



# Somethin' EXTRA<sup>®</sup>

## ALMOST READY TO FLY



### SOMETHIN' EXTRA<sup>®</sup> ARF ASSEMBLY MANUAL

#### INTRODUCTION:

Congratulations on your purchase of the fantastic new SIG SOMETHIN' EXTRA<sup>®</sup> ARF kit. SIG's kit version of this unique design has proven to be one of the most popular sport aerobatic R/C models ever produced. Reasons for this popularity with modelers are many but certainly one of the most important has been the consistently outstanding flying characteristics of the design. This new ARF version of the SOMETHIN' EXTRA<sup>®</sup> retains all of these attributes and offers modelers an even quicker way to get into the air with a very high-performance airplane!

Like the kit version, the ARF SOMETHIN' EXTRA<sup>®</sup> is built light and strong for best performance. Using fixture construction, this ARF has been built to virtual perfection, assuring you of a truly straight airplane. This means that it will fly straight, the way it was meant to. The covering has been professionally applied and the trim scheme is completely unique to the airplane. This trim scheme offers superb visibility in any attitude. In terms of flying capabilities, there just aren't many designs that have the huge flight envelope of the SOMETHIN' EXTRA<sup>®</sup>. Depending upon your flying skills, the SOMETHIN' EXTRA<sup>®</sup> is capable of just about any maneuver you can think of and probably a few that never crossed your mind.

The design of this airplane has been well thought-out and also well proven. For example, the tail braces are there for a reason. This airplane is capable of extremely quick rolls and snap maneuvers and the tail brace system keeps those forces off of the tail group - they are needed! The two-piece wing allows easy disassembly and transportation in the smallest of vehicles. The method employed to retain the wing panels to the fuselage is simple, strong and very easy to work with.

Finally, we urge you to read this manual completely. Familiarize yourself with the parts and their assembly sequences. The successful assembly and flying of this airplane is your responsibility. If you deviate from these instructions, you may wind-up with problems later on. We would also like to point out that this airplane is not suitable for beginners. The performance of this airplane is beyond the capabilities of beginning pilots. You should have good experience with low-wing, aileron equipped R/C models before flying this airplane.

#### RADIO EQUIPMENT:

The SOMETHIN' EXTRA<sup>®</sup> ARF can be flown with typical 4-channel radios and five standard servos. You will need an aileron "Y" harness to connect the ailerons to the receiver's single aileron channel. You will also likely need a couple of 6" servo extension cables for the wing mounted aileron servos.

However, the *real* potential of the SOMETHIN' EXTRA<sup>®</sup> ARF can be realized by using one of today's inexpensive computer radio systems, such as the Hitec Flash 5X or the Airtronics<sup>®</sup> RD-6000. These radio systems allow you to "fine-tune" your control surfaces to exactly your style of flying. In addition, you'll be able to set-up the ailerons to act as flaperons, which can lend a whole new dimension to your flight routines! Using such radios, you will not need a Y-harness for the aileron connections.

#### ENGINES, PROPELLERS, AND MUFFLERS:

As stated earlier, over-powering the SOMETHIN' EXTRA<sup>®</sup> ARF is totally unnecessary and counter-productive to achieving the C.G. without the need for lead weights. This design is not about speed. Aerodynamically, the SOMETHIN' EXTRA<sup>®</sup> is not a particularly fast airplane. It's been designed to fly at moderate speeds at the high end, with incredible low speed capability. To take full advantage of the design, you should use powerful, bearing equipped 2-stroke engines in the .40 - .46 range. We have tested this airplane using the Irvine .40, .46, and the .53 engines. Any one of these powerplants flies the SOMETHIN' EXTRA<sup>®</sup> beautifully. What is especially nice about Irvine engines is their great power, truly linear throttle response, and their extremely efficient mufflers. We suggest you to give serious thought to the engine you intend to use for this airplane. A marginal engine will always yield marginal results.

When using 2-stroke engines, avoid heavily pitched props. Ideally you want your engine pulling as well vertically as it does in horizontal flight. To do this, it needs to operate at or about its best rpm level to take advantage of its power curve.

For 4-stroke engines, we suggest displacement sizes up to .65. Using engines larger than this will likely give you weight and balance problems, along with the realities of propeller clearance. Another important thing to remember is that typical 4-stroke engines have their throttle arms usually located differently than throttle arms on 2-stroke engines. If you want to power this model with a 4-stroke engine, you will likely have to install a new, relocated throttle cable tube. While this is not difficult, it is something to consider when choosing an engine.

No matter what engine you choose always use an effective muffler! A loud engine could cost you (and possibly your club) the use of your flying site if it offends nearby non-modeling neighbors. Use the muffler that came with your engine or an after-market muffler made especially to quiet two-stroke engines.

#### COVERING MATERIAL:

Your SOMETHIN' EXTRA<sup>®</sup> ARF has been professionally covered using AeroKote<sup>™</sup>. This material is known for its ease of application, light weight and consistency of color. If you live in a dry climate, you may notice that some wrinkles may develop after removing the covered parts from their plastic bags. This is perfectly normal in low humidity climates. Your model was built and covered in a part of the world, which has relatively high humidity and therefore, the wood was likely carrying a fair amount of

moisture. When exposed to drier air, the wood typically loses this moisture, dimensionally "shrinking" in the process. In turn, this may cause some wrinkles. However, wrinkles are easy to remove by just using a hobby type heat iron.

We suggest covering the iron's shoe with a thin cotton cloth, such as an old T-shirt, to prevent scratching the film. The iron should be set to 220°F - 250°F (104°C - 121°C). Use the heated iron to lightly shrink the material - do not press on it. Then, lightly iron the material back down to the wood. You can also use a hobby-type heat gun to re-shrink the covering but you must be careful around seams or color joints. Re-heating seams may cause them to "creep", making them unsightly. This is especially true with the SOMETHIN' EXTRA'S® trim scheme and pin striping. You must also be careful when using a heat iron or heat gun when working around the windshield and side windows - heat will distort this clear plastic material.



**MODELER'S TIP:** A very easy way to avoid damaging seams and joints when reshinking the covering is to protect the seams with wet paper towels rolled into strips. These are then arranged directly onto the joints or seams and their coolness protects the seam from shifting or "crawling" under heat.

Your SOMETHIN' EXTRA® ARF is covered with SIG Aerokote™

**#SIGSTL100 White**

and

**#SIGSTL312 Fire Red or #SIGSTL360 Violet**

#### REQUIRED TOOLS:

For proper assembly, we suggest you have the following tools and materials available:

A selection of glues - SIG Thin and Thick CA and  
SIG Kwik-Set 5-Minute Epoxy

Threadlock Compound, such as Loctite® Blue

A selection of hand tools, such as;

Screwdriver Assortment

Pliers - Needle Nose & Flat Nose

Diagonal Wire Cutters

Small Allen Wrench Assortment

Pin Vise for Small Dia. Drill Bits

Hobby Knife With Sharp #11 Blades

Scissors

Heat Iron and Trim Seal Tool

Masking Tape

Paper Towels

Small Power Drill With Selection of Bits



In addition you will also be required to make a few solder connections. We suggest that you have a good soldering iron and good quality solder and flux. For the pushrod connections, we use and like the Stay-Brite® Silver Solder product.

#### COMPLETE KIT PARTS LIST:

The following is a complete list of all parts contained in this kit. Before beginning assembly, we suggest that you take the time to inventory the parts in your kit. Note that the hinges for the rudder, elevator, and ailerons are in place in the kit. These have not yet been glued.

#### BASIC AIRCRAFT PARTS:

- 1 each Fuselage
- 1 each Fuselage/Canopy Hatch With Hardwood Hardpoint for Nylon Bolt Attachment
- 1 each Horizontal Stabilizer and Elevator Set With Hardwood Hardpoints for Tail Support Wires and Elevator Horn
- 1 each Vertical Fin and Rudder Set With Hardwood Hardpoints for Tail Support Braces and Rudder Horn
- 1 set Right & Left Wing Panels With Ailerons With Hardwood Hardpoints for Aileron Horns
- 1 pair Fiberglass Wheel Pants
- 1 each Canopy

#### HARDWARE:

##### U.S. HARDWARE:

- 1 each 2-56 x 3/4" Threaded Brass Coupler - Throttle Linkage
- 1 each 2-56 x 3/8" Slotted Bolt - Tail Brace/Fuselage Attachment
- 5 each 2-56 Solder Links - Ailerons (2), Rudder & Elevator (2) & Throttle (1)
- 4 each 4-40 x 3/8" Round Head Bolts - Wheel Pant Attachment
- 4 each 4-40 Blind Mounting Nuts - Wheel Pant Mounting
- 2 each J-Hooks, Threaded - Wing Panel Retention
- 8 each #2 x 1/2" Pan Head Screws - Control Horn Attachment

##### METRIC HARDWARE:

- 1 each 2mm Wheel Collar With Set Screw and Allen Wrench - Tailwheel Assembly
- 4 each PM2 x 12mm Phillips Head Bolts - Tail Wire Support Attachment (3), Tail Wheel Attachment (1)
- 4 each M2 Hex Nuts - Tail Support Wire Attachment (3), Tail Wire Attachment (1)
- 2 each M2 Washers - Tail Wire Attachment
- 4 each 2.3 x 8mm PWA Screws - Canopy Attachment Screws
- 3 each PM4 x 16mm Phillips Head Bolts - Main Landing Gear Attachment
- 4 each PM4 x 22mm Phillips Head Bolts - Motor Mount Attachment

- 2 each PM4 x 35 mm Phillips Head Bolts - Main Wheel Axles
- 4 each M4 Hex Nuts - Main Wheel Axle Attachment
- 10 each M4 Washers - Main Wheel Axles (6), Motor Mount Bolts (4)
- 2 each 4mm Wheel Collars With Set Screws - Main Wheel Attachment

#### **WIRE PARTS:**

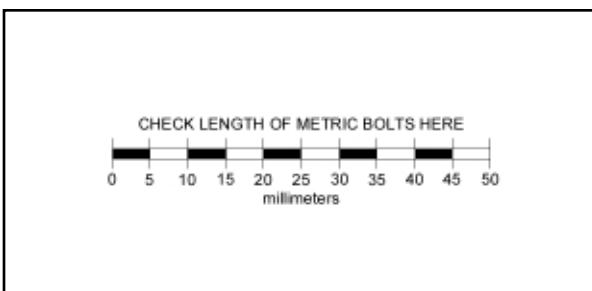
- 1 each Pre-Bent 3mm Elevator Joiner Wire
- 1 each Pre-Bent 2.0 mm Tail Wheel Wire
- 2 each 1.8mm Dia. x 19.7cm Bright Wire, Threaded Both Ends - Upper Tail Supports
- 2 each 1.8mm Dia. x 15.5cm Bright Wire, Threaded Both Ends - Lower Tail Supports
- 2 each 2-56 X 1-1/4" Threaded One End - Rudder & Elevator Servo Control Rods
- 2 each 2-56 X 3-1/2" Threaded One End - Rudder & Elevator Control Horn Rods
- 2 each 2-56 X 4-1/2" Threaded One End - Aileron Pushrods
- 1 each .065 Dia. x 18" Braided Throttle Cable

