

TELEPHONE SETS

616 TYPE

CONNECTIONS

1.00 GENERAL

1.01 The 616A telephone set is an 18-button set of THE CALL DIRECTOR type and is similar in appearance to the 636-type telephone set.

1.02 The 616A provides the following features:

- 22B (TOUCH-TONE) dial
- Relay for switching between 2- and 4-wire circuits
- 43A face plate
- D120C cord (even-count color code)
- Nonilluminated (amber button) flash key and (clear plastic) mechanical release key.

1.03 The set comes equipped with 599A key in the first module position and 598A keys in the second and third module positions and is coded 616A2-51.

1.04 The internal wiring is arranged to separate the G-type handle electrically from the switchhook contacts when a 289B or equivalent plug is inserted into the jacks. The jacks are provided for use with a 52- or 53-type operator head set or a G3AR hand set.

1.05 Certain leads are designed for future connection to 3A speakerphone system but there are no standard provisions for this feature on the 616A set at present.

2.00 APPLICATIONS

2.01 This set is designed to be used in SCAN installations on 2- or 4-wire circuits. It is intended that line circuits of 1A1 key telephone systems only be used with this set.

2.02 A special busy lamp control circuit is included in this section (Fig. 5) for use with a handset or an operator headset. The control circuit requires the use of a 6C KTU. The A1 ground is connected to one side of the KTU relay winding and controlled by the A lead battery from an operated line circuit. The *BL* or *LS* lead (*Y-BR*) is not used.

2.03 The *BZ* and *BZ1* buzzer leads appear in the second module position only and connect to the *Y-S* and *S-Y* leads (orange-white serving). Connections are made at the equipment to provide the required type of buzzer operation.

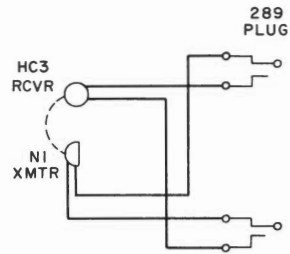
2.04 The *K1* relay switches the receiver from 2- to 4-wire circuitry.

- On 2-wire lines, the relay in its unoperated position connects the receiver to the 4010A network in the usual manner.

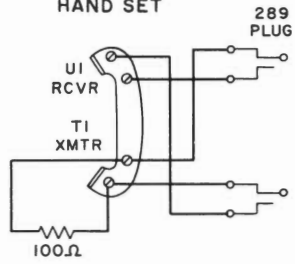
- On 4-wire lines the relay operates to disconnect the receiver from the network and connect it to the *RR* and *RT* leads. The transmitter and network function in the usual manner as a common battery transmitter circuit. The receiver leads are externally switched to impedance matching repeat coils in the associated line circuits.

