

STAGE TRUE DIVERSITY WIRELESS MICROPHONE USER GUIDE



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Feature Abstract

- ACEMIC X4 wireless microphone is a high-quality, stable and reliable true diversity wireless microphone, suitable for small stage performances and engineering use
- The wireless microphone of this system adopts the latest UHF high-fidelity audio wireless transmission technology to ensure the audio clarity and restoration of the microphone
- True diversity reception ensures no dead spots in long-distance transmission to the greatest extent, and the maximum reception distance reaches 200 meters, which is stable and reliable
- 4*20MHz bandwidth design, up to 1600 adjustable frequency points, allowing you to adjust frequency more accurately and improve frequency utilization
- It is easy to operate and has fast spectrum scanning and spectrum frequency selection functions. This function can avoid frequency interference from other wireless devices in the same place.
- Super anti-interference ability, supports 10 set systems working simultaneously without interference
- English and Chinese menu switch on receiver
- The receiver has a key lock function to prevent accidental changes to settings

Frequency Selection

ACEMIC can provide different frequency band options for the wireless system that comply with government regulations in different countries or regions. These regulations help limit the interference of radio frequency (RF) between different wireless devices, And it can prevent interference with local public communication channels such as television and emergency broadcasting. The receiver and transmitters are labeled with the system's band and frequency range. For example, "610MHz-698MHz". For information on the available bands in your region, please consult your local dealer or call us to check. You may also go to our official website (www.acemic.com) for more details.

Group and Channel

To transmit audio signals through a wireless system, the transmitter and receiver must be set to an identical radio frequency or channel. Because each microphone must use a different channel. A large channel selection range allows users to use more microphones simultaneously. It also provides a wider selection of available channels - these channels are away from interference from television broadcasts, electronic devices, or other wireless systems. A group is a combination of a series of compatible channels. By setting channels in the same group, wireless microphones can achieve better performance.

Frequency Automatic Scanning

The following functions can scan the radio frequency environment to find the best group and channel settings for specific installations.

Channel scanning: Find the best available channel in the current selection group and set up it for the receiver.

Spectrum Analyzer

This feature can scan audio signals transmitted by multiple wireless systems in the same environment, and then stagger the channels between the system and other wireless devices , this can avoid channel interference issue.

Interface Lock

This feature can lock the transmitter and receiver, so user cannot change setup.

X4 Wireless Mic System

Product parts and components All systems include:



X4 Receiver



Receiver's Antenna X4



Quarter Inch Audio Cable



AA Battery



Power Adapter

Handheld Transmitter Options:



Handheld Transmitter

Bodypack Transmitter Options:



Bodypack Transmitter

Plug-on Transmitter:



Plug-on Transmitter

Conference Mic Transmitter:



Conference Mic Transmitter

Button of front panel and interface of rear panel for receiver

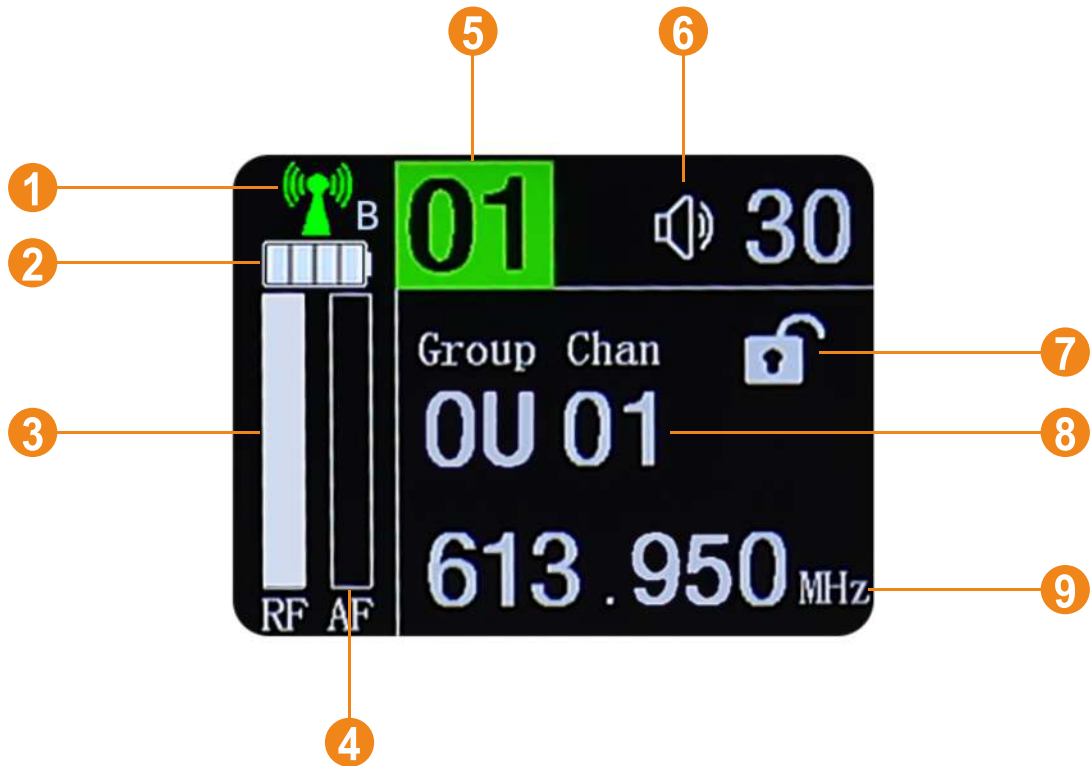


- | | |
|---------------------------------|---|
| 1. IR SYNC window | 6. CH4 channel selection button |
| 2. CH1 channel selection button | 7. Press the channel menu button: |
| 3. Channel return/cancel button | enter the menu to confirm the left/right rotation selection |
| 4. CH2 channel selection button | 8. Receiver power switch |
| 5. CH3 channel selection button | |



- | | |
|---|---|
| 1. Antenna input of CH3 channel , CH4 channel | 5. CH2 channel audio balanced output |
| 2. CH4 channel audio balanced output | 6. CH1 channel audio balanced output |
| 3. CH3 channel audio balanced output | 7. Antenna input of CH1 channel , CH2 channel |
| 4. CH1-CH4 channel 6.35 audio mixing output | 8. Receiver power input jack |

