COMPLETE RTF AIRPLANE

FLYZONE™ by Hobbico™

HOBBICO®

Sky Pilot™

ARF Version Requires

- 3-Channel Radio
- 2 Micro Servos
- Electronic Speed Control (Great Planes C-12 GPMM2015 is recommended)

RTF Version Requires

- 8 (AA) Alkaline Batteries

Radio-controlled!
READY-TO-FLY

ASSEMBLE ONLY WITH ADULT SUPERVISION

Please read through this instruction booklet to **THOROUGHLY** familiarize yourself with the assembly and flight characteristics of this airplane before beginning to assemble the kit.

Please inspect all parts carefully before starting assembly! If any parts are missing, broken or defective, or if you have any questions about the assembly or flying of this airplane, please call us at **(217) 398-8970** and we'll be glad to help.

WARRANTY

Hobbico® 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 Hobbico's liability exceed the original cost of the purchased kit.** Further, Hobbico reserves the right to change or modify this warranty without notice.

In that Hobbico has no control over the 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 buyers are not prepared to accept the liability associated with the use of this product, they are 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.

Printed in China HCAZ1175 for HCAA1985 & HCAA1979 V2

PROTECT YOUR MODEL, YOURSELF AND OTHERS; FOLLOW THESE IMPORTANT SAFETY PRECAUTION

Your Sky Pilot plane is not a toy, but rather a sophisticated, working model that functions very much like an actual airplane. Because of its realistic performance, the model, if not assembled and operated correctly, could possibly cause injury to yourself and spectators or damage property.

We highly recommend that you get experienced, knowledgeable help with assembly and during your first flights, to make your R/C modeling experience totally enjoyable. You'll learn faster and avoid risking your model before you're truly ready to solo. Your local hobby shop has information about flying clubs in your area whose membership includes qualified instructors. You can also contact the national **Academy of Model Aeronautics** (AMA), which has more than 2,500 chartered clubs across the country. Instructor training programs and insured newcomer training are available through any one of these clubs.

Contact the AMA at the address or toll-free phone number below.

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302
(800) 435-9262
Fax: (765) 741-0057
or via the Internet at: http://www.modelaircraft.org

PRECAUTIONS

1. Assemble the plane **according to the instructions. Do not** alter or modify the model. If you make any modifications, you will void your warranty.

2. **Test** the operation of the model **before each flight** to insure that all equipment is operating properly, and that the model remains structurally sound.

3. Fly only on calm days (with wind speeds less than 5 mph) and in large open areas free of trees, people, buildings or any other obstacles.

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

The R/C model hobby becomes more and more enjoyable as your experience grows. Your chances for success and graduation to higher levels are very good if you take your time and follow the assembly and flying instructions carefully and completely. We hope you enjoy flying your Sky Pilot plane.

GLOSSARY

Electronic Speed Control/Receiver (ESC/RX): This unit controls the speed of the motor and the control surfaces.

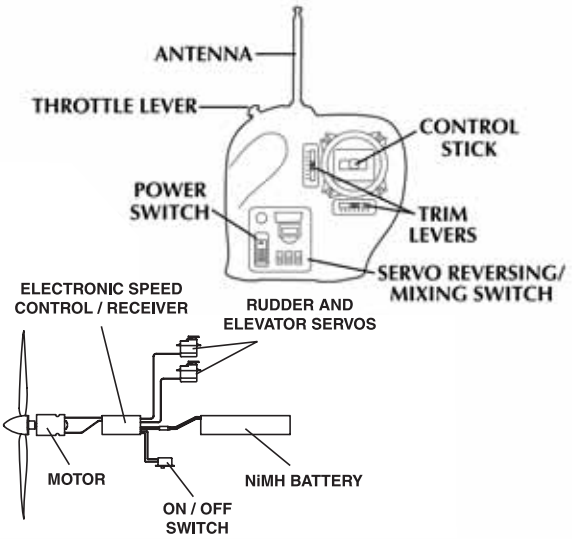
Elevator: Controls the altitude.

Rudder: Controls direction.

Motor: The motor rotates the prop to provide thrust.

Nickel-Metal Hydride (NiMH) Battery: Rechargeable batteries which are used to power the airplane. NiMH batteries are lighter and smaller than most other types of rechargable batteries.

Transmitter (TX): This is the hand-held unit that sends the signal to the control unit. Moving the stick controls the direction and climb/descent. The throttle lever controls the motor.



AIRFRAME PARTS AND HARDWARE

UNPACKING THE BOX

Check the parts against the list below.
If any parts are damaged or missing, give us a call at: (217) 398-8970.

