



PURE RESONANCE AUDIO WMS1-HH Handheld Wireless Microphone System Instruction Manual

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Caution: Please read this manual carefully before operating.
Damage caused by misuse is not covered by the warranty.

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SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use. The included conventions of safety symbols and messages are regarded as essential precautions.
- We recommend that you keep this instruction manual handy for future reference.

SAFETY SYMBOL AND MESSAGE CONVENTIONS

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage that could result from mishandling. Before operating this product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety risks.



WARNING!

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.



CAUTION!

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.



WARNING!

- If you find any of the following abnormal conditions, turn off the power, unplug the unit, and contact your nearest dealer. Do not operate the unit further in this condition.
 - Smoke or a strange smell is coming from the unit
 - Water or metal objects fall into the unit
 - The unit falls, is dropped, or the housing is damaged
 - The power supply cord is damaged (exposure of the core, disconnection, etc.)
 - It is malfunctioning
- The unit contains high-voltage parts. To avoid fire or electric shock, DO NOT open or disassemble the unit.
- DO NOT place cups, bowls, vases, or other containers of liquid on the unit or touch it with wet hands, as this may cause fire or electric shock.
- DO NOT expose the unit to rain or any environment with high moisture levels or where it may be splashed by water or other liquids, as this may result in fire or electric shock.
- DO NOT put metal, flammable materials, or coins into the unit; doing so may cause fire or electric shock.

*No user-serviceable parts inside. Refer all servicing to qualified service personnel.

*Changes or modifications not expressly approved by the manufacturer could void the user's warranty.



CAUTION!

- DO NOT place heavy objects on the unit to prevent personal injury or property damage.
- Before turning on the power, ensure the volume is at the lowest level to avoid damaging your hearing.
- DO NOT continue operating the unit if the sound is distorted, as it may cause overheating and fire.
- DO regularly clean the unit to prevent damage or fire caused by accumulated dust on the unit, power supply, or wall AC outlet.
- When replacing the battery, use the same specification battery and ensure the correct installation to avoid electrical damage and explosion hazards.
- DO connect the unit to a power socket with a grounding device to ensure it is adequately grounded.
- The unit uses a power plug as a disconnection device from the main power supply. It must be disconnected when necessary for safety.
- The unit is only suitable for safe use in areas with an altitude of 1.24 miles (2000 m) and below.

- When installing the unit, ensure proper ventilation and avoid high temperatures or direct sunlight to allow for normal heat dissipation.
- This unit is recommended for indoor use only. If you use it outdoors, pay attention to waterproofing, moisture, and lightning protection.
- DO NOT operate the unit in places with wireless shielding equipment or subject to severe vibration.
- The original packaging has undergone shock-proof testing. To prevent accidental damage to the unit, use the original packaging for transportation.
- DO NOT move the unit between extremely cold and hot places to prevent condensation and damage.

PRECAUTIONS FOR USE

- Keep your hand in the middle of the microphone to avoid damage to the frequency response or signal transmission.
- Avoid putting two transmitters next to each other to prevent interference.
- DO NOT point the microphone directly at the speaker to prevent feedback oscillation, commonly known as “howling.”
- To minimize intermodulation interference, keep at least 16 ft (5 m) between the wireless microphone receiver and transmitter.
- The receiving range is affected by many factors and varies greatly. Avoid large metal obstructions for better transmission.
- If the battery symbol flashes when the transmitter is in use, the battery is low and needs to be replaced.
- If the transmitter will not be used for a while, remove the battery to prevent microphone damage from battery leakage.

MICROPOWER RADIO TRANSMITTING EQUIPMENT MUST COMPLY WITH REGULATIONS

- Comply with the specific terms and usage scenarios of the “Micropower Short-Distance Radio Transmitting Equipment Catalog and Technical Requirements” and usage methods such as control, adjustment, and switching.
- Do not make unauthorized changes of use scenes, expansion of transmission frequency range, increase of transmission power (including additional installation of radio frequency power amplifiers), no unauthorized external antenna or change to other transmission antennas.
- Do not cause harmful interference to other lawful radio stations or propose any protection from harmful interference.
- The unit is subject to interference from equipment for industrial, scientific, and medical (ISM) applications radiating radio frequency energy or from other lawful radio stations.
- If it causes harmful interference to other lawful radio stations, discontinue use immediately and take measures to eliminate the interference before further use.
- Comply with the regulations of electromagnetic environmental protection and the competent authorities of the relevant industries when using micropower equipment in aircraft and in electromagnetic environmental protection areas such as airports, radio observatories, meteorological radar stations, and satellite earth stations (including measurement and control, ranging, receiving, and navigation stations), which are designated by laws, regulations, and standards.
- It is prohibited to use any kind of model remote controller in an area with a radius of 3 miles (5,000 m) around

the center point of the airport runway.

