

KEY TELEPHONE SETS 540 AND 560 SERIES COMMON BATTERY — CONNECTIONS

1.00 GENERAL

1.01 Associate the color of the drawing with the color of the features for each key telephone set on page 3, 5, 7, or 9.

1.02 For notes, common circuit, and connection information use fold-out sheet on page 9 and match with page 3, 5, or 7.

1.03 Due to extensive changes marginal arrows have been omitted.

2.00 INDEX

Key Telephone Set	Page	Key Telephone Set	Page
540B	2 and 3	564H	6 and 7
544A	4 and 5	565A	4, 5, and 10
544B	6 and 7	565B	6 and 7
545B	6 and 7	565E	8 and 9
564B	2 and 3	565G	4, 5, and 10
564C	2 and 3	565H	6 and 7
564D	2 and 3	565L	8 and 9

3.00 TABLES

- A — Terminations at Connecting Block
- B — 1A and 1A1 Conversion
- C — Pickup-signal Key Conversion
- D — Line Exclusion
- E — Cutoff of Ringer or Buzzer in Set
- F — Cutoff of External Circuit
- G — Ringer or Buzzer Connections
- H — Set Ringer or Buzzer Cut Off by Exclusion Key

4.00 CONNECTIONS

- Install KS-15724, List 1 diode, Fig. 2, so it does not come in contact with network case or other terminals. (The diode's function is to prevent false operation of station busy lamp.)

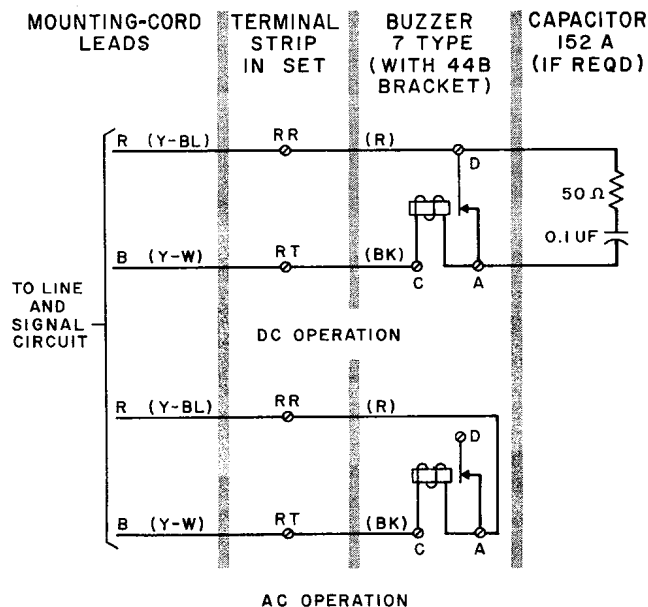
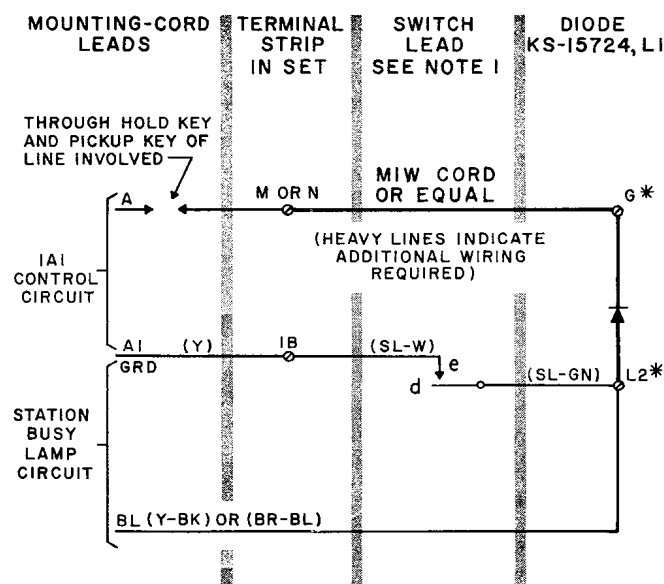


Fig. 1 — Buzzer Connections



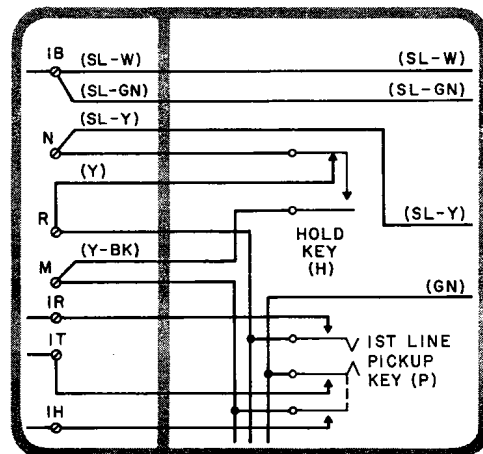
* TERMINALS ON NETWORK
(SEE TABLE B FOR CONNECTIONS)

