EliteModels

8mm EPP Acrocub

Instruction Manual



Specifications

Wingspan: 34.6 in (880mm)
Length: 31.5 in (800mm)
Wing Area: 213.9 sq in (13.8sq dm)
Flying Weight: Approx. 9oz (270g)

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Dear Customer,

Congratulations on your purchase of Elite Models Acrocub 8mm EPP Airplane ARF from Value Hobby. We thank you for your generous support, and hope you enjoy your new airplane.

At Value Hobby, we hope to offer competitive prices, good performance, and products that you can setup and use with ease. That's why we extensively researched and tested this airplane, and suggested all the products necessary for you to setup properly. We understand that you have many choices when purchasing, and we are grateful you choose to buy from us.

As vendors, one of the most gratifying things for us is to hear from our customers. We would welcome any suggestion to help us improve. Please make us aware of any errors and imperfections in the airplane or the instructions, or about the setup that we suggested. We hope you'll find our setup suggestions to be helpful, and enjoy flying your new airplane. Please feel free to contact us at (630) 948-0947 or email us at support@valuehobby.com

Disclaimer

By purchasing and/or building this model, user assumes ALL liability and risk involved with this product. This model should be built and flown by an experienced pilot and only flown at AMA sanctioned sites.

Value Hobby guarantees this model to be free of defects in materials and workmanship at the date of purchase. This warranty does not cover any parts damaged by use or modifications. In no way shall Value Hobby liability exceed the original cost of the purchased model. Further, Value Hobby reserves the right to modify this warranty without notice. Value Hobby has no control over the final stages of assembly or the material used for the final assembly. No liability shall be assumed nor materials used for the final user-assembled product. By the act of using the final product the user accepts all resulting liability. Value Hobby, as a R/C product vendor, provides a top quality airplane and instructions to complete the model. The quality and flight characteristics of the finished model depend greatly on how it is built; we cannot guarantee the performance for the completed model and representations are expressed or implied as to the performance of the completed model. 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.

Safety in Assembly

During assembly of this aircraft, you will be asked to use sharp knives and hobby adhesives. Please follow all safety procedures recommended by the manufacturers of the products you use, and always follow these important guidelines:

ALWAYS protect your eyes when working with adhesives, knives, or tools, especially power tools. Safety glasses are the best way to protect your eyes.

ALWAYS protect your body, especially your hands and fingers when using adhesives, knives, or tools, especially power tools. Do not cut toward exposed skin with hobby knives. Do not place hobby knives on tables or benches where they can roll off or be knocked off.

ALWAYS have a first-aid kit handy when working with adhesives, knives, or tools, especially power tools.

ALWAYS keep hobby equipment and supplies out of the reach of children.

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Safety in Flying

This is NOT a toy! It is a very high-performance RC airplane capable of high speeds and extreme maneuvers. It should only be operated by a competent pilot in a safe area with proper supervision.

ONLY fly your aircraft in a safe, open area, away from spectators and vehicles–and where it is legal to fly.

NEVER fly over an unsafe area, such as a road or street.

Never fly too close to yourself or spectators.

Never run your motor inside a house or building with the propeller attached – Remove the prop for safety.

Required Items

Foam Glue (Welders Glue)
Hot glue gun
Thin & Medium CA
Lighter
Small drill bits
Tape measure and ruler
Hobby Knife
Needle nose pliers
Wire Cutters
Course sand paper
Scissors
Small Phillips Screwdriver

Before Starting Assembly

Examination

Unpack your airplane and examine the components. Check for damage of any kind. If you see any damage, please contact Value Hobby immediately.

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133 x 8 x 1mm carbon fiber sheet 2pcs
240 x 8 x 1mm carbon fiber sheet 2pcs
23 x 1mm Z bend wire 8pcs
185 x 8 x 1mm carbon fiber sheet 2pcs
Hook and loop strap 150mm 1pcs
M3 x 8mm screw for mounting the motor 4pcs
200 x 2mm heat shrink tubing 1pcs
790 x 3 x 3 carbon fiber square tubing 1pcs
Fiberglass control horn, motor mount, servo arm extension and guides for pushrod
60 x 2mm axle 2pcs
370 x 1mm pushrod for elevator and rudder 2pcs
M2 x 6mm screw 6pcs
M2 nut 6pcs
Plywood wheel hub kit 1 set
EPP wheel 2 set
Sewing thread 1pcs

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RECOMMENDED RADIO EQUIPMENT

	Product	SKU	Quantity
Radio	Flysky FS-i6 Transmitter and Receiver Set	FLY-RC-4572	1
Servo	Towerpro SG90 9g servo	TWP-SV-0352	3
Y Harness	Universal Servo Y-Harness 26AWG 6in (15cm)	AMS-AC-2397	1

2S POWER SETUP

	Product	SKU
Motor	GForce 2206-1900KV Brushless Outrunner Motor	VHB-MT-5009
ESC	Hobbywing Flyfun 12A ESC	HWG-SC-0236
Battery	GForce 30C 500mah 2S LiPO	RFI-LP-0731
Prop	8 x 4.5 Slow Flyer Prop (2pcs)	GFH-MP-2663

3S POWER SETUP

	Product	SKU
Motor	GForce 2206-1500KV Brushless Outrunner Motor	VHB-MT-5008
ESC	Hobbywing Flyfun 12A ESC	HWG-SC-0236
Battery	GForce 30C 500mah 3S LiPO	RFI-LP-0732
Prop	8 x 4.5 Slow Flyer Prop (2pcs)	GFH-MP-2663

OPTIONAL ACCESSORIES

	Product	SKU
Charger	GT Power C6 6S LiPO Charger	GTP-CH-1427
Foam Glue	Thin Foam Safe Glue	VHB-AC-2511
Watt Meter	GT Power 130A Watt Meter	GTP-AC-0591
Connector	Male JST Connector (10pcs)	AMS-AC-1401
	Female JST Connector (10pcs)	AMS-AC-1402
LiPO Bag	LiPO Safe Bag	RFI-LP-2725

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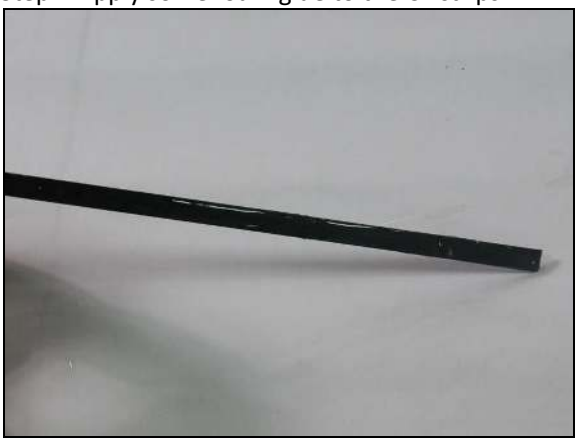
Note: 1. Allowing the foam glue to set for a few minutes before assembly will shorten tack up time. This will help you secure the bond more quickly, as the glue usually take longer to cure than needed. Any joints that you feel are going to require adjustment, it is best to assemble the pieces while the glue is wet so you will have time to make adjustments.
2. Use low temperature hot glue for gluing electronics. This will allow for easy removal later. The low temperature hot glue can be loosened by swabbing the glue joint with alcohol.

