

"NASTY" 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.

Cheap plastic credit cards.

Clear packing tape

Basswood stick 3/8x3/8x4 inches

Music wire 1/32 (.032)x 12 in.

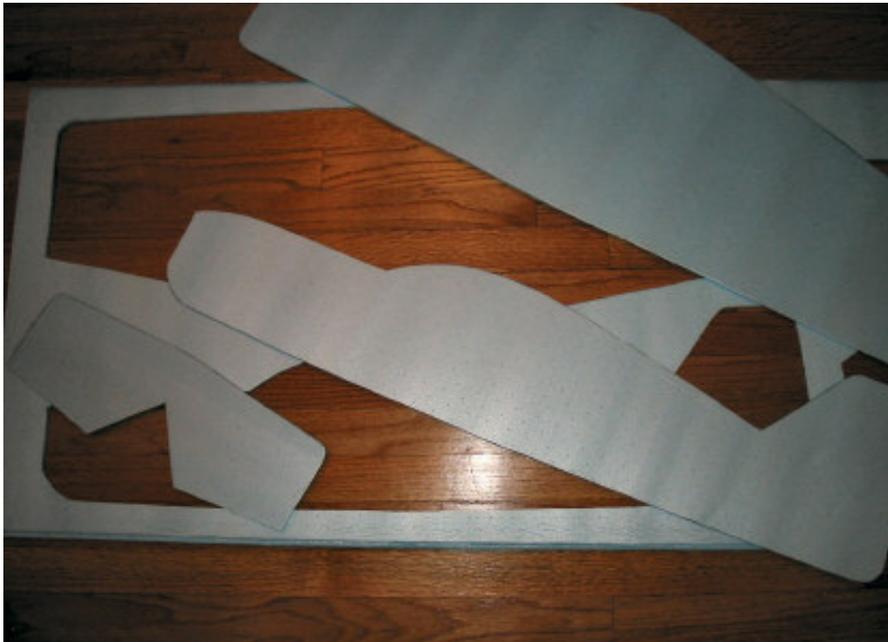
2 carbon fiber rods 1/8 x 35 in.

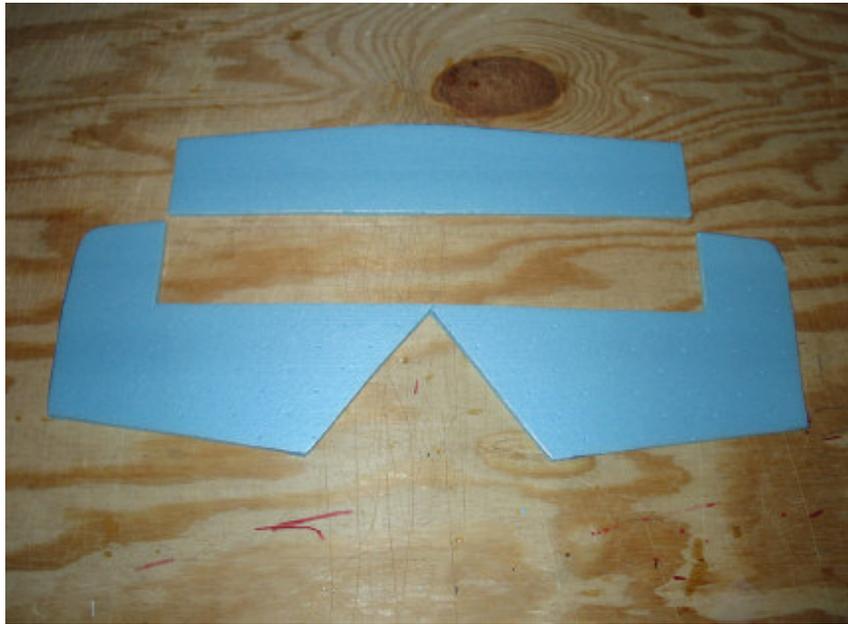
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Getting Started

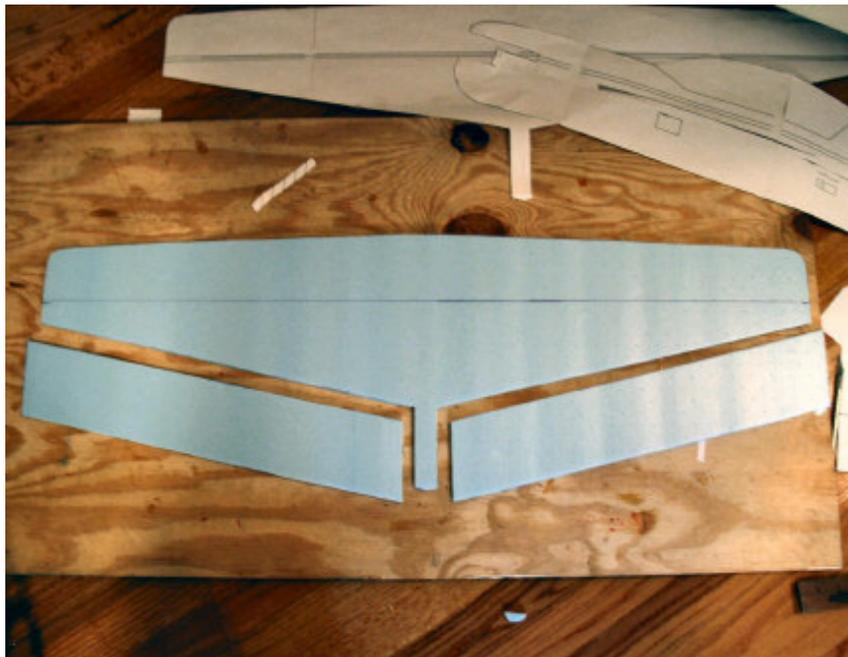


Tape tiled plans together to make full size plan. With full size or tiled plans that have been taped, cut out the “Nasty” and tape to the foam. Trace along the outside edge and remove plans. Using a sharp new #11 exacto knife, cut out the “Nasty” holding the knife straight. Take your time and make smooth long cuts.

