ELRS 1W

2.4G Long-range Module

User Manual

Contents

1. Specifications

Packet refresh rate: 50Hz/100Hz Full/150Hz/250Hz/333Hz Full/500Hz/D250/D500/F500/F1000

RF output power: 25mw/50mw/100mw/250mw/500mw/1W

Frequency bands: 2.4GHz
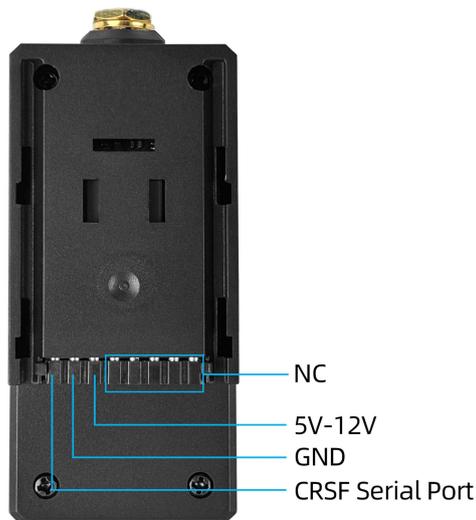
Input voltage: 5~12.6V

USB Port: Type-C

Fan: Built-in high-efficiency cooling fan

Antenna: 2.4G Rod Antenna

Compatible transmitter: compatible with radio transmitter which has the Nano (Lite) module bay
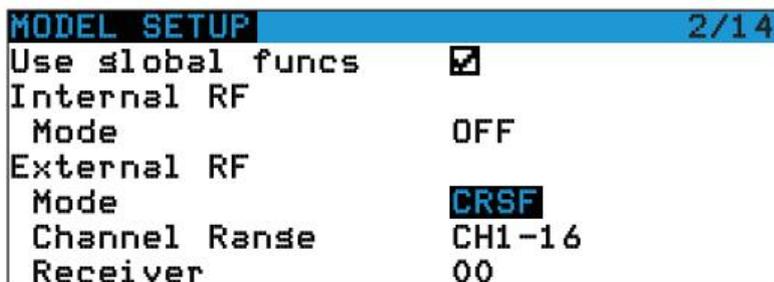
2. Basic Configuration

ATA ELRS 1W long-range module supports the Crossfire serial protocol (CRSF protocol), so please make sure your transmitter support the CRSF serial protocol. We use the transmitter with OpenTX system and RadioLink T16D to show how to setup the CRSF protocol and LUA script.
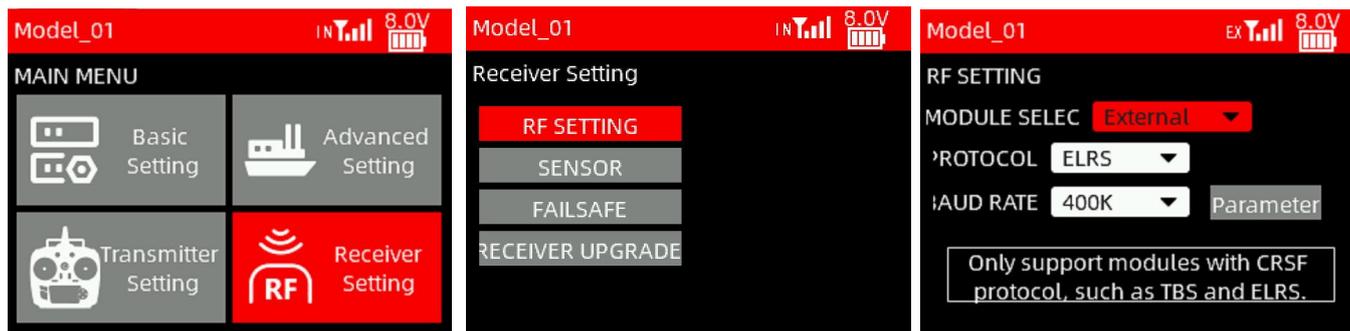

NC
5V-12V
GND
CRSF Serial Port

Note：Please assemble the antenna before power on. Otherwise, the PA chip in the module will be damaged.

