

# Zeke's Park Scale Models



Thank you for purchasing the Whim™ Series Micro Squire from **Park Scale Models**. From a very early age I had a fascination for aircraft of all types, but especially for general aviation aircraft. As a young boy building Comet© and Guillows© models, I developed a passion for planes built from balsa. Nothing could capture my imagination like the balsa structures I'd see in books and magazines and I dreamt of one day having a business that specialized in park flyer sized remote controlled aircraft. Now, 25 years later, technology has made it possible to turn my boyhood dream into reality. I sincerely hope you have as much enjoyment building and flying your Whim™ Series Micro Squire as I did developing it.

## **General Building Information**

Please be sure to carefully read through the instructions before building your Whim™ Series Micro Squire. Having a good understanding of the building process will help to make a more enjoyable experience and greatly reduce the chance of making a mistake. It is strongly suggested that you follow the building sequence in the manual. A great deal of thought and time has been put into making the building sequence as 'fool-proof' as possible.

You will need to have a sharp cutting blade (X-acto© #11 works well) to free the parts from the sheets by cutting the small 'hold-in' tabs. Because balsa is a natural product, the density can vary several places in a single sheet. Occasionally the laser might not cut through the sheet completely when it hit's these spots of higher density. You can quickly free these parts by running your cutting blade along the laser cut line.

The Whim™ Series Micro Squire is built with the following control configuration:

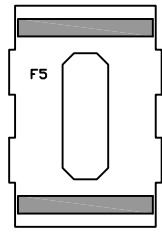
- Rudder, elevator and throttle

Whim™ Series Micro Squire specifications	
Length:	17.25" (43.8cm)
Wing Span:	25.5" (64.7cm)
Wing Area:	~118 in <sup>2</sup> (974 cm <sup>2</sup> )
Weight:	~3.3 oz. (94g)
Wing Loading:	4.0 oz/ft <sup>2</sup>
Power System:	GWS LPS-B2C-CS w/7x6 prop HexTronik D1811 Brushless Outrunner w/5x4.3 prop
Control Functions:	Rudder, elevator & throttle
Battery Pack:	2S 300mAh LiPo

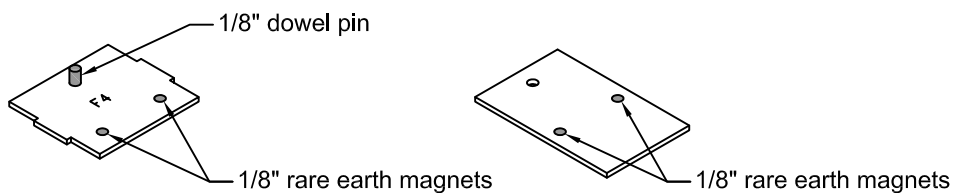
## **Items needed to complete your Whim™ Series Micro Squire:**

- 4ch micro receiver
- 2 – 3 sub micro servos (4.3 grams or less recommended)
- 6A-7A Electronic Speed Controller
- Hextronik D1811-2000 10g outrunner and a GWS 5x4.3 propeller
- 1 package Du-Bro Micro pushrods (#847)
- 2 packages of Du-Bro Micro control horns (#848)
- 1 roll of light weight covering material
- Misc. building supplies (glue, razor blades, etc.)

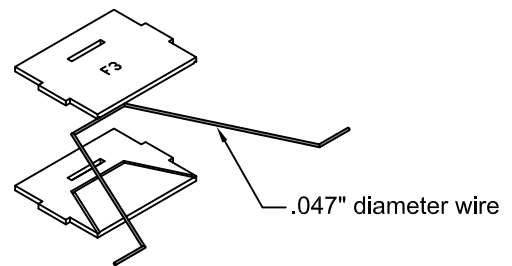
1. Use scrap balsa to glue cross grain reinforcement strips to F5.



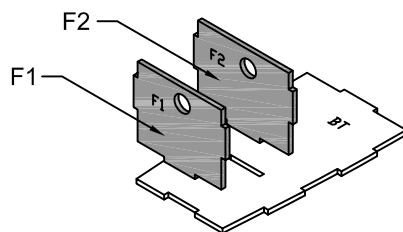
2. Glue two rare earth magnets and 1/8" diameter dowel pin (included) into F4. Glue two rare earth magnets into the removable Receiver/ESC tray. Ensure that the magnetic poles are the same direction on both pieces.



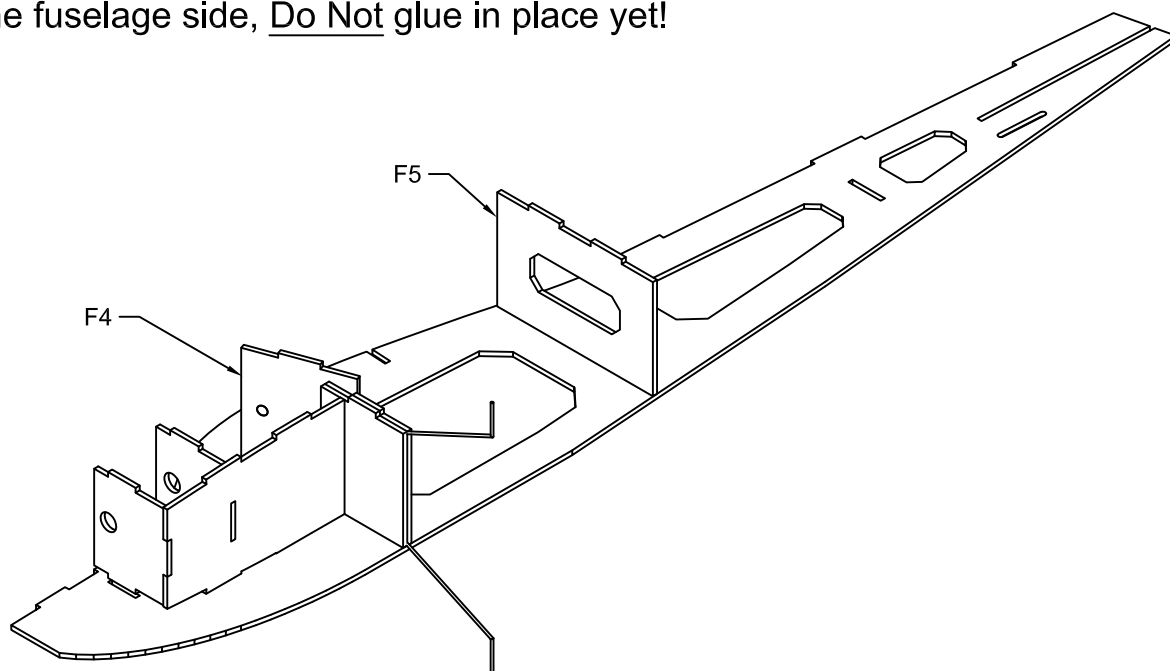
3. Bend .047" diameter wire for the landing gear using the template at the end of the instructions. Use a piece of .047" diameter wire to 'clean out' the grooves in F3 for the landing gear wire. Place the landing gear wire into the slot in F3. Use epoxy or thick CA to glue formers F3 together, clamp together until the glue has cured.



