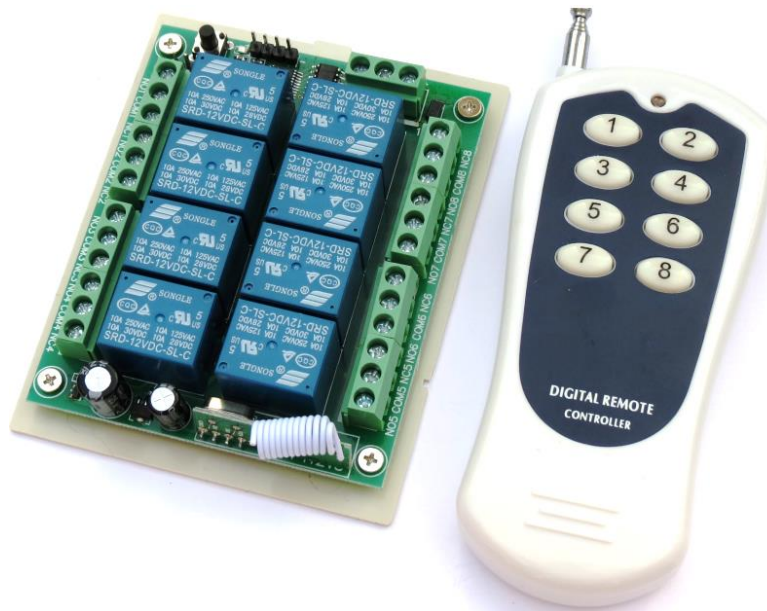


# USER MANUAL

## Wireless Relay Octo Module

### Quicksilver SKU *wr-octo*



As Referenced in the Article  
***Untether Your Memories!***  
*by Gene, K5PA & Jim, WB2REM*

To Purchase, Please Visit Quicksilver Radio: <http://www.qsradio.com>

## Wireless Relay Octo Module Specifications

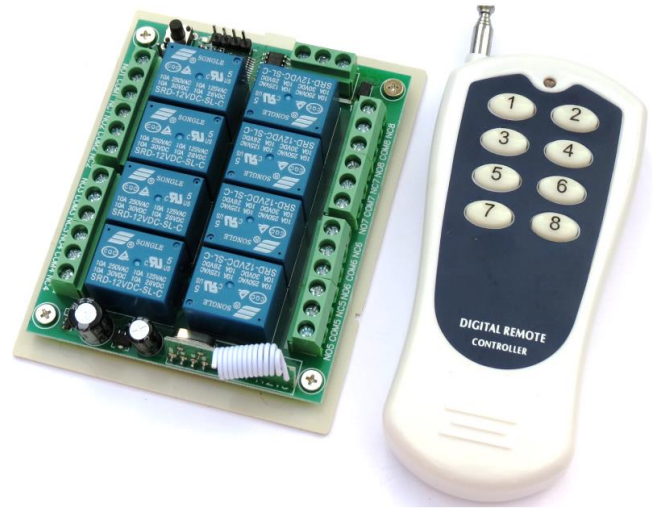
**Vendor Source:** Quicksilver Radio

**Model:** Wireless Relay Octo

**Vendor SKU:** *wr-octo*

**URL:** <http://www.qsradio.com/shop-now.html#!/Relays/c/13310077/offset=0&sort=normal>

**Description:** Wireless Relay Octo, 8-Channel relay module. The current version of the Quicksilver SKU *wr-octo* is shown in the photo. The information in this User Manual is based on this circuit board assembly.



**Operating Radio Frequency:** 315 MHz

**Power Requirements:** The Wireless Relay Octo Module is specified to work at 12 VDC. The measured quiescent current is 10 mA. When one relay is activated, the operating current increases to 38 mA. These are nominal values based on measurements. Each subsequent relay adds another 28 mA to the total current.

