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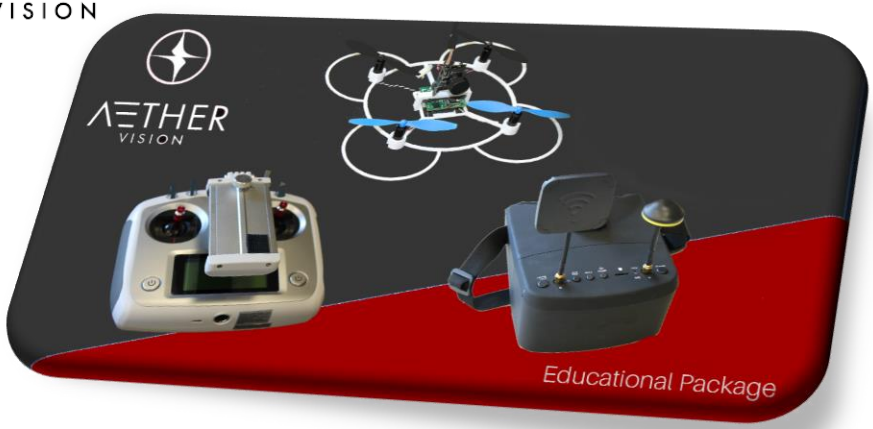

Rogue Version Micro User Manual (RV Micro) v.2.0.1

High Performance, 3-D Printed, Sustainable, Ultra-Lightweight, and Extremely Versatile

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www.AetherVisonLLC.com

NOTICE

All instructions, warranties and other collateral documents are subject to change at the sole discretion of AetherVision, LLC. For up-to-date product literature, visit aethervisionllc.com and click on the support tab for this product.

Meaning of Special Language

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE: Procedures, which if not properly followed, create a possibility of physical property damage AND possibility of injury.

CAUTION: Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.

WARNING: Procedures, which if not properly followed, create the probability of physical property damage, collateral damage, and serious injury OR create a high probability of superficial injury.

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury or death.

This is a sophisticated product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. Do not use with incompatible components or alter this product in any way outside of the instructions provided by AetherVision, LLC. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

- FOR CURRENT FEDERAL AVIATION ADMINISTRATION (FAA) REGULATIONS VISIT WWW.KNOWBEFOREYOUFLY.ORG AND WWW.FAA.GOV/UAS
- FOR ADDITIONAL RESOURCES VISIT THE ACADEMY OF MODEL AERONAUTICS WWW.MODELAIRCRAFT.ORG
- FOR ÆTHERVISION MANUAL RESOURCES PLEASE VISIT HTTP://AETHERVISIONLLC.COM/QUADCOPTER-ASSEMBLY-MANUALS/

Age Recommendation: Not for children under 6 years of age. Safety Glasses Recommended. Supervision REQUIRED for ages 6-12. This is not a toy.

Safety Precautions and Warnings

- Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
- Always operate your model in open spaces away from full-size vehicles, traffic and people.
- Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
- Always keep all chemicals, small parts and anything electrical out of the reach of children.
- Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
- Never place any portion of the model in your mouth as it could cause serious injury or even death.
- Never operate your model with low transmitter batteries.
- Always keep aircraft in sight and under control.
- Always move the throttle fully down upon strike or crash.
- Always use fully charged batteries.
- Always keep transmitter powered on while aircraft is powered.
- Always remove batteries before disassembly
- Always keep moving parts clean.
- Always keep parts dry.
- Always let parts cool after use before touching.
- Always remove batteries after use.
- Never operate aircraft with damaged wiring.
- Never touch moving parts.

Language and Terminology

Please familiarize yourself with special language and terminology necessary for RV Micro operation. Visit AetherVisionllc.com/support for a more in-depth glossary.

- **Remote Controller –** A wireless radio controller used to wirelessly operate and manipulate a remote-controlled machine.
- **Remote Controlled Machine –** A machine that is wirelessly controlled via a radio frequency.
- **Binding –** The process of connecting a remote controller to a remote-controlled machine. "Binding a Remote Controller to a Quadcopter"
- **Radio Channel –** The Frequency at which two or more devices communicate on. Typically expressed in Gigahertz (GHz).
- **Quadcopter –** A Four (4) Engine Copter.
- **First Person View (FPV) –** An on-board perspective from a remote-controlled machine. Typically, the primary view a Pilot and Operator use when flying beyond line of sight.
- **Lithium Battery (LiPo) –** A Lithium Polymer Battery
- **Battery Cell(s)** - A 3.7 Volt battery cell in a LiPo. More cells in series mean more voltage. (1S = 3.7 Volts; 3S = 11.1 Volts
- **Overcharge –** The process of exceeding the maximum amount of charge a LiPo is capable of.
- **Low-Voltage Warning –** A warning that informs the operator the minimum LiPo voltage is approaching.
- **Low-Voltage Cutoff** - An Automatic cutoff that shuts down all systems to prevent battery damage and/or LiPo fire.
- **Balance Charge** - Multi-Cell LiPo batteries being recharged evenly to ensure that every cell has the same voltage in the same battery pack. (NOTE: Balance Charge does not apply to single-cell batteries)
- **LiPo S- Rating –** Number of cells connected in series to attain voltage (1S – 3.7 Volts; 3S 11.1 Volts)
- **LiPo C** - Rating: The maximum rate at which a LiPo battery can be drained. Typically, it is a multiplied value (Battery Capacity x Discharge Rate – 2100mAh x 10C = 21 Amp discharge)
- **LiPo Charge Rate** - The maximum rate at which a LiPo battery can be recharged. Typically calculated by capacity and rating (3C charge rating – 2100mAh x 3C = 6.3A Max charge rate)
- **Aileron –**The movable areas of a wing from that control or affect the roll of an aircraft by working opposite one another-up-aileron on the right wing and down-aileron on the left wing.
- **Elevator –** The movable part of a horizontal airfoil which controls the pitch of an aircraft, the fixed part being the Stabilizer.

