



Wingspan: 78.5 in [2000mm]
Wing Area: 678 sq in [43.7dm²]
Weight: 28 – 32 oz [795 – 905g]
Wing Loading: 5.9 – 6.7 oz/sq ft [18 – 21g/dm²]
Length: 41 in [1035mm]
Radio: Two-channel, two standard servos

WARRANTY

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

In that Tower Hobbies has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

To make a warranty claim send the defective part or item to Hobby Services at the address below:

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

Include a letter stating your name, return shipping address, as much contact information as possible (daytime telephone number, fax number, e-mail address), a detailed description of the problem and a photocopy of the purchase receipt. Upon receipt of the package the problem will be evaluated as quickly as possible.

READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT INSTRUCTIONS AND WARNINGS CONCERNING THE ASSEMBLY AND USE OF THIS MODEL.

Tower Hobbies
P.O. Box 9078
Champaign, IL 61826
(800) 637-6050
www.towerhobbies.com

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INTRODUCTION

Thank you for purchasing the Tower Hobbies Vista™ sailplane. Easy-to-fly sailplanes such as this serve many purposes—they are an excellent way for beginners to get into R/C, they are great for experienced pilots who want to take a break from their powered models, and they are even suitable for thermal competition. Check the weather report now because in just a few hours your Tower Vista sailplane will be ready to launch and seek thermals with the best.

AMA

We urge you to join the **AMA** (Academy of Model Aeronautics) and a local R/C club. The AMA is the governing body of model aviation and membership is required to fly at AMA clubs. Though joining the AMA provides many benefits, one of the primary reasons to join is liability protection. Coverage is not limited to flying at contests or on the club field. It even applies to flying at public demonstrations and air shows. Failure to comply with the Safety Code (excerpts printed in the back of the manual) may endanger insurance coverage. Additionally, training programs and instructors are available at AMA club sites to help you get started the right way. There are over 2,500 AMA chartered clubs across the country. Contact the AMA at the address or toll-free phone number that follows.



Academy of Model Aeronautics

5151 East Memorial Drive

Muncie, IN 47302

Tele: (800) 435-9262

Fax (765) 741-0057

Or via the Internet at:

<http://www.modelaircraft.org>

IMPORTANT!!! Two of the most important things you can do to preserve the radio controlled aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

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

1. Your Tower Hobbies Vista sailplane should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size airplane. Because of its performance capabilities, the Tower Vista sailplane, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage to property.
2. You must assemble the model **according to the instructions**. Do not alter or modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photos. In those instances the written instructions should be considered as correct.
3. You must take time to **build straight, true and strong**.
4. You must use an R/C radio system that is in first-class condition.
5. You must correctly install all R/C and other components so that the model operates correctly on the ground and in the air.
6. You must check the operation of the model before **every** flight to insure that all equipment is operating and that the model has remained structurally sound. Be sure to check clevises or other connectors often and replace them if they show any signs of wear or fatigue.
7. If you are not an experienced pilot or have not flown this type of model before, we recommend that you get the assistance of an experienced pilot in your R/C club for your first flights. If you're not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.
8. While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high-stress flying the modeler is responsible for taking steps to reinforce the high-stress points.

We, as the kit manufacturer, provide you with a top quality, thoroughly tested kit and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations are expressed or implied as to the performance or safety of your completed model.

ORDERING REPLACEMENT PARTS

Replacement parts for the Tower Hobbies Vista sailplane are available using the order numbers in the **Replacement Parts List**. Replacement Parts may be ordered from Tower Hobbies at www.towerhobbies.com or by calling (217) 637-6050.

Parts may also be ordered 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@greatplanes.com, or by telephone at (217) 398-8970.

Replacement Parts List

Order Number	Description	How to Purchase
	Missing pieces	Contact Product Support
	Instruction manual	Contact Product Support
	Full-size plans	Not available
TOWA4011	Wing Kit	Contact Hobby Supplier
TOWA4012	Fuselage Kit	Contact Hobby Supplier
TOWA4013	Tail Set	Contact Hobby Supplier

METRIC CONVERSIONS

1" = 25.4mm (conversion factor)

1/64" = .4 mm	3/4" = 19.0 mm
1/32" = .8 mm	1" = 25.4 mm
1/16" = 1.6 mm	2" = 50.8 mm
3/32" = 2.4 mm	3" = 76.2 mm
1/8" = 3.2 mm	6" = 152.4 mm
5/32" = 4.0 mm	12" = 304.8 mm
3/16" = 4.8 mm	18" = 457.2 mm
1/4" = 6.4 mm	21" = 533.4 mm
3/8" = 9.5 mm	24" = 609.6 mm
1/2" = 12.7 mm	30" = 762.0 mm
5/8" = 15.9 mm	36" = 914.4 mm

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

ADDITIONAL ITEMS REQUIRED

Hardware & Accessories

This is the list of hardware and accessories required to finish the Vista sailplane. Order numbers are provided in parentheses.

- 2-channel radio with two standard servos
- 1/4" [6mm] R/C foam rubber (HCAQ1000)
- Spare #64 rubber bands (TOWQ1220)
- Great Planes® Self Adhesive Lead Weights (GPMQ4485)
- Launching system: Standard Hi-Start (up to 500' launches at sites with 800' or more launch area) (DYFP8301)

-or-

- Up-Start 2m (up to 200' launches at sites with 300' or more launch area) (DYFP8305)

Adhesives & Building Supplies

In addition to a few common household tools, this is the "short list" of the most important items required to assemble the Tower Vista sailplane.

- Tower Hobbies Build-It™ 30-minute epoxy (TOWR3811)
- #1 Hobby knife (TOWR1010)
- #11 blades (5-pack, TOWR1015)
- Drill bits: 1/16" [1.6mm] , 3/32" [2.4mm], 1/8" [3.2mm]
- Drill

Optional Supplies & Tools

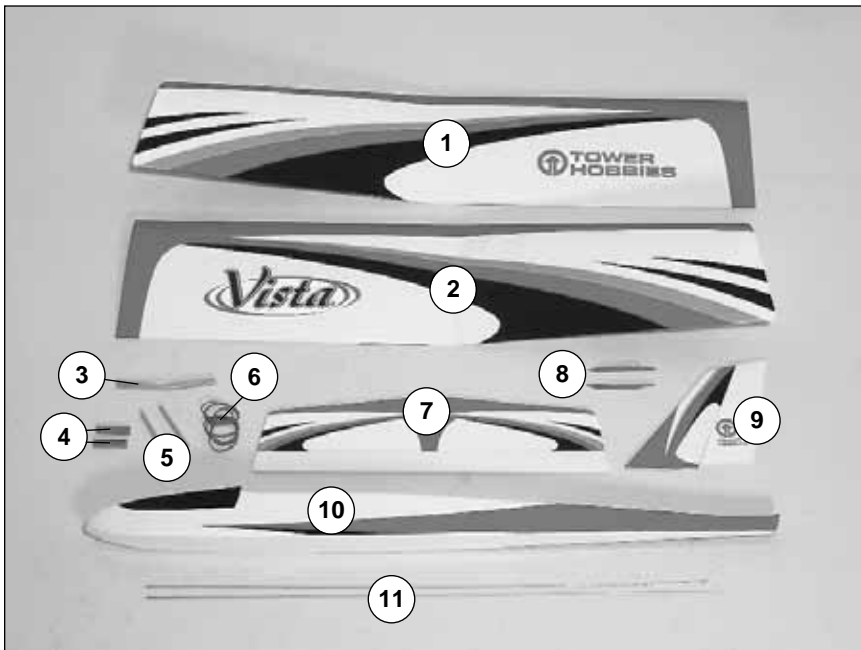
Here is a list of optional items mentioned in the manual that will help you assemble the Tower Vista sailplane.