Fig. 2 — Station Busy Lamp Circuit Connections with 1A1 Key Telephone System

TABLE A
TERMINATIONS AT CONNECTING BLOCK

Ckt	Lead Desig		Key Cable	Conn Block		Mounting-cord Leads			
	1A	1A1		Term.	No.	540B	564B	564C	564D
Line 1	R	R	BL	1	1 Block Nearest Cord Butt	R	R	R	R
	T	T	W	2		GN	GN	GN	GN
Line 2	B	A1	OR	4		Y	Y	Y	Y
	H	A	W	5		BK	BK	BK	BK
	R	R	GN	6		BL	BL	BL	BL
	T	T	W	7		W	W	W	W
Line 3	R	R	SL	3		BR-R	BR-R	BR-R	BR-R
	T	T	W	8		BR-GN	BR-GN	BR-GN	BR-GN
Line 4 and Sig	R	R	OR	4		BR-Y	BR-Y	BR-Y	BR-Y
	T	T	R	5		BR-BK	BR-BK	BR-BK	BR-BK
Line 5 and Sig	R	R	BR	9		BR-BL	BR-BL	BR-BL	BR-BL
	T	T	R	10		BR-W	BR-W	BR-W	BR-W
Sig Grd	G	G	BL	1	3			GN-W	GN-W
			BK	2					
Ringer or Buz	R	R	OR	4		Y-BL	Y-BL	Y-BL	Y-BL
	B	B	BK	5		Y-W	Y-W	Y-W	Y-W
			GN	6					
			BK	7					
			BR	9					
			BK	10					
			SL	3					
			BK	8					
Lamp 1	L	L	BL	1	4 Place Straps		SL-Y	SL-Y	SL-Y
	LG	LG	Y	20			SL-BK	SL-BK	SL-BK
Lamp 2	L	L	OR	4			SL-BL	SL-BL	SL-BL
	LG	LG	Y	50					
Lamp 3	L	L	GN	6			SL-W	SL-W	SL-W
	LG	LG	Y	70					
Lamp 4	L	L	BR	9			SL-BR	SL-BR	SL-BR
	LG	LG	Y	100					
Lamp 5	L	L	SL	3			BR		
	LG	LG	Y	80					

● Not used in set.

**Fig. 3A – Wired for 1A****TABLE B****1A AND 1A1 CONVERSION**

(All terminals are on terminal strip.)

Key Tel Sys	Switch Leads		Hold-key Leads	
	SL-GN	SL-Y	Y	Y-BK
1A	1B	N	R	M
1A1	N	R	M	N

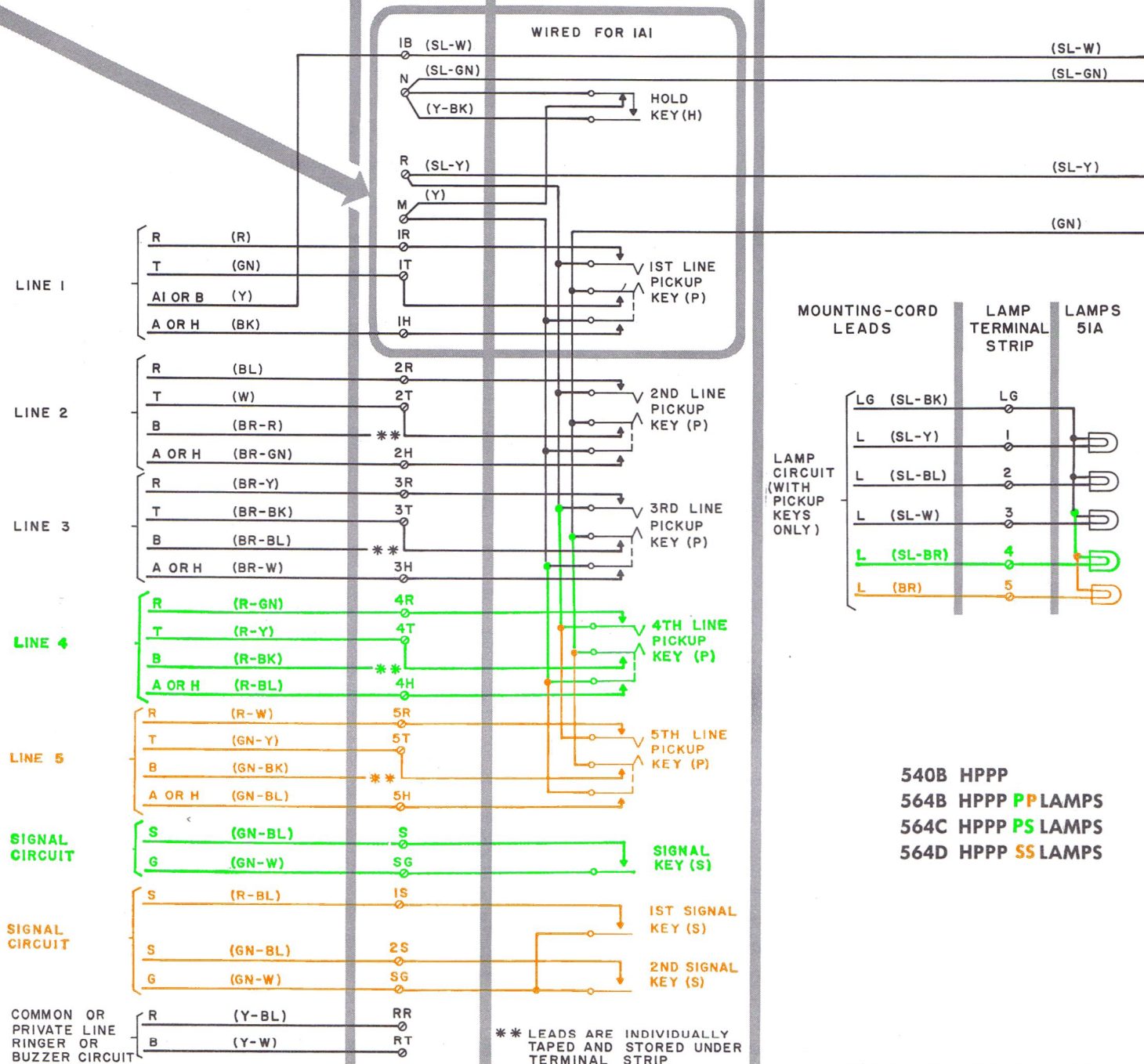
Connections for Key Telephone Sets 540B, and 564B, C, D