Interface of Receiver



1. Working status of transmitter
2. Power status of transmitter
3. CH1 channel receiver RF signal strength indication
4. CH1 channel audio signal strength indication
5. ID number corresponding to the transmitter, green is the currently operable channel
6. Mic Volume
7. Receiver Lock (press EXIT + menu button at the same time to start, the unlocking operation is the same)
8. Group is the group, Chan is the channel
9. Currently operating frequency

X4 Wireless Mic System

TFT display of receiver

Menu



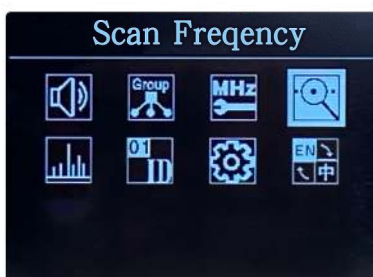
Audio output: Adjust the receiver output volume, 0~+30dB, 1dB adjustment per level



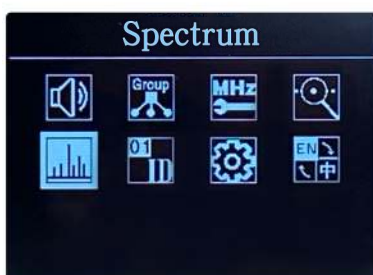
The frequency of each boot can be preset and recalled according to the actual usage environment



Manual frequency adjustment: Different frequencies can be adjusted and used manually



Automatic scanning: can automatically scan and set the optimal frequency for the current usage environment



Spectrum analyzer: It can scan out which frequencies are interfered with in the current usage environment. Manually adjust and use frequencies that are not interfered with to avoid interference

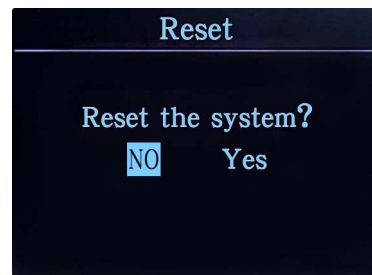
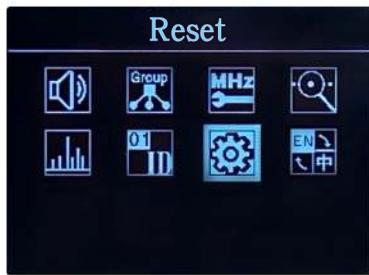
X4 Wireless Mic System

TFT display of receiver

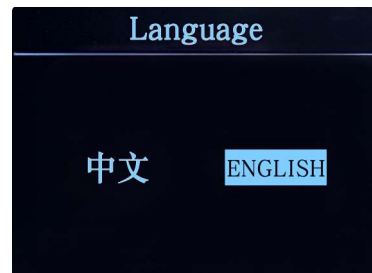
Menu



Number setting: 01 ~ 99. When multiple sets of X4 are used at the same time, the ID number corresponding to the transmitter can be set.



System reset: Restore factory settings



Language selection: The menu language can be switched between Chinese and English

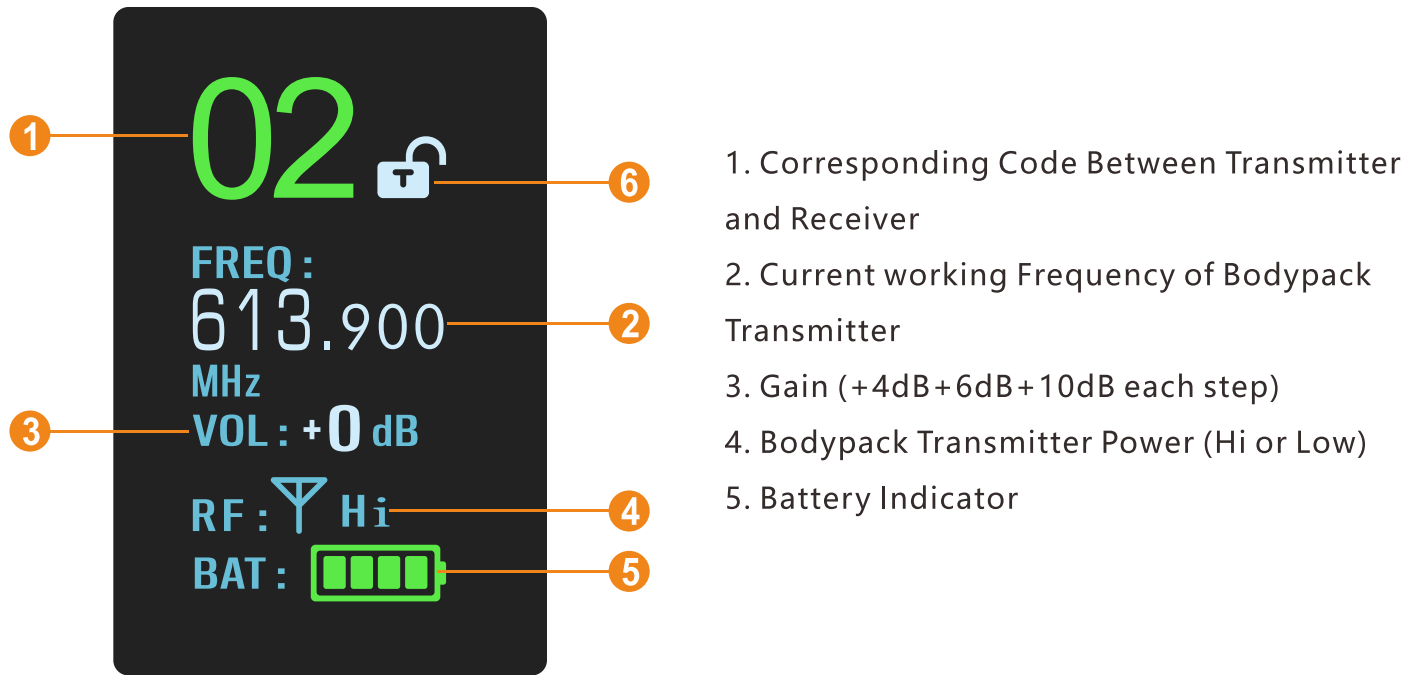
Features of Bodypack Transmitter(BP-A)



