

LiteRadio 4 SE Radio Transmitter

Version No.1 2026-04-20

LiteRadio 4 SE is a brand new radio transmitter from BETA FPV, equipped with ExpressLRS 2.4G protocol and the latest version of BETA FPV's LiteRadio operating system. It can control FPV drones equipped with ELRS 2.4G series receivers, and also supports a variety of mainstream FPV simulators including DJI Virtual Flight, meeting the needs of remote control uses from starter to advanced.



1. Product profile

1.1 Feature highlights

- Utilizes BETA FPV's latest LiteRadio radio transmitter system
- Upgraded signal accuracy and service life of the controller sensor
- New Xbox mode for practicing DJI Virtual Flight, compatible with computers, cell phones and tablets of various systems
- Built-in 1S 2000mAh high-capacity Li-ion battery
- Maximum charging power upgraded to 15W, and the battery can be fully charged in 40 minutes at the shortest

1.2 Specifications

- Model: LiteRadio 4 SE
- Operating Frequency: 2.4000-2.4835GHZ
- ELRS Transmit Power(EIRP): 2.4GHz<20dbm
- WiFi Transmit Power(EIRP): 2.4GHz<5dbm
- Operating Temperature: -10℃ to 40℃.
- Charging Ambient Temperature: 0℃ to 35℃
- Battery capacity: 2000mAh (Li-ion battery)
- USB charging input: 5V, supports up to 3A rapid charging
- Product weight: about 210g
- Product Size: 172.5mm*118.5mm*72.5mm

1.3 Default setting

Radio transmitter mode

- Mode2(throttle is in the left hand i.e.)

RF module configuration

- Built-in RF module: ON
- Built-in RF Module Wireless Protocol: ELRS3 2.4G

ExpressLRS system configuration

- Transmit power: 100mW
- Packet rate: 250HZ
- Telemetry rate: 1:8

Channel configuration

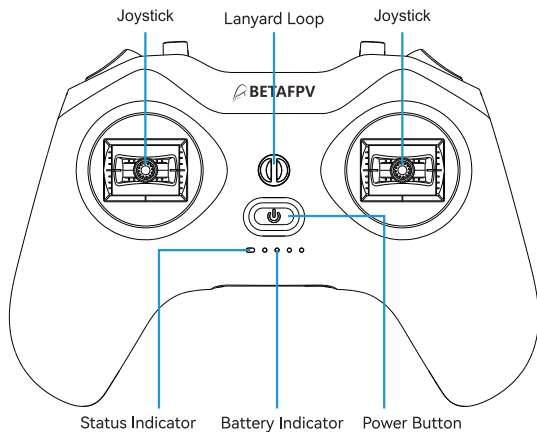
Channel	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	CH9	CH10
Input	Roll(A)	Pitch(E)	Throttle(T)	Yaw(R)	SA	SB	SC	SD	SE	SF

Other settings

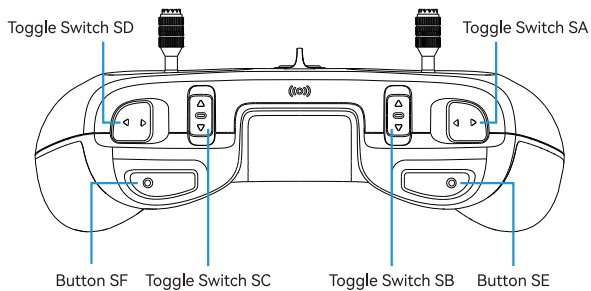
- Buzzer tone switch: ON
- Joystick center dead zone: 1% (Joystick center dead zone does not act on the throttle channel)