#### **MOLDED PARTS:**

- 2 each 1/8" O.D. x 22" Nylon Rudder & Elevator Pushrods
- 2 each Nylon Control Horns - Rudder & Elevator - Medium RIGHT
- 1 each Nylon Control Horn - Aileron - Small RIGHT
- 1 each Nylon Control Horn - Aileron - Small LEFT
- 5 each Nylon 2-56 RC Links - Rudder & Elevator (2), Ailerons (2) & Throttle (1)
- 8 each Molded Plastic Support Ends - Tail Support Wire Ends
- 1 each 2-1/4" Spinner Assembly, White, With Inserts and Mounting Screws - P/N SIGSP22511
- 1 each 4-40 x 1" Slotted Nylon Bolt - Canopy/Hatch Attachment
- 4 each Clear Silicon Washers - Canopy Attachment

#### **MISCELLANEOUS:**

- 1 each Hardened Aluminum Main Landing Gear
- 1 each Hardened Aluminum Tube Main Wing Joiner - 18 mm Diameter x 38.6 cm
- 1 each Pre-Bent Tail Wheel Wire Bracket
- 1 pair 2-3/4" (70mm) Diameter Main Wheels
- 1 each 1.0" (25mm) Diameter Tail Wheel
- 17 each CA Hinges - Rudder 3, Elevator 6, Ailerons 8
- 1 set Adjustable Width 40-Size Motor Mounts
- 1 each Fuel Tank, 260cc (8.8 oz.) With All Fittings
- 1 each 3 mm Plywood Aileron Position Guide (APG)
- 1 each 5mm Dia. x 150mm Hardwood Dowel - Rear Wing Positioning Dowel
- 2 each Black Foam Rubber - 10mm x 80mm x 200mm - Radio & Fuel Tank Packing Material
- 1 each #64 Rubber Band - Wing Attachment
- 1 each Decal Set
- 1 each Assembly Manual

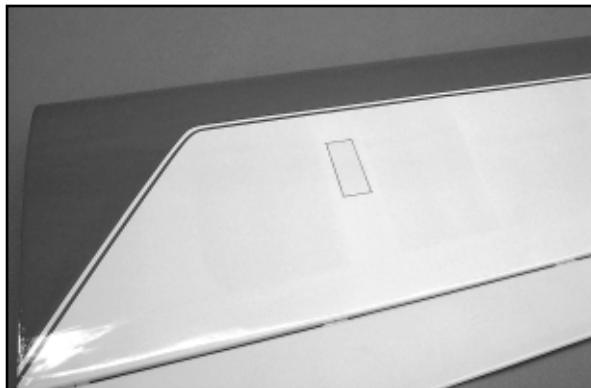


#### **ASSEMBLY:**

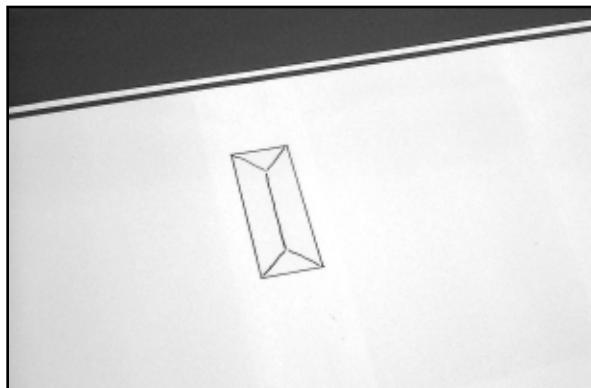
We have found it helpful in the assembly of this pre-covered model to be sure that our workbench is covered with an old blanket or soft foam pads to prevent denting, scratching, etc.

#### **WINGS:**

The two wing panels in your kit are virtually ready to use, with the exception of installing a servo in each panel, hinging the ailerons and attaching the linkages. To do this, you must know which side of the panel is the bottom. Hold one of the panels to the light. The bottom of the wing panel will have a 1" x 2-1/4" rectangular servo bay opening showing just beneath the white covering. Remove the ailerons and the hinges from both wing panels, setting them aside for now.



- 1) Use your hobby knife and a sharp #11 blade to open the aileron servo bay. To make the neatest possible job, we suggest cutting each corner of the opening at a 45° angle toward the middle of the opening. Then make a cut at the middle of the opening, connecting with the four previous corner cuts.

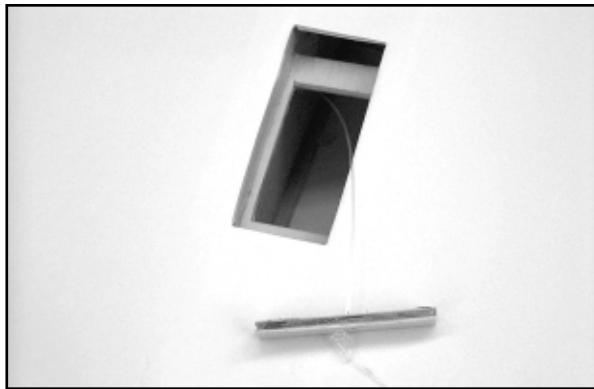


The four sides of the servo bay opening can now be covered using a small trim seal type iron. Use your hobby knife to trim off the excess covering material from inside the bay. Repeat this process

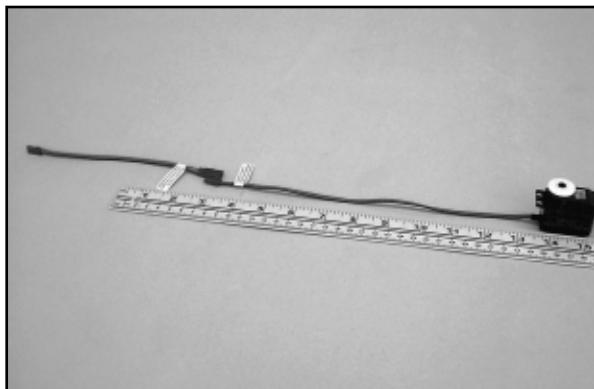


on the remaining wing panel.

2) Inside the aileron servo bay you will see the plywood servo mount. You will also see a small rectangle of plywood with thin line tied to it. This line leads through the wing and exits at the root rib, where you will see the line attached to another plywood piece taped to the rib. This line will be used to pull the aileron servo lead through the inside of the wing, exiting at the root rib.



Before installing the aileron servos you must determine if the servo cable lead is long enough to go through the wing, exit the root rib and have enough length left to enter the fuselage and connect to the receiver. This length is typically 13-1/2" and it's unlikely the servo lead will be long enough. If not, you must add a servo extension lead to make up the needed length. A 6" servo extension lead will usually be more than enough. Plug the extension into the end of your servo and secure well with tape to prevent accidental disconnection. Use the hardware supplied with your radio system to install the grommets and eyelets onto the servo. It is now ready to install into wing.

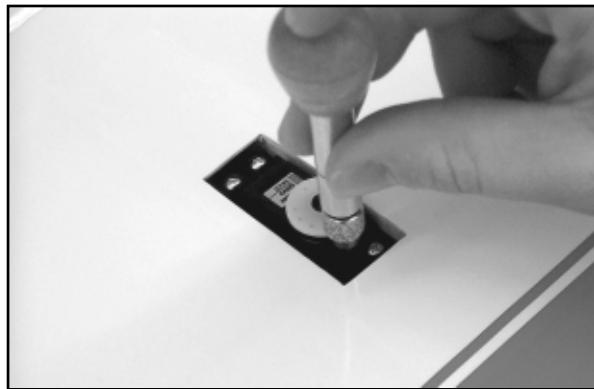


3) Pull the plywood rectangle and line out of the servo bay opening. Remove the plywood from the line and discard it. Tie the line securely to the connector end of the servo lead. Remove the tape from the plywood rectangle at the root rib. Carefully pull the



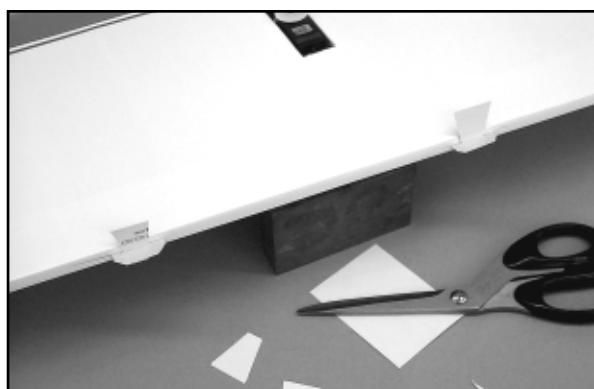
line and the servo cable lead through the wing until the servo cable emerges from the root rib.

4) Fit the servo onto the two servo rails in the wing panel (note that the servo is mounted with its output arm toward the leading edge of the wing), taking up any slack in the servo cable, by pulling the cable a little from the root rib end of the line. Use a pin-vise and a small dia. bit to drill four small guide holes through the servo rails for the servo mounting screws. Use the screws supplied with your radio system to mount the servo securely in place to the servo rails. Repeat this procedure with the remaining wing panel.



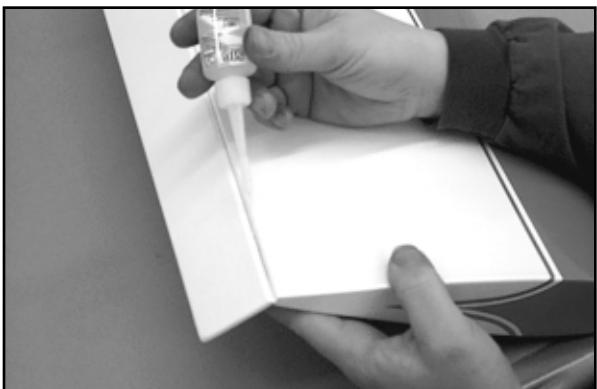
5) The ailerons are now hinged to the wing panels. The supplied hinges are the CA type. The installation procedure for these hinges is the same for all of the flying surfaces on this airplane.

The hinges have a die-cut center slot in them that can be used to accurately place and center the hinge equally into both the wing panel and the aileron. To do this, use a business card and a pair of scissors to cut eight or so "wedges". These should be wide enough at the top so as to not pass through the hinge slot cut-out. Press the hinges in place into the wing panel up to the hinge slot cut-out. Place a card wedge into each hinge slot cut-out and then press the aileron in place onto each exposed hinge half, up to the card wedges. Align the outer tip of the aileron with the wing panel tip. The hinges are now in proper position for permanently gluing in place with thin CA glue.



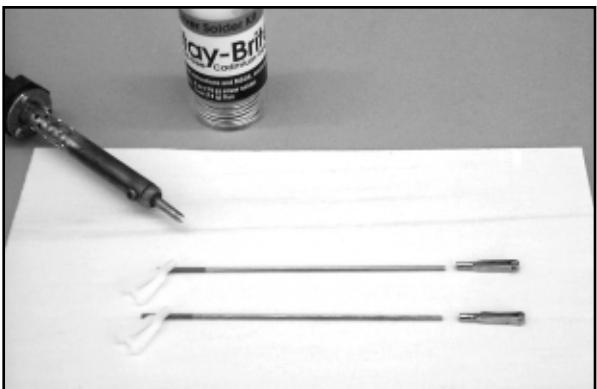
Flex the aileron downward, exposing both sides of the hinges between the wing and aileron (using a piece of masking tape to hold the aileron in this position will free up both of your hands). For CA hinges, we always suggest using a fine-tipped applicator on the glue bottle to better control the flow. Remove the wedge from one of the hinges and apply four drops of CA glue to each hinge edge. Remove the wedge from the next hinge and again apply four drops of glue to each hinge edge. Repeat this process for the remaining hinges. Remove the tape holding the flexed aileron to the wing panel and flex the aileron in the opposite direction, again

taping it to the wing panel in the flexed position. Turn the panel over and apply four drops of CA glue to each edge of the hinges. Remove the tape, returning the aileron to its centered position. Because it takes a little time for the CA to fully wick its way through the entire surface of the hinge and surrounding wood, allow at least 10 minutes before flexing the aileron. Any spilled glue can be easily removed with SIG Debonder.



