COMPLETE RTF AIRPLANE

HOBBICO®

SKY ZAP™

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.

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

Your SKY ZAP™ 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 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 SKY ZAP plane.

GLOSSARY

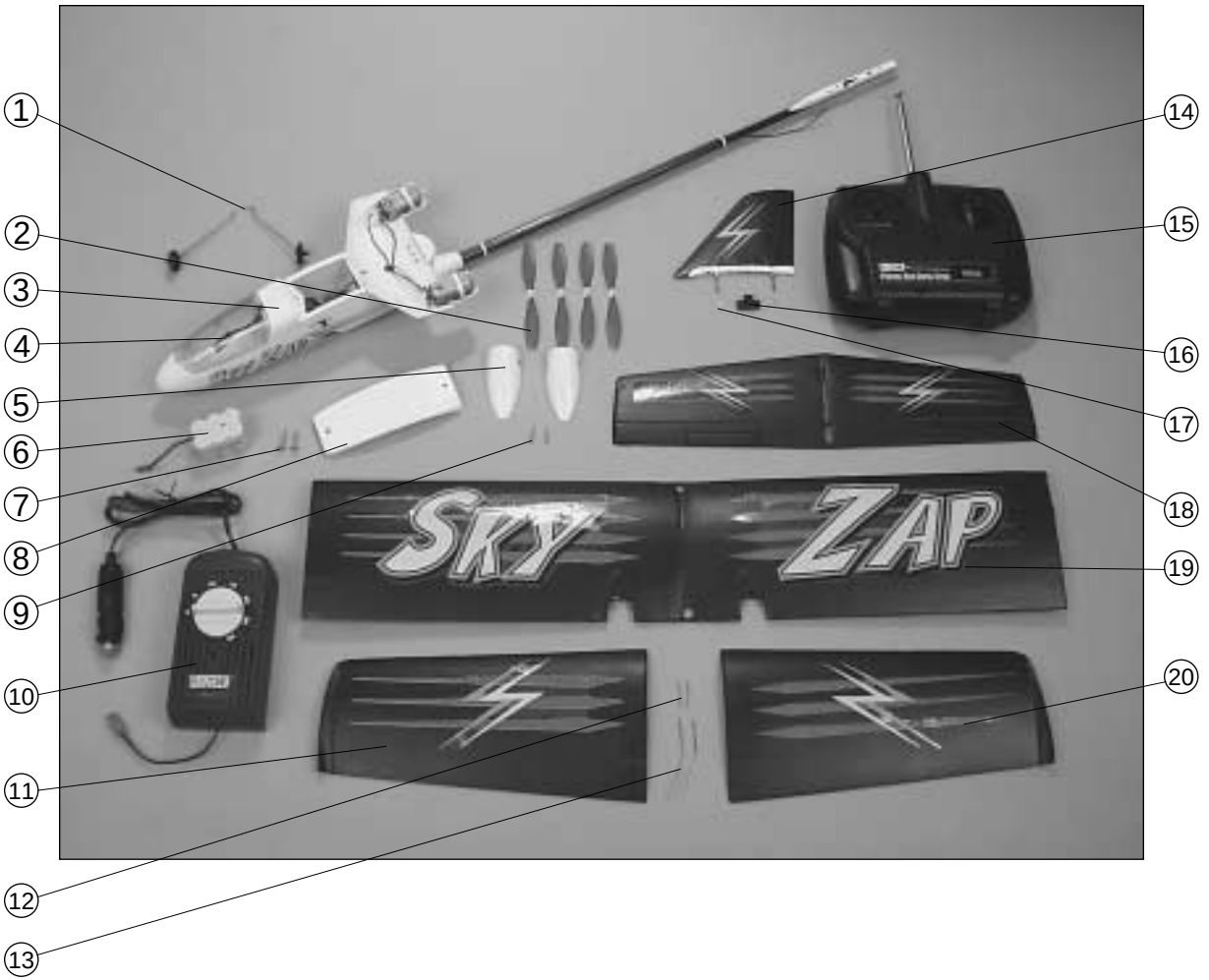
Electronic Speed Control with Auto Cut-off: This unit controls the motors. Also, it monitors the battery voltage and turns off the motors when the voltage gets low. That way there will be enough battery power to only operate the motors for steering during the landing.

Motors: The motors rotate the props to provide thrust.

