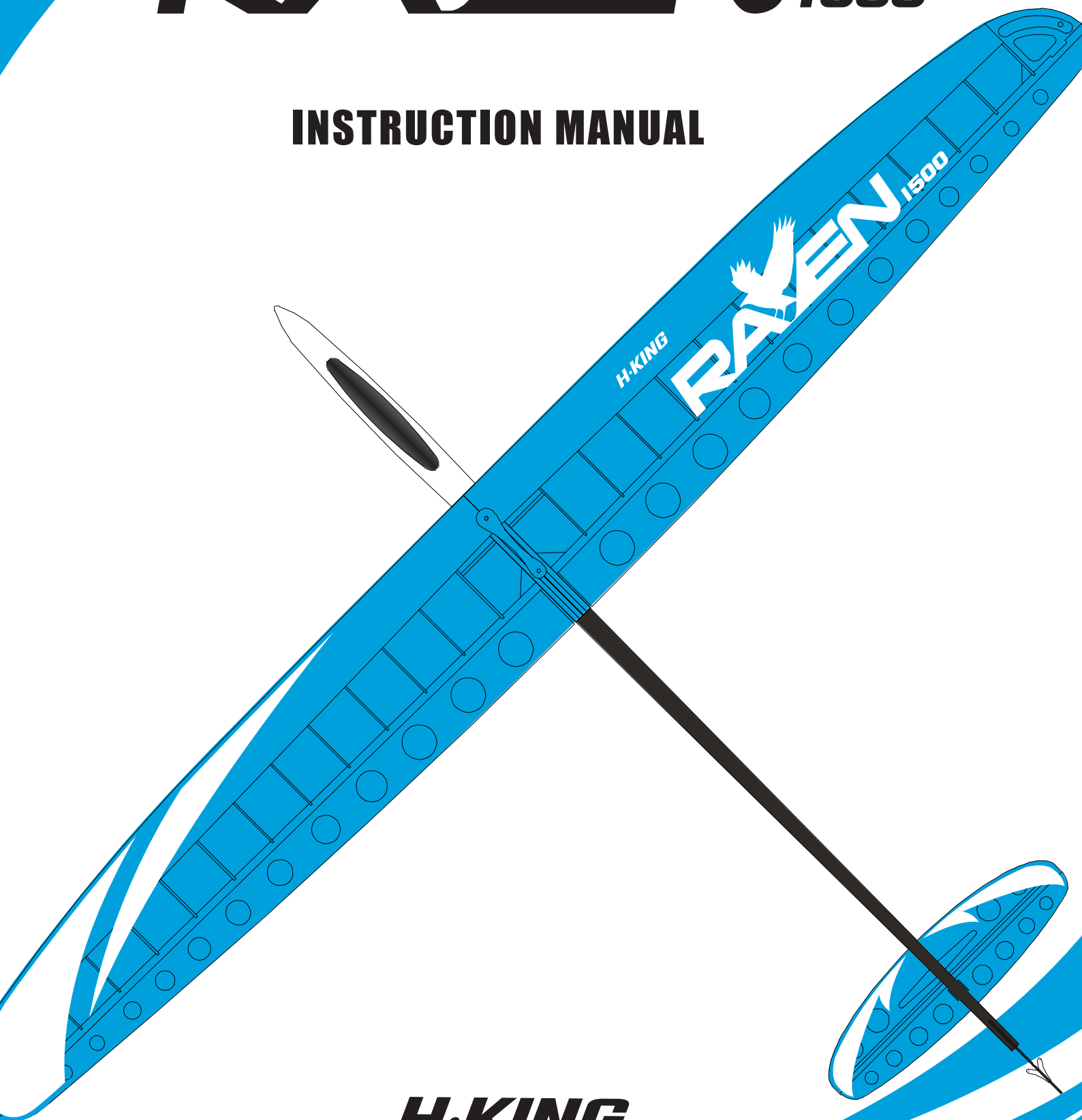




RAVEN *1500*

INSTRUCTION MANUAL



H-KING

WARNING!

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.

This is a sophisticated hobby product and NOT a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure operate this product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision.

This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in this manual prior to assembly, setup, or use, in order to operate correctly and avoid damage or serious injury.

SAFETY PRECAUTIONS AND WARNINGS

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others. This mode is controlled by a radio signal subject interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help avoid collisions injury.

Age Recommendation: Not for children under 14 years. This is not a toy.

- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model in the street in populated areas for any reason.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.
- Never lick or place any portion of your model in your mouth as it could cause serious injury or even death.

Hobbyking Model Friendly Reminder

Thank you for purchasing a HOBBYKING MODEL product. Our goal is to provide high quality products and offer great customer service. If you have any problems with your product or want to offer suggestions for improvements (such as plane design, packaging, building instructions, etc.) please feel free to contact us.

