

COMPLETE RTF AIRPLANE



FLYZONETM
by **HOBBICO**[®]

Mini
VenturaTM

Instruction Manual



Quiet Electric Flight

Radio-Controlled Model

Requires 8 "AA" Alkaline
Batteries (not included)

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 this model.

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 model.** 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.

INTRODUCTION

Thank you for purchasing the Hobbico Mini Ventura™. The Mini Ventura capitalizes on the success of its big brother, the Ventura, only in a smaller package that can be flown in even smaller areas. Although the Mini Ventura is a small, durable, easy-to-fly model, it would still be a great idea to get the assistance of an experienced modeler for your first flights. Once you have learned the basics and perfected your hand-eye coordination, you'll be able to enjoy countless, trouble-free flights with your Mini Ventura. Please read all of the safety precautions and the instructions to ensure the best possible experience with your Mini Ventura.

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

1. Your Hobbico Mini Ventura is not a toy, but rather a sophisticated, working model that functions very much like an actual airplane. Because of its realistic performance, the Mini Ventura, if not assembled and operated correctly, could possibly cause injury to yourself and spectators or damage property.
2. Assemble the plane **according to the instructions**. Do **not** alter or modify the model. If you make any modifications, you will void your warranty.
3. Testing has proven that the Mini Ventura may be flown by experienced pilots in winds of up to 15mph, but beginners should fly the Mini Ventura only when wind speeds are 5mph or less. The Mini Ventura should be flown only in large, open areas free from trees, people, buildings, telephone or electric lines or any other obstacles.
4. The Mini Ventura is offered on six different channels (1 through 6) that are on a "shared" frequency band of 27 MHz (mega Hertz). This means that **both** the Mini Ventura **and** ground-based models (cars and boats) may use these channels. If two or more models are being operated in the same area on the same channel, radio interference may occur resulting in a crash of one or both models. You should be **especially** aware of radio controlled model airplane club sites that may be near by. Always look for other R/C activity in the area. If there is another R/C model being operated, kindly ask the

pilot/driver what is his frequency (channel). **Do not operate your models at the same time if you are both on the same frequency.**

The best way to avoid radio interference (and to get flight instruction) is to join an R/C club where frequency control measures will be in effect. If you insist on flying elsewhere, **always be aware of your proximity to R/C flying sites and other modelers who could be using the same frequency as you.**

If you're an inexperienced modeler, we recommend that you get assistance from an experienced, knowledgeable modeler to help you with assembly and your first flights. 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. Through any one of them, instructor training programs and insured newcomer training are available. 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

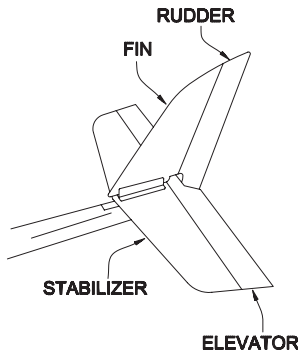
or via the internet at: <http://www.modelaircraft.org>



Attention: The Mini Ventura 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 the 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



Vertical Stabilizer (Fin): Vertical tail wing that stabilizes the model in the “right/left” direction by keeping the tail behind the nose.

Rudder: Movable surface connected to the fin. Controls the turning direction of the model.

Horizontal Stabilizer (Stab): Horizontal tail wing that stabilizes the model in the “up/down” direction.

Elevator: Movable surface connected to the stabilizer. Controls the main wing angle to make the model climb or descend.

Transmitter (Tx): Hand-held control box operated by the pilot that sends signals to the receiver to control the model for flying.

Receiver (Rx): Electronic unit in the airplane that receives signals from the transmitter and relays them to the servos to operate the controls.

Servo: An electronic unit inside the model with a small motor, gears and an external arm that moves the pushrod connected to the control surface (elevator and rudder for the Mini Ventura).

Electronic Speed Control (ESC) with Auto Cut-off: Electronic unit in the airplane that controls the speed of the motor. When the battery voltage drops to a certain point the ESC will automatically cut off the motor, reserving enough battery power to operate the radio while you glide and land the airplane.

Trim Tabs: The sliding tabs on the transmitter that allow fine adjustments of the control surfaces.

Volt (V): A Volt is a measure of a battery’s “muscle.” The battery pack for the Mini Ventura is made up of five individual 1.2V batteries. Connected together the total Voltage is 6 Volts (1.2 x 5).

Ampere (A): An Ampere, or “Amp,” is a measure of the flow of electricity, or “current.” A milliamp (mA) is one one-hundredth of an Amp.

