

1A1 KEY TELEPHONE SYSTEM
540- AND 560-SERIES KEY TELEPHONE SETS
STATION CONNECTIONS

1.00 GENERAL

This section covers connections at the station for 540- and 560-series key telephone sets. It includes key cable, connecting block, cord conductor, and internal set connections.

2.00 1A1 APPLICATION OF 540- AND 560-SERIES KEY TELEPHONE SETS

2.01 All the 540- and 560-series key telephone sets shown in this section are arranged for use in the 1A1 key telephone system. These sets are furnished shop-wired for use in the 1A key telephone system. *To use these sets in the 1A1 system, certain wires within the sets must be reterminated.*

2.02 Key telephone set internal wiring changes and connections are covered in Tables 33.01 through 33.06. This includes ringer, buzzer, exclusion, and cutoff connections, as well as necessary wiring changes.

3.00 KEY CABLE CONNECTIONS

3.01 Key cable, connecting block, and cord conductor connections for 540- and 560-series key telephone sets are shown in Table 33.07.

3.02 Key cable pairs always should be associated with a certain feature as designated in the tables of this section. If a certain feature is not furnished, that associated pair should be left vacant.

3.03 Pair 12 in the key cable is designated for use as the common audible signal pair, dial selective intercom station signal pair, or buzzer system signal pair when the common signal, station signal, or buzzer signal is to be provided in the set.

3.04 Pair 21 in the key cable is designated for use as the common audible signal pair, dial selective intercom station signal pair, or buzzer system signal pair when the common signal, station signal, or buzzer signal is to be provided external to the set.

3.05 Pairs 22, 23, and 24 in the key cable are used for the sixth line with the 565A key telephone set to maintain standardization of color for feature assignment.

4.00 REFERENCES

Reference information for this section is given in Section C71.355, 1A1 Key Telephone System, Connection Data, Description and Use.

SECTION C71.433

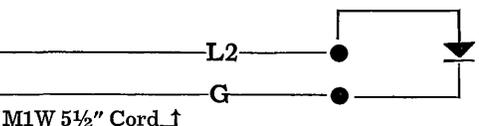
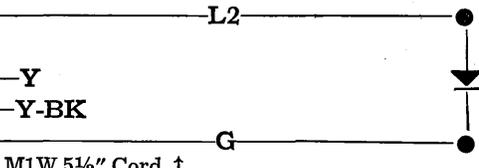
TABLE 33.01

Internal Wiring Changes (Switchhook and Hold Key Leads) for Auxiliary Control Leads (A1 and A) in 540B, 564B, C, and D Key Telephone Sets

Switchhook Lead	Hold Key Lead	Tel Set Terminal
Color		
S-W		1B
S-G	Y-BK	N
S-Y		R
	Y	M

TABLE 33.02

Internal Wiring Changes (Switchhook and Hold Key Leads) for Auxiliary Control Leads (A1 and A) in 544A, B, 545B, 565A, B, and E Key Telephone Sets with or without Station Busy Signal

Type of Tel Set	Station Busy Signal	Switchhook Lead	Tel Set Terminal	Hold Key Lead	Tel Set Network Terminal	1N91 Diode or Equiv*
Code No.		Color		Color		
544A and 565A	Not Used	S-W S-G	1B N			
565A	Used	S-W S-G	1B N		L2 G	
544B,† 545B, 565B, and 565E	Not Used	S-W S-G S-Y	1B N R M	Y-BK Y		
	Used	S-W S-G S-Y	1B R M N N	Y Y-BK	L2 G	

* Diode and M1W 5-1/2 inch cord are not furnished with sets.
 † Set is not equipped with station busy signal.

Ringer and Buzzer Connections

TABLE 33.03

Option		Tel Set	Tel Set Network	Ringer Lead	Buzzer Terminal
		Terminal		Color	
Set Ringer Used as Line Ringer on Tip and Ring of Any Line except Private Line		R*		R	
		T*		BK	
			A	S-R	
			K	S	
Ringer or Buzzer in Set Used as Common Audible Signal, Dial Selective Intercom Station Signal, or Signal-key and Buzzer System Signal	Ringer with Capacitor	RR		R	
		RT		BK	
		A	S-R		
		K	S		
	Ringer without Capacitor	RR		R	
		RT		BK	
		A	S-R		
		A	S		
7-type Buzzer†	RR	M1W 5½" Cord ↕		A or D	
	RT	M1W 5½" Cord ↕		C	

* Terminals are designated 1R and 1T for first line, 2R and 2T for second line, etc.

