

STINGER 3.0

INSTRUCTION MANUAL



Specifications

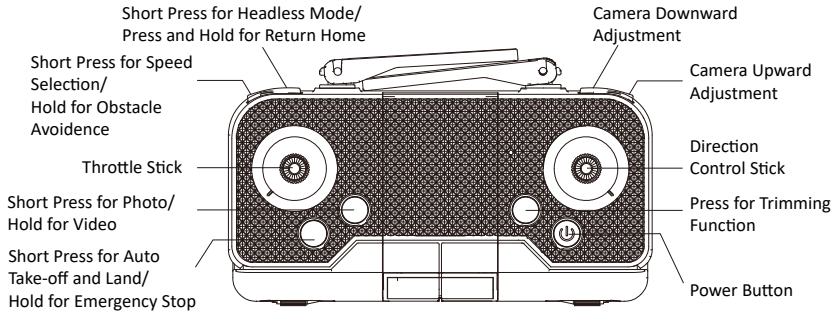
Total width (motor shaft to motor shaft):	10.5" (270mm)
Prop size:	5.75" (146mm)
Height:	2.28" (58mm)
Weight:	7. oz. w/ battery (213g)
Battery:	3.7V 1S 2000mAh Cartridge Style LiPo battery
Motors:	8620 Coreless (4 total)
Charger:	0.5 to 2.0A USB charger
Transmitter:	4-channel, 2.4GHz w/ built-in phone holder

As with its predecessors, the Stinger 3.0 doesn't break the budget when getting started with a full-featured FPV drone. The Stinger 3.0 includes standard features in its class such as Altitude Hold, One-Touch Take-Off and Landing, Heading Lock, 6-Axis Gyro Stabilization Control, high-visibility LED's and more. For FPV photos and videos, the new 3.0 includes a 1080p HD camera with a 1-axis control (up and down) from the transmitter. A second, downward-facing fixed camera provides another viewing angle while in flight. Also new is the Collision Avoidance feature that helps provide safe flights when indoors or in low sunlight environments. Plus, the Stinger 3.0 now arrives in a hard sided, quality, travel-type case with soft foam packing to keep the unit and components safe during travel and storage.

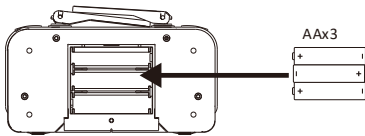
The Stinger 3.0 is an RTF (Ready-To-Fly) drone, so it arrives factory-assembled with everything needed to experience the fun of FPV flight. In addition to the long list of features already mentioned, you receive a 2.4GHz 4-channel transmitter with a built-in smartphone holder, a powerful 2000mAh cartridge-style battery that provides up to 15 minutes of flight time for getting FPV images and videos, and a USB charger for quick charging. Even the AA batteries for the transmitter are included, so you'll be taking quality in-flight photos and videos within minutes of opening the box!



Transmitter



Installing Transmitter Batteries

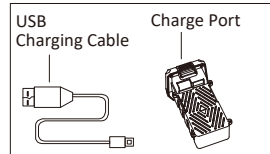
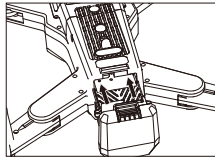
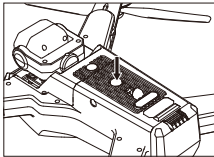


Open the battery compartment and insert the 3 AA batteries making sure the polarity is aligned correctly for each one.



1. Double-check to make sure batteries are inserted matching the polarity shown inside the battery compartment.
2. For best results, do not combine the use of used batteries with new batteries and also try to replace all batteries at once with batteries from the same package.

Charging Instructions



Make sure the power to the Stinger 3.0 is off. Then, release the battery from the compartment by pressing the indentation at the bottom of the battery and pulling away from the aircraft.

Plug the Mini USB connector into the integrated charge port on the battery. Plug the USB connector into a 5V USB charge port such as your computer. The red light on the battery will be on during charging, and will turn off when the charge process is complete.

