

CABLE GENERAL - TESTING

TESTING PROCEDURE FOR COAXIALS

NOTES CONCERNING THIS ADDENDUM

This addendum supplements Section G50. 244. 1 with additional instructions for making megger tests and with a description of the buzzer signaling circuit to be used when a communication circuit is necessary in connection with the testing of coaxials.

The following should be marked "See Addendum" and treated as indicated:

Paragraph 2.05, 8.01, 8.02 - added.

Paragraph 4.06, 4.07 - replaced.

2. PREPARATION FOR TEST

Test With Megger Test Set

2.05 When a communication circuit is required as outlined in Paragraph 2.04, the buzzer signaling equipment described in Part 8 is connected at the ends of the cable and at any intermediate point where the cable is open, and is tested. Both buzzer and push button equipment should be located outside the splicing pits or manholes. The buzzer should be operated as follows:

- (a) The tester signals that he is ready to test by sending 15 short buzzes to the far end.
- (b) The splicer at the far end gets out of the pit or manhole when he hears the 15-buzz signal and signals 15 short buzzes that he is also ready for the test.
- (c) The tester replies that he is testing at once by again sending 15 short buzzes to the far end.

(d) Upon completion of the testing with high voltages, the tester sends 10 long buzzes to the splicers at the far end and any intermediate points, who reply with 10 long buzzes. This is the signal for both the splicer at the testing point and the splicer at the far end to short the inner conductor of each coaxial to its outer conductor to dissipate any potential on the coaxial.

4. TEST WITH HIGH VOLTAGE MEGGER TEST SETS

4.06 In cases where the insulation resistance, as indicated by a 2,500-volt megger is more than 10 megohms but less than 500-megohm miles, or if the megger needle varies over the scale without taking a fixed value, indicating the occurrence of corona discharge, repeat the test using a megger having a voltage rating of 1,250 or 1,500 volts. If the reading is satisfactory at the lower voltage, the trouble encountered with the 2,500-volt megger is probably due to dirt or a copper sliver and the suspected coaxial should be subjected to a test with the 94A Test Set (sliver burner) as outlined in Paragraph 5.01. When the insulation resistance as measured by the lower voltage megger is less than the 500-megohm miles and there is no indication of a short circuit or corona discharge, trouble due to moisture should be suspected and the necessary steps taken to clear the low insulation. When the coaxial is cleared, it shall be retested with the 2,500-volt megger, and must meet the requirements as outlined in Paragraph 4.03(3) before being considered satisfactory.

4.07 Insulation resistance tests should be performed, as outlined above, on each coaxial in each section of cable before the cable is spliced. Spliced sections should be tested through each completed splice to insure that faults have not been introduced by the splicing. When splicing is completed between Type L auxiliary stations, this section should be tested as a unit. Exactly the same tests should be made in the same sequence in testing a repeater section as in testing an individual length of cable. The tests covered above would therefore, describe the procedure for any length of cable.

8. BUZZER SIGNALING CIRCUIT

8.01 The buzzer signaling circuit is used for signaling between tester and any other personnel involved in coaxial tests with the 2,500-volt megger, sliver burner, and high voltage bridge.

8.02 The apparatus should be made up locally in accordance with the following diagram. Two pairs of paper insulated conductors in the coaxial cable under test are employed between signal points. A separate buzzer signaling circuit should be used between the tester and each point where the cable is open.

