

SEPARATELY MOUNTED KEYS
6021, 6027, 6028, 6040, AND 6041 TYPES
CONNECTIONS

1.00 GENERAL

- 1.01 Associate the color of the drawing with the color of the features for each key on page 3.
- 1.02 For notes and typical telephone set connections use fold-out sheet on page 9 and match with page 3, 5, or 7.
- 1.03 Any appropriate telephone set may be connected to a particular key by referring to the associated Table A for required lead designations.

2.00 INDEX

Key	Page	Key	Page
6021DN	2 and 3	6040B	6 and 7
6027DA	2 and 3	6040C	8 and 9
6027DB	2 and 3	6041A	4 and 5
6028DA	2 and 3	6041B	6 and 7
6040A	4 and 5	6041C	8 and 9

3.00 TABLES

- A — Key, Key Cable, and Telephone Set Connections
- B — 1A and 1A1 Conversion
- C — Pickup-Signal Key Conversion
- D — Cutoff Key Connections

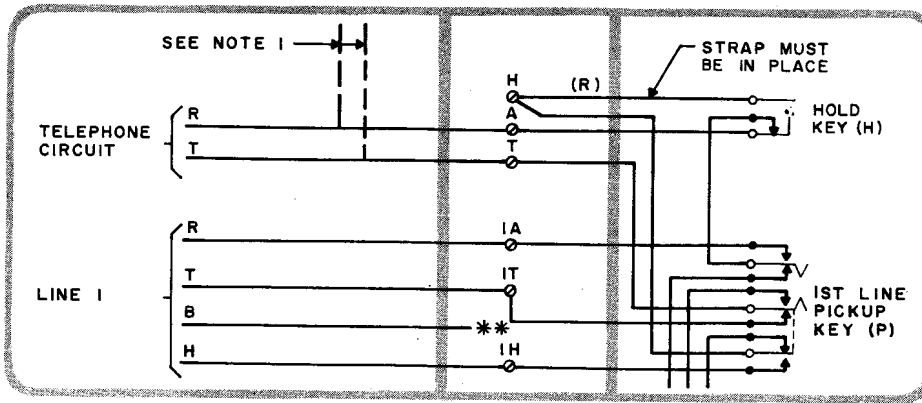


Fig. 1A - Connections for 1A

TABLE A
KEY, KEY CABLE, AND TELEPHONE SET CONNECTIONS
(See Note 2)

Ckt	Lead Desig		Key Cable D Type	Term. Strip In Key		Telephone Set Lead Desig	
	1A	1A1		1A	1A1	1A	1A1
Line 1 and Tel Set	R	R	BL	1A	1H		
	T	T	W	1T	1T		
Line 2	B	A1	OR	**	**		A1
	H	A	W	1H	1A		
Line 3	R	R	GN	2A	2H		
	T	T	W	2T	2T		
Line 4	B	—	BR	**	**		
	H	A	W	2H	2A		
Line 5	R	R	SL	3A	3H		
	T	T	W	3T	3T		
Line 6	B	—	BL	**	**		
	H	A	R	3H	3A		
Line 7	R	R	OR	4A	4H		
	T	T	R	4T	4T		
Line 8	B	—	GN	**	**		
	H	A	R	4H	4A		
Line 9	R	R	BR	5A	5H		
	T	T	R	5T	5T		
Line 10	B	—	SL	**	**		
	H	A	R	5H	5A		
Ringer or Buz	R	R	BL	LR▲	LR▲	R	R
	B	B	BK	LT▲	LT▲	B	B
Signal	S	S	BR	S	S		
	G	G	R	G	G		
Cutoff Ckt External	R	R	BR	CR	CR		
	T-B	T-B	R	CT	CT		
Telephone Set				A	H	R	R
				T	T		
				—	—	—	—
				—	A	—	A
Cutoff Ckt—Local				LR	LR	R	R
				X	X	T-B	T-B

