# 6-PORT CONFERENCE CIRCUIT (SD-2H176)

# OPERATIONAL TESTS

# NO. 2 AND ▶NO. 2B◀ ELECTRONIC SWITCHING SYSTEMS

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## 1. GENERAL

**1.01** This section describes the method of testing the 6-port conference circuit (SD-2H176) used in the No. 2 and No. 2B Electronic Switching Systems (ESS).

**1.02** This section is reissued to cover the No. 2B ESS.

**1.03** The following tests will be performed:

*A. Circuit State and Scan Point Operation:* This test verifies the operation of the circuit relays and the saturation of the ferrod sensors associated with the 6-port conference circuit.

*B. Transmission Loss Measurement:* This test verifies the transmission loss of the 6-port conference circuit in the talk states.

**1.04** The tests in this section are to be performed on a periodic basis as prescribed by No. 2 and No. 2B ESS equipment test list or when a malfunction of one of the circuits is suspected. Refer to Fig. 1 for test set-up.

**1.05** The tests will be performed from the trunk test panel (TTP) in conjunction with the maintenance display buffer and teletypewriter (TTY). The keys on the TTP may be either a locking or nonlocking type. In order to differentiate between the two types of keys, the use of a locking type key shall be identified by the words "operate" and "release" and the use of a nonlocking type key shall be identified by the word "depress" in the ACTION column. For more detailed information about the TTP and its operation, refer to Section 232-130-301, Trunk Test Panel—Method of Operation.

*Note:* Nonlocking relays require a depression of at least one-half second to ensure system recognition.

**1.06** ***Lettered Steps:*** A letter a, b, c, etc, added to a step number in Part 3 and 4 of this section indicates an action which may or may not be required depending on local conditions. The condition under which a lettered step or a series of lettered steps should be made is given in the ACTION column, and all steps governed by the same condition are designated by the same letter within a test. Where a condition does not apply, all steps designated by that letter should be omitted.

**1.07** Whenever the term TOUCH-TONE® telephone service is used, it refers to the equipment required to provide this service to the customer.

## 2. APPARATUS

**2.01** Transmission measuring set (TMS) 23D, or equivalent with appropriate test leads. Equivalent apparatus must be capable of measuring power in 600- and 900-ohm circuits at 1 kHz. The accuracy must be ±0.1 dBm at 1 kHz at normal room temperature and the range must be from -15 dBm to +10 dBm.

*Note:* This item will not be required if the TTP is equipped with a TMS.

**2.02** Two (2) test telephone sets equipped with appropriate cords terminated to 310 plugs.

**2.03** 508A relay blocking tools, as required.

## 3. PREPARATION

**3.01** Refer to office records to obtain the trunk group number (TGN), member number (MEMN), and the supervisory scan point number (SPN) of the circuits to be tested.

**3.02** Verify the scan point number and obtain the MEMN for all the noncontrolling ports in the 6-port conference circuit as follows:

At maintenance TTY type in:

A VY:TRK: aaa bbb!

aaa = TGN

bbb = MEMN

When verifying the SPN of the phantom port ⧫(the controlling port that carries the busy idle status for the circuit),⧫ the system will respond by giving the TGN, MEMN, and SPN for all the ports as follows:

```
AR VY TRK aaa bbb
                      ⎫
TEN nn gcsl           ⎪
PDB cxzy b            ⎬ (Phantom Port)
SPN ss rrbb           ⎭
```

```
TRK aaa bbb
                      ⎫
TEN nn gcsl           ⎪
PDB cxzy b            ⎬ (Port 0)
SPN ss rrbb           ⎭
.
.                     ⎫ (Ports 1-4)
.                     ⎭
TRK aaa bbb
                      ⎫
TEN nn gcsl           ⎪
PDB cxzy b            ⎬ (Port 5)
DSP ss rrbb           ⎭
```

Where: ss = scanner number

rr = scanner row

bb = bit in row.

The bb bit represents the first ferrod sensor (0) in the scanner row that is associated with the specific circuit. All other ferrod sensors assigned to the same circuit follow in consecutive order (0, 1, 2, etc). Refer to the output message manual (OM-2H200) for explanation of other data fields, if required.

**3.03** Use the following procedure to make the 6-port conference circuit traffic busy and to connect it to the TTP.

*Note:* When connection to a 6-port conference circuit is required, the phantom port must be connected to the TTP prior to connecting the noncontrolling ports.