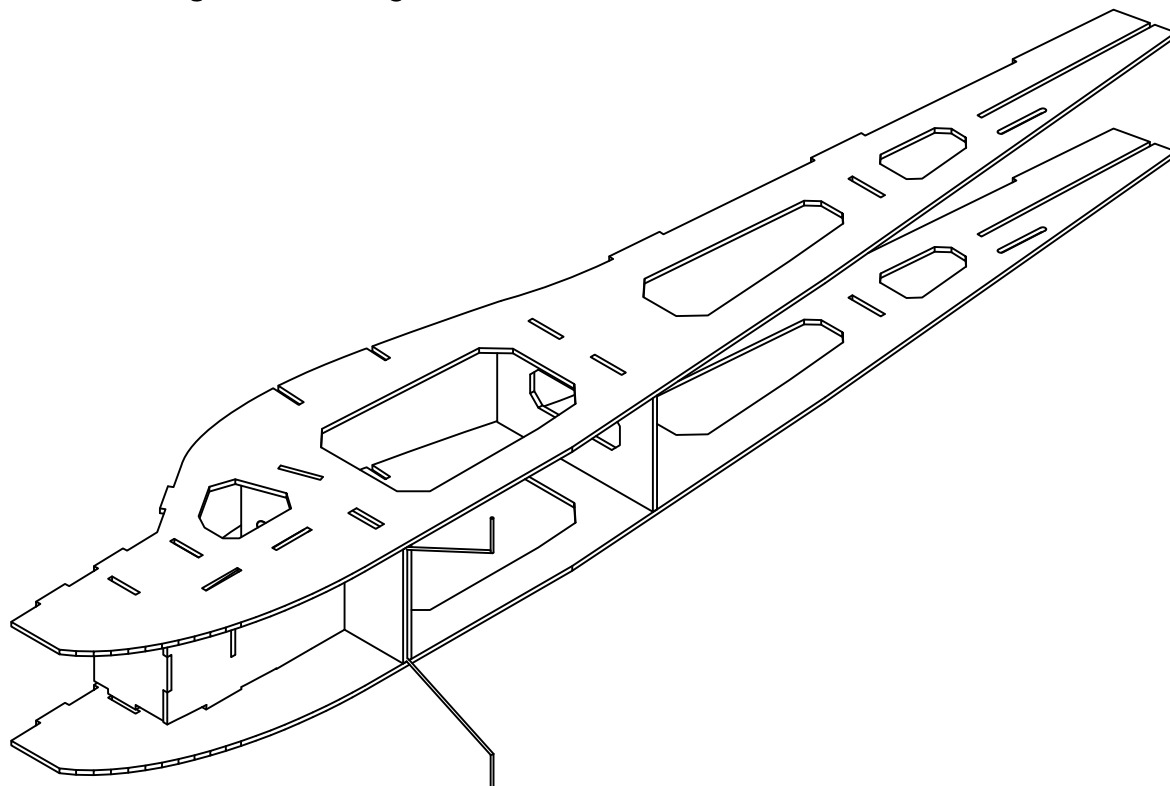
4. Fit F1 and F2 into BT. If you intend to use the LPS motor system, the part numbers on F1 and F2 must face the front of the plane for the proper motor stick alignment.



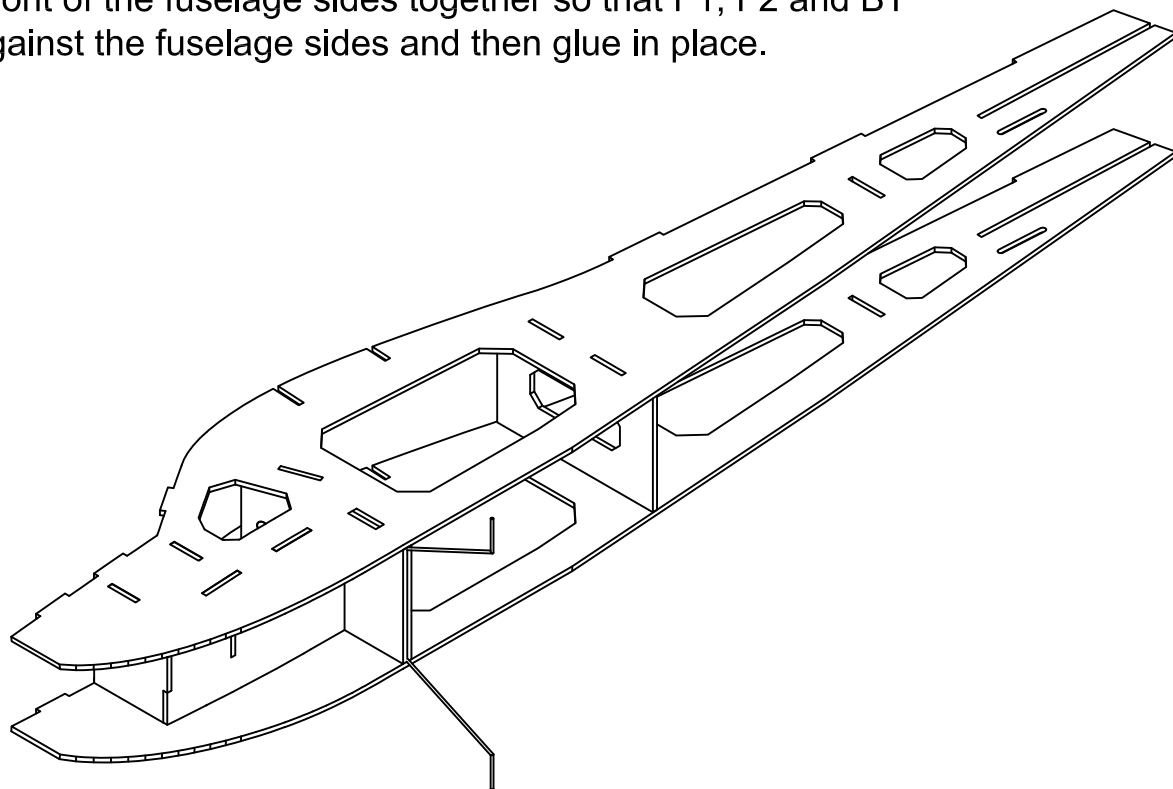
5. Fit F4 and F5 into the slots in the fuselage side. Ensure that these formers are perpendicular to the fuselage side and then glue them in place. Fit F3 into the fuselage and then fit F1/F2/BT into the slot in F3 and also the fuselage side, Do Not glue in place yet!