AetherVision Rogue Micro*V3* (RV Micro)

Thank you for purchasing the sustainable, 3-D printable, AetherVision Rogue Version Micro© (RV Micro). The RV Micro is engineered with advanced features while maintaining a simple design and quick assembly procedure. The RV Micro features open source software from the AetherVision online community. Weighing only 56 grams, the RV Micro boasts impressive flight performance with three different flight modes, an acrobatic (Acro) mode for higher-performance maneuvers and a stability mode with self-leveling. In stability mode the machine self-levels. In stability mode the bank angle is also limited, making it easy to fly the aircraft without having to worry about over-control. In Acro mode the Micro is capable of flips, rolls and more, and the aircraft does not limit the bank angle.

The RV Micro is easy to manage, 3D print and assemble. It is exciting to fly and durable enough to take the punishment. Built-in prop guards help prevent prop strikes so you can keep flying even if you bump into a wall, direct drive motors keep operation quiet and maintenance simple, and the frame is lightweight yet rigid, lending the RV Micro remarkable durability. Knowing that the frame can be preprinted gives pilots the confidence to test their skills. Be sure to read this manual before you fly to fully understand the features this tiny aircraft contains, to maximize your fun and ensure safe operation.

Table of Contents

Product Information

RV Micro Features	RTF
3-D Printed Airframe – *Rogue MicroV3 (RV Micro)*	Optional
Motors – 8.5mm x 20mm Brushed	**Included**
On-board Electronics – FPV Camera and Flight Controller	**Installed**
Battery – (1) 1S 3.7V 500mAh 25C Li-Po Battery	**Included**
Charger – 1S USB 6-Port Li-Po Battery Charger	**Included**
Transmitter – FlySky FS-i6S	**Included**

*Ready-to-Fly (RTF)

RV Micro Specifications	
Length and Width	5.43 in (138mm)
Height	2.87 in (73mm)
Weight (Empty)	1.06 oz. (30g)
Weight (Flying Weight)	1.52 oz. (43g)
Frame Material	ABS Plastic
Maximum Velocity	15 mp/h (25 km/h)

First Flight Preparation

- Remove and inspect contents
- Begin charging the flight battery
- Install the flight battery in the quadcopter (Once it has been fully charged)
- Program your computer transmitter
- If necessary, bind your transmitter
- Familiarize yourself with the controls
- Find a suitable area for flying

Flying Checklist

❑ **Always turn the transmitter on first**
❑ Plug the flight battery into the connector from the Flight control unit
❑ Allow the flight control unit to initialize and arm properly
❑ Fly the model
❑ Land the model
❑ Unplug the flight battery from the flight control unit
❑ **Always turn the transmitter off last**

Charging Warnings

The Battery Charger (AVBC1S) included with your quadcopter has been designed to safely charge the Li-Po battery.

CAUTION: All instructions and warnings must be followed exactly. Mishandling of Li-Po batteries can result in a fire, personal injury and/or property damage.

- By handling, charging or using the included Li-Po battery, you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately. If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120º F (5–49° C). Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- Always charge batteries away from flammable materials.
- Always inspect the battery before charging
- Always disconnect the battery after charging, and let the charger cool between charges.
- Always constantly monitor the temperature of the battery pack while charging.
- ONLY USE A CHARGER SPECIFICALLY DESIGNED TO CHARGE LI-PO BATTERIES. Failure to charge the battery with a compatible charger may cause a fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.
- Never leave charging batteries unattended.
- Never charge batteries outside recommended levels.
- Never charge damaged batteries.
- Never attempt to dismantle or alter the charger.
- Never allow minors to charge battery packs.
- Never charge batteries in extremely hot or cold places (Recommended between 40–120° F or (5–49° C) or place in direct sunlight.

Low Voltage Cutoff (LVC)

When a Li-Po battery is discharged below 3V, the battery may become damaged and may no longer accept a charge. The RV Micro flight control unit protects the flight battery from over-discharge using Low Voltage Cutoff (LVC). Before the battery charge decreases too much, LVC becomes active. Power to the motors decrease and the LED on the flight control unit blinks, showing some battery power is reserved for flight control and safe landing.

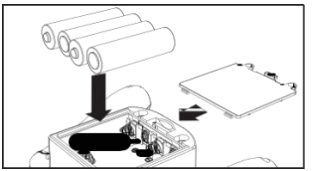
When the motor power decreases, please land the aircraft immediately and recharge the flight battery.

Disconnect and remove the Li-Po battery from the aircraft after use to prevent trickle discharge. During storage, make sure the battery charge does not fall below 3V.

NOTICE: Repeated flying to LVC will damage the battery.

The Transmitter and Installing Batteries (RTF)

Install 4 AA batteries (included) into the transmitter, noting polarity. Replace the transmitter batteries when the touch LCD screen indicator graphic flashes on screen and the transmitter beeps. The transmitter has already been bound to the included flight controller and is Ready-To-Fly (RTF).



FlySky Transmitter Diagram

Battery Charging

Your aircraft comes with a multi-1S 3.7V DC Li-Po battery charger capable of charging 6 batteries at a time in addition to (1) 1S 3.7V 500mAh 25C Li-Po Battery. This charger can charge up to 6 packs (3.7V Batteries) at the same time. Refer to the charging warnings. It is recommended to charge the battery pack while you are inspecting the aircraft. The flight battery will be required to confirm proper aircraft operation in future steps.

NOTICE: Charge only batteries that are cool to the touch and are not damaged. Look at the battery to make sure it is not damaged (e.g., swollen, bent, broken or punctured).

1. Insert the charger into a USB port. The charger only uses power from the USB port, it will not connect to your computer. USB power supplies, such as those used to charge cellular phones, can also be used (Output: DC5V, 2000mA).
2. Slide the battery into the slot on the charger and press it into the charge jack/connector located at side of the charging disk. The end cap of the battery is specifically designed to allow the battery to fit into the slot one way to prevent reverse polarity connection. However, check for proper alignment and polarity.

