

NIGHT ALARM CIRCUIT

NO. 12 SWITCHBOARD

1. GENERAL

1.01 This section describes methods of testing the night alarm circuit and of adjusting the AU relay using test circuit SD-15122-01 or SD-15174-01. The tests are as follows:

(A) Night Alarm Circuit Test

(B) Adjustment of AU Relay

1.02 The section has been reissued to include test circuit SD-15174-01 and to include in Test (A) a check for the proper release of the AU relay.

1.03 Method (B) should be applied only when Test (A) indicates a failure of the night alarm circuit due to faulty operation of the AU relay, and may be employed at any time when the battery voltage is between 46 and 50 volts. However, if the voltage is not between these limits when the adjustments are necessary, the adjustments may be made but should be rechecked at the time the voltage is between the limits.

2. APPARATUS

Test (A)

2.01 P3E Cord equipped with two No. 110 Plugs.

2.02 Operator's Telephone Set.

Test (B)

2.03 W2C Cord equipped with a No. 110 Plug at one end and two No. 59 Cord Tips at the other end.

Tests (A) and (B)

2.04 W2AS Cord equipped with a No. 110 Plug at one end and a No. 522A Key at the other end.

3. METHOD

(A) Night Alarm Circuit Test

Alarm Associated with Line Drops

3.01 With the night alarm key normal, manually operate and restore a line drop at each position of the switchboard. Note that the night alarm bell rings, while a drop is operated.

Alarm Associated with Line Lamps

3.02 With the night alarm key normal, connect one plug of the P3E cord to the C jack of the test circuit and the plug of the W2AS cord to the D jack of the test circuit.

3.03 Make a busy test on a common battery line jack and, if the line is not busy operate the No. 522A key associated with the W2AS cord. Then while holding the key operated, partially insert the other plug of the P3E cord into the line jack so that the tip of the plug just makes contact with the ring spring of the jack. The night alarm bell should ring.

3.04 While holding the connections, momentarily operate the position release key. The alarm bell should stop ringing. Continuation of the ringing indicates that the AU relay of the night alarm circuit has failed to release.

3.05 Remove the No. 110 plug from the line jack and release the No. 522A key.

3.06 Repeat 3.03 to 3.05, using a common battery line circuit at each panel of the switchboard.

3.07 Operate the night alarm key, if it was operated previous to the test and remove the test cords from the test circuit.

(B) Adjustment of AU Relay

3.08 With the night alarm key normal connect the plug of the W2C cord to the C jack of the test circuit and the plug of the W2AS cord to the D jack of the test circuit.

3.09 At the main distributing frame select a spare common battery line circuit that is not cross-connected or that has the heat coils removed. Where there are two night alarm circuits, the line selected must be one associated with the alarm relay to be adjusted.

3.10 Connect the No. 59 cord tip of the white (tip) conductor of the W2C cord to the ring terminal of the line. Connect the blue (ring) conductor to the tip terminal of the line.

3.11 Remove the covers from night alarm relays AU and AR.

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3.12 Operate and release the No. 522A key associated with the W2AS cord.

Note: At least five seconds should have elapsed, between the connection of the test cords to the test jacks and the operation of the No. 522A key to permit the line lamp to become warm.

3.13 If the night alarm bell rings, manually operate the AR relay for a moment to silence the bell and proceed according to 3.15 and 3.16.

3.14 If the bell does not ring, continually operate and release the No. 522A key while turning the biasing screw (thumb screw) of the AU relay in a counter-clockwise direction until the bell rings. Manually operate the AR relay.

3.15 Turn the biasing screw of the AU relay a small amount in a clockwise direction and then operate and release the No. 522A key. Silence the bell if it rings by manually operating the AR relay. Repeat this procedure at intervals of not less

than five seconds until the bell fails to ring when the key is operated.

Note: The interval of five seconds or more between the release and the subsequent operation of the key is required to allow the line lamp to cool, thus reducing its resistance.

3.16 Then turn the biasing screw of the AU relay a small amount in a counter-clockwise direction and operate and release the No. 522A key. Repeat this procedure at intervals of not less than five seconds until the bell rings. Then manually operate the AR relay to silence the bell.

3.17 After the adjustment has been made, operate the night alarm key if it was operated previous to the test, and disconnect the test cords.

4. REPORTS

4.01 The required record of these tests should be entered on the proper form.