



238 Pillow Street
Butler, PA 16001
724-283-4681
724-283-5939 (fax)
www.bwieagle.com

PRODUCT INFORMATION BULLETIN

AIR-EAGLE® SR 2.4 GHz RF Receiver MODEL 38-6000-DC – Rev.3

DESCRIPTION

The AIR-EAGLE SR is an RF system designed for wireless remote control of electrical apparatus in a variety of industrial applications. This function receiver is equipped with high current SPDT relays and is user-programmable for up to 128 digital addresses and eight network frequencies to allow multiple transmitters and receivers to operate simultaneously in the same area without interference. Capable of receiving remote signals transmitted from up to 300 feet away (with the SR Transmitter) or up to 1200 feet away (with the SR Plus Transmitter), the model 38-6000-DC utilizes spread-spectrum technology and provides the utmost security and reliability even in the noisiest RF environments.

APPROVALS

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

APPLICATIONS

Designed by request for railroading applications, this unit has contact input terminals that allow the operator to switch frequencies and "listen" to different transmitters at any time.

INSTALLATION

DISCONNECT DC 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 DC power and control to the proper terminals in your control circuit.



Dimensions (with mounting plate) 6.3" L x 4.8" W x 4.3" H

TERMINAL STRIP WIRING – BOTTOM PCB

| | | | | | |
|---|--------------|----|--------------|----|-------------------|
| 1 | N/O Relay #1 | 7 | N/O Relay #3 | 13 | (-) 9-36VDC INPUT |
| 2 | C Relay #1 | 8 | C Relay #3 | 14 | (+) 9-36VDC INPUT |
| 3 | N/C Relay #1 | 9 | N/C Relay #3 | | |
| 4 | N/O Relay #2 | 10 | N/O Relay #4 | | |
| 5 | C Relay #2 | 11 | C Relay #4 | | |
| 6 | N/C Relay #2 | 12 | N/C Relay #4 | | |

TERMINAL STRIP WIRING –TOP PCB

| INPUTS 1 thru 3 <i>USED TO SET NETWORK FREQUENCY</i> | Network Address | INPUT 1 Terminals 1 and 2 | INPUT 2 Terminals 3 and 4 | INPUT 3 Terminals 5 and 6 |
|---|-----------------|---------------------------------|---------------------------------|---------------------------------|
| | 1 | 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 |

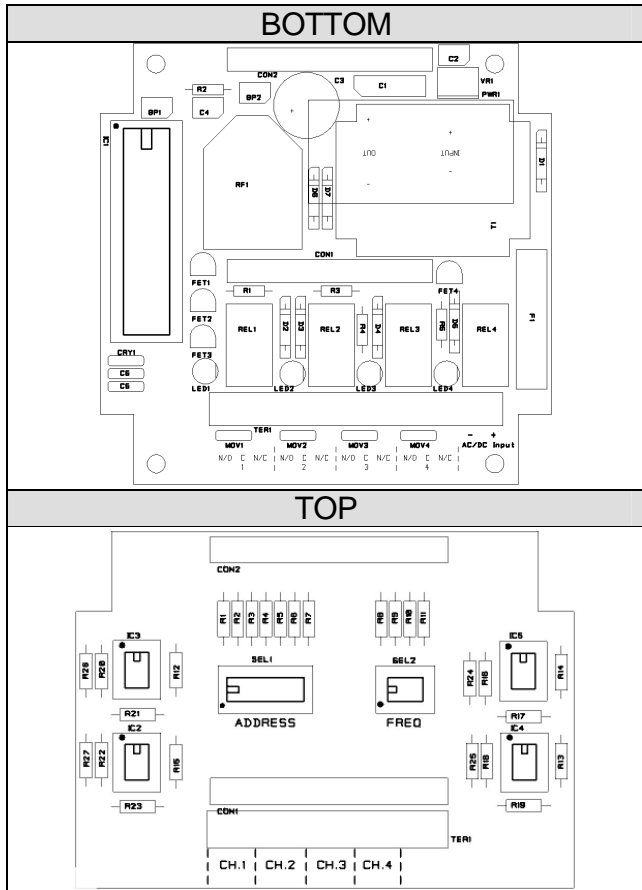
Note - INPUT TERMINALS 7 thru 10 are not used on this model