Section1 Airframe Assembly

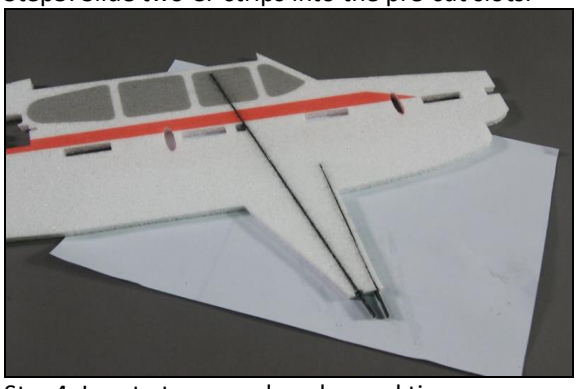
Step1. Locate the fuselage half and two CF strips. Long one (240 x 8 x 1mm) and short one (133 x 8 x 1mm).



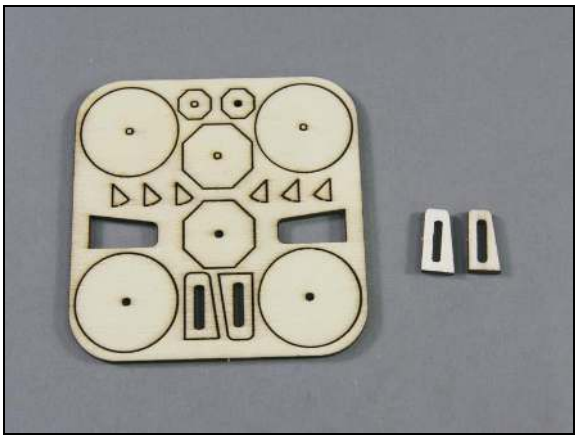
Step2. Apply some foam glue to the CF strips.



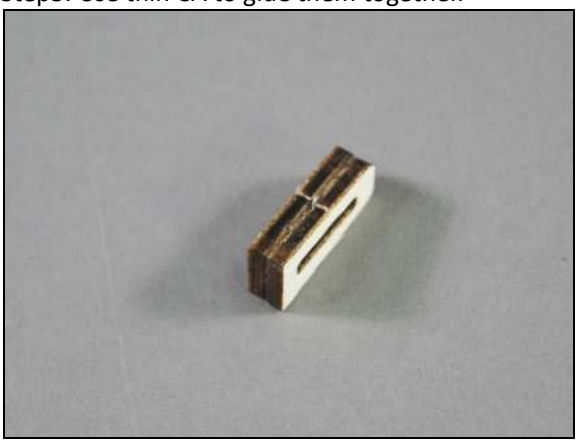
Step3. Slide two CF strips into the pre-cut slots.



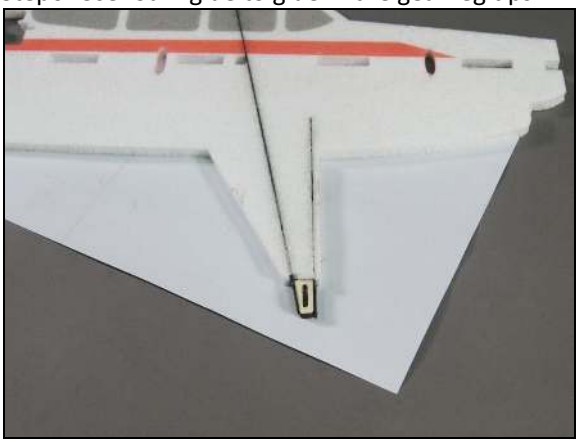
Step4. Locate two gear leg plywood tips.



Step5. Use thin CA to glue them together.

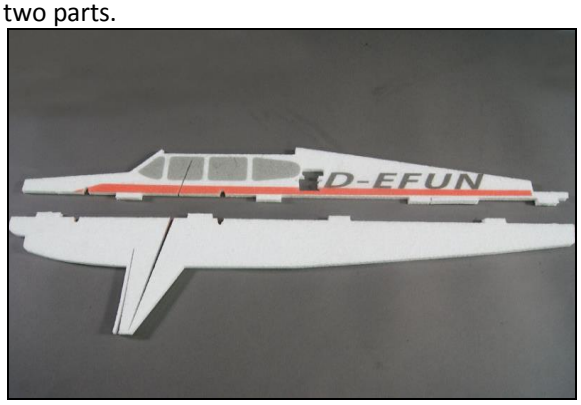


Step6. Use foam glue to glue in the gear leg tips.

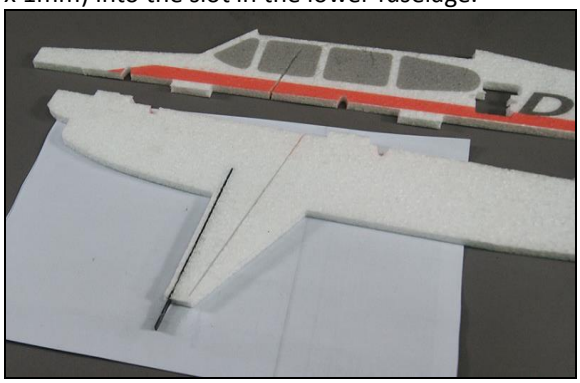


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Step7. Locate another fuselage half and cut it into two parts.

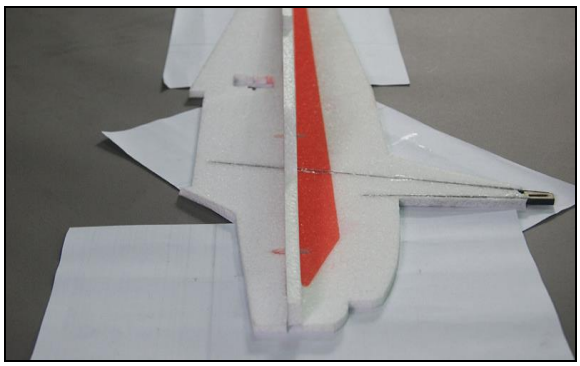


Step8. Use foam glue to install the CF strip (133 x 8 x 1mm) into the slot in the lower fuselage.

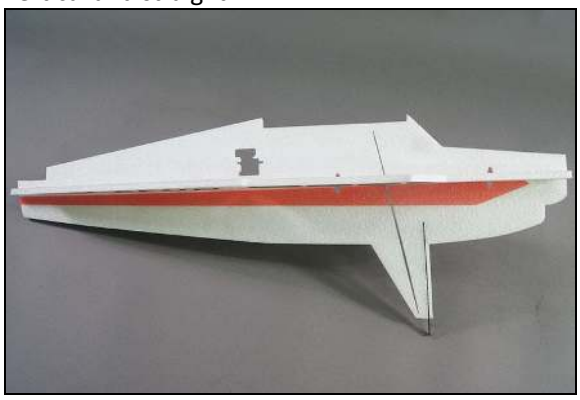


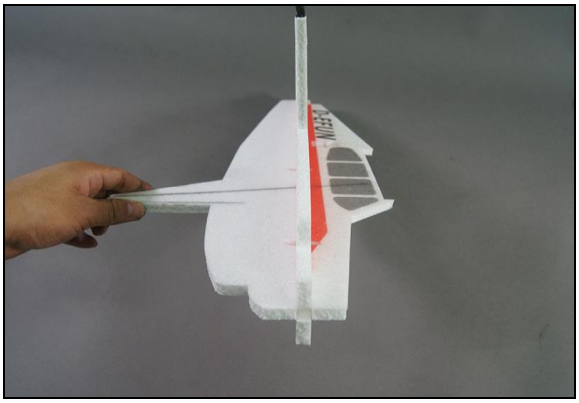
Step9. Glue the upper fuselage onto the other fuselage half. Make sure the upper fuselage is vertical and straight.



