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› [Bkiyougo MG03 12V 1CH 433MHz RF Wireless Relay Module Instruction Manual](#)

Bkiyougo MG03

Bkiyougo MG03 12V 1CH 433MHz RF Wireless Relay Module Instruction Manual

Model: MG03 | Brand: Bkiyougo

1. INTRODUCTION

The Bkiyougo MG03 is a versatile 12V 1-channel 433MHz RF wireless relay module designed for remote control applications. It offers stable and reliable performance with high reception sensitivity, allowing control within a 50-meter range in open areas. This module is suitable for various uses, including entrance control, car lights, garage doors, and other home automation projects. This manual provides detailed instructions for its safe and effective operation.

2. PRODUCT OVERVIEW AND FEATURES

Key Features:

- **433MHz RF Wireless Control:** Ensures stable and reliable performance with high reception sensitivity (>97dBm).
- **Extended Range:** Operates within 50 meters in open areas, with signals capable of passing through walls, floors, and doors.
- **High Load Capacity:** Equipped with a 10A relay, capable of handling high-power electrical appliances for long-term stability.
- **Multiple Operating Modes:** Supports Momentary, Toggle, Latched, and Delay modes, adjustable to suit specific application needs.
- **Secure EV1527 Learning Code:** Enhances system security, preventing unauthorized control from other transmitters.
- **Versatile Applications:** Ideal for remote control switches, receiver modules, motorcycles, car anti-theft systems, home security, electric doors, remote control sockets, LED lighting, garage door openers, and more.

What's in the Box:

- 433Mhz RF Wireless Relay Remote Control Module
- Remote Control Transmitter

3. SAFETY INFORMATION

Please read and understand all safety instructions before installing or operating this device. Failure to do so may result in

electric shock, fire, or serious injury.

- **Electrical Safety:** Ensure power is disconnected before making any wiring connections. Work with low voltage DC 12V only. If you are unsure about electrical wiring, consult a qualified electrician.
- **Proper Voltage:** Only connect the module to a 12V DC power source as specified. Connecting to incorrect voltage can damage the device and pose a safety risk.
- **Load Capacity:** Do not exceed the maximum current rating of 10 Amps for the relay. Overloading can cause overheating and damage.
- **Environment:** Install the module in a dry environment, away from moisture, extreme temperatures, and corrosive substances.
- **Children:** Keep the device and remote control out of reach of children.

4. COMPONENT IDENTIFICATION

Familiarize yourself with the components of the relay module and remote control.



Image 1: Detailed view of the Bkiyougo MG03 relay module and its remote control. The module features screw terminals for Normally Open (NO), Common (COM), and Normally Closed (NC) connections, along with +V and -V for power input. A learning button and signal LED are also visible. The remote has 'A' and 'B' silicone buttons, an indicator light, and a metal keychain.

