Sanpyl Sanpyl2r4fg8qak3

Sanpyl Mini Remote Momentary Switch Relay Remote Control Switch Instruction Manual

Model: Sanpyl2r4fg8qak3

Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of your Sanpyl Mini Remote Momentary Switch Relay Remote Control System. This system consists of a 433MHz miniature transmitter and a DC6V-36V receiver, designed for various control applications such as switches, lamps, relays, and small devices.

Important Safety Information

- Ensure all power is disconnected before installation or wiring to prevent electric shock.
- This device operates on specific DC voltage ranges. Verify your power supply matches the requirements for the transmitter (DC5V-24V) and receiver (DC6V-36V).
- Do not expose the modules to moisture, extreme temperatures, or corrosive environments.
- Installation should be performed by individuals with appropriate technical knowledge.
- Keep out of reach of children.

Product Overview

The Sanpyl Mini Remote Control Switch system comprises two main components: a receiver module and a transmitter module. Both are designed for compact integration into various projects.

Receiver Module (DC6V-36V)

This miniature receiver operates within a DC6V-36V input range. It features a learning point for pairing with the transmitter and a low voltage relay. Its superheterodyne receiver module ensures high sensitivity and good anti-interference performance, making it suitable for stable control through walls, floors, and doors up to 100 meters in open areas.

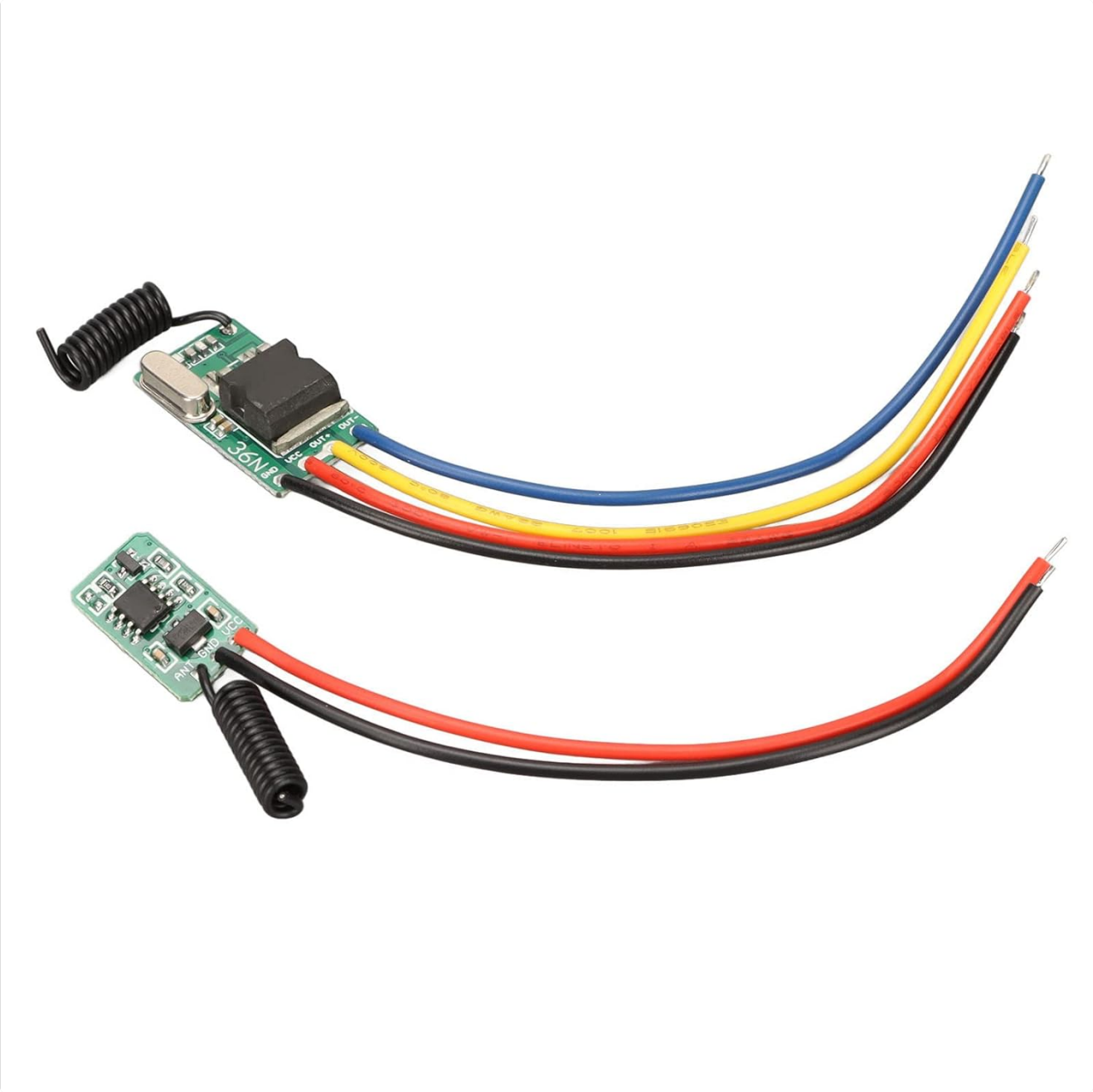

Image: Sanpyl Receiver Module. This image shows the compact receiver module with its attached wires, highlighting its small form factor and connection points.

