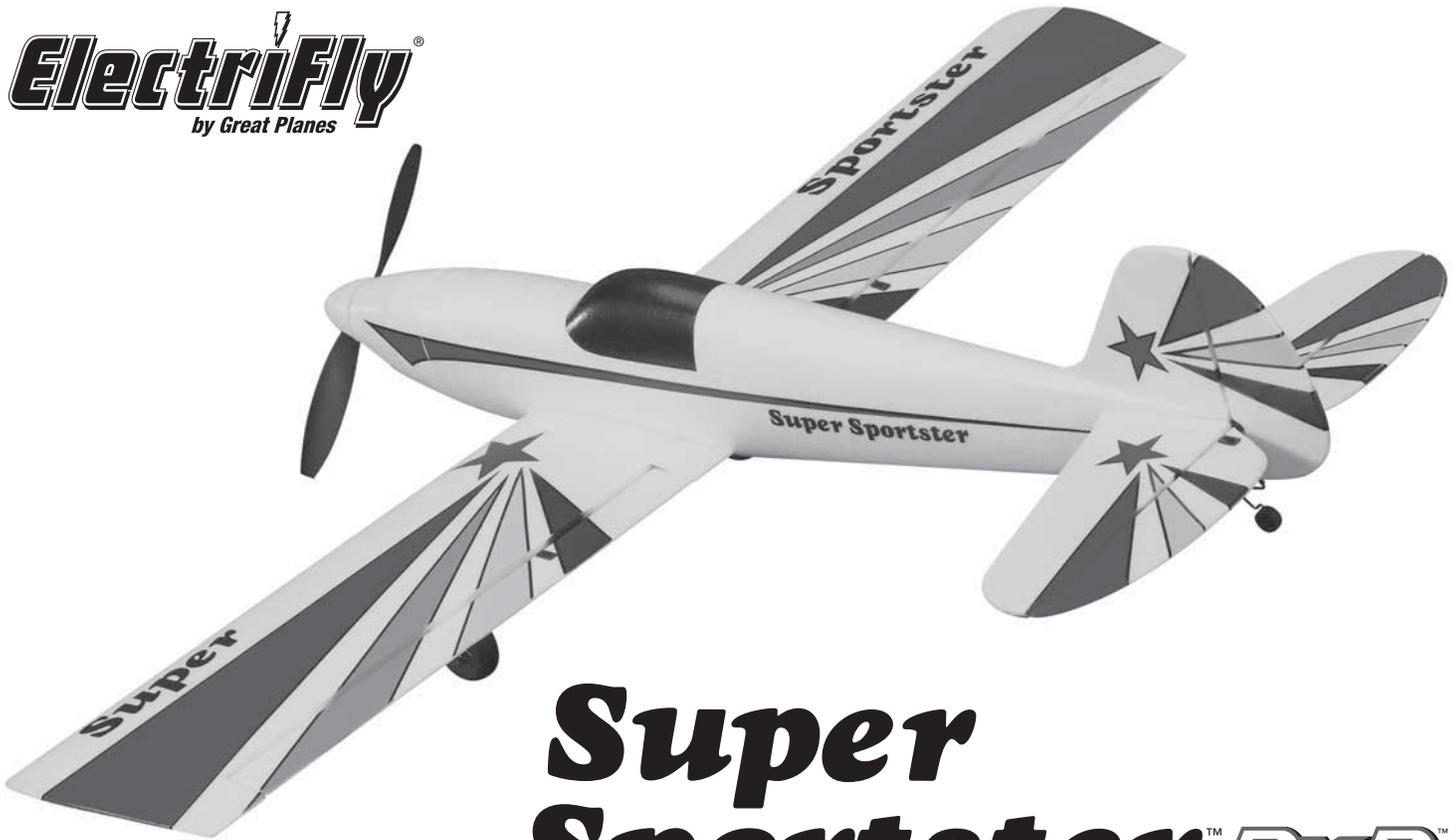


**ElectriFLY**<sup>®</sup>  
by Great Planes



# Super Sportster<sup>™</sup> **FXR**<sup>™</sup> RECEIVER-READY

## SPECIFICATIONS

<b>Wingspan:</b> 40 in [1015mm]	<b>Length:</b> 32.5 in [825mm]
<b>Wing Area:</b> 267 in <sup>2</sup> [17.2 dm <sup>2</sup> ]	<b>Weight:</b> 20–22 oz [565–605 g]
<b>Wing Loading:</b> 10.8–11.5 oz/ft <sup>2</sup> [33–35 g/dm <sup>2</sup> ]	<b>Radio:</b> 4-channel minimum

## INSTRUCTION MANUAL

## WARRANTY

Great Planes<sup>®</sup> 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.



Champaign, Illinois  
(217) 398-8970, Ext 5  
airsupport@greatplanes.com

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## INTRODUCTION

Congratulations on your purchase of the Great Planes Super Sportster Rx-R EPO! Continuing with the success of the Super Sportster design since its introduction in 1982 comes the EPO version. You can expect the same honest flight characteristics with the EPO Sportster as the larger wood counterparts. If this is your first Super Sportster, then you will discover and appreciate the sporty handling of the plane. If this is your first low wing model, the Sportster can be flown slow and gentle as you become accustomed to flying a plane without the self-righting tendency your high wing trainer has.

