3 D H O B B Y S H O P . C O M

Assembly Manual- 62” OSIRIS

Thank you for purchasing this 3DHobbyShop ARF RC aircraft. If you have any issues, questions, concerns or problems during assembly, please contact our tech department at: Info@3DHobbyShop.com or 1-830-990-6978 10am-5pm Central M-F

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.

IMPORTANT NOTE – We strive to provide the absolute best-quality ARF aircraft on the planet. However, the ultimate success or failure of this aircraft is dependent upon proper assembly by you. If you have questions about an assembly step, please contact us, or read the assembly thread for your airplane on RCGroups.com before proceeding. It is always better to slow down and be sure of your assembly than to rush through it and make a mistake which can cause a crash.

SAFETY in Flying

SAFETY NOTICE: 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 near overhead power or utility lines. If your airplane ever becomes stuck in a line or a tree DO NOT attempt to retrieve it yourself. Contact the authorities for assistance in retrieving your aircraft. Power lines are DANGEROUS and falls from ladders and trees CAN KILL!

Never fly too close to yourself or spectators. Spinning propellers are DANGEROUS!

Never run your motor inside a house or building with the propeller attached – Remove the prop for safety.

Always fly within your control.

Always follow manufacturer’s instructions for your radio system.

Always obtain proper insurance before flying – contact the AMA at www.modelaircraft.org

REQUIRED ITEMS

CA Glue – Thin and Thick
Epoxy – 30 minute
Hobby Knife
Small Phillips Screwdriver
Set Metric Allen Wrenches
Scissors
Small Pliers
Masking tape
Drill and drill bits
Optional – Heat gun and covering iron
Threadlocker (Blue Loctite)
CA debonder

Assembly Instructions – Read completely before starting assembly!

UNPACK

Unpack your airplane and examine the components. Check for damage of any kind. If you have damage, please contact 3DHobbyShop to discuss.

WRINKLES

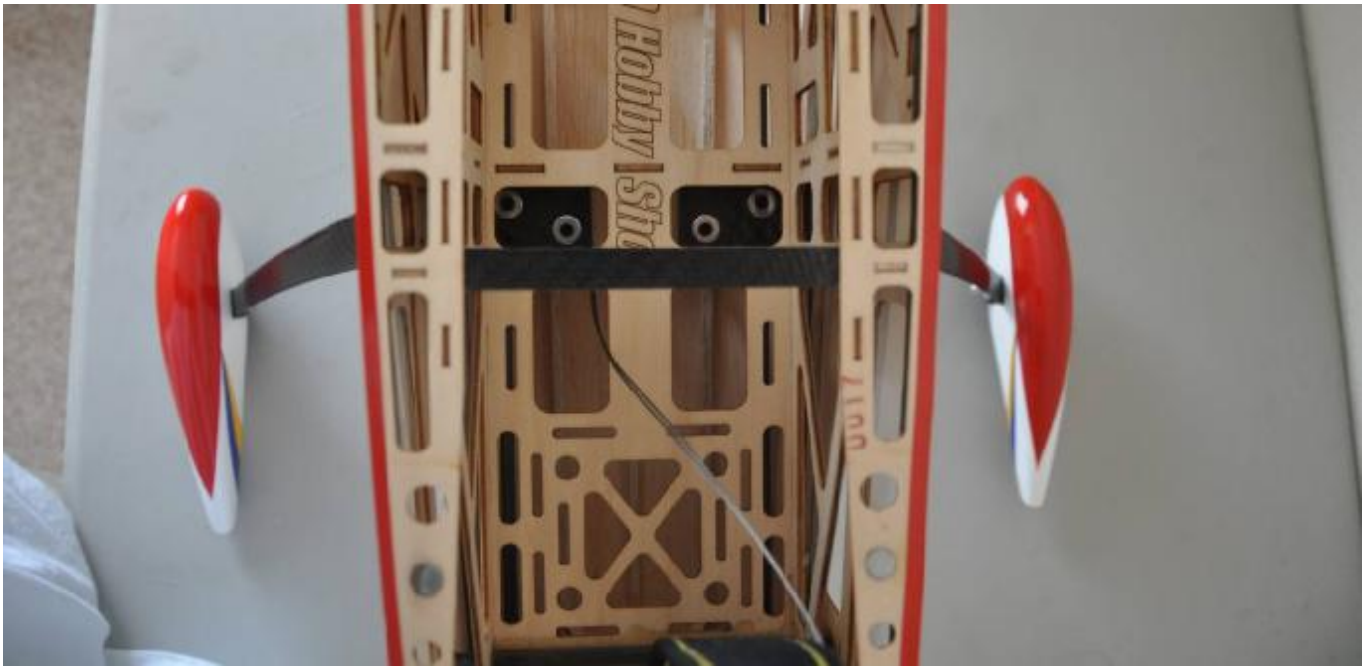
Your airplane was packed in plastic at the factory without any wrinkles in the covering. You may notice some wrinkles now; more likely, you will notice a few in a day or two or the first time you take the plane out to the flying field. These wrinkles are the result of wood shrinkage and/or expansion. Balsa wood changes size and shape slightly as it is exposed to varying humidity in the air. This is a natural property of balsa wood. As your airplane adjusts to the weather in your part of the world, wrinkles may appear and disappear. Wrinkles may be removed with the gentle application of heat to the covering material on your airplane. The best tools to use are a heat gun and covering iron. Apply the heat gently: the covering material will shrink as you apply the heat, and this will remove the wrinkles. BE CAREFUL! Too much heat applied too quickly can damage the covering, either by causing it to pull away from the wood at seams and corners or even by melting it. The covering will shrink at low temperature with patient application of heat. **Wrinkles in the covering DO NOT affect flight performance.** If you must shrink on a color-seam, use the iron and go slowly and carefully to avoid any pulling or lifting at the seam.