Voltage and Charging Current Guidelines

Input	DC4.7-5.3V
Adapter current	0.5-2A

Warning:

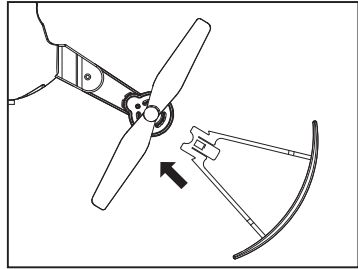
The input voltage and current of the USB charging cord should not exceed these guidelines or damage is likely to occur to both the battery and charge cord.

Important Safety Requirements

1. Do NOT place battery in a hot area (near a fire, inside a car, etc.) either while charging or storing.
2. Do NOT strike, hit, throw, or do anything that could cause damage to the outside case of the battery.
3. Do NOT allow the battery to get wet. It must be stored in a cool, dry location.
4. Do NOT leave unattended while charging!

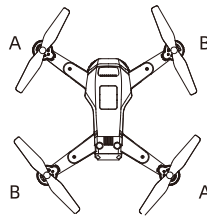
Blade Guard Installation

Blade guards are included with your purchase of the Stinger 3.0. You have the choice of flying either with or without the blade guards attached. It is recommended that beginner pilots fly with the blade guards attached both to protect the blades and protect items in the vicinity from being damaged by blade strikes. Before installing the blade guards you will need to remove the inserts from each arm where the guards will fit. To insert the blade guards, hold the blade guard as shown in the diagram and connect to the arm by aligning and inserting the prongs into the matching slots.



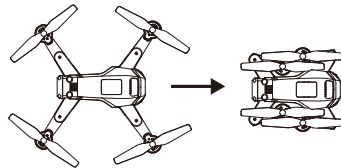
Blade Replacement

Note that the Stinger 3.0 uses 2 different types of blades- labeled A and B. If a blade is ever lost or damaged, make sure to replace it with the correct blade as shown in the diagram. The arms on the Stinger are labeled with either an A or a B. Match the appropriate blade to arm. The replacement blades are labeled on the bottom of the blade near the hub. To reach the blade removal screw, remove the cap at the center.



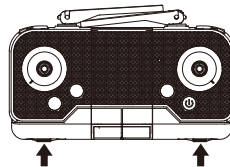
Storage

For safe and convenient storage in the carry case, make sure to fold the arms as shown in the diagram.

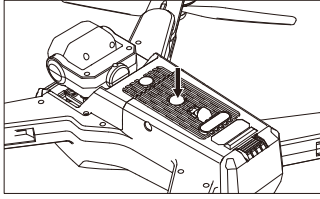


Installing Transmitter Sticks

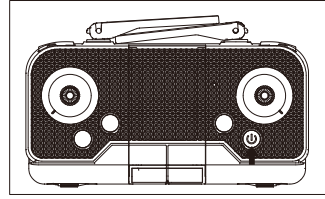
The transmitter sticks are located in compartments at the bottom of the transmitter, as shown. To install, press fit the smaller end of each stick into the receptacle for each control.



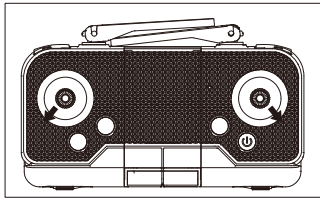
Flight Set-Up



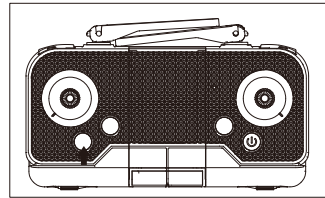
First, press the on/off button on the bottom of the body until the LED's in the arms begin to flash. Then, place the aircraft on a flat, dry surface with plenty of space to fly.



Next, turn on the transmitter by pressing and holding the on/off button. The LED's in the arms of the aircraft turn to solid, indicating the aircraft is bound to the transmitter and the motors are armed.



It is always a good idea to calibrate, or reset the gyro of the aircraft before you fly. As a final step, move both control sticks to the bottom outside corners as shown in the diagram. The LED's should flash quickly. When the flashing stops, your Stinger 3.0 is now ready for flight!

