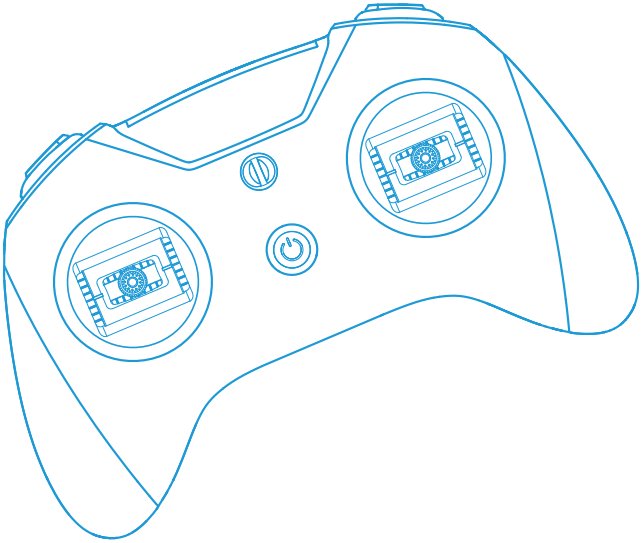
BETAFPV



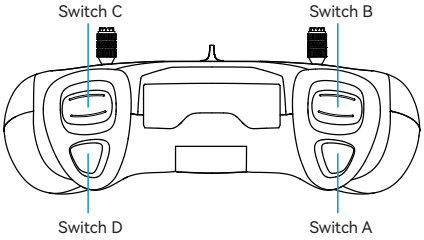
LiteRadio 3 Radio Transmitter

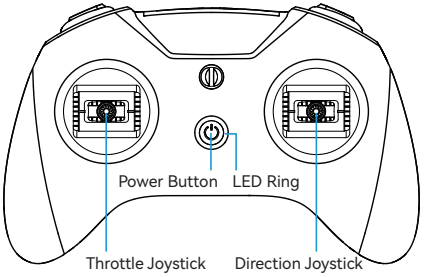
BETAFPV Configurator Supported

LiteRadio 3 is a remote control radio transmitter designed primarily for RC models, including multicopters, airplanes. It gives you more than you ever thought possible from an entry level 8-channel radio.

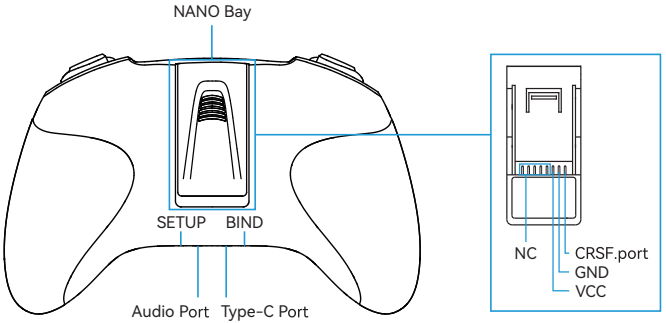
- 8 channels in total.
- USB Joystick support for most practice simulator.
- Nano module bay for external RF TX module.
- New designed joystick gimbal for longer usage life.
- Support BETAFPV Configurator for updating, configuring and tuning.
- Provide ExpressLRS 2.4G protocol version and CC2500 version for option.
- Built-in 2000mAh battery and USB charge supported.

The front side of the radio transmitter.





The back side of the radio transmitter.



1.Button Functions

There are three buttons on LiteRadio 3 radio transmitter.

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

2.Power On/Off

POWER ON: Long press the power button on the radio transmitter for 3 seconds until it beeps three times (do re mi) then release. The radio transmitter LED ring will flash red quickly, then remain blue.

POWER OFF: A long press of the power button on the radio transmitter will turn it off after three beeps (mi re do).

3.LED Indicator and Buzzer

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

State of the LED Ring	Reason	Solution
Red light solid 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
Red light breathes slowly	On charging	
Green light breathes slowly	Charge complete	

The buzzer will alarm twice, indicating a low battery that needs to be re-charged.

4.Binding the Receiver

There are the steps to make the LiteRadio 3 enter binding status.

1. Power on the remote control radio transmitter and wait for its system to load completely. LED ring is solid blue.

2. Enter receiver's binding mode, and wait for it to bind with the radio;

3. Press the bind button on the bottom of the transmitter to enter binding stutas. The LED ring will be red and flash quickly.

4. The LED ring will change to solid blue 5 seconds later when transmitter exits binding status. If not bind successfully, repeat the process above.

