



CL-3600 SOLAR CHARGER

INSTRUCTIONS

Thank you for buying the Coleman CL-3600 Solar Charger system. This product is built with high quality materials and components and will serve your needs for many years with minimal maintenance.

The Coleman CL-3600 Solar Charger is a fully integrated system designed to work with 12-volt batteries or an equivalent system (e.g. two 6-volt batteries connected in series). The battery is an important component of any solar charging system, and we suggest using a reliable deep-cycle battery. A battery that is connected to a solar system plays two important roles at the same time: it serves as both a power storage unit (in which you can store the electricity generated from the solar panel) and a stable power source (from which you can run fluorescent lights, small TVs, radios, laptops, VCRs and any other small appliances).

This solar system generates DC electricity using wires with specific polarity (negative and positive). It is essential to maintain the integrity of these polarities throughout the circuitry. We do not recommend using any wires other than those provided.

PACKAGE CONTENTS (SEE ILLUSTRATION 1)

- ① Three (3) weatherproof solar panels, each with a 10-ft (305 cm) J-plug output cable (L: 39 in. / 100 cm W: 14 in. / 36 cm, Weight: 12 lbs. / 5.4 kg)
- ② One (1) 4A 12-volt/24-volt self-adjusting charge controller
- ③ Two (2) charge controller J-plug to splice wire assembly connectors
- ④ One (1) three-into-one wire junction harness
- ⑤ One (1) CLA (cigarette lighter adaptor) connector
- ⑥ One (1) battery clamp connector
- ⑦ Three (3) mounting screw packages containing four (4) screws each

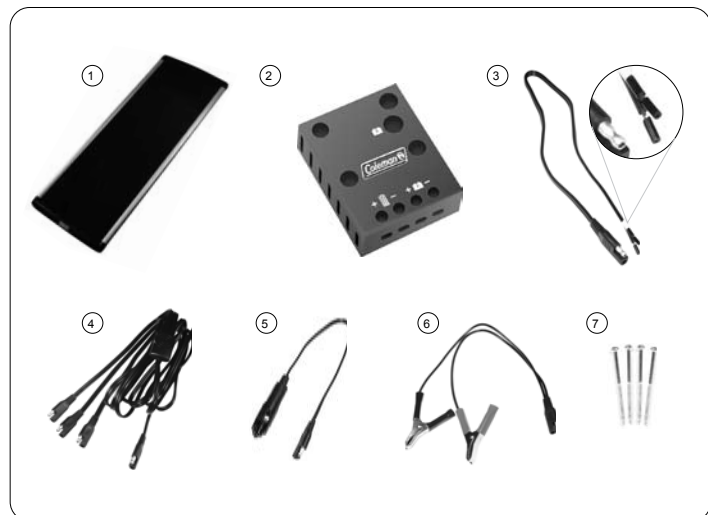


Illustration 1

*** Before installing your solar charger, please ensure that all components are included. If one or several items are missing from this package, please contact customer service immediately at www.colemansolar.com or 1.888.427.7652 (toll-free).**

INSTALLATION

System installation is simple but requires careful planning. Before you begin, it is important to select the best location for the solar panels, battery and charge controller.

1. SOLAR PANEL LOCATION

Solar panel location is a key factor in maximizing your system performance. Since electricity generation is directly dependent upon the total amount of sun exposure, to ensure that your system performs at the highest level it is important to position the solar panels in a location that follows the natural path of the sun. You should also be sure to keep your system away from any trees or other obstacles that might shade the active panel area.

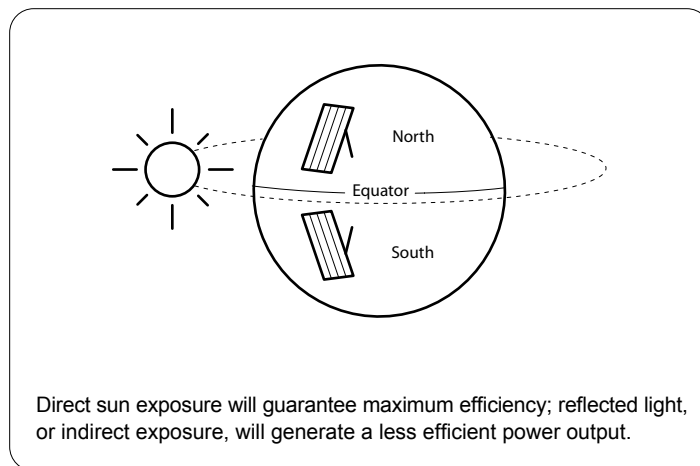


Illustration 2

Also, the panels – dark side up – should face south if you live in the northern hemisphere (e.g. Canada or the US) and north if you live in the southern hemisphere (see illustration 2). Once you have settled upon the ideal location (taking into account the placement of the battery and the connection to your application), you should mount your panels at an angle of 30 to 40 degrees facing the appropriate direction (e.g. south or north).

