

STEP-BY-STEP OFFICES

TERMINAL BALANCE DBO ADJUSTMENTS AND VERIFICATION TESTS

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2. DBO ADJUSTMENTS		2	1.01 This section provides procedures for adjustment and verification of capacitance buildout of toll connecting (TC) trunks.
3. VERIFICATION MEASUREMENTS		3	1.02 This section does not affect Equipment Test Lists.
A. General		3	1.03 These procedures, with satisfactory verification results, are initially required to certify that an office is balanced. They are also required as circuit order tests when new trunks are added in an office subsequent to initial balance certification or when rearrangement of equipment in a certified office may affect the terminal balance conditions in that office.
B. Incoming and Outgoing IT Trunks and Direct Switchboard Access to IT Trunks (Fig. 1)		5	1.04 The drop buildout (DBO) procedures, when required, should not be performed unless the procedures of Sections 660-474-500 and 660-474-504 have been completed. Trunks that require DBO depend on results obtained in Section 660-474-500. It should be noted that DBO may require coordination and completion of the procedures in Section 660-474-520 when a served class 5 office requires a network buildout (NBO). Furthermore, before any balance procedures or measurements will be reliable, all trunks must meet the noise and 1000-Hz loss requirements as specified in the applicable BSPs for trunk transmission testing. When a trunk is equipped with an impedance compensator, the proper adjustments must also be completed on the compensator before terminal balance verification procedures can be performed.
C. IT to Switchboard Paths—OA, TX, WH, 121 Trunks, etc (Fig. 2)		6	1.05 When initially balancing or rebalancing an office, the procedures can be conveniently performed in the sequence presented in the text. When performing the balancing required in circuit order work, obtain NBO and DBO values (if required) from office balance records and use the applicable verification procedures of Part 3 shown in Table A for the type of trunk to be tested.
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TABLE A
TEST SEQUENCE SUMMARY

TYPE OF TRUNK	PROCEDURE	
	PART	FIGURE
IT (Incoming or Outgoing)	3B	1
TC (Outgoing)	3E or 3F	4 or 5
TC (Incoming)	3G or 3H	6 or 7
Operator Assistance	3C	2
2-Wire Toll Tandem	3D	3
Miscellaneous Trunks	3I	8
Service-Type Trunks	3J	9
Special Service Lines	3K	10

Note: Build-out capacitors in the trunk to be tested must be strapped to agree with other trunks in the group before performing indicated verification procedures.

1.06 The measurements in the procedures are made from the toll testboard using a balance test (BAL TST) circuit, as described in Section 660-474-504. Balance measurements require that the trunk being measured be held in an off-hook condition. The holding is accomplished with the E&M supervision test circuit on toll testboards. Certain measurements are made with the trunk held from the class 5 office or subscriber location. In these cases the method of holding the trunk is covered in Section 660-576-500.

1.07 Results of the procedures in this section should be recorded. Section 660-474-010 furnishes the information required to establish and maintain records of all balancing.

1.08 The requirements for terminal balance echo return loss (ERL) and singing point/singing return loss (SP/SRL) measurements are given in Section 660-474-301.

1.09 Impedance compensators, in general, provide approximately 4-dB improvement in return-loss measurements on 2-wire TC trunks working on loaded cable facilities. All such TC trunks should be equipped with impedance compensators. The impedance compensators currently in use for improving the impedance characteristics of loaded

cable pairs are the 837-type compensators and the early type compensators (SD-95756-01). The description of various types of compensators are in Section 332-205-100. Adjustment procedures are in 332-205-500.

Caution: *Balance testing must be made on an out-of-service basis. The proper out-of-service procedures should be made on any working trunk prior to performing any balance tests.*

2. DBO ADJUSTMENTS

2.01 Drop buildout is normally quite limited and is not generally required in the service-type and 2-wire tandem trunks or switched paths (IT-TC or TC-IT) within $\pm 0.0125 \mu\text{F}$ of the NBO value. The occasional cases where some buildout in intertoll (IT) trunks is necessary should be completed before the measurements in Section 660-474-500 were made. Only the TC trunk groups switching to or from IT with office cabling capacitances in the switched path less than the NBO minus $0.0125 \mu\text{F}$ requires buildout. The measurements made (according to Section 660-474-500) are used to determine which trunk groups will require buildout and the amount of capacitance needed. For example, assume that the procedures in Section 660-474-500 determined

the NBO to be $0.030 \mu\text{F}$ and assume that the sum value of seven individual trunk measurements in a given trunk group (a representative sample for a trunk group having 20 trunks, see Table B) was $0.070 \mu\text{F}$, which averages to $0.010 \mu\text{F}$. Then the DBO required for that TC trunk group would be $0.020 \mu\text{F}$ ($0.030 - 0.010 = 0.020 \mu\text{F}$). With the exception of service-type and 2-wire tandem trunk groups, *each trunk group should be analyzed separately to determine when DBO is required and for what value.* When the value has been determined, the BO capacitor in all trunks in the trunk group should be strapped with the value.

TABLE B
TRUNK GROUP
SAMPLE SIZES

TOTAL NUMBER OF TRUNKS	NUMBER IN SAMPLE
5 or less	All trunks
6 to 10	5
11 to 15	6
16 to 25	7
26 to 50	8
Over 50	Approximately 18 percent of total

3. VERIFICATION MEASUREMENTS

A. General

3.01 Verification measurements are required on all trunks after initial DBO procedures are completed, when an office is rebalanced, or when circuit order work is performed. Initial performance of these procedures may indicate that a class 5 office requires an NBO. Any major additions, modifications, or rearrangements of equipment in the toll office, or in some cases, the connecting class 5 office will affect the results obtained in these procedures. Circuit order work in general will require only the procedures applicable to a specific trunk or trunk group.

3.02 When applicable, the NBO capacitance selection in large class 5 offices must be completed before these procedures can be performed. Consistent inability to meet the ERL and SP/SRL requirements to a particular end office is indicative of conditions in the class 5 office which require NBO capacitance. The procedures for NBO selection in class 5 offices are contained in Section 660-474-520.

B. Incoming and Outgoing IT Trunks and Direct Switchboard Access to IT Trunks

3.03 This procedure is required to verify all incoming and outgoing IT trunks and direct switchboard access to IT trunks. The procedure ensures that no defective network lines, incorrect NBO adjustment, or other trouble exists in the IT trunks. In those offices where the IT trunk 2-wire lines have significant differences in length (see Section 660-474-500), the procedure is also used to verify the addition of BO capacitance.

3.04 This procedure is dependent upon proper buildout of the code 100 BAL TST TERM, the switchboard balance test termination (SWBD BAL TST TERM) (see Section 660-474-504), and a selected CAMA trunk that has an approximately average amount of office cabling capacitance in the CAMA selector jack cabling. The selected trunk can be determined from the recorded measurements made in Section 660-474-500.

STEP	PROCEDURE
	(b) Remove termination, remove trunk busy devices, and release the incoming CAMA test trunk at the class 5 office.
	(c) Disconnect the cord circuits at the switchboard.
6	Repeat Steps 1 through 5 on all incoming, outgoing, and direct access paths of IT trunks.

