

"STC"

Build Guide



Supplies Needed

Blucore or Depron Foam. Blucore (Fan Fold Foam) is available at Lowes. Approximately \$25 for 50 feet of Blucore. Depron can be ordered on the internet for slightly more.

CA glue (foam safe)

5 minute epoxy

Exacto knife with #11 razor blades

Hot Glue gun and glue sticks. \$1 each at the Dollar Store.

Thread

Cheap plastic credit cards.

Clear packing tape

5/16 inch wood dowel

Basswood stick 3/8x3/8x4 inches

Bamboo skewer

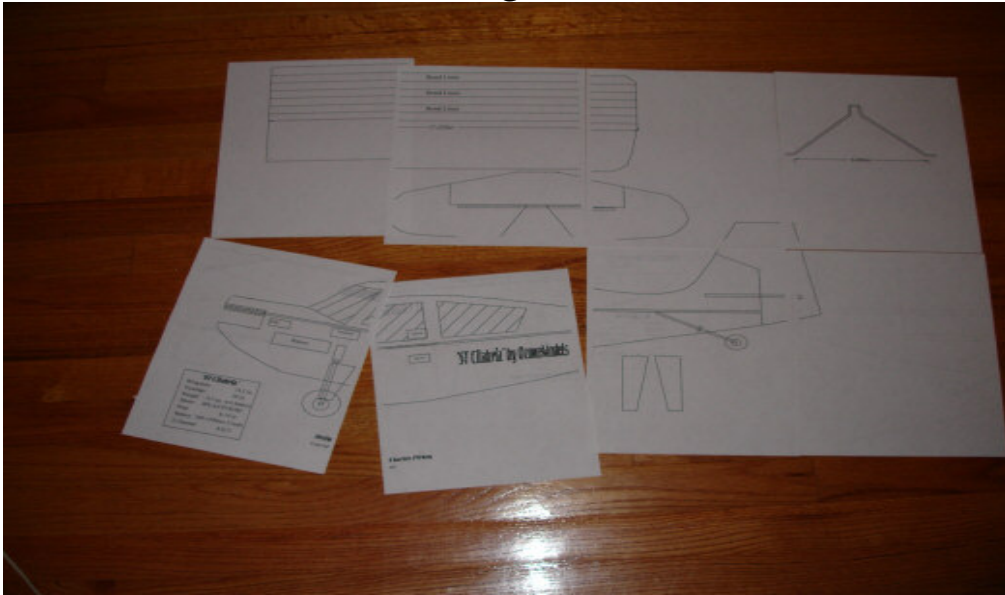
Music wire -2 pieces-1/32 (.032)x 16 in.

Music wire- 1/16 in.x 12in.

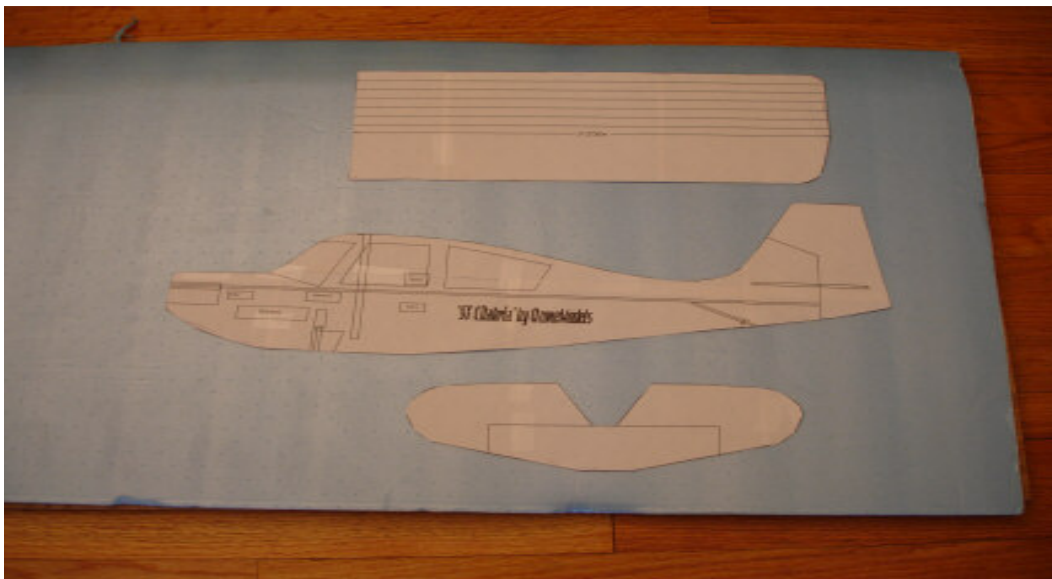
1 carbon fiber rod or arrow shaft- aprox. 1/8 x 22 in. or wood/plastic dowel

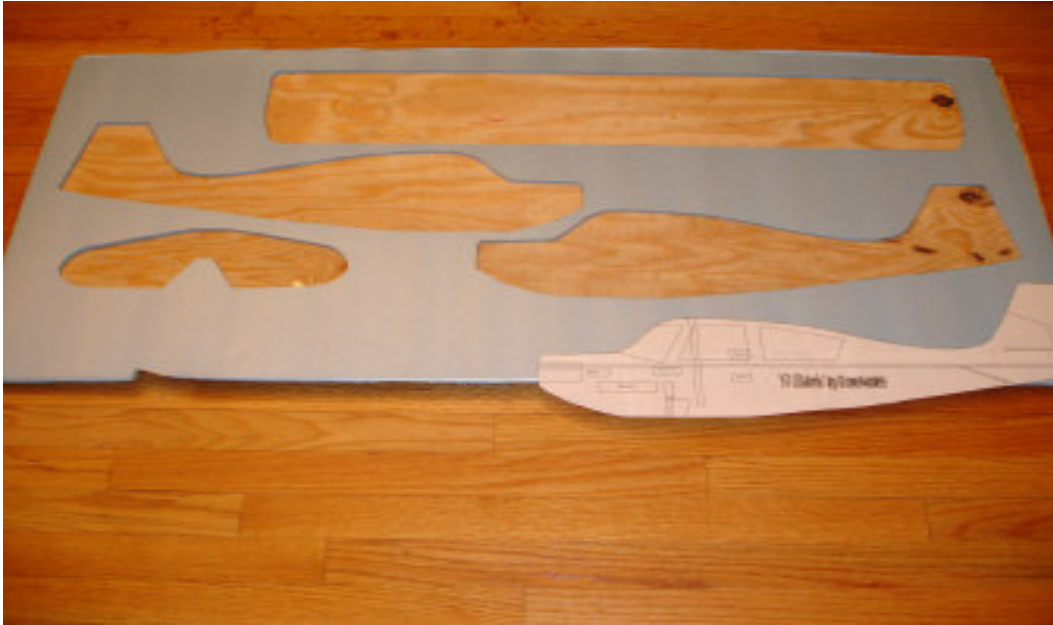
Pliers

Getting Started

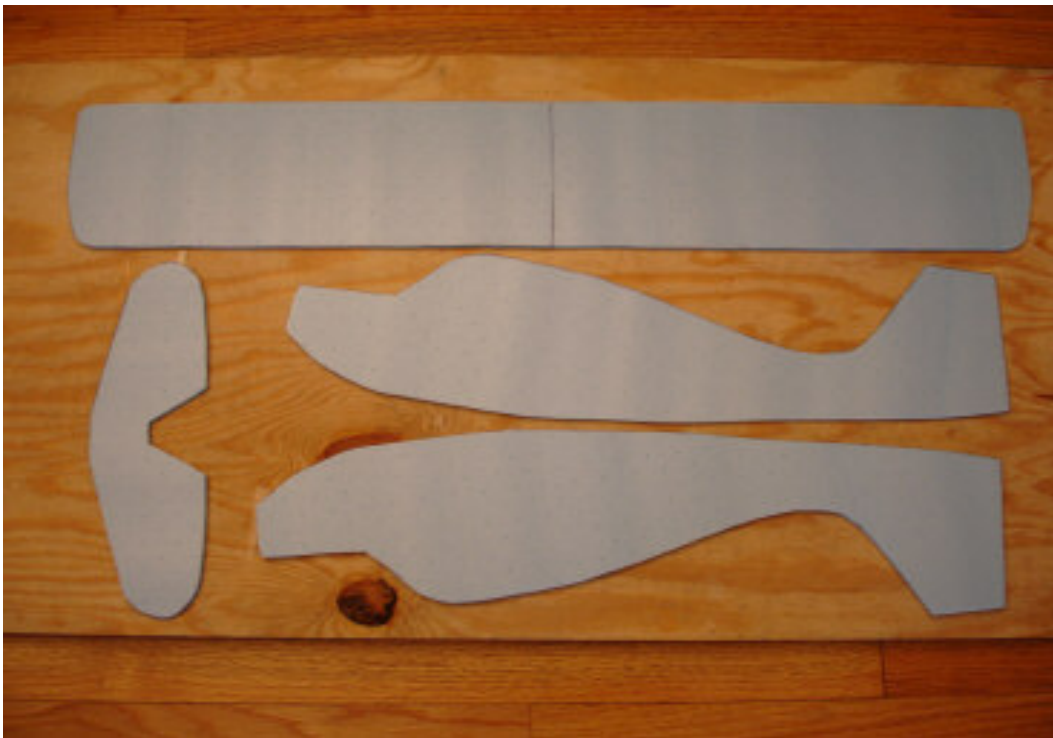


Tape tiled plans together to make full size plan. With full size or tiled plans that have been taped, cut out the STC and tape to the foam.