The practical wingspan allows you to toss the Sportster into the back seat of any size car without having to take the wings off. Grab a flight or two over your lunch at a spacious park or your local field! And the EPO material is very resilient against rough landings, but should damage occur, it can be repaired quickly using regular CA glue and accelerator so you can keep on flying.

For the latest technical updates or manual corrections to the Super Sportster EPO visit the Great Planes web site at [www.greatplanes.com](http://www.greatplanes.com). Open the "Airplanes" link, then select the Super Sportster EPO. 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

We urge you to join the AMA (Academy of Model Aeronautics) and a local R/C club. The AMA is the governing body of model aviation and membership is required to fly at AMA clubs. Though joining the AMA provides many benefits, one of the primary reasons to join is liability protection. Coverage is not limited to flying at contests or on the club field. It even applies to flying at public demonstrations and air shows. Failure to comply with the Safety Code (excerpts printed in the back of

the manual) may endanger insurance coverage. Additionally, training programs and instructors are available at AMA club sites to help you get started the right way. There are over 2,500 AMA chartered clubs across the country. Contact the AMA at the address or toll-free phone number below:

### 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: <http://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.

## SAFETY PRECAUTIONS

### Protect Your Model, Yourself & Others... Follow These Important Safety Precautions

1. Your Super Sportster EPO 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 Sportster, 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 first-class condition, and a correctly sized motor and components throughout the building process.
5. You must correctly install all R/C and other components so that the model operates correctly on the ground and in the air.
6. You must check the operation of the model before **every** flight to insure that all equipment is operating and that the model has remained structurally sound. Be sure to check clevises or other connectors often and replace them if they show any signs of wear or fatigue.
7. 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.
8. 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.

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 Super Sportster EPO that may require planning or decision making before starting to build. Order numbers are provided in parentheses.

### Radio Equipment

The Super Sportster EPO requires a minimum 4-channel transmitter and receiver. If you have a transmitter already, a standard 2.4GHz receiver or micro FM receiver is recommended. If you need to purchase a transmitter, we recommend the Futaba 6EX 2.4GHz transmitter/receiver combo as it provides digital trims, dual rates and end point adjustments, model memory and other mixing options that will be useful for future model airplanes or helicopters you purchase. Part numbers for these models are provided below:

- Futaba® 6EX 6-Channel 2.4GHz Transmitter/Receiver (FUTK6900)
- Futaba R617FS 7-Channel 2.4GHz FASST™ Receiver (FUTL7627)

### Batteries and Charger

One 1250-1300mAh 11.1V Lithium Polymer battery pack is required. Recommended batteries are provided below.

- SuperTigre® LiPo 11.1V 1250mAh 15C (SUPP1030)
- Great Planes ElectriFly LiPo 3S 11.1V 1300mAh 25C Power (GPMP0505)

*The Great Planes 1300mAh pack will require the use of an adapter (SUPM0040)*

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, but is able to charge four LiPo packs simultaneously. The Great Planes Triton2 charger will only charge one pack at a time. However, it 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)

### Optional Supplies and Tools

Here is a list of optional tools and adhesives that will help you set up and repair the Super Sportster EPO:

- 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)
- Precision Magnetic Prop Balancer (TOPQ5700)
- AccuThrow™ Deflection Gauge (GPMR2405)
- CG Machine™ (GPMR2400)
- Hobbico Flexible 18" Ruler Stainless Steel (HCAR0460)
- Denatured alcohol (for epoxy clean up)

## IMPORTANT BUILDING NOTES

- **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 stabilizer and wing incidences and motor 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](http://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, take an inventory of this kit to make sure it is complete, and 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 Ph (217) 398-8970, ext. 5  
Champaign, IL 61822 Fx (217) 398-7721

E-mail: [airsupport@greatplanes.com](mailto:airsupport@greatplanes.com)

## ORDERING REPLACEMENT PARTS

Replacement parts for the Great Planes Super Sportster EPO 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 Hobbico web site at [www.hobbico.com](http://www.hobbico.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 via facsimile 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 **Hobby Services**  
and payments by 3002 N Apollo Drive, Suite 1  
personal check to: Champaign IL 61822

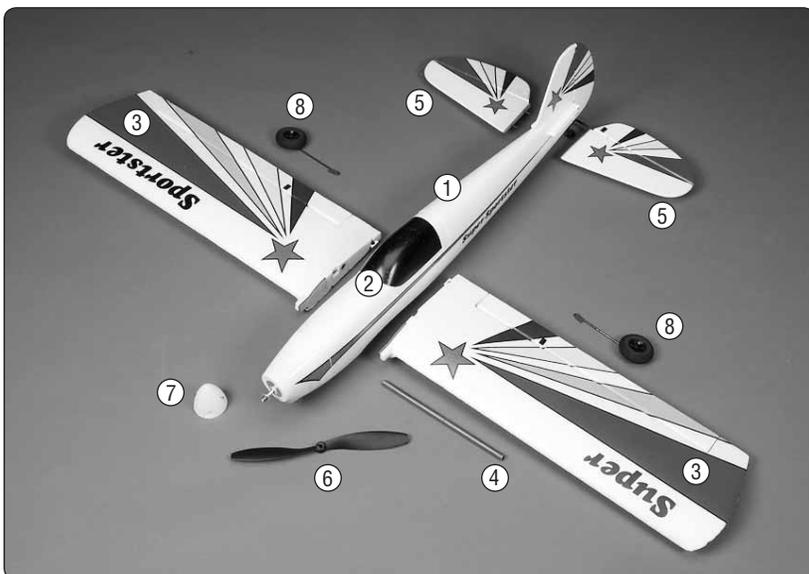
Be certain to specify the order number exactly as listed in the **Replacement Parts List**. Payment by credit card or personal check only; no C.O.D.

