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60” EPP Swift Assembly Manual

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November 2020


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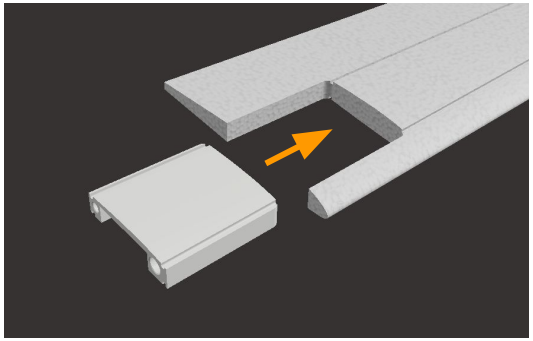
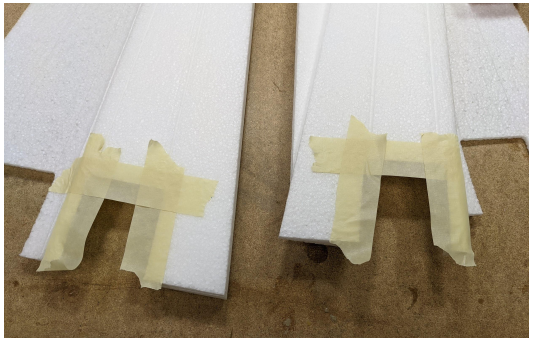
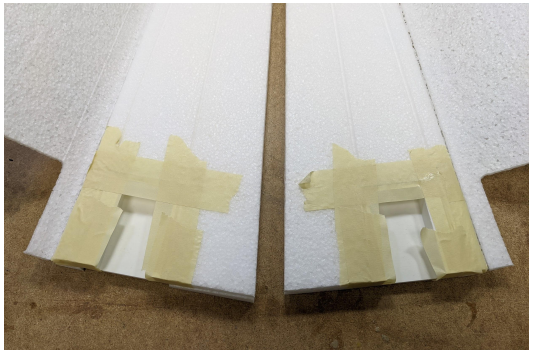
Additional Components to Purchase

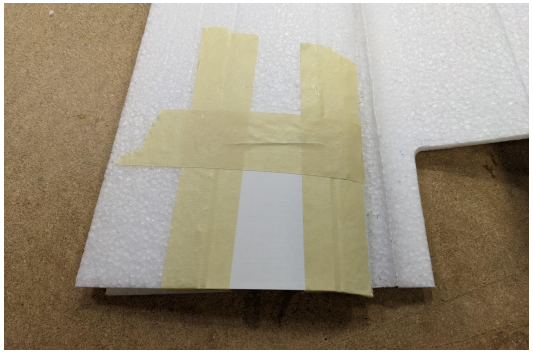
Component	Details	Qty	Link
Servos	EMAX ES3352	4	AloftHobbies
Battery	4.8V 1300 2/3A NiMH Flat	1	AloftHobbies
Receiver	4 channel	1	
Servo Extensions	8" Servo Extension	2	AloftHobbies
White Gorilla Glue			
Painters Tape			
Vinyl	Oracal 651, optional		Amazon
White Monocote	Optional for control surfaces		Amazon

Wing Joiner - Bracket Assembly







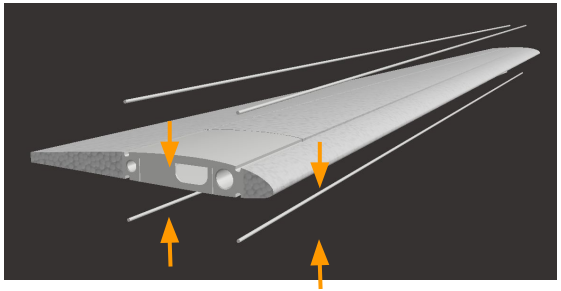


Glue the wing joiner bracket to the EPP wing panel using White Gorilla Glue.

Painters tape can be used to ensure perfect alignment.