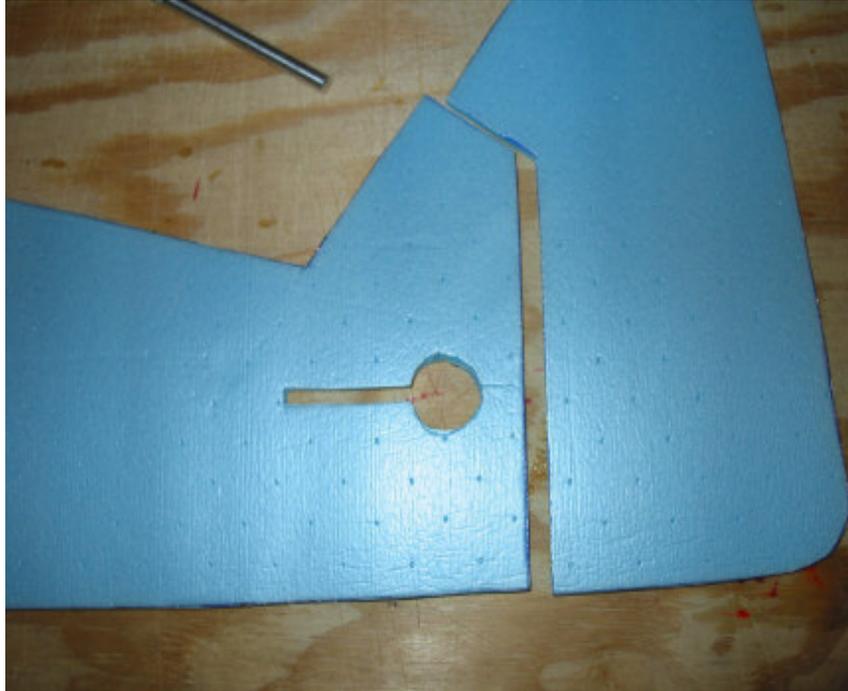




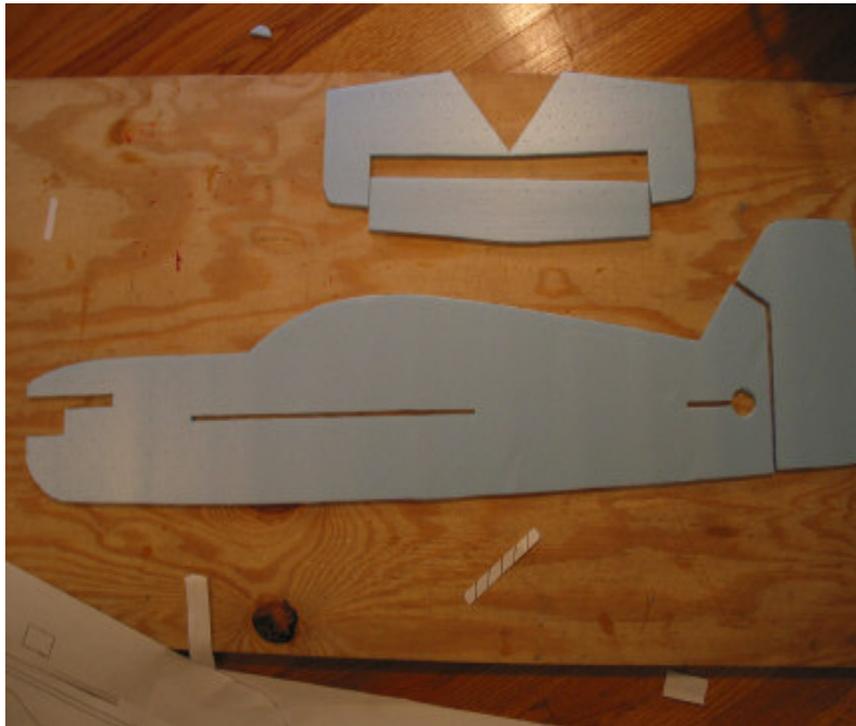
Cut the Elevator from the horizontal stabilizer.



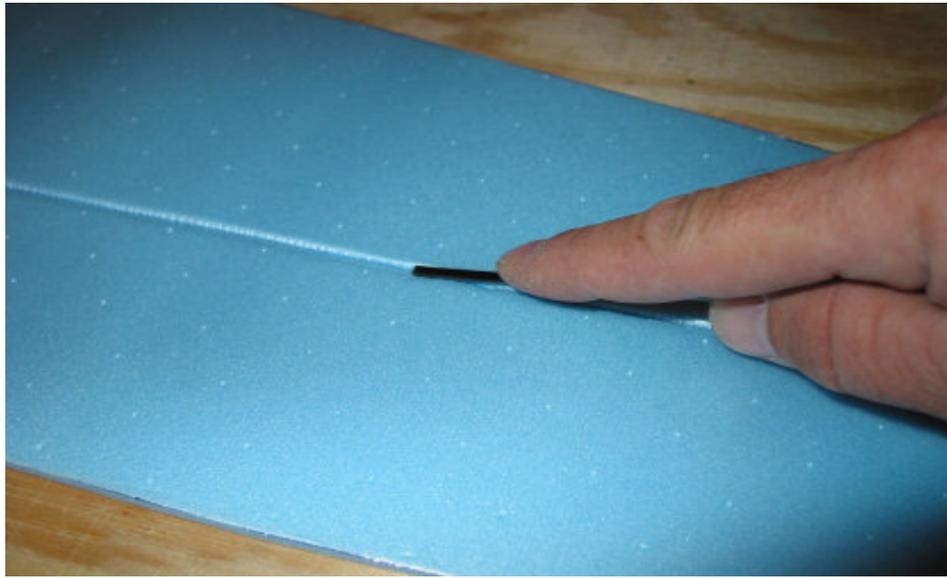
Cut away the ailerons and draw a line where the carbon fiber will be placed using the plans as a template.



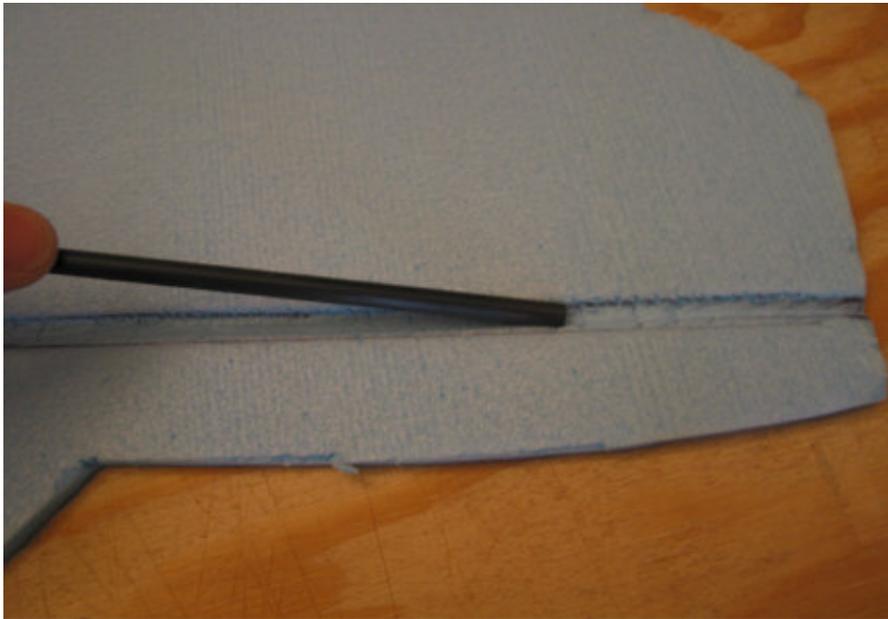
Cut away the rudder and the opening for the horizontal stabilizer.