Power Connections (circuit card assembly): +V 12VDC Positive - or GND 12VDC Negative

**Relay Contacts:** 8 relays, with isolated contacts, ratings 5A @ 250VAC, 10A/30VDC, SPDT

Relay #1: <b>NO1</b> Normally Open	<b>NC1</b> Normally Closed	<b>C1</b> Common
Relay #2: <b>NO2</b> Normally Open	<b>NC2</b> Normally Closed	<b>C2</b> Common
Relay #3: <b>NO3</b> Normally Open	<b>NC3</b> Normally Closed	<b>C3</b> Common
Relay #4: <b>NO4</b> Normally Open	<b>NC4</b> Normally Closed	<b>C4</b> Common
Relay #5: <b>NO5</b> Normally Open	<b>NC5</b> Normally Closed	<b>C5</b> Common
Relay #6: <b>NO6</b> Normally Open	<b>NC6</b> Normally Closed	<b>C6</b> Common
Relay #7: <b>NO7</b> Normally Open	<b>NC7</b> Normally Closed	<b>C7</b> Common
Relay #8: <b>NO8</b> Normally Open	<b>NC8</b> Normally Closed	<b>C8</b> Common

**Size/Weight:** Relay Module, 3.9x3.1x1.1 in. / weight 5.0 oz.

Pushbutton FOB, 4.2x2.0x0.7 in. / weight 2.0 oz.

**Remote Sender Unit:** The Remote Sender Unit programmed with the Wireless Relay Octo is shown above. The Remote Sender uses a single battery, type A23, alkaline, 12V delivered with the Wireless Relay. There are 8 buttons on the Sender unit. Each button is used to control the relays on the board. A short, extendable antenna can be extracted to increase the range.

**Operating Range:** The range for operating the wireless relay is approximately 200 feet (61 m) but dependent on obstructions and terrain. At extended ranges, the remote Sender unit antenna needs to be extended for the greatest range.

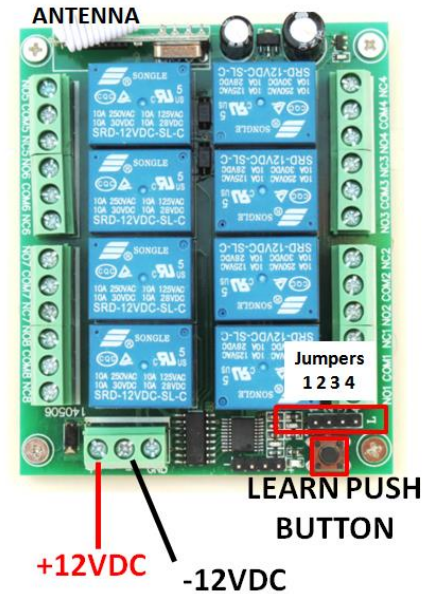
**Price Class:** \$60 each

## Programming Instructions, Wireless Relay Octo Module

**Introduction:** The Wireless Relay Octo Module is programmed using the Remote Sender Unit. The Wireless Receiver Octo Module can be reprogrammed to a new remote Sender at anytime. Refer to the photograph the location of the black, Learn pushbutton and the LED indicator.

**Enabling the Remote:** The Remote Sender Unit requires one A23 battery that is supplied with the unit. Before using the relay, it must be "paired" with at least one remote button. When power is applied, hold down the black, Learn button on the Relay Module circuit board assembly until the LED flashes. This clears all existing programming.

To pair the unit with a Remote Sender Unit, quickly press and release the black Learn button and then press any button on the Remote Sender. You can have several Wireless Relay Octo Modules programmed to the same Remote Sender Unit for simultaneous relay control.



**Relay Operation Modes, Jumper Selections:** There are 3 modes for the Wireless Relay Octo Module. Mode 1 is Interlock, Mode 2 is Latching and Mode 3 is Momentary. They are selected based on a small shorting jumper inserted on the 3-pin header JP2 located above the Black, round button on the main circuit card assembly. Labels **T** and **L** are silkscreen on the circuit card next to JP2.

