

# Acro-Wot MKII

## INSTRUCTION MANUAL



**Flyzone**<sup>™</sup>  
how high will you soar

### SPECIFICATIONS

<b>Wingspan:</b>	49 in [1245mm]
<b>Wing Area:</b>	39.5 in <sup>2</sup> [1005 dm <sup>2</sup> ]
<b>Weight:</b>	38–42 oz [1075–1190 g]
<b>Wing Loading:</b>	13–15 oz/ft <sup>2</sup> [40–46 g/dm <sup>2</sup> ]
<b>Length:</b>	39.5 in [1005mm]
<b>Radio:</b>	4-channel radio system

### WARRANTY

Hobbico guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. **In no case shall Hobbico's liability exceed the original cost of the purchased kit.** Further, Hobbico reserves the right to change or modify this warranty without notice.

In that Hobbico has no control over the final assembly 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.

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## INTRODUCTION

Chris Foss' successful AcroWot design is now available to you in a smaller EPO version that is virtually ready to fly right out of the box. The AcroWot MKII boasts the same docile, aerobatic flight characteristics as the original in a durable and convenient electric package that will be ready to fly whenever you are. With self-aligning tail surfaces and electronics already installed, assembly will be complete in less than an hour.

For the latest technical updates or manual corrections to the AcroWot MKII visit the Flyzone® web site at [www.flyzoneplanes.com](http://www.flyzoneplanes.com). Open the "Airplanes" link, then select the AcroWot MKII. If there is new technical information or changes to this model a "tech notice" box will appear in the upper left corner of the page.

### Academy of Model Aeronautics

If you are not already a member of the AMA, please join! The AMA is the governing body of model aviation and membership provides liability insurance coverage, protects modelers' rights and interests and is required to fly at most R/C sites.

#### Academy of Model Aeronautics

5151 East Memorial Drive  
Muncie, IN 47302-9252

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.

## SAFETY PRECAUTIONS

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

1. Your AcroWot MKII 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 AcroWot, 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 good condition. All components must be correctly installed so that the model operates correctly on the ground and in the air. You must check the operation of the model and all components before **every** flight.
5. 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.

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.

## ADDITIONAL ITEMS REQUIRED

### Radio Control System

The AcroWot MKII Tx-R™ (Transmitter Ready™) comes with the servos and receiver installed, so all that is required is a 4-channel transmitter. The Tactic™ TTX404 2.4GHz spread spectrum 4-channel transmitter (TACJ2404) is included with the RTF (ready to fly) version of the AcroWot, so this same radio system is ideal for your Tx-R version, too.

- Tactic TTX404 2.4GHz 4-channel transmitter (TACJ2404)
- (4) AA batteries will be required to operate the recommended transmitter (FUGP7308).

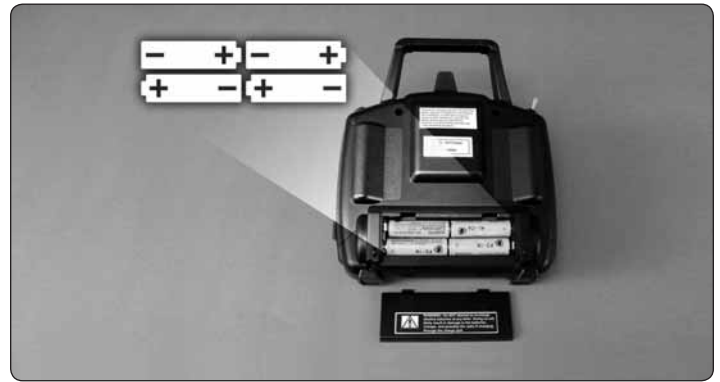
If you already own a transmitter that you plan to use with the AcroWot, first make sure it is in the compatibility list at [www.Tx-Ready.com/anylink-chart.html](http://www.Tx-Ready.com/anylink-chart.html). If so, you can purchase the AnyLink 2.4GHz Universal Radio Adapter to allow your transmitter to communicate with the pre-installed Tactic receiver.

- Tactic AnyLink™ 2.4GHz Universal Radio Adapter (TACJ2000)
- Tactic AnyLink SLT™ 2.4GHz Adapter Cable Futaba® Hitec® Round (TACM0003)
- Tactic AnyLink SLT 2.4GHz Adapter Cable Hitec Aurora (TACM0004)
- Tactic AnyLink SLT 2.4GHz Cable Spektrum® DX4e/5e/7s/8 (TACM0005)
- Tactic AnyLink SLT 2.4GHz Adapter Cable Futaba 12Z 14MZ (TACM0006)

