



## 12 AMP Solar Charge Controller

### User Manual



**! WARNING:** Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item #16002

**SAVE THESE INSTRUCTIONS**

## Important Safety Information

Save the receipt and these instructions. It is important that you read the entire manual to become familiar with this product before you begin using it.

This product is designed for certain applications only. the distributor cannot be responsible for issues arising from modification. We strongly recommend this product not be modified and/or used for any application other than that for which it was designed. If you have any question relative to a particular application, Do not use the product until you have first contacted the distributor to determine if it can or should be performed on the product.

### **WARNING**

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be a safer experience and do the job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.



#### **WARNING**

This product can expose you to chemicals, including Di (2-ethylhexyl) phthalate (DEHP) which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information, go to [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)



#### **ADVERTENCIA**

Este producto puede exponerlo a productos químicos, incluidos Di (2-etilhexil) ftalato (DEHP) que el estado de California sabe que causa cáncer, defectos de nacimiento u otros daños reproductivos. Para obtener más información, vaya a [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

## Intended Use

Any solar panel that is rated 12 watts or higher requires the use of a charge controller. Ecowareness Solar panels and charge controllers come equipped with easy j-plug adapters. The 12 Amp Charge controller is designed to protect your 12 Volt batteries from being overcharge by high voltage surges and prevents discharging of the battery overnight. LED lights display battery "Charged" or battery "Charging". Never deeply discharge your battery; never let your battery voltage pass below 11.0 volts. It will cause permanent damage to the battery. Use a DMM (Digital Multi-Meter) to measure your battery's voltage. When connecting and during operation it is normal for both lights to flicker for a short time.

## Parts List

Reference	Part Description	Quantity
1	12 AMP charge controller	1

## Technical Specifications

Property	Specification
Battery voltage system	12V
Charging current (max)	12A
Charging power (max)	180W
Cut-in voltage	13V
Cut-out voltage	14.2V

## Assembly Instructions

### Mounting:

Consider the location – ideally placed within 2 -5 feet of battery, in a well protected dry place, free from moisture and weather.

This product is designed to be flush mounted or wall mounted.

### Connection:

#### Step 1: connect the charge controller to the battery

Using "to Battery" wire, connect the battery clamp adapters to the charge controller. Next, Connect red positive (+) battery clamp to the positive(+) battery terminal. Then connect the negative (-) battery clamp to the negative (-) battery terminal.

#### Step 2: connect the charge controller to the solar panel

Using "to Solar Panel" wire on the charge controller. Connect JPlug to the solar panel J- Plug.

**WARNING: Connections must be placed in order and ensure that the positive (+) matches the positive(+) and the negative (-) matches the negative (-). (Connections are in Parallel)**

Wrong connections may cause damage to parts or all of the system.

### J-Plug Connection

Confirm that connections are tight and secure.

### Connecting Multiple Solar Panels.

Contact Ecowareness for 3 -in-1 J-Plug connection wire, or more information on connecting multiple solar panels.

## Operating Instructions

- Observe manufacturer's safety procedures when working around batteries and other electrical equipment
- Always connect charge controller to the battery first and remove last.
- This product is designed to be used on 12 volt configurations in parallel, (optional 6 volt in series)
- This product is designed to receive charges from 12 Volt Solar Panels
- This product should be placed in a well ventilated dry area, free from flammable gases, weather, and moisture Charge controller is NOT weatherproof
- Charge controller should not be installed further than 2 to 5 ft. way from the battery. Solar Panel length must not reach further than 20 ft way from battery or loss of current may occur.
- LED light indicates a full battery charge "green" at 14.2 Volts, at this time the charge controller will cut out to prevent overcharging
- LED light indicates battery charging "yellow" when battery reaches below 13 Volts, charge controller will cut in and allow solar panel to being charging
- Charge controller can handle up to 165 Watts of solar power

## Limited Warranty

Ecawareness warrants our products to the original purchaser that this product is free from defects in materials and workmanship for the period of one year from date of purchase. In the case of product defect, contact Ecawareness customer service to receive troubleshooting. If defective part or unit should be returned, a Return Authorization Number must be issued by Ecawareness and the defective part or unit should be returned to the authorized location at the purchasers' expense. A dated proof of purchase is required to receive warranty service. Once received at authorized location and defect proves to be the result of defective material and workmanship, the defective part or unit will be replaced at warrantors' option and returned to the original purchaser at warrantors' expense. No refunds will be granted by the warrantor, in the event of buyer's remorse please contact your point of purchase within and in adherence to their return policy. Refunds are granted at the retailers' discretions.



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