

# *SkyLeaf-ST*

INSTRUCTION MANUAL

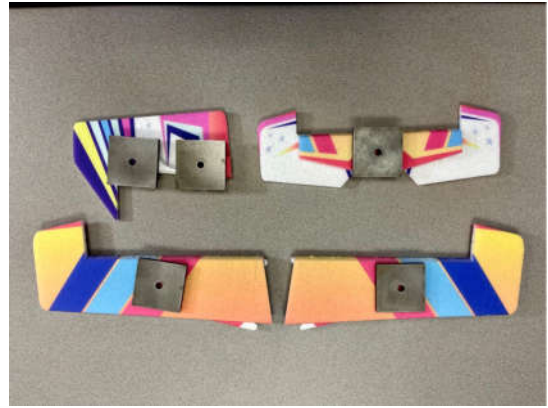


**Futaba**  
FutabaUSA.com

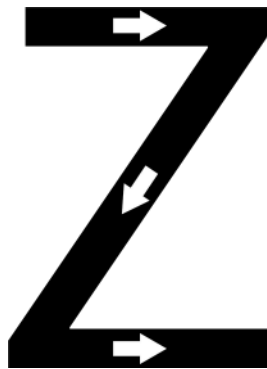
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Major components laid out flat on table



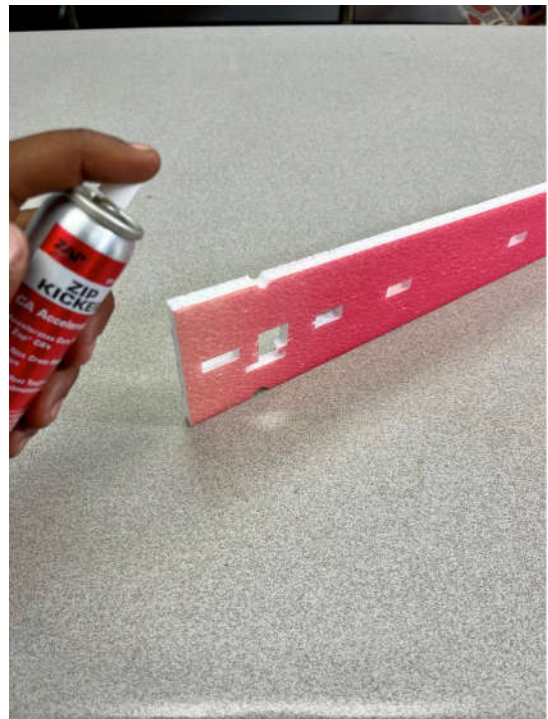
Locate all of your hinged surfaces. Place them in a folded position with the seam facing the inside of the fold and place weights on top of them for 30-60 min. This will free up the hinge and allow the surface to move freely.



\*NOTE manual reads top row before proceeding to the bottom row of the page.

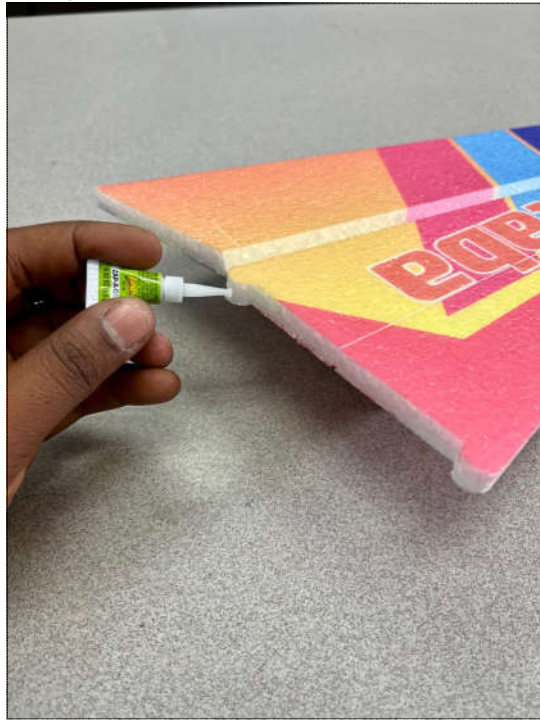


Locate the center horizontal fuse and both wing panels. As you will notice both wings have different sized domes where they connect to the fuse. Make sure to match them to the appropriate sized dome cut-out on the fuse.



Take your rear horizontal fuse and coat the area where the wing will meet it with accelerator. This will help to ensure a strong bond.

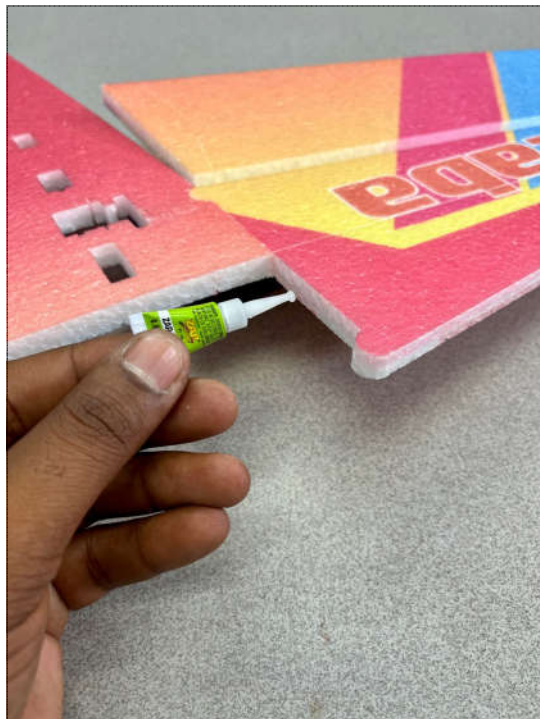
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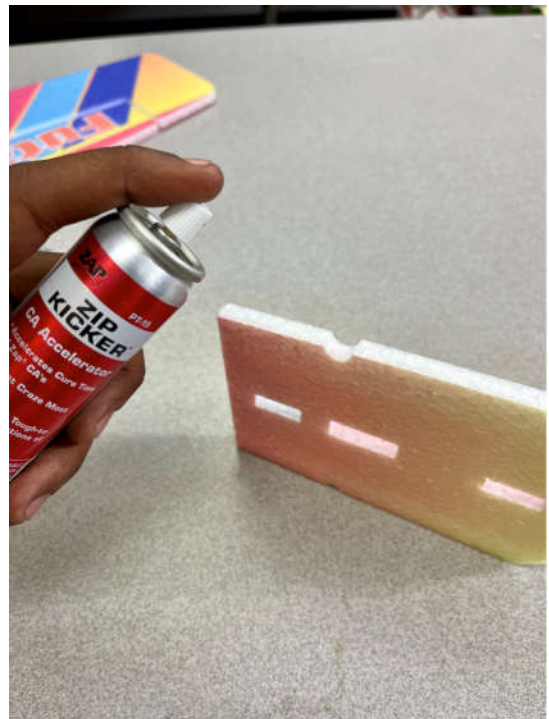
Take medium CA and put a consistent bead along the rear mating portion of the right wing



Join the wing and the horizontal fuse and allow to dry.

