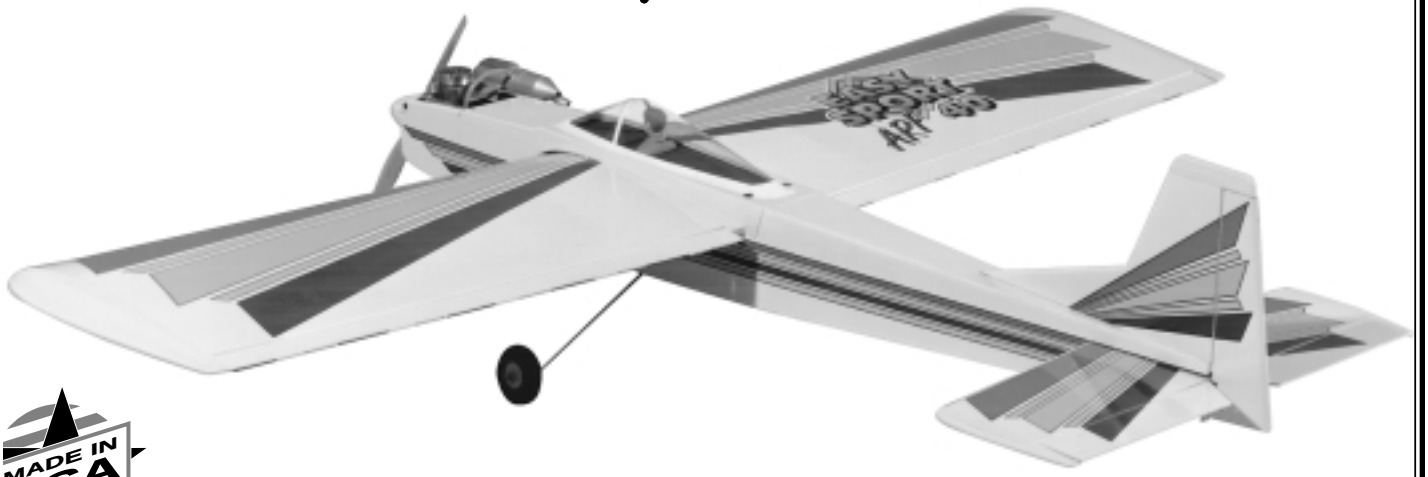
EASY SPORT™ 40 ARF



MADE IN USA

INSTRUCTION MANUAL

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

READ THROUGH THIS INSTRUCTION MANUAL FIRST. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

GREAT PLANES® MODEL MANUFACTURING COMPANY

P.O. Box 788 Urbana, IL 61801 (217) 398-8970

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PROTECT YOUR MODEL, YOURSELF & OTHERS...FOLLOW THIS IMPORTANT SAFETY PRECAUTION

Your Easy Sport 40 is not a toy, but rather a sophisticated, working model that functions very much like an actual airplane. Because of its realistic performance, the Easy Sport, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage property.

If this is your first sport model we recommend that you get help from an experienced, knowledgeable modeler with your first flights. You'll learn faster and avoid risking your model before you're truly ready to solo. Your local hobby shop has information about flying clubs in your area whose membership includes qualified instructors.

You may also contact the national Academy of Model Aeronautics (AMA), which has more than 2,300 chartered clubs across the country.

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302-9252
Tele. (800) 435-9262
Fax (317) 741-0057

INTRODUCTION

Congratulations and thank you for purchasing the **Great Planes Easy Sport 40 ARF**! This model has many features that are usually found only in kit-type aircraft. These features include: rod-in-tube pushrods, an adjustable glass-filled nylon engine mount, multiple color covering and high quality Great Planes hardware. The construction technique that is used for this aircraft results in a model that is lighter and stronger than conventional, built-up balsa airplanes. The Easy Sport 40 ARF will provide an excellent second aircraft to help build confidence and assist in perfecting your aerobatic skills.

The Great Planes Easy Sport 40 ARF is similar to the original Easy Sport 40 kit. The Almost-Ready-to-Fly version is stable enough to be a great second airplane, yet has aerobatic capabilities which allows rapid advancement of your aerobatic skills. This Easy Sport has the same good looks and excellent stability at low speeds that can be found on the kit version and reflects the design expertise and high quality standards of Great Planes kits.

Please inspect all parts carefully before starting to build! If any parts are missing, broken or defective, or if you have any questions about building or flying this airplane, please call us at (217) 398-8970. If you are calling for replacement parts, please reference the part numbers and the kit identification number (stamped on the end of the carton) and have them ready when calling.

PRECAUTIONS

1. Build 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 correct.

2. Take time to build straight, true and strong.

3. Use a radio control system that is in first-class condition and correctly-sized engine and components throughout your building process.

4. You must properly install all components so that the model operates properly on the ground and in the air.

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

6. If you are not already an experienced R/C pilot, you should fly the model only with the help of a competent, well experienced R/C pilot.

NOTE: We, as the kit manufacturer, can provide you with a top quality kit and great instructions, but ultimately the quality 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 directions to end up with a well-built model that is straight and true.

DECISIONS YOU MUST MAKE

Engine Selection

The recommended engine size range is as follows:

.40 to .51 cu. in. **2-stroke**
.52 to .70 cu. in. **4-stroke**

The Easy Sport 40 will fly well with any of the recommended engine sizes. For “Hot Dogging” and speedy performance, we suggest either an O.S.® .46 FX or a SuperTigre™ GS-45, both 2-stroke engines. An O.S. FS-70 Surpass is a good choice for those who prefer 4-stroke engines.

PREPARATIONS

Required Accessories

Items in parentheses (OSMG2691) are suggested part numbers recognized by distributors and hobby shops and are listed for your ordering convenience. **GPM** is the Great Planes brand, **TOP** is the Top Flite® brand, and **HCA** is the Hobbico® brand.

- ❑ 4 Channel Radio with 4 Servos
- ❑ Engine - *See* **Engine Selection** above
- ❑ Propellers (see engine instructions for sizes)
- ❑ 18" Silicone fuel tubing (Great Planes #GPMQ4131)
- ❑ 1/4" Latex foam rubber for receiver & battery (Hobbico #HCAQ1000)

Note: Larger wheels than those included may be required for operation on rough grass fields.

Building Supplies and Tools

These are the building tools, glue, etc. that we recommend and mention in the manual. *We recommended Great Planes **Pro**™ CA and Epoxy*

- ❑ 1 oz. CA thin (Great Planes #GPMR6002)
- ❑ 1 oz. CA+ Medium (Great Planes #GPMR6008)
- ❑ 6-Minute Epoxy (Great Planes #GPMR6045)
- ❑ 30-Minute Epoxy (Great Planes #GPMR6047)
- ❑ Hand or electric drill
- ❑ Hobby saw (razor saw)
- ❑ Hobby knife, #11 Blades
- ❑ Common pliers
- ❑ Screwdrivers (phillips and flat blade)
- ❑ T-Pins
- ❑ String
- ❑ Straightedge with scale
- ❑ Masking tape (required for construction)
- ❑ Sandpaper (medium grit)
- ❑ T-Bar sander (or similar)
- ❑ Isopropyl rubbing alcohol (70%)
- ❑ Round file
- ❑ Felt-tip pen
- ❑ Mixing sticks
- ❑ Drill Bits: 1/16", 3/32", 5/64", 5/32", 7/64"

Optional Supplies and Tools

- ❑ Dremel® MultiPro™ or similar
- ❑ 1 oz. Thick CA- (GPMR6014)
- ❑ 6-Minute Pro Epoxy (GPMR6045)
- ❑ CA Applicator Tips (HCAR3780)
- ❑ Epoxy Brushes (GPMR8060)
- ❑ CA Debonder (GPMR6039)
- ❑ Trim Seal Tool (TOPR2200)
- ❑ Heat Gun (TOPR2000)
- ❑ Straightedge (Fourmost Non Slip, FORR2149)
- ❑ Kyosho Curved Scissors for trimming canopy (KYOR1010)

Common Abbreviations

Elev = Elevator
LE = Leading Edge (front)
Lt = Left
Rt = Right
TE = Trailing Edge (rear)
Fuse = Fuselage
LG = Landing Gear
Ply = Plywood
Stab = Stabilizer
" = Inches

Get Ready to Build

1. Remove all parts from the box. As you do, identify each part by comparing it with the parts list on page 5. Using a felt-tip or ballpoint pen, lightly write the part **name** on each piece to avoid confusion later. Use your bar sander or sanding block to **lightly** sand the edges to remove any irregularities or slivers.

2. As you identify and mark the parts, separate them into groups, such as **fuse** (fuselage), **wing**, **fin**, **stab** (stabilizer) and **hardware**.

Futaba® 4NBF Conquest 4-channel Radio
Flexibility and convenience make the Futaba Conquest FM radio systems a good choice for experienced fliers. **FUTJ39****

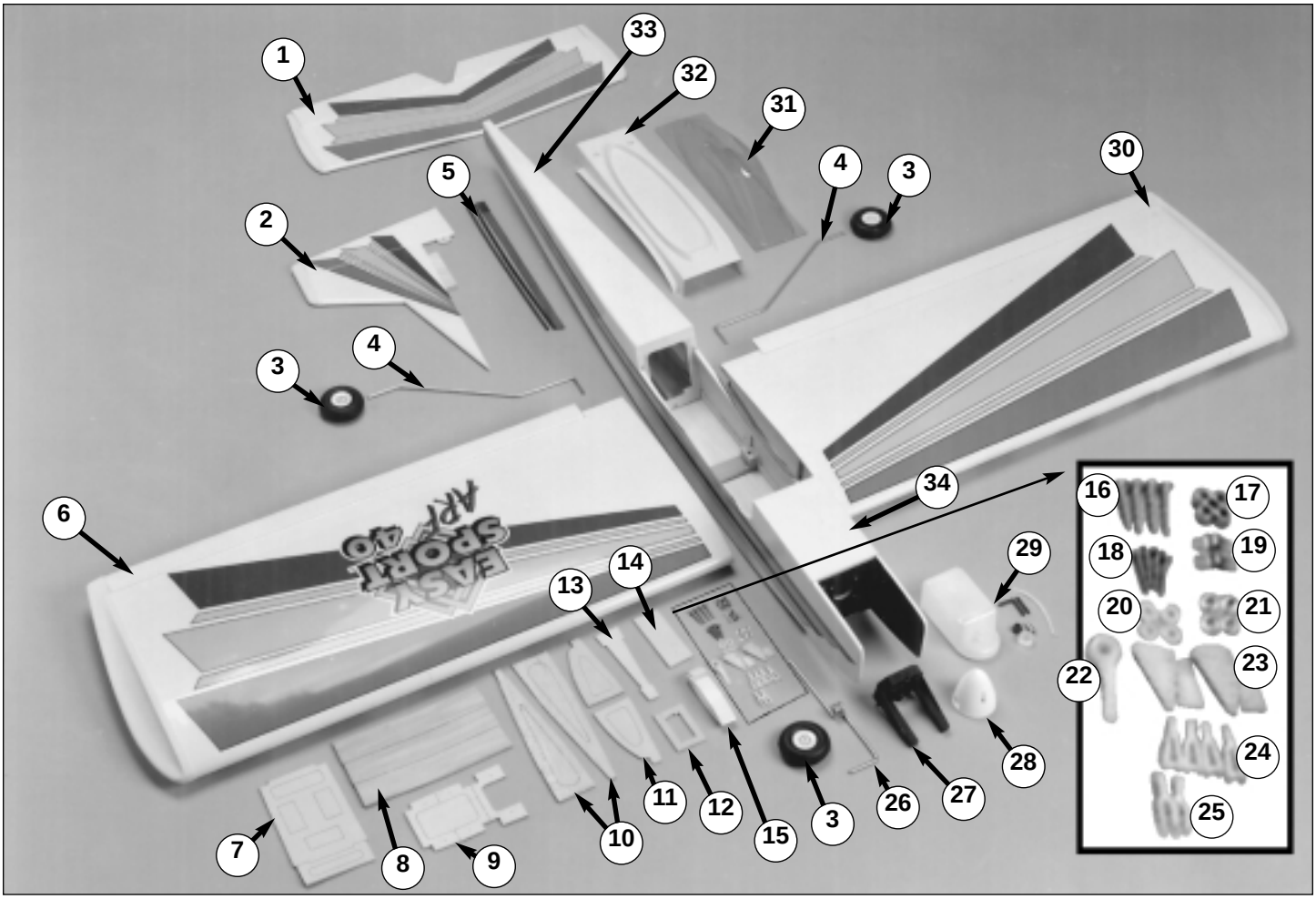
O.S.® .70 Surpass 4-stroke Engine
Lower noise, higher torque, increased fuel economy and longer engine life make the O.S. .70 Surpass engine an excellent choice for your model. **OSMG0870**

Great Planes Pro™ Thin, Instant Set CA
Instant-setting Pro CA is ideal for fast assembly, with a curing time of 1-3 seconds. All Pro CAs are dated for freshness. **GPMR6002**

Great Planes Pro Medium CA
Thick CA+ is an excellent gap filler that cures in 10-15 seconds. All Pro CAs "wick" better into balsa wood for the strongest possible bond. **GPMR6008**

Great Planes Pro 6-minute Epoxy
Pure, powerful Pro 6-minute Epoxy cures very quickly while also providing incredible strength. Two-bottle set includes 4.5 oz. bottles of epoxy and hardener. **GPMR6045**

Great Planes Pro 30-minute Epoxy
Pro 30-minute Epoxy provides modelers with longer curing time to reposition parts and provides greater strength for high-stress areas. **GPMR6047**