3. Always disconnect the flight battery from the charger immediately upon completion of charging.

LED Indications

When you make the connection successfully charging has begun. Charging a fully discharged (not over-discharged) 500mAh battery takes approximately 30–40 minutes. The LED light goes out when the charge is complete.
CHARGING (Solid White) **MAX CHARGE** (OFF)

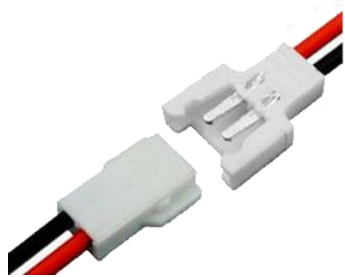
⚠ **CAUTION:** Only use chargers specifically designed to charge the included Li-Po battery. Failure to do so could result in fire, causing injury or property damage or death.

⚠ **CAUTION:** Never exceed the recommended charge rate.

⚠ **CAUTION:** Once charging is complete, immediately remove the battery. Never leave a battery connected to the charger.

Installing Flight Controller Battery

1. Adjust the throttle and throttle trim to the lowest settings.
2. Power on the FlySky aircraft transmitter.
3. Flip the quadcopter upside-down and install the battery by connecting the battery connector to the flight control board beneath the control unit.
4. Slide the battery into the bottom battery bracket ensuring the battery is centered.
5. Place the RV Micro right-side up on a flat surface and leave the aircraft still until the LED on the flight control unit is solid (not blinking).



CAUTION: Always disconnect the Li-Po battery from the aircraft when not flying to avoid over-discharging the battery. Batteries discharged to a voltage lower than the lowest approved voltage may become damaged, resulting in loss of performance and potential fire when batteries are charged.

Transmitter and Receiver Binding

Binding is the process of programming the receiver to recognize the GUID (Globally Unique Identifier) code of a specific transmitter. You need to 'bind' your FlySky aircraft transmitter to the receiver for proper operation. If you purchased an RTF model, the transmitter is bound to the flight controller at the factory.

To bind or re-bind your RV Micro to your chosen aircraft transmitter, please follow the directions below.

General Binding Procedure

1. Disconnect the flight battery from the quadcopter.
2. Set Throttle to idle and Center all sticks on your transmitter.
3. Power ON the FlySky aircraft transmitter and move all switches to the up position.
4. To put the transmitter into bind mode, press the Setting Icon, tap right to SYS and Select Rx BIND.
5. Connect the flight battery in the quadcopter while simultaneously holding the bind button.
6. Before the battery has been connected, hold bind button.
7. After connecting the battery, release the bind button after 2–3 seconds. The quadcopter is bound when the LEDs on the flight control unit turn solid.
8. Disconnect the flight battery and power the transmitter off.

If you encounter problems, obey binding instructions and refer to the troubleshooting guide for other instructions. If needed, contact the appropriate AetherVision Product Support office.

CAUTION: When binding a flight control unit to the FlySky aircraft transmitter, you must have the throttle at idle and make sure a second aircraft transmitter is not on the bind screen when attempting to reestablish a bind.

Flight Mode Selection

This transmitter's flight mode selection feature lets the pilot change between stability mode, intermediate mode and agility mode.

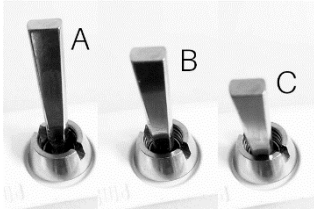
• When powered on, the transmitter default setting is in stability mode.

• Change flight modes by changing the position of Toggle Switch B (SwB)

• In stability mode (A), the controls cannot reach their maximum values. This mode is typically preferred by pilots looking for easy control response during first flights.

• In intermediate mode (B), the controls can reach their maximum values, but self-stabilization is still active. This mode is typically preferred by intermediate pilots who are ready for faster forward flight and become comfortable with basic aerobatic maneuvers.

• Acro mode (C), deactivates all self-stabilization. When flown in acro mode, the Rogue will not return to a neutral (self-stabilizing) flight position when you release the controls. This mode is for experienced pilots who are ready for fast forward flight and aerobatic maneuvers, such as loops, rolls, etc.



Flight Mode Selection

• A – HORIZON – Self- Stabilization – Beginner
• B – ANGLE – Minimal Self-Stabilizing - Intermediate
• C – ACRO – NO Self-Stabilization - Advanced

Transmitter Controls

Horizon – Beginner mode with Self-Stabilization

Angle – Intermediate mode with Self-Stabilizing

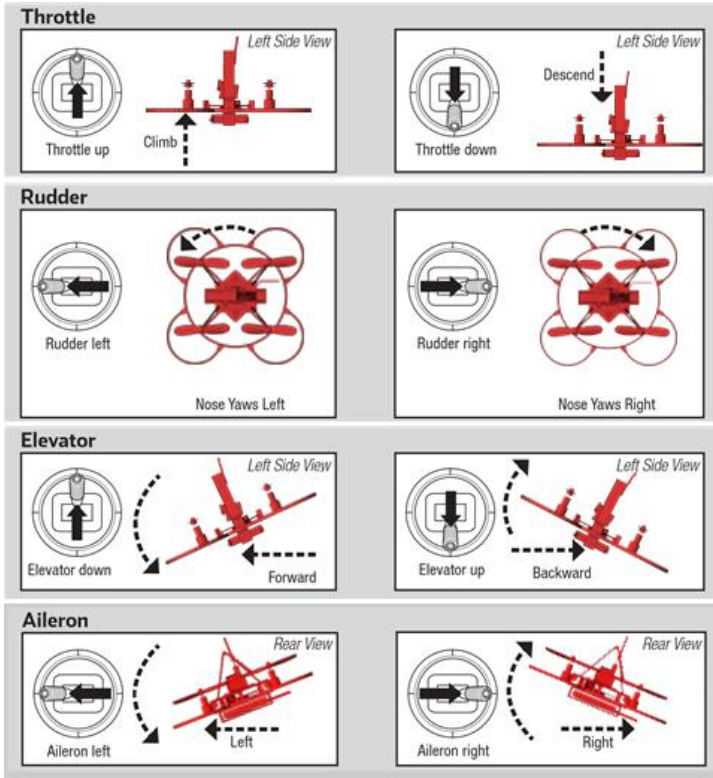
Acrobatic (Acro) – Expert mode with NO Self Stabilization

LED Codes

Equipment	LED Color	LED Status	Operation
Quadcopter	Blue	Rapid Blink	Error – Restart Machine
		Slow Blink	Movement Error - Stop Moving
		Slow Solid	Ready to ARM
		Off	Ready for Flight
	All Bottom LED's (Red and White)	Flashing Slowly	No Transmitter Connected
		Solid	Transmitter Connected

Understanding the Primary Flight Controls

If you are not familiar with the controls of your RV Micro, take a few minutes to familiarize yourself with them before attempting your first flight.



