Seawind EP

INSTRUCTION MANUAL

Wingspan: 39.5 in [1005mm]
Wing Area: 234 in^2 [15.1dm^2]
Weight: 24 – 26 oz [680 – 735g]
Wing Loading: 14.8 – 16 oz/ft^2 [45 – 49g/dm^2]
Length: 33.5 in [845mm]
Radio: 4-channel, three servos
Electric Motor: 1.1 in [28mm] dia., 110 W, 25A ESC

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.

GREAT PLANES® MODEL MANUFACTURING COMPANY
Champaign, Illinois
(217) 398-8970, Ext 5
airsupport@greatplanes.com

TABLE OF CONTENTS

INTRODUCTION

Thank you for purchasing the Great Planes EP Seawind ARF. Testing and developing the Seawind was lots of fun. Immediately we were surprised by how nimble and sporty this model is. And although the Seawind is a float plane, hand-launching and grass landings are always an option when not flying from water. When you do get the opportunity to fly from water, be certain to read the "FLYING" section on page 15 of this manual–there are a few water takeoff and landing techniques that will make your outing more successful. The Seawind is happiest when the winds are relatively calm (around 5 - 6 mph or less), but the Seawind can also be flown in winds around 10 mph (though she does get "bumped" around some).

For the latest technical updates or manual corrections to this model visit the Great Planes web site at **www.greatplanes.com**. Open the "R/C AIRPLANES" pull down tab across the top of the page, then select "ARFs-ELECTRIC." Scroll down the page and click on "EP Seawind ARF." If there is new technical information or changes an **"Important! TECH NOTICE"** box will appear in the upper left corner of the page. Click on the Tech Notice box to read the info.

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:

AMA SINCE 1936

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.

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

1. Your Seawind 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 Seawind, 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.

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 pushrod 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 the one recommended will be 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.

ADDITIONAL ITEMS REQUIRED

Following is the list of hardware and accessories required to finish the Seawind. Order numbers are provided in parentheses.

Adhesives

The list of accessories required to complete the Seawind is rather straightforward–with the exception of adhesives which deserve a quick discussion. Hardly any glue is used to build the Seawind, but it must be the right kind. With the exception of slow-drying glue such as epoxy or waterproof white glue (which should be used for the horizontal stabilizer so there will be time for alignment), the rest of the model could be assembled with foam-safe CA. But it wouldn't be economical to purchase two different kinds of glue when so little of either is used. So if you don't have any glue at all, or if you already have some waterproof white glue or epoxy, you could do all the gluing with just that. But if you don't want to wait for the glue to dry on the rest of the parts you could also purchase some foam-safe CA. Following are some suggestions for the kinds of glue:

- ❏ J&Z Products R/C-56 waterproof white glue (JOZR5007)
- ❏ 1 oz Great Planes Pro™ Foam Safe CA+ Medium Glue (GPMR6069)
- ❏ 4 oz. Great Planes Pro 6-minute epoxy (GPMR6042)
- ❏ CA accelerator (GPMR6035)

Hardware & Accessories

- ❏ 4-channel mini receiver (Futaba® R114F – FUTL0442 low band or FUTL0443 high band)
- ❏ Matching Rx crystal (FUTL62** low band or FUTL63** high band)
- ❏ (3) Micro servos (Futaba S3114 – FUTM0414)
- ❏ 6" [150mm] Servo extension wire (for connecting aileron servo to receiver – FUTM4506)
- ❏ Great Planes RimFire™ 28-30-950kV Out-Runner brushless motor (GPMG4560)
- ❏ Great Planes Silver Series 25 Amp Brushless ESC (GPMM1820)

Motor Battery (see "Average Maximum Flight Time" chart on page 15):

- ❏ Great Planes LiPo 11.1V 910mAh 20C Discharge w/Balance (GPMP0605)

-or-

- ❏ Great Planes LiPo 11.1V 1250mAh 20C Discharge w/Balance (GPMP0609)

-or-

- ❏ Great Planes LiPo 11.1V 1500mAh 20C Discharge w/Balance (GPMP0613)
- ❏ LiPo battery charger (Great Planes PolyCharge4™ DC-Only – GPMM3015)
- ❏ One charge lead for each battery to be charged simultaneously (GPMM3148)
- ❏ 12 Volt source for powering charger (Hobbico® 12 Volt Power Supply – HCAP0250)

Building Supplies

- ❏ Great Planes Pro™ Threadlocker (GPMR6060)
- ❏ Common hobby tools (wire cutters, small Phillips screwdrivers, hobby knife)
- ❏ Great Planes Segmented Lead Weights (GPMQ4485)
- ❏ RTV silicone cement or white glue
- ❏ Drill bits: 1/16" [1.6mm], #60 (.040") [1mm] to #52 (1/16") [1.6mm], #60 (.040") [1mm] to #58 (.042") [1.07mm]
- ❏ 1.5mm Hex wrench

Note: The small drills are for drilling holes for the servo mounting screws. If small drill bits are not available or if you prefer not to purchase them, the small screw holes could be made with a #11 hobby blade, but care must be taken because it can be easy to oversize holes made this way.

Optional Supplies & Tools

❏ Precision Magnetic Prop Balancer (TOPQ5700)
❏ CA applicator tips (HCAR3780)
❏ CA debonder (GPMR6039)

BUILDING NOTES

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** 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.

ORDERING REPLACEMENT PARTS

Replacement parts for the Seawind 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**. 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 and payments by personal check to:

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

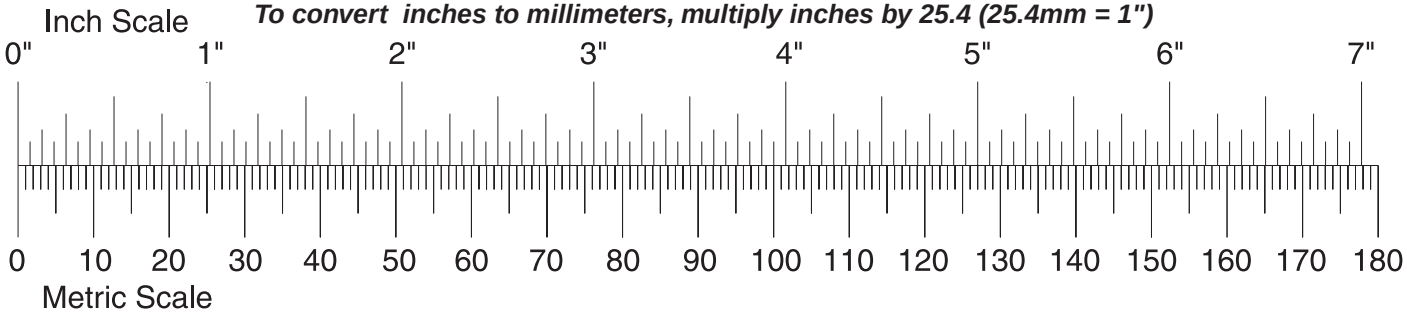
Be certain to specify the order number exactly as listed in the **Replacement Parts List**. Payment is by credit card or personal check only; no C.O.D.

