

RADIOMASTER R86C V2

Radiomaster R86C V2 Receiver User Manual

MODEL: R86C V2

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of your Radiomaster R86C V2 6-channel SFHSS Compatible PWM Sbus Receiver. Please read this manual thoroughly before using the product to ensure safe and efficient operation. This receiver is designed for use with compatible D8, D16, and SFHSS protocol transmitters, specifically optimized for MPM radio systems.

2. Safety Information

Always prioritize safety when operating remote-controlled models. Failure to follow safety guidelines can result in injury or damage.

- Ensure all connections are secure and correct before powering on your model.
- Verify proper binding and control surface response before each flight or operation.
- Operate your model in open areas, away from people, animals, and obstacles.
- Do not operate the receiver if it has been damaged or exposed to moisture.
- Keep the receiver away from strong electromagnetic interference sources.
- The recommended age for users is 18 years and up.

3. Product Overview

The Radiomaster R86C V2 is a compact and versatile 6-channel receiver designed for remote control applications. It supports both PWM and SBUS output formats, offering flexibility for various setups. The receiver is compatible with D8, D16, and SFHSS signal formats, making it suitable for a wide range of transmitters, particularly those utilizing the Multi-Protocol Module (MPM).



Image 3.1: Front view of the Radiomaster R86C V2 receiver, showing the KEY button, LED indicator, 2.4GHz V2 label, and channel outputs (S.BUS, CH6-CH1).



Image 3.2: The Radiomaster R86C V2 receiver with its dual antennas extended, illustrating the full setup for optimal signal reception.

Key Features:

- 6 PWM Channels, 8 SBUS Channels
- D8, D16, and SFHSS Compatible Signal Formats
- PWM / SBUS Output Formats

- Wide Power Input Range: 4.5-8.4V (PWM), 4.5-6.6V (SBUS)
- Compact Size and Lightweight Design
- Over 1km Range

4. Specifications

Specification	Value
Channels	6 (PWM), 8 (SBUS)
Frequency Range	2400-2483.5Mhz
Power Input Range	4.5-8.4V (PWM), 4.5-6.6V (SBUS)
Signal Format	D8, D16, SFHSS Compatible
Output Format	PWM / SBUS
Range	More than 1km
Antenna Length	15cm
Dimensions	45 x 21.2 x 12.7mm
Weight	8 grams

