Radiolink R8EF

Radiolink R8EF 8-Channel 2.4GHz RC Receiver Instruction Manual

Model: R8EF

1. Introduction

The Radiolink R8EF is an 8-channel 2.4GHz RC receiver designed for various remote-controlled models, including airplanes, trucks, robots, and helicopters. It supports SBUS, PPM, and PWM signal outputs, offering versatility and compatibility with a range of Radiolink transmitters. This manual provides essential information for the proper setup, operation, and maintenance of your R8EF receiver.

Image 1.1: Overview of the Radiolink R8EF receiver.

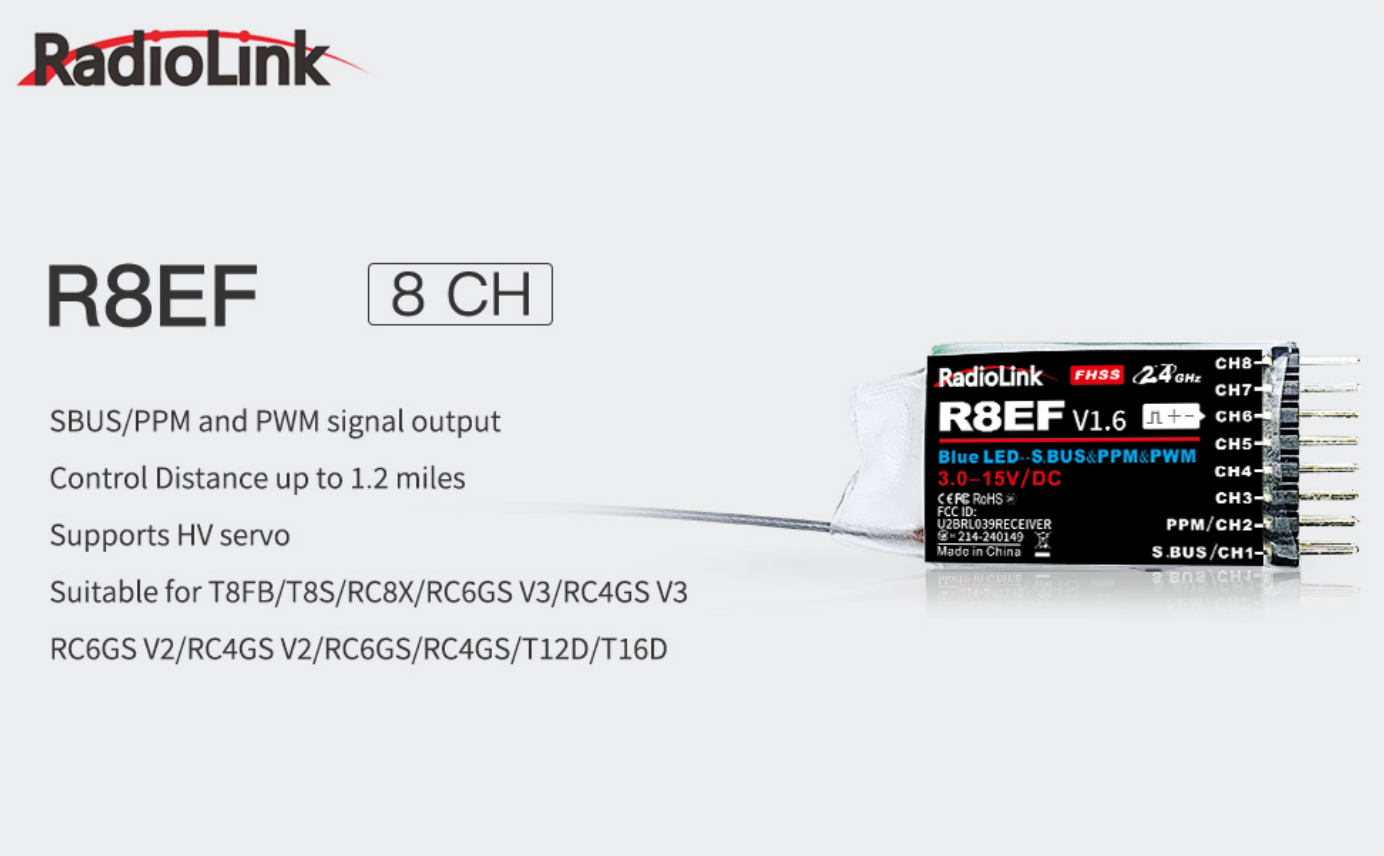


Image 1.2: Summary of key features and compatibility for the Radiolink R8EF receiver.