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

Replacement Parts List

GPMA2730	Wing
GPMA2731	Fuselage
GPMA2732	Tail Surface Set
GPMA2733	Wing Tips
GPMA2734	Canopy/Hatch
GPMA2735	Spinner Set (2)
GPMA2736	Cowl
GPMA2737	Decal Set

To convert inches to millimeters, multiply inches by 25.4 (25.4mm = 1")

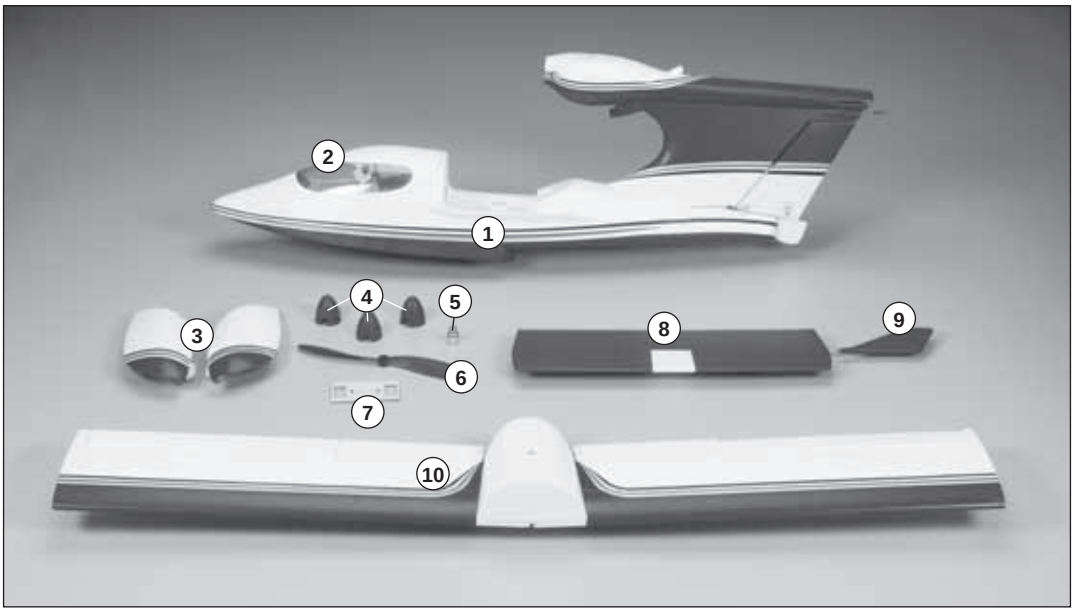


KIT INSPECTION

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

KIT CONTENTS

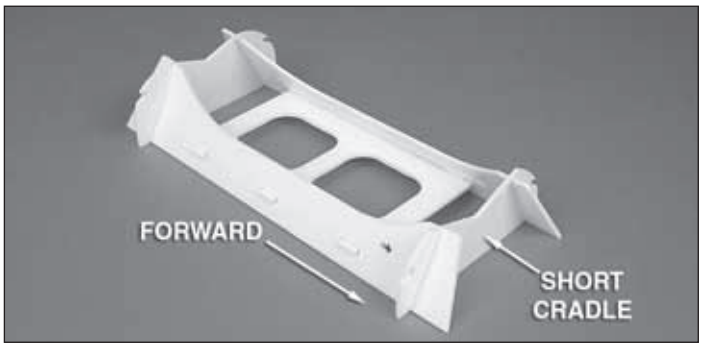


Kit Contents

1	Fuselage	8	Horizontal Stabilizer & Elevator
2	Canopy/Hatch	9	Vertical Fin
3	Wing Tips (L&R)	10	Wing
4	Spinners (3)		
5	Prop Adapter		
6	Propeller		
7	Elevator & Rudder Servo Tray		

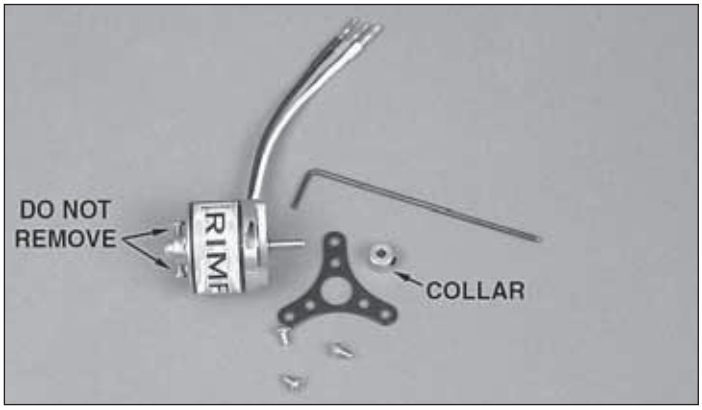
ASSEMBLY

Mount the Motor & Cowl



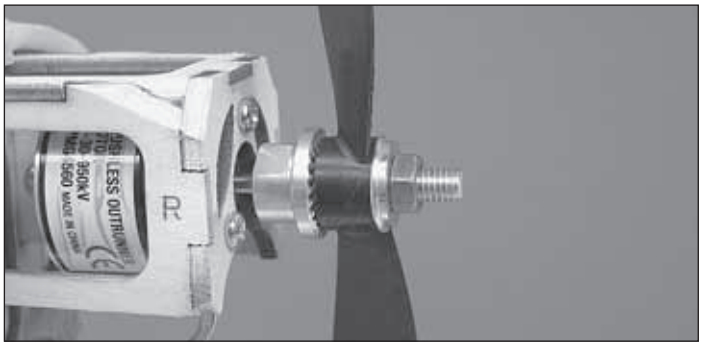
❏ 1. Fit together the assembly/transport stand. Note that the arrows on the sides point toward the front cradle which is the one that is shortest. Use foam-safe CA, epoxy or white glue to glue it together.

❏ 2. Test fit the model in the stand. If necessary, use a hobby knife to trim the short cradle where shown to fit the fuse.



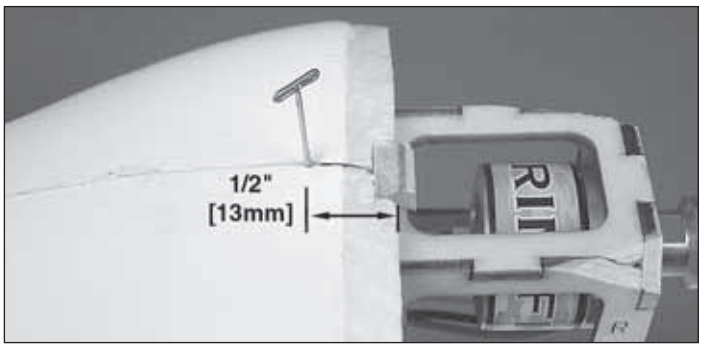
❏ 3. Use a 1.5mm Allen wrench to loosen the set screw in the collar on the front of the motor (not included) and remove the collar. Also remove the mounting plate, but leave the prop saver screws in place because they hold in the drive shaft.

❏ 4. Connect the wires on the motor to the wires in the fuse. Mount the motor with the three 3mm x 6mm Phillips screws that came with this kit and a drop of threadlocker on the threads.



❏ 5. Temporarily mount the prop adapter and the propeller to the motor shaft. Use an 8mm wrench to tighten the prop nut while holding the collet with a 10mm wrench to lock the prop adapter onto the shaft.

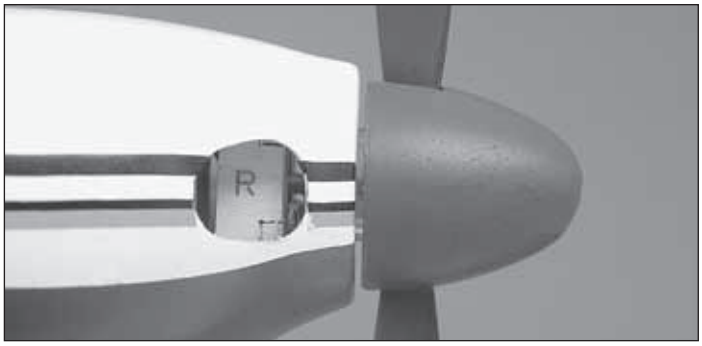
❏ 6. Loosen the prop nut and remove the prop and washer. The collet should remain locked to the motor shaft. If the collet does not remain locked, use a **small drop** of CA on the collet to hold it to the propeller shaft. Then lock it down again.