- 1. Antenna of Bodypack
- 2. Display of Transmitter
- 3. 4 pin XLR Port
- 4. Antenna Port
- 5. Infrared SYNC Port

- 6. Power Switch (Long Press)
- 7. Up Button
- 8. Feature Menu Button (Short Press)
- 9. Down Button
- 10. Battery Compartment

Interface of Bodypack Transmitter(BP-A)



1. Gain setting: -10dB 0dB +10dB three options
2. Press the up and down to manually set the frequency
3. High: 30mW Low: 10mw
4. Chinese and English switching
5. Turn on the lock screen to avoid misoperation

X4 Wireless Mic System

Body-pack Transmitter Function Description(BP-B)

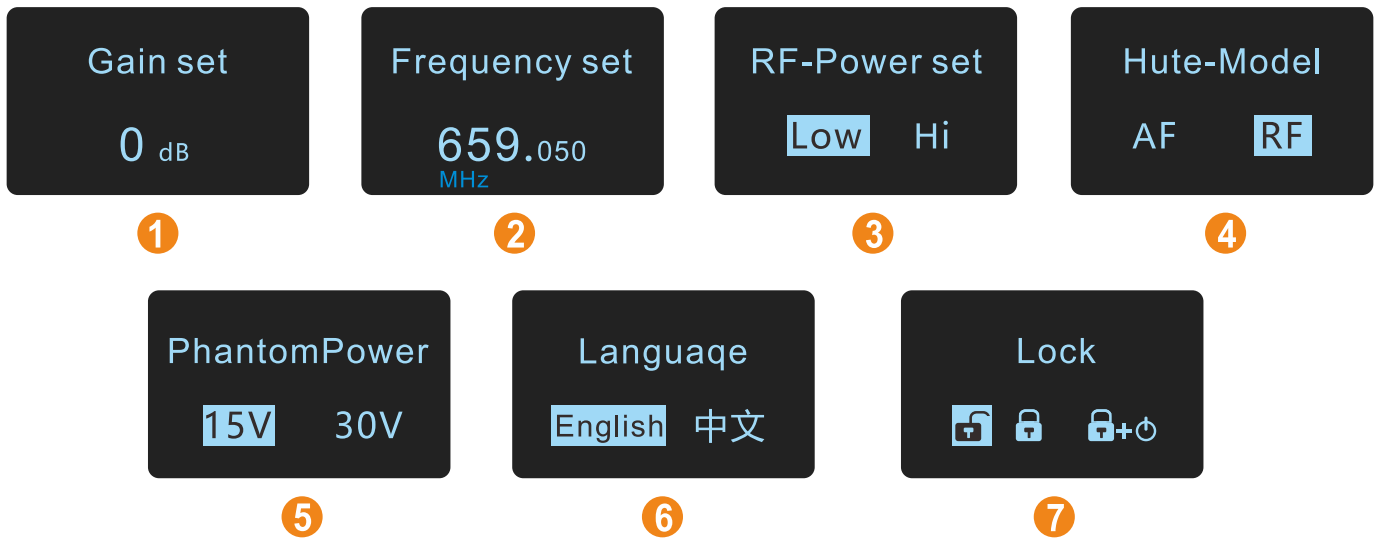


1. Antenna
2. Power (double-click quickly to turn on or off the mute function)
3. 4-pin XLR jack
4. Up
5. Set (short press)
6. Down
7. Battery compartment
8. TYPE-C charging port

Body-pack Transmitter Interface Description(BP-B)



1. The corresponding numbers of the transmitter and receiver
2. Volume gain setting
3. Operating frequency of the bodypack transmitter
4. Battery life display (Lithium battery is displayed as Li, Dry battery is displayed as AA)
5. Phantom power
6. Lock screen or unlock screen icon



1. Volume setting: Gain has three modes to choose from: -10dB 0dB +10dB
2. Frequency setting: Press the up and down to set
3. Transmitting power: Low: 10mW, High: 30mW
4. Mute mode: Quickly double-click the power button to turn on or off the mute mode
Audio off: Transmitter signal is normal, microphone is muted
RF off: Transmitter signal is turned off, and microphone is muted at the same time (this mode will save more power)
5. Phantom power: 15V/30V phantom power can be manually selected
6. Language: Chinese and English
7. Lock button: The first one: unlock mode;
The second one: turn on the lock screen mode, the transmitter can be shut down normally
The third one: turn on the lock screen mode, the transmitter cannot be shut down (need to be unlocked before shutting down)

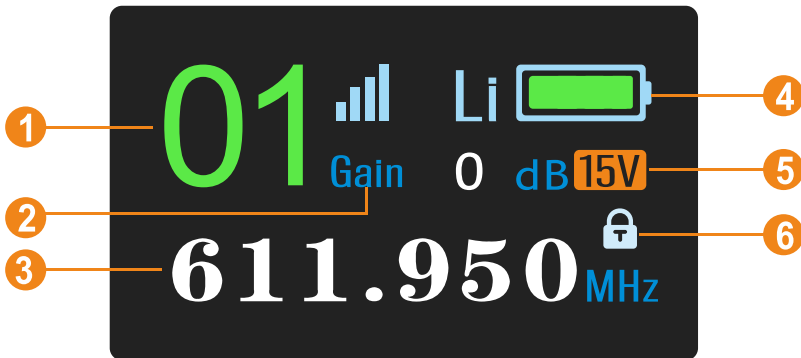
X4 Wireless Mic System

Body-pack Transmitter Function Description(BP-C)

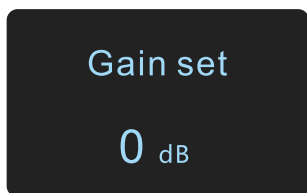


1. 4-pin XLR jack
2. Power (double-click quickly to turn on or off mute mode)
3. Antenna
4. Up
5. Set
6. Down
7. Battery compartment lock button
8. TYPE-C charging port
9. Battery compartment

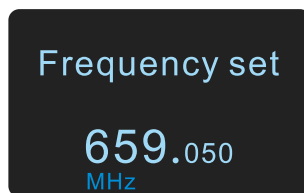
Body-pack Transmitter Interface Description(BP-C)