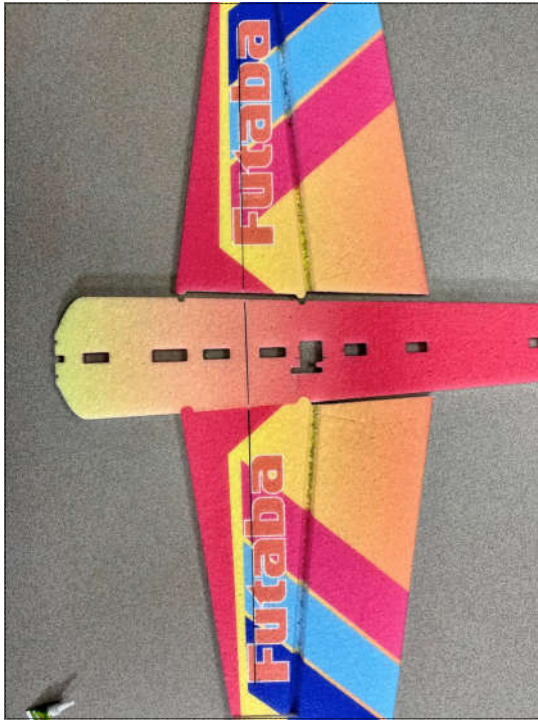


Now apply another bead on the front mating portion of the same wing.

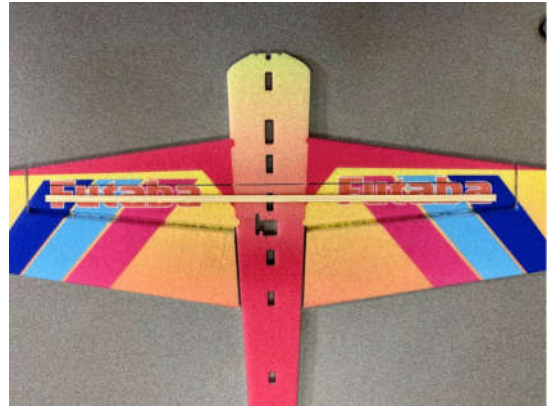


Spray the front horizontal fuse with accelerator

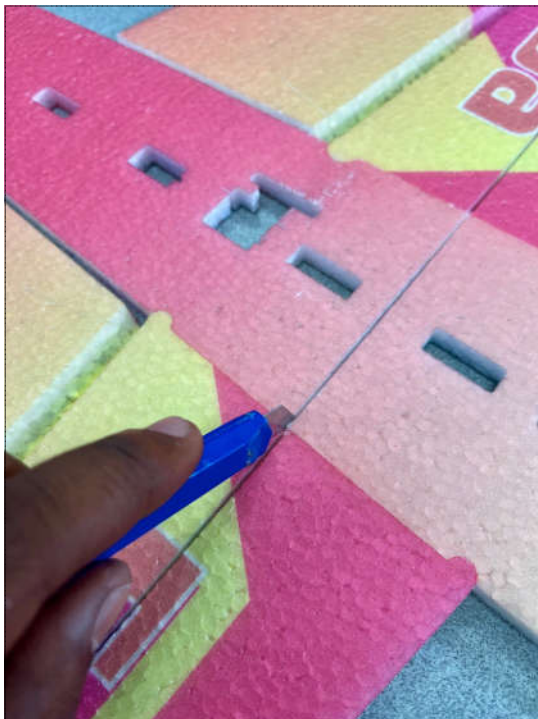
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Place the front portion of the wing together with the front portion of the horizontal fuse and allow to dry. Now you have completed one side of the wing attachment. Follow the previous steps for the other wing.



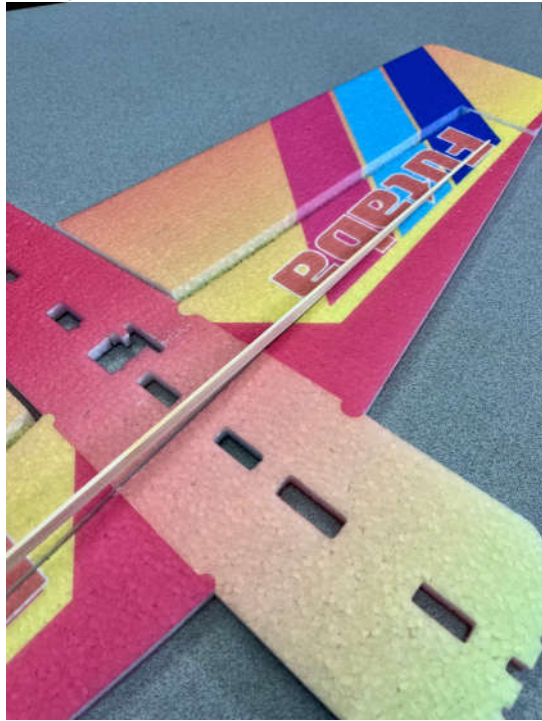
Locate your balsa wing spar, also locate the pre-cut slot for the wing spar.



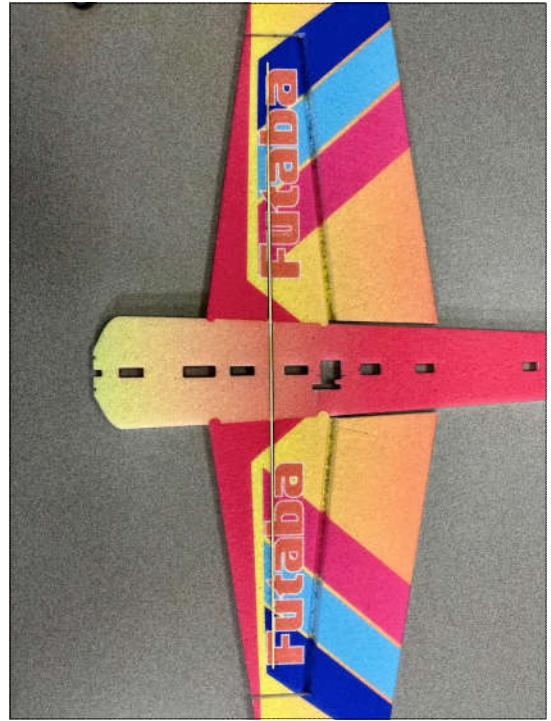
Once the slot is located ensure that you open up the slot completely. There are still remnants of foam keeping the wings together that will need to be cut away in order to fit the wing spar. See below for the open slot.