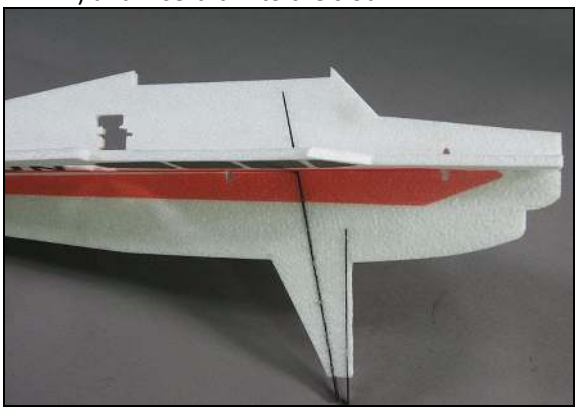


Step10. Glue the lower fuselage onto the other fuselage half. Make sure the lower fuselage is vertical and straight.

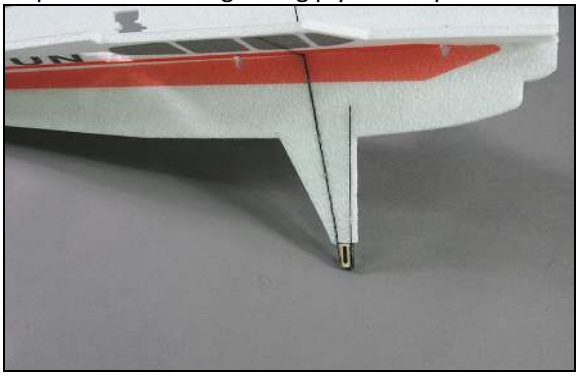




Step11. Apply the foam glue to the CF strip (240 x 8 x 1mm) and insert it in to the slot.



Step12. Glue in the gear leg plywood tips.



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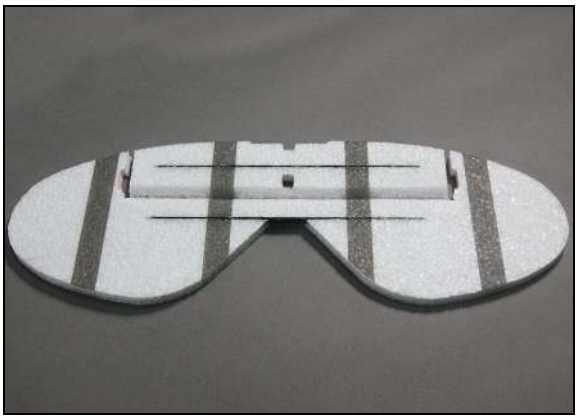
Step13. Locate the white triangle foam block.



Step14. Glue this foam block onto the tail of fuselage.



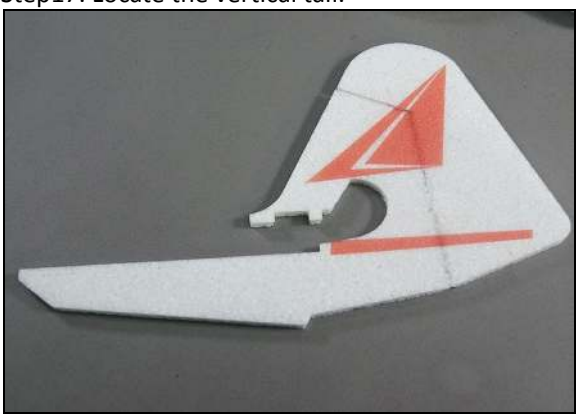
Step15. Glue two CF strips (185 x 8 x 1mm) into the horizontal tail.



Step16. Glue the horizontal tail onto the fuselage. Make sure the tab slot on the tail is aligned with the centerline of the fuselage, and the tail is parallel with the work surface.

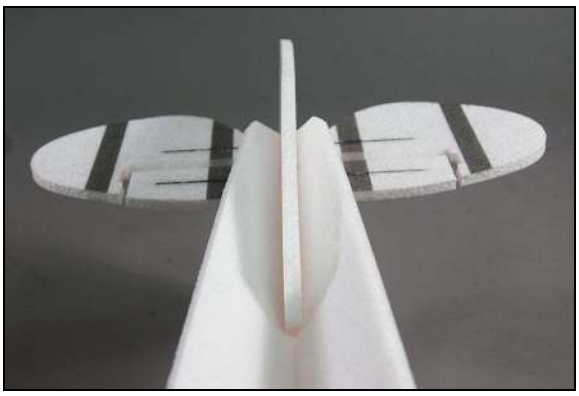


Step17. Locate the vertical tail.



Step18. Glue the vertical tail on to the fuselage. Make the tail is straight and vertical.

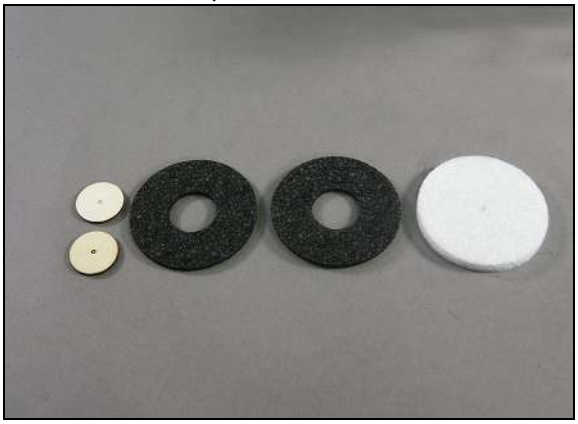




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Section2 Wheels Installation

Step1. Locate the foam parts and wood hubs for the wheel assembly.

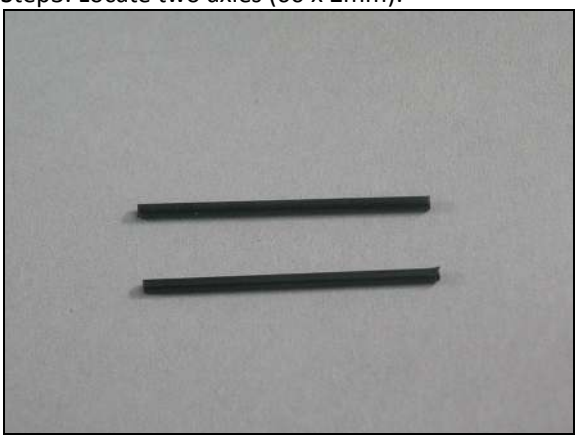


Step2. Glue them together as shown.
Make sure the holes on the wood hubs and solid EPP foam are aligned with each other.

