

TESTS AND INSPECTIONS AT TIME OF INSTALLATION
555 PBX**1. GENERAL**

- 1.01 This section covers tests and inspections that are required when the 555-type P B X is installed.
- 1.02 This section is reissued to convert it to letter size and to incorporate material from the addendum in its proper location. In the process of this conversion, marginal arrows have been omitted.
- 1.03 Two persons are required at the P B X for conducting the Extension Line Circuit Operation Tests under (D) and the Night Service Test under (E) in Part 7. Also the assistance of a test deskman is required in making tests under (E).

2. TOOLS

- 2.01 All tools required for the tests in this section are specified in the practices covering tests of the 555-type P B X 's.

3. INSPECTION OF CROSS-CONNECTING TERMINAL

- 3.01 The box shall be firmly mounted.
- 3.02 Connecting blocks and fanning strips shall be firmly mounted and properly lettered and numbered.
- 3.03 Cable extending to the P B X shall be properly terminated.
- 3.04 Cross-connections and wires to stations shall be neatly dressed and firmly fastened to the connecting block terminals.

4. INSPECTION OF CABLE BETWEEN CROSS-CONNECTING TERMINAL AND PBX

- 4.01 The cable shall be securely fastened to the wall or ceiling when run on the surface and shall be properly protected with two layers of friction tape where it may pass around such obstacles as gas pipes, electric light conduits, metal work, and foreign telephone, telegraph and signal conductors and the clearance is 1/2 inch or less.

5. INSPECTION OF PBX

- 5.01 The P B X shall stand level, and each section shall be fastened to the floor.
- 5.02 The interior of the P B X shall be clean and free from wire clippings, etc., and the exterior shall present a neat appearance without scratches or other defects.
- 5.03 The cable and cable form shall be securely fastened and sufficient slack shall have been left in the entering cable.
- 5.04 Cable sheaths shall be insulated against contact with the P B X ironwork.
- 5.05 The individual cable conductors for each row of terminal punchings shall be carried through the fanning holes and properly terminated. The punchings shall be free from wire clippings and loose bits of solder.
- 5.06 All bolts employed for fastening sections together shall be tight.
- 5.07 All relay covers shall be in place.
- 5.08 The circuit label shall be secured to the inside of the rear panel. The P number of the circuit label shall match that stamped on the framework of the P B X.
- 5.09 The cable hole or holes in the end panel or panels not used for entering cable shall be covered with a fibre plate.

- 5.10 Long cords shall be provided in two-position installations together with No. 112 pulley assemblies and No. 123A cord weight.

- 5.11 There shall be sufficient space for easy access in the rear of the board and sufficient space in front for operating purposes.

- 5.12 The rear panel shall be in place and properly fitted and the front panel underneath the writing shelf shall be in place.

- 5.13 See that the dial, when required, hand generator handle, lamps and lamp caps are in place.

- 5.14 See that the instruction card is correctly faced for area served (manual or dial).

6. RELAY TESTS

- 6.01 The relays should not require the application of a current flow test at the time of installation, except when a P B X is moved from one subscriber's premises to another without passing through the shop or storeroom for reconditioning. The testing and readjustment of individual relays, when necessary, shall be conducted in accordance with the requirements for the particular type of relay involved.

7. CIRCUIT OPERATION TESTS**(A) Miscellaneous Circuits**

- 7.01 The battery and generator feeders, battery cut-off key, buzzer and buzzer key, ringing key, hand generator and hand generator key shall be tested in accordance with the section covering miscellaneous circuits, 536-490-600.

(B) Cord Circuit Tests

- 7.02 Each cord circuit shall be tested in accordance with the section covering cord circuit tests, 536-490-525.

(C) Attendant's Telephone Set and Dial Circuit

- 7.03 Tests of the attendant's telephone set and dial circuit shall be made in accordance with Section 536-490-507.

