

Radiolink R8FM

Radiolink R8FM 8 Channels 2.4GHz Micro RC Receiver User Manual

MODEL: R8FM

Brand: Radiolink

1. Introduction

The Radiolink R8FM is an 8-channel 2.4GHz micro RC receiver designed for mini FPV racing drones, quads, and aircraft. It features SBUS/PPM signal output and utilizes frequency hopping spread spectrum (FHSS) pseudo-random algorithm for strong anti-interference capabilities. Its compact size and lightweight design make it ideal for small-scale models.

- **Strong Anti-interference:** Employs FHSS technology for reliable signal reception.
- **8 Channels:** Provides standard SBUS/PPM signal output with a high resolution ratio of 4096 for fast response.
- **Long Range Control:** Offers stable remote control distance up to 1.2 miles in the air (actual distance may vary with environment).
- **Super Mini Size:** Weighs only 0.09oz (2.5 grams) and measures 0.78*0.59*0.2 inches, suitable for drones like 130, 120, 110.
- **Easy to Bind and Safe Protection:** Binds in approximately 1 second to T8S/T8FB transmitters. Includes voltage protection software.



Figure 1.1: Radiolink R8FM Micro RC Receiver. This image shows the compact design of the R8FM receiver with its antenna and pin connectors.

2. Setup and Binding

2.1 Components Overview

Familiarize yourself with the components of the R8FM receiver before setup.

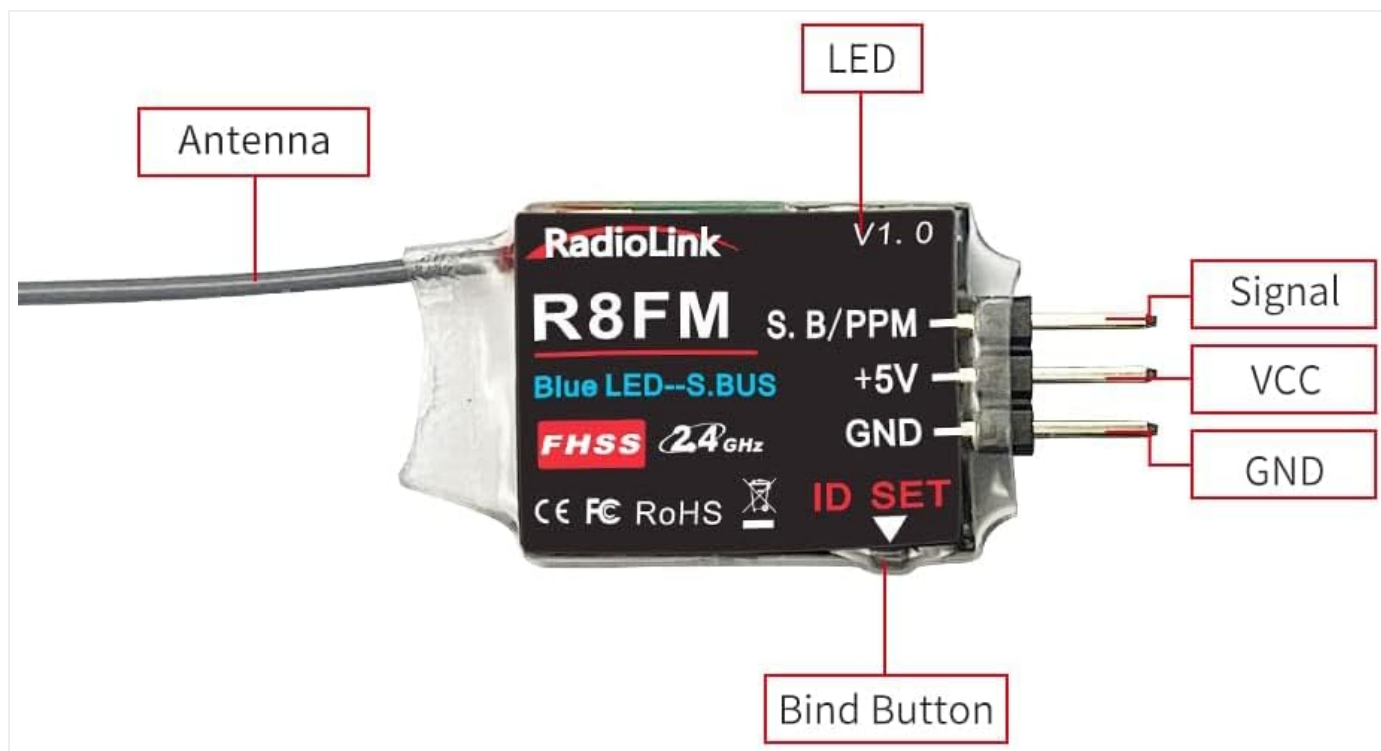


Figure 2.1: Labeled diagram of the R8FM receiver. This diagram points out the antenna, LED indicator, bind button, signal pin, VCC (+5V) pin, and GND (Ground) pin.

2.2 Compatible Transmitters

The R8FM receiver is compatible with various Radiolink transmitters, including T8FB, T8S, RC8X, RC6GS V3, and RC4GS V3.