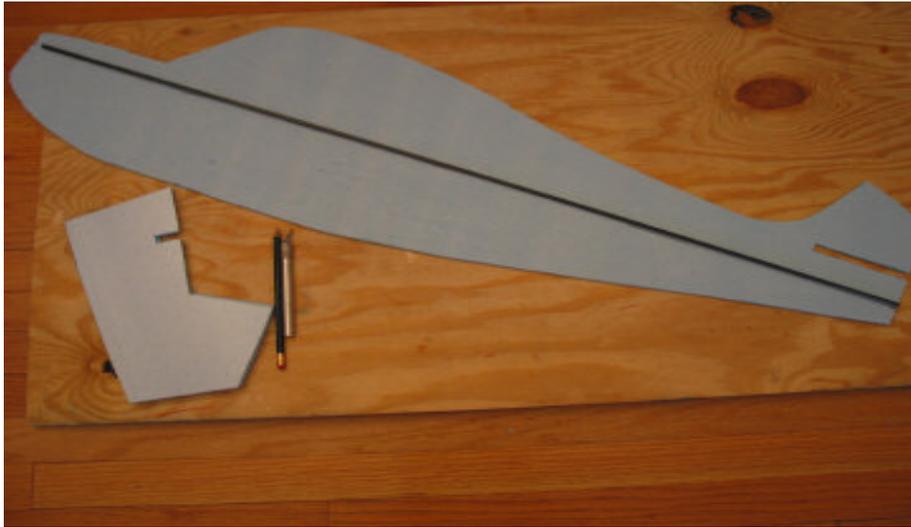
Cut out motor mount area, main wing slot, and draw line for carbon fiber brace.



Using the carbon fiber, press along the line until a nice groove is made.



Same for fuselage



Mix 5 min epoxy and fill the groove with it. Press the cf spar into the epoxy. Lay wax paper over the strut and press down. (Different fuse in picture)





Place books on the wax paper, pressing down on the spar. Allow to dry



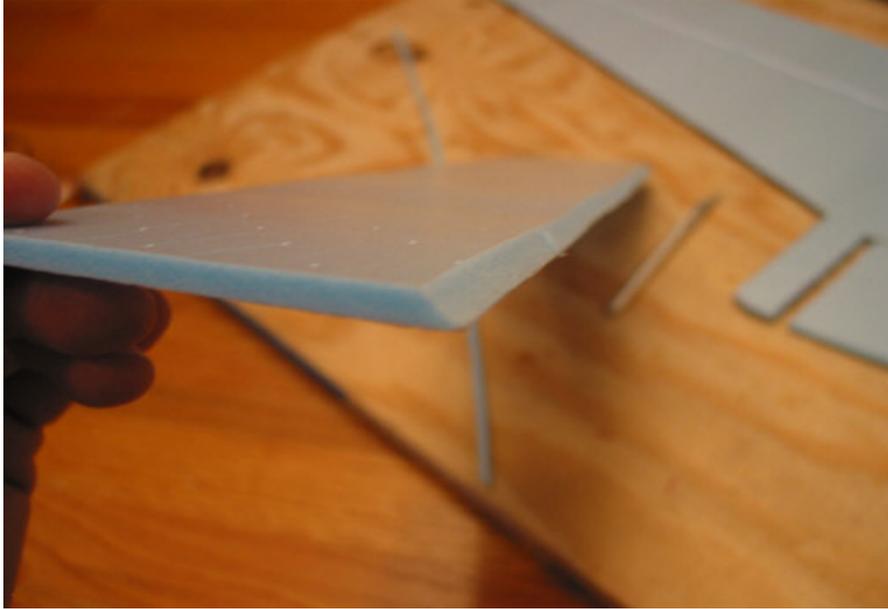
After drying, remove all black ink markings with alcohol and a paper towel.



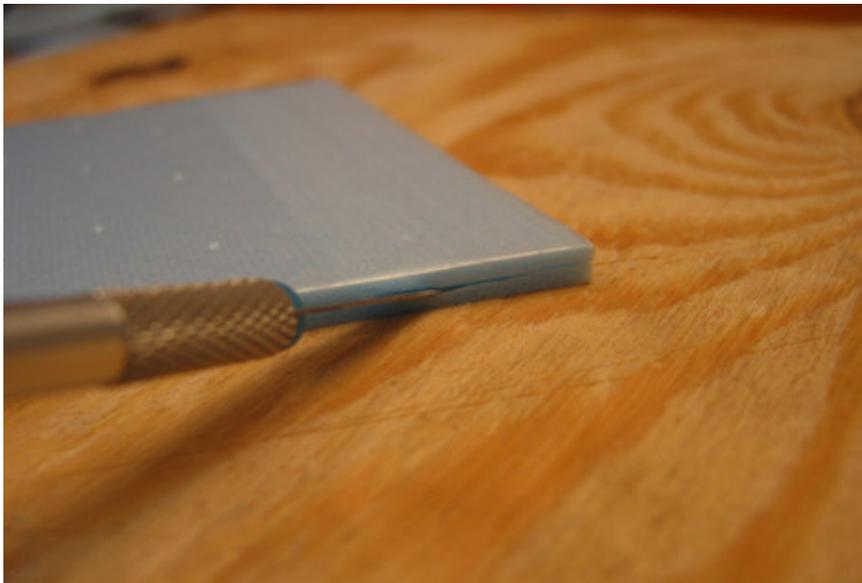
Using clear packing tape, place a strip down along the spar on both sides of the wing.



