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# PRODUCT INFORMATION BULLETIN

## AIR-EAGLE® SR 2.4 GHz RF Receiver 4 Latching Relays MODEL 38-2050-FB-DC

### DESCRIPTION

The AIR-EAGLE SR is an RF system designed for medium range wireless remote control of electrical apparatus in a variety of industrial applications. The model 38-2050-FB was designed specifically to work with the 36-4000-4B-CFB and will send a confirmation signal back to the transceiver when the transmission is received. This unit provides two latching relays that can be directly interfaced with the customer's equipment or P.L.C., and has eight user-programmable frequencies to allow multiple systems to operate in the same area. Capable of receiving remote signals transmitted from up to 1200 feet away, model 38-2050-FB 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

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.

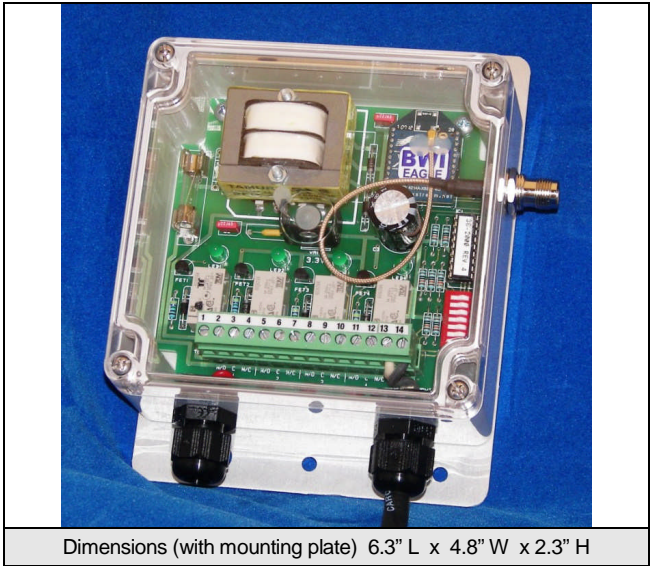
### INSTALLATION

DISCONNECT DC Power from all equipment before installation.

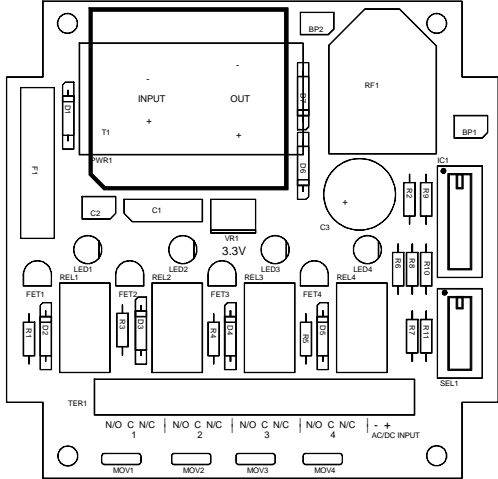
1. Mount the AIR-EAGLE SR RECEIVER in a convenient location.
2. Install antenna. The unit has an antenna connector located on the right side on the enclosure. Attach the supplied portable antenna to this connector.
3. Connect DC power and control to the proper terminals in your control circuit.

### TERMINAL STRIP WIRING

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		



### CONTROLS AND INDICATORS



LED1	Illuminates when relay #1 is energized
LED2	Illuminates when relay #2 is energized
LED3	Illuminates when relay #3 is energized
LED4	Illuminates when relay #4 is energized
RF1	RF module that receives data from the remote transmitter
REL1 thru REL4	Four SPDT output control relays
SEL1	Seven dip switches for selecting relay options and operating frequency

# AIR-EAGLE® SR

2.4 GHz RF Receiver

4 Latching Relays

**MODEL 38-2050-FB-DC**

## RELAY OPERATION

Relays energize and de-energize in based on commands received from the transmitter. The LEDs continually update, indicating the current relay command being received. See table below for relay mode configuration for this receiver:

TX BUTTON DEPRESSED	RELAY OPERATED – MODE
1	Relay #1 Energizes – Latching
2	Relay #1 De-Energizes
3	Relay #2 Energizes – Latching
4	Relay #2 De-Energizes
5	Relay #3 Energizes – Latching
6	Relay #3 De-Energizes
7	Relay #4 Energizes – Latching
8	Relay #4 De-Energizes

## RELAY & FREQUENCY SET-UP

The unit is shipped from the factory with SEL1 switches in the open positions and should not be changed for the above relay operation. If you wish to change the Network Frequency default settings, follow the instructions for Frequency Set-Up on the table below.

- 1) Remove power from unit
- 2) Remove top cover.
- 3) Select desired address 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
"1"	N/A	N/A
"2"	N/A	N/A
"3"	N/A	N/A
"4"	N/A	N/A

### FREQUENCY SET-UP

SEL1 (SW4-6)	Network Address	SW4	SW5	SW6
	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

### OTHER

SEL1 (SW7)	Reserved for future use
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## SPECIFICATIONS

DC Input	9 – 36 VDC @ 10 Watts
Relay Contacts	SPDT 5 amp @ 120VAC or 50VDC
Fuse Protected	1 amp
Receiver Frequency	2.4 GHz Spread Spectrum
Receiver Range – Dependant upon transmitter – see below:	
Using 38 Series TX	Approximately 300 feet
Using 36 Series TX	Approximately 1200 feet
Receiver Channels	Four independent networks
Operating Temperature	-40° F to +185° F
Enclosure	ABS Plastic, NEMA 3, 3R, 4, 4X, 12 + 13

## REPLACEMENT PARTS & ACCESSORIES

PC Board	38-2050-FB-DC
2.4GHz Rt. Angle TNC Rubber Duck Antenna	99-ANT-0004
Air-Eagle SR Transmitter	38-1300
Air-Eagle SR Plus Transmitter	36-1300
Optional Antennas/Accessories:	
2.4GHz TNC Portable Antenna	49-1201
2.4GHz Mobile Magnetic Mount Antenna	49-2201
2 Ft. Bulkhead Assembly (Used when mounting receive inside another enclosure)	49-5004

## 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 or merchantability and fitness for a particular purpose. BWI Eagle makes no express warranties beyond those stated here. BWI Eagle 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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