SUPERSTAR 40™ ARF

.40-Size Almost Ready-to-Fly Trainer

Wingspan: 60 in [1524mm]
Wing Area: 660 sq in [42.6dm²]
Weight: 5.5 lbs [2495g]
Wing Loading: 19 oz/ sq ft [58 g/dm²]
Engine: .40 cu in [6.5cc] two-stroke
Radio: 4-channel, 4 servos

See more of our products at ***www.hobbico.com***

WARRANTY

Hobbico® 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 Hobbico's liability exceed the original cost of the purchased kit. Further, Hobbico reserves the right to change or modify this warranty without notice.

In that Hobbico 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.

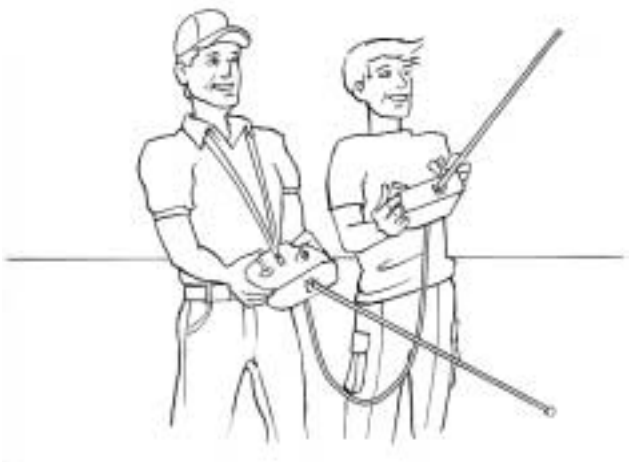
If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

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

1610 Interstate Drive Champaign, IL 61822
(217) 398-8970, Ext. 2
airsupport@hobbico.com

Introduction

Congratulations and thank you for purchasing the Hobbico SuperStar .40™ ARF. You've made the right decision by purchasing a "real" model airplane with a .40-size engine and a 4-channel radio. Once assembled and set up, there will be no fiddling with a temperamental engine or constant troubleshooting to figure out how to get the model to fly. Under the guidance of an experienced flight instructor, all you'll have to do is concentrate on learning to fly. And after you've mastered the SuperStar, the engine and radio may be installed in your next model!



IMPORTANT

Once mastered, piloting a model aircraft can be one of the most enjoyable hobbies around. However, it cannot be stated **strongly** enough that, if you do not already know how to fly an R/C airplane, you will probably **not** be able to fly this model by yourself. It may appear to be easy, but over-controlling and disorientation quickly overcome inexperienced fliers, swiftly ending their first flight. The **best thing** you can do to insure success is to **find a flight instructor** who will inspect your model for airworthiness and provide flying lessons. If you haven't yet done so, **contact the local hobby shop and ask them to introduce you to an instructor or an R/C club representative.** If there is no club or experienced R/C pilot nearby, it would be worth even a long drive to find one–if only for just a few flight lessons (then you'll have an idea of what to expect).

Join the AMA (Academy of Model Aeronautics). In addition to other vital functions, the AMA, the governing body of model aeronautics in the United States, provides insurance to members who comply with the Safety Code. You must be a member to fly at R/C clubs chartered by the AMA–most of which are. The AMA can also direct you to the closest club whose membership should have qualified flight instructors. To join the AMA, telephone, write or fax them at the address below, or join on-line at www.modelaircraft.org.

AMA
SINCE 1936

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:
www.modelaircraft.org

Protect Your Model, Yourself and Others...Follow these Important Safety Precautions

1. Your SuperStar .40 ARF 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 SuperStar .40 ARF, 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 drawings or sketches. In those instances the written instructions should be considered as correct.

3. You must check the operation of the model before **every** flight to insure that all equipment is operating and that the model has remained structurally sound. Be sure to check clevises or other connectors often and replace them if they show any signs of wear or fatigue.

We, as the kit manufacturer, provide you with a top quality 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.

Additional Items Required

A four-channel radio control system is required to fly this model. “Four-channels” means that the system is capable of controlling four separate functions in the plane. In the case of your SuperStar, this would be **ailerons**, **elevator**, **rudder** and **throttle**. If purchasing a new system, be certain it comes with four servos (some systems come with only three servos, so a fourth may have to be purchased separately). A 6" servo extension wire for the aileron servo is also required (see the “Hardware” list on this page), but some radio control systems include the extension. So, it may not have to be purchased separately.

A .40 cu in [6.5cc] 2-cycle model engine and suitable propeller (and spare propellers) are also required to fly the SuperStar. The number .40 refers to engine **displacement** in cubic inches. Most .40 cu in engines recommended for this model run well with a 10 x 6 propeller (but consult the engine manufacturer’s instructions to be certain). When sizing a propeller, the first number refers to the propeller **diameter** in inches. The second numbers refers to the propeller **pitch** in inches.

Notes About Glue

There are two types of glue that are recommended for assembling this model. The first type, Cyanoacrylate, is more commonly known as “super glue.” Most modelers just call it “CA.” CA comes in different viscosities (thickness). Both thin and medium viscosity are recommended for this model and are listed in the ***Building Supplies*** section that follows. Thin CA rapidly absorbs into wood and is best for bonding parts that are already together. Thin CA is also **required** for gluing in the hinges (as you will see when you get to that part of assembly). Medium CA is good for joining parts that require positioning before joining them together, or for filling small gaps in parts that don’t fit perfectly. CA doesn’t always cure immediately. When instant curing is required, CA “activator” can be applied to make the CA harden right away. Activator (also known as “accelerator”) is usually sprayed out of a small bottle.

One accessory recommended for applying CA is CA Applicator Tips (HCAR3780). These small tips fit on the top of the bottle and help direct and control the amount of CA that comes out. When the tip becomes clogged, just cut off the end and keep going. After the applicator tip becomes too short, just replace it with another.

The second type of adhesive that is used for assembling this model is epoxy. There are different working times for epoxy (5-minute, 15-minute, 30-minute, etc.), but 30-minute is recommended. Longer working time allows more time for positioning and joining the parts, and provides a stronger bond as more epoxy can be absorbed into the material before it hardens. Epoxy is also recommended for fuelproofing bare wood.

IMPORTANT: Read the warning labels on all glue containers. Be especially certain to use CA in a well-ventilated area. After applying CA, step back or look away from the work to avoid the vapors. CA bonds skin immediately. If this happens, CA debonder or acetone fingernail polish remover will dissolve the CA after a few minutes. Never point the CA tip toward your face and be careful when opening a clogged tip.

Building Supplies

In addition to the radio and engine, the following items will also be required:

Adhesives & Tools

- ❑ 1/2 oz. [15g] Thin Pro™ CA (GPMR6001)
- ❑ 1/2 oz. [15g] Medium Pro CA+ (GPMR6007)
- ❑ Pro 30-minute epoxy (GPMR6047)
- ❑ #1 Hobby knife (HCAR0105)
- ❑ #11 blades (5-pack, HCAR0211)
- ❑ Drill bits: 1/16" [1.6mm], 3/32" [2.4mm]
- ❑ Small metal file
- ❑ 1/16" hex driver wrench (“Allen” wrench)
- ❑ Masking tape (TOPR8018)
- ❑ Pro Threadlocker thread locking compound(GPMR6060)
- ❑ Denatured alcohol (for epoxy clean up)

Hardware

- ❑ 6" [150mm] Servo extension wire (HCAM2701 for Futaba®)
- ❑ R/C foam rubber (1/4" [6mm] – HCAQ1000, or 1/2" [13mm] – HCAQ1050)
- ❑ 3' [900mm] Standard silicone fuel tubing (GPMQ4131)

Optional Items

The following items are not absolutely necessary, but are mentioned in the manual and will assist in assembling your model.

- ❑ 21st Century® sealing iron (COVR2700)
- ❑ CA applicator tips (HCAR3780)

- ❑ Epoxy brushes (6, GPMR8060)
- ❑ Mixing sticks (50, GPMR8055)
- ❑ Mixing cups (GPMR8056)
- ❑ Builder's Triangle Set (HCAR0480)
- ❑ Precision Magnetic Prop Balancer™ (TOPQ5700)

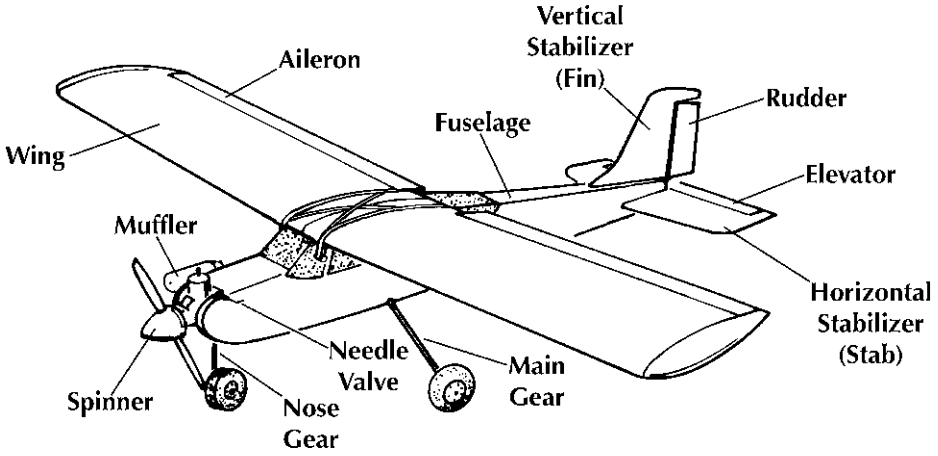
Field Equipment

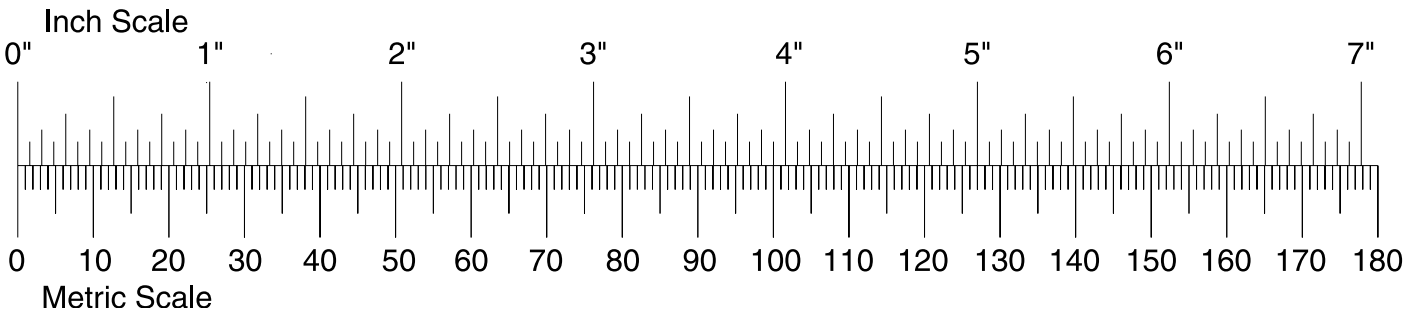
When ready to fly, you'll need the equipment to fuel the plane and start the engine. Perhaps you've already made arrangements with the R/C club or your flight instructor to borrow their equipment, but eventually you'll want to get your own. Some of the items are photographed or listed on the side of the kit box cover. Additionally, a field box will be required to carry the equipment.

Kit Inspection

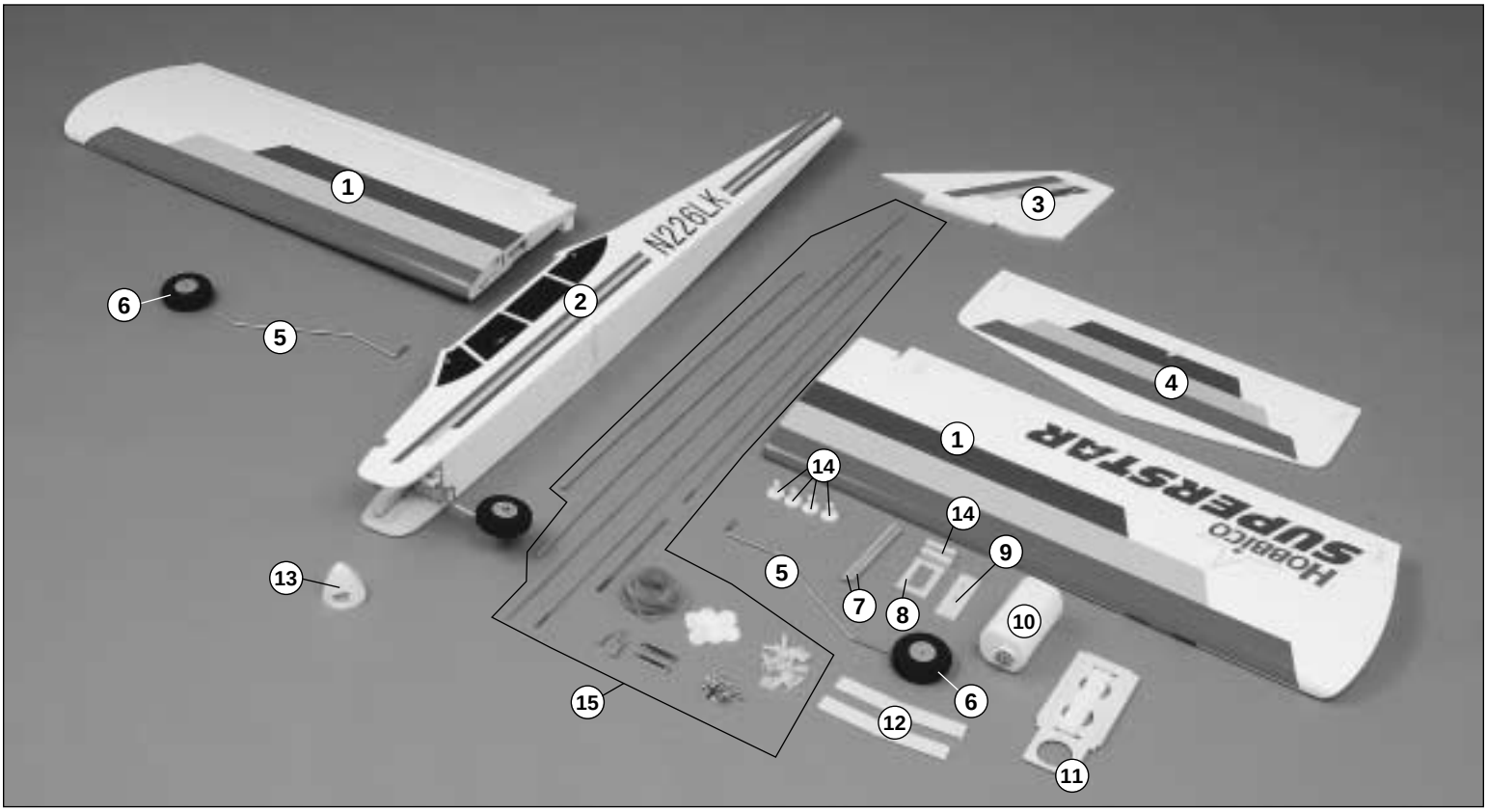
Before beginning assembly, inspect the parts in this kit to make sure they are of acceptable quality. If any parts are defective or damaged, or if you need assistance with assembly, contact Product Support.

