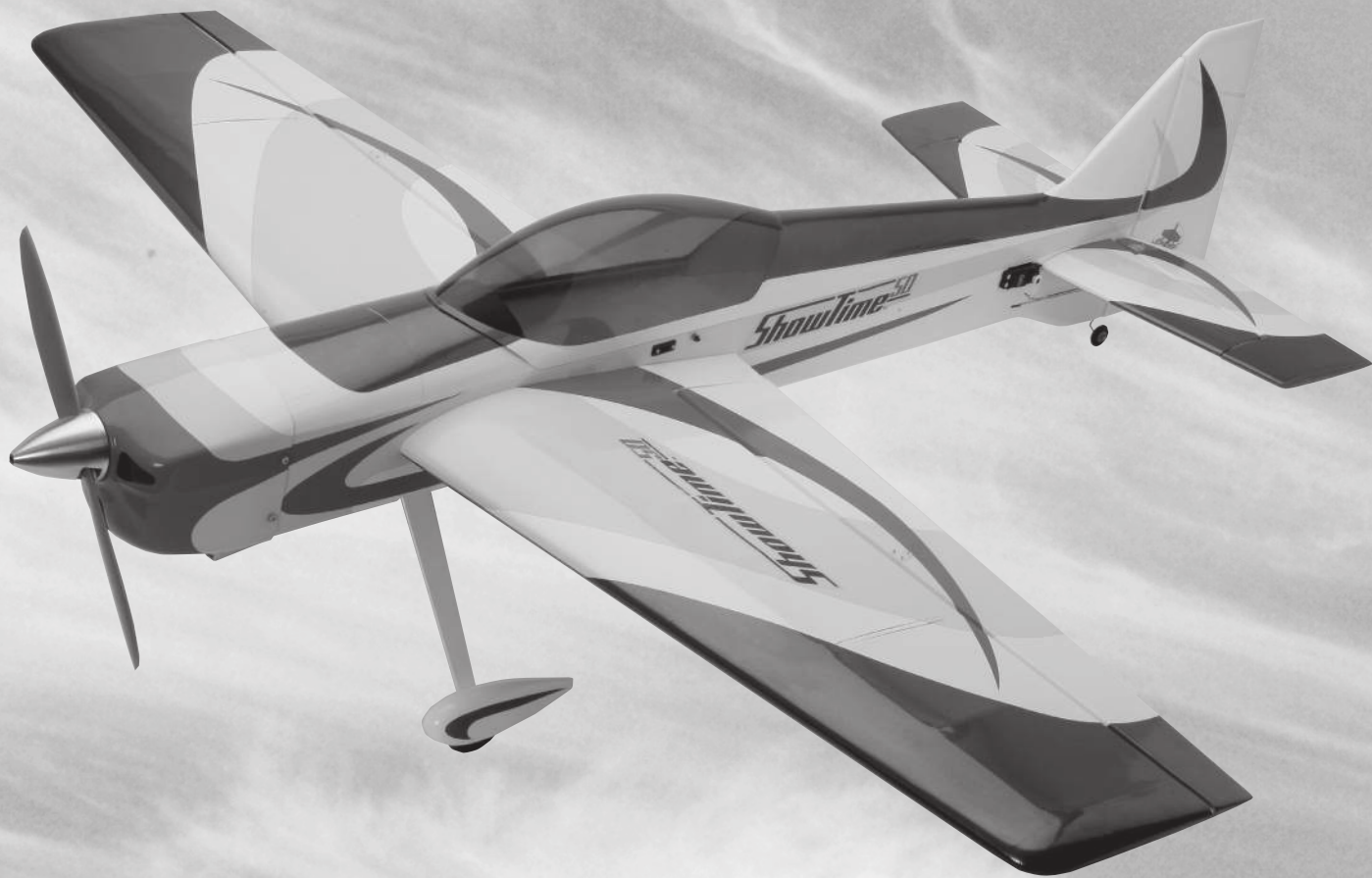




ShowTime 50 ARF

ASSEMBLY MANUAL



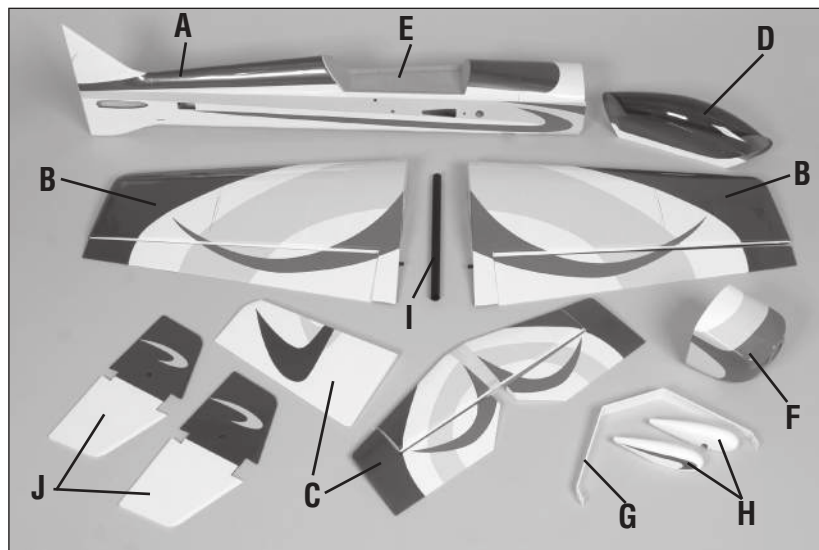
Specifications

Wingspan.....	57 in (1448mm)	Length.....	59.25 in (1505mm)
Wing Area	722 sq in (46.6 sq dm)	Weight.....	6–7 lb (2.7kg–3.1kg)

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Contents of Kit



Replacement Parts

A. HAN4276	Fuselage w/Fin and Hatch
B. HAN4277	Wing Set w/Ailerons
C. HAN4278	Tail Set w/Stabilizer, Elevator and Rudder
D. HAN4279	Canopy
E. HAN4280	Canopy Hatch
F. HAN4281	Painted Cowl
G. HAN4282	Landing Gear
H. HAN4283	Wheel Pant Set
I. HAN4286	Anodized Wing Tube
J. HAN4288	Side Force Generator Set

Items not shown

HAN4284	Decal Set
HAN4285	Tail Wheel Bracket
HAN4287	Pushrod and Hardware Set

Radio and Power Systems Requirements

- 5- to 6-channel radio system (minimum) w/receiver
- 537 Standard Servo (JRPS537) (6) or equivalent for rudder (1), elevator (2), ailerons (2), throttle (1)
- 12" Servo Lead Extension (JRPA098) (2)
- 6" Y-Harness (JSP98020)

Recommended JR® or JR SPORT™ Systems

- XP9303
- XP7202
- XP6102
- XS600



JR XP9303



JR XP7202



JR XP6102

Recommended Power Systems

- .52 2-stroke
- .82 4-stroke



Evolution .52NX
EVOE0520



Saito .82 AAC
SAIE082A

UltraCote® Covering Colors

Pearl Blue HANU845
True Red HANU866

White HANU870
Bright Yellow HANU872

Field Equipment Required

- Propeller
- Long Reach Glow Plug Wrench (HAN2510)
- 2-Cycle Sport Plug (HAN3001)
- 2-Cycle Super Plug (HAN3006)
- 4-Cycle Super Plug (HAN3011)
- Metered Glow Driver w/Ni-Cd & Charger (HAN7101)
- Fuel
- Manual Fuel Pump (HAN118)

Optional Field Equipment

- 12V 7Ah Sealed Battery (HAN102)
- PowerPro™ 12V Starter (HAN161)

Required Tools and Adhesives

Tools

- Canopy scissors
- Square
- Foam: 1/4" (6mm)
- Side cutters
- Phillips screwdriver (small)
- Ruler
- Hex wrench: 9/64", 3/16"
- Drill bit: 1/16" (1.5mm), 5/64" (2mm), 3/32" (2.5mm), 1/8" (3mm), 9/64" (3.5mm), 5/32" (4mm), 1/4" (6mm)
- Drill
- Flat blade screwdriver
- Hobby knife
- Phillips screwdriver (large)
- Pliers
- Sandpaper
- Socket wrench: 11/32"

Adhesives

- 6-minute epoxy
- Thin CA (cyanoacrylate) glue
- CA remover/debonder
- Zap-A-Dap-A-Goo
- Canopy glue (Formula 560)
- 30-minute epoxy
- Medium CA (cyanoacrylate) glue
- Pacer Z-42 Threadlock
- Hinge glue
- Masking tape (3M blue recommended)

Other Required Items

- Epoxy brushes
- File
- Mixing sticks for epoxy
- Petroleum jelly
- Sanding bar
- String
- Wax paper
- Felt-tipped pen or pencil
- Measuring device (e.g. ruler, tape measure)
- Paper towels
- Rubbing alcohol
- Sandpaper (medium)
- T-pins
- Rotary tool w/sanding drums

Date of Purchase Warranty Period

Exclusive Warranty- Horizon Hobby, Inc., (Horizon) warrants that the Products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the Purchaser.

Limited Warranty

(a) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable. REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE PURCHASER. This warranty covers only those Products purchased from an authorized Horizon dealer. Third party transactions are not covered by this warranty. Proof of purchase is required for warranty claims. Further, Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(b) Limitations- HORIZON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCT. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

(c) Purchaser Remedy- Horizon's sole obligation hereunder shall be that Horizon will, at its option, (i) repair or (ii) replace, any Product determined by Horizon to be defective. In the event of a defect, these are the Purchaser's exclusive remedies. Horizon reserves the right to inspect any and all equipment involved in a warranty claim. Repair or replacement decisions are at the sole discretion of Horizon. This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the Product. This warranty does not cover damage due to improper installation, operation, maintenance, or attempted repair by anyone other than Horizon. Return of any goods by Purchaser must be approved in writing by Horizon before shipment.

Damage Limits

HORIZON SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCT, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY. Further, in no event shall the liability of Horizon exceed the individual price of the Product on which liability is asserted. As Horizon has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability.

If you as the Purchaser or user are not prepared to accept the liability associated with the use of this Product, you are advised to return this Product immediately in new and unused condition to the place of purchase.

Law: These Terms are governed by Illinois law (without regard to conflict of law principals).

Safety Precautions

This is a sophisticated hobby Product and not a toy. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the Product or other property. This Product is not intended for use by children without direct adult supervision. The Product manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or injury.

Questions, Assistance, and Repairs

Your local hobby store and/or place of purchase cannot provide warranty support or repair. Once assembly, setup or use of the Product has been started, you must contact Horizon directly. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please direct your email to productsupport@horizonhobby.com, or call 877.504.0233 toll free to speak to a service technician.

Inspection or Repairs

If this Product needs to be inspected or repaired, please call for a Return Merchandise Authorization (RMA). Pack the Product securely using a shipping carton. Please note that original boxes may be included, but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as **Horizon is not responsible for merchandise until it arrives and is accepted at our facility**. A Service Repair Request is available at www.horizonhobby.com on the "Support" tab. If you do not have internet access, please include a letter with your complete name, street address, email address and phone number where you can be reached during business days, your RMA number, a list of the included items, method of payment for any non-warranty expenses and a brief summary of the problem. Your original sales receipt must also be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

Warranty Inspection and Repairs

To receive warranty service, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be repaired or replaced free of charge. Repair or replacement decisions are at the sole discretion of Horizon Hobby.

Non-Warranty Repairs

Should your repair not be covered by warranty the repair will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for repair you are agreeing to payment of the repair without notification. Repair estimates are available upon request. You must include this request with your repair. Non-warranty repair estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Please advise us of your preferred method of payment. Horizon accepts money orders and cashiers checks, as well as Visa, MasterCard, American Express, and Discover cards. If you choose to pay by credit card, please include your credit card number and expiration date. Any repair left unpaid or unclaimed after 90 days will be considered abandoned and will be disposed of accordingly. **Please note: non-warranty repair is only available on electronics and model engines.**

Electronics and engines requiring inspection or repair should be shipped to the following address:

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822

All other Products requiring warranty inspection or repair should be shipped to the following address:

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822

Please call 877-504-0233 with any questions or concerns regarding this product or warranty.

Safety, Precautions, and Warnings

This model is controlled by a radio signal that is subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help to avoid collisions or injury.

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

Before Starting Assembly

Before beginning the assembly of the ShowTime™ 50, remove each part from its bag for inspection. Closely inspect the fuselage, wing panels, rudder, and stabilizer for damage. If you find any damaged or missing parts, please contact the place of purchase.

If you find any wrinkles in the covering, use a heat gun or sealing iron to remove them. Use caution while working around areas where the colors overlap to prevent separating the colors.

