TRUNKS INCOMING FROM MANUAL TOLL OFFICE SWITCHBOARDS

1. GENERAL

1.01 This section covers the detailed methods to be followed in making transmission tests on trunks incoming to step-by-step offices from manual toll office switchboards.

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. DIAL TRUNKS

2.01 These circuits are tested at the HIDF of the incoming step-by-step office by the loop method and the loops are established at the manual toll office switchboard by means of a switchboard cord circuit.

2.02 At the incoming step-by-step office the circuits are completed to the transmission measuring set through two vacant connector terminals.

2.03 Figure 1 shows schematically the connections for the test.

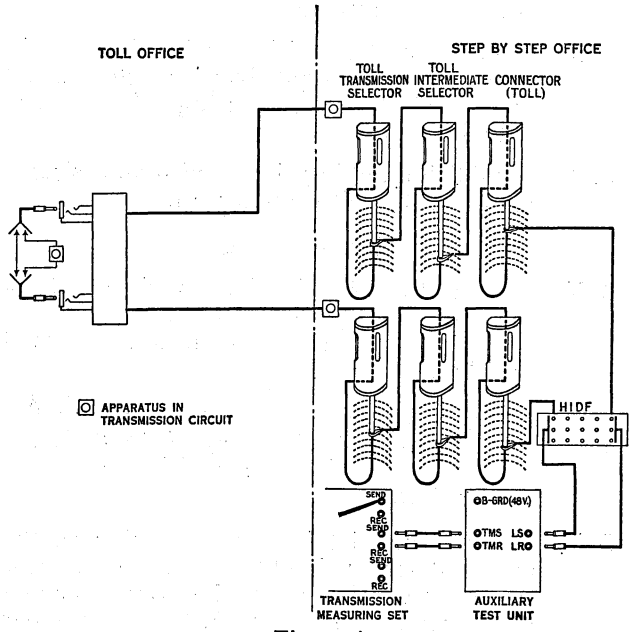

Figure 1

Preliminary Connections

2.04 Provide three regular double-ended patching cords equipped with 110-type plugs and two special patching cords equipped and connected as indicated below:

110-Type Plug connected to a **234-Type or Similar Plug**	
Tip	No. 1 Terminal
Ring	No. 2 Terminal
Sleeve	No. 3 Terminal
	No. 4 Terminal Open

2.05 Connect the TMS and TMR jacks of the auxiliary test unit, respectively, to the sending and receiving jacks of the transmission measuring set using two regular patching cords.

2.06 Connect the B-GRD (48V) jack of the auxilary test unit to 48 volt battery and ground (battery on tip and ground on sleeve), using a regular patching cord.

Note: This battery and ground may be obtained from any source convenient to the location of the testing apparatus, preferably a nearby BATT jack.

2.07 At the HIDF select two vacant connector terminals and remove the tip, ring and sleeve intercepting lines from these vacant connector terminals.

2.08 Connect the LS and LR jacks of the auxiliary test unit, respectively, to the vacant connector terminals, using the special patching cords of Paragraph 2.04.

2.09 Establish a talking circuit with an assistant tester at the toll switchboard.

Testing Procedure

2.10 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 OPEN	Key 5 to BATT
Key 2 to OPEN	Key 6 to BATT
Key 3 to MET	Key 12 to SL
Key 4 to MET	

2.11 At the manual toll office switchboard, over one of the trunks to be tested, have the assistant tester dial the number of the connector terminal connected to the LS jack of the auxiliary test unit. The plug of the cord used for dialing should be left inserted in the trunk jack.

Note: When the connection has been completed to the auxiliary test unit, the sleeve lamp associated with the LS jack should light.

2.12 Operate key 1 of the auxiliary test unit to HOLD.

2.13 At the manual toll office switchboard over another trunk to be tested, have the assistant dial the number of the connector terminal connected to the LR jack of the auxiliary test unit. The plug of the cord used for dialing should be left inserted in the trunk jack.

Note: When the connection has been completed to the auxiliary test unit, the sleeve lamp associated with the LR jack should light.

2.14 Operate key 2 of the auxiliary test unit to HOLD.

2.15 At the toll office switchboard loop the two trunks by inserting the free end of the cord circuit of Paragraph 2.11 or Paragraph 2.13 in a multiple jack of the trunk being held by the other cord circuit and remove this latter cord circuit from the trunk jack when the looping has been completed.

2.16 Measure the transmission loss.

Note: This will be the loss of two trunk circuits including the wiring of the toll train and the loss of the looping cord circuit.

