



Before use, please read the explanations carefully!

TECHone™

Sukhoi EPP

Instruction Manual



Specifications

Fuselage length: 750mm (29.5in)
Wingspan: 800mm (31.5in)
Flying Weight: 230-250g (with battery)

Additional Required Equipment

Motor: C20 Pro or 2205
ESC: 10A
Propeller: 8040/9050 Slow Flyer Prop
Servo: 6G
Radio: 4 / more channel
Receiver: 4 / more channel
Battery charger
Battery: 7.4V 850mAh Li-po

- Laser-cut 5mm genuine EPP parts for optimum strength and Minimum weight .
- Lightweight carbon fiber truss system virtually eliminates flex .
- Ideal for indoor flight and capable of outdoor flight in low winds .
- Minimal assembly required flight ready in as little as 3 hours .
- Vibrant screen printed trim scheme.

Required Tools and Adhesives (not included in the kit)

5 Minute Epoxy
Glue
Aerosol Zip-Kicker
#0 and #1 Phillips Head Screwdrivers
1.5mm Hex Wrench
Adjustable Wrench
Wire Cutters
Z-Bend Pliers
Needle Nose Pliers
Modeling Knife
Scissors
Electric or Hand Drill
Assorted Drill Bits
Straight Edge Ruler
Pencil
T-Pins
Builder's Triangle
220 Grit Sandpaper with Sanding Block
Masking Tape
Paper Towels
Rubbing Alcohol
Epoxy Mixing Sticks
Epoxy Mixing Cups
Soldering Iron

Warning

An R/C aircraft is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, preferably AMA (Academy of Model Aeronautics) approved flying sites, following all instructions included with your radio. Always assume the electric motor can come on at any time so use extreme caution. Before beginning assembly of your Sukhoi EPP, we strongly suggest that you read through this instruction manual so you can become familiar with the parts and the assembly sequence. Assemble the kit according to the sequence provided in the instruction manual. Do not attempt to modify or change the kit design as doing so could adversely change the models flying characteristics.

SPECIFICATIONS

Sukhoi is a great choice for the 3D performance profiles beginners.

This airplane is made from EPP sheet foam, which makes the airplane light, durable and repairable. The assembly is simple and easy. The airplane assembles quickly allowing you to spend more time at the field and less time at your workbench. Please look over the entire manual before you start, it will speed up the building process and assure you of a fine flying model when you're done.

RECOMMENDED ITEMS FOR FLIGHT



**Outrunner
Brushless Motor**



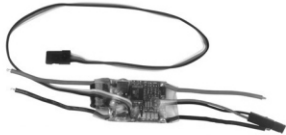
**Propeller to Suit
Power System**



LiPo Battery



**4 Channel or More
Micro Receiver**



Micro ESC



**4 Channel or More
Transmitter**



Battery Charger



**4-6 Gram Micro
Servos(3)**

TOOLS AND SUPPLIES REQUIRED



Foam Friendly Epoxy Glue



Wire Cutters



Z-Bend Pliers



Pencil



**Straight Edge
Ruler**



CA Glue



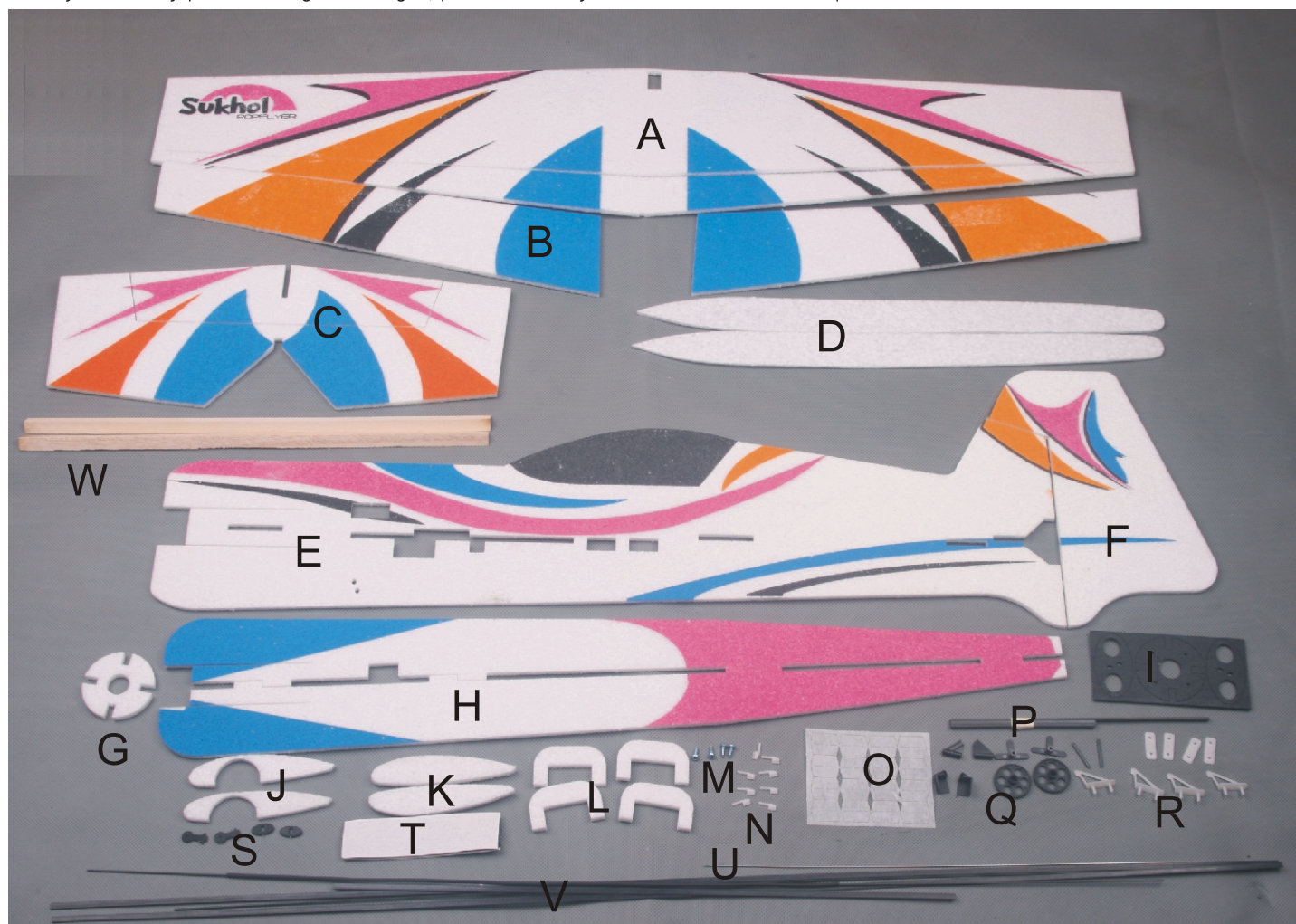
**Builder's Triangle
or Square**



**Small Phillips Head
Screwdriver**

KIT CONTENTS

If you find any parts missing or damaged, please contact your distributor as soon as possible



- A Wing
- B Aileron
- C Horizontal stabilizer
- D Fuselage foam stringers
- E Vertical fuselage
- F Rudder
- G Motor mount strengthen foam
- H Horizontal fuselage
- I Motor mount plate
- J Wheel pants
- K Wheel covers

- L Battery support plates
- M Screws
- N Clevises
- O Hinges
- P Carbon fiber slices and rods
- Q Landing gears
- R Control horns
- S Push rod leader
- T Velcro
- U Wire
- V Carbon fiber rods and slices

LEGEND



Top View / seen from the top



Bottom View / seen from below



Use foam friendly CA glue. Apply glue to mating surfaces before the glue dries.



