



BETAFPV LiteRadio 2 Radio Transmitter User Manual

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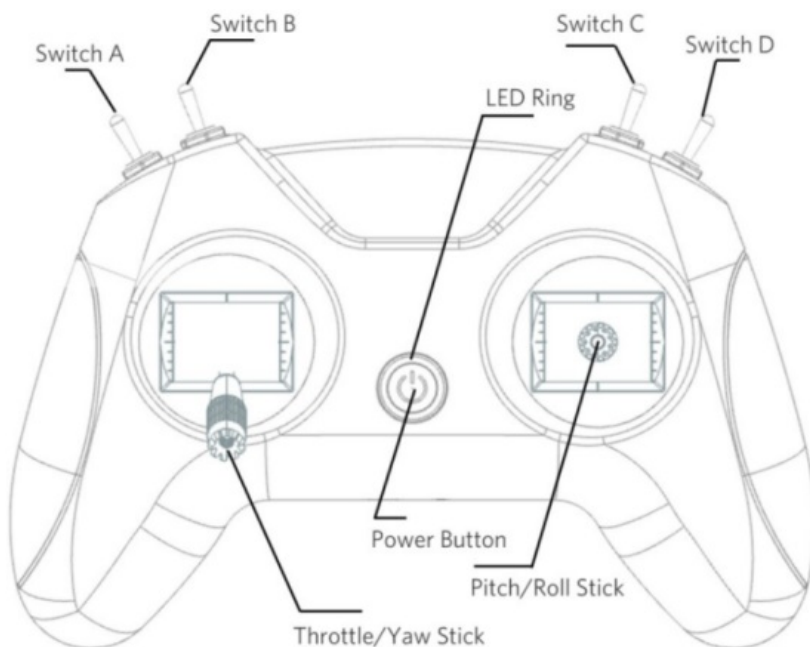


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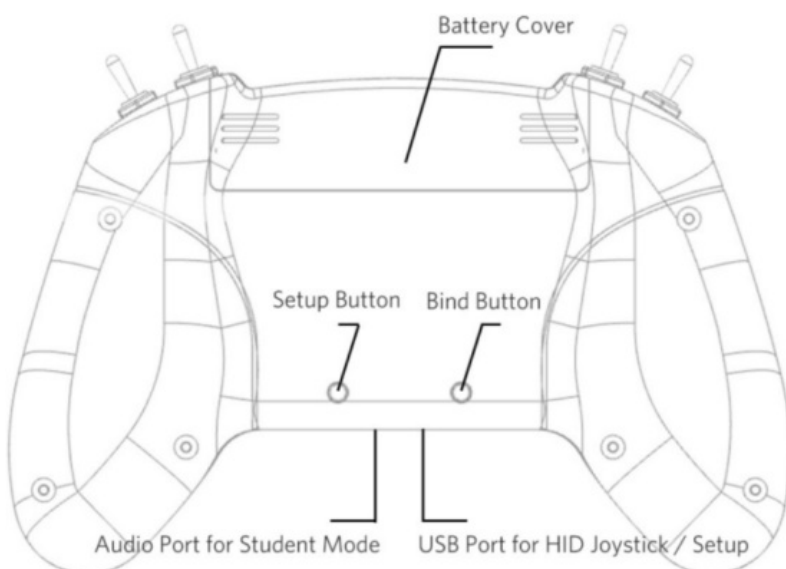
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Product Overview

- The front side of the radio.



- The back side of the radio.



Installing the Transmitter Battery

1. Remove battery cover from the back of the transmitter.
2. Connect the included 2 piece 1S batteries to the power cable, and insert the connector to the transmitter.
3. Install the battery cover.

Power the Transmitter On and Off

1. Press the power button until the transmitter shake twice, then release the power button.
The LED will be green first, and turn to blue finally.
2. Press the power button until the transmitter shake once, then it will turn off.

LED Status	Reason	Solution
Red Solid	The throttle stick or switches are not in the lowest	Lower throttle and switches to the lowest position to blue then.
Green Solid	The system is loading.	Wait for the system loading completes
Blue Flash Slow	Battery reaches the low voltage limit	Charging the batteries.

Switching Protocol

Press and hold the bind button, then press the power button until the purple light is flashing.