† If 152A capacitor is to be provided, connect spade-tipped capacitor leads to buzzer terminals A and D.

Cutoff Connections Using
565E Key Telephone Set

TABLE 33.05

Feature	Leads to Cut Off Line, Ext Sta, Ringer, Listen- ing-in Line Ckt, or Receiver	Cutoff Key Lead	Tel Set	Tel Set Network	Ringer Lead	Buzzer Terminal	
							Desig
Cutoff Set Ringer Used as Line Ringer		R-W G-W	R* T*				
			CR CT		R BK		
				A K	S-R S		
Cut Off Set Ringer, Buzzer Used as Common Audible Signal, or Dial Selective Intercom Station Signal	Ringer with Capacitor	R-W G-W	RR RT				
			CR CT		R BK		
				A K	S-R S		
	Ringer without Capacitor	R-W G-W	RR RT				
			CR CT		R BK		
				A A	S-R S		
	7-type Buzzer†	R-W G-W	RR RT				
			CR	A or D			
			CT	C			
			M1W 5½" Cord ↓				
Cut Off Line, Extension Station, Ringer, or Listening-in Line Circuit	R T		CR CT				
		R-W G-W	R* T*				
Cut Off Extension Station and Transfer Line Ringer	R T		CR CT				
		R-W G-W	R* T*				
			XR XT		R BK		
				A K	S-R S		

(Table 33.05 continued on page 6.)

* Terminals are designated 1R and 1T for first line, 2R and 2T for second line, etc.

† If 152A capacitor is to be provided, connect spade-tipped capacitor leads to buzzer terminals A and D.

TABLE 33.05 (Contd)

Cutoff Connections Using
565E Key Telephone Set

Feature		Leads to Cut Off Line, Ext Sta, Ringer, Listen- ing-in Line Ckt, or Receiver	Cutoff Key Lead	Tel Set	Tel Set Network	Ringer Lead	Buzzer Terminal
		Desig	Color	Terminal		Color	
Cut Off Common Ringer or Buzzer at Another Station and Transfer Common Ringer or Buzzer to Set	Ringer with Capacitor		R-W G-W	RR RT			
		R T		CR CT			
				XR XT		R BK	
					A K	S-R S	
	Ringer without Capacitor		R-W G-W	RR RT			
		R T		CR CT			
				XR XT		R BK	
					A A	S-R S	
	7-type Buzzer*		R-W G-W	RR RT			
		R T		CR CT			
				XR	M1W 5½" Cord ↕		A or D
				XT	M1W 5½" Cord ↕		C
Cutoff Head Receiver Used as Listening-in Set		R G		CR CT			
			R-W G-W		R G		

* If 152A capacitor is to be provided, connect spade-tipped capacitor leads to buzzer terminals A and D.

Conversion of Pickup Keys to Signal Keys
Wiring Changes for 544A, B, 545B,
565A, B, and E Key Telephone Sets

TABLE 33.06

Type of Tel Set	No. of Pickup Keys Converted to Sig Keys*	Last Pickup Key May Be Converted to a Common Aud Sig Key For Use With 2 or 3 Private or Inter-com Lines†	Key Lead	Tel Set Terminal
Code No.		No. of Lines	Color	
544A or 565E	0		S-BR	M
	1		S-BR	SG
544B and 545B	0		BR	M
	1		BR	SG
565A	0		S-BR BK-BR W-BR	M M M
	1		S-BR BK-BR W-BR	M M SG
	2		S-BR BK-BR W-BR	M SG SG
	3		S-BR BK-BR W-BR	SG SG SG
565B	0		Y-BR BR S-BR BK-BR	M M M X
	1		Y-BR BR S-BR BK-BR	M M M SG
	2		Y-BR BR S-BR BK-BR	M M SG X
	3		Y-BR BR S-BR BK-BR	M X SG X
	1	2	Y-BR BR S-BR BK-BR	M X 5H SG
	1	3	Y-BR BR S-BR BK-BR	X X 5H SG

* To convert a key position from pickup (locking) to signaling (nonlocking), remove screw detail P12A892 entirely from the plunger at the key position to be converted. To convert a key position from signaling (nonlocking) to pickup (locking), insert screw detail P12A892.

