



Before use, please read the explanations carefully!

TECH ONE™

# Yak54 F3P

## Instruction Manual



### Specifications

Wingspan: 815mm (32in)  
Fuselage length: 786mm (31in)  
Flying Weight: 130-150g (with battery)

### Additional Required Equipment

Motor: 2404 KV: 1600  
ESC: 10A  
Propeller: GWS 9050 Slow Flyer Prop  
Servo: 5G\*3  
Radio: 4 / more channel  
Receiver: 4 / more channel  
Battery charger  
Battery: 7.4V 350mAh

- Laser-cut 3mm genuine EPS 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.

### Introduction

Thank you for purchasing the Yak54-F3P.

The Yak54-F3P ARF has super slow flight responsiveness so you can fly high-alpha 3D with authority. Its carbon fiber reinforced Yak54-F3P construction provides the solid, precise feel of a balsa profile plane without the weight. This allows you to fly the Yak54-F3P ARF outside in windier conditions that would keep most other profile foamies grounded. The Yak54-F3P ARF is another exciting addition to TECH ONE's outstanding line of electric RC aircraft and accessories.

TECH ONE uses top-quality engineering and materials in everything it makes, so you always get the maximum level of value and fun. TECH ONE backs all of its products with the best customer service and support in the hobby so your electric flight experience is always a positive one.

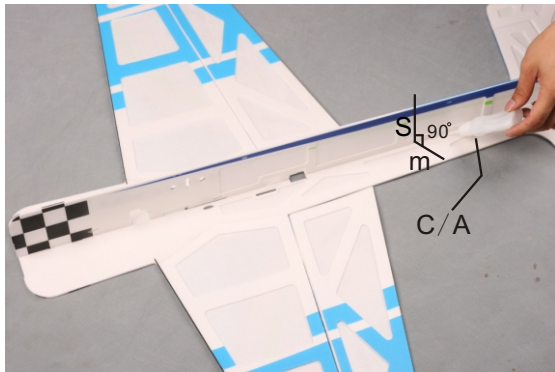
These assembly instructions are designed to guide you through the entire assembly process of your new airplane in the least amount of time possible. Along the way you'll learn how to properly assemble your new airplane and also learn tips that will help you in the future. We have listed some of our recommendations below. Please read through them before beginning assembly.

### Warning

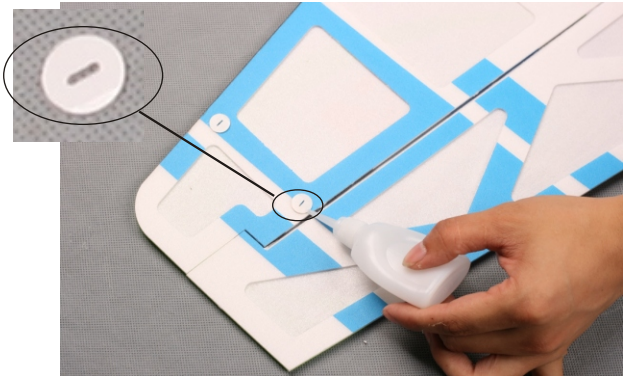
An R/C aircraft is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, preferably AMA (Academy of Model Aeronautics) approved flying sites, following all instructions included with your radio. Always assume the electric motor can come on at any time so use extreme caution. Before beginning assembly of your Yak54-F3P, 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.

### 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



Glue the fuselage side board onto the fuselage main board.

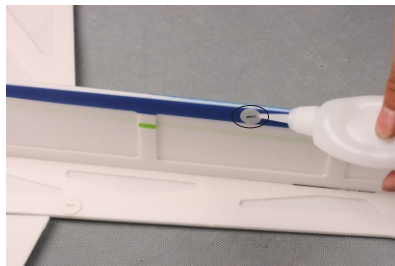


Install the round doublers onto the pre-reserved holes on the bottom fuselage to strengthen the joint of carbon fiber rod and foam.