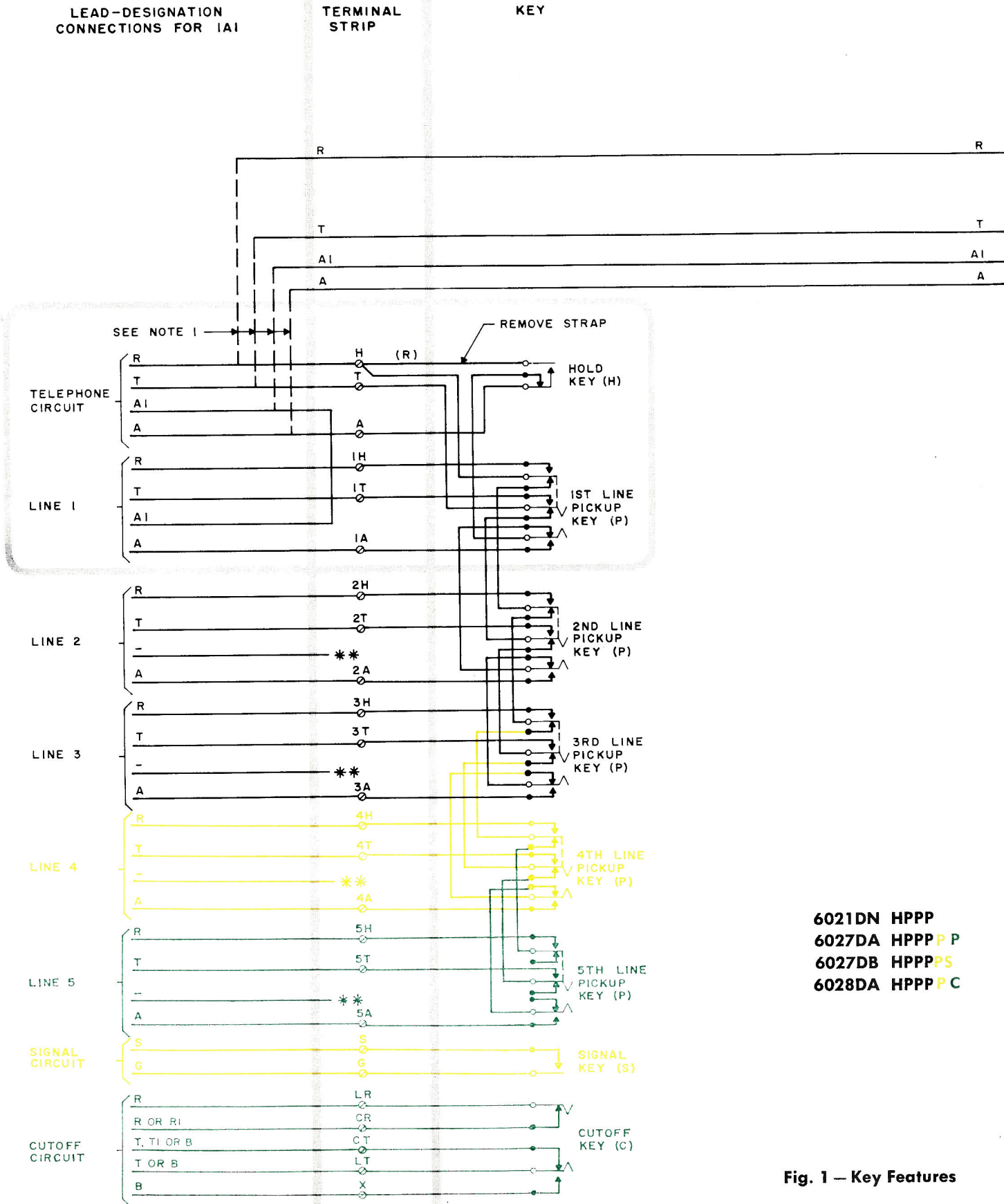
** Not terminated in key
▲ See Note 3

TABLE D
CUTOFF KEY CONNECTIONS
(For 6028DA key only)

Cutoff	Com or Pvt Line Ringer Ckt		Ext Sta, Ext Ringer, or Manual Cutoff Ckt		Local Ringer		Strap To Ring and Tip Terms. of Line Involved	
	R	B	R or R1	T, T1, or B	R	T or B	R	T
Of Local Com or Pvt Line Ringer and (Transfer) Ext Com or Pvt Line Ringer ●	LR	LT	CR	CT	LR	X		
Of Local Line Ringer and (Transfer) Ext Sta or Ext Line Ringer ●			CR	CT	LR	X	LR	LT
Of Controlled 1A1 Key Tel Sys Sta ◆			CR	CT				

● Either feature may be used separately
◆ Place strap from LR terminal to CT terminal

Connections for Keys 6021DN, 6027DA, DB and 6028DA



6021DN HPPP
 6027DA HPPPP P
 6027DB HPPPPS
 6028DA HPPPP C

Fig. 1 - Key Features

** Not Terminated in Key

TABLE A
KEY, KEY CABLE, AND TELEPHONE SET CONNECTIONS
(See Notes 4 and 5)

