

## LINES ARRANGED FOR MANUAL COMPLETION OF EMERGENCY CALLS OPERATION TEST

### 1. GENERAL

1.01 This section covers methods of testing auxiliary lines from a dial office to stations of fire departments, police departments, etc., when such lines are multipled through a DSA switchboard or a combined toll and DSA switchboard, in order that, when required, emergency calls may be completed manually whether or not the line is busy. The tests are grouped as follows:

(A) Line Multipled in a Separate DSA Switchboard of a Panel or Step-by-Step Office or Through Toll Positions Only of a Combined Toll and DSA Switchboard Associated with a Step-by-Step Office.

(B) Line Multipled Through Both Toll and Local Positions of a Combined Switchboard in a Step-by-Step Office.

(C) Ringing Test from Toll Positions of a Combined Switchboard in a Step-by-Step Office.

1.02 The methods covered in this section contemplate that steps will not be taken to prevent attempts to complete emergency calls at any time. Testers should therefore cooperate with the Traffic force to ensure the prompt completion of any emergency call which may appear upon or for a line while under test.

1.03 It should be noted that a busy test on lines of the types covered by this section may not prevent the completion of emergency calls. While making tests or adjustments, care should accordingly be taken to avoid, in so far as possible, any condition which might interfere with an emergency call.

1.04 Prior to starting the tests covered herein and after completing them, the chief operator and the station attendant should be notified regarding the tests.

Caution: Should the necessity arise for readjustment or other work which would render one of these lines inoperative, arrange with the chief operator to have signal plugs placed in the switchboard multiple and also notify the station attendant that the line is to be taken out of service. Again notify the

chief operator and the station attendant as soon as the line is restored to service.

1.05 The tests covered in this section can be made by one tester in cooperation either, with the DSA or toll board operators or with a Plant assistant at the switchboard. When the ringing test from toll positions (Test C) is to be made, local practices may require the presence of an assistant at the station in order that calling the subscriber for the ringing test may be avoided.

### 2. APPARATUS

2.01 Dial Hand Test Set equipped with Cords and Clips.

### 3. METHOD

(A) Line Multipled in a Separate DSA Switchboard of a Panel or Step-by-Step Office, or Through Toll Positions Only of a Combined Toll and DSA Switchboard Associated with a Step-by-Step Office

3.01 With the condenser of the dial hand test set in circuit, connect the test set to the HMDF terminals of the line to be tested. If dialing clicks, ringing or conversation are heard, defer the test until the line is idle.

3.02 In the absence of any indication that the line is busy, operate or release the button of the hand test set, as required, to short circuit the set condenser. Upon receipt of dial tone, call the operator by dialing zero.

Note: If the station attendant should answer due to the signal being operated by inductive surges from dialing, etc., the tester should request the attendant during the remainder of the tests to delay for a few seconds before answering a signal on any of the lines being tested.

3.03 When the operator answers, give her the number of the line under test and instruct her to proceed as follows: Leave the first cord up and restore the talking key. Take another cord with the talking key operated and after noting that there is a busy condition on the multiple jack sleeve of the line under test, plug

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the second cord into the multiple jack and challenge. When talking to the operator over each cord, note that the circuit is free from noise and that the transmission in both directions appears to be satisfactory.

3.04 If the cutoff feature is provided, proceed with 3.05. Otherwise the operator should be instructed to disconnect the first cord when the disconnect signal appears and the tester should cut the condenser of the hand test set into the circuit long enough to permit this and for release of the switches. He should then proceed with 3.08.

### Test of Cutoff Feature

3.05 When the cutoff feature is provided, the tester should instruct the operator to remain in on the latter connection while she takes the front cord of the pair with which she first answered and plugs it into any jack which will give a suitable tone, such as dial tone, busy tone or "No such number" tone.

3.06 Upon receipt of the tone, the operator should depress the cutoff key associated with the line under test, if such a key is provided. If an additional jack is provided instead of the key, she should take any spare cord and insert it momentarily into the jack.

3.07 The above operation should remove the tone and cause a disconnect signal to appear on the cord connected to the special service trunk.