2. Key Features

- **Excellent Anti-interference:** Utilizes a pseudo-random FHSS algorithm for robust anti-interference capabilities.
- **Long Control Range:** Achieves a control range of up to 1.2 miles (2000 meters).
- **8 Channels and 3 Signals Support:** Provides standard SBUS, PPM, and PWM signal outputs, suitable for most aircraft.
- **High Resolution:** Features a high-resolution ratio of 4096 for precise control.
- **Fast Response:** Ensures fast response across all channels.
- **Press to Bind:** Simplifies the binding process with a single button press, eliminating the need for a traditional bind plug or complex radio setup.
- **Anti-polarity Protection:** Incorporates reverse polarity protection to prevent damage from incorrect power connections.
- **Wide Input Voltage Range:** Supports 3.0-15V DC input voltage, compatible with high-voltage servos.
- **Wide Compatibility:** Works with Radiolink transmitters including T12D, T16D, T8S, T8FB, RC4GS, RC4GS V2, RC4GS V3, RC6GS, RC6GS V2, RC6GS V3, and RC8X.

3. Setup

3.1 Binding Process

The R8EF receiver features a simplified binding process:

1. Power on your Radiolink transmitter.
2. Power on the R8EF receiver.
3. Locate the bind button on the side of the R8EF receiver.
4. Press and hold the bind button for approximately 1 second. The LED indicator on the receiver will flash rapidly,

indicating it is in binding mode.

5. Once the LED on the receiver turns solid blue, the binding process is complete.

Note: If using a multi-protocol radio like the TX16S, you may need to tap the bind button twice within one second to switch the R8EF into PWM mode for proper operation, indicated by a solid red LED. The default mode might be purple (combined red and blue).

Image 3.1: Location of the bind button on the R8EF receiver.

3.2 Connection Diagrams

The R8EF receiver supports PWM, PPM, and SBUS signal outputs. Ensure correct wiring based on your model's requirements.