| STEP | ACTION | VERIFICATION |
|---|---|---|
| **All Tests** | | |
| 1 | At telephone set on TTP—<br>Operate access trunk 1 key. | |
| 2 | Lift handset off-hook; or operate TRFR key of TEL CKT on TTP if using headset. | At telephone set—<br>Access trunk 1 lamp lighted.<br>At ACCESS TRUNK 1 CONTROL—<br>SUPV lamp lighted.<br>At TEL CKT—<br>TRFR lamp lighted if TRFR key is operated. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 3 | At TOUCH-TONE dial—<br>Dial 1 + TGN + MEMN + ST to gain access to the phantom port of the 6-port conference circuit. | At ACCESS TRUNK 1 CONTROL—<br>EQPT ST lamp lighted steadily or flashing at a rate of 120 interruptions per minute.<br>At MISC TEST CONTROL—<br>P & E lamp lighted if connection was successful.<br><br>***Note:*** If the EQPT ST lamp is flashing and the P & E lamp is not lighted steadily, the TTP is not connected to the circuit to be tested. |
| 4a | If the P & E lamp is not lighted steadily—<br>At ACCESS TRUNK 1 CONTROL—<br>Depress RLS key. | |
| 5a | Repeat Steps 3 and 4a until connection is successful. | |
| 6 | Place handset on-hook or release TRFR key. | At telephone set—<br>Access trunk 1 lamp extinguished.<br>At TEL CKT—<br>TRFR lamp extinguished. |
| 7 | At telephone set—<br>Operate access trunk 2 key. | At MISC TEST CONTROL—<br>P & E lamp remains lighted. |
| 8 | Lift handset off-hook or operate TRFR key at TEL CKT on TTP if using headset. | At telephone set—<br>Access trunk 2 lamp lighted.<br>At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp lighted.<br>At TEL CKT—<br>TRFR lamp lighted if TRFR key is operated. |
| 9 | At TOUCH-TONE dial—<br>Dial 1 + TGN + MEMN + ST to gain access to port 1 of the 6-port conference circuit. | At ACCESS TRUNK 2 CONTROL—<br>EQPT ST lamp lighted steadily or flashing at a rate of 120 interruptions per minute.<br><br>***Note:*** If the EQPT ST lamp and the P & E lamp are flashing, the TTP is not connected to the circuit to be tested. |
| 10b | If the P & E lamp is flashing—<br>At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | |
| 11b | Repeat Steps 9 and 10b until connection is successful. | |
| 12 | Place handset on-hook or release TRFR key. | At telephone set—<br>Access trunk 2 lamp extinguished.<br>At TEL CKT—<br>TRFR lamp extinguished. |

## 4. METHOD

**4.01** If the verification procedure fails or if a malfunctioning circuit is indicated during any part of these tests, proceed as follows.

(1) Discontinue the test.

(2) Troubleshoot the circuit which failed.

(3) Replace faulty circuit components using standard repair procedures.

(4) Repeat the test that failed. If verification is successful, continue the test.