Hobbico Product Support:
Phone: (217) 398-8970
Fax: (217) 398-7721
E-mail: airsupport@hobbico.com





Parts List



- ❑ 1. Wing
- ❑ 2. Fuselage (nose gear factory installed)
- ❑ 3. Fin with rudder
- ❑ 4. Stabilizer with elevator
- ❑ 5. Main landing gear wires
- ❑ 6. 2-3/4" main wheels
- ❑ 7. 1/4" dowels
- ❑ 8. Plywood aileron servo mount
- ❑ 9. Plywood pushrod tube brace
- ❑ 10. Fuel tank w/hardware
- ❑ 11. Plywood fuselage servo tray
- ❑ 12. Plywood wing joiners
- ❑ 13. 2" spinner
- ❑ 14. These parts not used
- ❑ 15. Hardware *(see detailed list below)*

Hardware

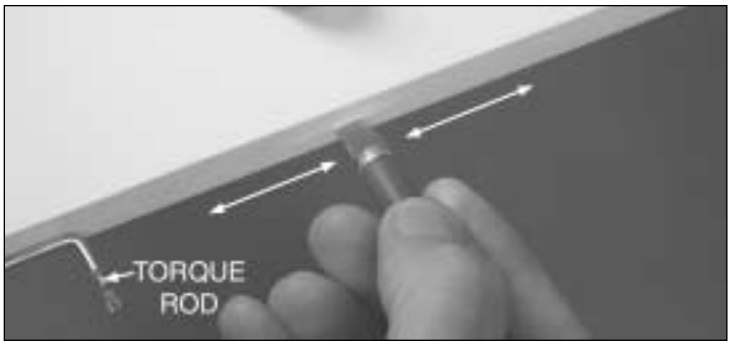
(2) Brass body for screw-lock pushrod connector (throttle, nose steering)
(6) 6-32 Blind nuts (factory-installed, 4-engine mount, 2-nose gear mount)
(2) Nylon control horns (1-elevator, 1-rudder)
(1) 5/32" Nylon nose steering arm (factory installed)
(5) Nylon clevis (2-ailerons, 1-elevator, 1-rudder)
(2) Nylon landing gear straps (main landing gear)
(15) CA hinges
(4) Nylon Faslinks (2-ailerons, 1-elevator, 1-rudder)
(2) Nylon torque rod horns (aileron torque rods)
(2) 3/16" Gray pushrod tubes (elevator, rudder, throttle, antenna guide)
(5) Silicone retainers (for clevises)
(7) 6-32 x 1/8" Socket set screws (6-wheel collars, 1-nose gear collar)
(1) 6-32 x 1/4" Socket-head cap screw (nose steering arm)
(2) 4-40 x 1/4" Socket-head cap screws (screw-lock pushrod connectors)
(6) 6-32 x 3/4" Screws (factory-installed, 4-engine mount, 2-nose gear mount)
(8) 5/32" Wheel collars (6-wheels, 1-nose steering arm, 1-nose gear)
(1) 17-1/2" Wire pushrod (throttle)
(2) 36" Wire pushrods (1-elevator, 1-rudder)
(2) 6" Wire pushrods (ailerons)
(6) #6 Washer (factory installed, 4-engine mount, 2-nose gear mount)
(4) 2-56 x 1/2" Screw (elevator and rudder control horns)
(8) #2 x 1/2" Screw (4-main landing gear straps, 4-servo tray)
(12) #64 Rubber bands
(1) Engine mount (factory installed)
(2) Metal engine mounting straps
(4) 4mm Nuts (engine mounting)
(4) 4mm Washers (engine mounting)
(4) 4mm Lock washers (engine mounting)
(4) 4 x 25mm Screws (engine mounting)
(1) Nose gear mount (factory installed)

Assemble the Wing

Hinge the Ailerons

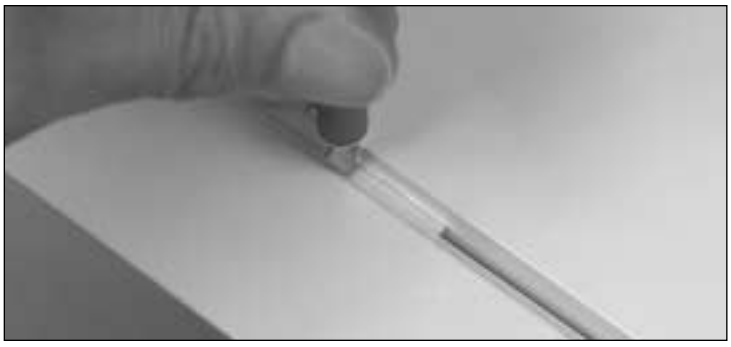
Start with the right wing first.

❑ ❑ 1. Carefully remove the masking tape holding the aileron to the wing. Also remove the protective foam block on the **aileron torque rod**.

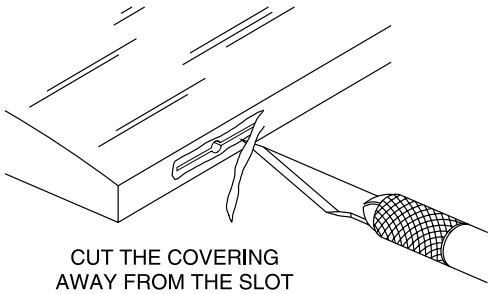


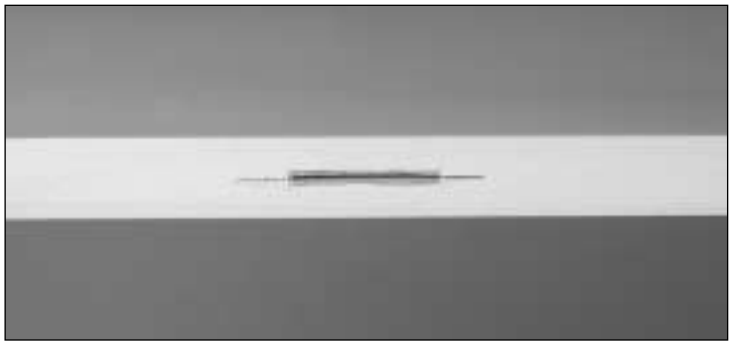
❑ ❑ 2. Use a hobby knife with a #11 blade to “loosen-up” the precut hinge slots in the wing to help the hinges go in easier. This is done by inserting the blade into the hinge slot and moving it from side-to-side several times. Note that the back edge of the blade is the part that does the work.

❑ ❑ 3. Insert a CA hinge halfway into each hinge slot in the aileron. Test fit the aileron to the wing and to the aileron torque rod with the hinges.



❑ ❑ 4. Mark the exact location of the hinges by cutting **small** slits through the covering on both sides of the hinges in the wing and aileron.


CUT THE COVERING
AWAY FROM THE SLOT

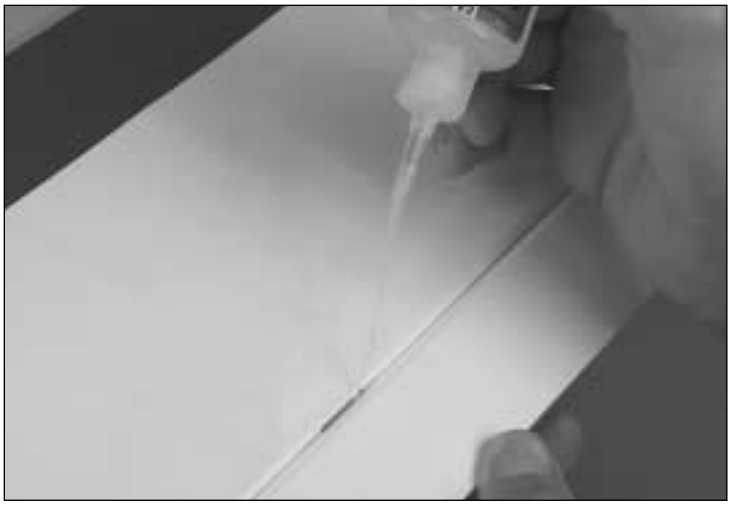


❑ ❑ 5. Remove the aileron from the wing and take out the hinges. Cut a small strip of covering from the hinge slots in the aileron and the wing between the slits you cut. **Hint:** Use a small metal straightedge as a cutting guide.

❑ ❑ 6. Lay a few paper towels neatly on top of each other. Use a pair of scissors to cut them into small squares. These paper towel squares will come in handy throughout the assembly process (and will save you from wasting whole paper towels for small jobs).

❑ ❑ 7. Mix a small batch of 30-minute epoxy. Use a toothpick or a small piece of wire to work some epoxy into the hole and the groove in the aileron for the torque rod. Also coat the torque rod with epoxy.

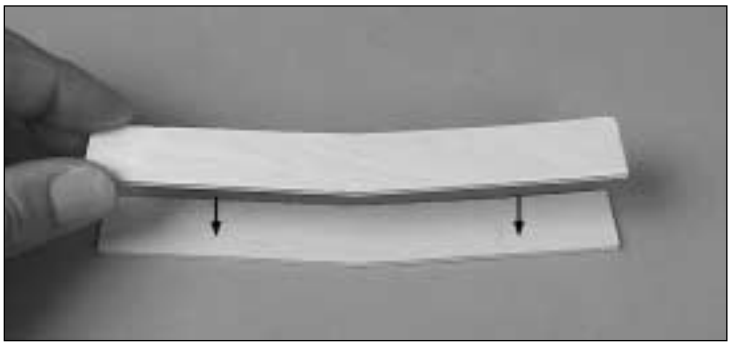
❑ ❑ 8. Join the aileron to the wing with the hinges. Be certain that the hinges remain centered. If any hinges do not remain centered, stick a pin through the hinge near the middle, then rejoin the aileron to the wing. Pull out any pins you may have used. Use a paper towel square to wipe away epoxy that has squeezed out of the aileron.



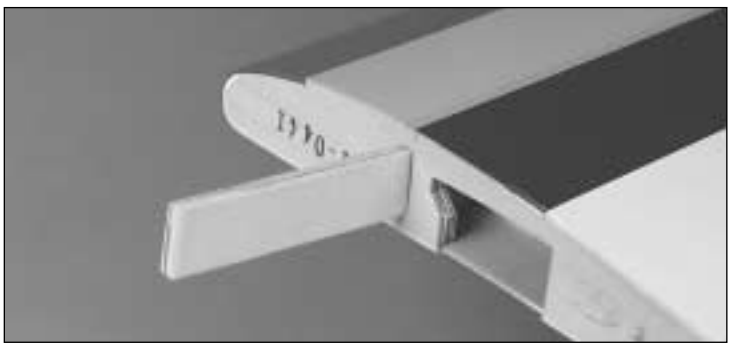
❏ ❏ 9. Position the aileron so there is a **small** gap between the aileron and the wing–just enough to see light through or to slip a piece of paper through. Add six drops of thin CA to the top of each hinge. Wait a few seconds between drops to allow the CA to fully soak in so it does not get into the gap. After gluing the tops of all the hinges, flip the wing over and add six drops of CA to the bottom of each hinge. Keep the paper towel squares close by to absorb excess CA that doesn't get into the hinges.

❏ 10. Return to step 1 and hinge the left wing the same way.

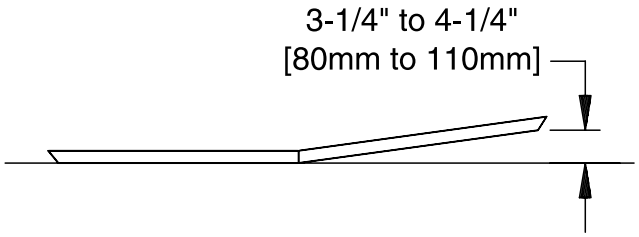
Join the Wing Halves



❏ 1. Use epoxy to securely glue together both 1/8" [3mm] plywood **wing joiners**. Clamp the joiners together and wipe away excess epoxy that squeezes out.



❏ 2. After the epoxy from the previous step has hardened, test fit the joiner in one, then the other wing half. Test join the wings with the joiner.

