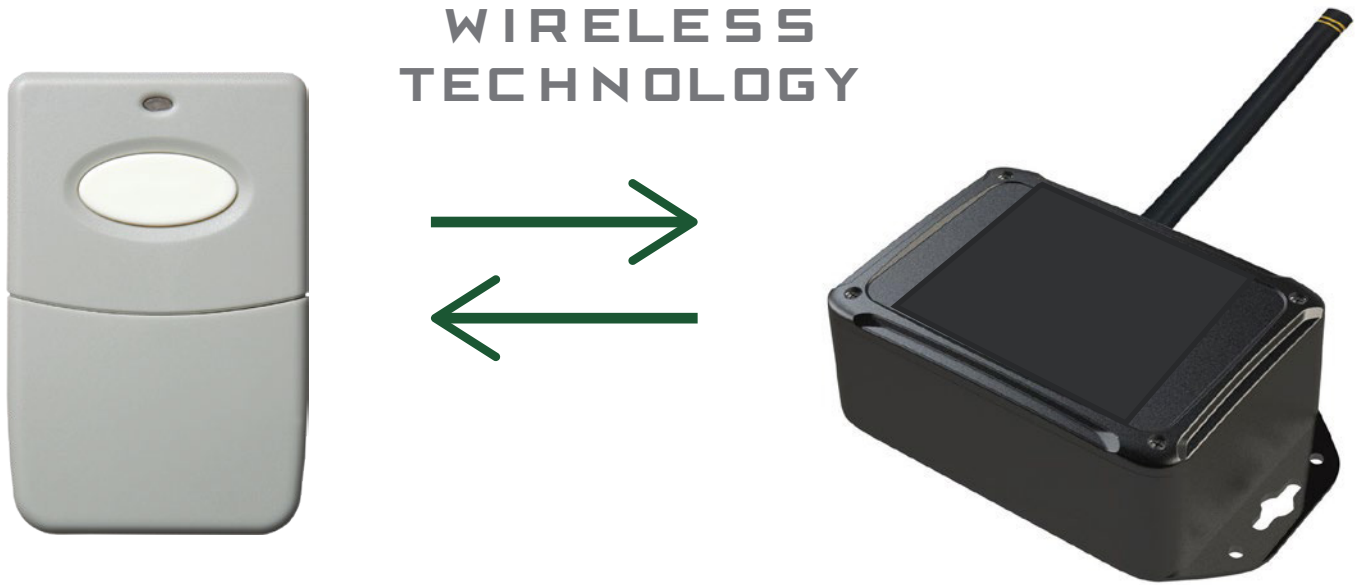


# LRRR915 & LRRT915

## LONG RANGE RANCH TRANSMITTER & RECEIVER KIT

v.3.15.19



The LONG RANGE RANCH transmitter/receiver kit is a revolutionary product. This product allows for wirelessly triggering a relay through a battery powered hand held transmitter with extreme range, no line-of-sight wireless technology.

### WHAT'S INCLUDED

There are two pieces included in the KIT LRRR915 RECEIVER & LRRT915 TRANSMITTER

### HOW IT WORKS...

Congratulations on your purchase of the American Armor Long Range Ranch Transmitter/Receiver kit. It has been designed with state-of-the-art radio technology to provide maximum transmission through obstruction and interference.

The LRRR915 to LRRT915 kit can be easily paired together with the program/learn button on the LRRR915 board. Simply connect the Dry output closure to the device you are triggering and you will be up and running.

The LRRT915 is a send/receiver unit that sends a signal when the button is pressed, indicated by a red LED light. And receives a signal back, indicated by a green LED light. This allows users to know the signal was sent and received by the corresponding LRRR915 unit.