STEP	PROCEDURE
1	Perform (a) on incoming IT trunks, (b) on outgoing IT trunks, or (c) on direct access to outgoing IT trunks: <p>(a) Using the testboard appearance of the trunk to be tested, seize the trunk toward the drop and dial the proper code to establish a connection to the code 100 BAL TST TERM.</p> <p>(b) At the class 5 office, seize the selected CAMA trunk and key pulse (dial) the trunk code and testing number for the trunk to be tested. Terminate the CAMA trunk with 900-ohm plus 2.16 μF or 600-ohm terminations at the toll office end of the trunk. (See Fig. 1.)</p> <p>Note: Busy trunks to step CAMA selector to the trunk to be tested when required.</p> <p>(c) At the toll switchboard, use the calling cord of a cord circuit to seize the IT trunk by direct access. Connect the answering cord of the cord circuit to the SWBD BAL TST TERM. Close the TALK-MON key.</p>
2	Set up test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504, Part 2B, and connect test equipment to the 4WTS transmit and receive ports of the IT trunk being tested.
3	Measure the ERL and SP/SRL. <p>Note: The measurement results must meet the requirements given in Section 660-474-301.</p>
4	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record the results on circuit order testing Form E-2545A when performing circuit order work.
5	Disconnect test equipment from trunk tested and perform (a) on incoming trunks, (b) on outgoing trunks, or (c) on direct access paths: <p>(a) Release the trunk circuit at the testboard.</p>

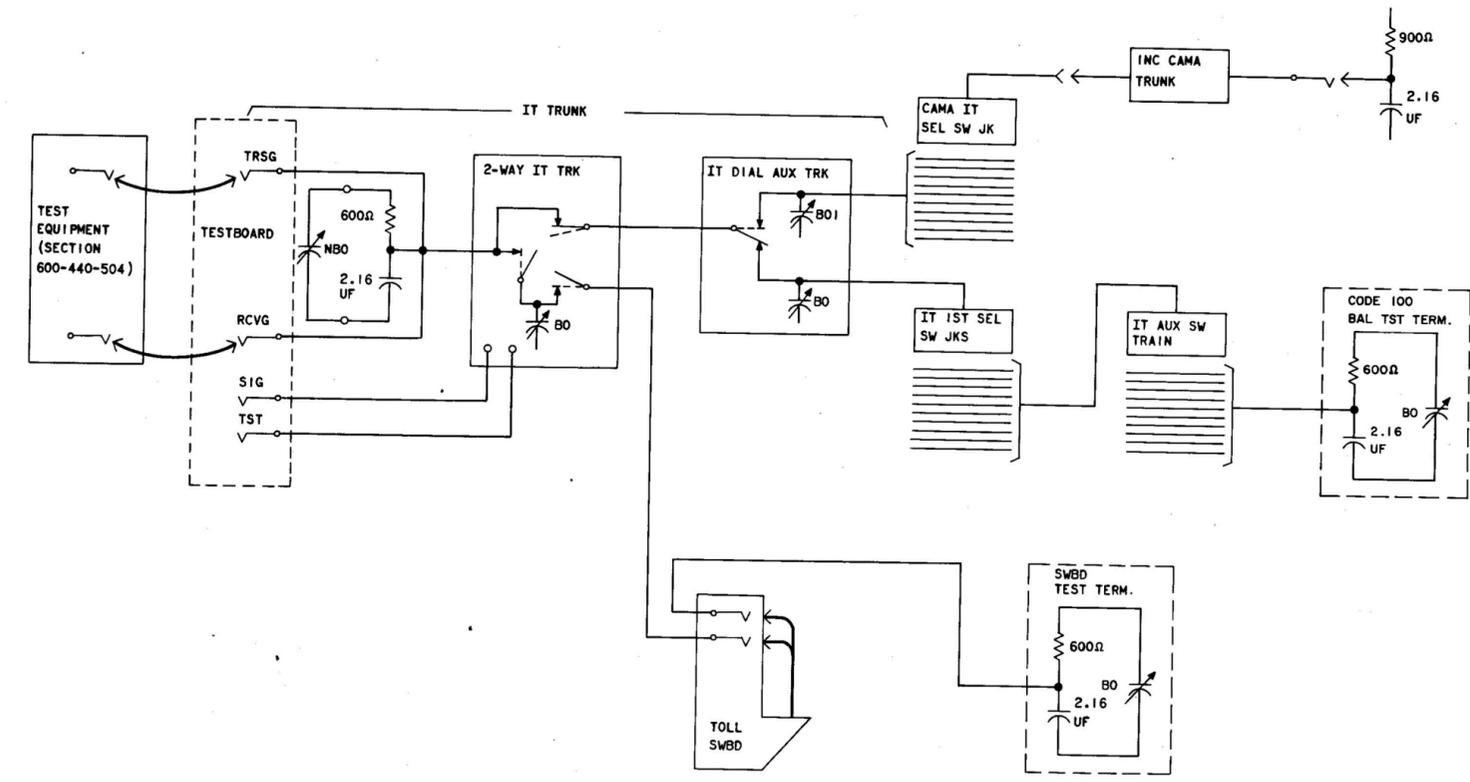


Fig. 1—Verification of Incoming and Outgoing IT Trunks and Switchboard Path of Direct Access to IT Trunks

C. IT to Switchboard Paths—OA, TX, WH, 121 Trunks, etc

3.05 The BAL TST circuit, properly built out as an incoming IT trunk, and a properly built-out SWBD BAL TST TERM (see Section 660-474-504)

are used to perform this procedure. Any required BO capacitance as determined in Part 2 must be strapped in the TC trunk before performing verification.

STEP	PROCEDURE
1	Using the testboard appearance of the BAL TST circuit, seize the circuit and dial the trunk code of the trunk being tested (121, etc) to establish a connection to the toll switchboard.
	Note: Manually step the selector to the desired trunk circuit when required.
2	Use an answering cord of a cord circuit at the switchboard to connect to the incoming signal. Use the calling cord of the cord circuit to connect to the SWBD BAL TST TERM. Close the TALK-MON key. (See Fig. 2.)
3	Set up the test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect the test equipment to the BAL TST circuit 4WTS transmit and receive ports.
4	Measure the ERL and SP/SRL.
	Note: Measurement results must meet requirements given in Section 660-474-301.
5	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work.
6	Remove the answering cord from the trunk at the switchboard and release the BAL TST circuit at the testboard appearance.
7	Repeat Steps 1 through 6 on each type of operator service trunk.
8	Disconnect test equipment, release the BAL TST circuit, and disconnect cord circuits at the switchboard.

