

Thank you for purchasing an Apex from TBRC Wings.

Kit Contents

- 1: 1x Left wing core
- 2: 1x Right wing core
- 3: 1x Blunt core
- 4: 2x Flat carbon spar
- 5: 2x Coroplast winglets
- 6: 1x Bay cover
- 7: Laminate
- 8: 2x Elevons
- 9: 1x Plywood motor mount
- 10: 1x Yellow motor attachment plate
- 11: 2x Control horns
- 12: Decal set
- 13: 2x Foam fins

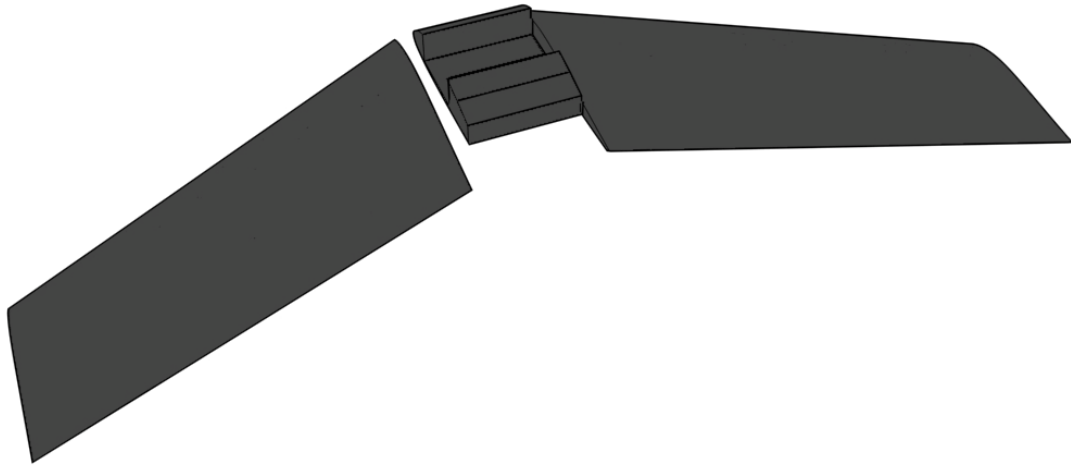
Tools Required

- Hobby Iron
- Goop (or other contact adhesive eg Welders or ShoeGoo)
- Sand Paper
- T Pins
- Soldering Iron/Gun
- Hobby Knife

Centre of Gravity is 94mm from the nose

Step1

Identify your left wing, right wing and the blunt section. It's best to do this one wing at a time. Apply glue to the portion of the wing that will join the blunt and press together firmly. Use the T pins to hold the wing in place as the glue cures. The bottom of the wing and the blunt will line up and match.

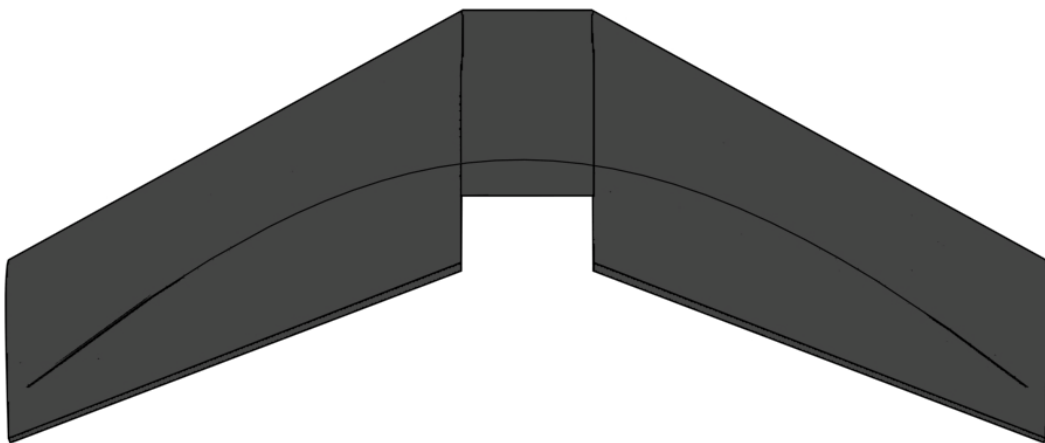


Step2

Cut 27cm (10.5 inches) from one end of the flat carbon spar. You now have a long spar and a short spar.

