VOLANTEX RC

V767-1

Firstar

Specification

Wingspan:	758mm
Length:	536mm
Weight with Battery:	200g
Battery:	7.2V 500mAh NiMh for Brushed RTF 7.4V 850mAh Li-Po for Brushless RTF
Transmitter:	4 Channel 2.4GHz (included with Dual function, simulator plug.) for RTF.
Receiver:	3 - Channel 2.4GHz combine with (1.3g servo 2pcs, ESC) for Brushed RTF 4 - Channel 2.4GHz standard receiver for 4-CH Brushless RTF

Safety Precautions

- Your airplane 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 plane, if not assembled and operated correctly, could possibly cause injury to yourself or spectators and damage property.

- Keep items that could become entangled in the propeller/ rotor blades away from the propeller/rotor, including loose clothing, tool , etc. Be especially sure to keep your hands, face and other parts of your body away from the propeller/rotor blades.

- As the user of this product you are solely and wholly responsible for operating it in a manner that does not endanger yourself and others or result in damage to the productor the property of others.

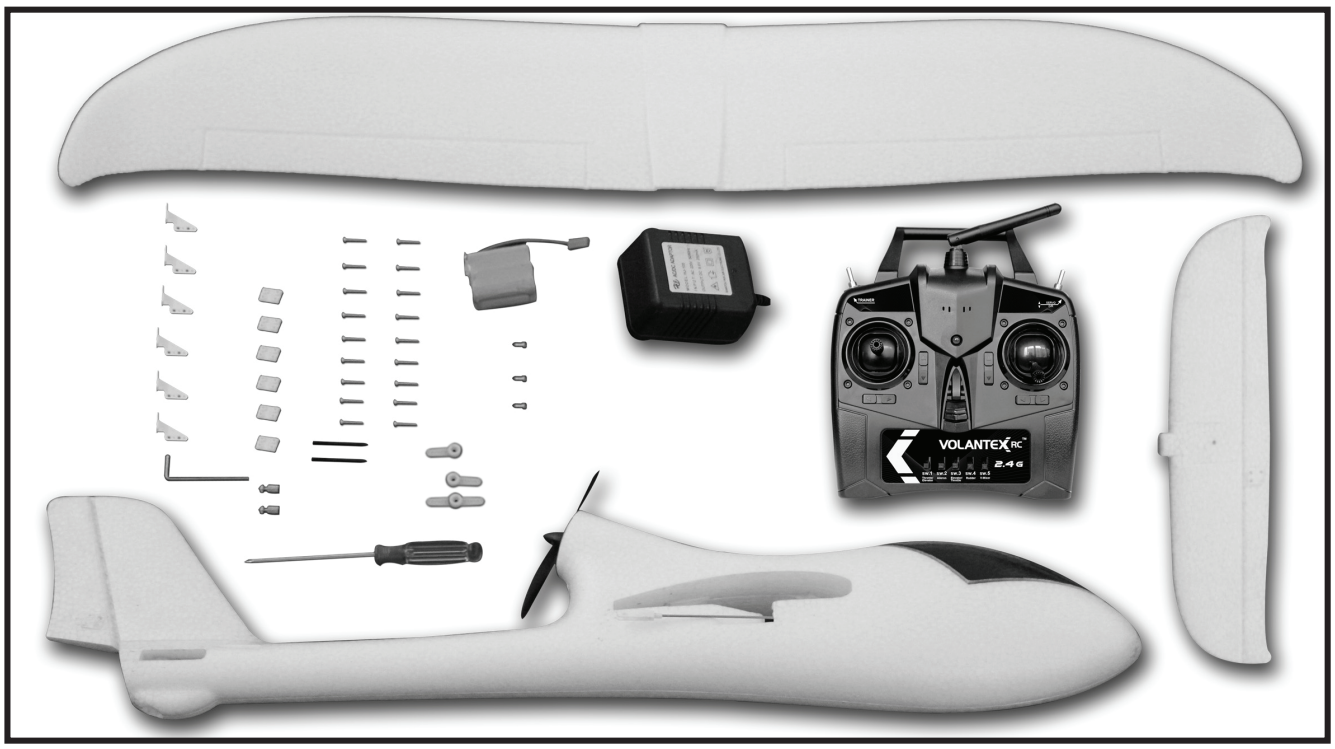
- You must assemble the model according to the instructions. Do not alteror modify the model, as doing so may result in an unsafe or unflyable model. In a few cases the instructions may differ slightly from the photo. In those instances the written instructions should be considered as correct.

- 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 flight. If you are not a member of a club, your local hobby shop has information about clubs in your area whose membership includes experienced pilots.

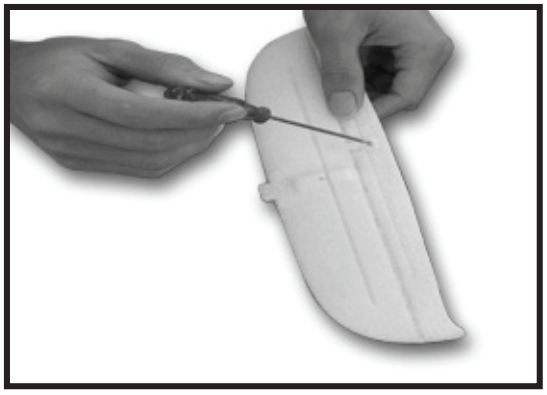
- While this kit has been flight tested to exceed normal use, if the plane will be used for extremely high stress flying, such as racing , or if an engine larger than one in the recommended range is used, the modeler is responsible for taking steps to reinforce the high stress points and / or substituting hardware more suitable for the increased stress.