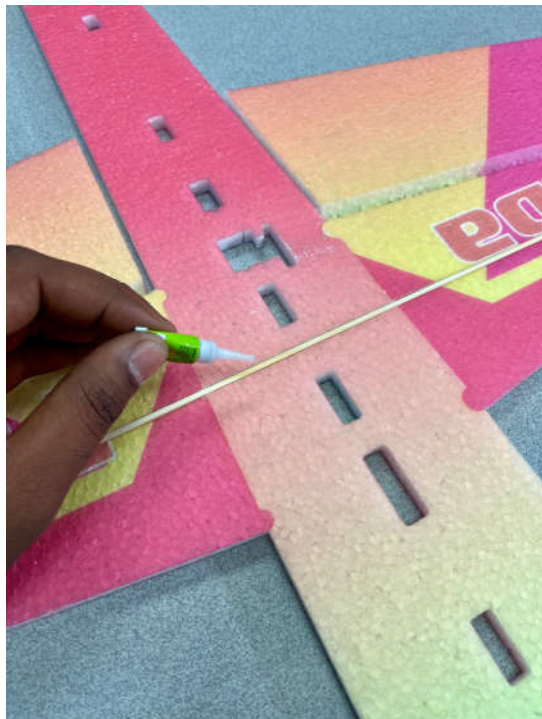
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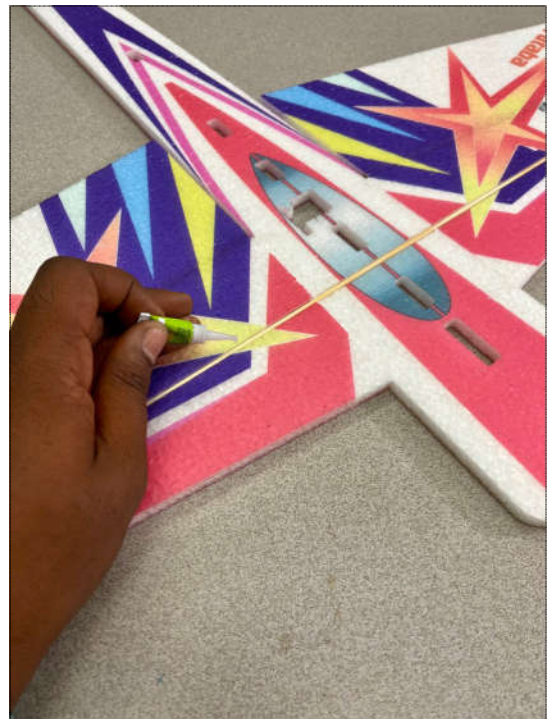
Test fit the wood spar in the wing slot .



Ensure that the spar fits completely down in the slot and the wing stays flush with the table.



Use thin CA to glue the spar into place on the bottom of the airplane. You can also use medium CA for this but ensure you get glue on both sides of the spar in the slot. Be careful not to glue your wing to the table



On the top side of the wing use medium CA to fill in any void you may have missed when gluing on the bottom.

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Now locate the horizontal tail section. You will notice like the wing it has a dome on one side that corresponds with an indentation on the horizontal fuse to ensure proper alignment.



Take your accelerator and spray it on the horizontal stabilizer.

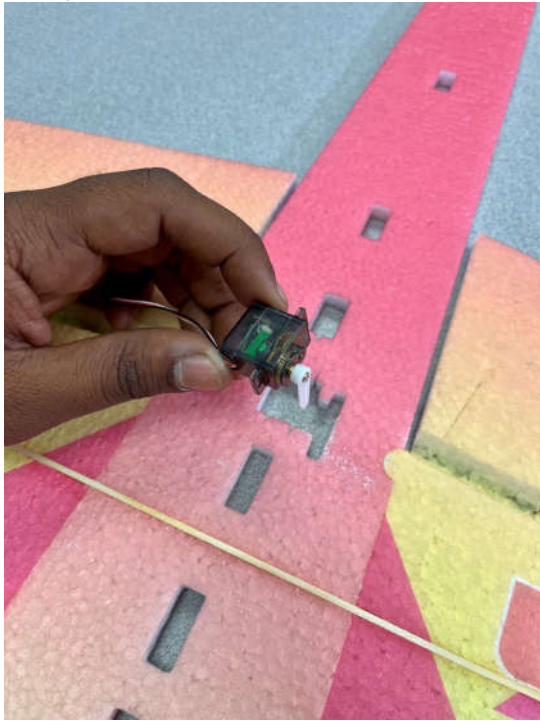


Add a bead of medium CA to the tail end of your horizontal fuse.

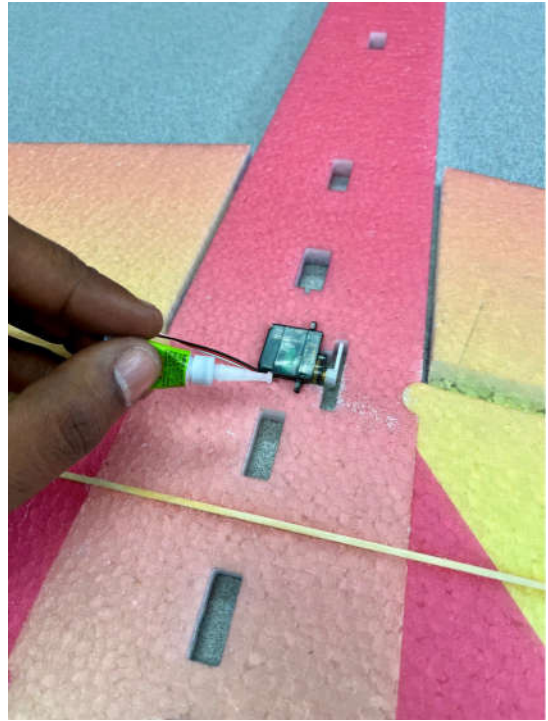


Join the two together on a flat surface and allow a straight and tight bond between the two surfaces.

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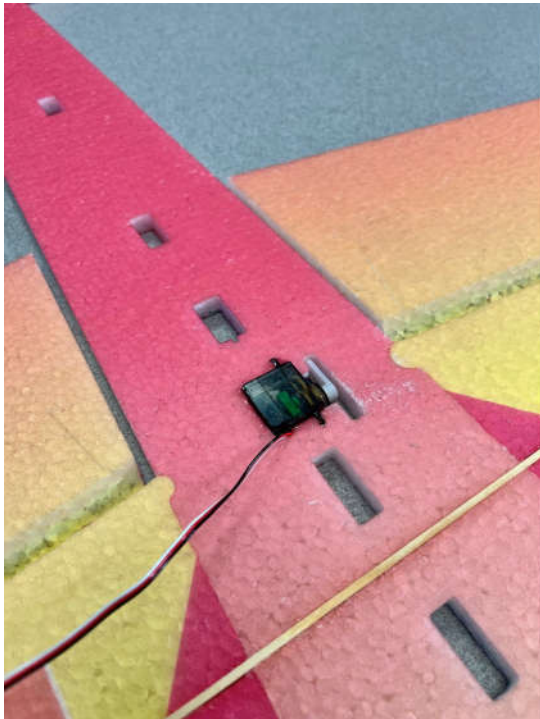


Next we will mount your Futaba PS-10 Servo for elevator. Before we glue this in place please take the longest single sided arm and power the servo up and center the arm. This will help the setup process.

