

6040-, 6041-, 6050-, AND 6051-TYPE SEPARATELY MOUNTED KEYS IDENTIFICATION, INSTALLATION, AND CONNECTIONS

1. GENERAL

1.01 This section contains information for 6040-, 6041-, 6050-, and 6051-type keys (Fig. 1, 2, and 3).

1.02 This section is reissued to add:

- Station busy lamp battery information
- 652-type jack in 6040- and 6041-type keys
- Information on knockout section in housing of 6050- and 6051-type keys
- D50BE cord
- B25G and B50C connector cables
- Reference to Table D
- Comcode ordering information.

1.03 The 6040-, 6041-, 6050-, and 6051-type keys connected to a single line telephone set provides for the key features of a multibutton telephone set and connects the single line station to any one of a number of lines.

2. IDENTIFICATION

A. Purpose

2.01 These keys are used in conjunction with a single line telephone set to furnish station control features in 1A, 1A1, 1A2, and 6A KTS (Fig. 4 and 5).

B. Ordering Guide

2.02 Refer to Tables A through D.

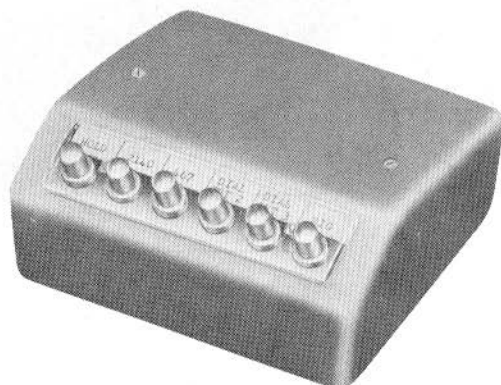


Fig. 1—6040-Type Key

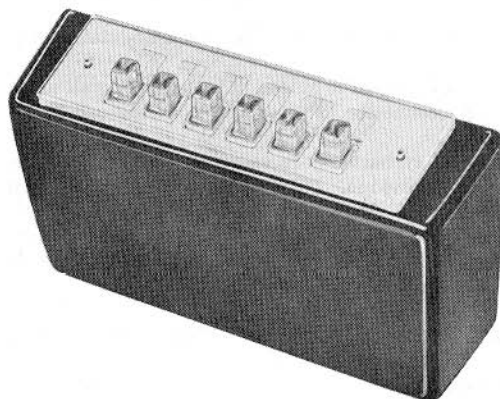


Fig. 2—6050-Type Key

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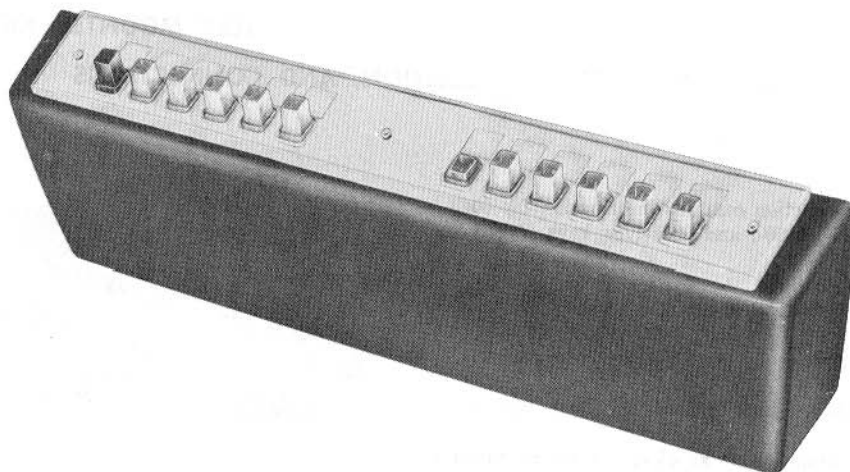


Fig. 3—6051-Type Key

C. Design Features

2.03 Choice of location when installing:

- Top of desk or table using mounting cord
- Fastened to side of desk, table, or wall using connector cable or inside wiring cable.

2.04 Key buttons are equipped to illuminate the individual buttons and their associated designation areas.

2.05 Pickup buttons convertible to signaling or intercom options (Table D).

2.06 ♦Currently available 6040- and 6041-type keys are equipped with a 652-type jack as shown in Fig. 9, 10, and 11. This jack accepts a modular mounting cord plug allowing modular telephone sets to be used with these keys.

2.07 The 6050- and 6051-type key housings are designed with a knockout section. This knockout will accommodate the 652-type jack of the D50BE cord (6050) and B25G or B50C cable connector (6051). Similar to the 6040- and 6041-type keys, the jack permits modular telephone sets to be used with 6050- and 6051-type keys.♦

D. Operating Features

2.08 **Hold or Release Key:** Nonlocking, releases any locked pickup key. Does not release cutoff keys. Can be illuminated in 6050-type and 6040G, 6041G, 6040J, and 6041J keys.

2.09 **Pickup:** Locking, when depressed, releases any other pickup keys. Some pickup keys convertible to nonlocking for signaling options (Table D) by removal of screw detail. Will not release cutoff keys. Buttons are illuminated.

2.10 **Cutoff Key:** Turnbutton, locking in either position. Does not release other keys in 6040- or 6041-type keys. Can be modified to release locked keys in 6050- and 6051-type keys by removal of 811258193 (P-12E819) bushing. Button illuminated on 6050C and 6051C keys only.

3. INSTALLATION

3.01 Locate keys where accessible to user and where designation strip can be seen clearly.

3.02 Unless otherwise instructed, block unused buttons with 811218585 (P-12A858) blocking rings.

♦TABLE A♦

SEPARATELY MOUNTED KEYS

KEY (NOTE 1)	MTG CORD OR CONN CABLE	KEY MOUNTING	KEY UNIT (NOTE 2)	CONNECTION DIAGRAM
6040A† 6041A†	D40A*		589H	—
6040B† 6041B†	D40A*		589J†	—
6040C† 6041C†	D37A*		589K†	—
6040D† 6041D†	D20G		589L	—
6041E			589M	—
6040G 6041G	D50N-87		636A	Fig. 9
6040H 6041H	D50S-87		636B	Fig. 10
6040J 6041J	D50T-87		589AJ	Fig. 11
6040K 6041K	D20H-87		589AN	—
6050A	D50P-87, D50BE-87 Cord or A25A Conn Cable	397A	599A	Fig. 12
6050B			598A	Fig. 13
6050C			599B	Fig. 14
6051A	A50A, B25C, B25G, B50B, or B50C Conn Cable	398A	598A - 599A	Fig. 17 & 18
6051B			598A - 599A	Fig. 17 & 18
6051C			598A - 599A	Fig. 17 & 20

* For maintenance purposes, replace with D42A.

† MD.

Note 1. Add color suffix to key code. (Refer to Table B).

Note 2. 598 and 599 keys are electrically identical and respectively interchangeable with the 656 and 657 keys of the same letter code.

3.03 When installing keys provide a means of identifying the key code for future installation or repair visits. Stencil or mark key code on base assembly or inside housing.

A. 6040- and 6041-Type Keys

3.04 Use Form E-4227 designation cards for both 6040- and 6041-type keys.

3.05 6040-Type Keys are equipped with mounting cord for connection to key cable. Designed to be installed unattached on desk or table top.

3.06 Install KS-8035 friction pads (order separately) to base of 6040-type keys when the key is installed on a desk or table top. The friction pads prevent the key from sliding or marring the surface.

♦TABLE B♦

COVERS AND HOUSINGS FOR 6040-, 6041-, 6050-, AND 6051-TYPE KEYS

COLOR AND SUFFIX	COVERS FOR 6040A, B, C, D, G, H, J, AND K 6041A, B, C, D, G, H, J, AND K	COVERS FOR 6041E	HOUSINGS FOR 6050A, B, AND C	HOUSINGS FOR 6051A, B, AND C
Black (-03)	818156036 (P-81E603)	818189037 (P-81H903)	818110033 (P-81A003)	818154031 (P-81E403)
Ivory (-50)	818156507 (P-81E650)	818189508 (P-81H950)	818110504 (P-81A050)	818154502 (P-81E450)
Green (-51)	818156515 (P-81E651)	818189516 (P-81H951)	818110512 (P-81A051)	818154510 (P-81E451)
Red* (-53)	818156531 (P-81E653)	818189532 (P-81H953)	818110538 (P-81A053)	818154536 (P-81E453)
Yellow* (-56)	818156564 (P-81E656)	818189565 (P-81H956)	818110561 (P-81A056)	818154569 (P-81E456)
White (-58)	818156580 (P-81E658)	818189581 (P-81H958)	818110587 (P-81A058)	818154585 (P-81E458)
Lt. Beige (-60)	818156606 (P-81E660)	818189607 (P-81H960)	818110603 (P-81A060)	818154601 (P-81E460)
Aqua Blue* (-62)	818156622 (P-81E662)	818189623 (P-81H962)	818110629 (P-81A062)	818154627 (P-81E462)

* Nonpromoted colors.

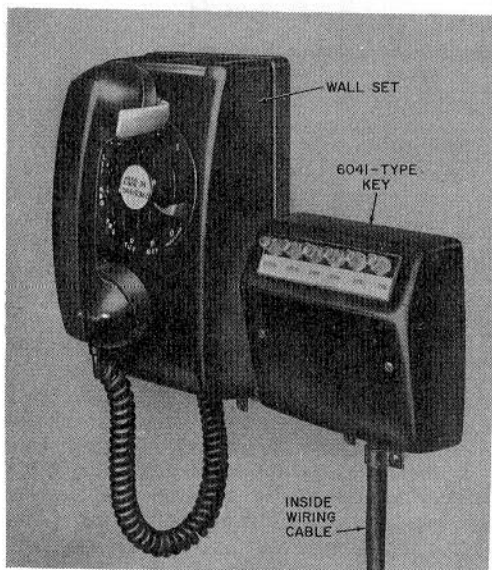


Fig. 4—Typical Installation of 6041-Type Key

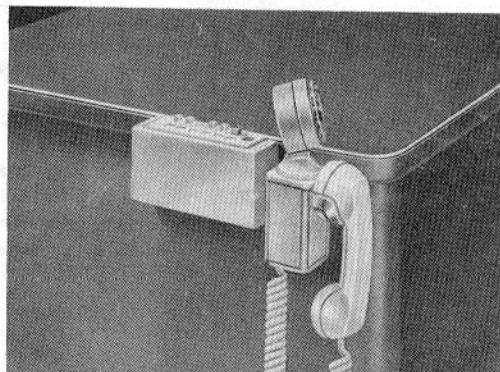


Fig. 5—Typical Installation of 6050-Type Key

3.07 6041-Type Keys may be mounted to wall or other vertical surface. The key cable is connected directly to the terminal board (Fig. 6).

B. 6050- and 6051-Type Keys

3.08 May be attached to a wall, desk or other vertical surface. Mounting may be on the

left or right side of desk or table by turning key unit 180 degrees within key mounting, as necessary.