2. Appearance

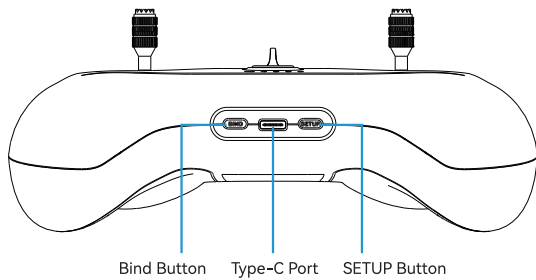
Front view



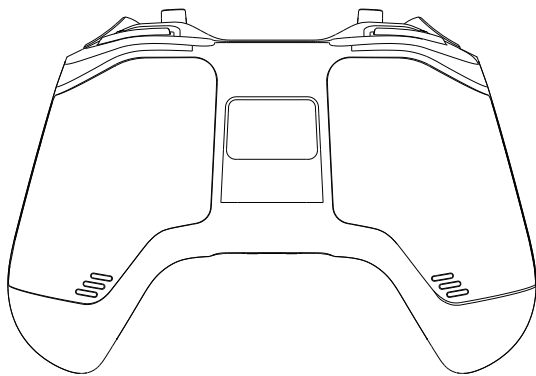
Top view



Bottom view



Back view



3. Basic operation manual

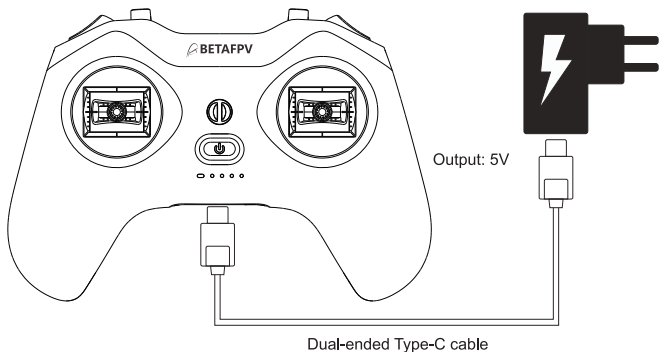
3.1 Power on/off

- Short press and then long press the power button, wait for the indicator lights to light up one by one and accompanied by the “beep beep beep” sound, the radio transmitter will be turned on.
- Short press and then long press the power button again, when the indicator lights turn off one by one and accompanied by “beep beep beep” sound, the radio transmitter will turn off the power.
- Short press the power button to display the current battery.
- Fully charged LiteRadio 4 SE radio transmitter can be used continuously for about 8 hours.

Mode	LED Indicator	Buzzers	Description
Working	Blue light solid on	No	Working
Wi-Fi	Green light solid on	No	Wi-Fi
Throttle position warning	Red light solid on	No	The throttle joystick is not in the lowest position, please dial the throttle joystick to the lowest position

3.2 Charging

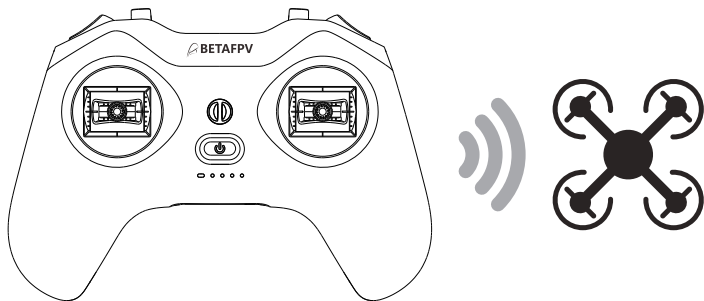
To ensure safety during storage and transportation, the lithium batteries are shipped with about 80% charge. When getting your new LiteRadio 4 SE radio transmitter, please fully charge the batteries before using it.



- Turning off the radio transmitter.
- Use the USB cable to connect the radio transmitter to the 5V adapter.
- Disconnect the adapter as soon as possible after charging is complete.
- When using the 3A@5V rapid charge adapter, the LiteRadio 4 SE radio transmitter takes only about 40 minutes from low battery warning to full battery.

Battery	Led Indicator	Buzzers	Description
Low Battery Warning	Orange light flashes four times and battery indicator will all off	With the sound of "beep beep beep"	Batteries are too low, need to charge the radio transmitter
Charging	Red light flashing and battery indicator are lit one by one	No	Charging
Charging Complete	Green light flashing and battery indicator is solid on	No	Charging complete

3.3 Frequency binding with receivers



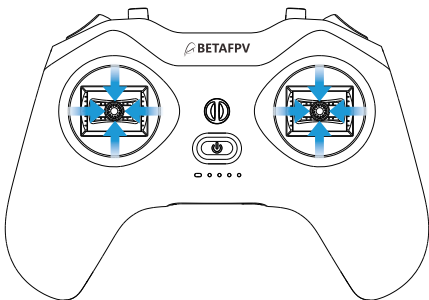
- Turn on the radio transmitter.
- Put the receiver into the binding state. The ELRS receivers usually power on and off in a quickly 3 times. For more details, please refer to the receiver's instruction manual.
- Long press the BIND button at the bottom of the radio transmitter to enter the binding state. This state lasts for up to 8 seconds.
- After the binding is successful, the remote control will emit a successful connection tone and automatically exit the binding state.
- If the binding is not successful within 8 seconds, please repeat the above operation.
- If you need to exit the binding state, please short press the BIND button.
- After the receiver is successfully bound, it will automatically connect the next time it is turned on, and there is no need to repeat the binding.

