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# PRODUCT INFORMATION BULLETIN

## AIR-EAGLE® SR 2.4 GHz RF Receiver MODEL 38HC-2000

### DESCRIPTION

The AIR-EAGLE SR is an RF system designed for short to medium range wireless remote control of electrical apparatus in a variety of industrial applications. Systems can consist of any number of receivers and handheld or contact input transmitters working together. This receiver is equipped with 3 independent relays that can switch 20 amps @ 120VAC or 30VDC. The relays are user programmable for momentary or toggle/latching operation and can be directly interfaced with the customer's equipment or P.L.C. Eight user selectable frequencies allow multiple systems to be used in the same area. Capable of receiving remote signals transmitted from up to 600 feet away, the Air-Eagle SR Receiver utilizes spread-spectrum technology and provides the utmost in security and reliability.

### APPROVALS

|                     |               |
|---------------------|---------------|
| United States (FCC) | OUR-XBEEPRO   |
| Canada (IC)         | 4214A-XBEEPRO |
| Europe (CE)         | ETSI          |

### APPLICATIONS

Doors, gates, barriers, tail gates, electrically controlled hydraulic valves, propane shut off controls, winches, anchor lifts, lights, sprinkling systems, movie screens, curtains, news weather screens, alarm systems, skeet throwers, saw mill applications, grain or aggregate chutes, conveyor belts, boat lifts, and more.

### INSTALLATION

DISCONNECT AC Power from all equipment before installation.

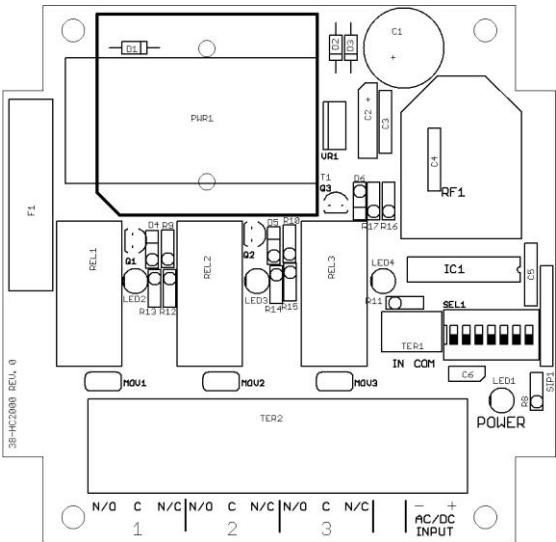
1. Mount the AIR-EAGLE SR RECEIVER in a convenient location.
2. Install antenna. The unit has an antenna connector located on the right side on the enclosure. Attach the supplied portable antenna to this connector.
3. Connect supplied power input cable to your external power source.

### TERMINAL STRIP WIRING

| 1            | 2          | 3            | 4            | 5          | 6            | 7            | 8          | 9            | 10       | 11               | 12           |
|--------------|------------|--------------|--------------|------------|--------------|--------------|------------|--------------|----------|------------------|--------------|
| N/O Relay #1 | C Relay #1 | N/C Relay #1 | N/O Relay #2 | C Relay #2 | N/C Relay #2 | N/O Relay #3 | C Relay #3 | N/C Relay #3 | Not Used | 120VAC (Neutral) | 120VAC (Hot) |



### CONTROLS AND INDICATORS



|                |  |
|----------------|--|
| POWER LED      | Illuminates while receiver is powered on                               |
| LED2           | Illuminates when relay #1 is energized                                 |
| LED3           | Illuminates when relay #2 is energized                                 |
| LED4           | Illuminates when relay #3 is energized                                 |
| RF1            | RF module that receives data from the remote transmitter               |
| REL1 thru REL3 | High current SPDT output control relays                                |
| SEL1           | Seven dip switches for selecting relay options and operating frequency |

# AIR-EAGLE® SR

## 2.4 GHz RF Receiver

### MODEL 38HC-2000

## RELAY & FREQUENCY SET-UP

The unit is shipped from the factory with SEL1 switches in the open positions. All three relays will operate as maintained momentary and unit is receiving commands on frequency one. If you wish to change these default settings, follow the instructions on the table below.