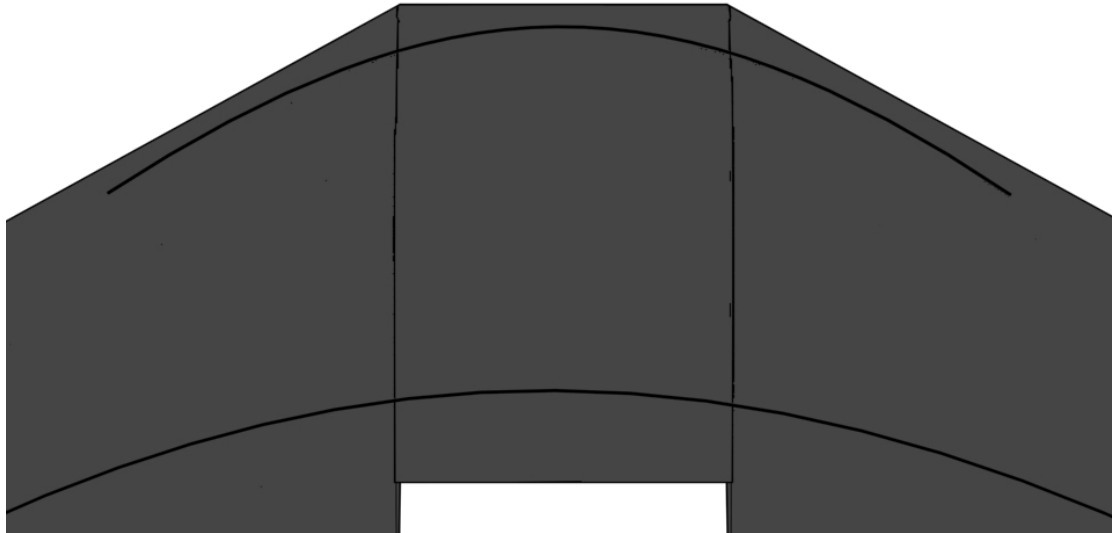
Step3

Bend the long spar and place it on the bottom of your wing so that its ends go from the wingtip to wingtip and the top goes through the middle of the blunt's rear section. Trace along this with a marker pen and then cut along this marked line about 5mm or about 1/4 of an inch. Squeeze Goop inside this slot and install the flat spar on it's edge into this cut that you just made.



