

L1A-TYPE RINGERS

IDENTIFICATION, INSTALLATION, CONNECTIONS, AND MAINTENANCE

1. GENERAL

1.01 This section contains information on the L1A manufacture discontinued (MD), L1AM (MD), and L1AMP ringers. These are indoor/outdoor loud auxiliary ringers.

1.02 The reasons for reissuing this section are listed below. Revision arrows are used to emphasize the more significant changes.

- Add procedure to remove D4CD mounting cord from L1AMP ringer
- Add 13A housing information
- Show 181A backboard MD.

1.03 The L1AMP ringer is the same as the L1AM ringer, except it has keyhole-type slots in the plastic base for mounting on a 1049A mounting plate. A 2-foot modular weatherproof mounting cord (D4CD) is provided with L1AMP ringer.

2. IDENTIFICATION

2.01 The L1A (MD), L1AM (MD), and L1AMP ringer is a single-coil, high impedance, loud ringing signal for indoor or outdoor use. The ringer has a 2-position bias spring and two concentric gongs. The volume can be adjusted by rotating the gongs (Fig. 1).

2.02 The ringer has mounting facilities provided for the installation of a 425A or 426A electron tube. The tubes are used for selective multiparty line ringing or when there is evidence of inductive interference (Table A). For the maintenance and mounting instructions of these tubes, refer to the section entitled Electron Tubes.

A. Ordering Guide

2.03 Order as follows: Ringer, L1AMP-49 (includes 2-foot D4CD mounting cord).

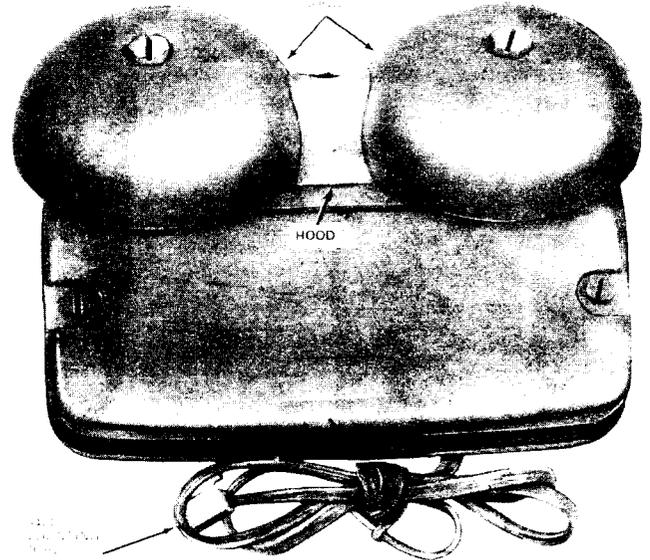


Fig. 1 — L1AMP Ringer

(a) Order associated apparatus as follows:

- (1) Plate, Mounting, 1049A (indoor locations)
- (2) Housing 13A (outdoor locations).

3. INSTALLATION

3.01 Select a location that will permit customer to hear ringer.

3.02 Mount ringer in a vertical position with gongs at top.

A. Indoor Locations

3.03 Indoor locations in most cases will require the use of a 1049A mounting plate. The mounting plate has four mounting holes and can be directly fastened to a wall surface as follows.

Note: Arrow indicates top of mounting plate.

