

LiteRadio 2 SE Radio Transmitter

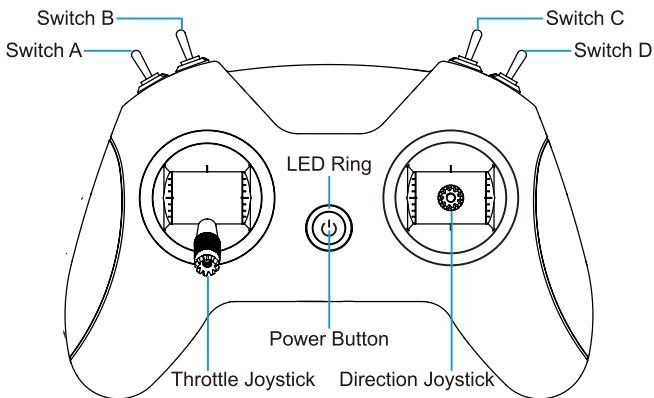
LiteRadio 2 SE is a remote control radio transmitter for FPV racing drone. The Special Edition(SE) is the upgraded version based on LiteRadio 2.

Here is the comparison of these two radio transmitters.

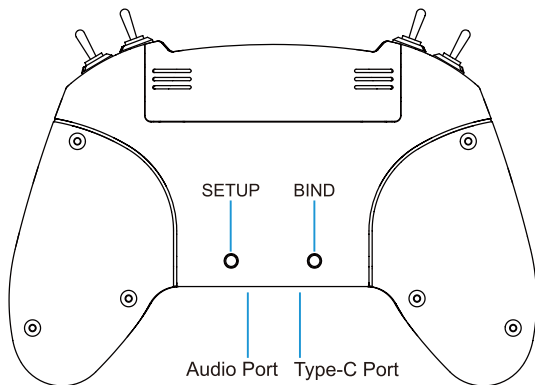
|                      | <b>LiteRadio 2 SE</b>                                | <b>LiteRadio 2</b>                  |
|----------------------|--|-------------------------------------|
| System               | Customed LiteRadio System                            | Opensource OPENTX                   |
| Power                | Bulit-in 1000mAh 1S Battery                          | Removable 350mAh 2S Battery         |
| Protocols            | Frsky D16 FCC/D16<br>LBT/D8/Futaba S-FHSS、<br>Bayang | Frsky D16 FCC/D16<br>LBT/D8、 Bayang |
| Channels             | 8  | 8                                   |
| RF Power             | 100mW  | 80mW                                |
| Working Time         | 8 hours  | 3 hours                             |
| USB Charge           | Yes  | Yes                                 |
| HID Joystick         | Yes  | Yes                                 |
| Student Radio Mode   | NO   | Yes                                 |
| Joystick Calibration | Yes  | No<br>(Could with OpenTX Companion) |
| Firmware Update      | Yes  | NO                                  |

*LiteRadio 2 remote control radio transmitter is discontinued.*

The front side of the radio transmitter.



The back side of the radio transmitter.



# 1.Button Functions

There are three buttons on remote control radio transmitter.

- Power Button: Turn the transmitter off/on.
- BIND Button: Enter binding mode after the transmitter is powered on.
- SETUP Button: Enter joystick calibration mode after remote control radio transmitter is powered on.

## 2.Power On/Off

**POWER ON:** Long press the power button on the transmitter for 3 seconds until it beeps three times then release. The remote control radio transmitter power indicator will quickly flash red, then remain blue.

**POWER OFF:** A long press of the power button on the remote control radio transmitter will turn it off after three beeps.

## 3.LED Indicator and Buzzer

The LED light indicates the working status of the radio transmitter.

| State of the LED           | Camera status   | Solution   |
|----------------------------|---|--|
| Red light normally on      | The throttle joystick or switches are not in the lowest | Lower throttle and switches to the lowest position. Turn to blue then. |
| Red light flashing quickly | The radio transmitter is binding                        | Wait for completing binding  |
| Blue light flashing slowly | Battery reaches the low voltage limit                   | Charge the transmitter batteries                                       |

The buzzer will alarm three times in a row, which indicates a low battery and needs to be re-charged.

## 4. Binding the Receiver

There are the steps to make the LiteRadio 2 SE enter binding status.

1. Power on the remote control radio transmitter and wait for its system to load completely.
2. Press the bind button on the back of the remote control radio transmitter. The power indicator will flash red.
3. If binding is successful, the LED light will change to blue. If not, repeat the process above.