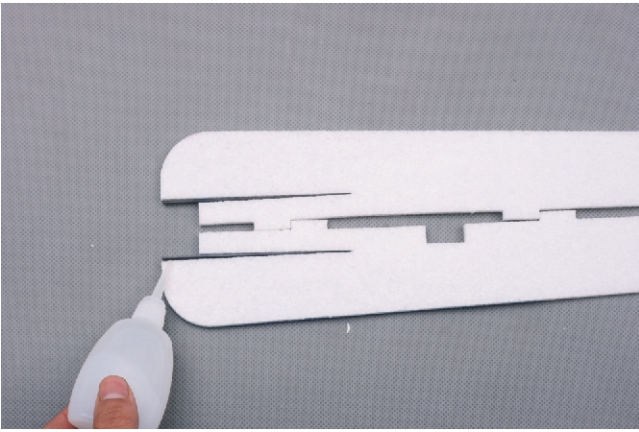
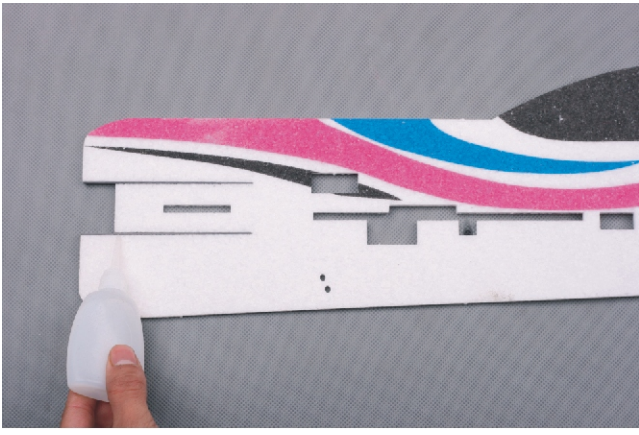
Use foam friendly CA glue. Let dry for 10 minutes after joining glue surfaces together.



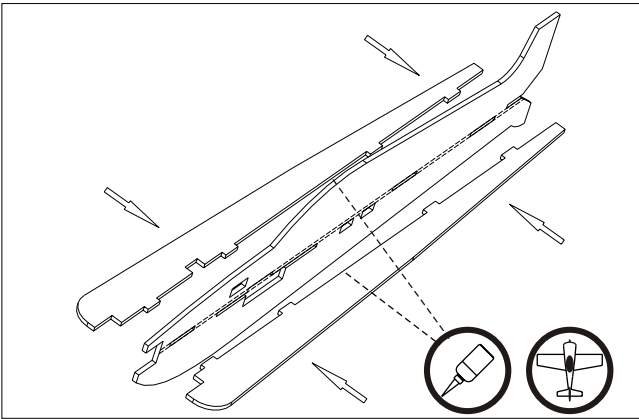
Use CA glue



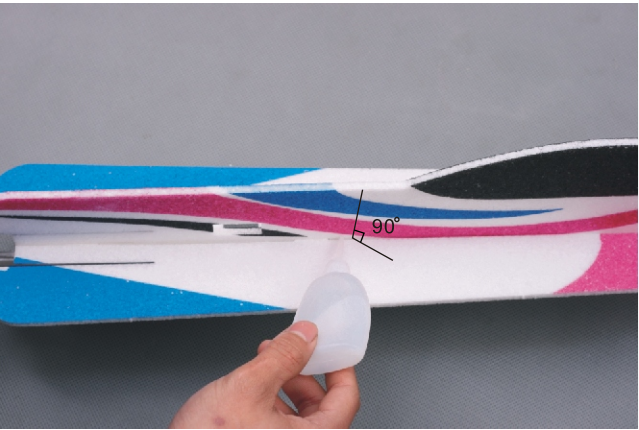
Proceed carefully



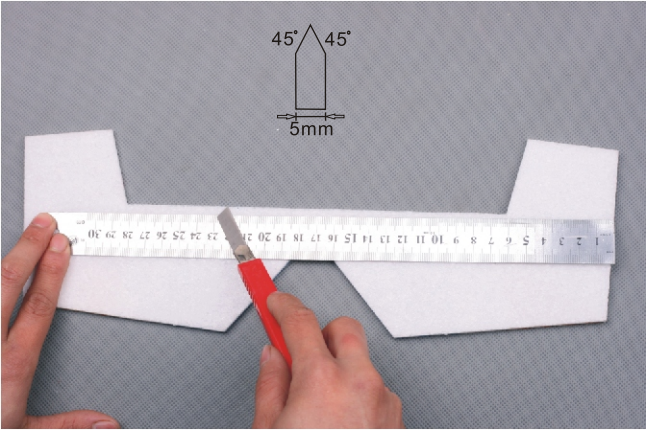
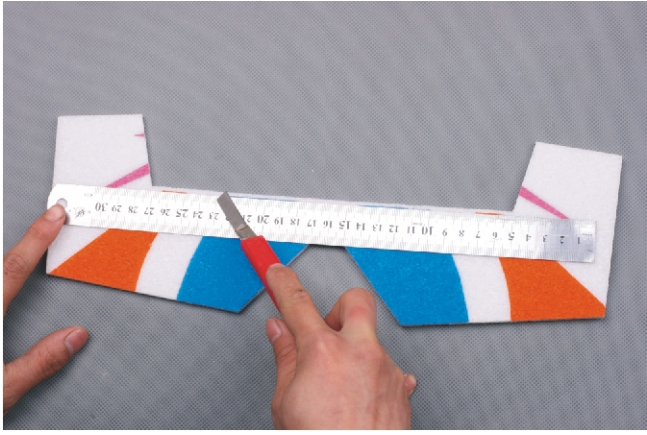
Put the short carbon slice into plane head, use some glue to stick.



