

AIRWAVE TECHNOLOGIES

AT-6200D

Dual Channel Digital Wireless Microphone System User Guide



Thank you for choosing the new Airwave Technologies AT-6200D Series of Digital Wireless Microphone Systems - built on the proven performance of the AT-5200 Series. By converting vocal input to digital data before transmission, the AT-6200D delivers clearer sound, less hiss and noise, stronger encryption options, and more consistent audio quality. Unlike analog systems that degrade with interference and distance, digital transmission preserves signal integrity, maintaining clean audio right up to the edge of range while resisting RF noise and dropouts.

We appreciate your trust in Airwave Technologies for your wireless audio needs.

Warranty Information & Technical Support

Airwave Technologies stands behind the quality of its products. Any reasonable warranty claim will be honored for one year from the date of purchase.

If a defect occurs, call 305-891-7399 to obtain an RA#. Clearly mark the RA# on the outside of the shipping box containing the defective item or system, and send to us for repair or replacement.

Service Phone Number - 305-891-7399

Service Email - Service@AirwaveTechnologies.com

Airwave Technologies, Inc.

ATTN: Service Department / RA# _____

2901 Simms Street, Suite F

Hollywood, FL 33020

FCC Statement

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a different circuit
- Consult the dealer or an experienced radio/TV technician for help

This equipment has been verified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

System Components



AT-6200D Dual Channel Digital Wireless Receiver
2 Transmitters (Based on Configuration)
2 Antennas
Combo Rack Mount / Antenna Front Mount Kit
with Mounting Screws, Cables, BNC Connectors
Power Adapter
Four 1.5V AA Batteries
User Guide

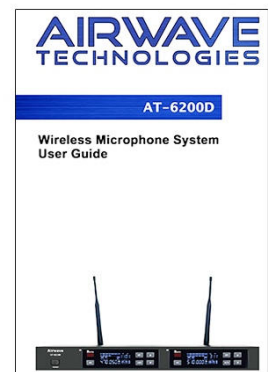
U-61
Digital
Handheld
Transmitter
(AT-6210D & AT-6250D)



U-62
Digital
Bodypack
Transmitter
(AT-6220D & AT-6250D)



LAV-2
Lavalier
Transmitter
(AT-6220D & AT-6250D)

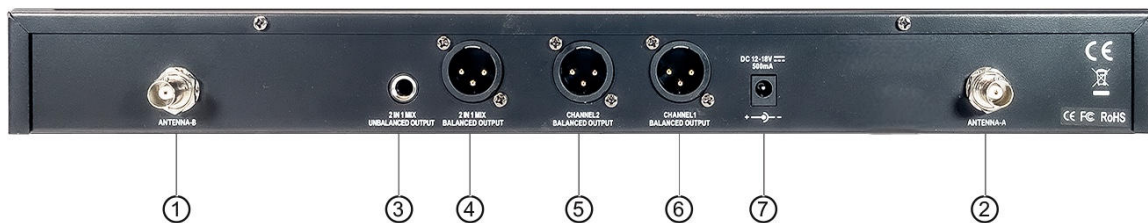


AT-6200D Receiver Front Panel Features



- ❶ Power Button - Press for 2 seconds to turn on, hold longer to turn off.
- ❷ ASC Infrared Frequency Button - Press this button to establish infrared connection between the receiver and the transmitter.
- ❸ Infrared Frequency IR Window
- ❹ LED Display
- ❺ Auto Button for Fast Frequency Sweep
- ❻ Set Button - To set all functions showing on the screen.
- ❼ Ⓢ Up and Down Setting Buttons

AT-6200D Receiver Rear Panel Features



- ❶ Antenna Jack B 50Ω
- ❷ Antenna Jack A 50Ω
- ❸ 1/4" 2 in 1 Mix Unbalanced Output Socket
- ❹ XLR 2 in 1 Mix Balanced Output Socket
- ❺ XLR Channel 2 Balanced Output Socket
- ❻ XLR Channel 1 Balanced Output Socket
- ❼ DC 12~18V 500 mA Power Adapter Socket

U-61 Handheld Transmitter Features



Changing Batteries

Two Alkaline AA batteries should provide power for approximately 10 hours. When the power indicator on the display is flashing, batteries should be replaced immediately as shown below.