2. CHARGE CONTROLLER LOCATION

The charge controller is an important component of your system that **must be located indoors** and in close proximity (12 in. / 30 cm) to the battery. It protects your battery from overcharging and unwanted discharge, thereby preventing damage and increasing system efficiency. **DO NOT** place the charge controller outdoors, as it will negatively impact the performance and functionality of your system.

3. MOUNTING YOUR SOLAR PANELS

Each panel must be securely mounted using either a stand or a permanent structure (not included). To mount your solar panels, place one of each of the four (4) screws provided in the mounting holes of the plastic housing. Please be sure to mount the panels in an upright position (blue LED at the top) and to **allow room for the J-plug output cables** to be connected to the three-into-one wire junction harness.



Please note: The screws provided are compatible with wooden and other soft mounting surfaces. To mount your panels on brick or concrete surfaces, please purchase the appropriate screws for these applications. For all applications, it is important to ensure the screws are

not over-tightened and to secure the panels without bending them, as this might crack and break the tempered glass substrate of the panel and negatively impact system performance.

SYSTEM CONNECTION

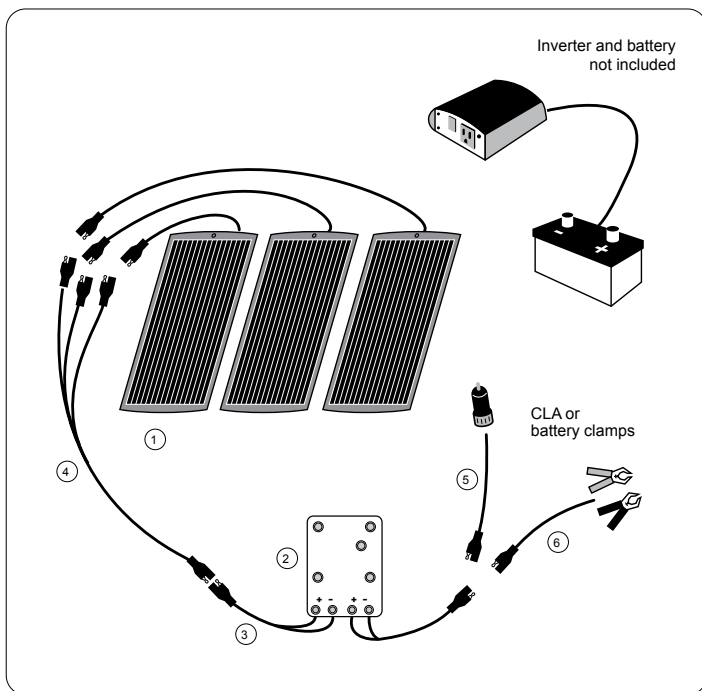



Illustration 3

It is important to follow these instructions in sequence to ensure proper connections between components and the correct functioning of your system.

1. CHARGE CONTROLLER

Warning: These connections must be made before connecting the battery and the solar panels to avoid having any live power inside the charge controller during the connection process.

The charge controller has two (2) sets of connection ports (positive and negative) illustrated on its housing:

 1. Solar panel input ports

 2. Battery output ports

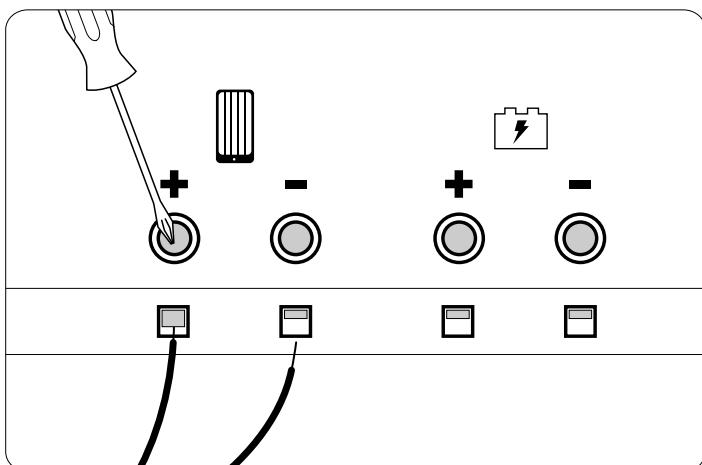


Illustration 4

The solar panel and battery connectors are essential to the proper functioning of your system. Please see the charge controller instructions for more information.