FEATURES:

- Excellent build quality
- Lightweight composite fuselage pod
- Preinstalled servos (elevator x 1pc & aileron x 2pcs)
- Pre-built balsa wing and tail surfaces
- Easy assembly (approx. 30mins)

SPECIFICATIONS:

- Wingspan : 1500mm
- Length : 1180mm
- Wing Area : 23.2 dm²
- Wing Loading : 12.5g/dm²
- Flight Weight : 290g

Required:

- Radio: 5ch and up with computer mixing
- Battery: 1S 500mAh Or 4.8V battery

KIT CONTENTS



1. Left main wing
2. Right main wing
3. Composite Fuselage Pod
4. Elevator
5. Rudder
6. Carbon Fiber Tail Boom (including empennage platform)
7. Spare parts package (Wing spar, wing mount reinforcement plate, launch column and carbon fiber control horns)
8. Hardware accessory package. (Push rod, control surface cable wires, main wing mounting holes shims, torsion springs, screws and copper tubes)

Replacement parts for the Raven 1500 are available using the order numbers in the spare parts list follows. The fastest, most economical service can be provided by www.hobbyking.com

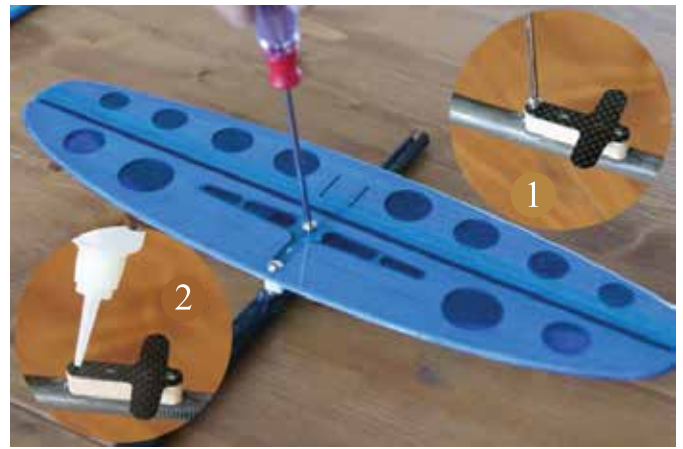
KIT INSPECTION

Before starting to build, inspect the parts to make sure they are acceptable quality. If any parts are missing or are not in good shape or acceptable quality, or if you need assistance with setup and assembly, please feel free to contact Hobbyking. Please write down the name of the parts when you are reporting defective or missing of them.

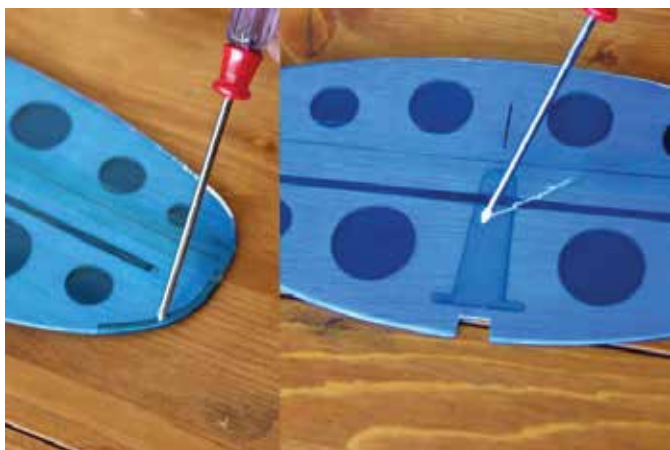
ASSEMBLE THE PLANE



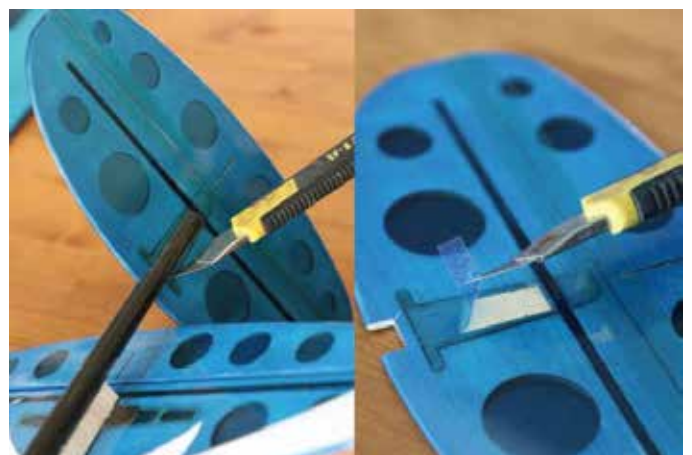
1. Remove the paint from the back of the nose.



