



# Cetus Lite

## FPV KIT

### User Manual

Version No.2    2023-03-02





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# 1. Product List

- 1 x Cetus Lite FPV Brushed Whoop Quadcopter
- 1 x LiteRadio 1 Transmitter (CC2500 Version)
- 1 x BETA FPV VR02 FPV Goggles

## Box Contents:

- 2 x BT2.0 300 mAh 1S Lipo Battery
- 1 x BT2.0 Battery Charger and Voltage Tester
- 1 x USB Charging Cable (Type-C)
- 1 x Type-C Adapter (adapter board+4PIN connector cable)
- 1 x Prop Removal Tool
- 4 x 31mm 4-Blade Prop (Replacement)
- 1 \* 716 CW motor
- 1 \* 716 CCW motor
- 1 \* Goggles Headband

## 2. Preflight Checks

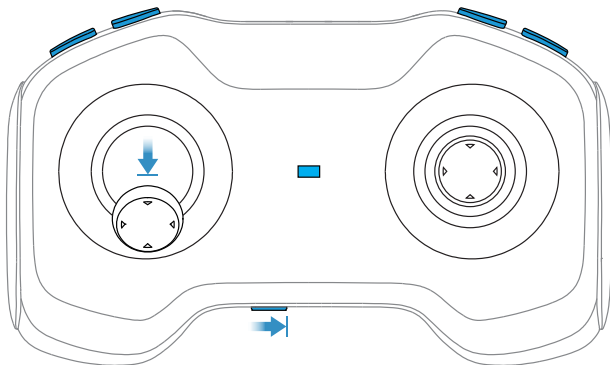
1. Check all parts are included according to product check-list. Ensure all parts are intact and the frame undamaged.
2. Ensure all propellers and motors are installed correctly and stably.
3. Ensure that propellers do not scratch against frame ducts and motors spin smoothly.
4. Ensure batteries (of quadcopter, remote control radio transmitter, and FPV goggles) are fully charged.
5. Be sure pilot is familiar with all flight controls. (Refer “Remote Control Radio Transmitter”).
6. Always keep a safe distance in all directions around the quadcopter (1 meter or more) when having a test-flight. Operate the quadcopter carefully in open space.

## 3. Quick Start Guide

### 3.1 Quick Start

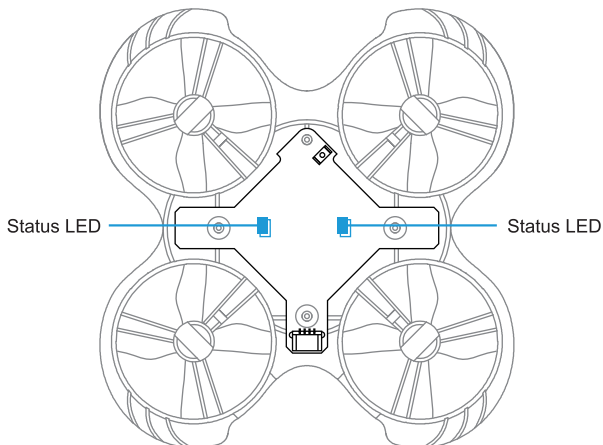
Before flying, verify that the remote control radio transmitter is successfully Binded with the quadcopter, all basic controls are functional, and the quadcopter can be taken off normally.

- Step 1: Take out the remote control radio transmitter, set the throttle joystick to the lowest position. Turn the power button on the bottom to the right. When it beeps three times and power indicator turns from flash red to solid blue, and release the left joystick for it to be recentered. This process indicates that radio has been turned on successfully.



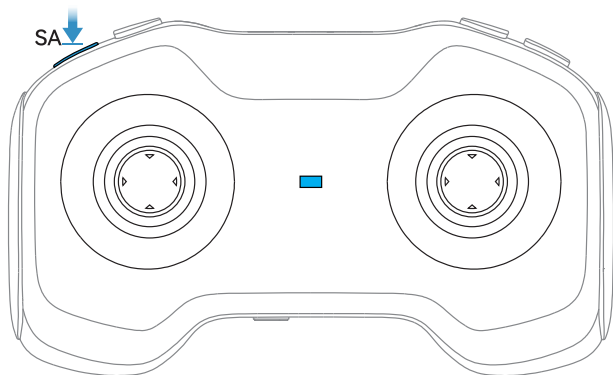
Set the Left Joystick to the Lowest Position.  
And Push the Power Button to the Right.

- Step 2: Install the battery into the battery mounting slot under the quadcopter. Ensure that the direction of the battery and quadcopter's power cord is aligned in the same direction. Connect the quadcopter with the battery, then place the quadcopter on a horizontal surface. Wait 3-5 seconds until its status LED lights changes from flashing blue to solid blue. This indicates that the initialization of the quadcopter is complete and the quadcopter has binded successfully with the remote control radio transmitter.





- Press switch SA to arm the quadcopter. Then motors will start spinning slowly. Press Switch SA again to disarm the quadcopter and motors will stop spinning.



Press Switch SA to Arm the Quadcopter

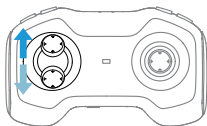
The completion of these steps verifies the normal functioning of the quadcopter and remote control radio transmitter, and the following flight operations can be continued.

## 3.2 Flight Operation

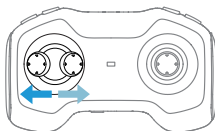
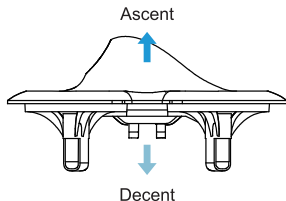
Step 4: Re-arm quadcopter (step 3). Motors will spin at a low speed.

Throttle (left) Joystick:

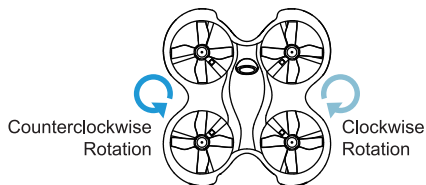
- Up/down controls rate of ascent/ descent.
- Left/Right controls counterclockwise/ clockwise rotation.



Joystick Up/Down

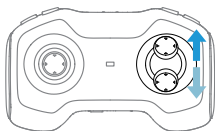


Joystick Left/Right

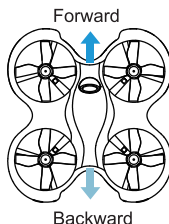


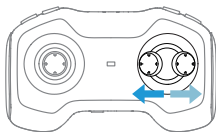
Direction (right) Joystick:

- Up/down controls forward/ backward.
- Left/right controls left/ right.

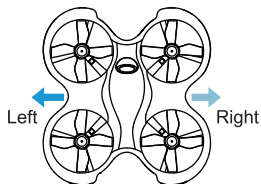


Joystick Up/Down





Joystick Left/Right

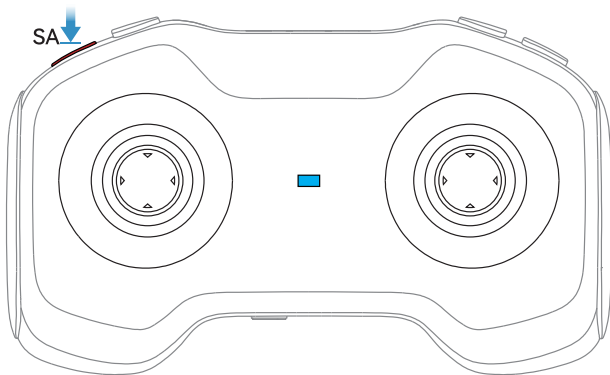


It is recommended to begin flying without using fpv goggles for practice. Be familiar with the controls and sensitivity of the joysticks by following the above-mentioned operation steps.