- Model airplane covering iron with covering sock
- Epoxy brushes (6, GPMR8060)
- Mixing sticks (50, GPMR8055)
- Mixing cups (GPMR8056)
- Builder's Triangle Set (HCAR0480)
- Denatured alcohol (for epoxy clean up)
- CG Machine™ (GPMR2400)

KIT INSPECTION

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 Kit Contents list on this page.

Tower Hobbies Product Support
3002 N. Apollo Drive, Suite 1
Champaign, IL 61822
Telephone: (217) 398-8970, ext. 5
Fax: (217) 398-7721
E-mail: airsupport@towerhobbies.com



Kit Contents

1. Left Wing Panel
2. Right Wing Panel
3. Wing Joiner
4. Servo Rails (2)
5. Wing Dowels (2)
6. Rubber Bands (6)
7. Horizontal Stabilizer (Stab) w/Elevator
8. R&L Vertical Stabilizer Braces
9. Vertical Stabilizer (Fin) w/Rudder
10. Fuselage
11. Pushrods (2)

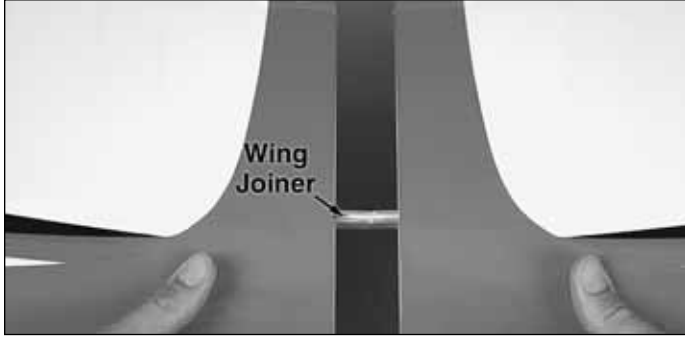
Kit Contents (not photographed)

Nylon Control Horns w/Mounting Plates (2)
Nylon Clevises (2)
Nylon 90° Pushrod Connectors (2)
Nylon Tail Skid
Tow Hook
Washer
2 x 10mm Screws (4)

Silicone Clevis Retainers (2)
3mm Nut
1/8" x 3/8" x 8" [3 x 10 x 200mm] Balsa Stick

ASSEMBLY

Join the Wings



○ 1. Without using any glue, test fit both wing halves together with the **wing joiner**. Make sure the halves fit together well and there is no gap. If there is a problem with the fit, look for obstructions such as glue bumps or wood slivers inside the wings where the joiners fit. Make any adjustments necessary to get a good fit.



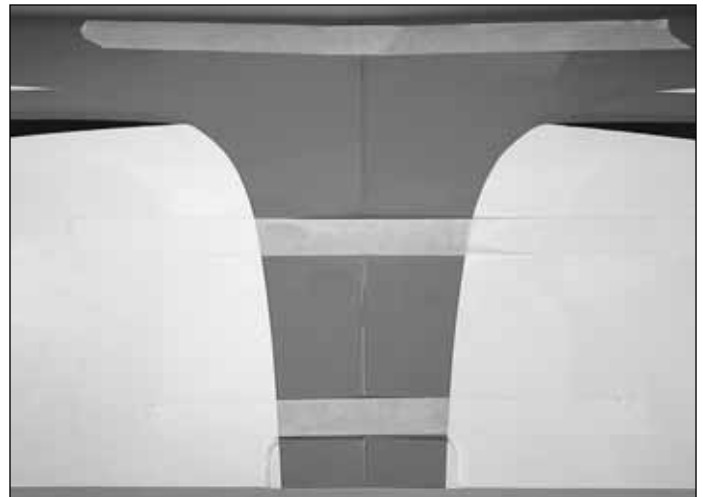
○ 2. Place a sheet of wax paper on your workbench and gather all the items required for joining the wings: 30-minute epoxy, a mixing cup, an epoxy mixing stick, an epoxy brush, paper towels and denatured alcohol for epoxy clean up. **Hint:** To cut down on waste, cut the paper towels into several small squares as shown in the photo.

Caution: Do not use 5-minute epoxy for joining the wing halves. It will not provide enough working time.

Read steps 3 and 4 all the way through before proceeding. It is important to use the proper technique for joining the wing halves to ensure a strong wing.



○ 3. Separate the wings and take out the joiner. Mix up approximately 1/2 oz. [15cc] of 30-minute epoxy. Use an epoxy brush to coat both ends of the wing and one half of the joiner all the way around. Pour a generous amount of epoxy into one of the wings where the joiner goes, and then **slowly** insert the epoxy-coated half of the joiner. Wipe away excess epoxy as it is forced out of the wing. **Note:** There must be no “empty space” inside the wing where the joiner fits—the cavity must be filled with epoxy. If no epoxy “oozes” out when you installed the joiner, remove the joiner and add more epoxy. Then reinstall the joiner. Proceed rapidly to the next step.

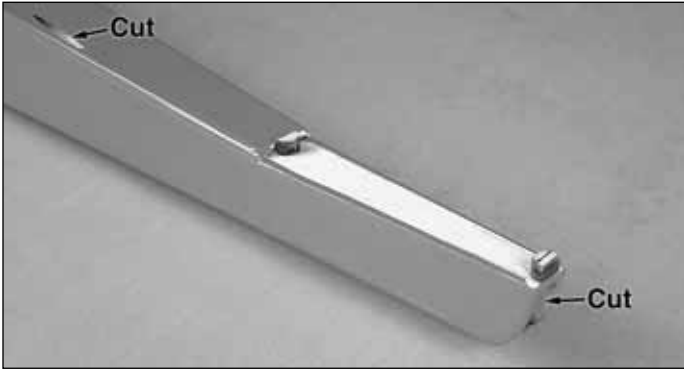


○ 4. Coat the protruding end of the joiner all the way around with epoxy and pour epoxy into the other wing. Join the wing to the other joiner/wing assembly, **slowly** pressing the two halves together. Allow excess epoxy to drip out as you go. When the wings come together, wipe away excess epoxy that is squeezed out. Then use several strips of masking tape on both the top and bottom of the wing to tightly hold the two halves together. If epoxy continues to work out of the wing under the tape, remove one strip at a time and wipe off the epoxy. Then replace the tape with another strip. Do not disturb the wing until the epoxy has hardened.

