# RINGERS

# M AND N TYPES

## 1. GENERAL

**1.01** This section is reissued to add information on the M1B ringer. Changes or additions in the body of the table is indicated by shaded areas.

## 2. IDENTIFICATION

**2.01** The M-type (Fig. 1 and 2) and N-type (Fig. 3) ringers are high-impedance, single-coil, single-gong ringers. The coil on the M1A, M2B, and N1A has four spade-tipped leads for use where tip-party identification is required (Fig. 4). Where tip-party identification is not involved, the two-lead M1B ringer can be used.


***Use the BK and S-R leads when 2650 ohm identification is required. DO NOT use the 2500 ohm winding which may result in bell tap due to reversed ringer bias.***

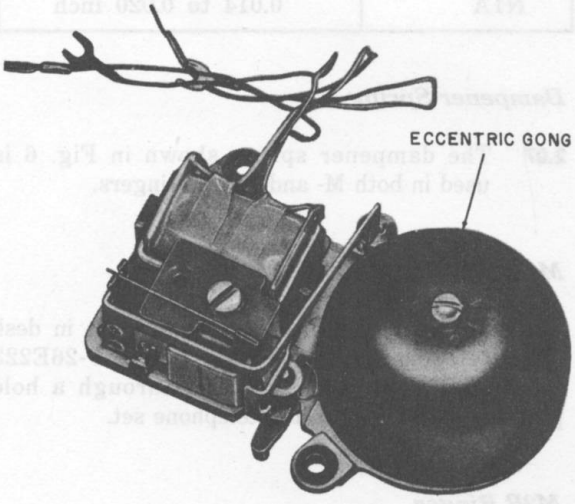


**Fig. 1—M1A and M1B Ringer**

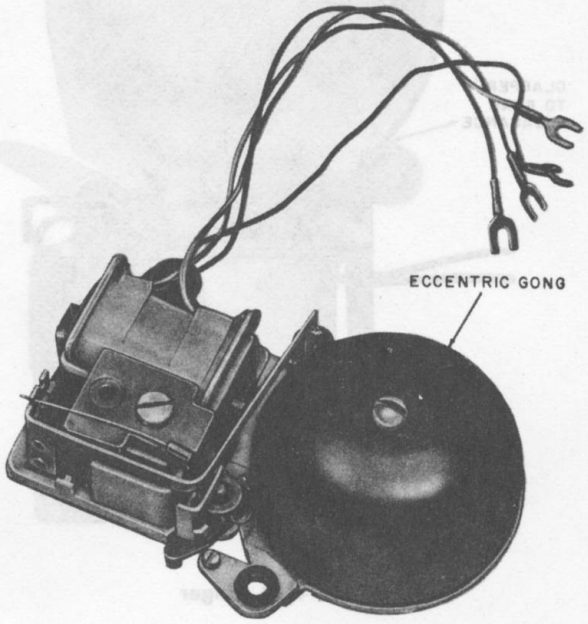


**Fig. 2—M2B Ringer**

**2.02** These ringers are designed to operate in series with an 0.45 μf capacitor.

### *Ringer Cutoff*

**2.03** These ringers are provided with a mechanical volume control. There are three positions of volume: HIGH, LOW, and OFF. The OFF position is blocked by a factory placed machine screw. Remove the screw for ringer cut off feature. (See Fig. 5, 6, and 7).