Caution:

1. Find a suitable open place for the first flight.
2. Push the joysticks slowly, especially the throttle joystick.
3. If the quadcopter becomes out of control or collides with objects, quickly pop-up switch SA to disarm, and motors will stop spinning.

● Step 5: Land quadcopter steadily and press switch SA to disarm, as shown below:



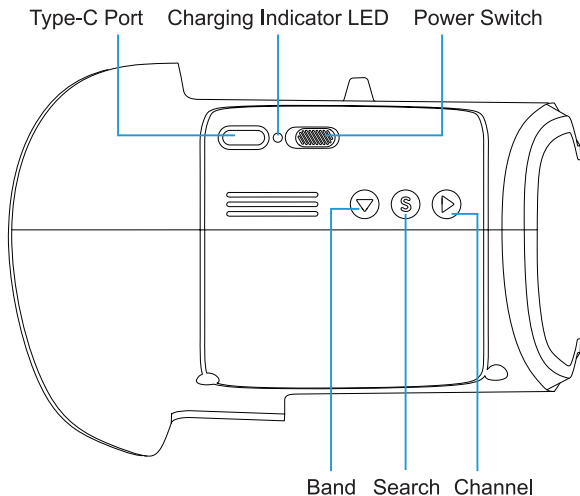
Press Switch SA to Disarm the Quadcopter

● Disconnect the battery with the quadcopter by removing it from the mounting slot. Push the power button on the bottom to the left, the LED indicator turns off. This indicates that the remote control radio transmitter has been powered off.

### 3.3 First Person View (FPV)

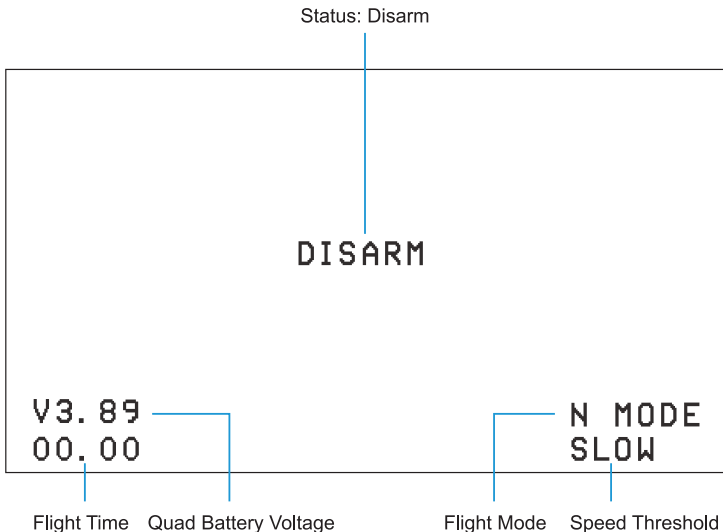
First-person view (FPV) is the real-time video transmission between image captured on quadcopter to fpv goggles.

- Take out the goggles, install the headband;
- Slide the power switch to the right. The screen lights up and the VR02 goggles are turned on;
- Long press the “S” button for 1 second to turn on the fast frequency search function. After 3 seconds, a beep will sound and the corresponding FPV cross-machine screen is displayed in the goggles, indicating that the frequency search is complete.



### 3.4 On-Screen Display (OSD)

After the frequency search, flight information and FPV images will be shown on the display. This information is called On-screen Display (OSD), as shown below:



About OSD information:

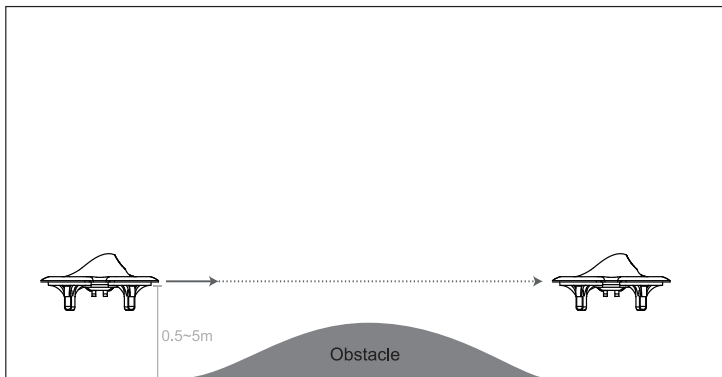
- The flight status of the quadcopter is displayed in the center. DISARM indicates locked status. LOW VOL indicates that the battery voltage of the quadcopter is low. RX LOSS indicates that the quadcopter has been disconnected with the remote control radio transmitter;
- Status of the quadcopter is displayed in the bottom of the screen, including the receiver protocol, quad battery voltage, flight time, flight mode, and speed threshold.

### 3.5 Flight Modes

Cetus Lite FPV only supports Normal Mode (N MODE). And there is no Sport Mode (S MODE) or Manual Mode (M MODE).

**N MODE:** When the quadcopter ascends, center two joysticks at the same time. Then quadcopter will maintain a horizontal attitude at a certain height. The position of the

directional joystick controls the tilt direction and tilt angle of quadcopter. It also has an auxiliary flight function, which can assist in adjusting the altitude position, but can not adjust the horizontal position.



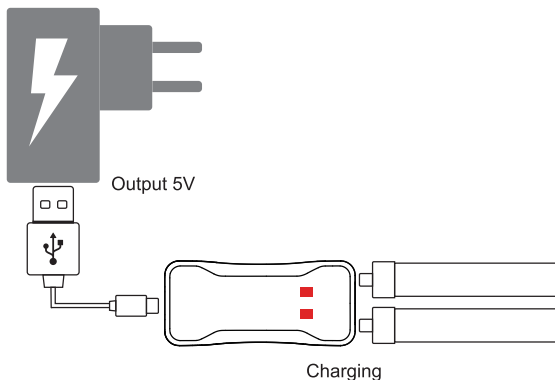
Caution 1: When flying in Normal mode, please try to choose an indoor or windless outdoor environment., keeping the flight height within 0.5m-5m. Meanwhile, the outdoor flight height should not exceed 5m. When in a harsh environment, such as flying in a strong wind, the quadcopter may not be controlled, drift and fall.

Caution 2: If you want to experience the auxiliary flight function in both altitude and horizontal positions, when in normal mode (N MODE), sport mode (S MODE), and manual mode (M MODE), please try Cetus or Cetus Pro kit, which supports more flight modes.

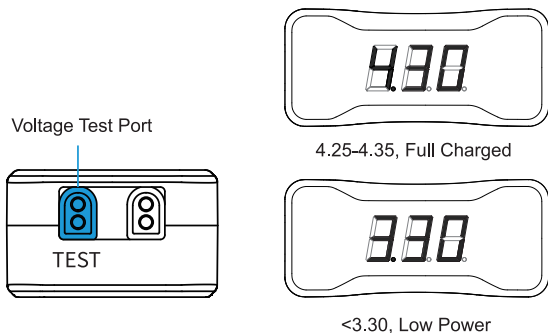
## 3.6 Battery Charging

Each battery provides 4-5 minutes of smooth flight. When LED indicator on the quadcopter started flashing red, indicating the battery is low on power and needs to be recharged. Charging steps are as follows:

- Connect the charger with a Type-C port USB cable;
- Connect one or two batteries to the port on the right of the charger and the charger's LED indicator will turn solid red while charging;
- When the charger's LED indicator turns solid green, charging process is complete.