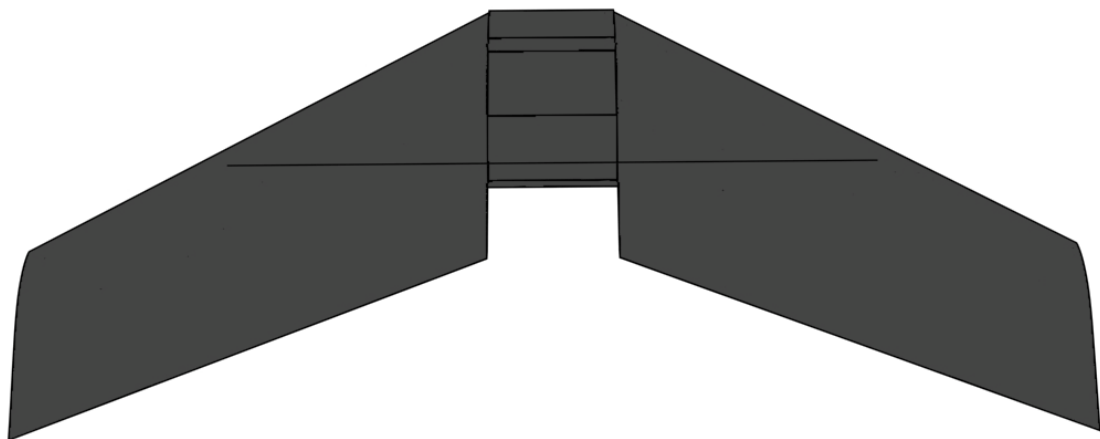
Step4

On the underside of your wing lay the short spar across the nose and bend the ends down. Mark this line and cut and glue the spar in place like you did in the previous step for the long spar



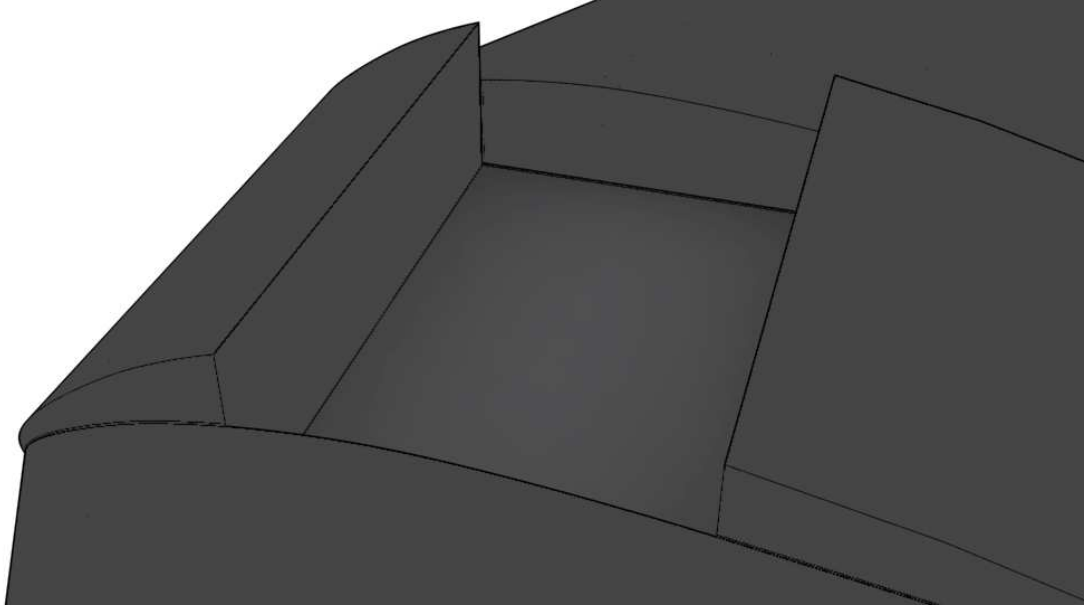
Step5

Cut your second carbon spar at 42cm (16.5inches) On the top side of your wing install this spar straight across the back of the blunt 10mm up from the back of the blunt. You will need to cut deep into the back of the blunt in order for the spar to sit below the top of the wings.