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# 1. RECEIVER SPECIFICATIONS

**Power Input:** 12-24 Volt AC/DC

**Relays:** 10A 250 VAC/ 28VDC

**12V:** 50mA (idle) 1A (transmit)

**24V:** 25mA (idle) 500ma (transmit)

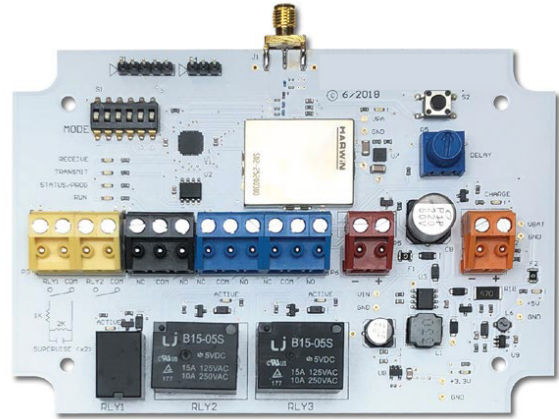
**Range:** 1/2 mile (Through obstructions)

**Relays:** 10A 250 VAC/ 28VDC

**Minimum / Maximum Temperature Range:**

-40°F to 185°F (-40°C to 85°C)

**Security Encryption:** AES



**POWER INPUT: 12 to 24 VOLTS AC/DC. - 1 AMP Minimum**

**Always follow polarity when DC Power is used. Antenna Must Always be Used Regardless of Range.**

**BATTERY INPUT:** for 12 Volt Sealed Lead Acid (SLA) battery only.

Solid GREEN LED indicates battery charging. Momentarily flashing GREEN LED indicates battery is charged and a trickle/conditioning charge is occurring.

## MOUNTING:

The receiver case is weather resistant and should be mounted on the exterior of the gate opener to achieve the longest possible range.