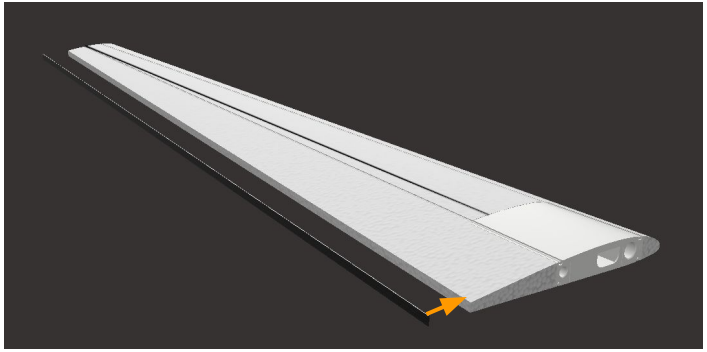
It is also recommend to place the wingpanel into the EPP cut offs and ballast it to ensure a straight glue joint.

Wing Reinforcement - Glass Fiber Rods



Glue the white glass fiber rods into the channels of the wing joiner bracket and the EPP wing panel. White Gorilla glue is the prefered option. We recommend to lay a bead of glue into the channel and dampening the rod with a wet cloth before laying it into the channel. Then use painters tape to cover the channel over the full length. To ensure a perfectly straight wing the panel should be placed in the EPP cut offs and ballasted on a flat work bench until fully cured.

Wing Reinforcement - Carbon Strip



Glue the 6mm carbon strip on the trailing edge of the iwing using White Gorilla Glue.

Painters tape and placing the assembly into the EPP cut offs will help to keep the wing straight until fully cured.

Wing Lamination

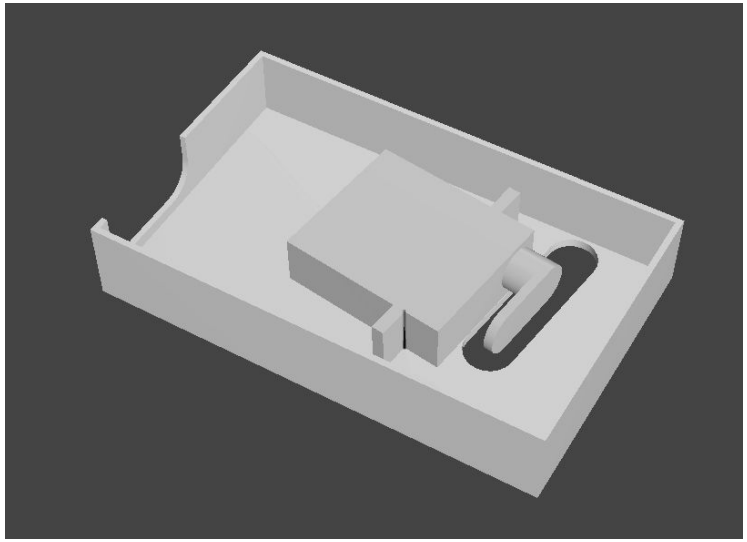
Please choose the prefered decoration method before proceeding:

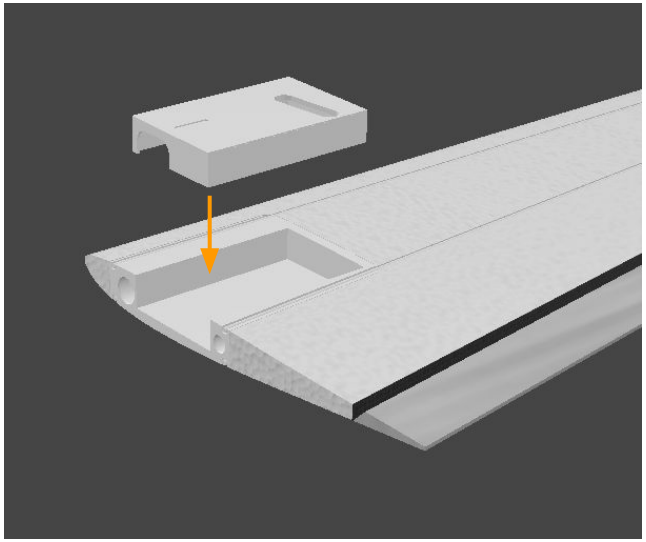
1. Using Spray paint or brush on paint to apply a design to the EPP before covering it
2. Using Vinyl (Oracal 651) to apply the design after covering (recommended)

Use the 5 mil laminating foil to cover the full wing. We leave the root and tip usually uncovered which makes the covering process very easy since no complex curves need to be covered.