3. CRSF Protocol

In OpenTX system, enter into MODEL SELECTION--MODEL SETUP. Turn off the "Internal RF". E enable "External RF" and select "CRSF" as the protocol, as shown below:

When T16D transmitter is used, mount the module on T16D. Enter Receiver Setting -> RF Protocol. Set the module to External, and select the corresponding protocol and baud rate, as shown below:

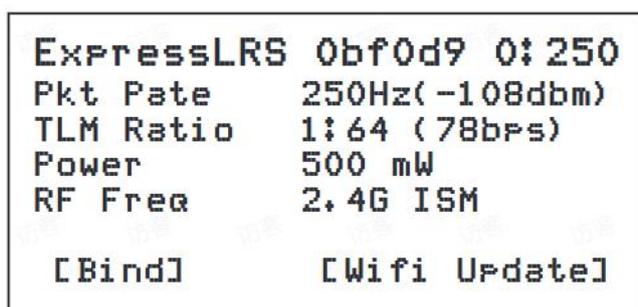Here is the tutorial to show how to connect ELRS module to T16D:

https://www.youtube.com/watch?v=64idhfqYJLA

4. LUA Script

If you want to modify the parameters such as power, refresh rate etc, the LUA script can be used to control the module.
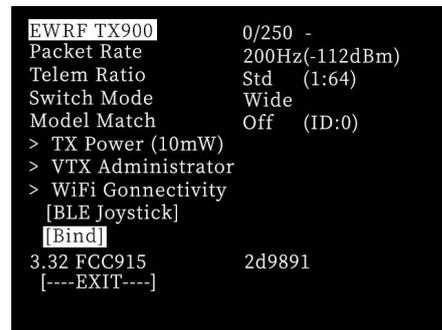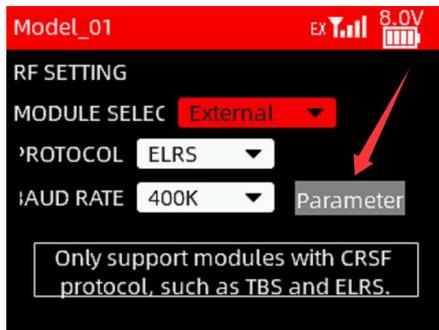
The steps to modify the LUA script for OpenTX:

• Save the ELRS.lua script files onto the radio transmitter's SD Card in the Scripts/Tools folder;

• Long press the "SYS" button (for RadioMaster T16 or similar radios) or the "Menu" button (for Frsky Taranis X9D or similar radios) to access the SD-HC CARD Menu where you can find ELRS script ready to run;

• Below image show the LUA script runs successfully:

The steps to modify the LUA script for RadioLink T16D transmitter:

Enter Receiver Setting -> RF Protocol. Set the module to External. Click Parameter to enter the script, as shown below:

With the LUA script, pilot could check and setup some configurations of the module. Here is the introduction of these parameters:

Packet Rate: Data packet frequency. The higher the frequency, the shorter the interval between data packets sent by the module, and the faster the receiver response

Telem Ratio: Receiver telemetry ratio

Switch Mode: Switching mode

Model Match: Model matching, off by default

TX Power: RF TX module output power

VTX Administrator: Set the VTX parameter of FC and goggles which have bound with RF TX module

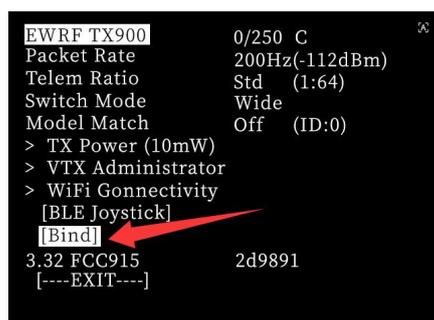WIFI Connectivity: Enables WIFI function of RF TX module or receiver

BLE Joystick: Open the bluetooth function

Bind: Set the RF TX module into binding status

Exit: Return or exit

5. Bind

(1) Power on ELRS receiver three times consecutively, with a power-up interval of less than 1.5 seconds.

(2) The indicator light of the receiver will flash twice, indicating it has entered the binding status.

(3) Press the BIND button on the transmitter, as shown below.

(4) The indicator light of the receiver will turn solid, indicating successful binding.

(5) After successful binding, the program will record the paired remote control device. The next power-on will restore the last binding record. No need to bind them every time the receiver is powered on.

6. Firmware Update

Please refer to the below tutorial to update the firmware:

https://www.youtube.com/watch?v=t1sRgJEYnLk

Technical Support Here

Contact RadioLink RL via Fcebook Messenger	User Manual	FAQ	Tutorials

If the above communication cannot solve your problem, you can also send emails to our technical support: after_service@radiolink.com.cn This content is subject to change. Please download the latest version from https://www.radiolink.com.cn/elrs1w_manual