

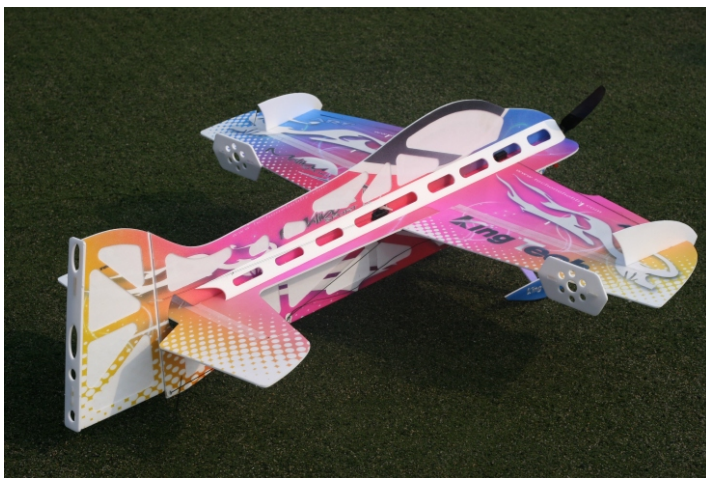


Before use, please read the explanations carefully!

TECHONE™

Malibu2 F3P

Instruction Manual



Specifications

Fuselage length: 884mm (34.8in)
Wingspan: 845mm (33.2in)
Flying Weight: 135-160g (with battery)

Additional Required Equipment

Motor: 2403 KV:2100
ESC: 10A
Propeller: GWS 8040 Slow Flyer Prop
Servo: 5G*3
Radio: 4 / more channel
Receiver: 4 / more channel
Battery charger
Battery: 7.4V 350-500mAh (25C)

- 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 Malibu2-F3P.

The Malibu2-F3P ARF has superb slow flight responsiveness so you can fly high-alpha 3D with authority. Its carbon fiber reinforced Malibu2-F3P construction provides the solid, precise feel of a balsa profile plane without the weight. This allows you to fly the Malibu2-F3P ARF outside in windier conditions that would keep most other profile foamies grounded. The Malibu2-F3P ARF is another exciting addition to TECHONE's outstanding line of electric RC aircraft and accessories.

TECHONE uses top-quality engineering and materials in everything it makes, so you always get the maximum level of value and fun. TECHONE 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.

