de Havilland

TIGER MOTH

INSTRUCTION MANUAL

SPECIFICATIONS

Wingspan: 30 in [760mm]
Wing Area: 282 in^2 [18.2 dm^2]
Wing Loading: 4.1 oz/ft^2 [13 g/dm^2]
Length: 24.5 in [620mm]
Weight: 8.1 oz [230 g]
Radio: 3-channel, 2-micro servos
Motor: RimFire™ 250 (28-13-1750), 7.4V (2S) 300mAh LiPo, SS-8 ESC

WARRANTY

Great Planes® Model Manufacturing Co. guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. **In no case shall Great Planes' liability exceed the original cost of the purchased kit.** Further, Great Planes reserves the right to change or modify this warranty without notice.

In that Great Planes has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

To make a warranty claim send the defective part or item to Hobby Services at the address below:

Hobby Services
3002 N. Apollo Dr. Suite 1
Champaign IL 61822 USA

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

ElectriFly™ by Great Planes

Champaign, Illinois
(217) 398-8970, Ext 5
airsupport@greatplanes.com

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INTRODUCTION

Thank you for purchasing the ElectriFly Tiger Moth Slow Flyer EP ARF. The Tiger Moth was intended for indoor flying, but is also fun to fly outdoors on evenings or in the morning when the winds are still calm.

For the latest technical updates or manual corrections to the Tiger Moth visit the ElectriFly web site at www.ElectriFly.com. Open the “Airplanes” link, then select the ElectriFly Tiger Moth ARF. If there is new technical information or changes to this model a “tech notice” box will appear in the upper left corner of the page.

Academy of Model Aeronautics

If you are not already a member of the AMA, please join! The AMA is the governing body of model aviation and membership provides liability insurance coverage, protects modelers’ rights and interests and is required to fly at most R/C sites.

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302-9252

Tele. (800) 435-9262
Fax (765) 741-0057

Or via the Internet at:
http://www.modelaircraft.org

IMPORTANT!!! Two of the most important things you can do to preserve the radio controlled aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

PROTECT YOUR MODEL, YOURSELF & OTHERS… FOLLOW THESE IMPORTANT SAFETY PRECAUTIONS

1. Your Tiger Moth should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size airplane. Because of its performance capabilities, the Tiger Moth, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage to property.

2. You must assemble the model **according to the instructions**. Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct.

3. You must take time to **build straight, true** and **strong**.

4. You must use an R/C radio system that is in good condition, a correctly sized motor, and other components as specified in this instruction manual. All components must be correctly installed so that the model operates correctly on the ground and in the air. You must check the operation of the model and all components before **every** flight.

5. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for your first flights. If you’re not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.

6. While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high stress flying, such as aggressive aerobatics, or if a motor larger than one in the recommended range is used, the modeler is responsible for taking steps to reinforce the high stress points and/or substituting hardware more suitable for the increased stress.

We, as the kit manufacturer, provide you with a top quality, thoroughly tested kit and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations are expressed or implied as to the performance or safety of your completed model.

Remember: Take your time and follow the instructions to end up with a well-built model that is straight and true.

ADDITIONAL ITEMS REQUIRED

This is a partial list of items required to finish the Tiger Moth that are illustrated in the instruction manual. Order numbers are provided in parentheses.

Motor, Battery, ESC Recommendations

- ❍ Great Planes® *RimFire* 250 (28-13-1750) Outrunner motor (GPMG4502)
- ❍ Great Planes *ElectriFly* 2S (7.4V) 300mAh 20C *Competition BP* LiPo battery (GPMP0700)
- ❍ Great Planes *ElectriFly* SS-8 8 Amp Brushless ESC (electronic speed control) (GPMM1800)
- ❍ Great Planes 8 x 6 *Power Flow* Slo-Flyer electric propeller (GPMQ6610, qty. 2)

Radio Equipment

- ❍ Minimum 3-channel radio control system
- ❍ Two ES40 Pico micro servos (GPMM1200)
- ❍ Mini/micro receiver (Futaba® R6004FF – FUTL7624)

Adhesive & Building Supplies

Other than common hobby tools, this is the list of Adhesives and Building Supplies that were used to finish the Tiger Moth.

- ❍ Thin foam-safe CA (HOTR1040)
- ❍ Medium foam-safe CA (HOTR1050)
- ❍ CA applicator tips (GPMR6033)
- ❍ CA accelerator (GPMR6035)
- ❍ Great Planes Pro Threadlocker (GPMR6060)
- ❍ #60 to #55 (.040" to .052") [1.0mm to 1.3mm] drill bit
- ❍ Spare Propeller Saver O-rings (GPMG1405)
- ❍ Optional: J&Z R/C 56 (or household white glue)
- ❍ Optional: 3/4" fiber-reinforced tape (for reinforcing wings, *see* page 4)

KIT INSPECTION

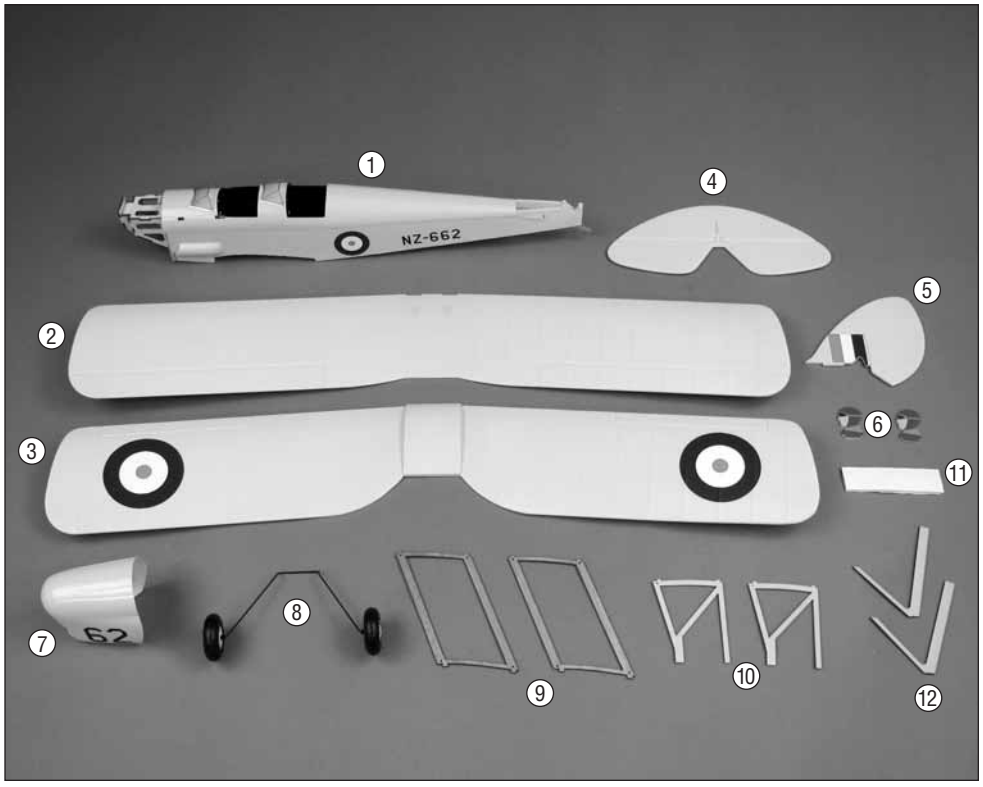
Before starting to build, take an inventory of this kit to make sure it is complete, and inspect the parts to make sure they are of acceptable quality. If any parts are missing or are not of acceptable quality, or if you need assistance with assembly, contact **Product Support**.

Great Planes
Product Support
3002 N Apollo Drive, Suite 1
Champaign, IL 61822

Ph: (217) 398-8970, ext. 5
Fax: (217) 398-7721

E-mail: airsupport@greatplanes.com

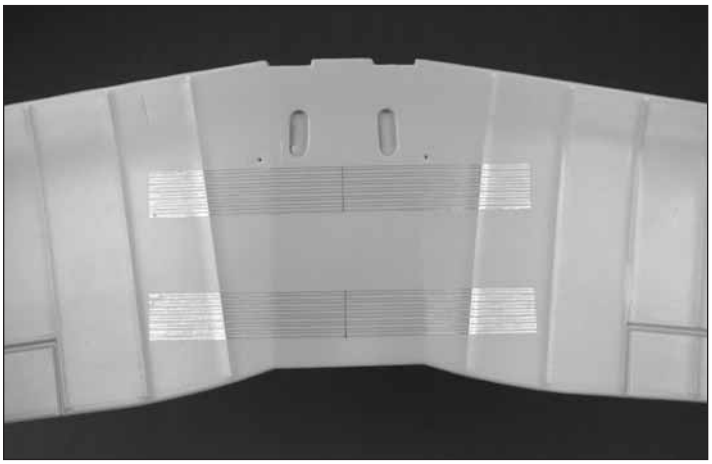
KIT CONTENTS

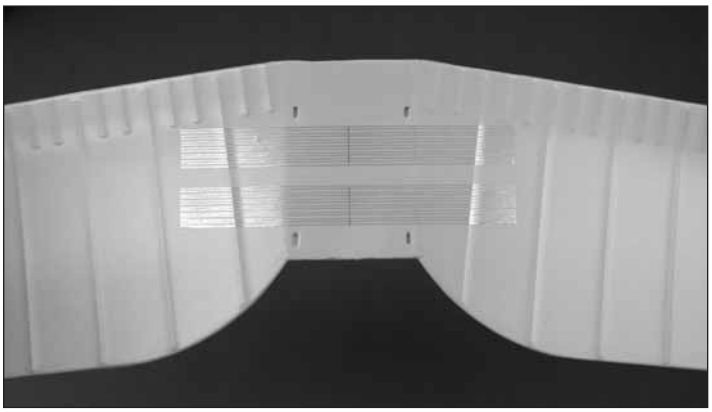


1 Fuselage
2 Bottom Wing
3 Top Wing
4 Horizontal Stabilizer (Stab)
5 Vertical Stabilizer (Fin)
6 Pilots
7 Cowl
8 Main Landing Gear
9 Outer Wing Struts
10 Cabanes
11 Hook and Loop Material
12 Landing Gear Struts