MOUNTING CORD
540B-DI4D, 564B-D28A
564C-D25A, 564D-D25A

TERMINAL
STRIP

KEY
540B-588A, 564B-589A
564C-589D, 564D-589E

FOR SETS
EQUIPPED WITH
SPEAKERPHONE
FEATURE



540B HPPP
564B HPPP **P** LAMPS
564C HPPP **S** LAMPS
564D HPPP **S** LAMPS

Fig. 3 — Key Telephone Sets

TABLE A
TERMINATIONS AT CONNECTING BLOCK FOR 544A
 (See page 10, Table A, for 565A, G connections.)

Ckt	Lead Desig		Key Cable D Type	Conn Block		Mtg-cord Leads
	1A	1A1		Term.	No.	
Line 1	R T	R T	BL W	1 2	1 Block Nearest Cord Butt	R GN
	—	A1 A	OR W	4 5		Y BK
Line 2	R T	R T	GN W	6 7		BL W
	—	— A	BR W	9 10		BR-R ● BR-GN
Line 3	R T	R T	SL W	3 8		BR-Y BR-BK
	—	— A	BL R	1 2		BR-BL ● BR-W
Line 4 and Sig	R T	R T	OR R	4 5		R-GN R-Y
	—	— A-S	GN R	6 7		R-BK ● R-BL
			BR R	9 10		
			SL R	3 8		GN-BL ●
Sig Grd	G	G	BL BK	1 2	3	GN-W
Ringer or Buz	R B	R B	OR BK	4 5		Y-BL Y-W
			GN BK	6 7		
			BR BK	9 10		
			SL BK	3 8		
Lamp 1	L LG	L LG	BL Y	1 2	4 Place Straps	SL-Y SL-BK
Lamp 2	L LG	L LG	OR Y	4 5		SL-BL
Lamp 3	L LG	L LG	GN Y	6 7		SL-W
Lamp 4	L LG	L LG	BR Y	9 10		SL-BR
			SL Y	3 8		

● Not used in set.

TABLE B
1A AND 1A1 CONVERSION

Sta Bsy Lp Ckt	Key Tel Sys	Switch Leads		See Fig. 2	
		SL-W	SL-GN	M1W Cord	Diode KS-15724, L1
No	1A	1B	1B		
	1A1	1B	M		
Yes	1A	SG	L2		
	1A1	1B	L2	G to M	G to L2

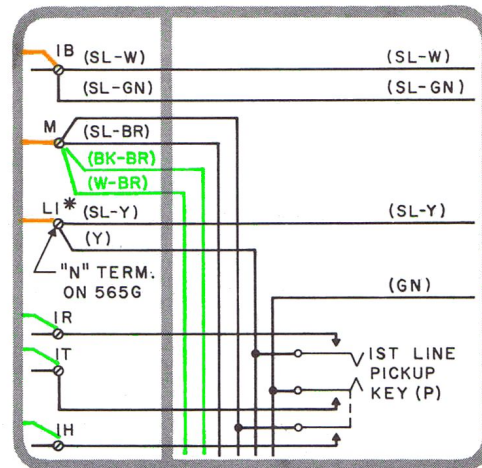


Fig. 4A – Wired for 1A

TABLE C
PICKUP-SIGNAL KEY CONVERSION
 (See Notes 6 and 7)

Key Tel Set	Convertible-key Options	Key Leads		
		SL-BR	BK-BR	W-BR
544A	PPPP	M		
	PPPS	SG		
565A and 565G	PPPPPP	M	M	M
	PPPPPS	M	M	SG
	PPPPSS	M	SG	SG
	PPSSSS	SG	SG	SG

TABLE D
LINE EXCLUSION
 (See Note 10)

Exclusion	Key Tel Sys	Exclusion-key Leads			
		R-Y	GN-Y	BR-R	BK-W
On Any Line	1A	R✕	T✕	EB	EH
	1A1	R✕	T✕	EB	H✕

✕ Terminal of line involved.

