

TELEPHONE SETS
 540 AND 560 SERIES
 COMMON BATTERY—CONNECTIONS

1.00 GENERAL

1.01 Information contained in this section was formerly covered in Section C71.347, Issue 3 entitled Key Telephone Sets, 540 and 560 Series, Common Battery—Connections. Changes are listed in 1.02.

1.02 This section is issued:

- To show the black and red ringer leads permanently wired to the RR and RT terminals.
- To include information identifying telephone sets contained within this section with the ringer leads on the RR and RT terminals.

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

1.04 For notes, common circuit, and connection information use foldout on page 9 and match with page 3, 5, or 7.

1.05 Telephone sets wired with the black and red ringer leads on the RR and RT terminals will have a (+) plus sign after the code number on base of set.

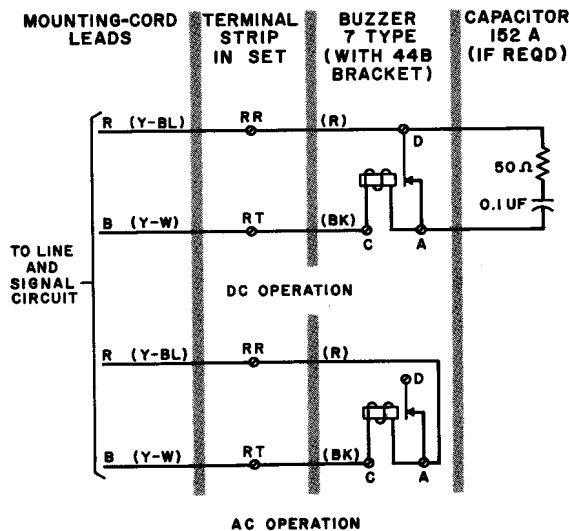


Fig. 1 — Buzzer Connections

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 Circuits
- G — Ringer or Buzzer Connections
- H — Set Ringer or Buzzer Cut Off by Exclusion Key