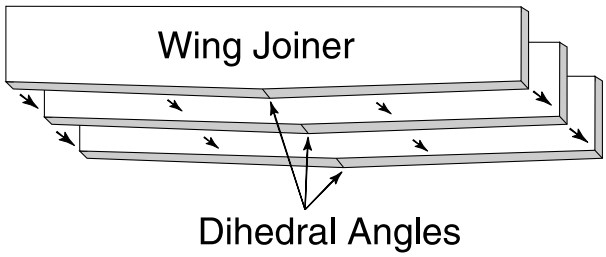
PARTS LIST

1 Stabilizer/Elevator Assembly	**18** 6-32 x 3/4" Sheet Metal Screws
2 Rudder/Fin Assembly	**19** Nylon Landing Gear Straps
3 Wheels	**20** #6 Flat Washers
4 Main Landing Gear Wire	**21** Silicone Clevis Retainers
5 Pushrods	**22** Nylon Steering Arm
6 Right Wing Panel	**23** Nylon Control Horns
7 Servo Tray	**24** Nylon Clevis
8 Wing Joiner	**25** Swivel Clevis
9 Plywood Wing Hold-Down Plates	**26** Nose Gear Wire
10 Aft Root Ribs	**27** Engine Mount R & L
11 Forward Root Ribs	**28** Spinner
12 Aileron Servo Tray	**29** Fuel Tank Assembly
13 Stabilizer Mounting Base	**30** Left Wing Panel
14 Wing Bolt Plate	**31** Canopy
15 Wing Tape	**32** Wing Fairing
16 6-32 x 1" Screws	**33** Fuselage
17 Wheel Collars	**34** Hatch

WING ASSEMBLY

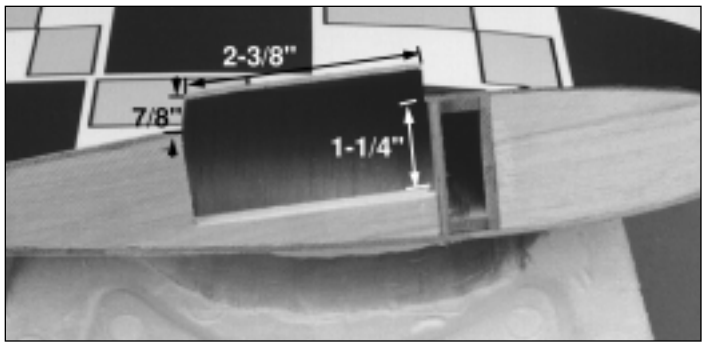
Assemble the Wing Joiners

Note: As epoxy is used for most of this kit's assembly, it's a good idea to keep rubbing alcohol and paper towels handy for cleanup. Before the epoxy has had time to cure, moisten a paper towel with alcohol and clean off any excess epoxy.



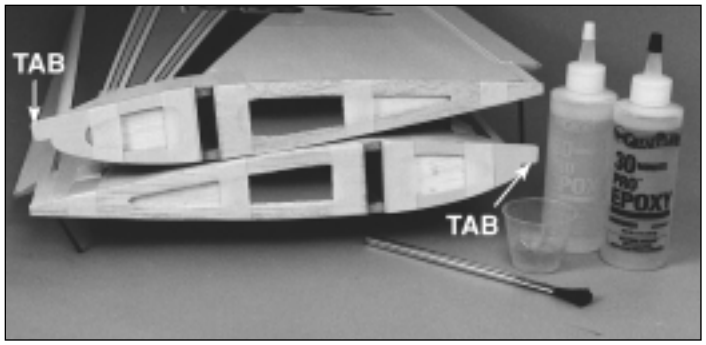
❏ 1. Lightly sand the edges of the three **plywood wing joiners** to remove any rough edges. Use 30-minute epoxy to glue the three pieces together. **Be sure that the slight dihedral angle is on the same edge of all three pieces**. Clamp the wing joiners together or weigh them down on a flat surface while the epoxy cures.

Prepare the Wing Roots



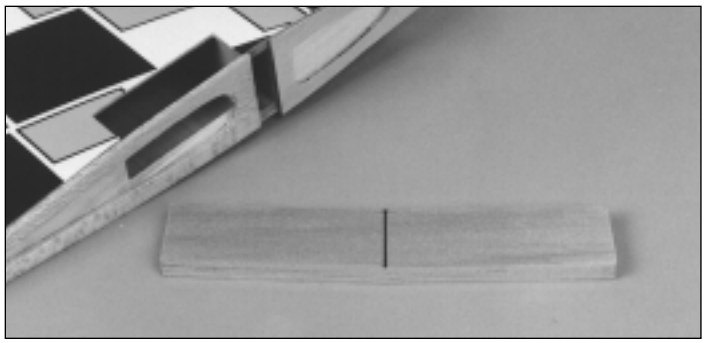
❏ 2. Measure and mark the location of the aileron servo tray opening. Using a sharp hobby knife, carefully cut the opening for the aileron servo tray in both wing panels on the **bottom** of each wing panel.

Note: The opening begins directly behind the wing spar.

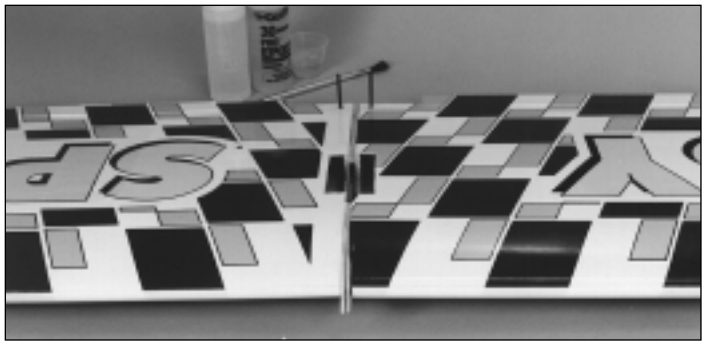


❏ 3. Sand the inside of both wing roots for a nice flush fit. Use 30-minute epoxy to glue the die-cut ply **forward** and **aft root ribs** to both wing roots. Be sure that they are aligned with the top and bottom of the wing. When installing the **forward root rib**, it should be noted that the tab is placed toward the **top** of the wing. Use strips of masking tape to hold the parts in position until the epoxy has cured.

Join the Wing Panels



❏ 1. Draw a centerline on the wing joiner as shown in the photo. **Test fit** the wing joiner into each wing panel. You must be certain that the joiner fits all the way into the wing panels. The joiner should fit snugly into each wing panel. Sand the joiner if it does not fit snugly or does not fit completely into the wing panels.



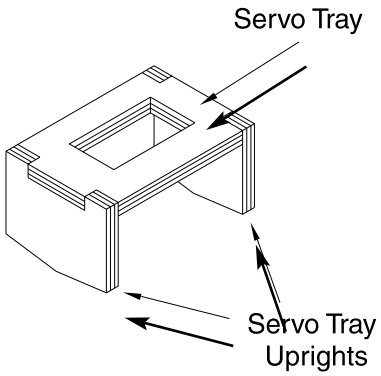
❏ 2. Test fit the panels together with the wing joiner in place. The angled edge of the joiner points towards the **bottom** of the wing. Check the alignment of the leading and trailing edges. They should line up nicely with the roots fitting together without any gaps. Sand the root ribs if any imperfections are keeping the wing halves from fitting together properly.

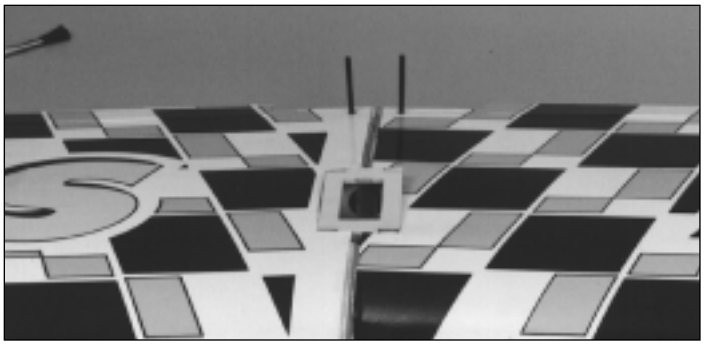
Carefully read and practice the following step completely before mixing any epoxy. The entire step must be completed before the epoxy begins to set.

❑ 3. When you are satisfied with the fit, pull the panels apart and mix up a large batch (about 1.5 oz.) of **30-minute epoxy**. Using an epoxy mixing stick, liberally spread epoxy **inside both** of the joiner slots and on one half of the joiner itself. Next, quickly install the glued end of the joiner into one of the slots. Spread more epoxy onto the root ribs and the protruding end of the wing joiner. Slide the two wing panels together. The epoxy should squeeze out around the edges. This is a good sign that there is enough epoxy to securely join the two wing halves. Double check the alignment and wipe off any excess glue with a paper towel and rubbing alcohol. Hold the two wing halves together using masking tape. Continually check the alignment of the wing halves while the epoxy cures.

❑ 4. Once the glue has cured, check the joint for any small gaps and fill them with epoxy. Wipe off any excess epoxy using a paper towel and rubbing alcohol. The paper towel can also be used to remove any fingerprints or epoxy residue that may have been left behind.

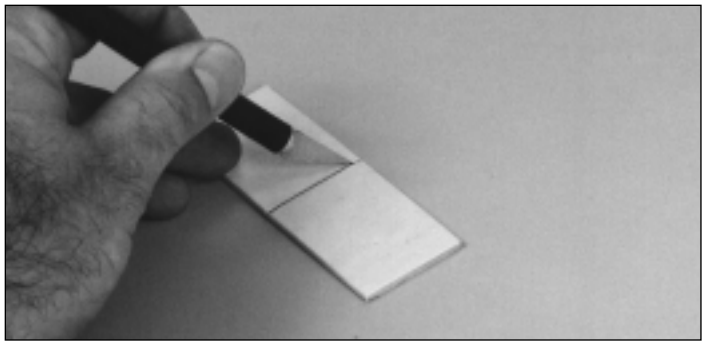
Install the Aileron Servo Tray



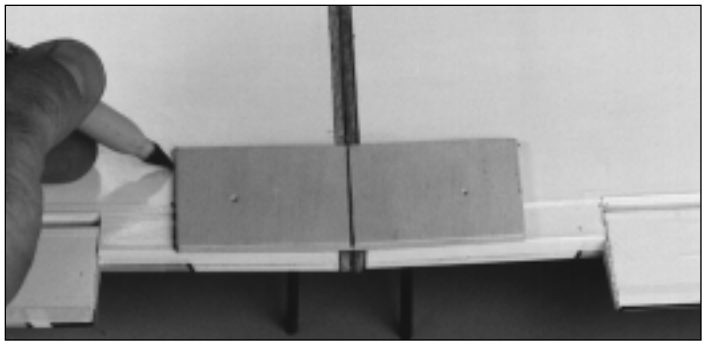


❑ 1. Glue the aileron servo tray and uprights into the wing using 6-minute epoxy.

Install the Wing Bolt Plate



❑ 1. Lay the wing bolt plate on a table with the punch marks facing upwards. Draw a centerline across the wing bolt plate. Using a hobby knife, **gently** score the wing bolt plate along this centerline. This score line is to allow the wing bolt plate to be easily bent to the contour of the wing and should not be cut completely through the plate.



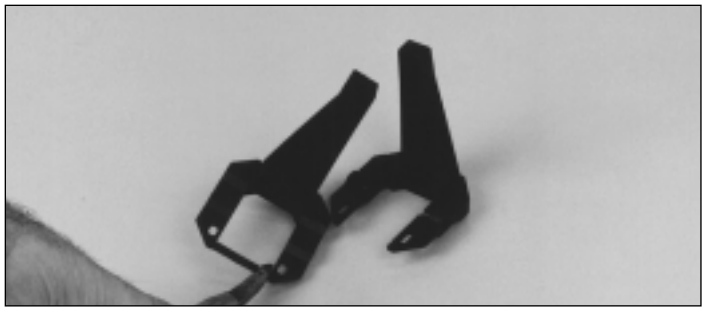
❑ 2. Position the **wing bolt plate** on the trailing edge of the **top** of the wing. Use the centerline on the wing bolt plate to center it between the aft root ribs. Draw a line around the plate on the covering using a felt-tip pen. Carefully remove the covering with a hobby knife. **Be careful not to cut into the wood.**

❑ 3. Using 6-minute epoxy, glue the wing bolt plate in place with the punch marks facing up. Clamp it in position while the epoxy cures.

INSTALL FUSELAGE COMPONENTS

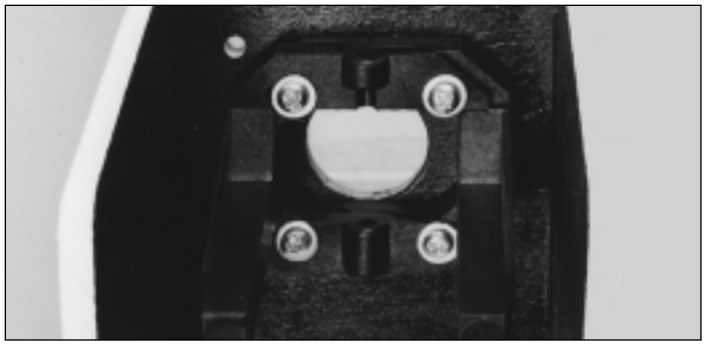
Install the Engine Mount

Note: The following steps depict the installation of a **2-stroke** engine. The steps are similar if you are using a **4-stroke** engine, although some changes to the throttle pushrod routings will need to be made.



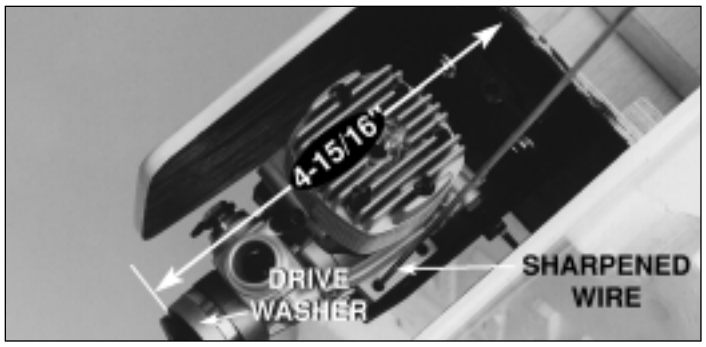
❑ 1. Remove the center spreader from the **engine mount halves**. Trim any excess flashing with a hobby knife or file.