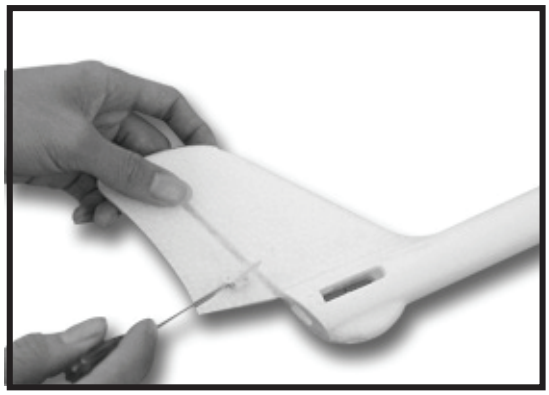
We , as the kit manufacturer, provide you with a top quality, thoroughly tested kit and instructions, but ultimately the quality and flyability of your finished model depends on how you build it; therefore, we cannot in any way guarantee the performance of your completed model, and no representations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

Kit Contents

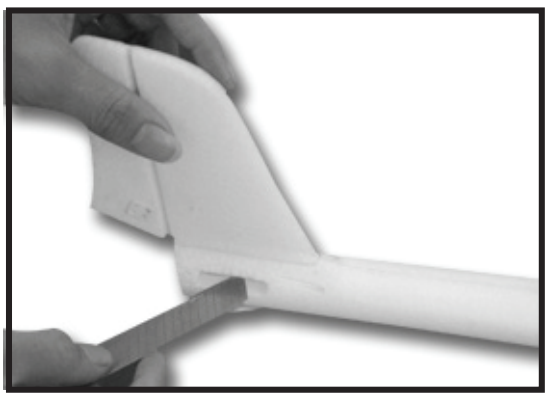


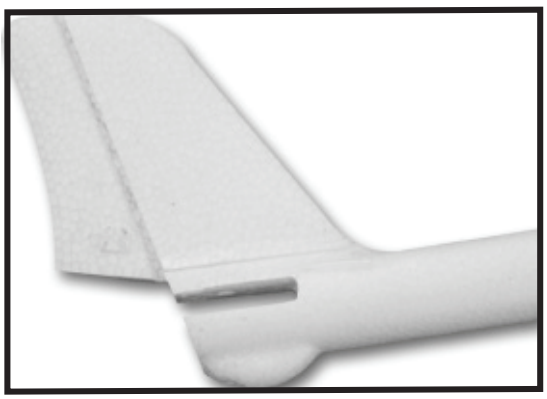
Assemble The Plane



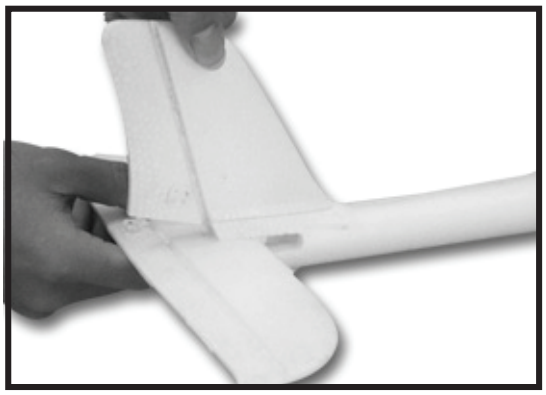


1. Install the servo horn of the vertical and horizontal tail by screw.

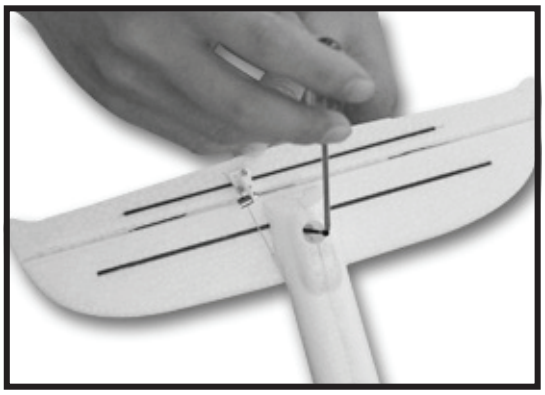




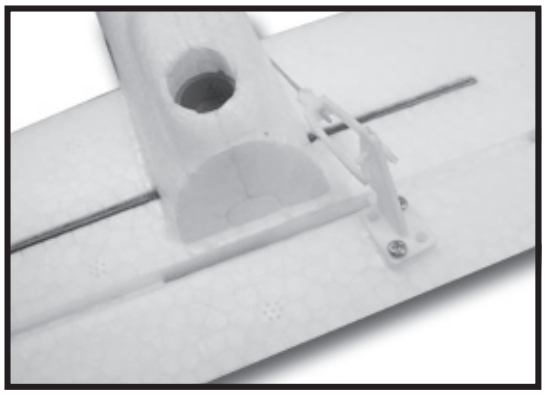
2. Cut the foam of the hole in the end of the tail.

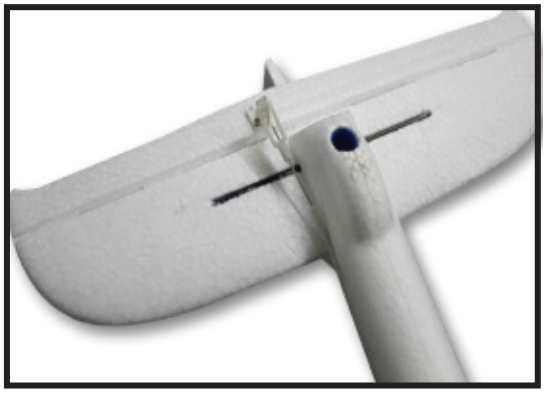


4. Insert the horizontal tail to the corresponding gap of the tail.

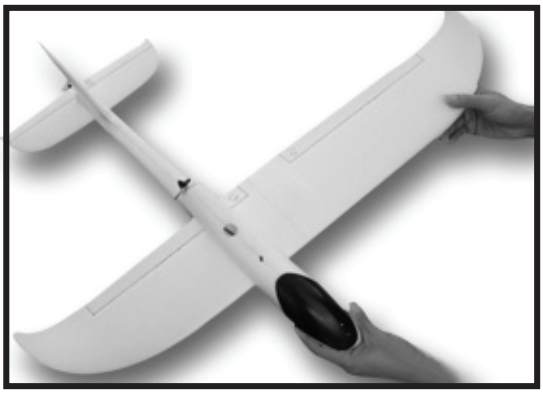


5. Fix the tail by a long corresponding screw.



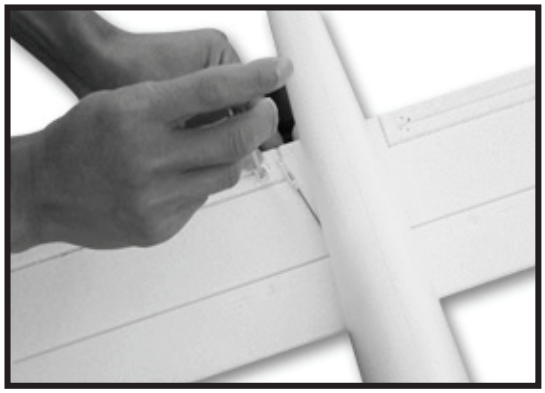


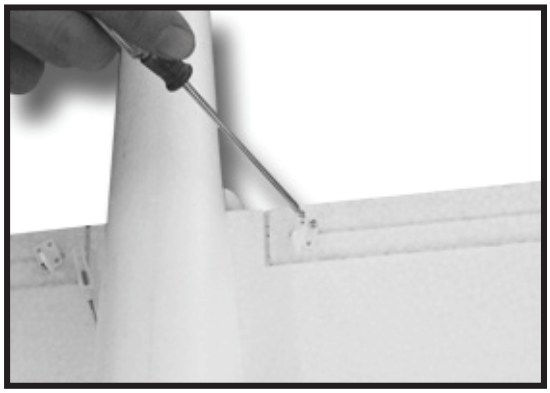
6. Connect the push rod wire with the control surface of the vertical and horizontal tail by the clevis.



