

**NOS. 740-A, B AND C PRIVATE BRANCH EXCHANGES**

**1. GENERAL**

1.01 This section covers the detailed methods to be followed in making transmission tests on circuits associated with the No. 740-A, No. 740-B and No. 740-C private branch exchanges.

1.02 Information covered in this section of practices is outlined as follows:

Subject	Page
1. General .....	1
2. Testing Methods .....	1
(A) Selector-Connectors .....	1
(B) Attendants' Telephone Circuits ...	2
No. 740-A and No. 740-B P.B.X.'s	2
No. 740-C P.B.X. ....	3
(C) Central Office Trunk Circuits ....	3
To Manual Offices .....	3
To Step-by-Step Offices .....	5
To Panel Offices .....	6
(D) Dial Tie Line Circuits .....	6
To Manual P.B.X. Switchboards	6
To a No. 740-A or No. 740-B P.B.X. ....	8
(E) Repeating Tie Line Circuits .....	9
To a No. 700-C or a No. 701-A P.B.X. ....	9
To a No. 710-C or a No. 711-A P.B.X. ....	9

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**

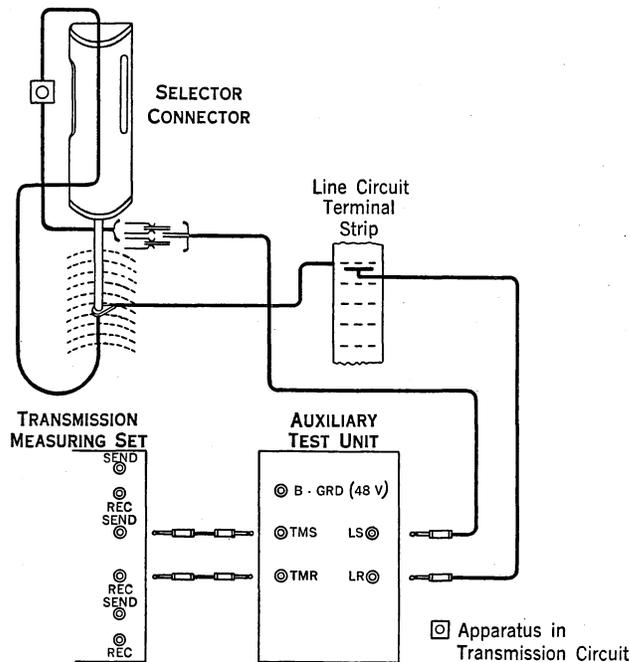
**(A) Selector-Connectors**

2.01 When selector-connectors function as selectors there is no equipment in the transmission circuit, and transmission tests are not required on that part of the selector-connector.

2.02 The connector portion of selector-connectors should be tested in accordance with the procedure given in paragraphs 2.03 to 2.17, inclusive.

2.03 These circuits should be tested from the test jacks of the selector-connectors and the connections to the transmission measuring set completed through a vacant connector terminal of the selector-connector.

2.04 Figure 1 shows schematically the connections for the test.



**Figure 1**

**Preliminary Connections**

2.05 Provide two regular double-ended patching cords equipped with No. 110 plugs, one No. P3C cord equipped with a No. 110 plug and a No. 240-A plug (No. 4 Terminal Open), a patching cord equipped with a No. 110 plug on one end and clips on the other end, and one special patching cord equipped and connected as follows:

**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

2.06 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 of the regular patching cords.

2.07 Connect the B-GRD (48 V) jack of the auxiliary test unit to 48 volt battery and ground, (battery on tip and ground on sleeve) using the patching cord equipped with a No. 110 plug and clips.

Note: This battery and ground may be obtained from any source convenient to the location of the testing apparatus.

**SECTION K28.40**

2.08 Connect the LR jack of the auxiliary test unit to the vacant connector terminal, from which the "busy" ground has been removed, at the line circuit terminal strip using the special patching cord of paragraph 2.05.

2.09 Insert the No. 110 plug of the No. P3C cord in the LS jack of the auxiliary test unit.

**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 3 to MET
- Key 2 to OPEN                      Key 4 to MET

2.11 Insert the No. 240-A plug of the No. P3C cord connected to the LS jack of the auxiliary test unit in the test jack of an idle selector-connector to be tested and operate key 1 of the auxiliary test unit to TEST.

Note: Before operating key 1 of the auxiliary test unit to TEST, inspect the shaft and wiper to determine if the selector-connector is still idle. If it is not idle, another selector-connector should be selected for test and the procedure of paragraph 2.11 carried out.

2.12 Dial the number of the vacant terminal to which the LR jack of the auxiliary test unit is connected.

2.13 Operate key 1 and key 2 of the auxiliary test unit to HOLD.

2.14 With the transmission measuring set in the measuring condition, test the selector-connector for cutouts by tapping the cover and carefully tapping the wiper cords with a pencil.