❑ 2. This is a good time to fuelproof the tank and engine compartments. Lightly brush a mixture of 30-minute epoxy thinned with isopropyl alcohol into both compartments. Be careful not to get any of the epoxy into the blind nuts that are located in the firewall.

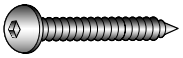


❑ 3. Fit the two halves of the engine mount together. Use four **#6 flat washers** and four **6-32 x 1" phillips head screws** to attach the engine mount to the firewall. Blind nuts have already been installed in the firewall for this purpose. Don't tighten the screws completely yet, as the mount will need to be adjusted to fit the engine.

❑ 4. Test fit the engine to the mount. Adjust the width of the mounting rails to accommodate the engine without being too tight or too loose. Tighten the mount screws so that you can mark the engine screw holes without allowing the rails to move.



❑ 5. Position the engine so that the drive washer is 4-15/16" from the firewall. Using one of the 17-1/2" push rods, sharpen the non-threaded end using a file or sandpaper. Use this sharpened wire to scribe the four mounting holes onto the rails. Use a 7/64" drill bit to drill pilot holes through the rails for the #6 sheet metal screws.

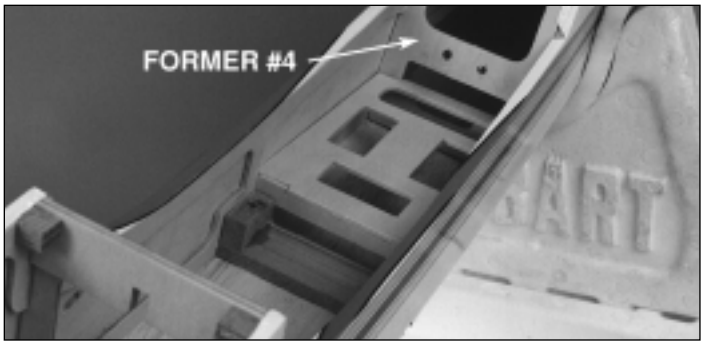


#6 x 5/8" Sheet Metal Screw (4)

❑ 6. Attach the engine to the rails using four #6 x 3/4" sheet metal screws.

Install the Servo Tray

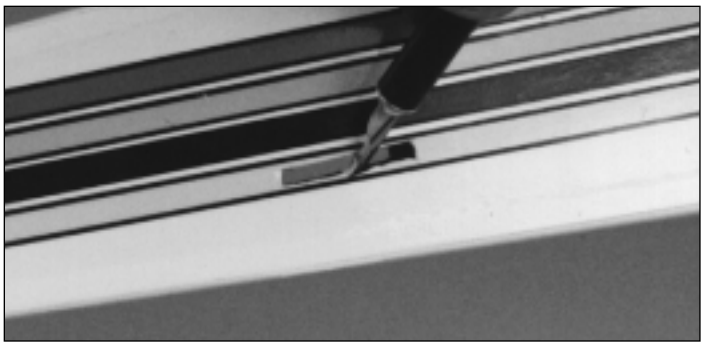
❑ 1. Separate the two die-cut 1/8" (3.2mm) ply parts of the **servo tray assembly,** then lightly sand off any rough spots from the edges. **Save the excess plywood for use in later steps.**



❑ 2. Test fit the servo tray assembly by first placing the front brace **behind** the landing gear mounts. The servo tray is then installed by "locking" it into the cut-out of former #4 and the front brace. When satisfied with the fit of these components, glue them in place using medium CA. Be sure to make a fillet along the joint between the servo tray and the fuselage side.

Install the Pushrod Tubes

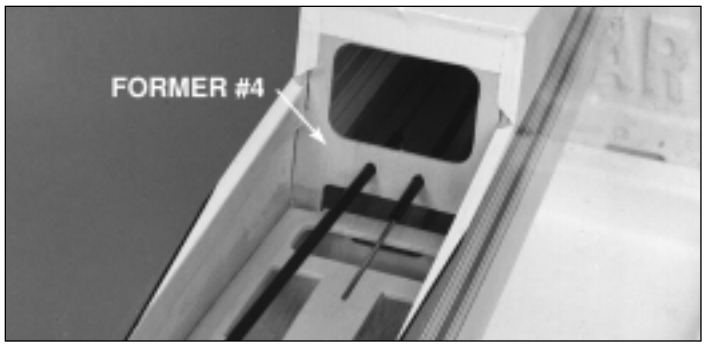
❑ 1. Measure and cut a 21" length from each of the two **outer pushrod tubes** supplied. The 21" pieces will be used for the rudder and elevator. Save the pieces that were cut off for the nose gear and throttle pushrods.



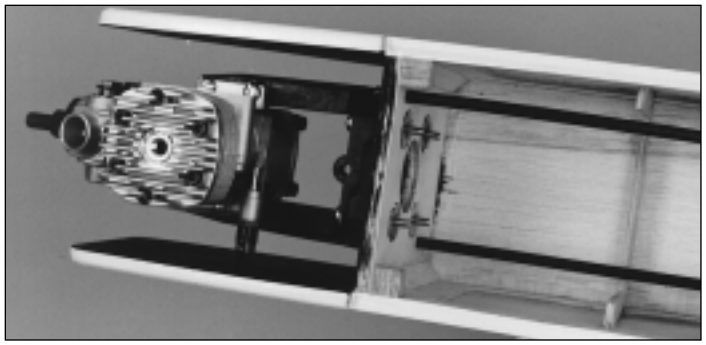
❑ 2. Locate the pushrod exit slot under the covering on the tail section of the fuselage by lightly pressing with your fingers. The slot should be located 3-3/4" from the rear the fuselage and 7/8" from the bottom of the fuselage. Trim the covering to provide access to the pushrod exit. Check the

fit of the outer pushrod tubes to the pushrod exits. If the fit is too tight, trim the opening slightly with a hobby knife to allow the pushrod to fit without binding.

❏ 3. Roughen the outside of the outer pushrod tubes using 220-grit sandpaper.



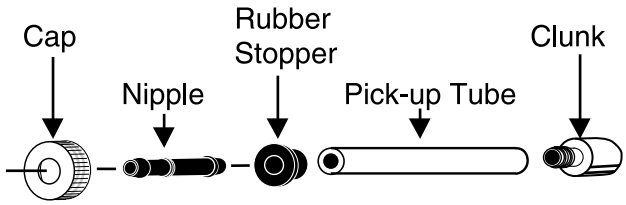
❏ 4. Insert the **36" threaded wire rods** through the pushrod tube openings into the fuselage from the rear and guide them through former #4. Do not allow the pushrods to cross each other inside the fuselage. If the pushrods are crossed during the installation, the nose gear will operate in the opposite direction of the rudder, making ground handling of the aircraft rather difficult. Slide the outer pushrod tubes into place from the inside using the threaded rods as guides. Leave approximately 1" of the outer pushrod tube in front of former #4. Apply thick CA to the points where the outer tubes contact former #4 and at the exits.



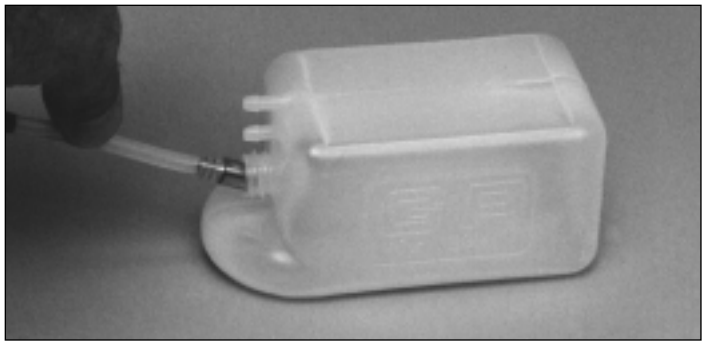
❏ 5. Trim one of the remaining pushrod tubes to 12". After roughening the tube with 220-grit sand paper, install the tube into the upper right hole in the firewall. This will be used for the throttle pushrod. Leave about 1/4" of the tube exposed in front of the firewall. Glue the pushrod tube to both sides of the firewall using medium CA.

❏ 6. Trim the other remaining outer pushrod to 13-1/2" for use as the nose wheel pushrod tube. After roughening the tube with 220-grit sand paper, install the tube into the lower left hole in the firewall. This tube should be installed flush with the front of the firewall. Glue the pushrod tube in place from the back of the firewall using medium CA.

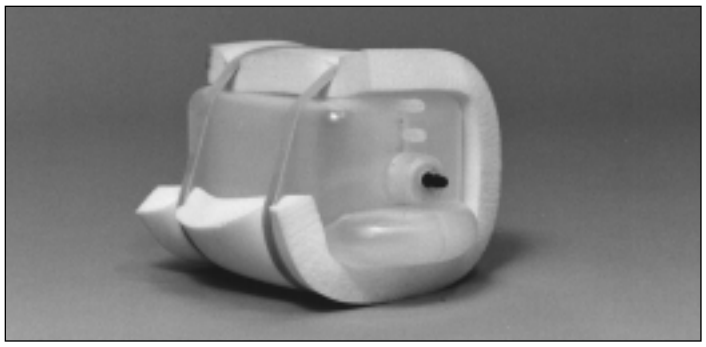
Assemble the Fuel Tank



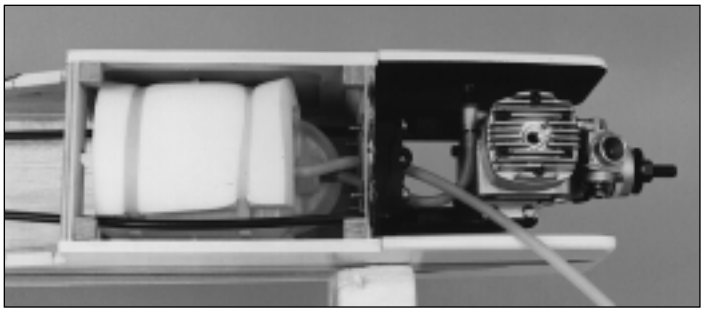
❏ 1. Push the **straight nipple** through the **rubber stopper** until the ridge (1/4" from one end) contacts the outside face of the stopper. Cut the **pick-up tube** to 2-7/8". Push one end of the pick-up tube all the way onto the **clunk** and the other end all the way onto the nipple.



❏ 2. Insert the pick-up tube assembly into the tank, then thread the **cap** over the stopper, tightening it securely.



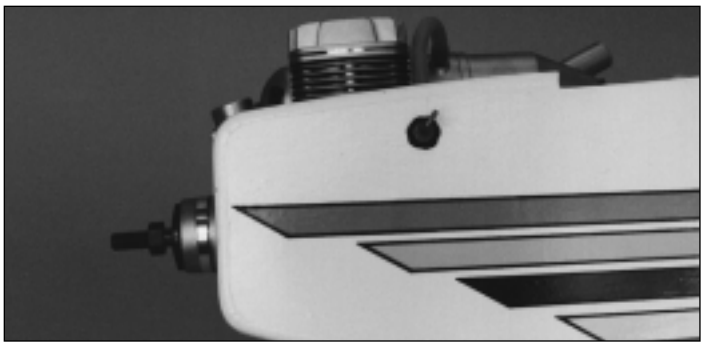
❏ 3. Wrap the 3-1/2" x 7-7/8" x 1/2" sheet of **foam rubber** around the tank as shown in the photo. Secure it into position with a couple of rubber bands. The reason for the open area on the side of the tank is to allow clearance for the throttle pushrod tube.



❏ 4. Insert two 12" pieces of fuel tubing through the hole in the firewall. Place the fuel tank partially into the fuel tank compartment and connect the lines to the tank. Work the tank into position, centering it in the compartment. Cut the fuel tube to the carburetor so the there are no sharp bends or kinks in the fuel line.

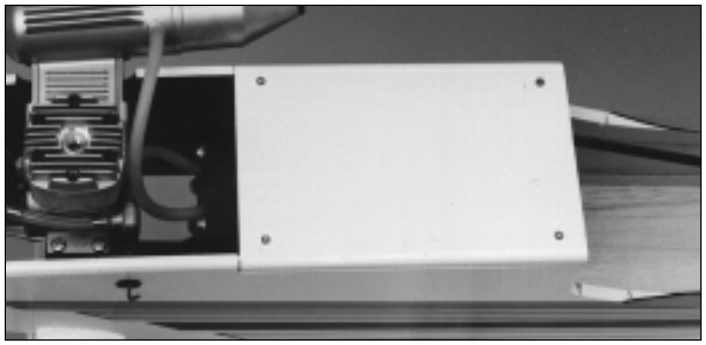
Completing the Engine & Fuel Tank Installation

❏ 1. Mark the position of the muffler cut-out onto the side of the fuselage. Remove the engine at this point to prevent any wood from entering the engine. Use a hobby knife and/or razor saw to cut the fuse side to allow for at least 1/4" clearance around the muffler. Be sure to paint the exposed wood with a fuelproof paint or epoxy.



❏ 2. Locate the position of the needle valve according to your specific engine. Cut or drill the fuselage side to allow for ease of needle adjustments. Leave a space around the needle so that any vibrations will not affect the needle setting. Install the muffler. Cut the tank pressure tube to the proper length, then attach it to the muffler.

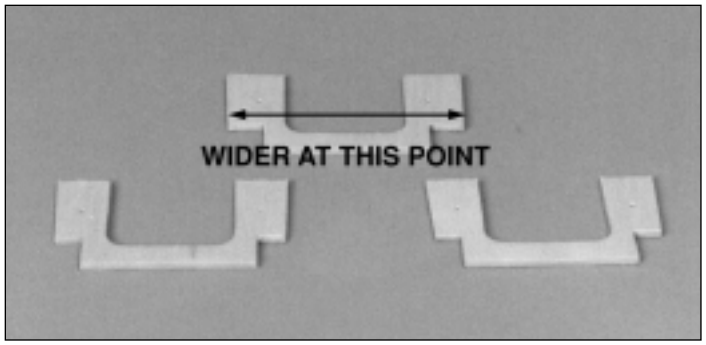
Note: A small piece of music wire or a cut down hex wrench can be used to extend the needle if it does not reach through the fuse side.