***To avoid breaking volume control arm when replacing blocking screw, be sure control is in high position.***

**2.04** Cutoff features for the 1554B telephone set (Fig. 8) manufactured in late 1963 and early

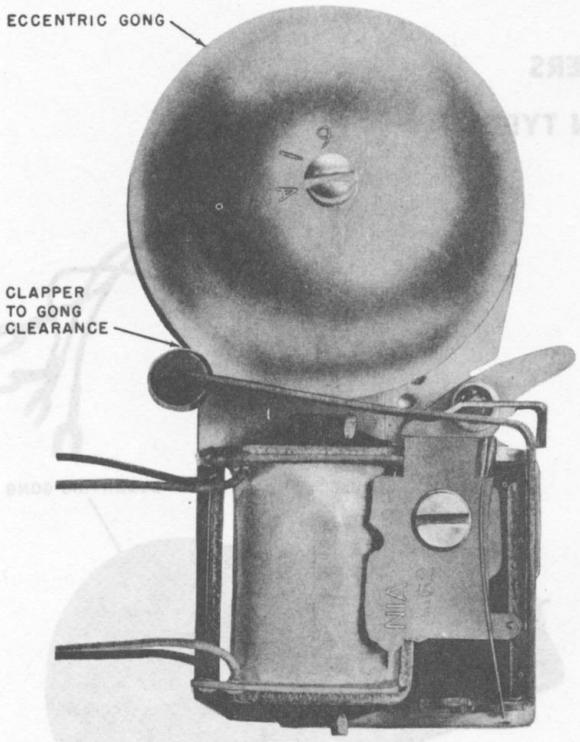


Fig. 3—N1A Ringer

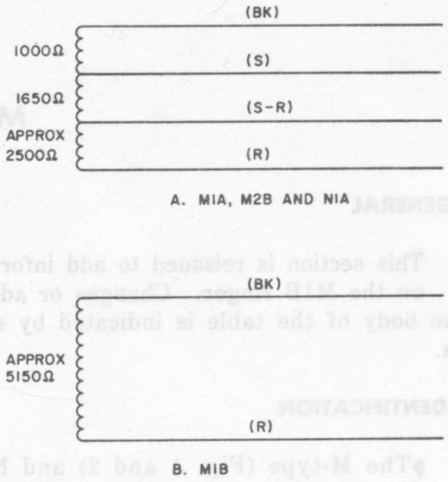


Fig. 4—M- and N-Type Ringers, Schematic

1964 is accomplished by bending the projection on the ringer adjustment arm. Bend the projection toward the ringer gong.

***Caution: Do not allow the projection to touch the base of the ringer or the ringer gong.***

### *Gong*

**2.05** The 61A gong used in these ringers is eccentric (Fig. 1 and 2). The resonator is built in and needs no adjustment. Table A shows clapper to gong clearance.

### *Bias Spring*

**2.06** The bias spring for the M- and N-type ringers is factory set in the HIGH tension notch (Fig. 5). It can be positioned to either the HIGH or LOW tension notch.

**TABLE A**

**CLAPPER TO GONG CLEARANCE**

| RINGER | CLEARANCE |
|---|---|
| M1A, M1B | 0.010 to 0.020 inch |
| M2A, M2B | 0.008 to 0.016 inch (ringer vertically mounted) |
| N1A | 0.014 to 0.020 inch |

### *Dampener Spring*

**2.07** The dampener spring shown in Fig. 6 is used in both M- and N-type ringers.

### *M1A, M1B, and N1A Ringers*

**2.08** These ringers are intended for use in desk telephone sets. Access to the P-26E223 screw used for ringer cutoff is through a hole provided in the base of the telephone set.

### *M2B Ringer*

**2.09** This ringer is intended for use in wall telephone sets. Access to the P-27E539 screw used for ringer cutoff is gained by removing the telephone set housing (Fig. 6 and 7).

