

Extra 300 32e ARF

Assembly Manual



Specifications

Wingspan:	52.5 inches (1335mm)
Wing Area:	542 sq in (34.2 sq dm)
Length:	49.0 inches (1245mm)
Weight w/Battery:	4.40 - 4.60 lb (1.90-2.10 kg)
Weight w/o Battery:	3.70 - 3.90 lb (1.60-1.80 kg)



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Introduction

Designed by veteran IMAC and XFC competitor, Mike McConville, the Extra 300 32e ARF is optimized to deliver unlimited 3D and precision aerobatic performance using the latest in brushless motor technology. And while it is IMAC legal, you don't have to be a competitive pilot to appreciate its incredible performance. Any intermediate to experienced pilot will enjoy its "big plane" handling characteristics and gorgeous scale lines whether they're out for a trophy or simply out for a good time.

Important Information Regarding Warranty Information

Please read our Warranty and Liability Limitations section on Page 32 before building this product. 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.

Covering Colors

White	HANU870
Flame Red	HANU883
Silver	HANU881
Midnight Blue	HANU885

Using the Manual

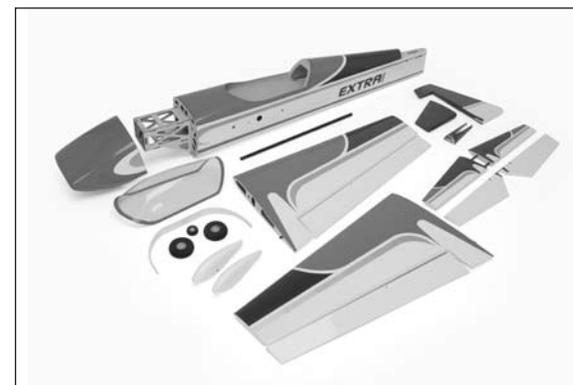
This manual is divided into sections to help make assembly easier to understand, and to provide breaks between each major section. In addition, check boxes have been placed next to each step to keep track of its completion. Steps with a single circle (○) are performed once, while steps with two circles (○○) indicate the step requires repeating, such as for a right or left wing panel, two servos, etc.

Remember to take your time and follow the directions.

Contents of Kit/Parts Layout

Replacement Parts

EFL41 26	Wing Set
EFL41 27	Fuselage
EFL41 28	Horizontal Tail Set
EFL41 29	Vertical Tail Set
EFL41 30	Tail Support
EFL41 31	Cowling
EFL41 32	Canopy
EFL41 33	Main Landing Gear
EFL41 34	Wheel Pant Set
EFL41 35	Wing Tube
EFL41 36	Control Hardware
EFL41 37	Wheel Set
EFL41 38	Hardware Set



Recommended Radio Equipment

You will need a minimum 6-channel transmitter, receiver and four servos. You can choose to purchase a complete radio system. If you are using an existing transmitter, just purchase the other required equipment separately. We recommend the crystal-free, interference-free Spektrum™ DX6i 2.4GHz DSM® 6-channel system. If using your own transmitter, we recommend the JR SPORT™ MN48 Mini servos.

If you own a Spektrum radio, just add a DSM2™ receiver and four JR SPORT MN48 mini servos. We show the installation of the AR6200 receiver in the manual.

Transmitter

SPM6600	DX6i 6-Channel Full Range w/o Servos MD2
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Or Purchase Separately

SPMAR6200	DSM2 AR6200 6-Channel Receiver Ultralite
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And

JSP20040	MN48 Mini Servo (4)
JSP98100	3-inch (76mm) Servo Extension
JSP98110	6-inch (152mm) Servo Extension (2)
JSP98120	18-inch (457mm) Servo Extension
JRPA215	Heavy-Duty Servo Horn (2)

The Spektrum trademark is used with permission of Bachmann Industries, Inc.

Required Tools and Adhesives

Tools & Equipment

Crimping tool	Side Cutters
Epoxy brushes	Felt-tipped pen
Flat file	Hobby knife (#11 blade)
Hobby scissors	Low-tack Tape
Mixing cup	Medium grit sandpaper
Mixing stick	Nut Driver 7mm
Paper towel	Pencil
Petroleum jelly	Phillips screwdriver: #1, #2
Pin vise	Pliers (2)
Rubbing alcohol	Ruler
Square	String
T-pins	Toothpicks
Adjustable wrench	
Open end or box wrench: 10mm	
Ball driver or hex wrench: 3/32 inch, 1.5mm	
Drill bit: 1/16-inch (1.5mm), 5/64-inch (2mm)	

Adhesives

Threadlock	Thin CA
Canopy glue	30-minute epoxy

Brushless Outrunner Setup

EFLM4032A	Power 32 Brushless Outrunner Motor, 770Kv
APC14070E	APC 14x7E Propeller or
APC13065E	APC 13x6.5E Propeller
EFLA1060	60-Amp Pro Switch-Mode BEC Brushless ESC
THP38504SP30	3850mAh 4S 14.8V Pro Power 30C Li-Po
EFLSP225	2 1/4 inch Aluminum Spinner

Optional Accessories

EFLA110	Power Meter
EFLC505	Intelligent 1- to 5-Cell Balancing Charger

Note on Lithium Polymer Batteries



Lithium Polymer batteries are significantly more volatile than alkaline or Ni-Cd/ Ni-MH batteries used in RC applications. All manufacturer's instructions and warnings must be followed closely. Mishandling of Li-Po batteries can result in fire. Always follow the manufacturer's instructions when disposing of Lithium Polymer batteries.

Warning

An RC aircraft is not a toy! If misused, it can cause serious bodily harm and damage to property. Fly only in open areas, preferably at AMA (Academy of Model Aeronautics) approved flying sites, following all instructions included with your radio.

Keep loose items that can get entangled in the propeller away from the prop, including loose clothing, or other objects such as pencils and screwdrivers. Especially keep your hands away from the propeller.

E-tips

During the course of building your model we suggest that you use a soft base for the building surface. Such things as a foam stand, large piece of bedding foam or a thick bath towel will work well and help protect the model from damage during assembly. This is not shown in the assembly photographs to display the detail of the actual building of the model.

Aileron Installation

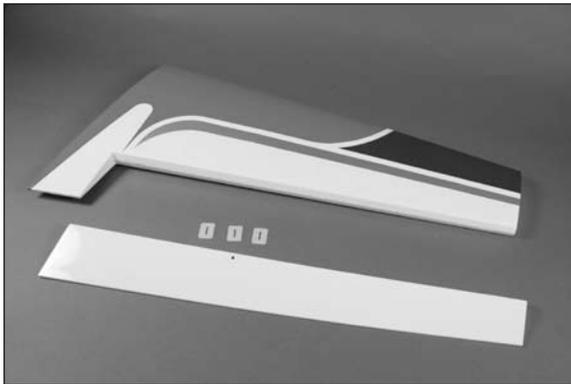
Required Parts

Wing panel with aileron (right and left)
CA hinge (10 total)

Required Tools and Adhesives

Pin vise	T-pins
Ruler	Drill bit: 1/16-inch (1.5mm)
Thin CA	Hobby knife with #11 blade

- 1. Locate one of the wing panels. Separate the aileron from the wing. Remove the hinges and set them aside.



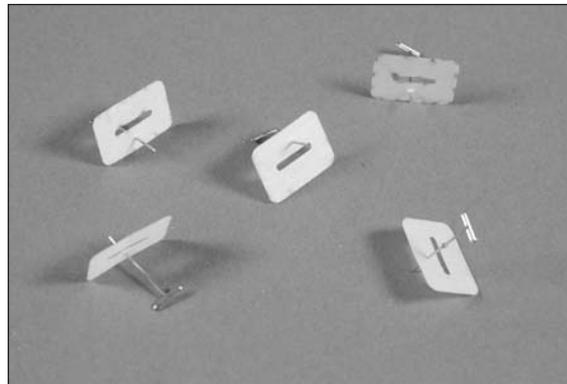
- 2. Use a pin vise and 1/16-inch (1.5mm) drill bit to drill a hole in the center of each of the hinge slots in the aileron. Note that there are five (5) slots, even though only three (3) hinges were removed in the previous step.



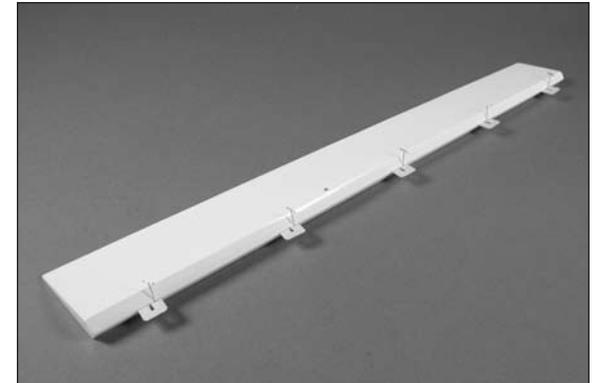
- 3. Use a pin vise and 1/16-inch (1.5mm) drill bit to drill a hole in the center of each of the hinge slots in the wing. Note that there are five (5) slots, even though only three (3) hinges were removed in the previous step.



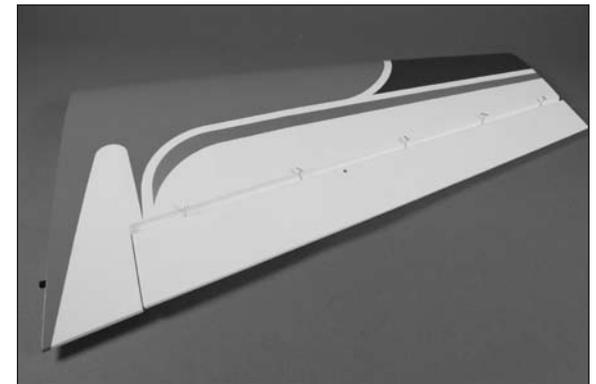
- 4. Place a T-pin in the center of each of the hinges as shown. You will need to prepare five (5) hinges in this step. The additional hinges have been supplied with your model.



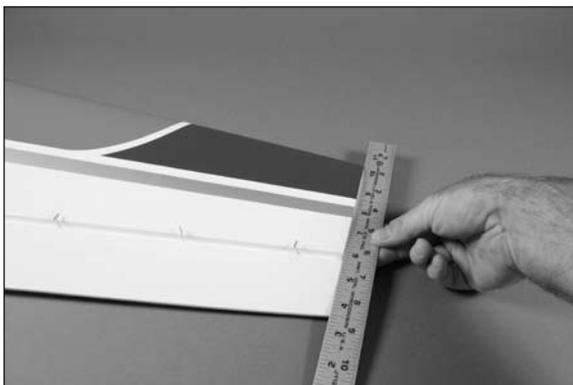
- 5. Insert the hinges in the slots of the aileron. The T-pins will keep the hinges centered so they are positioned equally in the aileron and wing when installed.



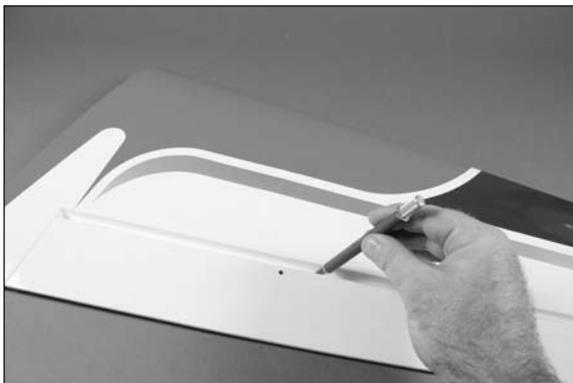
- 6. Position the aileron by sliding the hinges into the slots in the wing.



- 7. Check the alignment of the aileron. Use a ruler to make sure the end of the aileron is aligned evenly with the wing tip.



- 8. Remove the T-pins from the hinges. Set the hinge gap using a hobby knife with a #11 blade. The blade should just fit in the gap between the aileron and wing.



Etips

When hinging the aileron, do not use CA accelerator. The CA must be allowed to penetrate the hinge or the bond between the hinge and wood could fail.