### Battery and Charger

The AcroWot MKII RTF comes complete with a motor battery and charger. The AcroWot MKII Tx-R version requires an 1800mAh 11.1V LiPo battery and LiPo Charger. The AcroWot MKII was designed for the Flyzone 1800mAh 11.1V LiPo battery (FLZA6024). Other LiPo batteries similar in size with the same voltage and capacity may also work, but they may not fit properly in the battery compartment or have the same type of battery connector. In addition to a battery, a LiPo battery charger is also required and there are several that will work (depending on your budget and requirements). A safe, economical charger is the ElectriFly® 3S (3-cell/ 11.1V) LiPo Smart Charger (GPMM3318). The Smart Charger includes adapters to charge from a 110V wall outlet or a 12V DC outlet from a car. The Smart Charger will take approximately 2-1/2 to 3 hours to fully charge the battery. For a more advanced charger we recommend the ElectriFly Triton EQ AC/DC Charger. (GPMM3155) The Triton EQ can charge NiCd, NiMH, Lead-Acid, Li-Ion, LiPo, and LiFe battery chemistries. It has a built-in cell balancer and is loaded with features such as a backlit LCD that will display charge settings and realtime data during charge, 5A max charge rate, 1–14 NiCd or NiMH cells or 1–6S lithium cells, safety features, etc.

## TTX404 TRANSMITTER



To install the batteries, slide the battery door down. Insert the cells as shown in the diagram, making sure to note proper polarity for each cell. Close the battery door.

### Power Switch, LED, and Low Battery Alarm

The red power LED should light when the power switch is moved upwards to the “ON” position. The Tx should have adequate power for flight when the LED is on constantly. Anytime the LED begins to flash, accompanied by the sounding of an audible tone, the Tx battery voltage has dropped too low **and operation of the model should NOT be attempted!**



**WARNING! Never operate an R/C model with weak Tx batteries! Reduced operational range and/or possible loss of control of the aircraft could result. Replace weak alkaline batteries, or re-charge NiCd or NiMH batteries before attempting a flight!**

If during a flight the Tx LED starts to flash, accompanied by the sounding of audible tones, it's a warning that the Tx batteries have become weak and the aircraft should be landed as soon as possible!



## ADJUSTABLE STICKS



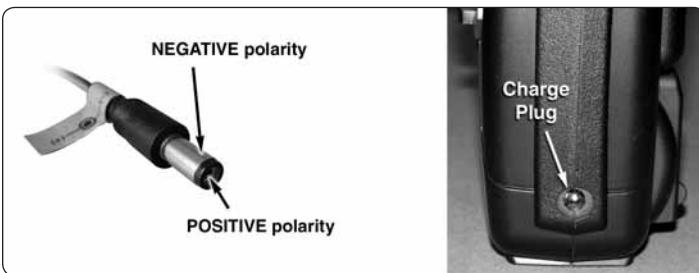
The length of both gimbal sticks can be adjusted as desired. Loosen the set screw inside the center of the stick with a 2mm hex wrench. Rotate the stick end counter-clockwise to lengthen the stick, or clockwise to shorten the stick. Once the desired stick length is found, tighten the set screw with the hex wrench.

## CHARGE JACK



**WARNING!!** Do NOT attempt to recharge alkaline batteries! The charge jack should ONLY be used if rechargeable cells are used in the transmitter.

The TTX404 includes a built-in charge jack for convenient recharging of NiCd or NiMH batteries, and is compatible with charge leads designed for Futaba® brand transmitters. (HCAP0101) This jack is NOT compatible with charge leads for Hitec®, Airtronics®, JR® or Spektrum® radios. The dimensions for compatible charge plugs are as shown in the picture below.



To use the charge jack with optional rechargeable batteries, first remove the sticker that covers the charge jack on the side of the Tx – making sure not to allow any object to be inserted inside the jack itself. Next, insert the cells inside the Tx's battery compartment noting proper polarity. Make sure the transmitter's power switch is in the OFF position. Connect a compatible charge lead to the jack and follow the instructions included with the charger for charging of NiCd or NiMH batteries that are rated at 4.8V.

Tactic's optional TACP1000 rechargeable battery and wall charger kit includes eight "AA" size rechargeable NiMH cells and 110V AC wall charger, which is compatible with this Tx and can be found at local retailers. Make sure to follow the instructions included with the charge kit.



**WARNING!!** It's not recommended to charge batteries at greater than 1 amp through this charge jack. Fast charging of NiCd and NiMH batteries should ONLY be done with chargers that are specifically designed to include the peak-detection function which can automatically stop charge when full charge is detected. Misuse, improper charging, or over-charging of rechargeable cells can result in damage to the cells that could include cell rupture, explosion, or fire!!

## TRAINER FUNCTION

The TTX404 Tx includes a built-in **wireless** trainer function – no trainer cable required! This trainer system connects a teacher's Tactic Tx to a student's Tactic Tx by wireless connection. Tactic's wireless trainer function is not compatible with trainer systems in any other brand radios.



