
USER MANUAL – 12V MINI WIND TURBINE – 01/2018

INTRODUCTION: Thank you for your purchase. This mini wind turbine is designed to harvest wind energy in a way that is portable and easy to set up. It is designed to provide a **maximum** of 15 watts. This maximum will only be achieved at the highest wind speeds.

HOW IT WORKS: Your wind turbine is equipped with a 12V male cigarette lighter plug. This plug can be inserted into any 12V outlet to charge a 12VDC battery. **Please note:** This product is designed to be used while monitoring the voltage of the battery. If the turbine is to be left unattended for a long time, we recommend using a wind turbine charge controller to avoid **overcharging your battery**.

If equipped, your mini wind turbine kit may include a 12V battery. Please refer to the chart below for typical 12 volt lead acid battery voltages.

VOLTAGE	STATE OF CHARGE	STATUS
12.60	100%	GOOD
12.50	90%	
12.42	80%	
12.32	70%	
12.20	60%	
12.06	50%	
11.90	40%	
11.75	30%	DISCHARGED – CHARGE AS SOON AS POSSIBLE
11.58	20%	
11.31	10%	BAD – CHARGE IMMEDIATELY. PERMANENT BATTERY DAMAGE MAY OCCUR
10.5	0%	

If your battery approaches 13.5V, we recommend disconnecting the wind turbine to avoid permanent damage to your battery. If your battery approaches 11.75V, we recommend using an additional charging method to charge your battery to avoid permanent damage.

As always, if you have any questions please don't hesitate to contact us through our website at <http://www.cuttingedgepower.com/about-us>. We typically answer all questions within 24 hours.

TROUBLESHOOTING		
Problem	Cause	Solution
No voltage output when blade is spinning	Many times the generator polarity (positive and negative) is marked wrong from the generator factory. This problem can also happen if the blade is reverse installed.	Loosen the generator set screw. Loosen the cable strain relief. Remove the generator from the body. Swap the positive and negative leads. Reinstall the generator.
Blade never spins	Some areas don't receive much wind. Other areas receive a lot of "dirty wind" which is composed of high speed wind that changes directions a lot.	You can try to reverse the blade and see if it helps. If not, Cutting Edge Power offers blades in larger sizes to accommodate your requirements. Contact us at Support@CuttingEdgePower.com
Blade flies off	The blade is loose on the generator shaft.	Your mini turbine blade is press-fit on from the factory. However, if it starts to get loose over time, you can install set screws in the holes in the side of the blade. The holes are sized for an M3 (3mm) machine screw.
Blade spins, acts like a fan	The blocking diode  is not working properly.	Make sure you haven't removed the blocking diode from the plug or mini turbine body.

BLADE REMOVAL/INSTALLATION:

All Cutting Edge Power blades are designed to be press fit on and may have additional set screws to hold it.

Blade removal: loosen the set screws (if equipped) on the blade. Remove the blade with a screwdriver, or other prying tool.

Blade installation: First try to push the blade on by hand. If it's not possible, you can set the blade on a hard surface and push the turbine on the blade. Install the 2 set screws to lock the blade in place. Do NOT install 1 set screw otherwise the blade will not rotate properly.

TIPS:

- Sometimes with low wind the turbine may need a "jump start" spin on the blade to get it started.
- Make sure to point the turbine directly in the direction of the wind.