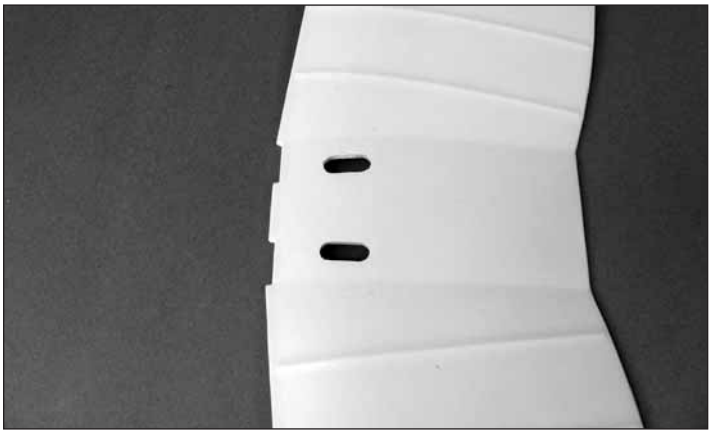
ASSEMBLY

Mount the Wings

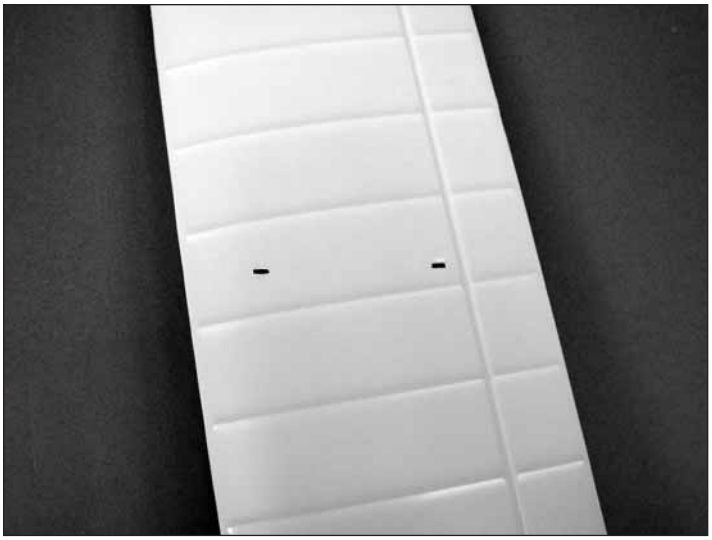




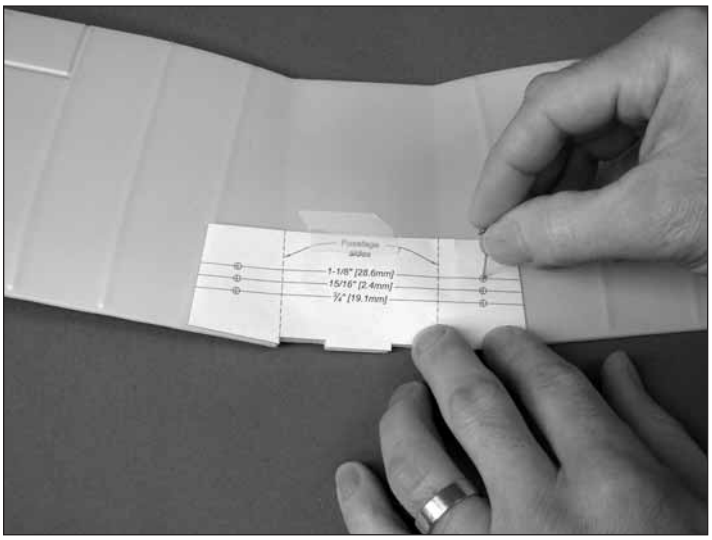
❏ 1. If you will be flying your Tiger Moth aggressively by flying it outdoors in windy conditions or performing aggressive aerobatics, or if you will be using servos, batteries or a motor larger than those recommended, apply two 6" [150mm] strips of 3/4" [20mm] fiber-reinforced tape to the **bottom** of both wings as shown. (We marked light centerlines on the strips of tape to make them easier to center.) If you will be flying your Tiger Moth in calm conditions or indoors in a normal, scale-like manner, no reinforcement is required.



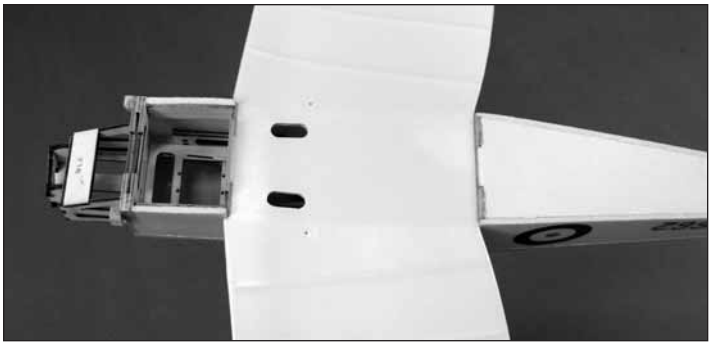
❏ 2. Use a sharp hobby knife to cut the skin from the top of the bottom wing over the holes for the landing gear struts.

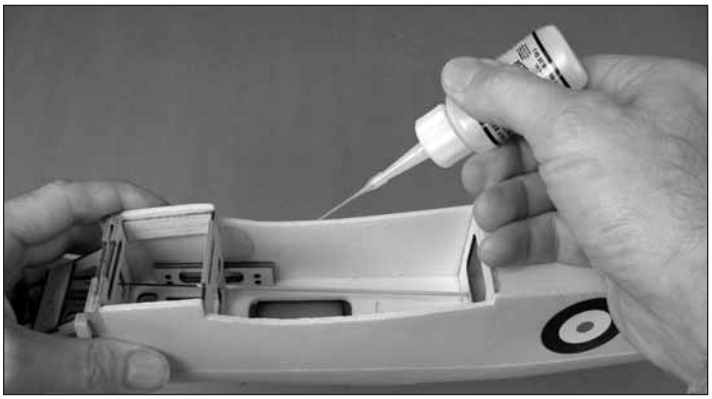


❏ 3. Also cut the skin from both sides of the bottom wing over the notches for the outer wing struts. (There is no need to cut the skin from the slots in the top wing.)

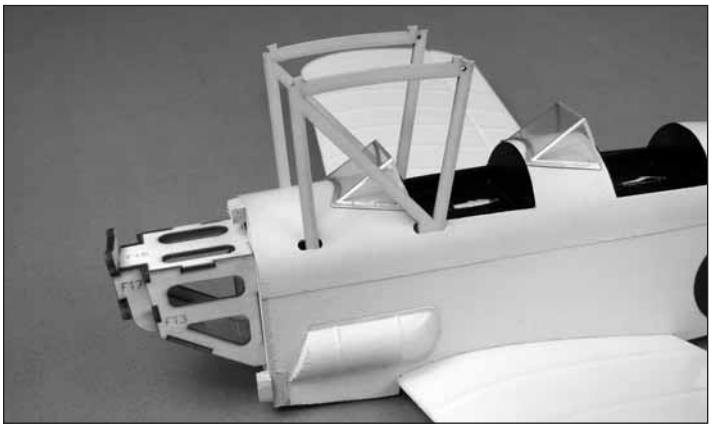


❏ 4. Cut the **C.G. marking template** from the back of the manual. Tape the template to the top of the **bottom** wing with the front edges of the template aligned with the leading edge. Use a small pin or a sharpened pencil to lightly puncture small dimples through the cross marks in the template into the wing skin. When balancing the plane later, it will be suspended with sharpened pencils or pens “keyed” into the dimples. **Note:** Should you ever need to re check the balance in the future but have misplaced your template, the recommended balance point is 15/16" [23.8mm] from the leading edge of the bottom wing at the fuselage sides. The forward balance point is 3/4" [19.1mm] and the aft balance point is 1-1/8" [28.6mm].

