RAGE RC

STINGER GPS

FPV Drone with GPS & HD Camera

Same Stinger Legacy Value, Now With GPS!

INSTRUCTION MANUAL

Specifications

Total width (motor shaft to motor shaft):	9.00” (229mm)
Prop size:	4.75” (120mm)
Height:	2.00” (50.8mm)
Weight:	7.1oz. (202g)
Battery:	7.4V 2S 3000mAh Lipo battery
Motors:	1503/2600KV Brushless (4 total)
Charger:	USB charging cable
Transmitter:	4-channel, 2.4GHz

As with its namesakes, the Stinger GPS is another full-featured FPV drone at a price that won't break your budget – and now even GPS functions like Position Hold, Waypoints and Return Home (within the 200m range of the transmitter signal) are included. The Stinger GPS also includes standard features such as Altitude Hold, 6-Axis Gyro Stabilization Control, One Touch Take-Off and Land, brushless motors, and more. The 1080p HD camera has 1-axis movement (up and down) that can be controlled from the transmitter. Plus, a second, downward-facing fixed camera provides another viewing perspective during flights. As a step up from previous renditions of the Stinger, the GPS comes with a hard-sided travel-type case with soft foam packing for all the components and a cartridge-style battery that now provides up to 25 minutes of flight time to take and save HD images and videos conveniently to your smart device.

The Stinger GPS is an RTF (Ready-To-Fly) drone, so it arrives factory-assembled with everything needed to experience FPV flight and try out the GPS functions. In addition to its long list of features, you receive a 2.4GHz 4-channel transmitter and smartphone holder, an USB charging cable for the included flight battery, and an extra set of propeller blades. The transmitter includes an internal battery, so all you need to do is charge the transmitter and flight battery and you can be taking FPV photos and videos within minutes of opening the box!

WARNING

For current safety guidelines and restrictions for locations where you can fly, please see FAA's B4UFLY app or visit their website at https://www.faa.gov/uas/recreational_fliers/where_can_i_fly/b4ufly/

DISCLAIMER AND SAFETY INSTRUCTIONS

In order to make it easier and safer to use this product, please read all the contents of this manual carefully before using this product and make sure to save this manual for future reference.

DISCLAIMER

1. In order to protect the legitimate rights and interests of users, please carefully read the instructions, disclaimers and safety instructions provided with this product before use.
2. This product is not suitable for people under the age of 14. People under the age of 14 need to use it under the supervision and guidance of adults with model aircraft flight experience.
3. Once you start using the product, you are deemed to have read, understood, recognized and accepted all terms and contents of the product's instructions, disclaimers and safety instructions.
4. In the process of using this product, please be sure to strictly abide by and implement the requirements including but not limited to the instructions and safety instructions. For all personal injuries, accidents, property losses, legal disputes the user shall bear relevant responsibilities and losses and the seller(s) will not bear any responsibility.
5. The seller(s) will not be liable for any direct or indirect violation of laws and regulations caused by the use of the product.

SAFETY INSTRUCTIONS

1. This product is not suitable for people under the age of 14.
2. The product has high-speed rotating blades and includes certain dangers in operation. Do not approach or touch the product while it is running.
3. When using this product, please keep away from dangerous environments such as airports, railways, highways, high buildings, electric lines, etc.
4. When using this product, please keep away from high electromagnetic interference environments such as mobile base stations, high-power transmitting equipment, etc.
5. When using this product, please keep away from all types of manned aircraft.
6. Please do not use this product in rain, thunder, dust, fog, snow, strong wind, low temperature and other harsh environments.
7. This product is a non waterproof design, please do not operate this product near areas of water.
8. When operating this product, always keep a safe distance of about 10 yards between the aircrafts and people or animals.
9. Always keep the aircraft flying within the operator's visual range. Do not attempt to fly when product is not visible behind buildings or walls.
10. Do not hover or fly over a crowd or near groups of people.
11. Do not operate this product near a place where children play.
12. Do not use this product to chase vehicles or affect the normal operation of vehicles.
13. Do not turn off the transmitter when the product is flying.
14. This product can not be used when under the influence of alcohol, fatigue, medications, physical discomfort, etc.
15. Please check the product before each use, including but not limited to the firmness of parts, cracks and wear of the body and propeller. In case of any abnormality, please stop using and replace the necessary accessories immediately.
16. Do not attempt to block any moving parts while operating this product.
17. Do not modify this product or use it for any purpose beyond the original design.
18. Do not operate this product in a no fly zone according to laws and regulations.