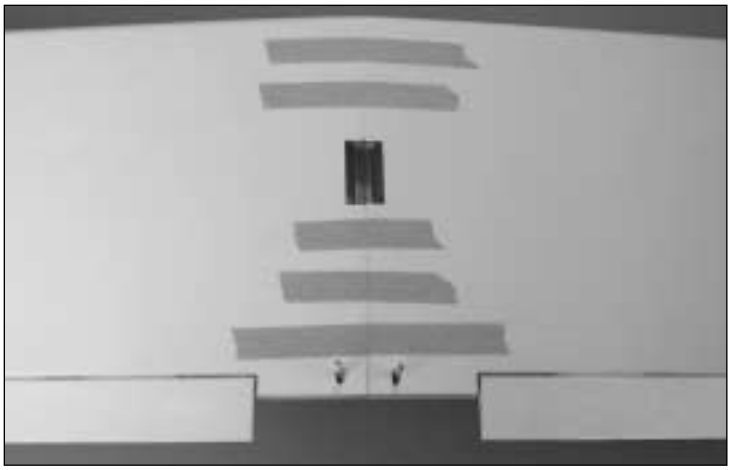


❏ 3. Lay one wing panel flat on your workbench. Measure the distance between the bottom of the raised end of the wing and the workbench. The measurement should be 3-1/4" to 4-1/4" [80mm to 110mm].

❏ 4. Separate the wings. Cut out the sheeting so the servo can go half-way in. If necessary, enlarge the cutout in the rib so the servo will fit. Prepare the other wing half the same way.

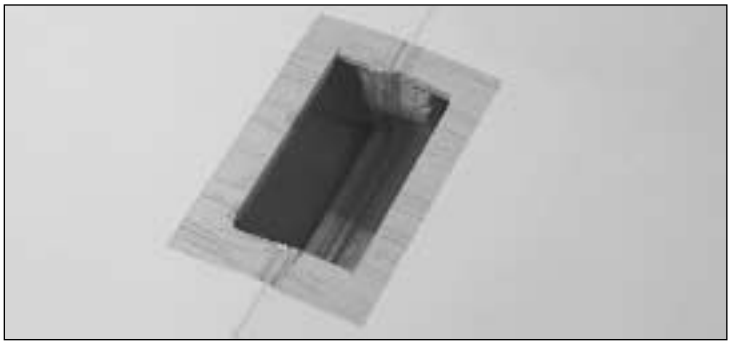
❏ 5. Mix up 1/2 oz. [15ml] of 30-minute epoxy. Working quickly, pour a generous amount into one of the wing halves where the joiner goes. Use a piece of stiff wire or something similar to spread the epoxy all around the inside to coat all the surfaces. **Thoroughly** coat one half of the joiner with epoxy as well. Insert the coated end of the joiner into the wing. Coat the rib on the end of the wing with epoxy (an epoxy brush works well for this).

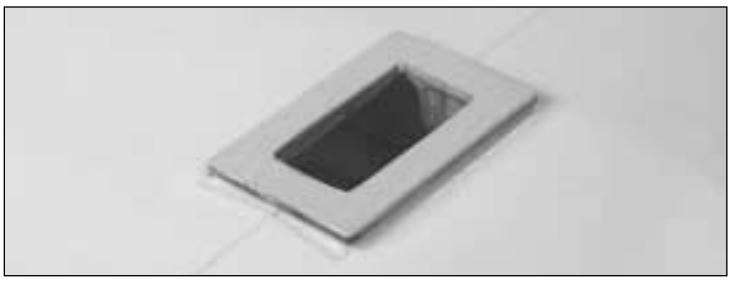
❏ 6. Use the remainder of the epoxy to coat the protruding end of the joiner and the inside of the opening in the other wing half. Join the wings and use your paper towel squares to wipe away excess epoxy as it squeezes out.



❏ 7. Tightly tape the wing halves together with several strips of masking tape on the top and bottom. Continue to wipe away excess epoxy as it comes out. Be certain the front and back of both wings accurately align. Do not disturb the wing until the epoxy has hardened.

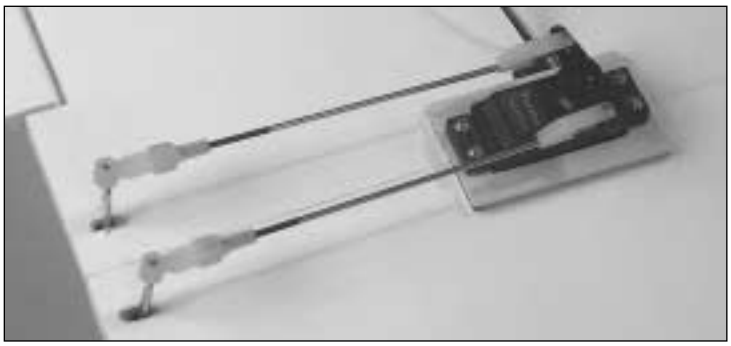
Hook Up the Ailerons



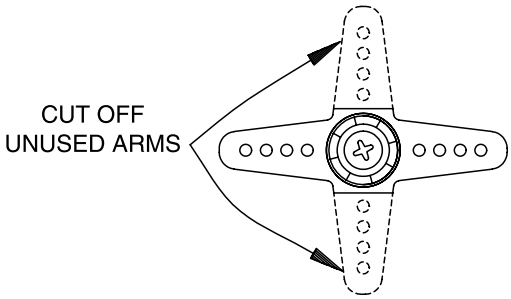


❏ 1. Cut the covering from the bottom of the wing for the 1/8" [3mm] plywood **aileron servo mount**. Glue the servo mount to the wing with epoxy. Make sure the mount is level and fill the gap on both sides with epoxy.

Refer to this photo for the following seven steps.

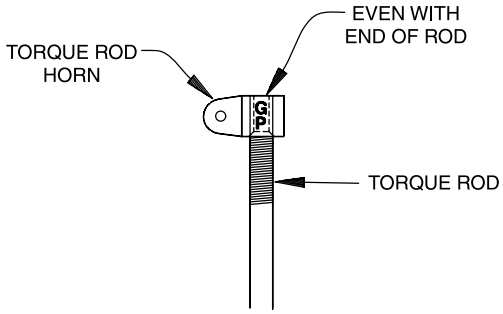


❏ 2. Cut a hole in the sheeting so the servo wire can come through (the hole can be seen in the photo at step 6). Guide the servo wire out the hole and install the servo.

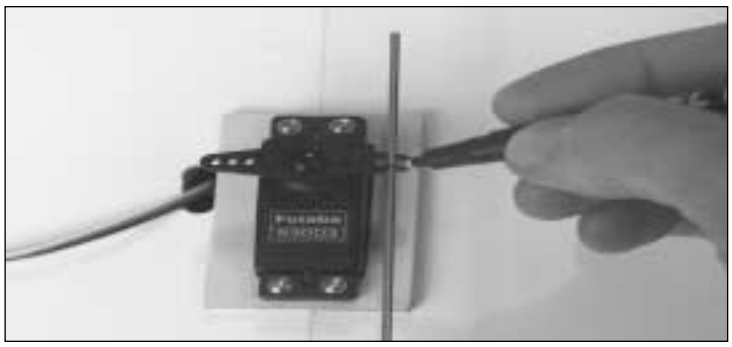


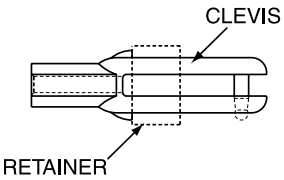
❏ 3. Use wire cutters to cut two of the arms off a four-arm servo arm. Install the arm on the aileron servo.

❏ 4. Drill 1/16" [1.6mm] holes through the servo mount for the servo mounting screws, then temporarily mount the servo using the eyelets, rubber grommets and screws that came with it. Remove the screws, add a few drops of thin CA to the holes, allow to **fully** harden, then remount the servo. This process is important to harden the "threads" in the wood so the screws remain tight.

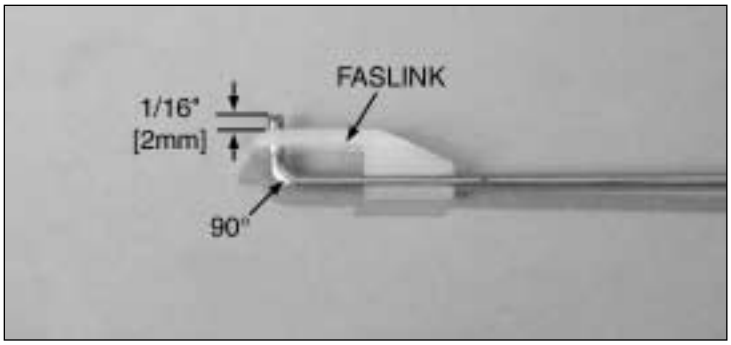


❏ 5. Thread the nylon **torque rod horns** onto the aileron torque rods until the horns are even with the ends of the torque rods.

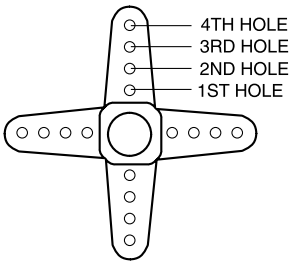




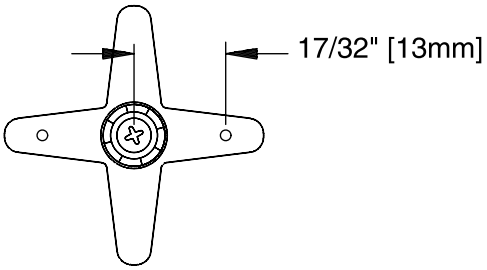
❏ 6. Thread a nylon **clevis** twenty full turns onto a 6" [150mm] **wire pushrod** that is threaded on one end. Connect the clevis to the torque rod horn. Align the pushrod with the servo arm, then use a fine-point felt-tip pen to mark the pushrod where it crosses the servo holes. **Note:** The aileron must be **centered** during this procedure (the bottom of the aileron should be even with the bottom of the wing).



❏ 7. Disconnect the pushrod from the torque rod horn. Use pliers to make a 90° bend in the pushrod at the mark you made. Fit a nylon **Faslink** to the pushrod, then cut off the excess pushrod 1/16" [2mm] above the Faslink.



SERVO ARM



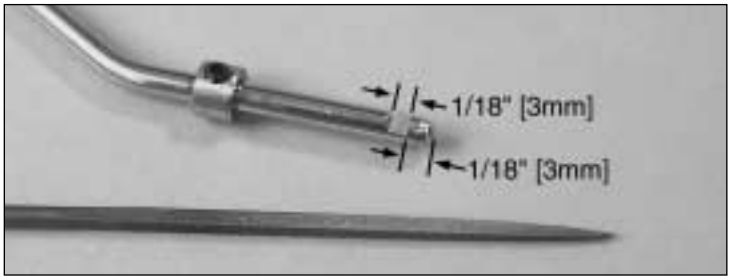
❏ 8. Enlarge the holes in the servo arm with a #48 or 5/64" [2mm] drill or a hobby knife. Connect the pushrod to the third hole out on the servo arm. **Note:** If using servo arms different than the Futaba servo arms shown in this manual, connect the pushrod to a hole that is as close as possible to 17/32" [13mm] from the center.

9. Make and connect the other pushrod the same way.

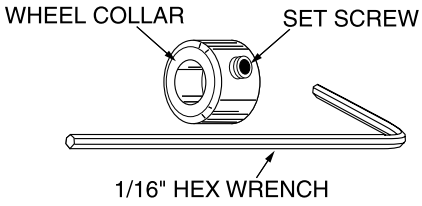
Now the wing is finished. Set it aside while working on the fuselage.

Assemble the Fuselage

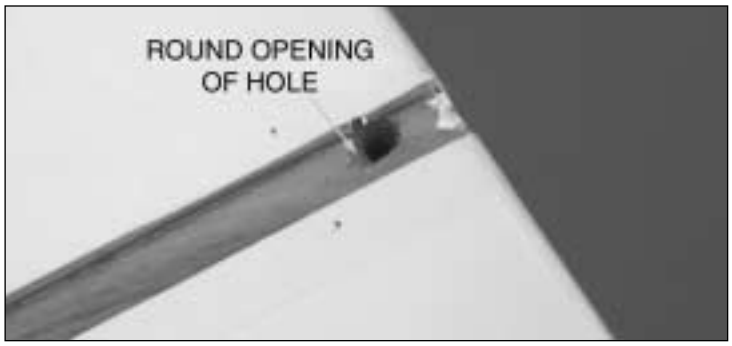
Mount the Landing Gear



❏ 1. Use a small metal file to file a 1/8" [3mm] wide “flat spot” 1/8" [3mm] from the end of both **main landing gear wires**.

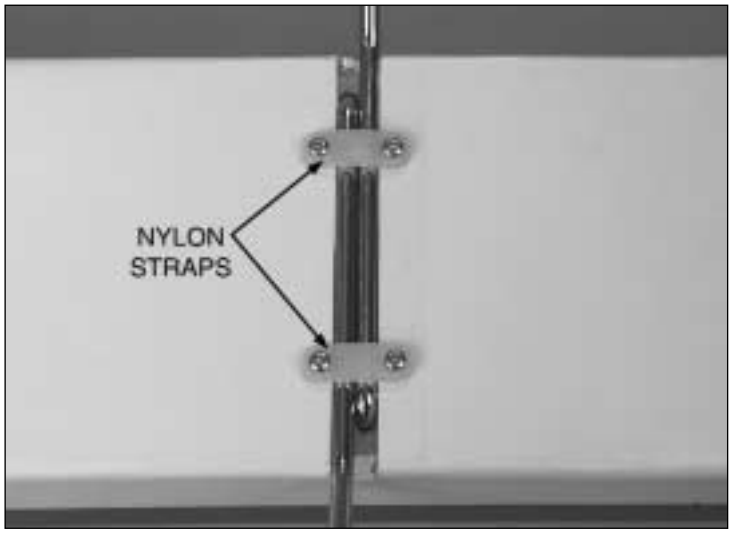


❏ 2. Mount the wheels to the landing gear with a 5/32" wheel collar on both sides of each wheel. Add a small drop of non-permanent thread locking compound (such as Great Planes Threadlocker GPMR6060) to two 6-32 set screws and thread them into the collars using a 1/16" hex (“Allen”) wrench. Position the wheel collars, then tighten the set screws. Be certain the set screw in the outer wheel collar is in the flat spot.



❏ 3. Use a hobby knife with a #11 blade to round the inner edges of the holes in the **landing gear rail** in the bottom of the fuselage for the main landing gear. This way, the landing gear wires will go all the way down. Fuelproof the bare wood in the groove by applying a light coat of epoxy.