3.2.1 PWM Output Connection

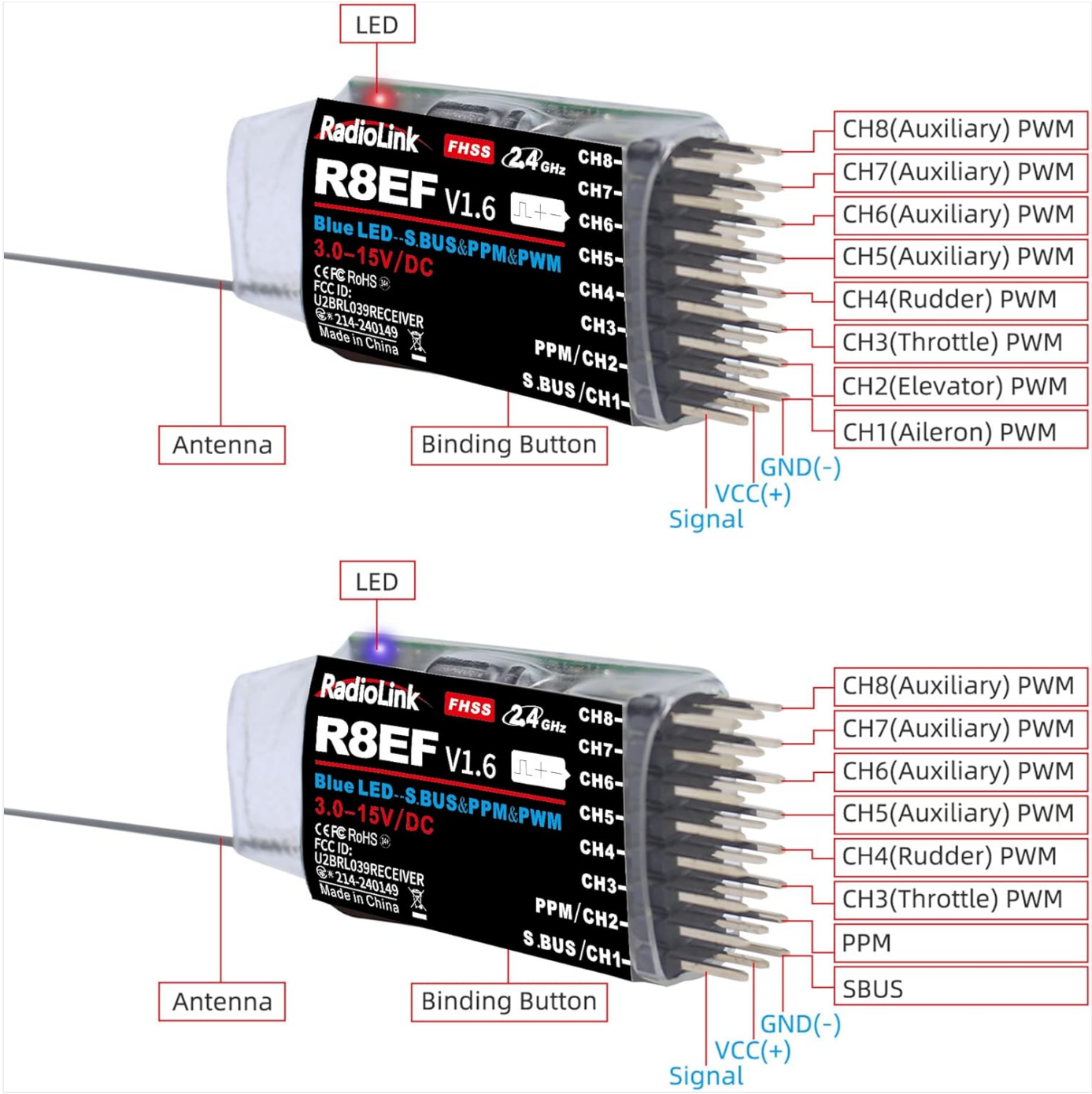


Image 3.2: PWM output connection diagram for the R8EF receiver. Channels 1-8 provide individual PWM signals for Aileron, Elevator, Throttle, Rudder, and Auxiliary functions. Each channel port includes Signal, VCC(+), and GND(-) pins.

3.2.2 SBUS/PPM Output Connection

Receivers Comparation

Model	R8EF	R8XM	R8FM	R8SM
Picture				
Channels	8	8	8	8
Voltage Telemetry	No	Built-in	No	No
Signal Output	PWM, PPM/SBUS	PPM/SBUS		
RSSI Output	×	√	√	√
Control Range (Meters)	2000	4000	2000	2000
Demensions (inch)	1.63*0.85*0.45	0.87*0.67	1.18*0.69	0.7*0.51
Weight	0.25oz	0.14oz	0.09oz	0.07oz
Supports Models	Fixed-Wing, Delta Wing, Glider, Multirotor, RC Car, Boat, and Robot.	Fixed-Wing, Delta Wing, Glider, and Multirotor.	Fixed-Wing, Delta Wing, Glider, and Multirotor.	Fixed-Wing, Delta Wing, Glider, and Multirotor.

Image 3.3: SBUS/PPM output connection diagram for the R8EF receiver. SBUS is typically on Channel 1, and PPM on Channel 2. Channels 3-8 provide individual PWM signals. Each channel port includes Signal, VCC(+), and GND(-) pins.

4. Operating Instructions

After successful binding and correct wiring, the R8EF receiver will establish a stable connection with your compatible Radiolink transmitter. The receiver's primary function is to translate control signals from the transmitter into commands for your model's servos and other components.

- Ensure your transmitter is powered on before powering on the receiver to prevent unintended control inputs.
- Verify all control surfaces and functions respond correctly to transmitter inputs before operating your model.
- The blue LED on the receiver indicates a successful connection. If the LED is flashing or off, re-check power and binding.

4.1 Compatible Transmitters

The R8EF receiver is compatible with the following Radiolink transmitters:

- Radiolink T12D
- Radiolink T16D
- Radiolink T8S
- Radiolink T8FB
- Radiolink RC4GS, RC4GS V2, RC4GS V3
- Radiolink RC6GS, RC6GS V2, RC6GS V3
- Radiolink RC8X

Image 4.1: The R8EF receiver is compatible with various Radiolink transmitters, including the T8S and T8FB models shown.