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

## REPLACEMENT PARTS LIST

Order No.	Description
GPMA4215	Super Sportster EP Rx-R Wing
GPMA4216	Super Sportster Rx-R Fuselage
GPMA4217	Super Sportster Rx-R H-Stab
GPMA4218	Super Sportster EP Rx-R Cowl
GPMA4219	Super Sportster EP Rx-R Gear
GPMA4220	Super Sportster EP Rx-R Spinner
GPMA4221	Super Sportster EP Rx-R Hatch
GPMA4222	Super Sportster EP Rx-R Motor
GPMA4223	Super Sportster EP Rx-R ESC
GPMA4224	Super Sportster EP Rx-R Servo
GPMA4225	Super Sportster Rx-R T-Wheel
GPMA4226	Super Sportster Rx-R Wing Tube
GPMA4227	Wing Bolt 1 pc.

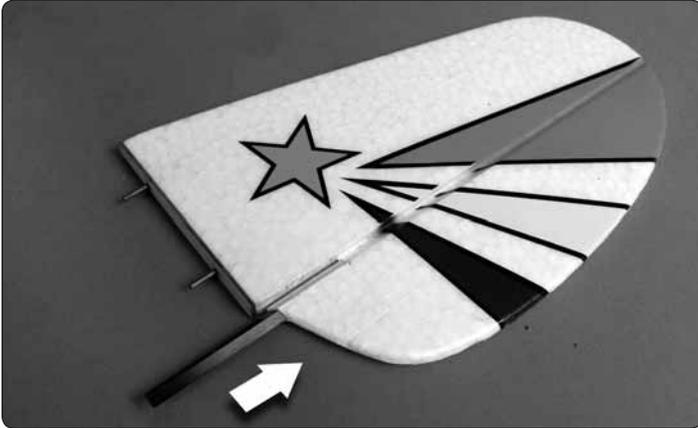
## KIT CONTENTS



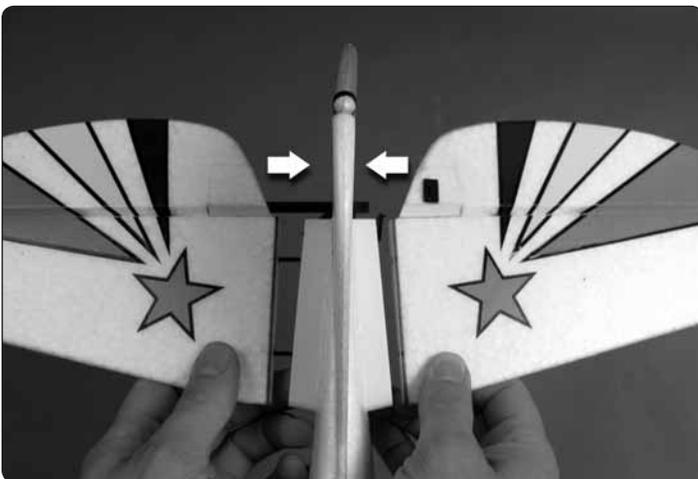
1. Fuselage
2. Canopy Hatch
3. Left and Right Wing Panels
4. Wing Tube
5. Left and Right Horizontal Stabilizers
6. Propeller
7. Spinner
8. Left and Right Main Landing Gear

## BUILDING INSTRUCTIONS

❑ 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 4.

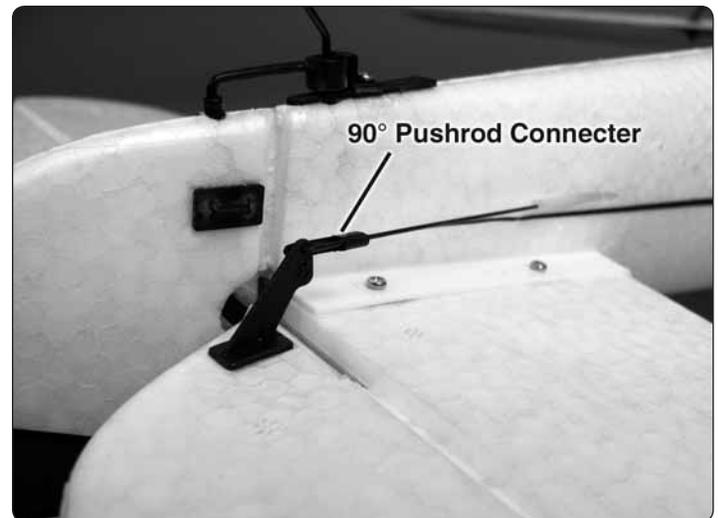


❑ 2. Insert the square elevator joiner into the pocket of one of the horizontal stabilizer halves, being sure that the joiner is fully seated in the pocket.