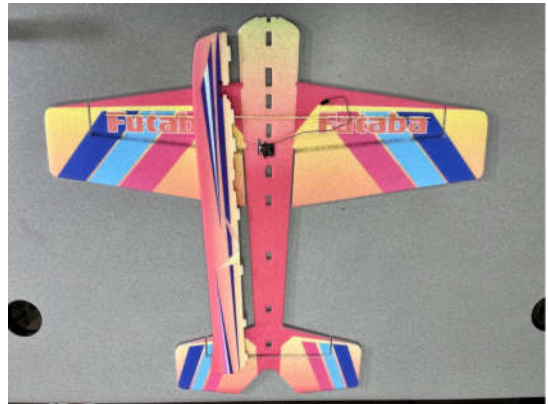


Once you have the servo arm centered you can power down the servo and rotate the arm out of the way like you see above. Then on a flat surface press the servo into its slot. Use medium CA to glue the servo into place making sure it is flush to the table.

\*Make sure the servo lead is coming out on this side of the fuse as pictured above.



If needed afterward spray a small amount of accelerator on the CA.

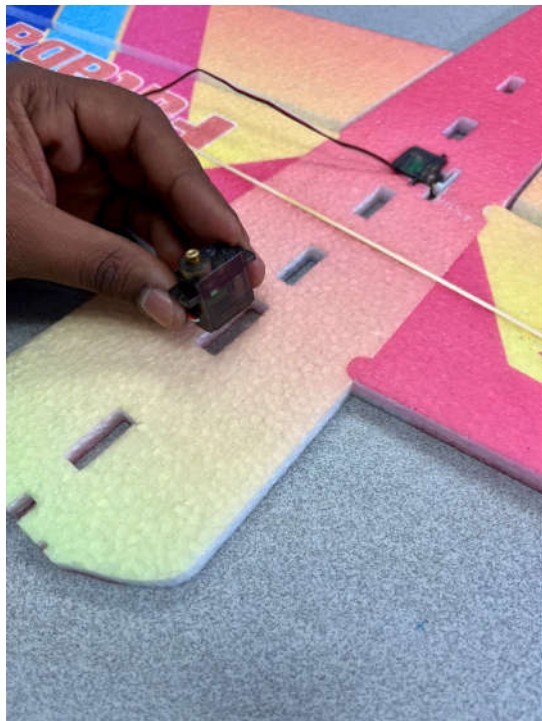


Locate the bottom vertical fuse piece.

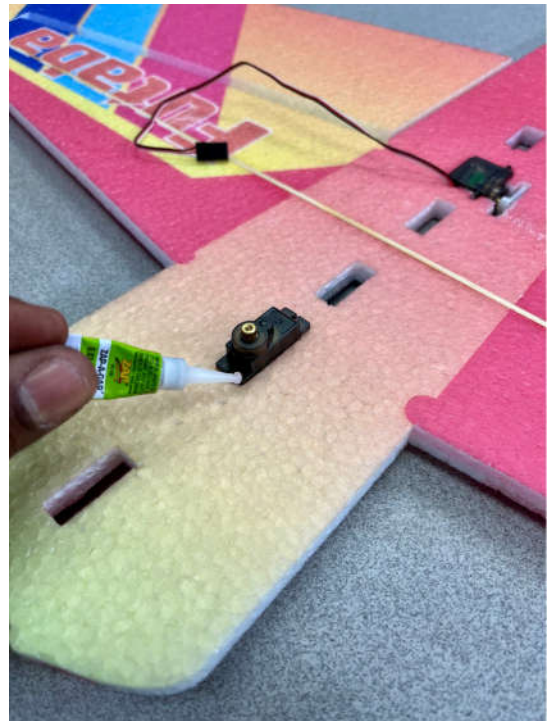


Once located dry fit the fuse in the the horizontal fuse check to make sure the nose mates with the assembled portion of the fuse. Minor fitting may be required.

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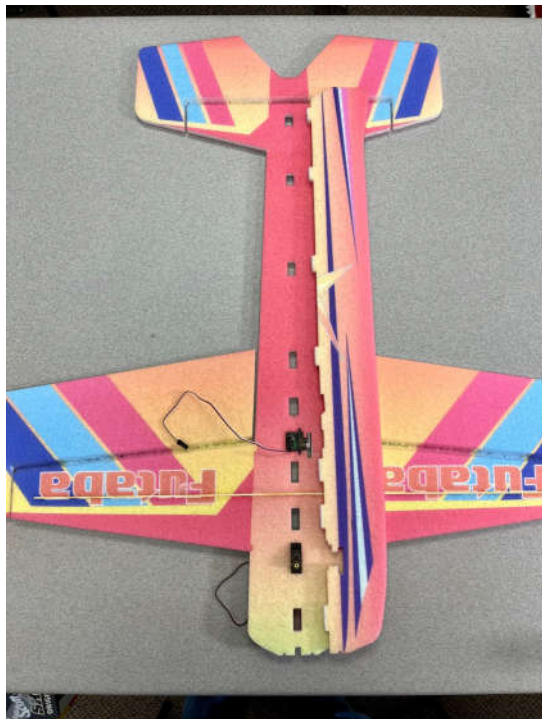


Now find your aileron servo, and test fit in the correct slot, as shown below

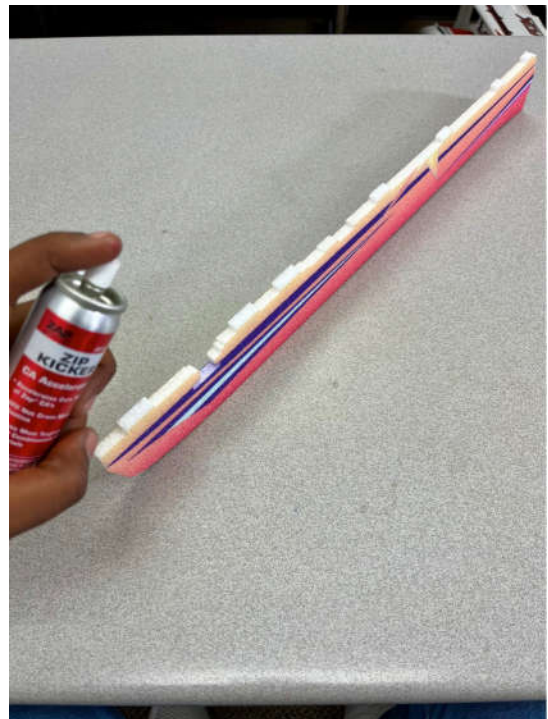


Slide servo completely in slot and glue in with medium CA. Make sure the servo lead is routed back towards the bottom of the plane which in the photo above is the visible side.

\*Take note of where the lead is when performing this step.



