

## LOCAL TEST DESK CIRCUITS

### 1. GENERAL

- 1.01 This section covers the detailed methods to be followed in making transmission tests on local test desk circuits in step-by-step offices.
- 1.02 Information covered in this section of practices is outlined in the following table:
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- 1.03 Reference should be made to Section K20.01 for general testing methods and to Section K20.11 for general testing apparatus requirements.

### 2. TEST CORD CIRCUITS AND ASSOCIATED TELEPHONE CIRCUITS

#### Preliminary Connections

- 2.01 Provide two regular double-ended patching cords equipped with 110 type plugs and one switchboard cord equipped with a 109 type plug.
- 2.02 Connect the TMS and TMR jacks of the auxiliary test unit respectively to the sending and receiving jacks of the transmission measuring set using the patching cords equipped with the 110 type plugs.
- 2.03 Connect the B-GRD (24V) jack of the auxiliary test unit to 24 volt battery and ground (battery on tip and ground on sleeve) using the switchboard cord equipped with the 109 type plug.

#### Testing Procedure

- 2.04 Operate the following keys of the auxiliary test unit to the positions specified. Keys not mentioned should remain in the normal position.
- Key 1 to HOLD  
Key 2 to HOLD  
Key 3 to MET  
Key 4 to MET
- 2.05 Insert the No. 220 plug in the test desk telephone set jack with the key of the plug in the normal position.
- 2.06 Insert the primary test cord in the LS jack of the auxiliary test unit.
- 2.07 Operate the proper keys of the test desk to bridge the telephone circuit across the pri-

mary test cord circuit without the current supply equipment.

- 2.08 Where the test desk is arranged for the use of a breast type transmitter insert the No. 202 plug associated with the No. 220 plug in the LR jack of the auxiliary test unit.
- 2.09 Operate the key of the No. 220 plug to the T position.
- 2.10 Proceed as outlined in paragraphs 2.11 to 2.36, inclusive.
- 2.11 Where the test desk is arranged for the use of a suspended transmitter remove the cords from the transmitter cord fasteners and connect to these fasteners, the LR jack of the auxiliary test unit.

Note: Where the transmitter circuit is normally closed by the insertion of a telephone set plug, the tips of which are connected together, the connections for the test should be made in the same manner as in paragraphs 2.08 and 2.09 after short-circuiting the suspended transmitter terminals.

- 2.12 With the transmission measuring set in the measuring condition perform the operations as outlined in paragraphs 2.13, 2.14 and 2.15.
- 2.13 Rotate the plug of the cord slowly in the test set jacks to detect cutouts due to defective and dirty plugs.
- 2.14 Test the cord for cutouts by holding the plug firmly in the jack and rotating the cord slowly with a cranking motion.
- 2.15 Test the keys associated with the test circuit for cutouts in the normal and operated position (except the ringing keys in the operated position) by tapping the key tops lightly.

For lever type keys, move the lever slightly forward and backward, while exerting a reasonable pressure to the left and right to take up any play or side-lash.

For plunger type keys, connected in the transmission circuit move the plungers with a circular motion and test for plunger-spring clearance by depressing the plungers slightly.

- 2.16 Where the test circuit is equipped to transfer the testing equipment from one test cord circuit to another, test the cord and transfer key for cutouts before proceeding with the remaining tests.

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- 2.17 Replace the test cord connected to the transmission measuring set with one of the other test cords and operate the transfer key and proceed with the cutout tests as outlined in paragraphs 2.13 to 2.15, inclusive.
- 2.18 Restore the transfer key and replace the cord removed in paragraph 2.17 and proceed with the tests as follows:
- 2.19 Measure the transmission loss.  
Note: This is the loss of the telephone circuit in the transmitting condition.
- 2.20 Operate the proper keys of the test desk to connect the current supply equipment across the test cord circuit.
- 2.21 Measure the transmission loss.  
Note: This is the bridged loss of the current supply equipment and the telephone circuit in the transmitting condition.
- 2.22 Measure the current supply from the test cord while depressing key 9 of the auxiliary test unit to remove the holding bridge from the circuit.
- 2.23 When a transmission test pad (artificial network) is provided in the test desk operate the proper keys to connect it in the test cord circuit.
- 2.24 Measure the transmission loss.  
Note: This is the loss of the transmission test pad (artificial network) and associated apparatus as measured through the telephone circuit in the transmitting condition.
- 2.25 Operate the proper keys of the test desk so that the telephone circuit is bridged across the test circuit without the current supply equipment.
- 2.26 Operate the key of the No. 220 plug to the normal position.  
Note: Where the test desk is equipped with a suspended transmitter, remove the connections of paragraph 2.11 from the LR jack of the auxiliary test unit and connect to the transmitter cord fasteners a 40 ohm resistance.
- 2.27 Disconnect the receiving jack of the transmission measuring set from the TMR jack of the auxiliary test unit by removing the patching cord.
- 2.28 On the transmission measuring set connect the sending T and R terminals, respectively, to the receiving T and R terminals.  
Note: When a transmission measuring set of the No. 3 type is used, these connections are made through the jack contacts of the set when a dummy plug is removed from a jack other than the one to be used in this test.
- 2.29 Measure the transmission loss.  
Note: This is the loss of the telephone circuit in the bridged talking condition.
- 2.30 Operate the proper keys of the test desk to bridge the telephone circuit in the monitoring condition across the test cord circuit.
- 2.31 Measure the transmission loss.  
Note: This is the loss of the telephone circuit in the bridged monitoring condition.
- 2.32 Remove the strapping between the sending and receiving T and R terminals of the transmission measuring set.
- 2.33 Connect the receiving jack of the transmission measuring set and the TMR jack of the auxiliary test unit using the patching cord equipped with 110 type plugs.
- 2.34 Operate the key of the No. 220 plug to the R position.
- 2.35 Measure the transmission loss.  
Note: This is the loss of the operator's telephone circuit in the receiving monitoring condition.
- 2.36 Where the test desk is equipped with more than one testing circuit, test the features of the other circuits in the same manner as outlined under the above testing procedure.