19. Due to the variety of materials used in the aircraft, high temperature will damage the internal structure of the aircraft, and lead to unpredictable flight characteristics. Therefore, please keep the aircraft away from any heat source and avoid exposing to direct sunlight for a long period time.
20. Please follow the product instruction manual.
21. Please use original accessories for maintenance and replacement.
22. Please make sure that other operators understand and abide by the safety instructions.
23. The motor can be hot after use. Please do not touch it to avoid burns.
24. Do not use expanded, leaking or damaged batteries.
25. Keep away from inflammables when charging the battery (such as blankets, solid wood furniture, wooden boards, etc.)
26. Please use the original charge cord. Do not use other brands or damaged charging cords.
27. Please keep a safe distance from the high-speed rotating blades to avoid the risk of injury.
28. Do not fly the aircraft close to the face or ears to avoid injury or hearing loss.
29. Aircraft should be used as far away from other electrical equipment and magnetic objects as possible to avoid interference.
30. Please do not short circuit or squeeze the battery to avoid damage to the battery or surrounding objects.

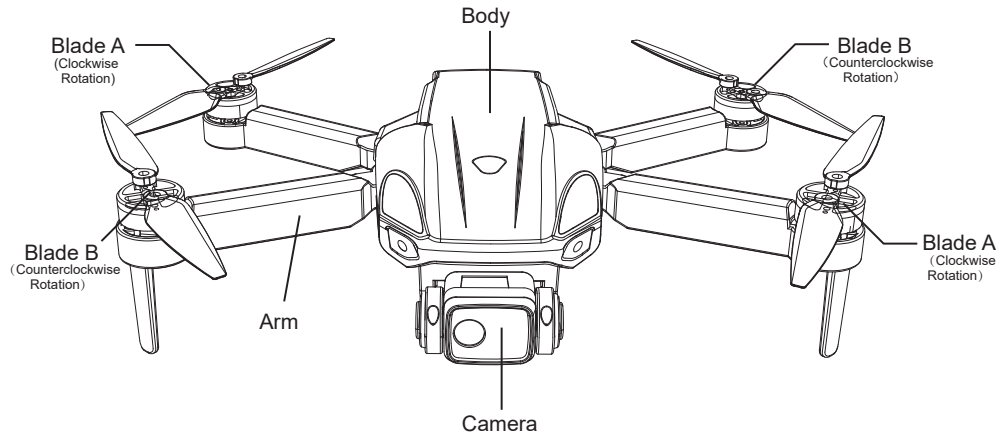
CHARGING PRECAUTIONS

1. There are certain risks in using lithium batteries which may cause significant injury or death to people - or damage to property. Please use it carefully as the user bears all relevant responsibilities.
2. If the battery leaks, avoid contact with skin and eyes. If it touches the skin, please wash immediately with soap and clear water. In case of contact with eyes, wash immediately with plenty of water and see doctor immediately.
3. If the charger emits odor, noise or smoke, please unplug the power supply immediately.

CHARGING INSTRUCTIONS

1. Please use the original charge cord for charging. Do not use damaged or other brand chargers.
2. Do not charge batteries that are swollen, leaking or damaged.
3. The device consists of electronic components and batteries. For electronic waste, please carry out according to local waste treatment requirements.
4. Do not charge on a surface near inflammables (blankets, wood floor, solid wood furniture, etc.) or conductive objects. Please keep the battery in view when charging.
5. Do not charge the battery immediately after using the product, allow the battery to cool down for 10-15 minutes.
6. The room temperature when charging the battery should be between 40 °F and 100 °F.
7. Dispose of all electronic components and batteries according to local laws and regulations.

