



Your XC-3 plane kit includes:

- 1 Ea. Fuselage
- 1 Ea. 4 3/4" X 16" Coroplast sheets
- 2 Ea. Green wire 18" inches long.
- 2 Ea. Universal Tip
- 1 Ea. Control Surface Template sheet
- 1 Ea. Front tip/ Canard Holder
- 1 Ea. Tail Holder
- 2 Ea. Wing/Canard Adjuster
- 1 Ea. Wing Clip

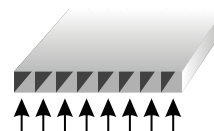
Tools required:

- Pencil
- Scissors or Hobby Knife
- Ruler or Square
- 2.5 mm Hex Key
- Superglue
- Launch Pole

Assembly Instructions

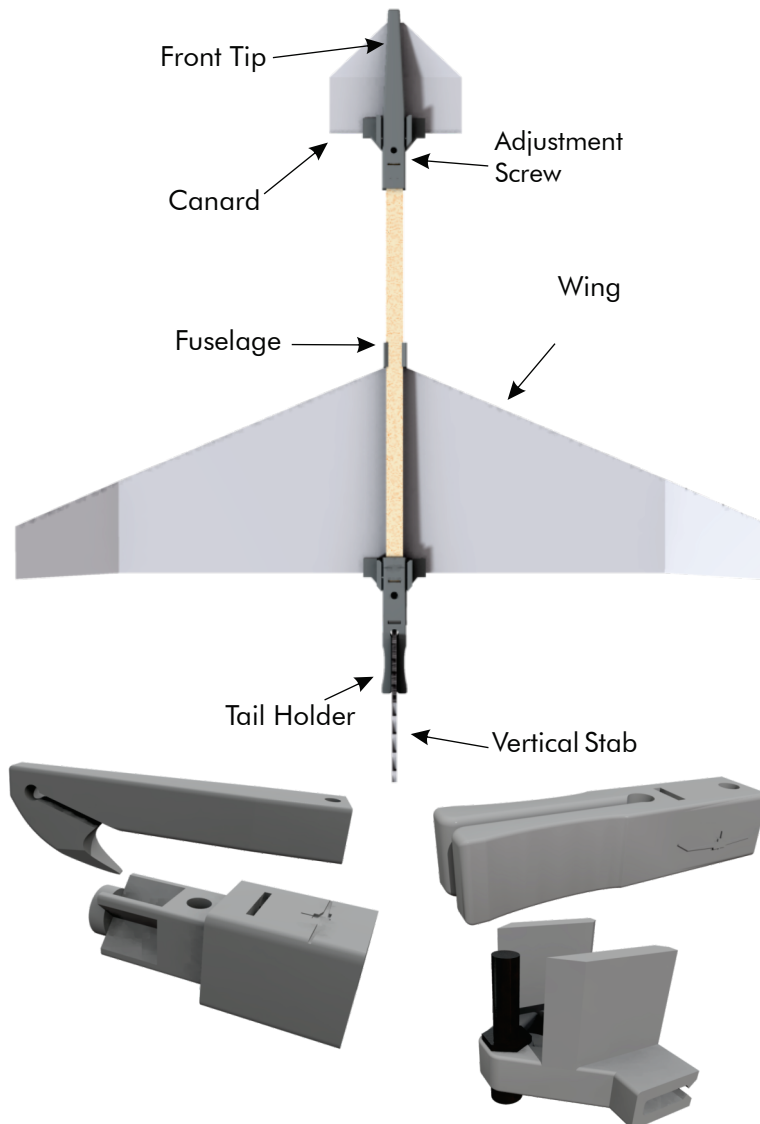
Additional Terms used in this manual.

- Fuselage - This means the body of the airplane. In this case it's the wood.
- Substrate - This is the term in manufacturing used for the material you make things from. We will be using it to make the wing, canard, and vertical stab.
- Canard - In aeronautics, a canard is a wing configuration in which a small forewing or foreplane.
- Vertical Stabilizer - Sometimes called a tail fin, Provides stability to the flight.



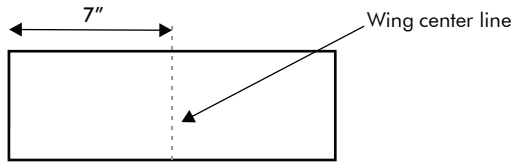
The flutes are the holes that run along the length of wing material.