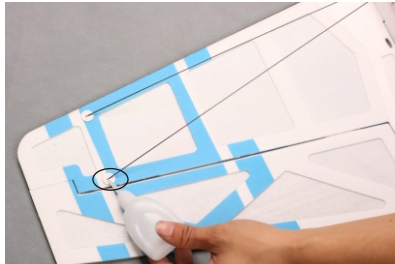
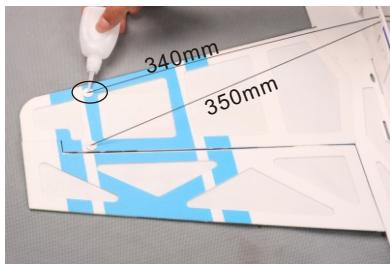
## 2.Bracing



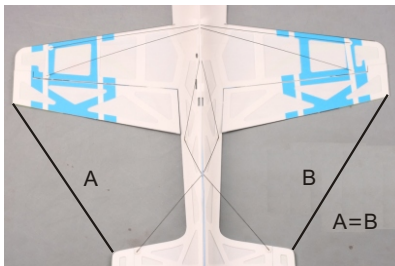
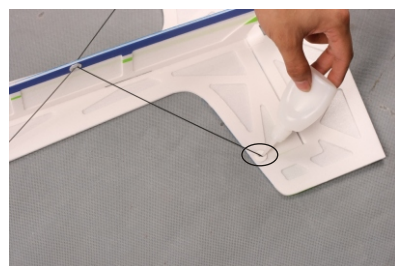
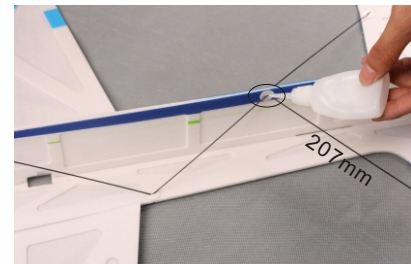
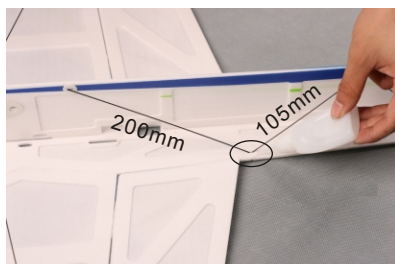
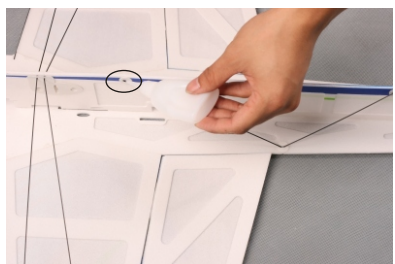
Install the round doublers on other places.



Install the doubler for the landing gear.



Cut proper length of carbon fiber rods, then install them into corresponding round doublers. Note: The fuselage side board should be perpendicular to the fuselage main board.



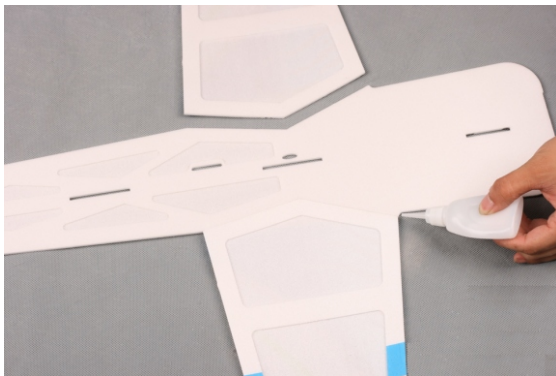
Install the round doublers, then fix the carbon fiber rods as shown to strengthen the fuselage and wing. Note: The whole plane should be vertical, no distortion.