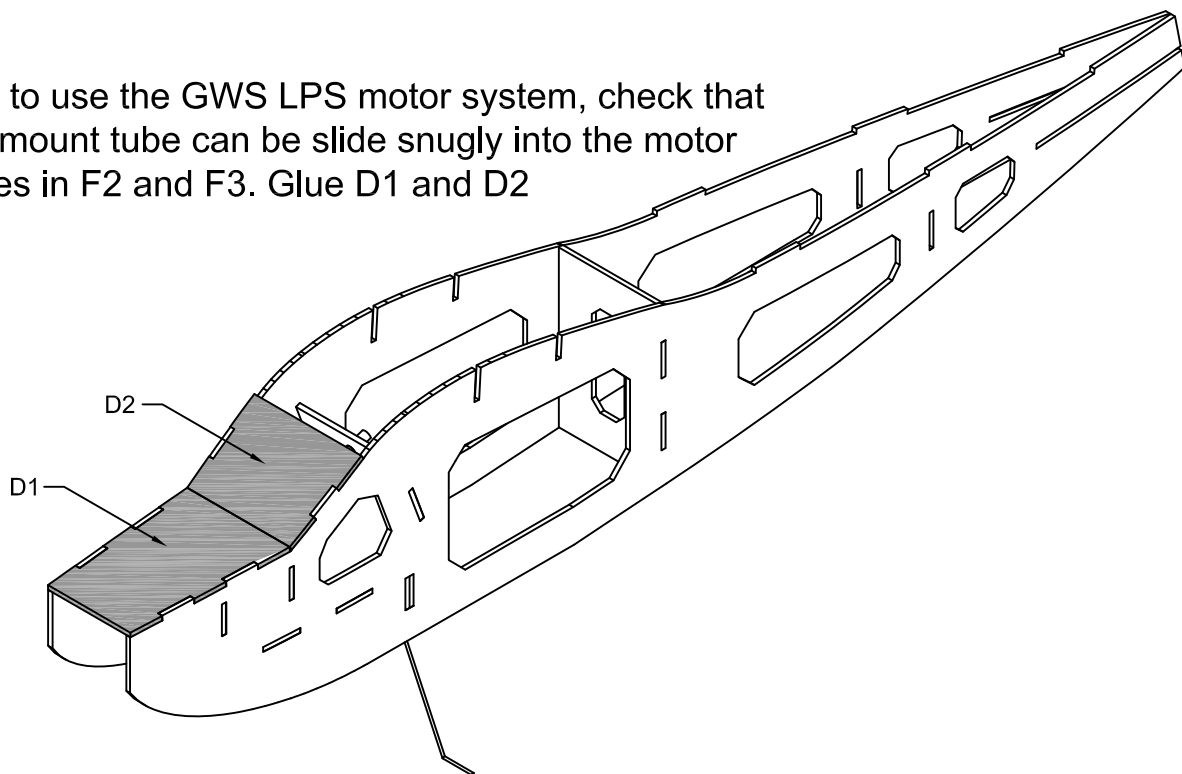
6. Add the second fuselage side and glue to F3, F4 and F5.



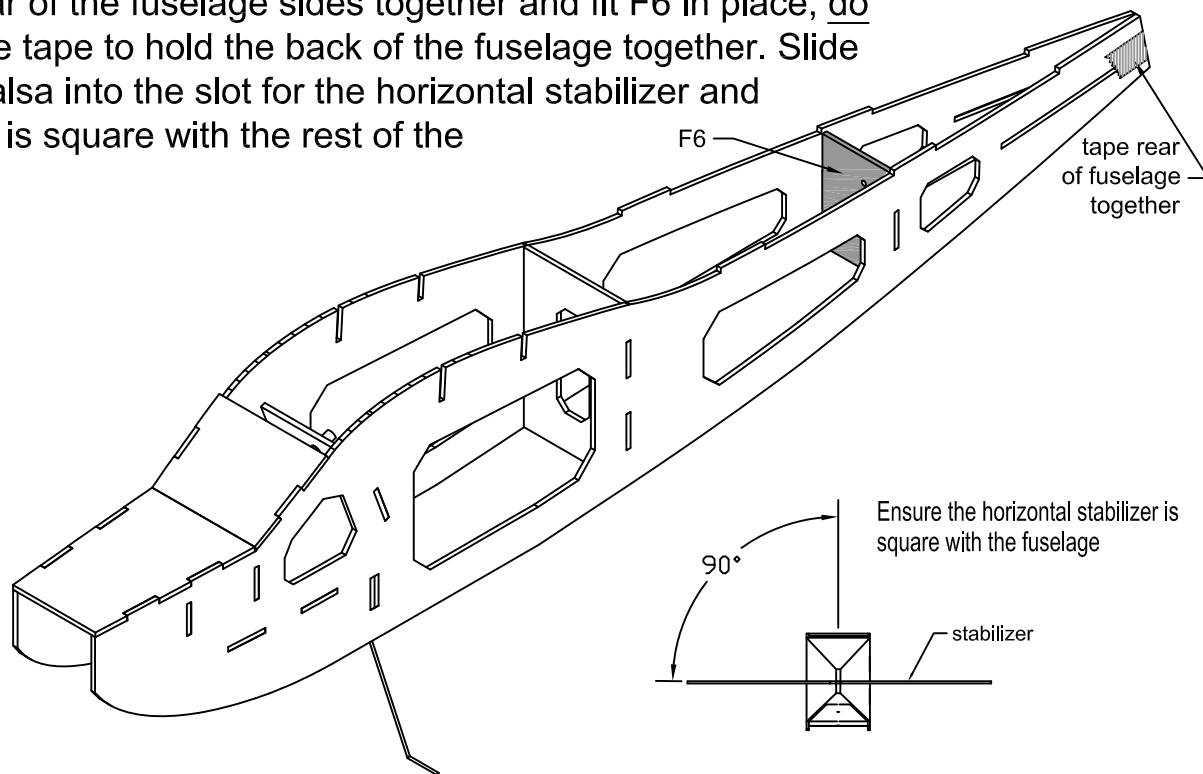
7. Bend the front of the fuselage sides together so that F1, F2 and BT are tight against the fuselage sides and then glue in place.