5. Maintenance

Proper maintenance ensures the longevity and reliable performance of your R8EF receiver:

- **Keep Clean:** Regularly clean the receiver and its connections to prevent dust and debris buildup. Use a soft, dry cloth.
- **Protect from Moisture:** Avoid exposing the receiver to water or high humidity. If used in damp conditions, ensure it is properly protected.
- **Secure Mounting:** Mount the receiver securely within your model to prevent vibrations from loosening connections or damaging components.
- **Antenna Placement:** Ensure the antenna is positioned correctly and not obstructed by carbon fiber or metal parts, which can reduce range. Avoid sharp bends in the antenna wire.
- **Power Supply:** Always use a stable power source within the specified voltage range (3.0-15V DC).
- **Inspect Connections:** Periodically check all wiring and connectors for signs of wear, corrosion, or loose connections.

6. Troubleshooting

If you encounter issues with your R8EF receiver, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Receiver LED not solid blue after binding attempt.	Binding failed; incorrect mode; power issue.	• Ensure transmitter is on and in binding mode (if applicable). • Re-attempt the binding process, holding the bind button for 1 second. • For multi-protocol radios (e.g., TX16S), try tapping the bind button **twice** within one second to switch to PWM mode (solid red LED). • Check receiver power supply (3.0-15V DC).
No control response from model.	No binding; incorrect wiring; power loss; incompatible transmitter.	• Confirm successful binding (solid blue LED). • Verify all servo and ESC connections are correct and secure. • Check power supply to the receiver and servos. • Ensure your transmitter is a compatible Radiolink model.
Reduced control range or intermittent signal.	Antenna obstruction/damage; environmental interference; low transmitter battery.	• Ensure the receiver antenna is clear of carbon fiber, metal, or other signal-blocking materials. • Inspect the antenna for damage. • Avoid operating near strong sources of 2.4GHz interference (e.g., Wi-Fi routers, other RC systems). • Check transmitter battery level.
Servos behave erratically (go berserk).	Incorrect signal mode (e.g., SBUS/PPM vs. PWM); binding issue.	• Re-check the binding process, especially if using a multi-protocol radio, to ensure the correct output mode (PWM, SBUS, or PPM) is selected for your setup. • Verify wiring matches the selected signal output mode.

7. Specifications

Feature	Detail
Channels	8 Channels
Frequency	2.4GHz FHSS
Signal Output	SBUS, PPM, PWM
Control Range	Up to 2000 meters (1.2 miles) in optimal conditions
Input Voltage	3.0-15V DC
Resolution	4096
Dimensions (L x W x H)	1.91 x 0.83 x 0.43 inches (48.5 x 21 x 11 mm)
Weight	0.247 ounces (7 grams)
Compatible Transmitters	T12D, T16D, T8S, T8FB, RC4GS (V2/V3), RC6GS (V2/V3), RC8X
Applicable Models	Rotary Wing, Fixed Wing, Glider, Multicopter, RC lawn mower, Box Bot, Car, Boat, Robot

Image 7.1: Physical dimensions of the Radiolink R8EF receiver.