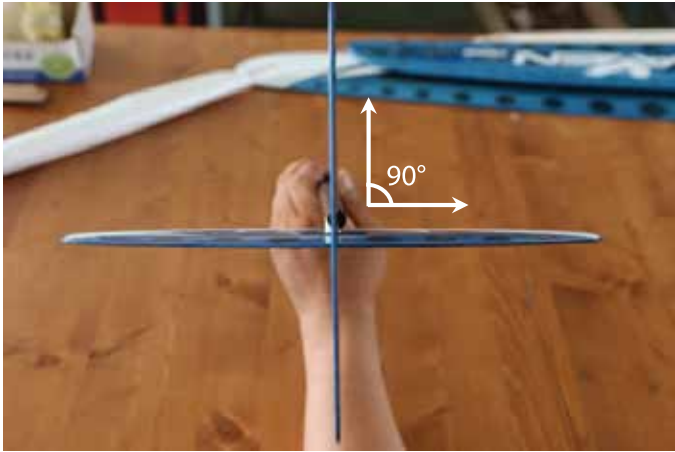
2. First use a screw driver to drive the tapping screw in place as shown (Pic.1) Then unscrew it and apply CA glue inside the hole and let it dry. (Pic.2) This helps to increase the strength of the mounting hole.



3. The left picture shows the lower end of rudder. The right picture shows the position where we should remove the covering.



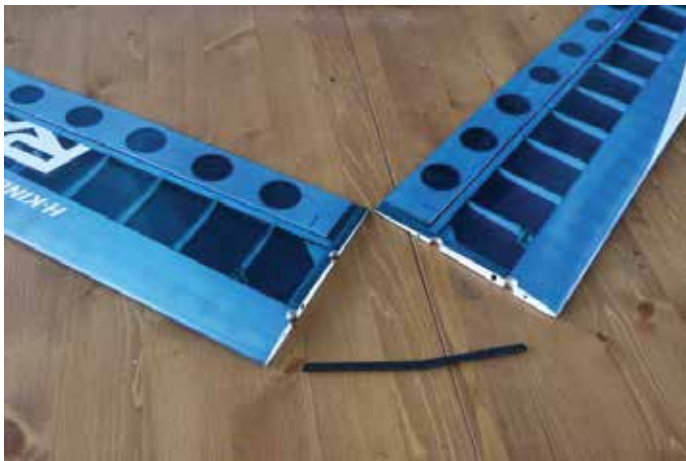
4. Put the rudder into the tail tube. Cut the covering along the edge of the tail pipe and remove it.



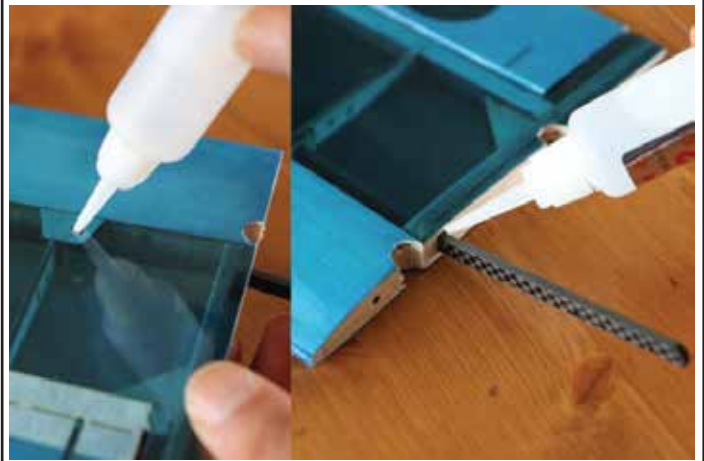
5. Ensure the rudder and elevator should be installed straight and level.



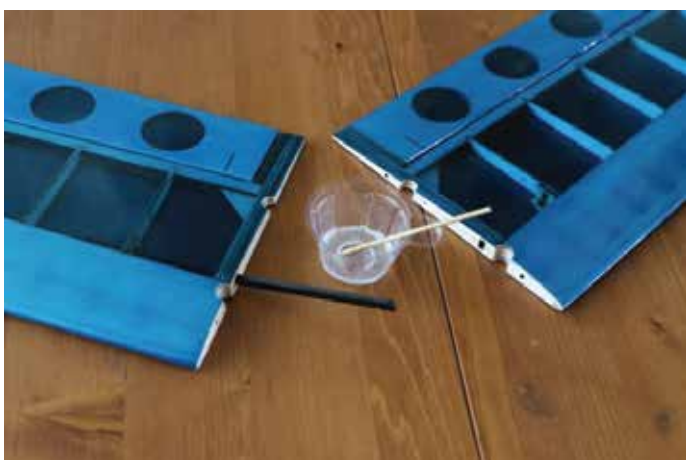
6. Glue the rudder to the tail boom securely with CA as shown.