| STEP | ACTION | VERIFICATION |
|---|---|---|
| **A. Circuit State and Scan Point Operation** | | |
| 13 | At ACCESS TRUNK 1 CONTROL—<br>Depress VM key. | At ACCESS TRUNK 1 CONTROL—<br>VM lamp lighted.<br>At VOLTMETER CONTROL—<br>100K lamp lighted. |
| 14 | At VOLTMETER CONTROL—<br>Operate GRD key. | At VOLTMETER CONTROL—<br>GRD lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0.<br>A deflection on the meter indicates a resistance between the tip and ring leads. |
| 15 | At VOLTMETER CONTROL—<br>Release GRD key. | At VOLTMETER CONTROL—<br>GRD lamp extinguished. |
| 16 | At VOLTMETER CONTROL—<br>Operate TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0. |
| 17 | At VOLTMETER CONTROL—<br>Depress FEMF key. | VOLTMETER CONTROL—<br>FEMF lamp lighted.<br>100K lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 18 | At VOLTMETER CONTROL—<br>Release TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 19 | At VOLTMETER CONTROL—<br>Depress MET VM key. | At VOLTMETER CONTROL—<br>MET VM lamp lighted.<br>FEMF lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 20 | At test and control unit—<br>Set PD GROUP switch to 0-5 position. | |
| 21 | Use TTY printout information from 3.02 for input to the following message. | |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 22 | At maintenance TTY—<br>▶For No. 2 ESS offices type in:◀<br>UBRL TS:RSN:ssrr!<br>ss = Number of the trunk scanner in decimal (0-11).<br>rr = Number of the scanner row in decimal.<br><br>▶For No. 2B ESS offices type in:<br>MON:TSSN ssrr;RDT LAMPS!<br>ss = Number of trunk scanner in decimal (0-11).<br>rr = Number of scanner row in decimal (0-63).<br>RDT LAMPS = Direct the result to the DISPLAY BUFFER.◀ | At DISPLAY BUFFER—<br>Lamps associated with ferrod sensors 0-5 for the 6-port conference circuit are displayed on the display buffer lamps and are lighted. |
| 23 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamps lighted. |
| 24 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 key. | At circuit under test—<br>Relay A0 operated.<br>At VOLTMETER—<br>Meter indicates between 42.75 and 52.5 volts on 120-volt scale. |
| 25 | At front of writing shelf on TTP—<br>Plug in test telephone set "A" into ACCESS TRK-1 jack and lift receiver off-hook.<br><br>***Note:*** Voltmeter is disconnected from the circuit when ACCESS TRK-1 jack is used. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 0 extinguished. |
| 26 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 27 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 key. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 0 lighted.<br>At circuit under test—<br>Relay B0 operated.<br>Relay A0 remains operated. |
| 28 | At ACCESS TRUNK 1 CONTROL—<br>Depress HOLD key. | At ACCESS TRUNK 1 CONTROL—<br>HOLD lamp lighted.<br>VM key extinguished.<br>At VOLTMETER CONTROL—<br>MET VM lamp extinguished. |
| 29 | At ACCESS TRUNK 2 CONTROL—<br>Depress VM key. | At ACCESS TRUNK 2 CONTROL—<br>VM lamp lighted.<br>At VOLTMETER CONTROL—<br>100K lamp lighted. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 30 | At VOLTMETER CONTROL—<br>Operate GRD key. | At VOLTMETER CONTROL—<br>GRD lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0.<br>A deflection on the meter indicates a resistance between the tip and ring leads. |
| 31 | At VOLTMETER CONTROL—<br>Release GRD key. | At VOLTMETER CONTROL—<br>GRD lamp extinguished. |
| 32 | At VOLTMETER CONTROL—<br>Operate TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0. |
| 33 | At VOLTMETER CONTROL—<br>Depress FEMF key. | At VOLTMETER CONTROL—<br>FEMF lamp lighted.<br>100K lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 34 | At VOLTMETER CONTROL—<br>Release TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 35 | At VOLTMETER CONTROL—<br>Depress MET VM key. | At VOLTMETER CONTROL—<br>MET VM lamp lighted.<br>FEMF lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 36 | At PERIPHERAL DECODER POINTS—<br>Release 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp extinguished.<br>0 lamp remains lighted. |
| 37 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At VOLTMETER—<br>Meter indicates between 42.75 and 52.5 volts on the 120-volt scale.<br>At circuit under test—<br>Relay A1 operated. |
| 38 | At front of writing shelf on TTP—<br>Plug in test telephone set "B" into ACCESS TRK-2 jack and lift receiver off-hook.<br><br>***Note:*** Voltmeter is disconnected from the circuit when ACCESS TRK-2 jack is used. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 1 extinguished. |
| 39 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 40 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 1 lighted.<br>At circuit under test—<br>Relay B1 operated.<br>Relay A1 remains operated. |
| 41 | At PERIPHERAL DECODER POINTS—<br>Release 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp extinguished.<br>0 lamp remains lighted. |
| 42 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 and AT 2 keys. | At test telephone sets A and B—<br>Verify that a talking path has been established between the two sets.<br>At circuits under test—<br>Relays B0 and B1 released.<br>Relays A0 and A1 remain operated.<br>At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 1 extinguished. |
| 43 | At PERIPHERAL DECODER POINTS—<br>Release 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp extinguished. |
| 44 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At circuits under test—<br>Relay A1 released.<br>Relay A0 remains operated.<br>At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 1 lighted. |
| 45 | At front of writing shelf on TTP—<br>Remove test telephone set "B" from ACCESS TRK-2 jack. | |
| 46 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>VM lamp extinguished.<br>At VOLTMETER CONTROL—<br>MET VM lamp extinguished. |
| 47 | At telephone set on TTP—<br>Lift handset off-hook or:<br>At TEL CKT—<br>Operate TRFR key. | At telephone set—<br>Access trunk 2 lamp lighted.<br>At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp lighted.<br>At TEL CKT—<br>TRFR lamp lighted if TRFR key is operated. |
| 48 | At TOUCH-TONE dial—<br>Dial 1 + TGN + MEMN + ST to gain access to port 2 of the 6-port conference circuit. | At ACCESS TRUNK 2 CONTROL—<br>EQPT ST lamp lighted steadily or flashing at a rate of 120 interruptions per minute. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| | | *Note:* If the EQPT ST lamp and the P & E lamp are flashing, the TTP is not connected to the circuit to be tested. |
| 49c | If the P & E lamp is flashing—<br>At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | |
| 50 | Repeat Steps 48 and 49c until connection is successful. | |
| 51 | Place handset on-hook or release TRFR key. | At telephone set—<br>Access trunk 2 lamp extinguished.<br>At TEL CKT—<br>TRFR lamp extinguished. |
| 52 | At ACCESS TRUNK 2 CONTROL—<br>Depress VM key. | At ACCESS TRUNK 2 CONTROL—<br>VM lamp lighted.<br>At VOLTMETER CONTROL—<br>100K lamp lighted. |
| 53 | At VOLTMETER CONTROL—<br>Operate GRD key. | At VOLTMETER CONTROL—<br>GRD lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0.<br>A deflection on the meter indicates a resistance between the tip and ring leads. |