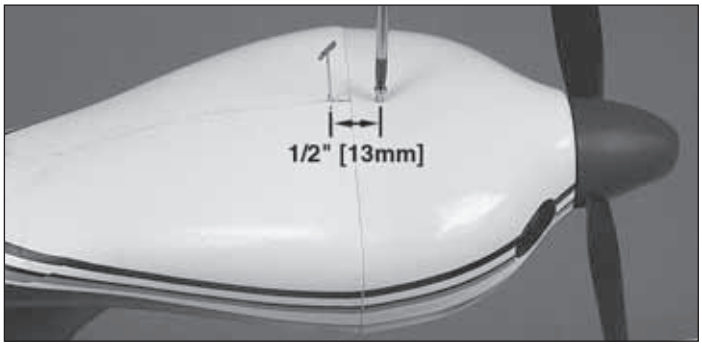
❏ 7. Insert a pin into the motor pod 1/2" [13mm] behind the middle of the wood block for the top cowl mounting screw.

❏ 8. Insert two more pins into the engine pod 1/2" [13mm] behind the middle of the other two cowl mounting blocks around the bottom of the motor pod.

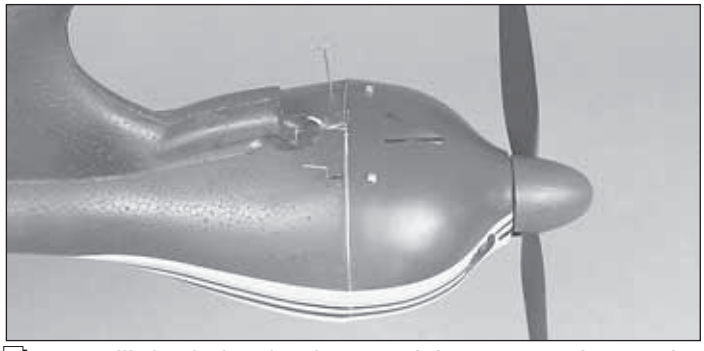
❏ 9. Fit the cowl to the pod. Mount the propeller with the prop washer and prop nut.



❏ 10. Fit one of the spinners all the way onto the propeller and collet assembly. Adjust the cowl so there will be an approximately 1/16" [1.5mm] gap between the spinner and the cowl.



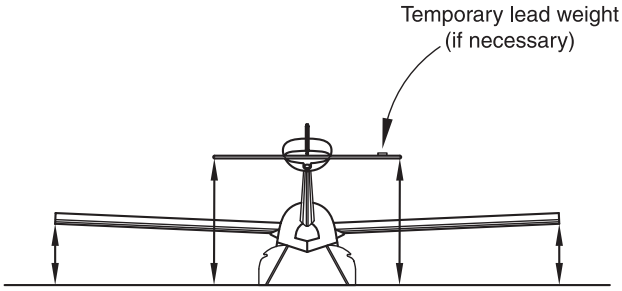
❏ 11. Drill a 1/16" [1.6mm] hole trough the cowl and the cowl mounting block 1/2" [13mm] ahead of the pin in the top of the motor pod–this should put the screw hole right in the middle of the cowl mounting block. Screw in one of the three larger wood screws that came with this kit.



❏ 12. Drill the holes for the remaining two cowl mounting screws and insert the screws. Remove the pins.

Later, after the model has been completely finished, the spinner will be glued to the prop washer with a dab of RTV silicone or white glue.

Mount the Horizontal Stabilizer & Fin

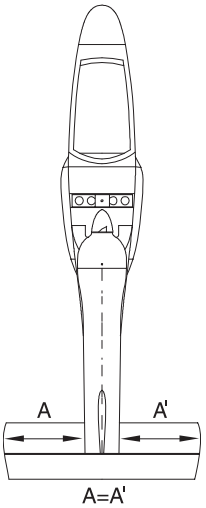


❏ 1. Temporarily mount the wing to the fuselage. With the plane resting in its building cradle, measure the distance from the bottom of both wing tips down to your workbench. Adjust the plane in the cradle until both distances are equal.

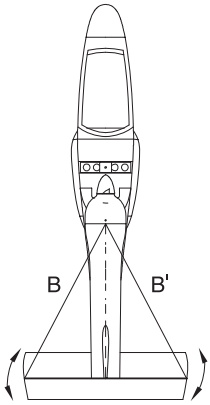
❏ 2. Test fit the horizontal stabilizer (stab) into the fuselage. Center it as best as you can by eye. Same as you measured the distance from the wings down to the workbench, measure the distance from both stab tips down to the workbench. If the distances are not equal, place a small amount of weight on the “high side” of the stab until you can get it level–use coins or the stick-on lead weight you will be using to balance the model later. This is how much weight will have to be used when actually gluing the stab into the fuse.

Note: It’s best to glue the horizontal stabilizer into the fuselage with slow-setting glue such as epoxy, waterproof white glue or R/C-56 so that there will be time to accurately position and center the stab before the glue dries.

❏ 3. Apply glue to the un painted area on the top and bottom of the stab. Slide the stab into position and wipe off any excess glue. Proceed immediately to the next step.



❏ 4. Taking accurate measurements, center the stab in the fuselage from side-to-side.



Rotate the stabilizer tip until B=B'

❏ 5. Square the stab with the centerline of the fuselage by taking accurate measurements from both tips to the seam between the two fuselage halves on the top of the motor pod behind the cowl. Rotate the stab as shown to equalize both sides. Make sure the stab has remained centered laterally.

❏ 6. If any weight was required to level the stab with your workbench, position the weight and re check the measurements. Do not disturb the model until the glue has hardened.

❏ 7. Glue in the fin with the same glue used for the stab–do not clog the receiver antenna tube that comes out of the fuselage by the left side of the fin. View the fin from behind the model to make sure it is vertical.

Install the Servos & Radio

❏ 1. Remove the elevator pushrod wire from the fuse. Disconnect the rudder pushrod from the rudder control horn and remove the rudder pushrod as well.

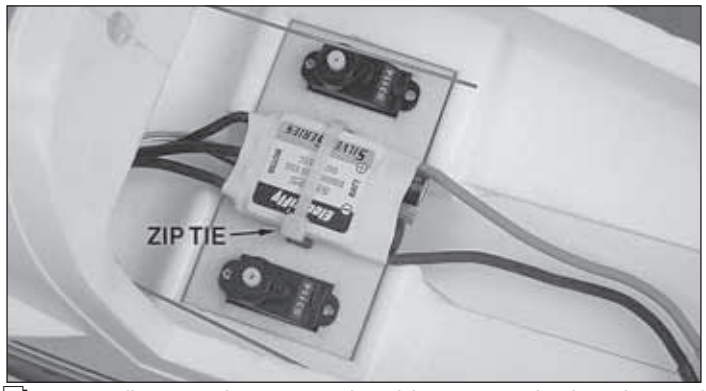
❏ 2. Use fine-grit sandpaper with household oil to clean any deposits or oxidation from both wires. This will allow the wires to move as freely as possible in the guide tubes.

❏ 3. Wipe the pushrod wires clean with a paper towel, and then lightly but thoroughly coat them with household oil. This will protect the wires from future rust or oxidation once you start flying the model from water.

❏ 4. Reinstall the pushrods and connect them to the middle hole in both control horns with the 90° connectors.

Note: Before mounting the receiver and ESC as shown here, refer to the ***"Optional ESC & Receiver Mounting Location"*** section on page 17.