For ailerons, cut a 45 degree angle along the inside edge. Do the same on the wing where they will hinge.



Finished aileron hinge.



For the trailing edge of the wing, all of the rudder and the entire horizontal stabilizer, cut edges to a nice sharp point by cutting along the length, in the middle of the edge.



Flip over and repeat along the same edge....



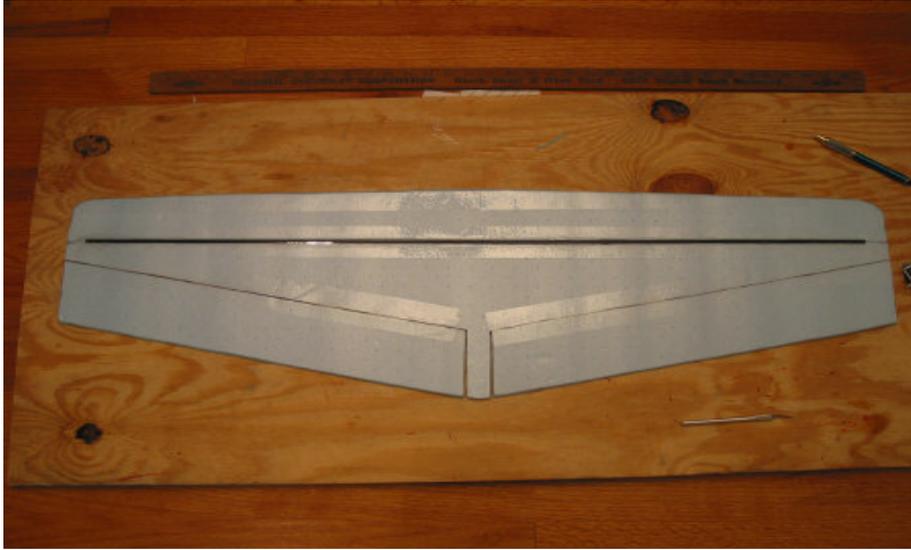
...until a sharp, even, knife edge is made.



Place clear packing tape along the aileron with it at a 45-50 degree angle.



Run another piece of clear packing tape down the leading edge of the wing. This will protect it and help keep its shape.



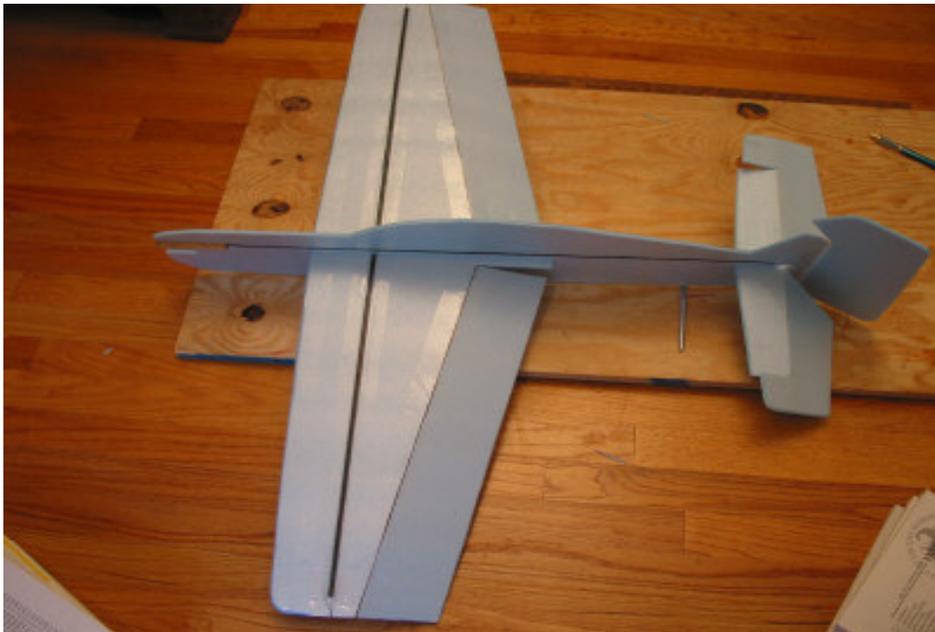
Finished wing.



Glue stab into place with hot glue or 5 minute epoxy. Add tape to elevators and attach at 45-50 degree angle.



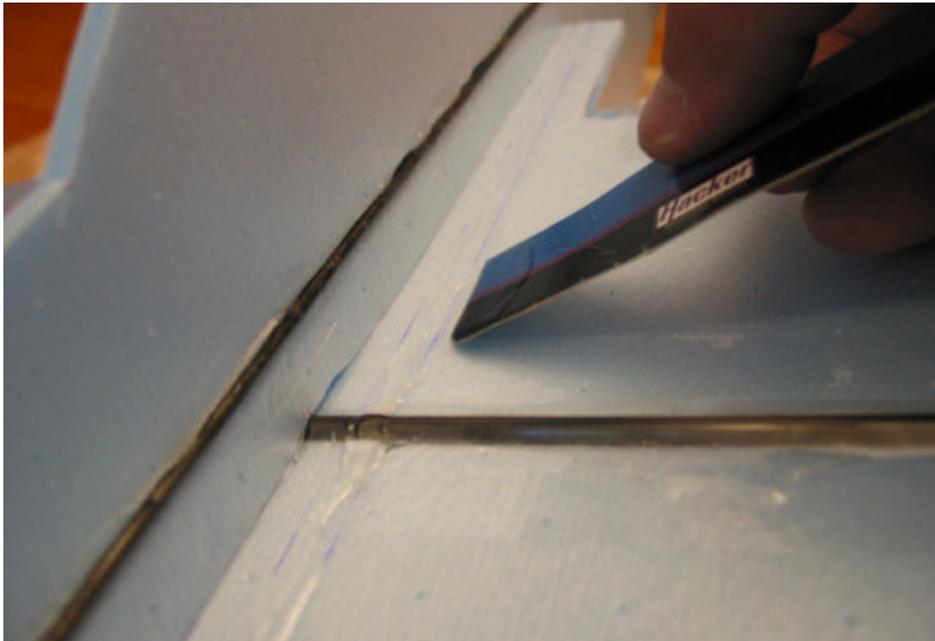
Add tape to rudder and attach.