Depending on the color design the balsa aileron can be covered with 5 mil laminating film or Monocote. We recommend white Monocote for a beautiful finish.

Aileron Servo Assembly





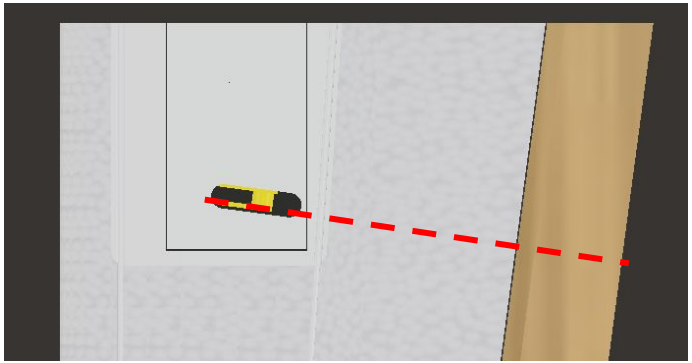
Use double sided tape to secure the servo in the servo tray.

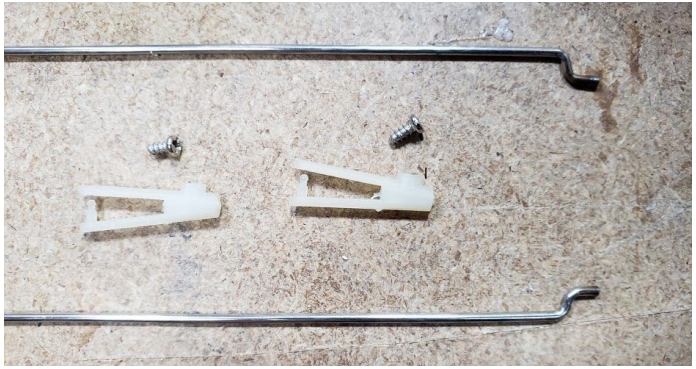
The whole assembly can then be place in the wing joiner bracket and secured with tape.

Ailerons

1. Cut the balsa ailerons to length so they fit the wings. Make sure to apply the correct angle at the ends.
2. Use a sanding block to apply a 45° bevel to the control surface.
3. Cover both the horizontal stabilizer and the elevator the laminate of your choice (either the provided transparent 5 mil or Monokote of any color)
4. Use packaging tape or laminate to hinge the aileron to the wing.

Aileron Linkages





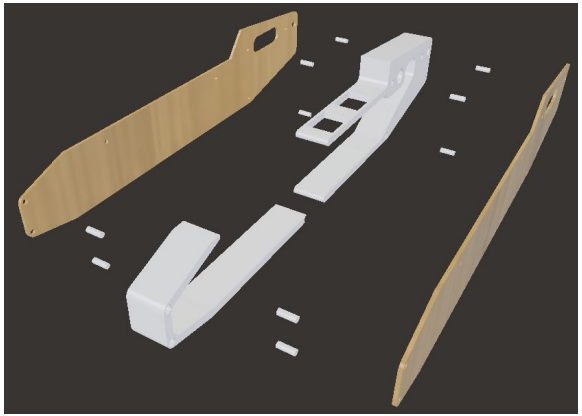
Determine the aileron control horn position by using a ruler and extending servo horn position towards the aileron.

Create a cavity using sharp knife which can receive the provided control horns.

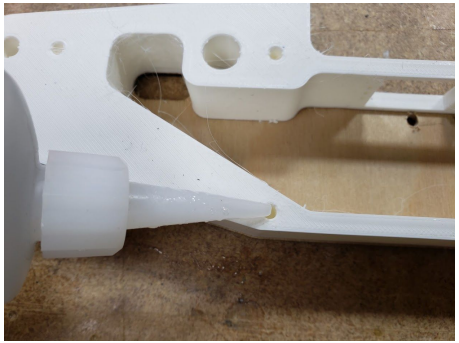
Use CA or Epoxy to glue the control horn into the cavity.

