

TIE TRUNKS OPERATION TESTS 606A, 607A AND 607B PBX

1. GENERAL

- 1.01 This section describes a method of testing tie trunks in the 606A, 607A and 607B PBX.
- 1.02 This section has been reissued to change the title for clarification purposes and convert it to letter size.
- 1.03 The tests are as follows:
- (A) Test of Jacks for Cut-outs—A.C. Continuity Method
 - (B) Test of Jacks for Cut-outs—D.C. Click Method
 - (C) Operation Test of Automatic Tie Trunks
 - (D) Operation Test of Ringdown Tie Trunks
 - (E) Operation Test of Repeating Tie Trunks (except No. 607-B P B X)
 - (F) Operation Test of Terminating or Through and Terminating Tie Trunks
- 1.04 Tests (C), (D), (E), and (F) should be made from a different position each time the test is made, using a different cord each time so that eventually every tie trunk will have been tested in connection with a different cord circuit.
- 1.05 Test (A) should be made when the switchboard is equipped with an A.C. continuity test circuit. Otherwise employ the D.C. click method in test (B).

2. APPARATUS

Test (A)

- 2.01 Test line circuit SD-66240-01.
- 2.02 Test cord assembly shown in Fig. 1. (To be made up locally.)

Note: In order to insure no variations in the No. 113-B gauge, it should be checked with the No. 106-A gauge.

- 2.03 Test cord—No. R2CU cord, 6 feet long, equipped with a No. 716E receiver (or equivalent) and a No. 309 plug.

Test (B)

- 2.04 Test cord assembly, Fig. 1 modified, by replacing the S3A cord with No. 309 plug attached, with a No. R2CU cord, 6 feet long, equipped with a No. 716-E receiver (or equivalent).

Tests (A), (B), (C), (D), (E) and (F)

- 2.05 Attendants telephone set.

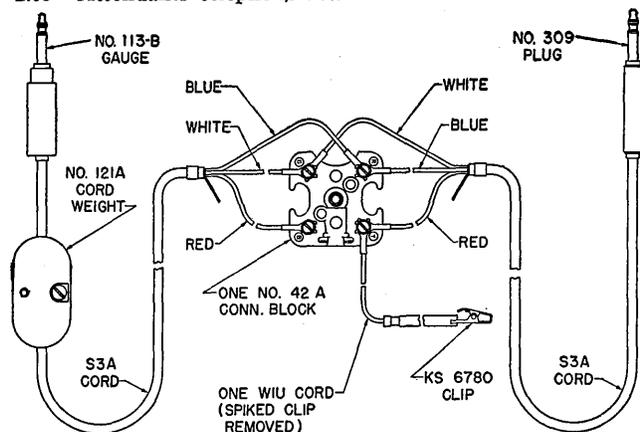


FIG. 1

3. PREPARATION

All Tests

- 3.01 Before making the tests outlined herein, insert the plug of an attendant's telephone set into the telephone jacks of the switchboard position from which the tests are to be made.

Tests (A) and (B)

- 3.02 Make the trunks busy in the usual manner, where necessary, before proceeding with these tests.

Test (E)

- 3.03 Arrange to have an assistant to answer the test calls.

4. METHOD

(A) Test of Jacks for Cut-outs—A.C. Continuity Method

- 4.01 This test checks the tie trunk jacks for cut-outs, clicks and undue noises caused by poor plug and jack contact.
- 4.02 Make the usual busy test to determine that the tie trunk to be tested is idle.
- 4.03 Insert the No. 113-B gauge of Fig. 1 into a multiple jack of the tie trunk circuit to be tested and the No. 309 plug into the CON FRONT jack of the test line circuit. Attach the WIU cord clip to the sleeve of a plug of an idle switchboard cord.
- 4.04 Insert the plug of an idle back cord into the jack of another multiple appearance of the tie trunk circuit and the plug of the associated front cord into the CON REAR jack.
- 4.05 Insert the receiver cord into the REC jack. A slight tone may be heard in the receiver. Rotate the No. 113-B gauge one revolution while listening in the receiver for any clicks or changes in the volume of the tone, which indicates a cut-out or other trouble conditions. No pressure other than that exerted by the cord and cord weight should be applied to the gauge.
- 4.06 Transfer the testing cords to the jacks of the other multiple appearances of the tie trunk, so that all the multiple jacks for the tie trunk circuit may be tested.
- 4.07 Upon completion of the test, disconnect the testing cords.

(B) Test of Jacks for Cut-outs—D.C. Click Method

- 4.08 This test checks the tie trunk jacks for undue clicks and noises due to poor plug and jack contact.
- 4.09 Make the usual busy test to determine that the tie trunk to be tested is idle.
- 4.10 Insert the plug of an idle back cord into a multiple jack of the tie trunk circuit to be tested. Insert the 113-B gauge of Fig. 1 modified, into the jack of another multiple appearance of the tie trunk and note that a click is heard in the receiver as the plug is inserted.
- 4.11 Rotate the No. 113-B gauge one revolution while listening for a click in the receiver which, if heard, indicates that the jack cuts out. No pressure other than that exerted by the cord and cord weight should be applied to the gauge.
- 4.12 Proceed as in 4.06 and 4.07.