Milliamp-Hours (mAh): Indicates the “size,” or capacity of a battery pack (and how much energy it can store). The capacity of the Mini Ventura’s battery is a 600mAh (.6Ah), so if the battery was connected to an electric motor that required .6A to run, the battery could run the motor for about one hour. However, at full power the Mini Ventura’s motor uses about 7 Amps, so it will run for about five minutes on the 600mAh battery ($.6\text{Ah}/7\text{A} = .086$ hours (5.2 minutes)).

Nickel-Metal Hydride (NiMH) Battery: There are a few different types of rechargeable batteries. The Mini Ventura battery pack is a rechargeable NiMH battery. NiMH batteries are lighter and smaller than most other types of rechargeable batteries.

KIT INSPECTION

Before starting assembly, take an inventory of this kit to make sure it is complete, and inspect the parts to make sure they are of acceptable quality. If any parts are missing or are not of acceptable quality, or if you need assistance with assembly, contact **Product Support**. When reporting defective or missing parts, use the part names exactly as they are written in the **"Kit Contents"** list on this page.

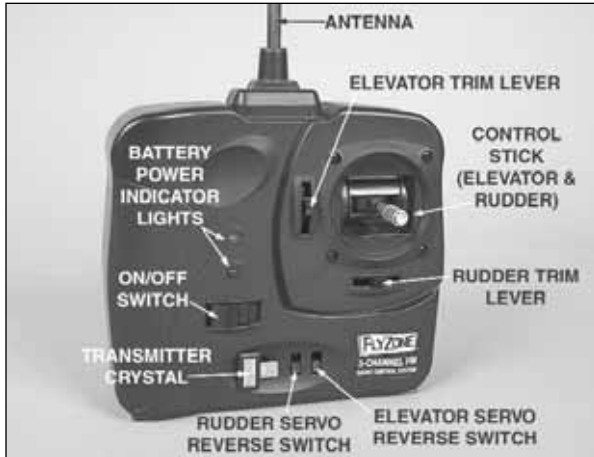
Hobbico Product Support:
3002 N. Apollo Drive, Suite 1
Champaign, IL 61822
Telephone: (217) 398-8970 ext. 3
Fax: (217) 398-7721
E-mail: airsupport@hobbico.com



Kit Contents

- | | |
|----------------------------|---|
| 1. Transmitter | 10. Stabilizer and Elevator |
| 2. Instructional DVD | 11. Fin and Rudder with Fin Mounting Nuts |
| 3. Transmitter Antenna | 12. Battery Charger and Adapter Plug |
| 4. Wing | 13. Spare Fuses |
| 5. Fuselage | |
| 6. Spare Spinner | |
| 7. Spare Folding Propeller | |
| 8. Spare Fin Mounting Nuts | |
| 9. Wing Rubber Bands | |

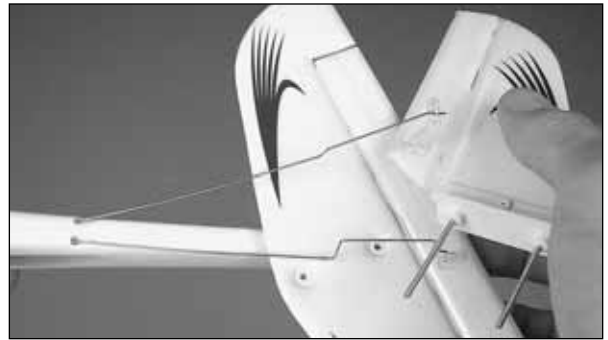
FLYZONE 3-CHANNEL FM TRANSMITTER (TX)



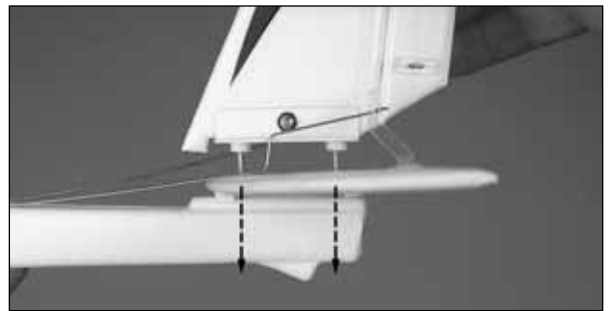
ASSEMBLY



1. Unscrew the **fin mounting nuts** from the fin mounting rods.



2. Holding the parts in your hands, connect the pushrods to the middle hole in the control horns on the elevator and rudder. (You can get a closer look in the bottom, two photos on this page.)



3. Join the fin and stabilizer to the fuselage by inserting the threaded rods down through the stabilizer and the fuselage. **Note:** Use care not to push the rods through the wire receiver antenna inside the fuselage.



This is how the pushrods should look when connected to the control horns on the elevator and rudder.