- Environmental conditions of temperature and voltage when micropower devices are used.

DESCRIPTION

The Pure Resonance Audio WMS1-HH handheld wireless microphone system offers exceptional performance with low bit error rates, stable transmission, and robust anti-interference abilities. Utilizing advanced digital U-band transmission technology and pi/4-DQPSK modulation, this wireless system ensures clear and reliable audio. The ergonomic transmitter design provides a comfortable grip, while the rack-mountable receiver integrates seamlessly into any setup. Ideal for conferences, training rooms, public address, and large-scale events, the WMS1-HH delivers professional sound quality with natural, high-reduction audio output.

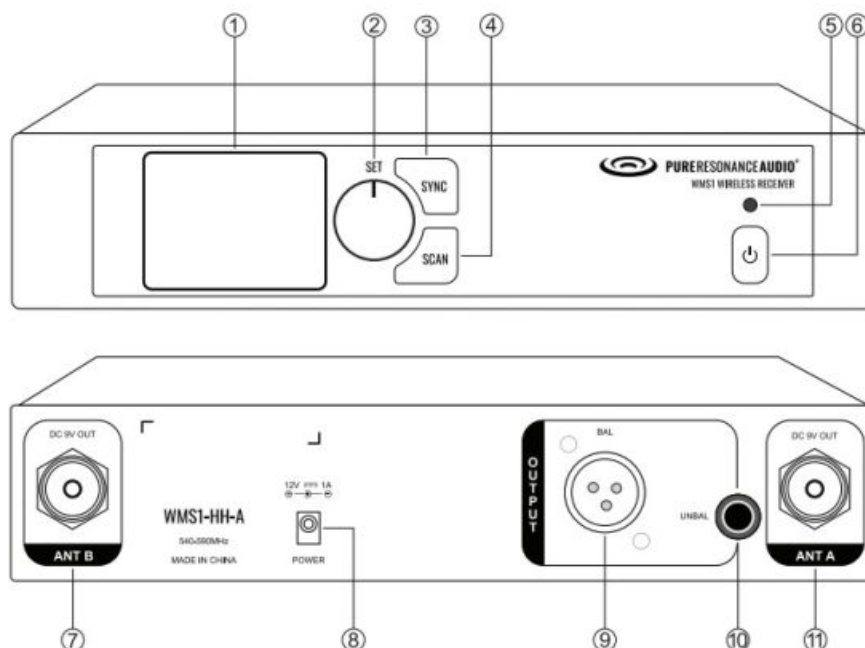
FEATURES

- Rack-mountable receiver
- Dynamic microphone transmitter
- Strong anti-interference, low bit error rate, and stable transmission
- ID code pilot encryption prevents cross-frequency interference
- Automatic frequency scanning for clear signal
- Infrared scanning for easy transmitter/receiver pairing
- EQ adjustments for highs, mids, and bass
- Balanced and unbalanced mixing outputs
- Optional Auto Mute function when inactive and to avoid impact sounds
- One-key Mute mode
- Auto shutoff after 8 minutes of inactivity
- 328 ft (100 m) working range
- 10-hour max battery life

