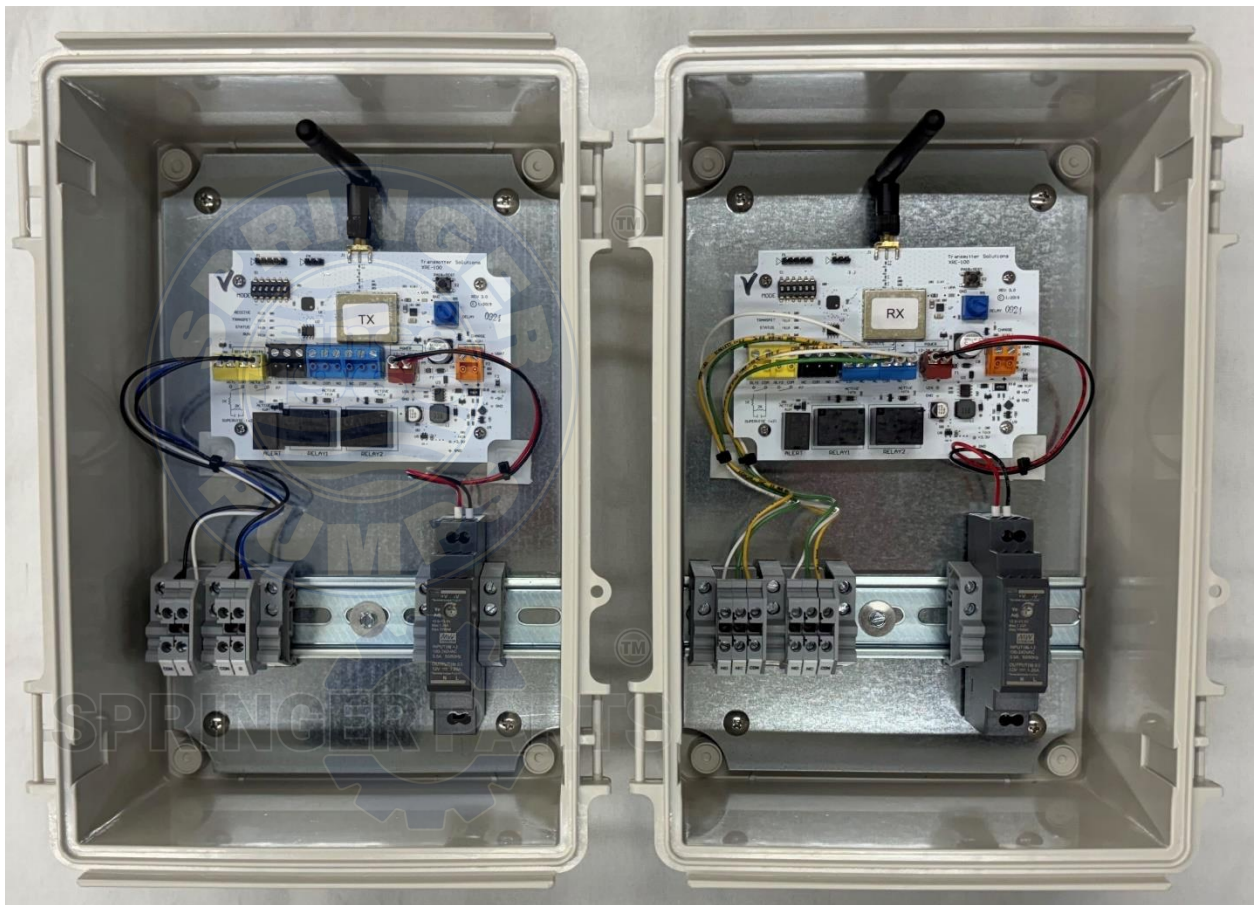


Compact Short Range System (OTO)



FCC Regulatory Statement

FCC ID: 2ASPOXRE100A: This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT! Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference in radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