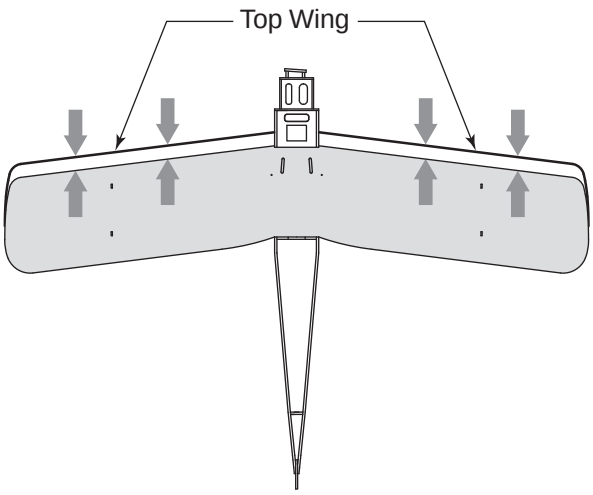




❏ 5. Test fit the bottom wing to the fuselage just to see how it fits. Remove the wing and apply a bead of thick or medium foam-safe CA to the wing saddle and fit the wing back into position. Glue the front and back of the wing to the fuselage as well.



❏ 6. Test fit the cabanes as shown, making certain they are all the way down into the "pockets" in the fuselage. View the top edges of the cabanes to make sure they align with each other. Make any adjustments necessary. Then, glue the cabanes into position with foam-safe CA.



❏ 7. Test fit the top wing to the cabanes. View the model from the bottom, making sure the leading edge of the top wing is parallel with the leading edge of the bottom wing. If necessary, there should be enough free play in the notches to rotate the top wing to get it aligned. If you need to move the top wing but cannot, the notches may be slightly enlarged.

❏ 8. Once you can get the top wing aligned with the bottom wing, glue it to the cabanes with a **small** amount of thin, foam-safe CA—using only a little thin CA will allow it to harden faster and keep excess from running all over the rest of the wing or dripping onto your clothes or workbench!

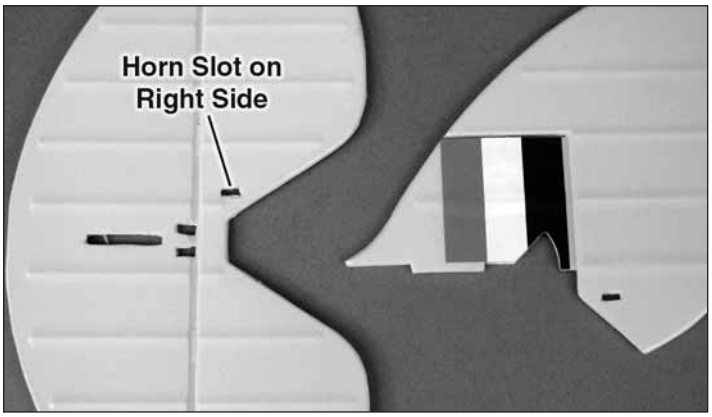
Refer to this photo for the following two steps.

❏ 9. Test fit the **outer struts** to the top and bottom wings. Then, glue the struts to the **bottom** wings only with a small amount of thin CA.

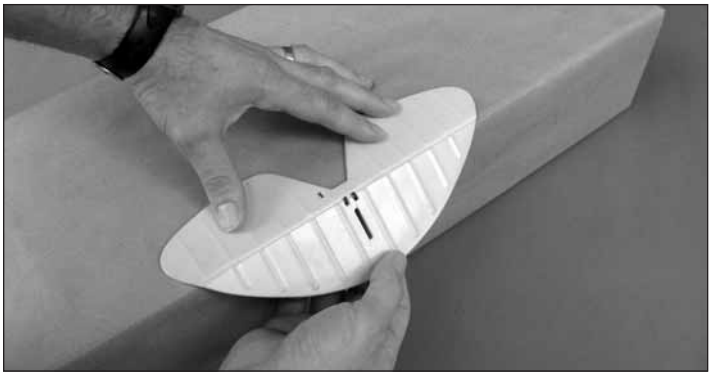
❏ 10. As when gluing the top wing to the cabanes, view the model from the bottom. Note the alignment between the leading edge of the top and bottom wing to see if they are parallel with each other. If necessary, adjust the top wing on the struts until the leading edges are parallel. Then, glue the top wing to the struts with a small amount of thin, foam-safe CA.

❏ 11. After the CA on the struts and cabanes has hardened, follow with fillets of J&Z R/C 56 ***or*** thick or medium foam-safe CA to all the glue joints of the wings including the bottom wing to the fuselage and both wings to the cabanes and outer struts.

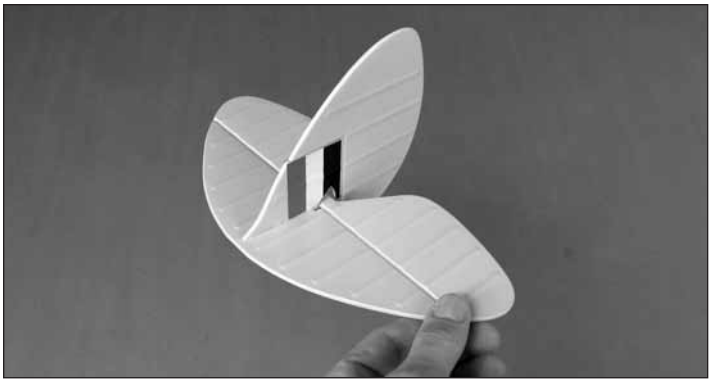
Mount the Stab and Fin



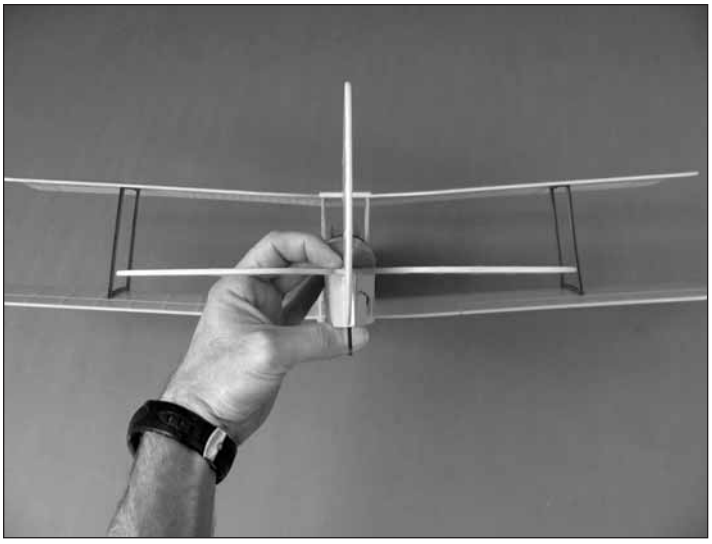
❏ 1. Use a sharp hobby knife to cut the skin from all the slots and notches in the horizontal stabilizer (stab), elevator and rudder.



❏ 2. Make sure the elevator and rudder can move up and down and left and right freely by flexing them back and forth a few times. If the hinge joints seem too rigid, move them back and forth a few more times to about a 45-degree angle in both directions. When you do the elevator, align the hinge line with the edge of your workbench or a cardboard box to keep the elevator halves aligned.



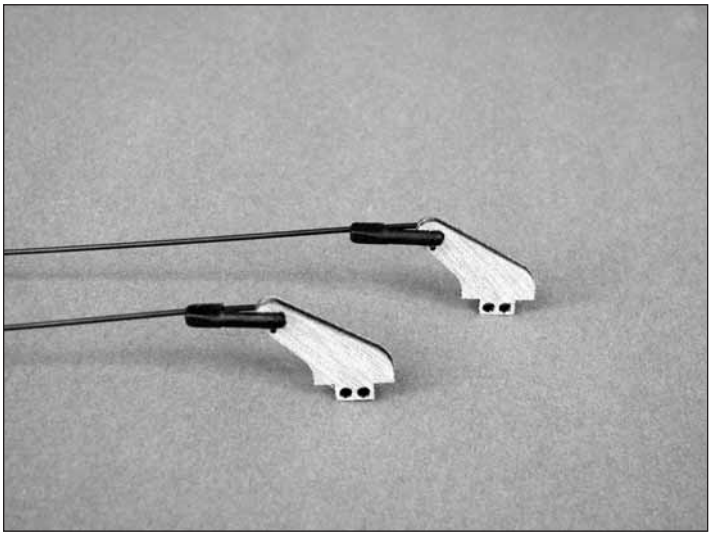
❏ 3. Glue the fin to the stab, making sure the two are perpendicular. **NOTE:** Be certain that the slot for the elevator horn is on the ***right*** side.