	Part Name	Qty.
❑ 1.	Fuselage/Stabilizer	1
❑ 2.	Propeller	2
❑ 3.	Peak Charger	1
❑ 4.	1100 mAh NiMH Battery	1
❑ 5.	Screwdriver	1
❑ 6.	Wing	1
❑ 7.	Rudder	1
❑ 8.	Transmitter	1
❑ 9.	Mounting Screws (wing=1, struts=4)	5
❑ 10.	Instructional DVD	1
❑ 11.	Struts	2
	Decal (Not Shown in Photo)	1

FCC REQUIREMENT

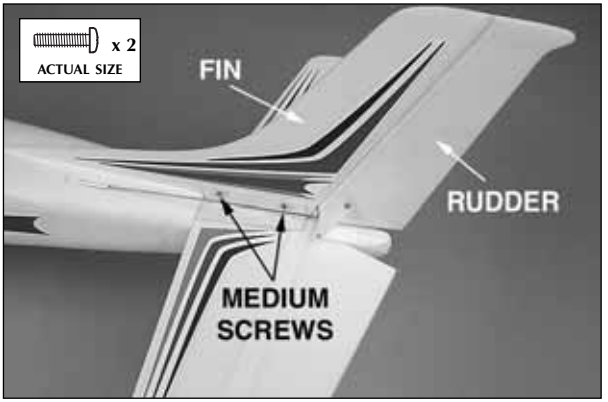
Carrier Frequency: 27

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications to this product not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

INSTALL THE FIN

❏ 1. The decals for the Sky Pilot are already cut-out on the decal sheet. Peel the decals off of the sheet and apply them to the plane using the box as a guide to their location.

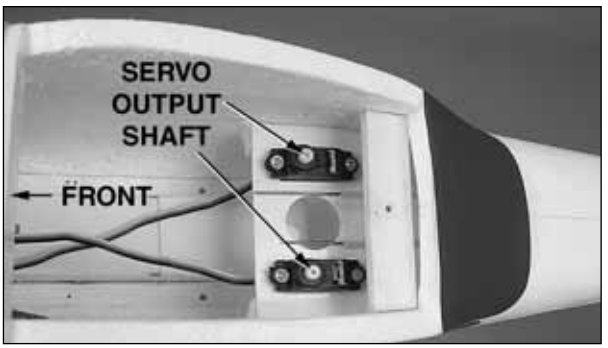


❏ 2. Insert the fin into the fin holder. Use two medium screws to attach the fin to the holder. Be careful to not over tighten the screws.

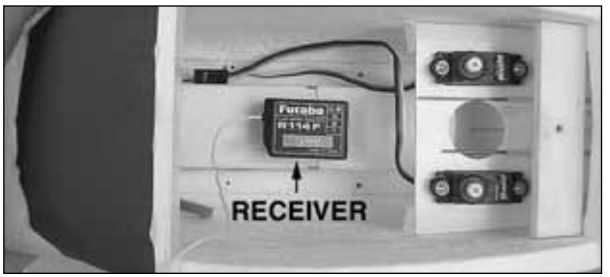
RADIO INSTALLATION (ALMOST-READY-T0-FLY VERSION)

(If you have the Ready-to-Fly version of the Sky Pilot with the radio system already installed, skip to ***PREPARE THE TRANSMITTER, page 5***.)

❏ 1. Follow the manufacturer's instructions to install the rubber bushings and metal grommets in both servos.

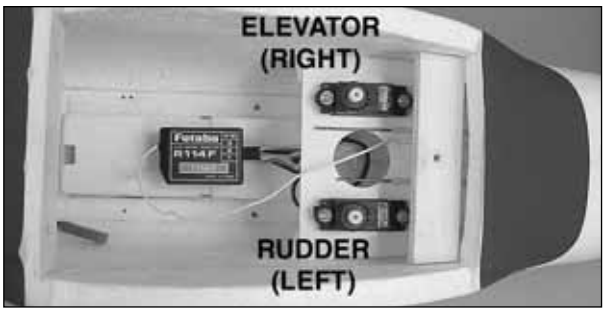


❏ 2. Use the screws, included with your servos, to attach the servos to the servo tray. Note that both servo arm output shafts are towards the front.

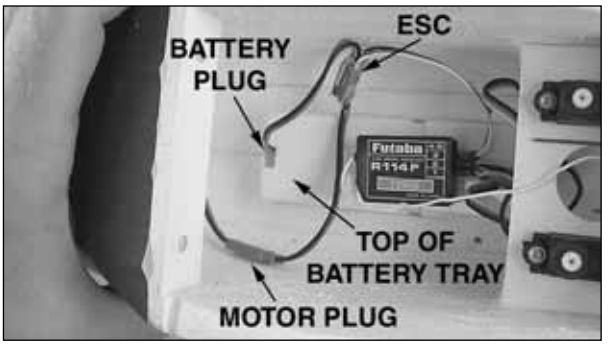


❏ 3. Clean the back side of the receiver (not included) with rubbing alcohol. Apply double-sided tape (not included) to the back of the receiver. Then, install the receiver in the fuselage, on top of the battery holder.

