

TRUNKS AND TIE LINES
OPERATION TESTS FROM SELECTOR LEVELS
702A PBX

1. GENERAL

1.01 This section describes the method of testing the operating features of trunks and tie lines working from selector levels in a No. 702-A P.B.X. to central offices and distant P B X 's. The tests covered are:

(A) **Direct Dial Trunks to Central Office, Toll Switchboard or P B X Attendant and Tie Lines to Other P B X 's—Regular Selectors.**

(B) **Direct Dial Trunks to Central Office, Toll Switchboard or P B X Attendant and Tie Lines to Other P B X 's—Two-Digit Rotary Hunting Selectors.**

1.02 This routine should be made from selectors having direct access to the trunks and tie lines. Use a different switch each time, so that all trunks and tie lines will eventually be tested from all switches.

1.03 Any trunk or tie line on which a failure is encountered should be made busy until the trouble is cleared.

2. APPARATUS

2.01 Dial Hand Test Set equipped with a No. 2-CB Dial and a No. 240-F Plug. (Lamp Omitted).

2.02 No. 375-A Tools, as required.

3. METHOD

(A) **Direct Dial Trunks to Central Office, Toll Switchboard or P B X Attendant and Tie Lines to Other P B X 's—Regular Selectors.**

3.01 Remove the switch cover and connect the dial hand test set to the test jack of an idle selector and operate the C button. Dial the switch to the required level and note whether it rotates to the first trunk or tie line contacts. If this trunk or tie line is busy the switch will automatically rotate to the contacts of the first idle circuit. In case the switch rotates over a terminal, record the circuit number for testing when idle. If upon subsequent test the switch passes over the terminals of the circuit, monitor on the switch that is connected to the trunk to make certain that the circuit is actually busy.

Trunks to Manual Central Office, Toll Switchboard, P B X Attendant and Dial Tie Line to Distant P B X Attendant

3.02 When the operator or attendant answers, check the number of the trunk or tie line with her. On calls to the toll switchboard note that the audible ringing signal is heard.

3.03 On trunks to a local manual central office or toll switchboard request the operator to close the listening key for a moment and note that the supervisory lamp flashes. Immediately release and operate the C button two or more times, and when the operator answers ascertain if the supervisory lamp flashed properly.

3.04 With the C button of the hand test set still operated rotate the selector to the next contacts by momentarily operating the off-normal finger. Check the number of this trunk or tie line with the operator or attendant and on trunks to a manual central office or toll switchboard repeat the test under 3.03.

3.05 When the last trunk or tie line on the level has been tested momentarily operate the off-normal finger with the C button still operated and observe that the switch rotates to the 11th step and that the busy signal is heard in the receiver. Release the C button and observe that the selector releases properly.

Trunks to Panel Central Office

3.06 Dial tone should be heard. Dial the permanently made busy number in the panel office. Note that busy tone is heard.

3.07 Rotate the selector to the next contact by momentarily operating the off-normal finger. When dial tone is heard dial the permanently made busy number in the panel office. Busy tone should then be heard. Test each trunk in this manner.

3.08 Repeat the operations in 3.05 before releasing the switch from the last trunk on the level.

Trunks to Step-by-Step Central Office

3.09 Dial tone should be heard. Dial the connector multiple test line number in a non-reverse battery connector group in the step-by-step office. Note that a tone is heard in the receiver for approximately one second, followed by clicks at the rate of one per second.

Note: If a connector multiple test line number in a non-reverse battery connector group in the step-by-step office is not available, dial zero after dialing the selector to the proper terminal and when the operator answers, check the trunk number. Also test for proper operation of the flashing and holding features in accordance with 3.03.

3.10 Rotate the selector to the next contact by momentarily operating the off-normal finger. Where dial tone is heard proceed as in 3.09.

3.11 When the last trunk has been tested rotate the switch to the 11th step by operating the off-normal finger with the C button still operated. Note that the busy signal is heard in the receiver. Release the C button and note that the selector releases properly.

Tie Lines to Incoming Selectors at a Distant P B X

3.12 Proceed as in 3.01 and then dial the station at the distant P B X for which arrangements have been previously made for someone to answer the necessary test calls. Note that the audible ringing signal is heard in the receiver. When the station answers ascertain that it is the correct one and request the party to hang up. Rotate the selector to the next contacts by momentarily operating the off-normal finger. Dial the station at the distant P.B.X. over the tie line. Repeat this test on each tie line.

3.13 When the last tie line on the level has been tested proceed as in 3.11.

3.14 Upon the completion of the tests disconnect the dial hand test set and replace the switch cover.

(B) **Direct Dial Trunks to Central Office, Toll Switchboard, or P B X Attendant and Tie Lines to Other P B X 's—Two-Digit Rotary Hunting Selectors.**

3.15 Connect the dial hand test set to the test jack of an idle selector and operate the C button. Dial the required two digits to direct the switch to the first trunk or tie line of the group under test. Note whether the switch rotates to the first trunk or tie line contacts. If this trunk or tie line is busy the switch will automatically rotate to the contacts of the first idle circuit.

3.16 In case the switch rotates over a terminal, record the circuit number for testing when idle. If upon subsequent test the switch passes over the terminals of the circuit, monitor on the switch that is connected to the trunk to make certain that the circuit is actually busy.

Trunks to Manual Central Office, Toll Switchboard, P B X Attendant and Dial Tie Line to Distant P B X Attendant.

3.17 When the operator or attendant answers, check the number of the trunk or tie line with her.

3.18 On trunks to a local manual central office or toll switchboard proceed as in 3.03.

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3.19 Release the C button and when the switch has restored, dial the two digits required to reach the next higher terminal on the same level.

3.20 Test each circuit in turn by dialing the required two digits after the switch has returned to normal. Then check the trunk or tie line number with the operator or attendant. On trunks to a manual central office or toll switchboard proceed as in 3.03.

3.21 When the last trunk has been tested before releasing the switch insert a No. 375-A tool between the spring 3 and 4 of the switch test jack. Release the C button and observe that the switch does not release. Disconnect the hand test set and connect it to another idle two digit rotary hunting selector. Operate the C button of the dial hand test set and dial the required two digits to direct the switch to the trunk or tie line to which the first switch is connected. Note that the switch selects these terminals and that the busy signal is heard in the receiver. Release both switches.

Trunks to Panel Central Office

3.22 Dial tone should be heard. Dial the permanently made

busy number in the central office. Note that busy tone is heard.

3.23 Proceed as in 3.19, 3.20 and 3.21.

Trunks to Step-by-Step Central Office

3.24 Proceed as in 3.09, 3.19, 3.20 and 3.21.

Tie Lines to Incoming Selectors at a Distant P B X

3.25 Proceed as in 3.15 and 3.16. Then dial the station at the distant P B X where arrangements have been made to have someone answer the test calls. Note that the audible ringing signal is heard in the receiver. When the station answers ascertain that it is the correct one.

3.26 Proceed as in 3.19 and dial the station at the distant P B X over each tie line. After all tie lines have been tested proceed to test the all tie lines busy signal as in 3.21.

3.27 Upon the completion of tests disconnect the dial hand test set.

4. REPORTS

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