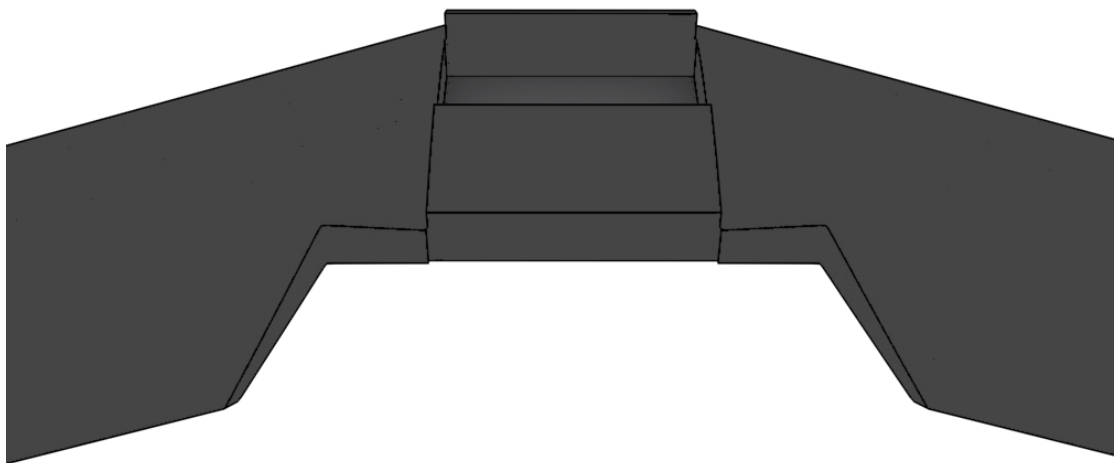
Step6

While waiting for the glue on the spars to cure, smear a thin coating of glue on the inside of the equipment bay. This will help velcro stick when you want to install your electronics later, it also adds some strength to the bay.



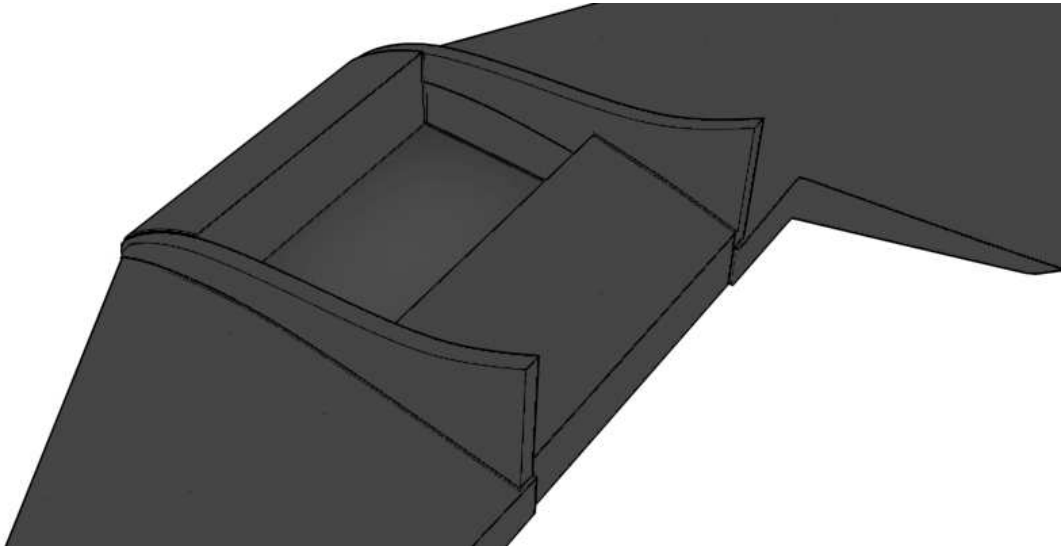
Step7

Identify how big of a propeller you're wanting to use on your build and cut out the back corner of the wings to ensure you have enough clearance.



Step8

These foam fins are an option addition to the Apex.
Glue the foam fins to the side of the blunt section.