Remove the canopy before attempting to use heat on your covering! The canopy is made of thermo-activated plastic and WILL deform with the application of heat. Do not apply heat to the canopy.

PAINT

If you need to clean your airplane, we recommend using a damp towel. The paint used on the canopy and cowl is not safe for all cleaners. In particular, DO NOT use alcohol on these parts, it will remove the paint.

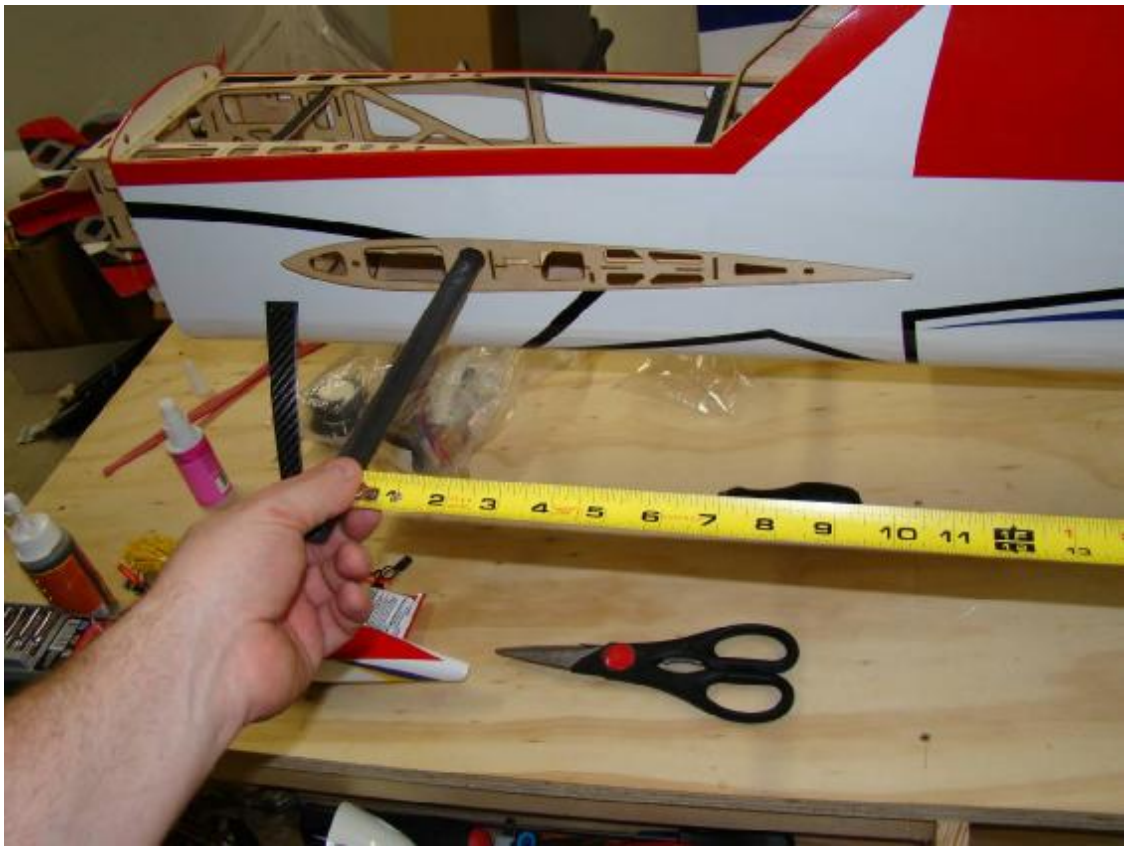
The Osiris main landing gear are pre-assembled. Insert each gear into the pre-cut slot in the side of the fuselage and attach with QTY 4 4-40 screws and washers. Use blue Loctite or similar threadlocker on these screws.