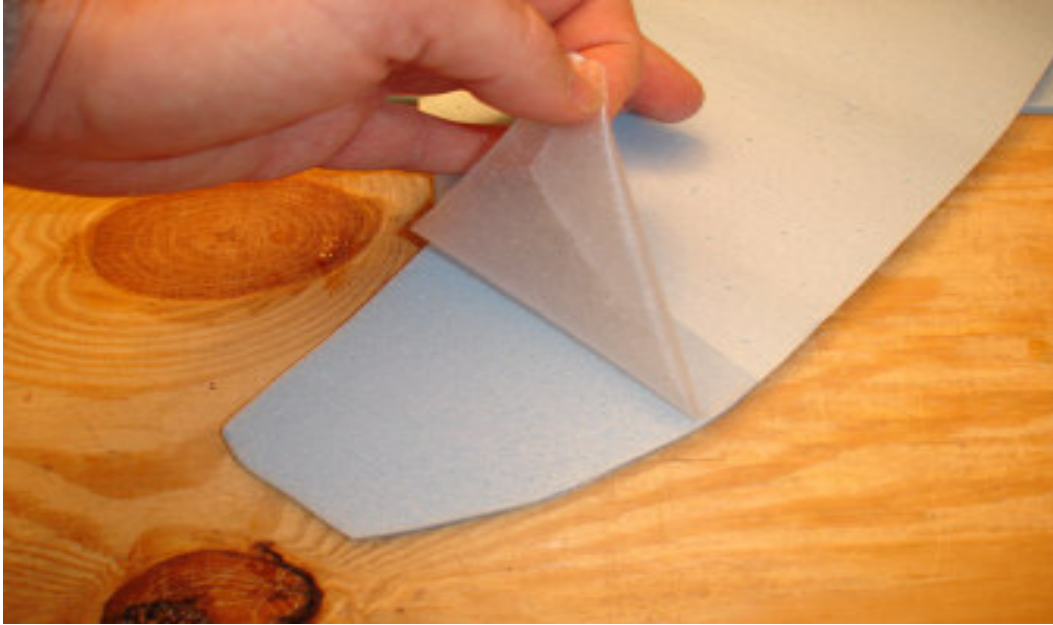




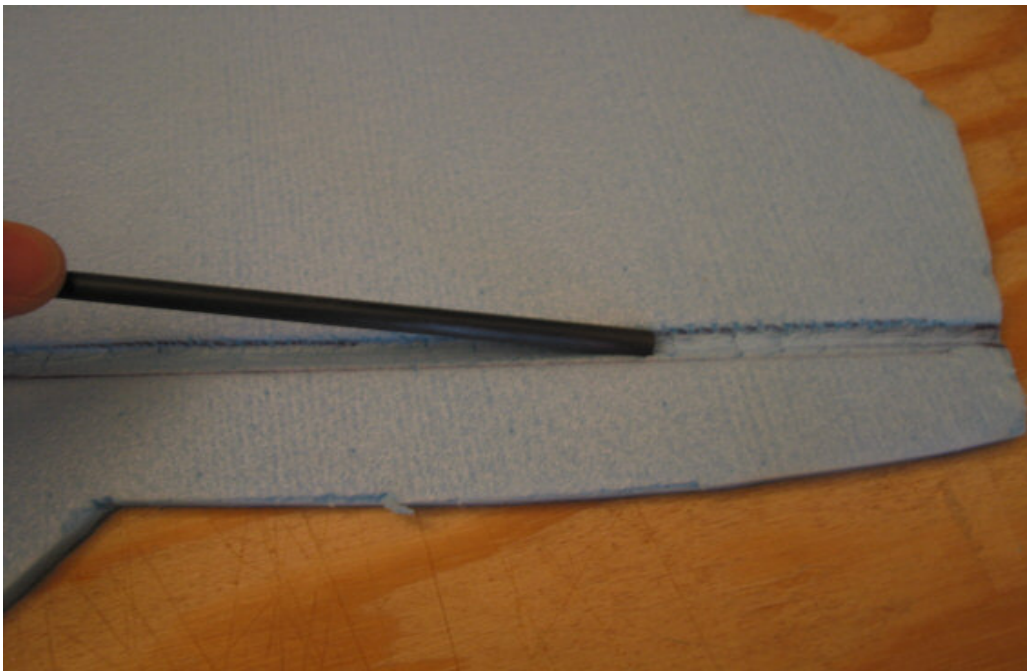
Trace along the outside edge and remove plans. Using a sharp, new #11 exacto knife, cut out the STC, holding the knife straight. Take your time and make smooth long cuts



Continue until all pieces have been cut out of the foam



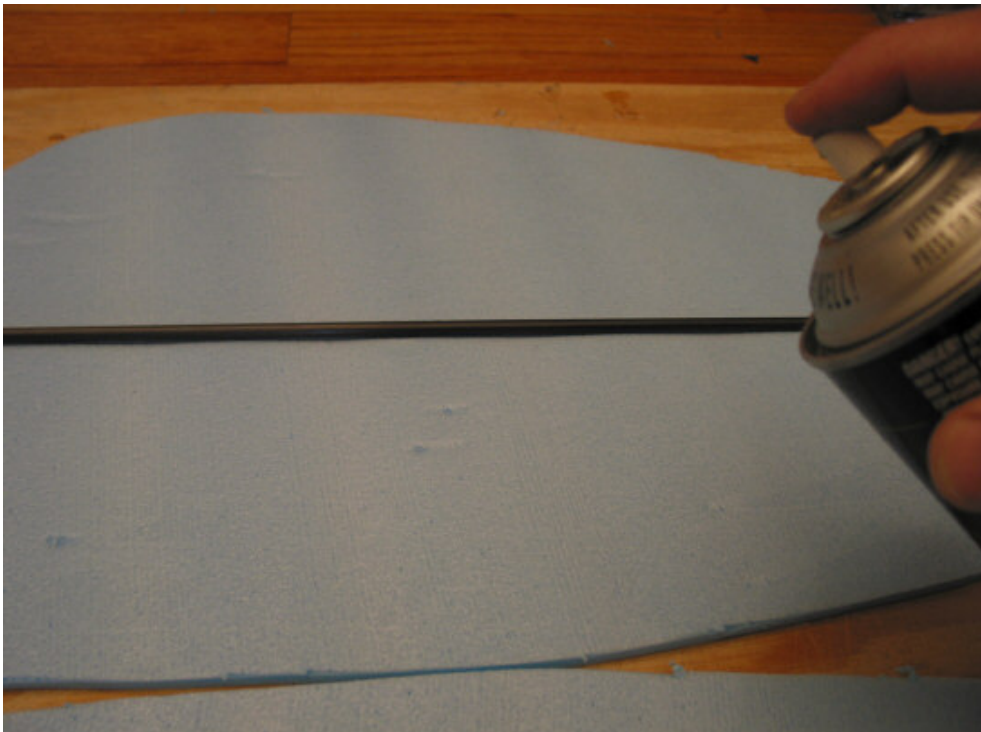
Separate the two fuselage pieces and peel the skin off the inside (not outside) halves that will be glued together.



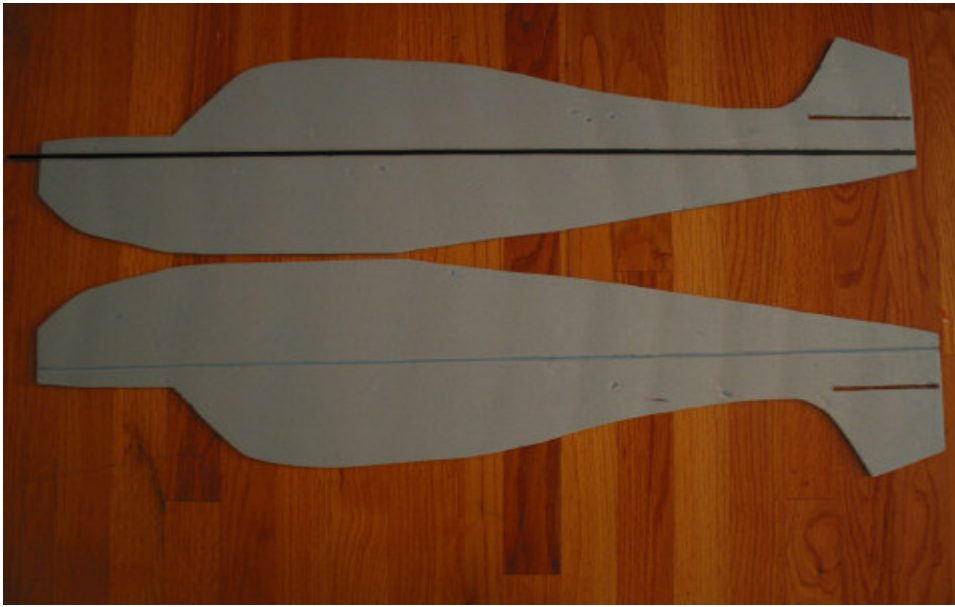
Cut a shallow groove along the line on both inside halves using a rod.. (The cutout template of the fuselage has a line running from nose to tail, use that as a guide) Using the end of the 1/8in.carbon fiber rod (recommended) or dowel, press down on the foam as you drag it down the groove, to make the cut.