SPECIFICATIONS

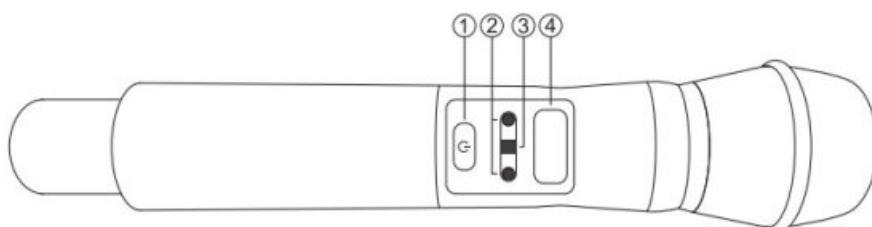
SYSTEM	
RF Range	540 MHz – 590 MHz
Modulation Mode	pi/4-DQPSK
Frequency Response (± 3 dB)	20Hz – 20kHz
Distortion Plus Noise (THD+N)	<0.1%
Signal-to-Noise (S/N) Ratio	_105 dB (XLR)
Range	328 ft (100 m)
RECEIVER	
Antenna Interface	BNC/50 Ω
Receive Sensitivity	<-95 dBm
Maximum Output	Balanced output 500 mV; Unbalanced output 1000 mV
Working Current	≤ 300 mA
Power Supply	DC 12V/1A
Dimensions (H x W x D)	1.72" (43.6 mm) x 8.35" (212 mm) x 8.43" (214 mm)
Weight	2.91 lbs (1.32 kg)
HANDHELD TRANSMITTER	
Microphone Cartridge	Dynamic microphone
Output Power	≥ 10 dBm
Working Current	≤ 200 mA
Battery	(2) Replaceable AA batteries
Max Battery Life	Up to 10 hours
Dimensions (L x Dia)	9.65" (245 mm) x 1.54" (39 mm) with cartridge
Weight	0.88 lbs (0.4 kg) with battery

RECEIVER FRONT & REAR PANELS



1. **LCD Display:** Displays the system's working status and settings (RF, Volume, Scan, Settings, Battery Level, RF Signal Strength, AF Level).
2. **SET Button/Knob:** Unlock and adjust receiver settings.
3. **SYNC Button:** Sync the receiver and transmitter after the transmitter frequency changes or any changes are made to the receiver.
4. **SCAN Button:** Scan local frequencies. The result will be the frequency with the least interference in that frequency band.
5. **IR Indicator Light:** Used for frequency pairing with the transmitter.
6. **Power Button:** Press and hold the power button to turn the receiver on and off.
7. **ANT-B-IN:** Used to connect the antenna.
8. **POWER:** DC 12V/1A power input.
9. **OUTPUT BAL:** XLR balanced output.
10. **OUTPUT UNBAL:** 1/4" TS unbalanced output.
11. **ANT-A-IN:** Used to connect the antenna.

HANDHELD MICROPHONE TRANSMITTER



1. **Power/Mute Button:**
 - Long Press: to turn on or turn off.
 - Short Double Press: to mute or unmute.
2. **Status Indicator Lights:**
 - Unmuted: Both lights are solid.
 - Muted: Alternating flashing lights

– Off: Both lights are off.

3. **IR Window:** Used for updating the transmitter via the receiver IR indicator.

4. **OLED Display:** Used to display the current status information of the handheld transmitter.

OPERATION GUIDE

RECEIVER OPERATION

Power On/Off

- When the receiver is off, press and hold the Power Button to turn the receiver on (Figure 1).
- When the receiver is on, press and hold the Power Button to turn the receiver off (Figure 2).



Fig. 1 Receiver Power On



Fig. 2 Receiver Power Off

SET Button/Knob

- Long-press the SET Button to lock or unlock the menu. Pressing other buttons while the screen is locked will result in a prompt that says, “Locked. Please long-press the unlock button to unlock.”
- Short-pressing the SET Button when the screen is unlocked will highlight the different options in a larger font. When the desired option is highlighted, short-press the knob to edit or select the option. While flashing, you can turn the SET Knob to adjust the different parameters. Once finished adjusting, short-press the SET Button to confirm the selection.

SCAN Button

- Press the SCAN Button to automatically scan the local radio frequencies for the frequency with the least interference. The receiver will automatically stop at the optimal frequency. After scanning is complete, press the SYNC Button to update the transmitter.

SYNC Button

- Once a change has been made to the receiver, press the SYNC Button. The receiver's IR Indicator Light will begin flashing. While flashing, move the handheld transmitter's IR Window within 12" in front of the IR Indicator Light to complete the update. Once the transmitter has been updated, the IR Indicator Light will stop flashing.

Receiver Home Screen (Figure 3)

- RF Signal Strength: Displays RF signal strength in real-time.

