COMPLETE RTF AIRPLANE

HOBBICO®

SPEED PILOT™

FLYZONE™ by Hobbico®

Quiet Electric Flight
Radio-Controlled Model
Requires 8 (AA) Alkaline Batteries (not included)

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®, Inc. 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.

HCAZ3071 for HCAA2012 V1.0

PROTECT YOUR MODEL, YOURSELF AND OTHERS. FOLLOW THIS IMPORTANT SAFETY PRECAUTION

Your FlyZone™ Series 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 10mph) and in large open areas free of trees, people, buildings or any other obstacles.

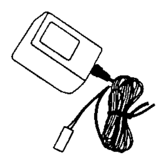
Remember: Take your time and follow the instructions to end up with a well-built model that is straight, durable and easy to fly.

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 FlyZone Speed Pilot.

CHARGING THE NiMH BATTERY PACK

Charge the battery before assembling the airplane. You will need to use the battery to set up the radio system during assembly.

Charging the battery pack is safe and easy when you follow these instructions. Before charging, make sure that all wires and connectors are in good shape and properly insulated.



1. Plug the included battery charger into a 110 volt A/C wall outlet.

2. Remove the battery pack from the box. Plug the battery into the charger connector. Be careful – the battery will plug in only one way.

3. Allow the battery to charge for 3 hours using the A/C wall charger.

4. **IMPORTANT! NEVER LEAVE A CHARGING BATTERY UNATTENDED.**

5. During charging, feel the battery to see if it is starting to warm up. A warmed up (but not hot!) battery pack is a sign that it is fully charged. Once the pack is warm, disconnect it from the charger. Depending on how much charge was already in the pack, you may have to disconnect the battery early.

6. After each flight, remove the battery from the airplane and allow it to cool completely before recharging.

SAFETY PRECAUTIONS FOR CHARGING BATTERIES

1. Never leave a charging battery unattended.

2. Never let the battery charge until it feels **hot**. A hot battery is an overcharged battery. Only let the battery get warm to the touch.

3. Only use the included charger! A higher rate charger will charge the pack too quickly and heat up the wires.

4. A properly cared for battery pack will last a long time. If the battery pack is continually overcharged or charged at too high of a rate, the pack will not last long.

BATTERY WARNING

ATTENTION: The product you have purchased is powered by a rechargeable battery. At the end of its 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.

This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

GLOSSARY

Motor: The motor rotates the prop to provide thrust.

Auto Cut-off: This unit controls the power to the motor. It also monitors the battery voltage and switches off the motor at a preset voltage, leaving enough battery power to operate the radio while landing.

NiMH Battery: Rechargeable batteries which are used as power for the airplane.

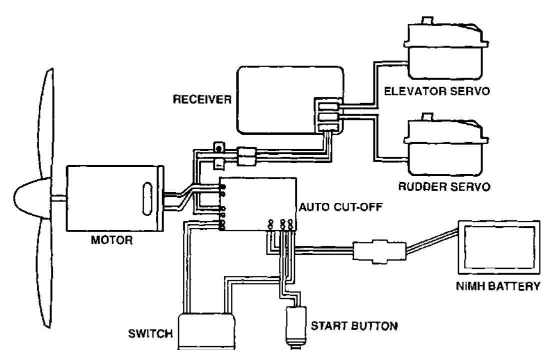
Receiver (RX): The radio unit in the airplane which receives the transmitter signal and relays the control to the servos.

Servos: The electronic/mechanical device which moves the control surfaces of the airplane according to the commands of the transmitter/receiver.

Switch: Turns on the power to the receiver, servos and motor.