Chip description

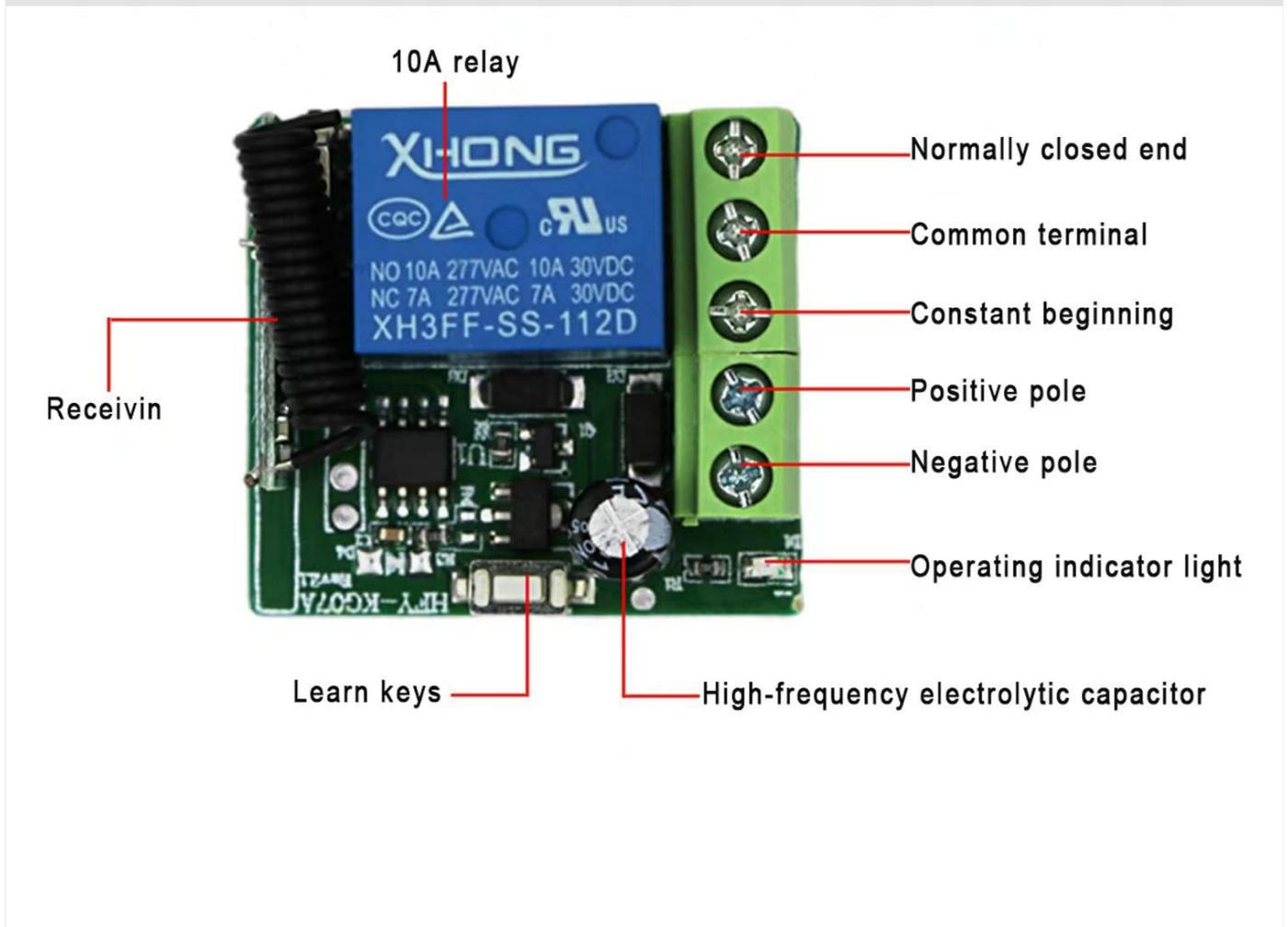


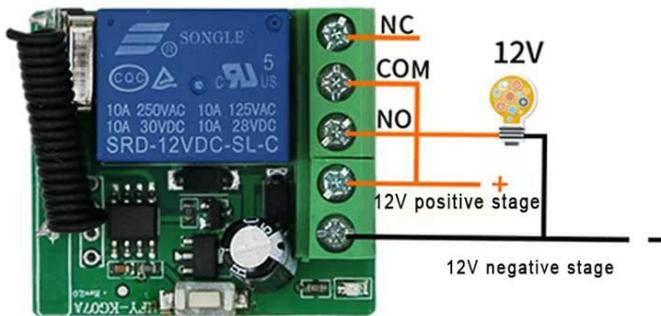
Image 2: Close-up of the relay module showing the 10A relay, Normally Closed end, Common terminal, Constant beginning, Positive pole, Negative pole, Operating indicator light, Learn keys, and High-frequency electrolytic capacitor.

