



Included in this Kit: (1) RF340-4PR-ASL Receiver (1) 12-Button Transmitter *Image shown with standard transmitter*

Available accessories:

- Additional Transmitter RFT340-4PR-TO
- Rechargeable Transmitter GKF-WPTX-12
- Waterproof Enclosure GWE-663-812
- Long Range Antenna LRA340 **SEE PAGE 3 FOR SETUP**
- Hand-held Pendant HP4PR-ASL
- Package of 6 A23 12V Alkaline Batteries A23-6
- Clear Protective Transmitter Pouch ZLB-67

RF340-4PR-ASL is an RF Transmitter and Receiver operating at a fixed frequency of 340 MHZ. The receiver operates from 12VDC and provides four polarity reversing outputs. Up to 30 transmitters can be programmed to activate the receiver. The receiver has terminal blocks for connecting the input power and output to the 4-polarity reversing relay outputs. Each transmitter has a unique address that is transmitted when a button is pressed. A "program" button is provided on the receiver to program the transmitter(s) address into the receiver's memory. An LED on the receiver indicates the receiver's programming status and illuminates when the receiver is energized. The operating range is at least 100 feet.

The transmitter has two buttons assigned to each of the four outputs. The $up(^{)}$ button runs the motor in one direction and the down (v) button runs the motor in the opposite direction. The outputs are energized for as long as the buttons are depressed.

Manual Switch Input Control: The receiver contains a 10-position terminal block for connection to manual switch inputs to control the 4 polarity reversing outputs. The manual switch inputs are logic level inputs and only require small gauge wire between the switches and the terminal block.

Current Detection/Over-Current System Shutdown: The RF340-4PR-ASL incorporates output current detection that will disconnect an output when the output exceeds the current setting of the DIP switch for that output. When multiple outputs are activated, the total current of all active outputs are monitored. The sum of the current for all outputs are shutdown for 5 seconds. After the 5 second reset time the output can be activated by pressing the corresponding switch on the transmitter.

The system will monitor the current trip circuit and will allow the output to be activated 3-separate times when a current trip threshold occurs. After the third consecutive current trip occurs within one-minute time period, the receiver will turn off all outputs and the program LED will start to flash. The input power to the receiver must be turned off and then back on to re-activate the system. This is a safety feature to protect the receiver and connected loads, and alerts the user there is an over-current condition that should be resolved.

Latching Light Output: There is a 2-position terminal block on the receiver that provides an output to a 12VDC light. The transmitter "LIGHT" switch is used to control the light output. The output is rated at 10 Amps.

Maximum Ratings: Power for the receiver can be in the range of 10VDC to 15VDC. The receiver is reversing polarity protected. The relay contacts are rated at 30 Amps @ 13.8VDC.

Power Consumption: 10mA when the relays are de-energized, 45mA when one relay is energized.

Dimensions: Receiver dimensions are approximately 5"L x 5"W x 2"H

Operating Temperature Range: 0°F to 160°F

Automated Time Out Adjustment: The automatic time out of the Receiver after last switch activation is adjustable from no time-out, up to 1-hour time-out. The switch used to adjust the time-out set point is located on the Receiver and can be set for the time shown in the table on page 2.



Programming Instructions

Each Transmitter has its own unique internal address that is transmitted whenever a switch is pressed. The Receiver needs to be programmed to respond only to Transmitters it is intended to operate with. The following steps configure the Receiver to operate with a particular Transmitter(s). Up to thirty Transmitters can be programmed to one Receiver. Please read the entire programming procedure before starting. Prior to programming the Receiver, verify that the Receiver is connected to the input power. 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 2 seconds). The Receiver is now in the transmitter program mode. Release the pushbutton. 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 LED on the Receiver extinguishes and then illuminates (blinks once). Release the button.

3. Repeat previous step for additional Transmitters that will operate with this particular Receiver. The red LED on the Receiver will extinguish and illuminate one time for the first Transmitter being programmed, twice for the second, three times for the third, four times for the fourth etc. The Receiver will not respond to Transmitters that have already been programmed.

4. After 5-seconds of no switch being pressed on the transmitter(s) the Receiver will return to normal operation. 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.

Automated Time Out Adjustments

The automatic time out of the Receiver after last switch activation is adjustable from no time-out, up to 1-hour time-out. To turn the Receiver on, first press and release the "A" button on the Transmitter. Within two seconds, press and release the "B" button on the Transmitter. The LED on the Receiver will illuminate and the Receiver will now respond to transmitter commands and will automatically turn off after the time set by the switch. The switch used to adjust the time-out set point is located on the Receiver and can be set for the time shown in the tables below. When the Receiver is configured for no time-out, the transmitter is always active and does not require the 2-button turn-on sequence.

Switch for Time-Out Set Point

DIP Switch Position 0: No Time Out, Always Active **DIP Switch Position 1: 1 Minutes DIP Switch Position 2: 2 Minutes DIP Switch Position 3: 3 Minutes DIP Switch Position 4: 4 Minutes DIP Switch Position 5: 5 Minutes DIP Switch Position 6: 10 Minutes DIP Switch Position 7: 15 Minutes DIP Switch Position 8: 20 Minutes DIP Switch Position 9: 25 Minutes DIP Switch Position A: 30 Minutes DIP Switch Position B: 35 Minutes DIP Switch Position C: 40-Minutes DIP Switch Position D: 45-Minutes DIP Switch Position E: 50-Minutes DIP Switch Position F: 55-Minutes**

Switch for Current Trip Set Point

DIP Switch Position 0: 1.0-Amperes DIP Switch Position 1: 2.0-Amperes DIP Switch Position 2: 4.0-Amperes DIP Switch Position 3: 6.0-Amperes DIP Switch Position 4: 8.0-Amperes DIP Switch Position 5: 10.0-Amperes DIP Switch Position 6: 12.0-Amperes DIP Switch Position 7: 14.0-Amperes DIP Switch Position 8: 16.0-Amperes DIP Switch Position 9: 18.0-Amperes DIP Switch Position A: 20.0-Amperes DIP Switch Position B: 22.0-Amperes **DIP Switch Position C: 24.0-Amperes DIP Switch Position D: 26.0-Amperes DIP Switch Position E: 28.0-Amperes DIP Switch Position F: 30.0-Amperes**



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.

Momentary/Latching Operation

Each of the 4-polarity reversing outputs can be configured for momentary or latching. For momentary operation the output will be present for as long as the transmitter switch is pushed, releasing the switch will stop the output. For latching operation the output will turn on once the transmitter switch is pushed and released; pushing and releasing the same switch will turn off the output. Switch SW7 on the Receiver is a 4-position DIP switch and is used to select the mode of the 4-outputs. Placing each switch in the "UP" position sets the output for latching; the "DOWN" position configures the output for momentary operation. Each output can be configured independently



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 10-15VDC. 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 programed 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.



Wiring Diagram