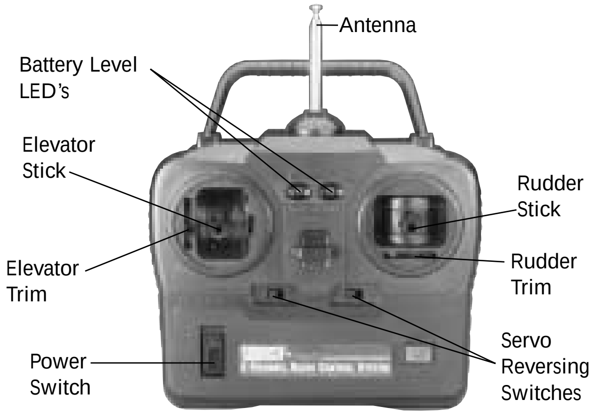
Start Button: With the switch on, pressing the start button starts the motor. To turn the motor off, move the switch to off.

Transmitter (Tx): This is the hand-held unit that sends the signal to the receiver. As you move the stick on the transmitter, the servos in the airplane will react accordingly.

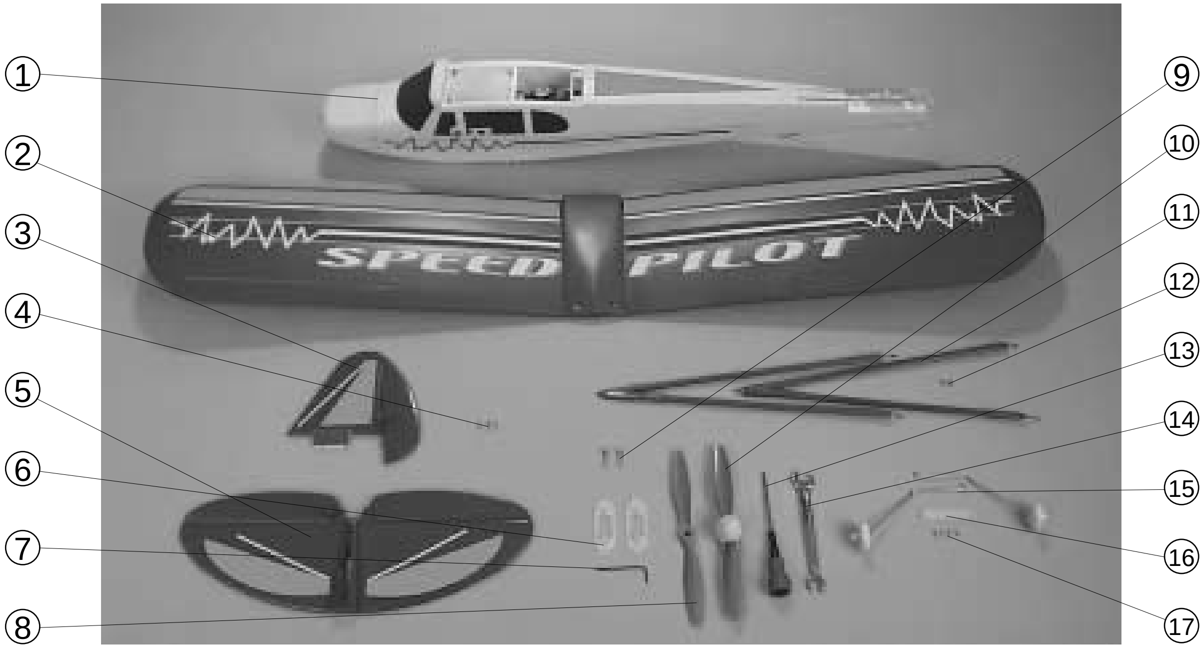


Above is a sketch detailing the layout and function of the R/C system. It is important to understand the principles of the system in order to operate your model correctly.