Ckt	Lead Desig		Key Cable	Conn Block		Mtg-cord Leads	Term. Strip In Key	Telephone Set Lead Desig	
	1A	1A1		D Type	Term.			No.	6040A
Line 1 and Tel Set	R	R	BL	1	1	R	1R		
	T	T	W	2		GN	1T		
	B	A1	OR	4		Y	1B		A1
Line 2 and Sig	H	A	W	5		BL	2R		
	R	R	GN	6		W	2T		
	T	T	W	7		BR-R	2H		
Line 3 and Sig	B	—	BR	9		BR-GN	2H		
	H-S	A-S	W	10		BR-Y	3R		
	R	R	SL	3		BR-BK	3T		
Line 3 and Sig	T	T	W	8		2	BR-BL	3H	
	B	—	BL	1	BR-W		3H		
Line 4 and Sig	H-S	A-S	R	2	R-GN		4R		
	R	R	OR	4	R-Y		4T		
	T	T	R	5	R-BK		4H		
Line 4 and Sig	B	—	GN	6	R-BL		4H		
	H-S	A-S	R	7	R-W		5R		
	R	R	BR	9	GN-Y		5T		
Line 5 and Sig	T	T	R	10	GN-BK		5H		
	B	—	SL	3	GN-BL		5H		
	H-S	A-S	R	8					
Sig Grd	G	G	BL	1	3	GN-W	SG		
			BK	2		Y-BK			
Ringer or Buz	R	R	OR	4		Y-BL	RR	R	R
	B	B	BK	5		Y-W	RT	B	B
Telephone Set	R	R	GN	6		BK-BL	ER	R	R
	T	T	BK	7		BK-W	ET	T	T
	—	—	BR	9		BL-W	EB	—	—
	—	A	BK	10		SL	EH	—	A
		SL	3						
		BK	8						
Lamp 1	L	L	BL	1	4	SL-Y	1		
	LG	LG	Y	2		SL-BK	LG		
Lamp 2	L	L	OR	4		SL-BL	2		
	LG	LG	Y	5		SL-W	3		
Lamp 3	L	L	GN	6		SL-W	3		
	LG	LG	Y	7		SL-BR	4		
Lamp 4	L	L	BR	9		SL-BR	4		
	LG	LG	Y	10		BR	5		
Lamp 5	L	L	SL	3					
	LG	LG	Y	8					

■ See Note 6

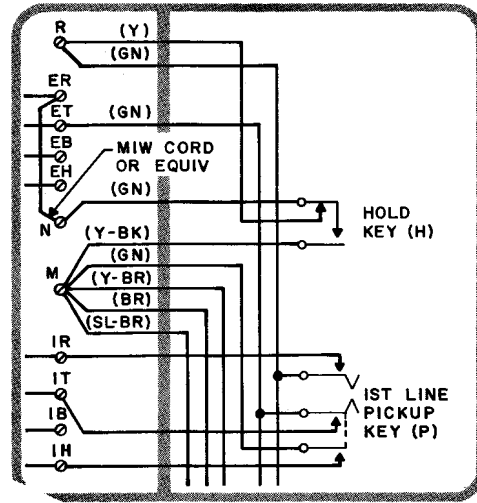


Fig. 2A - Wired for 1A

TABLE B
1A AND 1A1 CONVERSION

Key Tel Sys	Hold Key Leads		MIW Cord or Equiv	
	Y	Y-BK	— C	— C
1A	R	M	ER to N	
1A1	M	N	ER to R	EH to N

■ See Note 6

TABLE C
PICKUP-SIGNAL KEY CONVERSION
(See Notes 7 and 8)

Convertible Key Options	Key Leads			
	BR	Y-BR	SL-BR	BK-BR
HPPPPP	M	M	M	X
HPPPPS	M	M	M	SG
HPPPSS	M	M	SG	X
HPPSSS	X	M	SG	X
HPPP*P*S*	X	M	5H	SG
HPP*P*P*S*	X	X	5H	SG