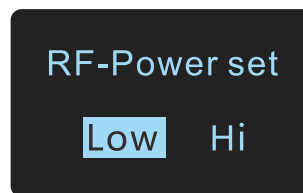
1. The corresponding numbers of the transmitter and receiver
2. Volume gain setting
3. Operating frequency of the bodypack transmitter
4. Battery life display (Lithium battery is displayed as Li, Dry battery is displayed as AA)
5. Phantom power
6. Lock screen or unlock screen icon



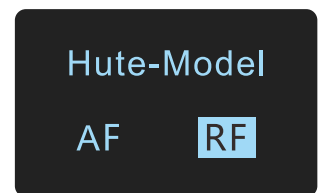
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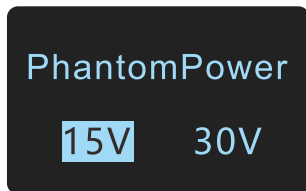
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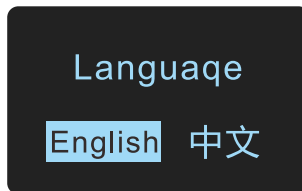
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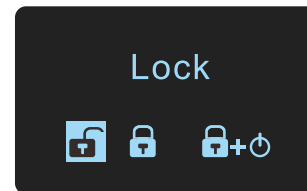
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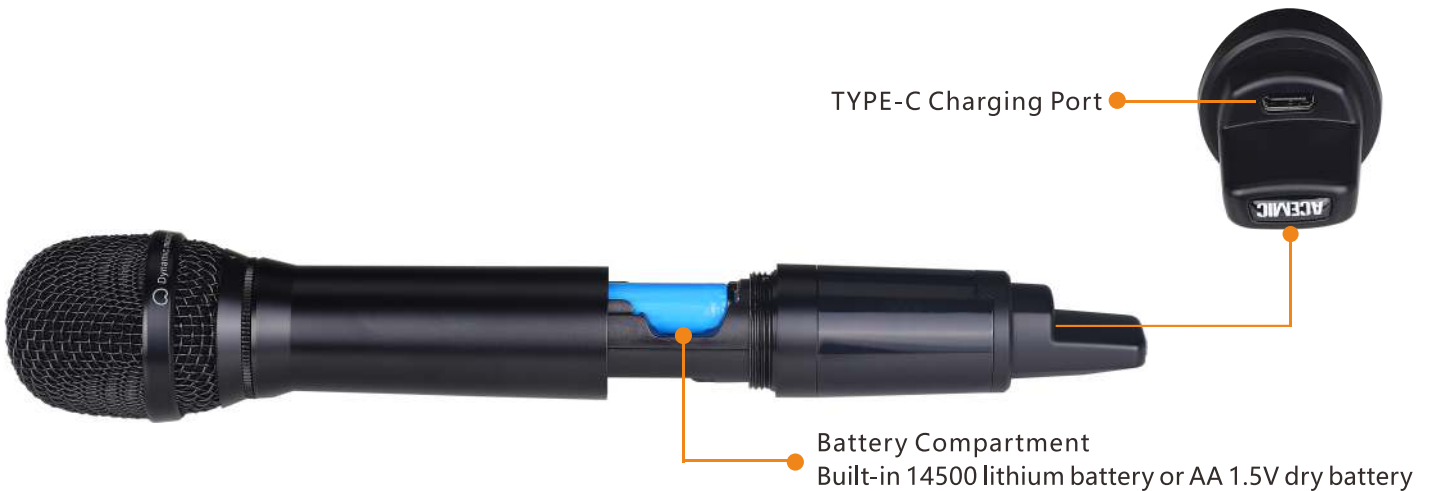
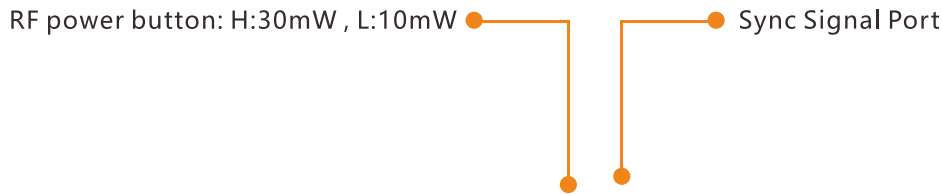
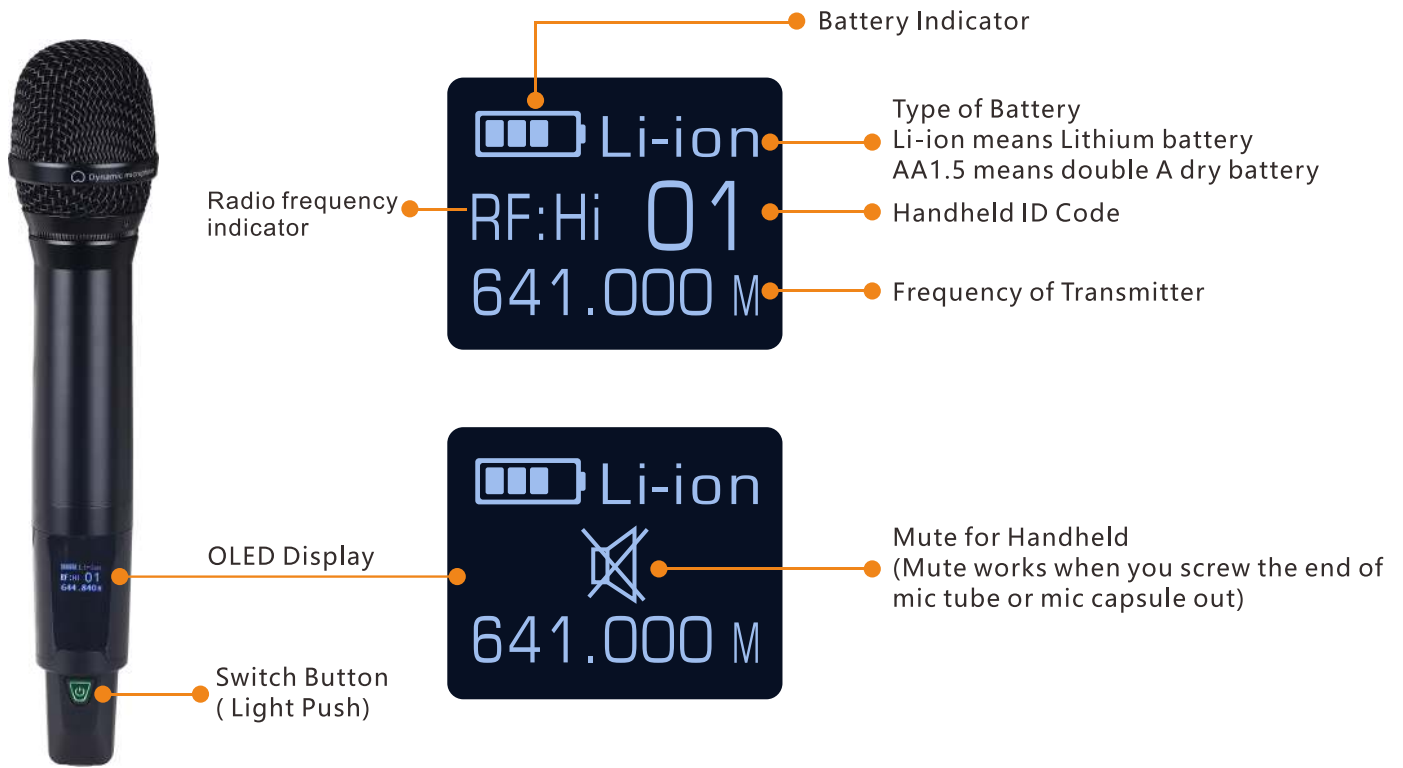