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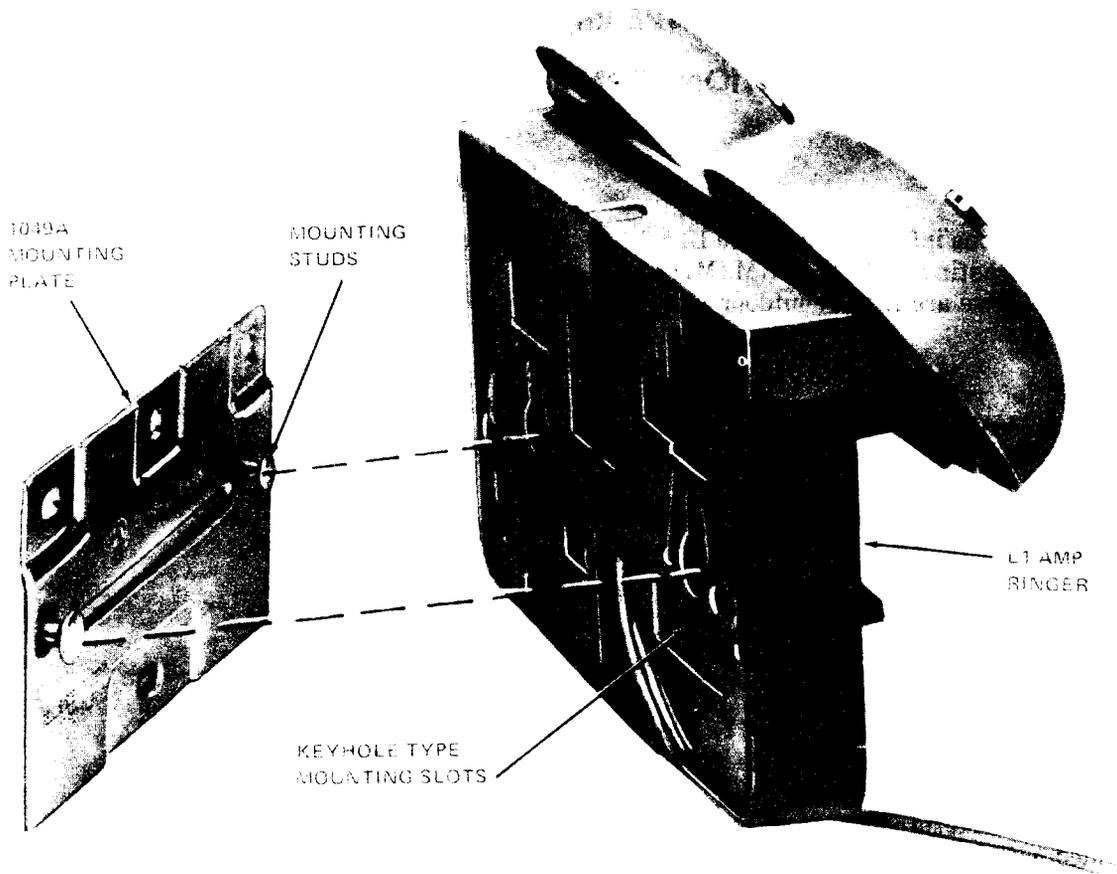


Fig. 2—♦L1AMP Ringer and Mounting Plate (Indoor Installation)♦

- (a) For fastening to wood, use panhead self-tapping screws.
- (b) For hollow wall construction, use toggle bolts or B wall screw anchors.
- (c) For concrete and masonry surfaces, use D plastic anchors.

3.04 To mount ringer to mounting plate, align mounting plate studs with keyhole-type slots in ringer, press ringer down on mounting plate until mounting studs completely engage ringer (Fig. 2).

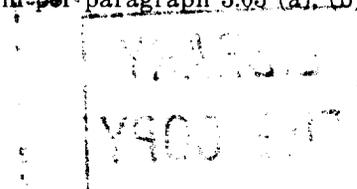
3.05 Remove ringer cover and connect as required per Table A and Fig. 3, using D4CD mounting cord for bridged ringing. D-station wire can be used for other ringing configurations.

B. Outdoor Installations

3.06 ♦Outdoor installations require the use of a weatherproof 181A-49 (MD) backboard or 13A housing and 625WP4 connecting block when the D4CD mounting cord is used for individual bridged ringing configurations. Refer to paragraphs 3.07 and 3.08 for installation procedures.♦

3.07 Install the 181A-49 (MD) backboard and ringer as follows:

- (1) Remove backboard cover.
- (2) Fasten backboard to wall surface using the appropriate item per paragraph 3.03 (a), (b), or (c).



- (3) Mount ringer on backboard with mounting screws provided.
- (4) Connect D4CD (see Note) mounting cord or D-station wire leads per Table A.
- (5) Install backboard cover.
- (6) Connect D4CD (see Note) mounting cord to 625WP4 connecting block or D-station wire to an indoor connecting block (Fig. 3).

Note: Individual bridged ringing for non tip and ring applications requires the D4CD cord be connected to 625WP4 connecting block.

3.08 ♦ Install the 13A housing (Fig. 4) and ringer as follows.

