



## Autonomous Powering

Here we explain how to power your MAARU autonomously with solar power. If you have mains connection available, you can just plug into the wall. Similarly solar panels can be subbed for wind or other renewable power sources.

**If you don't want to power MAARU autonomously...** you should plug your pre-charged battery into a solar charge controller. Or if you are choosing to use a power bank with inbuilt charge moderation, you can plug right into the Pi

### For solar powered deployments...

	1. Connect the AWG10 cable to the solar panel. You can do this either by stripping and soldering this to the existing wire or by attaching the new cables directly to the panel (Keep note of the negative and positive terminals).
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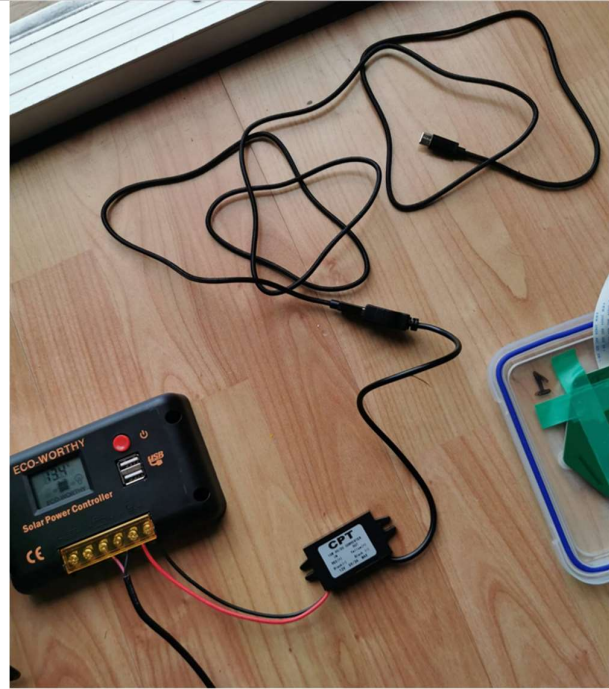


2. Connect the solar panel to the solar charge controller by the AWG10 wire. Ensure you connect positive to positive and negative to negative. Left two terminals in the picture here.

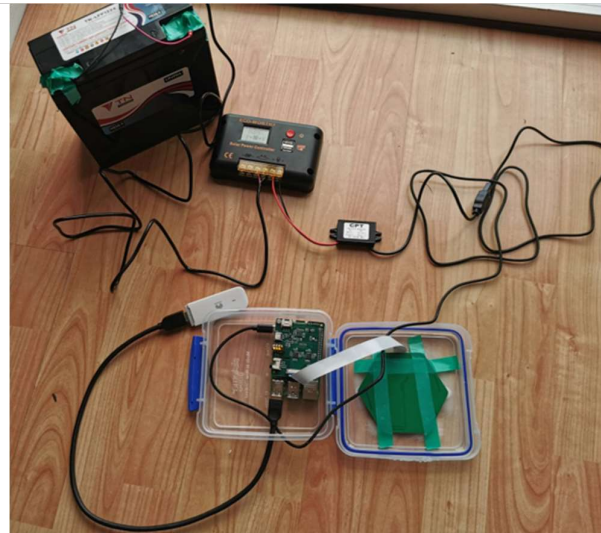


3. Connect the Battery to the solar charge controller (middle two terminals). You can use the AWG10 for this or I've often just used the wires that came with the panel/ solar charge controller set. Again, ensure you connect positive to positive and negative to negative. Note: the solar panel isn't attached here, but if for your field deployments make sure that it is.

4. Go through the settings on the Solar Charge Controller and make sure it all matches up to your battery. Especially: running voltage and battery type. This will maintain battery quality for longer



5. Attach the 12V to 5V step-down to the power out terminus on the Solar Charge Controller. Ensure the terminals match up and that the 12V side is attached to the solar charge controller. Right two terminals here. Note: Depending on the type of step-down converter you have you may need a USBC adaptor.



6. Plug the power source into the Pi

**TIP:** You can control whether the power is running to the Pi or not by the button on the solar charge controller