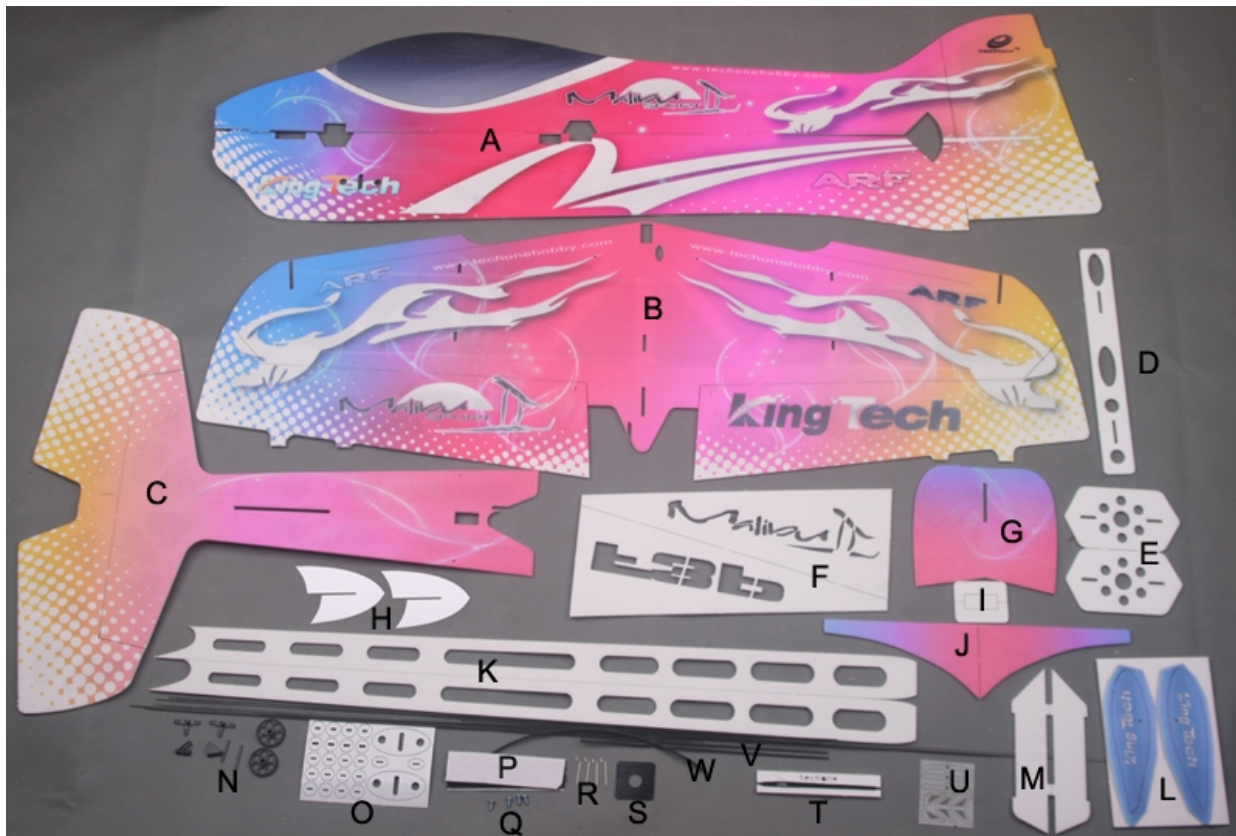
Warning

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 Malibu2-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.

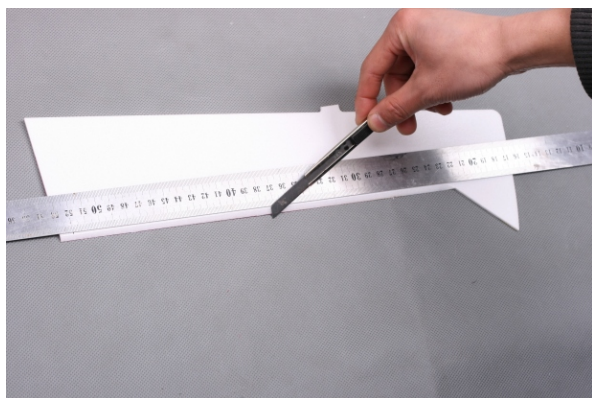
Required Tools and Adhesives (not included in the kit)

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

Kit Contents



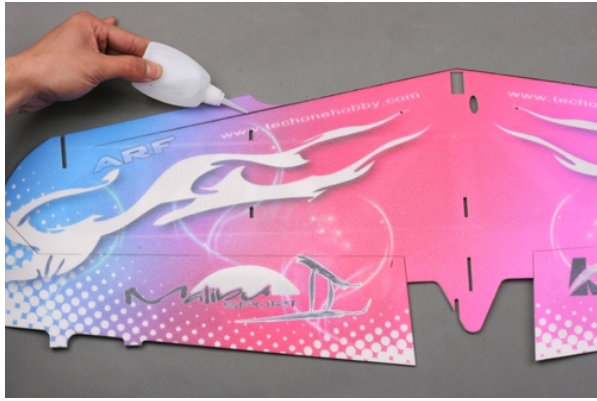
- | | |
|--|-------------------------------------|
| A Fuselage | L Wheel covers |
| B Wing with aileron | M Wing fences under the middle wing |
| C Rear of horizontal fuselage | N Landing gear sets |
| D Rudder damping board | O Doublers |
| E Aileron damping board | P Velcro |
| F Wing strengthen foam with letters (Letters: Malibu, F3P) | Q Screws |
| G Head of horizontal fuselage | R Z bend |
| H Wing fences on the wing tip | S Motor mount |
| I Strengthen foam slices around the battery holes | T Thread |
| J Landing gear stringers | U Servo arms and control horns |
| K Fuselage stringers | V Carbon fiber rods and strips |
| | W Shrink tube |



