

**BELL SYSTEM PRACTICES**  
Station Installation and Maintenance

**SECTION C53.157**  
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AT&T Co Standard

## **1A1 KEY TELEPHONE SYSTEM SUPPLIES**

### **1. GENERAL**

1.01 This section lists in alphabetical order the apparatus, equipment and material required in connection with the installation and maintenance of the 1A1 key telephone system. Items commonly used in other types of station systems are not included.

1.02 Part 2 lists the apparatus, equipment units, etc., needed for new installations and for additions to existing installations. For maintenance reasons, it may, of course, be necessary to replace any individual piece of apparatus or part thereof. Part 3 lists those replacement parts for which it is expected there will be a general need. Four apparatus cabinets normally used for housing the 1A1 key telephone system equipment are listed in this section. Other apparatus cabinets and accessories used for housing station system equipment units, storage batteries, etc., and which may be used at centralized locations of a number of 1A1 key telephone systems are covered in separate sections in Division C50 entitled Key Equipment and Wiring Plan Cabinets.

### **2. SUPPLIES — INSTALLATION**

**Assembly:**       **P39A697 Key Telephone Unit Mounting.** For mounting angle bracket key telephone units in the cabinet. This is a hinged assembly that may be swung open to permit adjustment of relays, etc. This unit may be used in the cabinet in conjunction with the regular panel mounted 200 series key telephone units of this system.

**Backboards:**     **KS-5796, Lists 7, 8 and 9.** Beige-gray, wooden backboards for 1, 2 and 3 105B apparatus boxes respectively.

- Bar:** **P37A502 Mounting** (23 inches) For mounting 200-type KTU's in 11 or 18-plate cabinets.  
**P37A823 Mounting** (19 inches) Same as 23-inch bar.  
**P37A901 Adaptor.** For mounting 2-inch wide plates on racks drilled on 1-inch centers. Two are used to obtain correct vertical spacing at mounting bars.
- Base:** **ED-91180-01, Group 22 for 11 and 18-Plate Cabinets.** Same as groups 12 and 13 except beige-gray wrinkle finish.
- Box:** **Apparatus, 105B.** Beige-gray finished box for mounting angle bracket type key telephone units. (Capacity four 1-3/4-inch units or their equivalent.)
- Bracket:** **36A.** For mounting the 7-type buzzer and 152A condenser in place of the B1A ringer in telephone sets.
- Cabinet:** **ED-95021-01, Group 7, Metal, Unit Panel.** One cabinet less cover for mounting station system unit panels.
- Cards:** **Designation.** See Section C37.321 for designation cards used on 6017, 6027, 6028 and similar type keys.
- Condenser:** **152A.** For suppressing radio frequency induction from 7-type buzzers in key telephone sets. (Mounted on 36A bracket.)
- Cords:** Code numbers of the mounting cords for key telephone sets which are furnished as a part of the sets or for maintenance are listed in the table at the end of this section.
- Cover:** **ED-95021-01-G8.** Beige-gray wrinkle finish cover with sound absorbing treatment for ED-95021-01-G7 cabinets.
- Eyelet:** **P-339942.** Used to block unused keys of key telephone sets. Supersedes key blocking device P-476016 and eyelet P-482845.
- Filters:** **61A.** For suppressing radio frequency induction from a separately mounted 7-type buzzer. Arranged to mount on 36A Bracket.  
**61P.** For suppressing radio frequency induction from the key telephone set dial.

- Fuses:** 24C. Two-ampere circuit fuse.
- Guard:** D-96008. A key blocking device for 6021, 6027 and 6028-type keys.
- Holders:** P-482882 **Designation Strip.** For use on 4-button key telephone sets.  
P-482883 **Designation Strip.** For use on 6-button key telephone sets.
- Keys:** **For Use with Hangup Type Handset or other Telephone Sets:**

### Features

- 6021DN 3 line pickup and holding.
- 6027DA 5 line pickup with holding.
- 6027DB 4 line pickup with holding and signaling.
- 6028DA 4 line pickup with holding and cutoff.

### For Use with Hangup Hand Telephone Sets or to Supplement Keys in Key Telephone Sets.

- 549A For use where four separate push-buttons are required (furnished with cord).
- 549B For use where four separate push-buttons are required (without cord).
- 549C For use where eight separate push-buttons are required (furnished with cord).
- 549D For use where eight separate push-buttons are required (without cord).
- 551A For use where one push-button is required (without cord).

- Lamps:** 51A 10-volt lamp for illuminated button telephone sets.
- G2 10-volt lamp for use in 101-type key equipment and Nos. 14 and 15-type indicators associated with illuminated button telephone sets.

- A3** Used in indicators and associated 101-type key equipment with 14-26V d-c supply.
- K2** Used in indicators and associated 101-type key equipment with 48 volt d-c supply.

