

GTE AUTOMATIC ELECTRIC
TYPE 33 RINGER UNIT
INSTALLATION

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1. GENERAL

1.01 The Type 33 Ringer unit equipped with a Type 45 ringer (Figure 1) is a separate audible signaling device that can be used with GTE Automatic Electric coin telephones or telephones that are not equipped with ringers.

1.02 This section is being reissued to include information on the new ringer capacitor used with the Type 33 ringer unit. This section supersedes Section 473-810-200, Issue 2. Because of extensive changes marginal arrows are not used. Remove Issue 2 from the GTE Practices binder and replace.

2. DESCRIPTION

2.01 The Type 33 ringer unit is comprised of a baseplate, terminal strip and plastic housing, and when assembled measures 5-1/4-inches wide, 5-1/4-inches high and 2-1/8-inches deep. The Type 33 ringer unit (422357) is available in classic ivory. The ringer unit can be equipped with straight-line, superimposed, or harmonic ringers. These ringers may be supplied with standard "A" coils or impregnated "B" coils (the impregnated coils offer

greater climatic protection). The ringer capacitor, on the ringer assembly (Figure 1), is replaced by a cold cathode tube when superimposed ringing is desired (Figure 2). The ringer unit also contains a terminal strip where the ringer wiring, telephone line cord, and station wires (from the station protector) are connected. This terminal strip eliminates the need for a line cord connecting block.

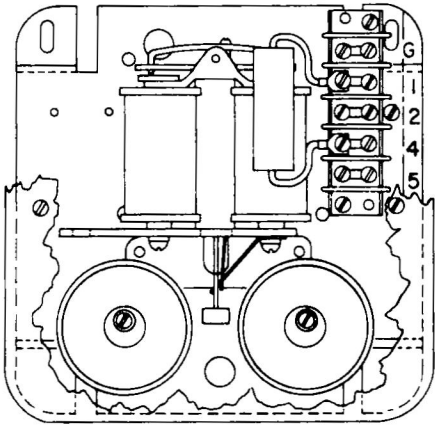
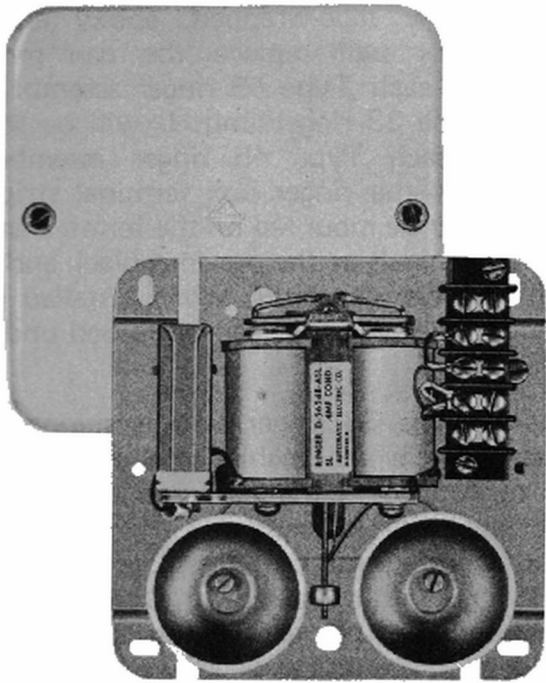


Figure 1. Type 33 Ringer Unit Equipped with Type 45 Ringer.

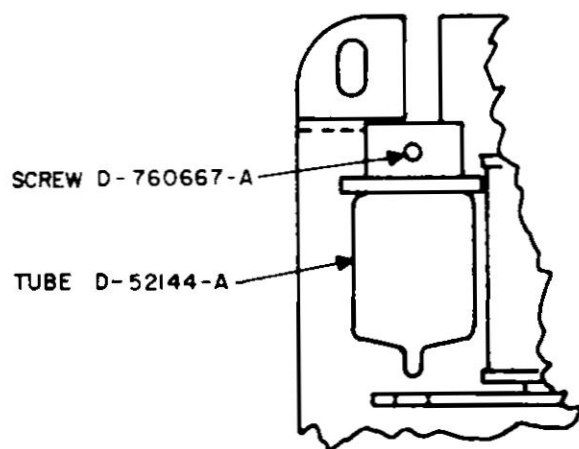


Figure 2. Tube Mounting for Superimposed Ringing.

