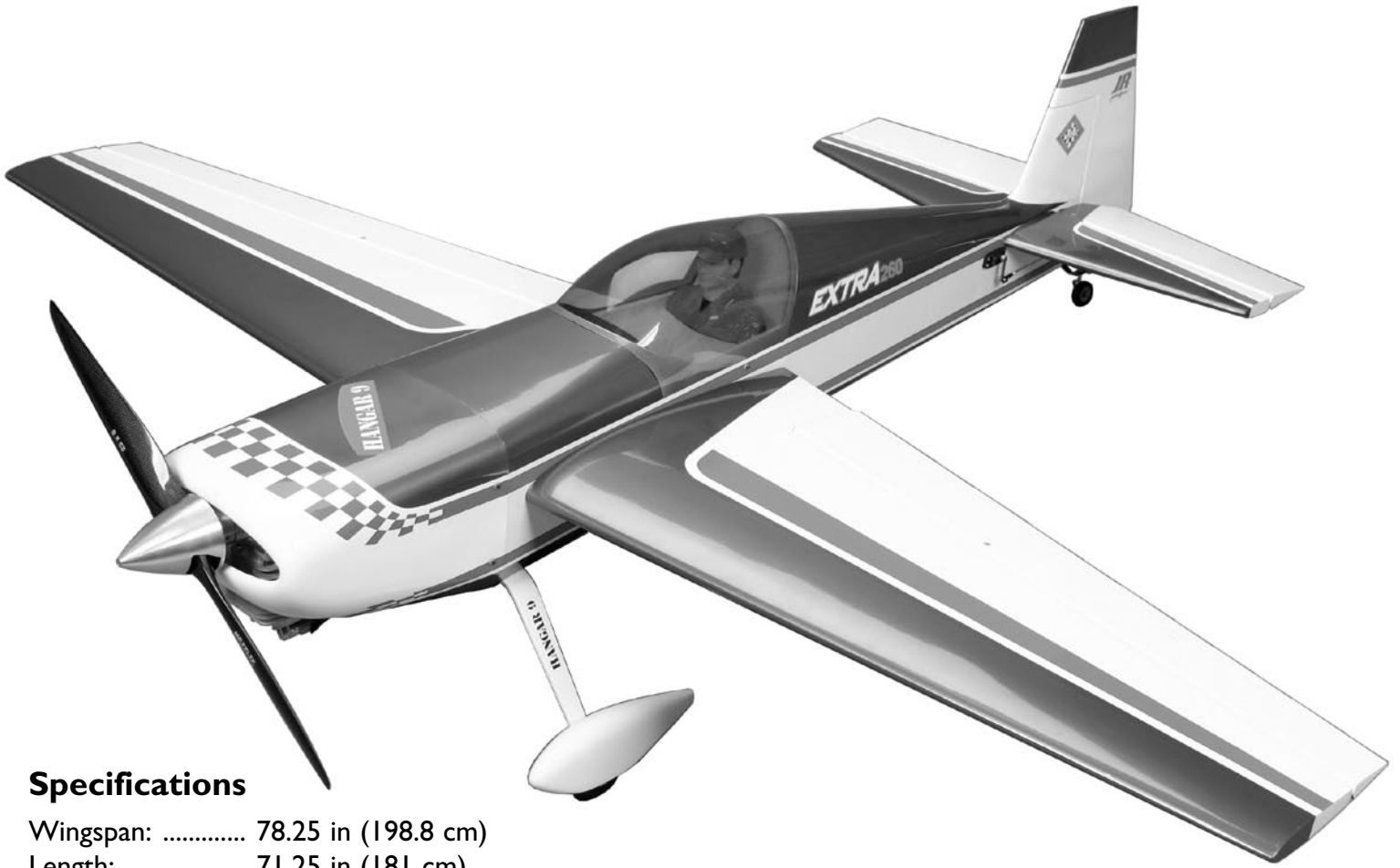




Extra 260

ASSEMBLY MANUAL



Specifications

Wingspan: 78.25 in (198.8 cm)
Length: 71.25 in (181 cm)
Wing Area: 1134 sq in (73.1 sq dm)
Weight: 12–15.5 lb (5.44–7.0 kg)
Radio: 4-channel w/6 servos

Recommended Engines:
2-Stroke..... 1.20–2.10
4-Stroke..... 1.50–2.20
Gas..... 35–50cc

- Awsome IMAC and 3D performer
- Lightweight construction
- Designed by aerobatic veteran Mike McConville
- 90% factory built ARF
- Plug-in wings and stabilizers for easy transport and field assembly

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Covering Colors

- | | | | |
|------------|---------|--------------|---------|
| • White | HANU870 | • Pearl Blue | HANU845 |
| • True Red | HANU866 | | |

Contents of Kit



Large Parts

Fuselage w/Hatch	HAN2751
Right Wing Panel w/Aileron	HAN2752
Left Wing Panel w/Aileron	HAN2753
Stabilizer w/Elevators	HAN2754
Rudder	HAN2755
Canopy	HAN2756
Canopy Hatch	HAN2757
Cowl	HAN2758
Carbon Fiber Landing Gear	HAN2759
Wheel Pant Set	HAN2760
Decal Set	HAN2761
Carbon Fiber Tail Wheel Bracket	HAN2762
Anodized Aluminum Wing Tube	HAN2763
Anodized Stab Tubes	HAN2764

Other Items Needed (not included in the kit)

- Propeller
Saito 1.80: APC 17x6
Saito 2.20: APC 18x8
DA-50: Mejelik 23x8
- Spinner (3 1/4")
- 12" Servo Extension (JRPA098) (2)
- 18" Servo Extension (JRPA099) (2)
- 3D XL 1/2 Servo Arm 4-40: JR (HAN3578) (4)
(5 if using DA-50)
- 3D XL Full Servo Arm 4-40: JR (HAN3576)
(If using Saito 1.80–2.20)

Additional Required Equipment

Radio Equipment

- 6-channel radio system (minimum)
- 1 standard servo for throttle (JRPS537 recommended or equivalent)
- 4 hi-torque servos (JRPS8231 recommended or equivalent)
- 1 hi-torque servo (JRPS8411 recommended or equivalent)

Recommended JR® Systems

- PCM10X
- XP9303
- XP6102



JR PCM 10X



JR XP9303

Recommended Engines

- Saito™ 1.50, 2.20
- Desert Aircraft DA-50

Additional Required Tools and Adhesives

Tools

- 4-40 tap
- Adjustable wrench (small)
- Canopy scissors
- Drill (drill press preferred)
- Drill bit: 1/16", 3/16", 5/64", 7/32", #43, 5/32"
- Drum sander
- Cut-off wheel
- Flat blade screwdriver w/short handle
- Foam: 1/4"
- Hex wrench: 3/32"
- Hobby knife
- Masking tape
- Phillips screwdriver (small)
- Razor saw
- Scissors
- Square
- Syringe
- Tap handle
- Toothpicks
- Velcro straps

Adhesives

- 30-minute epoxy
- Medium CA (cyanoacrylate) glue
- CA remover/debonder
- Pacer Z-42 Threadlock
- Pacer hinge glue (PT-55)
- Formula 560-canopy glue
- Shoo Goo

Other Required Items

- Epoxy brushes
- Felt-tipped pen or pencil
- Measuring device (e.g. ruler, tape measure)
- Mixing sticks for epoxy
- Paper towels
- Petroleum jelly
- Rubbing alcohol
- Sanding bar
- Sandpaper (coarse)
- Covering Iron (HAN101)
- Dental floss or string

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 and engine.

Servo Selection

The servos used for the control surfaces of the Extra 260 must have a minimum of 80 ounce inch of servo torque. In the prototype Extras, we used JR8231 and JR9411 servos. On the rudder we used one JR8411SA servo.

Before Starting Assembly

Before beginning the assembly of the Extra 260, 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, contact the place of purchase.

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

Using the Manual

This manual is divided into sections to help make assembly easier to understand and to provide breaks between each major section. Remember to take your time and follow the directions.

Warranty Information

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

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

Once assembly of the model has been started, you must contact Horizon Hobby, Inc. directly regarding any warranty question that you have. Please do not contact your local hobby shop regarding warranty issues, even if that is where you purchased it. This will enable Horizon to better answer your questions and service you in the event that you may need any assistance.

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

Horizon Hobby
4105 Fieldstone Road
Champaign, Illinois 61822
(877) 504-0233
www.horizonhobby.com

Section 1 – Hinging the Control Surfaces

Required Parts

- Elevator (left and right)
- Fuselage
- Rudder
- Hinges (17)
- Wing panel (right and left)
- Aileron (left and right)
- Stabilizer (left and right)

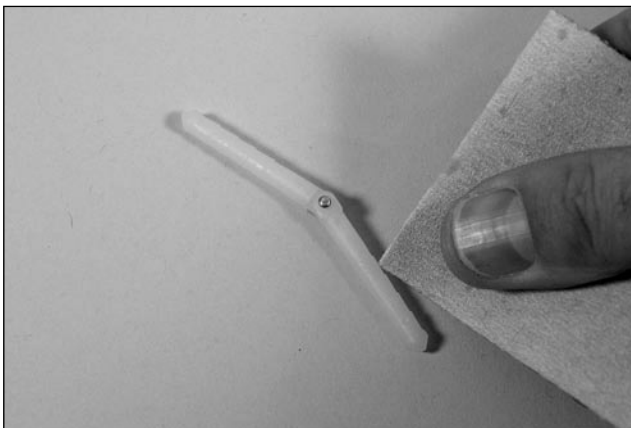
Required Tools and Adhesives

- 30-minute epoxy
- Syringe
- Sandpaper (coarse)
- Toothpicks
- Pacer Hinge Glue (PT-55)
- Razor saw
- Petroleum jelly

Properly hinging the control surfaces on giant-scale models is vitally important. Poorly installed hinges affect the model's precision and control response and can also be dangerous. Each and every hinge needs to be securely bonded in place in both the flying surface and the control surface. The hinge pivot points need to be exactly parallel to each other and precisely located on the center of the hinge line.

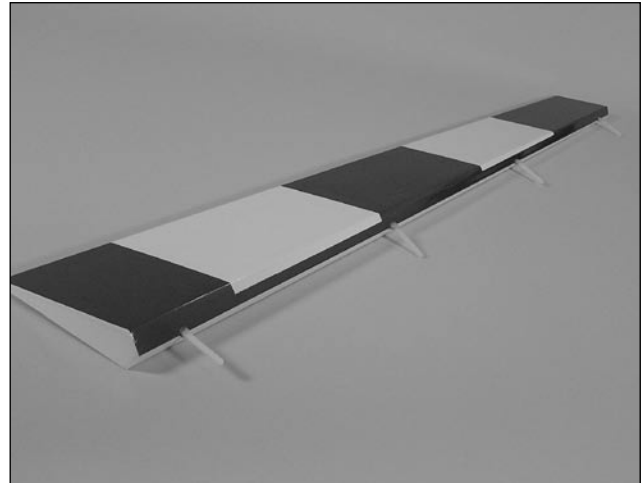
Step 1

Sand each end of the hinge point hinge using coarse sandpaper. This will improve the bond of the epoxy to the hinge. Apply a thin coat of Petroleum jelly to the hinge point to prevent the epoxy from gluing the hinge surface.



Step 2

Mix 1 ounce of 30-minute epoxy. Using a glue syringe or toothpick, place a sufficient amount of 30-minute epoxy into one of the hinge pockets in the aileron leading edge only. Install one of the hinge points until the hinge pin center is flush with the leading edge of the aileron. Some epoxy should ooze out of the pocket as the hinge is installed. If not, remove the hinge and apply more epoxy. After gluing a few hinges, you'll get the hang of just how much epoxy is needed. Wipe away any excess epoxy with rubbing alcohol. Recheck that the center of the hinge pin is flush and parallel with the leading edge. Continue installing hinges in the leading edge of the aileron. The control surfaces (ailerons) will be installed after the epoxy is fully cured.



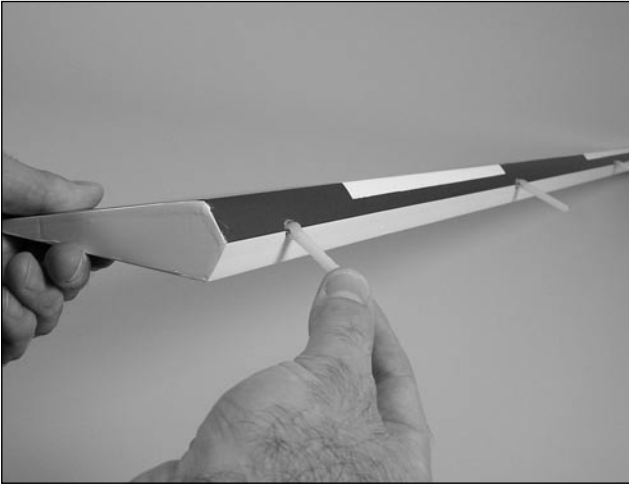
Note: Be sure that the hinge pivot pins are parallel and flush to the aileron leading edge. It's important to frequently mix a fresh batch of 30-minute epoxy in order to achieve good glue joint penetration. If you notice the epoxy becoming thicker, then mix a new batch.

Hint: You can also use Pacer PT-55 Hinge Glue to glue the hinges. Follow the instructions here as well as on the glue bottle to achieve the best results.

Section 1 – Hinging the Control Surfaces

Step 3

Allow the glue to fully cure for at least 6 hours. When cured, work each hinge throughout its full motion several times using your hands. This will break free any epoxy that may have found its way into the hinge joint. Move the hinge throughout its full travel until no resistance is felt. This may take as many as 40 or 50 times.



Step 4

Mix 1 ounce of 30-minute epoxy or use Pacer PT-55 hinge glue. Place a sufficient amount of glue in each of the hinge pockets in one wing panel.



Step 5

Carefully attach the aileron to the wing, making sure the hinges are inserted in their respective hinge pockets. Press the aileron and wing together such that less than a 1/64" hinge line gap exists between the aileron and wing. The bevels should virtually touch. Use a paper towel and rubbing alcohol to wipe away any visible epoxy around the hinges.