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

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

AIRFRAME PARTS AND HARDWARE

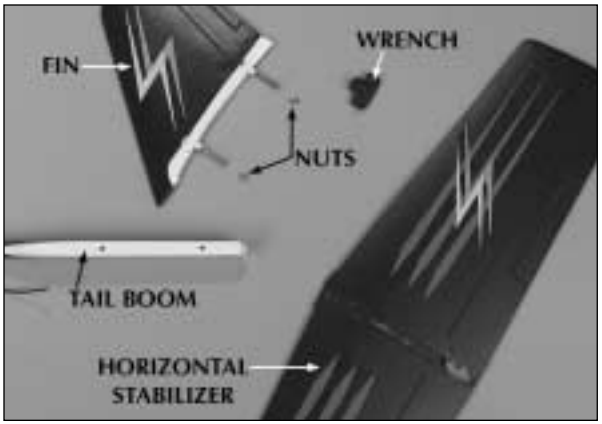


UNPACKING THE BOX

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

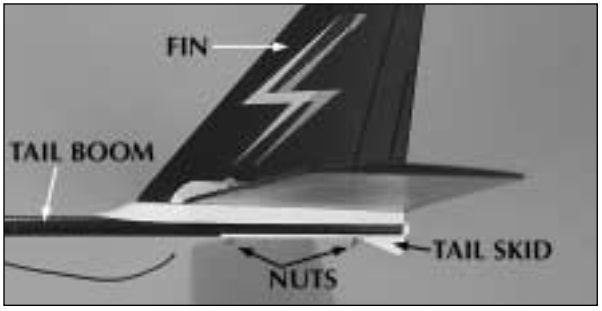
	Part Name	Qty.
❑ 1.	Landing Gear	1
❑ 2.	Propellers	4
❑ 3.	Fuselage/Tail Boom	1
❑ 4.	Canopy/Battery Cover (Installed in Fuselage)	1
❑ 5.	Motor Covers (Left & Right)	2
❑ 6.	600 mAh NiMH Battery	1
❑ 7.	Top Cover Screws	2
❑ 8.	Top Cover	1
❑ 9.	Motor Cover Screws	2
❑ 10.	Charger	1
❑ 11.	Left Wing Tip Section	1
❑ 12.	Small Wing Joiner Wires	2
❑ 13.	Large Wing Joiner Wires	2
❑ 14.	Fin	1
❑ 15.	Transmitter	2
❑ 16.	Wrench for Tightening Nuts	1
❑ 17.	Nuts	2
❑ 18.	Horizontal Stabilizer	1
❑ 19.	Wing Center-Section	1
❑ 20.	Right Wing Tip Section	1
❑ 21.	Instructional Video (Not shown in photo)	1
❑ 22.	Small Phillips Screwdriver (Not shown in photo)	1
❑ 23.	Tape for Wing Joints (Not shown in photo)	1

INSTALL THE STABILIZER & FIN

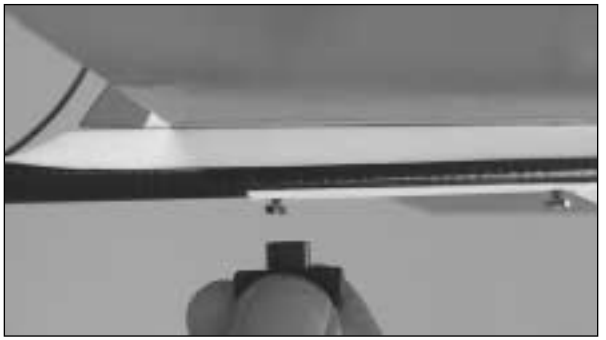


❑ 1. The above photo shows the components you will need to assemble the stabilizer and fin. You will need the horizontal stabilizer, the fin, two nuts, and the special wrench for tightening the nuts.

❑ 2. Note that the fin is installed on top of the horizontal stabilizer. Make sure that the swept back edge is mounted to the front of the model. Place the two fin mounting bolts (already installed on the bottom of the fin) through the top of the horizontal stabilizer, forming a single unit. The top of the horizontal stabilizer is the side with the decals applied.



❑ 3. Place the mounting bolts of the assembly through the holes from the top of the tail of the fuselage as shown in the photo. Make sure that the tail skid is pointing down.



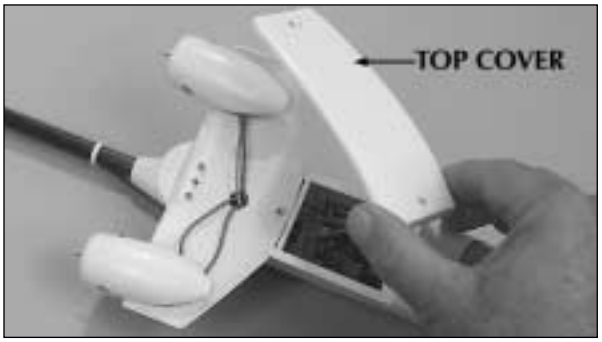
❑ 4. Place the two nuts on the mounting bolts that extend through the bottom of the tail boom as shown in the photo. Using the special wrench included with the model, tighten the nuts firmly but do not overtighten. You have now completed the assembly of the fin and stabilizer.

