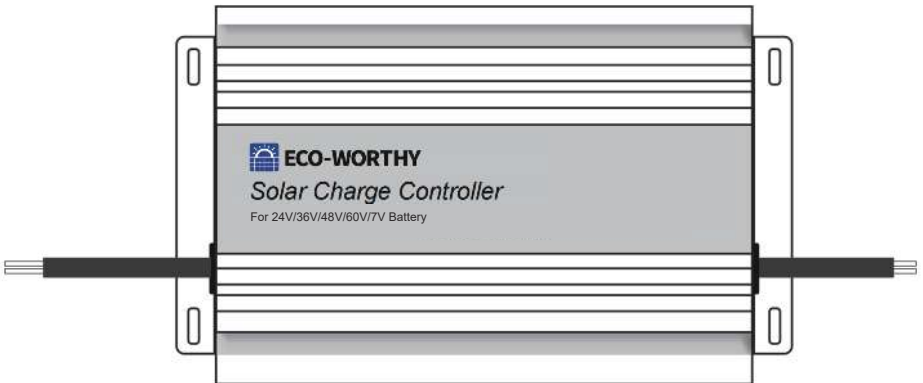




**ECO-WORTHY**

# SOLAR CHARGE BOOST CONTROLLER (User Manual)



ECO-WORTHY solar charge boost controller is a device for boosting solar charge voltage. The boost controller can work on 24V/36V/ 48V/60V/ 72V Lead-acid battery, Lithium battery, GEL battery, Flooded battery, etc. It's perfect for golf cart and off-grid power system.

## FEATURES

- Highly-functioning MCU to stabilize the system
- Visualized charge voltage and current
- 24V/36V/48V/60V/72V switchable output voltage
- Protection for overcharge, reverse current, overheat and reverse wiring
- Draw power only from solar input, zero battery consumption

## TECHNICAL DATA

Display	LED digital
Input Voltage	DC 13-50V
Input Power	450W
Working Current	12A
Charge Efficiency	>93%
Output Voltage	24V/36V/48V/60V/72V
Battery Type	Lead-acid/Lithium/GEL/Flooded
Working Temperature	-20°C~60°C (-4°F~140°F)
Heat Dissipation	Cooling fan(Auto-turn-on at 131°F)
Ingress Protection	IP30
Size	134*87*47mm (5.3*3.4*1.8 inch)
Weight	375g (0.83 lbs)

## INDICATOR & LIGHTS

**Work light:**Constantly on when the controller is charging the battery.

**Charge light:**Constantly on when the controller is charging the battery. Flash when the battery is full.

## SETTINGS

***The set button has two functions:***

- 1.Check the PV input voltage and controller temperature.
- 2.Set charging voltage for lithium battery.

***Check the PV input voltage and controller temperature.***

When the work light is on, press the set button once to show PV input voltage one the upper screen and the controller temperature on the lower screen.

***caution!***

The default battery type for the boost charge controller is lead-acid, if your golf cart battery is 48V/60V/72V lead-acid battery, then adjust the voltage gear of boost charge controller to fit your golf cart battery.

If your golf cart battery system voltage is 24V/36V, Or your golf cart battery type is lithium battery, according to the last passage, 48V/60V/72V voltage gear have default charging parameter for 48V/60V/72V lead-acid battery,you need to manually adjust charge voltage .

- For 48V, the settable voltages are: 54.6V / 54.8V / 58.4V / 58.8V
- For 60V, the settable voltages are: 67.2V / 71.4V / 73V
- For 72V, the settable voltages are: 84V / 87.6V

### ***How to set the charging voltage of boost controller?***

Step1:adjust voltage gear to fit your golf cart battery (e.g adjust voltage gear to 60V for 60V golf cart battery) .

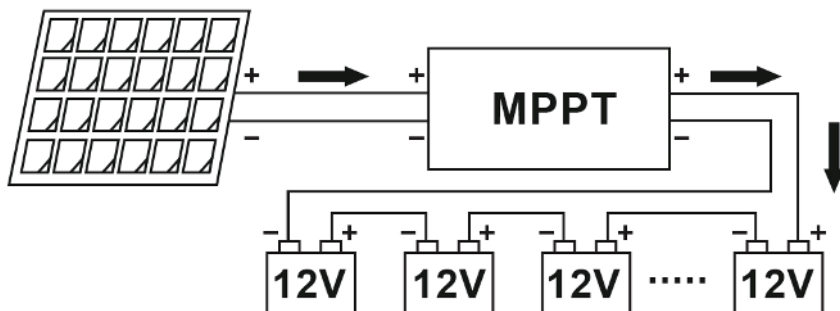
Tips:For 24V/36V golf cart batteries , you need adjust voltage gear to 48V.

Step 2: Hold “SET”button 5 seconds , released “SET”button until the volt age on the display starts flashing.

Step 3: Press “SET”button a once for adjusting charge voltage (In 0.1V step ) ,Hold “SET”button for quick charge voltage adjustment.

Voltage Gears	Default Charging Voltage	Battery Voltage	Charging Voltages Range	Best Charging Voltage for LiFePO4 Battery
48V	57.6V	24V	18.8-59.9V	29.2V
		36V		43.8V
		48V		58.4V
60V	72V	60V	60-74.9V	73V
72V	86.4V	72V	75-89.9V	87.6

## WIRING DIAGRAM



### *Installation Guide*

Step 1: Connect the controller to the solar panel, with the positive pole of the red line connected to the positive pole of the solar panel and the negative pole of the black line connected to the negative one of the solar panel.

Step 2: After the solar panel is connected, the controller will turn on. You need to adjust the gear switch to the same voltage as the battery.

Attention: For lead acid batteries, flood batteries, and gel batteries, you only need to adjust the gear switch and DON'T TOUCH THE "SET" BUTTON! If you use a lithium battery, the voltage needs to be reset. You can refer to the lithium battery setting method.

Step 3: Connect the controller to the battery pack. Likewise, connect the positive pole of the red wire to the positive pole of the battery, and connect the negative pole of the black wire to the negative pole of the battery. Now you complete the installation.

**Error 1:** The work light is not on and the screens are not showing any numbers

**Solution:** Check if the solar panels and the controller are correctly connected. If everything's correct, then the controller might be damaged. Contact service team for further assistance.

**Error 2:** The Voltage screen is showing normal readings but the Current screen is not.

**Solution:** Check the fuse to see if it's blown or check if the battery and the controller is correctly connected.

## Note:

1. It is strictly prohibited to use the controller under excessive voltage or power. The controller will not work if it is connected to the battery without solar panel.
2. The voltage gear of the controller must be consistent with the battery's, and it's dangerous to charge a battery with a higher voltage gear.
3. The controller should be connected to the solar panel first, and then to the battery. The current input and output of the controller are both positive on the red line and negative on the blue line.
4. The length of the wires connecting the controller to the battery and solar panel should be as short as possible to reduce electrical losses.
5. Solar panels should be fully exposed to sunlight without any obstruction and shadows.
6. To user of household electric vehicle: The blue (black) line in the charging line is positive and should be connected to the red output line of the controller.
7. It is prohibited to replace fuses with larger ones or copper wires. The fuse of the 450W controller is 10A.
8. The controller must be protected from water. And it's highly recommended to be installed inside the Golf Cart.

## SUPPORT

**Contact number:**

US 1-866-939-8222

UK +44 20 7570 0328

**Email:**

customer.service@eco-worthy.com