| 54 | At VOLTMETER CONTROL—<br>Release GRD key. | At VOLTMETER CONTROL—<br>GRD lamp extinguished. |
| 55 | At VOLTMETER CONTROL—<br>Operate TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0. |
| 56 | At VOLTMETER CONTROL—<br>Depress FEMF key. | At VOLTMETER CONTROL—<br>FEMF lamp lighted.<br>100K lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 57 | At VOLTMETER CONTROL—<br>Release TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 58 | At VOLTMETER CONTROL—<br>Depress MET VM key. | At VOLTMETER CONTROL—<br>MET VM lamp lighted.<br>FEMF lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 59 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 60 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At VOLTMETER—<br>Meter indicates between 42.75 and 52.5 volts on the 120-volt scale.<br>At circuit under test—<br>Relay A2 operated. |
| 61 | At front of writing shelf on TTP—<br>Plug in test telephone set "B" into ACCESS TRK-2 jack and lift receiver off-hook.<br><br>***Note:*** Voltmeter is disconnected from the circuit when ACCESS-TRK 2 jack is used. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 2 extinguished. |
| 62 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 63 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 2 lighted.<br>At circuit under test—<br>Relay B2 operated.<br>Relay A2 remains operated. |
| 64 | At PERIPHERAL DECODER POINTS—<br>Release 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp extinguished.<br>0 lamp remains lighted. |
| 65 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 and AT 2 keys. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 2 extinguished.<br>At circuits under test—<br>Relay B2 released.<br>Relays A0 and A2 remain operated.<br>At test telephone sets A and B—<br>Verify that a talking path has been established between the two sets. |
| 66 | At PERIPHERAL DECODER POINTS—<br>Release 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp extinguished. |
| 67 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At circuits under test—<br>Relay A2 released.<br>Relay A0 remains operated.<br>At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 2 lamp lighted. |
| 68 | At front of writing shelf on TTP—<br>Remove test telephone set "B" from ACCESS TRK-2 jack. | |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 69 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>VM lamp extinguished.<br>At VOLTMETER CONTROL—<br>MET VM lamp extinguished. |
| 70 | At telephone set on TTP—<br>Lift handset off-hook or:<br>At TEL CKT—<br>Operate TRFR key. | At telephone set—<br>Access trunk 2 lamp lighted.<br>At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp lighted.<br>At TEL CKT—<br>TRFR lamp lighted if TRFR key is operated. |
| 71 | At TOUCH-TONE dial—<br>Dial 1 + TGN + MEMN + ST to gain access to port 3 of the 6-port conference circuit. | At ACCESS TRUNK 2 CONTROL—<br>EQPT ST lamp lighted steadily or flashing at a rate of 120 interruptions per minute.<br><br>***Note:*** If the EQPT ST lamp and the P & E lamp are flashing, the TTP is not connected to the circuit to be tested. |
| 72d | If the P & E lamp is flashing—<br>At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | |
| 73 | Repeat Steps 71 and 72d until connection is successful. | |
| 74 | Place handset on-hook or release TRFR key. | At telephone set—<br>Access trunk 2 lamp extinguished.<br>At TEL CKT—<br>TRFR lamp extinguished. |
| 75 | At ACCESS TRUNK 2 CONTROL—<br>Depress VM key. | At ACCESS TRUNK 2 CONTROL—<br>VM lamp lighted.<br>At VOLTMETER CONTROL—<br>100K lamp lighted. |
| 76 | At VOLTMETER CONTROL—<br>Operate GRD key. | At VOLTMETER CONTROL—<br>GRD lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0.<br>A deflection on the meter indicates a resistance between the tip and ring leads. |
| 77 | At VOLTMETER CONTROL—<br>Release GRD key. | At VOLTMETER CONTROL—<br>GRD lamp extinguished. |
| 78 | At VOLTMETER CONTROL—<br>Operate TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp lighted. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| | | At VOLTMETER—<br>Meter indicates 0. |
| 79 | At VOLTMETER CONTROL—<br>Depress FEMF key. | At VOLTMETER CONTROL—<br>FEMF lamp lighted.<br>100K lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 80 | At VOLTMETER CONTROL—<br>Release TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 81 | At VOLTMETER CONTROL—<br>Depress MET VM key. | At VOLTMETER CONTROL—<br>MET VM lamp lighted.<br>FEMF lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 82 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 83 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At VOLTMETER—<br>Meter indicates between 42.75 and 52.5 volts on the 120-volt scale.<br>At circuits under test—<br>Relay A3 operated.<br>Relay A0 remains operated. |
| 84 | At front of writing shelf on TTP—<br>Plug in test telephone set "B" into ACCESS TRK-2 jack and lift receiver off-hook.<br><br>***Note:*** The voltmeter is disconnected from the circuit when ACCESS TRK-2 jack is used. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 3 extinguished. |
| 85 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 86 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 3 lighted.<br>At circuits under test—<br>Relay B3 operated.<br>Relays A0 and A3 remain operated. |
| 87 | At PERIPHERAL DECODER POINTS—<br>Release 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp extinguished.<br>0 lamp remains lighted. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 88 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 and AT 2 keys. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 3 extinguished.<br>At circuits under test—<br>Relay B3 released.<br>Relays A0 and A3 remain operated.<br>At test telephone sets A and B—<br>Verify that a talking path has been established between the two sets. |
| 89 | At PERIPHERAL DECODER POINTS—<br>Release 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp extinguished. |
| 90 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At circuits under test—<br>Relays A3 released.<br>Relay A0 remains operated.<br>At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 3 lamp lighted. |
| 91 | At front of writing shelf on TTP—<br>Remove test telephone set "B" from ACCESS TRK-2 jack. | |
| 92 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>VM lamp extinguished.<br>At VOLTMETER CONTROL—<br>MET VM lamp extinguished. |
| 93 | At telephone set on TTP—<br>Lift handset off-hook or:<br>At TEL CKT—<br>Operate TRFR key. | At telephone set—<br>Access trunk 2 lamp lighted.<br>At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp lighted.<br>At TEL CKT—<br>TRFR lamp lighted if TRFR key is operated. |
| 94 | At TOUCH-TONE dial—<br>Dial 1 + TGN + MEMN + ST to gain access to port 4 of the 6-port conference circuit. | At ACCESS TRUNK 2 CONTROL—<br>EQPT ST lamp lighted steadily or flashing at a rate of 120 interruptions per minute.<br><br>***Note:*** If the EQPT ST lamp and the P & E lamp are flashing, the TTP is not connected to the circuit to be tested. |