- ❑ 4. Push the fin and the threaded rods all the way down, then install and tighten the fin mounting nuts enough to apply slight pressure holding all the parts together with no gaps.



- ❑ 3. Center the rudder and elevator trim levers. Move the **rudder servo reversing switch** to the **up** position and the **elevator servo reversing switch** to the **down** position.

FLIGHT PREPARATION



- ❑ 1. If you have not already done so, insert the antenna into the top of the transmitter and tighten with your hands (do not use pliers or any other tool).



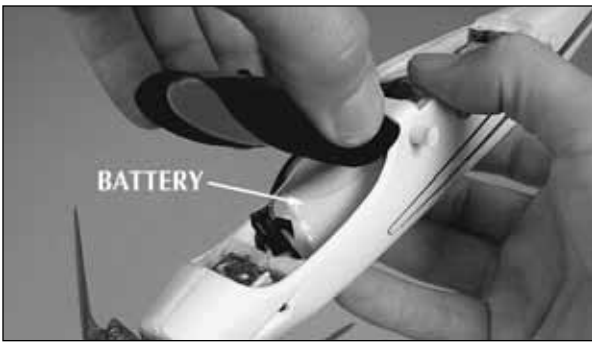
- ❑ 2. Install eight "AA" alkaline batteries in the back of the transmitter and then replace the battery cover. **Note:** Alkaline batteries are preferred over rechargeable batteries because alkalines have a higher voltage.

IMPORTANT!!! ALWAYS reduce the throttle lever and turn on the transmitter **before** plugging in the battery. Similarly, **NEVER** plug in the battery before reducing the throttle lever and turning on the transmitter.

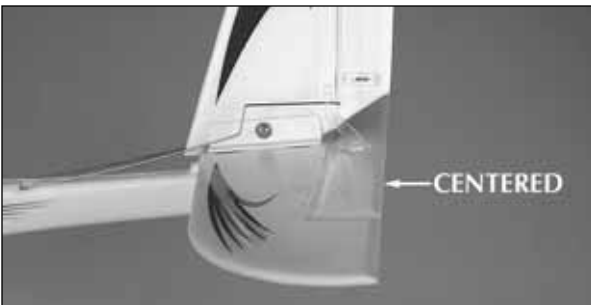


- ❑ 4. Move the throttle lever on the transmitter all the way to the left (when viewing the transmitter from the front), to the **off** position.

- ❑ 5. Switch on the transmitter. Check the battery condition. Both the red and green lights should glow. When the green light becomes dark the batteries are too low and the model should not be flown. If the green light becomes dark while flying, land the plane immediately or loss of control may result.



- ❑ 6. Install the battery. Connect the battery to the plug in the fuselage. Tuck in the wires so the hatch can close.



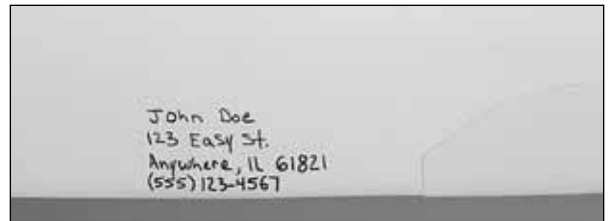
- ❑ 7. With the transmitter turned on, the trims centered and the battery plugged in, view the elevator from the

rear. If necessary, bend the "Z" portion of the elevator pushrod to get the elevator centered.

- ❑ 8. Center the rudder the same way. **Note:** The procedure of centering the rudder and elevator must be done with the radio system on and the trims centered.

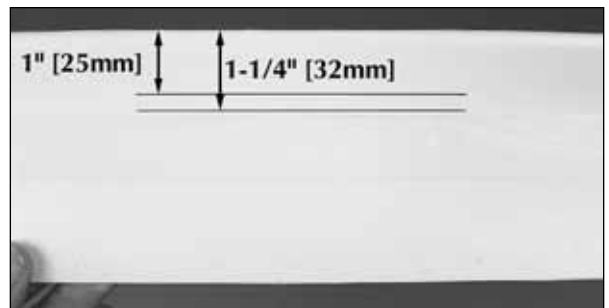
PREFLIGHT

IDENTIFY YOUR MODEL



- ❑ Use a fine-point felt-tip pen to write your name, telephone number and address directly on the model, or write it on a piece of masking tape and apply it to the model.