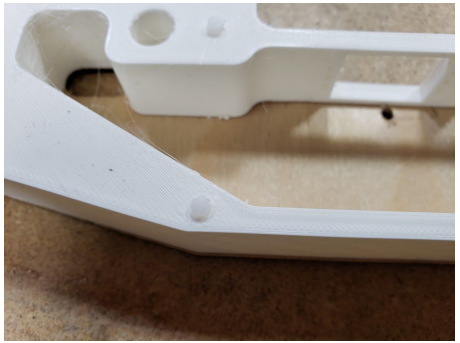
Use the rest of the provided aileron linkage components to connect the servo to the aileron.

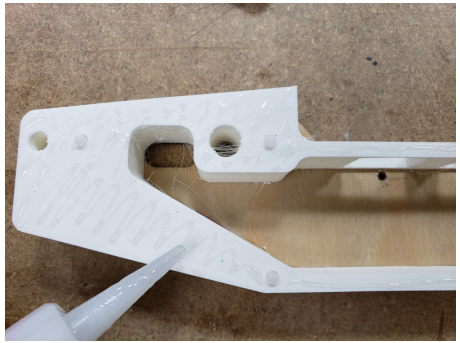
Fuselage Pod Assembly



1. Use CA to glue the plastic pins into one side of the PLA fuselage parts
2. Use CA to glue the PLA parts on one of the Plywood side panels by aligning the plastic pins with the pre drilled holes.
3. Repeat step 1 and 2 for the other side







Tail Holder Reinforcement

Use the short glasfiber rods to reinforce the tail holder.

Insert the rods into the holes left and right of the square hole.

We recommend using thin CA to glue it in.

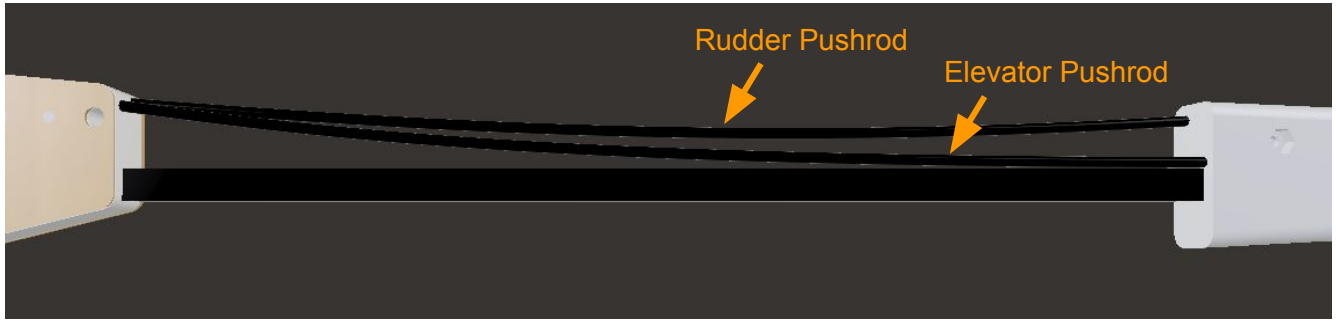
Then remove the excess with a side cutter.

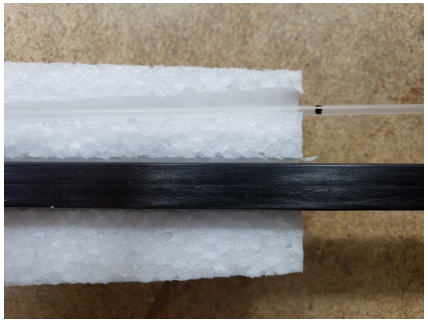
Fuselage Tail Assembly

Double check the carbon fiber tail boom length by dry fitting the assembly into one of the EPP fuselage halves before applying glue.

Use CA to join the fuselage servo pod, the carbon fiber tail boom and the tail holder.

