



Installation Manual

As of 1/8/03

The Industrial, Receptacle and Marine Solargizers are not battery chargers -- they are better. Each system uses a revolutionary [ReNew-IT Pulse Technology](#) to prevent the main cause of battery problems and failure: *sulfation buildup on your battery plates*.

By conditioning the plates, these proven products help all your lead-acid batteries work harder and last longer than ever before. They prevent dead batteries, extend battery life dramatically and maintain peak battery efficiency. They also increase charge acceptance so batteries recharge faster and with better quality.

Installing Solargizer is very easy. Just follow the simple instructions below. Once installed, they work automatically to ensure peak battery performance and constant reliability.

INSTALL ILLUSTRATIONS: Throughout these instructions there are links to illustrations showing how each Solargizer model should be installed. If you are going to print out these instructions for future use, make sure you print the illustrations as well.

WARNING:

Because of the possibility of personal injury, always use extreme caution when working with batteries.

Battery Precautions

ALWAYS use the following precautions when working around batteries:

- Shield eyes. Explosive gasses can cause blindness or injury.
- No sparks, flames or smoking.
- Sulfuric acid can cause blindness or severe burns.

A. Mount The Circuit Box

1. Mount the circuit box close to the battery so that the lugs (see below) can reach the battery terminals. DO NOT attach it to the battery itself. MAKE SURE the box is situated in a location where it is protected and will not accidentally be disturbed by mechanics, etc.

The circuit box can be mounted in one of two ways:

- *1st Method:* For a semi-permanent installation, use two round head screws* to attach the circuit box to the surface of the vehicle or equipment in an area away from moving engine parts.
- *2nd Method:* Apply an industrial adhesive* to the back of the circuit box and glue it to the surface of the vehicle or equipment.

2. Once the circuit box has been mounted, use plastic cable ties* to secure the Solargizer wires to a cable or other secure area near the battery. This will keep the wires from tangling with moving engine parts or from accidentally being disturbed by a mechanic.

For examples of circuit box installations, go to our [Installations](#) section.

*Not included.

B. Connect Lugs To Battery Terminals

IMPORTANT: The positive (+) Solargizer wire (red) must be connected to the positive (+) battery terminal and the negative (-) Solargizer wire (black) to the negative (-) battery terminal in order for Solargizer to work.

Industrial 12-Volt, Receptacle and Marine Solargizer:

Single 6- or 12-volt batteries --

1. Slip the round metal lug at the end of the positive (red) Solargizer terminal wire onto the bolt securing the battery clamp to the positive terminal until it sits next to the nut tightening the clamp.
2. Slip a star washer* onto the bolt and next to the lug.
3. Screw a hex nut* onto the bolt and tighten it until it secures the lug and washer between it and the clamp nut. This will allow Solargizer to send a pulsating dc current through the terminal and into the battery which will eliminate the buildup of sulfates on the lead plates.

**Not included.*

4. Repeat steps 1 - 3 for the negative wire.

To see an illustration of an Industrial 12-Volt Solargizer on a single 12-volt battery, [click here](#).

Two 6-Volt Batteries In Series --

For two (2) 6-volt batteries connected in series to equal 12-volts, follow steps 1 through 2 above. On step 3 connect the positive wire to the positive terminal on Battery 1 and the negative wire to the negative terminal on Battery 2 (see Fig. 2).

To see an illustration of an Industrial 12-Volt Solargizer on two 6-volt batteries, [click here](#).

Batteries In Parallel --

For 6-volt batteries install one (1) Industrial 12-Volt Solargizer on each set of two (2) batteries (see instructions above). For 12-volt batteries install one (1) 12-Volt Solargizer on each battery.

24-Volt and 36-Volt Solargizers:

For 6- or 12-volt batteries connected in series to equal 24 volts, use the 24-Volt Solargizer. For 36 volts use the 36-Volt Solargizer. To install, see steps 1 through 2 under the 12-Volt Solargizer section. On step 3 connect the positive wire to the positive terminal on Battery 1 and the negative wire to the negative terminal on the last battery in the set.

To see an illustration of how a 24-Volt Solargizer looks installed on two (2) 12 volt batteries, [click here](#). For an illustration of a 36-volt Solargizer on three (3) 12-volt batteries, [click here](#).

C. Mount The Solar Panel

While the solar panel on both the Solargizer and the Marine Solargizer mount the same way, the Marine also has a quick-disconnect between the solar panel and circuit box to make installing even easier.

