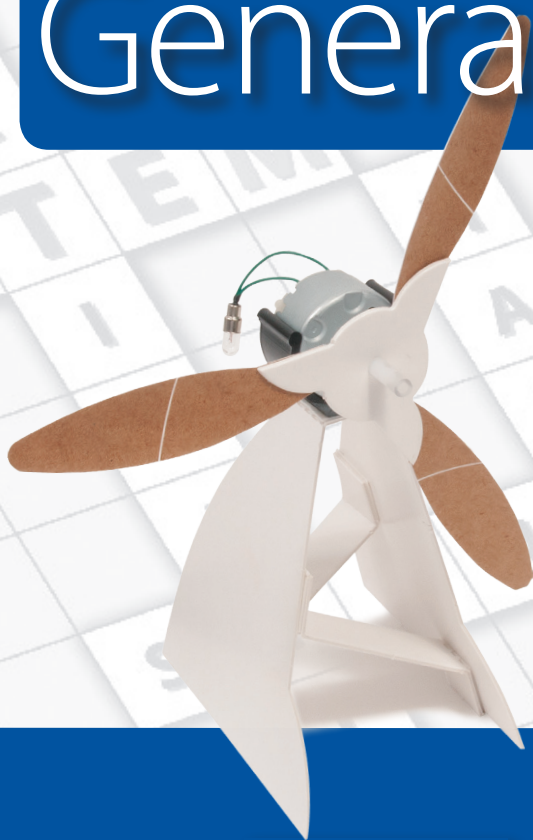


Eco-Wind Generator II

User Guide



PITSCO
EDUCATION

40696 V0814

Cautionary and Warning Statements

- This kit is designed and intended for educational purposes only.
- Use only under the direct supervision of an adult who has read and understood the instructions provided in this user guide.
- Read warnings on packaging and in manual carefully.
- Always exercise caution when using sharp tools.
- Keep hands clear of spinning blades.

Materials Included

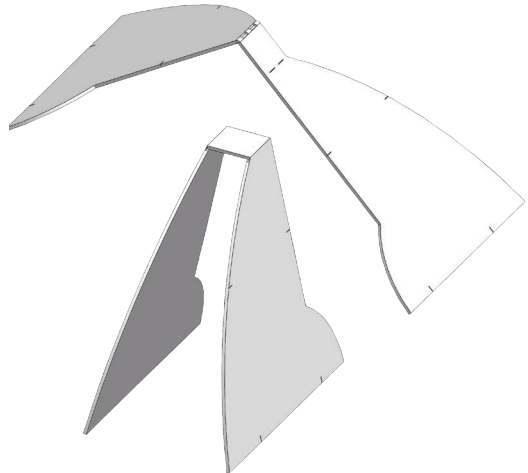
- Sheet of die-cut card-stock parts
- Blade templates sheet
- Motor with presoldered wires and bulb
- Small vinyl tubing
- Prop hub
- Motor clip
- 6 glue dots
- 5 self-adhesive foam tabs
- Cardboard half tube

Items Required (not included)

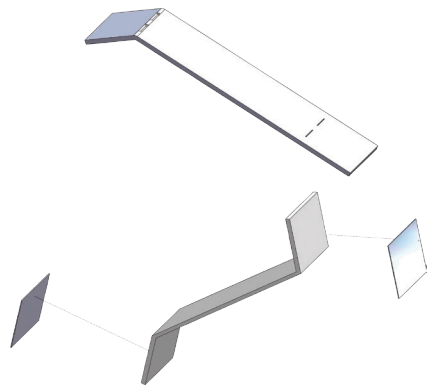
- Scissors
- High-velocity electric fan (not a box fan) or strong wind
- Ballpoint pen (optional)
- Straightedge (optional)

Building the Base

1. Pop out the die-cut parts.
2. Take the largest die-cut piece – this makes the base – and slightly bend the two scored lines near the middle of the piece.
3. Take the two rectangle parts and carefully bend the end flaps in opposite directions. Remove the foam tabs from the paper and apply one to each folded end of the rectangle parts. Be sure the tabs are on the bent-out sides as shown. Remove the backing from the foam tabs.