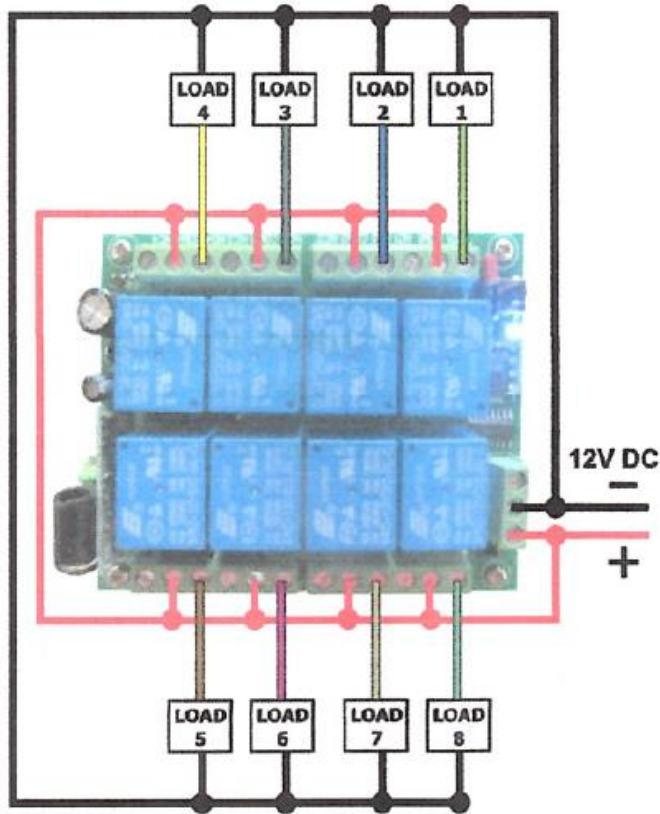
**Mode 1 -Interlock:** Only one relay can be active (normally open contact is closed) at a time, and the other 7 are inactive (normally open contact is open). Pressing another button on the Remote Sender will activate another relay, but will also deactivate the 7 other relays. Note that when DC power is first applied, all relays are inactive. Once any one is activated, there will always be one that is active. To deactivate all relays you must remove DC power. To enable Mode 1, Interlock, put a shorting jumper on JP2, pins 3 and 4, nearest the silkscreen label **T**.

**Mode 2 - Latching:** Each relay is independent. Each activates by pressing its corresponding Remote Sender button, and will stay active until its Remote Sender button is pressed again. You can have any combination of active and inactive relays. If power is removed, all relays become inactive. To enable Mode 2, Latching mode, add a shorting jumper on JP2, pins 1 and 2, nearest the silkscreen label **L**.

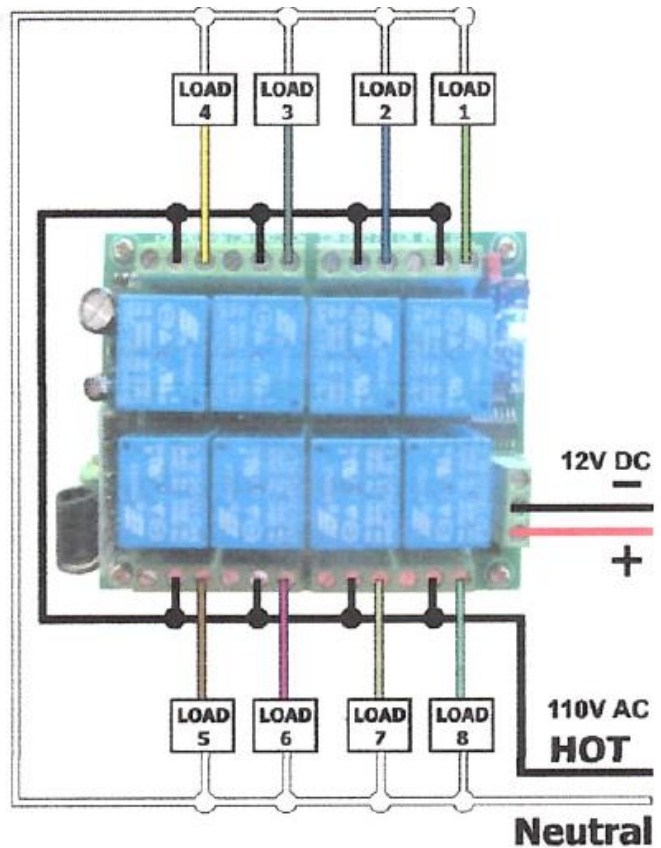
**Mode 3 - Momentary:** One relay will be active only as long as its corresponding Sender button is pressed. You can only have one active relay at any time. To enable Mode 3, Momentary mode, remove all shorting jumpers on JP2.

