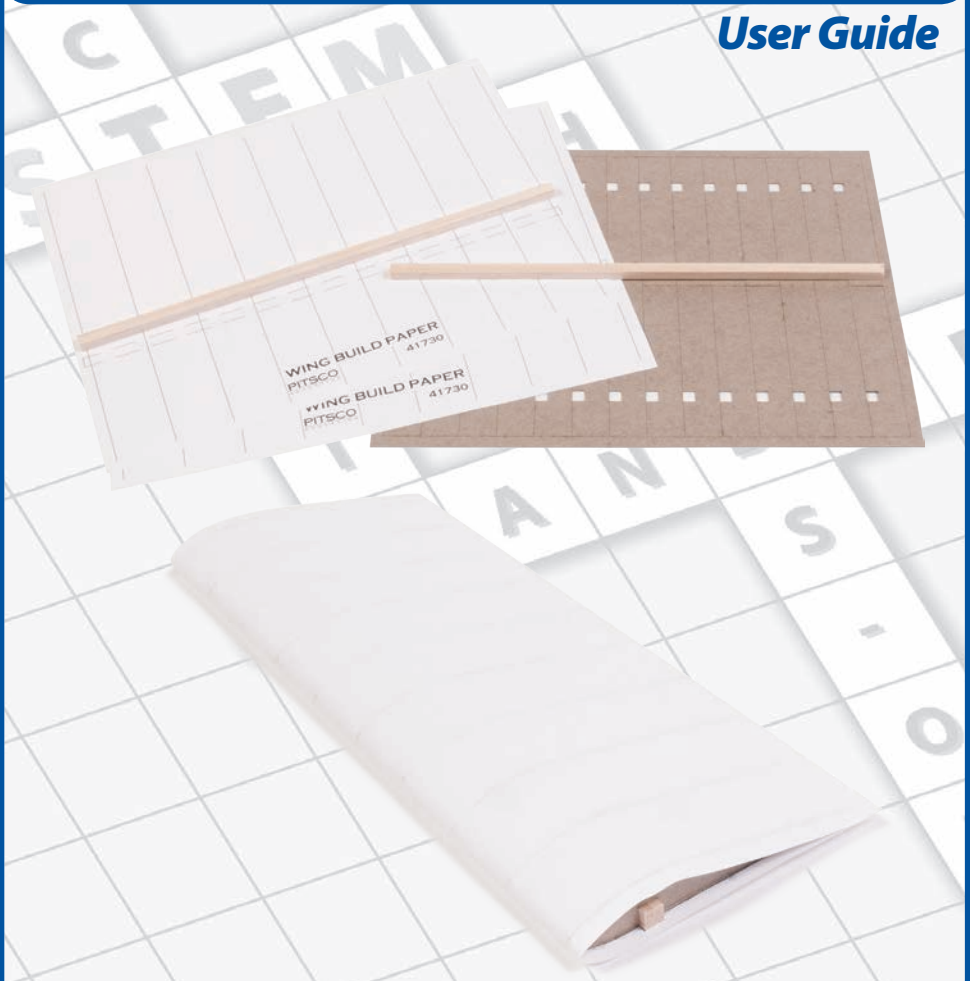


Wing Build Kit

User Guide



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

- 2 balsa sticks
- 2 Wing Build Papers
- 1 airfoil template

Items Required (not included)

- Scissors
- Glue
- Pencil

Note: When you create your airfoil, it must have a radius, a rounded nose. A sharp nose will make the wing stall. The bottom of the airfoil should be flat.

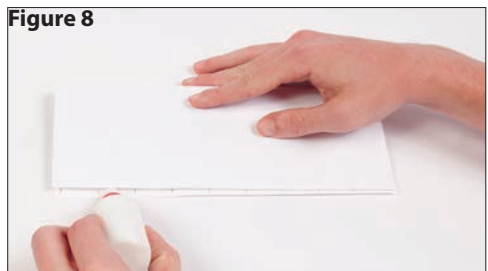
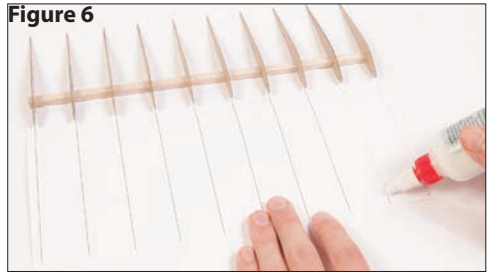
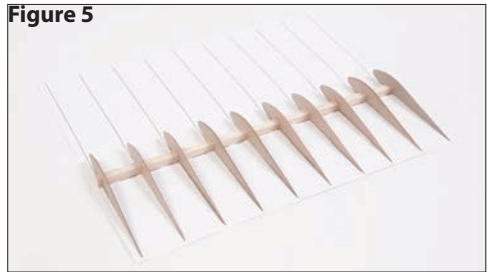
Preparing the Airfoils

1. Glue a balsa stick on the Wing Build Paper between the dashed lines (Figure 1).
2. Pop out one airfoil from the template and draw your design (Figure 2). Cut out your design. **Note:** Make sure the nose of your airfoil has a radius. A sharp nose will make the wing stall.
3. Trace the design onto other airfoils and cut them out (Figure 3). You will need 10 airfoils for each wing you build.



Building the Wing

1. With the balsa stick as the horizontal dividing line for the paper, glue each vertical line on the bottom half of the paper including the top of the balsa stick (Figure 4).
2. Place each airfoil on the glue lines with the notch in the airfoil over the balsa stick (Figure 5). The nose of your airfoil should be facing the long side of the paper.
3. After the glue has dried, glue the lines on the other side of the paper and then fold the paper over so the glue lines attach to the top of the airfoils (Figures 6 and 7). Try to glue the paper as smoothly as possible to prevent gaps.
4. Place a line of glue along the back side of the airfoils and seal the edges of the folded paper together (Figure 8).



Activities

The Wing Build Kit is designed to enable students to test different airfoil designs for a wing. For activities, the Wing Build Kit is best used with other Pitsco products such as the Air Stream or the Air Control Funnel and the Wing Tester. These products will enable you to transform the airflow from a normal box fan into a more constant stream and to test the lift that your wing design can create.



P.O. Box 1708 • Pittsburg, KS 66762

www.pitsco.com

Toll-Free Orders 800-835-0686