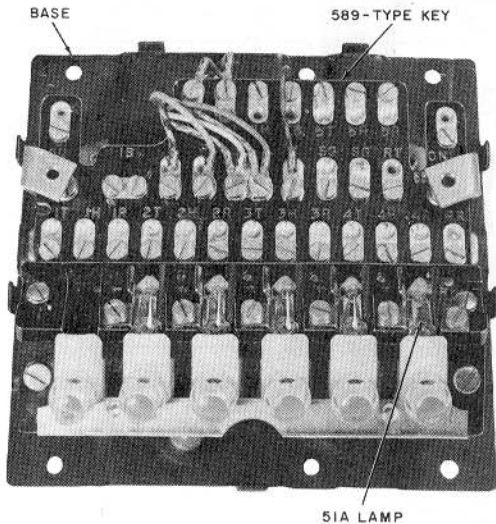


Fig. 6—6041-Type Key, Internal View

- 3.09** Key can be mounted so that cable enters from front, rear, top, or bottom (Fig. 7).
- 3.10** When necessary to assemble 6051-type key, remove latch bar tension spring from second 598A, 656A, 599A, or 657A key, as only one is required. A link assembly is required to connect the two latch bars together (Fig. 8).
- 3.11** An insulation shield (Fig. 8) should be installed on the 6050- and 6051-type keys.
- 3.12** Use Form E-4646 designation strips with 6050- and 6051-type keys.

4. CONNECTIONS INDEX

A. Line Connections

Table E—6040A, 6040B, 6040C, Keys with D40A (MD) and D37A (MD) Cords and 6041A, 6041B, 6041C Keys Cable Connected

Table F—6040A, 6040B, 6040C, Keys with D42A Cord and 6041A, 6041B, 6041C Keys Cable Connected

