

2nd Floor
TOLL SWITCHING TRUNKS TO STEP-BY-STEP OFFICES

OPERATION AND COIN CONTROL TESTS

LOOP BACK METHOD

NO. 1 TOLL SWITCHBOARD

1. GENERAL

1.01 This section describes operation and coin control tests of toll switching trunks to step-by-step offices from the No. 1 toll switchboard based upon a loop back method. It also covers an alternative operation test based upon the use of a connector multiple test line (other than SD-31636-01) arranged to wait for ringing.

1.02 This section has been reissued to cover trunks arranged for local type supervision and trunks arranged for automatic ringing.

1.03 The tests are divided as follows:

(A) Operation Test - With Circuit Looped Back to Toll Office

(B) Coin Control Test - With Circuit Looped Back to Toll Office

(C) Operation Test - Using Connector Multiple Test Line (Other Than SD-31636-01) Arranged to Wait For Ringing

1.04 Tests (A) and (C) are alternative methods but Test (A) checks more of the features than Test (C). Therefore, if Test (C) is normally scheduled, Test (A) should be made occasionally to check the additional features.

1.05 Tests should preferably be made from the end position of a lineup in order to include all multiple wiring, and in case more than one lineup is involved the tests should be scheduled so that they are fairly equally distributed between the lineups.

2. APPARATUS

All Tests

2.01 Operator's Telephone Set.

Tests (A) and (B)

2.02 These tests are based on the assumption that a spare line circuit has been assigned for the purpose in the local office, connected to a spare multiple jack circuit, with ground on the sleeve, in the toll office. The conductor resistance between the two offices must not exceed the normal subscriber conductor loop range for the local office.

2.03 Portable Prepayment Coin Subscriber Set terminating in a cord equipped with a No. 310 (or No. 110) Plug with the line terminals of the set connected to tip and ring of the plug, and the ground terminal to sleeve.

3. PREPARATION

All Tests

3.01 Connect an operator's telephone set to the position at which tests are to be made.

3.02 When testing controlled ringing trunks, operate the position key to cancel the automatic ringing feature if such a key is provided.

Tests (A) and (B)

3.03 Connect the portable coin subscriber set to the multiple jack, at the toll switchboard, which is associated with the connector terminal in the terminating office assigned for the purpose.

4. METHOD

4.01 In each of the tests it is necessary to place calls for certain connector terminals. The method of making a call depends upon the type of equipment involved and is described under (1), (2), and (3) below. In each case a busy test should be made to avoid connecting to a busy trunk.

(1) Dialing Trunks - Using Cords Other Than Type A Cords: Connect a trunk cord to the trunk to be tested and operate the monitoring key or the position dialing key as required. Dial the desired number and then operate the talking key.

(2) Dialing Trunks - Using Type A Cords: Connect a trunk cord to the trunk to be tested and operate the talking key and the dialing key. Dial the desired number and then restore the dialing key to normal.

(3) Straightforward Trunks: Connect a trunk cord to the trunk to be tested, with the talking key operated, and listen for order tone. Upon hearing order tone give the "B" operator the desired number.

(A) Operation Test - With Circuit Looped Back to Toll Office

- 4.02 Place a call, as covered in 4.01, over the trunk to be tested for the number of the terminal assigned for testing under this method.
- 4.03 When the trunk is arranged for controlled ringing, operate and release the ringing key after the cord supervisory lamp has lighted. Note that the portable coin subscriber set bell rings properly.
- 4.04 Remove the receiver from the station switchhook and "flash" the hook slowly, noting that the trunk cord supervisory lamp follows the flashes properly.
- 4.05 Blow into the station transmitter, and tap the transmitter with the fingers. Corresponding sounds should be heard in the receiver of the operator's telephone set.
- 4.06 When the trunk is arranged for controlled ringing, hold the station receiver away from the ear. Reoperate and release the ringing key of the toll cord used for test. Note that ringing is heard in the receiver, but that no excessive clicks, due to possible faulty adjustments of the trunk relays, are heard during the application of ringing current.
- 4.07 When the trunk is arranged to provide a busy condition on the sleeve of the jack with the subscribers receiver off the hook and the cord removed from the trunk jack, remove the cord from the trunk jack and check that the sleeve tests busy.
- 4.08 If the coin control test (B) is not to be made at this time, replace the station receiver on the switchhook. Also disconnect the portable subscriber set, unless further tests are to be made. Remove the cord from the trunk jack, if 4.07 was not applied.

(B) Coin Control Test - With Circuit Looped Back to Toll Office

- 4.09 With a connection established between the trunk to be tested and the portable coin subscriber set, as covered in 4.02, deposit a coin in the subscriber set. The receiver should be in place on the switchhook.
- 4.10 In offices arranged for the associated jack method of coin control, proceed as in 4.11 to 4.15. In offices arranged for the coin control selector method of coin control, proceed as in 4.16 to 4.21. In offices arranged for control of the coin by the local "A" operator, proceed as in 4.22 to 4.26.

Associated Jack Control

- 4.11 Connect the coin control cord to the coin collect jack associated with the trunk under test.
- 4.12 Depress the coin collect key and observe that the coin pilot lamp lights.
- Release the coin collect key. See that the coin is collected.
- 4.13 Deposit another coin and remove the receiver from the switchhook.
- 4.14 Depress the coin return key and observe that the coin pilot lamp lights
- and that the coin is returned. Release the coin return key.
- 4.15 Remove the cords from the coin control and trunk jacks and disconnect the portable subscriber set, unless further tests are to be made.

Coin Control Selector

- 4.16 Connect the coin control cord to an idle coin control trunk.
- Note: A different coin control trunk should be used for each toll switching trunk tested, until all coin control trunks to the office under test have been used.
- 4.17 Operate the dialing key of the coin control cord and dial the toll switching trunk number.
- 4.18 Restore the dialing key and depress the coin collect key. Listen for low tone on the toll switching trunk and see that the coin is collected. Release the coin collect key.
- 4.19 Deposit another coin and remove the receiver from the switchhook.
- 4.20 Depress the coin return key and listen for high tone. Release the coin return key. See that the coin is returned.
- 4.21 Remove the cords from the coin control and trunk jacks and disconnect the portable subscriber set, unless further tests are to be made.

Control by Local "A" Operator

- 4.22 Depress the proper call circuit key and when the "A" operator answers, say "Trunk-----collect," (giving the number of the trunk under test).
- 4.23 Listen on the trunk under test and note that low tone is received. Note that the coin is collected and remove the receiver from the switchhook.

4.24 Repeat the test with the exception that the distant operator is requested to "return" instead of "collect" and the receiver is left off the hook.

4.25 Listen for high tone on the trunk under test and check that the coin is returned.

4.26 Remove the cord from the trunk under test, replace the receiver on the hook and disconnect the portable subscriber set, unless further tests are to be made.

(C) Operation Test - Using Connector Multiple Test Line (Other Than SD-31636-01) Arranged to Wait For Ringing

4.27 Place a call, as covered in 4.01, over the trunk to be tested for the number of the connector multiple test line. (Only those test lines which await ringing will function properly.)

4.28 When the trunk is arranged for controlled ringing, operate and release the ringing key after the cord supervisory lamp has lighted. When the trunk is arranged for automatic ringing, no ringing key operation is required.

4.29 Note that interrupted tone is received over the trunk and that the cord supervisory lamp flashes.

Note: Tone may not be heard during the fast flashing interval of the test line.

4.30 Remove the cord from the trunk jack.

5. REPORTS

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

Bell Telephone Laboratories, Inc.