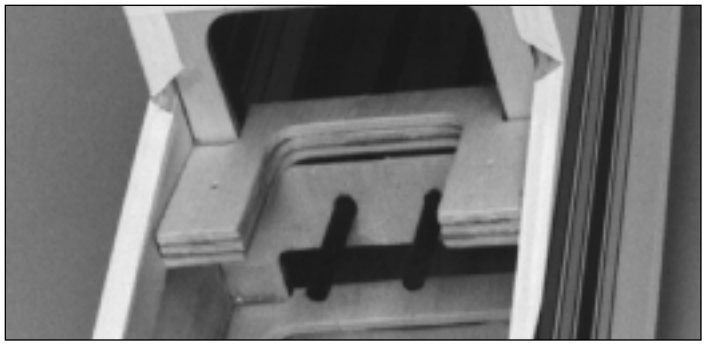
❏ 3. Fit the **hatch** in position. By measurement, determine where to drill 1/16" holes in the four corners of the hatch to pass through the center of the four underlying hardwood blocks. Tape the hatch to the fuselage using masking tape to prevent the hatch from moving while drilling the holes. After drilling these holes, remove the hatch and enlarge **only the holes in the hatch** to 3/32". Soak the inside of the holes in the hatch with a drop or two of thin CA to harden the balsa. Clean out the holes with a 3/32" drill bit after the CA has cured. Attach the hatch with four **#2 x 3/8"** sheet metal screws.

MOUNT THE WING TO THE FUSE

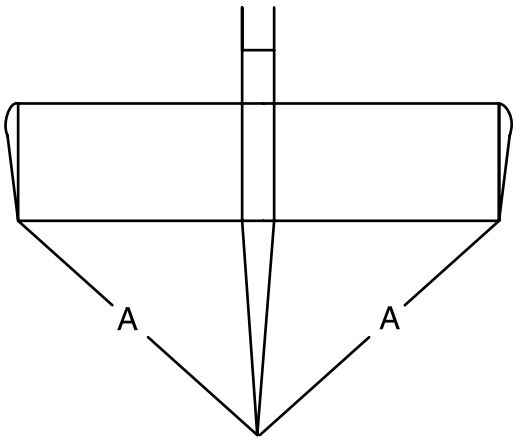
Installing the Wing Hold-Down Plate



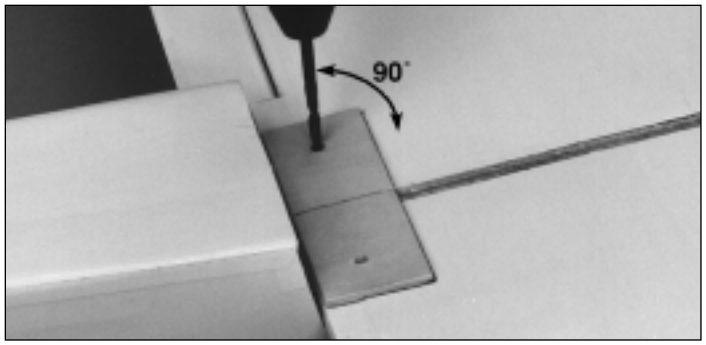
❏ 1. Lightly sand the edges of the three **plywood wing hold-down plates** to remove any rough edges. Note that one of the plates is slightly wider than the other two. This plate is to be placed on the bottom. Use 30-minute epoxy to glue the three pieces together. Clamp the wing hold-down plates together or weigh them down on a flat surface while the epoxy cures.



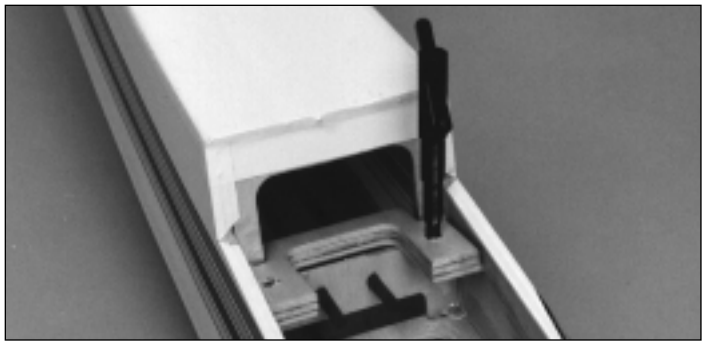
❏ 2. Test fit the assembled wing hold-down plate into the fuselage, placing the larger plate downward and locking it into the fuse sides. Sand or trim the plate to achieve the best fit. Remove the plate and glue it in place using 30-minute epoxy.



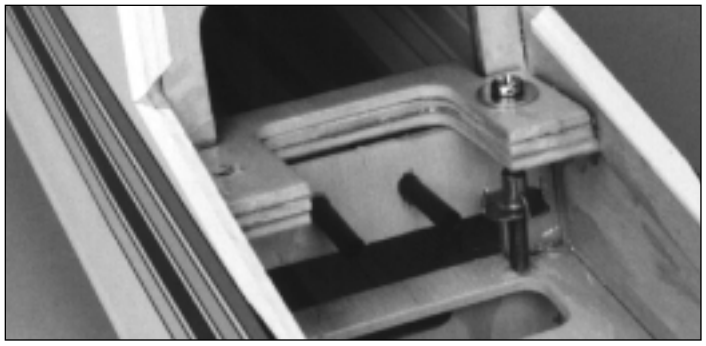
❏ 3. Position the wing on the fuselage with the centerline of the wing along the centerline of the fuselage. Hold a string (with one end attached to a pin centered at the tail) out to a wing tip. Put a piece of tape on the string to mark the intersection of the string and the wing tip. Swing the string over to the other wing tip and check to see if the distances are the same. Make slight adjustments to the angle of the wing until the distances from the tail to the wing tips are equal.



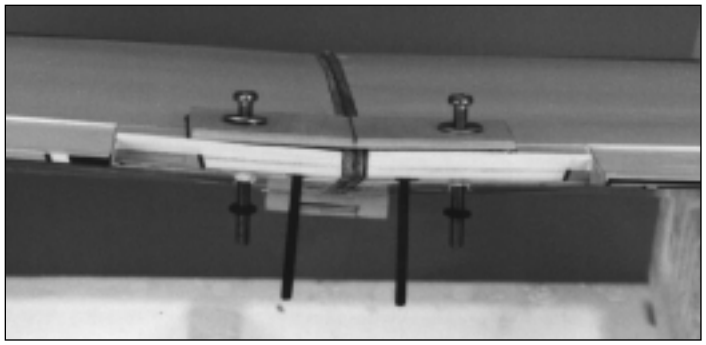
❏ 4. Once the wing is aligned to the fuselage, use a 5/32" drill bit to drill through the wing and into the wing hold-down plate. When drilling, be sure that the drill bit remains square to the wing bolt plate in all directions.



❏ 5. Enlarge the holes in the mounting blocks to 3/16". A prop reamer or 3/16" drill bit may be used for this operation.



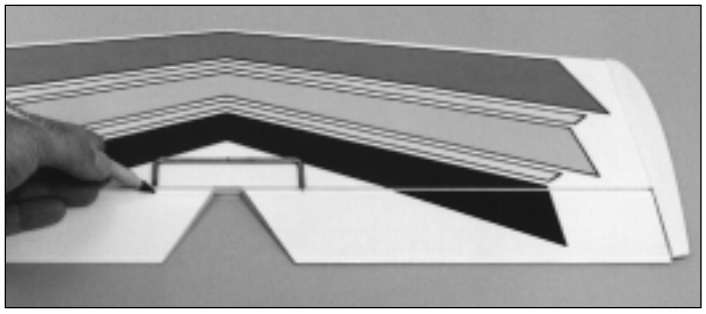
❏ 6. Slide one of the **4mm washers** onto one of the **4mm wing hold-down bolts**. Slide the bolt through the wing hold-down plate. Thread one of the **blind nuts** with the "pronged" side up partially onto the wing hold-down bolts from the underside of the wing hold-down plate. Put a small drop of 30-minute epoxy on the prongs, then draw it up into the wing hold-down plate by tightening the bolt. Repeat this process for the other blind nut.



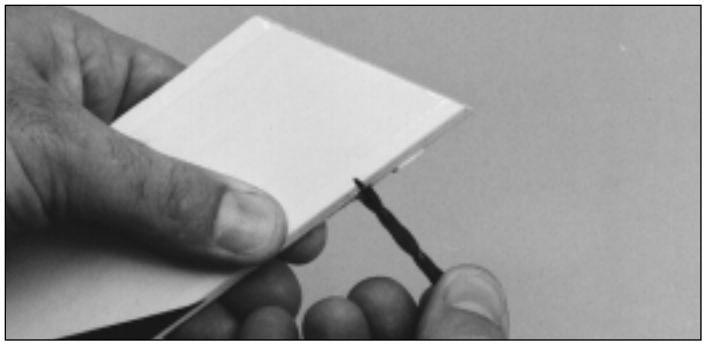
❏ 7. Slide the bolt/washer combination from the last step through the wing from the top. Slide one of the rubber O-rings onto the bolt from the bottom. The O-ring keeps the bolt from falling out during transport.

INSTALL THE TAIL COMPONENTS

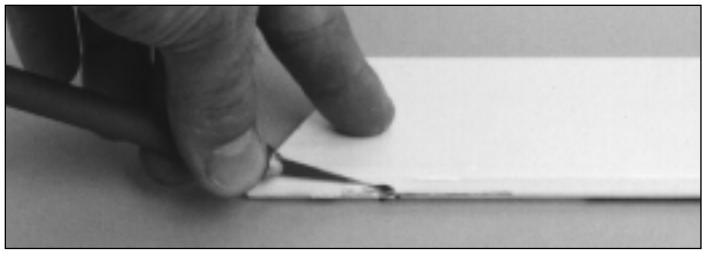
Join the Elevator Halves

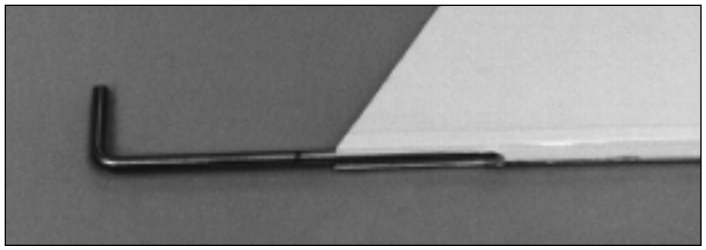


❏ 1. Without glue, position the **elevator halves** on the **stabilizer**. Make sure that the elevators do not bind at the tips. Measure and mark a centerline onto the elevator joiner wire. Center the joiner between the two elevator halves. Mark the position where the joiner will enter the elevator halves.

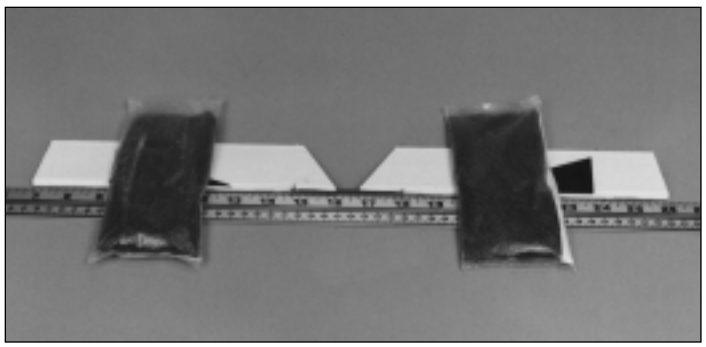


❏ 2. Remove the elevator halves from the horizontal stabilizer and drill straight into the leading edge of the stabilizer using a 5/32" drill bit at the marks. Drill into the elevators 1" to allow for complete insertion of the elevator joiner. This step is done best using either a pin vise or twisting the drill bit into the wood with your fingers.



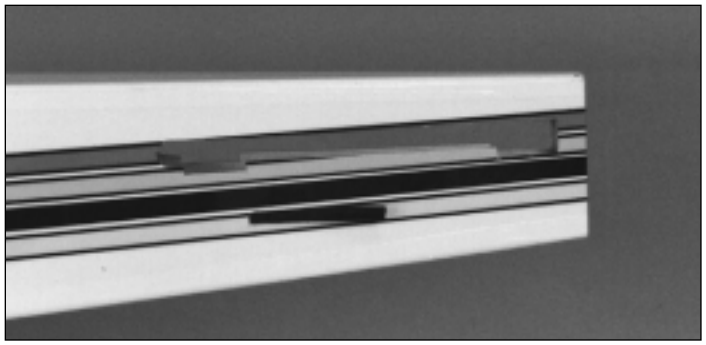


❏ 3. Carefully cut grooves into the leading edges of the elevator halves to allow the joiner to recess into the leading edge.



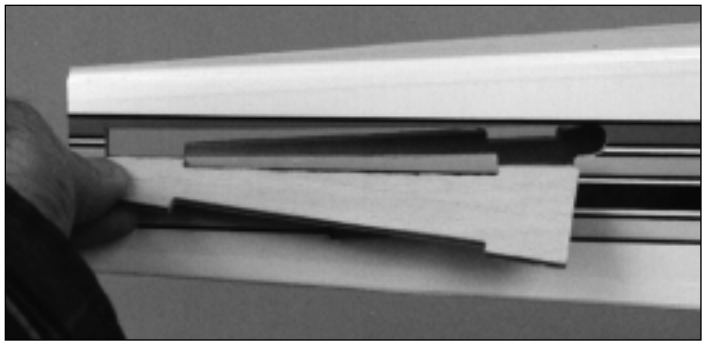
❏ 4. Use a straightedge to align the elevator halves on a flat surface. Using 6-minute epoxy, glue the joiner wire into position. Make sure the joiner wire is fully seated in the elevator halves before the epoxy cures. Use weights to keep the elevator halves from moving.

