



LRT WIRELESS MICROPHONE



USER GUIDE

FCC and IC Notices

This equipment complies with Part 15 of the FCC rules and Industry Canada licence-exempt RSS standard(s). Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Cet équipement est conforme à la Partie 15 des règlements de la FCC et Industrie Canada exempts de licence standard RSS (s). Tout changement ou modification non expressément approuvée par le fabricant pourrait annuler l'autorité de l'utilisateur de faire fonctionner l'équipement.

The antenna used for this device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other transmitter.

This device complies with Part 15 of the FCC rules and Industry Canada licence-exempt RSS standard(s) subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept all interference received, including interference that may cause undesired operation.

Cet appareil est conforme à la Partie 15 des règlements de la FCC et Industrie Canada exempts de licence standard RSS (s) soumis aux deux conditions suivantes:

1. *Cet appareil ne peut causer des interférences nuisibles.*
2. *Cet appareil doit accepter toutes les interférences reçues, y compris les interférences qui peuvent perturber le fonctionnement.*

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Introduction

This is the user guide for the WatchGuard Video Long Range Transmitter (LRT) Wireless Microphone. The LRT Microphone is a specialized device designed to be used exclusively with WatchGuard's family of vehicle-based digital video recorder (DVR) products. This Guide's purpose is to describe the proper connection, installation and use of the LRT Microphone.

General Operation

The LRT connects directly to all WatchGuard DVR products to supply one of the audio tracks during the video recording process. The LRT microphone is a system with two primary devices; the Transmitter and the Base. Typically, the user (for example, a police officer) will wear the Transmitter device on their body. This device can be attached to the user with one of the available spring-loaded clips or worn in a holster on the user's belt. Like the DVR, the LRT Base device mounts in a vehicle using one of several brackets and attaches to the DVR using a cable. The Base device also requires an antenna connection to provide the wireless radio link to the Transmitter device. This antenna is supplied as part of the LRT microphone system and mounts to the vehicle windshield using an adhesive.

Installation

Important: Please turn off the power to the digital video system before connecting or disconnecting any microphone system cables.

Please reference Figure 1 during the installation process. Reference the WatchGuard Video “Microphone Installation Instructions – document number WGD00011” for further details.

Mounting the Base

Select an appropriate location inside the vehicle to mount the Base mounting bracket. Attach the bracket to the vehicle using the supplied mounting hardware then slide the Base onto the bracket so it locks into the Base mounting bracket slot.

Antenna Connection

The supplied Base antenna is intended to be mounted on the interior of the vehicle in the upper right corner of the windshield. This long, thin antenna should be mounted horizontally for best performance.

Remove the backing from the adhesive strip on the supplied window mount antenna. Press the exposed adhesive side of the antenna onto the selected windshield location.

Connect the antenna cable to the Base at the point indicated in Figure 1.

Warning: The RP-SMA connector should be finger tightened only. No hand tools should be used when making the antenna connection.

Only 900MHz antennas available from WatchGuard Video should be used. Wireless performance and audio quality will be affected if a non-approved antenna is used.

DVR Cable Connection

Connect the supplied digital video recording (DVR) system interface cable to this point. This cable supplies power from the DVR to the Base device when the DVR power is turned on. This cable also transfers the audio signal from the microphone system to the DVR for inclusion in the DVR video recording.

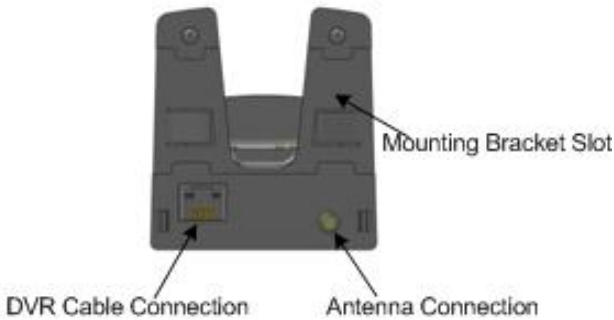


Figure 1: Base Back

Base Unit Features

Red and Green Status LEDs

Please reference Figure 2.

The green LED on the Base will light when communicating with the Transmitter device. The LED will light solid green when a voice recording is enabled. During a voice recording, this LED will flash when the Transmitter is muted. When a recording is not active, this LED will flash when the Base is attempting to associate (bind) with a Transmitter device.

The red LED on the Base will light when the transmitter is inserted into the base. The LED will light red when the battery is charging. The green LED will light when the battery is fully charged.



