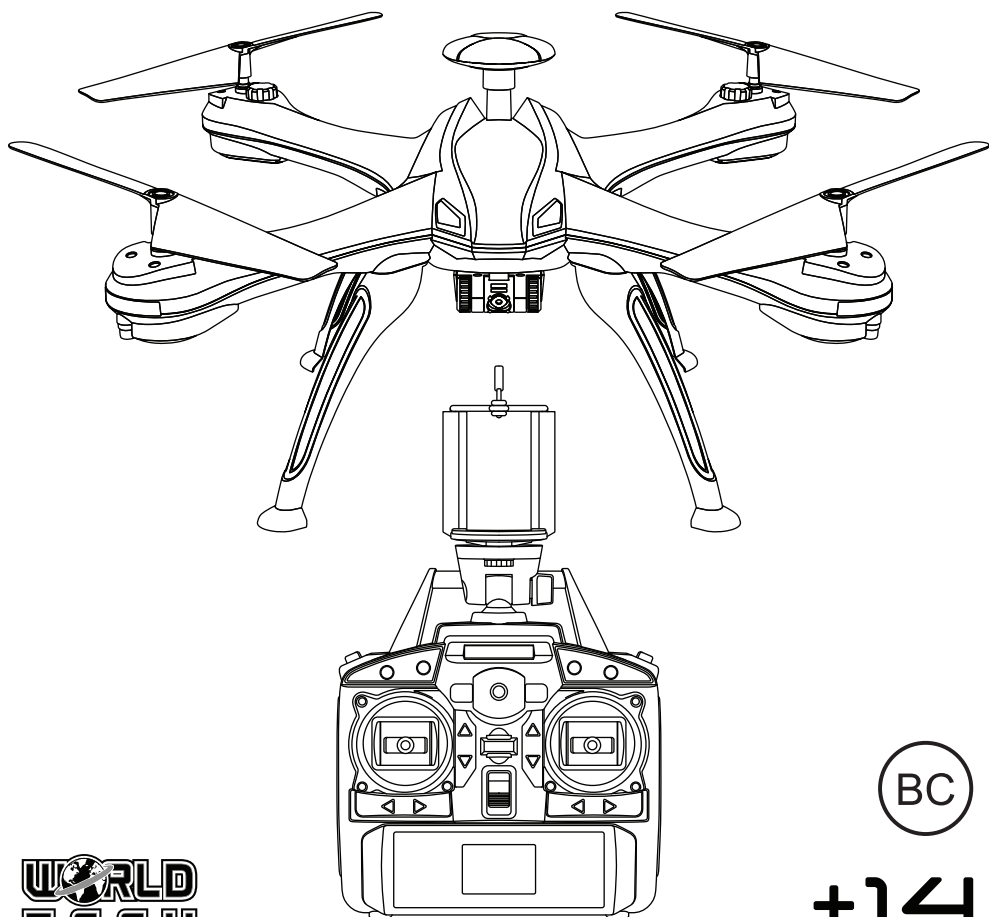


VENOM PRO

GPS STREAMING DRONE

GPS STREAMING HD CAMERA
2.4GHz 4.5CH RC QUADCOPTER

INSTRUCTION MANUAL



**WORLD
TECH
ELITE**

BC

+14

ITEM NO. 33049

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INTRODUCTION

Thank you for purchasing this amazing World Tech Toys product. This drone is suitable for indoor and outdoor flight. Please carefully read the entire manual before operating this drone and keep it for reference in the future.

SAFETY & PRECAUTIONS

1. Important Instructions

- 1) This product is not a toy. It is a precision piece of equipment with integrated mechanical technologies, electronics, aerodynamics and radio frequencies. To avoid accidents, the operator must read these instructions carefully prior to operation. If operated incorrectly, serious physical injury and/or property loss may occur.
- 2) This product is suitable for operators with previous hobby flying experience, age 14 and up.
- 3) Only fly in a safe environment that is legal for remote control flying.
- 4) We are not responsible for the operation and control of this device and related safety responsibilities.

2. Safety Instructions

- 1) Always operate far away from obstacles and crowds. This drone has uncertain flying speeds and conditions which present potential danger. Fly away from people, animals, high buildings, high voltage wiring, etc. To ensure a safe and fun flying environment avoid bad weather conditions like wind, rain, and thunder.
- 2) Avoid high temperatures. This drone is made of metal, plastic, electronic components and other materials. Keep away from any heat source and avoid using in high temperatures to prevent transformation and broken parts resulting from the heat.

