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PRODUCT INFORMATION BULLETIN

AIR-EAGLE® SR 2.4 GHz RF Receiver 2 Latching Relays MODEL 38-2050 – Rev. 3

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. Each system consists of a 4-relay receiver and handheld or contact input transmitter. The integral high current relays in the receiver are user-programmable for any combination of momentary or latching operation, and can be directly interfaced with the customer's equipment or P.L.C. 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 38-2050 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 AC Power from all equipment before installation.

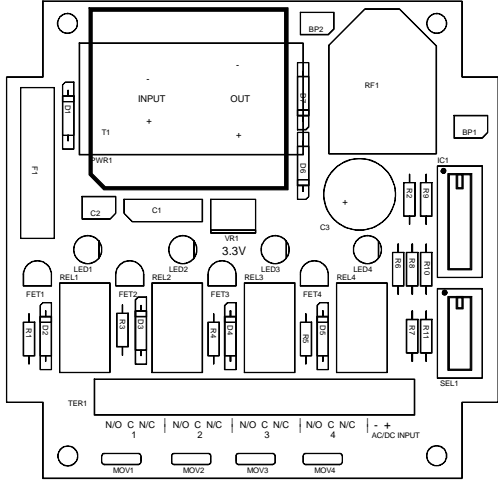
1. Mount the AIR-EAGLE SR RECEIVER in a convenient location.
2. Install antenna. The unit has an antenna connector located on the right side on the enclosure. Attach the supplied portable antenna to this connector.
3. Connect AC power and control to the proper terminals in your control circuit.

TERMINAL STRIP WIRING

1	N/O Relay #1	7	Not Used	13	120 VAC - (Neutral)
2	C Relay #1	8	Not Used	14	120 VAC - (Hot)
3	N/C Relay #1	9	Not Used		
4	N/O Relay #2	10	Not Used		
5	C Relay #2	11	Not Used		
6	N/C Relay #2	12	Not Used		



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

2 Latching Relays

MODEL 38-2050 – Rev. 3

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

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 top cover.
- 2) Select desired relay configuration and/or network frequency
- 3) Move SWITCH "7" on SEL1 to the "CLOSED" position.
- 4) Wait approximately one second then move SWITCH "7" on SEL1 back to the "OPEN" position.
- 5) Programming is now complete. Replace top cover.

Note – Selected relay configuration 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* the relay configuration and/or network frequency)

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

Frequency Selection	SEL1 – SWITCH NUMBER "5"	SEL1 – SWITCH NUMBER "6"
1	OPEN	OPEN
2	CLOSED	OPEN
3	OPEN	CLOSED
4	CLOSED	CLOSED

OTHER

SEL1 SWITCH NUMBER "7"	Normal Operation	Programming
	OPEN	CLOSED

SPECIFICATIONS

AC Input	120 VAC, 16 W, 50/60 Hz
Relay Contacts	SPDT 5 amp @ 120 VAC per channel
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
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 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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