Icon	Function
	Transmitter Power Level
	Battery Power Indicator
	Frequency Setting
	Mute Icon
	Handheld Gain Value

1. Microphone Gain Adjustment Display



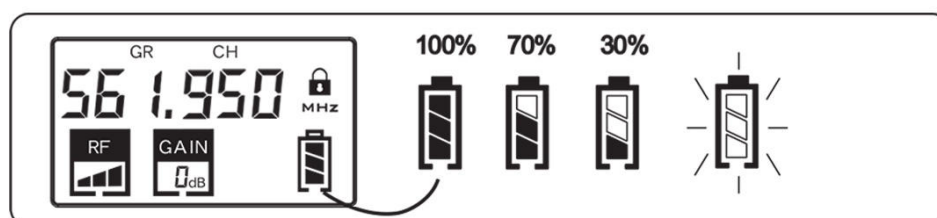
2. Transmitting Power Level Display



3. Frequency Setting Display 56 1.950



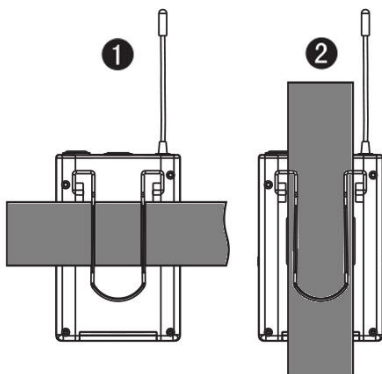
- Mute: Tap the power button to mute handheld transmitter, the icon will be displayed. Tap the power button again to clear mute.
- Lock: Double tap the power button to lock the transmitter. Double tap the power button again to unlock it. This feature will prevent a speaker from accidentally muting or turning off the microphone.
- Low Power Tip: If the battery icon shows less than 30%, replace batteries immediately. Battery icon will flash prior to shutting off.



U-62 Bodypack Transmitter Features



- ① Antenna
- ② LED Screen
- ③ SET Button
- ④ UP Button
- ⑤ 3-Pin Microphone Input
- ⑥ Power / Mute Button
- ⑦ Power Indicator Light
- ⑧ Infrared Frequency (IR) Window



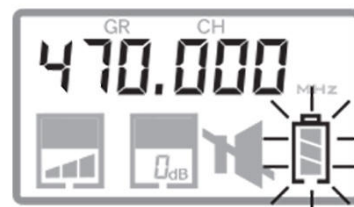
Wearing the Bodypack Transmitter

- ① Transmitter Clamped to a Belt
- ② Transmitter Clamped to Guitar Strap

Changing Batteries



Two Alkaline AA batteries should provide power for approximately 10 hours. When the power indicator on the display is flashing, batteries should be replaced immediately as shown.

