

## RINGERS—E1-TYPE

### 1. GENERAL

1.01 This section contains identification, installation, connections, and maintenance information on the E1-type ringer.

1.02 This section is reissued to show the 146A Adapter replaced by the 146B and to revise the text.

1.03 The E1-type ringer (Fig. 1) may be used on the following services:

- Individual lines
- 2-party flat and message rate
- 4-party semiselective
- Nonselective party line
- Divided code ringing
- Regular PBX station

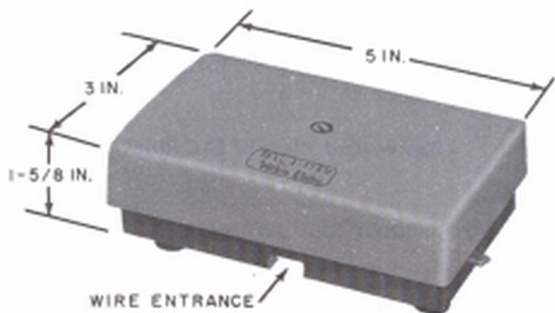


Fig. 1—E1-Type Ringer, External View

1.04 When controlled by a 531C or 687B subscriber set, the E1-type ringer may be used on the following services:

- 4-party selective
- 8-party semiselective

1.05 See appropriate section for subscriber set connections.

1.06 Obtain tip party identification, when required, through the ringer associated with each station. Refer to section covering connections for particular type of telephone set used.

### 2. IDENTIFICATION

2.01 The E1-type ringer (Fig. 2 and 3) consists of a 7- or 10-terminal connecting block and a single-gong ringing mechanism in series with an 0.40 uf capacitor.

2.02 The E1-type ringer is equipped with a volume-control lever (Fig. 2). Volume is adjustable from off to loud. To adjust ringer to off position, refer to 3.05.



*Be sure to acquaint customer with location and use of ringer volume-control lever.*

2.03 The ringing mechanism, capacitor, and connecting block are mounted on a gray metal base enclosed with a P-81D449 (light olive gray) or a P-81D450 (ivory) plastic cover.

2.04 The E1A and E1B ringers are rated MD and are replaced by the E1C and E1D, respectively. The E1C and E1D ringers have a gong resonator to improve the audible characteristics of the ringer.

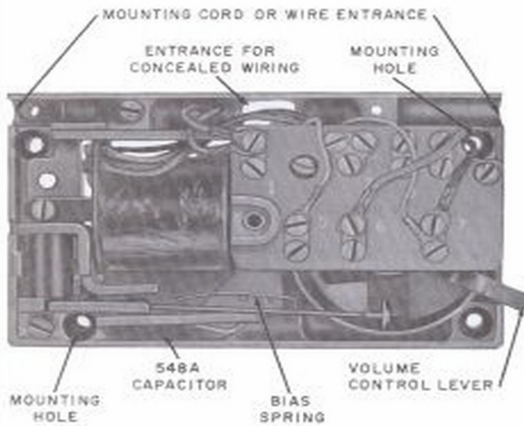


Fig. 2—E1C Ringer, Internal View

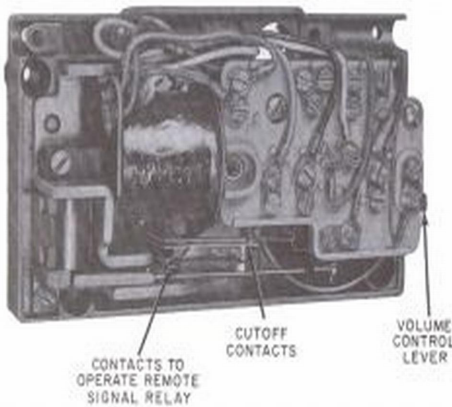


Fig. 3—E1D Ringer, Internal View

2.05 The E1B (MD) and E1D ringers are used with the 2A farm interphone as an auxiliary ringer, connecting block, and remote signal control.

### 3. INSTALLATION

3.01 The E1-type ringer may be mounted to a 63A bracket, KS-19407L1 bracket or an electrical outlet box using a 146B adapter. All necessary screws are provided with the adapter.

3.02 Mounting holes in the ringer are fitted with rubber grommets. Unless using a 146B adapter, use screws of sufficient length to hold ringer to mounting surface securely.