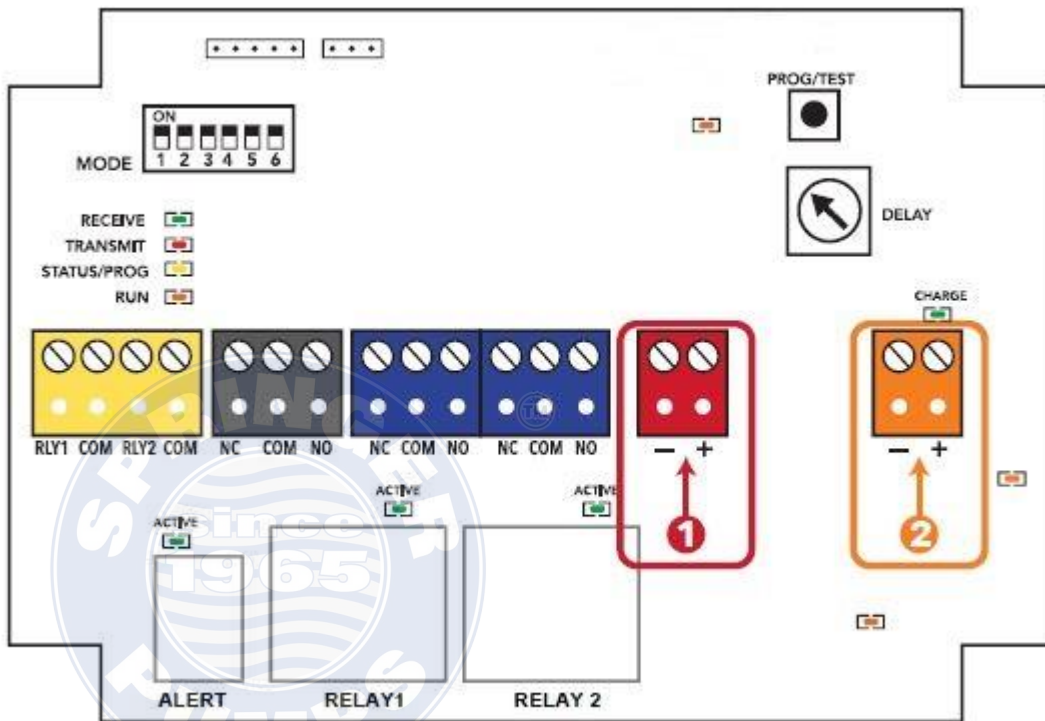
(Example – use only shielded interface cables when connecting to computer or peripheral devices).

The warranty period of this product is 12 months, beginning from the manufacturing date.

During this period, if the product does not operate correctly, due to defects in workmanship and/or materials, the product will be repaired or replaced at the sole discretion of Remote Control Technology.

SPECIFICATIONS

- Power Input: 120-240VAC
- Relays: 10A 240 VAC/ 30VDC
- 50mA Draw (idle)
- 1A Draw (transmit)
- Range: 1/4 mile (approximate)
- Minimum / Maximum Temperature Range:
 - -40°F to 185°F (-40°C to 85°C)
- Security Encryption: AES



1. POWER INPUT:

Power Input: 120-240VAC into provided 12VDC power supply (mounted on DIN rail)

2. BATTERY BACKUP INPUT:

Battery Input: for 12 Volt Sealed Lead Acid (SLA) battery only

- Solid Green LED = Battery charging
- Momentary Flashing LED = Battery is fully charged and a trickle/conditioning charge is occurring

LED INDICATORS

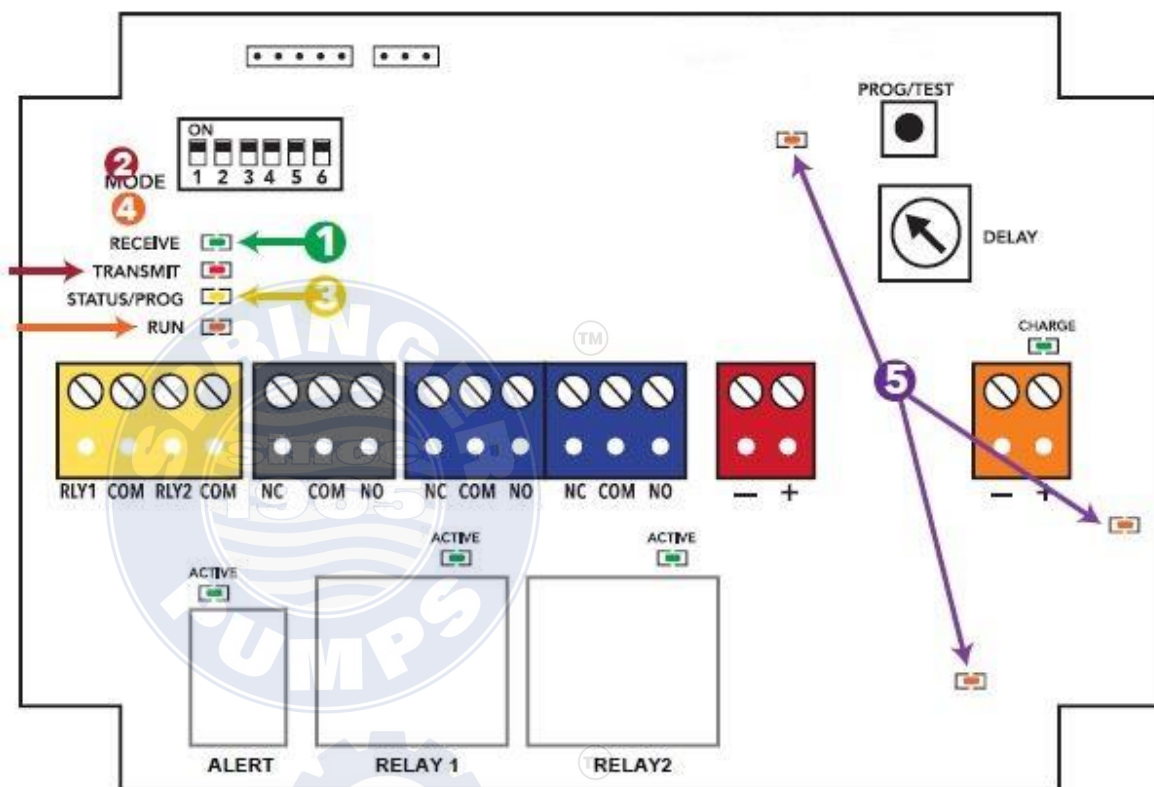
RECEIVE - Flashes GREEN momentarily when a valid radio transmission is received.