THE RADIO CONTROL SYSTEM



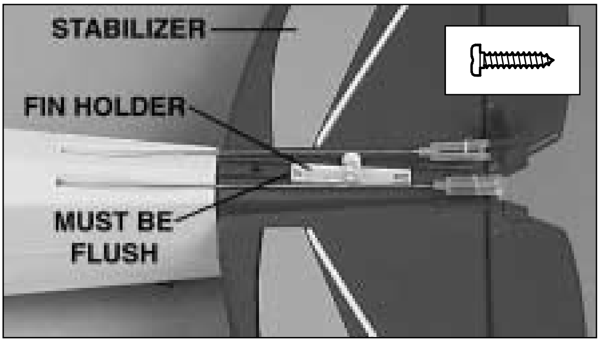
AIRFRAME PARTS AND HARDWARE



☐		Part Name	Qty.
☐	1.	Fuselage	1
☐	2.	Main Wing	1
☐	3.	Fin	1
☐	4.	Medium Screws	3
☐	5.	Stabilizer	1
☐	6.	Mini Servo Trays	2
☐	7.	Hex Wrench	1
☐	8.	Spare Propeller	1
☐	9.	Large Screws	2
☐	10.	Propeller w/Adapter	1
☐	11.	Wing Struts	2
☐	12.	Medium Screws	2
☐	13.	Screwdriver	1
☐	14.	Propeller Wrench	1
☐	15.	Landing Gear	2
☐	16.	Landing Gear Cover	1
☐	17.	Small Screws	4
☐	18.	Battery & Charger (not shown)	1

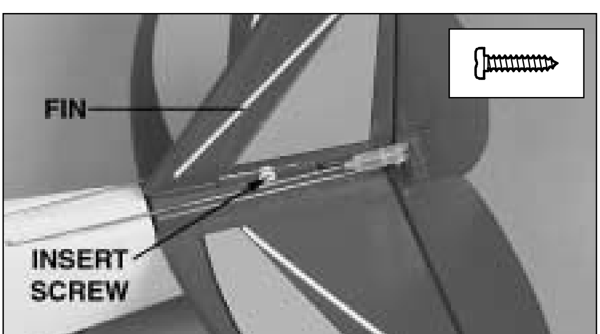
Check the parts against the list above. If any parts are damaged or missing, give us a call at: (217) 398-8970.

INSTALL THE STABILIZER & FIN



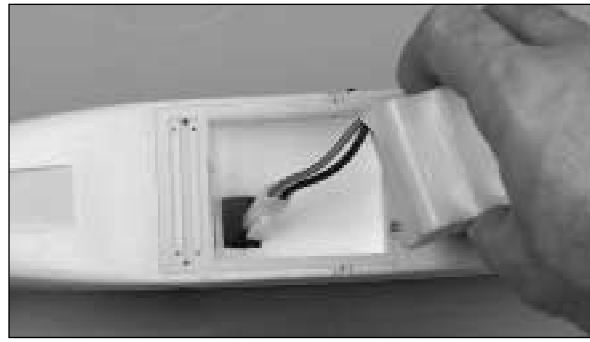
❑ 1. Position the **stabilizer** on the tail end of the fuselage. The top of the stabilizer must be flush with the top of the rectangular fin holder. If it is not flush, remove the stabilizer and check the two screw holes on the bottom of the stabilizer for excess foam in the holes.

❑ 2. Secure the stabilizer to the fuselage with two **medium screws**. Be careful to not overtighten the screws.



❑ 3. Insert the **fin** into the fin holder. Use a **medium screw**, inserted through the left side, to secure the fin to the fin holder.

RADIO ADJUSTMENT



❑ 1. Remove the motor battery from the charger. Open the **battery hatch cover** on the bottom of the plane and attach the motor battery, to the connector from the motor relay, inside the battery hatch.

❑ 2. Remove the battery cover from the back of the transmitter and install eight "AA" batteries. Make sure you insert the batteries according to the diagrams. Reinstall the cover. Switch on the transmitter and check the LED's on the front of the transmitter. Like a traffic light, green and yellow mean "GO!" However, if the red LED is glowing, you need to install fresh batteries.

❏ 3. This is a good time to make sure that your radio's servo reversing switches are correctly set. On the front of the transmitter, in the center, are two reversing switches. Set both reversing switches to REV.

❏ 4. Install the transmitter antenna in the transmitter by threading it into the top of the transmitter.

