

SR22 TURBO



INSTRUCTION MANUAL

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SPECIFICATIONS

Wingspan: 50.5 in [1285mm]	Length: 36 in [915mm]	Motor: .10 (35-30-1250) Brushless Outrunner
Wing Area: 305 in ² [19.7 dm ²]	Weight: 2.5-3 lb [1130-1360 g]	
Wing Loading: 19-23 oz/ft ² [58-70 g/dm ²]	Radio: 4-channel, 4-nano servos	

WARRANTY

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

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

If the 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.

To make a warranty claim send the defective part or item to Hobby Services at the address below:

Hobby Services
3002 N. Apollo Dr. Suite 1
Champaign IL 61822 USA

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

ElectriFly[™]
by Great Planes

Champaign, Illinois
(217) 398-8970, Ext 5
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INTRODUCTION

Congratulations on your purchase of the Great Planes ElectricFly Cirrus SR22 ARF! With only an evening or two of final assembly, you will be rewarded with a beautiful scale model that flies with inexpensive radio components and can fit in the backseat of a car without removing the wings. The wings can be removed for storage by simply unscrewing the knurled wing bolts and sliding the panels off of the lightweight carbon wing tube. Battery changes are a snap with the self-aligning magnetic hatch. A fiberglass fuselage and canopy hatch ensure a smooth appearance that looks great in the pits and in the air. A cockpit interior, which only requires the addition of a pilot(s) of your choice, finishes off the realism.

For the latest technical updates or manual corrections to the Cirrus SR22 ARF visit the Great Planes web site at www.greatplanes.com. Open the "Airplanes" link, then select the Cirrus SR22 ARF. If there is new technical information or changes to this model a "tech notice" box will appear in the upper left corner of the page.

AMA

If you are not already a member of the AMA, please join! The AMA is the governing body of model aviation and membership provides liability insurance coverage, protects modelers' rights and interests and is required to fly at most R/C sites.

ACADEMY OF MODEL AERONAUTICS



5151 East Memorial Drive
Muncie, IN 47302-9252
Tele. (800) 435-9262
Fax (765) 741-0057

Or via the Internet at:
www.modelaircraft.org

IMPORTANT!!!

Two of the most important things you can do to preserve the radio controlled aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

PROTECT YOUR MODEL, YOURSELF & OTHERS... FOLLOW THESE IMPORTANT SAFETY PRECAUTIONS

1. Your Cirrus SR22 ARF should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size airplane. Because of its performance capabilities, the Cirrus SR22, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage to property.
2. You must assemble the model **according to the instructions**. Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct.
3. You must take time to **build straight, true and strong**.
4. You must use an R/C radio system that is in good condition, a correctly sized motor, and other components as specified in this instruction manual. All components must be correctly installed so that the model operates correctly on the ground and in the air. You must check the operation of the model and all components before **every** flight.
5. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for

your first flights. If you're not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.

6. While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high stress flying, such as racing, or if a motor larger than one in the recommended range is used, the modeler is responsible for taking steps to reinforce the high stress points and/or substituting hardware more suitable for the increased stress.

7. **WARNING:** The fuselage, wheel pants, and canopy hatch included in this kit are made of fiberglass, the fibers of which may cause eye, skin and respiratory tract irritation. Never blow into a part to remove fiberglass dust, as the dust will blow back into your eyes. Always wear safety goggles, a particle mask and rubber gloves when grinding, drilling and sanding fiberglass parts. Vacuum the parts and the work area thoroughly after working with fiberglass parts.

We, as the kit manufacturer, provide you with a top quality, thoroughly tested kit and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations are expressed or implied as to the performance or safety of your completed model.

Remember: Take your time and follow the instructions to end up with a well-built model that is straight and true.

DECISIONS YOU MUST MAKE

This is a partial list of items required to finish the Cirrus SR22 ARF that may require planning or decision making before starting to build. Order numbers are provided in parentheses.

Radio Equipment

The Cirrus SR22 ARF requires a minimum 4-channel radio system with four nano servos such as the *ElectriFly ES-50* nano servo. In addition, two 12" [305mm] servo extensions and a dual servo extension are required for the aileron servos.

- Great Planes *ElectriFly ES50 Nano Servo J* (GPMM1210)
- Hobbico® *Extension 12" [152mm] Futaba J* (HCAM2100)
- Futaba® *Dual Servo Extension 6" J* (FUTM4130)

Motor Recommendation

The recommended motor for the Cirrus SR22 ARF is a *RimFire™ .10 (35-30-1250)* brushless outrunner motor.

- Great Planes *RimFire .10 (35-30-1250) Outrunner Brushless* (GPMG4595)

If using the recommended brushless motor, a 35A brushless ESC is required:

- Great Planes *Silver Series 35A Brushless ESC 5V/2A* (GPMM1830)

Propeller

If you are installing the recommended *RimFire* brushless motor, we suggest a 10x7E APC propeller (APCQ4123).

Batteries and Charger

One 1500-3350mAh 11.1V Lithium Polymer battery pack is recommended. Using a 2200mAh 11.1V LiPo, our SR22 balanced at the recommended C.G. without the need for additional ballast.

- Great Planes *ElectriFly LiPo 3S 11.1V 1500mAh 25C* (GPMP0511)
- Great Planes *ElectriFly LiPo 3S 11.1V 2200mAh 25C* (GPMP0520)
- FlightPower® *EON-X™ Lite LiPo 3S 11.1V 2500mAh 25C* (FPWP4238)
- Great Planes *ElectriFly LiPo 3S 11.1V 3350mAh 25C* (GPMP0541)

A cell balancer is required for the LiPo battery packs listed above:

- Great Planes *ElectriFly Equinox™ LiPo Cell Balancer 1-5* (GPMM3160)

A suitable charger is also required. The *Great Planes PolyCharge4™* is designed for LiPo packs only. However, it is able to charge four LiPo packs simultaneously. The *Great Planes Triton2™* charger will only charge one pack at a time, but is capable of charging NiCd, NiMH, LiPo, and Pb acid batteries. Order numbers for both are provided below:

- Great Planes *PolyCharge4 DC Only 4 Output LiPo Charger* (GPMM3015) **OR**
- Great Planes *ElectriFly Triton2 DC Comp Peak Charger* (GPMM3153)

Pilot

If you wish to use the same pilot that is shown in the building instructions, purchase *Williams Brothers 1/8 Pilot Bust Kit Sportsman (WBRQ1130)*. This pilot figure requires finish sanding and painting, and some additional modification of the pilot figure is described in the building instructions.

ADDITIONAL ITEMS REQUIRED

Adhesives and Building Supplies

This is the list of Adhesives and Building Supplies that are required to finish the Cirrus SR22 ARF:

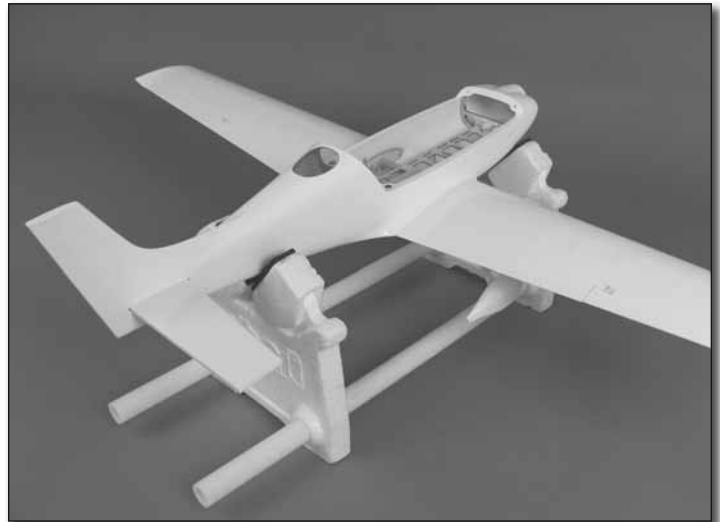
- 1/2 oz. [15g] Thin Pro™ CA (GPMR6001)
- 1/2 oz. [15g] Thick Pro CA- (GPMR6013)
- Threadlocker thread locking cement (GPMR6060)
- Drill bits: 1/16" [1.6mm], 5/64" [2mm]
- Small metal file or rotary tool
- Revell® #1 Light Duty Aluminum Handle Knife w/Blade (RMXR6901)
- Revell #11 Light Duty Blades (5) (RMXR6930)
- Medium T-pins (100, HCAR5150)
- Top Flite® MonoKote® sealing iron (TOPR2100)
- Top Flite Hot Sock™ iron cover (TOPR2175)
- 220 grit sandpaper
- Panel Line Pen (TOPQ2510)

Optional Supplies and Tools

Here is a list of optional tools that will help you build the Cirrus SR22 ARF:

- 1/2 oz. [15g] Medium Pro CA+ (GPMR6007)
- 2 oz. [57g] spray CA activator (GPMR6035)
- 4 oz. [113g] aerosol CA activator (GPMR6034)
- CA applicator tips (HCAR3780)
- CA debonder (GPMR6039)
- Pro 6-minute epoxy (GPMR6045)
- Pro 30-minute epoxy (GPMR6047)
- Epoxy brushes 6, (GPMR8060)
- Mixing sticks (GPMR8055)
- Mixing cups (GPMR8056)
- Pliers with wire cutter (HCAR0630)
- Rotary tool reinforced cut-off wheel (GPMR8020)
- Hobby Heat™ micro torch II (HCAR0755)
- Precision Magnetic Prop Balancer (TOPQ5700)
- AccuThrow™ Deflection Gauge (GPMR2405)
- CG Machine™ (GPMR2400)
- Hobbico Flexible 18" Ruler Stainless Steel (HCAR0460)
- Top Flite MonoKote heat gun (TOPR2000)
- Hobbico Pin Vise 1/16 Collet w/6 Bits (HCAR0696)
- Great Planes Heat Shrink Tubing 3/8x3" (3) (GPMM1060)
- Woodland Scenics Low Temp Foam Glue Gun (WOOU1445)
- Denatured alcohol (for epoxy clean up)

Building Stand



A building stand or cradle comes in handy during the build. We use the Robart Super Stand II (ROBP1402) for all our projects in R&D, and it can be seen in pictures throughout this manual.

IMPORTANT BUILDING NOTES

- When you see the term test fit in the instructions, it means that you should first position the part on the assembly without using any glue, then slightly modify or custom fit the part as necessary for the best fit.
- Whenever the term “glue” is written, you should rely upon your experience to decide what type of glue to use. When a specific type of adhesive works best for that step, the instructions will make a recommendation.
- Photos and sketches are placed before the step they refer to. Frequently you can study photos in following steps to get another view of the same parts.
- The Cirrus SR22 is factory-covered with Top Flite Jet White MonoKote film (TOPQ0204). Should repairs ever be required, MonoKote can be patched with additional MonoKote purchased separately. MonoKote is packaged in six-foot rolls, but some hobby shops also sell it by the foot. If only a small piece of MonoKote is needed for a minor patch, perhaps a fellow modeler would give you some. MonoKote is applied with a model airplane covering iron, but in an emergency a regular iron could be used. A roll of MonoKote includes full instructions for application.
- The stabilizer and wing incidences and engine thrust angles have been factory-built into this model. However, some technically-minded modelers may wish to check these measurements anyway. To view this information visit the web site at www.greatplanes.com and click on “Technical Data.” Due to manufacturing tolerances which will have little or no effect on the way your model will fly, please expect slight deviations between your model and the published values.

KIT INSPECTION

Before starting to build, inspect the parts to make sure they are of acceptable quality. If any parts are missing or are not of acceptable quality, or if you need assistance with assembly, contact **Product Support**. When reporting defective or missing parts, use the part names exactly as they are written in the Kit Contents list.

Great Planes Product Support

3002 N. Apollo Drive, Suite 1
Champaign, IL 61822
Telephone: (217) 398-8970, ext. 5
Fax: (217) 398-7721
E-mail: airsupport@greatplanes.com

ORDERING REPLACEMENT PARTS

Replacement parts for the Great Planes Cirrus SR22 ARF are available using the order numbers in the **Replacement Parts List** that follows. The fastest, most economical service can be provided by your hobby dealer or mail-order company.

To locate a hobby dealer, visit the Great Planes web site at www.greatplanes.com. Choose "Where to Buy" at the bottom of the menu on the left side of the page. Follow the instructions provided on the page to locate a U.S., Canadian or International dealer.