Bind Status	Led Indicator	Buzzer	Description
Binding	Status indicator flashes red quickly 2 times	Accompanied by the sound of "beep beep"	Binding
Binding complete	No	Beep sound (One short and one long)	Binding complete
Disconnection warning	No	Beep sound (One long and one short)	The receiver connection is interrupted and needs to be reconnected/bind

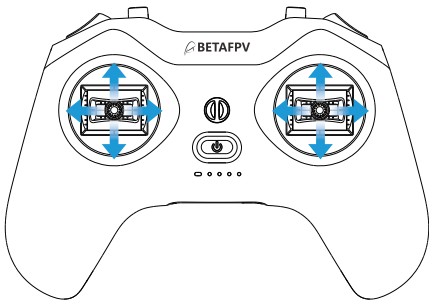
3.4 Calibrating the joystick

Joystick calibration consists of two stages, the first stage is to calibrate the joystick center position and the second stage is to calibrate the joystick boundaries.

- Turn on the radio transmitter.
- Long press the SETUP button on the bottom of the radio transmitter to enter the first stage of the joystick calibration state.
- Move all joysticks to the middle position.



- Press the setup button briefly, the radio transmitter will record the center point of the joysticks and enter the second stage.
- Toggle the joysticks, gently touch the four boundaries: up, down, left and right.



- Short press the SETUP button again, the radio transmitter will record the joystick boundaries and complete the calibration.
- The joystick of the LiteRadio 4 SE radio transmitter is calibrated at the factory, and needs to be re-calibrated only if the remote control is subjected to violent impacts, or if you notice a significant shift in the joysticks signal after prolonged use.

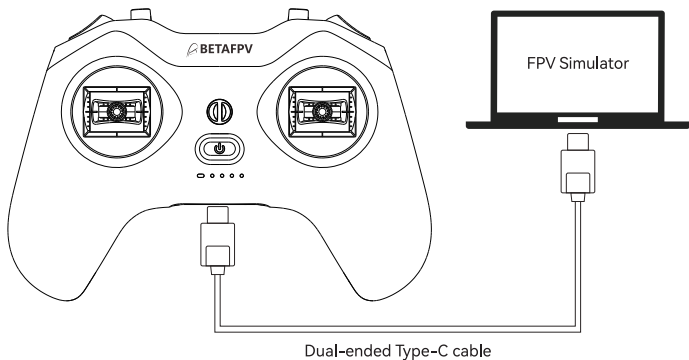
Calibration	Led Indicator	Buzzer	Description
Calibration center	Red lights flash three times	Accompanied by the sound of "beep beep"	Enter the joystick calibration state and move all joysticks to the middle position to set the midpoint
Calibration boundary	Red lights flash three times	Accompanied by the sound of "beep beep"	Gently move the joystick to the four boundaries of up, down, left, and right to set the maximum range of the joystick
Calibration complete	Red lights flash three times	Beep sound (One short and one long)	Calibration complete

4. Connecting to a Simulator

The LiteRadio 4 SE radio transmitter can be connected to computers, phones and tablets for practicing FPV simulator or DJI Virtual Flight.

4.1 Solution 1: Data cable joystick mode

The joystick mode with data cable connection is compatible with Windows and macOS computers and supports all major FPV simulators except DJI Virtual Flight.



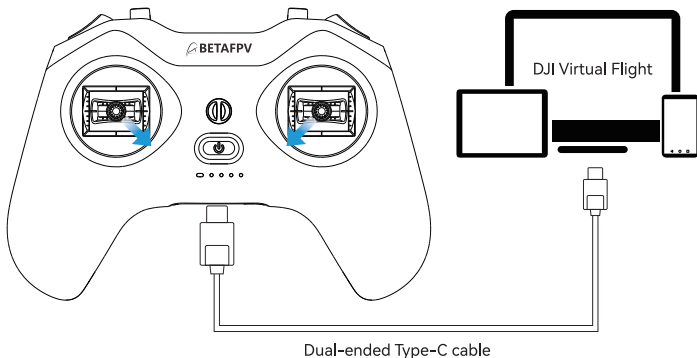
Dual-ended Type-C cable

- Turn off the radio transmitter.
- Use a USB data cable to connect the radio transmitter and computer.
- At this time, the LiteRadio 4 SE radio transmitter can be identified as a “BETAFPV Joystick”.

Note: In the power-on state, there is no signal output from the USB of the remote control radio transmitter, and the joystick mode can't be used.

4.2 Solution 2: Data cable Xbox mode

Xbox mode can only be connected by data cable, and can be used to practice DJI Virtual Flight or other FPV simulators that support Xbox mode, which is compatible with Windows and macOS computers, as well as Android phones and tablets.