Transmitter Module (DC5V-24V)

The transmitter is a radio frequency board without an external casing or buttons. It requires a DC5V-24V power supply to transmit signals. This miniature module is designed to be paired with a learning code receiver and can be integrated with other sensors or microcontrollers for various applications.

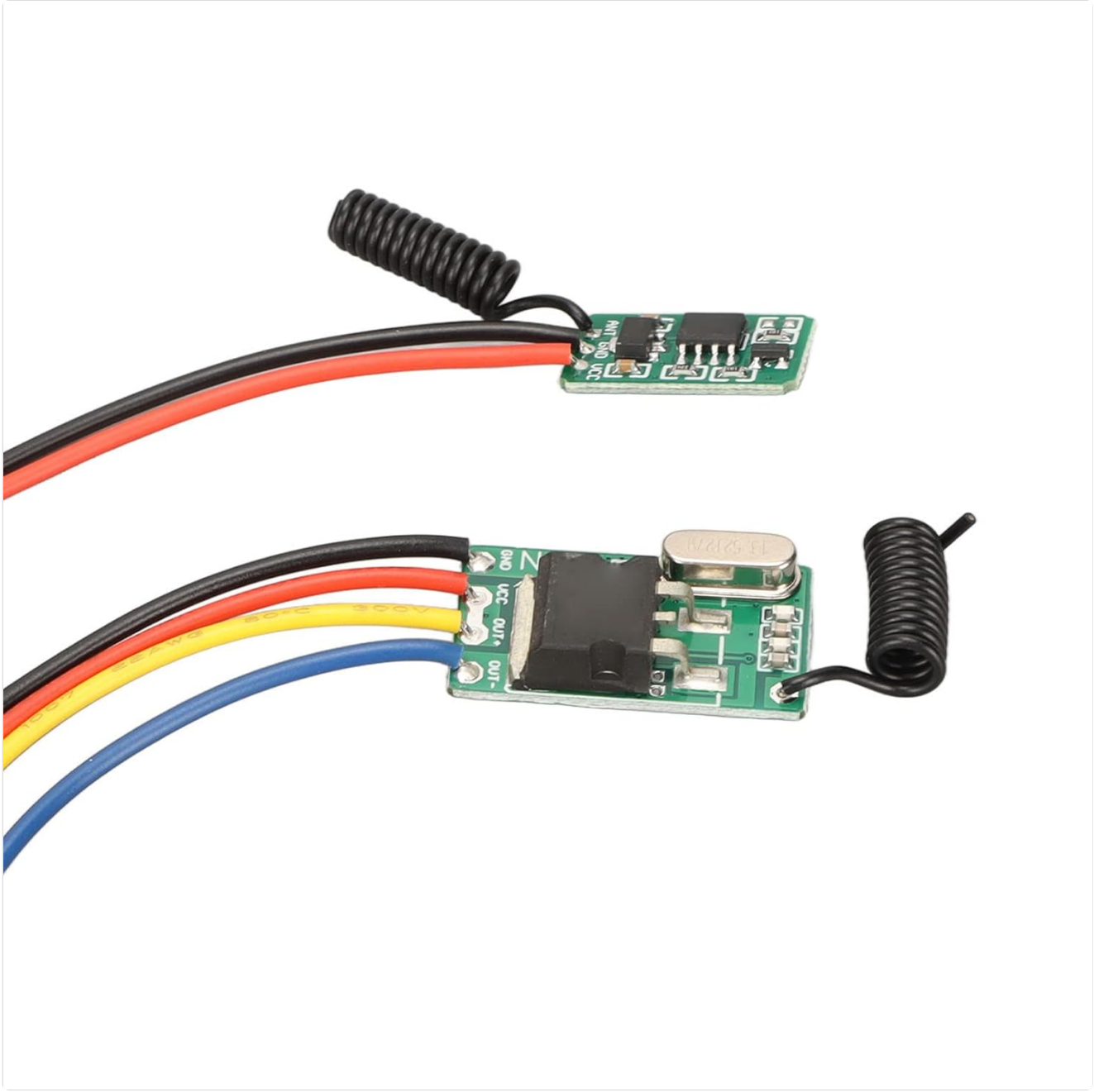

Image: Sanpyl Transmitter Module. This image displays the miniature transmitter module with its power input wires, illustrating its simple design for integration.