## Kit Contents

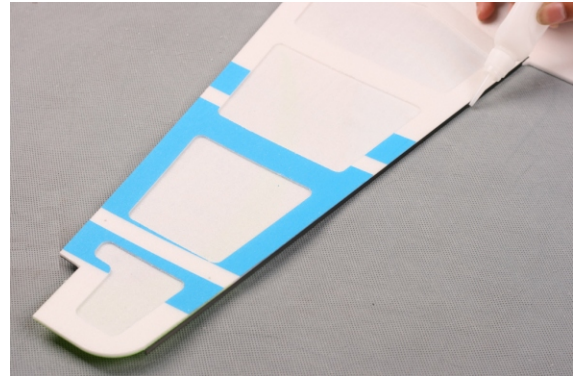


- A Wing with Aileron
- B Fuselage Side Board
- C Fuselage Main Board
- D Wing Fences
- E Foam Doublers (long)
- F Foam Doublers (short)
- G Wheel Covers
- H Control Horn Backplates
- I Control Horns
- J Round Doublers
- K Threads
- L Landing Gear Deco Foam Strips
- M Motor Fixed Foam
- N Carbon Fiber Rods
- O Landing Gears
- P Velcro
- Q Heat-Shrink Tubing
- R Doublers for Landing Gears
- S Servo Arms
- T Screws
- U Plywood Motor Mount

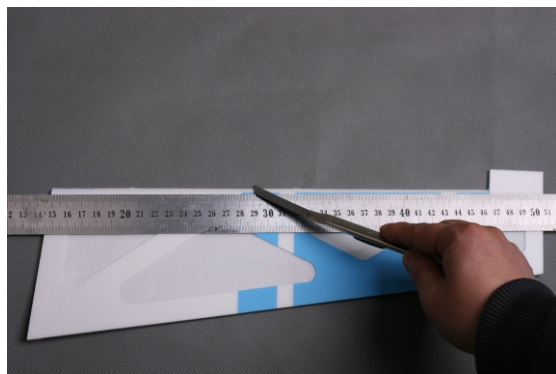
### 1. Fuselage and Wing Assembly



Glue the wings and fuselage together with foam-friendly C/A.  
Note: No distortion of the fuselage and wings.



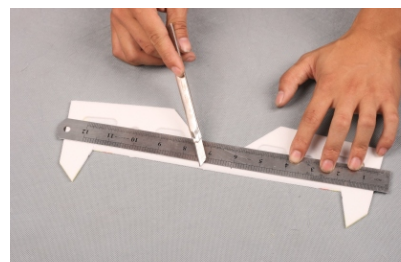
Glue 2 pcs carbon strips on the front of the wings with some foam-friendly C/A.



Cut 45° bevel on the two ailerons.



Use 3M magic tape to splice the aileron and wing.

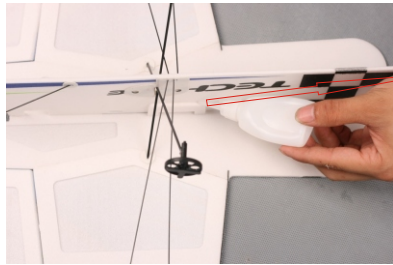
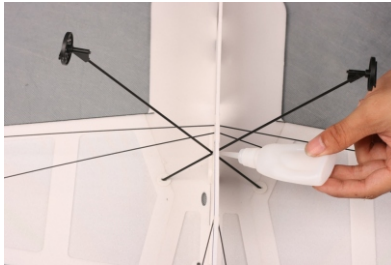
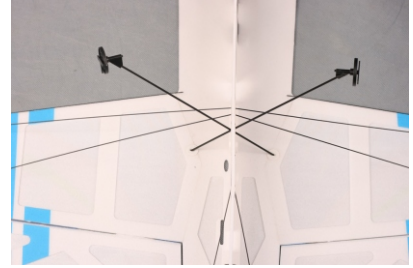
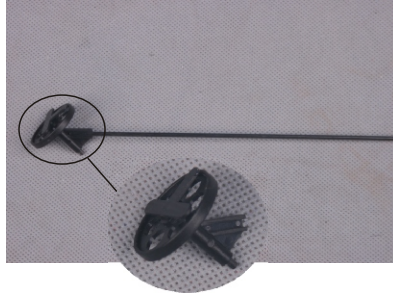
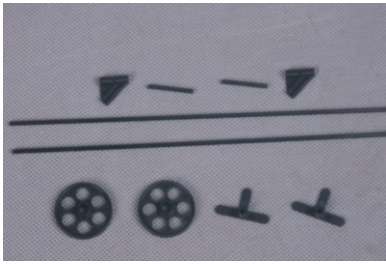