2.05 For further information on this set refer to SD-69454-01.

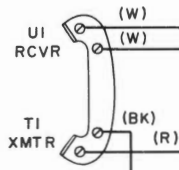
52A OR 53A
HAND SET



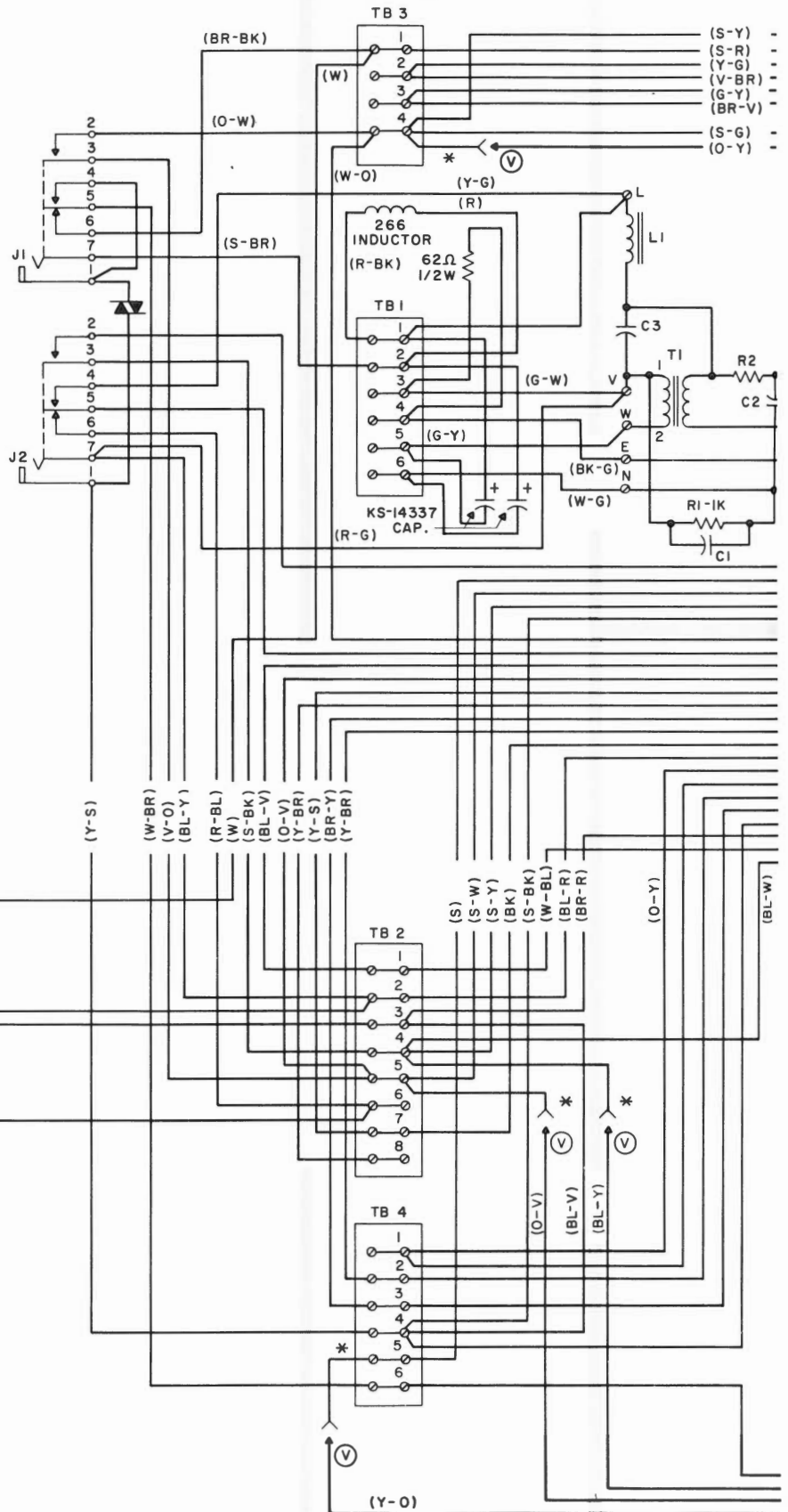
G3L
HAND SET

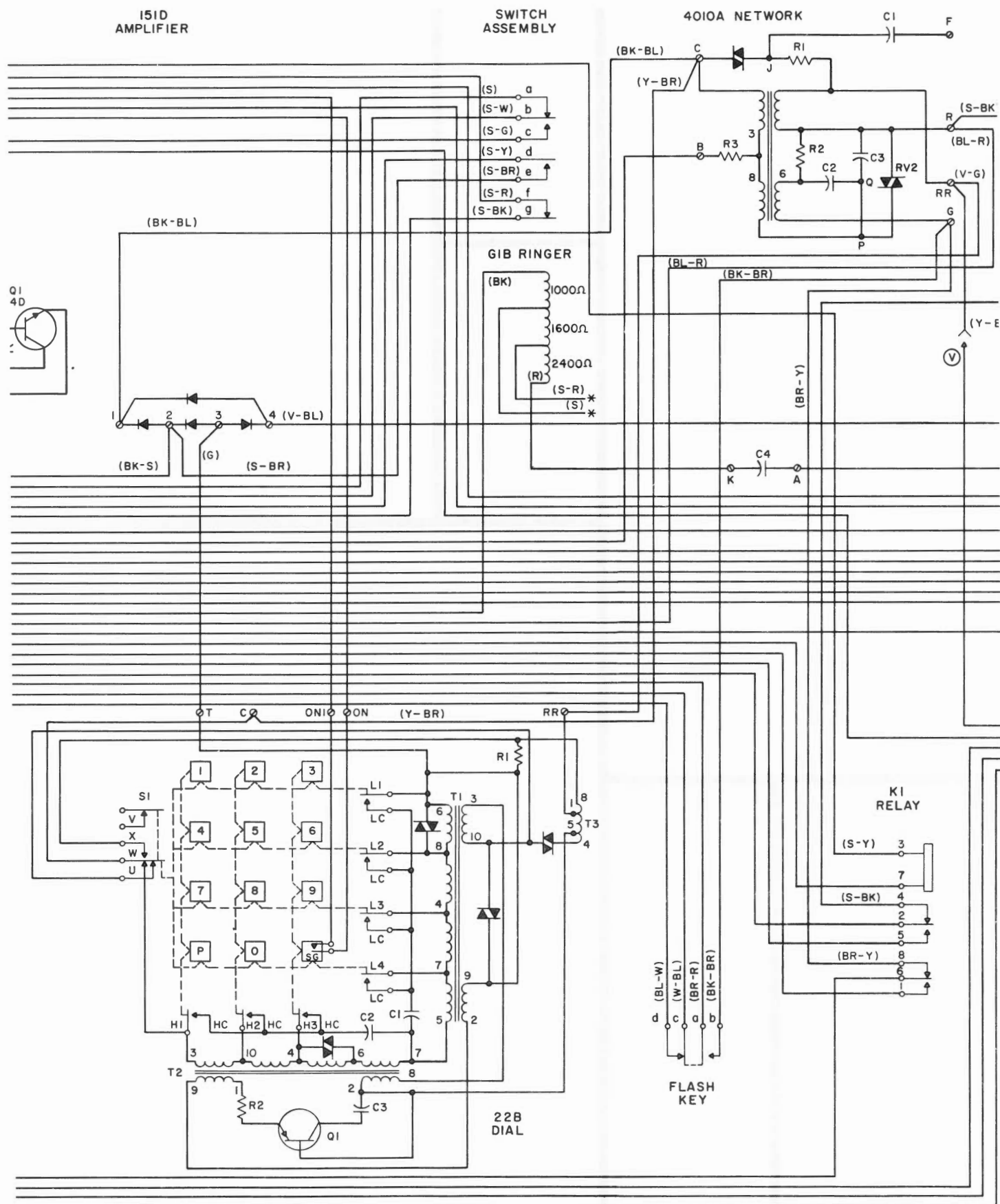