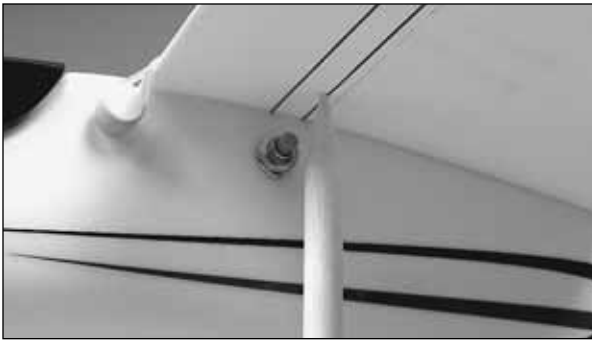
BALANCE YOUR MODEL



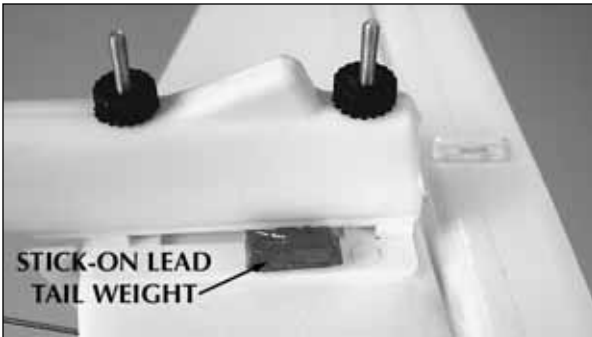
- ❑ 1. Use a straightedge and a fine-point felt-tip pen to mark two lines on the bottom of the wing 1" [25mm] and 1-1/4" [32mm] from the leading edge indicating the balance range.

- ❑ 2. Install the battery (it is not necessary to hook it up).

- ❑ 3. Mount the wing to the fuselage with two rubber bands.



❑ 4. Lift the model with two pencils, placing one on each side of the wing between the lines. Adjust the model on the pencils until the fuselage is level when viewed from the side. (For illustration purposes, a stand was made in the shop, but household items such as pencils or pens are suitable for the balancing procedure.) If the model balances with the pencils between the lines, then the center of gravity is correct and the model is ready to fly.



❑ If the model balances with the pencils **ahead** of the lines, weight will have to be added to the **tail** to get it to balance. Tail weight may be stuck to the side of the fuselage or to the bottom of the stabilizer.



- ❑ If the model balances with the pencils **behind** the lines, weight will have to be added to the **nose** to get the model to balance. Stick-on lead weight may be purchased from the hobby shop. Nose weight may be stuck to the inside of the hatch.
- ❑ 5. Stick on as much weight as required to get the model to balance when lifted by the pencils between the lines. If you added any weight, recheck the balance.

BATTERY CHARGING

WARNING: Before charging the battery you must read and follow ALL of the Battery Charging Safety Precautions and the Battery Charging Instructions.

BATTERY CHARGING SAFETY PRECAUTIONS

WARNING: DO NOT overcharge the battery! Unless you have just completed a flight and run the battery all the way down, there is no way to know how much charge is left. Overcharging the battery may result in melting the plastic cover, damaging the vehicle, or causing the battery to explode.

- ❑ 1. **The battery should always be discharged before charging.** It takes 40 minutes to charge the battery for the Mini Ventura. If the battery is not discharged, a 40-minute charge will overcharge the battery. If it has been a while since you last flew your Mini Ventura, or if for any other reason you do not remember how much “charge” is left in the battery, it should first be discharged before charging. To

discharge the battery, install and connect it to the model. Turn on the transmitter and run the motor until it stops and the battery has been discharged. Now the battery is ready to be charged.

2. **Never charge the battery while the car engine is running.** This will increase the output of the charger and overcharge your battery.

3. **Always place the batteries and charger outside the car while charging.**

4. **Frequently touch or handle the battery to monitor its temperature while charging.** Use caution while touching the battery as it could become hot if overcharged. It is okay and normal for the battery to be warm to the touch, but never allow it to become hot. If the battery has become hot it is overcharged and should be disconnected from the charger immediately.

5. **Never leave a charging battery unattended.**

6. If you ever use a different battery charger, charge this battery pack only at a maximum charge rate of 500mA (1/2 Amp). A higher charge rate will charge the battery pack too quickly and heat up the wires.

7. 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.

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

the switch is in the 6V setting before charging the battery for the Mini Ventura.

3. Connect the battery charger to a 12-volt accessory socket (cigarette lighter) in a vehicle. **The vehicle's engine must not be running. Place the charger outside the vehicle.** Do not let the battery or charger hang by the wires. If necessary, place the charger and battery on a stand.

4. Connect the battery pack to the charger. **Note:** The plug will fit only one way.

5. Rotate the timer dial to 30 minutes. The red light on the charger will illuminate when the battery is charging. If the red light does not illuminate, check the connection between the charger and the 12-volt accessory socket (cigarette lighter) and between the charger and the battery.