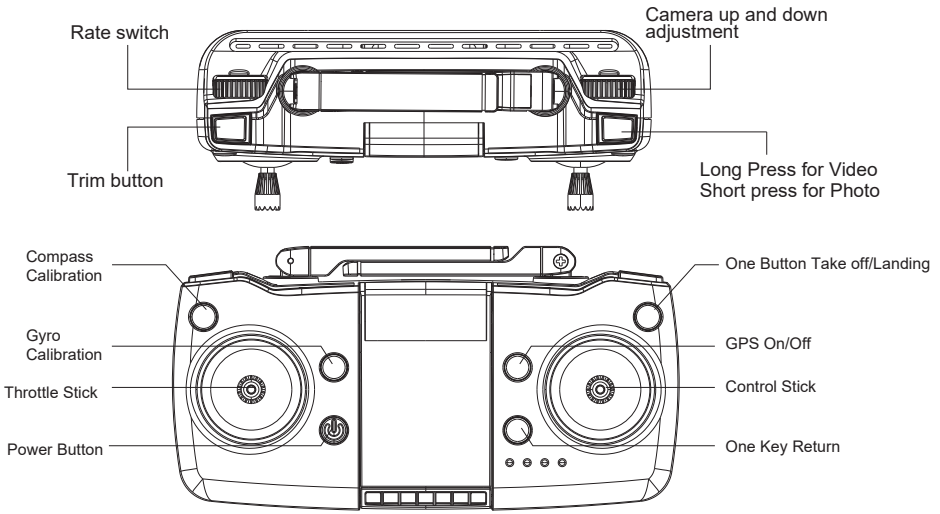
PRODUCT OVERVIEW



NOTE

When replacing the blades, ensure that the blades A / B installed on each shaft are consistent.

TRANSMITTER OVERVIEW



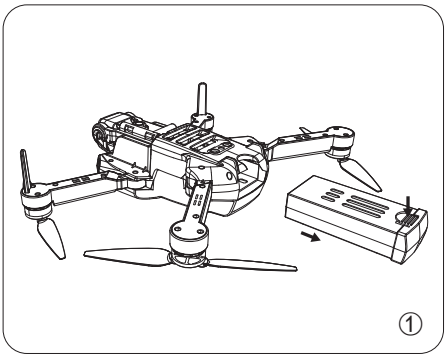
Important Notice! When the power supply of the transmitter is lower than 3.5V, you will hear a low power beeping sound. When this occurs, you must charge the transmitter before flying.

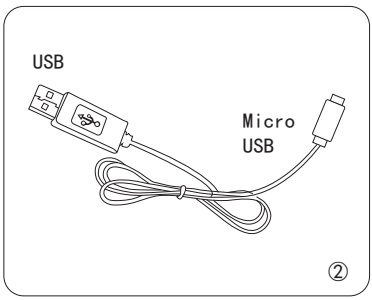
CHARGING AND BATTERY INSTALLATION

CHARGING

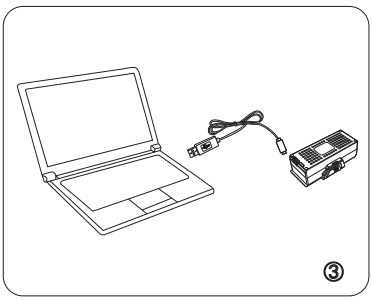
1. Hold the end of the battery cartridge at the indentation and pull out of the compartment.

(figure 1)





2. Connect the original charge cord Micro USB to the flight battery. *(figure 2)*



3. Plug the USB into a 5V USB power source.

(figure 3)

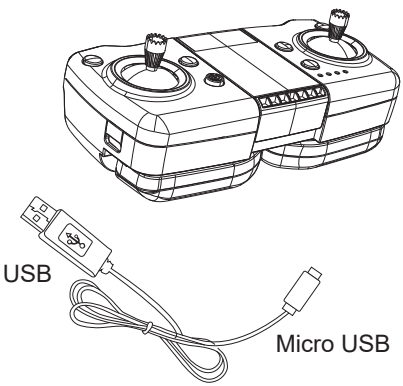
The red light will remain on while charging. When battery is fully charged the red light will go out. The charging time is about 3 hours .

Note: Please use the factory charge cord. It is NOT recommended to use a damaged or other branded cord for charging.

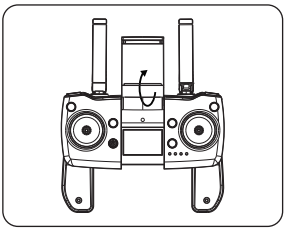
TRANSMITTER CHARGING

The transmitter includes a built-in 3.7V lithium battery. To charge, connect the micro USB to the transmitter and the USB to a 5V power source.

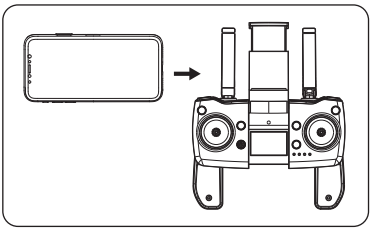
The charge light will be on during charging and will go off when charging is complete. The charge time should be approximately 3 hours.



