

**BELL SYSTEM PRACTICES**  
Station Installation and Maintenance

**SECTION C32.540**  
Issue 2, July, 1954  
**AT&T Co. Standard**

## **TELEPHONE SETS**

### **502, 510, AND 511 TYPES**

### **DESCRIPTION AND USE**

#### **1. GENERAL**

- 1.01 This section describes and indicates the uses for 502-, 510-, and 511-type common battery telephone sets.
- 1.02 The section is reissued to include the 502-type telephone sets.
- 1.03 Due to extensive changes in this section, marginal arrows have been omitted.
- 1.04 Replacement parts are listed in Section C32.544, Telephone Sets—500 Series—Supplies.

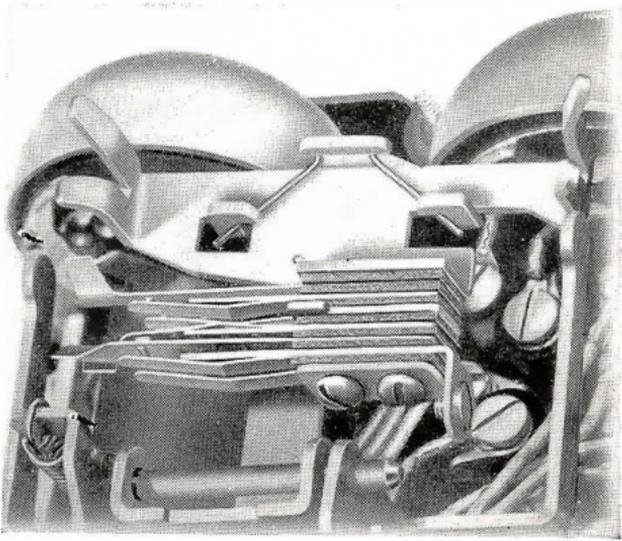
#### **2. DESCRIPTION (GENERAL)**

2.01 **Appearance:** The size and shape of 502, 510, and 511 sets are similar to 500-type telephone sets. It may be noted that the 511 set shown in Fig. 1 has a plastic turn-push button below and to the left of the dial. Also, the left plunger is designed to provide a fingerhold so that it may be lifted to operate a switch. The **502** has **only** the special plunger and the **510** has **only** the turn-push button. These features will help identify the different types of sets from an appearance standpoint.



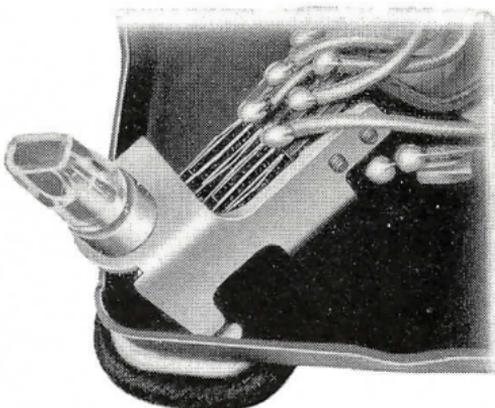
Fig. 1—511-Type Telephone Set

2.02 **Exclusion Switch:** This switch is operated by manually lifting the left plunger, and restored by replacing the handset. When operated, it disconnects and short circuits (excludes) one or more extension stations to assure privacy of conversation (see Fig. 2).



**Fig. 2—Exclusion Switch (P-19A410 Switch Assembly)**

**2.03 Turn-Push Button Key:** Two lines may be picked up by sets equipped with this key (see Fig. 3). Turning the button transfers the talking and dialing circuits of the telephone set to either of the two lines. If only one line is desired, the key contacts may be used to cut off an extension station, an external ringer, the ringer in the set, or a headset (listening station). The key may also be used to transfer the line from the ringer in the set to an extension station or ringer. Depressing the button closes another pair of contacts. This function provides for push-button signaling.



**Note:** A P-347015 terminal strip and key assembly includes a 584A key and the terminal strip shown in Fig. 4.

**Fig. 3—Turn-Push Button (584A Key)**

2.04 **Network:** All sets covered by this section are equipped with 425B networks and are therefore provided with equalization. The network case acts as a shield and prevents crosstalk where two lines terminate in a set. Additional shielding is not required.

2.05 **Mounting and Housing:** The general information on mounting and housings covered in the description of 500-type sets also applies to 502-, 510-, and 511-type sets. In addition a terminal strip (see Fig. 4) has been provided for terminating the mounting cord or other connections. Mounting cord sizes are covered under individual set descriptions later in this section and the supplies section gives the code numbers of cords.