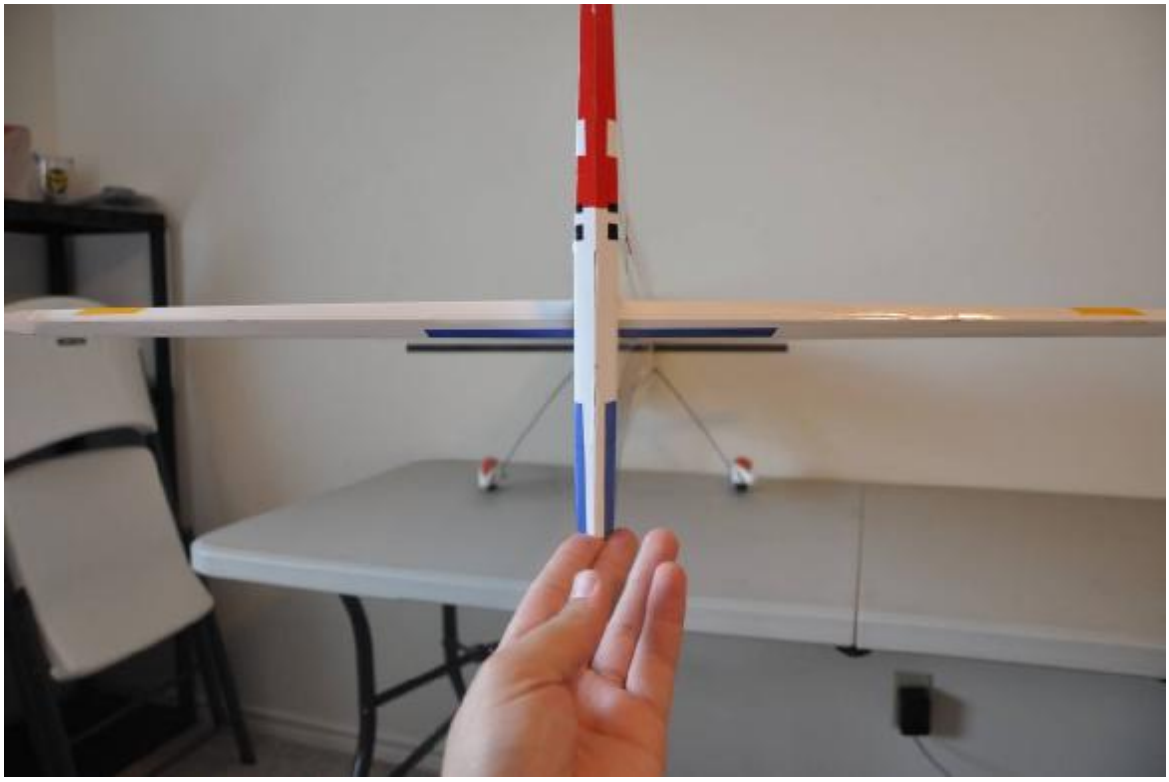
Remove covering over horizontal stabilizer opening and the single elevator servo opening in fuselage.

Insert horizontal stabilizer into fuselage cutout. Do not glue at this time. NOTE: Do not remove any covering from the horizontal stabilizer. Align side-to-side as shown.

Install carbon wing tube into fuselage and measure on both sides form tube to stabilizer, equalize these measurements.

