

AIR-EAGLE XLT PLUS

461-1400-AC

900 MHz RF Transmitter



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Product Rev: 8



461-1400-AC

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.

SIGNAL RANGE

Max range statements are estimates based on a clear line of sight with few interferences. Actual range will vary based on transmitting power, orientation of transmitter and receiver, height of transmitting and receiving antennas, weather conditions, electronic interference, terrain, and physical obstacles, including but not limited to; walls, building structures, trees (foliage), metal objects, and landscape (hills, mountains).



WIRELESS STOP SYSTEMS WORK IN CONJUNCTION WITH HARD-WIRED SYSTEMS.

Wireless Stop and E-Stop devices must work in conjunction with a hard-wired system. A wireless system should never be considered a primary life-saving device. At least one hard-wired switch must be available in the event the wireless signal is lost. Failure to comply may result in serious injury or death to personnel and damage to equipment.

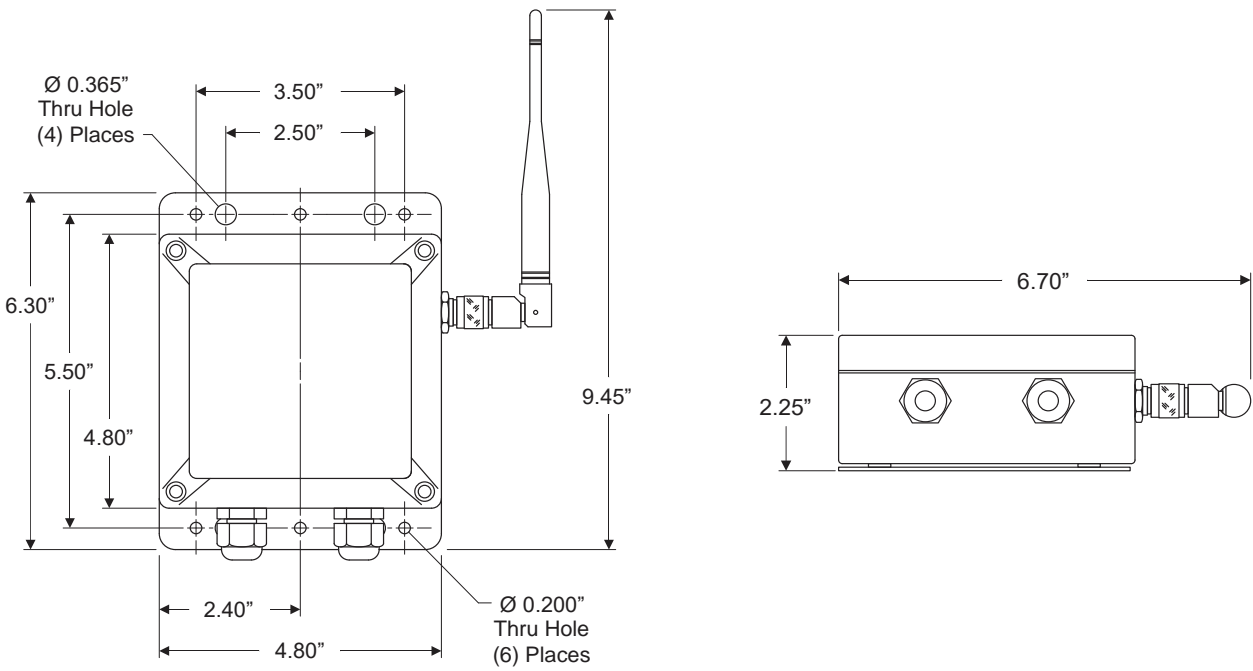
461-1400-AC



INTRODUCTION

The Air-Eagle XLT PLUS TX is an R.F. transmitter capable of sending four independent dry-contact input commands to an Air-Eagle XLT Receiver located up to 1 mile away (longer ranges can be achieved with external antennas) Any number of transmitters and receivers can be combined to create a long-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.

DIMENSIONS



461-1400-AC

INSTALLATION

1. **DISCONNECT** power from all equipment before proceeding with installation.
2. Mount the transmitter in a convenient location.
3. Install input control wiring to the terminal strip.
4. Attach rubber duck antenna or coax from external antenna to connector on side of enclosure.
5. Connect supplied power input cable to your external power source.