SMART PHONE INSTALLATION



1. Open the mobile phone bracket on the transmitter.

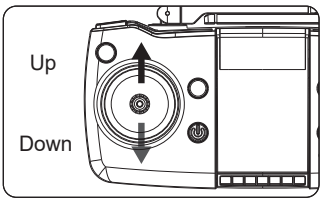


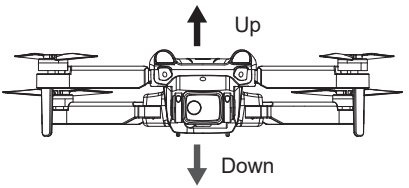
2. Insert the mobile phone into the bracket on the transmitter and adjust the bracket as necessary.

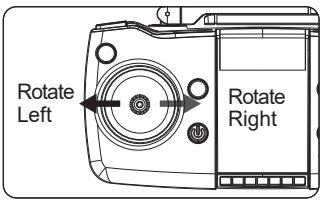
TRANSMITTER INSTRUCTIONS

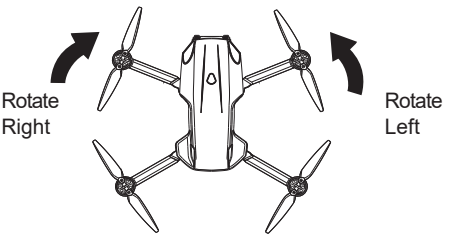
CONTROL DIRECTIONS

1. Left Control Stick (throttle/yaw) The left stick controls the flight altitude and left and right rotation (yaw)

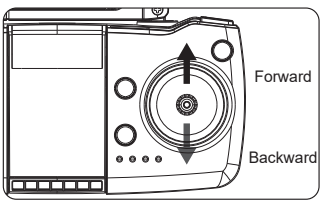


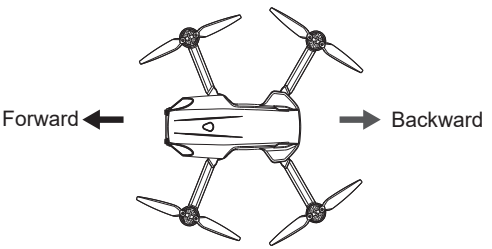


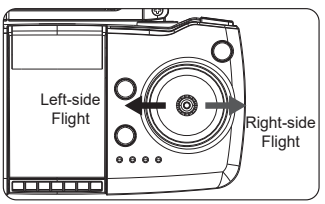


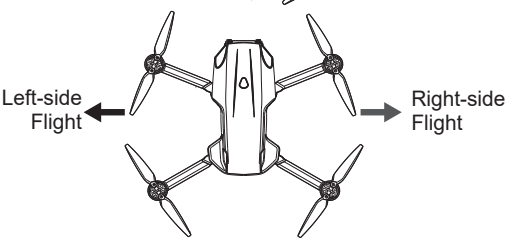


2. Right Control Stick (pitch/roll) The right stick controls the forward/backward and left/right-side flight direction









ONE KEY RETURN

One Key Return: When you press One Key Return, the transmitter will beep continuously and the aircraft will start to return to the take-off position to land. Once the unit has returned and landed, the beeping on the transmitter will stop after 3 seconds. This function works only if GPS mode is on.

SAFE RETURN

If the aircraft detects low voltage level, the front and rear lights of the aircraft will blink slowly and the aircraft will automatically return to a height of about 20 meters within the radius of the take-off point. At this time the aircraft can fly for about 2-4 minutes. When a second low voltage level is detected and the aircraft is less than 10 meters high, it will automatically rise to 10-20 meters, return to take-off point and automatically land. This function will only work when in GPS mode.

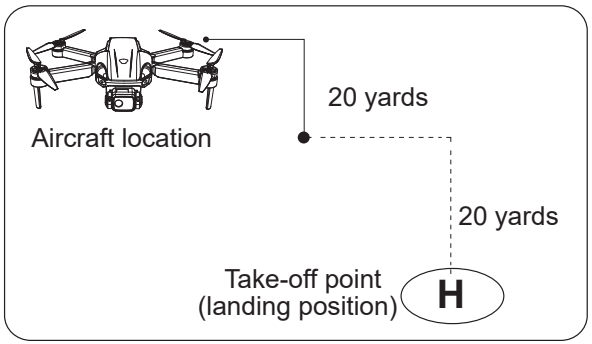
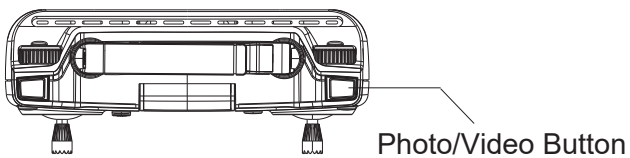