INSTALL THE LANDING GEAR

❑ 1. Turn the fuselage upside-down. Insert the landing gear wire into the slot in the bottom of the fuselage as shown in the previous photos.

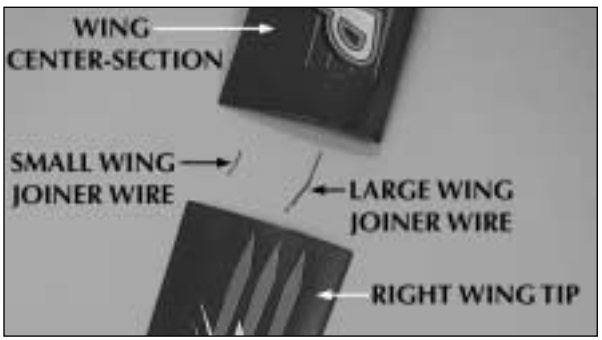
INSTALL THE MAIN WING

Note: There are three pieces to the main wing itself; the center-section, the right wing tip panel, and the left wing tip panel.

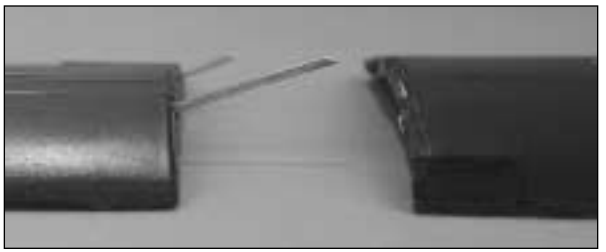


❑ 1. Using the phillips screwdriver, supplied with the airplane, remove the two 20mm phillips head screws from the top wing cover located on the top of the fuselage.

❑ 2. Turn the fuse over and remove the two motor covers by removing the two small screws on the bottom of the motor pod. Do not remove the motors.



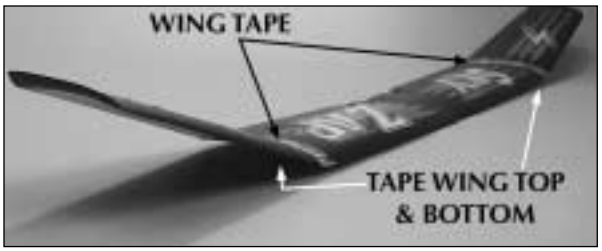
❑ ❑ 3. Locate the right wing tip, the wing center-section, a large wing joiner wire, and a small joiner wire as shown in the above photo.



❑ ❑ 4. Insert the large wing joiner wire into the front plastic joiner insert and the small wing joiner wire in the rearward plastic joiner insert. Make sure that the bends in the two wires are inserted so that the ends point upwards.

❑ ❑ 5. Carefully slide the outer wing panel onto both the joiner wires, making sure that the wires remain in the proper position and allowing the outer wing panel to point upward.

❑ ❑ 6. Using the clear tape included, apply it to the joint of the wing tip, making sure that the joint remains butted tightly in place against the center-section. Tape both the top and bottom of the joint.

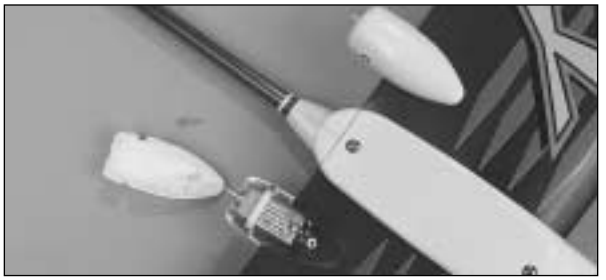


❑ 7. Repeat steps #3 through #6 for the left wing tip. Your wing should like the above photo.

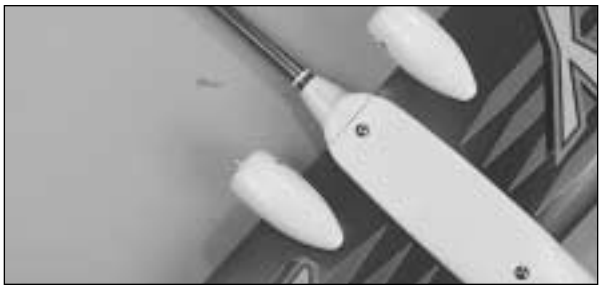
❑ 8. Place the wing into position as shown.

