GODIYMODULES B0FBVDF3DF

GODIYMODULES Dual Channel Receiver Signal Converter (Model B0FBVDF3DF) User Manual

Model: B0FBVDF3DF | Brand: GODIYMODULES

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the GODIYMODULES Dual Channel Receiver Signal Converter, Model B0FBVDF3DF. This device is designed to convert PWM signals from an RC receiver into voltage signals for controlling servos and various DC motor equipment. It features high-precision conversion and supports a wide range of applications, including RC tanks, crawlers, and battery-powered vehicles.

2. Key Features

- Dual channel PWM to voltage signal conversion.
- High precision signal conversion for stable servo and DC motor drive.
- Wide operating voltage range: 7-24V (recommended 12V).
- Supports multiple voltage output adjustments to match different motor specifications.
- Suitable for RC crawlers, tanks, and other model applications.

3. Specifications

Parameter	Value
Model Number	B0FBVDF3DF
Power Supply Voltage	7-24V DC (Recommended 12V)
5V Output	Can be external power supply 5V-100mA
PWM Signal Input	P1, P2 (Servo Receiver PWM Signal Input)

Voltage Signal Output (Motor Speed)	OT1, OT2 (1000µs~1500µs to 4.2V-0V, 1500µs~2000µs to 0V-4.2V)
Direction Signal Output	VH1, VH2 (1000µs~1500µs output 5V, 1500µs~2000µs output 0V)
Dimensions	Approximately 3.94 x 0.79 x 0.39 inches
Weight	Approximately 0.71 ounces
Mounting Type	Panel Mount

4. Package Contents

The package includes:

- 1 x GODIYMODULES Dual Channel Receiver Signal Converter (Model B0FBVDF3DF)

5. Setup and Wiring

Careful wiring is crucial for proper operation. Refer to the diagram below for connection details.

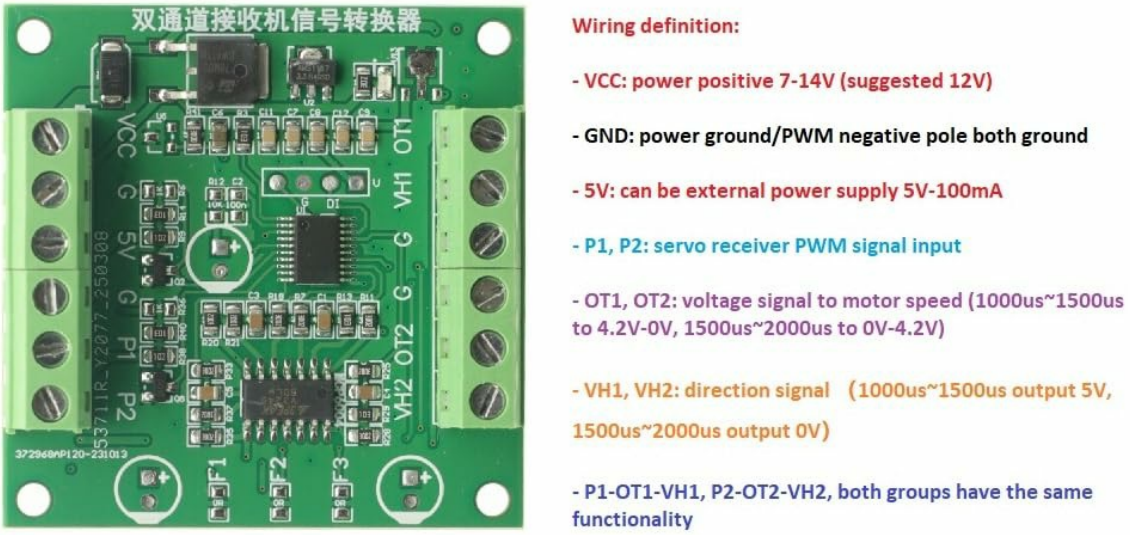

Figure 5.1: Wiring Diagram and Pin Definitions

This image displays the top view of the converter board with all terminal blocks and pin labels. On the right side, a text overlay defines each pin: VCC (power positive 7-14V, suggested 12V), GND (power ground/PWM negative pole), 5V (external power supply 5V-100mA), P1/P2 (servo receiver PWM signal input), OT1/OT2 (voltage signal to motor speed, 1000μs~1500μs to 4.2V-0V, 1500μs~2000μs to 0V-4.2V), VH1/VH2 (direction signal, 1000μs~1500μs output 5V, 1500μs~2000μs output 0V). It also notes that P1-OT1-VH1 and P2-OT2-VH2 have the same functionality.