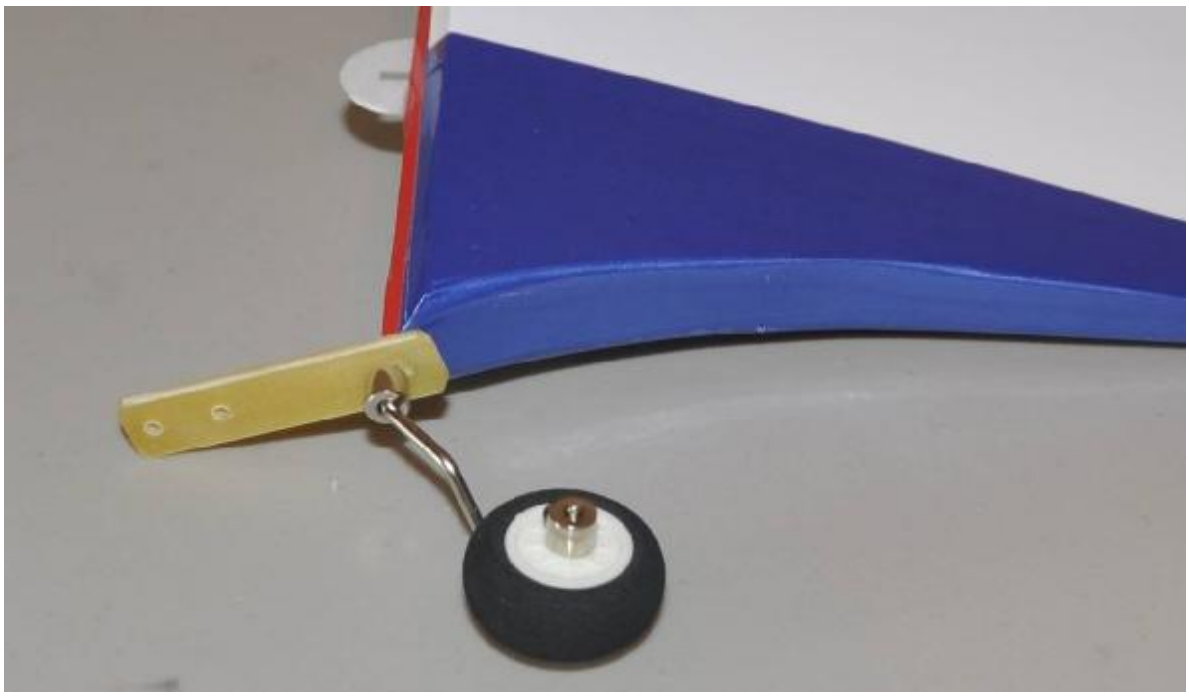


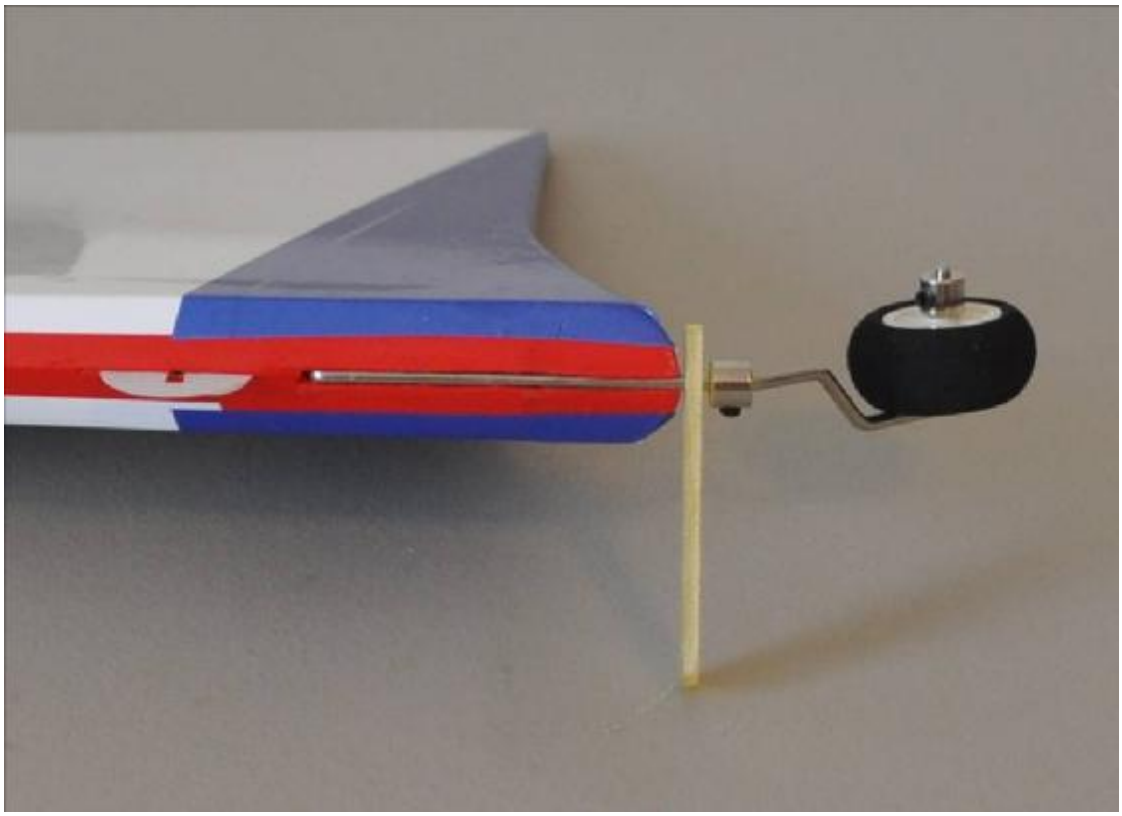
Sight from the stabilizer forward to the wing tube as shown. If you need to correct the position of the stabilizer, add shims of card stock on the bottom of the stabilizer on one side.



