

# GAMA ELECTRONICS

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## RFR24VPRWP Instruction Manual



### Included in this Kit:

(1) RFR24VPRWP Receiver

(1) 3-Button Transmitter \*Image shown with standard transmitter\*

### Available accessories:

- Standard Transmitter P44066
- Waterproof Transmitter KF340-3WP
- Rechargeable Transmitter GKF-WPTX-3
- Long Range Antenna LRA-340
- Waterproof Enclosure GWE-663-812
- Clear Protective Transmitter Pouch ZLB-67
- 6-Pack of Replacement A-23 12V Batteries for Transmitter A23-6

This receiver is a 340 MHz polarity reversing remote control. It is intended to be used in conjunction with the P44066 Transmitter. The receiver can be configured for either momentary or latching operation. The unit operates from 24VDC and provides a 24VDC polarity reversing output. A third auxiliary relay provides a contact closure. All of the electronic components are encapsulated so the receiver is capable of being operated in harsh environments.

**Operating Temperature Range:** 0°F to 160°F

**Maximum Ratings:** Power for the receiver can be in the range of 21VDC to 28VDC. It is recommended that a 24V deep cycle marine battery be used to power the receiver. The receiver is reverse polarity protected.

**Power Consumption:** 10 Milliamperes when the relay is de-energized. 45 Milliamperes when the relay is energized.

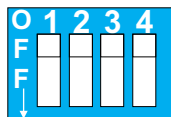
**Input/output Connections:** 24VDC input power connects to the terminals marked "24V" and "GND" on the top panel of the receiver. The two white wires provide a set of dry contact closures using the ON/OFF switch position on the transmitter.

**Dimensions:** Receiver dimensions are 5.0"W x 5.0"D x 1.5"H. The receiver weighs 1.0 lb.

### Dip Switch:

Switches Up= Latching Mode

Switches Down= Momentary Mode

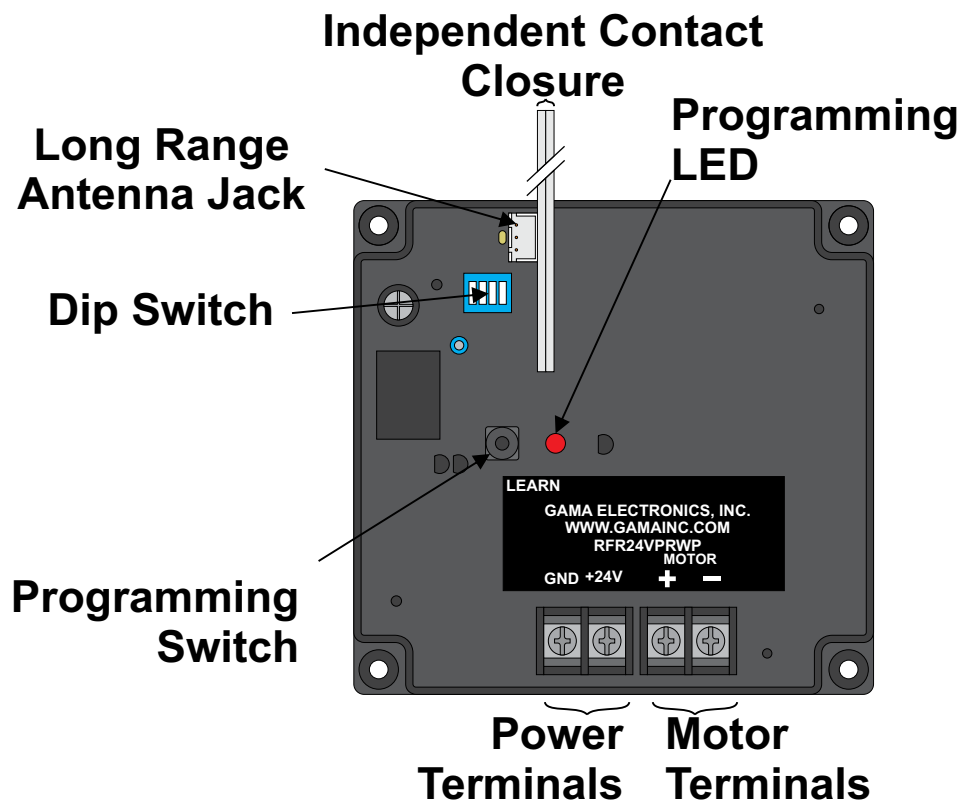


Turning any of the 4 DIP switches to the On position enables the corresponding latching function. Pressing the transmitter button once will energize the relay output. Pressing the same button a second time will de-energize the relay output. If the DIP switches are in the Off position, the corresponding relay will have a momentary function. In this mode, the relays are energized for as long as the transmitter button is depressed. Momentary and latching functions can be intermixed as desired.

### Programming Instructions

Each transmitter has its own unique internal address along with the data as to which button is pressed and transmitted. The receiver needs to be programmed to respond only to the specific transmitter it is intended to operate with. The following steps configure the receiver to operate with a particular transmitter. Up to 30 transmitters can be programmed to one receiver. Please read the entire programming procedure before starting. Make sure the receiver is connected to power before programming. When the receiver enters program mode, all previous transmitter addresses that were programmed will be erased from the receiver's memory.

