

AM6409**Stable Wireless Microphone Home Theater Karaoke Use****Description**

This intelligent wireless microphone system adopts advanced UHF wireless transmission and digital pilot tone technology, ensuring stable signal transmission and excellent anti-interference performance while effectively preventing frequency interference. The system consists of handheld microphones and a receiver, and supports practical features such as infrared automatic frequency synchronization, automatic interference-free channel search, and adjustable transmission power. In addition, the microphones are equipped with an intelligent sensing power-saving function that automatically mutes when left idle and enters energy-saving mode to extend battery life. With clear and natural sound quality, strong mid-low frequency performance, and delicate high frequencies, this system is suitable for KTV rooms, conference rooms, classrooms, small to medium performances, speeches, and various other applications.

Features

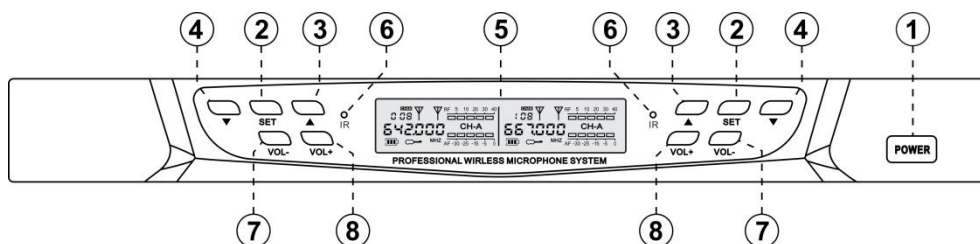
- Brand-new audio circuit architecture delivers delicate highs and powerful mid-low frequencies, with exceptional detail and clarity. Outstanding dynamic tracking capability ensures stable and natural sound pickup at both long and short distances.
- Innovative digital pilot tone technology completely eliminates frequency interference between adjacent KTV rooms — no cross-frequency interference ever.
- Built-in feedback suppression circuit for easier system setup and tuning.
- Automatic interference-free channel scanning for convenient installation.

- Maximum output volume can be freely limited for flexible application.
- UHF frequency band with PLL (Phase-Locked Loop) frequency synthesis.
- 100 × 2 channels with 250 kHz channel spacing.
- Superheterodyne dual-conversion design with extremely high receiving sensitivity.
- Multi-stage high-performance dielectric RF filters for excellent anti-interference capability.
- First IF uses SAW (Surface Acoustic Wave) filter; second IF uses triple ceramic filters for enhanced interference rejection.
- Specially designed mute circuit completely eliminates turn-on and turn-off pop noise.
- Powered by widely available AA batteries, with 6–10 hours of continuous operation.
- Unique voltage-boosting design ensures consistent performance even when battery power decreases.
- Ideal operating radius up to 80 meters under optimal conditions.
- Default configuration includes LCD display with blue backlight and aluminum alloy microphone body.
- Adjustable RF transmission power and adjustable squelch threshold. Rear-panel external squelch control knob allows flexible effective operating range adjustment from 10m to 80m.
- Infrared automatic frequency synchronization enables quick channel pairing between microphone and receiver.
- Specially designed for KTV installations. Standard configuration: two microphones and one receiver. Easily supports deployment in over 100 KTV rooms. Unique structural design allows fast and simple maintenance.
- Applications: Suitable for high-end KTV rooms, small to medium-sized performances, classrooms, conference rooms, and similar venues. A key new product of the year, highly favored by customers. Packaging: Standard color box packaging (see product brochure for details).

Specifications

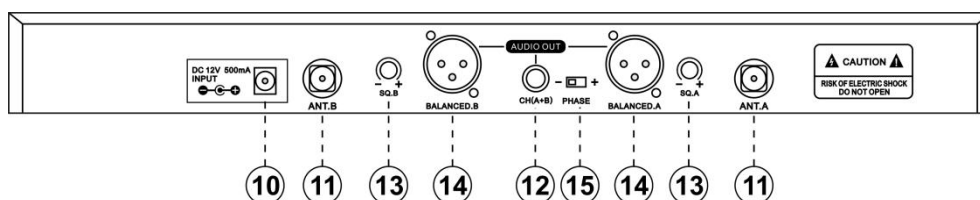
Model	AM6409
Frequency Range	640–690 MHz
Adjustable Channels	100 × 2
Oscillator Type	Phase-Locked Loop frequency synthesis (PLL)
Frequency Stability	±10 ppm
Receiving Mode	Superheterodyne Dual Conversion
Pilot Tone Method	Digital Pilot
Receiver Sensitivity	-95 ~ -67 dBm
Audio Frequency Response	40–18,000 Hz
Total Harmonic Distortion (THD)	≤0.5%
Signal-to-Noise Ratio (SNR)	≥110 dB
Audio Output	Balanced output and mixed output
Transmission Power	3–30 mW
Modulation Type	Frequency Modulation (FM)
Battery Type	2 × AA batteries
Power Supply	100–240 V, 50–60 Hz → 12 V DC (switching power adapter) 220 V AC, 50–60 Hz → 12 V DC (linear power supply)
Power Consumption	≤10 W