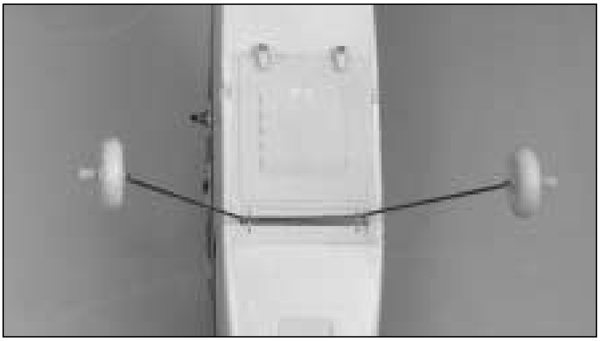
❏ 5. Switch on the transmitter and then the airplane. Center the rudder and elevator trim levers.

❏ 6. Install the **nylon clevises** in the outer holes of the rudder and elevator **control horns**. With the rudder and elevator sticks and trims centered, use a straightedge to check that the rudder is in-line with the fin and the elevator is in-line with the stabilizer. If they are not, remove the clevis from the control horn and thread the clevis in or out until the rudder is aligned with the fin and the elevator with the stabilizer.

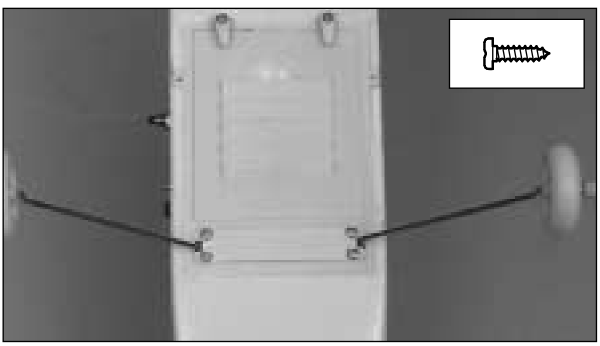
❏ 7. When viewing the airplane from the aft end, move the rudder stick to the left. The rudder must move to the left. If it does not, change the position of the rudder servo reversing switch.

❏ 8. By moving the elevator stick down, the elevator must move up. If it does not, change the position of the elevator servo reversing switch.

INSTALL THE LANDING GEAR AND PROPELLER



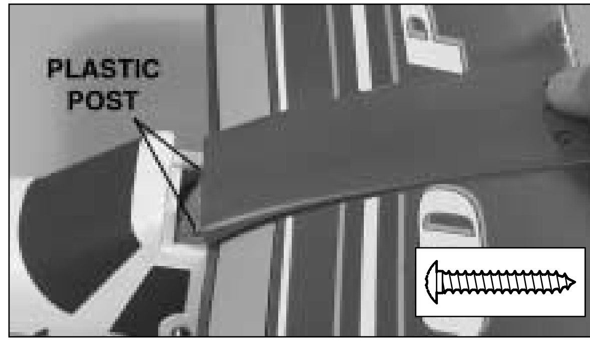
❑ 1. Insert the two **landing gear wires** in the slot in front of the battery hatch.



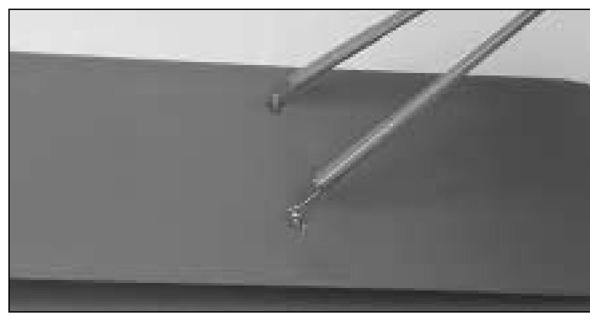
❑ 2. Position the **landing gear cover** over the landing gear and secure it with four small screws. Do not overtighten the screws.

❑ 3. Slide the **propeller** with the propeller adapter onto the motor shaft. Use the **1.5mm hex wrench** to tighten the **set screw** against the motor shaft.

