EliteModels

48in EPP MXS

Almost-Ready-to-Fly

INSTRUCITION MANUAL



Specifications

Wingspan: 48 in (1230mm)
Length: 46in (1170mm)
Wing Area: 471sq in (30.4sq dm)
Flying Weight: 1.8-2.0lb (800-900g)

Dear Customer,

Congratulations on your purchase of 48in EPP MXS 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's 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.

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

CA Glue – Thin and Thick
Epoxy glue
Hobby Knife
Small Phillips Screwdriver
Set Metric Allen Wrenches
Scissors
Small Pliers
Wire Cutters
Masking tape

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.

RECOMMENDED RADIO EQUIPMENT

	Product	SKU	Quantity
Radio	Flysky I6 6CH transmitter and receiver set	FLY-RC-4572	1
Servo	Towerpro MG90s metal gear micro servo	TWP-SV-0358	4
Servo Extension	Universal (Futaba/JR) Servo Extension 26AWG 12in	AMS-AC-0560	2
Y-Harness	Universal (Futaba/JR) Servo Y-Harness 26AWG 6in	AMS-AC-2397	1

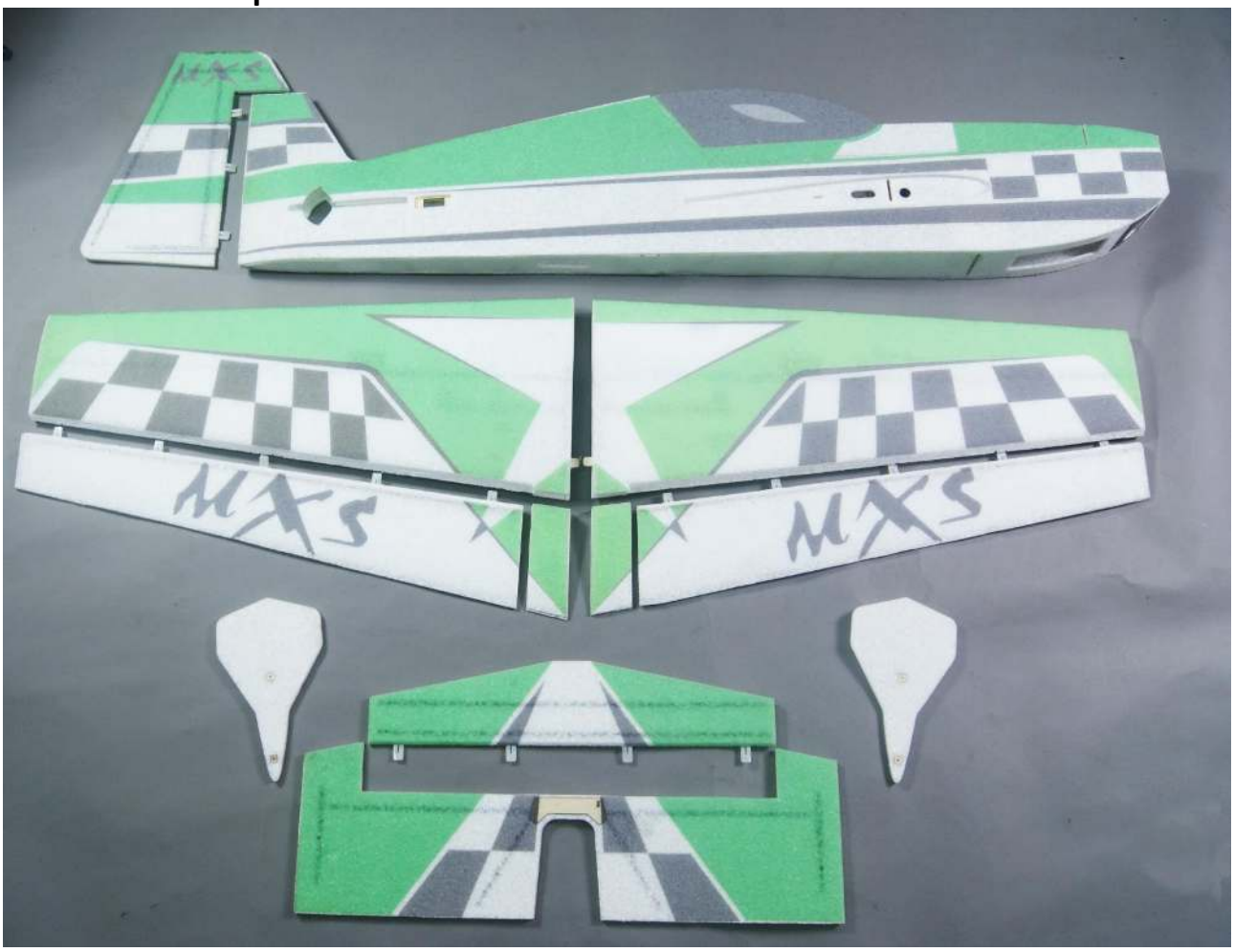
RECOMMENDED POWER SETUP

	Product	SKU
Motor	GForce G15 3542-1100KV brushless motor	LEO-MT-3463
ESC	Hobbywing SkyWalker-50A ESC w/ 3A BEC	HWG-SC-3537
Battery	GForce Elite Series 30C 2200mAh 3S 11.1V LiPO	FLM-LP-1874
Prop	12 x 6 E prop	VHB-MP-3757

OPTIONAL ACCESSORIES:

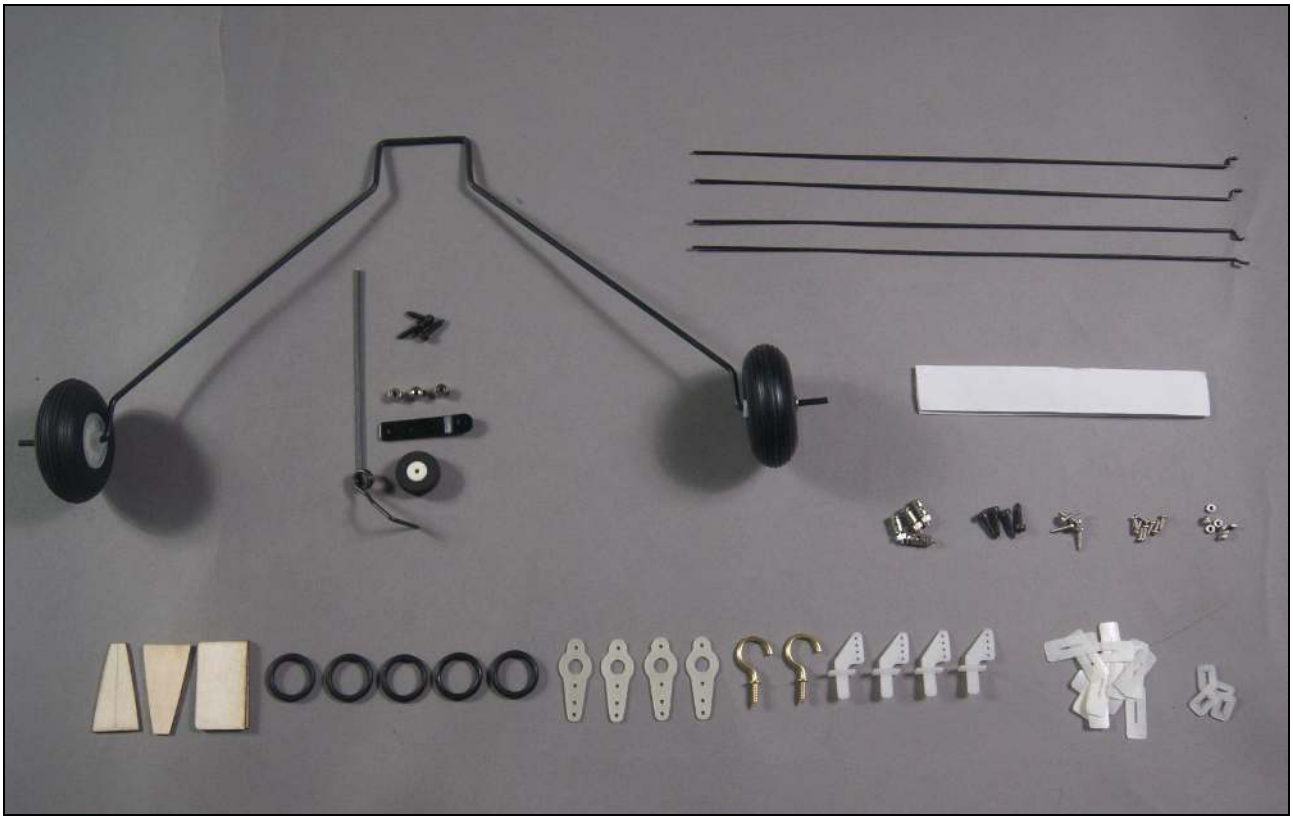
	Product	SKU
Charger	GT Power C6 6S LiPO Charger	GTP-CH-1427
Thin CA Glue	Quickie Thin CA	VHB-AC-2097
Foam Glue	Thin Safe Foam Glue	VHB-AC-2511
Watt Meter	130A Watt Meter and Power Analyzer	GTP-AC-0591
Connector	T Connector Female	AMS-AC-1914
	T Connector Male	AMS-AC-1913
LiPO Bag	LiPO Charging Bag	RFI-AC-2725

Main Parts of Airplane



Fuselage x 1
Wing panel x 2
Aileron x 2
Horizontal Stabilizer x 1
Vertical Stabilizer x 1
Elevator x 1
Rudder x 1
SFG x 2

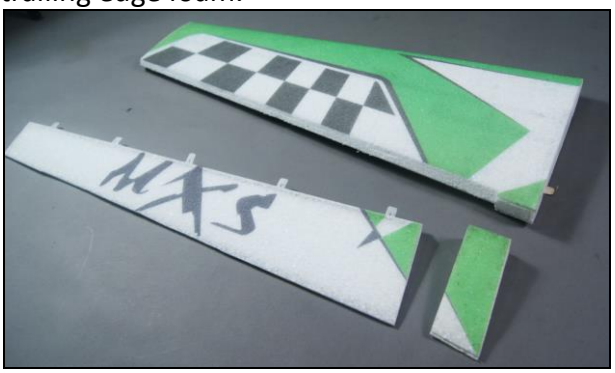
Small Parts and Accessories:



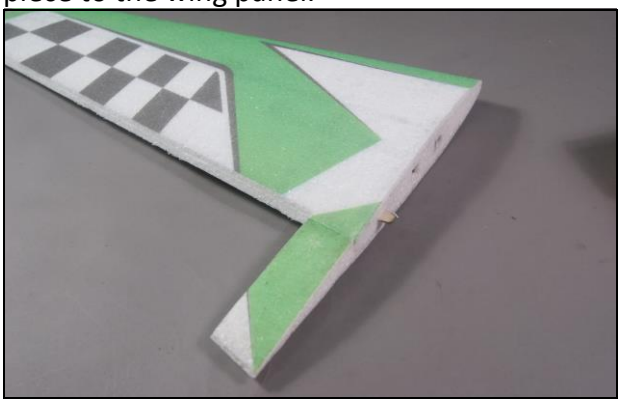
Main landing gear x 1
Plywood inserts x 1
Wheel tail assembly x 1
Plywood bracket x 1
450mm Wing tube x 1
Wing retainer hook x 2
Rubber band x 4
Long servo arm x 4
Control horn x 4
1.8 x 150mm pushrod x 4
M2 x 6mm screws for servo arm x 8
M2 nut x 8
2.1mm pushrod connector x 4
Hook&loop strap x 1
Hinge x 1 bag
M3 x 12mm self-tapping socket screws for mounting motor x 4
M2.6 x 12mm screws for SFGs x 4

Section1. Aileron and Aileron Servo installation

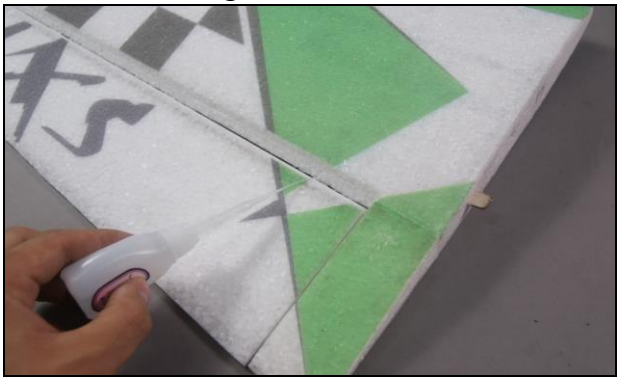
Step1. Locate the wing panel, aileron and small trailing edge foam.



Step2. Use the foam glue to glue the foam piece to the wing panel.