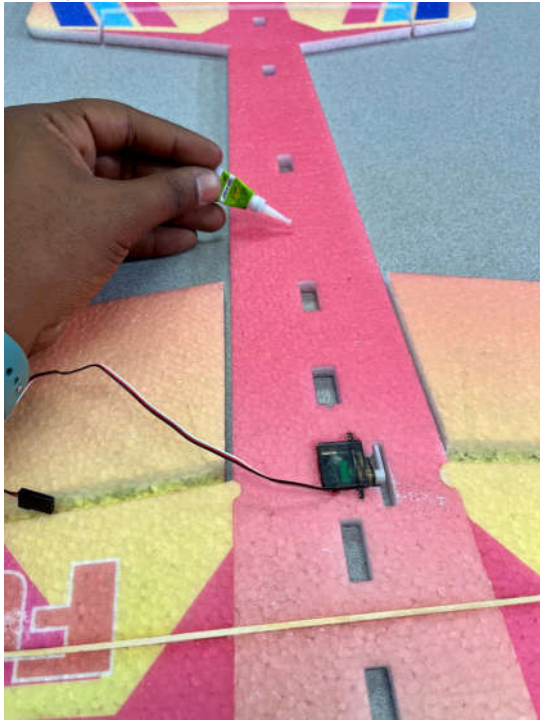
Now that your aileron servo is glued, grab your bottom vertical fuse piece and lets prepare to glue it in place.



On the bottom fuse piece spray accelerator so that you can make a instant bond when gluing.



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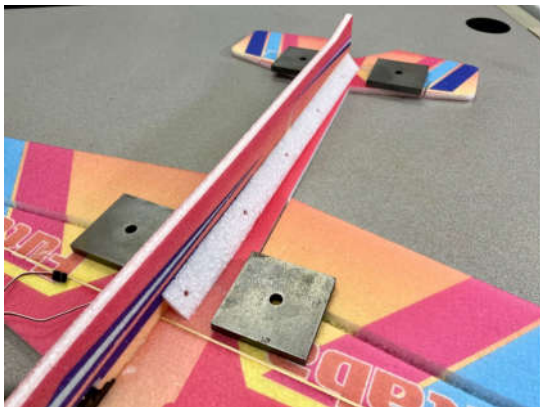
Take your medium CA and liberally apply a bead all the way down the horizontal fuse piece.



Join the two pieces together ensuring the nose is square.

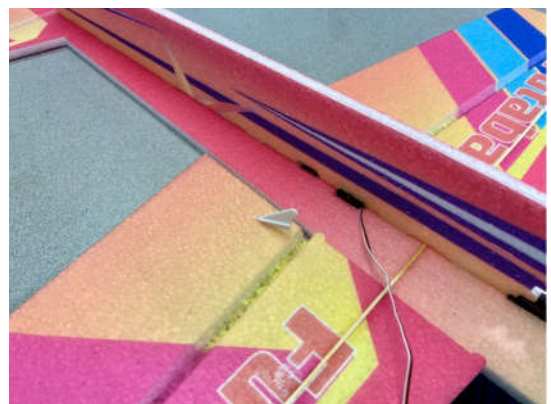


Now the the bottom fuse is attached lets grab one of our 45 stiffeners. You want to put CA on the 45 angled part of this piece . This piece helps keep the fuse straight.



Now with your fuse weighed down to a table, attach the stiffener and spray with accelerator.

Next we will setup the ailerons. First we want to locate the aileron differential arm along with he two control horns.



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Test fit the horns in their slots. If needed you can trim the foam to open up the slots some.



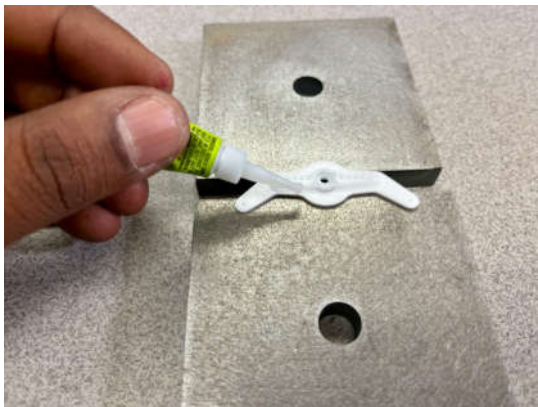
Next apply medium CA to the horn.



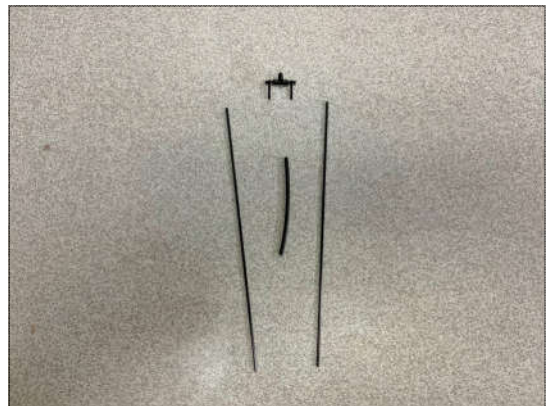
Press the horn into the slot and you can apply accelerator. You will repeat this step on both ailerons.



In the package with your aileron servo locate the long double sided arm. This is how you will connect the servo arm to the differential arm.



Use medium CA to glue the servo arm to the differential arm. You can wrap this with sewing string/alternatives to add extra strength or you can also take a small servo screw and screw the aileron horn and servo horn together to ensure the servo arm is locked straight.



Next up you will need to locate the two aileron pushrods, heat shrink and the ball link ends for the pushrods.



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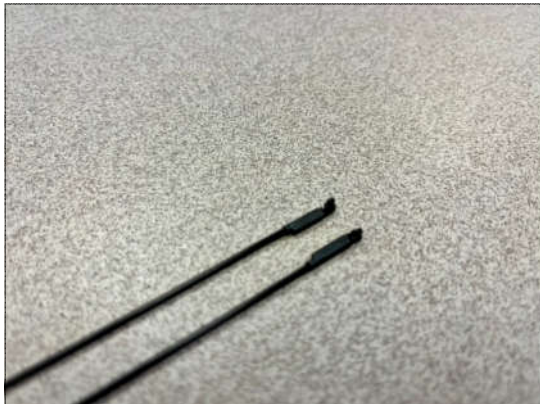
The ball link ends have a small groove molded into them. This is the side you will glue to the pushrod. Using medium CA is easier on this step but thin also works well.



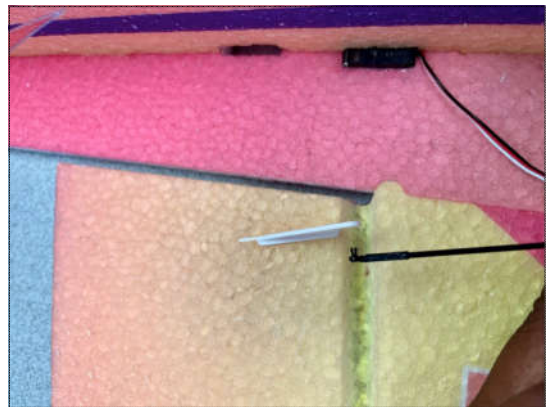
\*be sure to sand the rod ends so that there is a rough surface for the CA to bond to.



Next cut a small piece of heat shrink and slide it down the pushrod and over the base of the ball link, shrink this. This adds extra protection against the ball link breaking free from the pushrod.