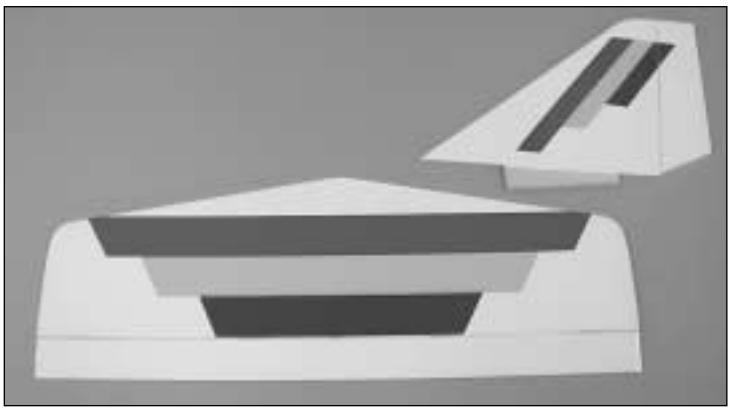
#2 x 1/2" [13mm] screw



❏ 4. Insert the main landing gear wires into the holes, then drill 1/16" holes for the **nylon straps**. Mount the gear to the bottom of the fuselage with the straps and four #2 x 1/2" [13mm] screws.

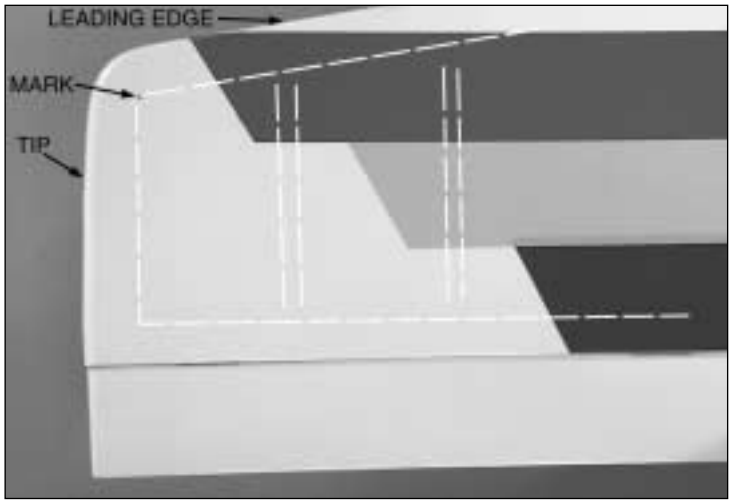
Mount the Stab and Fin

❏ 1. Use 30-minute epoxy to securely glue in the 1/4" [6mm] **wing dowels**. The longer dowel goes in front. After positioning the dowels, lightly coat them with epoxy so they will be fuelproofed.

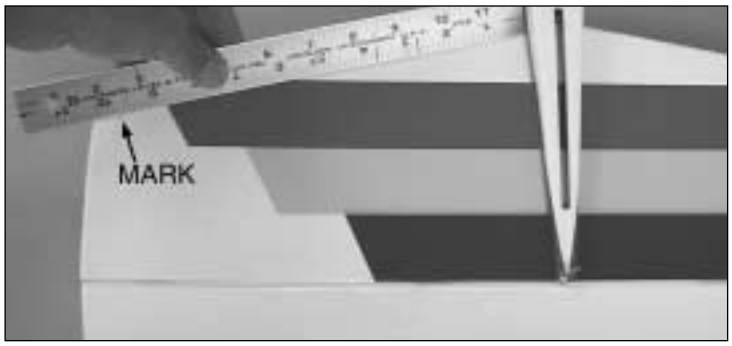


❏ 2. The same way you joined the ailerons to the wing, cut the covering from the hinge slots and join the elevator to the stab and the rudder to the fin with the hinges. Use thin CA to permanently glue in the hinges.

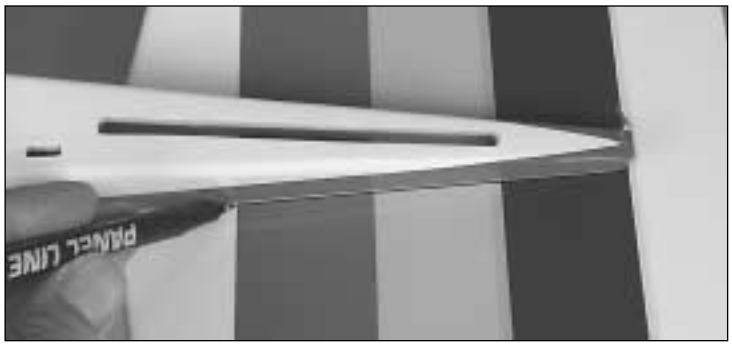
❏ 3. Taking accurate measurements, use a fine-point felt-tip pen to mark the center of the stabilizer on the trailing edge. Insert the stabilizer into the fuselage. Center the mark on the aft end of the fuselage, then stick a pin through the fuselage and the stab to hold it in position.



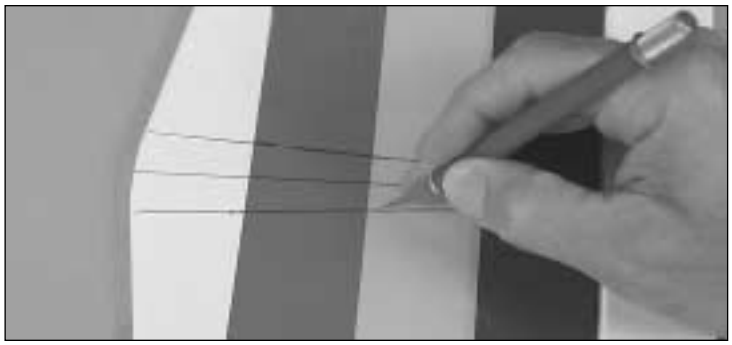
❏ 4. Use a fine-point felt-tip pen to mark both ends of the stab where the **leading edge** meets the **tip** under the covering.



❏ 5. Measure the distance between the fuselage and the marks on both sides of the stab. Adjust the stab until both measurements are equal and the stab is centered.



❏ 6. Using a fine-point felt-tip pen, draw lines around the top and bottom of both sides of the stabilizer where it goes into the fuselage.

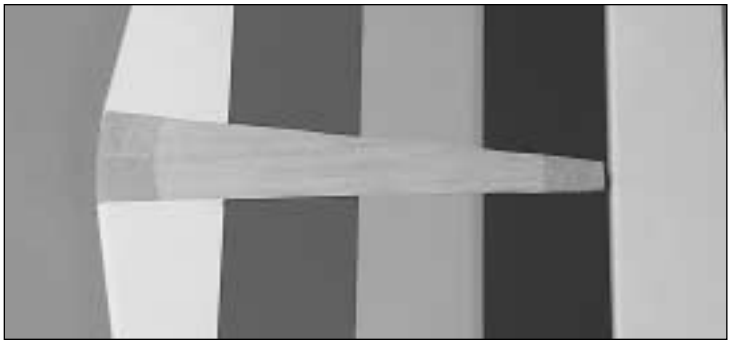


❏ 7. Take the stab out of the fuselage. Refer to the ***Expert Tip*** that follows, or use a hobby knife with a new, sharp #11 blade to cut along the covering 1/32" [1mm] inside the lines you marked. Use **great care** to cut **only into the covering** and **not**

into the balsa beneath. Cutting too deep will weaken the structure, possibly causing the stab to break during flight.

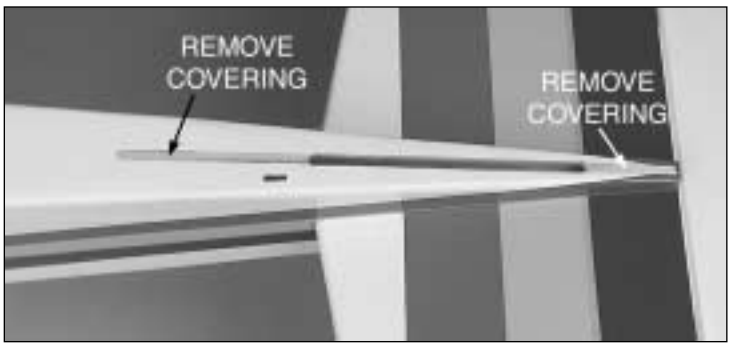
EXPERT TIP

An alternate way to cut the covering over the stabilizer is to use a soldering iron. This way, you will not risk accidentally cutting into the balsa. A fine soldering tip is not necessary, but does work best. Using a metal straightedge as a guide, move the soldering iron just fast enough to melt through the covering. Be careful not to burn the wood, otherwise you will have defeated the purpose of using a soldering iron to cut only the covering.



❏ 8. Peel the covering from the stab. Use one of your paper towel squares **lightly** moistened with denatured alcohol to wipe the ink from the stab and the fuselage.

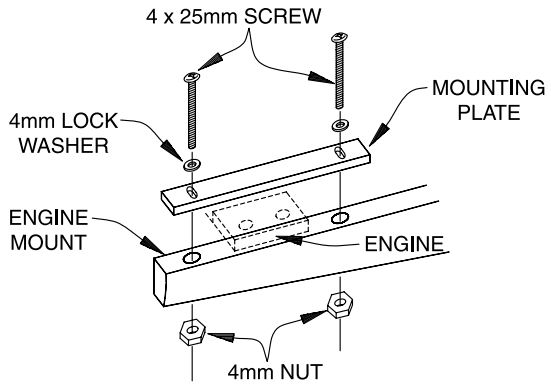
❏ 9. Mix 1/4 oz. of 30-minute epoxy. Apply epoxy to both sides of the stab where it contacts the fuselage and in the fuselage where it contacts the stab. Slide the stab into position and center-it-up as you did with the pin and by taking measurements as in steps 3 & 5. Wipe away excess epoxy. Do not disturb the fuselage until the epoxy has hardened.



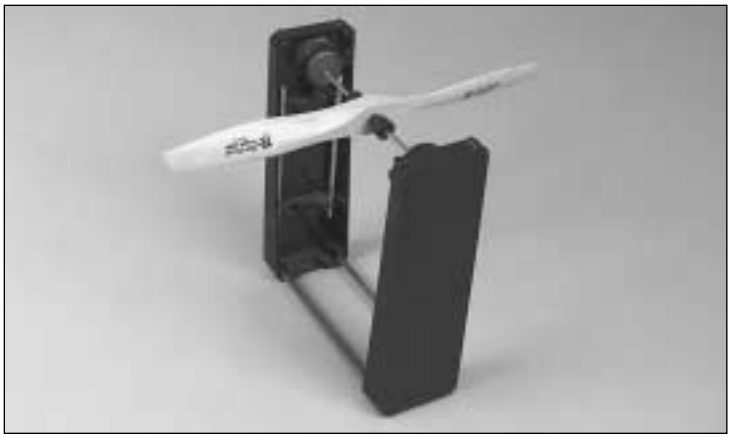
❏ 10. Test fit the fin in the fuselage. Similar to what was done for the stab, mark the outline of the fin onto the top of the fuselage, then cut away the covering and wipe away the ink.

❏ 11. Glue the fin into the fuselage with 30-minute epoxy. Be certain to apply epoxy to both the fin and the fuselage where they contact each other. Immediately after inserting the fin and before the epoxy hardens, use a builder's triangle to make certain the fin is perpendicular to the stab. If it is not, use masking tape to pull the fin to one side or the other to get it vertical.

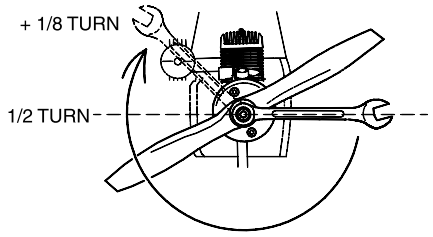
Mount the Engine and Radio Tray



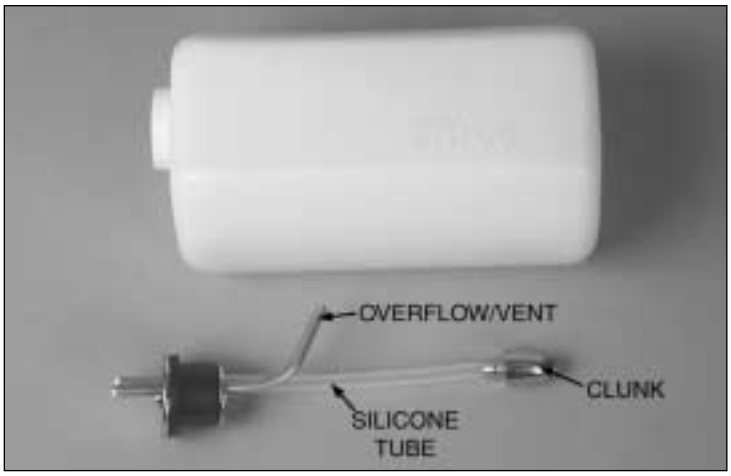
❏ 1. Mount the engine to the mount with two metal straps, four 4 x 25mm screws and 4mm lock washers and 4mm nuts. Be certain the engine is pointing straight ahead, and is not slanted off to one side or the other. Note that the lock washers go under the heads of the screws. Be certain the engine is centered and that the screws are evenly tightened. Do not use a small, hobby screwdriver to tighten the screws. A large (No. 2) Phillips screwdriver is preferred.

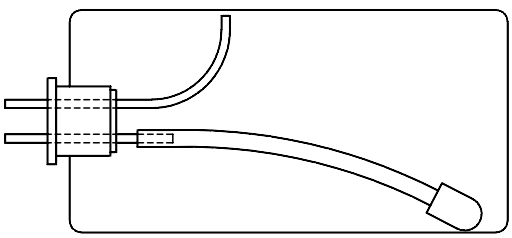


❏ 2. Balance the propeller and spare propellers. Most .40-size engines that will be used on this model run best with a 10 x 6 (10" diameter, 6" pitch) propeller, but refer to the manufacturer's recommendations that came with your engine. The Top Flite Power Point Precision Magnetic Propeller Balancer (TOPQ5700) is illustrated in the photo.