**IMPORTANT!** Before attempting to fly the airplane, it's very important to make sure all reversing switches and trim lever adjustments on the student's Tx match the settings on the teacher's Tx! Otherwise, the airplane could suddenly veer off in an unwanted manner when the teacher's trainer switch is pressed. Proper matching of the student and teacher's Tx settings should ensure that no unexpected movements occur when the trainer switch is pressed. This is especially true of the throttle control!

1. The Tx that was used to setup the controls on the aircraft must be used by the TEACHER.
2. The student must use a separate Tactic Tx with wireless trainer function.
3. Place the teacher and student's transmitters within 1 meter of each other, and make sure the throttle stick for each Tx is set to idle.
4. Turn ON the power switch for the Tx being held by the student.
5. Pull and hold the trainer switch on the teacher's Tx, and then turn ON the teacher's Tx power switch.
6. The LED on the teacher's Tx will flash 3 times to indicate it has become bound with the student's Tx.
7. The teacher can then release his trainer switch.
8. Once both transmitters are bound together, power can be applied to the receiver to prepare for flight.

When the training session has ended, with the model on the ground and all power removed from the model, place both transmitters within 1 meter of each other and simply turn the power switch for both transmitters to the OFF position. This will terminate the wireless link between both transmitters. If additional training will be performed again, return to step 1 above to re-establish the wireless link between the teacher and student's transmitters.

## BIND THE RECEIVER TO THE Tx

For proper operation it's necessary to "bind" the Tx and Rx together electronically. This ensures sole communication between the two, and prevents other transmitters from being able to control the receiver.

1. Turn on the Tx.
2. Apply power to the Rx.
3. If the Rx LED flashes once and then stays on, the Rx is already bound to the Tx and you can skip to the next section. Otherwise, insert a small diameter screwdriver through the hole marked "BIND" and press the pushbutton until the Rx LED glows red and then turns off after about one second.
4. Release the "BIND" button.
5. If the binding is successful, the Rx LED will flash once and then remain ON.
6. Test for proper Tx/Rx functionality in the next section. If the radio doesn't appear to have become properly binded, repeat steps 1–6 above.

## FAILSAFE FUNCTION

The included TR624 receiver has a failsafe feature which engages in the event that the radio signal from the transmitter somehow becomes interrupted. This safety feature causes the servos to automatically move either to a certain position, or hold their last position so to prevent the model from moving in an erratic manner. Channels 1, 2, and 4 will enter a "hold" mode, whereby the servos will lock in their last recognized position.

Channel 3 will move to a pre-set position. The factory default failsafe position for channel 3 is to move to 0% full throttle. Motor/prop movement should stop if the receiver loses signal from the transmitter. The throttle servo's failsafe position can be manually re-set to any other position if desired, as follows:

**IMPORTANT NOTE:** Before manually resetting the failsafe, make sure the servo reversing switches are in the correct position for the application.

1. Apply power to the Tx and Rx.
2. If using an ESC, do NOT arm the ESC. Do NOT attempt to adjust the throttle's failsafe position if the ESC is armed.
3. Move the Tx throttle stick to the desired position for the throttle control to move if the Rx goes to failsafe.
4. Press and hold the "Bind" button on the receiver, and the Rx's LED should blink twice. Release the Bind button, and the receiver's LED should turn on (stop flashing). The Tx and Rx should now be bound, with the throttle failsafe in the new position as set above.

## 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.

**Hobbico Product Support**  
3002 N Apollo Drive Suite 1  
Champaign, IL 61822

Ph: (217) 398-8970 ext. 5  
Fax: (217) 398-7721

E-mail: [airsupport@hobbico.com](mailto:airsupport@hobbico.com)

## ORDERING REPLACEMENT PARTS

Replacement parts for the AcroWot MKII 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.

To locate a hobby dealer, visit the Hobbico web site at [www.hobbico.com](http://www.hobbico.com). Select "Where to Buy" in the menu across the top of the page and follow the instructions provided to locate a U.S., Canadian or International dealer.

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](mailto:productsupport@hobbico.com), or by telephone at (217) 398-8970.

### REPLACEMENT PARTS LIST

ORDER NO.	DESCRIPTION
FLZA6223	Fuselage Set
FLZA6224	One Piece Wing
FLZA6225	Vertical Fin
FLZA6226	Horizontal Stab
FLZA6227	Main Landing Gear
FLZA6228	Tail Wheel Assembly
FLZA6229	Spinner Assembly
FLZA6230	Foam Battery Hatch
FLZA6231	11x8 Propeller
FLZA6232	Prop Adapter
FLZA6233	Brushless Motor
FLZA6234	40 Amp ESC
FLZA6235	Hardware Set
FLZA6236	Decal Sheet
GPMM3318	GP 3S LiPo Balancing Smart Charger w/AC/DC
TACJ2404	Tactic TTX404 4-Channel 2.4GHz Radio System
TACL0624	Tactic TT624 6-Channel 2.4GHz Receiver
FLZA6024	LiPo Battery 3S 1800 mAh