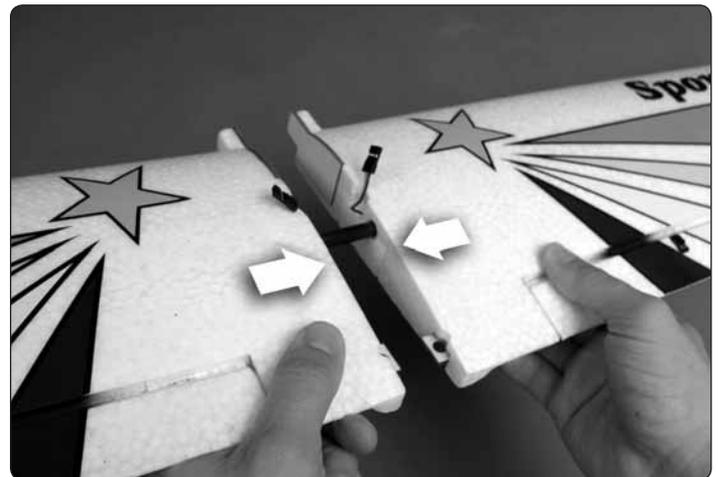
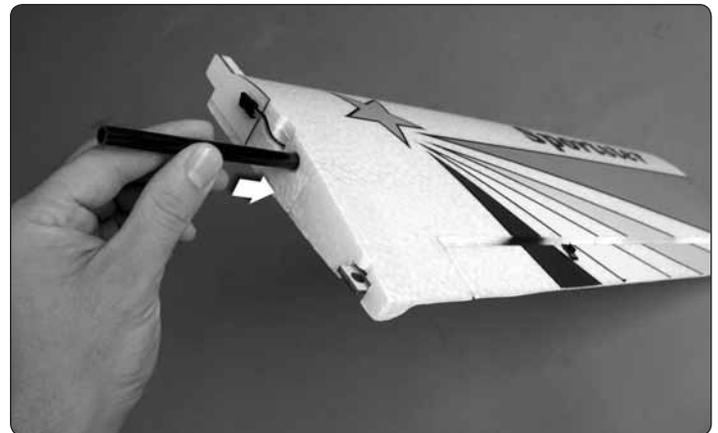


❑ 3. Slide the two horizontal stabilizer halves into the fuselage so that the carbon pins installed in one side fit into the mating holes in the other side and that the elevator joiner fits into