INSTALL THE WING



❑ 1. At the front edge of the wing are two small plastic posts. Position the wing on top of the fuse and slide the wing forward, inserting the posts in the holes on the fuselage. Fasten the wing to the fuselage with two large screws (included in the wrench parts bag). The screws should be tight enough to hold the wing snug against the fuselage, yet not crush the wing.



❑ 2. Turn the airplane over and attach the wing struts to the two strut supports in the bottom of each of the wings.

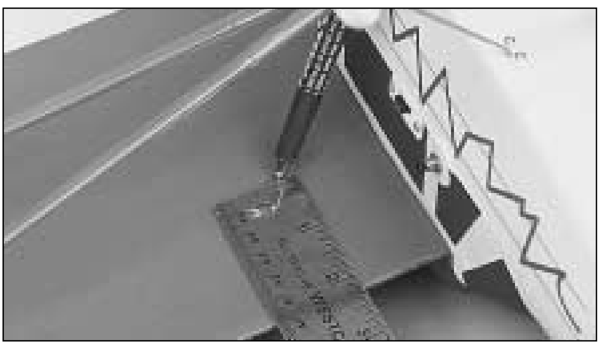
❑ 3. Rotate the wing struts so that the end of the strut is positioned on the bottom of the fuselage. The plastic mount on the strut must align with the mounting hole in the battery hatch. If it does not, remove the strut and attach it to the strut supports on the other side of the wing.

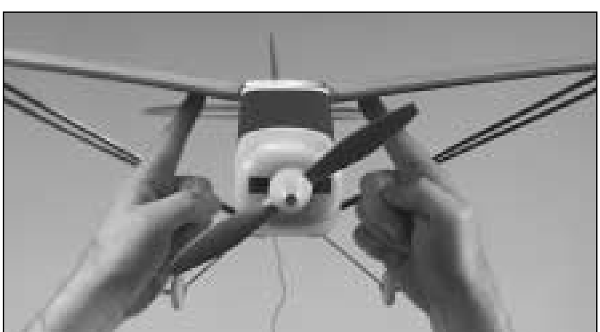
❑ 4. Secure the wing struts to the fuselage with medium screws. Do not overtighten the screws and strip out the plastic.

Important: The Speed Pilot must never be flown without the wing struts attached. The wing struts help support the wing.

BALANCE YOUR 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.



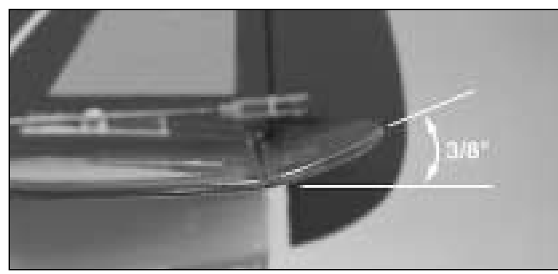


❑ Turn the Speed Pilot over and place marks on the bottom of the wing 1-7/8” and 2-1/4” back from the front of the wing, on both sides of the fuselage. Turn the airplane over. Try balancing the airplane on your finger tips, between the marks. This is where the model should balance for your first flights. We also found that most of our test models balanced at this point without having to add weight to the nose or tail. If it does not balance within these marks, weight will need to be added to the nose or tail. At most hobby shops, you can purchase self-adhesive lead weight made specifically for balancing airplanes.

SET THE CONTROL THROWS

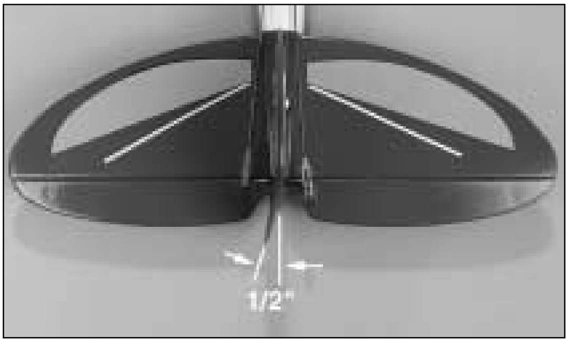
The throws are measured at the widest part of the elevators and rudder. Adjust the position of the pushrods at the servo horns and the nylon control horns to change the amount of throw.

