# AIR-EAGLE XLT

# 441-HH-9

## 900 MHz RF Transmitter


Document Date: 6/21/2021
Product Rev: 12

BWI EAGLE

# 441-HH-9

## 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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Dimensions – 4.71” L x 2.99” W x 1.12” D
(note: belt clip adds .43” to depth)

## INTRODUCTION

The Air-Eagle XLT TX is a handheld R.F. transmitter capable of sending up to sixteen unique digital commands to an Air-Eagle XLT Receiver located up to 2500 feet away. Any number of transmitters and receivers can be combined to create a medium-range radio frequency system that operates hazardous or hard-to-reach equipment from safe, convenient locations. Eight user-programmable frequencies allow multiple systems to operate simultaneously in the same area without interference. This transmitter will automatically go into “sleep” mode when no buttons are being depressed on the unit to dramatically extend battery life.

## INITIAL OPERATION SET-UP

This transmitter comes ready to operate, with batteries installed, and factory programmed to Frequency #1. No setup is necessary unless you wish to change frequency or transmit mode. See FREQUENCY PROGRAMMING AND TRANSMITTING MODE SETUP.

## CONTROLS & INDICATORS

| | |
|---|---|
| TX LED | Illuminates **RED** when transmitting in standard mode or **GREEN** in repeater mode. When this LED blinks **RED** during or following a transmission, the battery needs to be replaced. See Note #1 |
| **Note #1** – The low battery notification signals have been improved to provide more noticeable indications and to safely disable communications BEFORE a low battery condition can corrupt internal memory causing device failure. When a low battery is first detected, the TX LED will blink several times after all buttons are released. If it is possible to replace the batteries now, please do so. If not, the operator has approximately 15 more button activations. During this time, when a button is depressed and held, the TX LED will blink SLOWLY. The slow blinking will continue several more times after all buttons are released. Transmissions are still being sent to the receiver during this time. When a button is depressed and the TX LED is RAPIDLY blinking, the RF output is disabled, and NO signal will reach the receiver. The batteries MUST NOW BE REPLACED to resume normal functions. | |
| Pushbuttons 1 thru 8 | Transmit channel 1 thru 8 commands to the receiver |
| Pushbutton P/Shift | The P/Shift button performs two functions:<br><br>1. If button is depressed momentarily and another button is then pressed within 10 seconds, the higher code for that button is transmitted. This allows for transmission of pushbutton codes 9 thru 16.<br><br>2. If button is depressed for longer than 5 seconds, the transmitter will enter “programming” mode. See PROGRAMMING section. |
| Pushbuttons 9 thru 16 | Transmit channel 9 thru 16 commands to the receiver |

## GENERAL OPERATION

This transmitter sends up to 16 independent commands. Each button sends an RF Code for that channel. Button 1 transmits channel 1 commands, button 2 transmits channel 2 commands etc. To send commands 9 thru 16, the P/Shift button must be used. As noted under CONTROLS & INDICATORS, the P/Shift button serves two purposes. As the “P” button, it allows you to program the transmitter to operate on a different frequency. As the “Shift” button, it allows you to send commands 9 thru 16 to the receiver.

To use as the “P” button, you must press and hold the button for approximately 5 seconds to enter programming mode. (See PROGRAMMING section for more details).

To use as the “Shift” button, press the P/Shift button momentarily. The TX LED will begin to flash rapidly indicating you’re in the Shift mode. While in shift mode pressing buttons 1 thru 8 transmit the higher numbered code for that button. The transmitter will stay in the Shift mode as long as buttons are being depressed within 10 seconds of one another. During this time, the TX LED gives visual confirmation that you’re in Shift mode by continuously flashing GREEN/RED rapidly. After 10 seconds has elapsed with no buttons depressed, the transmitter will revert back to standard mode and the TX LED will extinguish. If, while in Shift mode, you wish to transmit a button 1 thru 8 command and don’t want to wait for the Shift mode to time out, you can simply press the P/Shift button momentarily to revert back to the standard mode.