- 9. Flex the aileron slightly so the hinges can be seen. Make sure not to change the hinge gap in the process. Saturate the hinges using thin CA on both the top and bottom of the hinge to both sides of the wing and aileron.



- 10. After the CA has fully cured, check to make sure the hinges are secure by gently pulling on the aileron and wing. If you find any loose hinges, apply more CA to the hinge and recheck.



- 11. Flex the aileron through its range of motion a few times to break in the aileron hinges.



- 12. Repeat Steps 1 through 11 to join the remaining aileron to its wing panel.

Aileron Servo Installation

Required Parts

Nylon clevis (2) Clevis retainer (2)
Assembled wing panel (right and left)
Control horn screw with hardware (2)
Servo extension, 6-inch (152mm) (2)
Aileron linkage wire, 2 1/2-inch (64mm) (2)
Radio system
Servo with accessories (2)
Heavy-duty servo horn (2)
Nylon control horn (2)

Required Tools and Adhesives

Pliers Phillips screwdriver: #1, #2
String Pencil
Thin CA Threadlock
Pin vise String
Drill bit: 1/16-inch (1.5mm), 5/64-inch (2mm)

- 1. Remove the tapered nut and one countersink from the control horn screw. Slide the screw and remaining countersink into the hole in the aileron. The screw must exit to the bottom of the wing.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

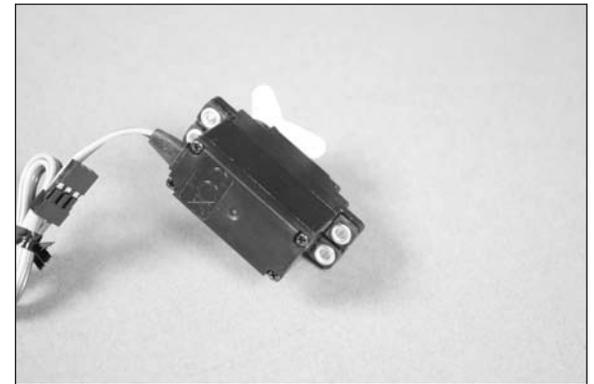
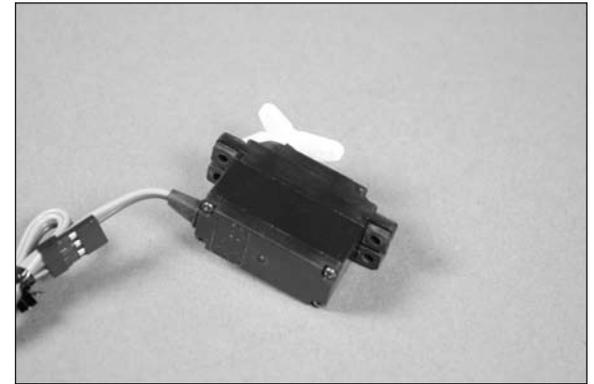
- 2. Slide the countersink back onto the control horn screw. The tapered nut is then threaded on the screw to secure its position on the aileron. Use a #2 Phillips screwdriver and pliers to tighten the hardware.



- 3. Thread the nylon control horn on the control horn screw. The top of the control horn must be flush with the top of the screw when installed. It may be necessary to use a #2 Phillips screwdriver to keep the control horn screw from rotating when installing the control horn.



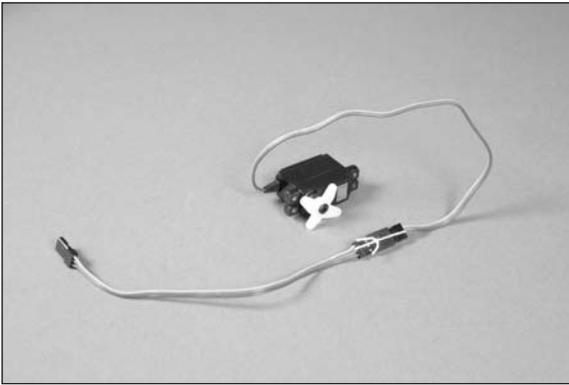
- 4. Prepare the servo by installing the grommets and brass eyelets as described in the instructions with the servo or your radio system.



E-tips

Prepare the elevator and rudder servos at this time as well.

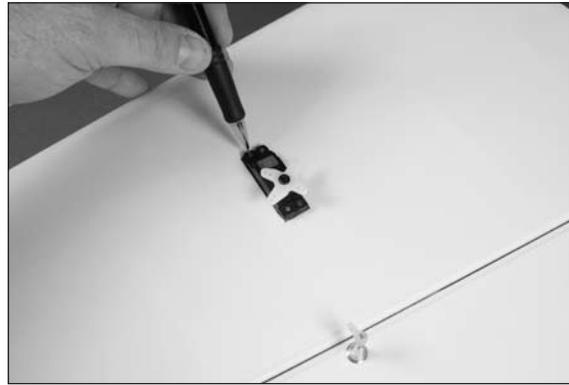
- 5. Secure a 6-inch (152mm) servo extension to the aileron servo lead using string or a commercially available connector. This will keep the servo and lead from disconnecting inside the wing.



- 6. Insert the extension into the opening for the aileron servo. Guide the extension through the wing and out of the wing root as shown.



- 7. Position the servo in the servo opening. Make sure it is centered and not touching the sides of the opening. Use a pencil to mark the locations for the servo mounting screws.



- 8. Move the servo and use a pin vise with a 1/16-inch (1.5mm) drill bit to drill the holes for the aileron servo mounting screws. Use care not to accidentally drill through the covering on the top of the wing.



- 9. Apply 2-3 drops of thin CA in each of the holes to harden the surrounding wood. This will make the screws more secure when they are installed.



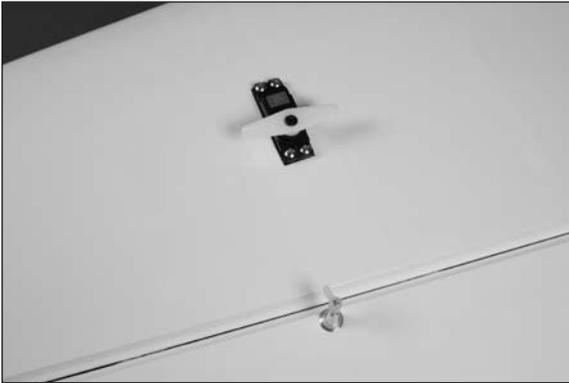
- 10 Use the screws provided with the servo to secure it in the wing. Note that the output of the servo faces to the aileron. Use a #1 Phillips screwdriver to tighten the screws.



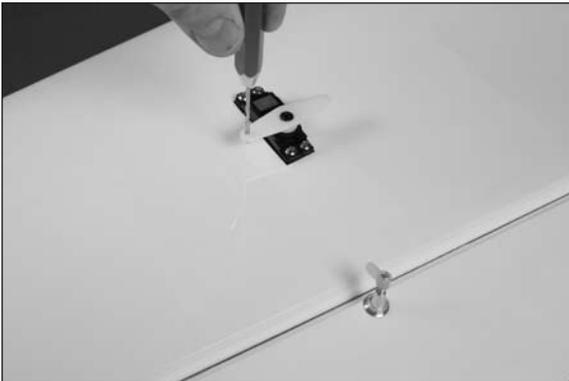
E-tips

When installing the servo horn on the aileron servo it must be positioned parallel to the aileron hinge line.

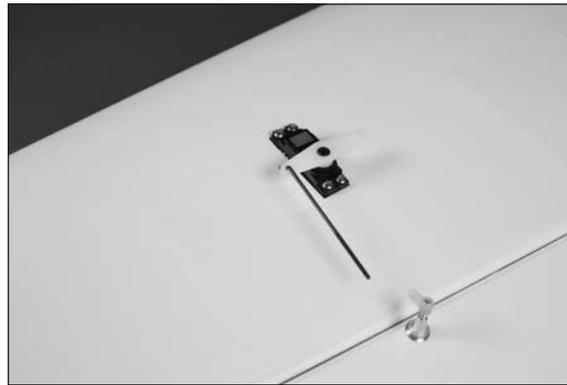
- ○ 11. Use a #1 Phillips screwdriver to remove the stock servo horn from the servo. Use the radio system to center the aileron servo. Attach a heavy-duty servo horn to the servo using the screw from the servo and a #1 Phillips screwdriver.



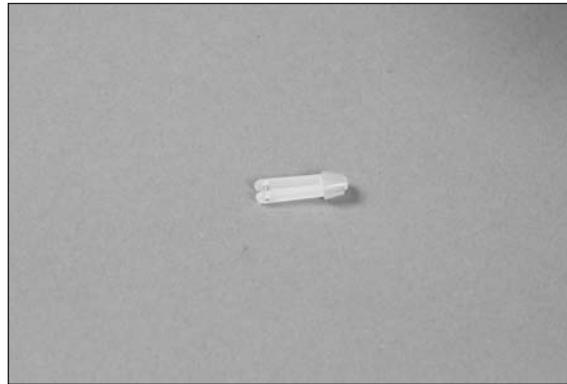
- ○ 12. Use a pin vise and a 5/64-inch (2mm) drill bit to enlarge the outer hole in the servo horn.



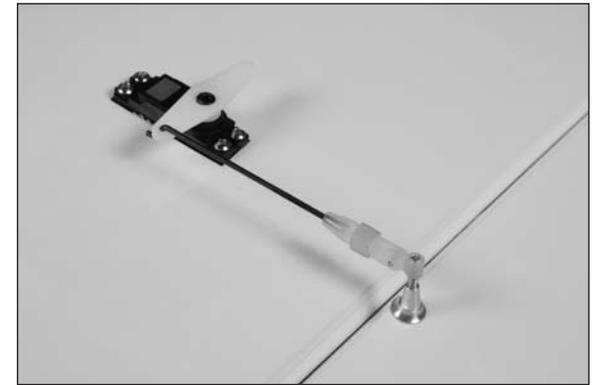
- ○ 13. Insert the Z-bend of the 2 1/2-inch (64mm) linkage wire into the hole in the servo horn as shown.



- ○ 14. Slide a clevis retainer on a clevis as shown.



- ○ 15. Thread the clevis on the aileron linkage wire. With the radio system on, adjust the clevis so the aileron is aligned when the clevis is attached to the control horn. Slide the clevis retainer over the forks of the clevis to prevent it from opening in flight.



- 16. Repeat Steps 1 through 15 to install the remaining aileron servo.

Motor Installation

Required Parts

Fuselage	Motor spacer (4)
Speed control	Motor with accessories
#4 washer (4)	Hook and loop tape
4-40 x 1-inch socket head screw (4)	
Servo extension, 3-inch (76mm)	

Required Tools and Adhesives

String	Threadlock
Phillips screwdriver: #1, #2	
Ball driver or hex wrench: 3/32-inch	

- 1. Remove the canopy hatch from the fuselage by sliding the hatch pin rearward and lifting the hatch from the fuselage.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

- 2. Use a #2 Phillips screwdriver to attach the X-mount to the motor using the screws provided with the motor.



E-tips

The blind nuts in the firewall can be positioned for a variety of motors. You will need to adjust their position to mount your particular motor.

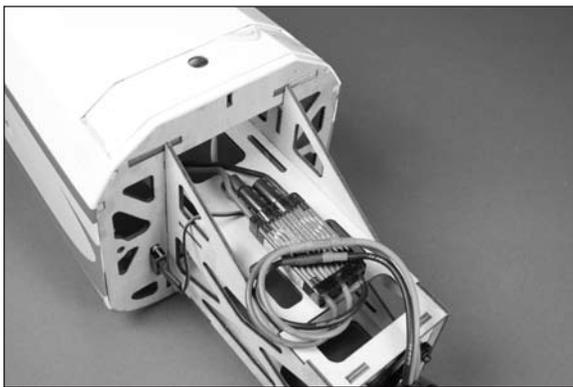
- 3. Use four (4) aluminum motor spacers, four (4) #4 washers and four (4) 4-40 x 1-inch socket head screws to attach the motor to the firewall. Tighten the screws using a 3/32-inch ball driver or hex wrench.



E-tips

Matching the colors between the ESC and motor when they are connected will result in the correct motor direction if using all E-flite components.