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1. Volume setting: Gain has three modes to choose from: -10dB 0dB +10dB
2. Frequency setting: Press the up and down to set
3. Transmitting power: Low: 10mW, High: 30mW
4. Mute mode: Quickly double-click the power button to turn on or off the mute mode
Audio off: Transmitter signal is normal, microphone is muted
RF off: Transmitter signal is turned off, and microphone is muted at the same time (this mode will save more power)
5. Phantom power: 15V/30V phantom power can be manually selected
6. Language: Chinese and English
7. Lock button: The first one: unlock mode;
The second one: turn on the lock screen mode, the transmitter can be shut down normally
The third one: turn on the lock screen mode, the transmitter cannot be shut down (need to be unlocked before shutting down)

X4 Wireless Mic System

Handheld Transmitter Function Description(MIC A)

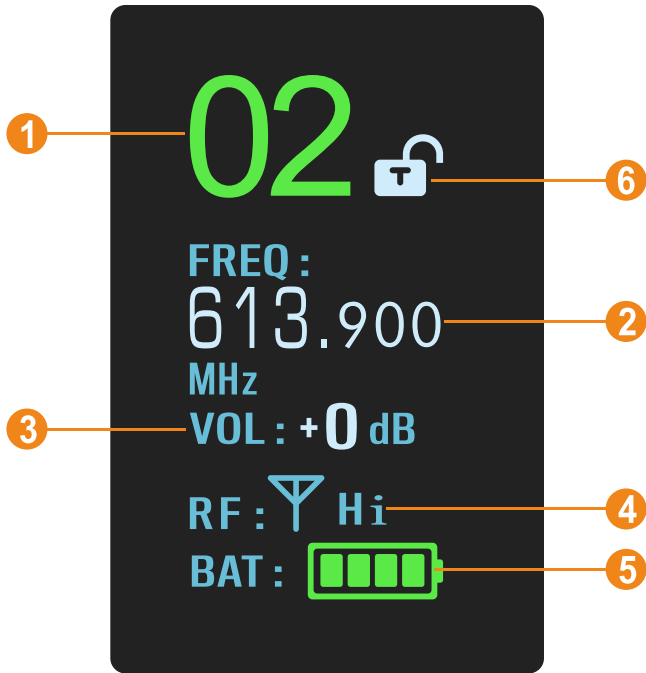


Handheld Transmitter Function Description(MIC B)



1. 4-pin XLR jack
2. Power (double-click quickly to turn on or off silent mode)
3. Antenna
4. Up
5. Set
6. Battery compartment

Handheld Transmitter Interface Description(MIC B)



1. The corresponding numbers of the transmitter and receiver
2. Operating frequency of the handheld transmitter
3. Gain (three modes to choose from: +10dB +0dB -10dB)
4. Handheld transmitter power (Hi or LOW)
5. Battery life display
6. Lock screen mode
(need to enter the menu to turn on or unlock)



1. Gain setting: -10dB 0dB +10dB three options
2. Press the up and down to manually set the frequency
3. High: 30mW Low: 10mw
4. Chinese and English switching
5. Turn on the lock screen to avoid misoperation

