

Strix Goblin Instruction Manual

Rev 3 - 4.24.2017

Introduction

- Thank you for purchasing the Strix Goblin! This is a high performance plank style aircraft and it was designed using aerodynamic principles never before applied to model airplanes. As a result, it is extremely efficient and can reach very high speeds while remaining smooth and easy to fly.
- This is a precision aircraft and should be built and flown as such. Consider aerodynamics when placing your FPV components – large cameras with big mounts placed high above the fuselage will result in poor flight characteristics.
- CG on all plank aircraft is very specific, and the Goblin is no different. Take careful note of your CG, and remember it is always best to error on the side of nose heavy. Small bumps on the bottom of the wings near the fuselage indicate the proper CG.
- Control surface travel is very important. Do not use more than recommended in this guide.

Important Information

- **Recommended battery:** 4s 3300-5000
- **Recommended Motor:** 2217/2300kv
- **Recommended ESC:** 60amp
- **Recommended Prop:** APC 6x4
- **Recommended Glue:** Beacon Foam-Tac or similar adhesive
- **Center of Gravity:** 31mm from leading edge – note location of bumps on bottom of wings
- **Reflex:** adjust your elevons such that the bottom edge of the elevons is flat with the top of the corresponding part of the fuselage (approximately 3mm up from flat).
- **Control surface travel:** It is recommended to have no more than 6mm of travel in each direction for elevator. More travel can be used for roll as desired. The faster you go, the less you will need. Consider using expo to help smooth out your inputs.
- **NOTE:** If you plan to be regularly exceeding 100mph, it is recommended to reinforce the hinges
- **THIS IS NOT A TOY.** This is a high performance model aircraft meant to be used by individuals over the age of 14 and with experience flying model aircraft.

Launching the Goblin

- Launching the Goblin is simple if done correctly. The best method is to give it about 2/3 throttle and throw it much like a football. Grip the plane on the fuselage directly under the wings. Grip tape has been included and is recommended to be installed to aide launching. Throw it very hard at about a 20 degree angle above the horizon. It is imperative to throw it as fast as possible to ensure an easy launch.

Landing the Goblin

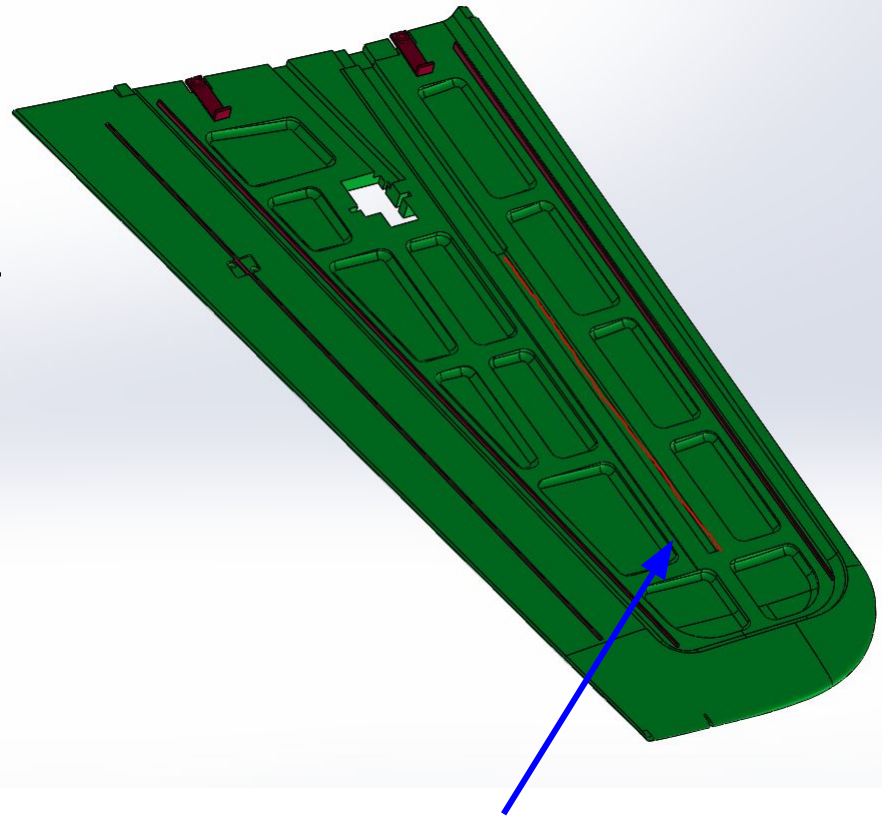
- Landing the Goblin requires a large location with a clear line of approach.
- Prior to landing and at altitude, experiment with slowing the airplane down to landing speeds to understand how long it takes and how the aircraft handles at these speeds.
- The Goblin will glide with the power off for a long distance. Reduce altitude and speed prior to your approach. Cut power with considerable distance (~100m) to the landing area to slow the aircraft as much as possible. With slight up elevator input, use the throttle to adjust the descent rate and carefully guide it in for a smooth belly landing. Maintain level approach to prevent wingtips from touching the ground.