★ See Note 9

Connections for Keys 6040A and 6041A

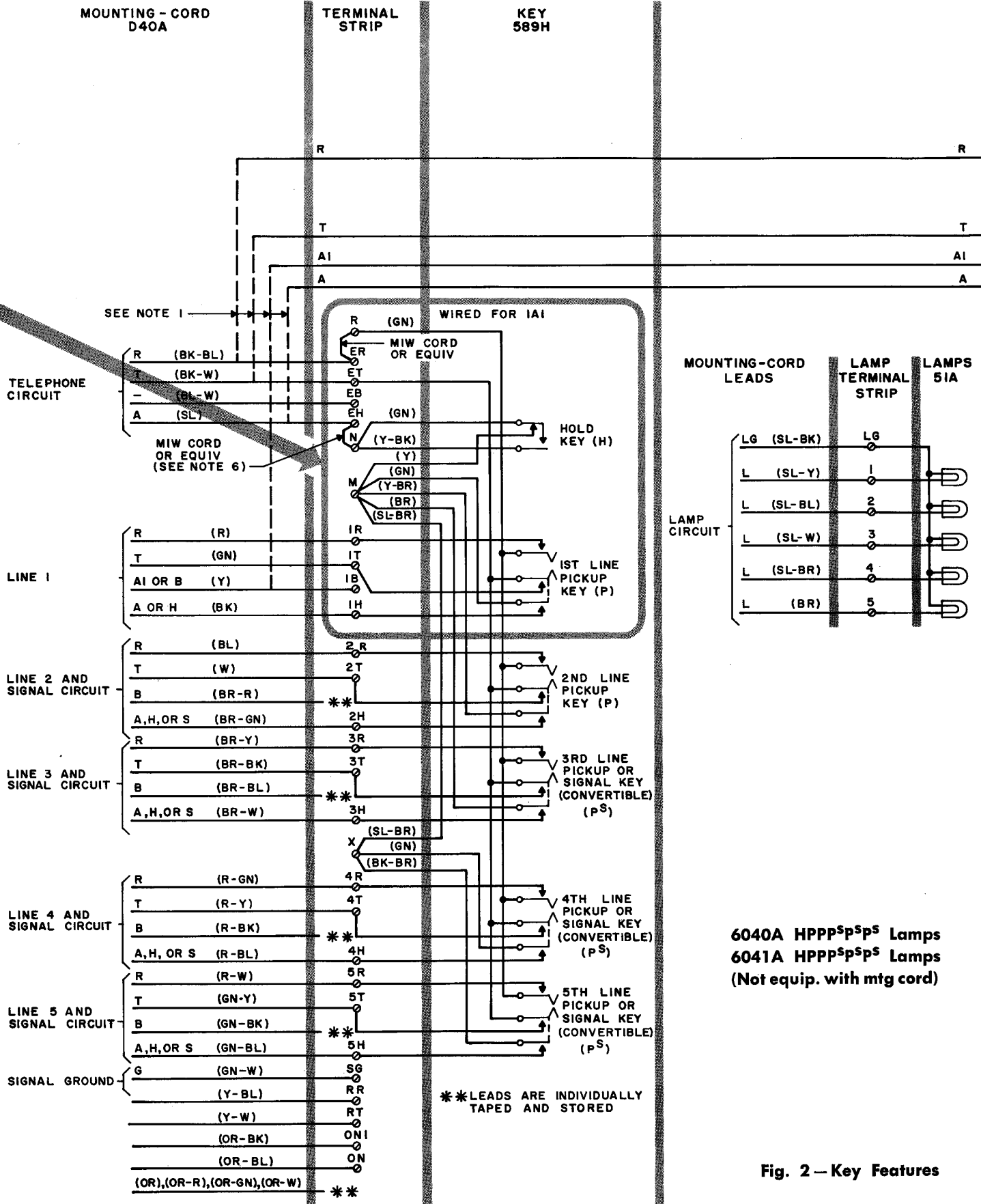


Fig. 2 - Key Features

TABLE A
KEY, KEY CABLE, AND TELEPHONE SET CONNECTIONS
(See Notes 4 and 5)

Ckt	Lead Desig		Key Cable	Conn Block		Mtg-cord Leads	Term. Strip In Key	Telephone Set Lead Desig	
	1A	1A1	D Type	Term.	No.	6040B		1A	1A1
Line 1 and Tel Set	R	R	BL	1	1	R	1R		
	T	T	W	2		GN	1T		
	—	A1	OR	4		Y	1B	—	A1
	—	A	W	5		BK	1H		
Line 2	R	R	GN	6		BL	2R		
	T	T	W	7		W	2T		
Lamp 6	L	L	BR	9		BR-R	6		
Line 2	—	A	W	10		BR-GN	2H		
Line 3	R	R	SL	3		BR-Y	3R		
	T	T	W	8		BR-BK	3T		
	—	—	BL	1	2	BR-BL			
	—	A	R	2		BR-W	3H		
Line 4	R	R	OR	4	R-GN	4R			
	T	T	R	5	R-Y	4T			
Line 6 and Sig	S	A-S	GN	6	R-BK	6H			
Line 4 and Sig	S	A-S	R	7	R-BL	4H			
Line 5	R	R	BR	9	R-W	5R			
	T	T	R	10	GN-Y	5T			
Sig Grd	G	G	SL	3	GN-BK	SG			
Line 5 and Sig	S	A-S	R	8	GN-BL	5H			
Line 6	R	R	BL	1	3	GN-W	6R		
	T	T	BK	2		Y-BK	6T		
Ringer or Buz	R	R	OR	4		Y-BL	RR	R	R
	B	B	BK	5		Y-W	RT	B	B
Telephone Set	R	R	GN	6		BK-BL	ER	R	R
	T	T	BK	7		BK-W	ET	T	T
	—	—	BR	9		BL-W	EB	—	—
	—	A	BK	10		SL	EH	—	A
Lamp 6	LG	LG	SL	3					
			BK	8					
Lamp 1	L	L	BL	1	4	SL-Y	1		
	LG	LG	Y	2		SL-BK	LG		
Lamp 2	L	L	OR	4		SL-BL	2		
	LG	LG	Y	5		SL-W	3		
Lamp 3	L	L	GN	6		SL-BR	4		
	LG	LG	Y	7					
Lamp 4	L	L	BR	9					
	LG	LG	Y	10					
Lamp 5	L	L	SL	3		BR	5		
	LG	LG	Y	8					