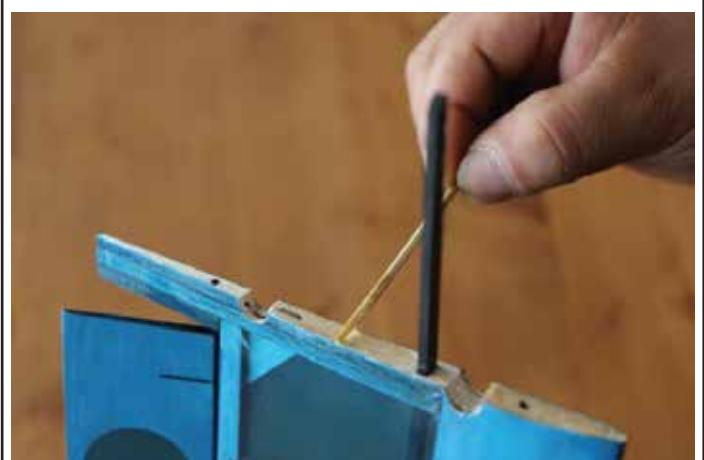
7. Main wing and the carbon fiber wing spar.



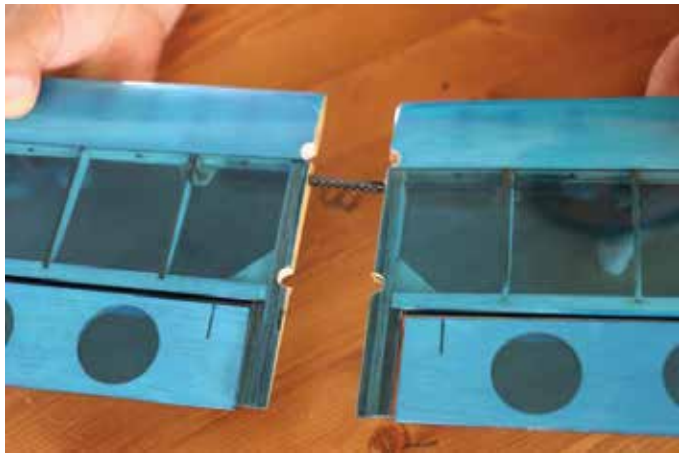
8. First insert the carbon spar, then apply glue into the hole as shown.



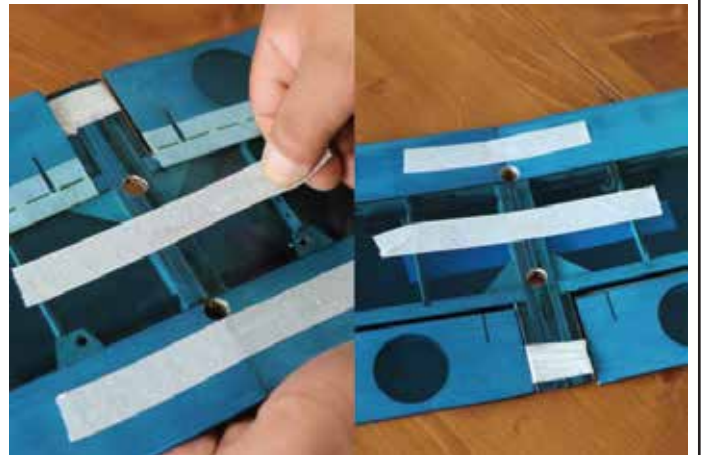
9. Apply the main wings with epoxy resin.



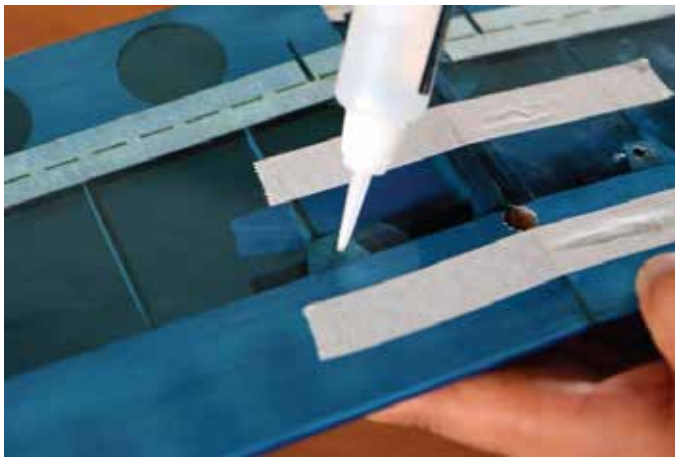
10. Apply the epoxy resin to the wing root ribs evenly.



