

3-TYPE SOUNDERS AND 12521 SOUNDERS REQUIREMENTS AND ADJUSTING PROCEDURES

1. GENERAL

1.01 This section covers 3 Type Sounders and 12521 Sounders and replaces specification X-70179, Issue 1 and X-70292, Issue 1.

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

1.04 Operate and Operated Position Operate means that when the specified current is applied, the magnetic air-gap adjusting screw shall strike the anvil with sufficient impact to produce a good clear signal. This is also the operated position of the sounder.

1.05 Release and Normal Position Release means that when the specified operating current is cut off, the armature lever shall strike the stroke adjusting screw with sufficient impact to produce a good clear signal. This is also the normal position of the sounder.

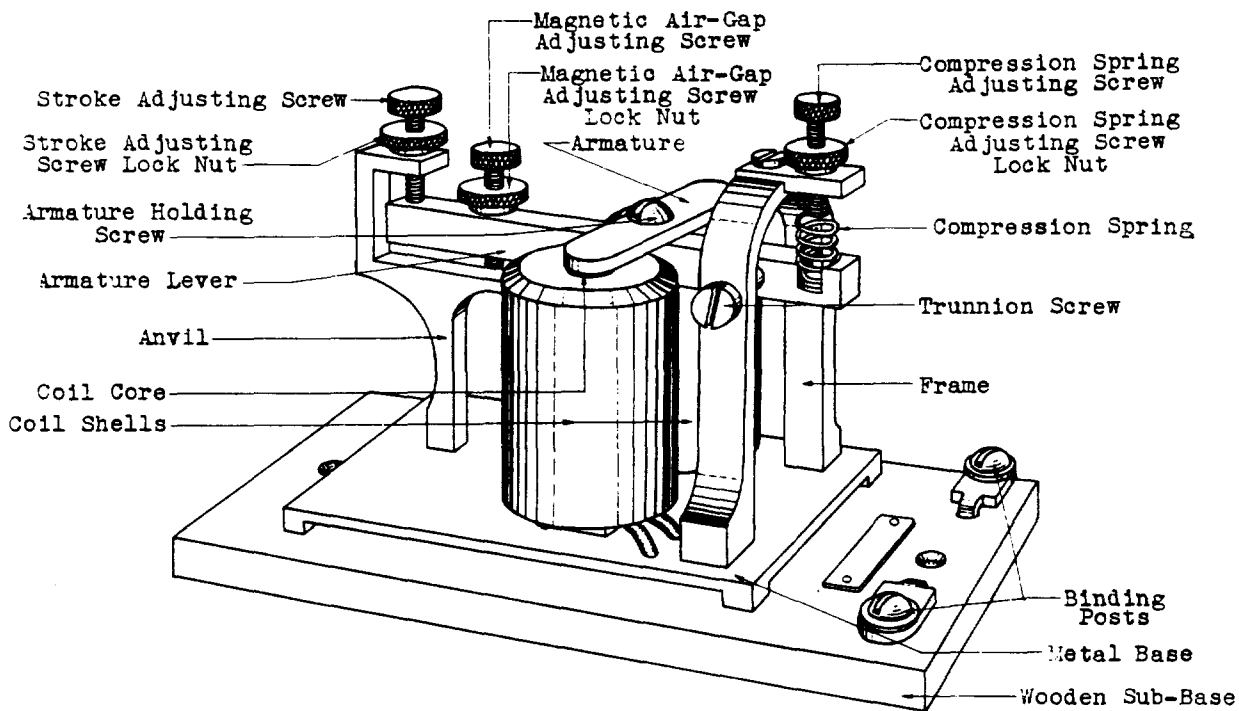


Fig. 1

REASON FOR REISSUE COVERING CHANGES IN GENERAL

1. To omit the definitions covering "Magnetic Air-gap (2.003) and "Lever Travel"(2.004)

as covered in X-70292-01, Issue 1.

2. REQUIREMENTS

current flow values specified below:

Current Flow in Amperes

Code No.	Test	Readjust
3-A	-	.120
3-B	-	.050
3-C	-	.020
3-D	-	.042
3-E	-	.010
12521	.105	.065

2.01 Horizontal End Play of Trunnion Screws There shall be some horizontal end play in the trunnion screw bearings but this end play shall not exceed

.015" on 3 type sounders

.024" on 12521 sounders

Gauge by eye and feel.

2.02 Operated Armature Air-gap When the sounder is in the operated position, the clearance between the armature and coil cores shall be:

Min. .005"

Max. .016"

Gauge by eye.

(b) The sounder shall operate as fast as the hand can open and close the operating circuit by means of a key.