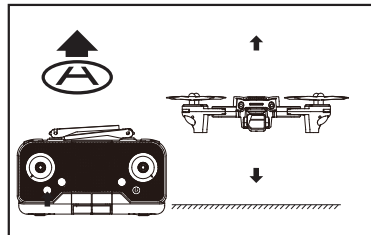


To take off you **MUST** use the Auto Take-Off button on the transmitter. The control sticks will not function until the aircraft reaches altitude hold height.

Key Flight Features

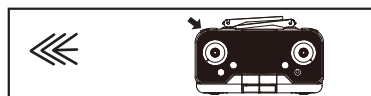
Auto Take-Off and Landing

1. To take-off, press the button on the **bottom left** of the transmitter with the arrow pointed up. The aircraft will then take off and climb to a steady altitude for you to begin your flight.
2. To land, press the same button on the **bottom left** of the transmitter. The aircraft will then descend to a smooth landing. Make sure you are familiar with this button in case you lose orientation and need to land the aircraft immediately.



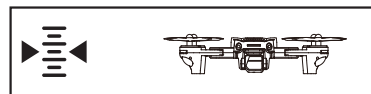
Flying Rates

The Stinger 3.0 has 3 rates. Press the left side of the button on the left shoulder (top) of the transmitter. The number of beeps indicate the rate chosen. One beep is low, two is intermediate, and three beeps is high rate.



Altitude Hold

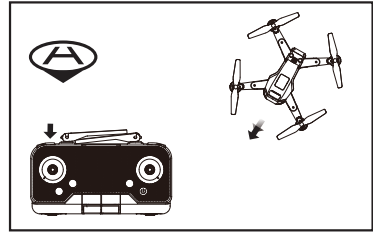
The Stinger 3.0 includes an altitude hold function. After climbing to the desired altitude allow the throttle (left) stick to return to its center position. The aircraft will remain at that altitude until the throttle is either raised or lowered.



One Key Return

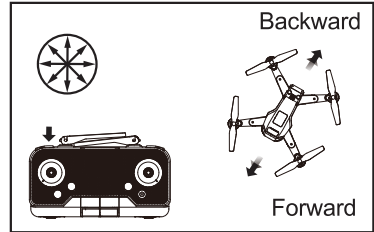
Enable One Key Return by pressing and holding the right side of the button of the left shoulder of the transmitter. The transmitter will begin to beep and the lights will flash. The aircraft will fly back in the direction of where it started no matter which direction it is facing. Press the One Key Return button again to exit this mode.

NOTE: The pilot will still need to land the aircraft either manually or by using Auto Land.



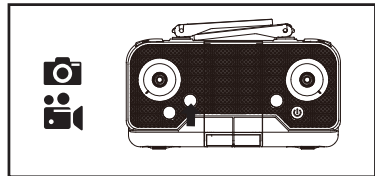
Headless Mode

The Stinger 3.0 is set to fly in standard mode with controls as described previously in this manual. Headless mode is helpful when you are unsure of the orientation of the aircraft at a distance. To activate, short press the right side of the button on the left shoulder of the transmitter. Once activated, move the right control stick in the direction that you wish the aircraft to go. It will move in that direction regardless of which direction the aircraft is facing. Press the button again to exit this mode.



1080p Camera Operation

1. Press the camera/video button on the right bottom of the transmitter. When a beep sound is heard, it means that a photo has been taken. Each press will take a new photo.
2. Press and hold the same camera/video button on the transmitter until a beep sound is heard which means video recording has started. Press the button again to stop the recording.
3. All photos and videos will record directly to the app on the pilot's mobile device when connected via WiFi.