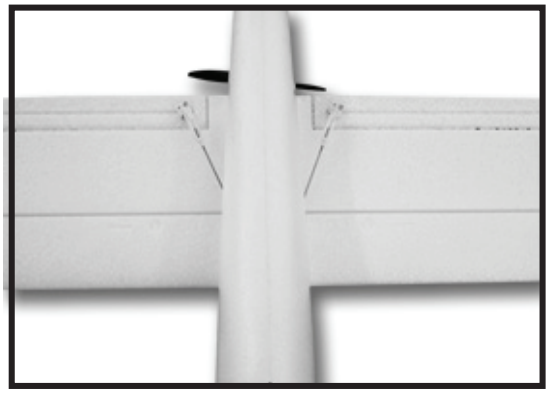
7. Insert the wing to the corresponding hole of the fuselage.Make sure the wing is fix vertically with the fuselage.

Install the ailron(4-CH)





8. Install the servo horn of the aileron by screw.



9. Connect the push rod to the servon horn and make sure the aileron are balance.

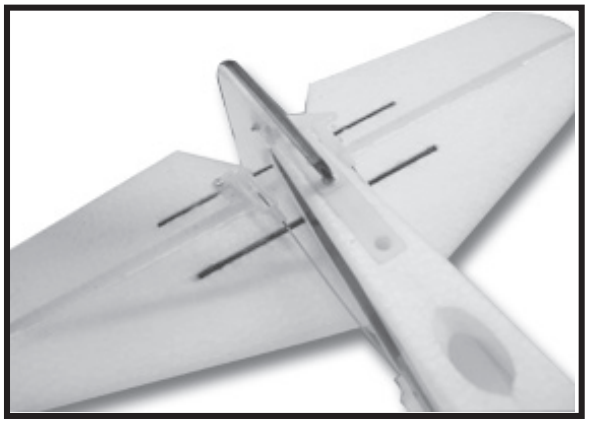
10. The plane fully assembled as shown in the figure.

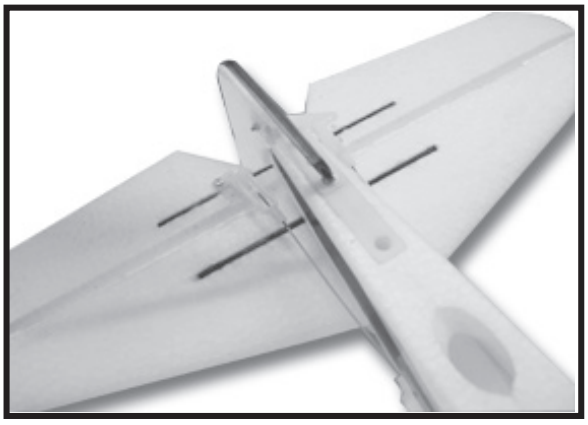
Centering the Control Surfaces

With the transmitter turned on and the LiPo flight battery connected to the ESC (and installed in the battery compartment) it's now possible to connect the pushrods to the rudder and elevator control surfaces and to 'center' the surfaces accordingly.

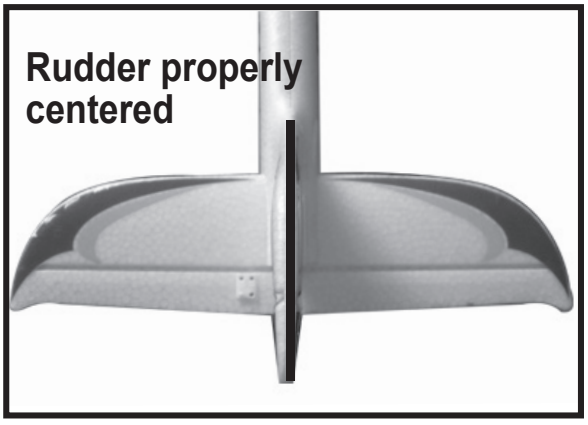
Firstly, be sure to center the elevator and rudder (aileron) trim levers. Press the trim button till it has a short and big drop sound, (a long and big drop sound means you reach the end of the trim in one side).

With the trim levers centered, carefully spread open each 'clevis' (the white color plastic part installed on the threaded end of the metal pushrod) so you can insert the pin in the OUTERMOST hole on each control horn. It may be helpful to insert a flat blade screwdriver (not included) into the clevis then carefully 'twist' it until it disengages the pin from the hole in the clevis. Also, it is not necessary to 'snap' the clevis back together until the centering adjustments are complete.





After connecting the clevises to the control horns view the vertical tail and rudder from directly above. The rudder should be ' in line ' with the vertical tail when it's properly 'centered'. However, if the rudder is angled off to the right or left you can adjust the length/position of the pushrod/clevis so the surface is centered 'mechanically' while the trim lever on the transmitter is centered.

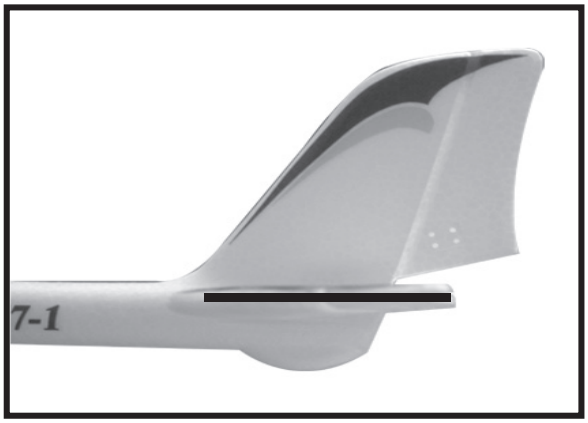


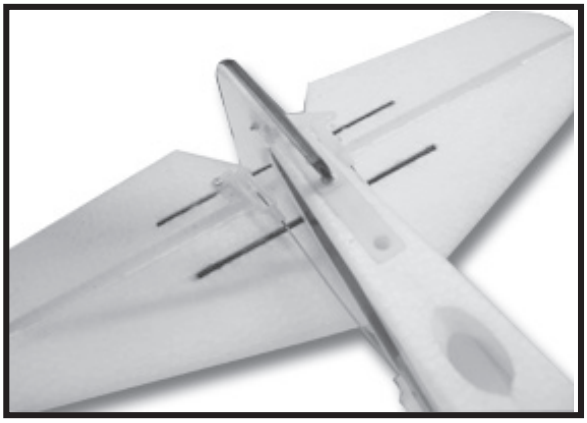
If the rudder is angled off to the left carefully remove the clevis from the control horn and screw it 'in'(clockwise) one half to one full turn then insert the pin back into the outermost hole in the control horn. Or, if the rudder is angled off to the right carefully remove the clevis from the control horn and screw it 'out' (counter-clockwise) one half to one full turn then insert the pin back into the outermost hole in the control horn.