❏ 4. Route the antenna through the antenna tube, located at the top back of the servo tray, and out the tail of the fuselage. **Caution: Do not cut the excess antenna exiting out the aft end of the fuselage. Cutting the antenna will reduce the range of the radio system.**

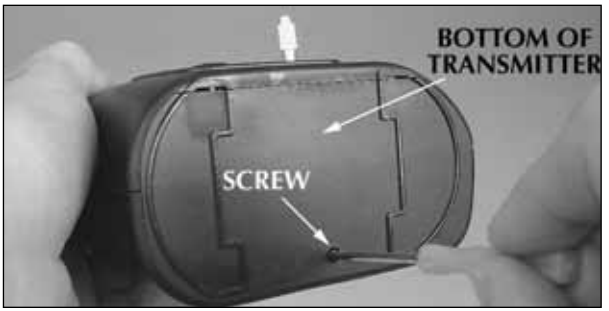


❏ 5. Plug the right servo into the elevator servo socket and the left servo into the rudder servo socket of the receiver. **Note:** If using a 4-channel, 2-stick transmitter, modelers that are just learning to fly will have fewer problems if the rudder servo is plugged into the aileron socket of the receiver. This will allow the right stick to be used for the rudder and elevator.



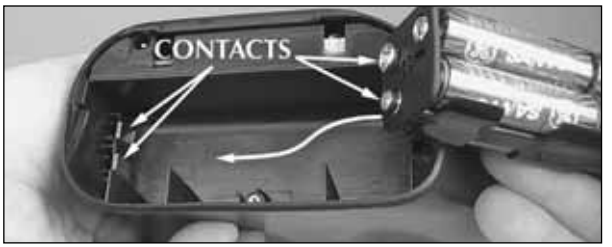
❏ 6. Your Sky Pilot requires a minimum 12 amp ESC. Plug the electronic speed control (ESC) into the motor connector. Plug the ESC servo lead into the throttle socket of the receiver. Route the battery connector from the ESC through the hole in the top front of the battery tray. **Note:** If the ESC that you are installing has an on/off switch, install it in the side of the fuselage using the screws included with the ESC.

PREPARE THE TRANSMITTER



❏ 1. The transmitter that controls your airplane requires power, in the form of eight "AA" batteries. To install the batteries, loosen the screw on the bottom of the transmitter and remove the battery hatch.

❏ 2. Pull the battery holder out of the transmitter case and install eight new "AA" batteries, following the diagram on the holder.



❏ 3. Insert the battery holder in the transmitter case so that the two contacts on the battery holder align with the contacts in the transmitter case. Reinstall the battery hatch on the transmitter case and tighten the screw.

❏ 4. Switch on the transmitter and check the LED on the front of the transmitter. If the green light is on, it is safe to fly. If the red light is on or flashing, you need to install fresh batteries.

❏ 5. On the front of the transmitter are three switches. The two switches on the left are for reversing the direction of the servos. The mixing switch on the right turns the V-tail mixing on or off. Set ch.1 switch to **REV**, ch.2 to **NOR** and mix to **OFF**.

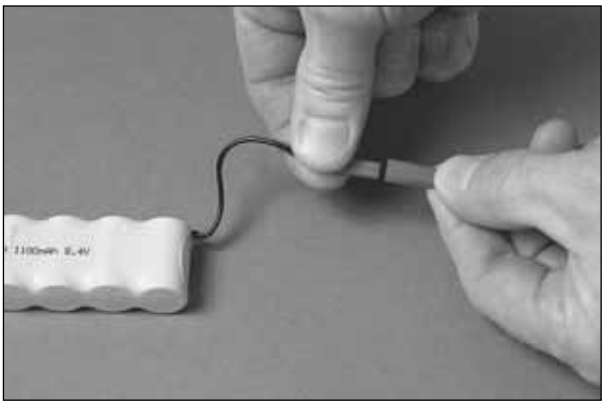
Caution:

- Do not use rechargeable (NiCd) batteries.
- Do not mix old and new batteries.
- Do not mix alkaline, standard (carbon-zinc) or rechargeable (NiCd) batteries.

CHARGE THE PLANE'S NIMH BATTERY

❏ 1. Plug the battery charger into a 12-volt power outlet in a vehicle, placing the charger and battery outside the car, away from flammables.