TABLE C
PICKUP-SIGNAL KEY CONVERSION
(See Notes 7 and 8)

Convertible Key Options	Key Leads		
	SL-BR	BK-BR	W-BR
PPPPPP	M	M	M
PPPPPS	M	M	SG
PPPPSS	M	SG	SG
PPSSSS	SG	SG	SG

Connections for Keys 6040B and 6041B

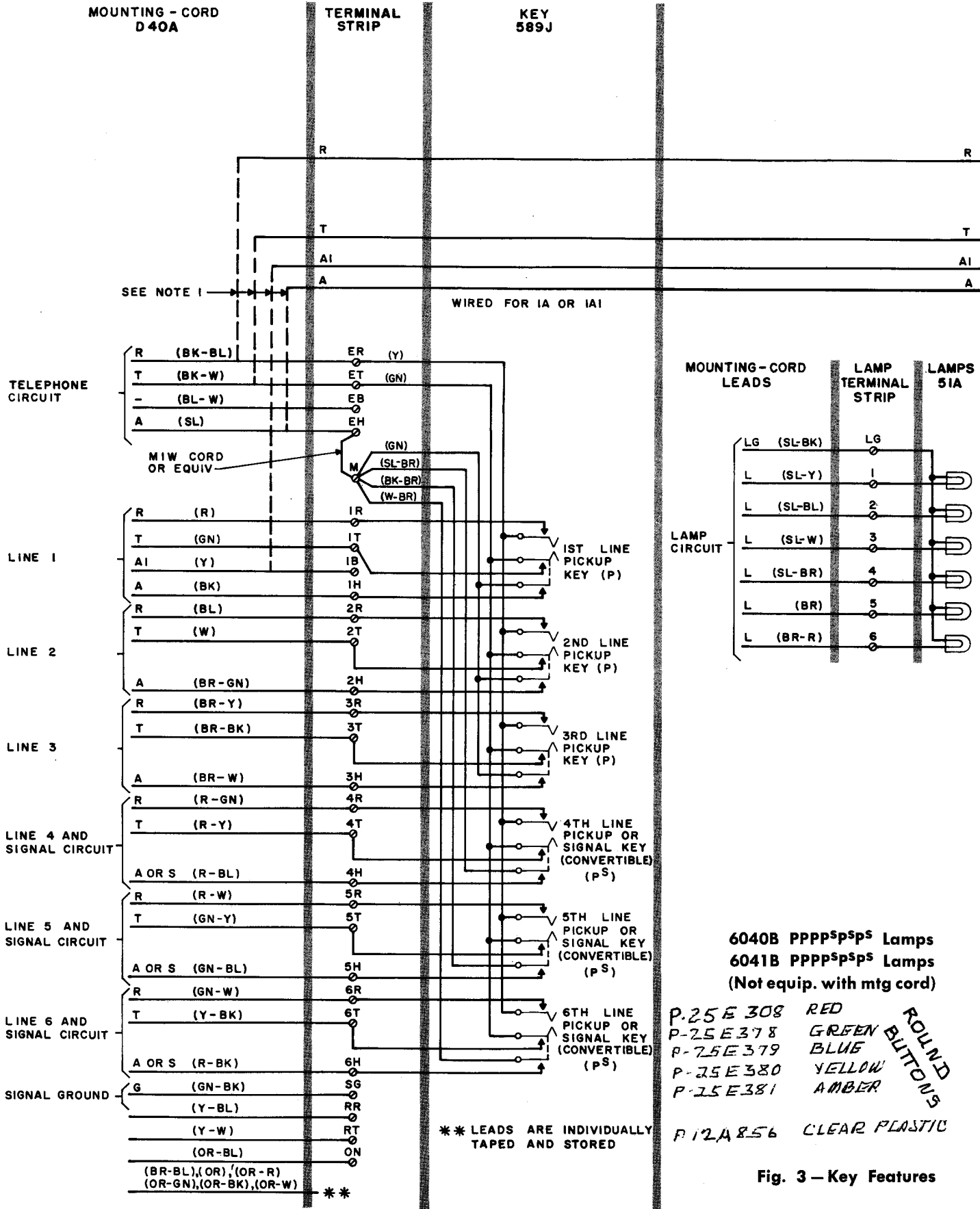


Fig. 3 - Key Features

SECTION C71.348.00

TABLE A
KEY, KEY CABLE, AND TELEPHONE SET CONNECTIONS
(See Notes 4 and 5)