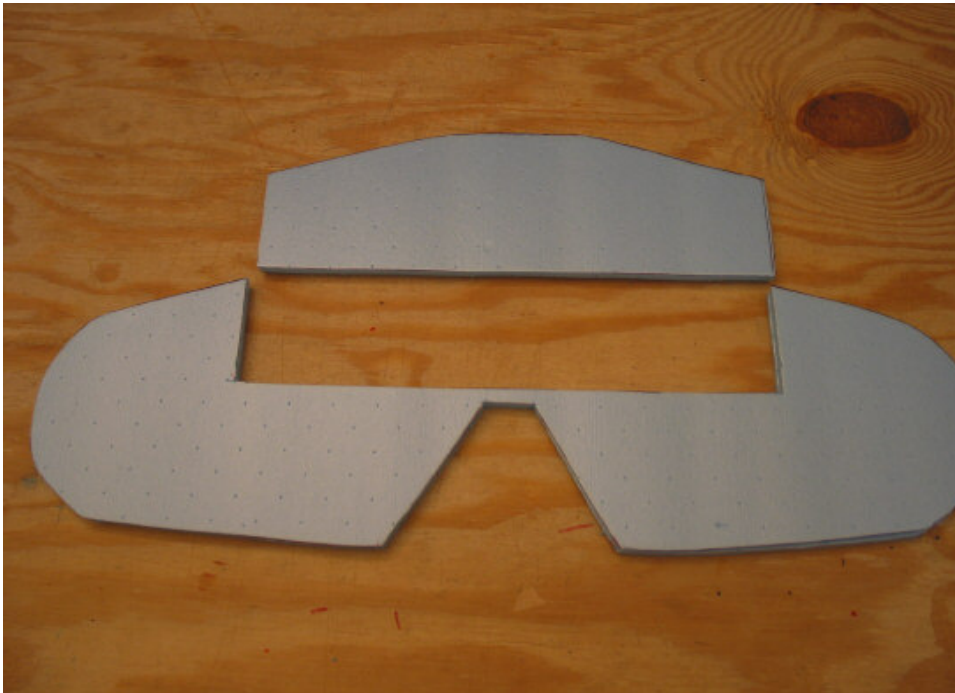
Using 3M Super 77 Spray adhesive, cover one side completely



Light to medium coverage will hold fine. Heavier along carbon fiber groove.

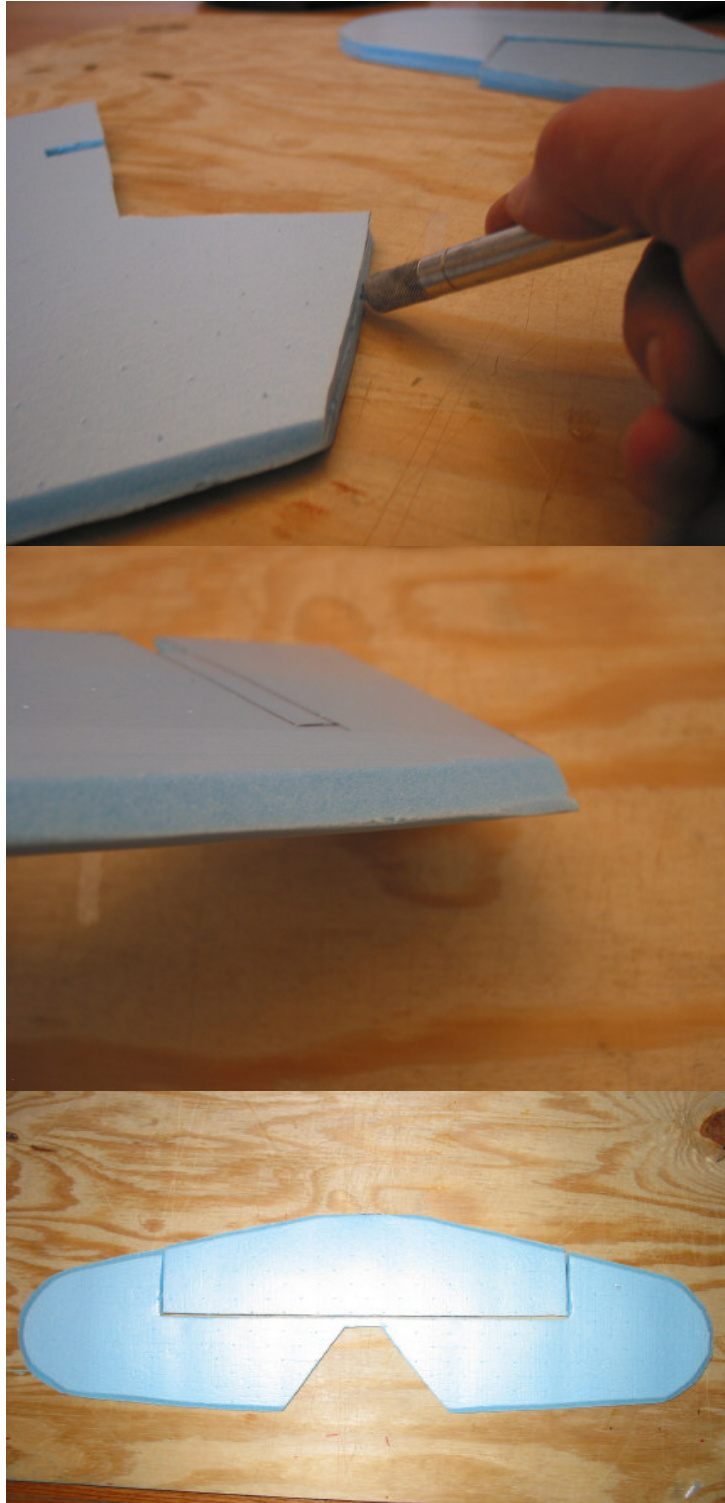


Place the carbon fiber rod (or dowel) in the groove and press both halves together.

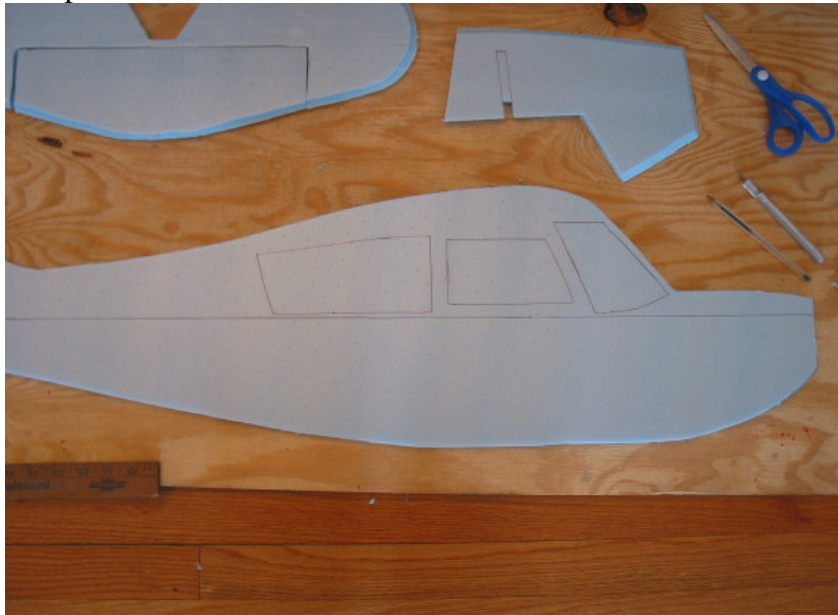


Place the fuse aside to dry, grab the stab/elevator pieces and finish cutting them out.

After the glue dries, cut the edges of the rudder and elevator to a fine edge. Take your exacto knife and cut down the edge at a 45 degree angle from the center of the edge. Flip over and repeat. It will make a nice, sharp edge.



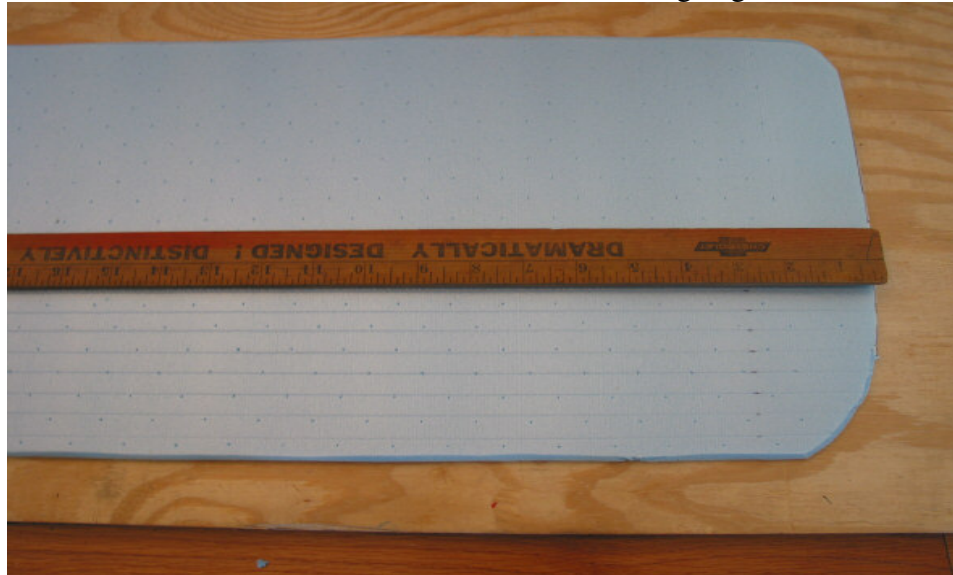
The STC up to this point:



Now place your cut out wing on the table for measuring.