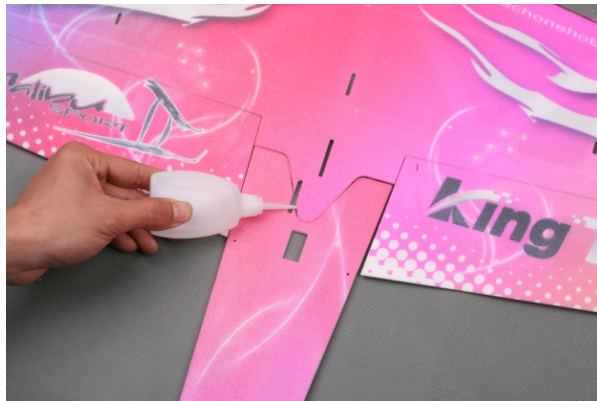
1. Cut 45° bevel on the two ailerons.



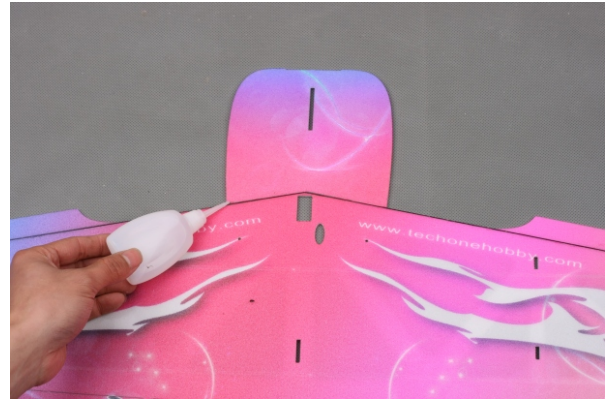
2. Use 3M magic tape to splice the two ailerons and the wing.



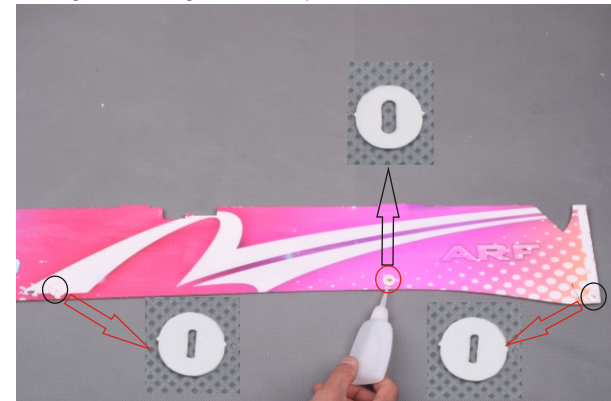
3. Glue 2pcs carbon fiber strips on the front of wing with some foam-friendly C/A.



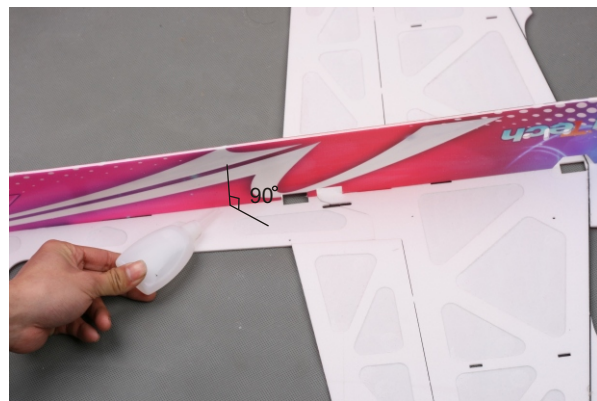
5. Key the rear of horizontal fuselage into the wing and apply some foam-friendly C/A.



