Gochanmi ER203S

Gochanmi ER203S Professional 2-Channel UHF Wireless Microphone System

User Manual

1. Introduction

Thank you for choosing the Gochanmi ER203S Professional 2-Channel UHF Wireless Microphone System. This system is designed to provide clear, stable, and reliable audio transmission for various applications, including live performances, karaoke, conferences, and public speaking. Featuring advanced UHF technology, adjustable frequencies, and robust construction, the ER203S ensures high-quality sound with minimal interference.
Please read this manual carefully before operating the system to ensure proper setup, optimal performance, and safe use. Keep this manual for future reference.

2. Package Contents

Verify that all items listed below are included in your package:

- 2 x Handheld Microphones
- 2 x Antennas
- 1 x Wireless Receiver Unit
- 1 x Power Adapter
- 1 x Instruction Manual (this document)

3. Product Features

- **UHF Frequency Band:** Utilizes Ultra High Frequency for reliable transmission with reduced interference compared to VHF.
- **Multi-Channel Frequency Synthesis:** DPLL digital phase-locked loop technology offers up to 100 selectable channels within a 50MHz bandwidth, allowing multiple systems to operate simultaneously without interference.
- **Automatic Frequency Matching:** Advanced automatic frequency technology simplifies pairing

between the transmitter and receiver.

- **Adjustable Receiver Sensitivity:** Customize receiver sensitivity to enhance anti-blocking capability or extend reception distance.
- **High-Fidelity Microphones:** Dynamic, cardioid directional microphones with high sensitivity and low noise for clear, stable sound.
- **Durable Construction:** Microphones feature an aluminum tube body and impact-resistant steel mesh grille, offering corrosion resistance and durability.
- **LCD Display:** Microphones and receiver are equipped with high-grade LCD screens displaying current frequency, signal level, and battery status.
- **Extended Range:** The metallic receiver with dual antennas provides a transmission range of up to 100 meters (328 feet).
- **Versatile Connectivity:** Receiver includes two XLR outputs and one 6.35mm mixed output for connection to various audio equipment such as mixers, powered speakers, and audio interfaces.

Image 3.1: High-Fidelity Moving Coil Microphone Capsule. This image illustrates the internal structure of the microphone capsule, highlighting its high-fidelity moving coil design. It also shows a polar pattern diagram indicating its cardioid directional pickup, and a frequency response graph demonstrating low distortion, high noise resistance, and a wide frequency range.