2.15 Measure the transmission loss.

2.16 Release the selector-connector by operating key 1 and key 2 of the auxiliary test unit to OPEN, and remove the No. 240-A plug from the selector-connector test jack.

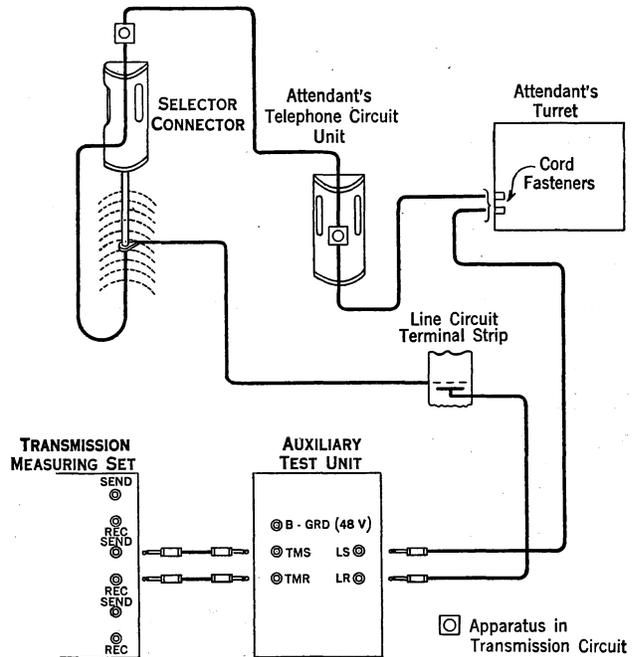
2.17 Repeat the above testing procedure for the remaining selector-connectors to be tested, and when the testing is completed restore the "busy" ground to the vacant connector terminal.

**(B) Attendant's Telephone Circuit**

**No. 740-A and No. 740-B P.B.X.'s**

2.18 This circuit should be tested from the cord fasteners in the attendant's turret and the connections to the transmission measuring set completed through a vacant connector terminal of the selector-connector. The testing of this circuit should be done during a light load period.

2.19 Figure 2 shows schematically the connections for the test.



**Figure 2**

**Preliminary Connections**

2.20 Provide two regular double ended patching cords, two patching cords equipped with a No. 110 plug on one end and clips on the other end, and one special patching cord 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

2.21 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.

2.22 Connect the B-GRD (48 V) jack of the auxiliary test unit to 48 volt battery and ground (battery on tip and ground on sleeve), using a patching cord equipped with a No. 110 plug on one end and clips on the other.

Note: This battery and ground may be obtained from any source convenient to the location of the testing apparatus.

2.23 Connect the LR jack of the auxiliary test unit to the terminal strip lugs associated with the vacant connector terminal from which the "busy" ground has been removed, using the special patching cord equipped with the No. 110 and No. 234 plugs.

2.24 Connect the LS jack of the auxiliary test unit to the cord fasteners in the attendant's turret using the special patching cord equipped with the No. 110 plugs and clips.

**Testing Procedure**

2.25 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	

2.26 At the attendant's turrent operate the ATT EXT key with the receiver of the attendant's telephone off the hook.

2.27 Dial the number of the vacant connector terminal to which the LR jack of the auxiliary test unit is connected.

2.28 Operate key 1 and key 2 of the auxiliary test unit to HOLD and replace the receiver of the attendant's telephone set on the hook.

2.29 Measure the transmission loss.

Note: This will be the loss of the attendant's telephone circuit and a connector.

2.30 Restore the ATT EXT key to normal and disconnect the patching cord from the cord fasteners in the attendant's turrent. Remove the patching cord from the line circuit terminal strip and restore the "busy" ground to the vacant connector terminal.

**No. 740-C P.B.X.**

2.31 The preliminary connections for testing the attendant's telephone circuit of the No. 740-C P.B.X. are the same as for the No. 740-A and No. 740-B P.B.X.'s as outlined in paragraphs 2.20 to 2.24 inclusive.

**Testing Procedure**

2.32 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	

2.33 At the attendant's turrent operate the EXTENSION SWITCHBOARD key with the receiver of the attendant's telephone off the hook.

2.34 Dial the number of the vacant connector terminal to which the LR jack of the auxiliary test unit is connected.

2.35 Operate key 1 and key 2 of the auxiliary test unit to HOLD and replace the receiver of the attendant's telephone set on the hook.

2.36 Measure the transmission loss.

Note: This will be the loss of the attendant's telephone circuit and a connector.

2.37 Restore the EXTENSION SWITCHBOARD key to normal and disconnect the patching cord from the cord fasteners in the operator's turrent. Remove the patching cord from the line circuit terminal strip and restore the "busy" ground to the vacant connector terminal.