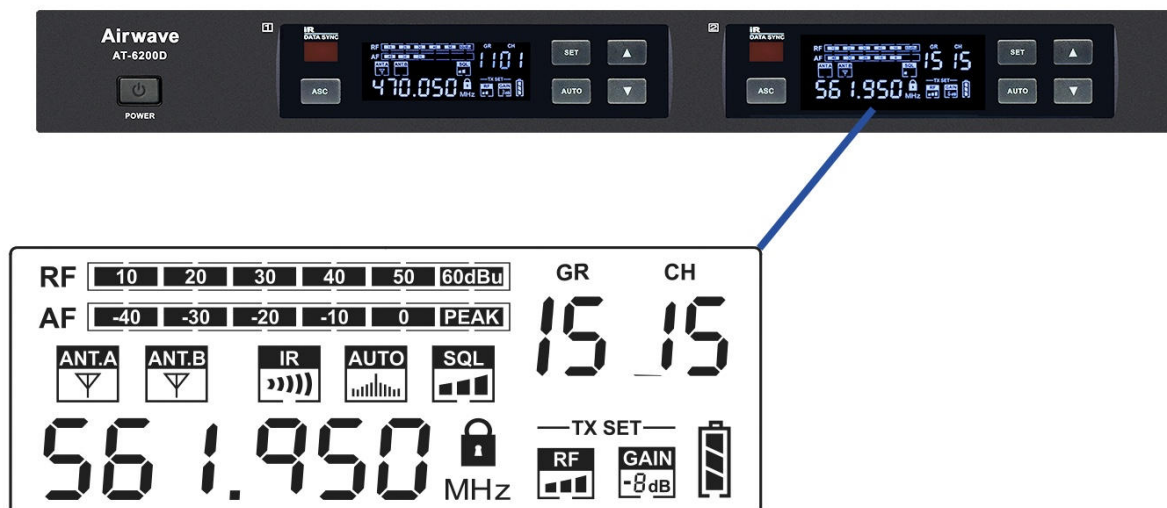


Frequency Selection & Best Practices Guide

- Radio frequencies used for wireless communication in most countries including the United States are under strict control and regulations. These regulations specify which devices can be used at what frequency and tend to limit interference within the frequency bands.
- To ensure consistent reliable frequency availability and to minimize the interference that might occur the user has a choice between different frequency bands. The Airwave AT-6200D is offered with 2 different bands. Systems designated as A Band operate between 470.050 and 510.000 MHz. Systems designated as B Band operate between 512.000 and 561.950 MHz.
- For user convenience, preset frequency groups have been created to minimize inter-modulation distortion. When using multiple receivers and transmitters each system must use a separate and different channel. Grouping the receivers and then using separate channels on the transmitters will provide the best frequency use and distribution.
- When using up to 3 units (max of 6 channels) in the same frequency range, under normal conditions, the wireless microphone system does not require an antenna combiner. If using 4 to 8 units (8 to 16 channels) the use of an approved antenna combiner is highly recommended.
- Maintain clear line of sight between transmitter and receiver antennas. Obstructions (walls, metal, people) reduce range and reliability.
- Keep distance between antennas and transmitters: Avoid placing transmitters too close to receiver antennas (minimum 3~10 feet) to prevent overload and dropouts.
- Always perform a frequency scan (if available) before operation to identify and avoid active TV stations or other RF sources. Do not operate on frequencies occupied by nearby DTV broadcast stations in your area.
- Be aware of other RF devices such as wireless intercoms, IEM systems, WiFi routers, and LED walls, which can introduce interference.
- Position receiver antennas away from large metal objects and at least a few feet above the ground for best performance.
- Use high-quality, low-loss coaxial cable for remote antennas; excessive cable length can reduce signal strength.
- Weak transmitter batteries can reduce RF output and cause dropouts—always use fresh or fully charged batteries.
- RF performance can change depending on the venue (crowds absorb RF, empty rooms reflect it). Re-check frequencies if conditions change.
- Users are responsible for operating within local regulations and licensed frequency ranges.
- When possible, pre-select backup frequencies in case interference appears during operation.
- For assistance in selecting the best operating frequency range in your zip code, you may call Airwave Technologies Support at 305-891-7399

Navigating The Menu On The Receiver (AT-6200D)

1. Hold the **SET** button for 3 seconds to unlock display.
2. Adjust **VOL (Receiver Gain)** by pressing the up or down arrows.
3. Press the **SET** button again to scroll through the various settings.
4. The setting will flash when selected and able to be adjusted.
5. Settings can be adjusted by pressing the up or down arrows.
6. System auto-saves settings and will auto-lock when idle for 10 seconds.

