

## **FIVE-YEAR LIMITED WARRANTY**

**What Does The Warranty Cover?** The warranty covers any defect in workmanship or materials in the charger under normal use and service.

**What Will PulseTech Do?** PulseTech will, at its option, replace or repair any defective unit with a new or rebuilt unit at no charge.

**What Does The Warranty Not Cover?** The warranty only applies to the battery charger. The warranty does not cover any other equipment, static damage, water damage, over-voltage damage, dropping of the unit or damage resulting from extraneous causes including owner misuse. In addition, PulseTech will not be responsible under this warranty if PulseTech determines that (1) upon examination that the circuit board failure was (A) caused by misuse, neglect, accident, alteration or abnormal condition of operation or handling (including the failure to install the product in accordance with PulseTech's instructions and observe the warning on the product and the instruction manual) or other conditions beyond the control of PulseTech or (B) damaged in transit to PulseTech, and (2) the owner is not the original purchaser that purchased the product through an authorized PulseTech dealer or distributor. The warranty is void if owner attempts to disassemble the unit or to modify the cable assemblies. IN NO EVENT SHALL PULSETECH BE LIABLE FOR ANY DIRECT, SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL, PUNITIVE OR EXEMPLARY DAMAGES, EXPENSES, LOST SAVINGS OR LOST PROFITS OR ANY OTHER DAMAGES OF ANY KIND FROM ANY BREACH OF THIS WARRANTY OR OTHERWISE. Some states, provinces or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you.

**How to Get Service?** Contact PulseTech by calling 1-800-580-7554 for a Return Authorization Number. Then send the product postage prepaid with proof of purchase(sales receipt) within the warranty period to PulseTech. Battery chargers beyond the warranty period are subject to the repair charges in effect at that time.

**How Does State, Province or Country Law Apply?** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, province to province or country to country.

## Xtreme Charge Maintenance and Charging

The Xtreme Charge is a microprocessor controlled maintenance and bulk charger for any type of 12-V lead-acid battery. It features PulseTech's intelligent circuitry which imposes only the correct amount of charge rate as determined by the continual evaluation of the battery's condition. By using only the appropriate amount of charge rate, the battery is maintained safely at its proper operating voltage indefinitely. Conversely, if the charger is connected to a discharged battery, its bulk charge capability (2.5A actual/5A effective) will re-charge the battery rapidly and safely so it can be put back into service quickly. Charge rates may be as minimal as 0.2A during typical float up to the full 2.5A for more deeply discharged batteries. This variable float charge ensures optimal charge rate is applied to the battery at all times.

PulseTech's unique and patented PULSE technology increases the duty and life cycles of your battery by minimizing the size of the lead sulfate crystals. This allows a battery to accept as much charge as possible. PULSE technology helps ensure that your new batteries will stay in like-new condition while improving older batteries dramatically. Duty cycles are typically extended from three to five times for all types of lead-acid batteries!

## PulseTech's ReNew-It Pulse Technology

Twelve years ago, PulseTech applied its technology to a full line of innovative and unique products designed to make batteries stronger so they will work harder and last longer than ever before.

To get an idea of exactly how important PulseTech's technology is to the performance of all your powersport toys, consider this: **The main cause of vehicle failure is battery failure. The main cause of battery failure is sulfation buildup on the battery plates. And ReNew-IT Pulse Technology prevents sulfation buildup.**

When it comes to a dead battery, chances are it is still good. You just can't reach the energy due to sulfate buildup. That means you have to buy another battery even though the one you have may still be useable. Xtreme Charge helps prevent this problem.

## How Renew-IT Pulse Technology Makes Batteries Stronger

PulseTech's Xtreme Charge connects directly to the battery. The Xtreme Charge emits a pulsating DC current that removes the sulfate deposits from the plates and returns them to the battery acid as active electrolyte.

Here is how it works:



- Lead-Acid batteries work by releasing energy through an interaction that occurs between the positive and negative lead plates and the lead sulfates in the electrolyte.
- Sulfation buildup occurs as lead sulfates form on the battery plates during the normal charge/discharge cycles. During this process, some of the sulfates enlarge to the point where they won't accept energy so they stay on the plate. Over time these sulfates can build up until efficiency is reduced and finally the battery dies.
- ReNew-IT Pulse Technology works to prevent sulfation buildup by removing the sulfate deposits from the plates through a unique Ion Transfer process.
- The lead sulfates then return to the battery acid as active electrolyte. When connected on a regular basis, our battery maintenance systems will also keep the sulfates from building up again.

## Get True Battery Power

PulseTech's technology works with all types of lead-acid batteries including sealed, gel cell & AGM. By keeping the plates "clean", batteries charge faster and deeper so they work harder and last longer than you ever thought possible. They also have greater charge acceptance so your battery will recharge faster and release all of its stored energy. With more available energy so your vehicles last longer between recharges and your electronic accessories work better.

You get the true power of your batteries.

Some of our patented products also prevent the normal loss of battery power on stored vehicles and equipment no matter how long they sit unused — even months at a time.

They even help protect the environment. Since batteries last longer, it reduces the danger of contamination caused by lead and sulfuric acid dumped from prematurely discarded batteries.

## Xtreme Charge 5 Stages of Charging

### 1. Initialization

Xtreme Charge's unique test feature evaluates the battery thoroughly during initial connection to determine the appropriate charge rate based on its size and condition. It tests the battery continually for as long as it is connected to the charger to maintain the optimal bulk or float charge rate. This test step incorporates a "Bad Battery" indication if it determines the battery is faulty and can not be charged.

### 2. Bulk

After the initial evaluation the Xtreme Charge will do one of two things which is determined by the batteries initial state. If the battery is determined to be discharged, its bulk charge capability(2.5A actual/5A effective) is used to re-charge the battery rapidly and safely so it can be put back into service quickly.

### 3. Saturation

A proprietary computer-integrated technology measures both the voltage and current to determine the appropriate amount of charge the battery is able to accept at any given time. As the pulse and saturation charges improve the battery's condition, the charge rate is increased safely to an optimal level. This proprietary algorithm protects the battery from the risk of damage due to overcharging.

### 4. Storage(Float)

Once the battery has reached its full charge, the Xtreme Charge will enter into its fourth stage. The float charge. A float charge is where the charger provides just enough voltage/amperage to compensate for the batteries self discharge. Essentially maintaining the battery at its full charge or storage capacity.

### 5. Pulse(De-Sulfation)

The fifth stage, or Pulse stage isn't actually a stage by itself. The charger provides the pulse maintenance throughout the previous stages of the charge cycle and will continue to as long as the battery is hooked up to the charger.