- 4. The speed control is mounted to the bottom of the battery box using hook and loop tape. Route the wires for the battery and servo connection into the fuselage. Connect the leads for the motor to those on the motor at this time. Make sure these leads do not interfere with the operation of the motor.



- 5. Secure a 3-inch (76mm) servo extension to the lead from the speed control using string or a commercially available connector.



- 6. Mount the switch from the speed control to the fuselage as shown. Use a #1 Phillips screwdriver to tighten the screws that secure the switch.



Cowling and Spinner Installation

Required Parts

Fuselage assembly Spinner assembly
Cowling #4 washer (2)
Propeller
4-40 x 1-inch socket head screw (2)

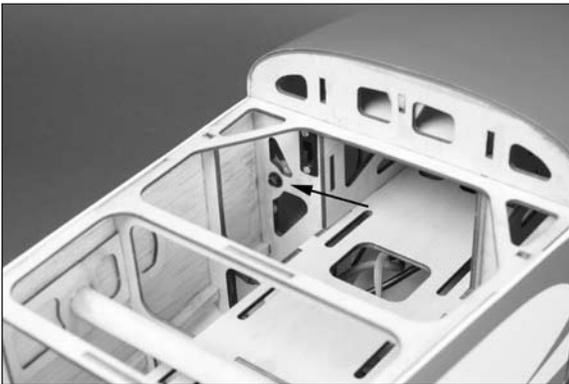
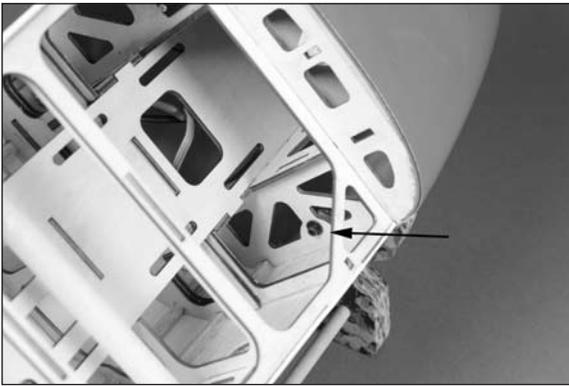
Required Tools and Adhesives

Ball driver: 3/32-inch
Box wrench or open end wrench: 10mm

- 1. Fit the cowling to the fuselage. It should overlap the fuselage as shown.



- 2. The cowling is secured using two (2) 4-40 x 1-inch socket head screws and two (2) #4 washers. You will need to use a ball driver to tighten these screws. The ball driver will allow you to access the screws at an angle so they can be tightened.



- 3. Slide the spinner adapter and backplate on the motor. Leave a gap of 3/32-inch to 1/8-inch (2.5 to 3mm) between the cowl and backplate.



E-tips

Always a good idea to balance your propeller. An unbalanced propeller can cause vibrations to be transmitted into the airframe which could damage the airframe or other components as well as produce unwanted flight characteristics.

- 4. Slide the propeller on the adapter. It may be necessary to enlarge the hole in the propeller so it fits over the adapter.



- 5. Slide the propeller washer on the adapter, then thread the nut in position. Use a 10mm box wrench or open end wrench to tighten the propeller nut. Do not use pliers as pliers will eventually round the corners of the nut.



- 6. Install the spinner cone. Position the spinner cone so it doesn't contact the propeller as shown. Secure the spinner cone using the screw provided with the spinner and a 3/32-inch hex wrench or ball driver.



Landing Gear and Wheel Installation

Required Parts

Fuselage assembly Axle with hardware (2)
#4 washer (5) Aluminum landing gear
Main wheel (2) Wheel pant (left and right)
4-40 x 1-inch socket head screw (3)
4-40 x 3/8-inch socket head screw (2)

Required Tools and Adhesives

Hex wrench or ball driver: 1.5mm, 3/32-inch
Threadlock Nut driver: 7mm
Flat file Pliers or adjustable wrench

- 1. Remove the landing gear fairing from the fuselage and set it aside.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

E-tips

The landing gear can only be installed in one direction. If the holes in the landing gear don't align with the blind nuts in the fuselage, rotate the gear front-to-back so the holes are aligned with the blind nuts installed in the fuselage.

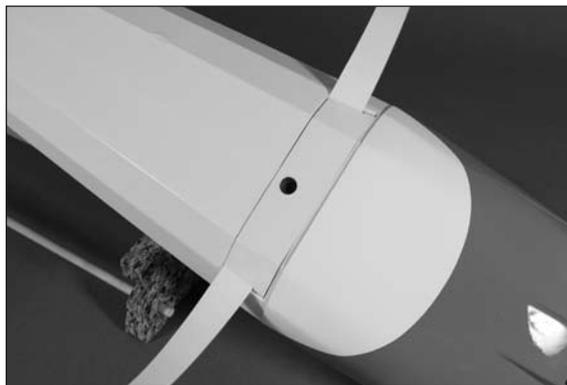
- 2. Attach the landing gear using two (2) 4-40 x 1-inch socket head screws and two (2) #4 washers. Use a 3/32-inch hex wrench or ball driver to tighten the screws. Only install the outer screws as shown in the photo. The center hole is for the attachment of the landing gear fairing.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

- 3. Use a 4-40 x 1-inch socket head screw and #4 washer to attach the landing gear fairing to the fuselage.



- 4. Attach the axle to the landing gear. Use a 7mm nut driver to tighten the locknut while holding the axle with an adjustable wrench or pliers.



- 5. Use a 1.5mm hex wrench to loosen the setscrew in the wheel collar to remove the collar. Use a file to make a flat area for the first 1/4-inch (6mm) on the bottom of the axle. This will provide an area to tighten the setscrew, making it more secure.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

- 6. Slide the wheel on the axle. Use a 1.5mm hex wrench to tighten the wheel collar that secures the wheel to the axle.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

- 7. Slide the wheel pant over the wheel. Position it so the hole in the landing gear aligns with the blind nut in the wheel pant. Use a 4-40 x 3/8-inch socket head screw and #4 washer to secure the position of the wheel pant. Tighten the screw using a 3/32-inch hex wrench or ball driver.



- 8. Repeat Steps 4 through 7 to install the remaining wheel and wheel pant.



Fuselage Servo and Receiver Installation

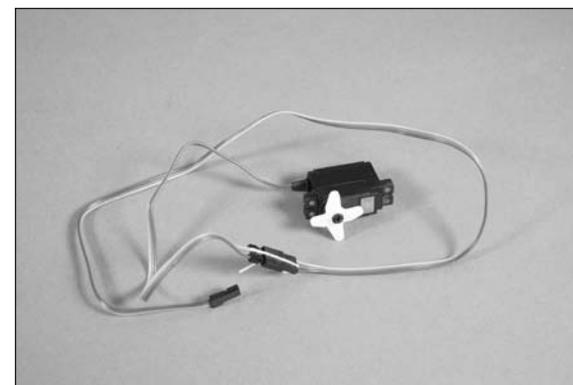
Required Parts

Fuselage assembly	Hook and loop tape
Receiver	Servo with accessories (2)
Servo extension, 18-inch (457mm)	

Required Tools and Adhesives

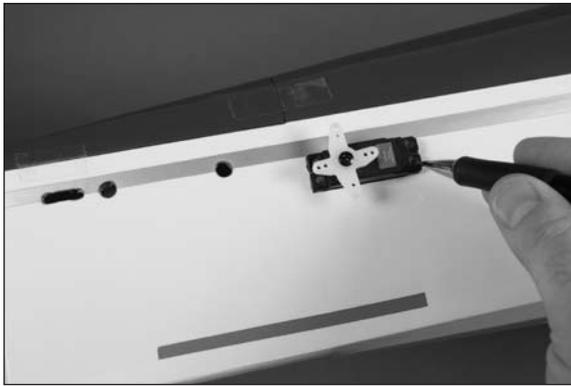
Pencil	String
Thin CA	Phillips screwdriver: #1
Pin vise	Drill bit: 1/16-inch (1.5mm)

- 1. Secure a 18-inch (457mm) servo extension to the elevator servo lead using string or a commercially available connector. This will keep the servo and lead from disconnecting inside the fuselage.



Note: You should have already installed the grommets earlier when you did the aileron servos. If you didn't, please go back to page 6, Step 4 for instructions.

- ○ 2. Place the elevator servo in the fuselage with the servo output to the rear. With the servo positioned so it is not touching the sides of the opening, use a pencil to transfer the locations for the four servo mounting screws on the fuselage.



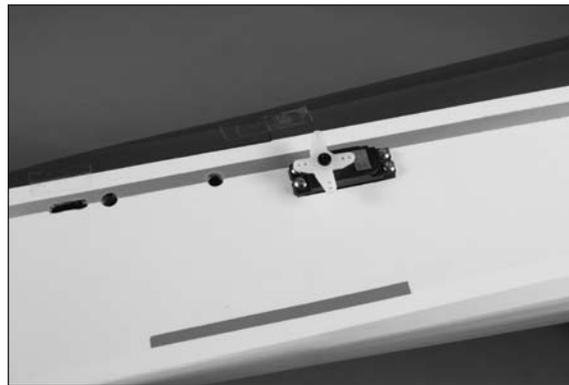
- ○ 3. Move the servo from the fuselage. Use a pin vise with a 1/16-inch (1.5mm) drill bit to drill the four holes in the fuselage for the servo mounting screws.



- ○ 4. Place 2-3 drops of thin CA in each of the holes to harden the surrounding wood. This will help in preventing the screws from vibrating loose.



- ○ 5. Use the four (4) screws provided with the servo and a #1 Phillips screwdriver to secure the servo in the fuselage.



- 6. Repeat Steps 2 through 5 to install the rudder servo in the fuselage.



- 7. Use hook and loop tape to install the main receiver and remote receiver in the fuselage. Make sure to plug the speed control, rudder and elevator into the appropriate ports of the receiver at this time.



Stabilizer Installation

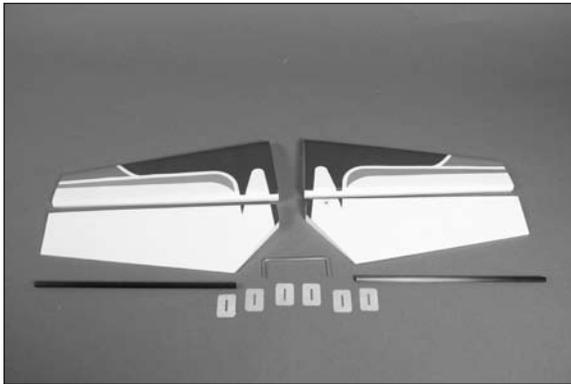
Required Parts

Fuselage assembly Heavy-duty servo horn
Elevator and stabilizer assembly

Required Tools and Adhesives

30-minute epoxy	Hobby knife with #11 blade
Mixing cup	Mixing stick
Epoxy brush	Paper towel
Rubbing alcohol	Felt-tipped pen
Pin vise	Drill bit: 5/64-inch (2mm)
Side cutters	Phillips screwdriver: #1

- 1. Disassemble the elevator and stabilizer assembly. Make sure to place the parts nearby so they can be used in the next two sections of the manual.



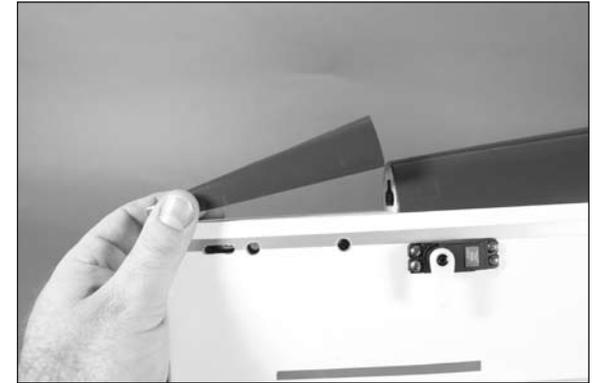
- 2. Use a #1 Phillips screwdriver to remove the stock servo arm from the elevator servo. Install a heavy-duty servo arm on the elevator servo so it is perpendicular to the servo centerline. Use side cutters to remove the arm that faces upward on the servo so it doesn't interfere with the operation of the servo.