Step3. Attach the aileron to the wing, and drip the CA to the hinges.

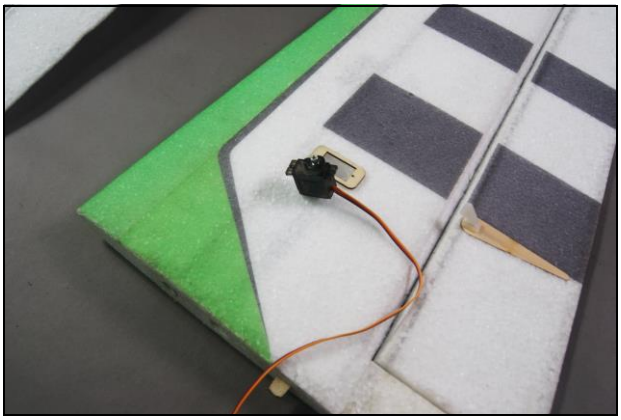


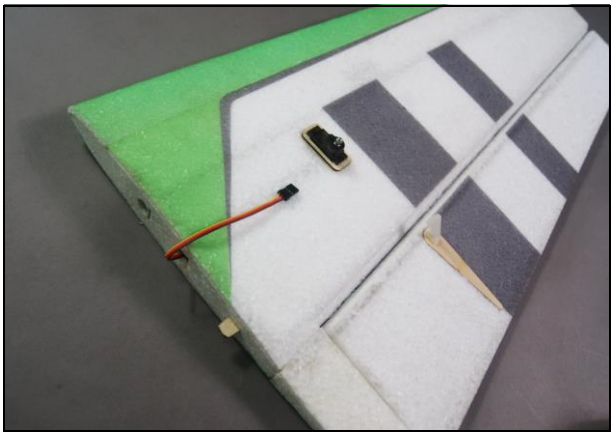


Step4. Apply the epoxy to the control horn, and insert it to the plywood stiffener.



Step5. Thread the servo wire through the wing and install the servo to the servo mount.

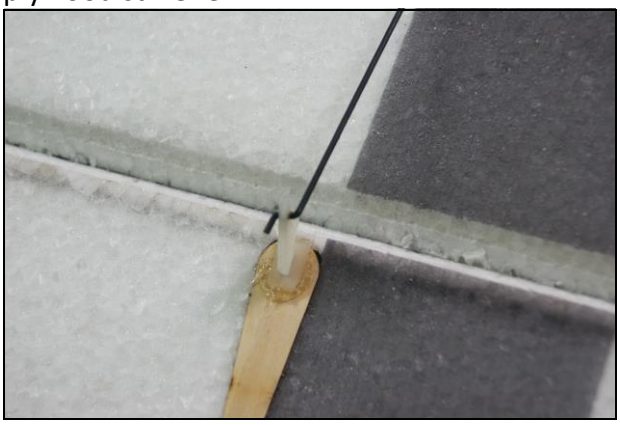




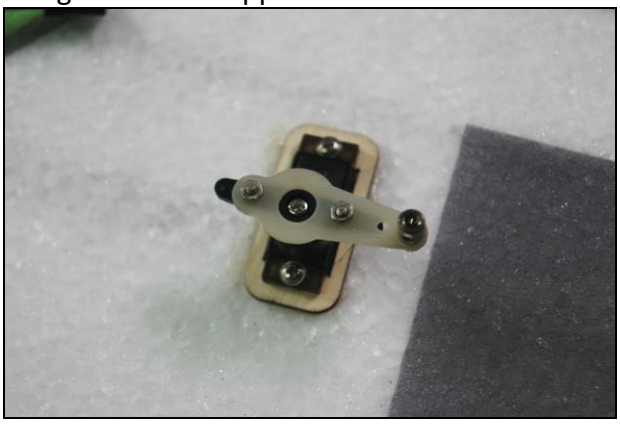
Step6. Use two M2*6mm screws and two nuts to install the long servo arm to the stock servo arm.
Install the pushrod connector to the long servo arm.



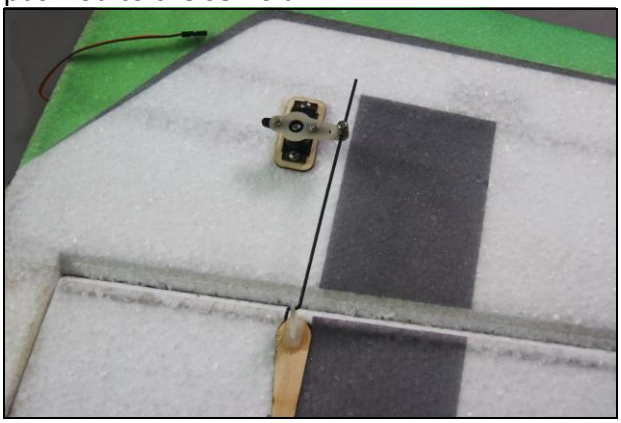
Step7. Attach the pushrod to the control horn, and use glue to install the control horn into the plywood stiffener.



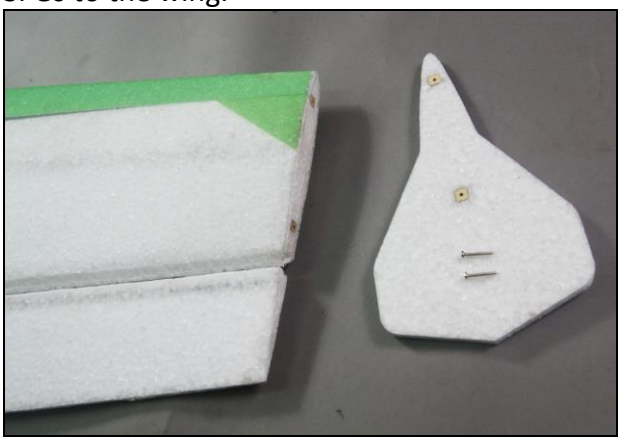
Step8. Install the servo to the servo mount using the screw supplied with the servo.



Step9. With aileron centered, connect the pushrod to the servo arm.



Step10. Use two M2.6x12 screws to install the SFGs to the wing.



