

MULTIPLE JACK CIRCUITS

TELETYPEWRITER SWITCHBOARD NO. 1

1. GENERAL

1.01 This section describes the a-c. continuity test of multiple jack circuits at the teletypewriter switchboard No. 1.

1.02 The test outlined herein, with the exception of minor changes, was previously covered in Provisional Section A281.803 and therefore cancels Section A281.803.

1.03 This test should ordinarily be made at a time of light traffic load as the test conditions specified below place a very low impedance shunt across the tip and ring of the circuit under test, making the circuit inoperative.

2. APPARATUS

2.01 P3D Cord equipped with No. 309 Plugs.

2.02 P3D Cord equipped with a No. 309 Plug, a No. 113A Gauge and a No. 121A Cord Weight attached to the cord about 2 inches from the gauge.

2.03 No. 710 or P3E Cord equipped with a No. 309 Plug and a No. 310 Plug.

2.04 A small Screwdriver, such as a Bell System Cabinet Screwdriver.

2.05 Test Circuit per SD-63488-01, Figs. 1 and 4 (J66121AH).

2.06 Portable Control Box (Potentiometer and Receiver) per (J64703A).

3. METHOD

3.01 It is essential in the following procedures for the No. 113A gauge to be within its specified requirements. A check of these requirements can be made by inserting the No. 113A gauge into the No. 106A gauge. When the No. 113A gauge is turned to the position where the needle of the No. 106A gauge is the farthest to the right, no portion of the needle shall be to the right of the green line. If an appreciable number of jacks are to be tested, it is desirable to make the above check from time to time to ensure that the gauge has not become bent or worn to the extent that it applies too severe a condition on the jack tested.

3.02 A busy test should be made in the regular manner on the circuit to be tested. Note that the circuit is not busy.

3.03 Connect the jack to be tested to the B jack of the test circuit by means

of a P3D cord. The gauge should be inserted into the jack to be tested. Connect a multiple appearance of the jack under test to the A jack of the test circuit by means of a P3D cord.

3.04 At the position in which the jack is being tested, connect the CKT jack of the portable control test set (potentiometer and receiver) to the D jack of the test circuit by means of a No. 710 or P3E cord. The No. 310 plug should be inserted into the CKT jack of the portable control test set.

3.05 Check the operation of the interrupter circuit as follows: Operate the ST key in the cable turning section to start the interrupter. The TN lamp should light as an indication that the interrupter is in operation. While listening in the test receiver, withdraw the plug from the A jack so that its sleeve and tip make contact with the sleeve and ring of the jack, respectively. If appreciable tone is heard indicating that the interrupter is operating, reinsert the plug and proceed with the test.

3.06 Turn the knob of the potentiometer until a minimum tone is heard. This condition should exist when the pointer is on "0". If minimum tone is heard at some other point, an unbalance condition exists in the jack circuit. Experience with this test will determine the degree of unbalance which should be investigated. If an appreciable tone is heard at all positions of the pointer it is an indication of an unbalance which should be investigated.

3.07 Listen in the test receiver during the following operations.

3.08 With the No. 113A gauge in its normal position in the jack, that is, with no pressure other than that exerted by the cord and cord weight applied to the plug, rotate the gauge one complete revolution. A cutout will be indicated by a click or change of volume of tone.

3.09 While holding the No. 113A gauge firmly in the jack, tap the jack strip lightly with the handle of a screwdriver. Also tap the jack strip in which the multiple jack of the jack under test appears while holding the No. 309 plug firmly in the jack. Clicks or a change in volume of tone indicates trouble on the jack at which the tapping takes place. If an appreciable tone is heard continuously it is an indication of trouble on the jack under test or its multiple.

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3.10 Remove all plugs from the jacks and restore the ST key to normal upon completion of the test.

4. REPORTS

4.01 The required record of this test should be entered on the proper form.

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