Tail Linkages

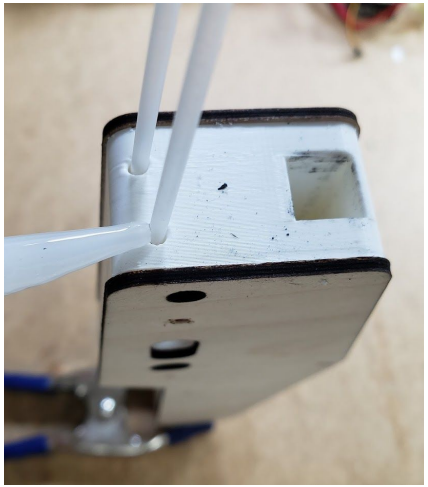




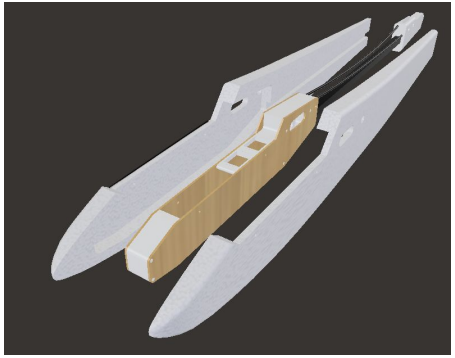
Cut the pushrod sleeve to length by loosely placing it in the fuselage. (the sleeve in the kit will yield sleeves for poth push rods)

Use CA to glue the push rod sleeves into the prepare holes of the front and rear PLA parts

Make sure the pushrods can slide freely before applying the glue. And make sure the pushrod sleeves follow a smooth curvature.

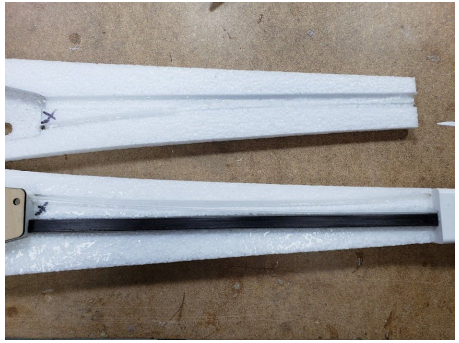


Fuselage EPP Assembly



Use white gorilla glue to embed the fuselage assembly into the two EPP halves.

We recommend using the provide EPP cutoffs as fixtures on a flat table and weights to ensure a straight glue up. Using plastic food wrap between the EPP fuselage parts and cutoffs prevents unwanted fusion of the EPP.



Fuselage Lamination

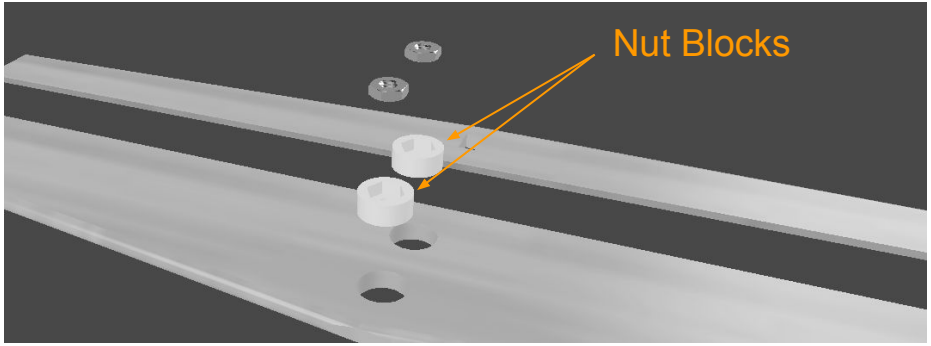
Sand the fuselage edges round to your liking before proceeding.

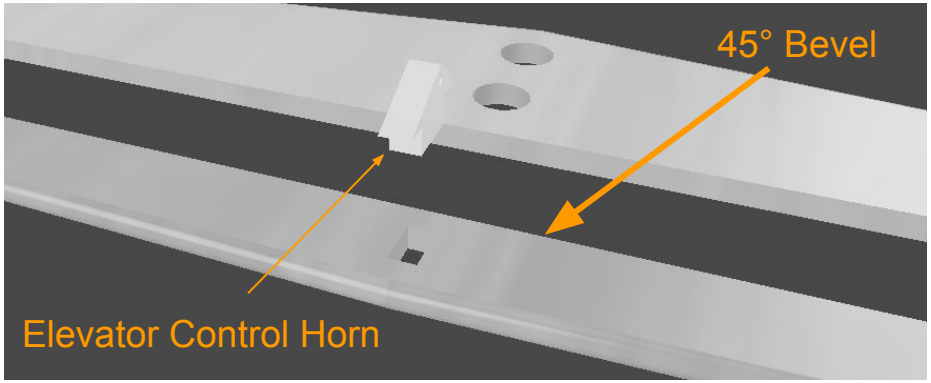
Please choose the prefered decoration methode before proceeding.