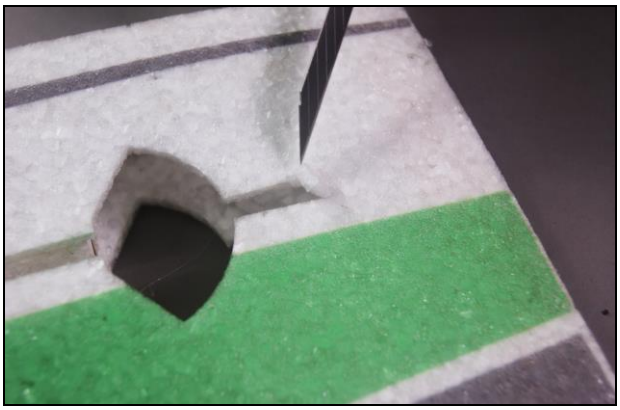


Step11. Repeat the step1 to step10 for the right wing panel.

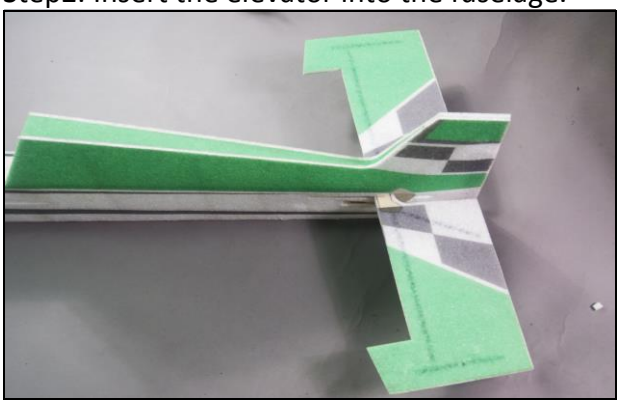
Section2. Horizontal stabilizer and vertical stabilizer installation

Step1. Cut 10mm length foam piece from the rudder post

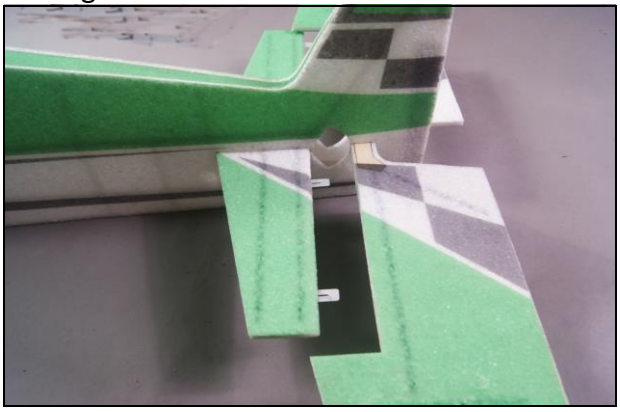




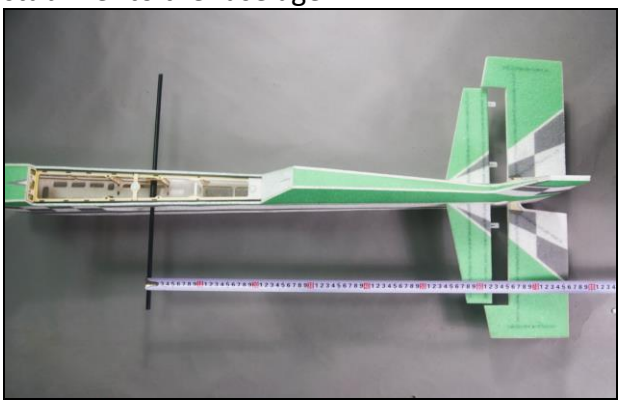
Step2. Insert the elevator into the fuselage.



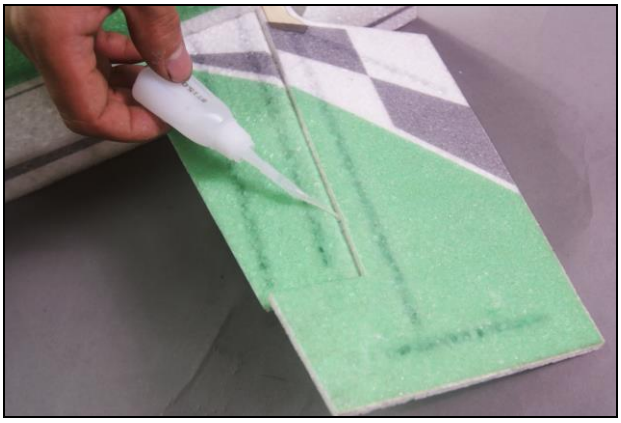
Step3. Insert the horizontal stabilizer to the fuselage.

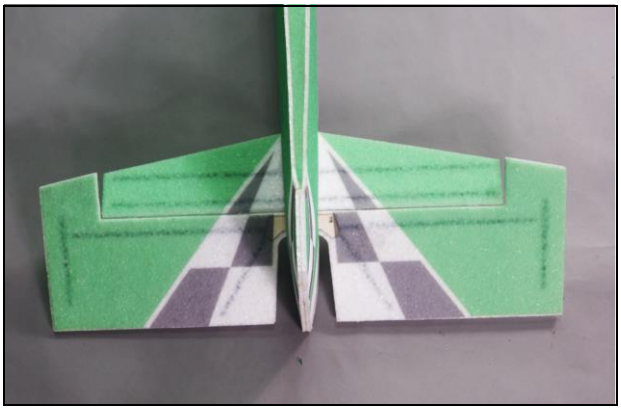


Step4. Insert the wing tube into the fuselage and make it centered.
Slide the stabilizer in the place and measure to make sure the distance from the tube to the stabilizer is the same on the both side, and make sure the stabilizer is centered.
Once satisfied, use foam glue to glue the stabilizer to the fuselage



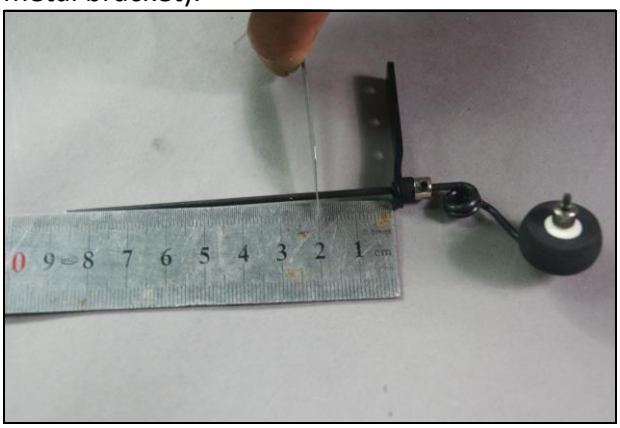
Step5. Use the thin CA to attach the elevator to the stabilizer.





