

RC Profile Planes

<http://rcprofileplanes.com>



Wing Commander Morningstar Construction Manual

Disclaimer:

In that RC Profile Planes has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to RC Profile Planes for a full refund.

While this kit has been flight tested for normal use, if the plane will be used for extremely high stress flying, such as racing, the modeler is responsible for taking steps to reinforce the high stress points.

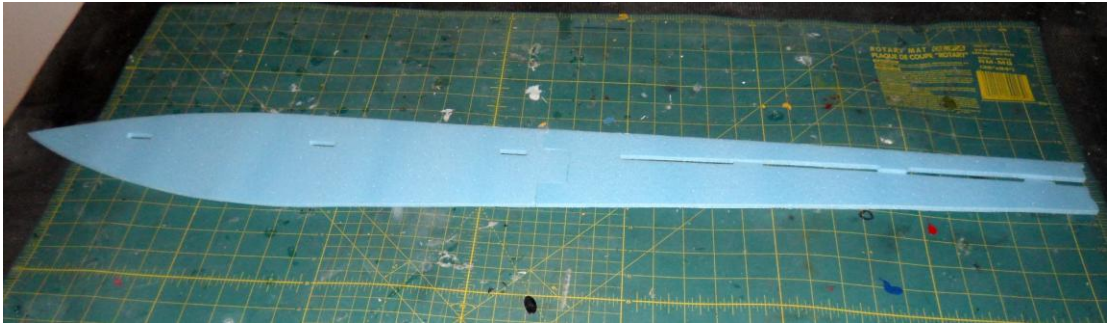
Note: This document is available online at <http://rcprofileplanes.com/blog/plans>

Included parts:

- 1x Wooden Motor Mount
- 2x Control Rods
- 2x Control Horns
- 1x Carbon Rod
- 2x Tailerons
- 2x Vertical Stabilizers
- 4x Winglets
- 2x Main body
- 2x Main fuselage halves
- 4x Engine outlines



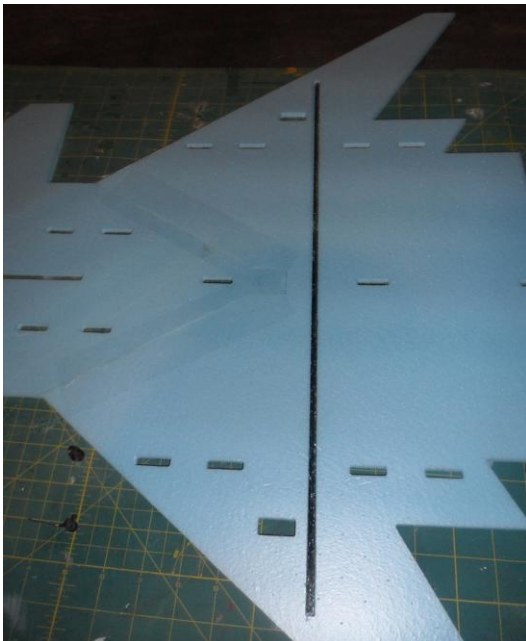
1. Glue the two main fuselage halves together.



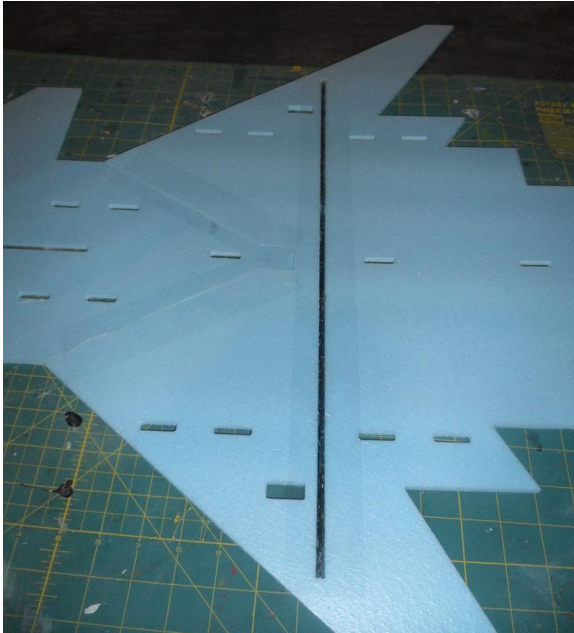
2. Glue the two main wing halves together.



3. Cover one side of the main wing with tape. Insert the carbon rod and glue in place



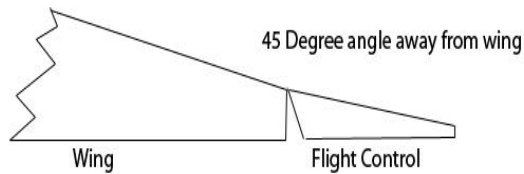
4. Cover the top of the slot with tape as well.