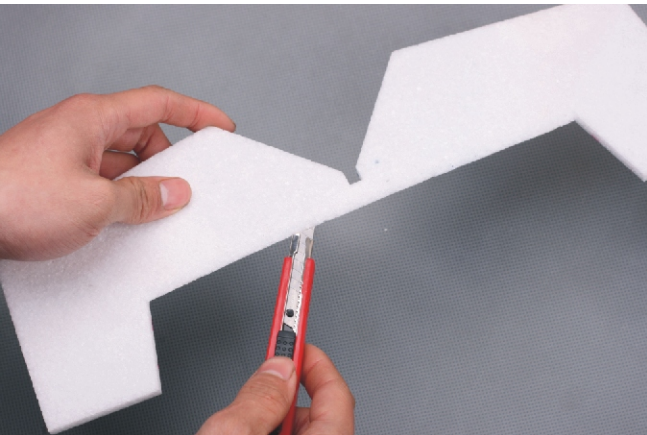
Apply glue or epoxy evenly at the indicated area to join the fuselage parts together.



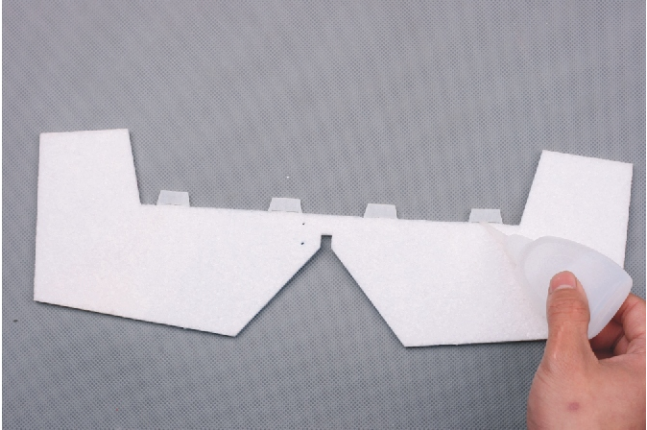
Make sure that the fuselage parts are glued firmly and at right angles.



Bevel a 45 degree on each side of the elevator. Please refer to above picture.



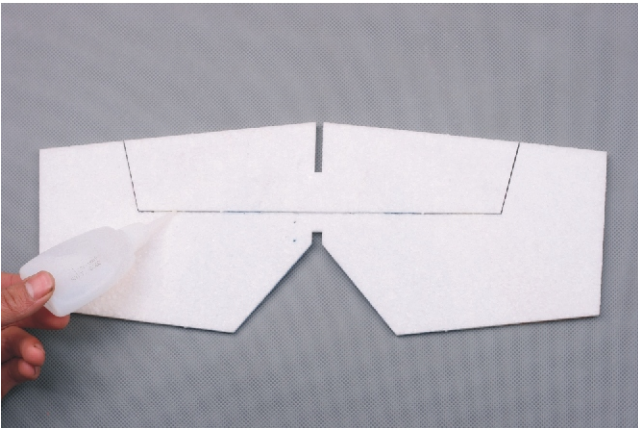
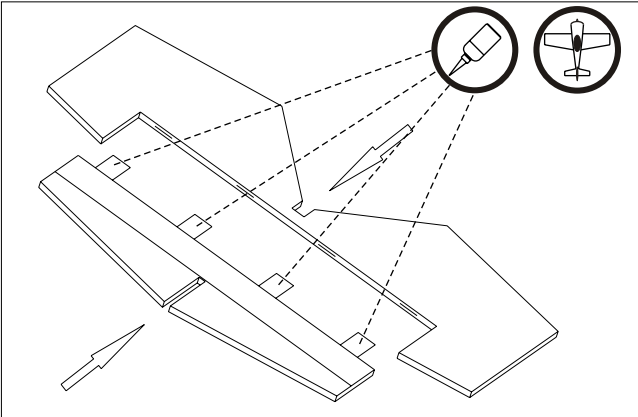
Cut 4 hinge slots in the elevator.



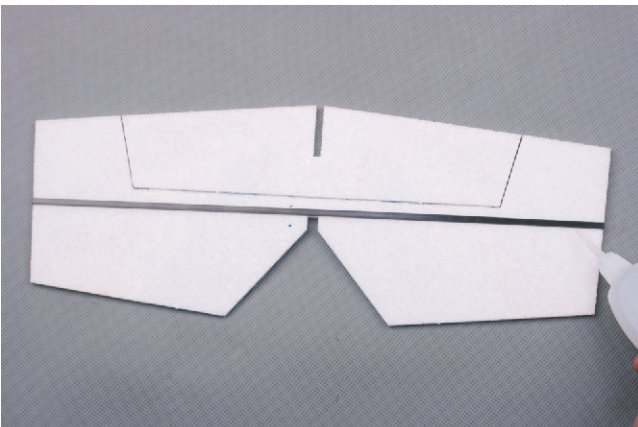
Apply a thin layer of glue to each hinge, then insert them into the slots.



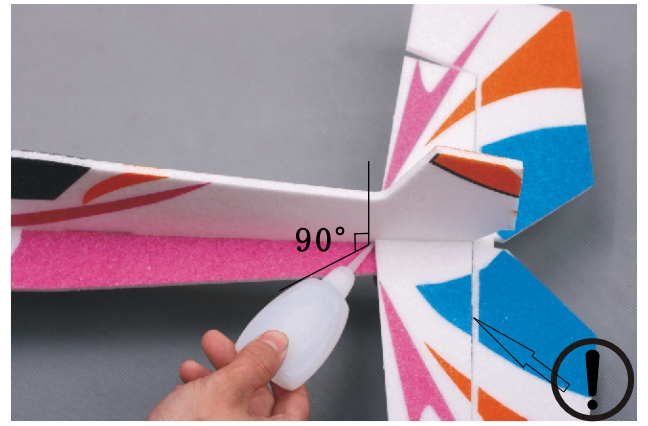
Cut 4 hinge slots in corresponding locations of the horizontal stabilizer.



Hinge the elevator to the stabilizer.



Put the carbon slice to the back of elevator and stick with some glue.



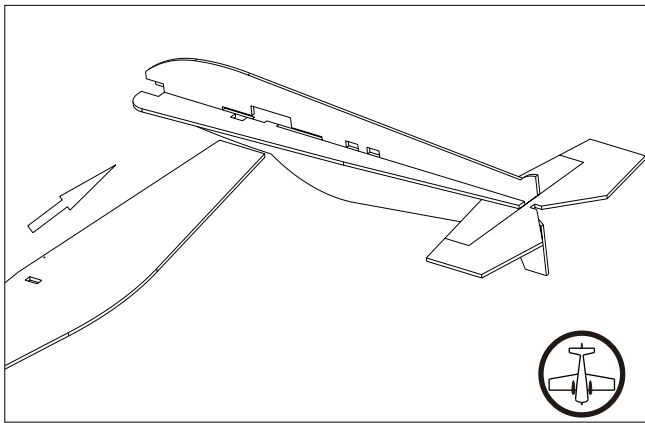
Slide the stabilizer into the fuselage. Make sure that the top of the stabilizer is toward the top of the fuselage. Align the notches in the front and back of the stabilizer with the fuselage. Use a builders triangle or square to hold the stabilizer and fuselage perpendicular to each other, then glue the stabilizer to the fuselage.