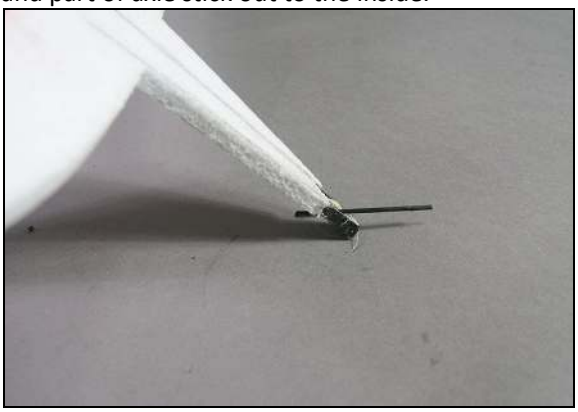




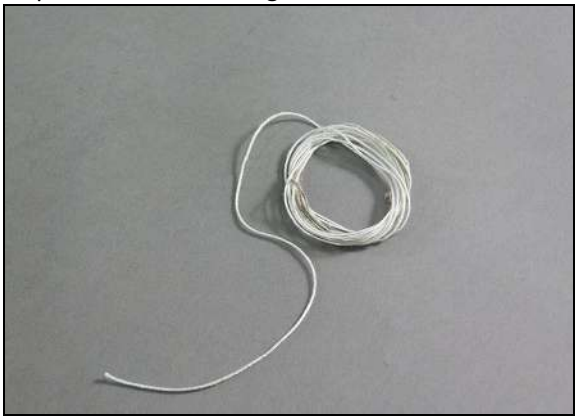
Step3. Locate two axles (60 x 2mm).



Step4. Use hot glue to install the axle to the plywood gear leg tip.
Make sure the axle is parallel with the work surface and part of axle stick out to the inside.

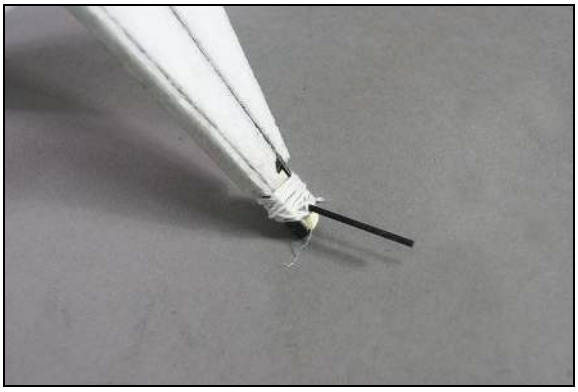


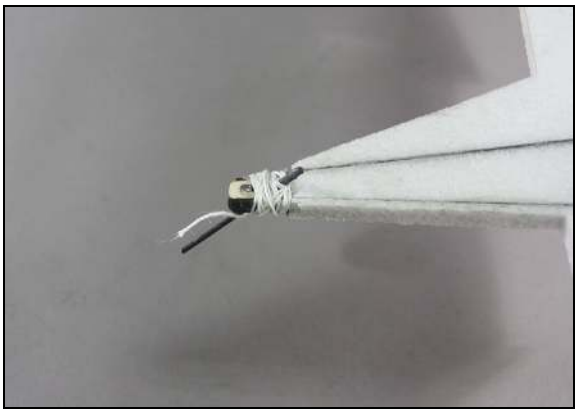
Step5. Locate the sewing thread as shown.



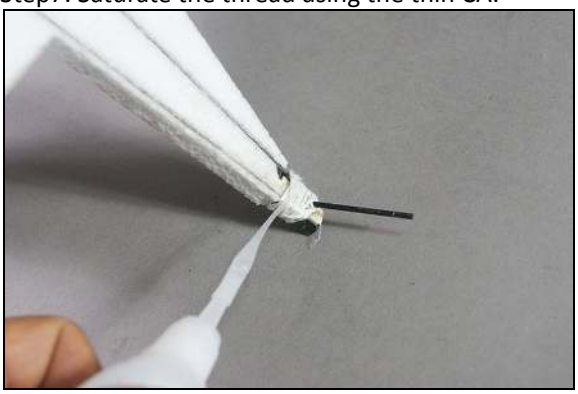
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Step6. Wrap the axle area with the thread as shown.



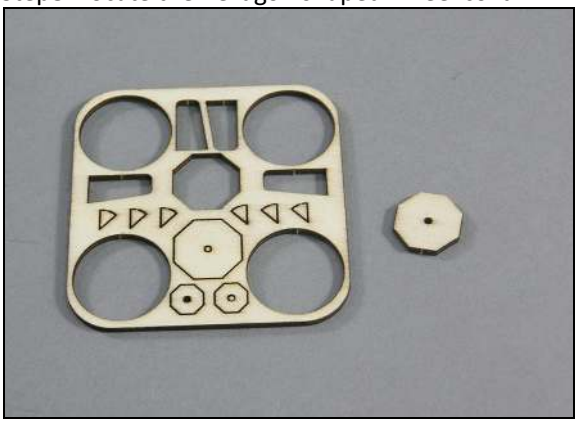


Step7. Saturate the thread using the thin CA.

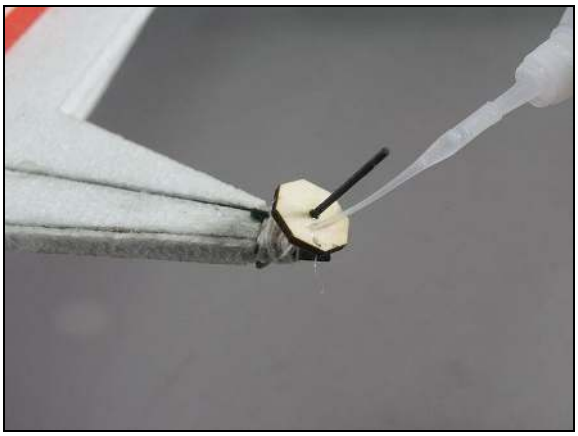




Step8. Locate the hexagon shaped wheel collar.



Step9. Use thin CA to glue the hexagon shaped wheel collar to the axle.



Step10. Slide the wheel onto the axle.