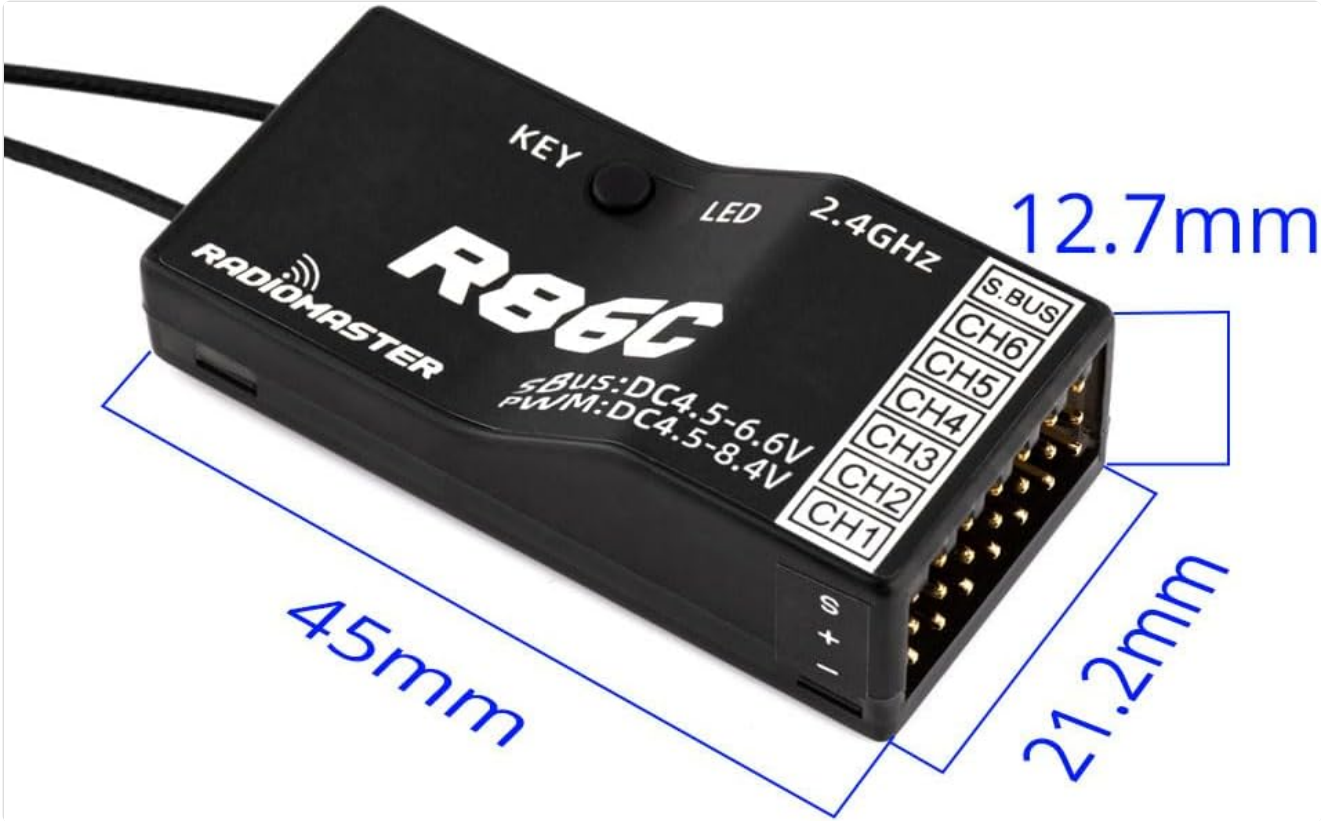


Image 4.1: Dimensions of the Radiomaster R86C V2 receiver, indicating its length (45mm), width (21.2mm), and height (12.7mm).



Image 4.2: The Radiomaster R86C V2 receiver placed on a digital scale, displaying a weight of 8.00 grams.

5. Setup

5.1. Connections

Connect the receiver to your flight controller or servos according to your model's requirements. The R86C V2 offers both PWM and SBUS outputs.

- **PWM Channels (CH1-CH6):** Connect individual servos or ESCs directly to the corresponding PWM pins.
- **SBUS Output:** Connect to the SBUS input of your flight controller for a single-wire connection, providing up to 8 channels. Note the SBUS power input range is 4.5-6.6V.
- **Power Input:** Ensure the receiver receives power within the specified range (4.5-8.4V for PWM, 4.5-6.6V for SBUS).



Image 5.1: Close-up view of the receiver's pin headers, showing the 'S', '+', and '-' labels for signal, positive power, and negative power connections, respectively.

5.2. Binding Procedure

To establish communication between your transmitter and the R86C V2 receiver, a binding process is required. The specific steps may vary slightly depending on your transmitter's firmware and protocol (D8, D16, or SFHSS).

1. **Power On Receiver in Bind Mode:** Press and hold the **KEY** button on the receiver while connecting power. The LED on the receiver should flash rapidly, indicating it is in bind mode.
2. **Activate Bind Mode on Transmitter:** On your compatible transmitter (e.g., Radiomaster with MPM), navigate to the model setup menu and select the appropriate protocol (D8, D16, or SFHSS). Initiate the binding process from the transmitter.
3. **Confirm Binding:** Once binding is successful, the LED on the receiver will turn solid green. If the LED continues to flash, repeat the binding process.
4. **Test Controls:** After successful binding, power cycle both the transmitter and receiver. Verify that all control surfaces and functions respond correctly to transmitter inputs before operating your model.

6. Operating

Once the receiver is successfully bound and installed, ensure your transmitter is powered on before powering your model. The receiver will automatically connect to the bound transmitter. Always perform a range check and verify all control functions are working correctly before each use.

- **Signal Loss Failsafe:** Configure failsafe settings on your transmitter to ensure a safe response (e.g., throttle cut, neutral control surfaces) in case of signal loss.
- **Antenna Placement:** Ensure antennas are positioned at a 90-degree angle to each other and away from carbon fiber or metal parts to maximize signal reception and range.

7. Maintenance

Proper maintenance ensures the longevity and reliable performance of your receiver.

- **Keep Clean:** Regularly inspect the receiver for dirt, dust, or debris. Clean gently with a soft, dry brush or compressed air.
- **Avoid Moisture:** Protect the receiver from water and excessive humidity. If exposed to moisture, allow it to dry completely before use.
- **Inspect Connections:** Periodically check all wire connections for signs of wear, corrosion, or looseness.
- **Physical Damage:** Avoid dropping or subjecting the receiver to strong impacts. Inspect for cracks or damage to the casing or antennas.

8. Troubleshooting

If you encounter issues with your Radiomaster R86C V2 receiver, refer to the following table for common problems and solutions.

Problem	Possible Cause	Solution
Receiver LED not solid green after binding attempt	Binding failed; incorrect protocol; transmitter too far/close	Ensure correct protocol (D8/D16/SFHSS) is selected on transmitter. Repeat binding procedure. Ensure transmitter is within 1-2 meters during binding.
No control response after binding	Incorrect wiring; wrong output format; failsafe active	Check all connections (PWM/SBUS) to flight controller/servos. Verify output format setting on receiver (if configurable) matches flight controller input. Check transmitter failsafe settings.
Short range or intermittent signal	Poor antenna placement; interference; low receiver voltage	Adjust antenna orientation (90-degree angle, away from carbon/metal). Avoid operating near strong RF sources. Check receiver power supply voltage.
Receiver not powering on	No power; reverse polarity; damaged receiver	Verify power source is connected and providing correct voltage. Check for correct polarity. Inspect receiver for visible damage.

9. Warranty and Support

Radiomaster products are manufactured to high-quality standards. For warranty information, technical support, or service inquiries, please visit the official Radiomaster website or contact your authorized dealer. Keep your proof of purchase for warranty claims.

Official Radiomaster Website: www.radiomasterrc.com

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question