B. Pickup-Signal Key Options

Table G—6040A, 6041A, 6040G and 6041G Keys

Table H—6040B, 6041B, 6040H, and 6041H Keys

Table I—6040C, 6041C, 6040J, and 6041J Keys

C. Cutoff Key Options

Table J—6040C, 6041C, 6040J, and 6041J Keys

D. Pickup Signal Conversion

Table K—6050- and 6051-Type Keys

E. Station Busy Lamp Option

Fig. 15—6050A and 6050C Keys

Fig. 16—6050B Key

Fig. 21—6051A and 6051C Keys

Fig. 22—6051B Key

F. Connector Cable Connections

Fig. 23—B25C and B25G Connector Cable Connections to 6051A Key

Fig. 24—B50B and B50C Connector Cable Connections to 6051-Type Key

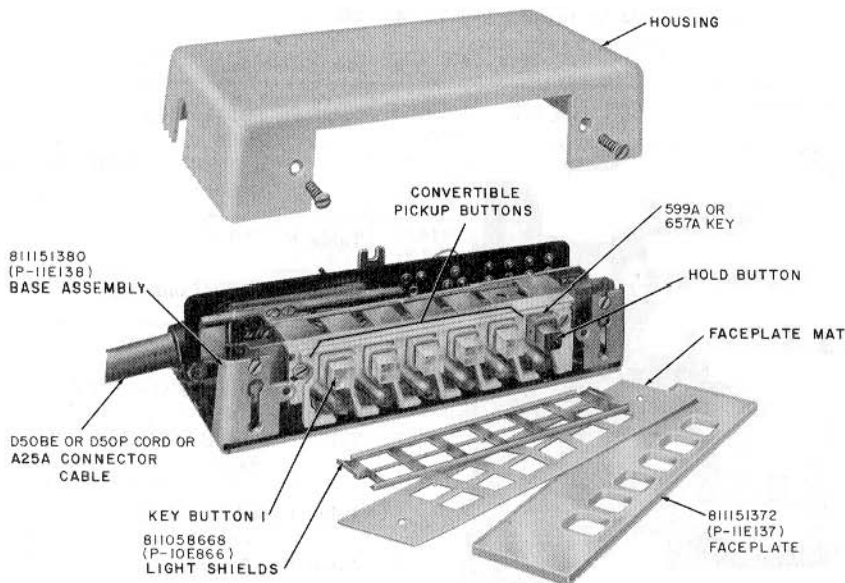


Fig. 7—6050A Key

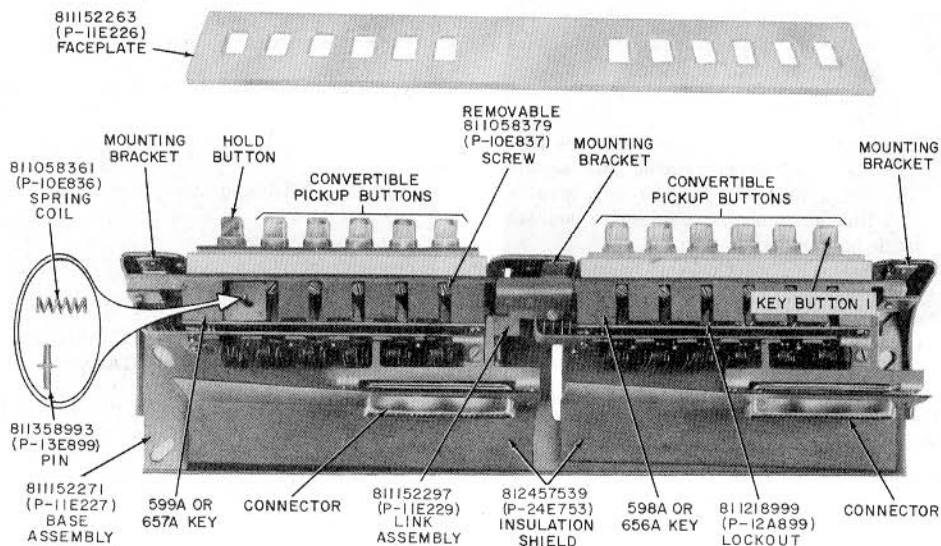


Fig. 8—6051A Key

