

## LINK AND LINK ALLOTTER CIRCUITS OPERATION TESTS 755A PBX

### 1. GENERAL

1.01 This section describes a method of testing the operating features of the link and link allotter circuits in the No. 755-A PBX.

1.02 This section is reissued to provide for testing all links under Tests (B), (C), and (D) and to add Test (E), Test of the Chain Circuit Ground and (F), Test of the M and N Relays.

1.03 The tests covered are:

(A) **Link Allotter and Link Cutout Keys:** This checks the operating features of link cutout keys and that the links are selected in sequence.

(B) **Dial Tone, Preliminary and Extra Pulses and Busy Tone:** This checks that dial and busy tone are provided to the calling station and dialing of preliminary or extra pulses is ineffective.

(C) **Ringing and Tripping:** This checks the ringing and tripping operating features of the relays in the link circuit.

(D) **Line Hunting (Where Provided):** This checks that incoming calls may be completed if either station in the line hunting group is idle.

(E) **Chain Circuit Ground:** This checks continuity through the contacts of the L1 and LK relays in the call allotter circuit.

(F) **M and N Relays:** This checks the continuity of the emergency call allotter path.

1.04 When routine tests are made, perform them during periods of light traffic so that the busying of links will not interfere with service.

1.05 When making tests which require the use of a hand-test set, keep the receiver slightly away from the ear so that clicks which may occur during testing will not act directly on the ear.

### 2. APPARATUS

2.01 No. 1011G Dial Hand Test Set equipped with a 2W37A Cord Assembly consisting of one W2DB Cord, one No. 471A Jack and two No. 2 Test Clips per A. T. & T. Co. Specification No. 6928 (or equivalent).

2.02 One W1U Cord.

2.03 Dust Cloth.

### 3. PREPARATION

3.01 Carefully remove the dust with a slightly dampened dust cloth from the top and sides of the apparatus cabinet before removing the cover.

3.02 Operate the switch of the dial hand test set to the MON (monitoring) position.

3.03 Connect the dial hand test set to the T and R terminals associated with an idle key station at the P.B.X. terminal strips "A" or "B". Strap the associated L and G terminals of the same station using the W1U cord.

### 4. METHOD

#### (A) Link Allotter and Link Cutout Keys

4.01 When all links are idle, operate the three link cutout keys, CO1, CO2 and CO3, to the OFF position. Observe that the link allotter relays CH1, CH2 and CH3 are released.

4.02 Operate the switch of the dial hand test set to the TALK position. Note that busy tone is heard in the receiver.

4.03 Dial the code of an idle station and note that none of the link allotter relays operate. Observe that busy tone is still heard.

4.04 Restore the switch of the dial hand test set to the MON position and link cutoff keys to normal.

4.05 Operate the switch of the dial hand test set to the TALK position. Observe that a link is seized and the associated link allotter relay is released.

4.06 Restore the switch of the dial hand test set to the MON position and disconnect the clip of the W1U cord from the L or G terminals. Reoperate the switch to the TALK position and reconnect the clip. Observe that a different link is seized, the associated link allotter relay is released and the link allotter relay previously released is now operated.

4.07 Repeat 4.06 three or four times. Observe that a different link is seized each time and the links are seized in sequence.

#### (B) Dial Tone, Preliminary and Extra Pulses and Busy Tone

4.08 With the switch of the dial hand test set operated to the TALK position and the L and G terminals strapped out, observe that dial tone is heard in the receiver.

4.09 Dial the digit 1 and note that dial tone is still heard.

4.10 Dial the code of the station to which the dial hand test set is connected. Observe that busy tone is heard.

4.11 Restore and reoperate the switch of the dial hand test set to the TALK position and when dial tone is heard again dial the digit 4. Observe that the DC relay operates.

4.12 Restore the switch of the dial hand test set to the MON position and disconnect the clip of the W1U cord from the L or G terminal.

4.13 Repeat 4.08 to 4.12, inclusive, using a different link each time until all links are tested.

#### (C) Ringing and Tripping

4.14 Operate the switch of the dial hand test set to the TALK position and reconnect the clip of the W1U cord to the L or G terminal. When dial tone is heard, dial the code of an idle key station. Observe that dial tone stops after the first digit and that audible ringing is heard in the receiver after the second digit.

4.15 When the subscriber at the called station answers note that ringing is tripped and a talking connection is established.

4.16 Request the subscriber to depress an idle trunk button, and then restore the hand set to its mounting. Observe that when the trunk button is depressed the called station is disconnected.

- 4.17 Restore the switch of the dial hand test set to the MON position and disconnect the clip of the W1U cord from the L or G terminal.
- 4.18 Repeat 4.14 to 4.17, inclusive, using a different link each time until all links are tested. ←

**(D) Line Hunting (Where Provided)**

- 4.19 Make the first line of the line hunting group (Line 26 or Line 36) busy by blocking the associated CO relay to the operated position.
- 4.20 Operate the switch of the dial hand test set to the TALK position and reconnect the clip of the W1U cord to the L or G terminal. When dial tone is heard, dial the code of the station line which has been made busy. Observe that audible ringing is heard in the receiver and that the second line (Line 27 or Line 37) answers.
- 4.21 Request the subscriber at the called station to restore the hand set to its mounting. Restore the switch of the dial hand test set to the MON position and disconnect the clip of the W1U cord from the L or G terminal.
- 4.22 Repeat 4.20 and 4.21 using a different link each time until all links are tested. ↵
- 4.23 Restore the CO relay.

**(E) Chain Circuit Ground**

- 4.24 With all L1 and LK relays normal manually operate the L1 relay associated with Line 39 (or the highest ↵

numbered line with which the P.B.X. is equipped). Observe that the E, E1, E2 and MS relays operate, the N relay operates and then releases and the M relay does not operate. Momentary operation of the M relay may be disregarded. ↵

- 4.25 Release the L1 relay and note that the relays restore.

**(F) M and N Relays**

- 4.26 Block the E relay non-operated. With all L1 and LK relays normal manually operate the L1 relay associated with Line 39 (or the highest numbered line equipped). Observe that the M and N relays operate and the E1, E2 and MS relays do not operate.
- 4.27 Allow the L1 relay to return to normal. Repeat this test on all L1 relays and then on all LK relays, operating each in turn.
- 4.28 Operate the switch of the dial hand test set to the TALK position and reconnect the clip of the W1U cord to the L or G terminal. Observe that dial tone is heard in the receiver.
- 4.29 Restore the E relay to normal. Disconnect the dial hand test set and the W1U cord. ↵

**5. REPORTS**

- 5.01 Enter the required record of these tests on the proper form.