LED Status	Protocol Version
Flash once	D16 FCC
Flash twice	D16 EU
Flash Three Times	D8

Binding the Receiver

1. Make sure the transmitter is powered on.
2. Press the BIND button from the back of the transmitter. The transmitter will enter the binding mode and last about 10 seconds, indicated by blue and red LED flash alternately.
3. Check the receiver if binding successfully. If not, redo the process above.

Battery Alarm & Charge the Battery

The blue LED flashes slowly when the battery reaches the low voltage limit. Plug in USB for charging.

HID Joystick

The LiteRadio 2 transmitter can act as a USB Joystick when connected to a personal computer. The below steps describe how to activate this function.

1. Power on the transmitter, ensure the LED is solid blue.
2. Connect USB cable, USB connect symbol appears.
3. USB Joystick device should be available on computer.

The OpenTX manual of how to setup the joystick function.

https://opentx.gitbooks.io/manual-for-opentx-2-2/radio_joystick.html

Student Radio Mode

The trainer function is available for this LiteRadio 2 transmitter. Inserting the audio cable to the audio port, LiteRadio transmitter could be recognized as the student radio in default.

The OpenTX manual of how to setup the trainer function.

https://opentx.gitbooks.io/manual-for-opentx-2-2/radio_trainer.html

OpenTX Companion

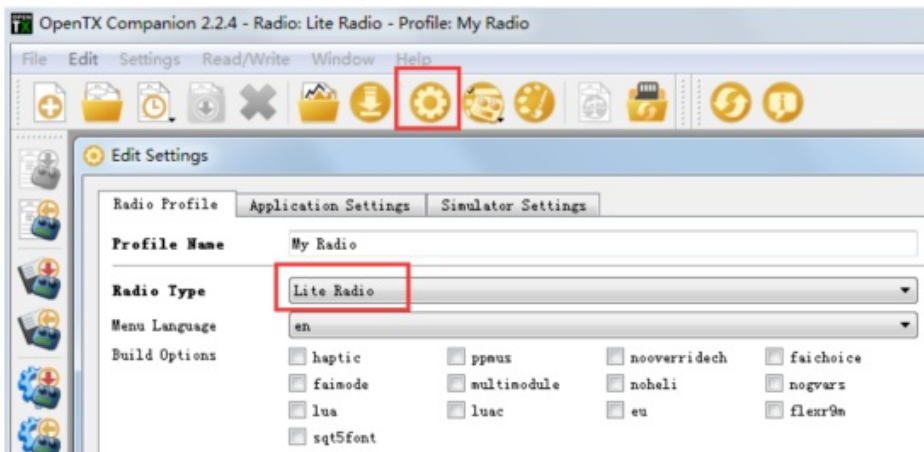
The LiteRadio 2 transmitter runs the OpenTX 2.2.4 firmware. OpenTX comes with a computer-based graphical user interface, OpenTX Companion, that runs on Windows, Mac OS and Linux.

First, please download the OpenTX Companion file and install it in your computer. **Please DO NOT use the original version.**

