MPulsefalk

Published Monthly by PulseTech Products Corporation, The World Leader In Battery Performance Technology • February 2005

INDUSTRY SPOTLIGHT

Gensets and UPS

Gensets and other standby systems depend on lead-acid batteries to provide the energy required to start them, and most of these batteries sit unused for months. As a result, the batteries discharge which causes the plates to become heavily sul-

fated. This sulfation "buildup" is the main

cause of battery problems and failure. And if the batteries fail, the backup systems will too.

That's why the Solargizer and PowerPulse systems are the ideal solutions for battery problems on gensets and UPS (Uninterrupted Power Supply) systems. They make sure the lead-acid batteries work when they need them.

PowerPulse comes in 12-, 24-, 36- and 48-volt models. Solargizer is available in 12-, 24- and 36-volt units.



TESTIMONIAL

"We only used to get a maximum of four years out of our golf cart batteries. Now they are going on about five or six years and still going strong. I know the PowerPulse is working great on them..."

Charlie Guy Owner, *Brockville Highland Golf* Brockville, Ontario, Canada

SUCCESS STORY

CSXT Keeps Battery Costs & Performance On Track

Twelve years ago, CSX Transportation Inc., one of the largest railroads in the United States, began looking for a solar battery charging system to use on its radio-controlled ballast cars. After extensive searching, it found the solution: The Solargizer Solar Charger from PulseTech.

PROBLEM: In 1993, CSXT was using a battery-charging system on its radio-controlled ballast cars that consisted of an alternator/air motor arrangement using trainline air. However, the company determined that a solar-powered charging system had the potential to reduce downtime and maintenance costs. So, CSXT began a long search for a cost-effective solar system that could provide the power they needed more efficiently.

SOLUTION: In June 1995, CSXT's Engineering Materials Group installed a 10-Watt Solargizer Solar Charger on four ballast-cars in order to test the units.

RESULTS: After evaluating them for several months, CSTX was convinced the Solargizer Solar Charger was the answer to their needs. The company elected to install the chargers on every radio-controlled ballast car in the fleet.

CSXT Transportation was not only pleased with the performance of the Solargizer Solar Charger, but also the anticipated savings this product would create through increased battery life, reduction in maintenance costs and the reduction in air demands. In fact, according to F. Joe Loyd, Senior Manager/ Engineering Materials and Scales for CSXT, using these units along with solenoid-controlled valves enabled the rail road to eliminate the use of one locomotive per unit train due to the reduced volume of air required. That alone would





Photos: (Top) By using the Solargizer Solar Charger and solenoid-controlled valves on its radio-controlled ballast cars, CSXT eliminated the use of one locomotive per unit train due to the reduced volume of air required. This alone will provide considerable savings every year. (Bottom) The Solargizer Solar Charger is so effective in increasing battery performance and reducing battery related costs, CSXT installed units on hundreds of radio-controlled ballast cars.

produce considerable savings for the company every year.

"We initially installed the (Solargizer Solar Chargers) for testing on four ballast cars beginning in June 1995," said Joe, "After evaluating them for several months, we were convinced we had an answer to our needs."

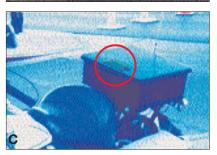
LEARN MORE: See your local PulseTech dealer to see how our products can help increase your battery reliability. For a dealer near you, call **1-800-580-7554**. Or visit **www.pulsetech.net**.



SAMPLE INSTALLS









Installing PulseTech products is easy and well worth the time. Shown above are examples of actual customer installations:

- A. A set of six 6-volt industrial scrubber batteries with a 36-Volt PowerPulse (735X036) unit.
- B. A RediPulse 6-12 (735X260) installed on a rider sprayer at a major golf course.
- C. The solar panel of a 12-Volt Solargizer (735X130) mounted on a police motorcycle.
- D. The Pulse Recovery System 12 (740X650) recovering and cleaning batteries in the maintenance department of a major airport.

TECHTALK FAQ

Presenting a series of frequently-asked questions regarding the benefits of PulseTech products and how they can help your customers:

How much sunlight does Solargizer need to work?

The solar panel on the Solargizer Battery Maintenance System is so efficient, it only needs one to two hours of direct sunlight a day to accomplish its task for a full 24 hours. This is true even if you live in areas where skies are cloudy or lightly overcast most of the time. In these situations the solar panel may require a little more time to absorb enough sunlight.

To make sure you are receiving the full benefit of Solargizer's ReNew-IT Pulse Technology, make sure the solar panel is mounted in an area where it has access to as much available direct sunlight as possible. The solar panel will then absorb sunlight, convert it into energy and the circuit box will desulfate the battery on a daily basis.

Does Solargizer need direct sunlight to work?

No, not really. Obviously, the better exposure to bright sunlight the more efficiently the unit works. But, because of the unique design, Solargizer accomplishes its assigned tasks with minimal amounts of ultraviolet (UV) exposure. A rule of thumb is Solargizer requires on average one to two

hours per day of sunlight to provide benefit. Even cloud cover provides UV exposure that can then be converted to energy. Common sense plays a part, the more the better, but it doesn't have to be "Death Valley" sun to be effective. The Solargizer works extremely well even in notoriously cloudy locations like Seattle.

Where is the best place to install the Solargizer solar panel?

Installation of the Solargizer solar panel is one of personal preference. And since the industrial model Solargizers have solar panels with an acrylic/lexan cover, they are weatherproof and virtually indestructible so they can be mounted almost anywhere.

Ideally, the most effective location for the solar panel is on top of your vehicle or equipment. That way it is sure to receive the most exposure to sunlight during the day. If for some reason you can not mount it on top, be sure to put it some place where it will receive as much sunlight as possible. (Note: Do not mount the panel behind a windshield if it is UV protected.) Since the panel is so efficient, it can be installed either horizontally or vertically, but we suggest you mount it horizontally.

Scientifically-Proven Technology

Independent studies by researchers at Oakland University and Ohio State University recently confirmed that ReNew-It Pulse Technology increases battery efficiency and battery life dramatically. These two-year studies showed that our technology allowed a more even distribution of lead-sulfate crystals over the surface area of the battery plates. It also revealed a significant reduction in the size of crystals. These changes greatly improve a battery's ability to store and provide energy.

Our technology also prevents sulfate-induced corrosion that is the primary cause of shedding of active material on the plates. As a result, the

life span of the battery is increased dramatically.

(Left) A battery plate covered in heavy sulfation buildup which reduces the battery's ability to accept, store and release energy. (Right) ReNew-It Pulse Technology" cleans these lead-sulfate deposits off the plates and converts them to active electrolyte. This process exposes the active material on the battery plates which means batteries are stronger so you get up to three times longer life and maximum performance.