**(C) Central Office Trunk Circuits****To Manual Offices**

2.38 These circuits may be tested by either the loop or straightaway methods. The loop method can be used only if there are three or more circuits in the group. Where the group consists of less than three circuits, the tests are made by the straightaway method.

**Loop Method**

2.39 Under this method the circuits are tested at the line circuit terminal strip of the No. 740-A, No. 740-B or No. 740-C P.B.X. during a period of light traffic load.

2.40 The loop is established at the "A" board of the manual office by means of a switchboard cord circuit and where required a trunked connection to the "B" board.

2.41 The circuits are completed to the transmission measuring set at the P.B.X. through two vacant connector terminals of the selector-connectors.

2.42 Figure 3 shows schematically the connections for the test.

**Preliminary Connections**

2.43 Provide two regular double-ended patching cords equipped with No. 110 plugs, one patching cord equipped with a No. 110 plug on one end and clips on the other, 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

2.44 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.

2.45 Connect the B-GRD (48 V) jack of the auxiliary test unit to 48 volt battery and ground (battery on tip and ground on sleeve) using the patching cord equipped with a No. 110 plug on one end and clips on the other.

Note: This battery and ground may be obtained from any source convenient to the location of the testing apparatus.

2.46 Select two vacant connector terminals, remove the "busy" grounds, and connect the LS and LR jacks of the auxiliary test unit, re-

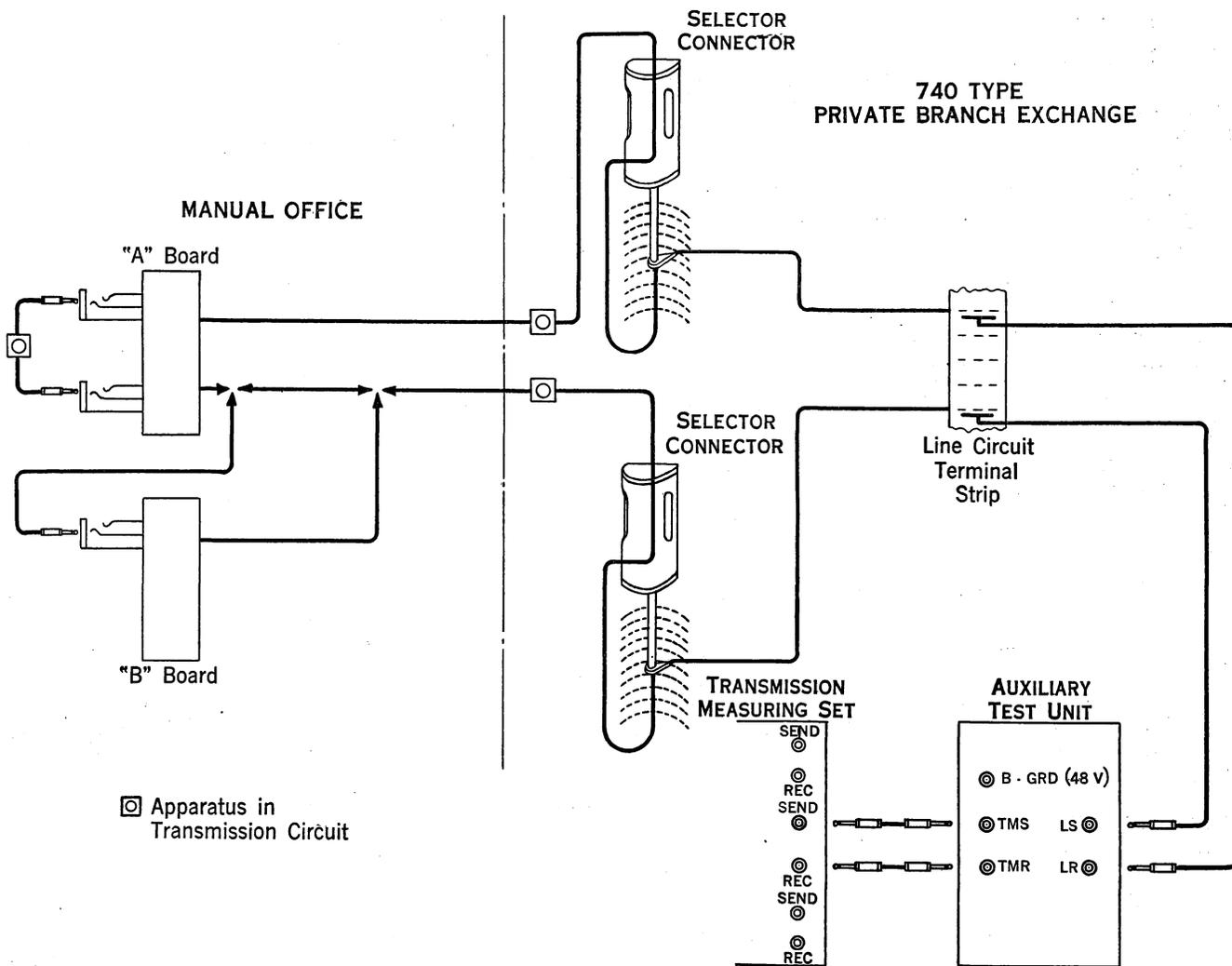


Figure 3

spectively, to the vacant connector terminals using the special patching cords.