5.Switching Protocol

Note: Switching internal protocol is only available for CC2500 version radio transmitter. ExpressLRS version can only switch to the external TX module.

The CC2500 version could support 4 different internal protocols, including Frsky D16 FCC, Frsky D16 LBT, Frsky D8 and Futaba S-FHSS, it also supports. The protocol is indicated by the flashing times of the LED when power on, before the buzzer alarms.

Cc2500 Version	
LED Status	Protocol Version
Red Flash once	Internal Frsky D16 FCC (ACCST 1.X Version)
Red Flash twice	Internal Frsky D16 LBT (ACCST 1.X Version)
Red Flash Three Times	Internal Frsky D8
Red Flash Four Times	Internal Futaba S-FHSS
Purple Flash Three Times Quickly	Internal TX Module Off and Run External TX Module

ExpressLRS Version	
LED Status	Protocol Version
Red Flash once	Internal ELRS
Purple Flash Three Times Quickly	Internal TX Module Off and Run External TX Module

To change protocols and TX module, here are the steps:

1. Power the radio transmitter off;

2. Press and hold the BIND button while power the radio transmitter back on;

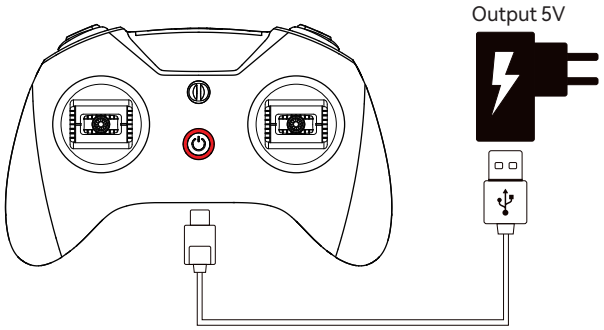
3. Then the flash color and times of the LED before buzzer alarms will change, according to the tables above.

Note: LiteRadio 3 CC2500 version 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.

6.Charging

LiteRadio 3 radio transmitter has a built-in 2000mAh battery. When the red light flashes twice and the buzzer alarms twice, indicates that radio transmitter is low battery and needs to be re-charged. Below charging method for reference:

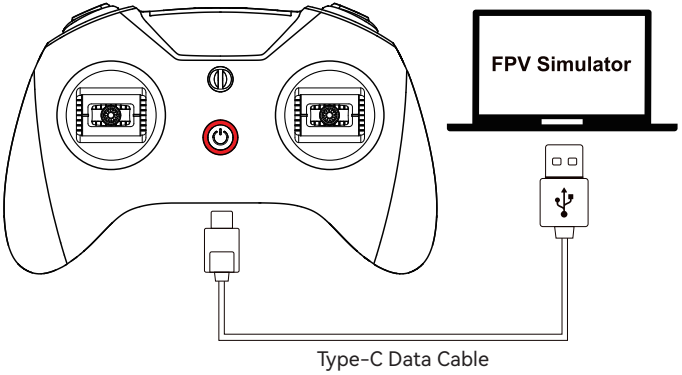
- Turn off the radio transmitter.
- Plug in radio transmitter with adapter by USB cable (5V output adapter is allowed).
- The LED ring breathes in red means charging, while in green means fully charged.



The continue working time for full charged battery is about 15 hours.

7.HID Joystick

It is the safest and quickest method to get started by using model practice simulator for starters. LiteRadio 3 radio transmitter supports most of simulators on market with comprehensive configuration.

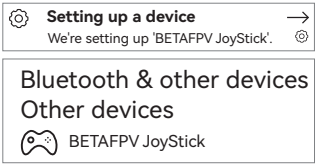


Operation steps below:

● Turn off radio transmitter.

● Connect the transmitter to computer via USB data cable. Wait for the LED ring breathes in red or green.

● Install driver from PC automatically, prompt box pops up after successful installation. Then, radio transmitter works as joystick human interface device (AKA HID device) normally.



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.

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.

● 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, we 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.

9.BETAFPV Configurator

BETAFPV Configurator is utility designed to simplify updating, configuring and tuning the radio transmitter.

Download address: https://github.com/BETAFPV/BETAFPV_Configurator/releases

How to enter the radio transmitter configuration page:

- Turn off the radio transmitter.
- Connect the transmitter to computer via USB data cable. Wait for the LED ring breathes in red or green.
- Open the BETAFPV Configurator program in your computer and switch to the configurator page for radio transmitter.
- Click the "Connect Radio Controller" button on the top right of the page.