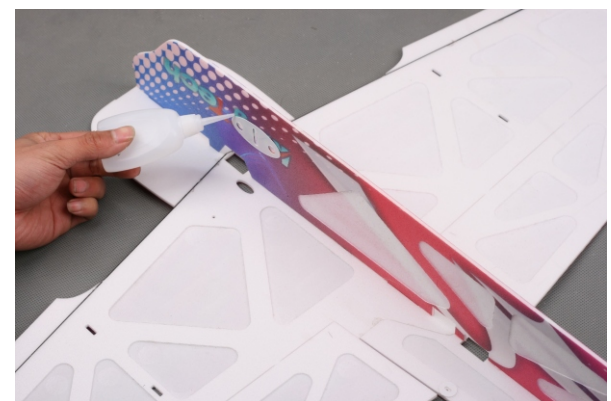
4. Use some foam-friendly C/A to glue the head of the horizontal fuselage to the wing, see above picture.



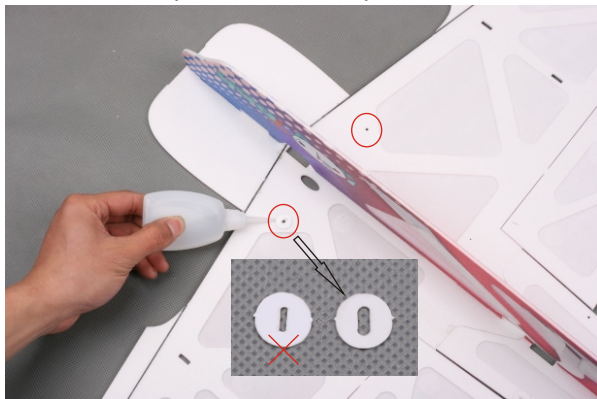
6. Install the round doublers to the pre-reserved holes (6 places) on the lower vertical fuselage.



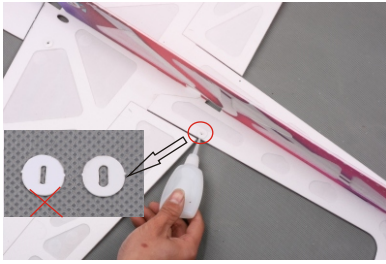
7. Fix the lower vertical fuselage to the horizontal fuselage with some foam-friendly C/A. Make sure they're vertical, no distortion.



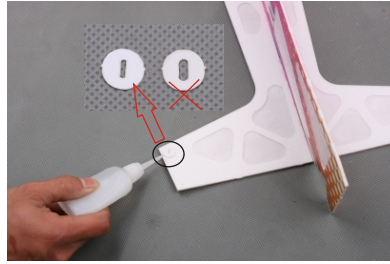
8. Install the landing gear reinforcements.



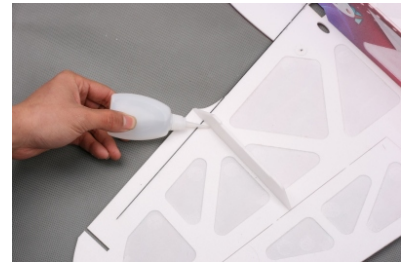
9. Install the round doublers to the pre-reserved holes (2 places) on the wing forehead to strengthen the joint of carbon fiber rod and foam.



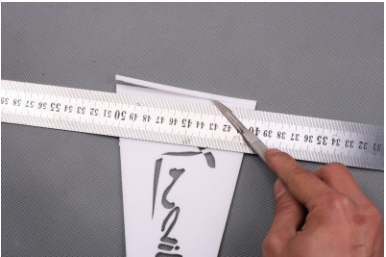
10. Install the round doublers to the pre-reserved holes (2 places) on the horizontal fuselage.



