CIRCUIT ORDER OR TRUNK ORDER TESTS
MESSAGE TRUNKS — TESTING METHODS

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1. GENERAL

1.01 This section discusses test methods for making transmission measurements on intertoll trunks terminated at via net loss (VNL) in 2-wire and 4-wire toll switching offices. The methods confine the testing effort as much as possible to the home office at the originating and terminating ends of the trunks. Performance of the tests on a pre-service basis insures that the transmission levels will be correctly adjusted in advance of actual measured loss (AML) measurements with distant offices.

1.02 The sections listed below outline the test methods for measurement and adjustment of transmission levels on intertoll trunks terminated in 2-wire and 4-wire toll switching offices:

660-450-502 — Measurement of Office Wiring and Equipment Losses — 2-wire Toll Switching Offices

660-450-503 — Measurement of Office Wiring and Equipment Losses — 4-wire Toll Switching Offices

660-450-504 — Adjustment of Transmission Levels on Combination Trunks — Intermediate Offices

660-450-505 — Channel Net Gain and Frequency Response Characteristics

1.03 Only by performing the tests can we make sure that an intertoll trunk with a transmission or equipment trouble will not be placed in service. And this, after all, is the primary purpose of making circuit order or trunk order tests.

2. LINE-UP OF INTERTOLL TRUNKS

2.01 The test methods are based on the philosophy that intertoll trunks are divided into three readily measured segments or sections, separated by the voice-frequency patching bay or repeater bay located at the originating and terminating ends of the transmission facility as shown in Fig. 1. The test methods require that the three segments be tested beforehand and meet their individual requirements.

(A) Prescribed Test Points — AML Measurements

2.02 The prescribed test points for making AML measurements from testboards are as follows:

(1) ***At the originating end or control office testboard*** — test access to outgoing and 2-way trunks for transmission maintenance tests should always be from the equivalent of the outgoing switch appearance.

(2) ***At the terminating end or noncontrol office testboard*** — test access to incoming and 2-way trunks for transmission mainte-

nance tests should always be via an incoming Code 101 trunk which is reached by signaling over the trunk to be tested from the outgoing office.

2.03 It is not practical or convenient to locate test access jacks for measuring intertoll trunks at the outgoing switches. Instead, access is obtained over test multiples from centrally located testboards as shown in Fig. 1.

2.04 One of the principal features of the transmission measuring circuits shown in Fig. 1, is the ability to adjust the level at the testboard by means of the pads so that it is at the equivalent level of the outgoing switch appearance. The new measuring circuits — when properly adjusted as covered in the testboard practices — compensate for office wiring and test trunk losses between the 1000-cycle, 1-milliwatt (0 dbm) source of test power at the testboards and the −2 db transmission level point (−2 TLP), or equivalent, at the outgoing switches at the originating and terminating ends of the trunk.

(B) Line-up of Originating and Terminating Segments

2.05 The originating and terminating segments of all intertoll trunks should be lined up independently as shown in Fig. 1 — Step 1. Measurements should be made between the voice-frequency patching bay or repeater bay and the testboard. Section 660-450-502 outlines the detailed procedures which should be used to adjust the transmission levels on outgoing and incoming trunks terminated in 2-wire toll switching offices. Section 660-450-503 outlines the detailed procedures which should be used to adjust the transmission levels on outgoing and incoming trunks terminated in 4-wire toll switching offices.

(C) Line-up of Transmission Facility

2.06 In the process of establishing a trunk, the transmission facility should be lined up between the voice-frequency patching or repeater bays as shown in Fig. 1 — Step 2. Section 660-450-505 outlines the detailed procedures which should be used in making channel net gain and frequency response measurements on carrier telephone channels. Where two or more facilities are interconnected at voice frequency, each facility or carrier channel should be lined up individually between voice-frequency terminals. Interconnecting paths consisting of pads and office wiring should also be adjusted to the required loss between the patching bays. Section 660-450-504 outlines the detailed procedures which should be used in the adjustment of transmission levels on combination trunks at intermediate offices.

