

## 4-TYPE BUZZERS REQUIREMENTS AND ADJUSTING PROCEDURES

### 1. GENERAL

1.01 This section covers 4 type buzzers and replaces specification X-70178-01, Issue 1-D.

1.02 Reference shall be made to Section 020-010-711, covering General Requirements and Definitions for ad-

ditional information necessary for the proper application of the requirements listed herein.

1.03 Part 1, "General" and Part 2, "Requirements" form part of the Western Electric Co. Inc. Installation Department handbook.

### 2. REQUIREMENTS

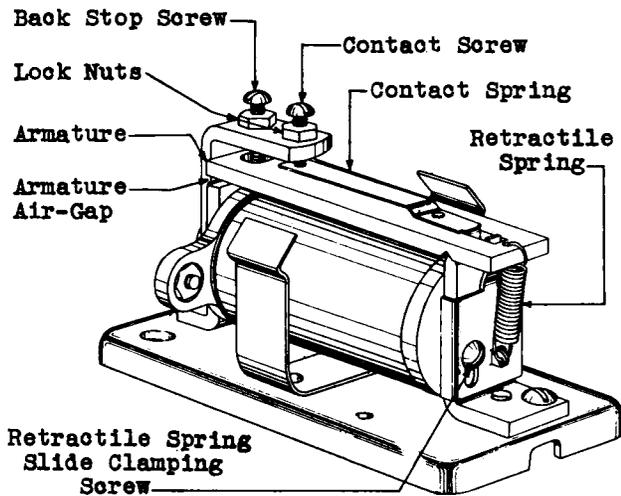


Fig. 1 - No. 4-C Buzzer

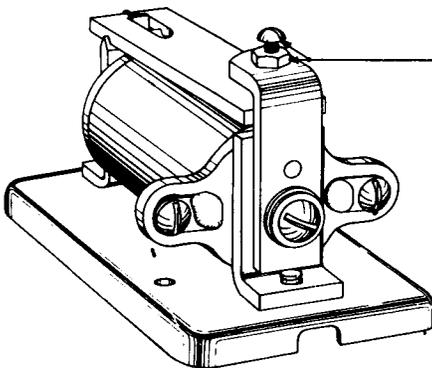


Fig. 2 - No. 4-B Buzzer

2.01 Cleaning Contacts and parts shall be cleaned when necessary in accordance with the section covering cleaning of relay contacts and parts.

2.02 Tightness of Screws and Lock Nuts The screws and lock nuts shall be sufficiently tight to maintain their adjusted position.

#### 2.03 Electrical Requirements

(a) The buzzer shall vibrate steadily on 16 2/3 cycle or 20 cycle ringing current supply when it is mounted and connected in the circuit in which it is used.

(b) With the same adjustment as specified in (a) above the No. 4-C buzzer shall operate on 24 volts D.C. when connected in series with a non-inductive resistance of 1000 ohms.

Note The buzzer is adjusted in the Shop to operate in only two positions; vertical position with fulcrum end down and in a horizontal position. If the buzzer is mounted in the circuit in some position other than these two it may require some readjustment on receipt from the Shop.

3. ADJUSTING PROCEDURES

TOOLS

<u>Code No.</u>	<u>Description</u>
48	Wrench - 7/32" and 1/4" Hex. Socket Double-end and Screw-driver
KS-6015	Duck-bill Pliers

MATERIALS

-	1000 Ohms Non-inductive Resistance
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3.01 CLEANING (Rq.2.01)

M-1 Clean the buzzer when necessary in accordance with the section covering cleaning procedures for relay contacts and parts.

3.02 TIGHTNESS OF SCREWS AND LOCK NUTS (Rq.2.02)

3.03 ELECTRICAL REQUIREMENTS (Rq.2.03)

M-1 General Failure of the buzzer to vibrate steadily is usually due either to loose connections, broken leads, loose back stop or contact screws, excessive or insufficient retractile spring tension. It will be necessary to balance the armature travel and the retractile spring tension against each other. In checking for any of the above conditions on the No. 4-C buzzer, it will be necessary to remove the cover.

M-2 When testing a No. 4-C buzzer with alternating current, connections must be made to the spoolhead terminals. With direct current, the leads must be connected to the base and to the free spoolhead terminal.