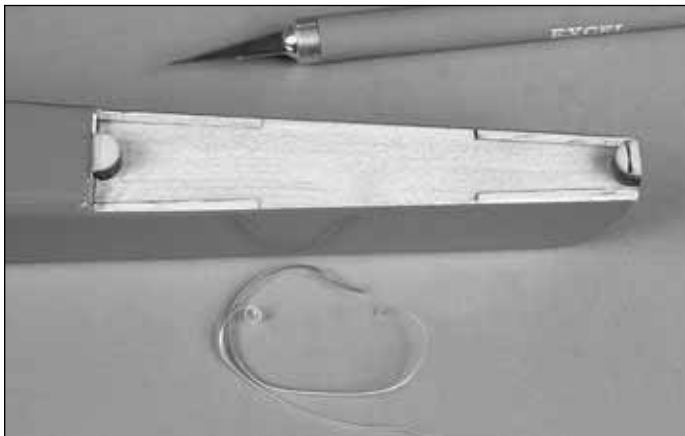
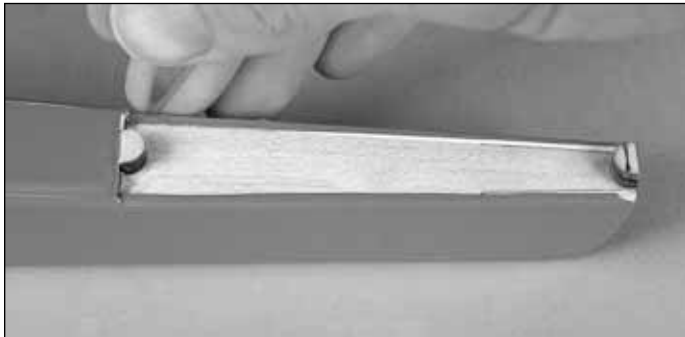
○ 5. After the epoxy has fully hardened, slowly and carefully pull away the masking tape. If any of the covering loosened, iron it back down with a covering iron on medium heat. Use a covering sock over the iron to protect the Tower Vista's finish.

ASSEMBLE THE FUSELAGE

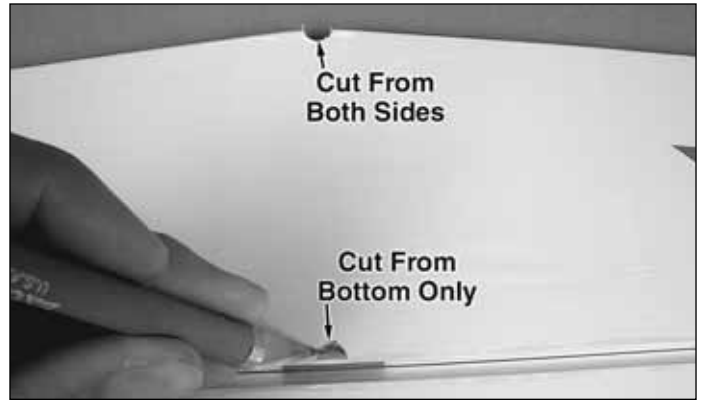
Join the Stabilizer



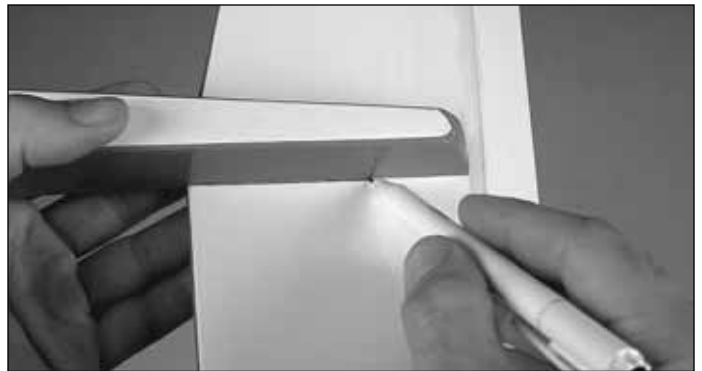
○ 1. If you haven't done so already, remove the protective foam piece from the aft end of the fuselage where the stabilizer goes. Cut the covering at the opening from the rudder pushrod tube and from the slot in the back of the fuselage for the elevator pushrod.



○ 2. Cut off any covering that has been wrapped around the side of the fuselage over the top of the stab saddle where the stabilizer goes.



○ 3. Use a sharp hobby knife to cut the covering from the **bottom only** of the horizontal stabilizer (stab) over the half-circle notch in the trailing edge. Also cut the covering from both sides of the stab over the half-circle notch in the leading edge.



○ 4. Place the stab on the fuselage, keying the notches in the stab into the pegs on the fuselage. Use a fine-point, felt-tip pen to mark the outline of the fuselage onto the stab.

○ 5. Take the stab off the fuselage and follow the preceding **Expert Tip** or use a sharp hobby knife with a straightedge to cut along the lines. If using a hobby knife to cut the covering, take **great care** not to cut into the wood. Cutting into the wood will weaken the structure which could cause it to fail in flight.

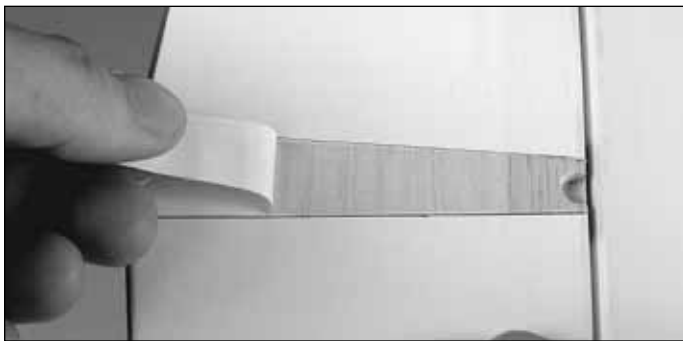


Expert Tip

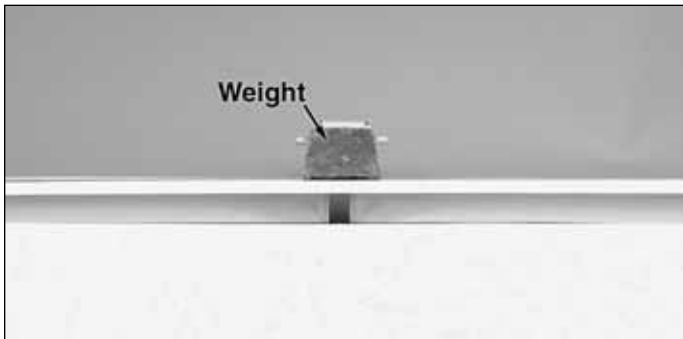


How to cut covering from balsa.

Rather than using a hobby knife which could inadvertently cut into the balsa, use a heated soldering iron. Move the iron at a pace that will just melt the covering without burning into the wood—the hotter the soldering iron, the faster you will have to move it. A sharp tip isn't necessary, but a fine-point does work best.



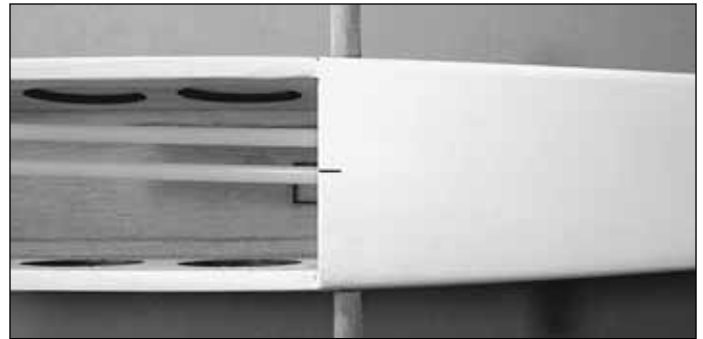
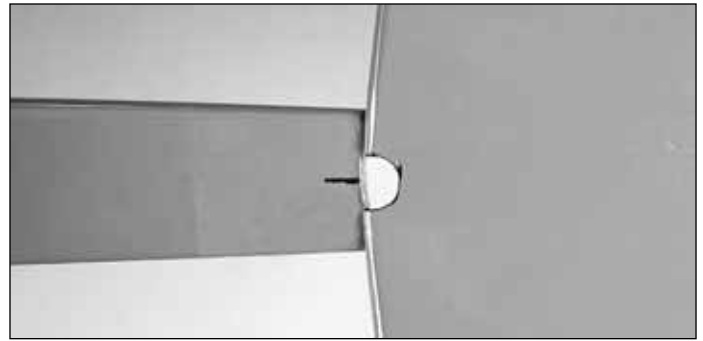
○ 6. Peel the covering from the bottom of the stabilizer.