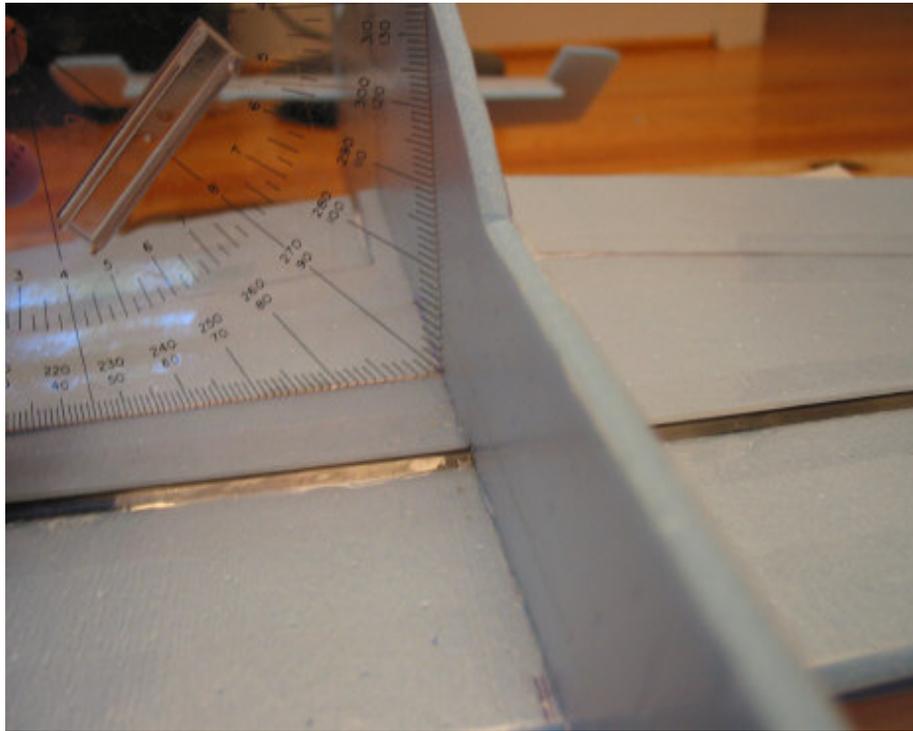
Place wing in fuse and check for fit before gluing.



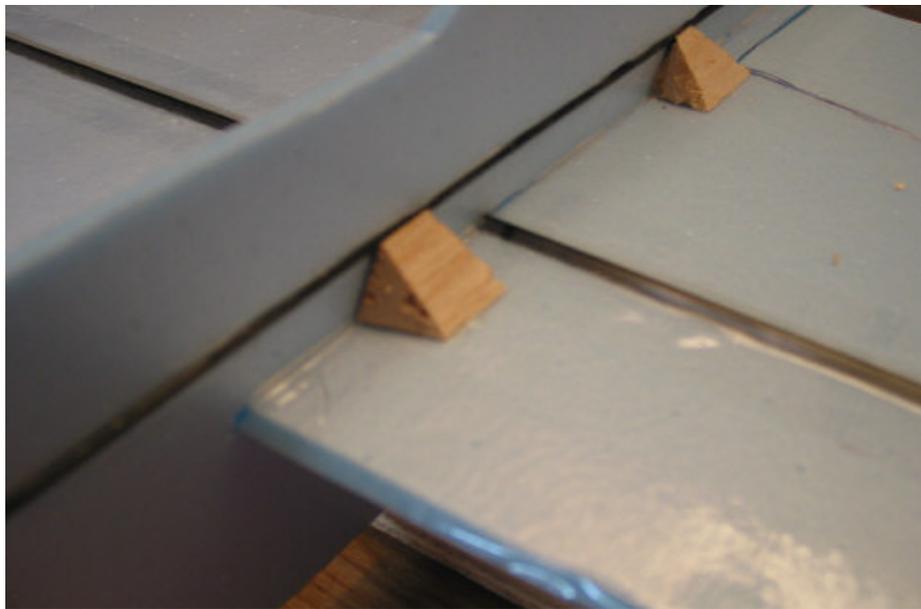
Prepare wing for gluing by leveling the wing with books and using a right angle to check wing is straight and level.



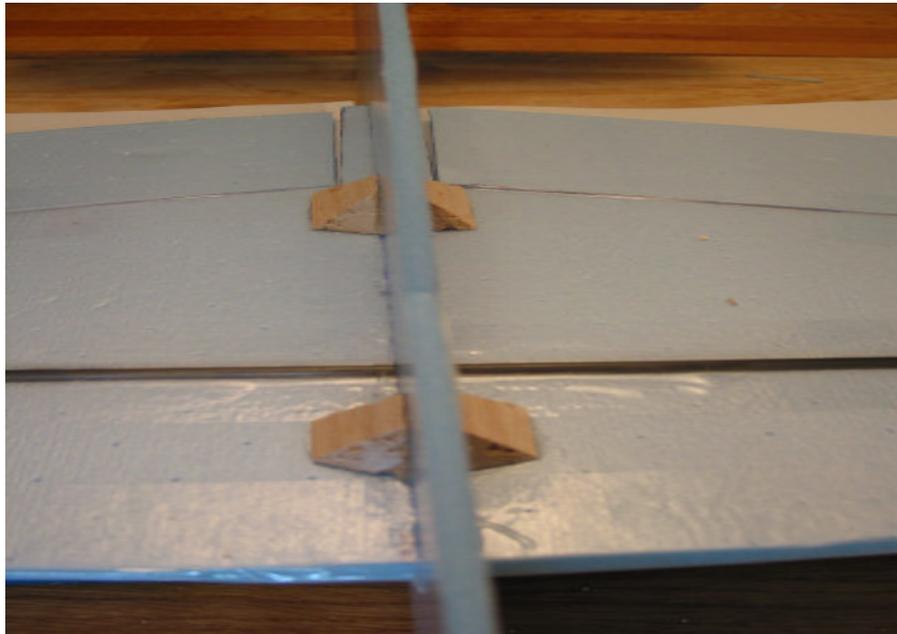
Mix 5 minute epoxy and place on Fuselage line.



Slide fuse onto epoxy and check that it's level.



Cut from 3/4x3/4 triangle balsa, 8 (eight), 1 and 1/2 in. wing braces. Place two on each side, top and bottom. The braces rest against the fuselages carbon fiber, adding more strength than cross braced or “shockie” style bodies.