- (1) Partially fasten the base of the housing to wall surface using the appropriate item per paragraph 3.03 (a), (b), or (c).
- (2) Slip the D4CD (see Note in paragraph 3.07) mounting cord or D-station wire through the mounting cord or wire hole of the housing base. Finish fastening the base to wall surface.
- (3) Remove ringer cover and mount ringer to housing base using two screws provided with 13A housing.
- (4) Connect D4CD (see Note in paragraph 3.07) mounting cord or D-station wire leads per Table A and install ringer cover.
- (5) Install housing cover using two screws provided.
- (6) Connect D4CD mounting cord to 625WP4 connecting block or D-station wire to an indoor connecting block (Fig. 3).♦

4. MAINTENANCE

- 4.01** If ringer fails to operate properly, check the following.
- (a) Using hand test set or meter check for incoming signal across appropriate terminals shown in Table A.
 - (b) All leads should be dressed away from clapper and armature.

- (c) Armature air gap should be free of dirt and foreign material.
- (d) All terminal connections should be tight and correctly terminated.
- (e) Biasing spring should not touch or rub pole piece and should be in correct notch.

Note: See section on maintenance of C-type ringers for proper bias spring position on a particular class of service.

- (f) ♦ To remove the hood (Fig. 1), perform the following:
 - (1) If the hood has a screw, remove it and swing the top of the hood outward.
 - (2) If the hood has no screw, press down on top of hood and simultaneously swing outward.♦



Correct biasing spring tension has been set at factory. Do not bend biasing spring. Spring can be moved to either notch as required.

- (g) Clapper should have perceptible to 1/32-inch clearance from 26F gong when armature is nonoperated. With armature operated, clearance should be perceptible to 1/32-inch between clapper and 26E gong. Gongs are on an eccentric pivot and may be rotated to meet this requirement.
 - (h) If ringer still does not operate properly, replace ringer.
- 4.02** ♦ When it is required to remove the D4CD mounting cord of the L1AMP ringer, use the following procedure.

- (1) Remove the ringer cover.
- (2) Using the right thumb, carefully flex back the small retainer tab while simultaneously lifting the terminal board with left index finger (Fig. 5A) until the right side of the board is released.
- (3) Using the left thumb, carefully flex back the large retainer tab while simultaneously lifting the terminal board with right index finger until the board is completely released.
- (4) Remove terminal board from ringer as far as lead lengths permit. Rotate the mounting cord

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downward until *J* hook is released (Fig. 5B). Disconnect mounting cord leads.

- (5) Align terminal board over the two bosses and retainer tabs, then snap into place (Fig. 5C).
- (6) Refer to Part 3 for installation information.◀

◆TABLE A◆

LINE, RINGER, AND ELECTRON TUBE CONNECTION

WIRE OR LEAD	COLOR	D4CD CORD INDIV BRIDGED (NOTE 1)	2-PARTY		SELECTIVE RINGING AND AVERAGE INDUCTION (UP TO 30 VOLTS) (NOTE 2)				SEVERE INDUCTION (30 TO 80 VOLTS) (NOTE 2)				
			RING	TIP	(-) RING PARTIES (1-5)	(-) TIP PARTIES (2-6)	(+) RING PARTIES (3-7)	(+) TIP PARTIES (4-8)	(-) RING PARTIES (1-5)	(-) TIP PARTIES (2-6)	(+) RING PARTIES (3-7)	(+) TIP PARTIES (4-8)	
D-Station Wire or D4CD Mtg Cord	Ring	R	4	4	3	4	3	4	3	4	3	4	3
	Tip	G	3	3	4	3	4	3	4	3	4	3	4
	GRD	Y	†	6	6	6	6	6	6	6	6	6	6
	Spare	BK	†	†	†	†	†	†	†	†	†	†	†
Ringer	R		4	4	4	6	6	4	4	1	1	4	4
	S-R		1	1	1	1	1	1	1	4	4	1	1
	S		2	2	2	2	2	2	2	4	4	2	2
	BK		3	6	6	6	6	4	4	2	2	4	4
Capacitor	W		1	1	1	1	1	1	1	1	1	1	1
	Y		2	2	2	2	2	2	2	2	2	2	2
426A Electron Tube	R					6	6	4	4				
	BK					1	1	1	1				
	Y					4	4	6	6				
426A Electron Tube (Severe Induction)*	R									3	3		
	BK									1	1		
	Y									4	4		
425A Electron Tube (Severe Induction)	R									3	3	4	4
	BK									6	6	1	1
	Y									1	1	6	6
	G									4	4	3	3

Note 1: Individual bridged ringing requires the D4CD cord and modular jack to be used.

