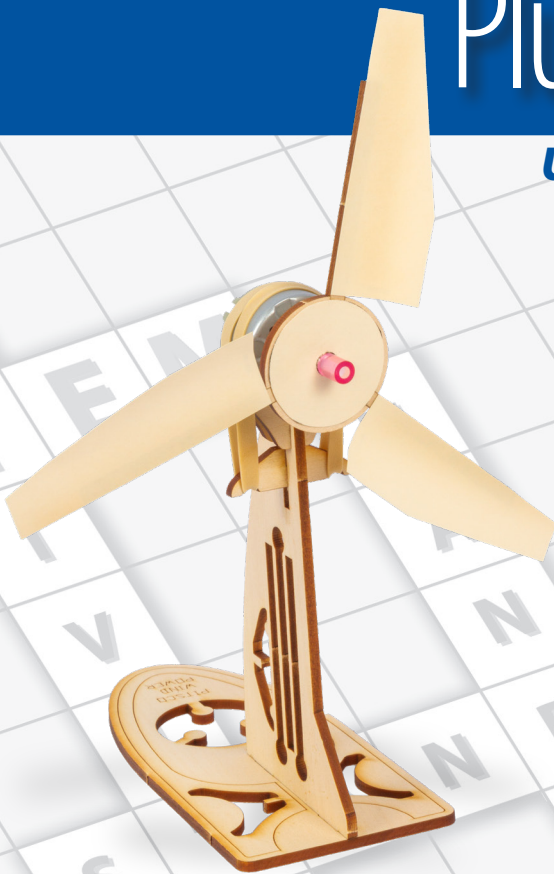


# Wind Gen Plus Kit

*User Guide*



**PITSCO**  
EDUCATION

59739 V0421

## **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.

## Materials Included

- 1 sheet card-stock circles and blades
- 1 piece of small tubing
- 1 motor with LED
- 1 rubber band
- 1 sheet of wooden laser-cut parts
- 1 prop hub

## Items Required (not included)

- HD Bond II or wood glue
- Waxed paper
- Masking tape
- Scissors or hobby knife
- Electric fan or source of wind

## Building the Wind Generator

1. On the area where you intend to work, spread a piece of waxed paper and tape it down to the surface. This will prevent glue from getting on the work surface.
2. Using scissors or a hobby knife, carefully cut out the circles and the blades from the card-stock sheet (Figure 1). Cut out the small circle in the middle of each card-stock circle.
3. Carefully pop out the laser-cut parts from the wooden sheet. Find the three Part 6s and one Part 5. Set aside all the other parts.
4. Glue the rounded end of each Part 6 into one of the holes around the perimeter of Part 5 (Figure 2).
5. When dry, glue a card-stock circle centered over Part 5. Press it firmly down and turn it over. Repeat with the other circle (Figure 2).
6. Glue each blade to the face of each Part 6. Make sure the printed side of the blades is facing down and the straight side is aligned with the edge of the Part 6s (Figure 3). Let dry.
7. Find Parts 2, 3, and 4. Glue the two Part 3s on top of Part 2 (Figure 4).
8. Glue Part 4 onto Part 2 in the slot under the Part 3s (Figure 5). Center this part in the opening of Part 2 and make sure it is set in place by sliding it as far up into the slot as possible.