Align & Install the Stabilizer

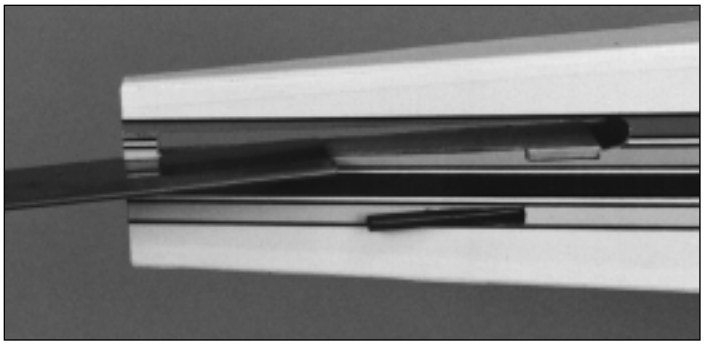


❏ 1. Locate the horizontal stabilizer slot under the covering on the tail section of the fuselage by lightly pressing with your finger. The slot is located on both sides of the fuselage. Carefully remove the covering, exposing the slots with a hobby knife.

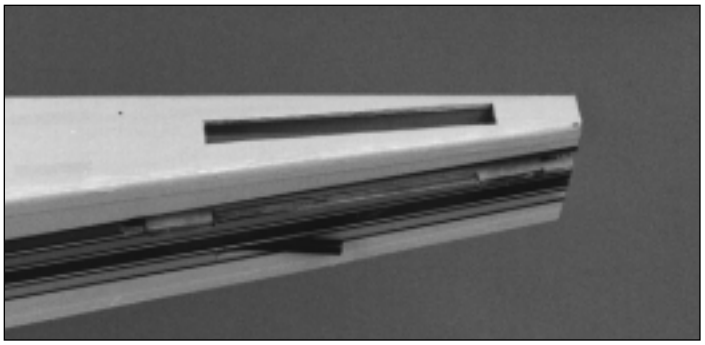
Note: Do not cut into the wood around the slot.



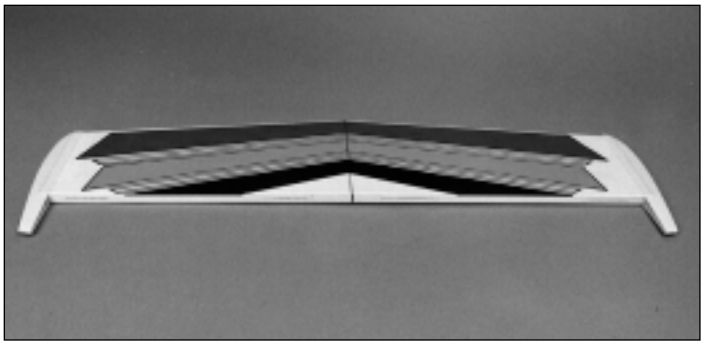
❏ 2. Locate the 1/8" plywood **stabilizer mounting base** and test fit it into the bottom of the horizontal stabilizer slot. Lightly sand the base if necessary to obtain a good fit. Remove the base from the fuselage. Reinstall the plate using a generous amount of 30-minute epoxy. Be sure that there is enough epoxy to properly secure the stab base to the fuselage. Remove any excess epoxy from the outside of the fuselage with a paper towel and rubbing alcohol.



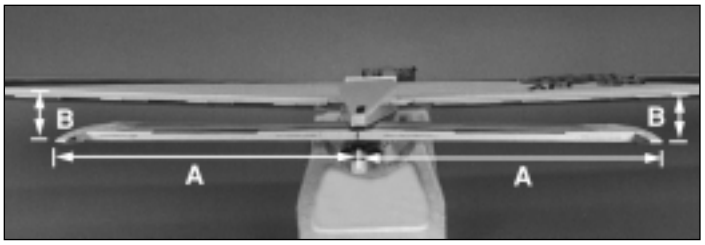
❑ 3. Carefully remove the tail post using a razor saw to allow installation of the horizontal stabilizer.



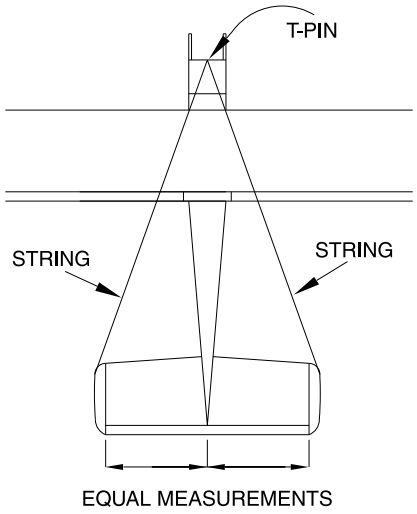
❑ 4. Locate the slot for the vertical fin on the top of the fuselage and remove the covering.



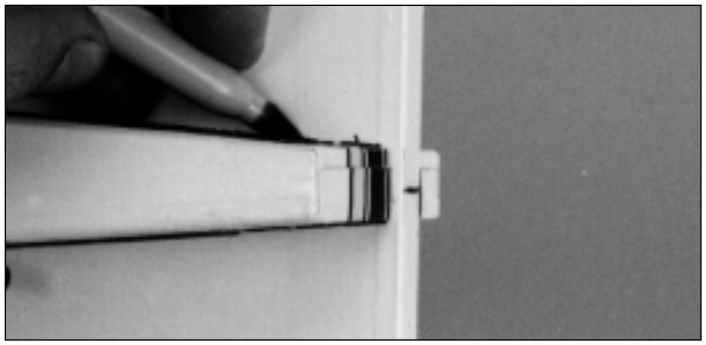
❑ 5. Measure and mark an accurate centerline on the top of the horizontal stabilizer. Make sure to mark the centerline on the trailing edge also.



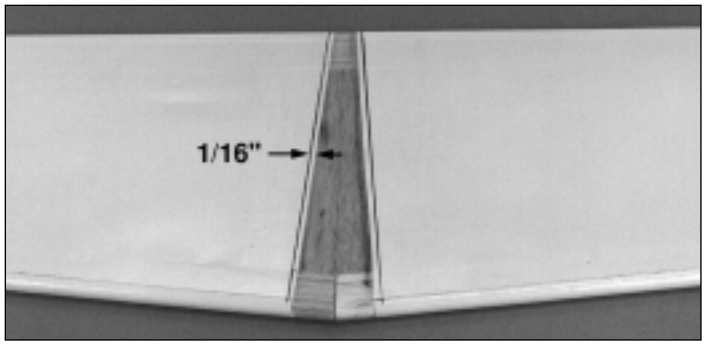
❑ 6. Insert the stabilizer into the stabilizer slot so it is centered in the fuselage (dimension A should be equal). Place the wing onto the fuselage and secure it in place with the wing hold-down bolts. View the plane from the rear and at a distance of a few feet. The stabilizer should be parallel to the wing (dimension B should be equal). If not, sand the stabilizer mounting base slightly to achieve the proper position of the stabilizer.



❑ 7. Attach a piece of string with a T-pin to the top center of the firewall. The string should be long enough to reach to the horizontal stabilizer. Align the stabilizer using the same method that was used for aligning the wing.



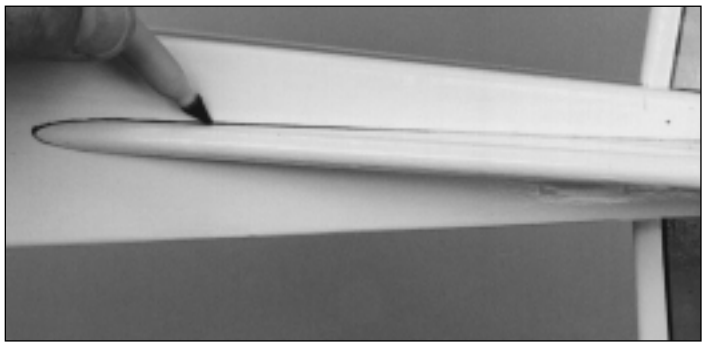
❑ 8. With the stabilizer properly aligned, use a felt-tip pen to trace a line around the tail of the airplane on the top and bottom of the horizontal stabilizer.



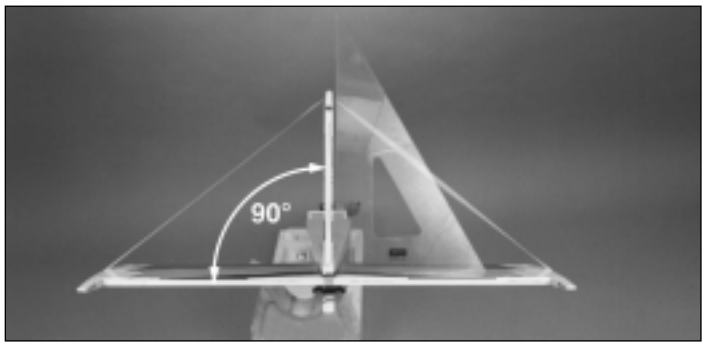
❑ 9. Remove the stabilizer and draw two additional lines, top and bottom, 1/16" **inside** the lines drawn in the previous step. Using a **new** #11 knife blade, carefully cut through the covering along the **inside** lines and remove the covering from the center. **Do not cut the wood under the covering! This would seriously weaken the stabilizer and could easily cause the stabilizer to break in flight. Be very careful** when you make this cut. If the covering is not removed from the stabilizer, a proper bond will not be achieved.

❏ 10. Mix 1/4 oz. of 30-minute epoxy. Using a mixing stick, place glue inside the horizontal stabilizer mount. Place more glue onto the bottom and top of the stabilizer where the covering was removed. Insert the stabilizer from the rear and adjust the alignment using the guide lines that were drawn onto the stabilizer in step 8. Wipe off any epoxy that squeezes out using a paper towel dampened with rubbing alcohol. Recheck the alignment frequently while the glue cures.

Install the Vertical Fin

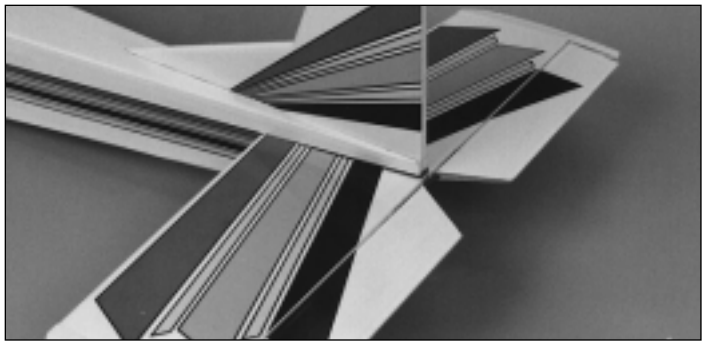


❏ 1. Remove the **rudder** from the **vertical fin**. Test fit the vertical fin in the slot in the top of the fuselage. Sand the edges of the slot if necessary to obtain a snug fit. Draw a line around the forward portion of the vertical fin on the fuselage. Remove the fin and cut 1/16" inside the line to provide adequate gluing area for the vertical fin.

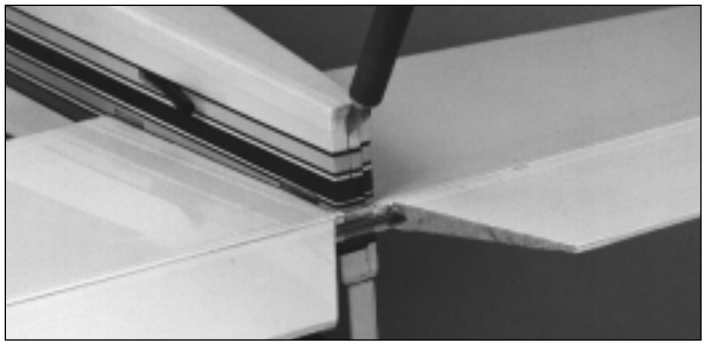


❏ 2. Mix 1/4 oz. of 30-minute epoxy. Using a mixing stick, apply epoxy to the top of the horizontal stabilizer through the slot. Also apply a small amount to the top of the fuselage in the area the covering was removed. Check for a 90Þ angle between the fin and horizontal stabilizer when viewing from the rear. Use masking tape to hold the vertical fin in this position. Check this alignment several times as the epoxy cures.

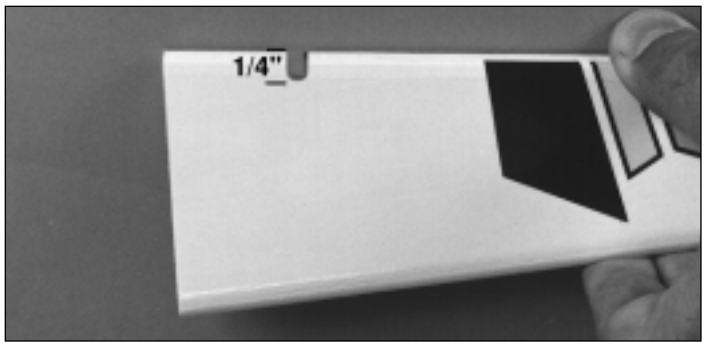
Install the Elevator Halves



❏ 1. Work the hinges into the slits in the trailing edge of the horizontal stabilizer and press the elevators up to the edge of the stabilizer. Flex the elevators all the way in one direction, but do not allow the elevators to pull away from the stabilizer. Apply 5 drops of **thin CA** onto each hinge. Do not use accelerator while hinging, as the glue must wick into the hinge to properly attach the hinges. Use a paper towel to absorb any excess glue. Wait a few minutes for the glue to set up, then repeat the process for the opposite side of the elevators. After letting both sides dry, flex the elevators both directions to free up the elevators for operation.



❏ 2. **Carefully** cut a slot in the tail post using a hobby knife for the lower rudder hinge.