2.02 The new tape-wrapped, epoxy end-filled capacitor will replace the can mounted capacitor on each Type 45 ringer assembly used with the Type 33 ringer unit. It will be shipped loose with each Type 45 ringer assembly for connection at the ringer box terminal strip. The capacitor is to be mounted on the terminal strip to the same terminals as the previous black and white leads of the can capacitor. When installed in the ringer box, the capacitor can be folded under the terminal strip.

2.03 The Type 33 ringer unit is shipped unassembled, which enables minor assembly and wiring operations in the field and also permits a greater flexibility in supplying the various ringer assemblies and ringer unit from stock. When the Type 33 ringer unit is used with D-56548 Type 45 ringer assemblies, the necessary assembly hardware is provided.

3. **INSTALLATION**

Assembly

3.01 To assemble the Type 33 ringer unit, fasten the ringer assembly to the baseplate with the three mounting screws provided. To install the tape-wrapped, epoxy end-filled capacitor, attach the spade-ended terminals of the capacitor to the desired terminals of the terminal strip and fold under. For superimposed ringing, mount the cold cathode tube on the baseplate (Figure 2) using the self-tapping screw provided.

Mounting

3.02 After the ringer unit has been assembled, it can be wired or mounted and then wired,

whichever is more convenient. Mount the ringer unit in a convenient inconspicuous location within six feet of the telephone. The ringer unit may be mounted with the baseplate in a horizontal or vertical plane; however, when mounted in a vertical plane the ringer gongs should be at the bottom.

Mounting Type 33 Ringer Unit Over an Outlet Box

3.03 The Type 33 ringer unit can be mounted to several types of standard electrical outlet boxes by using a conduit adapter plate. The standard electrical outlet boxes on which the Type 33 ringer unit can be mounted are the following:

- (a) 4-inch, square outlet box.
- (b) 4-inch, octagonal outlet box.
- (c) 4-11/16-inch, square outlet box.
- (d) Suttle Equipment Co. 63-A junction box.
- (e) 2 x 4-inch handy box.

3.04 Figure 3 is an outline drawing of the conduit adapter plate which shows the various mounting slots that correspond with the various electrical outlet boxes previously mentioned. The four holes (one in each corner) are used to mount the Type 33 ringer unit. Mount the conduit adapter plate and Type 33 ringer unit to the electrical outlet box in the following manner:

- (1) Remove the cover plate and screws from the front of the electrical outlet box.
- (2) Bring the station wire out through the outlet box and wire hole in the conduit adapter plate.
- (3) Referring to Figure 3, mount the conduit adapter plate using the screws removed in step (1) and the holes designated in the notes.
- (4) Remove the cover from the Type 33 ringer unit and mount the ringer baseplate to the conduit adapter plate with four 8-32 x 3/16-inch screws.
- (5) Complete the wiring of the ringer unit and replace the cover.

Wiring

3.05 To wire the Type 33 ringer unit for use with Type 182, 183 telephone sets and other telephone sets using three conductor line cords refer to the appropriate section in the 473 series of GTE Practices.

3.06 To wire the Type 33 ringer unit for use with the Type 182A telephone set using a five conductor line cord refer to the appropriate section in the 473 series of GTE Practices.

4. ORDERING INFORMATION

4.01 The ringer box, ringer assembly, cold cathode tube and in some cases, the ringer capacitor are ordered separately. The ringer unit (L-1508-XXE) can be ordered as an assembly. If a replacement housing is needed; order one D-490099-E.