❏ 3. Mount the back plate of the spinner and the propeller to the engine. Tighten the propeller nut "finger-tight," then use the appropriate-size wrench (10mm for most .40 engines) or a crescent wrench to fully tighten the nut. 1/2-turn, plus 1/8 turn should be sufficient. **Note:** Do not install the muffler until instructed to do so.

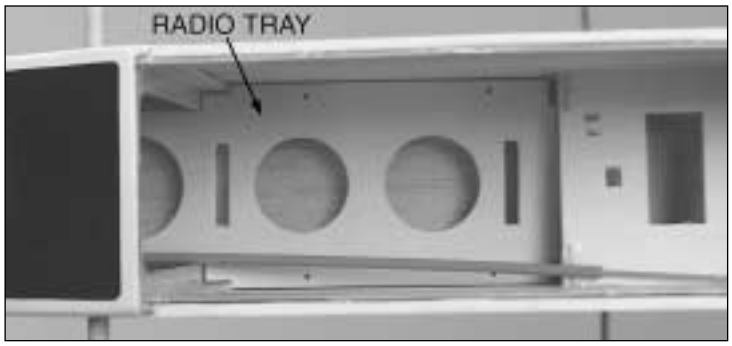




❏ 4. Prepare the fuel tank as shown in the photo, first by inserting two aluminum tubes through the rubber stopper, followed by the metal plates and the screw. Bend one of the tubes upward so it will be near the top of the tank when the stopper is inserted. This tube will be connected to the muffler and serves both as an overflow line (to signify when the tank is full) and as a pressure line to provide muffler pressure to the tank. Connect the clunk to the other tube with the silicone tube that came in the tank. Note that the silicone tube must be cut to the correct length, so that when the tank is assembled, the clunk does not contact the back of the tank. Otherwise, the clunk could become stuck near the top of the tank, thus discontinuing fuel flow.

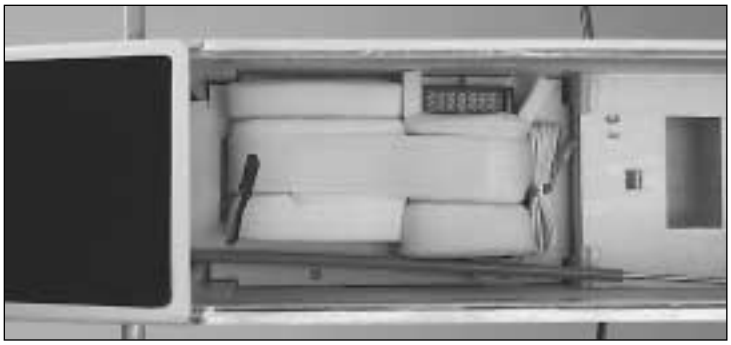
❏ 5. Insert the rubber stopper in the tank, then securely tighten the screw. Shake the tank and listen for the clunk inside. If the clunk stops making noise, the fuel line may be too long and the clunk may have become stuck. Disassemble the tank and shorten the fuel line as necessary.

❏ 6. Install the fuel tank in the fuselage with the neck of the tank protruding through the hole in the firewall. Make certain you have installed the tank upright (with the pressure tube inside the tank pointing upward).



❏ 7. Test fit the 1/8" [3mm] plywood **radio tray** in the fuselage over the four pre-glued mounting blocks. If necessary, use a hobby knife to trim the notches in the battery tray so it will fit. **Note:** The battery tray also keeps the fuel tank from shifting aft.

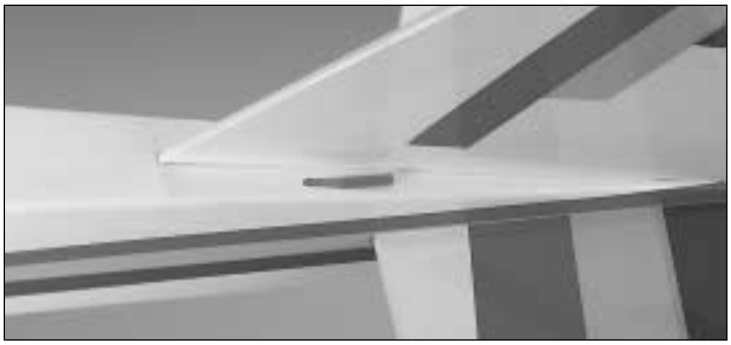
❏ 8. Wrap the battery pack and receiver in 1/4" [6mm] R/C foam rubber (if 1/4" R/C foam rubber is not available, 1/2" [13mm] is suitable–it just takes up a little more space). Securely mount the battery and receiver to the radio tray with the Velcro strips included with the kit.

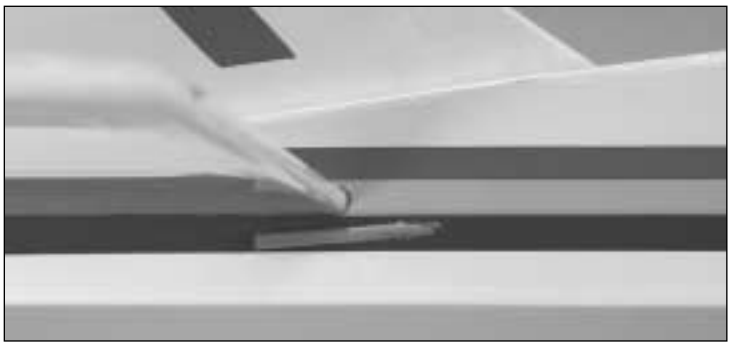


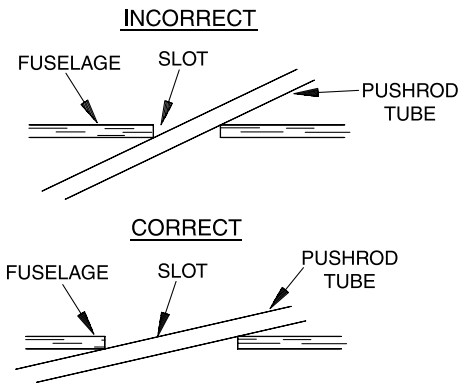
❏ 9. Mount the radio tray in the fuselage with the #2 x 3/8" [10mm] screws.

Mount the Servos

❏ 1. Make two 18" [460mm] **pushrod tubes** from the 3/16" [4.8mm] gray pushrod tubes supplied with this kit. (It doesn't matter which tubes you cut them from as there will be plenty of tubing leftover anyway.) **Thoroughly** roughen both ends of the tubes with coarse sandpaper so glue will adhere. **Do not use any glue until instructed to do so.**

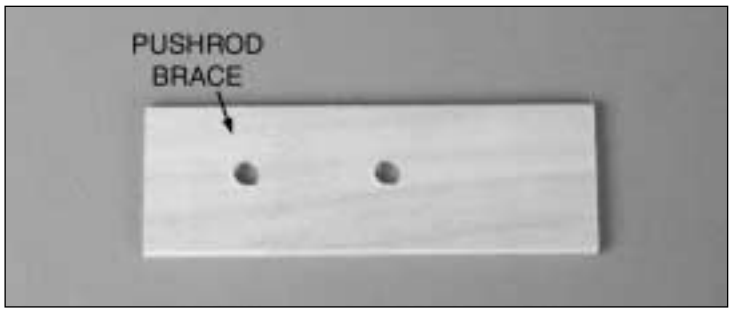






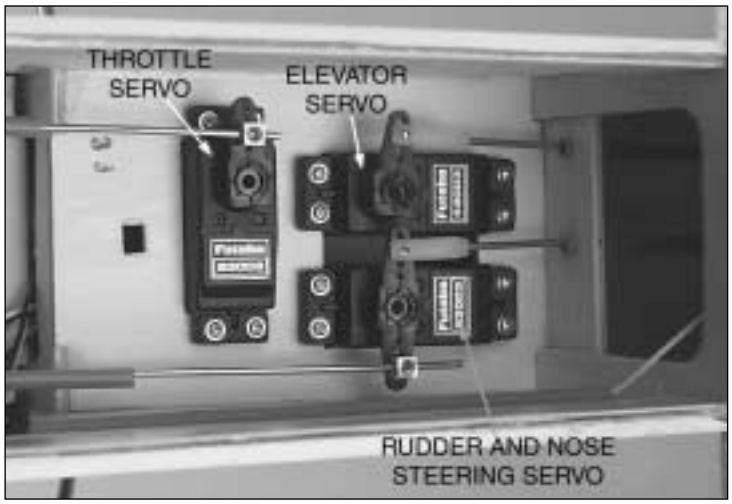
❏ 2. Enlarge the holes in the fuselage so the pushrod tubes will go through. The holes should be long enough to accommodate the tubes at a small angle as shown in the sketch above.

❏ 3. Guide the tubes through the holes up through the fuselage into the radio compartment.

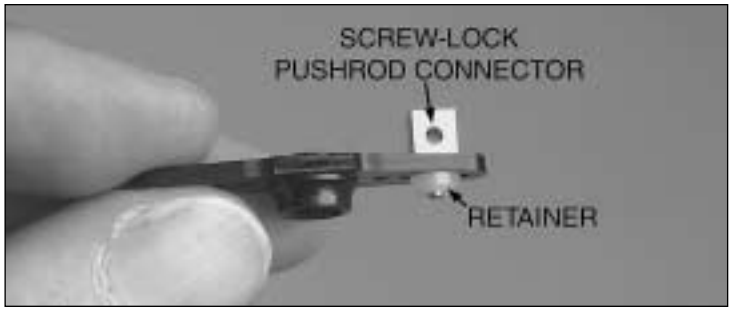


❏ 4. Fit the tubes through the 1/8" [3mm] plywood **pushrod brace**, then position the brace behind the former as shown.

Refer to this photo while installing the servos and hooking up the pushrods.



❏ 5. The same as was done for the aileron servo, make **one** two-arm servo arm and **two** one-arm servo arms by cutting off the unused arms. Save two of the cut off arms for use later when hooking up the antenna.



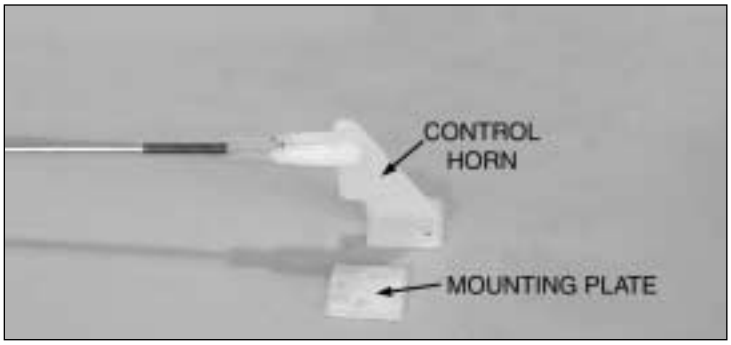
❏ 6. Install a brass screw-lock pushrod connector in the third hole out into the two-arm servo arm (or, like the aileron servo

arm, to a hole that is as close to 17/32" [13mm] as possible). Secure the connector with a nylon retainer.

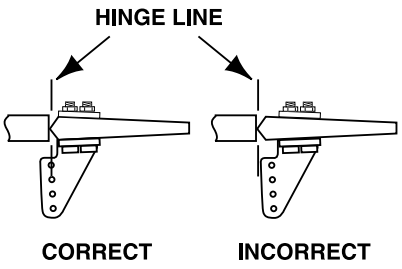
❑ 7. Place the servos in the servo tray as shown in the photo at step 5. Drill 1/16" [1.6mm] holes through the servo tray for mounting the servos. Mount the servos in the tray with the screws that came with the servos.

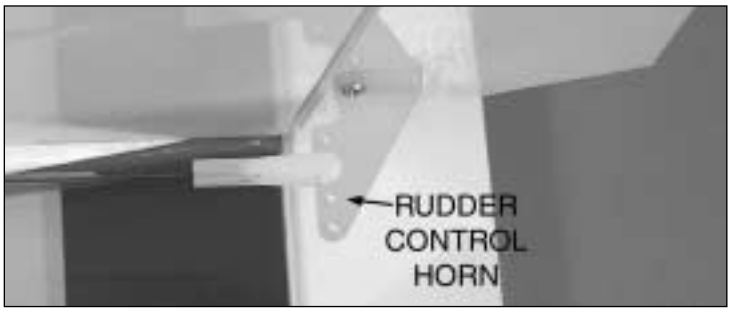
❑ 8. Remove the screws and the servos. “Harden” the holes in the servo tray with a drop of thin CA in each hole. Allow to fully harden, then reinstall the servos with the screws.

❑ 9. Insert the **nose-steering pushrod** into the screw-lock pushrod connector on the rudder servo.



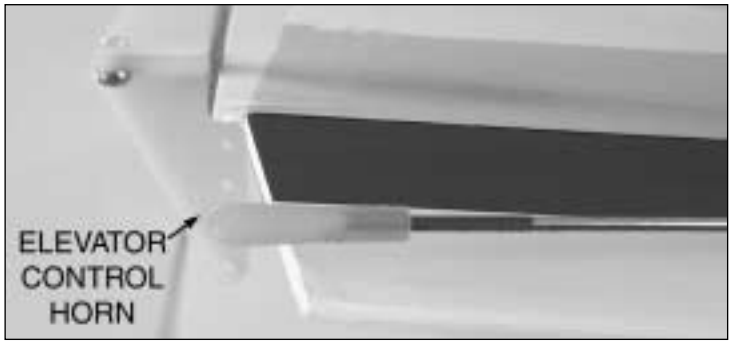
❑ 10. Thread a nylon clevis onto a 36" [910mm] wire pushrod twenty full turns. Cut the **mounting plate** from a **control horn**, then connect the clevis on the pushrod to the third hole from the bottom of the horn. Cut 9 inches [230mm] from the unthreaded end of the pushrod. This will be the elevator pushrod. Prepare the rudder pushrod the same way, only connect the clevis to the second hole from the bottom of the control horn. Guide the pushrods through the respective tubes in the fuselage.