We recommend the following control surface throws:

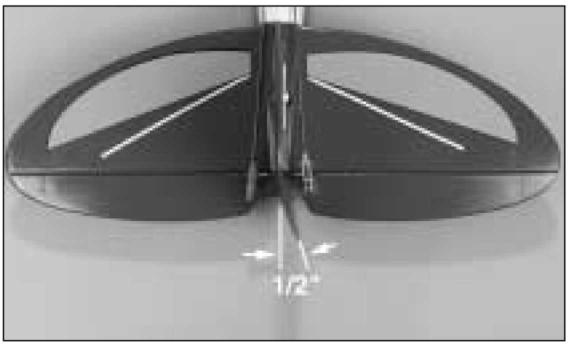


When the elevator stick is moved all the way down (towards you) the trailing edge (back edge) of the elevator should move **up 3/8”**.

When the elevator stick is moved all the way up (away from you) the trailing edge (back edge) of the elevator should move **down 3/8”**.



When the rudder stick is moved all the way left, the trailing edge (back edge) of the rudder should move to the **left 1/2"**.



When the rudder stick is moved all the way right, the trailing edge (back edge) of the rudder should move to the **right 1/2"**.

HOW DOES THE SPEED PILOT WORK

Your transmitter controls the altitude (how high the plane flies) and direction. Once the motor start button is pushed, the motor will continue to run until the motor battery power is reduced to a factory set voltage, or the motor on/off switch is moved to the off position.

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 cutting power to the motor, in effect saving power for the receiver. That way, your airplane goes into a glide and you stay in control as you land.

CHOOSE A GOOD FLYING SITE

It's best to fly on calm days, when there's little or no wind. 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 in winds of no more than 5 miles per hour. After you are comfortable with the airplane, you can fly in winds that are no more than 10 miles per hour. If flown in stronger winds, the plane may be blown down wind and not have enough power to get back to you.

3. Make sure the motor battery is fully charged and that the transmitter has good "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 (for example CH. A2 27.045). This is the channel frequency you are using.

5. Range check your radio before each flight. Switch on the transmitter and then the receiver. Do not push the motor start button during the first part of the radio range check. With the antenna collapsed, walk 50 feet away from the airplane. Move the rudder and elevator control stick, checking that the rudder and elevator move. Now, have a helper hold the airplane, press the start button to start the motor. Again, perform the range test with the motor running. If you still have control over the airplane, it is safe to extend the antenna and fly the airplane.

FLYING THE SPEED PILOT

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, turn your transmitter power switch "ON" and extend the antenna. This immediately puts you in control.

2. Now pick up the airplane and switch the airplane on.

3. Press the start button to start the motor. **Caution:** Keep your hands behind the propeller.

4. Hand launch the Speed 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 characteristic of the airplane, it can be flown off a hard surface instead of hand launched.

5. Allow the airplane to climb a few seconds before turning it.

6. When your plane is moving away from you, moving the rudder stick to the left will make your plane turn to the left. Moving the rudder stick to the right will make the plane turn to the right. By adding a little up elevator (moving the stick towards you) during the turn, the plane will turn much tighter. **Caution:** It only requires a small amount of up elevator.

7. When the plane is coming toward you, moving the rudder stick left still causes left rudder, but your plane 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 plane is coming toward you, turn your body so that you are facing the same direction the plane is going, looking over your shoulder at the plane. Now when you move the rudder stick left, the plane will go to your left.

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

9. Now, with the plane flying level, check to see if the plane 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 plane should be trimmed so that if you take your hands off of the control stick, the plane will fly straight and level on its own. Having the plane trimmed properly makes flying much easier and more enjoyable.

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

11. When learning to fly, it is best to keep the plane 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. The Speed Pilot will get approximately 5 to 10 minutes of flight, on a fully charged battery before the motor relay stops the motor.