NEVER charge your airplane battery while driving or with the vehicle engine running!



❏ 2. Plug the battery pack into the charger connector. Be careful–do not force the plugs, the battery pack will plug in only one way. The red LED will be on solid.

❏ 3. **IMPORTANT! NEVER LEAVE A CHARGING BATTERY UNATTENDED. ONLY CHARGE THE SKY PILOT BATTERY WITH A PEAK DETECTION CHARGER. DO NOT USE A WIND-UP TIMER CHARGER.**

❏ 4. During charging, feel the battery every 5-minutes to see if it is starting to warm up. A warm (but not hot) battery pack is a sign that the battery is nearing a full charge. If the battery becomes hot, disconnect it from the charger.

❏ 5. Once the battery reaches a full charge the charger will start to beep and the LED will flash.

❏ 6. Unplug the battery pack from the charger and unplug the charger from the 12-volt power outlet in your vehicle.

❏ 7. After each flight, remove the pack from the airplane and allow it to cool completely before recharging.

BATTERY CHARGING PRECAUTIONS

❏ 1. Always remove the battery from your Sky Pilot before charging.

❏ 2. Remember to check the temperature of the battery every 5 minutes during the charge. If the battery becomes hot, unplug the battery from the charger, even if the charger has not stopped charging.

❏ 3. Charging the Sky Pilot battery while your car is running can be dangerous, because it increases the chances of overcharging. For this reason, you should **never** charge your Sky Pilot battery while your car's engine is running.

❏ 4. If you use a different peak battery charger, charge this battery pack only at a maximum charge rate of 1 amp. A higher charge rate will charge the battery pack too quickly and heat up the wires.

❏ 5. A properly cared for battery pack will last a long time. If the battery pack is continually charge while it is still hot or charged at too high of a rate, the life of the battery pack will be shortened.

WARNING: Misuse or malfunction may overheat the battery and charger, resulting in personal injury or damage to surroundings.

BATTERY RECYCLING

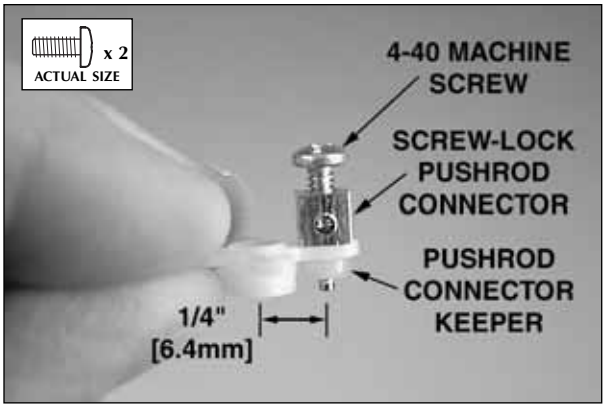
NiMH

ATTENTION: The product you have purchased is powered by a rechargeable battery. At the end of the battery's useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste system. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

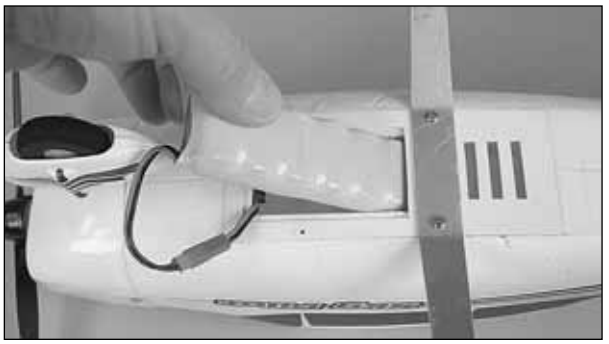
WARNING: This product contains a chemical known to the State of California to cause cancer.

RADIO ADJUSTMENT

Check and tighten the screw in the prop adapter before each flight. (If you have the Ready-to-Fly version of the Sky Pilot with the radio system already installed, skip Steps 1 and 4.



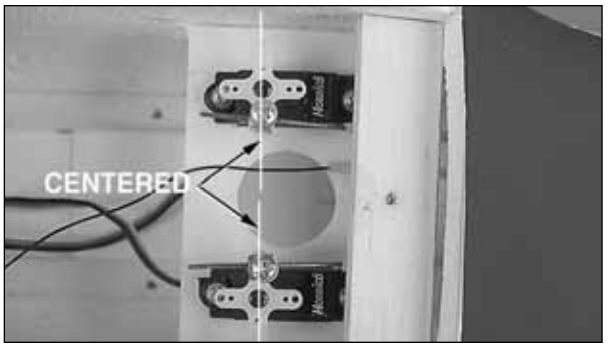
❏ 1. Install the screw-lock pushrod connector in the hole 1/4" (6.4mm) from the center of the servo arm. Press the plastic pushrod connector keeper on the pushrod connector pin. Install a 4-40 machine screw in the top of the pushrod connector. Make two servo arms with pushrod connectors attached.