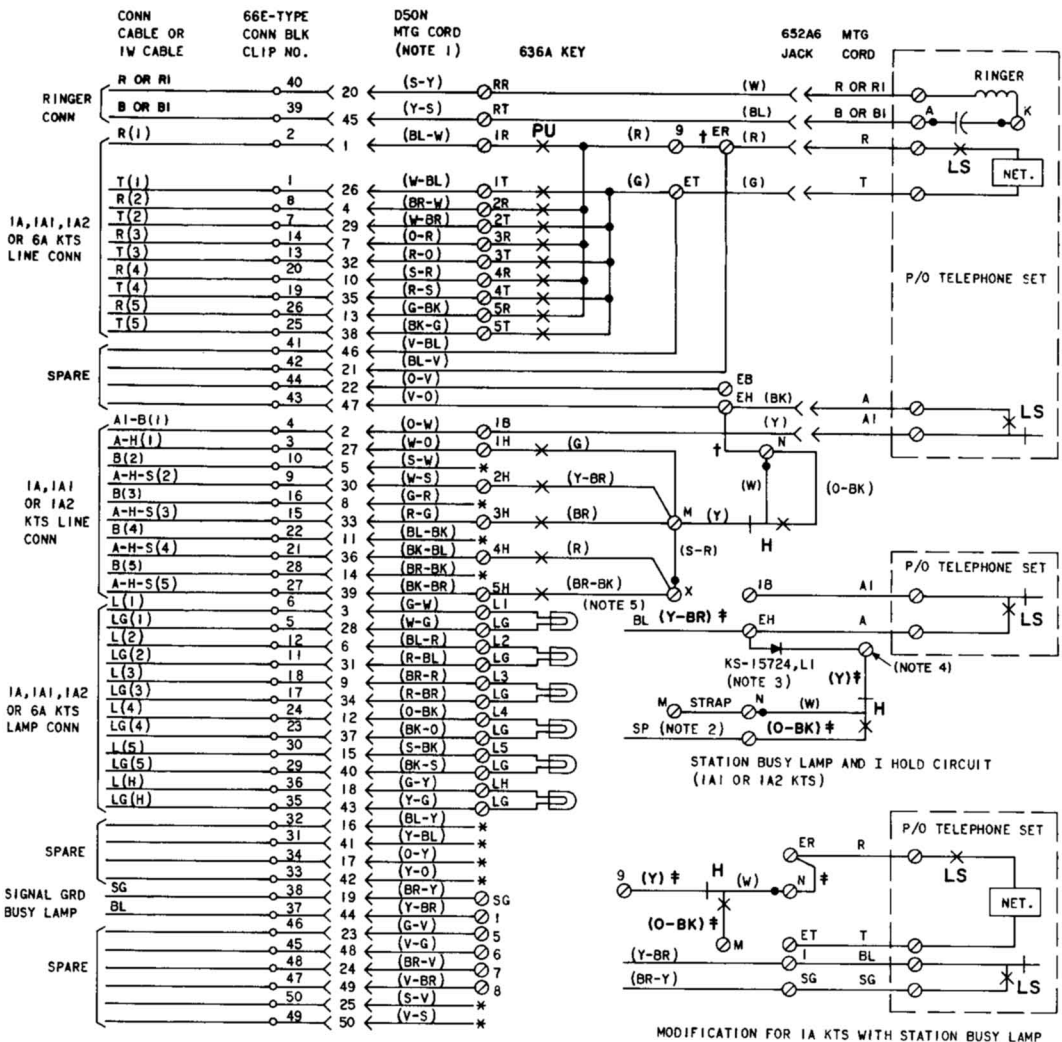


Fig. 9—6040G or 6041G Key, Connections

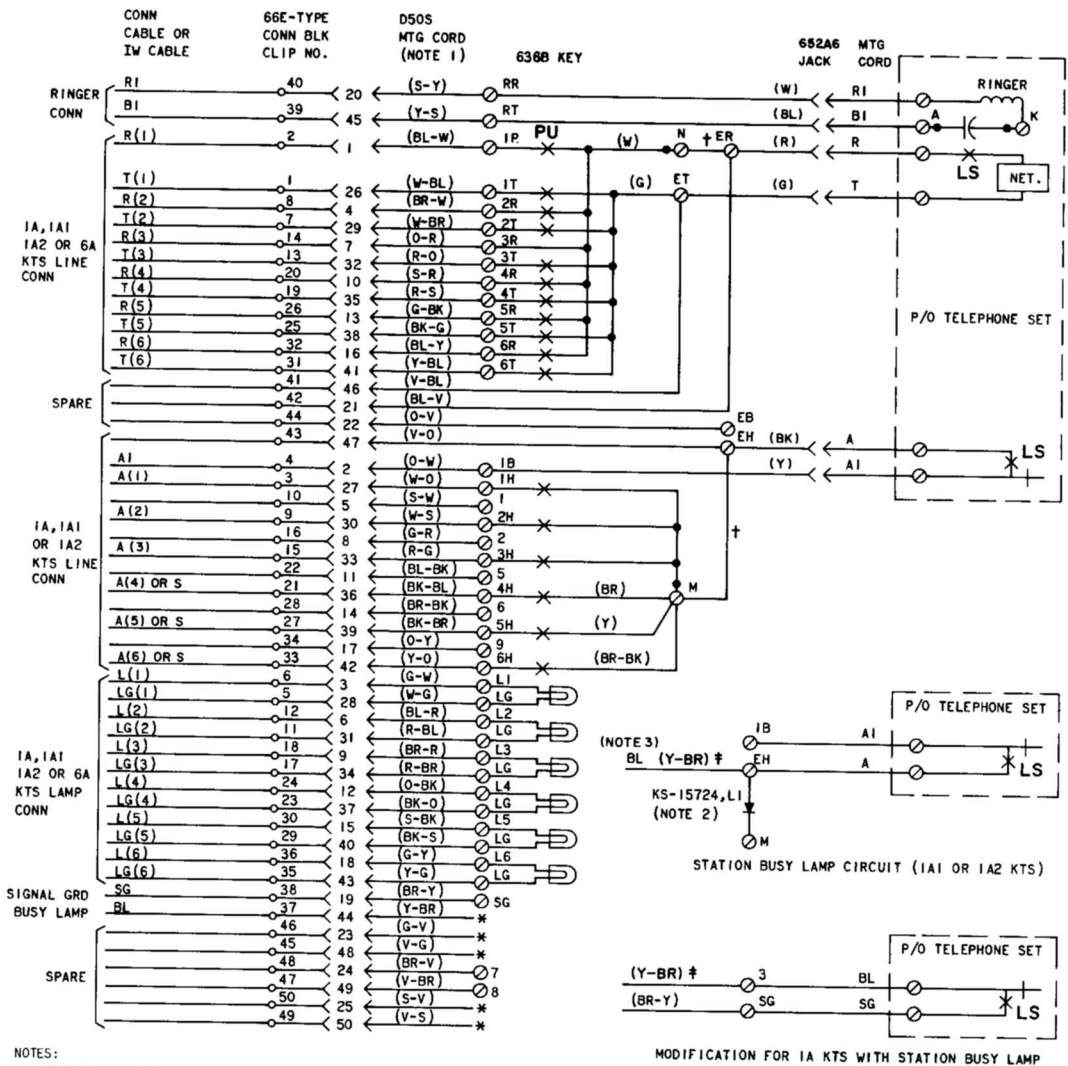


Fig. 10—6040H or 6041H Key, Connections

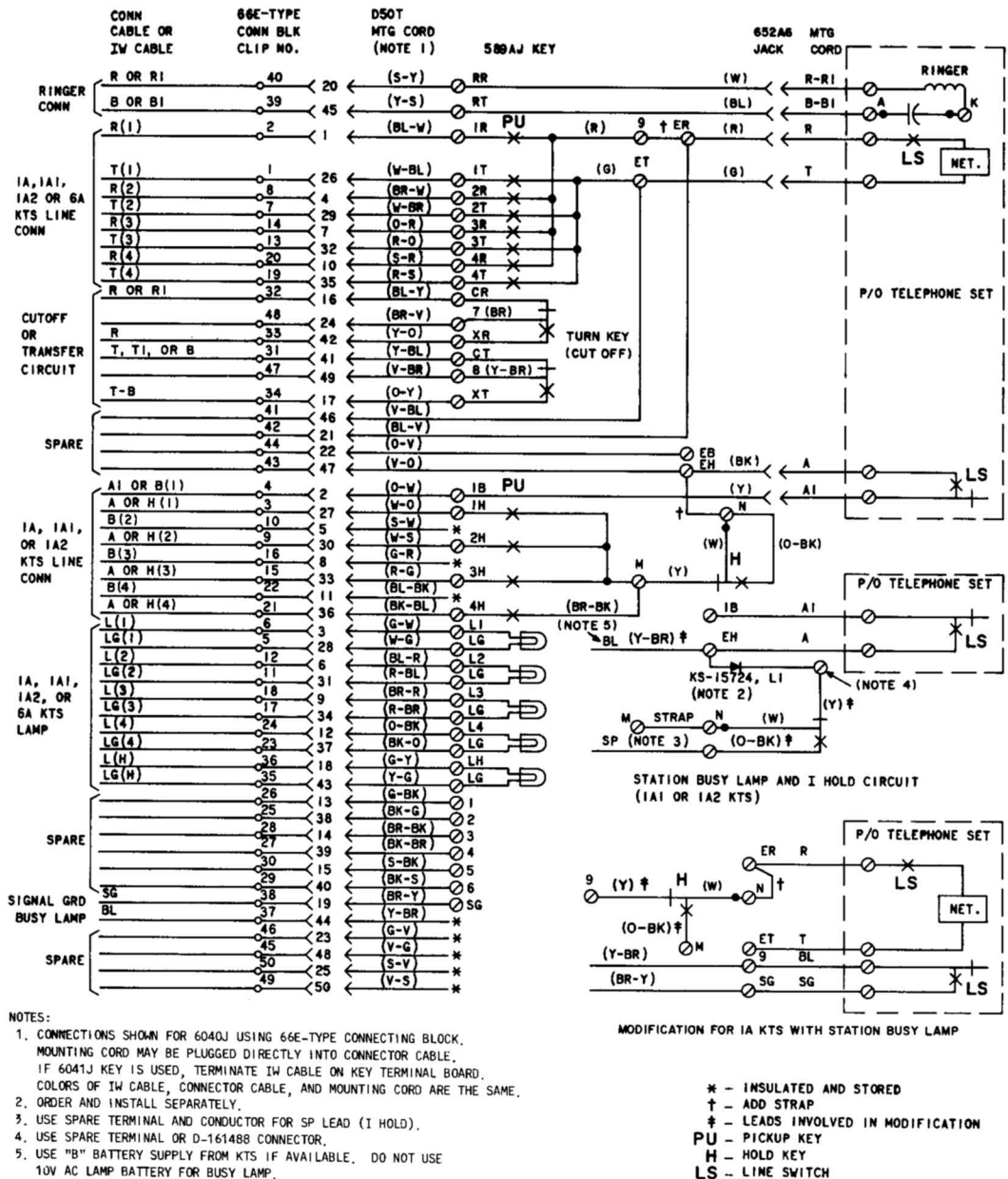


Fig. 11—6040J or 6041J Key, Connections

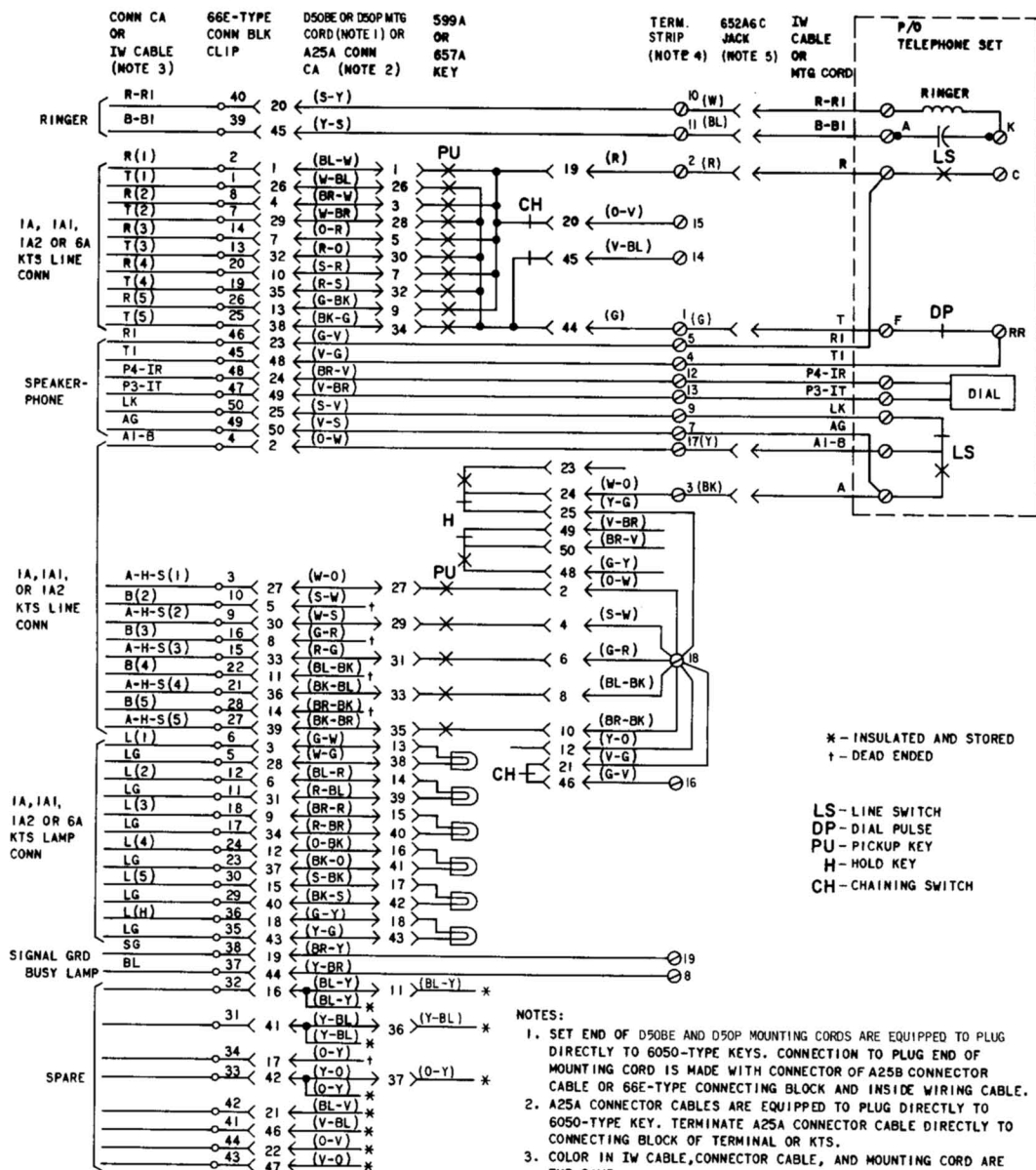


Fig. 12—6050A Key, Connections

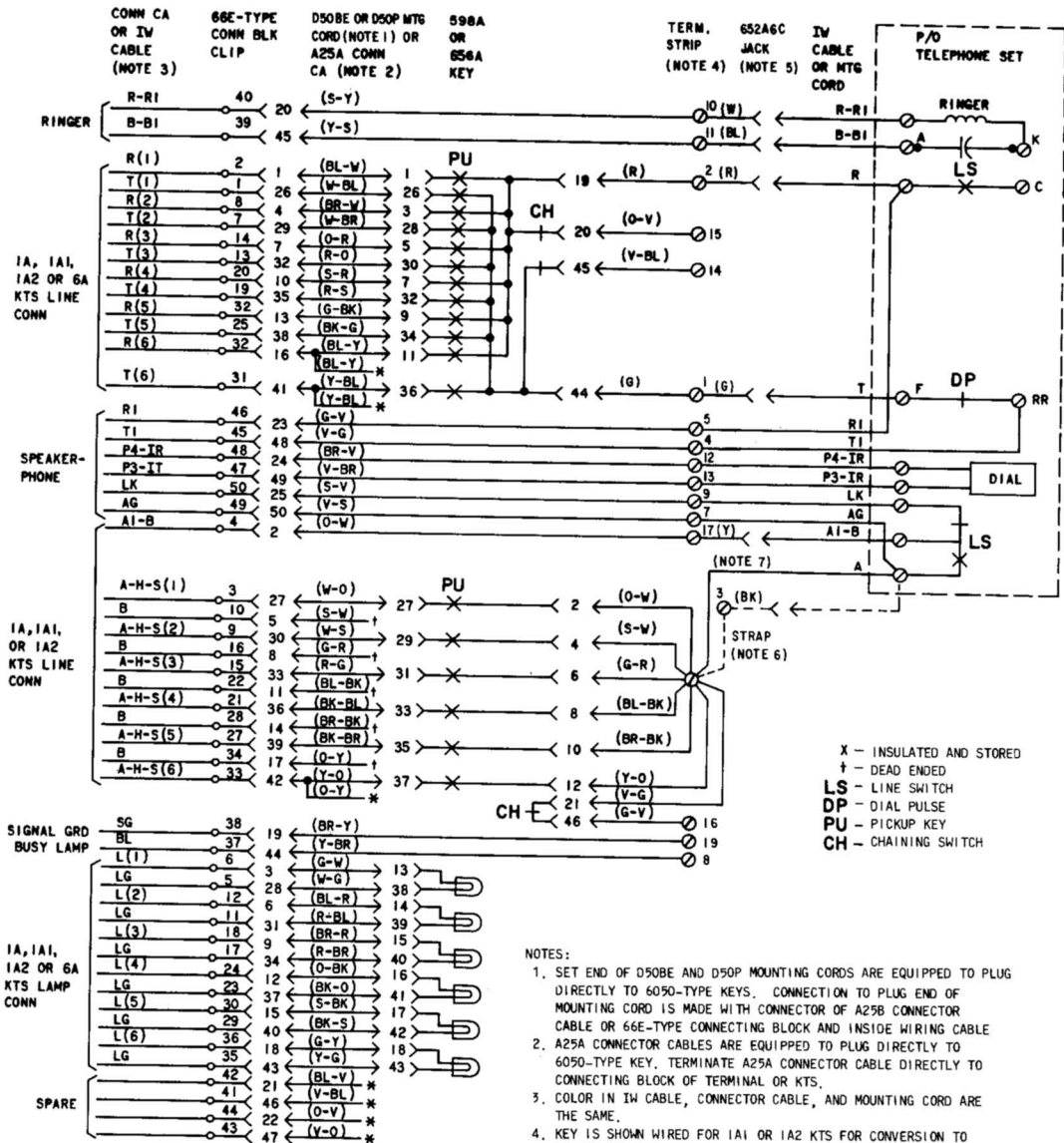


Fig. 13—6050B Key, Connections

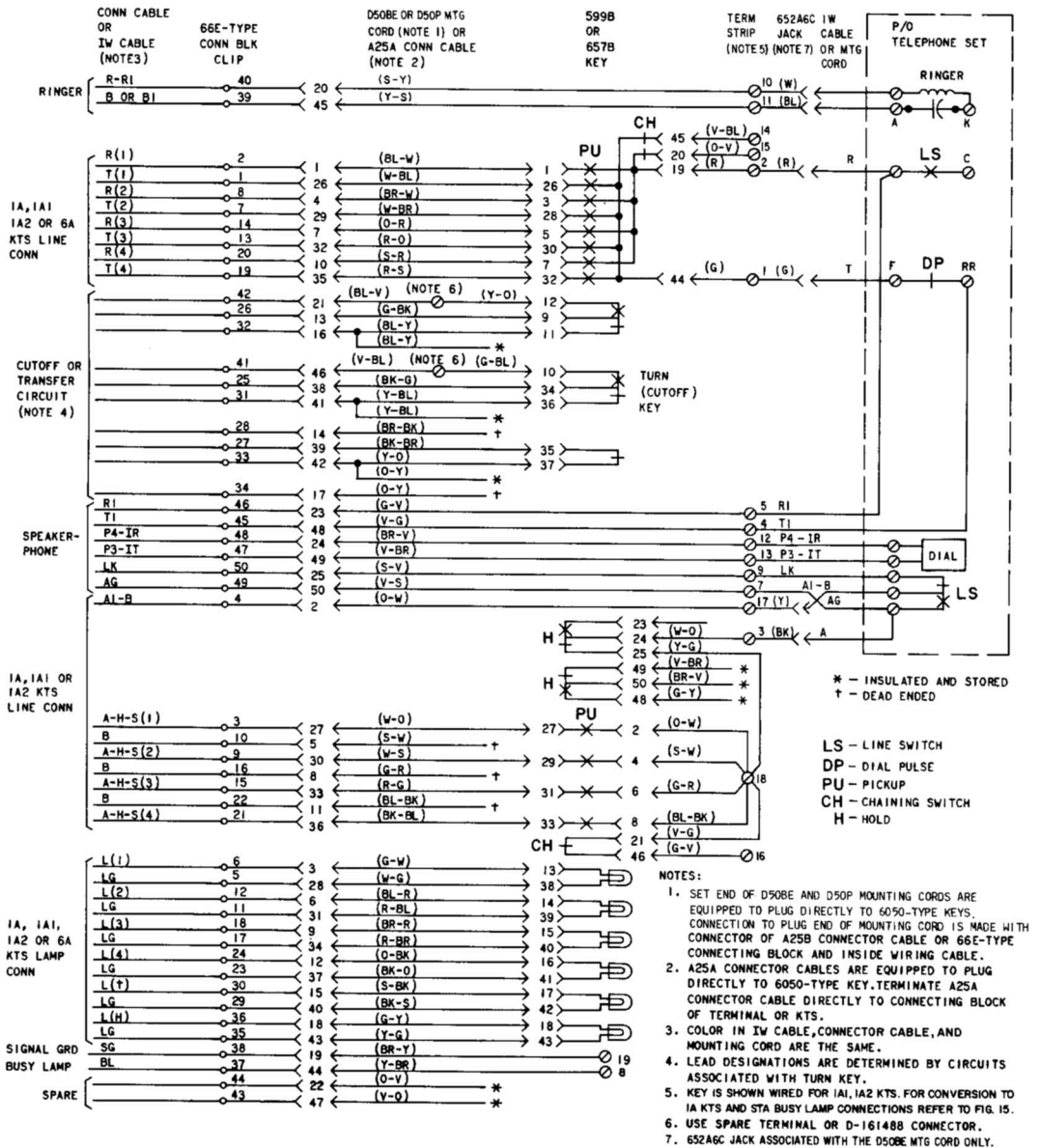
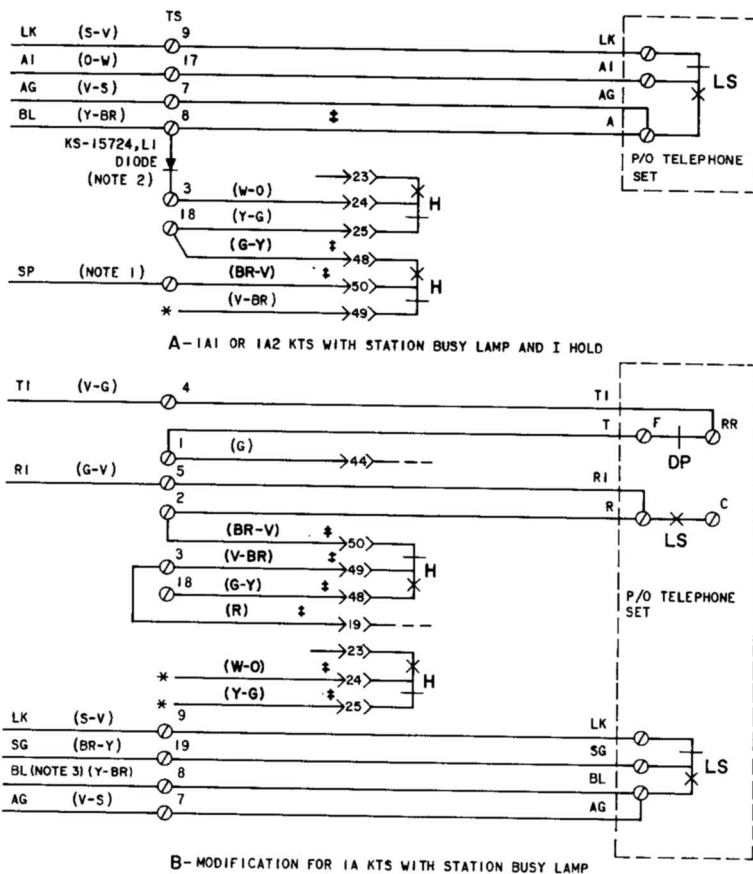


Fig. 14—6050C Key, Connections



NOTES:

1. USE SPARE TERMINAL AND CONDUCTORS FOR SP LEAD (I HOLD)
2. ORDER AND INSTALL DIODE SEPARATELY
3. USE "B" BATTERY SUPPLY FROM KTS IF AVAILABLE. DO NOT USE 10V AC LAMP BATTERY FOR BUSY LAMP.