View the vertical tail and rudder from directly above again and continue adjusting the length/position of the pushrod/ clevis until the rudder is centered appropriately.

NOTE: You should always rotate the clevis until the pin is perpendicular with the control horn to ensure the pin is not under any excessive load/ pressure when inserted in the hole and during operation. In some cases it may not be possible to 'exactly' center the surface mechanically while properly aligning the pin. In these cases be sure the pin is properly aligned then adjust the position of the trim lever slightly as needed. Also, it will likely be necessary to make further adjustments to the position of the trim lever during flight as most surfaces do not end up in exactly the centered position when an airplane is trimmed properly for actual flight (but 'centered' is still the best starting point).

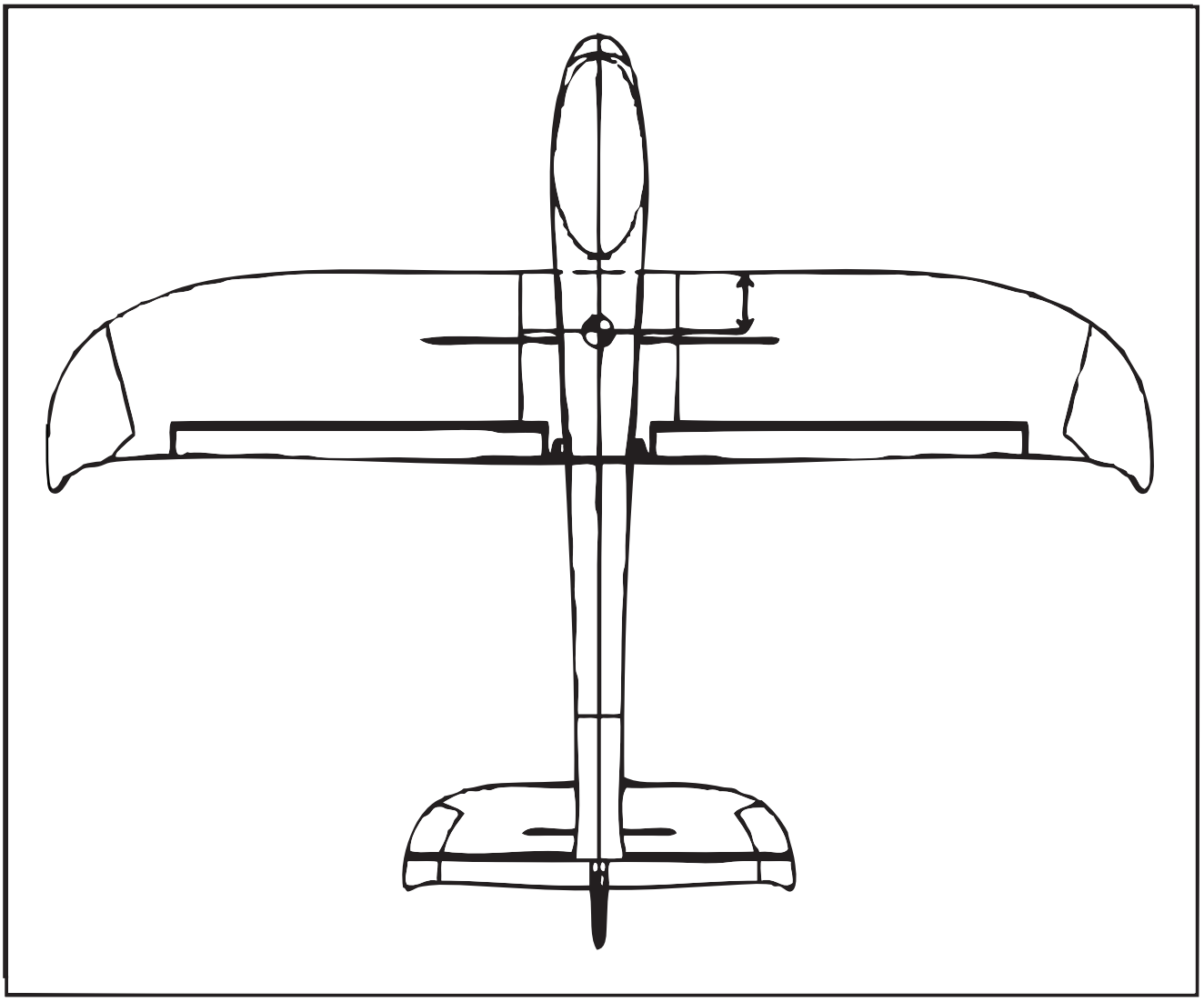
Follow the same steps outlined for centering the rudder to center the elevator (and aileron) as well.





Also, we strongly recommend installing the included 'clevis keepers' to provide added security for the clevises. Typically you can carefully slide the keepers over the clevises when they are not connected to the control horn.Then, after connecting the clevis to the control horn and ' snapping ' the clevis together you can slide the keepers into a position that does not allow them to 'bind'against the control horn during movement of the surface.

Center of Gravity



The ideal C.G.position is 40±5 mm behind the leading edge measured at where the wing meets the fuselage . The C.G. has a GREAT effect on the way of the model flight. If the C.G. is too far aft (tail heavy), the model will be too responsive and difficult to control. If the C.G. is too far forward (nose-heavy), the model will be too stable and not responsive enough.In order to obtain the C.G. specified, add weight to the fuselage or move the battery position.Check the C.G.before flying.

Battery Warnings

IMPORTANT NOTE: Lithium Polymer LiPo) batteries are significantly more volatile than the alkaline , NiCd and NiMH batteries also used in RC applications. All instructions and warnings must be followed exactly to prevent property damage and/ or personal injury as mishandling of LiPo batteries can result in fire.