| 95e | If the P & E lamp is flashing—<br>At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | |
| 96 | Repeat Steps 94 and 95e until connection is successful. | |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 97 | Place handset on-hook or release TRFR key. | At telephone set—<br>Access trunk 2 lamp extinguished.<br>At TEL CKT—<br>TRFR lamp extinguished. |
| 98 | At ACCESS TRUNK 2 CONTROL—<br>Depress VM key. | At ACCESS TRUNK 2 CONTROL—<br>VM lamp lighted.<br>At VOLTMETER CONTROL—<br>100K lamp lighted. |
| 99 | At VOLTMETER CONTROL—<br>Operate GRD key. | At VOLTMETER CONTROL—<br>GRD lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0.<br>A deflection on the meter indicates a resistance between the tip and ring leads. |
| 100 | At VOLTMETER CONTROL—<br>Release GRD key. | At VOLTMETER CONTROL—<br>GRD lamp extinguished. |
| 101 | At VOLTMETER CONTROL—<br>Operate TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0. |
| 102 | At VOLTMETER CONTROL—<br>Depress FEMF key. | At VOLTMETER CONTROL—<br>FEMF lamp lighted.<br>100K lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 103 | At VOLTMETER CONTROL—<br>Release TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 104 | At VOLTMETER CONTROL—<br>Depress MET VM key. | At VOLTMETER CONTROL—<br>MET VM lamp lighted.<br>FEMF lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 105 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 106 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At VOLTMETER—<br>Meter indicates between 42.75 and 52.5 volts on the 120-volt scale.<br>At circuits under test—<br>Relay A4 operated.<br>Relay A0 remains operated. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 107 | At front of writing shelf on TTP—<br>Plug in test telephone set "B" into ACCESS TRK-2 jack and lift receiver off-hook.<br><br>***Note:*** Voltmeter is disconnected from the circuit when ACCESS TRK-2 jack is used. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 4 extinguished. |
| 108 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 109 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 4 lighted.<br>At circuits under test—<br>Relay B4 operated.<br>Relays A0 and A4 remain operated. |
| 110 | At PERIPHERAL DECODER POINTS—<br>Release 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp extinguished.<br>0 lamp remains lighted. |
| 111 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 and AT 2 keys. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 4 extinguished.<br>At circuits under test—<br>Relay B4 released.<br>Relays A0 and A4 remain operated.<br>At test telephone sets A and B—<br>Verify that a talking path has been established between the two sets. |
| 112 | At PERIPHERAL DECODER POINTS—<br>Release 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp extinguished. |
| 113 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At circuits under test—<br>Relay A4 released.<br>Relay A0 remains operated.<br>At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 4 lamp lighted. |
| 114 | At front of writing shelf on TTP—<br>Remove test telephone set "B" from ACCESS TRK-2 jack. | |
| 115 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>VM lamp extinguished.<br>At VOLTMETER CONTROL—<br>MET VM lamp extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 116 | At telephone set on TTP—<br>Lift handset off-hook or:<br>At TEL CKT—<br>Operate TRFR key. | At telephone set—<br>Access trunk 2 lamp lighted.<br>At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp lighted.<br>At TEL CKT—<br>TRFR lamp lighted if TRFR key is operated. |
| 117 | At TOUCH-TONE dial—<br>Dial 1 + TGN + MEMN + ST to gain access to port 5 of the 6-port conference circuit. | At ACCESS TRUNK 2 CONTROL—<br>EQPT ST lamp lighted steadily or flashing at a rate of 120 interruptions per minute.<br><br>***Note:*** If the EQPT ST lamp and the P & E lamp are flashing, the TTP is not connected to the circuit to be tested. |
| 118f | If the P & E lamp is flashing—<br>At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | |
| 119 | Repeat Steps 117 and 118f until connection is successful. | |
| 120 | Place handset on-hook or release TRFR key. | At telephone set—<br>Access trunk 2 lamp extinguished.<br>At TEL CKT—<br>TRFR lamp extinguished. |
| 121 | At ACCESS TRUNK 2 CONTROL—<br>Depress VM key. | At ACCESS TRUNK 2 CONTROL—<br>VM lamp lighted.<br>At VOLTMETER CONTROL—<br>100K lamp lighted. |
| 122 | At VOLTMETER CONTROL—<br>Operate GRD key. | At VOLTMETER CONTROL—<br>GRD lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0.<br>A deflection on the meter indicates a resistance between the tip and ring leads. |
| 123 | At VOLTMETER CONTROL—<br>Release GRD key. | At VOLTMETER CONTROL—<br>GRD lamp extinguished. |
| 124 | At VOLTMETER CONTROL—<br>Operate TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp lighted.<br>At VOLTMETER—<br>Meter indicates 0. |
| 125 | At VOLTMETER CONTROL—<br>Depress FEMF key. | At VOLTMETER CONTROL—<br>FEMF lamp lighted.<br>100K lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 126 | At VOLTMETER CONTROL—<br>Release TR REV key. | At VOLTMETER CONTROL—<br>TR REV lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 127 | At VOLTMETER CONTROL—<br>Depress MET VM key. | At VOLTMETER CONTROL—<br>MET VM lamp lighted.<br>FEMF lamp extinguished.<br>At VOLTMETER—<br>Meter indicates 0. |
| 128 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 129 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At VOLTMETER—<br>Meter indicates between 42.75 and 52.5 volts on the 120-volt scale.<br>At circuit under test—<br>Relay A5 operated. |
| 130 | At front of writing shelf on TTP—<br>Plug in test telephone set "B" into ACCESS TRK-2 jack and lift receiver off-hook.<br><br>***Note:*** Voltmeter is disconnected from the circuit when ACCESS TRK-2 jack is used. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 5 extinguished. |
| 131 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 132 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 5 lighted.<br>At circuits under test—<br>Relay B5 operated.<br>Relays A0 and A5 remain operated. |
| 133 | At PERIPHERAL DECODER POINTS—<br>Release 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp extinguished.<br>0 lamp remains lighted. |
| 134 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 and AT 2 keys. | At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 5 extinguished.<br>At circuits under test—<br>Relay B5 released.<br>Relays A0 and A5 remain operated.<br>At test telephone sets A and B—<br>Verify that a talking path has been established between the two sets. |
| 135 | At PERIPHERAL DECODER POINTS—<br>Release 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 136 | At PERIPHERAL DECODER POINTS—<br>Depress AT 2 key. | At circuits under test—<br>Relay A5 released.<br>Relay AC remains operated.<br>At DISPLAY BUFFER—<br>Lamp associated with ferrod sensor 5 lamp lighted. |
| 137 | At PERIPHERAL DECODER POINTS—<br>Depress AT 1 key. | At circuit under test—<br>Relay A0 released. |