Type 33 Ringer Box and D-56548 Type 45 Ringer Assemblies

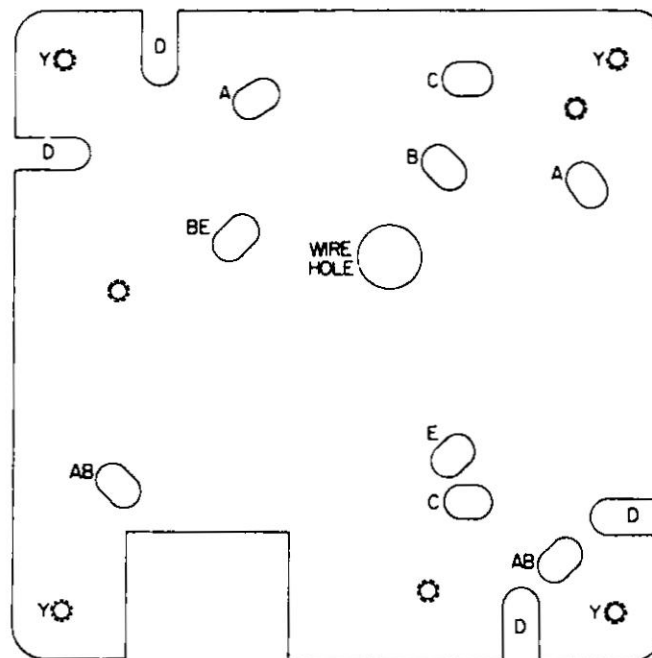
4.02 Ordering information for the various D-56548 ringer assemblies with integral ringer capacitor is contained in Table 1.

Superimposed Ringers

4.03 For superimposed ringing a cold cathode tube (D-52144-A) and mounting screw (D-760887-A) must be ordered in addition to the ringer box and ringer assembly.

Capacitor

4.04 The ringer frequency determines the type of capacitor to be used. Use Table 2 when ordering a ringer capacitor.



NOTES:

1. HOLES DESIGNATED A FOR THE 4 INCH SQUARE OUTLET BOX.
2. HOLES DESIGNATED B FOR THE 4 INCH OCTAGONAL OUTLET BOX.
3. HOLES DESIGNATED C FOR THE 2 INCH X 4 INCH HANDY BOX.
4. HOLES DESIGNATED D FOR THE 4 ¹¹/₁₆ INCH SQUARE OUTLET BOX.
5. HOLES DESIGNATED E FOR THE SUTTLE COMPANY TYPE 63-A JUNCTION BOX.
6. HOLES DESIGNATED Y FOR MOUNTING TYPE 33 RINGER UNIT.
7. RINGER UNIT WIRES ARE RUN THROUGH THE LARGE HOLE OF THE ADAPTER PLATE.

Figure 3. Outline Drawing of Conduit Adapter Plate.

Table 1. **Ordering Information** for the D-56548 Type 45 Ringer Assemblies.

Ringer Assembly			
Frequency	Description	Standard Coil	Impregnated Coil
SL	Straight-line	D-56548-CSLR	D-56548-BSLR
16.6	Harmonic	D-56548-C16R	D-56548-B16R
20	Harmonic or Decimonic	D-56548-C20R	D-56548-B20R
25	Harmonic	D-56548-C25R	D-56548-B25R
30	Harmonic or Decimonic	D-56548-C30R	D-56548-B30R
33.3	Harmonic	D-56548-C33R	D-56548-B33R
40	Decimonic	D-56548-C40R	D-56548-B40R
42	Harmonic	D-56548-C42R	D-56548-B42R
50	Harmonic	D-56548-C50R	D-56548-B50R
50	Decimonic	D-56548-C51R	D-56548-B51R
54	Harmonic	D-56548-C54R	D-56548-B54R
60	Decimonic	D-56548-C60R	D-56548-B60R
66	Harmonic	D-56548-C66R	D-56548-B66R
66.6	Harmonic	D-56548-C67R	D-56548-B67R
VT	Superimposed	D-56548-CVTR	

Table 2. Ordering Information Ringer Capacitors.

Ringer Frequency	Required Capacitor	Capacitor Value	Ringer Frequency	Required Capacitor	Capacitor Value
Straight-line	HD-680008-A	.4 μ F	30 Hertz	HD-680006-A	.2 μ F
16.6 Hertz	HD-680009-A	.7 μ F	42 Hertz	HD-680005-A	.08 μ F
25 Hertz	HD-680007-A	.3 μ F	54 Hertz	HD-680005-A	.08 μ F
33.3 Hertz	HD-680006-A	.2 μ F	66 Hertz	HD-680005-A	.08 μ F
50 Hertz	HD-680005-A	.08 μ F	40 Hertz	HD-680006-A	.2 μ F
66.6 Hertz	HD-680005-A	.08 μ F	60 Hertz	HD-680006-A	.2 μ F
20 Hertz	HD-680009-A	.7 μ F	50 Hertz	HD-680006-A	.2 μ F

TYPE 33 RINGER BOX INSTALLATION

1. GENERAL

1.01 This section provides information for the redesigned Type 33 ringer box. The new design incorporates a modular plug and two modular line cord jacks. The box is a separate audible signal device that can be used with GTE Automatic Electric telephones that are not equipped with ringers.