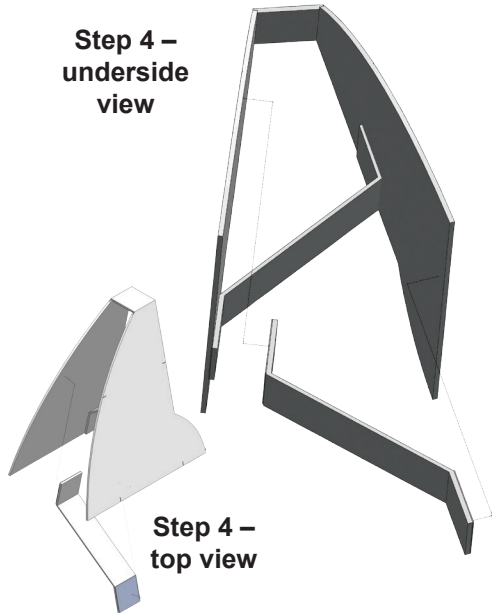
Step 2



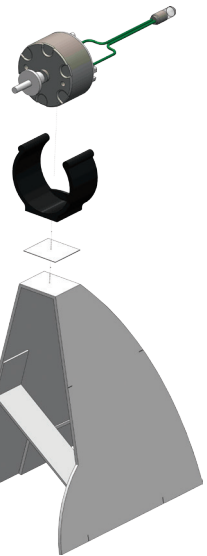
Step 3

4. Press one tab end of the rectangle at the bottom of the base front and just inside the front notch. Press the other tab end up higher on the other side of the base. It will be just under an etched notch. Repeat on the back of the base but so the rectangle angles are in the opposite direction of the first rectangle.
5. Put the last foam tab on the motor clip and press on top of the base. Press the motor into the clip.

**Step 4 –
underside
view**



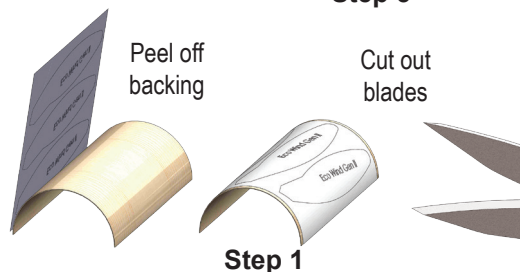
**Step 4 –
top view**



Step 5

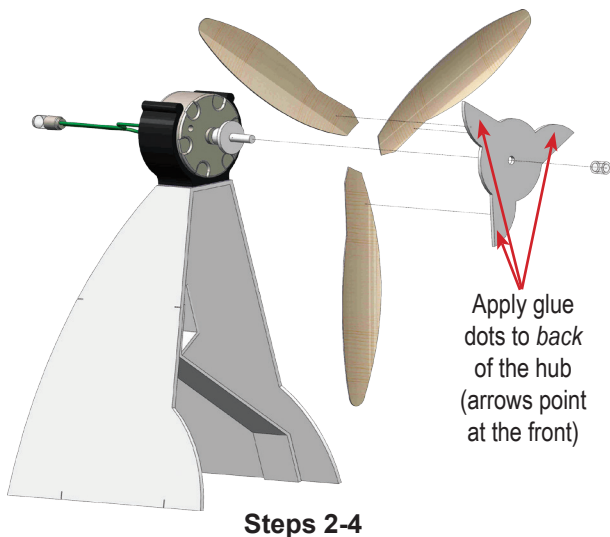
Assembling the Blades

1. Remove the backing from the blade templates and then line them up on and press them onto the cardboard half tube. Cut out the blades.



Step 1

2. On the die-cut hub, line up the wings so the slight bend in angle on the wings lines up with the hub end. Also, the inward curving side of the blade faces the hub. Mark where the bottom of the blade is on the hub.



3. Apply two glue dots in each marked area. Press on the blades.
4. Push the blade assembly onto the motor post and secure with the small piece of tubing.
5. Place the generator on a flat surface in front of an electric fan or in a good, strong wind. Turn on the fan and turn it up until the generator blades turn and the bulb lights up. You might need to secure the generator to the surface with tape if the fan is very strong.

Ideas for Using the Eco-Wind Generator II

- Use a multimeter to measure the voltage at different wind speeds and record the results in a data table. Graph the results.
- Wire two or more generators together in series and in parallel to see what effect there is on the bulb.
- Have students describe how a large-scale wind farm could provide power for homes and industry.

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