Flight Controller Function

The Flight Controller unit in your RV Micro is a powerful combination of processing and electronic speed controls. This unit is equipped with white and red status indicator LEDs for easy understanding.

- Before each flight, power on the transmitter before connecting the flight battery to the RV Micro unit. After each flight, disconnect the flight battery from the RV Micro before powering off the transmitter.
- The FlySky transmitter will arm the motors when the throttle stick is in the lowest possible position and all switches are in the up position. The Transmitter will emit a warning if switches are in an incorrect position.
- With the FlySky transmitter turned on and the transmitter on home screen, it is safe to connect the flight battery to the Flight Controller.
- Connect the flight battery to the flight controller unit. Center the Battery in its mounting slot. An un-centered battery will cause the quadcopter to drift.
- After the flight battery is connected, place the RV Micro on a level surface. The flight controller status LED should glow solid BLUE within a few seconds. DO NOT move, sway or pretend to fly the quadcopter after connecting the flight battery. This movement can stop the unit initialization and calibration. If the quadcopter is moved before the flight controller unit status LED glows solid, disconnect then re-connect the flight battery to the flight controller.
- When the flight controller status LED glows solid, the control unit is initialized and ready for flight.
- Set the throttle stick to IDLE, select your flight mode using Switch B and toggle Switch D (SwD – Pre-Arm), followed by Switch A (SwA – ARM).

CAUTION: Use EXTREME caution, the RV Micro is now ARMED and READY FOR FLIGHT.

First Flight Prep

- After confirming the rotor blades rotate in the correct direction, test the motor response controls.
- Move the throttle to a very low level of power, where the quadcopter begins to get "light" on its landing skid.
- Move the rudder stick a small amount to the right. The nose of the quad-copter should start to rotate to the right (clockwise).
- Move the rudder stick a small amount to the left. The nose of the quadcopter should start to rotate to the left (Counter-clockwise). If the nose moves to the right, please refer to the Troubleshooting Guide.
- Move the elevator control stick forward. The quadcopter should skid forward on the floor.
- Move the elevator control stick backward. The quadcopter should skid backward on the floor.
- Move the aileron stick right. The quadcopter should skid to the right on the floor.
- Move the aileron stick left. The quadcopter should skid to the left on the floor.
- When rotors turn correctly and respond correctly to controls, your RV Micro is ready for its first flight!

First Flight

- Increase the throttle until the model is approximately 2 ft. (600mm) off the ground in a low-level hover. Concentrate on balancing the throttle stick's position (near the middle) so that the RV Micro holds a steady hover altitude. In some cases, you may need to make a few short "hops" to an altitude of just a few inches until you become familiar with the control inputs and trim settings required to maintain a steady hover and altitude.
- The RV Micro requires minor throttle adjustments to maintain its altitude in hover. Remember to keep these throttle adjustments as minimal as possible. Large adjustments could result in a loss of control and/or a possible crash.
- While attempting to establish a low-level hover, check to see if any trim adjustments are required to help keep the RV Micro from constantly drifting in various directions. If you find that it constantly drifts without any directional control input, land the model before making any adjustments to the subtrim settings in your Transmitter's menu.

– If the nose of the RV Micro rotates to the left or right, adjust the rudder trim.
– If the RV Micro continually drifts forward or backward, adjust the battery center position.
– If the RV Micro continually drifts to the left or right, adjust the battery center position.

- With your RV Micro properly balanced and maintaining a stable low-level hover, practice using the rudder, elevator and aileron controls to familiarize yourself with the machine's responses to control inputs. Remember to keep the control inputs as minimal as possible

- When comfortable with low-level hovering, you can transition to hovering and flying the RV Micro at higher altitudes of 3 to 4 ft. At these higher altitudes, you will become comfortable with the flight characteristics of the aircraft.
- Don't be afraid to set the RV Micro down on the ground quickly by lowering the throttle when approaching walls or other obstacles to help prevent propeller strikes.

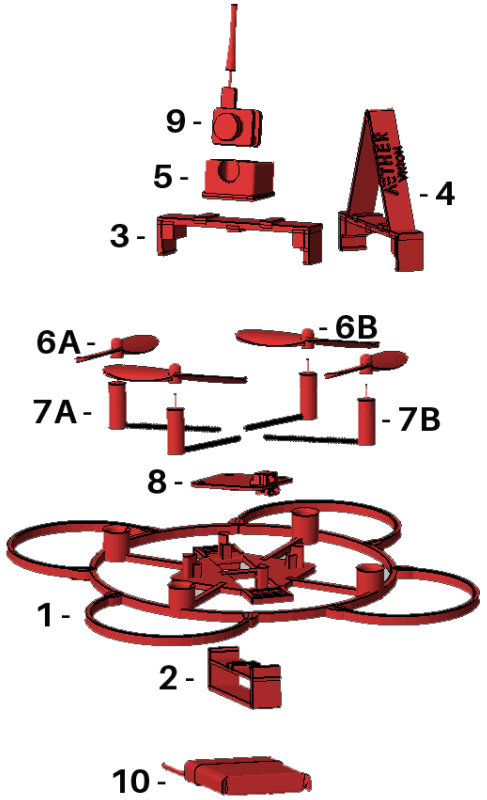
Once you have gained experience and confidence in hovering the RV Micro, you can attempt more advanced maneuvers including:

• Forward Flight	•Pirouettes	• Circuits (Circles)
•Backward Flight	•Spot Landings	• Figure 8s
•Skidding Takeoffs	•Skidding Landings	• Flips and Rolls

Post-Flight Inspection and Maintenance Checklist

√		
	Cleaning	Make sure the battery is not connected before cleaning. Remove dust and debris with a soft brush or a dry, lint-free cloth.
	Motors	Replace the motor when the model will not fly steady or veers off when doing a climb out.
	Wiring	Make sure the wiring does not block moving parts. Replace damaged wiring and loose connectors.
	Fasteners	Make sure there are no loose screws, other fasteners or connectors. Do not over-tighten metal screws in plastic parts. Tighten screws so the parts are mated together, then turn screw only 1/8th of a turn more.
	Propellers	Make sure there is no damage to the propellers or other parts that move at high speed. Damage to these parts includes cracks, burrs, chips or scratches. Replace damaged parts before flying.