- **AF Signal Strength:** Displays the audio signal strength from the transmitter in real time.
- **Radio Frequency:** Displays the current frequency selected on the receiver.
- **Volume Level:** Displays the current volume level (for proper gain staging, start by setting volume to 80%)
- **SCAN:** Automatically scans the local radio frequencies for the frequency with the least interference. The receiver will automatically stop on the optimal frequency.
- **SETTINGS:** Opens the Settings Screen.

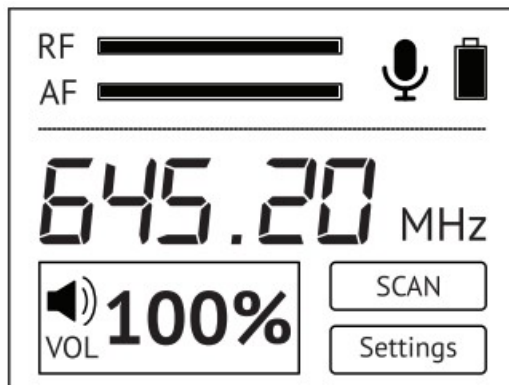


Fig. 3 Main Screen

Settings Screen. (Figure 4)

• Microphone Settings (Figure 5):

- **Power:** [1-7] Strength of RF output being transmitted from the handheld unit. If intermodulation occurs (typically in a system with multiple wireless microphones being used simultaneously), adjusting the transmit power intensity down can help minimize the interference.
- **Auto Mute:** [ON or OFF] Enables the transmitter to mute automatically after 5 seconds of no movement. Auto Mute will disengage when the transmitter is moved again. Auto Mute will also engage if the transmitter is dropped.
- **ID:** [ON or OFF] Enables audio encryption between transmitter and receiver. The encrypted audio signal will have enhanced anti-interference abilities.
- **One-key Mute:** [ON or OFF] Enables a double click of the transmitter Power/Mute Button to mute or unmute the transmitter. When turned off, the transmitter Power/Mute Button functions ONLY as a power button.

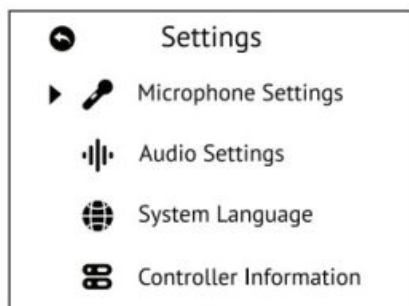


Fig. 4 Settings



Fig. 5 Microphone Settings

• Audio Settings (Figure 6):

- **Reverb:**
 - **Ratio:** Adjusts the rate of decay.
 - **Delay:** Adjusts the rate of delay.
 - **Level:** Adjusts the amount of effect applied to the channel.
- **EQ:**

- Bass: Allows users to boost or cut low frequencies $\pm 6\text{dB}$.
- Middle: Allows users to boost or cut mid-range frequencies $\pm 6\text{dB}$.
- Treble: Allows users to boost or cut high frequencies $\pm 6\text{dB}$.

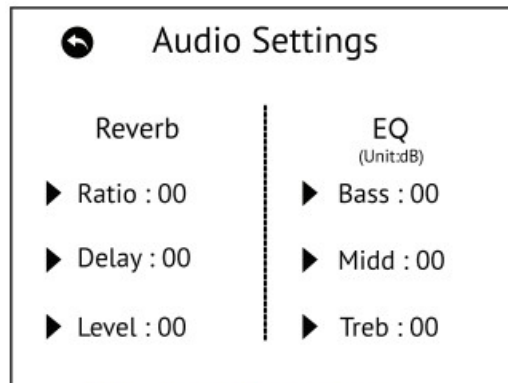


Fig. 6 Audio Settings

- System Language (Figure 7): [Chinese or English] Set the desired language to be displayed.
- Controller Information (Figure 8): Displays the current software version.



Fig. 7 System Language

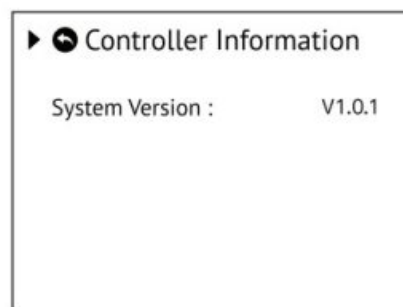


Fig. 8 Controller Information

Low Battery Alert (Figure 9)

- When the microphone battery level is low, the receiver display turns red, and a low battery symbol appears.