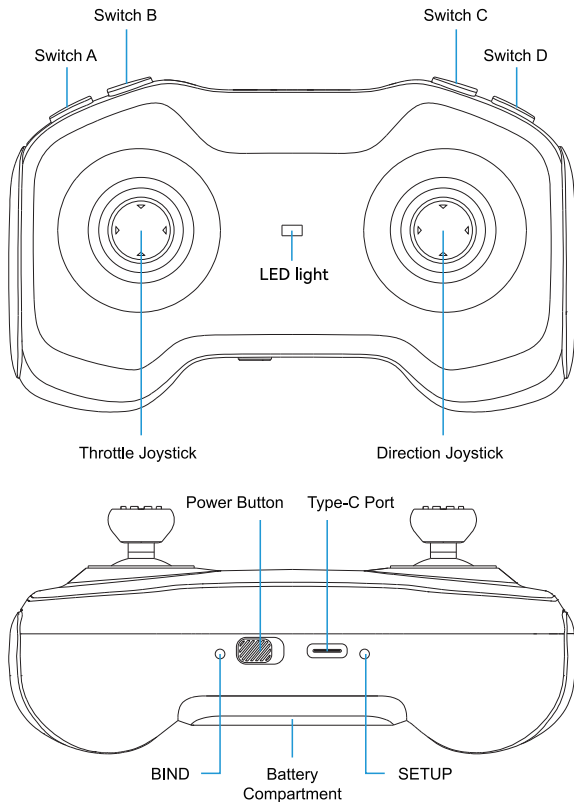
Two batteries can be charged at the same time. Charging a fully discharged battery takes approximately 20 minutes. When the charger is not connected to a USB cable and connector, inserting the battery to the TEST port of the charger can display the current battery level. The number of 4.25-4.35 represents a fully charged battery while 3.30 or lower indicates a low battery.



## 4. Remote Control Radio Transmitter

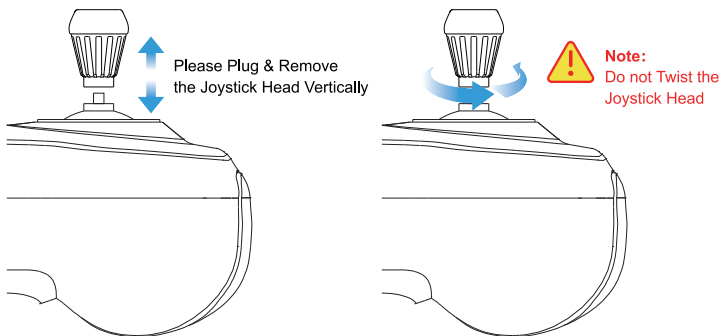
The remote control radio transmitter in this kit is LiteRadio 1 model.

Switch instructions as shown below.



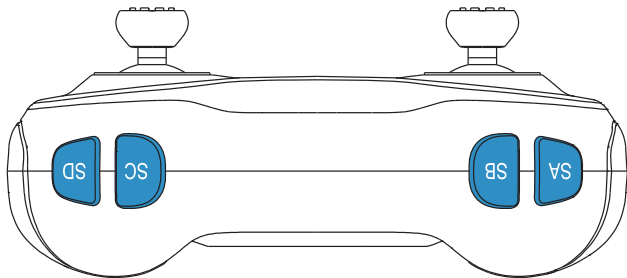


The LiteRadio 1 is compatible with two types of joystick heads. When replacing the joystick head, please be aware NOT to twist the joystick head. Instead, pull it out directly, then replace the joystick head. As shown below:



## 4.1 Switch Functions

Four switches are provided on the front of the remote control radio transmitter: SA, SB, SC, and SD, as shown below. Pilots can change different statuses and parameters of the quadcopter. Please take notice that these switches can only work after the remote control radio transmitter is successfully binded to the quadcopter.



Switch SA: Arm/Disarm Quadcopter

- Press switch SA to disarm
- Re-press switch SA to arm

Switch SB: Quadcopter Level Calibration

- Press Switch SB to perform Level Calibration

Switch SC: Speed Threshold of Quadcopter

- Press switch SC and change to slow mode(SLOW)
- Press switch SC again to change to fast mode(FAST)

When quadcopter is flying in a low gear(SLOW), quadcopter body is slightly tilted front with angle 3-5 degrees, and movement speed is around 2m/s;

When quadcopter is flying in a high gear(FAST), quadcopter body is slightly tilted front with angle 5-10 degrees, and movement speed is around 3.5m/s.

Switch SD: Change Video Transmitter (VTX) frequency

Press switch SD once. Then frequency will be automatically changed to the next.

There are in total 8 frequencies. After switching to the last frequency(5866), frequency will cycle to the first one (5733) and start again.

The factory default frequencies are 5733/5752/5771/5790/5809/5828/5847/5866 in sequence.

There are also 3 buttons at the bottom of the remote control radio transmitter.

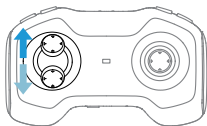
Functions are as follows:

- Power Button: Push to the right to turn on, and Push to the left to turn off;
  - BIND Button: Enter binding mode with a short press (active after the remote control radio transmitter is powered on);
  - SETUP Button: Enter joystick calibration mode with a short press (active after the remote control radio transmitter is powered on);
- Refer "Advanced Settings" for more information on binding or joystick calibration.

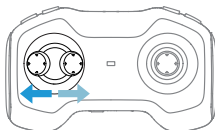
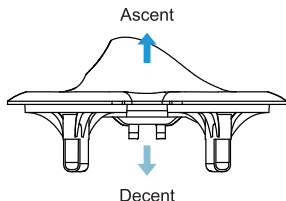
## 4.2 Joystick Functions

Two joysticks (throttle&direction joysticks) on the front of the remote control radio transmitter control the quadcopter: Ascent/descent (throttle), forward/backward tilt (pitch), left/right tilt (roll), and rotation of flight direction(yaw).

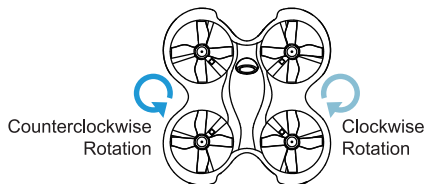
Throttle (left) Joystick - Ascent/descent (throttle) and rotation of flight direction (yaw).



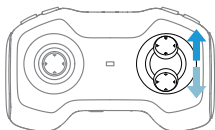
Joystick Up/Down



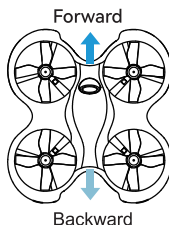
Joystick Left/Right

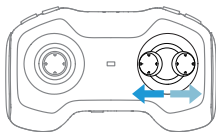


Direction (right) Joystick - forward/backward tilt (pitch) and left/right tilt (roll).