**Erase the Present Mode:** With the power applied, hold down the black, round button on the Wireless Relay Octo Module circuit board assembly, the LED will begin flashing in 2 seconds and stop after another 4 seconds. Release the black button and the programming is cleared.

### Example Wiring Diagrams



**12V Load Control Wiring Schematic**  
 1. Normally Open



**110V Load Control Wiring Schematic**  
 1- White line is neutral for all four loads  
 2- 110V Black line is AC hot feed to relays  
 3- Normally open

### Example Wiring Diagrams

**Safety Caution:** When load voltages, other than 12VDC, are switched the contacts must be isolated from connections with the 12VDC [ positive (+) and negative (-) ] power leads to the circuit board assembly.

The relay contacts are isolated from the 12 VDC power to the printed circuit board assembly. The diagrams show connections from the 12 VDC source to circuit board. When 12 VDC loads are being switched on and off, the power could be shared with the relay switch contacts (n.o., com, n.c).

# USER MANUAL

## Wireless Relay 4-Channel Module

Amazon, INSMA SKU, CECOMINOD029486



As Referenced in the Article  
*Untether Your Memories!*  
*by Gene, K5PA & Jim, WB2REM*

To Purchase, Please Visit [Amazon.com](https://www.amazon.com)



## Wireless Relay 4-Channel Module Specifications

**Vendor Source:** Amazon

**Mfgr Model:** INSMA, GV-RK04S-12

**Vendor SKU:** CECOMINOD029486

**URL:**

[https://www.amazon.com/gp/product/B01CCSG2ZY/ref=px\\_yo\\_dt\\_b\\_asin\\_title\\_o00\\_s00?ie=UTF8&psc=1](https://www.amazon.com/gp/product/B01CCSG2ZY/ref=px_yo_dt_b_asin_title_o00_s00?ie=UTF8&psc=1)



**Description:** Wireless RC Switch, 4 Ch Relays, 12 VDC, with Enclosure, and 2 Remotes

**Operating Radio Frequency:** 433.92 MHz

**Power Requirements:** The Wireless Relay is specified to work at 12 VDC. The measured quiescent current is less than 10 mA with no relays activated. When one relay is activated, the operating current increases to < 50 mA. These are nominal values based on measurements.

Power Connections (circuit card assembly): + Symbol 12VDC Positive - Symbol GND (12VDC return)

**Relay Contacts:** 4 relays, with isolated contacts, relay component P/N SRA-12VDC-CL rating listed as 20A @ 125VAC, 20A/14VDC, SPDT

Relay Contacts Marked A = N.O. (Normally Open)

Relay Contacts Marked B = Com (Common)

Relay Contacts Marked C = N.C. (Normally Closed)