Dual-ended Type-C cable

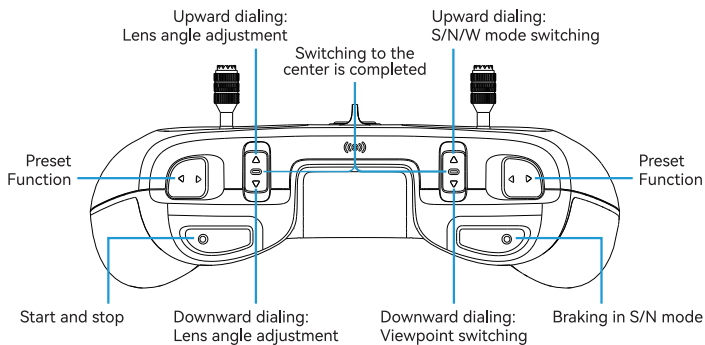
- Turn off the radio transmitter.
- At the same time, turn the left joystick to the lower right corner and the right joystick to the lower left corner, at this time, use the USB cable to connect the radio transmitter to the computer, cell phone or tablet, the status indicator will flash white lights 3 times, indicating that it has successfully entered the Xbox mode.
- At this time, the LiteRadio 4 SE radio transmitter can be recognized as “BETA FPV Joystick”.

Note:

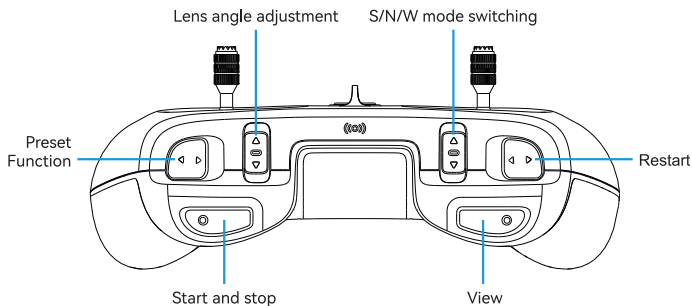
- *There is no signal output from the USB of the remote control in the power-on state, and Xbox mode cannot be used.*
- *After connecting to Xbox mode under Windows system, if you find that the cursor moves, please move the joystick and three-position switch of the remote control to the middle position, and move the two-position switch to the left and right.*

DJI Virtual Flight default button functions

- Windows operating system



- Android operating system



5. Configure radio transmitter

BETA FPV Configurator is a ground station application independently developed by BETA FPV. It can configure specifications or upgrade firmware for LiteRadio series radio transmitter. It is compatible with computers running Windows, Linux and macOS. Download: https://github.com/BETA FPV/BETA FPV_Configurator/releases

5.1 Connecting BETA FPV configurator

- Turn off the radio transmitter.
- Connect the radio transmitter and computer by the USB cable.
- Open the BETA FPV Configurator application and switch to the radio transmitter configuration program.
- Click the “connect radio transmitter” button on the upper right corner of the interface to enter the setup interface.

Note: In the power-on state, there is no signal output from the USB of the remote control, so you can't use BETA FPV Configurator. Please do remember turn off the radio transmitter.

5.2 Upgrading the radio transmitter firmware

- Turn off the radio transmitter and disconnect the USB connection.
- Press and hold the power button while holding down the SETUP button, the status indicator will light up in blue light with “beep beep” sound, and enter the radio transmitter firmware flash mode.
- Use the USB cable to connect the radio transmitter and computer.
- Open the BETA FPV Configurator application and switch to the radio transmitter configuration program
- Click the “Firmware Flasher” button on the upper left of the interface to enter the firmware flash interface.
- Follow the “Steps of How to flasher” at the bottom of the firmware programming interface to complete the programming.

Note: When the radio transmitter is turned on, there is no signal output from the USB port , so it is impossible to upgrade the firmware of the radio transmitter. Please do remember turn off the radio transmitter.

It is recommended to visit the support page on the official website for detailed tutorials on using the BETA FPV Configurator or to download the latest version of the firmware. Support page link: <https://support.betafpv.com/hc/en-us/articles/40274282610329-Manual-for-LiteRadio-4>

6. Compliance Information

Model: LiteRadio 4 SE

FCC ID: 2AT6X-LITERADIO4SE

6.1 FCC statements

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.

Radiation Exposure Statement

The SAR limit of USA (FCC) is 1.6 W/kg averaged over one gram of tissue.

This product has also been tested against this SAR limit.

To maintain compliance with FCC RF exposure requirements, the use of belt clips, holsters, and similar accessories should not contain metallic components in their

assembly. The use of accessories that do not satisfy these requirements may not comply with RF exposure requirements and should be avoided.

6.2 EU Declaration of Conformity

Hereby, Shenzhen Baida Moxing Co.,Ltd. declares that the radio equipment type LiteRadio 4 SE is in compliance with directive 2014/53/EU.