After sufficient time has passed, flex the aileron firmly up and down on the wing panel to create free and easy movement. We also suggest pulling on the aileron at each hinge location to be sure they are firmly in place. Repeat this procedure for the remaining wing panel and aileron.

6) The aileron pushrods are now assembled. From the kit contents locate the two 2-56 x 4-1/2" wire pushrods - threaded at one end, two nylon 2-56 R/C links, two 2-56 solder links. You will also need a soldering iron and solder.



Slip a solder link onto the unthreaded end of the 4-1/2" aileron pushrod wire until you can just see the end of the wire emerge from the link's tube - a distance of about 3/8". Solder the link in place to the wire, using enough heat to "sweat" the joint completely. Make the second aileron pushrod in the same way. Thread the nylon R/C link onto the threaded end of the pushrod, about half the distance of the threads. The pushrods are now ready for installation.

7) The aileron control horns are now installed. From the kit contents, locate the two smaller nylon control horns and four #2 x 1/2" Slotted Pan Head screws. Note that there is a left and right aileron control horn. When mounting the horns to the ailerons, the bases of the horns will each face out towards the wing tips. We suggest using servo output arms for the aileron servos instead of the round wheel types. For this step, these arms should be mounted onto each aileron servo, with the arm facing inboard toward the fuselage, at 90° to the servo.

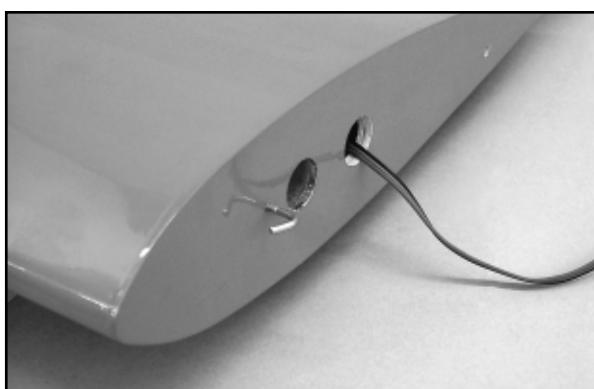
Attach the solder link to the outer-most hole in the servo output arm and place the arm back onto the servo in the correct position (facing inboard at 90° to the servo). Place the nylon aileron horn onto the leading edge of the aileron, with its holes lined up with the hinge line. The upright arm of the horn should be parallel with the servo. In this position, use a pencil to mark the two mounting hole locations in the horn's base onto the surface of the aileron. Use a power drill and a 3/32" dia. drill bit to make two holes through the aileron. The horn can now be attached to the aileron using a small screwdriver and two #2 x 1/2" Pan Head screws. These screws should slip through the horn base and the drilled holes and into the separate nylon horn piece. Tighten the screws securely. Repeat this process on the opposite aileron. Use diagonal cutters or a small grinding wheel to remove the exposed tips of the screws on top side of each aileron.



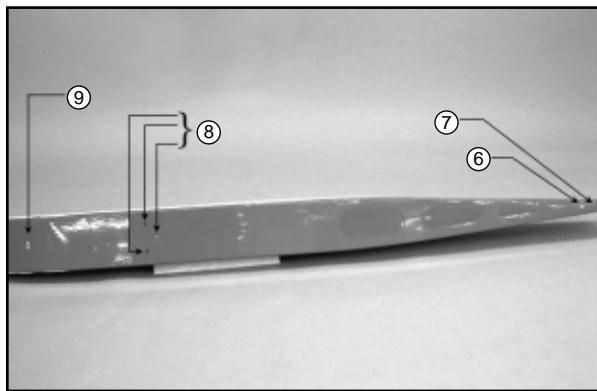
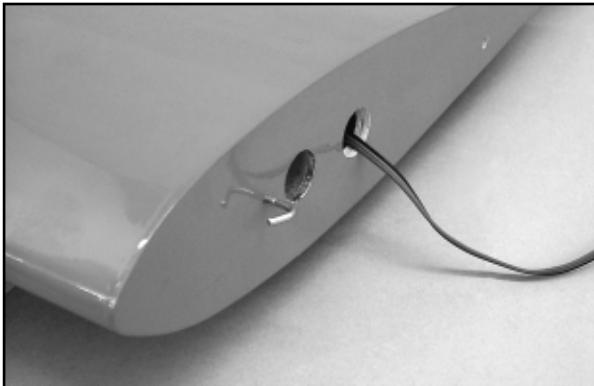
The nylon R/C link on the aileron pushrod can now be attached to the aileron horn. We typically use the second hole from the horn's tip for initial placement. With the servo and aileron now connected, the nylon R/C link can be adjusted to position the aileron in approximately "neutral". Final adjustments will come later.

8) From the kit contents, locate the two threaded J-hooks. These will be threaded into the wing panel root ribs to provide wing retention using a #64 rubber band. 1/16" dia. guide holes have been pre-drilled in each wing root for these hooks, just ahead of the main wing tube holes. Once you locate the holes, use a 3/32" dia. bit and a power drill to drill through the root rib.

Pressing the J-hook firmly into the hole, begin threading it in place using hand pressure. Once the threads engage, continue threading the hook in place until it is about 1/2" away from the surface of the wing root rib with the open end of the hook facing forward. This is the correct position for these hooks. Unthread the hooks, removing them from the wing panels. Mix a small amount of 5-minute epoxy and use a small length of wire or a pin to get glue into both of the hook holes. Apply a small amount of glue to the threads of the hooks and thread them back in place into each



wing panel, again positioning their open ends forward and leaving them about 1/2" away from the surface of the panel. Wipe off any excess glue and allow the epoxy to set.



#### FUSELAGE AND TAIL GROUP:

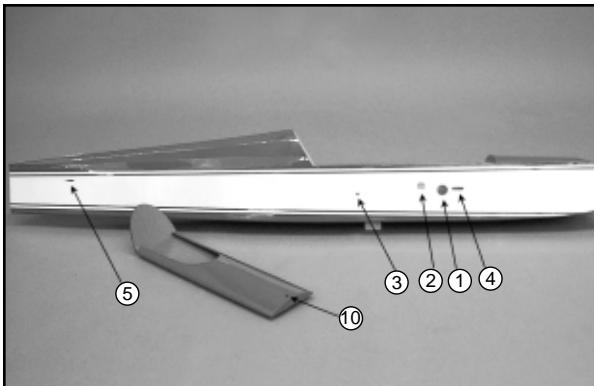
The fuselage is provided with the removable Canopy Hatch in place. To remove this hatch, simply lift it up at the front and slide it forward, disengaging the locating dowel pin from the rear plywood former.

1) The fuselage has been built and covered with several openings that must now be opened up.

These are:

- 1 - Main wing tube holes - Located on fuselage sides at fiberglass wing tube
- 2 - Aileron Servo Lead Holes - Located on fuselage sides just behind wing tube holes
- 3 - Rear Wing Locating Dowel Holes - Located on fuselage sides 5" behind main wing tube
- 4 - Wing J-Hook Clearance Holes - Located on fuselage sides just ahead of wing tube
- 5 - Rudder and Elevator Pushrod Openings - Located on fuselage sides 1" below stabilizer
- 6 - Antenna Exit Hole - Located on fuselage bottom 3-1/2" from end
- 7 - Tail Brace Blind Mounting Nut Hole - Located on fuselage bottom 1-1/4" from end
- 8 - Three Bolt Holes For Mounting Landing Gear - Located on fuselage bottom under landing gear plate
- 9 - Fuel Drain Hole - Located on fuselage bottom just ahead of the firewall
- 10 - Bolt hole in the center forward end of the canopy hatch

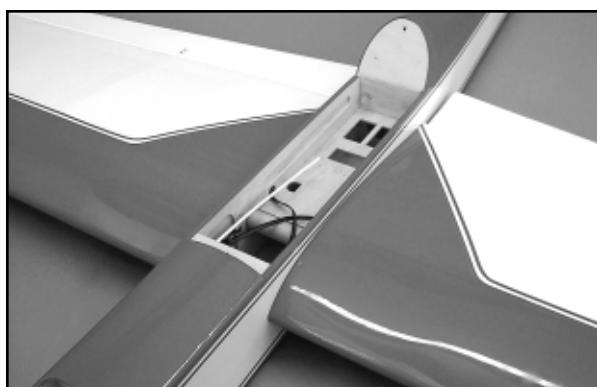
With a hobby knife and a sharp #11 blade, carefully open each of these holes. When you are finished, we suggest using a small heat sealing type iron to reheat and firmly attach the covering around the holes just made.



2) From the kit contents, locate the 5mm (7/32") dia. x 150mm (5-3/4") hardwood dowel rear wing positioning dowel. Insert the dowel into the fuselage side, directly beneath the plywood servo mounting tray on the inside of the fuselage and through the corresponding hole in the opposite fuselage side. Center the dowel in place, leaving the ends protruding from the fuselage sides approximately 1-5/16" on each side.



The wing panels can now be test fitted to the fuselage. From the kit contents locate the main wing tube (18mm [11/16"] dia. x 36.6cm [15-3/16"] long). Insert the wing tube through the fuselage, roughly centering it. With the aileron servo side down, slip a wing panel in place onto the tube and slide it in place up to the rear wing positioning dowel. Feed the servo lead into the fuselage through the appropriate hole. Line up the dowel with the hole in the rear of the wing panel and press the panel in place up to the fuselage side. Repeat this process for the remaining wing panel. The wings are now in place. Note that the J-hooks now protrude into the fuselage in front of the fiberglass wing tube. The fit should be good with little if any gaps. Remove the wing panels.



The rear wing positioning dowel is now permanently glued in place into the fuselage. Use a drop or two of thin CA on the dowel,

where it exits the fuselage sides to secure it.

- ❑ 3) The fuselage is now prepared to receive the horizontal stabilizer (stab) and the vertical fin. At the top rear of the fuselage you will see a strip of uncovered balsa. This is the fin spacer block and it is now removed. The fuselage also has a horizontal stab spacer block built into it and this also must be removed. Use a sharp #11 blade and your hobby knife to cut the covering away from the stab slot on both sides of the fuselage. The block will become free and can be removed and discarded. The remaining covered fillet blocks should be handled carefully until the stabilizer and fin are permanently in place.

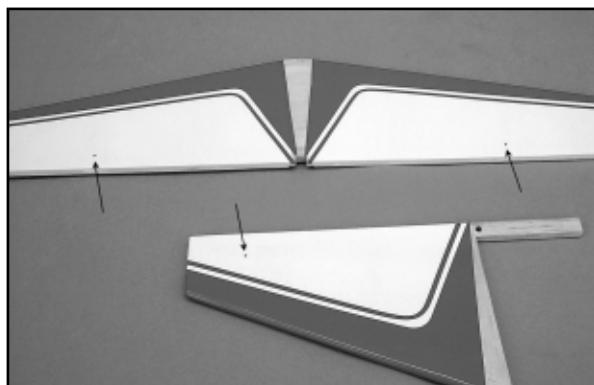


Use your hobby knife to cut the covering material away from the rear fuselage tailpost, exposing the rear fin slot.