Kit Assembly Instructions

If you have a PNP aircraft, skip to
page 17

1. Glue components into wings

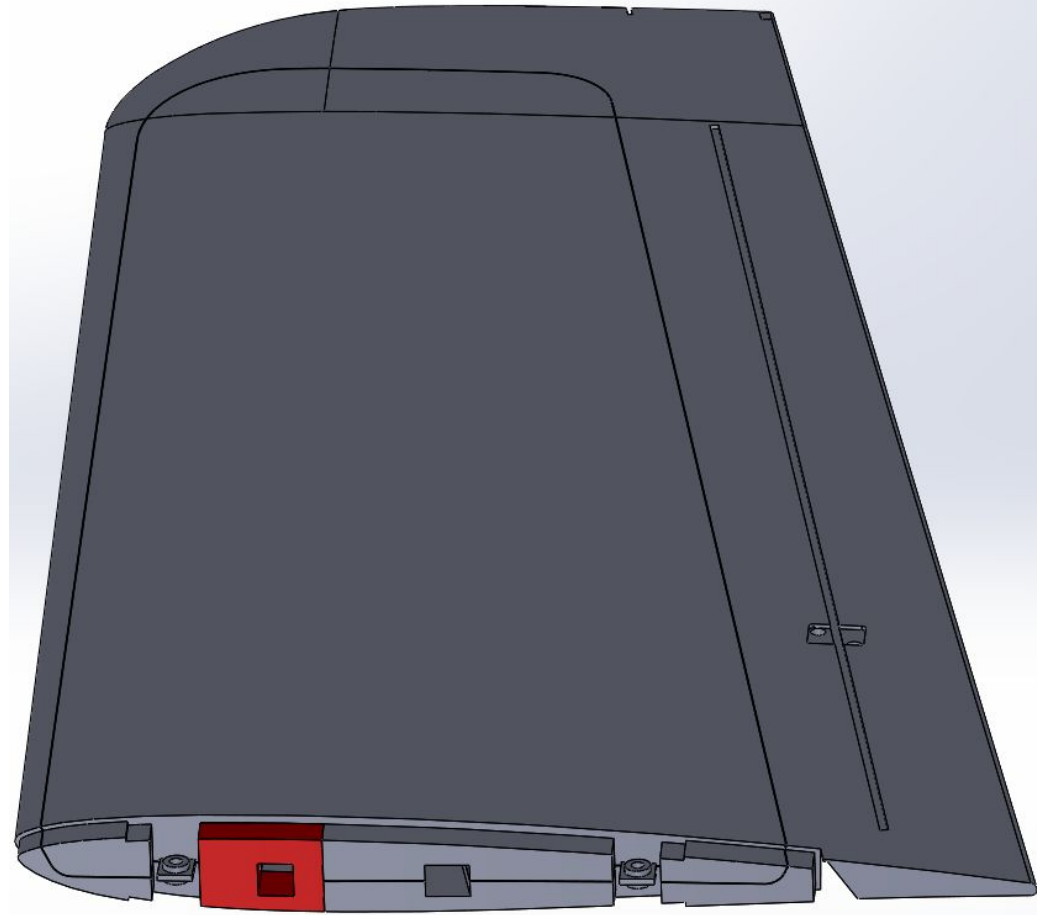
- Lay out the top halves of the wings and glue in the spars and wing anchors.
- Make sure the wing anchors are in the correct position – notice that one side is longer than the other.
- Glue square hollow spar into the channel marked with the red line. Be sure to only glue where the line is.



Glue along thin red line

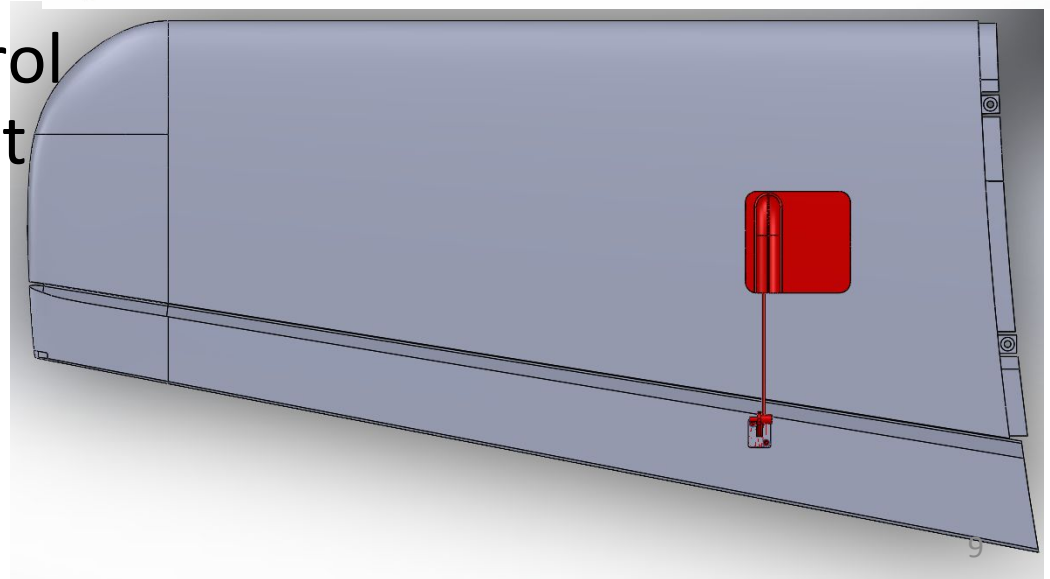
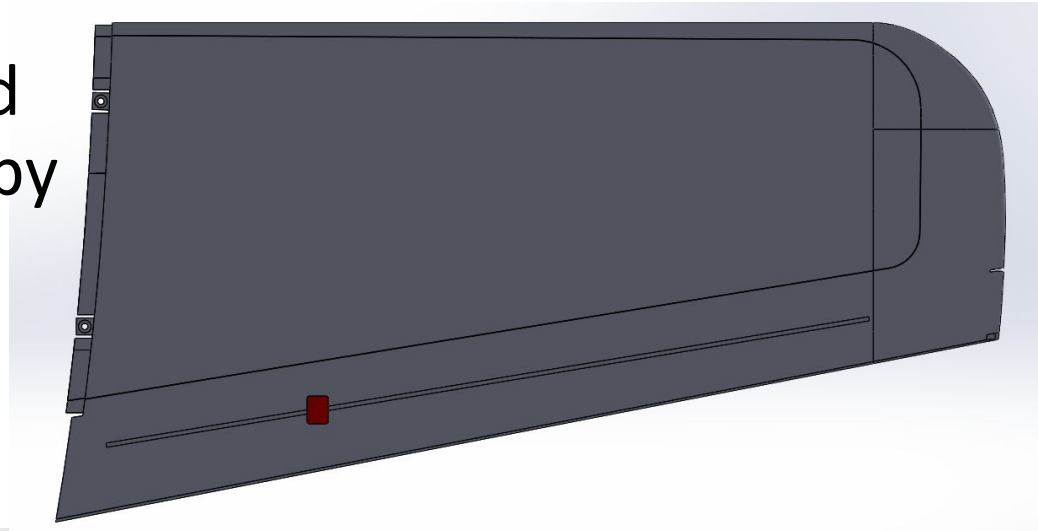
2. Glue wing halves together