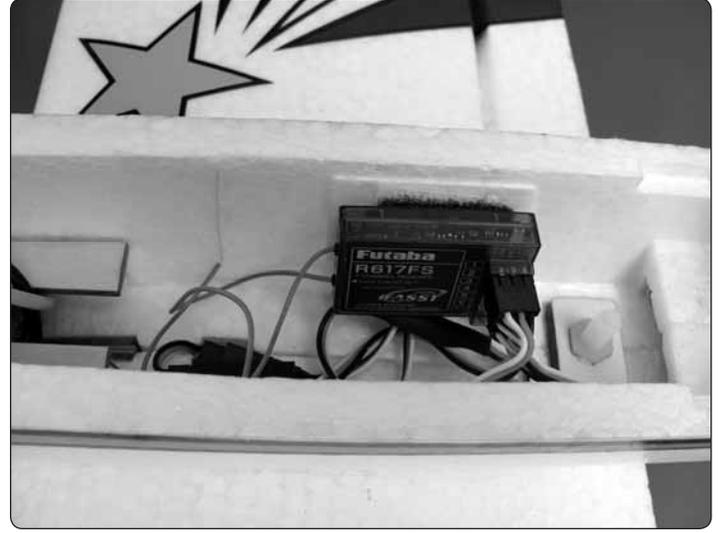
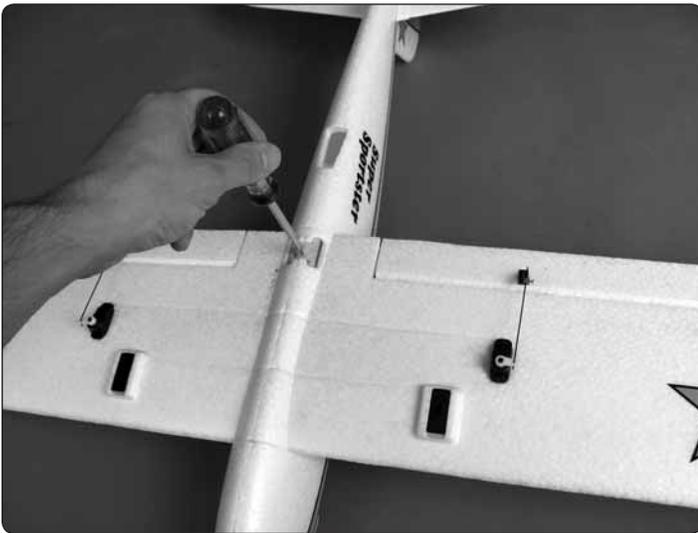
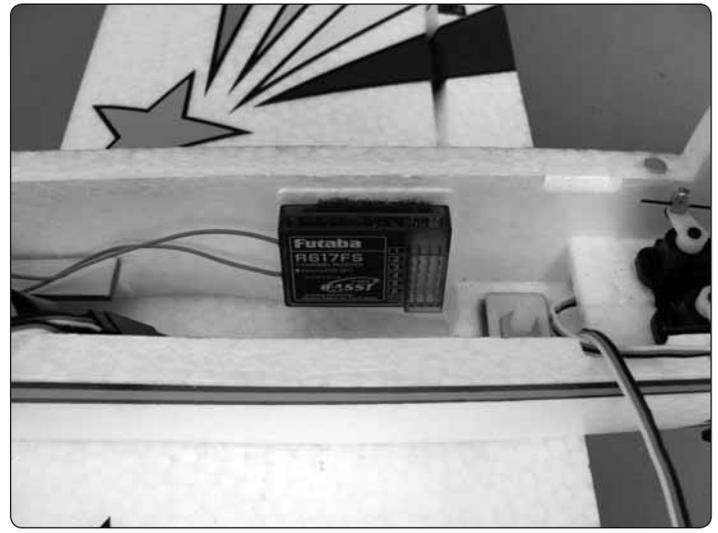
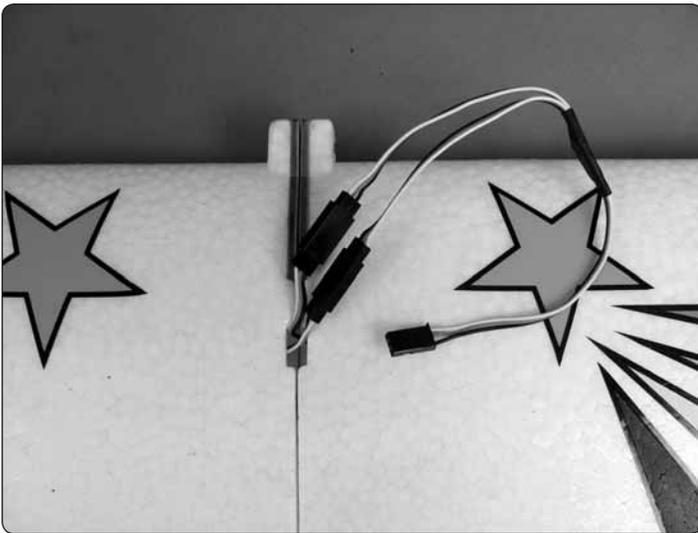
the other joiner pocket. Align the four holes in the molded plastic stab saddle with the holes in the plywood plates on the underside of the stab halves. Secure the stab halves to the stab saddle using four 2x6mm screws.



❑ 4. Connect the elevator pushrod to the outer hole of the elevator control horn and secure it using the 90 degree pushrod connector that is attached to the pushrod.

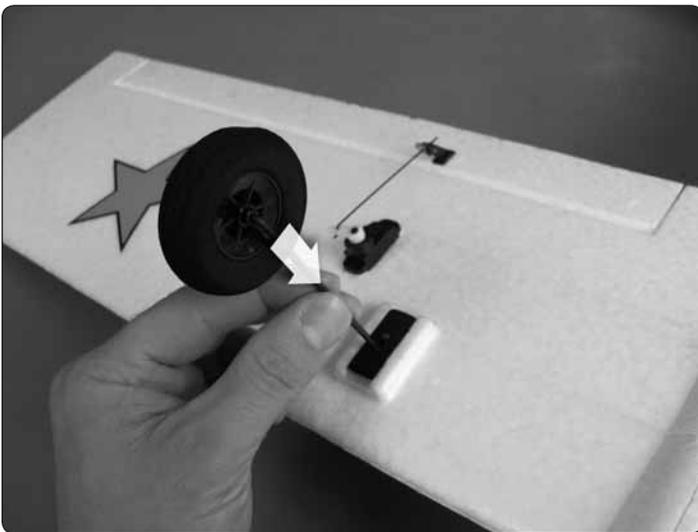


❑ 5. Insert the carbon wing tube into one of the wing panels. Slide the other panel onto the tube, being sure that the aileron servo leads are aligned with the grooves at the roots of the wings.