| 138 | At front of writing shelf on TTP—<br>Remove test telephone sets "A" and "B" from ACCESS TRK-1 jack and ACCESS TRK-2 jack, respectively. | |
| 139 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>VM lamp extinguished.<br>At VOLTMETER CONTROL—<br>MET VM lamp extinguished. |
| 140 | At ACCESS TRUNK 1 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 1 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>HOLD lamp extinguished.<br>At MISC TEST CONTROL—<br>P & E lamp extinguished. |
| 141 | To clear the DISPLAY BUFFER—<br>At maintenance TTY—<br>▶For No. 2 ESS offices type in:◀<br>UB SY:CLB!<br><br>▶For No. 2B ESS offices type in:<br>STOP:UTIL!◀ | At DISPLAY BUFFER—<br>Ferrod sensor display removed from display buffer lamps. |
| **B. Transmission Loss Measurement** | | |
| 13 | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>Depress XMSN keys. | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>XMSN lamps lighted. |
| 14g | If TTP is equipped with a TMS—<br>At TRANSMISSION MEASURING CONTROL—<br>Set MEASURE switch to MEAS 2.<br>Set TEST SET switch to TMS.<br>Depress and hold CAL key. | At TRANSMISSION MEASURING CONTROL—<br>CAL lamp lighted. |
| 15h | If TTP is not equipped with a TMS—<br>At front of writing shelf on TTP—<br>Connect portable TMS to TRANS MEAS-TM | |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| | 1 jack using appropriate cord.<br>Set DIAL MEAS EXT switch to MEAS. | |
| 16 | At TMS—<br>Set ADD DBM switch to 0 position. | |
| 17 | At TRANSMISSION MEASURING CONTROL—<br>Set SEND switch to 0 DBM-1 kHz position. | |
| 18 | At TMS—<br>Adjust CAL 1 for 0 DBM on meter. | |
| 19g | If TTP is equipped with a TMS—<br>At TRANSMISSION MEASURING CONTROL—<br>Release CAL key. | At TRANSMISSION MEASURING CONTROL—<br>CAL lamp extinguished. |
| 20 | At test and control unit—<br>Set PD GROUP switch to the 0-5 position. | |
| 21 | At circuits under test—<br>Block operate relay S0 in port 0.<br>Block operate relay S1 in port 1. | |
| 22 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 23 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A0 in port 0 operated.<br>Relay A1 in port 1 operated. |
| 24 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -2.0 dBm. |
| 25 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 26 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 27 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 0 relay B0 operated and relay A0 remains operated.<br>In port 1 relay B1 operated and relay A1 remains operated. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 28 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -1.5 dBm. |
| 29 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 30 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 31 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 0 relays A0 and B0 released.<br>In port 1 relays A1 and B1 released. |
| 32 | At circuits under test—<br>Remove block from S1 relay in port 1.<br>Block operate S2 relay in port 2. | |
| 33 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |
| 34 | Repeat Steps 7 through 12 to gain access to port 2 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 35 | At ACCESS TRUNK 2 CONTROL—<br>Depress XMSN key. | At ACCESS TRUNK 2 CONTROL—<br>XMSN lamp lighted. |
| 36 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 37 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under tests—<br>Relay A0 in port 0 operated.<br>Relay A2 in port 2 operated. |
| 38 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -2.0 dBm. |
| 39 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 40 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 41 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 0 relay B0 operated and relay A0 remains operated.<br>In port 2 relay B2 operated and relay A2 remains operated. |
| 42 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -1.5 dBm. |
| 43 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 44 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 45 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 0 relays A0 and B0 released.<br>In port 2 relays A2 and B2 released. |
| 46 | At circuits under test—<br>Remove block from S2 relay in port 2.<br>Block operate S3 relay in port 3. | |
| 47 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |
| 48 | Repeat Steps 7 through 12 to gain access to port 3 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 49 | At ACCESS TRUNK 2 CONTROL—<br>Depress XMSN key. | At ACCESS TRUNK 2 CONTROL—<br>XMSN lamp lighted. |
| 50 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 51 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A0 in port 0 operated.<br>Relay A3 in port 3 operated. |
| 52 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -2.0 dBm. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 53 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 54 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 55 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm<br>At circuits under test—<br>In port 0 relay B0 operated and relay A0 remains operated.<br>In port 3 relay B3 operated and relay A3 remains operated. |
| 56 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -1.5 dBm. |
| 57 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 58 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 59 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 0 relays A0 and B0 released.<br>In port 3 relays A3 and B3 released. |
| 60 | At circuits under test—<br>Remove block from S3 relay in port 3.<br>Block operate S4 relay in port 4. | |
| 61 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |
| 62 | Repeat Steps 7 through 12 to gain access to port 4 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 63 | At ACCESS TRUNK 2 CONTROL—<br>Depress XMSN key. | At ACCESS TRUNK 2 CONTROL—<br>XMSN lamp lighted. |
| 64 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 65 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test— |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| | | Relay A0 in port 0 operated.<br>Relay A4 in port 4 operated. |
| 66 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -2.0 dBm. |
| 67 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 68 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 69 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 0 relay B0 operated and relay A0 remains operated.<br>In port 4 relay B4 operated and relay A4 remains operated. |
| 70 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -1.5 dBm. |
| 71 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 72 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 73 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 0 relays A0 and B0 released.<br>In port 4 relays A4 and B4 released. |
| 74 | At circuits under test—<br>Remove block from S4 relay in port 4.<br>Block operate S5 relay in port 5. | |
| 75 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |
| 76 | Repeat Steps 7 through 12 to gain access to port 5 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 77 | At ACCESS TRUNK 2 CONTROL—<br>Depress XMSN key. | At ACCESS TRUNK 2 CONTROL—<br>XMSN lamp lighted. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 78 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 79 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A0 in port 0 operated.<br>Relay A5 in port 5 operated. |
| 80 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -2.0 dBm. |
| 81 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 82 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 83 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 0 relay B0 operated and relay A0 remains operated.<br>In port 5 relay B5 operated and relay A5 remains operated. |
| 84 | At TRANSMISSION MEASURING CONTROL—<br>Depress REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp lighted.<br>At TMS—<br>Meter indicates between 0 and -1.5 dBm. |
| 85 | At TRANSMISSION MEASURING CONTROL—<br>Release REV TST key. | At TRANSMISSION MEASURING CONTROL—<br>REV TST lamp extinguished. |
| 86 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 87 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 0 relays A0 and B0 released.<br>In port 5 relays A5 and B5 released. |
| 88 | At circuits under test—<br>Remove blocks from S0 and S5 relays. | |
| 89 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 90 | At ACCESS TRUNK 1 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 1 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished.<br>At MISC TEST CONTROL—<br>P & E lamp extinguished. |
| 91 | Repeat Steps 1 through 6 for access trunk 3 to gain access to the phantom port of the 6-port conference circuit. | Same as Steps 1 through 6. |
| 92 | Repeat Steps 7 through 12 for access trunk 1 to gain access to port 2 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 93 | Repeat Steps 7 through 12 for access trunk 2 to gain access to port 1 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 94 | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>Depress XMSN keys. | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>XMSN lamps lighted. |
| 95 | At circuits under test—<br>Block operate S1 relay in port 1.<br>Block operate S2 relay in port 2. | |
| 96 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 97 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A1 in port 1 operated.<br>Relay A2 in port 2 operated. |
| 98 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 99 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 1 relay B1 operated and relay A1 remains operated.<br>In port 2 relay B2 operated and relay A2 remains operated. |
| 100 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 101 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 1 relays A1 and B1 released.<br>In port 2 relays A2 and B2 released. |
| 102 | At circuits under test—<br>Remove block from S1 relay in port 1.<br>Block operate S4 relay in port 4. | |
| 103 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |
| 104 | Repeat Steps 7 through 12 to gain access to port 4 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 105 | At ACCESS TRUNK 2 CONTROL—<br>Depress XMSN key. | At ACCESS TRUNK 2 CONTROL—<br>XMSN lamp lighted. |
| 106 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 107 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A2 in port 2 operated.<br>Relay A4 in port 4 operated. |
| 108 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 109 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 2 relay B2 operated and relay A2 remains operated.<br>In port 4 relay B4 operated and relay A4 remains operated. |
| 110 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 111 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 2 relays A2 and B2 released.<br>In port 4 relays A4 and B4 released. |
| 112 | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>Depress RLS keys. | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamps extinguished.<br>XMSN lamps extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 113 | At circuits under test—<br>Remove block from S2 relay in port 2.<br>Block operate S1 relay in port 1. | |
| 114 | Repeat Steps 7 through 12 for access trunk 1 to gain access to port 4 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 115 | Repeat Steps 7 through 12 for access trunk 2 to gain access to port 1 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 116 | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>Depress XMSN keys. | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>XMSN lamps lighted. |
| 117 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 118 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A1 in port 1 operated.<br>Relay A4 in port 4 operated. |
| 119 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 120 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 1 relay B1 operated and relay A1 remains operated.<br>In port 4 relay B4 operated and relay A4 remains operated. |
| 121 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 122 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 1 relays A1 and B1 released.<br>In port 4 relays A4 and B4 released. |
| 123 | At circuits under test—<br>Remove block from S1 relay in port 1.<br>Block operate S2 relay in port 2. | |
| 124 | At ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 2 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>XMSN lamp extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 125 | Repeat Steps 7 through 12 to gain access to port 2 of the 6-port conference circuit. | Same as Steps 7 through 12. |
| 126 | At ACCESS TRUNK 2 CONTROL—<br>Depress XMSN key. | At ACCESS TRUNK 2 CONTROL—<br>XMSN lamp lighted. |
| 127 | At PERIPHERAL DECODER POINTS—<br>Operate 0 key. | At PERIPHERAL DECODER POINTS—<br>0 lamp lighted. |
| 128 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -2.0 dBm.<br>At circuits under test—<br>Relay A2 in port 2 operated.<br>Relay A4 in port 4 operated. |
| 129 | At PERIPHERAL DECODER POINTS—<br>Operate 1 key. | At PERIPHERAL DECODER POINTS—<br>1 lamp lighted.<br>0 lamp remains lighted. |
| 130 | Depress AT 1 and AT 2 keys. | At TMS—<br>Meter indicates between 0 and -1.5 dBm.<br>At circuits under test—<br>In port 2 relay B2 operated and relay A2 remains operated.<br>In port 4 relay B4 operated and relay A4 remains operated. |
| 131 | At PERIPHERAL DECODER POINTS—<br>Release 0 and 1 keys. | At PERIPHERAL DECODER POINTS—<br>0 and 1 lamps extinguished. |
| 132 | Depress AT 1 and AT 2 keys. | At circuits under test—<br>In port 2 relays A2 and B2 released.<br>In port 4 relays A4 and B4 released. |
| 133 | At circuits under test—<br>Remove blocks from S2 and S4 relays. | |
| 134h | If TTP is not equipped with a TMS—<br>At front of writing shelf on TTP—<br>Remove cord from TRANS MEAS-TM 1 jack. | |
| 135 | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 1 CONTROL and ACCESS TRUNK 2 CONTROL—<br>SUPV lamps extinguished.<br>EQPT ST lamps extinguished.<br>XMSN lamp extinguished. |
| 136 | At ACCESS TRUNK 3 CONTROL—<br>Depress RLS key. | At ACCESS TRUNK 3 CONTROL—<br>SUPV lamp extinguished.<br>EQPT ST lamp extinguished.<br>At MISC TEST CONTROL—<br>P & E lamp extinguished. |