By handling, charging or using the included LiPo battery you assume all risks associated with LiPo batteries. If you do not agree with these conditions, please return your complete product in new, unused condition to the place of purchase immediately.

You must read the following safety instructions and warnings before handling, charging or using the LiPo battery.

- You must charge the LiPo battery in a safe area away from flammable materials.

- Never charge the LiPo battery unattended at any time. When charging the battery you should always remain in constant observation to monitor the charging process and react immediately to any potential problems that may occur.

- After flying / discharging the battery you must allow it to cool to ambient / room temperature before recharging. Also, it is NOT necessary or recommended to discharge the battery 'completely' before charging (LiPo batteries have no 'memory' and it's safe to charge partially discharged batteries when using an appropriate charger and settings).

- To charge the battery you must use only the stock included Charger or a suitably compatible LiPo battery charger. Failure to do so may result in a fire causing property damage and/ or personal injury. DO NOT use a NiCd or NiMH charger to charge Li-Po battery.

- If at any time during the charge or discharge process the battery begins to balloon or swell, discontinue charging or discharging immediately. Quickly and safely disconnect the battery then place it in a safe , open area away from flammable materials to observe it for at least 15 minutes. Continuing to charge or discharge a battery that has begun to balloon or swell can result in a fire. A battery that has ballooned or swollen even a small amount must be removed from service completely.

- Store the battery partially charged (approximately 50% charged/3.85V per cell), at room temperature (approximately 68–77° Fahrenheit [F]) and in a dry area for best results.

- When transporting or temporarily storing the battery, the temperature range should be from approximately 40–100°F. Do not store the battery or model in a hot storage car or direct sunlight whenever possible. If stored in a hot garage or car the battery can be damaged or even catch fire.

- Do not over-discharge the LiPo flight battery. Discharging the LiPo flight battery to a voltage that is too low can cause damage to the battery resulting in reduced power, flight duration or failure of the battery entirely.

- LiPo cells should not be discharged to below 3.0V each under load. In the case of the 2-Cell/ 2S 7.4V LiPo battery used to power the plane you will not want to allow the battery to fall below 6.0V during flight.

The included ESC features a 'soft' low voltage cutoff (LVC) that smoothly reduces power to the motor (regardless of the power level you have set with the throttle stick) to let you know the voltage of the battery is close to the 6.0V minimum.

However, even before this reduction in power , if you find that more than the typical amount of throttle/ power is required to cruise or climb you should land the model and disconnect the battery immediately to prevent over-discharge.

And while it is possible to continue flying the model after the soft LVC occurs, this is NOT recommended. Continued discharging can result in reaching the 5.0V ' hard' LVC which may cause permanent damage to the LiPo battery resulting in reduced power and flight duration during subsequent fights (or failure of the battery entirely which is not covered under warranty).

Also, it is not recommended that you fly to the soft LVC every time you fly. Instead you should be aware of the power level of the battery / airplane throughout the flight, and if at any time the airplane begins to require more throttle/ power than typical to maintain cruise or climb you should land the airplane and disconnect

the LiPo battery immediately . Constantly discharging the battery to the soft LVC can still cause permanent damage to the battery so it's best to use a timer or stop -watch to time the duration of your flights and to stop flying at a reasonable time before the soft LVC is reached.

IMPORTANT NOTE: DO NOT LEAVE THE LIPO BATTERY CONNECTED TO THE ESC UNLESS YOU ARE READY TO FLY. IF THE BATTERY IS LEFT CONNECTED TO THE ESC WHEN IT IS NOT IN USE THE LIPO BATTERY WILL BE OVER-DISCHARGED BY THE SMALL AMOUNT OF CURRENT THE ESC CONSUMES.

It can sometimes take a few hours or even up to a few days to over- discharge the battery this way but doing so will likely cause permanent damage to or failure of the battery entirely (which is not covered under warranty).

IMPORTANT NOTE: DO NOT STORE THE LIPO FLIGHT BATTERY FULLY CHARGED. For improved safety and longevity of the LiPo battery it's best to store it only partially charged for any length of time. Storing the LiPo battery at approximately 50% charged (which is approximately 3.85V per cell) is typically best, however it will take some careful management of the charge time and the use of a voltmeter to achieve this voltage.

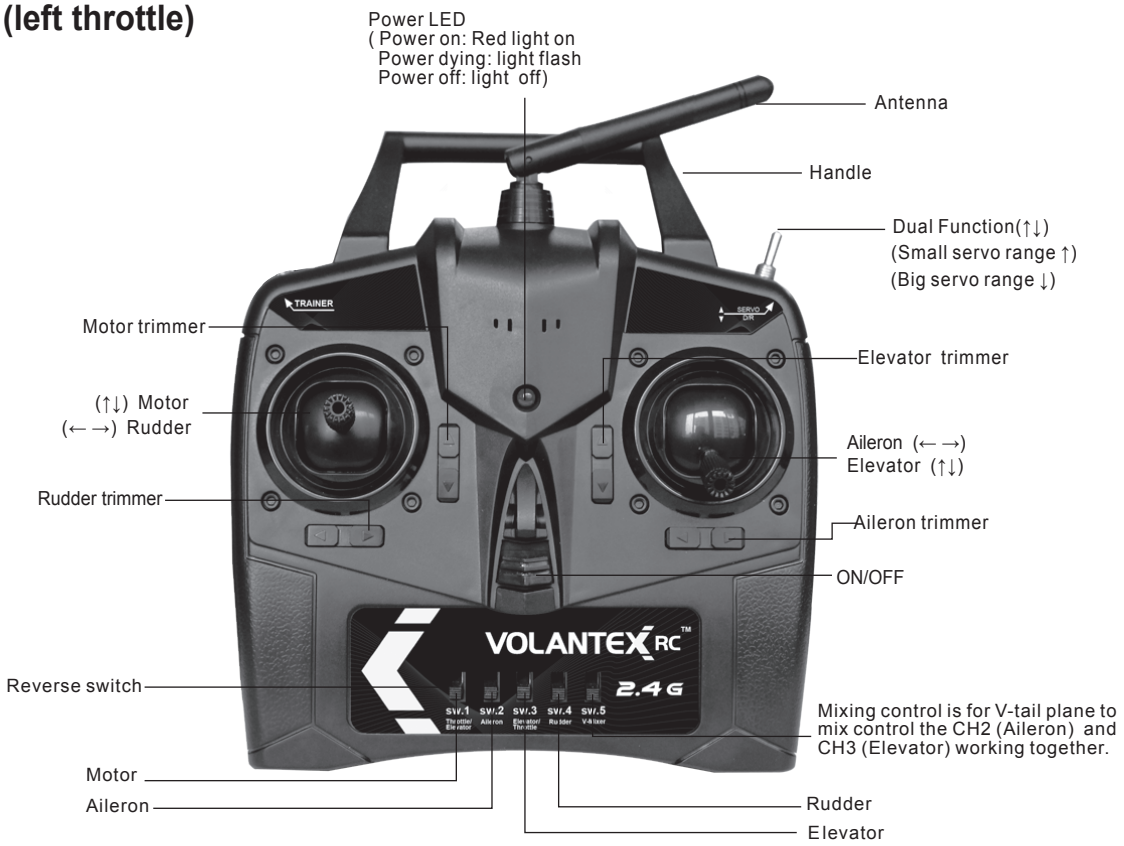
If you have the equipment and skills to achieve the 50% charge level for storage it is recommended. If not, simply be sure to not store the battery fully charged whenever possible. In fact ,as long as the battery will be stored at approximately room temperature and for no more than a few weeks before the next use, it may be best to store the battery in the discharged state after the last flight (as long as the battery was not over-discharged on the last flight).