Parts may also be ordered directly from Hobby Services by calling (217) 398-0007, or fax at (217) 398-7721, but full retail prices and shipping and handling charges will apply. Illinois and Nevada residents will also be charged sales tax. If ordering via fax, include a Visa® or MasterCard® number and expiration date for payment.

Mail parts orders and payments by personal check to:

Hobby Services

3002 N. Apollo Drive, Suite 1
Champaign, IL 61822

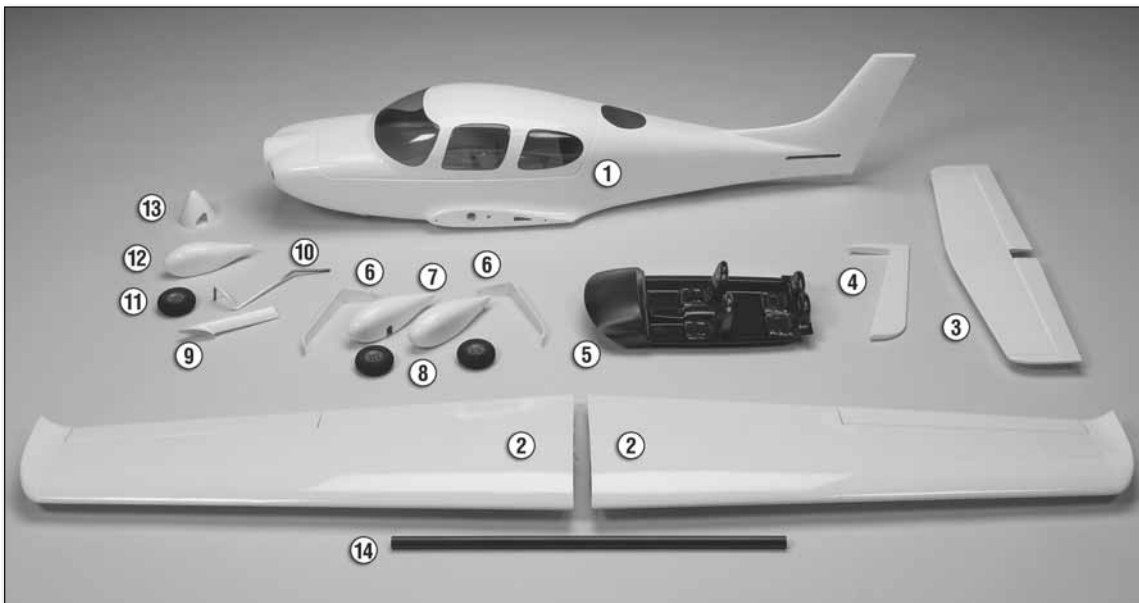
Be certain to specify the order number exactly as listed in the **Replacement Parts List**. Payment by credit card or personal check only; no C.O.D.

If additional assistance is required for any reason, contact Product Support by telephone at (217) 398-8970, or by e-mail at productsupport@greatplanes.com.

REPLACEMENT PARTS LIST

Order No.	Description
GPMA4035	FUSELAGE
GPMA4036	WING
GPMA4037	TAIL SURFACES
GPMA4038	HATCH
GPMA4039	WHEELPANTS
GPMA4040	NOSE GEAR FAIRING
GPMA4041	MAIN GEAR SET
GPMA4042	NOSE GEAR
GPMA4043	DECALS
GPMA4044	WING JOINER ROD
GPMA4045	SPINNER
NOTE ▶	Full-size plans are not available. You can download a copy of this manual at www.greatplanes.com .

KIT CONTENTS



1. Fuselage, canopy hatch
2. Wing
3. Horizontal stabilizer (stab) with elevators
4. Rudder
5. Cockpit interior
6. Main landing gear
7. Main gear wheel pants
8. Main wheels
9. Nose gear fairing
10. Nose gear
11. Nose wheel
12. Nose wheel pant
13. Spinner
14. Wing tube

BUILDING INSTRUCTIONS

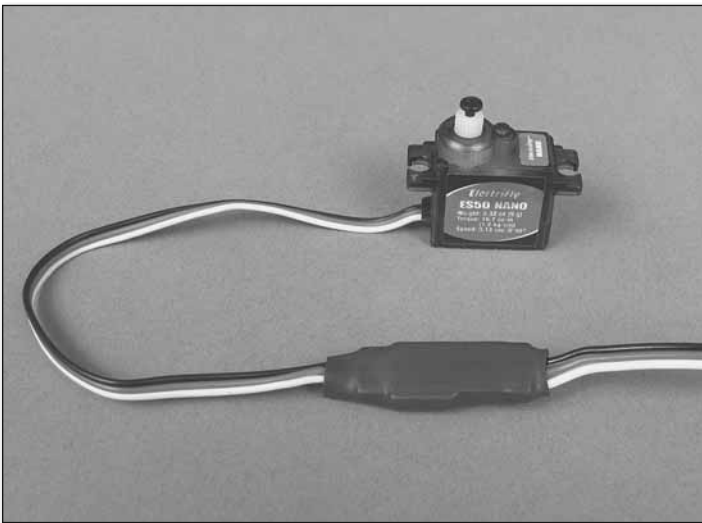
Preparations

- ❑ 1. If you have not done so already, remove the major parts of the kit from the box and inspect for damage. If any parts are damaged or missing, contact Product Support at the address or telephone number listed in the "Kit Inspection" section on page 5.

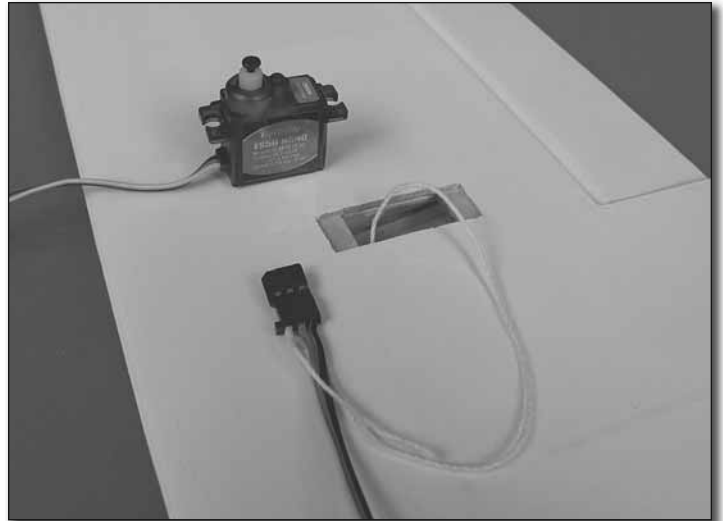


- ❑ 2. Carefully remove the tape and separate all the control surfaces. Use a covering iron with a covering sock on high heat to tighten the covering if necessary. Apply pressure over sheeted areas to **thoroughly** bond the covering to the wood.

Assemble the Wing Panels



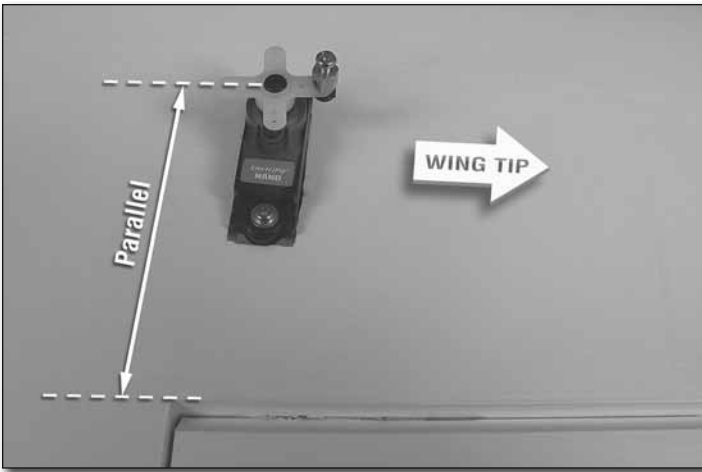
- ❑ 1. Attach a 12" [305mm] servo extension to each aileron servo. Secure the connections using tape, heat shrink tubing (not included) or special clips designed for that purpose.



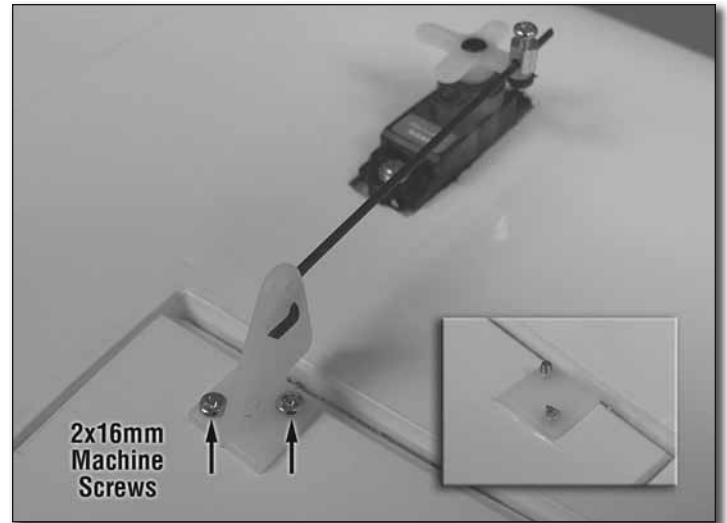
- ❑ 2. Locate the strings taped inside the aileron servo bays and tie the ends of the strings to the servo extensions. Use the string to pull the servo leads through the wing ribs.



- ❑ 3. Install the rubber grommets and eyelets included with the servos. Position the servos in the aileron servo bays in the orientation shown. Drill 1/16" [1.6mm] holes through the servo mounting tabs. Thread a servo mounting screw (included with the servos) into each hole and back it out. Apply a drop of thin CA to each hole to harden the wood. When the glue has dried, install the servos using the screws included with the servos.

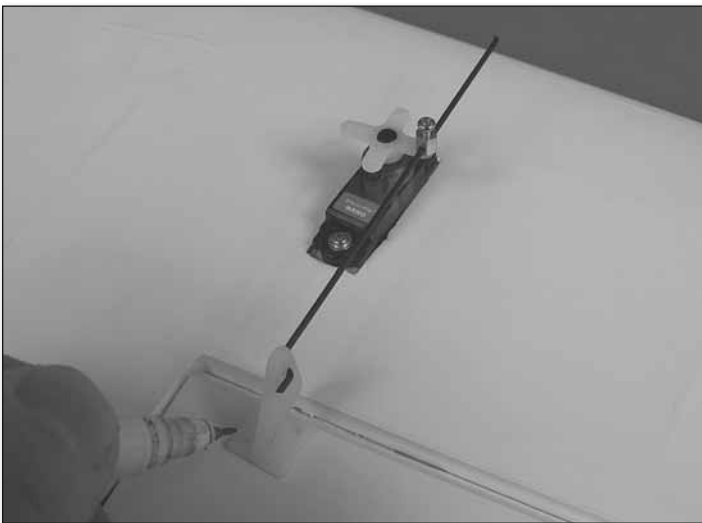
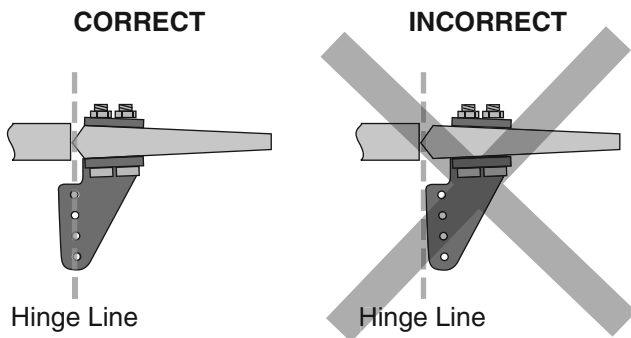


❑ 4. Install a screw lock pushrod connector into the outer hole of the long servo arm as shown with a nylon screw lock retainer. Loosely thread a 2x4mm machine screw into the connector. Center the servos with your radio system and install the servo arm onto the servo parallel to the **aileron hinge line** as shown with the connector toward the wing tip. Be sure to reinstall the servo arm screw into the servo. Repeat this step for the other aileron servo.