Using a ruler and a pencil, draw lines along the leading edge of the wing, spacing them a $\frac{1}{2}$ inch apart. Last line should be about 3 inches from the leading edge.

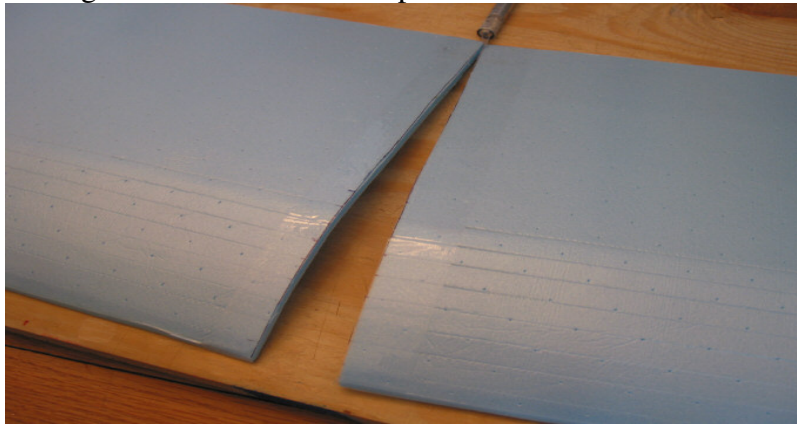


Don't press down too hard with the pencil, just enough to leave a visible line. Depron is more brittle than blucor. To prevent breakage, wrap clear packing tape along the leading edge, wing tip to wing tip, before next step.

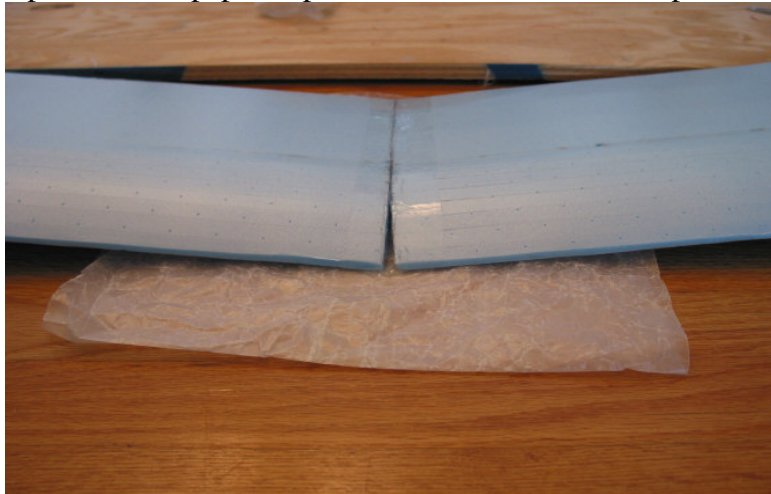
Now take the wing and place it on the counter or table. Starting at the leading edge, place the first line on the edge of the counter and bend down about 5 degrees. Move to the next line and repeat. Do all lines until a nice curve is made. Check by placing on top of fuselage and matching the curve where the wing is mounted.



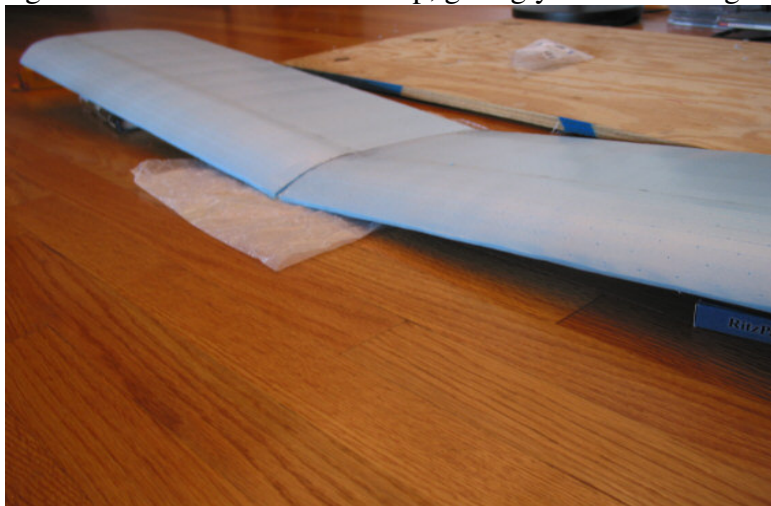
Now cut the wing down the center and separate.



Lay down a piece of waxpaper to protect the table surface and place the wing seam on it.



Prop up wings to 2-5/8 to 3 inches at the tip, giving you about 6 degrees of dihedral.



Mix up 5 min. epoxy and glue the wings together. Pour extra into wide seam to fill space. Don't worry about filling the gap completely, we'll do that later with the Hot Glue gun. After top dries, turn over and add 5 min. epoxy to seam again.



After epoxy dries, fill any gaps with Hot glue. Wrap seam in clear packing tape.



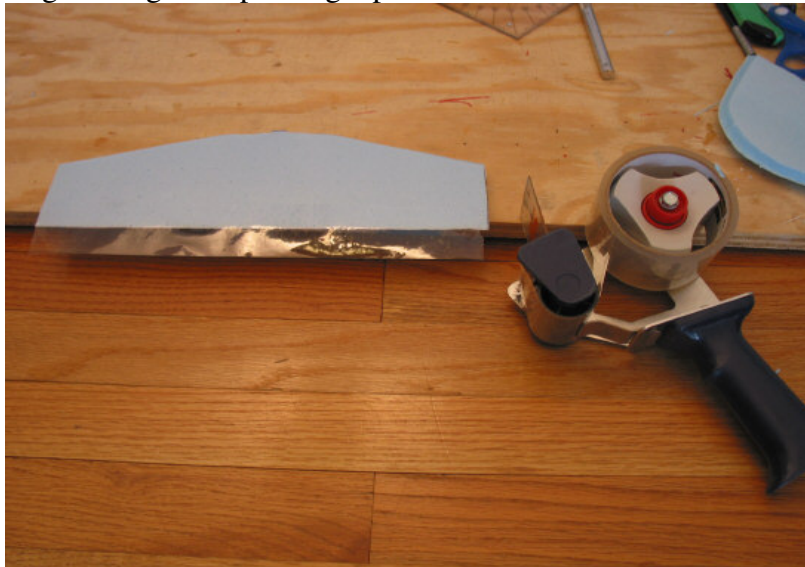
Run clear packing tape down the leading edge and down the spar, top and bottom.



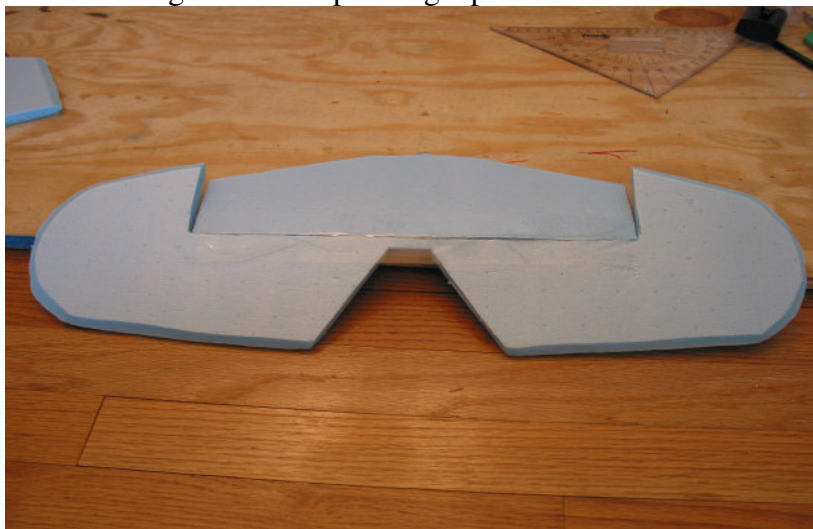
Completed wing.



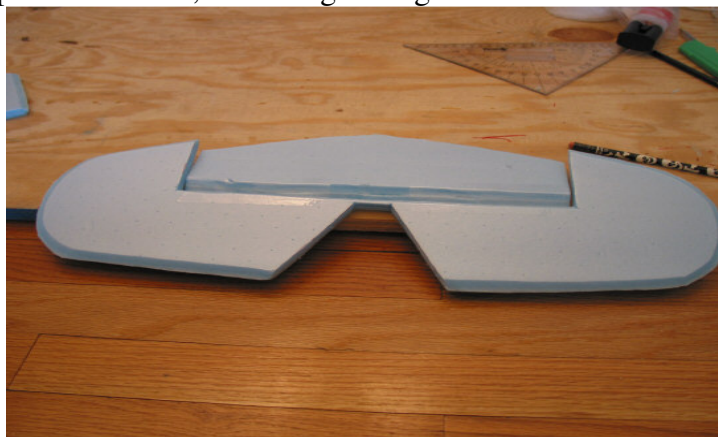
Now add hinges using clear packing tape on the elevator.