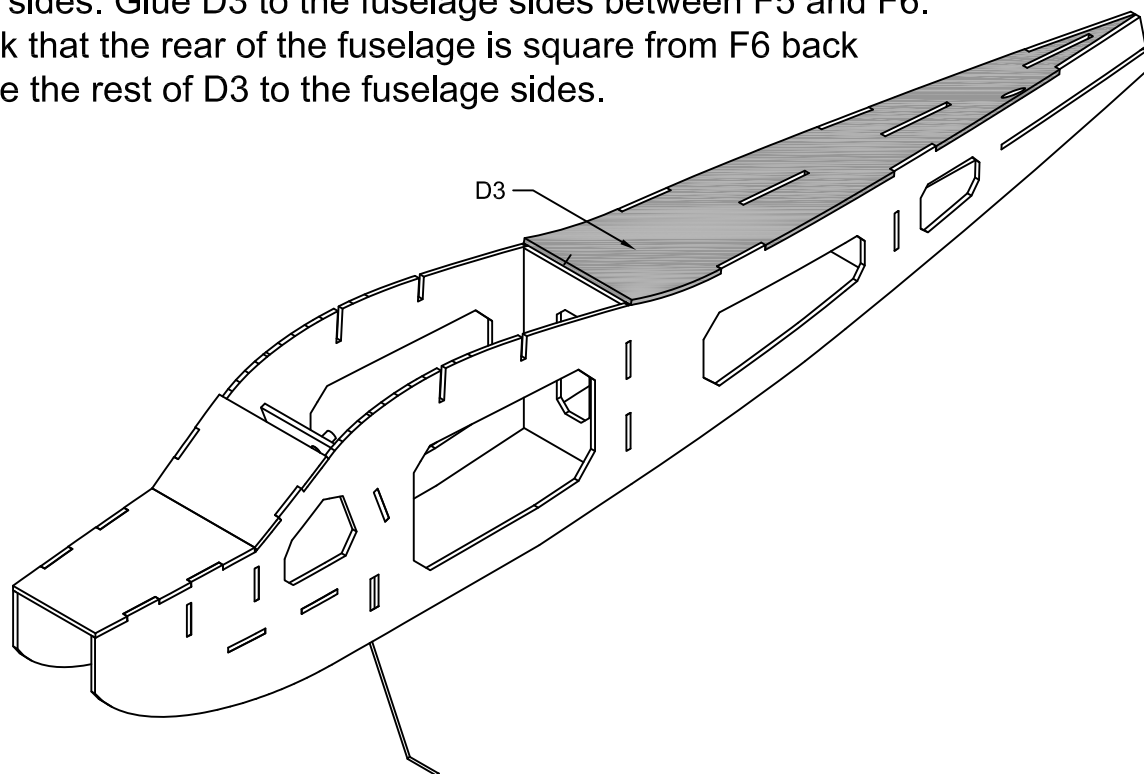
8. If you plan to use the GWS LPS motor system, check that the motor mount tube can be slide snugly into the motor mount holes in F2 and F3. Glue D1 and D2 in place.



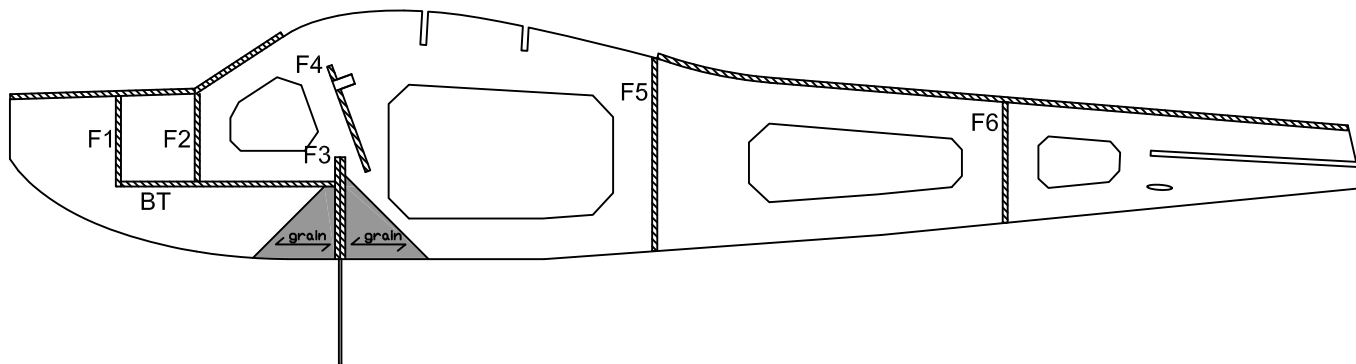
9. Bend the rear of the fuselage sides together and fit F6 in place, do not glue. Use tape to hold the back of the fuselage together. Slide a piece of balsa into the slot for the horizontal stabilizer and make sure it is square with the rest of the fuselage.



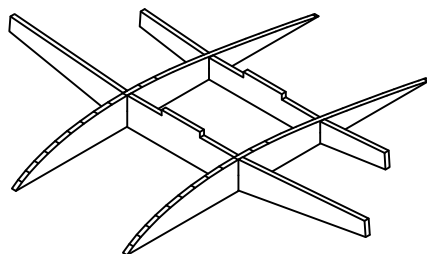
10. Fit D3 in place. Check that the fuselage is square and then glue F6 to the fuselage sides. Glue D3 to the fuselage sides between F5 and F6. Double check that the rear of the fuselage is square from F6 back and then glue the rest of D3 to the fuselage sides.



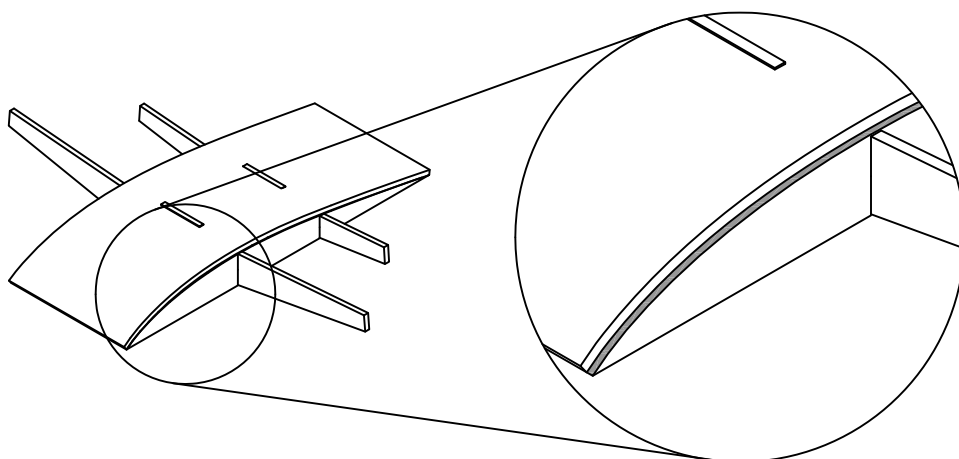
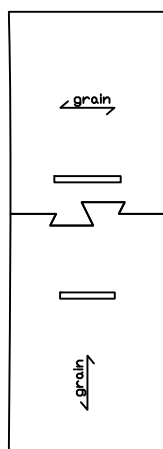
11. Glue the triangular landing gear reinforcements to the inside of the fuselage sides.