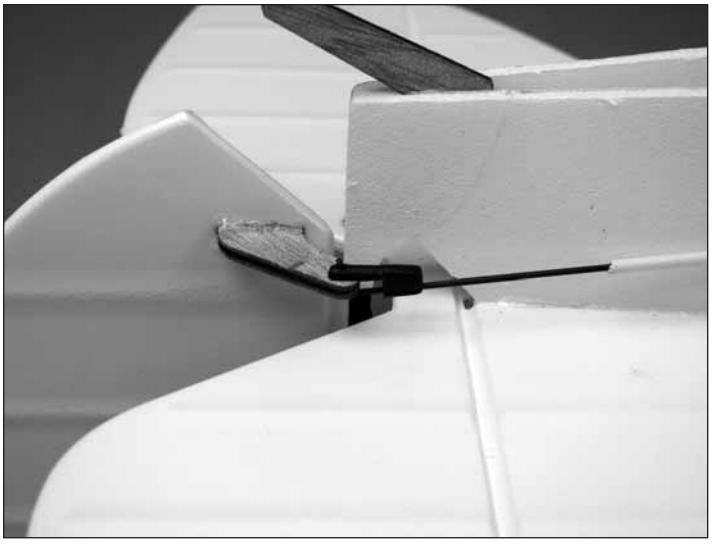
❏ 4. Hold the stab to the fuselage and view the model from the rear to see if it is parallel with the bottom wing. If the stab is not parallel with the bottom wing, lightly sand or trim the high side of the stab saddle to get the stab to align.

❏ 5. The same way you glued on the wing, apply thick or medium foam-safe CA to the stab saddle and then set the stab down into position. Make sure the leading edge of the fin is **centered** over the top of the fuselage. Hold the stab in position long enough for the glue to set (or use a **light** mist of CA accelerator).

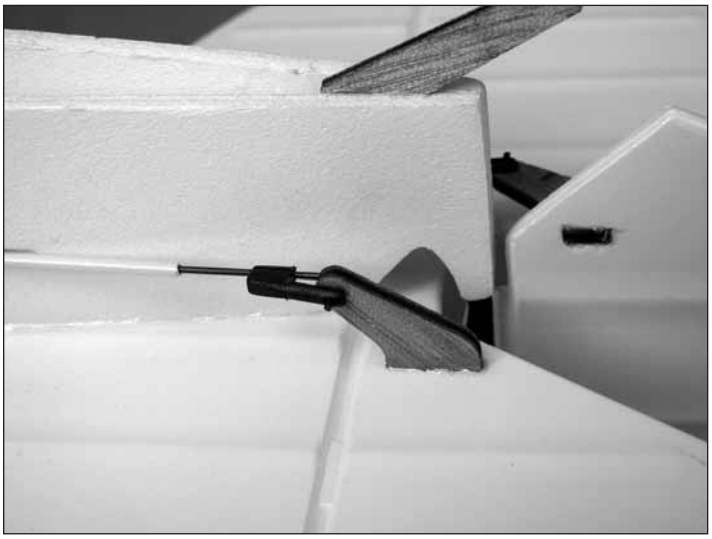
Hook Up the Elevator & Rudder



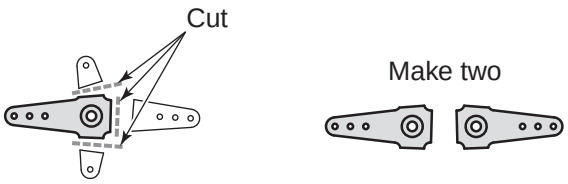
❏ 1. Connect both pushrods to the control horns with the micro FasLink™ connectors as shown.



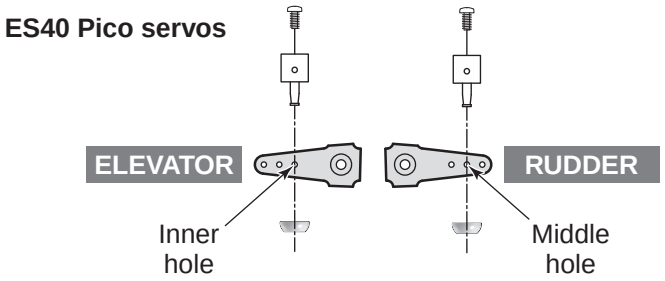
❏ 2. Guide the rudder pushrod up through the rudder tube in the **left** side of the fuselage. Then, fit and glue the rudder horn into the elevator.

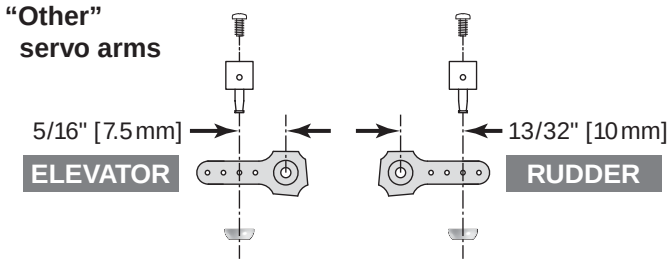


❏ 3. Fit and glue the elevator horn into the elevator the same way.



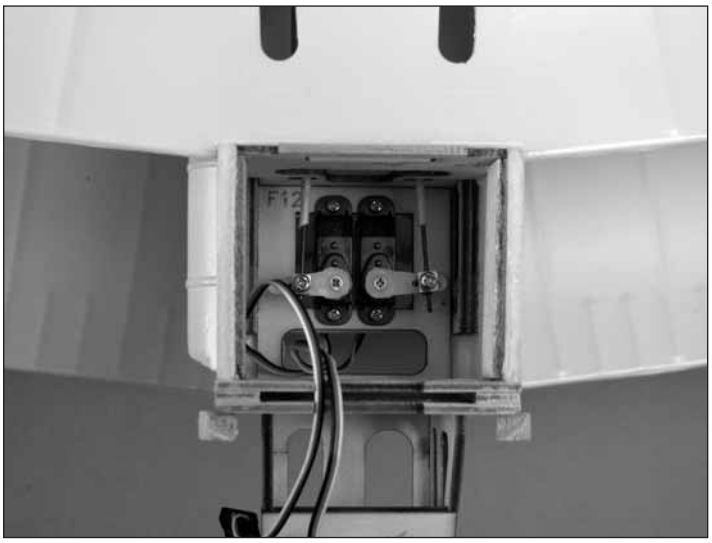
❏ 4. Make two single-arm servo arms by cutting off the unused arms.



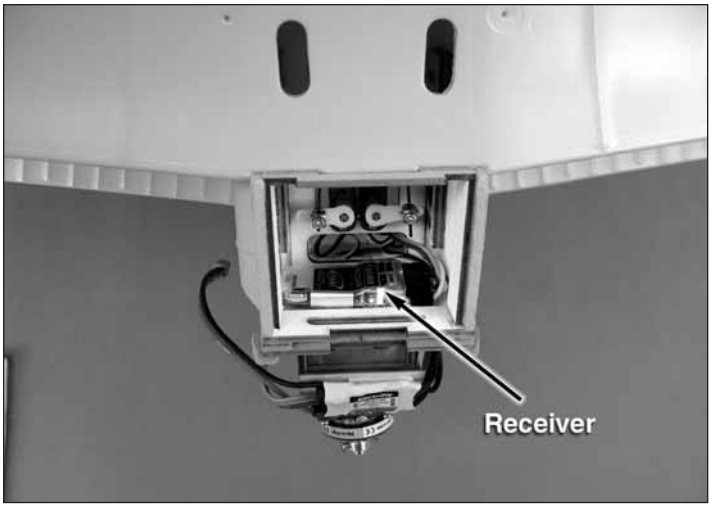


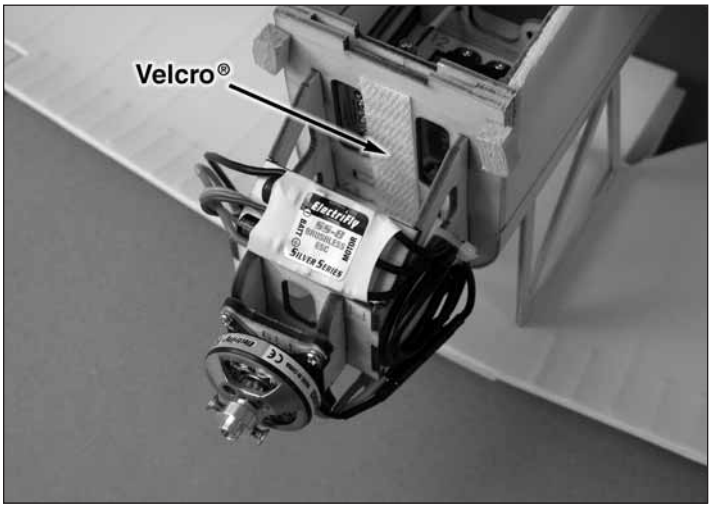
❏ 5. If using ES-40 Pico servos, mount a screw-lock connector to the **middle** hole of one servo arm and to the **inner** hole of the other servo arm. If using different servos, mount the connectors in the holes closest to 5/16" [7.5mm] and 13/32" [10mm] from center.