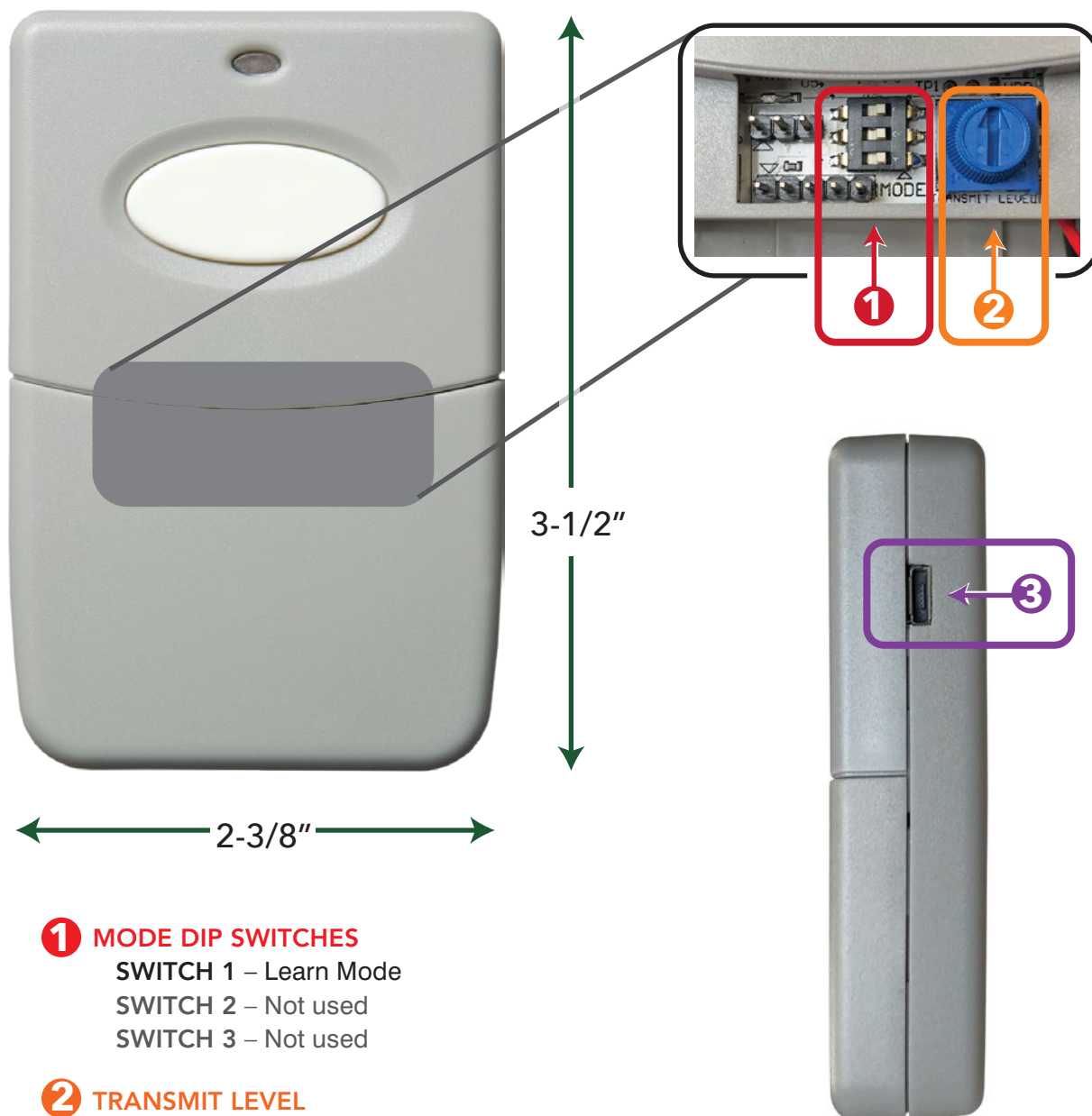
## 2. TRANSMITTER SPECIFICATIONS

Minimum / Maximum Temperature Range: -40°F to 185°F (-40°C to 85°C)

Security Encryption: AES

Range: 1/2 mile (Through obstructions)

Power: Micro-USB Rechargeable



- 1** **MODE DIP SWITCHES**  
SWITCH 1 – Learn Mode  
SWITCH 2 – Not used  
SWITCH 3 – Not used

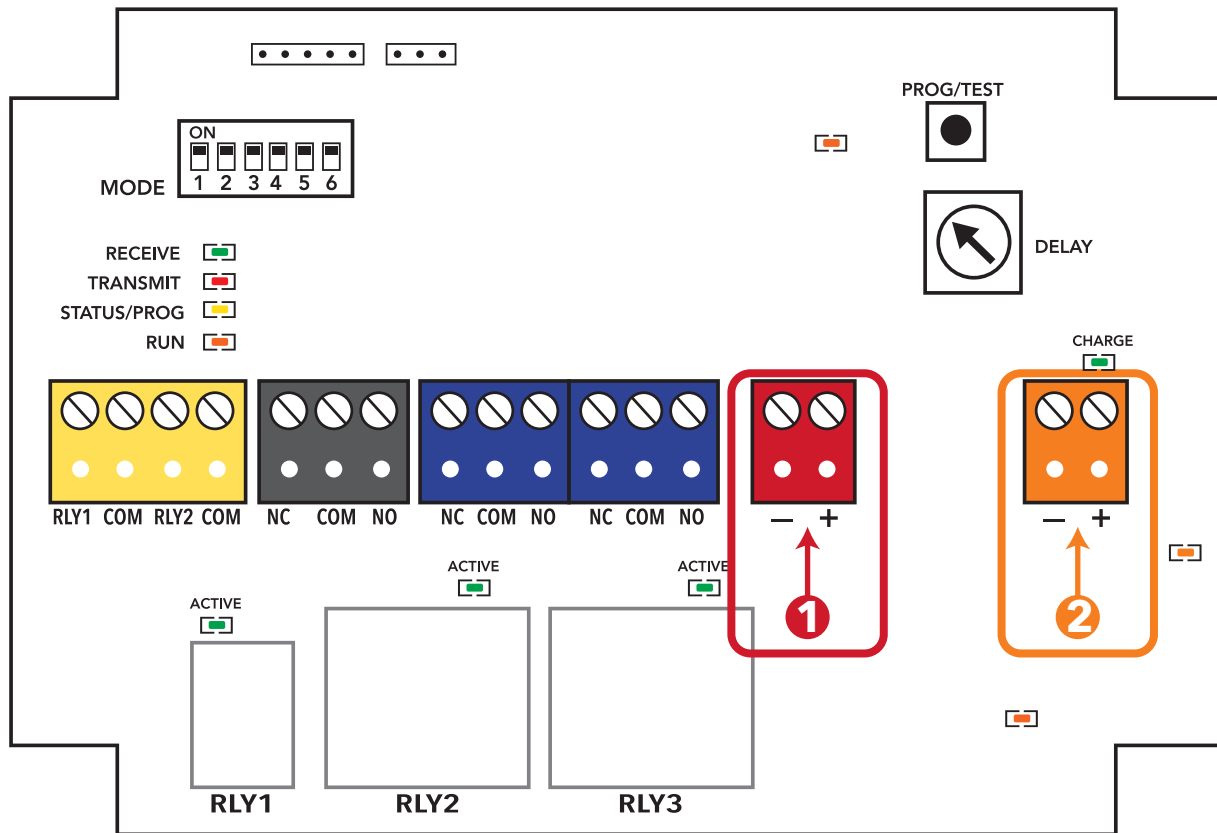
- 2** **TRANSMIT LEVEL**  
Clockwise for more power when transmitting.  
Counterclockwise for less power when transmitting.  
(Battery life will vary based on transmit power level set)

- 3** **MICRO-USB PORT**

### 3. POWER DETAILS

The Receiver requires 1 amp of current draw to transmit at full power.