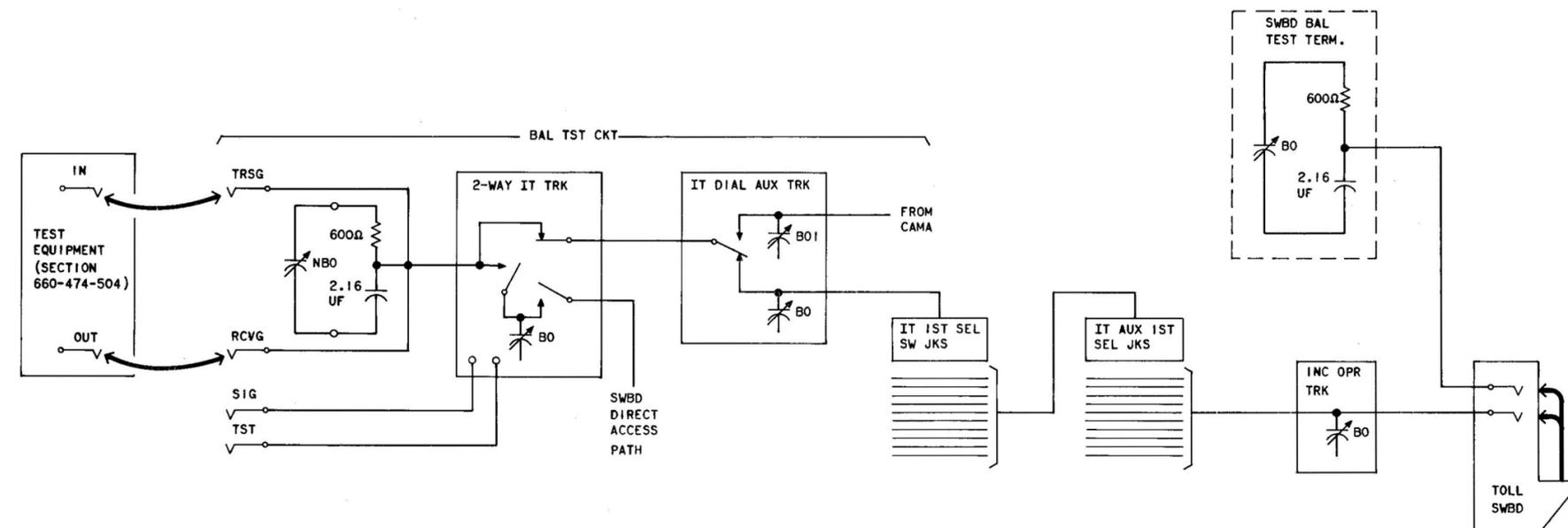


Fig. 2—Verification of Switchboard Trunks—OA, TX, WH, 121, etc, Trunks

D. Switchboard to IT Machine Path—Operator Trunks

3.06 The BAL TST circuit, properly built out as an outgoing IT trunk, and a properly built-out SWBD BAL TST TERM (see Section 660-474-504)

are used to perform this procedure. Any required BO capacitance as determined in Part 2 must be strapped in the TC trunk before verification.

STEP	PROCEDURE
1	Use the calling cord of a cord circuit on the switchboard to seize the operator trunk to be tested and key pulse (dial) the ABX-XXXX code to establish a connection to the BAL TST circuit. Use the answering cord of the cord circuit to connect to the SWBD BAL TST TERM. Close the TALK-MON key of the cord circuit. (See Fig. 3.)
	<i>Note:</i> Busy trunks to step operator first selector to the trunk to be tested when required.
2	Set up the test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports.
3	Measure the ERL and SP/SRL.
	<i>Note:</i> Measurement results must meet the requirements given in Section 660-474-301.
4	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work.
5	Remove the calling cord from the operator trunk jack appearance on the switchboard.
6	Repeat Steps 1 through 5 on each operator trunk.
7	Disconnect test equipment, remove trunk busy devices, and disconnect cord circuits at the switchboard.

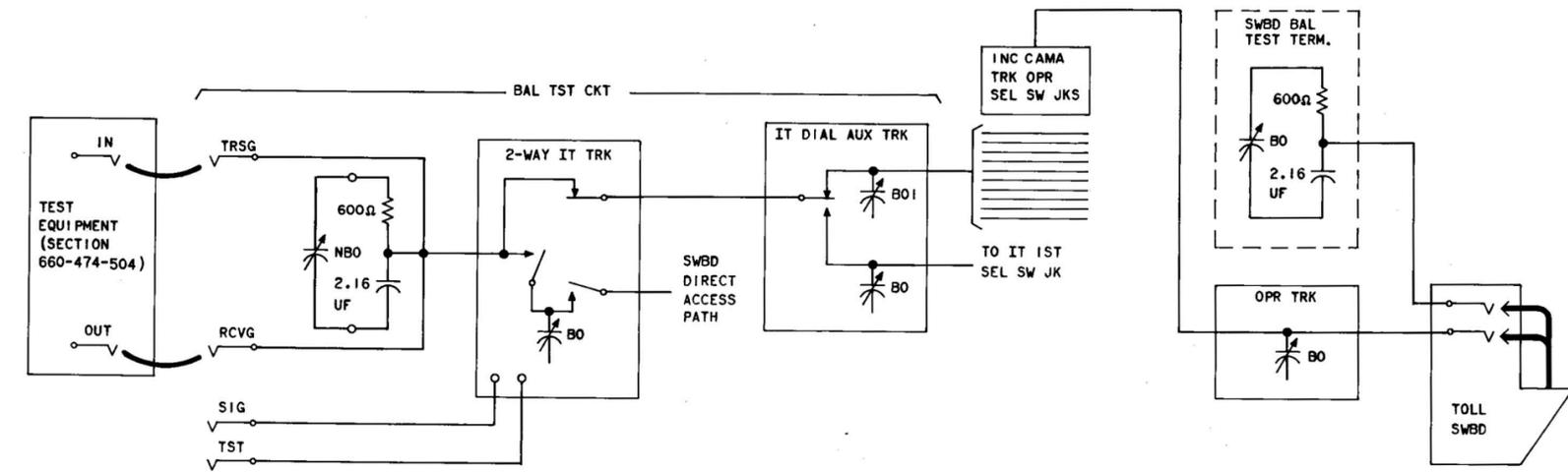


Fig. 3—Verification of Operator Trunks

E. Machine Paths From IT to TC—TS, 2-Way OO, 1-Way OO (Outgoing) Trunks

is used to perform this procedure. Any required BO capacitance as determined in Part 2 must be strapped in the TC trunk before performing verification.

3.07 The BAL TST circuit, properly built out as an incoming IT trunk (see Section 660-474-504),

STEP	PROCEDURE
1	Using the testboard appearance of the BAL TST circuit, seize the trunk and dial the number assigned to the BAL TST TERM in the class 5 office of the trunk to be tested. <i>Note:</i> Busy trunks to step the IT selector to trunk to be tested.
2	Set up the test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports. (See Fig. 4A.)
3	Measure the ERL and SP/SRL.
4	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work. <i>Note:</i> The measurement results must meet the requirements given in Section 660-474-301.
5	When the TC trunk has a 4-wire facility to the class 5 office, replace the test equipment connections to the BAL TST circuit transmit and receive ports with 600-ohm terminations. Connect the test equipment to the transmit and receive ports of the 4WTS in the TC trunk. (See Fig. 4B.) (This test verifies the NBO and network line in the TC trunk hybrid and must meet the requirements given in Section 660-474-301.)
6	At the testboard release the trunk tested. (Disconnect test equipment and restore transmission path in 4-wire facilities.)
7	Repeat Steps 1 through 6 on all TC trunks.
8	Disconnect test equipment and remove any trunk busy device.