Cut a 45° bevel on the elevator as shown.



Same assembly as the aileron and wing.

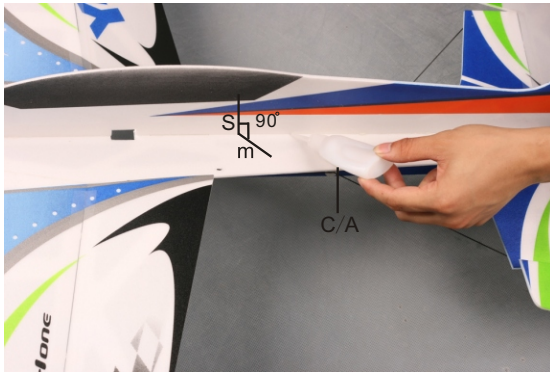
### 3. Landing Gear



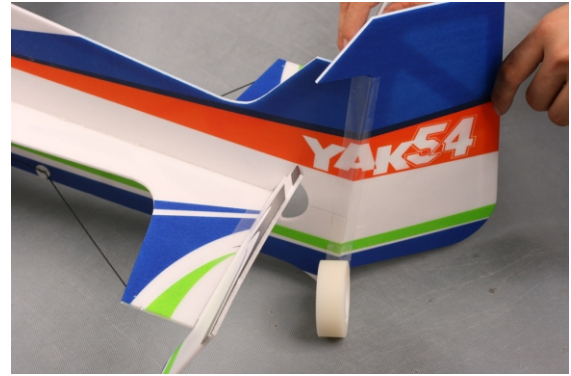
Assemble the landing gears and fix them with some foam-friendly C/A.

fix them with some foam-friendly C/A.

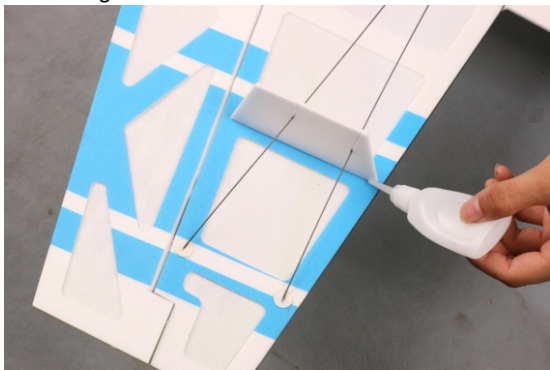
### 4. Fuselage



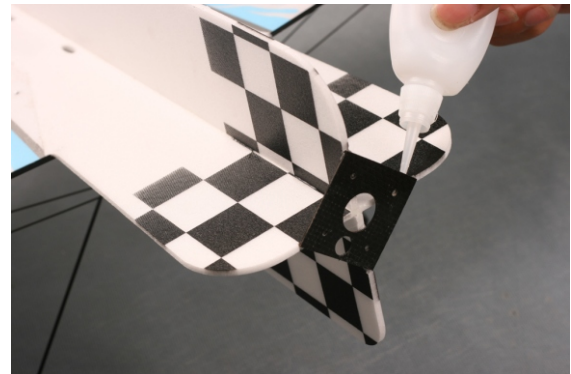
s-fuselage side board  
m-fuselage main board



