

Solar Powered, Self Contained Data Logger

APRS World, LLC

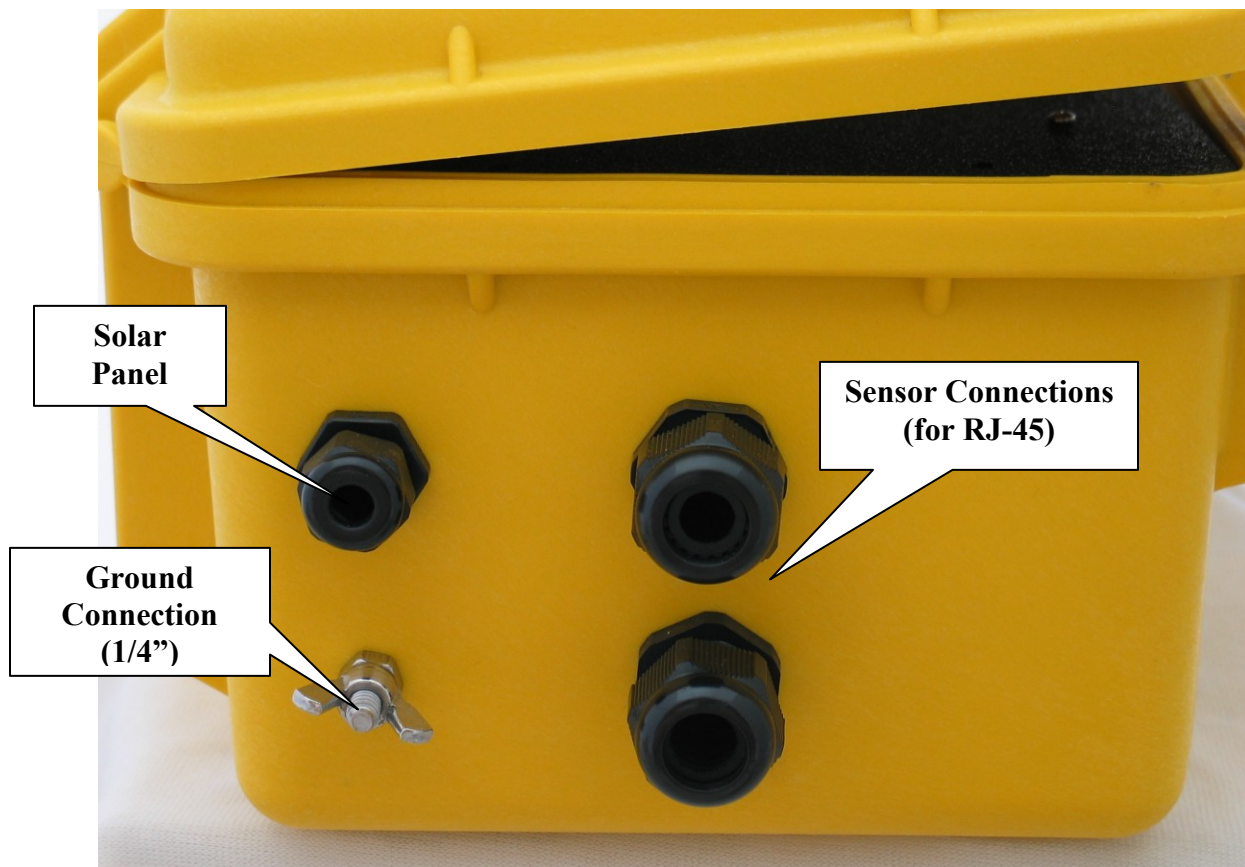
Revised 2009-01-16

Cable Installation

Install sensor and solar panel cables through weatherproof cord grips. The large grips are suitable for passing an RJ-45 connector. When cables are installed you should hand tighten the outer nut to force the gland to seal around the cable. This will provide a weatherproof connection into the enclosure and relieve strain on the cable.

Ground Hookup

The system incorporates internal lightning protection. To be effective the system must be grounded well. The 1/4"-20 bolt and wing nut provide a connection point for your system ground.