Figure 2: Base Front

Binding a Base with a Transmitter

To function correctly, a specific Transmitter device must be bound or associated with a specific Base. This is the process that allows the Base and Transmitter to communicate wirelessly without interfering with other Base/Transmitter pairs.

To bind a Transmitter to a Base, ensure the Base device is properly installed in a vehicle as describe above. Power-on the DVR to apply power to the Base. Insert the Transmitter device into the Base cradle fully

until the contacts on the bottom of the Transmitter (Figure 5) connect with the contacts on the Base (Figure 3).

The Base and Transmitter LEDs will flash briefly. After a few seconds, the binding process is complete. The Base and Transmitter are now ready for normal use.

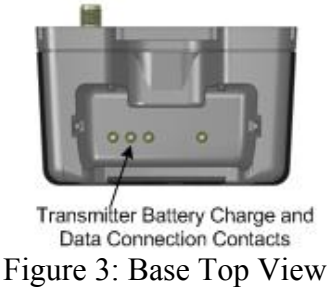


Figure 4: Base Bottom

Transmitter Unit Features

Transmitter Power On/Off

Refer to Figure 5. Use this switch to turn the Transmitter device power on and off. This switch must be in the ON position for all Transmitter-recording functions to operate properly.



Figure 5: Transmitter Bottom

Talk/Mute Slide Switch

Refer to Figure 6. This control is used to enable microphone voice recording and to mute the audio during a recording. When the Transmitter power is turned on and the transmitter is bound with the Base, slide this control down to begin voice recording. Once activated, the green Transmitter LED will light and remain solid. Pressing the button again will stop the recording function if the DVR is configured for this behavior. The green Transmitter LED will turn off.

Behavior of the slide switch function can be overridden by the video system (DVR). Settings on the DVR system can, for example, force the recording function to remain on even though the Transmitter slide switch is pressed. See the DVR system user manual for complete details.

Mute

With Transmitter voice recording enabled, the slide switch can be pressed and held to suppress detection of the voice by both the internal and externally connected (lapel) microphones. Once this switch is held down, the green Transmitter LED will flash. The Transmitter will continue to

keep the recording enabled but there will be no voice audio present in the recording. Release the slide switch to re-enable the voice audio; the Transmitter LED will go back to a solid green LED.



Figure 6: Transmitter Front

Status Indicators

Refer to Figures 7 and 8.

Battery Level Indicator

This icon shows the level of remaining charge available for the Transmitter battery.

Signal Strength Indicator

This icon shows the quality of the wireless signal connection to the Base.

Audio Status Indicator

This icon lights when the Talk/Mute slide switch is pressed to start an audio recording.

Mute Status

This icon lights when the Talk/Mute slide switch is pressed during a recording to mute the audio.

Backlight Status

This icon shows when the LCD backlight is active or not.

Vibration Mode Status

This icon shows when the vibration notification mode is selected.

Beeper Mode Status

This icon shows when the beep notification mode is selected.

LCD Backlight Control Button

Press this button to turn on the LCD backlight. This will allow the LCD status icons to be more easily viewed in low light conditions.

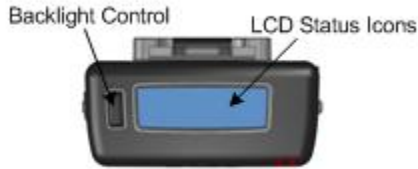


Figure 7: Transmitter Top

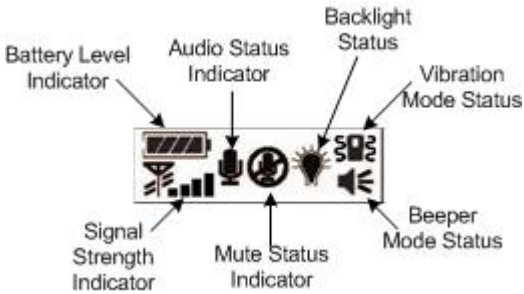


Figure 8: LCD Status Icons

Mode Button

Refer to Figure 9. The mode button is used to select the notification mode. The default notification mode is a beep. Pressing this button will change the mode to vibrate. Pressing it again will change the mode to a beep and vibrate combination. Pressing it again will disable the notification mode. Pressing it again will select the default beep mode. The notification mode selection rotates in a sequence of Beep > Vibrate > Beep + Vibrate > Silent for each button press.