Connections for Key Telephone Sets 544A, and 565A, G

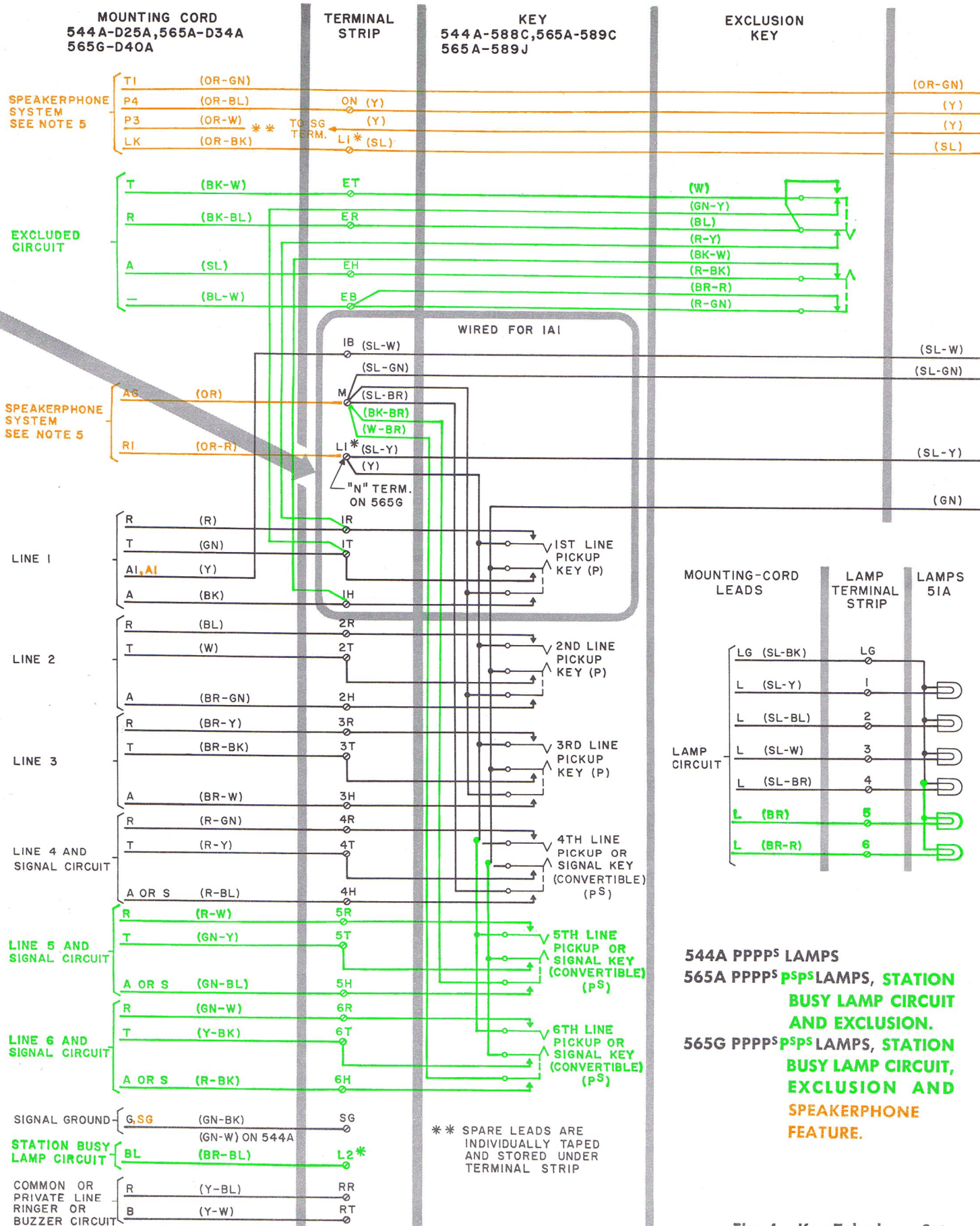


Fig. 4 — Key Telephone Sets

TABLE A
TERMINATIONS AT CONNECTING BLOCK

Ckt	Lead Desig		Key Cable	Conn Block	No.	Mounting-cord Leads			
	1A	1A1				544B	545B	564H	565B, 565H◆
Line 1	R T	R T	BL W	1 2	Block Nearest Cord Butt	R GN	R GN	R GN	R GN
	B H	A1 A	OR W	4 5		Y BK	Y BK	Y BK	Y BK
Line 2 and Sig	R T	R T	GN W	6 7		BL W	BL W	BL W	BL W
	B H-S	— A-S	BR W	9 10		BR-R BR-GN	BR-R BR-GN	BR-R BR-GN	BR-R BR-GN
Line 3 and Sig	R T	R T	SL W	3 8		BR-Y BR-BK	BR-Y BR-BK	BR-Y BR-BK	BR-Y BR-BK
	B H-S	— A-S	BL R	1 2		BR-BL BR-W	BR-BL BR-W	BR-BL BR-W	BR-BL BR-W
Line 4 and Sig	R T	R T	OR R	4 5				R-GN R-Y	R-GN R-Y
	B H-S	— A-S	GN R	6 7				R-BK R-BL	R-BK R-BL
Line 5 and Sig	R T	R T	BR R	9 10				R-W GN-Y	R-W GN-Y
	B H-S	— A-S	SL R	3 8				GN-BK GN-BL	GN-BK GN-BL
Sig Grd	G	G	BL	1	3	GN-W	GN-W	GN-W	GN-W
Sta Bsy Lp	BL	BL	BK	2			Y-BK	Y-BK	Y-BK
Ringer or Buz	R B	R B	OR BK	4 5		Y-BL Y-W	Y-BL Y-W	Y-BL Y-W	Y-BL Y-W
	R T	R T	GN BK	6 7			BK-BL BK-W		BK-BL BK-W
Ex-cluded Ckt	B H	■ A	BR BK	9 10			BL-W SL		BL-W SL
			SL BK	3 8					