Transmitter Details

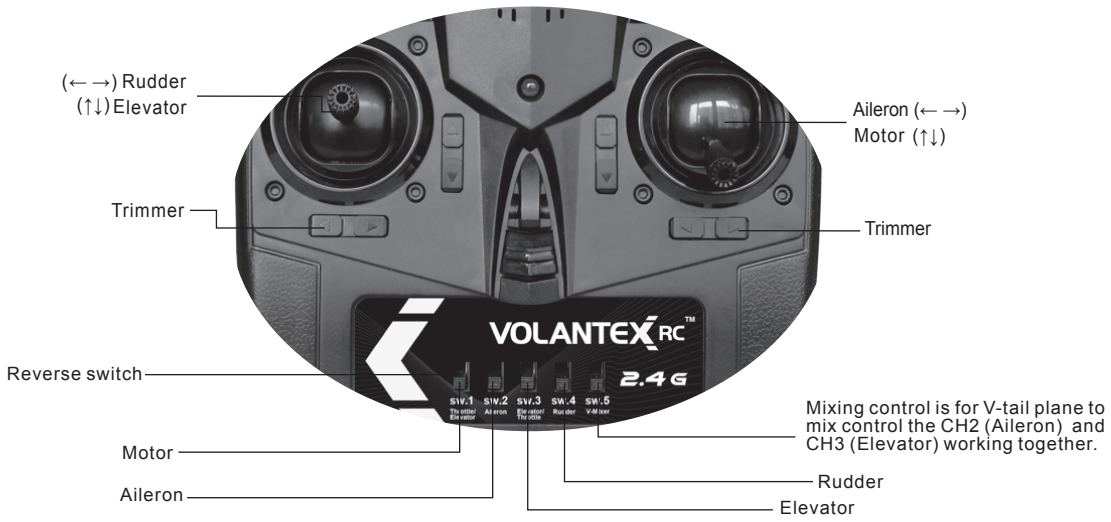
Mode 1 and Mode 2

Depending on which area you are in, you will either use a Mode1 or Mode 2 transmitter. The difference between the two modes deals with the throttle and Elevator joystick different. Mode 2 transmitters have the throttle control on the left stick and the Elevator controls on the right stick. Mode 1 is in the opposite way.

Mode 2 (left throttle)



Mode 1 (Right throttle)



Low Battery Voltage/Power Indication

When the AA battery voltage/power drops to a level that's too low for safe continued operation , the red color LED indicator will begin flashing. DO NOT use the transmitter or fly when the red LED indicator is flashing and immediately install new AA batteries before using the transmitter or flying.

Control / Servo Reversing

The transmitter features control/ servo reversing functionality for the aileron, elevator, throttle and rudder channels. The control / servo directions were set correctly at the factory for the plane , however , in case the controls are operating in the wrong direction , or you use the electronics in other models later on, simply change the position of 'Servo Reverse' switch for the channel(s) as needed.

Delta / Elevon Mixing

Located to the right of the 'Servo Reverse' switches is a switch that activates / deactivates the optional-use 'Delta / Elevon' mixing. No such mixing is used for the plane so please be sure this switch is in the OFF / lower position (failure to do so will result in improper control and the inability to fly the plane). However, if using this transmitter with 'flying wing' , delta or other airplanes that 'combine (mix)' the elevator and aileron (often known as 'elevon') controls you can move the switch to the ON/upper position.

Dual Function

When the Dual function is on the up position (face against the enduser), the servo will go in small range condition , the plane will move more stable , much easier to be under control by a beginners. If the switch is on the down position (opposite way), the servo move in big range condition. The plane will be more sensitive, better for expert to perform action.

