

How is the Battery Fighter® battery charger different from a trickle charger?

The Battery Fighter® battery charger delivers constant 1.25 Amp charging current to raises battery terminal voltage to approximately 80% recharged during bulk charge mode, charging current will then drop gradually. The battery charge voltage is hold constantly at 14.4 VDC during absorption charge mode until the current drops to 0.1 Amp or until 6 to 8 hours have elapsed. It then automatically switches to a float charge mode. During float charge mode, the output voltage of the Battery Fighter® battery charger is 13.2 VDC, which is well below the gassing voltage of a lead acid battery. This keeps the battery topped off, while minimizing any detrimental effects to do gassing. The Battery Fighter® battery charger is able to perform these complex switching functions because its electronic circuitry is controlled by an on board microprocessor.

Although they often appear to be a better economic choice for the typical consumer, trickle chargers do not have the advantage of sophisticated electronic control. Therefore, as they allow the value of charge current to trickle down to what appears to be safe levels, the output voltage of the charger rises well above 15 VDC, sometimes even going higher than 16 VDC depending on the charger type and the battery that is connected to it. Either voltage is well above the gassing voltage of a lead acid battery. If the battery remains connected to this high level of voltage for an extended period of time, even less than 1 day, extreme damage can be done to the battery. What appears to be a cost savings for the charger may actually cost several times the charger price in replacement batteries.

What makes the Battery Fighter® battery charger different from other automatic battery chargers?

Many automatic battery chargers turn off when the battery voltage rises or the charge current falls to a preset level. Then after a period of time, when the battery self discharge characteristics have reduced its terminal voltage significantly, sometimes to the point where the battery has given up almost 90% of its stored charge, the charger will turn on and recharge the battery. This type of cycling will dramatically reduce battery life. The Battery Fighter® battery charger does not turn off. It automatically switches to a safe float voltage level that keeps the battery charged and yet does not do any harm to the battery or cause any reduction in its useful life.

Battery Fighter®'s 4-Step Constant Current Charging Program:

Step 1) Qualification:

Qualification check to ensure safety by verifying battery status prior to charging. Now you will know if batteries need replacing without guessing.

Step 2) Bulk Charge:

Constant current at 1.25 Amps to raise battery voltage to be approximately 80% recharged. Then current drops gradually until voltage reaches 14.4 VDC. When battery voltage reaches 14.4 VDC, it will transit to Step 3, Absorption Charge.

Step 3) Absorption Charge:

Holds voltage at 14.4VDC and forces current to fully charge the battery. When battery-charging current drops below 0.1 Amp or until 6 to 8 hours have elapsed, it will transit to Step 4, Float Charge.

Step 4) Float Charge:

Maintain fully charged battery at 13.2VDC float voltage. If an external load is applied to the battery while the charger is in Step 4, Float Charge, and if the battery voltage drops below a range between 12.0 to 12.5 VDC, then the charge cycle will restart.