**IMPORTANT - Receiver REQUIRES AT LEAST 1AMP POWER SUPPLY**



#### ① POWER INPUT:

**Power Input:** 12 to 24 VOLTS AC/DC. Always follow polarity when DC Power is used. **1 AMP Minimum**

#### ② BATTERY INPUT:

**Battery Input:** for 12 Volt battery.

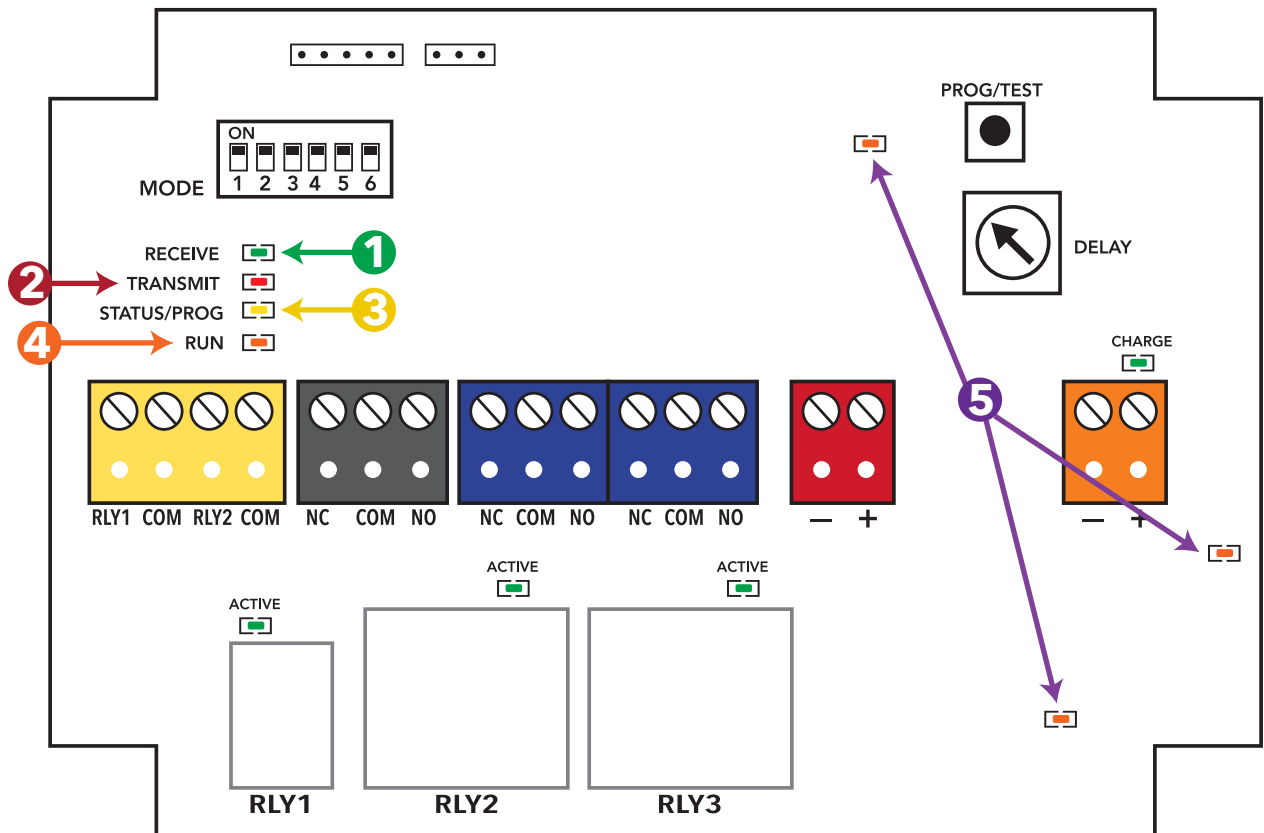
Solid Green LED = Battery charging

Momentary Flashing LED = Battery is fully charged and a trickle/conditioning charge is occurring