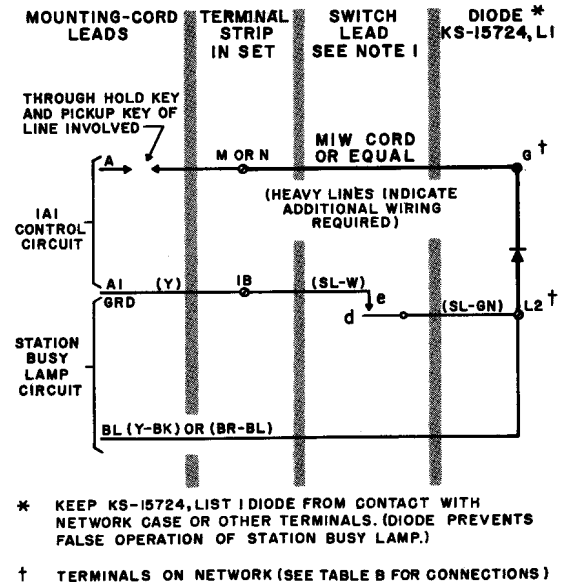


Fig. 2 — Station Busy Lamp Circuit Connections with 1A1 Key Telephone System

TABLE A
TERMINATIONS AT CONNECTING BLOCK

Ckt	Lead Desig		Key Cable	Conn Block		Mounting-Cord Leads			
	1A	1A1	D Type	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
Line 3	R	R	GN	6		BL	BL	BL	BL
	T	T	W	7		W	W	W	W
Line 4 and Sig	B	—	BR	9		BR-R	BR-R	BR-R	BR-R
	H	A	W	10		BR-GN	BR-GN	BR-GN	BR-GN
Line 5 and Sig	R	R	SL	3		BR-Y	BR-Y	BR-Y	BR-Y
	T	T	W	8		BR-BK	BR-BK	BR-BK	BR-BK
Sig Grd	B	—	BL	1	BR-BL	BR-BL	BR-BL	BR-BL	
	H	A	R	2	BR-W	BR-W	BR-W	BR-W	
Ringer or Buz	R	R	OR	4		R-GN	R-GN	R-GN ●	
	B	B	BK	5		R-Y	R-Y	R-Y ●	
Lamp 1	B	—	GN	6		R-BK	R-BK	R-BK ●	
	H-S	A-S	R	7		R-BL	R-BL	R-BL ●	
Lamp 2	R	R	BR	9		R-W			
	T	T	R	10		GN-Y			
Lamp 3	B	—	SL	3		GN-BK			
	H-S	A-S	R	8		GN-BL	GN-BL	GN-BL	
Lamp 4	G	G	BL	1	3			GN-W	
	BK	BK		2				GN-W	
Lamp 5	R	R	OR	4		Y-BL	Y-BL	Y-BL	
	B	B	BK	5		Y-W	Y-W	Y-W	
Lamp 6			GN	6					
			BK	7					
Lamp 7			BR	9					
			BK	10					
Lamp 8			SL	3					
			BK	8					
Lamp 9	L	L	BL	1	4 Place Straps		SL-Y	SL-Y	SL-Y
	LG	LG	Y	2			SL-BK	SL-BK	SL-BK
Lamp 10	L	L	OR	4			SL-BL	SL-BL	SL-BL
	LG	LG	Y	5					
Lamp 11	L	L	GN	6			SL-W	SL-W	SL-W
	LG	LG	Y	7					
Lamp 12	L	L	BR	9		SL-BR	SL-BR	SL-BR ●	
	LG	LG	Y	10					
Lamp 13	L	L	SL	3		BR			
	LG	LG	Y	8					

● Not used in set.