**Testing Procedure**

2.47 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  |               |

2.48 Select a trunk to be used as the standard or test trunk and pass a call in the regular way from the attendant's turret over this trunk. Have the "A" board operator complete the call in the regular way to the trunk to be tested.

2.49 At the attendant's turret dial the number of the connector terminal connected to the LS jack of the auxiliary test unit and complete the connection to the trunk to be tested.

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

2.51 At the attendant's turret dial the number of the connector terminal connected to the LR jack of the auxiliary test unit and complete the connection to the standard or test trunk.

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

2.53 Measure the transmission loss.

Note: This will be the loss of the two P.B.X. trunk circuits and the looping cord circuit or circuits at the central office.

2.54 Disconnect the trunks by operating key 1 and key 2 of the auxiliary test unit to OPEN.

2.55 Repeat the above testing procedure to determine the transmission loss of the trunk used as the standard or test trunk.

2.56 Proceed with the test as outlined in paragraphs 2.48 to 2.54, inclusive, for the remaining trunks of the group.

2.57 When all the trunks in the group have been tested, disconnect the trunks by operating key 1 and key 2 of the auxiliary test unit to OPEN, and by having the "A" cord circuit removed at the manual office switchboard. Remove the testing connections from the vacant connector terminals. Restore the "busy" grounds to the vacant connector terminals.

#### Straightaway Method

2.58 Under this method the circuit is tested at the line circuit terminal strip of the No. 740-A, No. 740-B or No. 740-C P.B.X.

2.59 The circuit is completed for test to the sending transmission measuring set at the manual office switchboard by means of a switchboard cord circuit.

2.60 Figure 4 shows schematically the connections for the test.

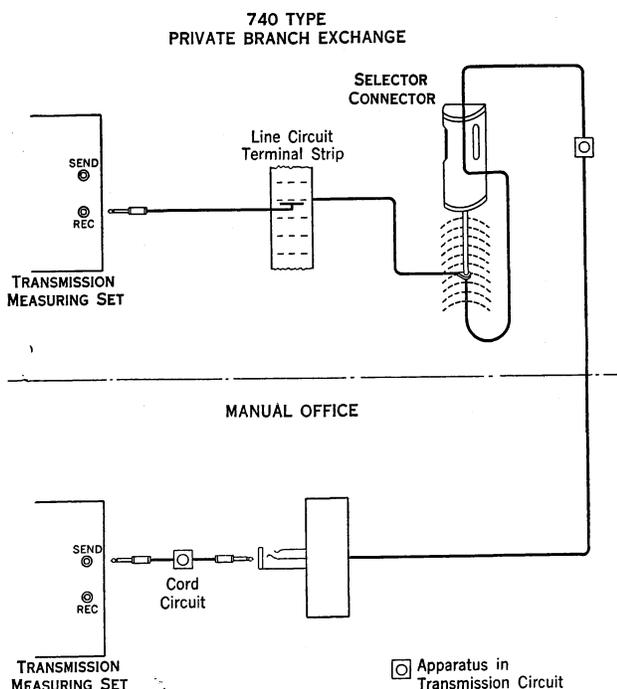


Figure 4

#### Preliminary Connections

2.61 At the P.B.X. provide a special patching cord 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

2.62 At the P.B.X. connect the receiving terminal of the transmission measuring set to a vacant connector terminal at the line circuit terminal strip of the P.B.X. using the special patching cord of paragraph 2.61.

Note: The "busy" ground should be removed from the vacant connector terminal.

2.63 Establish communication with the tester at the manual office and arrange for the connections outlined in paragraph 2.64.

2.64 At the manual office switchboard connect the sending terminal of the transmission measuring set to the jack of the trunk to be tested using a switchboard cord circuit.

#### Testing Procedure

2.65 At the attendant's turret pass a call in the regular way over the trunk to be tested. Dial the number of the vacant connector terminal to which the measuring apparatus is connected and complete the call to the trunk under test.

2.66 Measure the transmission loss.

Note: This is the loss of the P.B.X. trunk circuit and a switchboard cord circuit.