Covert Mode

Covert mode disables all light and sound coming from the Transmitter device. To enter covert mode, hold the mode button down for 3 seconds. Once in covert mode, the LCD backlight, green LED and red LED will be disabled. The LCD status icon will still show the current status of the system. The backlight status LCD icon will indicate the system is in covert mode.

To exit covert mode and return to normal operation, depress the mode button for 3 seconds or, press the mode button twice.



Figure 9: Transmitter Left Side

Lapel Microphone Jack

Refer to Figure 10. Connect the accessory lapel microphone to this jack.



Figure 10: Transmitter Right Side

Transmitter Belt Clip

Refer to figure 11. To attach one of the accessory belt clips to the Transmitter, position the clip in the clip mount slot on the back of the Transmitter and press down until it locks into place.



Figure 11: Transmitter Back

SET UP AND OPERATION

Binding the Transmitter and Base

1. Ensure the DVR is installed properly and the RJ-45 signal cable is connected to the microphone base.
2. Turn on the DVR power.
3. Turn the microphone Transmitter power switch to ON and place the Transmitter in the recharge cradle of the Base. The Transmitter goes in the base with the WatchGuard logo facing out.
4. The Base's green LED and the Transmitter LED will both light and flash during the binding operation. Once the binding operation is successful, the LED on the Base and the LED on the Transmitter will go dark. (If the green LEDs continue to flash, binding is not successful. See the troubleshooting section of this manual.)
5. The Transmitter and Base are now bound and will continue to be bound until another Transmitter is linked to that Base.

Normal Operation

1. With the Transmitter bound to the Base, remove it from the cradle, plug in the lapel microphone (if used) and place the Transmitter on your belt holster.
2. To start the recording, press the Talk/Mute button. The Transmitter's LED will light a constant green. Voice recording is now enabled and all audio detected by the microphone will be saved with the DVR system video.
3. To end recording, press the Talk/Mute button, The green Transmitter and Base LEDs will turn off.
4. At the end of your shift turn the transmitter OFF by sliding the Transmitter power switch to the OFF position. Replace the Transmitter in the Base charging cradle.

Out of Range

If you use the Transmitter too far away from the Base during recording, the transmitter will alert you with the selected notification mode and the Transmitter's red LED will light.

- Move closer to the Base and the link will be re-established. The LED will go out when link is back to normal operation.
- If you went out of range in Standby mode (voice recording off), re-enter normal range and operation will return to normal.
- If you will be out of range for a long period of time, turn the Transmitter off.

Low Battery Warning

If the Transmitter beeps and the red LED flashes, return the transmitter to its base charging cradle to fully charge the transmitter.

The Base's LED indicator will light constant green when the unit is fully charged.

GUIDELINES AND RECOMMENDATIONS FOR BEST PERFORMANCE

Compatibility

The Transmitter and Base must be bound to work together by placing the Transmitter into the charging cradle of the Base while the Base power is on. The Base and the Transmitter's LEDs will flash until binding occurs. Any Transmitter can be bound with any Base.

Using Multiple Wireless Systems

The system has multiple "channels" that are really different frequency hopping schemes. Each bound Base and Transmitter will automatically find a clear channel so up to 26 systems can work together in one location depending on other interference problems.

Potential Sources of Interference

There are many potential sources of interference for your wireless microphone system. The microphone operates in the 900MHz frequency band and other devices in that band may interfere. The spread spectrum technique used in the microphone is very robust and should operate even in the presence of other 900MHz devices.

TECHNICAL SPECIFICATIONS

Operating Voltage	Transmitter: 3.7VDC Base: 12VDC
Frequency	900MHz (902.25 ~ 928.00 MHz) – 52 channels, digital spread spectrum
Operating Range	1 mile in open line of sight * Note : Operating Range can be different according to the environment
LED Indicators	Transmitter: low battery warning, Out of Range, Talk On, Mute Base: Charging indicator, Talk On
Jacks	Base: 8 pin RJ-45 for power, audio out, and trigger out Transmitter: Lapel microphone jack
Battery	Capacity: Lithium-ion 3.7V DC/1200mA Charging time: 3 hours Talk Time: Max. 8 Hours Stand-by time: 25 days

TROUBLESHOOTING

Problem	Check Points
No reception	<ul style="list-style-type: none"> - Check the battery status - Check the connection and cables - Check the communication range
Poor reception, static, noise	<ul style="list-style-type: none"> - Change the location of Base or antenna - Check the communication range
Unit does not respond or synchronize	<ul style="list-style-type: none"> - Check the battery status - Check the power switch on the Transmitter - Check the connection and cables

WARRANTY

WatchGuard Video, in recognition of its responsibility to provide quality systems, components, and workmanship, warrants each system, part, and component it manufactures first sold to an end user to be free from defects in material and workmanship for a period of **ONE-YEAR** from the date of purchase. A defective component that is repaired or replaced under this limited warranty will be covered for the remainder of the original warranty period. Where defects in material or workmanship may occur, the following warranty terms and conditions apply:

WARRANTOR – This warranty is granted by WatchGuard Video, 415 Century Parkway, Allen, TX 75013, Telephone: 972-423-9777, Facsimile: 972-423-9778.

