

RUNNING CABLE AND WIRE
CHECKING CABLE AND WIRE LOCATIONS

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1. GENERAL

1.1 Scope of Section

1.11 This section contains information pertaining to procedures for checking cable and wire locations.

2. INSTALLING EQUIPMENT

2.1 The tools and supplies normally required for checking cable and wire locations are listed in Section 200 of this handbook.

3. GENERAL INFORMATION

3.1 Purpose of Checking Cable and Wire Locations

3.11 It is recommended that cable and wire locations be verified after the cable and wires are run, but before any securing and/or butting, stripping, etc., operations are performed. This will minimize installation effort required to correct cables or wires that are run to wrong locations.

4. CHECKING CABLE AND WIRE LOCATIONS

4.1 Wire Run Verification

4.11 Use the ITE-5609 L-3 MLVS Test Set or the ITE-4137A AC Continuity Test Set to check terminating locations of wires. This check verifies that the wires have been run to the proper locations per the cable tag. (This test is for wire runs, such as P-wire, that have cable tags attached.) For small applications the R-3311 Lamp Test Flashlight or ITE-4525 Tone Buzzer Test Set may be used.

4.111 The ITE-5609 L-3 for wire verification, consists of a 13 lead resistance test box and a meter. Prior to verification of wires, the meter should be calibrated by shorting the meter leads and adjusting the screw on the meter face until the needle is directly on the calibrate line.

4.112 Connect the ground lead of the test box to the first wire to be verified (see Figure 1). Record the connection next to the run number of that wire in the Installers running list (a blank paper may be used if preferred). Connect lead No. 1 of the test box to the second wire to be verified and record the connection next to the run number. Continue in the same manner for test block leads 2-12 as required.

4.113 At the other end of the wire group, connect the black lead of the meter to the wire connected to the ground lead of the test block. This will serve as the return or common lead.

4.114 Using the meter scale, verify wire runs connected to the test block by making contact between the red probe of the meter and each wire separately.

NOTE: The ITE-4442A Volt-Ohmmeter may be substituted for the L-3 Meter. Instructions for adapting the ITE-4442A VOM for the test are in Handbook 100, TMO-5609.

4.115 Large groups of wires may be verified by using additional test boxes or by disconnecting the test box and reconnecting to another group of wires.

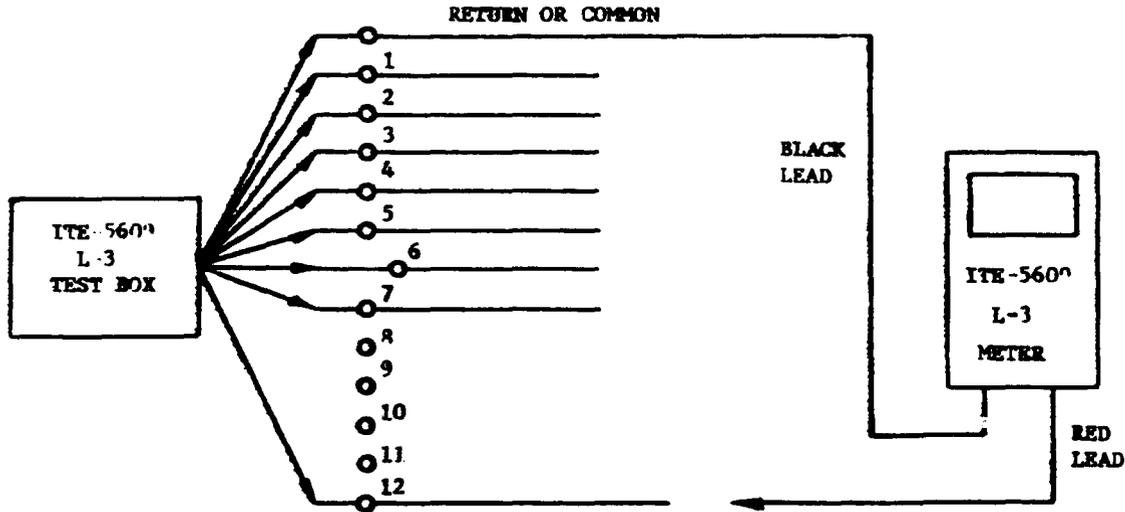


FIG. 1

4.12 Circuit arrangements for buzzing wires with the ITE-4137A AC Continuity Test Set are shown in Handbook 50. The maintenance methods for ITE-4137A AC Continuity Test Set and the ITE-4525 Tone Buzzer Test Set are covered in Handbook 100.