PHOTO AND VIDEO

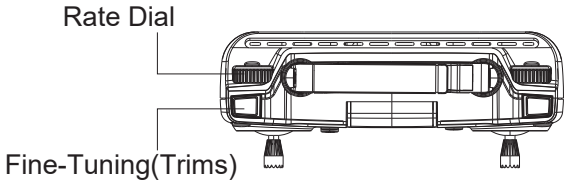
1. Short press the photo button on the transmitter or touch the photo icon on the app interface to take photos. The photos will be stored on your smart device. Both photo and video will only work when your device is connected to the app!
2. Press and hold the video button on the transmitter, or touch the app interface to record. Press the video button again or touch the icon to stop recording. The video will be saved on your smart device. Both photo and video will only work when your device is connected to the app!



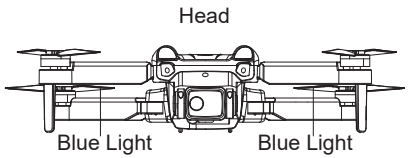
Press and release button for photo.
Press and hold for 1 second to start video recording.
Press and hold again to stop video recording.
While in video mode the blue light on the transmitter will blink.

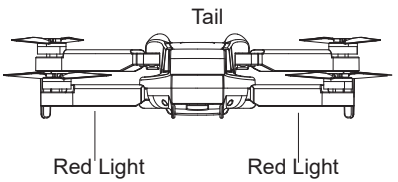
RATES

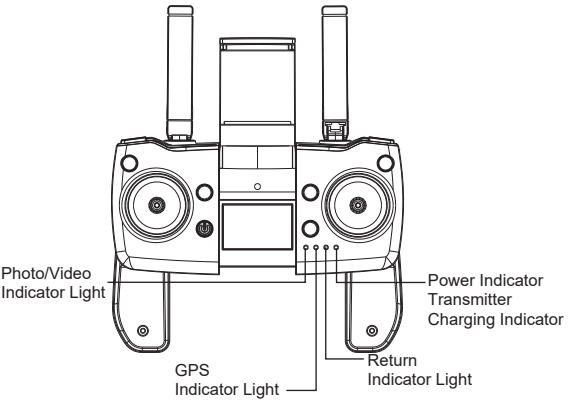
Rotate the rate dial on the transmitter to change the flight speed.
One beep is low, two beeps is medium, three beeps is high.
When transmitter is turned on, the default setting is low rate.



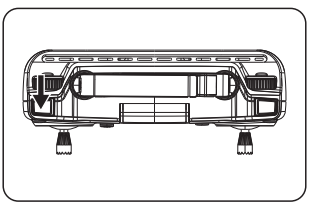
LIGHTS







FINE TUNING ADJUSTMENT (Trims)



Short press to enter fine-tuning (trim) mode, use forward/backward/left fly/right fly control sticks to fine tune (trim) directions while in flight until the drone has reached a steady hover and is not drifting in any direction. To exit Fine Tuning mode, press the button again.

SAFE FLIGHT GUIDE

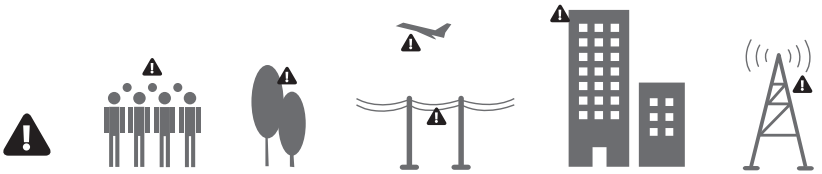
Recommended flying conditions:

Fly in a open unobstructed environment

Ensure a Strong GPS signal

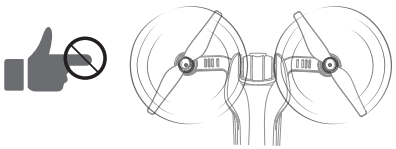
Fly within Visual range

Keep flight Altitude below 400ft



Do not fly over or near people, trees, high-voltage power lines, buildings, airports or water.

Do not use this product under severe weather conditions, such as rain, snow, fog and wind speed exceeding 10-15mph.