1.02 This section includes information on the new plastic base developed for the Type 33 ringer box. This section also contains information on interfacing the unit with wall-mounting miniature jacks, and more comprehensive wiring information.

2. DESCRIPTION

2.01 The box (Figure 1) consists of a plastic baseplate with a molded-in terminal strip (Figure 2) and a plastic housing. When assembled, the box is 5¼ inches high, 5½ inches wide, and 2½ inches deep. The box can be equipped with straight-line, superimposed, or harmonic ringers. Figure 3 shows a Type 48 straight-line ringer assembled on the baseplate. The ringer capacitor on the ringer assembly is replaced by a cold cathode tube when superimposed ringing is desired. The box also has a terminal strip molded into the base. At this terminal strip, the ringer wiring, modular jacks, modular plugs, and telephone line cord are connected. This terminal strip eliminates the need for a line cord connecting block.



Figure 1. Type 33 Ringer Box.

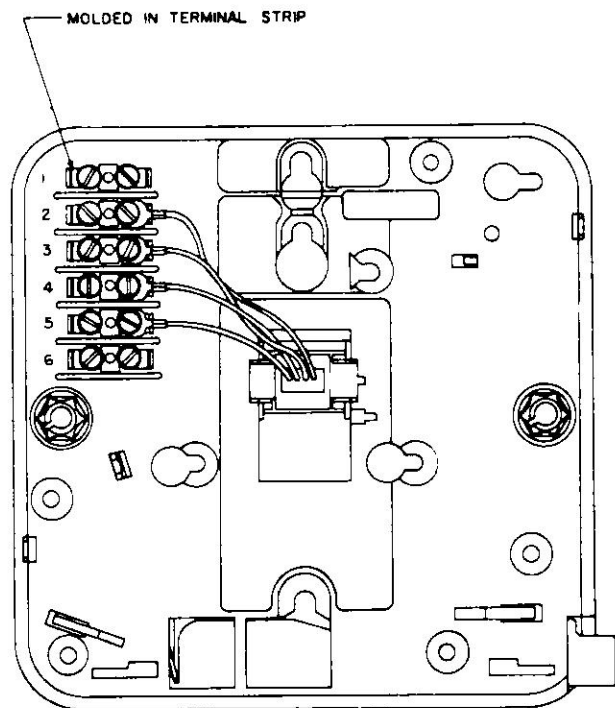


Figure 2. Ringer Box Baseplate
(Top View).

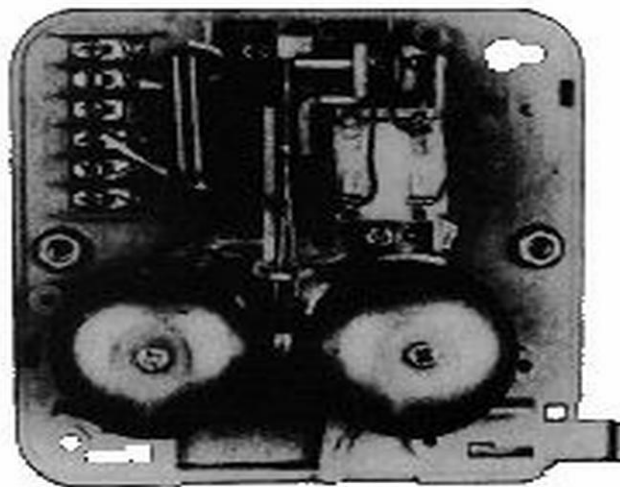


Figure 3. Ringer Box Baseplate Equipped With
Type 48 Ringer

2.02 The plastic baseplate is equipped and wired for use with a wall-mounted miniature jack. The modified version consists of two miniature line jacks, one miniature plug, a latch bar, and a return spring. Figure 4 shows the snap-in miniature plug that mates to a modular hardware jack that is flush-mounted on a wall.