- Carefully apply glue to all mating surfaces, including ribbon spars and square spar. Do not get glue residue in main spar channels
- Firmly press wing halves together to ensure proper adhesion.
- Glue on plastic wing caps. (shown in red)
- **Note:** Servos can be installed before, or after gluing wings.



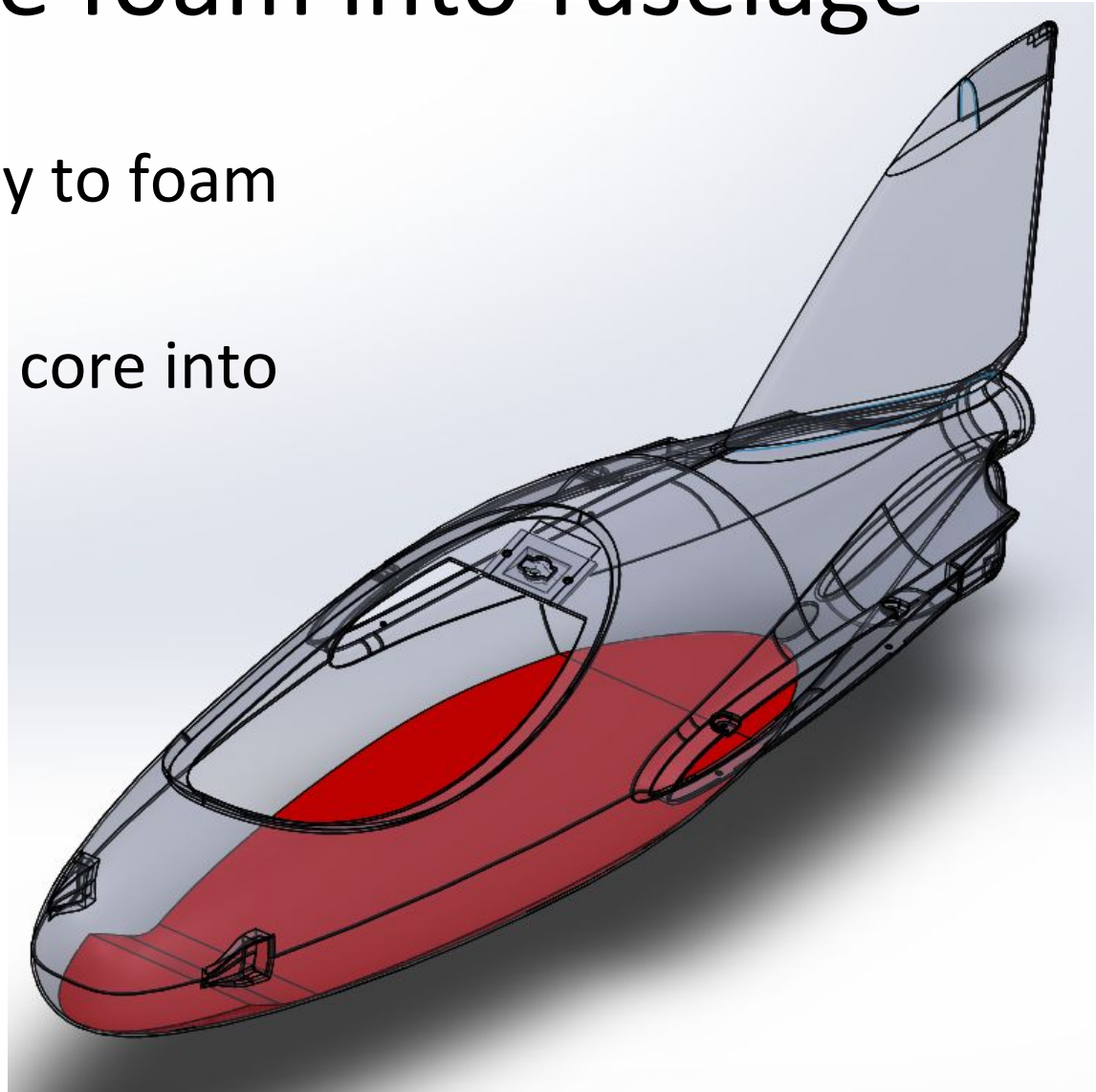
3. Install Servos & Control horns

- Servos can be installed after wings are glued by threading the servo wire through the channel in the wings. Glue servos in place.
- Glue and screw control horns in place and set up linkages.
- Glue on covers over servos.