- ❑ 4) From the kit contents, locate the horizontal stabilizer and elevators, the vertical fin and rudder and the pre-bent elevator joiner wire. First, in order to be able to attach the tail braces to both the stab and fin, the factory prepared holes for the bolts must be opened up. You can see the hole locations beneath the covering. Find them and open them up with a sharp #11 blade and a hobby knife or use a technique that works well for us. Use a cigarette lighter or butane torch to heat up the end of

a sharp metal pick or punch. Press the hot end of the pick into the hole through the covering. Doing this produces a perfect hole with sealed edges. Remember to open up the holes on both sides of the stab and fin.



- ❑ 5) The elevators are now joined, using the elevator joiner wire. Use 5-minute epoxy for this step. First remove the strip of covering from the inboard leading edge of both elevator halves. This exposes the wire channel and joiner hole placed there by the factory.

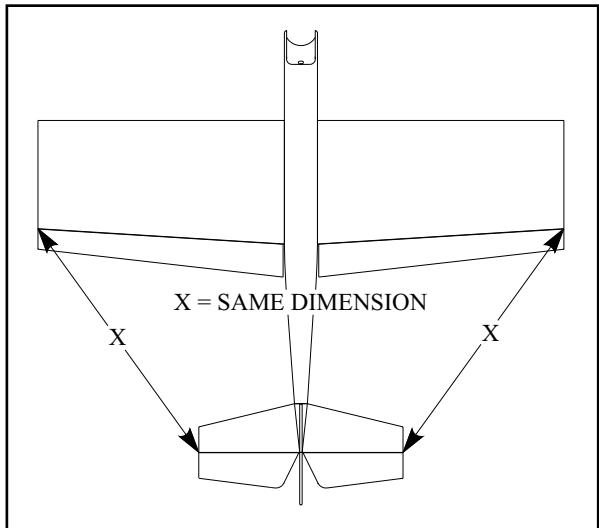


Use a toothpick or small dowel to apply epoxy into the elevator joiner holes and channels in each elevator half. Press the wire elevator joiner into each elevator half and lay the assembly on a flat work surface, protected with waxed paper. Wipe off any excess glue with a paper towel and alcohol. Make sure the leading edge of the entire elevator assembly is straight (we use a straight balsa strip, glued in place to a piece of scrap plywood for a "truing" fixture). Allow the epoxy to cure completely before removing.

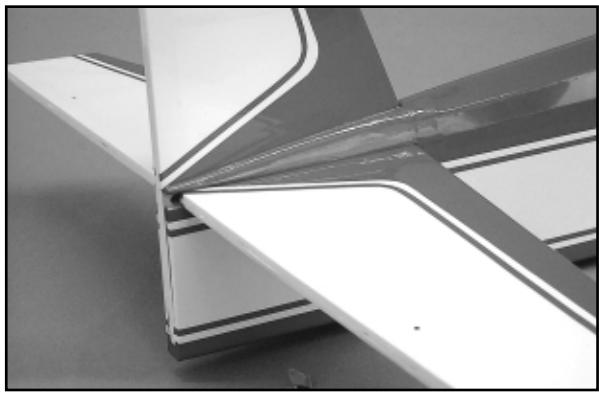


- ❑ 6) The horizontal stabilizer is now be glued in place into the rear of the fuselage. We suggest using 5-minute epoxy for this job to allow time to position the stab accurately and make any final adjustments that might be needed. We have found it helpful to

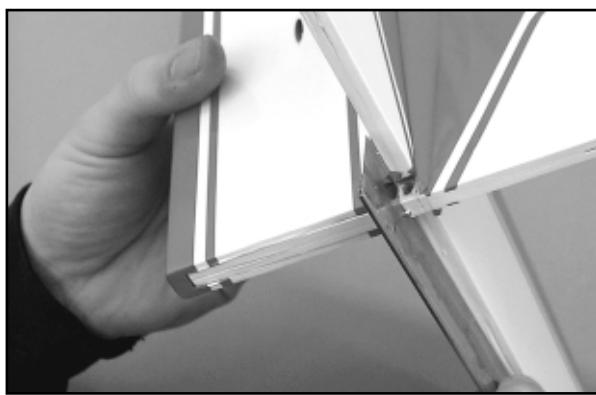
attach the wing panels to the fuselage before gluing the stab in place. This provides a good visual aid when checking the stab for level and also for being square to the wings in the top view. Apply glue to the bottom center of the stab and its center leading edge, where it contacts the fuselage former. Slip the stab in place, being careful to align it squarely and that the slot at the rear of the stab is aligned with the fuselage sides. With the fuselage on a flat surface, sight the model from the front. The stab should be absolutely aligned with the wings, without leaning to one side or the other. If it is leaning, use a small weight or a little masking tape to straighten it out. Allow the glue to set completely.



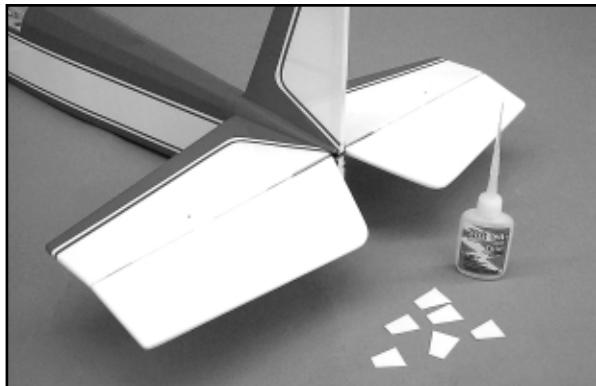
7) The vertical fin is now glued in place into the rear of the fuselage - use 5-minute epoxy for the job to give you a little working time. Apply glue to the exposed wood on both sides of the fin base and to the bottom of the fin, where it contacts the stab. Also apply glue to the fin tailpost, where it slips into the rear of the fuselage - keep glue away from the elevator hole in the tailpost. With the fin in place, sight the model from the front to make sure the fin is absolutely 90° upright to the stab. If needed, use a little masking tape to pull it into alignment. Wipe off any excess glue using alcohol.



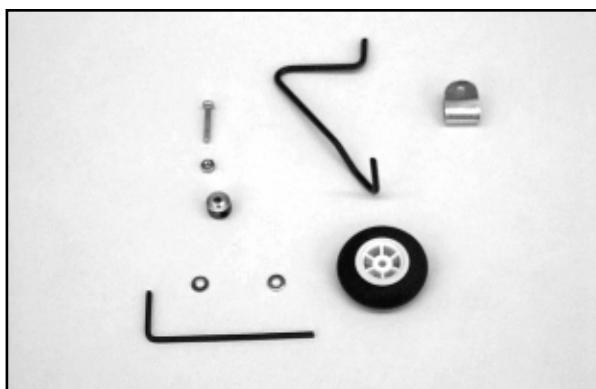
8) To be able to fit and hinge the elevators to the stabilizer, the tailpost material must be cut away, allowing the elevator joiner wire to fit against the stabilizer. A hole has been drilled through the tailpost at this location. Use a razor saw to open up this slot.



9) The elevators are now hinged to the stabilizer. Use the same hinging method described earlier in Step 5 of the WING ASSEMBLY instructions.



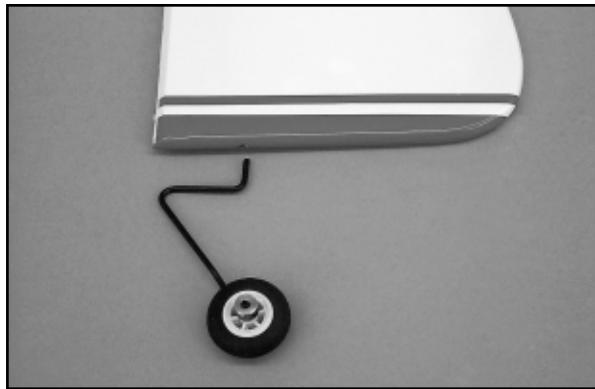
10) The tailwheel assembly is now prepared and attached to the bottom of the rudder. From the kit contents locate: 1 pre-bent tailwheel wire, 1 - 2mm wheel collar, 1 - metal tailwheel wire bracket, 2 - M2 washers, 1 - PM2 x 12mm bolt, 1 - M2 hex nut, the 1" dia. tailwheel, and the Allen wrench for the wheel collar.



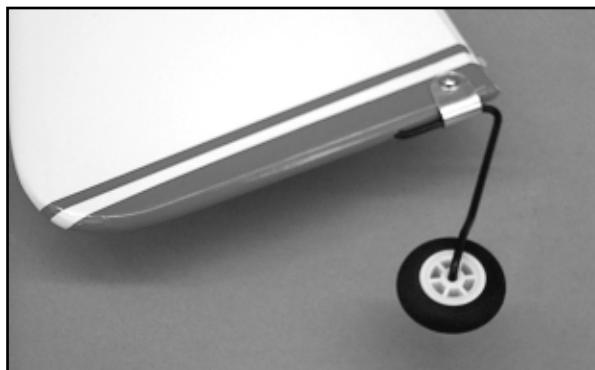
The tailwheel has two dissimilar sides - one side of the hub is "dished" inward and the other side has its axle hole flush with the hub. For mounting purposes, the "dished" side faces the wheel collar. Simply slip the wheel in place onto the axle of the pre-bent tailwheel wire, followed by the wheel collar. Leave a little play in the wheel and use the Allen wrench to tighten and secure the wheel collar to the axle. A little thread-locking compound on the set screw will keep it firmly in place.

The tailwheel assembly is now mounted to the bottom front of the rudder. Measure 1-1/8" back from the leading edge of the rudder and mark this location onto the rudder at its bottom center. Use a 3/32" dia. bit and drill a hole into the bottom of the rudder about

1/2" deep - be sure the hole is drilled at 90° and that it's centered at the bottom of the rudder.



Insert the upright tailwheel wire stub into the hole just drilled. Slip the metal tailwheel bracket over the wire onto the bottom front of the rudder. Mark the location of the hole in the bracket onto one side of the rudder. Remove the bracket and use a 3/32" dia. bit to drill through the rudder at the mark just made. Place the tailwheel wire back onto the rudder and slip the bracket in place, aligned with the hole just drilled. Place a washer onto the 12mm bolt and slip it through the bracket and out the other side of the rudder. Use the remaining washer and hex nut to tighten the assembly firmly to the rudder.



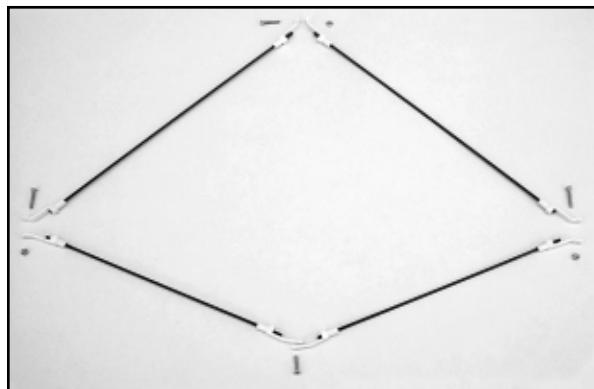
□11) The rudder is now hinged to the vertical fin. Use the same hinging method described earlier in Step 5 of the WING ASSEMBLY instructions.