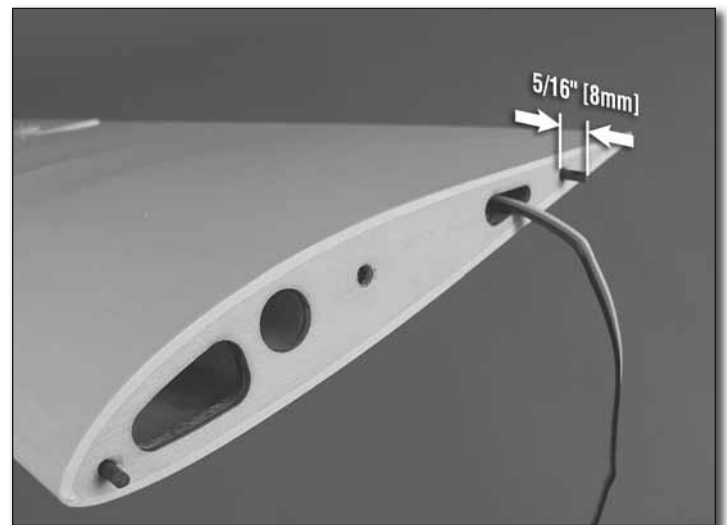


❑ 6. Drill 5/64" [2mm] holes at the marks you made through the ailerons. Apply a couple drops of thin CA glue to each hole to harden the wood surrounding the holes. When the glue has dried, install the control horns onto the ailerons using four 2x16mm machine screws and control horn backplates. The ends of the screws can be cut off beyond the control horns.

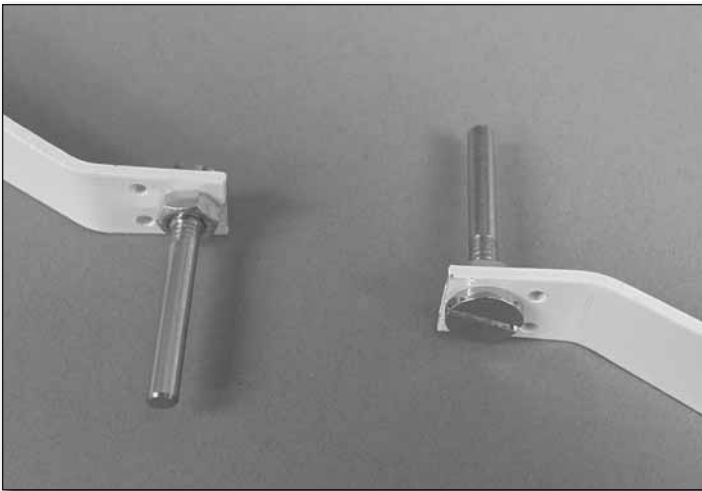
❑ 7. Position the aileron in the neutral position and tighten the screw in the screw lock pushrod connector against the pushrod with threadlocking compound. The excess pushrod beyond the pushrod connector can be cut off.



❑ 5. Connect the Z-bend end from a 90mm aileron pushrod into the second outer hole of a control horn. Insert the other end into the screw lock pushrod connector. Align the pushrod perpendicular to the hinge line and align the holes in the control horns directly over the aileron hinge line. Mark the location of the control horn mounting holes. Repeat this step for the other aileron servo.



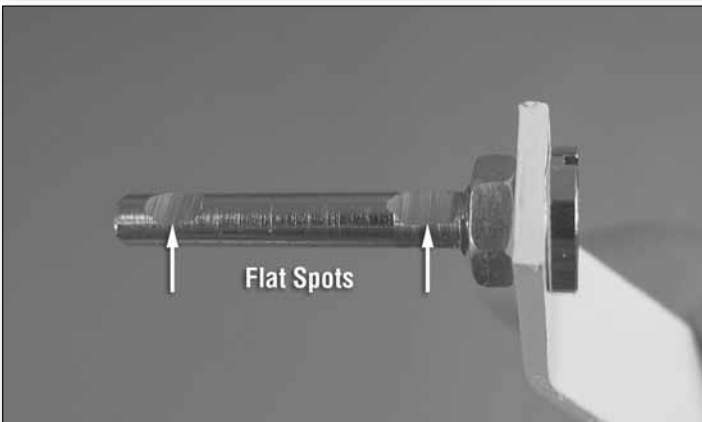
❑ 8. Use medium or thick CA to glue the carbon anti-rotation pins into the wing root ribs. The pins should protrude beyond the ribs approximately 5/16" [8mm].



❑ 9. Install the axles onto the landing gear legs using the included landing gear nuts and threadlocking compound.



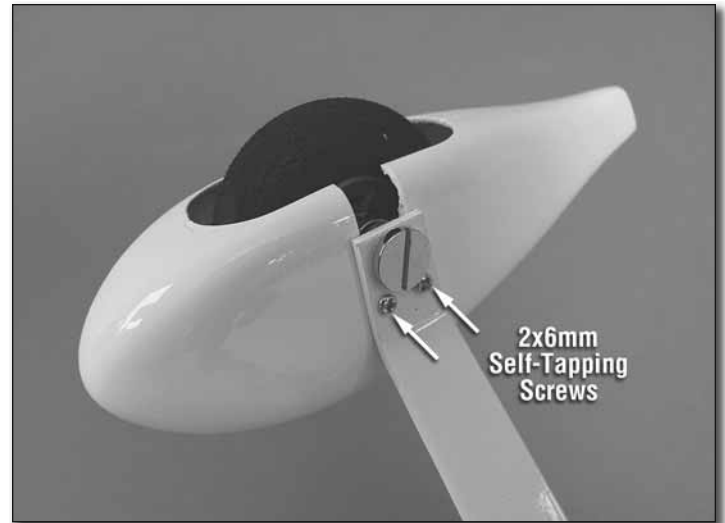
4mm Wheel Collars



Flat Spots

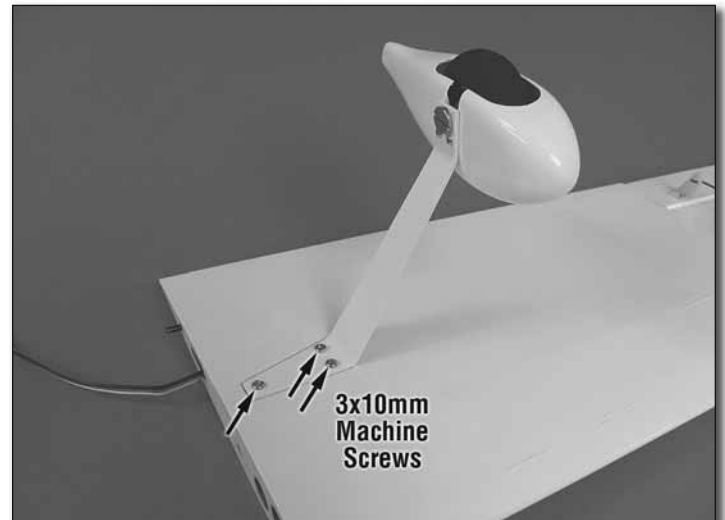
❑ 10. Slide a 4mm wheel collar onto each axle followed by a main wheel and another 4mm wheel collar. Mark the location of the screw holes in the wheel collars onto the axles. Remove the wheel collars and wheels and use a file or rotary tool to grind flat spots onto the axles at the marks you made.

❑ 11. Install the wheel collars and main wheels onto the axles. Secure the collars onto the axles with 3mm set screws and threadlocking compound. Be sure that the wheels rotate freely. Oil them if necessary.



2x6mm
Self-Tapping
Screws

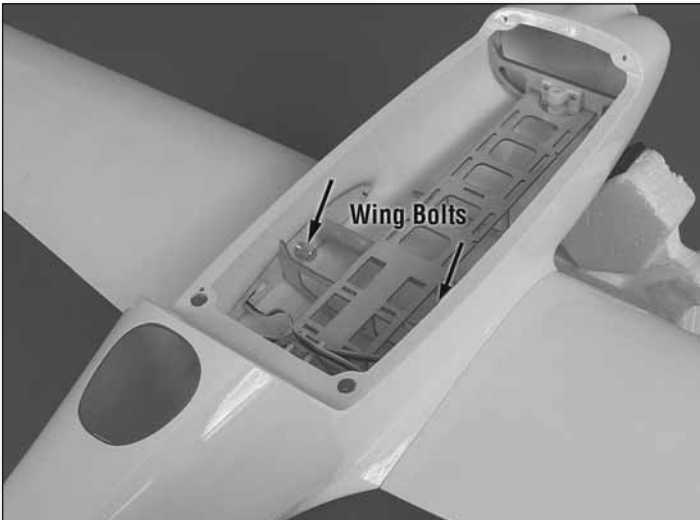
❑ 12. Thread a 2x6mm self-tapping screw into each hole in the wheel pants and back it out. Apply a drop of thin CA to each hole and allow the glue to dry. Install the wheel pants onto the landing gear with four 2x6mm self-tapping screws.



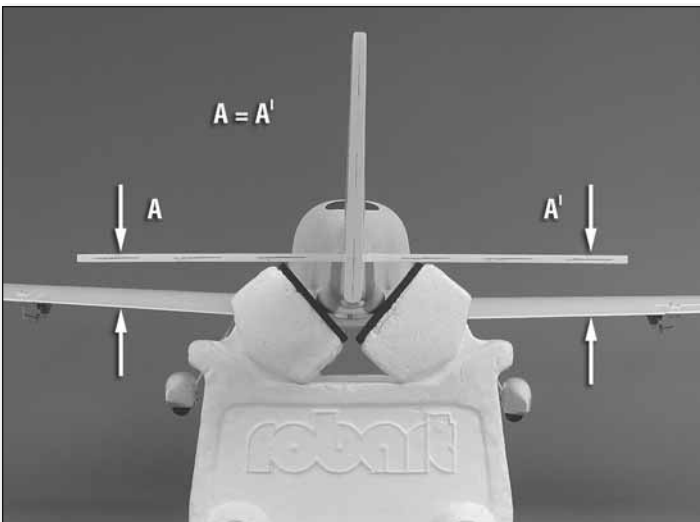
3x10mm
Machine
Screws

❑ 13. Bolt the landing gear legs to the wing panels using six 3x10mm machine screws and threadlocking compound.

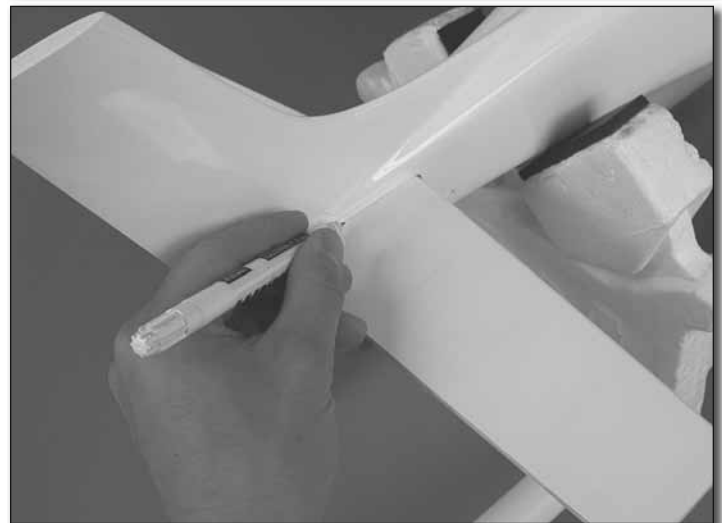
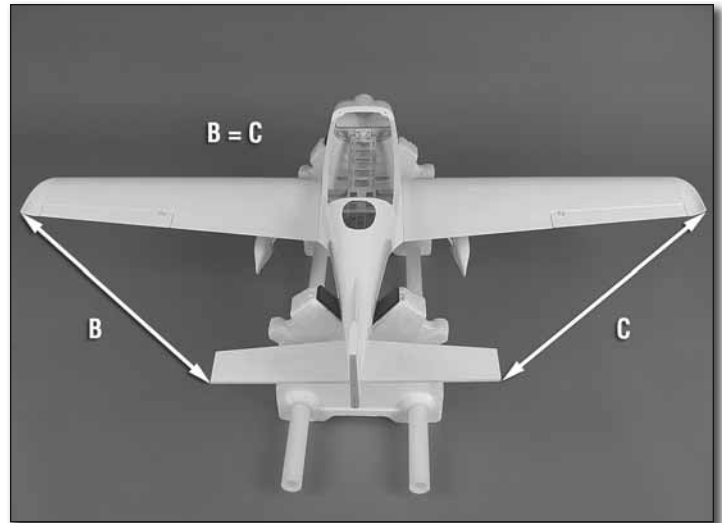
Install the Tail Section



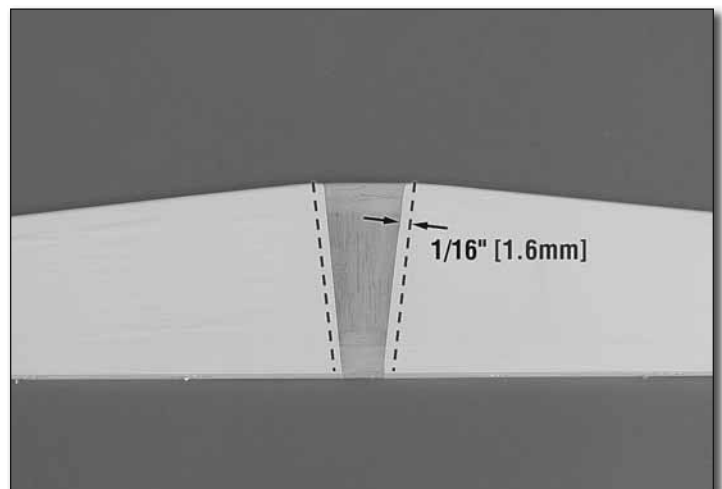
❑ 1. Insert the carbon wing tube into the outer wing tube in the fuselage and center it left and right. Slide the wing panels onto the tube and tighten them down using the included wing bolts.