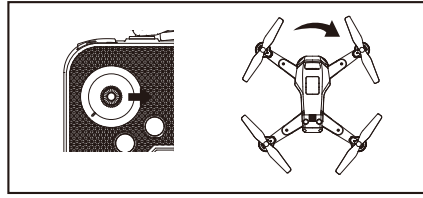
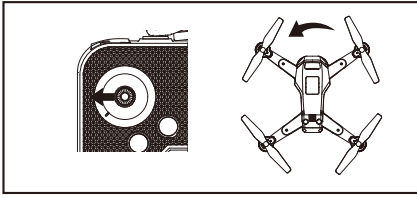
Flight Control

Ascending & Descending



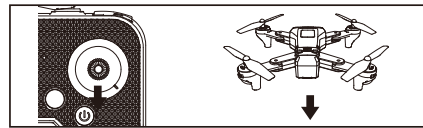
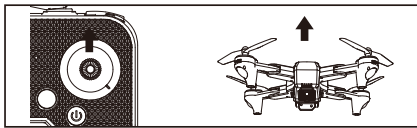
Move the left stick (throttle) up for the aircraft to ascend and down to descend. Use small, smooth movements for the best results.

Yaw (spin) Left or Right



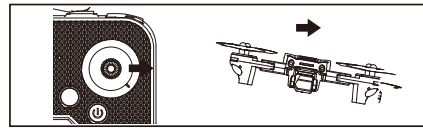
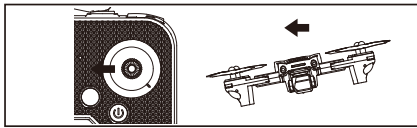
Move the left stick to the left for the aircraft to yaw to the left and to the right to yaw the aircraft to the right.

Forward & Backward



Move the right stick up for the aircraft to move forward and down to move backwards. Use small, smooth movements for the best results.

Move Aircraft Left or Right

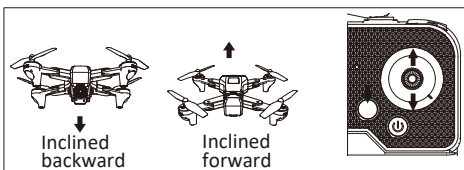


Move the right stick to the left for the aircraft to move to the left and to the right for the aircraft to move to the right.

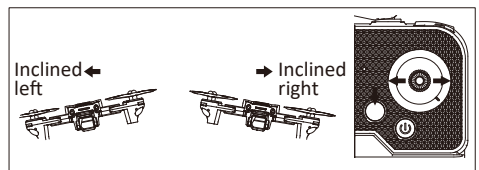
Trimming Instructions

If you find that while in a stable hover, the Stinger 3.0 drifts in any of the directions described in the previous section, press the left button on the bottom right of the transmitter to enter trim mode. Then, move the right control stick in the directions shown to adjust the trims, as needed.

Trim Forward/Backward



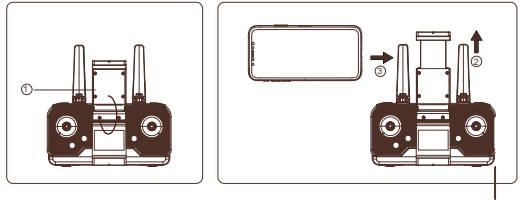
Trim Left/Right



Phone Holder Installation

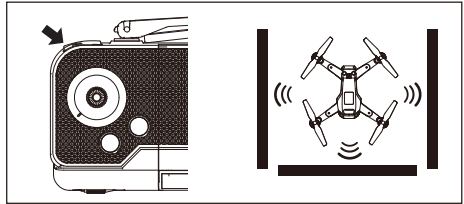
A built-in phone holder is part of the Stinger 3.0 for FPV view during flight. To use the phone holder, complete the following steps.

1. Lift the center section of the transmitter from bottom and pull up.
2. Rotate up until it extends above the top of the transmitter.
3. Stretch the top of the phone holder to fit your device horizontally and place the device inside.
4. Adjust the arms extending from the top of the transmitter to support the device, as needed.



Collision Avoidance

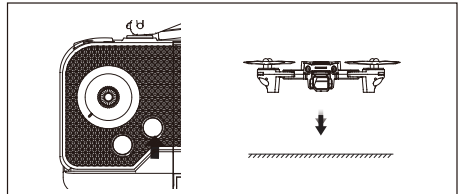
To engage the Collision Avoidance feature, press and hold the left side of the button on the left shoulder of the transmitter until you hear a beep and the LED's begin to flash quickly. The aircraft will then avoid large obstacles to the front, left and right. Press again to stop the feature. When in Collision Avoidance mode, the aircraft will automatically go into low speed and will only work at that setting.