2.67 Upon completion of the test the trunk should be released at the P.B.X. and the connection to the measuring apparatus at the manual office removed.

2.68 The above procedure should be followed for the remaining trunks to be tested, and when the testing is completed the "busy" ground should be restored to the vacant connector terminal.

#### To Step-by-Step Offices

2.69 These circuits are tested at the line circuit terminal strip at the No. 740-A, No. 740-B or No. 740-C P.B.X. by the straightaway method.

2.70 The circuit is completed for the test from a test line jack at the step-by-step office.

2.71 Figure 5 shows schematically the connections for the test.

#### Preliminary Connections

2.72 At the P.B.X. provide a special patching cord 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

2.73 At the step-by-step office provide a regular double ended patching cord equipped with No. 110 plugs.

2.74 At the P.B.X. connect the receiving jack of the transmission measuring set to a vacant

## SECTION K28.40

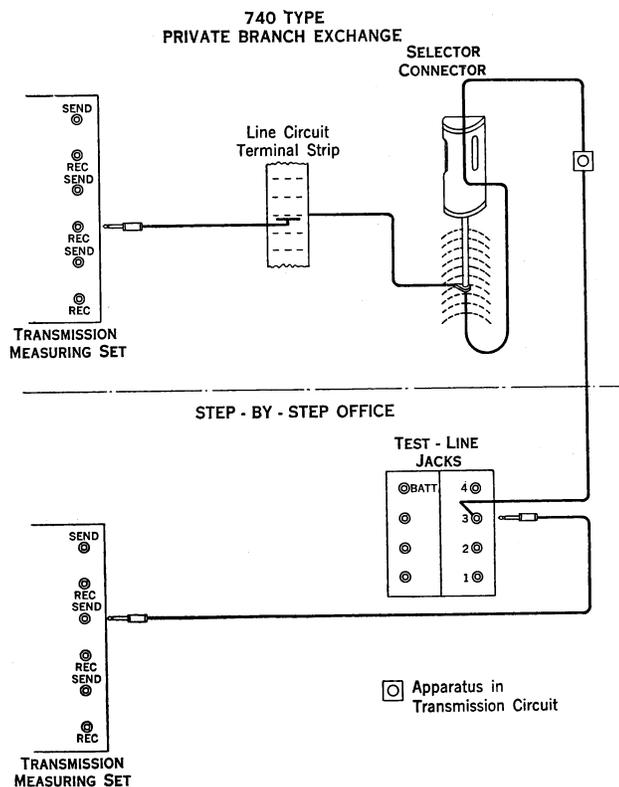


Figure 5

connector terminal at the line circuit terminal strip using the special patching cord of paragraph 2.72.

Note: It will be necessary to remove the "busy" ground from the vacant connector terminal.

2.75 Establish communication with the tester at the step-by-step office and arrange for the connections of paragraph 2.76.

2.76 At the step-by-step office select a test line associated with a connector group and connect the sending jack of the transmission measuring set to the test line circuit (jack No. 3 of the test line group) using the patching cord of paragraph 2.73.

### Testing Procedure

2.77 At the attendant's turret pass a call in the regular way over the trunk circuit to be tested for the test line number to which the transmission measuring set is connected.

Note: It will be necessary for the tester at the step-by-step office to trip the ringing.

2.78 At the attendant's turret dial the number of the vacant connector terminal to which the transmission measuring set is connected and complete the call to the trunk to be tested.

2.79 Measure the transmission loss.

2.80 The above procedure should be followed for the remaining trunks of the group and when the testing is completed the testing connections should be removed and the "busy" ground restored to the vacant connector terminal.

### To Panel Offices

2.81 Trunk circuits to panel offices should be tested in the same manner as those to step-by-step offices, the methods for which are outlined in paragraphs 2.69 to 2.80 inclusive, except that the sending transmission measuring set should be connected at the I.D.F. to a spare final multiple circuit from which the intercepting line has been removed, instead of being connected to a test line.

### (D) Dial Tie Line Circuits

#### To Manual P.B.X. Switchboards

2.82 These circuits may be tested by either the loop or straightaway methods. The loop method can be used only if there are three or more circuits in the group. Where the group consists of less than three circuits the tests are made by the straightaway method.

#### Loop Method

2.83 Under this method the circuits are tested at the line circuit terminal strip of the No. 740-A or No. 740-B P.B.X. by the loop method during a period of light traffic load.

Note: Tie lines are not associated with the No. 740-C P.B.X.

2.84 The loops are established at the connecting manual P.B.X. by means of a switchboard cord circuit.

2.85 The circuits are completed to the transmission measuring set at the No. 740-A or No. 740-B P.B.X. through two vacant connector terminals of the selector-connectors from which the "busy" grounds have been removed.