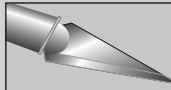
❑ 2. Lightly sand the inside of the stabilizer slot in the fuselage with 220 grit sandpaper and clean it with denatured alcohol. Temporarily install the horizontal stabilizer into the stab slot and center it right and left. Stand back 5-6 ft [1.5–1.8m] and view the model from behind. Confirm that the stab and wings are parallel. If not, sand the slot as necessary until they are parallel. A weight can also be placed on the high side to bring the stab parallel with the wings.



❑ 3. Confirm that the stab is still centered left and right. Measure from the wing tips to the stab tips and make those distances equal. Use a felt-tip pen to trace around the fuselage onto the stabilizer.



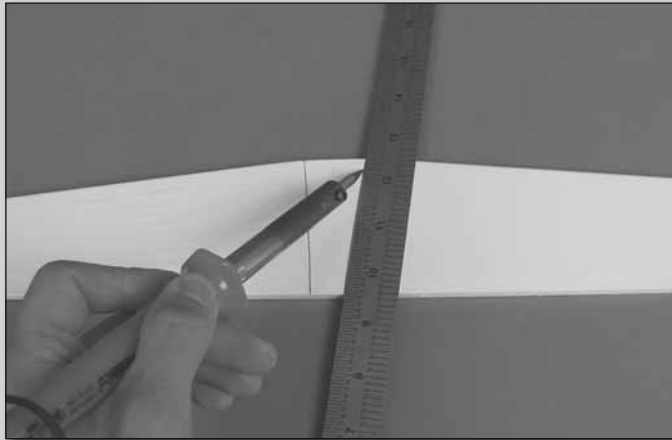
❑ 4. Carefully cut the covering 1/16" [1.6mm] inside the lines you drew and remove the covering. Use a sharp hobby knife and take care to only cut through the covering and not into the wood beneath. Use denatured alcohol to wipe away the lines you drew (or use CA debonder). See the following **Expert Tip** for an alternative method for removing covering.



EXPERT TIP

HOW TO CUT COVERING FROM Balsa

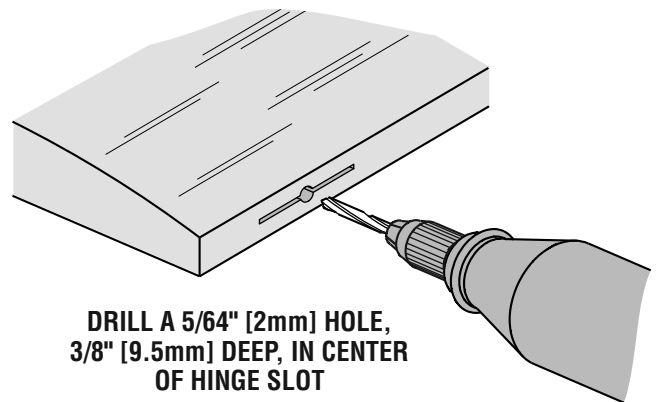
Use a soldering iron to cut the covering from the stab. The tip of the soldering iron doesn't have to be sharp, but a fine tip does work best. Allow the iron to heat fully.



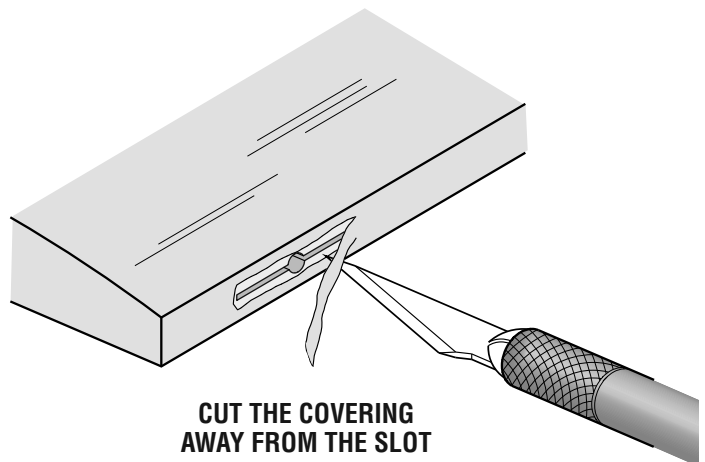
Use a straightedge to guide the soldering iron at a rate that will just melt the covering and not burn into the wood. The hotter the soldering iron, the faster it must travel to melt a fine cut. Peel off the covering.



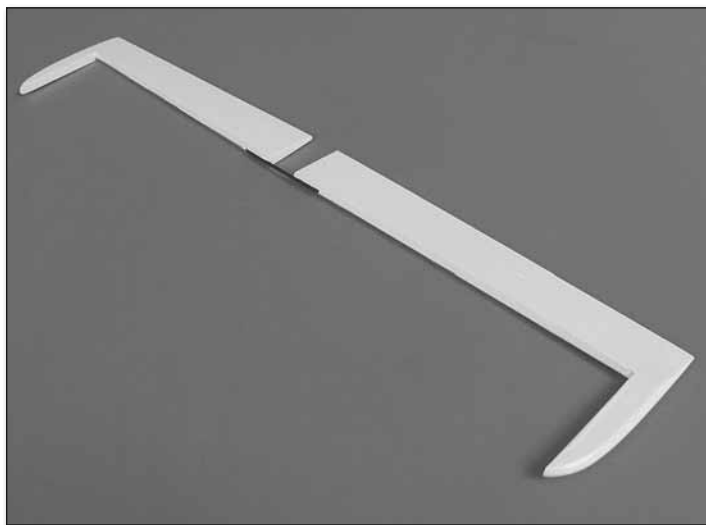
❑ 6. Insert the **elevator joiner wire** into the aft end of the stab slot. Insert the stab into the slot and center it left and right. Measure from the wing tips to the stab tips and make those distances equal. Confirm that the stab and wing are still parallel. A weight can be added to one side of the stab to make any small corrections. When satisfied, wick thin CA along the edges where the stab meets the fuselage. When the CA has dried, confirm that the stab is thoroughly glued to the fuselage. Note: epoxy can also be used in this step.



DRILL A 5/64" [2mm] HOLE,
3/8" [9.5mm] DEEP, IN CENTER
OF HINGE SLOT

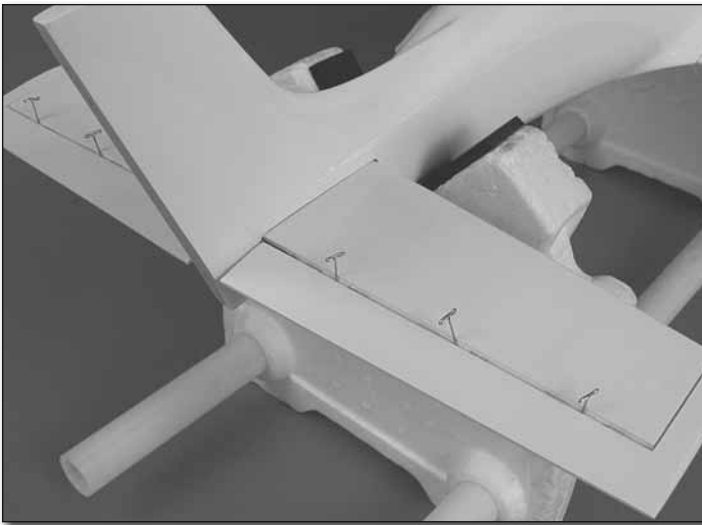


CUT THE COVERING
AWAY FROM THE SLOT



❑ 5. Before gluing the stab into position in the fuselage, check the fit of the elevator joiner wire by inserting it into the holes in the leading edge of the elevators. Lay the elevators on a flat work surface and confirm that they both lay flat. If not, remove the wire from the elevators and use pliers to bend or "tweak" it until they do. Do not attempt to bend the joiner wire while it is installed in the elevators!

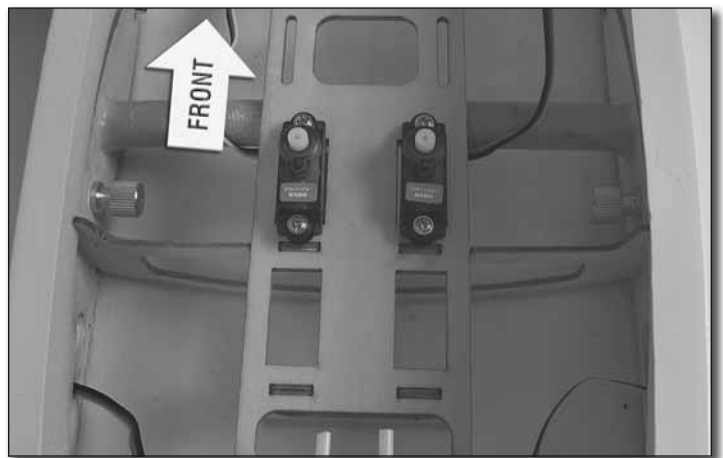
❑ 7. Drill a 5/64" [2mm] hole 3/8" [9.5mm] deep into the center of each hinge slot in the **elevator halves** and stab. Trim the covering away from each hinge slot to ensure that the hinges will be properly glued in place.



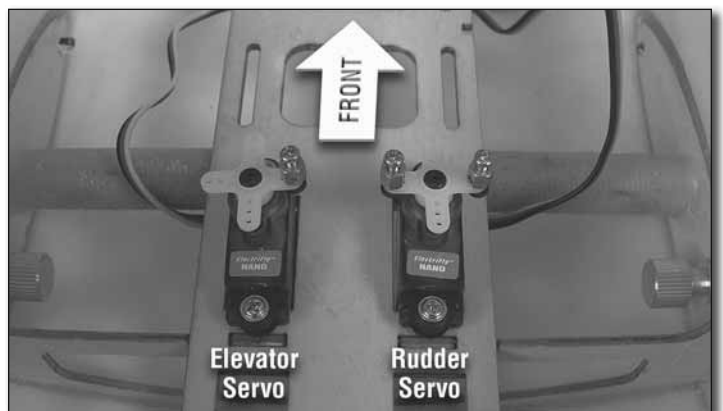
❑ 8. Test fit the elevator halves onto the stab with CA hinges. If necessary, enlarge the hinge slots with a hobby knife. When satisfied with the fit, insert a CA hinge halfway into each hinge slot in the stab. Push a pin through the middle of each hinge to keep them centered. The elevator joiner wire ends fit into the pre-drilled holes and slots at the LE of the elevators. When satisfied, roughen the ends of the elevator joiner wire with sandpaper and clean them with denatured alcohol. Mix up a small amount of epoxy and coat the ends of the joiner wire. Install the elevator halves onto the stab with CA hinges, being sure that there are even gaps between the stab tips and elevators on each side. Remove the pins from the hinges. Apply six drops of thin CA to the top and bottom of each hinge without using accelerator. After the CA glue has hardened, confirm that the elevators are secure by pulling on them and deflecting them up and down. Wipe away any excess epoxy with denatured alcohol. The CA hinges will hold the elevators in place while the epoxy on the joiner wire cures.