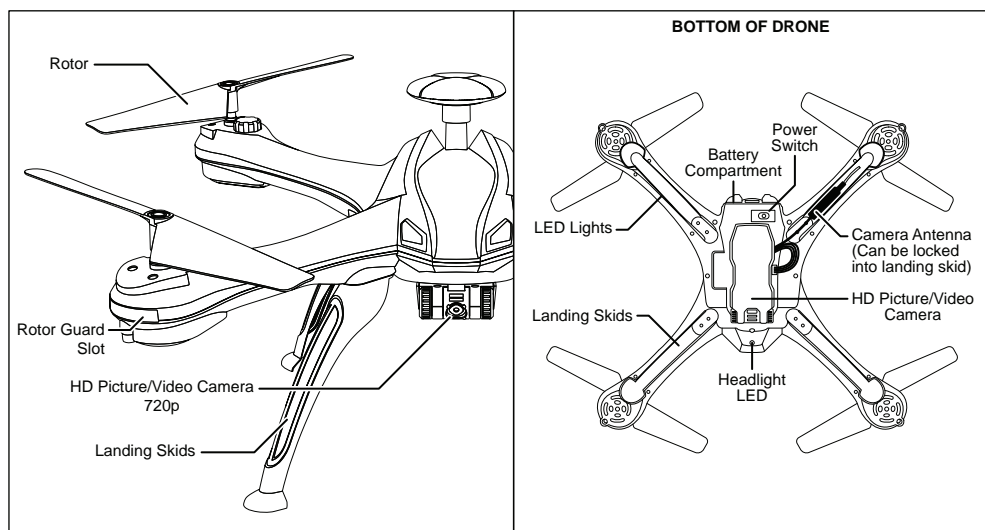
3. Flight Environment

The inside of this drone is integrated with precision electronic and mechanical parts. Avoid contact with water and wet environments as it may result in parts breakdowns and accidents may occur.

4. Attention Before Flying

- 1) The minimum recommended flying area is 25ft x 25ft x 15ft.
- 2) Be sure that the transmitter and drone batteries are fully charged.
- 3) Be sure that the throttle is at its lowest position to avoid premature flight.
- 4) Always turn on the drone first, then turn on the transmitter. Incorrect operation may result in failure and the possible influencing of other devices in the area.
- 5) Ensure that all plugs and wires are secure and in place as they may loosen over time.

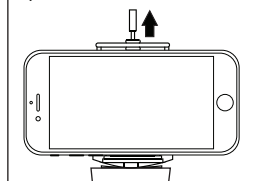
DRONE DIAGRAM



TRANSMITTER DIAGRAM/PHONE CRADLE INSTALLATION

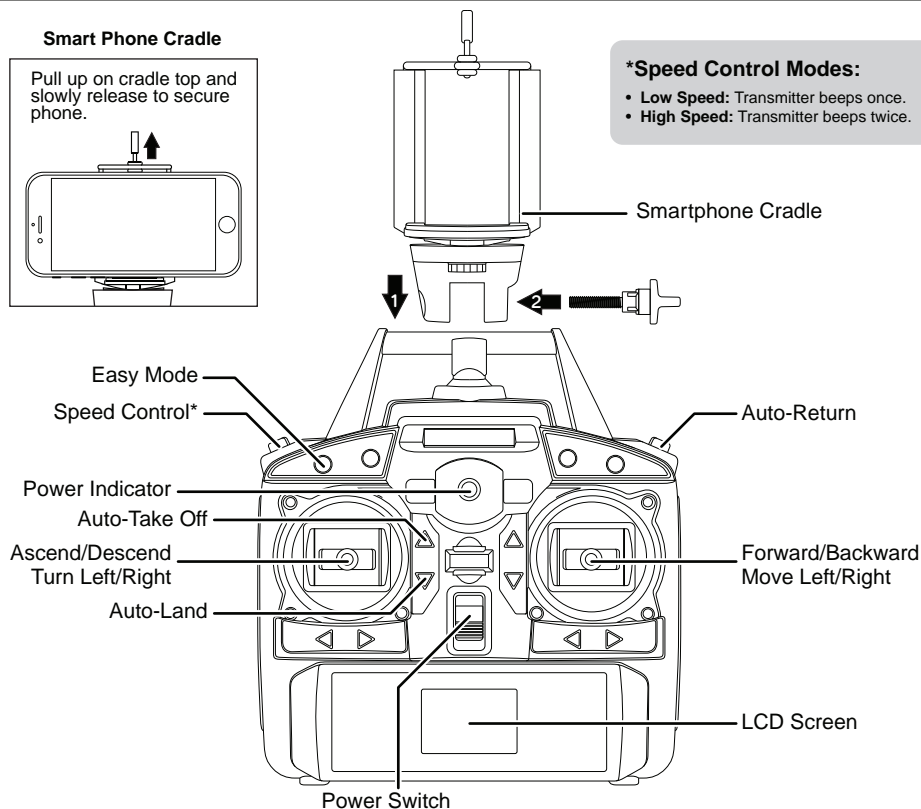
Smart Phone Cradle

Pull up on cradle top and slowly release to secure phone.



*Speed Control Modes:

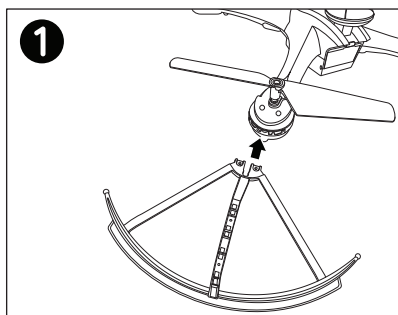
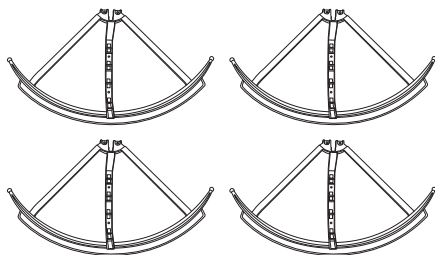
- **Low Speed:** Transmitter beeps once.
- **High Speed:** Transmitter beeps twice.