(C) Operation Test of Automatic Tie Trunks

- 4.13 This test checks the operating features under switchboard to distant P B X and from distant P B X to local P B X conditions.
- 4.14 **One Way:** Insert the plug of an idle back cord with its associated talk and dial key operated into the jack

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of the tie trunk to be tested. If idle indicating lamps are provided, observe that the lamps are extinguished in all appearances. The indicating lamps on the next idle tie trunk circuit should light.

4.15 When the attendant at the distant end answers, check the tie trunk number and remove the plug from the jack.

4.16 **Two Way:** Insert the plug of an idle front cord with its talk and dial key operated, into the jack of the first idle tie trunk to be tested. When the distant attendant answers, request her to disconnect momentarily, then to originate a call on the tie trunk and hold the connection until she receives a disconnect signal. Remove the plug of the front cord from the jack of the tie trunk circuit.

4.17 Observe that the line lamps are lighted on the incoming call. Check that the idle indicating lamps, where provided, are extinguished in all appearances and that the idle indicating lamps on the next idle tie trunk circuit are lighted.

4.18 Insert the plug of an idle back cord into the jack of the tie trunk circuit under test. The line and back supervisory lamps will be extinguished.

4.19 Remove the back cord plug from the tie trunk circuit. The line lamp will remain extinguished and the idle indicating lamps, where provided, will light when the distant attendant disconnects.

Note: It may be necessary, in some cases, that the attendant at the distant end be advised to disconnect at the end of a time interval sufficient to permit the test to be completed.

(D) Operation Test of Ringdown Tie Trunks

4.20 This test checks the operating features under switchboard to distant P B X conditions and distant P B X to local P B X conditions.

4.21 **Two Way:** Insert the plug of an idle back cord into the jack of a spare extension line circuit and insert the plug of the associated front cord, with its talk and dial key operated, into the jack of the tie trunk to be tested. Observe that the indicating lamps are extinguished in all appearances. The lamps on the next idle tie trunk circuit will light.

Note: For the No. 607-B P B X it will be necessary to operate the (ring front) key to signal the distant attendant.

4.22 When the distant attendant answers, request her to disconnect momentarily, then to originate a call on the tie trunk and hold the connection until she receives a disconnect signal. Remove the front cord plug from the jack of the tie trunk under test.

4.23 Observe that the line lamps are lighted on the incoming call. Check that the indicating lamps are extinguished in all appearances and that the indicating lamps on the next idle tie trunk are lighted.

4.24 Insert the plug of an idle back cord into the jack of the tie trunk under test. The line and back supervisory lamps will be extinguished.

4.25 Remove the back cord plug from the tie trunk jack. The line lamp will be extinguished and the idle indicating lamps will light. Restore the cord circuit to normal.

(E) Operation Test of Repeating Tie Trunks

4.26 This test checks the operating features of tie trunks from switchboard to attended and unattended distant P B X's.

4.27 **Where the repeating tie trunks terminate at a distant attended P B X:** Insert the plug of a front cord, with its associated talk and dial key operated, into the jack. If idle indicating lamps are provided, observe that the lamps are extinguished at all appearances. The indicating lamps on the next idle trunk will light.

4.28 Dial zero to reach the distant attendant.

4.29 When the attendant at the distant end answers, check the tie trunk number and remove the plug from the tie trunk jack.

4.30 **Where the repeating tie trunk terminates at a distant P B X without a switchboard** proceed as in 4.27.

4.31 Dial the number of an extension. Observe that an audible ringing signal is heard in the receiver.

4.32 When an answer is received, check the extension number, then remove the plug from the tie trunk jack.

(F) Operation Test of Terminating or Through and Terminating Tie Trunks

4.33 This test checks the operation of the line signal lamps when ringing is applied to the line.

4.34 Insert the plug of an idle front cord into the station jack of the tie trunk to be tested. Insert the plug of the associated back cord into the trunk jack.

4.35 Ring with the associated key of the back cord which is in the trunk jack. The line lamp will light as long as the ringing key is operated. When the attendant at the distant end answers, request that she ring back and observe that the line lamp again lights while ringing current is being applied.

4.36 Remove the plugs of the cord circuit from the trunk and station jacks.

4.37 When testing through and terminating tie trunks, insert the plug of an idle front cord into a MULT jack. If idle indicating lamps are provided, observe that the lamps are extinguished at all appearances. The indicating lamps on the next idle trunk should light.

4.38 Operate the ringing key associated with the front cord. Observe that the line lamp remains extinguished.

4.39 When the attendant at the distant end answers, request that she disconnect momentarily and then originate a call on the tie trunk. Disconnect the cord from the MULT jack.

4.40 Observe that the line lamps are lighted by the incoming call.

4.41 Insert the plug of an idle front cord in the multiple jack. Observe that the line lamp is extinguished.

4.42 Request the distant attendant to re-ring and observe that the front cord lamp lights.

4.43 Remove the front cord plug from the jack of the tie trunk under test.

4.44 Proceed as in 4.37, 4.38 and 4.39.

4.45 Observe that the line lamp lights.

4.46 Insert the plug of an idle front cord in the THRU jack and observe that the line lamp is extinguished and that the front and rear cord lamps light.

4.47 Remove the front cord plug from the jack of the tie trunk under test.

5. REPORTS

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