11. Stick the left and right main wing panels together.



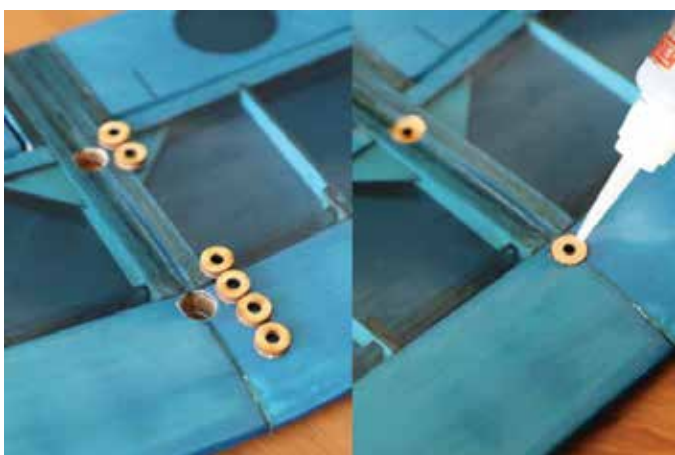
12. Use paper tape to pull two wings together and wait for the glue to dry (over 24 hours)



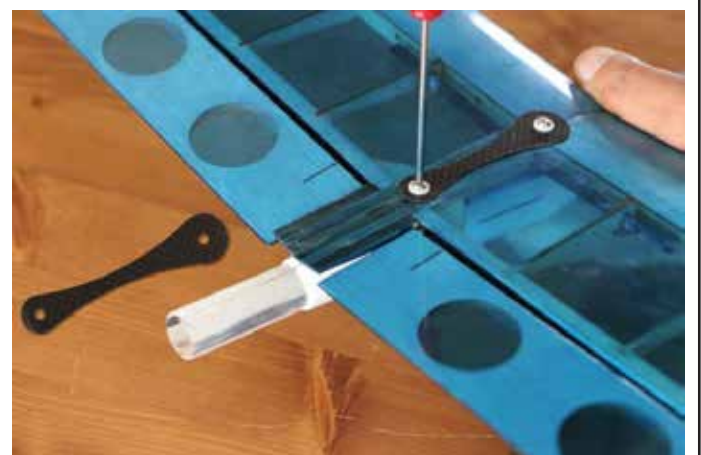
13. On the other side of the wing, apply glue into the hole as shown.



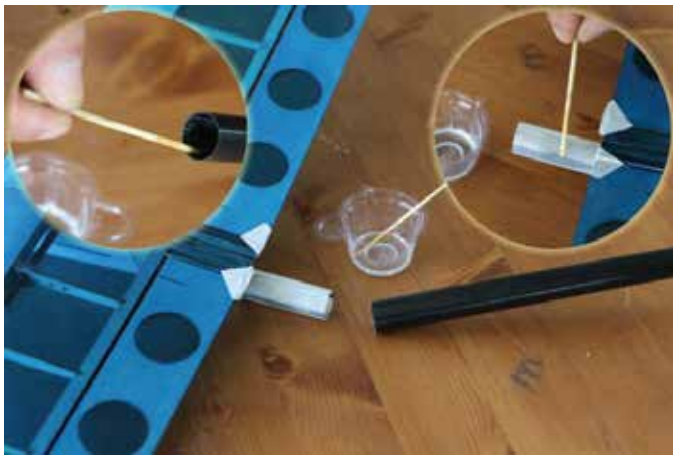
14. Install the shims after the glue has been completely cured.



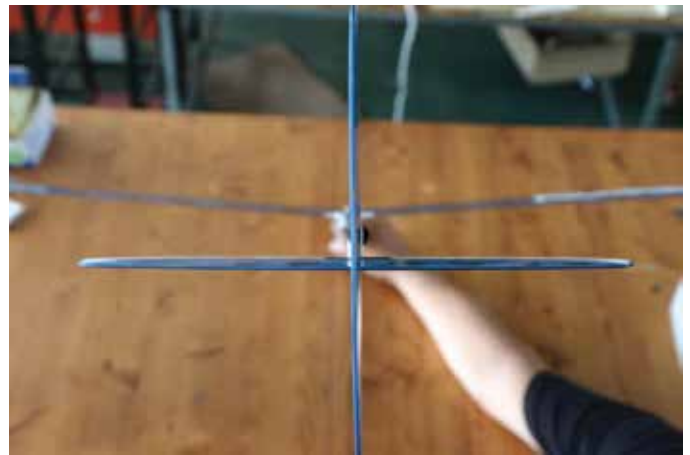
15. Trial fit the provided shims on the front and rear mounting holes onto the wing. If you are satisfied with the fit, glue it to the wing as shown.



16. Install the wing onto the fuselage. Add the supplied carbon reinforcement plate in place as shown and secure the wing with wing mounting screws.