5. WIRING DIAGRAMS

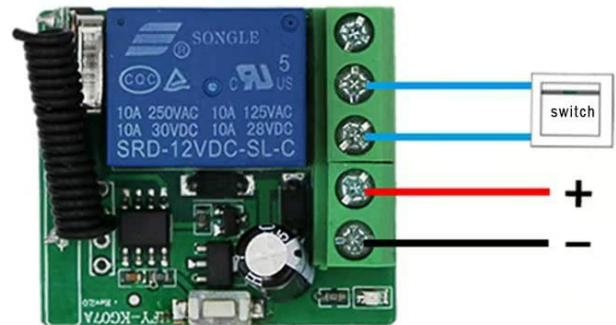
Proper wiring is crucial for the correct function of the relay module. Refer to the diagrams below for common application scenarios.

Application wiring diagram

Control 12V load wiring diagram



Wiring diagram of exit switch



Access Control Wiring Diagram

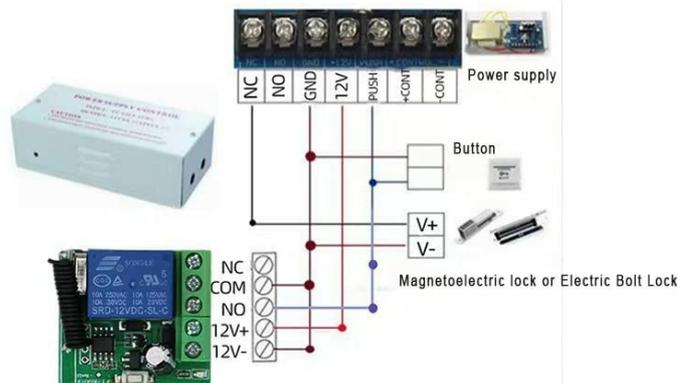


Image 3: This image displays three wiring diagrams: a Control 12V load wiring diagram (showing connection to a light bulb), a Wiring diagram of an exit switch, and an Access Control Wiring Diagram (illustrating connection to a magneto-electric lock or electric bolt lock).

- **Power Input:** Connect the 12V DC power supply to the +V (positive) and -V (negative) terminals on the module.
- **Load Connection:** The relay has three terminals:
 - **NO (Normally Open):** The circuit is open (disconnected) when the relay is inactive and closes (connects) when activated.
 - **COM (Common):** This is the common terminal for the relay switch.
 - **NC (Normally Closed):** The circuit is closed (connected) when the relay is inactive and opens (disconnects) when activated.

Connect your device's power line through the COM and either NO or NC terminals, depending on whether you want the circuit to be normally open or normally closed.

6. PROGRAMMING AND OPERATING MODES

The Bkiyougo MG03 module supports four operating modes: Momentary, Toggle, Latched, and Delay. Follow these steps to program the remote control and set the desired mode.

6.1 Clearing Existing Codes

Before programming a new remote or changing modes, it is recommended to clear any existing codes from the receiver.

1. Press and hold the **Learning Button** on the receiver module for approximately 8 seconds until the indicator light flashes rapidly and then turns off.
2. Release the button. All previously stored remote control codes are now cleared.

6.2 Programming Operating Modes

After clearing codes, you can program the desired operating mode.

