BASEWEST

Operating & Calibration Instructions

Model TS-451 Test Set

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1.0 GENERAL

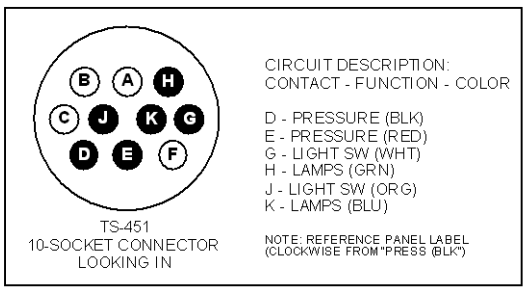
This manual covers the operation and calibration of the Model TS-451 cross-talk tester for Airbus escape slide lighting systems. The Model TS-451 Cross-Talk Tester is designed to test for shorts and/or electrical cross-talk in Airbus A330/340 Escape Slide Lighting System circuits.

2.0 THEORY OF OPERATION

2.1 The Model TS-451 Cross-Talk Tester tests for electrical short circuits and/or electrical cross-talk up to a resistance of 1.999 MΩ. This is accomplished by testing each individual circuit against all other circuits in the system at the same time (except lamp circuits H-K). The reading is accomplished by a digital LCD ohmmeter.

2.2 The test set is connected to the escape slide lighting system under test via the circular connector located on the head of the instrument.

2.3 Circuits are selected for test with a rotary switch. Circuits tested are named on the instrument panel and are identified relative to the connector contacts shown below.



2.4 Power is provided by a non-rechargeable 9V battery located in a compartment accessible from the bottom of the instrument case. The device is activated by an ON/OFF rocker switch on the instrument panel.

3.0 OPERATING INSTRUCTIONS

3.1 Connect the system to be tested via the 10-pin connector on the escape slide lighting system interface cable to the mating connector at the top of the instrument.

3.2 Turn the unit ON via the rocker switch on the instrument face; the LCD meter will activate.

3.3 Test each circuit as indicated on the test set's panel label, turning the indicator on the rotary switch to the desired circuit. Any of the following readings may be present for each circuit test:

- An LCD Meter reading of "1.- - - -" indicates that the circuit under test has a resistance in excess of 1.999 MΩ m. This is an acceptable reading
- An LCD Meter reading of "0.000" indicates that there is a short circuit in the circuit under test. This is not an acceptable reading.
- An LCD Meter reading in the range of 0.001 to 1.999 indicates the resistance of the circuit under test in megohms (MΩ). Any reading above 0.500 MΩ is acceptable.
- An LCD Meter reading of "Low Batt" indicates that the battery should be replaced before further testing is accomplished.

3.4 When testing is complete, turn the rocker switch to OFF; the LCD meter will deactivate.

4.0 CALIBRATION INSTRUCTIONS

4.1 Place a short circuit across contacts "D" and "E" on the instrument's test connector. Verify that the instrument LCD meter reading stabilizes to "0.000" within several seconds when the rotary switch is moved to both the "PRESSURE (BLK)" and "PRESSURE (RED) positions. Remove the short circuit.

4.2 With no cables or short circuits connected to the instrument's test connector, verify that the LCD meter reads "1.- - - -" in all test positions indicated on the face of the test set.

4.3 Obtain a 510K (1% or better) resistor. Verify and record the resistor value using a calibrated DMM (ohmmeter mode).

4.4 Place the 510K resistor across contacts "D" and "E" on the instruments test connector Verify that the instrument LCD meter reads the value of the 510K resistor +/- 2KΩ when the rotary switch is moved to both the "PRESSURE (BLK)" and "PRESSURE (RED) positions. .

4.5 If the meter reading above is out of limits per the above step, open the instrument and adjust the trimpot on the back of the LCD meter until the reading is within +/- 2 KΩ of the previously recorded resistor value. Record LCD reading on calibration record.