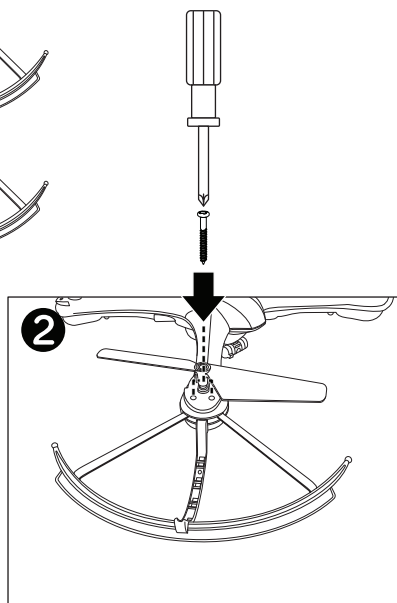
INSTALLING THE ROTOR GUARDS

The drone comes with 4 rotor guards. It is recommended that you install the rotor guards to protect the rotor blades from getting damaged or harming others. If you need to install or remove a rotor guard, just follow these easy steps.

NOTE: The rotor guards are all identical and can be installed on any arm of the drone.



Push the rotor guard into the rotor arms slot as shown. Push until it is flush in the arm and you feel the rotor guard secure itself.

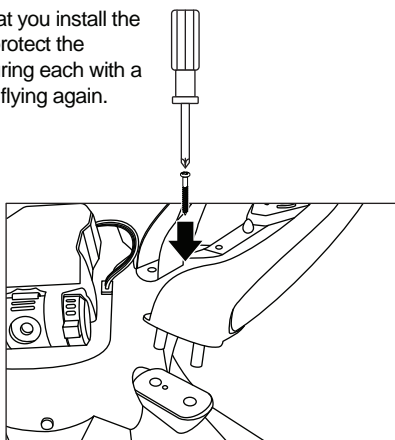
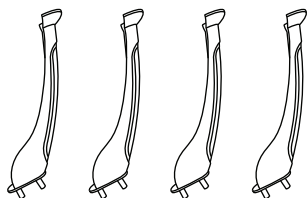


To fully secure use two screws on the top of the rotor arm as shown, do not over tighten.

INSTALLING THE LANDING SKIDS

The drone comes with 4 landing skids. It is recommended that you install the landing skids before you fly for more gentle landings and to protect the camera from impact. Install each landing skid as shown securing each with a single screw. Always replace a damaged landing skid before flying again.

NOTE: The landing skids are all identical and can be installed on any part of the drone's slots.

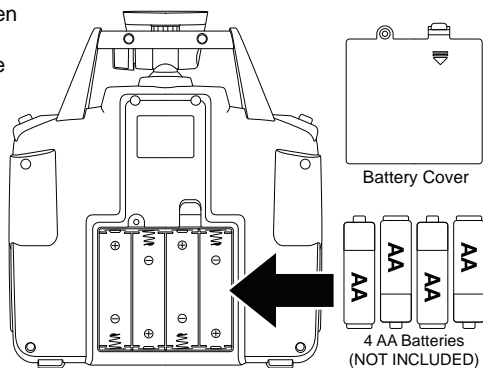


INSTALLING THE TRANSMITTER BATTERY

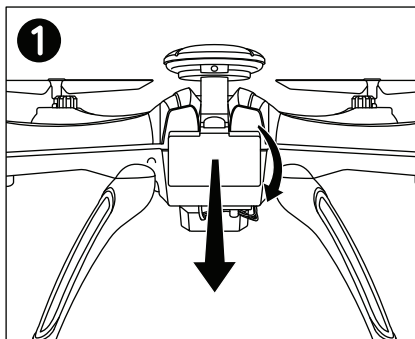
First, remove the screw on the battery cover and then remove the battery cover itself. Next, install 4 AA batteries with the correct polarity. Finally, replace the battery cover and screw it in place.

CAUTION:

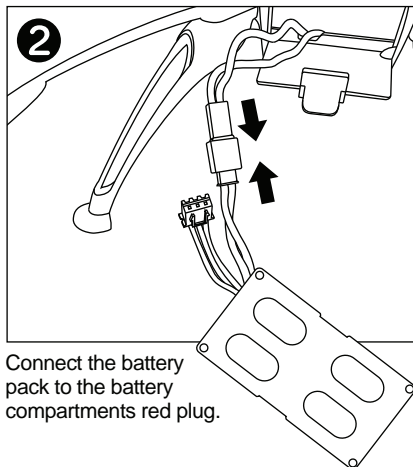
1. Make sure the batteries are installed with the correct polarity.
2. Do not mix old and new batteries.
3. Do not mix different types of batteries.



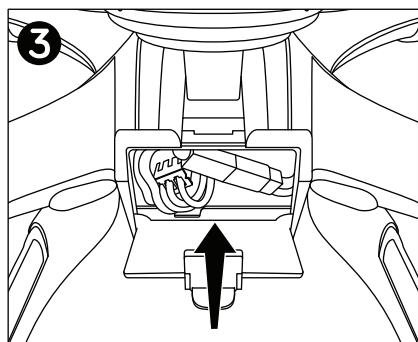
INSTALLING THE DRONE BATTERY



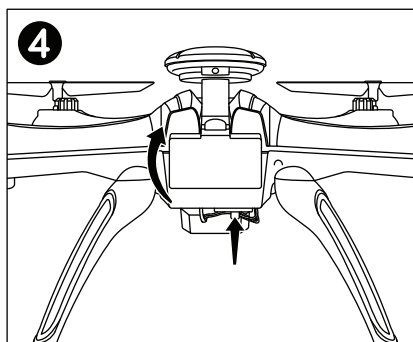
Make sure the drone power switch is in the OFF position. Pull the battery compartment door away from the drone and swing it open.