- 3. Use a pin vise with a 5/64-inch (2mm) drill bit to enlarge the outer hole of the elevator servo arm.



- 4. Carefully remove the fin fairing from the fuselage. Set the fin fairing aside at this time.



- 5. Slide the two carbon tubes into one of the stabilizer halves.



- ○ 6. Slide the tubes into the holes at the rear of the fuselage. The stabilizer will fit tight against the fuselage. Use a felt-tipped pen to trace the outline of the stabilizer on the fuselage.



E-tips

Use caution when trimming the covering. Accidentally cutting into the wood will weaken the structure and may cause failure in flight.

- ○ 7. Remove the stabilizer from the fuselage. Use a hobby knife with a new #11 blade to trim the covering 1/16-inch (1.5mm) inside the lines drawn on the fuselage.



- 8. Repeat Steps 5 through 7 to prepare the opposite side of the fuselage.



- 9. Check the fit of both stabilizers to the fuselage. They must fit tightly to the fuselage as shown. If not, the stabilizer tubes will need to be shortened until they both fit tight as shown.



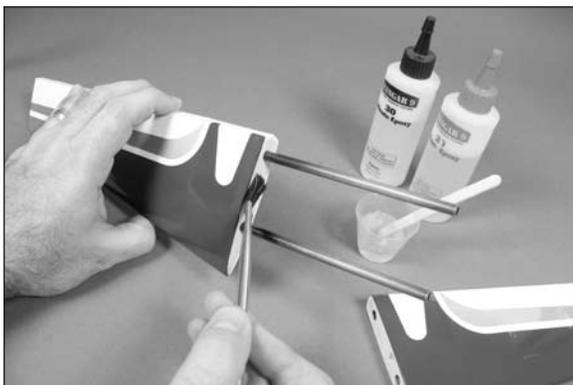
E-tips

Read through the following steps to understand them completely. These steps must be performed before the epoxy begins to cure.

- 10. Remove the stabilizers from the fuselage as well as the tubes from the stabilizer halves. Mix 1/4 ounce (15mL) of 30-minute epoxy. Apply a small amount of epoxy in the holes of the stabilizer for the stabilizer tubes.



- 11. Slide the stabilizer tubes in the stabilizer. Use an epoxy brush to apply a thin layer of epoxy on the root end of the stabilizer.



- 12. Use an epoxy brush to apply a thin layer of epoxy on the exposed wood of the fuselage at this time as well.



- 13. Slide the stabilizer into position. It must be pressed tight against the fuselage. Use a paper towel and rubbing alcohol to remove any excess epoxy.



- 14. Apply a small amount of epoxy in the holes of the stabilizer for the stabilizer tubes in the remaining stabilizer half.



- 15. Use an epoxy brush to apply a thin layer of epoxy on the root end of the stabilizer. Also apply epoxy to the exposed wood on the side of the fuselage as described in Step 12.



- 16. Slide the remaining stabilizer into position. It must be pressed tight against the fuselage. Use a paper towel and rubbing alcohol to remove any excess epoxy. Set the fuselage assembly aside until the epoxy has fully cured.



Elevator Installation

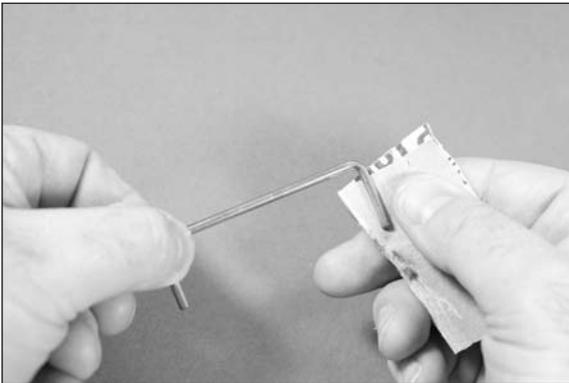
Required Parts

Fuselage assembly	Control horn assembly
Nylon control horn	Elevator joiner wire
CA hinge (6)	Clevis
Clevis retainer	Elevator (left and right)
Pushrod wire, 3 ¹ / ₂ -inch (90mm)	
Plastic packaging from model	

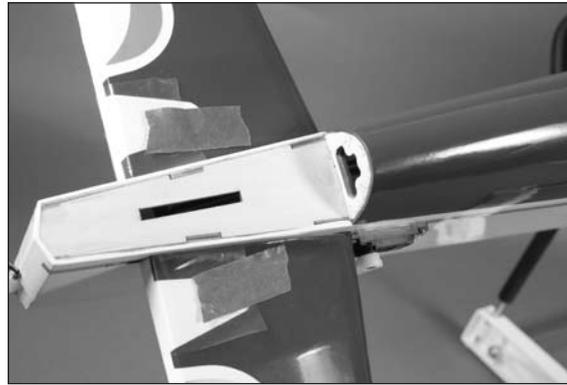
Required Tools and Adhesives

Scissors	Medium grit sandpaper
Low-tack tape	Thin CA
30-minute epoxy	Toothpick
T-pins	Hobby knife with #11 blade
Pin vise	Drill bit: 1/16-inch (1.5mm)
Threadlock	Phillips screwdriver: #2
Pliers	Mixing cups
Paper towels	Rubbing alcohol
Mixing sticks	

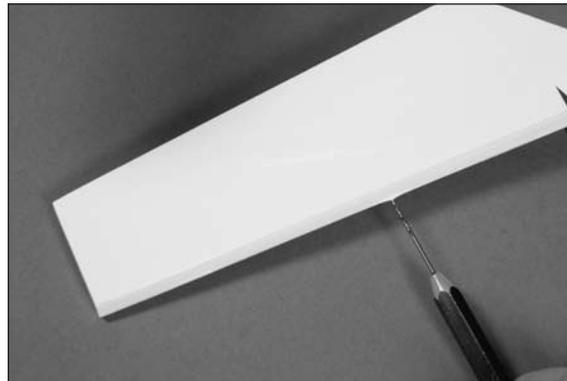
- 1. Use medium grit sandpaper to lightly sand the ends of the elevator joiner wire. This will provide a surface for the epoxy to adhere to.



- 2. Cut two strips of the clear plastic film the model was packaged in using scissors. Use low-tack tape to tape the plastic to the elevators so the joiner wire isn't accidentally glued to the stabilizers.



- 3. Use a pin vise with a 1/16-inch (1.5mm) drill bit to drill a hole in the center of each of the hinge slots in both the elevators and stabilizers.



E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

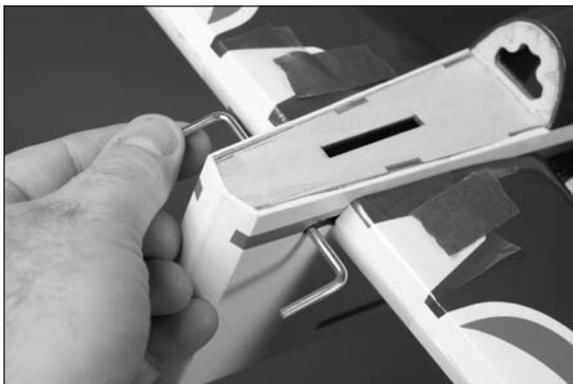
- 4. Remove the tapered nut and one countersink from the control horn screw. Slide the screw and remaining countersink into the hole in the elevator. The screw must exit to the bottom of the elevator.



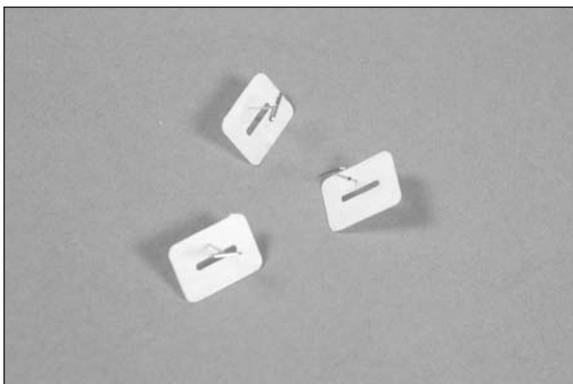
- 5. Slide the countersink back onto the control horn screw. The tapered nut is then threaded on the screw to secure its position on the elevator. Use a #2 Phillips screwdriver and pliers to tighten the hardware. Thread the nylon control horn onto the control horn screw so it is flush with the end of the screw as shown.



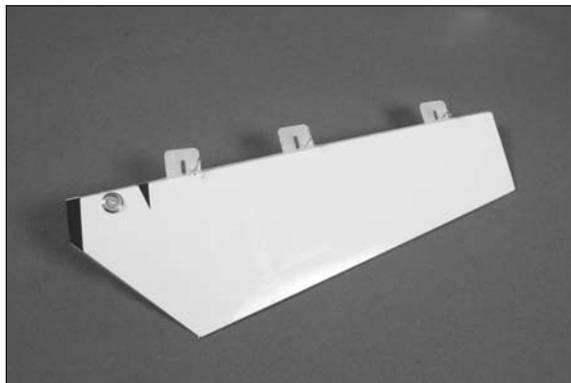
- 6. Slide the elevator joiner wire into position in the slot at the rear of the fuselage.



- 4. Place a T-pin in the center of each of the hinges as shown. You will need to prepare three (3) hinges in this step.



- 5. Slide the three (3) hinges into the slots in the elevator. The T-pins will center the hinges so an equal amount of hinge is in both the elevator and stabilizer.



- 6. Test fit the elevator into position using the hinges. Make sure the elevator joiner wire is positioned in the elevator as well. The elevator should fit tightly against the stabilizer in this step. If it does not, check to determine why and correct as necessary.



- 7. Repeat Steps 4 through 6 to check the fit of the remaining elevator half to the stabilizer.

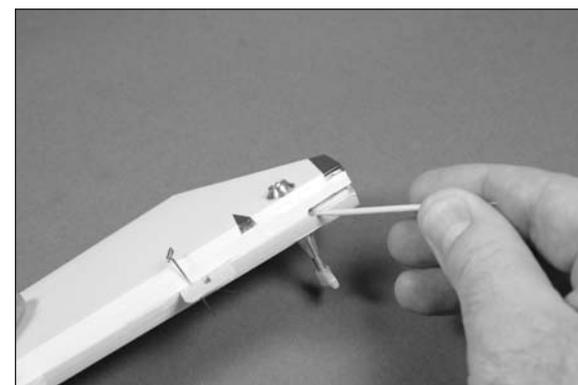
Etips

Read through the following steps to understand them completely. These steps must be performed before the epoxy begins to cure.

- 8. Mix 1/4 ounce (15mL) of 30-minute epoxy. Use a mixing stick to apply the epoxy to the elevator joiner wire where it fits into the elevator.



- 9. Use a toothpick to apply epoxy to the hole in the elevator for the joiner wire.



- 10. Repeat Steps 8 and 9 to apply the epoxy for the remaining elevator half.

- 11. Fit the elevator halves to the stabilizer. Remove the T-pins from the hinges. Position the elevators so the tips of the elevators align with the tips of the stabilizers. Set the hinge gap using a hobby knife and #11 blade. The blade should just fit into the gap between the elevator and stabilizer as shown.



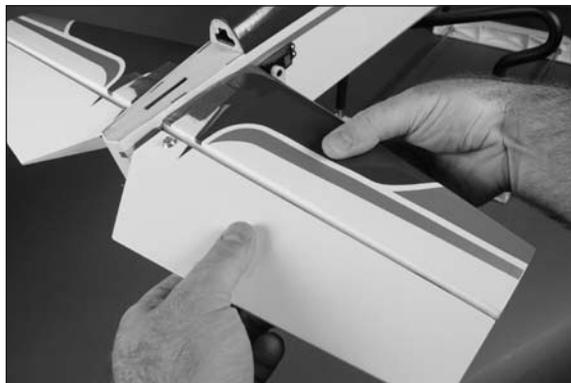
E-tips

When hinging the elevators, do not use CA accelerator. The CA must be allowed to penetrate the hinge or the bond between the hinge and wood could fail.

- 12. Flex the elevators slightly so the hinges can be accessed. Use care not to change the hinge gap. Saturate each hinge with thin CA on both the top and bottom of the hinge. Allow the CA to fully cure before proceeding.