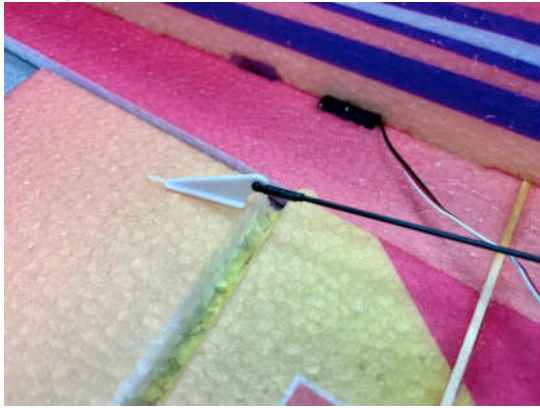
Repeat the above steps for both pushrods until you have two complete sets.



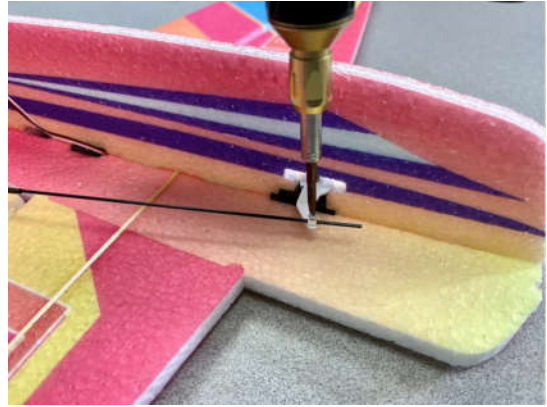
Now take one pushrod and press the ball link into the control horn. The angle matches perfectly if you insert the ball link from the outer wing tip towards the fuse.



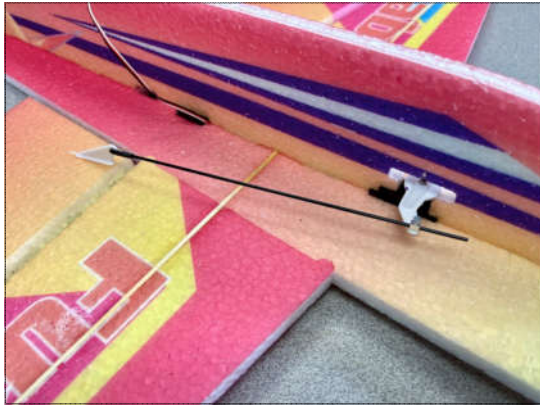
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Once you have one pushrod connected to the control horn, power up your aileron servo and center it. Then attach your servo arm and differential arm to the servo. Ensure the differential arm is angled forward towards the nose of the aircraft.

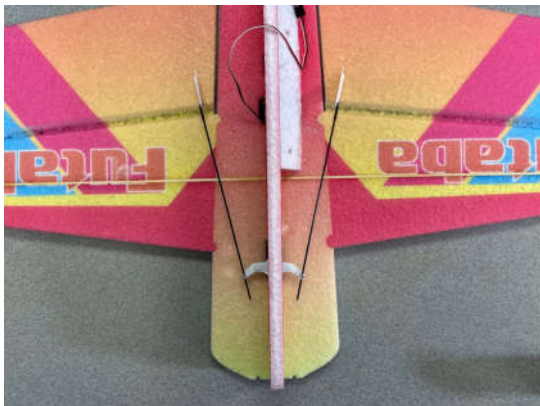


With the servo powered and the aileron flush with the horizontal fuse tighten the screw on the micro ez link.

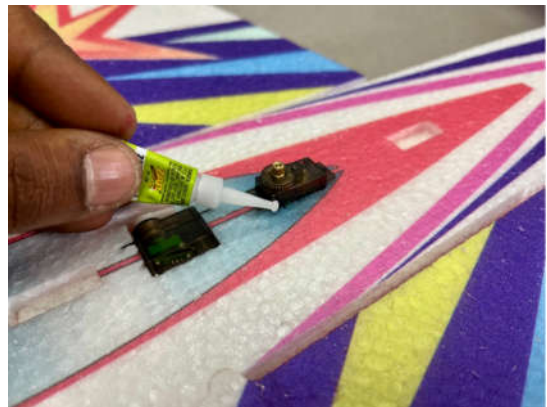


Repeat the previous steps for both sides. You can clip/cut any excess carbon left past the micro ez link connector.

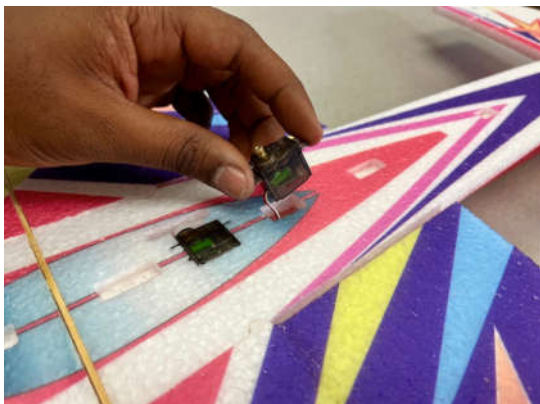
\*Make sure to be careful when cutting carbon rod as fine particulate can become airborne



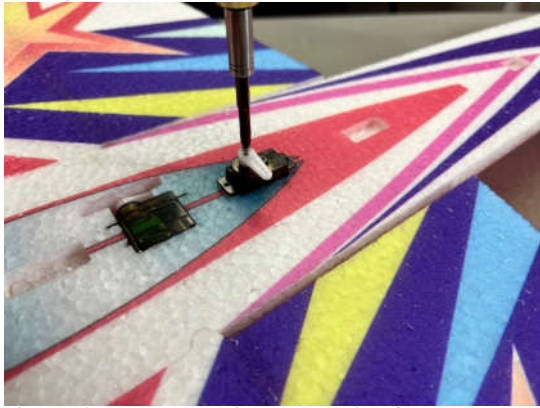
Locate your PS-10 servo for rudder. Slide into the rudder servo slot and make sure the servo leads come out on the same side as your other servos.



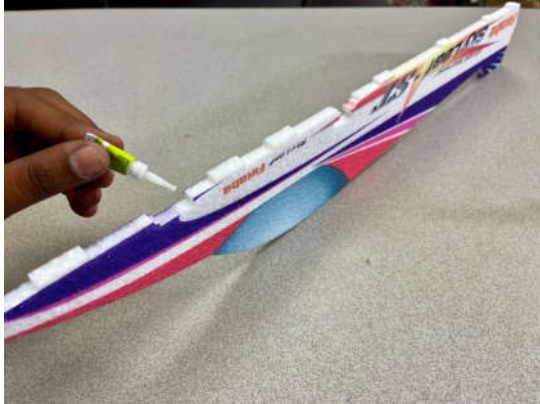
Using medium CA to glue the servo into place.