❏ 6. Turn on your transmitter and center the trims. Temporarily connect the servos to your receiver. Connect the ESC to the receiver and a battery to the ESC so you can power up the system. Mount the servo arms to the servos.



❏ 7. Unplug the servos and the ESC from the receiver and mount the servos to the servo tray in the fuselage with the screws that came with this kit (or with the screws that came with the servos).





Refer to these photos for mounting the receiver, ESC and motor.

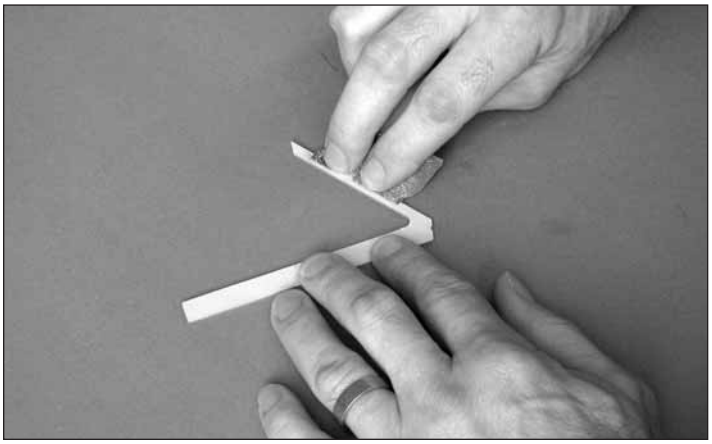
❏ 8. Reconnect the servos and the ESC to the receiver. Use the included adhesive-back Velcro or double-sided adhesive foam tape (not included) to mount the receiver wherever convenient, such as to the sides or top of the "engine box" or to the back of the former in the servo compartment where shown. If you do mount the receiver back in the servo compartment, make sure the pushrods and servo arms don't hit the receiver when the servo arms rotate forward.

❏ 9. Mount the ESC where shown. Apply a strip of the rougher, "hook side" of adhesive-backed Velcro where shown for the battery.

❏ 10. Mount the motor to the firewall with the three included 2mm x 8mm Phillips wood screws. Connect the motor wires to the ESC and make sure the motor is turning the correct direction by plugging in the battery and running the motor. If the motor is turning the wrong direction, switch any two motor/ESC wires with each other.

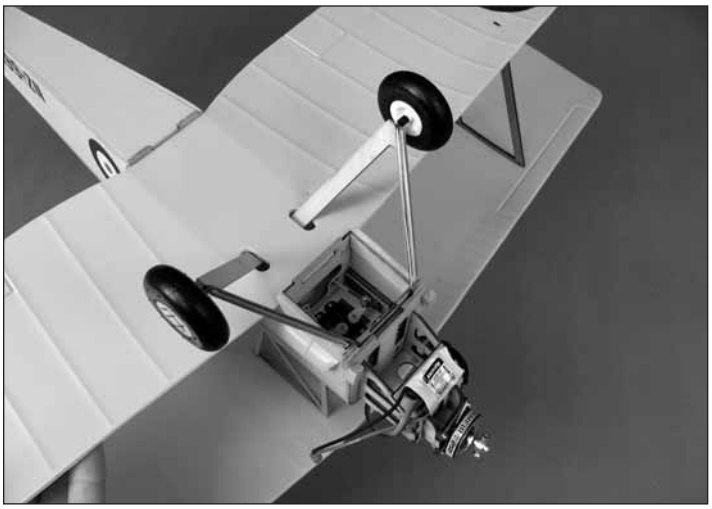
❏ 11. With the radio on and the trims centered, center the rudder and elevator and tighten down the screws in the screw-lock connectors to lock the pushrods down. Use the control sticks on your transmitter to move the elevator and rudder, making sure they respond in the correct direction. If necessary, use the servo reversing function in your transmitter to reverse the servos so the elevator, rudder and throttle respond correctly.

Mount the Cowl & Landing Gear



❏ 1. Use medium-grit sandpaper to roughen the inner surfaces of the forward legs on the plywood **landing gear struts** where they will be glued to the main landing gear wires.

❏ 2. Use a small piece of paper towel or a small cloth dampened with denatured alcohol or other solvent to wipe any residual oils or contaminants from the landing gear wires. Use medium-grit sandpaper to scuff the gear wire so glue will adhere.

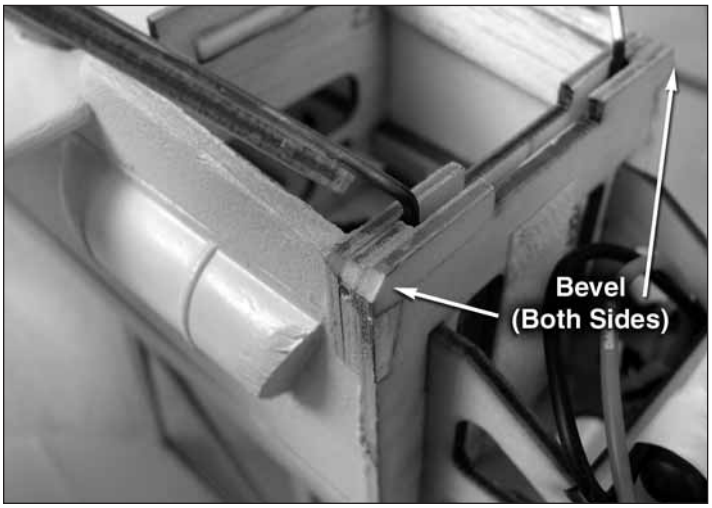


Refer to this photo for the next two steps.

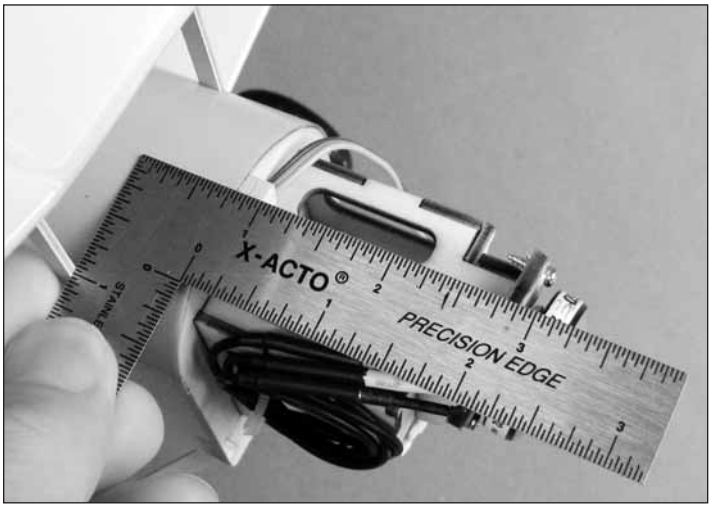
❏ 3. Insert the main landing gear wire into the fuselage—the gear should fit tightly enough to stay in on its own, but if it doesn't fit tightly add a drop of thin, foam-safe CA to the legs where they go into the mounts.

❏ 4. One at a time, position the struts to the gear and in the wing and glue them to the gear wires with thin CA. **Hint:** before positioning the struts, "prime" them with a **light** mist of CA accelerator sprayed from a distance of approximately 12" [300mm]. This will cause the CA to harden faster, preventing it from running down onto the rest of the model.

❏ 5. Once the struts have been glued to the gear wires, apply a small fillet of thick or medium CA to the wire and the struts securely holding them on.

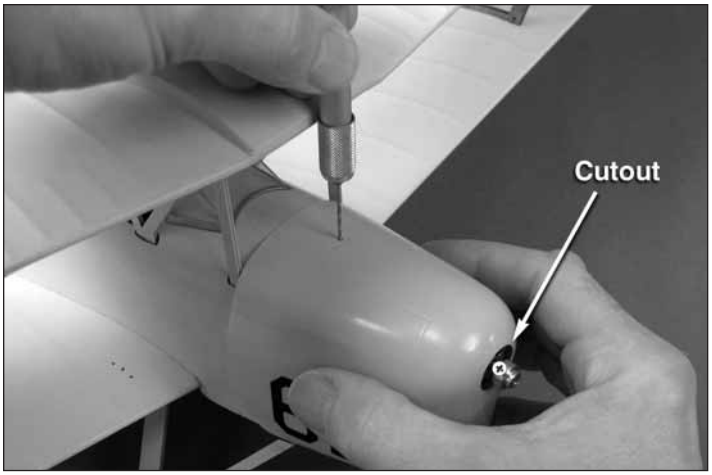


❏ 6. Carefully cut a small bevel the bottom corners of the front fuselage former.