TERMINAL STRIP WIRING

| | |
|-------------|--------------------------------|
| Terminal 1 | CH1 Dry Contact Input (Common) |
| Terminal 2 | CH1 Dry Contact Input |
| Terminal 3 | CH2 Dry Contact Input (Common) |
| Terminal 4 | CH2 Dry Contact Input |
| Terminal 5 | CH3 Dry Contact Input (Common) |
| Terminal 6 | CH3 Dry Contact Input |
| Terminal 7 | CH4 Dry Contact Input (Common) |
| Terminal 8 | CH4 Dry Contact Input |
| Terminal 9 | 100-250 VAC (N) Input |
| Terminal 10 | 100-250 VAC (H) Input |

GENERAL OPERATION

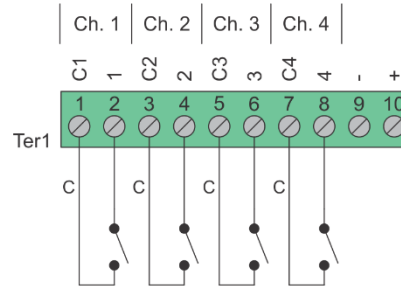
A closure on any input transmits its channel command to activate the corresponding relay in the remote receiver. The transmission continues as long as the input is closed and ceases when the input opens.



**DRY CONTACT INPUT WIRING
4-Input Transmitter**

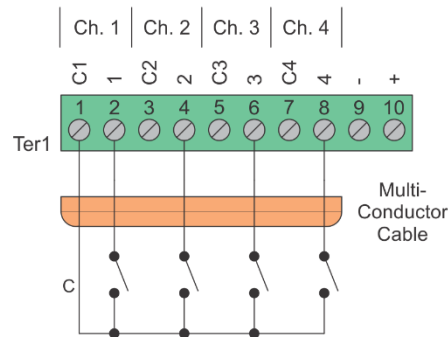
Standard wiring of a dry contact input transmitter

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.



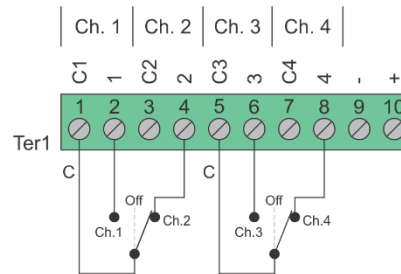
Standard Wiring for Common Ground Applications

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

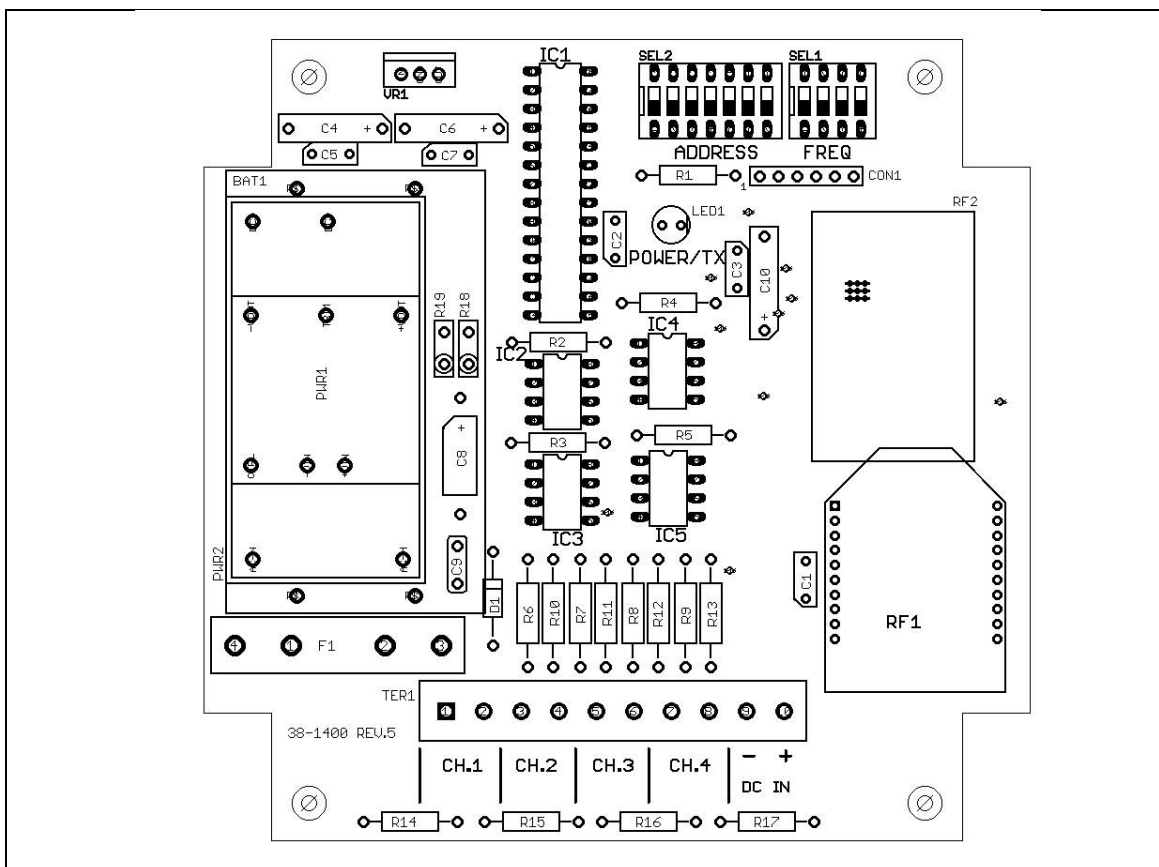
The common (C) terminal of the switch only needs to be connected to one of the channels ground terminal. In this configuration two channels would be transmitting all the time. A switch with a center "off" position would allow transmitting to stop. In this example channels 2 and 4 are transmitting.