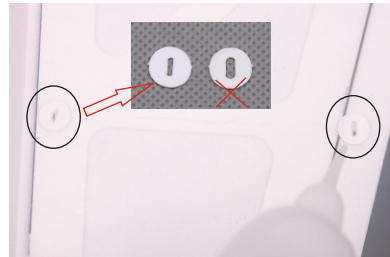
11. Install the round doublers to the pre-reserved holes (4 places) on the horizontal stabilizer.



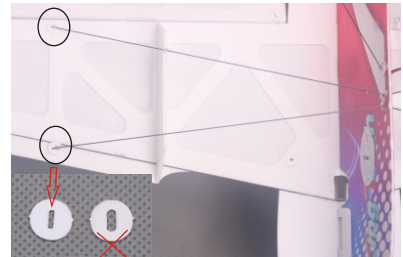
12. Insert the wing fence into the pre-reserved slot of the middle wing and apply some foam friendly C/A.



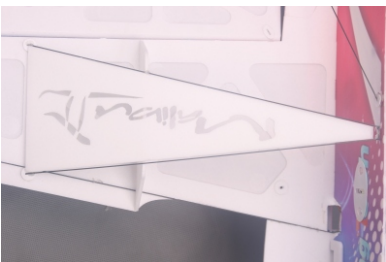
13. Bevel the wing strengthen foam.



14. Install the round doublers to the pre-reserved holes (4 places) on the wing. Please pay attention to the direction of the slot on the round doubler, see above picture for reference.



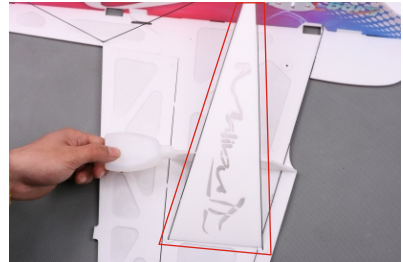
15. Install the carbon fiber rods (4pcs) to strengthen the wing as shown.



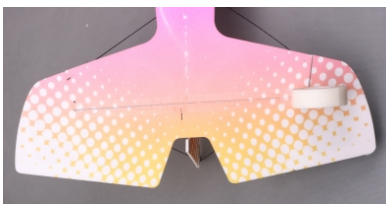
16. Place the wing strengthen foam between the two carbon fiber rods. Note: Please pay attention to the hollow-carved letters on the wing strengthen foam. Put the foam right side down.



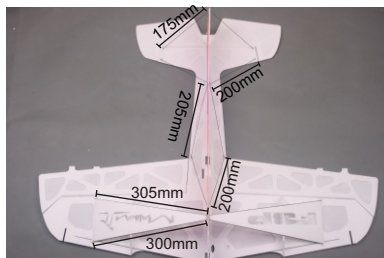
17. Apply some C/A to the round doubler joints.



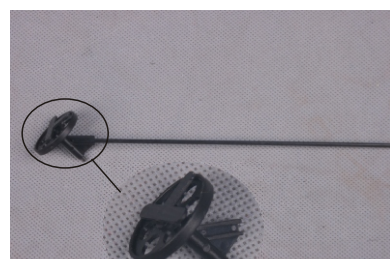
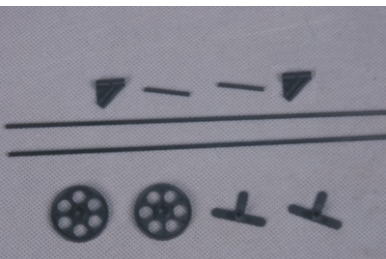
18. Apply some C/A to all the joints of carbon fiber rods and the wing strengthen foam.



19. Fix the elevator to the fuselage with 3M magic tape.



20. Install other carbon fiber rods. Finished carbon fiber rods assembly picture as shown.



21. Install the landing gears.



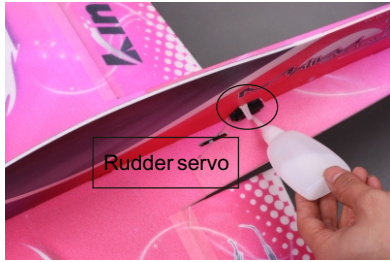
22. Key the upper vertical fuselage on the wing with some foam friendly C/A. Be vertical and no distortion.