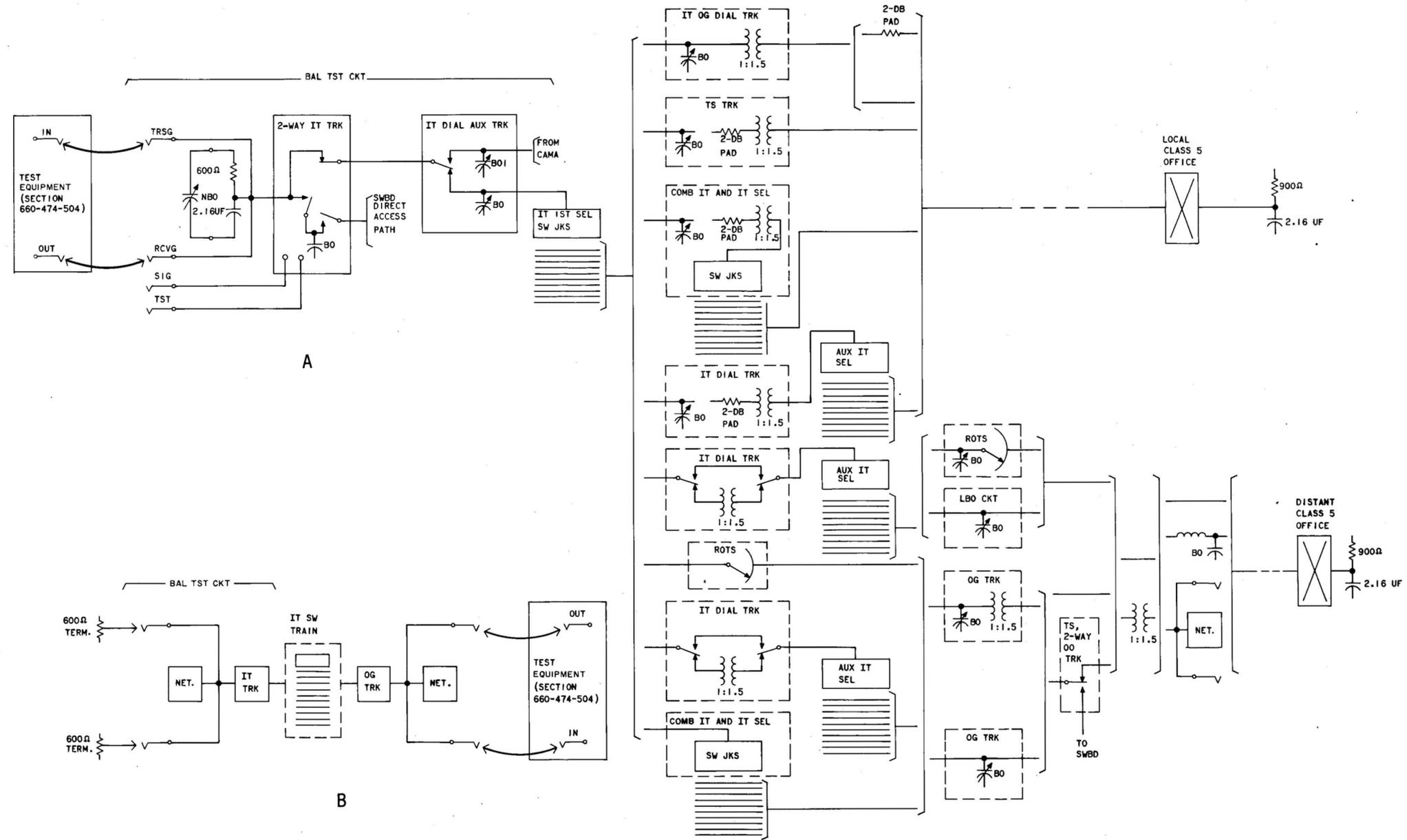


Fig. 4—Verification of Machine Paths From IT to TC—TS, 2-Way OO, 1-Way OO (Outgoing) Trunks

F. Switchboard Paths From IT to TC—TS, 2-Way OO, 1-Way OO (Outgoing) Trunks

is used to perform this procedure. Any required BO capacitance as determined in Part 2 must be strapped in the TC trunk before performing verification.

3.08 The BAL TST circuit, properly built out as an incoming IT trunk (see Section 660-474-504),

STEP	PROCEDURE
1	Using the testboard appearance of the BAL TST circuit, seize the circuit and dial 121 to establish a connection to the toll switchboard on a 121 trunk. At the switchboard, use the answering cord of a cord circuit to connect to the incoming signal. Use the calling cord of the cord circuit to seize the TC trunk to be tested and key pulse (dial) the number assigned to the BAL TST TERM in the class 5 office. Close the TALK-MON key of the cord circuit.
2	Set up the test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports. (See Fig. 5A.)
3	Measure the ERL and SP/SRL.
	Note: The measurement results must meet the requirements given in Section 660-474-301.
4	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work.
5	When the TC trunk has a 4-wire facility to the class 5 office, replace the test equipment connections to the BAL TST circuit transmit and receive ports with 600-ohm terminations. Connect the test equipment to the transmit and receive ports of the 4WTS in the TC trunk. (See Fig. 5B.) Then measure the ERL and SP/SRL. (This test verifies the NBO and network line in the TC trunk hybrid and must also meet requirements given in Section 660-474-301.)
6	At the switchboard, remove the calling cord from the jack multiple appearance of the TC trunk tested. (Disconnect test equipment and restore transmission path in 4-wire facilities.)
7	Repeat Steps 1 through 6 on all paths from IT to TC.
8	Disconnect test equipment and disconnect cord circuits at the switchboard.