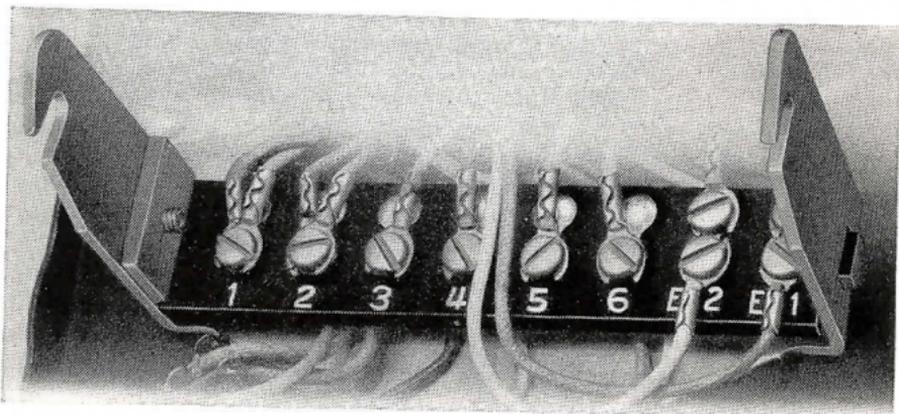


Fig. 4—P-338886 Terminal Strip Assembly

**Note:** Part of P-347015 Terminal Strip and Key Assembly

- 2.06 **Dial:** All dial telephone sets covered here are equipped with 7-type dials.
- 2.07 **Ringer:** C4A ringers with volume control are used in 502-, 510-, and 511-type telephone sets. When a signaling buzzer is desired, the ringer may be replaced with a 7-type buzzer mounted on a 44A bracket.
- 2.08 **Handset:** G1A handsets are used on all telephone sets covered in this section.
- 2.09 **Manual and Dial Set Coding:** Code numbers such as 502A/B cover both manual and dial versions of each type key telephone set to permit converting to either without changing the code number stamped on the base. When necessary to specify manual or dial, use the proper code letter with the code number shown in Table A.

**TABLE A**

TYPE OF SERVICE	SET CODE NUMBERS			
	502	510	510	511
Manual	A	A	E	A
Dial	B	B	F	B

**3. USE**

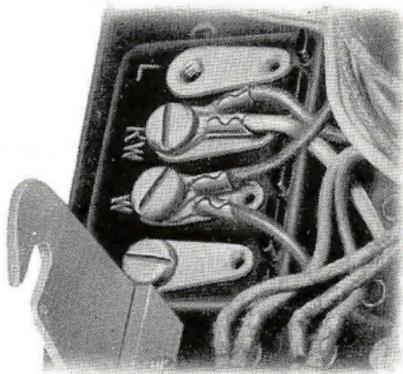
3.01 **General:** Telephone sets covered by this section are primarily for use with key telephone systems or key telephone equipment. Each type of set is equipped to provide one or more features such as exclusion, 2-line pickup, or signaling. The service uses and basic feature combinations of each type are covered in the next four paragraphs. Optional feature combinations are covered in Table B, page 7.

3.02 **502A/B:** This set is equipped with an exclusion switch and is primarily for use in 1A or 1A1 key telephone systems when only one line is required. It may also be used at attendant's positions or with 101-type key equipment. A set of contacts in the line-switch (switchhook) that "make" as the handset is lifted are wired to connect control lead "A" to ground in 1A1 key telephone systems. This is called external circuit control. The 502A/B telephone set is furnished with a 6-conductor mounting cord and replaces 402A and 402C sets.

3.03 **510A/B:** This set is primarily for use with 1A key telephone systems. It is equipped with a turn-push button key for 2-line pickup. It has a 4-conductor mounting cord and replaces 410AA and 410AC sets.

3.04 **510E/F:** This set is equipped with a 6-conductor mounting cord. Its other parts and service uses are the same as the 510A/B. The additional mounting cord pair permits 2-line pickup and signaling as basic features. The 510E/F replaces 410BA and 410BC sets.

3.05 **511A/B:** This set is intended for use in 1A key telephone systems. It is equipped with a turn-push button key for 2-line pickup and signaling, and an exclusion switch. It has a 10-conductor mounting cord and replaces 410CA- and CC-, 411AA-, AC-, CA-, and CC-types of telephone sets. It also has an auxiliary terminal block shown in Fig. 5.



**Fig. 5—Auxiliary Terminal Block (P-16A368)**

3.06 **Optional Feature Combinations:** Starting from left to right, Table B is intended to aid in the selection of a telephone set according to the combination of features required at a station. Reading right to left from a set code number gives the various feature combinations of the set.

**TABLE B**

<b>FEATURES</b>	<b>With Push-Button Signal Circuit</b>	<b>With Exclusion</b>	<b>Line Ringer in Set</b>	<b>Common Ringer or Buzzer in Set</b>	<b>Tel. Set Code No.</b>	<b>No. of Mtg. Cord Conductors</b>
2 Line Pickup	No	No	Yes	No	510 A/B	4
			No	Yes	510 E/F	6
	Yes	Yes	Yes	No	511 A/B	10
			No	Yes	511 A/B	10
	Yes	No*	No	Yes*	511 A/B	10
		No	Yes	No	510 E/F	6
One Line	No	Yes	Yes	No	502 A/B	6
			No	Yes	502 A/B	6
		No*	No	Yes*	502 A/B	6
One Line and Cut-Off Ext.; or Aux. Headset; or Ext. with Ringer Transfer	Yes	No	Yes	No	510 E/F	6
		Yes	Yes	No	511 A/B	10
	No	No	Yes	No	510 A/B	4
One Line and Cut-Off Line Ringer Inset	Yes	No	Yes	No	510 A/B	4

\* Exclusion switch used to cut off common ringer.