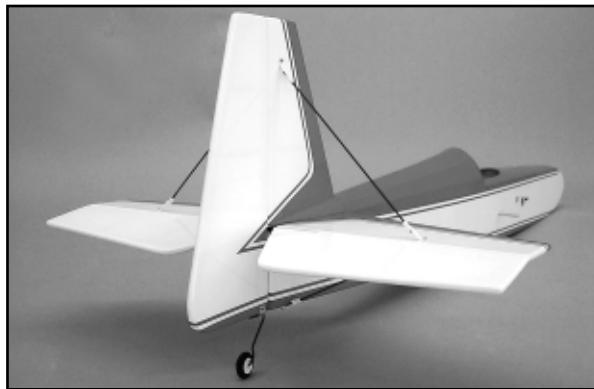
□12) From the kit contents locate:

- 2 - 1.8mm (1/16") x 19.7cm (7-3/4") upper tail support wires
- 2 - 1.8mm x 15.5 (6-1/16") lower tail support wires
- 8 - Molded plastic support ends
- 3 - PM2 x 12mm bolts
- 3 - M2 hex nuts
- 1 - 2-56 x 3/8 slotted head bolt

These parts will be used to make the tail brace system. As shown, the two longer wires are the upper brace wires and the two shorter ones are the lower brace wires. The three PM2 x 12mm bolts and nuts are used to secure the braces to the two outer holes on each side of the stab and the single upper hole in the fin. The 2-56 x 3/8" bolt is used to pass through the two bottom brace ends, into the 2-56 blind nut already installed in the fuselage.



The molded supports are first threaded onto the brace wires. A little light oil on the wire threads will help in threading these support ends in place. Adjust the plastic ends as needed to match the holes in the flying surfaces without forcing them - the fit should support, not pull or push the surface. As shown, the molded plastic support ends have their tips bent with pliers to conform to the flat tail surfaces. These plastic parts bend easily and will retain their shape. Just do it carefully. Once the lengths have been adjusted and the tips bent to match the surfaces, bolt them in place. We suggest using a little thread-locking compound on the bolts to secure them against vibration.



□13) From the kit contents locate: 4 - PWA2.3 x 8mm screws, 4 - clear silicon washers, 1 - 4-40 x 1" nylon bolt, and the canopy.

Use the 4-40 nylon bolt to secure the canopy hatch in place to the fuselage. Press the four silicon washers into the four pre-drilled



holes in the canopy (from experience, do not drop these washers on the floor because they are really hard to find!). Place the canopy onto the canopy hatch with its rear edge lined up with the rear edge of the angled former. Carefully center the canopy and use a few pieces of masking tape to hold it in this position. Use a pin through each washer's center to poke a small hole at each location. Remove the tape and the canopy.

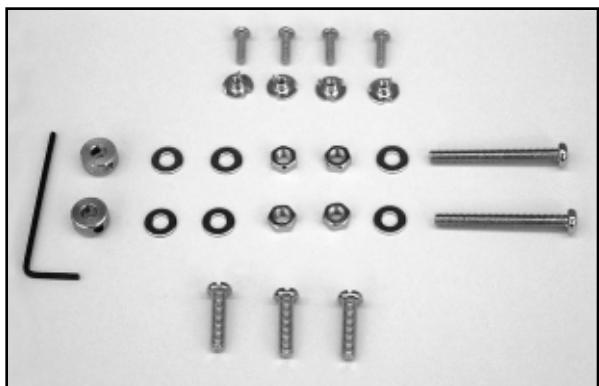
Press the silicon washers onto each screw. Use a screwdriver to insert each screw in place through the canopy and into the holes just made. Tighten the screws enough to force the small diameter side of the washer into the holes in the canopy - do not overtighten, it is not necessary.



**MODELER'S TIP:** If you want to add a pilot figure to your model, it is now very easy to remove and then reattach the canopy. For a pilot figure, we suggest using the Williams Bros. 2-5/8" "Sportsman" civilian figure. It will have to be cut down a little in height but it's size is just about perfect for the model. Glue a small lite-ply base inside the bust and use epoxy and a sheet metal screw through the bottom of the canopy hatch to hold the pilot securely in place.

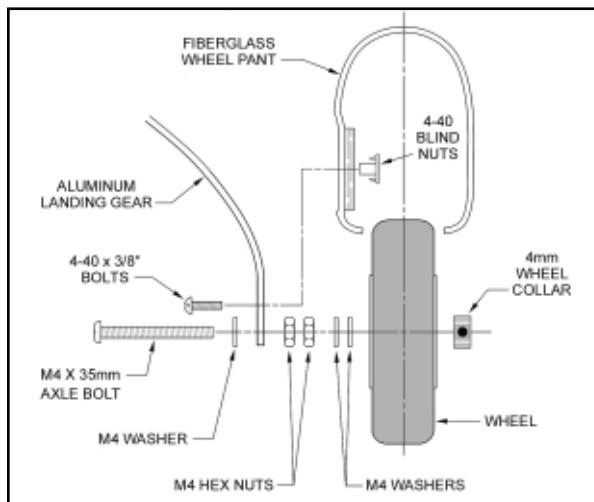
#### LANDING GEAR & WHEEL PANTS:

From the kit contents, locate the following parts: Hardened Aluminum Main Landing Gear, 2 - Main Wheels, 2 - Fiberglass Wheel Pants, and the bag containing: 2 - 4mm Wheel Collars w/ Set Screws, 6 - M4 Washers, 3 - PM4 x 16mm Bolts, 4 - M4 Hex Nuts, and 2 - PM4 x 35mm Bolts. In addition, locate the four 4-40 x 3/8" Slotted Head Bolts and the four 4-40 Blind Mounting nuts used for attaching the wheel pants to the landing gear. When assembling the hardware in the following steps, we suggest using a thread-locking compound, such as Loctite® #242.



- 1) Slip one M4 washer onto each of the PM4 x 35mm bolts.

Insert the bolts into the two axle holes at the bottom of the landing gear legs, from the inside surface. Thread one M4 hex nut onto the threads of each bolt, all the way up to the aluminum landing gear. Use a Phillips screwdriver and a small adjustable wrench to firmly tighten the nuts to the bolt and landing gear. When doing this, leave one of the "points" on the nuts pointed straight up on the landing gear to engage the cut-out in the wheel pant slot. Thread a second M4 hex nut onto the bolt, up to the first hex nut. Use an adjustable wrench to tighten this nut firmly to the first nut. This is the basic wheel axle assembly.



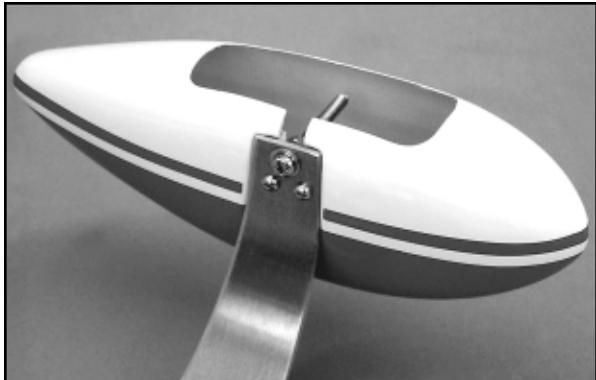
**MODELER'S TIP:** The aluminum landing gear supplied with your kit can be easily polished to a high, chrome-like luster that makes the airplane look very classy! Start by sanding the edges of the landing gear smooth with 400 wet or dry type sandpaper - wet. Now simply use a good quality aluminum polish such as Simichrome™ or Flitz™ and a little elbow grease to polish the gear. Another method is to use a bench grinder with a buffering wheel. Use a buffering compound to quickly polish the gear to a bright, polished finish.

- 2) The fiberglass wheel pants can now be mounted to the landing gear. Note that the wheel pants have been molded with a recess on the inner face that accepts the thickness of the aluminum landing gear and pre-aligns the pant angle to provide their correct relationship to the fuselage in side view. Also note that in side view the leading edge of the landing gear is not tapered. Place one of the wheel pants onto the aluminum landing gear leg with the axle nuts aligned with the slot in the pant's inner face. Using the two, wheel pant mounting holes in the aluminum landing gear (just above the axle) as guide holes, drill two 7/64" diameter holes through the wheel pant and the inner plywood mounting pad. Repeat this process on the remaining wheel pant.



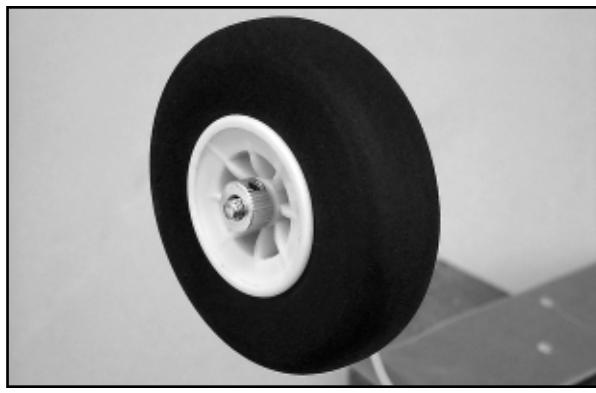
Remove the 7/64" bit from your power drill and replace it with a 9/64" dia. bit. Re-drill the two holes in each wheel pant with the 9/64" bit.

- 3) From the inside of the wheel pant, press two 4-40 blind mounting nuts into the wheel pant mounting holes just drilled. Place the wheel pant back onto the aluminum landing gear. Thread two 4-40 x 3/8" slotted head bolts through the landing gear and wheel pant and into the blind mounting nuts. Use a screwdriver to tighten the bolts just enough to pull the blind nuts fully into the plywood mounting pad. Repeat this procedure on the remaining wheel pant.



Remove the bolts and wheel pants from the landing gear. Apply a little CA glue around the edges of the blind nuts to retain them - keep glue away from and out of the threads.

- 4) The main wheels are now mounted to the axles. Note that the main wheels have two dissimilar hub sides. One side of the hub is "dished" inward and the other side is flush with the outer edge of the hub. The "dished" side is the outer face of the wheel. Slip two M4 washers onto the axle, followed by the main wheel ("dished" side facing outwards) and the 4mm wheel collar. Leaving just a little "play" for the wheel, tighten the wheel collar set screw with the provided Allen wrench. It is a good idea to position the set screw straight down, providing access when the wheel pant is in place.



**MODELER'S TIP:** You can always be sure that wheel collars will stay in place if you take the time to file or grind a small "flat" into the axle, where the set screw contacts it. Along with using thread locking compound, a "flat" in the axle is very effective in keeping the set screw in place despite vibration.