Lamp 1	L LG	L LG	BL Y	1 2	4	SL-Y SL-BK	SL-Y SL-BK	SL-Y SL-BK	SL-Y SL-BK
Lamp 2	L LG	L LG	OR Y	4 5		SL-BL	SL-BL	SL-BL	SL-BL
Lamp 3	L LG	L LG	GN Y	6 7		SL-W	SL-W	SL-W	SL-W
Lamp 4	L LG	L LG	BR Y	9 10			SL-BR	SL-BR	
Lamp 5	L LG	L LG	SL Y	3 8			BR	BR	

◆ See Note 11.

■ See Note 10.

TABLE B
1A AND 1A1 CONVERSION
(R terminal on terminal strip)

Sta Bsy Lp Ckt	Key Tel Sys	Switch Leads			Hold-key Leads		See Fig. 2	
		SL-W	SL-GN	SL-Y	Y	Y-BK	M1W Cord	Diode KS-15724, L1
No	1A	1B	1B	N	R	M		
	1A1	1B	N	R	M	N		
Yes	1A	SG	L2	N	R	M		
	1A1	1B	L2	R	M	N	G to N	G to L2

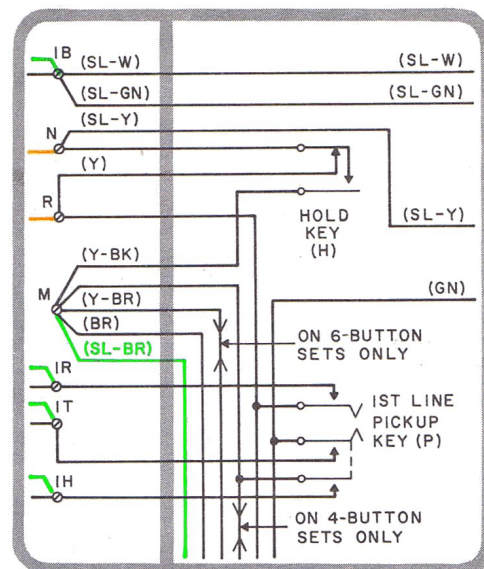


Fig. 5A — Wired for 1A

TABLE C
PICKUP-SIGNAL KEY CONVERSION
(See Notes 6 and 7)

Key Tel Set	Convertible-key Options	Key Leads			
		BR	Y-BR	SL-BR	BK-BR
544B or 545B	HPPP	M			
	HPPS	SG			
564H, 565B, or 565H	HPPPPP	M	M	M	X
	HPPPPS	M	M	M	SG
	HPPSSS	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 8.

TABLE D
LINE EXCLUSION
(See Note 10)

Exclusion	Key Tel Sys	Exclusion-key Leads			
		R-Y	GN-Y	BR-R	BK-W
On Any Line	1A	R✕	T✕	1B▲	H✕
	1A1	R✕	T✕	EB	H✕

✕ Terminal of line involved.

▲ See Note 9.