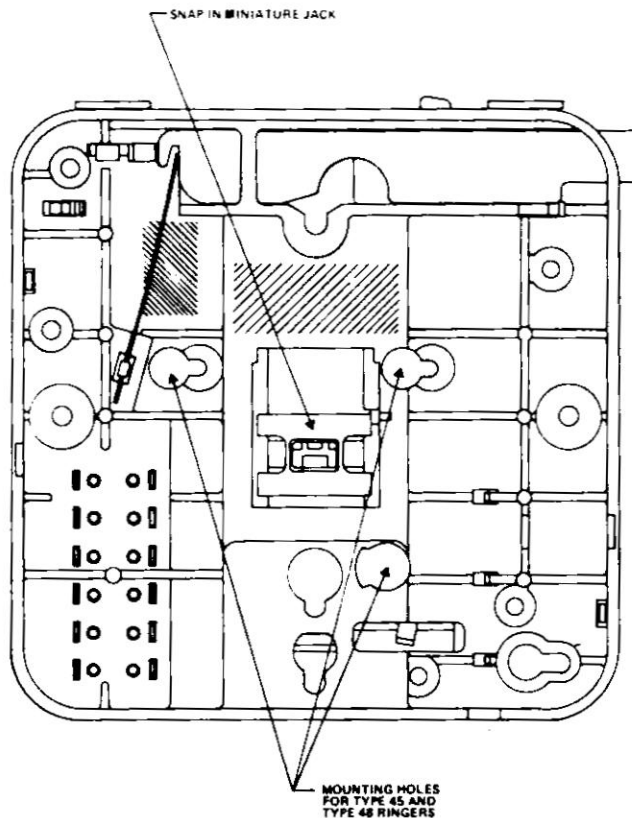


Figure 4. Ringer Box Baseplate (Underside).

2.03 The ringer box is shipped partially assembled, and requires minor assembly and wiring operations in the field. This permits greater flexibility in choosing various ringer assemblies. When the box is used with the Type 48 ringer assembly, part no. HD-560010-ASAR, the necessary assembly hardware is provided. The Type 45 ringer assembly, part no. D-56548-CXX, can be interchanged with the Type 48 ringer assembly.

3. INSTALLATION

Preliminary Procedures

3.01 Before mounting the box, perform the following preliminary procedures:

- (a) Fasten the ringer assembly to the baseplate with the three mounting screws provided. Figure 4 shows the mounting holes for Type 45 and Type 48 ringer assemblies.
- (b) Install the ringer capacitor by attaching the spade-ended terminals of the capacitor to the desired terminals of the terminal strip.

- (c) For superimposed ringing, mount the cold cathode tube on the baseplate (Figure 5) using the self-tapping screw provided.

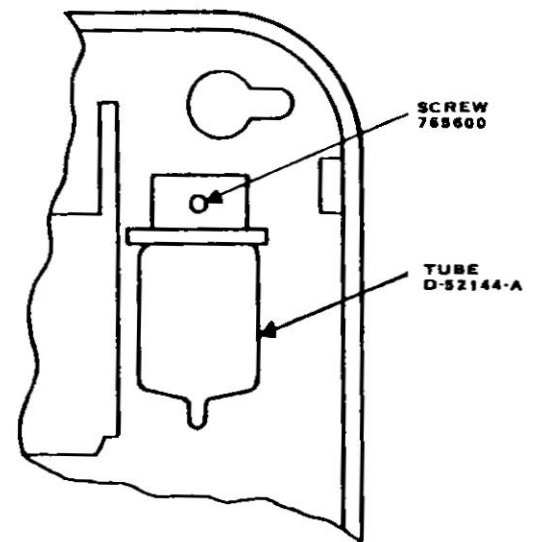


Figure 5. Cold Cathode Tube Mounting.

- (d) Remove the two securing screws from the modular jack and install two locking pins onto the screws. Reassemble the screws into the jack.

Mounting

3.02 The ringer box is equipped with two plug shells (GTE or Western Electric Company (WECO)). The insert and wire assembly is already wired to the terminal strip. Snap the insert into the GTE or WECO shell and snap this assembly into the back of the baseplate. Mount the ringer box on the jack by pressing the latch bar towards the left. Release the latching bar; the ringer box should be securely fastened to the jack.

Wiring

3.03 The ringer box is wired from the factory for bridged ringing (Figure 6). If other ringing schemes are required refer to Table 1.