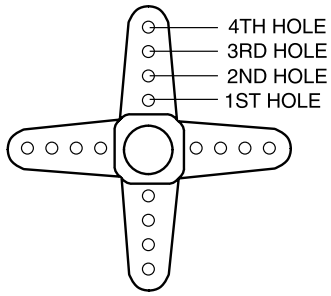
#2-56 x 1/2" [13mm] screw

❑ 11. Position the rudder control horn on the rudder so the clevis holes in the horn are in line with the hinge gap as shown in the sketch. Using the mounting holes in the control horn as a template, drill 3/32" [2.4mm] holes through the rudder for mounting the horn. Mount the horn with two 2-56 x 1/2" [13mm] screws and the mounting plate.



❑ 12. Mount the elevator control horn to the elevator using the same procedure described in the previous step.

❑ 13. The same way you did for the aileron pushrods, use a felt-tip pen to mark the elevator and rudder pushrods where they cross the holes in the servo arms. Disconnect the clevises from the control horns, then make 90° bends in the pushrods at the marks.



SERVO ARM

❑ 14. Enlarge the holes in the **elevator** and **rudder servo arms** with a #48 or 5/64" [2mm] drill or a hobby knife so the pushrods will fit. Connect the elevator pushrod to the **third** hole in the elevator servo arm (or 17/32" [13mm] from center) and the rudder pushrod to the **third** hole on the rudder servo arm (or 17/32" [13mm] from center). Secure the pushrods with a Faslink. Cut off the excess wire 1/16" [2mm] above the Faslink, then connect the servo arms to the servos.

❑ 15. Adjust the clevises on the back of the pushrods so the elevator and rudder will be centered, then fit them onto the control horns. The clevis on the elevator pushrod should be in the **third** hole from the base of the horn and the clevis on the rudder pushrod should be in the **second** hole from the base of the horn.

Now it’s time to glue…

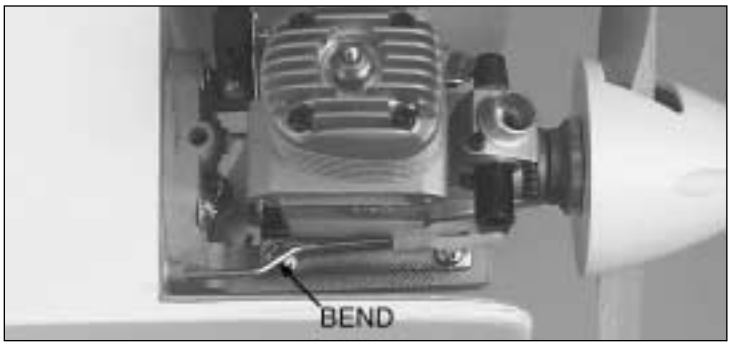
❑ 16. With the pushrods connected to the servos, use medium CA to glue the pushrod brace to the back of the former and to

the servo tray as shown. Use thin or medium CA to glue the pushrod tubes to the brace and the fuselage where they exit.

Let's hook up the throttle...

❑ 17. Cut a 12" [300mm] pushrod tube from any remaining 3/16" [4.8mm] gray pushrod tubing. Roughen one end of the tube with coarse sandpaper so glue will adhere. Guide the pushrod tube through the hole in the firewall and through the fuselage until 1/8" [3mm] of the roughened end protrudes from the firewall.

❑ 18. Fit a screw-lock pushrod connector in the second from the center hole of the throttle servo arm. Secure the screw-lock pushrod connector with a nylon retainer.



❑ 19. Thread a nylon clevis onto the end of the 18" [460mm] pushrod. Slide the pushrod into the tube, then bend the pushrod as necessary and connect the clevis to the top hole in the carburetor arm. Fit the other end of the pushrod into the screw-lock pushrod connector on the throttle servo.

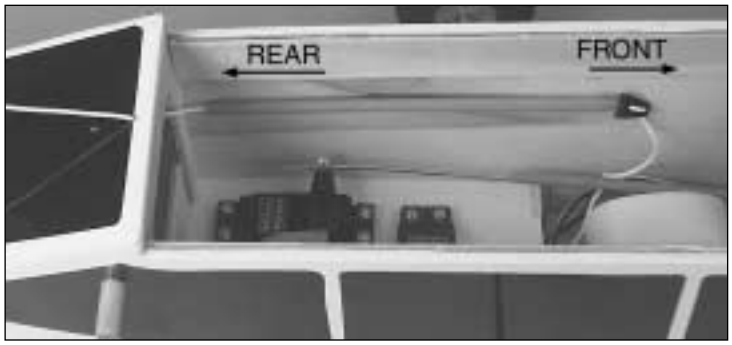
❑ 20. Use thin or medium CA to glue the throttle pushrod tube in the firewall.

Now the servos are hooked up, but final adjustments have to be made before the model will be ready to fly. First, the antenna and on/off switch must be mounted.

Hook Up the Controls

❑ 1. Mount the on/off switch in the precut opening on the left side of the fuselage (opposite the engine exhaust). Be certain the opening is large enough to allow the switch to fully turn on and off. If necessary, enlarge the opening.

❑ 2. Connect the switch to the receiver and battery already mounted in the fuselage.



❑ 3. Cut a piece of leftover 3/16" [4.8mm] gray pushrod tube to a length of 4" [100mm]. Roughen the tube so glue will adhere, then glue the tube to the inside of the fuselage as shown. Guide the receiver antenna in and out the holes in one of the servo arms you saved from earlier. Route the receiver antenna through the tube. Drill a 3/32" [2.4mm] hole through the top of the fuselage as shown, then guide the antenna out of the hole.

❑ 4. Make a "hook" as shown in the photo from the other cut off servo arm you saved. Connect the antenna to a pin stuck in the fin via the hook and a small rubber band. **Do not** cut off the rest of the antenna, but let it trail from the hook.

❑ 5. Connect a 6" servo extension wire into the aileron receptacle in the receiver (labeled **"1"** in most receivers). Connect the on/off switch and the three servos in the fuselage to the receiver as well (in most receivers, the elevator servo should connect to receptacle **2**, the throttle servo should connect to receptacle **3**, and the rudder servo should connect to receptacle **4**). Be certain none of the servo wires interfere with the pushrods.

Now the plane is assembled, but there are a few things that **must** be done before it will be ready to fly. You must carefully perform **all** of the following **setup procedures**. If possible, have your flight instructor assist.

Prepare the Model for Flight

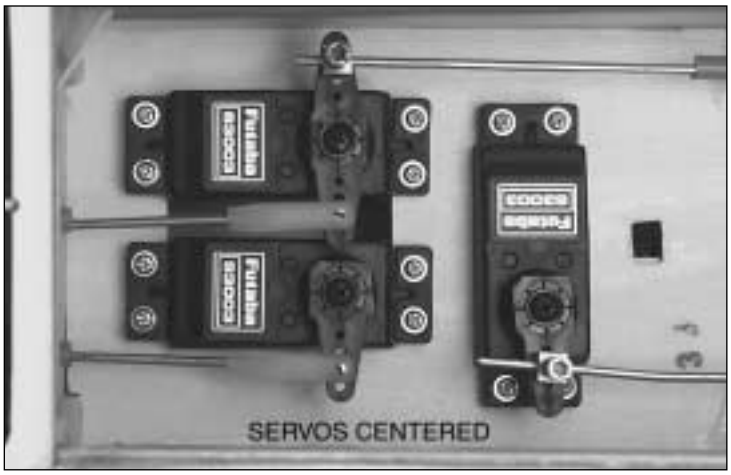
The batteries must be charged to continue.

Check the Control Directions

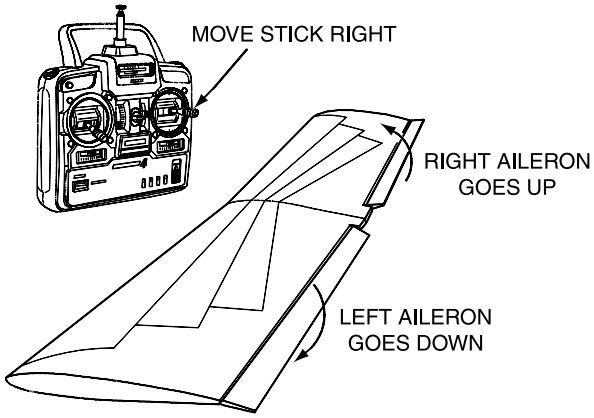
The first thing that has to be done is to center the controls and make sure they all move in the right direction.

❑ 1. Connect the aileron servo wire coming from the wing to the servo wire coming from the receiver. Temporarily place the wing on the fuselage.

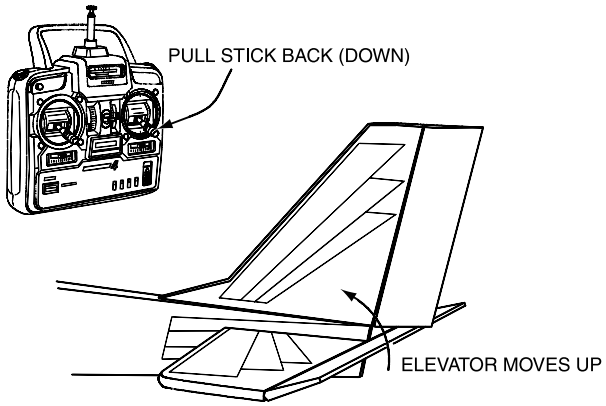
❑ 2. Center all the trims on the transmitter. Turn on the transmitter, then the receiver. (The idea is to never have the receiver on by itself. When turning off the system, turn off the receiver first, then the transmitter.)

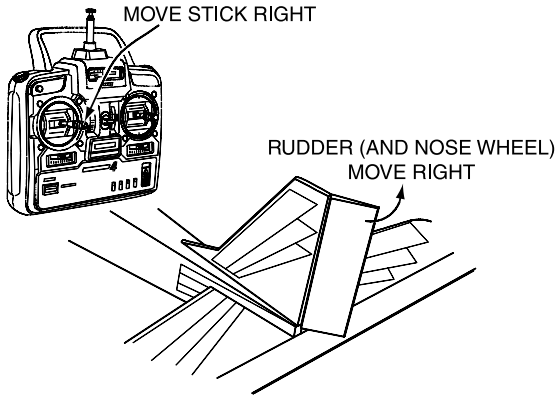


❑ 3. Observe the servo arms on all the servos. If necessary, take the servo arms off any servos that are not **centered** and reposition them so they are centered. Be **certain** to reinstall and tighten any screws you may have removed from the servo arms.



❑ 4. Move the right control stick on the transmitter to the **right** as shown in the diagram. Observe the ailerons. The right aileron should move **up** and the left aileron should move **down**. Moving the control stick to the left should make the ailerons move the opposite way. If the ailerons do not respond as described, reverse the direction using the **reversing switch** for the ailerons on the transmitter. If necessary, refer to the instructions in the manual that came with your radio to identify and operate the reversing switch.





❑ 5. Move the right stick **down** (pull it back) to make the elevator go up. Move the left stick to the right to make the rudder (and nose wheel) move right. Move the left stick down to close the throttle. If necessary, use the reversing switches on the transmitter to make the controls respond in the correct direction.

Note that pulling the elevator stick back moves the elevator up (which, in flight, pushes the tail down, thus increasing the angle of the wing thereby making the model climb). The best way to keep this in mind is to think in terms of a pilot in an airplane. He pulls the control stick back to “pull up” the nose of the plane.

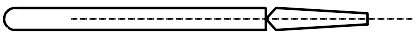
Set the Control Throws

The next thing that has to be done is to make sure the controls move the correct amount.

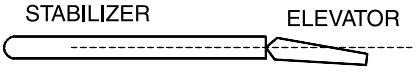
The control throws are a measure of how far the flight controls (ailerons, elevator and rudder) move. If the controls move too much, the plane will respond too quickly and be difficult to control. If the controls do not move enough, it may not be possible to recover the plane from adverse situations or to flare for landing. Due to the **great** effect the control throws have on the way a model flies, the control throws **must** be checked and corrected if necessary.

❏ 1. Turn on the transmitter and receiver. Center all the trim levers on the transmitter.

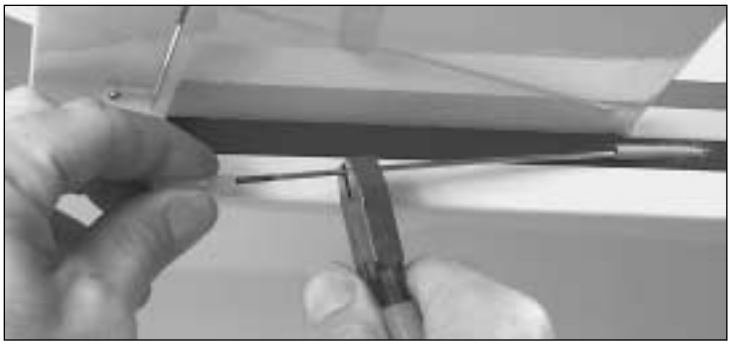
We’ll do the elevator first…



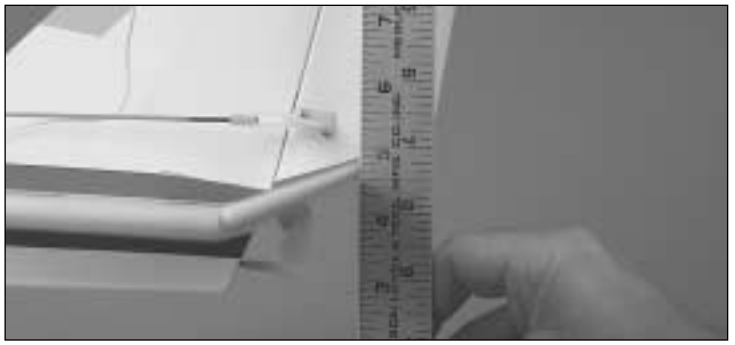
ELEVATOR CENTERED WITH STAB



ELEVATOR NOT CENTERED WITH STAB

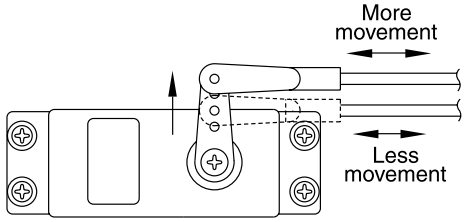


❏ 2. View the elevator and stab from the end. The elevator should be centered as shown in the sketch at the top. If the elevator is not centered with the stab (as shown in the bottom sketch), disconnect the clevis from the elevator control horn. Holding the end of the pushrod with pliers, thread or unthread the clevis as necessary until the elevator is centered when reconnected to the pushrod.