To connect the solar panels and the battery, please follow these steps in sequence for each connection (see illustration 4):

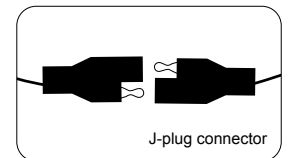
1. Select one (1) charge controller J-plug to splice wire assembly connector
2. Ensure the positive end of the wire is clearly identified
3. Remove the precut sleeve from each end
4. Slide each end of the wire into the appropriate port (+ to + and - to -)
5. Using a Philips screwdriver, tighten the screws and fasten the wire ends

Once you have completed both connections, mount the charge controller into position using the mounting instructions supplied with the charge controller.

2. SOLAR PANEL

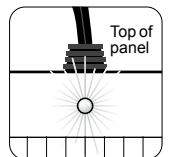
To connect the solar panels to the charge controller, please follow these steps in sequence:

1. Connect the 10-ft (305 cm) J-plug output cables from the three (3) respective panels into the three-into-one wire junction harness. Simply snap the J-plug connectors together. (see illustration 3).



2. Connect the three-into-one wire junction harness directly into the J-plug to splice wire assembly that is connected to the charge controller input solar panel port (see illustration on charge controller) by snapping both J-plugs together. (see illustration 3).

Please note: A blue LED light might be illuminated throughout the installation. If this is the case, it simply indicates that a current is being generated by the solar panel.



Also, if the three-into-one wire junction harness is only being used for one or two panels, all unconnected J-plugs should be capped using electrical insulating tape.

3. BATTERY

There are two (2) types of battery connections: CLA (cigarette lighter adaptor) and battery clamps (see illustration 3).

1) CLA (cigarette lighter adaptor): For charging your vehicle battery or system battery (house battery)

Most trailers, boats and recreational vehicles are equipped with a deep-cycle battery (house battery) connected to the electrical system. Often, the manufacturer of these units provides a direct connection to the battery (house battery) using a female cigarette lighter receptacle.

Before selecting the type of connector, it is important to (a) validate the connection of any female cigarette lighter receptacle as well as, in some cases, (b) identify the target charging battery.

(a) The first step is to verify that there are no switches or system constraints impacting the female cigarette lighter receptacle connection. In some vehicles, the female cigarette lighter receptacle only operates after an ignition or contact key is turned on, thus activating the circuitry. This is easily checked either with a multimeter (voltage) or by inserting a standard car lighter or other device that uses a cigarette lighter adaptor (e.g. cell phone charger, flashlight). If the female cigarette lighter receptacle is operational, you can expect any of these results: the lighter will quickly pop out, the cell phone charger will indicate that it is charging or the flashlight bulb will light up.

(b) In the event that you are running a vehicle **with two batteries** (house

and standard automotive start-up battery), it is important to ensure the female cigarette lighter receptacle is connected to the battery targeted for recharge. This is easily checked either with a multimeter (voltage) or by inserting a standard car lighter or other device that uses a cigarette lighter adaptor (e.g. cell phone charger, flashlight). To determine if the target battery is connected to the female cigarette lighter receptacle, simply disconnect the negative lead wire from the battery and validate the connection of the battery. If the female cigarette lighter receptacle is connected to the disconnected battery, the test will fail. If it does not, reconnect the negative lead wire and repeat the same process with the other battery(ies) in the system.

If your application has a valid female cigarette lighter receptacle, it provides a quick and easy way to charge your battery. Using the CLA, simply snap together the J-plug from the CLA wire assembly and the J-plug to splice wire assembly from the charge controller battery output port (see illustration on charge controller). Then, simply connect the CLA to your female cigarette lighter receptacle.