Refer to this photo for the following four steps.



❏ 5. Test fit your elevator and rudder servos in the plywood servo tray. Drill small holes in the servo tray for the small wood screws supplied with this kit for mounting the servos. Any drill from a #60 (.040") [1mm] up to a #52 (1/16") [1.6mm] can be used, but drills nearer the smaller end of the size range will be best.

❏ 6. Temporarily mount the servos in the tray with the screws. **IMPORTANT!:** Remove the screws and servos, apply a few drops of thin CA to each the screw hole, allow to harden, and then remount the servos with the screws. Use care not

to over tighten the screws, stripping out the holes–especially if a larger drill was used. If this happens, remove the screw and build up the hole with more thin CA.

❏ 7. Install the nylon zip tie that came with this kit into the slots in the servo tray for mounting the ESC later. Glue the servo tray in the fuse.

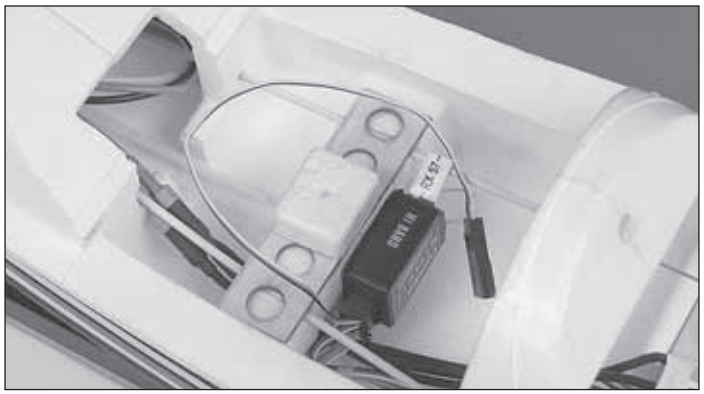
❏ 8. Mount your ESC to the servo tray with a small patch of the included Velcro hook-and-loop material and the nylon tie.

❏ 9. If you haven't yet done so, remove the propeller from the motor.

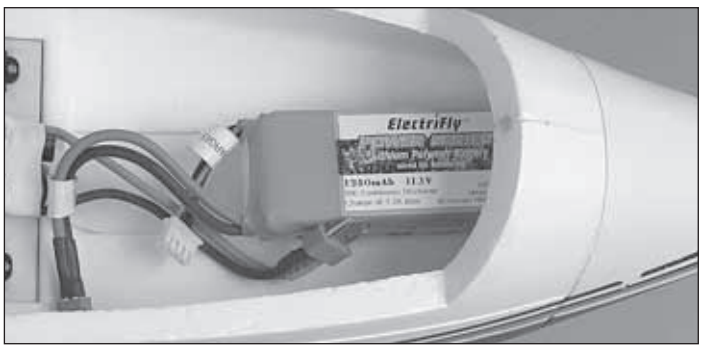
❏ 10. Connect the wires from the ESC to the motor wires.

❏ 11. Connect an aileron servo extension wire to the receiver so you will be able to connect the aileron servo when mounting the wing. Guide the receiver antenna up through the antenna tube. If it's difficult to get the antenna up through the tube, a few drops of household oil added to the antenna will help.

❏ 12. Connect the rudder and elevator servos and the ESC to the receiver. Turn on the transmitter. **With the propeller removed,** connect a charged motor battery to the ESC and operate the controls to make sure the servos and ESC are connected to the receiver correctly.

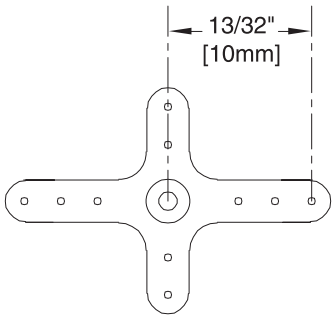


❏ 13. Use the included Velcro hook-and-loop material (or optional double-sided foam mounting tape–not included) to mount the receiver where desired. The location shown is preferable because all the wires can easily reach and the receiver will be raised off the cabin floor, making it less likely to get wet if any water leaks in.

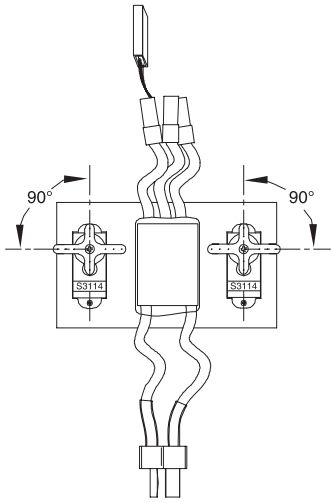


❏ 14. Mount the motor battery as far forward as possible in the fuse with one strip of the included Velcro on the battery and the opposing strip in the bottom of the fuse.

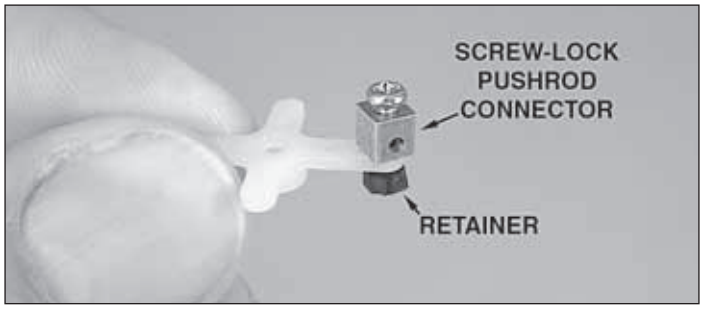
Hook Up the Rudder & Elevator



❏ 1. Even if you will be using a computer radio that has programming to adjust the control throws, it is best to have the pushrod setup mechanically correct so that you will be able to achieve the high-rate control throws listed on page 11 when the ATVs (or endpoints) are set to 100%. And if you don't have a computer radio it is a *requirement* that the pushrods be connected to the correct holes in the servo arms and control horns. Otherwise, you will not get the correct control throw. To get the desirable pushrod setup use servo arms with pushrod holes that are 13/32" [10mm] from the center. If using Futaba S3114 servos the small servo arms that come with the servos achieve this.



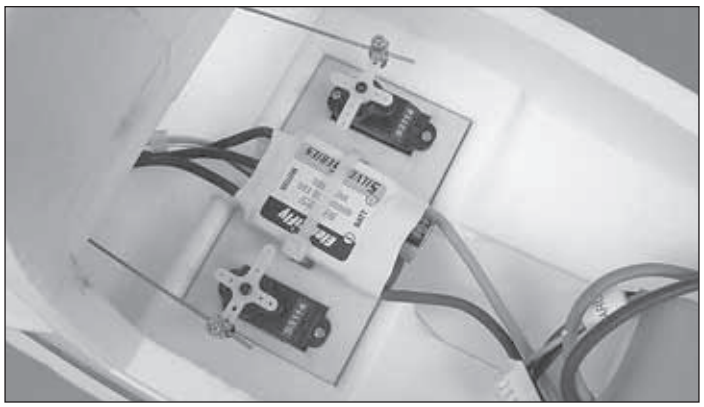
❏ 2. With the transmitter on, the trims centered and the motor battery connected to the receiver, fit the servo arms on the rudder and elevator servos so the arms will be 90-degrees (or as close as 90-degrees as possible) to the servos.



❏ 3. If necessary, use a hobby knife to carefully enlarge the hole in the elevator servo arm. Then connect a small, brass

screw-lock pushrod connector to the arm and secure it with a small, black retainer. Thread one of the small machine-thread screws that came with this kit into the connector.