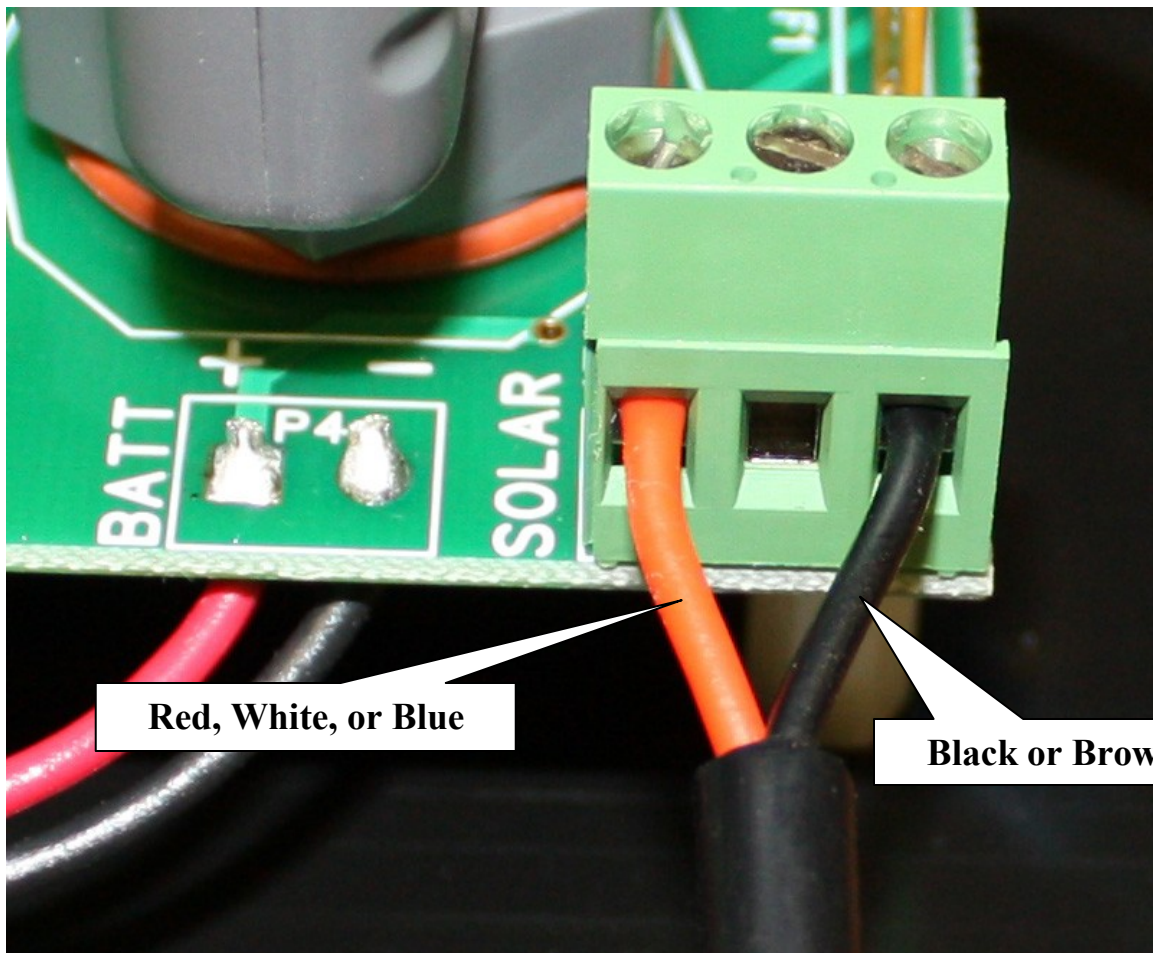
Solar Panel Electrical Hookup

The solar panel is sent disconnected and needs to be wired to the solar charge controller. The connection is located on the back of the black plastic panel. Remove the yellow thumb screws and flip the black panel over to expose the circuit board.

The solar panel will have a **red, white, or blue** wire to indicate positive and a **black or brown** wire for negative. These wires are connected with the three position screw terminal in the lower right corner of the wiring circuit board. The positive wire goes to the left most terminal of the connector and the negative wire to the right most terminal. The middle terminal is left unconnected.