1. Locate the pushbutton labeled "PROGRAM" on the receiver. Press and hold this button until the red LED next to the program button illuminates (approximately 3 seconds). The receiver is now in the transmitter program mode. Release the button. At this point all previously programmed transmitter addresses are erased from the receiver's memory.
2. Press and release any button on the transmitter and verify that the red program LED extinguishes and then illuminates (blinks once).
3. Repeat previous step for additional transmitters that will operate with this particular receiver. The red LED on the receiver will extinguish and illuminate (blink) each time a transmitter is programmed.
4. The receiver will return to normal mode if no transmitter buttons are pressed for 5-seconds. The red LED on the receiver will blink rapidly, then extinguish. The receiver is now in the normal mode of operation. This completes the programming instructions. The receiver will retain all of its programming even when power is removed.



## To Add Long Range Functionality

The remote control system is equipped with an internal antenna. The expected range in normal conditions is approximately 100 feet. When additional range is needed, or if the control is placed locations adverse to RF signal reception, a long range antenna can be added to the system. GAMA Electronics long range antenna, part number LRA-340, replaces the internal antenna on the system. In normal operating conditions expected range is greater than 500 feet. If the long range option is purchased with the system, this modification will be made prior to shipment.

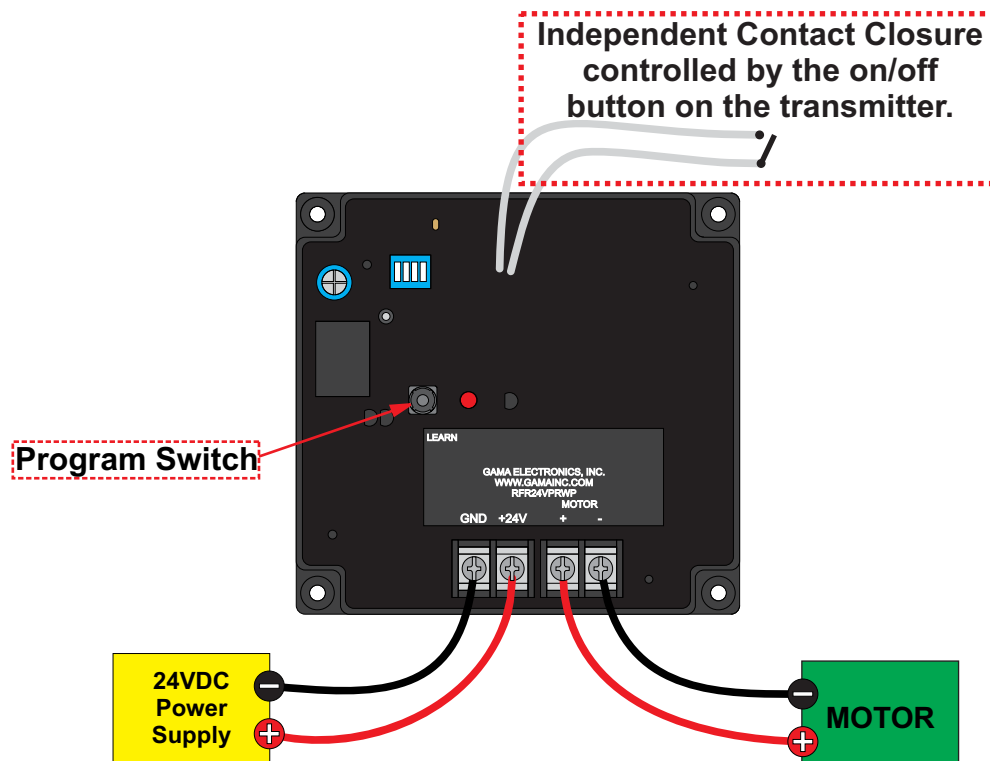
**NOTE: ONCE THE LONG RANGE MODIFICATIONS HAVE BEEN MADE TO THE SYSTEM THEY CANNOT BE REVERSED.**

### To add long range functionality:

1. Plug long range antenna (Part number LRA-340) into the long range antenna jack.
2. Clip the Long Range Antenna Bypass Wire (This will deactivate the internal antenna)

NOTE: It is recommended that you cover the exposed wires with RTV silicone sealant.

## Wiring Diagram



## **Troubleshooting**

All remote-control systems shipped by GAMA Electronics are 100% functionally tested just prior to shipment.

If your RF remote control system does not work out of the box, stops working or functions intermittently please take the following steps to resolve common issues. Please note that you must be 2-3 feet away from the receiver when operating the remote control. Operating within 2-3 feet may result in no operation or intermittent operation.

### **1. Replace the A23 12V Battery in the transmitter**

- The remote control can activate during shipping and drain the battery that is installed in the control. We send a replacement battery with the system if this occurs.

### **2. Check the voltage supply at the receiver**

- The receiver is designed to function at 21-28VDC. Voltage on the (+) and (-) terminals on the control should be within this range.

### **3. Reprogram the remote control**

- If the system is non-functional try to reprogram the remote control. The program may not have taken during the programming process or the program button may have been pressed. If the program button is pressed the memory of the remote controls programmed to the receiver are erased.

### **4. Listen and look for functionality on the receiver.**

- The LED that is used for programming the system will illuminate when the receiver is activated. You will also hear a “click” when the internal relays engage. If you can see the LED illuminate and you hear the relay “click” the issue is most likely in the wiring or device being controlled.

### **5. Add a long-range antenna**

- If the receiver is in an area that is averse to the reception of an RF signal, such as near a motor or in a metal casing, a long-range antenna may solve the issue. Connect the antenna per the instructions on page 3 and mount the antenna in an exposed area away from any motor.