2.86 Figure 6 shows schematically the connections for the test.

#### Preliminary Connections

2.87 Provide two regular double-ended patching cords equipped with No. 110 plugs, one patching cord equipped with a No. 110 plug on one end and clips on the other, 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

2.88 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.

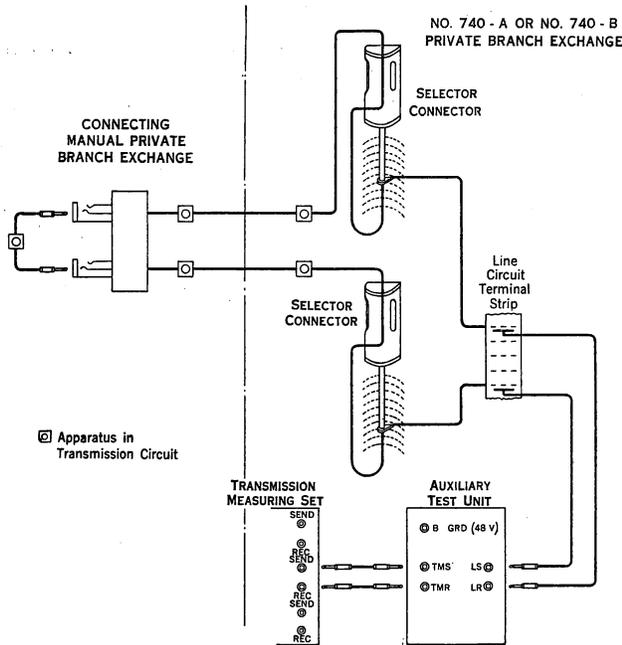


Figure 6

2.89 Connect the B-GRD (48 V) jack of the auxiliary test unit to 48 volt battery and ground (battery on tip and ground on sleeve) using the patching cord equipped with a No. 110 plug on one end and clips on the other end.

Note: This battery and ground may be obtained from any source convenient to the location of the testing apparatus.

2.90 Select two vacant connector terminals of the selector-connectors, remove the "busy" grounds, and connect the LS and LR jacks of the auxiliary test unit, respectively, to these vacant connector terminals using the special patching cords.

2.91 Establish a talking circuit with the connecting manual P.B.X.

#### Testing Procedure

2.92 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	

2.93 Select a tie line to be used as the standard or test trunk and pass a call in the regular way from the P.B.X. over this tie line. Have the attendant at the connecting manual P.B.X. complete the call to the tie line to be tested.

2.94 At the attendant's turret dial the number of the connector terminal connected to the LS jack of the auxiliary test unit and complete the connection to the tie line to be tested.

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

2.96 At the attendant's turret dial the number of the connector terminal connected to the LR jack of the auxiliary test unit and complete the connection to the tie line used as the standard or test trunk.

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

2.98 Measure the transmission loss.

Note: This will be the loss of two P.B.X. tie line circuits, and the looping cord circuit.

2.99 Disconnect the tie lines by operating key 1 and key 2 of the auxiliary test unit to OPEN.

2.100 Repeat the above testing procedure to determine the transmission loss of the tie line used as the standard or test trunk.

2.101 Proceed with the tests as outlined in paragraphs 2.93 to 2.99, inclusive, for the remaining tie lines of the group.

2.102 When all the tie lines in the group have been tested disconnect the tie lines by operating key 1 and key 2 of the auxiliary test unit to OPEN and have the attendant remove the cord at the manual P.B.X. switchboard. Remove the patching cords from the terminal strips and restore the "busy" grounds to the vacant connector terminals.

#### Straightaway Method

2.103 Under this method the circuits are tested at the line circuit terminal strip of the No. 740-A or No. 740-B P.B.X.

2.104 The circuits are completed for test to the sending transmission measuring set at the connecting manual P.B.X. switchboard by means of a cord circuit.

2.105 Figure 7 shows schematically the connections for the test.

#### Preliminary Connections

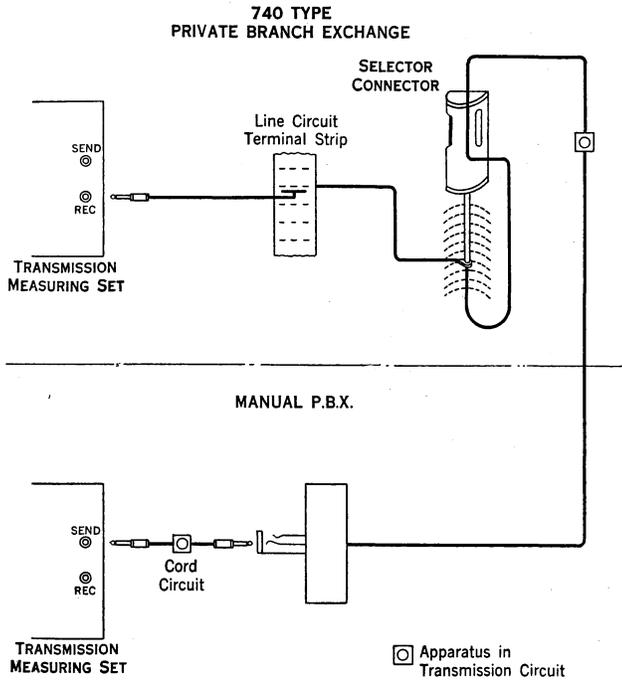
2.106 At the No. 740-A or No. 740-B P.B.X. provide a special patching cord equipped and connected as indicated below.