3.03 The inside wire can enter the ringer from the back, bottom, or either end (Fig. 1, 2, and 3).

3.04 When the inside wire enters the ringer from the bottom or back, the mounting cord from the telephone set may be brought in from either end of ringer. The E1-type ringers have a stayhook holder on the left side which can be moved to the right side, if desired. Secure telephone set cord to ringer as shown in Fig. 4.

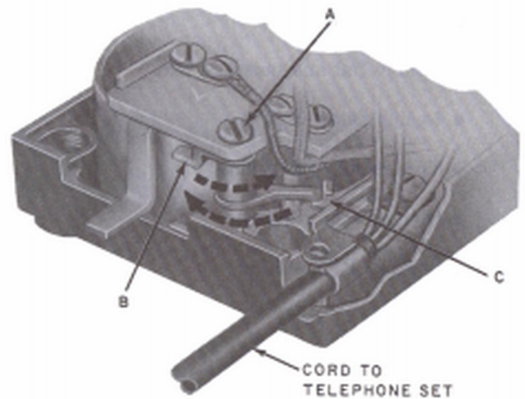


Fig. 4—End View of E1C Ringer

3.05 To silence ringer permanently:

- (1) Loosen screw A (Fig. 4).
- (2) Move stop B (Fig. 4) to right.
- (3) Move volume control to off.
- (4) Move latch C (Fig. 4) to the left so that it falls in place over the volume-control lever. This will lock ringer in off position.

**4. CONNECTIONS**

**4.01** Some typical connections for the E1-type ringer are shown in Fig. 5.

**4.02** The E1D ringer is equipped with two sets of contacts (Fig. 3). One set, controlled by the clapper, operates a remote signal relay; the other, operated by the volume-control cam, cuts off remote signals. For connections, refer to section on farm interphone.

**5. BIAS SPRING POSITION**

**5.01** The ringer is shipped with bias spring in the high (outside) notch. Table A indicates proper bias spring position for various classes of service.



***Do not bend bias spring. Correct bias spring tension has been set at factory.***

**5.02** Obtain a ringing test, after completing installation. Check for bell taps while dialing.

**5.03** If bell does tap with bias spring in low notch, move bias spring to high notch. Repeat ringing test.

**6. MAINTENANCE**

**6.01** If ringer fails to operate properly, check that:

- (1) Airgap is clear of dirt or foreign material. Clean if necessary.
- (2) All connections are tight and correct.
- (3) Leads do not interfere with ringer operation.
- (4) The 548A capacitor is not open or shorted. Replace if defective.

**6.02** Replace ringer if it still fails to operate properly.

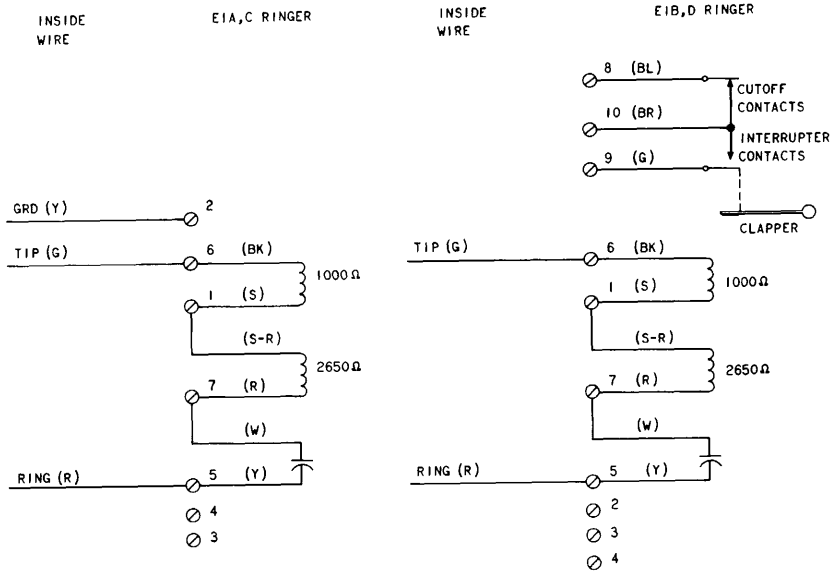


Fig. 5—E1-Type Ringer, Connections