Connections for Key Telephone Sets 544B, 545B, 564H, 565B, H

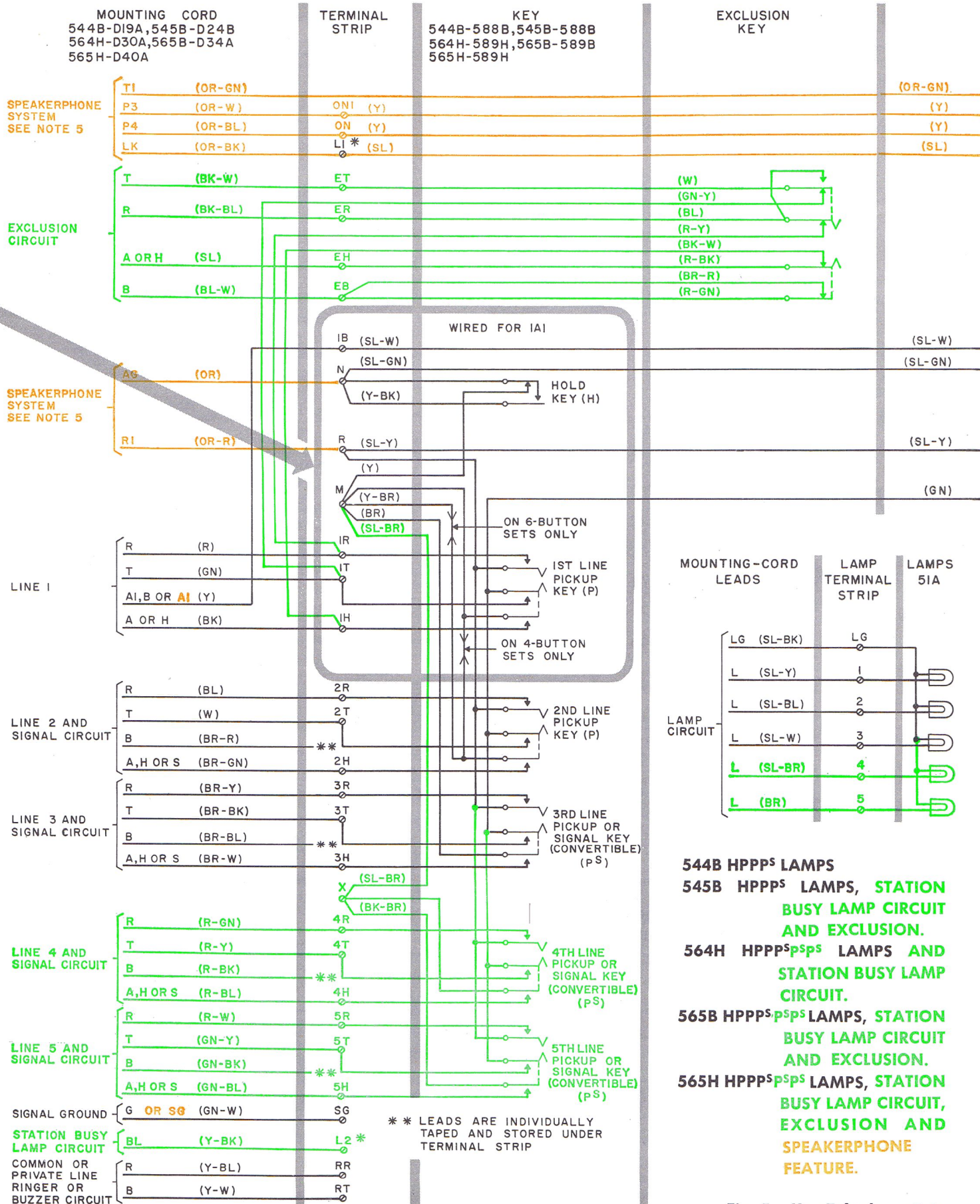


Fig. 5 — Key Telephone Sets

TABLE A
TERMINATIONS AT CONNECTING BLOCK

Ckt	Lead Desig		Key Cable	Conn Block		Mounting-cord Leads
	1A	1A1	D Type	Term.	No.	565E, 565L◆
Line 1	R	R	BL	1	Block Nearest Cord Butt	R
	T	T	W	2		GN
	B	A1	OR	4		Y
Line 2	H	A	W	5		BK
	R	R	GN	6		BL
	T	T	W	7		W
Line 3	B	—	BR	9		BR-R
	H	A	W	10		BR-GN
	R	R	SL	3		BR-Y
Line 4 and Sig	T	T	W	8		BR-BK
	B	—	BL	1	2	BR-BL
	H	A	R	2		BR-W
Line 4 and Sig	R	R	OR	4		R-GN
	T	T	R	5		R-Y
	B	—	GN	6		R-BK
Sig Grd	H-S	A-S	R	7		R-BL
			BR	9		
			R	10		
Sta Bsy Lp			SL	3		
			R	8		
Ringer or Buz	G	G	BL	1	3	GN-W
	BL	BL	BK	2		Y-BK
	R	R	OR	4		Y-BL
Ex-cluded Ckt	B	B	BK	5		Y-W
	R	R	GN	6		BK-BL
	T	T	BK	7		BK-W
Cutoff Ckt	B	■	BR	9		BL-W
	H	A	BK	10		SL
	R	R	SL	3		SL-R
Lamp 1	T	T	BK	8		SL-GN
	L	L	BL	1	4	SL-Y
	LG	LG	Y	2		SL-BK
Lamp 2	L	L	OR	4		SL-BL
	LG	LG	Y	5		
	L	L	GN	6		SL-W
Lamp 3	LG	LG	Y	7		
	L	L	BR	9		SL-BR
	LG	LG	Y	10		
Lamp 4			SL	3		
			Y	8		

◆ See Note 11.