Note 2: Use negative party connections when capacitor type grounded ringing must be replaced with tube type ringing due to inductive noise.

* The three elements 426A tube can be used to combat severe inductive noise (30 to 80 volts) on negative parties only. It cannot be used on positive parties.

† Insulate and store.

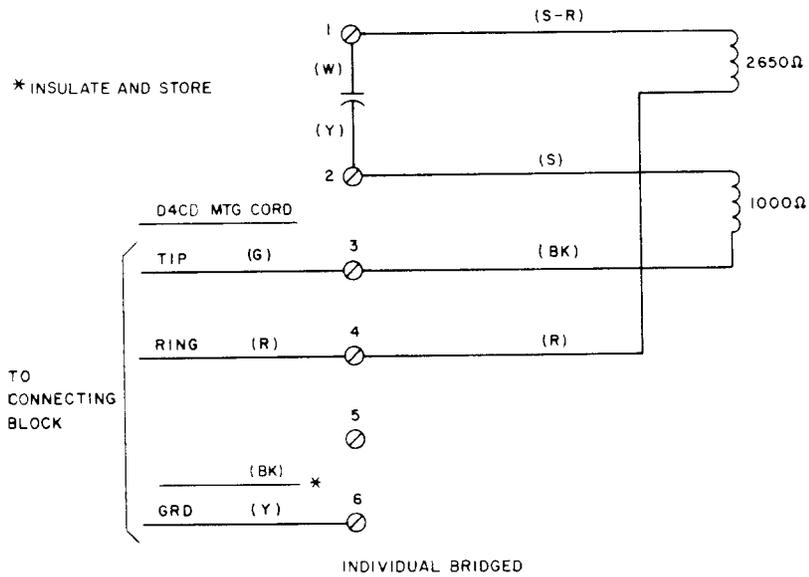
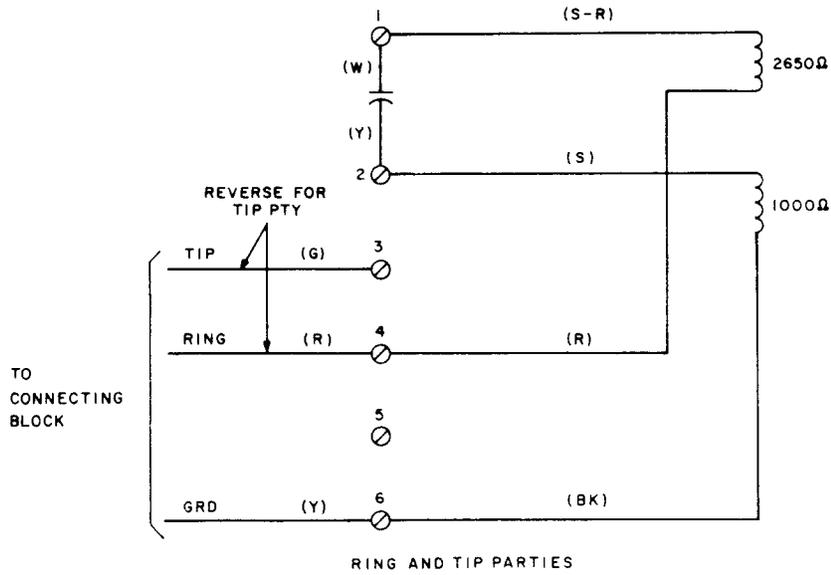
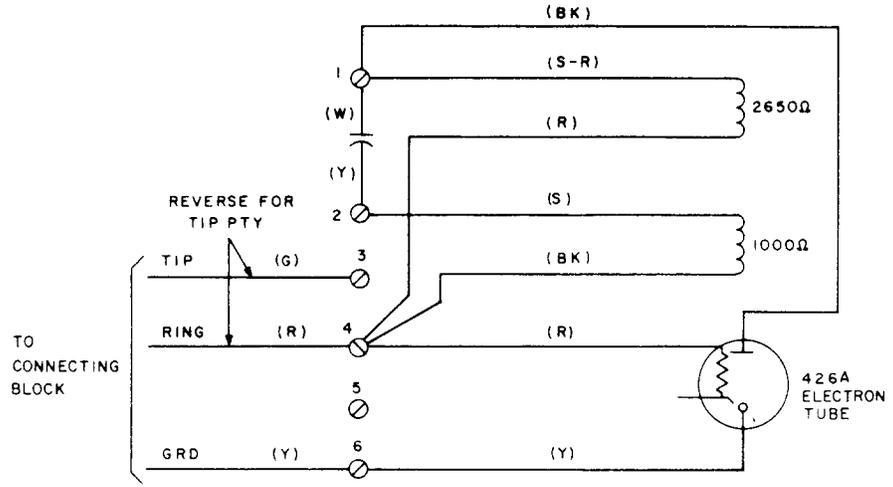
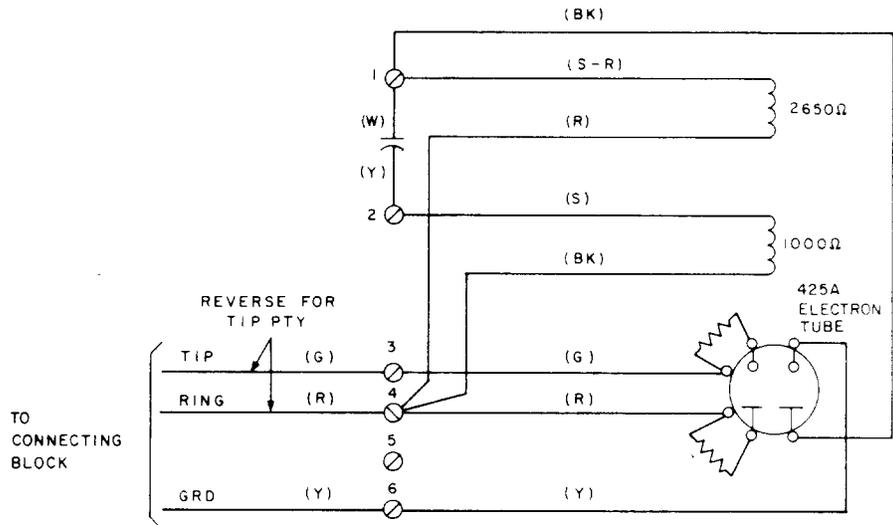


