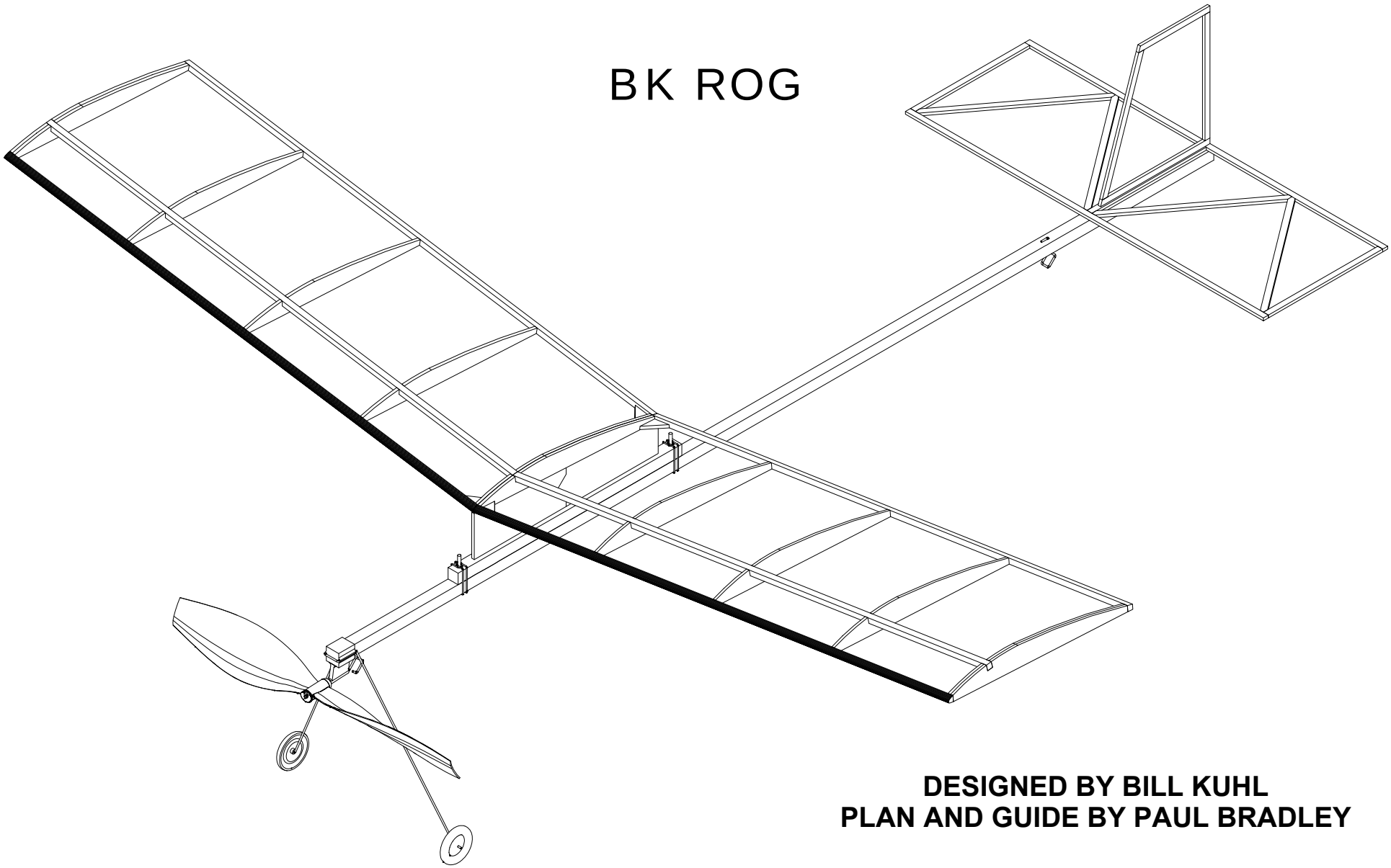
BK ROG

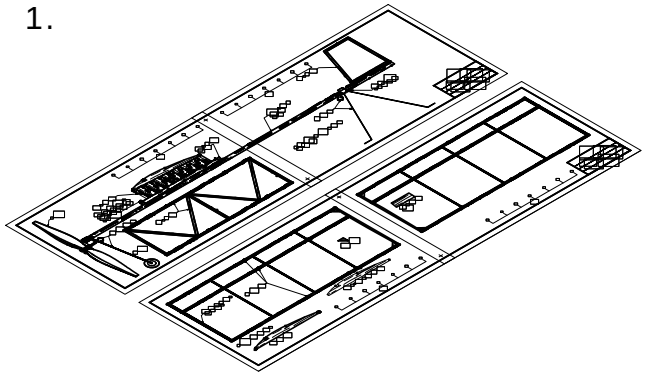


DESIGNED BY BILL KUHL
PLAN AND GUIDE BY PAUL BRADLEY

A RUBBER POWERED SPORT MODEL

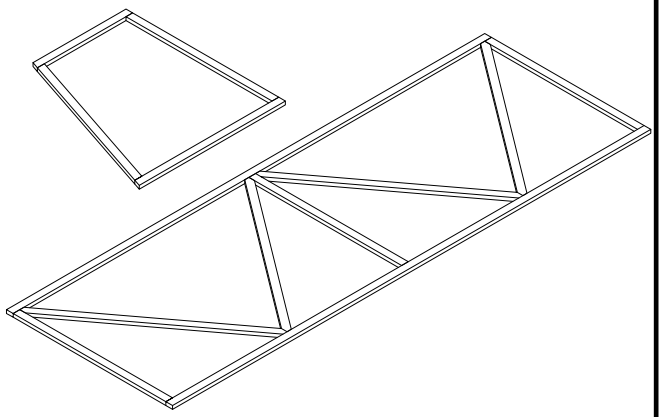
ASSEMBLY GUIDE

1.