* INSULATED AND STORED

† LEADS INVOLVED IN MODIFICATION

LEGEND:

H - HOLD
 DP - DIAL PULSE
 LS - LINE SWITCH

Fig. 15—Station Busy Lamp, I Hold and 1A KTS Options—6050A and 6050C Keys

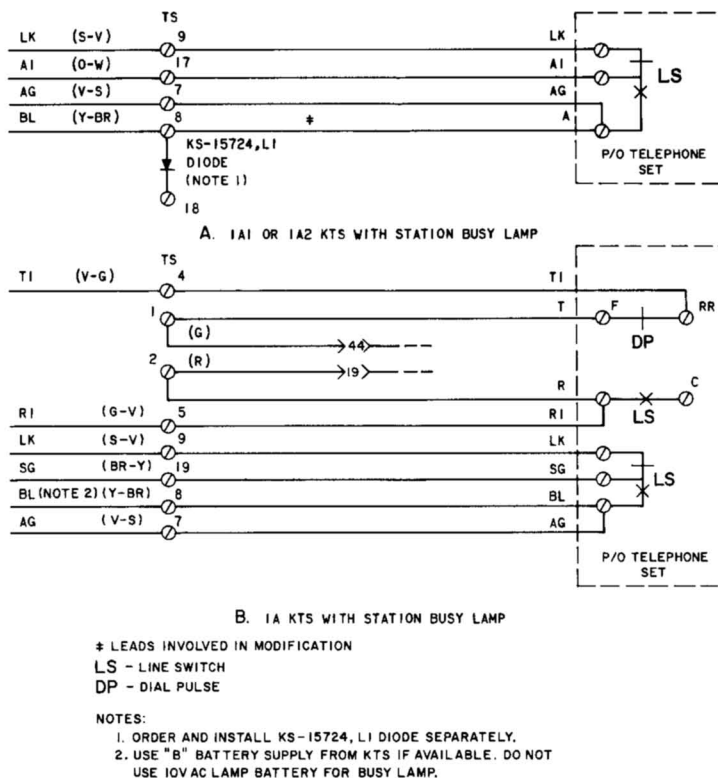


Fig. 16—Station Busy Lamp Option with 1A1, 1A2, or 1A KTS—6050B Key

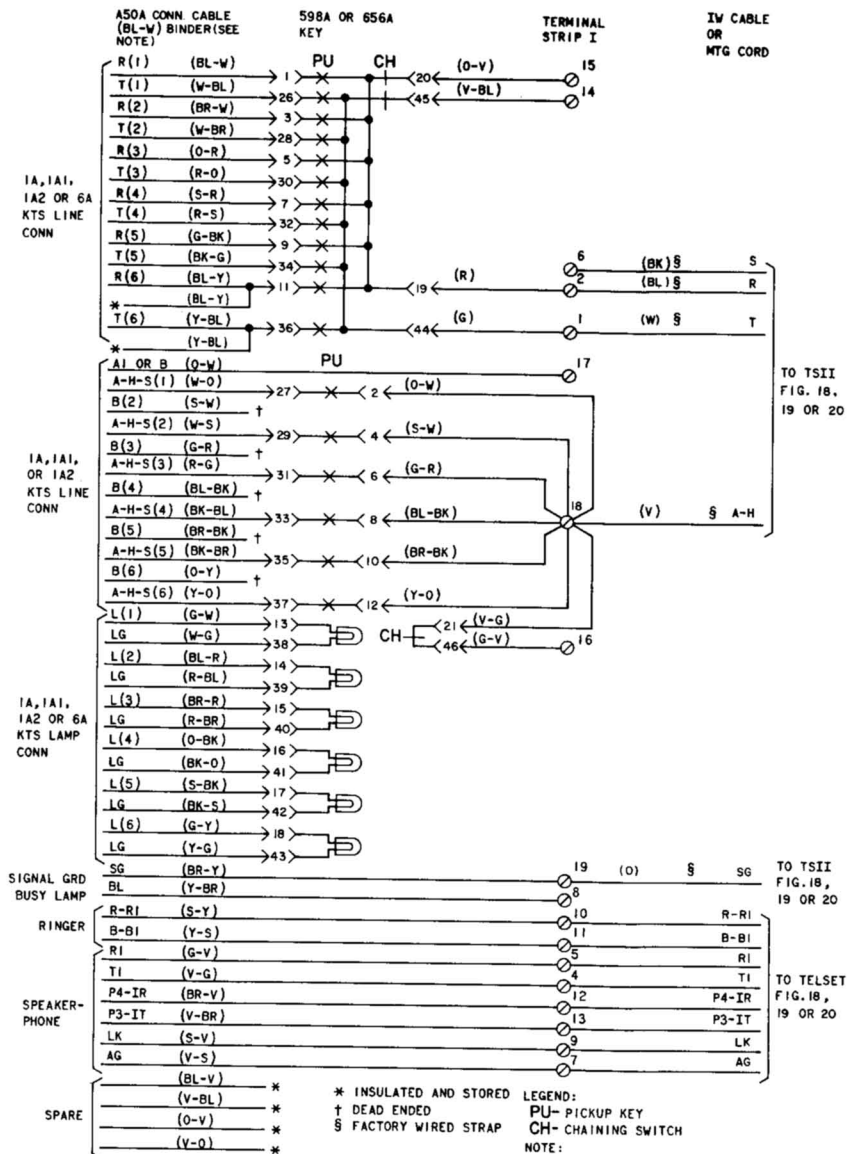


Fig. 17—6051A, 6051B, and 6051C Key Connections (First Key Module)

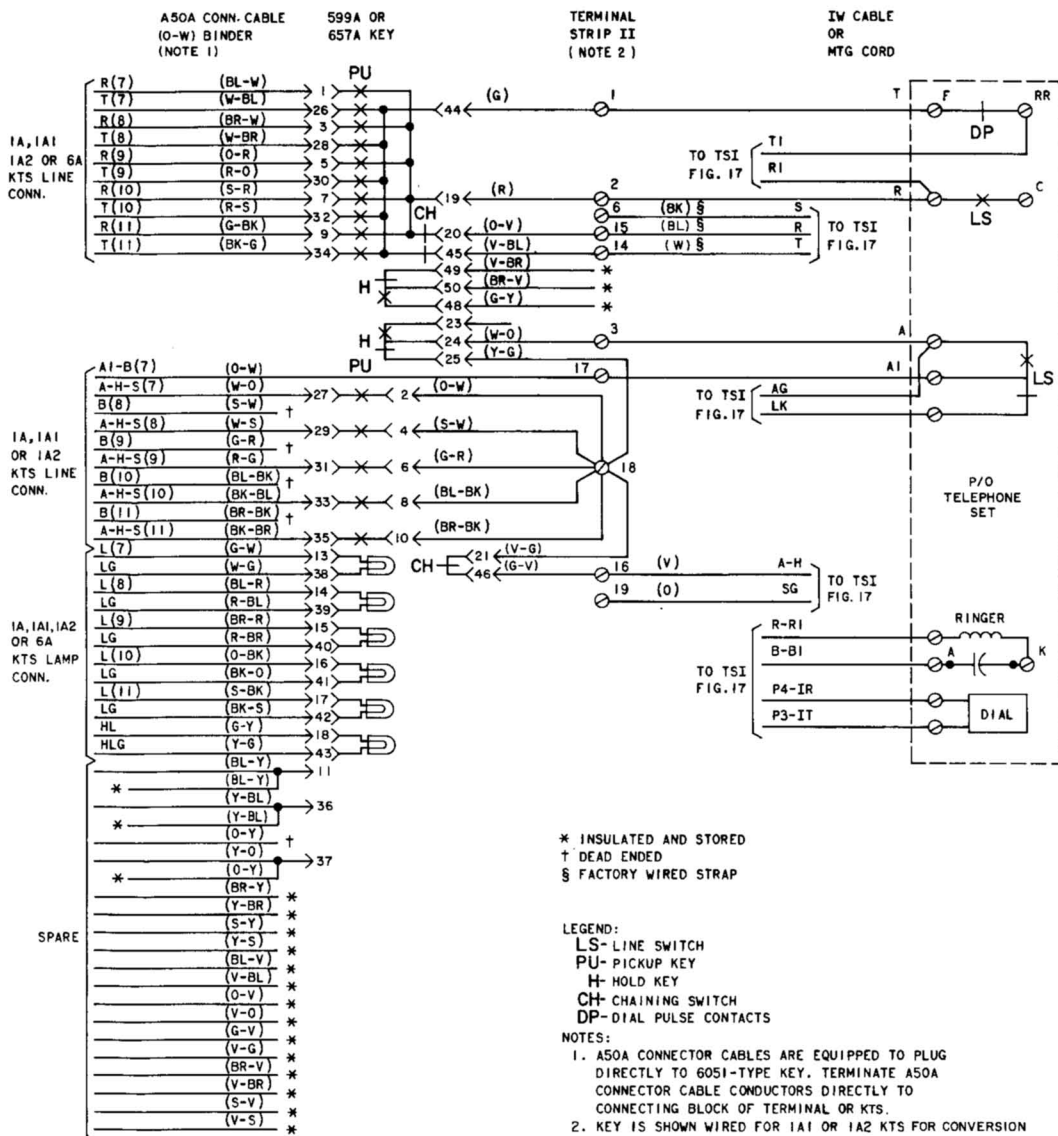


Fig. 18—6051A Key, Connections (Second Key Module)

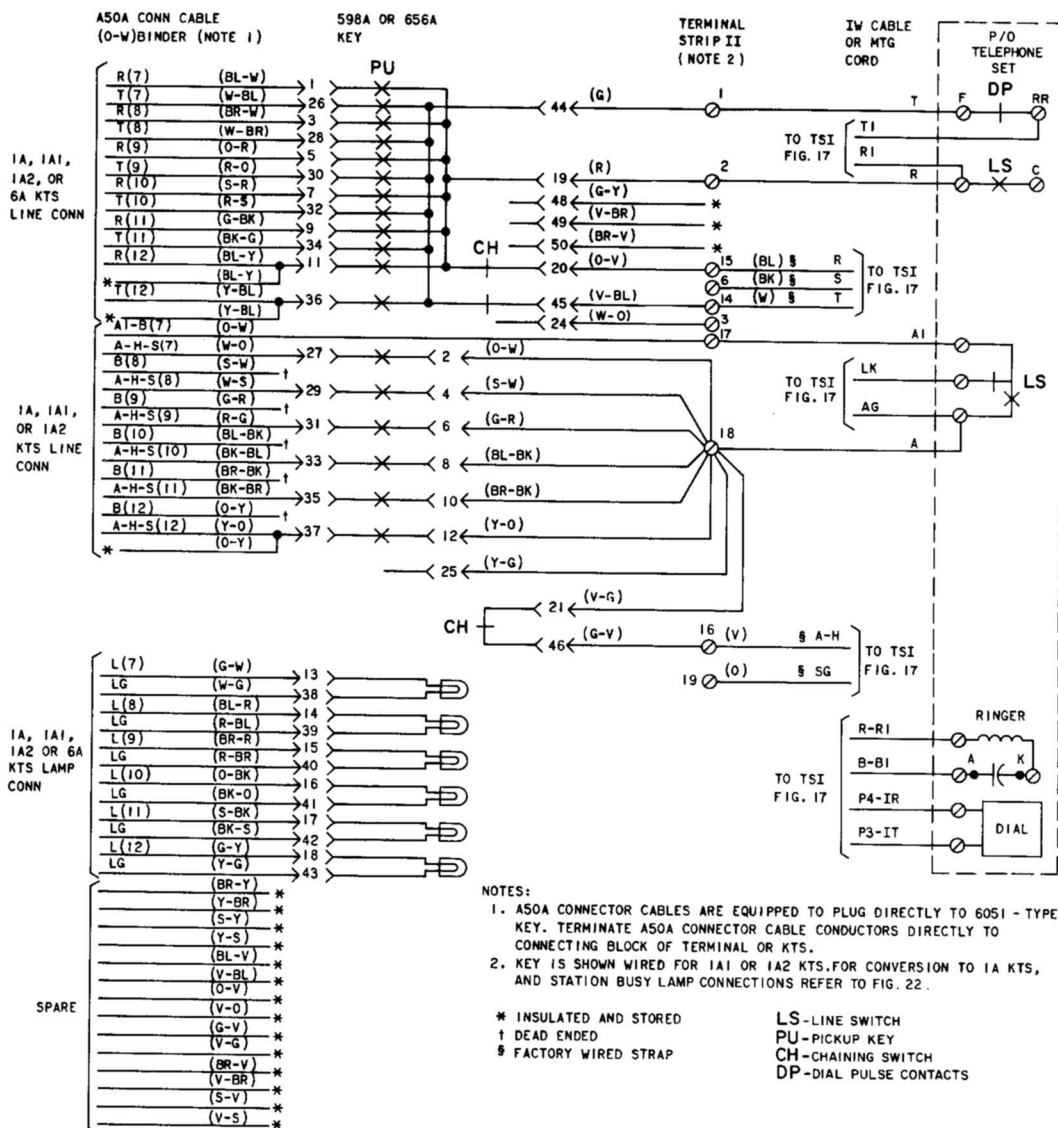


Fig. 19—6051B Key, Connections (Second Key Module)