Section3. Tail Wheel and Rudder Installation

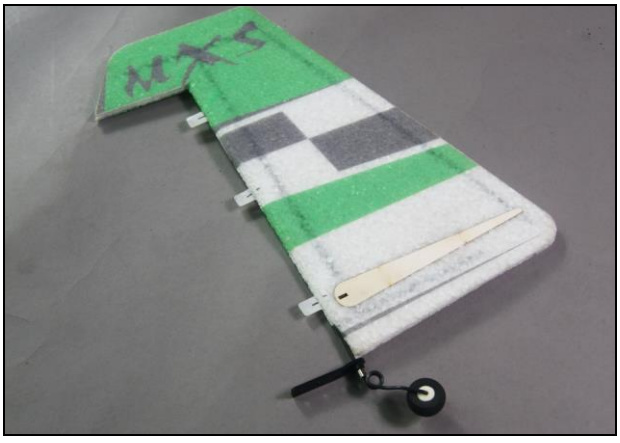
Step1. Assemble the tail wheel as shown and make a mark on the wire (20mm from the metal bracket).



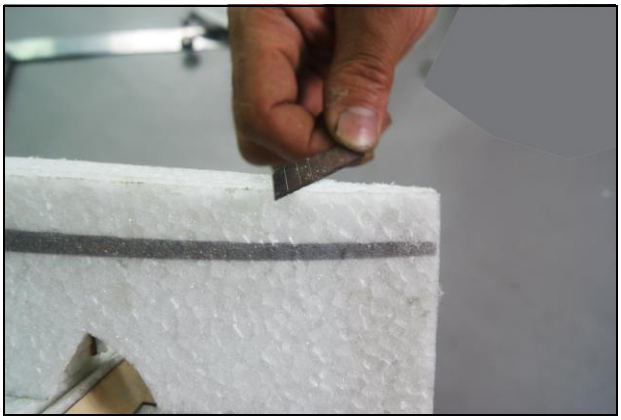
Step2. Bend the wire 90 degree as shown.



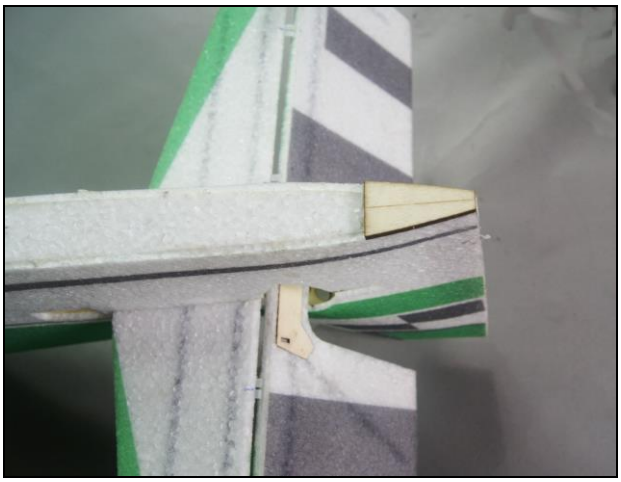
Step3. Glue the tail wheel wire into the reinforcement tube in the rudder.



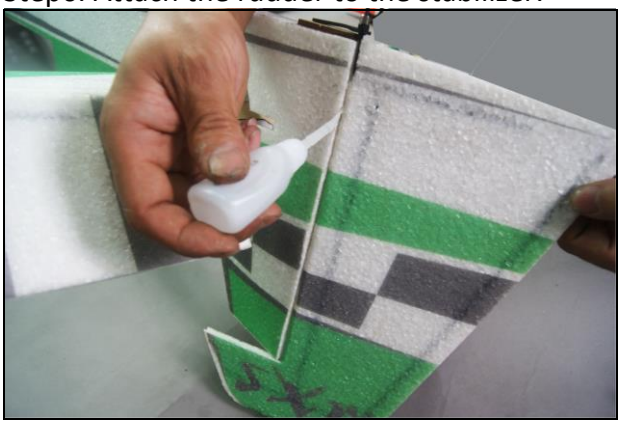
Step4. Use a hobby knife to trim the bottom of the vertical stabilizer to make sure it is flat.



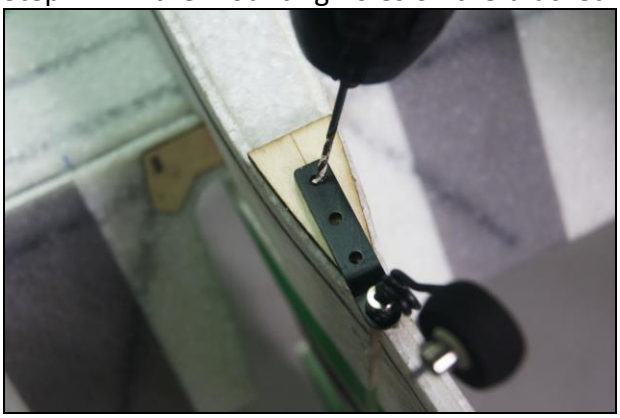
Step5. Glue a plywood bracket onto the vertical stabilizer.



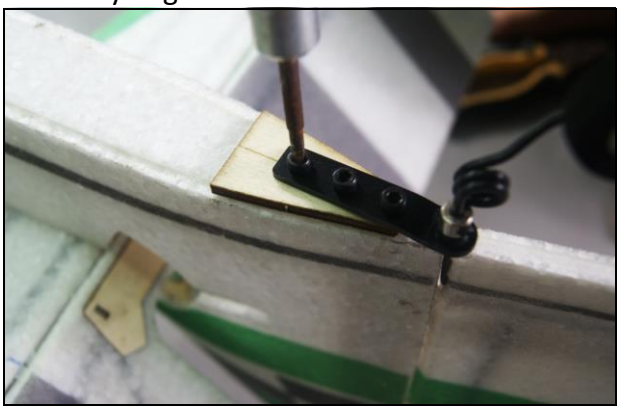
Step6. Attach the rudder to the stabilizer.



Step7. Drill the mounting holes on the bracket.



Step8. Secure the tail wheel to the bracket using the screws supplied in the tail wheel assembly bag.

