

# CHARGING SOURCE Model 208B



## Instruction Manual

4/09



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## 1.0 DESCRIPTION

The Model 208B Charging Source, shown in Figure 1.0-1, is a portable, battery powered, dual polarity power supply that is designed to provide an accurate and stable nominal 1200 Volts DC to open circuit loads such as isolated charged plate detectors, electrostatic calibration targets and personnel isolated from ground.



Figure 1.0-1: Model 208B Charging Source

The Charging Source provides the appropriate voltage required to measure ionizer neutralization time, personnel dissipation time for evaluating footwear, flooring, seating or any other personnel grounding system, voltage suppression and electrostatic field meter calibration either alone or in a test set-up.

The Model 208B operates from a single 9 Volt alkaline battery. It has a fixed  $1200 \pm 100$  Volt output (internally adjustable) with current limited to 50 microamps for personnel safety (max allowable current is 5 milliamps). Polarity is selected by simply reversing the output probe assembly. The conductive case acts as the ground side of the circuit when held by the user. The  $\frac{1}{4}$ " male snap located on the back for is used to connect a standard wrist strap ground lead with mating  $\frac{1}{4}$ " female snap. A red LED indicates both power on and battery low conditions.

## 2.0 OPERATION

To select polarity pull the probe assembly forward slightly and rotate it  $180^\circ$  so that the probe is lined up with the desired polarity symbol then let it snap back into place.

Simply depress the red momentary pushbutton to turn on the voltage and then touch the probe tip to the object or person to be charged. Due to the large value current limiting resistor in series with the output allow a second or two for charging time. Allow approximately 2-3 seconds for the residual charge on the probe tip to dissipate before touching it.

When using the Model 208B Charging Source verify the object being charged is isolated from ground or from any large, conductive object that may load down the output. Even a relatively high resistance to ground may load the output. For the Model 208B any resistance greater than 1000 megOhms is considered an open circuit load. When charging personnel, acrylic or Teflon® should be used to isolate the test subject from ground during the charging cycle.

### **3.0 MAINTENANCE**

The Model 208B Charging Source contains no user servicable parts and must be returned to the factory for service. The output voltage can be checked by direct connection to a high input impedance voltmeter (>50 MegOhms) or by using a calibrated electrostatic voltmeter. The output should read  $1200 \pm 100$  Volts.

To change the 9 volt battery, remove the cover on the back by sliding it towards the rear. For best results use alkaline batteries.

To clean the conductive ABS plastic case, a damp cloth should be used. Do not use any solvents as these may react with the plastic and damage the case.

### **4.0 WARRANTY**

Electro-Tech systems, Inc. warrants its equipment, accessories and parts of its manufacture to be and remain free from defects in material and workmanship for a period of one (1) year from date of invoice and will, at the discretion of Seller, either replace or repair without charge, F.O.B. Glenside, PA, similar equipment or a similar part to replace any equipment or part of its manufacture which, within the above stated time, is proved to have been defective at the time it was sold.

This warranty becomes null and void should the equipment, or any part thereof, be abused or modified by the customer or used in any application other than that for which it was intended.

ETS must be notified before any equipment is returned for repair. ETS will issue an RMA (Return Material Authorization) number for return of equipment.

Equipment should be shipped prepaid and insured in a sufficiently large box with adequate packing to prevent shipping damage. The RMA number, description of the problem along with the contact name and telephone number must be included in formal paperwork and enclosed with the instrument. Round trip shipping charges are the responsibility of the customer.