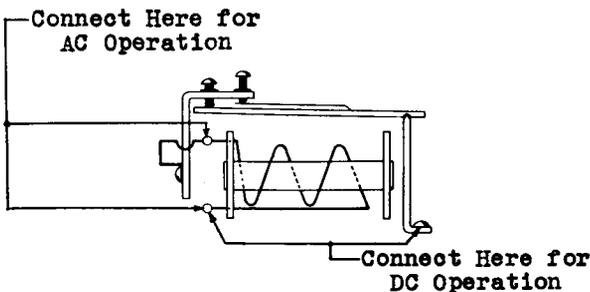


Fig. 3 - Connections to the Buzzer for AC and DC Operation

M-3 Wiring Examine the buzzer to determine whether or not the leads to the buzzer terminals are broken and whether or not there are any loose connections.

M-4 Loose Lock Nut Failure of the contact screw or the back stop screw to be held firmly in place will result in the buzzer vibrating unsteadily. To correct this condition, tighten the lock nut by turning it as far as possible in a clockwise direction with the socket wrench of the 48 combination tool.

M-5 Failure to Operate If no leads are broken and all connections are tight, and the armature fails to show any tendency to move toward the core when the circuit is closed, it is an indication that the armature travel or the retractile spring tension is excessive.

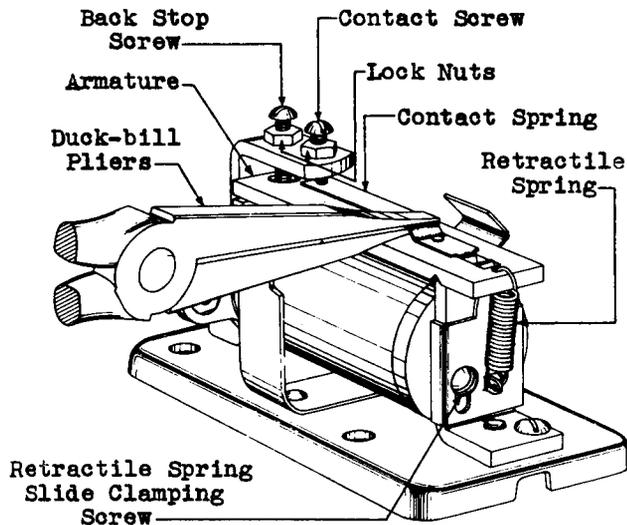


Fig. 4 - Method of Adjusting Contact Springs with Duck-bill Pliers

M-6 If the armature travel is excessive reduce it as follows: Loosen the lock nut on the back stop screw by turning it in a counter-clockwise direction with the wrench and then turn the screw in a clockwise direction with the screw-driver of the No. 48 combination tool until the travel is such that the buzzer operates satisfactorily when the circuit is closed. When the back stop

screw has been set in the proper position, fasten the lock nut securely by turning it in a clockwise direction. In the case of the No. 4-C buzzer it should be noted at this time that when the armature is moved against the core there is an appreciable separation between the contact spring and the back contact. Any adjusting of the contact spring should be done with a pair of duck-bill pliers applied as shown in Fig. 4.

M-7 If the armature travel is satisfactory, failure to operate is probably due to excess tension of the retractile spring. Reduce the tension of the spring by loosening the retractile spring slide clamping screw with the screw-driver of the No. 48 combination tool and by moving the slide up as required.

M-8 Failure to Release Failure of the buzzer to vibrate steadily may be due to the armature travel being too small, or may be due to insufficient tension of the retractile spring thereby causing the armature to stick against the core when the circuit is closed.

M-9 If the armature travel is insufficient increase it as follows: Loosen the lock nut as indicated in paragraph M-6 and then turn the back stop screw in a counter-clockwise direction with the screw-driver until the travel is such that when the circuit is closed it will give a satisfactory signal. In this case, as previously specified, when the proper setting of the back stop screw has been obtained, fasten the lock nut securely so as to prevent the back stop screw moving out of position and in the case of the No. 4-C buzzer note that when the armature is against the core there is an appreciable separation between the contact spring and the back contact.

M-10 If the armature travel is apparently satisfactory the failure to release is probably due to insufficient tension of the retractile spring. To increase the tension of the spring adjust the retractile spring slide down in the manner described under paragraph M-7.