



Wireless Microphone System

RLWM-U200D

The RLWM-U200D is a professional-grade wireless microphone system designed for high-fidelity audio capture in demanding environments. This dual-channel system utilizes advanced dynamic compression and expansion technology to ensure clear, natural sound reproduction while maintaining a strong signal-to-noise ratio of over 50dB. Engineered for versatility, it supports various pickup types including handheld dynamic microphones as well as condenser options for lavalier and conference mounts, making it an ideal solution for public speaking, live performances, and corporate installations.

The hardware is designed for seamless integration into standard 19-inch equipment racks, featuring a durable chassis and integrated mounting ears. The receiver utilizes a quad-antenna configuration to maximize signal reception and minimize dropouts. Its front panel is equipped with intuitive controls and clear digital displays that provide real-time information on frequency and channel status, allowing for quick adjustments in fast-paced environments.

Signal Integrity and Distortion Control

The RLWM-U200D is built to maintain the highest levels of signal purity throughout the signal chain. With a total harmonic distortion (THD) of $\leq 5\%$, the system prevents unwanted coloration of the sound, ensuring the speaker's voice is reproduced with absolute accuracy. The comprehensive distortion is also strictly controlled at $\leq 5\%$ (@1KHz), which is essential for maintaining clarity during high-output segments. By integrating professional audio processing methods, the system effectively manages the balance between loud and soft passages, providing a smooth and professional listening experience for the audience.



Professional Integration and Build

The hardware of the RLWM-U200D is designed for seamless integration into standard 19-inch equipment racks. The receiver features a quad-antenna configuration that maximizes signal reception and minimizes dropouts. Its front panel is equipped with intuitive controls and clear digital displays that provide real-time information on frequency and channel status, allowing for quick adjustments in fast-paced environments. With its professional black finish and durable construction, this system is a long-term investment for any facility requiring dependable wireless audio.

Advanced Receiver Engineering

The receiver incorporates PLL Phase Locked Frequency Synthesis oscillation mode for precise signal locking and stability. It provides an adjustable audio output level from 0 to 300mV with a standardized output impedance of 600Ω to match professional mixing consoles. To ensure signal purity, the unit delivers significant artifact and harmonic suppression of $\geq 85\text{dB}$. Power requirements are flexible, supporting DC14V/400mA for non-diversity dual-channel models and DC14V/1000mA for diversity four-channel configurations.

Transmitter Performance Standards

Every transmitter in the RLWM-U200D system employs PLL Phase Locked Frequency Synthesis to prevent frequency drift during operation. High operational reliability is guaranteed with frequency stability within $\leq \pm 10\text{ppm}$ and a powerful 30mW output optimized for range and regulatory compliance. The hardware features exceptionally low harmonic radiation at less than -55dBc and is capable of managing high-intensity audio with a maximum input sound pressure of 130dB SPL.



Operational Efficiency

- **Channel Configuration:** Available in diversity dual-channel and non-diversity four-channel models.
- **System Integration:** Designed for standard rack-mount installation with integrated mounting ears.
- **User Interface:** Features intuitive front-panel controls for volume and channel selection.
- **Output Power:** Delivers a powerful 30mW output, optimized for range and regulatory compliance.

Key Specifications

Technical Performance

- Frequency Range: Operates within a broad 610-690MHz spectrum.
- Bandwidth: Provides a wide 120MHz bandwidth for flexible channel management.
- Modulation Method: Utilizes reliable FM modulation.
- Frequency Deviation: Features a maximum frequency deviation of $\pm 50\text{KHz}$.
- Audio Response: Delivers a frequency response range of 100Hz-10KHz.
- Dynamic Range: Achieves a superior dynamic range of $>105\text{dB}$ (A-weighted).

Receiver Specifications

- Oscillation Mode: Employs PLL Phase Locked Frequency Synthesis for stable signal locking.
- Output Levels: Offers an audio output level of 0-300mV with a 600Ω impedance.
- Harmonic Suppression: Provides significant artifact and harmonic suppression of $\geq 85\text{dB}$.
- Power Supply: Compatible with DC14V power sources ranging from 400mA to 1000mA depending on the specific channel configuration.

Transmitter Characteristics

- Oscillation Mode: Also uses PLL Phase Locked Frequency Synthesis for precision transmission.
- Frequency Stability: Maintains high stability within $\leq \pm 10\text{ppm}$.
- Output Power: Delivers a maximum output of 30mW, compliant with national radio wave regulations.
- Harmonic Radiation: Features low harmonic radiation at $< -55\text{dBc}$.



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