- 13. Once the CA has cured, gently pull on the elevator and stabilizer to check that the hinges are secure. If any hinges are not secure, apply more CA and recheck them once the CA cures.



- 14. Flex the elevator through its range of motion a number of times to break in the hinges.



- 15. Slide a clevis retainer on a nylon clevis. Thread the clevis onto the 3¹/₂-inch (90mm) linkage wire. Insert the bend in the linkage in the hole enlarged in the elevator servo arm. Adjust the clevis so when it is attached to the elevator control horn the elevator is centered.



Fin Installation

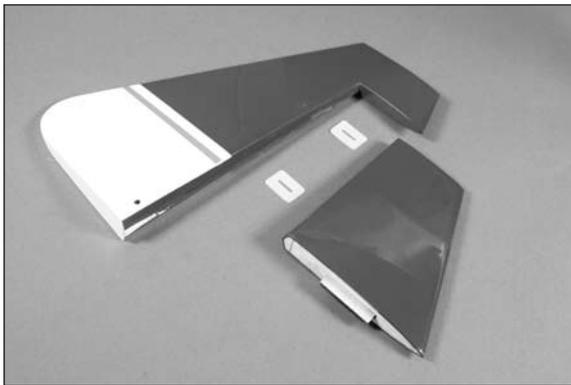
Required Parts

Fuselage assembly Fin fairing
Rudder and fin assembly

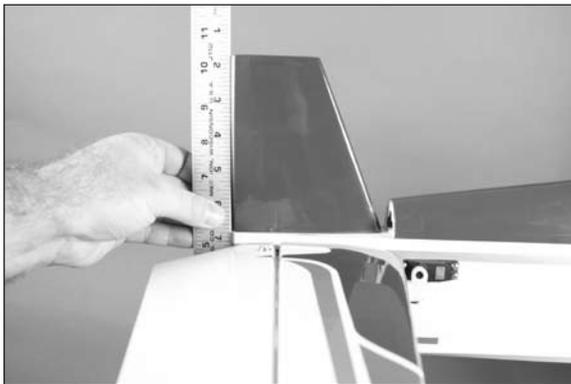
Required Tools and Adhesives

Ruler	Low-tack tape
Square	30-minute epoxy
Rubbing alcohol	Paper towels
Mixing stick	Mixing cup

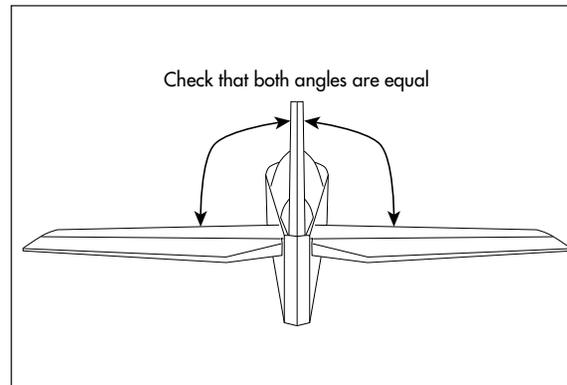
- 1. Separate the rudder from the vertical fin. Set the rudder and hinges aside at this time.



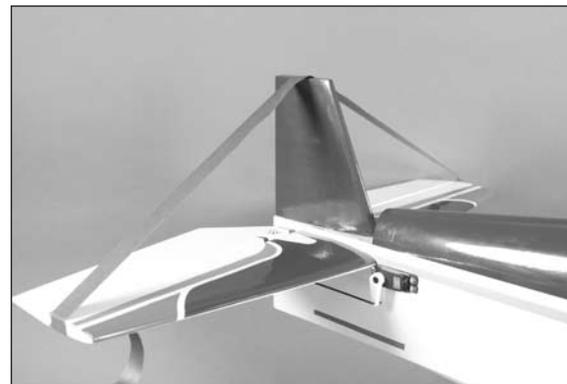
- 2. Place the fin on the fuselage. Use a ruler to align the rear edge of the fin to the rear edge of the fuselage.



- 3. Check the alignment of the fin to the stabilizer. Since both the fin and stabilizer are tapered, you won't be able to use a square to accurately set the angles during this step, but it will help gauge the angles.



- 4. Once the alignment has been checked, mix 1/4 ounce (15mL) of 30-minute epoxy and apply it to the bottom of the fin where it contacts the fuselage. Use low-tack tape to hold the fin in alignment until the epoxy fully cures. Use a paper towel and rubbing alcohol to remove any excess epoxy before it has a chance to cure.



- 5. Once the epoxy has cured between the fin and fuselage you can install the fin fairing. Use 30-minute epoxy to glue the fairing in position. Use low-tack tape to hold it in place until the epoxy cures. Use a paper towel and rubbing alcohol to remove any excess epoxy before it has a chance to cure.



Rudder and Tail Wheel Installation

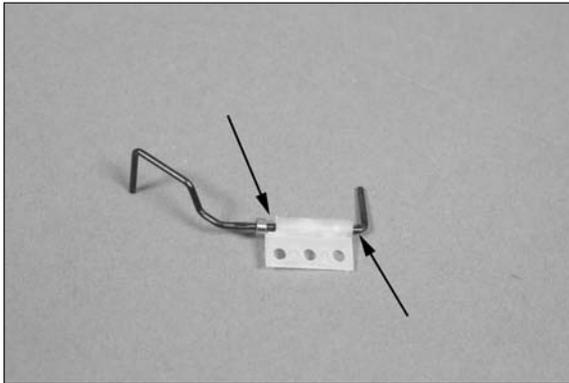
Required Parts

Fuselage assembly	Rudder
CA hinge (2)	Rudder control horn screw
Tail wheel assembly	Nylon control horn (2)
Tail wheel	Wheel collar with setscrew

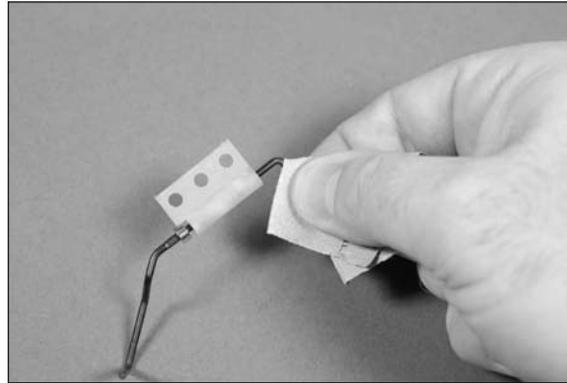
Required Tools and Adhesives

Low-tack tape	Medium grit sandpaper
Pin vise	Drill bit: 1/16-inch (1.5mm)
Petroleum jelly	30-minute epoxy
Thin CA	T-pins
Toothpick	Hobby knife with #11 blade
Pliers (2)	Hex wrench: 1.5mm
Mixing cups	Mixing sticks
Rubbing alcohol	Paper towels
Ruler	Threadlock

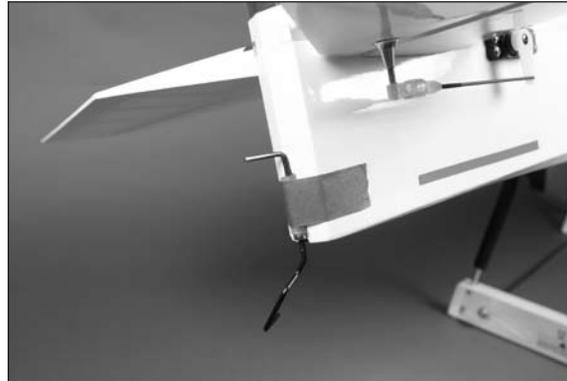
- 1. Apply a small amount of Petroleum jelly using a toothpick at the top and bottom of the tail gear bushing. Work the jelly into the bushing to prevent epoxy from entering the bushing. If epoxy enters, it could glue the wire to the bushing.



- 2. Use medium grit sandpaper to roughen the section of the wire that will enter the rudder. This provides a surface for the epoxy to adhere to.



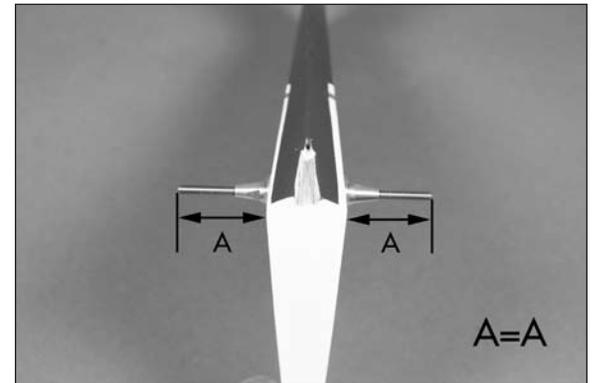
- 3. Apply 30-minute epoxy to the bushing where it fits into the fuselage. Insert the bushing in the fuselage and use low-tack tape to hold the assembly in position until the epoxy fully cures.



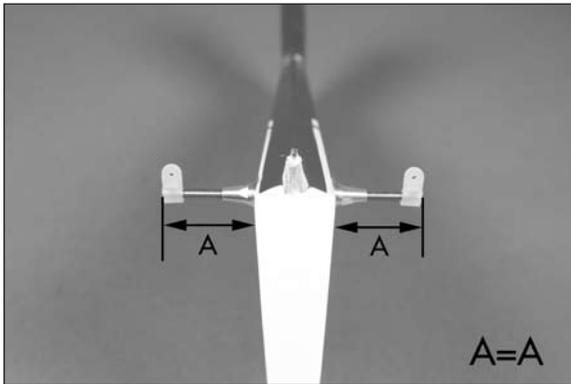
E-tips

Always use threadlock on metal-to-metal fasteners to prevent them from vibrating loose.

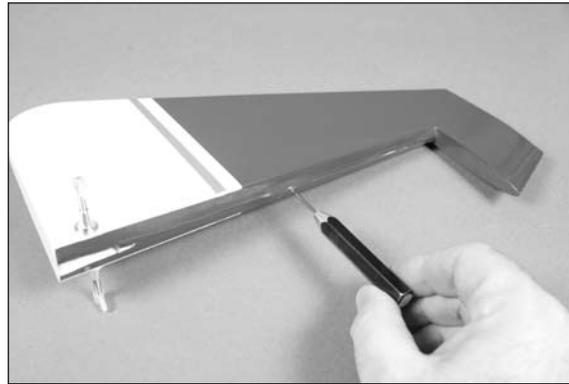
- 4. Insert the rudder control screw through the rudder. Position the screw equally on both sides of the rudder. Use two pair of pliers to tighten the tapered nuts to secure the screw.



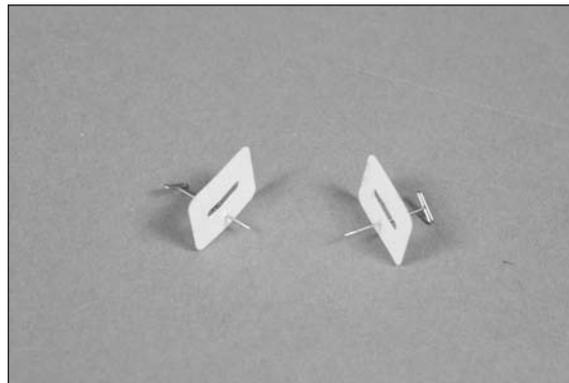
- 5. Thread a nylon control horn on each end of the threaded rod. Position the horns so they are flush with the ends of the rod. Also make sure the distance from the rudder surface to the control horn is equal on both sides.



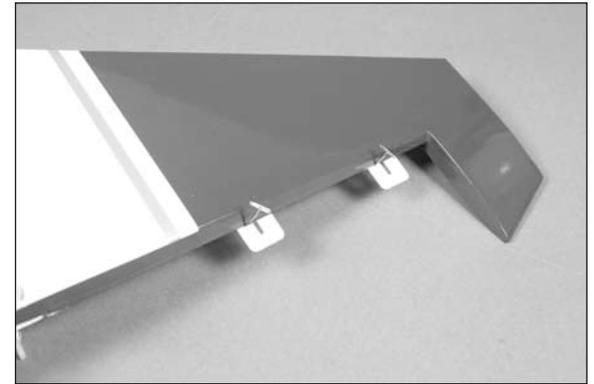
- 6. Use a pin vise with a 1/16-inch (1.5mm) drill bit to drill a hole in the center of the two hinge slots in the rudder and fin.



