

# DC POWER CORP.

## POWER-SONIC AGM BATTERY

### QUICK GUIDE

The Power-Sonic line of sealed rechargeable AGM (Absorbed Glass Mat) batteries has earned an industry leading reputation with over 40 years of service. Adherence to the following guidelines will ensure that battery life is maximized and operation is trouble-free.

#### **Charging for Cycling Operation**

Some cyclic applications require that recharging be done in a relatively short time. The initial charge current, however, must not exceed 0.25 x battery Amp Hour capacity (recommended initial charge current is 0.20 x battery Amp Hour capacity). The charge and absorption stages should be set at 2.40 to 2.45 volts/cell with the float voltage limited to 2.25 to 2.30 volts/cell. The voltage should NEVER be allowed to rise above 2.45 volts/cell unless temperature charging compensation is required.

Equalize charging is NOT required.

#### **Charging for Float Operation**

The recommended constant float voltage is 2.25 - 2.30 volts/cell. Maintaining this float voltage will allow the battery to define its own current level and remain fully charged without having to disconnect the charger from the battery. The trickle current for a fully charged battery floating at the recommended charge voltage will typically hover around the 0.001 C rate (100mA for a 100 AH battery, for example.)

#### **Temperature**

Battery temperature should always be considered when designing or selecting a charging system. Temperature compensation is required for proper charging when ambient battery temperature varies up or down from 25° Celsius.

To prevent problems arising from heat exchange between batteries connected in series or parallel, it is recommended to provide air space of at least 0.4" (10mm) between batteries.

#### **Sealed/Maintenance-Free**

The valve regulated spill proof construction allows trouble-free safe operation without the need to add water as gases generated during the charge phase are recombined in a unique "oxygen cycle". AGM batteries should **never** be opened or equalized.

#### **Easy Handling**

No special handling precautions or shipping containers for surface or air transportation are required due to the leak-proof construction.

#### **Wide Operating Temperature Range**

Power-Sonic batteries are designed and tested to operate in some of the harshest environments on Earth. (-40° C to +60° C)

#### **Battery Life**

The life of your battery is directly related to the repeated cyclic depth of discharge. Please refer to the cycle life versus depth of discharge chart for your specific battery.

#### **Warranty**

Solar Applications are warranted for 2 year free replacement. All charging must incorporate temperature compensation and Depth of Discharge must be **limited** to 50% of battery capacity.

#### **Torque Specifications**

Initial torque values for "U" and "B" (T11) terminals: **11 N-m = 97 in-lbs**

A periodical re-torque should be performed to ensure a consistent solid bond between all batteries and external connections to terminals.