- 1) Remove power from unit
- 2) Remove top cover.
- 3) Select desired relay operation and/or network frequency using table below.
- 4) Reattach cover and apply power.
- 5) Programming is now complete.

### RELAY CONFIGURATION

| SEL1 SWITCH NUMBER | OPEN                         | CLOSED                |
|--------------------|------------------------------|-----------------------|
| SW1                | Relay #1 momentary (default) | Relay #1 toggle/latch |
| SW2                | Relay #2 momentary (default) | Relay #2 toggle/latch |
| SW3                | Relay #3 momentary (default) | Relay #3 toggle/latch |

**Maintained Momentary** – Relay mimics button or input – when depressed or closed, relay will be energized; when released, relay de-energizes

**Toggle Latch** – Relay changes (and holds) its state each time the corresponding button or input is depressed or closed.

|     |          |  |
|-----|----------|--|
| SW4 | NOT USED |  |
|-----|----------|--|

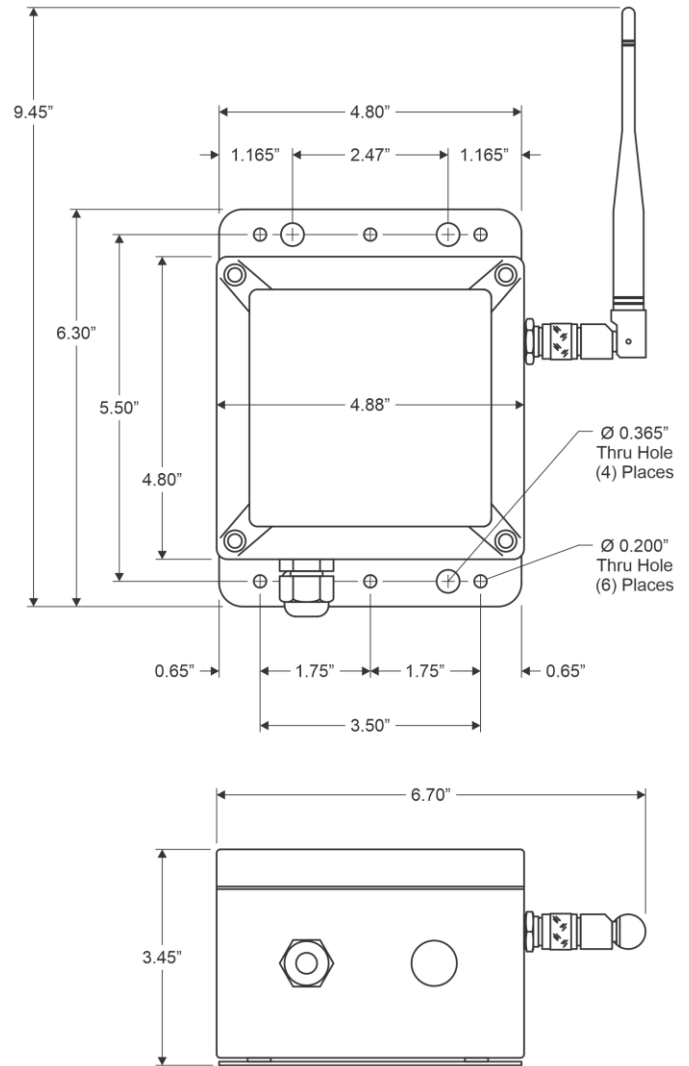
### FREQUENCY SET-UP

|                 | Network Frequency | SW5    | SW6    | SW7    |
|-----------------|-------------------|--------|--------|--------|
| SEL1<br>(SW5-7) | 1 (default)       | OPEN   | OPEN   | OPEN   |
|                 | 2                 | CLOSED | OPEN   | OPEN   |
|                 | 3                 | OPEN   | CLOSED | OPEN   |
|                 | 4                 | CLOSED | CLOSED | OPEN   |
|                 | 5                 | OPEN   | OPEN   | CLOSED |
|                 | 6                 | CLOSED | OPEN   | CLOSED |
|                 | 7                 | OPEN   | CLOSED | CLOSED |
|                 | 8                 | CLOSED | CLOSED | CLOSED |