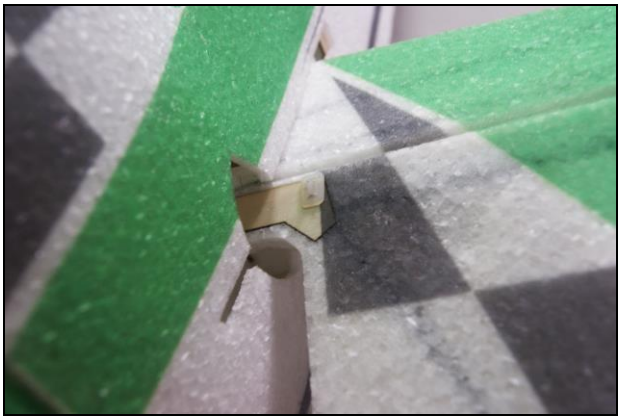


Section4. Elevator Rudder Installation

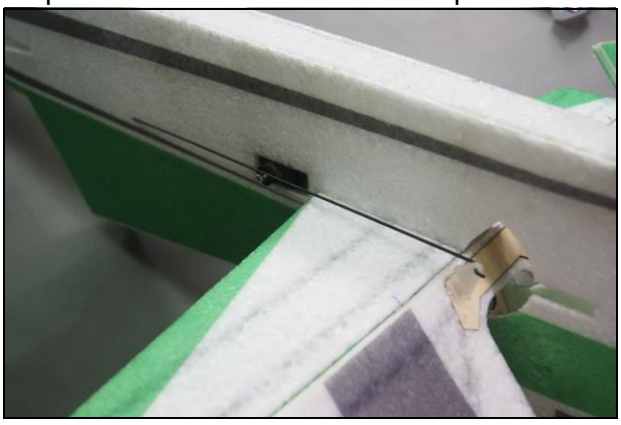
Step1. Attach the pushrod to the control horn, and use glue to install the control horn into the plywood stiffener.



Step2. Snap the backplate onto the control horn.



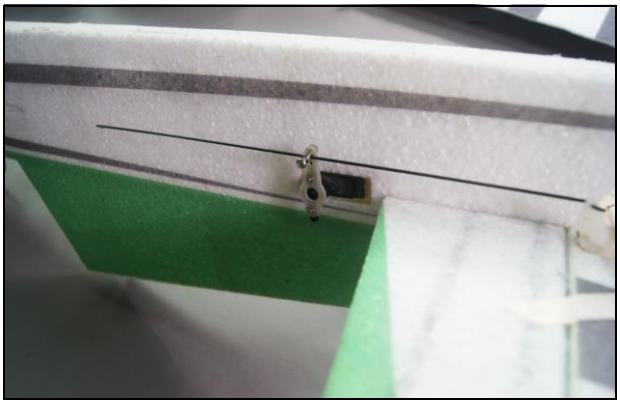
Step3. Install the elevator servo in place.



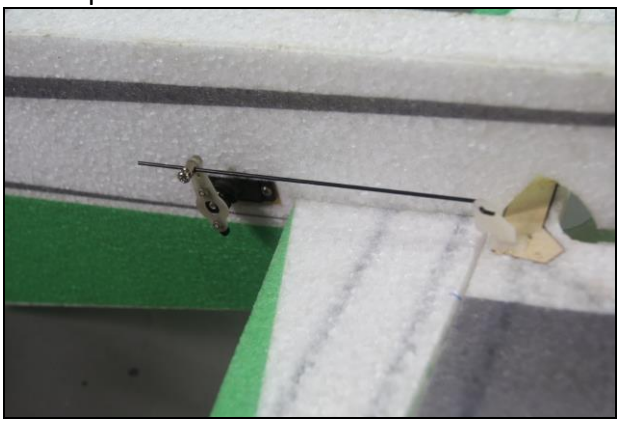
Step4. Use two M2*6mm screws and two nuts to install the long servo arm to the stock servo arm.
Install the pushrod connector to the long servo arm.



Step5. Install the servo arm to the servo, and slide the pushrod through the pushrod connector.

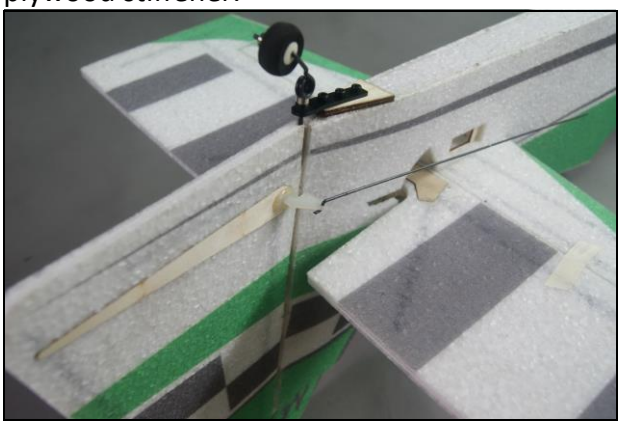


Step6. Cut the excessive the pushrod wire.
With the elevator centered, tighten the screw of the pushrod connector.

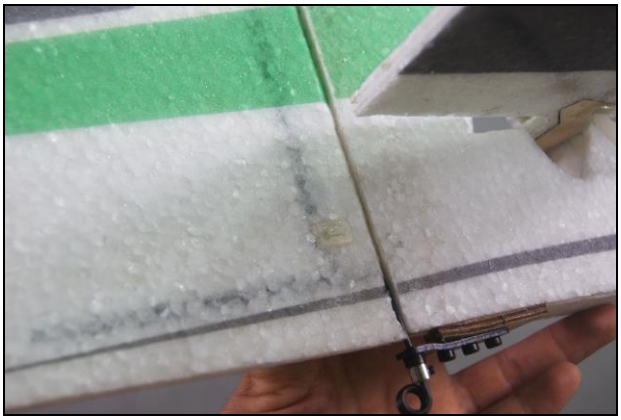


Section5. Rudder Servo Installation

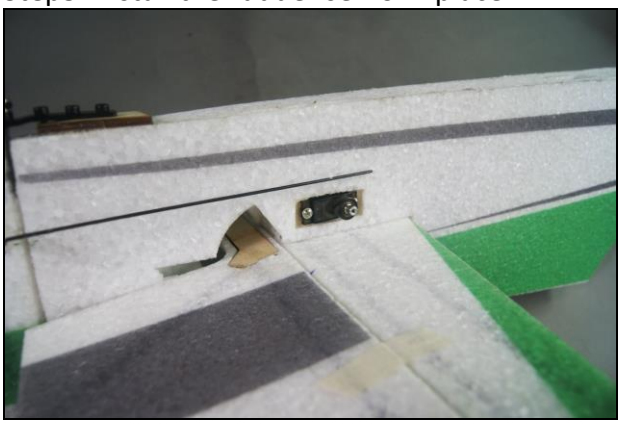
Step1. Attach the pushrod to the control horn, and use glue to install the control horn into the plywood stiffener.