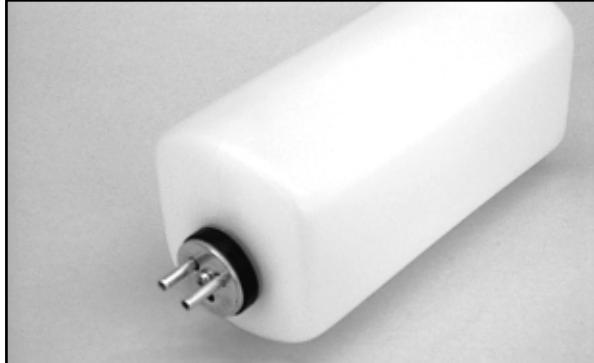
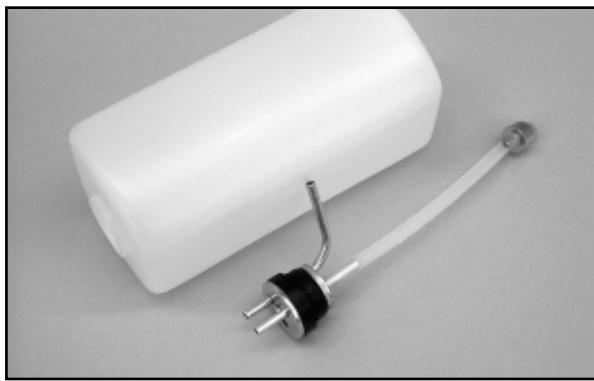
compound on each bolt and do not over-tighten them. The landing gear/wheel pant assembly is now complete and ready to mount. Save the Allen wrench for your tool kit.

The completed landing gear assembly is now mounted in place to the bottom of the fuselage using the three PM4 x 16mm bolts provided in the kit. Use a little thread-locking compound on these bolts to keep them securely in place.



#### FUEL TANK ASSEMBLY:

The 260cc (8.8oz.) fuel tank supplied with this kit is easily assembled. We suggest using a simple two line fuel system in this airplane. One fuel line is connected to the "clunk" or fuel pick-up line and the engine's carburetor. This same line will also be used to fill the tank. The second line is the overflow line for use when filling the tank. After filling the tank, this same line is then connected to the engine's muffler pressure nipple, providing manifold pressure to the tank. Note that the rubber stopper for the tank has two holes all the way through it. Use these holes for the two fuel lines. Gently bend the aluminum overflow tube upwards to 90°, to reach the top of the tank. Adjust the length of the internal silicon fuel tubing to allow free movement of the fuel pick-up inside the tank. Assemble the stopper assembly into the neck of the tank and secure by tightening the compression bolt.

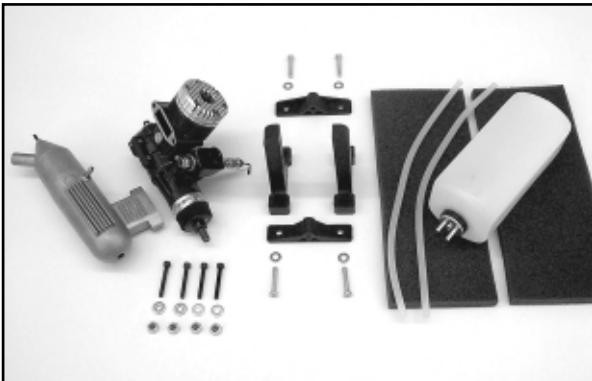


- 5) The wheel pants can now be mounted in place to the landing gear using the 4-40 x 3/8" bolts. Use a little thread locking

## ENGINE AND TANK INSTALLATION:

This instruction sequence will install both the fuel tank and the engine. Therefore, you will need the following:

- Engine (with muffler removed) - not included
- Assembled Fuel Tank
- Motor Mount Assembly (4-piece)\*
- 4 - PM4 x 22mm Bolts
- 4 - M4 Washers
- 2 - Black Foam Rubber Pads - 10mm (7/16") x 80mm (3-1/8") x 200mm (7-7/8")
- 2 - 9" Lengths of Silicon Fuel Tubing - not included
- 4 - 6-32 x 1" Socket Head Bolts - not included
- 4 - 6-32 Lock Nuts - not included
- 4 - #6 Washers - not included



(\*NOTE: The motor mount system provided in the kit can be used in two ways - with or without the adjustable bases. The two bases can be used when you need a little more mounting arm length for your engine. This could be the case when working with larger 4-stroke engines. However, typical 2-stroke engines do not need this extra length. In this case the mounting bases can be set aside and not used.)

□ 1) The fuel tank is installed first. Apply a bead of silicon sealer around the neck of the fuel tank and install it into the fuel compartment, aligning the neck with the round hole in the firewall. Press the neck into the firewall hole. Cut two 2-1/2" pieces of foam rubber from one of the pads. Press these in place in the tank compartment, one on each side of the tank (a long screwdriver is handy when inserting and positioning these foam pieces). Insert the remaining piece of cut foam into the tank compartment, on top of the tank. These foam pads will hold the tank nicely in place and resist vibration. Allow the silicon sealant to cure before applying any pressure to the fuel lines.



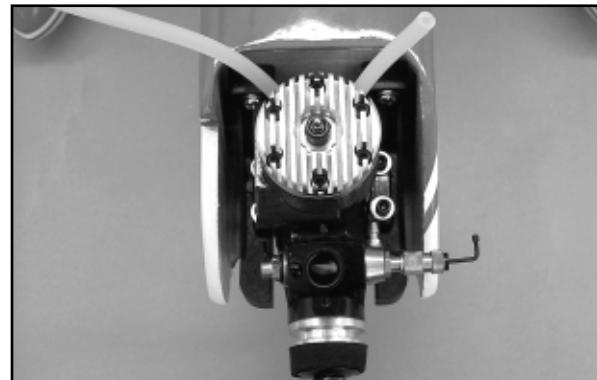
**NOTE:** The engine compartment was fuel proofed during production of the airplane. However, for a little extra insurance,

you could give the engine compartment an additional coat of surfacing resin. If you decide to do this, use a brush to apply the resin and be sure to brush the resin up to the covering edges.

□ 2) Apply a little thread-locking compound to the four PM4 x 22mm bolts and install the two motor mount arms to the firewall - do not tighten in place yet. As mentioned earlier, these arms can be positioned to adjust to the width of the engine's crankcase. Place your engine on the motor mount arms and move the arms as needed to accept the engine. Also, center the engine to the fuselage in the top view. When everything appears correct, tighten the bolts, securing the mounts to the firewall.



□ 3) Use a punch or pencil to mark the engine's mounting bolt locations directly onto the motor mount arms. Remove the engine and drill the four required holes in the mounts for your engine. If you are using 6-32 x 1" bolts and lock nuts (not supplied) to mount your engine, use a 5/32" dia bit for the clearance holes. Do not drill and tap these motor mounts. Doing so may weaken them. Use a little thread-locking compound on all bolts when assembling these components. The muffler should be mounted after the throttle linkage has been made in the following section.



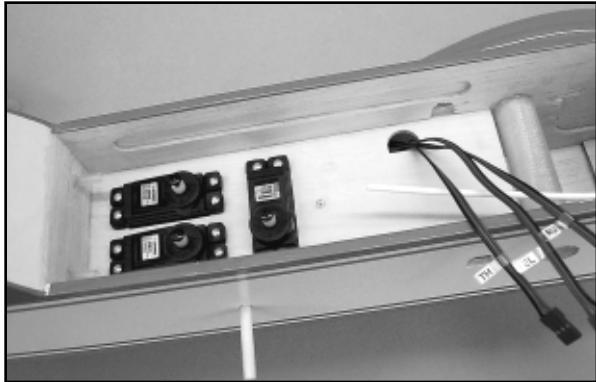
□ 4) Some engine configurations have rear-mounted, remote needle valve assemblies. If you are using this type of engine, you will have to likely drill a hole in the side of the fuselage to allow the needle valve to clear. Be sure to fuel proof any exposed wood in such holes with epoxy resin, clear dope, etc.

## RADIO INSTALLATION:

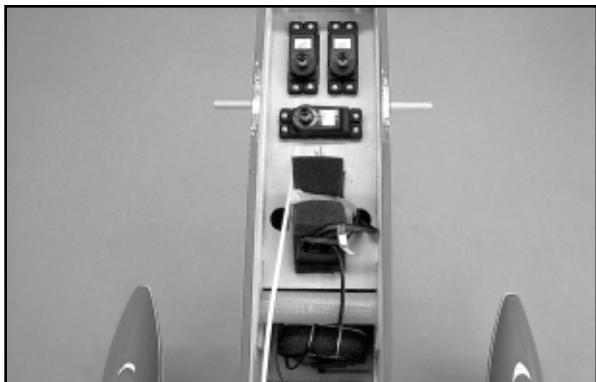
**IMPORTANT:** Carefully note that the factory installed rudder and elevator pushrod tubes built into the fuselage, cross each other in the tail area, making their exits on the opposite side. Looking down on top of the fuselage, with the nose forward, the rudder servo is in the *right* servo tray cut-out and the elevator servo is the *left* cut-out. The rudder pushrod exits the rear of the fuselage on the *left* side, the elevator pushrod exits on the *right*.

Because the aileron servos are already installed and ready, the installation of the rest of the radio system only consists of dropping in the rudder, elevator and throttle servos, the receiver, and the switch. The pushrod connections to these servos will be made shortly. Install the rubber grommets and eyelets supplied with your radio system onto the rudder, elevator, and throttle servos. Install all three servos in place into the fuselage servo tray, again using the screws supplied with your system. Route the servo leads through one of the half round receiver retention holes. We have found it handy to label these leads for easy identification when plugging them into the receiver.

The on/off switch can be mounted wherever it is most convenient for you. If you want to have the switch exposed on the fuselage side, you must cut a small rectangular slot for the switch body and mount it with the hardware supplied with the radio system. We always prefer an internally mounted switch and in this model it is easy to locate and install. We place the switch on the floor of the fuselage, just behind the landing gear block. With the switch in place, we use a length of .046" music wire to activate the switch from the outside of the fuselage. Whatever switch mounting method you choose, make sure the switch is securely in place without any pressure on the wires.



The receiver is now mounted in place. As shown, it sits atop the servo tray, ahead of the throttle servo and between the two half-round cut-outs. First feed the receiver's antenna through the internal antenna tube (it exits at the bottom rear of the fuselage). Use the remaining foam pad to cut top and bottom foam pieces, sized to your receiver. Place one piece of foam on the bottom of the receiver and the other on the top. Use a tie-wrap through the two half-round cut-outs to secure the receiver to the tray. Remember that the aileron servo leads will be coming into each fuselage side, at the receiver location. Final placement of the receiver and its servo receptacles should be made with this in mind.



Use the remaining piece of foam rubber to pad your airborne

battery pack. Wrap the pack securely with the foam and hold it in place with small rubber bands or tape. The final location of the battery pack will be determined during final balancing when the correct CG is established. For now, tuck it underneath the servo tray or behind the tank to keep it out of the way.

#### **PUSHROD ASSEMBLY & CONNECTION:**

From the kit contents locate the following:

- 2 - 1/8" O.D. x 22" nylon rudder and elevator pushrods
- 1 - .065" dia. x 18" braided throttle cable
- 2 - 2-56 x 1-1/4" rods, threaded one end - rudder and elevator servo control rods
- 2 - 2-56 x 3-1/2" rods, threaded one end - rudder and elevator control horn rods
- 3 - 2-56 solder links
- 3 - 2-56 nylon R/C links
- 1 - 2-56 x 3/4" threaded brass coupler
- 2 - Nylon control horns - one right and one left for elevators and rudder
- 4 - #2 x 1/2" pan head screws - control horn attachment

You will also need three servo output arms for your servos and be sure your radio system is charged and ready to use for this section.