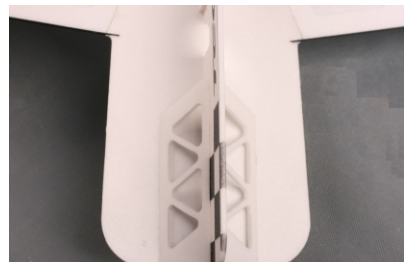
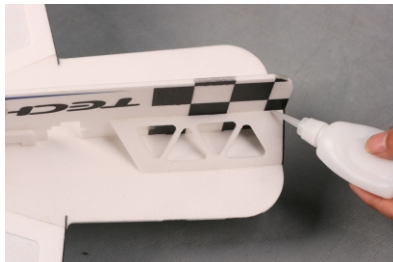
Fix the rudder with 3M magic tape.



Install the wing fences and fix as shown in the picture.

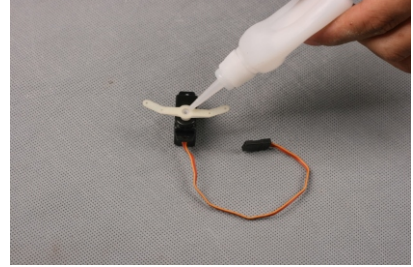
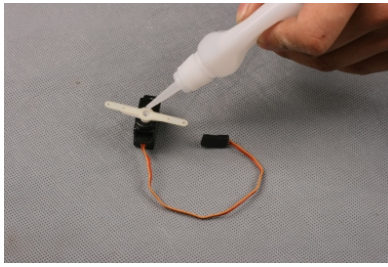
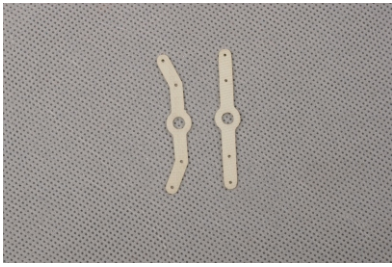


Install the motor mount and fix as shown in the picture.

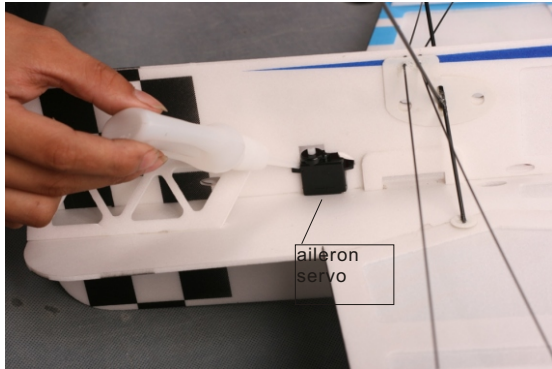


Fix the foam doublers on the fuselage. Note: Keep the fuselage and wing vertical, no distortion.

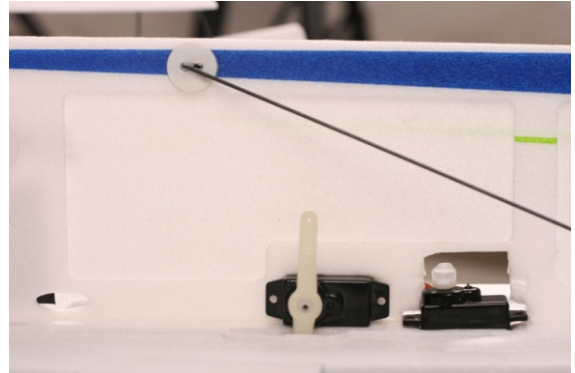
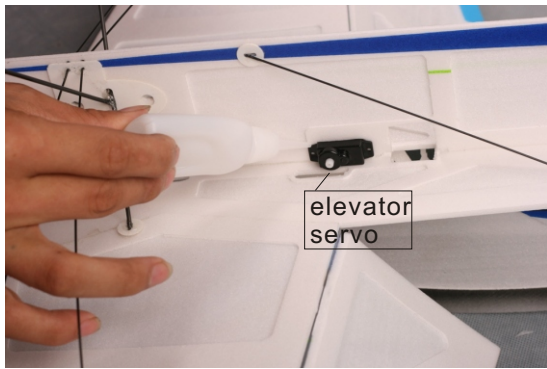
## 5. Servo and Servo Arm