1. Before proceeding, peel off the protective plastic sheet covering the panel and discard.
2. Mount the panel where it will have direct access to sunlight. (Note: Make sure it is mounted on a flat surface and DO NOT bend or flex the panel.) If installing the Marine version, you can separate the quick-disconnect on the wire if need be and then reconnect it after the panel is installed. The solar panel can be mounted in one of the following ways:
 - *1st Method:* For a semi-permanent installation, use four flat head screws to mount the solar panel to a flat surface on your vehicle or equipment.
 - *2nd Method:* Attach the solar panel by using two pieces of double-sided tape* as follows:
 - Clean the surface where you plan on mounting the solar panel to remove all dirt, oil, etc.
 - Peel off the backing from the double-sided tape and stick both pieces to the back of the panel lengthwise along the edges. NOTE: If mounting panel inside your windshield, stick the tape on the front of the panel on the black section where the wire connects and along the opposite edge where the Solargizer name is printed. DO NOT mount the tape on top of the blue solar cells or the silver strip above the Solargizer name. (Note: Some windshields are designed to block ultra violet light which will reduce the effectiveness of the solar panel.)
 - Peel off the backing from the opposite side of the tape and press the panel firmly against the vehicle surface or windshield.
 - *3rd Method:* Mount the panel on the outside of the windshield by using a set of suction cups (Part No. 735X834)

available from your PulseTech Dealer.

- *4th Method:* The panel can also be mounted using a variety of industrial strength adhesives* that can be purchased at your local auto parts or hardware store.

3. Once the solar panel has been mounted use a plastic cable tie to secure the wire to a cable or other stable area near the battery. This will keep it from tangling with moving engine parts or from accidentally being disturbed by a mechanic.

For examples of solar panel installations, go to our [Applications](#) section.

**Not included.*

D. Splicing The Solar Panel Wire (Optional)

If you wish to remove any excess wiring or lengthen the wiring between the solar panel and circuit box once they are mounted, follow these steps. NOTE: DO NOT connect the circuit box to the battery until after the splicing is completed. Also, the splicing can take place only between the solar panel and circuit box and NOT between the circuit box and battery.

1. Pull the two connected wires apart and use a pair of wire cutters to cut one wire at a time to avoid causing a short. Remove the desired amount of wire.
2. Strip both cut wire ends approximately 3/8".
3. Take one end of the positive (+) wire (red) connected to the solar panel and insert it into the male end connector* exposing only bare wire. Take the end of the positive wire connected to the circuit box and do the same with the other male end. NOTE: A simple wire* nut may also be used. A good connection is critical to proper operation.
4. Hand tighten both male ends into the barrel.
5. Repeat the process with both negative (--) wires (black).

Note: If you wish to extend the length the solar panel wires, it can be spliced with up to 10-feet of 22-gauge wire.

**Not included.*

LED

Each Solargizer unit has an LED on top of the circuit box. The LED will light up when the wires are attached to the battery terminals and the unit is activated (the panel is exposed to sunlight or the ac adapter on the Receptacle units are plugged into an outlet). Once the unit is installed, if the LED does not light it may be due to one of the following reasons:

1. You do not have enough sunlight to activate the circuit.
2. The Solargizer has been installed incorrectly (reversed polarity or a short).
3. There is a bad connection.
4. The battery has a short.

Receptacle Solargizer Models

The 24- and 36-Volt Receptacle Solargizer models include both a solar panel and a specially-designed 110-volt ac adapters that can be plugged into an electrical outlet to power the circuit boxes.

1. Install these models using the same instructions listed previously for circuit box and solar panel. When mounting the circuit box, make sure the box is installed upright so the the receptacle (hole) on the bottom of the box is pointing down. This will keep water, grease, dirt, etc. from collecting in the hole.
2. When the vehicle or equipment is stored, insert the tip of the adapter connector into the small receptacle (hole) on the bottom of the circuit box.
3. Plug the adapter into a 110-volt (or 220-volt if that is the model you purchased) ac electrical outlet. The adapter will now power the Solargizer unit 24-hours a day as long as electricity is supplied by the outlet.

Basic Care and Cleaning

The Solargizer system is completely weatherproof so normal moisture will not damage it. If the solar panel gets dusty or dirty, simply clean it with mild soap and water. DO NOT use cleaning solvents on the circuit box or the solar panel.

Precautions

- DO NOT hold positive and negative lugs at the same time while the solar panel is exposed to sunlight. It may cause a slight electric shock. Be sure to keep the panel out of sunlight during installation.
- Any solvents that may be harmful to plastic should not be used on or near the unit.
- Secure ALL Solargizer wires and verify they are a safe distance from moving parts before starting the vehicle.

WARNING: The pulsating dc current produced by this product may interfere with the correct operation of some electronic devices when the unit is placed near the antenna. In order to insure no interference, the circuit box should be placed away from the antenna.

For More Information

For more information on installing and using Solargizer or our other battery maintenance products, contact your local [PulseTech dealer](#). Or contact PulseTech at **1-800-580-7554** or PPC@pulsetech.net.

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