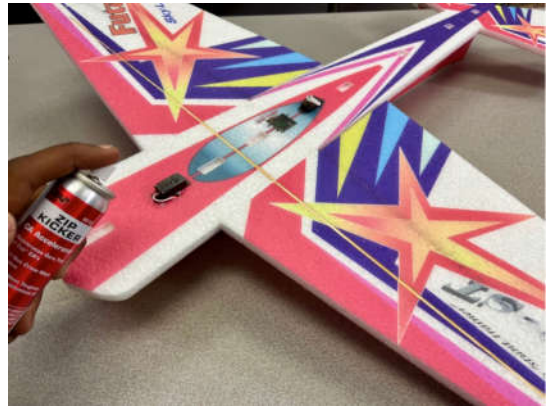
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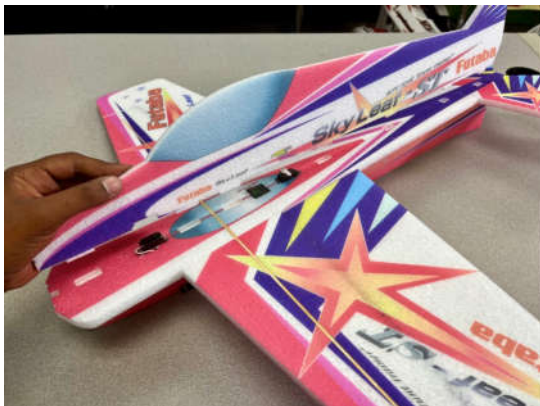
Once glued into place power up the servo and make sure that it is centered and mount the bigger single side arm.



Put a bead of medium CA all the way down your top fuse as you begin prepping it to join to the assembled fuse.



Spray the fuse with accelerator so that upon making contact the bond is quick and strong,



Line up the top fuse and press it into place making sure its perfectly square and flush with the nose.

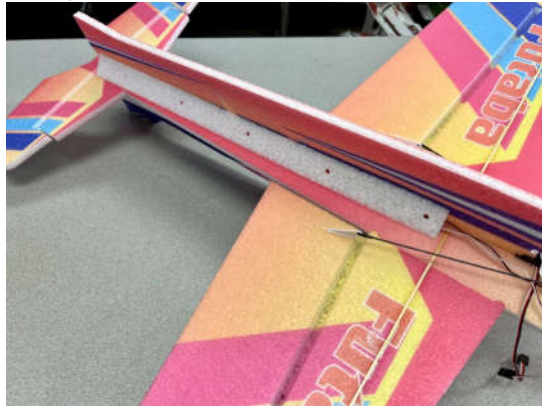


Locate the second 45 stiffener.



Apply CA on the 45 pieces of this stiffener just like the first one.

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Attach to the fuse while making sure your servo leads come forward out of the front exit of the stiffener.



Use medium CA to put a bead of glue down the hinged portion of the rudder.

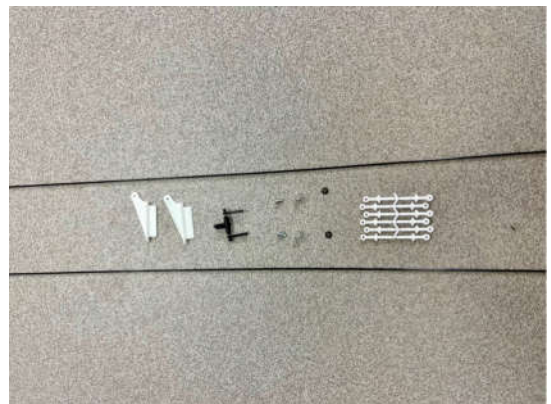


Attach the rudder to the fuse check to make sure you have alignment top and bottom of the fuse

Locate the rudder piece.



Spray the vertical fin area on the aircraft with accelerator.



Next locate your rudder and elevator control horns, two ball link ends, two micro ez link connectors and the pushrod guides.

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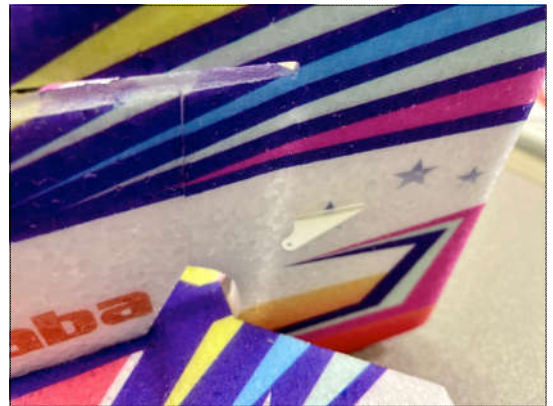
Test fit the horns in their slots. If needed you can use a hobby knife to open up the slots some.



Next apply medium CA to the horn.

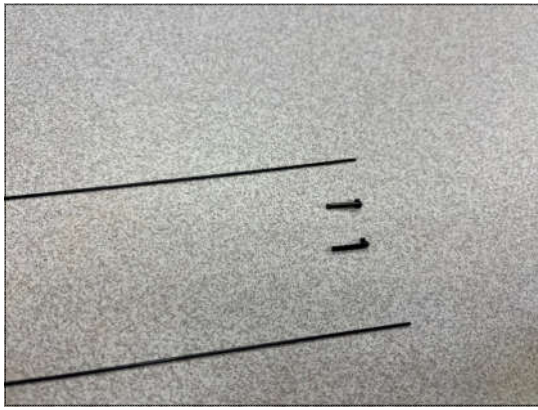


\*Press the horn into the slot and you can apply accelerator. You will repeat this step on both elevator and rudder.

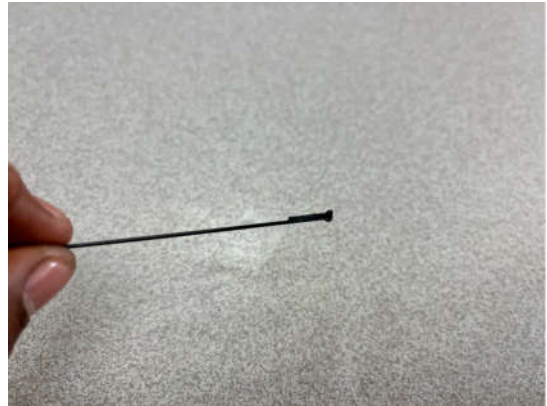


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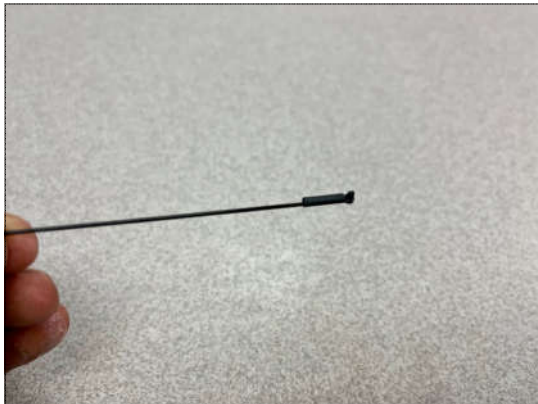
Attach a micro ez link connector to both rudder and elevator servos



Next up locate both your rudder and elevator pushrod. (These are both the same length) along with two ball link ends.



The ball link ends have a small groove molded into them. This is the side you will glue to the pushrod. Using medium CA is easier on this step but thin can also work. Be sure to sand the rod so that there is good adhesion.