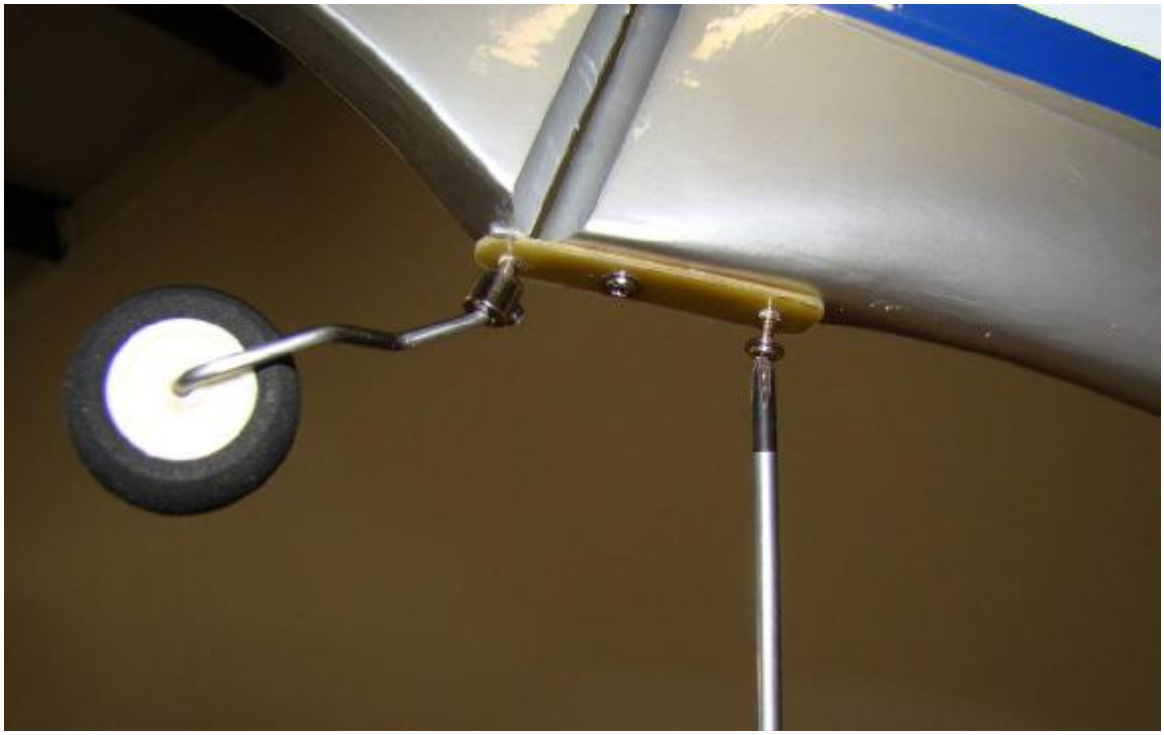
Once stabilizer is perfectly located, drip a generous amount of thin CA glue into the stabilizer-fuselage joint on top and bottom. If you drip any CA onto your covering, use CA debonder and a towel to remove unwanted glue from the covering material.

Assemble tailwheel bracket onto tailwheel wire. Drill hole just beneath bottom rudder hinge into rudder. Install tailwheel wire into rudder as shown with 30 minute epoxy, allow to cure. Install wheel and collar onto tailwheel wire.

