AIR-EAGLE XLT PLUS

465P-8D-ESTOP-DC

900 MHz RF Receiver



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Product Rev: 2

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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).

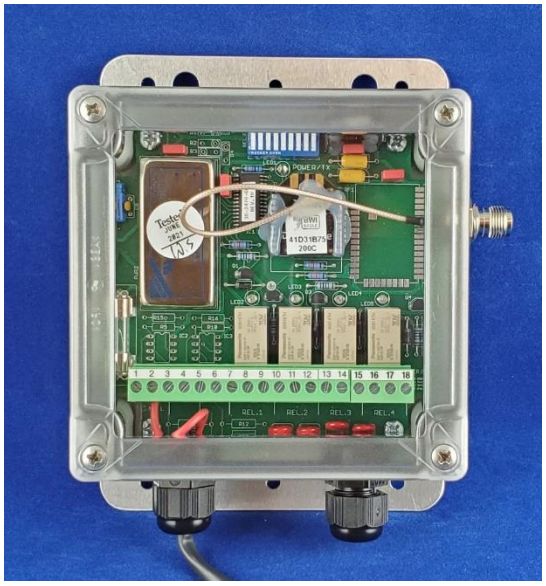


WIRELESS STOP SYSTEMS WORK IN CONJUCTION WITH HARD-WIRED SYSTEMS.

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.



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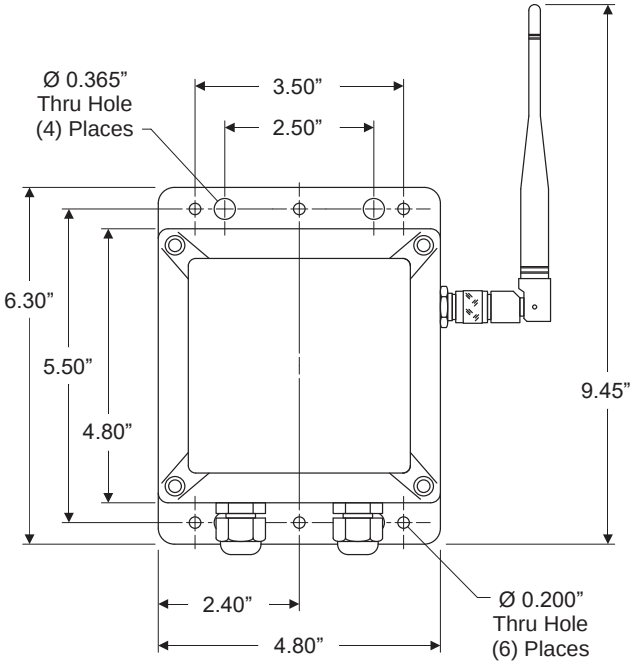


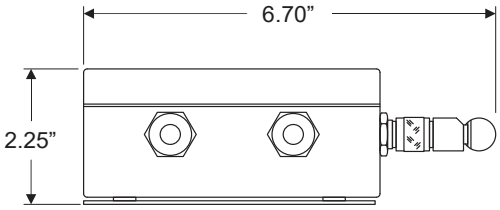


INTRODUCTION

The AIR-EAGLE XLT PLUS RECEIVER MODEL 465P-8D-ESTOP-DC is a wireless receiver designed to work with a linking transmitter for failsafe operation of electrical apparatus in a variety of industrial applications. Eight user selectable frequencies allow multiple systems to be used in the same area. This receiver can receive remote signals transmitted from up to 5000 feet away.

DIMENSIONS





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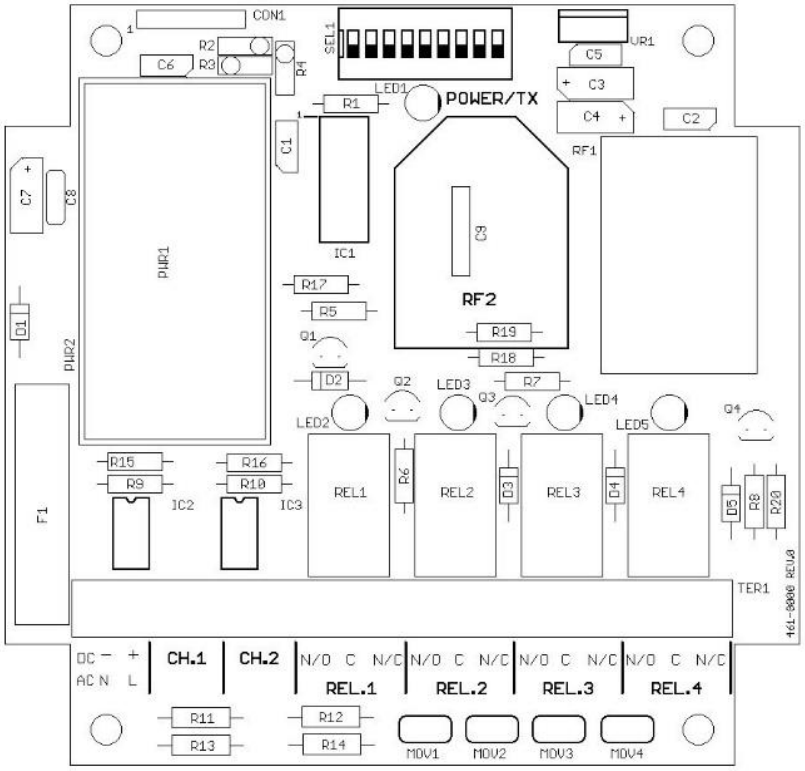
INSTALLATION