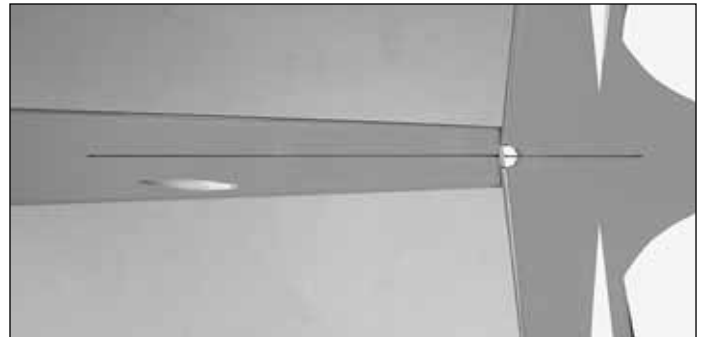
○ 7. Reposition the stabilizer onto the fuselage. Resting the fuselage on your workbench, place a weight on top of the stab to hold it down. View the fuselage from the rear. If the stab is parallel with the workbench, proceed to the next step. If the stab is not parallel with the workbench, remove the stab and use medium-grit sandpaper to sand down the “high side” of the stab saddle where the stab rests until you can get the stab level.

○ 8. Use 30-minute epoxy to glue the stab into position—be certain to coat **both** the bottom of the stab **and** the fuselage with epoxy. Use weight or T-pins to hold the stab in position until the epoxy hardens.

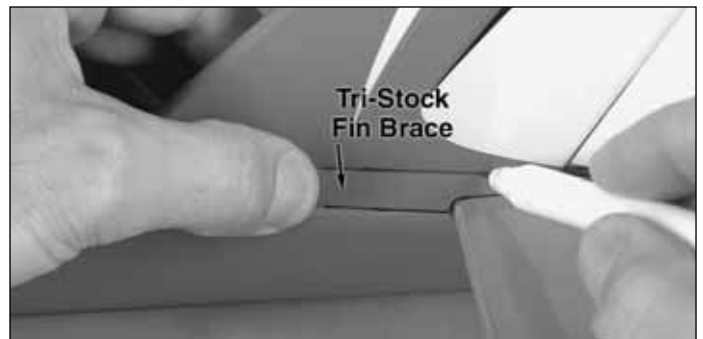
Join the Fin



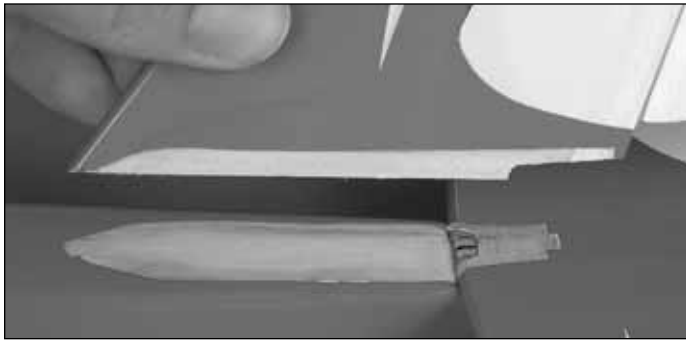
○ 1. Taking accurate measurements, use a fine-point, felt-tip pen to mark the center of the fuselage in the two locations shown.



○ 2. Using the marks to align a straightedge, mark a centerline down the top of the fuselage and onto the stab as shown—this will be used to align the fin.

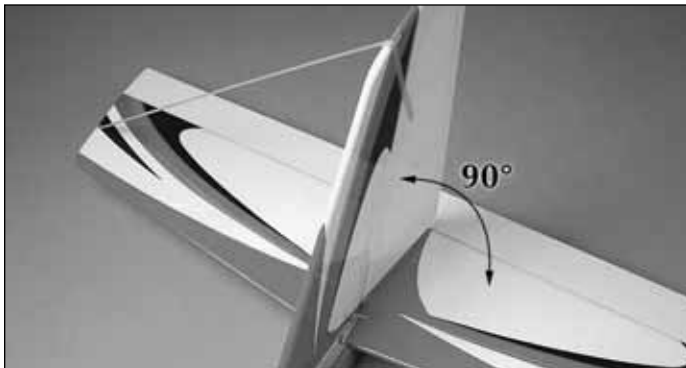


○ 3. Place the fin on the fuselage, accurately aligning it over the centerline. Without using any glue, place the tri-stock **fin braces** on both sides of the fin. The same as was done with the bottom of the stab, use a fine-point, felt-tip pen to mark the outline of the fin braces onto the fuselage top and the fin.



○ 4. Working carefully without cutting into the balsa, use your heated soldering iron or a sharp hobby knife to cut the covering from the sides of the fin and the top of the fuselage. Make sure you cut just inside the lines—approximately 1/32" [.5mm]—so that none of the balsa will be exposed when all the parts are joined.

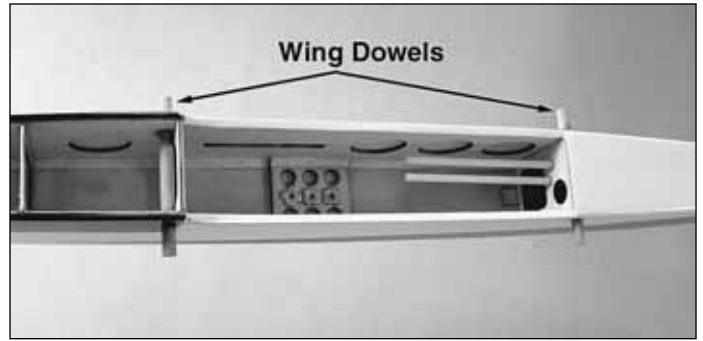
○ 5. Use one of your paper towel squares moistened with denatured alcohol to wipe away the ink lines.



○ 6. Use 30-minute epoxy to glue the fin to the fuselage with T-pins to hold the fin in position. Before the epoxy hardens use a builder's square to check to see if the fin is perpendicular to the stab. If necessary, use tape to pull the fin over to one side or the other to get the fin vertical. Allow the epoxy to harden before proceeding.

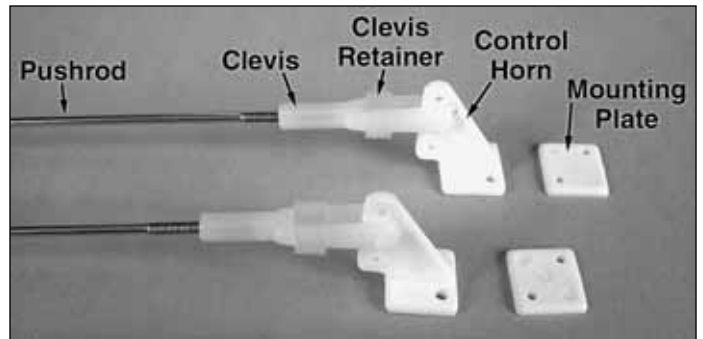


○ 7. Take out the T-pins. Glue the tri stock braces into position with 30-minute epoxy using T-pins to hold them in place.