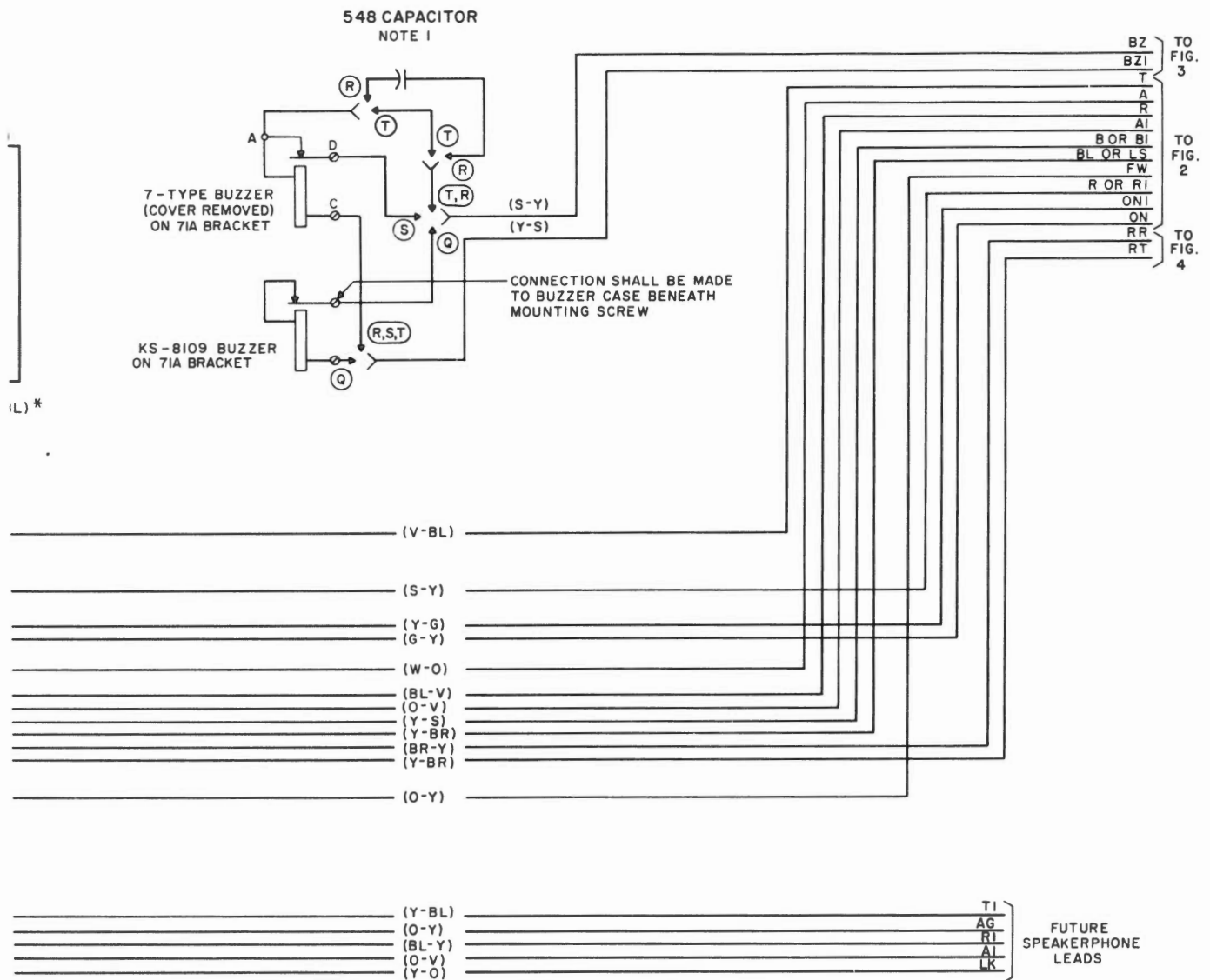
G3AR
HAND SET



TERMINAL
BLOCKS







- Options
- Q KS-8109 DC Buzzer
- R Common Audible with
Power Failure Feature
- S DC Buzzer 7-Type
- T AC Buzzer 7-Type
- V Future Speakerphone