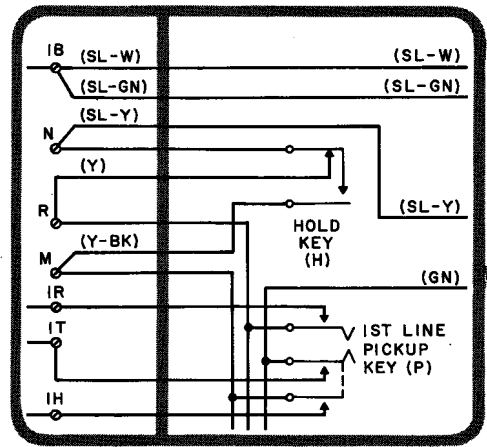


Fig. 3A - Wired for 1A

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

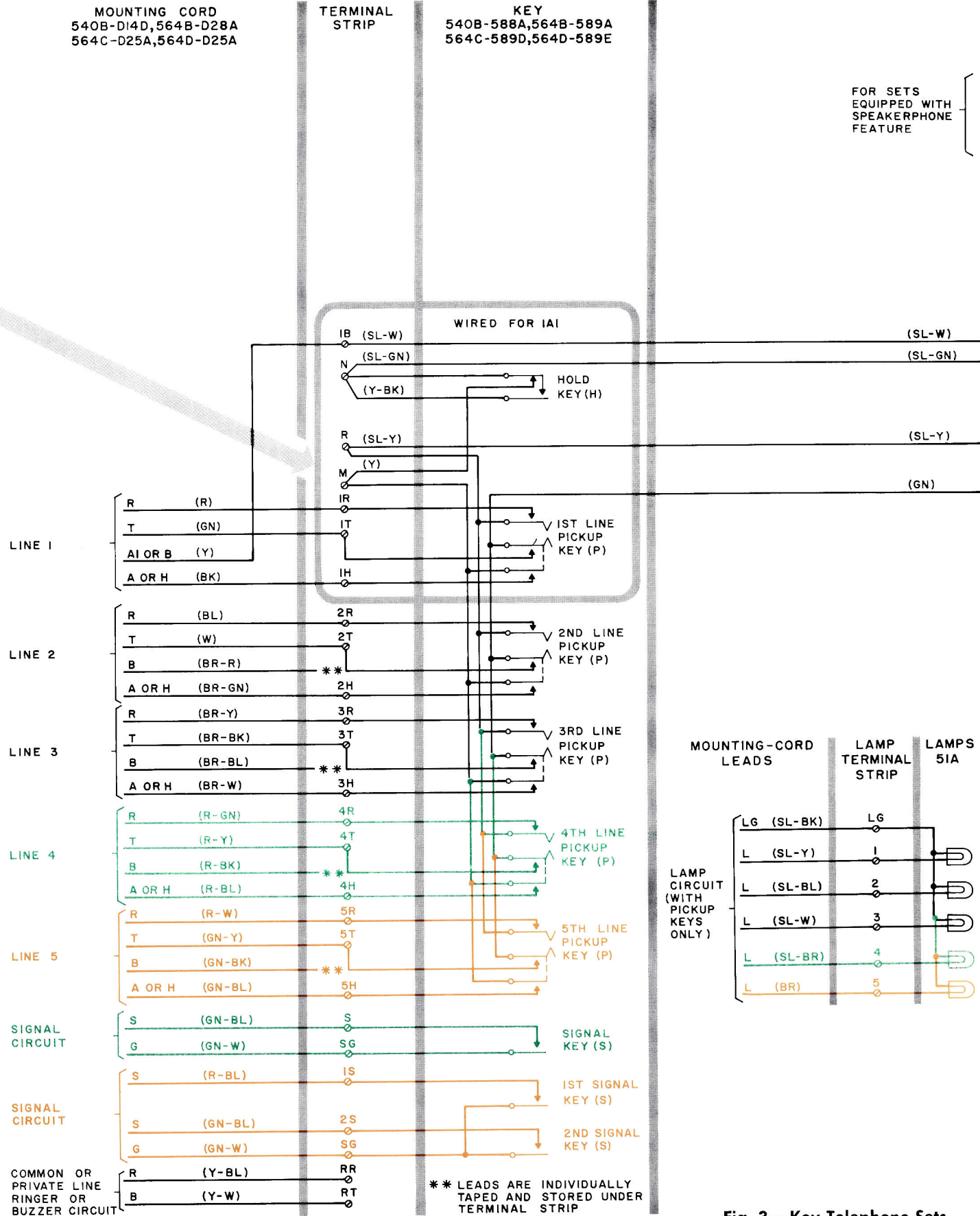


Fig. 3 — Key Telephone Sets

SECTION C71.347.00

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

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

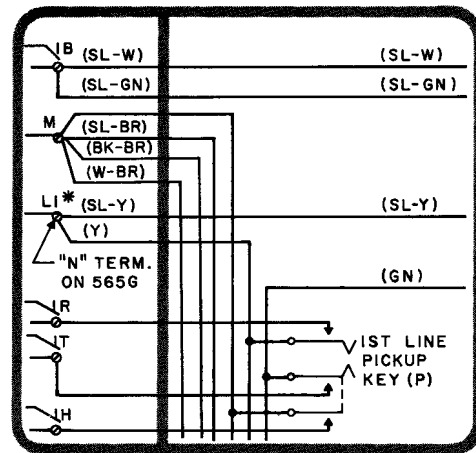


Fig. 4A - Wired for 1A

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 X	T X	EB	EH
	1A1	R X	T X	EB	H X

~~X~~ Terminal of line involved.