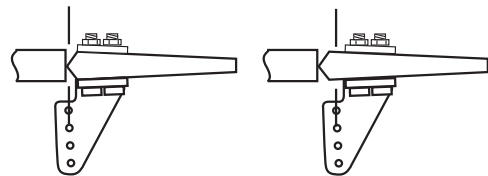
○ 8. While you have some epoxy mixed, glue in both wing dowels.

Hook Up the Controls



○ 1. Cut one of the wire pushrods to a length of 27" [685mm] by cutting off the non-threaded end. Cut the other pushrod to a length of 29-3/4" [685mm].

○ 2. Thread one of the pushrods halfway into one of the clevises—this should take about fifteen full turns. Cut the mounting plate off one of the control horns. Slide a silicone retainer over the clevis, then connect the clevis to the third hole out from the bottom of the horn. Prepare the other pushrod the same way.



CORRECT

INCORRECT

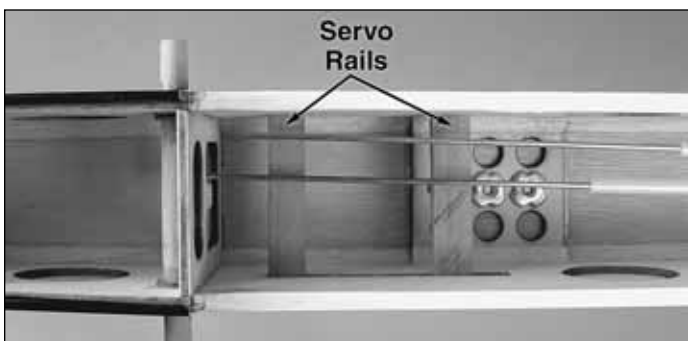
○ 3. Slide the longer pushrod into the elevator guide tube in the fuselage. Mark, then drill 3/32" [2.4mm] holes through the elevator for the two elevator horn mounting screws. Mount the elevator horn with two 2 x 10mm screws and the plastic mounting plate.



Note: If the silicone retainer on the clevis rubs against the inside of the fuselage sides, use a hobby knife to trim the inside of the fuselage as necessary for free, smooth movement.

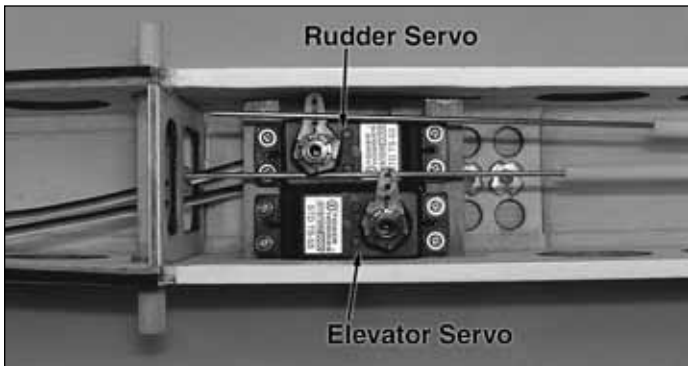


○ 4. Install the rudder pushrod and mount the control horn the same way.



○ 5. Without using any glue, install both hardwood servo rails into the slots. Glue the forward rail into the fuselage as far forward as it will go.

Refer to this photo for the following four steps.

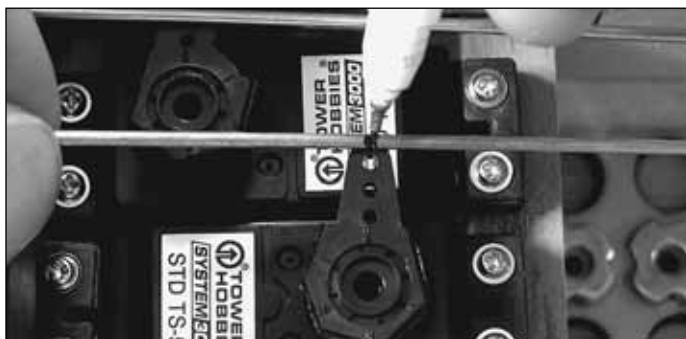


○ 6. Position the servos on the rails and slide them forward against the forward rail. Note the position of the splined output shaft on the servos (the elevator servo is facing aft and the rudder servo is facing forward). Space the rail approximately 3/32" [3mm] aft of the servos, and then securely glue the rail into position.

○ 7. Place the servo arms on the servos—if your servos came with a selection of servo arms, select ones that will not interfere with the other servo or the fuselage sides. For Futaba® and Tower servos, use the six-arm servo arms and cut off the unused arms.

○ 8. Position the left servo all the way over to the **left** side of the fuselage, then drill 1/16" [1.6mm] holes through the rails for the servo mounting screws. Mount the servo with the screws that came with it.

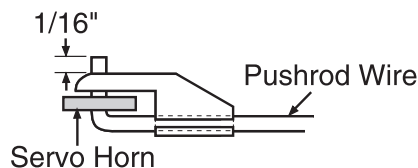
○ 9. Move the rudder servo as far over to the **right** as it will go **without the arm contacting the right fuselage side**. Drill 1/16" [1.6mm] holes through the rails and mount the rudder servo with the screws that came with the servo.



○ 10. Center the servo arms as shown holding the elevator pushrod so the elevator is centered. Mark the pushrod where it crosses the holes in the elevator servo arm.



○ 11. Use pliers to make a 90° bend in the pushrod at the mark you made.

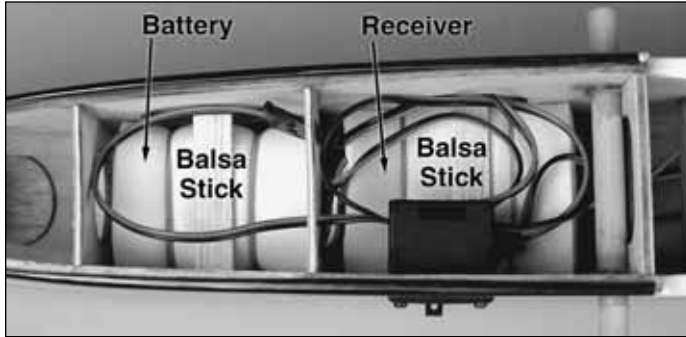


○ 12. Take the servo arm off the servo. Enlarge the holes in the servo arms with a servo horn drill (HCAR0698), a 5/64" [2mm] drill bit or a hobby knife. Connect the pushrod to the outer hole in the elevator servo using a 90° pushrod connector. Cut the pushrod 1/16" [1.6mm] from the connector. Then replace the servo arm on the servo.

○ 13. Connect the rudder pushrod to the rudder servo the same way.

Install the Receiver & Battery

Refer to this photo while installing the receiver and battery.



○ 1. Noting how the rubber band on the canopy hatch is attached to the tab on the former (so you will know how to reattach it later), unhook the rubber band and temporarily remove the canopy hatch and set it aside.

○ 2. Connect the servos and on/off switch to the receiver—on most four-channel airplanes, the rudder is operated by the left stick on the transmitter. However, on two-channel planes such as this (that do not have ailerons), the rudder is controlled by the right stick. Connect the rudder servo to the channel in the receiver that will allow the rudder to be controlled by the **right** stick—for Futaba receivers that is channel 1.