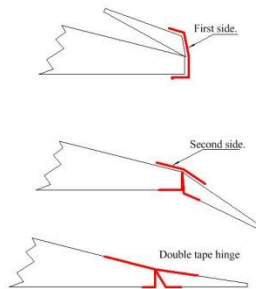
5. Insert the fuselage into the wing aligning the tabs and slots. Glue in place.



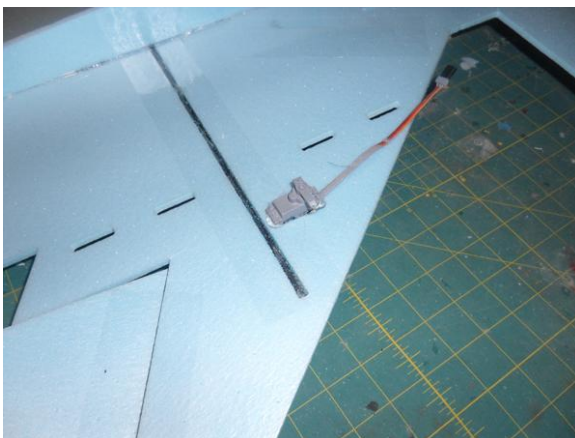
6. Prepare the two taileron controls by sanding a 45 degree angle on the edge that will connect to the main wing. The edge should be sanded down and away from the wing. This angle will be used to allow taileron to rotate downward when hinged. Remember to align the left and right taileron and sand each flight control appropriately.



7. The tailerons will be attached using a tape hinge. Start by placing the taileron on top of the wing and taping over the two. Then fold the taileron flat behind the wing and tape over the top of this joint. The end result will be a tape hinge that allows the taileron to move up and down.



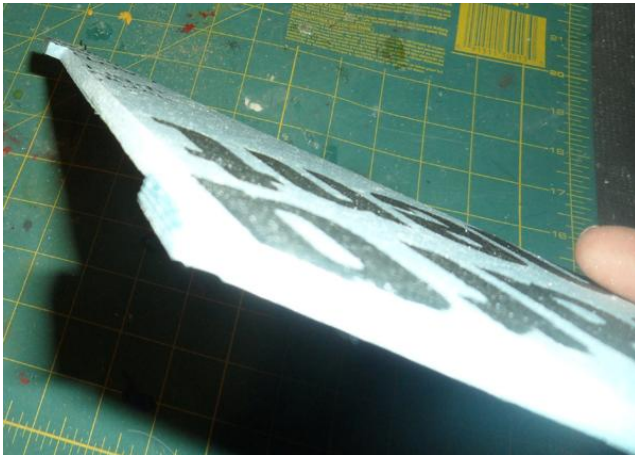
8. Insert the servos into the pre-cut slots and glue them in place. Do this for the left and right servo.



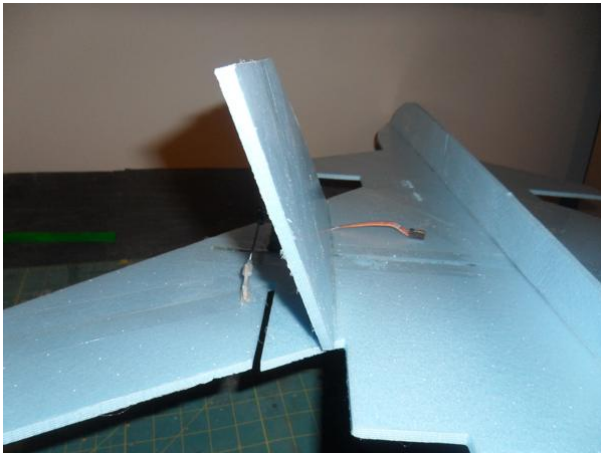
9. Cut a slot in each taileron. Glue a wooden control horn into each taileron.



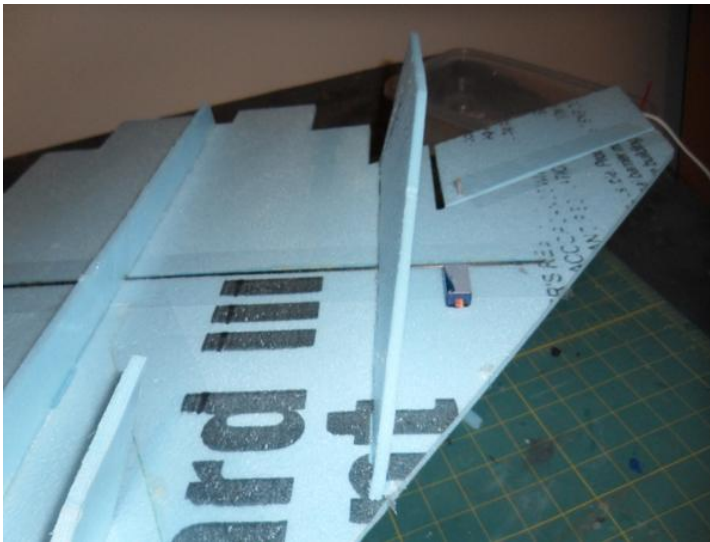
10. Sand the long edge of the vertical fins to a 45 degree angle. Remember sand the left and right in the opposite direction.



