User Guide for PN00122 Kit

By S&S Tech

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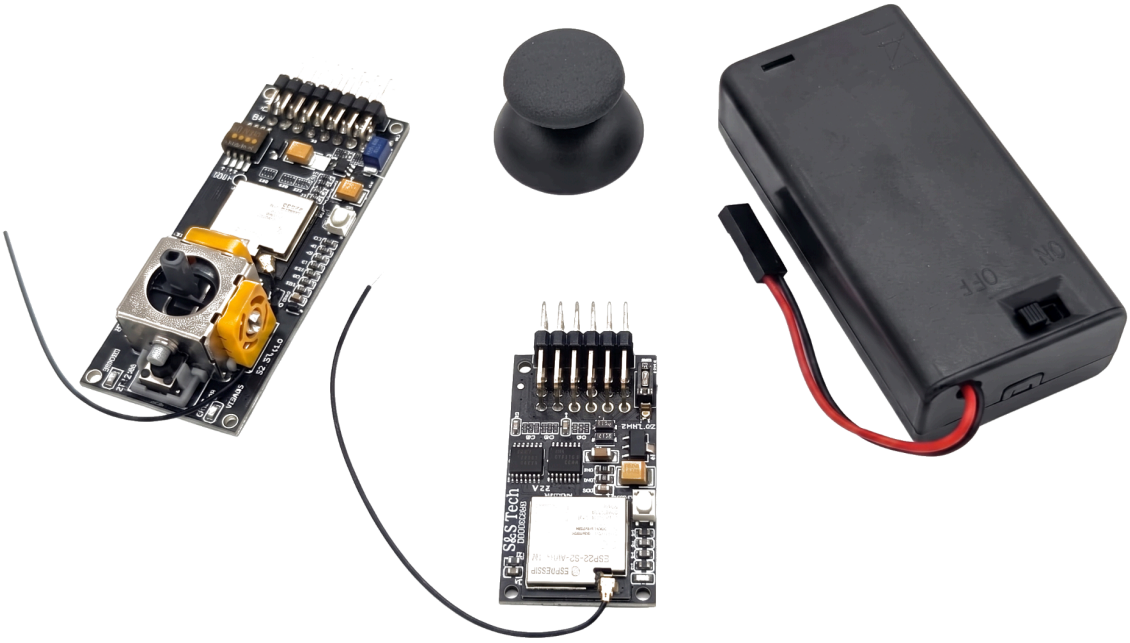
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



Specifications

Transmitter:

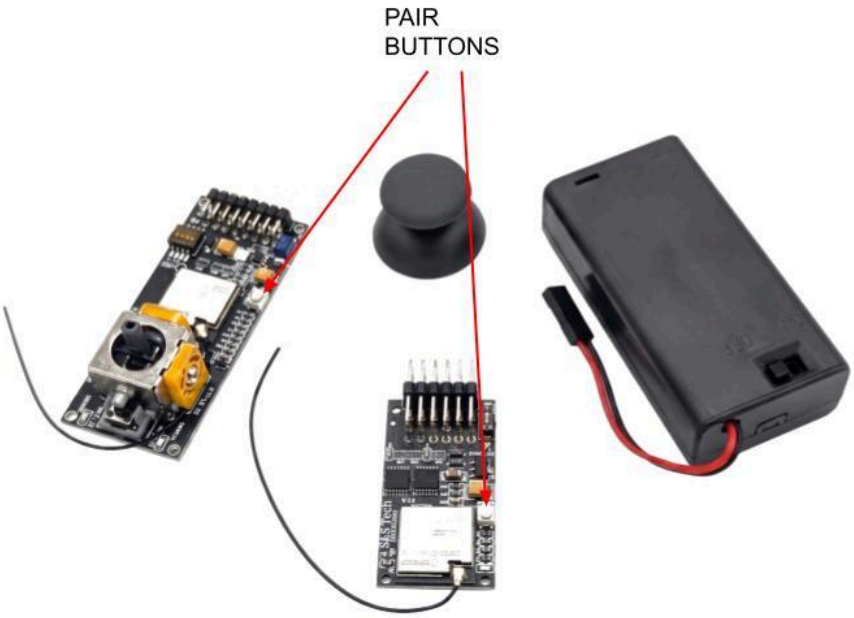
- 100m range
- **2.5-3.3vdc** operational voltage
- 2 channels for the x-y analog joystick
- 6 channels of **active-low** logic level (on/off) pins
- 2 channels of PWM/DIR signal pins for the MCU (Arduino or Pi) mode
- Standard variable speed mixed (rover) mode joystick controls
- Standard variable speed independent mode joystick controls
- Fixed speed momentary mode joystick controls
- Fixed speed latch mode joystick controls

