

ACL MODEL #380 CALIBRATION INSTRUCTIONS

CALIBRATION

The checker should be calibrated on average every 12 months. A test resistance can be applied across the parallel bars to verify if the checker is within specification, using a resistance decade box. Calibration can be obtained by contacting your supplier.

SPECIFICATION

Dimensions: - approx. 70mm x 130mm x 35mm

Weight: - approx. 103 grams

Power: - Battery operated PP3 9 volt

Connections: - 2 x 3.5mm jack plug for earth connection

Test Range: - 10^3 to 10^{12+}

Dissipative Range: - 3×10^5 to 3×10^9 1/2 Decade between each decade on a logarithmic scale

Example: $1 \times 10^5 \times 3.21 = 3 \times 10^5$ (1/2 Decade Measurement) $\times 3.21 = 1 \times 10^6$

Method of Measurement:

Surface Resistivity (Ohms per square)

Point to Point Resistance (Ohms)

Accuracy: - +/- 0.5 Decade in Conductive Range
+/- 0.25 Decades in Dissipative Range

TEST EQUIPMENT USED

Resistance Decade Box

Test Leads

The resistance decade box required will need a range of from > 1 kilohm to 999 meg ohms or 10^9 . Measurements greater than 10^9 are calculated using cad generated techniques, as high resistances greater than 10^9 are difficult to verify with a test voltage of 9 volts.

Connect the test leads from the resistance decade box to the test probes of the checker, set the decade box to the desired resistance i.e. $10^3 = 1$ K, then press and hold the checker's test button, the 10^3 LED should light, 10 K 10^4 LED should light and so on. To measure the changeover point between decades, increase the resistance of the decade box while pressing the checker's test button. Record the resistance when the next LED lights permanently (this is the changeover resistance).

Example: The first green LED is illuminated $10^3 = 1$ kilohm.

At 3 or 4 kilohms 10^4 LED is illuminated, the changeover point is 3 or 4 kilohms. $10^4 = 10$ kilohms so between 3 or 4 kilohms and 30 or 40 kilohms will be the changeover points from 10^4 to 10^5 .

Please note that the checker has no internal parts to adjust, so verification of calibration can be achieved by using the above process. If verification cannot be achieved the unit should be returned to the supplier.