○ 3. Wrap the receiver and receiver battery in 1/4" [6mm] R/C foam rubber. Use tape or small rubber bands to hold the foam rubber in place.

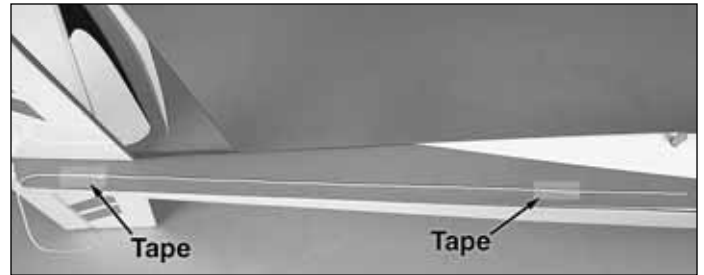
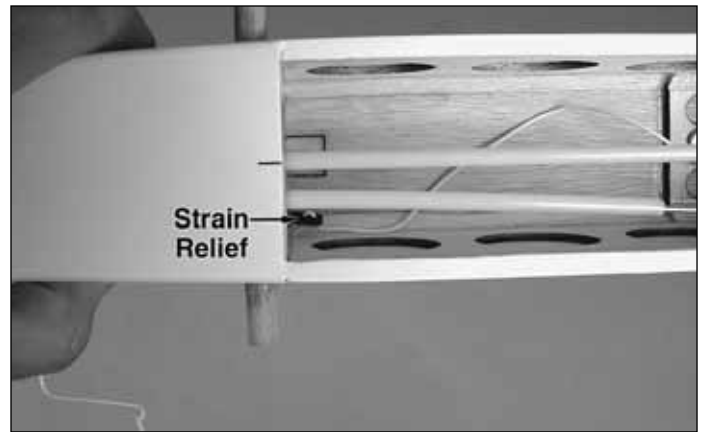
○ 4. Place the receiver in the fuselage where shown. Connect the receiver battery to the on/off switch, and then place it in the fuselage ahead of the receiver.

○ 5. Cut the 1/8" x 3/8" x 8" [3 x 10 x 200mm] balsa stick to the lengths required to fit between the fuselage sides where shown. Then glue the sticks in place, holding the receiver and battery in position.

○ 6. Use the mounting plate from your receiver on/off switch as a template to cut and drill holes in the fuselage side. Then mount the switch.



○ 7. Guide the receiver antenna past the servos, then through one of the cut off servo arms as shown to make a "strain relief" that keeps tension off the solder joint inside the receiver.



○ 8. Drill a 1/16" [1.6mm] hole through the side of the fuselage where shown. Then guide the antenna through the hole. Use clear tape to hold the receiver antenna to the outside of the fuselage.

GET THE MODEL READY TO FLY

Final Assembly

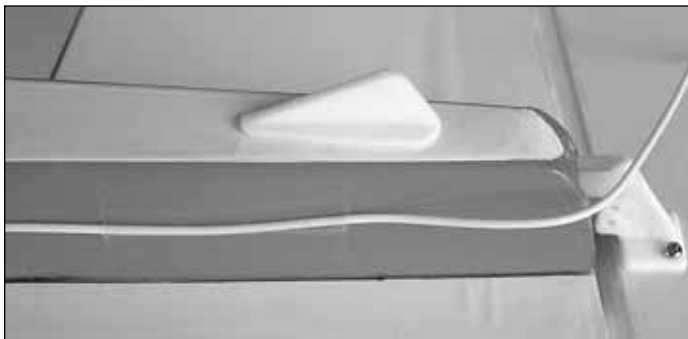


○ 1. Use a piece of wire or a small, wood dowel to reattach the rubber band and reinstall the canopy hatch.



○ 2. Thread the 3mm nut onto the tow hook and slip on the 3mm washer with a drop of thread-lock or CA. Thread the hook into one of the three holes in the bottom of the fuselage. Use a 5.5mm wrench or needle-nose pliers to

tighten the nut and secure the hook. The forward hole is recommended for starting out as it will provide mild launches for first flights. Later, the hook may be moved aft for more aggressive, higher launches.

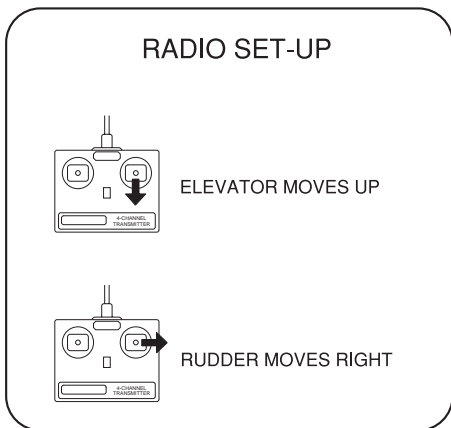


○ 3. Cut off two of the barbs from the pegs on the tail skid. Drill 1/8" [3.2mm] holes through the bottom of the fuselage for the prongs. Then glue the tail skid into position.

Check the Control Directions

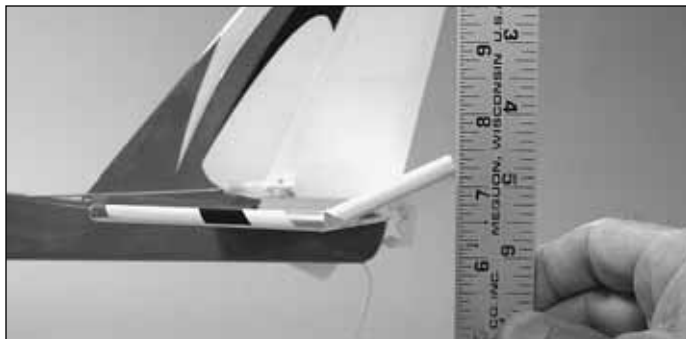
○ 1. Turn on the transmitter and receiver and center the trims. If necessary, remove the servo arms from the servos and reposition them so they are centered. **Don't forget to install the screws that hold on the servo arms.**

○ 2. With the transmitter and receiver still on, check all the control surfaces to see if they are centered. If necessary, screw the clevises on the pushrods in or out to center the control surfaces.



○ 3. Make certain that the elevator and rudder respond in the correct direction as shown in the diagram. If necessary, use the servo reversing function in the transmitter to reverse the servos so they respond in the right direction. Be certain the elevator and rudder have remained centered. Adjust if necessary.

Set the Control Throws



Use a ruler to measure and set the control throw of the elevator and rudder as indicated in the chart that follows. If your radio does not have dual rates, we recommend setting the throws at the **low** rate setting.

Note: The rudder throw is measured at the bottom of the rudder.