❑ 9. Place the fuselage top center cover as shown on top of the wing and align it with the holes in the wing and fuselage.

❑ 10. Insert the two 20mm phillips head screws that you removed earlier, being sure not to overtighten them, which could crush the wing.



❑ 11. Note that the motor covers are marked Left and Right. Make sure that they are installed correctly. Place one of the motor covers into place. Then, turn the model over and insert one of the phillips head machine screws that you removed earlier using your phillips screwdriver. Do not overtighten these screws.



❑ 12. Hold the remaining motor cover in place and once again turn the model over and insert the remaining phillips head machine screw into place.

INSTALL THE PROPELLERS

❑ 1. Press the propellers onto the motors. To prevent the prop from binding, be sure to leave a space, approximately 1/16", between the propellers and the end of the motor covers.

INSTALL THE BATTERY & CANOPY

❑ 1. Locate the battery. Remove the canopy from the fuselage by simply lifting it at the front.

❑ 2. Insert the battery inside the canopy compartment as shown. Re-attach the canopy in place by inserting the tail-end tab first. The canopy simply snaps on and off, providing easy access to the battery in order to remove it for recharging.

INSTALL THE TRANSMITTER BATTTERIES

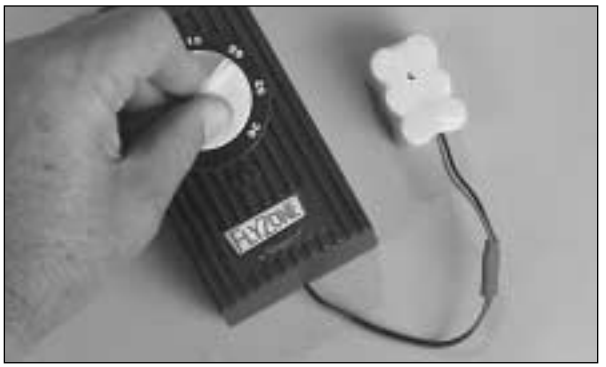
❑ 1. The transmitter that controls your airplane requires power, in the form of eight “AA” batteries. To install the batteries, just turn over the transmitter, remove the battery hatch and install the batteries following the diagram inside the battery compartment. Reinstall the battery hatch, switch on the transmitter and check the LEDs on the front of the transmitter. If both the red and green lights are on, it is safe to fly. If only the red light is on, you need to install fresh batteries.

❑ 2. Install the transmitter antenna by placing it into the top of the transmitter and thread it into place.

CHARGE THE MOTOR BATTERY

❑ 1. Plug the battery charger into a 12-volt power outlet in a vehicle.

❑ 2. Plug the battery pack into the charger connector. Be careful - the battery pack will plug in only one way.



❑ 3. Rotate the timer knob on the charger to **20 minutes.** Make sure the red light comes on.

❑ 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. Always disconnect the charger from the 12-volt power outlet in your vehicle when finished charging.

❑ 7. After each flight, remove the battery pack 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. If your battery is not completely discharged before charging, the charging time may take less than 20 minutes. Again, only let the battery get warm to the touch – not hot.

❑ 4. We recommend that your vehicle's engine is shut off during charging. Charging the Sky Zap's battery while your vehicle's engine is running increases the chance of overcharging the battery.

❑ 5. If you ever use a different battery charger, charge this battery pack only at a maximum charge rate of 1/2 amp. A higher charge rate will charge the battery pack too quickly and heat up the wires.

❑ 6. 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 life of the battery pack will be shortened.

BATTERY RECYCLING

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.

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

CHECK THE BALANCE OF 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.

❑ 1. After the battery pack is charged, remove the battery hatch cover/canopy. Insert the battery pack inside the fuselage. Do not plug the battery pack into the connector inside the fuselage. Reinstall the battery hatch cover/canopy.

❑ 2. Place marks on the bottom of the wing 2-1/8" [54mm] back from the front of the wing, next to the left and right sides of the fuselage. Turn the airplane right side up. Try balancing the airplane on your finger tips, on these marks. This is where the model should balance. 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 at these marks, weight will need to be added to the nose or tail. If it needs weight in front, just drop a penny or two into the nose until it balances.

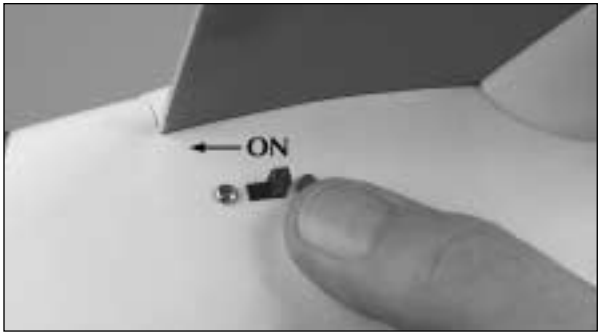
HOW DOES THE SKY ZAP WORK

Your transmitter controls the altitude of the airplane by operating both motors and the direction of the plane by turning off either the left or right motor.