Connect the battery pack to the battery compartments red plug.

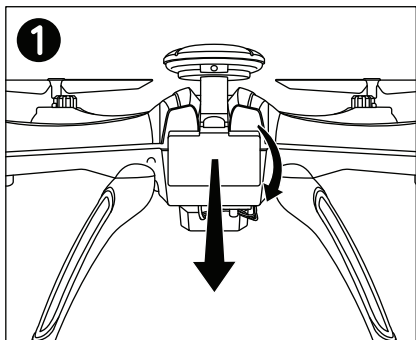


Put the battery pack into the battery compartment and arrange the connectors so everything fits inside.

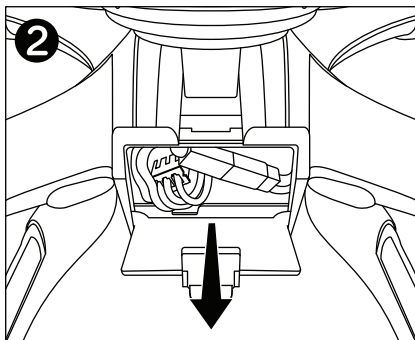


Close the battery compartment and switch on the drone power switch when ready to fly.

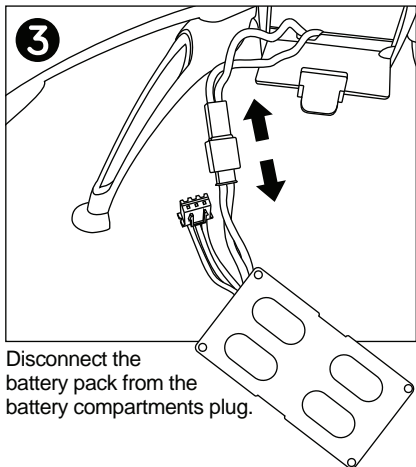
CHARGING THE DRONE BATTERY



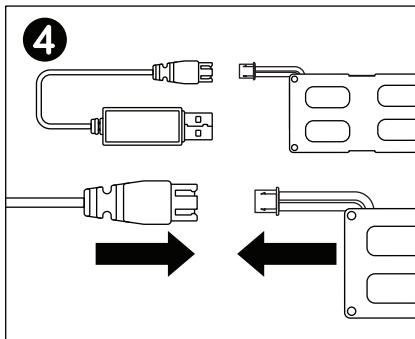
Make sure the drone power switch is in the OFF position. Pull the battery compartment door away from the drone and swing it open.



Gently pull the battery pack and connector cables out from the drone battery compartment.





Disconnect the battery pack from the battery compartments plug.



Connect the battery packs white connector to the included USB charger then plug the USB to any powered USB port.

USB CHARGER LED LIGHT INDICATOR

Green Light 	Red Light 
Charging	USB charger is connected to a powered USB port.

Please Note: The USB chargers red light will turn on when plugged in to indicate there is power running through the USB. Once the battery is connected the green light will turn on and blink. The green light will turn solid when charging is complete.

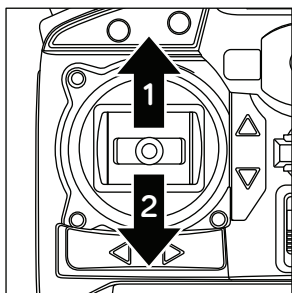
BATTERY PACK SPECIFICATIONS

Battery Type	Battery Specification	Usage Duration	Charge Time
Li-Po Battery	7.4V 700mAh	Flight Duration 6.5 - 7.5 minutes	Charging Time 210 -240 minutes

CAUTION WHILE CHARGING:

Do not charge with batteries still installed. Do not charge battery unsupervised. Do not immediately charge after use. Do not overcharge battery. **Ideal charge time is 210-240 minutes.** Overcharging can cause a catastrophic failure. Always charge on dry and ventilated areas away from any heat source or flammable materials. Always use the original USB charging cable provided. Promptly change and replace old or defective batteries.

SYNCING THE DRONE TO THE TRANSMITTER



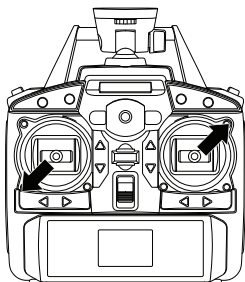
Switch ON the drone and place it on a flat surface. The drone's LED lights will start flashing rapidly as it searches for GPS signals and the transmitter. Switch ON the transmitter and it will emit a short beep. Once connected to the drone it will emit another short beep. The LCD screen display will change and the drone's LED lights will slowly flash once connected. The transmitter has now successfully paired with the drone and control information will update on the LCD screen.

If the drone does not pair with the transmitter automatically, turn off the transmitter and turn it back on while the drone is on. If that fails you will need to push up on the left joystick then all the way down to manually pair. The transmitter will beep when paired. The

Drone's LED lights will continue to flash for about a minute until it has found enough GPS signals to function properly, LEDs will remain on when ready to fly (If still flashing move to a more open area).