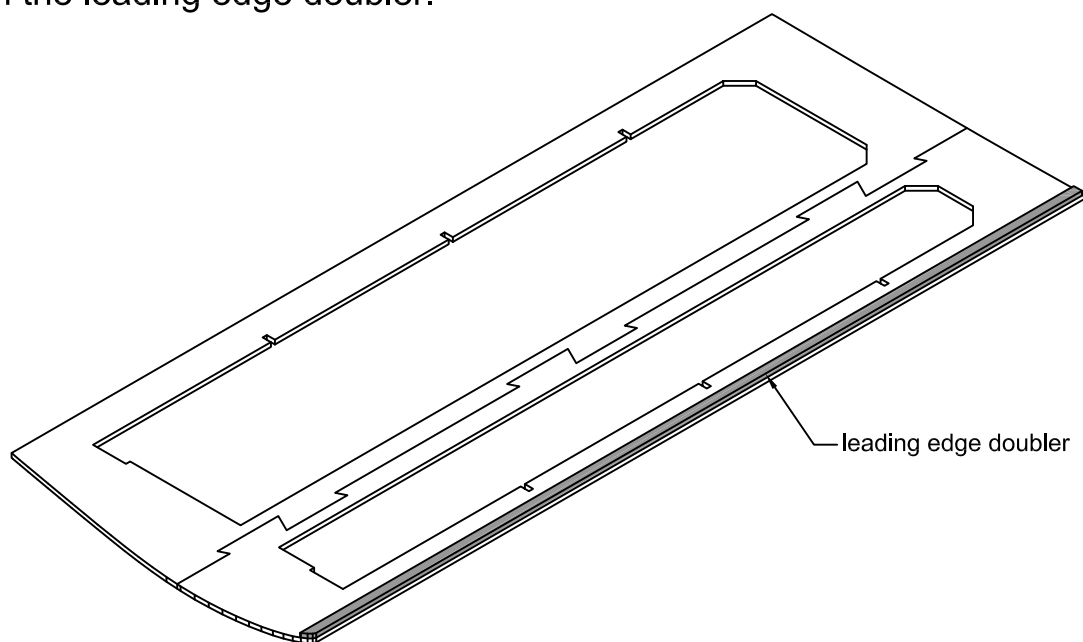
12. Begin construction on the wing by fitting ribs R1 into the slots in S1 and S2. Do Not glue together yet!



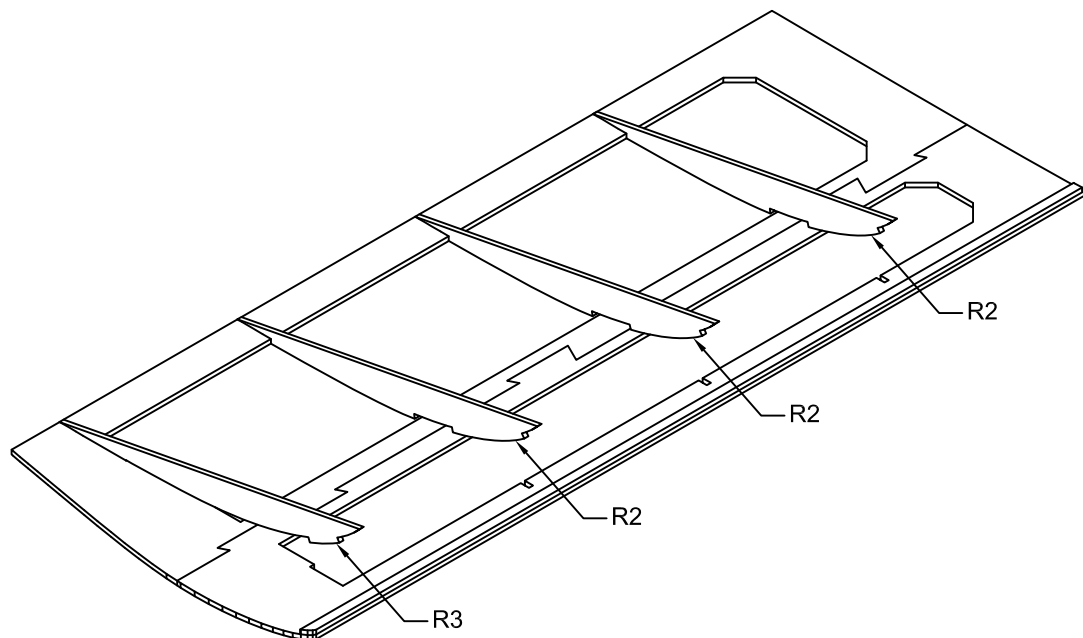
13. Glue together the two pieces that make the wing center sheeting. Fit the tabs on the top of S1 and S2 into the slots in the sheeting. Turn over and glue S1 and S2 to the underside of the sheeting. Glue the sheeting to the ribs R1 starting at the trailing edge and working forward along the centerline of the ribs.



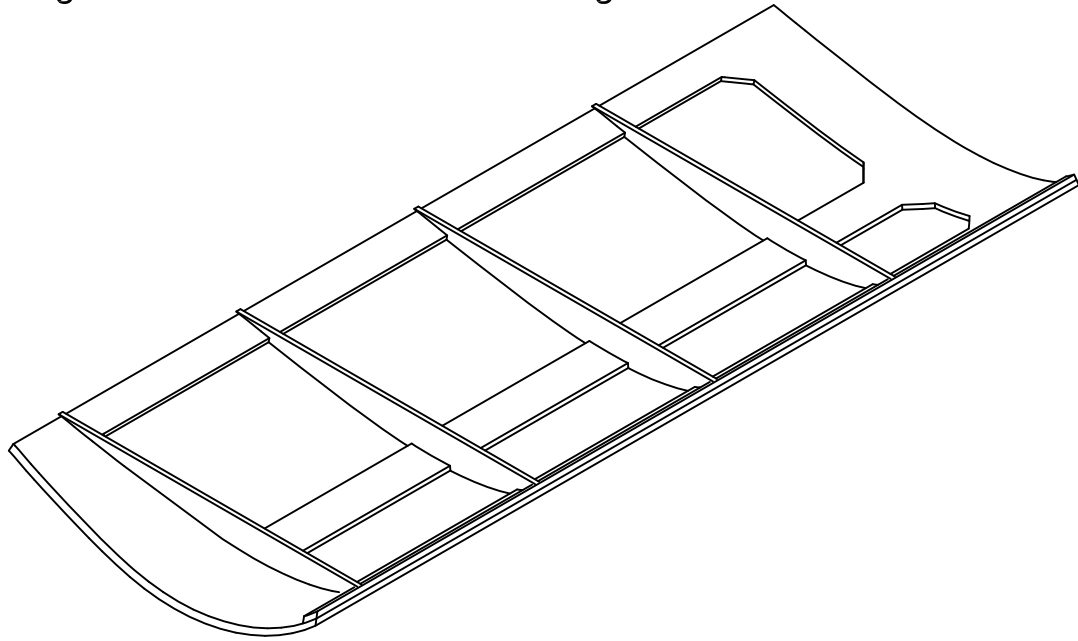
14. Glue the front and rear wing halves together and glue on the leading edge doubler.