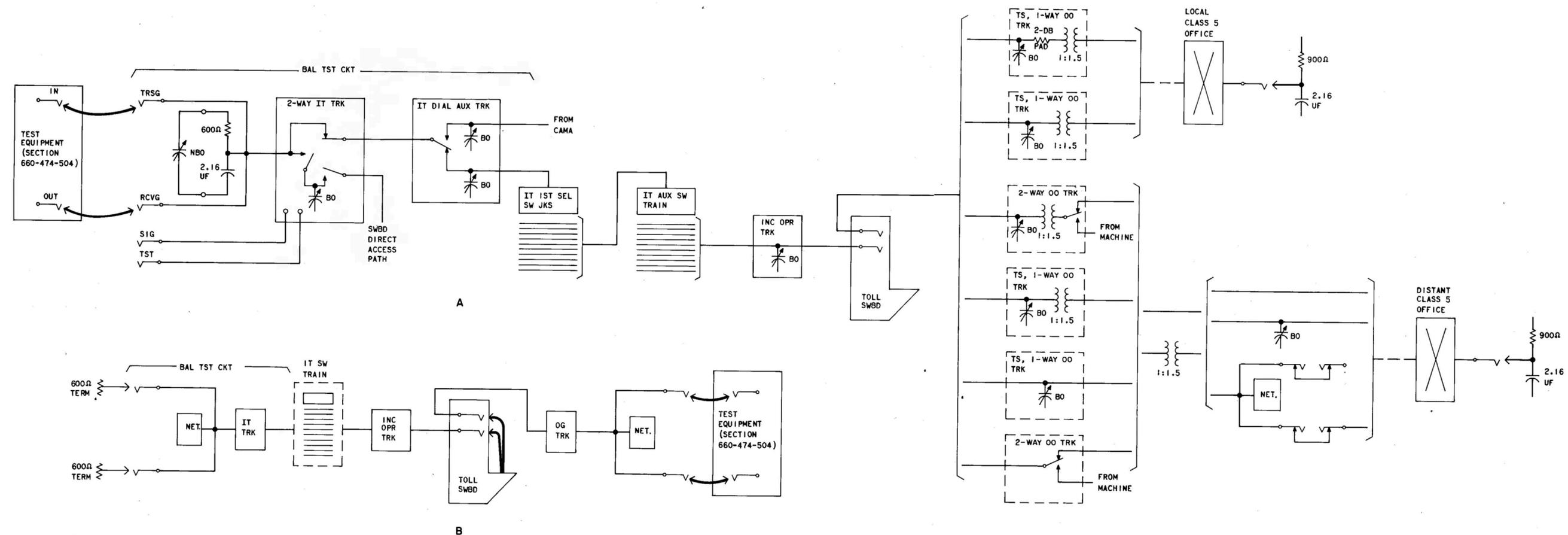


Fig. 5—Verification of Switchboard Paths From IT to TC—TS, 2-Way OO, 1-Way OO (Outgoing) Trunks

G. Machine Paths From TC to IT—CAMA, ANI

should be made available when testing with CAMA trunk. Any required BO capacitance as determined in Part 2 must be strapped in the TC trunk before performing verification.

3.09 The BAL TST circuit, properly built out as an outgoing IT trunk (see Section 660-474-504), is used to perform this procedure. A test number

STEP	PROCEDURE
1	At the class 5 office using the proper method to originate, hold, and give an off-hook termination condition on calls to the toll office (see Section 660-576-500), seize the CAMA trunk to be tested and key pulse the required ABX-XXXX code to establish a connection to the BAL TST circuit.
2	Set up test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports. (See Fig. 6A.)
3	Measure the ERL and SP/SRL.
4	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work. <i>Note:</i> The measurement results must meet the requirements given in Section 660-474-301 for each type of trunk connection.
5	When the TC trunk has a 4-wire facility to the class 5 office, replace the test equipment connections to the BAL TST circuit transmit and receive ports with 600-ohm terminations. Connect the test equipment to the transmit and receive ports of the 4WTS in the TC trunk. (See Fig. 6B.) Then measure the ERL and SP/SRL. (This test verifies the NBO and network line in the TC trunk hybrid and must also meet requirements given in Section 660-474-301.)
6	At the class 5 office release the trunk. (Disconnect test equipment and restore transmission path in 4-wire facilities.)
7	Repeat Steps 1 through 6 on all TC trunks.
8	Disconnect test equipment and remove terminations.

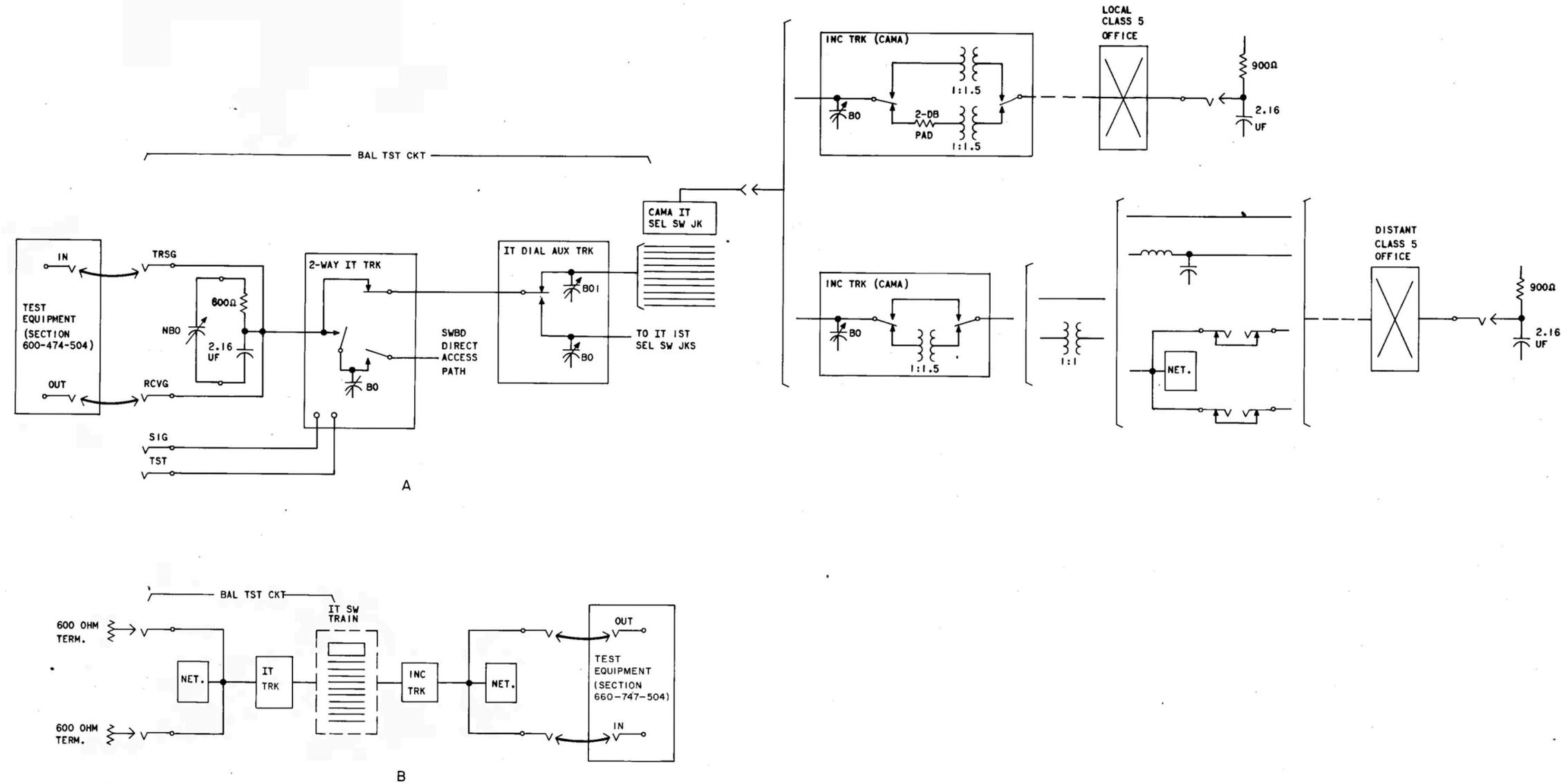


Fig. 6—Verification of Machine Paths From TC to IT—CAMA

H. Switchboard Paths From TC to IT—2-Way OO, 1-Way OO (Incoming), RC Trunks

is used to perform this procedure. Any required BO capacitance as determined in Part 2 must be strapped in the TC trunk before performing verification.