1. Using Spray paint or brush on paint to apply a design to the EPP before covering it
2. Using Vinyl (Oracal 651) to apply the design after covering (recommended)

Use the 5 mil laminating foil to cover the full fuselage. There is no need to cover the complete plastic tail holder. A short overlap will be sufficient.

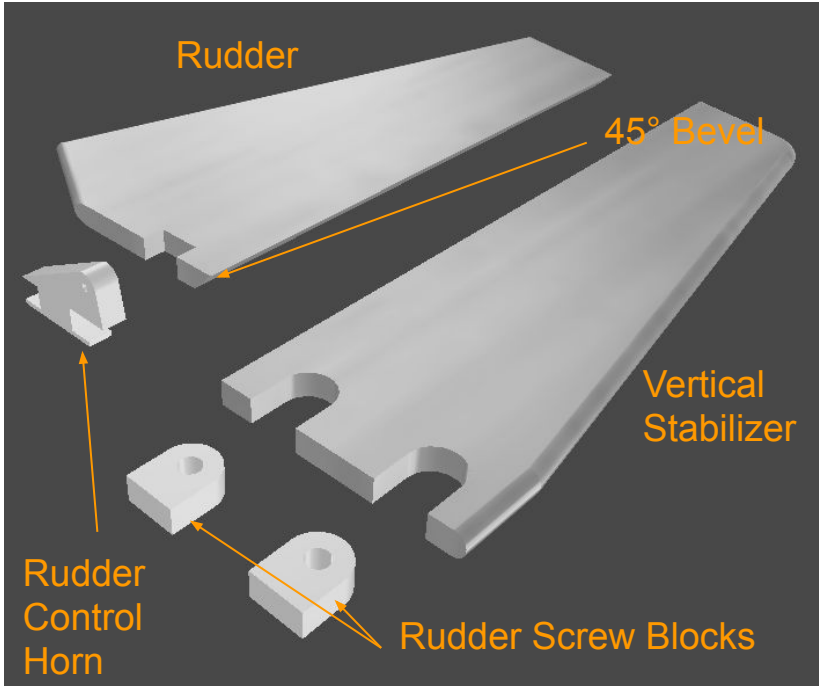
Elevator Assembly





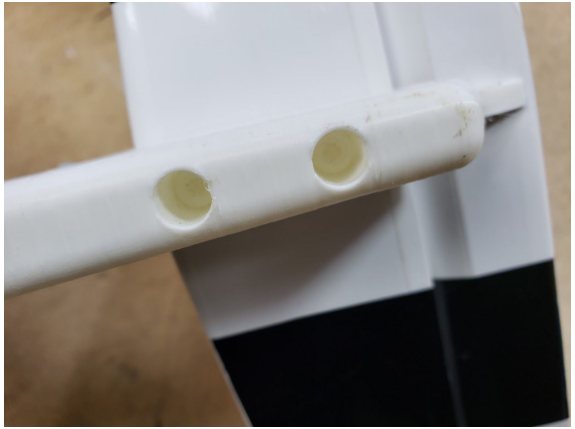
1. Us CA to glue the nut blocks into the balsa horizontal stabilizer. There is no need to glue the nuts since they will be covered by lamination film.
2. Use a sanding block to apply a 45° bevel to the control surface.
3. Cover both the horizontal stabilizer and the elevator the laminate of your choice (either the provided transparent 5 mil or Monokote of any color)
4. Use CA to glue in the Elevator control horn.
5. Standard office tape can be used to hinge the elevator

Rudder Assembly



1. Use CA to glue the rudder screw blocks into the vertical stabilizer
2. Use a sanding block to apply a 45° bevel to the control surface.
3. Laminate both the rudder and the vertical stabilizer with your prefered method (provided 5 mil or colored Monokote)
4. Use CA to glue in the rudder control horn.
5. Standard office tape can be used to hinge the rudder.