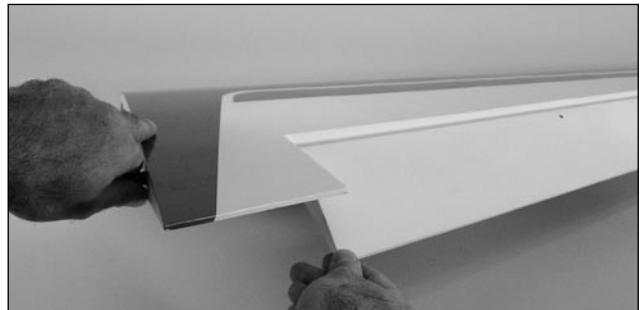


Step 6

Double-check the hinge gap and allow the glue to fully cure for at least 6 hours.

Step 7

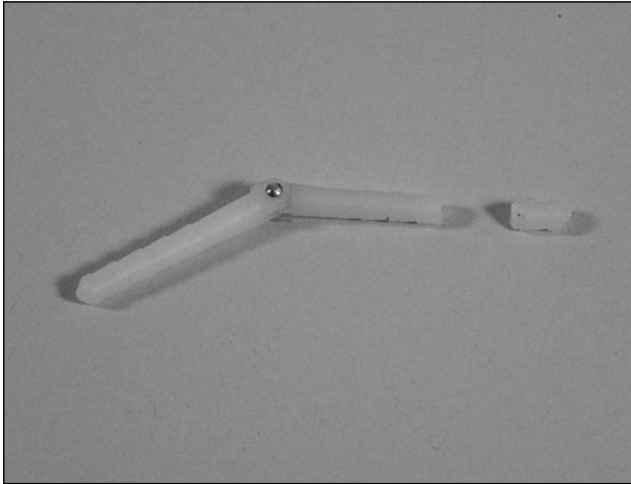
When fully cured, move each control surface throughout its travel range several times to break away any epoxy in the hinge. Be sure to deflect the surface fully.



Section 1 – Hinging the Control Surfaces

Step 8

Use a razor saw to cut off the first section of one of the hinges. This is done to clear the tube installed in the stabilizer.



Step 9

Glue the elevator hinges in place using the same techniques used to hinge the ailerons. The shortened hinge will be installed into the stabilizer towards the root.



Step 10

Repeat Steps 1 through 9 for the remaining aileron and elevator.

Hint: Combining the left and right wing/ aileron and/or left and right stabilizer/elevator while waiting for glue to cure will make this section move along much quicker.

Step 11

Since all that's left is the rudder, this is a good time to glue it as well. Follow Steps 1 through 7 to complete hinging the control surfaces.

Section 2 – Sealing the Hinge Gaps

Required Parts

- Wing panel w/aileron (right and left)
- Stabilizer w/elevator (left and right)

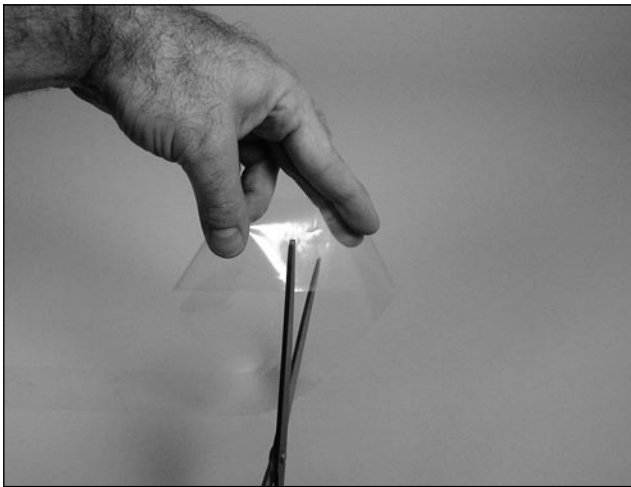
Required Tools and Adhesives

- Straight edge/ruler
- Felt-tipped pen
- Scissors
- Hobby knife w/#11 blade
- Covering Iron (HAN101)
- Clear UltraCote® (HANU964)

It is a good idea to be sure that the aileron and elevator hinge lines be sealed airtight. Sealing the hinge line has several advantages. A sealed hinge line gives a greater control response for a given control deflection. It also offers more precise, consistent control response and makes trimming easier. Sealing the aileron and elevator hinge line is highly recommended. Failure to do so may cause control surface flutter, resulting in a crash.

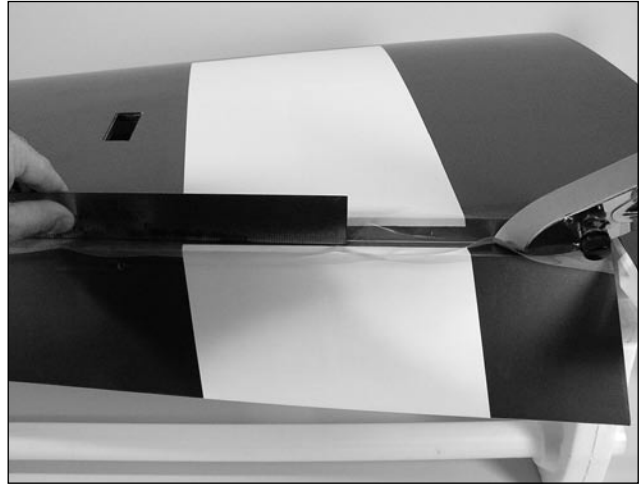
Step 1

Cut a piece of Clear UltraCote® for sealing the ailerons to approximately 1" x 32". Fold the UltraCote down the center with the adhesive side to the outside making a sharp crease at the fold.



Step 2

Remove the backing from the UltraCote. Place the folded crease side into the center of the hinge line on the bottom of the wing. Using a straight edge as shown, hold one side of the covering in place while ironing down the opposite side with a sealing iron. We recommend setting the iron temperature to 320° for this procedure.



Step 3

Fully deflect the aileron in the up position. Place the straight edge over the hinge line covering that you just ironed down in Step 2 with the edge of the straight edge placed firmly at the bottom of the hinge line as shown. Iron down this side of the covering, making sure the aileron is fully deflected.

Step 4

Repeat Steps 1 through 3 for the remaining aileron hinge gap.

Step 5

Repeat Steps 1 through 3 for both elevator halves using a 1" x 15" piece of clear covering.

Section 3 – Aileron Servo Installation

Required Parts

- Wing panel (right and left)
- 3 1/2" aileron linkage (2)
- 8-32 x 2 1/4" control horn screw (2)
- 8-32 flange nut (2)
- Molded swivel link (2)
- Ball link for swivel link (2)
- 4-40 x 1/2" socket head screw (2)
- 4-40 lock nut (2)
- Ball link for servo arm (2)

Required Tools and Adhesives

- Drill
- Ruler
- Phillips screwdriver (small)
- 12" Servo Extension (JRPA098) (2)
- 3D 1/2 Servo Arm 4-40: JR (HAN3578) (2)
- Drill bit: 1/16"

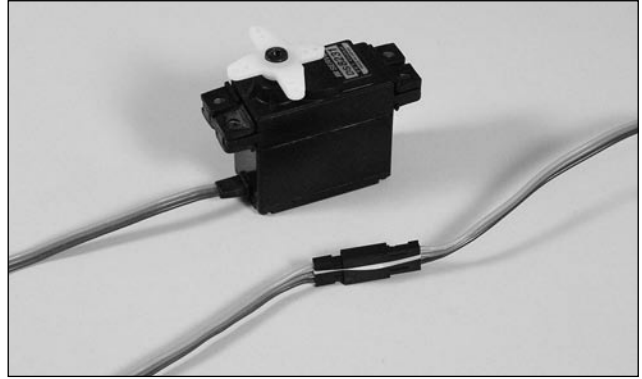
Step 1

Install the servo hardware (grommets and eyelets) included with the servo.



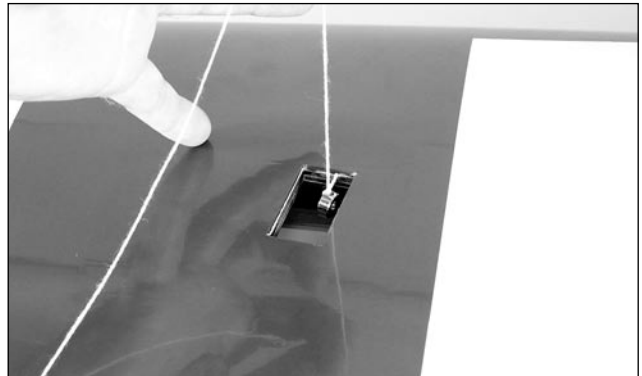
Step 2

Plug a 12" servo extension onto the servo. 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 3

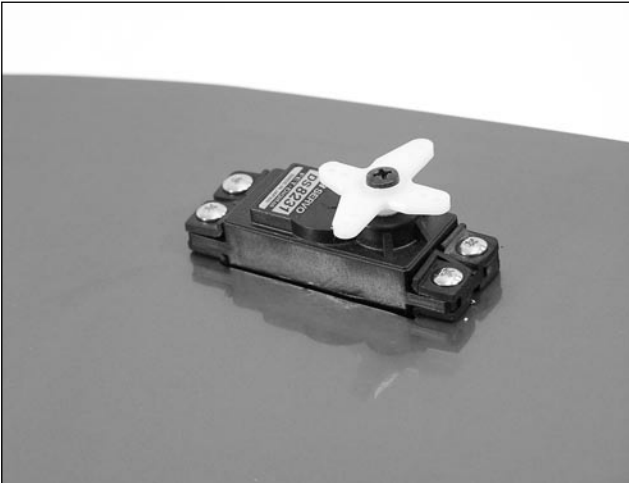
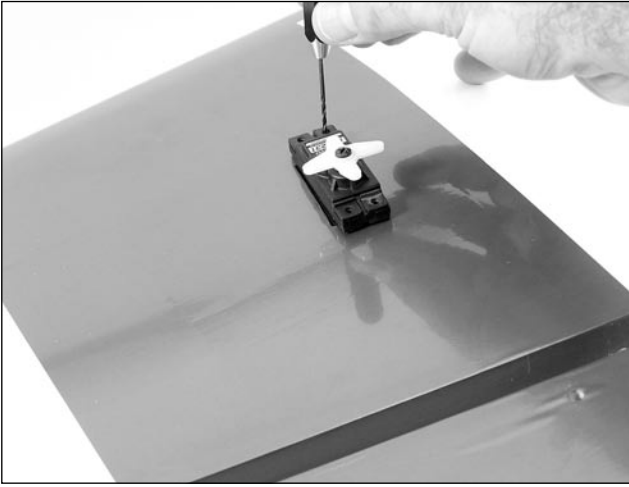
Tie a weight to a piece of string. A wheel collar works great in this application. Lower the string into the wing from the aileron servo opening. Hold the wing with the tip upwards and let the weight drop out through the wing root for the servo.



Section 3 – Aileron Servo Installation

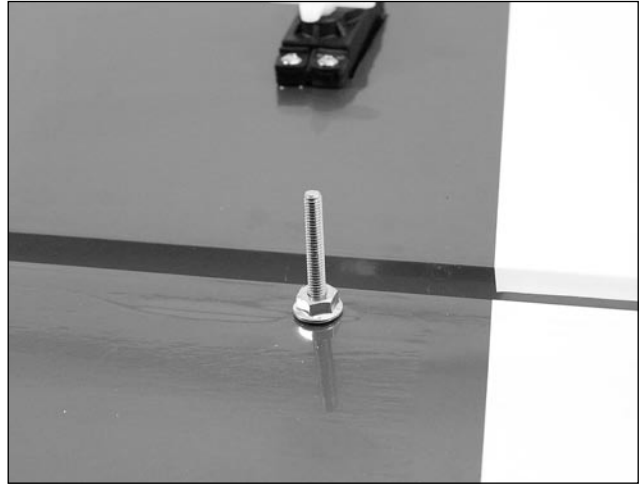
□ □ Step 4

Tie the string to the servo extension and insert the servo into the wing. Use the string to pull the servo lead through the wing. Position the servo so the output shaft is towards the trailing edge of the wing. Use a 1/16" drill bit to drill the locations for the servo screws. Mount the servos using the hardware provided with the servos.



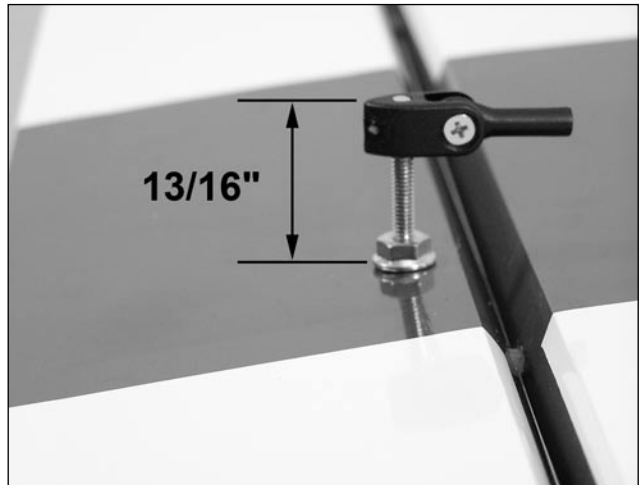
□ □ Step 5

Mix a small amount of 30-minute epoxy and lightly coat the inside of the hole in the aileron and the 8-32 x 2 1/4" control horn screw. Thread the screw into the hole from the top of the surface. Wipe away any excess epoxy on the wing and screw with rubbing alcohol and a paper towel. Screw the 8-32 flange nut in place as shown. Allow the epoxy to fully cure.



□ □ Step 6

Screw the molded swivel link onto the 8-32 screw until the distance from the aileron surface to the top of the link is 13/16".



Section 3 – Aileron Servo Installation

Step 7

Using the 4-40 screws (don't substitute a standard screw) and nuts included, attach the ball link to the outer hole in the servo arm from the bottom side as shown. The sequence is screw, ball link, servo arm and nut. Don't forget to use threadlock.

Note: Hangar 9® aluminum servo arms are suggested for ease of installation and durability. Use 3D 1/2 Servo Arm 4-40: JR (HAN3578) for the aileron servos.



Step 8

Screw a 4-40 ball link 5 to 6 turns onto each end of a 3 1/2" long aileron linkage. Adjust the linkage length until the hole in the ball link aligns with the outer hole in the servo arm when the aileron is neutral and the servo arm is centered.