Step2. Snap the backplate onto the control horn.



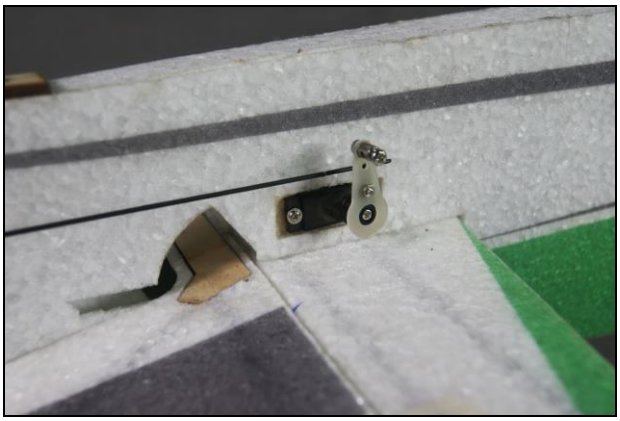
Step3. Install the rudder servo in place.



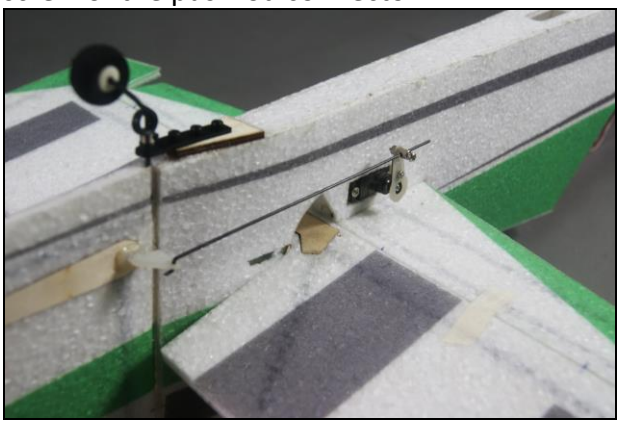
Step4. Use one M2*6mm screws and one to install the long servo arm to the stock servo arm.
Install the pushrod connector to the long servo arm.
Cut off the servo arm on the opposite side.



Step5. Install the servo arm to the servo, and slide the pushrod through the pushrod connector.

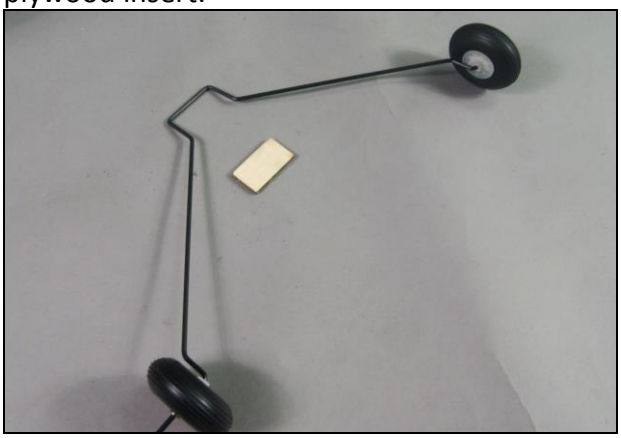


Step6. With the rudder centered, tighten the screw of the pushrod connector.

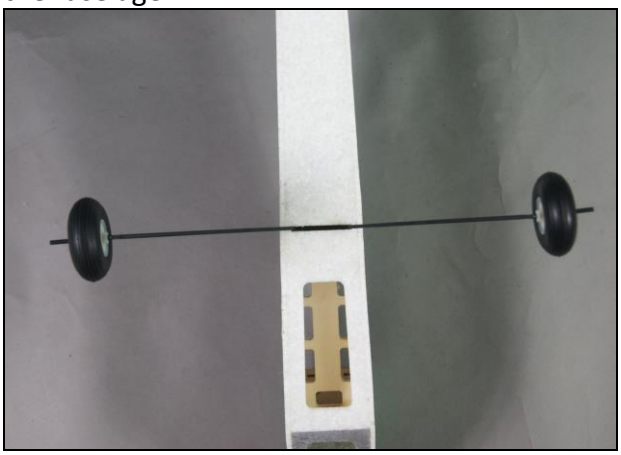


Section6. Landing Gear Installation

Step1. Locate the assembled landing gear and plywood insert.



Step2. Insert the landing gear into the slot in the fuselage.

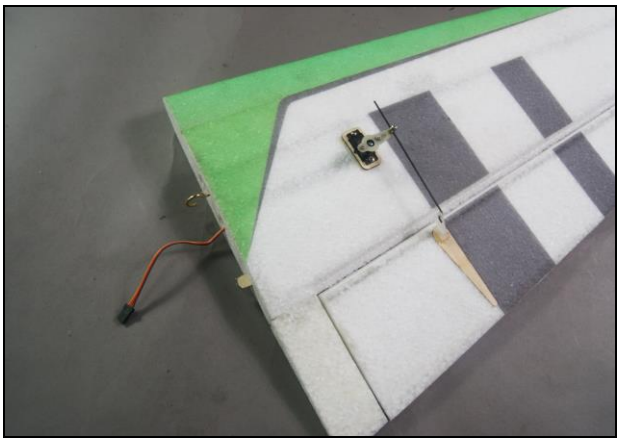


Step3. Apply epoxy to the plywood insert and insert it to the fuselage.