■ See Note 10.

TABLE B
1A AND 1A1 CONVERSION
(R terminal on terminal strip)

Sta Bsy Lp Ckt	Key Tel Sys	Switch Leads			Hold-key Leads		See Fig. 2	
		SL-W	SL-GN	SL-Y	Y	Y-BK	M1W Cord	Diode KS-15724, L1
No	1A	1B	1B	N	R	M		
	1A1	1B	N	R	M	N		
Yes	1A	SG	L2	N	R	M		
	1A1	1B	L2	R	M	N	G to N	G to L2

TABLE C
PICKUP-SIGNAL KEY CONVERSION
(See Notes 6 and 7)

Convertible-key Options	Key Lead SL-BR
HPPPPC	M
HPPPSC	SG

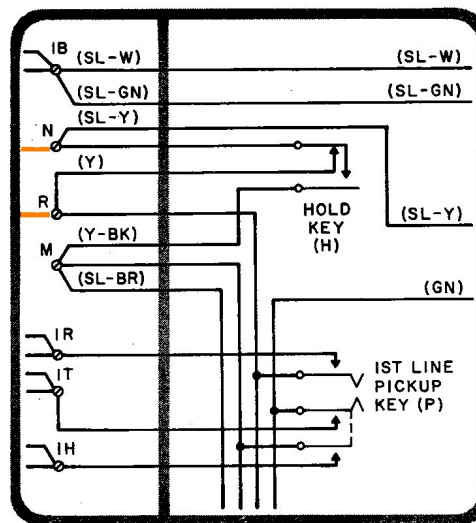


Fig. 6A – Wired for 1A

TABLE D
LINE EXCLUSION
(See Note 10)

Exclusion	Key Tel Sys	Exclusion-key Leads			
		R-Y	GN-Y	BR-R	BK-W
On Any Line	1A	R✱	T✱	1B▲	H✱
	1A1	R✱	T✱	EB	H✱

✱ Terminal of line involved.

▲ See Note 9.

TABLE E
CUTOFF OF RINGER OR BUZZER IN SET
(R and RR terminals on terminal strip.)

Cutoff	Ringer Leads				Buz Leads		Cutoff-key Leads	
	R	BK	SL	SL-R	R	BK	R-W	GN-W
Of Bridged Ringer On Any Line	CR	CT	K	A			R✱	T✱
Of Common or Private Line Ringer or Buzzer (see Note 3)	With Cap.	CR	CT	K	A		RR	RT
	With-out Cap.	CR	CT	A	A	CR	CT	RR
Of Bridged Line Ringer When Used With Feature 1 On Table F	XR	XT	K	A			R✱	T✱

✱ Terminal of line involved.

TABLE F
CUTOFF OF EXTERNAL CIRCUITS

Cutoff	Cutoff-key Leads	
	R-W	GN-W
Of Ring and Tip of Any Line	R✱	T✱
Of Head Receiver Used as Listening-in Set	R✱	GN✱
Of Controlled 1A1 Key Tel Sys Sta	CT	XT

✱ Terminal of line involved.

* Terminal on network.