Put the carbon slice into wing, use some glue to stick.



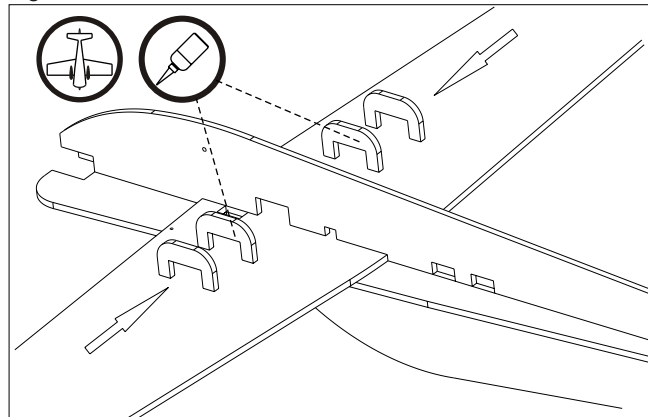
Put the carbon slice into leading edge of wing and stick with some glue.



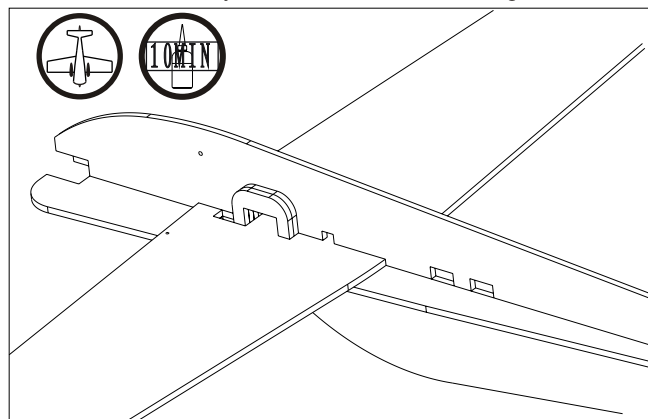
Slide the wing into the fuselage. Make sure that the top of the wing is toward the top of the fuselage. Align the notch in the front of the wing and the tab in the back of the wing with the fuselage.



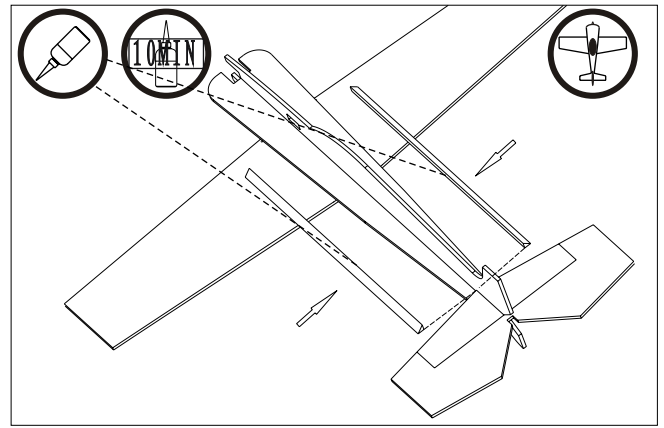
Use a builders triangle or square to hold the wing and fuselage perpendicular to each other, then glue the parts together.



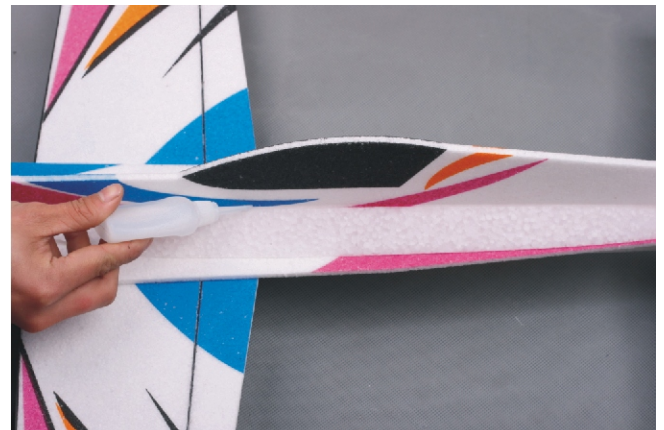
Glue two pieces of battery support plates to each side of the fuselage. The notch of the support plates should be even with the battery mount hole of the fuselage.



Allow the glue to cure before continuing.



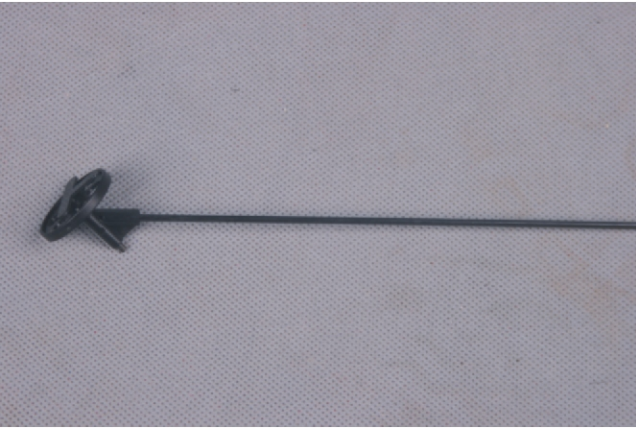
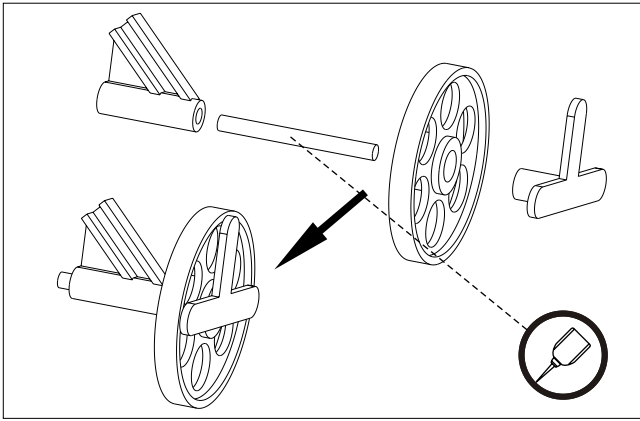
Glue the triangle stock to the top of the fuselage and wing as shown.