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:

- a. Connect 548A capacitor from terminal A of buzzer to BZ lead. Use D-161488 connector or spare terminal to connect capacitor leads to BZ lead.
- b. When available, use capacitor in 4010 network. Connect BZ lead to terminal A of network. Use M1W cord or equivalent to connect terminal K of network to terminal A of buzzer.

Note 2: BL or LS lead (Y-BR) is not used for busy lamp control circuit. See Fig. 5.

Insulate with KS-19147, List 1 cord tip insulator and store.

Fig. 1 — Telephone Set Circuit for 616-Type Telephone Set

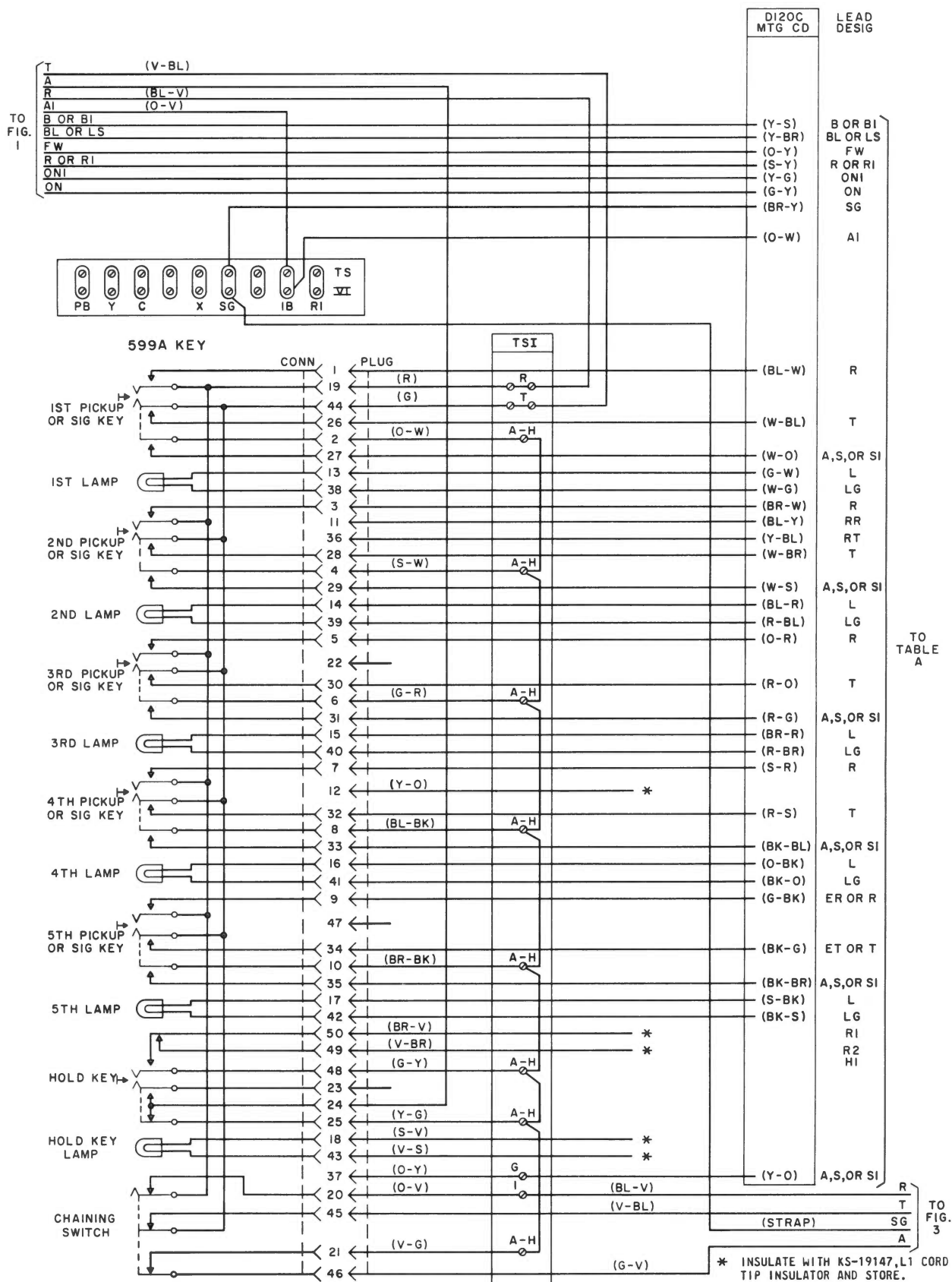


Fig. 2—616-Type Telephone Set (First Key)