Ckt	Lead Desig		Key Cable D Type	Conn Block		Mtg-cord Leads 6040C	Term. Strip In Key	Telephone Set Lead Desig	
	1A	1A1		Term.	No.			1A	1A1
Line 1 and Tel Set	R	R	BL	1	Block Nearest Cord Butt	R	1R	—	A1
	T	T	W	2		GN	1T		
Line 2	B	A1	OR	4		Y	1B		
	H	A	W	5		BK	1H		
Line 3	R	R	GN	6		BL	2R		
	T	T	W	7		W	2T		
Line 4 and Sig	R	R	SL	3		BR-R	2H		
	T	T	W	8		BR-GN	2T		
Sig Grd	B	—	BR	9		BR-Y	3R		
	H	A	R	10		BR-BK	3T		
Ringer or Buz	R	R	OR	4	BR-BL	3H			
	B	B	BK	5	BR-W	3H			
Telephone Set	R	R	GN	6	R-GN	4R			
	T	T	BK	7	R-Y	4T			
Cutoff Ckt External	—	—	BR	9	R-BK	4H			
	—	A	BK	10	R-BL	4H			
Lamp 1	L	L	BL	1	BR	9			
	LG	LG	Y	2	R	10			
Lamp 2	L	L	OR	4	SL	3			
	LG	LG	Y	5	R	8			
Lamp 3	L	L	GN	6	SL-R	CR			
	LG	LG	Y	7	SL-GN	CT			
Lamp 4	L	L	BR	9	SL-Y	1			
	LG	LG	Y	10	SL-BK	LG			
Cutoff Ckt—Local	R	R	OR	1	SL-BL	2			
	B	B	BK	2	SL-W	3			
Of Local Com or Pvt Line Ringer and (Transfer) Ext Com or Pvt Line Ringer ●	—	—	OR	4	SL-BR	4			
	—	—	BK	5	—	—			
Of Local Line Ringer and (Transfer) Ext Sta or Ext Line Ringer ●	—	—	OR	6	—	—			
	—	—	BK	7	—	—			
Of Controlled 1A1 Key Tel Sys Sta	—	—	OR	9	—	—			
	—	—	BK	10	—	—			

■ See Note 6

Connections for Keys 6040C and 6041C

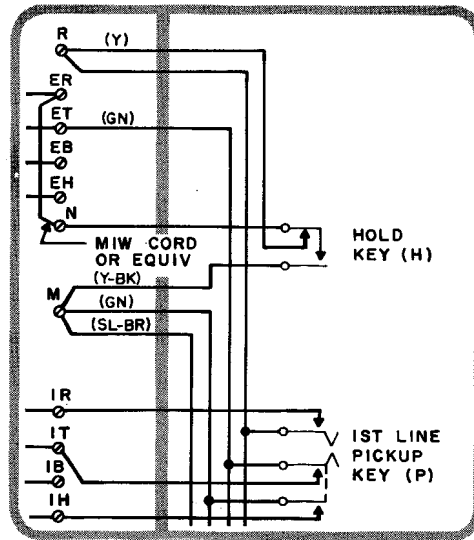


Fig. 4A - Wired for 1A

TABLE B
1A AND 1A1 CONVERSION

Key Tel Sys	Hold Key Leads		MIW Cord or Equiv	
	Y	Y-BK	—	—
1A	R	M	ER to N	
1A1	M	N	ER to R	EH to N■

■ See Note 6

TABLE C
PICKUP-SIGNAL KEY CONVERSION
(See Notes 7 and 8)

Convertible Key Options	Key Lead
	HPPPPC
HPPPS	SG

TABLE D
CUTOFF KEY CONNECTIONS

Cutoff	See Note 10						Cutoff Key Leads	
	Com or Pvt Line Ringer Ckt		Ext Sta, Ext Ringer, or Manual Cutoff Ckt		Local Ringer			
	R	B	R or RI	T, TI, or B	R	B	R-W	GN-W
Of Local Com or Pvt Line Ringer and (Transfer) Ext Com or Pvt Line Ringer ●	RR	RT	CR	CT	XR	XT	RR	RT
Of Local Line Ringer and (Transfer) Ext Sta or Ext Line Ringer ●			CR	CT	XR	XT	R⊗	T⊗
Of Controlled 1A1 Key Tel Sys Sta			CR	CT			CT	ON