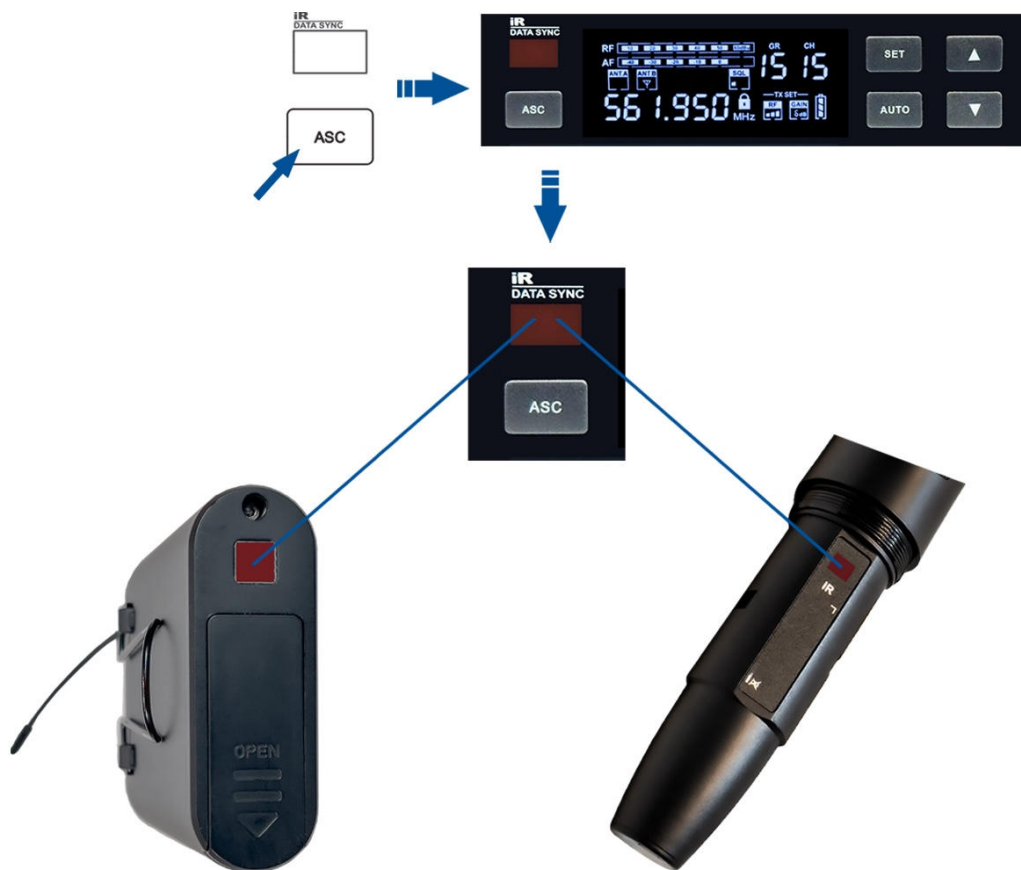


Icon	Function
	The frequency indicator
	Adjust the transmitter power RF
	The transmitter Microphone gain adjustment
	Noise gate threshold
	The receiver RF lamp
GR	Current group
CH	Current channel
RF	Receiver signal strength
AF	Audio level

Syncing Transmitters (U-61 Handheld or U-62 Body Pack)

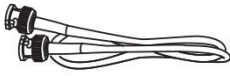
1. Turn **ON** transmitter and locate the IR transmission window.
(see diagram for location)
2. Press the **ASC** button on receiver to sync its setting to the transmitter. Receiver will transmit selected group, channel, and gain adjustments for approximately 25 seconds.
3. Hold up the IR window of the transmitter to the IR window of the receiver about 3-6" apart during the 25 second IR transmission cycle. The ASC button acts as an ON / OFF toggle. Long pressing the button will not activate the syncing sequence. Lightly press the **ASC** button and the IR Window will flash red during IR transmission.
4. Verify matching channels and settings between the transmitter and receiver. The RF meter of the receiver should have full bars across the screen with matching frequency. The AF meter should display bars when you speak into the transmitter.

When more than one system is used, only the IR window of one transmitter should be pointed to the receiver for each infrared connection.

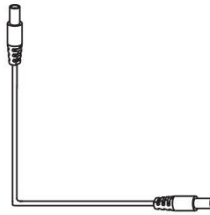


Audio Rack Connection Diagram

1 BNC Dualhead Connecting Line
(Optional Accessory)



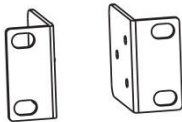
2 Power Connecting Line
(Optional Accessory)