Exploded View



Parts Listings

	Part #	Description
1	RVM3	Main Frame: Micro RV
2	RVM32	Bottom Battery Bracket
3	RVM33	Top FPV Camera Bracket
4	RVM34	(Alt) Security Top FPV
5	RVM35	FPV Camera Mount
6A	RVM36A	Prop, CW Rotation (2): Micro
6B	RVM36B	Prop, CCW Rotation (2):

	Part #	Description
7A	RVM8520	Motor, CW Rotation (2):
7B	RVM8520R	Motor, CCW Rotation (2):
8	RVM38B	Flight Controller
9	RVM39	FPV Camera 3-in-1 System
10	RVM310	500mAh 1-Cell 3.7V 25c LiPo
	AVBC1S	1S USB Li-Po Charger,
	AVFSI6S	FlySky FS-i6S Transmitter
	AVMUSB3	Micro USB Cable

Before you Begin Assembly

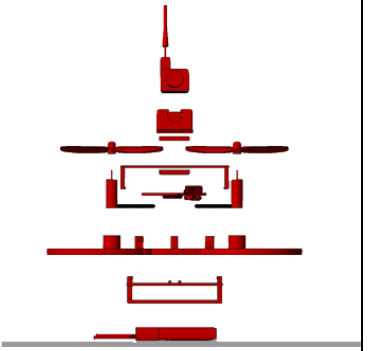
KEEP YOUR WORK AREA CLEAN AND WELL LIT
ALWAYS CHECK HARDWARE AND ASSEMBLED PARTS AFTER ASSEMBLY
DRESS PROPERLY – WEAR RESTRICTIVE HAIR COVERING TO CONTAIN LONG HAIR
WHEN TESTING, WEAR ANSI APPROVED SAFETY GOGGLES
NEVER CONNECT A BATTERY OR POWER SOURCE BEFORE VERIFYING ALL COMPONENTS ARE SAFE TO RECEIVE POWER

REQUIRED TOOLS	
TOOL	*DESCRIPTION*
Small Pliers	For carefully connecting delicate plugs, connectors and Binding the Radio Transmitter
Small Flat File	For filing any excess plastic material
Small Hobby Knife	For trimming any excess plastic material

REQUIRED PARTS

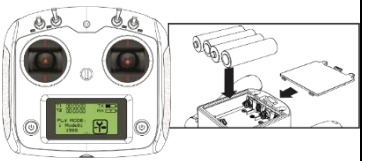
Kit Components

- Quadcopter Frame
- Battery Bracket
- Top Bracket
- FPV Camera Mount
- FPV Camera (If separate)
- Flight Controller (FC)
- (4) Motors
- (4) Propellers (CW & CCW)
- Supplied Foam Pad & Adhesive Pad



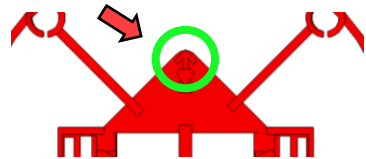
Radio Transmitter (Tx)

- FlySky FS-i6S
- (4) AA Batteries



Supplied LiPo Battery

- 1S 500 mAh 25C

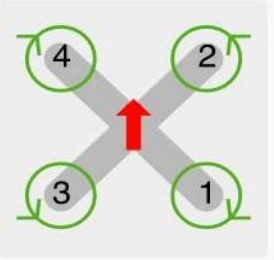
ASSEMBLY STEPS	
• Gather motors. • Pay attention to the color of the wires. These determine the rotation of the motor and propeller. **Red** and **Blue** - CLOCKWISE (CW) **Black** and **White** – COUNTER CLOCKWISE (CCW)	
Attach the propellers to each corresponding motor gently. **DO NOT push with excessive force.** **Pushing with excessive force may result in damage to the motor or personal injury.**	
Determine the forward direction of the Quadcopter by finding the forward arrow on the front of the airframe.	

ASSEMBLY STEEPS (CONT.)

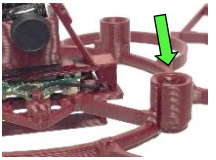
MOTOR ROTATION GUIDE

Motor 1 & 4
Red and **Blue** - CLOCKWISE (CW)

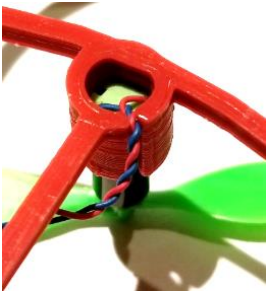
Motor 2 & 3
Black and **White** – COUNTER CLOCKWISE (CCW)



Carefully insert each motor into the corresponding motor mount (CW & CCW), until they reach the stopper, ensuring no wires are pinched or damaged during insertion.



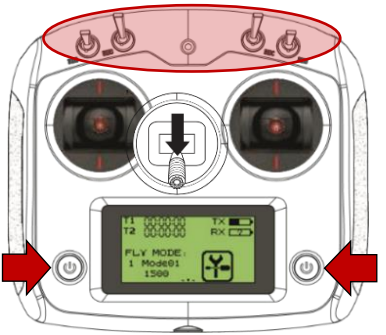
1. Once inserted, route the wires outward through the motor mount slot.
2. Carefully straighten wire.
3. Next, very gently twist motor wire ends until they are neatly twisted. There should be approximately 5-7, 360° twists.
4. Wrap the motor wire ONCE up and around the airframe arm, leaving the connector underneath the frame.
5. Set airframe aside.