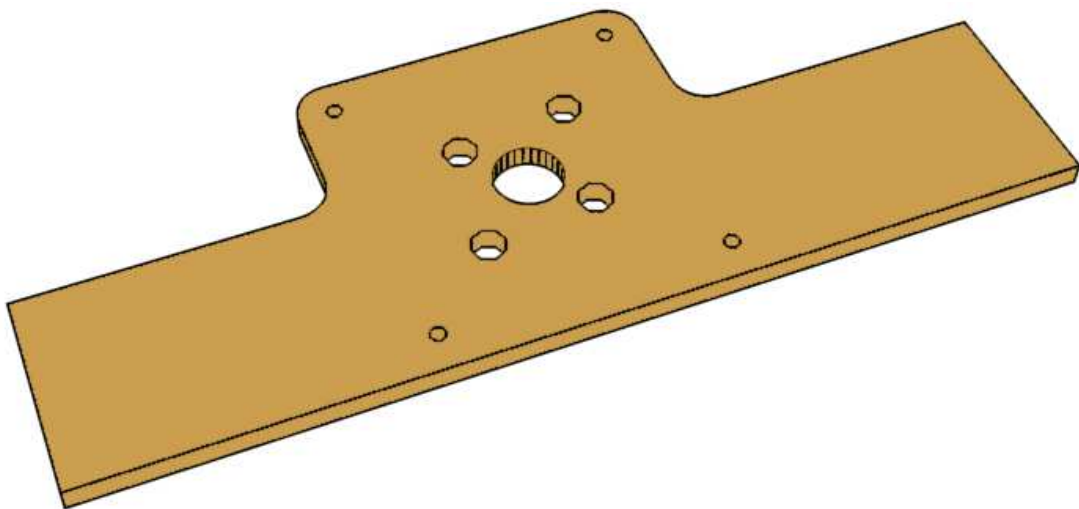
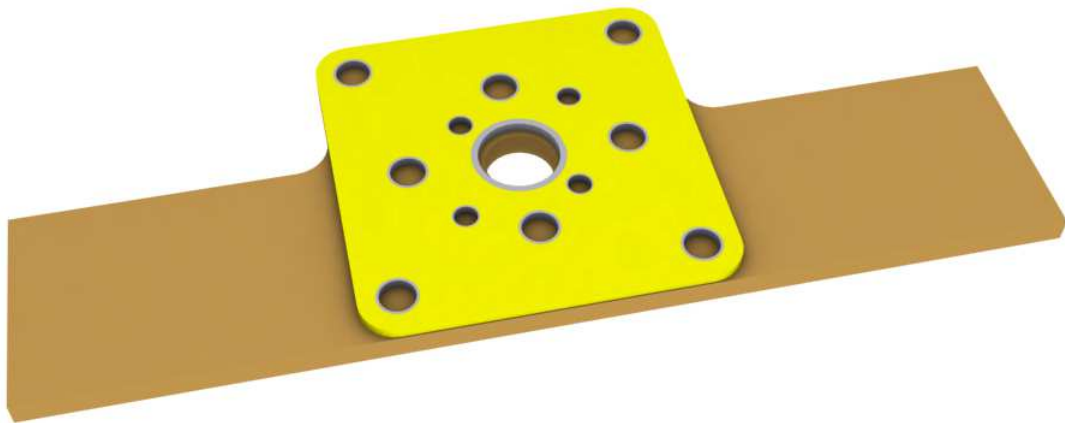


Step9

Give all the foam surfaces a light sanding. This will help the laminate adhere to the surface.