Wiring configurations shown here are examples. The wiring for your application may differ. Call BWI Eagle for assistance or consult an electrician.

461-1400-AC

CONTROLS & INDICATORS



| | |
|-----------------------------------|--|
| POWER/TX LED1 | Dual color LED. Illuminates green while transmitter when power is applied. Changes to red while any input is closed, and unit is transmitting. |
| Input Channels 1 through 4 | Transmits individual RF codes to the receiver. |
| SEL1 | Dip switch bank for frequency selection. |
| SEL2 | Dip switch bank for digital address selection. |
| RF2 | RF module that transmits data. |

APPROVALS

| | |
|---------------------|------------------------|
| United States (FCC) | MCQ-XBPSX |
| Canada (IC) | 1846A-XBPSX |
| Australia | RCM |
| Brazil | ANATEL: 05774-16-01209 |

461-1400-AC

FREQUENCY & DIGITAL ADDRESS 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 Frequency #1 and Digital Address #1. If you wish to change these default settings, follow the instructions 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. ***IMPORTANT***
Disconnect power from unit.
2. Remove top cover.
3. Select desired frequency and/or digital address using the table.
4. Reattach cover.
5. Reconnect power to unit.
6. Programming is complete.

| FREQUENCY SETUP (SEL1) | | | | |
|--|--------|--------|--------|--------|
| NETWORK FREQUENCY | SW1 | SW2 | SW3 | |
| 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 | |
| SEL1 SW4 not used on this model – leave in OPEN position | | | | |
| DIGITAL ADDRESS SETUP (SEL2) | | | | |
| DIGITAL ADDRESS | 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 |
| SEL2 SW5-7 not used on this model – leave in OPEN position | | | | |

461-1400-AC

SPECIFICATIONS

| | |
|--|---|
| Power Supply | 100-250 VAC, 5 W, 50/60 Hz |
| Fuse Protected | 2 amp |
| Transmit Data | Four Independent Dry Contact Inputs |
| Transmitter Frequency | 902-928 MHz Spread Spectrum |
| RF Output Power | 1 Watt |
| Transmit Range | Up to 1 Mile (Up to 10 miles with external antenna - see accessories) |
| <p>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.</p> | |
| RF Networks | Eight Independent Network Frequencies |
| Operating Temperature | -40° F to +185° F |
| Enclosure | Polycarbonate, IP66 (NEMA 4) |
| Weight | Approx 2.11 lbs. |

ACCESSORIES

| | |
|---|---------------------------------------|
| STANDARD ANTENNA (INCLUDED) | |
| 900MHz TNC Portable "Rubber Duck" Antenna | 49-1103 |
| MOBILE/BASE ANTENNAS (OPTIONAL) Used to help achieve max range in non-line-of-sight and line-of-sight applications. Contact BWI Eagle for recommendations. | |
| 900MHz Thru-Hole/Bracket 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 CABLE Used to connect external antennas to control unit. | |
| Flex Coax Cable w/Connectors (Available in 5', 15', 25', 30', 40', 60', 80', and 100' lengths) | 49-4000-XX (XX = length in feet) |
| BULKHEAD EXTENSION 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', and 7' lengths) | 49-5004-X-ISO (X = length in feet) |