Please note: To charge at maximum performance, the charge controller should be located close to the battery. If the female cigarette lighter receptacle is not located in the same area as the battery, it will still recharge the battery but will likely require more time to complete the charge cycle.

2) Battery clamps: For charging a free standing battery

If your application does not have a female cigarette lighter receptacle, you must use the battery clamp connector provided. To connect to the battery using the battery clamp connector, simply snap together the J-plug from the battery clamp connector and the J-plug from the J-plug to splice wire assembly that is connected to the charge controller output port (see illustration on charge controller).

Respecting the polarity, connect both the red (+) and black (-) battery clamps to the battery. Ensure that the clamps are properly secured and provide good contacts with the battery. Once this is completed, your system should operate properly. If it does not, please double-check your connections and review installation procedure as described previously.

WARRANTY:

Please register online at:
http://www.icpsolar.com/4105/warranty_registration.asp

WARRANTY PERIOD: 2 YEARS

ICP Solar Technologies grants the original purchaser of the product a Limited Warranty on the power output and the materials of the module. ICP guarantees that unit will produce a minimum 80% of its original power rating for the Warranty Period from the purchase date. ICP warrants the module to be free from defects in materials and workmanship under normal applications, installation, use and service conditions for the Warranty Period from the purchase date. ICP will, at its option, either repair or replace the product if it becomes inoperable due to a defect in material or labor during the Warranty Period.

This warranty does not cover installation or costs derived thereof. ICP shall not be responsible for any costs due to removal, shipment, re-installation or any other loss due to warranty servicing. The maximum liability to ICP under this warranty shall not exceed the purchase price of this product. This warranty does not cover any module, which has been damaged by misuse, neglect, improper installation or acts of God, including lightning, floods, earthquakes, fire and high winds. This warranty does not cover accessories included with the product. This warranty does not cover broken glass or defective wires. This warranty does not cover damage due to water infiltration unless the product is weatherproofed by ICP. ICP shall not be responsible for any damage to persons or property caused by improper installation, misuse or improper handling of this product.

Some states do not allow exclusion or limitation of accidental or consequential losses so the exclusions may not apply to the purchase. This warranty gives you specific legal rights and you may have other rights, which vary from one state (or province) to another. If warranty service is required, please contact beforehand the dealer or distributor who sold you the module. For further assistance, contact our customer service department at customers@icpsolar.com or by calling our toll-free line at 1-888-427-7652. Please note that ICP will not accept returns without prior authorization. The original proof of purchase is required for warranty validation.

FREQUENTLY ASKED QUESTIONS

Q1: What types of batteries can I recharge?

A: You can recharge all types of 12V batteries including automotive, deep cycle, traction, gel-cell and heavy-duty.

Note: Depending on the type of battery in your application, charge controller settings might need to be adjusted. Please review charge controller instructions

Q2: How long will it take to charge a dead battery?

A: A single solar panel will supply the battery with 1.2 amps/hrs in full sun. Therefore, depending on the type of battery and conditions, a battery requiring 30 amp-hours for full charge would take approximately 25 hours of full sunshine to recharge. If you triple the number of panels, you should expect it to take a third of the time.

Q3: Can my solar panels drain my battery at night?

A: No. These solar panels are equipped with a built-in diode, which prevents reverse current.

Q4: Can I overcharge my battery with this solar panel?

A: Yes, and it is therefore important to use a charge controller with these panels. The charge controller will protect your battery from overcharging and unwanted discharge.

Q5: Can my solar panels be left outdoors without protective covering?

A: Yes, these panels are environmentally resistant and can be mounted outdoors.

Q6: Can I mount the solar panels directly to a surface?

A: Yes, these panels can be installed using the mounting screws provided.

Q7: Can I run an appliance, without a battery, by connecting it directly to my solar panels?

A: Yes, provided that the appliance is wired directly and its power needs are less than the solar panels' output capacity. However, we do not suggest using this system without a battery. Running directly from the solar panels creates many operational difficulties and does not allow for any shading or night applications.


NEED MORE HELP? WE'RE JUST A CLICK AWAY!

1) Visit the Coleman® Solar website at: www.colemansolar.com.

2) Send an e-mail to customers@icpsolar.com. Our technical support staff will answer all your questions within 24 hours.

3) In North America call 1.888.427.7652 (toll-free) between 9AM and 5PM (Eastern Standard Time).

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