

BG-24

2.4G SINGLE-CHANNEL TRI-DIVERSITY WIRELESS MICROPHONE SYSTEM



BG-24 is an industry-first wireless microphone system that integrates three diversity techniques: frequency diversity, time diversity, and antenna diversity. It features a sleek and durable design crafted from a strong aluminum alloy. Its bright OLED display provides clear visibility of the device's status. Optional dual-bay chargers for handheld microphones enhance charging management convenience. Operating on the 2.4 GHz frequency band, this ensures unrestricted use in any country. With Relacart's proprietary digital audio algorithms, BG-24 offers ultra-low latency transmission, making it ideal for small to medium-sized performances, business meetings, conference rooms, schools, home entertainment, and more.

Key Features

Independently developed low-latency compression algorithm

- Relacart independently develops digital audio algorithm with compression and decompression latency less than 3 ms, significantly ahead of other 2.4G digital wireless microphones on the market and provides an excellent solution for the overall digital audio system. Additionally, the frequency occupied bandwidth is less than 1MHz, greatly reducing the external and intermodulation interference.

2.4 2.4G unlimited frequency band

- Adopting the globally unrestricted 2.4G transmission frequency band, it can be used freely in any region without frequency restrictions. The effective transmission distance is up to 50 meters in open environments.

AES AES-256 Encryption

- Equipped with AES-256 high-level encryption suitable for any scenario requiring secure transmission, such as confidential meetings. This ensures privacy protection while simultaneously eliminating RF interference by allowing only encrypted signals to reach the receiver.

Stable wireless transmission

- Relacart's innovative wireless audio system circuit provides it with a stable wireless transmission.
- It has antenna diversity reception mode to ensure safe wireless signal reception.
- Frequency diversity provides backup frequencies and automatic hopping functions, allowing it to flexibly avoid complex wireless frequency interference.
- Time diversity technology works by transmitting the same signal at different times. The receiver can receive multiple independently fading copies and combine these copies (such as maximum ratio combining, equal gain combining, etc.), which can significantly reduce the risk of signal loss due to poor channel conditions at any specific moment.

High fidelity sound reproduction

- The BG-24 digital wireless microphone system provides users with an extremely flat frequency response curve. It has a frequency response range of 20-20kHz and a distortion of <0.1%, giving the most fidelity sound for speech reproduction.

Optional dual-bay chargers

- Optional contact-type dual bay changer, simply place the microphone into it for charging. Utilizing rechargeable NiMH batteries, it offers a longer lifespan compared to alkaline batteries, ensuring enhanced safety, durability, and environmental friendliness. This convenient charging method is suitable for various scenarios requiring frequent charging.

Product Specification



BG-24R

Single Channel Wireless Receiver

- 1U Half-Rack receiver chassis, Using a high-brightness LCD display, even in dim usage scenarios, it can still clearly display the device's frequency band, power, grouping, lock/unlock and other working status.

Main Frame Size:	1U Half-Rack
Receiving Channel:	Single Channel
Reception Method:	Antenna diversity/frequency diversity/Time Diversity
Audio Format:	Relacart proprietary digital audio format
Wireless Carrier Frequency:	2.4-2.48GHz
Compatible Channels:	≥ 14
Display Channel:	LCD
Effective Distance:	50 meters (open space)
Sampling:	24bit/48kHz
Encryption:	AES-256
Delay:	≤2.9ms, ≤ 3.8ms (encryption enabled)
Dynamic Range:	≥ 110dB (A-weighted)
Frequency Response:	20Hz-20kHz(± 1dB)
Comprehensive T.H.D:	<0.1% @ 1KHz
System Gain Adjustment:	(-18~18 dB)
Audio Output Interface:	XLR balanced output, 1/4 "unbalanced output
Power Supply:	DC/12V
Current Load:	≤150mA
Dimensions(mm):	200 (L) × 200 (D) × 44 (H)

- The casing is made of sturdy and durable aluminum alloy, and is equipped with bright OLED to clearly display working status such as frequency band, power, group, lock/unlock, etc. Powered by two pc of AA battery or NiMH battery. It can be put in the dual-bay charger for charging when adopt NiMH battery. It is suitable for various occasions that require frequent charging.

Audio Format:	Relacart proprietary digital audio format
Wireless Carrier Frequency:	2.4-2.48GHz
Transmission Method:	Frequency diversity
Modulation Method:	GFSK
Transmission Rate:	1Mbps
Sampling:	24bit/48kHz
Compatible Channels:	≥ 14
Display Channel:	OLED
Dynamic Range:	≥ 110dB (A-weighted)
Frequency Response:	20Hz-20kHz (± 1dB)
Sensitivity:	≤ -45dB
RF Power:	≥ 50mW
Power Supply:	Alkaline battery (AA) × 2
Current Load:	145mA (typical value)
Battery Life:	≥ 8 hours
Dimensions(mm):	55 (Φ) × 269 (L)

BG-24H

Wireless Handheld Microphone



- The casing is made of sturdy and durable aluminum alloy, and is equipped with bright OLED to clearly display working status such as frequency band, power, group, lock/unlock, etc. Powered by two pc of AA battery or NiMH battery. It can be put in the dual-bay charger for charging when adopt NiMH battery. It is suitable for various occasions that require frequent charging.

Audio Format:	Relacart proprietary digital audio format
Wireless Carrier Frequency:	2.4-2.48GHz
Transmission Method:	Frequency diversity
Modulation Method:	GFSK
Transmission Rate:	1Mbps
Sampling:	24bit/48kHz
Compatible Channels:	≥ 14
Display Channel:	OLED
Dynamic Range:	≥ 110dB (A-weighted)
Frequency Response:	20Hz-20kHz (± 1dB)
Sensitivity:	≤ -45dB
RF Power:	≥ 50mW
Power Supply:	Alkaline battery (AA) × 2
Current Load:	145mA (typical value)
Battery Life:	≥ 8 hours
Dimensions(mm):	65 (L) × 21.3 (W) × 75.5 (H)

BG-24T

Wireless Bodypack Transmitter



- Dual Bay Charger is suitable for Relacart rechargeable handheld transmitters and bodypack transmitters. Just put the transmitters into it for charging. It can display the current device power and has a charging completion indicator light.

Compatible transmitters:	Up to 2 × UH-280, UT-280, BG-24H, or BG-24T
Compatible transmitter charging parameters:	
Charging current: Fast charge 1.1 A; slow charge 500 mA	
Charging time: 3 hours = 50% charged; 6 hours = 100% charged (battery capacity: 2600 mAh)	
External power supply:	DC 12V / 1A (maximum of 4 units can be connected in daisy chain)
External power supply required when connected in daisy chain: 12V / 2A (2 units) 12V / 3A (3 units) 12V / 4A (4 units)	
Compatible SONY camera battery charging parameters:	
Charging current: 600 mA	
Charging time: 1.5 hours = 50% charged; 3 hours = 100% charged (battery capacity: 1500 mAh)	
Operating temperature range:	-18°C (0°F) to 50°C (122°F)
Storage temperature range:	-29°C (-20°F) to 74°C (165°F)
Dimensions (mm):	185 (W) × 88 (D) × 86 (H)
Weight:	Approx. 155 g