3.08 On receipt of the disconnect signal, the operator should take down the connection from the special service trunk and advise the testman. During this conversation note that the line is free from noise and that the transmission in both directions appears to be satisfactory

### Test for Busy Condition of Line Terminal - Panel Office

3.09 Plug the front cord of an idle intercepting or special service cord pair into an outgoing trunk to a cordless B or dial incoming selector and dial, set up or order a connection to the line under test. (Do not use a "No test" trunk.) Busy tone received over this connection indicates that the line terminal is busy and the tests of 3.10 and 3.11 are unnecessary.

3.10 If the busy tone is not received, plug the front cord of another cord pair into an outgoing trunk to a "No test" incoming selector and dial, set up or order a second connection to the line under test. Plug the back cord of this pair into any

jack from which a tone may be secured, as in 3.05.

3.11 Operate the talking key of the cord put up in 3.09 and with all other talking keys normal, listen for the tone secured by the procedure of 3.10. If this tone is heard, it indicates the presence of circuit trouble which interferes with the busy condition of the final terminal of the line under test. If, where the line under test is a first or intermediate one of a group arranged for terminal hunting, no tone is heard, the test is satisfactory and the cords put up in 3.09 and 3.10 should be disconnected.

### Test for Busy Condition of Line Terminal - Step-by-Step Office

3.12 Plug an idle cord equipped for dialing or key pulsing into a "Verification trunk" outgoing to the test distributor from the DSA board or toll board and set up a connection over the test train to the line under test. The busy condition of the connector terminal should be indicated by a dark cord supervisory lamp, in which case the test is satisfactory and the cord should be disconnected.

### Test for Supervision

3.13 Cut the condenser of the hand test set in and out several times and have the operator report the operation of the cord supervisory signal which should light whenever the condenser is in circuit.

### Disconnection

3.14 Instruct the operator to disconnect when the disconnect signal is received. Disconnect the hand test set.

### (B) Line Multiplied Through Both Toll and Local Positions of a Combined Switchboard in a Step-by-Step Office

3.15 Proceed in accordance with 3.01 to 3.08 inclusive, 3.12 and 3.13. The work of Test "B" will be facilitated if it is practicable for the assistant at the switchboard to use a toll and an intercepting position which are close together.

### Test for Busy Condition of Multiple in Local Positions and Talking Path

3.16 Upon completion of the above procedures with a toll cord connected to the line at the OGT multiple and a hand test set bridged on the line at the HMDF, the assistant at the intercepting position should take an intercepting cord, test a multiple jack sleeve of the line under test, plug into the jack and challenge on the line. Note that there was a busy sleeve condition and that transmission in both directions between the tester at the HMDF

and the intercepting position appears to be satisfactory.

**Test Supervision at Local Position - Toll Cord Up First**

3.17 The tester should cut the condenser of the test set in and out several times and have the assistant at the switchboard note that the supervisory signal lights when the condenser is in circuit.

**Test for Busy Condition of Multiple in Toll Positions**

3.18 Instruct the assistant to disconnect the cord at the toll position when the disconnect signal appears and then to test the multiple jack sleeve at the toll position, noting that the busy condition remains, and then to return and challenge on the intercepting cord. Cut the condenser of the hand test set into the circuit.

**Test for Busy Condition of Multiple in Local Positions and Talking Path**

3.19 Upon again hearing the assistant at the intercepting position, cut out the condenser in the hand test set and give instructions for the assistant to proceed as follows: Withdraw the plug of the intercepting cord, test the sleeve for the busy condition (it should test busy), reinsert the plug and, upon receipt of dial tone, operate the cutoff key, if provided. During this conversation, note that the transmission in both directions appears satisfactory.

**Test of Cutoff Feature, if Provided Intercepting Position**

3.20 Upon hearing dial tone, the assistant should operate the cutoff key, if provided, and the tone should cease. If the cutoff feature is not provided, cut the hand test set condenser into the circuit long enough for the switches to release.

**Test Supervision at Local Positions - Intercepting Cord Up First**

3.21 Repeat the test of 3.17.

**Disconnection**

3.22 Instruct the assistant to disconnect when the disconnect signal is received. Disconnect the hand test set.

**(C) Ringing Test from Toll Positions of a Combined Switchboard in a Step-by-Step Office**

3.23 Plug a cord arranged for ringing, into the toll switchboard multiple, if the line is not busy, and ring the station.

3.24 When the station attendant answers, say, "This is the Telephone Company testing. Please hang up".

**4. REPORTS**

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