



105 Bonnie Drive
Butler, PA 16002
724-283-4681
724-283-5939 (fax)
www.bwieagle.com

PRODUCT INFORMATION BULLETIN

AIR-EAGLE® SR PLUS 2.4 GHz RF Transmitter MODEL 36-10100-AC

DESCRIPTION

The AIR-EAGLE SR PLUS TX is an R.F. transmitter capable of sending a single dry contact input command to an Air-Eagle SR Receiver from up to 600 feet away. Any number of transmitters and receivers can be combined to create a medium-range remote control system that operates hazardous or hard-to-reach electrical apparatus from safe, convenient locations. This unit has eight user-selectable network frequencies to allow multiple systems to operate simultaneously in the same area without interference.

APPROVALS

United States (FCC)	MCQ-XBEE3
Canada (IC)	1846A-XBEE3
Europe (CE)	ETSI

INSTALLATION

DISCONNECT Power from all equipment before installation.

1. Mount the transmitter in a convenient location.
2. Install input wiring to terminal strip.
3. Install antenna onto antenna connector located on the right side on the enclosure.
4. Connect supplied power input cable to your external power source.

TERMINAL STRIP WIRING

TER 3 DRY CONTACT INPUT		TER 2 RELAY OUTPUT		TER 1 AC/DC POWER INPUT	
1	Input 1 C	1	Not Used	1	100-250 VAC
2	Input 1	2	Not Used	2	100-250 VAC
		3	Not Used	3	Ground

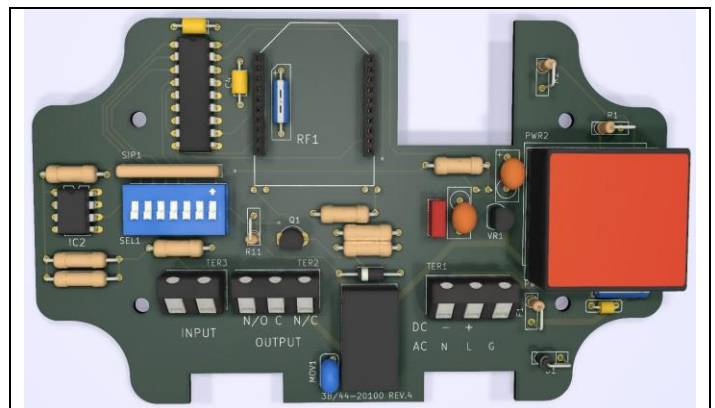
GENERAL OPERATION

A contact closure on the input transmits to energize relay 1 (or another relay as selected by the channel code transmitted) in any receiver within transmit range. The signal transmits continuously as long as the input is closed.



Dimensions (with mounting plate) 7.07L x 3.57W x 1.62H

CONTROLS AND INDICATORS



Power – LED1	Illuminates green when unit is powered
TX – LED2	Illuminates red when unit is transmitting
Relay – LED3	Not used on this model
RF1	RF module that sends data to the remote receiver
SEL1	Seven dip switches for selecting options & network frequency
TER3	Dry contact input
TER2	Relay output
TER1	Power Input

AIR-EAGLE® SR PLUS

2.4 GHz RF Transmitter

MODEL 36-10100-AC

CHANNEL CODE & FREQUENCY SET-UP

The unit is shipped from the factory with all SEL1 switches in the open positions. By default, it is transmitting Channel #1 code and operating on Frequency #1. If you wish to transmit a different channel code or and/or change the frequency, follow the instructions on the table below.

- 1) Remove power from unit then remove back cover.
- 2) Select desired channel code and/or frequency using table below.
- 3) Reattach cover and apply power. Programming is now complete.