How to recognise if your radio transmitter supports the BETAFPV Configurator?
Remove the cover on the back of the transmitter and there is a label, comes with "BETAFPV Configurator Supported".

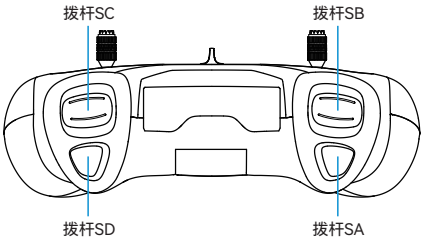
DO NOT power on the transmitter first and connect it to the PC. The USB port is invalid in this situation.

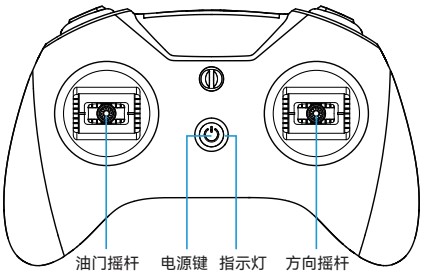
LiteRadio 3遥控器是一款模型进阶需求的遥控器。BETAFPV LiteRadio系列遥控器从2020年发布以来，成为深受广大模型爱好者喜欢的手柄遥控器之一。

LiteRadio 3作为该系列中新的成员，将带来更多更新的功能。

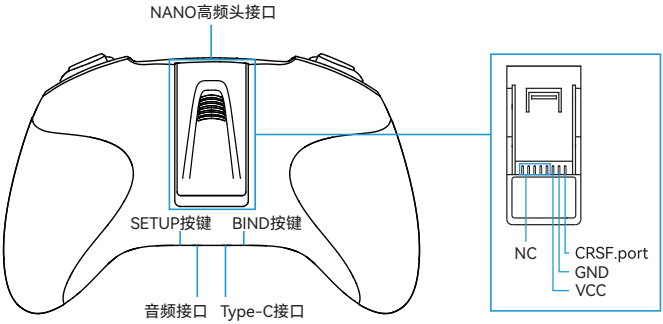
- 支持8通道；
- USB Joystick模式支持绝大部分模型模拟器；
- 支持外接Nano高频头扩展；
- 使用新版本高寿命的电位器摇杆；
- 支持BETAFPV Configurator上位机调参和升级；
- 提供ExpressLRS 2.4G协议版本，CC2500版本供客户选择；
- 内置2000mAh电池，支持USB充电。

LiteRadio 3遥控器正面如下图所示。





LiteRadio3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

- 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灯亮起，然后变成蓝色常亮，遥控器开机成功。
- 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RGB 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
红灯渐变闪烁	充电中	
绿灯渐变闪烁	充电完成	

遥控器内置了一个蜂鸣器，当它“滴滴”两声时，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，按下遥控器底部的BIND按键，遥控器将进入绑定状态，该过程为持续5秒的红灯闪烁，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. 使接收机进入对频状态，等待与遥控器对频；

3. 按一下遥控器底部的BIND按键，遥控器正面的LED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；

4. 5秒之后遥控器自动退出对频状态，LED灯变为蓝色常亮，检查遥控器是否对上接收机；如果没有，请重复上面第3步操作。

5.遥控器协议查看与切换

注意：内置协议切换只适用于CC2500版本遥控器。ExpressLRS协议遥控器，内置协议不可以切换。

关机状态下，按电源键开机，在BB响发出声音之前，可以看到LED闪烁，闪烁颜色及次数代表当前发射模块及协议版本，具体如下：

CC2500版本遥控器	
灯光颜色及闪烁次数	发射模块及协议版本
红灯闪烁一次	内置 Frsky D16 FCC（ACCST 1.X 版本）
红灯闪烁两次	内置 Frsky D16 LBT（ACCST 1.X 版本）
红灯闪烁三次	内置 Frsky D8
红灯闪烁四次	内置 Futaba S-FHSS
紫灯快速闪烁三次	内置发射模块关闭，外置发射模块开启

ExpressLRS协议遥控器	
灯光颜色及闪烁次数	发射模块及协议版本
红灯闪烁一次	内置 ELRS
紫灯快速闪烁三次	内置发射模块关闭，外置发射模块开启

如何切换协议：

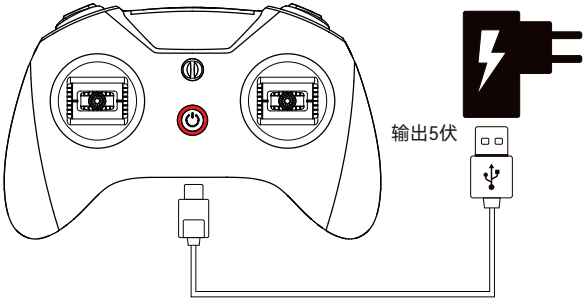
在关机状态下，先按住遥控器底部的BIND按键，同时按电源键开机，此时LED灯颜色和闪烁次数将发生变化，LED灯闪烁完毕协议即切换成功，其闪烁次数表示下次开机的协议版本。

