109SC Digital Multimeter with Stray Current Test Procedure

1. Drive first stake into soil near the blast site. This will be the center stake.

2. The second stake will be moved around the center stake at various points around the blast site. Connecting wire may be run from each stake to the tester. (For each test, this stake will have to be driven in 6" – 8" and be tight).

Note: Soil must be moist in stake area. If soil is dry, add water until soil is moist.

3. Connect tester to meter with the red and black leads to V-Ω and COM. Connect stake leads to the red & black terminals on the tester. Polarity (Direction) does not matter.

4. Turn dial to the 200 mV scale setting, and note reading DC Volts then AC Volts. If the reading is greater than 49 millivolts on either DCV or ACV, or the combined total of ACV and DCV, run the test again depressing the button on the tester. This shunts the leads with a 1 Ω resistor.

Note: When the shunting button is used, it should not be depressed for more than 10 consecutive seconds for any one measurement.

The readings should drop to near zero. If the readings are still greater than 49 millivolts, stray current is too high, and the source will have to be located, or a non-electric system will have to be used.

Note: It is highly recommended that the user review the section on Recognizing Extraneous Electricity in the "ISEE Blasters' Handbook". This source explains in detail the characteristics of stray current, and how to test for it.

Note: Not MSHA approved for use in methane-air environments.