



**APRS World, LLC**  
**Wind Data Logger**

**Solar Powered  
Self-Contained  
Data Logger**

**Installation Guide**

**Covers Part Numbers:**

**APRS6060 Wind Data Logger package, solar powered, outdoor**

**APRS6063 Wind Data Logger #40R package, solar powered, outdoor**

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## WARRANTY

APRS World's support policy is simple—***we want you to be happy!*** If you have a problem, please feel free to contact us. We will do our best to get you up and running as soon as possible.

The Wind Data Logger has a one-year limited warranty. We will repair or replace your wind data logger if you encounter any manufacturing related problems within one year of purchase. We reserve the right to charge a reasonable fee for repairing units with user-inflicted damage or lightning damage. Please note that drilling holes in the case will leave your Wind Data Logger vulnerable to the elements, pests, and other natural damage. Therefore, **user created holes in the case will void your warranty.**

Any defective equipment must be returned for evaluation. It is your responsibility to ship the defective unit back to APRS World, LLC. We will pay for shipping the replacement to you. If it is necessary for you to receive a replacement for the defective unit prior to shipping it back for evaluation, then an invoice for the replacement equipment will be issued. If the defective unit is not returned or if we determine that the damage is not a warranty claim, then the invoice will become payable.

We reserve the right to upgrade your equipment to an equivalent or better model. This warranty does not cover the accuracy of the sensors connected to the wind data logger or the accuracy of the data collected by the Wind Data Logger.

## TECHNICAL SUPPORT

The Wind Data Logger is designed to be easy to install and operate. After the initial installation of your Wind Data Logger equipment, technical support is limited to issues not covered in our Wind Data Logger manual. APRS World, LLC reserves the right to charge a fee for technical support that either extends beyond the one year warranty period or for questions that are addressed in the latest manual.

## FURTHER INFORMATION

See our website for further and specialized technical information:

<http://www.aprsworld.com/selfcontained/solar/>

## SPECIFICATIONS

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### COMPONENT LIST

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- 10 watt Solar Panel
- Wind Data Logger Module
- Self Contained Enclosure
- Solar Panel Side of Pole Mount
- Anemometer Cable 100'
- Temperature Sensor 10'
- USB Secure Digital (SD) Card Reader
- Secure Digital (SD) Card

#### *APRS6060 Wind Data Logger package, solar powered, outdoor*

- Anemometer

#### *APRS6063 Wind Data Logger #40R package, solar powered, outdoor*

- Anemometer #40R, with Boot
- Stub Mast, 11"

### HARDWARE INCLUDED

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- 2 x ¼ – 20 x ¾" SS hex-cap bolt
- 4 x ¼ flat washer, SS
- 2x ¼ split lock washer, SS
- 2x ¼ hex nut, SS
- 4x ⅝ – 18 x ¾" SS hex-cap bolt
- 8x ⅝ flat washer
- 4x ⅝ split lock washer, SS
- 4x ⅝ hex nut, SS
- Mounting kit

### TOOLS REQUIRED FOR ASSEMBLY

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- Small Flat Head Screwdriver
- Large Flat Head Screwdriver
- ½" Socket Wrench
- 10 mm Metric Wrench
- ¼" Wrench or ¼" Nutdriver
- Wire Stripper

### SUPPLIES REQUIRED

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- 6 x Stainless Steel Hose Clamps (large enough for the diameter of the mast plus 1½")

## SOLAR PANEL AND MOUNT ASSEMBLY

<p>1. The hardware shown mounts to the back of the solar panel. Place the bolts in the slots and slide past the wiring box, to the right, on the back of panel. The mounting arm is then placed with the bolts pushing up through the slots. The washer and bolt are then secured in place.</p>	 <p>The image shows two parts: on the left, a collection of hardware including two flat washers, two lock washers, and one hex nut with a bolt. On the right, a solar panel is shown with a mounting arm being attached to its back. The arm is being pushed onto the bolts that have been inserted into the panel's slots.</p>
<p>2. Thread each hose clamp through one of the sets of narrow holes in the bracket as shown.</p> <p>When placing bracket on the pole, ensure that:</p> <ul style="list-style-type: none"><li>• The flat side of the bracket is against the pole</li><li>• The end of the bracket with the arm mounting holes nearest to the edge is up.</li></ul>	 <p>A close-up photograph showing a metal bracket being attached to a vertical metal pole. Two hose clamps are being threaded through the narrow holes in the bracket. The flat side of the bracket is pressed against the pole.</p>
<p>3. Tighten hose clamps.</p>	
<p>4. Place panel/arm assembly on the bracket as shown.</p>	  <p>The left image is a close-up showing the solar panel and its mounting arm being placed onto the bracket that is already secured to the pole. The right image shows the complete assembly from a wider perspective, with the solar panel tilted at an angle on the pole against a background of a landscape.</p>
<p>5. Insert bolt and flat washer from the inside out. Place a flat washer, lock washer, and hex nut on the outside. This orientation allows you to tighten the bolt with just one wrench.</p>	 <p>A close-up photograph of the bracket's mounting holes. It shows the internal hardware (bolt and flat washer) and the external hardware (flat washer, lock washer, and hex nut) being used to secure the bracket to the pole.</p>
<p>6. Adjust the tilt of the panel as desired, and tighten the bolts.</p>	

## SOLAR PANEL INFORMATION

### 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 vertical to allow snow to slide off.

### Grounding

The frame of your solar module should be connected to earth ground using one of the unused mounting holes provided in 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.