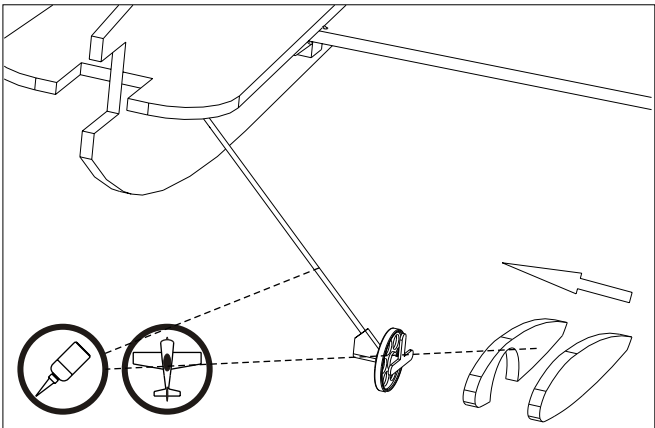
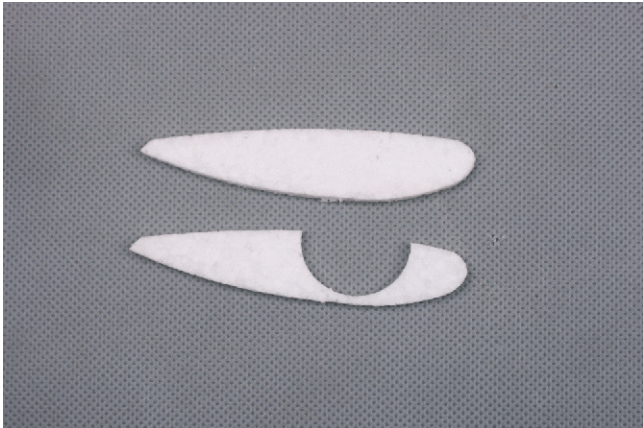
Glue the two foam stringers onto the sides of fuselage.



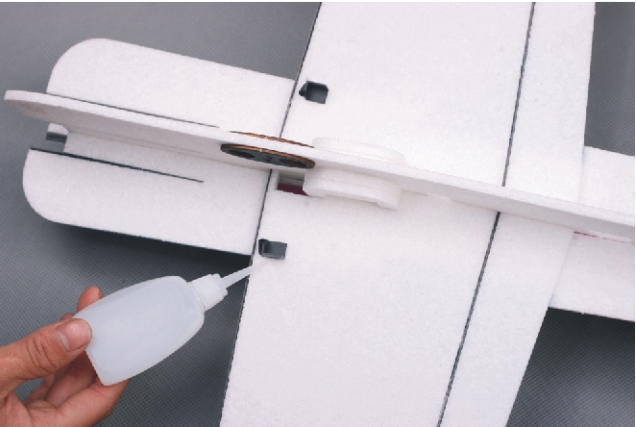
Install the landing gear stiffeners onto the two sides of the lower vertical fuselage.



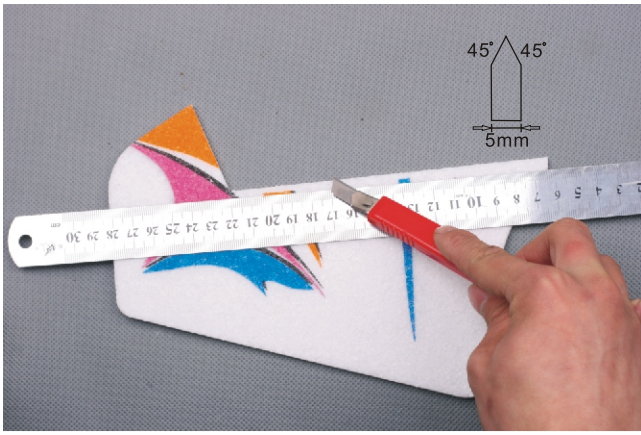
Slide one carbon axle into the axle mounting bracket, then slide one wheel (flat side first) onto one wheel pant mounting bracket. Firmly push the carbon axle into the wheel pant mounting bracket to secure the assembly together. Repeat the previous procedures to make a second wheel and axle assembly.



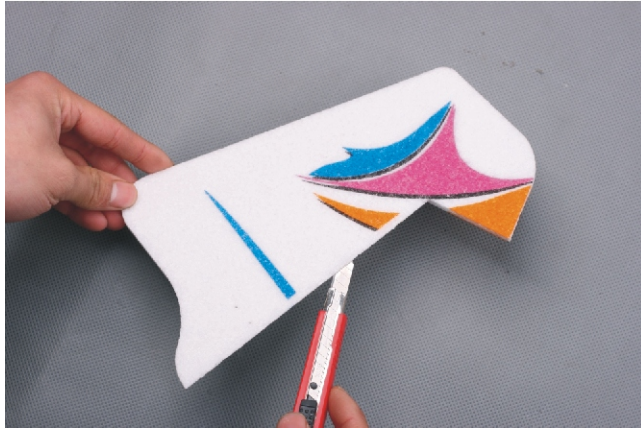
Glue the inner wheel pant section to the outer wheel pant section. Make two wheel pants—one right and one left. Glue one inside of wheel pant to one wheel pant mounting bracket. Make sure the wheel pant points straight ahead and that the wheel pant is even with the other wheel pant when viewed from the side. The base of the bracket should be even with the bottom of the wheel pant and the wheel should be centered from side to side. Of the wing, this will let them flex a little. Install the second wheel pant assembly.



Slide the axle mounting bracket onto the end of the carbon strut. Check that the wheel spins freely. Glue the axle mounting bracket to the carbon strut.



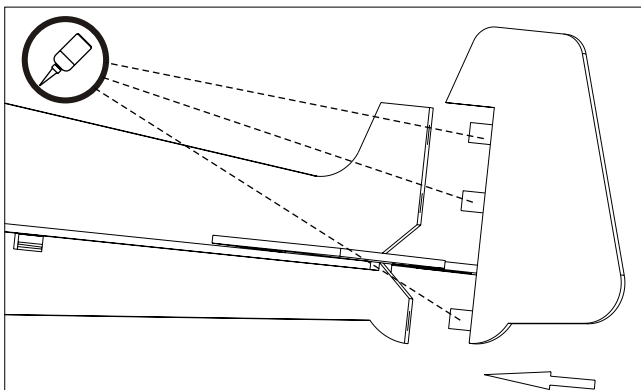
Cut a 45 degree bevel on each side of the rudder. Please refer to above picture.



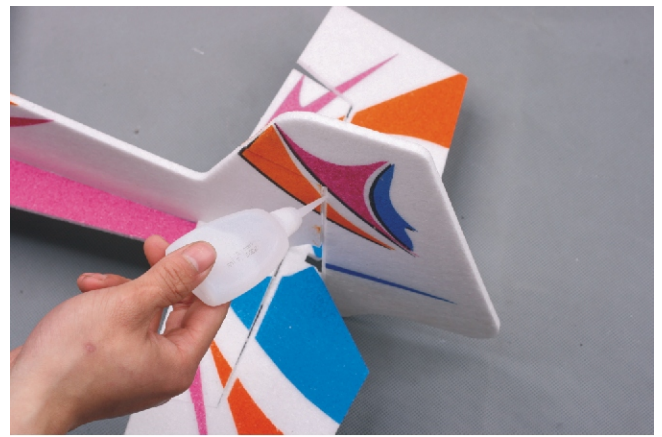
Cut 3 hinge slots in the rudder as indicated.



