

# **#70100HHS Mid-Range Light Duty Handheld System**



## **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 to 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).

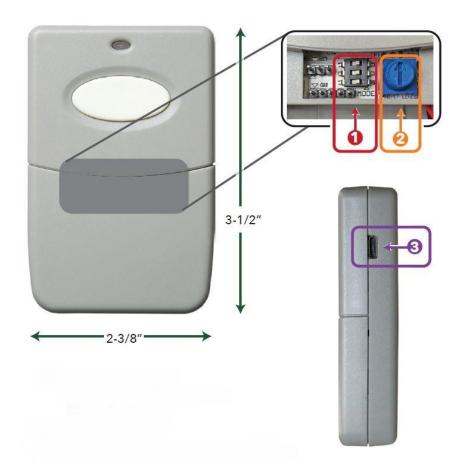
## TRANSMITTER SPECIFICATIONS

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

## **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

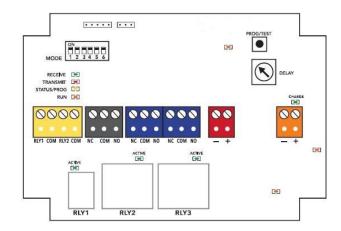
POWER INPUT: 12 to 24 VOLTS AC/DC. - 1 AMP Minimum

Always follow polarity when DC power is used.

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.

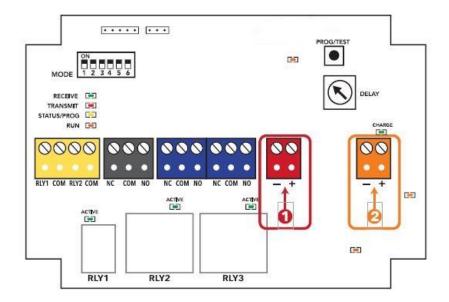




## **POWER DETAILS**

Each unit (Base and Remote) need 1 amp of current draw to transmit at full power.

**IMPORTANT - UNITS REQUIRE AT LEAST 1 AMP 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 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**

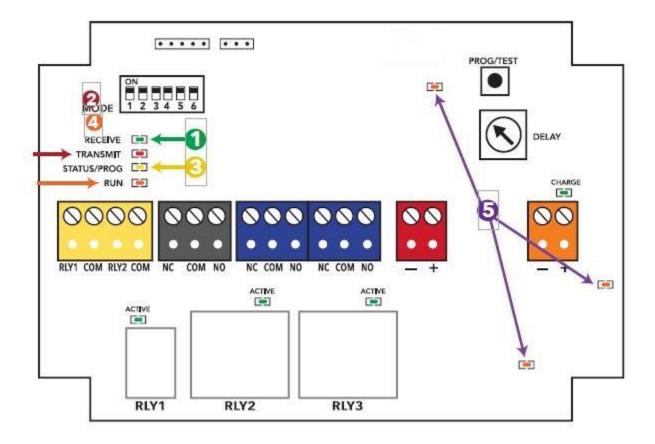
**RECEIVE** - Flashes GREEN momentarily when a valid radio transmission is received.

**TRANSMIT** - Flashes RED momentarily when the unit transmits a packet as a result of a Relay 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.



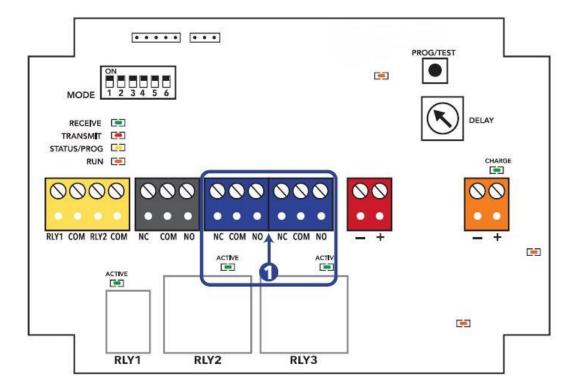
## **RELAY DIAGRAM AND WIRING**

#### **RELAY OUTPUTS**

The receiver come with 2-relay outputs.

However, for a one transmitter/one receiver configuration, only Relay #1 will be used.

The relay state is shown with the green active LED above the #1 relay.

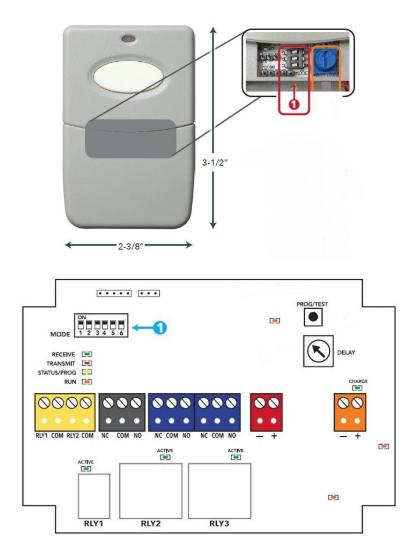


## **DIP SWITCHES**

#### To PAIR a handheld transmitter to a receiver:

- Set DIPSWITCH 1 to ON on the handheld transmitter (inside battery compartment) and on the receiver
- Press the button on the handheld transmitter and observe the STATUS light on the receiver flashing 3 times.
- Turn dipswitch 1 OFF on both units for normal operation.

### NOTE: All DIPSWITCHES should be set to the OFF position for normal operation.



## **TROUBLESHOOTING**



#### Handheld transmitter & receiver are not communicating:

- Check the Run LED on the receiver. Normal operation will be orange LED flashing once a second.
- Press the button on the handheld transmitter. When pressed, the handheld 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 on the green receive LED on the
  handheld transmitter.

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

- Power cycle the receiver.
- Move the receiver to a higher location.

#### If you are not getting the desired range:

- Ensure the receiver has at least 1-amp of power dedicated to itself.
- Ensure the handheld transmitter is fully charged.
- Move the receiver unit to a higher location.
- Check that the potentiometer on the handheld transmitter board is turned to full power (all the way to the left).

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.

## **NOTES:**

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# Other reliable products from Remote Control Technology



## **Stationary Solutions**

Ranging from Short to Long Range Wireless Remote Control Systems. Learn how our solutions can help your company save time and money.

#### **Handheld Solutions**

Remote Control Technology has designed and manufactured custom wireless applications for a number of Fortune 500 companies.

#### **Irrigation Control**

Since 1982, Remote Control Technology has taken the lead in RF radio frequency wireless remote controls for irrigation controllers.

At Remote Control Technology, we are committed to quality and service.

With nearly 40 years of experience, we manufacture and sell the highest quality wireless control systems in the industry.