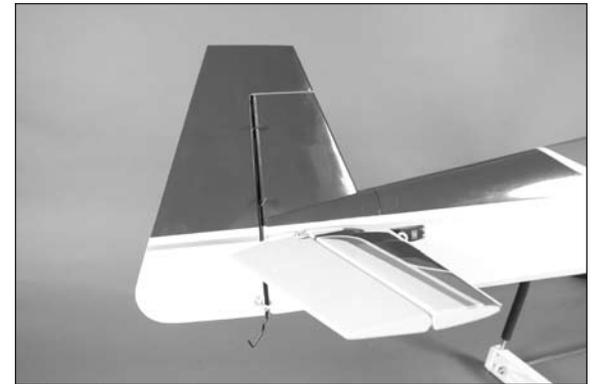
- 7. Place a T-pin in the center of each of the hinges as shown. You will need to prepare two (2) hinges in this step.



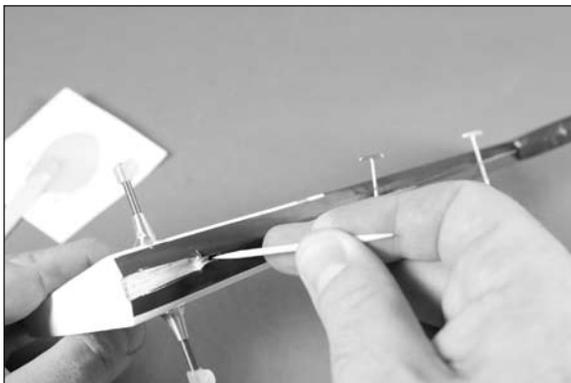
- 8. Slide the two (2) hinges into the slots in the rudder. The T-pins will center the hinges so an equal amount of hinge is in both the rudder and fin.



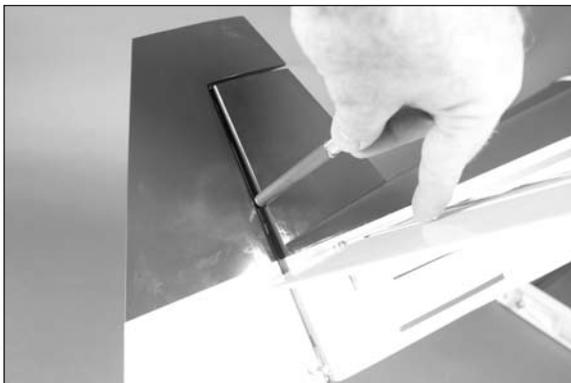
- 9. Test fit the rudder into position using the hinges. Make sure the tail gear wire is positioned in the rudder as well. The rudder should fit tightly against the stabilizer in this step. If it does not, check to determine why and correct as necessary.



- 10. Mix a small amount of epoxy. Use a toothpick to insert the epoxy in the hole in the rudder where the wire fits into. Also apply a small amount of epoxy to the wire itself.



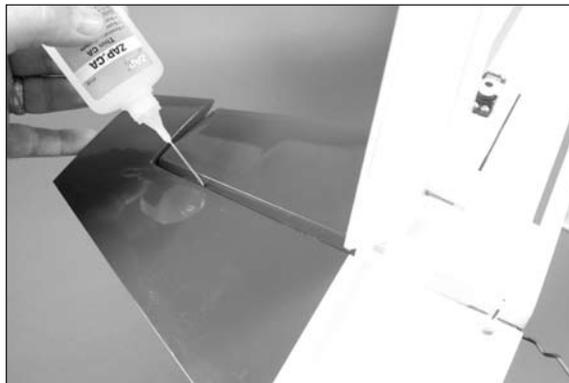
- 11. Reposition the rudder to the fin. Remove the T-pins from the hinges and check the gap between the rudder and fin using a hobby knife and #11 blade. Use a paper towel and alcohol to clean and epoxy that squeezes out.



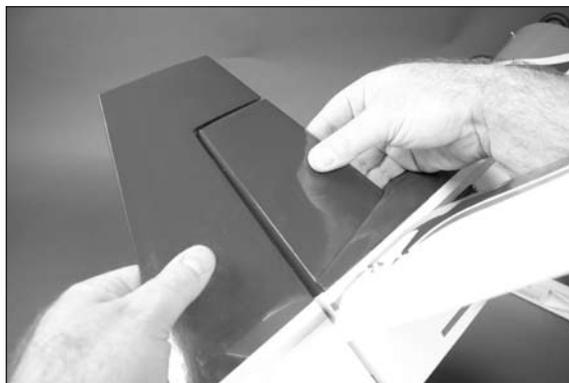
E-tips

When hinging the rudder, do not use CA accelerator. The CA must be allowed to penetrate the hinge or the bond between the hinge and wood could fail.

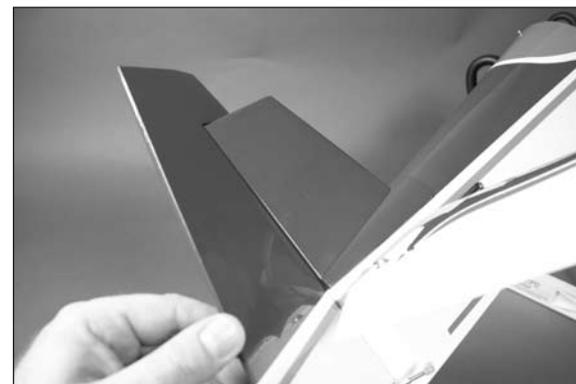
- 12. Move the rudder slightly to access the hinges without changing the hinge gap. Saturate each hinge on both sides with thin CA. Allow the CA to fully cure before proceeding.



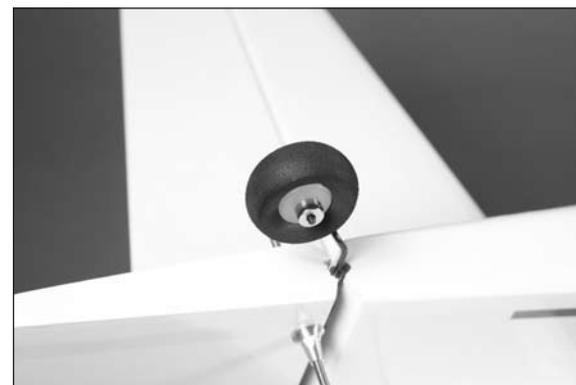
- 13. Once the CA has cured, gently pull on the rudder and fin to check that the hinges are secure. If any hinges are not secure, apply more CA and recheck them once the CA cures.



- 14. Flex the rudder through its range of motion a number of times to break in the hinges.



- 15. Attach the tail wheel to the tail wheel wire using a wheel collar and 1.5mm hex wrench. Make sure to use threadlock on the setscrew to prevent it from vibrating loose.



Rudder Pull-Pull Cable Installation

Required Parts

Fuselage assembly Rudder cable (2)
Cable fitting (4) Cable crimp (4)
Nylon clevis (4) Clevis retainer (4)
Radio system Heavy-duty servo horn

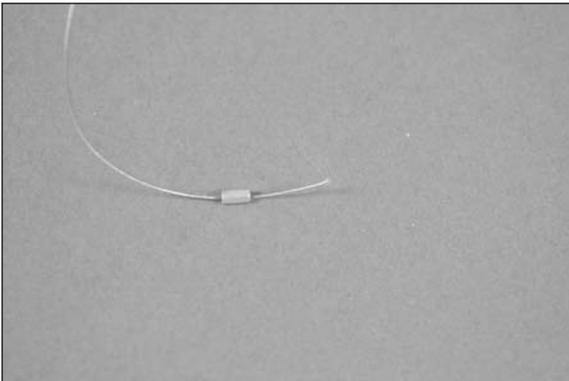
Required Tools and Adhesives

Low-tack tape Crimping tool or pliers
Side cutters Hobby knife with #11 blade
Phillips screwdriver: #1

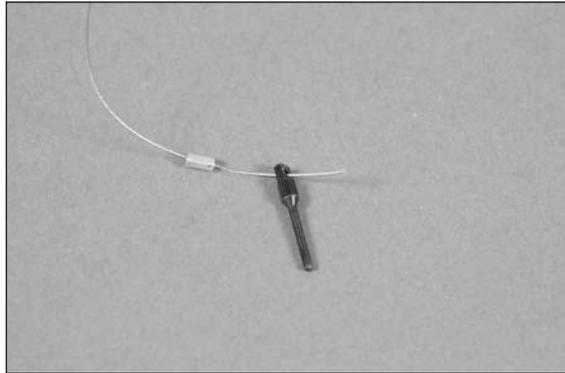
- 1. Using low-tack tape to keep the rudder centered when installing the rudder cables will make the installation much easier.



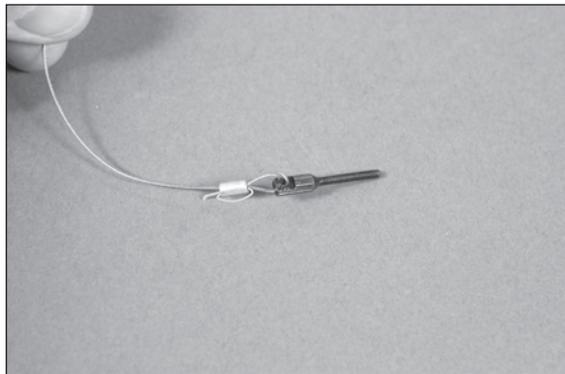
- 2. Slide a crimp on one end of a rudder cable.



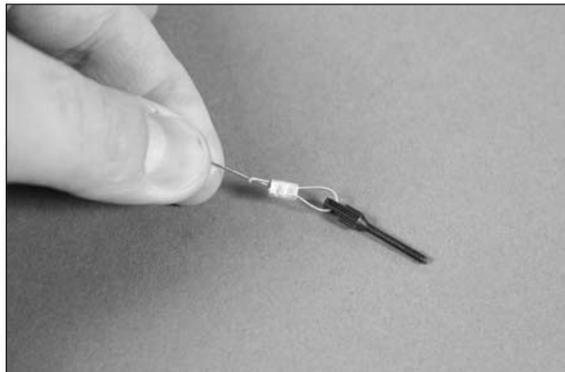
- 3. The cable then goes through the hole in the cable fitting as shown.



- 4. Pass the cable back through the crimp, then loop the cable through the crimp again.



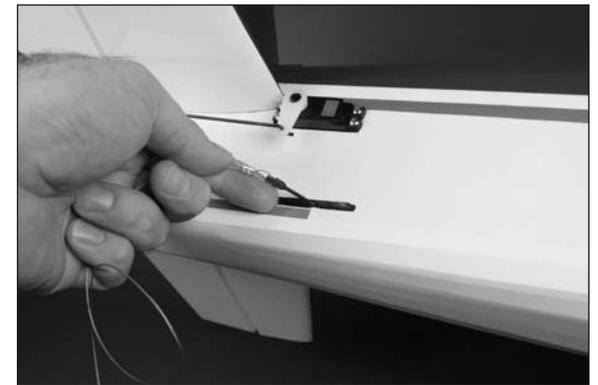
- 5. Use a crimping tool or pliers to secure the crimp to the cable.



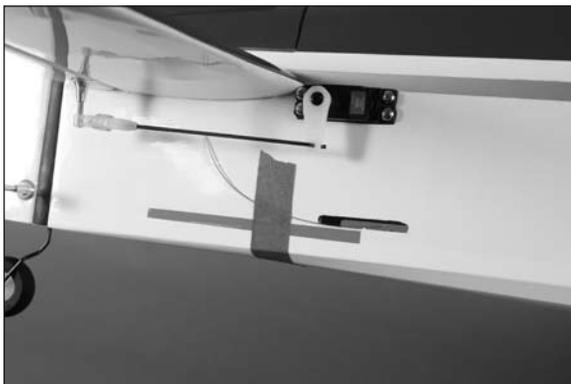
- 6. Use a hobby knife with a #11 blade to remove the covering from the fuselage for the cable to pass through.