Fig. 3—L1A-Type Ringer, Connections (Sheet 1 of 3)

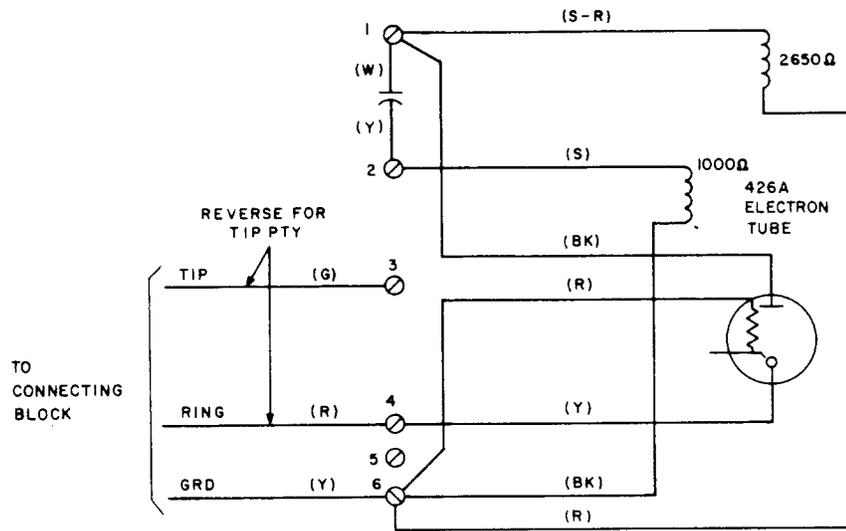


SELECTIVE RINGING
POSITIVE (+) RING AND TIP PARTIES

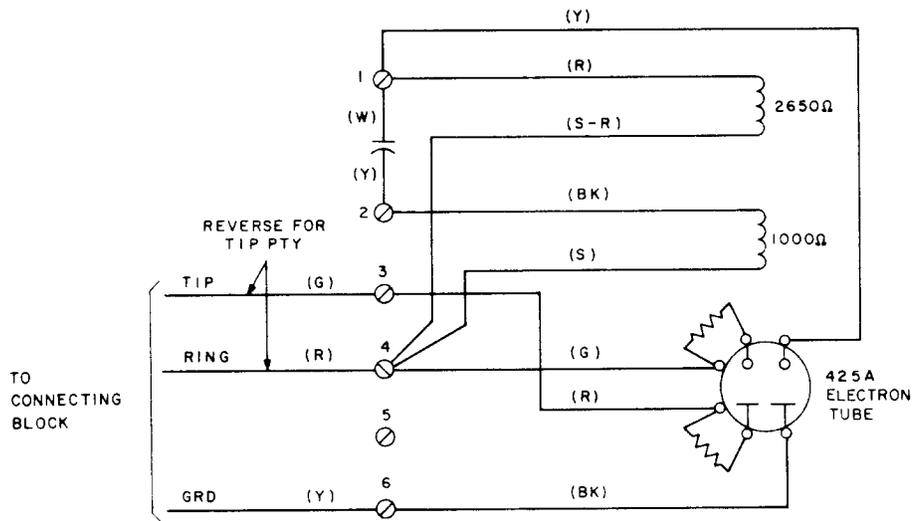


SEVERE INDUCTION
POSITIVE (+) RING AND TIP PARTIES