AIR-EAGLE® SR

2.4 GHz RF Receiver

MODEL 38-6000-DC – Rev.3

CONTROLS AND INDICATORS



| | |
|-----------------|---|
| LED1 – LED4 | Will be illuminated when the corresponding relay is energized |
| Inputs 1 thru 4 | Four normally open dry contact inputs |
| REL1 thru REL4 | Four SPDT output control relays |

SPECIFICATIONS

| | |
|--|-------------------------------------|
| DC Input | 9 – 36 VDC @ 10 Watts |
| Relay Contacts | SPDT 5 amp @ 120 VAC or 50 VDC |
| Fuse Protected | 1 amp |
| Receiver Range – Dependant upon transmitter – see below: | |
| Using 38 Series TX | Approximately 300 feet |
| Using 36 Series TX | Approximately 1200 feet |
| Receiver Frequency | 2.4 GHz Spread Spectrum |
| Receiver Coding | 128 Digital Addresses |
| Receiver Channels | 8 Independent Network Frequencies |
| Antenna Connection | TNC Bulkhead |
| Enclosure | Polycarbonate / NEMA 4, 4x, 12 + 13 |
| Operating Temperature | -40° F to +185° F |

DIGITAL ADDRESS & FREQUENCY SET-UP

Address: The unit is shipped from the factory with SEL1 switches in the open positions (Digital Address = "0") If using this receiver with a *handheld* transmitter, this setting must **NOT BE CHANGED**. If using this receiver with a contact input transmitter, this setting can be changed by the user in any combination **but must match the transmitter that is set up to communicate with this receiver**.

Frequency: These settings do not need to be changed if using the inputs on the top PCB to change frequencies.

- 1) Remove top cover.
- 2) Select desired address and/or network frequency
- 3) Move SW4 on SEL2 to the "CLOSED" position. Keep switch in the closed position for at least one second, then return to the "OPEN" position.
- 4) Programming is now complete. Replace top cover.

Note – Selected address and frequency settings will be maintained, in the internal flash memory, even if power is removed from unit. The above procedure needs to be performed only if *changing digital address and/or network frequency*

| | | | | |
|--|--|--------|-------------|--------|
| SEL1 (ADDRESS) | Seven dip switches for selecting digital address of this transmitter (Maximum of 128 combinations) | | | |
| SEL 2 (SW 1-3): (NETWORK FREQUENCY) | Network Address | SW1 | SW2 | SW3 |
| | 1 | 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 | |
| SEL2 (SW4) | Normal Operation | | Programming | |
| | OPEN | | CLOSED | |

REPLACEMENT PARTS & ACCESSORIES

| | |
|---|--------------------------------|
| PC Board (Main) | 38-6002-DC |
| Standard Antenna (Included): | |
| 2.4GHz TNC Portable Antenna (For distances up to 1200 feet*) | 49-1201 |
| Optional Antennas and Accessories – Used to increase range in both non line of sight and line of sight applications. - Contact BWI Eagle for recommendations | |
| 2.4GHz Thru-Hole Mount Mobile Antenna | 49-2201 |
| 2.4GHz Magnetic Mount Mobile Antenna | 49-2202 |
| 2.4GHz Omnidirectional Antenna | 49-3201 |
| 2.4GHz 13dB Yagi Antenna | 49-3202 |
| Flex Coax Cable w/Connectors – Connects external antenna(s) to base unit(s). | 49-4000-XX (XX = # of Feet) |
| Inline Lightning Arrestor | 49-5002 |
| * = Line of Sight | |

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.