Correct polarity **MUST** be observed when hooking up the solar panel. Reverse polarity can **DESTROY** the electronics! This will void your warranty.



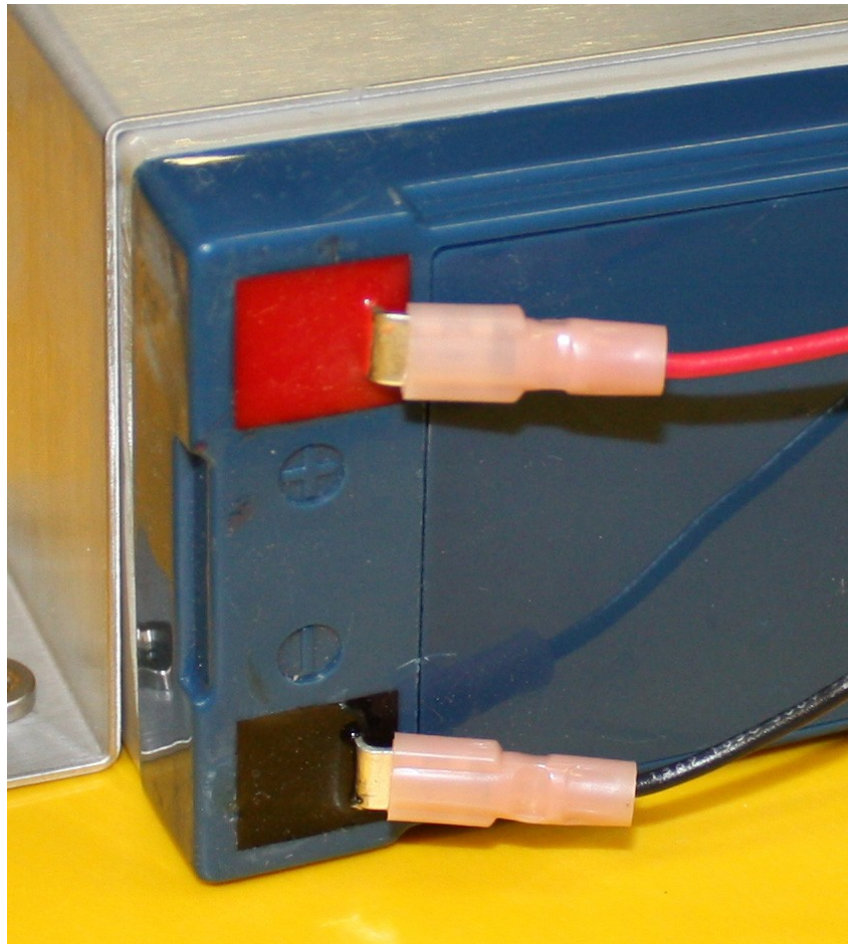
Battery Hookup

The battery is the large rectangular object on the bottom of the yellow case. It has a red and black terminal on one side. The red terminal should have the red wire and connector inserted over it and the black terminal the black wire and connector.



Correct polarity **MUST** be observed when hooking up the battery. Reverse polarity can **DESTROY** the electronics! This will void your warranty.

Be sure the connectors are firmly seated on the battery terminals.



Solar Panel Installation

The solar panel should be installed in a location free from daytime shadows. Orient the solar panel facing the equator and set it to an angle equal to your latitude plus 10 degrees.

For more accurate tilt angles you can visit:

<http://www.powerupco.com/technical/TiltAngle.pdf>

In snowy climates we recommend that you orient your panel nearly vertically to allow snow to slide off.

Solar Panel Grounding

The frame of your solar module should be connected to earth ground using one of the unused mounting holes provided on the module frame. When connecting to the module frame, a star lock washer must be used to ensure a solid electrical connection. Consult the National Electric Code (NEC) for grounding requirements.

Solar Panel Maintenance

Module surface may be cleaned as needed using soap and water. Abrasive materials and chemicals should not be used.

Solar Panel Warranty

Panels are covered by manufacturer warranty. Look for manufacturer label on the front or back of solar panel. Contact manufacturer directly or contact APRS World.