#### 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

2.107 At the No. 740-A or No. 740-B P.B.X. connect the receiving jack of the transmission measuring set to a vacant connector terminal at the line circuit terminal strip using the special patching cord of paragraph 2.106.

**SECTION K28.40**



**Figure 7**

Note: It will be necessary to remove the "busy" ground from the vacant connector terminal.

2.108 Establish communication with the tester at the connecting manual P.B.X. and arrange for the connections outlined in paragraph 2.111.

2.109 At the connecting manual P.B.X., connect the sending jack of the transmission measuring set to the jack of the tie line to be tested using a switchboard cord circuit.

**Testing Procedure**

2.110 At the attendant's turret pass a call in the regular way over the tie line to be tested. Dial the number of the vacant connector terminal to which the measuring apparatus is connected and complete the call to the tie line under test.

2.111 Measure the transmission loss.

Note: This is the loss of the tie line and a switchboard cord circuit.

2.112 Upon completion of the test the tie line should be released at the P.B.X. and the testing connections removed.

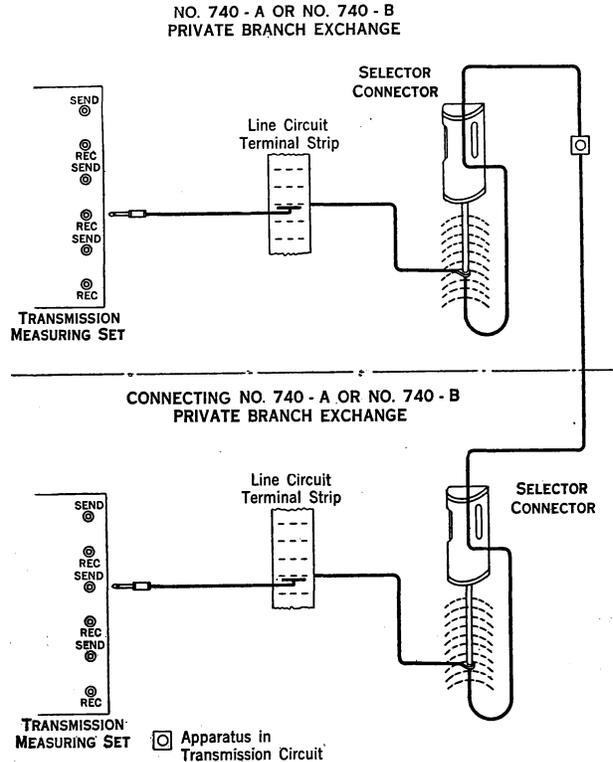
2.113 The above procedure should be followed for the remaining tie lines to be tested and when the testing is completed the "busy" ground should be restored to the vacant connector terminal.

**To a No. 740-A or No. 740-B P.B.X.**

2.114 This circuit is tested from the line circuit terminal strip of the No. 740-A or No. 740-B P.B.X. by the straightaway method.

2.115 The circuit is completed for test to the sending transmission measuring set at the connecting No. 740-A or No. 740-B P.B.X. from the line circuit terminal strip associated with a vacant connector terminal.

2.116 Figure 8 shows schematically the connections for the test.



**Figure 8**

**Preliminary Connections**

2.117 At each P.B.X. provide a special patching cord 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

2.118 At the P.B.X. from which the testing is to be done connect the receiving jack of the transmission measuring set to a vacant connector terminal at the line circuit terminal strip using one of the special patching cords of paragraph 2.117.

Note: The "busy" ground should be disconnected from the vacant connector terminal.

2.119 Establish communication with the tester at the connecting P.B.X. and arrange for the connections outlined in paragraph 2.120.

2.120 At the connecting P.B.X. connect the sending jack of the transmission measuring set to a vacant connector terminal (from which the "busy" ground has been disconnected) at the line circuit terminal strip using one of the special patching cords of paragraph 2.117.