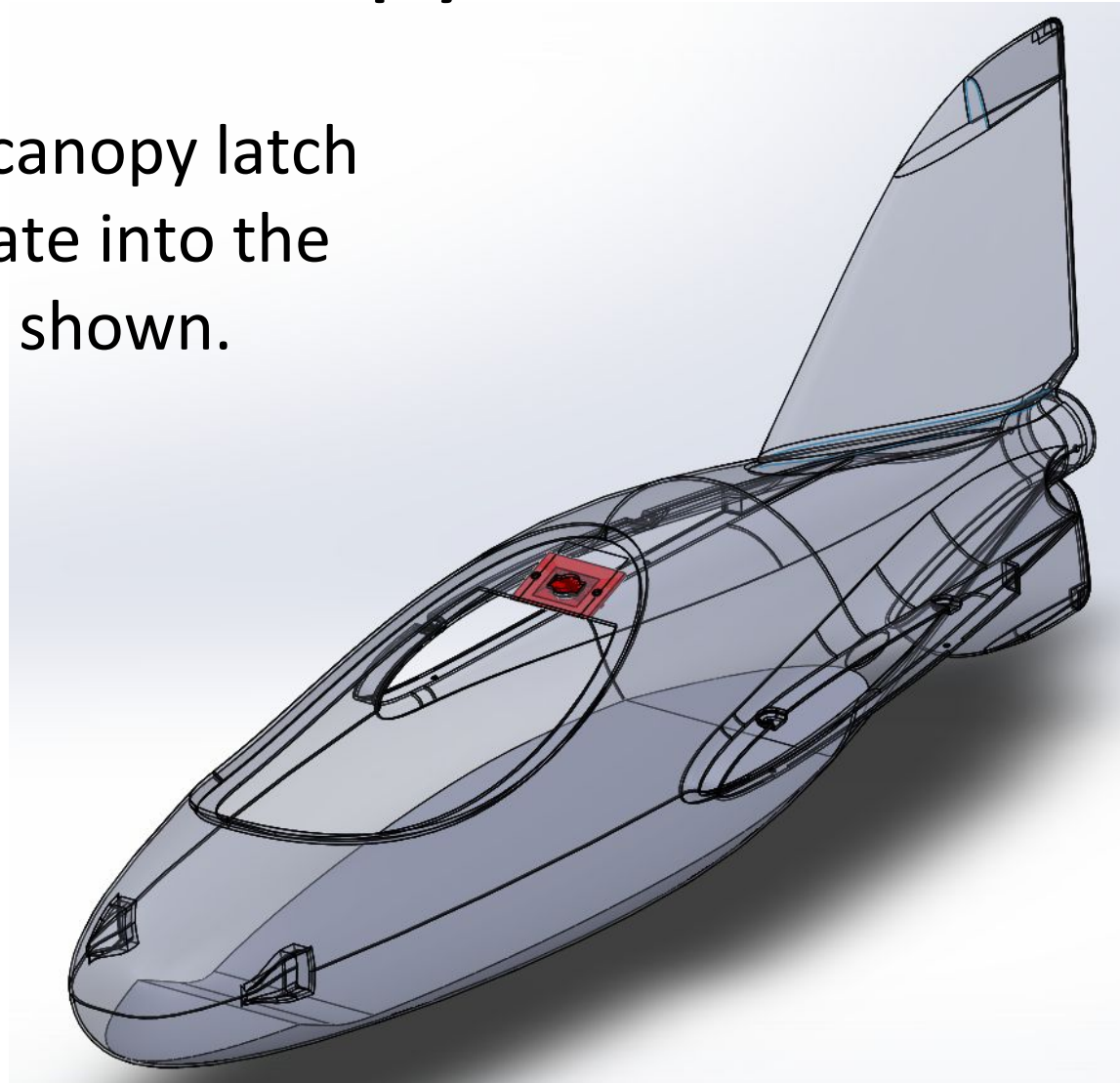
4. Glue foam into fuselage

- Glue wood tray to foam core.
- Glue the foam core into the fuselage.