## 4. LED INDICATORS

### STATUS LEDs:

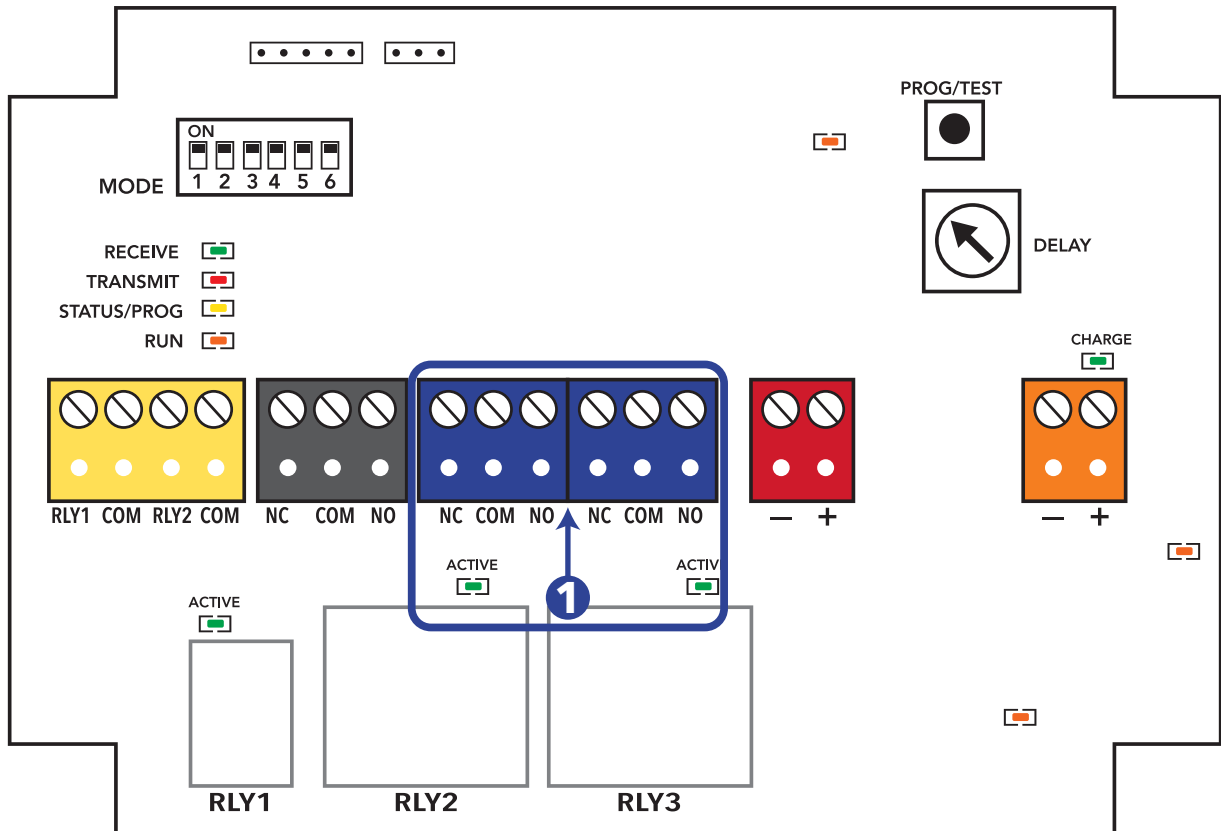
- 1 RECEIVE** - flashes GREEN momentarily when a valid radio transmission is received.
- 2 TRANSMIT** - flashes RED momentarily when the unit transmits a packet as a result of an Relay Input change event or handshake.
- 3 STATUS/ PROG** - flashes yellow patterns indicating status of the unit: pairing, error, etc.
- 4 RUN** - flashes ORANGE 1 second ON and 1 second OFF indicating the microprocessor is running.
- 5 POWER LED** - Glows solid orange when power is present. 5 volt relay supply, 3.3 volt logic supply, and VPA 3.6 volt power amplifier supply.