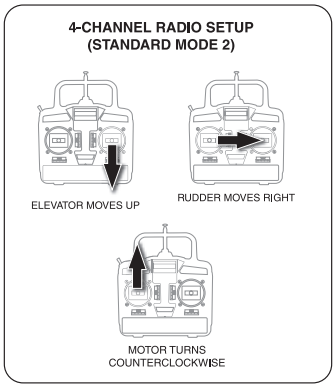
Use this photo to hook up the elevator and rudder servos.



❏ 4. Slip the elevator pushrod into the connector on the servo arm. Then mount the servo arm to the elevator servo and secure it with the screw that came with the servo.

❏ 5. With the system "on," center the elevator and tighten the retaining screw on the screw-lock pushrod connector with a drop of threadlocker.

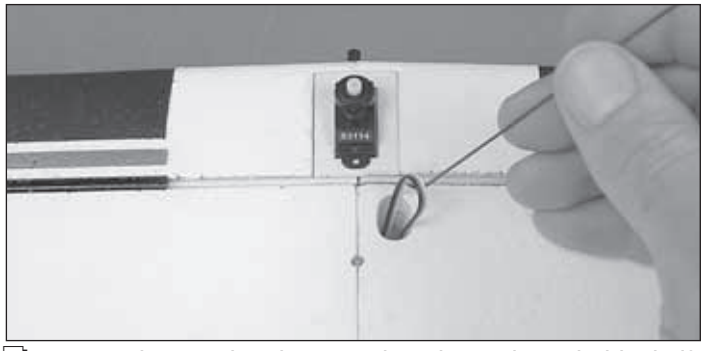
❏ 6. Connect the rudder pushrod the same way–don't forget to use threadlocker on the retaining screw in the screw-lock pushrod connector and don't forget to install the screw that holds on the servo arm.



❏ 7. Operate the controls on the transmitter to make sure the elevator, rudder and motor respond in the correct direction. (It will probably be necessary to reverse the throttle direction in the transmitter.) Also make sure the servo arms don't interfere with the ESC or the mounting strap. If necessary, cut off the unused servo arms or adjust the position of the ESC and the strap. You may double-check and set the control throws now, or wait until you get to the ***"Set the Control Throws"*** section on page 12.

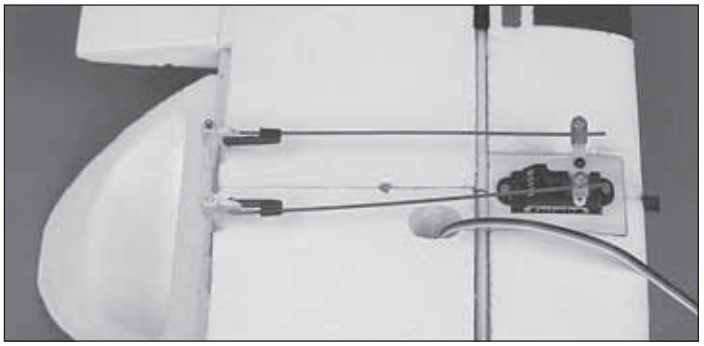
❏ 8. Cut off the excess pushrod wire, but leave approximately 1/4" [5mm to 6mm] protruding from the screw-lock pushrod connectors in case small adjustments will ever be required later on.

Assemble the Wing

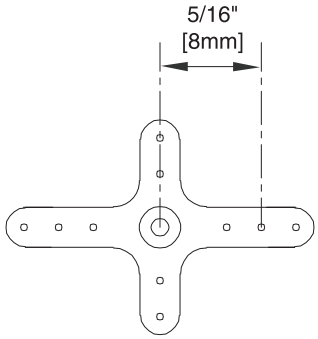


❏ 1. Use a brass tube sharpened on the end or a hobby knife to cut a hole in the bottom of the wing where shown for the aileron servo wire. Use one of the aileron pushrod wires with the 90° bend on the end to pull the servo wire up through.

Refer to this photo while hooking up the ailerons.



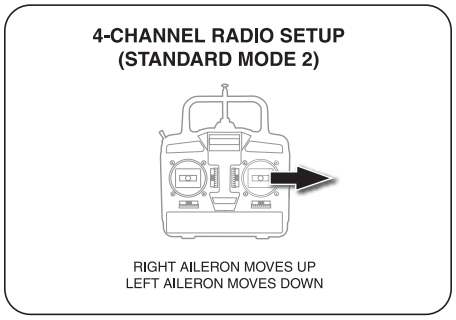
❏ 2. The same as you mounted the rudder and elevator servos in the fuse, mount the aileron servo in the wing–only this time use a drill **no larger** than a #58 (.042") [1.07mm] for the servo screw mounting holes. If you don't have the right drill you could use the tip of a #11 blade to make the holes instead. If you do accidentally oversize the holes, they may be filled with medium CA and redrilled.



❏ 3. Same as when hooking up the elevator and rudder servos, and with the propeller off the motor, connect the aileron servo to the extension coming from the receiver and turn the system on. Make sure the aileron trim is centered and place the servo arm on the servo so it will be 90-degrees. Mount the two remaining screw-lock pushrod connectors to the servo arm–only this time mount them 5/16" [8mm] from the center of the arm to achieve the correct throw.

❏ 4. Connect the aileron pushrods to the torque rod horns on the ailerons with the 90° connectors and to the screw-locks in the servo arm. Center the ailerons and tighten down the screws in the connectors with a drop of threadlocker on the threads. Make sure you have the servo arm screw in the servo.

❏ 5. Cut off the extra pushrod wire, but leave approximately 1/4" [5mm to 6mm] protruding from the screw-lock pushrod connectors.

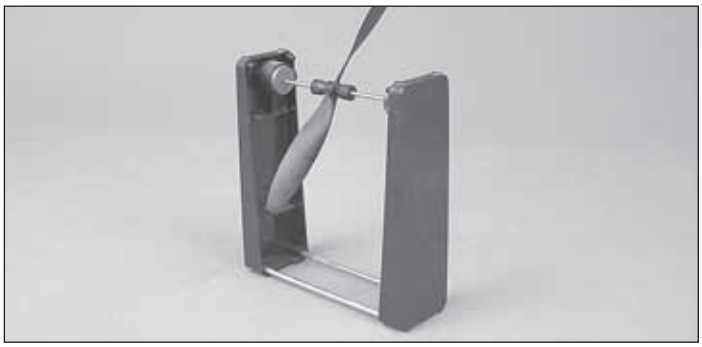


❏ 6. Use the transmitter to operate the ailerons to make sure they respond in the correct direction. You can set the control throws now, or wait until you get to the ***"Set the Control Throws"*** section on page 12.

❏ 7. Use thick or medium foam-safe CA, epoxy, R/C 56 or waterproof white glue to glue on the wing tips. If necessary, use pins to hold them in position while the glue is drying.

GET THE MODEL READY TO FLY

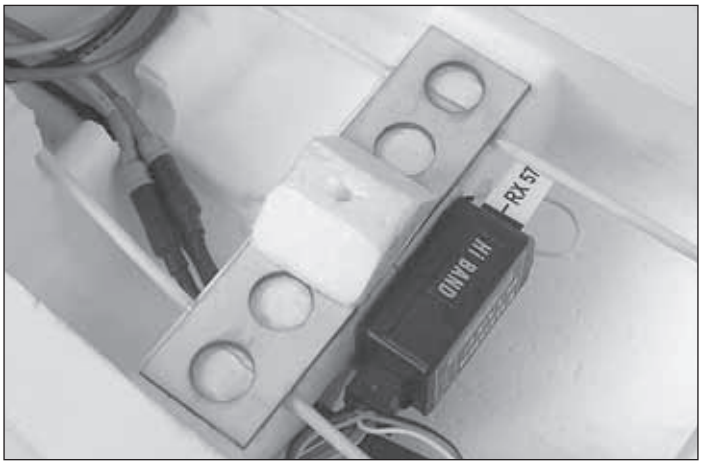
Balance the Propeller & Mount the Spinner



❏ 1. For optimum performance and motor efficiency balance the propeller using a Top Flite® Precision Magnetic Prop Balancer (TOPQ5700) or other suitable balancer. Use a hobby knife or sandpaper to sand the one side of the heavier blade until you can get the prop to balance.