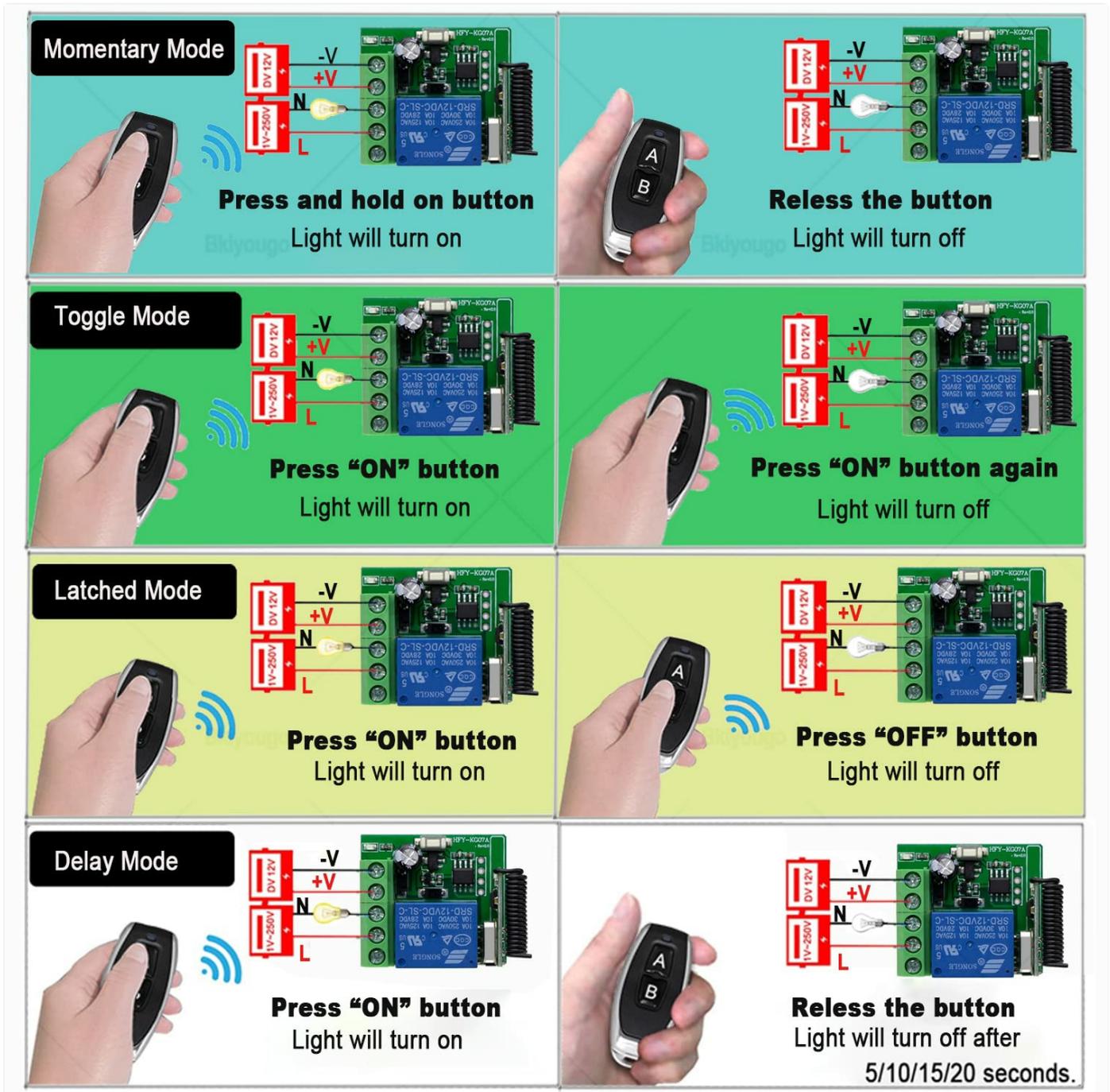


Image 4: Visual guide illustrating the functionality of Momentary, Toggle, Latched, and Delay operating modes for the Bkiyougo MG03 relay module, showing how the relay activates and deactivates with remote button presses.

Momentary Mode (Inch Mode)

The relay activates only while the remote button is pressed and deactivates upon release. Ideal for applications like electric door locks or garage door openers where a brief signal is needed.

1. Press the **Learning Button** on the receiver module **once**. The indicator light will turn on.
2. Press the desired button on your remote control (e.g., button 'A'). The indicator light on the module will flash and then turn off, indicating successful pairing.
3. Test: Press and hold the remote button; the relay should activate. Release the button; the relay should deactivate.