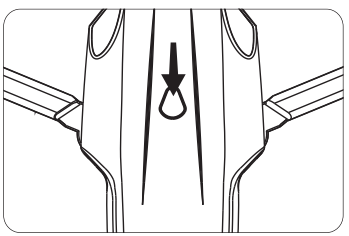


Do not attempt to fly aircraft in restricted areas.

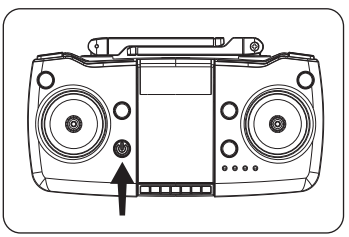
Keep hair and body parts from rotating blades and motors.

It is very important to understand safety guidelines for safe flight. Please read them carefully before flight.

STEPS BEFORE TAKE-OFF

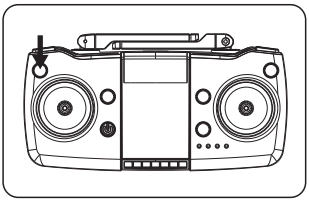


Install the battery in the aircraft, then press and hold the aircraft Power Button for more than 3 seconds. The aircraft will beep and the lights on the front and rear arms of the aircraft will flash slowly.

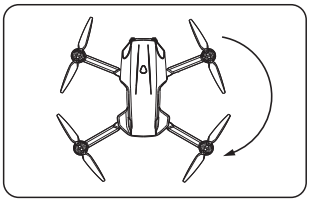


Press the power button on the transmitter. You will hear a beep and the power light will turn on. The front lights of the aircraft will remain on solid and the rear lights will continue to flash slowly. The binding process is now complete.

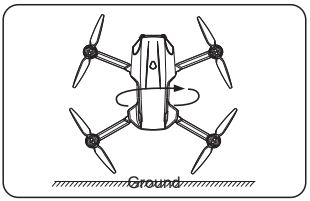
COMPASS CALIBRATION



Short press the one key compass calibration button as shown and the transmitter will beep. The front and rear lights of the aircraft should then turn off.

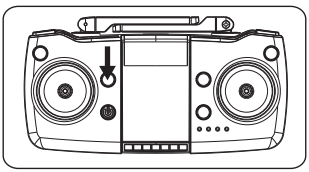


With the body of the drone horizontal to the ground, rotate the drone through at least one full turn until the unit beeps and the blue lights turn solid.



Next, with the nose of the drone pointed to the sky, rotate the drone until the unit beeps and the red lights begin to flash. Then, set the drone on the ground and when the red lights go solid this step is complete.

GYRO CALIBRATION



Short press the Gyro Calibration button and you will hear a beep and the back red lights will begin to flash. When you hear a 2nd beep, the gyro has been calibrated. The rear red lights will continue to flash slowly until GPS signals have been acquired.

Important Note - it is recommended that both the compass calibration and gyro calibration are completed before flight each time the battery is installed.

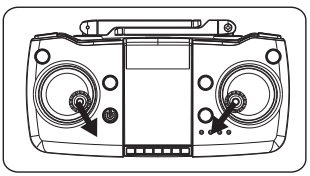
ACQUIRING GPS SIGNALS

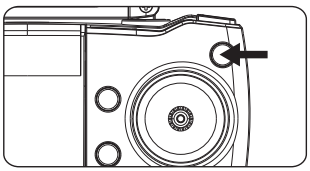
Place the drone on a level space in a clear, unobstructed outdoor surface so the drone can acquire GPS signals. This step may take 1 to 3 minutes. When the necessary GPS signals have been acquired, the rear red lights will stay on solid and the transmitter will beep once. This process of acquiring satellites can be monitored by viewing the top of the app screen on your device (see page 13).

Note: If this process has not been completed after 3 minutes, the required number of satellites to fly with GPS have not been acquired. Either search for a more unobstructed setting to try acquiring signals again or long press the GPS On/Off button on the transmitter (see page 5) until the GPS light goes off to fly without GPS.

The motors can then be unlocked by following the instructions in the following section.

ONE BUTTON TAKE-OFF/LANDING





1. One Button Take-off

   After unlocking (as shown on the left), short press the take-off/landing button or click the take-off icon on the app interface and the aircraft will take off.

   Do not hold this button in place as it will initiate an Emergency Stop and the motors will turn off in flight!

2. One Button Landing

   When the aircraft needs to land, short press the auto take-off/land button again. The aircraft will automatically land on the ground in place. During the descent, the direction of flight can be controlled by the control sticks. If you decide you want to continue to fly instead, press the auto take-off/landing button again, and the descent will stop.

