

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C53.152
Issue 7, May, 1955
AT&T Co Standard

1A AND 1A1 KEY TELEPHONE SYSTEMS SUPPLIES

1. GENERAL

1.01 This section provides supply information pertaining to apparatus required for the installation and maintenance of 1A and 1A1 key telephone systems. It is reissued to include information formerly covered in Section C53.157, 1A1 Key Telephone Systems, Supplies. It does not include supply information on items common to all types of station systems.

1.02 For information concerning the following items, refer to the associated C section.

Buzzers	C54.352
Cabinets and Backboards	C53.506
Designation Strips and Cards	C37.321
Keys, Station Control	C36.306
Keys, 549 and 551 Type	C36.301
Lamp Indicators	C54.311
Power Supply Arrangements	C53.511

1.03 Due to extensive changes, marginal arrows have been omitted.

2. SUPPLIES

INDEX

ORDERING INFORMATION AND USE

Assemblies

P-17A101, WINDOW STRIP ASSEMBLY.

For 540-type sets.

P-17A102, WINDOW STRIP ASSEMBLY.

For 560-type sets.

Cord

CORD, (Code No.)

Code numbers of cords for key telephone sets are listed in Tables A to F at the end of this section.

INDEXORDERING INFORMATION AND USE

- Eyelet** **P-339942, EYELET.**
Used to block unused keys of 440- and 460-type key telephone sets.
- Holders** **P-482882, DESIGNATION STRIP HOLDER.**
For 440-type sets.
- P-482883, DESIGNATION STRIP HOLDER.**
For 460-type sets.
- Lamp** **LAMP, 51A.**
10-volt lamp for illuminated button sets.
- Ring
(Blocking)** **P-12858, BLOCKING RING.**
Used to block unused keys of 540- and 560-type key telephone sets.
- Sets
(Telephone)** **SET, TELEPHONE, 500L.**
This set can be used with 1A1 key telephone systems if a D6T cord is substituted for the regular cord.
- SET, TELEPHONE, 500M.**
Same as above equipped with dial.
- SET, TELEPHONE, 502A.**
This set has exclusion switch and external circuit control for 1A1 key telephone system. For single line only.
- SET, TELEPHONE, 502B.**
Same as above equipped with dial.
- SET, TELEPHONE, (Code No.)**
The code numbers of key telephone sets and the features provided by each are shown in Tables A to F at the end of this section.
- Note:** The suffix R added to the set code number denotes that the set is equipped with a retractile handset cord. Telephone sets ordered with the suffix R added to the code will be equipped with retractile handset cords when received.

**Units
(Key
Telephone)**

UNIT, TELEPHONE, KEY, (Code No.)

The code numbers of key telephone units and their primary circuit functions are listed below. The "AT&TCo Std" column lists those key telephone units which are currently being manufactured and may be ordered. The "Mfr. Disc." column lists those key telephone units which are no longer being manufactured but which may be used as substitutes if available.

<u>AT&TCo Std</u>	<u>Mfr. Disc.</u>
1A	Hold unit.
1B	Hold unit. Designed primarily for 1A key telephone system use on 555 PBX station lines.
2A	Battery feed unit for intercommunicating line, 14 to 26 volts.
3A	Intercommunicating signaling unit.
	4A Intercommunicating line unit, one-way automatic signaling. Replaced by 13-type KTU.
5A	Auxiliary hold unit.
6B	6A Busy lamp unit.
6C	Busy lamp unit. Designed primarily for 1A key telephone system use on 555 PBX station lines.
7A	Private line unit.
8A	Bridging-terminal unit with nine double-screw terminals, not drilled.
8C	8B Same as 8A, but drilled for mounting relays, capacitors, resistors, etc.