Using the Manual



HAN101 – Sealing Iron

**HAN141 – Sealing Iron
Sock**



HAN100 – Heat Gun

HAN150 – Covering Glove

This manual is divided into sections to help make assembly easier to understand, and to provide breaks between each major section. In addition, check boxes have been placed next to each step to keep track of each step completed. Steps with a single box (☐) are performed once, while steps with two boxes (☐ ☐) indicate that the step will require repeating, such as for a right or left wing panel, two servos, etc. Remember to take your time and follow the directions.

Section 1: Aileron Installation

Required Parts

- Wing panel (left and right)
- Aileron (left and right)
- CA hinge (8)
- Nylon wire keeper (2)
- Nylon clevis (2)
- Clevis retainer (2)
- Control horn w/backplate
- 2-56 x $1\frac{3}{16}$ " machine screw (6)
- $4\frac{3}{8}$ " (110mm) pushrod (2)

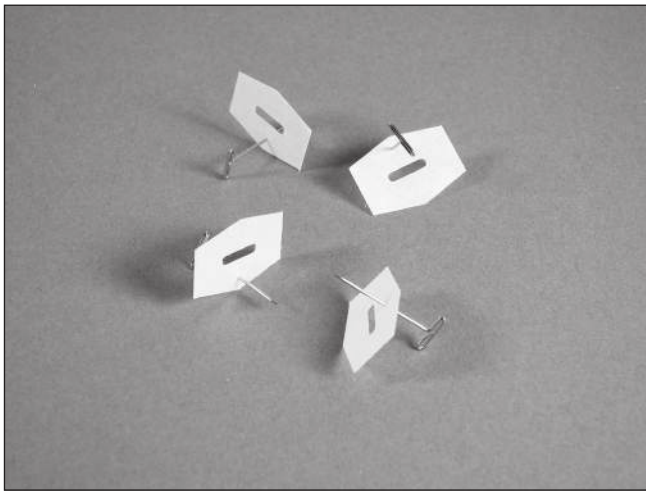
Required Tools and Adhesives

- Thin CA
- T-pins
- Felt-tipped pen
- Drill
- Square
- Ruler
- Servo w/hardware (2)
- Side cutters
- 12" Servo Extension (JRPA098)
- Drill bit: 1/16" (1.5mm), 5/64" (2mm)
- Phillips screwdriver (small)
- Large Servo Horns w/Screws (JRPA212) (2)

We recommend that you use the hinges provided. They work extremely well when installed as described. Even though the ailerons are large, we had absolutely no problems.

□ □ Step 1

Locate 4 CA hinges. Place a T-pin in the center of the hinges.



□ □ Step 2

Use a 1/16" (1.5mm) drill bit to drill a hole in the center of each hinge location in both the wing and aileron. This creates a tunnel that the CA can pass through allowing the CA to penetrate further into the hinge.



Note: Using a rotary tool and 1/16" (1.5mm) drill bit will make the perfect hole as it removes the excess wood fibers from the hole.

□ □ Step 3

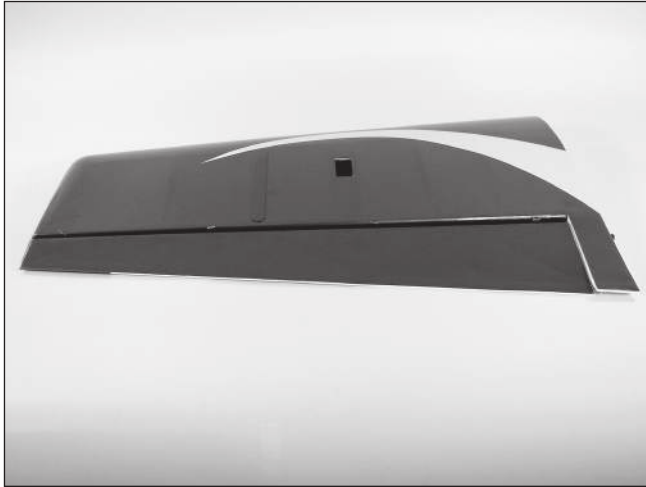
Place the hinges in the precut slots in the aileron (or wing if you prefer). Each T-pin will rest against the edge when installed correctly.



Section 1: Aileron Installation

□ □ Step 4

Slide the aileron and wing together. The gap between the aileron and wing should be approximately 1/64" (.4mm). Align the end of the aileron to the wing. Also check that the aileron can move freely and not bind at the wing root.



Note: Do not use CA accelerator during the hinging process. The CA must be allowed to soak into the hinge to provide the best bond. Using accelerator will not provide enough time for this process.

□ □ Step 5

Remove the T-pins from the hinges. Flex the aileron and apply Thin CA to each hinge. Make sure the hinge is fully saturated with CA. Use a paper towel and CA remover/debonder to clean up any excess CA from the wing and/or aileron. Make sure to apply CA to both the top and bottom of the hinge.



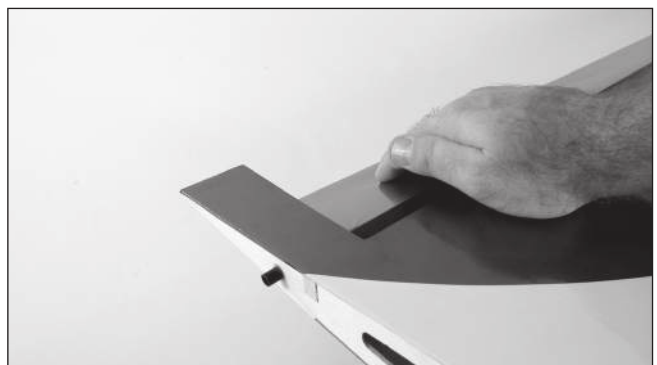
□ □ Step 6

Firmly grasp the wing and aileron and gently pull on the aileron to ensure the hinges are secure and cannot be pulled apart. Use caution when gripping the wing and aileron to avoid crushing the structure.



□ □ Step 7

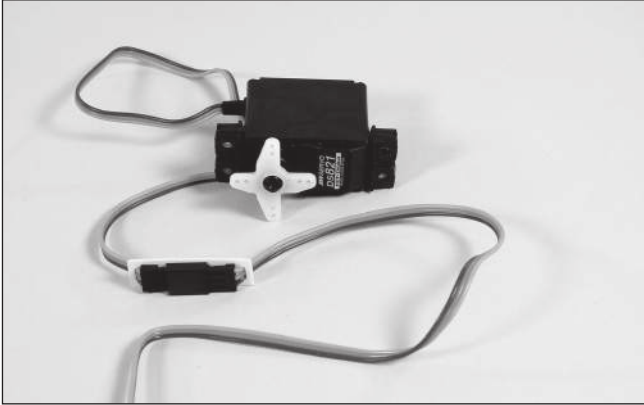
Work the aileron up and down several times to work in the hinges and check for proper movement.



Section 1: Aileron Installation

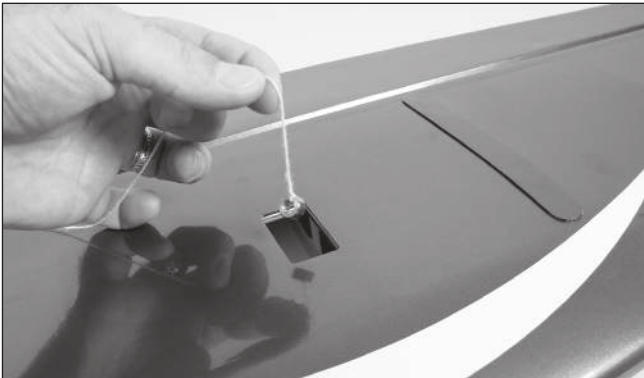
□ □ Step 8

Install the servo hardware (grommets and eyelets) included with the servo. Plug a 12" servo extension onto the servos. Either tie the servo leads together, using a commercially available connector, or use unwaxed dental floss to secure the extensions to prevent them from coming loose during flight.



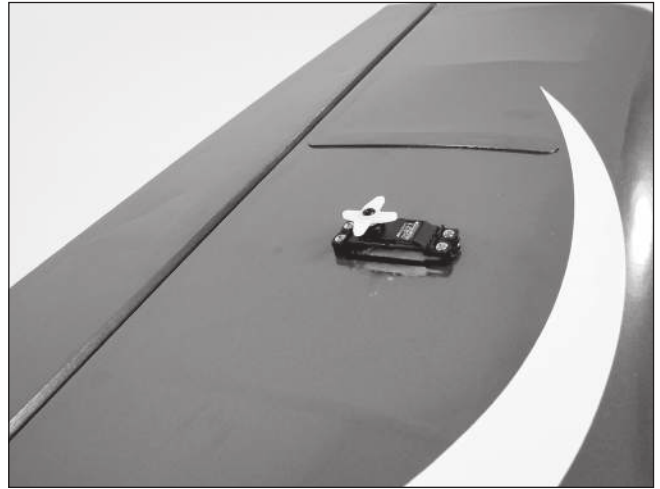
□ □ Step 9

Tie a weight to a piece of string. A wheel collar works great in this application. Lower the string into the wing from the aileron servo opening. Let the weight drop out through the wing root for the servo.



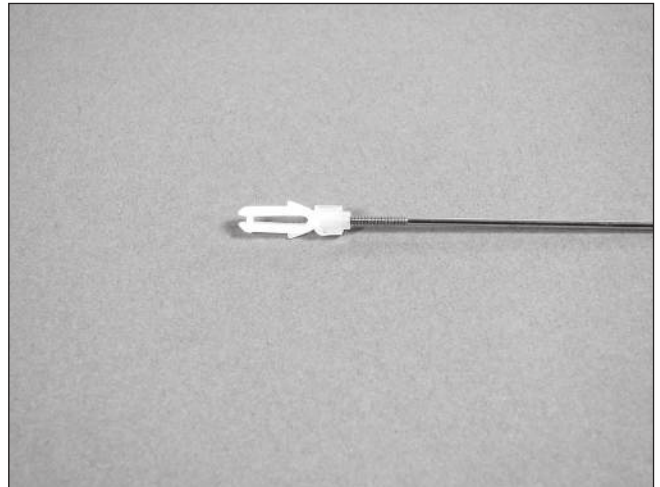
□ □ Step 10

Insert the servo into the opening in the wing. Use the string to pull the servo lead through the wing. Make sure the servo lead exits the root of the wing as shown. Position the servo so the output shaft is toward the trailing edge of the wing. Use a 1/16" (1.5mm) drill bit to drill the locations for the servo screws. Mount the servos using the hardware provided with them.



□ □ Step 11

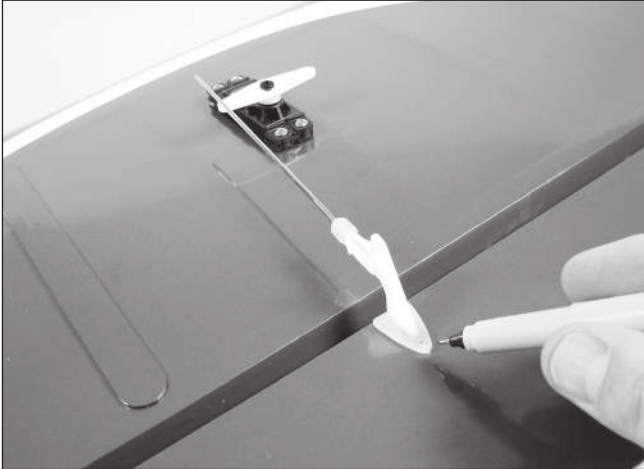
Slide a clevis retainer onto a nylon clevis. Thread a clevis onto a 4³/₈" (110mm) wire a minimum of 10 turns.



Section 1: Aileron Installation

□ □ Step 12

Remove the back plate from a control horn using side cutters or a sharp hobby knife. Attach the clevis to the control horn. After installing a heavy-duty servo arm, position the control horn on the aileron so the horn aligns with the hinge line of the aileron. With the aileron servo centered, position the pushrod so it is perpendicular to the hinge line as it crosses the servo arm. Mark the position for the mounting holes using a felt-tipped pen.



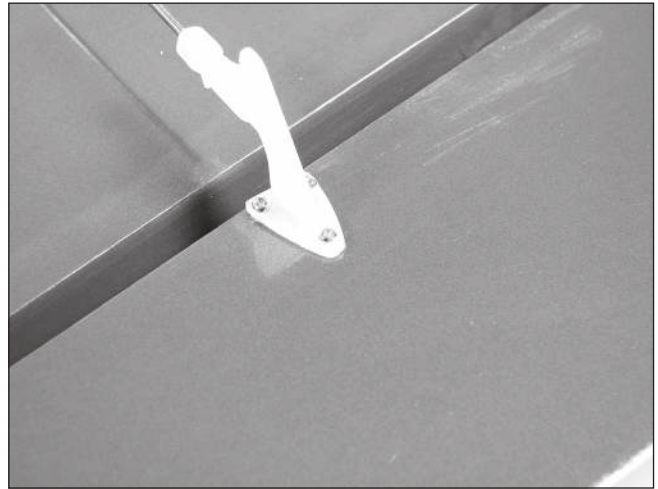
□ □ Step 13

Drill three 5/64" (2mm) holes at the locations marked in the previous step.