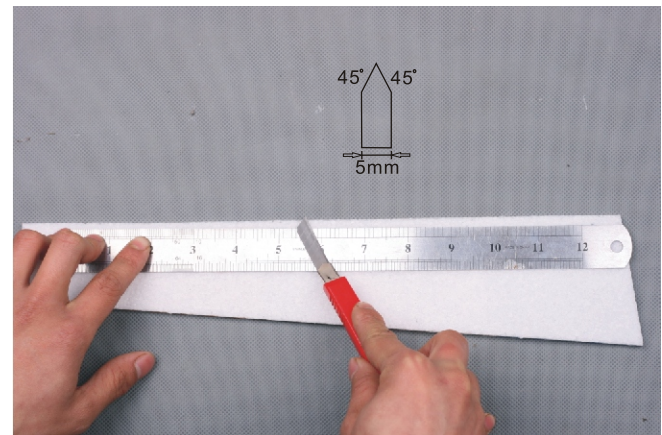
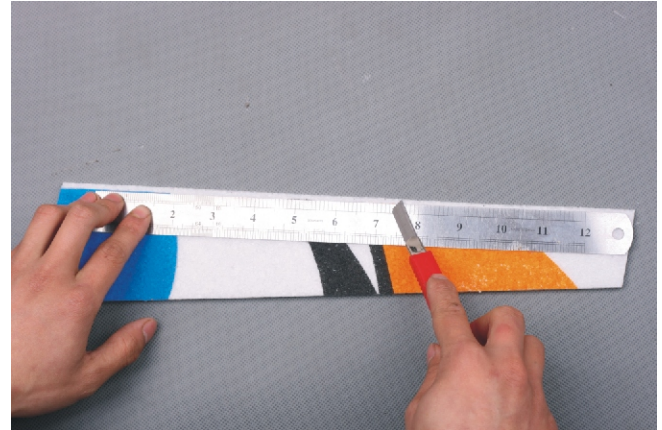
Apply a thin layer of glue to each hinge, then insert them into the slots.



Also cut 3 hinge slots in the corresponding locations of the vertical stabilizer, then hinge the rudder to the stabilizer.



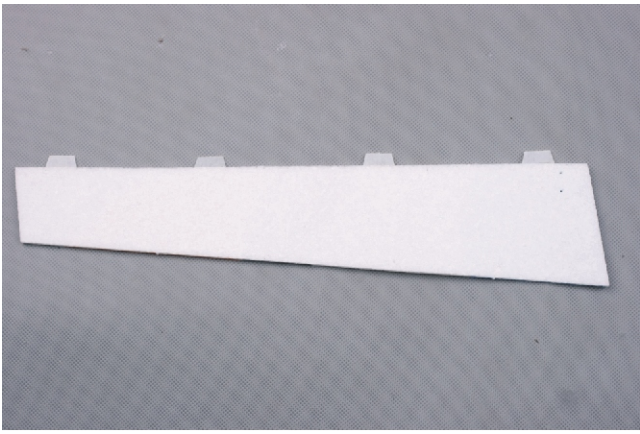
Same as assembly of elevator



Cut a 45 degree bevel on the bottom leading edge of the ailerons.



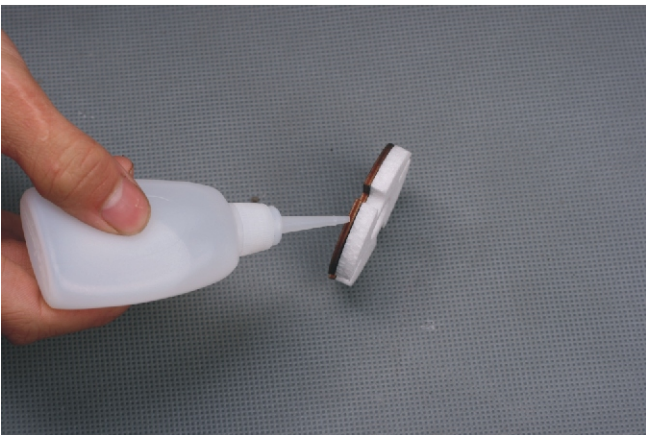
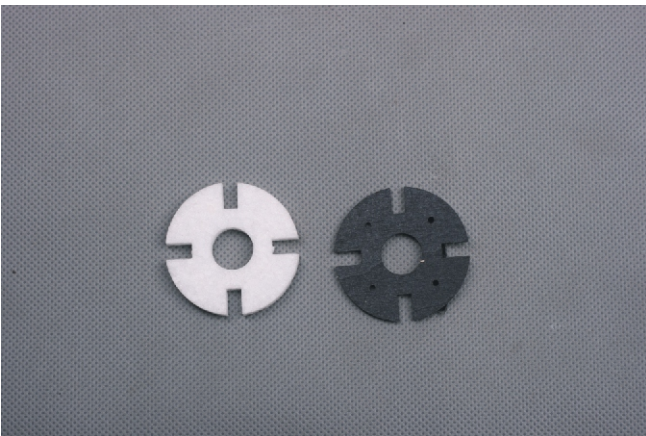
Cut 4 hinge slots in the leading edge of the ailerons.



Apply a thin layer of glue to each hinge, then insert them into the slots.



Also cut 4 hinge slots in the corresponding locations of the wing, then hinge the ailerons to the wing, using the same techniques that you used to hinge the elevator.



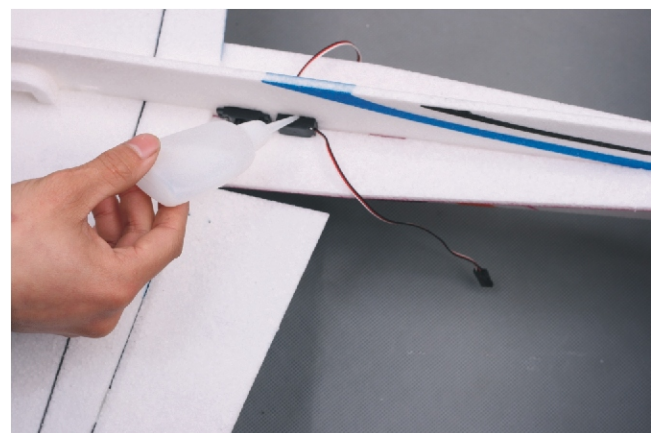
Glue the motor mount plate to the fuselage. Slide the motor mount plate up against the fuse. You should end up with zero downthrust and zero sidethrust. Allow the glue to cure before continuing.



