F1A RINGER

1. GENERAL

1.01 This practice covers the description, installation and maintenance procedures of the BELL-CHIME F1A ringer. Three types of signal operation are available. By operating a control lever as shown in Fig. 1, the customer selects either a CHIME, a LOUD ring, or a LOW ring.

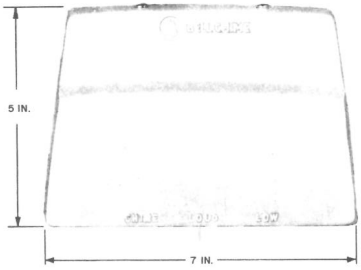


FIGURE 1. F1A Ringer with 125A Cover in Place

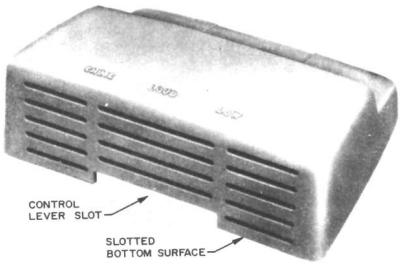


FIGURE 2. 125A Cover

1.02 The plastic cover (Fig. 2) is not supplied with the F1A ringer. Order separately as follows:

a. Cover 125A-50 (Ivory)

b. Cover 125A-63 (Gold)

2. INSTALLATION REQUIREMENTS

2.01 The F1A ringer is installed when covered by a contact memo (see Fig. 3). Typical installations include:

a. Centrally located BELL-CHIME ringer

b. Extension ringer

c. Ringer for Cinderella telephone set

d. Loud ringer

2.02 This ringer may be connected with the following classes of service:

a. Individual flat and message rate

b. 2-party flat and message rate

c. Regular PBX stations.

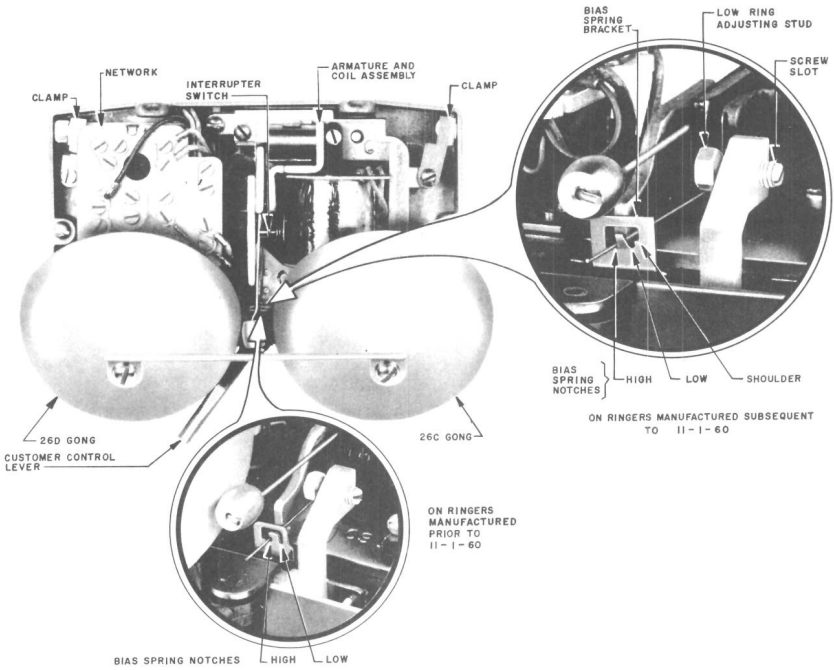


FIGURE 3. F1A Ringer, Components

2.03 This ringer *is not to be used* with cold cathode tube-type ringing bridges for the following classes of service:

a. 4-party selective

b. 8-party semiselective

2.04 In areas where inductive interference requires cold cathode tube-type ringing bridges, this ringer may be connected as shown in Figures 4 and 5.

2.05 Since the customer may experience difficulty distinguishing rings in the CHIME position, do not use with these code ringing services:

a. Nonselective party lines

b. Divided code ringing

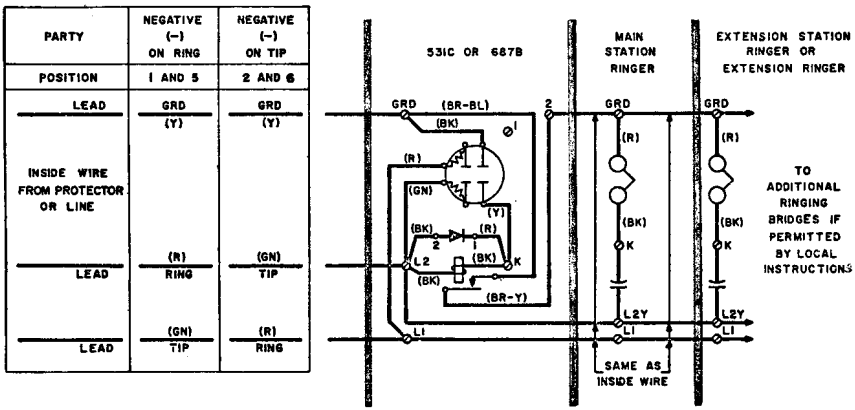


FIGURE 4. Modified 500 Subscriber Set Connections
Negative Parties - Severe Induction