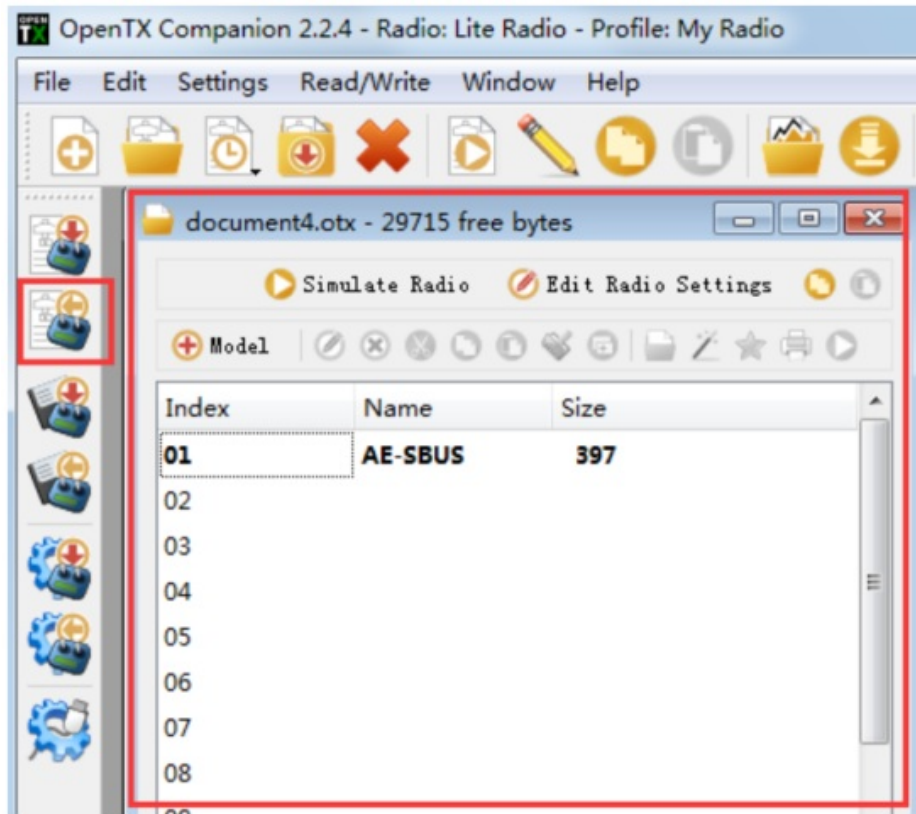
<https://github.com/BETAFPV/opentx/blob/LiteRadio/companion/companion-windows-2.2.4.exe>

How to connect the transmitter to the OpenTX Companion:

1. Press and hold the SETUP button from the back of the transmitter.
2. Press the power button on the transmitter. And then release both buttons. The LED ring will not power on .
3. Connect the transmitter to the computer via a USB cable.
4. Open the OpenTX Companion software.
5. Set the radio type to Lite Radio in the settings page. As show below. Do not forget to press the OK button at the end of this tab.



from the radio. If you get a document dialogue as show below. Congratulate, connect successfully.

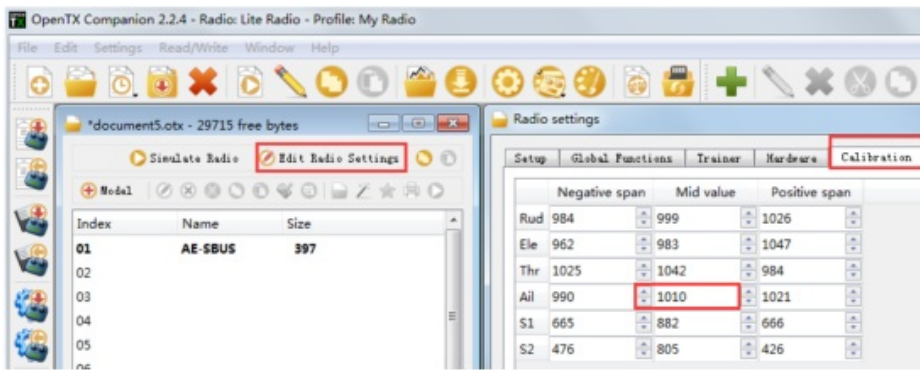


The frequent usage of the OpenTX Companion is trim the gimbal central value.

For example, You find the center value of the gimbal on the roll axis is 1525 in the Betaflight Configuration.

The central value of the gimbal in the range of 1500+-5 is normal.