注意：LiteRadio 3 CC2500版本只能够支持D16 ACCST 1.X版本的协议。如果使用Frsky官方接收机，且该接收机为D16 ACCST 2.X或者ACCESS协议，则无法对频连接使用。

6.低电量警报及充电

遥控器已经内置了2000mAh的电池，无需再外接电池。当红灯闪烁两次，同时蜂鸣器“滴滴”两声，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）；
- 红灯渐变闪烁，表示正在充电中；绿灯渐变闪烁，表示充电结束。



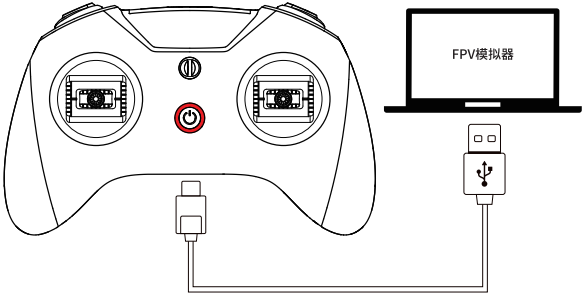
Type-C数据线

电池充满，可以连续使用 15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。

7.HID Joystick模式使用

在连接个人电脑后，LiteRadio 3遥控器可作为USB游戏手柄使用，可以用来练习模型模拟器。具体步骤如下：



Type-C数据线

- 遥控器关机；
- 使用一根USB数据线连接遥控器和PC电脑，遥控器LED变为红色或者绿色渐变闪烁；

● 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。

其他设备

若无法正常识别出遥控器，则可能是电脑没有自动安装驱动，或者识别了错误的驱动程序，需要重新安装驱动。

注意：遥控器开机状态下连接到电脑，USB口无信号输出，无法使用Joystick功能。

8.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。

● 拨动摇杆，分别移动到正上、正下、正左、正右摇杆边界，（注意不要刻意大力按压，摇杆接触到边界即可）并在边界处停留 1-2S，完成后再次按下SETUP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。

9.BETAFPV Configurator基本使用

BETAFPV Configurator可以用来对飞控或者遥控器进行参数配置，固件升级。

下载地址：https://github.com/BETAFPV/BETAFPV_Configurator/releases

如何进入遥控器参数配置页面：

- 遥控器关机；
- 用USB数据线将遥控器连接到电脑，LED灯红色或者绿色渐变闪烁，遥控器被识别为HID设备；
- 打开BETAFPV Configurator，切换到遥控器配置程序页面；
- 点击右上角“连接遥控器”按钮，进入遥控器参数设置页面。

注意：遥控器开机状态下连接到电脑，USB口无信号输出，无法使用BETAFPV Configurator。

可以进行的配置内容包括：

- 切换摇杆模式（即日本手、美国手）；
- 射频模块的配置（开启关闭内置、外置射频模块）；
- ExpressLRS系统参数配置（射频模块为ExpressLRS系统时有效）；
- 各通道的混控，微调等切换。

如何判断手里的遥控器是否支持BETAFPV Configurator上位机调参？

- 取下遥控器的Micro接口后盖，可以看到有一张铭牌，上面写着BETAFPV Configurator Supported。

注意：老版本遥控器无法使用BETAFPV Configurator上位机调参。

FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
This device may not cause harmful interference, and
This device must accept any interference received, including interference that may cause undesired operation.
Warning: Changes or modifications not expressly approved by the party responsible for compliance 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.

– This radio is designed for and classified as “General population/uncontrolled Use”, the guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons regardless of age or health.The exposure standard for wireless radio employs a unit of measurement known as the Specific Absorption Rate, or SAR, the SAR limit set 1.6W/kg.
– Body-worn operation; this device was tested for typical body-worn operations with the Front of the Transmitter kept 0mm for body worn. To maintain compliance with RF exposure requirements, use accessories that maintain a 0mm for body worn. 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 highest reported SAR value for worn on the body is 0.426 W/kg .

Instagram

Facebook

Youtube

BETAFPV