6. After the timer has stopped, reset the dial to an additional 10 minutes – **no more than 10 additional minutes or the battery will overcharge!!**

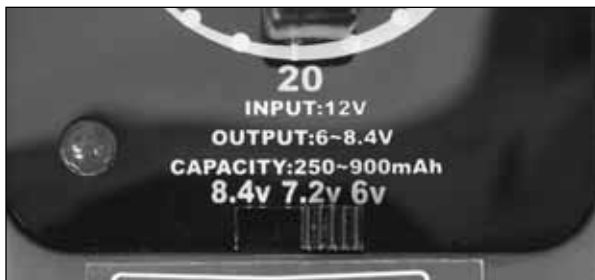
WARNING! NEVER LEAVE A CHARGING BATTERY UNATTENDED.

7. During charging, periodically feel the battery to see if it is becoming warm. A warm (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 before the 40 minutes are up.

8. When the timer dial has returned to "0" disconnect the battery from the charger and disconnect the charger from the vehicle.

BATTERY CHARGING INSTRUCTIONS

1. **IMPORTANT!!!** Discharge the battery by installing it in the model and running the motor until it stops.



2. Set the Voltage switch on the charger to the **6V** setting all the way over to the right. **Always make sure**

FIND A SUITABLE FLYING SITE

Though the Mini Ventura is a "Park Flyer," the **best** place to fly **any** model is at an AMA chartered club field. The AMA address and telephone number are on page 2.

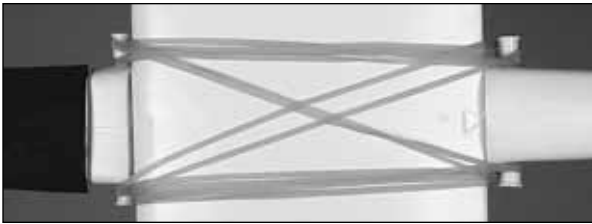
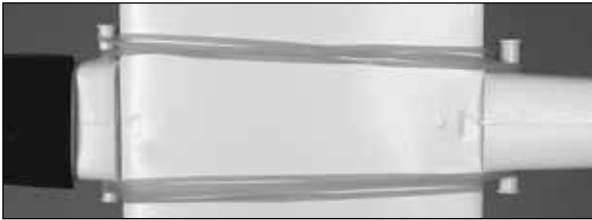
IMPORTANT!!! When flying at a radio control model airplane club flying site, **never** turn on the transmitter until you have the matching frequency pin in your possession indicating that there is no one else flying on your frequency.

If not flying at a model airplane flying site, find an area clear of trees, power lines and other structures. Do not fly within 6 miles of existing R/C flying fields or around groups of people—especially children.

FLYING

Review these flying procedures so you will have an idea of what to expect when you meet your instructor.

MOUNT THE WING



Place the wing on the fuselage. Center the wing from side-to-side, aligning the arrows with the seam on the top of the fuselage. First secure the wing with four rubber bands—one on each side, then with two more rubber bands in a crisscross fashion.

OPTIONAL: INSTALL THE WIND FLAG

Tie the red ribbon to the tip of the transmitter antenna. This will serve as a wind flag to indicate the wind direction. Always take off and land into the wind.

CHECK THE CONTROLS

Don't forget to scan the area for other modelers who may be operating R/C models that may be on the same frequency as you.

Fully extend the transmitter antenna. Make sure the throttle lever is in the **off** position and then turn on the

transmitter. Install the battery; then plug it in. Be careful not to inadvertently bump the motor start button.

Check the controls **before every flight** by moving the control stick in all directions, observing how the controls react, and making sure they respond in the correct direction. Most malfunctions can be discovered by performing this simple, last-second procedure, saving your model from a crash.

Perform a range check before each flying session of the day. Do not push the motor start button during the first range check. With the antenna collapsed, walk 50 feet [15m] from the airplane. Move the rudder and elevator control stick, making sure the controls respond. Have an assistant hold the airplane and press the motor start button to start the motor. Perform the range test with the motor running. The controls should respond as expected. If there are any “glitches” or unexpected control movements, the plane is not safe to fly. Make sure the transmitter batteries are in good condition and make sure the motor battery in the plane is adequately charged.

TAKE OFF

Caution: It is likely that the Mini Ventura will not fly straight ahead on the first launch. It may suddenly dive or climb or turn to the right or the left. This is impossible to predict because the model has not yet been adjusted, or “trimmed” for straight-and-level flight. Even though the controls were centered visually at home, minor trim adjustments will probably still be required to get the model to fly straight. This means you will have to be ready on the control stick to give corrections **immediately** after launching. Instructions are provided for how to trim the model after it has reached a comfortable altitude, but until then continual control stick input may be required. After the model has been trimmed it should fly straight-and-level on its own—this will make the next hand launch easier. Just remember to be ready to give **immediate** control stick inputs after launching.

