

**ATTENDANT CENTRAL OFFICE TRUNKS**  
**RELAY, JACK AND LAMP CIRCUIT TESTS**  
**700C PBX**  
**(MANUAL SWITCHBOARD)**

**1. GENERAL:**

1.1 This section describes tests of the trunk relays, polarity, jacks for cut-outs, and lamp jack frame for crosses.

**2. APPARATUS:**

2.1 Test Receiver (No. 528 or equivalent) equipped with cords and clips, No. 760 Cord and Test Plug (minimum size).

**3. METHOD:**

3.1 **Trunk Relay Operation Test:** (Non-multiple boards.) Obtain a ring on the trunk from the central office. If the board is connected to a manual office, request the operator who answers to ring on the trunk. If connected to a dial system office dial zero, and when the operator answers request a ring on the trunk, or if a reverting ring circuit is available, dial the assigned number. The trunk lamp should light, indicating that the line relay operates properly and that the jack contacts and the make contacts of the line relay are O. K. This also tests the normal make contacts of the cut-off relay.

3.2 Connect an idle front cord to the trunk jack. The trunk lamp should be extinguished, indicating that the cut-off relay operates properly, releasing the line relay. Disconnect the cord from the jack.

3.3 (Multiple boards.) Obtain a ring on the trunk from the central office, as described in 3.1. The trunk lamp should light and the busy signals should operate. This indicates that the line relay operates properly, and also tests the normal make contacts of the cut-off relay and the make contact of the line relay.

3.4 Connect an idle front cord to a jack of the trunk. The trunk lamp should be extinguished, but the busy signals should remain operated. This indicates that the cut-off relay operates properly, releasing the line relay. Disconnect the cord from the jack. The busy signals should release.

3.5 Connect a front cord, with the night and dial key operated, in turn to each associated jack of the trunk under test. The busy signals should operate.

3.6 **Trunk Polarity Test:** Operate a night and dial key and insert the associated front plug into a jack of the trunk under test. Connect one clip of the test receiver to ground and touch the other clip alternately to the tip and ring terminals of the associated back plug. A louder click should be obtained on the tip of the back plug than on the ring. Disconnect the plug from the trunk jack and restore the night and dial key.

3.7 **Trunk Jack Cut-out Test:** Connect the test receiver to the tip and ring terminals of the test plug. If the trunk under test is connected to a multiple board, connect the sleeve terminal of the test plug to the sleeve of an idle front cord, using the No. 760 cord. Insert the test plug into a jack of the trunk under test and manipulate the plug to determine whether the jack cuts out. This should be done by grasping the plug at the cord end and while applying a sideward pressure (that is, away from the centre of rotation), move the plug through a complete circle. Test all multiple jacks in the same way. Disconnect the test plug and receiver.

3.8 **Test of Lamp Jack Frame for Crosses:** (Non-Multiple Boards.) Connect one clip of the test receiver to the tip of an idle back plug and touch the other clip to the metal frame of the lamp cap. No click should be heard. Disconnect test receiver.

3.9 (Multiple Boards) Operate a talk and dial key and touch the tip of the associated front plug to the metal frame of the trunk lamp cap. No click should be heard. Restore the talk and dial key.

3.10 **Test of Sleeve Circuit:** To check that the sleeve battery contacts are open, make a busy test on the sleeve of a jack of the trunk under test. No click should be heard.

Note: Great care should be exercised by the maintenance man in placing calls over trunks in dial system message rate areas to see that non-registering code numbers are used.

**4. REPORTS:**

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