❑ 9. Install the rudder to the fuselage in the same manner.



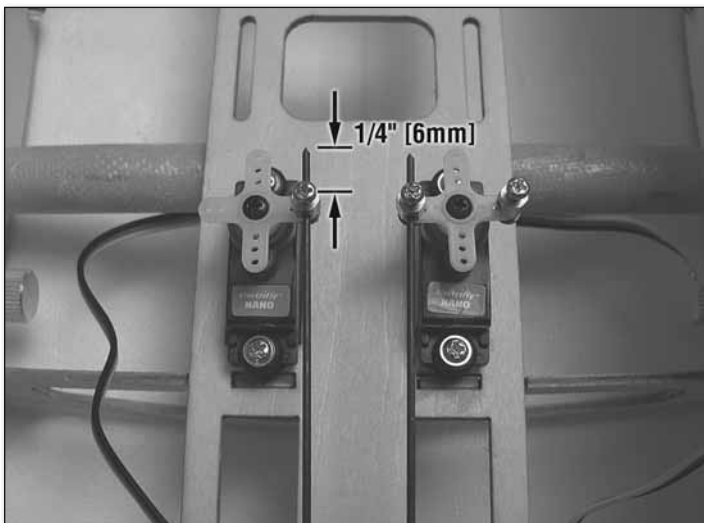
❑ 10. Use your radio system to center the elevator and rudder servo. Install the servos into the fuselage as shown using the hardware included with the servos. **NOTE:** Additional servo bays are included aft of the ones shown in the photo. If you plan to use a larger battery such as an 11.1V 3350mAh LiPo, install your servos in the aft position to provide additional space on the battery tray.



❑ 11. Install two screw-lock connectors in the outer holes of the rudder servo arm and one in the outer hole of the elevator servo arm. Loosely thread a 2x4mm machine screw into each connector. Install the servo arms onto the servos using the servo arm screw, being sure that the arms are perpendicular with the servo case.



❑ 12. Insert the long pushrods into the rudder and elevator outer pushrod tubes and through the screw lock connectors on the servos. Hook a control horn to the Z-bend of the elevator pushrod (use the outer hole in the control horn) and, using the pushrod as a guide to position the control horn, install the horn onto the underside of the left elevator with 2x16mm machine screws. Install a control horn onto the rudder in the same manner using the second outer hole in the control horn.

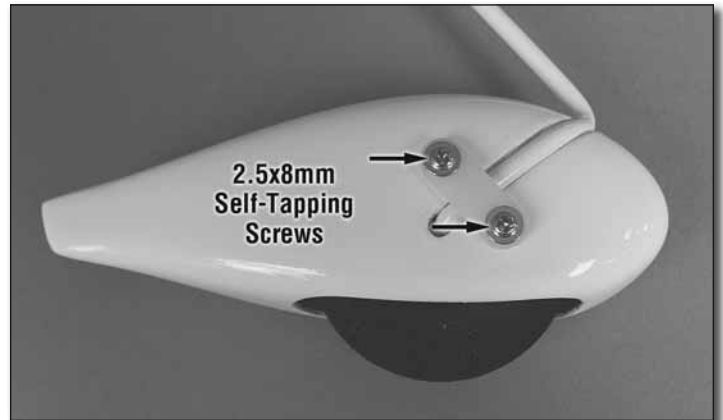


❑ 13. Center the elevators and rudder. Tighten the screws in the screw lock connectors against the pushrods. The excess length of pushrod can be cut off 1/4" [6mm] beyond the connectors.

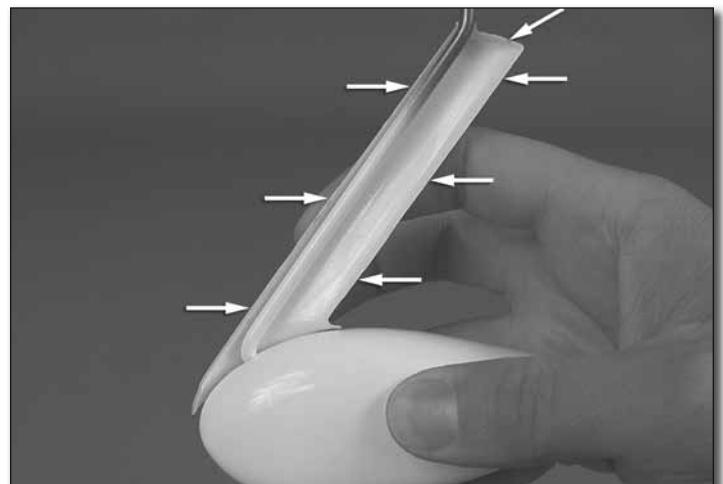
Install the Nose Gear, Motor and ESC



❑ 1. Insert the nose gear wire through the nose wheel pant followed by an aluminum spacer, nose wheel, and the other aluminum spacer. Confirm that the wheel rotates freely. If not, remove the wheel and lightly sand each side of the wheel hub where it contacts the spacers. Oil the axle and reinstall the wheel.



❑ 2. Thread a 2.5x8mm self-tapping washer head screw into each hole in the nose wheel pant and back it out. Apply a drop of thin CA to each hole and allow it to harden completely. Secure the nose gear to the wheel pant with a nylon strap and two 2.5x8mm self-tapping washer head screws.



❑ 3. Fit one half of the nose gear fairing to the nose gear and carefully apply a thin bead of medium or thick CA glue

around its edge. Align the other half of the fairing over the first and glue the edges of the parts together flush.



❑ 4. Glue the nose gear fairing to the wheel part.

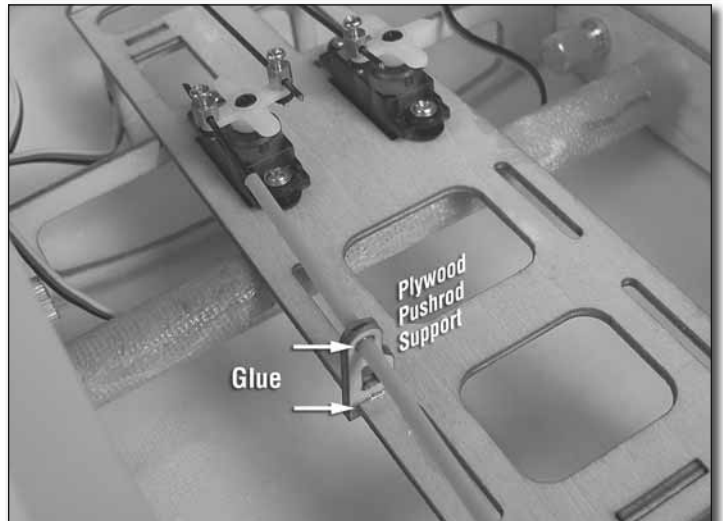
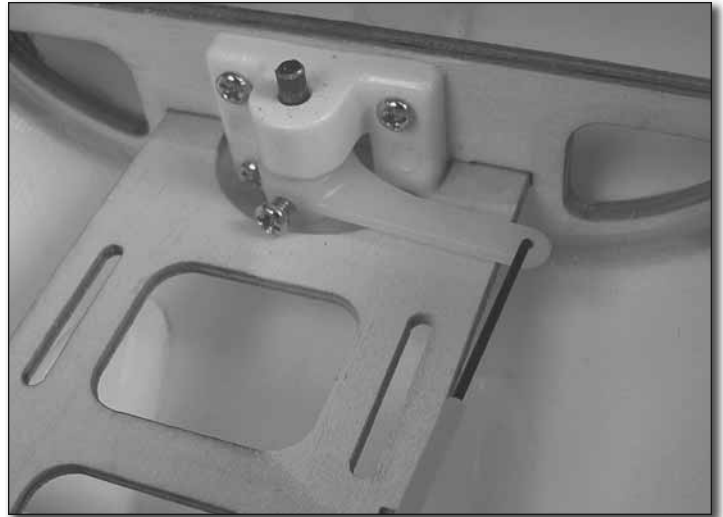


❑ 5. Insert the 3.5mm wheel collar into the nylon steering arm and loosely thread a 3x8mm machine screw into the collar.

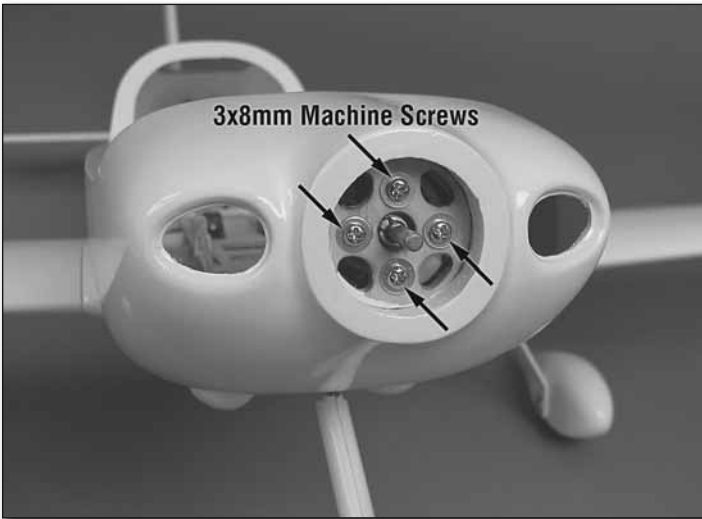
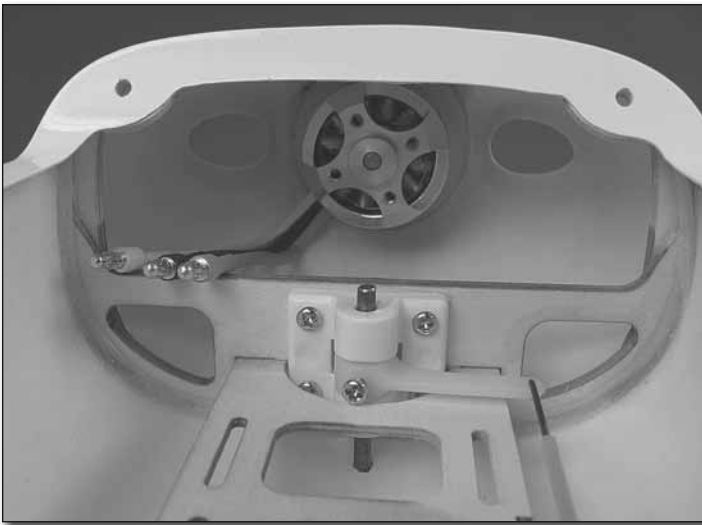


❑ 6. Fit the steering arm into the steering arm block so the arm is on the right side of the fuselage. Insert the nose gear

wire through the hole on the underside of the fuselage and up through the steering arm and block. Align the screw in the steering arm with the flat spot on the wire and thoroughly tighten the screw using threadlocking compound.



❑ 7. Insert the outer pushrod tube through the hole in the plywood pushrod support. Insert the remaining pushrod through the outer pushrod tube. Connect the Z-bend on the pushrod to the outer hole in the steering arm. Insert the other end through the screw lock connector on the rudder servo arm (clip off some of the pushrod wire if necessary when flexing the wire to fit into the connector). With the nose wheel pointed straight and the rudder servo centered, tighten the screw in the connector against the pushrod. Center the outer pushrod tube fore and aft on the wire and fit the plywood support into the notch on the battery tray. Thoroughly glue the outer pushrod tube to the support and the support to the tray.



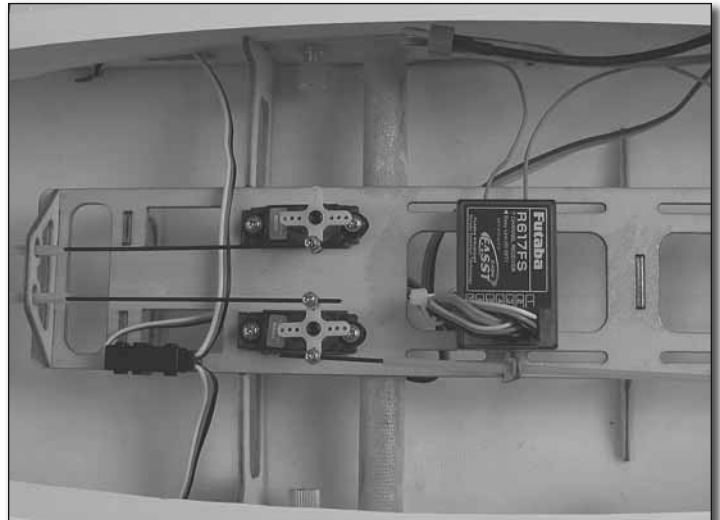
❑ 8. Remove the brass collar (if applicable) from your brushless motor. Insert the motor against the inside face of the firewall with the shaft protruding through the center hole. Install the motor using four 3x8mm machine screws, four 3mm flat washers and threadlocking compound.