The full text of the EU declaration of conformity is available at the following internet address: <https://support.betafpv.com/hc/en-us>

Specific Absorption Rate (SAR)

- Your device is tested to comply with applicable requirements and regulations of the European Union of human exposure to radio wave.
- Specific Absorption Rate (SAR) is used to measure radio waves absorbed by human. The device complies with RF specifications when the device is used at a distance of 0mm from your limbs. The SAR limit is 4.0 W/kg averaged over 10 gram of tissue in the European Union.
- LiteRadio 4 SE was tested and recorded the maximum SAR value was 1.78W/kg for the limbs.

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

7. Disclaimer

Before using this product, please read and comply with the operating guidelines in this manual carefully. If the product malfunctions or becomes unusable due to irregular operation, BETA FPV may not be able to provide you with the corresponding warranty measures and other after-sales services.

By using this product, you are deemed to have read and accepted all the terms and conditions associated with this product.

The wireless operating frequency bands and their corresponding available ranges vary from country to country, please refer to the local laws and regulations for details.

The documentation for this product is subject to change without notice, please visit www.betafpv.com for the latest information.

LiteRadio 4 SE是BETA FPV推出的一款全新遥控器，搭载ExpressLRS 2.4G协议与BETA FPV最新版本的LiteRadio操作系统。它可以控制配备ELRS 2.4G系列接收机的FPV无人机，还支持多种主流FPV模拟器，包括大疆虚拟飞行，满足从入门到进阶的遥控器使用需求。



1. 产品概述

1.1 功能特点

- 使用BETA FPV最新的LiteRadio遥控器系统；
- 摇杆传感器的信号精度和使用寿命升级；
- 新增Xbox模式，用于练习大疆虚拟飞行，兼容多种系统的电脑、手机和平板；
- 内置1S 2000mAh大容量锂电池；
- 最大充电功率升级到15W，最短可在40分钟内将电池充满。

1.2 规格参数

- 型号: LiteRadio 4 SE
- 工作频率: 2.4000-2.4835GHz
- ELRS发射功率 (EIRP) : 2.4GHz <20dbm
- WiFi 发射功率 (EIRP) : 2.4GHz <5dbm
- 工作环境温度: -10°C 至 40°C
- 充电环境温度: 0°C 至 35°C
- 电池容量: 2000mAh (锂离子电池)
- USB充电输入: 5V, 最高支持3A快充
- 产品重量: 约210g
- 产品尺寸: 172.5mm*118.5mm*72.5mm

1.3 默认配置

摇杆模式

- Mode2 (左手油门, 即美国手)

射频模块配置

- 内置射频模块: ON
- 内置射频模块无线协议: ELRS3 2.4G

ExpressLRS系统配置

- 发射功率: 100mW
- 数据包率: 250Hz
- 遥测率: 1:8

通道配置

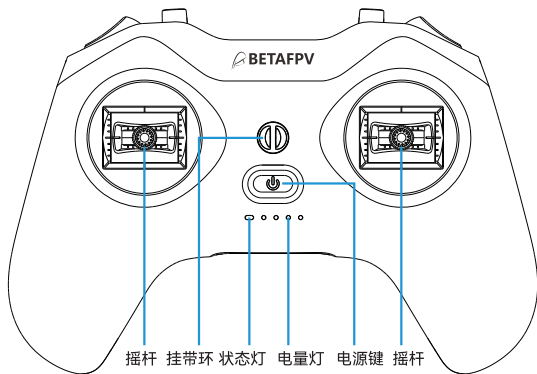
通道	CH1	CH2	CH3	CH4	CH5	CH6	CH7	CH8	CH9	CH10
输入	Roll(A)	Pitch(E)	Throttle(T)	Yaw(R)	SA	SB	SC	SD	SE	SF

其他设置

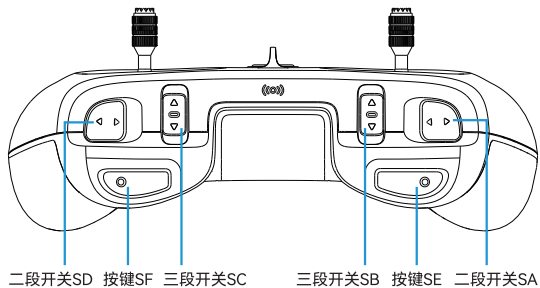
- 蜂鸣器提示音开关: ON
- 摇杆中间死区: 1% (摇杆中间死区不作用于油门通道)