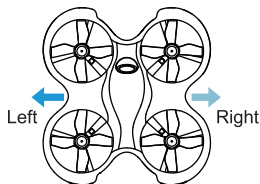


Joystick Up/Down





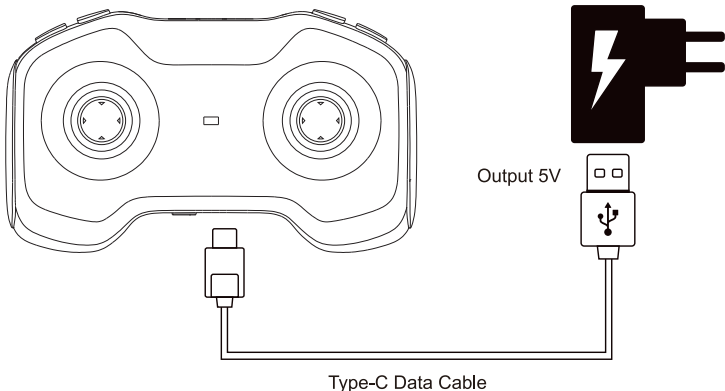
Joystick Left/Right



## 4.3 Charging the Remote Control Radio Transmitter

Remote control radio transmitter has a built-in 1000mAh battery. When red light flashes twice and the buzzer alarms twice, indicates that radio transmitter is low battery and needs to be recharged. Below are the charging methods for reference:

- Turn off the radio transmitter;
- Plug in remote control radio transmitter with adapter by USB cable (5V output adapter is allowed);
- The LED light breathes in red means charging, while in green means fully charged.



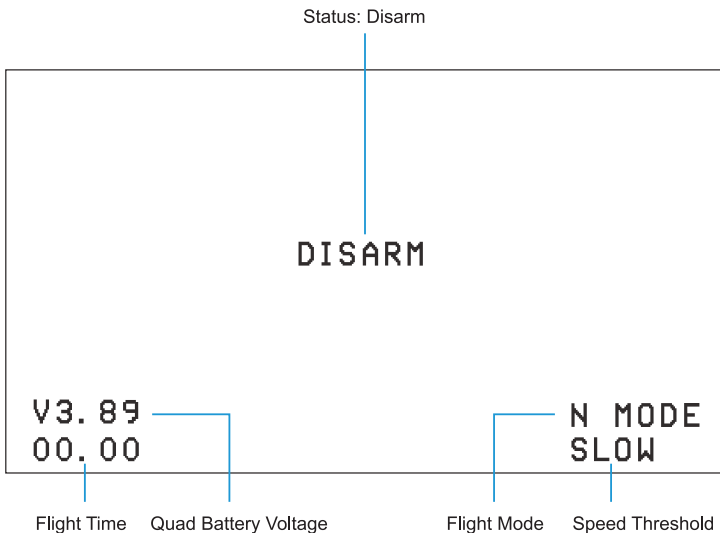
The continue working time for full charged battery is about 8 hours.

When battery is fully charged and left being unused within 30 days, battery power can still maintain about 80%.

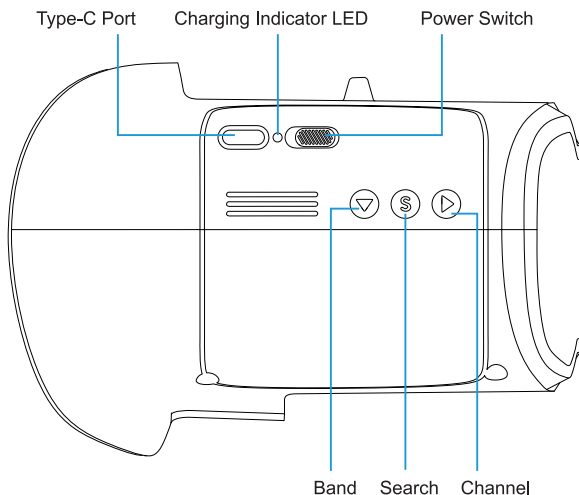
Fast charging protocol is not supported. So radio transmitter can not be quickly charged.

## 5. FPV Goggles

The FPV goggles used in the kit named model VR02. The FPV goggles uses built-in antenna to receive signal.



## 5.1 Button Operation



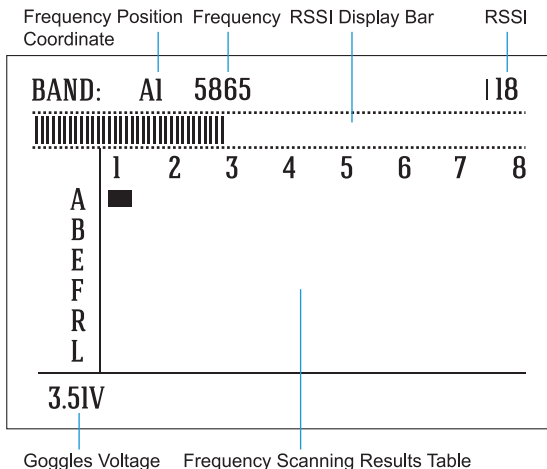
- Power switch

Turn the power switch left and right to turn the goggles on or off. When facing the switch, the left position is off; the opposite of the position is on.

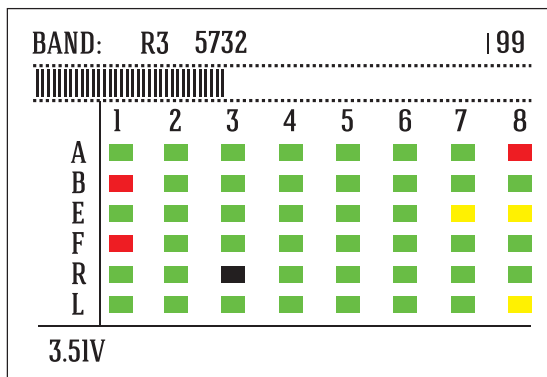
- Search button (S)

Quick frequency search: Press and hold the frequency search button for 1 second to start the frequency search. After 3 seconds, a beep will sound and the best available frequency will be selected. Quick frequency search is completed.

Frequency scan: Short press the frequency search key once to enter the frequency scan interface.



Press and hold for 1 second to start the frequency scan, and the frequency scan result will be displayed after 3 seconds. The different colors in the screen indicate the current status of each frequency as follows:



Green	0<RSSI<20 Frequency is available
Yellow	20<RSSI<70 Frequency has moderate interference from another transmitter
Red	70<RSSI<99 Frequency is completely in use by a transmitter
White	The strongest signal which the goggles received in this scan

### • Band Key and Channel Key

In the frequency scan interface, the Band Key can be cycled down to select different bands, and the Channel Key can be cycled to the right to select different channels. Pilot can select the goggles frequency by pressing the Band Key and Channel Key. For example, select a band and channel with green status since these frequencies are not occupied and signal interference is relatively weak. Then, set the quadcopter to the corresponding frequency and adjust the goggles to match.