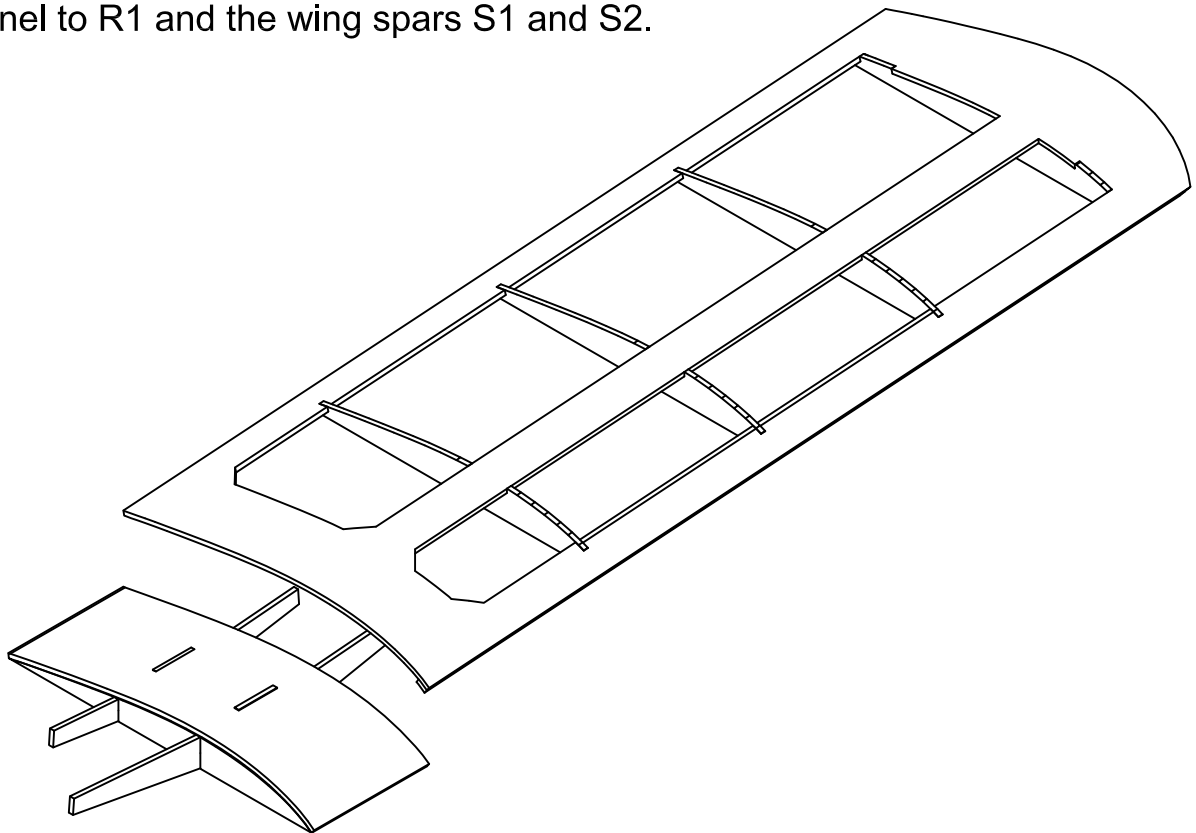
15. Fit ribs R2 - R3 to the slots at the trailing edge of the wing. Make sure they line up with the slots in front of the wing and glue to the trailing edge.



- 16.** Bend the wing forward to fit the ribs into the slots at the leading edge of the wing and glue the ribs to the rest of the wing.

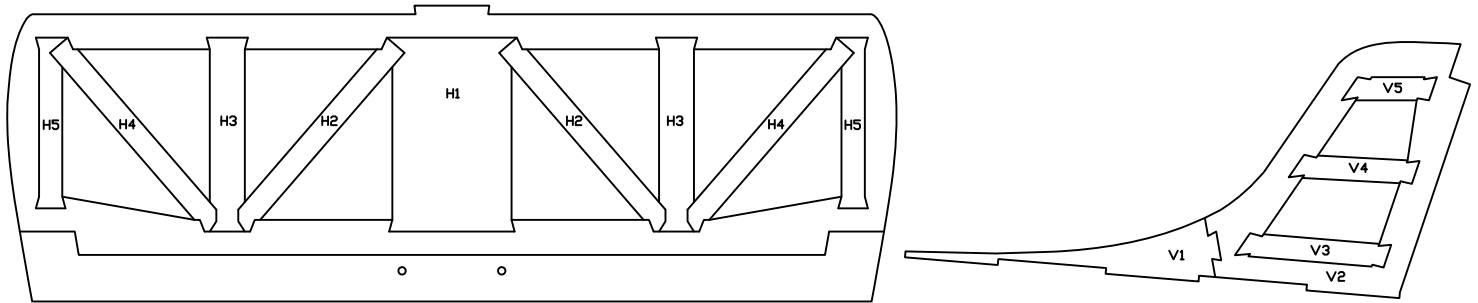


- 17.** Carefully align the leading and trailing edges of the wing panel with the wing center section and glue in place. Be sure to thoroughly glue the wing panel to R1 and the wing spars S1 and S2.





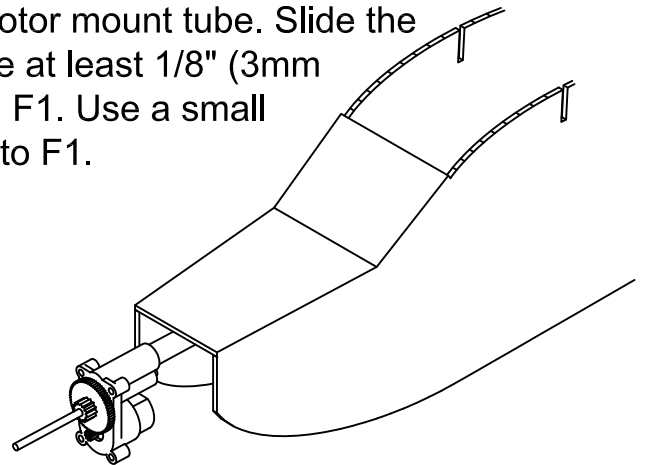
18. Glue the horizontal and vertical stabilizer structures together.