- 7. Insert the end of the rudder cable with the fitting into the fuselage through the hole in the side of the fuselage.



- ○ 8. Use low-tack tape to keep the cable from accidentally falling into the fuselage.



- ○ 9. Slide a clevis retainer on a nylon clevis. Hold the cable fitting with pliers to thread the clevis on the fitting. The end of the fitting should just be visible between the forks of the clevis.



- 10. Remove the stock servo horn from the rudder servo using a #1 Phillips screwdriver. Install a heavy-duty servo horn on the servo so it is perpendicular to the rudder servo centerline.

- ○ 11. Check that the cable is not tangled in any of the formers or the elevator servo wires. It must be a straight shot to the rudder servo. The cable will connect to the servo arm on the opposite side as the rudder control horn.



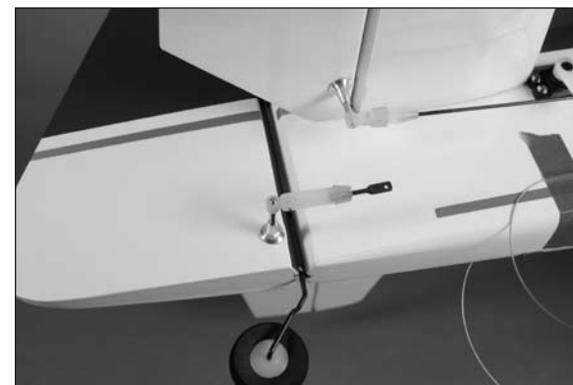
- 12. Repeat Steps 2 through 11 (excluding Step 10) to run the remaining rudder cable. Note that the cables cross inside the fuselage.



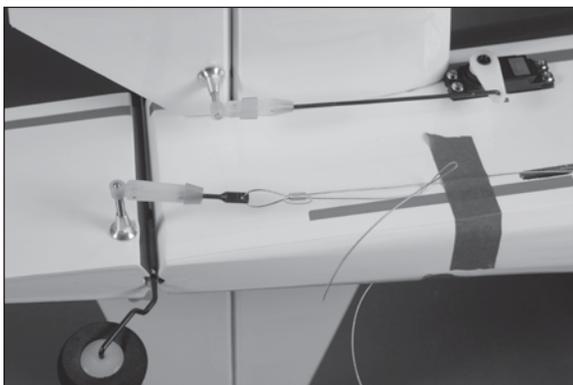
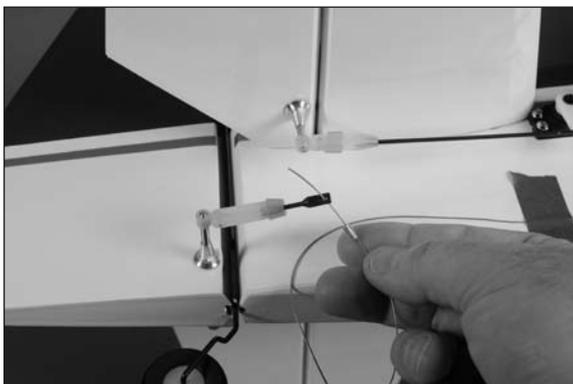
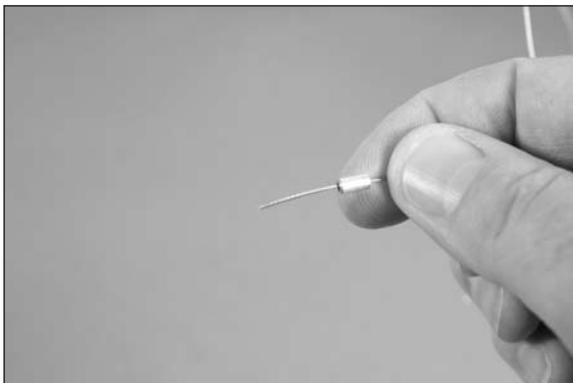
- ○ 13. Slide a clevis retainer on a nylon clevis. Hold the cable fitting with pliers while threading the clevis on the fitting. Thread the clevis on far enough so the threads of the fitting are almost visible between the forks of the clevis.



- ○ 14. Attach the clevis to the rudder control horn.



- 15. Slide a crimp on the end of the cable outside the fuselage. The cable then can pass through the hole in the cable fitting then back through the crimp. Do not use crimping pliers at this time.



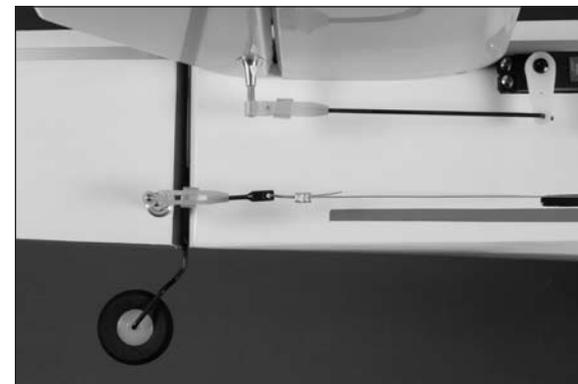
- 16. Repeat Steps 13 through 15 for the opposite cable. Remove the tape from the fuselage at this time as well.



E-tips

When setting the rudder cables it is best to have the radio system on to keep the rudder servo centered.

- 17. Adjust the cable in the crimps so there is light tension on each of the cables. Once tensioned, use crimping pliers to secure the crimps to the cables. Use side cutters to trim any excess wire that could interfere with the operation of the rudder.



E-tips

Check the tension of the cables periodically to make sure they are not slack. If so, adjust the clevises on both sides to reset the tension on the wires or you may have difficulty keeping the rudder correctly trimmed.

- 18. You may now remove the low-tack tape that is holding the rudder straight.
- 19. Now re-tension the cables to ensure the rudder moves freely and holds center with the radio system on.

Wing Installation

Required Parts

Fuselage assembly Wing panel (right and left)
Carbon wing tube #4 washer (2)
4-40 x 1-inch socket head screw (2)

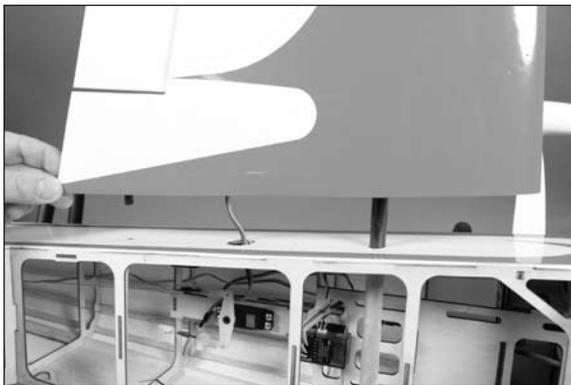
Required Tools and Adhesives

Ball driver: 3/32-inch

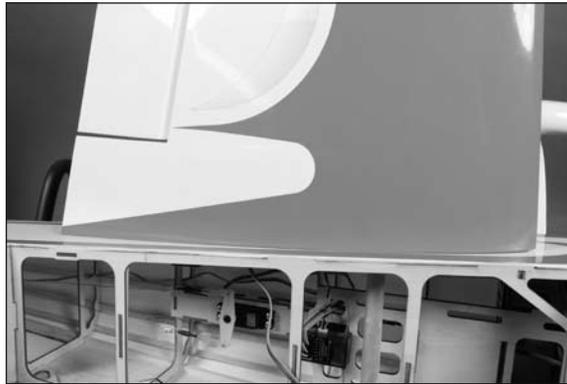
- 1. Slide the carbon wing tube in one of the wing panels. It will only fit in so far, so only slide it in as far as it will easily slide.



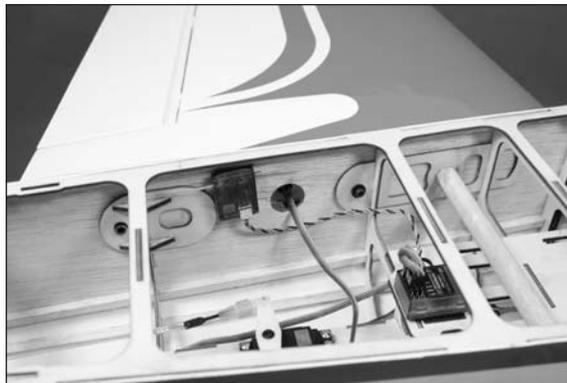
- 2. Slide the tube into the fuselage. Make sure to guide the servo lead from the aileron servo into the fuselage as well.



- 3. Slide the wing tightly against the fuselage. The rear anti-rotation pin will fit into the fuselage to keep the wing from rotating.



- 4. Use a 4-40 x 1-inch socket head screw and #4 washer to secure the wing to the fuselage. Use a ball driver to tighten the screw. Use of a ball driver is highly suggested as the screw can not be easily accessed directly with a standard hex wrench.



- 5. Repeat Steps 2 through 4 to attach the remaining wing panel to the fuselage.



- 6. Plug the aileron servos into the correct ports of the receiver.



Battery Installation

Required Parts

Motor battery Fuselage assembly
Hook and loop strap

- 1. Use a hook and loop strap (not included) to secure the battery in the fuselage. The location of the battery can be adjusted if necessary to achieve the correct Center of Gravity.



Canopy Installation

Required Parts

Fuselage assembly Canopy hatch
Canopy Pilot (modelers choice)

Required Tools and Adhesives

Canopy glue Medium grit sandpaper
Felt-tipped pen Clear paper or waxed paper
Low-tack tape Paper towels
Rubbing alcohol

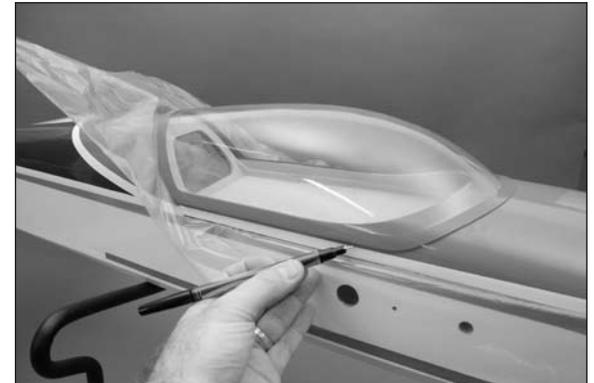
- 1. Place a piece of the clear plastic your model was packed in or a piece of waxed paper over the fuselage in the area of the canopy hatch. This will keep you from accidentally gluing the hatch to the fuselage.



- 2. Install the canopy hatch on the fuselage. It may be necessary to make adjustments to the plastic or waxed paper to get the hatch pin to lock the position of the hatch.



- 3. Place the canopy on the fuselage. Use a felt-tipped pen to trace the outline of the canopy on the canopy hatch. Make sure to center the canopy on the model before making any marks.



- 4. Use medium grit sandpaper to lightly sand the canopy hatch 1/4-inch (6mm) inside the line drawn in the previous step.



- 5. You may install a pilot of your choice at this time.

- 6. Lightly sand the inside edge of the canopy at this time as well. Use care not to over-sand the edge and get into the clear area of the canopy.



- 7. Use canopy glue to glue the canopy to the canopy hatch. Use low-tack tape to keep the canopy in position until the glue has fully cured.



- 8. Remove the lines made by the felt-tipped pen from the fuselage using paper towels and rubbing alcohol.

Center of Gravity

An important part of preparing the aircraft for flight is properly balancing the model.

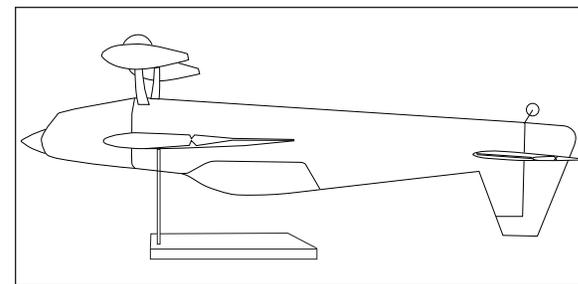
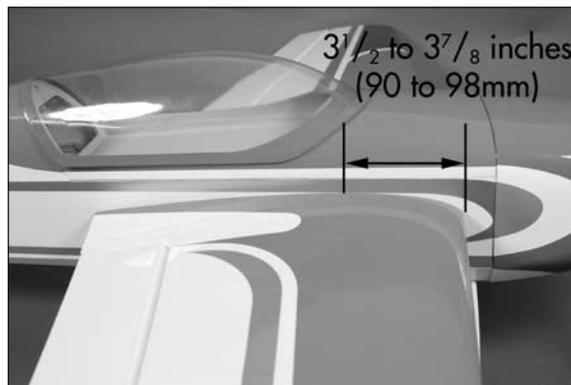
Caution: Do not inadvertently skip this step!

