

Building an Egg Crate Rubber Powered Model

Designed by Ross Jahnke



Figure 1. The materials that comprise the model are: Tops from a 12 egg and a 18 egg carton; a piece of 3/8" x 3/16" balsa; a propeller assembly from a Testors "Strato Streak", a rubber band, pins and Elmer's Glue or two part epoxy (not shown). *Note: Do not use super glue or model airplane glue as they will melt the foam.*



Figure 2. The tools used to build the model include pins, needle nose pliers, a scissors, a razor blade or exact knife, and a ruler. *Note: Parents should make the cuts using the razor or knife.*



Figure 3. Cut the wing from the 12 egg carton as shown using the razor or scissors-

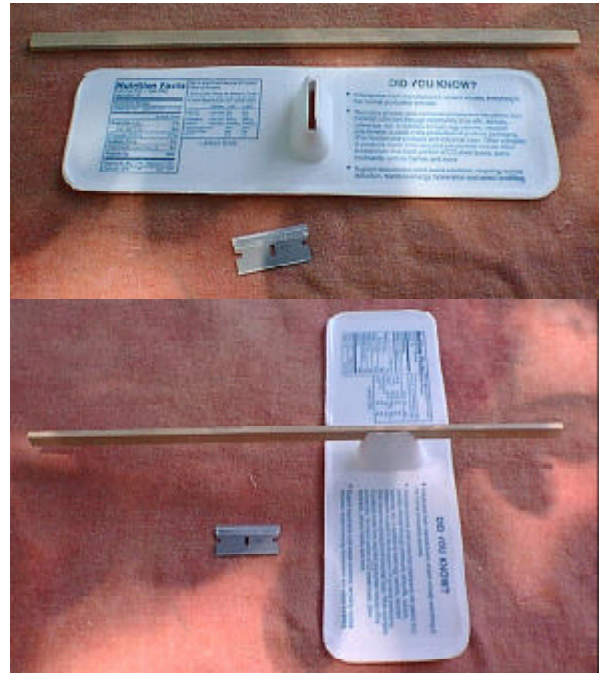


Figure 4. Notch the center of the wing so that it fits snugly over the motor stick. Do not glue yet!



Figure 5. Use the ruler as a guide to bend dihedral into the wing (the model will not fly without it). Do this twice on each half of the wing. *Note: If the foam cracks on the underside, rub Elmer's glue into the cracks and let dry.*



Figure 6. Cut the Stabilizer / fin template from the plan and trace it onto the inside of the 18 egg carton top using a pen or pencil.



Figure 7. Cut out the fin and stabilizer using the razor or scissors.



Figure 8. Cut the 3/8" x 3/16" balsa stick to 13 1/2" in length. Mark the location of the wing and the pin that will hold the rubber band on the side of the fuselage stick. Trim off excess wood behind the pin to save weight in the tail of the model. *Note: Depending on the propeller assembly you use, small shims of balsa may be necessary to make the plastic fitting fit snugly over the front of the stick.*

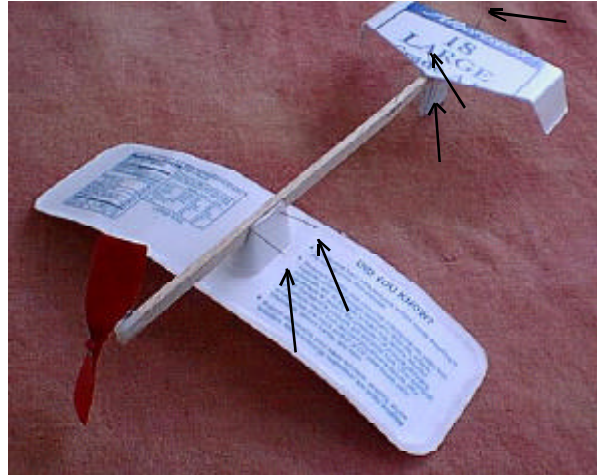


Figure 9. The model is glued together. Pins (note arrows) are used to hold parts in place while the glue dries, then removed. *Note: Remember to align the wing such that the leading edge (front) is 1/16" higher than the trailing edge (back). the model will not fly otherwise.*

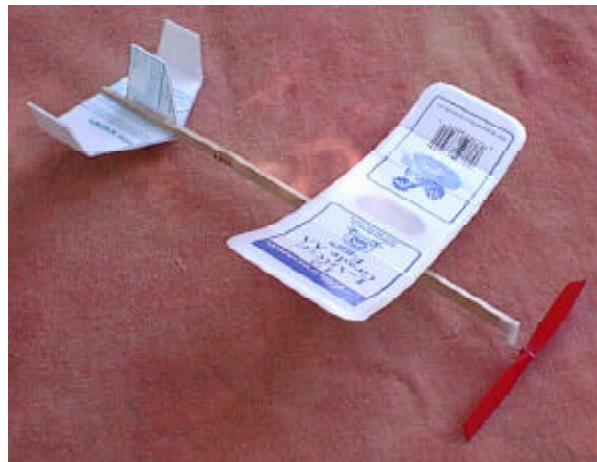


Figure 10. The finished model.