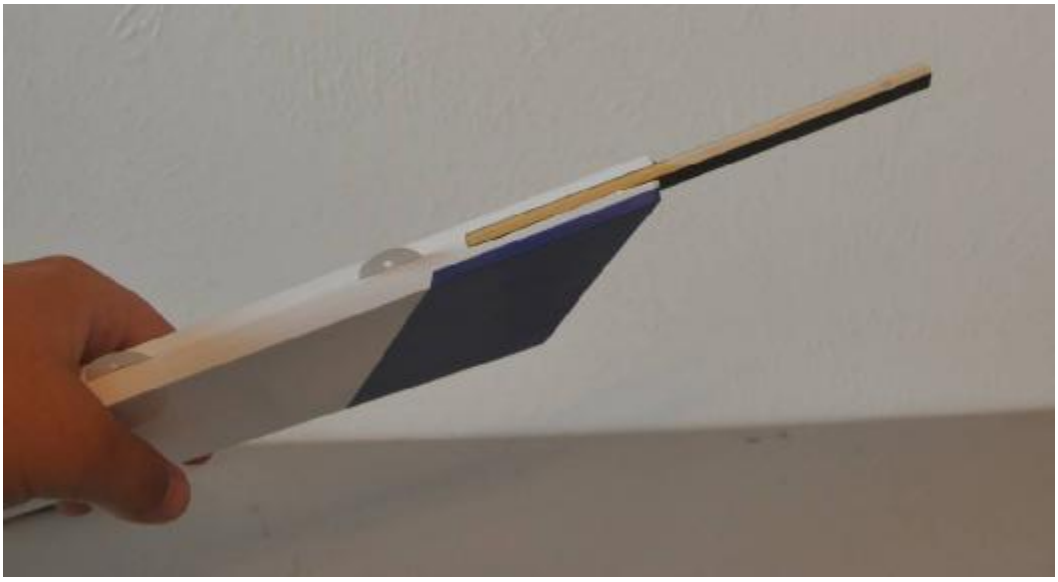




Install rudder onto fuselage, using two large drops of thin CA glue per hinge. Install tailwheel bracket onto fuselage with QTY 2 woodscrews.



Glue elevator joiner into one elevator half with thick CA or epoxy glue. Allow to cure.



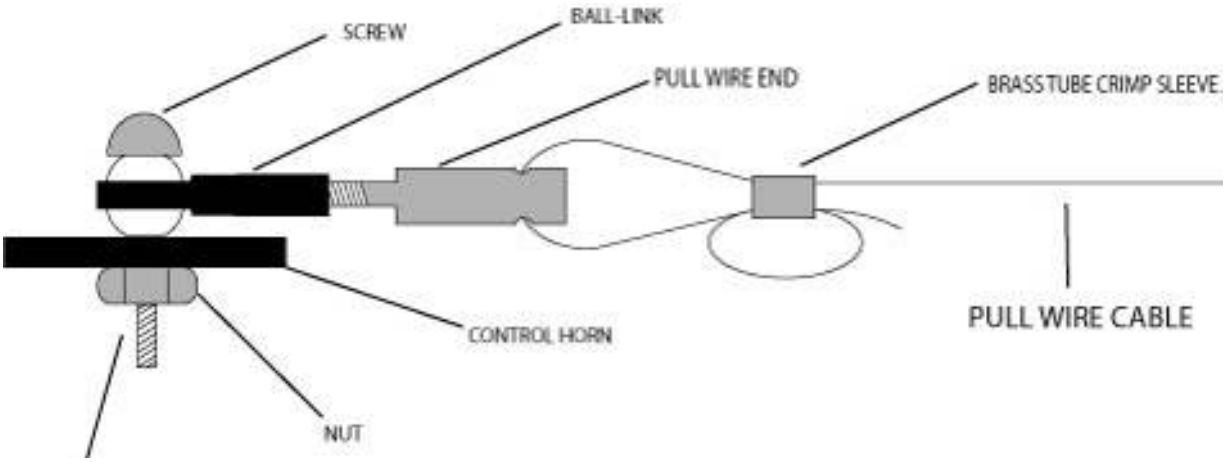
Insert elevator half with joiner into stabilizer, install with two large drops of thin CA glue on each hinge. Trail-fit second elevator half with no glue. Check for alignment between elevator halves. Correct joiner slot in second elevator as necessary.

Install second elevator half, using thick CA or epoxy on joiner and two drops of thin CA on each hinge.

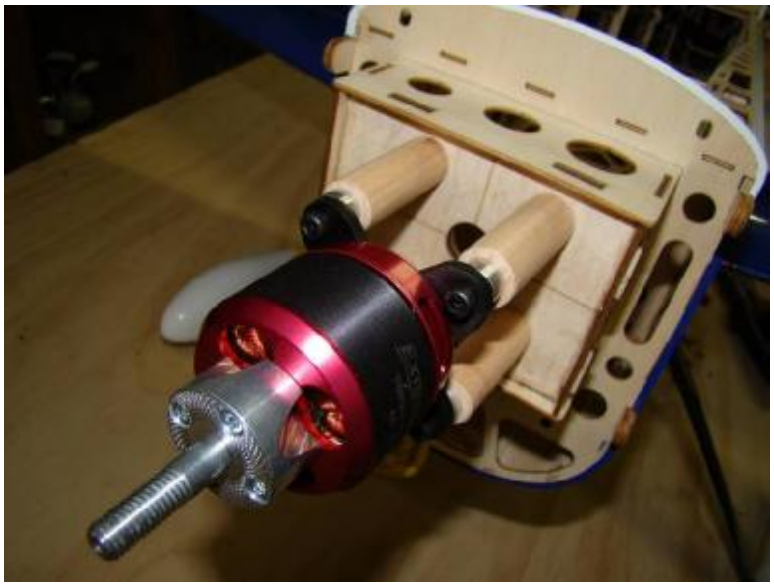
Assemble elevator pushrod from parts shown, including carbon tube stiffener.