3.10 The BAL TST circuit, properly built out as an outgoing IT trunk (see Section 660-474-504),

STEP	PROCEDURE
1	At the class 5 office, use the proper method to originate, hold, and give an off-hook termination condition on calls to the toll office switchboard. See Section 660-576-500.
2	Use the answering cord of a cord circuit to connect to the incoming signal. Use the calling cord of the same cord circuit to seize an operator trunk and key pulse (dial) the ABX-XXXX code to establish a connection to the BAL TST circuit or use the direct switchboard access to the BAL TST circuit. Close the TALK-MON key of the cord circuit.
3	Set up test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports. (See Fig. 7A.)
4	Measure the ERL and SP/SRL.
5	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work.
	Note: Measurement results must meet the requirements given in Section 660-474-301.
6	When the TC trunk has a 4-wire facility to the class 5 office, replace the test equipment connections to the BAL TST circuit transmit and receive ports with 600-ohm terminations. Connect the test equipment to the transmit and receive ports of the 4WTS in the TC trunk. (See Fig. 7B.) Then measure the ERL and SP/SRL. (This test verifies the NBO and network line in the TC trunk hybrid and must also meet requirements given in Section 660-474-301.)
7	At the class 5 office release the trunk. (Disconnect test equipment and restore transmission path in 4-wire facilities.)
8	Repeat Steps 1 through 7 on all TC trunks.
9	Disconnect test equipment and remove terminations.

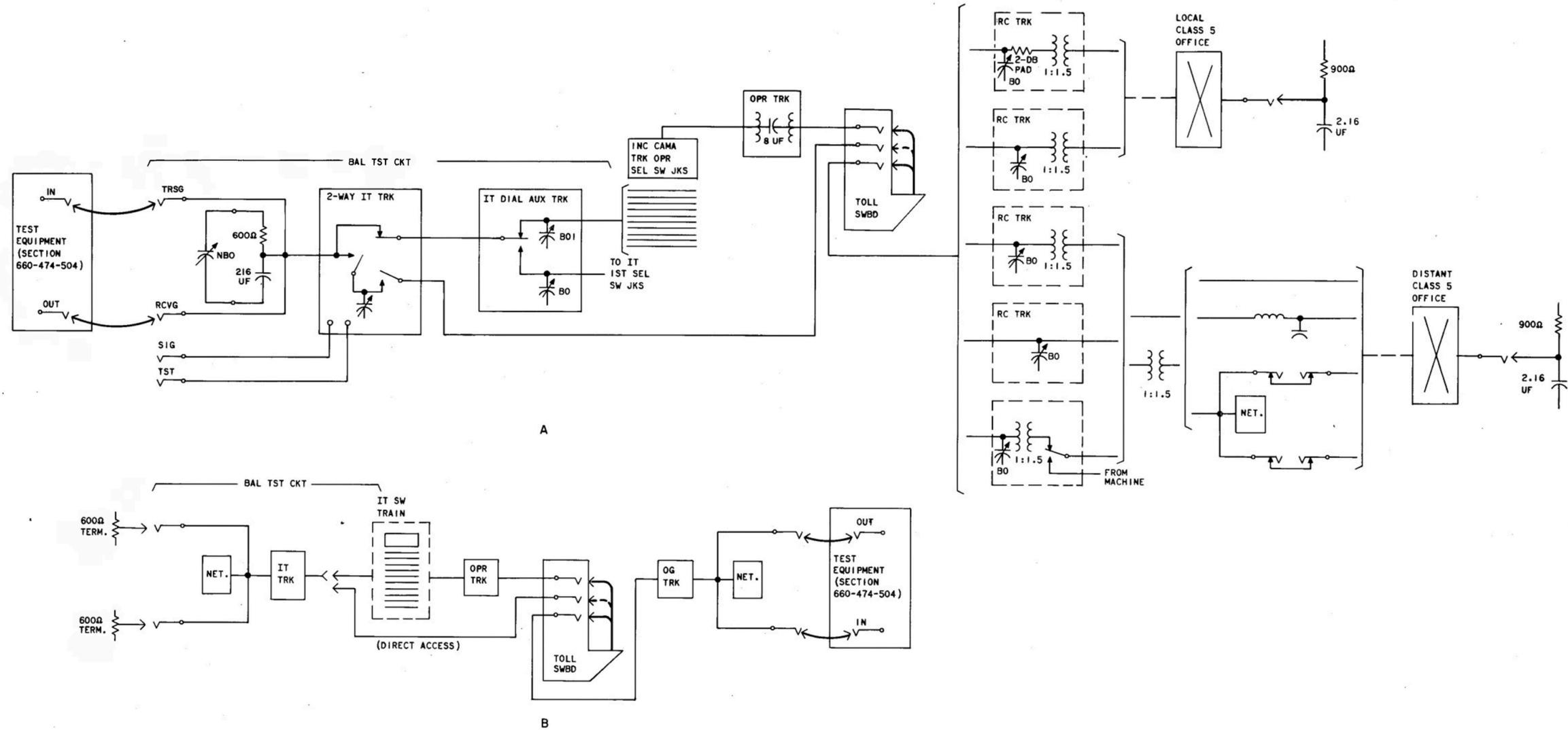


Fig. 7—Verification of Switchboard Paths From TC to IT 2-Way OO, 1-Way OO (Incoming), RC Trunks

I. Miscellaneous Paths TC to IT—Miscellaneous Trunks (TOLL SUB, EMG TRF, Mobile Radio, etc)

3.11 The BAL TST circuit, properly built out as an outgoing or direct accessed IT trunk (see Section 660-474-504), is used to perform this procedure.

3.12 Miscellaneous trunks should be tested using the connected subscriber equipment. In

noisy locations, wrap the subscriber subset transmitter in a sound absorbent material. When subscriber subset use is not practical, the 2AB auxiliary transmission test set and a dial HC telephone set can be used to simulate subscriber off-hook conditions. Mobile radio G2 terminal equipment furnishes the necessary off-hook conditions but does not include facilities to the base stations or subscriber equipment.

STEP	PROCEDURE
8	Repeat Steps 1 through 7 on all miscellaneous TC trunks.
9	Disconnect test equipment, remove terminations, and disconnect switchboard cord circuits.

STEP	PROCEDURE
1	At the subscriber location, signal the toll office in the same manner as a subscriber on the miscellaneous trunk or use the 2AB auxiliary transmission test set at the subscriber location main distributing frame. (In the case of EMG TRF trunks, the transfer relay must be operated when signaling the operator.)
2	At the switchboard, use an answering cord of a cord circuit to connect to the incoming signal. Use the calling cord of the cord circuit to perform (a) or (b): (a) Seize a 2-wire tandem trunk and key pulse (dial) the ABX-XXXX code to establish a connection to the BAL TST circuit. (b) Connect to the last jack appearance in the multiple of the switchboard direct access to the BAL TST circuit.
3	Close the TALK-MON key.
4	Set up test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports. (See Fig. 8A.)
5	Measure the ERL and SP/SRL and perform (a) and (b) when applicable. (a) When the TC trunk has a 4-wire facility to the class 5 office, replace the test equipment connections to the BAL TST circuit transmit and receive ports with 600-ohm terminations. Connect the test equipment to the transmit and receive ports of the 4WTS in the TC trunk. (See Fig. 8B.) (b) Measure the ERL and SP/SRL. (This test verifies the NBO and network line in the TC trunk hybrid and must meet requirements given in Section 660-474-301.)
Note: Measurement results must meet the requirements given in Section 660-474-301.	
6	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work.
7	Release the trunk by restoring subscriber equipment to on-hook condition. (Disconnect the 2AB set if used and restore transmission path.)