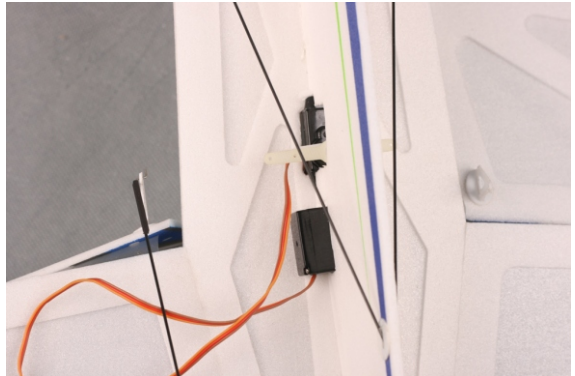
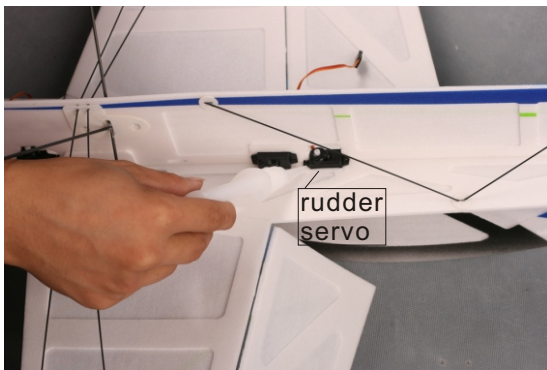
Fix the servo arm with some C/A



Install aileron servo and fix with some C/A.



Install elevator servo and fix with some C/A.

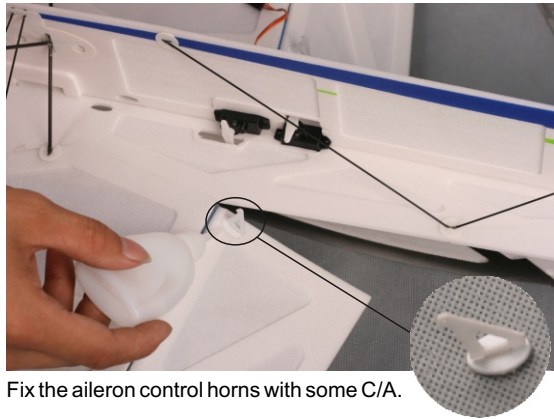


Install rudder servo and fix with some C/A.

## 6. Control Horns and Servos



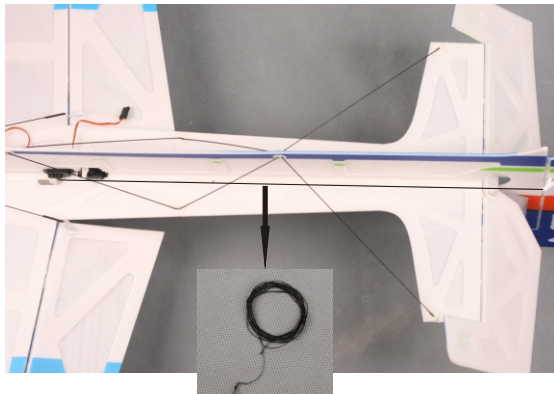
Glue together the control horns and their backplates.