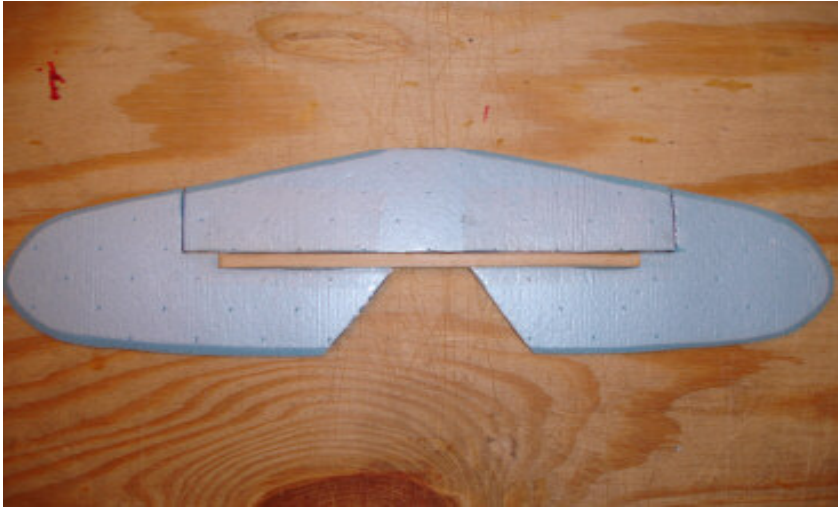


Deflect elevator 45 degrees before pressing tape down.



Add tape to other side, deflecting 45 degrees.



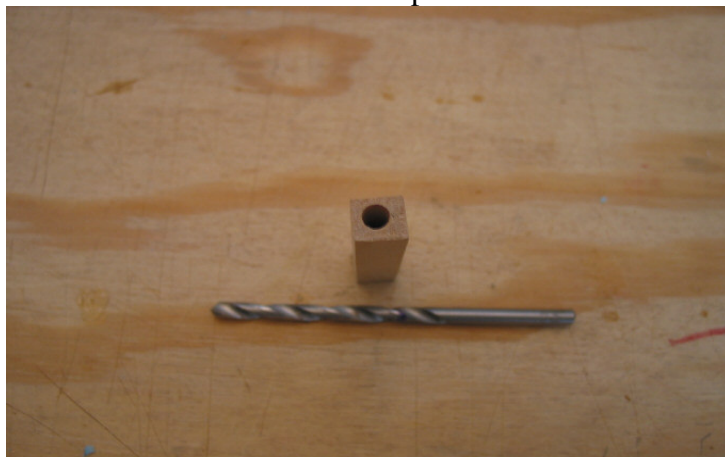


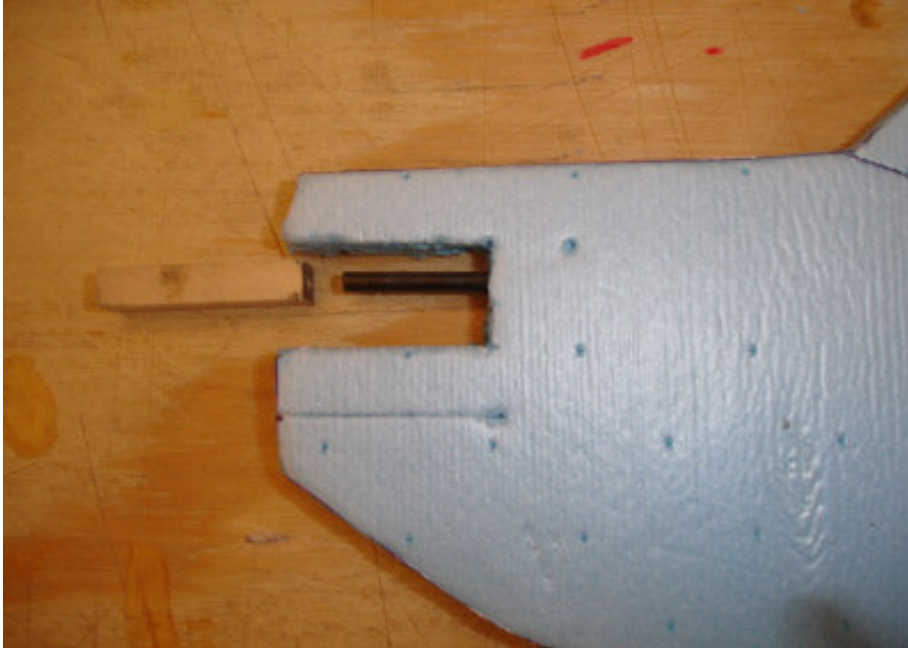
Using a 1/8 x 1/4 in. basswood as reinforcement for the elevator. Epoxy into place.

Using a basswood stick 1/4 by 3/8 inch cut off a piece about 1 1/4 inches long.

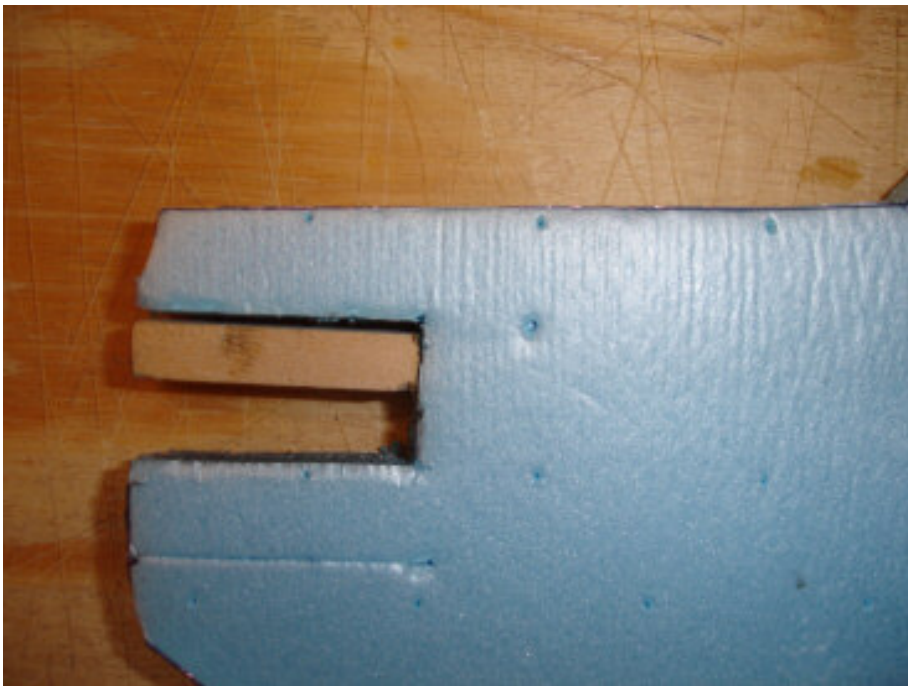


Drill a 1/8 inch hole about 3/4 inch deep in the motor mount.





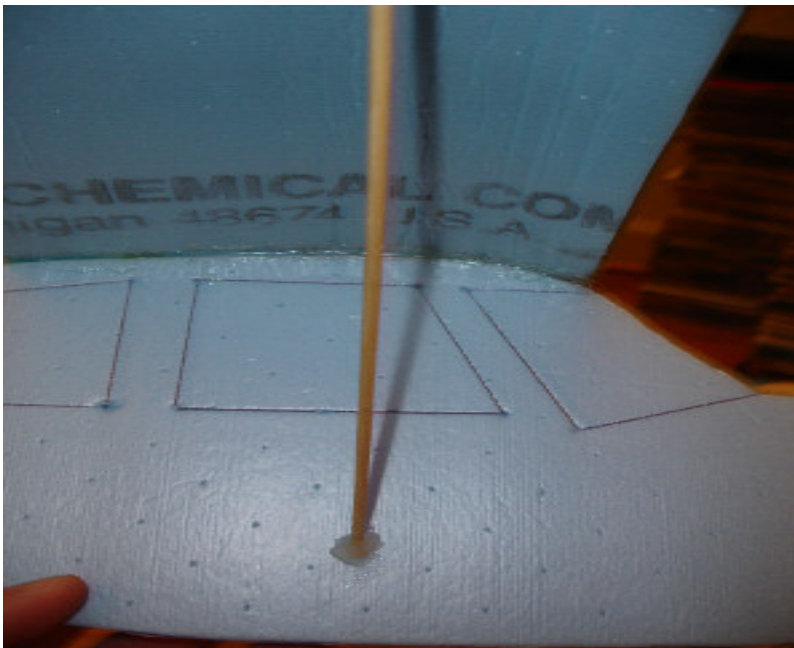
Add a small amount of 5 min epoxy and slide over CF rod.



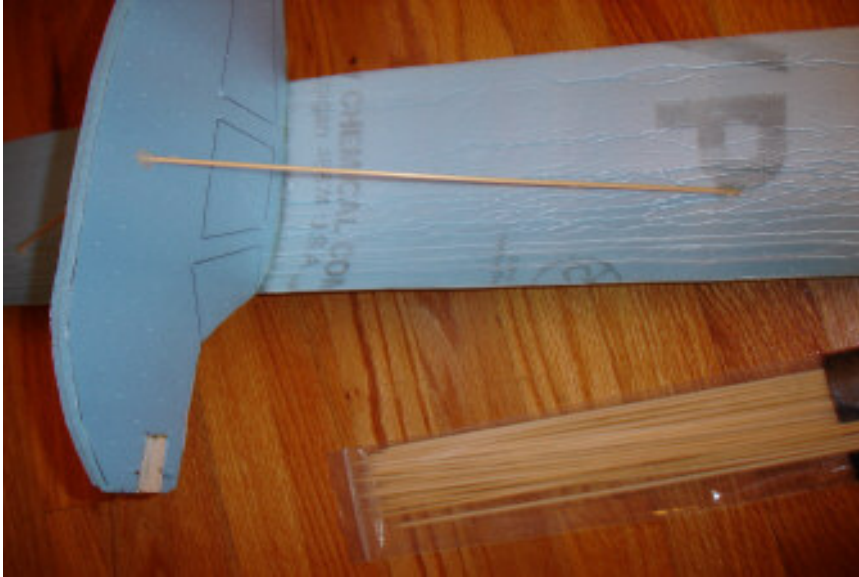
Should look like this. Allow extra time to dry. Important load bearing mount.