Install elevator servo, running extension through fuselage to front. Be sure to use your favorite kind of servo plug locking device on the servo plug to prevent the extensions from coming unplugged in flight. Install elevator pushrod as shown, bolting securely to servo arm and control horns with allen screw/locking nut.

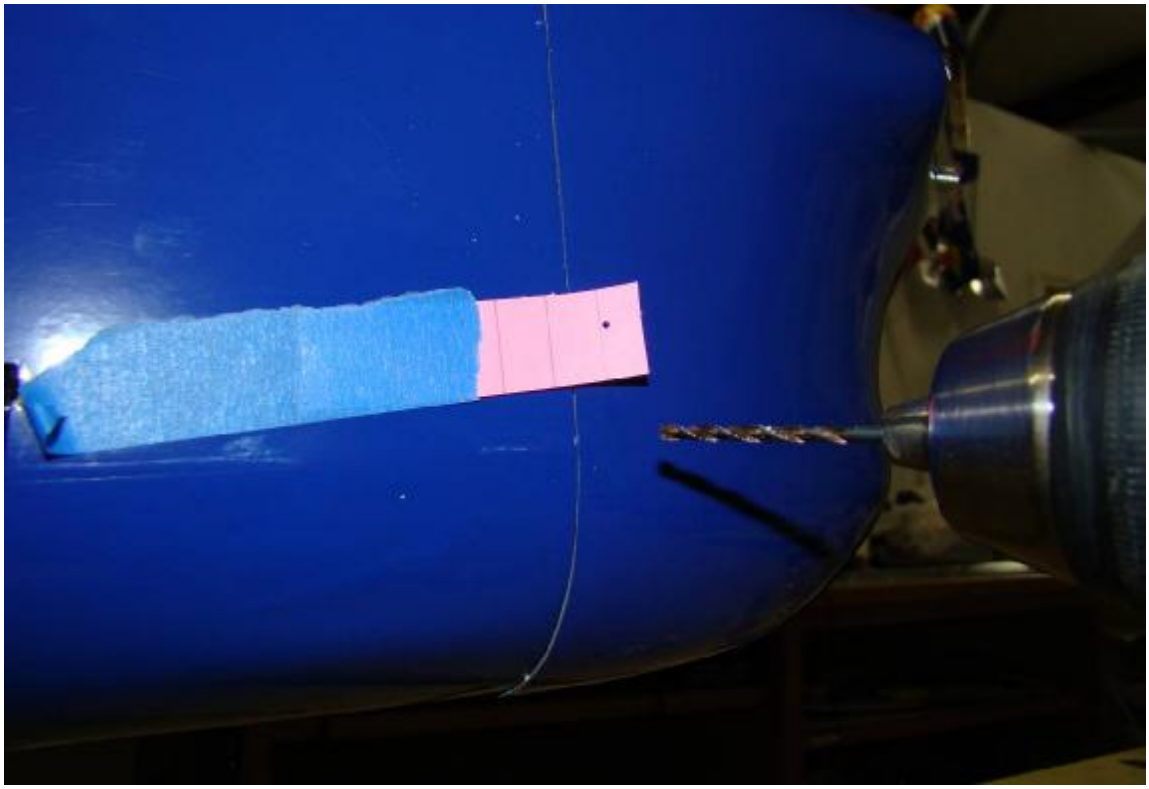
Install the rudder servo as shown. Assemble all 4 ends of the pull-pull cables as shown in the diagram. Make sure the cables are snug, but not “banjo-string” tight. The cables cross inside the fuselage to form an “X” shape.



Mount your brushless motor using 4 long 4mm screws and 4 appropriate standoffs. Note that 3 different lengths of standoff are included in the kit, as well as two lengths of 4mm screw. The standoffs are wood and can be sanded of trimmed as needed. Use blue loctite on 4mm screws.