(D) AML Measurements Between Trunk Terminals

2.07 After the originating and terminating segments have been lined up independently as shown in Fig. 1 — Step 1, and the facility or carrier channel gain and frequency response measurements have been completed between the patching bays as shown in Fig. 1 — Step 2, actual measured loss (AML) measurements should be made between trunk terminals as shown in Fig. 1 — Step 3. ***No adjustment should ever be made of the receiving pads or channel gain control to bring the actual measured loss of the trunk to within the required EML value. Such adjustments may cover up a maladjustment of the carrier channel or a wrong transmitting pad value at the distant office.***

2.08 If the requirements shown in Table 1 of Section 660-450-301 are not met, investigate each of the segments individually to make sure it meets its own requirements.

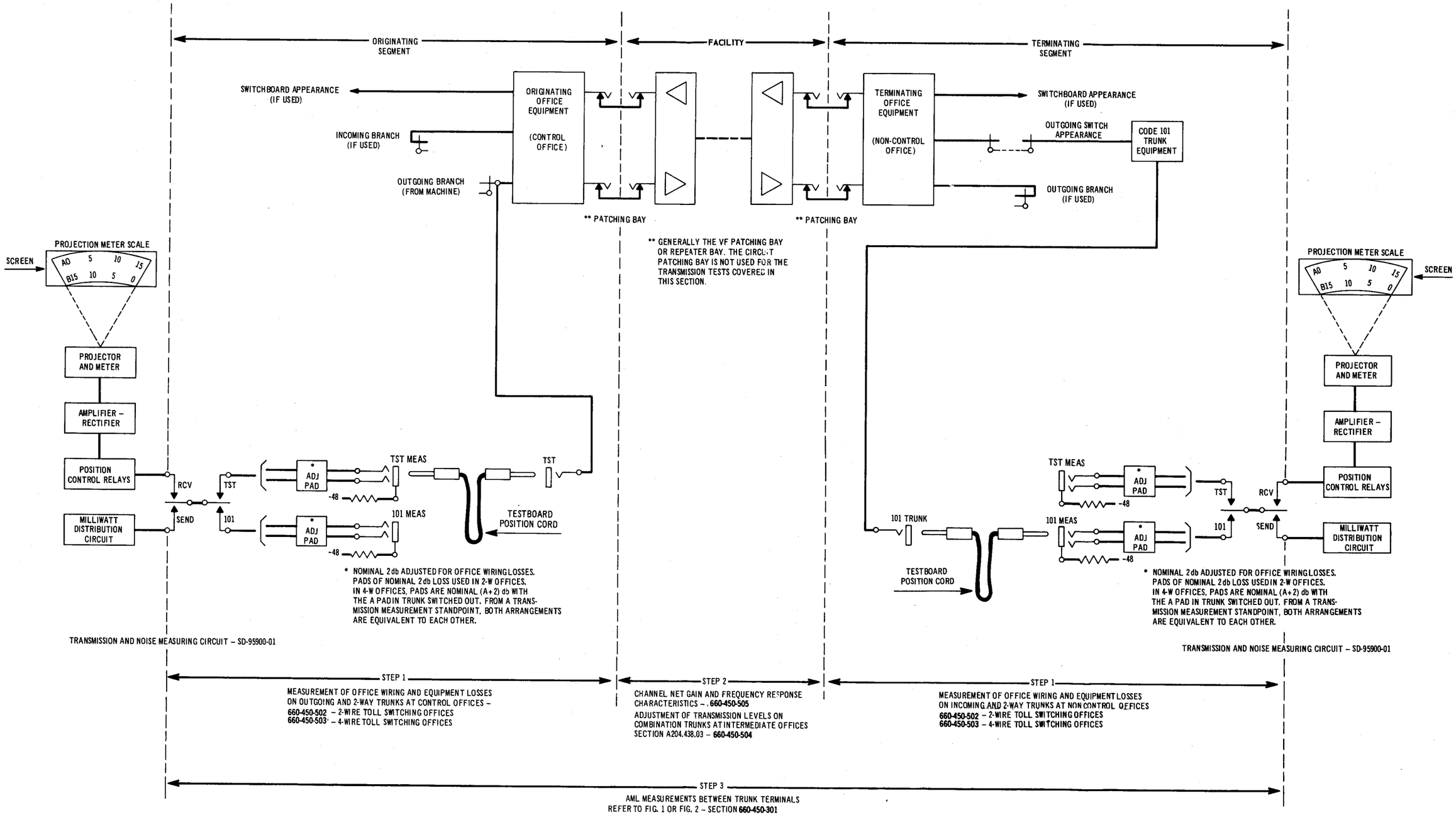

Fig. 1 – Simplified Sketch of Intertoll Trunk With Testboard Access