Bind the receiver

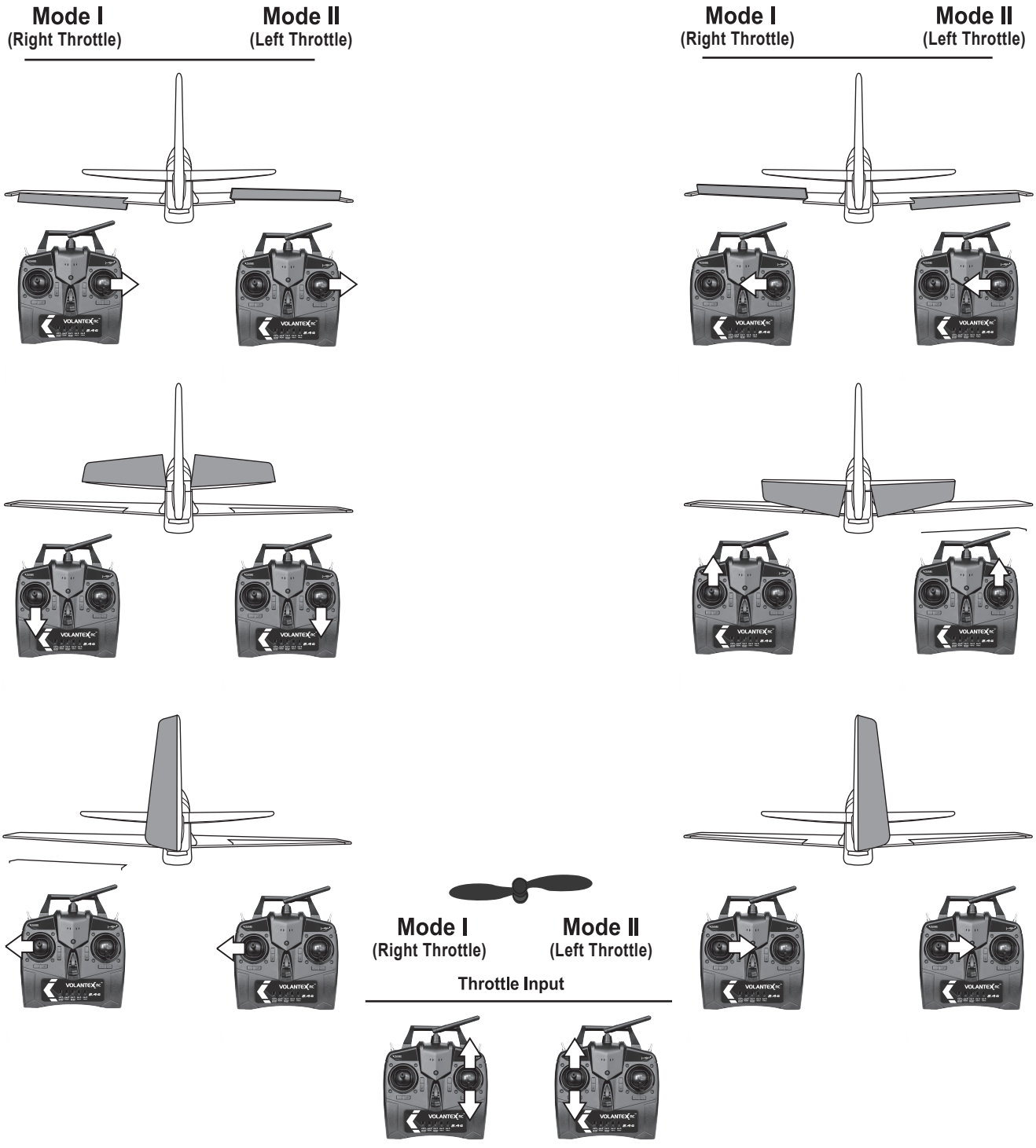
1. Turn the throttle to the bottom.
2. Turn on the transmitter.
3. Connect the battery to the receiver.
4. Press the bind button of the receiver. (the LED of the receiver will flash quickly)
5. The LED will light without flashing. (binded successfully)

Cautions

Pls make sure the throttle joystick is on the bottom position then bind the receiver. Before you connect the battery of the plane , pls leave away the propeller. (before the receiver bind the transmitter it may cause the propeller run automaticly.)

Check The Control Surface and Channel Condition

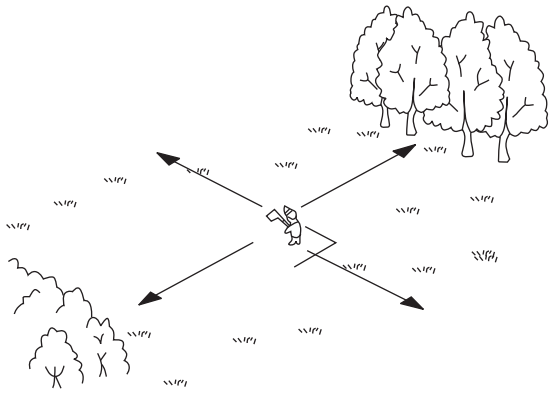
Before trying to fly the airplane, please carefully check to make sure the transmitter and the servos work normally. **CAUTION: Make sure that you must turn on the transmitter firstly and then you can connect the battery plug. If you want to turn off the transmitter you must ensure that the battery of the plane must be cut off first.**



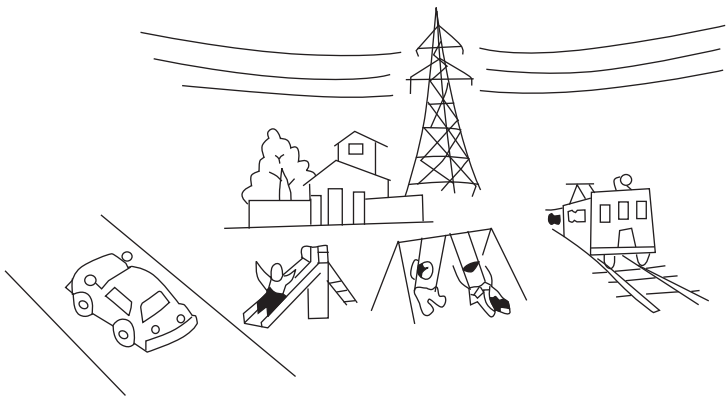
Know Your Frequency

Based on the size and weight of the plane it's typically considered to be a 'park flyer' class model. As a result it's best to fly the plane at a local park, schoolyard, flying field or other area that's large enough and free of people and obstructions. We recommend an area the size of at least one football/ soccer field, however, even larger areas are better suited and preferred especially when learning how to fly. **DO NOT fly in parking lots, crowded neighborhood areas or in areas that are not free of people and obstructions.**

We also suggest flying over grass as it's a much more forgiving surface that causes less damage in the unfortunate event of a crash. Short grass is better for takeoffs and landings as grass that is too long can cause the airplane to nose-over /flip and be damaged. An ideal flying area allows for takeoffs and landings on a smoother surface (such as asphalt) and flying over grass.



Fly in spacious ground without obstacles and boscage.



Never fly the plane near Highway, railway, high tension line, crowed people, Flying Area,and residential area.

PLEASE NOTE: The plane is designed to be flown outdoors only.

Flying Conditions

It's typically best to fly on days that are calm with no wind, especially when learning how to fly. We strongly suggest flying only in calm conditions until you're familiar with the controls and handling of the model. Even light winds can make it much more difficult to learn to fly, and in some cases can even carry the model beyond your line of sight.

Also, if you are a first-time or low - time pilot we highly recommend allowing a more experienced pilot to test fly and properly trim the model before attempting your first flight. A proven flyable and properly trimmed model is significantly easier and more enjoyable to fly! Please contact your local hobby shop and/or flying club to find a more experienced pilot near you.

After you've properly trimmed the airplane in calm conditions and become familiar with its handling /capabilities you'll be able to fly in light winds, or depending on your experience and comfort level, in winds up to 5–7 mph.

DO NOT fly on days when significant moisture, such as rain or snow, is present.

Flight Checklist

PLEASE NOTE: This checklist is NOT intended to replace the content included in this instruction manual. Although it can be used as a quick start guide, we strongly suggest reading through this manual completely before proceeding.