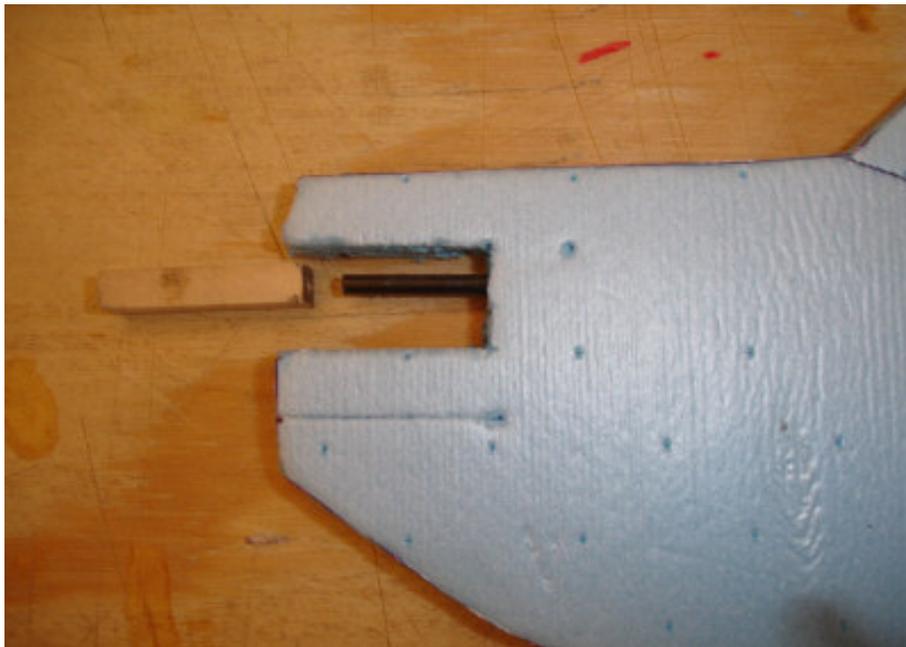


Both sides, top and bottom, braced against each other.

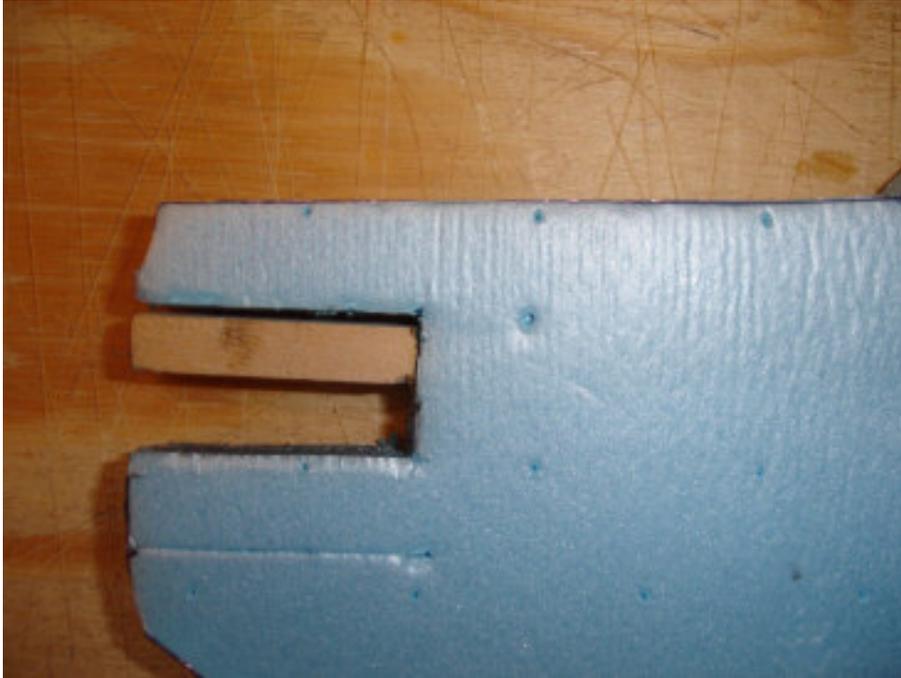
Using a basswood stick 3/8 by 3/8 inch cut off a piece about 1 1/2 inches long.



Drill a 1/8 inch hole about 2 inches deep in the motor mount.



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



Allow extra time to dry. Important load bearing mount.

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

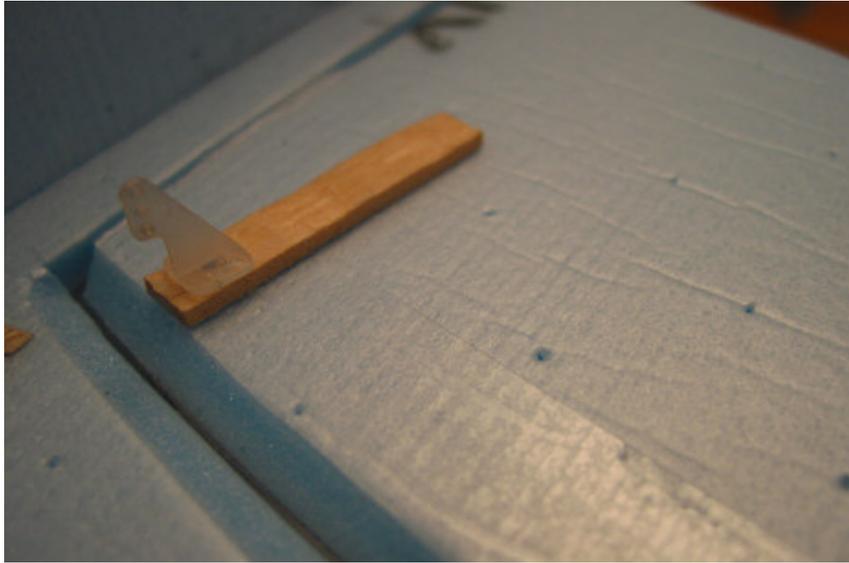




I use the dubro control horns and a small piece of basswood about 1/8in x 2-3 inches long. Drill a small hole for the control horn.