## 5. Switching Protocol

The Frsky version could support 4 different protocols, including Frsky D16 FCC, Frsky D16 LBT, Frsky D8 and Futaba S-FHSS. The protocol is indicated by the flashing times of the red LED when power on, before the buzzer alarms.

| LED Status        | Protocol Version |
|-------------------|------------------|
| Flash once        | Frsky D16 FCC    |
| Flash twice       | Frsky D16 LBT    |
| Flash Three Times | Frsky D8         |
| Flash Four Times  | Futaba S-FHSS    |

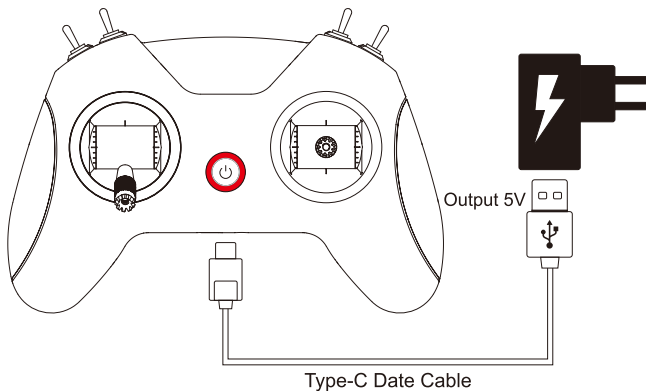
To change protocols (Frsky FCC D16, Frsky D16 LBT, Frsky D8, or Futaba S-FHSS), here are the steps:

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

## 6.Charging

Remote control radio transmitter has built-in 1000mAh battery. It indicates low battery and needs to be re-charged if blue light flashes slowly. Below charging method for reference:

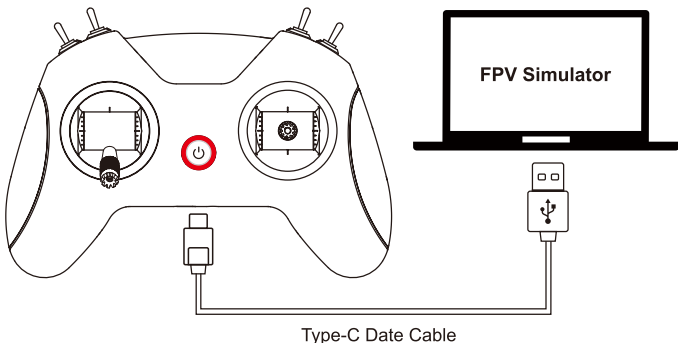
- Turn off remote control radio transmitter.
- Plug in remote control radio transmitter with adapter by USB cable (5V output adapter is allowed).
- The LED button red means charging, while light off means fully charged.



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

## 7.HID Joystick

It is the safest and quickest method to get started by using FPV simulator for starters. LiteRadio 2 SE remote control radio transmitter supports most of FPV simulators on market with comprehensive configuration.



Operation steps below:

- Turn on remote control radio transmitter, blue light on, works normally.
  - Connect remote control radio transmitter to PC by USB cable.
  - Install driver from PC automatically, prompt box pops up after successful installation.
- Then, remote control radio transmitter works normally.

### Bluetooth & other devices

#### Other devices



BetaFPV Taranis Joystick

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

## 8. Joystick Calibration

The joystick data may offset after it has used for a period of time (if joysticks is hit by physical). 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.
- Slowly rotate the throttle and direction joystick twice around the boundary of the joysticks(counter-clockwise/clockwise), then press SETUP button again, it hears a long "Bee" sound about 3 seconds. And the red LED light stops flashing, indicating that joystick calibration is complete successfully.



LiteRadio 2 SE遥控器是针对入门市场的一款FPV穿越机遥控器。该型号为2020年畅销遥控器LiteRadio 2的升级版本。

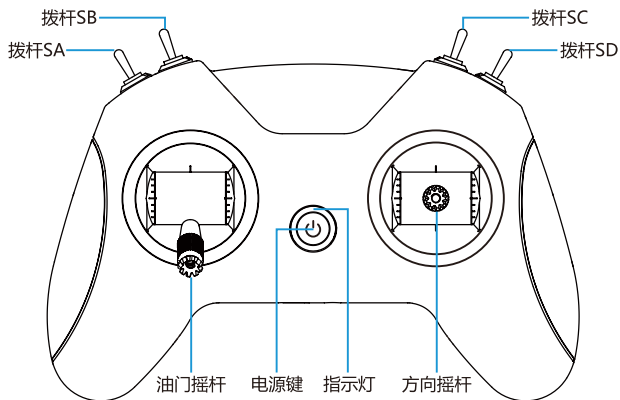
下面表格中罗列了LiteRadio 2 SE和LiteRadio 2的主要区别。