Connections for Key Telephone Sets 565E, L

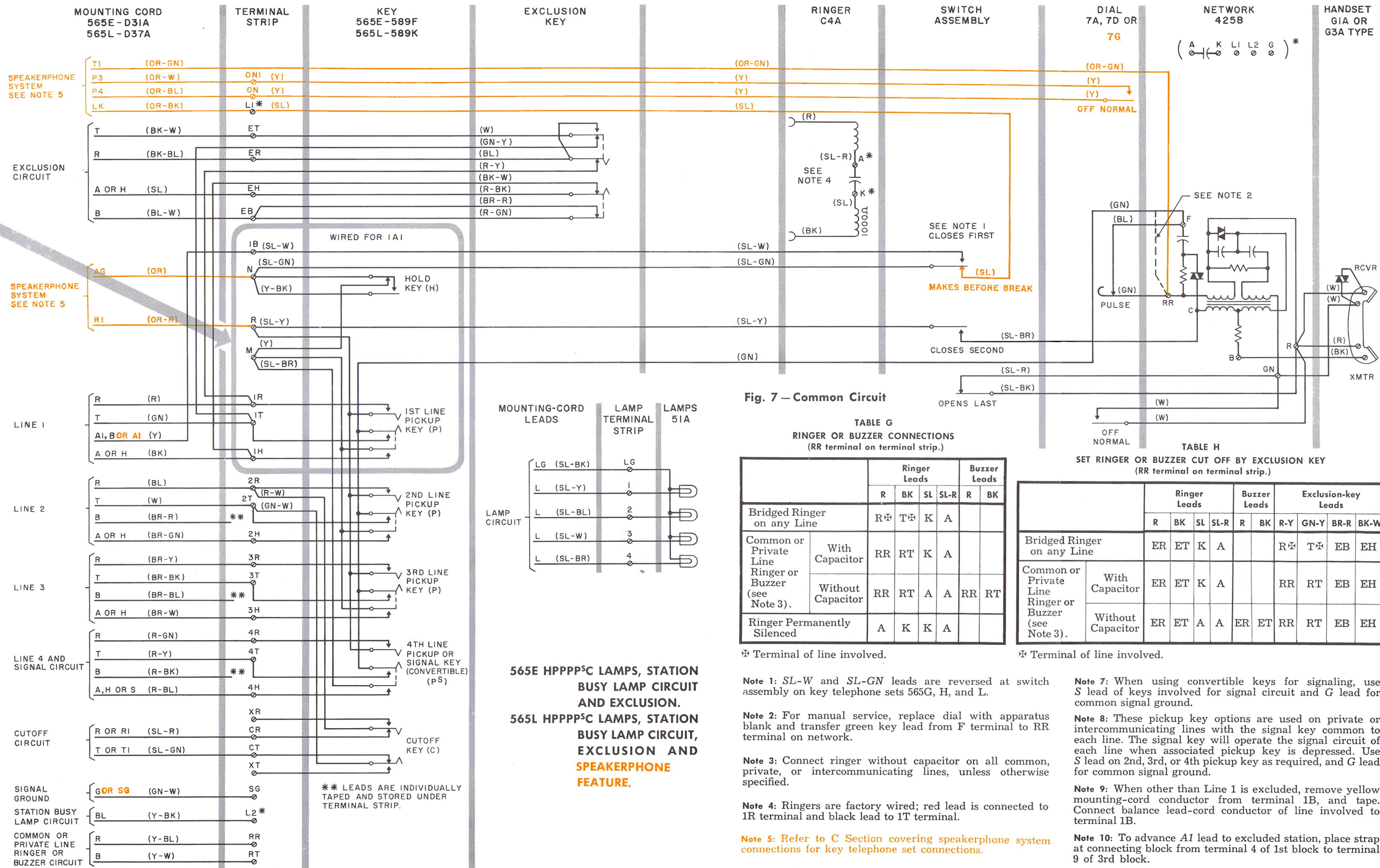


Fig. 6 - Key Telephone Sets

Fig. 7 - Common Circuit

TABLE A
TERMINATIONS AT CONNECTING BLOCK FOR 565A, G

Ckt	Lead Desig		Key Cable	Conn Block		Mounting-cord Leads
	1A	1A1	D Type	Term.	No.	565A, 565G◆
Line 1	R	R	BL	1	Block Nearest Cord Butt	R
	T	T	W	2		GN
	—	A1	OR	4		Y
Line 2	—	A	W	5		BK
	R	R	GN	6		BL
Lamp 6	T	T	W	7		W
Line 2	L	L	BR	9		BR-R
	—	A	W	10		BR-GN
Line 3	R	R	SL	3		BR-Y
	T	T	W	8		BR-BK
Sta Bsy Lp	BL	BL	BL	1	2	BR-BL
Line 3	—	A	R	2		BR-W
Line 4	R	R	OR	4		R-GN
	T	T	R	5		R-Y
Line 6 & Sig	S	A-S	GN	6		R-BK
Line 4 & Sig	S	A-S	R	7		R-BL
Line 5	R	R	BR	9		R-W
	T	T	R	10		GN-Y
Sig Grd	G	G	SL	3		GN-BK
Line 5 & Sig	S	A-S	R	8		GN-BL
Line 6	R	R	BL	1	3	GN-W
	T	T	BK	2		Y-BK
Ringer or Buzzer	R	R	OR	4		Y-BL
	B	B	BK	5		Y-W
Excluded Ckt	R	R	GN	6		BK-BL
	T	T	BK	7		BK-W
	—	■	BR	9		BL-W ●
—	—	A	BK	10		SL
			SL	3		
Lamp 6	LG	LG	BK	8 ○		
Lamp 1	L	L	BL	1	4 Place Straps	SL-Y
	LG	LG	Y	2 ○		SL-BK
Lamp 2	L	L	OR	4		SL-BL
	LG	LG	Y	5 ○		
Lamp 3	L	L	GN	6		SL-W
	LG	LG	Y	7 ○		
Lamp 4	L	L	BR	9		SL-BR
	LG	LG	Y	10 ○		
Lamp 5	L	L	SL	3		BR
	LG	LG	Y	8 ○		

◆ See Note 11.

■ See Note 10.

● Not used in set.