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

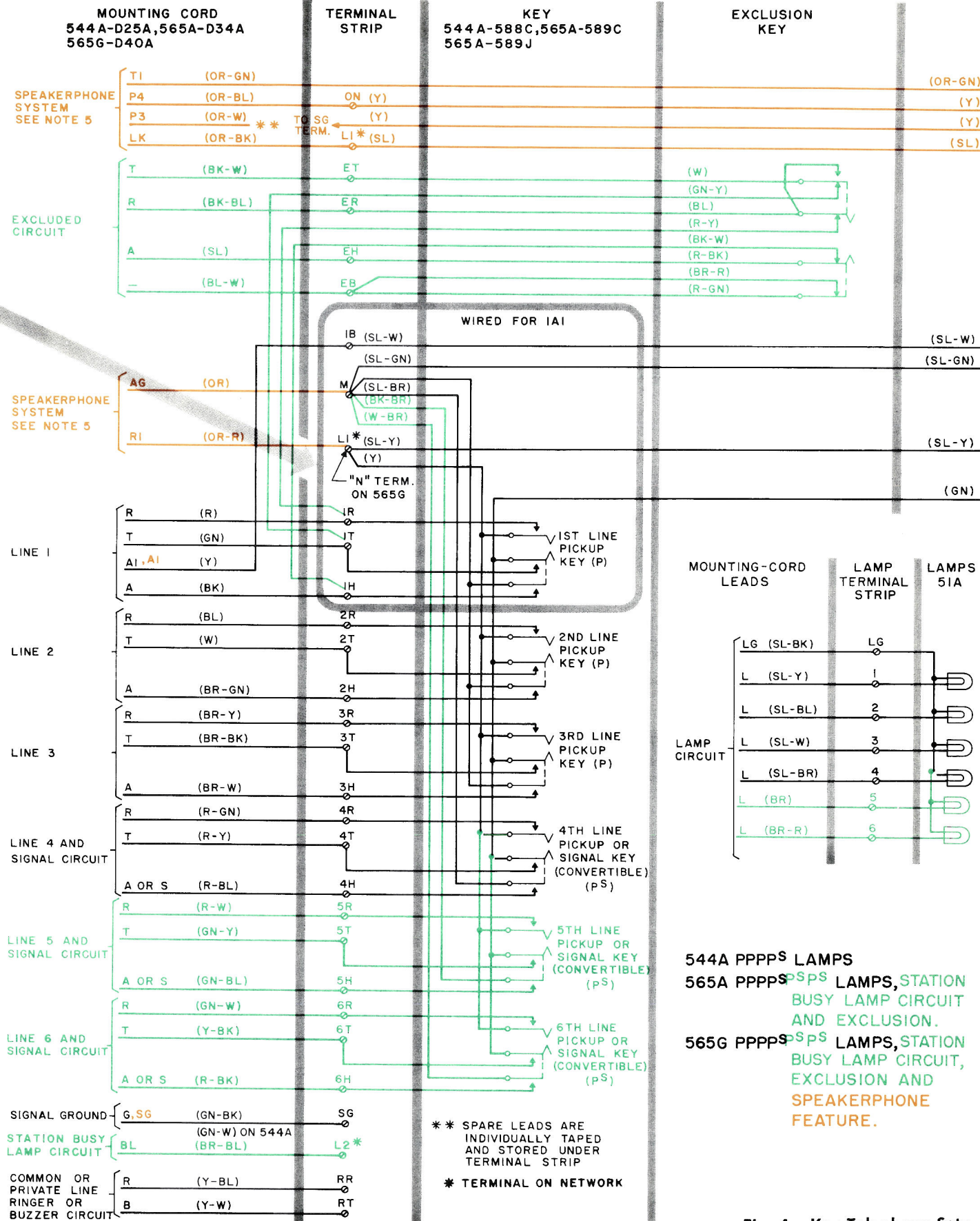


Fig. 4 - Key Telephone Sets

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TABLE A
TERMINATIONS AT CONNECTING BLOCK

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

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

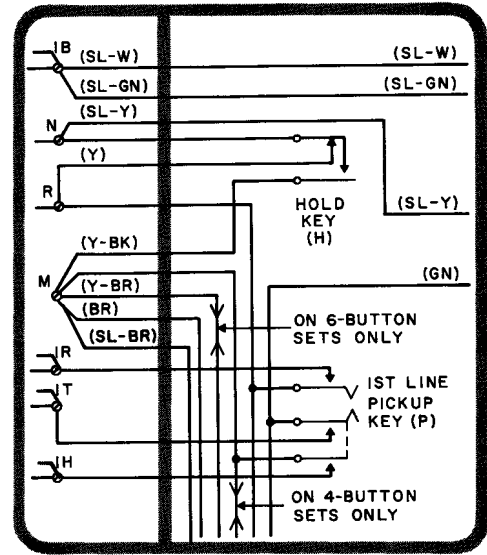


Fig. 5A - Wired for 1A

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.