| STEP | ACTION | VERIFICATION |
|---|---|---|
| 137 | At telephone set on TTP—<br>Operate green release key. | |
| 138 | Repeat all step procedures outlined in this section to test the remaining 6-port conference circuits. | |

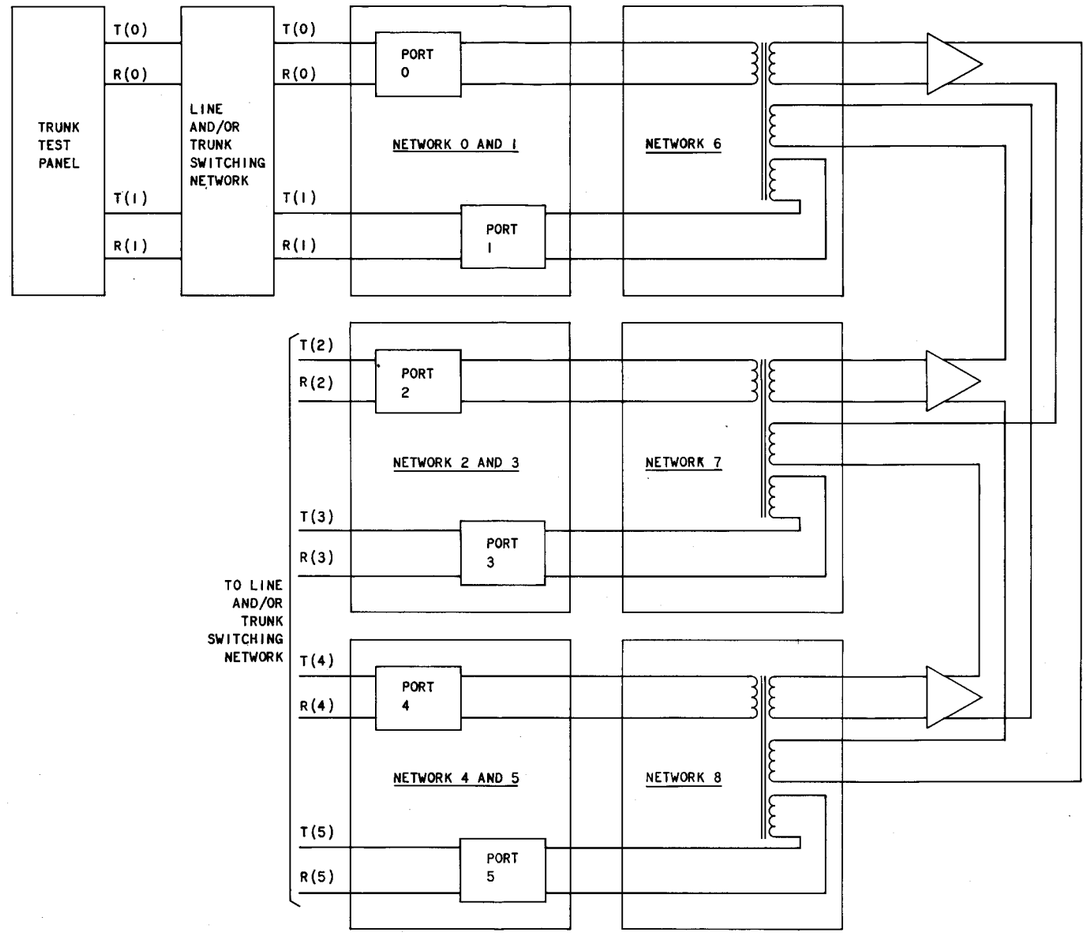


**Fig. 1—6-Port Conference Circuit Test Set Up**