19. Before beginning final assembly, it is recommended to cover all of the parts ahead of time. Install the motor, follow the installation procedure for the motor type you will be using.

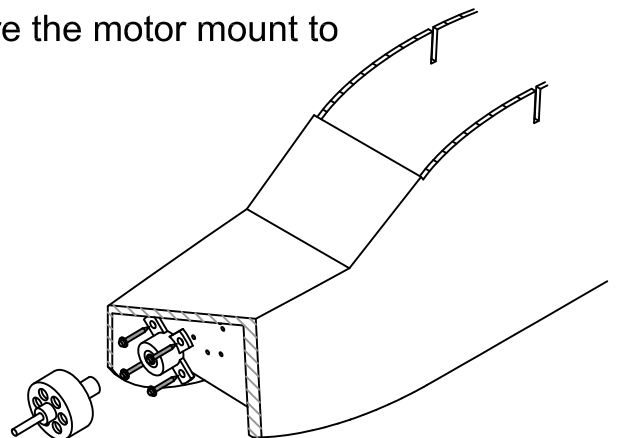
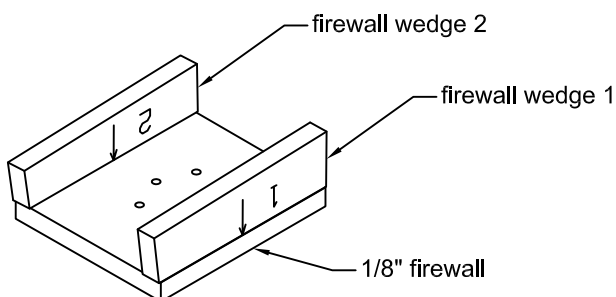
GWS LPS:

Slide the LPS drive onto the 6mm carbon motor mount tube. Slide the motor/tube into the holes in F1 and F2, leave at least 1/8" (3mm) of space between the back of the motor and F1. Use a small amount of thin CA to secure the motor tube to F1.



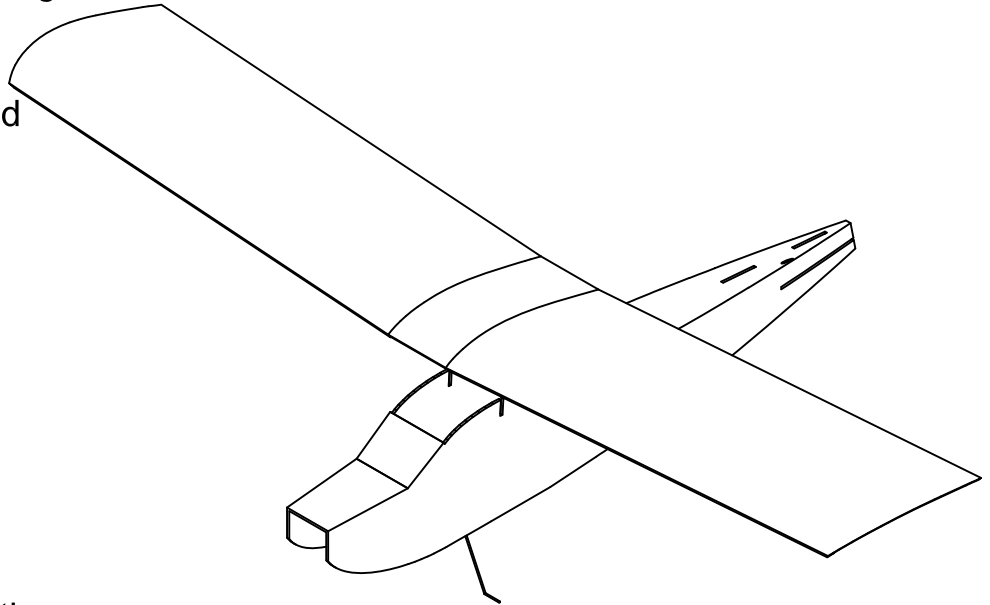
Brushless outrunner:

The brushless firewall mount is designed with down/right thrust built in. Begin by gluing the 1/8" firewall wedge 1 to the top of the backside of the firewall. The indicator arrow must point to the firewall. Glue firewall wedge 2 to the bottom of the firewall the same way. Glue the firewall to F1 and the fuselage. Secure the motor mount to the firewall with screws.