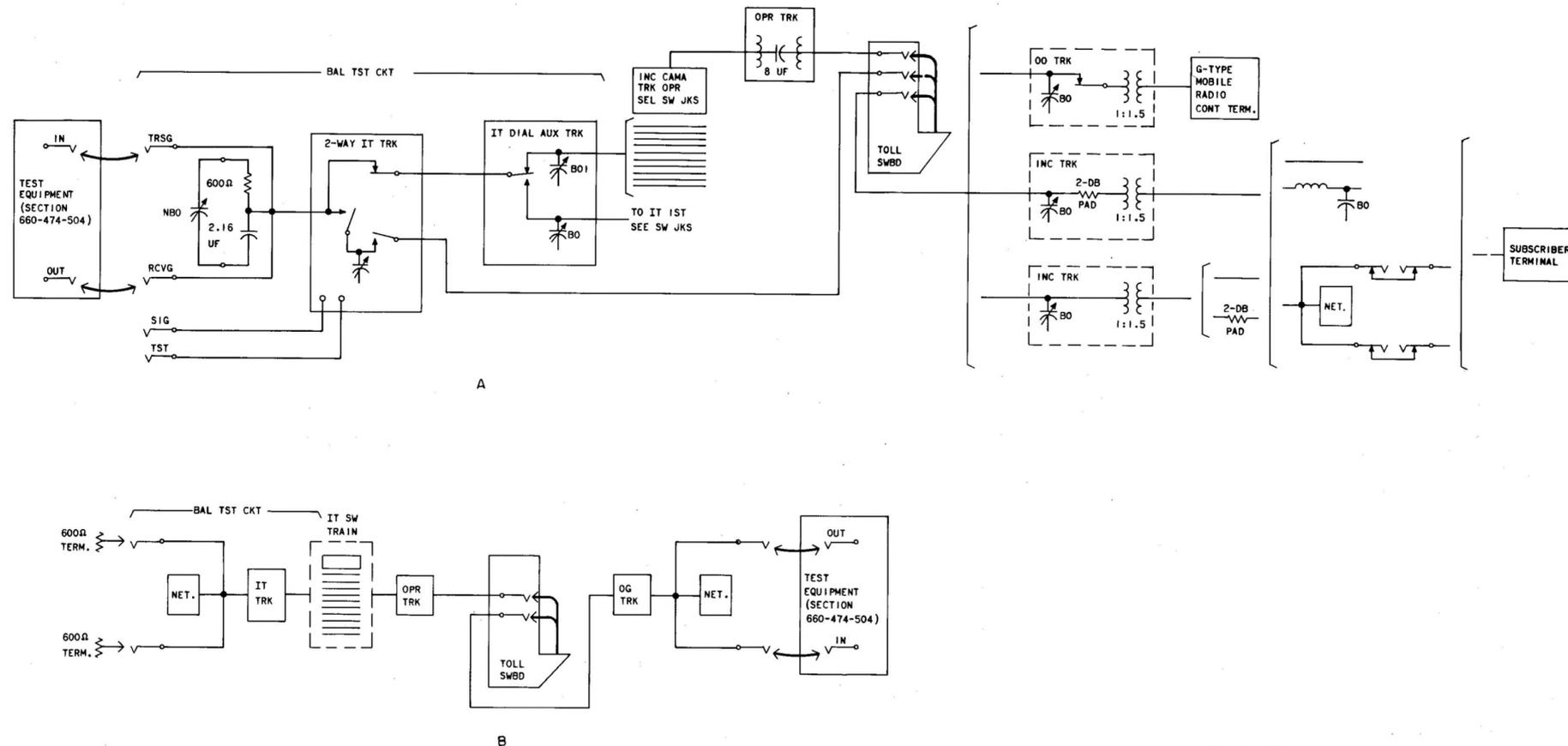


Fig. 8—Verification of Miscellaneous Paths TC to IT—1-Way OO (Outgoing), 2-Way OO (Incoming), RC, Miscellaneous (TOLL SUB, EMG TRF, Mobile Radio, etc) Trunks

J. Service-Type Trunks—TOLL INFO, OPR SVC, 101, etc

3.13 The BAL TST circuit, properly built out as an incoming IT trunk (see Section 660-474-504), is used for this procedure.

STEP	PROCEDURE
1	Using the testboard appearance on the BAL TST circuit, seize the trunk and dial the proper trunk code to establish a connection to the trunk to be tested. (See Fig. 9.) <i>Note:</i> Manually step the selector to the trunk when required.
2	Perform (a) or (b): (a) At the TOLL INFO desk, verify which position telephone circuit is connected and wrap the headset transmitter in a sound-absorbent material to eliminate room noise effects. (b) At the switchboard or testboard, use an answering cord of a cord circuit to connect to the incoming signal. Leave the TALK-MON key open and wrap the telephone headset transmitter in a sound-absorbent material to eliminate room noise effects.
3	Set up test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports.
4	Measure the ERL and SP/SRL. <i>Note:</i> The measurement results must meet the requirements given in Section 660-474-301.
5	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record results on circuit order testing Form E-2545A when performing circuit order work.
6	Repeat Steps 1 through 5 on all service-type trunks.