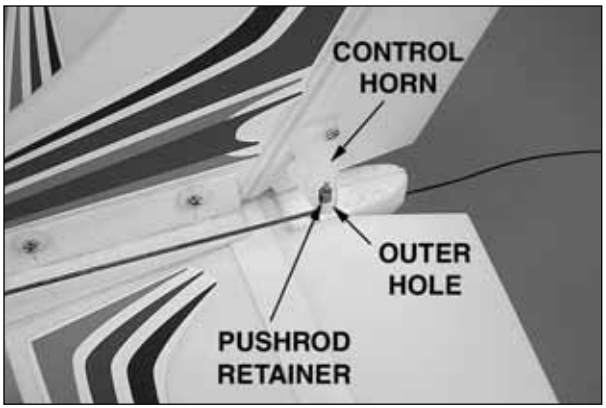
❏ 2. Switch on the transmitter. Make sure the green light is on. Open the battery hatch cover on the bottom of the plane and attach the battery to the connector. If needed, switch on the ESC.

CAUTION: Once the battery is connected to the ESC, stay clear of the propeller.

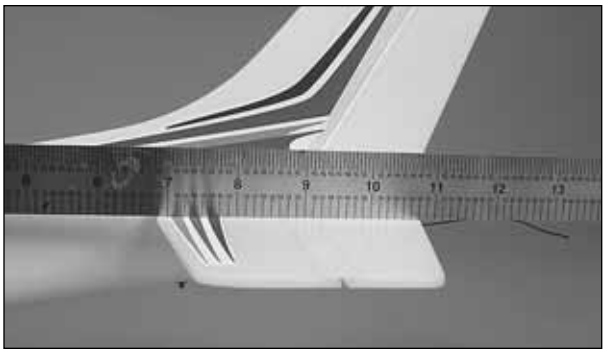
❏ 3. Center the rudder (or aileron) and elevator trim.

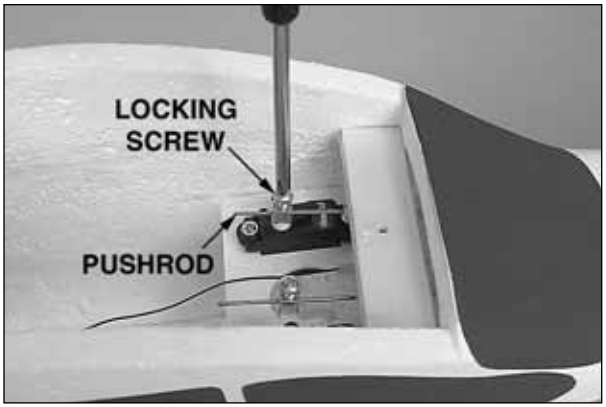


❏ 4. Insert the elevator and rudder pushrods through the pushrod connectors. Install the servo arms on the rudder and elevator servos so that both arms face the middle and are centered. **Remember to reinstall the servo arm screws.**



❏ 5. Install the rudder and elevator pushrods in the outer holes of the control horns. Slide a pushrod retainer over the pushrods to secure them.

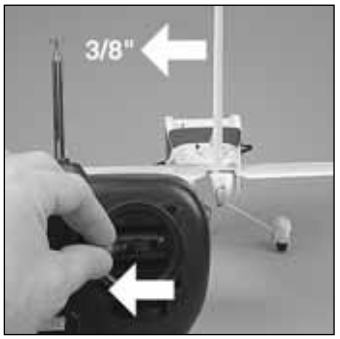




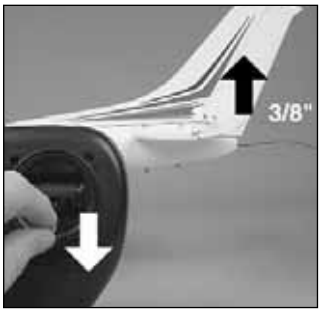
❏ 6. If you have the Ready-to-Fly version, we recommend that you check the elevator and rudder. With the elevator and rudder sticks and trims centered, position the elevator in-line with the stabilizer and tighten the screw in the elevator pushrod connector. Position the rudder in-line with the fin and tighten the screw in the rudder pushrod connector.

CHECK THE CONTROL THROWS

The throws are measured at the widest part of the elevator and rudder. Adjust the position of the pushrods at the servo arms and the control horns to change the amount of throw. Moving the pushrod out away from the center of the servo arm or in on the control horn will increase the amount the control surface moves.