1. Click the Edit Radio Settings in the dialog above. In the pop new dialog, choose the Calibration tab. As show below.

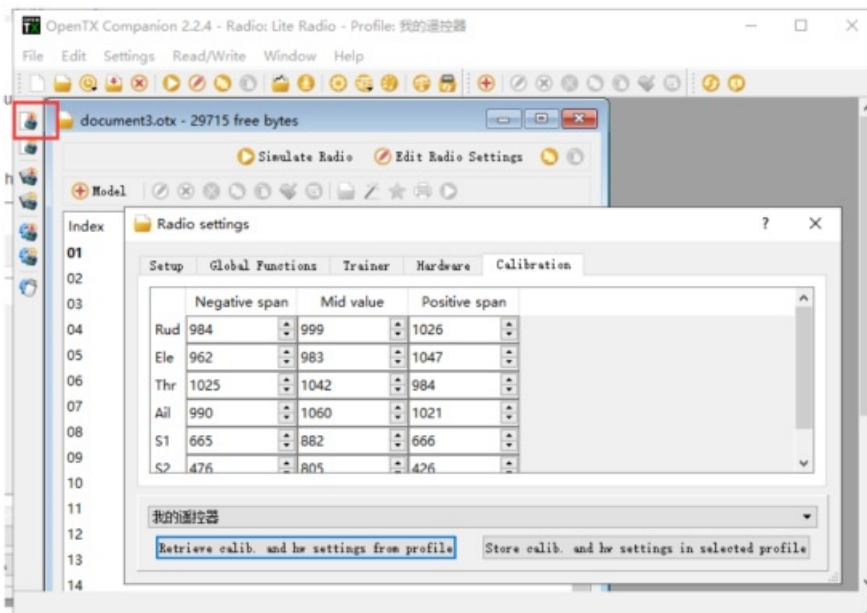
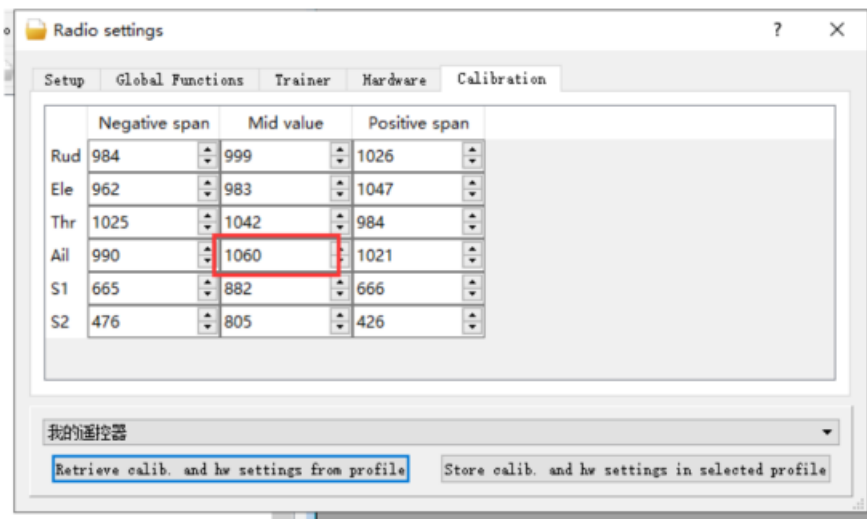


2. Calculate the calibrated Mid Value according to the equation below.

Calibrated Mid Value = Original Mid Value + (Betaflight Configuration Mid Value – 1500) * 2

Calibrated Mid Value = 1010 + (1525 – 1500)*2 = 1060

3. Update the Ail (Roll) Mid Value to 1060 and click the Write Models. button in the end of the tab.



The table above is just for the Mode

1 (right hand throttle). So if you have a Mode 2 radio transmitter (left hand throttle), if you want to calibrate the pitch value, you must change the Mid Value in Throttle row.

4. Now back to the Betaflight Configuration, confirm if the gimbal calibration works.

FAQ

Q: What is the expected range from the LiteRadio V2 transmitter?

A: The average output power is about 80mW on the transmitter. Also the valid range of the radio transmitter

depends on the receiver. This is our testing use this LiteRadio V2 transmitter.

Receiver	FPV Drones	Range	
Integrated SPI Frsky D16 receiver	Meteor65	200m	
External XM+ receiver	HX100	600m	
External AC900 receiver	75X HD	600m	

Q: Is it possible to flash the radio to a different protocol? If I want to try D8 or Bayang instead?

A: No. We should change the RF components in the transmitter for a different protocol.

Q: Is it possible to change radio to mode 1 from mode 2?

A: We think it is not easy for customers to change the mode. Need some modification. We should open the transmitter covers and exchange the gimbals first. Then we should update the configuration via the OpenTX Companion. So NOT recommend.

FCC Statement

FCC Caution

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

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.

IMPORTANT NOTE

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.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Documents / Resources

	<p>BETA FPV LiteRadio 2 Radio Transmitter [pdf] User Manual LITERADIO2, 2AT6XLITERADIO2, LiteRadio 2Radio Transmitter, LiteRadio 2, Radio Transmitter</p>
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