INDEXORDERING INFORMATION AND USE**Units
(Key
Telephone)
(Contd)**

	<u>AT&TCo Std</u>	<u>Mfr. Disc.</u>
		9A Nonlocking ringup relay unit. Replaced by 14A KTU for manual service and by 15-type KTU for dial service.
10A		Automatic exclusion unit.
11A		Ringing feed lamp unit.
12A		Dry cell battery feed unit.
13B	13A	Intercommunicating line unit, 2-way automatic signaling. Supersedes the 4A KTU.
14A		Ringup relay unit for manual areas. Supersedes the 9A KTU.
15D	15A 15B 15C	Ringup relay unit for dial areas. Supersedes the 9A KTU.
16A		Common audible signal control unit for dial areas.
17B	17A	Switching relay unit.
18D	18A 18B	Supervisory and busy lamp unit for dial areas.
18E	18C	Supervisory and busy lamp unit for dial areas. Designed primarily for 1A key telephone system use on 555 PBX station lines.
19B	19A	Flashing unit.
20A		Common audible signal control unit for manual areas.
21A		Fuse mounting unit for six fuses and grounds.

- 22F 22A Resistor unit. For use with 8-cell battery.
- 22G 22B Resistor unit. For use with 9-cell battery.
- 22H 22C Resistor unit. For use with 10-cell battery.
- 22J 22D Resistor unit. For use with 11-, 12-, or 13-cell battery, 26 volts maximum.
- 22K 22E Resistor unit. For use with 23-cell battery, 47.5- to 50-volt regulation.
- 23A Battery feed, noise suppression unit.
- 24A 101A induction coil unit. For use in attendant's head telephone set circuit applications.
- 25B 25A Automatic cutoff control unit.
- 26B 26A Automatic cutoff unit.
- 27A Capacitor unit (4uf).
- 28A Equalizing resistance lamp unit.
- 29A Cut-through relay unit.
- 30A Time-out circuit unit.
- 31A Battery feed relay unit.
- 32A Equalizer unit. For use in attendant's head telephone set circuit applications.
- 33A Wink circuit unit. Used with 17B KTU to furnish wink-hold timing sequence.

INDEXORDERING INFORMATION AND USE**Units
(Key
Telephone)
(Contd)**A&M
Only

- 50A** A 4-plate cabinet equipped for two CO or PBX line circuits. In olive green (-26) or walnut (-27).
- 50B** A 4-plate cabinet equipped for three CO or PBX line circuits. In olive green (-26) or walnut (-27).
- 50C** A 4-plate cabinet equipped for four CO or PBX line circuits. In olive green (-26) or walnut (-27).
- 51A** A 2-circuit CO or PBX line unit including common equipment.
- 52A** One CO or PBX line circuit unit.
- 53A** Automatic tie line unit.
- 54A** Ringdown tie line unit.
- 55A** Station line unit.
- 57A** Dial selected 9-station inter-communicating unit.

**Units
(Key
Telephone)
(Contd)**

<u>AT&T Co Std</u>	<u>Mfr. Disc.</u>	
56A		Private line—off-premise extension unit.
	200A	A 6-plate cabinet equipped for two CO or PBX line circuits with lamp flashing and time out. Beige gray.
200D	200B	A 6-plate cabinet equipped for three CO or PBX line circuits with lamp flashing and time out. Beige gray.
200E	200C	A 6-plate cabinet equipped for four CO or PBX line circuits with lamp flashing and time out. Beige gray.
201B	201A	Fuse mounting unit for seven fuses and grounds.
202B	202A	One CO or PBX line circuit unit.
203A		Automatic tie line unit.
204A		Ringdown tie line unit.
205A		Station line unit.
207A		Dial selected 9-station intercommunicating line unit.
208A		A 3-circuit signaling unit for flashing line lamp and automatic cutoff control unit.
209A		Flashing and time-out unit.
210A		Wink timing unit.