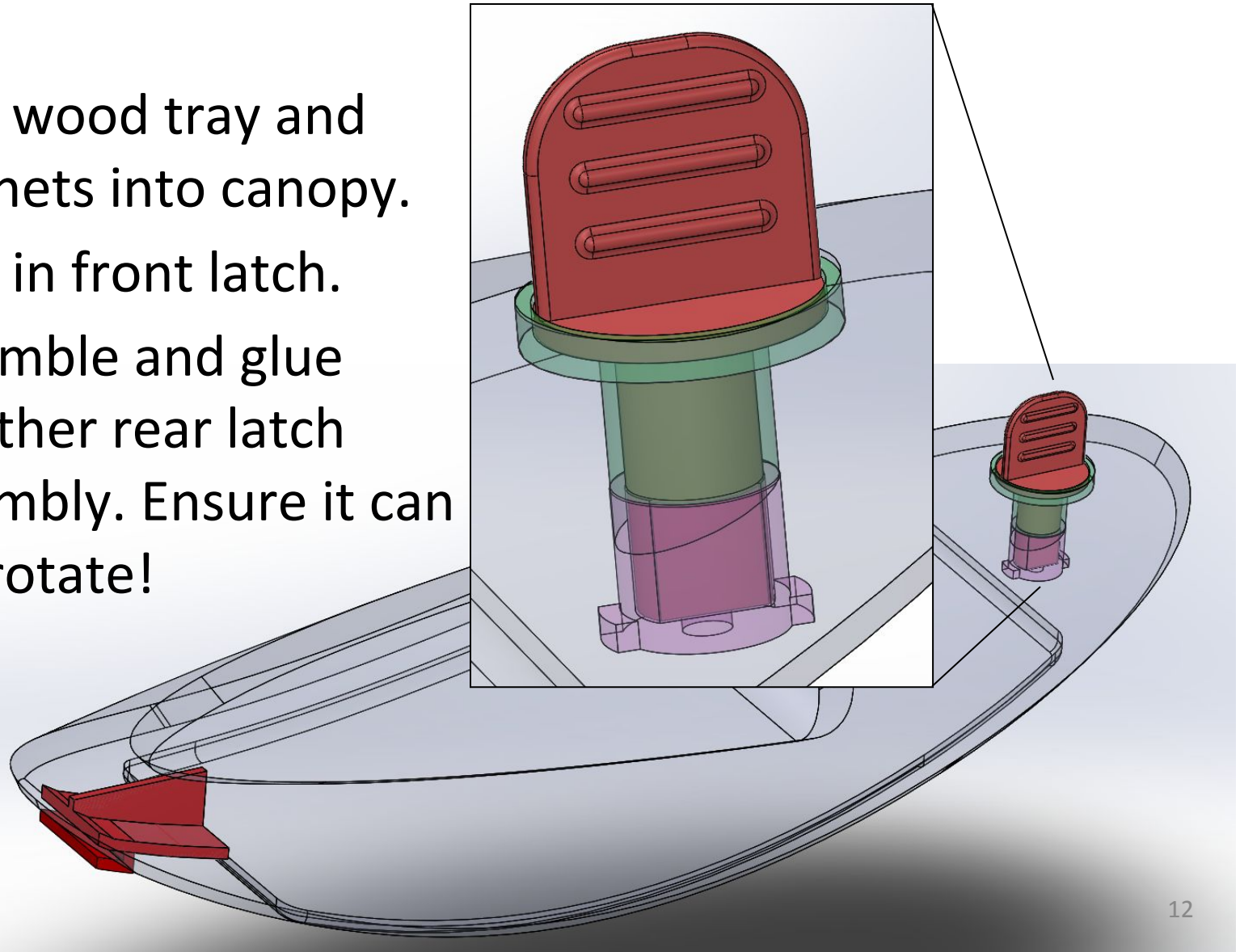
5. Install canopy latch receiver

- Screw the canopy latch receiver plate into the fuselage as shown.



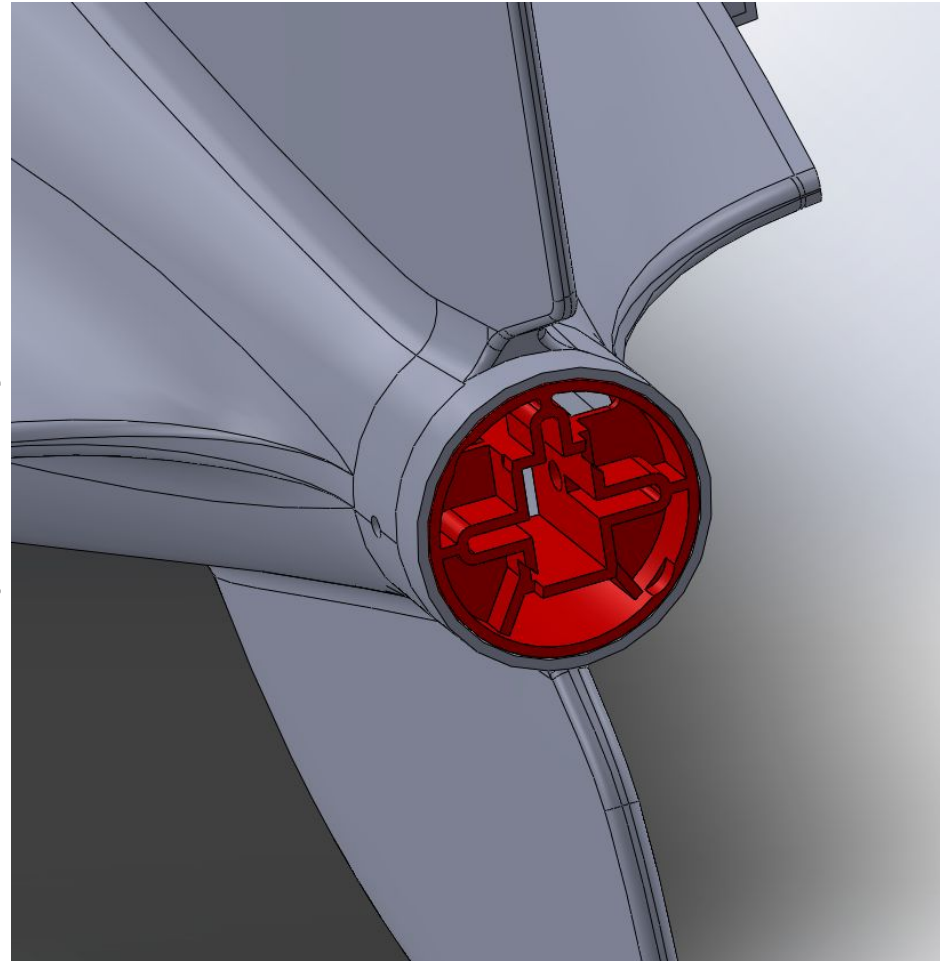
6. Assemble canopy

- Glue wood tray and magnets into canopy.
- Glue in front latch.
- Assemble and glue together rear latch assembly. Ensure it can still rotate!