† The automatic cutoff feature of the 1A1 key telephone system cannot be used on a line connected to the common audible signal key.

Key Cable, Connecting Block Terminals, Set Terminals,
and Cord Conductor Colors—540- and 560-series Sets

TABLE 33.07

Key Cable			Set Conn	Sets		540B	544B	545B	564C	544A	564B	565E	565B	
Pair No.	C Type	D Type		Term. Desig	Features		HPPP	HPP p/s-L	HPP p/s-L-E	HPPPPS-L	PPP p/s-L	HPPPPP-L	HPPP p/s C-L-E	HPP p/s p/s p/s-L-E
			Cords		D14D	D19A	D24B	D25A	D25A	D28A	D31A	D34A		
	Color		Conn Block											
			Term.		No.									
1	BL W	BL W	1R 1T	1	1	R	R	R	R	R	R	R	R	
				2		G	G	G	G	G	G	G	G	
	O W	O W	1B 1H	4		Y	Y	Y	Y	Y	Y	Y	Y	
				5		BK	BK	BK	BK	BK	BK	BK	BK	
	G W	G W	2R 2T	6		BL	BL	BL	BL	BL	BL	BL	BL	BL
7				W	W	W	W	W	W	W	W	W		
BR W	BR W	2H	9	BR-R*	BR-R*	BR-R*	BR-R*	BR-R*	BR-R*	BR-R*	BR-R*	BR-R*		
			10	BR-G	BR-G	BR-G	BR-G	BR-G	BR-G	BR-G	BR-G	BR-G	BR-G	
S W	S W	3R 3T	3	BR-Y	BR-Y	BR-Y	BR-Y	BR-Y	BR-Y	BR-Y	BR-Y	BR-Y		
			8	BR-BK	BR-BK	BR-BK	BR-BK	BR-BK	BR-BK	BR-BK	BR-BK	BR-BK	BR-BK	
6	BL-W W	BL R	3H or S	1	2	BR-BL*	BR-BL*	BR-BL*	BR-BL*	BR-BL*	BR-BL*	BR-BL*	BR-BL*	
				2		BR-W	BR-W	BR-W	BR-W	BR-W	BR-W	BR-W	BR-W	BR-W
7	BL-O W	O R	4R 4T	4					R-G	R-G	R-G	R-G	R-G	
				5					R-Y	R-Y	R-Y	R-Y	R-Y	R-Y
8	BL-G W	G R	4H or S	6					R-BK*	R-BK*	R-BK*	R-BK*	R-BK*	
				7				R-BL	R-BL	R-BL	R-BL	R-BL	R-BL	
9	BL-BR W	BR R	5R 5T	9						R-W		R-W		
				10						G-Y		G-Y		
10	BL-S W	S R	5H or S	3						G-BK*		G-BK*		
				8				G-BL	G-BL*	G-BL		G-BL		
11	O-W W	BL BK	SG L2	1	3		G-W	G-W	G-W	G-W		G-W	G-W	
				2			Y-BK	Y-BK	Y-BK	Y-BK	Y-BK	Y-BK	Y-BK	
12	O-G W	O BK	RR RT	4		Y-BL	Y-BL	Y-BL	Y-BL	Y-BL	Y-BL	Y-BL	Y-BL	
				5		Y-W	Y-W	Y-W	Y-W	Y-W	Y-W	Y-W	Y-W	
13	O-BR W	G BK	ER ET	6			BK-BL					BK-BL	BK-BL	
				7		BK-W					BK-W	BK-W		
14	O-S W	BR BK	EB EH	9		BL-W					BL-W	BL-W		
				10		S				S	S			
15	G-W W	S BK	CR CT	3							S-R			
				8							S-G			
16	G-BR W	BL Y	1 LG	1	4		S-Y	S-Y	S-Y	S-Y	S-Y	S-Y	S-Y	
				2			S-BK	S-BK	S-BK	S-BK	S-BK	S-BK	S-BK	
17	G-S W	O Y	2 †	4			S-BL	S-BL	S-BL	S-BL	S-BL	S-BL	S-BL	
				5										
18	BR-W W	G Y	3 †	6			S-W	S-W	S-W	S-W	S-W	S-W	S-W	
				7										
19	BR-S W	BR Y	4 †	9				S-BR	S-BR	S-BR	S-BR	S-BR		
				10										
20	S-W W	S Y	5 †	3						BR		BR		
				8										

*These conductors are not terminated in set.