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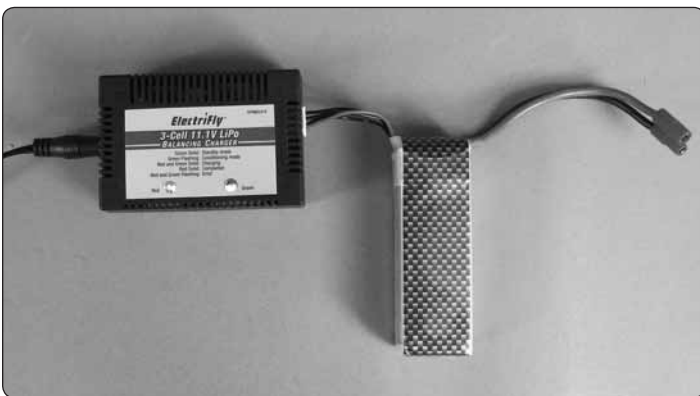


1. Fuselage
2. Wing
3. Stabilizer/Elevators
4. Vertical Fin/Rudder
5. Main Landing Gear
6. Flight Battery
7. Spinner/Propeller
8. Control Horn
9. Tail Wheel Assembly

## PREPARATIONS

Before starting to assemble the AcroWot MKII, we recommend charging the flight battery. Then, when you are ready to set up the radio system, the motor battery can be used to power the receiver.

### Charge the Battery



The following is an overview of how to charge your motor battery using the ElectrifiFly Smart Charger. If you are using a different LiPo charger, carefully follow the instructions included with the charger.

1. Connect the input power to the charger. The GREEN LED will be lit, indicating standby mode. The RED LED will be OFF.
2. Connect the battery to be charged to the balance plug. The RED LED will also be lit, and remain RED during the charging. Both LEDs should be lit solid while charging.

3. If the battery was completely discharged, the RED and GREEN LEDs will start to flash after 2-hours and 40-minutes. The charger has a built-in safety timer.
4. Disconnect the battery from the charger, wait for the GREEN LED to be lit, and then reconnect the battery to the charger.
5. It will take approximately 2-1/2 to 3 hours to complete the charge. When the battery is fully charged, the GREEN LED will turn OFF. Remove the battery from the charger at this time.
6. Charging time depends on the level of discharge of the battery and if the battery cells were unbalanced.

### LED SCHEME Use this table to determine charge action.

RED LED	GREEN LED	ACTION
OFF	Solid ON	No battery is connected
OFF	Flashing	Conditioning battery
Solid ON	Solid ON	Battery charging
Solid ON	OFF	Charge complete
Flashing	Flashing	ERROR*

\*Possible sources of battery error may include a highly unbalanced pack, charger timed out, or one cell of the pack which is low voltage. In the case of a battery error, please remove the battery pack from the charger and inspect it carefully for swelling or any other damage, such as broken wires.

### Battery Charging Precautions

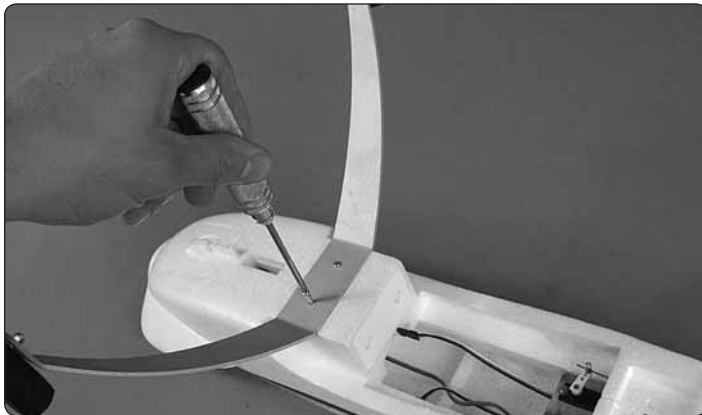
- Be careful to avoid overcharging the battery. Only use a LiPo approved charger. Never use a NiCd/NiMH peak charger.

- Remember to check the temperature of the battery during the charge. The battery should not get hot. If it does, unplug the battery from the charger.
- Charge the battery at a maximum charge rate of 1.8 amps. A higher charge rate will cause the battery to get hot.
- Never place the battery on combustible material or leave it unattended while charging.
- Never charge the battery in the plane.
- We recommend that a balancing charger be used to charge the battery. A properly cared for battery will last a long time. If the battery pack is continually charged without balancing the individual cells, the life of the battery pack will be shortened.