□ □ Step 14

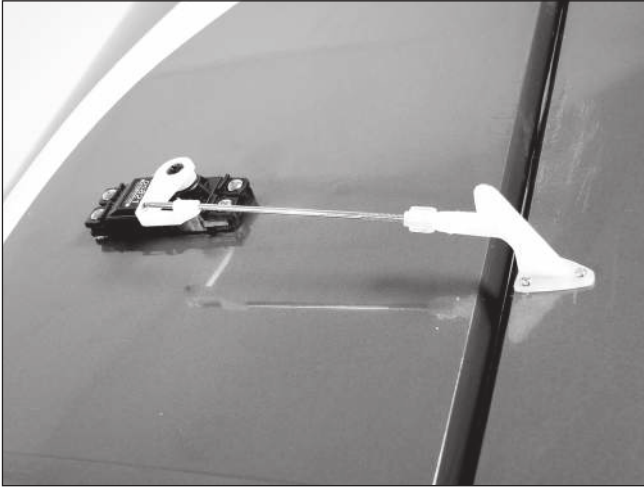
Attach the control horn using three #2 x 1 3/16" screws and the control horn backplate.



Section 1: Aileron Installation

□ □ Step 15

Center the aileron servo electronically using the radio system. Install a servo arm onto the aileron servo. Attach the pushrod with clevis to the control horn. Physically place the aileron control surface in neutral. Mark the pushrod where it crosses the holes in the servo arm. Bend the wire 90 degrees at the mark made in the previous step. Cut the wire 1/2" (13mm) above the bend. Slide the wire through the outer hole in the aileron servo arm. Secure the wire using a nylon wire keeper.



Note: Remove the excess arm from the servo horn using side cutters to prevent interference between it and the linkage.

□ Step 16

Repeat Steps 1 through 15 for the remaining aileron.

Note: Once the ailerons have been installed, it is suggested to seal the hinge gap from the bottom of the aileron using either clear tape or clear covering.

Section 2: Stabilizer Installation

Required Parts

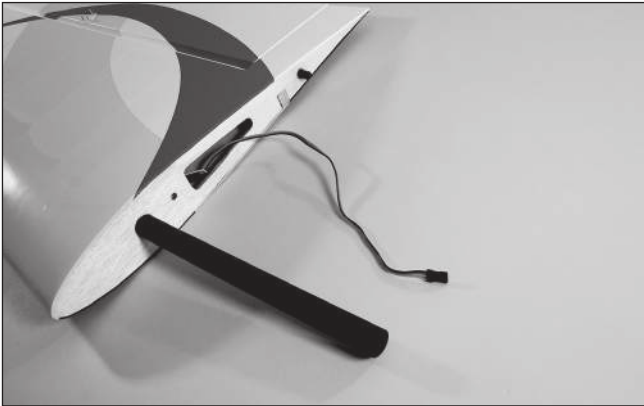
- Wing panel (right and left)
- Fuselage
- Horizontal stabilizer
- 1/4-20 x 2" nylon bolt (2)
- Wing tube

Required Tools and Adhesives

- 30-minute epoxy
- Sandpaper
- Ruler
- Epoxy brush
- Masking tape

□ Step 1

Locate the wing tube and carefully slide it into one wing panel.



□ Step 2

Remove the hatch from the fuselage. Slide the wing against the fuselage, guiding the alignment pin of the wing into the location in the fuselage. Secure the wing to the fuselage using a 1/4-20 x 2" bolt.



□ Step 3

Slide the remaining wing panel onto the wing tube and secure it to the fuselage using a 1/4-20 x 2" wing bolt.

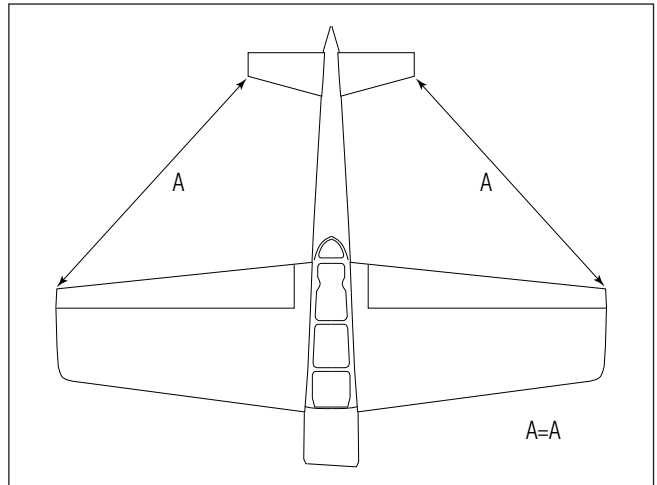
□ Step 4

Slide the stab into the fuselage. Center the stab in the opening by measuring the distance from the fuselage to each tip. The stab is aligned when both measurements are identical.

Hint: The stabilizers can be installed temporarily to aid in getting the stabilizer centered in the fuselage. Just don't glue the hinges so they can be removed once the stabilizer is aligned.

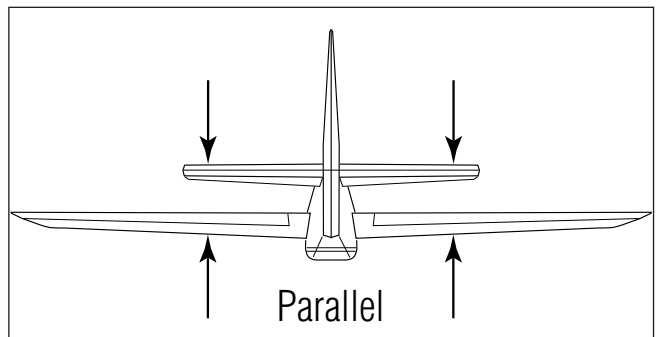
□ Step 5

Check the distance from each stab tip to each wing tip. These measurements must be equal.



□ Step 6

The last alignment step is making sure the wing and stabilizer are parallel. If they are not, sand the opening in the fuselage for the stab until the stab rests parallel to the wing.



Section 2: Stabilizer Installation

☐ Step 7

Mix 1/2 ounce of 30-minute epoxy. Apply epoxy to the top and bottom of the exposed wood of the stabilizer. Slide the stabilizer the rest of the way into the slot in the fuselage. Double-check the alignment to verify it is correct. Remove any excess epoxy using a paper towel and rubbing alcohol. Allow the epoxy to fully cure before continuing.



Hint: Use rubbing alcohol and a paper towel to clean up any excess epoxy. Remember, this only works before the epoxy cures.

Section 3: Elevator Installation

Required Parts

- Fuselage
- Elevator (right and left)
- CA hinge (6)

Required Tools and Adhesives

- Drill
- 2mm x 16mm (6)
- T-pins
- 18" Servo Extensions (JRPA099) (2)
- Drill bit: 1/16" (1.5mm) 3/32" (2.5mm)
- Large Servo Horns w/Screws (JRPA212) (2)
- Reversing Y-Harness (JRPA133) (Optional)
- Thin CA
- Dental floss or string

☐ ☐ Step 1

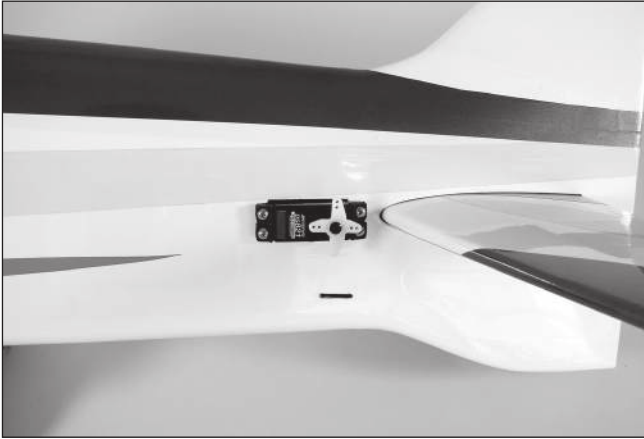
Install an 18" servo extension on one of the servos. Either tie the leads together, use a commercially available connector, or use unwaxed dental floss to secure the leads to prevent them from coming loose during flight. Also install the servo hardware (grommets and eyelets) at this time.

Note: Using two standard rotation servos and a standard Y-harness for the elevator servos will result in them moving in opposite directions instead of the same direction. As such, the elevator servo installation will either require the use of one reversed rotation servo and one standard rotation servo or a reversing Y-harness. It is highly recommended to use a computer radio or a JR® MatchBox™ to link the two elevator servos to operate properly.

Section 3: Elevator Installation

□ □ Step 2

Fasten the elevator servo in place using the screws included with the servo.



□ □ Step 3

Locate 3 CA hinges. Place a T-pin in the center of the hinges. Use a 1/16" (1.5mm) drill bit to drill a hole in the center of each hinge location in both the wing and aileron. Place the hinges in the precut slots in the stabilizer. Each T-pin will rest against the edge when installed correctly. Slide the stabilizer and elevator together. The gap between the two should be approximately 1/64" (.4mm). Align the stabilizer so it can move freely and not bind against the stabilizer.



Note: Do not use CA accelerator during the hinging process. The CA must be allowed to soak into the hinge to provide the best bond. Using accelerator will not provide enough time for this process.

□ □ Step 4

Remove the T-pins from the hinges. Flex the elevator and apply Thin CA to each hinge. Make sure the hinge is fully saturated with CA. Use a paper towel and CA remover/debonder to clean up any excess CA from the stabilizer and/or elevator. Make sure to apply CA to both the top and bottom of the hinge. Firmly grasp the stabilizer and elevator and gently pull on the elevator to ensure the hinges are secure and cannot be pulled apart. Use caution when gripping the stabilizer and elevator to avoid crushing the structure. Work the elevator up and down several times to work in the hinges and check for proper movement.



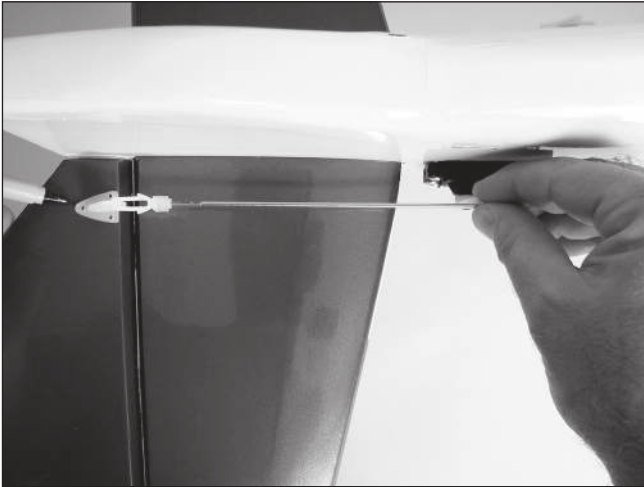
□ □ Step 5

Slide a clevis retainer onto a nylon clevis. Thread a clevis onto a 6" (152mm) wire a minimum of 10 turns.

Section 3: Elevator Installation

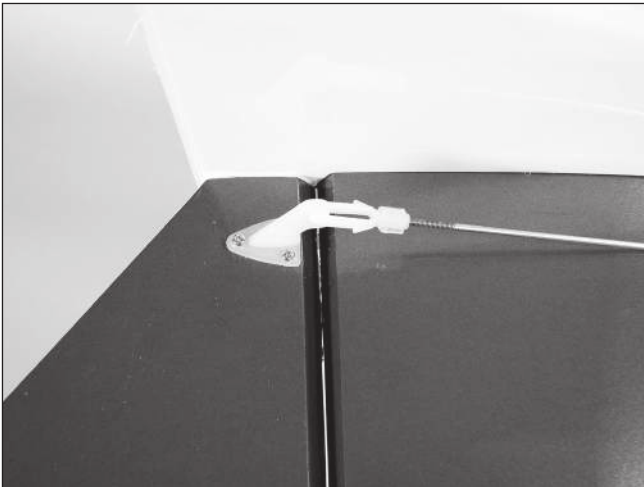
□ □ Step 6

Remove the back plate from a control horn using side cutters or a sharp hobby knife. Attach the clevis to the control horn. After installing a heavy-duty servo arm, position the control horn on the elevator so the linkage is parallel to the outside edge of the fuselage. Mark the position for the mounting holes using a felt-tipped pen.



□ □ Step 7

Drill three 5/64" (2mm) holes at the locations marked in the previous step. Attach the control horn using three #2 x 1 3/16" screws and the control horn backplate.



□ □ Step 8

Center the elevator servo electronically using the radio system. Physically place the elevator control surface in neutral. Mark the pushrod where it crosses the holes in the servo arm. Bend the wire 90 degrees at the mark made in the previous step. Cut the wire 1/2" (13mm) above the bend. Slide the wire through the outer hole in the elevator servo arm. Secure the wire using a nylon wire keeper.