11. Glue the two top vertical fins onto the main body. The left fin is shown. Do the same for the right fin in the opposite direction. Route the servo cable under the vertical fin.



12. Sand the bottom two fins as you did the top and glue the left and right fins on the bottom of the fuselage. Do the same for the two small lower winglets. Glue these to the bottom of the fuselage as well.

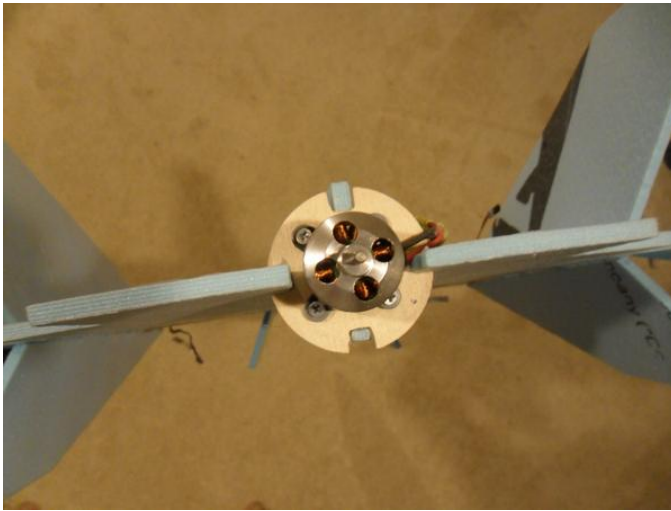


13. Attach the brushless motor to the wooden firewall mount using four screws.

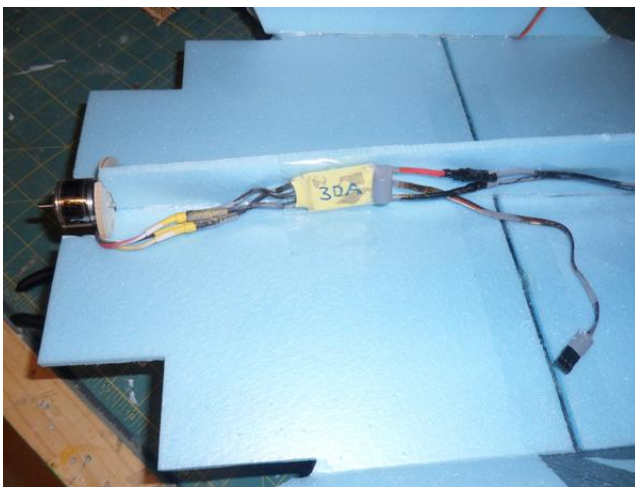


Note: The following steps will install the motor and speed controller. These steps are an example installation using the recommended 2212-06 Brushless motor and 30A ESC. Your installation may vary.

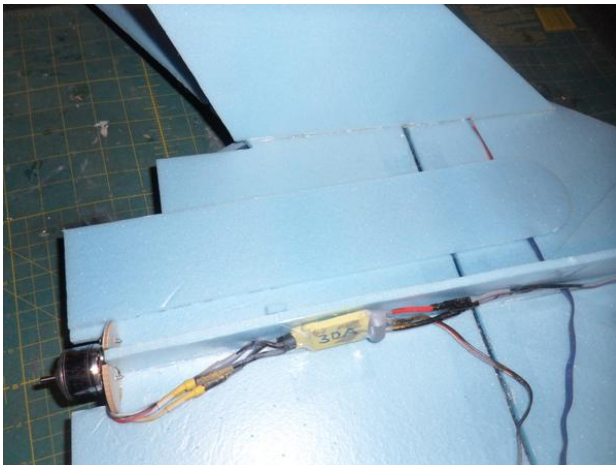
14. Glue the motor and mount into the rear of the fuselage



15. Connect the ESC to the motor leads. The ESC is attached to the plane with tape but you can use Velcro as well.



16. Glue the engine outlines on top of the fuselage.



This image is provided as an example of electronics placement:



17. Battery location will depend on the battery chosen. The center of gravity is 24 inches from the tip of the nose. Choosing a heavier or lighter battery will move the mount location backward or forward. Using the recommended 3s 2200mah the location will be right under the cockpit. You will have to cut a slot based on where the plane balances. The image below shows an option for mounting the battery below the nose.



18. The final step is to connect the battery to the ESC. I recommend Deans connectors but other connectors can be used as well. You will need to provide a sufficient length of wire to connect the ESC to the battery

19. Finishing recommendations:

- a. Use Foam safe paint on BlueCore or the foam will melt
- b. Testors spary paints work very well
- c. Lowes Balspar spray paint can be used sparingly but too much can melt the foam
- d. To present a more seamless appearance you can paint over the servos, and tape attaching the ESC.
- e. Use tape to strengthen/protect the belly and wings.

20. Flight controls setup. The plane must be configured for delta wing flight using a computer radio. No exponential should be needed for stable flight.

Enjoy!!