## 5.2 Frequency Selection

The FPV goggles can receive 48 frequency points in the 5.8GHz spectrum, distributed across 6 bands (A, B, E, F, R, and L) of 8 channels (CH-1, ....., CH-8), as shown below:  
The stock quadcopter included in this kit only uses 8 frequency points of band B, which is the second row in the table below:

	CH 1 (MHZ)	CH 2 (MHZ)	CH 3 (MHZ)	CH 4 (MHZ)	CH 5 (MHZ)	CH 6 (MHZ)	CH 7 (MHZ)	CH 8 (MHZ)
A	5865	5845	5825	5805	5785	5765	5745	5725
B	5733	5752	5771	5790	5809	5828	5847	5866
E	5705	5685	5665	5645	5885	5905	5925	5945
F	5740	5760	5780	5800	5820	5840	5860	5880
R	5658	5695	5732	5769	5806	5843	5880	5917
L	5362	5399	5436	5473	5510	5547	5584	5621



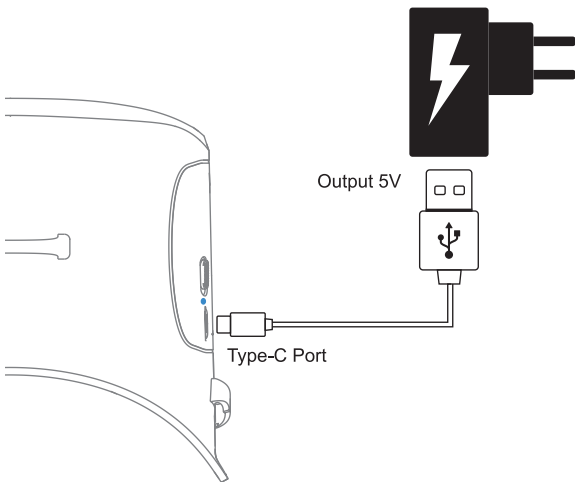
Press and hold the Search Key for 1 second to automatically search for the frequency point with the strongest signal strength in the space to obtain the FPV picture of the quadcopter.

We can also shortly press the Band Key to switch to the designated band and use the Chanel Key to switch to the designated channel so that the FPV goggles can work on the designated frequency point.

## 5.3 Charging the FPV Goggles

The FPV goggles have a built-in 2000mAh battery and no external battery is required. When voltage is below 3.40V, a beep will sound in every 10s and it needs to be recharged. User can also press the S button to check the voltage. To charge the goggles battery:

- Turn off the FPV goggles;
- Connect FPV goggles and adapter with the Type-C cable (5V output adapter is allowed, such as mobile phone charger);
- The power light will be blue when charging and lights out when fully charged.



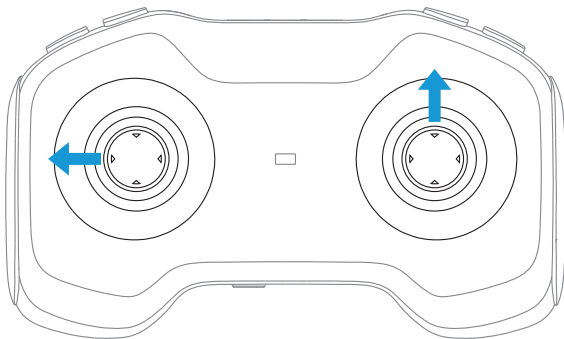
Note: Fast charging protocol is not supported. So FPV goggles can not be fast charged.

## 6. Quadcopter OSD Menu Operation

The OSD menu is a set of operation interfaces designed to modify the configuration of the quadcopter. The most used functions are to turn on or off quadcopter RGB lights and OSD, together with other options.

### 6.1 How to Access/Operate OSD Setting Menu

The position of joysticks to access the OSD setting menu is as shown below. The throttle joystick is moved to the left-center and the direction joystick towards the upward center.



Throttle Stick Left



Direction Stick Up

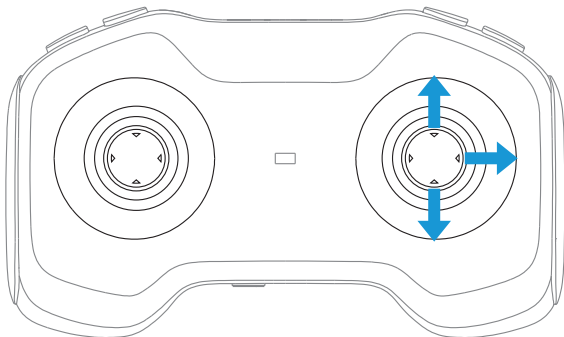
Caution: Make sure the quadcopter is disarmed before accessing the OSD menu.

After accessing the OSD menu, pilot will see the following menu interface on the FPV screen.

```
- MAIN -  
  
>CONFIG      >  
  OPTION     >  
  
SAVE  
EXIT
```

The OSD menu cursor can be controlled by the right joystick to operate the OSD interface:

- Up: move the cursor up
- Down: move the cursor down
- Right: confirm/modify selection



↑ Joystick Up:  
Cursor Moves Up

↓ Joystick Down:  
Cursor Moves Down

→ Joystick Right:  
Modification/Confirmation

## 6.2 Turn Quadcopter RGB LED ON/OFF

The quadcopter status LED light is solid blue by default when flying. User can set it to color cycling mode:

- In the MAIN menu, select CONFIG and enter the CONFIG menu, as shown below;
- Select LED, select OFF (for solid blue) or ON (for RGB color cycling effect);
- Select BACK to exit CONFIG sub-menu;
- Select SAVE in the MAIN menu to save changes and exit the OSD.

— CONFIG —

>LED  
CALI  
VTX

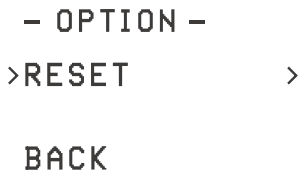
OFF  
OK  
FCC

BACK

## 6.3 OSD Other Options

Quadcopter gyroscope default settings can be restored.

- Enter OPTION, select RESET and confirm;
- The LED indicator of the quadcopter flashes blue and the screen automatically exits the OSD interface, this means complete restoration of quadcopter gyroscope default settings.



– OPTION –

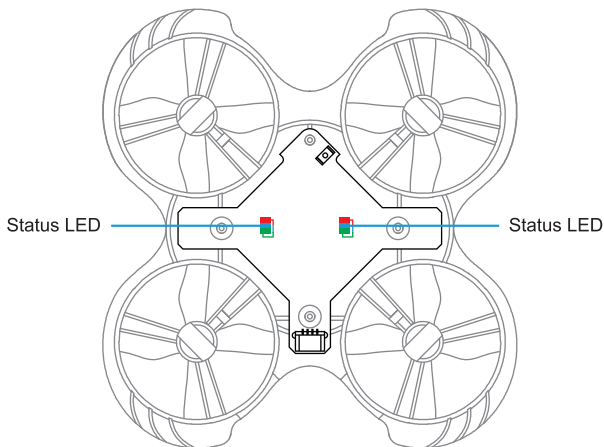
>RESET >

BACK

# 7. LED Light/Beep Status Codes

## 7.1 Quadcopter LED Light

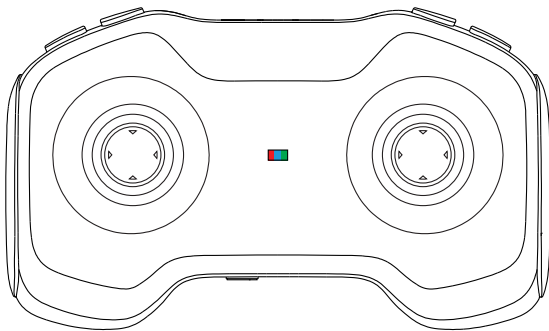
There are two RGB LED indicator on the bottom of the quadcopter.