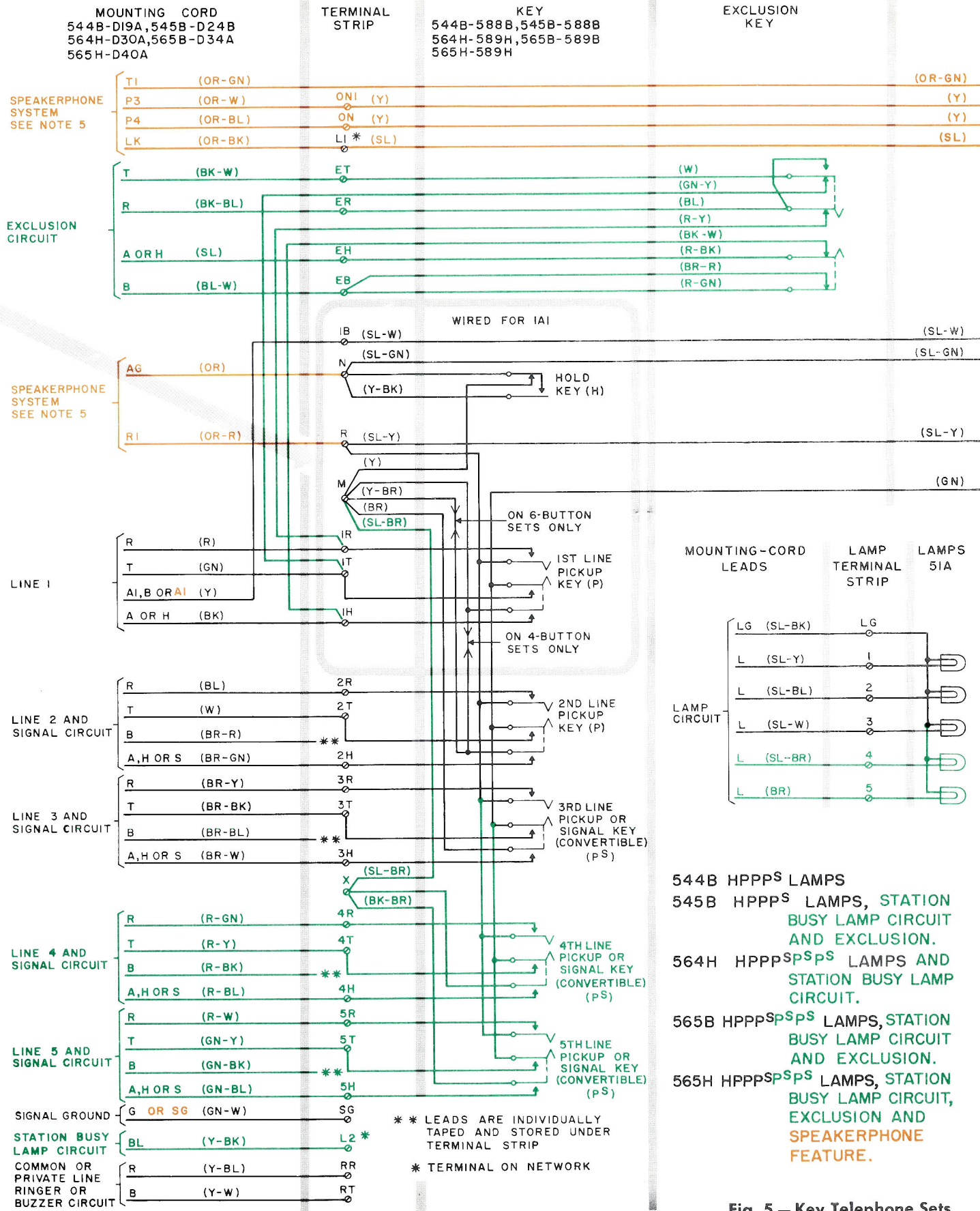


Fig. 5 — Key Telephone Sets

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TABLE A
TERMINATIONS AT CONNECTING BLOCK

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

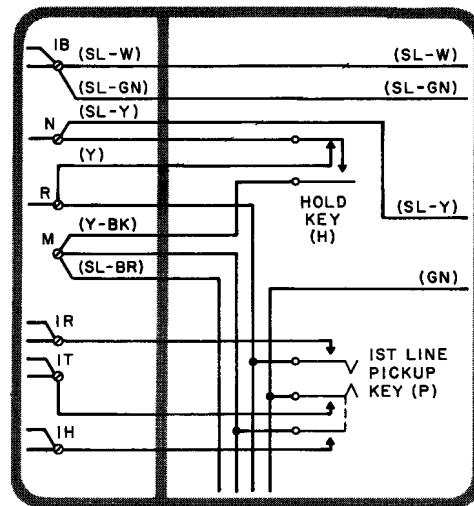


Fig. 6A - Wired for 1A

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 X	T X	1B X	H X
	1A1	R X	T X	EB	H X

✕ 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 X	T X
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 X	T X

✕ 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 X	T X
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

