINAL K O

CONNECT 548A CAPACITOR
D-161488 CONNECTOR OR S
BZ LEAD.

NOTE 2: WITH 599A OR 599B K
SPADE TIPPED, INSULATED, AN
(BL-Y),(Y-BL), AND (O).

WITH 599B KEY IN FIRST MODU

WITH 598A KEY IN FIRST MODU

CORD CONNECTIONS

THIRD, FOURTH OR FIFTH MODULE

TB III IV OR V

(BK) A-H
(BR-G) A-H
(BR-W) A-H
(R-BL) A-H
(G-BL) A-H
(S-BR) (O-BK) A-H
(R-Y) R
(G-Y) T
(BL) I
(W)
(BL-W) A-H
(S-BL)

TO FIG 2,4,5,6, OR 7

(R-W)
(W)
(S-BL)

NOTE 1: WHEN A 7-TYPE BUZZER IS USED WITH A COMMON AUDIBLE ALARM AND POWER FAILURE FEATURE, A 548A OR EQUIVALENT CAPACITOR SHALL BE INSTALLED AS FOLLOWS:

WHEN AVAILABLE USE THE CAPACITOR IN THE 425B NETWORK, CONNECT BZ LEAD TO TERMINAL A OF NETWORK AND USE A M1W STRAP OR EQUIVALENT TO CONNECT TERMINAL K OF NETWORK TO TERMINAL A OF BUZZER.

CONNECT 548A CAPACITOR FROM TERMINAL A OF BUZZER TO BZ LEAD. USE A D-161488 CONNECTOR OR SPARE TERMINAL TO CONNECT CAPACITOR LEAD TO BZ LEAD.

NOTE 2: WITH 599A OR 599B KEY IN FIRST MODULE, THE FOLLOWING LEADS ARE SPADE TIPPED, INSULATED, AND STORED: (O-BL),(BR-Y),(O-W),(BR-BK),(S-BR), (BL-Y),(Y-BL), AND (O).

WITH 599B KEY IN FIRST MODULE (G-BL) SHOULD BE INSULATED AND STORED.

WITH 598A KEY IN FIRST MODULE, THESE SAME LEADS ARE CONNECTED AS FOLLOWS:

TO EXTEND A LEAD CONTROL, STRAP TERMINAL G OF NETWORK TO A-H TERMINAL ON TB1.

TO EXTEND LAMP LEADS, CONNECT (O-BL) TO (BR-Y) AND (O-W) TO (BR-BK) USING D-161488 CONNECTORS OR SPARE TERMINALS.

CONNECT (S-BR) AND (G-BL) (IF STORED) TO A-H TERMINAL ON TB1.

(O-R),(O-G), AND (O) LEADS REMAIN STORED.

NOTE 3: WHEN 1A KEY EQUIPMENT ONLY IS USED, MOVE LEAD A1 (Y) FROM 1B TO SG AND MAKE CONVERSIONS IN TABLE B OR C.

NOTE 4: THE PB LEAD IS FOR ADD-ON CONFERENCE CONTROL OF THE 6A KEY TELEPHONE SYSTEM

NOTE 5: WHEN SIGNALING KEYS OTHER THAN THE 617A ARE TO BE PROVIDED, THE SPADE-TIPPED LEADS ASSOCIATED WITH THE CONVERTED PICKUP KEYS SHALL BE CONNECTED TO THE SG TERMINAL ON TB V1. IF ADDITIONAL TERMINALS ARE REQUIRED, PROVIDE AN M1W STRAP, OR EQUIVALENT, BETWEEN THE C OR S AND SG TERMINALS ON TB V1.

NOTE 6: WHEN MORE THAN FIVE PRIVATE AND INTERCOMMUNICATING LINES WITH COMMON SIGNAL KEY ARE REQUIRED PER TELEPHONE SET AND WHERE THE 617A KEY IS NOT USED, STRAP TOGETHER C TERMINALS OF RESPECTIVE 6-BUTTON KEY UNITS REQUIRING COMMON SIGNALING FEATURE.