INDEXORDERING INFORMATION AND USE**Units
(Key
Telephone)
(Contd)**

	<u>AT&TCo Std</u>	<u>Mfr. Disc.</u>
211A		Miscellaneous unit featuring an intercommunicating line battery feed relay, a ringing feed lamp unit, a capacitor for noise suppression, and an audible signal control relay.
212A		A 3-circuit CO or PBX line unit with lamp flashing and time out.
213A		One CO or PBX line circuit unit. For joint use by stations of key telephone systems or key equipments which are arranged for: (1) "A" lead control or (2) "B" and "H" leads control.

Notes

1. Key telephone unit codes 1 through 33 denote single- or double-space angle-bracket type apparatus units designed primarily for 1A system use.
2. Key telephone unit codes 51 through 57 are strip-mounted 1A system units on 1-3/4-inch by 19-inch mounting plates.
3. Key telephone unit codes 201 through 213 are panel-mounted 1A1 system apparatus units.
4. The 50A through C key telephone units are cabinet-assembled 1A system units.
5. The 200A through E key telephone units are cabinet-assembled 1A1 system units.

TABLE A

**Feature Combinations, Cord and Set Codes of Single Button
500-type Telephone Sets for 1A Key Telephone Systems Only**

Telephone Set Codes			Features								
			Number of Lines Picked Up	Signaling Circuit	Line Ringer	Common or Private Line Ringer or Buzzer	Exclusion	Ringer or Buzzer Cut Off by Exclusion Key	Cut Off by Key		
Ringer or Buzzer in Set	Extension Station or Ringer	Head Receiver Listening-in Station									
Manual	Dial	Mounting Cord									
510A	510B	D4AS	2		X						
			1	X	X						
			1	X	X				X		
			1		X					X	
			1		X				X	X	
			1		X						X
510E	510F	D6S	2	X	X						
			2			X					
			1	X	X					X	
			1	X	X				X	X	
			1	X	X						X
511A	511B	D10E	2	X	X		X				
			2	X		X	X				
			2	X		X		X			
			1	X	X		X			X	
			1	X	X		X		X	X	
			1	X	X		X				X

Note: Manual sets are obtained by replacing the dial with a 95B apparatus blank.

TABLE B

Feature Combinations, Cord and Set Codes of 540- and 560-type Telephone Sets For 1A or 1A1 Key Telephone Systems

Station Control Key Arrangement	Features Provided			Coding			
	Excl Key	Illuminated Key Buttons (Less Lamps)	Station Busy Lamp Control	Set Codes		Cord Code	Key Code
				Dial	Manual		
H P P P				540BB	540BA	D14D	588A
H P P P ^s		X		544BB	544BA	D19A	588B
	X	X	X	545BB	545BA	D24B	
P P P P ^s		X		544AB	544AA	D25A	588C
H P P P P P		X		564BB	564BA	D28A	589A
H P P P P S		X		564CB	564CA	D25A	589D
H P P P S S		X		564DB	564DA	D25A	589E
H P P P ^s P ^s P ^s	X	X	X	565BB	565BA	D34A	589B
P P P P ^s P ^s P ^s	X	X	X	565AB	565AA	D34A	589C
H P P P P ^s C	X	X	X	565EB	565EA	D31A	589F

H = Hold (Nonlocking)
 P = Pickup (Locking)
 S = Signal (Nonlocking)

C = Cutoff (Turn Button)
 P^s = Convertible — Either Pickup (Locking) or Signaling (Nonlocking) Change can be made by installer

Notes

1. The exclusion feature is furnished by raising the left-hand hook switch plunger.
2. The 51A lamps for illuminated key buttons will be furnished by the installer when the set is placed in service.
3. Manual sets are obtained by replacing the dial with a 95B apparatus blank.