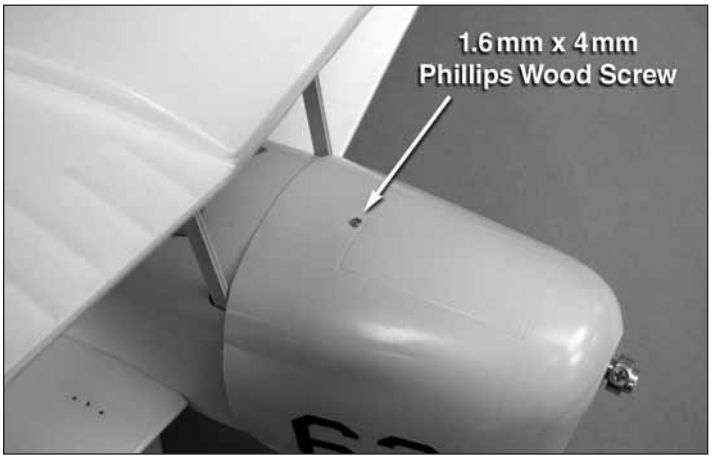


❏ 7. Measure and note the distance from the front edge of the cabanes to the center of the cowl mounting block. (It should be approximately 7/8" [22mm].)

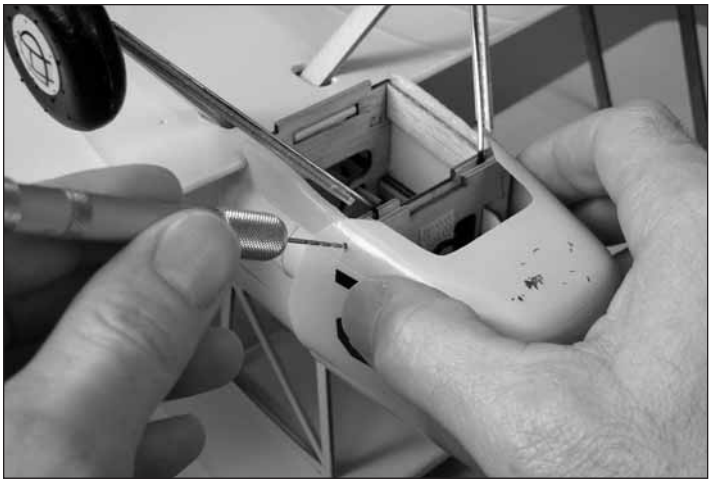
❏ 8. Make sure you have a ***small drill bit*** from .040" to .052" (#60 to #55) [1.0mm to 1.3mm] for drilling the cowl mounting screw holes. ***Don't be tempted*** to use a 1/16" [1.6mm] drill found in common drill assortments because it is too large.



❏ 9. Fit the cowl over the fuselage so the cutout for the propeller adapter will clear the adapter and the prop-saver O-ring screws. Also turn the motor to make sure it is not rubbing the inside of the cowl. Using the measurement taken in the previous step, hold the cowl in position and drill a hole through the top of the cowl into the cowl block.



❏ 10. Secure the top of the cowl to the fuselage block with a 1.6mm x 4mm Phillips wood screw.



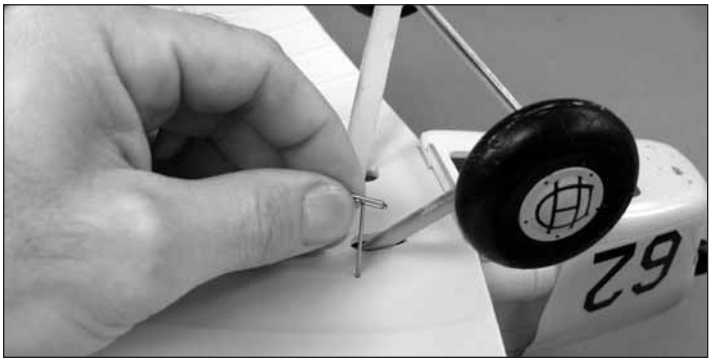
❏ 11. Turn the fuselage over. Holding the cowl in position, drill another hole through the bottom corner into the center of the plywood laminations that comprise the front former and the landing gear mount.

❏ 12. Secure the cowl with another 1.6mm x 4mm Phillips wood screw. Drill the third and final hole opposite the one drilled in the previous step and insert another screw.

❏ 13. While you're adding finishing touches, glue in one or both pilots.

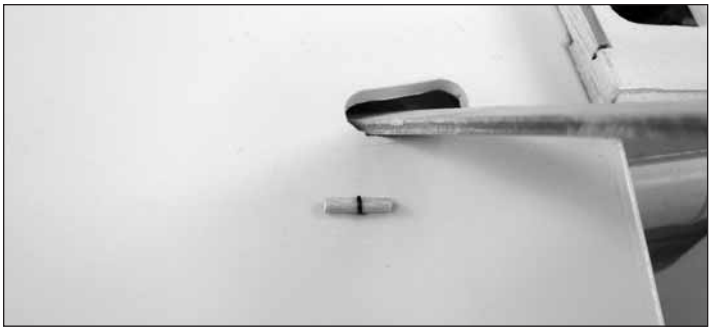
Optional: Add the Flying Wires

The flying wires are not required, but they add that one final piece of scale detail for even more realism. If you do install the flying wires, they should be tight enough to remain taut, but not so tight as to introduce any twist into the wings. To make the flying wires you'll need some black heavy/medium thread and a toothpick.



❏ 1. Use a pin to puncture the molded-in dimples in the bottom wing up through the top skin.

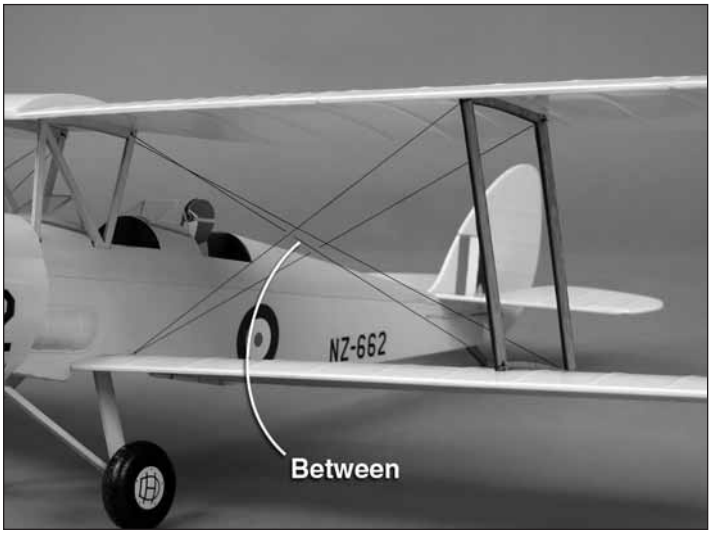
❏ 2. Cut an approximately 30" [760mm] length of black thread. Insert both ends of the thread down through the hole you punctured in one of the wings.



❏ 3. Cut two 1/4" [6mm] pieces from a toothpick. Loop the string around one of the toothpick pieces on the bottom of the wing and pull the string through until it stops. Add a few drops of foam-safe CA to the string and toothpick to permanently glue it in.

❏ 4. Loop one end of the string around one of the holes in the top of the outer strut. Lightly pull the line to apply some tension. Then, add a drop of thin CA where it loops around the strut and allow to harden. Tie off the other end of the flying wire to the other hole in the top of the strut the same way. Cut off excess thread.

❏ 5. Add the bottom flying wires to the other side of the bottom wing the same way—be certain not to pull the strings too tight or you may introduce twist into the wings.



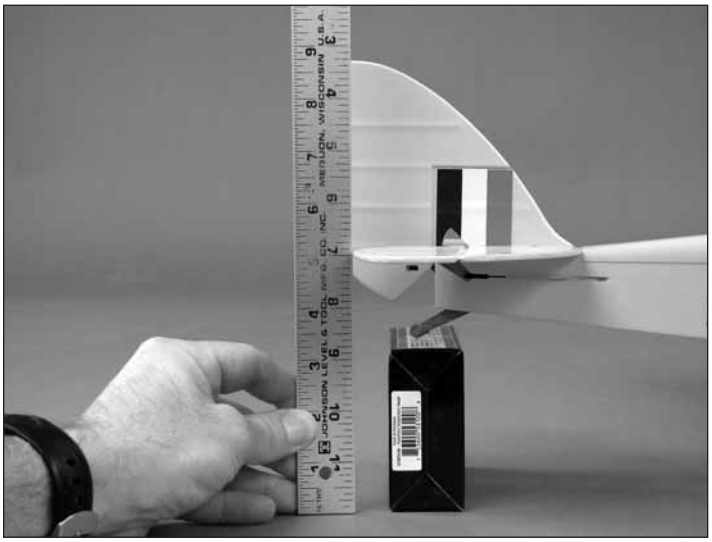
❏ 6. Add the top flying wires that go from the top of the cabanes down to the bottom of the struts—the easiest way is to first tie one end of the thread around one of the holes in the bottom of the outer strut, loop it through the hole in the top of the cabane, then tie the other end down to the other hole in the bottom of the outer strut. Note that the front wire that runs from the bottom of the struts up to the cabane runs **between** the other wires coming from the bottom of the wing next to the fuselage.