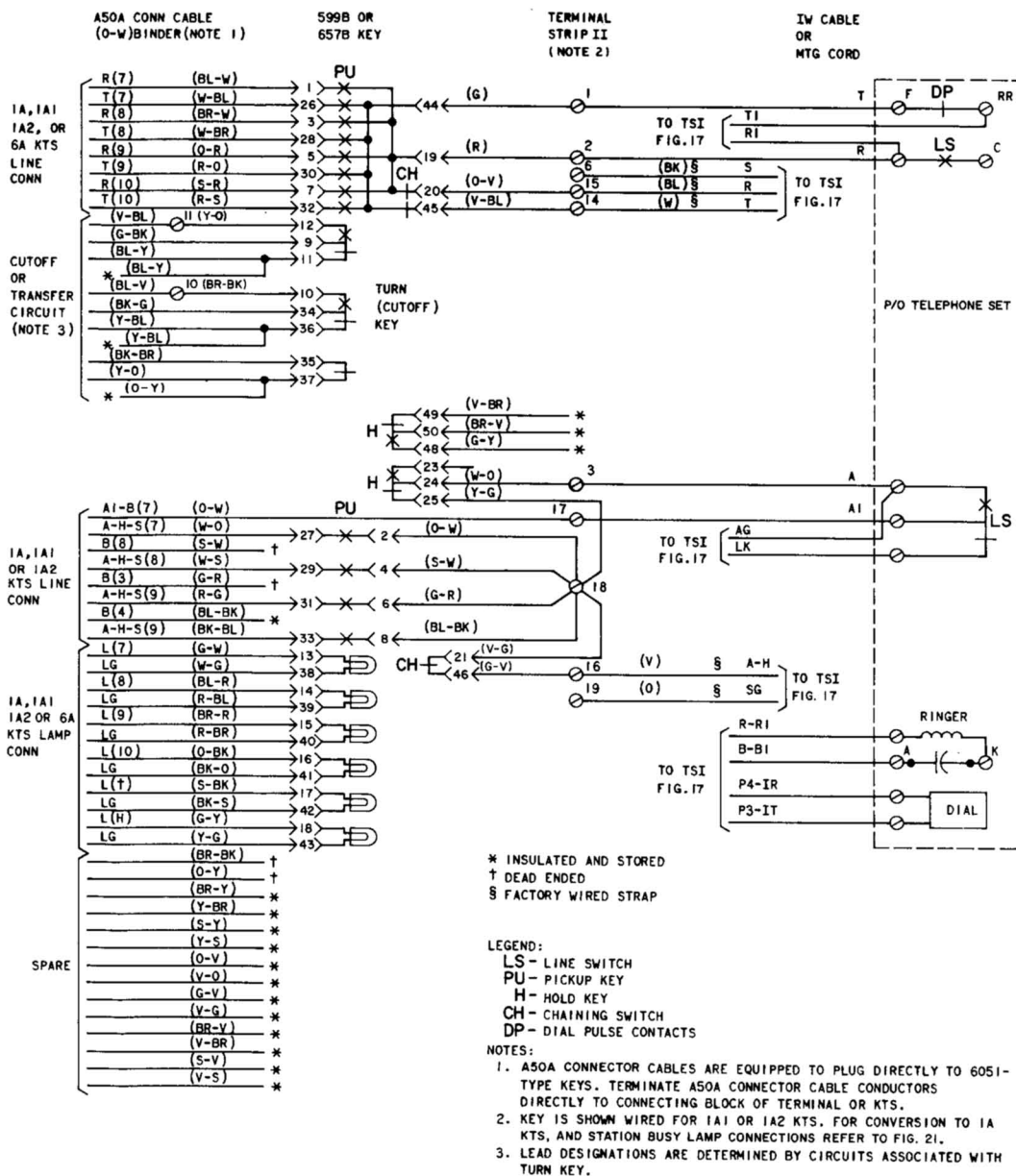
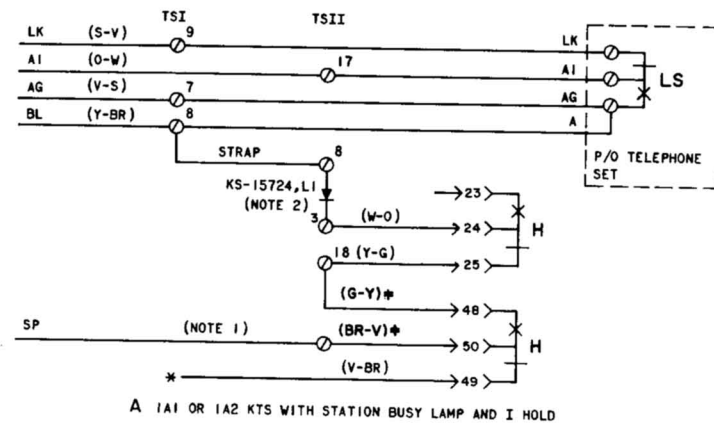
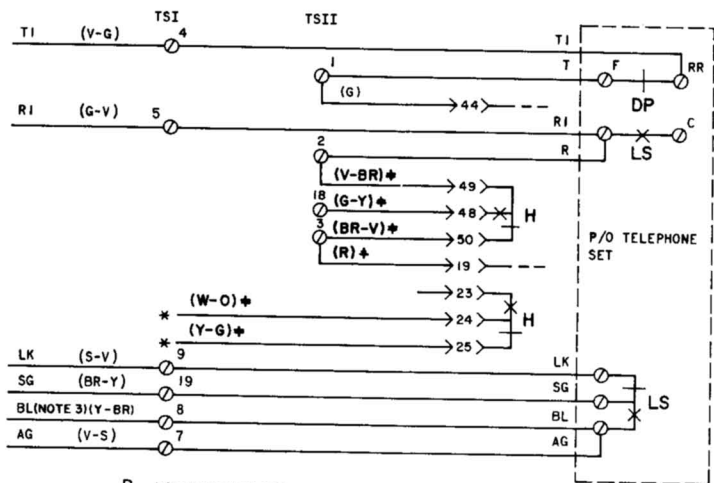


Fig. 20—6051C Key, Connections (Second Key Module)



A 1A1 OR 1A2 KTS WITH STATION BUSY LAMP AND I HOLD



B - MODIFICATION FOR 1A KTS WITH STATION BUSY LAMP

NOTES:

1. USE SPARE TERMINAL AND CONDUCTORS FOR SP LEAD (I HOLD)
2. ORDER AND INSTALL DIODE SEPARATELY
3. USE "B" BATTERY SUPPLY FROM KTS IF AVAILABLE. DO NOT USE 10V AC LAMP BATTERY FOR BUSY LAMP.

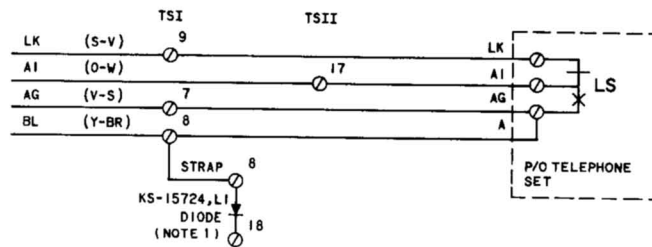
* INSULATED AND STORED

✦ LEADS INVOLVED IN MODIFICATION

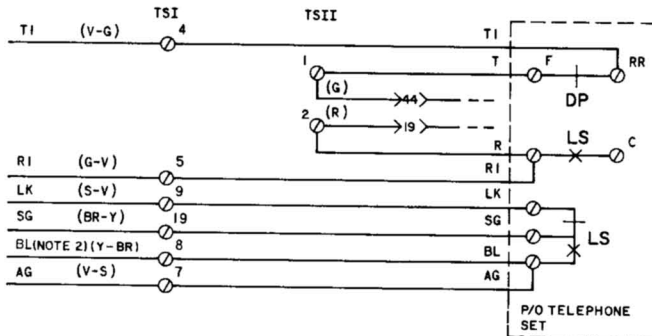
LEGEND :

H - HOLD
LS - LINE SWITCH
DP - DIAL PULSE

Fig. 21—Station Busy Lamp, I Hold and 1A KTS Options—6051A and 6051C Keys



A. 1A1 OR 1A2 KTS WITH STATION BUSY LAMP



B. MODIFICATION FOR 1A KTS WITH STATION BUSY LAMP

NOTES:

1. ORDER AND INSTALL DIODE SEPARATELY.
2. USE "B" BATTERY SUPPLY FROM KTS IF AVAILABLE.
DO NOT USE 10V AC LAMP BATTERY FOR BUSY LAMP.