TABLE C

Feature Combinations, Cord and Set Codes of 440- and 460-type Telephone Sets For 1A and 1A1 Key Telephone Systems

Station Control Key Arrangements	Excl Key	Codes							
		Telephone Set Nonilluminated Key Buttons				Telephone Set Illuminated Key Buttons			
		Manual	Dial	Cord		Manual	Dial	Cord	
				Fabric	Vinyl			Fabric	Vinyl
H P P P	No	440EE	440EG	D14A	D14G	444EE	444EG	D18C	D18G
	Yes					445EE	445EG	D22B	D27A
H P P S	No	440FE	440FG	D12A	D23C	444FE	444FG	D16B	D27A
H P P C	No	440GE	440GG	D12A	D17A				
H P P P P P	No	460GE	460GG	D22B	D23C	464GE	464GG	D29A	D28C
	Yes					465GE	465GG	D32A	D35A
H P P P P S	No	460HE	460HG	D20B	D23C	464HE	464HG	D26A	D25B
	Yes					465HE*	465HG*	D29A	D35B
H P P P P C	Yes					465KE	465KG	D29A	D35A
H P P P S C	Yes					465LE	465LG	D26B	D27A
H P P P S S	No	460ME	460MG	D18C	D23C	464ME	464MG	D26B	D27A
	Yes					465ME	465MG	D26B	D27A

H = Hold (Nonlocking)

S = Signal (Nonlocking)

P = Pickup (Locking)

C = Cutoff (Turn Button)

* Arranged for pickup on three private lines with common signaling key, and pickup and hold on one CO line.

Notes

1. Manufacture discontinued on all these sets. This table is for reference purposes.
2. Manual sets are obtained by replacing the dial with a 94A apparatus blank.

TABLE D

Feature Combinations, Cord and Set Codes of Single Button 400-type Telephone Sets For 1A Key Telephone Systems Only

Telephone Set Codes			Features							
			Number of Lines Picked Up	Signaling Circuit	Line Ringer	Common Ringer	Exclusion	Cut Off by Key		
Manual	Dial	Mounting Cord						Ringer in Set	Extension Station, External Ringer, or Headset Control	Extension Station Ringer Transfer
410AA	410AC	D4AH	1	X	X			X		
			1		X					X
			1		X			X		
			2		X					
411AA	411AC	D6P	1	X	X		X	X		
			1		X		X			X
			1		X		X		X	
			2		X		X			
410BA	410BC	D6P	1	X	X					X
			1	X	X				X	
			2	X	X					
			2			X				
411BA	411BC	D8M	1	X	X		X			X
			1	X	X		X		X	
			2	X	X		X			
			2			X	X			
410CA	410CC	D8M	2	X		X				
411CA	411CC	D10C	2	X		X	X			

Notes

1. Manufacture discontinued on all of these sets. This table is for reference purposes.
2. Manual sets are obtained by replacing the dial with a 94A apparatus blank.

TABLE E
Feature Combinations, Cord and Set Codes of 440-type
Telephone Sets For 1A Key Telephone Systems Only

Station Control Key Arrangements	Excl Key	Codes								
		Telephone Set Nonilluminated Key Buttons					Telephone Set Illuminated Key Buttons			
		Manual	SHA Dial	SHB Dial	Cord		Manual	SHB Dial	Cord	
					Fabric	Vinyl			Fabric	Vinyl
P P P P	No	440AA	440AB	440AC	D10D	D10G	444AA	444AC	D16B	D19B
	Yes	441AA	441AB	441AC	D12A	D28B	445AA	445AC	D18C	D28B
P P P S	No	440BA	440BB	440BC	D10D	D23C				
	Yes	441BA	441BB	441BC	D12A	D27A	445BA	445BC	D16B	D27A
P P P C	No	440CA	440CB	440CC	D10D	D27A				
	Yes	441CA	441CB	441CC	D12A	D27A	445CA	445CC	D16B	D27A
P P S C	No	440DA	440DB	440DC	D10D	D27A				
	Yes	441DA	441DB	441DC	D12A	D27A	445DA	445DC	D16B	D27A
H P P P	No	440EA	440EB	440EC	D14A	D14G	444EA	444EC	D18C	D18G
	Yes	441EA	441EB	441EC	D18C	D27A	445EA	445EC	D22B	D27A
H P P S	No	440FA	440FB	440FC	D12A	D23C	444FA	444FC	D16B	D27A
	Yes	441FA	441FB	441FC	D16B	D27A	445FA	445FC	D20B	D27A
H P P C	No	440GA	440GB	440GC	D12A	D17A				
	Yes	441GA	441GB	441GC	D16B	D27A	445GA	445GC	D20B	D27A