TRANSMIT - Flashes RED momentarily when the unit transmits a packet because of an Input change event or handshake.

STATUS/ PROG - Flashes yellow patterns indicating status of the unit: pairing, error, etc.

RUN - Flashes ORANGE 1 second ON and 1 second OFF indicating the microprocessor is running.

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.



RELAY DIAGRAM AND WIRING

TRANSMITTER INPUTS

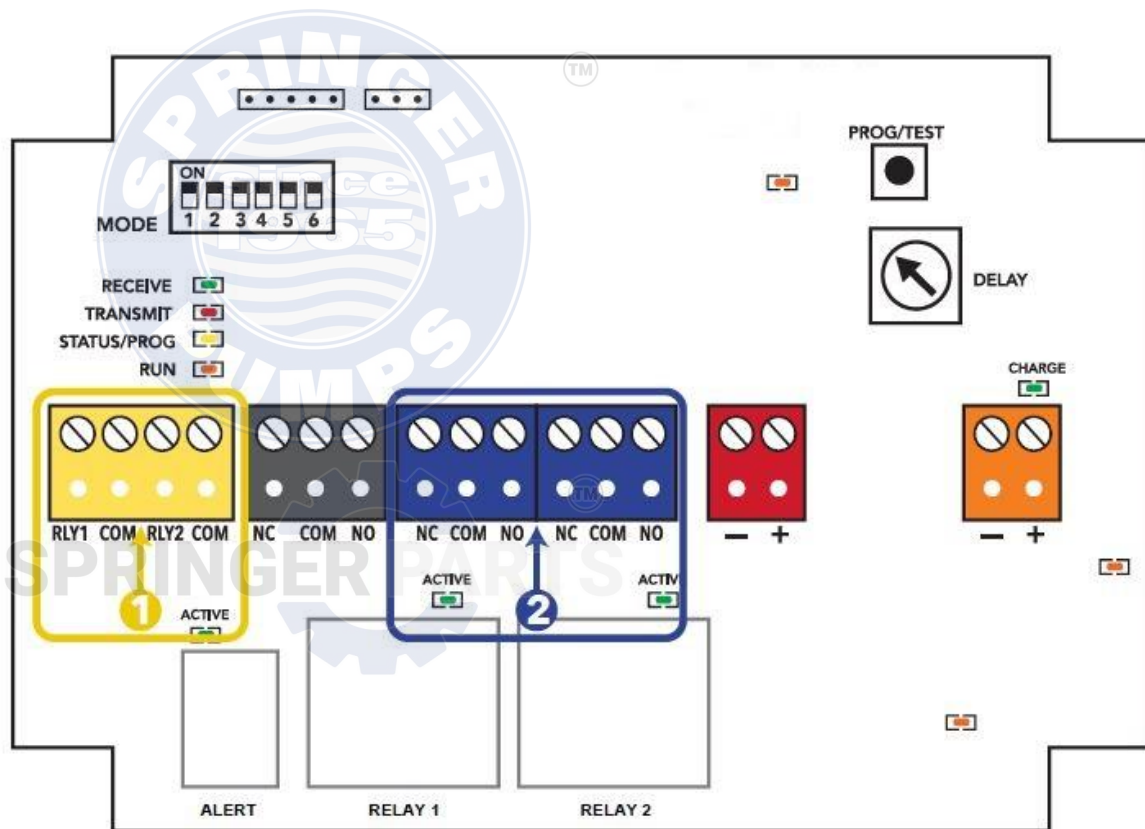
Inputs - The **transmitter** comes with (2) dry contact inputs. Connect DRY closure from devices (such as float switch, pressure switch, manual switch, relay output, etc.) A closure on RLY1/COM input will result in a closure on RLY1 (NC/COM/NO) of the receiver. A closure on RLY2/COM input will result in a closure on RLY2 (NC/COM/NO output) of the receiver.