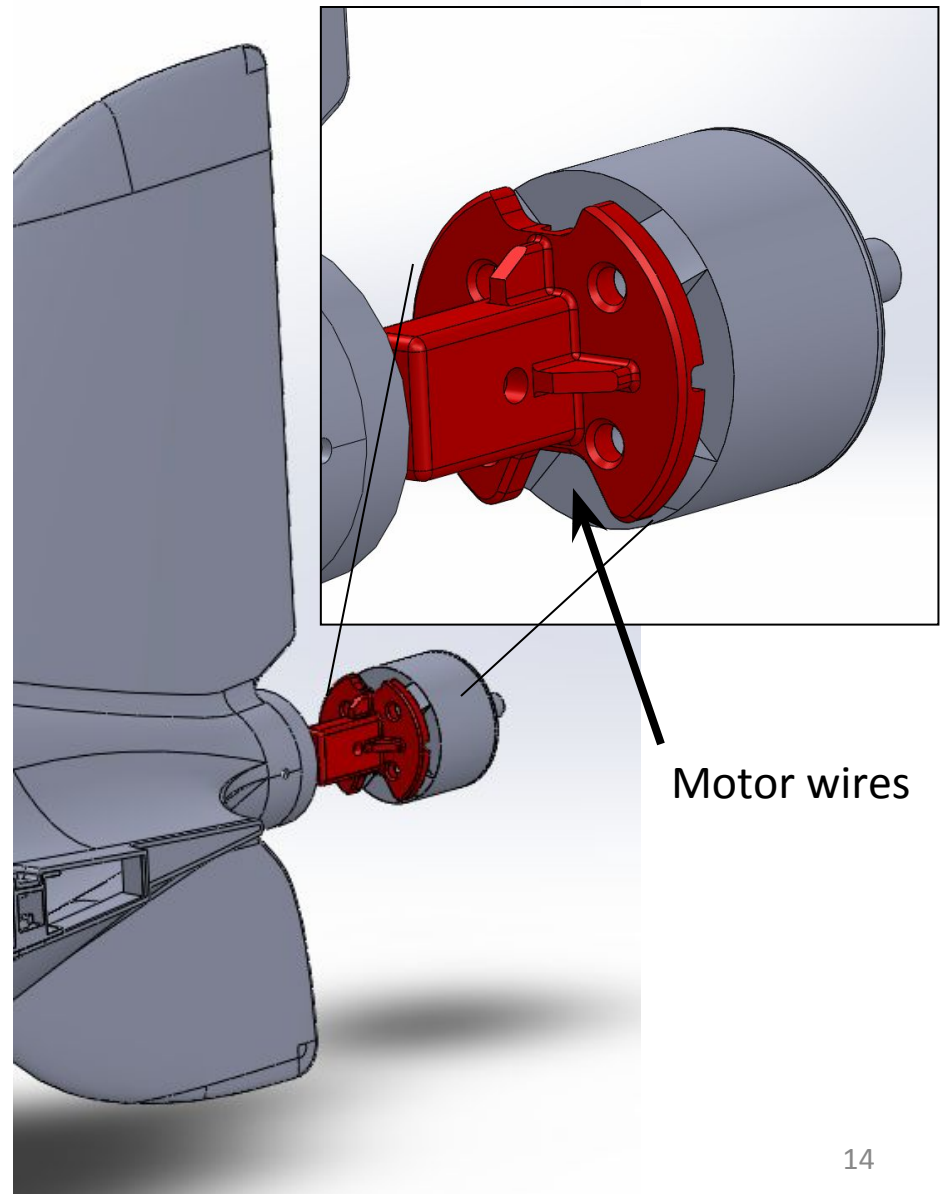
7. Install Motor Mount Receiver

- Install the motor mount receiver into the opening at the rear of the fuselage.
- Ensure it is installed in the proper orientation and that the screws on the side line up with the holes in the fuselage – see picture.
- If desired, it can be glued in for additional support.



7. Install Motor

- Bolt motor to motor mount. Check orientation of mount in picture. Ensure bolts do not go too far into the motor and touch the windings.
- Carefully push the motor wires through the bottom of the motor mount receiver while inserting the motor mount.
- Once fully inserted, secure the motor mount and receiver with bolts.