2. 外观形态

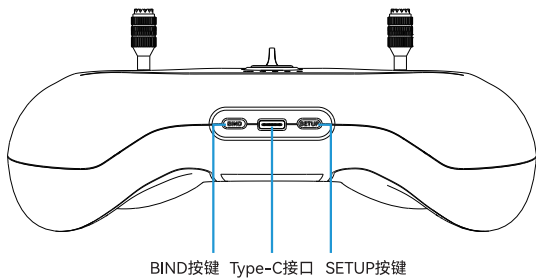
LiteRadio 4 SE遥控器正面如下图所示。



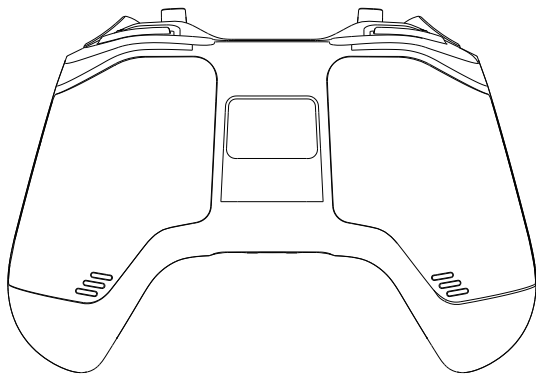
LiteRadio 4 SE遥控器顶部如下图所示。



LiteRadio 4 SE遥控器底部如下图所示。



LiteRadio 4 SE遥控器背面如下图所示。



3. 基础操作指南

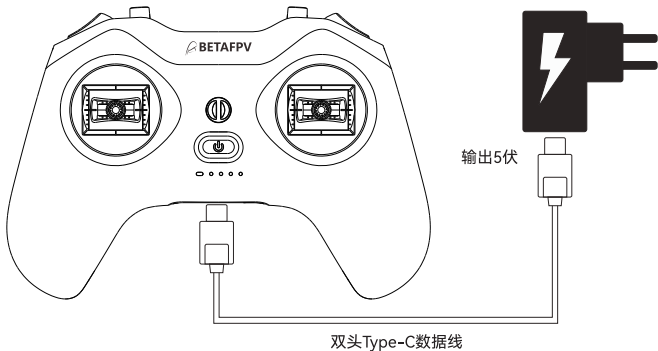
3.1 开机/关机

- 先短按再长按电源键，待指示灯逐个点亮并伴随“滴滴滴”声，遥控器开机；
- 再次短按后长按电源键，待指示灯逐个熄灭并伴随“滴滴滴”声，遥控器关机；
- 短按电源键可显示当前电量；
- 充满电的LiteRadio 4 SE遥控器电池可连续使用8小时左右。

工作状态	指示灯	蜂鸣器	状态说明
正常工作	状态灯蓝色常亮	无	遥控器处于正常工作状态。
Wi-Fi模式	状态灯绿色常亮	无	遥控器处于Wi-Fi工作模式。
油门位置警示	状态灯红色常亮	无	油门杆不在最低位，需要将油门杆拨到最低位。

3.2 充电

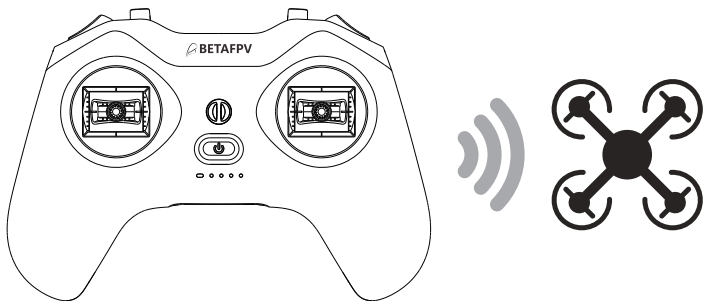
为确保储存和运输过程中的安全性，锂电池在出厂时的电量约为80%左右；因此，当拿到全新的LiteRadio 4 SE遥控器时，请先将电池充满再使用。



- 关闭遥控器；
- 使用USB线连接遥控器和5V适配器；
- 充电完成后请尽快断开适配器；
- 使用3A@5V快充适配器时，LiteRadio 4 SE遥控器从低电量警示到电池充满，最快仅需40分钟左右。

电量状态	指示灯	蜂鸣器	状态说明
低电量警示	状态灯橙色快闪4次 电量灯全部熄灭	伴随“滴滴滴滴”声	电池电量过低， 需要给遥控器充电。
充电中	状态灯红色呼吸闪烁 电量灯逐个点亮	无	充电过程中。
充电完成	状态灯绿色呼吸闪烁 电量灯全部常亮	无	充电完成。