Receiver:

- **5vdc** operational voltage
- Selectable 3.3/5vdc output logic voltage
- 2 channels of PWM/DIR output signal pins for standard motor drivers
- 2 channels of PPM output signal pins for standard RC motor drivers
- 6 channels of logic level output pins

Pairing

The RC set should be already paired out-of-the-box. In case the set is not paired, simply press both the transmitter's and the receiver's pair buttons at the same time for about 5 seconds until the LED lights of both devices turn solid instead of blinking.



Transmitter's Control Modes

Look for the DIP switch from your transmitter:

DIP Setting Table (Switch number 4 Not Used):

	Switch 1	Switch 2	Switch 3
Standard (Variable Spd.)	OFF for Mixed ON for Independent	OFF	OFF
Latch (Fixed Spd.)		ON	OFF
Momentary (Fixed Spd)		OFF	ON
MCU (PWM/DIR)		ON	ON

To run the Latch/Mixed mode, you have to set your fixed speed first.

Setting the fixed speed for the Latch/Momentary Mode:

1. Set the DIP to the standard mixed mode first (SW1 ON, SW2 OFF, SW3 OFF).
2. Move the joystick forward to your desired speed then click (press down) on the joystick at that position so the controller will record it.
3. Set the DIP to the latch/momentary mode. For example, ON-OFF-ON sets the momentary mixed mode controls.

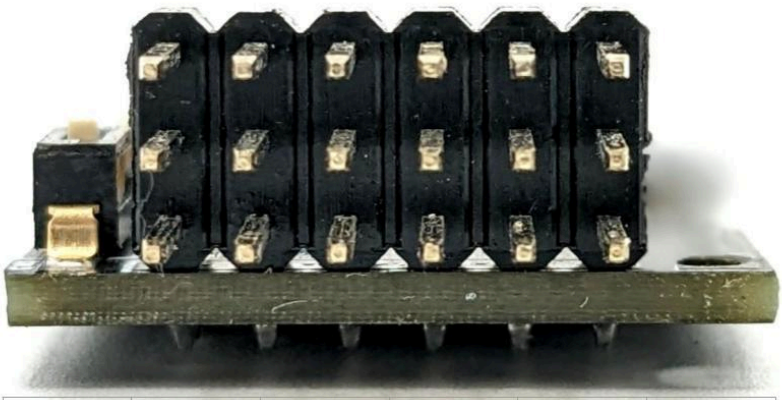
Transmitter's Input Signal Pins

2. BAT+	4. PWM1	6. PWM2	8. BT2	10. BT4	12. BAT+	14. BT6	16. VOID
1. GND	3. DIR1	5. DIR2	7. BT1	9. BT3	11. GND	13. BT5	15. VOID

Definitions:

- BAT+: Positive terminal of your power source. Operational voltage is 2.5-3.3vdc.
- GND: Ground. Negative terminal of your power source.
- PWM1-2: Pulse Width Modulation signals, PWM1 for channel 1, PWM2 for channel 2. These pins are for the MCU mode.
- DIR1-2: Direction logic level signals for reverse/forward, DIR1 for channel 1, DIR2 for channel2. High/Low for reverse/forward. These pins are for the MCU mode.
- BT1-6: **Active-Low** logic level signals. You may operate them with an MCU or simply ground the BT pin, by a switch for example, to turn on your signal.