RECALIBRATING THE DRONE

When the drone moves without transmitter input or moves in unexpected ways you should recalibrate the drone as outlined below. Start by pairing the drone to the transmitter and following one or both of the calibrations below. Perform Compass Calibration when having GPS or direction related issues. Perform Gyro Calibration when the drone is having issues staying stable during hover or flight.



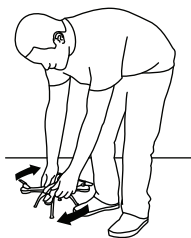
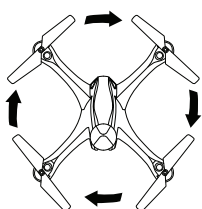
COMPASS CALIBRATION

Place the drone on a flat level surface. To start the compass calibration process push the left joystick to the bottom left corner and the right joystick to the top right corner. After the Drone LED lights will begin to flash quickly. Let go of the joysticks.

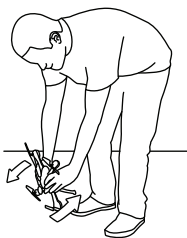
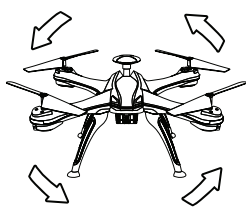
Hold the drone a few inches off the ground while keeping it level with the floor. Rotate the drone clockwise 3-5 times (Pic 1). Next, stand the drone on its rear with the front of the drone facing up. Rotate the drone counter-clockwise 3-5 times (Pic 2). The LED lights on the drone will begin to slowly flash if recalibration is successful. If the LED lights on the drone never change, turn off the drone and start the process again.

Recalibration may increase drone GPS accuracy when flying in new areas.

1 Turn Clockwise (Top Down View)

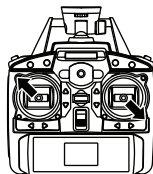


2 Turn Counter Clockwise (Top Down View)



GYRO CALIBRATION

Place the drone on a flat level surface. To start the gyro calibration process push the left joystick to the top left corner and the right joystick to the bottom right corner. Hold for 5 seconds and the drone LEDs will begin to slowly flash if calibration is successful.

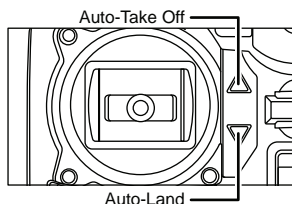
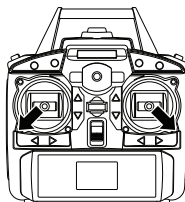


ROTOR UNLOCK/LOCK - AUTO-TAKE OFF/LAND

Before flying your drone for the first time please read all the instructions carefully and make sure you fully understand how to control it. **You will not be able to control your drone until you unlock the rotors at the start of each flight.**



Rotor Unlock/Lock



UNLOCK/LOCK - AUTO-TAKE OFF

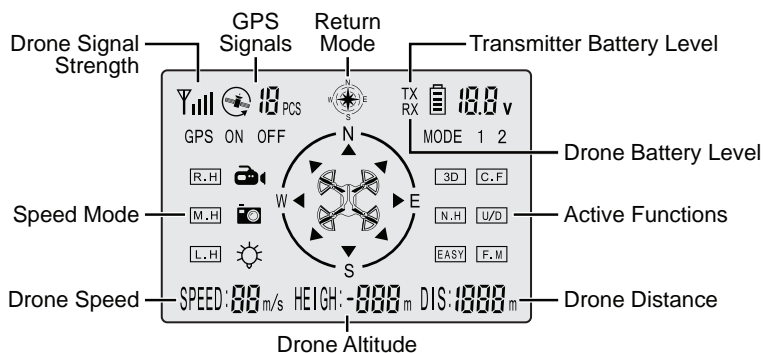
Once you've synced the drone and transmitter, you must unlock the drone's rotors. To unlock or lock the rotors you must pull both transmitter joysticks down and outward as shown for a few seconds. The rotors will begin to spin when unlocked. Repeat the steps to lock the rotors. You can now slowly press up on the Ascend/Descend stick (left joystick) and the drone will take off. To use the Auto-Take Off press the **AUTO-TAKE OFF** button and the drone will begin to ascend and hover in place.

AUTO-LAND

Press the **AUTO-LAND** button when you are ready to land. The drone will slowly descend and land in its current position and the rotors will eventually stop spinning after no input. To promptly stop the rotors perform the rotor Unlock/Lock function above.

Note* When using touch controls in app, Auto-Take Off and Auto-Land must be used in app.

TRANSMITTER LCD INTERFACE

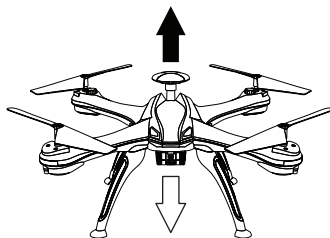
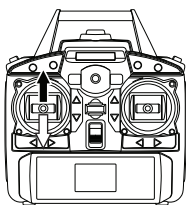


AUTOMATIC SHUTDOWN OVERRIDE FUNCTIONS

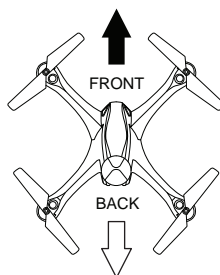
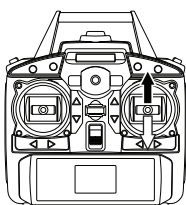
For safety precautions, the drone will automatically shut down when the following situations occur:

1. When the drone's battery is running low.
2. When one or more of the drone's propellers has resistance due to impact or any form of entanglement.