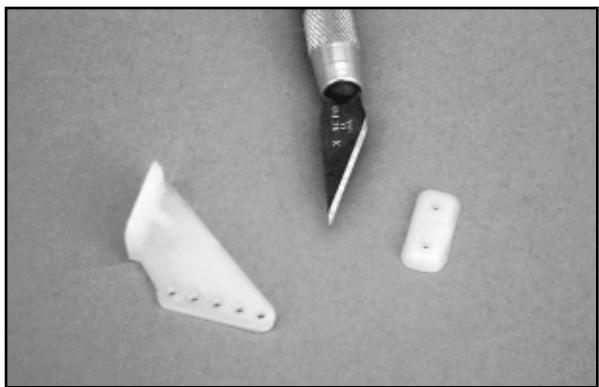
- 1) Use your soldering iron to solder the 2-56 x 3/4" brass coupler onto one end of the braided throttle cable. Next, solder the unthreaded ends of the two 1-1/4" rudder and elevator servo control rods into two of the 2-56 solder links.



- 2) Insert the unthreaded end of the 3-1/2" control rod into one of the 18" nylon control tubes, up to the threads on the rods. Thread the rod into the tube about 3/16" - 1/4". Repeat this procedure with the remaining tube and rod. Thread a nylon R/C link onto the exposed threads of each rod - these are the ends that will be attached to the rudder and elevator control horns.



□ 3) Start with the rudder pushrod. Looking at the fuselage from the rear, the rudder pushrod exit is on the left side. Use a hobby knife to cut the base away from the nylon control horn. Attach the control horn to the nylon R/C link. Slip the unprepared end of the nylon control tube into the pushrod exit at the rear of the fuselage on the left side. Push the rod all the way into the radio compartment. Hold the nylon control horn in place against the rudder at its leading edge, lining up the holes in the horn with the hinge line of the rudder. Use a pencil to press indentations into the rudder covering through the two screw hole locations on the base of the horn.



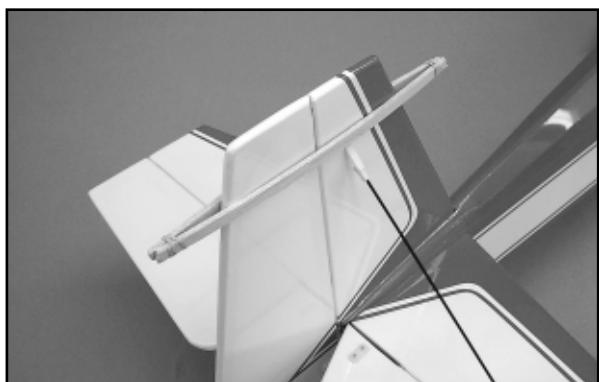
Remove the nylon control tube from the fuselage and remove the control horn from the R/C link. Use a 3/32" dia. bit to drill two holes through the rudder at the marks just made. Press two #2 x 1/2" screws through the base of the rudder horn and the holes in the rudder. Hold the nylon base part to the opposite side of the rudder and secure the horn in place with a screwdriver.

□ 4) The nylon elevator control horn is mounted to the bottom of the right elevator half (when viewed from the rear) in the same manner as the rudder horn. Note that the elevator horn is angled slightly inward toward the fuselage to line-up with the pushrod exit.



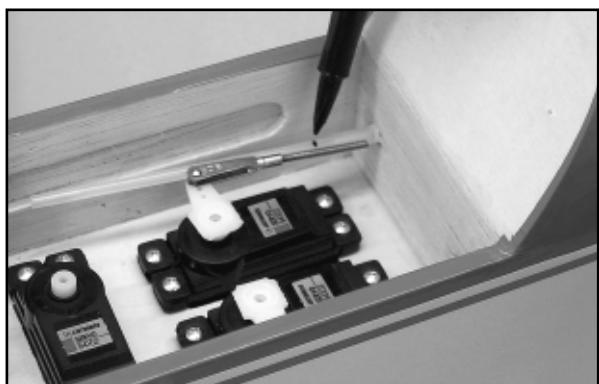
Install both the rudder and elevator pushrods into their exits from the rear of the fuselage and snap the R/C links in place to the nylon horns.

□ 5) The pushrod connections are now made for the rudder and elevator servos. Begin by neutralizing the rudder in place to the fin with tape or a pair of scrap balsa sticks (about 8" long), with rubber bands holding them together at each end. Slip this fixture over the top of the fin and rudder.



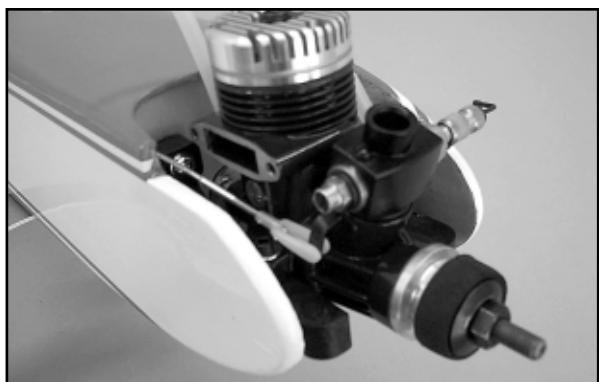
Turn the radio system on and center the rudder and elevator servos with the transmitter trims. Trial-fit the servo arms onto the servos until you find a spline location that places one of the arms at 90° to the servo body. We suggest clipping off the other three arms to avoid any potential mechanical interference. Press the servo arms in place.

Press one of the solder links into the outermost hole in the rudder servo arm, alongside the nylon pushrod. With the solder link and pushrod tube in this relationship, use a marker pen to make a mark on the nylon tube for cutting the tube to final length. This length must leave enough tube to thread the stud end of the solder link into it about 1/2" or so. Cut the tube with a pair of scissors at the mark just made.



Thread one of the solder link/studs into the end of the trimmed nylon rudder pushrod. Connect the solder link to the servo output arm. Adjust the rear nylon R/C link as needed to set the rudder at neutral. Repeat this process for the elevator servo connection.

□ 6) The throttle pushrod is next. Thread the remaining 2-56 nylon R/C link onto the threaded brass coupler that is soldered to one end of the braided throttle cable. From the firewall side, insert the braided throttle cable into the tube housing, pushing it into the



radio compartment. Turn the radio system on and make sure the servo is traveling in the right direction for low and high throttle. Set the throttle stick to full low throttle, with the trim lever centered. Push or pull the throttle cable to close the carburetor on the engine. Connect the remaining solder link to the throttle servo output arm. Use a marker pen to mark the cable for cutting, with sufficient length to fit into the solder links' tube end for the required solder connection.

Remove the cable and cut it at the mark just made (use a carbide cut-off wheel for this cut) and reinsert it back into the throttle housing tube in the face of the firewall. Solder the link in place to the trimmed end of the cable. Connect the solder link to the servo output arm and the nylon R/C link to the carburetor throttle arm. Use the radio to test the throttle action and adjust as needed to obtain true "low" and "high" throttle movement without any binding. We prefer to add a little wedge of scrap balsawood to the inside of the fuselage, where the throttle tubing angles toward the servo, to support it.



Assemble the wings to the fuselage and set all flight surfaces to neutral. In the case of the ailerons this would normally be a difficult job because of the thickness of the wing panels and the inability to sight down the trailing edge of each panel to see their relationship. However, your kit includes a plywood Aileron Position Guide (APG) that allows independent neutral positioning for each aileron.

As shown, the APG is simply held against the fuselage side, on top of the wing panel at the trailing edge. The aileron pushrod is then adjusted to align the aileron parallel with the flat at the rear of the APG fixture - simple and easy.

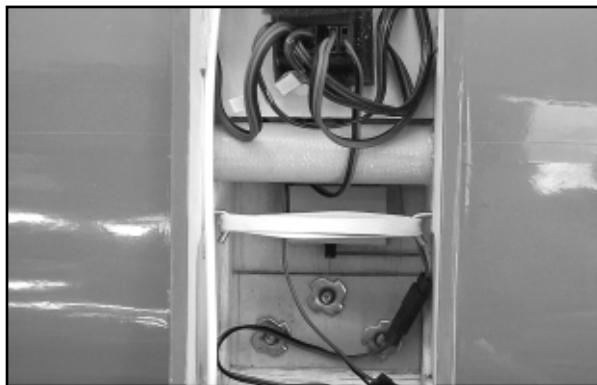


After the flight surfaces have been neutralized, take the time to fit each R/C link with a short length of fuel tubing (medium silicon tubing is fine for 2-56 hardware) to keep the links firmly in place to each control horn and servo arm. This common safety practice has saved a lot of models! Last, make sure that you have secured

the servo arms to each servo with the retaining screws.

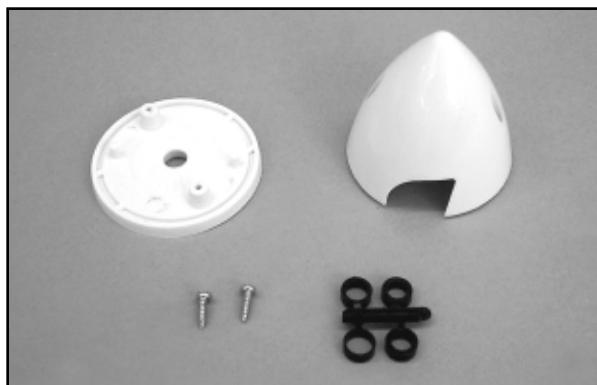
#### **WING RETENTION:**

The wing system used on this airplane is simple, straight forward, and very convenient. It is also well proven in actual use. This system allows the wings to be removed for transportation, storage, maintenance, etc. From the kit contents, locate the #64 rubber band. The rubber band is simply hooked to one of the J-hooks and stretched three (3) times between the two wing J-hooks. Stretching it more than three times is unnecessary and stretching it only twice is insufficient. Periodically inspect the rubber band for any signs of wear and replace it as needed.



#### **SPINNER ASSEMBLY:**

Locate the white SIG spinner assembly from the kit contents. This spinner is easy to install, lends a great look to your finished SOMETHIN' EXTRA® ARF and is ready for use with APC propellers! Choose the correct adapter ring for your engine. The fit should be a nice slip fit over the engine's prop shaft. Slip the spinner backplate onto the prop shaft and onto the adapter ring. The propeller is installed next, followed by the nose cone. The cone is held in place with the provided screws. Be sure to snug the screws securely in place, but do not over-tighten them.



#### **CONTROL SURFACE TRAVEL CHART:**

There are any number of different radio systems currently in use and on the market. Because of this, it is not possible to explain the optimum set-up for all systems for this particular airplane. The following suggested control surface travel information is based on our experience with the SOMETHIN' EXTRA® ARF. These suggested surface movements should be considered as starting points. As your experience and confidence builds, control movements can be adjusted to suit your particular style of flying and to explore the airplane's capabilities.

<b>SURFACE</b>	<b>LOW RATE TRAVEL</b>	<b>HIGH RATE TRAVEL</b>
ELEVATORS:	1-1/4" UP - 1-1/4" DOWN	1-3/4" UP - 1-3/4" DOWN
AILERONS:	1" UP - 1" DOWN	1-1/2" UP - 1-1/2" DOWN
RUDDER:	1-7/8" LEFT - 1-7/8" RIGHT	2-1/4" LEFT - 2-1/4" RIGHT
THROTTLE:	FULL RANGE OF TRAVEL	

**NOTE:** These measurements were taken as follows:

- Elevator travel measured at the widest inboard trailing edge*
- Aileron travel measured at the inboard trailing edge*
- Rudder travel measured at the widest lower trailing edge*

If you are using a computer radio, the following information may be of help. Listed and explained below are types of control surface mixing that would be desirable on this type of model and the effect they have on the flight performance of the SOMETHIN' EXTRA®.