Receiver's Output Signal Pins



3. GND	6. GND	9. GND	12. GND	15. BT3	18. BT6
2. VCC	5. VCC	8. PWM1	11. PWM2	14. BT2	17. BT5
1. PPM1	4. PPM2	7. DIR1	10. DIR2	13. BT1	16. BT4

Definitions:

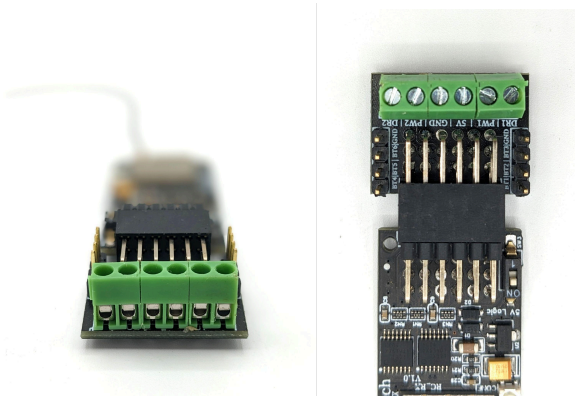
- GND: Ground. .
- VCC: Connect this pin to your 5vdc source.
- PPM1-2: PPM1 for channel 1, PPM2 for channel 2. Connect them to your motor driver that accepts PPM/Radio signals.
- PWM1-2: PWM1 for channel 1, PWM2 for channel 2. Connect them to your standard H-bridge PWM/DIR controllers.
- DIR1-2: Direction logic level signals for reverse/forward, DIR1 for channel 1, DIR2 for channel2. Connect them to your standard H-bridge PWM/DIR controllers.
- BT1-6: These pins will correspond to the transmitter's BT signals. Output logic voltage (3.3/5v) is based on the DIP switch selection of the receiver.

Receiver's Logic Voltage

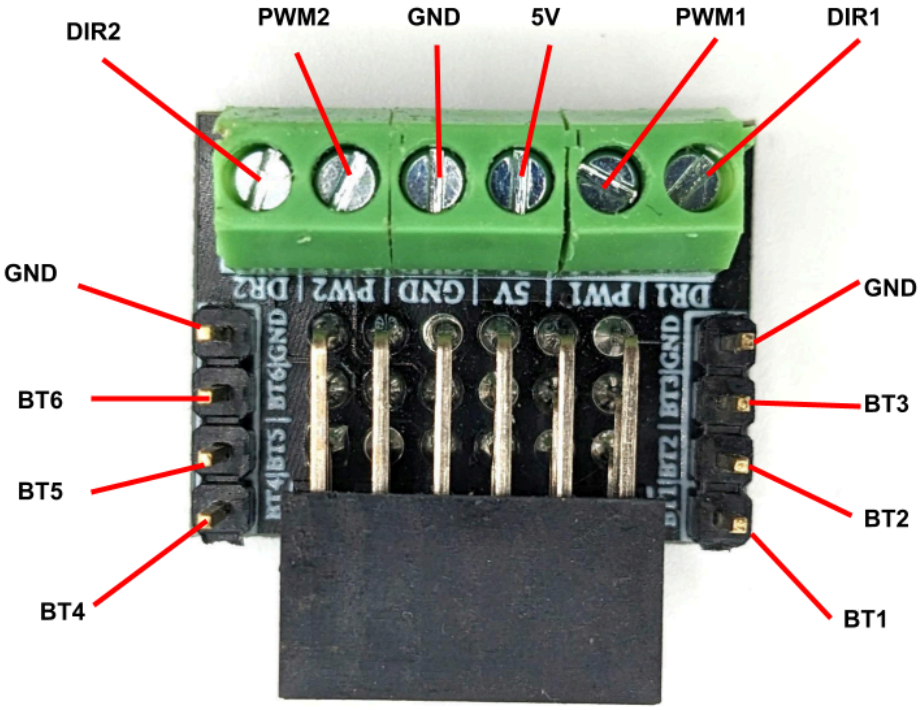
Look for the DIP switch to set your logic voltage between 3.3v and 5v. This will set the output logic voltage to your motor driver or MCU.

ON for 5vdc. OFF for 3.3vdc.

The Extender



The extender is included. Using the extender is mandatory if your PWM/DIR controller board has no 5v power supply. Go to page 5 for the pin definitions.


DIR2
PWM2
GND
5V
PWM1
DIR1
GND
BT6
BT5
BT4
GND
BT3
BT2
BT1