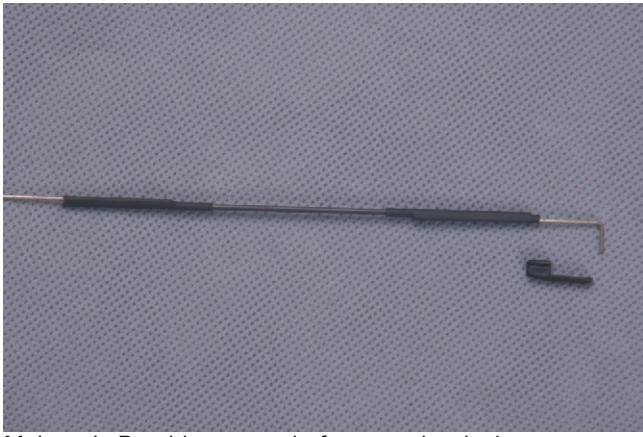
Install the motor to the motor mounting plate, using the hardware provided with the motor.



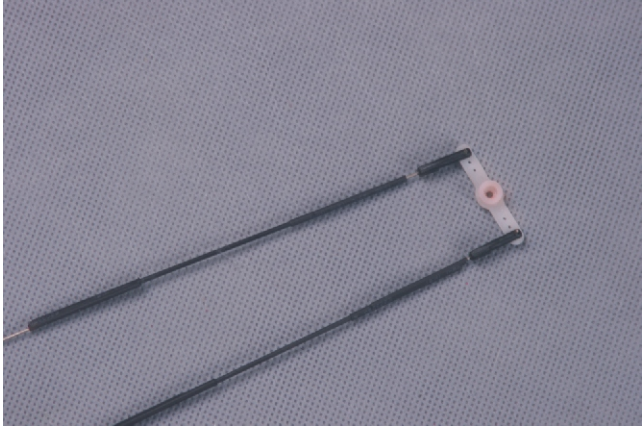
Install the aileron servo into the wing.



Install the elevator and rudder servos into the fuselage. Use a couple drops of foam friendly CA to secure them into place. Notice that the elevator servo is mounted on the left side of the fuselage and the rudder servo is mounted on the right side of the fuselage.



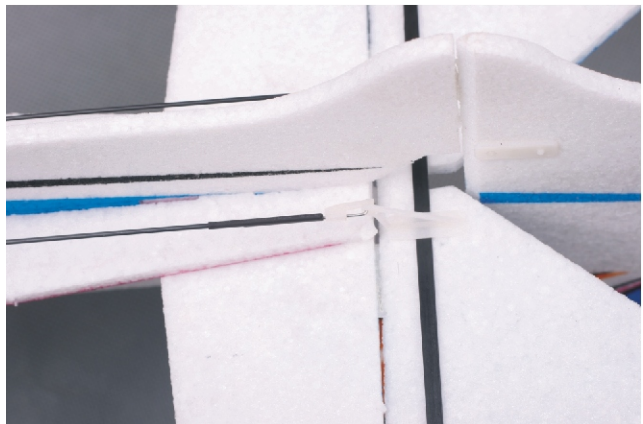
Make a L-Bend in one end of one pushrod wire.



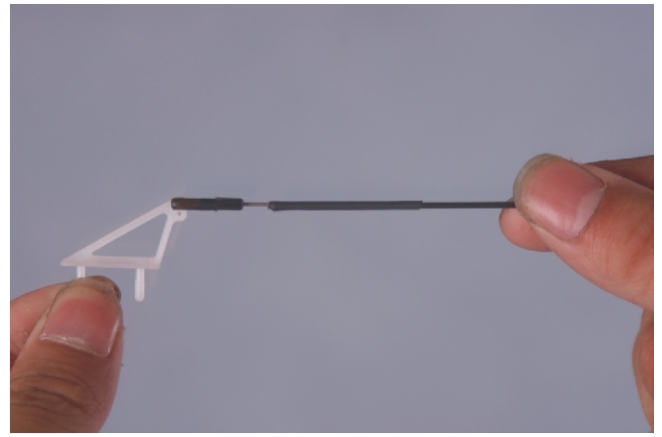
Make a L-Bend in one end of a second pushrod wires. Attach the L-Bends into the outermost hole in the servo arms.



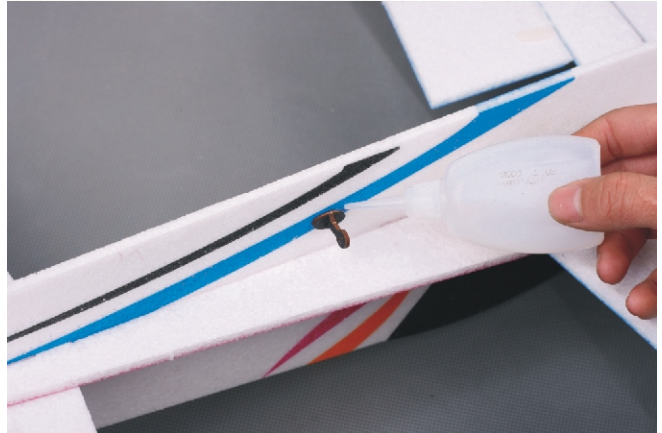
Center the aileron servo, then attach the servo arm onto the servo, making sure that it is centered. Check that servo arm is still centered, then center both ailerons. Cut the pushrod wires to length, snap the clevises into the outermost holes in the control horns, then glue the clevises to the pushrod wires.



Install one control horn onto the bottom of the left side of the elevator.



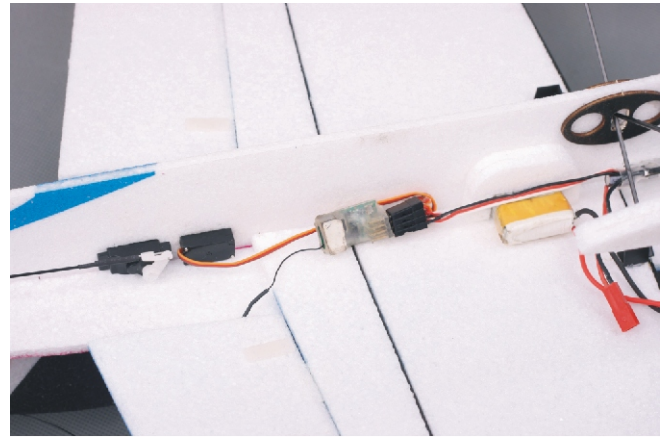
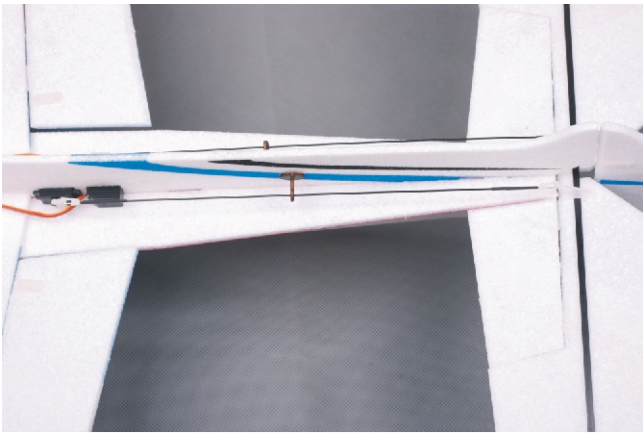
Make a L-Bend in one end of one pushrod wire. Attach the L-Bend into the outermost hole in the servo arm.