2.03 Electrical Requirements

(a) Unless otherwise specified on the Circuit Requirement Table, the sounder shall operate on the

2.04 Tightness of Lock Nuts The lock nuts shall be sufficiently tight to hold the screws in their adjusted positions.

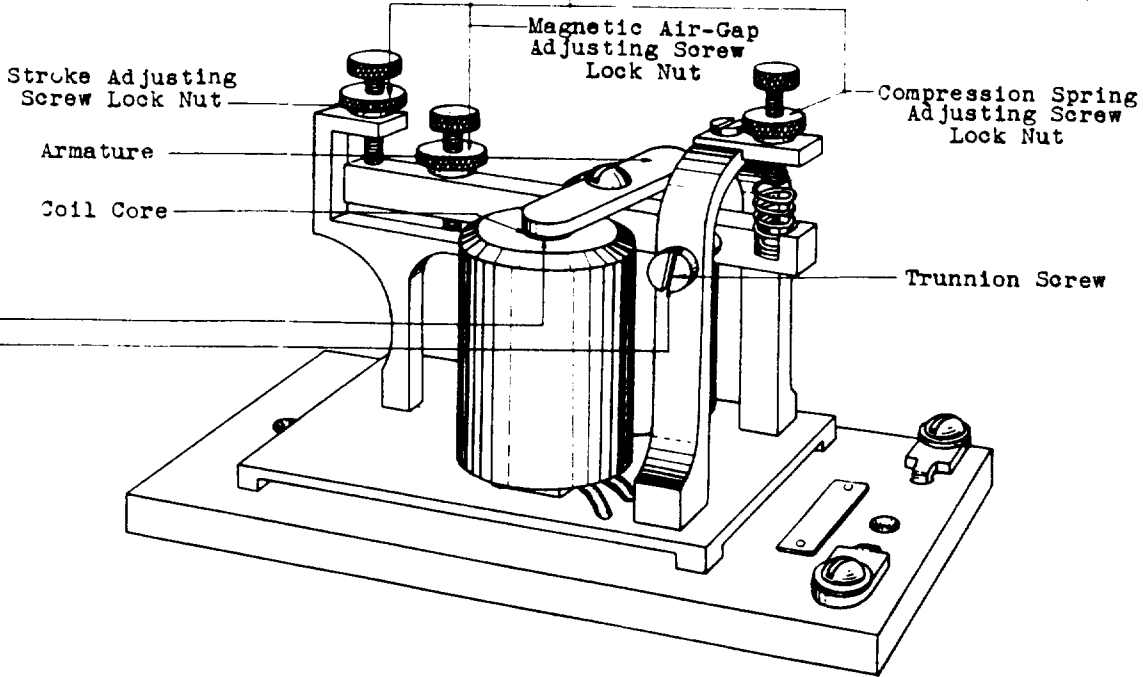


Fig. 2

REASON FOR REISSUE COVERING CHANGES IN REQUIREMENTS

1. To add the requirement covering "Horizontal End Play of Trunnion Screws" (2.01).
2. To change the air-gap limits as given in the requirement covering "Operated Armature Air-gap" (2.02).
3. To reword the requirement covering "Electrical Requirements" (2.03) and to include the current flow values.
4. To add the requirement covering "Tightness of Lock Nut" (2.04).

3. ADJUSTING PROCEDURESTOOLS

<u>Code No.</u>	<u>Description</u>
-	Bell System Regular Screw-driver - 4" per A.T.&T. Co. Drawing 46-X-34

TEST APPARATUS

35-C	Current Flow Test Set
------	-----------------------

3.01 HORIZONTAL END PLAY OF TRUNNION (Rq.2.01)
SCREWS

M-1 If the horizontal end play of the trunnion screws exceeds the specified amount, tighten the screws as required with the 4" regular screw-driver.

3.02 OPERATED ARMATURE AIR-GAP (Rq.2.02)3.03 ELECTRICAL REQUIREMENTS (Rq.2.03)3.04 TIGHTNESS OF LOCK NUTS (Rq.2.04)

M-1 To check the operated armature air-gap of a sounder depress the armature lever with the finger and see whether or not the gaps between the armature and the coil cores are satisfactory. If the air-gap between either coil core and armature exceeds the gap between the other coil core and armature, it is an indication that the armature is bent. If this is the case, remove the armature holding screw with the 4" regular screw-driver and remove the armature. Straighten the armature as required and replace. If it cannot be satisfactorily straightened, replace the armature with a new one.

M-2 If the operated armature air-gaps are not satisfactory after the armature has been checked, loosen the magnetic air-gap adjusting screw lock nut and turn the magnetic air-gap adjusting screw in (to the right) or out (to the left) as required to obtain a satisfactory air-gap. Then tighten the magnetic air-gap adjusting screw lock nut.

M-3 If the sounder fails to operate when the specified current is applied, decrease the pressure of the compression spring until it operates. To do this, loosen the compression spring adjusting screw lock nut and turn the compression spring adjusting screw out (to the left). After the tension has been sufficiently weakened tighten the compression spring adjusting screw lock nut and operate the sounder.

M-4 If the sounder still fails to operate satisfactorily, depress the armature lever and observe whether or not it is near the specified limit. If the gap is not satisfactory adjust as outlined in M-2 above.

M-5 If the sounder is satisfactorily adjusted as outlined above but does not follow the electrical impulses satisfactorily, loosen the stroke adjusting screw lock nut and turn the stroke adjusting screw in (to the right) as required to decrease the travel of the armature lever.

M-6 After all requirements have been satisfactorily met, tighten the lock nuts with the fingers taking care not to move the adjusting screws. Care should be taken when checking for loose lock nuts to turn them in the direction which tends to tighten them.

REASON FOR REISSUE COVERING CHANGES IN ADJUSTING PROCEDURES

1. To add the following procedures:

3.01	M-1	Horizontal End Play of Trunnion Screws
3.02		
to	M-6	Tightness of Lock Nuts
3.04		

2. To change the following procedures:

3.02	M-1	
to	to	Armature Air-Gap and Electrical
3.04	M-5	Requirements.