



Read these instruction sheets along with all other component's instruction sheets that will connect to this system.

- Do not operate the controller without batteries! Be sure controller wires are connected to batteries before connecting or disconnecting wind and solar.
- You must have a dump load when using the controller with a wind turbine.
- Connect the thin sense wires to batteries only. To extend any charge controller wires, use the same size or larger. Do not hook up backwards! Positive=(red, +), negative=(black, -).
- Use proper sized power cables. Undersized cables get hot. This can cause wires to melt and transfer excessive heat to the relay.
- Be sure your connections are snug. Do not over tighten the nuts on the charge controller relay/solenoid.
- Don't make adjustments to controller's programming unless you are experienced or your system requires it.
- Avoid possible electrocution or burns.
 - Place controller up high and away from children and pets.
 - For indoor use only.

Troubleshooting and additional important information:

Voltage can fluctuate rapidly with fewer batteries. This can cause rapid on/off dumping (clicking sound). Increase the amount of batteries.

If your solar panel voltage is too high, rapid on/off dumping can occur. Example: 24V solar panels charging 12V batteries. 24V solar panels have a VOC of 32-38 volts. 12V panels have a VOC of 18-22 volts.

Solar and wind work great together. Wind turbines can charge 24 hours per day. Solar is 8 hours max.

Never mix and match batteries. All batteries must be the same type, size, and age. An old mismatched or shorted battery in a bank causes a lot of problems.

WARNING: Avoid braking your wind turbine in winds over 20 mph (32 km/hr, 5.6 m/sec), in storms, or for any long periods of time when the wind is blowing. This can cause your turbines coil to overheat and burn up (applies to most turbines with a blade diameter of 80 inches, 2 meters, or less without braking or furling mechanisms). The brake is typically used during maintenance and/or turbine erection/take down.

Do not allow your turbine to free spin in high winds as the blades can self-destruct and open turbine voltages can be LETHAL.

It is usually best to leave the switch in the ON position and let a charge controller and dump load regulate the turbine.