   Do not hold this button in place as it will initiate an Emergency Stop and the motors will turn off in flight!

TROUBLE SHOOTING GUIDE

Problem	Reason	Problem Solving
Transmitter has no power	Power is not on	Make sure transmitter is turned on
	Transmitter battery is not charged	Make sure the transmitter battery is charged
The aircraft is uncontrollable	The transmitter has accidentaly turned off	Make sure transmitter is turned on
	Strong winds are affecting the aircraft	Find a time to fly when it is not windy
	One of the blades may be damaged	Stop the flight and make sure all blades are in perfect condition
The aircraft will not climb in altitude	Not enough power to the aircraft	Increase throttle to make sure there is enough power
	Aircraft battery needs to be charged	Stop the flight and charge the battery
The aircraft descends too fast in landing	Decreasing throttle too quickly	Lower the throttle slowly for smooth landings or use the auto land feature

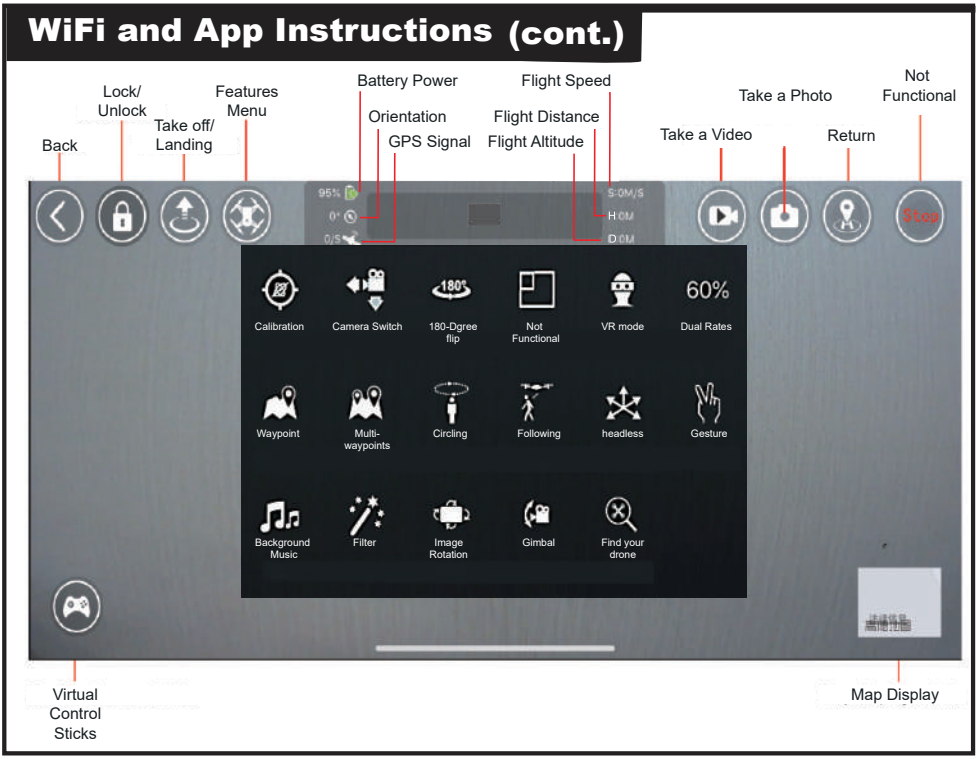
WiFi and App Instructions

1. Scan the appropriate QR code to download the app to your mobile device.
2. With the aircraft turned on, turn on the WiFi on you mobile device.
3. Find the WiFi starting with HF GPS5G_xxxxxxx.
4. Open the app and start your FPV flight.

IOS **Android**

After completing the above steps, set the aircraft on a smooth level outdoor surface for 1 to 3 minutes and it will automatically search for GPS signals.

WiFi and App Instructions (cont.)



Gyro Calibration - pressing this feature on the app will calibrate the gyro in the same way as the button on the transmitter (page 11). This step should be done BEFORE each flight and will not work during flight.

View Switching - this will switch the view on your device from the front facing camera to the down-facing camera on the drone and back and forth as desired by the pilot.

180 Rotation - this feature will rotate the drone 180 degrees in place for a panoramic view of your surroundings.

Picture in Picture - this feature is NOT available for this product.

VR Mode - this feature changes the view to a dual screen for use with VR goggles (not included).