Each 4" x 14" Coroplast sheet will have enough material to make one complete set of control surfaces for the XC-3 glider. Control surfaces are the tail fin, canard and wing.

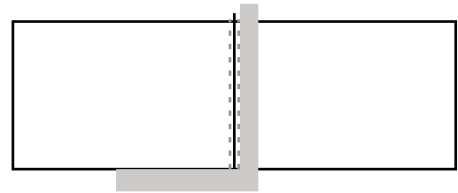


Step 1- Make the Wing

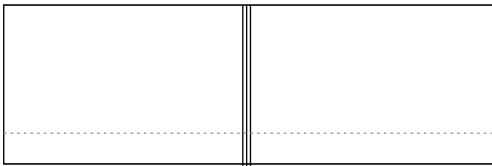
1. From the left hand side of the Coroplast sheet measure 7" to mark the center of the sheet. Lightly draw a line down the center of the sheet.



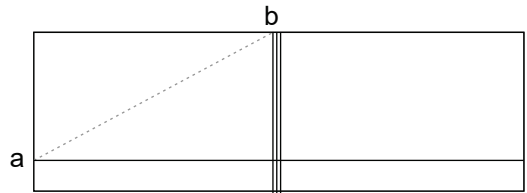
2. Using a square, draw lines .125" on both sides of the original line.



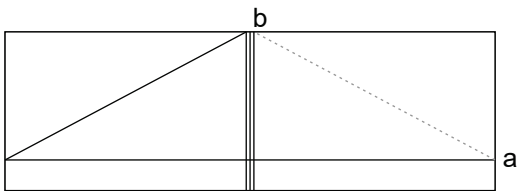
3. Using a straight edge, draw a line 1" from the bottom of the substrate.



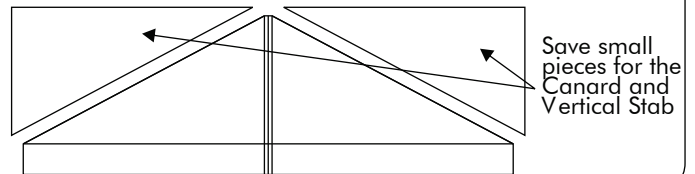
4. Using a straight edge, draw an angled line between point a and point b.



5. Repeat on the other side

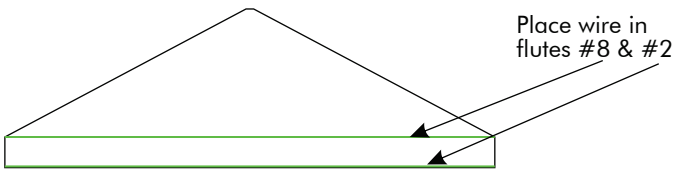


6. With a pair of scissors cut along the diagonal lines. Remove and save the smaller pieces for the vertical stab and canard.

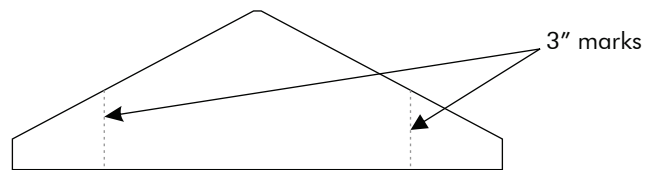


Step 2- Make the Winglets

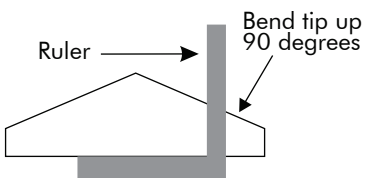
1. Insert two green pieces of wire in the wing flutes #2 and #8, counting from the trailing edge of the wing. Cut the wire to ensure the wire will not extend past the wing.



2. Measure in 3" from each wing tip and draw a line from the leading edge to the trailing edge.

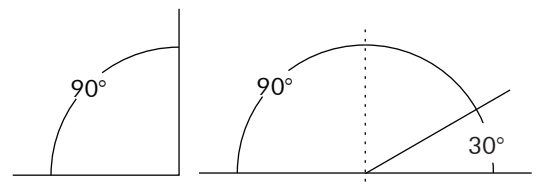


Now it is time to bend the winglets. Lay the wing on a table and extend the wing tip past the table edge about 3".