Front Panel



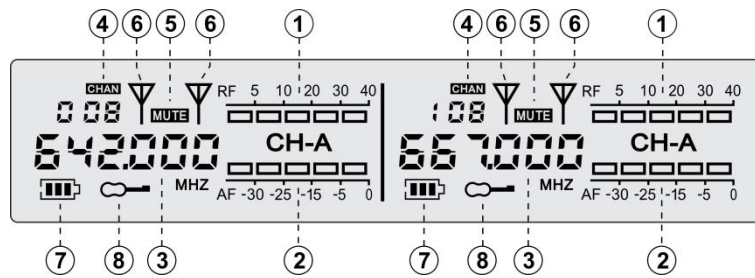
- ① Power Button: Press briefly to turn on the unit; the LCD display will light up. Press and hold for 3 seconds to turn off the unit; the LCD will turn off and power will be disconnected.
- ② SET Button: When not in menu mode, this button functions as the infrared frequency synchronization key.
- ③ ④ Frequency Adjustment Buttons: Used to adjust or select the operating frequency/channel.
- ⑤ LCD Display: Displays channel number, mute status, RF signal strength, audio level, and other system information.
- ⑥ Infrared Synchronization Window: Used in conjunction with the “SET” button to transmit channel parameters to the transmitter via infrared sync.
- ⑦ ⑧ Volume Adjustment Buttons: Used to adjust the receiver output volume.

Rear Panel



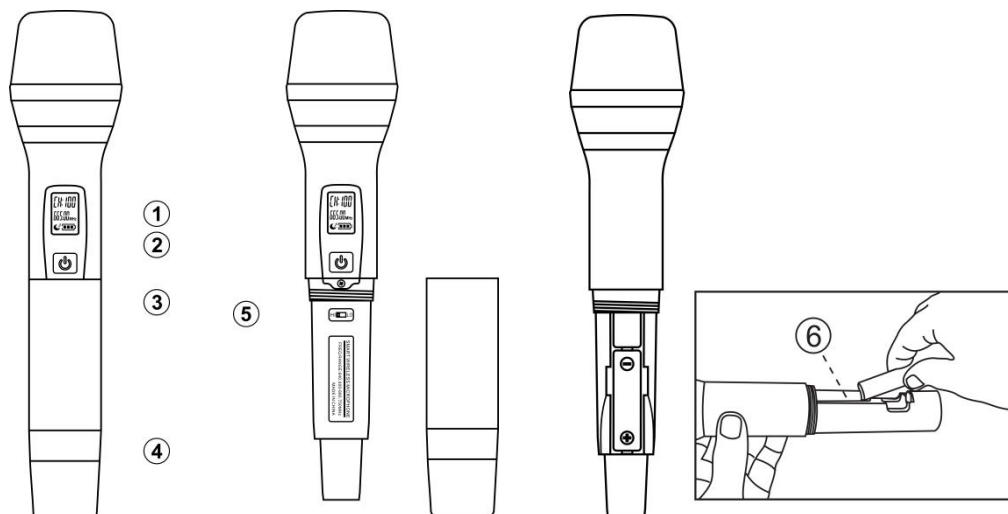
- ⑩ DC Power Input Jack: DC 12V / 500mA power input. The center pin is positive (+).
- ⑪ Antenna Connector: Connector for the receiving antenna.
- ⑫ Mixed Audio Output: Combines the audio signals from both channels into a single mixed output.
- ⑬ Squelch Control: Turn counterclockwise toward “-” to reduce receiving sensitivity. This shortens the operating distance but improves interference resistance. Turning clockwise increases receiving sensitivity and extends operating range.
- ⑭ Balanced Audio Output: Suitable for long-distance connections and effectively reduces noise caused by cables.
- ⑮ Mixed Output Phase Switch: Used to switch the phase of the mixed audio output signal.

Receiver LCD Display Description



- ① RF Level Indicator (5-level): Displays the strength of the received RF signal.
- ② AF Level Indicator (5-level): Displays the audio signal level (microphone audio output level).
- ③ Frequency Display: Shows the current operating frequency.
- ④ Channel Display: Shows the current operating channel.
- ⑤ Mute Indicator: When the “MUTE” icon lights up, it indicates that the RF signal is being received.
- ⑥ Antenna Channel Indicator: Dynamically displays the antenna channel currently selected by the automatic antenna diversity system.
- ⑦ Transmitter Battery Level Indicator: Displays the battery level of the transmitter when it is powered on.
- ⑧ Receiver Key Lock Indicator: When activated, frequency and volume adjustment functions are disabled. Only infrared frequency synchronization is allowed.

Microphone Structure Overview



- ① LCD Display
- ② Infrared Receiving Window
- ③ Power Switch
- ④ Microphone Base
- ⑤ High/Low Power Switch
- ⑥ Battery Compartment