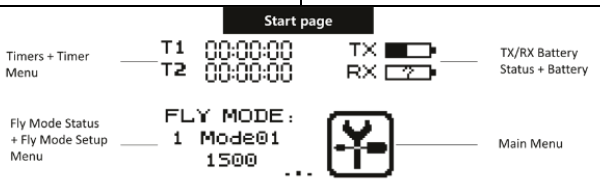


BIND FLIGHT CONTROLLER AND TRANSMITTER

1. Gather Flight Controller (FC)
2. Gather Radio Transmitter (Tx)
3. Ensure AA Batteries have been put into Radio Transmitter (Tx)

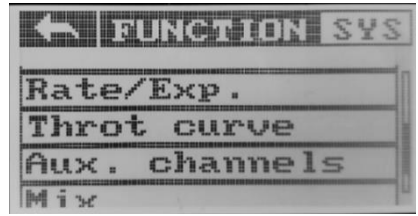
4. Ensure all switches are in the correct position (**UP**) and Throttle is at **IDLE**. Radio Transmitter will emit a warning on the screen if switches are in an incorrect position.
5. Turn on Radio Transmitter by pushing both power buttons at the same time. You will hear a startup sound.
6. The Radio Transmitter Information screen responds to touch input. Once Radio Transmitter is ON, familiarize yourself with the items displayed.





Setting up Channel 5 (AUX1) for Switch A (SwA)

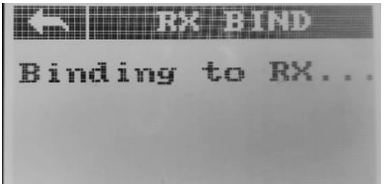
1. Press the **Main Menu** Button 
2. The FUNCTION Screen should be displayed.
3. Scroll down to **AUX. CHANNELS** and tap to enter Aux. channels.
4. By using left or right arrows, find and select Channel 5.
5. Channel 5 should say **NONE** [If other icons show, tap the icon and change it to SWx]
6. Under **CH TYPE**, select **SWx**
7. By default of the **SWx** choices, **SwA** is selected. If you need to change this, tap the **SwA** icon and select a different switch.
8. Once Channel 5 is set to **SwA**, proceed to BIND procedure.



BINDING PROCEDURE

1. Press the Main Menu Button
2. Tap on **SYS**
3. Under the **SYSTEM** Menu, tap **Rx Bind**
4. The transmitter is now in BIND mode and ready to bind with the Flight Controller.

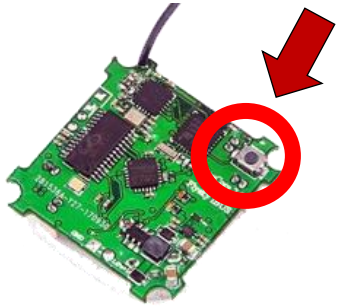
5. NOTE: Radio Transmitter bind mode will timeout after 30 seconds.



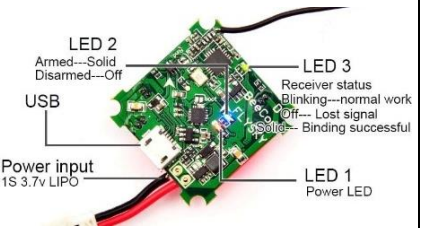
6. Gather Flight Controller Board.
7. Gather supplied 1S LiPo Battery.

BINDING PROCEDURE (CONT.)

8. Find the **BIND** button.
9. Press and hold down the **BIND** button, while connecting the LiPo Battery.
10. All **LED's** will begin to flash rapidly.
11. Immediately release the **BIND** button; **LED's** will flash slowly.
12. Exit "RX BIND" Menu on your Transmitter.
13. All **LED's** should become **SOLID**, if the **BIND** is successful.
14. If the bind fails, repeat the above steps. If problem persists, refer to the Troubleshooting Guide.

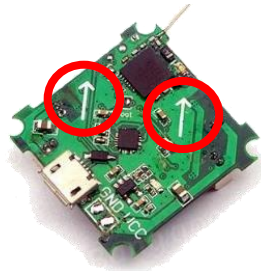


15. Verify a successful **BIND** by disconnecting the LiPo battery from the Flight Controller and reconnecting **WITHOUT** pressing the bind button.
16. The Radio Transmitter and Flight Controller should connect immediately with all LED's solid.
17. Disconnect the LiPo Battery again and turn off Radio Transmitter.
18. Set Radio Transmitter to the side.
19. If connection fails, repeat the **BIND** procedure.

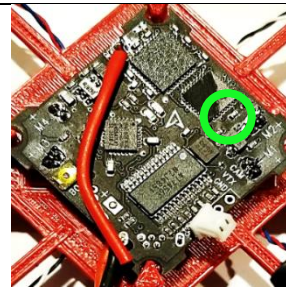


INSTALLATION

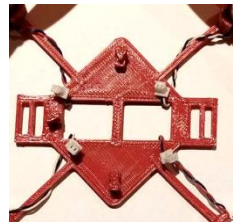
1. Gather Flight Controller Board.
2. Orient upright and forward by looking for the forward direction arrow printed on the circuit board. The four motor connectors are on the bottom side of the flight controller.
3. NOTE: Arrows MAY vary in shape or size.

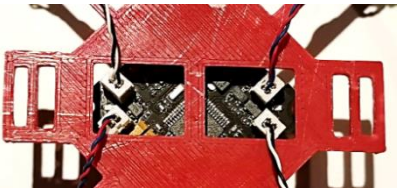
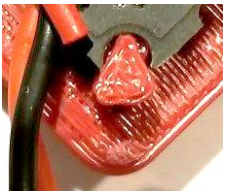
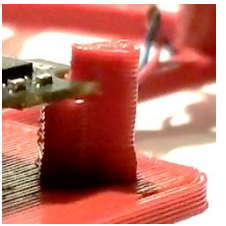


4. With the arrow facing forward, align the board with the forward direction of the quadcopter for visual orientation.
5. Do not fully insert flight controller into the airframe.