Step 9

Center the servo using the radio system. Attach the servo horn to the servo using the screw provided with the servo.



Step 10

Attach the linkage to the servo horn on the aileron. Adjust the link so the aileron is centered at the same time as the servo.

Step 11

Repeat Steps 1 through 11 for the remaining wing panel.

Section 4 – Wing and Stabilizer Installation

Required Parts

- Wing panels
- Fuselage
- Wing tube
- Stabilizer tube
- 1/4-20 x 2" nylon bolt (2)
- 4-40 x 1/2" socket head screw (2)

Step 1

Remove the two 4-40 x 1/2" screws securing the hatch to the fuselage. Remove the hatch and store it in a safe place until later.

Step 2

Locate the wing tube and carefully slide it into one wing panel. Slide the wing (with tube) into the wing tube opening in the fuselage. Make sure the wing panel alignment pins slide into the holes provided in the fuselage. Be sure the alignment pins are secure in the wing halves before installing the wings. If they are not, remove the pin and apply a small amount of thin CA into the tube socket and reinstall the alignment pin.

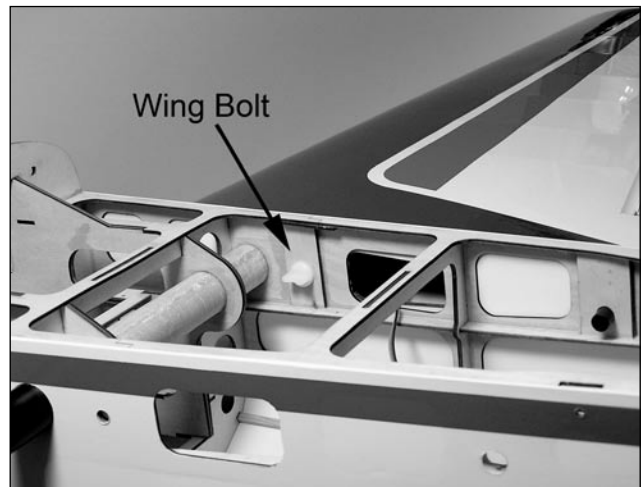


Step 3

Carefully slide the remaining wing panel onto the wing tube that projects from the fuselage. The fit may be tight; use caution when inserting the wing panels onto the wing tube and fuselage.

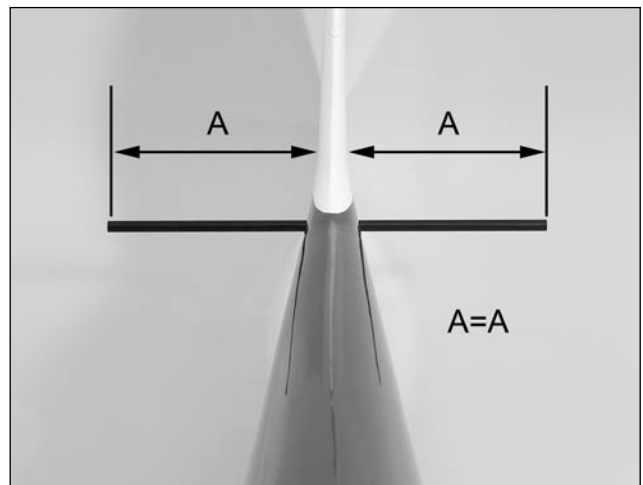
Step 4

Secure the wing panels using the 1/4-20 x 2" nylon wing bolts.



Step 5

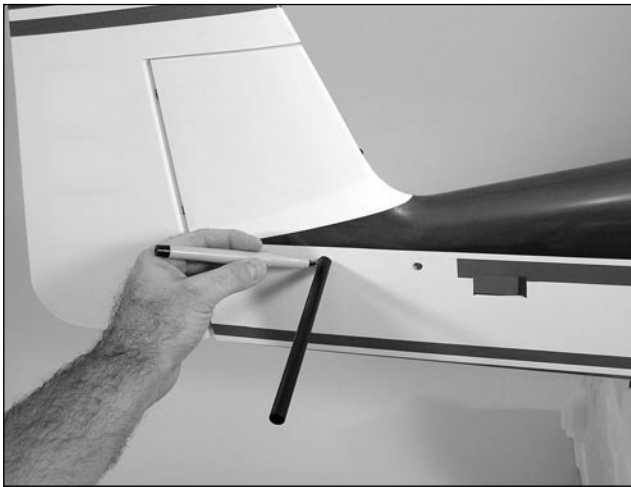
Insert the stabilizer tube into the aft hole in the fuselage. Measure the distance of the exposed tube and adjust until both sides are equal.



Section 4 – Wing and Stabilizer Installation

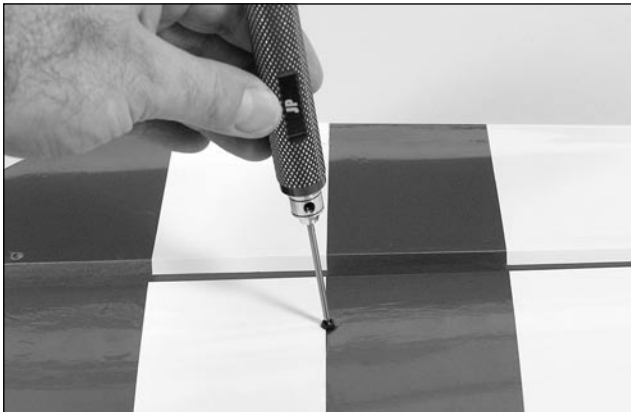
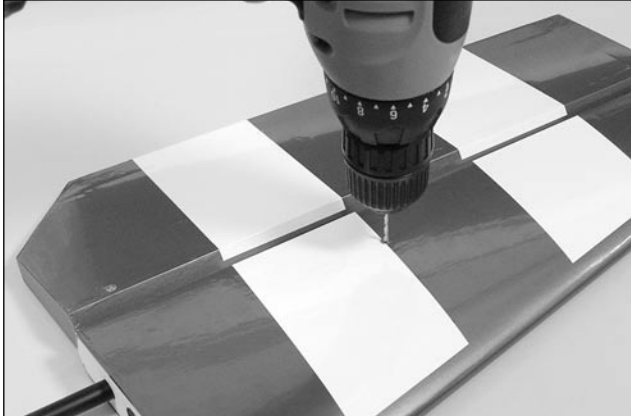
Step 6

Mark the tube on both sides of the fuselage using a felt-tipped pen.



Step 7

Remove the tube and install it into one elevator up to the first line on the tube. Drill through the hole into the stabilizer and tap for a 4-40 bolt. Install a 4-40 x 1/2" bolt to secure the tube in the stabilizer.



Step 8

Slide the assembly into the fuselage. Slide the remaining stab half onto the tube and drill and tap the location for the 4-40 retaining bolt. Install the bolt to complete the procedure.

Hint: When removing the stabilizer for storage, remove only one bolt, leaving the tube secured in the remaining stabilizer. Trying to install the tube without the aid of an alignment guide can be frustrating.



Section 5 – Elevator Servo Installation

Required Parts

- Fuselage w/stabilizer
- 5 1/2" elevator linkage (2)
- 8-32 x 2 1/4" control horn screw (2)
- 8-32 flange nut (2)
- Molded swivel link (2)
- Ball link for swivel link (2)
- 4-40 x 1/2" socket head screw (2)
- 4-40 lock nut (2)
- Ball link for servo arm (2)

Required Tools and Adhesives

- Drill
- Drill bit: 1/16"
- 5" 4-40 linkage (2)
- Dental floss or string
- Aluminum servo arms (2)
- Control horn ball ends (2)
- 18" Servo Extensions (JRPA099) (2)

Note: Using two standard rotation servos and a standard "Y" harness for the elevators will result in them moving in opposite directions instead of the same direction. As such, the elevator 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.

The elevators require a minimum of 80 ounce inch of servo torque. In the prototype Extras we used JR8231 and JR9411 servos with excellent results. Using servos with less torque could cause a crash.

Step 1

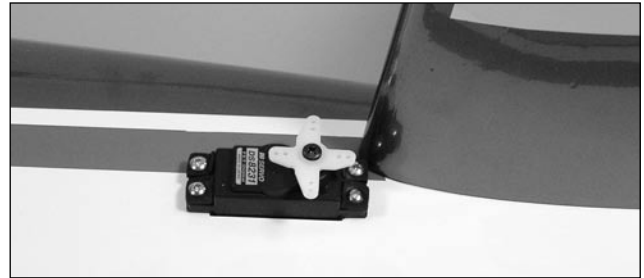
Install an 18" servo extension onto an elevator servo. Either tie the servo leads together, using a commercially available connector, or use unwaxed dental floss to secure the extensions to prevent them from coming loose during flight. Install one side only of the two Y-harnesses to two of the servos, also tying knots to prevent disconnection. The other two servos will be hooked up to the Y-harness when installed in the airplane. One elevator servo will need to be a reversed-direction servo.

Step 2

Install the servo in the fuselage tail section with the output shaft to the rear as shown in the photo.

Step 3

Drill a 1/16" pilot hole before installing the screws. Using the screws included with the servos, fasten the servos in place.



Step 4

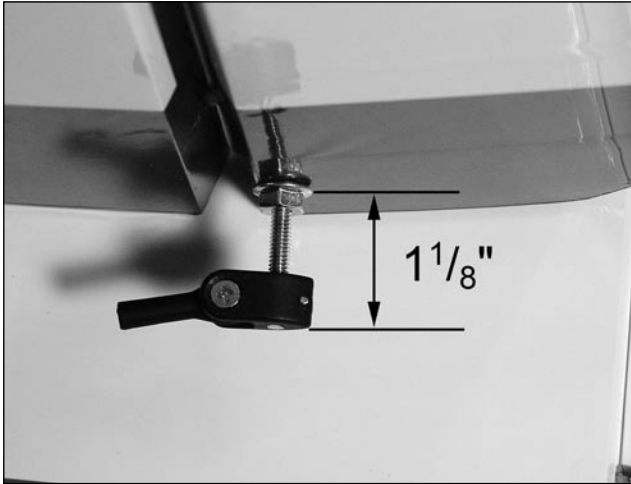
Mix a small amount of 30-minute epoxy and lightly coat the inside of the hole in the elevator and the 8-32 x 2 1/4" control horn screw. Thread the screw into the hole from the top of the elevator. Wipe away any excess epoxy on the wing and screw with rubbing alcohol and a paper towel. Screw the 8-32 flange nut in place as shown. Allow the epoxy to fully cure.



Section 5 – Elevator Servo Installation

Step 5

Screw the molded swivel link onto the 8-32 screw until the distance from the elevator surface to the top of the link is $1\frac{1}{8}$ ".



Step 6

Remove the stock servo arms from the elevator servos and replace them with 3D XL $\frac{1}{2}$ servo arms. The arms need to face down as shown. Be sure to use a drop of threadlock on the servo arm screw if using metal-geared servos.

Step 7

Screw a 4-40 ball link 5 to 6 turns onto a $5\frac{1}{2}$ " elevator linkage. Screw the opposite end of the linkage into the swivel control horn on the elevator. Adjust the linkage length until the hole in the ball link lines up with the outer hole in the servo arm when the elevator is neutral and the servo arm is centered.

Step 8

Use the included 4-40 screws and nuts to attach the ball link to the outer hole in the arm. From the topside, the correct sequence is 4-40 screw, ball link, servo arm and 4-40 locknut. Be sure to use threadlock.



Step 9

Repeat Steps 1 through 8 for the remaining elevator servo and linkage.

Section 6 – Landing Gear Installation

Required Parts

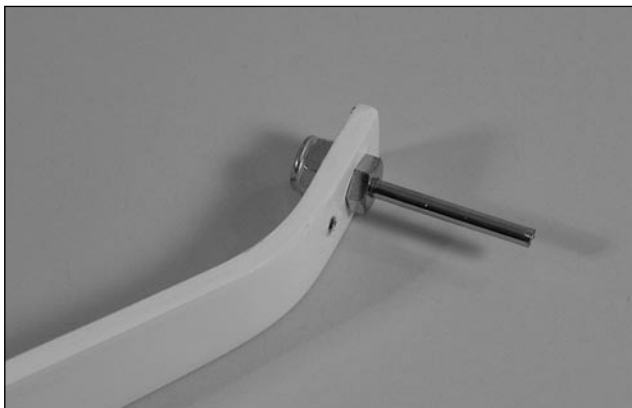
- Fuselage
- Wheel pant (left and right)
- #8 washer (4)
- 8-32 nylon lock nut (4)
- 3 1/4" Wheel (2)
- 3/16" wheel collar (4)
- #4 washer (2)
- 8-32 x 3/4" socket head bolt (4)
- 4-40 x 1/2" socket head screw (2)

Required Tools and Adhesives

- 5/32" hex wrench
- Ruler
- Felt-tipped pen
- Square
- Adjustable wrench (small)

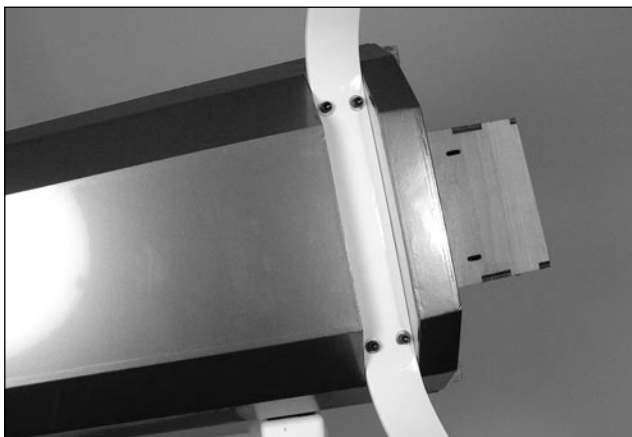
Step 1

Install the axles in the landing gear. Secure the axles using an adjustable wrench and the nuts provided with the axles.