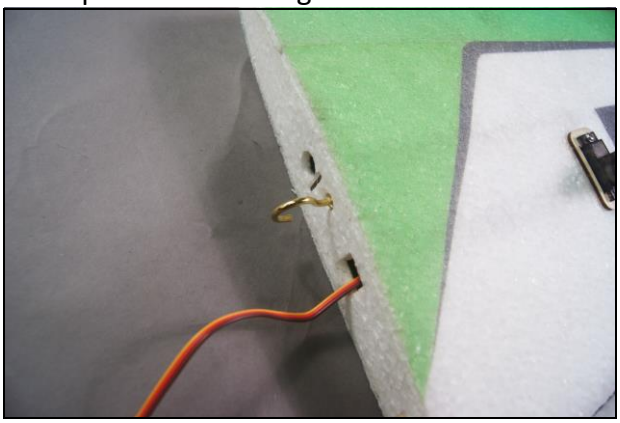


Section7. Wing Installation

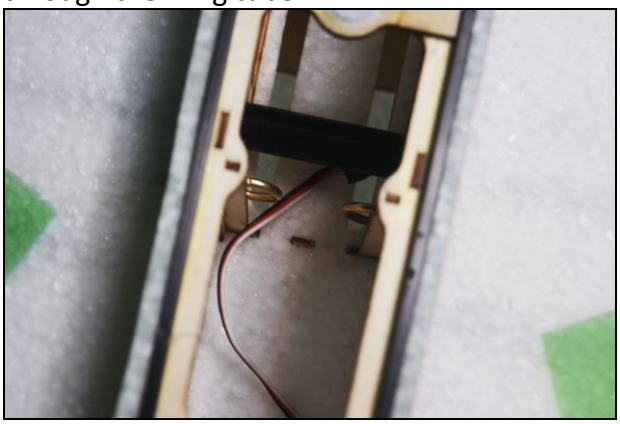
Step1. Glue the wing retainer hook to the wing root.



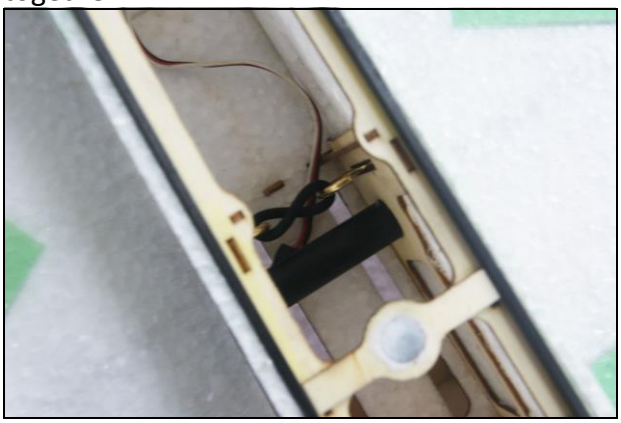
Step2. Be sure the open end of the hook points the top side of the wing.



Step3. Attach two wing panels to the fuselage through the wing tube.

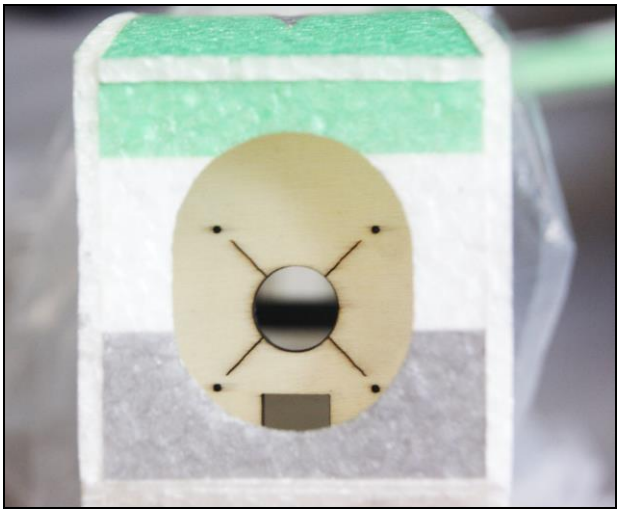


Step4. Use rubber band to connect the hook together.

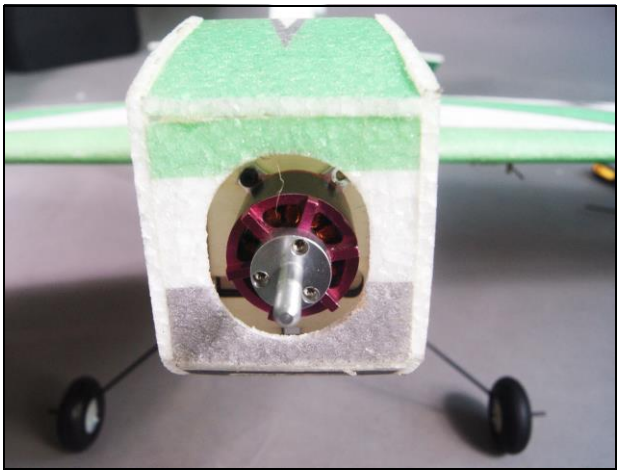


Section8. Motor Installation

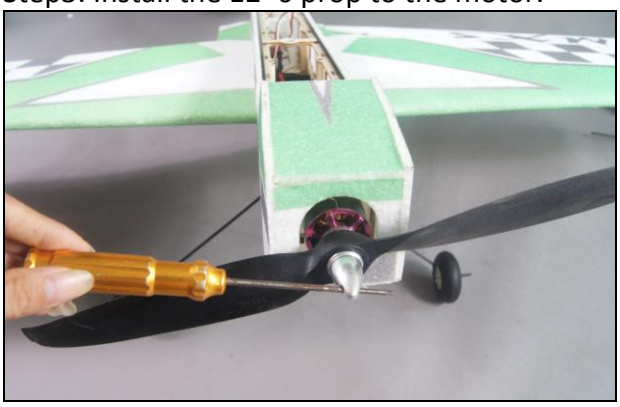
Step1. Put the motor in position on the firewall and use a felt-tipped pen to mark the locations for mounting holes.
Remove the motor and drill four mounting holes on the marked locations.



Step2. Use four M3x12mm self-tapping screws to install the motor to the fire wall.



Step3. Install the 12*6 prop to the motor.



Section9. Control throws and Exponential

1. Low/Precision Rates (in degrees and inches) and Corresponding Exponential

Aileron: 15 degrees (0.75in) 30% Expo
Elevator: 13 degrees (1.25in) 30% Expo
Rudder: 45 degrees (3.5in) 75% Expo

2. High/3D Rates (in degrees and inches) and Corresponding Exponential

Aileron: 35 degrees (2in) 75% Expo
Elevator: 45 degrees (3in) 75% Expo
Rudder: 45 degrees (3.5in) 75% Expo

The above throw measurements were taken at the aft edge of the ailerons and elevator, and from the bottom aft edge of the rudder. Keep in mind that even the low throws mentioned here are relatively aggressive, so be sure to also program the matching exponential listed to help soften the model's feel around center stick.

Section10. Center of Gravity

Balance your Extra at a point 4.5in behind the leading edge of the wing where the wing meets the fuselage.
This is a good starting point. As you become accustom to the aircraft, you can adjust the CG to suit your preference.



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