H = Hold (Nonlocking)
P = Pickup (Locking)

S = Signal (Nonlocking)
C = Cutoff (Turn Button)

Notes

1. Manufacture discontinued on all of these sets. This table is for reference purposes.
2. Manual sets are obtained by replacing the dial with a 94A apparatus blank.

TABLE F
Feature Combinations, Cord and Set Codes of 460-type
Telephone Sets For 1A Key Telephone Systems Only

Station Control Key Arrangements	Excl Key	Codes									
		Telephone Set Nonilluminated Key Buttons					Telephone Set Illuminated Key Buttons				
		Manual	SHA Dial	5HB Dial	Cord		Manual	5HB Dial	Cord		
					Fabric	Vinyl			Fabric	Vinyl	
P P P P P P	No	460AA	460AB	460AC	D14A	D19B					
	Yes	461AA	461AB	461AC	D16B	D28B	465AA	465AC	D25A	D28B	
P P P P P S	No	460BA	460BB	460BC	D14A	D23C					
	Yes	461BA	461BB	461BC	D16B	D28B	465BA	465BC	D22B	D28B	
P P P P P C	No	460CA	460CB	460CC	D14A	D28B					
	Yes	461CA	461CB	461CC	D16B	D28B	465CA	465CC	D22B	D28B	
P P P P S C	No	460DA	460DB	460DC	D14A	D28B					
	Yes	461DA	461DB	461DC	D16B	D28B	465DA	465DC	D22B	D28B	
P P P S S S	No	460EA	460EB	460EC	D12A	D23C					
	Yes	461EA	461EB	461EC	D14A	D28B	465EA	465EC	D18C	D28B	
P P S S S S	No	460FA	460FB	460FC	D12A	D23C					
	Yes	461FA	461FB	461FC	D14A	D35A	465FA	465FC	D16B	D35A	
H P P P P P	No	460GA	460GB	460GC	D22B	D28C	464GA	464GC	D29A	D28C	
	Yes	461GA	461GB	461GC	D26B	D35A	465GA	465GC	D32A	D35A	
H P P P P S	No	460HA	460HB	460HC	D20B	D23C	464HA	464HC	D26B	D25A	
	Yes	461HA	461HB	461HC	D24A	D35A	465HA	465HC	D29A	D35A	
H P P P P C	No	460KA	460KB	460KC	D20B	D35A					
	Yes	461KA	461KB	461KC	D24A	D35A	465KA	465KC	D29A	D35A	
H P P P S C	No	460LA	460LB	460LC	D18C	D27A					
	Yes	461LA	461LB	461LC	D22B	D27A	465LA	465LC	D26B	D27A	
H P P P S S	No	460MA	460MB	460MC	D18C	D23C	464MA	464MC	D22B	D25A	
	Yes	461MA	461MB	461MC	D22B	D27A	465MA	465MC	D26B	D27A	
H P P S S S	No	460NA	460NB	460NC	D14A	D23C					
	Yes	461NA	461NB	461NC	D18C	D27A	465NA	465NC	D22B	D35A	
H P P P P S *	No	460JA	460JB	460JC	D20B	D35A					
	Yes	461JA	461JB	461JC	D24A	D35A	465JA	465JC	D29A	D35A	

H = Hold (Nonlocking)
P = Pickup (Locking)

S = Signal (Nonlocking)
C = Cutoff (Turn Button)

* Arranged for pickup on three private lines with common signaling key, and pickup and hold on one CO line.

Notes

1. Manufacture discontinued on all of these sets. This table is for reference purposes.
2. Manual sets are obtained by replacing the dial with a 94A apparatus blank.