NOTE: Because this feature uses Infrared technology, it will function best in indoor or low light settings.

Emergency Stop

If the aircraft is flying out of control and the auto-land feature does not work, to avoid damage or injury press and hold the left button under the left control stick. Use **ONLY** in case of emergency as damage to the aircraft could result.



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 your mobile device.
3. Find the WiFi named Stinger 3.0-xxx and connect.
4. Open the app and start your FPV flight.



iOS



Android

WiFi and App Instructions (cont.)

Please refer to the following for an explanation of the features and limitations of the app. The numbered list should match the numbers assigned to the features available on the app.

1. **Gesture Control** - 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 👌.
2. **View Switching** - this feature switches the view on the screen from the front camera to the down facing camera and back and forth as the pilot wants.
3. **Master Mode** - this feature has NOT been enabled for this product.
4. **Picture in Picture** - this feature shows both views at one time. It also allows the pilot to switch the PIP back and forth between the 2 different cameras.
5. **Palm Control Flight** - this feature is NOT enabled for this product.
6. **VR Mode** - this feature changes the view to a dual VR screen for use with VR goggles.
7. **Headless Mode** - this feature pulls the drone back to the pilot in the range of where it started the flight. It is recommended to use this feature from the transmitter as described earlier in the manual rather than through the app.
8. **Tracking Mode** - this function also has NOT been enabled for this product.
9. **Lens Reverse** - this feature flips the screen view upside down.
10. **Menu** - this feature adds another menu list at the top of the screen.
11. **Speed** - to change speeds it is recommended that you use the speed selection key located on the transmitter.
12. **Take Picture** - along with the transmitter photo/video button, this feature allows you to take a photo with the mobile device.
13. **Video** - as with the video/photo button on the transmitter, this feature will record video to your mobile device.
14. **Airplane Mode** - when the transmitter is not in use, this feature allows for control of the aircraft via the phone using the WiFi signal. **Due to the size of this aircraft and the accuracy of the controls, it is strongly recommended that all flight control should be by the transmitter and not use the app on the phone!**
15. **Emergency Stop** - NOT enabled for this product.
16. **Take-Off and Landing** - this feature works by the app only when the transmitter is off and flight control is through the app. (see Airplane Mode above)
17. **Entertainment** - NOT enabled for this product.
18. **Album** - this feature takes you to any recorded photos and videos.
19. **Calibration** - this can be used as another way to calibrate the Stinger 2.0. Press the button and it highlights - then after a couple of seconds it turns off when the aircraft has been calibrated.
20. **Return Key** - note that this feature is NOT for returning the drone to the pilot. It is for going back to the main menu on the app.
21. **Left Remote (stick)** - this feature works the same as the left stick on the transmitter just through the Airplane Mode controls when the transmitter is off. **It is strongly recommended that all flight control should be by the transmitter and not use the app on the phone!**
22. **Right Remote (stick)** - this feature works the same as the right stick on the transmitter just through the Airplane Mode controls when the transmitter is off. **It is strongly recommended that all flight control should be by the transmitter and not use the app on the phone!**
23. **3D Mode** - this feature allow the pilot to move the object on the screen inside the video.

Trouble Shooting Guide

Problem	Reason	Problem Shooting
Transmitter has no power	1. Power is not on	Make sure transmitter is turned on
	2. Batteries not inserted correctly	Make sure batteries are aligned by correct polarity
	3. Batteries are worn out	Replace with new batteries
The aircraft is uncontrollable	1. The transmitter has accidentally turned off	Make sure transmitter is turned on
	2. Strong winds are affecting the aircraft	Find a time to fly when it is not windy
	3. 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	1. Not enough power to the aircraft	Increase throttle to make sure there is enough power
	2. Aircraft battery needs to be charged	Stop the flight and charge the battery
The aircraft descends too fast in landing	1. Decreasing throttle too quickly	Lower the throttle slowly for smooth landings or use the auto land feature