LEGEND:

LS LINE SWITCH
DP DIAL PULSE

Fig. 22—Station Busy Lamp and 1A KTS Options—6051B Key

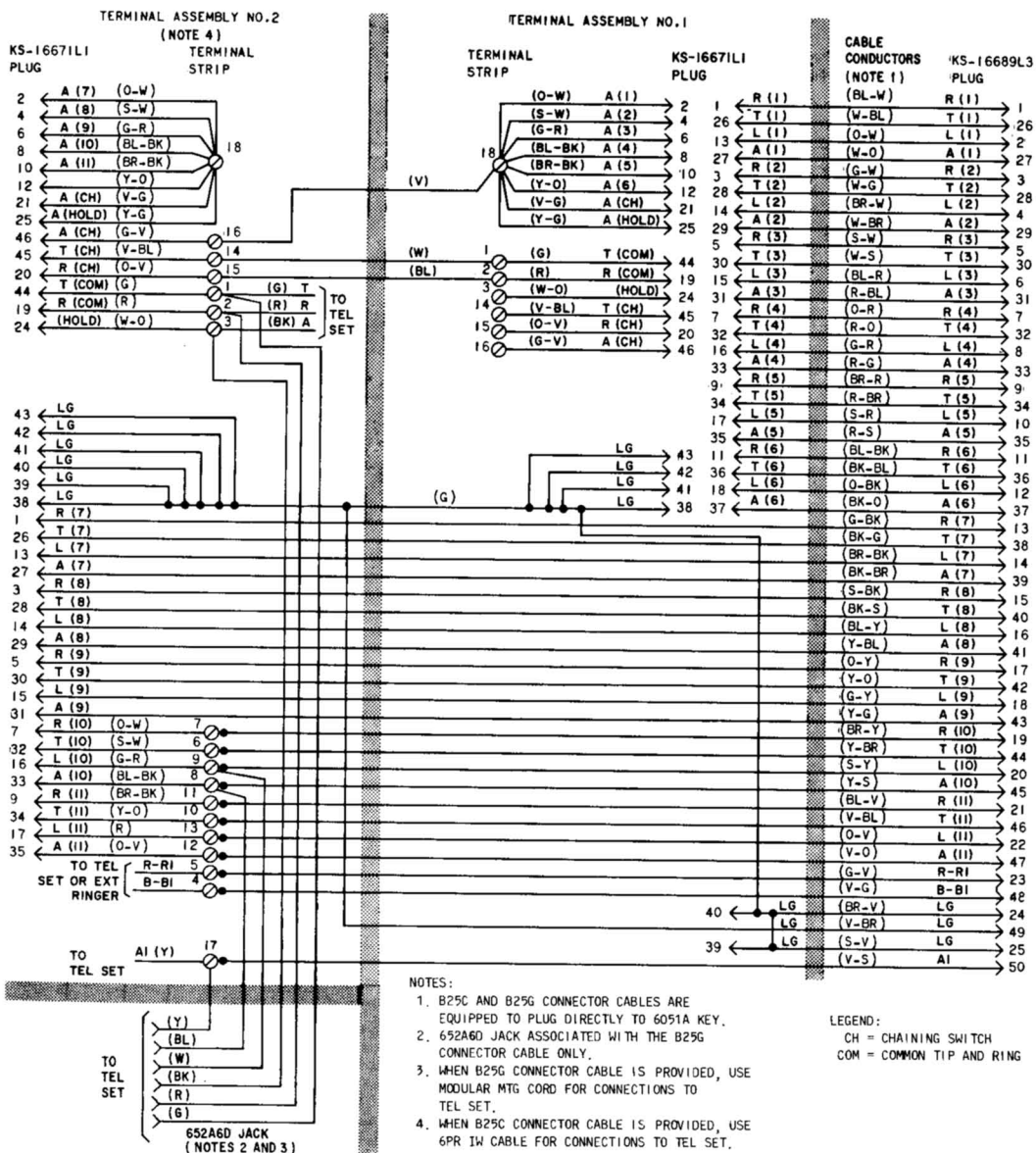


Fig. 23—B25C and B25G Connector Cable Connections to 6051A Key

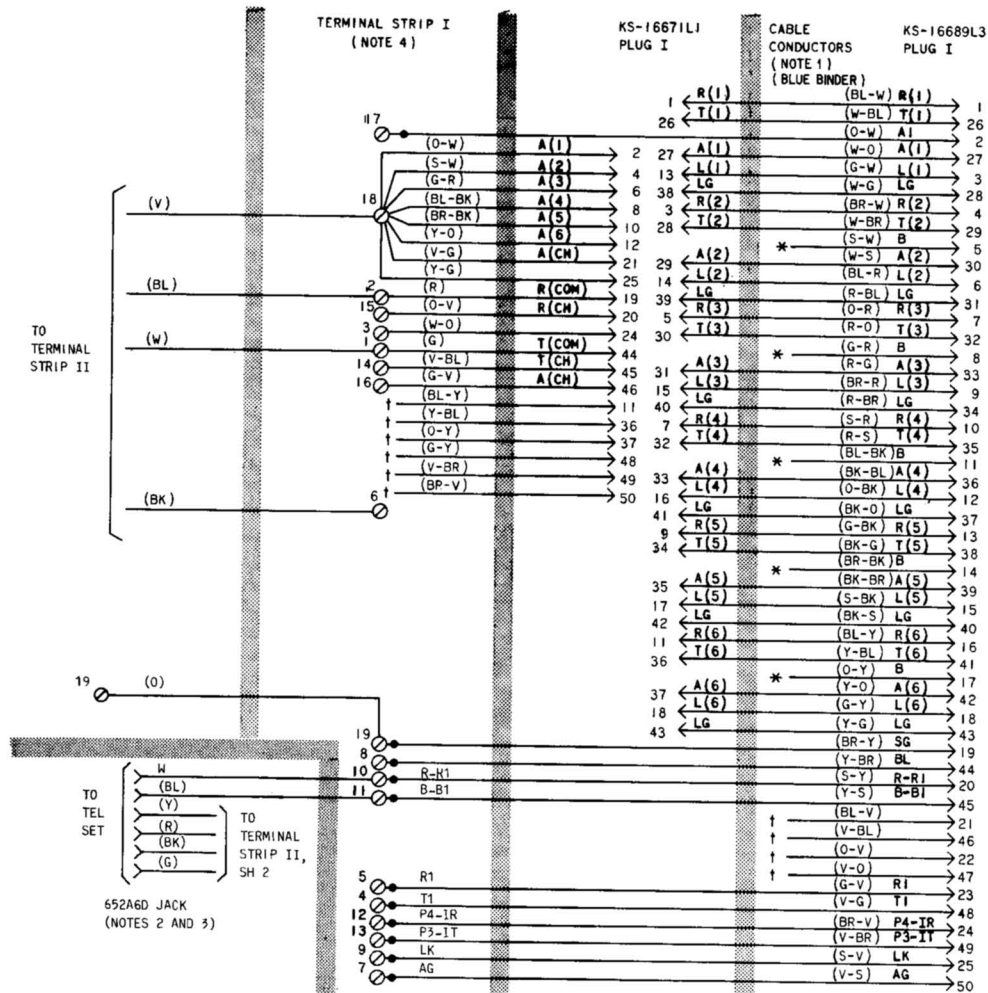


Fig. 24—B50B and B50C Connector Cable Connections to 6051-Type Key (Sheet 1 of 2)

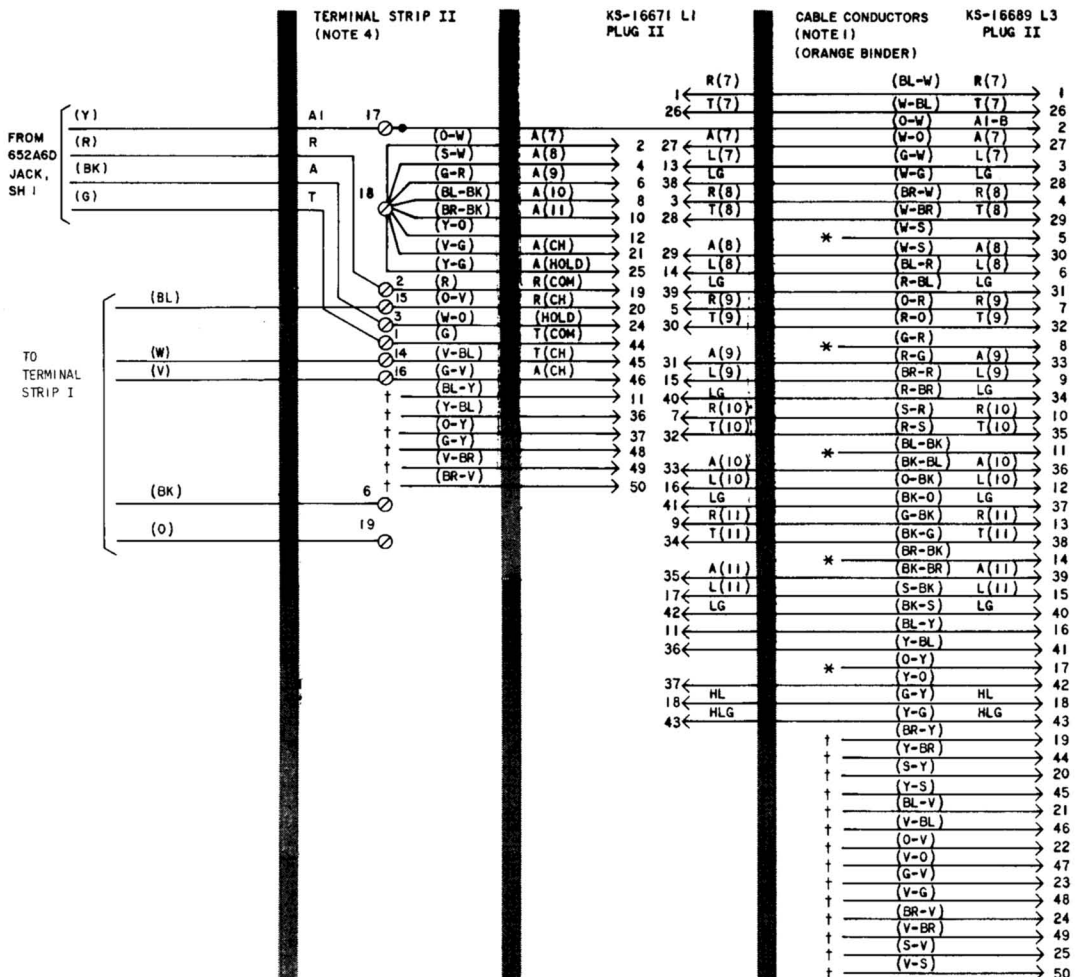


Fig. 24—B50B and B50C Connector Cable Connections to 6051-Type Key (Sheet 2 of 2)†

♦TABLE C♦

FACEPLATE MATS FOR 6050- AND 6051-TYPE KEYS

HOUSING COLOR	COORDINATED COLOR FACEPLATE MATS		FACEPLATE MATS			
	6050 KEY	6051 KEY	6050 KEY		6051 KEY	
			SILVER	GOLD	SILVER	GOLD
Black	818379703 (P-83G970)	818770703 (P-87G070)	818379786 (P-83G978)	818379794 (P-83G979)	818770786 (P-87G078)	818770794 (P-87G079)
Ivory	818379802 (P-83G980)	818770802 (P-87G080)				
Green	818379711 (P-83G971)	818770711 (P-87G071)				
Red	818379695 (P-83G969)	818770695 (P-87G069)				
Yellow	818379729 (P-83G972)	818770729 (P-87G072)				
White	818379737 (P-83G973)	818770737 (P-87G073)				
Lt. Beige	818379752 (P-83G975)	818770752 (P-87G075)				
Aqua Blue	818379760 (P-83G976)	818770760 (P-87G076)				

TABLE D
KEY FEATURES

KEY	FEATURES*	PRINCIPAL USE
6040A, 6041A 6040B, 6041B 6040C, 6041C	H P P P _s P _s P _s P P P P _s P _s P _s H P P P P _s C	1A, 1A1, 1A2, or 6A Key Telephone Systems
6040D, 6041D†	H P P P P L	755 PBX (see SD-66507-01)
6041E	R P _s P _s P _s S _P S _P	No. 15 Automatic Call Distribution System
6040G, 6041G 6040H, 6041H 6040J, 6041J	H P P P _s P _s P _s P P P P _s P _s P _s H P P P P _s C	1A, 1A1, 1A2, or 6A Key Telephone Systems
6040K, 6041K†	H P P P P L	755 PBX (see SD-66507-01)
6050A 6050B 6050C 6051A 6051B 6051C	H P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s H P_s P_s P_s P_s C P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s P_s	1A, 1A1, 1A2, or 6A Key Telephone Systems

*H-Hold, P-Pickup, S-Signal, C-Cutoff, L-Local, P_s or S_P-Convertible Pickup or Signal, R-Release.