Status LED color	Status	State description	Solution
—	Off	The power on the quadcopter is abnormal or off	Replace the battery and power on again
Red	Flashing slowly	Quadcopter battery is low	Replace the battery
Blue	Solid	The quadcopter is connected with the remote control radio transmitter	
Blue	Flashing fast	Quadcopter is horizontal calibrating	Place the quadcopter on a horizontal surface and wait for a while
Purple	Solid	Quadcopter accessed the OSD menu	Unplug the battery and power it on again
Green	Flashing fast	Quadcopter is in binding mode	
White	Flashing fast	Arming failed, because the throttle joystick was not in the center position when arming	Disarm, and place the throttle joystick at the center position
Amber	Flashing slowly	Loss of remote control radio transmitter signal	Re-establish the connection with the remote control radio transmitter

## 7.2 Remote Control Radio Transmitter LED Light & Beep Status Codes

There are two RGB LED indicator on the bottom of the quadcopter.



Indicator LED color	Status	State description	Solution
Red	Solid	Throttle joystick is not at the lowest position when starting	Move throttle joystick to the lowest position
Red	Flashing fast	Remote control radio transmitter is in binding mode	Wait for binding
Red	Flashing slowly	Battery voltage is too low	Charge remote control radio transmitter

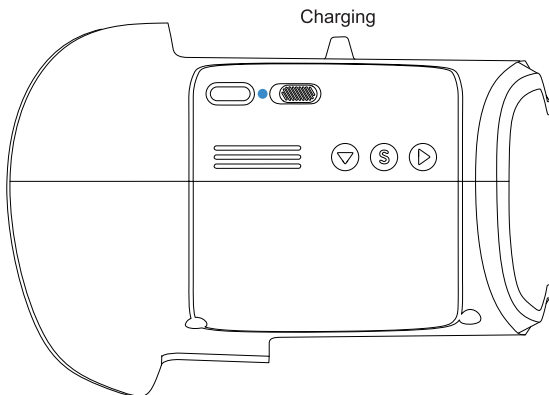
There is a built-in beeper, pilot can recognize the working status of the remote control radio transmitter by its sound.

Beep	State description
The buzzer alarms twice: di-di	Low battery



## 7.3 FPV Goggles LED Light Status Codes

The FPV Goggles have a LED indicator lights which indicate Charging status.



Indicator LED color	Status	State description
Blue	Solid	Charging
—	Off	Not charging or charging is complete

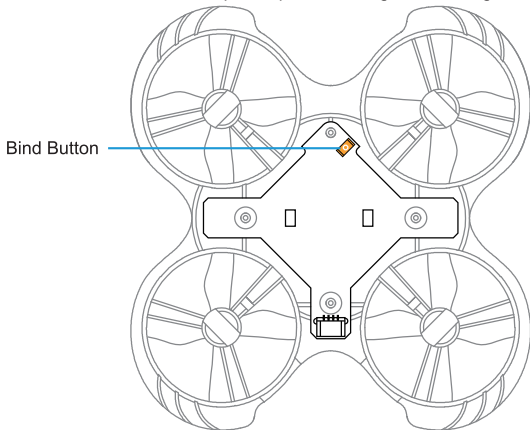
## 8. Advanced Settings

Additional advanced settings are available in case of special operations.

### 8.1 Re-Bind for Quadcopter

If quadcopter and remote control radio transmitter cannot be binded successfully, the pilot may need to re-bind. This can happen when replacing new electronic parts of the quadcopter during maintenance or upgrading the remote control radio transmitter. The steps are as follows:

- Power on the quadcopter and wait for its system to load completely;
- Use a screwdriver to lightly press the button on the quadcopter and the status light on the quadcopter turns green and starts to flash;
- Power on the remote control radio transmitter and wait for its system to load completely;
- Lightly press the BIND button on the bottom of the remote control radio transmitter with a screwdriver. The power indicator will flash red;
- If re-bind is successful, quadcopter status light will change to blue.



Note: The re-binding of the remote control radio transmitter and the quadcopter may not be successful after pressing the BIND button of the remote control radio transmitter once. In this situation, pilot needs to press the BIND button a second time to complete the binding.

## 8.2 Quadcopter Level Calibration

After the quadcopter has taken off and landed several times, the quadcopter gyroscope may become offset. This will cause the quadcopter to always tilt in the same direction during a flight. To fix up it, the quadcopter gyroscope can be recalibrated. The steps are as follows:

- Turn on the quadcopter and the remote control radio transmitter, and ensure that the connection is successful;
- Place the quadcopter on a horizontal plane;
- Enter the quadcopter's OSD menu (Refer "OSD Menu Operation");
- In the MAIN menu, select CONFIG, then CALI;
- Push the direction joystick to the right to enter level calibration mode. Quadcopter's LED flashes blue;
- When the OK prompt appears and the LED returns to solid blue, the calibration is complete. Pilot can exit the OSD menu.

— CONFIG —

LED  
>CALI  
VTX

OFF  
OK  
FCC

BACK

## 8.3 Joystick Calibration

The joystick data may offset after it has used for a period of time (if joystick has been hit against physically). User need to re-calibrate joysticks based on following steps:

- After powering on, press SETUP button on the back of remote control radio transmitter, it hears two "Bee Bee" sounds, and red LED flash quickly (two flashes each time), which means remote control radio transmitter entered calibration mode;
- Move throttle joystick and direction joystick to middle position, press SETUP button again, wait until the buzzer beep three "Bee Bee Bee" sounds, red LED light flashes quickly (two flashes each time), which indicates joystick data has been acquired and enter into the boundary value calibration mode;
- Toggle the joystick to move to the top, bottom, left, and right joystick boundaries respectively (do not to press too hard, the joystick just needs to touch the boundary) and keep the position for 1-2S, then press the SETUP button one more time, user can hear a long beeping sound (about 3 seconds) from the buzzer again, and the red LED light stops flashing, indicating that the calibration of the joystick is completed.

## 8.4 Switching Protocol

How to check the current protocol

The radio transmitter could support 4 different protocols, including Frsky D16 FCC, Frsky D16 LBT, Frsky D8 and Futaba S-FHSS.

The current protocol is indicated by the flashing times of the red LED when power on, before the buzzer alarm.

How to change the current protocol

Below are the steps to change protocol (Frsky FCC D16, Frsky D16 LBT, Frsky D8, or Futaba S-FHSS).

- Power off the radio transmitter;
- Press and hold the BIND button while power on the radio transmitter;
- Then the flash times of the red LED before buzzer alarms will change, according to the tables above.

LED Status	Protocol Version
Flash once	Frsky D16 FCC (ACCST 1.X Version)
Flash twice	Frsky D16 LBT (ACCST 1.X Version)
Flash Three Times	Frsky D8
Flash Four Times	Futaba S-FHSS

Note: LiteRadio 1 only work with D16 ACCST 1.x Frsky protocol. So if you use a Frsky receiver with D16 ACCST 2.X version or ACCESS version, binding will fail.

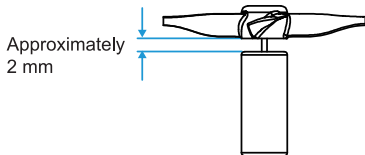
## 9. FAQ

### 9.1 How to Replace Propellers and Motors

Propellers can be deformed or fall off when quadcopter collides with an object. Bent or missing propellers need to be replaced.

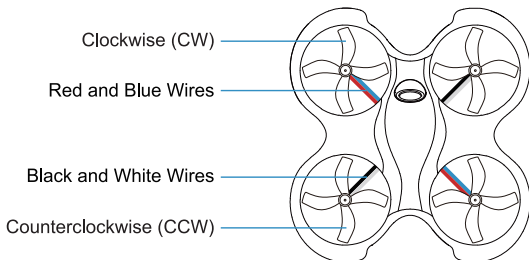
Firstly, use the included propeller removal tool to remove propellers from the motor. The tool should be placed between the motor and the propellers. Please hold the motor instead of the frame duct with your hand when removing propellers to protect the frame from being deformed by overexertion.