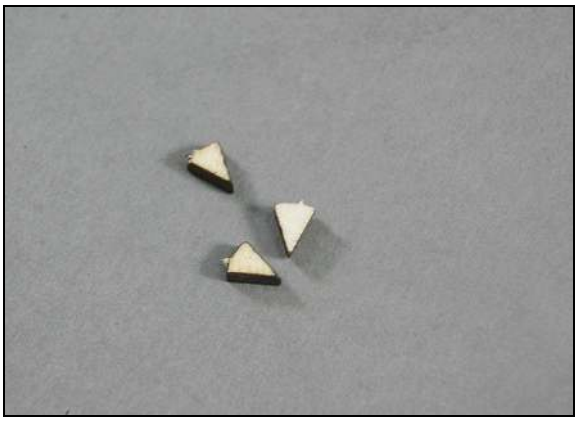


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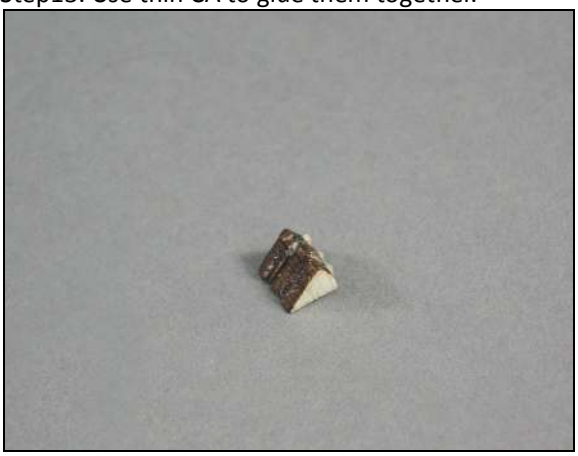
Step11. Install the smaller hexagon shaped plywood wheel collar and use the low temperature hot glue to hold it in place.
(Make sure the wheel can move freely.)



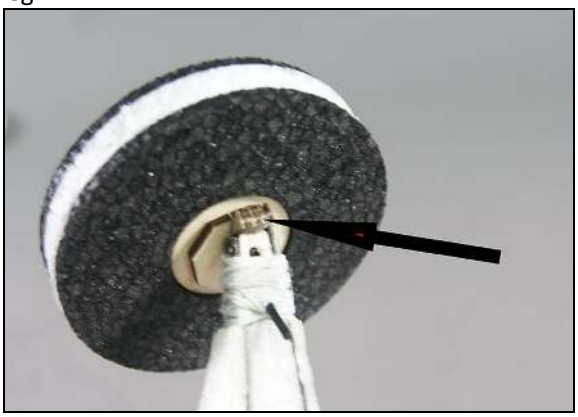
Step12. Locate three pieces of triangle plywood as shown.



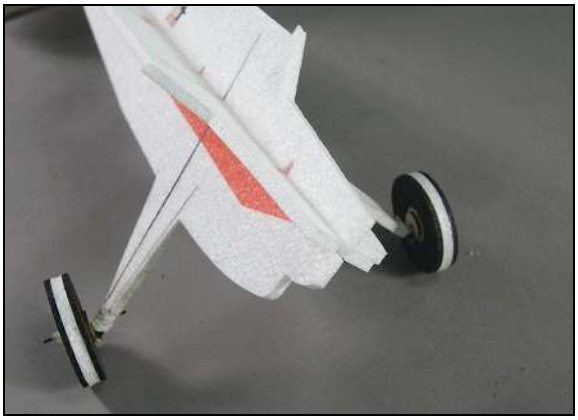
Step13. Use thin CA to glue them together.



Step14. Use foam glue to install the triangle plywood block between the wheel collar and gear leg.



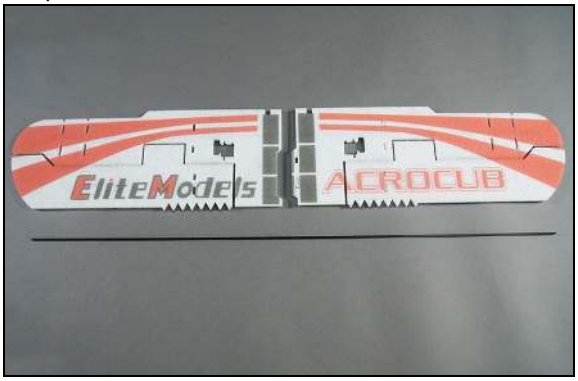
Step15. Repeat previous steps to install the other wheel.



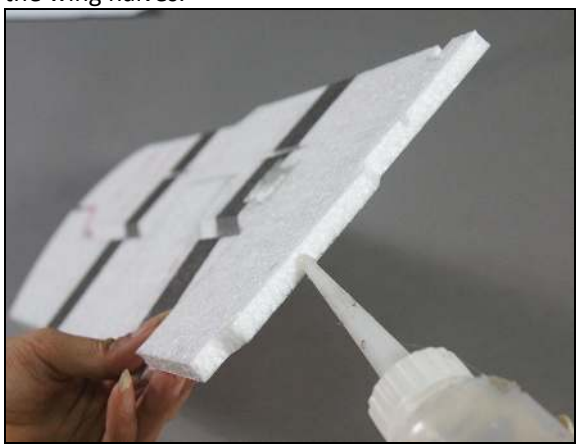
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Section 3 Wing and Servos Installation

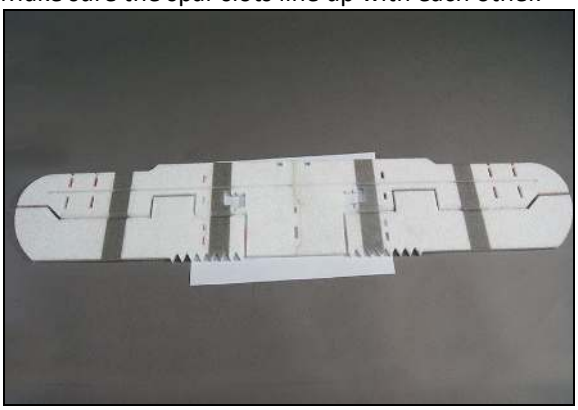
Step1. Locate the two wing halves and the square CF spars.



Step2. Apply foam glue evenly onto one edge of the wing halves.



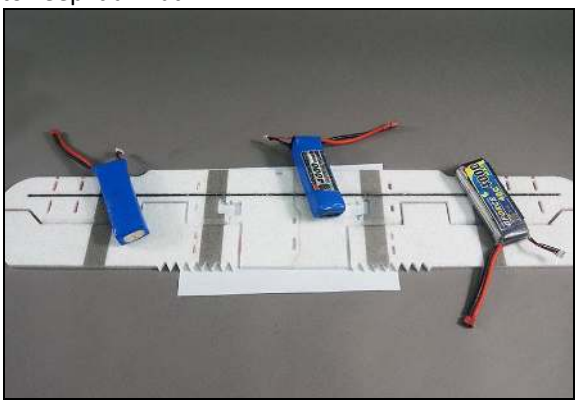
Step3. Attach two pieces of wing halves together. Make sure the spar slots line up with each other.



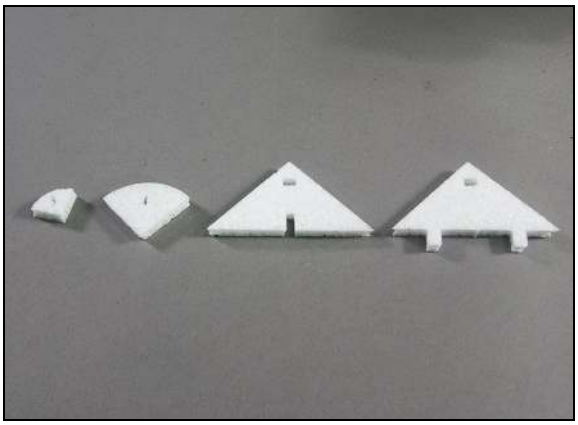
Step4. Apply some foam glue into the slot.