Technical Specifications

Sanpyl Mini Remote Control Switch Specifications

Feature	Specification
Receiver Working Voltage	DC6V-36V
Receiver Maximum Load	5A (Less than 3A if controlling a motor)
Receiver Working Frequency	433MHz
Receiver Frequency Deviation	±0.2MHz

Feature	Specification
Receiver Operating Temperature	-20°C to +80°C
Receiver Sensitivity	≥-109dBm
Receiver Modulation	Amplitude Modulation (AM)
Receiver Encoding Type	Learning Point Add Emitter
Transmitter Working Voltage	DC5V-24V
Transmitter Modulation Mode	ASK
Transmitter Working Frequency	433MHz
Transmitter Working Current	8-10mA
Transmitter Transmit Power	21mW
Transmitter Coding Type	Learning Code (Ev1527)
Control Distance	Approx. 10-100m (32.8-328ft) without obstacles

Setup Instructions

1. Wiring the Receiver Module

The receiver module requires a DC power input between 6V and 36V. Identify the VCC (positive), GND (negative), and output terminals on the receiver board. Connect your power supply and the device to be controlled (e.g., lamp, motor) according to the wiring diagram for your specific application. Ensure the maximum load of 5A (or 3A for motors) is not exceeded.

Image: Receiver Module Connections. This close-up shows the input and output terminals on the receiver module, indicating where power and controlled devices should be connected.

2. Wiring the Transmitter Module

The transmitter module requires a DC power input between 5V and 24V. Connect the positive and negative terminals of your power source to the corresponding inputs on the transmitter board. This module is designed for integration and does not have external buttons; its operation is triggered by applying power or through an external signal if integrated with other circuits.