†Lamp ground lead. Strap to terminal 2(LG) of fourth block.

(Table 33.07 continued on page 9.)

TABLE 33.07 (Contd)

Key Cable, Connecting Block Terminals, Set Terminals,
and Cord Conductor Colors—540- and 560-series Sets

Key Cable			Set Conn	Sets		564D	Key Cable			Set Conn	Sets		565A	
Pair No.	C Type	D Type	Term. Desig	Features		HPPSS-L	C Type	D Type	Term. Desig	Features		PPP p/s p/s p/s-L-E		
				Cords		D25A				Cords		D34A		
	Color			Conn Block		Term.	No.	Color		Conn Block		Term.	No.	
1	BL W	BL W	1R 1T	1 2	1	R G	1	BL W	BL W	1R 1T	1 2	R G		
2	O W	O W	1B 1H	4 5		Y BK	2	O W	O W	1B 1H	4 5	Y BK		
3	G W	G W	2R 2T	6 7		BL W	3	G W	G W	2R 2T	6 7	BL W		
4	BR W	BR W	2H	9 10		BR-R* BR-G	R24 T4	BR(R) W(BR)	BR(V) W(BR)	6L 2H	9 10	BR-R BR-G		
5	S W	S W	3R 3T	3 8		BR-Y BR-BK	5	S W	S W	3R 3T	3 8	BR-Y BR-BK		
6	BL-W W	BL R	3H	1 2	2	BR-BL* BR-W	T11 T6	W(O-W) W(BL-W)	BK(BL) R(BL)	L2 3H	1 2	BR-BL BR-W		
7	BL-O W	O R	1S	4 5		R-G* R-Y*	7	BL-O W	O R	4R 4T	4 5	R-G R-Y		
8	BL-G W	G R		6 7		R-BK* R-BL	T23 T8	R(G) W(BL-G)	V(G) R(G)	6H or S 4H or S	6 7	R-BK R-BL		
9	BL-BR W	BR R		9 10			9	BL-BR W	BR R	5R 5T	9 10	R-W G-Y		
10	BL-S W	S R	2S	3 8		G-BL	R11 T10	O-W(W) W(BL-S)	BL(BK) R(S)	SG 5H or S	3 8	G-BK G-BL		
11	O-W W	BL BK	SG	1 2	3	G-W	22	O R	O V	6R 6T	1 2	G-W Y-BK		
12	O-G W	O BK	RR RT	4 5		Y-BL Y-W	12	O-G W	O BK	RR RT	4 5	Y-BL Y-W		
13	O-BR W	G BK		6 7			13	O-BR W	G BK	ER ET	6 7	BK-BL BK-W		
14	O-S W	BR BK		9 10			14	O-S W	BR BK	EB EH	9 10	BL-W S		
15	G-W W	S BK		3 8			15	G-W W	S BK	CR CT	3 8			
16	G-BR W	BL Y	1 LG	1 2	4	S-Y S-BK	16	G-BR W	BL Y	1 LG	1 2	S-Y S-BK		
17	G-S W	O Y	2 †	4 5		S-BL	17	G-S W	O Y	2 †	4 5	S-BL		
18	BR-W W	G Y	3 †	6 7		S-W	18	BR-W W	G Y	3 †	6 7	S-W		
19	BR-S W	BR Y		9 10		S-BR*	19	BR-S W	BR Y	4 †	9 10	S-BR		
20	S-W W	S Y		3 8			20	S-W W	S Y	5 †	3 8	BR		
							T24	R(BR)	V(BR)	6†	8			

* These conductors are not terminated in set.

† Lamp ground leads. Strap to terminal 2(LG) of fourth block.