2. After the motor stops the Speed Pilot glides very well. It is important to turn the plane so that it lands into the wind. If the plane is at a high altitude, you may need to fly past your landing area before turning into the wind to prevent over shooting your landing area. Once the motor stops, do not make tight turns or apply too much up elevator or the plane may stall and lose altitude very quickly. Apply just enough elevator so that the plane descends in a shallow glide.

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

AFTER THE FLIGHT

Switch the airplane and then the transmitter off. Unplug and remove the motor battery. Allow the motor battery to cool before recharging. Check the plane over to make sure nothing has come loose.

REPAIRS

Even the best R/C pilots in the world damage their planes 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 to the broken area and hold together with clear packaging tape. Let the glue cure, leaving the tape in place for added strength.

PART LIST

Replacement parts for your Speed Pilot

HCAA3330 - Main Wing Set **HCAA3331** - Tail Set

HCAA3332 - Fuselage Set **HCAA3333** - Cowl

HCAG1030 - 380 Motor **HCAG1031** - Motor Mount

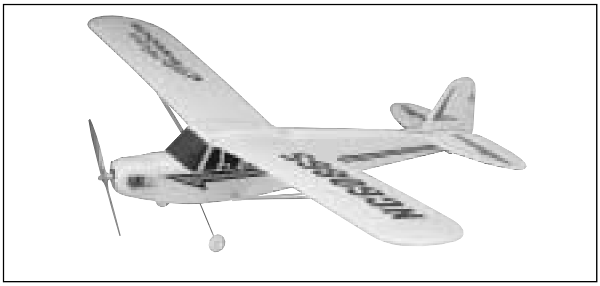
HCAP0119 - AC Wall Charger **HCAP6006** - NiCd Battery

HCAP6007 - NiMH Battery

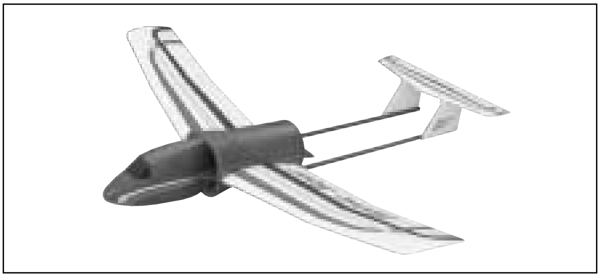
HCAM7035 - Switch with Auto Cut-Off

HCAQ3016 - Landing Gear Set

OTHER ITEMS AVAILABLE FROM HOBBICO



Hobbico FLYZONE™ Aero Cruiser™ Electric
The 37.5" span Aero Cruiser features factory-built main sections, along with assembly tools AND a video that shows how it's done. A 380 motor, electronic speed control w/auto cut-off, 8.4V NiMH battery are installed for you –and an AC charger and two props are included. The **RTF** includes a 3-channel transmitter and requires only 8 "AA" cells. The **ARF** is identical in building ease, but requires a 3 or 4-channel radio w/2 standard or mini servos. **RTF-HCAA2004, ARF-HCAA2011**



Hobbico Sonic Soar™ Free-Flight Electric
Sonic Soar's motor, rechargeable battery and powerful ducted fan unit are already installed, and decals are already applied. Only easy final assembly remains...and the one tool needed is included. Charge the battery, toss the model skyward...and watch it zoom into the air! Spans 26.8", requires 6 "C" batteries. For ages 10+. **HCAA0350**

DuraTrax® Transmitter NiCd Conversion Kit
Don't waste money on throwaway alkalines – invest in rechargeable NiCd economy and ease! Includes eight 700mAh "AA" Sanyo® NiCds for your radio and a 110V AC wall charger that plugs into your radio charge jack. Charges cells in just 2-3 hours! **DTXP4009**

BUILDING NOTES

Kit Purchased Date: ______________________

Date Construction Finished: _______________

Where Purchased: _______________________

Finished Weight: _________________________

Date Construction Started: ________________

Date of First Flight: ______________________

FLIGHT LOG