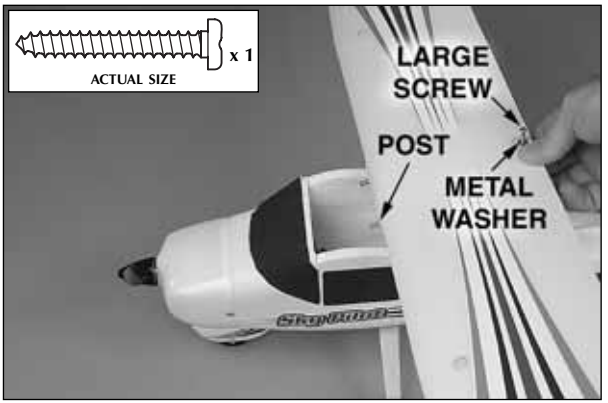
❏ 1. When viewing the airplane from the aft end, move the rudder stick to the left. The rudder must move to the left. If it does not, change the position of the rudder servo reversing switch on the transmitter. When the rudder stick is moved all the way left, the trailing edge of the rudder should move to the **left 3/8" (9.5mm).** When the rudder stick is moved all the way right, the trailing edge of the rudder should move to the **right 3/8" (9.5mm).**



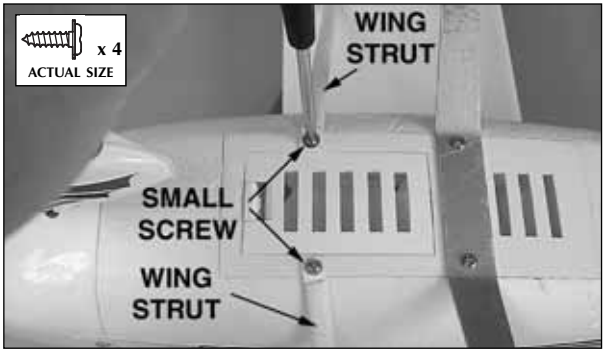
❏ 2. By moving the elevator stick down, the elevator must move up. If it does not, change the position of the elevator servo reversing switch on the transmitter. When the elevator stick is moved all the way down (towards you) the trailing edge (back edge) of the elevator should move **up 3/8" (9.5mm).** When the elevator stick is moved all the way up (away from you) the trailing edge of the elevator should move **down 3/8" (9.5mm).**

❏ 3. To start the motor, the throttle lever must first be "OFF", all the way to the left when switching on the transmitter and plane. Then move the lever all the way to the right and hold it there for 5 seconds. Then return the lever to the left. This will "arm" the motor. The motor will now operate when the throttle lever is moved to the right. **NOTE:** Arming the motor will need to be done each time after the transmitter has been turned OFF!

INSTALL THE WING



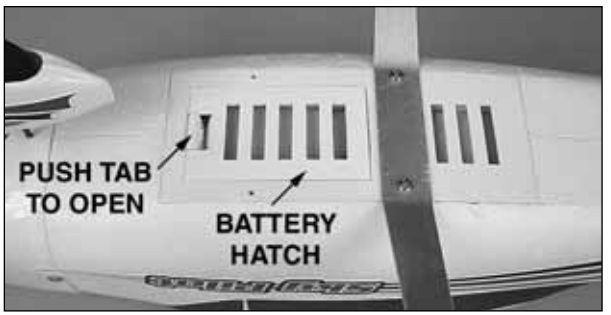
❏ 1. At the front edge of the wing are two small posts. Position the wing on the top of the fuselage and slide the wing forward, inserting the posts in the holes on the fuselage. Fasten the wing to the fuselage with the large screw and metal washer. The screw should be tight enough to hold the wing snug against the fuselage, yet does not crush the wing.



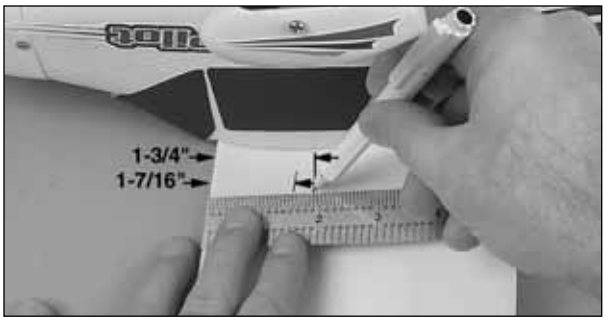
❏ 2. Turn the plane over and attach the wing struts to the battery tray and the wing with four small screws. **Important:** The Sky Pilot must never be flown without the wing struts attached. The wing struts help support the wing.