These are the recommended control surface throws:

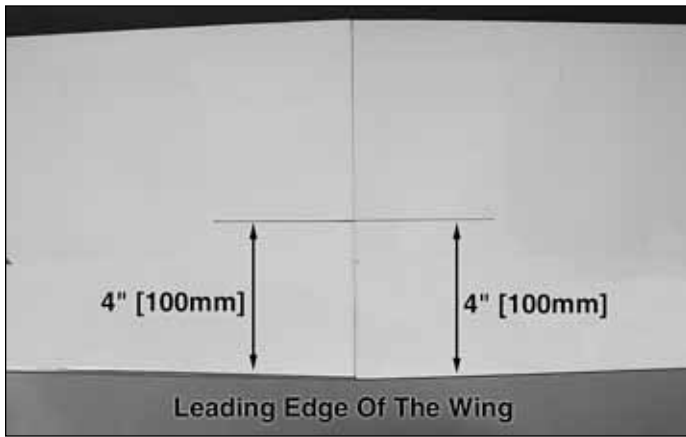
	High Rate	Low Rate
ELEVATOR:	5/8" [16mm] up 5/8" [16mm] down	3/8" [10mm] up 3/8" [10mm] down
RUDDER:	1-1/2" [38mm] right 1-1/2" [38mm] left	5/8" [16mm] right 5/8" [16mm] left

IMPORTANT: The Tower Vista 2m sailplane has been **extensively** flown and tested to arrive at the throws at which it flies best. Flying your model at these throws will provide you with the greatest chance for successful first flights. If, after you have become accustomed to the way the Tower Vista 2m sailplane flies, you would like to change the throws to suit your taste that is fine. However, too much control throw could make the model difficult to control, so remember, "more is not always better."

Balance the Model (C.G.)

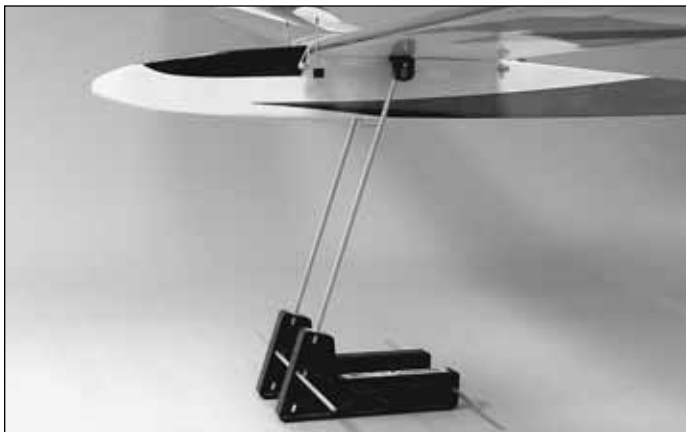
More than any other factor, the **C.G.** (balance point) can have the **greatest** effect on how a model flies, and may determine whether or not your first flight will be successful. If you value this model and wish to enjoy it for many flights, **DO NOT OVERLOOK THIS IMPORTANT PROCEDURE.** A model that is not properly balanced will be unstable and possibly unflyable.

At this stage the model should be in ready-to-fly condition with all of the systems in place including the servos, switch, battery and receiver.

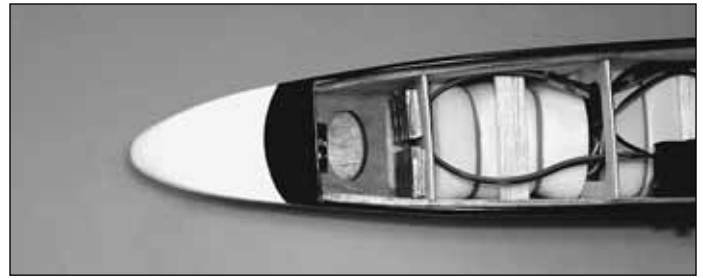


○ 1. If you will be using a Great Planes C.G. Machine™ to balance your model, set the rulers to 4" [100mm]. Place the plane on the machine. If you will not be using the C.G. Machine, use a felt-tip pen or narrow (1/8" [3mm] or less) tape to mark a line, noting the C.G. on the bottom of the wing 4" [100mm] back from the leading edge.

This is where your model should balance for the first flights. Later, you may wish to experiment by shifting the C.G. up to 1/2" [13mm] forward or 1/2" [13mm] back to change the flying characteristics. Moving the C.G. forward may improve wind penetration and stability, but the model will then fly and land a little faster. Moving the C.G. aft makes the model lighter and more responsive to thermals, but could also cause it to become too difficult to control. In any case, **start at the recommended balance point** and do not at any time balance the model outside the specified range.



○ 2. Attach the wing to the fuselage with a couple of rubber bands. The model must be totally ready to fly with all of the components installed. Place the model on the Great Planes CG Machine or lift it at the balance point you marked. You should be able to feel the tape lines with your fingers.



○ 3. When supporting the model at the C.G. it is likely that the tail will drop, indicating that it is "tail heavy" and weight must be added to the nose. If the nose drops however, the model is "nose heavy" and weight must be added to the tail. Use Great Planes Self-Adhesive Lead Weights to balance the model. Nose weight can be attached inside the fuselage to the former as shown. Approximately 2 oz. [60g] of ballast will be required for most models. There is also a cavity in the balsa nose block for lead or steel shot (not included). If you prefer to install lead or steel shot in the cavity, determine the amount required, mix with epoxy, then pour in. Weight installed in this manner will be permanent.

○ 4. **IMPORTANT:** If you found it necessary to add any weight, recheck the C.G. after the weight has been installed.

PREFLIGHT

Identify Your Model

No matter if you fly at an AMA sanctioned R/C club site or if you fly somewhere on your own, you should always have your name, address, telephone number and AMA number on or inside your model. It is **required** at all AMA R/C club flying sites and AMA sanctioned flying events. Fill out the identification tag on page 15 and place it on or inside your model.

Charge the Batteries

Follow the battery charging instructions that came with your radio control system to charge the batteries. You should always charge your transmitter and receiver batteries the night before you go flying, and at other times as recommended by the radio manufacturer.

CAUTION: Unless the instructions that came with your radio system state differently, the initial charge on **new** transmitter and receiver batteries should be done for 15 hours **using the slow-charger that came with the radio system**. This will "condition" the batteries so that the next charge may be done using the fast-charger of your choice. If the initial charge is done with a fast-charger, the batteries may not reach their full capacity and you may be flying with batteries that are only partially charged.

Range Check

Ground check the operational range of your radio before the first flight of the day. With the transmitter antenna collapsed and the receiver and transmitter on, you should be able to walk at least 100 feet away from the model and still have control. Have an assistant stand by your model and, while you work

the controls, tell you what the control surfaces are doing. If the control surfaces do not respond correctly, do not fly! Find and correct the problem first. Look for loose servo connections or broken wires, corroded wires on old servo connectors, poor solder joints in your battery pack or a defective cell, or a damaged receiver crystal from a previous crash.

AMA SAFETY CODE (excerpts)

Read and abide by the following excerpts from the Academy of Model Aeronautics Safety Code. For the complete Safety Code refer to *Model Aviation* magazine, the AMA web site or the Code that came with your AMA license.

General

1) I will not fly my model aircraft in sanctioned events, air shows, or model flying demonstrations until it has been proven to be airworthy by having been previously, successfully flight tested.

2) I will not fly my model aircraft higher than approximately 400 feet within 3 miles of an airport without notifying the airport operator. I will give right-of-way and avoid flying in the proximity of full-scale aircraft. Where necessary, an observer shall be utilized to supervise flying to avoid having models fly in the proximity of full-scale aircraft.

3) Where established, I will abide by the safety rules for the flying site I use, and I will not willfully and deliberately fly my models in a careless, reckless and/or dangerous manner.

5) I will not fly my model unless it is identified with my name and address or AMA number, on or in the model. **Note:** This does not apply to models while being flown indoors.

7) I will not operate models with pyrotechnics (any device that explodes, burns, or propels a projectile of any kind).