● Either feature may be used separately
⊗ Terminal of line involved

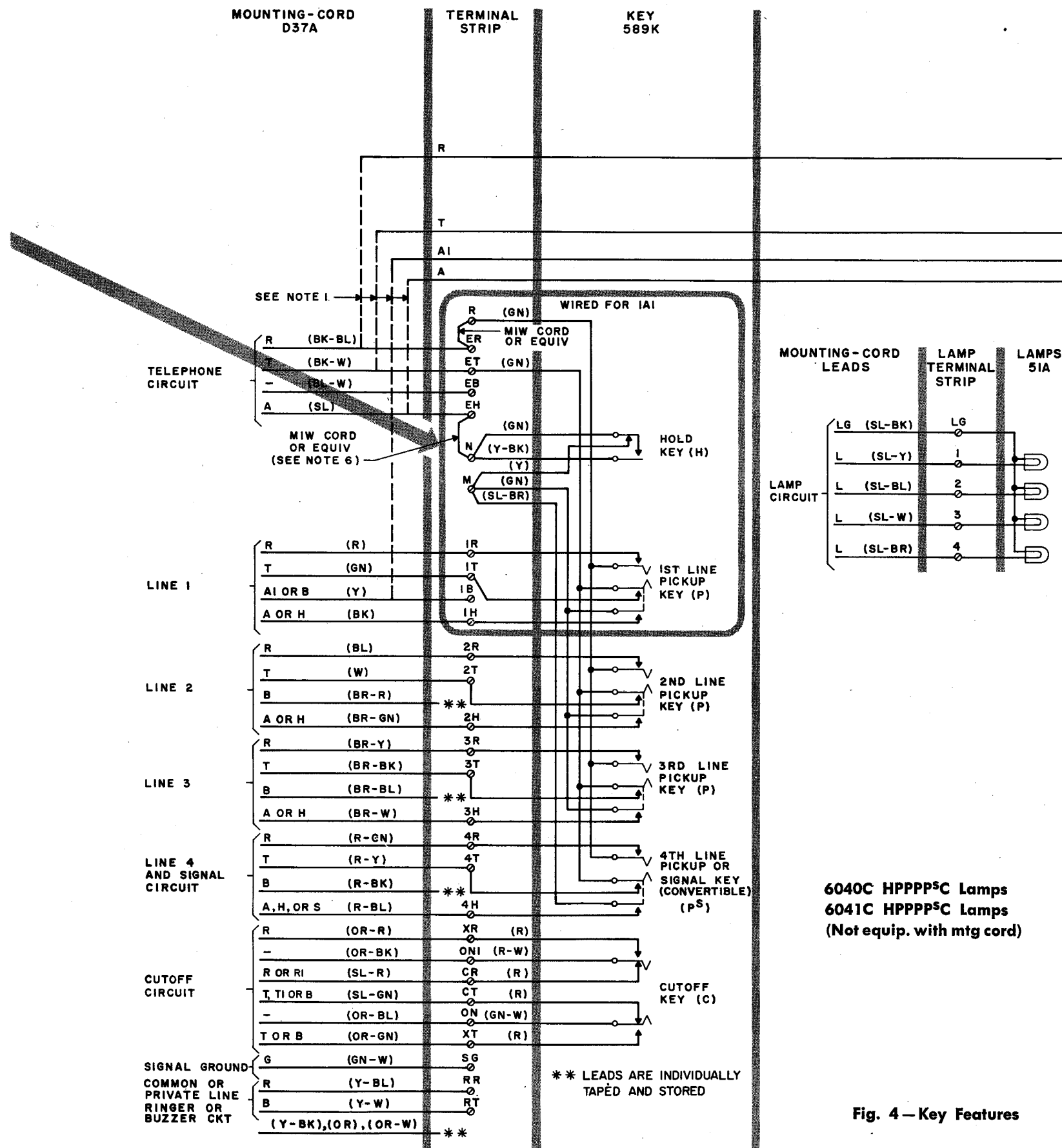


Fig. 4 - Key Features

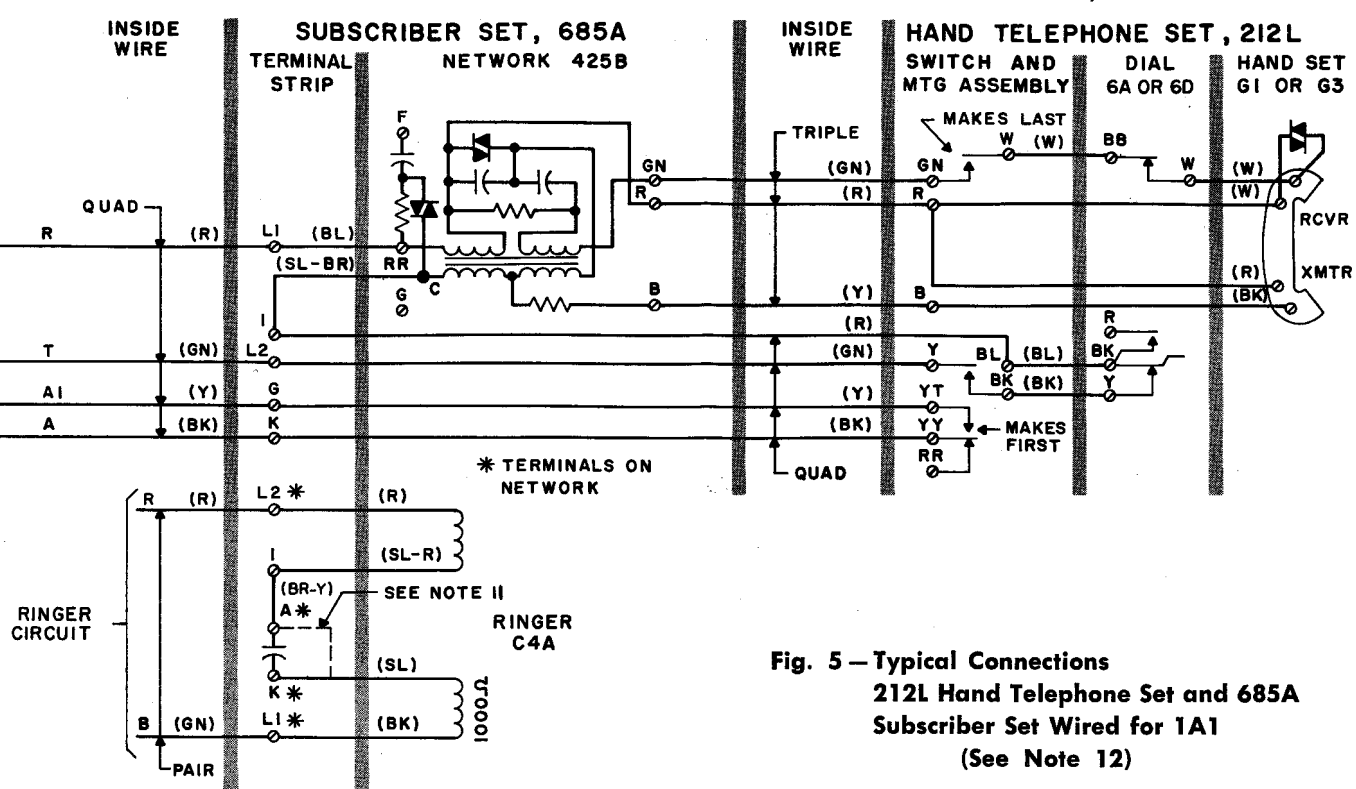


Fig. 5 - Typical Connections
212L Hand Telephone Set and 685A
Subscriber Set Wired for 1A1
(See Note 12)

- Note 1:** Dotted lines show typical telephone set connections to key.
- Note 2:** 6020 series key connections. Terminate key cable and inside wire from telephone set directly to terminals in key. Advance AI, R, and B leads from key cable to inside wire for telephone set, as required, preferably by twisting, soldering, and individually taping the connections. When keys are used with 1A1 key telephone systems, remove red strap connected between terminal H and HOLD key.
- Note 3:** Terminate key cable leads to LR and LT terminals only if cutoff feature is required as shown in Table D.
- Note 4:** 6040 series key connections. Terminate key cable, mounting cord, and inside wire from telephone set directly to connecting block. Individually tape and store spare mounting cord leads at connecting block.
- Note 5:** 6041 series key connections. Terminate key cable and inside wire from telephone set directly to terminals in key. Terminate all LG leads from key cable to LG terminal in key, preferably by twisting and soldering the leads before terminating.
- Note 6:** The strap between EH and N terminals is installed on 6040A and C keys only. When installing 6041A and C keys, connect the A lead from the telephone set directly to the N terminal.
- Note 7:** Refer to the C Section covering telephone sets, 540 and 560 types; identification and assembly of parts for mechanical conversion of keys.
- Note 8:** When using convertible keys for signaling, use S lead of keys involved for signal circuit and G lead for common signal ground.
- Note 9:** These pickup key options are used on private or intercommunicating lines with the signal key common to each line. The signal key will operate the signal circuit of each line when the associated pickup key is depressed. Use S lead on 2nd, 3rd, or 4th pickup key as required and G lead for common signal ground.
- Note 10:** Table D provides for connections to the 6041C key. Make corresponding connections at connecting block, as required, when installing 6040C key.
- Note 11:** Connect SL ringer lead to terminal A on all common, private, or intercommunicating lines unless otherwise specified.
- Note 12:** The 211L hand telephone set may be used with 1A installations. Make connections as shown in Fig. 5, omitting only the A and AI leads.