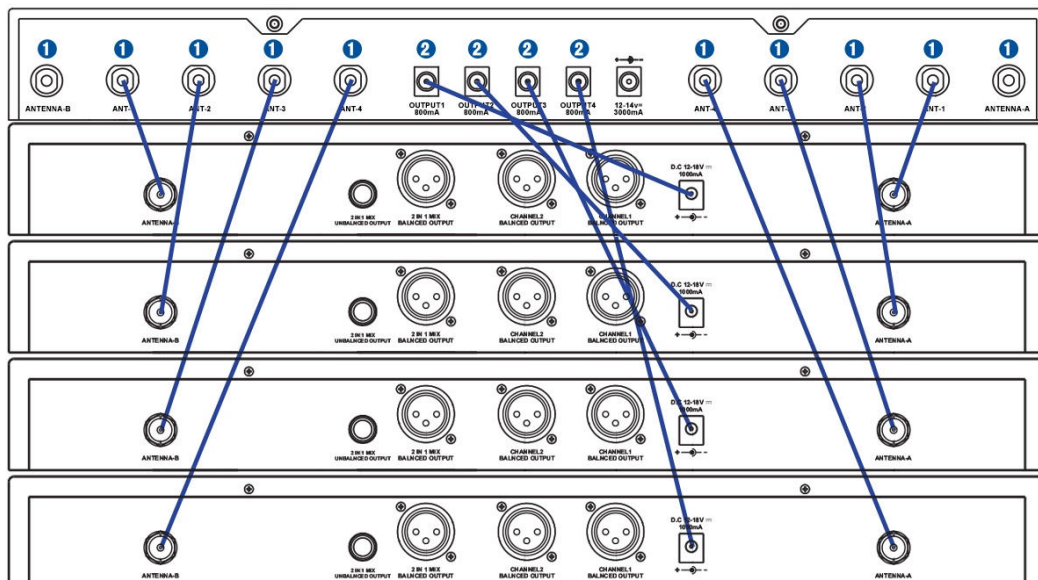
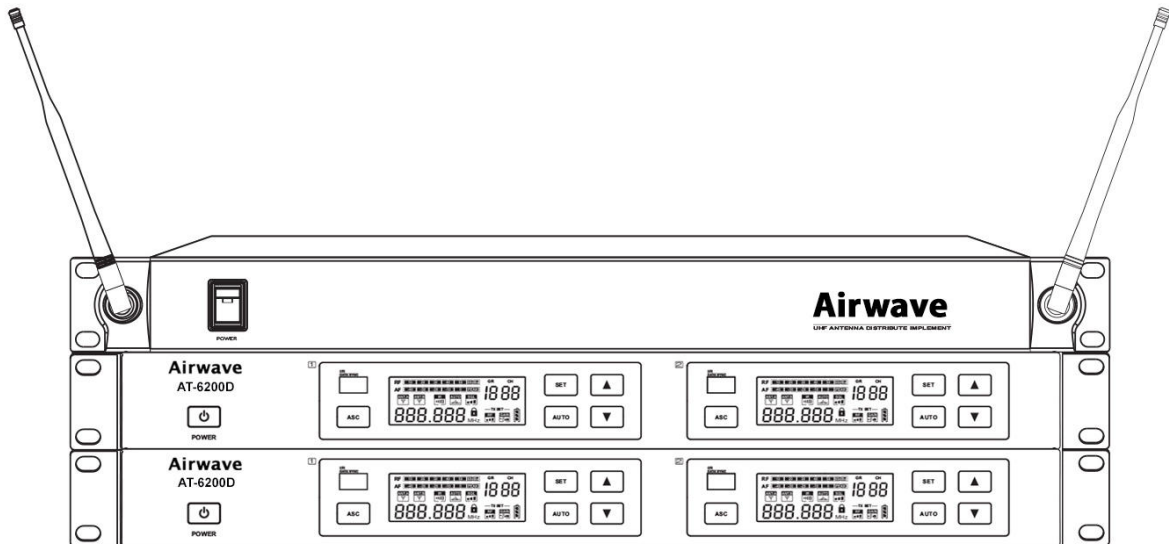
3 Direct Power Adapter
(Optional Accessory)



4 Airwave Rack Mount System



5 Antenna Combiner & Amplifier
(Optional Accessory)



Important Safety Instructions

- Only use as intended and follow the manufacturers instructions.
- Do not expose this system to rain or moisture and keep away from water sources.
- Do not install system near any heat sources, direct sunlight, or open flame.
- Ventilation holes should not be covered. Operating temperature range 28°~122° F
- Risk of electric shock if the receiver chassis cover is removed. There are no user-serviceable parts inside. All internal circuits in the receiver and transmitters are factory-calibrated for optimal performance and regulatory compliance. Do not open the chassis, receiver, or transmitters. Doing so will void the warranty and may result in improper operation.
- Refer all servicing to Airwave Technologies. Servicing is required when any damage has occurred for example exposure to liquids, being dropped, or does not operate.
- Notice for users with implanted pacemakers or AICD devices: Low-power signals from wireless microphones may cause interference. When using a bodypack transmitter, wear it on a belt rather than near the chest; any interference will stop when the transmitter is turned off. Consult your physician or device provider if you have concerns or experience issues.