Secondly, the distance between the replaced propeller and the motor is kept at about 2mm. There is no need to press down forcefully. Pressing down forcefully will cause damage to the motor or the blade to deform, and rubbing against the frame when quadcopter is powered on.



4 spare propellers are included: two each clockwise (CW) and counterclockwise (CCW). CW propeller warps clockwise. It is used on the front left or rear right motor. CCW propeller warps counterclockwise. It is used on the front right or rear left motor. Install as in the diagram below.

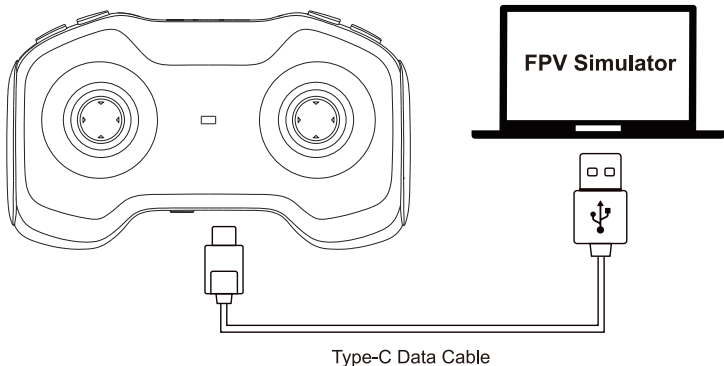
The CW propeller corresponds to the motor with red and blue wires, and the CCW propeller corresponds to the motor with black and white wires.



Caution: Please do not power on the quadcopter when the popeller is deformed, loosen or damaged. Quadcopter may loose control in flight per situation. User needs to replace the popeller before performing the next flight.

## 9.2 Radio Connecting to Simulator

It is the safest and quickest method to get started using FPV simulator for practicing FPV flights. LiteRadio 1 remote control radio transmitter supports most of the FPV simulators on market with comprehensive configuration.



Operation steps below:

- Turn off radio transmitter;
- Connect the transmitter to computer via USB data cable. Wait for the LED light breathes in red or green;
- Install driver from PC automatically, prompt box pops up after successful installation. Then, remote control radio transmitter works normally.



### Setting up a device

We're setting up 'BETAFPV JoyStick'.



Other devices



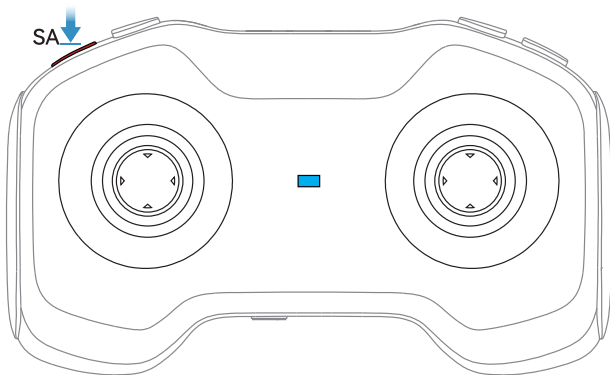
BETAFPV Joystick

User needs to manually install driver if PC doesn't install automatically or installed incorrectly.

DO NOT power on the transmitter first and connect it to the PC. The USB port is invalid in this situation.

## 9.3 How to Stop After A Collision

- Press switch SA on the remote control radio transmitter immediately once the quadcopter collides with an object. Press switch SA to arm the quadcopter and all motors will immediately stop spinning.
- If the flying altitude is too high and it is difficult to control, please press switch SA immediately to stop the motor.



Press Switch SA to Disarm the Quadcopter

Caution: Press switch SA immediately when the quadcopter is hit or the propellers scratch against the frame duct.



# 10. Supplement

## 10.1 Warning & Security

- Move the throttle joystick as gently as possible to avoid the quadcopter ascending and descending too suddenly.
- Press switch SA on the remote control radio transmitter to stop the motor running immediately if the quadcopter collides with any object.
- Please try to keep motors perpendicular to the body. Otherwise, flight performance will be degraded.
- Learn to control the quadcopter proficiently before flying in a large outdoor area or with the wind.
- Battery life can be significantly reduced if pilot continues to fly after the low voltage warning is shown.
- Do not fly in rain. Humidity may cause unstable flight or loss of control.
- Keep the battery away from water. If the flight controller touches water, a short circuit may occur and the flight controller may burn out.
- Do not fly in inclement weather with thunderstorms or lightning.
- Do not fly in areas that are not permitted by local law.

## 10.2 Precautions for Battery Use and Charging

- Do not immerse the battery in water. Store in a dry area if not used for a long time.
- Keep away from children. If swallowed, seek medical attention immediately.
- Do not use or store the battery near heat sources, microwave ovens, or open flames.
- Only use a battery charger that meets the specifications when charging.
- Do not throw the battery into fire or heat the battery.
- Do not use or store the battery in an extremely hot environment, such as in a car under direct sunlight or hot weather. Overheating affects the performance of the battery and shortens the service life of the battery. Overheated batteries can catch fire.
- If the battery has a peculiar smell, temperature, deformation, discoloration, or any other abnormal phenomenon, stop using the battery. Recycle and replace the battery.
- If the battery connector gets dirty, please wipe it with a dry cloth before use. Avoid getting battery contacts dirty, which can cause energy loss or failure to charge.
- Disposing of the battery randomly may cause a fire. Please fully discharge the battery and use insulating tape to dispose of the battery output connector before

disposing of the battery. Refer to local regulations before disposing or recycling a battery.

## 10.3 After-Sale Service

- **Warranty:** All defective merchandise, unless otherwise indicated, may be returned for a replacement within 30 days from the date of goods received. We cannot provide refunds or replacements beyond 30 days.
- If the product is confirmed to have a quality problem (product design or quality issues), we will cover it with replacing or refund.
- All warranty replacements are required to have photos or videos and a detailed description. The warranty does not cover physically damaged merchandise. We are willing to figure out the best solutions, as always.
- For after-sale service, please reach out via e-mail: [support@betafpv.com](mailto:support@betafpv.com)

This clause only applies to the products manufactured by BETAFPV and sold by BETAFPV authorized dealers.

The specific interpretation rights of this clause belong to BETAFPV.





<https://betafpv.com>



# **Cetus Lite FPV Kit**

## Disclaimer and Safety Guidelines

2024-04-07

# Disclaimer and Warning

## Disclaimer

This product is a multi-rotor aircraft, equipped with powerful motors and sharp propellers, has fast flight speed, but also has a certain hazard when operating, need to be used with caution.

This product is not a toy and requires some basic knowledge to control, so please pay special attention to the warnings and cautions before you start using it. BETAFPV reserves the right to update this Disclaimer.

By using this product, you are deemed to have understood, acknowledged and accepted all of the terms and conditions of this document and you undertake to be responsible for your own actions and all consequences arising therefrom. You undertake to use this product only for legitimate purposes and agree to all of the terms and conditions of this document and any related policies or guidelines that BETAFPV may establish.

BETAFPV reserves the right to update this disclaimer and the safety guidelines.

Visit <https://betafpv.com/> for the latest version.