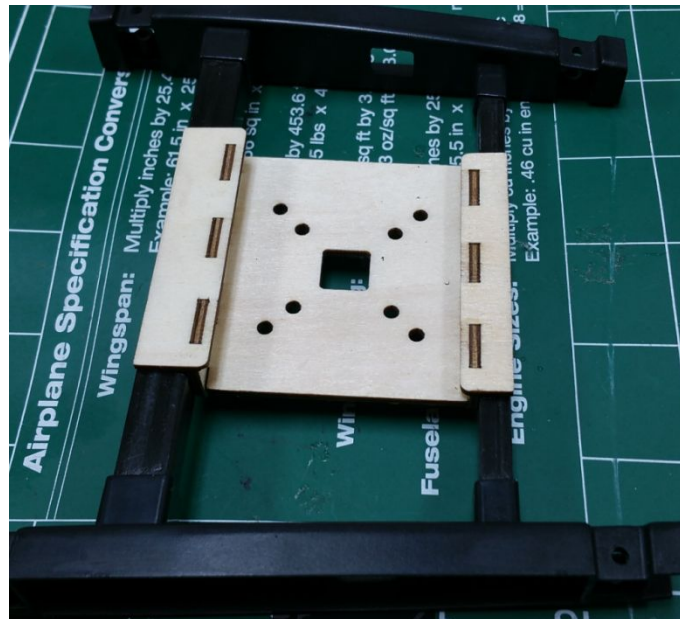
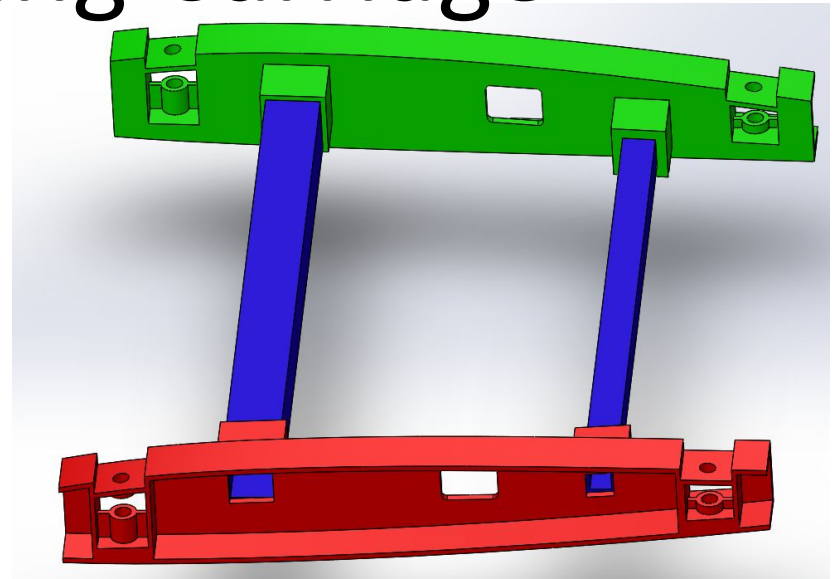


8. Attach ESC

- Install ESC inside the fuselage.
- Connect wires to motor and test motor direction with servo tester. (not included)
- Ensure power connector can be easily accessed through the hatch.

9. Assemble Wing Carriage

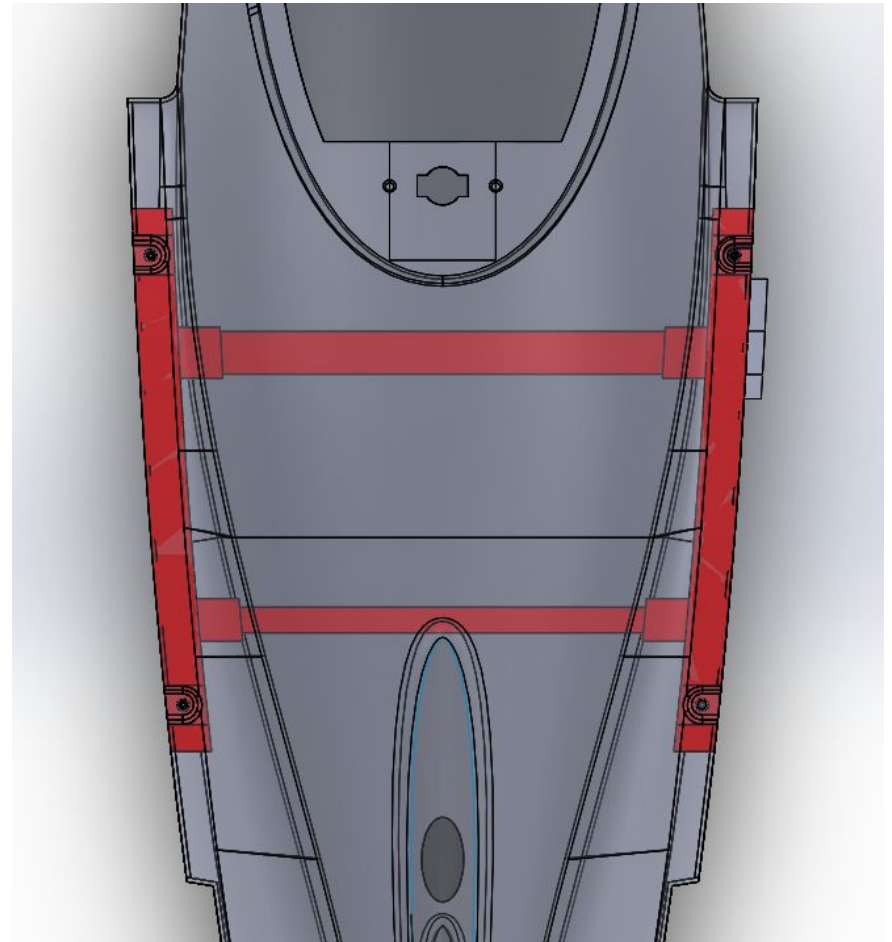
- Assemble plastic pieces with carbon spars as shown.
- Glue all parts together.
- Optionally install and glue wood shelf as shown.