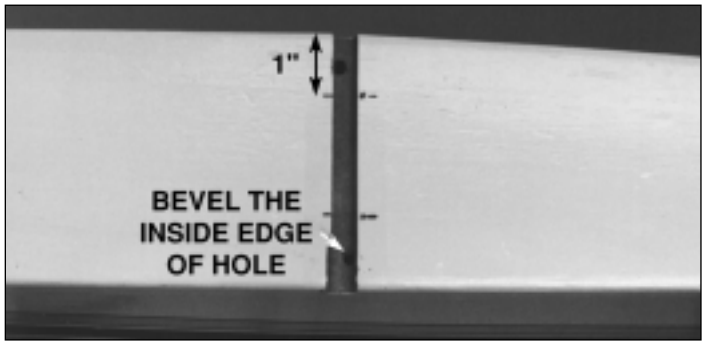
❏ 3. Temporarily install the rudder to determine where to notch the rudder to allow clearance for the elevator joiner. Press the rudder gently to leave an impression of the joiner on the rudder. Remove the rudder and cut a notch that is 1/16" above and below the impression. The notch should be cut 1/4" deep.

❑ 4. Reinstall the rudder and make sure that the notch allows proper clearance for the elevator joiner to operate without binding when the rudder is fully deflected. Also, the edges of the notch may need to be beveled to allow for full movement of the rudder. Once you are satisfied that there is no binding, glue the hinges using the same technique as the elevator hinges.

INSTALL THE LANDING GEAR

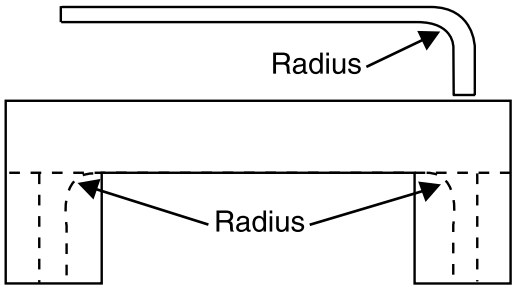
Mount the Main Landing Gear

REFER TO THIS PHOTO FOR THE FOLLOWING 3 STEPS



❑ 1. Locate the groove for the main landing gear under the covering in the center of the fuselage by lightly pressing with your finger. Using a hobby knife, carefully remove the covering, exposing the groove.

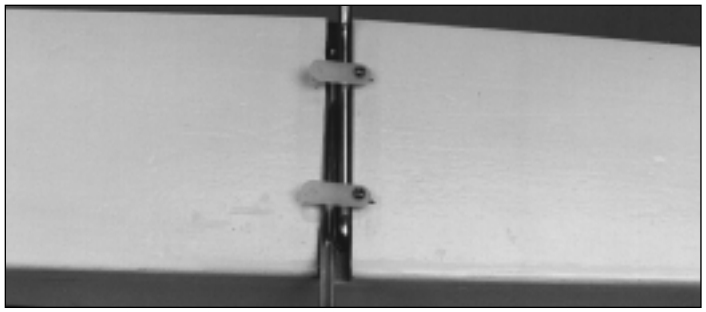
Note: Do not cut into the wood around the groove.



❑ 2. Carve a slight bevel on the **inside** edge of both holes. This is to allow for the radius at the bend in the landing gear.

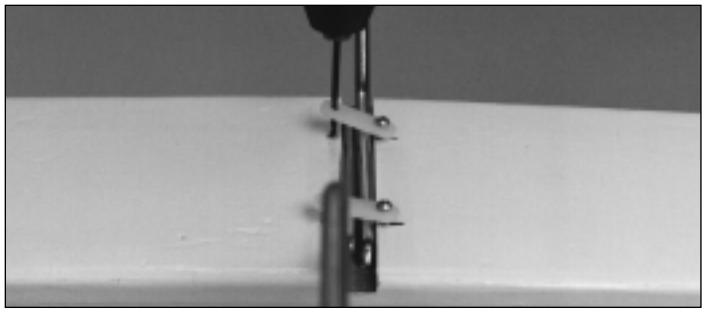
❑ 3. To prevent fuel from damaging the exposed wood, a thin coat of thin CA should be applied. This can be done by applying the CA, then using a piece of waxed paper or plastic, spread the glue until the wood has been completely covered by the CA.

❑ 4. Measure in 1" from the outside edges of the fuselage at the landing gear groove to locate the position of the landing gear straps. Drill a 1/16" hole 3/32" from the **rear edge** only at this time.

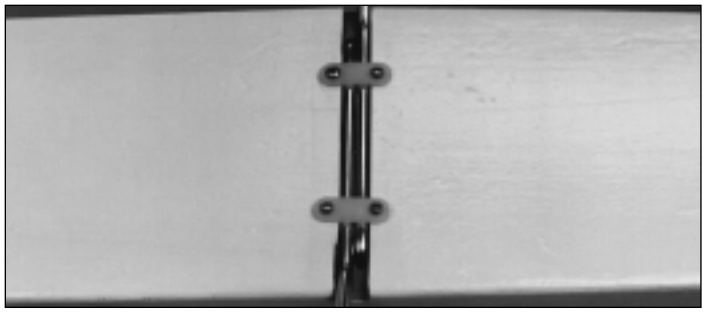


❑ 5. Install the **main landing gear** into position. Install the **landing gear straps** using two of the **#2 x 3/8"** screws.

Note:Do not tighten the screws yet.

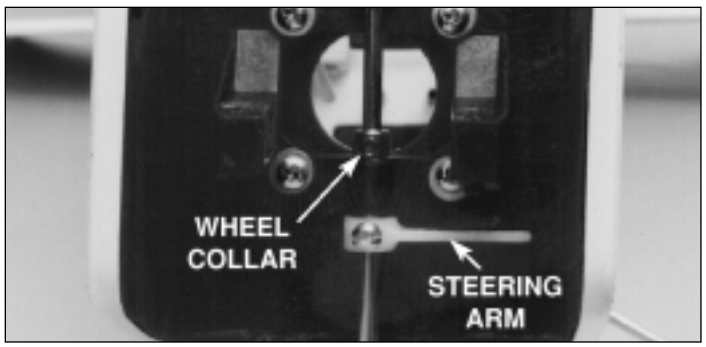


❑ 6. Using the holes in the front of the straps as a guide, drill a 1/16" hole for the front screws.



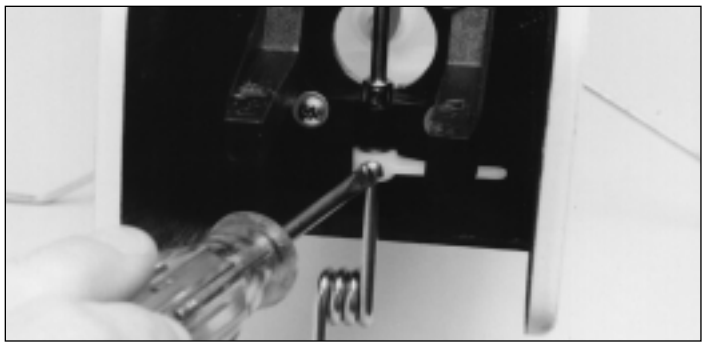
❑ 7. Install the last two #2 x 3/8” screws. Remove all four screws and harden the holes using two or three drops of thin CA in each hole. After the CA has has time to cure, reinstall the screws, making sure they are tightened completely.

Mount the Nose Gear



❑ 1. Insert a 5/32" wheel collar (without a screw) into the nylon steering arm. Be sure that the set screw holes on

both parts are aligned. Slide the steering arm over the straight end of the nose gear wire. Insert the wire through the lower gear hole in the engine mount. Install a 5/32" wheel collar onto the nose gear wire above the hole. Slide the nose gear into the upper hole in the engine mount. Adjust the height of the nose gear wire until the fuselage sits level. Install a 6-32 set screw into the wheel collar and tighten the set screw while the wheel collar is resting on top of the lower portion of the engine mount hole.



❑ 2. Slide the steering arm into contact with the bottom of the engine mount. Rotate the gear wire so that the axle is parallel to the firewall. Insert the 6-32 x 1/4" **screw** into the steering arm and thread it in a few turns. Position the steering arm in front of the pushrod hole with the tip of the arm approximately 5/8" away from the firewall. Tighten the screw securely.

Note: After the gear has been installed and tested, remove the nose gear strut. File or grind a flat spot on the gear wire at the screw location. This is necessary to prevent the nose gear steering arm from slipping.

RADIO INSTALLATION

Install the Radio Components

1. Follow this sequence for mounting the radio components:

❑ A. Install rubber grommets and brass eyelets in the servos following the radio manufacturer's recommendations.

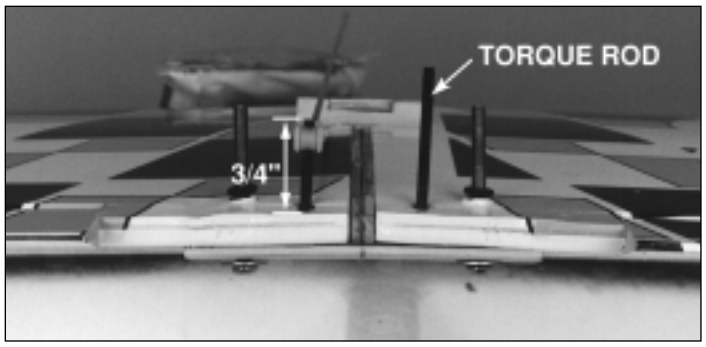
❑ B. Test fit the servos in the tray. Enlarge the openings if needed to create a 1/32" gap around the servo.

❑ C. Mark the mounting hole locations on the tray, then drill 1/16" pilot holes through each mark.

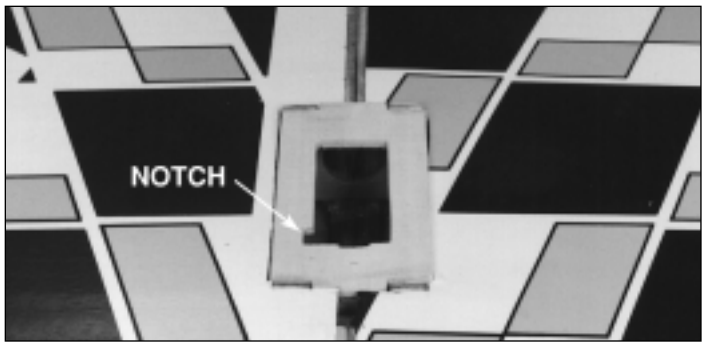
❑ D. Mount the servos with the screws provided with your radio.

❑ E. Wrap the receiver and battery with 1/4" foam (not included). Use masking tape or rubber bands to hold the foam in position.

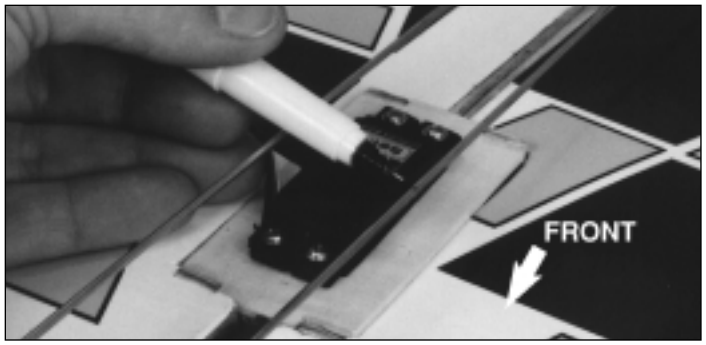
❑ 1. Following the manufacturer's recommendations, install and connect three servos, the receiver, the switch and the battery as shown in the photo. We added a Great Planes Switch Mount & Charge Jack (#GPMM1000, not included) for convenience and ease of use at the field. It is installed in the side of the fuselage opposite the engine exhaust. Center the elevator and rudder trims on the transmitter. Turn the radio on and center the servo arms.



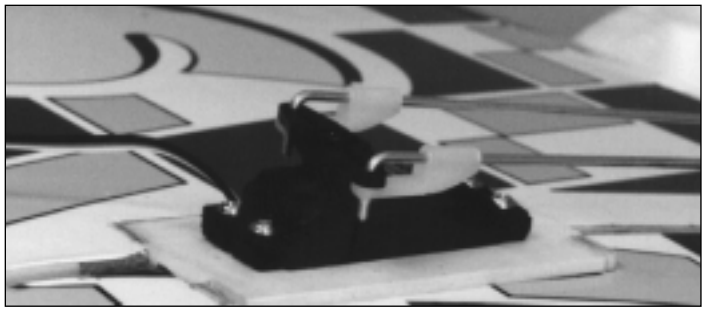
❑ 2.Assemble the **swivel clevises** by snapping the two parts together, then thread a **17-1/2" wire pushrod** 13 revolutions into each of them. Thread the swivels onto the torque rods until they are 3/4" above the surface of the wing. Cut off the excess torque rod that extends past the swivel.



❑ 3. Cut a notch in the aileron servo tray so the wire from the servo can pass through. Install the aileron servo as shown in step 4. Connect it to the receiver, turn on the radio, then center the servo horn.

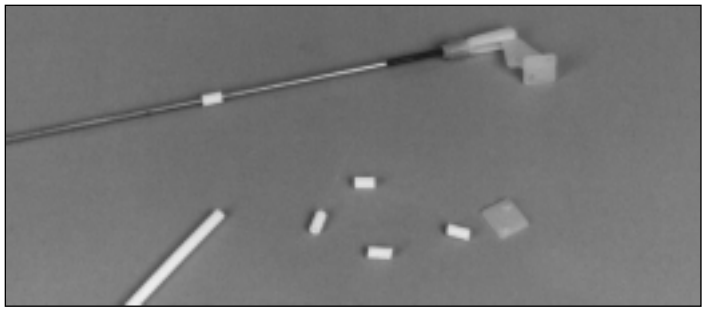


❑ 4. Center the ailerons, then mark the pushrods at the point where they meet the holes on the servo arm. Make a 90 degree bend down in the wires at this mark.