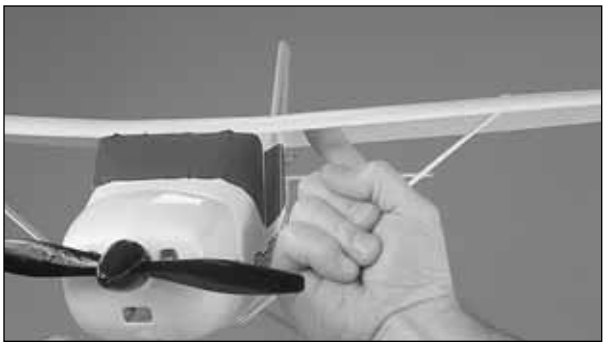
CHECK THE BALANCE OF THE MODEL

Note: This section is VERY important and must NOT be omitted. A model that is not properly balanced will be unstable and possibly unflyable.



❏ 1. After the battery pack is charged, open the battery hatch. Insert the battery pack inside the fuselage. Do not plug the battery pack into the connector inside the fuselage. Close the battery hatch.





❑ 2. Place marks on the bottom of the wing 1-7/16" (35mm) and 1-3/4" (45mm) back from the front of the wing, next to the left and right sides of the fuselage. Turn the airplane right side up. Try to balance the airplane on your finger tips, between the marks. This is where the model should balance. We also found that most of our test models balanced at this point out of the box without having to add weight to the nose or tail. If it does not balance at these marks, weight will need to be added to the nose or tail. At most hobby shops, you can purchase stick-on lead weight made specifically for balancing airplanes.

CHOOSE A GOOD FLYING SITE

The Sky Pilot should be flown only when the wind speed is 5 mph or less. If the wind is calm or very light, the Sky Pilot will be docile and easy to control. Also, find an area clear of trees, power lines and other structures. A flying field for R/C planes is best. Don't fly around groups of people, especially children or within 6-miles of existing R/C flying fields.

PREPARE FOR TAKEOFF

1. Find an open area free of buildings, trees, power lines and people.

2. For your first few flights, fly only when the wind is calm. After you are comfortable with the airplane, you can fly in winds that are no more than 5 miles per hour. If flown in stronger winds, the plane may be blown down wind and not have enough power to get back.

3. Make sure the battery pack is fully charged and that the transmitter has fresh "AA" batteries installed.

4. If others are flying in the same area, make sure that they are not using the same channel radio system you are. The front of your transmitter has a tag with a number on it (i.e. 1 through 6 and 26.995 through 27.255). This is the channel number and frequency you are using. If someone is on the same channel or frequency, **DO NOT** switch on your transmitter until they are finished flying.

FLYING THE SKY PILOT

Your transmitter controls the altitude, direction and speed of the airplane. The stick controls the altitude and direction and the lever on the top of the transmitter controls the speed.

When the battery power gets too low, the "Auto Cut-Off" feature of the speed control provides an extra degree of insurance. It reacts to low power by pulsing the motor on and off, in effect saving power for the receiver. That way your airplane goes into a glide and you stay in control as you land.

If you have never flown an R/C airplane before, we recommend that you get help from an experienced R/C pilot. Most R/C clubs have training programs that will help you learn to fly quickly. If you cannot find an experienced pilot to help you learn, the following will help you get your airplane into the air.

1. First switch your transmitter power switch "ON." This immediately puts you in control. Be sure your throttle lever on the top of the transmitter is all the way to the left.

2. Now pick up the airplane and switch the airplane on. **Caution:** Keep your hands behind the propeller.

3. Arm the motor by moving the throttle lever all the way to the right. Hold the throttle lever here for the count of 5. Then, move the throttle lever back to the left. Now when the throttle lever is moved to the right, the propeller will start to turn. The farther the lever is moved, the faster the propeller will turn.

4. Range check your radio before each flight. Switch on the transmitter and then switch on the airplane. Have a helper hold the airplane. With the transmitter antenna collapsed, walk 100 feet away from the airplane, holding the transmitter with the antenna pointing up. Move the control stick, checking that the control surface responds. Also, turn the motor on and check the range. If you still have control of the airplane, it is safe to extend the transmitter antenna and fly the airplane. If you do not have control of the plane, make sure the batteries in the transmitter are fresh and the battery in the plane is charged. Also, make sure the wire antenna is extending out the back of the airplane.

5. With the throttle lever moved fully to the right, hand launch the Sky Pilot into the wind, at a slight upward angle. **Note:** For the first couple of flights, we recommend having a helper hand launch the airplane. After you become familiar with the flight characteristics of the airplane, it can be flown off a hard surface instead of hand launched.