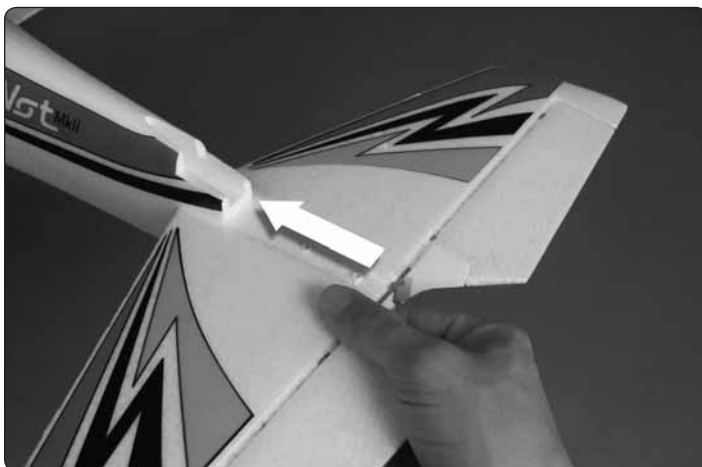
### Battery Recycling

**Attention:** The AcroWot MKII 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. We encourage contacting your local recycling center for more information.

## ASSEMBLE THE ACROWOT MKII



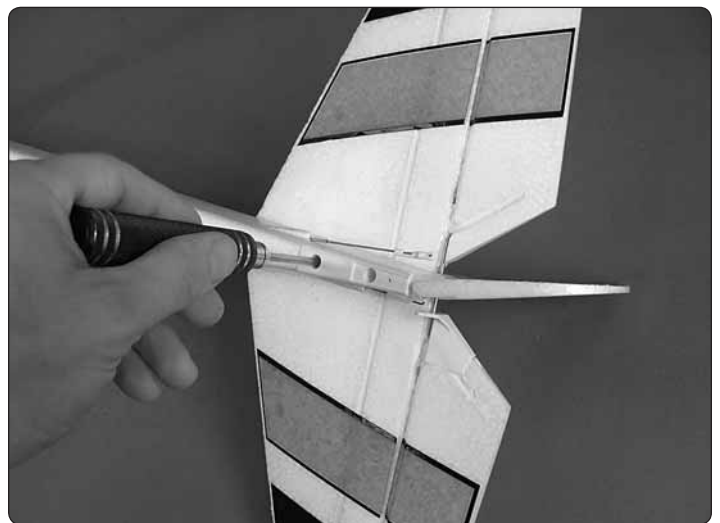
1. Install the main landing gear onto the fuselage using two 3x15mm machine screws and thread locking compound. Note the orientation of the gear in the photo.



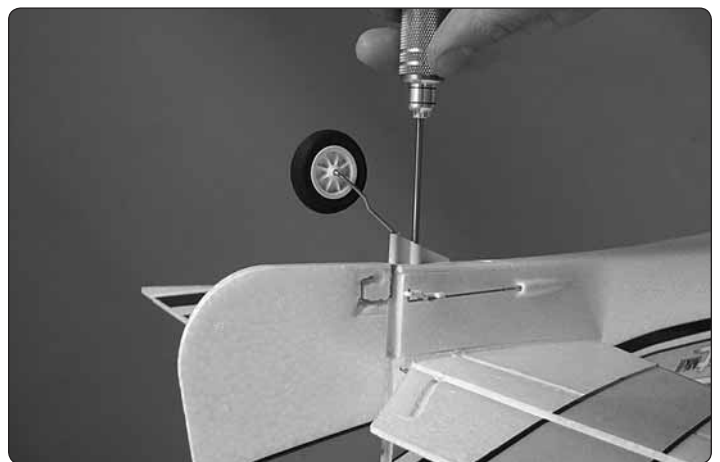
2. Slide the horizontal stabilizer into the slot in the fuselage. Align the holes in the stab with the holes in the fuse.



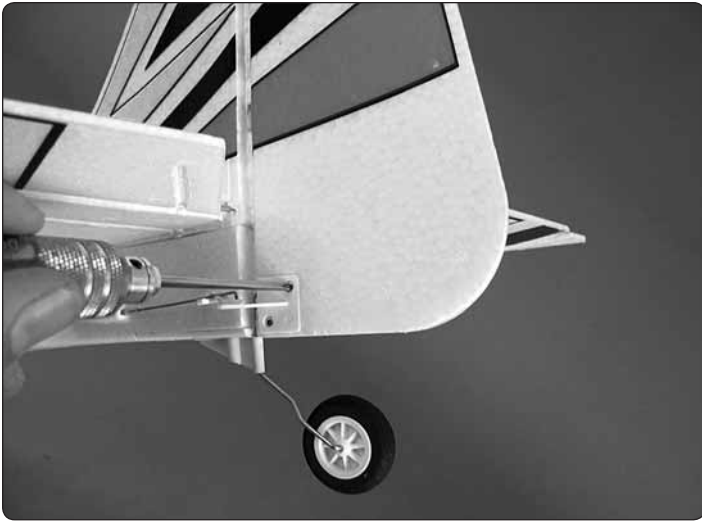
3. Fit the vertical fin in place, making sure it is fully seated in the notch in the fuse.