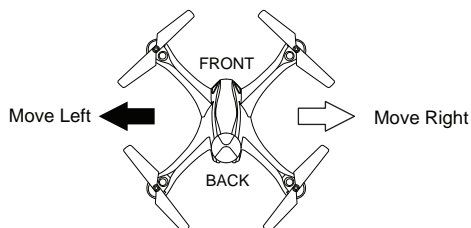
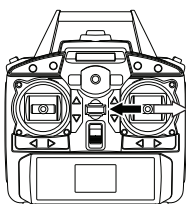
Ascend/Descend



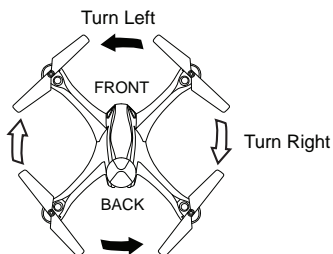
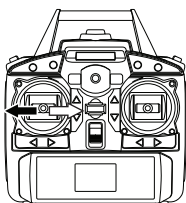
Move Forward/Backward



Move Left/Right



Turn Left/Right



LIVE FEED APP AND CAMERA OPERATION

App Available on Apple & Android Devices



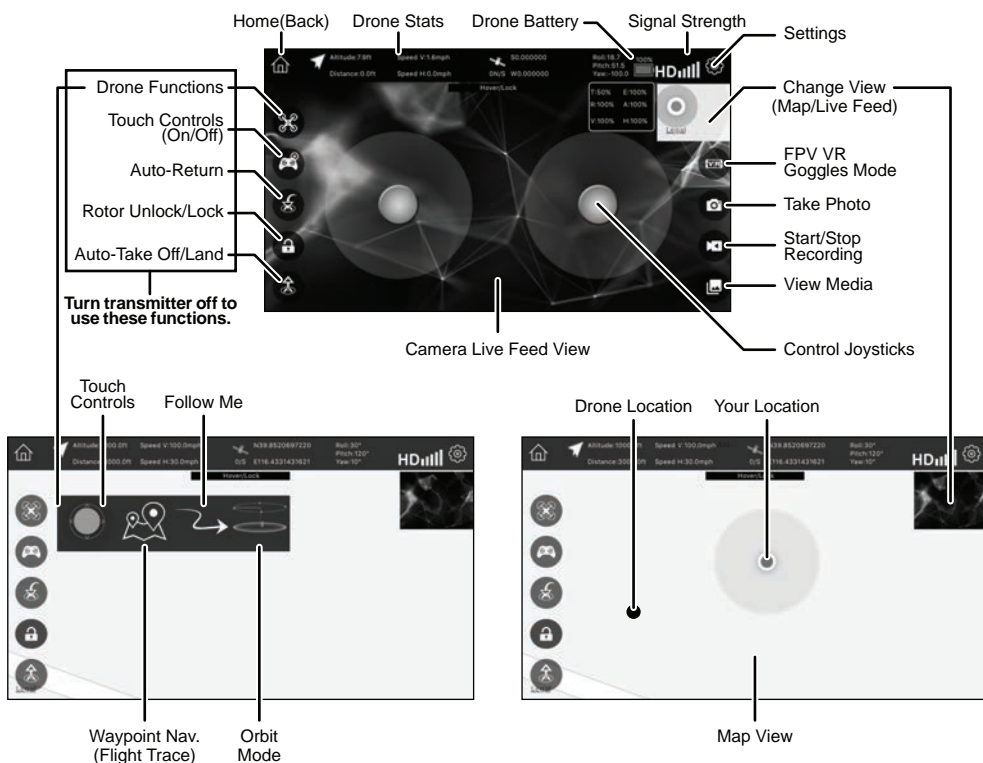
VENOM FPV

1. Search your phone's application store for "**VENOM FPV**" and download the free app. This application allows you to see a live feed of your drone's camera, take photos/videos that can be kept in the app or saved to your phone as well as other special actions.
2. Turn on the drone, go into the Wi-Fi settings of your phone and select the network "**VenomFPV-XXXXXX**" (X's are the unique ID of your drone) to establish a connection. **This must be done every time the drone is first turned on and you want to use the app based functions.**

3. Open the **VENOM FPV** app and select "**START**" to go to the live feed screen shown below. Start flying with the transmitter and use the app to take photos or start and stop recording.

If you want to use touch controls instead, turn off the transmitter and press the "Rotor Lock/Unlock" button in the app to start the rotors. Press the "Auto-Take Off" button to start flying or use the app's special functions.

Select View Media to view/delete photos and videos in the app. Copies can be saved to your phones media viewer and are stored in the app.



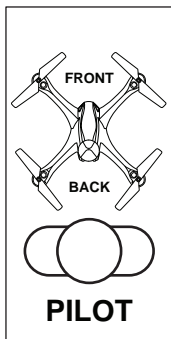
See pages 12-13 for details on Follow Me, Waypoint Navigation, Flight Trace and Orbit Mode.

SPECIAL FUNCTIONS



EASY MODE - THIS MODE ONLY WORKS WHEN THE PHONE APP IS NOT BEING USED. THE PHONE APP WILL INTERFERE WITH THIS FUNCTION.