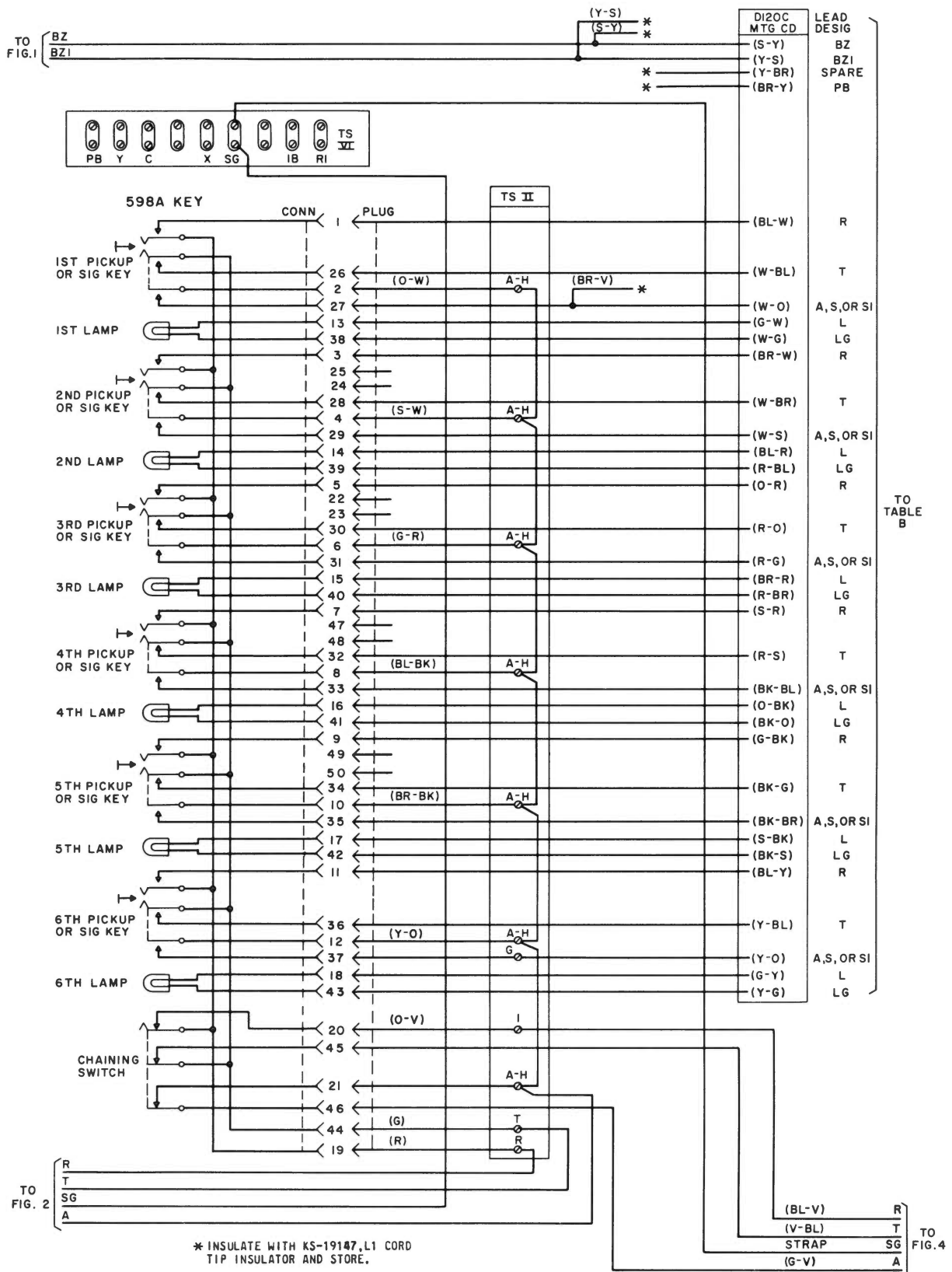


Fig. 3—616-Type Telephone Set (Second Key)