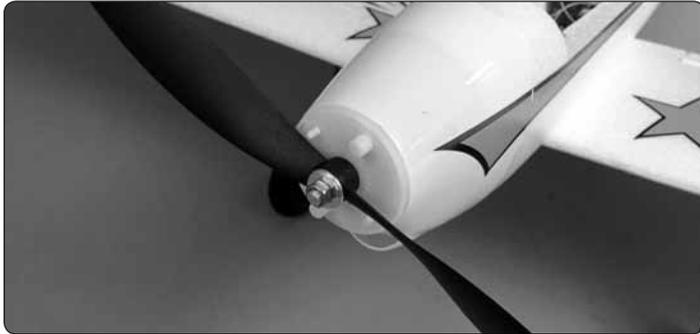
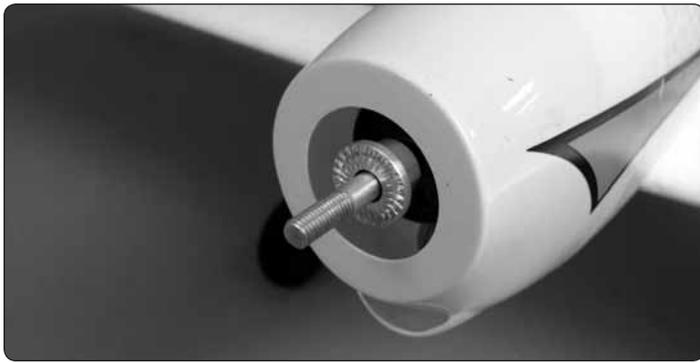


❑ 6. Connect the included Y-harness to the aileron servo leads. Install the wing onto the fuselage using the nylon wing bolt.

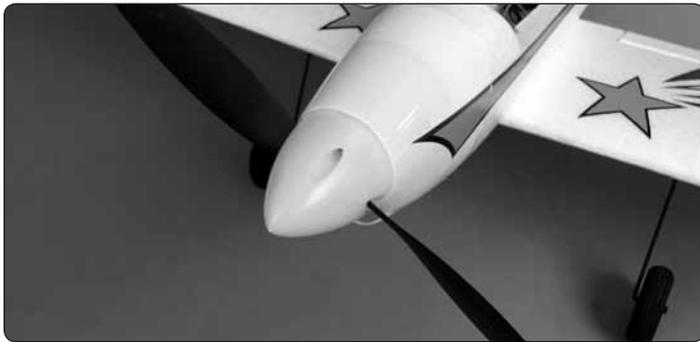
❑ 8. Use a piece from the included double-sided foam tape to attach your receiver to the side of the fuselage as shown. Connect the elevator servo, rudder servo, aileron servos and ESC to the receiver. If you have installed a 2.4GHz receiver, tape the receiver antennas to the side of the fuselage in the orientation described in your radio manual. An FM receiver antenna should be routed out the cool air exit hole on the underside of the fuselage and taped to the underside of the fuse.



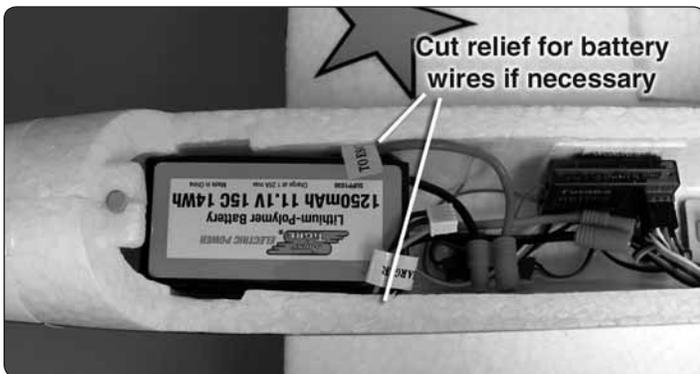
❑ 7. Press the landing gear wires into the plastic landing gear blocks as shown. Be sure that the landing gear is fully seated in the blocks.



❑ 9. Install the prop adapter shaft, prop adapter hub and spinner backplate onto the motor shaft. Fit the propeller onto the shaft and secure it with the prop washer and prop nut. Be sure to adequately tighten the prop nut.



❑ 10. Install the spinner cone onto the backplate using the included screws.



❑ 11. Apply a piece of the included self-adhesive hook and loop material to the battery tray and a mating piece to your flight battery. Test fit the battery onto the battery tray. The exact position of the battery on the tray will be determined when you balance the plane. Depending on the battery you have

chosen, you may need to use a hobby knife to cut relief slots in the sides of the fuselage for the battery wires.

## GET THE MODEL READY TO FLY

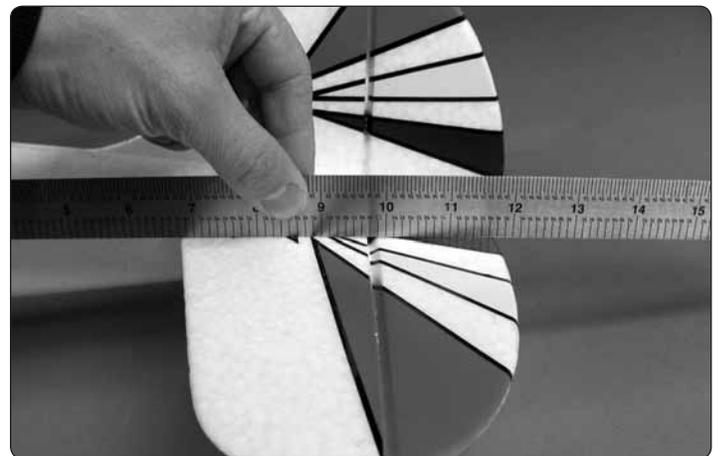
### Arming the ESC & Safe-Start Function

**SAFE-START:** As a safety precaution to prevent the motor from rotating when the battery is first connected, you must “arm” the ESC every time you connect the battery. The propeller will NOT rotate until the ESC is armed. **ALWAYS** take care to keep the propeller clear of yourself, others or objects **WHENEVER** the ESC is connected to the battery!