PNP Assembly Instructions

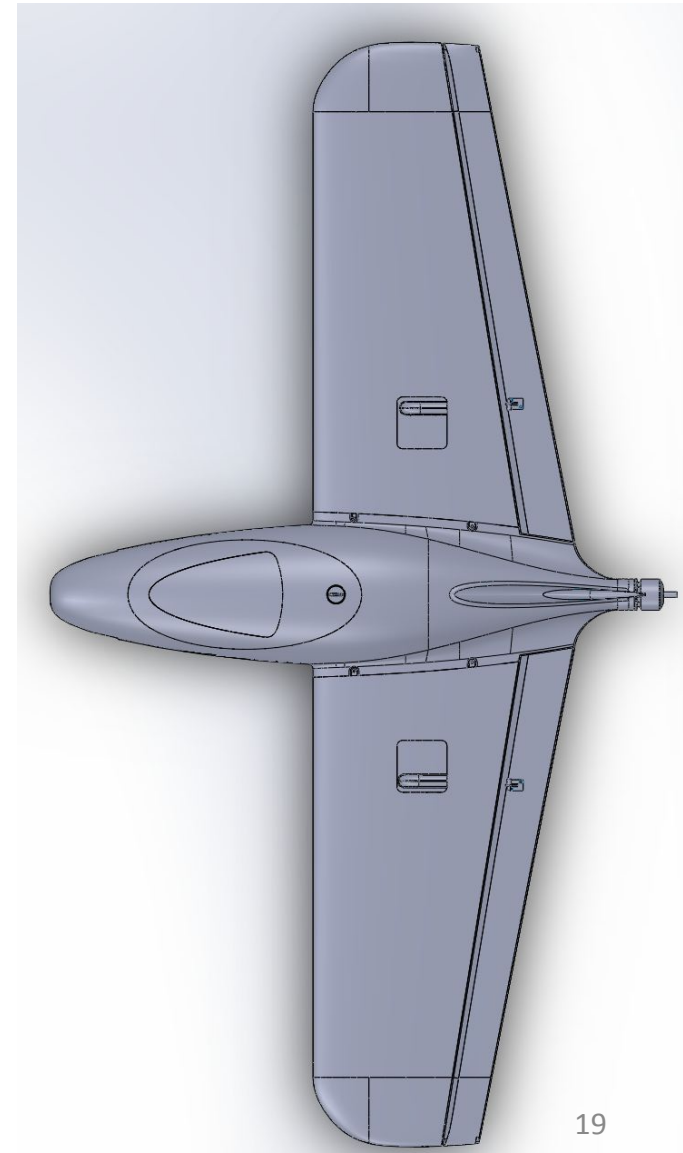
1. Insert Wing Carriage into Fuselage

- Insert the wing carriage into the fuselage as shown.



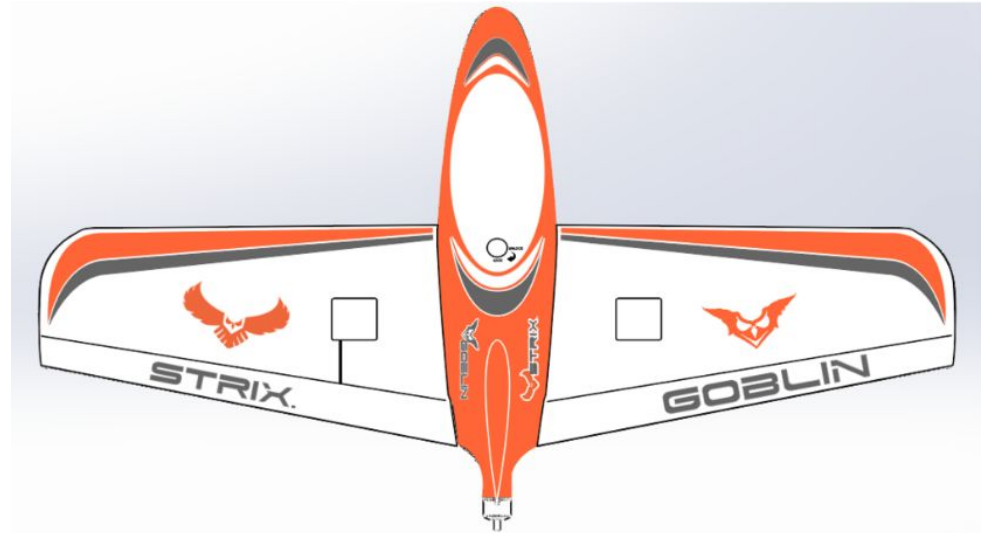
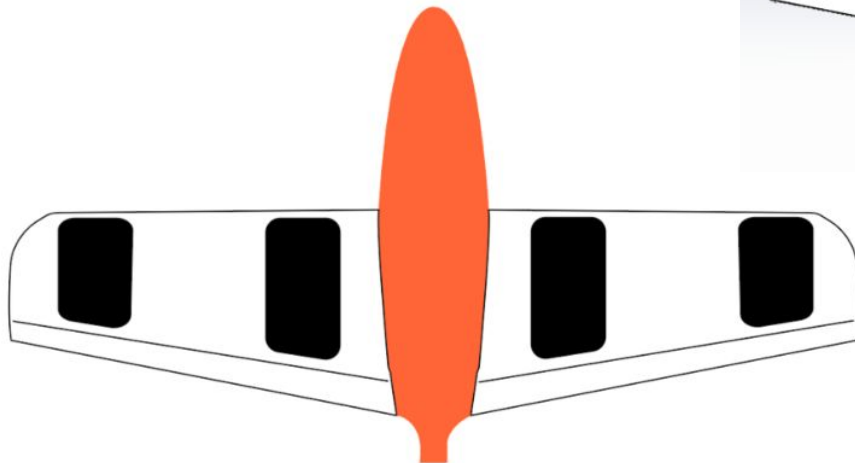
2. Install wings

- Install the main spar into one of the wings, and slide the wing onto the fuselage. Push the servo wire through the provided hole in the plastic side of the wing carriage.
- Slide the other wing on.
- Secure wings with provided M3 bolts.



3. Apply Decals

- This is the intended decal layout, but of course you can decide that. Two clear strips of decal have been included to apply to the bottom side of the wing on the hinge line as reinforcement - this is optional, but recommended.



4. Install and connect RC Receiver

- Connect your RC receiver as necessary.
- Install battery.
- Check control surface movement as per the beginning of this document.
- Check CG. (31mm from leading edge)
- **GO FLY!**