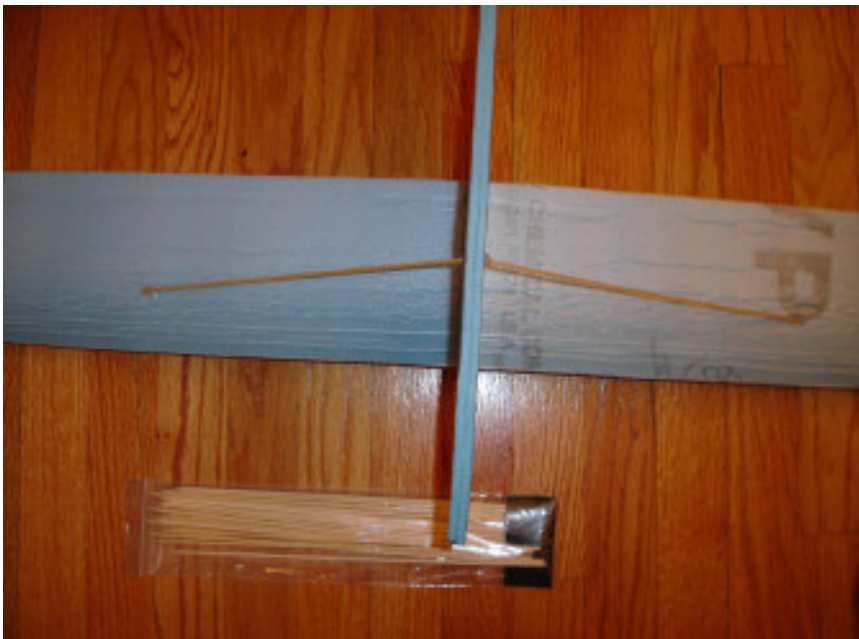
Place fuse between books and make sure it's straight. Prop wings up with books at the wing tips and measure. Make sure they are equal height and they match the leading and trailing line marks on the plans.



Lift wing off and add 5 min epoxy (or hot glue for easy removal later if you decide to change wing incidence) to the wing saddle. Place wing back on fuse and measure tips. Don't worry about any gaps, we'll fill them with hot glue after the wing dries.



Using 12 in or longer bamboo skewers, hot glue the struts in to place.



On opposite side in fuselage, poke the bottom of the strut through the foam until it butts up against the bottom of the other strut. Hot glue them together in fuse and attach other end to wing.

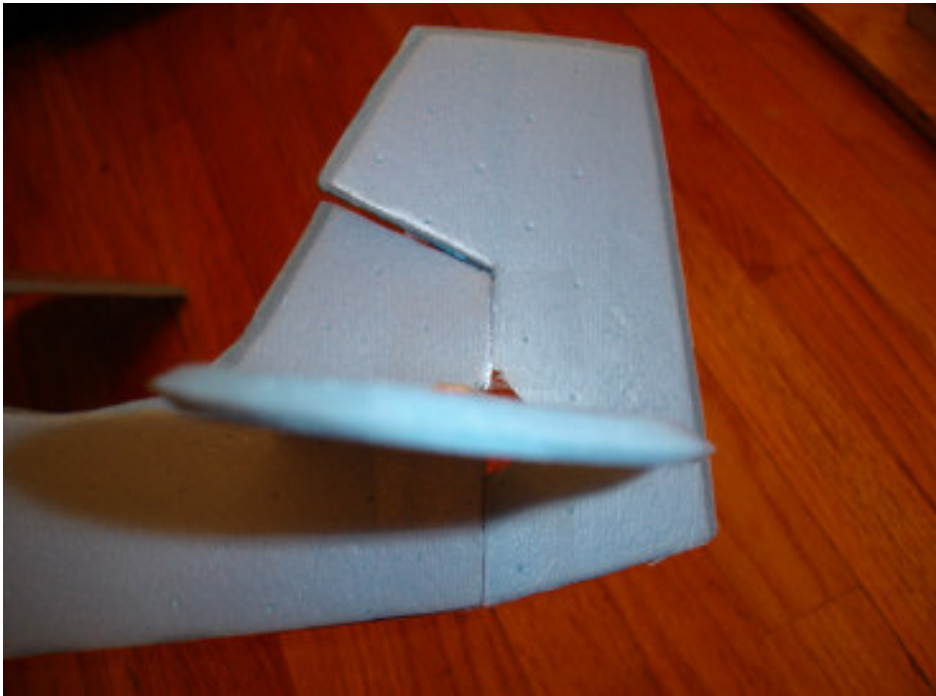


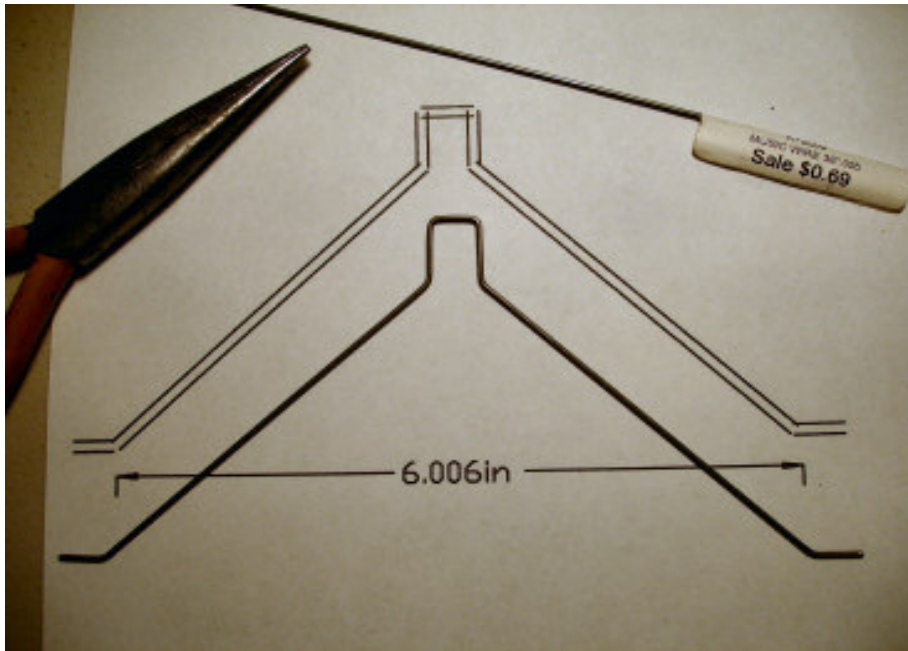
Now attach the “tailfeathers” to the fuse using 5 min. epoxy. Be sure they are straight and true. Measure front wing tip to rear wing tip. If both sides are even, your straight.





Now attach rudder using packing tape, same as before with elevator. Cut hole for reinforcement wood stick to move freely up and down.



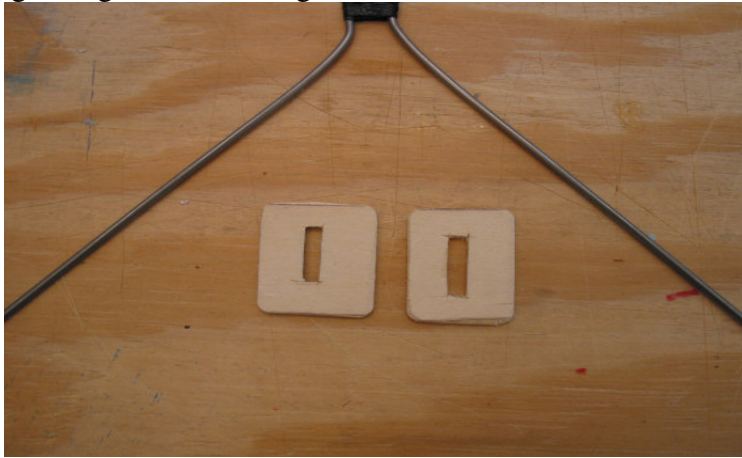


Using the template from the plans and .055 music wire, bend the landing gear into shape.

Wrap thread around the top and add CA glue to the threads.



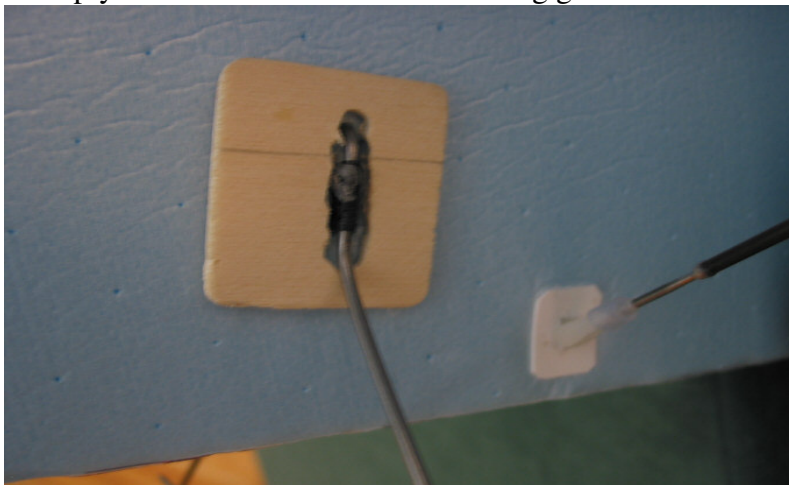
Cut out plywood pieces 1 1/4 inches high by 1 inch wide. Cut a slit in each one that the landing gear legs will fit through. You can use credit card material instead.