Rates - pressing this will change the rates as described on page 9 of this manual.

Waypoint - with this function the drone will fly to a specific point on the map within the approximately 200 yard range of this drone. Note that a Maps app will need to be downloaded for this feature to function.

Waypoints - with this function the drone will fly to a specific point on the map within the approximately 200 yard range of this drone. Note that a Maps app will need to be downloaded for this feature to function.

Circling - this feature will enable the drone to fly a circle around the pilot.

Following - with this feature the drone will follow the pilot within the flying range of the drone.

Headless Mode - this feature has not been enabled for this product.

Gesture - the drone can be controlled by 3 different hand gestures as shown on the app. Best results are at a distance of 5 to 10 feet from the drone. Due to safety considerations, it is recommended that someone else is flying the drone when you try using the hand gestures. To take a photo, use the peace sign ✌. For video either show an open palm 🖐 or the ok hand gesture 👌.

Background Music - this feature will allow you to choose music from your mobile device.

Filter - use this to open a menu to choose a filter to use with your photos.

Image Rotation - this feature will rotate the view on your device by 90 degrees each time it is pressed.

Gimbal - this feature will allow you to control the camera on the drone to move either up or down.

Find Your Drone - allows you to find your drone on the Maps app that has been downloaded.

Parts List

Item Number	Description
RGR4450	Stinger GPS RTF Drone
RGR4455	Complete Printed Body Set
RGR4456	Propeller Set (8) w/ Screws
RGR4457	1503/2600KV Brushless Motor
RGR4458	Front Replacement Arm w/ Motor (CW)
RGR4459	Rear Replacement Arm w/ Motor (CW)
RGR4460	Front Replacement Arm w/ Motor (CCW)
RGR4461	Rear Replacement Arm w/ Motor (CCW)
RGR4462	2.4GHz Transmitter
RGR4463	2.4GHz Receiver w/ GPS
RGR4464	12A Brushless Speed Controller Front (CW)
RGR4465	2S 7.4V 3000mAh Battery Pack
RGR4466	USB-A to Micro-USB Charging Cable
RGR4467	4K 5GHz WiFi Camera
RGR4468	12A Brushless Speed Controller Front (CCW)
RGR4469	12A Brushless Speed Controller Rear (CW)
RGR4470	12A Brushless Speed Controller Rear (CCW)

See your local hobby shop or place of purchase first. If unavailable, parts can be ordered direct at www.ragerc.com or call 1-866-724-3811 M-F 8:00-5:00PM Mountain Time.

Warranty

Warranty Period: Rage R/C warrants that the Stinger GPS ("Product") will be free from original factory defects in materials and workmanship upon purchase ("Warranty Period").
What is Not Covered - This warranty is not transferable and does not cover (a) cosmetic damage, (b) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (c) modification to any part of the Product, (d) attempted service by anyone other than a Rage R/C authorized service center, or (e) Product not purchased from an authorized Rage R/C dealer.
OTHER THAN THE EXPRESS WARRANTY ABOVE, RAGE R/C MAKES NO OTHER WARRANTY OR REPRESENTATION, AND THREFORE DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND SUITABILITY FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL MEET THE REQUIREMENTS OF THEIR INTENDED USE.
Purchaser's Remedy - Rage R/C's sole obligation and purchaser's sole and exclusive remedy shall be that Rage R/C will, at its option, either (a) service, or (b) replace, any Product determined by Rage R/C to be defective. Rage R/C reserves the right to inspect any and all Product(s) involved in a warranty claim. Service or replacement decisions are at the sole discretion of Rage R/C. Proof of purchase is required for all warranty claims. SERVICE OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY.
Limitation of Liability - RAGE R/C SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY, REGARDLESS OF WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, TORT, NEGLIGENCE, STRICT LIABILITY OR ANY OTHER THEORY OF LIABILITY, EVEN IF RAGE R/C HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Rage R/C exceed the individual price of the Product on which liability
is asserted. As Rage R/C has no control over use, setup, final assembly, modification or misuse, no liability shall be assumed nor accepted for any resulting damage or injury. By the act of use, setup or assembly, the user accepts all resulting liability. If you as the purchaser or user are not prepared to accept the liability associated with the use of the Product, purchaser is advised to return the Product immediately in new and unused condition to the place of purchase.
Law - These terms are governed by Utah law (without regard to conflict of law principals). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Rage R/C reserves the right to change or modify this warranty at any time without notice.

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