

## OPERATORS' TELEPHONE CIRCUITS NO. 1 TOLL OFFICE

### 1. GENERAL:

- 1.1 This section describes the testing of operators' telephone circuits.
- 1.2 The tests should be made at periods when the switchboard position can be vacated by the Traffic Department.
- 1.3 The tests described are as follows:
  - (a) Busy Test Relay.
  - (b) Talking Test.
  - (c) Grouping Key for Toll Cords.
  - (d) Grouping Key for Repeater Cords.
  - (e) Grouping Key Circuit, Inward Call Positions.
  - (f) Grouping Key Circuit, Inward Straightforward.
- 1.4 Tests (c), (d) and (e) can only be conducted with the use of the testing circuit for high impedance or condenser type toll cord circuits.

### 2. APPARATUS:

Tests (a), (d) and (e):

2.1 Operator's Telephone Set.

Tests (b) and (f):

2.2 Two Operator's Telephone Sets.

Tests (c), (d) and (e):

- 2.3 No. P2B Cord equipped with two No. 110 Plugs.
- 2.4 Testing Circuit for High Impedance Toll Cord Circuits or Condenser Type Toll Cord Circuits.

### 3. METHOD:

#### (a) Busy Test Relay:

- 3.1 Insert the plug of an operator's telephone set into the telephone jacks of the switchboard position to be tested.
- 3.2 Touch the sleeve of the plug of a cord to the tips of each of the adjacent plugs.
- 3.3 Distinct clicks should be heard in the operator's telephone receiver.

Note: On positions not equipped with busy test relays, the busy test feature should be tested in the same manner.

#### (b) Talking Test: Toll Switchboard:

- 3.4 Insert the plug of the operator's telephone set into the telephone set jacks at two positions (under test), separated by several sections.
- 3.5 Select a trunk circuit known to be in good condition as a talking trunk. The tester at each end should insert the plug of a toll cord into the jack of the selected trunk.

Note: The trunk circuit selected for the test should have a grounded sleeve when a busy test relay is provided in the cord circuit.
- 3.6 Operate the listening keys to the talking position at both switchboard positions and talk over the circuit. Note that the transmission appears satisfactory.
- 3.7 Each tester should operate the listening key to the monitoring position while the other is talking. In monitoring the volume should be somewhat less than that received with the key in the talking position.
- 3.8 Remove the cords and operator's telephone set plug from the jacks and restore all keys to normal.

#### Recording Switchboards:

- 3.9 The operator's telephone circuit should be tested in the same manner as described in paragraphs 3.4 to 3.8, inclusive, except the monitoring tests since the monitoring feature is not provided.

#### Outward Call Circuit:

- 3.10 Insert the plug of the operator's telephone set into the telephone jacks of the position under test.
- 3.11 Operate a call circuit key and make a talking test.
- 3.12 With the call circuit key operated, tone should be heard in the operator's telephone set if the distant operator is busy or if the position is unoccupied.

#### (c) Grouping Key for Toll Cords:

- 3.13 Where the high impedance toll cord testing circuit is provided, connect the TRK

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jack to a spare trunk multiple jack having a grounded sleeve.

Note: When the condenser type toll cord testing circuit is provided, connect the TOLL or T jack to a spare trunk multiple jack having a grounded sleeve.

- 3.14 Operate the JK key of the testing circuit. This supplies tone to the spare trunk multiple jack.
- 3.15 Insert the plug of an operator's telephone set into the telephone jacks of the first position of the section under test.
- 3.16 Insert the plug of a toll cord on the second position into a multiple of the jack to be used for tone.
- 3.17 Operate the grouping key on the second position.
- 3.18 Operate the cord circuit listening key associated with the cord connected to the spare trunk multiple jack to the talking position. Tone should be heard in the operator's telephone receiver.
- 3.19 Operate the cord circuit listening key to the monitoring position. The volume of tone heard on this test should be somewhat less than that received with the key in the talking position.
- 3.20 Tap the grouping key lightly with a pencil equipped with an eraser and listen for cut-outs or noise due to loose connections.
- 3.21 Test the busy test transfer by touching the tip of a trunk cord in the second position to the sleeve of an adjacent cord. A distinct busy test "click" should be heard in the operator's telephone receiver.
- 3.22 Test in a similar manner the grouping key of the first position, by moving the operator's telephone set from the first position to the second position of the section.
- 3.23 Restore all keys to normal and remove all cords from jacks used in this test. Restore the JK key to normal.