1. DISCONNECT power from all equipment before proceeding with installation.
2. Mount the receiver in a convenient location.
3. Select relay response options, PAN ID & frequency (See OPTIONS & FREQUENCY SET-UP section).
4. Install relay control wiring to the terminal strip.
5. Attach rubber duck antenna or coax from external antenna to connector on side of enclosure.
6. Connect supplied power input cable to your external power source.

TERMINAL STRIP WIRING

Terminal 1	Negative (-) 9-36VDC	
Terminal 2	Positive (+) 9-36VDC	
Terminal 3	CH1 Dry Contact Input (Common)	Not used on this model
Terminal 4	CH1 Dry Contact Input	
Terminal 5	CH2 Dry Contact Input (Common)	
Terminal 6	CH2 Dry Contact Input	
Terminal 7	N/O Relay 1	
Terminal 8	C Relay 1	
Terminal 9	N/C Relay 1	
Terminal 10	N/O Relay 2	
Terminal 11	C Relay 2	
Terminal 12	N/C Relay 2	
Terminal 13	N/O Relay 3	
Terminal 14	C Relay 3	
Terminal 15	N/C Relay 3	
Terminal 16	N/O Relay 4	
Terminal 17	C Relay 4	
Terminal 18	N/C Relay 4	

CONTROLS & INDICATORS

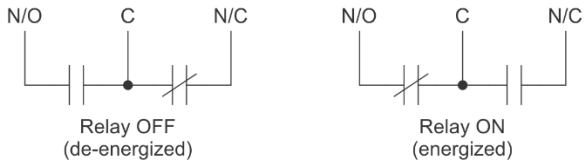


POWER/TX LED1	Dual color LED. Illuminates red while receiver is booting up; changes to green when boot-up is successful and unit is ready to operate. If this LED fails to turn green, power unit off for 15-20 seconds, then reapply power.
LED2	Illuminates green while relay 1 is energized
LED3	Illuminates green while relay 2 is energized
LED4	Illuminates green while relay 3 is energized
LED5	Illuminates green while relay 4 is energized
REL1 – REL4	Four SPDT output control relays
RF1 or RF2	RF module that transmits/receives data

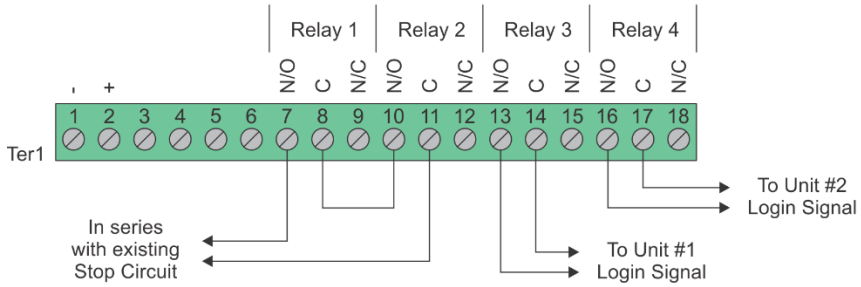
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RELAY OUTPUT WIRING
4-Relay E-Stop Receiver

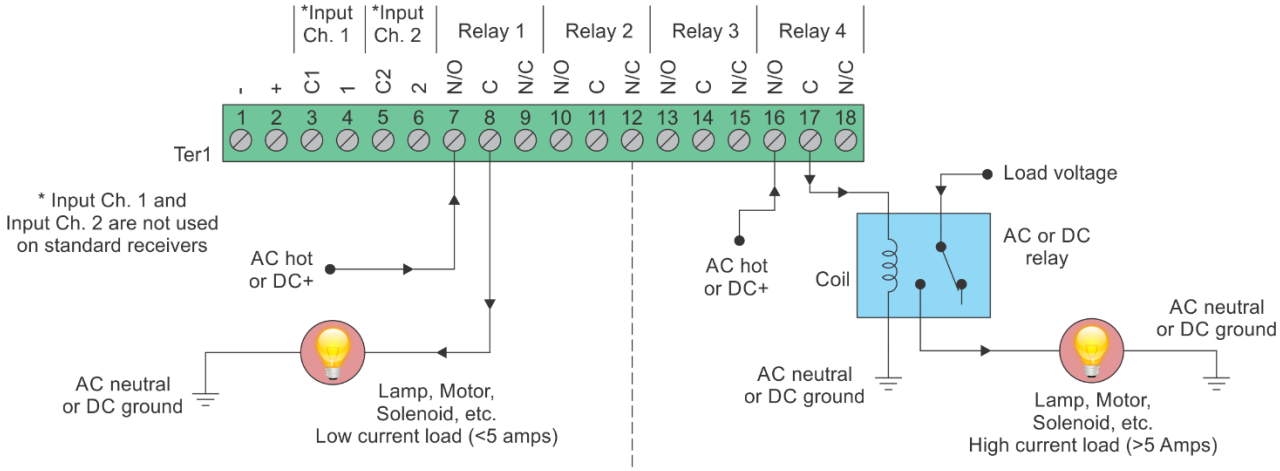
Receiver outputs are dry relay contacts, like an SPDT switch. When the relay is in a de-energized state, the N/C (normally closed) contact is connected to C (common). When the relay is energized the N/O (normally open) contact is connected to C (common).



