

## OUTGOING TRUNKS TO REPAIR SERVICE DESKS

### 1. GENERAL

- 1.01 This section outlines the detailed methods to be followed in making transmission tests on trunks outgoing from step-by-step offices to repair service desks.
- 1.02 Information covered in this section of practices is covered 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. TESTING METHODS

#### (a) Normal Condition

- 2.01 These circuits are tested at the HIDF or terminal strip at the selector frame of the step-by-step office by the loop method.
- 2.02 The loops are established at the repair service desk through the telephone circuit by the operation of the associated trunk keys to the talking position.
- 2.03 Figure 1 shows schematically the connections for the test.

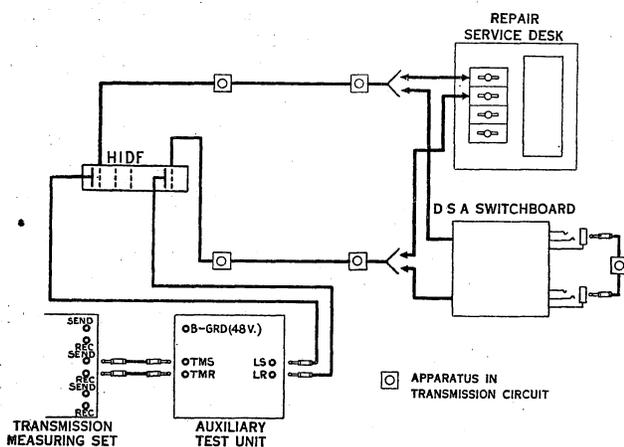


Figure 1

#### Preliminary Connections

- 2.04 Provide three regular double ended patching cords equipped with 110 type plugs

and two special patching cords equipped on one end with clips (tip, ring and sleeve) of a type suited to the punchings of the selector frame terminal strip when tests are made from this point. When tests are made from the HIDF the special patching cord should be 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 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.
- 2.07 Insert the 110 type plugs of the special patching cords in the LS and LR jacks of the auxiliary test unit.
- 2.08 Establish a talking circuit with an assistant tester at the repair service desk.

#### Testing Procedure

- 2.09 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  |               |
- 2.10 Connect the No. 234 plug or clips (as the case may be) of the special patching cord connected to the LS jack of the auxiliary test unit, to the HIDF or selector frame terminal strip punchings of the trunk to be tested.
- 2.11 If the sleeve lamp of the auxiliary test unit associated with the LS jack does not light (indicating that the trunk is idle) operate Key 5 to GRD.

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Note: If the lamp lights (indicating that the trunk is busy) remove the plug and repeat until an idle trunk is found.

- 2.12 Connect the No. 234 plug or the clips (as the case may be) of the special patching cord connected to the LR jack of the auxiliary test unit to the H1DF or selector frame terminal strip punchings of another trunk to be tested.
- 2.13 If the sleeve lamp of the auxiliary test unit associated with the LR jack does not light, (indicating that the trunk is idle) operate Key 6 to GRD.

Note: If the lamp lights (indicating that the trunk is busy) remove the plug and repeat until an idle trunk is found.

- 2.14 Advise the assistant tester of the two trunks being held for test and instruct him to loop them by operating the associated trunk keys to the talking position.
- 2.15 Operate key 1 and key 2 of the auxiliary test unit to HOLD.
- 2.16 Measure the transmission loss.

Note: This will be the loss of two trunk circuits including the bridged loss of the operator's telephone circuit.

- 2.17 Measure the current supply from the trunk connected to the LR jack of the auxiliary test unit while depressing key 10 to remove the holding bridge from the circuit.
- 2.18 Measure the current supply from the trunk connected to the LS jack of the auxiliary test unit while depressing key 9 to remove the holding bridge from the circuit.
- 2.19 Release one trunk by removing the clips or plug from the trunk terminals and restoring the associated trunk key at the repair service desk to normal.
- 2.20 Repeat the above testing procedure to determine the transmission loss of the trunk to be used as a standard or test trunk and set it up as outlined in paragraphs 2.09 to 2.11 inclusive.
- 2.21 Proceed with the tests as outlined in paragraphs 2.12 to 2.19, inclusive for the remaining trunks of the group omitting paragraph 2.18.

Note: Before connecting the patching cord from the LR jack of the auxiliary test unit to the next trunk to be tested key 2 should be operated to OPEN and key 6 to BATT.

- 2.22 When all of the trunks in the group have been tested, release the standard trunk by removing the plug from the trunk terminals

and restoring the associated trunk key at the repair service desk to normal.

### (b) Night Condition

- 2.23 Where the night condition for these circuits is the transfer of them from the repair service desk to the step-by-step "A" switchboard, the preliminary connections will be the same as outlined in paragraphs 2.04 to 2.08, inclusive.

### Testing Procedure

- 2.24 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	

- 2.25 Connect the No. 234 plug or the clips (as the case may be) of the special patching cord connected to the LS jack of the auxiliary test unit, to the H1DF or selector frame terminal strip punchings of the trunk to be tested.
- 2.26 If the lamp associated with the LS jack of the auxiliary test unit does not light (indicating that the trunk is idle) operate key 5 to GRD.

Note: If the lamp lights (indicating that the trunk is busy) remove the plug and repeat until an idle trunk is found.

- 2.27 Connect the No. 234 plug or the clips (as the case may be) of the special patching cord connected to the LR jack of the auxiliary test unit to the H1DF or selector frame terminal strip punchings of another trunk to be tested.
- 2.28 If the lamp associated with the LR jack of the auxiliary test unit does not light (indicating that the trunk is idle) operate key 6 to GRD.

Note: If the lamp lights (indicating that the trunk is busy) remove the plug and repeat until an idle trunk is found.

- 2.29 Advise the assistant tester of the two trunks being held for test and instruct him to loop them with a **special service operator's cord circuit**.
- 2.30 Operate key 1 and key 2 of the auxiliary test unit to HOLD.
- 2.31 Measure the transmission loss.

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

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- 2.32 If not measured in previous tests measure the current supply from the trunk connected to the LR jack of the auxiliary test unit while depressing key 10 to remove the holding bridge from the circuit.
- 2.33 If not measured in previous tests measure the current supply from the trunk connected to the LS jack of the auxiliary test unit while depressing key 9 to remove the holding bridge from the circuit.
- 2.34 Release one trunk by removing the plug from the trunk terminals and by having the special service cord circuit removed at the "A" switchboard.
- 2.35 Repeat the above testing procedure to determine the transmission loss of the trunk

to be used as a standard or test trunk and set it up as outlined in paragraphs 2.24 to 2.26, inclusive.

Note: Before connecting the patching cord from the LR jack of the auxiliary test unit to the next trunk to be tested key 2 should be operated to OPEN and key 6 to BATT.

- 2.36 Proceed with the tests as outlined in paragraphs 2.27 to 2.34, inclusive, for the remaining trunks of the group omitting paragraph 2.33.
- 2.37 When all of the trunks in the group have been tested, release the standard trunk by removing the plug from the trunk terminals and the special service cord circuit at the "A" switchboard.