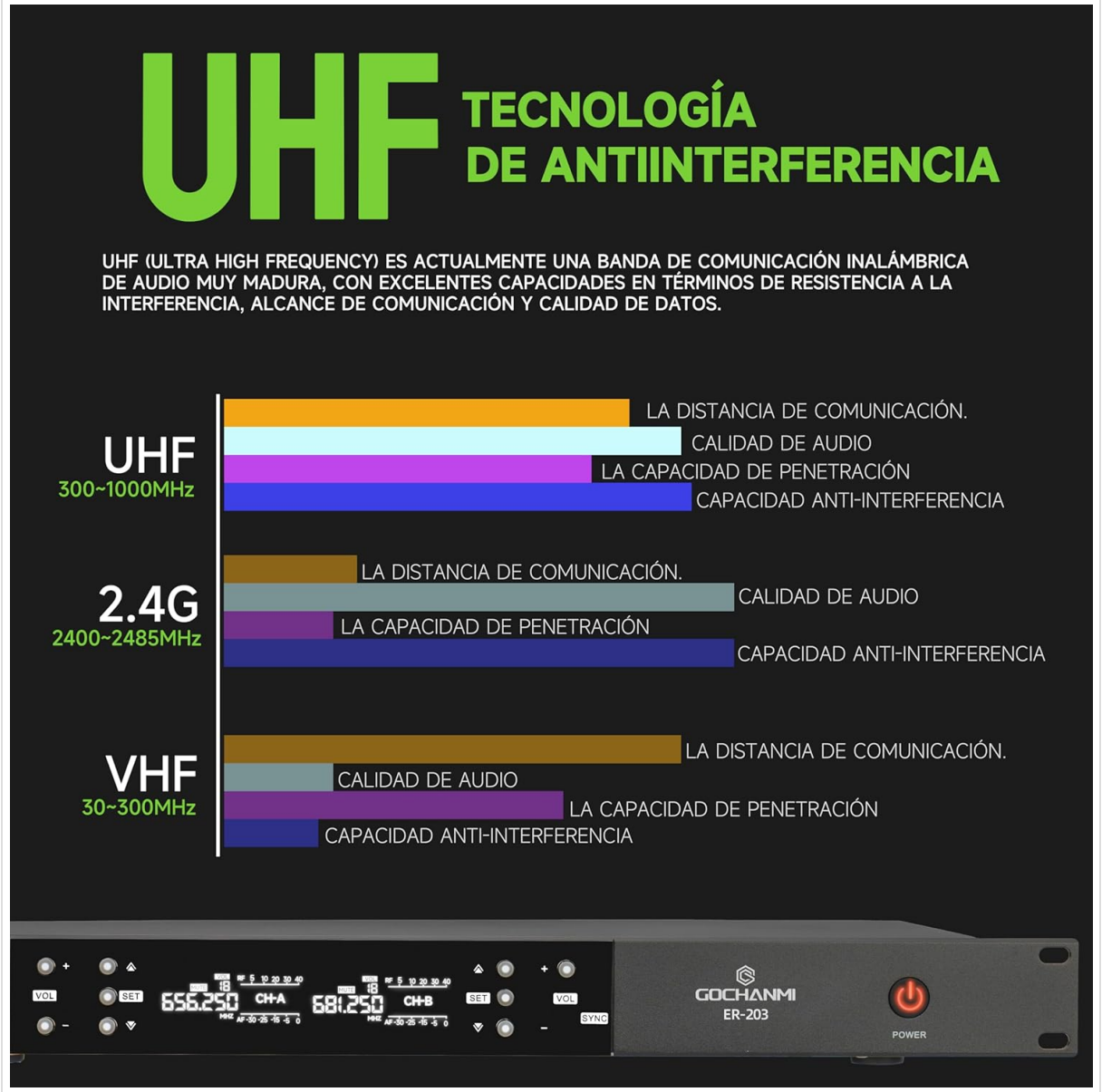

Image 3.2: Wireless Microphone Design. This image details the features of the handheld wireless microphone, including an impact-resistant alloy mesh head that prevents rust and corrosion, a high-definition LCD display for clear viewing of frequency and battery status, and a high-hardness alloy body that is fade-resistant, scratch-resistant, and offers robust protection.

