

SERVICE PROCEDURE JD0024

PRODUCT: SCR/SCRF BATTERY CHARGERS

SUBJECT: FIELD INSTALLATION OF GROUND DETECTION OPTION WITH INDICATING LIGHTS AND TEST SWITCH

Reference: Schematic Diagram EJ0089 Sheet 5 (in the Operating and Service Manual)

Materials Required

Ground Detection Option Kit (See Table 1)

Tools Required

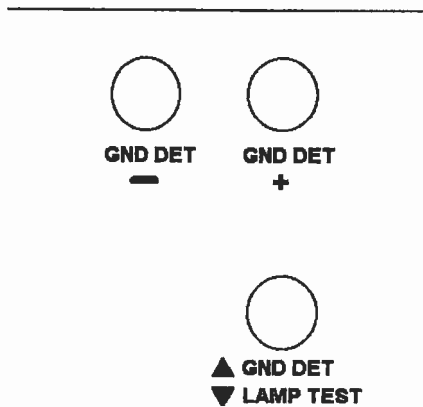
Standard Hand Tools

Wire crimpers, cutters and stripper

Soldering iron, 35-50W

Procedure

1. Disconnect all AC power to the charger and disconnect the batteries before starting this modification.
2. Check the part number of the Ground Detection Option Kit that you received against the nameplate rating of your charger, according to Table 1. Note the series resistors R50 and R51. Check the resistance values according to Table 1 before proceeding with the installation.
3. Most front panels are already predrilled for the ground detection indicators and the test switch. If your charger front panel is not predrilled, drill two 1/2" holes, spaced 1" apart, in the upper right hand corner, in order to mount the indicating lamps. Drill one 1/2" hole 1-1/2" below the right-hand hole you just drilled. Label the front of the panel as shown in the figure below.



4. Install the 2-position solder terminal strips included with the kit on the back of the front panel, using the top mounting studs on the dc meters, M1 and/or M2.

NOTES: The following instructions assume you are viewing the front panel components from the rear of the panel.

In the schematic diagram (ref. 1), the ground detection indicator circuit is shown connected to TB5(+) and TB5(-). You will connect the circuit to the dc voltmeter terminals instead, for easier wiring. The dc voltmeter (M2) terminals (+) and (-) are equivalent to TB5(+) and TB5(-), respectively.

- Refer to the schematic diagram, Ref. 1. Wire the ballast resistors R51 and R50, respectively, to M2, the dc voltmeter (+) and (-) terminals. The resistor R50 should be wired to M2 (-), and the resistor R51 to M2 (+). Mount one resistor on each terminal strip.

CAUTION: WEAR SAFETY GLASSES WHEN SOLDERING ELECTRONIC COMPONENTS.

Wire the other end of each resistor to the indicator: R50 to DS8, GND DET (+), and R51 to DS9, GND DET (-). Use quick-connect terminals to connect to the indicators.

Wire the other indicator terminals to the test switch as shown in the schematic diagram. *The top terminals of the switch are the LAMP TEST position, and the bottom terminals are the GND TEST position.*

- Restart the charger according to Sec. II-4 of the Operating and Service Instructions. Push the test switch to the upper (GND TEST) position. The indicating lamps should indicate a normal ungrounded battery system (no lamps glowing, or both lamps glowing dimly). Push the switch to the lower (LAMP TEST) position. Both lamps should light with nearly normal brightness. See section V of the manual for a description of the circuit operation.

Table 1: Ground Detection Option Kit

Charger Output Voltage	Ground Detection Indicator Kit Part Number	R50/R51 Value
12	EJ0089-01	2W, 27 Ohm
24	EJ0089-02	1W, 200 Ohm
48	EJ0089-05	2W, 1.0K Ohm
130	EJ0089-06	11W, 3.0K Ohm
260	EJ0089-07	11W, 7.5 K Ohm

Ordering information

Order by the part number in the center column in the table above. Be sure to provide:

- Charger model number
- Charger serial number