ELRS 接收机对频说明书卡片

中文/Chinese

iFlight ELRS 接收机说明书

接口说明：

RX：接收数据的串口
TX：输出数据的串口
5V：5V供电正极输入
GND：GND/负极

RX TX 5V GND

接线方式：

TX RX 5V GND → RX TX 5V GND
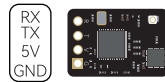
1.使用F722/F745/H743 MCU的飞控时，将ELRS接收机连接到飞控空闲的UART串口即可。
2.使用F411/F405 MCU的飞控时，需要将ELRS接收机连接到没有被反向（invert）的UART串口，（不能接SBUS、R2i、nR2、RT2否则会出现上电蓝灯常亮无法正常工作的情况）。如果飞控上只有被反向的接口(SBUS、R2i、nR2、RT2)，则需要刷写ELRS接收机固件，并打开RCVR_INVERT_TX选项，以反向接收机的CRSF输出，即可接到SBUS、R2i、nR2、RT2接口。

ELRS对频与固件更新：

ELRS存在两种对频方式：绑定短语对频与传统方式对频。

1.使用绑定短语对频：

如果你正在刷写接收机与高频头固件，只需要设置好绑定短语即可直接将接收机与高频头绑定，无需使用传统方式对频。在Custom binding phrase中设置你的绑定短语，注意！绑定短语内容必须具有唯一性，不要设置简单的绑定短语，否则在ELRS信号范围内，同样绑定短语的设备将会被绑定。
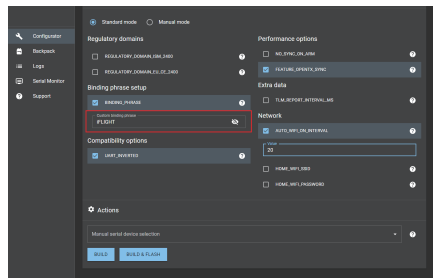
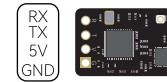具体操作流程请参考Expresslrs 官网中的快速上手教程，或iFlight官方哔哩哔哩账号视频教程。

2.使用传统方式对频：

给接收机上电，连续插拔三次，接收机进入对频状态，此时接收机 进入蓝色持续双闪,代表接收机进入对频模式，在遥控器中的ELRS LUA脚本选择BIND即可完成对频。

英文/English

iFlight ELRS User Manual

Receiver Pinout:

RX：Receiving serial port
TX：Transmitting serial port
5V：5v power supply
GND：GND/Ground

RX TX 5V GND

**Wiring Diagram:**

TX RX 5V GND → RX TX 5V GND

1. When using a F722/F745/H743 MCU connect any free UART on your flight control.
2. When using a F411/F405 MCU connect to any uninverted UART. The blue LED will be always on if connected to an inverted UART indicating an error. If you want to use inverted UARTs (SBUS, R2i, nR2, RT2) the firmware needs to be setup with the additional RCVR-INVERTTX setting in the ELRS Configurator.

ELRS Bind and Firmware updates:

There's two options to bind (link) your radio to the receiver:
Binding phrase or tranditional bind sequence

1.Binding phrase:

1. Set a custom binding phrase when flashing the firmware to receiver and radio to automatically link when powering on. No additional bind sequence needed. Make sure to setup a unique binding phrase to avoid issues with other pilots!
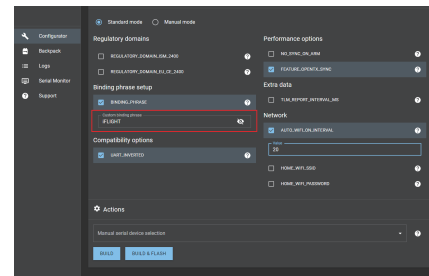
For specific information please visit the official ExpressLRS website or the video tutorial on the iFlight Bilibili.

2. Traditional Bind sequence

Power on the receiver, plug and unplug it three times in a row. The receiver will enter bind mode and the LED starts to double flash blue. Set your radio into bind mode as well or enter the ExpressLRS LUA script to activate bind mode to finish the process.

A. Appendix A

A.1. Requirement of FCC KDB 996369 D03 for module certification:

1.1 List of applicable FCC rules:

The module complies with FCC Part 15.249

1.2 Summarize the specific operational use conditions:

The module has been certified for Fix, Mobile, Portable applications. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

1.3 Limited module procedures:

The module has not its own RF shielding, which belong to Limited module Standard requires:

Clear and specific instructions describing the conditions, limitations and procedures for third-parties to use and/or integrate the module into a host device (see Comprehensive integration instructions below).

Resolve: Supply example as follows:

Installation Notes:

1) C8RX2400Module Power supply range is DC 1.8V~5.6V, when you use C8RX2400 Module design product, the power supply cannot exceed this range.

2) When connect Module to the host device, the host device must be power off.

3) Make sure the module pins correctly installed.

4) Make sure that the module does not allow users to replace or demolition.

1.4 Trace antenna designs:

Not applicable.

1.5 RF exposure considerations:

This equipment complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. The antenna(s) used for this transmitter must not be collocated or operating in conjunction with any other antenna or transmitter.

Note: the host product manuals must include a statement in order to alert the users of FCC RF exposure compliance.

1.6 Antennas:

Antenna Type	PIFA antenna
Antenna Gain	3.30 dBi(Max)

1.7 Label and compliance information

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.

Warning: Changes or modifications to this unit 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.

The system integrator must place an exterior label on the outside of the final product housing the 2A5BE-C8RXELRS Modules. Below is the content that must be included on this label.

The host product Labeling Requirements:
NOTICE: The host product must make sure that FCC labeling requirements are met. This includes clearly
visible exterior label on the outside of the final product housing that
displays the contents shown in below:

Contains FCC ID: 2A5BE-C8RXELRS

1.8 Information on test modes and additional testing requirements:
When testing host product, the host manufacture should follow FCC KDB Publication 996369 D04 Module Integration Guide for testing the host products. The host manufacturer may operate their product during the measurements. In setting up the configurations, if the pairing and call box options for testing does not work, then the host product manufacturer should coordinate with the module manufacturer for access to test mode software。

1.9 Additional testing, Part 15 Subpart B disclaimer:
The modular transmitter is only FCC authorized for the specific rule parts (FCC Part 15.249) list on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification. The final host product still requires Part 15 Subpart B compliance testing with the modular transmitter installed when contains digital circuity.

1.10 Information on test modes and additional testing requirements:
When testing host product, the host manufacture should follow FCC KDB Publication 996369 D04 Module Integration Guide for testing the host products. The host manufacturer may operate their product during the measurements.