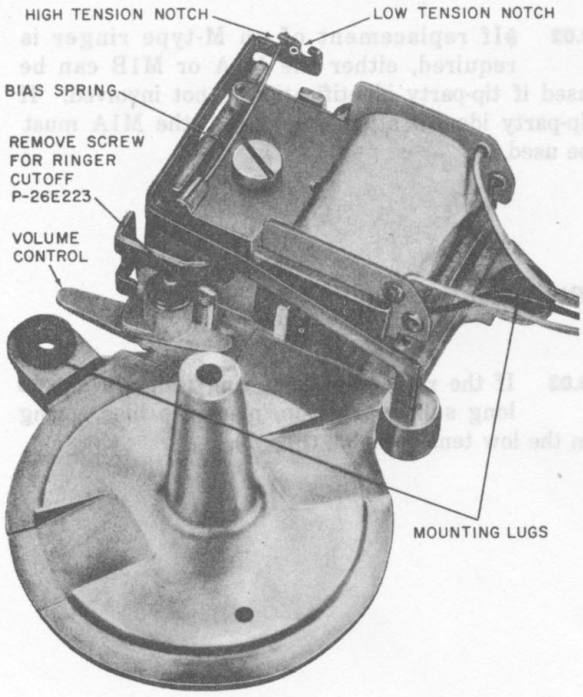


**Fig. 5—M1A and M1B Ringer, Gong and Resonator Removed**

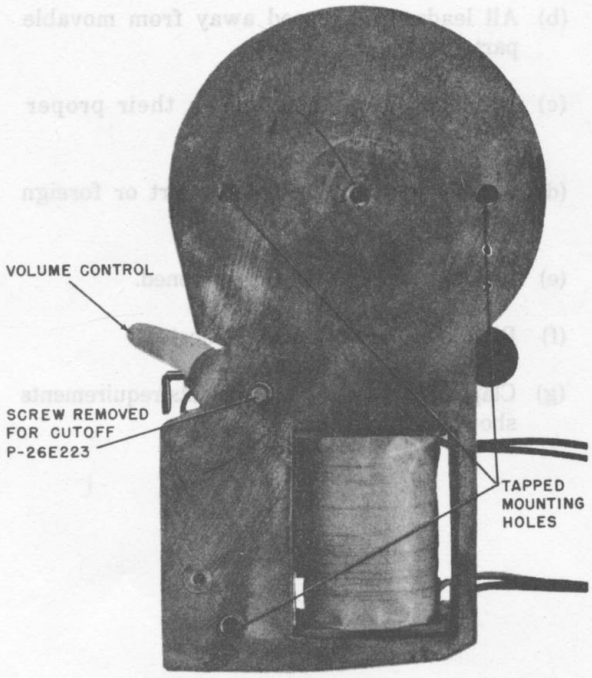


**Fig. 7—N1A Ringer, Rear View**

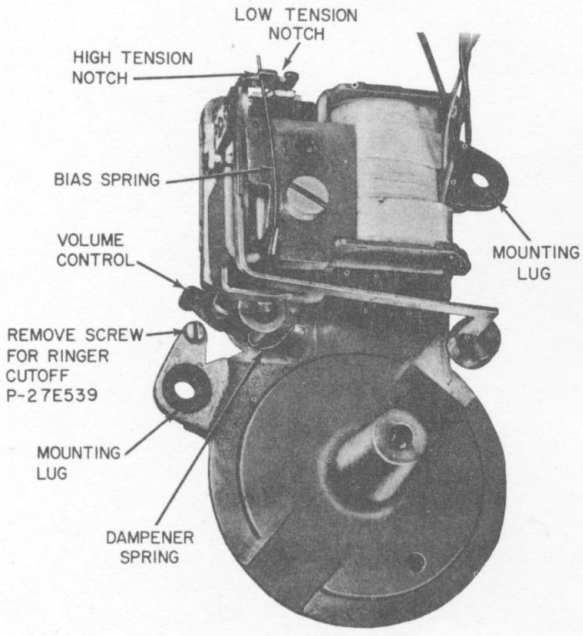


**Fig. 6—M2B Ringer, Gong and Resonator Removed**

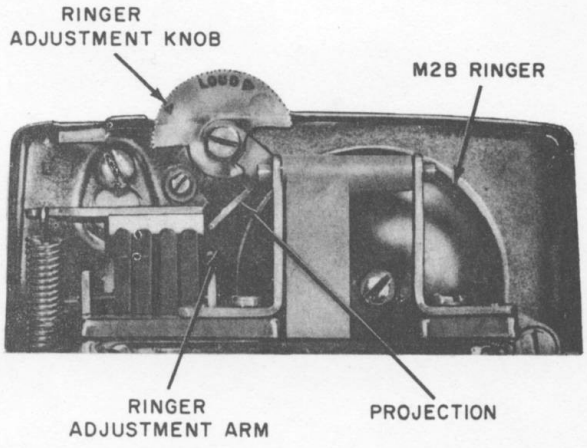


**Fig. 8—Ringer Cutoff in 1554B Telephone Set**

## 3. MAINTENANCE

**3.01** When ringer fails to operate, check that:

(a) Volume control is not in OFF position.

(b) All leads are dressed away from movable parts of ringer.

(c) All leads are tight and on their proper terminals.

(d) Armature airgap is free of dirt or foreign material.

(e) Bias spring is correctly positioned.

(f) Ringer coil is not open or shorted.

(g) Clapper to gong clearance meets requirements shown in Table A.

**3.02** ▶If replacement of an M-type ringer is required, either the M1A or M1B can be used if tip-party identification is not involved. If tip-party identification is involved, the M1A must be used.◀

***Bias Spring***

**3.03** If the ringer does not ring properly due to long subscriber loop, place the bias spring in the low tension notch (Fig. 5).