(D) Extension Line Circuit Operation Tests

- 7.04 When making these tests the assistant will perform certain operations at each station while the tester remains at the P B X position to observe that the equipment functions properly and to direct the assistant as may be necessary.

- 7.05 The assistant at the first station to be tested shall remove the receiver from the switchhook, thereby lighting the line lamp at the P B X.

- 7.06 The tester at the P B X position, after seeing that the right line lamp lights and has proper brilliancy, answers by operating the talk and dial key and inserting the right plug of the first cord pair into the station line jack. Both testers shall make certain that the talking connection is satisfactory.

- 7.07 The tester at the P B X shall instruct the assistant to hang up the receiver and wait for a ringing signal.

- 7.08 The tester, without changing the connection, shall ring with the right ringing key. When the assistant has determined that the bell rings properly he shall remove the receiver and advise the tester at the P B X.

- 7.09 The tester shall then instruct the assistant to go to the next station and repeat the tests covered in 7.04 to 7.08, inclusive. This shall be repeated until all stations have been tested. Also, the tester shall use each succeeding cord pair at the P B X until all have been used at least once.

7.10 In connection with the above tests, make the following tests on each extension line in accordance with the section covering extension line circuits, 536-490-660.

- (a) Test of line relay (if provided).
- (b) Test of jack contacts and sleeve circuit.
- (c) Test of extension line jack for cut-outs.
- (d) Test of break contacts of extension line jack.

(E) Trunk Circuit Tests

7.11 Make the following tests on each trunk circuit in accordance with Section 536-490-665.

- (a) Trunk relay operation test.
- (b) Trunk polarity test.
- (c) Trunk jack cut-out test.
- (d) Trunk jack sleeve circuit test.

Dial Tone Tests

7.12 When the P B X is connected to a dial central office, test each trunk for the presence of dial tone by operating the talk and dial key of a cord circuit and inserting the left cord into the trunk jack.

Test of Dial Central Office P B X Hunting Feature.

7.13 Operate the talk and dial key of a cord circuit and insert the left cord into the first trunk jack. When dial tone is heard, dial the number of that trunk in the P B X group. Ringing induction shall be heard and the trunk lamp of the next higher trunk shall light.

7.14 Operate the night and through dial key of an idle cord circuit and insert the left cord into the trunk jack on which the call has appeared.

7.15 Restore the talk and dial key associated with the cord circuit used in the first trunk to the normal position.

7.16 Operate the talk and dial key of an idle cord circuit and insert the left cord into the third trunk jack. When dial tone is heard, dial the number of the first trunk in the P B X group. Ringing induction shall be heard and the trunk lamp of the next higher trunk shall light.

7.17 Operate the night and through dial key of an idle cord circuit and insert the left cord into the trunk jack on which the call has appeared.

Note: The operation of the night and through dial key of the cord circuit before plugging into the trunk jack on which the call appears is to prevent operation of the message register equipment at the central office.

7.18 Continue this test, dialing from odd numbered trunks to operate the signal of the even numbered trunks until all trunks have been tested.

7.19 Disconnect the cords used in the above tests.

7.20 Repeat the test covered in 7.13 to 7.19 inclusive, dialing from even-numbered trunks to operate the signal of odd-numbered trunks.

7.21 When all trunks have been made busy, the busy signal shall be obtained when the number of the first trunk is dialed.

Night Service Test

7.22 Operate the battery key to OFF position.

7.23 Operate the night and through dial key of an idle cord circuit. Connect the front cord into the night jack of the trunk under test and the rear cord to the jack of a nearby extension. Call the central office from this extension in the regular way. The call shall go through satisfactorily. Obtain a ring on the trunk and note that the bell of the extension rings satisfactorily. Observe that the trunk lamp does not light on this connection. Restore the cord circuit to normal.

7.24 Repeat this test on each trunk that is to be used for night service.

7.25 When certain trunks are assigned separate line numbers for incoming night service, the trunks shall be tested for proper operation by dialing the numbers assigned these trunks.

7.26 Restore the battery key to the ON position.