### (d) Grouping Key for Repeater Cords:

- 3.24 Where the high impedance toll cord testing circuit is provided, connect the TRK jack to a spare trunk multiple jack having a grounded sleeve and with which is associated a network jack.

Note: Where the condenser type toll cord testing circuit is provided, connect the TOLL or T jack to a spare trunk multiple jack having a grounded

sleeve, with which is associated a network jack.

- 3.25 Operate the JK key of the testing circuit. This supplies tone to the spare trunk multiple jack.
  - 3.26 Insert the plug of an operator's telephone set into the telephone jacks of the position to which the repeater is arranged to be transferred.
  - 3.27 Insert one plug of a repeater cord at the other position into a multiple of the jack used for tone and associated network jack. (The line side of the repeater cord should be connected to the tone jack.)
  - 3.28 Operate the repeater grouping key.
  - 3.29 Operate the listening key associated with the repeater cord to the talking position. Tone should be heard on the operator's telephone receiver.
  - 3.30 Operate the listening key associated with the repeater cord to the monitoring position. The volume of tone heard on this test should be somewhat less than that received with the key in the talking position.
  - 3.31 Restore all keys to normal and remove all cords from jacks used in this test.
- (e) **Grouping Key Circuit, Inward Call Positions:**
- 3.32 Where the high impedance toll cord testing circuit is provided, connect the TRK jack to an emergency call circuit jack associated with the first inward position of the section under test.

Note: When the condenser type toll cord testing circuit is provided, connect the TOLL or T jack to an emergency call circuit jack associated with the first inward position.

- 3.33 Operate the JK key of the testing circuit. This supplies tone to the emergency call circuit jack.
- 3.34 Insert the plug of an operator's telephone set in the telephone jacks of the second inward position.
- 3.35 Operate the emergency call circuit key, and operate the grouping key to transfer to the second operator. Tone should be heard on the operator's telephone receiver.
- 3.36 Restore the emergency call circuit key and test the busy test feature transfer by touching the tip of a call circuit trunk or toll line cord on the first position to the

- sleeve of an adjacent cord. A distinct busy test "click" should be heard in the operator's telephone receiver.
- 3.37 Test the grouping key circuit on the second position in a manner similar to that described in paragraphs 3.34 to 3.36.
- 3.38 Restore all keys to normal and remove all cords from jacks used in this test.
- (f) **Grouping Key Circuit, Inward Straightforward:**
- 3.39 At the inward position on which the straightforward toll line used for test terminates, insert an operator's telephone set into the telephone jacks.
- 3.40 Insert the plug of an operator's telephone set into the telephone jacks of a toll switchboard position in another section.
- 3.41 Insert the plug of a toll cord into a straightforward toll line multiple jack.
- 3.42 Make a talking test and note that the transmission appears satisfactory.
- 3.43 Operate the grouping key associated with the inward position.
- 3.44 Remove the operator's telephone set from the first position to the second and repeat the talking test.
- 3.45 Test the busy test transfer at the inward position by touching the tip of a straightforward toll line plug on the first position to the sleeve of an adjacent plug. A distinct busy test "click" should be heard in the operator's telephone receiver connected to the second position.
- 3.46 Where the grouping key is arranged to transfer either left or right, tests described in paragraphs 3.44 and 3.45 should be made in both positions of the grouping key.
- 3.47 Restore all keys to normal and remove all cords from jacks used in this test.
4. **REPORTS:**
- 4.1 The required record of this routine should be entered on the proper form.