BWI EAGLE

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PRODUCT INFORMATION BULLETIN

AIR-EAGLE® XLT
900 MHz RF Transmitter
MODEL 441-HH-1-VBR

DESCRIPTION

The AIR-EAGLE XLT TX is a handheld R.F. transmitter capable of sending a single command to an Air-Eagle XLT Receiver located up to 2500 feet away. This model is equipped with a vibrating feedback that confirms to the user that the transmitted signal has reached the receiver. The TXs and RXs can be combined in any quantity 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. This transmitter will automatically go into "sleep" mode when not in use 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 the frequency or any of the other user programmable options (See FREQUENCY PROGRAMMING, RELAY PROGRAMMING, AND TRANSMITTING MODE SETUP on pages 2 & 3).

SPECIFICATIONS

Battery Life (Sleep Mode)	Up to 1 Year
Transmit Frequency	900 MHz Spread Spectrum
RF Networks	Eight Independent Frequencies
RF Output Power	250 mW
Transmit Range	Up to 2500 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.	
Operating Temperature	-40º F to +185º F
Keypad	Durable Sealed Membrane Keypad – Eliminates Dust, Dirt and Moisture Failures
Enclosure	ABS UL94 HB
Protective Ring	SEBS (TPE)
Power Requirements	3.0 VDC
Battery Type	(2) 1.5V lithium each, size AAA, to equal 3.0VDC nominal.

Enclosure with ring is rated IP54 *Not Waterproof

*Note: Current relay and frequency settings are maintained in flash memory during battery replacement. No reprogramming of user settings is necessary!

Battery Life (Active Usage)	Up to 3 months

Dimensions – 4.25" L x 2.68" W x .91" D
(note: belt clip adds .43" to depth)

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*
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.	
Pushbutton	Transmits an individual RF code to the receiver
Vibrate Alert	Vibration confirming that signal has been transmitted successfully

APPROVALS

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

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FREQUENCY PROGRAMMING

Please read through these instructions completely before beginning programming procedure!

All transmitters are set to Frequency #1 by default. The frequency can be changed at any time by following the procedure below. Once changed, we recommend labeling the transmitter with the selected frequency number. Frequency settings will not be changed during normal battery replacement.

The TX LED guides you through the programming procedure. To change the setting, follow these steps:

To select from Frequencies 1 thru 8:

1. Remove the battery cover from the back of the transmitter
2. Remove ONE of the batteries from the holder (be sure to note polarity so it is re-inserted properly in the following steps)
3. Using one hand, depress and hold down Button 1 on the transmitter. While holding button down, re-insert the battery into the holder.
4. With button #1 still depressed and battery in holder, keep the button pressed for 5 seconds until the LED turns **RED.**
5. Release button #1 and the TX LED will begin to blink. As shown in chart above, the TX LED will blink **RED** for frequencies 1 thru 4 and will blink **GREEN** for frequencies 5 thru 8.
6. To set the frequency, you must momentarily press button #1 immediately after the LED has blinked the number of times for the desired frequency. ***For example, to set to frequency 6, you release button #1 and watch as the LED blinks RED four times, then GREEN twice, THEN quickly press the button to set the TX to frequency 6.***

Press Button Immediately After:	To Set Unit To:
The First RED Flash	Frequency 1
The Second RED Flash	Frequency 2
The Third RED Flash	Frequency 3
The Fourth RED Flash	Frequency 4
The First GREEN Flash	Frequency 5
The Second GREEN Flash	Frequency 6
The Third GREEN Flash	Frequency 7
The Fourth GREEN Flash	Frequency 8

7. Once you have momentarily pressed the button to set the frequency, the TX LED will confirm your selection by blinking the numbers of times for the frequency that was set. (Note, if the confirmation shows the incorrect frequency, simply restart the programming from Step 1.
8. Once the proper selection has been confirmed, programming is complete. Replace battery cover tightly.

NOTE – if you fail to select a frequency during the programming procedure the transmitter will blink the frequency currently set in the transmitter as shown in the chart above. This can be used to view the transmitter's frequency without changing it.

You may repeat the above procedure if you wish to change the frequency at any time. See note* in SPECIFICATIONS.

RELAY PROGRAMMING

Please read through these instructions completely before beginning programming procedure!

All transmitters are set to operate Relay #1 in the remote receiver by default. The relay to be operated can be changed at any time by following the procedure below. Once changed, we recommend labeling the transmitter with the selected relay number. Relay settings will not be changed during normal battery replacement.

To view which Relay unit is set to operate:

1. Remove the battery cover from the back of the transmitter
2. Remove ONE of the batteries from the holder (be sure to note polarity so it is re-inserted properly in the following steps)
3. Using one hand, depress and hold down Button 1 on the transmitter. While holding button down, re-insert the battery into the holder.
4. With button #1 still depressed and battery in holder, keep the button pressed for 5 seconds until the LED turns **RED**.
5. Keep holding button #1 in until the LED turns **GREEN** (about 3 more seconds).
6. Release button and wait for 10 seconds – LED will then blink **GREEN** the number of times equal to the relay number it is set to operate.

To select the Relay you wish to operate:

1. Remove the battery cover from the back of the transmitter
2. Remove ONE of the batteries from the holder (be sure to note polarity so it is re-inserted properly in the following steps)
3. Using one hand, depress and hold down Button 1 on the transmitter. While holding button down, re-insert the battery into the holder.
4. With button #1 still depressed and battery in holder, keep the button pressed for 5 seconds until the LED turns **RED**.
5. Keep holding button #1 in until the LED turns **GREEN** (about 3 more seconds).
6. Release button and quickly press the number of times equal to the relay number you wish to operate.
7. Once you stop pressing for three seconds, the LED will blink back **GREEN** the number of times of the relay it's now controlling to confirm your selection.
8. If you didn't make the proper relay selection, you must repeat the procedure beginning at Step 3.

NOTE – if you fail to select a relay during the programming procedure the transmitter will blink the current relay setting.

You may repeat the above procedure anytime you wish to change which relay the transmitter is to operate   See note* in SPECIFICATIONS.

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TRANSMITTING MODE SETUP

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

NOTE: When setting up the transmitting mode, the LED will cycle through the indications for all the other set up options (frequency, relay selection, power level) before it gets to the point where you can select the transmission mode That's why in the directions below you'll see that you have to hold the button for 14 seconds until the LED starts blinking **GREEN**/**RED** quickly.

To select transmission mode:

1. Remove one battery from the transmitter
2. Press and hold Button 1 while inserting the battery
3. Continue holding Button 1 for 14 seconds until the LED cycles through the previous setup options and starts blinking **GREEN**/**RED** quickly.
4. Press button once for standard mode or twice 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.

LIMITED WARRANTY STATEMENT