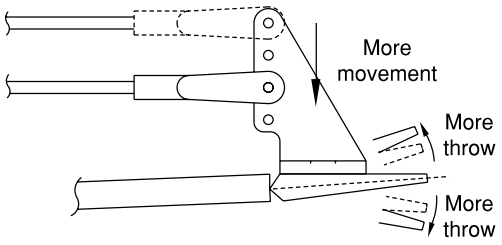


❏ 3. Place the end of a ruler on your workbench and hold it up to the elevator. Move the elevator all the way up by moving the control stick on the transmitter. Measure the distance the elevator moves. As shown in the **Control Throws Chart** on the next page, the elevator should move up 1/2" [13mm]. Measure the distance the elevator moves down.

❏ 4. If the elevator moves up 1/2" [13mm] and down 1/2" [13mm] the elevator throw is correct (a variance of 1/16" [2mm] in either direction is acceptable). If the elevator does not move up and down 1/2" [13mm], move the pushrod to a different hole **in the control horn** on the elevator. To get more throw, move the pushrod to a hole closer to the elevator. To get less throw, move the pushrod to a hole farther out. The throw can also be changed by moving the pushrod to different holes in the servo arm. Refer to the diagram below.



Moving the clevis outward on the servo arm results in more pushrod movement.



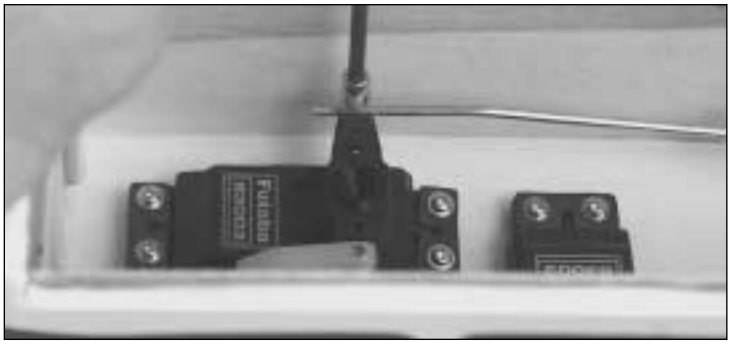
Moving the clevis inward on the control horn results in more throw.

To get the controls to move farther (*increase* the throw), connect the pushrod to a hole **farther in** on the control horn, or connect the pushrod to a hole **farther out** on the servo arm. To get the controls to move less (*decrease* the throw), connect the pushrod the opposite as described above.

❏ 5. Center the rudder and ailerons by adjusting the clevises on the pushrods as necessary. Refer to the **Control Throws Chart** for the correct measurements and check the throws. If necessary, adjust the throws as previously described.

Control Throws Chart:

Ailerons:	7/16" [11mm] up 7/16" [11mm] down
Elevator:	1/2" [13mm] up 1/2" [13mm] down
Rudder:	1" [25mm] right 1" left [25mm] left

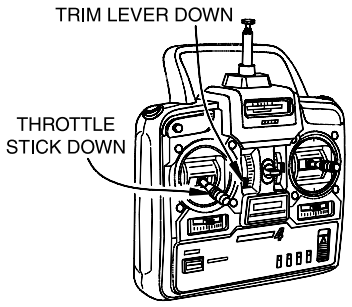


❑ 6. Center the nose wheel. Insert and tighten a 4-40 x 1/4" [6mm] screw in the screw-lock pushrod connector previously installed in the rudder servo arm. Roll the model on the floor to make sure it goes straight. If necessary, loosen the screw in the screw-lock pushrod connector and readjust the pushrod.

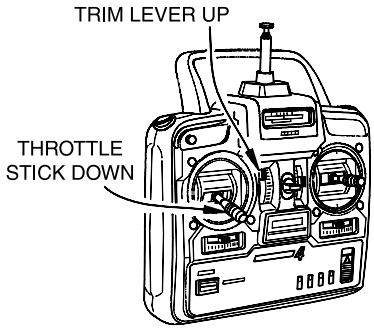
Adjust the Throttle

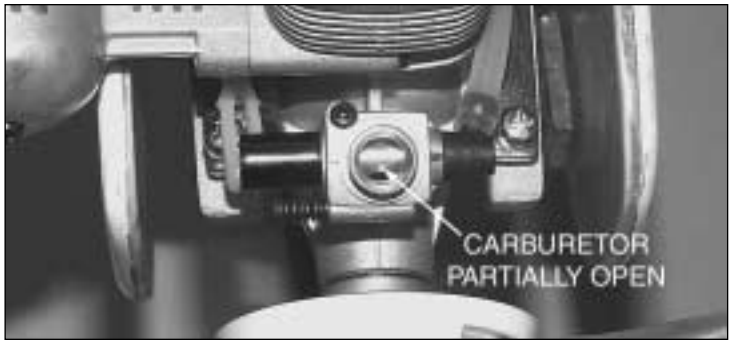
The throttle is to be set up so that when the throttle stick is all the way **down**, and the throttle trim lever is all the way **up**, the carburetor will be *nearly*, but not fully closed and the engine will idle at a low RPM. This will keep the engine running when the throttle stick is pulled all the way down (toward you) for landing. When, after landing, it *is* time to shut the engine off, move the trim lever down to fully close the carburetor.

Here's how to set up the carburetor…



❑ 1. With the transmitter and receiver on, move the throttle trim lever and the throttle stick all the way **down**. Rotate the arm on the carburetor to fully close the carburetor. Insert a 4-40 x 1/4" [6mm] screw in the screw-lock pushrod connector in the throttle servo arm and tighten the screw to lock the throttle pushrod.



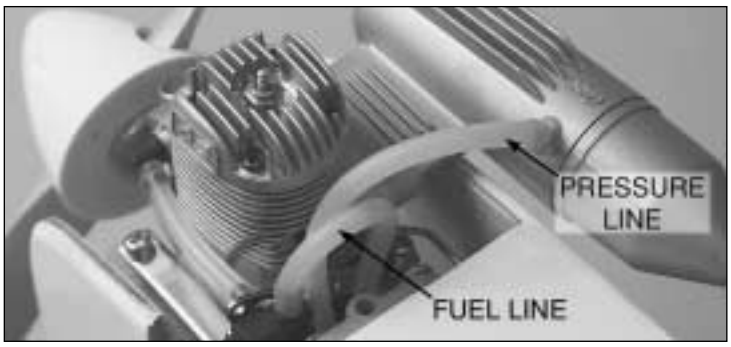


❑ 2. Move the throttle trim lever all the way up, but leave the throttle stick all the way down. *Now* the carburetor should be partially open.

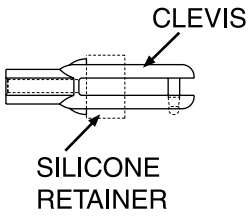
❑ 3. Move the throttle stick all the way up. Now the carburetor should be fully open.

❏ 4. If you are not able to achieve these settings, more or less movement may be required from the throttle pushrod. The same as the control surface throws, this is done by relocating the screw-lock pushrod connector on the servo arm to another hole, or by relocating the clevis on the carburetor arm to the other hole.

❏ 5. Install the muffler if you have not yet done so.



❏ 6. Connect the fuel lines. If your tank was assembled as shown in the photo on page 12, the fitting coming from the left side of the fuel tank goes to the muffler (pressure line) and the other fitting goes to the carburetor (fuel line) or to the needle valve if you have a remote needle such as on the O.S.® MAX LA .40 shown.



❏ 7. **Insert and tighten the screws that hold the servo arms on all four servos.** Install a **silicone retainer** on the clevises on the elevator and rudder servo arms and on the aileron torque rod horns.

Identify Your Model

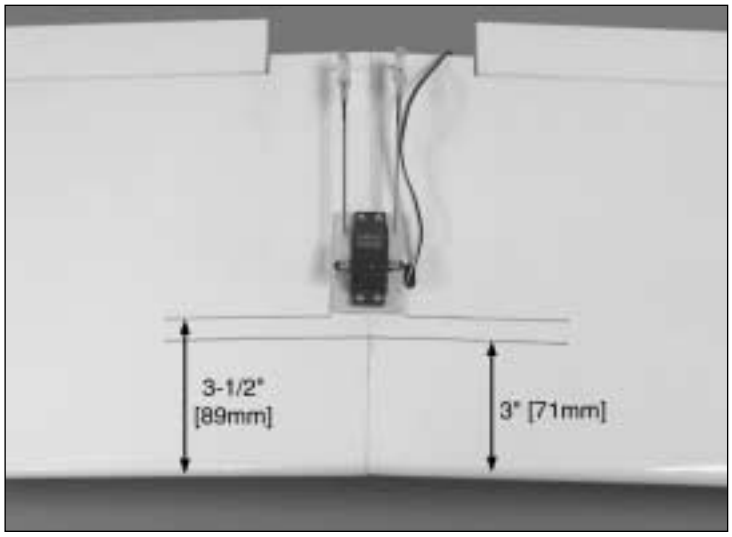
Whether you fly at an R/C club site or somewhere on your own, you should have your **name**, **telephone number**, **address** and **AMA number** on or in your model so it can be identified and returned in case it lands somewhere away from the flying site. Fill out the I.D. tag on page 23 and use spray adhesive or tape to attach it inside the fuselage.

Check the Ground Stance

Place the model on your workbench and view it from the side. In order to taxi, takeoff and land well, the model must sit level on the landing gear as shown. If the model does not sit level, or, if after a hard landing the main landing gear has bent upward, remove the main landing gear and use a bench vise or pliers to bend it back down to achieve the correct ground stance. If *(when)* you bend the nose gear, it should be bent back to its original position as well.

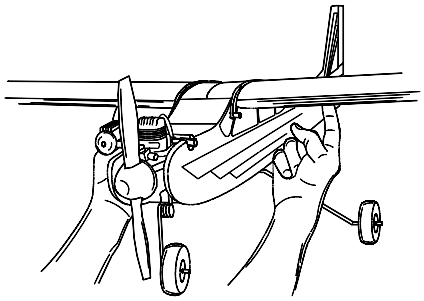
Balance the Model

This **important** step is also referred to as “checking the C.G.” (center of gravity). Simply stated, the ***center of gravity*** is the point at which the model balances when lifted under the wing. If the C.G. is too far forward, the model will be “nose-heavy” and could be difficult to takeoff and land and lose some of its self-correcting tendencies. If the C.G. is too far aft, the model will be “tail-heavy” and the controls may be too sensitive, making the model too difficult to control–especially for an inexperienced pilot! **DO NOT DISREGARD THIS STEP!** Follow the instructions to balance the model correctly, thus giving you the greatest chances for success!



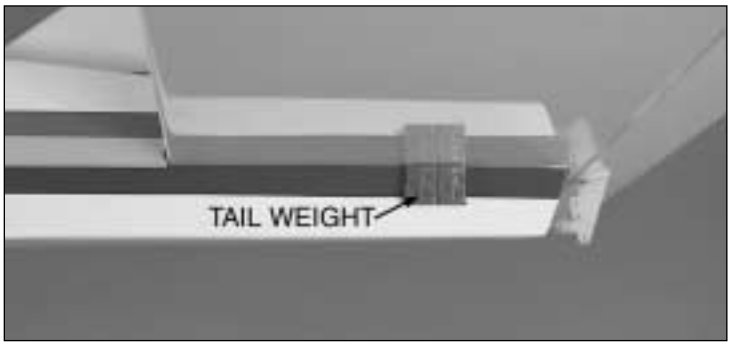
❏ 1. Use narrow tape or a felt-tip pen to mark two lines on the bottom of the wing 3" [71mm] and 3-1/2" [89mm] from the leading edge.

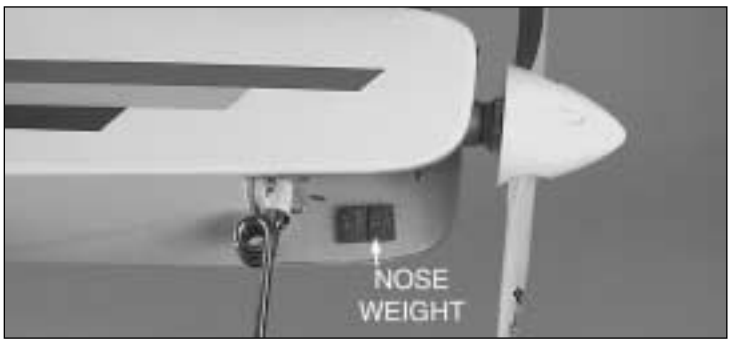
❏ 2. Make certain the model is in “ready-to-fly” condition with all components mounted and installed (propeller, spinner, landing gear, etc.). The fuel tank must be empty.



❏ 3. Mount the wing on the fuselage with four rubber bands. Lift the model on both sides of the fuselage with your fingertips between the lines you marked on the bottom of the wing.

❏ 4. If the fuselage will rest level with your fingertips anywhere between the lines, the C.G. is correct. If the tail is low even when your fingertips are on the aft lines, the plane is tail heavy and will require nose-weight to balance. If the nose is low even when your fingertips are on the forward lines, the plane is nose heavy and will require tail-weight. The SuperStar will probably balance "out of the box" without the requirement for additional ballast. However, if the model does require weight to get it to balance, do not be concerned. Many models require additional weight to balance so they will fly correctly!