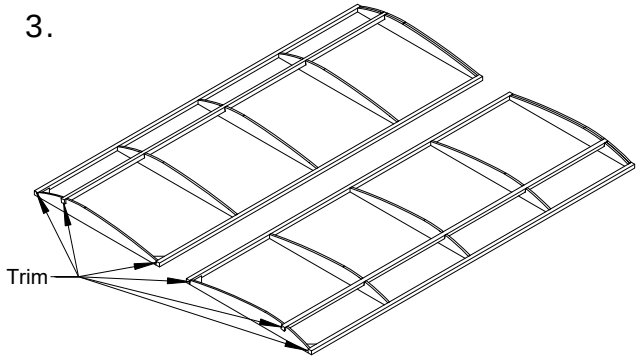
Begin the model assembly by taping the plan sheets together. Use the cross marks to align the sheets.

2.



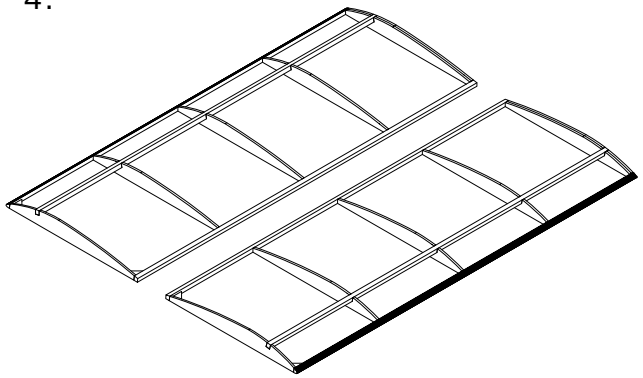
Build the tail surfaces using 1/16" x 1/8" balsa strip stock.

3.