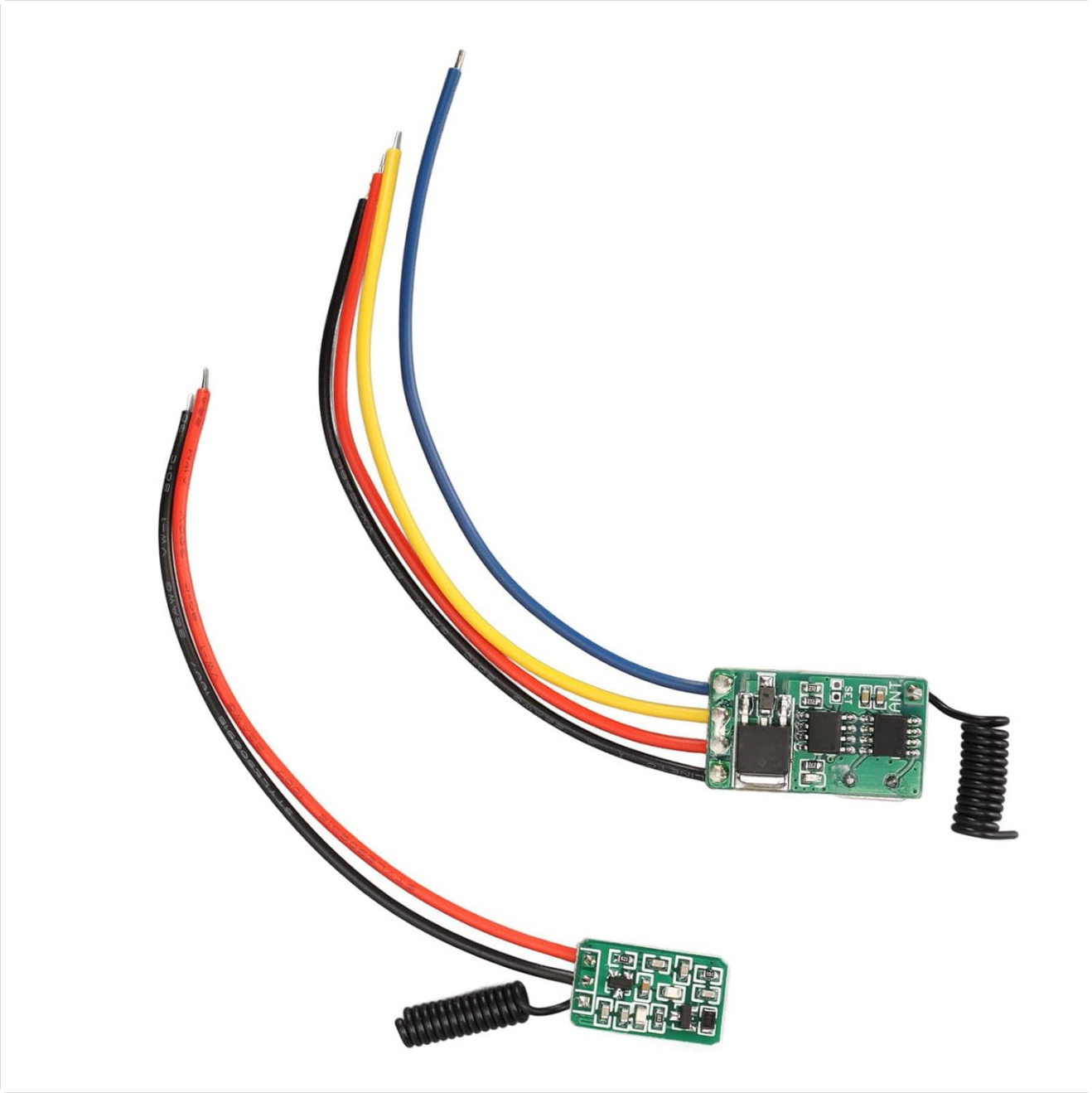

Image: Transmitter and Receiver Modules. This image shows both the transmitter and receiver modules, illustrating their relative sizes and basic wiring.

3. Pairing the Transmitter and Receiver (Learning Code)

To establish communication between the transmitter and receiver, they must be paired using the learning function:

1. **Power On:** Ensure both the receiver and transmitter modules are powered on within their specified voltage ranges.
2. **Enter Learning Mode:** On the receiver module, locate the "learning point" button or jumper. Press and hold this button (or short the jumper) for approximately 3 seconds until an indicator light (if present) changes state or flashes, indicating it's in learning mode.
3. **Transmit Signal:** While the receiver is in learning mode, activate the transmitter. If the transmitter is integrated with a button, press it. If it's triggered by power, cycle its power. The receiver's indicator light should flash or change state again, confirming successful pairing.
4. **Exit Learning Mode:** The receiver will automatically exit learning mode after a few seconds or after a successful pairing. Test the connection by activating the transmitter.

Note: Specific details for the "learning point" (button or jumper) may vary slightly. Refer to the markings on your

receiver board.

Operating Instructions

The receiver module supports different output states: Momentary, Toggle (Switch), and Latch (Lock). These modes are typically adjusted by connecting different points on the receiver board, often via jumpers or solder pads. Consult the markings on your specific receiver board for configuration.

Output Modes:

- **Momentary Mode:** The relay is activated only while the transmitter signal is being received (e.g., button is pressed). Releasing the button deactivates the relay.
- **Toggle (Switch) Mode:** Each press of the transmitter button reverses the relay's state. One press turns it ON, the next press turns it OFF.
- **Latch (Lock) Mode:** Pressing one transmitter button turns the relay ON, and it stays ON until a different designated transmitter button (if available on your transmitter setup) is pressed to turn it OFF. If only one button is used, this mode might not be applicable or might require a specific sequence.

After configuring the desired output mode and pairing, simply activate the transmitter to control the connected device according to the selected mode.

Maintenance

- Keep the modules clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Avoid exposing the modules to strong electromagnetic fields, which can interfere with operation.
- Regularly check all wiring connections to ensure they are secure and free from corrosion.
- Do not attempt to modify the internal circuitry, as this may void any potential warranty and could damage the device.

Troubleshooting

Issue: Device does not respond to transmitter.

- **Check Power:** Ensure both the transmitter and receiver are correctly powered within their specified voltage ranges.
- **Check Pairing:** Verify that the transmitter and receiver are properly paired. Repeat the pairing process if necessary.
- **Obstacles/Distance:** Reduce the distance between the transmitter and receiver. Ensure there are no excessive obstacles (thick walls, metal structures) that might block the RF signal.
- **Interference:** Check for other 433MHz devices or strong RF sources nearby that might be causing interference.

Issue: Receiver indicator light does not illuminate.

- **Power Connection:** Confirm the receiver's power input (VCC and GND) is correctly wired and receiving the

- **Power Connection:** Confirm the receiver's power input (VCC and GND) is correctly wired and receiving the correct voltage (DC6V-36V).
- **Module Damage:** If power is confirmed and the light still doesn't work, the module might be damaged.

Issue: Connected device (load) does not turn ON/OFF.

- **Load Wiring:** Check the wiring between the receiver's output terminals and the connected device.
- **Load Capacity:** Ensure the connected device's current draw does not exceed the receiver's maximum load capacity (5A, or 3A for motors).
- **Output Mode:** Verify the receiver's output mode (Momentary, Toggle, Latch) is correctly configured for your application.

Customer Support

For further assistance, technical support, or warranty inquiries, please contact Sanpyl customer service through the retailer where the product was purchased or visit the official Sanpyl store page on Amazon: Sanpyl Store.