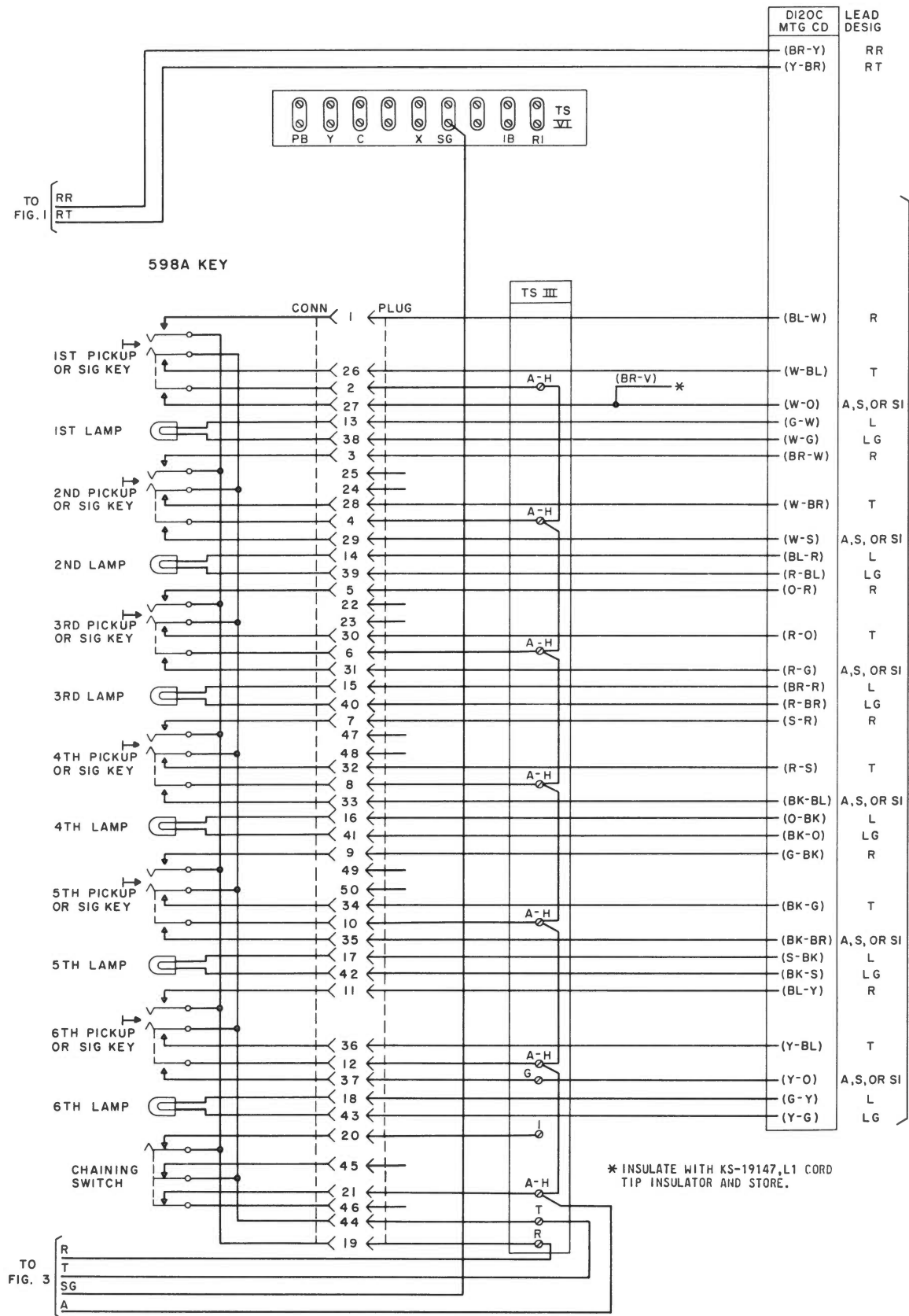


Fig. 4—616-Type Telephone Set (Third Key)

TABLE A
CONNECTIONS FOR FIRST KEY UNIT (616-TYPE SET)