**Mounting:**

**ED-69143-01-G1.** For bars 19 inches long and **ED-69143-01-G2** for bars 23 inches long. For mounting key telephone units in metal apparatus cabinets. The four-plate cabinet uses mounting bars 19 inches long, and the 11-plate and 18-plate cabinets may use mounting bars 19 inches long or 23 inches long as required.

**Noise Isolator:**

No.	KTU
P-37A706	207A
P-38A019	209A
P-38A020	210A

For use on equipment installed in locations where the room noise is low and the noise of selector or relay operation is objectionable. Two noise isolators are required per unit.

**Power Plant:**

**J86731A, List 4, 101G.** Same as List 2 but beige-gray wrinkle finish; List 6—same as List 1 but beige-gray wrinkle finish; List 7—floor stand for List 4 gray enamel. (See Section C53.511.)

**Set:**

**Telephone.** The key telephone sets equipped with an exclusion key only, are coded 402A and 502A for manual offices and 402C and 502B for dial offices. The code numbers of the four and six-button key telephone sets, the features provided and the types of cords furnished with them are shown in the table at the end of this section.

**Telephone, Hand 213E or B.** Hangup hand telephone set for use with separately mounted keys.

**Subscriber, 531A.** Used where additional line ringers are required or a separate common ringer only is required.

**Subscriber, 634CF.** For use with hangup hand telephone sets and separate keys where the ringer is associated with a particular line.

**Subscriber, 684 BA.** For use with hangup hand telephone sets and separate keys where the ringer in the subscriber set is used as a common ringer.

**Stand:**

**ED-95023-01, Group 2, Metal.** Two leg assemblies for mounting one 6-plate cabinet on the floor—dark gray finish.

**Group 4**—Two foot covers for Group 2.

**Group 6**—Two extension uprights for fastening 101G power plant per J86731A, List 4 to Group 2.

**Strips:**

**Designation.** See Section C37.321 for designation strips used in key telephone sets.

**Transformer:**

**393B.** Supplies a-c current at nominally 10 volts for operating lamps in key telephone sets, in indicators and key boxes. Furnished in beige-gray wrinkle metal box.

**KS-5714, L3.** For operating bells, buzzers or signal lamps. Has beige-gray wrinkle finish.

**Units—Key  
Telephone:**

Code	
<b>*3A KTU</b>	Intercommunicating code and selective signaling. Angle bracket mounting.
<b>*22F KTU</b>	Resistance unit for lamp leads of illuminated sets with common side of resistance connected to individual terminals. 8-cell (14-20 volts) battery supply. Angle bracket mounting.

- \*22G KTU** Same as above but for 9-cell (16-22 volts) battery supply.
- \*22H KTU** Same as above but for 10-cell (18-24 volts) battery supply.
- \*22J KTU** Same as above but for 11, 12 or 13-cell (20-28 volts) battery supply, or 47.5-50 volts battery supply using K2 signal lamps.
- \*22K KTU** Same as above but for 23 or 24-cell 47.5-50 volts battery supply.
- \*\*26B KTU** Automatic cutoff unit, angle bracket mounting.
- \*\*29A KTU** Cut through and control unit, angle bracket mounting.
- \*31A KTU** Intercommunicating line circuit with busy lamps and control of time-out circuit.
- 200A KTU** Apparatus cabinet per ED-95021-01 equipped with sound absorbing material in the cover, beige-gray finish, equipped for 2 central office or P.B.X. lines with wiring between units only. Provides flashing line lamp with automatic timing out feature, busy lamp and holding. Includes two 202A key telephone units and one 209A key telephone unit.
- 200B KTU** Apparatus cabinet per ED-95021-01 equipped with sound absorbing material in the cover, beige-gray finish, equipped for 3 central office or P.B.X. lines with wiring between units only. Provides flashing line lamp with automatic timing out feature, busy lamp and holding. Includes three 202A key telephone units and one 209A key telephone unit.

- 200C KTU** Apparatus cabinet per ED-95021-01 equipped with sound absorbing material in the cover, beige-gray finish, equipped for 4 central offices of P.B.X. lines with wiring between units only. Provides flashing line lamp with automatic timing out feature, busy lamp and holding. Includes four 202A key telephone units and one 209A key telephone unit.
- 201A KTU** Fuse unit, fuse mounting for 7 fuses and 6 ground terminals. Unit panel 6-15/16 inches high, 2-3/16 inches wide.
- 202A KTU** Central office or P.B.X. line, assembly, wiring and equipment for one C.O. or P.B.X. line. Unit panel 6-15/16 inches high, 3-1/16 inches wide.
- 203A KTU** Automatic tie line unit. Assembly, wiring and equipment for one circuit tie line. Unit panel 6-15/16 inches high, and 3-1/2 inches wide.
- 204A KTU** Ringdown tie line unit. Assembly wiring and equipment for one circuit ringdown tie line unit. Unit panel 6-15/16 inches high and 3-15/16 inches wide.
- 205A KTU** Assembly, wiring and equipment for a one circuit station line unit. Unit panel 6-15/16 inches high and 3-15/16 inches wide.
- 207A KTU** Dial selective intercommunicating line unit. Assembly, wiring and equipment having one circuit dial intercommunicating line circuit. Unit panel 6-15/16 inches high, and 5-11/16 inches wide.