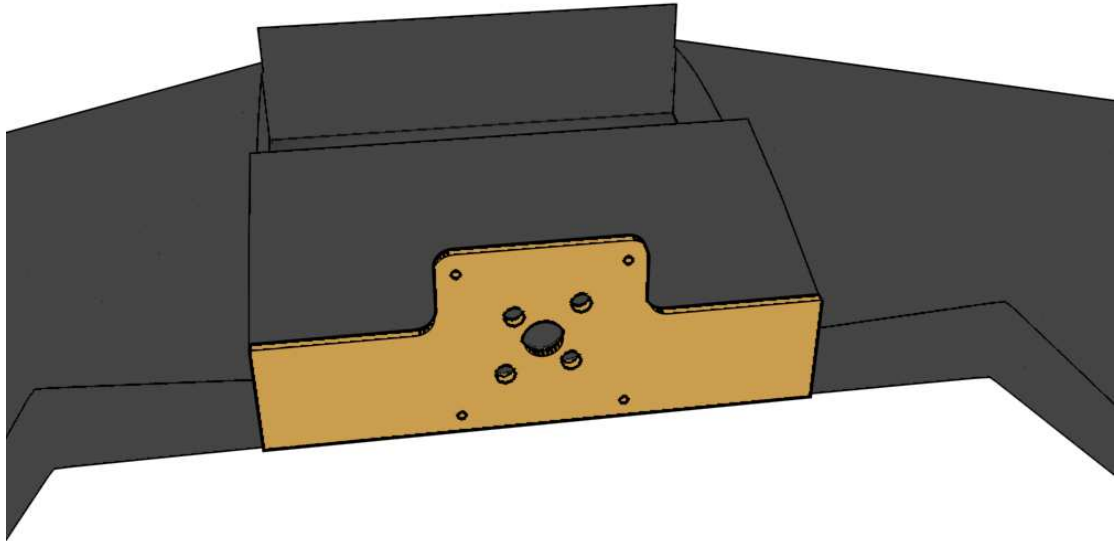
Step10

Place the yellow motor plate over the wooden motor mount and mark which holes you're planning on using for your motor and the corner holes. Put the yellow motor plate to the side. The motor plate is designed to fit the smaller 18xx motors and the larger 24xx motors. Predrill the corner holes in the motor mount with a thin drill bit to allow for easier attaching of the plate to the motor mount. Drill larger holes for the other holes as these will be the recessing needed as your motor screws will extend out the back of the plate.