Troubleshooting Guide

Problem	Indicator State	Solution
No sound or faint sound	Transmitter Power Light Off	Confirm main power is on Confirm batteries are inserted correctly +/- Confirm batteries in transmitter are charged
	Receiver Power Indicator Off	Confirm AC power is connected to receiver via power jack. Confirm AC power supply is normal Confirm Voltage on power supply is normal
	Receiver RF Indicator illuminated	Adjust high receiver volume control Adjust high transmitter gain switch setting Check receiver / amplifier / mixer connections
	Receiver Power Indicator Off Receiver RF Indicator illuminated	Ensure receiver is away from metal surfaces. Ensure space between transmitter and receiver is free of obstacles. Verify transmitter and receiver are using the same frequency.
	Low-voltage light on transmitter	Replace Batteries in Transmitter
Distortion or excess noise	RF Signal illuminated on receiver	Ensure that no potential sources of interference are nearby. (CD players, computers, digital devices, ear monitoring systems). Set receiver and receiver to a different frequency. Reduce the transmitter signal. Replace batteries. If using multiple systems - increase frequency interval between the systems.
Distortion level gradually increased	Low Battery Indicator flashing	Replace Batteries in Transmitter
Output has feedback and / or distortion.		Adjust the transmitter and receiver volume to appropriate levels.

AT-6200D DUAL CHANNEL WIRELESS RECEIVER SPECIFICATIONS

Digital Transmission and True Diversity Design
Up to 16 Channels Using 2 Bands and Antenna Distro
Infrared Data Synchronization / Auto Channel Button for Fast Frequency Sweep
Digital Adjustable Volume, Squelch, and Gain Control
RF Frequency Range: A Band 470.050~510.000Mhz, B Band 512.000~561.950MHz
Digital Modulation Mode: QPSK
Digital Audio Resolution: 24-bit A/D Conversion
Dynamic Range: 120dB (A-Weighted)
Frequency Response: 50Hz~18KHz (± 3 dB)
Signal to Noise Ratio: >95dB (A)
System Distortion: <0.1 % (THD+N @ AF 1KHz)
Noise Floor: <-93dBV (A) XLR
Maximum Output: +5dBV ± 1
AF System Gain: +15dB ± 1
Gain Control Range: 0 to 63dB per 1dB Step
Audio Output: XLR CH1 & CH2 / XLR Mix / 1/4" Mix
Impedance: XLR: 3k Ω / 1/4-inch connector: 3k Ω
System Operating Range: $\leq 260'$
Antenna Connectors: 2 BNC 1/4 Wave Rear Mount
Power Requirements: 12V/0.5A DC / Power Consumption: <500mA @ DC12V
Operating Temperature Range: 28°F~122°F
Dimensions: 16.142" (L) x 6.299" (W) x 1.732" (H) / Weight: 3.71 lbs.

U-61 HANDHELD MICROPHONE TRANSMITTER SPECIFICATIONS

Digital Audio Resolution: 24-bit A/D Conversion
Interchangeable Capsule
Infrared Data Synchronization
Frequency Range: A Band 470.050~510.000Mhz, B Band 512.000~561.950MHz
Dynamic Range: 110dB (A-Weighted)
Max SPL: 140dB
Capsule Frequency Response: 50Hz~16KHz (± 3 db)
Capsule Sensitivity: -50dB $\pm$ 2dB V/PA@1 KHz / Capsule Directivity: Single Point
Signal to Noise Ratio: >100dB (A)
RF Output Power: H-15dBm M-10dBm L-5dBm (@ ± 2)
Gain Adjustment Range: 0 / -3 / -6 / -9 dB
Power Requirements: <190mA @3.0V - 2 x 1.5V (AA) / Battery Life: >8H/1300mAH
Dimensions: 9.51" x 1.97" / Weight: 10.37oz

U-62 BODYPACK TRANSMITTER SPECIFICATIONS

Digital Audio Resolution: 24-bit A/D Conversion
Infrared Data Synchronization
Durable Metal Body Construction
Frequency Range: A Band 470.050~510.000Mhz, B Band 512.000~561.950MHz
Dynamic Range: 120dB (A-Weighted)
Frequency Response: 50Hz~15KHz (± 3 db)
Gain Adjustment Range: 0 / -3 / -6 / -9 dB
Input Impedance: 5k Ω
RF Output Power: H-15dBm M-10dBm L-5dBm (@ ± 2)
Harmonic Rejection: >50dB
Display: LCD
Power Requirements: <160mA @3.0V - 2 x 1.5V (AA) / Battery Life: >10H/1300mAH
Dimensions: 6.5" x 2.56" x .91" / Weight: 3.77oz

www.AirwaveTechnologies.com

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- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.