❑ 9. Apply a thin coat of epoxy to the inside of the fuselage in the area where the ESC will be installed (with epoxy brush in hand, also coat the center of the battery tray where the battery and receiver will be installed). This will improve

the adhesion of the double-sided tape. When the epoxy has completely cured, connect the ESC to the motor and affix the ESC to the fuselage with a piece of the included double-sided tape. Now would be a good time to use your radio system to confirm the correct rotation of the motor. If the motor is rotating in the wrong direction (it should rotate counter-clockwise when viewed from the front), simply swap two of the three motor wire leads. Be sure to neatly bundle the excess motor lead wire out of the way of the steering arm.

Finish the Model



❑ 1. Cut a piece of the included self-adhesive hook and loop material and use it to secure your receiver to the battery tray just in front of the tail servos. Connect your servos to the receiver. Neatly bundle the excess servo lead wires out of the way of the tail servos.



❑ 2. In order to orient the receiver antennas as described in the radio manual, we used scrap pieces of fuel tubing glued to the inside of the fuselage (tape can also be used). If you have an FM or PCM radio, route the receiver antenna out the cutout on the bottom of the fuselage and tape it in place.



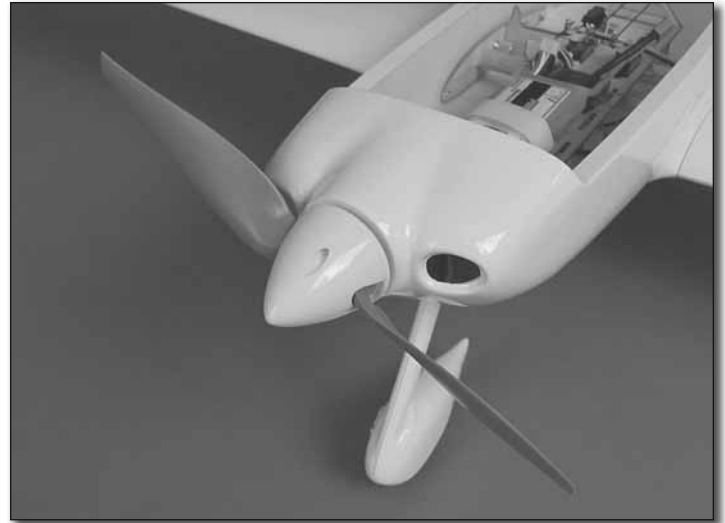
❑ 3. Cut pieces from the hook side of the included self-adhesive hook and loop material and attach them to the battery tray. Make a battery strap from the included non-adhesive hook and loop material by overlapping the material by approximately 1" [25mm]. Cut the strap to properly fit your battery and insert it through the slots in the battery tray.



❑ 4. Apply the loop side to the battery and test fit it into the fuselage.



❑ 5. Install the included prop adapter onto the motor shaft. Be sure it is pressed on as far as it will fit onto the shaft.



❑ 6. Install the spinner backplate, propeller, prop washer, and prop nut. Enlarge the slots in the spinner cone as necessary to fit your propeller. When satisfied, install the spinner cone to the spinner backplate using the included screws.



❑ 7. Apply the instrument panel decal to the cockpit interior.

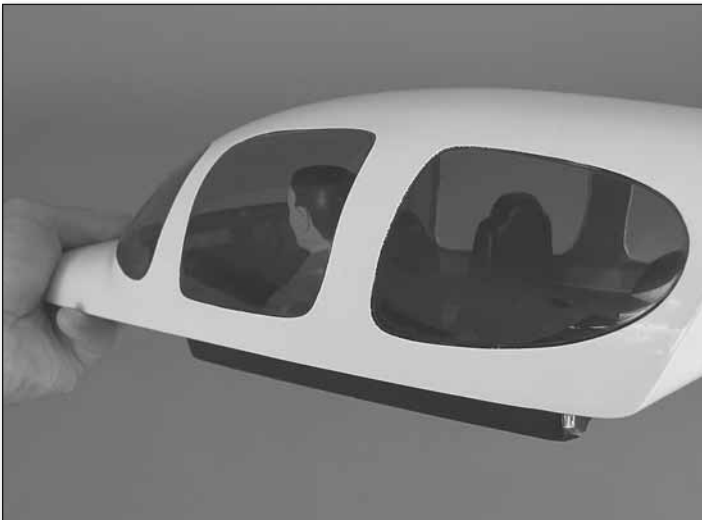
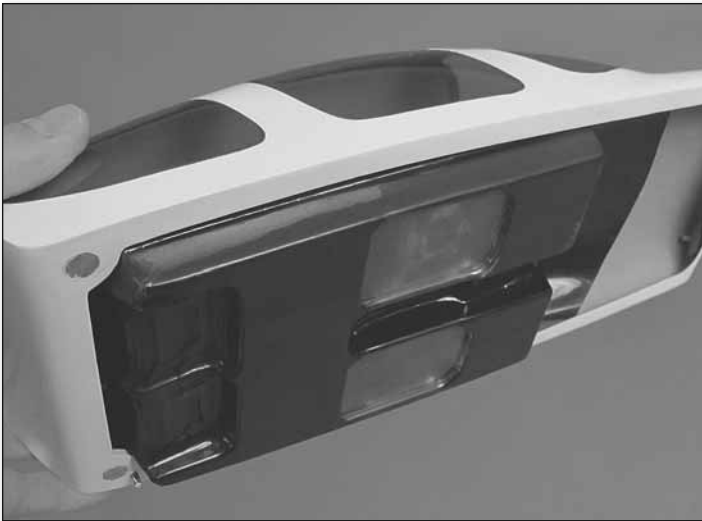


❑ 8. If you plan to install a pilot figure, install him now before gluing the cockpit interior to the canopy hatch. We used a Williams Bros. 1/8 Sportsman pilot, stock number

WBRQ1130. To improve the appearance of the pilot when installed in the Cirrus, we glued a 1/2" [13mm] thick piece of scrap balsa to the bottom of the pilot and rough cut the block to closely match the shape of the pilot. We then carefully sanded the block to blend in with the pilot figure and used a hobby knife and small wood file to continue the contours of the shoulders and shirt seams onto the balsa block. Some wood filler will fill the grain of the balsa and will allow the paint to be applied smoothly. When satisfied, paint your pilot. A 1/4" [6mm] thick scrap balsa will be required to raise the height of the pilot above the arm rests when you glue him to the pilot seat.



☐ 10. You have now finished the assembly of the Cirrus SR22 ARF!



☐ 9. Glue the cockpit interior into the canopy hatch. You will need to flex the forward end of the cockpit interior in order to fit it into place. We recommend using hot glue or silicone to glue the interior in place so if you wish to remove the interior for access to the pilot, the glue joint can be easily broken. Thick CA or epoxy would work as well. Use CA sparingly without activator as there is a chance that CA fumes may fog the windows.

APPLY THE DECALS

1. Be certain the model is clean and free from oily fingerprints and dust. Prepare a dishpan or small bucket with a mixture of liquid dish soap and warm water—about one teaspoon of soap per gallon of water. Submerge the decal in the soap and water and peel off the paper backing. **Note:** Even though the decals have a “sticky-back” and are not the water transfer type, submersing them in soap & water allows accurate positioning and reduces air bubbles underneath.
2. Position decal on the model where desired. Holding the decal down, use a paper towel to wipe most of the water away.
3. Use a piece of soft balsa or something similar to squeegee remaining water from under the decal. Apply the rest of the decals the same way.

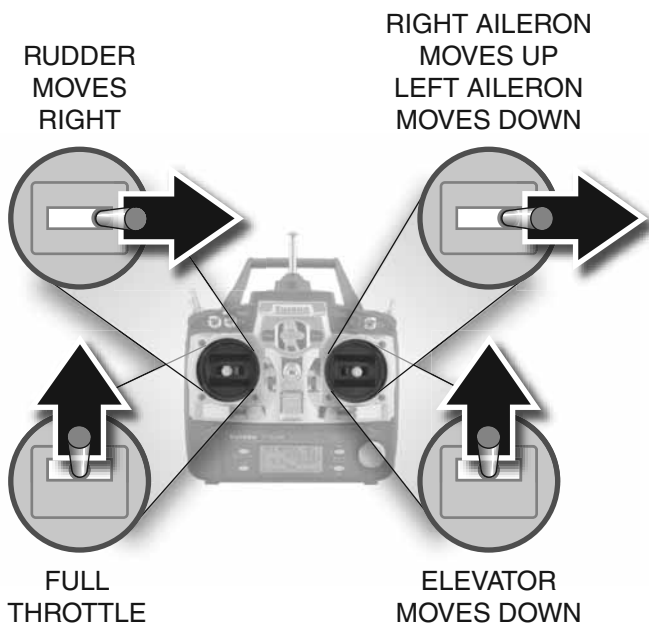
GET THE MODEL READY TO FLY

Check the Control Directions

1. Turn on the transmitter and receiver and center the trims. If necessary, remove the servo arms from the servos and reposition them so they are centered. Reinstall the screws that hold on the servo arms.

2. With the transmitter and receiver still on, check all the control surfaces to see if they are centered. If necessary, adjust the pushrod positions in the screw lock connectors to center the control surfaces.

4-CHANNEL RADIO SET UP (STANDARD MODE 2)

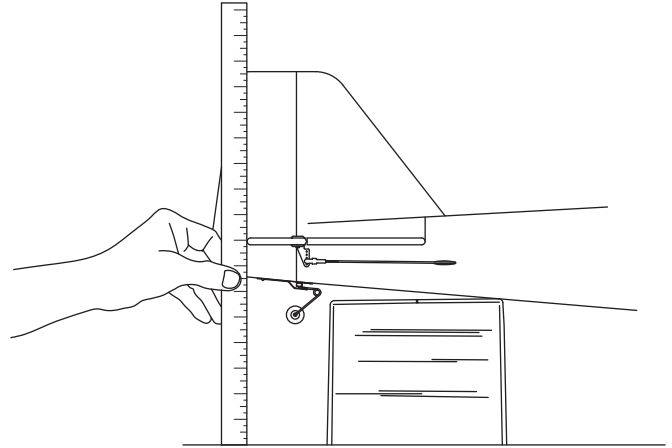


3. Make certain that the control surfaces and the throttle respond in the correct direction as shown in the diagram. If any of the controls respond in the wrong direction, use the servo reversing in the transmitter to reverse the servos connected to those controls. Be certain the control surfaces have remained centered. Adjust if necessary.

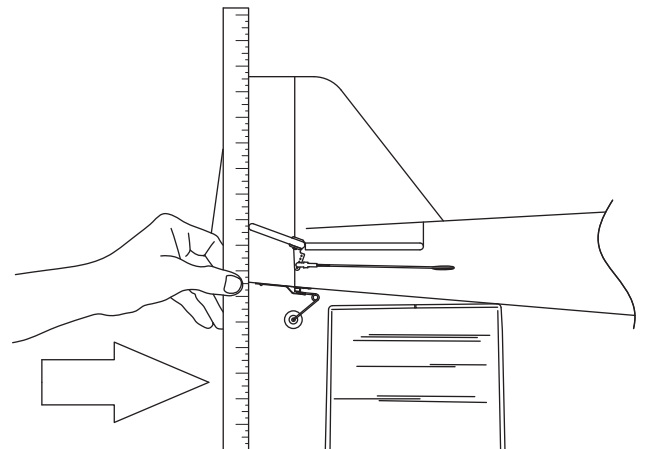
Set the Control Throws

1. Use a box or something similar to prop up the bottom of the fuselage so the horizontal stabilizer and wing will be level.

Measure the **high rate** elevator throw first...