## SPECIFICATIONS

|   |                                       |
|---|---------------------------------------|
| AC Input  | 120 VAC, 16 W, 50/60 Hz               |
| Relay Contacts  | SPDT 20 amp @ 120VAC or 30VDC         |
| Fuse Protected  | 1 amp                                 |
| Receiver Frequency  | 2.4 GHz Spread Spectrum               |
| Receiver Range  | Up to 600 Feet                        |
| Note: Range figures are estimates, based on free-air terrain with limited sources of interference. Actual range will vary based on transmitting power, orientation of transmitter and receiver, height of transmitting antenna, height of receiving antenna, weather conditions, interference sources in the area, and terrain between receiver and transmitter, including, but not limited to, indoor and outdoor structures such as walls, metal objects, trees, buildings, hills, and mountains. |                                       |
| Receiver Channels   | Eight independent network frequencies |
| Operating Temperature   | -40° F to +185° F                     |
| Enclosure   | Polycarbonate, IP66 (NEMA 4)          |
| Weight  | Approx 2 lbs.                         |

## DIMENSIONS



## ACCESSORIES

| Standard Antenna (Included):   |                                  |
|--|----------------------------------|
| 2.4GHz TNC "Rubber Duck" Antenna   | 49-1201                          |
| High Gain Antennas –<br>Used to help achieve max range in both non line of sight and line of sight applications. - Contact BWI Eagle for recommendations |                                  |
| 2.4GHz Thru-Hole Mount Omni Directional Antenna  | 49-2201                          |
| 2.4GHz Magnet Mount Omni Directional Antenna   | 49-2202                          |
| 2.4GHz Omni Directional Antenna  | 49-3201                          |
| 2.4GHz Yagi Antenna  | 49-3202                          |
| High Quality Coax Cables –<br>Used to connect external high gain antennas to control unit  |                                  |
| Flex Coax Cable w/Connectors – Available in 5', 15', 25', 30', 40', 60', 80', 100' Lengths   | 49-4000-XX<br>(XX = # of Feet)   |
| Bulkhead Extensions –<br>Used to provide an external antenna connection when mounting control unit inside another enclosure                              |                                  |
| TNC Male to TNC Bulkhead Cable Assembly - Available in 2', 4', 7' Lengths  | 49-5004-X-ISO<br>(X = # of Feet) |

**AIR-EAGLE® SR**

**2.4 GHz RF Receiver**

**MODEL 38HC-2000**

## LIMITED WARRANTY STATEMENT

BWI Eagle Inc. warrants the Air-Eagle Remote Control System, if properly used and installed, will be free from defects in material and workmanship for a period of 1 year after date of purchase. Said warranty to include the repair or replacement of defective equipment. This warranty does not cover damage due to external causes, including accident, problems with electrical power, usage not in accordance with product instructions, misuse, neglect, alteration, repair, improper installation, or improper testing. This limited warranty, and any implied warranties that may exist under state law, apply only to the original purchaser of the equipment, and last only for as long as such purchaser continues to own the equipment. This warranty replaces all other warranties, express or implied including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. BWI Eagle makes no express warranties beyond those stated here. BWI disclaims without limitation, implied warranties of merchantability and fitness for a particular purpose. Some jurisdictions do not allow the exclusion of implied warranties so this limitation may not apply to you. To obtain warranty service, contact BWI Eagle for a return material authorization. When returning equipment to BWI Eagle, the customer assumes the risk of damage or loss during shipping and is responsible for the shipping costs incurred.

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