4. ORDERING INFORMATION

4.01 The ordering information for the modular ringer box is: 422299 box ringer mod 33 A white L-1513-2.

4.02 The optional items are as follows:

- (a) Type 45 frequency ringer D-56548-CXXR series.
- (b) Type 48 straight line ringer HD-560010-ASAR.
- (c) Cathode tube D-52144-A.

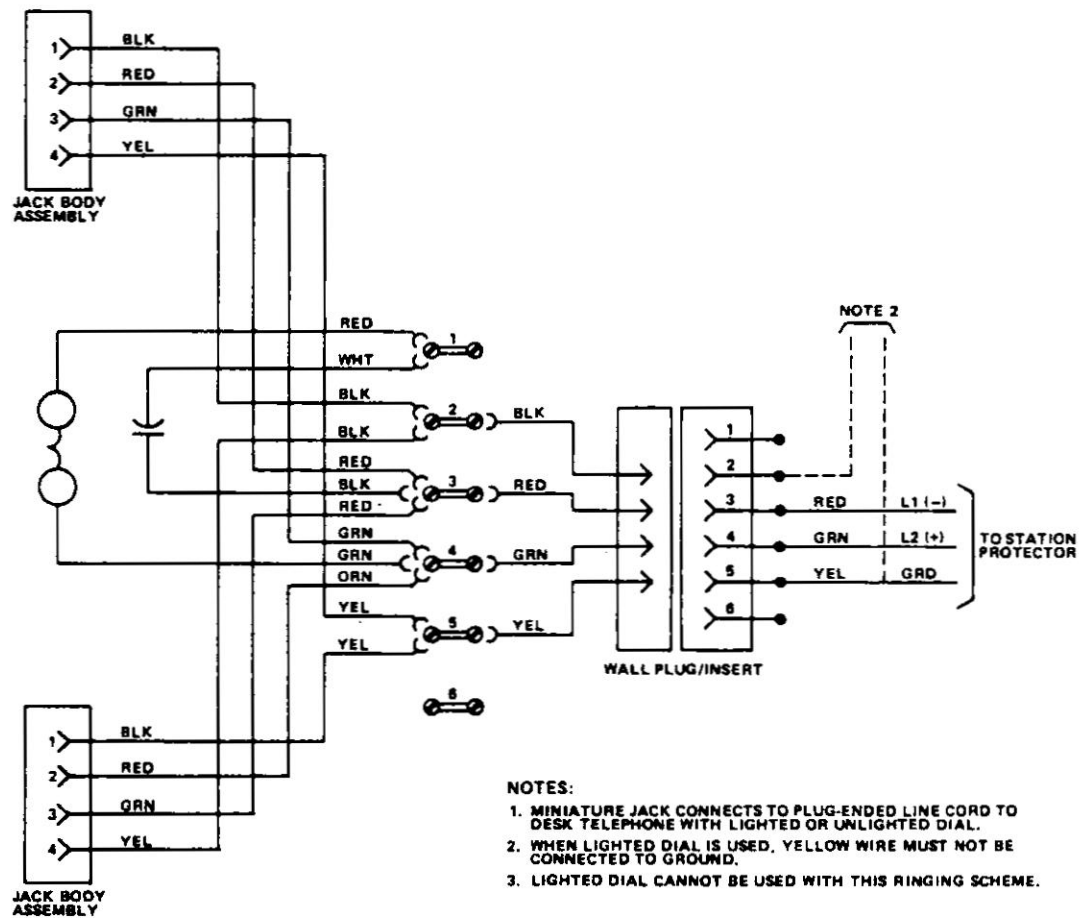


Figure 6. Wiring Diagram For Bridged Ringing.

Table 1. Wiring for Basic Modular Version of Unit, Bridged, and Divided Ringing.

TYPE OF RINGING	RINGER UNIT TERMINAL STRIP CONNECTIONS							
	CAPACITOR		RINGER		WIRING FROM MINIATURE JACKS CONNECTING TO TERMINALS			
	BLK	WHT	RED	GRN	BLK	RED	GRN	YEL
Bridged	3	1	1	4	2	3	5	5
Divided +Tip (Note)	5	1	1	4	2	3	4	5
Divided -Ring (Note)	5	1	1	3	2	3	4	5

NOTE: LIGHTED DIAL CANNOT BE USED WITH THIS RINGING SCHEME.