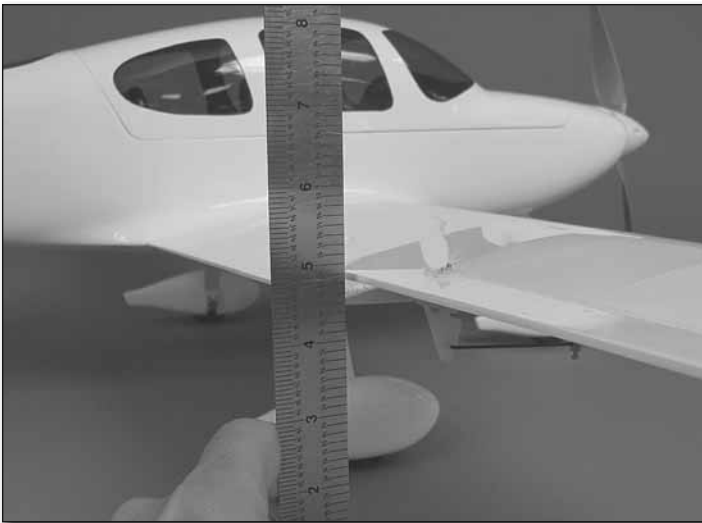
2. Hold a ruler vertically on your workbench against the widest part (front to back) of the trailing edge of the elevator. Note the measurement on the ruler.



MOVE THE RULER FORWARD

3. Move the elevator up with your transmitter and move the ruler forward so it will remain contacting the trailing edge. The distance the elevator moves up from center is the "up" elevator throw. Measure the down elevator throw the same way.

4. Repeat this procedure for the remaining control surfaces.



Use a Great Planes AccuThrow (or a ruler) to accurately measure and set the control throw of each control surface as indicated in the chart that follows. If your radio does not have dual rates, we recommend setting the throws at the **low** rate setting.

NOTE: The throws are measured at the **widest part** of the elevators, rudder and ailerons.

These are the recommended control surface throws:				
	HIGH RATE		LOW RATE	
	Up	Down	Up	Down
ELEVATOR	1/4"	1/4"	1/8"	1/8"
	[6mm]	[6mm]	[3mm]	[3mm]
	12°	12°	6°	6°
RUDDER	Right	Left	Right	Left
	7/16"	7/16"	1/4"	1/4"
	[11mm]	[11mm]	[6mm]	[6mm]
	17°	17°	10°	10°
AILERONS	Up	Down	Up	Down
	7/16"	7/16"	5/16"	5/16"
	[11mm]	[11mm]	[8mm]	[8mm]
	17°	17°	12°	12°

IMPORTANT: The Cirrus SR22 ARF has been **extensively** flown and tested to arrive at the throws at which it flies best. Flying your model at these throws will provide you with the greatest chance for successful first flights. If, after you have become accustomed to the way the Cirrus SR22 flies, you would like to change the throws to suit your taste, that is fine. However, too much control throw could make the model difficult to control, so remember, "more is not always better."

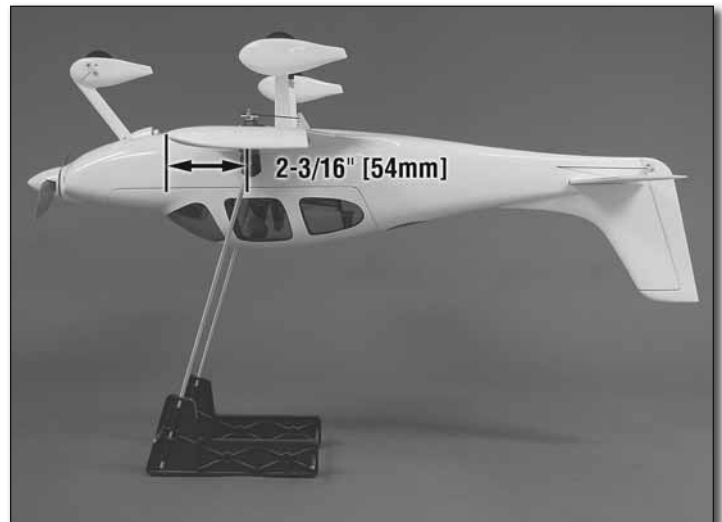
Balance the Model (C.G.)

More than any other factor, the **C.G.** (balance point) can have the **greatest** effect on how a model flies, and may determine whether or not your first flight will be successful. If you value this model and wish to enjoy it for many flights, **DO NOT OVERLOOK THIS IMPORTANT PROCEDURE.** A model that is not properly balanced will be unstable and possibly unflyable.

At this stage the model should be in ready-to-fly condition with all of the systems in place including the brushless motor, landing gear, the radio system and battery pack.

1. Use a felt-tip pen or 1/8" [3mm]-wide tape to accurately mark the C.G. on the top of the wing on both sides of the fuselage. The C.G. is located 2-3/16" [56mm] back from the leading edge of the wing at the fuselage.

This is where your model should balance for the first flights. Later, you may wish to experiment by shifting the C.G. up to 3/8" [9.5mm] forward or 5/16" [8mm] back to change the flying characteristics. Moving the C.G. forward may improve the smoothness and stability, but the model may then require more speed for takeoff and make it more difficult to slow for landing. Moving the C.G. aft makes the model more maneuverable, but could also cause it to become too difficult to control. In any case, **start at the recommended balance point** and do not at any time balance the model outside the specified range.



2. With the wing attached to the fuselage, all parts of the model installed (ready to fly) and battery installed, place the model upside-down on a Great Planes CG Machine, or lift it upside-down at the balance point you marked.

3. If the tail drops, the model is "tail heavy" and the battery pack and/or receiver must be shifted forward or weight must be added to the nose to balance. If the nose drops, the model is "nose heavy" and the battery pack and/or receiver must be shifted aft or weight must be added to the tail to balance. If possible, relocate the battery pack and receiver

to minimize or eliminate any additional ballast required. If additional weight is required, nose weight may be easily added by using a “spinner weight” (GPMQ4645 for the 1 oz. [28g] weight, or GPMQ4646 for the 2 oz. [57g] weight). If spinner weight is not practical or is not enough, use Great Planes (GPMQ4485) “stick-on” lead. A good place to add stick-on nose weight is to the firewall (don’t attach weight to the cowl—it is not intended to support weight). Begin by placing incrementally increasing amounts of weight on the bottom of the fuse over the firewall until the model balances. Once you have determined the amount of weight required, it can be permanently attached. If required, tail weight may be added by cutting open the bottom of the fuse and gluing it permanently inside.

Note: Do not rely upon the adhesive on the back of the lead weight to permanently hold it in place. Over time, the adhesive may fail and cause the weight to fall off. Use #2 sheet metal screws, RTV silicone or epoxy to permanently hold the weight in place.

4. **IMPORTANT:** If you found it necessary to add any weight, recheck the C.G. after the weight has been installed.

Balance the Model Laterally

1. With the wing level, have an assistant help you lift the model by the motor propeller shaft and the bottom of the fuse under the TE of the fin. Do this several times.

2. If one wing always drops when you lift the model, it means that side is heavy. Balance the airplane by adding weight to the other wing tip. **An airplane that has been laterally balanced will track better in loops and other maneuvers.**

PREFLIGHT

Identify Your Model

No matter if you fly at an AMA sanctioned R/C club site or if you fly somewhere on your own, you should always have your name, address, telephone number and AMA number on or inside your model. It is **required** at all AMA R/C club flying sites and AMA sanctioned flying events. Fill out the identification tag on page 21 and place it on or inside your model.

Charge the Batteries

Follow the battery charging instructions that came with your radio control system to charge the batteries. You should always charge your transmitter battery the night before you go flying, and at other times as recommended by the radio manufacturer.

CAUTION: Unless the instructions that came with your radio system state differently, the **initial** charge on **new** transmitter batteries should be done for 15 hours **using the slow-charger that came with the radio system**. This will “condition” the batteries so that the next charge may be done using the fast-charger of your choice. If the initial charge is done with a fast-charger the batteries may not reach their full capacity and you may be flying with batteries that are only partially charged.

Balance Propellers



Carefully balance your propeller and spare propellers before you fly. An unbalanced prop can be the single most significant cause of vibration that can damage your model. Not only will motor mounting screws loosen, possibly with disastrous effect, but vibration may also damage your radio receiver and battery.

We use a Top Flite Precision Magnetic Prop Balancer (TOPQ5700) in the workshop and keep a Great Planes Fingertip Prop Balancer (GPMQ5000) in our flight box.

Range Check

Ground check the operational range of your radio before the first flight of the day. With the transmitter antenna collapsed and the receiver and transmitter on, you should be able to walk at least 100 feet away from the model and still have control (follow the instructions that came with your radio if you are using a 2.4GHz system). Have an assistant stand by your model and, while you work the controls, tell you what the control surfaces are doing. Repeat this test **with the motor running** at various speeds with an assistant holding the model, using hand signals to show you what is happening. If the control surfaces do not respond correctly, **do not fly!** Find and correct the problem first. Look for loose servo connections or broken wires, corroded wires on old servo connectors, poor solder joints in your battery pack or a defective cell, or a damaged receiver crystal from a previous crash.

MOTOR SAFETY PRECAUTIONS

Failure to follow these safety precautions may result in severe injury to yourself and others.

- Get help from an experienced pilot when learning to operate motors.
- Use safety glasses when running motors.
- Do not run the motor in an area of loose gravel or sand; the propeller may throw such material in your face or eyes.
- Keep your face and body as well as all spectators away from the plane of rotation of the propeller as you run the motor.
- Keep these items away from the prop: loose clothing, shirt sleeves, ties, scarves, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets into the prop.
- The motor gets hot! Do not touch it during or right after operation.

LITHIUM BATTERY HANDLING AND USAGE

WARNING!! Read the entire instruction sheet included with your battery. Failure to follow all instructions could cause permanent damage to the battery and its surroundings, and cause bodily harm!

- ONLY use a LiPo approved charger. NEVER use a NiCd/NiMH peak charger!
- NEVER charge in excess of 4.20V per cell.
- ONLY charge through the “charge” lead. NEVER charge through the “discharge” lead.
- NEVER charge at currents greater than 1C.
- ALWAYS set charger’s output volts to match battery volts.
- ALWAYS charge in a fireproof location.
- NEVER trickle charge.
- NEVER allow the battery temperature to exceed 150° F (65° C).
- NEVER disassemble or modify pack wiring in any way or puncture cells.
- NEVER discharge below 3.0V per cell.
- NEVER place on combustible materials or leave unattended during charge or discharge.
- ALWAYS KEEP OUT OF REACH OF CHILDREN.

AMA SAFETY CODE (EXCERPTS)

Read and abide by the following excerpts from the Academy of Model Aeronautics Safety Code. For the complete Safety Code refer to *Model Aviation* magazine, the AMA web site or the Code that came with your AMA license.

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 aircraft 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.
- 5) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. Note: This does not apply to models while being flown indoors.
- 7) I will not operate models with pyrotechnics (any device that explodes, burns, or propels a projectile of any kind).

Radio Control

- 1) I will have completed a successful radio equipment ground 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.
- 5) **I will not knowingly operate my model within three miles of any pre-existing flying site except in accordance with the frequency sharing agreement listed** [in the complete AMA Safety Code].
- 9) Under no circumstances may a pilot or other person touch a powered model in flight; **nor should any part of the model other than the landing gear, intentionally touch the ground, except while landing.**

CHECK LIST

During the last few moments of preparation your mind may be elsewhere anticipating the excitement of the first flight. Because of this, you may be more likely to overlook certain checks and procedures that should be performed before the model is flown. To help avoid this, a check list is provided to make sure these important areas are not overlooked. Many are covered in the instruction manual, so where appropriate, refer to the manual for complete instructions. Be sure to check the items off as they are completed.