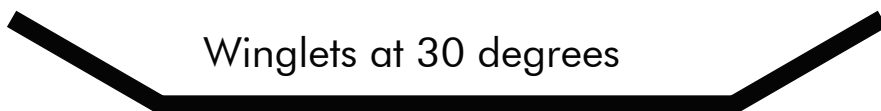


Lay a square or a ruler along the same pencil line from the above step.

Pushing down on the ruler with one hand and bending the wing tip up with the other. Bend each winglet to 90 degrees. For flight, bend winglet back down to 30



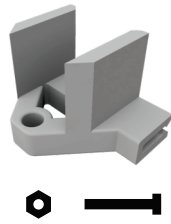
Winglets at 30 degrees



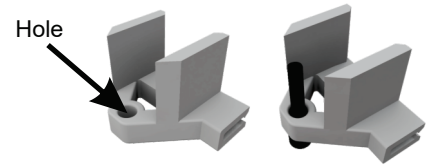
Step 3- Assemble Adjustment Lugs

Now we will assemble the two adjustment clips. There are three parts to it.

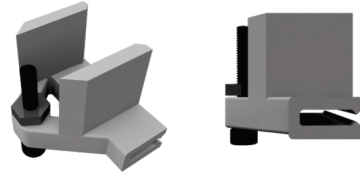
The main clip, an m3 bolt, and the nut that goes with it.



Place the bolt in the hole at the front of the cruiser.



Attach the nut to the bolt and bring it down to where it's almost touching the adjustment clip. This makes a "collar" that will allow you to adjust the height.



Step 4- Assemble the Fuselage

1. Attach the universal tips to the fuselage. Make sure the holes are going the same direction.



2. Place the Front Tip on the Universal tip. Make sure the hole in the front tip lines up with the hole in the Universal tip



3. Attach the Canard/ Wing Clip to bottom of the front tip. You will screw the M3 screw into the hole in the universal tip through the front tip.



4. Place the Tail Holder on the Universal tip. Make sure the hole in the front tip lines up with the hole in the Universal tip



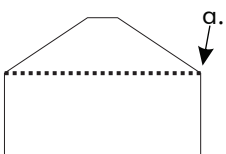
5. Attach the Canard/ Wing Clip to bottom of the back tip. You will screw the M3 screw into the hole in the universal tip through the back tip.



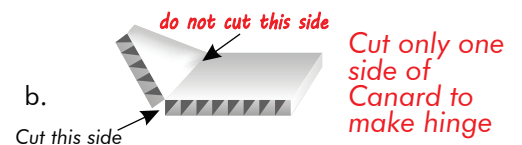
Step 5- Make Canard

From the Template cut out the canard.

Position both control surfaces so the flutes run left to right just like the wings.



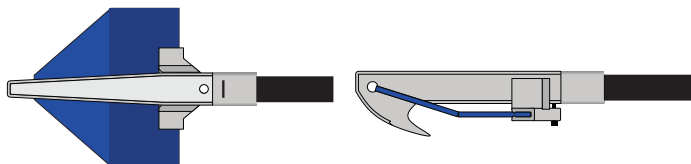
Now we need to make the hinge in the canard. If you look at the canard, find where the angle meets the vertical side. (a) What we are going to do is cut the material on one side of the canard at this point, leaving the other side as a hinge as in b.



Step 5 - Final Assembly

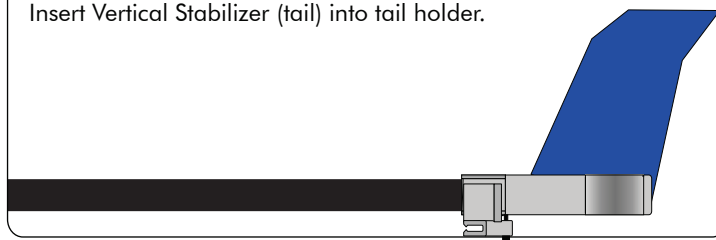
1. Insert the Canard into the slot on the front tip with the hinge cut facing down, lining it up with the fuselage so it's centered.

Put the Back of the canard into the adjustment clip.



2. Using the template, cut the Vertical Stabilizer from the leftover pieces of substrate.

Insert Vertical Stabilizer (tail) into tail holder.



Insert the wing into the Adjustment clip attached to the tail holder. Line the wing up with the fuselage using the lines you made earlier.