Step5. Push the square CF spar into the slot and wipe off any glue that squeezes out, weight it down to keep it all flat.

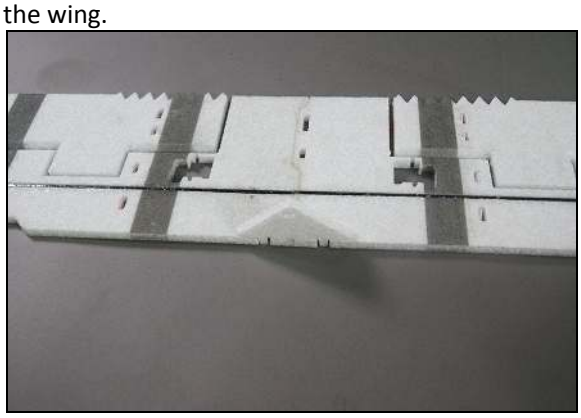


Step6. Locate the white EPP foam parts shown below.



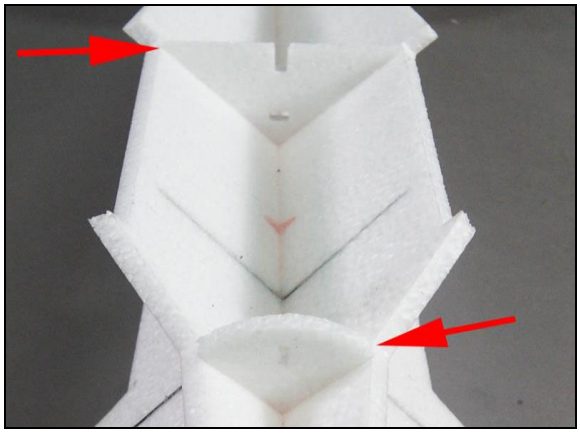
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Step7. Glue the foam part with two little tabs to the wing.

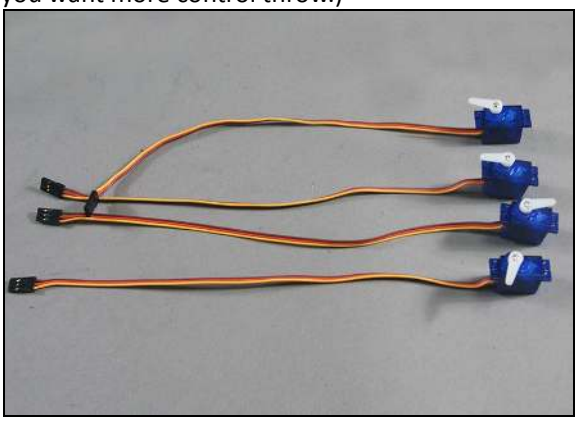


Step8. Glue the remaining three foam parts to the fuselage.

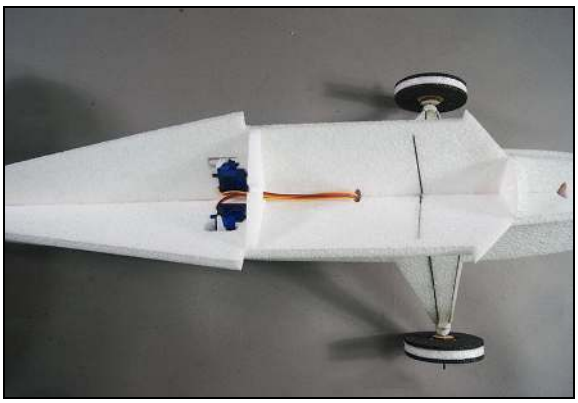




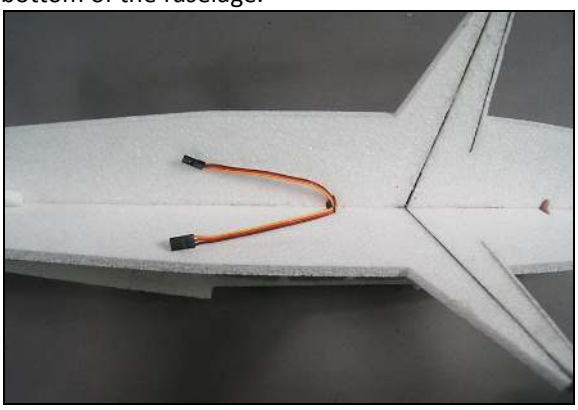
Step9. Prepare four 9g servos with servo arms installed.
(Fiberglass servo arm extensions are provided if you want more control throw.)



Step10 Use low temp hot glue to glue the rudder servo and elevator servo to the fuselage.
(Servo arms should be toward the inside of the fuselage.)

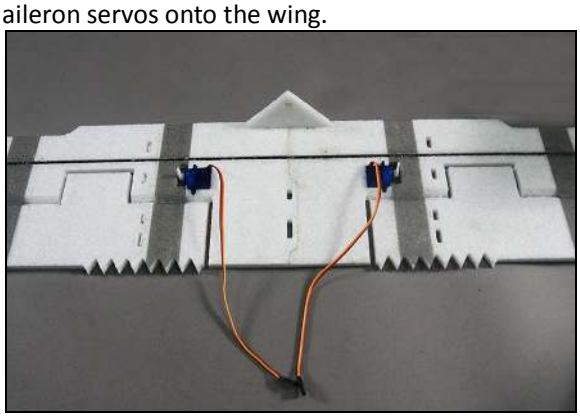


Step11. Thread servo lead through the hole into bottom of the fuselage.

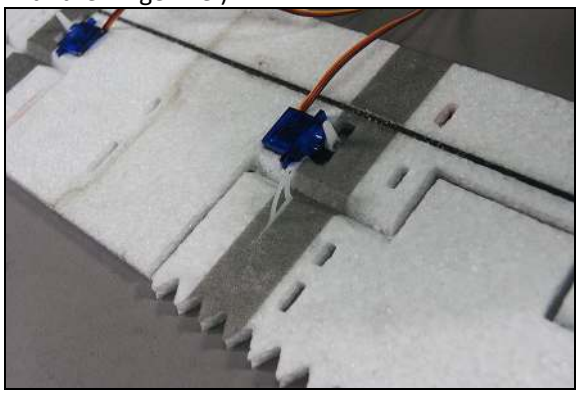


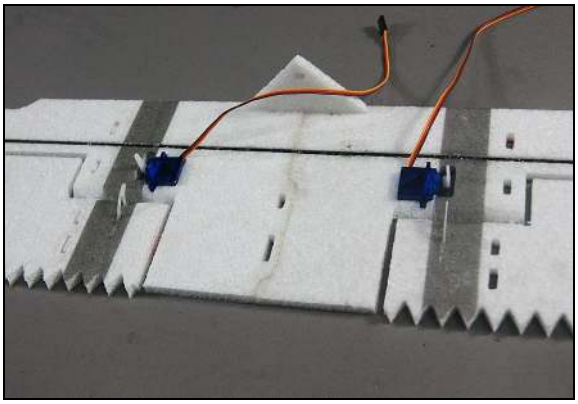
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Step12. Use low temperature hot glue to glue two aileron servos onto the wing.