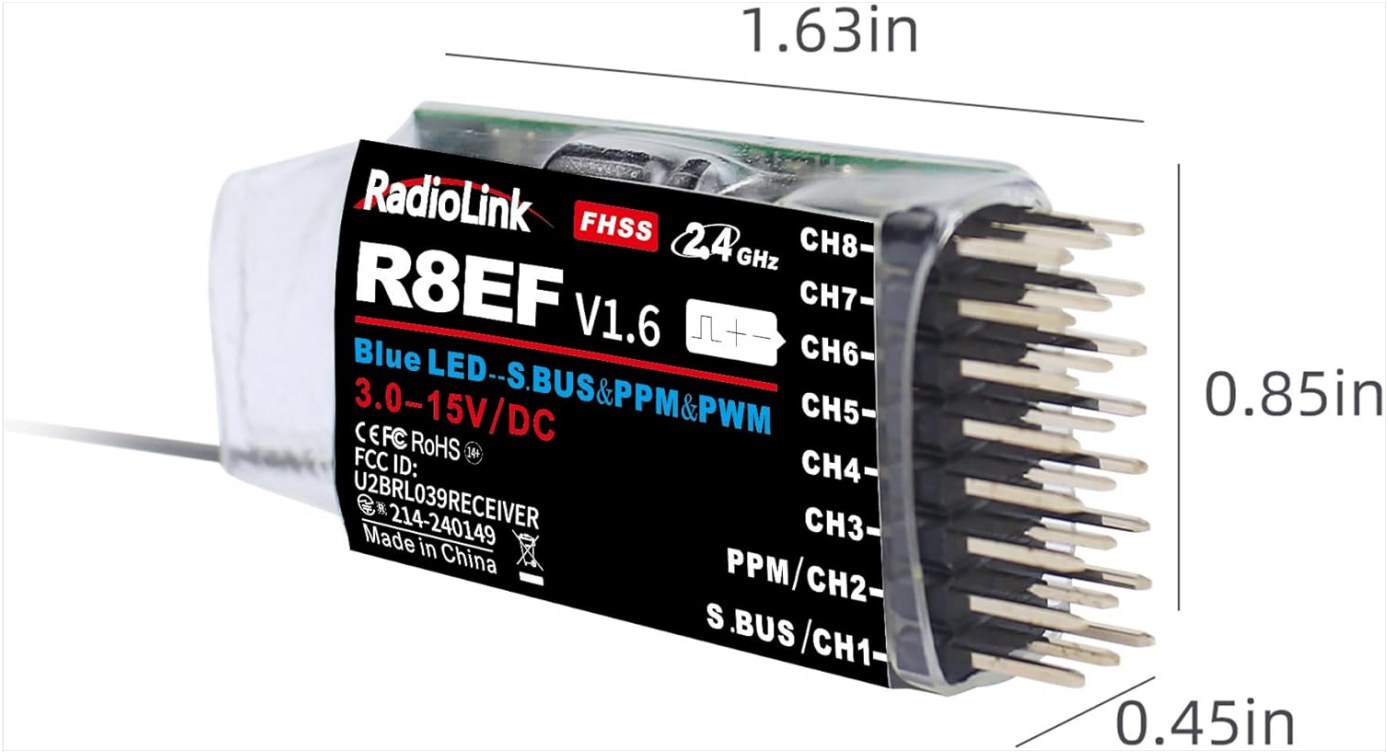


Image 7.2: Comparison table of Radiolink receivers, highlighting R8EF specifications against other models.

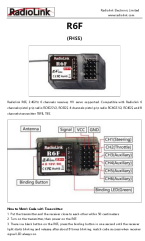
8. Support and Warranty

For technical support or warranty inquiries, please contact Radiolink customer service. You can find support information on the official Radiolink website or through your point of purchase. Radiolink provides comprehensive user manuals and FAQ troubleshooting files on their product pages.

Radiolink is committed to providing high-quality products and responsive after-sales service.

Related Documents - R8EF

	RadioLink R8FG V2.1 Instruction Manual: 8-Channel Gyro Receiver Comprehensive instruction manual for the RadioLink R8FG V2.1 8-channel receiver. Learn about setup, binding, telemetry, gyro functions, and specifications for this splash-proof, high-voltage servo compatible RC receiver.
	RadioLink R7FG 7-Channel Receiver with Gyro: Instruction Manual Comprehensive instruction manual for the RadioLink R7FG 7-channel dual antenna receiver, detailing setup, telemetry, gyro functions, working modes, specifications, and antenna installation.

	[RadioLink R7FG 7-Channel Receiver with Integrated Gyro Instruction Manual] Comprehensive instruction manual for the RadioLink R7FG 2.4GHz 7-channel receiver, detailing features like two-way transmission, PWM/PPM/SBUS signal support, integrated gyro, telemetry functions, binding procedures, working modes, and installation guidelines.
	[RadioLink R6F 2.4GHz 6-Channel HV Servo RC Receiver] Overview of the RadioLink R6F, a 2.4GHz 6-channel HV servo-compatible RC receiver. Includes specifications, installation guidance, and transmitter matching instructions for RC cars and boats.
	[RadioLink R4FGM FHSS 4-Channel Receiver User Manual] User manual for the RadioLink R4FGM 2.4GHz FHSS 4-channel receiver with built-in drift car gyro. Covers setup, binding, modes, gyro functions, technical specifications, and installation.
	[RadioLink RC4GS V3 Instruction Manual: Digital 5-Channel RC System for Cars, Boats, and Robots] This comprehensive instruction manual guides users through the setup, features, and operation of the RadioLink RC4GS V3, a 5-channel 2.4GHz digital proportional RC system designed for RC cars, boats, and robots. Learn about safety precautions, system functions, and advanced settings for optimal performance.