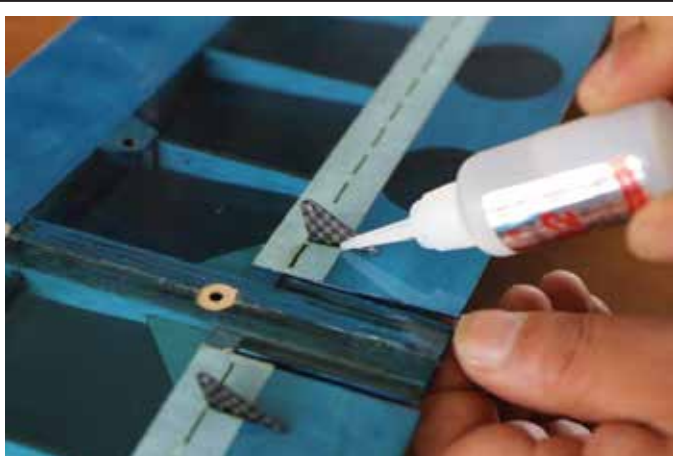
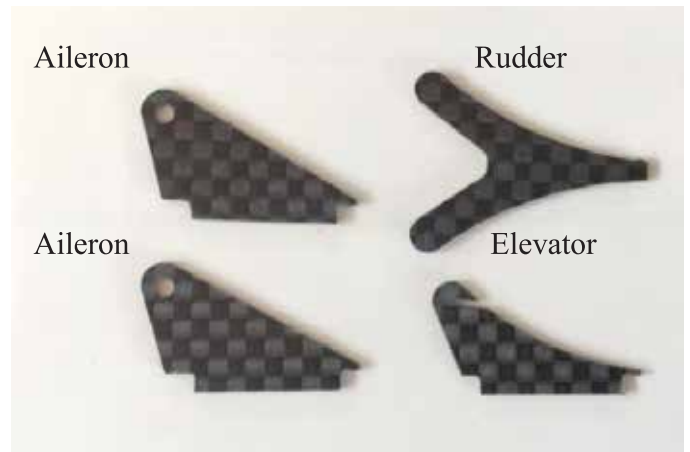
17. Apply enough epoxy glue on the fuselage pod as shown. Assemble the composite fuselage pod and carbon tail boom together.



18. Make sure the empennage is true and level which corresponds to the main wing.



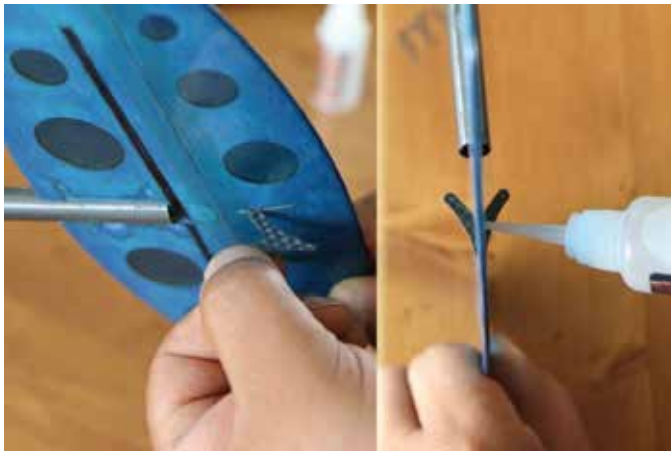
19. Once satisfied with the tail boom alignment, use paper tape to secure the tail boom in place and wait for the glue to dry.



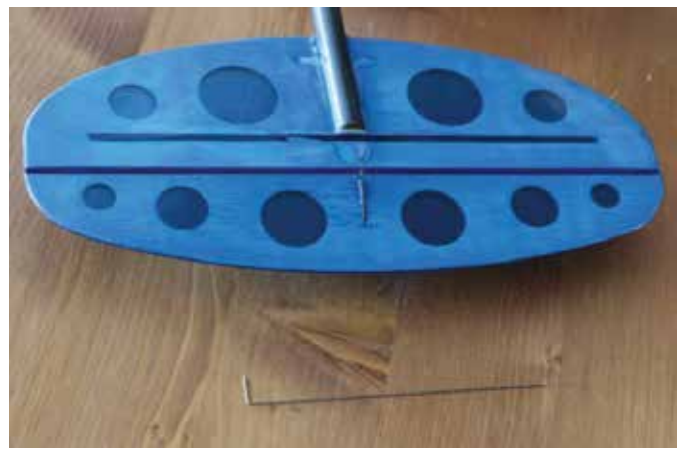
20. Glue the aileron horns as shown.



21. Glue the elevator horn as shown.



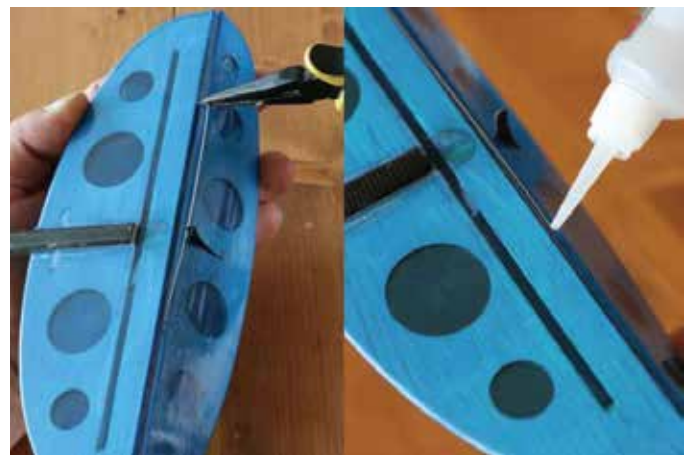
22. Glue the rudder horn as shown. Please pay attention to the direction of the horn.