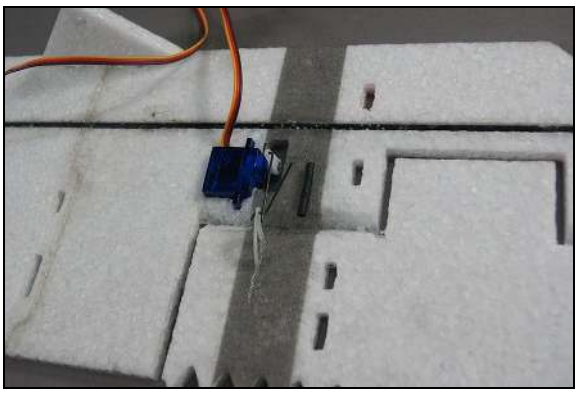


Step13. Use the servo arm as a guide to cut a slot for control horn. Apply some foam glue into the slot and insert in the control horn.
(Make sure the hole on the control horn is aligned with the hinge line.)

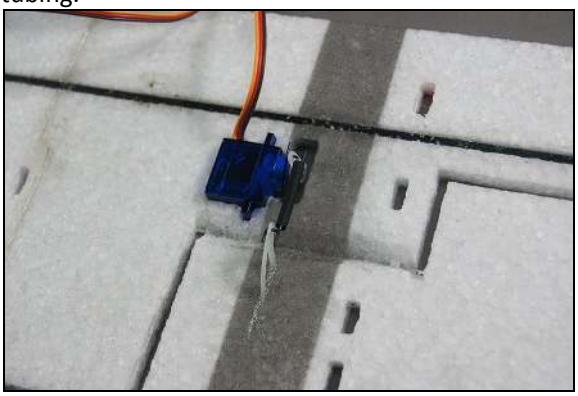




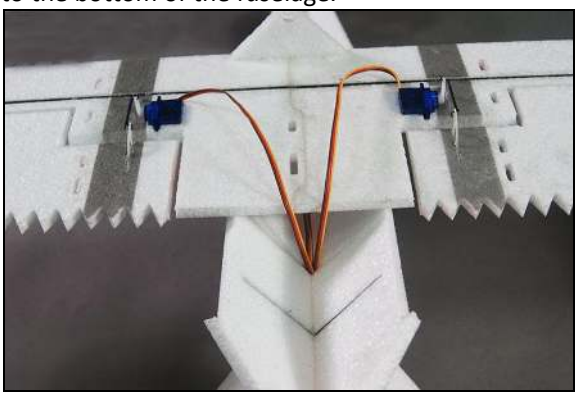
Step14. Attach the Z bend wire (23 x 1mm) to the servo arm and control horn.



Step15. Connect two pushrods together using the heat shrink tubing, then use the lighter to shrink the tubing, at last drop some think CA inside the tubing.

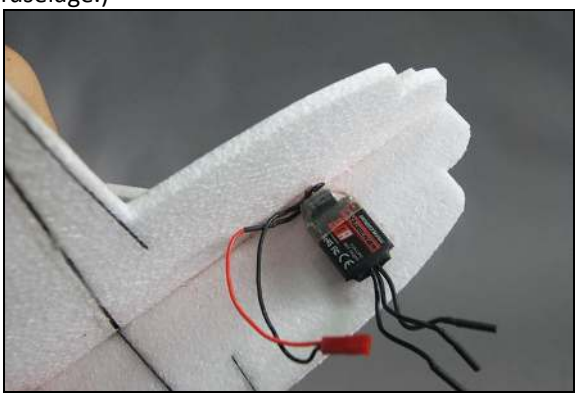


Step16. Thread two servo leads through the holes to the bottom of the fuselage.

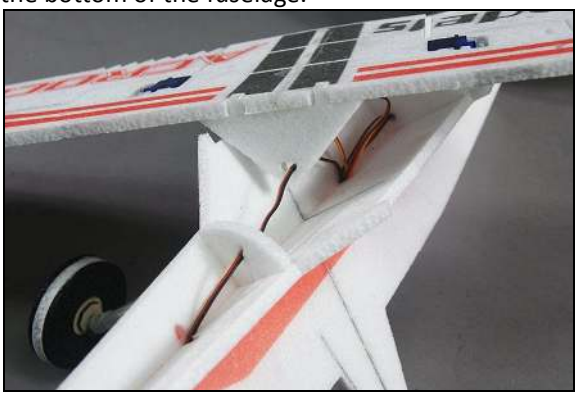


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Step17. Use hook and loop strap to stick the esc to the bottom fuselage.
(You also can put the esc onto the top of the fuselage.)



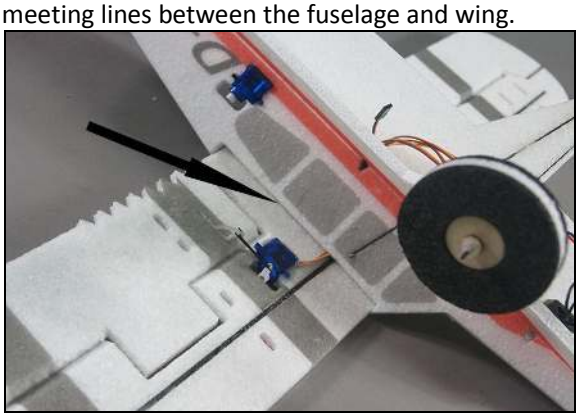
Step18. Thread the ESC lead through the holes to the bottom of the fuselage.

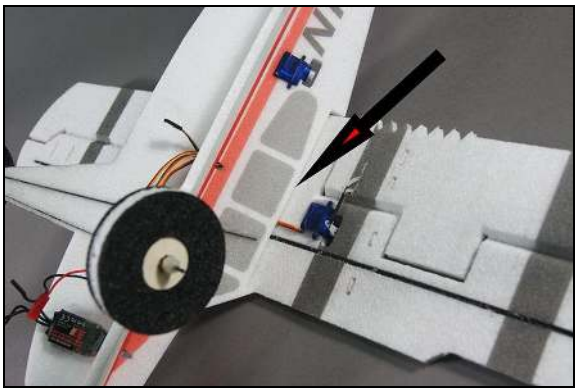


Step19. Glue the wing onto the saddle area of the fuselage.

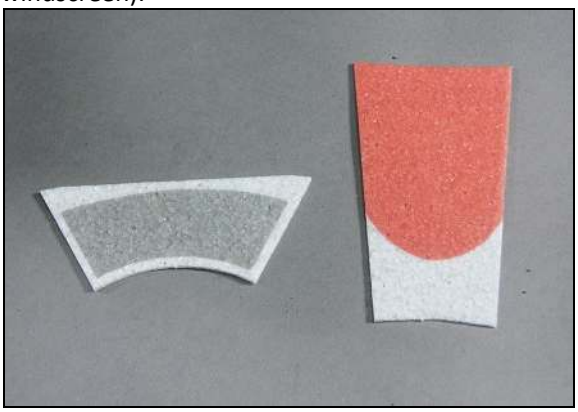


Step20. Apply the low temp hot glue to the meeting lines between the fuselage and wing.