CHANNEL SELECTION SET-UP

SEL 1 (SW1-4)	Channel Code To Be Transmitted	SW1	SW2	SW3	SW4
	1 (default)	OPEN	OPEN	OPEN	OPEN
	2	CLOSED	OPEN	OPEN	OPEN
	3	OPEN	CLOSED	OPEN	OPEN
	4	CLOSED	CLOSED	OPEN	OPEN
	5	OPEN	OPEN	CLOSED	OPEN
	6	CLOSED	OPEN	CLOSED	OPEN
	7	OPEN	CLOSED	CLOSED	OPEN
	8	CLOSED	CLOSED	CLOSED	OPEN
	9	OPEN	OPEN	OPEN	CLOSED
	10	CLOSED	OPEN	OPEN	CLOSED
	11	OPEN	CLOSED	OPEN	CLOSED
	12	CLOSED	CLOSED	OPEN	CLOSED
	13	OPEN	OPEN	CLOSED	CLOSED
	14	CLOSED	OPEN	CLOSED	CLOSED
	15	OPEN	CLOSED	CLOSED	CLOSED
	16	CLOSED	CLOSED	CLOSED	CLOSED

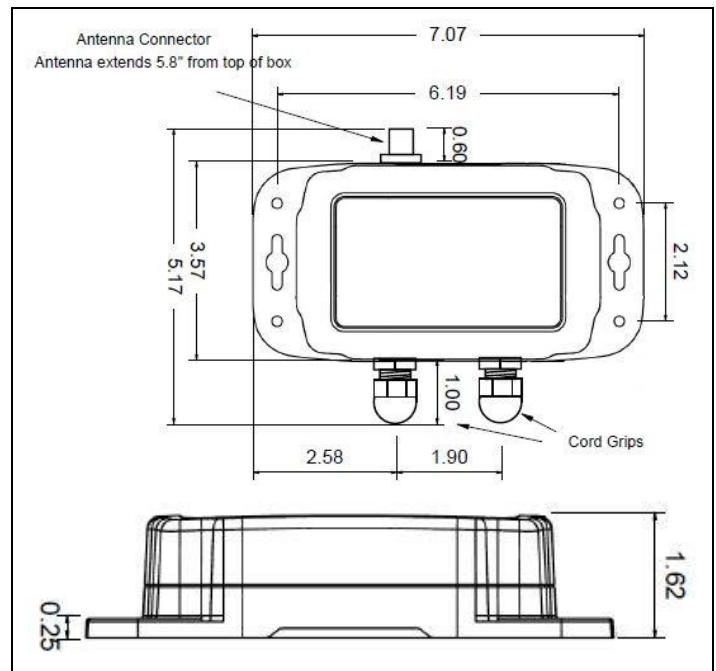
FREQUENCY SET-UP

SEL1 (SW5-7)	Network Frequency	SW5	SW6	SW7
	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

Power Input	100-250 VAC, 5 W, 50/60 Hz
Transmitter Frequency	2.4 GHz Spread Spectrum
RF Output Power	60 mW
Transmit Range	Up to 600 Feet
Note: Max 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.	
RF Networks	Eight Independent Frequencies
Antenna Connection	TNC Female Connector
Operating Temperature	-40° F to +185° F
Enclosure	Polycarbonate NEMA 4, 12, 13 – IP66
Weight	Approx 2 lbs.

DIMENSIONS



ACCESSORIES

Standard Antenna (Included):	
2.4GHz TNC "Rubber Duck" Antenna	49-1201
Mobile/Base Antennas – 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 Mobile Antenna	49-2201
2.4GHz Magnet Mount Mobile Antenna	49-2202
2.4GHz Omni Directional Base Antenna	49-3201
2.4GHz Yagi Directional Base Antenna	49-3202
High Quality Coax Cables – 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 (XX = # of Feet)
Bulkhead Extensions – 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 (X = # of Feet)

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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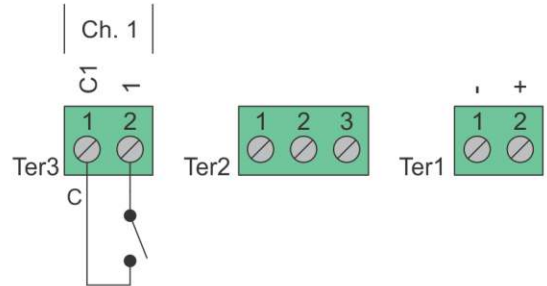
INPUT/OUTPUT WIRING

1-Input Transmitter / 1-Relay Receiver

Dry Contact Input Wiring - Standard

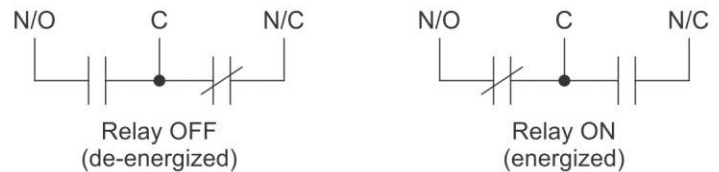
Standard wiring of a dry contact input transmitter

Shorting together the contacts of the respective channel will cause it to transmit. This can be done with any type of manual or automatic switch.

