

RINGDOWN AND AUTOMATIC TIE TRUNK CIRCUITS

OPERATION TESTS

555 AND 557A PBX

1. GENERAL

- 1.01 This section describes a method of testing 2-way ringdown tie trunks and 2-way automatic tie trunks associated with the 555 and 557A PBX.
- 1.02 The section is reissued to include the 557A PBX. Since this reissue covers a general revision, the arrows ordinarily used to indicate changes have been omitted.
- 1.03 In order to avoid the effects of clicks, the test receiver should be kept away from the ear.

2. APPARATUS

- 2.01 Attendant telephone set connected in the telephone set jacks of the PBX, (Tests B and C).
- 2.02 Test plug (123-B gauge) connected to a P3A cord equipped with three KS-6780 connecting clips or one No. 360A tool, one No. 360B tool, one No. 360C tool, and three KS-6278 connecting clips or equivalent (Test A).
- 2.03 Test receiver—No. 716E receiver attached to a W2AB cord equipped with two No. 360A tools (2W21A cord) and two KS-6278 tools.

3. METHOD

A. Test of Tie Trunk Jack for Cutouts

- 3.01 When testing jacks associated with automatic tie trunks, block the C relay of the tie trunk circuit non-operated.
- 3.02 Connect one clip of the test receiver to ground by attaching it to the metal framework of the switchboard. Connect the other clip to the sleeve of the test plug cord. Insert the test plug into the tie trunk jack, and after a short interval, disconnect the receiver.
- 3.03 Connect the clips of the test receiver to the tip and ring of the test plug cord. A click should be heard in the test receiver. Manipulate the test plug to determine if the jack cuts out by grasping the test plug cord at the plug end, and while applying a sideward pressure away from the center of rotation just sufficient to take up the play in the jack, slowly rotate the plug through a complete circle with a cranking motion. Cutouts will be indicated by clicks in the test receiver. Disconnect one clip of the test receiver and reconnect it. A click should be heard in the test receiver.
- 3.04 Remove the test plug from the jack and reinsert it. Disconnect and reconnect one clip of the test receiver. No click should be heard in the test receiver.
- 3.05 Restore the test equipment to normal.

B. Operation Test of Ringdown Tie Trunk Circuit

- 3.06 Connect the attendant telephone set to the telephone set jacks, and insert the left plug of an idle cord circuit into the trunk jack. Operate the TALK & DIAL key and ring on the trunk by means of the ringing key provided with the tie trunk.
- 3.07 When the attendant at the distant end of the trunk answers, request a ringback. When ringing is heard, the line lamp associated with the tie trunk should light and the

audible signal should sound if turned on. When the ringing stops, the line lamp should be extinguished.

- 3.08 Request the attendant at the distant end of the trunk to allow time for the cord circuit at the testing end to be disconnected and then to ring on the trunk with a short ring. With the plug removed from the trunk jack, the line lamp should light when the ringing signal is received, and if the locked-in line lamp option is provided, it should remain lighted until the plug is inserted into the trunk jack. Insert the left plug into the trunk jack. The line lamp should be extinguished. Request the attendant at the distant end to disconnect and to remain off the circuit until signaled.

- 3.09 Restore the TALK & DIAL key and operate the NIGHT & THRU DIAL key of the cord circuit. Connect the test receiver across the tip and ring of the right plug. A click should be heard in the test receiver.

- 3.10 Restore the test equipment to normal.

- 3.11 Operate the TALK & DIAL key and signal the distant attendant by ringing over the tie trunk. When the attendant answers, advise her that the test is completed but that she should wait a few seconds before disconnecting. Disconnect the plug from the trunk immediately. The line lamp should not flash or light when the attendant at the distant end of the trunk disconnects.

- 3.12 Restore the TALK & DIAL key, and disconnect the attendant telephone set.

C. Operation Test of Automatic Tie Trunk Circuit

- 3.13 Connect the attendant telephone set to the telephone set jacks. Operate the TALK & DIAL key of an idle cord circuit and insert the left plug into the trunk jack. The line lamp associated with the tie trunk should light and the audible signal should sound if turned on. When the attendant at the distant PBX answers, the lamp should be extinguished.
- 3.14 Request the attendant at the distant PBX to disconnect from the trunk for several seconds until the trunk line lamp is extinguished and to then originate a call on the trunk. When the distant attendant disconnects, the line lamp at this PBX should light. Restore the TALK & DIAL key, and operate the NIGHT & THRU DIAL key. Connect the test receiver clips to the tip and ring of the right plug. A click should be heard in the test receiver. Disconnect the test receiver. Disconnect the cord circuit. The line lamps at both PBXs should be extinguished.
- 3.15 When the distant attendant originates a call on the trunk, the line lamp at the PBX under test should light. Insert the left plug into the trunk jack. The line lamp should be extinguished. If the trunk circuit has the locked-out line lamp feature, momentarily remove the plug from the trunk jack. The line lamp should remain extinguished. Reinsert the plug into the trunk jack, operate the TALK & DIAL key, and advise the distant attendant that the test is completed. When the distant attendant disconnects, the line lamp should light. Remove the plug from the trunk. The lamp should be extinguished.
- 3.16 Restore the TALK & DIAL key and disconnect the attendant telephone set.