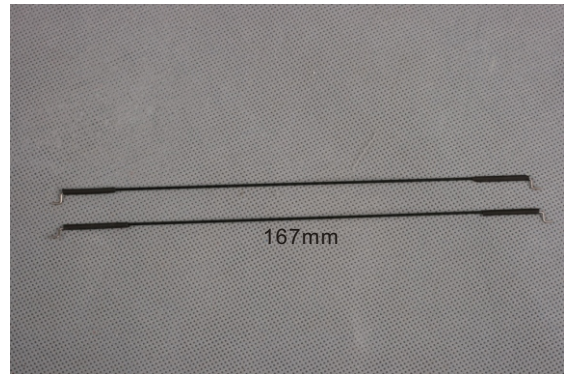
Fix the aileron control horns with some C/A.



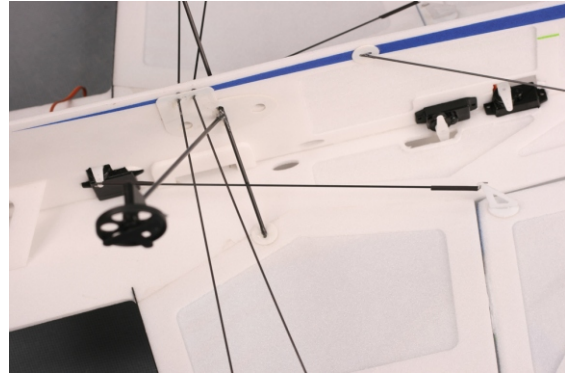
Fix the rudder control horns with some C/A.



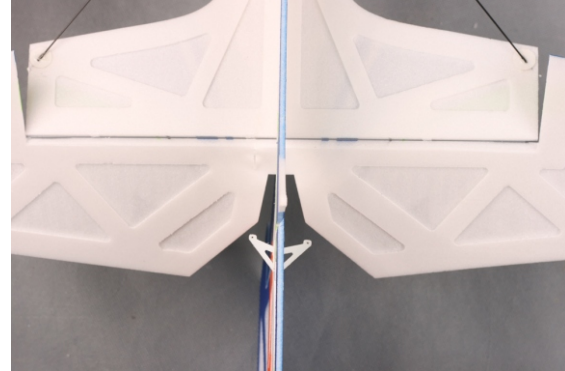
Link the servos and control horns with threads, make sure the threads are taut and the two ends of the servo arms are tied with threads.



Aileron carbon fiber push rods.



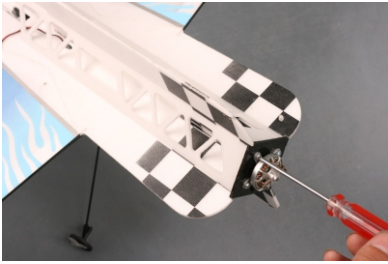
Install the push rods to connect the aileron servo and control horns.



Fix the elevator control horns with some C/A.



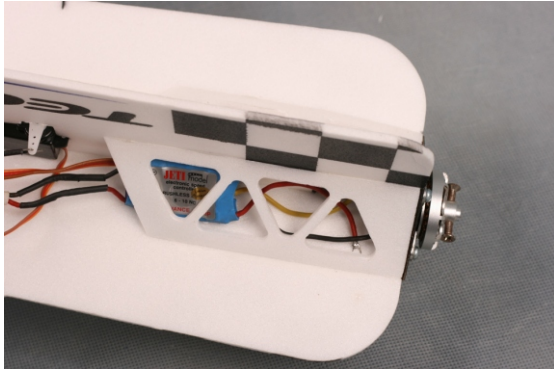
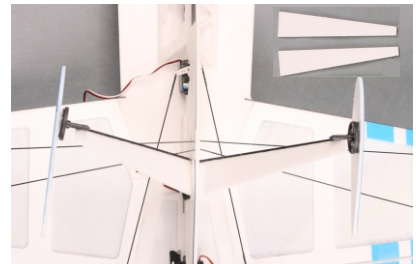
## 7. Control System