Push horn through hole and glue. (Shown partially inserted)



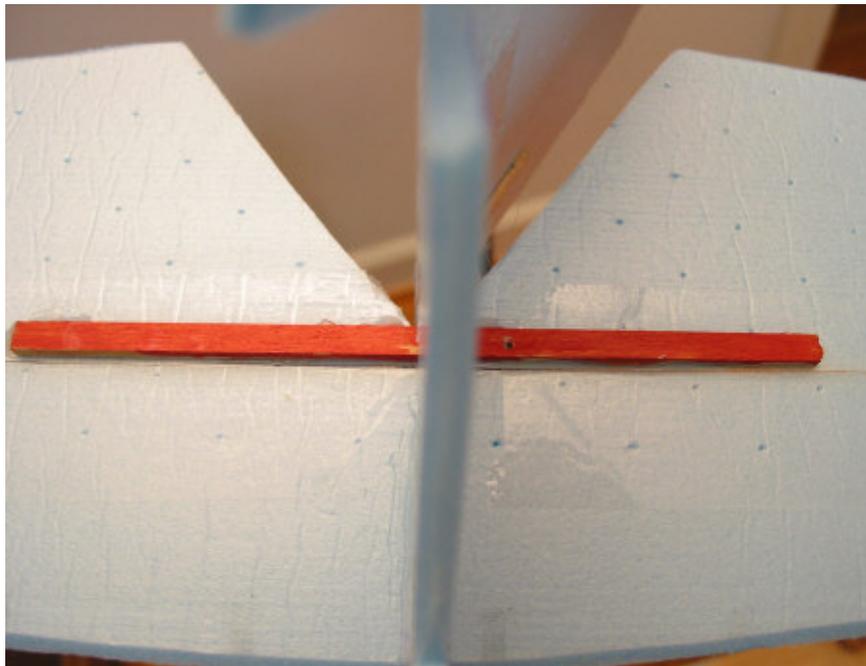
Glue to control surface with hot glue.



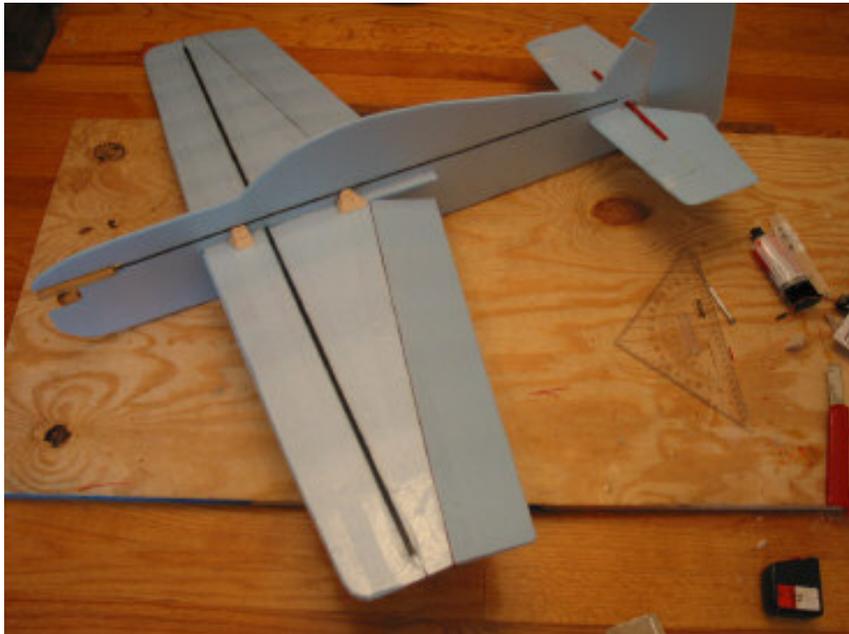
Using medium grade sandpaper, lightly roughen up the packing tape on the elevator. It'll give the wood stick good adhesion when glued.



Before gluing wood brace to elevator, straighten them by putting removable tape on the leading edge. After epoxy dries, remove tape and they will be even.



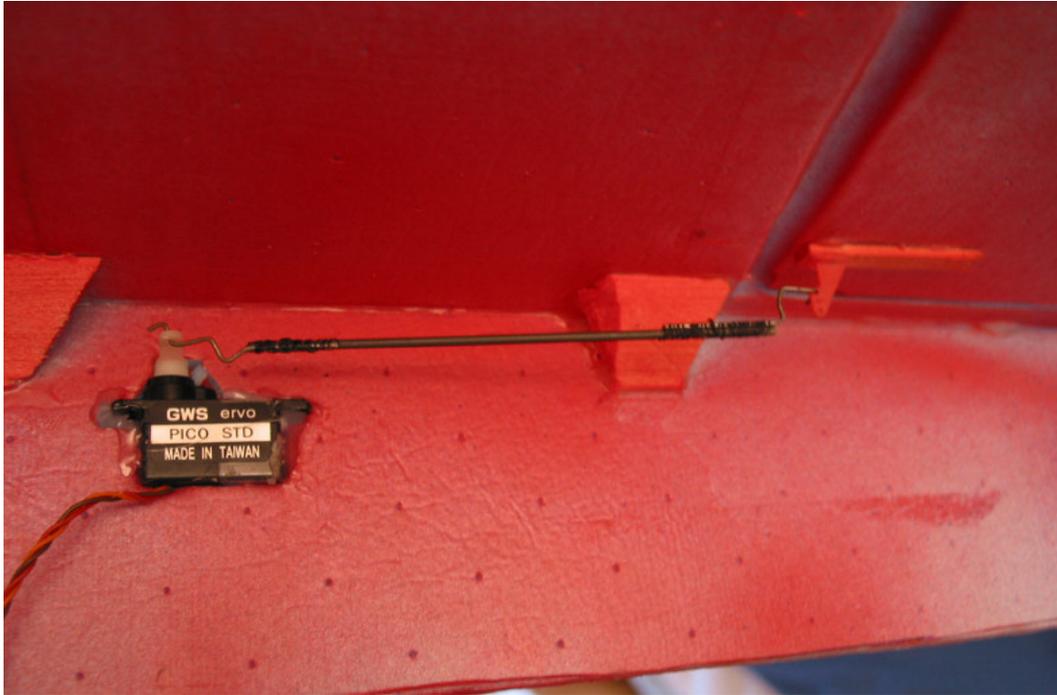
Using a 1/8 x 1/4 inch Basswood stick, epoxy into place.



The “Nasty” is now ready for paint, covering, or electronics.



A quick airbrush paint job and we're ready for electronics installation.



Single servo set up for ailerons saves weight. Use carbon fiber with music wire ends. Wrap thread around wire ends and CA.



Ailerons set up and ready to fly.