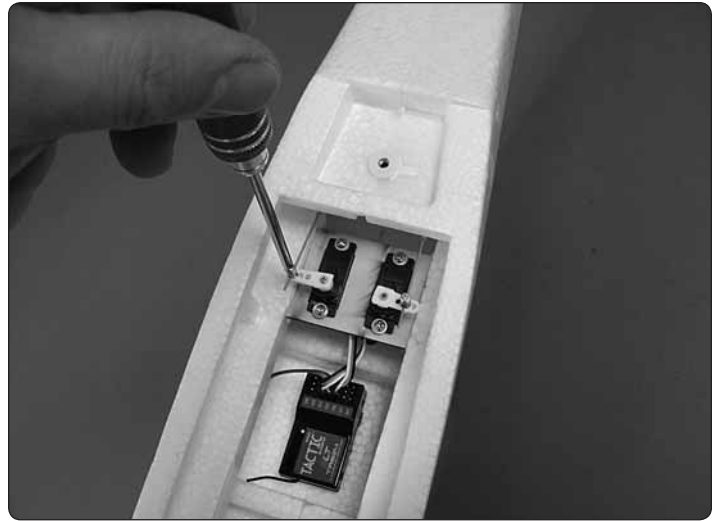
4. Secure the fin and stab in place with two 3x18mm machine screws as shown.



5. Fit the tail wheel assembly onto the underside of the fuse and push the tail wheel tiller wire into the molded groove in the rudder. Secure the tail wheel assembly with a 2x10mm self-tapping screw.



❑ 6. Install the rudder control horn onto the rudder using two 2x8mm self-tapping screws and the rudder control horn backplate. Note that the control horn captures the tail wheel tiller wire in the rudder.



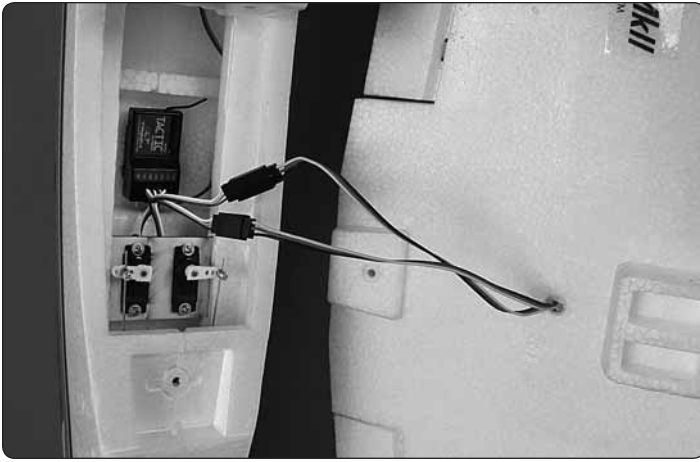
❑ 7. Remove the 90 degree pushrod connector from the rudder pushrod. Fit the 90 degree bend in the rudder pushrod wire into the outer hole of the rudder control horn. Reattach the 90 degree pushrod connector, making sure the connector is properly snapped into place.

❑ 9. Loosen the screws in the elevator and rudder servo arms. Temporarily power the receiver by turning on your transmitter (if you are using the AnyLink adapter, refer to the AnyLink manual for additional instructions) and connecting the flight battery to the ESC in the battery compartment. Center the elevators and rudder (also be sure your trim dials on the transmitter are centered). Tighten the screws in the servo arms with thread locking compound.



❑ 8. Install the elevator pushrod in the outer hole of the elevator control horn in the same manner as you did the rudder pushrod.

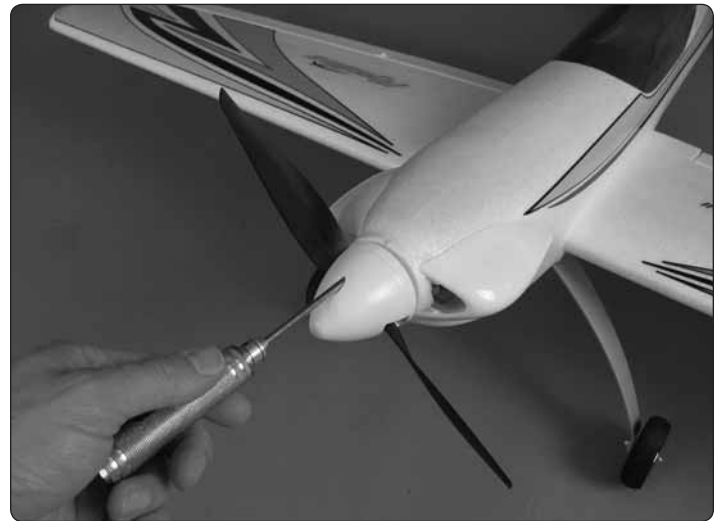




❑ 10. Connect the Y-harness attached to the aileron servo leads to the receiver. Fit the wing in place on the fuselage and secure it using a 4x12mm machine screw.