6. Once the forward direction is determined, set the flight controller to the side.
7. Gently pull the twisted motor connector wires a little bit closer to the center, through the corresponding frame side.



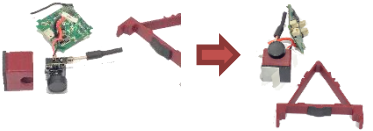
INSTALLATION (CONT.)	
8. Motors are connected to the M1, M2, M3, M4 plug sockets.	
9. Connect the M1 – M4 motor plugs to the flight controller.	
10. Once all motors are properly connected, gently push the board into the airframe mount, ensuring that the tabs are within the “c” cutout of the board.	
11. The board is fully placed, once it reaches the stopper tabs.	

INSTALLATION (CONT.)

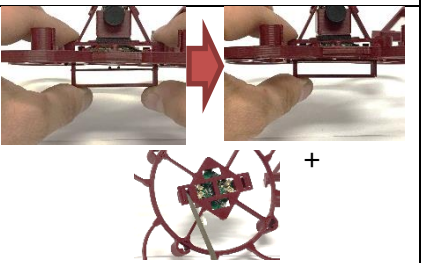
12. Gather the FPV bracket.
13. Gather supplied adhesive foam pad.

14. Mount the foam pad in the middle of the bottom side on the FPV bracket.
15. Remove the adhesive cover for the Camera mount and install in the **MIDDLE** of the FPV Bracket, as shown.

16. Insert the FPV camera into the FPV mount and gently snap into place.



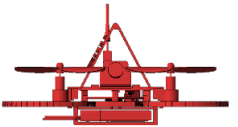
17. Install the FPV Bracket into outer airframe mount.
18. Using either skilled fingers or small pliers, CAREFULLY push the bracket into the slot, one side at a time.
19. If the fitment is too tight, lightly file/trim the lower edges of the FPV bracket and/or file/trim the airframe mount slot.

INSTALLATION (CONT.)	
20. If the FPV Camera is not connected to the flight controller, connect the FPV camera to the power source plug	
21. Gather Battery Bracket	
22. Using skilled fingers or small pliers, CAREFULLY install the Battery Bracket on the underside of the airframe, inserting the tabs on the inner two mounting tabs. 23. If the fitment is too tight, lightly file/trim the lower edges of the FPV bracket and/or file/trim the airframe mount slot.	
24. Cross Check and Verify all that components are properly placed and are tight. 25. Verify that Motors and Propellers are tight and in correct rotation. 26. Verify that the FPV Camera is snapped into its mount.	

INSTALLATION (CONT.)

27. By default, the ARM switch is on AUX1 (Channel 5) toggle this switch to ARM and activate your quadcopter.

28. Before Arming your quadcopter for flight, check the following:
29. Ensure that the Flight Controller is installed LEVEL
30. Ensure that all motors are properly connected, tight and rotating correctly.



31. You are now ready to begin flight testing.
32. Ensure all controls are trimmed for center and throttle is at IDLE ARM by toggling SwD (Channel 6) and then SwA (Channel 5).
33. Lift off by very slowly increasing the throttle until the quadcopter hovers 1”-3” off the ground. Check for any odd noises
34. If excessive drifts to one side are experienced, check battery balance location and the condition of the propeller(s).

Troubleshooting Guide

Problem	Possible Cause	Solutions
RV Micro control response is inconsistent or requires extra trim to neutralize movement.	Aircraft not initialized on a level surface.	Disconnect the flight battery, idle the throttle and re-initialize the quadcopter.
	Battery not correctly placed in battery slot.	Adjust battery position so quadcopter battery balances in the center of the frame.
RV Micro will not respond to throttle.	Throttle too high, Pre-Arm + Arm performed too fast	Reset controls with the throttle stick at the lowest setting and Pre-Arm & Arm reset.
	RV Micro moved during initialization.	Disconnect the flight battery and re- initialize the RV Micro while keeping the quadcopter from moving.
	Throttle channel is reversed.	Disconnect flight battery, reverse the throttle channel on the transmitter, and reconnect flight battery.

Troubleshooting Guide (Cont.)

Problem	Possible Cause	Solutions
RV Micro does not function, and smells burnt after connecting the flight battery.	Flight battery connected with the wrong polarity.	Replace the Flight Controller board.
RV Micro has reduced flight time or is underpowered.	Flight battery charge is low.	Completely recharge the flight battery.
	Inadequate power to flight battery charger.	Use a different USB power source for the charger.
	Flight battery is damaged.	Replace the flight battery and follow the flight battery instructions.
	Flight conditions might be too cold.	Make sure the battery is warm (room temperature) before use.

Troubleshooting Guide (Cont.)

Problem	Possible Cause	Solutions
ALL LED's on flight controller flash rapidly and aircraft will not respond to transmitter.	Transmitter too near aircraft during binding process.	Power off the transmitter. Move the transmitter a larger distance from the aircraft. Disconnect and reconnect the flight battery to the aircraft. Follow the binding instructions.
	Bind switch or button was not held while transmitter was powered on.	Power off transmitter and repeat bind process.
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter.	Move aircraft and transmitter to another location and attempt binding again.
Blue LED on the receiver flashes rapidly and the RV Micro will not respond to the transmitter (after binding).	Less than a 5-second wait between first powering on the transmitter and connecting the flight battery to the RV Micro.	Leave the transmitter powered on. Disconnect and reconnect the flight battery to the RV Micro.
	The RV Micro is bound to a different transmitter.	Disconnect and reconnect the flight battery to the RV Micro. Power off transmitter and repeat bind process.
	Flight battery or transmitter battery charge is too low.	Replace or recharge batteries.
	Aircraft or transmitter is too close to large metal object, wireless source or another transmitter.	Move aircraft and transmitter to another location and attempt connecting again.
Crashes immediately upon lift-off.	Propellers in wrong locations or incorrect flight mode selected.	Check motor and propeller orientation and make necessary flight mode adjustments.