GET THE MODEL READY TO FLY

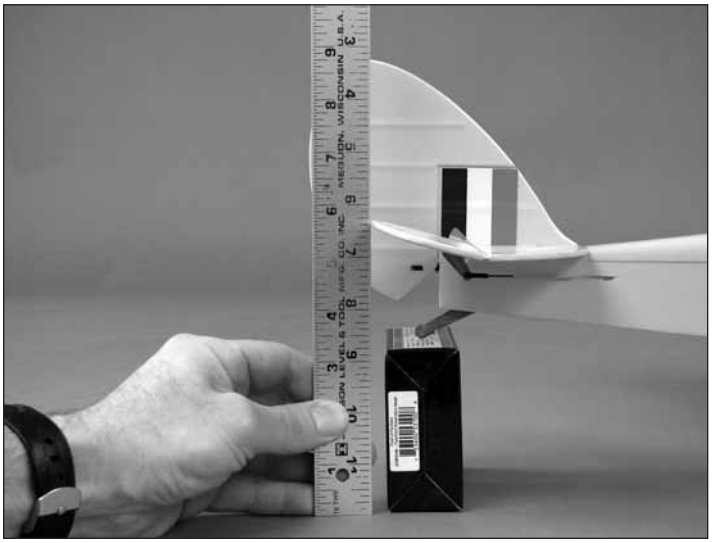
Check the Control Throws

If the pushrods were connected to the servo arms using the measurements provided in this manual, then the control throws should already be correct, or very nearly correct. However, it's still a good idea to check the throws since they have such a great effect on how the model flies.

❏ 1. Prop up the rear of the fuselage on a box or something similar so the horizontal stabilizer will be level or very nearly level. Turn on your transmitter and connect a battery to the ESC.



❏ 2. Place a ruler next to the trailing edge of the elevator at the widest part. Note the measurement.



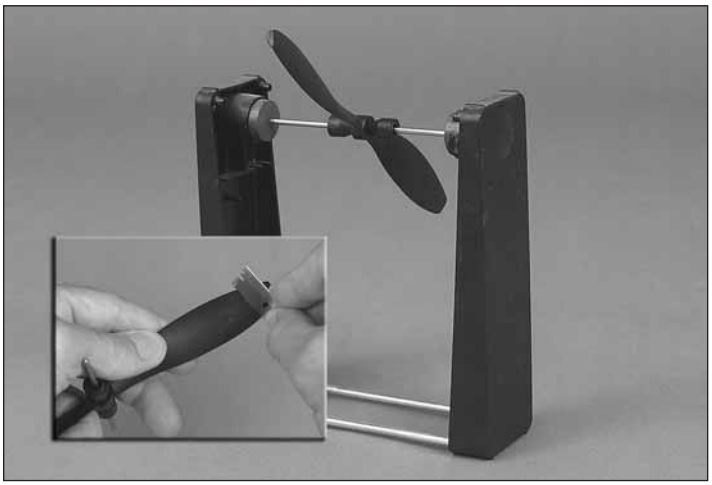
❏ 3. Use the transmitter to move the elevator to full "up" and note how far the elevator moved. This is the "up" elevator throw.

❏ 4. Make sure the up elevator throw you measured is the same as the throw specified below. Measure the down elevator throw and the right and left rudder throw the same way. If necessary, use the ATVs in your transmitter to adjust the throws. If your radio does not have ATVs and if your throws are not close to the specifications provided, you can change the throws by relocating the pushrods on the servo arms. Moving the pushrods inward will provide less throw and moving the pushrods out will increase the throw.

These are the recommended control surface throws:

	HIGH RATE		LOW RATE	
	Up	Down	Up	Down
ELEVATOR	5/8" [16mm] 17 deg	5/8" [16mm] 17 deg	3/8" [10mm] 10 deg	3/8" [10mm] 10 deg
	Right	Left	Right	Left
RUDDER	1-1/4" [32mm] 27 deg	1-1/4" [32mm] 27 deg	3/4" [19mm] 16 deg	3/4" [19mm] 16 deg

Balance the Propeller

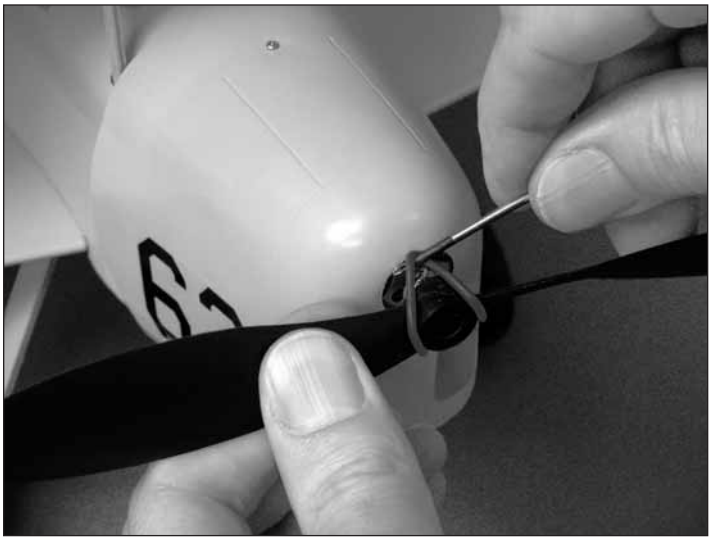


Take a few minutes to balance your propeller and a spare propeller before you fly. A balanced propeller will help the motor run smoothly and efficiently.

If the propeller is unbalanced, use a single-edge razor blade or a hobby knife to scrape material off the heavy blade until you can get the propeller to balance.

Balance the Model (C.G.)

More than any other factor, the C.G. (center of gravity/balance point) can have the greatest effect on how a model flies. If you value your model and wish to enjoy it for many flights, **DO NOT OVERLOOK THIS IMPORTANT PROCEDURE.** A model that is not properly balanced may be unstable and possibly unflyable.



❏ 1. Mount the propeller (not included) to the propeller adapter with the prop-saver O-ring that came with the RimFire motor. A Great Planes 8 x 6 ElectriFly PowerFlow™ Slow-Flyer propeller (GPMQ6610) is recommended. The easiest way to mount the prop is first to hook the O-ring around one of the screws, fit the propeller, and then use a small (#00) Phillips screwdriver to loop the O-ring around the propeller hub and the other screw. **Suggestion:** Purchase spare Prop Saver O-Rings (GPMG1405).

❏ 2. Optional: Fit the **servo cover** over the servo compartment. If necessary, use a couple of small strips of tape to hold the cover in place.

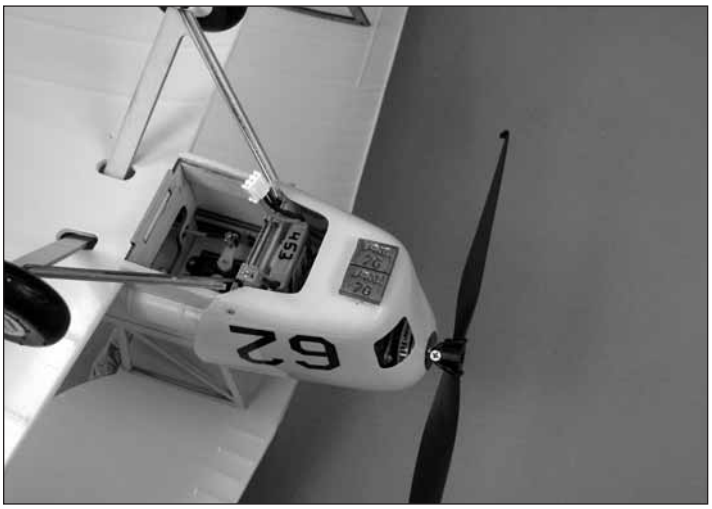
❏ 3. If you haven't done so already, attach a strip of the softer, "loop" side of the included Velcro hook-and-loop material to the motor battery. Install the motor battery in the fuselage to the other Velcro strip you attached earlier.

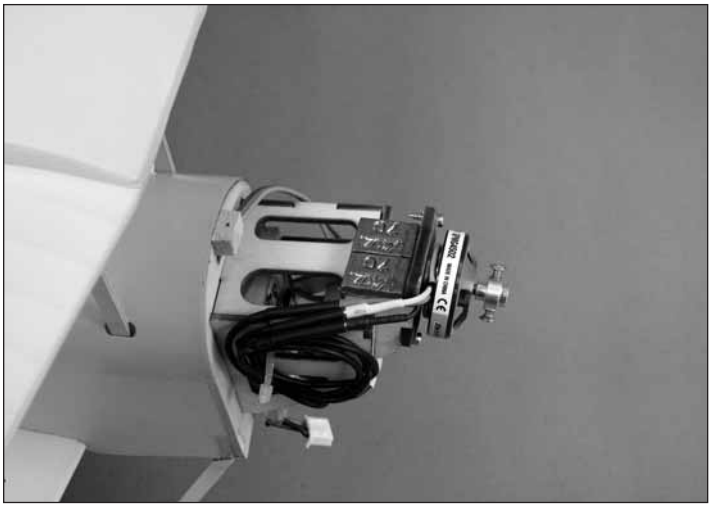
At this stage the model should be in ready-to-fly condition with all of the systems in place including the motor, complete radio system, ESC, propeller and battery.