|        | LiteRadio 2 SE                                | LiteRadio 2                     |
|--------|---|---------------------------------|
| 遥控器系统  | 自研轻量遥控系统                                      | 开源OPENTX系统                      |
| 供电     | 内置1000mAh 1S电池                                | 可拆卸350mAh 2S电池                  |
| 支持协议   | Frsky D16 FCC/D16 LBT/D8/Futaba S-FHSS、Bayang | Frsky D16 FCC/D16 LBT/D8、Bayang |
| 通道数目   | 8   | 8                               |
| 发射功率   | 100mW   | 80mW                            |
| 连续工作时间 | 8小时   | 3小时                             |
| USB充电  | 支持  | 支持                              |
| 模拟器模式  | 支持  | 支持                              |
| 学生模式   | 不支持   | 支持                              |
| 摇杆校准   | 支持  | 不支持(需要通过上位机)                    |
| 固件升级   | 支持  | 不支持                             |

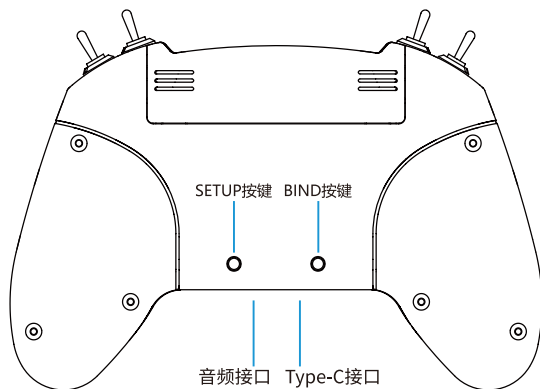
LiteRadio 2和LiteRadio 2 SE使用同一外壳,如何区别手里的遥控器是哪个型号呢?

- 取下遥控器后面的电池盖,如果里面没有电池接口,则为LiteRadio 2 SE;
- 单独出厂的LiteRadio 2 SE的手柄处为浅蓝色,而LiteRadio 2为白色;

LiteRadio 2 SE遥控器正面如下图所示。



LiteRadio 2 SE遥控器背面如下图所示。



# 1. 按键功能介绍

遥控器上有3个按键，其功能如下。

- 开机键: 长按开机/关机
- BIND键: 遥控器开机状态, 短按后遥控器进入对频模式
- SETUP键: 遥控器开机状态, 短按后遥控器进入摇杆校准模式

## 2. 开机/关机

1. 关机状态下, 长按遥控器电源键3秒, 直至听到蜂鸣器发出三声响 (do re mi), 同时红色LED灯快速闪烁, 然后变成蓝色常亮, 遥控器开机成功。

2. 开机状态下, 长按遥控器电源键3秒, 直到听到蜂鸣器发出三声响 (mi re do), 同时红色LED灯快速闪烁, 遥控器关机成功。

## 3. LED提示灯和提示音

遥控器开关按键下有一颗蓝红双色的LED提示灯, 用于提示遥控器的常见状态。

| 指示灯状态 | 状态说明        | 解决办法      |
|-------|-------------|-----------|
| 红色常亮  | 开机时油门杆不在最低位 | 将油门杆拨到最低位 |
| 红灯快闪  | 处于对频过程中     | 等待对频完成    |
| 蓝色慢闪  | 电池电压过低      | 给遥控器充电    |

遥控器内置了一个蜂鸣器, 当它连续重复报警三次时, 说明电量过低, 需要给遥控器充电。

## 4. 遥控器绑定接收机

在开机状态下，按下遥控器背面的Bind按键，遥控器将进入绑定状态，该过程为持续5秒的红蓝灯交替闪烁，待停止闪烁后，绑定过程结束。

1. 遥控器开机，确保LED灯环处于蓝色常亮；
2. 按一下遥控器背面的BIND按键，遥控器正面的电源按键灯会呈现红色闪烁，此时遥控器进入时间为5秒的对频状态；
3. 接收机进入对频状态，与遥控器对频；
4. 5秒之后遥控器自动退出对频状态。检查遥控器是否对上接收机。如果没有，请重复上面第二步操作。