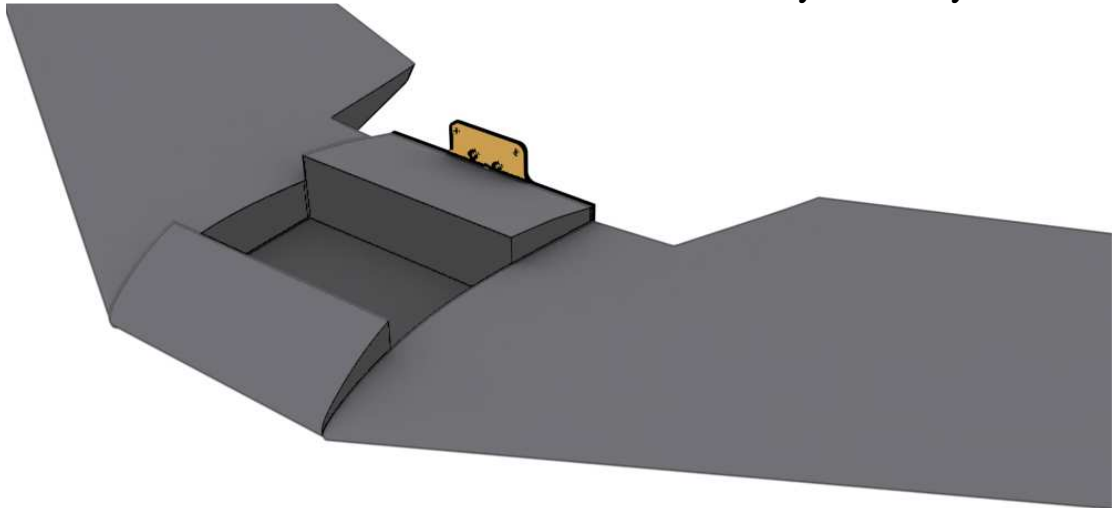
Step11

Glue the motor mount to the rear of the aeroplane



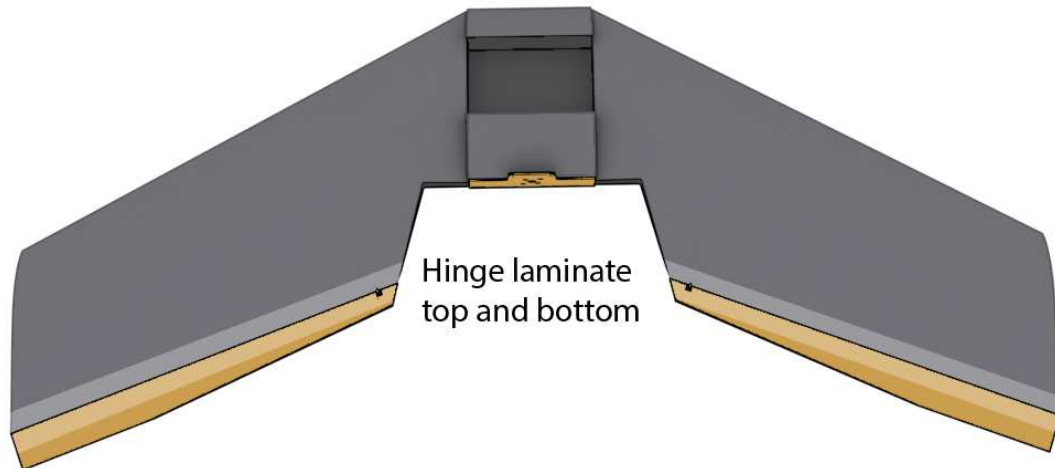
Step12

Laminate the aircraft with the included laminate and your hobby iron.



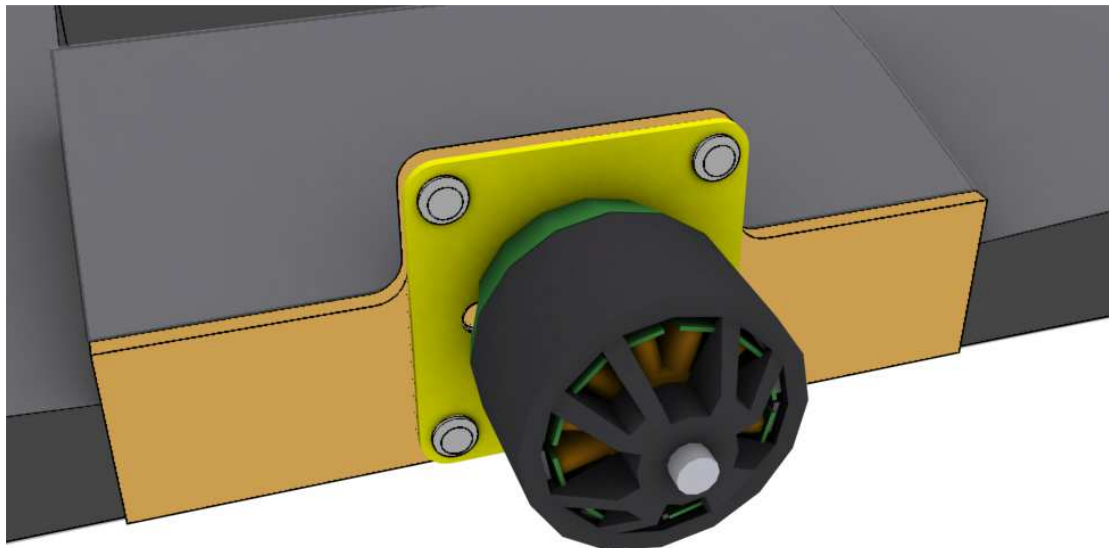
Step13

Laminate your elevons. Cut in and glue in the control horns on your elevons, install them in such a way that the holes are directly over the edge where the elevon will meet the wing. Cut 4 strips of laminate the length of your elevons and about 2 inches wide. Using these as top and bottom hinges, use your hobby iron to attach the elevons to the wing.