## FREQUENCY PROGRAMMING

***Please read through these instructions completely before beginning programming procedure!***

*At any time, you can check the current frequency setting by depressing the P/Shift button, for approximately 5 seconds, until the TX LED is illuminated **RED**. Then release the P/Shift button and watch as the TX LED stays **RED** for about 10 seconds, goes out, then begins to blink. The TX LED will blink **RED** one, two, three or four times for Frequencies 1 thru 4, or will blink **GREEN** one, two, three or four times for Frequencies 5 thru 8 accordingly. See table below for clarification.*

| LED Flashes: | Indicates Unit is Operating On: |
|---|---|
| **RED – one time** | **Frequency 1** |
| **RED – two times** | **Frequency 2** |
| **RED – three times** | **Frequency 3** |
| **RED – four times** | **Frequency 4** |
| **GREEN – one time** | **Frequency 5** |
| **GREEN – two times** | **Frequency 6** |
| **GREEN – three times** | **Frequency 7** |
| **GREEN – four times** | **Frequency 8** |

*To change the setting, follow these steps:*

**To select from Frequencies 1 thru 8:**

1. Depress the P/Shift button until the TX LED is illuminated **RED**. (Approximately 5 seconds)

2. Release the P/Shift button, then while the TX LED is still illuminated **RED**, depress Button 1 to select “Frequency 1” or Button 2 to select “Frequency 2” etc. If the transmit LED goes out before you have selected a network, no settings will have changed, ***and*** the LED will blink corresponding to the frequency that the TX is currently set to. You must then begin again at step 1 if you wish to change the current setting.

3. The TX LED will blink to confirm that your frequency selection has been accepted, and then will go out. For instance, if you have selected Frequency 1, the TX LED will blink **RED** *once* to confirm. If you have selected Frequency 6, the TX LED blinks **GREEN** two *times* to confirm.

Programming is now complete, and the transmitter is active for normal operation.

You may repeat the above procedure if you wish to change the frequency at any time.

## TRANSMITTING MODE SET-UP

***Please read through these instructions completely before beginning programming procedure!***

The transmitter can be set to be in a standard transmission mode or in a repeater mode where all receivers will repeat the transmission.

**To select transmission mode:**

1. Remove one battery from the transmitter
2. Press and hold the P/Shift Button while inserting the battery
3. Continue holding the P/Shift for 10 seconds until the LED starts flashing **GREEN/RED** quickly.
4. Press Button 1 for standard mode or Button 2 for repeating mode.
5. LED will turn **RED** if standard mode selected or **GREEN** if repeater mode selected.
6. If no button is pressed for 10 seconds, the LED will illuminate to show the current transmission mode.

Once the transmission mode has been selected, the LED will continue to illuminate **RED** (standard mode) or **GREEN** (repeater mode) during all future transmissions.

**NOTES ON TRANSMISSION MODE**

The standard transmission mode is best for situations where quick button response is needed. This type of transmission is typically used when you'll be watching what you're controlling, so repeating is not necessary.

For repeating mode there is a short delay added to the button commands to allow the system to repeat between multiple receivers without collision. This type of system is usually something where many units spread out over a large area need to be controlled simultaneously and response speed isn't a priority.

Both types of transmission can be used simultaneously in the same system although repeating transmissions could cause some lag in the standard transmissions.

## APPROVALS

| | |
|---|---|
| United States (FCC) | MCQ-XB900HP |
| Canada (IC) | 1846A-XB900HP |
| Australia | RCM |
| Brazil | ANATEL 3727-12-1209 |

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## SPECIFICATIONS

| | | |
|---|---|---|
| **Keypad** | Durable Sealed Membrane Keypad – Eliminates Dust, Dirt and Moisture Failures | |
| **Enclosure** | ABS UL94 HB | Enclosure with ring is rated IP54 *Not Waterproof |
| **Protective Ring** | SEBS (TPE) | |
| **Power Requirements** | 3.0 VDC | |
| **Battery Type** | (2) 1.5V lithium each, size AA, to equal 3.0VDC nominal. ***For best performance use ONLY Energizer Brand Lithium Batteries | |
| ***Note: Current frequency settings are maintained in flash memory during battery replacement. No reprogramming of frequency settings is necessary!** | | |
| **Battery Life(Active Usage)** | Up to 6 months | |
| **Battery Life(Sleep Mode)** | Up to 1 Year | |
| **Transmit Frequency** | 900MHz Spread Spectrum | |
| **RF Networks** | Eight Independent Network Frequencies | |
| **RF Output Power** | 250 mW | |
| **Max Transmit Range** | Up to 2500 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. | | |
| **Operating Temperature** | -40º F to +185º F | |
| **Weight** | Approx .23 lbs. (w/belt clip) | |