❏ 5. If additional weight is required to balance the plane, purchase **Great Planes Self-Adhesive Lead Weights (GPMQ4485)**. The weight is segmented in 1/4 oz [7g] increments and is easy to work with. If adding weight to the tail, attach it to the **left** side of the fuselage (opposite the muffler) under the stab. If adding weight to the nose, attach it to the inside of the fuselage side next to the engine.

❏ 6. If you found it necessary to add weight, recheck the C.G. after adding the weight.

Check List

Now it's time to do a final check before taking the model to the field. Take the time now to do these checks and make certain your model is ready to fly.

❏ 1. Make sure the screws on all the wheel collars are fully tightened.
❏ 2. Be certain all the nylon clevises have silicone retainers.
❏ 3. Make certain the screws that hold on the servo arms are present and tight.
❏ 4. Make certain the elevator, rudder and ailerons respond in the correct directions.
❏ 5. Make sure the rubber bands that hold the wing are in good condition.
❏ 6. Make certain the propeller nut is fully tightened.
❏ 7. Make certain you have balanced the model according to the instructions.
❏ 8. Make sure the battery and receiver are securely mounted and protected with R/C foam rubber.
❏ 9. Make certain you have filled out the I.D. card on page 23 and placed it inside the model.

Charge the Batteries

If you haven't already done so, refer to the instruction manual that came with your radio control system and charge the batteries in the plane and in the transmitter. This should always be done overnight the night before you go flying.

Gather Your Tools

In addition to the equipment required to fuel and start the engine mentioned near the beginning of the manual, you should start a collection of tools that may be required for adjustments and maintenance at the flying field. Following is a list of the most important items.

Tools:
❏ Medium (#1) Phillips screwdriver
❏ Large (#2) Phillips screwdriver
❏ 5/16" (or 8mm) Socket wrench (for glow plug)
❏ 10mm Wrench or crescent wrench (for propeller nut)
❏ Pliers
❏ Hobby knife

Spare Parts:

- ❑ 10 x 6 Propellers
- ❑ Glow plug
- ❑ #64 Rubber bands (stored in container with talcum powder or kitty litter)

Preflight Checks

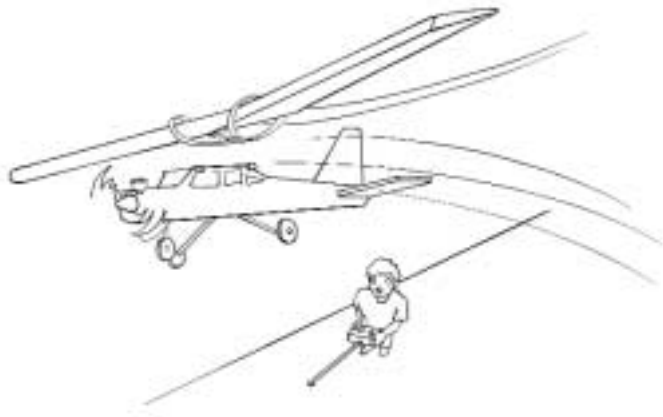
Preflight checks are to be done at the flying field. Your flight instructor should perform the checks with you.

IMPORTANT: Your radio control system transmits a signal on a certain frequency. Be certain you know what that frequency is. This is expressed as a two-digit number (42, 56, etc.), and can be found on the transmitter, on the receiver and on the box the transmitter came in. There are many different frequencies, but there is a chance that someone else at the flying field may be on the same frequency as you. If you turn on your transmitter while that person is flying, a crash will result. **NEVER** turn on your transmitter until you have permission from your instructor, and until you have possession of the frequency clip used for frequency control at the flying site.

Mount the Wing

Mount the wing to the fuselage with 12 #64 Hobbico or similar rubber bands. Install them from front to back, **crisscrossing the last two**. Never use torn, cracked or oily rubber bands. After removing the rubber bands from your model, store them in a container with talcum powder or clay-type kitty litter to absorb oil and keep them fresh for the next flying session.

If the rubber bands you will be using are different from those recommended, consult an experienced modeler to make certain they are strong enough, and that you have used enough of them. If uncertain, force the front of the wing off of the wing saddle. There should be considerable resistance! If the wing can be forced from the fuselage without having to strain your hands, then there are probably not enough rubber bands.



IMPORTANT!!! Flying a model with too few rubber bands can be dangerous. If the wing momentarily lifts from the fuselage and acts as though a large amount of “up” elevator has suddenly been applied because there are not enough rubber bands or they are too weak, internal structural damage may result. Even worse, the wing could actually detach from the fuselage resulting in a crash. If the model exhibits any tendencies that indicate there are not enough rubber bands, immediately reduce power, land and closely inspect the model for damage. If no damage is found, add more rubber bands.

Check the Controls

1. Get the frequency clip from the frequency control board at your flying site.

2. Turn on the transmitter and receiver. One at a time, operate each control on the airplane using the sticks on the transmitter. Make certain each control is responding correctly. This **must** be done before **every** flight. There are several types of malfunctions that can be discovered by performing this elementary task, thus saving your model!

Range Check the Radio

A range check **must** be performed before the **first** flight of a new model. It is not necessary to do a range check before every flight (but is not a bad idea to perform a range check before the first flight of each day). A range check is the final opportunity to reveal any radio malfunctions, and to be certain the system has adequate operational range.

1. Turn on the transmitter and receiver. Leave the transmitter antenna all the way down. Walk away from the model while simultaneously operating the controls. Have an assistant stand

by the model and tell you what the controls are doing to confirm that they operate correctly. You should be able to walk approximately 100 feet from the model and still have control without any “glitching” or inadvertent servo operation.

2. If everything operates correctly, return to the model and start the engine. Perform the range check with your assistant holding the plane with the engine running at various speeds. If the servos chatter or move inadvertently, there may be a problem. **Do not fly the plane!** With the assistance of your instructor, look for loose servo connections or binding pushrods. Also be certain you are the only one on your frequency, and that the battery has been fully charged.

Engine Safety Precautions

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

Keep all engine fuel in a safe place, away from high heat, sparks or flames, as fuel is very flammable. Do not smoke near the engine or fuel; and remember that engine exhaust gives off a great deal of deadly carbon monoxide. Therefore, **do not run the engine in a closed room or garage**.

Get help from an experienced pilot when learning to operate engines.

Use safety glasses when starting or running engines.

Do not run the engine 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 engine.

Keep these items away from the prop: 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 into the prop.

Use a “chicken stick” or electric starter to start the engine. Do not use your fingers to flip the propeller. Make certain the glow plug clip or connector is secure so that it will not pop off or otherwise get into the running propeller.

Make all engine adjustments from behind the rotating propeller.

The engine gets hot! Do not touch it during or right after operation. Make sure fuel lines are in good condition so fuel will not leak onto a hot engine, causing a fire.

To stop a glow engine, cut off the fuel supply by closing off the fuel line or following the engine manufacturer’s recommendations. Do not use hands, fingers or any other body part to try to stop the engine. Do not throw anything into the propeller of a running engine.

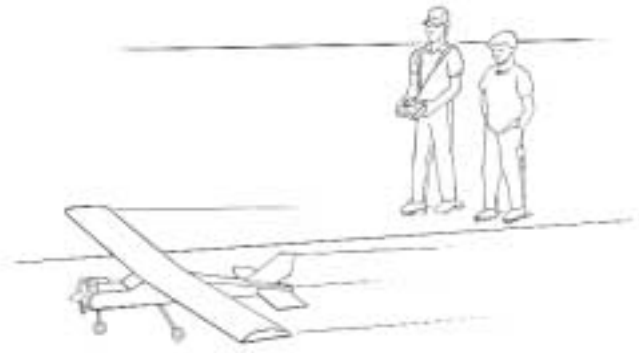
Flying

The following flying instructions are in **no way** an endorsement for learning to fly on your own, but are printed so you can know what to expect and what to concentrate on while learning under the tutelage of your instructor. Further, these flight instructions may be referenced once you begin flying on your own.

IMPORTANT: If you do insist on flying on your own, you **must** be aware of your proximity to R/C club sites. If there is an R/C site within six miles of where you are flying, and if you are operating your model on the same frequency at the same time as somebody else, there is a **strong** possibility that one or both models will crash due to radio interference. There is **great** potential for an out-of-control model to cause property damage and/or severe personal injury. We **strongly** urge you to fly at a R/C club site where frequency control is in effect so you can be assured you will be the only one flying on your channel.

Taxiing

Remember, it is assumed that your instructor is operating the model for you.



Takeoff

If possible, takeoff **directly into** the wind. If you are experienced, taking off in a crosswind is permissible (and sometimes necessary–depending upon the prevailing wind conditions and runway heading). Taking off into the wind will help the model roll straight and also reduces ground speed for takeoff. Taxi the model onto the runway or have an assistant carry it out and set it down pointing down the runway into the wind. When ready, gradually advance the throttle while simultaneously using the left stick (rudder/nose wheel) to steer the model. Gain as much speed as the runway and flying site will practically allow before gently applying up elevator, lifting the model into the air. Be ready to make immediate corrections with the ailerons to keep the wings level, and be smooth on the elevator stick, allowing the model to establish a gentle climb to a safe altitude before making the first turn (away from yourself). Do not “yank” back the elevator stick forcing the plane into too steep of a climb which could cause the model to stall and quit flying.

Flight

Once airborne, maintain a steady climb and make the initial turn away from the runway. When at a comfortable, safe altitude

throttle back to slow the model, thus giving you time to think and react. The SuperStar should fly well at half or slightly less than half-throttle. Adjust the trims so the plane flies straight and level. After flying around for a while, and while still at a safe altitude with plenty of fuel, practice slow flight and execute practice landing approaches by reducing the throttle further to see how the model handles when coming in to land. Add power to see how the model climbs as well. Continue to fly around while learning how the model responds. Mind your fuel level, but use this first flight to become familiar with the model before landing.

Landing

When ready to land, pull the throttle stick fully back while flying downwind just before making the 180° turn toward the runway. Allow the nose of the model to pitch downward to gradually bleed off altitude. Continue to lose altitude, but maintain airspeed by keeping the nose down while turning. Apply up elevator to level the plane when it reaches the end of the runway and is about five to ten feet off the ground. If the model is too far away, carefully add a small amount of power to fly the model closer. If going too fast, smoothly advance the throttle and allow the model to gain airspeed, then apply elevator to climb-out and go around to make another attempt. When finally ready to touch down, continue to apply up elevator, but not so much that the airplane will climb. Continue to apply up elevator while the plane descends until it gently touches down.

After you have landed and shut the engine off, adjust the pushrods on the ailerons, elevator and rudder as necessary so the trim levers on the transmitter may be returned to center (this will not be required on any of the controls that did not need trim adjustments).

Maintenance Tips

1. After flying for the day, use your fuel pump to drain excess fuel from the tank.

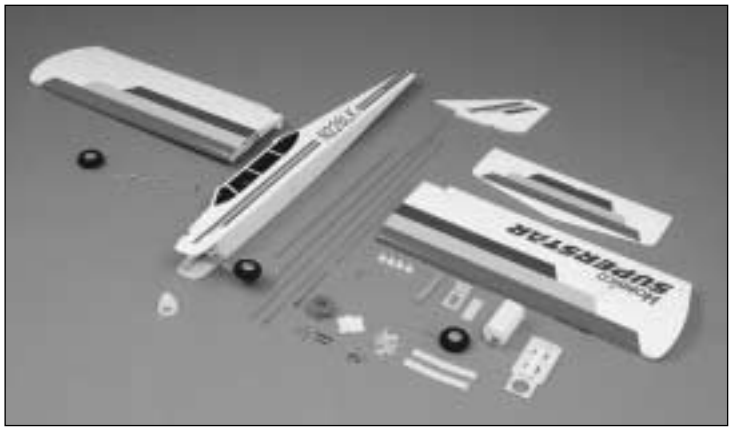
2. Purchase spare #64 rubber bands for the wing (HCAQ2020, 1/4 lb box). **Do not** reuse torn or oily rubber bands. After flying, remove the oily rubber bands from the wing and store them in a container with talcum powder or kitty litter. This will absorb oil and keep the rubber bands fresh for the next flying session.

3. After each day's flying (and between flights if you like), use spray cleaner and paper towels to **thoroughly** clean the model.

4. The SuperStar .40 ARF is factory-covered with Top Flite® MonoKote®. Should repairs ever be required, the covering can be repaired with patches cut from matching MonoKote colors. MonoKote is packaged in six-foot rolls, but some hobby shops also sell it by the foot. If only a small piece of covering is needed for a minor patch, perhaps a fellow modeler would give you some. The covering is applied with a model airplane covering iron, but in an emergency a regular iron could be used if set to a low heat.

Ordering Replacement Parts

To order replacement parts for the SuperStar .40 ARF, use the order numbers in the **Replacement Parts List** that follows. Replacement parts are available only as listed. Not all parts are available separately (an aileron cannot be purchased separately, but is only available with the wing kit). Replacement parts are not available from Product Support, but can be purchased from hobby shops or mail order/Internet order firms. Hardware items (screws, nuts, bolts) are also available from these outlets. If you need assistance locating a dealer to purchase parts, visit ***www.greatplanes.com*** and click on "Where to Buy." If this kit is missing parts, contact ***Hobbico Product Support.***



Replacement Parts List

Order #	Description	How to Purchase
Missing Pieces		Contact Product Support
Instruction Manual		Contact Product Support
Plans		Not available
HCAA3080	Wing Set	Contact your hobby supplier to purchase these items
HCAA3081	Fuse Set	
HCAA3083	Landing Gear Set	
HCAA3082	Tail Set	

This model belongs to:

Name

Address

City, State Zip

Phone number

AMA number

BUILDING NOTES

Kit Purchased Date: _____

Where Purchased:_____

Date Construction Started: _____

Date Construction Finished: _____

Finished Weight: _____

Date of First Flight: _____

FLIGHT LOG