**Size / Weight:** Relay Module, 3 x 2.125 x 1.0 inches (L x W x H) / 2.4 oz

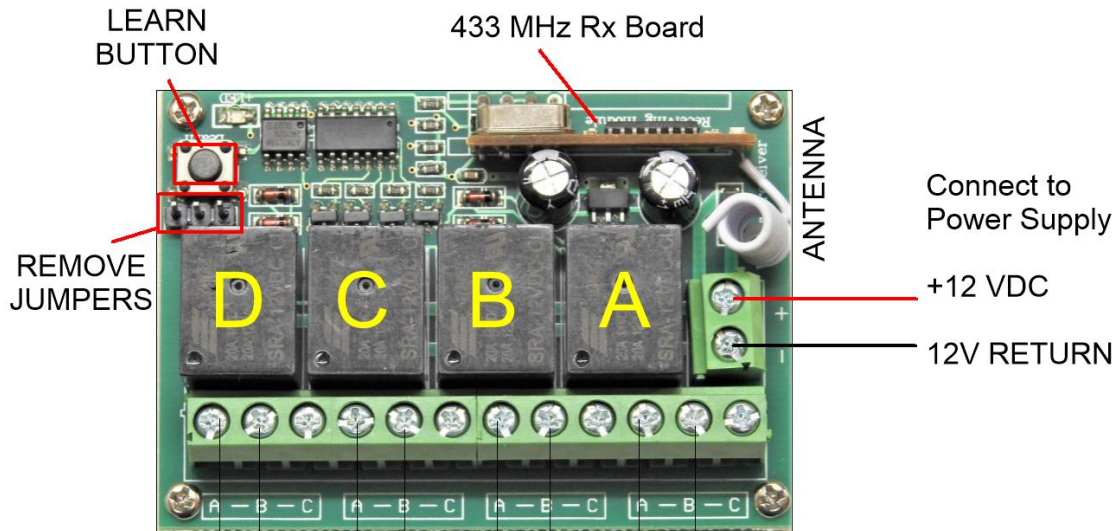
**Remote Sender Unit:** The Remote Sender Unit is programmed with the Wireless 4-Channel is shown above. The Remote Sender uses a coin cell battery delivered with the Wireless Relay. There are 4 buttons (A-B-C-D) on the Sender unit. Each button is used to control the relays on the board.

**Operating Range:** The range for operating the wireless relay is approximately 150-300 feet (50-100 m) but dependent on obstructions and terrain.

**Price Class:** \$17 each

## Programming Instructions, Wireless Relay 4-Channel Module

**Introduction:** The Wireless Relay is programmed using the Remote Sender Unit. The Wireless Receiver Module can be reprogrammed to a new remote Sender at anytime. Refer to the photograph the location of the black, Learn pushbutton and the LED indicator.



**Enabling the Remote:** The Remote Sender Unit uses a coin cell battery that is supplied with the unit. If the remote is not already paired with the relay, it must be "paired" with at least one remote button (Note: they are normally already paired and ready to be used).

To **Clear** an already paired unit, when power is applied, hold down the black, **Learn** button on the Relay Module circuit board assembly for 6-seconds and LED indicator will LED flash on. This clears all existing programming.

To pair the relay unit with a Remote Sender Unit, **quickly press and release** the black **Learn** button and then press any button on the Remote Sender.

**Relay Operation Modes, Jumper Selections:** There are 3 modes for the Wireless Relay 4-Channel Module. Mode A is Latching (Self-Locking), Mode B is Momentary (Non-Locking) and Mode C is Interlock. They are selected based on a small shorting jumper inserted on the 3-pin header located Below the black, LEARN button on the main circuit card assembly. **(The pin header pins are labeled as 1-2-3, left-to-right in the figure above)**

**Mode A – Latching, also known as Self-Locking:** Each relay is independent. Each activates by pressing its corresponding Remote Sender button and will stay active until its Remote Sender button is pressed again. You can have any combination of active and inactive relays. If power is removed, all relays become inactive. **To enable Mode A, Latching mode, add a shorting jumper on pins 1 and 2.**

**Mode B – Momentary, also known as Non-Locking:** One relay will be active only if its corresponding Sender button is pressed. You can only have one active relay at any time. **To enable Mode B, Momentary mode, remove the shorting jumper completely.**

**Mode C -Interlock:** Only one relay can be active (normally open contact is closed) at a time, and the other 3 are inactive (normally open contact is open). Pressing another button on the Remote Sender will activate another relay but will also deactivate the 3 other relays. Note that when DC power is first applied,