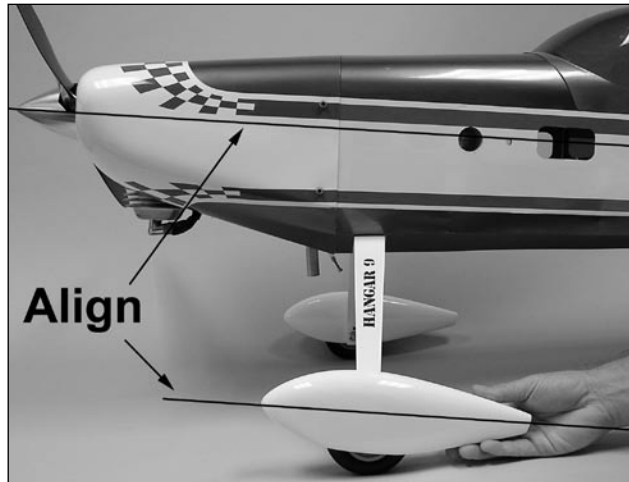
Step 2

Install the landing gear using four 8-32 x 3/4" socket head bolts, four #8 washers and four 8-32 nylon lock nuts. (The lock nuts are placed inside the fuselage.)



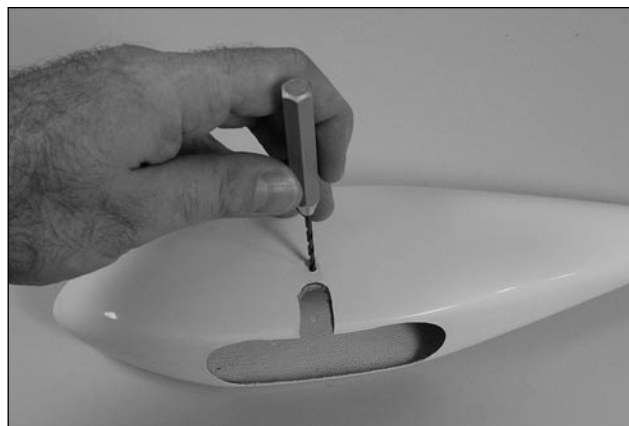
Step 3

Fit the pants over the axle on the landing gear. Align the centerline of the wheel pant to the centerline of the fuselage. Use a felt-tipped pen to transfer the location of the hole onto the pant.



Step 4

Remove the pant and use a 9/64" drill bit to drill the location marked in the previous step.



Section 6 – Landing Gear Installation

Step 5

Install a 4-40 blind nut into the hole from the inside of the pant. The nut will be drawn into the plywood later in this section.



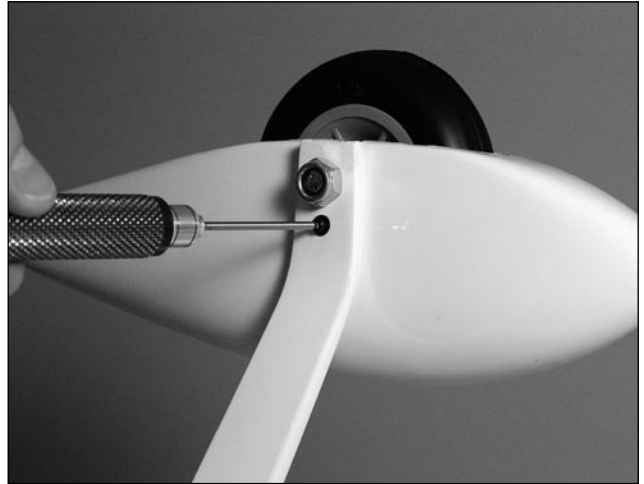
Step 6

Install the following items onto the axle: wheel pant, 3/16" wheel collar, wheel then another 3/16" wheel collar. It will be necessary to fit the parts inside the wheel pant and slide them onto the axle.



Step 7

Secure the pant in place using a 4-40 x 1/2" socket head screw and #4 washer. Use threadlock on the screw to prevent it from coming loose in flight.



Step 8

Center the wheel in the wheel pant and tighten the collars to prevent the wheel from moving side to side. Use threadlock on both set screws.



Step 9

Repeat Steps 3 through 8 for the remaining wheel pant.

Section 7A – Engine Installation: Saito

Required Parts

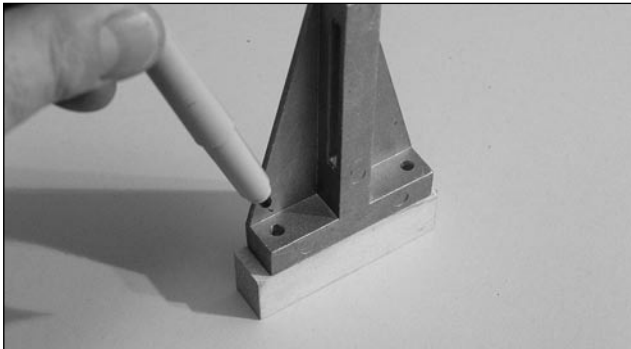
- Fuselage
- 8-32 x 1" screw (4)
- #8 washer (8)
- 8-32 blind nut (4)
- 1/4" fuel tubing
- 8-32 x 1 1/2" socket head bolt (4)
- 9/16" x 13/16" x 2 3/4" hardwood block (2)
- Engine mount (2)
- 8-32 locknut (4)
- 17" throttle pushrod tube
- Nylon clevis

Required Tools and Adhesives

- Medium CA
- Drill
- Ruler
- Square
- Drill bit: 3/16", 7/32"

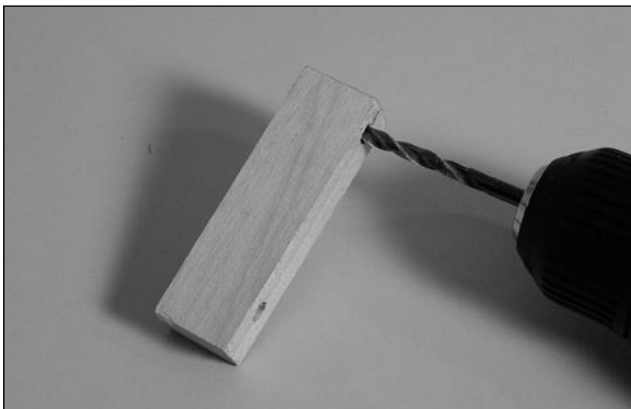
Step 1

Locate the right and left engine mounts and the two 9/16" x 13/16" x 2 3/4" hardwood blocks. Position an engine mount onto the narrow edge of a block. Mark the locations for the mounting bolts onto the block.



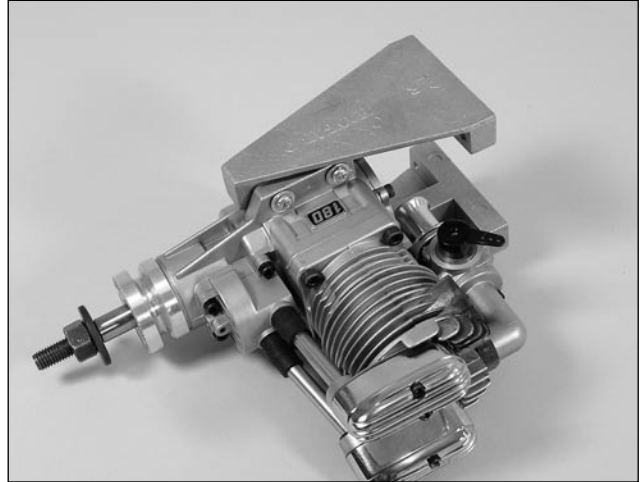
Step 2

Use a 3/16" drill and drill press to drill the two holes through the blocks.



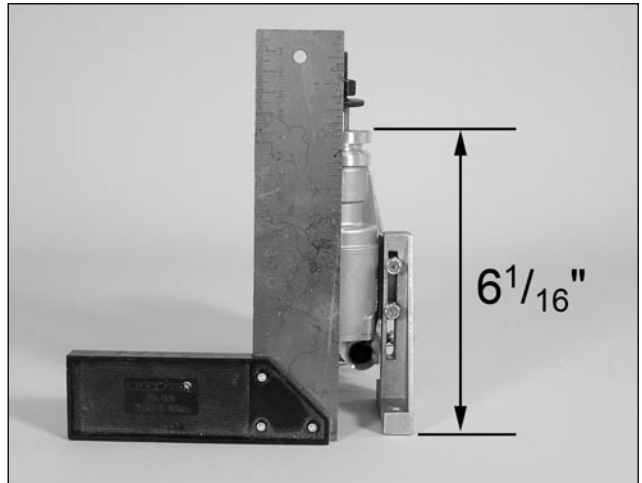
Step 3

Temporarily attach the engine to the engine mount using four 8-32 x 1" screws, four 8-32 locknuts and four #8 washers. Position the arrows on the mounts so they face towards the head of the engine.



Step 4

Position the engine on the mounts so the face of the drive washer is 6 1/16" from the work surface. Use a square to make sure the engine is square to the engine mounts.

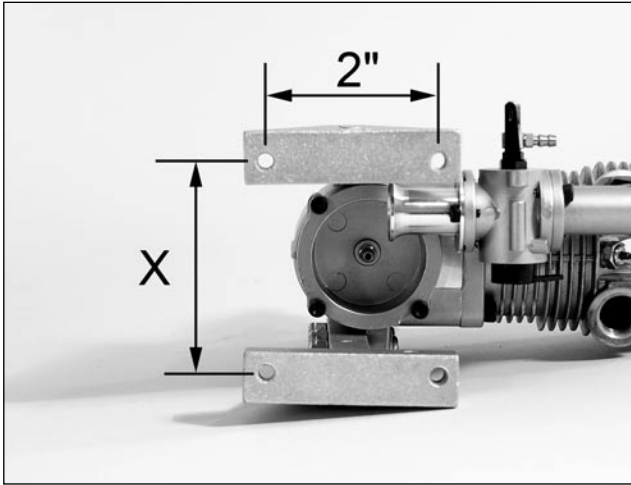


Section 7A – Engine Installation: Saito

Step 5

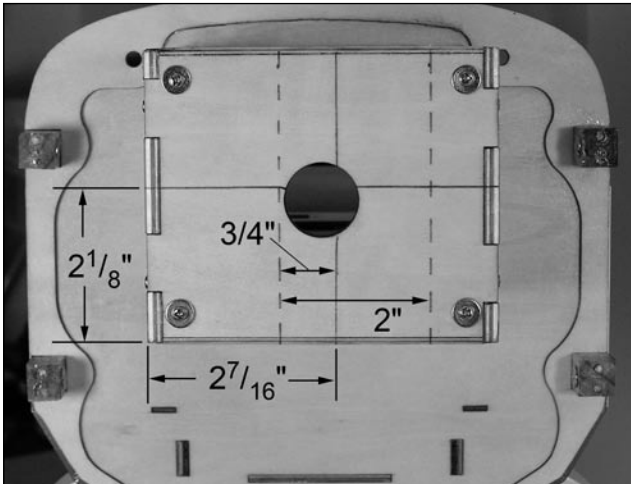
Measure and record the measurements as shown.

Hint: A Saito™ 1.80 should be $2\frac{3}{8}$ " between the mounts. The distance from the centers on the mounts is 2".



Step 6

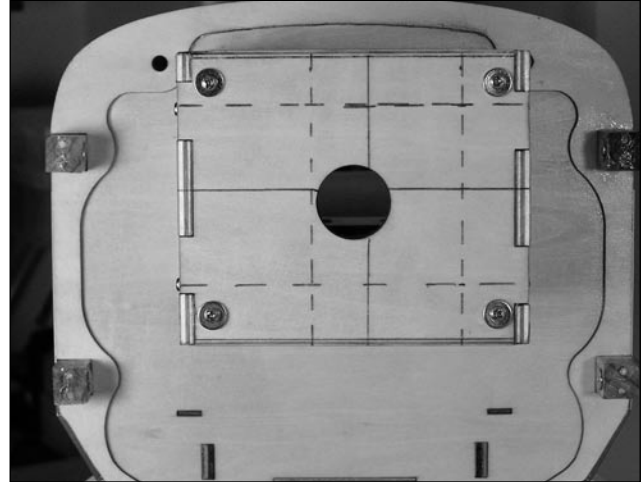
Mark the centerline for the engine onto the firewall. Note the vertical centerline is offset to the right side of center as viewed from the front due to the built-in right-thrust. Mark the positions for the mount halves as shown. These will be the same no matter what engine if you are using the supplied mount.



Note: The engine is not centered between the engine mount holes. The lines drawn for the mount reflect this.

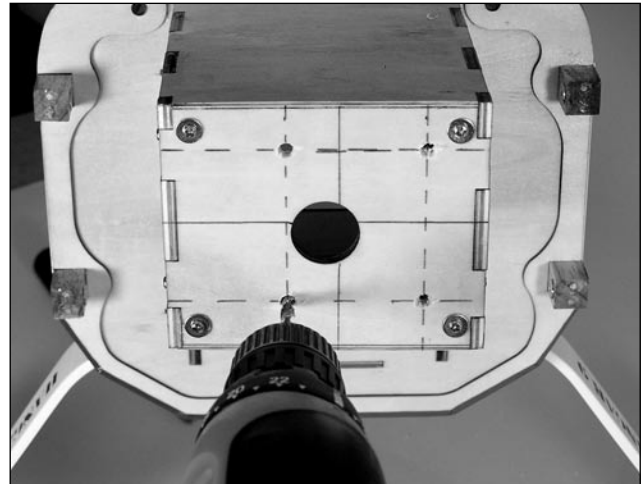
Step 7

Take the measurement from Step 5 and divide it by two. (For the Saito, this will be $1\frac{3}{16}$ ".) Use this measurement to mark the positions above and below the centerline for the engine mount.



Step 8

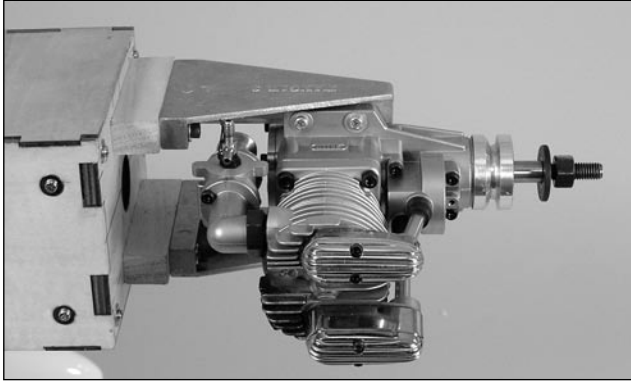
Use a drill and a $7/32$ " drill bit to drill four holes at the intersections of the lines drawn for the engine mount bolts.