- 1. Check the C.G. according to the measurements provided in the manual.
- 2. Be certain the receiver is securely mounted in the fuse. Simply stuffing it into place with foam rubber is not sufficient.
- 3. Extend your receiver antenna.
- 4. Balance your model *laterally* as explained in the instructions.
- 5. Use threadlocking compound to secure critical fasteners such as the set screws that hold the wheel axles to the struts, screw-lock pushrod connectors, etc.
- 6. Add a drop of oil to the axles so the wheels will turn freely.
- 7. Make sure all hinges are **securely** glued in place.
- 8. Reinforce holes for wood screws with thin CA where appropriate (servo mounting screws, wheel pants screws, etc.).
- 9. Confirm that all controls operate in the correct direction and the throws are set up according to the manual.
- 10. Secure connections between servo wires and Y-connectors or servo extensions, and the connection between your battery pack and the on/off switch, with vinyl tape, heat shrink tubing or special clips suitable for that purpose.
- 11. Make sure any servo extension cords you may have used do not interfere with other systems (servo arms, pushrods, etc.).
- 12. Balance your propeller (and spare propellers).
- 13. Tighten the propeller nut and spinner.
- 14. Place your name, address, AMA number and telephone number on or inside your model.
- 15. If you wish to photograph your model, do so before your first flight.
- 16. Range check your radio when you get to the flying field.

This model belongs to:	
	Name
	Address
	City, State, Zip
	Phone Number
	AMA Number

FLYING

The Cirrus SR22 ARF is a great-flying model that flies smoothly and predictably. The SR22 does not, however, possess the self-recovery characteristics of a primary R/C trainer and should be flown only by experienced R/C pilots.

CAUTION (THIS APPLIES TO ALL R/C AIRPLANES):

If, while flying, you notice an alarming or unusual sound such as a low-pitched "buzz," this may indicate control surface *flutter*. Flutter occurs when a control surface (such as an aileron or elevator) or a flying surface (such as a wing or stab) rapidly vibrates up and down (thus causing the noise). In extreme cases, if not detected immediately, flutter can actually cause the control surface to detach or the flying surface to fail, thus causing loss of control followed by an impending crash. The best thing to do when flutter is detected is to slow the model **immediately** by reducing power, then land as soon as safely possible. Identify which surface fluttered (so the problem may be resolved) by checking all the servo grommets for deterioration or signs of vibration. Make certain all pushrod linkages are secure and free of play. If it fluttered once, under similar circumstances it will probably flutter again unless the problem is fixed. Some things which can cause flutter are; Excessive hinge gap; Not mounting control horns solidly; Poor fit of clevis pin in horn; Side-play of wire pushrods caused by large bends; Excessive free play in servo gears; Insecure servo mounting; and one of the most prevalent causes of flutter; Flying an over-powered model at excessive speeds.

Takeoff

Before you get ready to takeoff, see how the model handles on the ground by doing a few practice runs at **low speeds** on the runway. If necessary, adjust the nose wheel so the model will roll straight down the runway. If you need to calm your nerves before the maiden flight, shut the motor down and bring the model back into the pits. Top off the battery, then check all fasteners and control linkages for peace of mind.

Remember to takeoff into the wind. When you're ready, point the model straight down the runway, then gradually advance the throttle. Gain as much speed as your runway and flying site will practically allow before gently applying up elevator, lifting the model into the air. At this moment it is likely that you will need to apply more right rudder to counteract engine torque. Be smooth on the elevator stick, allowing the model to establish a **gentle** climb to a safe altitude before turning into the traffic pattern.

Flight

For reassurance and to keep an eye on other traffic, it is a good idea to have an assistant on the flight line with you. Tell him to remind you to throttle back once the plane gets to a comfortable altitude. While full throttle is usually desirable for takeoff, most models fly more smoothly at reduced speeds.

Take it easy with the SR22 for the first few flights, gradually getting acquainted with it as you gain confidence. Adjust the trims to maintain straight and level flight. After flying around for a while and while still at a safe altitude with plenty of battery charge, practice slow flight and execute practice landing approaches by reducing the throttle to see how the model handles at slower speeds. Add power to see how the model climbs as well. Continue to fly around, executing various maneuvers and making mental notes (or having your assistant write them down) of what trim or C.G. changes may be required to fine tune the model so it flies the way you like. Mind your battery charge, but use this first flight to become familiar with your model before landing.

Landing

To initiate a landing approach, lower the throttle while on the downwind leg. Allow the nose of the model to pitch downward to gradually bleed off altitude. Continue to lose altitude, but maintain airspeed by keeping the nose down as you turn onto the crosswind leg. Make your final turn toward the runway (into the wind) keeping the nose down to maintain airspeed and control. Level the attitude when the model reaches the runway threshold, modulating the throttle as necessary to

maintain your glide path and airspeed. If you are going to overshoot, smoothly advance the throttle (always ready on the right rudder to counteract torque) and climb out to make another attempt. When you're ready to make your landing flare and the model is a foot or so off the deck, smoothly increase up elevator until it gently touches down. Once the model is on the runway and has lost flying speed, apply some down elevator to place the nose on the ground, regaining nose wheel control. Remember to mind your battery charge. Do not wait until your battery is depleted to begin your landing approach. You will need some charge left if you need to abandon your approach and circle back around.

One final note about flying your model. Have a goal or flight plan in mind for **every** flight. This can be learning a new maneuver(s), improving a maneuver(s) you already know, or learning how the model behaves in certain conditions (such as on high or low rates). This is not necessarily to improve your skills (*though it is never a bad idea!*), but more importantly so you do not surprise yourself by impulsively attempting a maneuver and suddenly finding that you've run out of time, altitude or airspeed. Every maneuver should be deliberate, not impulsive. For example, if you're going to do a loop, check your altitude, mind the wind direction (anticipating rudder corrections that will be required to maintain heading), remember to throttle back at the top, and make certain you are on the desired rates (high/low rates). A flight plan greatly reduces the chances of crashing your model just because of poor planning and impulsive moves. **Remember to think.**

Have a ball!

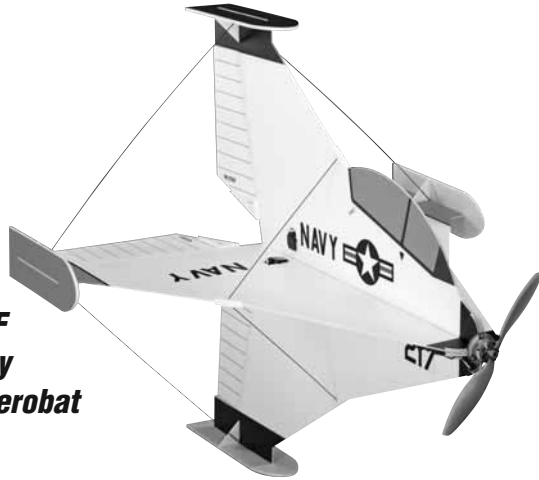
But always stay in control and fly in a safe manner.

GOOD LUCK AND GREAT FLYING!



ALSO AVAILABLE FROM GREAT PLANES

ElectriFly™ VFO ARF **Almost Ready-to-Fly** **Electric Sport/3D Aerobat** **GPMA1135**



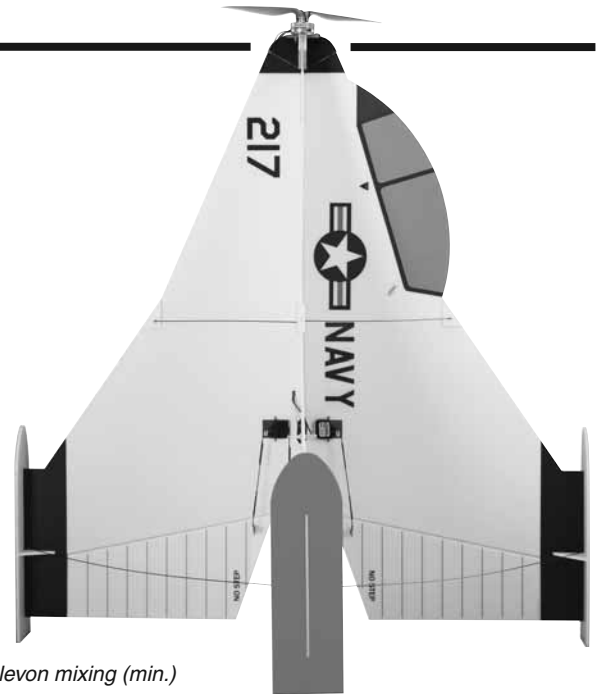
Part plane, part helicopter — all fun!

Wingspan: 26.5 in (675 mm)
Wing Area: 382 in² (24.6 dm²)
Weight: 9-10 oz (255-285 g)
Wing Loading: 3.4-3.8 oz/ft² (10-12 g/dm²)
Length: 29.5 in (750 mm)

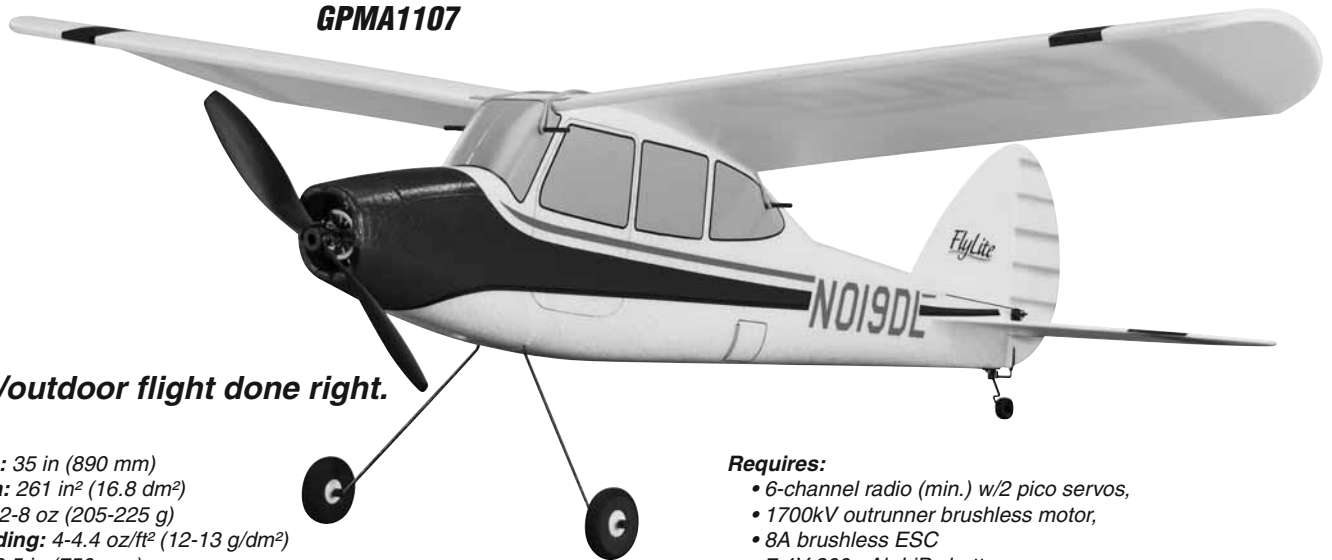
Requires:

- 6-channel radio w/4 micro servos & elevon mixing (min.)
- 300-size outrunner brushless motor
- 12A brushless ESC (min.)
- 11.1V 300mAh LiPo battery & LiPo charger

The VFO (Vertical Flying Object) takes off like a rocket, hovers like a heli and flies like a plane — and does it all with economical on-board components. It performs Harriers, high-alpha and prop hangs with ease, and transitions from a Wall directly into a tumbling back flip. Lightweight, finished foam parts with servo cut-outs and easy-to-use pushrods make assembly quick and easy. Carbon-fiber bracing offers lightweight support...and oversized control surfaces deliver massive maneuvering power.



ElectriFly™ by Great Planes® FlyLite™ EP ARF **GPMA1107**



Indoor/outdoor flight done right.

Wingspan: 35 in (890 mm)
Wing Area: 261 in² (16.8 dm²)
Weight: 7.2-8 oz (205-225 g)
Wing Loading: 4-4.4 oz/ft² (12-13 g/dm²)
Length: 29.5 in (750 mm)

Requires:

- 6-channel radio (min.) w/2 pico servos,
- 1700kV outrunner brushless motor,
- 8A brushless ESC
- 7.4V 300mAh LiPo battery

The FlyLite is sized just right for go-anywhere good times — and you can be ready to let 'em roll in as little as an hour after opening the box. The AeroCell™ foam fuselage and Pro-Formance™ foam wing surfaces make it crash-tough and feather-light. Self-aligning tail surfaces improve tracking and handling precision, and a steerable tail wheel allows smooth, easy ground handling. ElectriFly even includes an 8x6 PowerFlow™ prop. Add a brushless motor — we recommend the RimFire™ 250 outrunner — as part of your on-board power system and enjoy premium flight performance...indoors or out.

ElectriFLY
by Great Planes