

BELL SYSTEM PRACTICES
Station Installation and Maintenance

SECTION C32.535
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AT&T Co Standard

TELEPHONE SETS

500 AND 501 TYPE

DESCRIPTION AND USE

1. GENERAL

- 1.01 This section describes and indicates the uses for 500- and 501-type common battery telephone sets.
- 1.02 The section is reissued to include 500E/F-, 501F-, and 500H-type telephone sets.
- 1.03 Due to extensive changes in this section, marginal arrows have been omitted.
- 1.04 Replacement parts are now listed in Section C32.544, Telephone Sets—500 Series—Supplies.

2. DESCRIPTION

- 2.01 **Appearance:** Fig. 1 shows a 500-type telephone set.



Fig. 1—500-Type Telephone Set

2.02 Mounting and Housing: All parts enclosed by the housing, including the dial or apparatus blank, line switch (switchhook), and cording, are mounted on the metal base. The plungers are part of the housing assembly. The housing can easily be replaced and is fastened to the base with two special, roundhead, captive machine screws. Three-conductor, neoprene-jacketed mounting cords are standard with all 500- and 501-type sets except the 500H (6-conductor) and 500L/M (4-conductor).

2.03 Network: The code number of the network (425A or 425B) and the terminal designations are cast in the surface of the terminal block which covers the network case and are also stamped on the side of the case. Circuit elements inside the network case are mounted on the underside of the terminal block. This includes a filter which not only suppresses dial pulsing interference with radio, but increases the life of the pulsing contacts. The network shall not be replaced in the field.

2.04 Transmission Equalization: Equalizers are required in 500 series telephone sets used near central offices or as "on premise" PBX stations. Zoning practices provide specific information on their use. Telephone sets are equipped for equalization as follows:

- (a) Sets coded 500A/B and 501A/B have 311A equalizers and 425A networks.
- (b) Sets coded 500J/K and 501J/K **do not** have equalizers.
- (c) All other 500 series sets have 425B networks which contain the necessary apparatus for equalization.

2.05 Dial: All 500 series dial telephone sets are equipped with 7-type dials:

2.06 Ringer: Early 500-type sets used C2A ringers and 501-type sets used C3A ringers. These ringers are not interchangeable. The C4A ringer can be used with either 500- or 501-type telephone sets. C-type ringers are high impedance and their sound output is several db higher than the B-type ringer. The subscriber may adjust the volume to one of four levels by rotating a notched wheel in the base of the set. If authorized by a service order or other local instructions, the stop that normally prevents ringer cutoff may be bent by the installer, as described in Section C32.537, 500 Series Telephone Sets, (500 and 501 Type), Installation. This will allow the user to completely silence the bell.

2.07 Handset: G1A handsets are standard with all telephone sets in the 500 series. Neoprene-jacketed, 4-conductor

handset cords are furnished. Retractable cords are available with proper authorization.

2.08 **Manual and Dial Set Coding:** The type of telephone set and date of assembly is stamped with aluminum lacquer on the base of the set approximately as shown in Fig. 2.

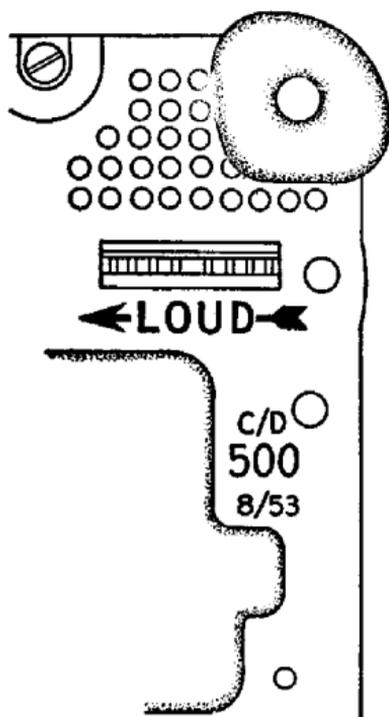


Fig. 2—Base of 500 Series Sets

Code numbers such as 500C/D cover both manual and dial versions of a particular type set. When necessary to specify manual or dial, use the appropriate code letter shown in Table A.

Table A

500-Type Sets		501-Type Sets	
Manual	Dial	Manual	Dial
A	B	A	B
C	D	C	D
E	F		F
	H	J	K
J	K		
L	M		

Note: Early 500J/K and 501J/K sets were coded 500T and 501T respectively.

3. USE

3.01 **General-Purpose Telephone Sets:** Telephone sets coded 500A/B and 500C/D are general-purpose sets for use with manual or dial common battery service on individual lines, including PBX and 1A key stations which require tip and ring only, or for any party-line service with nonpolarized ringing.

3.02 **Tube Sets:** Each telephone set coded 501A/B or 501C/D is furnished with a cold cathode gas-filled tube as part of its ringing circuit. They are primarily for use with polarized ringing service (4-party selective or 8-party semiselective). The 501J/K is for the same purpose where equalization is not required.

Note: Tube sets may be used with 4-party semiselective or divided code ringing for the purpose of reducing inductive interference as covered in Section C63.271, Line and Ringer Connections to Reduce Induction.

3.03 **Special Purpose Sets:** The following paragraphs cover the description and uses of special purpose sets coded 500 or 501.



Fig. 3—500F Telephone Set Showing Plunger Switch and Instruction

3.04 **500E/F:** This set is used for party-line service with nonpolarized ringing. It should not be used as tip party on a service which requires tip-party identification. The 500E/F is equipped with a plunger switch and wired to avoid interference with another party-line user's dialing or talking when the handset is lifted to place a call. Only a low-loss receiver circuit is bridged across the line with normal operation of the line switch (switchhook) contacts. When it is found that the line is not busy, pulling up the left plunger operates the plunger switch and cuts in the talking and dialing circuit elements. (See Fig. 3.) A call can then be placed or answered. Replacing the handset restores the switch automatically. The 500E/F replaces 302AA (Manual) and 302AC (Dial) telephone sets.

3.05 **501F:** Where polarized ringing is used, this set provides the same feature as the 500F. It replaces the 306G telephone set. (See Note in 3.02.)

3.06 **500H:** This set is equipped with a lucite dial finger wheel, a lamp which illuminates the dial, and a 6-conductor mounting cord. (See Fig. 4.) The lamp circuit is closed through the line switch (switchhook) contacts when the handset is lifted from its cradle. The light goes out when the handset is replaced. An auxiliary 6- to 8-volt ac or dc power source for the lamp circuit is required. Due to its wiring arrangement, the 500H cannot be used as tip party on message rate, automatic ticketing, AMA, or zone registration services. Its use otherwise is the same as the 500C/D.



Fig. 4—500H Telephone Set With Illuminated Dial

3.07 **500L/M:** This set is to be used at installations which require that the ringer circuit be brought out separately through the mounting cord. Examples are 1A-type telephone answering sets, 507-type PBX attendants' stations, certain 2B key telephone system stations, etc. A 4-conductor mounting cord and an additional terminal strip are provided. With the above exceptions, other parts of 500L/M telephone sets are the same as the 500C/D. Manual sets (500L) are available only by conversion.