23. Install the torsion springs on the rudder.



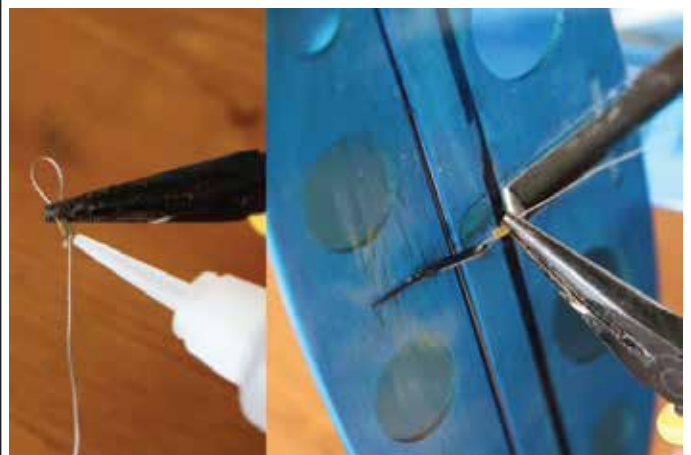
24. Insert and glue one end of the torsion spring into the rudder hinge slots as shown.



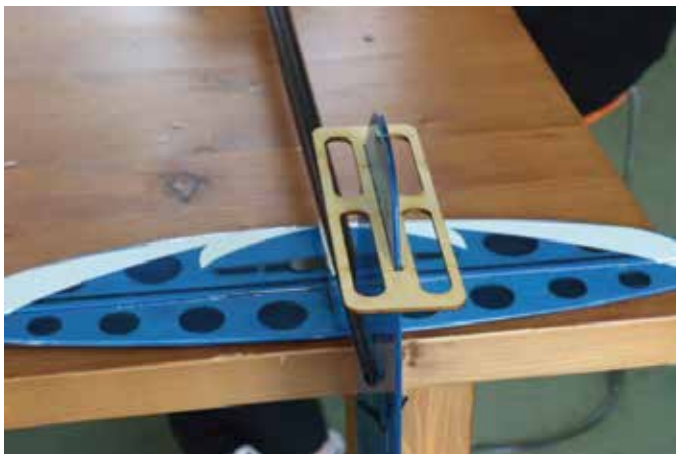
25. Insert and glue the other end of the torsion spring into the hinge slot as shown.



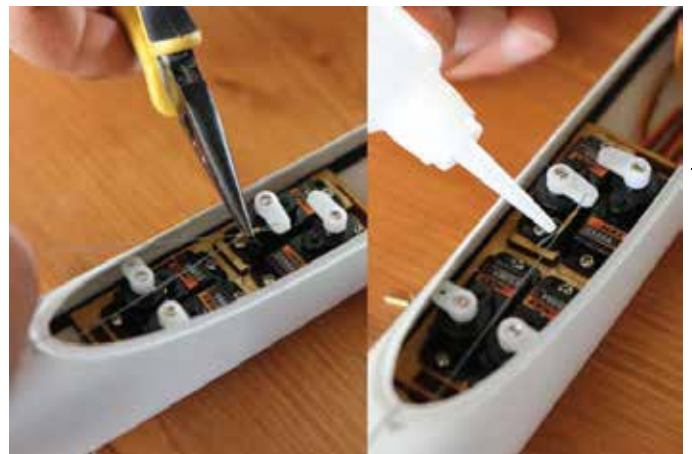
26. Use the same method as shown above to install the torsion spring on the elevator.



27. First thread the brass tubes on the wire and loop it through the holes on the control horn and thread it back to the brass tube again and crimp it with pliers as shown. Put a drop of CA on the brass tube to secure the wire in place.



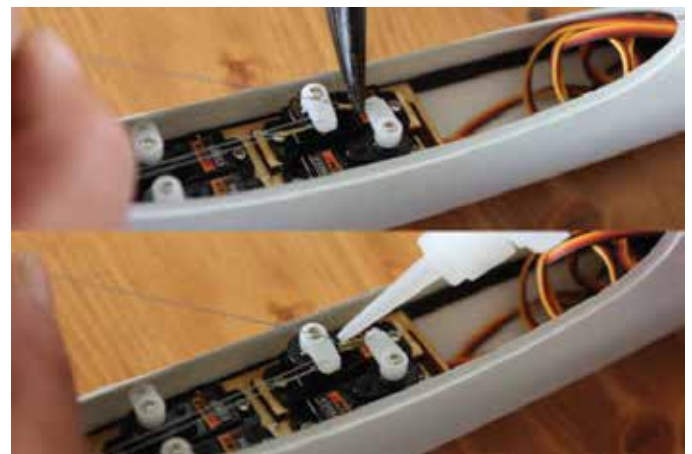
28. Put the control surface alignment board on the fin as shown.