Note: Remove the excess arm from the servo horn using side cutters to prevent interference between it and the linkage.

□ Step 9

Repeat Steps 1 through 8 for the remaining elevator and servo. Use the 8" (200mm) wire to assemble the linkage.



Section 4: Rudder Installation

Required Parts

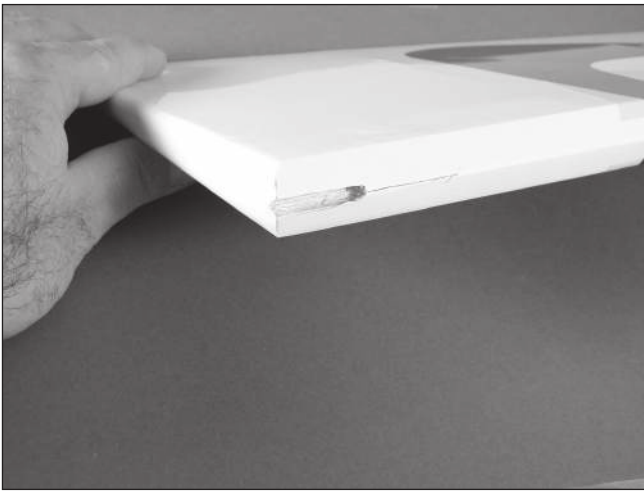
- Fuselage assembly
- Tail wheel assembly
- 4-40 x 5" (127mm) threaded rod
- 1" (25mm) tail wheel
- 5/64" wheel collar w/setscrew (2)
- Rudder

Required Tools and Adhesives

- CA hinge (3)
- Hobby knife
- 6-minute epoxy
- Drill
- Drill bit: 1/16" (1.5mm) 1/8" (3mm)
- Hex wrench (included in kit)
- Large Servo Horn w/Screws (JRPA212)
- T-pins
- Thin CA
- Petroleum jelly

□ Step 1

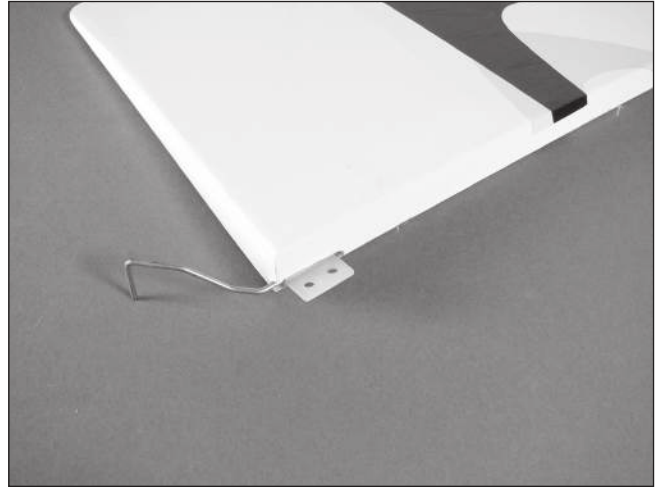
Make a mark 1" (25mm) from the bottom of the rudder. Drill the location using a 1/8" (3mm) drill bit. Make sure the drill is perpendicular to the hinge line of the rudder. Cut a groove from the hole to the bottom of the rudder. This is necessary to provide clearance for the tail wheel bearing.



Hint: An 11/64" (4.5mm) drill bit can be used to size the notch perfectly to the nylon bushing of the tail wheel assembly.

□ Step 2

Test fit the tail wheel bracket into the rudder. Make sure there is plenty of clearance for the bracket bushing and the hole has been drilled deep enough to fit the tail wheel wire.

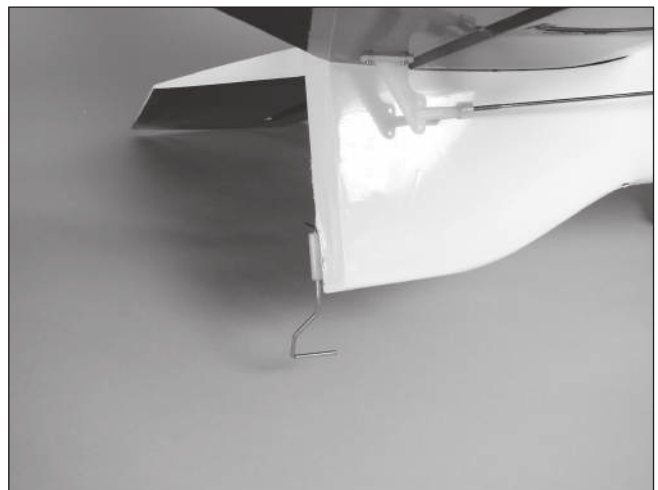


□ Step 3

Cut a slot in the aft end of the fuselage for the tail wheel bearing using a hinging tool or hobby knife. Position the top of the slot 1" (25mm) from the bottom of the fuselage. The slot should be 7/8" (23mm) long, which is the length of the tail wheel bearing.

□ Step 4

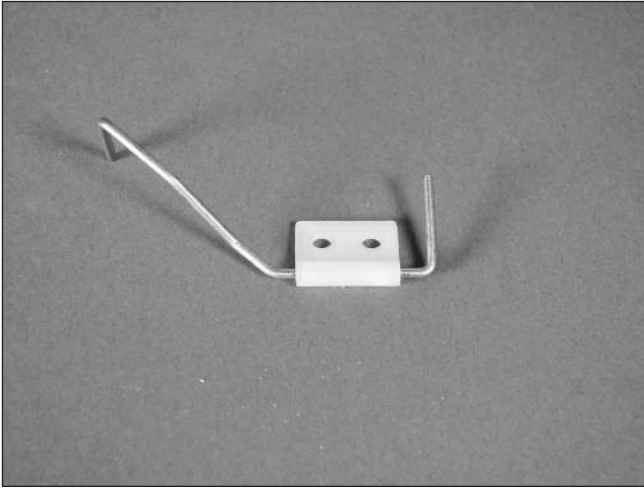
Test fit the tail wheel bearing into the slot. Make the slot large enough that the bushing will fit without forcing the wood apart.



Section 4: Rudder Installation

□ Step 5

Apply a light coat of petroleum jelly onto the tail gear wire where the bearing will ride. This is done to prevent the epoxy from sticking to the wire and bearing, which would make it a little difficult to steer or even use the rudder.



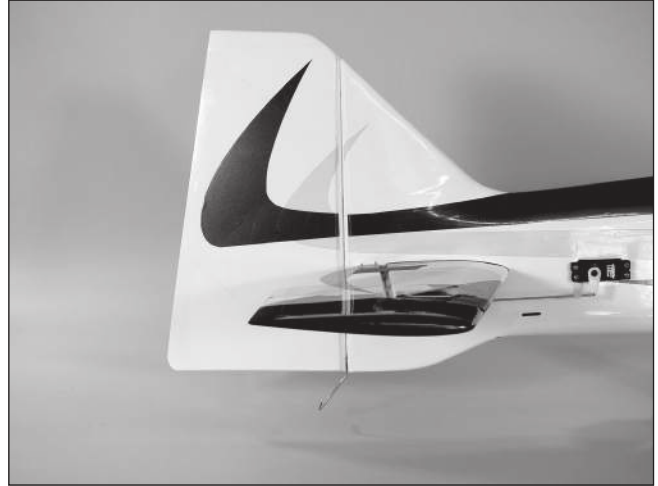
□ Step 6

Mix 1/2 ounce of 6-minute epoxy and apply it to both the tail gear bearing and the slot in the fuselage. Install the bearing into the fuselage. Use a paper towel and rubbing alcohol to remove any excess epoxy from the tail gear wire, bushing, and fuselage.

Hint: You can combine the previous step with the following step if you like. This will hold the rudder in position while the epoxy cures.

□ Step 7

Fit the rudder back onto the fuselage, making sure the tail wheel can move without binding. Check to make sure the rudder moves freely. It should not rub against the fin at the tip. Use 6-minute epoxy to glue the tail gear wire into the hole drilled into the rudder. Apply thin CA to both sides of the hinge. Make sure to saturate the hinge, and don't use accelerator. Use a paper towel and CA debonder/remover to clean up any excess CA.

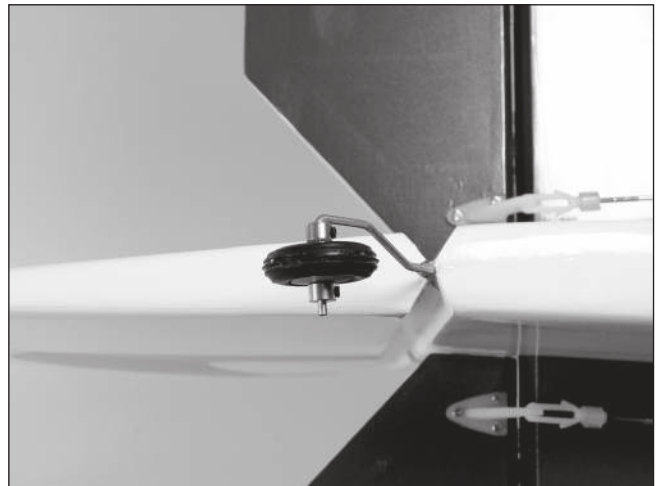


□ Step 8

Once the CA and epoxy has fully cured, give the rudder and fin the tug test to make sure the hinges are well glued. Flex the rudder a few times to break in the hinges.

□ Step 9

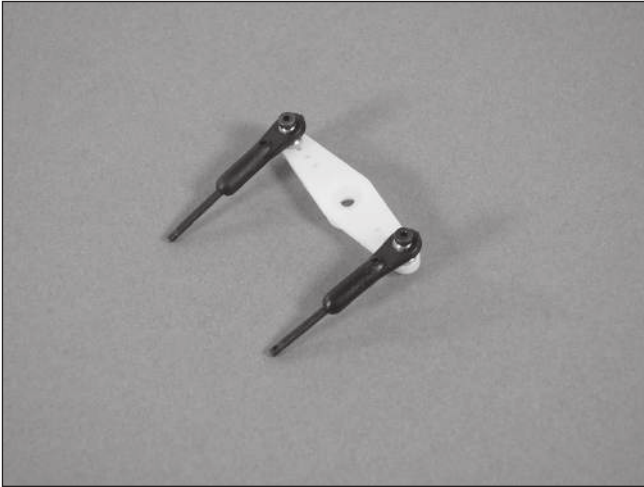
Attach the tail wheel to the tail wheel assembly using two 5/64" wheel collars.



Section 4: Rudder Installation

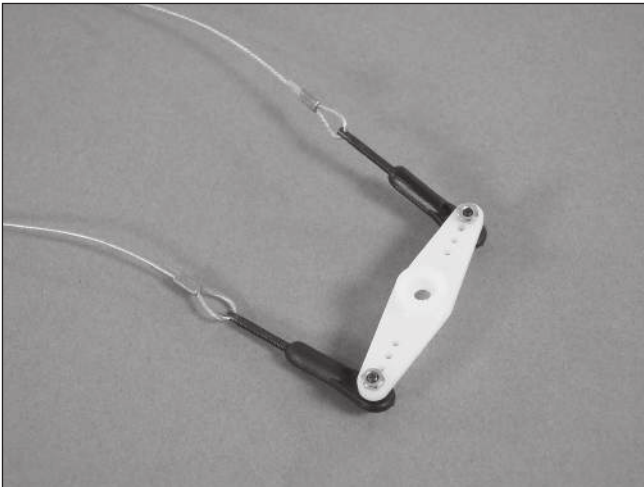
□ Step 10

Use a large servo horn and attach the ball links to the horn using the hardware included with the links. Thread the threaded cable ends about halfway into the ball links to complete the step.



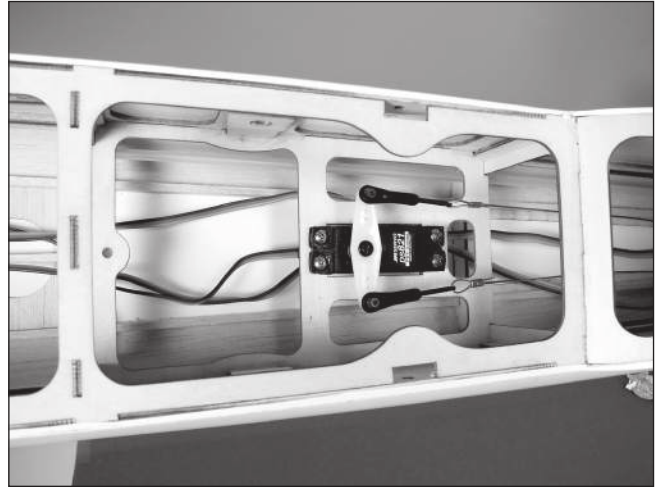
□ Step 11

Cut the cable into two equal pieces. Attach the pull-pull cable to the threaded cable ends using the cable, threaded cable end and crimp. The cable passes through the crimp, through the threaded end, then back through the crimp. Use a crimping tool to complete the job.