Fig. 3—L1A-Type Ringer, Connections (Sheet 2 of 3)

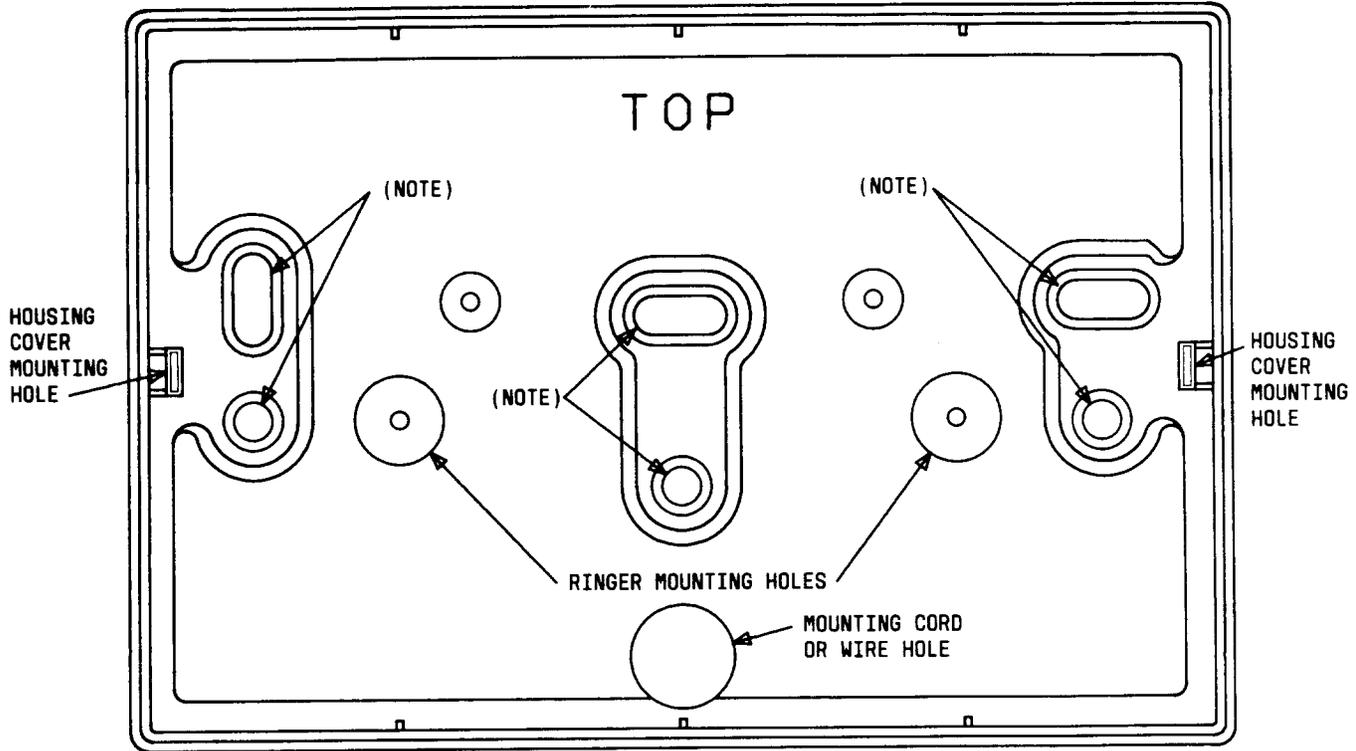


SELECTIVE RINGING
NEGATIVE (-) RING AND TIP PARTIES



SEVERE INDUCTION
NEGATIVE (-) RING AND TIP PARTIES

Fig. 3—L1A-Type Ringer, Connections (Sheet 3 of 3)