PRECAUTION: OLD OR USED DRY BATTERIES WILL LEAK, RELEASING A CORROSIVE LIQUID. AVOID POSSIBLE DAMAGE TO CABLES, FORMS, OR APPARATUS BY KEEPING BUZZER TEST SETS OFF CABLE RUNS AND BY HANGING THEM ON FRAMES OR RACKS ONLY WHEN THEY ARE IN USE.

4.2 Cable Run Verification

4.21 Use the ITE-5717 Cable Locator Test Set to check terminating locations of cables. This check verifies that the cables have been run to the proper locations per the cable tag. For small applications the methods outlined for wire run verification in Paragraph 4.1 may be used for cable run verification.

4.22 The following equipment is required to perform cable run verification:

ITE-5717	Transmitter with Case
ITE-5717 Det. 1	Receiver
ITE-9564 L-1	Cord, 12' Extension
ITE-9564 L-2	Cord, 6' Extension
ITE-9378A	Inductive Probe
ITE-9388A	Cord, Direct Connection
ITE-6100	Cable Piercing Adapter

4.23 ITE-5717 Setup

4.231 Transmitter Setup - Attach the ITE-6100 Cable Piercing Tool to the transmitter using the Direct Connection Cord (ITE-9388A) with either the 6 foot or 12 foot extension (ITE-9564 L-2 and ITE-9564 L-1 respectively). This is done by inserting the extension cord into the transmitter jack, then inserting the direct connection cord into the extension and clipping the red lead of the direct connection cord to the ITE-6100 Cable Piercing Adapter. The black lead of the direct connection cord should be attached to an available frame ground when sending tone. (All accessories are stored in the top compartment of the cable locator transmitter case.) After the probe is properly attached, set the transmitter's selection dial to RF NORMAL and latch the transmitter case shut.

4.232 Receiver Setup - Set the receiver to RF and attach the small inductive probe (ITE-9378A) with the 6 foot extension cord (ITE-9564 L-2).

NOTE: For maximum battery life, always unplug the receiver cords when not in use.

4.233 Talk Circuit Setup - The following three methods may be utilized to establish a talk circuit between Installers during cable run verification:

4.2331 Embedded Talk Circuit in Equipment Frames - If available, the embedded talk circuit in equipment frames is the quickest method of establishing a talk circuit by simply inserting the ITE-9650 Headset into the proper jacks.

4.2332 ITE-5281 Transceiver Test Set - The Transceiver Test Set is not to be used in ESS offices but is recommended for other applications due to its high mobility.

4.2333 ITE-2260A and ITE-2260B Call Wire Telephone Jacks - Connect the ITE-2260B to ground, -48 volts and an unused pair as indicated on the test set. Connect the ITE-2260A to the opposite end of same unused pair and then insert one ITE-9650 Headset into each call wire telephone jack to complete talk circuit. (Battery posts on cable locator transmitter may be used in lieu of office ground and voltage.)

4.24 Cable Run Verification Procedure

4.241 Installer 'A' using the transmitter pierces a cable to be verified with the ITE-6100 Cable Piercing Adapter to send tone. The portion of the cable punctured by the tool must be removed before the cable is terminated. For this reason the puncture should be within six inches of the end of the cable.

NOTE: The ITE-6100 Cable Piercing Adapter is not to be used on formed and/or connectorized cable. For these applications merely apply tone with the red lead of the Direct Connection Cord (ITE-9388A).

4.242 Installer 'B' using the receiver locates the cable with tone and reads the cable run number over the talk circuit to Installer 'A'.

4.243 Installer 'A' checks cable tag to verify correct placement and tagging. If run is correct, Installer 'A' retracts the ITE-6100, sets verified cable run aside and pierces another cable to be verified. This procedure is repeated until all cable runs are verified. A written record of all errors should be made for reference when making necessary corrections.

4.25 For a detailed explanation of ITE-5717 Cable Locator Operation, refer to TMO-5717.

Engineering Planning Manager
(Installation)

REASON FOR REISSUE

Include new cable run verification procedure.