Radio Control

1) I will have completed a successful radio equipment ground check before the first flight of a new or repaired model.

2) I will not fly my model aircraft in the presence of spectators until I become a qualified flier, unless assisted by an experienced helper.

3) At all flying sites a straight or curved line(s) must be established in front of which all flying takes place with the other side for spectators. Only personnel involved with flying the aircraft are allowed at or in the front of the flight line. Intentional flying behind the flight line is prohibited.

4) I will operate my model using only radio control frequencies currently allowed by the Federal Communications Commission.

5) **I will not knowingly operate my model within three miles of any pre-existing flying site except in accordance with the frequency sharing agreement listed** [in the complete AMA Safety Code].

9) Under no circumstances may a pilot or other person touch a powered model in flight; **nor should any part of the model, other than the landing gear, intentionally touch the ground except while landing.**

CHECK LIST

Use this Check List to make sure you haven't forgotten anything during the last few seconds of preparation.

- 1. Check the C.G. according to the measurements provided in the manual.
- 2. Be certain the battery and receiver are securely mounted.
- 3. Extend your receiver antenna and make sure it has a strain relief inside the fuselage to keep tension off the solder joint inside the receiver.
- 4. Make sure the tow hook is securely tightened.
- 5. Confirm that all controls operate in the correct direction and the throws are set up according to the manual.
- 6. Make sure all the servo arms are mounted to the servos with the screws included with your radio.
- 7. Place your name, address, AMA number and telephone number on or inside your model.
- 8. Cycle your receiver battery pack (if necessary) and make sure it is fully charged.
- 9. If you wish to photograph your model, do so before your first flight.
- 10. Range check your radio when you get to the flying field.

FLYING

Mount the Wing

Mount the wing to the fuselage with the six #64 rubber bands that came with the model. Install them one at a time, crisscrossing the last two. Never use torn, cracked or oily rubber bands.

If the rubber bands you will be using are different from those recommended, consult an experienced modeler to make certain they are strong enough, and that you have used enough of them. If uncertain, force the front of the wing off of the wing saddle. There should be considerable resistance! If the wing can be forced from the fuselage without having to strain your hands, then there are probably not enough rubber bands. If launching the Tower Vista 2m sailplane with launch systems stronger than those recommended in this manual, additional #64 rubber bands will be necessary.

IMPORTANT!!! Flying a model with too few rubber bands can be dangerous. The wing could actually detach from the fuselage resulting in a crash. If the model exhibits any tendencies that indicate there are not enough rubber bands, immediately land and closely inspect the model for damage. If no damage is found, add more rubber bands.

Trim Flights

Before the first flight of the day, don't forget to do a range check and make sure the elevator and rudder are functioning properly and respond in the correct direction.

Turn on the transmitter first and then the receiver. Hold the Tower Vista 2m sailplane under the wing with the nose pointed slightly down and directly into the wind. Launch the model with the wings level and the nose pointing at a spot on the ground about 50 feet [15m] in front of you. If the sailplane is launched with the nose up or launched too hard it will climb a few feet, stall and fall nose first straight down. Launch the plane with a gentle push forward. Adjust the trims on the transmitter so the plane flies straight ahead in a smooth glide path.



First Flights

Find a BIG, OPEN field for your first flights. The bigger the better, as you won't have to worry about where to land. Ground based objects (trees, poles, buildings, etc.) can cause the beginner to become easily disoriented. Try to find an experienced pilot to help you with your first flights. Although the Tower Vista 2m sailplane is very easy to fly, an experienced pilot can save you a lot of time and possible aggravation by helping you get your model in the air smoothly.

Follow the directions that came with your hi-start and lay it out directly into the wind. Place the stake at the far upwind edge of the flying field so the parachute will blow back onto the flying field.

Turn on your transmitter and then your receiver and hook the parachute onto your plane's tow hook. Pull the plane back until there is approximately 8 lbs. [3.5kg] of tension on the high start. More tension can be used after you get acquainted with the launching procedure.

Hold the plane above your head with the wings level and the nose pointed slightly up and directly into the wind. Give the plane a strong push forward to get it flying and it will climb up like a kite. You should not have to touch the elevator during the launch but use the rudder stick to keep it going straight up.

Note: You need to remember that your radio control responds as if you were sitting in the cockpit. When you push the transmitter stick to the right, the rudder moves to the plane's right! This means that when the plane is flying towards you, it may seem like the rudder controls are reversed (when you give "right" rudder the plane turns to your left—which is the plane's "right"). It is sometimes easier to learn to fly the plane if you always face your body in the direction the plane is flying and look over your shoulder to watch the model.

Use these first flights to get the "feel" of the controls and the Tower Vista 2m sailplane's flying characteristics. Try to keep the plane upwind and just perform some gentle S-turns (always turning into the wind) until it is time to set up for landing. When it is time to land, just continue performing the gentle S-turns upwind and let the plane glide onto the ground. Don't worry about where the plane lands – just use caution to avoid hitting anything. Always try to launch and land into the wind.

No matter how much – or how little – previous R/C flying experience you have, you'll thoroughly enjoy piloting the Tower Vista 2m sailplane. Its built-in stability keeps you calm and confident at the controls. And when your "beginner" days are behind you, the Tower Vista 2m sailplane's versatile performance can even help you earn impressive contest wins. It will be one of your favorites for many years to come. *Happy flying!*

**OTHER ITEMS AVAILABLE FROM
TOWER HOBBIES**



Tower Hobbies 4-TH 4-Channel FM Radio

The 4-TH is as affordable as it is perfect for first-time and sport fliers. Narrow-band FM technology and a dual-conversion receiver ensure that reception is as interference-resistant as the transmission. Rounded transmitter contours take it easy on the hands, while length and tension adjustments tailor all-important stick "feel" to your own needs. Servo reversing adds installation ease to the list of conveniences, which also includes easy-to-reach trims, 600mAh Tx and Rx NiCds, a dual-output charger, Futaba J-compatible connectors – and a trainer system to make it easy to teach flying skills or learn new ones. Requires servos. 1-year warranty. 72MHz. **TOWJ41****



DYNAFLITE™ HI-STARTS

DYFP8301 (Standard)

DYFP8302 (Heavy-Duty)

A Dynaflyte Hi-Start and 800' of clear launch area are all you need to send your sailplane rocketing up to 500' in the air! Easy to lay out and retrieve, Hi-Starts include everything required for sailplane launches: 100' of UV-stabilized surgical tubing, injection-molded reel, parachute, steel stake

and tow ring, and nylon tow line. Standard Hi-Start with 1/8" diameter tubing offers strong, steady power for 2-meter sailplanes. Heavy-Duty Hi-Start with 3/16" diameter tubing provides the launch power needed for sailplanes spanning 100" or more.



Great Planes C.G. Precision Aircraft Balancer™

Accurate balancing makes trainers more stable, low-wings more agile, and pylon planes move at maximum speed. The innovative C.G. Machine helps you achieve optimum balance easily, without measuring or marking—and without the errors that fingertip balancing can cause. You'll quickly pinpoint your plane's exact center of gravity. Then you'll know at a glance whether weight should be added, removed or relocated. The C.G. Machine works with kits and ARF models of any size and wingspan. Its slanted wire balancing posts support models weighing up to 40 pounds. **GPMR2400**

This model belongs to:				
Name				
Address				
City, State, Zip				
Phone number				
AMA number				

Cut out or copy the identification tag and put it on or inside your model.