❏ 2. Mount the propeller with the included aluminum propeller washer. Use a few dabs of RTV silicone, R/C 56 or waterproof white glue to glue on the spinner. Using just a few dabs of any of the soft glues recommended should allow the spinner to be removed if ever necessary in the future. If the spinner becomes damaged two spares are provided.

Mount the Wing



❏ 1. Test fit the wing to the fuse. If necessary, trim the foam block on top of the plywood wing bolt plate in the fuse so it doesn't interfere with the aileron pushrod wires when you mount the wing.

❏ 2. Mount the wing to the fuse. Use care to tighten the Phillips wing mounting screw just enough to draw the wing down to the fuse.

Apply the Decals

1. Use scissors or a sharp hobby knife to cut out the decals close to the edges.

2. Refering to the photos on the box, place the decals on the model where desired.

Set the Control Throws

If you have not already done so, 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 **high rate** setting.

Note: The throws are measured at the **widest part** of the rudder (at the bottom).

These are the recommended high and low rate control surface throws.

	High Rate	Low Rate
ELEVATOR:	5/8" [16mm] up	3/8" [10mm] up
	5/8" [16mm] down	3/8" [10mm] down
RUDDER:	1-1/4" [32mm] right	1" [25mm] right
	1-1/4" [32mm] left	1" [25mm] left
AILERONS:	7/16" [11mm] up	1/4" [6mm] up
	7/16" [11mm] down	1/4" [6mm] down

IMPORTANT: The Seawind 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 Seawind 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."

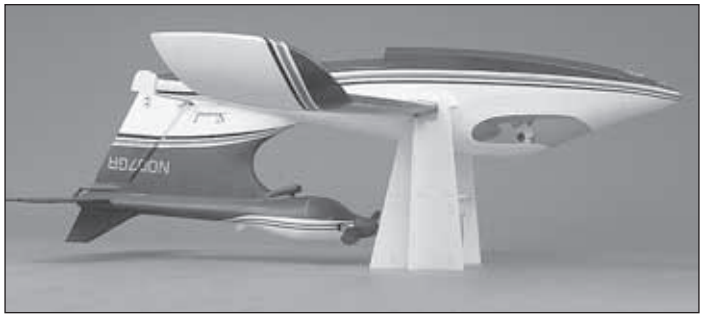
Balance the Model (C.G.)

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 motor, propeller, motor battery, ESC, and the complete radio system.

The Seawind comes with a unique balancing stand that has the balance point built-in. All that needs to be done is assemble the stand, place the model on the stand and determine how much ballast will be required.

❏ 1. Glue together the balance stand as shown. Glue the 3mm carbon tubes to the top of the stand.



❏ 2. Place the model upside-down on the balance stand as shown. The leading edge of the wings should contact the vertical "stop" on the stand, thus supporting the wing on the correct C.G. location which is 1" [25mm] from the leading edge.

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" [10mm] forward or 3/8" [10mm] 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.

❏ 3. If the tail drops, the model is "tail heavy." If possible, you could mount the battery farther forward. Otherwise, lead ballast will have to be added to the nose to get the model to balance. If the nose drops, the model is "nose heavy" and the battery pack could be shifted aft and/or weight could be added to the tail. It is likely, though, that your model will need an ounce or so of nose weight. If this is the case, place incrementally increasing amounts of weight on the bottom of the fuse over the location where it will be mounted inside until you can get the model to balance. Once you know how much weight is required place the model on the assembly stand, remove the canopy and attach the weight inside. Great Planes "stick-on" lead (GPMQ4485) is recommended and should be placed inside the fuse as far forward as possible while still leaving room for the battery.

❏ 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

Typically, a laterally balanced model will perform slightly better. And while some modelers tend to overlook these last-minute "fine tuning" procedures, we strongly urge you to laterally balance your Seawind. Otherwise, the heavier wing may tend to drag in the water causing the plane to "hook" as the model is building speed for takeoff. If you don't have easy access to a body of water large enough to float your Seawind to do the lateral balance now, you could wait until you get to the lake (or pond) and do the lateral balance right before your first flight.

❏ 1. With the model ready to fly and the battery installed, set the model in the water with the nose pointing into the wind.

❏ 2. It will probably float with one tip in the water and one tip up out of the water. Tilt the wing so the "dry" tip is now in the water and the "wet" tip is up. Do this several times, tipping the model from side-to-side.

❏ 3. If one tip always comes back down, then the opposite tip will need some weight. Place incrementally increasing amounts of weight on the "light" tip until neither tip is "favored" and the wings can be rocked to either side without one tip always coming back down.

❏ 4. Stick the weight to the bottom of the wing next to the "light" tip. Recheck the balance.

Note: Depending on how the model handles in the water, the final amount of weight may need to be adjusted.

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. Use a fine-point felt-tip pen to write the information somewhere inside the airplane such as on the bottom of the cockpit.

Charge the Batteries

Follow the battery charging instructions that came with your radio control system to charge the transmitter batteries. You should always charge your transmitter 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 and receiver 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.

Range Check

When you get to your flying site ground check the operational range of the 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. 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 or battery connections, damaged wires or a damaged receiver crystal from a previous crash in another model. One other possible source of radio "noise" that could cause interference is the arrangement and relative location of the receiver, receiver antenna and motor wires. If possible, remount the receiver in a different location or reroute some of the wires. Then try the range check again.

ELECTRIC MOTOR SAFETY PRECAUTIONS

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

Use safety glasses when running the motor.

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 it is turning.

Keep these items away from the prop: loose clothing, shirt sleeves, ties, scarfs, long hair or loose objects such as pencils or screwdrivers that may fall out of shirt or jacket pockets into the prop.

Always remove the LiPo battery from the plane before charging.

Always use a charger designed to charge LiPo batteries for charging the LiPo flight battery.

Never leave the LiPo battery unattended while charging. If the battery becomes hot, discontinue charging.

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

Perform these basic checks to make sure the model is ready to fly. Where appropriate, refer to the instruction manual for additional information required to complete the check.

❏ 1. Check the C.G. according to the measurements provided.
❏ 2. Confirm that all controls operate in the correct direction and the throws are set according to the manual.
❏ 3. Be certain the battery and receiver are securely mounted with the supplied adhesive-backed Velcro or Velcro purchased separately.
❏ 4. Extend your receiver antenna all the way out the antenna tube in the fuse.
❏ 5. Balance the model *laterally* in the water as described.
❏ 6. Use thread-locking compound to secure all the screws on the pushrod connectors.
❏ 7. Make sure all hinges are **securely** glued in place.
❏ 8. Reinforce the holes for the servo mounting screws with thin CA.
❏ 9. Make sure all servo arms are secured to the servos with the screws that came with them.
❏ 10. Balance the propeller.
❏ 11. Tighten the propeller nut and glue on the spinner.
❏ 12. Place your name, address, AMA number and telephone number on or inside your model.
❏ 13. If you wish to photograph your model, do so before your first flight.
❏ 14. Range check your radio when you get to the flying site.