E-Stop Wiring Suggestion



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.

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

Updated: 3/29/2022

RELAY ASSIGNMENT & MODES

SPLIT RELAYS

TRANSMITTER UNIT #	STOP	LOGIN
1	Relay 1	Relay 3
2	Relay 2	Relay 4

The “Stop” relays turn on at power up. If the STOP button is pressed, the “Stop” relay for the corresponding Unit # turns off. When the STOP button is released, the operator must power off the transmitter to reset. Once reset, powering on the transmitter will cause the “Stop” relay to re-energize.

If a logged in transmitter’s beacon hasn’t been received for 2 seconds the “Stop” AND “Login” relays will both drop out. To re-activate the receiver’s relays, the operator must power off the transmitter to reset, then power back on within range of the receiver for the corresponding “Stop” and “Login” relays to re-energize.

NOTE: If the transmitter gets out of range and the beacon is lost, the transmitter will blink “Out of Range” continually. Pressing the Power/Select button of the transmitter will clear this message and the transmitter will be ready to log in again.

When the operator wants to quit monitoring with their transmitter, while still in range of the receiver, power the transmitter off. This will de-energize the “Login” relay ONLY, allowing the system to continue to operate WITHOUT REMOTE STOP PROTECTION.

FAILSAFE RELAYS

TRANSMITTER UNIT #	STOP	LOGIN
1	Relays 1 & 2	Relay 3
2	Relays 1 & 2	Relay 4

All relays are off at power up. When a transmitter logs in, both “Stop” relays will energize and the corresponding “Login” relay will energize. If the second transmitter logs in while the first transmitter is already logged in, only its corresponding “Login” relay will energize (the “Stop” relays are not affected). When either transmitter activates a STOP command, both “Stop” relays will immediately de-energize in the receiver.

To re-energize the receiver’s “Stop” relays, all logged in transmitters must power off then log in again by powering their transmitters back on.

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OPTIONS, PAN ID & FREQUENCY SETUP

The unit is shipped from the factory with SEL1 switches in the open positions. If you wish to change the default settings, follow the instructions below:

1. *IMPORTANT* Disconnect power from unit.
2. Remove top cover.
3. Select desired relay response options, PAN ID and frequency using the table. Note – PAN ID and frequency must match transmitter.
4. Reattach cover.
5. Reconnect power to unit.
6. Programming is complete.

RELAY RESPONSE OPTIONS		
SEL1 SW1	Relay Response to E-Stop Event	SW1
	Failsafe (default)	OPEN
	Split	CLOSED
SEL1 SW2	System Reset Options	SW2
	Relays can be reset from Transmitter (default)	OPEN
	Power must be recycled to receiver following any E-stop or signal loss event	CLOSED

PAN ID			
PAN ID	SW4	SW5	SW6
BWI	OPEN	OPEN	OPEN
BWI1	CLOSED	OPEN	OPEN
BWI2	OPEN	CLOSED	OPEN
BWI3	CLOSED	CLOSED	OPEN
BWI4	OPEN	OPEN	CLOSED
BWI5	CLOSE	OPEN	CLOSED

FREQUENCY SETUP			
NETWORK FREQUENCY	SW7	SW8	SW9
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
Note – SW3 not used on this model			

NOTE: In PAN ID the identifier (BWI) may be different if your particular system has been uniquely coded. The numbering will be the same regardless.

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SPECIFICATIONS

Power Supply	9-36 VDC, 5 W
Relay Contacts	SPDT 5 amp @ 120VAC or 30VDC per channel
Fuse Protected	2 amp
Receiver Frequency	900 MHz Spread Spectrum
Receiver Range	Up to 5000 feet
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 Network Frequencies
Operating Temperature	-40º F to +185º F
Enclosure	Polycarbonate, IP66 (NEMA 4)
Weight	Approx 2.11 lbs.

APPROVALS

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

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)