Section 7A – Engine Installation: Saito

Step 9

Attach the engine to the firewall using four 8-32 x 1 1/2" socket head bolts, four #8 washers and four 8-32 blind nuts. Remember to use the mounting blocks that were prepared in Steps 1 and 2.

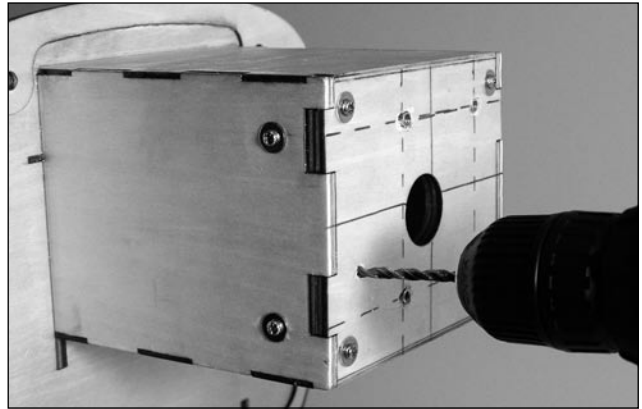
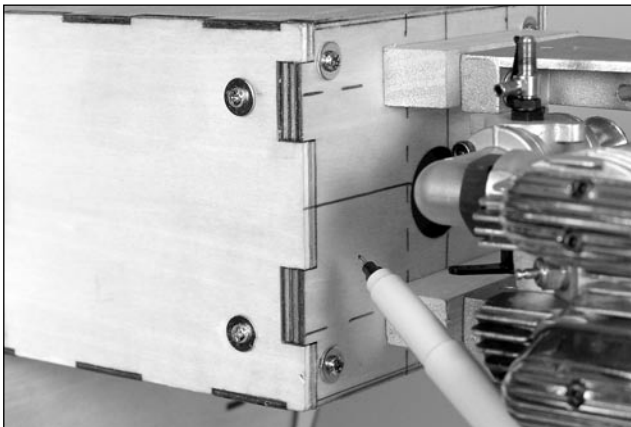


Step 10

Check the distance from the firewall to the drive washer and adjust as necessary to the distance of 6 7/8". Also double-check that the engine is square to the firewall.

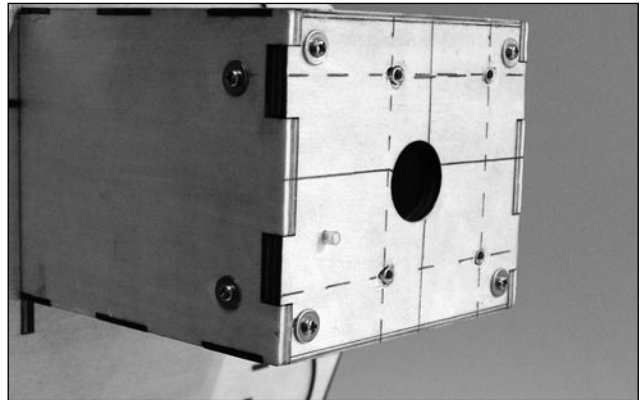
Step 11

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" drill bit.



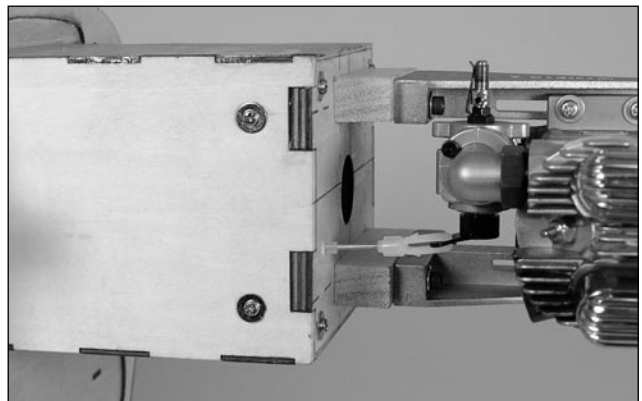
Step 12

Roughen the tube using medium sandpaper. Slide the tube into position and use medium CA to glue it to the firewall.



Step 13

Trim the tube 1/2" in front of the throttle servo tray. Place a 1/4" piece of fuel tubing onto a clevis, then thread the clevis onto the 13 3/4" throttle pushrod. Attach the clevis to the carburetor arm. Slide the pushrod wire into the tube and secure the engine to the firewall.



Section 7B – Engine Installation: DA-50

Required Parts

- Fuselage
- 17" throttle pushrod tube
- Nylon clevis
- 1/4" fuel tubing
- 13³/₄" throttle pushrod
- 1/4-20 x 1" bolts (4)
- 1/4" split washers (4)

Required Tools and Adhesives

- Medium CA
- Drill bit: 5/32", 7/32"
- Square
- Razor saw
- Drill
- Ruler
- Hobby knife
- Rotary tool

Note: The DA-50 can be used with either the MTW 75 canister and header exhaust system, or with the Slimline Pitts muffler, both available from Desert Aircraft. This section shows installation of the DA-50 using the MTW canister muffler system.

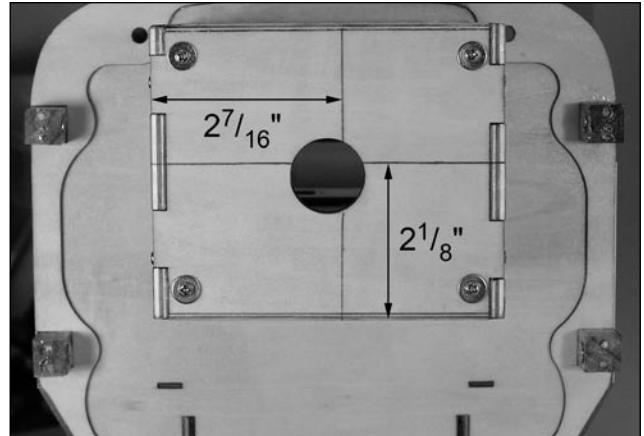
Step 1

Attach the engine standoff onto the engine using the instructions provided with the engine. Also collect all the items required for the exhaust system at this time.



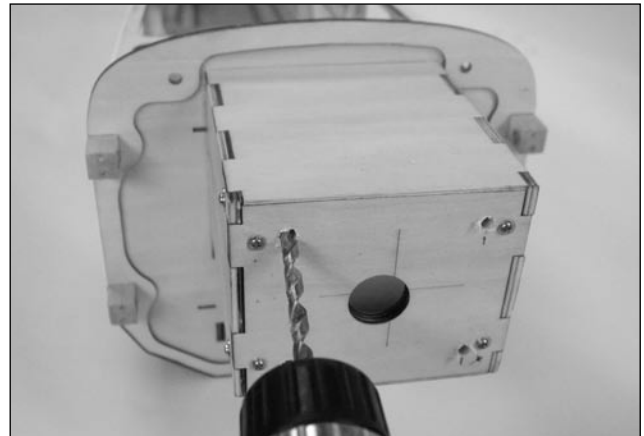
Step 2

Mark the centerline for the engine onto the firewall. Note the vertical centerline is offset to the right side of center as viewed from the front due to the built-in right-thrust. These will be necessary no matter what engine you choose to install.



Step 3

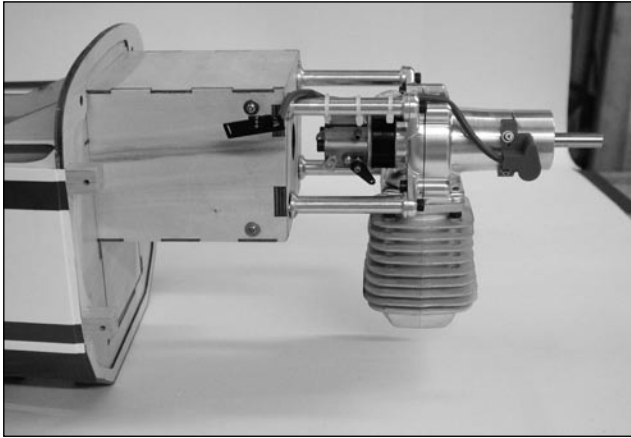
Measure the distance between the mounts, both horizontal and vertical. Take the measurement and divide it by two. Use this measurement to mark the positions above and below the centerlines for the engine mount. Use a drill and a 7/32" drill bit to drill four holes at the intersections of the lines drawn for the engine mount bolts.



Section 7B – Engine Installation: DA-50

Step 4

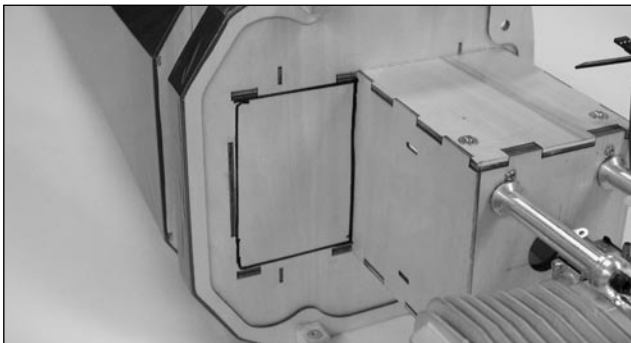
Attach the engine to the firewall using four 1/4-20 x 1" bolts and four 1/4" split washers from the inside of the firewall..



Note: Skip to Step 10 if using a Pitts-style muffler, as the following modifications are only required when using a canister-style muffler.

Step 5

Mark the former as shown. The area below and between the engine box will be removed. Use a hobby knife, rotary tool and saw to remove the area from the sub firewall.



Step 6

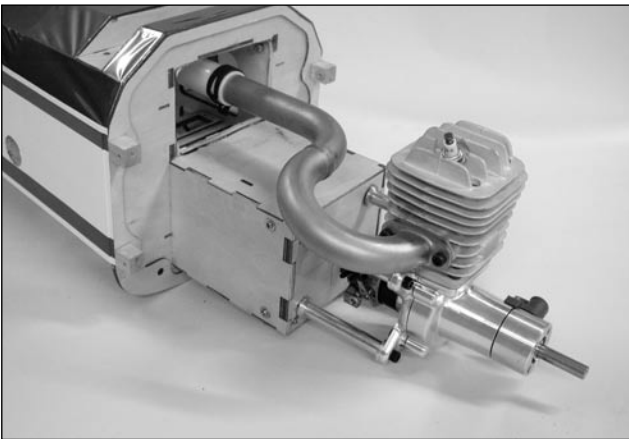
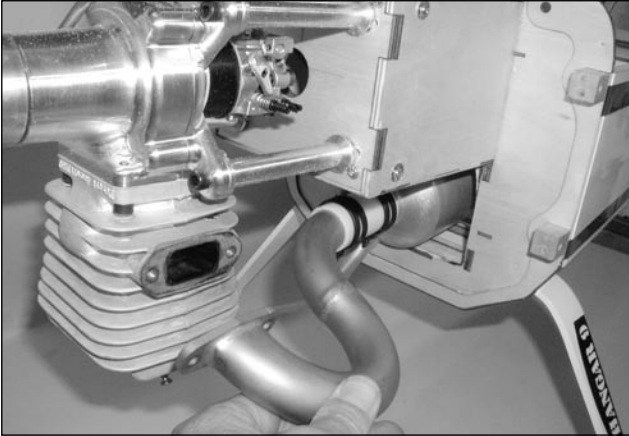
Remove the covering 1/2" away from the sides of the fuselage. Use a covering iron to iron the excess material down into the fuselage. Remember to seal the wood inside the fuselage to protect it from fuel and exhaust.



Section 7B – Engine Installation: DA-50

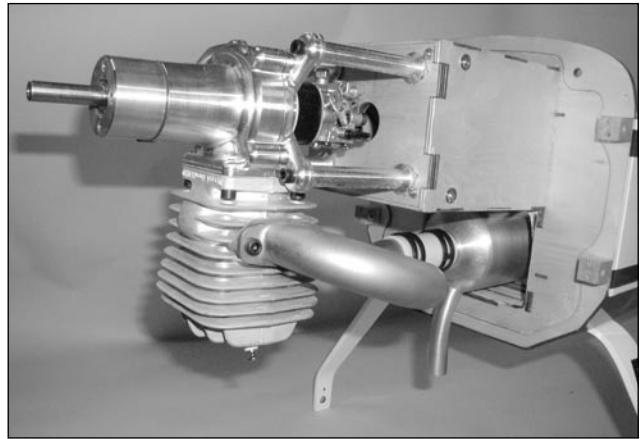
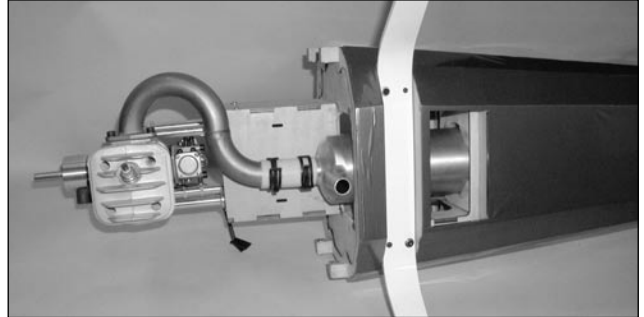
Step 7

Assemble the canister and header using the coupler and clamps provided with the muffler. Fit the muffler into the opening made in the former, and adjust as necessary to provide adequate clearance around the muffler.