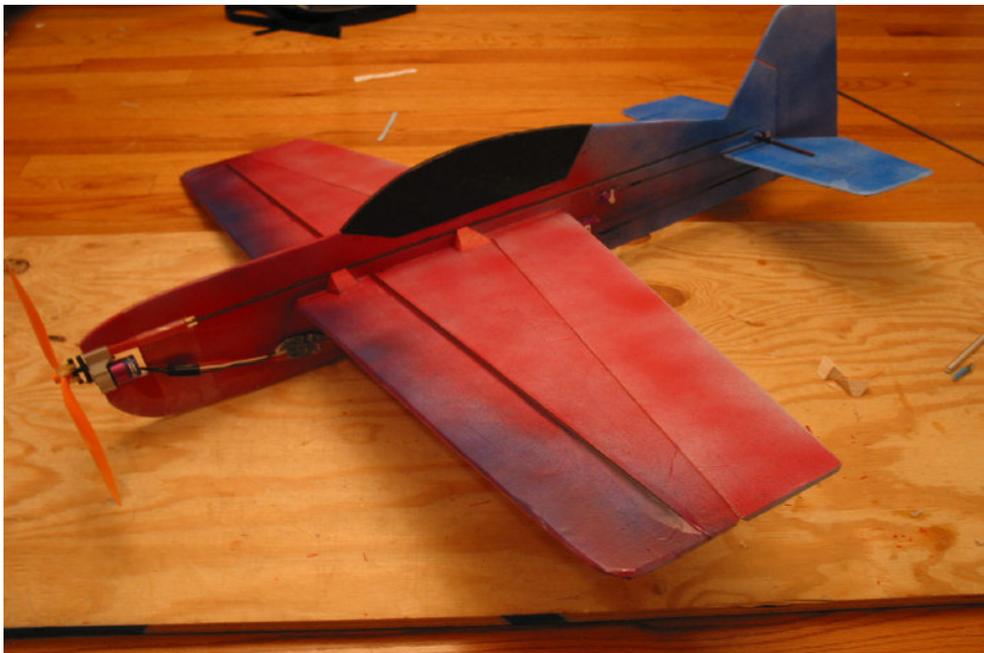
Carbon fiber and music wire again. If you don't have CF, use wire that is braced through straws glued to side about 1 inch long each.



Add servo extensions of 12 inch each if needed, from rear servos to receiver.



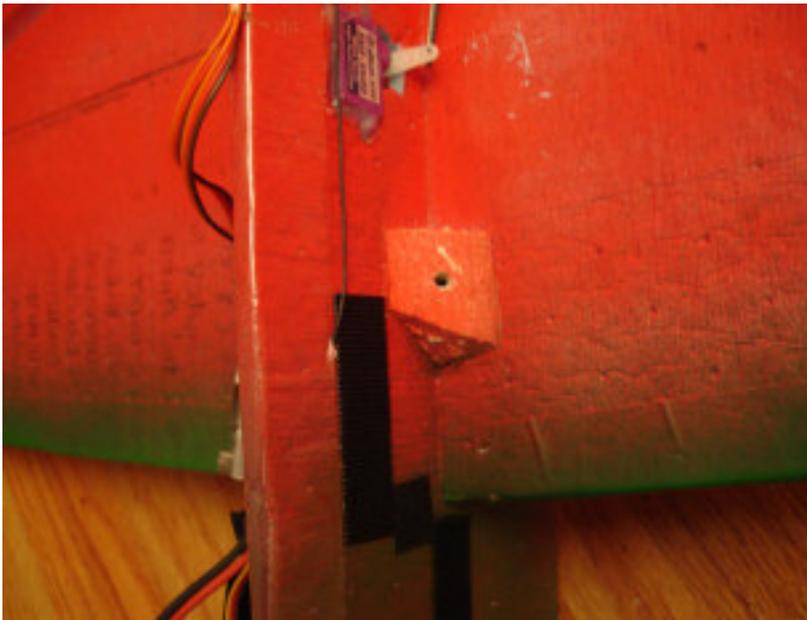
Run clear packing tape down the bottom of the fuselage to behind the wing. Run another piece just behind the motor, top to bottom. This will add lots of strength for landings and crashes, with very little weight gain.



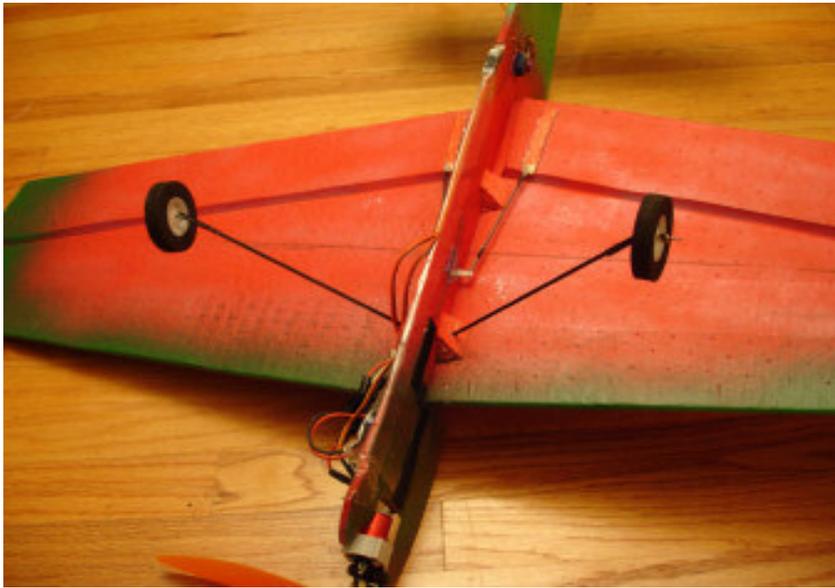
Completed "Nasty"



To add landing gear, cut two pieces of aprox. $\frac{3}{16}$ in (2.5mm) solid carbon fiber rods 8-8 $\frac{3}{4}$ in long (20-21.5cm) Cut two pieces of music wire 1 $\frac{1}{2}$ in. (4 cm) long, bend them to the desired angle, wrap with thread and CA glue. Add 2 inch (5cm) wheels.



Drill $\frac{3}{16}$ in. 2.5 cm, hole in triangle blocks at a 45 degree angle.



Hot glue or “friction fit” them into drilled holes.





Motors- Brushed- GWS350 with D gear. 1260 SF prop

Brushless- Hacker/Eflite E3-49, Razor 400, Himaxx 4200, Parkflyer 400
with gearbox and D gear 6:6-1. or comparable outrunners with 1260 SF prop.

Battery- 800-1500 ma 3 cell Lipo

ESC- CC-25 amp

Servos- GWS pico or Bluebird or equivalent.

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