5.1. Pin Definitions

- **VCC:** Power positive input. Connect to a 7-14V DC power supply. 12V is recommended for optimal performance.
- **GND:** Power ground and PWM negative pole. Connect to the negative terminal of your power supply and the ground of your PWM source.
- **5V:** This pin can be used as an external 5V power supply output, providing up to 100mA. Do not exceed this current limit.
- **P1, P2:** Servo receiver PWM signal input. Connect these to the PWM output channels of your RC receiver. P1 corresponds to channel 1, P2 to channel 2.
- **OT1, OT2:** Voltage signal output for motor speed control.
  - PWM input 1000μs to 1500μs: Output voltage ranges from 4.2V down to 0V.
  - PWM input 1500μs to 2000μs: Output voltage ranges from 0V up to 4.2V.
- **VH1, VH2:** Direction signal output.
  - PWM input 1000μs to 1500μs: Output is 5V.
  - PWM input 1500μs to 2000μs: Output is 0V.

Note: Both channel groups (P1-OT1-VH1 and P2-OT2-VH2) operate with identical functionality.

5.2. Connection Procedure

1. Ensure all power sources are disconnected before making any connections.
2. Connect the positive lead of your 7-14V DC power supply to the **VCC** terminal.
3. Connect the negative lead of your power supply to the **GND** terminal.
4. Connect the PWM signal output from your RC receiver to the **P1** and **P2** input terminals.
5. Connect the **OT1** and **OT2** outputs to the motor speed control inputs of your DC motor driver or servo.
6. Connect the **VH1** and **VH2** outputs to the direction control inputs of your DC motor driver or other relevant components.
7. Double-check all connections for correct polarity and secure fit.

6. Operating Instructions

Once properly wired, the converter operates automatically based on the incoming PWM signals from your RC receiver.

- **Power On:** Apply power to the VCC and GND terminals. The device will power up.
- **PWM Input:** The converter continuously monitors the PWM signals on P1 and P2.
- **Voltage Output (OT1/OT2):** The output voltage on OT1 and OT2 will vary proportionally to the PWM pulse width, controlling the speed of connected motors. A pulse width of 1500μs typically corresponds to 0V output (stop), while 1000μs and 2000μs correspond to maximum voltage in opposite directions (4.2V).
- **Direction Output (VH1/VH2):** The VH1 and VH2 outputs provide a 5V or 0V signal to indicate

direction, based on the PWM pulse width. This is useful for motor drivers that require a separate direction input.

Ensure your RC transmitter is calibrated correctly to provide the expected PWM pulse widths for desired motor speed and direction control.

7. Maintenance

The GODIYMODULES Dual Channel Receiver Signal Converter is designed for reliable operation with minimal maintenance.

- **Cleaning:** Keep the board clean and free from dust, dirt, and moisture. Use a soft, dry brush or compressed air for cleaning. Avoid using liquids or solvents.
- **Inspection:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion or damage.
- **Environment:** Operate the device within its specified temperature and humidity ranges to prevent damage. Avoid exposure to extreme temperatures or direct sunlight.

8. Troubleshooting

If you encounter issues with your signal converter, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No output voltage/motor not responding.	◦ Incorrect power supply voltage or polarity. ◦ No PWM signal input. ◦ Loose or incorrect wiring. ◦ Damaged converter board.	◦ Verify power supply is 7-14V DC and connected correctly to VCC/GND. ◦ Check RC receiver and PWM signal source. Ensure it's powered and transmitting. ◦ Review wiring diagram (Figure 5.1) and re-check all connections. ◦ If all else fails, the board may be faulty.
Motor speed/direction is erratic or incorrect.	◦ PWM signal interference. ◦ RC transmitter calibration issues. ◦ Incompatible motor driver.	◦ Ensure proper shielding for PWM signal wires. ◦ Calibrate your RC transmitter's PWM output range. ◦ Verify your motor driver is compatible with 0-4.2V analog input and 0/5V direction signals.
Converter board gets hot.	◦ Overcurrent on 5V output. ◦ Short circuit in wiring. ◦ Excessive input voltage.	◦ Ensure devices connected to 5V output do not draw more than 100mA. ◦ Inspect all wiring for any short circuits. ◦ Confirm input voltage is within 7-14V range.

9. Warranty Information

GODIYMODULES products are manufactured to high-quality standards. For specific warranty terms and conditions, please refer to the purchase documentation or contact your retailer. Typically, a limited warranty covers manufacturing defects for a period from the date of purchase.
This warranty does not cover damage caused by:

- Improper installation or wiring.
- Misuse, abuse, or neglect.
- Operating outside specified environmental conditions.
- Unauthorized modifications or repairs.
- Accidents or natural disasters.

10. Customer Support

If you require further assistance or have questions not covered in this manual, please contact GODIYMODULES customer support through your retailer or the official GODIYMODULES website. Please have your product model number (B0FBVDF3DF) and purchase information ready when contacting support.
For online resources and FAQs, visit: GODIYMODULES Store on Amazon

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