3.3 与接收机对频



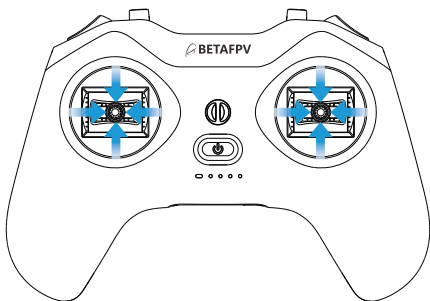
- 遥控器开机；
- 使接收机进入对频状态，ELRS系列接收机通常为快速通断电3次，详见接收机的使用说明书；
- 长按遥控器底部的BIND键进入对频状态，该状态最长持续8秒；
- 对频成功后，遥控器出现连接成功提示音，并自动退出对频状态；
- 如果8秒内未成功对频，则需重复上述操作；
- 如需主动退出对频状态，可短按BIND键；
- 与接收机对频成功后，下次开机时会自动连接，无需重复对频。

对频状态	指示灯	蜂鸣器	状态说明
对频中	状态灯红色快闪2次	伴随“滴滴”声	对频过程中。
连接成功提示	无	“滴滴”声 (一短一长)	接收机连接成功。
连接中断警示	无	“滴滴”声 (一长一短)	接收机连接中断， 需要重新连接/对频。

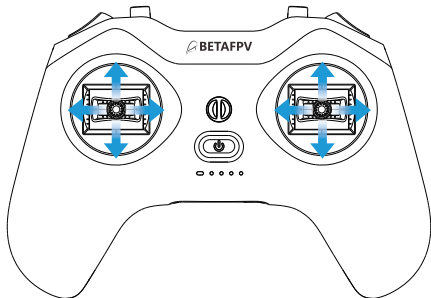
3.4 校准摇杆

摇杆校准包含两个阶段，第一阶段是校准摇杆中位，第二阶段是校准摇杆边界。

- 遥控器开机；
- 长按遥控器底部的SETUP键进入摇杆校准状态的第一阶段；
- 将所有摇杆拨到中间位置；



- 短按SETUP键，此时遥控器将记录摇杆的中点，并进入第二阶段；
- 拨动摇杆使它们轻轻触碰到上、下、左、右四个边界；



- 再次短按SETUP键，此时遥控器将记录摇杆的边界，并完成校准；
- LiteRadio 4 SE遥控器的摇杆在出厂时已校准，只有在遥控器经受剧烈碰撞，或长期使用后发现摇杆信号有明显偏移时，才需要重新进行校准。

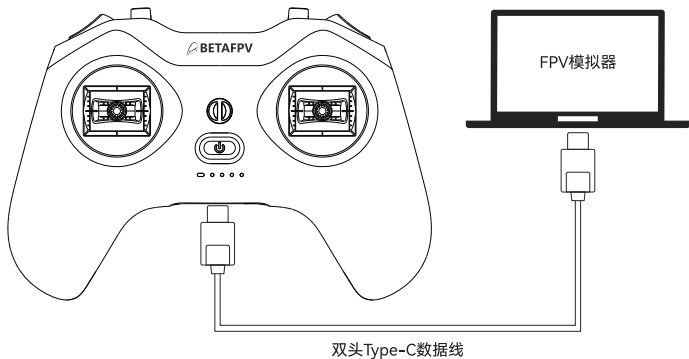
校准状态	指示灯	蜂鸣器	状态说明
校准中点	状态灯红色快闪2次	伴随“滴滴”声	进入摇杆校准状态，将所有摇杆拨到中间位置以设定中点。
校准边界	状态灯红色快闪3次	伴随“滴滴滴”声	将摇杆轻轻拨到上下左右四个边界，以设定摇杆的最大范围。
校准成功提示	状态灯红色快闪2次	伴随“滴滴”声 (一短一长)	摇杆校准成功。

4. 连接模拟器

LiteRadio 4 SE遥控器可以连接电脑、手机和平板，用来练习FPV模拟器或大疆虚拟飞行。

4.1 方式一：数据线JoyStick模式

以数据线连接的JoyStick模式兼容Windows和macOS系统的电脑，支持除大疆虚拟飞行以外的主流FPV模拟器。

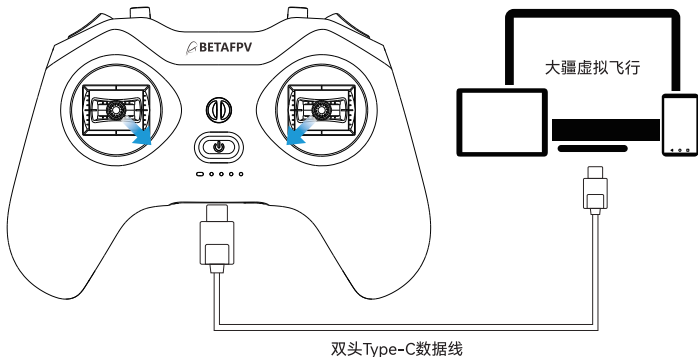


- 关闭遥控器；
- 使用USB数据线连接遥控器和电脑即可；
- 此时LiteRadio 4 SE遥控器可被识别为“BETAFPV Joystick”。

注意：在开机状态下，遥控器的USB没有信号输出，无法使用JoyStick模式。

4.2 方式二：数据线Xbox模式

Xbox模式仅能以数据线方式连接，可用于练习大疆虚拟飞行或其他支持Xbox模式的FPV模拟器，兼容Windows和macOS系统的电脑，以及Android系统的手机和平板。