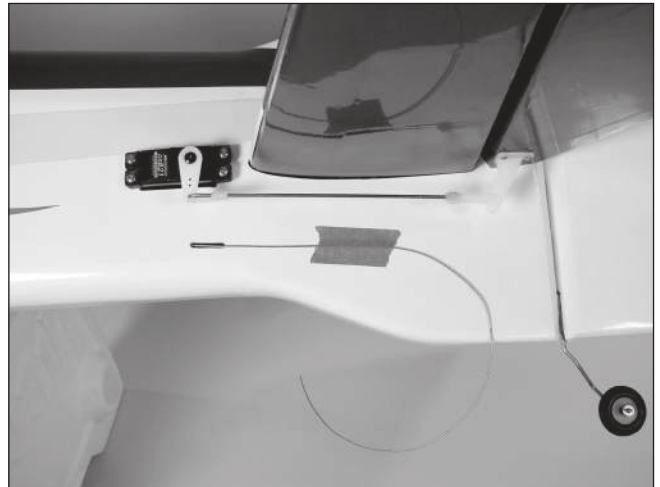
□ Step 12

Install the rudder servo into the fuselage using the hardware provided with the servo. Use the radio system to electronically center the rudder servo. Attach the servo arm to the rudder servo.



□ Step 13

Pass the cable out through the openings in the rear of the fuselage. The cables will cross inside the fuselage to get the correct geometry. Tape the cables to the outside of the fuselage to prevent them from falling back into the fuselage.



Hint: Insert a piece of music wire into the cable openings at the rear of the fuselage and use it to pull the cables out through the openings.

Section 4: Rudder Installation

□ Step 14

Position the cable so it is centered in the opening. Use a felt-tipped pen to mark the rudder where the cable crosses onto it. This will be used for positioning the control horns. Mark both sides of the rudder.



□ Step 15

Carefully measure the location of the marks vertically on both sides of the rudder. If they are in different locations, split the difference and remark the rudder so both sides are in exactly the same position vertically.

□ Step 16

Position the control horn on the rudder. Mark the locations for the screws onto the rudder using a felt-tipped pen. Mark both sides of the rudder for the control horn mounting screws.



□ Step 17

Use a 5/64" (2mm) drill bit to drill the locations for the screws. Drill each side half-way through the rudder so they connect in the center. To complete the procedure, use the drill bit to connect the holes from both sides of the rudder.



□ Step 18

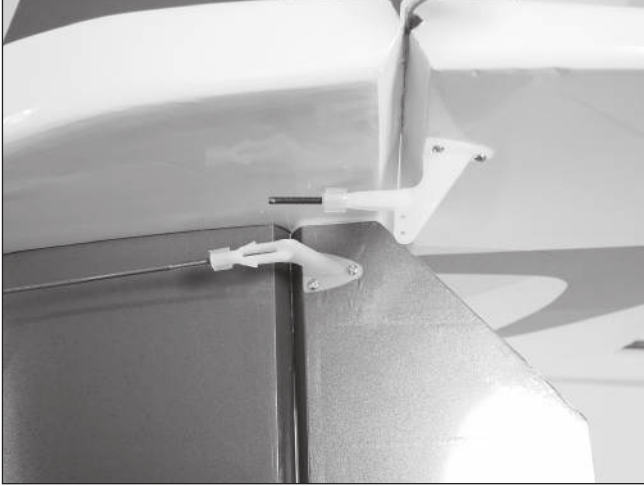
Attach the rudder control horns using three 2-56 x 1 3/16" machine screws and three 2-56 nuts. Use threadlock on thin CA to prevent the nuts from vibrating loose.



Section 4: Rudder Installation

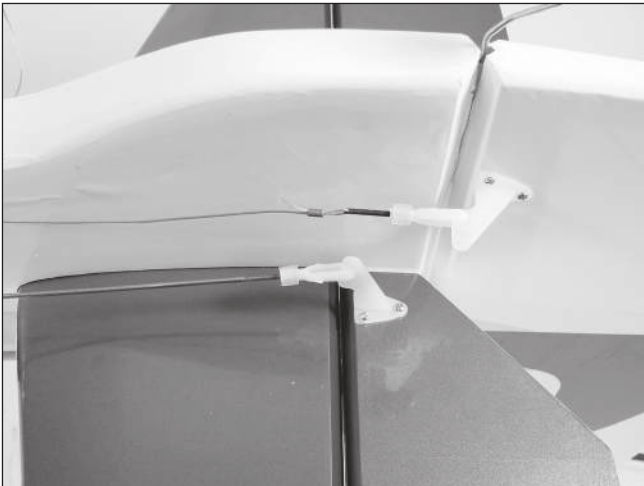
□ Step 19

Place a clevis retainer onto a nylon clevis, then thread a threaded cable end into the clevis. Attach the clevis to the rudder control horn. Repeat for both sides of the rudder.



□ Step 20

Slide a crimp onto the cable, then pass the cable through the threaded cable end. Pass the wire back through the crimp, but do not secure the wire until the next step.



□ Step 21

With the radio on, check the operation of the rudder. Adjust the cables so when the rudder servo is centered, the rudder is centered as well. There will be slight tension on the cables to prevent the rudder from wandering. Adjustments can be made at the rudder control horn and at the servo arm. Once satisfied with the cable lengths and tensions, use crimping pliers to secure the cables.

Note: Check the tension of the rudder cables before every flying session, as they may stretch over time.

Section 5: Landing Gear Installation

Required Parts

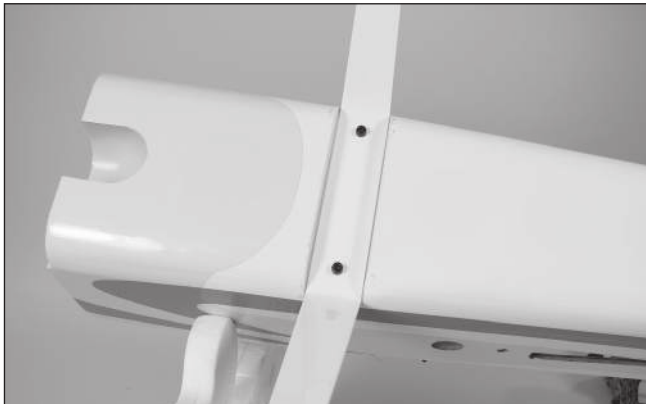
- Fuselage
- 1 1/4" axle w/nut (2)
- 8-32 x 1/2" screw (2)
- 2 1/4" wheel (2)
- 4-40 x 1/2" socket head screw (4)
- 5/32" wheel collar w/setscrew (4)
- Landing gear
- 4-40 blind nut (4)
- #4 washer (2)

Required Tools and Adhesives

- Phillips screwdriver
- Adjustable wrench (small)
- Drill
- Drill bit: 9/64" (3.5mm), 5/32" (4mm)
- Hobby knife
- 3/32" hex wrench

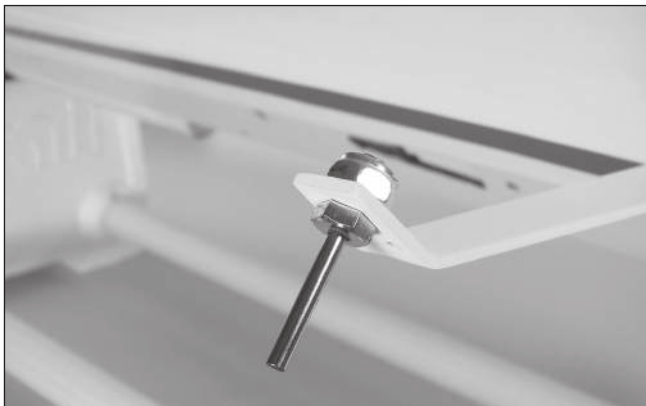
☐ ☐ Step 1

Install the landing gear using two 8-32 x 1/2" screws. Note that one edge of the gear is straight and the other is at a slight angle. The straight side faces forward.



☐ ☐ Step 2

Install an axle onto the landing gear. Secure the axle using an adjustable wrench and the nut provided with the axle.



☐ ☐ Step 3

Attach the wheel to the axle using two 5/32" wheel collars and setscrews. Face the setscrews toward the bottom of the wheel pant so the position of the wheel can be adjusted once the wheel pant has been installed.



Section 5: Landing Gear Installation

□ □ Step 4

Place the airplane on the work surface. Slide the wheel pant into position. Adjust it so it won't interfere with the runway while the plane is at rest. Use a felt-tipped marker to mark the locations for the two screws through the landing gear.



Note: It may be necessary to open the notch in the wheel pant slightly to fit over the hex on the axle.

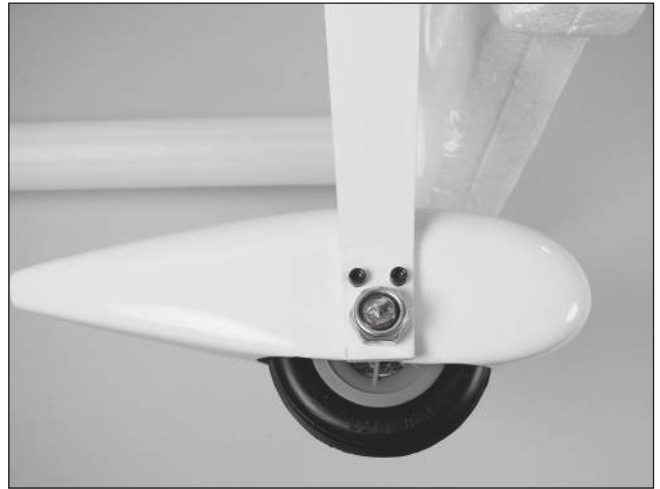
□ □ Step 5

Drill the locations for the pant screws using a 9/64" (3.5mm) drill bit. Insert two 4-40 blind nuts into the holes from the inside of the wheel pant.



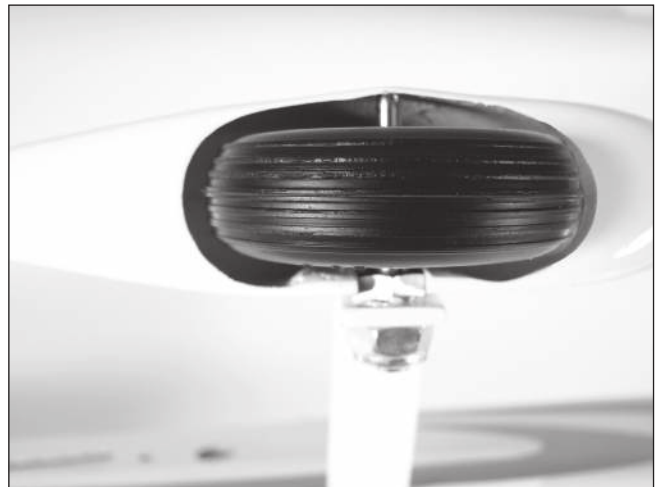
□ □ Step 6

Attach the wheel pant to the landing gear using two 4-40 x 1/2" socket head screws.



□ □ Step 7

Position the wheel so it is centered in the wheel pant. Tighten the collars once the wheel has been positioned.



□ Step 8

Repeat Steps 2 through 7 for the other wheel pant.

Section 6A: Four-Stroke Engine Installation

Required Parts

- Fuselage assembly
- Engine mount (2)
- Clevis
- Clevis retainer
- 8-32 x 1" screw (4)
- #8 x 5/8" self-tapping screw (4)
- 12" (305mm) outer pushrod tube
- 13" (330mm) pushrod wire
- Fuel tank assembly

Required Tools and Adhesives

- Drill
- Clamp
- Phillips screwdriver (large)
- Engine
- Medium CA
- Sandpaper
- Drill bit: 5/32" (4mm), 7/64" (2.5mm)

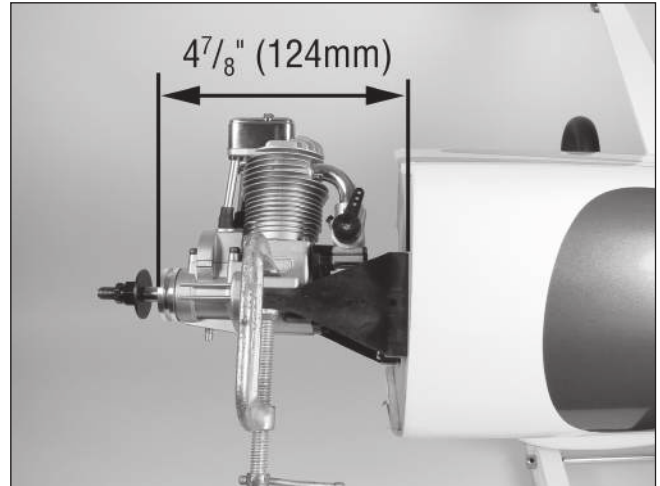
□ Step 1

Attach the engine mount to the firewall using four 8-32 x 1" machine screws.



