SERVICE OBSERVING DESK CIRCUITS

1. GENERAL

1.01 This section covers the detailed methods to be followed in making transmission tests on service observing desk circuits in step-by-step offices.

1.02 Information covered in this section of practices is outlined in the following table:

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. SINGLE-ENDED CORD CIRCUIT AND ASSOCIATED TELEPHONE CIRCUIT

(a) Cord Circuit

2.01 These circuits are tested in conjunction with the associated telephone circuit.

(b) Telephone Circuit

2.02 Figure 1 shows schematically the connections for the test.

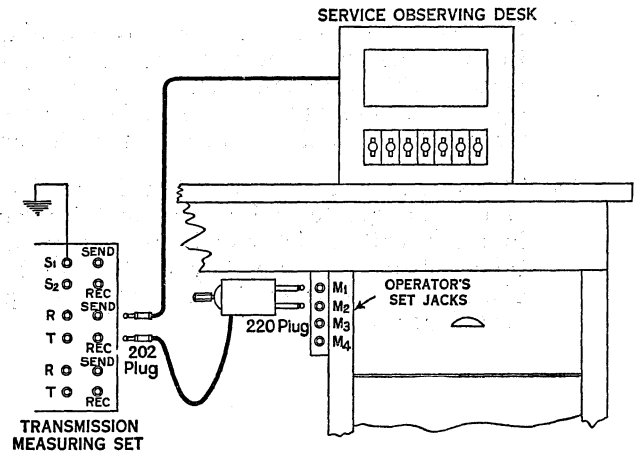

Figure 1

2.03 Connect the S1 binding post of the transmission measuring set to ground.

2.04 Insert the No. 220 plug in the telephone set jacks (M1-M2) or (M3-M4) associated with the service observing desk under test with the key of the plug in the "R" position.

2.05 Insert the No. 202 plug associated with the No. 220 plug in the receiving jack of the transmission measuring set.

2.06 Insert the plug of the service observing cord in the sending jack of the transmission measuring set.

2.07 Operate the "AMP" key of the service observing desk. Other keys should remain in the normal position.

2.08 With the measuring set in the measuring condition, perform the operations outlined in paragraphs 2.09, 2.10 and 2.11.

2.09 Rotate the plug of the cord circuit slowly in the test jack to detect cutouts due to a defective or dirty plug.

2.10 Test the cord for cutouts by holding the plug firmly in the jack and rotating the cord slowly with a cranking motion.

2.11 Test all keys associated with the cord circuit for cutouts in the normal and operated positions (except ringing and flashing keys in the operated position) by tapping the key-tops lightly and moving the levers slightly forward and backward while exerting a reasonable pressure to the left and right to take up any play or side-lash.

2.12 Measure the transmission loss.

Note: This will be the loss of the monitoring circuit in the receiving condition.

2.13 Remove the No. 202 plug associated with the No. 220 plug from the receiving jack of the transmission measuring set and operate the key of the plug to the normal position.

2.14 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.

2.15 Measure the transmission loss.

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Note: This will be the loss of the monitoring circuit in the bridged condition.

(c) Attendant's Telephone Circuit (Desk Stand)

2.16 This circuit is tested in conjunction with the single-ended cord circuit.

2.17 Figure 2 shows schematically the connections for the test.

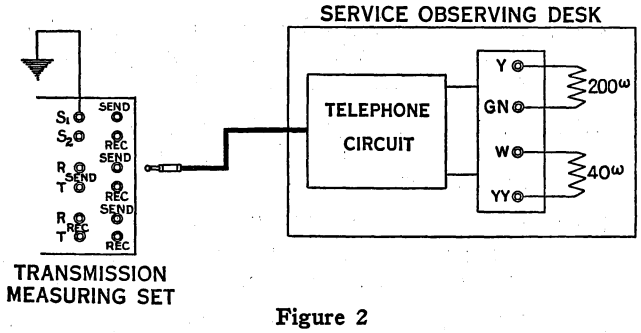

Figure 2

2.18 Remove the desk stand connections from the terminal block inside the service observing desk.

2.19 Connect a 200-ohm resistance to the GN-Y terminals and connect a 40-ohm resistance to the W-YY terminals.

2.20 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.

2.21 Connect the S1 terminal of the transmission measuring set to ground.

2.22 Insert the plug of the single-ended cord circuit in the sending jack of the transmission measuring set.

2.23 Operate the following keys of the service observing desk to the positions specified below:

Talk key to TALK
Amp. key to AMP
Answering key to ANS

2.24 Measure the transmission loss.

Note: This is the loss of the telephone circuit in the bridged talking condition and the single-ended monitoring cord circuit.

2.25 Remove the strapping between the sending and receiving T and R terminals of the transmission measuring set.

2.26 Remove the 40-ohm resistance from the W-YY terminals and connect to these terminals the receiving terminals of the transmission measuring set.

2.27 Measure the transmission loss.

Note: This will be the loss of the operator's telephone circuit in the transmitting condition.

3. AMPLIFIER CIRCUIT

3.01 Check the operation of the amplifier by making a receiving listening test as outlined below.

3.02 Insert the single-ended cord circuit of the service observing desk in the sending jack of the transmission measuring set.

3.03 Connect the S1 terminal of the transmission measuring set to ground.

3.04 Insert an operator's telephone set in the M3-M4 telephone set jacks of the service observing desk.

3.05 Reduce the sending current of the transmission measuring set to a minimum.

3.06 Operate key 1 of the transmission measuring set to SEND or REC and key 3 to MEAS in order to send out the testing current on the single-ended cord circuit.

3.07 Compare the volume of tone by listening in the receiver of the operator's telephone circuit while the amplifier is cut in and out by the operation of the AMP key between the normal and operated positions.

3.08 The volume of tone received in the receiver should be greater with the amplifier cut in the circuit, which condition usually obtains when the Amp. key of the service observing desk is in the normal or unoperated position.