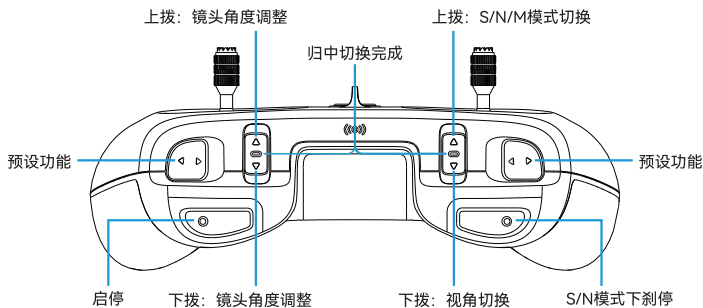
- 关闭遥控器；
- 同时将左侧摇杆拨到右下角，右侧摇杆拨到左下角，此时使用USB数据线将遥控器连接到电脑、手机或平板，状态灯白色快闪3次，表明进入Xbox模式成功；
- 此时LiteRadio 4 SE遥控器可被识别为“BETA FPV Joystick”。

注意：

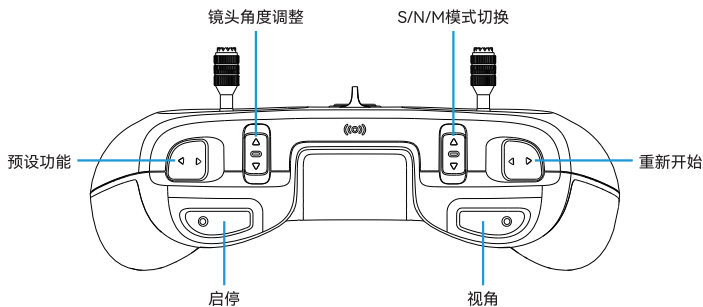
- 在开机状态下，遥控器的USB没有信号输出，无法使用Xbox模式；
- 在Windows系统下连接Xbox模式后，如果发现光标移动，请将遥控器的摇杆和三段开关拨至中间位置，两段开关拨至左右两边。

大疆虚拟飞行默认按键功能

• Windows操作系统



• 安卓操作系统



5. 配置遥控器

BETA FPV Configurator是一款BETA FPV自主研发的地面站应用程序，可为LiteRadio系列遥控器配置参数或升级固件，兼容Windows、Linux和macOS系统的电脑。

下载地址：https://github.com/BETA FPV/BETA FPV_Configurator/releases

5.1 连接BETA FPV Configurator

- 关闭遥控器；
- 使用USB数据线连接遥控器和电脑；
- 打开BETA FPV Configurator应用程序，切换为遥控器配置程序；
- 点击界面右上角的“连接遥控器”按钮，进入设置界面；
- 修改参数后，需点击设置界面右下角的“保存并重启”按钮完成配置。

注意：在开机状态下，遥控器的USB没有信号输出，无法使用BETA FPV Configurator。

5.2 升级遥控器固件

- 关闭遥控器并断开USB连接；
- 按住SETUP键的同时短按电源键，状态灯蓝色常亮并伴随“滴滴滴”声，进入遥控器固件烧写模式；
- 使用USB数据线连接遥控器和电脑；
- 打开BETA FPV Configurator应用程序，切换为遥控器配置程序；
- 点击界面左上方的“固件烧写工具”按钮，进入固件烧写界面；
- 按照固件烧写界面下方的“遥控器固件烧写步骤”的指引完成烧写。

注意：在开机状态下，遥控器的USB没有信号输出，无法升级遥控器固件。

建议访问官网Support页面，详细了解BETA FPV Configurator的使用教程，或下载最新版本的固件。

Support页面链接：<https://support.betafpv.com/hc/en-us/articles/40274282610329-Manual-for-LiteRadio-4>



6. 免责声明

使用本产品前，请您仔细阅读并遵守此说明书内的操作指引，如因不规范操作导致产品故障或无法使用，BETA FPV可能无法向您提供相应保修措施等售后服务。

使用本产品视为您已阅读并接受与本产品相关的全部条款。

各国家/地区支持的无线工作频段及其对应的可用范围有所不同，详情请参考当地法律法规。

本产品的文档如有更新，恕不另行通知，请访问 www.betafpv.com 了解最新信息。



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