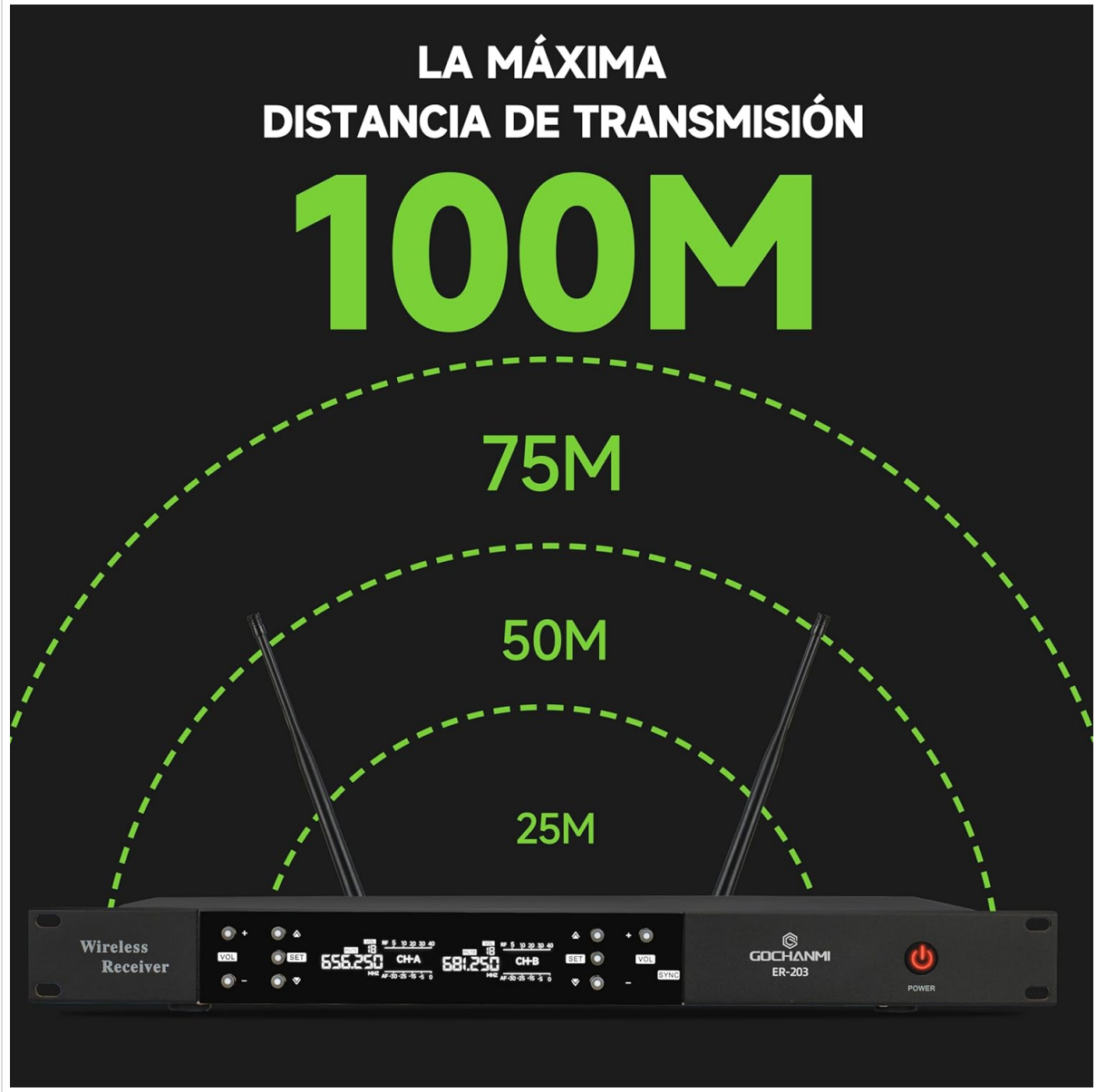

Image 3.3: UHF Anti-Interference Technology. This graphic compares UHF, 2.4G, and VHF technologies across communication distance, audio quality, penetration capability, and anti-interference capability. UHF (Ultra High Frequency) is highlighted as a mature wireless audio communication band with excellent resistance to interference, extended communication range, and high data quality.

Image 3.4: Maximum Transmission Distance. This image visually represents the wireless transmission range of the system, indicating a maximum effective distance of 100 meters (328 feet) under optimal conditions, with concentric circles showing decreasing signal strength at 75m, 50m, and 25m.

4. Setup

4.1 Receiver Placement

- Place the receiver unit on a stable, flat surface.
- Ensure the receiver is positioned at least 1.5 meters (5 feet) above the ground.
- Maintain a distance of at least 1 meter (3 feet) from walls or other obstructions.
- Avoid placing the receiver near metallic surfaces or digital devices (e.g., CD players, computers) to prevent interference.
- Ensure a clear line of sight between the receiver antennas and the handheld microphones for optimal signal reception.

4.2 Connecting the Receiver

1. **Connect Antennas:** Screw the two included antennas onto the ANTENNA INTERFACES at the rear of the receiver.
2. **Connect Power:** Plug the power adapter into the POWER INTERFACE on the receiver and then into

a suitable power outlet.

3. **Audio Output:**
    - For individual channel output, connect XLR cables from the XLR OUTPUT CONNECTORS (MIC A OUT, MIC B OUT) to your mixer or audio interface.
    - For a combined stereo output, connect a 6.35mm (1/4 inch) cable from the MIXED OUTPUT CONNECTOR to your mixer, powered speaker, or audio interface.

Image 4.1: Receiver Panel Functions. This image illustrates the front and rear panels of the ER203 receiver. The front panel shows volume controls, frequency adjustment buttons, and the power switch. The rear panel highlights the antenna interfaces, XLR output connectors for individual microphones, a 6.35mm mixed output connector, and the power interface.

Image 4.2: Connection Demonstration. This diagram shows how to connect the ER-203 wireless receiver to various audio devices, including a monitoring system, professional mixer, powered speaker, and audio interfaces, using both XLR and 6.35mm outputs.

4.3 Microphone Battery Installation

Each handheld microphone requires 2 AA batteries. Open the battery compartment at the bottom of the microphone, insert the batteries according to the polarity markings, and close the compartment securely. For best performance and battery life (approximately 7-8 hours under normal volume), use authentic alkaline or rechargeable batteries.

