BWI EAGLE

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PRODUCT INFORMATION BULLETIN

AIR-EAGLE® XLT
900 MHz RF Transmitter
MODEL 441P-HH-4-002-CL

DESCRIPTION

The AIR-EAGLE XLT MODEL 441P-HH-4-002-CL IS a handheld R.F. transmitter designed to work with receiver model 441AN/DP-5-0002 to provide wireless on/off and speed control of equipment at distances up to 600 feet. Buttons 1 & 3 send On/Off commands to a dry contact relay output and buttons 2 & 4 increase and decrease an analog output. The TX LED gives feedback of the range of analog output the receiver is producing. Eight user-programmable frequencies allow multiple systems to operate simultaneously in the same area without interference.

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 on page 2).

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 AAA , to equal 3.0VDC nominal.	

*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 3 months
Battery Life(Sleep Mode)	Up to 6 months
Transmit Frequency	900 MHz Spread Spectrum
RF Output Power	250 mW
Transmit Channels	Eight Independent Network Frequencies
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

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

CONTROLS & INDICATORS

Button 1	Transmits to energize relay in receiver
Button 3	Transmits to de-energize relay in receiver

TX LED illuminates **SOLID RED** when transmitting in standard mode and **SOLID GREEN** when transmitting in repeater mode

Button 2	Transmits to increase analog output in receiver
Button 4	Transmits to decrease analog output in receiver

TX LED provides the following feedback of the analog output when buttons 2 or 4 are depressed and the unit is transmitting analog commands:

- **FAST GREEN BLINK** – Analog Output at 100%
- **MEDIUM GREEN BLINK** – Analog Output at 76-99%
- **SLOW GREEN BLINK** – Analog Output at 51-75%
- **MEDIUM RED BLINK** – Analog Output at 26-50%
- **SLOW RED BLINK** – Analog Output at 1-25%
- **FAST RED BLINK** – Analog Output at 0%

Note #1 – If you press buttons 2 or 4 momentarily, the LED will flash to show the current analog output percentage range

Note #2 – The low battery indication is provided only when any buttons are released. 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.

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FREQUENCY PROGRAMMING

Please read through these instructions completely before beginning programming procedure!

*At any time, you can check the current frequency setting by depressing Buttons 3 & 4 simultaneously, for approximately 4 seconds, until the TX LED is illuminated "**RED**". Then release the buttons and watch until the TX LED 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 7 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 4:

1. Depress Buttons 3 & 4 simultaneously until the TX LED is illuminated "**RED**". (Approximately 4 seconds)

2. Release Buttons 3 & 4, 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 #4, the TX LED blinks "**RED**" *four times* to confirm.

To select from Frequencies 5 thru 8:

1. Depress Buttons 3 & 4 simultaneously until the TX LED is illuminated "**GREEN**". (Approximately 7 seconds)

2. Release Buttons 3 & 4, then while the TX LED is still illuminated "**GREEN**", depress button #1 to select "Frequency 5" or button #2 to select "Frequency 6" 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 #5, the TX LED will blink "**GREEN**" *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. See note* in SPECIFICATIONS.

APPROVALS

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

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.

To select transmission mode:

1. Remove one battery from the transmitter
2. Press and hold button 4 while inserting the battery
3. Continue holding button 4 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.

LIMITED 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 warranty also does not cover water damage to any handheld transmitter. 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.

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