### CONTROL SURFACE MIXING

<b>MIXING</b>	<b>CONTROL SURFACES</b>	<b>EFFECT</b>
FLAPERONS	AILERONS	SEE NOTE #1
ELEVATOR-FLAP	ELEVATORS and FLAPS	SEE NOTE #2
PRE-SET SWITCH	FLAPS and ELEVATORS	SEE NOTE #3

**NOTE #1** - Using typical modern computer radios and two separate aileron servos, it is possible to use the ailerons as flaps. In flight, lowering both ailerons as flaps typically causes the model to pitch down, requiring some corrective "up" elevator input to maintain level flight. Some transmitters have a rotary "Flap" knob that allows the pilot to select the best flap position for any given need or wind condition. With each aileron servo plugged into a separate channel in the receiver, lowering both ailerons as flaps still allows independent movement of each aileron to control roll. This is a versatile mixing feature as long as the pilot maintains elevator input as needed.

**NOTE #2** - Elevator To Flap mixing is also a good feature. It interfaces the elevators to the flaperons, allowing both surfaces to work together to maintain very slow, straight, and level flight. When mixed together, the flaperons travel downward while the elevators travel upwards at a pre-programmed rate. Likewise, deploying the flaperons upwards causes the elevators to travel downwards, again at a pre-programmed rate. This mixing feature can be used to give your SOMETHIN' EXTRA® ARF the ability to perform incredibly sharp turns and super tight loops.

**NOTE #3** - As mentioned in Note #1, some transmitters have rotary knobs for the "flap" channel. However, some transmitters have 3-position switches that allow pre-set flap and elevator positioning. There are even some transmitters that have both types of switches. The 3-position switch typically allows for three different flap positions. For example: Switch setting #1: Raise the flaperons 10° or so, causing them to act as spoilers on a sailplane which causes the airplane to make faster descents for those quick landings sometimes called for in fun-fly contests. Switch setting #2: With the switch in this position, the flaperons are held in neutral position - with the exception of "Elevator To Flap" mixing for normal flying. Switch setting #3: Lowers the flaperons to a pre-set location (say, 30° or so). This setting would allow the airplane to make incredibly slow landings or even to hover or appear to fly backwards in certain wind conditions.

Double-check the entire radio installation and remedy any problems now. Make sure that all five servos have their output arm screws back in place and tightened. We also suggest that you

periodically check the available voltage in your receiver and transmitter battery packs, using a good ESV (Expanded Scale Voltmeter) to avoid battery related problems. Last, no matter how good you may think your radio system is, make it a routine part of your pre-flight procedures to always perform a thorough range check before every flying session.

### DECAL APPLICATION:

The decals supplied with your SOMETHIN' EXTRA® ARF kit are high quality Mylar with an extremely aggressive adhesive. These are not die-cut and must be cut from the sheet with a hobby knife and a sharp #11 blade or with sharp scissors.

We suggest the following method to accurately apply these decals. Carefully cut out the decal and lift it off the sheet with tweezers. Use a product like SIG Pure Magic Model Airplane Cleaner, Fantastic®, or Windex® to spray the area of the model that will receive the decal. Then spray the adhesive side of the decal as well. Lightly position the decal in place on the model. The liquid cleaner allows the decal to slide easily into the desired position - do not press down on the decal. Once in position, hold the decal lightly in place with your finger and use a paper towel to gently dab the excess liquid away. Use a small squeegee to now set the decal in place, removing all excess liquid and any trapped air bubbles. The SIG 4" Epoxy Spreader - #SIGSH678 - is perfect for this job. Mop up any excess cleaner with a dry cloth and allow the decals to set overnight. They will be solidly adhered to the model without any air bubbles.



### CENTER OF BALANCE:

We suggest a beginning Center of Balance (CG) location of 3-1/2" back from the leading edge of the wing. This CG location is fairly "mild" and should be used for initial test flights. Later, when you're more comfortable with the airplane and how it flies, this CG location can be relocated further back to yield even wilder maneuvers. When doing this, never move the CG location further back than 1/4" without flying the airplane first. You need to be aware of how your airplane flies with an aft CG location and you would be wise to "sneak up" on this information rather than find out the hard way!

The easiest way to balance this model is upside down, using a balancing fixture. We made our fixture, using a pair of 1/4" dowels with rubber tips to protect the finish. Simply measure back 3-1/2" from the leading edge of the wing and mark that location on the wing with a non-permanent marker pen or thin strips of tape. Mark the CG location on both wing panels. Turn the airplane over and position the ends of the balancing fixture at the marks just made. Ideally, the model should be right on or very close to the recommended 3-1/2" point. If it is nose-heavy, the battery pack

can be moved back a little to achieve the right balance. If it is tail-heavy, the battery pack can be moved forward a little. In the unlikely event that moving the battery pack will not correct these conditions, then stick-on lead weights may be needed. These are available from your local hobby retailer. Make sure that any weights you use are very securely attached to the model.



Last, we also suggest that you balance your model laterally. To do this, use light line or string to suspend the assembled airplane inverted, from a front center and a rear center point on the fuselage - typically from the engine's prop shaft in the front and the tailwheel wire at the rear. Properly balanced laterally, the wings will remain level. If the airplane is heavier on one side than the other, the wing on the heavy side will hang lower. This can have a negative effect on how this or any other model flies and will show up in certain maneuvers. It should be corrected. The quickest fix is to add small stick-on weights to the lighter wingtip until the model hangs level. A neater method is to cut a small hole in the wingtip, place the lead inside securely and recover the area. No matter how you do the job, a laterally balanced model always performs better and is well worth the effort.

#### **FLYING:**

As we said earlier, the SOMETHIN' EXTRA® ARF is not a beginner's model! It was designed as an all-out sport aerobatic aircraft, with all of the inherent attributes of those types of airplanes. If this is your first aerobatic model or if you have relatively little actual flight time, we urge you to seek the assistance of a qualified R/C pilot to help you through the first few test flights.

First flights should be made with the control settings at the LOW RATES specified in this manual. You will find that the SOMETHIN' EXTRA® ARF takes very little space to take off. Line the airplane up on the runway, headed directly into the wind. Advance the throttle stick smoothly - do not slam it wide open all at once! Even though the vertical fin and rudder on this airplane has a lot of area, just a

little right rudder correction for engine torque may be needed to keep it tracking straight during take off. Once in the air, climb to a reasonable altitude before making any trim adjustments. Once the model is trimmed for straight and level flight, begin getting a feel for the way it flies. At an altitude of about three mistakes high, you can begin exploring its ability to loop, roll, etc. When you are more comfortable (usually within minutes), try out the HIGH RATE settings and begin to enjoy this model as it was meant to be! This thing will perform maneuvers that are not even named yet. Try some spins, both upright and inverted and be sure to throw in some snap rolls. You'll really appreciate how quickly it corrects itself when you let go of the sticks. Before landing, we always suggest that you check out the airplane's stall characteristics, while still at a reasonable altitude. When you are more familiar with the SOMETHIN' EXTRA® ARF, give the flaperons a try. You will not believe what you can get this model to do!

**FLYERS TIP:** *In flight, do not lower the flaperons above 1/2 throttle. At higher speeds, lowering the flaps will likely cause sudden pitch changes that may be difficult to correct at low altitudes.*

Be careful! The SOMETHIN' EXTRA® ARF has a tendency to make you feel very confident and you may wind-up flying too close to the ground or yourself. This airplane has the ability to recover quickly from virtually any maneuver but a point might be reached where you could run out of ideas and altitude at the same time. You also need to get comfortable with the shape and color of your model during some of the wilder maneuvers. Knowing which side is up and the direction of flight is always a good thing. If your engine quits for any reason, be aware that the SOMETHIN' EXTRA® ARF flies very nicely during a dead-stick glide. However, the thickness of the wing does not allow it to penetrate very well in high wind, dead-stick conditions. If your engine quits and you have some distance to travel back to the field, keep the nose down, the speed up, and avoid turns.

Landing the SOMETHIN' EXTRA® ARF is super easy. The first few times, without flaperons, keep a little power on the engine to keep the model moving. It can be flown right down to flare height, landing on the main wheels with a very short roll-out. With some experience and using the flaperons, you will find that you can consistently land this airplane in exactly the same place every time. As long as we're on the subject, no landing gear system is bulletproof. Your SOMETHIN' EXTRA® ARF has a great landing gear structure that has proven to be very tough. However, it can be ripped off during less than desirable landing approaches, poor field conditions, failure to flare, and just plain "brain fade". If this happens, simply epoxy the landing gear back in place and learn to be more careful in the future.

Finally, as we've said before in this manual, there is literally no substitute for a good running, reliable engine. The SOMETHIN' EXTRA® ARF places a premium on such engines and it's in your best interest to use a truly good engine to power this truly good airplane.

## **WARNING! THIS IS NOT A TOY!**

Flying machines of any form, either model-size or full-size, are not toys! Because of the speeds that airplanes must achieve in order to fly, they are capable of causing serious bodily harm and property damage if they crash. **IT IS YOUR RESPONSIBILITY AND YOURS ALONE** to assemble this model airplane correctly according to the plans and instructions, to ground test the finished model before each flight to make sure it is completely airworthy, and to always fly your model in a safe location and in a safe manner. The first test flights should only be made by an experienced R/C flyer, familiar with high performance R/C aircraft.

The governing body for radio-control model airplanes in the United States is the **ACADEMY OF MODEL AERONAUTICS**, commonly called the **AMA**. The **AMA SAFETY CODE** provides guidelines for the safe operation of R/C model airplanes. While AMA membership is not necessarily mandatory, it is required by most R/C flying clubs in the U.S. and provides you with important liability insurance in case your R/C model should ever cause serious property damage or personal injury to someone else. For more information, contact:

### **ACADEMY OF MODEL AERONAUTICS**

**5161 East Memorial Drive**

**Muncie, IN 47302**

**Telephone: (765) 287-1256**

**AMA WEB SITE: [www.modelaircraft.org](http://www.modelaircraft.org)**

## **CUSTOMER SERVICE**

SIG MANUFACTURING COMPANY, INC. is totally committed to your success in both assembling and flying the SOMETHIN' EXTRA® ARF kit. Should you encounter any problem building this kit or discover any missing or damaged parts, please feel free to contact us by mail or telephone.

### **SIG MANUFACTURING COMPANY, INC.**

**P.O. Box 520**

**Montezuma, IA 50171-0520**

**SIG MODELER'S ORDERLINE: 1-800-247-5008**

**(to order parts)**

**SIG MODELER'S HOTLINE: 1-641-623-0215**

**(for technical support)**

**SIG WEB SITE: [www.sigmfg.com](http://www.sigmfg.com)**

## **LIMIT OF LIABILITY**

The craftsmanship, attention to detail, and actions of the builder/flyer of this model airplane kit will ultimately determine the airworthiness, flight performance, and safety of the finished model. SIG MFG. CO.'s obligation shall be to replace those parts of the kit proven to be defective or missing. The user shall determine the suitability of the product for his or her intended use and shall assume all risk and liability in connection therewith.