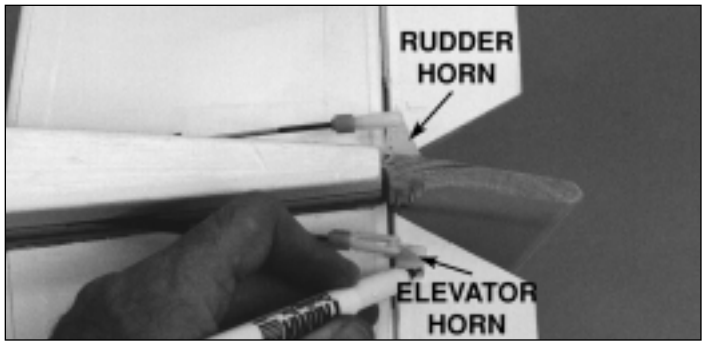
❑ 5. Cut off the excess wire 3/8" above the bend. Enlarge the servo horn holes with a 5/64" drill bit. Insert the bent wire pushrods into the servo horn from the upper side, then secure them with Nylon FasLink™ Pushrod Keepers.

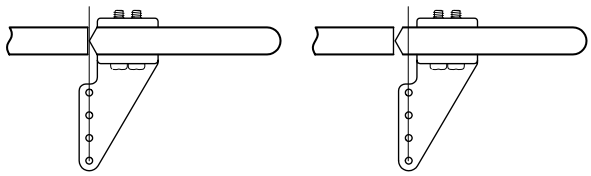
Install the Pushrods & Control Horns



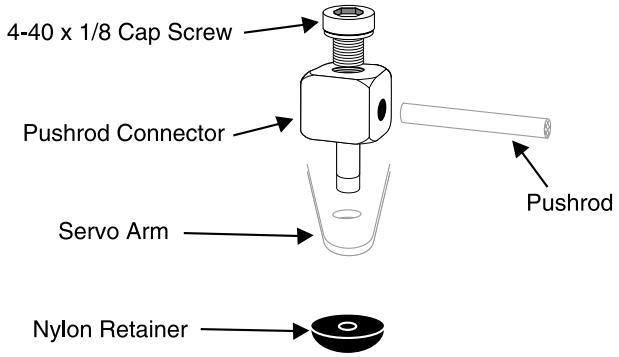
❑ 1. Slide a **silicone retainer** over the "hex" end of a **nylon clevis**. Thread the clevis 13 revolutions onto the threaded end of a **37" wire pushrod**. Cut six 1/4" **bushings** from the 6-1/2" plastic inner pushrod tube provided in the kit. Slide the bushings on the wire pushrod, spacing them about 3" apart. *Check the pushrod to be certain that the bushings won't pop out of the ends and cause the pushrods to stick.* Put a drop of thin CA on the pushrod wire at each bushing to hold them in place. Trim the backing plate from a **nylon control horn**, then clip the clevis to the top hole of the horn. Make a second assembly exactly the same as the first. *Clevis placement will be adjusted on the horn for proper control throw later*.

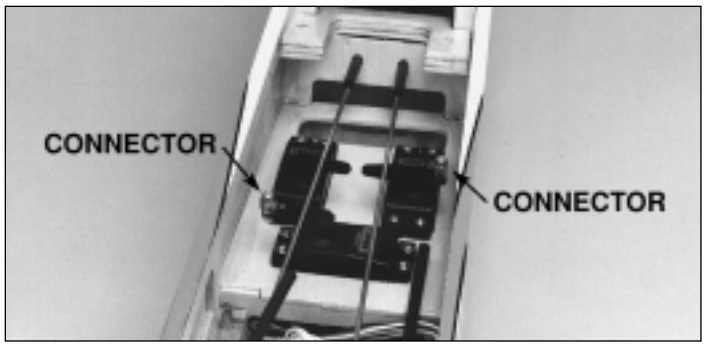
Note: Make sure the CA has **fully cured before proceeding** to the next step.





❑ 2. Insert the pushrods into the tubes in the fuselage. Hold the horn against the control surface (see sketch above for correct alignment). **Note**: Be sure that the control horn positions match those in the photo. The pushrod should not be bent and should slide easily in the tube. Mark the location for the horn screws on the control surface. Drill the 3/32" horn screw holes through the control surface. Mount the horn tightly in place with two **2-56 machine screws** and the **horn backing plate**. Repeat for the other control surface as shown.



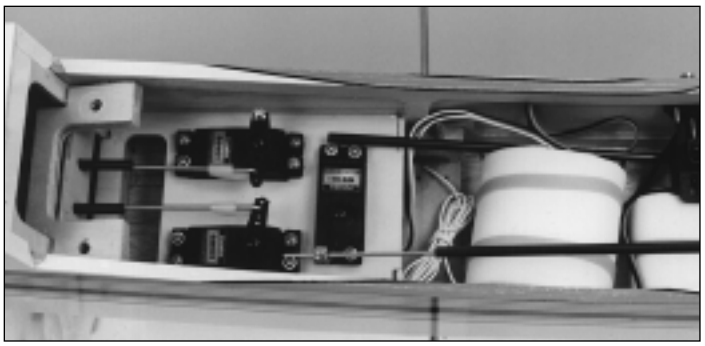


❑ ❑ 3. Install a **Screw-Lock Pushrod Connector** with the **4-40 x 1/8" cap screw** on the throttle and rudder servo horns. Snap the **nylon retainer** onto the pushrod connector post beneath the servo horn. Use the photo for the correct positioning of the connectors.

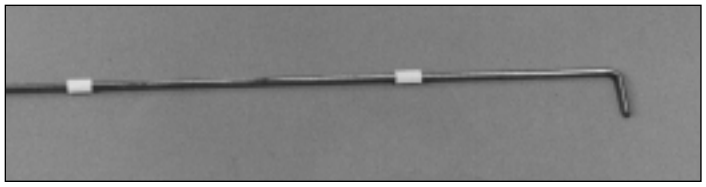
❑ ❑ 4. Center the elevator, then mark the pushrod where it crosses the servo horn hole. Enlarge the servo horn hole with a 5/64" drill bit. Make a 90 degree bend in the pushrod on the mark. Cut off the excess wire 3/8" above the bend. Insert the bent wire through the enlarged hole in the servo horn. Secure it in place with a Nylon FasLink. (Doesn't this sound similar to the same procedure used for the aileron pushrods?) Note the position of the FasLink in step 7.

❑ 5. Repeat steps 3 and 4 for the rudder pushrod.

❑ 6. Assemble the 17-1/2" throttle pushrod by installing a nylon clevis and silicone retainer onto the threaded end. Cut four 1/4" bushings and install them 2-1/2" apart. Slide the throttle pushrod into its outer tube (from the firewall in), then through the pushrod connector. Attach the clevis to the control arm of the carburetor.



❑ 7. With the radio on, move the throttle trim lever and control stick to the fully closed position, by pulling them back (or downward) all the way. Manually close the throttle on the carburetor completely. Tighten the set screw on the pushrod connector. Check throttle operation with the radio and make adjustments to the linkage as necessary for smooth operation from fully closed to fully open. *Use the appropriate holes in the servo horn and throttle arm to provide the correct amount of throttle movement and to prevent the servo from binding at its end points.*



❑ 8. Cut four 1/4" bushings and slide them onto the remaining 17-1/2" pushrod 3" apart, starting 2-1/2" from the non-threaded end. Bend the rod 90 degrees 1/2" from the non-threaded end.

❑ 9. Drill a 5/64" hole through the **center** hole in the nose gear steering arm. Insert the straight end of the steering pushrod (from the firewall in) into the pushrod tube, into the pushrod connector on the rudder servo. (Don't cut the wire or tighten the connector yet.) Work the wire into the steering arm as shown in the photo.

❑ 10. Turn the radio on. Check that the rudder trim is centered. Align the nose wheel axle with the firewall by moving the pushrod. When the axle is parallel with the firewall, tighten the set screw on the pushrod connector.

❑ 11. Using the leftovers that were saved from the servo tray, make small stand-offs to secure the ends of the throttle and nose wheel pushrods. Avoid getting any glue inside of the pushrod tubes.

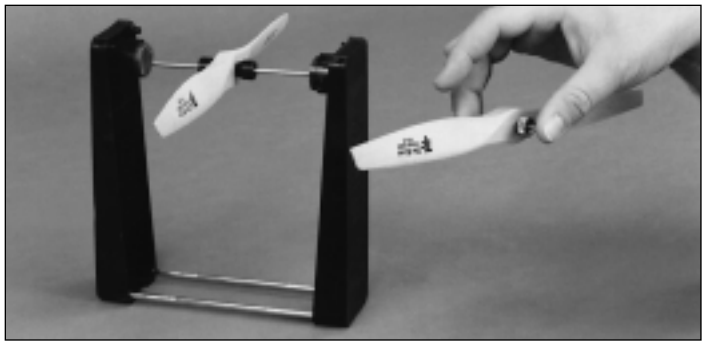
❑ 12. Drill a 1/16" hole through the bottom center of the fuselage in front of the main landing gear block. Route the receiver antenna through this hole. Put a small pin in the rear of the fuselage. Use a rubber band tied around the antenna wire and loop it around the pin to secure the antenna.

Note: Do not cut or shorten the antenna wire. Leave any excess to hang free.

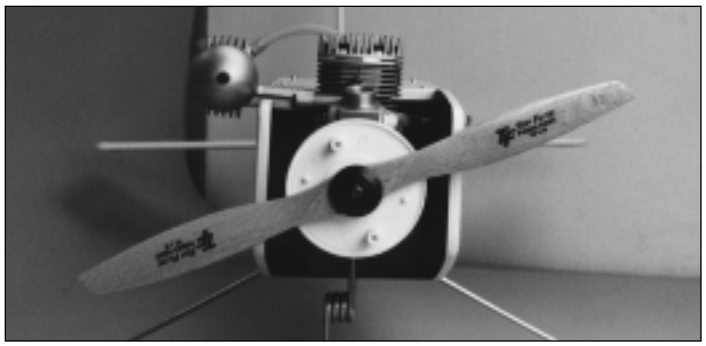
❑ 13. Once the model has been properly balanced, use "popsicle sticks" or leftover wood glued between the fuse sides to hold the receiver and battery securely in place.

FINAL ASSEMBLY

Balancing the Propeller



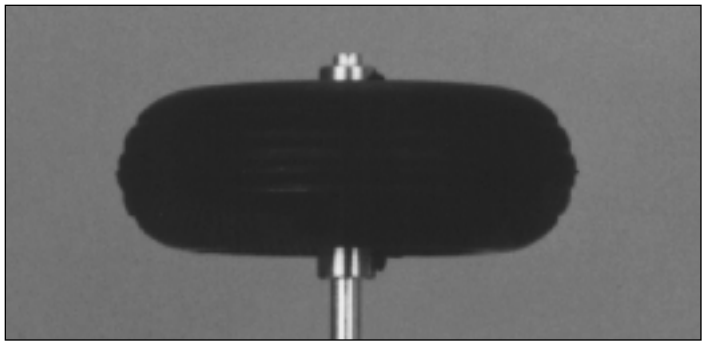
❏ 1. Carefully balance your propellers before flying. An unbalanced prop is the single most significant cause of vibration. Not only may engine mounting screws vibrate out, possibly with disastrous effect, but vibration may also damage your radio receiver and battery. Vibration may cause your fuel to foam, which will, in turn, cause your engine to run lean or quit. We use a **Top Flite Precision Magnetic Prop Balancer** (TOPQ5700) in the workshop and keep a **Great Planes Fingertip Balancer** (GPMQ5000) in our flight box.



❏ 2. Push the **spinner backplate** onto the prop shaft all the way. The center hole may be enlarged with a prop reamer or drill if necessary. Align a prop next to the “short” pins, but not between the “long & short” pins on the backplate. Finger tighten the prop nut and washer. Rotate the prop shaft counterclockwise until the engine reaches its compression stroke. Hold the prop shaft (or rear prop washer) while rotating the spinner backplate and propeller to the two o’clock position. Tighten the prop nut securely. Attaching the propeller in this position allows easier flip starting.

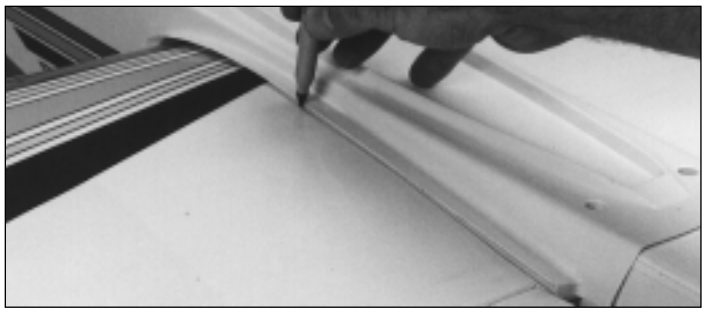
❏ 3. Attach the **spinner** to the backplate using the two **M3 x 15 screws**.

Install the Wheels

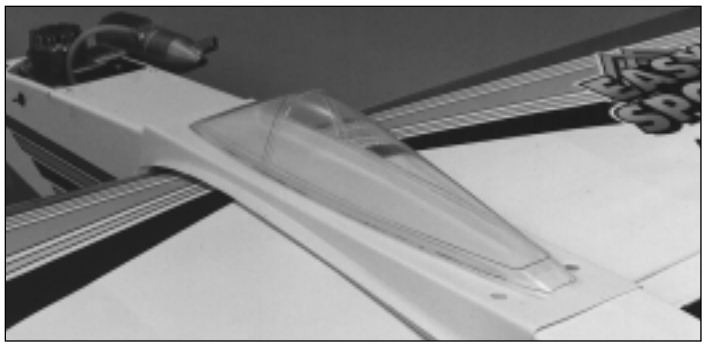


❏ 1. Install the three **wheels** using the six **5/32" wheel collars** and **set screws**. Grind or file a flat spot at the point of the set screw contact for each of the outer collars. This provides a better area for the set screw to “bite” and helps keep the wheels in place.