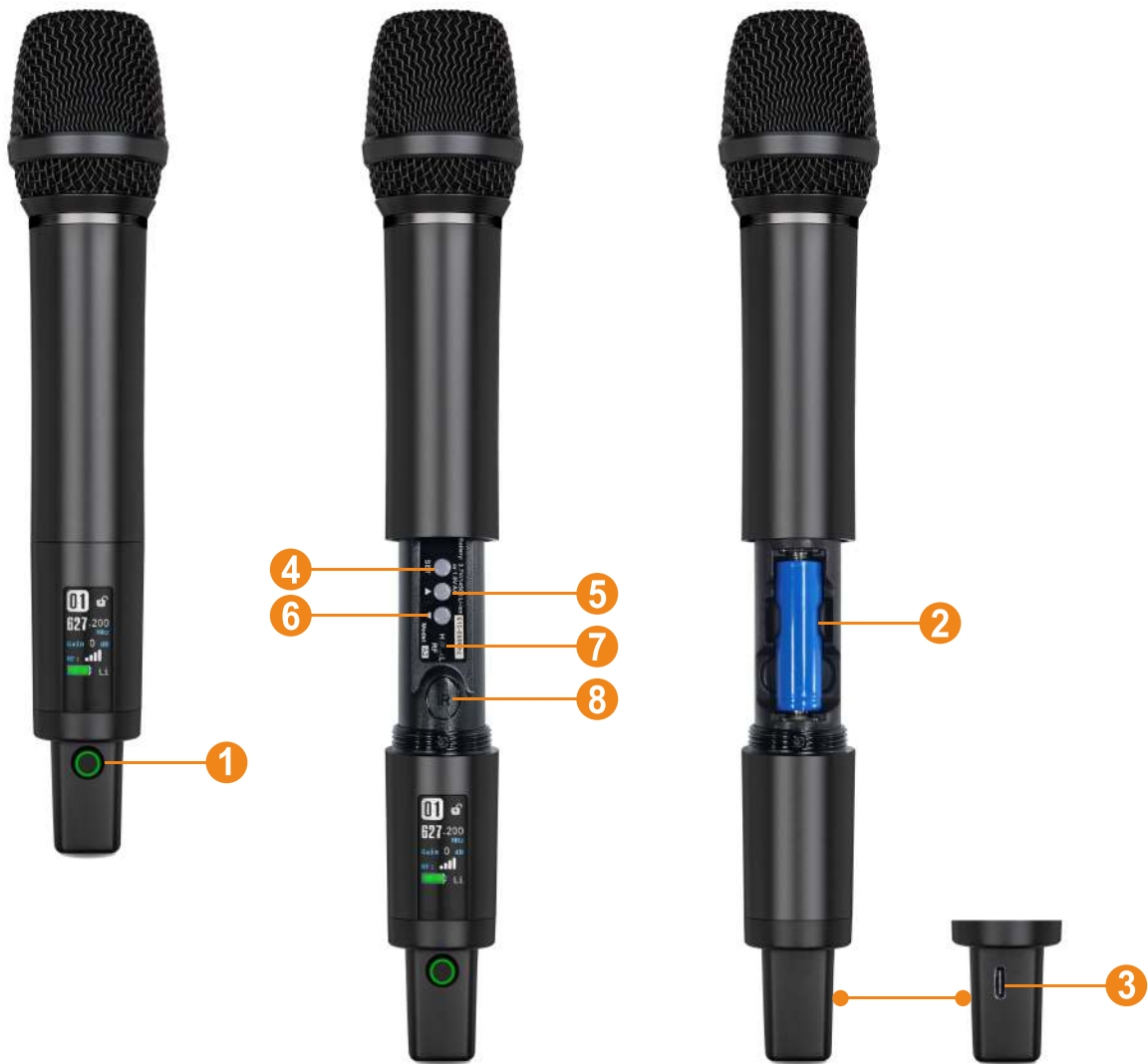
X4 Wireless Mic System

Handheld Transmitter Function Description(MIC C)



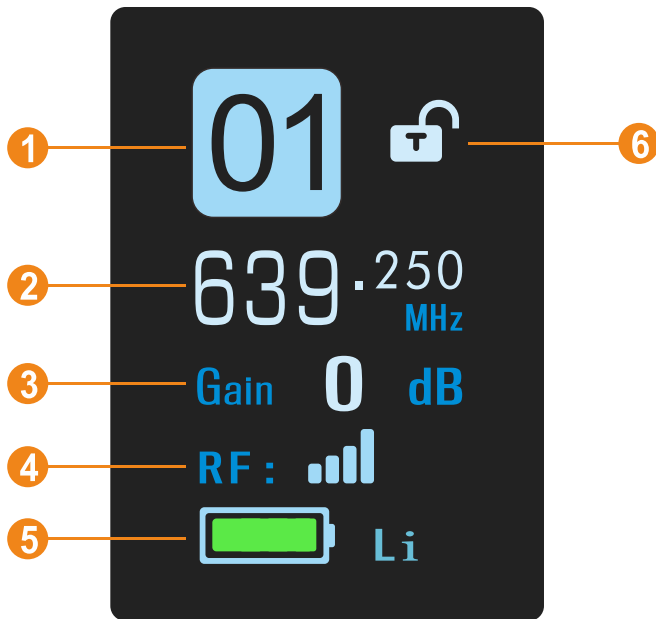
Powered by: 2X AA 1.5V battery

Handheld Transmitter Function Description(MIC F)

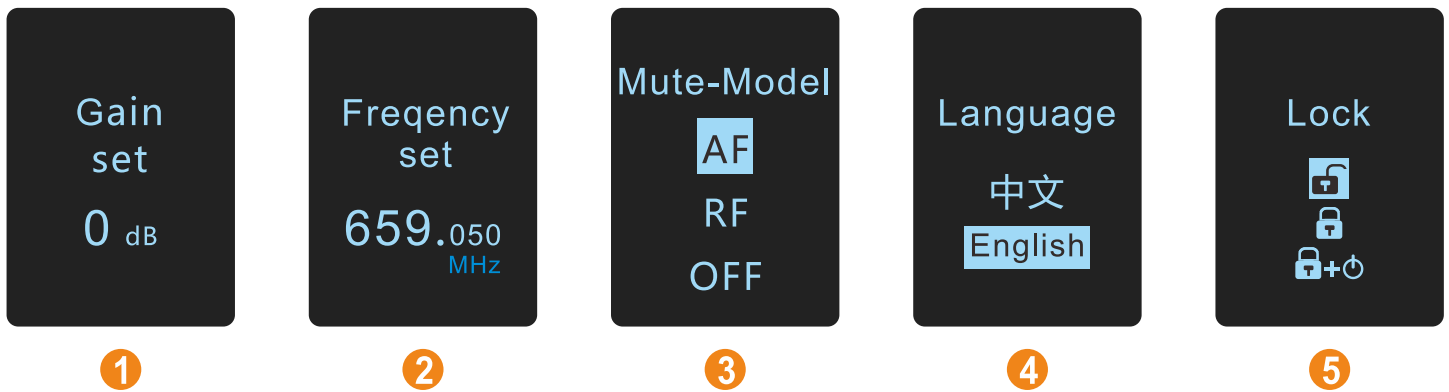


1. Power(double-click quickly to turn on or off silent mode)
2. Battery compartment
3. TYPE-C charging jack
4. Set
5. Up
6. Down
7. Transmit power: H (high, 30mW), L (low, 10mW)
8. Sync window

Handheld Transmitter Interface Description(MIC F)



1. The corresponding numbers of the transmitter and receiver
2. Operating frequency of the handheld transmitter
3. Gain (three modes of +10dB +0dB -10dB)
4. Handheld transmission signal
5. Battery life display
(Li for standard lithium battery and AA for ordinary dry battery)
6. Lock screen mode
(need to enter the menu to turn on or unlock)