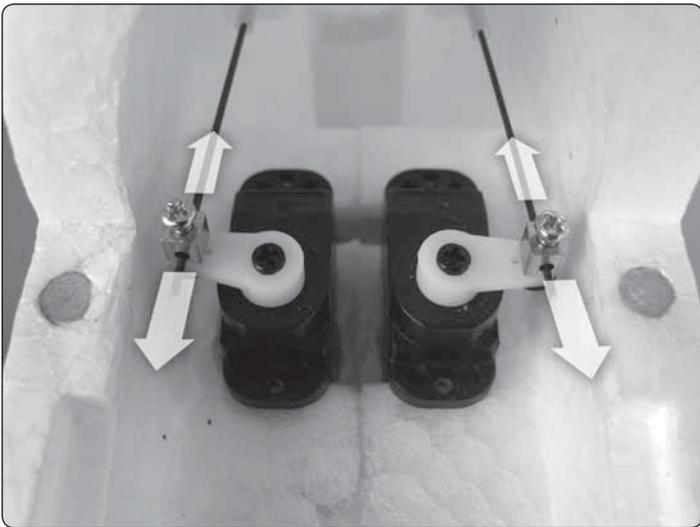
- ❑ 1. Turn the transmitter’s power on.
- ❑ 2. Move the throttle stick to the minimum or idle position (towards you).
- ❑ 3. Connect a fully charged battery to the ESC. The motor will beep once to confirm the beginning of the arming routine.
- ❑ 4. If the ESC emits continuous high pitched beeps when the throttle is moved to the idle position, disconnect the ESC from the battery, change the position of the throttle reversing switch on the transmitter and repeat the arming procedure starting with step 1.
- ❑ 5. Move the throttle stick to full throttle (away from you). The motor will again beep one time.
- ❑ 6. Move the throttle stick back to the idle position (towards you) and the motor will beep twice to confirm the completion of the arming routine. The ESC is now “armed”, and the motor **WILL ROTATE** anytime the throttle stick is advanced beyond the idle position.

### 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.

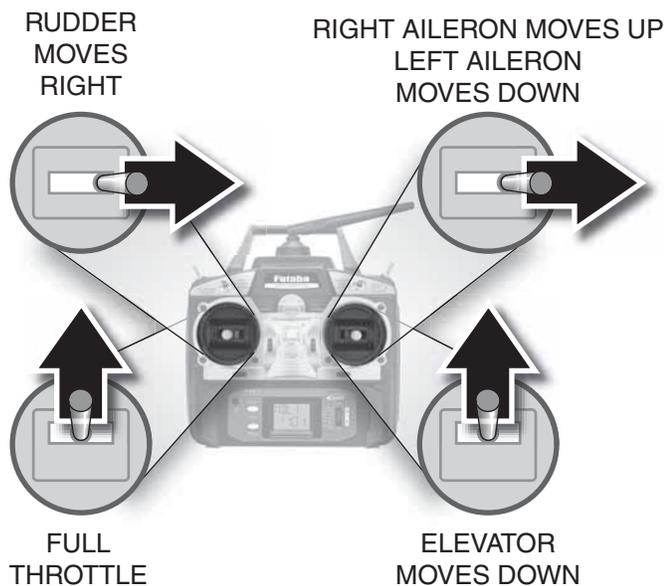


- ❑ 2. With the transmitter and receiver still on, use a straight edge as shown to check all the control surfaces to see if they are centered.



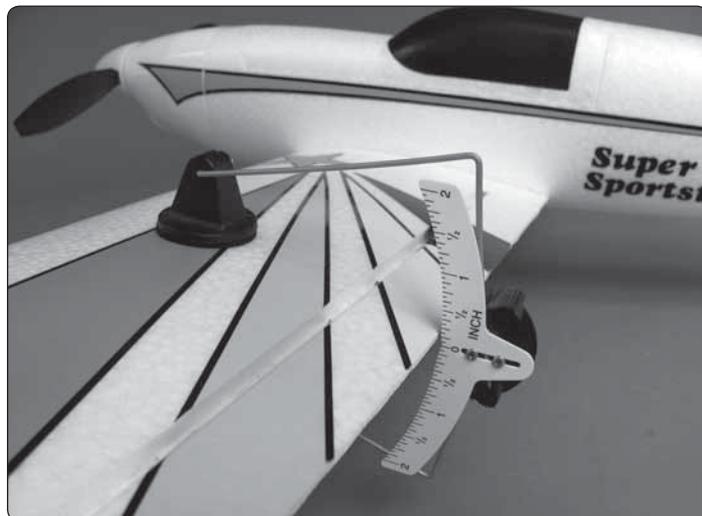
❑ 3. If necessary, adjust the pushrod positions in the screw lock connectors to center the control surfaces.