# 5. RELAY DIAGRAM AND WIRING

## 1 RELAY OUTPUTS

**Relay Outputs** - The Receiver come with 2-relay outputs. Both relay 1 and relay 2 can be used as momentary or latching. Please refer to DIP switch settings on page 8 for more information. The relay state is shown with the green active LED above the relay.



## 6. DIP SWITCHES

### 1 MODE SWITCHES

#### Single Receiver -> Dual Relay Mode

Assigns a group of Receiver's to RELAY 1 and RELAY 2 (if dipswitch 6 is ON). RELAYS 1 and 2 can be set momentary or latching with dipswitch 5.

		OFF	ON	NOTE
1	Pairing Mode	Pairing Mode OFF	Pairing Mode ON	
2	Rec'vr/Xmitter Mode	Rec'vr to Rec'ver	Rec'vr to Xmitter	
3	Dual Xmitter's	Single Xmitter	Dual Xmitter's	Valid when Switch 2=ON
4	NOT USED	NOT USED	NOT USED	
5	Momentary/Latching	Momentary	Latching	Valid when Switch 2=ON
6	Dual Relay	Singal Relay	Dual Relay	Valid when Switch 2=ON

#### To PAIR Transmitter's to Receiver:

1. Set dipswitch 1 to ON on the Receiver and Transmitter
2. Press the transmit button on the Receiver and observe the STATUS light on the Receiver flashing 3 times.
3. Turn dipswitch 1 OFF on both units for normal operation. Switches 5 and 6 function according to page 8 of Receiver Manual

#### Dual Transmitter -> Dual Relay Mode

Assigns a group of Transmitter's to RELAY 1 and a separate group of Transmitter's to RELAY 2 when Dipswitch 2 and 3 are ON. RELAYS 1 and 2 can be set momentary or latching with dipswitches 5 and 6, respectively.

To PAIR Transmitter's to RELAY 1:

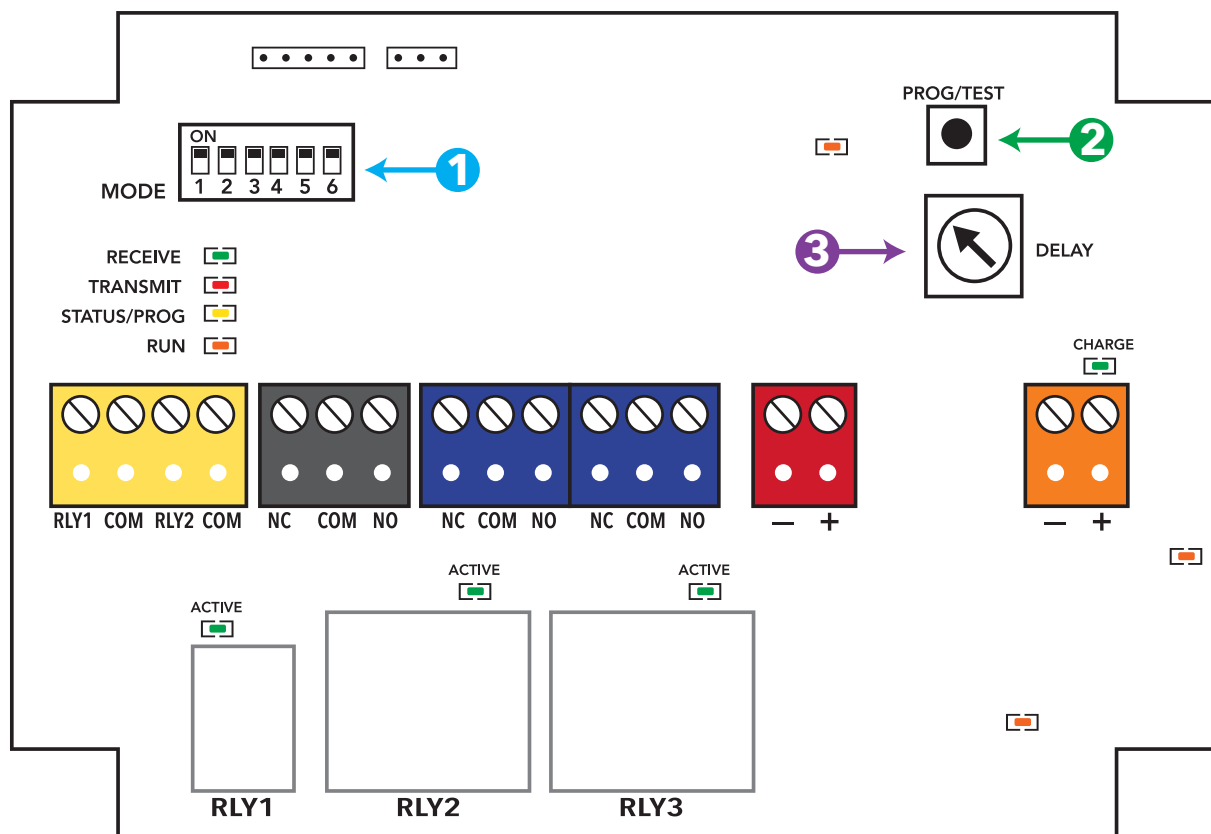
1. Set dipswitch 1 to ON and set dipswitch 4 to OFF on the Receiver.
2. Set dipswitch 1 to ON on the Transmitter.
3. Press the transmit button on the Transmitter and observe the STATUS light on the Receiver flashing 3 times.
4. Turn dipswitch 1 OFF on both units for normal operation.