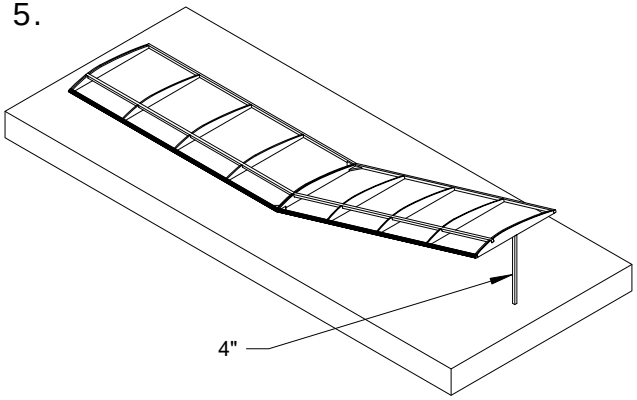
Build each wing panel. Use the slant template to set the slant angle of the center ribs. Add the gussets after setting the center rib slant angle. Also, trim the leading/trailing edges and the spar to be flush with the center rib slant after the glue is fully set.

4.



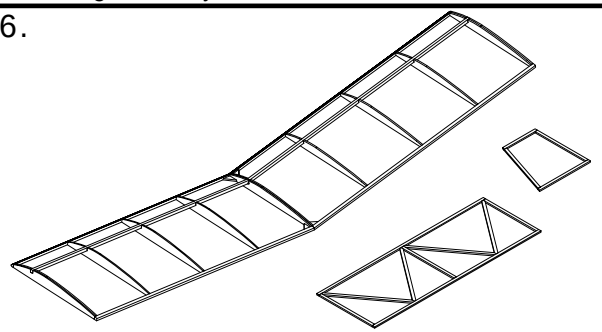
Sand the leading and trailing edges of each wing panel using the plan wing cross section drawing as a guide.

5.



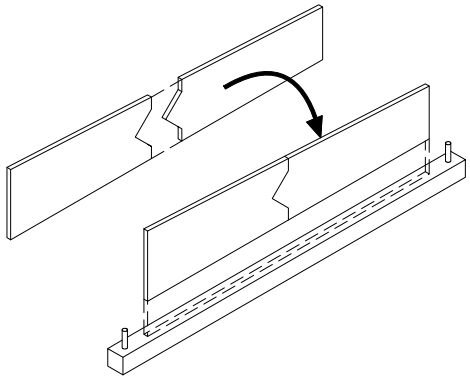
Glue the wing panels together. With one panel laying flat on your building board, the opposite wing tip should be 4" from the building board surface.

6.



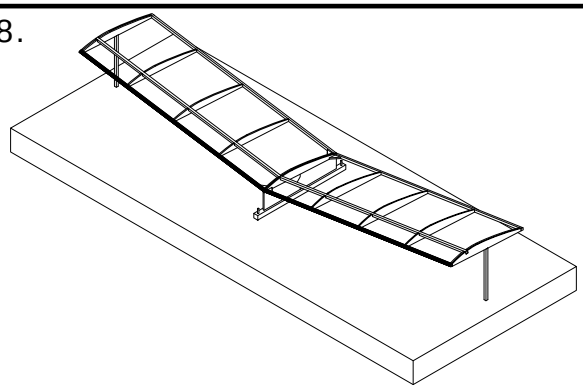
Cover the wing and tail surfaces. If water shrinking and doping the tissue, pin the components to your building board while drying. If dope is applied leave the surfaces pinned down for at least 72 hours after the last coat is applied. The covering is not shown in this or subsquent illustrations.

7.



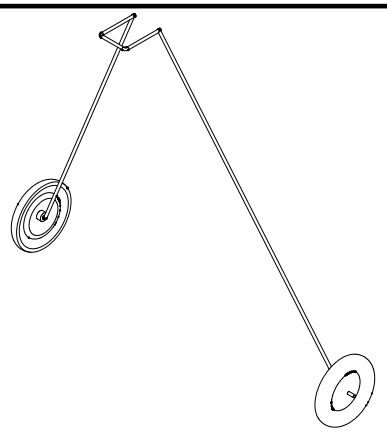
Glue the pylon parts together. The pylon should be vertical when the base is laying on your building board. Be sure to add the tooth pick pegs to each end of the base.