NOTE: BASE MOUNTING HOLES

Fig. 4—13A Housing Base Mounting Hole Arrangement (Outdoor Installation)

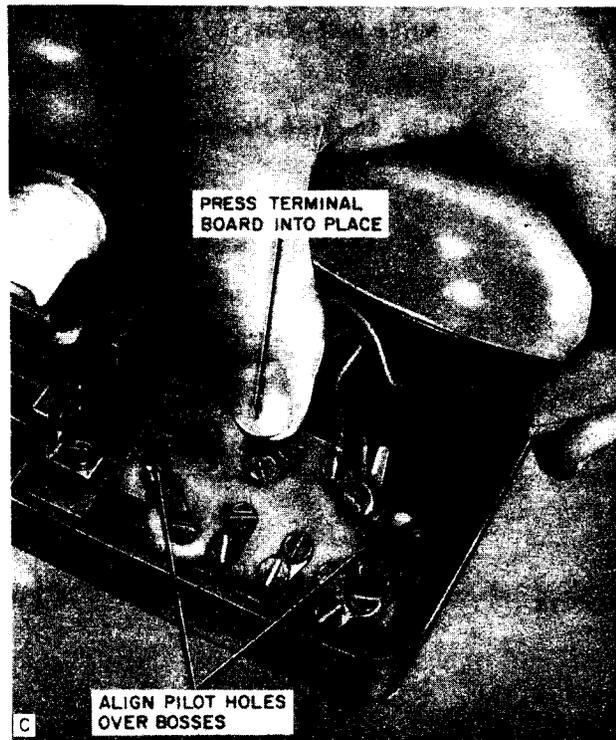
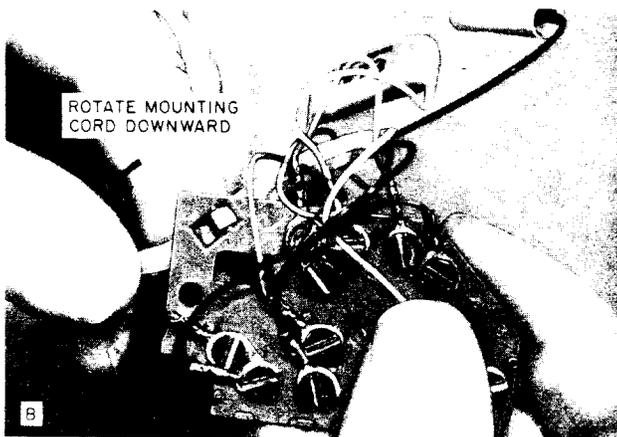
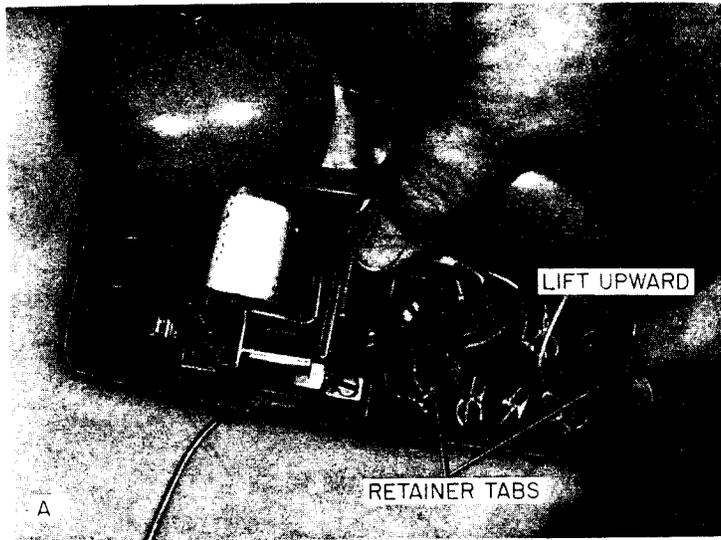


Fig. 5—D4CD Mounting Cord Removal