❑ 1. First switch on the transmitter and make sure the green and red lights are on.

❑ 2. Open the battery hatch/canopy and plug the battery pack into the plug in the fuselage.

❑ 3. Reinstall the battery hatch cover/canopy.



❑ 4. Move the power switch forward to the on position.

CAUTION: Stay clear of the propellers once the battery pack is plugged in and the switch is turned on.

❑ 5. Have an assistant hold the SKY ZAP while you move the left stick on the transmitter forward, or away from you. Both motors will run. When flying, with the motors running, the plane should climb at a 20 to 30 degree angle. Release the left stick and both motors will stop. In flight, the SKY ZAP will start to glide and slowly descend to the ground.

❑ 6. Moving the right stick to the right, the left motor will run. This will cause the plane to turn to the right in flight.

❑ 7. Moving the right stick to the left, the right motor will run. This will cause the plane to turn to the left in flight.

CHOOSE A GOOD FLYING SITE

The Sky Zap should be flown only when the wind speed is 5 mph or less. If the wind is calm or very light, the Sky

Zap will be docile and easy to control, especially for beginners. 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 to you.

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. 27.195 MHz). This is the channel frequency you are using. If someone is on the same frequency, **DO NOT** switch on your transmitter until they are finished flying.

5. 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 antenna collapsed, walk 50 feet away from the airplane. Move both control sticks, checking that the motors run and turn off following the control stick movement. If you still have control over the airplane, it is safe to extend the 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 plane.

FLYING THE SKY ZAP

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. Have an assistant help with the launch. Move the throttle stick forward so that the motors are running. Have your assistant launch the plane into the wind. It is not necessary to throw the plane really hard. Just a nice, smooth and level toss into the wind is more than enough.

2. Allow the airplane to climb at a 20 to 30 degree angle for a few seconds before turning it. This will allow the plane to gain altitude and air speed.

3. To turn the SKY ZAP, quickly move the right stick to the left or right, and release it. Do this several times in a row until the plane has turned. If you hold the right stick, instead of releasing it, the plane will turn tightly and lose altitude. When the SKY ZAP is moving away from you, moving the right stick to the left will make your plane turn to the left. Moving the right stick to the right will make the plane turn to the right.

4. When the plane is coming toward you, moving the right stick left still causes the plane to turn left, but it appears to turn to your right. In short, you have to reverse the way you control the right stick. A good way to familiarize yourself with the controls is when the plane is coming toward you, is to 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 right stick left the plane will go to your left.

5. 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.

6. 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 SKY ZAP will get up to 15 minutes of flight, at full throttle, on a fully charged battery before the motors stop. For your first couple of flights we recommend that you attempt to land before the motors stop. This will allow enough power to abort the landing and try again if you miss your landing area.

2. During your first flight, while at a high altitude, turn the motors off and notice how the SKY ZAP reacts. This will give you an idea of how the plane will react during landing.

3. To land the SKY ZAP, fly down wind, past the landing area a few yards. Gently turn into the wind and turn the motors off. The plane will start to come down. If it appears that the SKY ZAP will be short of the landing area, turn the motors back on for a couple of seconds to lengthen your approach.

4. As the SKY ZAP slowly descends, use the right stick to control the direction. The SKY ZAP will just about land itself. All you need to do is control its direction.

AFTER THE FLIGHT

Switch off the airplane. Then, switch the transmitter off. Unplug the battery from the plane and remove it from the battery compartment. 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 or white glue to the broken area and hold together with clear packaging tape. Let the glue cure, leaving the tape in place for added strength.

REPLACEMENT PARTS LIST

To order replacement parts for your SKY ZAP, 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 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 parts list.

Stock Number	Description
HCAA3460	Main Wing Kit
HCAA3461	Tail Assembly Kit
HCAA3463	Canopy (Hatch)
HCAA3462	Motor Covers (L/R)
HCAQ3330	Propellers (4)
HCAA3465	Fuselage Set
HCAQ3331	Landing Gear
HCAA3464	Decals
HCAM7029	Battery NIMH
HCAP0120	Charger 12V DC w/Adapter
HCAM7105	Transmitter Antenna

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 3–4 channel radio w/2 standard or mini servos. **HCAA2004/2011**