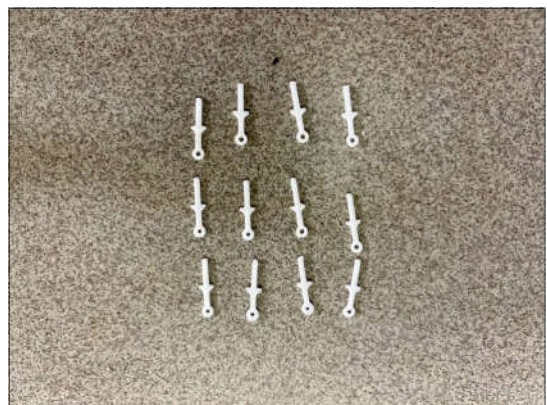


Next cut a small piece of heat shrink and slide it down the pushrod and over the base of the ball link, shrink this. This adds extra protection against the ball link breaking free from the pushrod.

Repeat the above steps for both pushrods until you have a pushrod for rudder and elevator.



Locate your pushrod guides in the kit.



You will clip 12 of them off the small holder they are connected to



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For the elevator press the ball link into the control horn coming from the fuse going towards the tip of the tail.



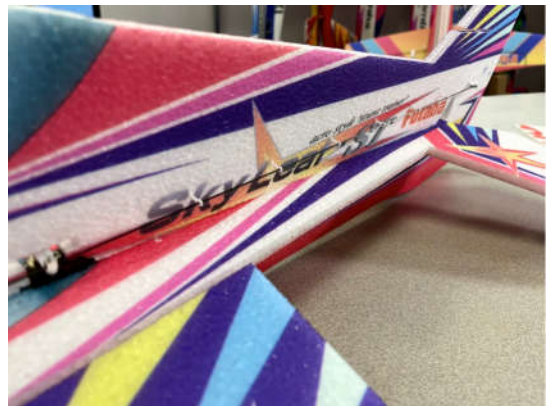
For the rudder press the ball link in from the top side of the control horn.



Align the 6 pushrod guides for the rudder & elevator in their slots. These slots may be a little hard to see but once you find one the rest become easy.



Use Medium CA to glue all the pushrod guides into their slots.



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Use Medium CA to glue all the pushrod guides into their slots.



With the servo powered on and centered make sure that both elevator and rudder are flush with their surfaces and tighten the center screw.

Leave about 1/2 inch of carbon and clip the excess, and add a small dab of CA to the tip.

\*Note when cutting the carbon that particulate can become airborne.



With the servo powered verified you have the control surface centered and tighten the set screw.



Spray the front of the nose with some accelerator where the motor mount will sit.



Now locate your motor mount. (Seen above)

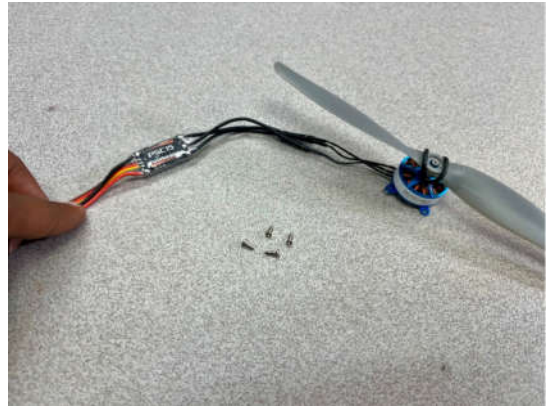


Apply medium CA on the inside of the motor mount as shown above.

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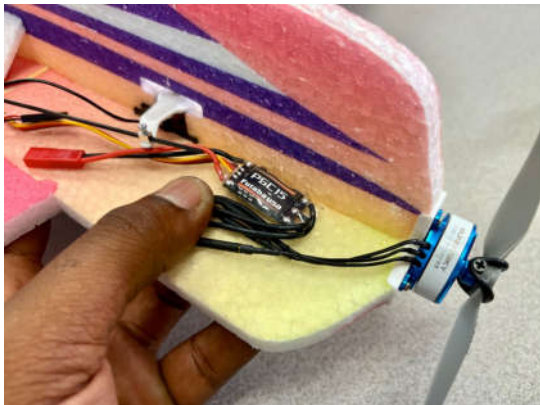
Press fit the the motor mount on to the front of the fuse and allow it to set while making sure that the mount has no up or down thrust as well as no left or right thrust.



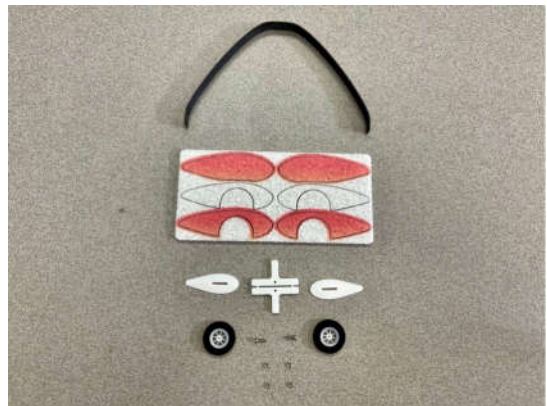
Now locate the PSC15 Esc and the PSM2305 motor along with your motor mounting screws.



Screw the motor directly to the mount make sure that your esc and lead are off to the bottom side of the aircraft on the same side as the rest of your servo wires.



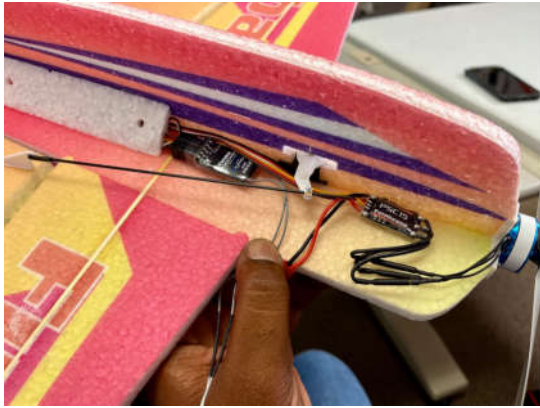
Take double sided tape and use it to attach your esc to the horizontal fuse.



For landing gear assembly please see the attached file.

<https://www.rc-factory.eu/assets/docs/8f60adecaf1592a0072d27fb04faf96c/3809-1/1735-2-landing-gear.pdf>

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Connect your receiver of choice, set throws (page 20)  
clean up your wiring and you are ready to fly.



## Required to complete:

- CA Medium
- CA Thin
- Zap Goo (optional replacement for CA)
- 4ch radio (min)
- 4ch receiver (R3004SB,R3104SB, R2106GF)
- 2S-3S Lipo 250mah-400mah (XT30 connector if using PSC-15)
- Phillips screwdriver/Flathead Screwdriver
- Heat gun
- Hobby blade/xacto
- 1/32 drill bit (optional)

Dual rate/Expo	Aileron	Elevator	Rudder
High Rate (Advanced)	100/-60	100/-60	110/-30
Mid Rate (General)	50/-35	50/-20	70/-25
Low rate (Calm)	30/-35	35/-35	50/-35

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