8.



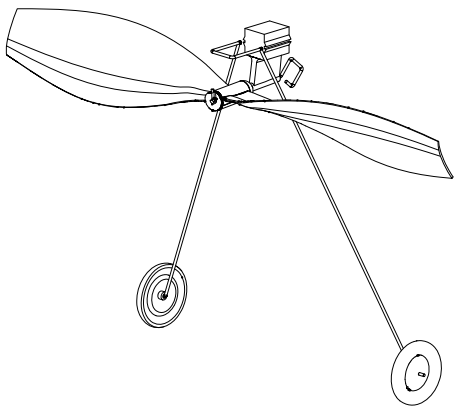
Glue the wing assembly to the pylon. Pinning the pylon to your building board and then supporting each wing tip at an equal distance from the building board will make sure the wing and pylon are square.

9.



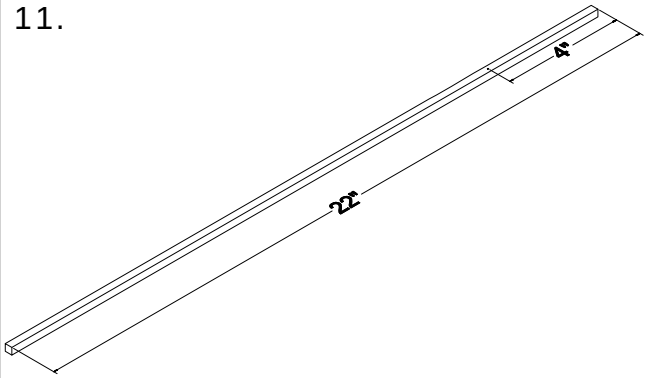
Bend the landing gear legs using 1/32" (.032") piano wire. Add the wheels after the landing gear is bent to shape.

10.



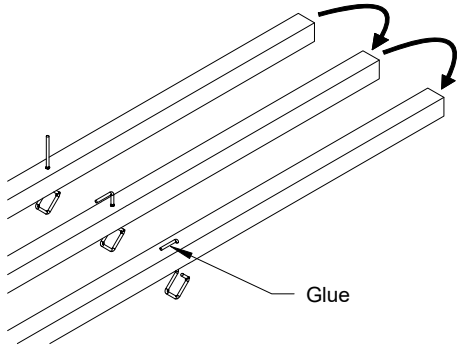
Slide the landing gear into the slots on each side of the propeller hanger.

11.



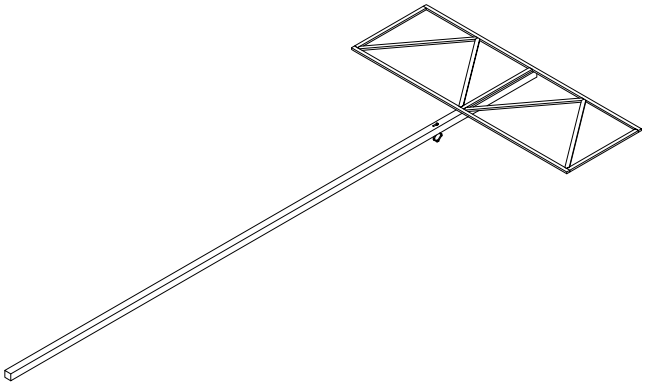
Cut a length of hard 1/4" square balsa to a length of 22". Use a piece of 1/32" (.032") piano wire to drill a hole 4" from one end of the stick.

12.



