

MANUAL**Model: BD-10**

Solar Converters Inc. - Rev. B

1.0 Application

When batteries age and/or spend too much time in a discharge or abused state, sulphite crystals can form on the battery plates, which impedes the flow of electricity and is the main cause of poor battery performance. This unit is a basic Battery Desulphator with a small charge controller included. It will charge a battery to 14.2 V and de-sulphate the battery. This unit emphasizes extremely low cost and premium performance.

NOTE: Operate the unit with the battery attached. Do not run for extended periods of time with no battery attached and input power applied.

2.0 Electrical Specifications**Input Voltage**

Solar Panel: 12 V nominal at maximum 2 amps
AC: 40 VA 16 V Class 2 Doorbell transformer

Output Voltage

14.3 VDC

Output charge Current

3 amps maximum

Nominal battery voltages (V)

12 V

Maximum Input (V)

40 V

Maximum Pulse Current (A)

6 Amps

Reverse polarity protected

Internal self resetting fuse on battery connection

3.0 Basic Operation

Sulphite crystals form when the battery charge is reduced and/or the discharge/discharge cycles are not well suited for the battery. These sulphite crystals act as insulators to the flow of electricity in the battery, seriously degrading the capability of the battery to have electricity flow in it, reducing its charging and discharge capability.

This unit uses a sharp pulse of current forced into the battery suddenly to "jar" the sulphite crystals and cause internal resonance, both mechanical and electrical, to grind down the sulphite crystals that form so they be re-combined into the battery acid.

4.0 Input Power Connection

Using wire of sufficient gauge (#16 AWG or better), connect the two blue wires to the solar panel or the 16 V output of a class 2 doorbell transformer.

5.0 Battery Connection

Using wire of sufficient gauge (#16 AWG or better), connect the red wire to the battery positive and the black wire to battery negative.

6.0 LEDs

The unit has 2 LEDs on it. The LED marked CHRG indicated the unit is powered and is charging the battery. The LED marked ON indicates the battery is at full voltage and the unit is de-sulphating the battery.