5. Operating Instructions

5.1 Powering On/Off

- **Receiver:** Press the POWER switch on the front panel of the receiver to turn it on or off.
- **Microphones:** Press and hold the power button on each microphone to turn it on or off. The LCD display will illuminate.

5.2 Frequency Adjustment and Pairing (SYNC)

The ER203S system features automatic frequency matching for easy setup.

1. Turn on both the receiver and the microphone you wish to pair.
2. On the receiver, use the **SET** buttons (up/down arrows) to select the desired frequency for Channel A or Channel B. Each microphone has 10 adjustable UHF frequencies.

3. Once the frequency is selected on the receiver, position the microphone's infrared sensor (usually near the battery compartment or display) close to the receiver's IR sensor.
4. Press the **SYNC** button on the receiver. The receiver will automatically transmit the frequency to the microphone, and they will pair. The microphone's LCD will display the matched frequency.
5. Repeat this process for the second microphone, ensuring it is paired to the other channel (A or B) on the receiver.

Note: If using multiple ER203S systems simultaneously, ensure each system uses distinct frequencies to avoid interference. The system supports up to 5 receivers (10 microphones) by separating frequencies.

5.3 Volume Control

Adjust the volume for each microphone channel using the individual **VOL** knobs on the front panel of the receiver. Rotate clockwise to increase volume and counter-clockwise to decrease.

Image 5.1: Multiple Device Support. This image demonstrates the capability of the Gochanmi ER203 system to support multiple receivers and microphones operating simultaneously in the same environment, thanks to its anti-crossover frequency and anti-interference features.

6. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the receiver and microphones. Do not use liquid cleaners or

solvents.

- **Storage:** When not in use for extended periods, remove batteries from the microphones and store the system in a cool, dry place away from direct sunlight and extreme temperatures.
- **Battery Replacement:** Replace microphone batteries when the low battery indicator appears on the LCD or when audio quality degrades.
- **Antenna Care:** Handle antennas carefully to avoid bending or breaking. Ensure they are securely attached during use.

7. Troubleshooting

Problem	Possible Cause	Solution
No sound from microphone.	Microphone not powered on. Low or dead batteries in microphone. Microphone not paired with receiver. Receiver volume too low. Audio cable disconnected or faulty. Connected audio device (mixer/speaker) input issues.	Ensure microphone is powered on. Replace batteries. Perform frequency pairing (SYNC) as per Section 5.2. Increase receiver volume. Check all audio cable connections. Verify input settings on your audio device.
Interference or static.	Other wireless devices operating on similar frequencies. Receiver too close to metallic objects or digital devices. Obstructions between microphone and receiver. Receiver or microphone too far apart.	Change the operating frequency of the microphone/receiver (Section 5.2). Relocate the receiver away from potential interference sources. Ensure a clear line of sight between microphone and receiver. Reduce the distance between microphone and receiver.
Short transmission range.	Obstructions or poor line of sight. Receiver placement (too low, near walls). Low microphone battery. Receiver sensitivity setting.	Ensure clear line of sight. Adjust receiver placement (1.5m height, 1m from walls). Replace microphone batteries. Adjust receiver sensitivity (if applicable, refer to advanced settings not detailed in this manual).

8. Specifications

Model	ER203S
Brand	Gochanmi
Connectivity Technology	UHF
Frequency Range	610-786MHz (2x100 / 4x50 Channels)

Modulation Method	π/4-DQPSK
Sampling Rate	48 KHz
Dynamic Range	> 90dB
Total Harmonic Distortion	< 0.1%
Audio Transmission Delay	< 3 ms
Signal-to-Noise Ratio (S/N)	> 96dB
Frequency Response	30-20 kHz
RX Sensitivity	< -94dBm
Unique ID Address	Yes
Microphone Form Factor	Handheld
Polar Pattern	Unidirectional (Cardioid)
Power Source (Microphones)	2 x AA Batteries
Output Connectors	2 x XLR, 1 x 6.35mm Mixed Output
External Material	Metal, Plastic
Recommended Uses	Singing, Karaoke, Broadcasting, Videoconferencing, Gaming

9. Warranty and Support

Warranty: This product comes with a 1-month seller warranty for quality-related issues. Please retain your proof of purchase for warranty claims.
Customer Support: If you have any questions about the product, require technical assistance, or need to make a warranty claim, please contact Gochanmi customer support. We aim to respond to inquiries within 24 hours.
For further assistance, please refer to the contact information provided with your purchase or visit the official Gochanmi website.