Mounting Cord				Pin Number of Cord, Plug, and Conn. Cable	A75A Connector Cable	
Termination in Set		Lead Designation	Blue- White Serving		Blue- White Serving	Connect To
Connections From	Terminal or Pin No.					
Fig. 1, 2	1	R	BL-W	1	BL-W	DISTRIBUTION TERMINAL OR APPARATUS CABINET
	26	T	W-BL	26	W-BL	
	TS VI (IB)	A1	O-W	2	O-W	
	27	A,S, or S1	W-O	27	W-O	
	13	L	G-W	3	G-W	
	38	LG	W-G	28	W-G	
	3	R	BR-W	4	BR-W	
	28	T	W-BR	29	W-BR	
	*	—	S-W	5	S-W	
	29	A,S, or S1	W-S	30	W-S	
	14	L	BL-R	6	BL-R	
	39	LG	R-BL	31	R-BL	
	5	R	O-R	7	O-R	
	30	T	R-O	32	R-O	
	*	—	G-R	8	G-R	
	31	A,S, or S1	R-G	33	R-G	
	15	L	BR-R	9	BR-R	
	40	LG	R-BR	34	R-BR	
	7	R	S-R	10	S-R	
	32	T	R-S	35	R-S	
	*	—	BL-BK	11	BL-BK	
	33	A,S, or S1	BK-BL	36	BK-BL	
	16	L	O-BK	12	O-BK	
	41	LG	BK-O	37	BK-O	
	9	R or ER	G-BK	13	G-BK	
	34	T or ET	BK-G	38	BK-G	
	*	—	BR-BK	14	BR-BK	
	35	A,S, or S1	BK-BR	39	BK-BR	
	17	L	S-BK	15	S-BK	
	42	LG	BK-S	40	BK-S	
	11	—	BL-Y	16	BL-Y	
	36	—	Y-BL	41	Y-BL	
	TB4 (1)	FW	O-Y	17	O-Y	
	TS1 (G)	A,S, or S1	Y-O	42	Y-O	
	TB3 (3)	ON	G-Y	18	G-Y	
	TB3 (2)	ON1	Y-G	43	Y-G	
	TS VI (SG)	SG	BR-Y	19	BR-Y	
	TB2 (8)	BL or LS	Y-BR	44	Y-BR	
	Network (A)	R or R1	S-Y	20	S-Y	
	TB2 (7)	B or B1	Y-S	45	Y-S	

* Cord conductors are cut dead and stored.

TABLE B

CONNECTIONS FOR SECOND KEY UNIT (616-TYPE SET)

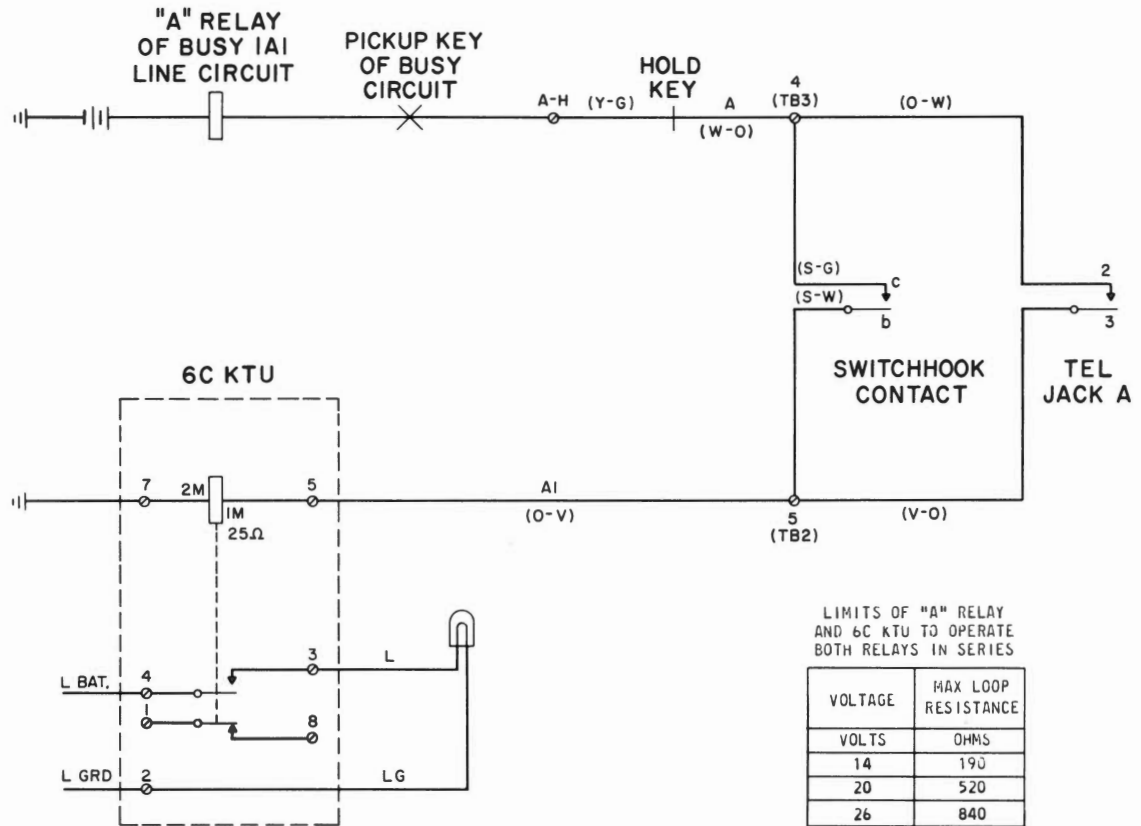
Mounting Cord				Pin Number of Cord, Plug, and Conn. Cable	A75A Connector Cable	
Termination in Set		Lead Designation	Orange- White Serving		Orange- White Serving	Connect To
Connections From	Terminal or Pin No.					
Fig. 1, 2, 3	1	R	BL-W	1	BL-W	DISTRIBUTION TERMINAL OR APPARATUS CABINET
	26	T	W-BL	26	W-BL	
	*	—	O-W	2	O-W	
	27	A,S, or S1	W-O	27	W-O	
	13	L	G-W	3	G-W	
	38	LG	W-G	28	W-G	
	3	R	BR-W	4	BR-W	
	28	T	W-BR	29	W-BR	
	*	—	S-W	5	S-W	
	29	A,S, or S1	W-S	30	W-S	
	14	L	BL-R	6	BL-R	
	39	LG	R-BL	31	R-BL	
	5	R	O-R	7	O-R	
	30	T	R-O	32	R-O	
	*	—	G-R	8	G-R	
	31	A,S, or S1	R-G	33	R-G	
	15	L	BR-R	9	BR-R	
	40	LG	R-BR	34	R-BR	
	7	R	S-R	10	S-R	
	32	T	R-S	35	R-S	
	*	—	BL-BK	11	BL-BK	
	33	A,S, or S1	BK-BL	36	BK-BL	
	16	L	O-BK	12	O-BK	
	41	LG	BK-O	37	BK-O	
	9	R	G-BK	13	G-BK	
	34	T	BK-G	38	BK-G	
	*	—	BR-BK	14	BR-BK	
	35	A,S, or S1	BK-BR	39	BK-BR	
	17	L	S-BK	15	S-BK	
	42	LG	BK-S	40	BK-S	
	11	R	BL-Y	16	BL-Y	
	36	T	Y-BL	41	Y-BL	
	—	—	O-Y	17	O-Y	
TS II (G)	A,S, or S1	Y-O	42	Y-O		
18	L	G-Y	18	G-Y		
43	LG	Y-G	43	Y-G		
—	—	BR-Y	19	BR-Y		
Spare	Spare	Y-BR	44	Y-BR		
A or D	BZ	S-Y	20	S-Y		
C	BZ1	Y-S	45	Y-S		

