BWI EAGLE

AIR-EAGLE® XLT
900 MHz RF Transmitter
MODEL 441-1400-DC

Dimensions (with mounting plate) 6.3" L x 4.8" W x 2.3" H

DESCRIPTION

The AIR-EAGLE XLT TX IS an R.F. transmitter capable of sending four independent dry-contact input commands to an Air-Eagle XLT Receiver located up to 2500 feet away (longer ranges can be achieved with external high gain antennas). Any number of transmitters and receivers can be combined to create a medium range radio frequency system that operates hazardous or hard-to-reach electrical apparatus from safe, convenient locations. Eight user-selectable frequencies allow multiple systems to operate simultaneously in the same area without interference.

APPROVALS

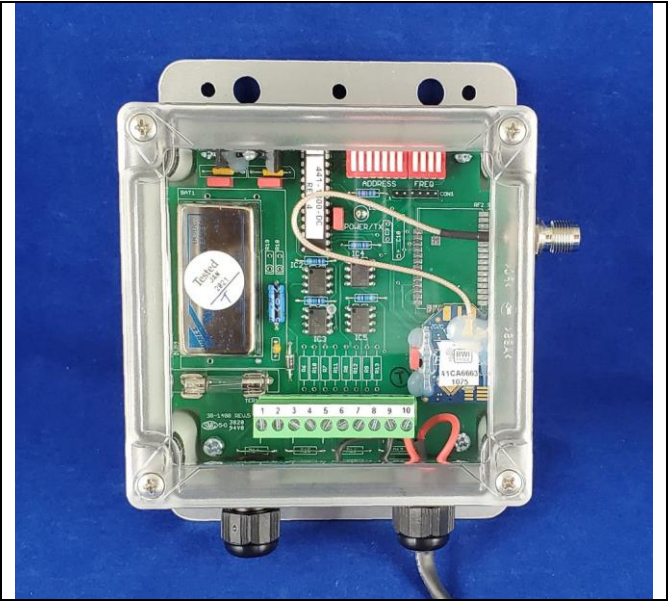| United States (FCC)	MCQ-XB900HP
Canada (IC)	1846A-XB900HP

INSTALLATION

1. Mount the AIR-EAGLE XLT TRANSMITTER in a convenient location.
2. Install wiring to contact input terminal strip (Note – the terminal block header lifts off the base for easy wiring)
3. Make desired repeater mode and frequency selections using instructions on page 2.
4. Attach supplied antenna to connector on right side of unit.
5. Connect supplied power input cable to your external power source.

TERMINAL STRIP WIRING

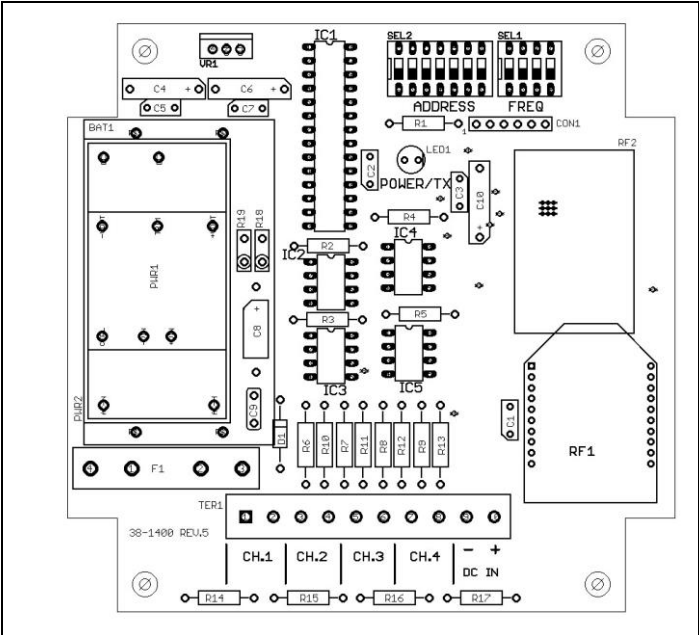|									
Wire as shown based on number of contact inputs									
1	2	3	4	5	6	7	8	9	10
C Input 1	Input 1	C Input 2	Input 2	C Input 3	Input 3	C Input 4	Input 4	(-) 9-36VDC input	(+) 9-36VDC input

GENERAL OPERATION

A closure on any input transmits its channel command to activate the corresponding relay in the remote receiver. The transmission continues as long as the input is closed and ceases when the input opens.