#### Testing Procedure

2.121 At the attendant's turret of the No. 740-A or No. 740-B P.B.X. from which the test is to be made pass a call in the regular way to the attendant at the connecting P.B.X. for the number of the vacant connector terminal to which the measuring apparatus is connected, using the tie line to be tested and have the connection completed at the attendant's turret at the connecting P.B.X.

2.122 At the attendant's turret dial the number of the vacant connector terminal to which the receiving transmission measuring set is connected and complete the connection in the regular way to the tie line to be tested.

2.123 Measure the transmission loss.

2.124 The above procedure should be followed for the other tie lines in the group to be tested.

2.125 When the testing has been completed the testing connections should be removed at the terminal strips at the respective P.B.X.'s and the "busy" grounds restored to the vacant connector terminals.

#### (E) Repeating Tie Line Circuits

To a No. 700-C or a No. 701-A P.B.X.

2.126 These circuits are tested in the same manner as the dial tie line circuits to manual P.B.X. switchboards, the methods for which are outlined in paragraphs 2.82 to 2.113 inclusive. Straightaway tests may be made as outlined in paragraphs 2.103 to 2.113 inclusive, or they may be made as outlined in paragraphs 2.127 to 2.138, inclusive.

To a No. 710-C or a No. 711-A P.B.X.

2.127 This circuit is tested from the line circuit terminal strip of the No. 740-A or the No. 740-B P.B.X. by the straightaway method.

2.128 The circuit is completed for test to the sending transmission measuring set at the connecting non-attended P.B.X. from the terminal strip associated with a vacant connector terminal.

2.129 Figure 9 shows schematically the connections for the test.

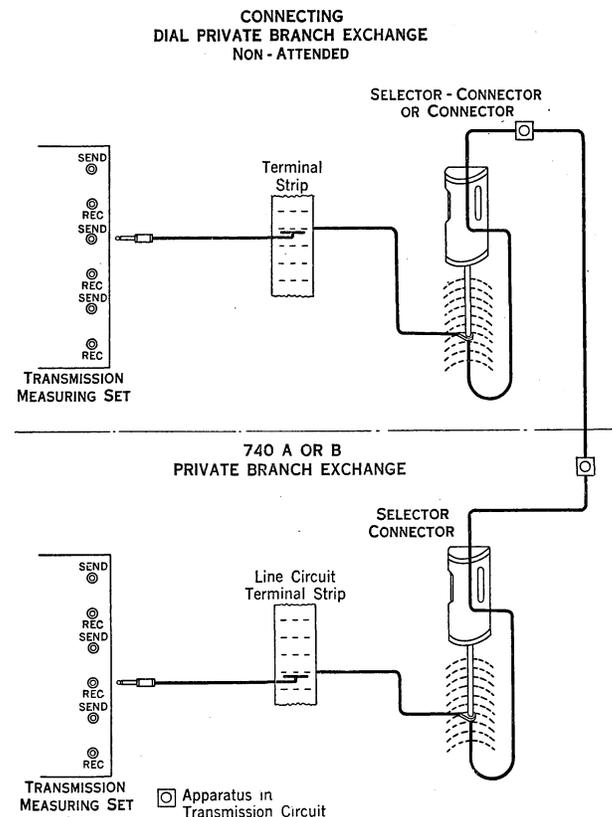


Figure 9

#### Preliminary Connections

2.130 At each P.B.X. provide a special patching cord 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

2.131 At the No. 740-A or No. 740-B P.B.X. connect the receiving jack of the transmission measuring set to a vacant connector terminal at the line circuit terminal strip, using one of the special patching cord of paragraph 2.133.

Note: The "busy" ground should be disconnected from the vacant connector terminal.

2.132 Establish communication with the tester at the connecting P.B.X. and arrange for the connections outlined in paragraph 2.133.

2.133 At the connecting P.B.X. connect the sending jack of the transmission measuring set to a vacant connector terminal at the terminal strip, using one of the special patching cords of paragraph 2.130.

## SECTION K28.40

Note: The "busy" ground should be disconnected from the vacant connector terminal.

### Testing Procedure

2.134 At the attendant's turret of the No. 740-A or No. 740-B P.B.X. pass a call in the regular way for the number of the vacant connector terminal to which the sending transmission measuring set is connected at the No. 710-C or No. 711-A P.B.X. using the tie line to be tested.

2.135 At the attendant's turret of the No. 740-A or No. 740-B P.B.X. dial the number of the vacant connector terminal to which the receiving

transmission measuring set is connected and complete the connection in the regular way to the tie line to be tested.

2.136 Measure the transmission loss.

2.137 The above procedure should be followed for the other tie lines in the group to be tested.

2.138 When the testing has been completed, the testing connections should be removed at the terminal strips at the respective P.B.X.'s and the "busy" grounds restored to the vacant connector terminals.