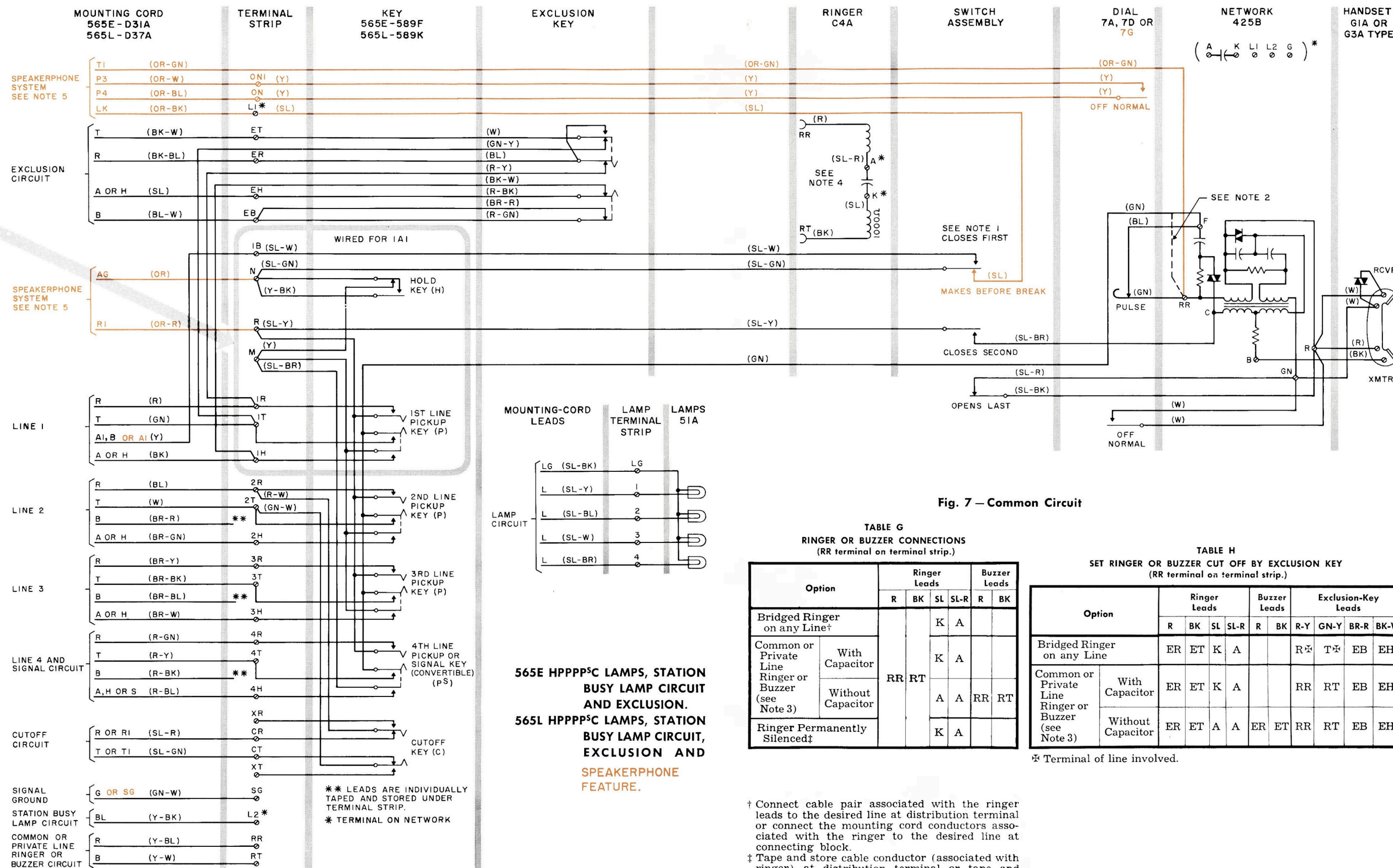


Fig. 6 - Key Telephone Sets

Fig. 7 - Common Circuit

TABLE G
RINGER OR BUZZER CONNECTIONS
(RR terminal on terminal strip.)

Option	Ringer Leads				Buzzer Leads	
	R	BK	SL	SL-R	R	BK
Bridged Ringer on any Line†				K	A	
Common or Private Line Ringer or Buzzer (see Note 3)	RR	RT		K	A	
				A	A	RR
Ringer Permanently Silenced‡				K	A	

TABLE H
SET RINGER OR BUZZER CUT OFF BY EXCLUSION KEY
(RR terminal on terminal strip.)