FLYING

The Seawind is a great-flying model that flies smoothly and predictably. The Seawind does not, however, possess the self-recovery characteristics of a primary R/C trainer and should be flown only by R/C pilots who have some experience.

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; oversized holes in servo arms or control horns where the pushrods connect, Excessive free play in worn servo gears; Insecure servo mounting; and one of the most prevalent causes of flutter; Flying an over-powered model at excessive speeds.

Preflight

Monitor and limit your flight time using the timer in your transmitter or the timer on your wrist watch. When the batteries are getting low the motor will usually provide a brief warning before the ESC cuts off motor power, so when you notice the plane flying slower you should land. Often (but not always!), after the motor cuts off, power can be briefly restored after holding the throttle stick all the way down for a few seconds.

To avoid an unexpected dead-stick landing on your first flight, set your alarm or timer 2 to 3 minutes less than the average flight time shown in the **"Average Maximum Flight Time"** chart below, for the battery you are using. When the alarm sounds you can land; or if you are an experienced pilot you may continue to fly, planning for a dead-stick landing to see just how long the motor will run. Circle the plane upwind of the landing area until the motor quits. Note the run time, and then land and reprogram your timer.

Average Maximum Flight Time

ElectriFly Power Series 910mAh 11.1V LiPo	8 min
ElectriFly Power Series 1250mAh 11.1V LiPo	10 min
ElectriFly Power Series 1500mAh 11.1V LiPo	13 min

Always be conservative so the motor won't quit unexpectedly and you will have enough battery to land under power.

Takeoff

The Seawind is a joy to fly from water, but there are a few techniques that should be used to insure success. The most important thing is to fly your Seawind the first few times when the winds are relatively calm–0 to 5 mph is preferred (especially if flying from water!). Later, once you have become more experienced with your Seawind, you will be able to fly it on windier days.

If you're a little nervous about flying from water, it may be a good idea to make your first flights over dry land (see the ***"Taking Off From Grass"*** section on the next page). This will allow you to get the model trimmed for straight-and-level flight and get a good feel for how it flies.

When you get to the pond the first thing you should do (if you haven't already performed the lateral balance) is to practice taxiing the plane at different speeds. Note that holding full "up" elevator will hold the water rudder down, thus providing more control. Also note that if you ever need to make a sharp "U" turn, the Seawind can just about turn around itself when moving as slow as possible with the motor at an "idle" rpm. But at higher speeds the ailerons may also be used to assist in turning. If it is too windy the Seawind will usually "weathervane" into the wind, making turns across the wind difficult. In these conditions about all you can do is execute turns at faster speeds (which will require more space), or avoid windy conditions altogether.

Use these techniques to position the Seawind for takeoff and to get it back to shore when you're done. If the Seawind ever gets into a situation where one of the wings becomes partially submerged, **immediately pull the throttle back** to stop its forward motion. Otherwise, the wing will dig deeper into the water. This is a rare occurrence, but if it happens more than once or twice during your taxiing tests this is probably an indication that it is too windy to takeoff from water.

When conducting higher-speed taxi tests (up to 1/4 to 1/3 throttle), observe which, if any, wing tip drags in the water. If, after small aileron corrections to level the wings, one wing tip still has a tendency to "hook," the opposite wing may need some weight. Add weight to the "light" tip or remove some of the weight you may have previously added to the "heavy" tip.

When ready for takeoff, the Seawind **must be pointing directly into the wind**–and the stronger the wind, the more important this will be. Once the model is pointing into the wind, smoothly advance the throttle to full power while simultaneously holding some "up" elevator. This will keep the nose up, the water rudder submerged, stabilize the plane and allow it to rise up out of the water without skipping. While the model is building speed, if necessary, use the ailerons to level the wings and use the rudder to make heading corrections. Like all airplanes, the objective is for smooth takeoffs–but when taking off from water you should also avoid getting the model into a "skipping" mode. If the model does get into a situation where it begins to skip off the water, you must either abort the takeoff by pulling back the throttle or apply full power and takeoff. Once airborne, the Seawind shouldn't snap or stall, so while you may want to relax the elevator a little, you can still maintain an aggressive climb.

To summarize the takeoff procedure: point the model into the wind, then smoothly advance the throttle using the rudder to maintain heading. Hold some "up" elevator to keep the nose up and get the model airborne once it has gained enough speed. If it does get into a "skipping" mode, don't try to smooth it out. Instead apply full power to get the model off the water or throttle back to abort the takeoff.

Flight

Once the model is airborne and has climbed to a comfortable altitude, the first priority will be to adjust the trims to get it flying straight-and-level. Continue to fly around, getting the model properly trimmed while you get a good feel for how it flies. If the model is flying too fast, simply remember to throttle back. While still at altitude, cut the power to see how it handles in a gliding situation to simulate a landing. Switch between the high and low rates to see how the model reacts. Remember to monitor your flight time so the motor doesn't unexpectedly cut off.

Landing

Landings with the Seawind can be a thing of beauty. She is "slippery" and tends to glide long, so set your approach a little farther out than you might normally expect–if you end up short you can always throttle up. If the winds are calm (5 mph or less) you can throttle all the way back cutting power completely while still on the down wind leg just before you make your cross-wind turn. Maintain airspeed and establish a descent by keeping the nose down. When the model has reached an altitude of approximately 10' [3 meters], gradually slow its speed by leveling the nose. The lower and slower it gets the more elevator you should apply until it is just a few inches off the water. At this time apply full or nearly full elevator to execute a landing flair as the Seawind touches down. The most important thing about landing on water–whether you are coming in a little "hot" or too slow–is to get the model to flair, keeping the nose up out of the water.

Taking Off From Grass

Surprisingly, the Seawind can easily takeoff from grass (your flying buddies will be tickled when they see you taking off and landing a float plane in the grass!). In our testing, we've found that shorter, dry grass provides the least resistance, so if taking off from tall grass more space will be required. In ideal conditions the Seawind took only about 50' [15 meters]

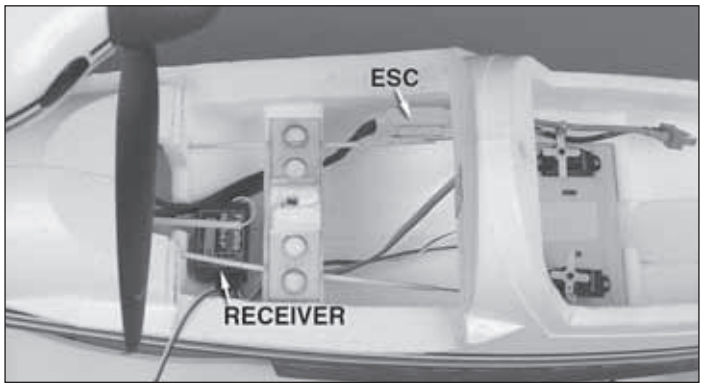
to get off the ground. Simply lay the model on the ground with the nose pointing into the wind, apply full power, allow it to gain flying speed and apply elevator to execute a takeoff.

If, for some reason, the conditions at your flying site aren't suitable for grass takeoffs, the Seawind may also be hand-launched (though grass takeoffs are preferred). It's best to have an assistant launch the model for you, but experienced pilots could also hand-launch the Seawind themselves. Hold the model by the bottom of the fuselage under the wing and operate the controls to make sure they are responding correctly. Apply full power and launch the model directly into the wind with the nose up at about a 30° angle. Be alert because until the model builds up speed it will initially pitch downward. Apply "up" elevator and operate the controls to keep the wings level. When the model has built up enough speed initiate a climb.

Have a ball! But always stay in control and fly in a safe manner.

GOOD LUCK AND GREAT FLYING!

