

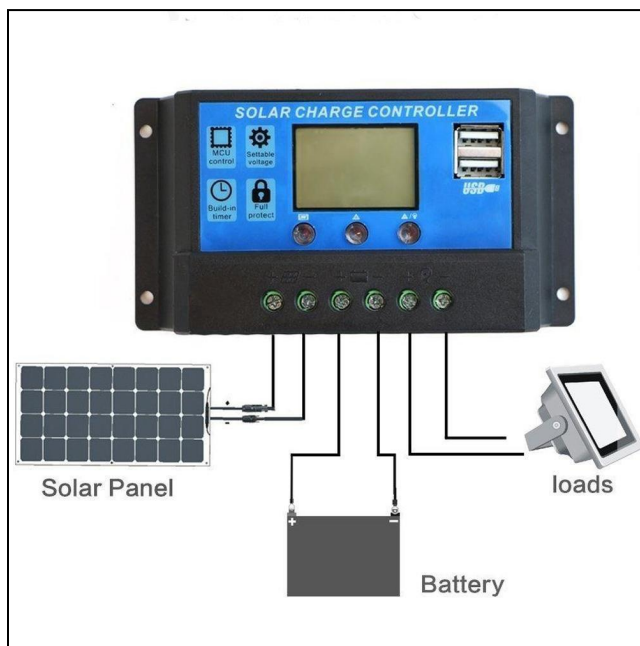


How to Connect your Solar Panel, Charge Controller, and Battery

By now you will have received your solar panel, charge controller, battery and wires to connect them.



Wiring Diagram



Here is the wiring diagram for your system.

The solar panel converts the sun's solar energy into electricity. The electricity then flows through the charge controller which regulate the voltage (a measure of the flow of electricity)

The charge controller prevents the battery from being overcharged.

The electricity then flows into the battery when it is stored.

We can use the electricity by plugging our load into the charge controller

You should have 2 sets of wires, One for connecting the solar panel and one for connecting the battery. The battery wires will have O-rings on their ends and solar panel wires will have MC4 connectors. See below



First make sure your wires are cut and stripped.

If they are not, cut your wires to your desired length. Then use wire strippers to cut through the rubber insulation on the outside of the wire and then pull it off, to expose the metal wire inside.

After all your wires are cut and stripped they should look like this

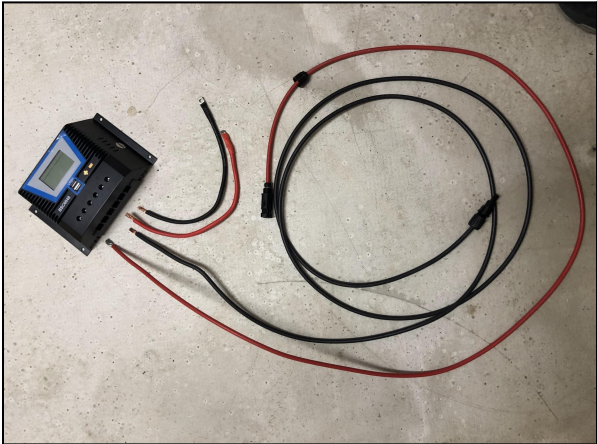


Then connect your wires to the charge controller, starting with the battery wires.



The charge controller has an input slot for the positive and the negative wire for the charge controller the battery and the load

1. Unscrew the screws
2. Place the stripped wire in the correct slot
3. Tighten the screw
4. Make sure that the wire is secure.
5. Repeat for the 4 battery and panel wires



Wire setup before plugging into charge controller



After plugging wires into the charge controller

Then connect the wires to the battery and to the solar panel

Starting with the battery.

The red wire will connect to the positive terminal of the battery and the black wire will connect to the negative terminal



Unscrew the terminal screw on the battery



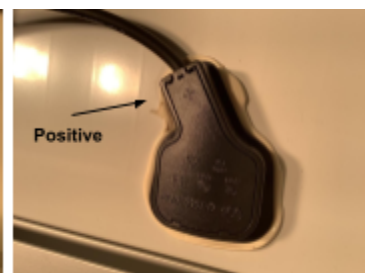
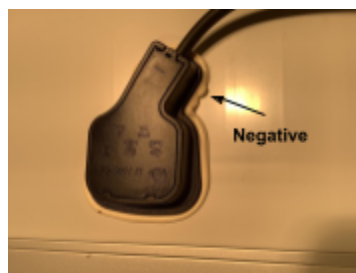
Put the screw through the O-ring and tighten

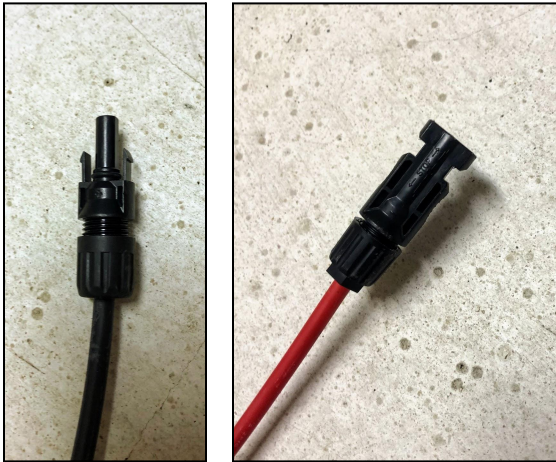


The battery should look like this after connecting both wires, the charge controller should light up. If the charge controller is not lit up double-check each of your connections

Then connect the solar panel

On the back of the solar panel you can tell which solar panel wire is positive vs negative





Connect your red wire with the positive solar panel wire and your black wire with the negative solar panel wire

The MC4 connectors should click together like this

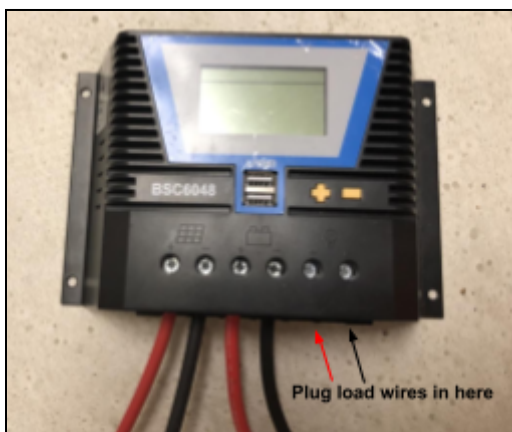


Now your system is complete.

When the solar panel produces energy is being regulated by your charge controller and stored in your battery.

Connecting your load

A load is something that uses energy to do something. It could be a light, a pump, a motor, a heater or something else depending on your project.



To connect your load you will plug the positive and negative wires from your load into the charge controller.

Congrats, you're done!
You have connected your solar panel, charge controller, battery, and load!