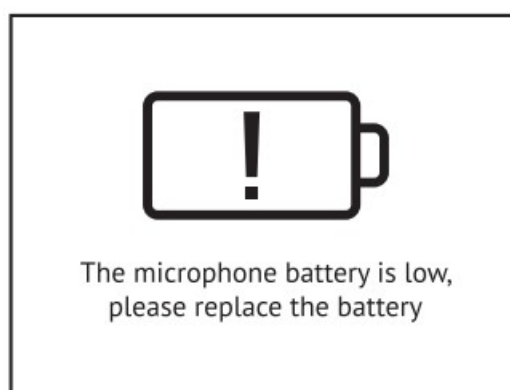


Fig 9 Low Battery Reminder

HANDHELD MICROPHONE TRANSMITTER OPERATION

Power On/Off Button

- When the transmitter is off, press and hold the Power/Mute Button to turn the transmitter on (Figure 10).
- When the transmitter is on, press and hold the Power/Mute Button to turn the transmitter off (Figure 11).



Fig. 10 Transmitter Power On



Fig. 11 Transmitter Power Off

Microphone Transmitter Home Screen (Figure 12)




- **Transmit Power Intensity:** **P7** [P1-P7] Displays the selected power setting.
- **ID Encryption Status:**  Indicates that ID encryption is active.
- **Battery Status:**  Displays battery status. When the battery level is low, the icon will begin to flash.
- **Radio Frequency:** **670.00 MHz** Displays the current radio frequency selected on the transmitter.
- **Auto Mute:** **Mute-A** Indicates that the Auto Mute feature is active.
- **Mute Status:**  Displays current mute status. If One-key Mute is



Fig. 12 Transmitter Main Screen

Automatic Shutdown

- The microphone transmitter supports a long-term automatic shutdown function. The device detects the working status (in use or resting state) and automatically turns off after 8 minutes of inactivity.

PLEASE NOTE: This feature can not be disabled.

SERVICE

In the event of a malfunction, ensure the problem is not related to operator error or system devices external to this unit. Once it is certain that the problem is related to the product, contact your warranty provider as described in the warranty section of this manual.

LIMITED WARRANTY

PRO ACOUSTICS, LLC. ("PRO ACOUSTICS") warrants this product to the original purchaser to be free from defects in materials and workmanship (subject to the terms set forth below) for the following periods from the date of purchase.

THIS WARRANTY COVERS THE LISTED PRODUCTS AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR THE FOLLOWING PERIOD

Warranty Terms

Speakers	2 Years
Amplifiers & Electronics	1 Year
Microphones	1 Year
Accessories	1 Year

PRO ACOUSTICS will repair or replace (at PRO ACOUSTICS's option) this product or any defective parts (excluding electronics and amplifiers) in this product.

Your authorized PRO ACOUSTICS dealer will inspect the product, and if your dealer is not equipped to perform the repair of your PRO ACOUSTICS product, they will replace your product or return it to PRO ACOUSTICS for repair at their discretion. Proof of purchase in the form of a bill of sale or receipted invoice, which is evidence that this product is within the warranty period, must be presented to obtain warranty service.

This warranty is invalid if the factory applied serial number has been altered or removed from this product.

This warranty is invalid if this product was not purchased from a PRO ACOUSTICS authorized dealer.

Cosmetic damage or damage due to the accident, acts of God, misuse, abuse, negligence, commercial use, or modification of, or to any part of, the product are not covered in this warranty. This warranty does not cover damage due to improper operation, maintenance, installation, or attempted repair by anyone other than PRO ACOUSTICS or a PRO ACOUSTICS dealer that is authorized to do PRO ACOUSTICS warranty work. Any unauthorized repairs will void this warranty.

This warranty does not cover products sold as is.

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This warranty gives you specific legal rights. You may have other rights which vary from state to state.

Specifications may change without notice.


PURE RESONANCE AUDIO®

866-676-7804

sales@pureresonanceaudio.com

www.PureResonanceAudio.com

Documents / Resources

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References

- [Pure Resonance Audio: Commercial Audio Speakers, Amplifiers & More](#)
- [User Manual](#)

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