* Cord conductors are cut dead and stored.

TABLE C
CONNECTIONS FOR THIRD KEY UNIT (616-TYPE SET)

D120C Mounting Cord				Pin Number of Cord, Plug, and Conn. Cable	A75A Connector Cable	
Termination in Set		Lead Designation	Green- White Serving		Green- White Serving	Connect To
Connections From	Terminal or Pin No.					
Fig. 1, 3	1	R	BL-W	1	BL-W	DISTRIBUTION TERMINAL OR APPARATUS CABINET
	26	T	W-BL	26	W-BL	
	*	—	O-W	2	O-W	
	27	A,S, or S1	W-O	27	W-O	
	13	L	G-W	3	G-W	
	38	LG	W-G	28	W-G	
	3	R	BR-W	4	BR-W	
	28	T	W-BR	29	W-BR	
	*	—	S-W	5	S-W	
	29	A,S, or S1	W-S	30	W-S	
	14	L	BL-R	6	BL-R	
	39	LG	R-BL	31	R-BL	
	5	R	O-R	7	O-R	
	30	T	R-O	32	R-O	
	*	—	G-R	8	G-R	
	31	A,S, or S1	R-G	33	R-G	
	15	L	BR-R	9	BR-R	
	40	LG	R-BR	34	R-BR	
	7	R	S-R	10	S-R	
	32	T	R-S	35	R-S	
	*	—	BL-BK	11	BL-BK	
	33	A,S, or S1	BK-BL	36	BK-BL	
	16	L	O-BK	12	O-BK	
	41	LG	BK-O	37	BK-O	
	9	R	G-BK	13	G-BK	
	34	T	BK-G	38	BK-G	
	*	—	BR-BK	14	BR-BK	
	35	A,S, or S1	BK-BR	39	BK-BR	
	17	L	S-BK	15	S-BK	
	42	LG	BK-S	40	BK-S	
	11	R	BL-Y	16	BL-Y	
	36	T	Y-BL	41	Y-BL	
	—	—	O-Y	17	O-Y	
	TS III (G)	A,S, or S1	Y-O	42	Y-O	
	18	L	G-Y	18	G-Y	
	43	LG	Y-G	43	Y-G	
	TB4 (3)	RR	BR-Y	19	BR-Y	
	TB4 (2)	RT	Y-BR	44	Y-BR	
	—	—	S-Y	20	S-Y	
	—	—	Y-S	45	Y-S	

* Cord conductors are cut dead and stored.



Note: The BL or LS lead (Y-BR) is not connected.

Fig. 5 — Busy Lamp Control Circuit for 1A1 KTS