❑ 11. As you did with the elevators and rudder, center the ailerons and tighten the screws in the aileron servo arms with thread locking compound, with the Rx powered.



❑ 12. Fit the spinner backplate onto the prop adapter shaft followed by the propeller, prop washer, and prop nut. Thoroughly tighten the nut onto the shaft. Install the spinner cone onto the backplate with the included screws.



❑ 13. Fit the flight battery into the battery compartment in preparation for checking the center of gravity of the plane. Install the battery hatch in place.

## Set the Control Throws

To ensure a successful first flight, set up your AcroWot MKII according to the control throws specified in this manual. The throws have been determined through actual flight testing and accurate record-keeping allowing the model to perform in the manner in which it was intended. If, after you have become accustomed to the way the AcroWot MKII flies, you would like to change the throws to suit your taste, that is fine. However, too much control throw could make the model too responsive and difficult to control, so remember, “more is not always better.”

These are the recommended control surface throws:

	LOW RATE	HIGH RATE
ELEVATOR	Up & Down 11/32" [9mm] 10°	Up & Down 5/8" [16mm] 18°
RUDDER	Right & Left 1-1/16" [27mm] 17°	Right & Left 1-5/8" [41mm] 27°
AILERONS	Up & Down 11/32" [9mm] 12°	Up & Down 1/2" [13mm] 18°

**NOTE:** The throws are measured at the **widest part** of the elevators, rudder and ailerons.

## Balance the Model (C.G.)

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

At this stage the model should be in ready-to-fly condition with **all** of the components in place including the complete radio system, battery, propeller, and spinner.

1. If using a Great Planes® C.G. Machine™, set the rulers to 2-7/16" [62mm]. If not using a C.G. Machine, use a fine-point felt tip pen to mark lines on the top of wing on both sides of the fuselage 2-7/16" [62mm] back from the leading edge. Apply narrow (1/16" [2mm]) strips of tape over the lines so you will be able to feel them when lifting the model with your fingers.

This is where your model should balance for the first flights. Later, you may experiment by shifting the C.G. 3/8" [10mm] forward or 3/8" [10mm] back to change the flying characteristics. Moving the C.G. forward will improve the smoothness and stability, but the model will then be less aerobatic (which may be fine for less-experienced pilots). Moving the C.G. aft makes the model more maneuverable and aerobatic for experienced pilots. In any case, **start at the recommended balance point** and do not at any time balance the model outside the specified range.



2. With the wing attached to the fuselage, and all parts of the model installed (ready-to-fly) with battery pack, place the model upside-down on a Great Planes CG Machine, or lift it upside-down at the balance point you marked.

3. If the tail drops, the model is “tail heavy.” If possible, move the receiver forward to get the model to balance. If the nose drops, the model is “nose heavy.” If possible, move the receiver aft. If additional weight is still required, nose or tail weight may be easily added by using Great Planes “stick-on” lead (GPMQ4485). To find out how much weight is required, place incrementally increasing amounts of weight on the top of the fuselage over the location where it would be mounted inside until the model balances. Once you have determined the amount of weight required, it can be permanently attached with glue or screws.

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

## Balance the Model Laterally

1. With the wing level, have an assistant help you lift the model by the motor propeller shaft and the bottom of the fuse under the TE of the fin. Do this several times.

2. If one wing always drops when you lift the model, it means that side is heavy. Balance the airplane by adding weight to the other wing tip. **An airplane that has been laterally balanced will track better in loops and other maneuvers.**

## CHOOSE A GOOD FLYING SITE

If the wind is calm or very light, the AcroWot MKII will be docile and easy to control. We do not recommend flying in winds greater than 10mph [16km/h]. Find a flying site clear of buildings, trees, power lines and other obstructions. Until you know how much area will be required and have mastered flying your AcroWot in confined spaces, a site at least the size of two or three football fields should be adequate – a flying field specifically intended for R/C planes is best. Don't fly within five miles of R/C flying fields and never fly near people – especially children who can wander unpredictably into the flying area.

### Perform a Range Check

As a precaution, an operational ground range test should be performed before the first flight each time you go out. Performing a range test is a good way to detect problems that could cause loss of control such as low batteries, defective or damaged radio components or radio interference. This usually requires an assistant and should be done at the actual flying site you will be using.

First switch on the transmitter, then install the fully-charged battery into the fuselage. Connect the battery and install the battery hatch.

**Remember, use care not to “bump” the throttle stick. Otherwise, the propeller will turn and possibly cause damage or injury.**

To range check the Tactic TTX404 radio control system, switch on the transmitter and connect the motor battery to the ESC. Set the model on the ground and have an assistant hold the model. Walk 100' (30m) from the model and while pointing the transmitter at the plane, operate the controls ensuring that the plane's surfaces operate according to the transmitter inputs. Operate the motor at different rpm. Have your assistant alert you if the controls quit responding or move suddenly or erratically. If you are using a different radio control system, follow the instructions that came with your radio control system to perform a ground range check. If the controls aren't working correctly or if anything seems wrong, don't fly the model until you find and correct the problem. Make certain all the servo wires are securely connected to the receiver and the transmitter batteries are in good condition.