## Individual Parts

### Remote Controller

1. Make sure remote controller batteries are fully charged before flight.
2. It is necessary to be re-bind if the remote controller has been replaced.
3. DO NOT block or cover the built-in antenna of the remote control for a strong antenna reception.

### Aircraft

1. Make sure aircraft batteries are fully charged before flight.
2. Make sure propellers are in good condition and mounted onto the motors correctly and securely.
3. Make sure the battery is mounted securely.

### Battery

1. Only use a battery charger that meets the specifications when charging.
2. Never leave while battery is in charging process. Do not charge the battery unattended.

3. Do not over charge the battery.
4. Do not short circuit the battery. Make sure the wire connection polarity is correct.
5. Do not charge/discharge battery at of recommended temperature range (Charge: 0 to 45°C).
6. Always place the battery in a fire resistant surface or fire safety container alone when charging/dis-charging. The middle of a cement driveway is a good example of a safe location.
7. Do not allow LiPo cells to overheat at any time. Cells which reach greater than 60°C will usually become damaged and will catch fire.
8. Do not charge/discharge battery inside house, garage, vehicle, building and away from any combustibile material.
9. Do not over discharge the battery. Do not discharge a battery pack to a level below 3.3V per cell.
10. Do not allow the electrolyte to get into eyes or on skin. Wash affected areas immediately if they come into contact with electrolyte. Do not alter or modify connectors or wires of a LiPo battery pack. Do not have contact with a leaky/damaged battery directly.
11. Do not assemble LiPo cells or pre-assembled packs together with other LiPo cells or packs.
12. Inspect batteries if crash, battery should be placed in a safe area for observation for at least 30 minutes after crash.

**Caution: The battery may be in high temperature!**

## **Flight Condition Requirements**

1. Do not fly in severe weather conditions including strong wind, snow, rain, fog, etc.
2. Only fly in open areas without tall buildings and large metal structures around. Buildings with a large number of concrete irons will affect the signal and interfere with the flight. It is recommended to fly at least 10m away from buildings, poles, obstacles, etc.
3. When flying, please keep control within sight and away from obstacles, crowds, water, etc.
4. Please do not fly in areas with high voltage lines, communication base stations or transmission towers to avoid interference.
5. Do not take off from moving objects, such as cars and ships.
6. Do not use the aircraft in an environment at risk of a fire or explosion.
7. To avoid injury, stay away from rotating propellers or motors.

# Regulations

## WARNING

To avoid non-compliant behavior, serious injury, and property damage, observe the following rules:

1. DO NOT modify the aircraft or use the aircraft for other illegal purposes.
2. DO NOT operate in the vicinity of manned aircraft, regardless of altitude. If necessary, land immediately.
3. DO NOT fly the aircraft in areas where the large events are being held, including but not limited to sporting events and concerts.
4. DO NOT fly the aircraft in areas prohibited by local laws.
5. Remain well clear of and DO NOT interfere with manned aircraft operations. Be aware of and avoid other aircraft and obstacles at all times.

## CAUTION

To avoid non-compliant behavior, serious injury, and property damage, observe the following rules:

1. DO NOT fly the aircraft near or inside restricted zones specified by local laws and regulations. Restricted zones include, but are not limited to, airports, borders between two sovereign countries or regions, major cities, and areas where temporary events or activities are being held.
2. DO NOT fly the aircraft above the authorized altitude.
3. Make sure to keep your aircraft within VLOS, and use an observer to assist if needed.
4. DO NOT use the aircraft to carry illegal or dangerous payloads.

## NOTICE

1. Make sure you understand the nature of your flight operation (such as for recreation, for public use, or for commercial use) and have obtained corresponding approval and clearance from the related government agencies before flight. Consult with your local regulators for comprehensive definitions and specific requirements. Note that remote controlled aircraft may be banned from conducting commercial activities in certain countries and regions.
2. DO NOT fly around sensitive infrastructure or property such as power stations, water treatment facilities, correctional facilities, heavily traveled roadways, government facilities, and military zones.



# **Export Controls**

## **Comply with Applicable Export Control Laws**

You are advised that export, re-export, and transfer of the Products are subjected to Chinese export control law and other applicable export control laws and sanctions (hereafter collectively referred to as "Export Control Laws"). Prior to your use, sale, transfer, rental, or other conduct related to the Products, unless permitted by the Export Control Laws or with the license issued by competent authorities, you shall in particular check and guarantee by appropriate measures that:

1. There will be no infringement of an embargo imposed by the Export Control Laws;
2. The Products will not be provided to the entities, persons, and organizations listed in all applicable sanctioned party lists;
3. It is only for civilian use, and it is forbidden to directly or indirectly use BETAFPV products for or related to the following content (1) any military combat purpose or military combat-related purposes; (2) terrorist activities; (3) other criminal acts. The purchaser shall also require its customers or users to comply with the aforementioned requirements.

## **Export Compliance, Disclaimer & Indemnity**

You acknowledge it is your responsibility to comply with Chinese export control law and any other applicable export control laws. You shall solely be responsible for the legal responsibility if any of your use, sale, transfer, rental or other conduct related to the Products fail to comply with the applicable export control laws, BETAFPV shall, in no circumstances, be responsible for your violation of any applicable export control laws. Furthermore, you shall indemnify, defend, and hold harmless BETAFPV, its affiliates, directors, officers, employees, agents, and representatives, from and against any and all claims, demands, suits, causes of action, expenses (including reasonable attorneys' fee), damages, losses, or liabilities of any nature whatsoever, arising from, or allegedly arising from, or related to, your failure to comply with applicable export control laws.

# Compliance Information

## **Cetus Lite Brushed Whoop Quadcopter**

Model: Cetus Lite FPV  
FCC ID: 2AT6X-CETUSLITE

## **LiteRadio 1 Radio Transmitter**

Model: LiteRadio 1  
FCC ID: 2AT6XLITERADIO2

## **VR02 FPV Goggles**

Model: VR02

## **FCC STATEMENT**

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.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications or changes to this equipment. Such modifications or changes could void the user's authority to operate the equipment.

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## **RF exposure information:**

The Drone / Transmitter / Goggles comply with FCC and EU radiation exposure limits. End users must follow specific operating instructions when using the equipment to meet radiation exposure requirements.

When using the drone, maintain a distance of 20cm from the body to ensure compliance with RF exposure requirements.

The Transmitter complies with FCC radiation exposure limits (1.6 W/kg). And complies with EU radiation exposure limits (2.0W/kg) for the body which was tested and recorded with the maximum SAR value is 0.298 W/kg for the body. The use of belt clips, holsters, and similar accessories should not contain metallic components in its assembly. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements and should be avoided.

The Goggles have been evaluated, the RF function is for receive only, not transmission. Meet general RF exposure requirements and RF exposure calculation is not needed.

## EU Declaration of Conformity:

Hereby, Shenzhen Baida Moxing Co.,Ltd. declares that the radio equipment type Cetus Lite FPV / LiteRadio 1 / VR02 are in compliance with directive 2014/53/EU.



The full text of the EU Declaration of Conformity is available at the following internet address:

<https://betafpv.com/>

Operation Frequency & output power

### **Cetus Lite FPV**

5.8GHz: E.I.R.P<14dBm Max.

2.4GHz: RX only

### **LiteRadio 1**

2.4GHz: E.I.R.P<18.5dBm Max.

### **VR02**

5.8G Receive only

**CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**

## Shenzhen Baida Moxing Co., Ltd.

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