Step 8

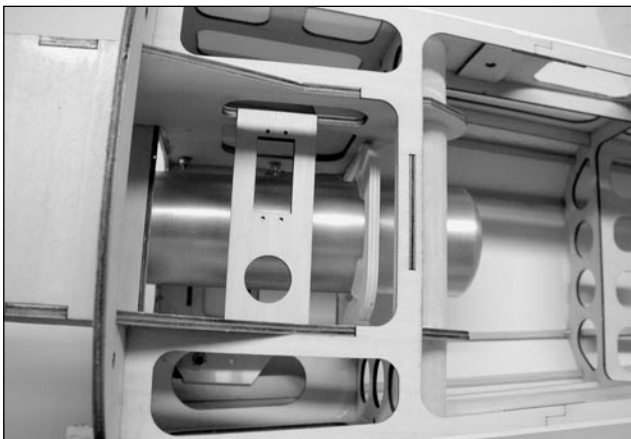
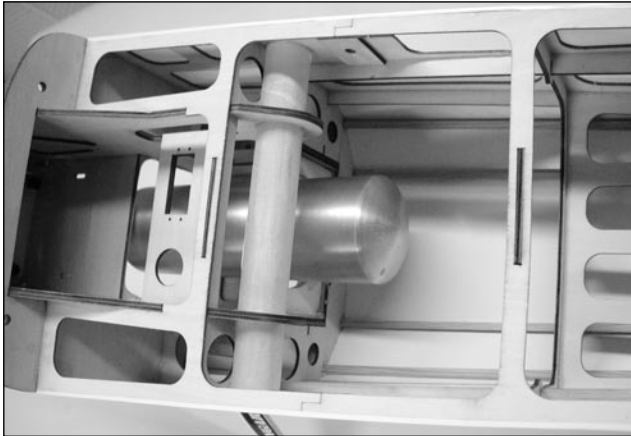
Position the exhaust stinger directly down so the exhaust exits the aircraft. Bolt the exhaust header to the engine.



Section 7B – Engine Installation: DA-50

Step 9

Trial fit the canister mount supplied with the exhaust system. Trim the bottom edge and add approximately 3/32" to each side so it fits snugly between the motor box sides. Adjust until the canister is centered in the opening in the former and glue in place with epoxy or medium CA. The canister is to be exposed to the inside of the model. This work well, keeping the weight to a minimum.



Step 10

If using a Pitts-style muffler, mount the muffler to the engine at this time.

Step 11

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" drill bit.

Step 12

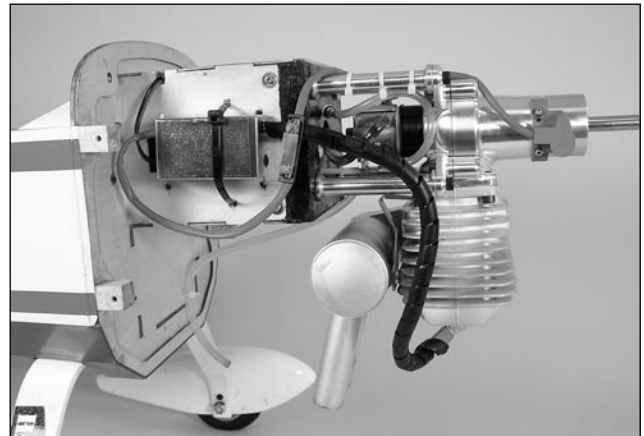
Roughen the tube using medium sandpaper. Slide the tube into position and use medium CA to glue it to the firewall.

Step 13

Trim the tube 1/2" in front of the throttle servo tray. Place a 1/4" piece of fuel tubing onto a clevis, then thread the clevis onto the 13³/₄" throttle pushrod. Attach the clevis to the carburetor arm. Slide the pushrod wire into the tube and secure the engine to the firewall.

Step 14

Install the ignition onto the engine box as shown. Mounting the ignition to the engine box keeps it from the radio. Being too near could cause radio interference.



Section 8A – Rudder Servo Installation: Saito

Required Parts

- Fuselage assembly

Required Tools and Adhesives

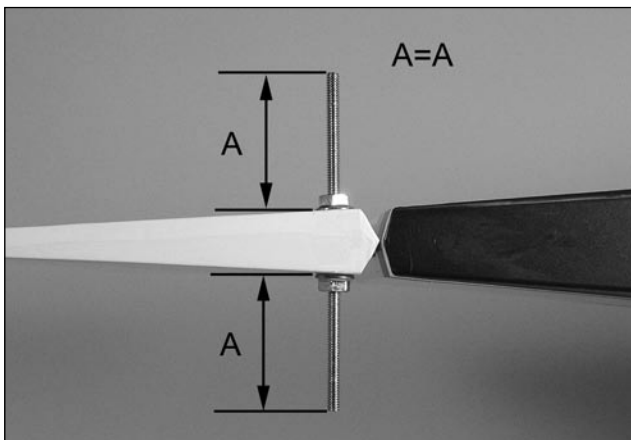
- Threadlock
- 4-40 linkage
- 4-40 locknut (2)
- 8-32 x 4" control horn screw
- 4-40 x 1/2" socket head screw (2)
- Ruler
- 8-32 flange nut (2)

The Extra 260 has two options for mounting the rudder servo. For lighter engines, such as the Saito™ 1.80 and 2.20, a pull-pull system is used. For heavier engines, such as the DA-50, a tail mounted servo is used.

The rudder requires a minimum of 100 ounce inch of servo torque. In the prototype Extras we used a JR8411SA servos with excellent results. Using servos with less torque could result in blow back.

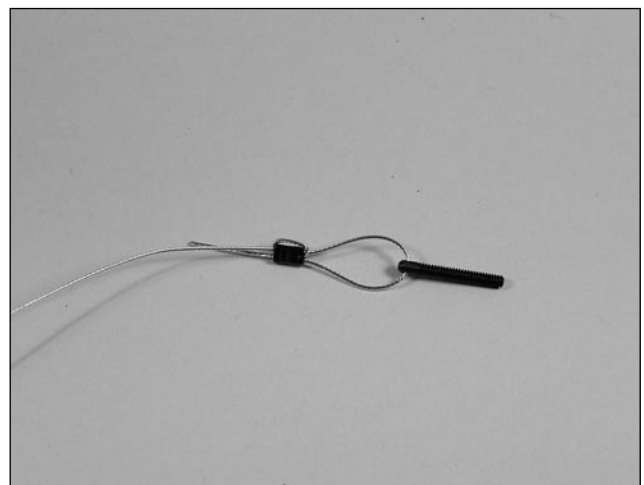
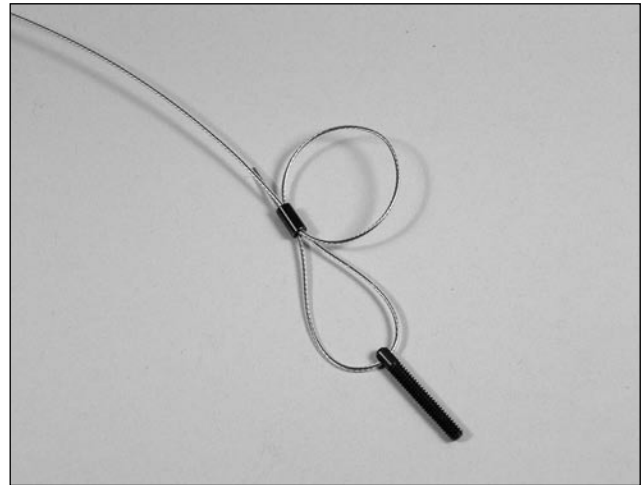
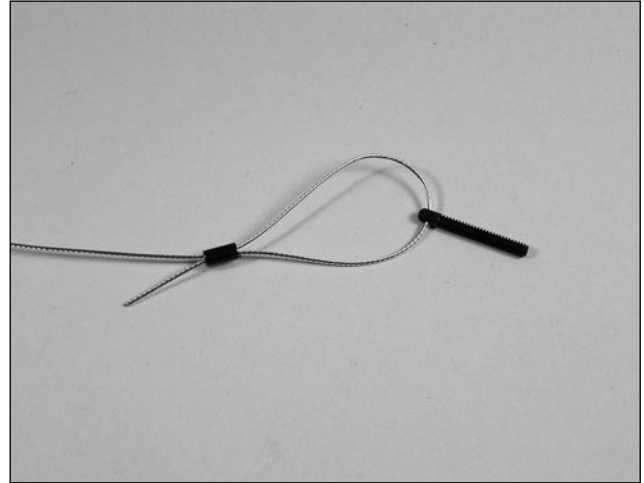
□ Step 1

Thread the 8-32 x 4" control horn screw into the hole in the rudder and epoxy in place. Thread the 8-32 flange nuts onto the screw from both sides of the rudder. Position the screw so it is centered in the rudder. Use threadlock on the nuts to prevent them from loosening during flight.



□ □ Step 2

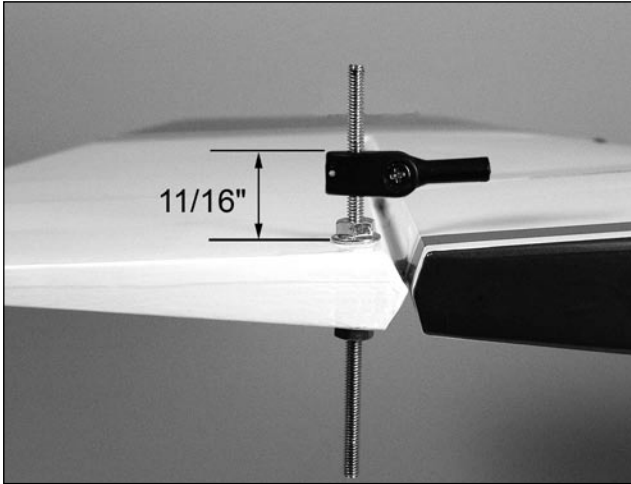
Cut the cable into two equal pieces. Prepare one end of the pull-pull cable using the cable, threaded cable end and crimp. The cable passes through the crimp, through the threaded end, then back through the crimp twice. Pull the excess cable tight and use a crimping tool to complete the job.



Section 8A – Rudder Servo Installation: Saito 1.80

Step 3

Screw the molded swivel link onto the 8-32 screw until the distance from the rudder surface to the top of the link is 11/16".



Step 4

Thread the cable end halfway into the ball link. Remove the covering from the fuselage for the cable exit. The exit is located 6" in front of the rudder hinge line. Pass the cable into the fuselage through the opening.



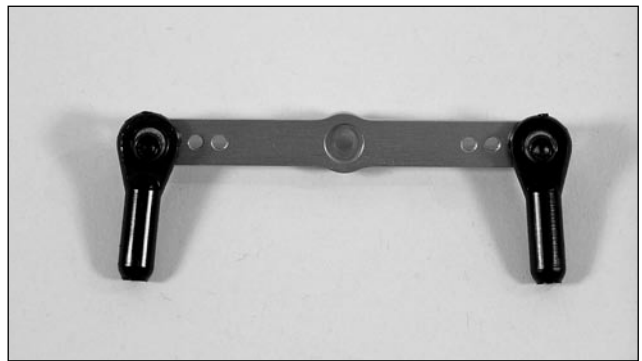
Step 5

Using the screws included with the servos, fasten the servos in place. You may find it helpful to drill a 1/16" pilot hole before installing the screws.



Step 6

Prepare the rudder servo arm by attaching two 4-40 ball links using the standoffs and 4-40 lock nuts.



Step 7

Center the rudder servo and place the servo arm onto the servo. Slide a crimp onto the cable, then a threaded end. Pass the cable back through the crimp.



Section 8A – Rudder Servo Installation: Saito 1.80

Step 8

Adjust the position of the threaded end on the cable so it will thread into the ball end and have slight tension on the cable to the rudder. It will take some time to get the position right. Once the position of the end is correct, pass the cable back through the crimp and secure the cable. Thread the end into the ball end.



Note: The cables will cross inside the fuselage to get the correct geometry.

Step 9

Repeat Steps 2 through 8 to assemble and install the second rudder cable. (Step 5 is only required once.)

Step 10

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 tension on the cables. Adjustments can be made at the rudder control horn and at the servo arm. Once adjustments are made, secure the servo arm to the rudder servo using the screw that came with the servo.

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

Section 8B – Rudder Servo Installation: DA-50

Required Parts

- Fuselage w/ stabilizer
- 5" rudder linkage
- 8-32 flange nut
- Molded swivel link
- 4-40 locknut
- Ball link for servo arm
- Ball link for swivel link
- 4-40 x 1/2" socket head screw
- 8-32 x 2 1/4" control horn screw

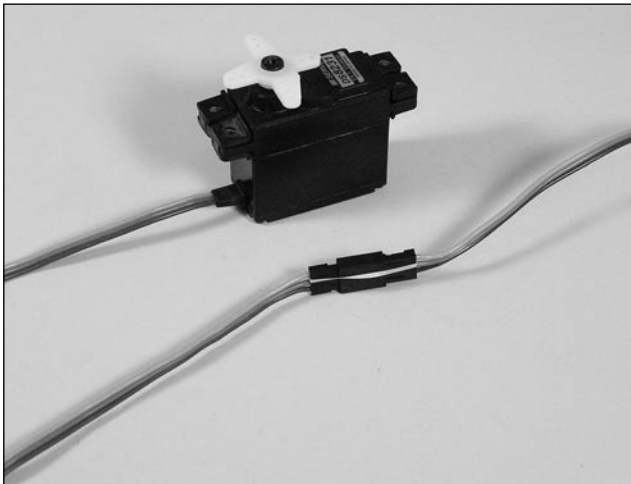
Required Tools and Adhesives

- Drill
- Drill bit: 1/16"
- Dental floss or string
- Aluminum servo arms
- Control horn ball ends
- 18" Servo Extensions (JRPA099)

The rudder requires a minimum of 100 ounce inch of servo torque. In the prototype Extras we used a JR8411SA servos with excellent results. Using servos with less torque could result in blow back.

Step 1

Install an 18" servo extension onto the rudder servo. Either tie the servo leads together, using a commercially available connector, or use unwaxed dental floss to secure the extension to prevent it from coming loose during flight.



Step 2

Remove the covering from the fuselage for the rudder servo location. Install the servo in the fuselage tail section with the output shaft to the rear as shown in the photo.

Step 3

Using the screws included with the servos, fasten the servos in place. You may find it helpful to drill a 1/16" pilot hole before installing the screws.