Limited Warranty

What this Warranty Covers

Aether Vision, LLC, (Aether) warrants to the original purchaser that the product purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase

What is Not Covered

This warranty is not transferable and does not cover (i) cosmetic damage, (ii) damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or due to improper use, installation, operation or maintenance, (iii) modification of or to any part of the Product, (iv) service attempted, outside manufacturer specifications, by anyone other than a Aether Vision authorized service center, (v) Product not purchased from an authorized Aether dealer, or (vi) Product not compliant with applicable technical regulations. OTHER THAN THE EXPRESS WARRANTY ABOVE, AETHER MAKES NO OTHER WARRANTY OR REPRESENTATION, AND HEREBY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE PURCHASER ACKNOWLEDGES THAT THEY ALONE HAVE DETERMINED THAT THE PRODUCT WILL SUITABLY MEET THE REQUIREMENTS OF THE PURCHASER'S INTENDED USE.

Purchaser's Remedy

Aether's sole obligation and purchaser's sole and exclusive remedy shall be that Aether will, at its option, either (i) service, or (ii) replace, any Product determined by Aether to be defective. Aether 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 Aether. 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

AETHER 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 AETHER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. Further, in no event shall the liability of Aether exceed the individual price of the Product on which liability is asserted. As Aether 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 Florida 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. Aether reserves the right to change or modify this warranty at any time without notice.

WARRANTY SERVICES

Questions, Assistance, and Services

Your local hobby store and/or place of purchase cannot provide warranty support or service. Once assembly, setup or use of the Product has been started, you must contact Aether directly. This will enable Aether to better answer your questions and service you in the event that you may need any assistance. For questions or assistance, please visit our website at www.aethervisionllc.com, submit a Product Support Inquiry, or call the office telephone number referenced in the Warranty and Service Contact Information section to speak with a Product Support representative.

Inspection or Services

If this Product needs to be inspected or serviced and is compliant in the country you live and use the Product in, please use the Aether Online Service/Refurbishment Request found on our website or call Aether to obtain a Return Merchandise Authorization (RMA) number. Pack the Product securely using a shipping carton. Please note that original boxes may be included but are not designed to withstand the rigors of shipping without additional protection. Ship via a carrier that provides tracking and insurance for lost or damaged parcels, as Aether is not responsible for merchandise until it arrives and is accepted at our facility. An Online Service/Refurbishment Request is available at http://www.aethervisionllc.com/product-support-inquiry/. If you do not have internet access, please contact Aether Product Support to obtain a RMA number along with instructions for submitting your product for service. When calling Aether, you will be asked to provide your complete name, street address, email address and phone number where you can be reached during business hours. When sending product into Aether, please include your RMA number, a list of the included items, and a brief summary of the problem. A copy of your original sales receipt must be included for warranty consideration. Be sure your name, address, and RMA number are clearly written on the outside of the shipping carton.

NOTICE: Do not ship LiPo batteries to Aether. If you have any issue with a LiPo battery, please contact the appropriate Aether Product Support office.

Warranty Requirements

For Warranty consideration, you must include your original sales receipt verifying the proof-of-purchase date. Provided warranty conditions have been met, your Product will be serviced or replaced free of charge. Service or replacement decisions are at the sole discretion of Aether.

Non-Warranty Service

Should your service not be covered by warranty, service will be completed and payment will be required without notification or estimate of the expense unless the expense exceeds 50% of the retail purchase cost. By submitting the item for service, you are agreeing to payment of the service without notification. Service estimates are available upon request. You must include this request with your item submitted for service. Non-warranty service estimates will be billed a minimum of ½ hour of labor. In addition you will be billed for return freight. Aether accepts money orders and cashier's checks, as well as Visa, MasterCard, American Express, and Discover cards. By submitting any item to Aether for service, you are agreeing to Aether's Terms and Conditions found on our website http://aethervisionllc.com/support-refurbishment/

ATTENTION: Aether service is limited to Product compliant in the country of use and ownership. If received, a non-compliant Product will not be serviced. Further, the sender will be responsible for arranging return shipment of the un-serviced Product, through a carrier of the sender's choice and at the sender's expense. AetherVision will hold non-compliant Product for a period of 60 days from notification, after which it will be discarded.

Warranty and Service Contact Information

Country of Purchase	Aether Vision	Contact Information	Address
United States of America	AetherVision Service Center (Repairs and Repair Requests)	marcy@aethervisionllc.com 321-802-3231	2475 Palm Bay Road NE#235 Palm Bay, FL 32905
	AetherVision Product Support (Product Technical Assistance)	info@aethervisionllc.com	
	Sales	sales@aethervisionllc.com 314-686-3835	

FCC Information

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.

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

This product contains a radio transmitter with wireless technology which has been tested and found to be compliant with the applicable regulations governing a radio transmitter in the 2.400GHz to 2.4835GHz frequency range.

Compliance Information for the FAA

Declaration of Conformity

(in accordance with ISO/IEC 17050-1)
No. HH2013010703
Product(s): RV Micro RTF
Item Number(s): RVM3
Equipment class: 1
The object of declaration described above is in conformity with the requirements of the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC, EMC Directive 2004/108/EC and LVD Directive 2006/95/EC:

EN 300-328 V1.7.1: 2017
EN 301 489-1 V1.7.1: 2017
EN 301 489-17 V1.3.2: 2017
EN60950-1:2018+A11:2016+A1:2016+A12: 2017
EN61000-3-2:2018+A1:2018+A2:2018
EN61000-3-3:2018
EN55022:2018 + AC:2018
EN55024:2018

CE

Signed for and on behalf of:
Aether Vision, LLC
Palm Bay, FL USA
Jan 1, 2018

Michael Gruener
President and
Chief Operating Officer International Operations and Risk Management
Aether Vision, LLC

Instructions for disposal of WEEE by users in the European Union

This product must not be disposed of with other waste. Instead, it is the user's responsibility to dispose of their waste equipment by handing it over to a designated collections point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and make sure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

Created 01/18 AERVM3