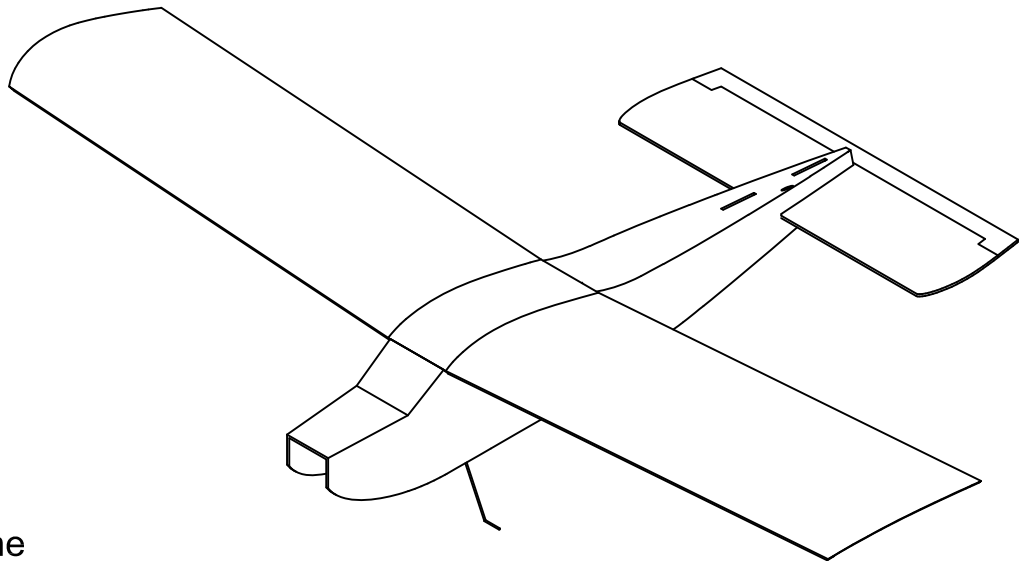


# Final Assembly

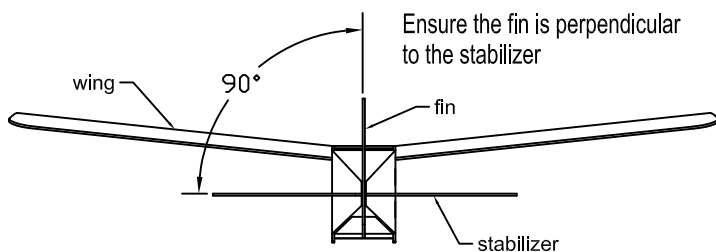
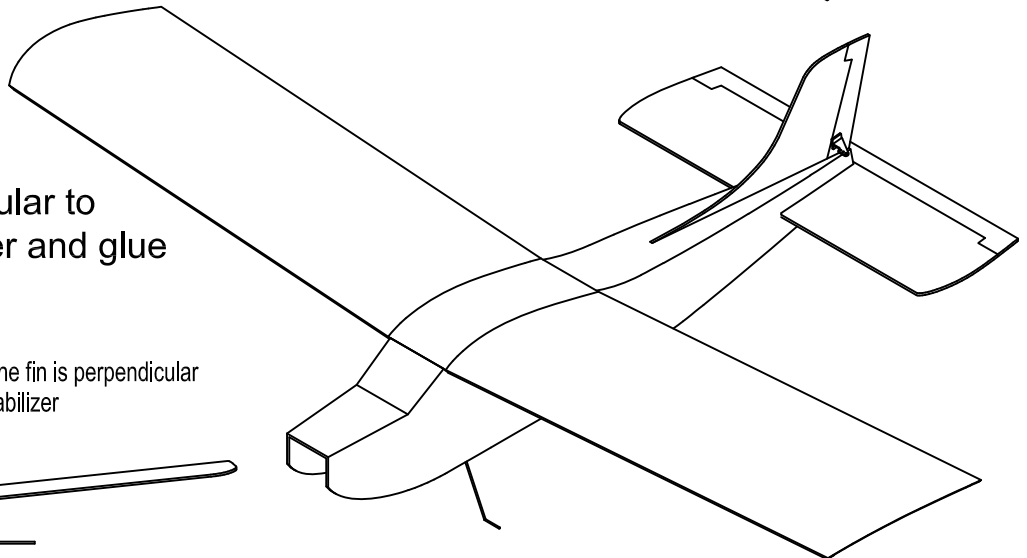
1. Fit the wing to the fuselage, trim covering away from where the wing meets the fuselage and glue wing in place.



2. Attach the elevator to the horizontal stabilizer with clear packing tape or covering material.

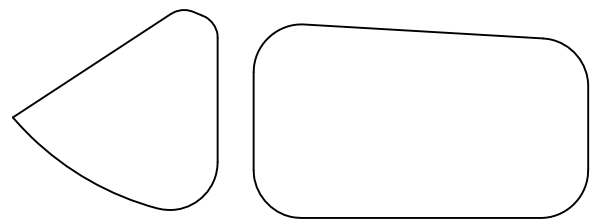
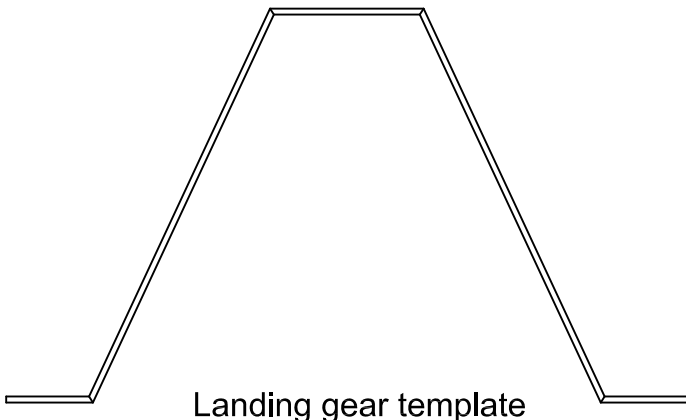
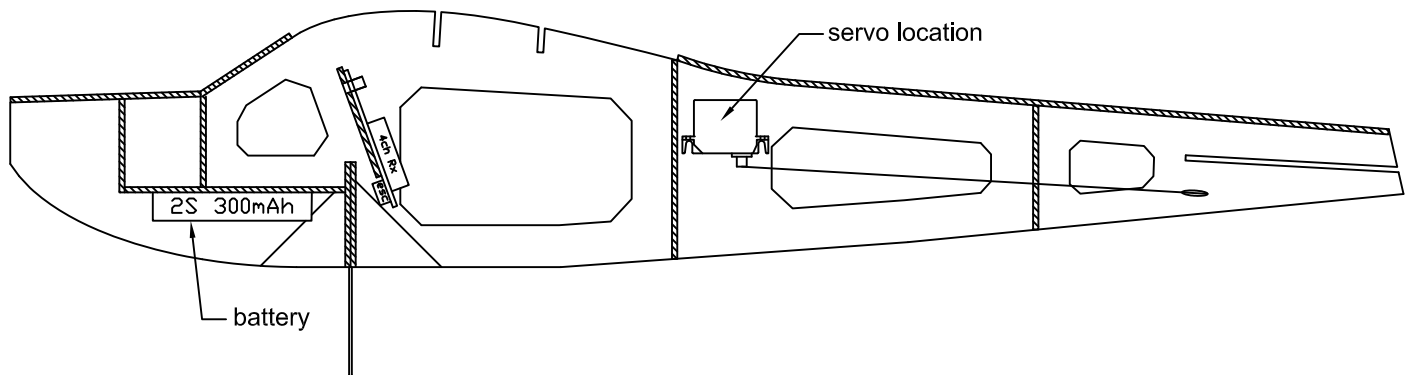


2. Attach the rudder to the vertical stabilizer with clear packing tape or covering material. Make sure the vertical stabilizer is perpendicular to the horizontal stabilizer and glue in place.

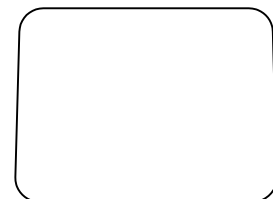


# Set up and Flying

1. Balance your Micro Squire on the front wing spar S1. Shift battery as necessary to balance.
2. Set the throws for the control surfaces:
  - Elevator - 1/8" to 3/16" up/down
  - Rudder - 3/8" left/right
3. Due to the undercambered wing, the Micro Squire can climb aggressively under full power. This can be countered by mixing in some down elevator with the throttle. Start at 5% down elevator and adjust as desired.
4. Setting up exponential throws (Expo) is a great way to help prevent over controlling your plane. A setting of 40% to 70% will provide smooth control response while still allowing for aggressive maneuvering.
5. It is recommended to secure the servos to the inside of the fuselage where indicated with double sided foam tape.
6. **\*\*CAUTION\*\*** The Whim Series Micro Squire was not designed for high speed flight. Over powering or high speed dives may cause wing flutter and possible structural damage.



Side window template



Front window template