□ Step 2

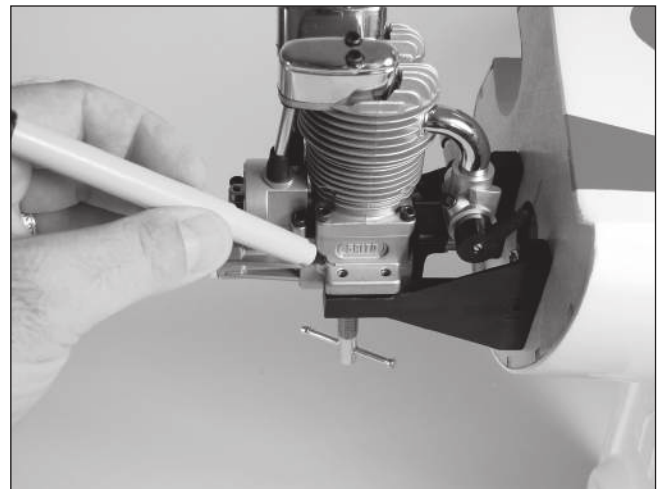
Position the engine on the mount. Adjust the engine so the distance from the firewall to the drive washer is $4\frac{7}{8}$ " (124mm). Use clamps to hold the engine in position.



Note: Check to see which direction the needle valve is pointing. It should point toward the bottom of the aircraft. Remove the carburetor and rotate it so it faces the bottom if necessary.

□ Step 3

Mark the locations for the engine mounting bolts.



Section 6A: Four-Stroke Engine Installation

□ Step 4

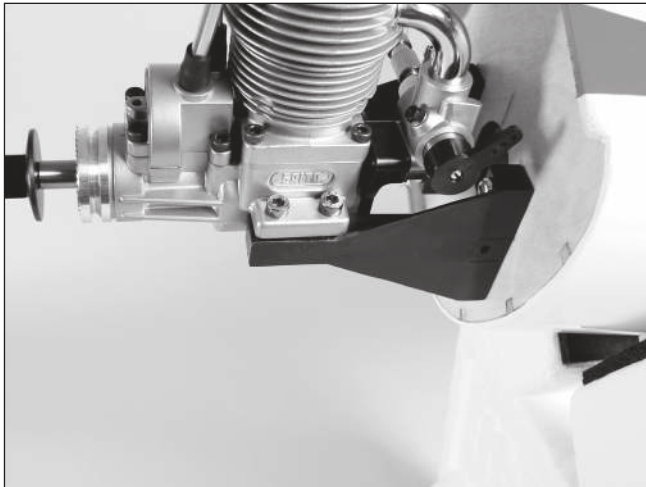
Remove the engine and drill the locations marked in the previous step using an 7/64" (2.5mm) drill bit.



Hint: Use a drill press for the best results. This makes holes perfectly perpendicular (square) to the mount.

□ Step 5

Attach the engine using four #8 x 5/8" socket head self-tapping screws.



□ Step 6

Determine the proper location for the throttle pushrod. Mark the location with a felt-tipped pen. Remove the engine and drill the firewall for the pushrod tube using a drill and 5/32" (4mm) drill bit.



□ Step 7

Test fit the 12" (305mm) outer pushrod tube through the firewall and into the fuselage. Once satisfied with the fit, roughen the tube using sandpaper. Slide the tube back into position and use medium CA to glue it to the firewall. Allow 1/16" (1.5mm) of the pushrod to extend forward of the firewall. Trim the throttle pushrod at the front edge of the throttle servo tray.



Section 6A: Four-Stroke Engine Installation

□ Step 8

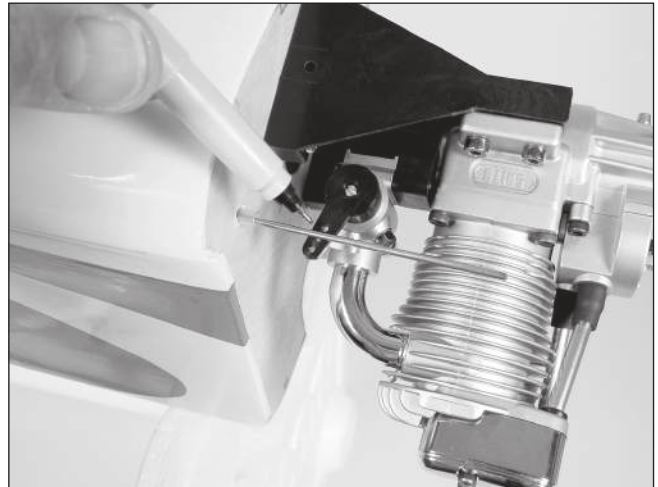
Install the servo hardware (grommets and eyelets) included with the servo. Mount the throttle servo with the output shaft toward the pushrod tube. Slide a clevis retainer onto a nylon clevis. Thread a clevis onto the 13" (330mm) pushrod wire a minimum of 10 turns. Slide the pushrod into place from inside the fuselage and attach the clevis to the servo arm. With the radio on and the throttle servo plugged in, center the throttle trim and stick. Use the screw from the servo to secure the horn to the servo.



Note: Remove any extra arms from the servo horn that may bind against the linkage.

□ Step 9

Physically move the carburetor to the closed position. Use the radio to move the throttle servo to the low position. Mark the pushrod where it crosses the throttle arm using a felt-tipped pen. Remove the pushrod and make a "Z" bend in pushrod.



□ Step 10

Remove the clevis from the pushrod. Slide the pushrod into the pushrod tube from the firewall. Attach the "Z" bend to the carburetor arm.



Section 6A: Four-Stroke Engine Installation

□ Step 11

Thread the clevis back onto pushrod. Attach the clevis to the throttle arm. Move the throttle to full throttle using the radio. Check the carburetor to make sure it is fully open. Adjust the clevis to correspond full throttle on the radio to full throttle on the carburetor. Use the radio to check low for idle and closed. Move the linkage at the carburetor arm and servo arm as necessary for full range of operation.

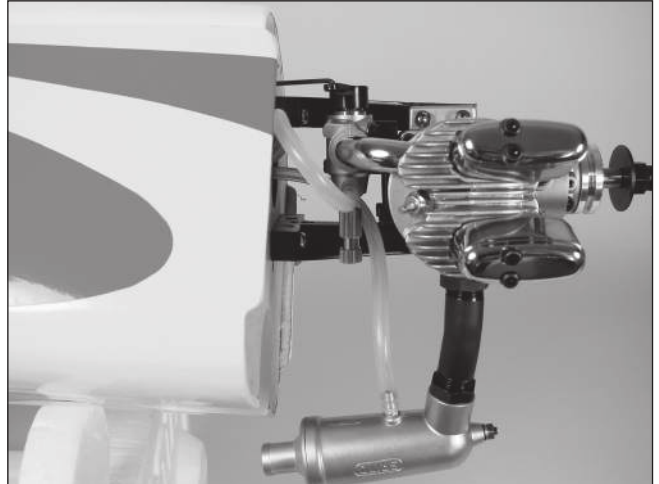
□ Step 12

Locate the fuel tank. Determine which fuel line is the vent line by looking at the top of the fuel tank. Make a note as to which side the vent line is located on. Slide the tank into the fuselage, guiding the tubes out through the hole in the firewall. Use the supplied stick to make a brace to hold the tank in position.



□ Step 13

Attach the muffler to the engine. Make the proper connections to the engine using the engine manufacturer's instructions.



Section 6B: Two-Stroke Engine Installation

Required Parts

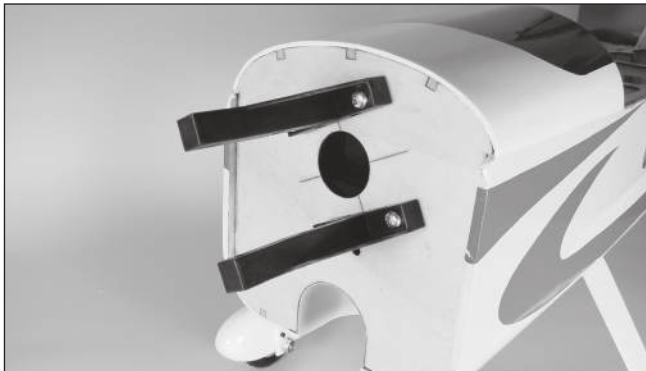
- Fuselage assembly
- Engine mount (2)
- Clevis
- Clevis retainer
- #8 x 5/8" self-tapping screw (4)
- 8-32 x 1" screw (4)
- 12" (305mm) outer pushrod tube
- 13" (330mm) pushrod wire
- Fuel tank assembly

Required Tools and Adhesives

- Drill
- Clamp
- Phillips screwdriver (large)
- Engine
- Medium CA
- Sandpaper
- Drill bit: 5/32" (4mm), 7/64" (2.5mm)

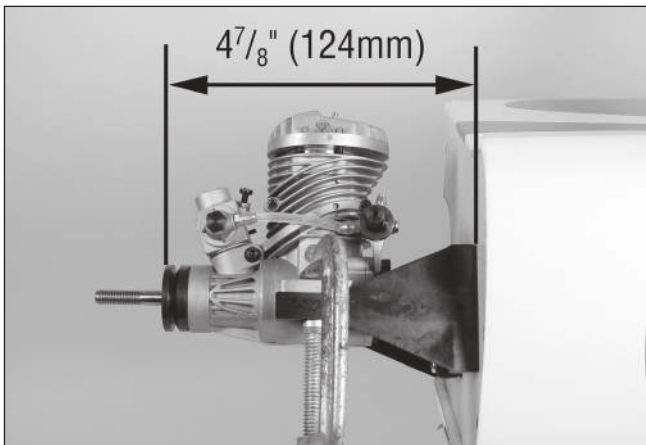
□ Step 1

Attach the engine mount to the firewall using four 8-32 x 1" machine screws.



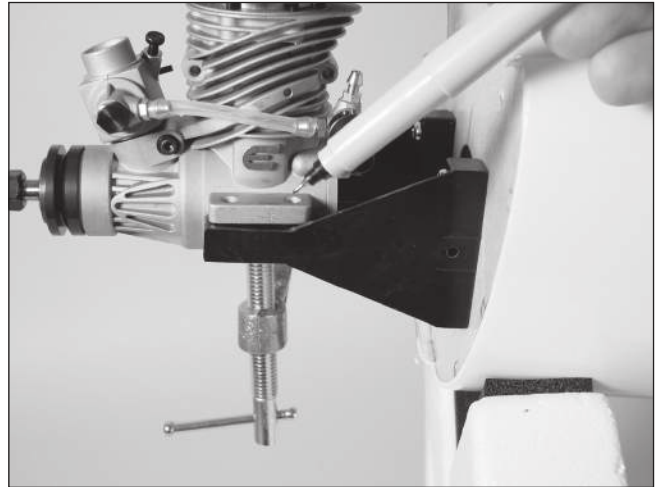
□ Step 2

Position the engine on the mount. Adjust the engine so the distance from the firewall to the drive washer is $4\frac{7}{8}$ " (124mm). Use clamps to hold the engine in position.



□ Step 3

Mark the locations for the engine mounting bolts.



□ Step 4

Remove the engine and drill the locations marked in the previous step using an 7/64" (2.5mm) drill bit.

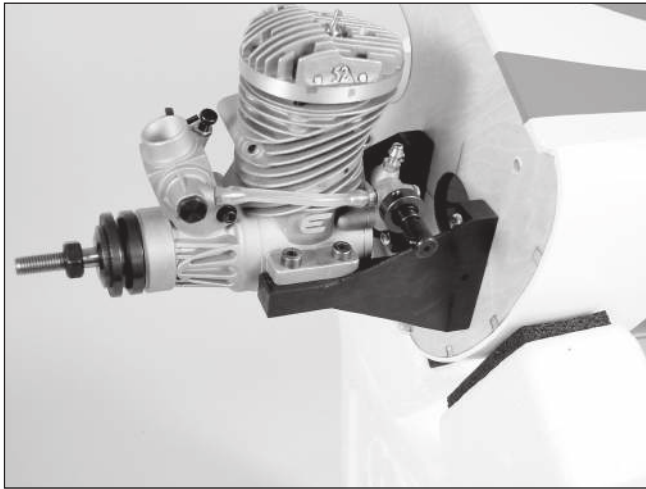


Hint: Use a drill press for the best results. This makes holes perfectly perpendicular (square) to the mount.

Section 6B: Two-Stroke Engine Installation

□ Step 5

Attach the engine using four #8 x 5/8" socket head self-tapping screws.