- Always turn the transmitter on first
- Ensure the throttle control stick is on the button position then plug the battery.
- Fly the model (hand‑launch or takeoff from a flat/level surface)
- Land the model (land on a flat/level surface)
- Unplug the LiPo flight battery from the ESC
- Always turn the transmitter off last

Know Your Frequency

CAUTION: The transmitter used to control your plane transmits signalson one of several frequencies that are available. To find out your frequency (or “channel”), look on the transmitter, If your “channel” happens to be the same as another model that is being flown nearby (even within a few miles), one or both models will crash. Know your frequency and be aware of the frequency of other models that are flying nearby-especially if you are flying at a radio control flying site. All flying sites have some sort of frequency control system to avoid this kind of interference , so learn how to use their frequency control system. Never turn on your transmitter until you are certain that you will be the only one operating on your frequency.

Perform a Range Check

As a precaution, an operational ground range test should be performed before the first flight each time 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 actual flying site you will be using.

First turn on the transmitter. Then, install the fully charged battery into the fuselage and hold it in place with the hook-and-loop strap. Connect the battery and install the hatch.

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

With the antenna on the transmitter collapsed (not extended), begin walking away from the model operating the controls in a predictable pattern (for example: Up, then down elevator. Right, then left aileron. Right, then left rudder). While moving the control surfaces, also vary motor rpm.
Have your assistant alert you if the controls fail to respond or if they move suddenly or erratically. You should be able to maintain control up to a distance of approximately100’ [30m].

If the controls respond erratically or if anything else seems wrong, make certain all the servo wires are securely connected to the receiver and that the transmitter and receiver batteries are fully charged. If you cannot finda mechanical problem with the model , it is slightly possible that there is radio interference somewhere in the area. One option would be to try another range check at an alternate flying site.

After the range check, fully extend the antenna.

Monitor and limit your flight time using a timer such as the one on your wrist watch. When the batteries are getting low you will usually notice a performance drop before the ESC cuts off motor power, so when you notice the plane flying slower you should land. Often (but not always!), power can be briefly restored after the motor cuts off by holding the throttle stick all the way down for a few seconds.

To avoid an unexpected dead-stick landing on your first flight set your timer to a conservative 4 minutes.When the alarm sounds you should land your model.

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.

Take Off

Until you have become comfortable with flying your plane, do not fly if the wind speed is greater than 10 mph [16 kilometers /hr].

One final check before takeoff : **always double - check the flight control response to your inputs from the transmitter before every flight.** Be certain the ailerons , elevator and rudder respond correctly and that none of the controls have inadvertently become reversed.

Don' t forget to fully extend the transmitter antenna.

If the surface is smooth (such as paverment or blacktop) the plane can take off from the ground. But most grass is probably too tall, so if flying from grass the model will have to be hand launched.

ROG (rise off ground) Take off

If taking off from the ground, place the model on your " runway " with the nose pointing into the wind--this will reduce the ground speed that must be reached and automatically provide " heading assist " making steering and takeoff easier. Slowly advance the throttle, adding rudder correction as needed to keep the model rolling straight. When the plane become " light "continue to apply throttle until you are at full power all this will happen in a few seconds. When sufficient liftoff speed has been reached, gradually apply "up "elevator allowing the model to leave the ground. Do not " yank " up on the stick rather, be smooth and allow the plane to eatablish a gentle climb.

Once you have reached a safe flying speed at a comfortable altitude (approximately 50' [15m]), work the controls as necessary to establish a gentle turn away from the runway.

Hand-Launch

Until you have become efficient at flying your plane, always use an assistant to hand-launch your model.

Have your assistant hold the model by the bottom of the fuselage. When both of you have signaled "ready ", advance the throttle to full power. Your assistant should run a few steps with the plane held high above his head, and then give the model a swift, but controlled toss at a level, or slightly nose - up attitude.Initially, the model will gently ascend, but within a few seconds it will reach enough speed to climb. Gently add " up " elevator to establish the climb.

Once you have reached a safe flying speed at a comfortable altitude (approximately 50' [15m]), work the controls as necessary to establish a gentle turnaway from the runway.

Flying

One thing to remember is that, when the plane is flying away from you, moving the aileron stick to the right will make the plane bank to your right.
However, when the model is flying toward you, moving the aileron stick to the right will make the plane move to your left. Of course, the plane is still responding the same way, it's just that your orientation has reversed. This must be kept in mind while learning to fly (and is also a good reason to take flight lessons from an experienced pilot!).

To establish a turn, " up" elevator(pulling back on the stick) is usually required along with aileron input to get the model into a bank. To stop the turn, apply a small amount of opposite aileron.

Once you get the plane into the air and have climbed to a comfortable altitude, the first "order of business" will be to "trim" the model for straight - and - level flight. The model flies best at approximately 3/4-throttle. Adjust the trims on the transmitter to make minor control surface adjustments as necessary until the plane will fly straight without any control inputs. Often, your assistant can reach over and adjust the trims for you.

Remember to keep the model high enough to give yourself time to make corrections, but don' t let it get too far away. Otherwise, it will be difficult to detect its attitude and which way it is going.

One final check before landing: see how the model will react when it's time to land and you cut the power. To do this, while still at altitude, cut the motor power.The model should establish a gentle, downward glide path.

This is how the model will react when it's actually time to land. Add power and climb back up to your original altitude.Try again, this time adding flaps.

To climb, add throttle and immediately take the flaps back out. Practice a few of these " climb and glides " to judge how far out you will need to be when its time to land.

Landing

To land, fly down - wind past the landing area. Gently turn into the wind, add flaps and reduce the throttle so that the airplane initiates an ascending glide path. If necessary, add power to extend the glide path to reach the runway. As the model approaches and loses altitude, gradually and proportionally add " up " elevator to control the glide path and altitude.
Continue to apply elevator until the mode l touches down at which time you should be holding full, or nearly full up elevator. This will cause the airplane to slow and settle to the ground.

Later, once you have become more experienced with your plane, you can cruise around and perform slow " fly-bys " with the flaps extended.

CAUTION: If, during a rough landing, the propeller becomes jammed and cannot rotate, the battery and speed control will become very hot if you attempt to add power .
Immediately move the throttle down to stop the motor. If you fail to do this, the motor, speed control and /or battery will be damaged.

After flight

Disconnect the battery and remove it from the airplane. Then, turn off the transmitter. Allow the battery to cool before recharging, or allow the motor to cool before installing another battery for the next flight. Inspect the airplane to make sure nothing has become loose or damaged.

VOLANTEX RC

Get you **easy way to fly**

www.volantexrc.com