### Maintenance

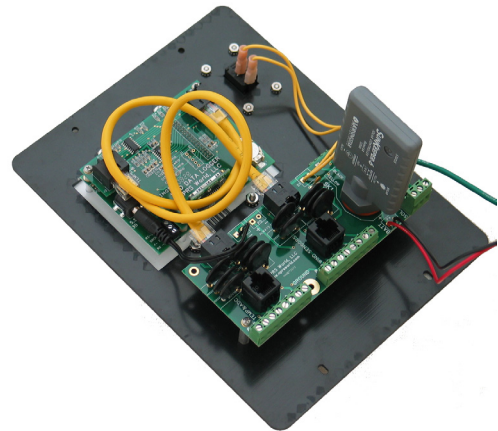
Module surface may be cleaned as needed using soap and water. Abrasive materials and chemicals should not be used.

### Warranty

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

## INSTALLATION OF DATA LOGGER

7. Open self contained enclosure, remove yellow thumb screws and pull out the black panel and flip over to expose the circuit board.



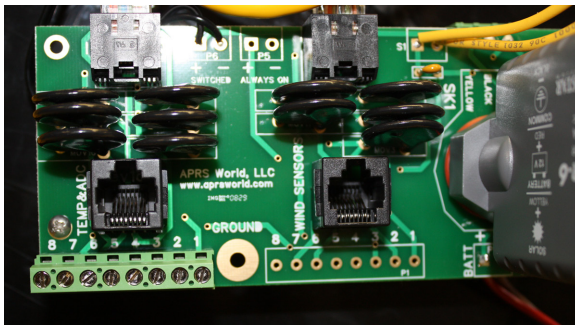
8. Put RJ 45 connector through weather proof cord grips (on the right) and plug into the circuit board where it's labeled wind sensor. Remove bolts on the anemometer and attach the other side of the wind sensor cord. Place bolts back on.



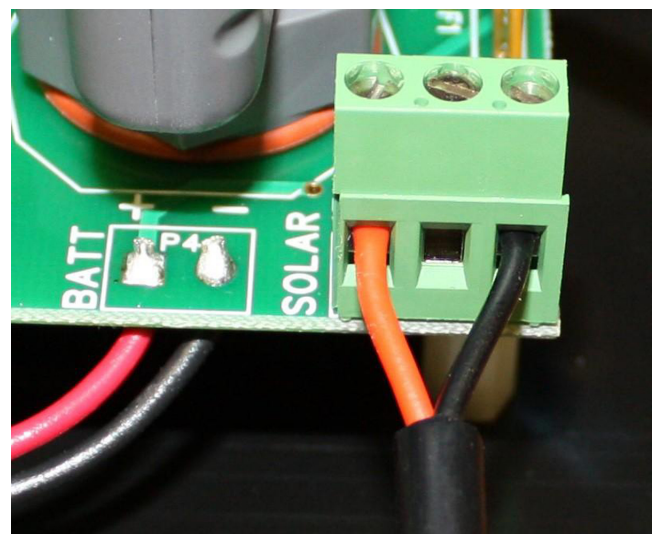
9. Place boot on anemometer.



10. Attach 10' temperature sensor to back of circuit board labeled Temp & ADC. Feed cord through weatherproof cord grips (on the right).



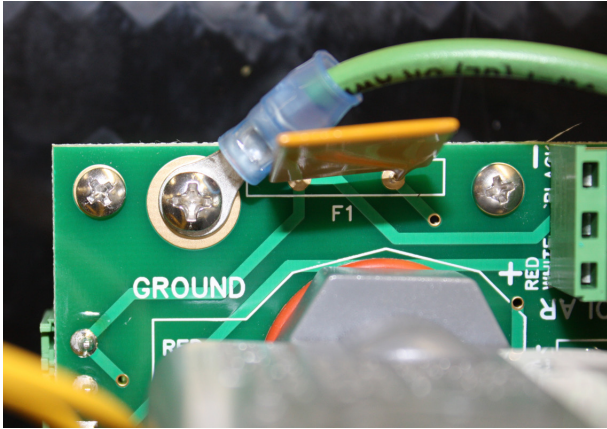
11. Hook up the solar panel battery (located inside enclosure) Red to Red, and Brown to Brown (or black).



**NOTE: Correct polarity MUST be observed when hooking up the battery. Reverse polarity can destroy the electronics! THIS WILL VOID YOUR WARRANTY!**

**12.** Feed cord from solar panel through the weather proof cord grip (the last one open on the left). Strip the cord about ¼". 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 circuit board. The positive wire goes into the left terminal (labeled on circuit board red, white, blue) and the negative wire to the right (labeled black or brown). The middle is left unconnected.

**13.** The system incorporates internal lightning protection. To be effective the system must be grounded well. The ¼ – 20 bolt and wing nut provide a connection point for your system ground. The green wire attaches to the circuit board labeled ground and the bolt and wing nut in the bottom of the box.



**14.** Once all wires are connected place the circuit board back into the case and put the thumb screws into place.

**15.** You can use the hardware to mount the case onto the pole. Take screws out of the back of the case. Place black mounting bracket onto the case using the nut, bolt and washer set provided. Do this on the top of the box and then again on the bottom. Then place hose clamps in the slots on the brackets, place on pole and tighten. Repeat for the bottom.



**16.** To set up to Wind Data Logger, please refer to the Wind Data Logger Manual.