† Refer to Section 502-541-419 for additional information.

TABLE E

LINE CONNECTIONS TO 6040A, 6040B, 6040C, KEYS WITH D40A (MD) AND D37A (MD) CORDS AND 6041A, 6041B, 6041C KEYS CABLE CONNECTED

CABLE COLOR	D40A MTG CORD			6040A-6041A† KEYS		6040B-6041B† KEYS		D37A MTG CORD			6040C-6041C† KEY	
	44A CONN BLK		CORD COLOR	LEAD DESIG	KEY TERM.	LEAD DESIG	KEY TERM.	44A CONN BLK		CORD COLOR	LEAD DESIG	KEY TERM.
	NO.	TERM.						NO.	TERM.			
W-BL BL-W	1	2 1	G R	T R	1T 1R	T R	1T 1R	1	2 1	G R	T R	1T 1R
W-O O-W		5 4	BK Y	A or H A1 or B	1H 1B	A A1	1H 1B		5 4	BK Y	A or H A1 or B	1H 1B
W-G G-W		7 6	S-BK S-Y	LG L1	LG 1	LG L	LG 1		7 6	S-BK S-Y	LG L	LG 1
W-BR BR-W		10 9	W BL	T R	2T 2R	T R	2T 2R		10 9	W BL	T R	2T 2R
W-S S-W		8 3	BR-G BR-R	A or H B	2H *	A L(6)	2H 6		8 3	BR-G BR-R	A or H B	2H *
R-BL BL-R	2	2 1	S-BL	LG L2	2	LG L	2	2	2 1	S-BL	LG L	2
R-O O-R		5 4	BR-BK BR-Y	T R	3T 3R	T R	3T 3R		5 4	BR-BK BR-Y	T R	3T 3R
R-G G-R		7 6	BR-W BR-BL	A-H-S B	3H *	A G	3H SG		7 6	BR-W BR-BL	A or H B	3H *
R-BR BR-R		10 9	S-W	LG L3	3	LG L	3		10 9	S-W	LG L	3
R-S S-R		8 3	R-Y R-G	T R	4T 4R	T R	4T 4R		8 3	R-Y R-G	T R	4T 4R
BK-BL BL-BK	3	2 1	R-BL R-BK	A-H-S B	4H *	A A(6)	4H 6H	3	2 1	R-BL R-BK	A-H-S B	4H *
BK-O O-BK		5 4	S-BR	LG L4	4	LG L	4		5 4	S-BR	LG L	4
BK-G G-BK		7 6	G-Y R-W	T R	5T 5R	T R	5T 5R		7 6	S-G S-R	T1-B R1	CT CR
BK-BR BR-BK		10 9	G-BL G-BK	A-H-S B	5H *	A	5H		PLACE STRAP	Y-BK		* *
BK-S S-BK		8 3	BR	LG L5	5	LG L	5					* *
Y-BL BL-Y	4	PLACE STRAP						4		O-W O		* *
Y-O O-Y												
Y-G G-Y												
Y-BR BR-Y		2 1	Y-BK G-W	G	SG	T(6) R(6)	6T 6R		10 9	G-W	G	† SG
Y-S S-Y		5 4	Y-W Y-BL	B1 R1	RT RR	B R	RT RR		8 3	Y-W Y-BL	B1 R1	RT RR
V-BL BL-V	4	7 6	BK-W BK-BL		ET ER		ET ER	4	2 1	BK-W BK-BL		ET ER
V-O O-V		10 9	S BL-W		EH EB		EH EB		5 4	S BL-W		EH EB
V-G G-V							*		7 6	O-G O-R	T-B R	XT XR
V-BR BR-V		8 3	O-BL O-BK		ON ON1		ON *		10 9	O-BL O-BK		ON ON1
V-S S-V							*		8 3			

*Insulate and store.

†6041-type keys not provided with mounting cords, terminate cable conductors directly to key terminals.

TABLE F

**LINE CONNECTIONS TO 6040A, 6040B, 6040C, KEYS WITH D42A CORD
AND 6041A, 6041B, 6041C KEYS CABLE CONNECTED**

CABLE AND MTG CORD (NOTE)		66E3 OR 66E4 CONN BLK TERMINAL	6040A-6041A† KEYS		6040B-6041B† KEYS		6040C-6041C† KEYS	
PIN NO.	CON- DUCTOR COLOR		LEAD DESIG	KEY TERM.	LEAD DESIG	KEY TERM.	LEAD DESIG	KEY TERM.
26	1	W-BL BL-W	1	2	T R	1T 1R	T R	1T 1R
27	2	W-O O-W	3	4	A or H A1 or B	1H 1B	A or H A1 or B	1H 1B
28	3	W-G G-W	5	6	LG L	LG 1	LG L	LG 1
29	4	W-BR BR-W	7	8	T R	2T 2R	T R	2T 2R
30	5	W-S S-W	9	10	A or H B	2H *	A or H B	2H *
31	6	R-BL BL-R	11	12	LG L	2	LG L	2
32	7	R-O O-R	13	14	T R	3T 3R	T R	3T 3R
33	8	R-G G-R	15	16	A or H B	3H *	A or H B	3H *
34	9	R-BR BR-R	17	18	LG L	3	LG L	3
35	10	R-S S-R	19	20	T R	4T 4R	T R	4T 4R
36	11	BK-BL BL-BK	21	22	A or H B	4H *	A-H-S B	4H *
37	12	BK-O O-BK	23	24	LG L	4	LG L	4
38	13	BK-G G-BK	25	26	T R	5T 5R	T R	5T 5R
39	14	BK-BR BR-BK	27	28	A or H B	5H *	A	5H *
40	15	BK-S S-BK	29	30	LG L	5	LG L	5
41	16	Y-BL BL-Y	31	32	*	*	T R	6T 6R
42	17	Y-O O-Y	33	34				
43	18	Y-G G-Y	35	36				
44	19	Y-BR BR-Y	37	38	SIG GRD	* SG	L SG	6 SG
45	20	Y-S S-Y	39	40	B R	RT RR	B R	RT RR
46	21	V-BL BL-V	41	42		ET ER		ET ER
47	22	V-O O-V	43	44		EH EB		EH EB
48	23	V-G G-V	45	46		*	A	6H
49	24	V-BR BR-V	47	48		ON ON1		ON ON1
50	25	V-S S-V	49	50		*		*

*Insulate and store.

†6041-type keys not provided with mounting cords, terminate cable conductors directly to key terminals.

Note: Pins 28, 31, 34, 37, 40, and 43 in the plug of D42A cord are strapped together.

TABLE G

PICKUP-SIGNAL KEY OPTIONS

6040A, 6041A, 6040G, AND 6041G KEYS

CONVERSION OPTIONS	636A KEY LEADS			
	Y-BR	BR	S-R	BR-BK
HPPPPP (Note)	M	M	M	X
HPPPPS	M	M	M	SG
HPPSSS	M	M	SG	X
HPPSSS	M	X	SG	X
HPPPP*S*	M	M	5H	EH†
HPPP*P*S*	M	X	5H	EH†
HPPP*P*P*S*	X	X	5H	EH†

*These arrangements use line switch controlled ground for common signal key used with private or intercommunicating lines. Common signal should be used to operate a common signal relay. Do not wire directly to a buzzer.

†Use A1 control lead for 1A1 or 1A2 KTS and SG lead for 1A KTS.

TABLE H

PICKUP-SIGNAL KEY OPTIONS

6040B, 6041B, 6040H, AND 6041H KEYS

CONVERSION OPTIONS	636B KEY LEADS		
	BR	Y	BR-BK
PPPPPP (Note)	M	M	M
PPPPPS	M	M	SG
PPPPSS	M	SG	SG
PPPPSSS	SG	SG	SG
PPPPP*S*	M	6H	EH†
PPPPP*P*S*	6H	6H	EH†

TABLE I

PICKUP-SIGNAL KEY OPTIONS

6040C, 6041C, 6040J, AND 6041J KEYS

CONVERSION OPTIONS	589AJ KEY LEADS	
	(G)	[S-BR] OR (BR-BK)
HPPPPC (Note)	M	M
HPPPSC	M	SG

Note: To convert from pickup (locking) to signaling (nonlocking) remove the 811218925 (P-12A892) screw detail at the key position being converted.

() Current Color

[] MD Color

TABLE J
CUTOFF KEY OPTIONS — 6040C, 6041C, 6040J, AND 6041J KEYS

CUTOFF	COM OR PVT LINE RINGER CIRCUIT		EXT STA OR EXT RINGER		LOCAL RINGER		CUTOFF KEY LEADS	
	R	B	R OR R1	T, T1, OR B	R	B	R-W OR BR	G-W OR Y-BR
Of local COM or PVT line ringer and transfer of local ringer	RR	RT	CR	CT	XR	XT	RR	RT
Of local line ringer and transfer of EXT STA or EXT ringer			XR	XT	CR	CT	R*	T*
EXT STA or EXT line ringer			CR	CT			R*	T*

*Terminals of line involved.

TABLE K
PICKUP SIGNAL CONVERSION — 6050- AND 6051-TYPE KEYS

KEY	CONVERSION OPTIONS (NOTE)	KEY LEADS					
		(O-W) [BK]	(S-W) [BR-G]	(G-R) [BR-W]	(BL-BK) [R-BL]	(BR-BK) [G-BL]	(Y-O) [S-BR]
599A	HPPPPP	18	18	18	18	18	*
	HPSSSS	18	19	19	19	19	*
598A	PPPPPP	18	18	18	18	18	18
	SSSSSS	19	19	19	19	19	19
599B	HPPPPC	18	18	18	18	*	*
	HPSSSC	18	19	19	19	*	*

Note: A pickup key (locking) may be converted to signaling (nonlocking) by removing the screw detail (Fig. 8) from the plunger at the key position to be converted. The keys and their associated cords are readily adaptable for individual signaling but not for common signaling.

*Not a pickup key

() Current color

[] MD color