Cut a slit in the fuselage 5 3/4 inches back from the nose and 1/2 inch from the bottom of the fuse. Insert gear.



Hot glue the plywood on both sides of the landing gear.



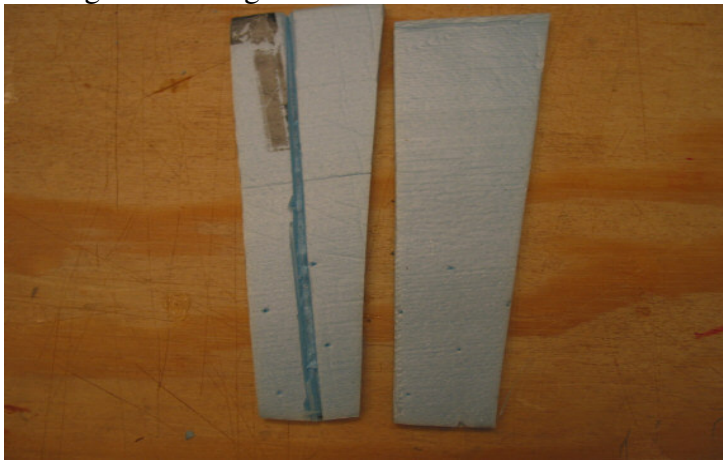
Cut two strips of plywood or plastic that will insert in front and back of landing gear slit.



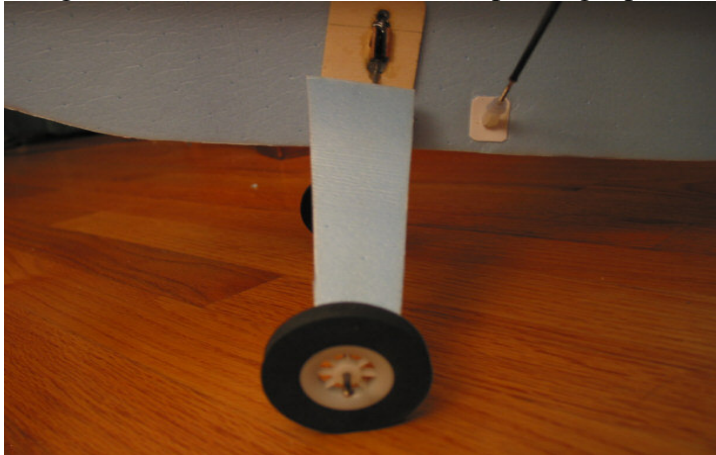
Align gear. Pour 5 min.epoxy or hot glue into slit. Allow to dry.



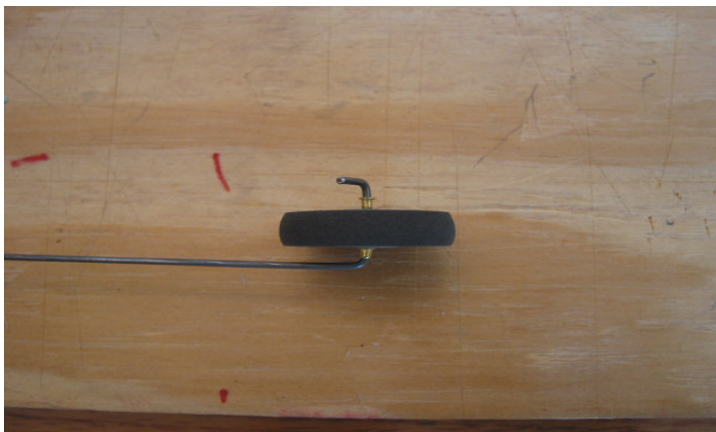
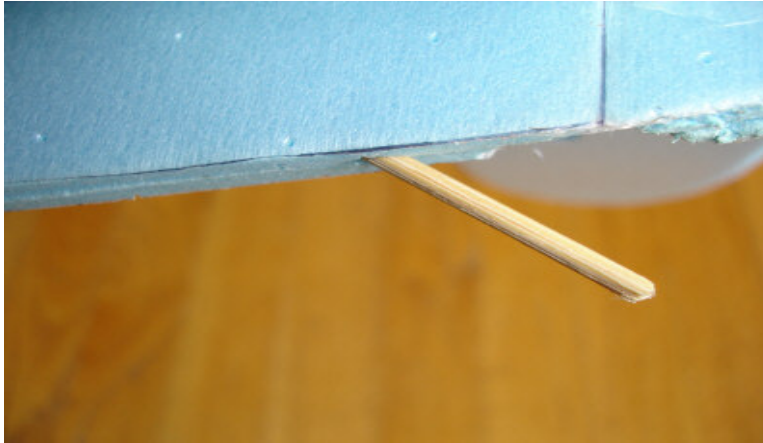
Cut skirts for gear. Make groove for wire.



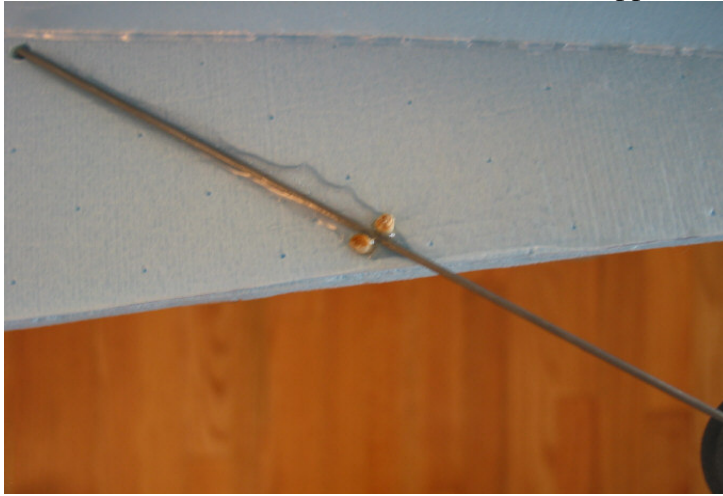
Hot glue to gear. Cover underside with clear packing tape. Install 1-3 inch wheels.



For rear wheel you can use a bamboo skid or bend music wire to fit a 1 ¼ inch foam wheel.



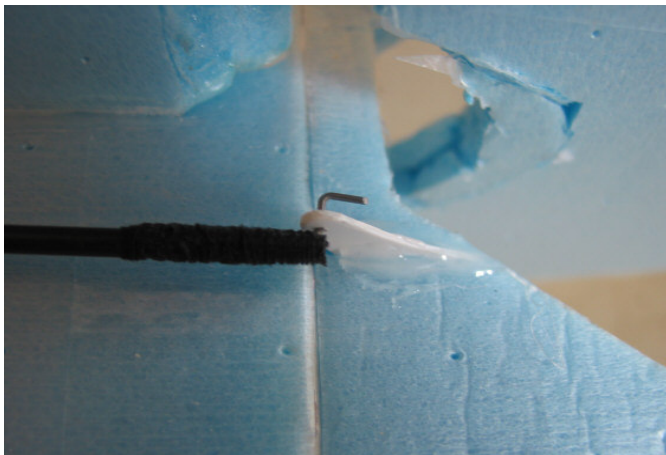
Poke two skewers into fuse on both sides of wire for support and Epoxy.



Cut control horns from plastic or buy them at your hobby shop.



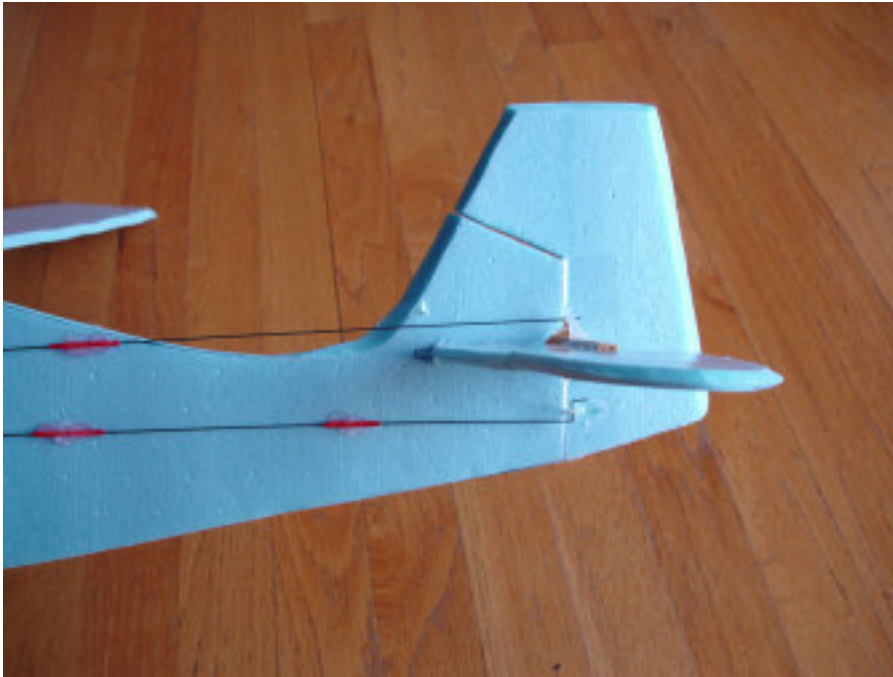
Hot glue into foam.