2.17 Disconnect one trunk by operating key 1 or key 2 (as the case may be) of the auxiliary test unit to OPEN and have the plug of the looping cord circuit removed from the trunk jack at the toll switchboard.

Note: When the disconnection has been completed, the sleeve lamp of the auxiliary test unit associated with the trunk to be released will be extinguished.

2.18 Repeat the above testing procedure to determine the transmission loss of a trunk to be used as a standard and set it up as outlined in Paragraphs 2.10 to 2.12, inclusive.

2.19 Proceed with the test as outlined in Paragraphs 2.13 to 2.17, inclusive, for the remaining trunks of the group.

2.20 When all of the trunks in the group have been tested disconnect the standard trunk by operating key 1 of the auxiliary test unit to OPEN and have the cord removed at the toll switchboard.

Note: When the disconnection has been completed, the sleeve lamp of the auxiliary test unit associated with the LS jack will be extinguished.

3. STEP-BY-STEP "B" SWITCHBOARD TRUNKS (ARRANGED FOR STRAIGHTFORWARD OPERATION)

3.01 These circuits are tested at the HIDF of the step-by-step office by the loop method and the loops are established at the manual toll office switchboard by means of a switchboard cord circuit.

3.02 At the step-by-step office the circuits are completed to the transmission measuring set through two vacant connector terminals.

3.03 Figure 1 shows schematically the connections for the test.

Preliminary Connections

3.04 Provide three regular double-ended patching cords equipped with 110-type plugs and two special patching cords equipped and connected as indicated in Paragraph 2.04.

3.05 Connect the TMS and TMR jacks of the auxiliary test unit respectively to the sending and receiving jacks of the transmission measuring set, using two regular patching cords.

3.06 Connect the B-GRD (48V) jack of the auxiliary test unit to 48 volt battery and ground (battery on tip and ground on sleeve), using a regular patching cord.

Note: This battery and ground may be obtained from any source convenient to the location of the testing apparatus, preferably a nearby BATT jack.

3.07 At the HIDF select two vacant connector terminals and remove the tip, ring and sleeve intercepting lines from these vacant connector terminals.

3.08 Connect the LS and LR jacks of the auxiliary test unit, respectively, to the vacant connector terminals, using the special patching cords.

3.09 Establish a talking circuit with an assistant tester at the toll switchboard.

Testing Procedure

3.10 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 OPEN	Key 5 to BATT
Key 2 to OPEN	Key 6 to BATT
Key 3 to MET	Key 12 to SL
Key 4 to MET	

3.11 At the manual toll office switchboard, the assistant tester should request an operator to pass a call in the regular way, over one of the trunks to be tested, for the number of the connector terminal connected to the

LS jack of the auxiliary test unit. The plug of the cord used to pass the call should be left inserted in the trunk jack.

Note: When the connection has been completed to the auxiliary test unit, the sleeve lamp associated with the LS jack should light.

3.12 Operate key 1 of the auxiliary test unit to HOLD.

3.13 At the manual toll office switchboard, over another trunk to be tested, have an operator pass a call in the regular way for the number of the connector terminal connected to the LR jack of the auxiliary test unit. The plug of the cord used to pass the call should be left inserted in the trunk jack.

Note: When the connection has been completed to the auxiliary test unit, the sleeve lamp associated with the LR jack should light.

3.14 Operate key 2 of the auxiliary test unit to HOLD.

3.15 At the toll office switchboard loop the two trunks by inserting the free end of the cord circuit of Paragraph 3.11 or Paragraph 3.13 in a multiple jack of the trunk being held by the other cord circuit and remove this latter cord circuit from the trunk jack when the looping has been completed.

3.16 Measure the transmission loss.

Note: This will be the loss of two trunk circuits including the wiring of the toll train and the loss of the looping cord circuit.

3.17 Disconnect one trunk by operating key 1 or key 2 (as the case may be) of the auxiliary test unit to OPEN and removing the plug of the looping cord circuit from the trunk jack at the manual toll office switchboard.

Note: When the disconnection has been completed, the sleeve lamp of the auxiliary test unit associated with the trunk to be released will be extinguished.

3.18 Repeat the above testing procedure to determine the transmission loss of a trunk to be used as a standard and set it up as outlined in Paragraphs 3.10 to 3.12, inclusive.

3.19 Proceed with the tests as outlined in Paragraphs 3.13 to 3.17, inclusive, for the remaining trunks of the group.

3.20 When all of the trunks in the group have been tested, disconnect the standard trunk by operating key 1 of the auxiliary test unit to OPEN and have the cord removed at the toll office switchboard.

Note: When the disconnection has been completed, the lamp associated with the LS jack of the auxiliary test unit will be extinguished.