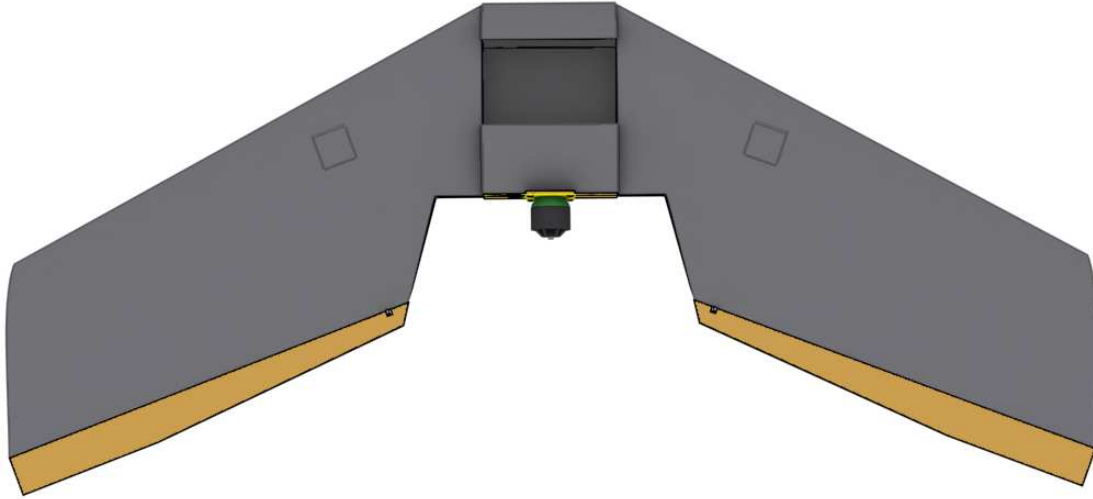
Step14

Screw the yellow motor plate to your motor with the screws that came with your motor. Screw the yellow motor plate to the wooden motor mount with the screws that came included with your servos.



Step15

Cut holes for your servos on the top of your wing where you want them to be installed. We strongly recommend you do this in front of or on the CG line as this will help balancing your plane later on.



Step16

Install your servos with a small dab of glue. A small slice along the top of the wing to the bay will be enough for you to push the wire down below the surface. A small strip of laminate over the top will add a bunch of strength back to the wing and help hold your servo in place.

Step17

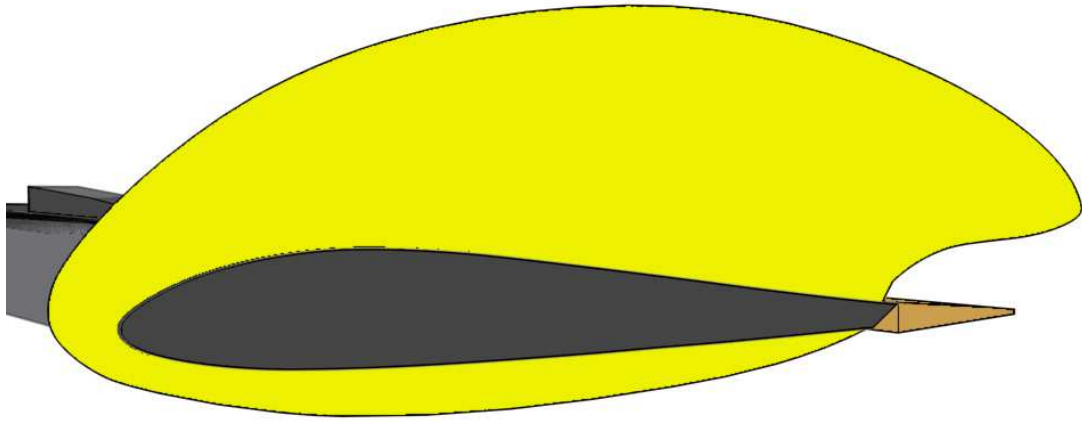
Install the rest of your electronics, Battery, ESC, Receiver, (FPV gear optional)

Step18

Glue on the bay hatch at the front to form a hinge (can also be taped if you prefer)

Step19

Glue on the winglets as shown in this image. They should be sticking forward of the wing, this is normal.



Step20

Go out and fly!

The CG mark for this plane is at 94mm from the nose.

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