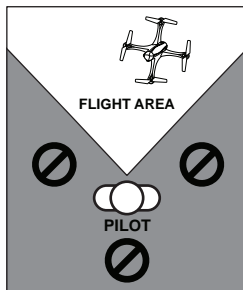
Simplify the drone controls by limiting command directions based on pilot direction. Use Easy Mode when you are having difficulty telling which direction the drone is facing and controlling the drone has become difficult. Follow the instructions below to use Easy Mode.



For Easy Mode to work properly you must launch the drone with the front of the drone facing away from the pilot as shown in the illustration to the left.



Easy Mode will not work if the button is pressed while the drone is to the side or behind the pilot. The drone must remain in front of the pilot, as shown in the illustration to the right (flight area).


To activate Easy Mode, press the button once while the drone is in flight. Once Easy Mode is activated, the drone control will be relative to the direction of the pilot, not the direction of the drone. The drone will fly toward the pilot when pressing down on the Forward/Backward stick (right joystick) and away when pressing up. Press the Easy Mode button again to deactivate it.



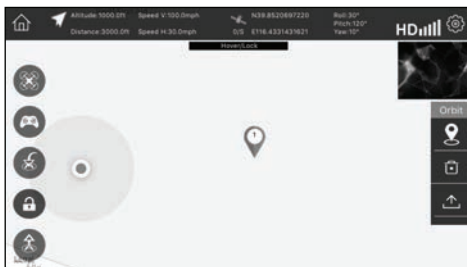
ORBIT MODE



Activate Orbit Mode via the Venom FPV app drone functions after the transmitter has been turned off. The drone will hover at a set altitude and fly in a circle around a set waypoint in this mode. Activate this mode and you will see a menu tab pop up in the app. Click the “” icon and then tap on the map to set a waypoint. Hard press the waypoint for a second to edit the hovering altitude and the radius the drone will hover around. Delete waypoints by pressing the “” icon and then tapping on the waypoint.





Once you have set the waypoint for your drone press the “” icon to start Orbit Mode. Press the icon again to stop Orbit Mode.

Make sure there are no wires or obstacles within a 25 foot radius of the waypoint set radius. The orbit distance you set is approximate and will work best with a strong GPS signal. The default altitude of the drone in this mode is 32 feet (Min-Max = 9-164). The default orbit radius is 9 feet (Min-Max = 9-68).



WAYPOINT NAVIGATION




Activate Waypoint Navigation via the Venom FPV app after the transmitter has been turned off. This mode is under the Waypoint Mode. Select the “” icon to set waypoints on the touch screen that the drone will follow using GPS telemetry. Press the “” icon to start the flight. You can delete single waypoints on the path created by clicking the “” icon. Use the “” icon to delete all the waypoints on the current path to make a new path.

Only perform this action in an open area where there are no potential obstacles within a 25 foot radius. Hard press any way point for over a second to edit a waypoints height. The drone will attempt to reach the specified height when at that way point. The default height for all waypoints is 98 feet.







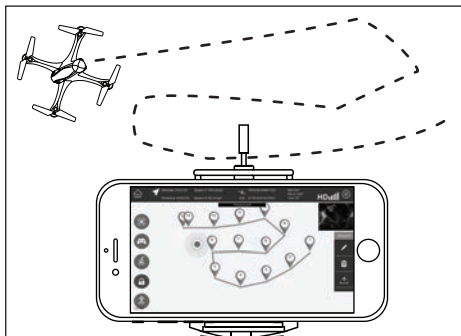
SPECIAL FUNCTIONS CONTINUED


FOLLOW ME

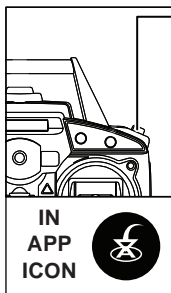
Activate Flight Trace via the Venom FPV app drone functions after the transmitter has been turned off. The drone will autonomously hover near the smart phone with the Venom FPV app active and follow it if moving. Always use this mode in an open area with no overhead wires or obstacles. The drone will follow your approximate location based on the app's GPS location. If the GPS signal is weak the function may not work as expected. Activate the mode by pressing the "" icon. Press the icon again to stop and resume normal function.

FLIGHT TRACE

Activate Flight Trace via the Venom FPV app after the transmitter has been turned off. This mode is under the Waypoint Mode. Select the "" icon to draw a path on the touch screen that the drone will follow using GPS telemetry. Way points will automatically drop along the path you make. Press the "" Icon to start the flight. You can delete single waypoints on the path created by clicking the "" icon. Use the "" icon to delete all the waypoints on the current path to make a new path.



Only perform this action in an open area where there are no potential obstacles within a 25 foot radius. Start with simple routes and experiment to see what your drone can copy in the sky. Hard press any waypoint for over a second to edit the height. The drone will attempt to reach the specified height when at that waypoint. The default height for all waypoints is 98 feet. Press the "" Icon to stop the flight and resume normal function.



AUTO-RETURN (GPS)

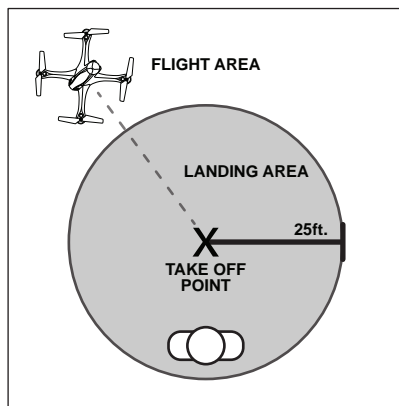
Utilizing an internal Global Positioning System (GPS), the drone will remember the approximate location it took off from and return to that spot and land. Press the Auto-Return button or in app icon when you want the drone to return. The transmitter will beep twice and the drone will fly in a straight line towards its take off point and land.