- 208A KTU** Three circuit signal circuit unit for flashing line lamps. Assembly, wiring and equipment for a three circuit signal circuit unit for flashing line lamps and for automatic cutoff of dial selective intercommunicating stations. Unit panel 6-15/16 inches high, and 3-1/2 inches wide.
- 209A KTU** Flashing and timing out circuit unit. Assembly, wiring and equipment for flashing and time out circuit unit. Unit panel 6-15/16 inches high, and 4-13/16 inches wide.
- 210A KTU** Wink circuit unit. Assembly, wiring and equipment for one wink circuit unit. Unit panel 6-15/16 inches high, and 2-5/8 inches wide.
- 211A KTU** Miscellaneous equipment. Assembly, wiring and equipment for intercommunicating line circuit, ringing lamp circuit, noise suppression circuit and audible signal control circuit. Unit panel 6-15/16 inches high and 3-1/16 inches wide.

\* Single units with angle bracket—Four may be mounted in 105B apparatus box.

\*\* Double units with angle bracket—Two may be mounted in 105B apparatus box.

**Varistor:**

**400A.** Used with 29A KTU for cut-through and control of automatic cutoff circuit.

**Wire:**

**24BG.** For cross-connecting and strapping of key telephone units. Furnished in red, green and black colors.

### 3. SUPPLIES—MAINTENANCE

3.01 Supplies ordinarily required for maintenance purposes follow:

**Cords:** See codes listed in Table.

**Fuses:** **24C**—2 ampere circuit fuse.  
**Bussman MDL2 Fusetrons** or equivalent for 101G power plant.

**Lamps:** **51A**  
**A3, G2 or K2.**

**Thermistor:** **8A** used on 202A and 204A KTU.

**Varistor:** **27B** used on 211A KTU.  
**400A** used with 29A KTU.  
**400E** used on 202A and 204A KTU.

TABLE  
KEY TELEPHONE SYSTEM 1A1  
FEATURE COMBINATION PROVIDED AND CORRESPONDING  
CODES OF TELEPHONE SETS AND CORDS

Four and Six Button Sets

Types of Keys and Features Provided	With Exclusion Feature	CODES					
		Telephone Set Non-Illuminated Key Buttons			Telephone Set Illuminated Key Buttons		
		Manual	Dial	Cord	Manual	Dial	Cord
361 DE (H) (P) (P) (P)	NO	440 EE	440 EG	D14 A	444 EE	444 EG	D18 C
	YES	+	+		445 EE	445 EG	D22 B
361 DF (H) (P) (P) (S)	NO	440 FE	440 FG	D12 A	444 FE	444 FG	D16 B
	YES	**	**		**	**	
361 DF (H) (P) (P) (C)	NO	440 GE	440 GG	D12 A	*	**	
	YES	**	**		*	**	
362 DG (H) (P) (P) (P) (P) (P)	NO	460 GE	460 GG	D22 B	464 GE	464 GG	D29 A
	YES	+	+		465 GE	465 GG	D32 A
362 DJ (H) (P) (P) (P) (P) (S) †	NO	460 HE	460 HG	D20 B	464 HE	464 HG	D26 A
	YES	+	+		465 HE	465 HG	D29 A
362 DK (H) (P) (P) (P) (P) (C)	NO	*	*		*	*	
	YES	+	+		465 KE	465 KG	D29 A
362 DL (H) (P) (P) (P) (S) (C)	NO	*	*		*	*	
	YES	+	+		465 LE	465 LG	D26 B
362 DM (H) (P) (P) (P) (S) (S)	NO	460 ME	460 MG	D18 C	464 ME	464 MG	D22 B
	YES	Manufacture Discontinued			Manufacture Discontinued		

H = Hold  
P = Pickup  
S = Signal  
C = Cutoff

\* The only set with these features is the set equipped for exclusion.  
\*\* Substitute a six button set containing the features required, omitting connection of features not used and blocking unused keys.  
+ Substitute a corresponding illuminated key button set.  
† Arranged for pickup on 3 private lines with common signaling key as well as pickup and hold on one C.O. line.