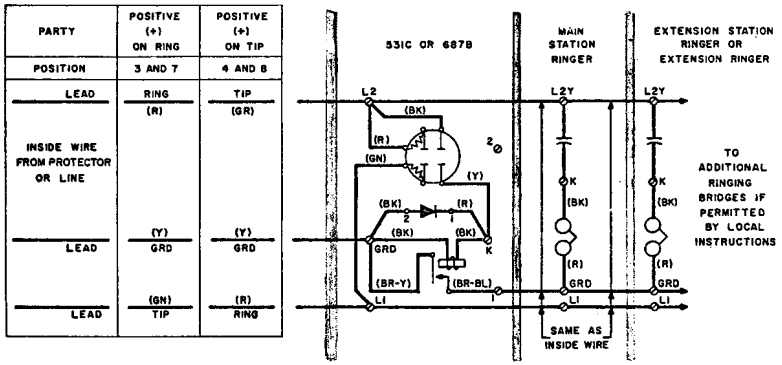


FIGURE 5. Modified 500 Subscriber Set Connections
Positive Parties - Average to Severe Induction

2.06 When tip party identification is required, it must be obtained through the ringer associated with each station. The connections are shown in the practice for particular telephone set used.

2.07 If tip party identification is required and the customer does not wish the telephone set associated with F1A ringer to ring:

a. F1A ringer should not be used for tip party identification.

b. F1A ringer should be connected as normal tip party ringer

c. Telephone set should be connected for tip party identification with the ringer silenced as described in the practice related to set.

3. DESCRIPTION

3.01 The F1A is a single coil, high impedance ringer with 2-position bias spring. The component parts, shown in Fig. 3, are:

a. Die-cast base for mounting components; it also provides cord clamps for telephone set mounting cord.

b. Armature and coil assembly similar to C-type ringers.

c. Network (498A) containing necessary electrical circuit elements which provide a 7-terminal connecting block.

d. Customer switch assembly for changing from bell to chime.

e. Interrupter switch assembly operated by movement of clapper rod to control chime operation. (Earlier model ringers have a 4-leaf spring assembly; later models have 3-leaf spring assembly.) (See Fig. 6.)

f. Stop bar to position cover away from gong assemblies.

4. INSTALLATION

4.01 Standard ringing bridge limitations apply to the use of this high impedance ringer.

4.02 Suggest a location so the customer can hear the chime or low ring in largest area of residence. The F1A will usually provide satisfactory coverage when centrally located on an inside partition about 5 feet above floor with control lever accessible to customer.

4.03 Ringer location shall allow space for tightening cover screws on top and adjusting low ring stud on right side.

4.04 Fasten directly to wall surface with two fasteners. Select length of fastener to provide secure mounting to particular wall material.

a. Use No. 8 RH wood screws when fastening to wood, wood studs.

b. Use toggle bolt (or similar) on wall surfaces of hollow construction.

4.05 Inside wire may enter ringer from back, bottom, or either side. (See Fig. 7 and 8.)

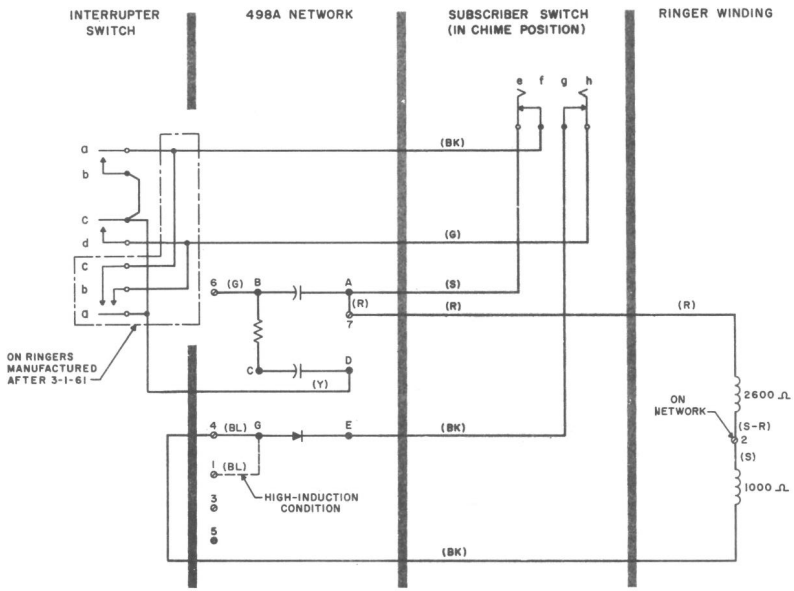
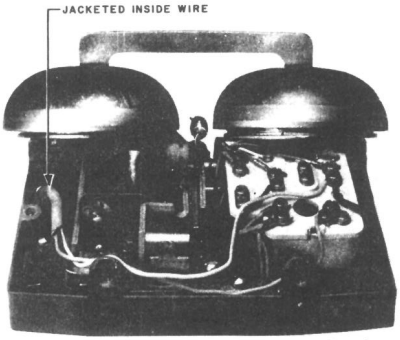
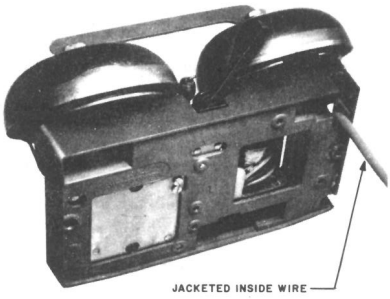