### Monitor Your Flight Time

Monitor and limit your flight time using a timer (such as one on a wrist watch or in your transmitter if yours has one). When the batteries are getting low you will usually notice a performance drop before the ESC cuts off motor power, so when the plane starts flying slower you should land. To avoid an unexpected dead-stick landing on your first flight, set your timer to a conservative 4 minutes (in most conditions the AcroWot MKII will usually fly for approximately 5 minutes, but this can vary). When your alarm sounds you can either land right away, or if you are an experienced pilot you may continue to fly until the motor finally quits. Then, glide it in for a landing.

If planning a “dead-stick,” circle your AcroWot upwind of the landing area until the motor quits and note the run time. When you learn how much flight time you are getting you can adjust your timer accordingly. Always be conservative so the motor won't quit unexpectedly and you will have enough battery to land under power.

## FLYING

The AcroWot MKII is a great-flying model that flies smoothly and predictably. The AcroWot does not, however, possess the self-recovery characteristics of a primary R/C trainer and should be flown only by experienced R/C pilots.

### Takeoff

Before you get ready to takeoff, see how the model handles on the ground by doing a few practice runs at **low speeds** on the runway. Hold “up” elevator to keep the tail wheel on the ground. If necessary, adjust the tail wheel so the model will roll straight down the runway. If you need to calm your nerves before the maiden flight, bring the model back into the pits. Top off the battery charge, then check all fasteners and control linkages for peace of mind.

Remember to take off into the wind. When you're ready, point the model straight down the runway, hold a bit of up elevator to keep the tail on the ground to maintain tail wheel steering, then gradually advance the throttle. As the model gains speed decrease up elevator allowing the tail to come off the ground. One of the most important things to remember with a tail dragger is to always be ready to apply **right** rudder to counteract motor torque. Gain as much speed as your runway and flying site will practically allow before gently applying up elevator, lifting the model into the air. At this moment it is likely that you will need to apply more right rudder to counteract motor torque. Be smooth on the elevator stick, allowing the model to establish a **gentle** climb to a safe altitude before turning into the traffic pattern.

### Flight

For reassurance and to keep an eye on other traffic, it is a good idea to have an assistant on the flight line with you. Tell him to remind you to throttle back once the plane gets to a comfortable altitude. While full throttle is usually desirable for takeoff, most models fly more smoothly at reduced speeds.

Take it easy with the AcroWot MKII for the first few flights, gradually getting acquainted with it as you gain confidence. Adjust the trims to maintain straight and level flight. After flying around for a while, and while still at a safe altitude with plenty of battery charge, practice slow flight and execute practice landing approaches by reducing the throttle to see how the model handles at slower speeds. Add power to see how she climbs as well. Continue to fly around, executing various maneuvers and making mental notes (or having your assistant write them down) of what trim or C.G. changes may be required to fine tune the model so it flies the way you like. Mind your battery charge, but use this first flight to become familiar with your model before landing.

## Landing

To initiate a landing approach, lower the throttle while on the downwind leg. Allow the nose of the model to pitch downward to gradually bleed off altitude. Continue to lose altitude, but maintain airspeed by keeping the nose down as you turn onto the crosswind leg. Make your final turn toward the runway (into the wind) keeping the nose down to maintain airspeed and control. Level the attitude when the model reaches the runway threshold, modulating the throttle as necessary to maintain your glide path and airspeed. If you are going to overshoot, smoothly advance the throttle (always ready on the right rudder to counteract torque) and climb out to make another attempt.

When you're ready to make your landing flare and the model is a foot or so off the deck, smoothly increase up elevator until it gently touches down. Once the model is on the runway and has lost flying speed, hold up elevator to place the tail on the ground, regaining tail wheel control.

One final note about flying your model. Have a goal or flight plan in mind for **every** flight. This can be learning a new maneuver(s), improving a maneuver(s) you already know, or learning how the model behaves in certain conditions (such as on high or low rates). This is not necessarily to improve your skills (*though it is never a bad idea!*), but more importantly so you do not surprise yourself by impulsively attempting a maneuver and suddenly finding that you've run out of time, altitude or airspeed. Every maneuver should be deliberate, not impulsive. For example, if you're going to do a loop, check your altitude, mind the wind direction (anticipating rudder corrections that will be required to maintain heading), remember to throttle back at the top, and make certain you are on the desired rates (high/low rates). A flight plan greatly reduces the chances of crashing your model just because of poor planning and impulsive moves. **Remember to think.**

**Have a ball! But always stay in control  
and fly in a safe manner.**

**GOOD LUCK AND GREAT FLYING!**

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