Flight:

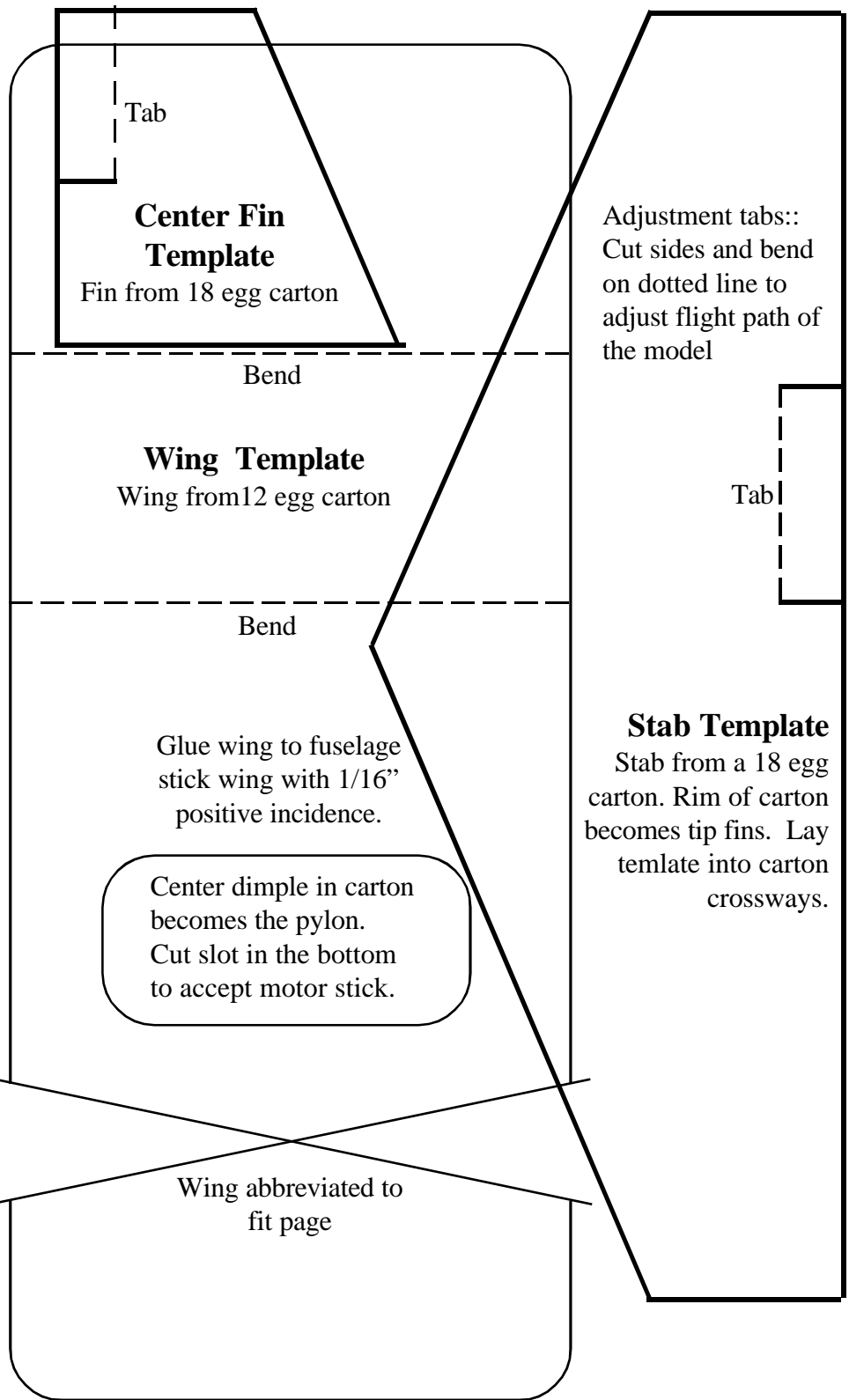
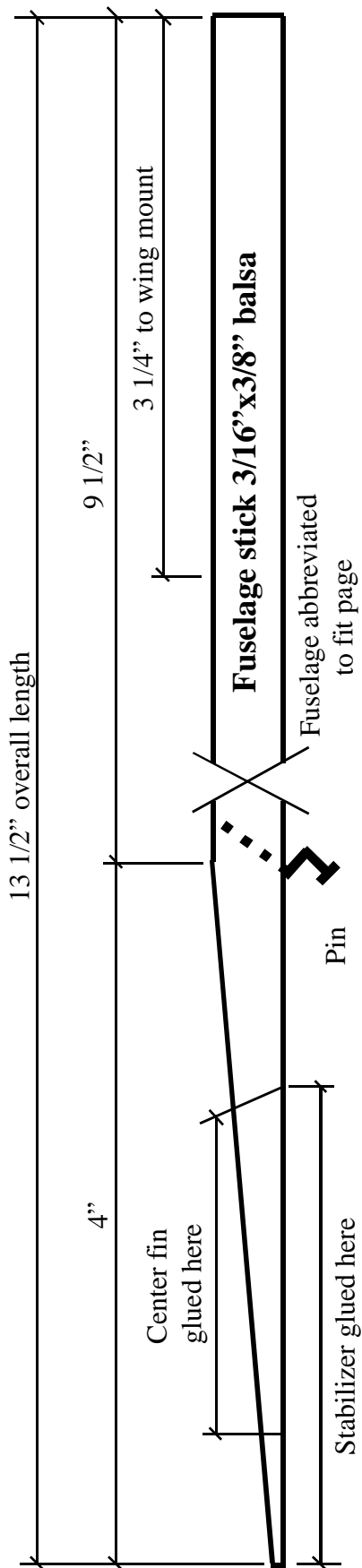
The model is powered by a loop of rubber 1/8" wide and 12" - 14" long. Most hobby shops carry rubber which can be purchased by the foot.

It is best to fly over grass in case the model hits the ground hard. Wind the prop clockwise 50 - 100 turns and test the model.

If it stalls (pitches nose up) bend the tab on the stabilizer down a bit, if it dives bend them up.

If it turns sharply to the left or right, gently bend the rudder tab to the opposite side.

Have fun with your Egg Crate!



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