		OFF	ON	NOTE
1	Pairing Mode	Pairing Mode OFF	Pairing Mode ON	
2	Rec'vr/Xmitter Mode	Rec'vr to Rec'ver	Rec'vr to Xmitter	
3	Dual Xmitter's	Single Xmitter	Dual Xmitter's	Valid when Switch 2 & 3=ON
4	Pair Rely1/Relay2	Pair to Relay 1	Pair to Relay 2	Valid when Switch 2 & 3=ON
5	Momentary/Latching 1	Relay 1 Momentary	Relay 2 Latching	Valid when Switch 2 & 3=ON
6	Momentary/Latching 2	Relay 1 Momentary	Relay 2 Latching	Valid when Switch 2 & 3=ON

#### To PAIR Transmitter's to RELAY 2:

1. Set dipswitch 1 to ON and set dipswitch 4 to ON.
2. Set dipswitch 1 to ON on the Transmitter.
3. Press the transmit button on the Transmitter and observe the STATUS light on the Receiver flashing 3 times.
4. Turn dipswitch 1 OFF on both units for normal operation.





## 7. BATTERY BACKUP

12 Volt Sealed Lead Acid (SLA) battery only. Solid GREEN LED indicates battery charging. Momentarily flashing GREEN LED indicates battery is charged and a trickle/conditioning charge is occurring.

## 8. PAIRING UNIT IN THE FIELD

To program turn DIP switch 1 to the on position in both the Receiver and Transmitter . With both DIP switches turned on press the Transmitter transmit button.

If done correctly the Receiver will flash yellow status LED 3 times and Receiver will flash green LED 3 times.

## 9. TROUBLESHOOTING

### **Transmitter & Receiver units are not communicating:**

- 1 - Check the Run LED on the Receiver. Normal operation will be orange LED flashing once a second.
- 2 - Press the button on the Transmitter . When pressed, the Transmitter will send a radio test packet and the RED TRANSMIT LED will illuminate. If the paired Receiver is online, it will acknowledge with a radio test packet – indicated by a momentary flash on the green receive LED.





### **If you do not see the transmit and receive LED lights activate:**

- 1 - Power cycle the Receiver unit.
- 2 - Move the Receiver unit to a higher location and avoid mounting on/in metal objects

### **If you are not getting the desired range between the Transmitter and Receiver unit:**

- 1 - Ensure the Receiver has at least 1-amp of power dedicated to itself.
- 2 - Ensure the Transmitter is fully charged.
- 3 - Move the Receiver unit to a higher location - and avoiding mounting in/on metal objects
- 4 - Check that the potentiometer on the Transmitter board is turned to full power. (All the way to the left)

#### **XRE LED GUIDE**

RECEIVE	
TRANSMIT	
STATUS/PROG	
RUN	

## WARRANTY

The warranty period of this product is 24 months, beginning from the manufacturing date. During this period, if the product does not operate correctly, due to a defective component, the product will be repaired or replaced at the sole discretion of American Armor Products. This warranty does not extend to the product casing which can be damaged by conditions outside of the control of American Armor Products.

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