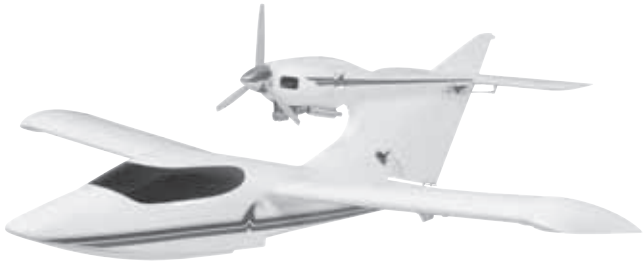
OPTIONAL ESC & RECEIVER MOUNTING LOCATION



The mounting locations for the ESC and receiver shown back on page 8 are suitable if you are certain you will always be flying in calm conditions when the water is smooth (or if you will not be flying off water at all). But if you anticipate flying your Seawind when the water may be a little "choppy," precautionary measures should be taken to protect the ESC and receiver from water that may splash into the fuselage when the water gets rough. The first thing you can do is simply relocate the ESC and receiver where shown. You could also seal the openings in both ends of the heat-shrink tubing on the ESC with RTV silicone and place the receiver in a balloon with the opening sealed with a nylon zip tie. If the ESC and/or receiver ever do get wet, remove them from the model and dry them out as soon as possible.

OTHER ITEMS AVAILABLE FROM GREAT PLANES

ElectriFly™ by Great Planes PBY Catalina EP Sport Scale ARF
Thrilling water takeoffs and landings are just a few hours away with the PBY Catalina! It has the look of the 1930s-era military/sea rescue plane, with high-quality construction features such as a fiberglass fuselage and a factory-covered, built-up wood wing and tail. Molded ABS wing tip floats and a removable rudder combine for excellent handling on the water, with a rubber plug in the fuselage providing easy water drainage if needed. Twin brushless out-runner motors deliver a great power-to-weight ratio for long flight times and the ability for executing basic aerobatics. An easy-access hatch on top allows for quick installation or removal of high-voltage, low-weight LiPo flight packs. Included in the generous hardware package are two props, prop adapters, machined aluminum prop hubs and observation canopies. **GPMA1154**



Great Planes Seawind* .60-.91 Sport-Scale ARF
No other R/C seaplane looks or flies like the Seawind. This sport-scale replica of the classic homebuilt amphibious aircraft draws attention wherever it's flown, whether at the flying field or the local lake. Substitute optional retracts for the included fixed landing gear and you'll be able to fly from land OR water with the same plane!

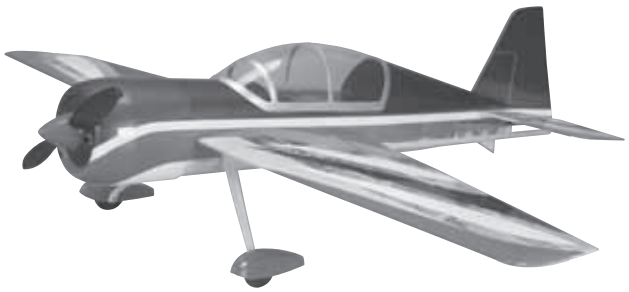
The fiberglass wingtips offer excellent stability during flight and double as floats to support the Seawind on the water. Without the need for bulky suspended floats, the model flies faster than typical seaplanes. Assembly moves quickly, too.

With its low number of parts, the Seawind ARF requires only 15 to 18 hours of building time. The fuselage and wingtips are gel-coated fiberglass. The built-up wing and tail section are made of balsa and factory-covered in Top Flite® MonoKote®. The wing simply plugs into an aluminum joiner and is secured with nylon bolts – no tools needed.

The unique boom-mounted engine design not only enhances the model's looks, but also reduces the likelihood of water "spray" reaching the engine during takeoff and landing. As

your sleek Seawind ARF touches down gracefully onto the water, it hits you: this is a seaplane like no other, in both looks and performance. **GPMA1360**

* The Seawind name is used with permission of Seawind Inc.



ElectriFly by Great Planes YAK 54 3D EP ARF
Winning performance is in the YAK's genes – and they shine again in this all-wood, easy-to-assemble park flyer 3D ARF. Using today's finest electric model engineering, it succeeds at any 3D maneuver – performing demanding precision aerobatics as well as larger models, but at smaller sites like parks and ball fields. Oversize ailerons provide impressive roll rates and superior control at all flying speeds. With reduced throws, it's also a fun and easy sport flier. The prebuilt, laser-cut balsa/ply structures assemble quickly, and hardware is included for mounting either an out-runner motor, like the ElectriFly RimFire 35-30-950, or an in-runner such as the ElectriFly Ammo B24-33-4040. A hand-crafted, lightweight fiberglass cowl is also included, painted to match the high-visibility trim scheme. **GPMA1542**

Futaba S3114 High Torque Micro Servo
Ideal for electric planes and small electric helis, the affordable, analog S3114 delivers plenty of power and performance in a compact package. **FUTM0414**

ElectriFly™ by Great Planes Silver Series SS25 Brushless ESC
Silver Series ESCs are compatible with NiCd, NiMH, and LiPo batteries, with automatic low-voltage cut-off for all. The SS25 features fully proportional forward and smooth throttle response with on/off brake. Connectors are installed and a 180-day warranty is included. **GPMM1820**

ElectriFly by Great Planes RimFire™ 28-30-950kV Out-Runner Brushless Motor
Powered by rare-earth Neodymium magnets, RimFire out-runner motors produce explosive acceleration in planes ranging from park flyers to 1.60-size giants! Their high-torque design eliminates the need for a gearbox, making them the simpler, lighter and less expensive alternative to a brushed motor and gearbox. Plus, their innovative housing optimizes cooling, allowing RimFire motors to produce 50% more performance power than out-runners of similar size. **GPMG4560**

- Highly efficient and virtually maintenance-free. Bearings are double-shielded and permanently lubricated.
- Installed, gold-plated bullet connectors compatible with all ElectriFly ESCs.
- Ideal for brushed-to-brushless upgrades and glow-to-electric conversions!
- Motor mount and hardware included.

ElectriFly by Great Planes Power Series Balanced LiPo Packs

GPMP0605	**11.1V 910mAh 20C Deans Ultra**
GPMP0609	**11.1V 1250mAh 20C Deans Ultra**
GPMP0613	**11.1V 1500mAh 20C Deans Ultra**

- The best choice for all-out 3D flying and contest-winning performance!

- Huge, 20C continuous discharge rate help packs stay cooler during sustained, high-amp current loads.
- Assembled, shrink-wrapped and wired in series for balancing, with a standard balancing connector and high-efficiency Deans plug.

ElectriFly PolyCharge4™
For convenience with multiple LiPo packs, there's the DC PolyCharge4. Each of its four independent outputs can charge a one-to-four cell Lithium-Polymer pack. It's ideal if you don't have the time for one-at-a-time charging – and don't want the expense and hassle of multiple chargers. Each output can handle packs from 300 to 3000mAh. Set the capacity, and PolyCharge4 will automatically set the charge rate to get you started – and use light and sound cues to tell you when your pack is done. **GPMM3015**

Hobbico 12V Power Supply
The 12V Power Supply transforms 110V AC current into constant 13.8V, 11.5A DC power for peak chargers, motor break-in and more. It includes fuse protection, 5V tap, a lighted on/off switch and one-year warranty protection. **HCAP0250**

BUILDING NOTES

Kit Purchased Date: _____

Where Purchased: _____

Date Construction Started: _____

Date Construction Finished: _____

Finished Weight: _____

Date of First Flight: _____

FLIGHT LOG