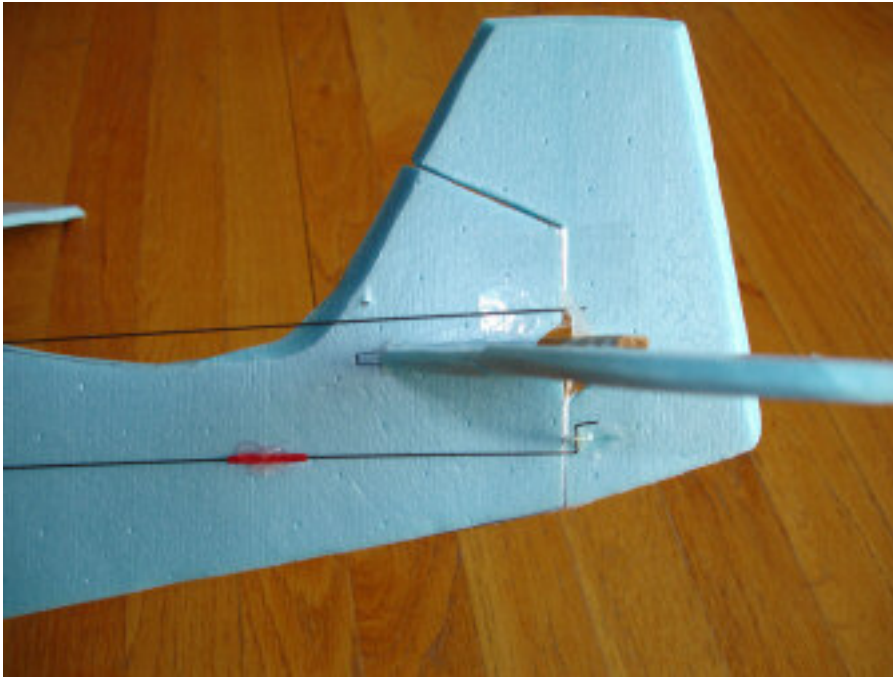
Cut holes for servos.



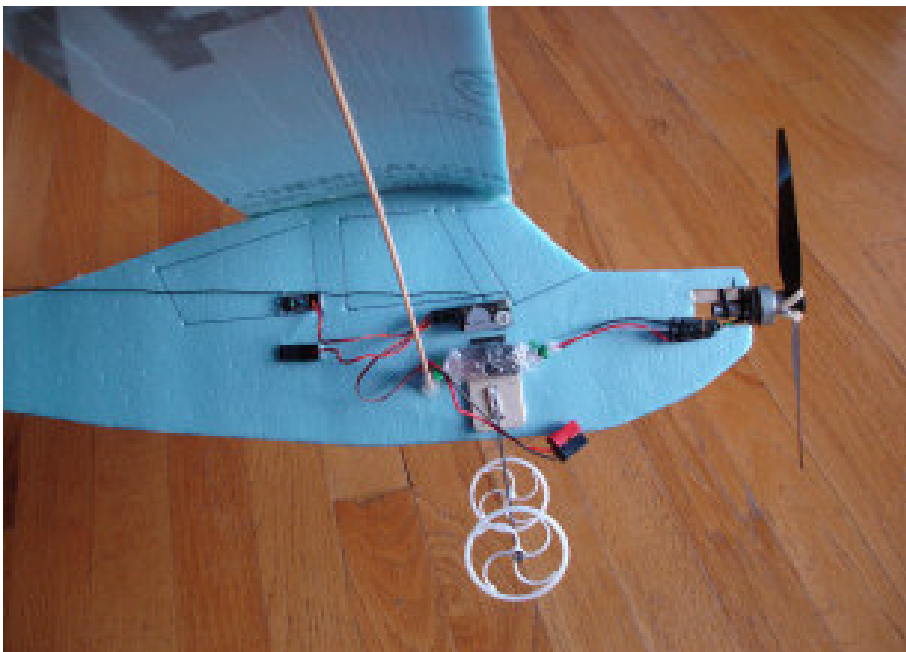
Using the .032 music wire, bend control rods. Before bending both ends, slide coffee straws or WD40 tubes over them. Hot glue them to the fuse to support the wire.

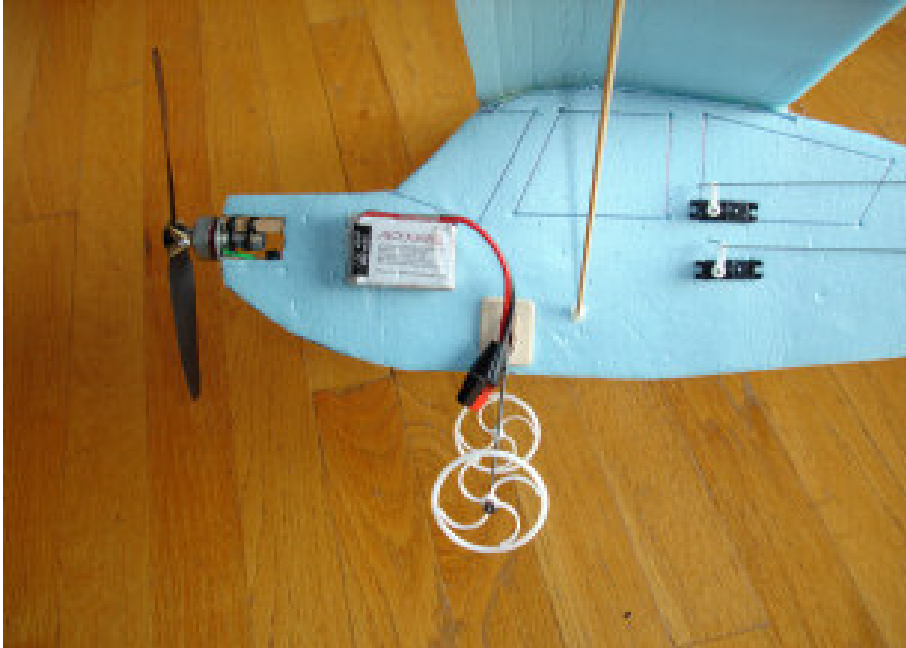


Another view.

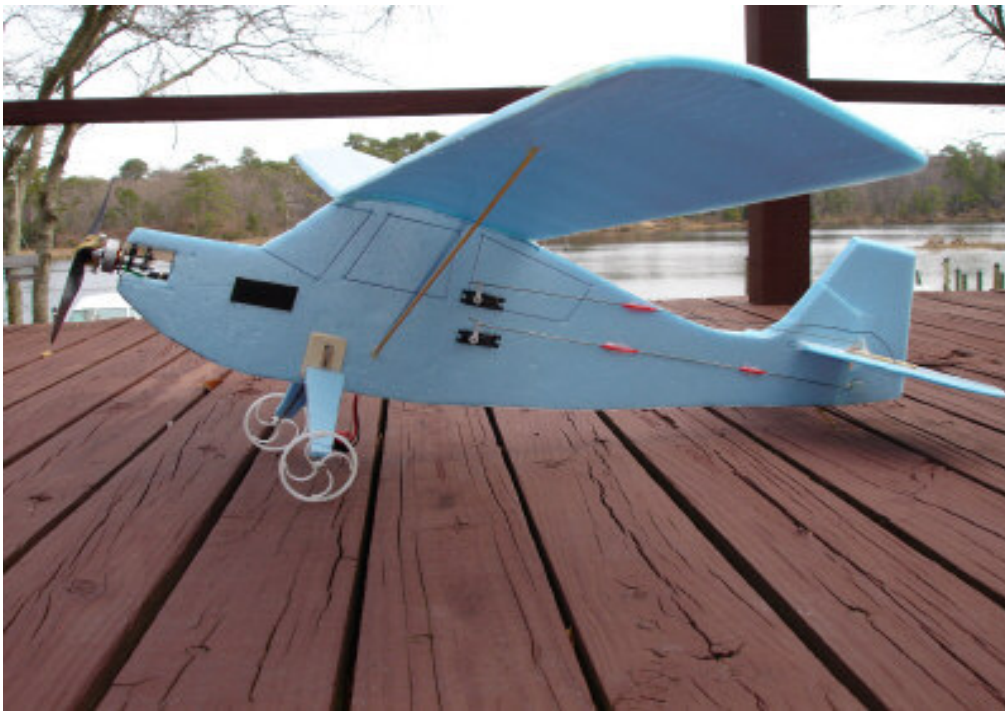


Add a ESC, 3-4 channel receiver, and motor. Use Velcro for easy removal. This is a 20mm CDROM motor rewind with 18 turns of 26g. wire and N50 magnets and a 8040 DD prop. Or use the single or double ISP-A motor with a 9 in. prop.





Add a 2 or 3 cell 350-1020ma lipo for power.....



....and your done building! Now its time to take it for a maiden flight or dress it up.



Just a little Econolite covering or paint, even magic marker will improve its looks.



That's it! You're ready to fly. Have fun!



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