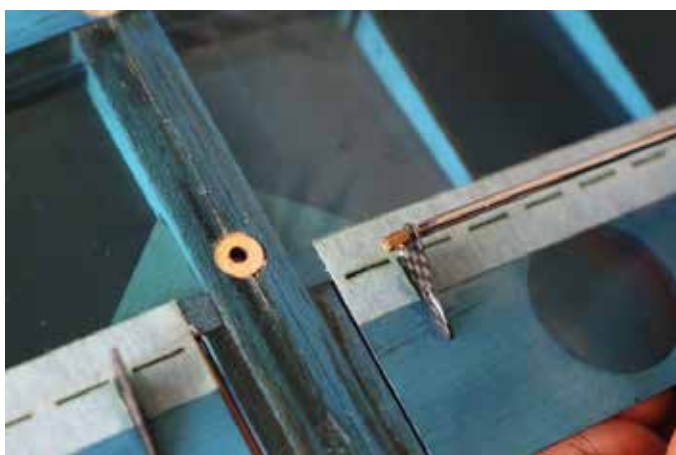
29. Make sure the servo arm is in 90 degree to the servo case. Stretch the cable wire through a hole on the servo horn. Tighten the wires and then crimp the supplied brass insert with pliers as shown.



30. Put the control surface alignment board on the elevator as shown.



31. Make sure the servo arm is in 90 degree to the servo case. Stretch the cable wire through a hole on the servo horn. Tighten the wires and then crimp the supplied brass insert with pliers as shown.



32. Install pushrod adjuster on aileron horns.



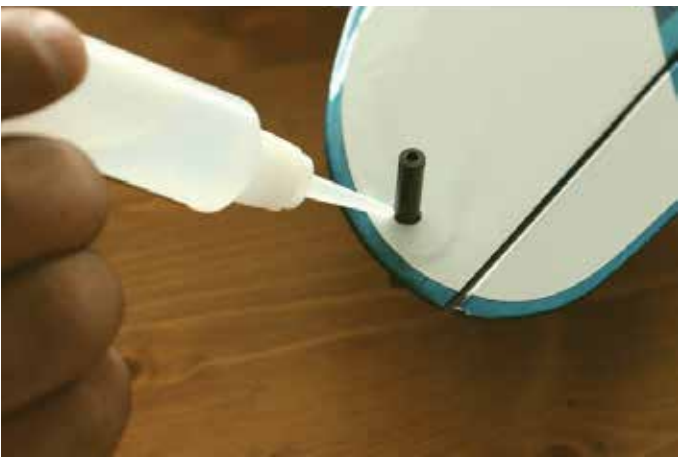
33. Ensure the servo horns are perpendicular to the servo cases, install the aileron push rod through the openings on the fuselage and attach it to the aileron servo horns.



34. Install the aileron pushrod to the pushrod adjuster as shown.



35. It depends on your habit that you always use your left or right hands for launching. Remove the covering film from the launch column's position on either left or right wing.



36. Apply CA glue to the hand launch column.



37. Done!

FIND A SUITABLE FLYING SITE

Find a flying site clear of buildings, trees, power lines and other obstructions. Never fly near people especially children who can wander unpredictably.

PERFORM THE RANGE CHECK OF YOUR PLANE

As a precaution an operation ground range test should be performed before the first flight each time you go out. Performing a range test is a good way to detect problems that could cause loss of control such as low batteries, defective or damaged radio components or radio interference. This usually requires an assistant and should be done at the actual flying site you will be using.

First turn on the transmitter, and then install a fully-charged battery into the fuselage. Connect the battery and install the hatch.

Note: Please refer to your Transmitter Manual that came with your radio control system to perform a ground range check. If the controls are not working correctly or if anything seems wrong, do not fly the model until you correct the problem. Make certain all the servo wires are securely connected to the receiver and the transmitter batteries have a good connection.

Find a flying site clear of buildings, trees, power lines and other obstructions. Never fly near people especially children who can wander unpredictably.

First Flight:

You need to stand parallel to the wing direction

Step 1. Your right index finger and middle finger should be wrapped around the peg.

Step 2. Stand with you left shoulder into the wind and the right wing tip on the ground.

Step 3. Start rotating to the left keeping the plane flat and your arm extended.

Step 4. On the second half of the rotation, this is the section which is most responsible for a good high launch. Don't use your arm to swing it too hard in this section. Remember, just let the rotation of your torso to speed the plane up.

Step 5. By this time in the launch, the plane will be trying to climb on its own, Just release your fingers and let the plane fly out of your hand. Remember, just release it directly into wind direction.

Step 6. Catch your balance after the moment you have released the plane. Hold the radio firmly in your hands and then start to enjoy your DLG flying for the day.

For the more information, please visit our website:

www.hobbyking.com