The recommended Center of Gravity (CG) location for your model is $3\frac{1}{2}$ to $3\frac{7}{8}$ inches (90 to 98mm) back from the leading edge of the wing as shown with the battery pack installed. Mark the location of the CG on the top of the wing with a felt-tipped pen.

When balancing your model, support the plane inverted at the marks made on the wing with your fingers or a commercially available balancing stand. This is the correct balance point for your model.

Adjust the motor battery as necessary so the model is level or slightly nose down. This is the correct balance point for your model. You should find the CG to be very close with the battery installed forward in the battery area inside the cowl.

We suggest a Center of Gravity of $3\frac{1}{2}$ for precision flight and $3\frac{7}{8}$ for 3D flight. Some have found the CG range to be a bit broader and is a personal taste and feel. You may explore the range and find the location that works best for you.



After the first flights, the CG position can be adjusted for your personal preference.

Control Throws

- 1. Turn on the transmitter and receiver of your Extra 300 32e. Check the movement of the rudder using the transmitter. When the stick is moved right, the rudder should also move right. Reverse the direction of the servo at the transmitter if necessary.
- 2. Check the movement of the elevator with the radio system. Moving the elevator stick toward the bottom of the transmitter will make the airplane elevator move up.
- 3. Check the movement of the ailerons with the radio system. Moving the aileron stick right will make the right aileron move up and the left aileron move down.
- 4. Use a ruler to adjust the throw of the elevator, ailerons and rudder. Adjust the position of the pushrod at the control horn to achieve the following measurements when moving the sticks to their endpoints.

Elevator High Rate

Up	2 ¹ / ₄ -inch	(57mm)
Down	2 ¹ / ₄ -inch	(57mm)

Elevator Low Rate

Up	3/4-inch	(19mm)
Down	3/4-inch	(19mm)

Aileron High Rate

Up	2-inch	(51mm)
Down	2-inch	(51mm)

Aileron Low Rate

Up	5/8-inch	(16mm)
Down	5/8-inch	(16mm)

Rudder High Rate

Right	3-inch	(76mm)
Left	3-inch	(76mm)

Rudder Low Rate

Right	1 ¹ / ₂ -inch	(38mm)
Left	1 ¹ / ₂ -inch	(38mm)

E-tips

Measurements are taken at the inner or widest point on the control surface.

These are general guidelines measured from our own flight tests. You can experiment with higher rates to match your preferred style of flying.

E-tips

Travel Adjust, Sub-Trim and Dual Rates are not listed and should be adjusted according to each individual model and preference.

Preflight

Check Your Radio

Before going to the field, be sure that your batteries are fully charged per the instructions included with your radio. Charge the transmitter and motor battery for your airplane. Use the recommended charger supplied with your particular radio system, following the instructions provided with the radio. In most cases, the radio should be charged the night before going out flying.

Before each flying session, be sure to range check your radio. See your radio manual for the recommended range and instructions for your radio system. Each radio manufacturer specifies different procedures for their radio systems. Next, run the motor. With the model securely anchored, check the range again. The range test should not be significantly affected. If it is, don't attempt to fly! Have your radio equipment checked out by the manufacturer.

E-tips

Keep loose items that can get entangled in the propeller away from the prop. These include loose clothing, or other objects such as pencils and screwdrivers. Especially keep your hands away from the propeller.

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

Check the radio installation and make sure all the control surfaces are moving correctly (i.e., the correct direction and with the recommended throws).

Check all the control horns, servo horns, and clevises to make sure they are secure and in good condition.

Flying Your Extra 300 32e ARF

The Extra 300 32e has been designed to meet the current IMAC rules regarding changing of the airframe outline. The deviation is no more than 10% in any area and meets all IMAC regulations. You will find the Extra 300 performs precision maneuvers with a very tight feel through the entire flight envelope. Takeoffs are as easy as applying the power and a slight amount of right rudder correction to lift off. Vertical performance is very strong and predictable. The Extra can perform any aerobatic maneuver you request. Landings are a breeze, and just line up on final approach and adjust your power to touch down. We hope you enjoy flying your Extra 300 and appreciate its aerobatic prowess as much as we do.

Happy landings.

Range Test Your Radio

Before each flying session, and especially with a new model, it is important to perform a range check. It is helpful to have another person available to assist during the range check. If you are using a Spektrum transmitter, please refer to your transmitter's manual for detailed instructions on the range check process.

1. With the model resting on the ground, stand 30 paces (approximately 90 feet) away from the model.
2. Face the model with the transmitter in your normal flying position. Be sure the throttle is in the full down position and plug the flight battery into the speed control.
3. As you move the controls, watch to be sure the airplane's motor and controls operate smoothly. You should have total control of the model at 30 paces (90 feet).
4. If control issues exist, call the Horizon Support Team at 1 877 504 0233 or go to horizonhobby.com to find a local Spektrum distributor in your country for service if you are using a Spektrum radio system.

Safety Do's and Don'ts for Pilots

- Check all control surfaces prior to each takeoff.
- Do not fly your model near spectators, parking areas or any other area that could result in injury to people or damage of property.
- Do not fly during adverse weather conditions. Poor visibility can cause disorientation and loss of control of your aircraft. Strong winds can cause similar problems.
- Do not take chances. If at any time during flight you observe any erratic or abnormal operation, land immediately and do not resume flight until the cause of the problem has been ascertained and corrected. Safety can never be taken lightly.
- Do not fly near power lines.

Daily Flight Checks

- 1. Check the battery voltage of the transmitter battery. Do not fly below the manufacturer's recommended voltage. To do so can crash your aircraft.

E-tips

When you check these batteries, ensure that you have the polarities correct on your expanded scale voltmeter.

- 2. Check all hardware (linkages, screws, nuts, and bolts) prior to each day's flight. Be sure that binding does not occur and that all parts are properly secured.
- 3. Ensure that all surfaces are moving in the proper manner.
- 4. Perform a ground range check before each day's flying session.
- 5. Prior to starting your aircraft, turn off your transmitter, then turn it back on. Do this each time you start your aircraft. If any critical switches are on without your knowledge, the transmitter alarm will sound a warning at this time.
- 6. Check that all trim levers are in the proper location.
- 7. All servo pigtails and switch harness plugs should be secured in the receiver. Make sure that the switch harness moves freely in both directions.

Warranty Information

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

Horizon reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.

(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 1/2 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.

United States:

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

Horizon Service Center
4105 Fieldstone Road
Champaign, Illinois 61822
USA

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

Horizon Product Support
4105 Fieldstone Road
Champaign, Illinois 61822
USA

Please call 877-504-0233 or e-mail us at productsupport@horizonhobby.com with any questions or concerns regarding this product or warranty.

United Kingdom:

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

Horizon Hobby UK
Units 1-4 Ployters Rd
Staple Tye
Harlow, Essex
CM18 7NS
United Kingdom

Please call +44 (0) 1279 641 097 or e-mail us at sales@horizonhobby.co.uk with any questions or concerns regarding this product or warranty.

Germany:

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

Horizon Technischer Service
Hamburger Strasse 10
25335 Elmshorn
Germany

Please call +49 4121 46199 66 or e-mail us at service@horizonhobby.de with any questions or concerns regarding this product or warranty.

Compliance Information for the European Union

INSTRUCTIONS FOR DISPOSAL OF WEEE BY USERS IN THE EUROPEAN UNION

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.



Age Recommendation: 14 years or over. Not a toy. Not intended for use by children without direct adult supervision.

2009 Official Academy of Model Aeronautics Safety Code

GENERAL

1. A model aircraft shall be defined as a non-human-carrying device capable of sustained flight in the atmosphere. It shall not exceed limitations established in this code and is intended to be used exclusively for recreational or competition activity.
2. The maximum takeoff weight of a model aircraft, including fuel, is 55 pounds, except for those flown under the AMA Experimental Aircraft Rules.
3. I will abide by this Safety Code and all rules established for the flying site I use. I will not willfully fly my model aircraft in a reckless and/or dangerous manner.
4. I will not fly my model aircraft in sanctioned events, air shows, or model demonstrations until it has been proven airworthy.
5. I will not fly my model aircraft higher than approximately 400 feet above ground level, when within three (3) miles of an airport without notifying the airport operator. I will yield the right-of-way and avoid flying in the proximity of full-scale aircraft, utilizing a spotter when appropriate.
6. I will not fly my model aircraft unless it is identified with my name and address, or AMA number, inside or affixed to the outside of the model aircraft. This does not apply to model aircraft flown indoors.
7. I will not operate model aircraft with metal-blade propellers or with gaseous boosts (other than air), nor will I operate model aircraft with fuels containing tetranitromethane or hydrazine.

8. I will not operate model aircraft carrying pyrotechnic devices which explode burn, or propel a projectile of any kind. Exceptions include Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight. Rocket motors up to a G-series size may be used, provided they remain firmly attached to the model aircraft during flight. Model rockets may be flown in accordance with the National Model Rocketry Safety Code; however, they may not be launched from model aircraft. Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Air Show Advisory Committee Document.
9. I will not operate my model aircraft while under the influence of alcohol or within eight (8) hours of having consumed alcohol.
10. I will not operate my model aircraft while using any drug which could adversely affect my ability to safely control my model aircraft.
11. Children under six (6) years old are only allowed on a flightline or in a flight area as a pilot or while under flight instruction.
12. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

RADIO CONTROL

1. All model flying shall be conducted in a manner to avoid over flight of unprotected people.
2. I will have completed a successful radio equipment ground-range check before the first flight of a new or repaired model aircraft.

3. I will not fly my model aircraft in the presence of spectators until I become a proficient flier, unless I am assisted by an experienced pilot.
4. At all flying sites a line must be established, in front of which all flying takes place. Only personnel associated with flying the model aircraft are allowed at or in front of the line. In the case of airshows demonstrations straight line must be established. An area away from the line must be maintained for spectators. Intentional flying behind the line is prohibited.
5. I will operate my model aircraft using only radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
6. I will not knowingly operate my model aircraft within three (3) miles of any preexisting flying site without a frequency-management agreement. A frequency management agreement may be an allocation of frequencies for each site, a day-use agreement between sites, or testing which determines that no interference exists. A frequency-management agreement may exist between two or more AMA chartered clubs, AMA clubs and individual AMA members, or individual AMA members. Frequency-management agreements, including an interference test report if the agreement indicates no interference exists, will be signed by all parties and copies provided to AMA Headquarters.
7. With the exception of events flown under official AMA rules, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and located at the flightline.

8. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual.
9. Radio-controlled night flying is limited to low-performance model aircraft (less than 100 mph). The model aircraft must be equipped with a lighting system which clearly defines the aircraft's attitude and direction at all times.
10. The operator of a radio-controlled model aircraft shall control it during the entire flight, maintaining visual contact without enhancement other than by corrective lenses that are prescribed for the pilot. No model aircraft shall be equipped with devices which allow it to be flown to a selected location which is beyond the visual range of the pilot.

Extra 300 32e Safe Operating Recommendations

- Inspect your model before every flight to make certain it is airworthy.
- Be aware of any other radio frequency user who may present an interference problem.
- Always be courteous and respectful of other users of your selected flight area.
- Choose an area clear of obstacles and large enough to safely accommodate your flying activity.
- Make certain this area is clear of friends and spectators prior to launching your aircraft.
- Be aware of other activities in the vicinity of your flight path that could cause potential conflict.
- Carefully plan your flight path prior to launch.
- Abide by any and all established AMA National Model Aircraft Safety Code.



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