23. Fix the rudder to the fuselage with 3M magic tape.



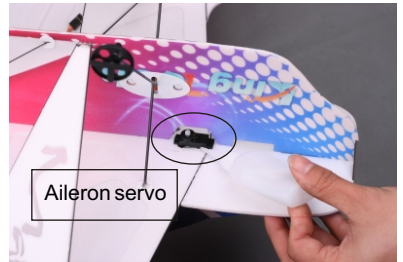
24. Install the motor mount.



Rudder servo



Elevator servo



Aileron servo

25. Install the servos.



26. Install the elevator and rudder control horns.



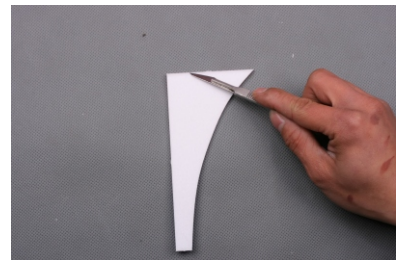
27. Bevel 45 degree the fuselage stringers.



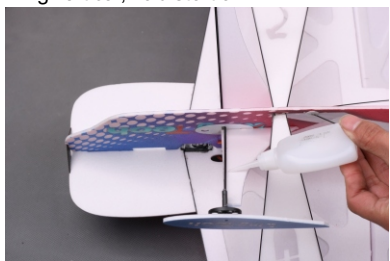
28. Fix the fuselage stringers to the fuselage. Note: Keep the fuselage and wing vertical, no distortion.



29. Fix the wheel covers to the wheels with some C/A.



30. Bevel the landing gear stringers.

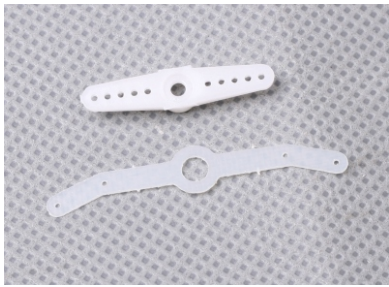


31. Fix the landing gear stringers with some C/A as shown.

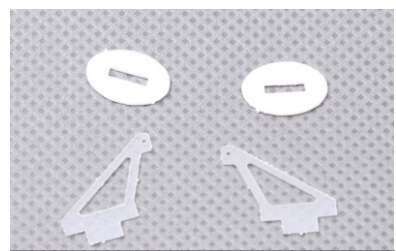


32. Glue 1pc straight fiber glass and 1pc original servo arms together. 2 kinds of fiber glass servo arms, straight servo arm (2pcs) and bended servo arm (1pc).

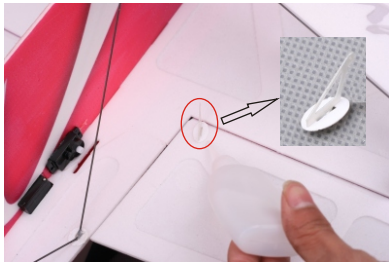




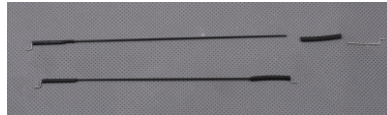
33. Glue 1pc bended fiber glass and 1pc original servo arms together. (for aileron)



34. Glue together the control horns and their backplates. (for aileron)



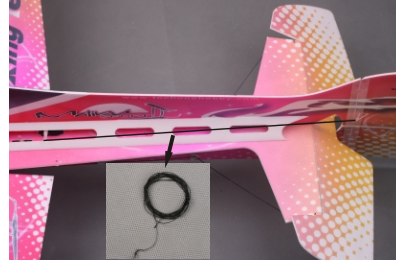
35. Insert the aileron control horns into the pre-reserved slots on the aileron and apply some C/A to fix it.