## 5. 遥控器协议查看与切换

关机状态下，按电源键开机，在蜂鸣器发出声音之前，可以看到红灯闪烁，闪烁次数代表当前协议类型，具体如下：

| 红灯闪烁次数 | 协议版本          |
|--------|---------------|
| 闪烁一次   | Frsky D16 FCC |
| 闪烁两次   | Frsky D16 LBT |
| 闪烁三次   | Frsky D8      |
| 闪烁四次   | Futaba S-FHSS |

如何切换协议：

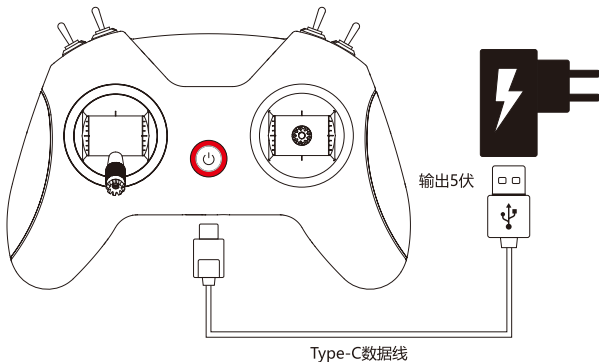
在关机状态下，先按住遥控器背面的BIND按键，同时按电源键开机，此时红色LED灯闪烁次数将发生变化，红灯闪烁完毕协议即切换成功，其闪烁次数表示下次开机的协议版本。

注意：协议查看和切换只适用于Frsky D16协议遥控器。支持Bayang协议的遥控器不能够切换到Frsky D16协议。

## 5. 低电量警报及充电

遥控器已经内置了1000mAh的电池, 无需再外接电池。蓝灯慢闪烁, 表示遥控器电池电量较低, 需要重新充电。充电方式如下。

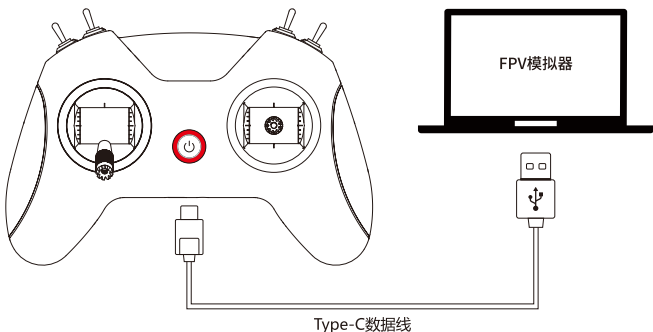
- 关闭遥控器;
- 使用USB线连接遥控器和适配器(5V输出的适配器即可, 例如手机充电器);
- 红灯常亮, 表示正在充电中; 红灯熄灭, 表示充电结束。



电池充满, 可以连续使用 8小时左右; 电池充满, 关机放置, 可以保证 30天电池电量仍保持在80%左右。

## 6.HID Joystick模式使用

在连接个人电脑后，LiteRadio 2 SE遥控器可作为USB游戏手柄使用，可以用来练习FPV模拟器。具体步骤如下：



使用步骤如下：

- 遥控器开机，蓝灯常亮正常工作；
- 使用一根USB数据线连接遥控器和PC电脑；
- Pc会自动安装驱动，驱动安装成功后弹出提示框，说明电脑已经成功识别到此遥控器并可以正常使用。



正在设置设备

正在设置“BETA FPV JoyStick”。

其他设备



BETA FPV JoyStick

## 7.摇杆校准

遥控器在使用一段时间之后,例如摇杆受到较重的物理撞击,可能会出现摇杆值发生偏移的情况。这个时候可以通过校准摇杆值,确保其摇杆值处于中位。

- 在开机状态下,按一下遥控器背面的SETUP按键,待听到蜂鸣器持续的发出滴滴声(2声),同时红色LED快速闪烁(每次闪烁两下),表示进入校准模式。
- 将两边的摇杆都移动至中间位置,再次按一下SETUP按键,待蜂鸣器持续发出滴滴滴声(3声),同时红色LED灯快速闪烁(每次闪烁两下),表示摇杆中值已经校准完毕,并进入边界值校准。
- 拨到摇杆,使其环绕摇杆边界缓慢转动两圈(逆时针/顺时针都可以),接着再次按一下SETUP按键,再听到蜂鸣器发出一声长时间滴声(大概3秒),且红色LED灯停止闪烁,表示摇杆校准完毕。



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