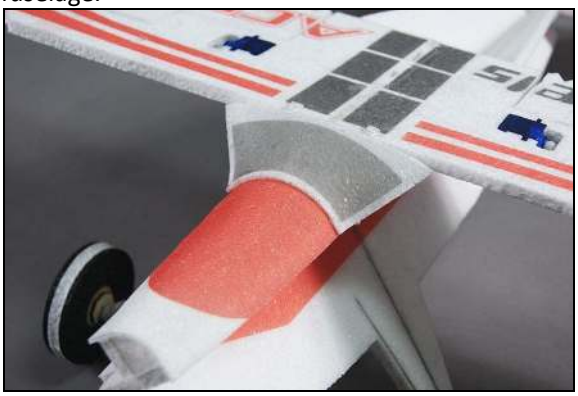




Step21. Locate two foam parts (cowling and windscreen).



Step22. Use foam glue to glue them to the fuselage.



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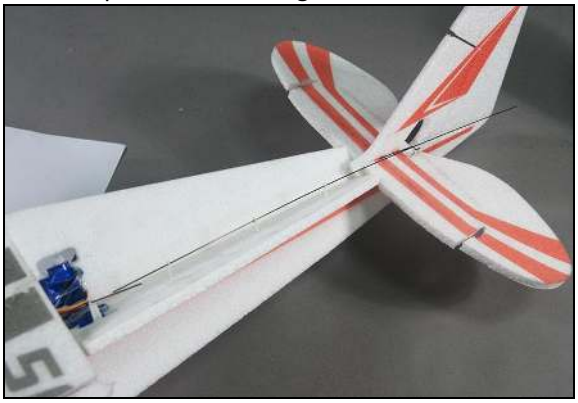
Step23. Start to install elevator servo linkage.
Install the elevator control horn.



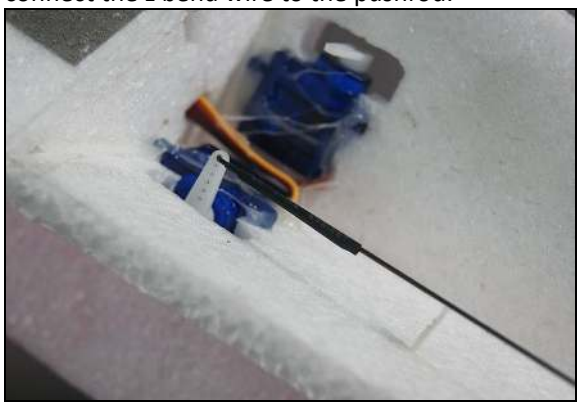
Step24. Attach the pushrods to the control horn and elevator servo arm.



Step25. Insert 4-5 guides into the fuselage for elevator pushrod (370 x 1mm).
Slide the pushrod into the guides.



Step26. Use a lighter to shrink the tubing to connect the z bend wire to the pushrod.



Step27. With the elevator centered, cut off the excessive pushrod and use a lighter to shrink the tubing to connect the z bend wire to the pushrod.



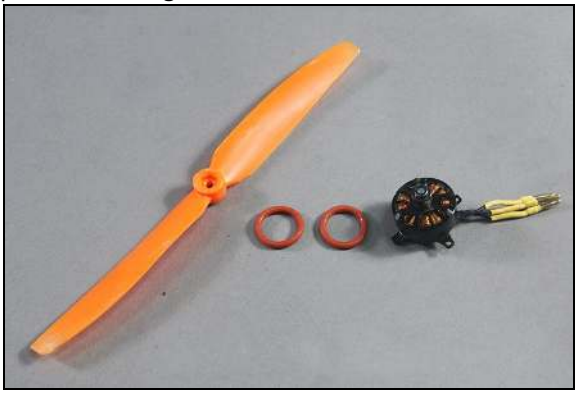
Step28 Repeat the previous steps to finish the rudder servo link installation.



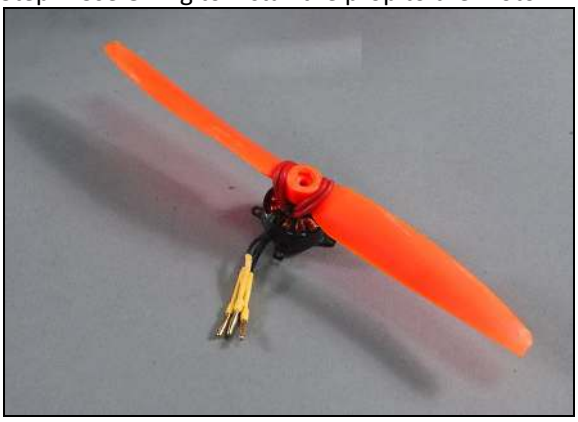
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Section4 Motor Installation

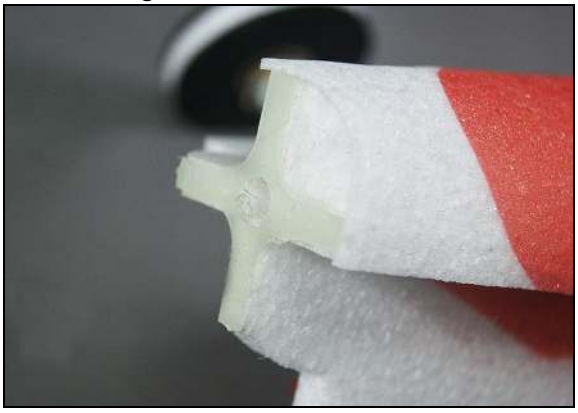
Step1. Prepare a 2206 motor, 8 x 4 prop and two pieces of O-ring.



Step2. Use O ring to install the prop to the motor.



Step3. Use hot glue gun to glue the motor mount to the fuselage.



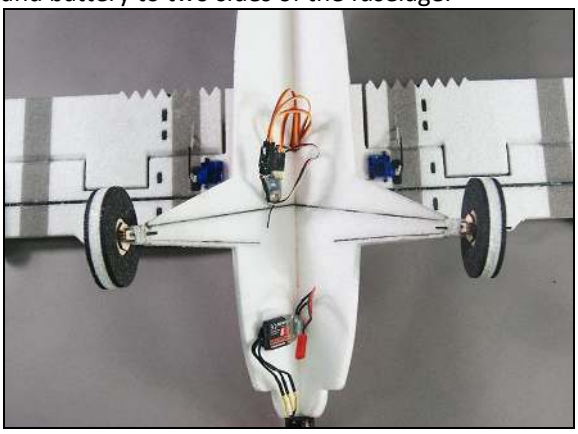
Step4. Install the motor to the motor mount using the screws provided with the motor.



Step5. Install the wing's and tail's side force generator.



Step6. Use hook and loop strap to stick the receiver and battery to two sides of the fuselage.



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Section5 Recommended CG and Control Throw

Center of Gravity

The recommended CG is 42mm (1.65in) from the leading edge of the wing.



Control throws

Extreme & 3D

Ailerons: approx. +/-40 degree
Rudder: approx. +/- 40 degree
Elevator: approx. +/-40 degree

Beginner & Sport

Aileron: approx. +/- 20 degree
Rudder: approx. +/- 20 degree
Elevator: approx. +/- 20degree

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