Compatible Radiolink Transmitters



Figure 2.2: Image showing the Radiolink R8FM receiver with compatible T8S and T8FB transmitters, illustrating the connection concept.

2.3 Binding Procedure

Follow these steps to bind your R8FM receiver to a compatible Radiolink transmitter:

1. Ensure your transmitter is powered on and in binding mode (refer to your transmitter's manual for specific instructions).
2. Connect the R8FM receiver to a power source (typically +5V from your flight controller or an external BEC).
3. Press and hold the **ID SET** button on the R8FM receiver.
4. While holding the button, power on the receiver. The LED on the receiver should start flashing rapidly, indicating it is in binding mode.
5. Release the ID SET button.
6. Once the binding is successful, the LED on the receiver will turn solid blue (for SBUS) or solid red (for PPM), indicating a stable connection.

The binding process typically takes about 1 second.

3. Operating Modes and Signal Output

3.1 SBUS/PPM Signal Switching

The R8FM receiver supports both SBUS and PPM signal outputs. You can switch between these modes by quickly pressing the **ID SET** button twice after the receiver has successfully bound.

- **Red LED:** Indicates PPM signal output (8 Channels Working).
- **Purple LED:** Indicates SBUS signal output (8 Channels Working).

PPM/SBUS Signal Working Modes



Red-PPM (8 Channels Working)



Purple-SBUS (8 Channels Working)

**quick press bind ID twice to switch signal*

Figure 3.1: Visual representation of the R8FM receiver's LED indicators for PPM (Red) and SBUS (Purple) signal modes.

3.2 Integration with Flight Controllers

The R8FM receiver needs to be equipped with a flight controller that supports SBUS or PPM input. Ensure your flight

controller is configured correctly for the chosen signal type.



Figure 3.2: Diagram showing the R8FM receiver's compatibility with various universal flight controllers such as Pixhawk, Mini Pix, ByMe-A, ByMe-D, Turbo Pix, F4, and F3.

4. Maintenance

To ensure the longevity and optimal performance of your Radiolink R8FM receiver, follow these general maintenance guidelines:

- **Keep Dry:** Avoid exposing the receiver to moisture or humidity, as this can damage internal electronic components.
- **Clean Gently:** If cleaning is necessary, use a soft, dry cloth. Do not use liquid cleaners or solvents.
- **Protect from Impact:** While durable, avoid dropping the receiver or subjecting it to strong impacts.
- **Proper Storage:** Store the receiver in a cool, dry place away from direct sunlight and extreme temperatures when not in use.
- **Antenna Care:** Ensure the antenna is not bent sharply or damaged, as this can affect signal reception range.

5. Troubleshooting

If you encounter issues with your R8FM receiver, consider the following common problems and solutions:

Problem	Possible Cause	Solution
Receiver LED not lighting up.	No power or incorrect power connection.	Check power supply (+5V) and ensure correct polarity.
Receiver LED flashing rapidly, not binding.	Transmitter not in binding mode or too far away.	Ensure transmitter is in binding mode and bring receiver closer to transmitter. Re-attempt binding.
No control response after binding.	Incorrect signal output (SBUS/PPM) or flight controller configuration.	Double-check receiver LED color (Red for PPM, Purple for SBUS) and ensure flight controller is set to match. Verify wiring to flight controller.
Reduced range or intermittent signal.	Antenna damage or interference.	Inspect antenna for damage. Ensure antenna is not shielded by carbon fiber or metal. Avoid operating near strong interference sources.

For further assistance, please refer to the official Radiolink support resources or contact their customer service.

6. Specifications

Key technical specifications for the Radiolink R8FM receiver:

Feature	Detail
Brand	Radiolink
Model Name	R8FM
Channels	8 Channels
Signal Output	SBUS/PPM
Connectivity Technology	2.4GHz FHSS
Maximum Range	Up to 1.2 Miles (in air)
Item Weight	2.5 Grams (0.088 ounces)
Product Dimensions (L x W x H)	1.18" x 0.69" x 0.1"
Color	Black
Material	Plastic
Included Components	R8FM receiver



Figure 6.1: Diagram illustrating the dimensions of the Radiolink R8FM receiver: 0.78 inches length, 0.59 inches width, and 0.2 inches height.

7. Warranty and Support

Radiolink is committed to providing high-quality products and customer support. For any inquiries or issues regarding your R8FM receiver, please utilize the following resources:

- **Online Support:** You can find quick support by contacting Radiolink's after-sales service.
- **Official Store:** Visit the [Radiolink Direct store on Amazon](#) for product information and support.
- **User Manual (PDF):** A comprehensive user manual is available in PDF format for detailed instructions. You can access it [here](#).
- **FAQs and Troubleshooting:** Full user manuals and FAQ troubleshooting files are often available on the product's Amazon sales page.

Radiolink Electronic Co., Ltd. was established in 2003 and specializes in researching, developing, and producing RC transmitters, flight controllers, receivers, and other related components. They utilize information technology manufacturing and automatic instrument testing to ensure product quality.