1. Volume setting: Gain has three modes to choose from: -10dB 0dB +10dB
2. Frequency setting: Press the up and down to set
3. Mute mode: Quickly double-click the power button to turn on or off the mute mode
Audio off: Transmitter signal is normal, microphone is muted
RF off: Transmitter signal is turned off, microphone is muted at the same time (this mode will save more power)
Cancel: Cancel the mute function
4. Language: Chinese and English switching
5. Lock key The first one: Unlock mode The second one: Turn on the lock screen mode, the transmitter can be shut down normally
The third one: Turn on the lock screen mode, the transmitter cannot be shut down (it needs to be unlocked before it can be shut down)

TR-1 Plug-on Transmitter Function Description

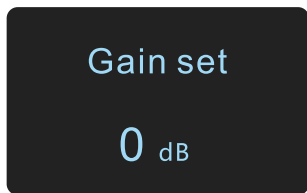


1. Gold-plated XLR female jack
2. Rotate the icon to lock or unlock the wired microphone
3. A red light will be displayed when the microphone volume is overloaded
4. Power indicator
5. Down
6. Set
7. Up
8. Sync window
9. Power (double-click quickly to turn on or off mute mode)
10. Battery compartment lock button
11. Phantom power switch
 - (1) No need to turn on the switch when connecting a dynamic wired microphone
 - (2) The switch needs to be turned on when connecting a condenser wired microphone (the red light will light up when the switch is turned on)
12. TYPE-C charging port

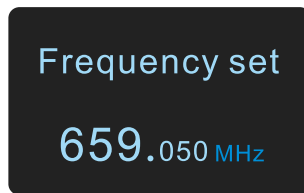
Plug-on Transmitter Interface Description



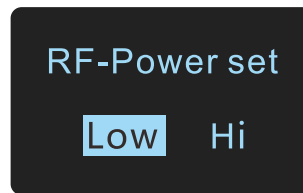
1. The corresponding numbers of the transmitter and receiver
2. Volume gain setting
3. Operating frequency of the bodypack transmitter
4. Battery life display
(Lithium battery is displayed as Li, dry battery is displayed as AA)
5. Phantom power
6. Lock screen or unlock screen icon



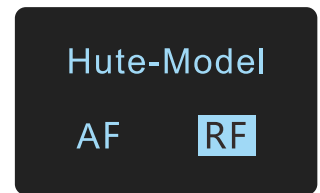
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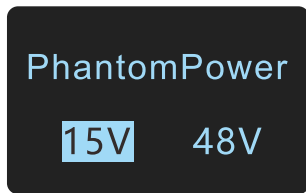
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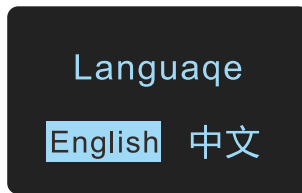
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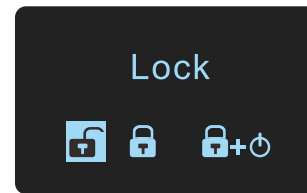
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1. Volume setting: Gain has three modes to choose from: -10dB 0dB +10dB
2. Frequency setting: Press the up and down to set
3. Transmitting power: Low: 10mW, High: 20mW
4. Mute mode: Quickly double-click the power button to turn on or off the mute mode
Audio off: Transmitter signal is normal, microphone is muted
RF off: Transmitter signal is turned off, and microphone is muted at the same time (this mode will save more power)
5. Phantom power: 15V/48V phantom power can be manually selected
6. Language: Chinese and English
7. Lock button: The first one: unlock mode; The second one: turn on the lock screen mode, the transmitter can be shut down normally
The third one: turn on the lock screen mode, the transmitter cannot be shut down (need to be unlocked before shutting down)

X4 Wireless Mic System

Conference Mic transmitter function description



Long press to turn on or off / Short press to turn on or off the mute button

Conference Mic Transmitter Rear Panel

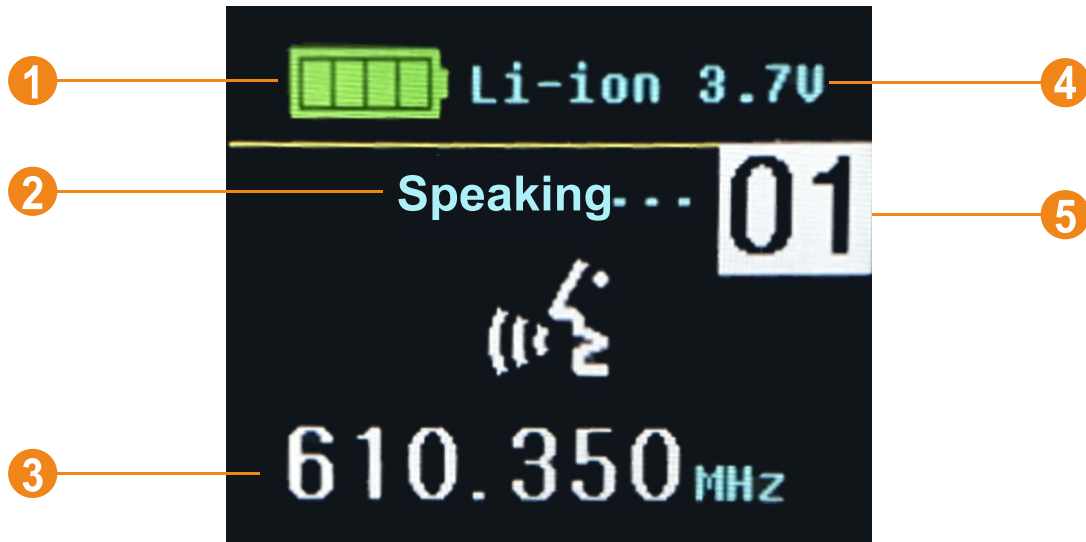
Built-in lithium battery/2×1.5V AA battery power supply switch