Toggle Mode (Self-Locking Mode)

Each press of the remote button toggles the relay state (ON/OFF). Press once to activate, press again to deactivate. Suitable for lights or fans.

1. Press the **Learning Button** on the receiver module **twice**. The indicator light will turn on.
2. Press the desired button on your remote control (e.g., button 'A'). The indicator light on the module will flash and then turn off, indicating successful pairing.
3. Test: Press the remote button once; the relay should activate. Press it again; the relay should deactivate.

Latched Mode (Interlock Mode)

One button activates the relay, and another button deactivates it. Requires two distinct buttons on the remote.

1. Press the **Learning Button** on the receiver module **three times**. The indicator light will turn on.
2. Press the first desired button on your remote control (e.g., button 'A'). The indicator light will flash.
3. Press the second desired button on your remote control (e.g., button 'B'). The indicator light will flash and then turn off, indicating successful pairing.
4. Test: Press button 'A'; the relay should activate. Press button 'B'; the relay should deactivate.

Delay Mode (Timed Mode)

The relay activates when the button is pressed and remains active for a set duration (e.g., 5, 10, 15, 20 seconds) before automatically deactivating.

1. Press the **Learning Button** on the receiver module **four times** for 5-second delay, **five times** for 10-second delay, **six times** for 15-second delay, or **seven times** for 20-second delay. The indicator light will turn on.
2. Press the desired button on your remote control (e.g., button 'A'). The indicator light on the module will flash and then turn off, indicating successful pairing.
3. Test: Press the remote button; the relay should activate and remain active for the programmed delay time before automatically deactivating.

6.3 Programming Video Guide

Watch this video for a visual demonstration of how to program the relay module with the remote control.

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Video 1: A demonstration showing the process of programming the 433MHz 12V RF Wireless Relay Remote Control. The video illustrates pressing the learning button on the module and then the remote control buttons to set different operating modes.

7. SPECIFICATIONS

Feature	Detail
Brand	Bkiyougo
Model Number	MG03

Feature	Detail
Coil Voltage	12 Volts DC
Current Rating	10 Amps
Maximum Switching Current	10 Amps
Maximum Switching Voltage	12 Volts
Minimum Switching Voltage	12 Volts
Connector Type	Screw Terminal
Contact Type	Normally Open (NO)
Mounting Type	PCB Mount
Operation Mode	Automatic
Product Dimensions	1.57 x 1.18 x 0.31 inches
Item Weight	3.17 ounces

8. TROUBLESHOOTING

If you encounter issues with your Bkiyougo MG03 module, refer to the following common problems and solutions:

- **Module not responding to remote:**

- Ensure the module is correctly powered (12V DC).
- Check if the remote control battery is functional.
- Verify that the remote is properly paired to the module. Try clearing codes and reprogramming the remote (refer to Section 6.1 and 6.2).
- Ensure the remote is within the effective operating range (up to 50 meters in open areas). Obstacles like thick walls can reduce range.

- **Relay not activating/deactivating correctly:**

- Confirm the wiring connections to your load are correct (COM, NO, NC terminals).
- Check if the load's current draw exceeds the 10A maximum rating of the relay.
- Verify the operating mode is set as intended (Momentary, Toggle, Latched, or Delay). Reprogram if necessary.

- **Indicator light not functioning:**

- If the indicator light on the module does not illuminate when powered, check the power supply connection.
- If it doesn't flash during programming, try clearing codes and re-attempting the programming sequence.

- **Interference:**

- Strong RF interference from other devices operating on similar frequencies (433MHz) can affect performance. Try relocating the module or reducing interference sources.

9. WARRANTY AND SUPPORT

For warranty information or technical support, please contact Bkiyougo customer service through the retailer where the product was purchased. Keep your purchase receipt as proof of purchase.



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