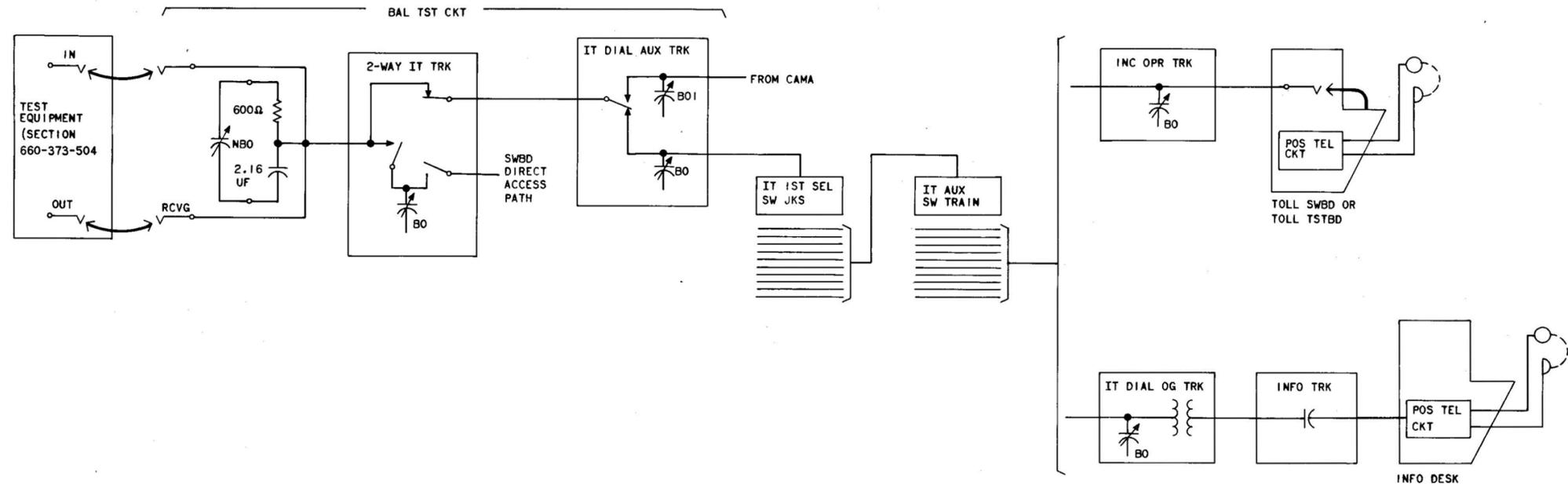


Fig. 9—Verification of Service-Type Trunks—TOLL INFO, OPR SVC, 101, etc, Trunks

K. SPECIAL SERVICE LINES—LD, INWATS Trunks

Section 660-474-504), is used to perform this procedure.

3.14 The BAL TST circuit, properly built out as an outgoing or an incoming IT trunk (see

STEP	PROCEDURE
1	Perform (a) or (b) to establish a connection between the BAL TST circuit and the subscriber location. (See Fig. 10A.) (a) At the testboard appearance of the BAL TST circuit, seize the IT trunk and signal the subscriber telephone equipment. Answer the incoming call at the subscriber location using the PBX switchboard cord circuit or a telephone set. (PBX switching machines may have a dialable termination for balancing.) (b) Use the subscriber telephone equipment to signal the toll switchboard. Answer the incoming signal using the switchboard cord circuit then seize the direct access path to the BAL TST circuit or seize an operator trunk and key pulse (dial) the ABX-XXXX code to establish a connection to the BAL TST circuit.
2	Terminate the subscriber PBX switchboard cord circuit in 600 or 900 ohms plus 2.16 μ F (depending on nominal impedance of PBX) or call an on-premise station from the PBX switchboard. If the subscriber equipment is a telephone set, wrap the handset transmitter in sound absorbent material to eliminate room noise interference.
3	Set up test equipment to perform ERL or SP/SRL measurements as described in Section 660-474-504 and connect test equipment to the BAL TST circuit 4WTS transmit and receive ports.
4	Measure the ERL and SP/SRL. Note: Measurement results must meet the requirements given in Section 660-474-301.
5	When the TC trunk has a 4-wire facility to the subscriber location, replace the test equipment connections to the BAL TST circuit, transmit and receive ports of the 4WTS in the TC trunk, and measure the ERL and SP/SRL. (See Fig. 10B.) Note: The result of this measurement must meet the requirements given in Section 660-474-301.
6	Record the measurement results and other information required to complete entries on Form E-6005 or E-6006. Also record the results on circuit order testing Form E-2545A when performing this procedure as circuit order work.
7	Release the trunks tested by returning the subscriber equipment to on-hook condition and removing any toll switchboard or PBX cord circuit connections.
8	Repeat Steps 1 through 7 on all Special Service Lines.

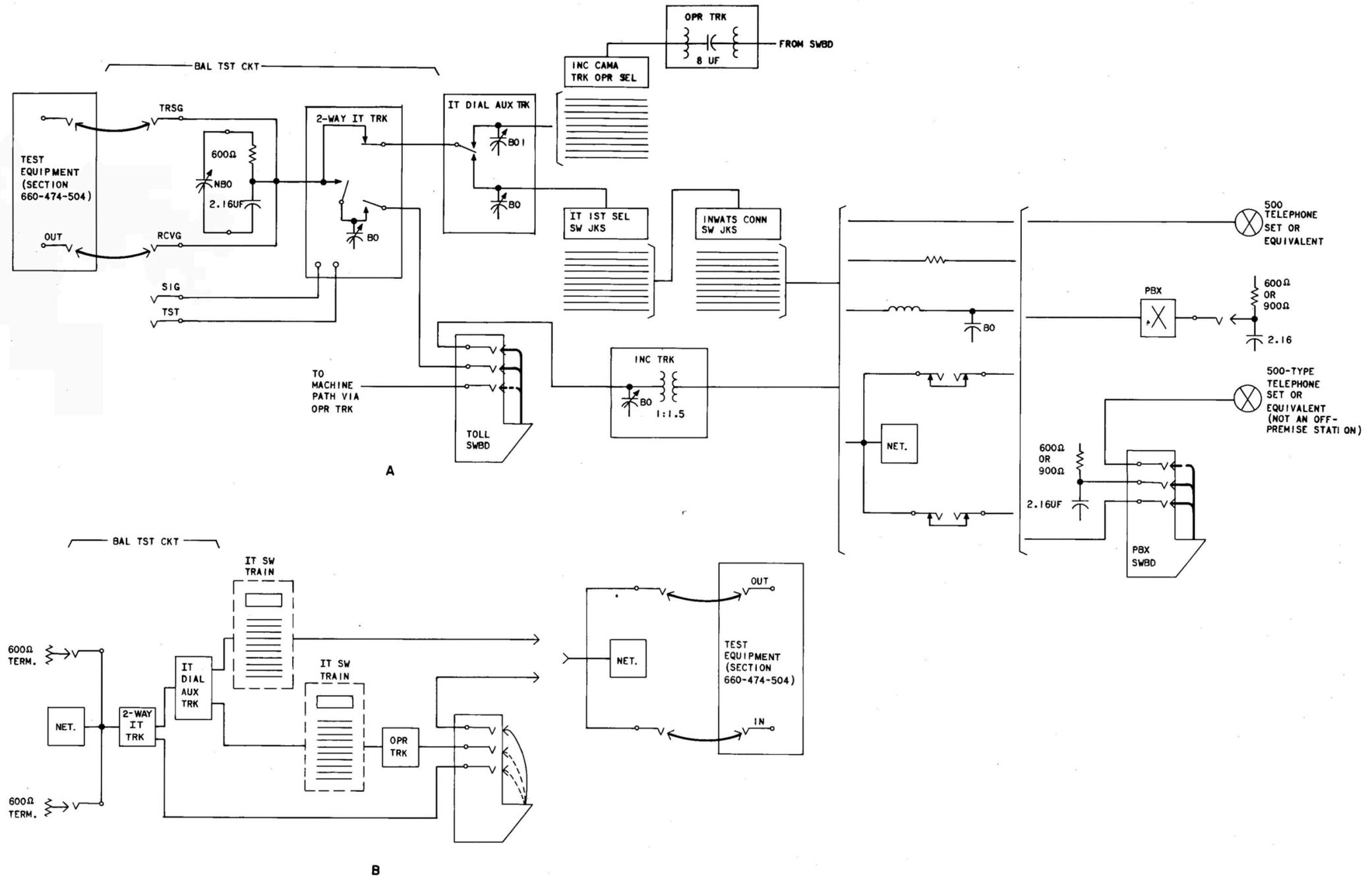


Fig. 10—Verification of Special Service Lines—LD, INWATS, OUTWATS, etc, Trunks