❏ 4. Place the model upside-down. Use two pencils or ballpoint pens to lift the model at the **middle** dimples you marked earlier with the template, noting the recommended balance point.

This is where your Tiger Moth should balance for the first flights. Later, you may experiment by shifting the C.G. 3/16" [4.8mm] forward or 3/16" [4.8mm] back to change the flying characteristics. Moving the C.G. forward will improve the smoothness and stability and allow your Tiger Moth to perform tighter turns, but the model will fly slightly faster. Moving the C.G. aft allows the model to fly more slowly, but will require slightly more pilot control in tightly-banked turns. In any case, **start at the recommended balance point** and do not at any time balance the model outside the specified range.

If the model is balanced properly it should rest level when viewed from the side. If the tail is down the model is "tail-heavy" and nose weight will be required. If the nose drops the model is "nose-heavy" and tail weight will be required. If you are using the components recommended in this manual it is likely that the model will balance at the recommended C.G. location, or possibly require 1/4 to 3/8 oz. [7g to 11g] of nose weight.





❏ 5. If any weight is required to get the model to balance, first determine how much by placing segments of Great Planes "stick-on" lead (GPMQ4485) over the location on the fuselage where it will be attached inside and rechecking the balance. A good place to attach tail weight is to the inside of one of the fuselage sides under the horizontal stab. A good place to attach nose weight is to the top of the "motor box" right behind the firewall. Do not attach nose weight to the cowl because it will cause stress around the mounting screw holes.

❏ 6. Once you know how much weight is required, attach it in the fuselage. Then, recheck the balance.

Charge the Batteries

Follow the battery charging instructions that came with your radio control system to charge the transmitter batteries. You should always charge your transmitter the night before flying, and at other times as recommended by the radio manufacturer.

CAUTION: Unless the instructions that came with your radio system state differently, the **initial** charge on **new** transmitter and receiver batteries should be done for 15 hours **using the slow-charger that came with the radio system**. This will "condition" the batteries so that the next charge may be done using the fast-charger of your choice. If the initial charge is done with a fast-charger the batteries may not reach their full capacity and you may be flying with batteries that are only partially charged.

MOTOR SAFETY PRECAUTIONS

Failure to follow these safety precautions may result in severe injury to yourself and others.

- Use safety glasses when starting or running motors.
- Do not run the motor in an area of loose gravel or sand; the propeller may throw such material in your face or eyes.
- Keep your face and body as well as all spectators away from the plane of rotation of the propeller as you start and run the motor.
- Keep loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets away from the prop.

FLYING

Ground Check & Range Check

When you get to your flying site follow the manufacturer's instructions that came with your radio to ground check the operational range of your radio. This should be done both with the motor off and with the motor running at various speeds. If the motor or control surfaces do not respond correctly or move erratically without command, **do not fly!** Find and correct the problem first. Look for loose servo connections or broken or loose motor or battery wires.

Flight

Taking off from the ground is desirable if you are flying indoors or outdoors where there is a smooth runway surface. However, if no smooth surface is available the Tiger Moth may easily be hand-launched.

No matter where you fly, the first thing you should do is **check the controls** after turning on the transmitter and connecting the battery. Make sure the controls respond and in the correct direction.

To take off from the ground, simply set the model down facing into any prevailing breeze. Smoothly advance the throttle all the way. Initially, the rudder will have little effect, but after a second or two when there is sufficient airflow the rudder will become effective. Use the rudder to steer the model.

When the Tiger Moth has gained sufficient flying speed apply "up" elevator, establishing a gentle (20 – 30-degree) climb.

If hand-launching your Tiger Moth, double-check to make sure that the controls are working correctly. Then, apply full throttle. Facing into any prevailing wind, gently toss the Tiger Moth into the air. Apply "up" elevator to establish a climb.

Once well clear of the ground make the first turn away from yourself. Use the trims to get the model to fly straight-and-level at your preferred flying speed—in smaller arenas/gymnasiums you will probably be most comfortable flying your Tiger Moth at about 1/4 – 1/3 throttle. In larger arenas or outdoors you will probably fly your Tiger Moth at 1/2 or higher throttle settings.

Execute turns to see how the Tiger Moth reacts. The Tiger Moth should be able to execute tightly-banked turns with a diameter of approximately 15'–20' [4.5m – 6m] (although this is not so important if you are flying in a large arena or outdoors). If, during the tightest turns the Tiger Moth noses up and seems to get "stuck" in the turn, nose weight may be required. If you don't feel the Tiger Moth flies slowly enough or if it doesn't react quickly enough to your control inputs, tail weight (or removing a portion of any nose weight) may help.

While the Tiger Moth is still high in the air and you have plenty of battery power, another good exercise is to cut the throttle and observe how the Tiger Moth glides. This will give you an indication of what it will do when it's time to land.

When ready to land, simply cut motor power and make the final turn to your landing area. Allow the Tiger Moth to establish a slightly nose-down attitude to maintain airspeed. If necessary, modulate the throttle and elevator to control the glide path. As you get closer to the ground continue to apply "up" elevator, causing the Tiger Moth to fly slower and slower until it finally touches down the precise moment it can no longer fly.

One final note about flying your model. Have a goal or flight plan in mind for **every** flight. This can be learning a new maneuver(s), improving a maneuver(s) you already know, or learning how the model behaves in certain conditions (such as on high or low rates). This is not necessarily to improve your skills (*though it is never a bad idea!)*, but more importantly so you do not surprise yourself by impulsively attempting a maneuver and suddenly finding that you've run out of time, altitude or airspeed. Every maneuver should be deliberate, not impulsive. For example, if you're going to do a loop, check your altitude, mind the wind direction (anticipating rudder corrections that will be required to maintain heading), remember to throttle back at the top, and make certain you are on the desired rates (high/low rates). A flight plan greatly reduces the chances of crashing your model just because of poor planning and impulsive moves. **Remember to think.**

Have a ball! But always stay in control and fly in a safe manner.

GOOD LUCK AND GREAT FLYING!

This model belongs to:

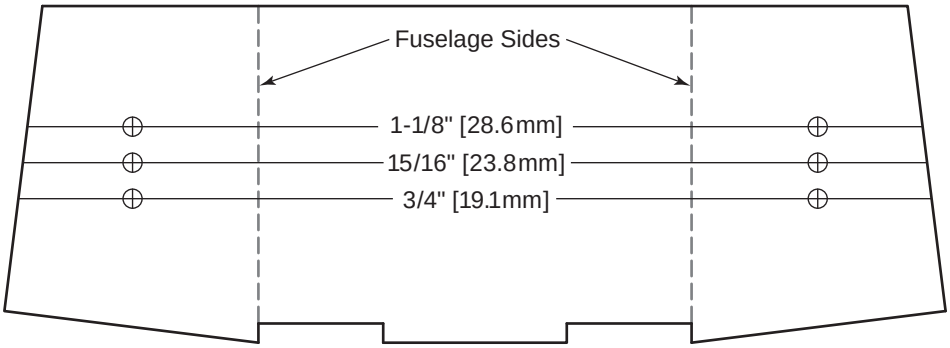
Name

Address

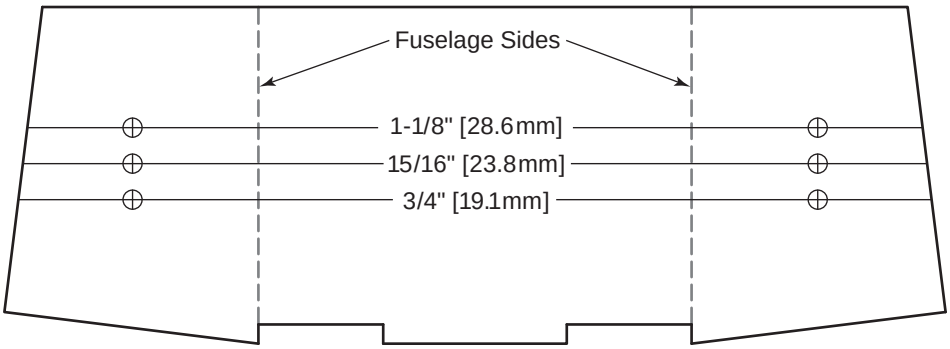
City, State, Zip

Phone Number

AMA Number



C.G. Marking Template



Spare C.G. Marking Template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