Install the Canopy



❏ 1. Mount the wing to the fuselage. Trim out the **wing fairing** and position it on the fuselage. Mark the edges around the wing fairing. Remove the fairing. Lightly sand the wing fairing and the wing where they contact each other. Clean the areas with rubbing alcohol and a paper towel to remove any dust or oil. Mix 1/4 oz. of 30-minute epoxy and glue the wing fairing in place. Use masking tape to hold it in place until the glue cures. Any excess epoxy can be cleaned up using a paper towel and rubbing alcohol.



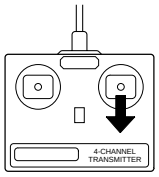
❏ 2 Carefully trim the **canopy** along the “cut lines” with a scissors or Lexan® scissors. Test fit the canopy on the wing fairing as you proceed, making small adjustments as required for a good fit. The area inside the canopy can be detailed at this time by painting and adding a pilot figure to

suit your own personal tastes. Roughen the bottom 1/8" of the canopy edge, as well as the area on the wing fairing that the canopy contacts. Be careful not to scratch any areas that may be visible when the canopy is installed. Glue the canopy in position with 6-minute epoxy or RC-56 glue. Finish the canopy by painting the frame lines using fuelproof paint or striping tape.

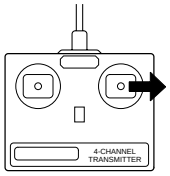
Note: Always test your paint on a small sample of the canopy to make sure that it doesn't attack or deform the the canopy material.

Control Surface Throws

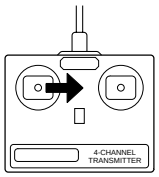
4-CHANNEL RADIO SETUP
(STANDARD MODE 2)



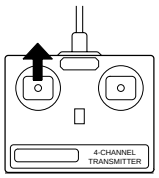
ELEVATOR MOVES UP



RIGHT AILERON MOVES UP
LEFT AILERON MOVES DOWN



RUDDER MOVES RIGHT
NOSE WHEEL TURNS RIGHT



CARBURETOR WIDE OPEN

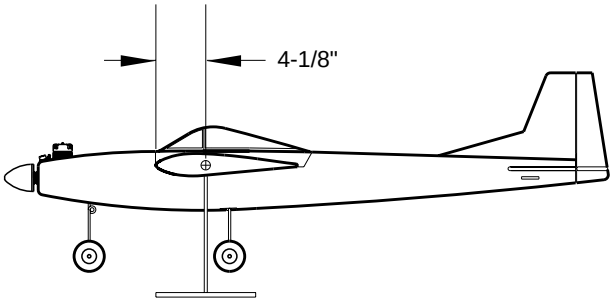
Note: Throws are measures at the widest part of the elevators, rudder and ailerons.

We recommend the following control surface throws:

	High rates	Low rates
ELEVATOR	1/2" UP 1/2" DOWN	3/8" UP 3/8" DOWN
RUDDER	1-1/4" RIGHT 1-1/4" LEFT	1" RIGHT 1" LEFT
AILERONS	7/16" UP 7/16" DOWN	5/16" UP 5/16" DOWN

Balance Your Model

Note: This section is **VERY IMPORTANT** and must **NOT** be omitted! A model that is not properly balanced will be **unstable and possibly unflyable.**



❑ 1. Accurately mark the balance point on the **bottom** of the wing on both sides of the fuselage. The balance point is located **4-1/8" back from the leading edge**. This is the balance point at which your model should be balanced for your first flights. Later, you may wish to experiment by shifting up to **1/4" forward or aft** to change the flight characteristics. Moving the balance **forward** may improve the smoothness and arrow-like tracking, but it may then require more speed for takeoff and make it more difficult to slow down for landing. Moving the balance point **aft** makes the model more agile with a lighter and snappier "feel" and often improves knife edge capabilities. In any case, **please start at the location we recommend and do not at any time balance your model outside the recommended range**.

❑ 2. With the wing attached to the fuselage, all parts of the model installed (ready to fly) and an **empty** fuel tank, hold the model at the marked balance point with the stabilizer level.

❑ 3. Lift the model. If the tail drops when you lift, the model is "tail heavy" and you must add weight* to the nose. If the nose drops, it is "nose heavy" and you must add weight* to the tail to balance.

Note: Nose weight may be added by using a Heavy Spinner nut (1/4"-28 GPMQ4640)(5/16"-24 GPMQ4641) or by gluing weights to the firewall. Tail weight may be added by using Great Planes (GPMQ4485) "stick-on" lead weights. Later, if the balance proves to be O.K., you can open the bottom of the fuse and glue these permanently in position.

*If possible, first attempt to balance the model by changing the position of the receiver battery and receiver. If you are unable to obtain good balance by doing so, then it will be necessary to add weight to the nose or tail to achieve the proper balance point.

PREFLIGHT

At this time check all connections including servo arm screws, FasLinks, clevises and servo cords. Make sure you have installed the **nylon retainer** on the Screw-Lock Pushrod Connector on the throttle pushrod at the servo arm and the **silicone retainers** on all the clevises.

Charge the Batteries

Follow the battery charging procedures in your radio instruction manual. You should **always** charge your transmitter and receiver batteries the night before you go flying and at other times as recommended by the radio manufacturer.

Find a Safe Place to Fly

The best place to fly your R/C model is an AMA (Academy of Model Aeronautics) chartered club field. Ask your hobby shop dealer if there is such a club in your area and join. Club fields are set up for R/C flying and that makes your outing safer and more enjoyable. The AMA also can tell you the name of a club in your area. We recommend that you join AMA and a local club so you have a safer place to fly and have insurance to cover you in case of a flying accident. The AMA address is listed on page 2 of this instruction manual.

If a club and its flying site are not available, you need to find a large, grassy area at least 6 miles away from any other R/C radio operation like R/C boats and R/C cars and away from houses, buildings and streets. A schoolyard may look inviting but it is too close to people, power lines and possible radio interference.

Ground Check the Model

Inspect your radio installation and confirm that all the control surfaces respond correctly to transmitter inputs. The engine operation must also be checked by confirming that the engine idles reliably and transitions smoothly and rapidly to full power and maintains full power indefinitely. The engine must be “broken-in” on the ground by running it for at least two tanks of fuel. **Follow the engine manufacturer's recommendations for break-in.** Make sure all screws remain tight, that the hinges are secure and that the prop is on tight.

Range Check Your Radio

Whenever you go to the flying field, check the operational range of the radio before the first flight of the day. First, make sure no one else is on your frequency (channel). With your transmitter antenna collapsed and the receiver and transmitter on, you should be able to walk at least 100 feet away from the model and still have control. While you work the controls, have a helper stand by your model and tell you what the control surfaces are doing. Repeat this test **with the engine running** at various speeds with a helper holding the model. If the control surfaces are not always responding correctly, **do not fly!** Find and correct the problem first. Look for loose servo connections or corrosion, loose bolts that may cause vibration, a defective on/off switch, low battery voltage or a defective cell, a damaged receiver antenna or a receiver crystal that may have been damaged from a previous crash.

Engine Safety Precautions

NOTE: 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 the engine exhaust gives off a great deal of deadly carbon monoxide. **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 and screwdrivers that may fall out of shirt or jacket pockets into the prop.

Use a “chicken stick” or electric starter; follow instructions supplied with the starter or stick. 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 propeller.

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

To stop the engine, cut off the fuel supply by closing off the fuel line or follow 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 Great Planes Easy Sport is a great flying sport airplane that flies smoothly and predictably, yet is highly maneuverable. It does not, however, have the self-recovery characteristics of a primary R/C trainer; therefore, you must either have mastered the basics of R/C flying or obtained the assistance of a competent R/C pilot to help you with your first flights.

Takeoff

If you have dual rates on your transmitter, set the switches to “high rate” for takeoff, especially when taking off in a cross wind. Although the Easy Sport has great low speed characteristics, you should always build up as much speed as your runway will permit before lifting off, as this will give you a safety margin in case of a “flame-out.” When the plane has sufficient flying speed, lift off by smoothly applying a **little** up elevator and climb out gradually.

CAUTION (THIS APPLIES TO ALL R/C AIRPLANES): If, while flying, you notice any unusual sounds, such as a low-pitched “buzz”, this may indicate control surface “flutter”. Because flutter can quickly destroy components of your airplane, any time you detect flutter you must **immediately** cut the throttle and land the airplane! Check all servo grommets for deterioration (this may indicate which surface fluttered) and make sure all pushrod linkages are slop-free. If it fluttered once, it will probably flutter again under similar circumstances unless you can eliminate the slop or flexing in the linkages. Here are some things which can result in flutter: Excessive hinge gap; Not mounting control horns solidly; Sloppy fit of clevis pin in horn; Elasticity present in flexible plastic pushrods; Side-play of pushrod in guide tube caused by tight bends; Sloppy fit of Z-bend in servo arm; Insufficient glue used when gluing in the elevator joiner wire or aileron torque rod; Excessive flexing of aileron, caused by using too soft balsa; Excessive “play” or “backlash” in servo gears; and Insecure servo mounting.

Flight

We recommend that you take it easy with your Easy Sport for the first several flights and gradually “get acquainted” with this fantastic airplane as your engine gets fully broken-in. Add and practice one maneuver at a time, learning how she behaves in each one. For ultra-smooth flying and normal maneuvers, we recommend using the “low rate” settings as listed on page 20. If you notice any “sluggishness” in the way your Easy Sport handles, it is probably a result of not enough speed, in which case you should install a propeller with increased pitch.

Landing

When it's time to land, fly a normal landing pattern and approach. If you find that it lands a little fast, you might try dialing in a few clicks of up elevator when you cut the throttle on the downwind leg of the landing pattern. This will automatically help to bleed off some of the speed. If your Easy Sport is built straight and true, you'll find that you can really flare it out for slow, nose-high, full-stall landings without fear of tip stalling.

Have a ball, but always stay in control and fly in a safe manner. GOOD LUCK AND GREAT FLYING!

–AIRCRAFT–
1996 OFFICIAL AMA NATIONAL MODEL AIRCRAFT SAFETY CODE
Effective January 1, 1996

Model Flying **MUST** be in accordance with this Code in order for AMA Liability Protection to apply.

GENERAL

1) I will not fly my model aircraft in sanctioned events, air shows, or model flying demonstrations until it has been proven to be airworthy by having been previously, successfully flight tested.

2) I will not fly my model higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator. I will give right-of-way and avoid flying in the proximity of full-scale aircraft. Where necessary, an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.

3) Where established, I will abide by the safety rules for the flying site I use and I will not willfully and deliberately fly my models in a careless, reckless and /or dangerous manner.

4) At all flying sites a straight or curved line(s) must be established in front of which all flying takes place with the other side for spectators. Only those persons essential to the flight operations are to be permitted on the flying side of the line; all others must be on the spectator side. Flying over the spectator side of the line is prohibited, unless beyond the control of the pilot(s). In any case, the maximum permissible takeoff weight of the models is 55 pounds.

5) At air shows or model flying demonstrations a single straight line must be established, one side of which is for flying, with the other side for spectators. Only those persons accredited by the contest director or other appropriate official as necessary for the flight operations or as having duties or functions relating to the conduct of the show or demonstration are to be permitted on the flying side of the line. The only exceptions which may be permitted to the single straight line requirements, under special circumstances involving consideration of site conditions and model size, weight, speed, and power, must be jointly approved by the AMA President and the Executive Director.

6) Under all circumstances, if my model weighs over 20 pounds, I will fly it in accordance with paragraph 5 of this section of the AMA Safety Code.

7) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. **Note:** This does not apply to models flown indoors.

8) I will not operate models with metal-bladed propellers or with gaseous boosts, in which gases other than air enter their internal combustion engine(s); nor will I operate models with extremely hazardous fuels such as those containing tetranitromethane or hydrazine.

9) I will not operate models with pyrotechnics (any device that explodes, burns, or propels a projectile of any kind) including, but not limited to, rockets, explosive bombs dropped from models, smoke bombs, all explosive gases (such as hydrogen-filled balloons), ground mounted devices launching a projectile. The only exceptions permitted are rockets flown in accordance with the National Model Rocketry Safety Code or those permanently attached (as per JATO use); also those items authorized for Air Show Team use as defined by AST Advisory Committee (document available from AMA HQ). In any case, models using rocket motors as a primary means of propulsion are limited to a maximum weight of 3.3 pounds and a G series motor. **Note:** A model aircraft is defined as an aircraft with or without engine, not able to carry a human being.

10) I will not operate any turbo jet engine (axial or centrifugal flow) unless I have obtained a special waiver for such specific operations from the AMA President and Executive Director and I will abide by any restriction(s) imposed for such operation by them. (**Note:** This does not apply to ducted fan models using piston engines or electric motors.)

11) I will not consume alcoholic beverages prior to, nor during, participation in any model operations.

RADIO CONTROL

1) I will have completed a successful radio equipment ground range check before the first flight of a new or repaired model.

2) I will not fly my model aircraft in the presence of spectators until I become a qualified flier, unless assisted by an experienced helper.

3) I will perform my initial turn after takeoff away from the pit or spectator areas and I will not thereafter fly over pit or spectator areas, unless beyond my control.

4) I will operate my model using radio control frequencies currently allowed by the Federal Communications Commission. (Only properly licensed Amateurs are authorized to operate equipment on Amateur Band Frequencies.)

5) I will not knowingly operate an R/C system within 3 miles of a pre-existing model club flying site without a frequency sharing agreement with that club.

6) I will not fly my model aircraft in any racing competition which allows models over 20 pounds unless that competition event is AMA sanctioned. (For the purposes of this paragraph, competition is defined as any situation where a winner is determined.)

Separate Code(s) available from AMA Headquarters for boats, cars and rockets.
ACADEMY OF MODEL AERONAUTICS
5151 EAST MEMORIAL DRIVE
MUNCIE , INDIANA 47302-9252

FLIGHT LOG

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