Parts List

ItemNumber	Description
RGR4550	Stinger 3.0 RTF Drone
RGR4551	Printed Body Set
RGR4552	Prop Guard Set (4)
RGR4553	Replacement Motor w/Gear (CW)
RGR4554	Replacement Motor w/Gear (CCW)
RGR4555	Replacement Gears (Set of 2)
RGR4556	Motor Cover (Set of 2)
RGR4557	3.7V 1S 2000mAh Lipo Battery w/Case
RGR4558	USB Charging Cable
RGR4559	2.4GHz Transmitter
RGR4560	1080p WiFi Camera
RGR4561	Propeller Set, Orange & Black (2ea)
RGR4562	Replacement Arm A w/Blue LED, Motor & Gearbox
RGR4563	Replacement Arm A w/Red LED, Motor & Gearbox
RGR4564	Replacement Arm B w/Blue LED, Motor & Gearbox
RGR4565	Replacement Arm B w/Red LED, Motor & Gearbox
RGR4566	Prop Shaft Set (4)

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.

Safety Precautions

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

- Be cautious with the propellers when the motors are running. Do not come into contact with rotating propellers as serious injury could result.
- Keep a safe distance, in all directions, around your aircraft to avoid possible collisions or injury. This aircraft is controlled by a radio signal that is subject to interference from many outside sources and could result in a momentary loss of control.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture can damage unprotected electronics.
- Make sure to keep all chemicals, small parts and anything electrical out of the reach of children.

Battery Safety Precautions

Important Note: Lithium Polymer (LiPo) batteries are more volatile than the alkaline, NiCad and NiMH batteries used in other RC applications. All instructions and warnings must be followed exactly to prevent possible personal injury or damage to property, including by fire. By handling, charging, or using the included LiPo battery you assume all potential risks. If you do not agree with these conditions, please return your complete product in new, unused condition to the place of purchase immediately.

Important - Please read the following safety instructions and warnings before handling, charging, or using the included battery.

- You must charge the LiPo battery in a safe area away from any flammable materials.
- Never charge the LiPo battery unattended at any time. When charging the battery you should always remain in constant observation of the battery to monitor the process and react immediately to potential problems you observe.
- After discharging the battery during operation you must allow it to cool to ambient room temperature before attempting to recharge. Also, it is NOT recommended that you completely discharge the battery before charging. It is safe to charge partially discharged batteries when using an appropriate LiPo charger.
- For charging the battery you must use only the included charger. Failure to do so may result in a fire causing property damage and/or personal injury. DO NOT use a NiCad or NiMH charger to charge your new LiPo 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 before placing it in a safe, open area away from flammable materials for observation for at least 15 minutes. Continuing to charge or discharge a battery that has started to “balloon” or swell can result in a fire. Important note: A battery that has “ballooned” or swollen even a small amount must be removed from service immediately and completely.
- Never discharge a LiPo battery below 3V per cell.
- Always disconnect a battery from the product when the product is not in use.
- Avoid continually operating the battery to LVC (Low Voltage Cutoff) as this could result in damage to the battery.
- Store the battery partially charged (approximately 50% charged or 3.85V per cell) at room temperature (approximately 68° to 77° Fahrenheit) in a dry area for best results.
- When transporting or temporarily storing the battery, the temperature range should be between 40° and 100°F. Do not store the battery inside a hot car or in direct sunlight or the battery could be damaged or even catch fire.
- LiPo cells should not be discharged below 3.0V each. In the case of this 1-cell, 3.7V battery you should not allow the voltage to fall below 3.0V during operation.
- Do not over-discharge the LiPo battery, doing so could result in reduced power, lower run times or complete failure of the battery.

NOTE: Your aircraft features a “soft” LVC (Low Voltage Cutoff) that smoothly reduces power (regardless of your throttle position) to let you know the battery is near the minimum voltage to avoid damage to your battery.

Warranty

Warranty Period: Rage R/C warrants that the Stinger 3.0 ("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 THEREFORE 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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HRP Distributing, Inc.
2034 South 3850 West
Salt Lake City, Utah 84104

RAGE RC

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