Step 4

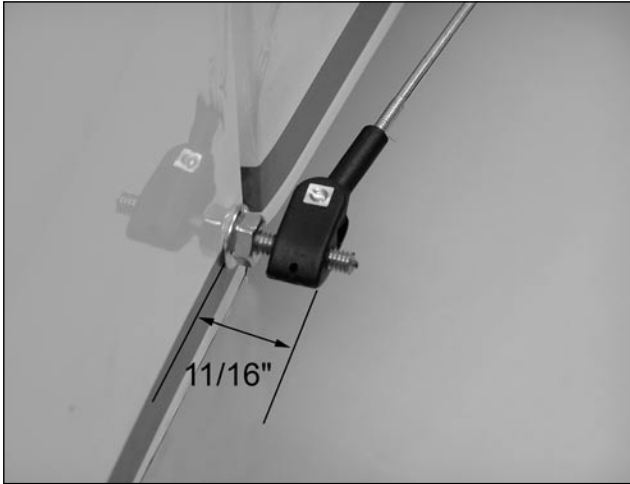
Mix a small amount of 30-minute epoxy and lightly coat the inside of the hole in the rudder and the 8-32 x 2 1/4" control horn screw. Slide the screw into the hole from side opposite of the rudder servo. Wipe away any excess epoxy on the wing and screw with rubbing alcohol and a paper towel. Screw the 8-32 flange nut in place as shown. Allow the epoxy to fully cure.



Section 8B – Rudder Servo Installation: DA-50

Step 5

Screw the molded swivel link onto the 8-32 screw until the distance from the rudder surface to the top of the link is 11/16".



Step 6

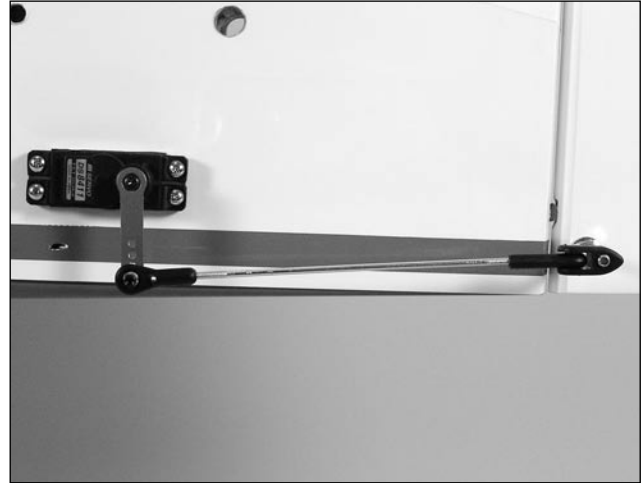
Remove the stock servo arms from the rudder servo and replace it with 3D XL servo arm. The arm faces down as shown. Be sure to use a drop of threadlock on the servo arm screw if using metal-gearred servos.

Step 7

Use the included 4-40 screws and nuts to attach the ball link to the outer hole in the arm. The correct sequence is 4-40 screw, ball link, servo arm and 4-40 locknut. Be sure to use threadlock.

Step 8

Screw a 4-40 ball link 5 to 6 turns onto the 5" rudder linkage. Screw the opposite end of the linkage into the swivel control horn on the rudder. Adjust the linkage length until the hole in the ball link lines up with the outer hole in the servo arm when the rudder is neutral and the servo arm is centered.



Section 9 – Tail Wheel Installation

Required Parts

- Fuselage
- Tail wheel assembly
- Tail wheel spring (2)
- Tail wheel assembly
- #4 x 5/8" socket head wood screw (2)
- Tiller arm

Required Tools and Adhesives

- Drill
- Drill bit: 5/64"
- Felt-tipped pen

Step 1

Secure the tiller arm to the bottom of the rudder using two wood screws. Remove the screws and apply 2-3 drops of thin CA into the holes to harden the balsa, then reinstall the screws.



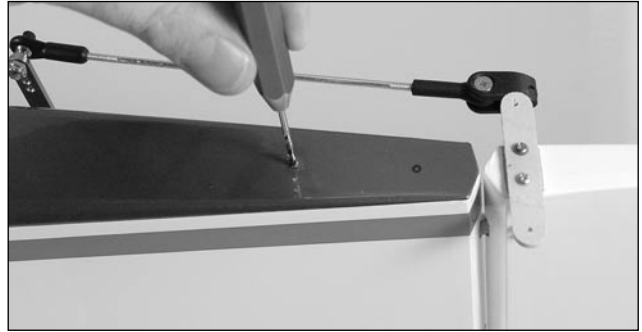
Step 2

Position the carbon fiber tail wheel in place as shown, centered on the rear of the fuselage. Using a felt-tipped pen, mark the positions for the mounting screws through the tail wheel bracket.



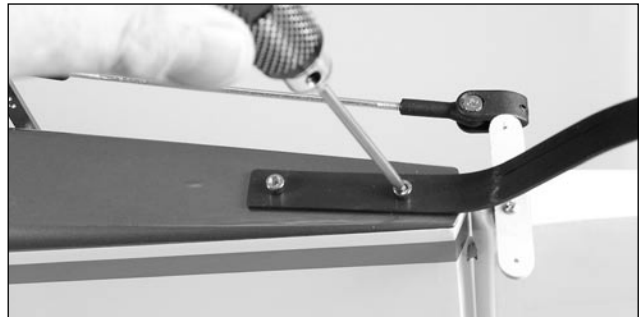
Step 3

Remove the bracket and drill 5/64" pilot holes at the previously marked positions.



Step 4

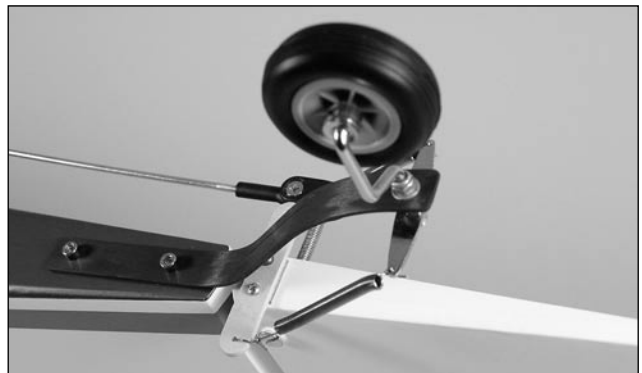
Use two #4 x 5/8" sheet metal screws to secure the tail wheel bracket in place. A hardwood plate is positioned in the rear of the fuselage, allowing these screws to be firmly tightened.



Hint: Remove the screws and wick thin CA into the holes to strengthen the threads. When dry, reinstall the screws.

Step 5

Use the tail wheel springs to make the connection between the tiller arm and the steering arm. Bend the springs so they won't come loose during flight.



Section 10 – Fuel Tank Installation

Required Parts

- Clunk (fuel pickup)
- Fuel pickup tubing
- Rubber stopper
- 15" tie wrap
- Metal tubes (short and long)
- Fuel tubing
- Metal caps (2)
- Fuel tank
- M3 x 20 screw
- Fuselage assembly

Required Tools and Adhesives

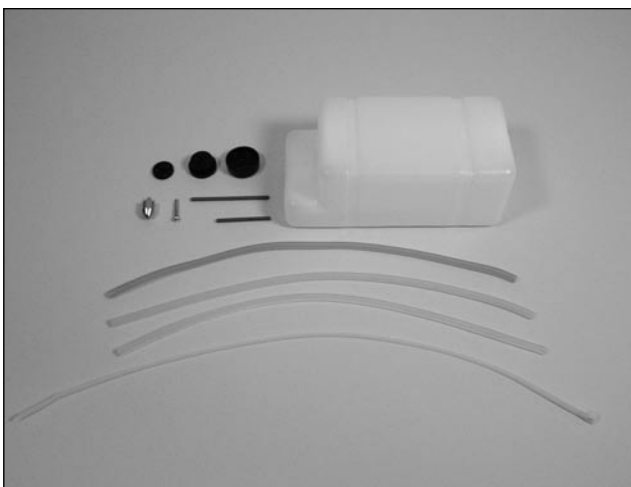
- Hobby knife
- Phillips screwdriver (small)
- Foam: 1/4"

Note: The stopper provided with the Extra has three holes that are not bored completely through the stopper. The holes are for the fuel pickup, fill and vent lines. For these instructions, only two holes will be used: one for the fuel pickup and one for the fuel vent. Only open the third hole if you are going to use a separate fill line.

Note for gas engines: While the stopper is OK for both gas and glow, the fuel tubing supplied is for glow engines only. If a gasoline engine is used, use Tygon tubing (not included) for all lines inside and outside the fuel tank.

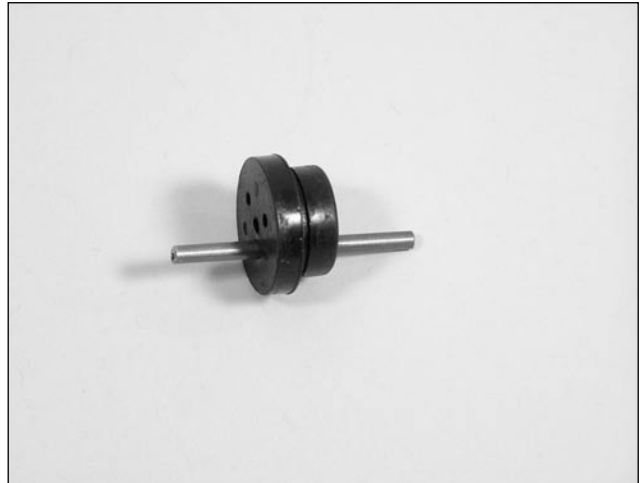
Step 1

Locate the fuel tank parts.



Step 2

Locate the rubber stopper. Insert the shorter metal fuel tube into one of the holes in the stopper so that an equal amount of tube extends from each side of the stopper. This tube will be the fuel tank pickup that provides fuel to the engine.



Step 3

Slide the smaller cap over the tube on the smaller end of the rubber stopper. This end will be inserted into the fuel tank. The larger cap is placed on the side of the rubber stopper that makes the cap. Loosely install the M3 x 20 screws through the center of the stopper.



Section 10 – Fuel Tank Installation

Step 4

Bend the longer fuel tube carefully to a 45-degree angle using your fingers. This will be the fuel tank vent tube. Use care not to kink the tube while bending.



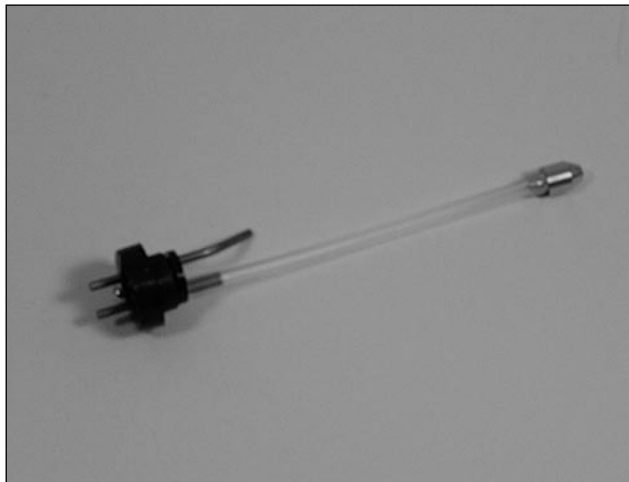
Step 5

Slide the vent tube into one of the remaining two holes in the stopper from the tank (small cap) side.



Step 6

Locate the clear piece of silicone fuel tubing and the fuel tank clunk. Cut the tubing to a length of 5". Install the clunk onto one end of the silicone tubing. Slide the silicone tubing (end opposite the clunk) onto the fuel tank pickup tube (straight tube) in the stopper.



Step 7

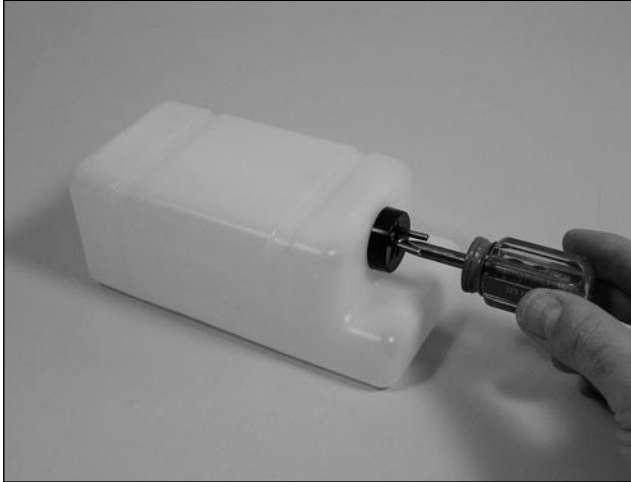
Carefully insert the stopper assembly into the fuel tank. Note the position of the vent tube; it must be up at the top portion of the fuel tank to function properly. Also, it may be necessary to shorten the length of the fuel pickup tubing to make sure the clunk does not rub against the back of the fuel tank. You should be able to turn the tank to any attitude, and the clunk will fall to the lowest point (all directions except for having the stopper facing down).



Section 10 – Fuel Tank Installation

Step 8

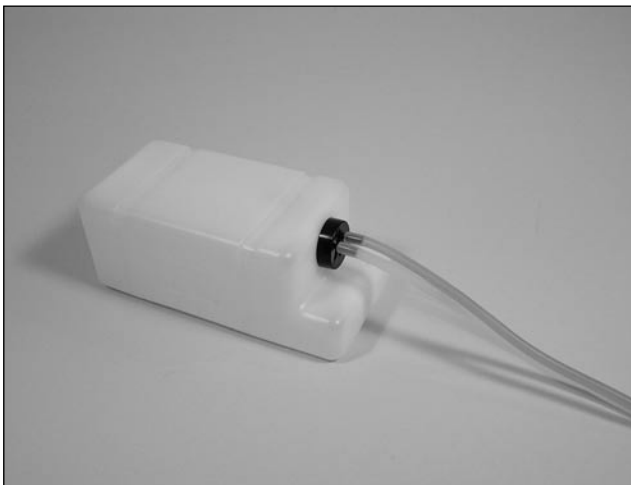
Tighten the M3 x 20 screw carefully—do not over-tighten. This allows the rubber stopper to form a seal by being slightly compressed, thus sealing the fuel tank opening.



Note: When installing the fuel tank, make sure to have a piece of foam at any point that contacts any structure inside the fuselage. Without the foam, vibrations will be transmitted to the fuel tank, which could cause the fuel to foam. In turn, you will not get the optimum performance from your engine.