Extend the transmitter antenna. Do not press the motor start button until you are actually ready to launch the airplane. Scan the area one last time to make certain there are no spectators, or that any spectators present are standing **behind** you.

Hold the transmitter in your left hand and hold the airplane in your right hand (or better, have your assistant

launch the model). When ready to launch, raise the model over your head and point the nose **directly into the wind**. Press the motor start switch, fully advance the throttle, then toss the model into the air at a level, or **slightly** nose up attitude. Make sure you launch with the wings level. **Note:** A good launch is important—it would be better to gently toss the model rather than throw it into the air at a bad angle that will make recovery difficult. Be careful on your first launch and make sure you get it going **straight ahead** and **into the wind**.

Immediately transfer your right hand to the transmitter so you can operate the control stick. Use the control stick to steer the Mini Ventura straight ahead while establishing a gradual climb.

When you get to a comfortable altitude make your first turn **AWAY** from yourself and any spectators that may be present. Generally (but not always), slight “back pressure,” or “up” elevator will be required to maintain altitude during turns.

FLIGHT

Here are a few things to keep in mind while flying your Mini Ventura:

1. Don't let it fly too far away. The farther away, the harder it will be to see what the Mini Ventura is doing and give the correct control inputs to fly it back.
2. When learning, it is best to keep the plane high enough so that if you make a mistake, you have enough altitude to make corrections.

Your first objectives will be to gain altitude (so you will have time to think and react) and make the first turn (so the model does not get too far away). When the plane is flying away from you, the Mini Ventura will respond the way you would expect; moving the rudder stick to the right will make the plane turn to your right. When the Mini Ventura is flying toward you it appears to respond in the opposite direction, but in actuality it is responding the same way; moving the rudder stick to the right will still make the plane turn to its right, but when it is facing you it will turn to **your** left. Beginning modelers can avoid this initial disorientation by turning their body away from the model and holding the transmitter so they are facing the same direction that it is flying. In this case you will have to look over your shoulder until the model passes by.

The next objective is to trim the plane for straight-and-level flight. With the Mini Ventura flying **directly into the wind**, see what it does when you let go of the control stick. It should fly straight-and-level. If the Mini Ventura climbs, it will need some down trim. Push the elevator trim tab forward (giving it down trim) until the Mini Ventura flies level. Do the opposite if the Mini Ventura dives when the control stick is released. If the plane turns to the left when the control stick is released, move the rudder trim tab to the right until it flies straight, and vice versa. Continue to adjust the trims so the Mini Ventura will fly straight when going into the wind.

The last exercise for your first flight will be to turn off the motor and see how the Mini Ventura reacts so you will know what to expect when it's actually time to land. Again, flying into the wind, reduce the throttle and observe how your Mini Ventura reacts. It should just glide straight ahead and establish a gentle nose-down attitude. Allow the model to glide as long and far as you like—you can even execute turns. When ready, apply full power and regain altitude. Do this a few times to get used to power-off flight.

Remember, the Mini Ventura is a “motor glider,” so you can turn off the motor at any time. In fact, flying with the motor off is the best way to extend flight time. Use full power to climb to a high altitude, then shut the motor off and glide. When you've lost too much altitude apply power and climb back into the sky. In conditions where there is no rising air, flight times of 8 to 11 minutes should be possible. When there is rising air, or “lift,” indefinite flight times are possible.

LANDING

Attempt a few practice landing approaches before the battery discharges so you can see what it will be like to land—without actually doing so. This is done by cutting the power, allowing the Mini Ventura to lose altitude and gliding it by in front of you five or so feet [1.5m] above the ground. After it gets too low add full power, climb out and go around again. This will give you an indication of what to expect, how to line it up with your landing spot and how much room it will take to land.

When you are ready to do a practice landing cut the power when the model is flying downwind (with the wind) in front of you. Make a turn into the wind allowing the Mini Ventura to lose altitude. Be ready to apply power if you get too far away or too close to the ground. You can always apply power, then cut power as needed to bring it

closer in. Allow the Mini Ventura to glide by about ten feet [3m] in front of you. When it gets too low or after it goes by add power and do it again. When you are ready to actually land do the same thing, only this time simply don't add power. As the Mini Ventura gets closer to the ground apply more and more "up" elevator until it slows to a stop—right on the ground. The propeller will fold back, preventing damage.

Retrieve the model and make a post-flight inspection by looking at the propeller, wings and tail for any damage.

AFTER FLIGHT

If any elevator trim was required, take a look at the elevator and make a mental note of its position. With the transmitter on and the battery plugged in, return the elevator trim tab to center, then bend the pushrod as shown in step 7, on page 7, until the elevator will be in the same position it was before you centered the trim.