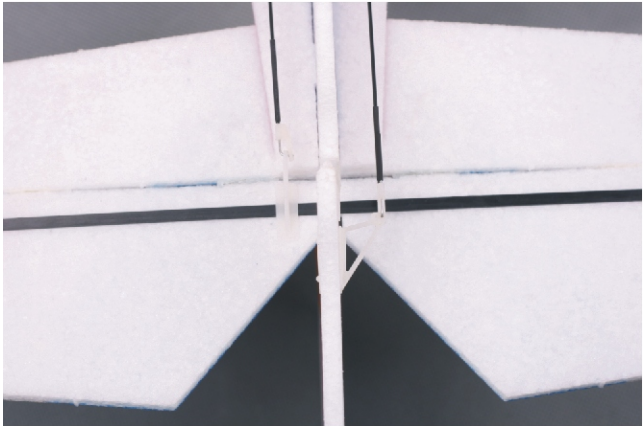
Assemble the indicate slice of leader and stick onto side of fuselage to reduce balk of the leader.



Install one control horn onto the right side of the rudder, 1" (25mm) above the bottom of the rudder. Important: Angle the control horn up toward the rudder servo, so that the pushrod will line up better.

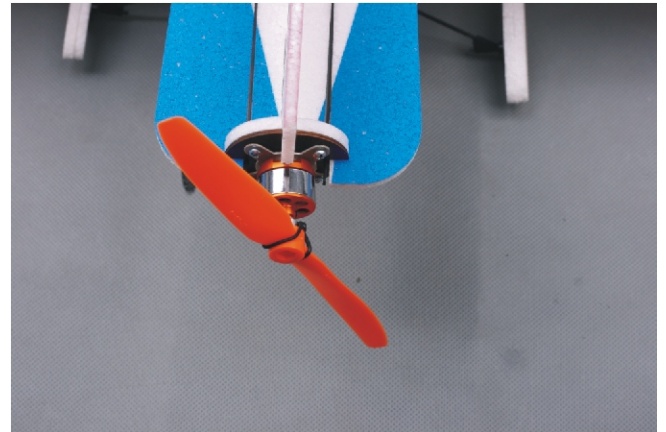


Install your receiver and ESC onto the left side of the fuselage, using velcro or double-sided tape. Extend the antenna along the bottom of the fuselage and hold it in place using small pieces of clear tape.

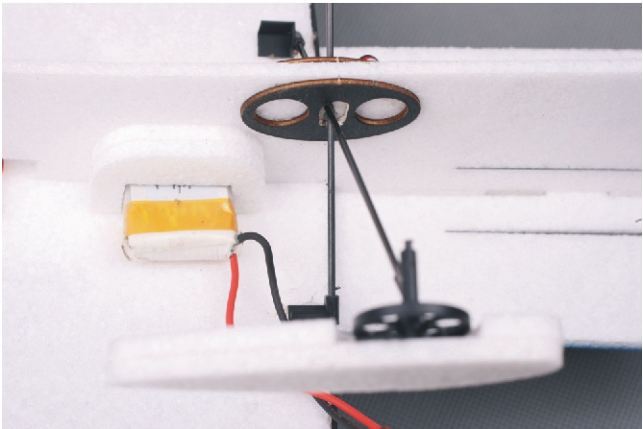


Check that the servo arm is still centered, then center the elevator/rudder.

Cut the pushrod wire to length and slide one pushrod over the end of the pushrod wire, snap the clevis into the outermost hole in the control horn, then glue the clevis to the pushrod wire.



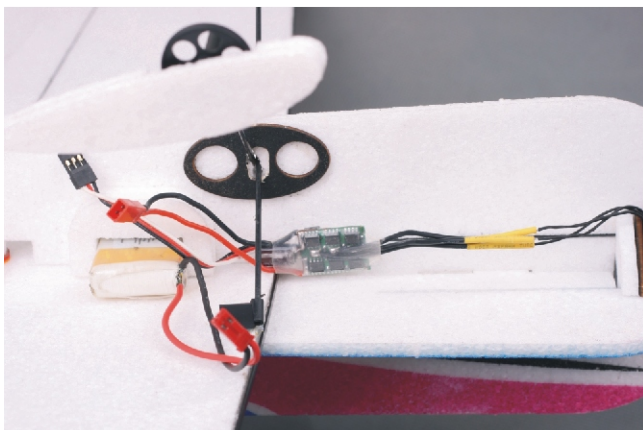
Install your propeller onto your motor and finish wiring your motor to your ESC.



Install your battery to the battery mount hole in the fuselage. Depending on the size of the battery you're using, you may need to cut the battery mount hole in the fuselage larger.



We hope you enjoy your new PopFlyer.



BALANCE POINT AND CONTROL THROWS

Balance point:

3-4 inches (80-100mm) back from the leading edge of the wing, at the fuselage sides.

We suggest starting with the balance point at 80mm, then moving it back as you become more proficient with the airplane. Moving the balance point back will make the airplane more aerobatic, but less stable.

DO NOT fly the airplane without first balancing it. The airplane should sit level or slightly nose down when you lift it up with your fingers at the balance point. It might be necessary to move the battery forward or backward to balance the airplane.

Control throws

Sport Flying

Ailerons: (24.4mm) 0.96" Up and Down

Elevator: (19.1mm) 0.75" Up and Down

Rudder: (35.6mm) 1.40" Right and Left

3D Flying

Ailerons: (67.2mm) 2.65" Up and Down

Elevator: (57.3mm) 2.26" Up and Down

Rudder: (106.7mm) 4.20" Right and Left

The control throws are measured from the widest point of the control surfaces

Exponential

Sport Flying

Ailerons: 20%

Elevator: 20%

Rudder: 20%

3D Flying

Ailerons: 45% - 55%

Elevator: 45% - 60%

Rudder: 45% - 60%

OUR GUARANTEE

TechOne guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This does not cover any component parts damaged by use, misuse or modification. In no case shall Phase 3's liability exceed the original cost of the purchased kit. In that TechOne has no control over the final assembly or material used for final assembly, no liability shall be assumed for any damage resulting from the use by the user of the final user-assembled product. By the act of using the final user-assembled product, the user accepts all resulting liability.



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