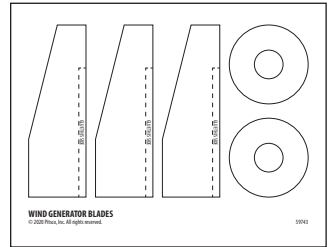


Figure 1

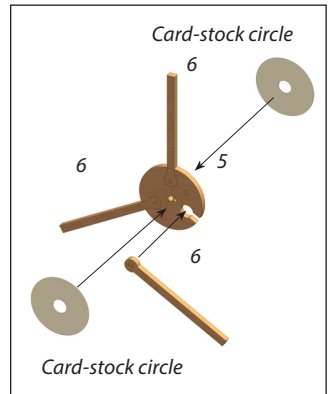


Figure 2

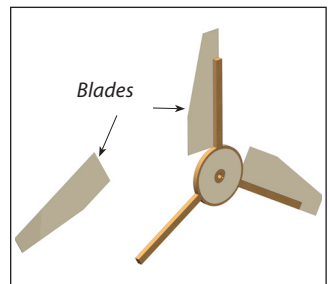


Figure 3

9. Glue the other end of Part 2 into Part 1 (Figure 6); this makes the stand. Let it dry.
10. Place the motor on top of the stand with the motor post facing toward the straight edge of Part 1 (Figure 7). Loop one end of the rubber band over one side of Part 4, pull it over the motor, and hook the other end on the other side (Figure 8).
11. When the blades are dry, take the blade assembly and create a scoop shape (Figure 9). Repeat this for all three blades.
12. Attach the prop hub onto the motor shaft and carefully press the blade assembly onto the shaft, using the prop hub to ensure proper alignment of the parts (Figure 10). Be sure the unprinted side of the assembly is facing forward.
13. Slide a small piece of tubing over the end of the prop hub.

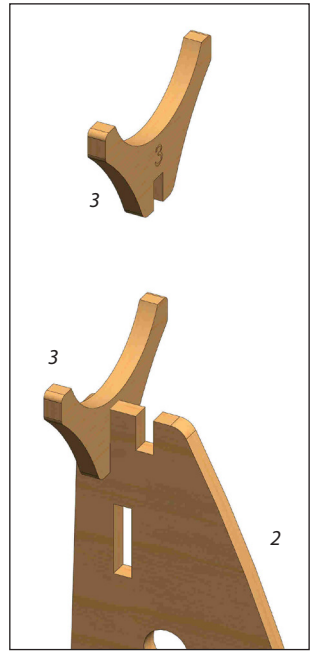


Figure 4

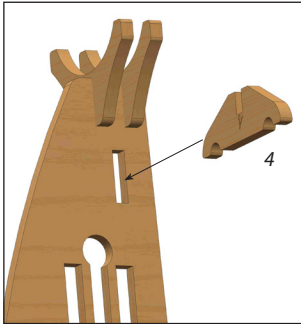


Figure 5

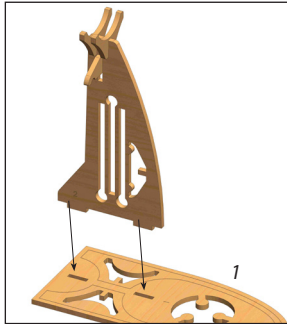


Figure 6

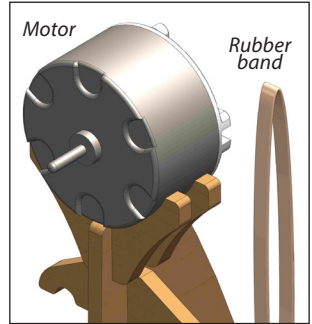


Figure 7

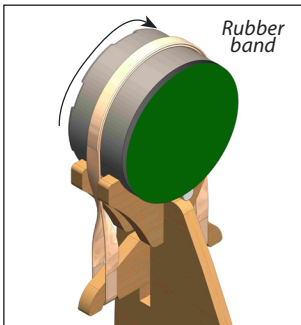


Figure 8



Figure 9

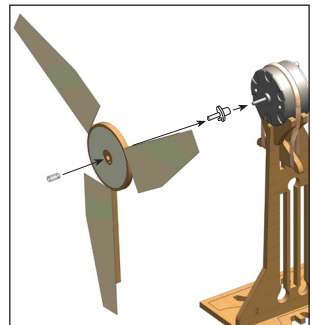


Figure 10

## Using the Wind Gen Plus

1. Set the Wind Gen Plus in front of a fan. It is recommended to secure it to the table or floor with masking tape to keep it from blowing over.
2. Turn on the fan to a low setting, making sure the wind generator is close to the fan and in the middle of the airflow. If the wind generator does not turn, set the fan to a higher setting.
3. Watch as the Wind Gen Plus starts to turn and lights the LED.

## Experiments

- Use a multimeter to measure the voltage at different wind speeds and record the results in a data table. Graph the results.
- Describe how a large-scale wind farm could provide power for homes and industry.



*Completed model*

**PITSCO**  
E D U C A T I O N

P.O. Box 1708 • Pittsburg, KS 66762  
[www.pitsco.com](http://www.pitsco.com)  
Toll-Free Orders 800-835-0686