

CONNECTORS - OPERATION TESTS 740E PBX

1. GENERAL

1.01 This section describes a method of testing the operating features of connectors in a No. 740E PBX. It also covers the purpose of each test.

1.02 The tests covered are:

- (A) Cut-In and Release
- (B) Busy Test and Hunting
- (C) Ringing, Pretripping, Tripping and Reverse Battery.

1.03 When performing test (A), a different level should be used each time the tests are performed so that eventually every connector will have been tested on each working level.

1.04 When test (B) or test (C) is scheduled, test (A) may be omitted on the levels involved.

2. APPARATUS

All Tests

2.01 No. 1011G dial hand test set equipped with a 2W39A cord assembly consisting of a W2CL cord, a No. 471A jack and a No. 240A plug (or equivalent).

2.02 No. 477A (or No. 375A) (make busy) tools, as required.

Tests (B) and (C)

2.03 Test set (PBX), J54701B (SD-66073-01).

2.04 Test telephone set (part of test set).

2.05 Testing cord—W2M cord, 9 feet long, equipped with one No. 310 plug (2W12A cord).

2.06 Patching cord—P3C cord, 10 feet long, equipped with one No. 310 plug and one No. 240A plug (3P2A cord).

3. PREPARATION

Test (A)

3.01 Operate the switch of the cord assembly of the dial hand test set to the ON position.

Test (B)

3.02 Insert a make busy tool between springs 3 and 4 of the TST jack of the test line on the line frame.

Tests (B) and (C)

3.03 Locate the PBX test set at the connector side of the line frame. Operate the 740E key in the test set.

3.04 Connect the testing cord to the BAT jack of the test set. Then, connect the No. 59 cord tip on the sleeve conductor (red) to ground, and connect the No. 59 cord tip on the tip conductor (white) to the equipment end of a fuse on the fuse panel.

3.05 Connect the test telephone set to the TEL jacks of the test set, or connect the dial hand test set to the HS jack of the PBX test set.

Note 1: When using a dial hand test set, operate the TRS (transmitter) key on the PBX test set. Operate the switch of the dial hand test set to the TALK position, and use the dial hand test set dial instead of the PBX test set dial in making tests. Also operate the switch of the cord assembly to the ON position and leave it in this position for the duration of the test.

Note 2: When using the test telephone set, leave the TRS key in the normal position except when found necessary to talk over the test line.

3.06 Connect the patching cord to the T jack of the PBX test set.

3.07 Operate the MS (motor start) key on the line frame.

4. METHOD

(A) Cut-In and Release

4.01 This test checks the cut-in and release features of the regular and rotary hunting connector.

4.02 With the switch of the dial hand test set in the MON position, connect the hand set to the test jack of an idle connector. Operate the switch of the hand set to the TALK position.

4.03 Dial the number of the level to be tested and immediately dial the digit one. Operate the switch at the dial hand test set to the MON position as soon as the digit one has been dialed to avoid ringing the station. Observe that the connector steps to the first contact of the level dialed and immediately releases. Observe that dialing the digit one does not cause an extra vertical step or a vertical kick of the shaft.

Note: An extra vertical step or a vertical kick of the shaft usually indicates that the C relay is too slow to release.

4.04 When testing is completed remove the dial hand test set from the test jack of the connector.

(B) Busy Test and Hunting

4.05 This test checks the busy feature of the connector. It also checks the hunting feature of the rotary hunting connector.

4.06 Plug the patching cord connected to the T jack of the P.B.X. test set to the test jack of an idle connector. Observe that the BSY (busy) lamp on the PBX test set is not lighted.

4.07 Operate the LP (loop) key of the PBX test set. Observe that the BSY lamp on the test set lights.

4.08 When testing a regular connector, dial the number () of the terminal assigned to the test line. Observe that the switch stops on the terminal corresponding to the number dialed, and check that busy tone is heard in the receiver.

4.09 When testing a rotary hunting connector, dial the number () of the test terminal preceding the test line terminal. Observe that the switch hunts over the terminal dialed and stops on the test line terminal. Observe that busy tone is heard in the receiver.

4.10 Release the LP key and observe that the switch releases and that the BSY lamp is extinguished indicating that the switch is idle.

4.11 Disconnect the PBX test set from the test jack of the switch.

4.12 When testing is completed, remove the make busy tool from the test line TST jack. Restore all test set keys to normal and disconnect all testing apparatus. Restore the MS key to normal.

(C) Ringing, Pretripping, Tripping, and Reverse Battery

4.13 This test checks the operation features of the connector. It also checks the ringing, pretripping, tripping, and reverse battery features.

4.14 Plug the patching cord connected to the T jack of the PBX test set to the test jack of an idle connector. Observe that the BSY lamp on the PBX test set is not lighted.

SECTION 546-404-520

4.15 Operate the LK (leak) key of the P B X test set. Observe that the BSY lamp lights. Dial the number () of the test line. Check that the test line bell on the line frame rings and that audible ringing is heard in the receiver.

4.16 During a ringing interval, momentarily insert a make busy tool between springs 5 and 6 of the TST jack of the test line. Check that the bell continues to ring indicating that the trip relay of the connector has not operated.

4.17 During a silent interval, momentarily insert a make busy tool between springs 1 and 2 of the TST jack of the test line. Check that the bell no longer rings indicating that the trip relay has operated.

4.18 Insert a make busy tool between springs 1 and 2 of the TST jack. Operate the REV (reverse) key of the

P B X test set. Observe that the REV lamp lights indicating a reversal of battery and ground from the switch.

4.19 Release the LK and REV keys. Observe that the BSY and REV lamps are extinguished and that the switch restores to normal.

4.20 Disconnect the P B X test set from the test jack of the switch. Remove the make busy tool from the test line TST jack.

4.21 When testing is completed, restore all test set keys to normal and disconnect all testing apparatus. Restore the MS key to normal.

5. REPORTS

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