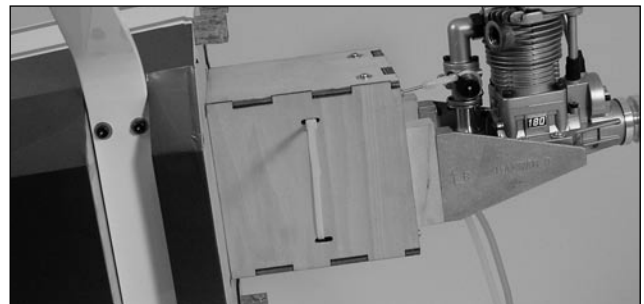
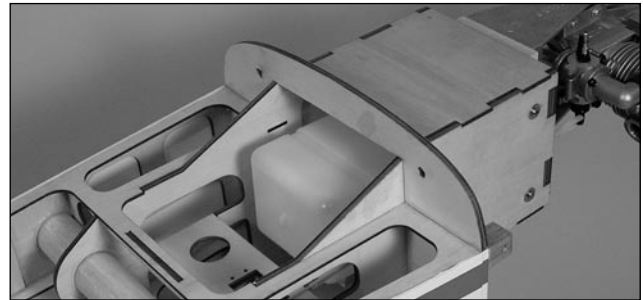
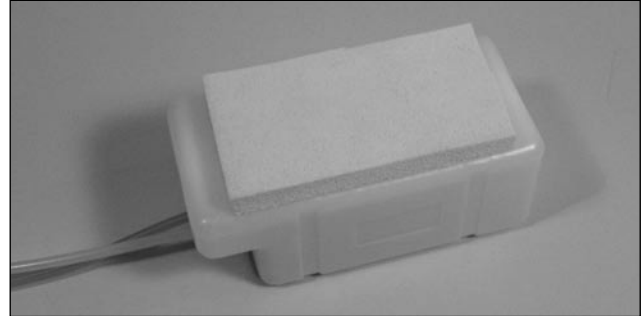
Step 9

Connect two 12" pieces of fuel tubing for pickup and vent tubes. Attach the green tubing to the pick-up, the red to the vent.



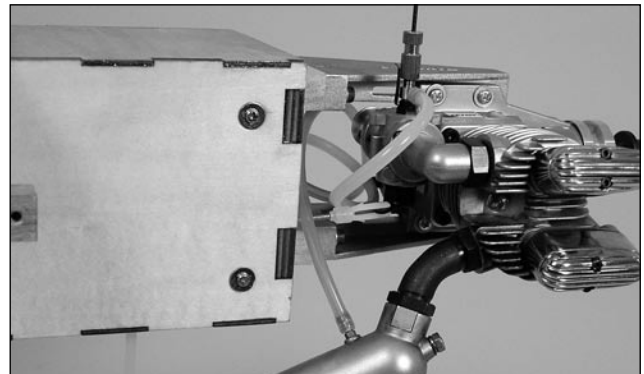
Step 10

Cut a piece of 1/4" foam and attach it to the bottom of the fuel tank. Install the fuel tank into the fuselage. Use the 15" tie wrap to secure the tank into position in the fuselage.



Step 11

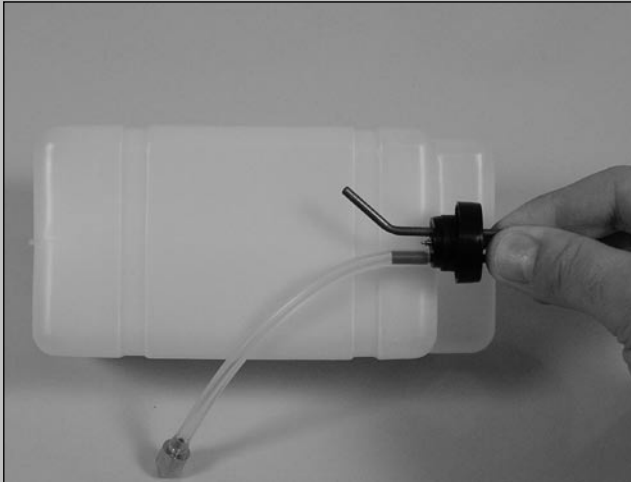
Make the proper connections to the engine, using the engine manufacturer's instructions. If you are using a 4-stroke, make sure to route the crankcase vent to the outside of the cowling.



Special considerations for DA-50 Installation:

Fuel Tank Orientation

Because of the location of the throttle linkage, the tank will be mounted on its side. Make sure the vent line is facing the correct direction in relationship to the fuel tank. It is helpful to slide a piece of Tygon tube onto the vent to extend it to the top of the tank.

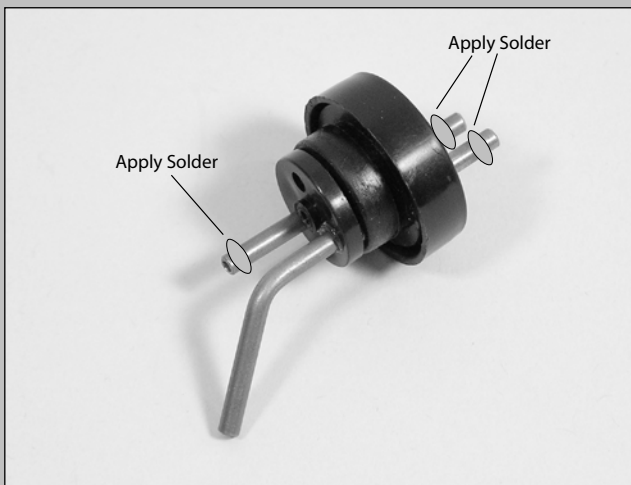


Fuel Tubing

When using gas engines, Tygon fuel tubing must be used. The supplied tubing is for glow engine use only.

Stopper Assembly

When preparing the stopper assembly, apply a drop of solder to the ends of the brass tubing where the fuel lines attach.



Securing the Fuel Tubing

Wire ties must be used to secure the fuel lines to the tubing. If these precautions are not done, the fuel lines will slide off the brass tubing.



Section 11 – Radio Installation

Required Parts

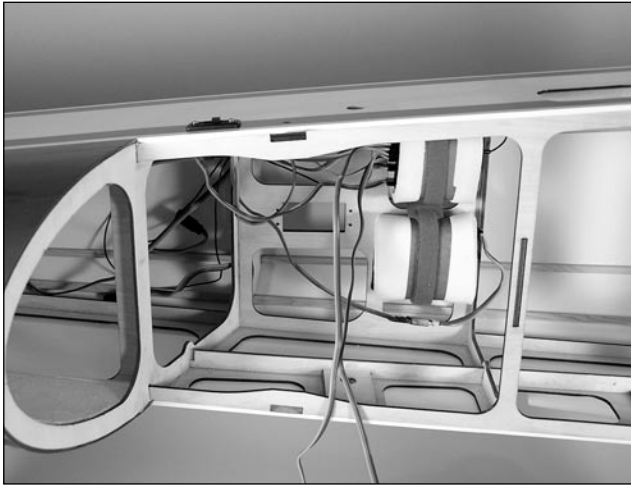
- Fuselage
- Pushrod keeper

Required Tools and Adhesives

- Velcro straps
- 1/4" foam

Step 1

Wrap the receiver battery and receiver in 1/4" foam. Attach the receiver and battery to the battery tray using Velcro straps to secure the receiver.



Step 2

Mount the receiver switch in a convenient location in the side of the fuselage.



Step 3

Mount the throttle servo using the hardware provided with the servo. Plug the servo into the receiver and attach the servo arm to the throttle servo.



Note: If using a DA-50 and canister exhaust, epoxy the two hardwood standoffs under the servo to raise it away from the canister. The servo mounts directly onto the standoffs.

Step 4

Move the servo to the throttle open position using the radio system. Manually move the throttle arm on the carburetor to the open position. Mark the pushrod where it crosses the servo arm. Make a 90-degree bend in the wire and install it into the servo arm.

Step 5

Check the movement of the throttle to verify there is no binding at either low or high throttle. If there is, make the necessary adjustment to eliminate any binding. Secure the pushrod using a pushrod keeper when all adjustments are complete.



Section 12 – Cowling Installation

Required Parts

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

Required Tools and Adhesives

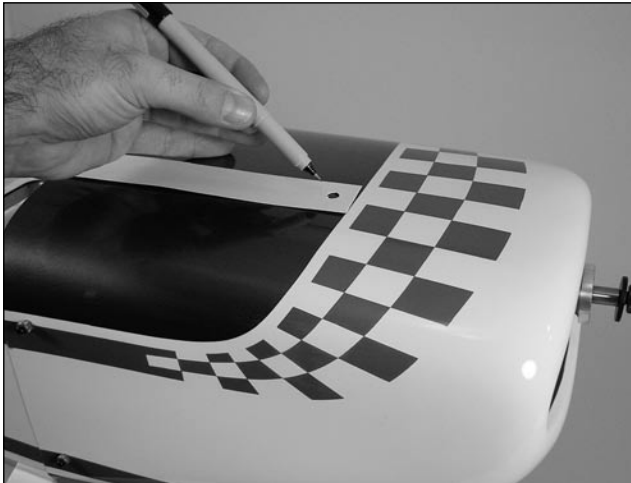
- Rotary tool with sanding drum
- 3 1/4" spinner and adapters

Step 1

Use cardstock to indicate the location of the engine, needle valve, firewall and any other engine related items that will need to be accessed with the cowling on.

Step 2

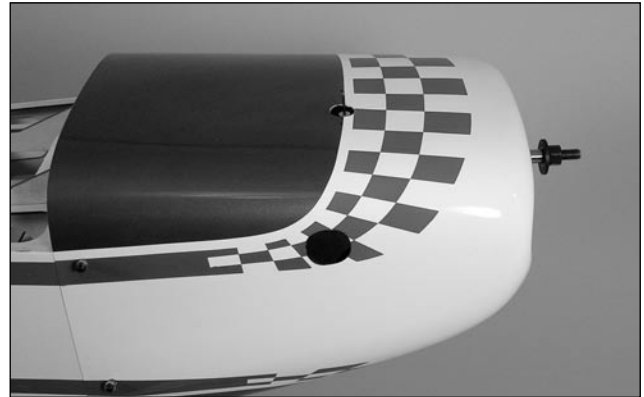
Attach the cowling onto the fuselage using four 4-40 x 1" socket head screws, four #4 washers and four pieces of 1/4" long fuel tubing. Transfer the positions from the cardstock onto the cowling.



Step 3

Remove the cowl from the fuselage. Use a rotary tool and sanding drum to remove material to allow access to items such as needle valves, glow plugs, cut-off switches, mufflers, etc.

Note: Start by removing only a little material at a time. You can always make the holes bigger as you work. Work until the cowl fits nicely over the engine.



Section 12 – Cowling Installation

Step 4

Remove the bottom rear edge of the cowl for an air exhaust. This is important for engine cooling.



For DA-50 and canister muffler



For DA-50 and pitts muffler

Step 5

Install the propeller and spinner to complete the cowling installation.



Section 13 – Hatch Assembly

Required Parts

- Hatch
- Canopy
- 4-40 x 1/2" screw (4)
- #4 washer (4)
- Decals
- 25–30% pilot

Required Tools and Adhesives

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

Step 1

Cut out the instrument panel decal from the decal sheet. Attach it into position.

Step 2

Install a 25% or 30% pilot figure to the hatch using Shoo Goo or similar adhesive that will remain flexible. Let the glue dry before securing the canopy in place.

Step 3

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



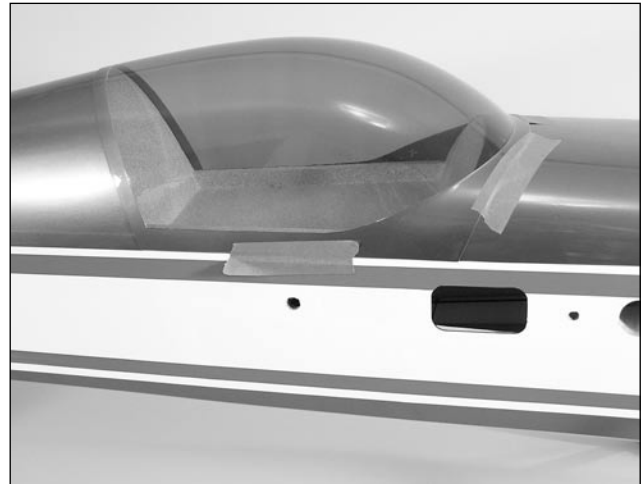
Step 4

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



Step 5

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 6

Apply the decals using the photos on the box as a guide.

Balancing the Model

Correctly balancing an aerobatic model is critical to its performance and flight characteristics. Checking the balance on giant-scale models is best done with two people.

□ Step 1

Measure back 5" from the leading edge at the root rib and mark the location with a felt-tipped pen on the bottom of the wing. This is the recommended center of gravity (CG). The CG range for your Extra 260 is between $4\frac{3}{4}$ " and $5\frac{1}{4}$ ".

□ Step 2

Fully assemble the model. With the airplane upright, lift the airplane with your index fingers to find the balance point. The balance point (CG) should be at the mark made at the root rib. If not, add the necessary weight to the nose or tail to obtain the correct balance.

Radio Setup

A 6-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 of each elevator half
- Rudder-to-elevator mixing to correct rudder-to-elevator coupling
- Rudder-to-aileron mixing to correct rudder-to-aileron coupling

When using a 6-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.

Control Throws

Aileron (measured at root of aileron)

High Rate	Low Rate
$2\frac{7}{8}$ " (38°) Up	$15/16$ " (13°) Up
$3\frac{1}{4}$ " (41°) Down	$1\frac{1}{4}$ " (15°) Down

Elevator (measured at widest point of elevator)

High Rate	Low Rate
$3\frac{3}{4}$ " (41°) Up	$15/16$ " (10°) Up
$3\frac{3}{4}$ " (41°) Down	$1\frac{1}{16}$ " (12°) Down

Rudder (measured at front of counter balance)

High Rate	Low Rate
$3\frac{1}{2}$ " (45°) Right	$1\frac{7}{8}$ " (25°) Right
$3\frac{1}{2}$ " (45°) Left	$1\frac{7}{8}$ " (25°) Left

Preflight at the Field

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 using a gasoline engine, check the range first with the engine not running and note the distance. Next, start the engine. With the model securely anchored, check the range again. The range test should not be significantly effected. If it is, 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.

Flying Information

For detailed information on set-up and flying the Extra 260 by Mike McConville, go to www.hangar-9.com.

2004 Official AMA 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.)
- 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

2004 Official AMA National Model Aircraft Safety Code

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 attitude at all times.



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