CONTROLS & INDICATORS

TX LED	Illuminates green when power is applied. Changes to red while any contact input is closed and unit is transmitting.
Dry Contact Inputs	Transmits individual RF codes to the receiver
SEL2	Dip switch bank for digital address selection
SEL1	Dip switch bank for frequency & repeater mode selection

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DIGITAL ADDRESS, FREQUENCY & REPEATER MODE SET-UP

The unit is shipped from the factory with all SEL1 and SEL2 switches in the open positions. By default, it is operating on Digital Address #1, Frequency #1 and the command transmitted will not be repeated by the receivers. If you wish to transmit on a different address and/or frequency, and/or set the unit to transmit a repeating packet, follow the instructions on the table below.

Note – only change digital address if using with a digitally addressable receiver. Otherwise, the digital address *must be kept at the default of Digital Address "1".*

1)	Remove power from unit and remove top cover.
2)	Select desired digital address, network frequency and repeater mode using tables below.
3)	Reattach cover and apply power. Programming is now complete.

DIGITAL ADDRESS SET-UP

SEL2 (SW1 – 4)

	Digital Address	SW1	SW2	SW3	SW4
SEL2 (SW1-4)	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
SEL2 (SW5-7) – Leave in OPEN position!!					

FREQUENCY SET-UP

SEL1 (SW1-3)

	Network Frequency	SW1	SW2	SW3
SEL1 (SW1-3)	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

REPEATER MODE

SEL1 SWITCH NUMBER	OPEN	CLOSED
SW4	Repeater Mode OFF (default)	Repeater Mode ON

SPECIFICATIONS

DC Input	9-36VDC Input @ 10 W Fuse Protected – 1A Slo-Blo
Transmit Data	Four Dry Contact Inputs
Transmit Frequency	900MHz Spread Spectrum
RF Output Power	250 mW
Transmit Range	Up to 2500 Feet w/standard antenna

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.

RF Networks	Eight Independent Frequencies
Enclosure	Polycarbonate, IP66 (NEMA 4)
Operating Temperature	-40º F to +185º F

ACCESSORIES

Standard Antenna (Included):	
900MHz TNC "Rubber Duck" Antenna	49-1103
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	
900MHz Thru-Hole Mount Mobile Antenna	49-2101
900MHz Magnet Mount Mobile Antenna	49-2102
900MHz Omni Directional Base Antenna	49-3101
900MHz Yagi Directional Base Antenna	49-3102
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

DOCUMENT DATE: 07/22/2021 / PRODUCT REV. 5

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.
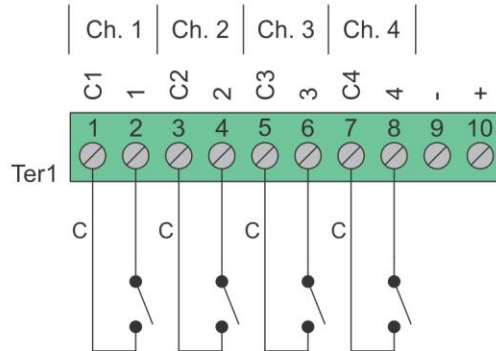
Standard Wiring for Common Ground Applications
Because each channel shares a common (C) terminal, inputs can be wired as shown to allow for fewer conductors to be run to the transmitter.
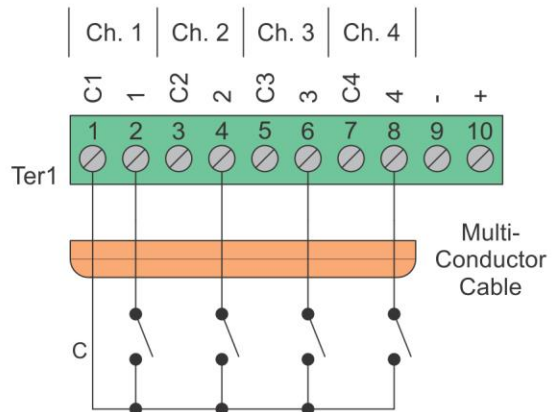
SPDT Switches
The common (C) terminal of the switch only needs to be connected to one of the channels ground terminal. In this configuration two channels would be transmitting all the time. A switch with a center "off" position would allow transmitting to stop.
In this example channels 2 and 4 are transmitting.
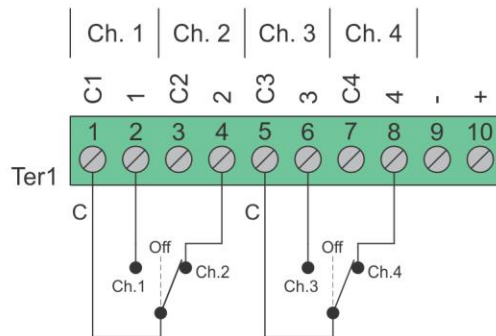
Wiring configurations shown here are examples. The wiring for your application may differ.
Call BWI Eagle for assistance or consult an electrician.

Updated: 4/29/2019