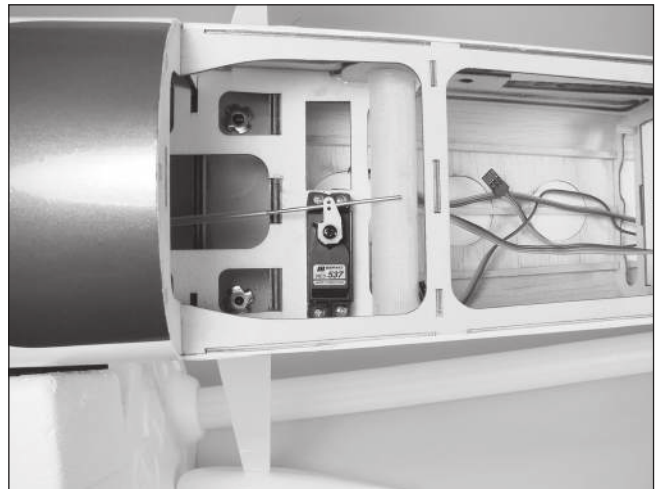
□ Step 6

Test fit the 12" (305mm) outer pushrod tube through the firewall and into the fuselage. Once satisfied with the fit, roughen the tube using sandpaper. Slide the tube back into position and use medium CA to glue it to the firewall. Allow 1/4" (6mm) of the pushrod to extend forward of the firewall. Trim the throttle pushrod at the front edge of the throttle servo tray.



□ Step 7

Install the servo hardware (grommets and eyelets) included with the servo. Mount the throttle servo with the output shaft toward the pushrod tube. Slide a clevis retainer onto a nylon clevis. Thread a clevis onto the 13" (330mm) pushrod wire a minimum of 10 turns. Slide the pushrod into place from outside of the fuselage. With the radio on and throttle servo plugged in, center the throttle trim and stick. Use the screw from the servo to secure the horn to the servo.

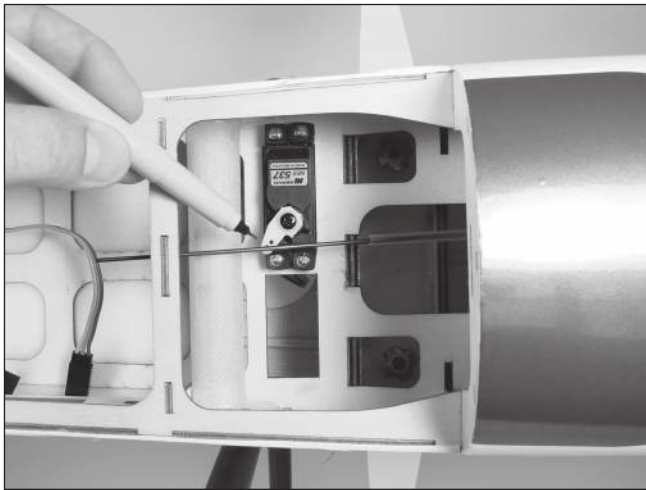


Note: Remove any extra arms from the servo horn that may bind against the linkage.

Section 6B: Two-Stroke Engine Installation

□ Step 8

Physically move the carburetor to the closed position. Use the radio to move the throttle servo to the low position. Mark the pushrod where it crosses the throttle servo arm using a felt-tipped pen.



□ Step 9

Bend the pushrod 90 degrees at the mark made in the last step. Use a nylon pushrod keeper to secure the pushrod wire to the servo arm.



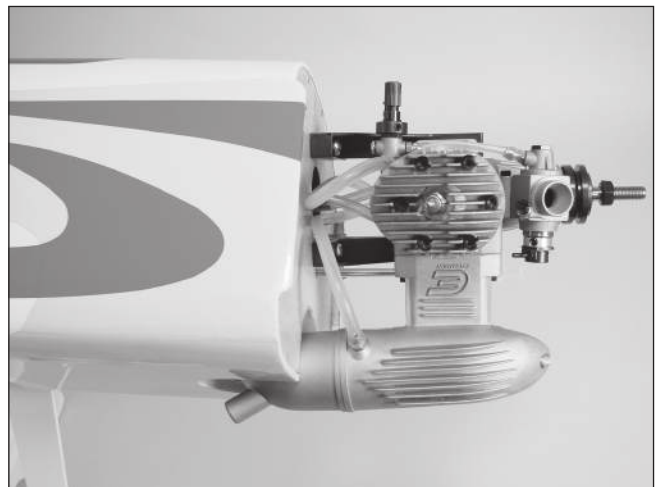
□ Step 10

Locate the fuel tank. Determine which fuel line is the vent line by looking at the top of the fuel tank. Make a note as to which side the vent line is located on. Slide the tank into the fuselage, guiding the tubes out through the hole in the firewall. Use the supplied stick to make a brace to hold the tank in position.



□ Step 11

Attach the muffler to the engine. Make the proper connections to the engine using the engine manufacturer's instructions.



Section 7: Cowling Installation

Required Parts

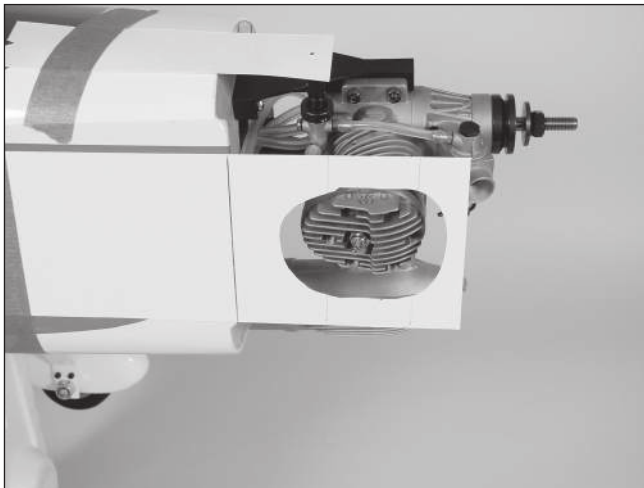
- Fuselage assembly
- Cowling
- #4 washer (4)
- 4-40 x 1/2" socket head screw (4)

Required Tools and Adhesives

- Hex wrench: 3/32"
- Hobby scissors
- Hobby knife
- Ruler
- Drill
- Drill bit: 1/8" (3mm)

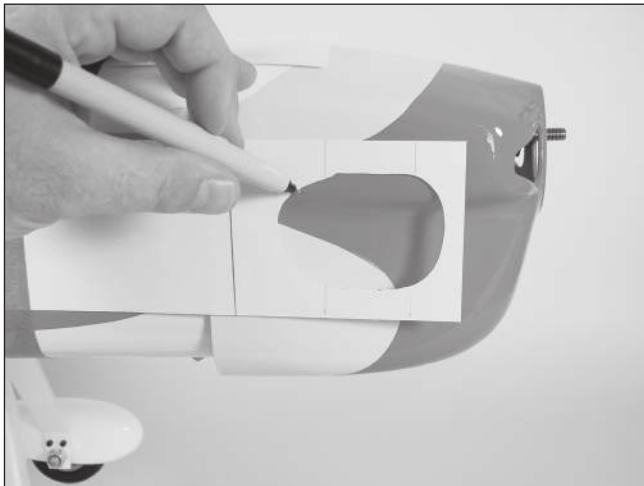
□ Step 1

Use pieces of card stock to indicate the location of the needle valve, engine head, and the firewall.



□ Step 2

Remove the engine. Position the cowl onto the fuselage so it is roughly 5" (127mm) from the firewall. Transfer the location for only the engine onto the cowl.



□ Step 3

Remove the cowl and remove the necessary material to fit the cowl over the engine. Install the engine back onto the firewall, and test fit the cowl over the engine.

Hint: Start by removing only a little material at a time. You can always make the holes bigger, but you can't make them smaller. Work until the cowl fits nicely over the engine.

Note: Remember to either trim material from the cowl to attach the glow igniter, or use a remove glow connection.

□ Step 4

Slide the cowling onto the fuselage. Temporarily install the propeller and spinner backplate. Position the cowl so there is 1/8" (3mm) gap between the backplate and the cowl.



Section 7: Cowling Installation

☐ Step 5

Use the card stock from Step 1 to locate the positions for the cowling screws. Drill the locations using a 1/8" (3mm) drill bit.

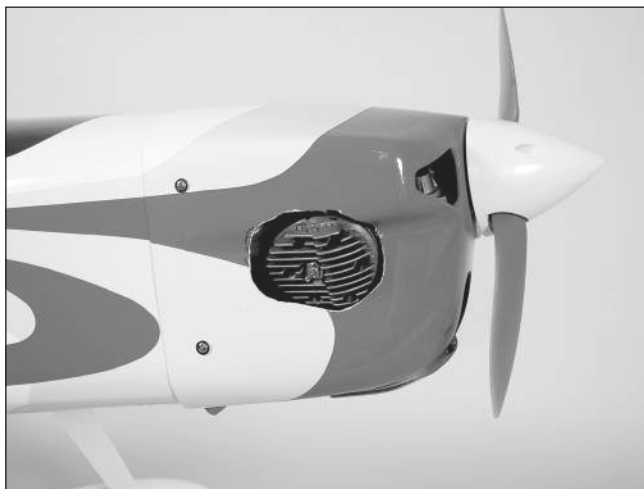


☐ Step 6

Make any cutouts in the cowling to clear items such as the muffler, fueling valve, needle valve, etc.

☐ Step 7

Locate four #4 x 1/2" sheet metal screws. Attach the cowling using the four screws.



Section 8: Final Assembly

Required Parts

- Hatch
- 4-40 x 1/2" screw (2)
- Decals
- Foam radio box
- Side force generator (2)
- Canopy
- #4 washer (3)
- Pilot figure
- Radio hatch

Required Tools and Adhesives

- Hex wrench: 3/32"
- Formula 560-canopy glue
- Receiver
- Switch harness
- Shoo Goo
- Masking tape
- Receiver battery

□ Step 1

Place a flat piece of foam into the fuselage, followed by the shaped radio foam. Plug the servos and extensions into their proper location in the receiver. Route the receiver antenna wire through the tube on the right-hand side of the fuselage to the tail. Place the receiver and receiver battery into the foam.



□ Step 2

Place the remaining flat foam over the receiver and receiver battery. Slide the radio plate into position and secure it using a 4-40 X 1/2" socket head screw and #4 washer.



□ Step 3

Remove the covering from the opening on the left side of the fuselage for the switch harness. Install the harness using the hardware provided with the harness.



□ Step 4

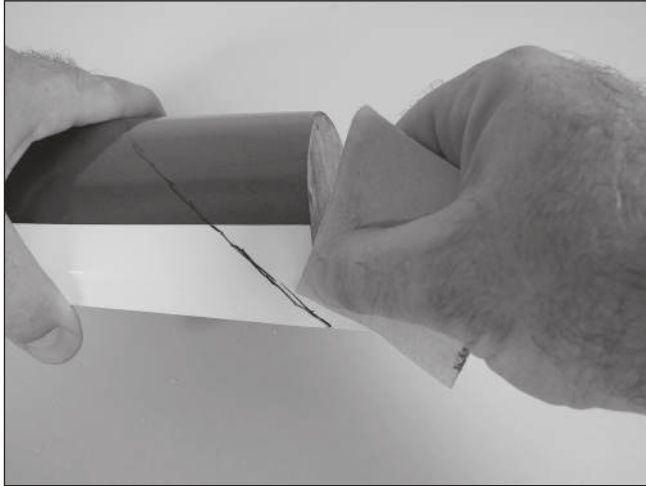
Position the canopy onto the canopy hatch. Trace around the canopy and onto the hatch using a felt-tipped pen.



Section 8: Final Assembly

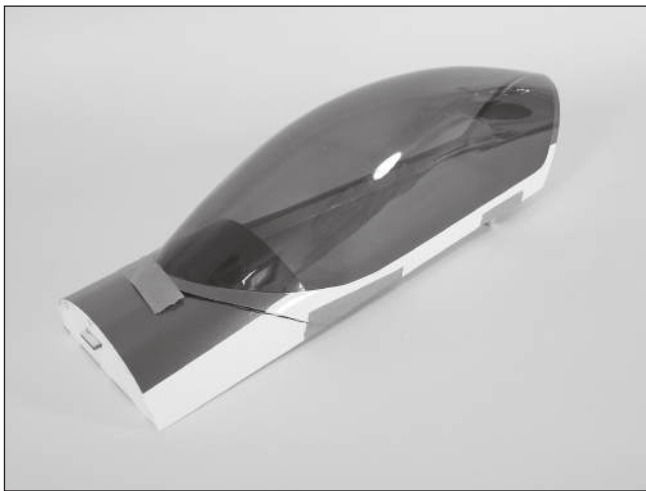
□ Step 5

Lightly sand the inside edge of the canopy and slightly inside the line drawn on the hatch using medium sandpaper.