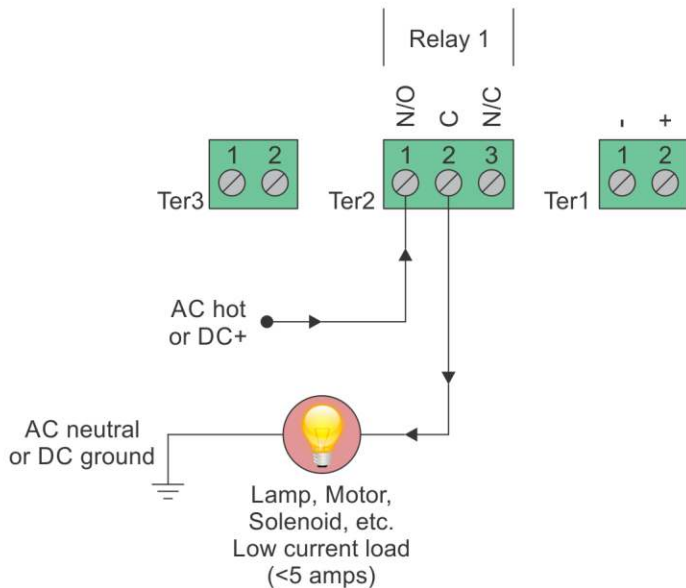


Relay Output Wiring

Receiver outputs are dry relay contacts, like an SPDT switch. When the relay is in a de-energized state, the N/C (normally closed) contact is connected to C (common). When the relay is energized the N/O (normally open) contact is connected to C (common).

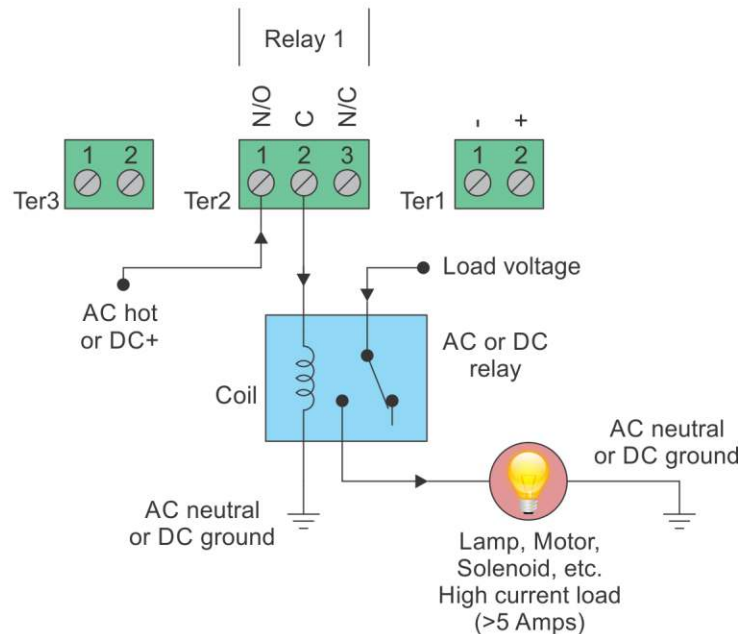


Relay Output Wiring - Normally Open Application with Externally Supplied Voltage



Internal Relay - Loads Less Than 5 Amps

Loads up to 5 Amps may be wired directly to the internal relays. Wiring to the N/O contact will cause the load to turn on when the relay is energized (the load is on when the relay is on). Wiring to the N/C contact will cause the load to turn on when the relay is de-energized (the load is on when the relay is off). AC or DC voltages can be switched through the relay.



External Relay - Loads Over 5 Amps

Loads over 5 Amps must use an external high current relay. Diagram shows how to turn on the relay using the lower current internal relay of the receiver. AC or DC voltages can be switched through the relay. Note: A protection diode for DC coils or an MOV for AC coils is recommended to reduce inductive EMI noise.