Option	Ringer Leads				Buzzer Leads		Exclusion-Key Leads			
	R	BK	SL	SL-R	R	BK	R-Y	GN-Y	BR-R	BK-W
Bridged Ringer on any Line	ER	ET	K	A			R-Y	T*	EB	EH
Common or Private Line Ringer or Buzzer (see Note 3)	ER	ET	K	A	ER	ET	RR	RT	EB	EH

* Terminal of line involved.

† Connect cable pair associated with the ringer leads to the desired line at distribution terminal or connect the mounting cord conductors associated with the ringer to the desired line at connecting block.

‡ Tape and store cable conductor (associated with ringer) at distribution terminal or tape and store mounting cord conductors (associated with the ringer) at connecting block when ringer is not used.

Note 1: SL-W and SL-GN leads are reversed at switch assembly on key telephone sets 565G, H, and L.

Note 2: For manual service, replace dial with apparatus blank and transfer green key lead from F terminal to RR terminal on network.

Note 3: Connect ringer without capacitor on all common, private, or intercommunicating lines, unless otherwise specified.

Note 4: All ringers are factory wired; red lead is connected to RR terminal and black lead to RT terminal.

Note 5: Refer to C Section covering speakerphone system connections for key telephone set connections.

Note 6: Refer to C Section covering telephone sets 540, 560 types, identification and assembly of parts for mechanical conversion of keys.

Note 7: When using convertible keys for signaling, use S lead of keys involved for signal circuit and G lead for common signal ground.

Note 8: 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 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 9: When other than Line 1 is excluded, remove yellow mounting-cord conductor from terminal 1B, and tape. Connect balance lead-cord conductor of line involved to terminal 1B.

Note 10: To advance A1 lead to excluded station, place strap at connecting block from terminal 4 of 1st block to terminal 9 of 3rd block.

Note 11: Individually tape and store spare mounting-cord leads at connecting block when speakerphone feature is not required.

Note 12: 540 and 560 series telephone sets are equipped with G-type hand sets. On sets equipped with 425B network, the handset may be replaced by a handset containing an amplifier such as the G6AR hand set for customers with impaired hearing or the G7AR for customers with impaired speech.

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	1	R				
	T	T	W	2		GN				
Line 2	—	A1	OR	4		Block Nearest Cord Butt	Y			
	—	A	W	5			BK			
Line 2	R	R	GN	6			2	BL		
	T	T	W	7				W		
Lamp 6	L	L	BR	9				3	BR-R	
Line 2	—	A	W	10					BR-GN	
Line 3	R	R	SL	3					4	BR-Y
	T	T	W	8						BR-BK
Sta Bsy Lp	BL	BL	BL	1	Place Straps					BR-BL
Line 3	—	A	R	2						BR-W
Line 4	R	R	OR	4		4				R-GN
	T	T	R	5						R-Y
Line 6 & Sig	S	A-S	GN	6			5			R-BK
Line 4 & Sig	S	A-S	R	7						R-BL
Line 5	R	R	BR	9				6		R-W
	T	T	R	10						GN-Y
Sig Grd	G	G	SL	3					7	GN-BK
Line 5 & Sig	S	A-S	R	8						GN-BL
Line 6	R	R	BL	1	8					GN-W
	T	T	BK	2						Y-BK
Ringer or Buzzer	R	R	OR	4		9				Y-BL
	B	B	BK	5						Y-W
Excluded Ckt	R	R	GN	6			10			BK-BL
	T	T	BK	7						BK-W
	—	■	BR	9				BL-W ●		
	—	A	BK	10				SL		
Lamp 6	—	—	SL	3				11		
	LG	LG	BK	8						
Lamp 1	L	L	BL	1	12				SL-Y	
	LG	LG	Y	2					SL-BK	
Lamp 2	L	L	OR	4		13			SL-BL	
	LG	LG	Y	5					SL-W	
Lamp 3	L	L	GN	6			14		SL-W	
	LG	LG	Y	7					SL-BR	
Lamp 4	L	L	BR	9					15	SL-BR
	LG	LG	Y	10						BR
Lamp 5	L	L	SL	3				16		
	LG	LG	Y	8						

◆ See Note 11.
■ See Note 10.
● Not used in set.