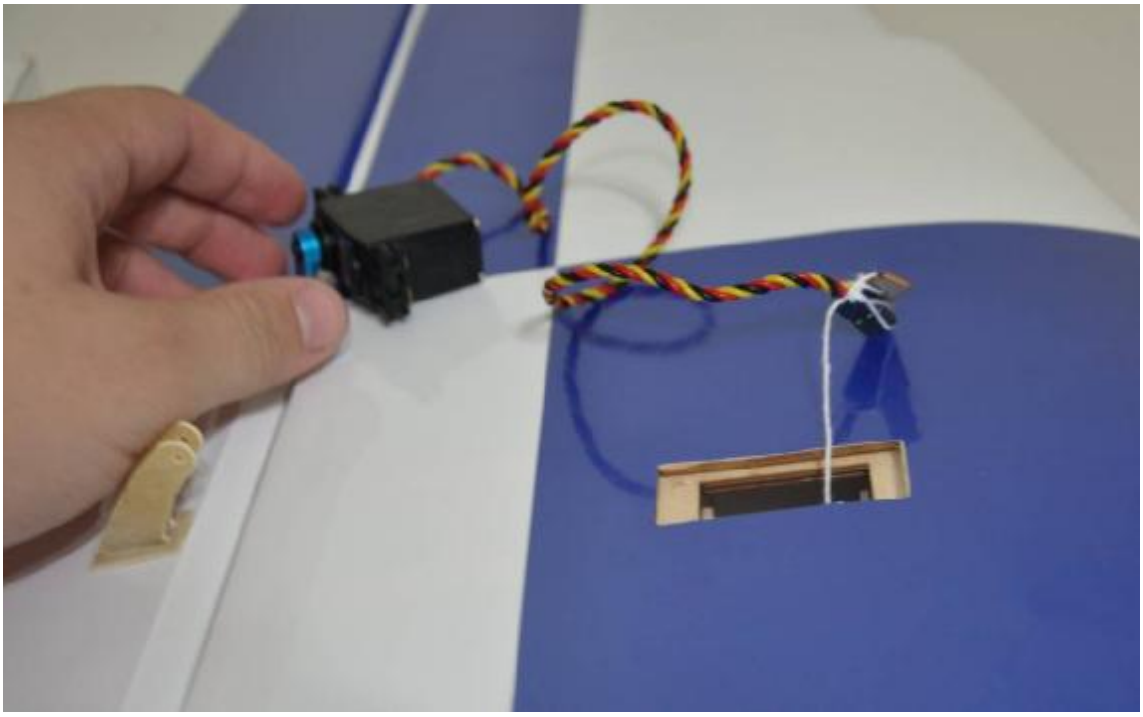


The cowl mounts using four screws through the four plywood tabs at the front of the fuselage. To make the correct holes in the cowl and tabs, tape a paper strip over the tab as shown, then install the cowl, the paper strip will indicate the correct position of the tab for drilling.



Glue aileron hinges, using two drops of thin CA per hinge.

Remove covering over aileron servo opening in wing, and use the installed pull-string to pull the aileron servo wire through the wing.



Install servo as shown, assemble aileron pushrods as shown, use allen screws with locknuts to attach ball links to servo arm and control horn.

Mount receiver to receiver tray immediately in front of wing spar tube.

Use included Velcro selection to secure lipo battery to battery tray.

SETUP NOTES:

Recommended control throws.

Elevator Low rate 12 degrees up and down
Mid rate 17 degrees up and down
High rate 22 degrees up and down

Aileron Low rate 15 degrees up and down
Mid rate 20 degrees up and down
High rate 25 degrees up and down

Rudder Low rate 25 degrees right and left
Mid rate 30 degrees right and left
High rate 35 degrees right and left

NOTE: Fly your initial flights on low rate. You may desire some exponential on high rate to tune the feel to your personal preference.

Center of Gravity:

Allowable range 6.5 inches – 7.25 inches

Measuered from leading edge of wing at root, where the wing meets the fuselage.

Recommended CG for competition flight: 7.0 inches

Recommended components:

Motor Hacker A50-12S
ESC Castle ICE 100 or Phoenix HV-85
BEC Castle BEC pro or Castle BEC 10A
Aileron and elevator servo Hitec Hs-5245MG
Rudder servo Hitec 7985MG
APC 15x10E or 15x12E prop

Before flight:

Make sure wing screws are installed and secure.

Double check all ball-link screws and locknuts.

Make sure canopy latch is fully engaged.

Balance prop accurately.

A full selection of spare and repair parts for your Osiris is available at
www.3DHobbyShop.com

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