Charging Deep Cycle Batteries

There are 3 essential components required to recharge a discharged battery:

1) Voltage 2) Amperage 3) Time

VOLTAGE

The voltage required to overcome a battery's natural resistance is 2.4 Volts per Cell (VPC). When charging, a slight variation in voltage is allowed, from 2.34 VPC not to exceed 2.42 VPC.

This translates into standard charging settings:
12V: from a low setting of 14V, not to exceed 14.5V, with 14.4 the desired target.
6V: from a low setting of 7V, not to exceed 7.25V, with 7.2 the desired target.

Amperage

Amperage supplied is primarily a function of the capacity of the charger and the time available to replace power consumed from the battery. Dyno recommends a recharge rate of 6% of the battery's 20 Hour Rate AH capacity. Higher charge rates are acceptable, but in no case should the battery temperature be allowed to exceed 110°F.

TIME

The length of time a battery is on charge is as important as the voltage and amperage settings of the charger. The voltage is "the pressure" that pushes the current. The current, which is expressed in amp, when multiplied by the number of hours the battery is on charge, is expressed in amp hours. Example: a 12V battery with proper pressure from the charger set at 14.4Volts with a flow of 10 Amps for a period of 15 hours is said to have received 150 Amp Hours.

The battery should be charged until the specific gravity (sp.gr.) of the electrolyte reaches 1.265, which indicates the battery is fully charged. Do not continue to charge a battery whose sp.gr. has reached 1.265, as continued charging will destroy (boil) the battery.

Maintenance (FLOAT) Charging

Batteries not used for long periods of time can be "maintained" or "floated" with an appropriate charger with voltage set not to exceed 2.2 VPC.
Example: 12V battery float setting = 13.2 Volts.

Equalization Charge

Dyno does not recommend equalization charges as a normal part of the routine battery maintenance. Instead, we recommend maintaining the battery at 1.265 sp.gr. as the best method *to prevent* the formation of sulfates on battery plates.

Battery Council International