36. Push rod assembly: Put the longer end of the "Z" bend into the shrink tube and then overlap one end of the carbon fiber rod as shown in the picture, then use a heat gun to shrink the tube. (For aileron)



37. Install aileron carbon fiber rods.



38. Link the servos and rudder control horns with threads. Make sure the threads are taut and the two ends of the servo arms are tied with threads.



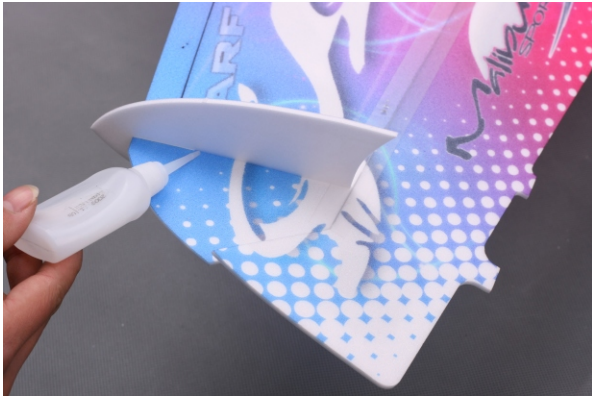
39. Link the servos and elevator control horns with threads. Make sure the threads are taut and the two ends of the servo arms are tied with threads.



40. Cut a 40mm long carbon fiber strip and a 20mm slot on the bottom vertical fuselage as shown. Insert the strip into the slot, then apply some C/A to fix it. The strip is used as a tail skid.



41. Install the motor.



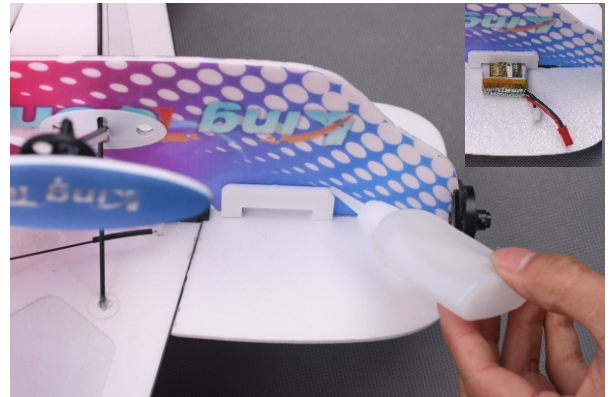
42. Insert the wing fence into the pre-reserved slot on the wing tip, then apply some foam friendly C/A to fix it.



43. Insert the aileron damping board into pre-reserved place, then apply some foam friendly C/A to fix it.



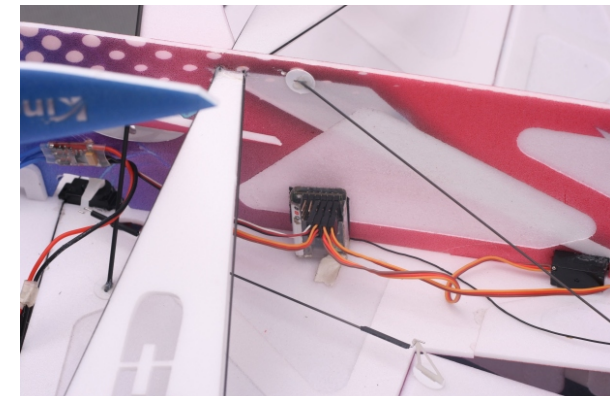
44. Install the rudder damping board. Same assembly as the aileron damping board.



45. Place the strengthened foam slices around the pre-reserved battery hole and use some foam friendly C/A to fix. Then insert the battery into the battery hole.



46. Install the ESC with velcro.



47. Install the receiver.



48. Install the propeller.



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 80mm (3.15") 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: (26.4mm) 1.04" Up and Down

Elevator: (24.8mm) 0.98" Up and Down

Rudder: (37.2mm) 1.46" Right and Left

3D Flying

Ailerons: (72.6mm) 2.86" Up and Down

Elevator: (74.4mm) 2.93" Up and Down

Rudder: (111.6mm) 4.40" 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



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