6. Pull the stick toward you so that the plane climbs at a 20 to 30 degree angle. Allow the airplane to climb a few seconds before turning it.

7. When your airplane is moving away from you, moving the rudder stick to the left will make your plane turn to the left. Moving the stick to the right will make the airplane turn to the right. By adding a little up elevator (moving the stick towards you) during the turn, the airplane will turn much tighter. To stop the turn, move the stick the opposite direction until the airplane is flying straight. **Caution:** It only requires a small amount of up elevator.

8. When the airplane is coming toward you, moving the rudder stick left still causes left rudder, but your airplane goes to your right. In short, you have to reverse the way you control the rudder. Here's a good way to familiarize yourself with the controls: When the airplane is coming toward you, turn your body so that you are facing the same direction the airplane is going, looking over your shoulder at the airplane. Now when you move the rudder stick left, the plane will go to your left.

9. Now that you have gained some altitude, it is time to trim the plane for straight, level flight. If the airplane wants to climb when the elevator stick is released, move the elevator trim lever up away from you. If the airplane wants to dive, move the elevator trim lever down away from you. It should require very little trim. Your goal is to have the airplane fly level with the elevator stick centered.

10. Now, with the airplane flying level, check to see if the airplane is flying straight. If it wants to turn when the rudder stick is centered, move the rudder trim lever opposite the direction the airplane is turning. The airplane should be trimmed so that if you take your hands off of the control stick, the airplane will fly straight and level on its own. Having the airplane trimmed properly makes flying much easier and more enjoyable.

11. Don't let the airplane get too far away from you. The farther away it is, the harder it is to see what the airplane is doing.

12. When learning to fly, it is best to keep the airplane high enough so that if you make a mistake, you have enough altitude to correct the mistake.

IT'S NOW TIME TO LAND

It's a known fact among fellow R/C pilots that your airplane **will** land. It is up to you as to where and how it lands.

1. For your first couple of flights we recommend that you attempt to land before the motor stops. Your Sky Pilot comes with an auto cut-off feature which reserves battery power for safe landings.

2. During your first flight, while at a high altitude, turn the motor off and notice how the Sky Pilot reacts. This will give you an idea of how the airplane will react during a landing.

3. To land the Sky Pilot, fly down wind, past the landing area. Gently turn into the wind and reduce the throttle so that the airplane starts to come down. Adjust the throttle as needed to reach the landing area, but not past it.

4. Just before landing, at about 1 foot above the ground, apply a little up elevator to flare (raise the nose of the airplane). This will cause the airplane to slow and settle to the ground.

Caution: If, during a rough landing, the propeller on the Sky Pilot should become jammed and cannot rotate with the throttle in the run position, the battery and speed control will become very hot. Immediately move the throttle lever to the left to stop the motor. If you fail to do this, the motor, speed control and/or battery will be damaged.

AFTER THE FLIGHT

Switch off the airplane. Then, switch the transmitter off. Unplug the battery from the airplane and remove the battery from the battery compartment. Allow the motor and battery to cool before recharging. Check the airplane over to make sure nothing has come loose or may be damaged.

REPLACEMENT PARTS LIST

To order replacement parts for your Sky Pilot, use the order numbers in the list below. Replacement parts are available only as listed. Replacement parts are not available from Product Support, but can be purchased from hobby shops or mail order/Internet order firms. If you need assistance locating a dealer to purchase parts, contact:

Product Support
Phone: 217-398-0007 Fax: 217-398-7721
E-mail: productsupport@hobbico.com

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 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 parts list.

Stock #	Description
HCAA3518	Battery 8.4v, 1100mAh NiMh
HCAA3519	Main Wing
HCAA3520	Propeller (2) w/Hub
HCAA3521	Cowl w/Screws
HCAA3522	Decals
HCAA3523	Struts (L & R)
HCAA3524	Motor Mount
HCAA3525	Main & Nose Landing Gear
HCAA3526	Wheel Pants (3)
HCAA3527	Tail Assembly
HCAA3528	Battery Hatch Door
HCAA3529	Fuselage Set w/Pushrods
HCAG3479	Motor 380
HCAM7500	Servo
HCAM7505	Servo Bearing Set
HCAM7506	Servo Horn
HCAM7106	Transmitter Antenna
HCAP9927	Peak Charger
HCAQ3017	Propeller (2)

REPAIRS

Even the best R/C pilots in the world damage their airplanes every now and then. In the unfortunate event that you damage your airplane, repairs are fairly simple to make yourself. If there are any cracks in the wing or fuselage, apply 6-minute epoxy or white glue to the broken areas and hold together with clear packaging tape. Let the glue cure, leaving the tape in place for added strength.