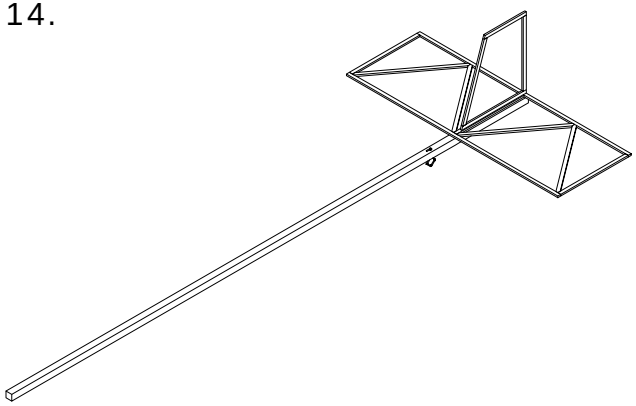
Bend the rear motor anchor hook from 1/32" (.032") piano wire.Insert the rear motor anchor into the hole in the stick. Bend the top 1/4" of the motor anchor hook as shown. Pull the hook down so the bent end is flush with the motor stick and then apply some glue.

13.



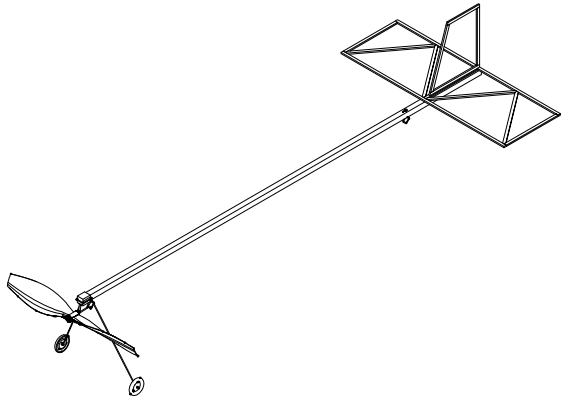
Glue the stab to the rear end of the motor stick.

14.



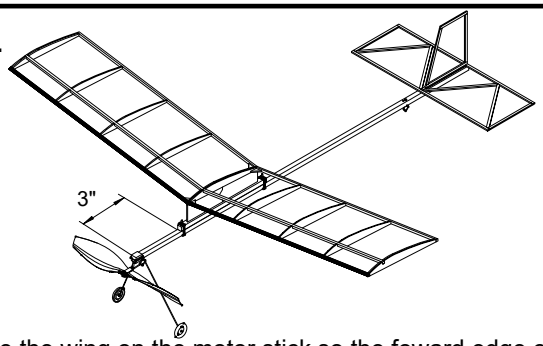
Glue the fin to the stab as shown. Make sure the fin is square to the stab.

15.



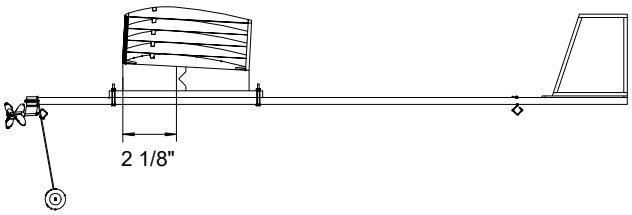
Slide the propeller hanger and landing gear assembly on to the nose of the motor stick. Some sanding of the motor stick may be necessary.

16.



Place the wing on the motor stick so the foward edge of the pylon base is 3" back from the forward edge of the prop hanger. Use several small rubber bands to hold the pylon base tight against the motor stick. This is just a starting position. The final location will be determined by flight trimming.

17.



Put a loop of rubber on the propeller hook and the rear anchor hook. The model should balance 2 1/8" back from the wing leading edge. Adjust the position of the pylon on the motor stick to get the model to balance.

18.

Wind the motor to about 250 turns. Fly the model to see if the wing position needs adjusting. Move it back slightly if the model is stalling (nose pitching up) and move it forward a bit if the model is diving. A trim tab can be added to the rear of the fin to allow turn adjustments if the model does not have a natural turn when flying. Keep increasing the number of motor turns and adjusting as necessary until you have reached the maximum number of turns the motor will handle.