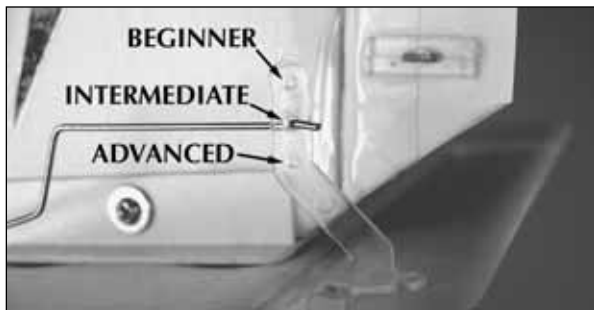
Do the same with the rudder. The idea is to have the model fly straight-and-level with the trims centered.

Unplug the battery, then turn the transmitter off. Remove the battery and allow it to cool before recharging. Allow the motor to cool before the next flight.

Caution: If the propeller is ever stuck and cannot rotate when power is applied, the battery and speed controller will overheat. Immediately cut the throttle lever to stop the motor. If you fail to do this, the motor, speed control and/or battery will be damaged.

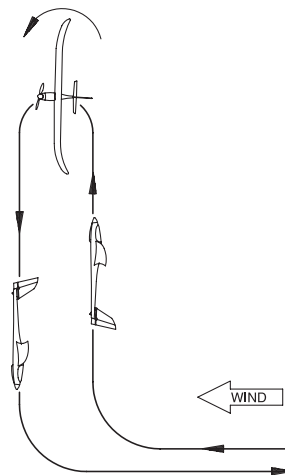
AEROBATICS

In the hands of intermediate or advanced pilots the Mini Ventura is capable of aerobatics. Among many thrilling maneuvers, stall turns and loops are fairly easy and fun.



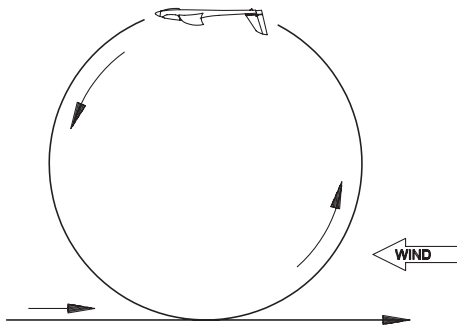
When ready to attempt aerobatics, move the elevator and rudder pushrods to the inner holes on the control horns. This will require temporary removal of the fin and stabilizer so the bends in the pushrods can be guided out of the holes. The closer in on the control horns that the clevises are, the more control throw the control surfaces will have and the more aerobatic the Mini Ventura will be.

Beginners should not attempt aerobatics until...they are no longer beginners and are able to react quickly and get the model out of adverse situations or avoid adverse situations altogether!



Stall Turn: First attempts at stall turns should be initiated with plenty of altitude and with the wind, so that the maneuver finishes into the wind. Stall turns are best done off to the left or right of the pilot. Fly the model straight-and-level under full power. Pull elevator until the model is vertical. Allow the model to climb vertically while reducing power to half-throttle. Just before the model stops its vertical ascent, apply full left rudder until the model pivots around the wing and is now pointing downward. Continue the vertical dive until the Mini

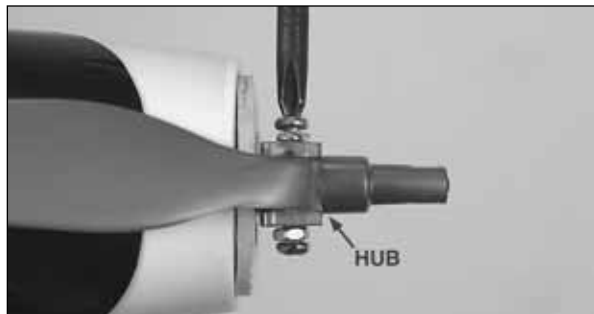
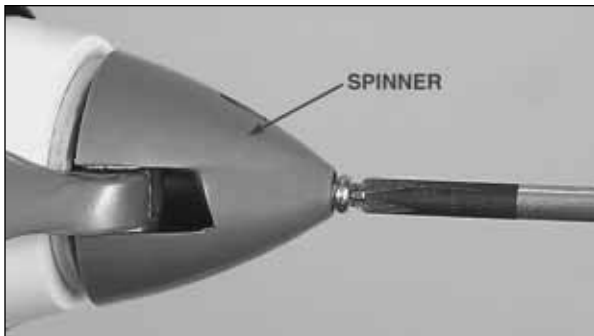
Ventura has gained enough speed to level out and re-enter straight-and-level flight as you apply full power.



