# TROUBLE-LOCATING METHODS—LINE INSULATION TEST CIRCUIT
# SERVICE IMPROVEMENT GUIDE
# EVALUATION TEST PROCEDURES
# NO. 5 CROSSBAR OFFICES

## 1. GENERAL

**1.01** This section is one of a series of Bell System Practices that comprise the No. 5 Crossbar Service Improvement Guide. This section provides manual trouble-locating methods which check the calibration of the Line Insulation Test (LIT) circuit.

**1.02** Whenever this section is reissued, the reason(s) for reissue will be listed in this paragraph.

**1.03** Recommendations for changes, additions, and/or deletions to this section should be forwarded as specified in Section 000-010-015.

**1.04** Section 218-080-100, General Description of the No. 5 Crossbar Service Improvement Guide, provides a complete table of contents and reference information for using the entire Service Improvement Guide.

## 2. TESTS/CALIBRATIONS

**2.01** Perform the following operational tests at the LIT frame control panel to properly calibrate the LIT circuit.

(1) Set all switches to off. Momentarily operate the RN1 key, and observe that all lamps are extinguished. Momentarily operate the MT key, and observe that the MT lamp lights. (MT1 lamp lights in approximately 60 seconds.)

(2) Allow a minimum of 10 minutes before starting test.

(3) Momentarily operate the S5 key and observe that the S5 lamp lights.

(4) Operate the LR 1000 Ω switch to position CAL.

(5) Operate the CAL 1000Ω switch to position CAL-160.

(6) Momentarily operate the MTS key and observe that the MTS and either the T0 or the T1 lamp lights. Disregard the RT-, RTK lamps for this test.

(7) If the T0 lamp is lighted, rotate AGC potentiometer very slightly in a counterclockwise direction. If the T1 lamp is lighted, proceed to (11).

(8) Momentarily operate the MTR key and observe that the MTS and T0 lamps are extinguished.

(9) Repeat (6), (7), and (8) until a change from T0 to T1 lamp occurs. If AGC potentiometer reaches adjustment limit before change occurs, it indicates a wiring change is required in the LIT circuit. In this case, remove N wiring, if provided, or change wiring from S to R option and then repeat test procedures starting at (6).

(10) Momentarily operate the MTS key and observe that the MTS and T1 lamps light.

(11) Rotate the AGC potentiometer very slightly in a clockwise direction.

(12) Momentarily operate the MTR key and observe that the MTS and T1 lamps are extinguished.

(13) Repeat (10), (11), and (12) until a change from T1 to T0 lamp occurs. If AGC potentiometer reaches adjustment limit before

change occurs, it indicates a wiring change is required in the LIT circuit. In this case, change wiring from R option to S option, if not already provided, or add N wiring and then repeat test procedures starting at (8).

(14) Operate CAL 1000Ω switch to position CAL-320.

(15) Momentarily operate the MTS key, and observe that the MTS and either the T1 or the T2 lamp lights.

(16) If the T1 lamp is lighted, rotate the M potentiometer very slightly in a counterclockwise direction. If the T2 lamp is lighted, proceed to (20).

(17) Momentarily operate the MTR key and observe that the MTS and T1 lamps are extinguished.

(18) Repeat (15), (16), and (17) until a change from T1 to T2 lamp occurs.

(19) Momentarily operate the MTS key, and observe that the MTS and T2 lamps light.

(20) Rotate the M potentiometer very slightly in a clockwise direction.

(21) Momentarily operate the MTR key and observe that the MTS and T2 lamps are extinguished.

(22) Repeat (19), (20), and (21) until a change from T2 to T1 lamp occurs.

(23) Operate the CAL 1000Ω switch to position CAL-640.

(24) Momentarily operate the MTS key and observe that the MTS and either the T2 or OK lamp lights.

(25) If T2 lamp is lighted, rotate H potentiometer very slightly in a counterclockwise direction. If OK lamp is lighted, proceed to (29).

(26) Momentarily operate the MTR key, and observe that the MTS and T2 lamps are extinguished.

(27) Repeat (24), (25), and (26) until a change from T2 to OK lamp occurs.

(28) Momentarily operate the MTS key, and observe that the MTS and OK lamps light.

(29) Rotate the H potentiometer very slightly in a clockwise direction.

(30) Momentarily operate the MTS key, and observe that the OK lamp is extinguished.

(31) Repeat (28), (29), and (30) until a change from OK to T2 lamp occurs.

(32) Momentarily operate the RN key, and observe that all lamps are extinguished.