RECEIVER OUTPUTS

Outputs - The **receiver** comes with (2) SPDT relay outputs. Each output follows dry contact inputs from the transmitter. When Inputs 1 and/or 2 on the transmitter are closed, relay Outputs 1 and/or 2 on the receiver are energized and provide continuity between COM/NO respectively. This relay state is also indicated by the GREEN ACTIVE LED above each relay.

NOTE: The “Alert” relay (bottom left in diagram below) will activate if the receiver loses contact with the transmitter for longer than 90 seconds.

The **black terminal block** is for the “Alert” relay output and is located in between the **yellow “Input” terminal blocks** and the **blue “Output” terminal blocks**.



MODES OF OPERATION & DIP SWITCH SETTINGS

ONE-TO-ONE: Consists of two units only (one “Transmitter” & one “Receiver”).

In this mode, functionality is in one direction only, from a single “Transmitter” to a single “Receiver”.

Inputs 1 & 2 on the transmitter will activate relay Outputs 1 & 2 on all receivers simultaneously.

Transmitter (One)

DIP Switch #5 = ON

Receiver (One)

DIP Switch #6 = ON

ADDITIONAL DIP SWITCH SETTINGS

DIPSWITCH 1: Used for pairing/ programming.

When ON the unit will pair to the units. To do this both units must have DIPSWITCH 1 ON.
Press the Program/Test button on either unit.

DIPSWITCH 6: Is used to configure receiver relay output behavior if communications are lost.

If DIPSWITCH 6 = OFF, the relays remain in the same state as they were before lost comms.

If DIPSWITCH 6 = ON, relays will deactivate with lost comms after 90 seconds*. Lost comms is determined by 3 consecutive SYNC transmissions from the other unit. SYNC transmissions are every 30 seconds, 90 seconds total.

***factory default setting...MAKE SURE RECEIVER DIP SWITCH #6 IS IN THE “ON” POSITION!**

PAIRING THE UNITS IN THE FIELD

NOTE: ONLY (2) TWO UNITS SHOULD BE POWERED-UP AT A TIME DURING PROGRAMMING...ALL OTHER UNITS SHOULD BE POWERED OFF!!!

1) Flip DIPSWITCH 1 to ON on both units

2) Press the PROG/TEST button on the:

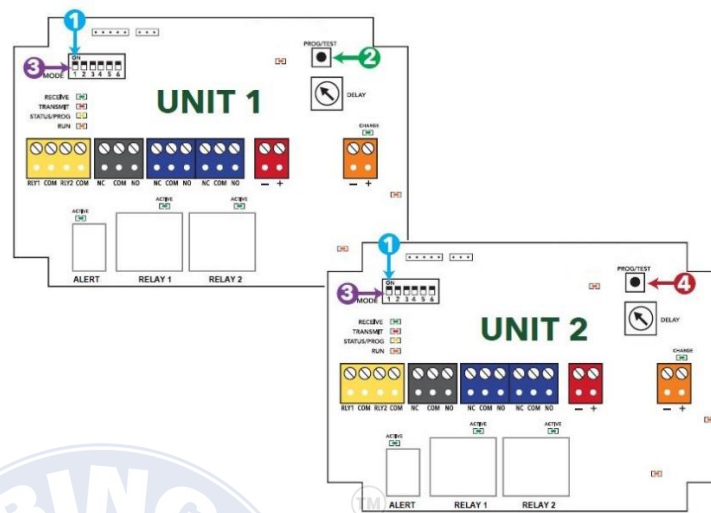
- One-to-One = “Transmitter”

NOTE: Observe the STATUS/PROG LED flashing.

3) Flip DIPSWITCH 1 to OFF on both units.

4) Press PROG/TEST on the designated “Transmitter(s)” and observe that the TRANSMIT and RECEIVE LEDs are operating normally.

Pairing procedure overwrites any previous units. For example, if replacing a unit simply follow the above procedure with the respective existing and replacement unit(s).



TROUBLESHOOTING

Units are not communicating (see page 4 for LEDs):

1. Check the “RUN” LED. Normal operation will be orange LED flashing once per second.
2. Press the red “PROGRAM” button. When pressed, the radio will send a test packet and the red “TRANSMIT” LED will illuminate. If the paired radio is online, it will acknowledge with its own test packet, confirmed on the original radio by a green “RECEIVE” LED.

If you do not see the “Transmit” and “Receive” LEDs illuminate:

1. Power cycle both radios.
2. Move the units to a higher location.

If you are not getting the desired range:

1. Ensure that both units are powered by their own dedicated power supply.
2. Ensure that 1A of power draw is available to each device during transmission
3. Move the units to a higher location.

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