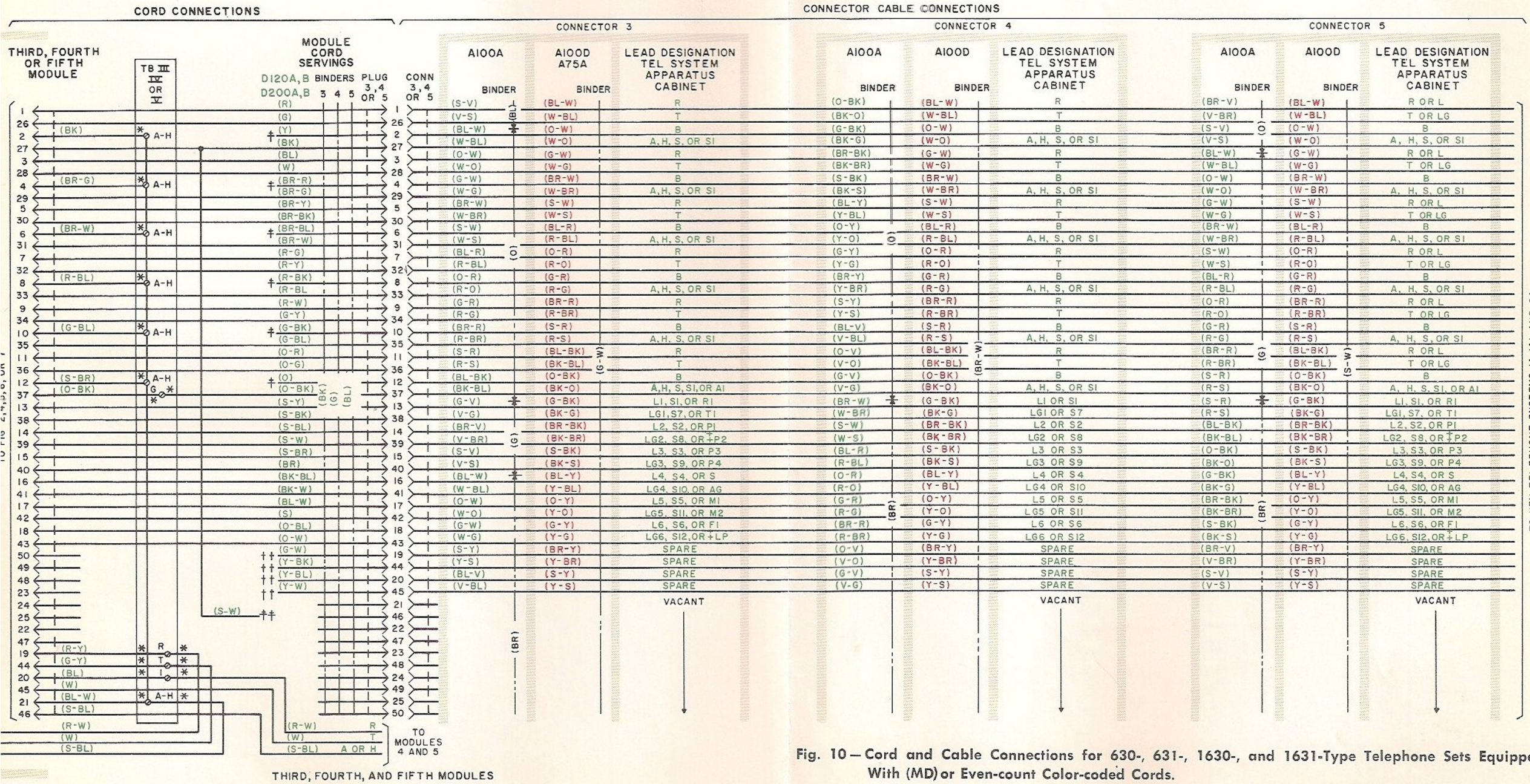


Fig. 10 — Cord and Cable Connections for 630-, 631-, 1630-, and 1631-Type Telephone Sets Equipped With (MD) or Even-count Color-coded Cords.