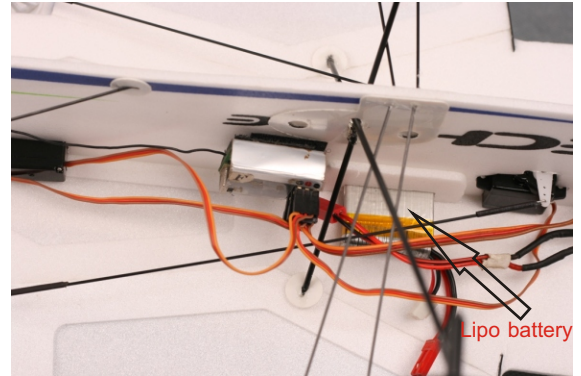
Install the motor.



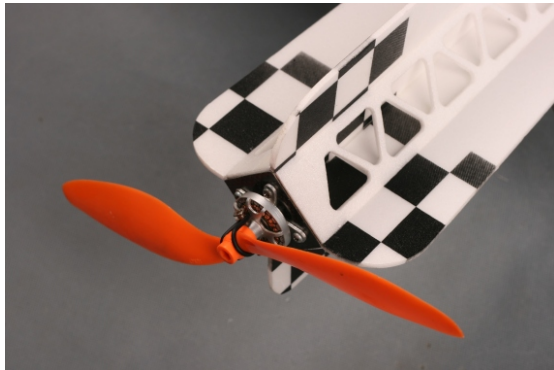
Fix the wheel covers with some foam-friendly C/A.



Mount your ESC to the fuselage, using one piece of velcro.



Use one piece of velcro to fix your receiver on the fuselage, and also install your battery to the designated place on the fuselage.



**PRO TIP :** After flying the airplane, you may want to add right and/or down thrust to the motor. You can do this by adding thin washers between the motor mount and the firewall.



### Motor Thrust

To ensure great flight performance and to be able to trim your airplane properly, it is critical that you adjust the motor thrust as described. We suggest that you add 2 degrees of down-thrust and 1 degree of right-thrust. This can be achieved by adding a washer or two behind the top and right side of the motor (between the motor and the firewall). When set properly, the trim for the elevator and the rudder should be neutral. Fine-tune the down-thrust and right-thrust until this trim is achieved.

### Balance Point

The Center of Gravity (C/G or Balance Point) is 2.95" (75mm) from the leading edge of the wing, measured at the center of the wing.

**WARNING** For test flying and general sport flying, we suggest you balance the airplane at the C/G recommended above. For 3D flying, you may want to experiment moving the C/G back in small increments until you're satisfied with the result.

### Control throws

Sport Flying

Ailerons: 37.2mm (1.46") Up and Down

Elevator: 29.2mm (1.15") Up and Down

Rudder: 44mm (1.73") Right and Left

3D Flying

Ailerons: 102.3mm (4.03") Up and Down

Elevator: 87.6mm (3.45") Up and Down

Rudder: 132mm (5.20") 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%

Exponential softens the response of the control surfaces around neutral stick. This makes the airplane easier to control while using such large control throws. The Exponential values shown are given as a percent. Please note that different brands of radio control systems may call for + or - Expo. Please check your transmitter's owners manual for more info.

### Seek Assistance

If you are new to R/C we suggest you find an experienced pilot to check out your aircraft and help you with the first few flights. This will help prevent damage to your model and will speed up the learning process and making your R/C experience all the more enjoyable. You can contact local R/C clubs or your dealer to obtain the names of experienced R/C pilots who would be willing to help you with your first few flights. Although this is an ARF (Almost-Ready-to-Fly) kit, it does have some construction features that can be challenging to the less experienced modeler. If you encounter difficulty in any construction sequence, please feel free to contact one of our technicians, we stand ready to provide any assistance we can.

Contact us at:

E-Mail: [techonehobby@gmail.com](mailto:techonehobby@gmail.com)



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