IR sync signal window



TYPE-C charge port

Conference Mic transmitter interface description



1. Battery level indicator

2. Normal speaking status/Turning on mute will be displayed as muted

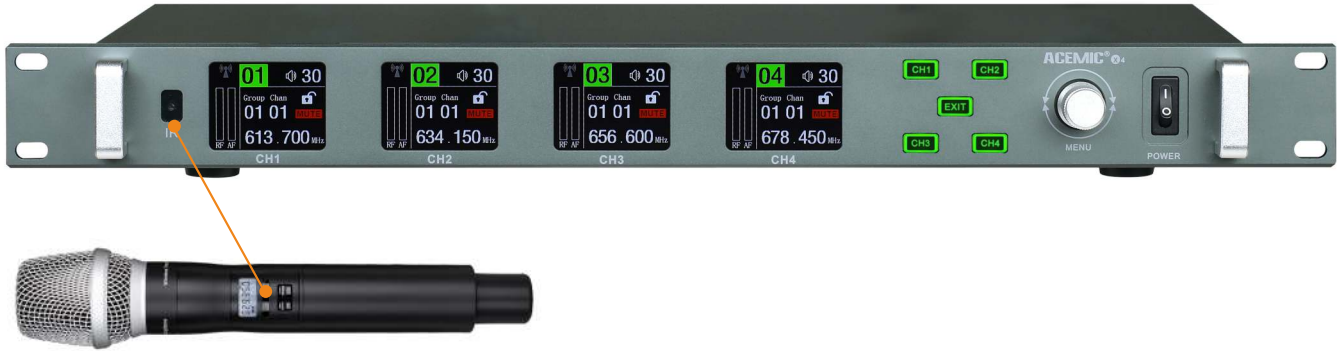
3. Conference base transmitter frequency

4. Battery type detection display:

Lithium battery display: Li-ion 3.7V , AA battery display: AA1.5VX2

5. ID numbers corresponding to the conference base transmitter and receiver

SYNC operating guide between transmitter and receiver



1. Long press the channel selection button, and a red light will flash in the IR infrared window of the receiver
2. Face directly the infrared IR port of handheld or bodypack transmitter to the receiver's IR interface
3. When the frequency of the transmitter is consistent with the frequency of the receiver, the MUTE on the receiver display will disappear, the status of the transmitter will be green and the transmitter power status will be displayed, indicating that the frequency has been adjusted.
4. X4 is a four-channel antenna microphone. If you need to sync the CH1 channel, first press the CH1 channel selection button. When the CH1 display ID background is green, long press the CH1 channel selection button. The sync operation for other channels is the same.

Troubleshooting

Problems	Solutions....
No Audio	Power supply, cable or radio frequency
Small sound or distortion	Gain
Operating range is short, sudden noise or signal dropout	Radio frequency
Cannot change frequency setup or program the receiver	Lock interface

Power supply

Ensure transmitter and receiver are powered by proper voltage. Receiver should be powered by the original power adapter. Check the transmitter's battery indicator, change battery or charge in time if required.

Gain

Adjust transmitter's gain

Cable

Check if all cables and connectors work well

Feature

- Get transmitter SYNC or make sure transmitter and receiver are set in an identical group and channel
- Check frequency label on transmitter and receiver to ensure that they are working in an identical frequency range

Reduce interference

- Work in different channels or do auto scan for group or channel
- When multiple systems are working, user should check if all systems are set to the channels in an identical group (systems in different frequency ranges need to be set in an identical group)
- The transmitter and receiver antennas should maintain a straight relative position without obstacles
- Keep the receiver antennas away from metal objects or other radio frequency interference sources such as CD players, computers, digital effects devices, network switches, network cables, and personal stereo monitors (PSM)

Specification for RX and TX

Receiver

Frequency Range	UHF612-698MHz
Adjustable Channel Number	400X4
Frequency Stability	0.002PPM
Receive Sensitivity	-100dBm
Audio Frequency Response	60Hz-18KHz (± 3 dB)
THD	< 0.5%
S/N Ratio	> 105dB
Dynamic Range	105dB
Maximum Frequency Deviation	± 48 KHz
Spurious Suppression	≥ 75 dB
Audio Output	Balanced and unbalanced output
Power Supply	12-18V DC/1000mA

4-Channel Receiver

Frequency Range	UHF612-698MHz
Adjustable Channel Number	400X4
Frequency Stability	0.002PPM
Receive Sensitivity	-100dBm
Audio Frequency Response	60Hz-18KHz (± 3 dB)
THD	< 0.5%
S/N Ratio	> 105dB
Dynamic Range	105dB
Maximum Frequency Deviation	± 48 KHz
Spurious Suppression	≥ 75 dB
Audio Output	Balanced and unbalanced output
Power Supply	12-18V DC/1000mA

Bodypack

Frequency Range	612-698MHZ
Maximum Number of Channels	1600
Output Power	5mW/30mW
Spurious Rejection	> -70dBc
Bandwidth	86MHZ
Peak Deviation	± 48 KHZ
Frequency Response	60-18KHZ
S/N Ratio	> 105dB
THD	< 0.5%
Input Voltage Range	0.8V max
Power Supply	2 X1.5V(AA)
Operating Time	10h

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Specification for RX and TX

Handheld

Frequency Range	612-698MHZ
Maximum Number of Channels	1600
Output Power	10mW /100mW
Spurious Rejection	>-70dBc
Bandwidth	86MHZ
Peak Deviation	±48kHz
Frequency Response	60-15KHZ
S/N Ratio	>105dB
THD	<0.5%
Input Voltage Range	mic 1V max
Power Supply	2 X1.5V(AA)
Operating Time	10h/5h

Conference Mic Transmitter

Frequency Range	612-698MHZ
Maximum Number of Channels	1600
Output Power	30mW
Spurious Rejection	>-70dBc
Bandwidth	86MHZ
Peak Deviation	±48kHz
Frequency Response	60-18KHZ
S/N Ratio	>105dB
THD	<0.5%
Input Voltage Range	0.8V max
Operating Time	8h
Power Supply	33.7V built-in lithium battery/2X1.5V(AA)

Plug-on Transmitter

Frequency range	610-698MHz
Bandwidth	88M
Maximum number of channels	8800
Transmit power	10/20mW
Maximum frequency deviation	65KHz
Phantom power supply for pins 2 and 3	15V/48V
Power requirements	1*14500 lithium battery or 1 AA alkaline battery
Battery life	Standard 14500 lithium battery 8-9 hours (high power mode) 10-11 hours (low power mode)