If the drone is at an altitude lower than 50 feet it will ascend up to 50 feet and then start its return. If the drone is higher than 50 feet it will immediately return.

If there are any potential obstacles in the drone's flight path and you are not connected to the app, activate Easy Mode before pressing the Auto-Return button so that you can easily pilot the drone and avoid any hazards.

The drone's GPS signal is approximate. When using this feature it is recommended to take off in an open area with at least a 25 foot radius to ensure a safe landing area.

Only use this function when there is enough battery power to finish the trip. If the power level is too low, press the Auto-Land button and land the drone in its current position.



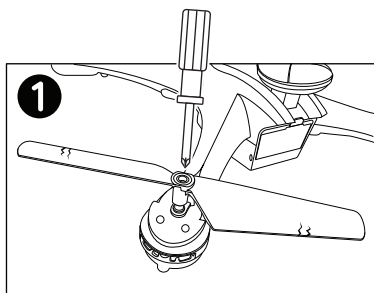
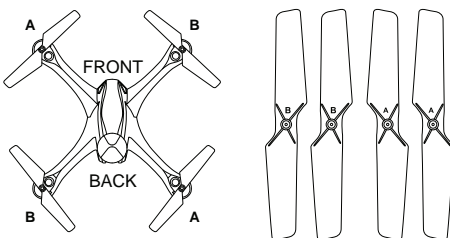
POST FLIGHT

After you are done flying the drone make sure the battery pack is disconnected and the transmitter power is turned off. If you are not going to use the drone for an extended period of time, please remove the AA batteries from the transmitter to prevent them from draining or leaking.

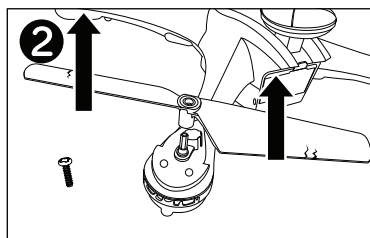
REPLACING THE ROTORS

The rotors can be damaged during a collision. The drone comes with 4 spare rotors. Please replace damaged rotors immediately.

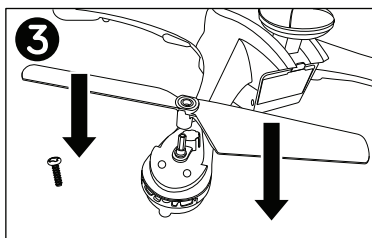
The drone comes with 2 A rotors and 2 B rotors. The A and B rotors must be installed on specific locations on the drone for it to fly properly. Check each rotor to see if it's labeled either A or B. Use the illustration above to install them in the correct location.



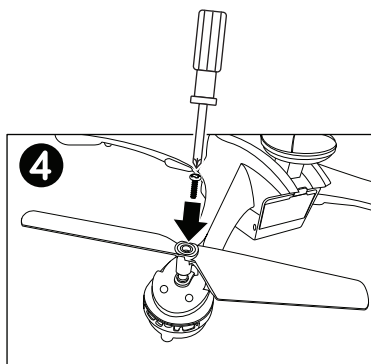
Use the included screwdriver to unscrew and remove the screw on the rotor.



Remove the damaged rotor by lifting upward. Be sure not to misplace the screw.



Place the correct A or B rotor on top of the peg.



Replace the screw on the rotor. Repeat the process for any other damaged rotors.

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Drone is unresponsive. The transmitter light keeps flashing.	Transmitter is not syncing with drone.	Repeat the power up process.
Drone is unresponsive.	Transmitter and or drone is not powered ON.	Turn both transmitter and drone ON.
	Transmitter batteries are installed incorrectly.	Install the batteries with the correct polarity.
	Transmitter batteries are drained.	Install fresh batteries in the transmitter.
Both drone and transmitter are ON. Drone is unresponsive.	Drone's battery pack is drained.	Charge the drone's battery pack.
	Drone is locked.	Unlock the drone (page 9), the rotors will start spinning. You will now be able to take off.
Drone's rotors spin but it doesn't take off.	Rotors are damaged.	Replace the damaged rotors.
	Drone's battery pack is drained.	Charge the drone's battery pack.
	Drone is not on a flat surface.	Place the drone on a flat surface before attempting to take off.
Drone is shaking when flying.	Rotors are damaged.	Replace the damaged rotors.
Drone moves while hovering without transmitter input.	Drone needs recalibration.	Recalibrate the drone (Page 8).
Drone still moves forward after recalibrating.	Gyroscope midpoint is off.	Turn off both transmitter and drone. Go through power on process and make sure you place the drone on a flat surface before taking off.

NOTES:

NOTES:

FCC WARNINGS

1. Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

2. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
3. FCC RF Radiation Exposure Statement Caution: To maintain compliance with the FCC's RF exposure guidelines, place the product at least 20cm from nearby persons.
4. The device must not be co-located or operating in conjunction with any other antenna or transmitter.



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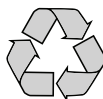
Email: customerserv@worldtechtoys.com

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Monday - Friday / 8:00AM - 5:00PM / Pacific Time

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