Final Tail Assembly

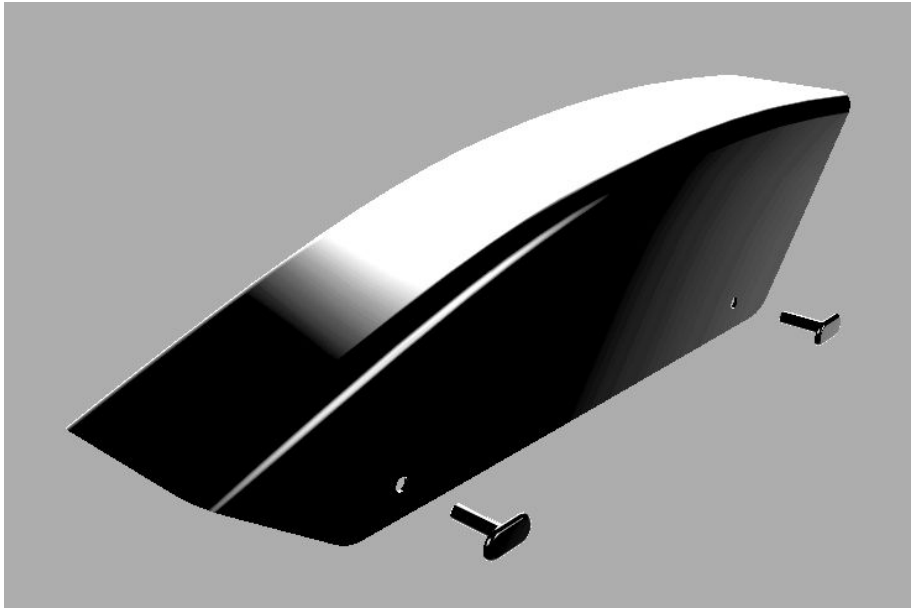


Both horizontal and vertical stabilizer can be attached to the fuselage by using the provided nuts and nylon screws.

Tail Linkages

To keep horizontal and vertical stabilizer removable we recommend using simple L bents both sides of the pushrods. The control surface horns slide easily over the pushrods and can’t move free. A blob of hot glue on the servo side keeps the pushrod in place as well.

Canopy



To achieve the desired look the canopy can be spray painted with any color from the inside.

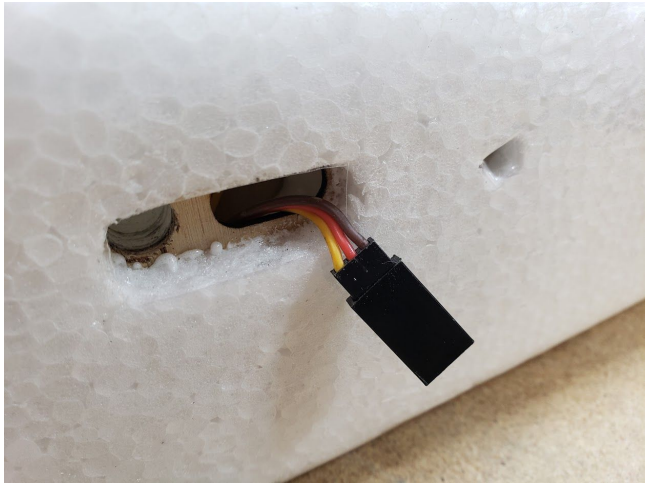
Cut the canopy out along the indentation.

Drill 4 holes into the side of the canopy large enough to receive the 4 canopy pins. (use the hole indentations as locators)

CA can be used to glue the pins to the canopy.

Make sure to extend the holes in the fuselage plywood side wall through the foam so the pins can slide in and hold the canopy on the fuselage.

Miscellaneous Notes



8” Servo Extension Cables can be used for easy Aileron Servo connection.

Settings:

Elevator Throw:	±5mm
Aileron Throw:	±10mm
Rudder Throw:	±25mm
Center of Gravity:	55mm