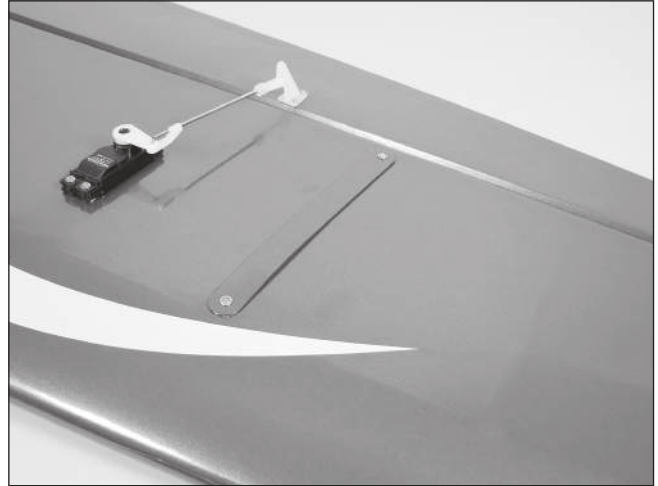
□ Step 6

Apply a bead of RCZ56 Canopy Glue (ZINJ5007) around the inside edge of the canopy. Position the canopy onto the hatch. Use tape to hold the canopy secure until the glue fully cures.



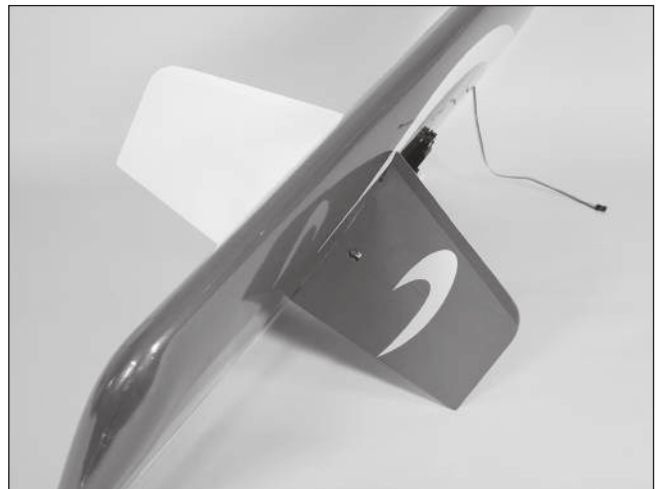
□ Step 7

If you are not planning on using the side force generators, secure the side force generator plugs to the wing using #2 x 1/4" screws.



□ Step 8

To install the side force generators, first remove the plugs. Slide the side force generators partially into the slot in the wing. When the stud is visible, install the thumbscrew to pull the upper and lower side force generators into position.



Note: The SFG's can be removed in a few seconds. Try your ShowTime™ 50 with and without to decide which setup suits your flying style best.

□ Step 9

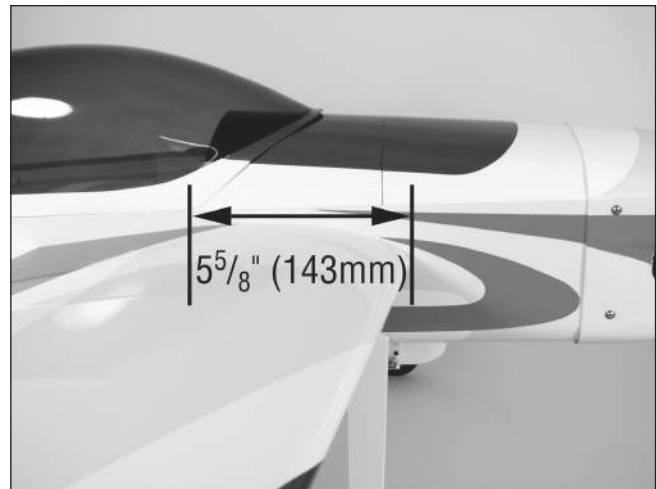
Apply the decals to customize your ShowTime 50.

Center of Gravity

An important part of preparing the aircraft for flight is properly balancing the model. This is especially important when various engines are mounted.

Caution: Do not inadvertently skip this step!

The recommended Center of Gravity (CG) location for the ShowTime™ 50 is $5\frac{5}{8}$ " (143mm) behind the leading edge of the wing against the fuselage (at the root rib). If necessary, move the battery pack or add weight to either the nose or the tail until the correct balance is achieved. Stick-on weights are available at your local hobby store and work well for this purpose.



Radio Setup

A 7-channel or greater computer radio is highly recommended. This allows the following features:

- Mixing the right aileron to the left aileron (flaperon mix)
- Electronically adjustable aileron differential
- Mixing the right elevator to the left elevator (dual elevator mixing)
- Independent travel and trim adjustments for each elevator half

When using a 7-channel or greater computer radio, each servo is plugged into its own separate channel. Consult your radio manual for specific details on hookup and programming.

If using a 6-channel radio with flaperon mix, the aileron servos are each plugged into their own channels. The right aileron plugs into the aileron socket in the receiver, while the left aileron plugs into channel 6. With flaperon activated in the programming, this allows for independent travel adjustment of each aileron in each direction and electronic aileron differential. Consult your manual for more programming details.

With a 6-channel computer radio, it will be necessary to Y-harness the two elevator servos; a reversed elevator servo is needed to achieve the correct control direction. A servo reverser can be used here.

Using a non-computer radio will require that the aileron and elevator be Y-harnessed. Be sure to use a reversed servo (or a reverser) for one of the elevator servos. If you've ever thought about purchasing a computer radio, now is a good time to do it.

Control Throws

Setting the control throws for your ShowTime™ 50 does require some attention to detail. To correctly set the throws, it is highly suggested to use the following procedure to achieve the greatest mechanical advantage from your servos.

□ Step 1

Determine the maximum amount of control surface throw from the throws listed. Use this 3D throws to set the maximum amount of throw, then use your computer radio for the lower rate listed.

□ Step 2

Set the Travel Adjust (ATV on Futaba transmitter) to about 15% under the max. (On a JR® transmitter that is 135%.) Make sure to set both directions during this process.

□ Step 3

Adjust the position of the clevis on the control horn and position of the ball link on the servo arm to achieve the throw decided in Step 1. It is highly recommended not to change the position on the servo arm unless absolutely necessary. Use Travel Adjust (ATV) to finalize the throws. That is why we left a little margin in the percentages back in Step 2.

□ Step 4

If setting a dual elevator or aileron, match the linkage locations used back in Step 3. Increase or decrease the Travel Adjust (ATV) a few points as necessary to fine-tune the throws to match up left and right sides and up and down throws so all is symmetrical.

This is all necessary to tune the mechanical advantage as good as possible. When setting up a model for 3D, the mechanical advantage will be less because of the large throws, and thus the servo will work harder and wear faster. Using an insufficient servo for the job, or trying to get too much throw, will cause something to fail, probably the servo.

There isn't an exact geometry to the linkage, as it depends on how much throw each individual modeler requires. The linkage geometry should always be maximized so the servo isn't working any harder than it has to.

Elevator	Up	Down
Low rate	9° (9/16")	10.5° (5/8")
High rate	43° (2 ⁵ / ₈ ")	43° (2 ⁵ / ₈ ")

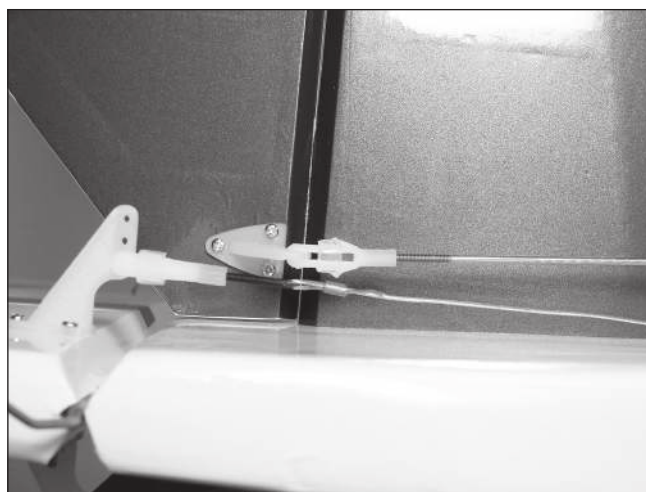
Aileron	Up	Down
Low rate	13° (1 ¹ / ₁₆ ")	12° (1")
High rate	37° (3")	35.5° (2 ¹⁵ / ₁₆ ")

(Measured at the inboard end for linear measurements)

Rudder	Left/Right
Low rate	28 deg (2 ¹ / ₂ ")
High rate	45 deg (3 ³ / ₄ ")

(Measured at top for linear measurements)

Once the control throws have been set, use the supplied heat shrink tubing on each clevis to prevent them from opening during flight.



Rates and Expos

Use Expo to soften the feel of the model. On high 3D rates use quite a bit of expo. The goal on 3D rates is to get the model to feel the same around neutral as it does on low rates.

Use low rate settings for all flying except for 3D aerobatics. For precision flying or general sport hot-dogging, the low rate throws are perfect, even for snap rolls. The only exception is rudder rates. Use 3D rudder rate when doing stall turns and rolling circles, since the more rudder the better for these. When doing 3D aerobatics, flip to 3D rates just before the maneuver. As soon as the maneuver is done, flip back down to low rate to avoid over-controlling the model.

Range Test Your Radio

☐ Step 1

Before each flying session, be sure to range check your radio. This is accomplished by turning on your transmitter with the antenna collapsed. Turn on the receiver in your airplane. With your airplane on the ground and the engine running, you should be able to walk 30 paces (approximately 100 feet) away from your airplane and still have complete control of all functions.

If not, don't attempt to fly! Have your radio equipment checked out by the manufacturer.

☐ Step 2

Double-check that all controls (aileron, elevator, rudder and throttle) move in the correct direction.

☐ Step 3

Be sure that your batteries are fully charged, per the instructions included with your radio.

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National Model Aircraft Safety Code

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) The maximum takeoff weight of a model is 55 pounds, except models flown under Experimental Aircraft rules.
- 5) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. (This does not apply to models while being flown indoors.)
- 6) 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.

- 7) 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), or 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. (A model aircraft is defined as an aircraft with or without engine, not able to carry a human being.)
- 8) I will not consume alcoholic beverages prior to, nor during, participation in any model operations.
- 9) Children under 6 years old are only allowed on the flight line as a pilot or while receiving flight instruction.

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) 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 personnel involved with flying the aircraft are allowed at or in the front of the flight line. Intentional flying behind the flight line is prohibited.
- 4) I will operate my model using only radio control frequencies currently allowed by the Federal Communications Commission. (Only properly licensed Amateurs are authorized to operate equipment on Amateur Band frequencies.)

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National Model Aircraft Safety Code

- 5) Flying sites separated by three miles or more are considered safe from site-to site interference, even when both sites use the same frequencies. Any circumstances under three miles separation require a frequency management arrangement, which may be either an allocation of specific frequencies for each site or testing to determine that freedom from interference exists. Allocation plans or interference test reports shall be signed by the parties involved and provided to AMA Headquarters. Documents of agreement and reports may exist between (1) two or more AMA Chartered Clubs, (2) AMA clubs and individual AMA members not associated with AMA Clubs, or (3) two or more individual AMA members.
- 6) For Combat, distance between combat engagement line and spectator line will be 500 feet per cubic inch of engine displacement. (Example: .40 engine = 200 feet.); electric motors will be based on equivalent combustion engine size. Additional safety requirements will be per the RC Combat section of the current Competition Regulations.
- 7) 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.
- 8) With the exception of events flown under AMA Competition rules, after launch, except for pilots or helpers being used, no powered model may be flown closer than 25 feet to any person.
- 9) Under no circumstances may a pilot or other person touch a powered model in flight.

Organized RC Racing Event

- 10) An RC racing event, whether or not an AMA Rule Book event, is one in which model aircraft compete in flight over a prescribed course with the objective of finishing the course faster to determine the winner.
- A. In every organized racing event in which contestants, callers and officials are on the course:
1. All officials, callers and contestants must properly wear helmets, which are OSHA, DOT, ANSI, SNELL or NOCSAE approved or comparable standard while on the racecourse.
 2. All officials will be off the course except for the starter and their assistant.
 3. "On the course" is defined to mean any area beyond the pilot/staging area where actual flying takes place.
- B. I will not fly my model aircraft in any organized racing event which does not comply with paragraph A above or which allows models over 20 pounds unless that competition event is AMA sanctioned.
- C. Distance from the pylon to the nearest spectator (line) will be in accordance with the current Competition Regulations under the RC Pylon Racing section for the specific event pending two or three pylon course layout.
- 11) RC night flying is limited to low-performance models (less than 100 mph). The models must be equipped with a lighting system that clearly defines the aircraft's position in the air at all times.



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