PARTIES TO WHOM WARRANTY IS INTENDED – This warranty extends to the original end user of the equipment only and is not transferable. Any exceptions must be approved in writing from WatchGuard Video.

PARTS AND COMPONENTS COVERED – All parts and components and repair labor of the warranted unit manufactured and/or installed by WatchGuard Video are covered by this warranty, except those parts and components excluded below.

PARTS AND COMPONENTS NOT COVERED – The Limited Warranty excludes normal wear-and-tear items such as frayed or broken cords, broken connectors, scratched or broken displays or consumable items such as batteries. WatchGuard reserves the right to charge for damages resulting from abuse, improper installation, or extraordinary environmental damage (including damages caused by spilled liquids) to the unit during the warranty period at rates normally charged for repairing such units not covered under the Limited Warranty. In cases where potential charges would be incurred due to said damages, the agency submitting the system for repairs will be notified. Altered, damaged, or removed serial numbers results in voiding this Limited Warranty. If while under the warranty period, it is determined that the WatchGuard Video system was internally changed, modified, or repair attempted, the system warranty will become null and void.

LIMITED LIABILITY – WatchGuard Video's liability is limited to the repair or replacement of components found to be defective by WatchGuard Video. WatchGuard Video will not be liable for any direct, indirect, consequential, or incidental damages arising out of the use of or inability to use the system even if the unit proved to be defective. WatchGuard Video will not be responsible for any removal or re-installation cost of the unit or for damages caused by improper installation.

REMEDY – If, within the duration of this warranty, a unit or component covered by this warranty is returned to WatchGuard Video and proves to be defective in material or workmanship, WatchGuard Video shall (at its option) repair or replace any defective components or offer a full refund of the purchase price. Replacement of a defective

component(s) pursuant to this warranty shall be warranted for the remainder of the warranty period applicable to the system warranty period.

SHIPPING – During the first ninety (90) days of the initial warranty period, WatchGuard Video will provide a prepaid shipping label to return any defective unit for end users in the continental United States provided serial numbers are submitted with request. In such event, contact WatchGuard's Customer Service Department to request a return material authorization (RMA) number. Failure to obtain and use a WatchGuard Video prepaid shipping label in the first ninety days (90) on the return shipment will result in the end user being responsible for shipping costs to WatchGuard Video. After the first ninety (90) days, the end user will be responsible for any shipping charges to WatchGuard Video. WatchGuard Video will return ship the product to a customer within the continental United States by prepaid ground shipping only. Any expedited shipping costs are the responsibility of the end user.

Customers that are outside the continental United States will be responsible for all transportation costs both to and from WatchGuard Video's factory for warranty service, including without limitation to any export or import fees, duties, tariffs, or any other related fees that may be incurred during transportation.

You may also obtain warranty service by contacting your local WatchGuard Authorized Service Center (ASC) for shipping instructions. A list of local ASCs may be obtained by contacting WatchGuard's Customer Service Department. Customers will be responsible for all transportation costs to and from the local ASC for warranty service.

EXTENDED WARRANTY – Extended Warranties may be purchased directly from WatchGuard Video. Any and all extended warranties must be purchased prior to the expiration of any previous warranty. Failure to purchase an extended warranty prior to the expiration of the warranty period will require the covered unit to be physically inspected at the facility of the manufacturer and any repairs necessary to bring the unit back to full working order must be performed prior to the issuance of any new warranty. The customer will be responsible for the cost of the inspection (equal to 1 hour of labor) plus the standard costs associated with any required repairs. Should you have any further questions regarding the WatchGuard Video limited warranty, please direct them to:

WatchGuard Video

Attn: Customer Service Department

415 Century Parkway

Allen, Texas 75013

(800) 605-6734 Toll Free Main Phone

(866) 384-8567 Toll Free Queued Customer Service

(972) 423-9777 Main

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