#### 4-CHANNEL RADIO SETUP (STANDARD MODE 2)



❑ 4. 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



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:**

	<b>LOW RATE</b>	<b>HIGH RATE</b>
<b>ELEVATOR</b>	<u>Up &amp; Down</u> 1/4" [6mm] 7°	<u>Up &amp; Down</u> 9/16" [14mm] 16°
<b>RUDDER</b>	<u>Right &amp; Left</u> 5/8" [16mm] 14°	<u>Right &amp; Left</u> 7/8" [22mm] 19°
<b>AILERONS</b>	<u>Up &amp; Down</u> 7/32" [6mm] 9°	<u>Up &amp; Down</u> 5/16" [8mm] 13°

**IMPORTANT:** The Super Sportster EPO 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 Super Sportster EPO 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."

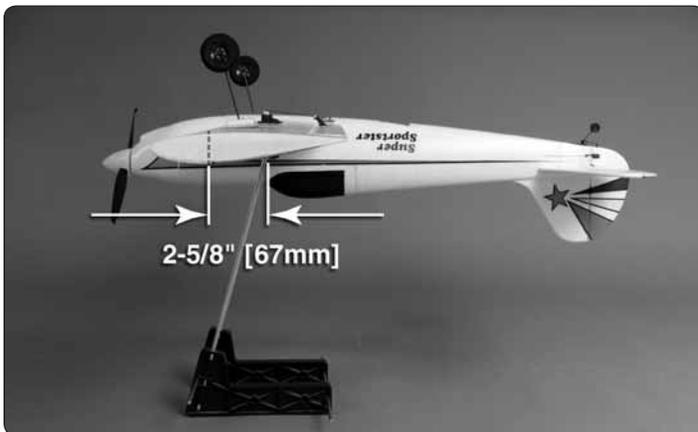
## Balance the Model (C.G.)

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 (**do not apply tape over the trim scheme!**) to accurately mark the C.G. on the top of the wing on both sides of the fuselage. The C.G. is located 2-5/8" [67mm] back from the leading edge of the wing.

This is where your model should balance for the first flights. Later, you may wish to experiment by shifting the C.G. up to 3/4" [19mm] forward or 3/8" [9.5mm] 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 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 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, 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

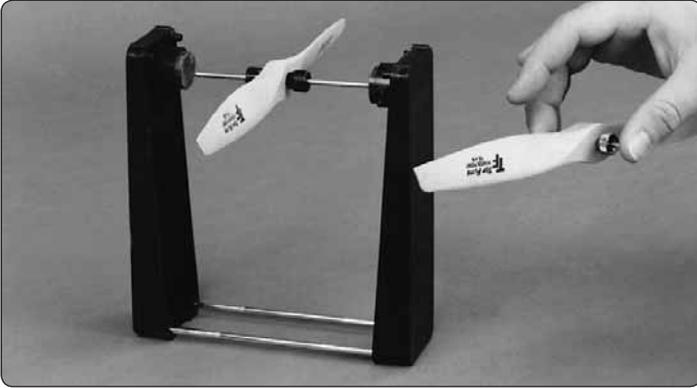
No matter if you fly at an AMA sanctioned R/C club site or if you fly somewhere on your own, you should always have your name, address, telephone number and AMA number on or inside your model. It is **required** at all AMA R/C club flying sites and AMA sanctioned flying events. Fill out the identification tag on page 12 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 Li-Po 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 2.5V per cell.
- **NEVER** place on combustible materials or leave unattended during charge or discharge.
- **ALWAYS** KEEP OUT OF REACH OF CHILDREN.
- **NEVER** charge the battery in the plane.
- **ALWAYS** remove the battery from the plane after a crash. Set it aside in a safe location for at least 20 minutes. If the battery is damaged in the crash it could catch fire. If the battery starts to swell, quickly move the battery to a safe location, preferably outside: Place it in a bucket, covering the battery with sand.

## AMA SAFETY CODES

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 (that's why it's called a *check list!*).

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 or secure dual receivers inside the fuselage as described in the instructions.

4. Balance your model *laterally* as explained in the instructions.

5. Confirm that all controls operate in the correct direction and the throws are set up according to the manual.

6. Make sure the servo wires and Y-harness do not interfere with other systems (servo arms, pushrods, etc.).

7. Balance your propeller (and spare propellers).

8. Tighten the propeller nut and spinner.

9. Place your name, address, AMA number and telephone number on or inside your model.

10. If you wish to photograph your model, do so before your first flight.

11. Range check your radio when you get to the flying field.

## FLYING

The Super Sportster EPO is a great-flying model that flies smoothly and predictably. The Sportster 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. Hold “up” elevator to keep the tail wheel on the ground. If necessary, adjust the tail 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 your batteries, 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, hold a bit of up elevator to keep the tail on the ground to maintain tail wheel steering, then gradually advance the throttle. As the model gains speed decrease up elevator, allowing the tail to come off the ground. One of the most important things to remember with a tail dragger is to always be ready to apply **right** rudder to counteract motor torque. 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 motor 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 Sportster 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, hold up elevator to place the tail on the ground, regaining tail wheel control.

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!***

This model belongs to:

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State, Zip

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
AMA Number