FIGURE 6. F1A Ringer, Schematic



F1A Ringer, Top View, Showing Jacketed Inside Wire Entering Through Rear

FIGURE 7.



F1A Ringer, Rear View, Showing Jacketed Inside Wire Entering Through Rear

FIGURE 8.

4.06 When inside wire enters ringer from bottom or back, mounting cord from telephone set may be brought into either end of the ringer. When inside wire enters from one end and set cord enters from opposite end, secure set cord to ringer with clamps provided.

CAUTION: *On earlier models of the F1A ringer, the interrupter switch assembly was not mounted separately. Loosening the left clamp screw may allow the component plate to shift, changing the position of the interrupter switch. On later models of the F1A ringer (Fig.3), the rack arm may become displaced from under the 26C gong plate preventing movement of the ringer control lever to the LOUD or CHIME position. Use care to prevent these conditions when loosening the left clamp screw and fully tighten clamp screw when the set cord is installed.*

4.07 Adjust volume of low ring by moving adjusting stud (Fig. 3) right or left; use a small screwdriver in slotted end located beneath right gong. Be sure that rack arm does not snag on gong plate.

NOTE: *The installer should be sure to acquaint customer with location and use of ringer control lever.*

TABLE 1.

BIAS SPRING POSITION

Class of Service		Bias Spring Notch	Remarks
Bridged Ringing Service	Individual Flat, Message Rate and PBX Stations	High	The bias spring may be placed in low notch when double tap is experienced in CHIME position or when operation is not satisfactory with bias spring in high notch. If repositioning bias spring results in dial tap or poor operation, check ringer as outlined in 6.00.
Grounded Ringing Service	2-party Flat and Message Rates	High	

5. BIAS SPRING POSITION

5.01 The ringer is shipped with bias spring in loud (left) notch. Table 1 indicates proper position of bias spring for various classes of service. (See Fig. 3.)

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

5.02 After completing installation work, obtain a ringing test in all three positions of subscriber switch. Obtain tests according to local instructions. Check for bell taps while dialing.

CAUTION: *Proper poling of the F1A ringer is very important to avoid double-tap in the CHIME position and bell taps while dialing.*

5.03 The biasing spring bracket has been changed on later models of the F1A ringer. (See Fig. 3.)

NOTE: *On later type brackets, bias spring must never be placed on shoulder located to right of low notch.*

6. MAINTENANCE

6.01 On a maintenance visit where ringer fails to operate properly, proceed as follows:

a. Check airgap at armature for dirt or foreign material and clean if necessary.

b. Make sure all connections are tight and *correct.*

c. See that all wires are dressed so that they do not interfere with operation of the ringer.

d. Clean interrupter switch assembly contacts when required, by carefully burnishing with a 265C tool.

NOTE: *Care must be taken to avoid changing adjustment of spring gap and spring tension of interrupter switch.*

6.02 If ringer rings properly but armature sticks in operated position when subscriber switch is in CHIME position, replace ringer.

6.03 If ringer rings with customer control lever in CHIME position, proceed as follows:

a. Shift network mounting plate until interrupter switch stud just touches clapper rod.

b. If Step a. results in double-tap, shift component plate *back* slightly toward original position.

c. If Step a. and b. does not correct trouble, replace ringer.

NOTE: On earlier models of the F1A ringer the interrupter switch was mounted to the network mounting bracket. On later models the interrupter switch is mounted separately to the ringer base and steps a., b. and c. will not apply.

7. CONNECTIONS

7.01 Table 2 gives connections for F1A ringer and circuit drawing is provided in Fig. 6.

TABLE 2.

LINE AND RINGER CONNECTIONS FOR F1A RINGER

Wire or Lead			Individual or Bridged	Ring Party	Tip Party
Inside Wire	Ring	R	6	6	1
	Tip	G	4	1	6
	GRD	Y	–	4	4
Ringer		R	7	7	7
		S-R	2	2	2
		S	2	2	2
		BK	4	4	4
Network Straps	G	BL	4	4	4
	A	R	7	7	7
	B	G	6	6	6