Loop: Loops should always be done into the wind. A proper loop should be done on-center, in front of the pilot. Fly straight-and-level under full power. Gradually pull up elevator, allowing the model to perform the loop. After the model passes through the top of the loop reduce power. As the model completes the loop apply full power and relax the elevator to return the model to straight-and-level flight.

REPAIRS

Minor damage to the wing and tail parts can be repaired with epoxy. Use tape to hold the parts together while the epoxy hardens.



Do not attempt to repair a damaged propeller. **Minor** chips or scratches to the tips of the propeller are acceptable, but performance may be reduced. If the propeller ever suffers major damage such as cracks near the base of the blade, the propeller must be replaced. To replace the propeller use a small Phillips screwdriver to remove the spinner, then loosen the screws in the hub. Replace the propeller and hub, tighten the screws, then replace the spinner. Be certain the spinner and propeller hub can spin freely and are not contacting the fuselage.

ORDERING REPLACEMENT PARTS

Replacement parts for the Hobbico Mini Ventura 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. Parts may also be ordered directly from Hobby Services, but full retail prices and shipping and handling charges will apply. Illinois and Nevada residents will also be charged sales tax.

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. If a hobby shop is not available, replacement parts may also be ordered from Tower Hobbies at www.towerhobbies.com, or by calling toll free: (800) 637-6050.

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 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@hobbico.com, or by telephone at (217) 398-8970.

REPLACEMENT PARTS LIST

How to Purchase:

Missing Pieces	Contact Product Support
Instruction Manual	Contact Product Support

Order Number

Description

HCAA3511	Tail Set
HCAA3561	Wing Set
HCAZ1207	DVD
HCAA3512	Canopy Hatch
HCAQ3021	Propeller/Spinner
HCAM7042	ESC
HCAA3513	Fuselage
HCAA3514	Decal Set
HCAG1013	180 Electric Motor
HCAA3517	600mAh NiMH Battery
HCAA3515	Control Horns (2)
HCAZ3050	Instruction Manual
HCAP9915	12V Field Charger

OTHER ITEMS AVAILABLE FROM HOBBICO



Hobbico FlyZone™ Ventura™ ARF

The Ventura ARF has all of the popular FlyZone advantages: rapid assembly, easy operation, low-speed stability, and affordability. But with an almost 40" wingspan, the Ventura is a little faster and larger, and conventional elevator and rudder control – plus fully proportional throttle control – make it perform more like a sophisticated R/C model that can help you develop basic aerobatic skills. You also get extras like an instructional DVD, 8.4V NiMH battery, 12V DC field charger, spinner and spare folding prop! **HCAA1999**



Hobbico FlyZone Aero Cruiser™ RTF

It's designed for the first-timer...but it doesn't look anything like a beginner's aircraft! With its classic profile, factory-built sections that assemble without glue, and slow, steady, electric-powered flight, the 37.5" span Aero Cruiser eases you into R/C aviation with confidence. The 3-channel radio's on-board gear, plus motor, ESC and NiMH battery, come already installed. A handy wall charger and tools are also included – and there's even a helpful "how to" video inside. **HCAA2004**



Hobbico NexStar™ Select RTF Trainer

After you've mastered the Mini Ventura and are ready to step up to the world of full-fledged, gas-powered R/C flight, try the Hobbico NexStar. Full, four-channel control, O.S.® Max .46 engine, and all wood construction are just a few of the features that make the NexStar a favorite among new pilots and club instructors alike. **HCAA17****



Hobbico Hobby/Craft Knife Set with Case

This set's three knives and thirteen knife blades come neatly organized in a handsome, stained wooden storage case. The blade selection suits your hobby needs perfectly, whether the job is trimming, deburring, chiseling, carving or cutting. Knife handles are heavy-duty #1 standard for multi-purpose use, and measure approximately 4-1/2" long. Knurled grips provide easy cutting control. **HCAR0350**



Hobbico Sukhoi SU-31 .50-.91 ARF

Smooth and stable at all speeds and absolutely predictable in handling, this Sukhoi ARF is ideal for intermediate fliers ready to move beyond basic aerobatics into exhilarating airshow stunts. It's fun with a .50, electrifying with a 4-stroke .91...and the spacious fiberglass cowl will enclose any engine in the recommended range, leaving the sport-scale silhouette intact. It's flight-ready in a matter of hours, with molded parts that eliminate shaping while adding authentic details. **HCAA2090**



Hobbico 9" x 12" Builder's Cutting Mat

This mat's durable, three-layer construction provides a firm base for any cutting job. Handy markings on the non-reflective green surface include metric and standard rulers; 2-inch star template; 30, 45, and 60 degree angles; and a 1-inch graph background. **HCAR0453**



