LMBGM AR2090

LMBGM AR2090 Mono UHF Dual Channel Wireless In-Ear Monitoring System User Manual

Model: AR2090 | Brand: LMBGM

1. Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your LMBGM AR2090 Mono UHF Dual Channel Wireless In-Ear Monitoring System. This system is designed to deliver high-quality audio monitoring for professional applications such as recording studios, churches, and live band performances.

Key Features:

- Wide bandwidth response from 50Hz to 20KHz for comprehensive audio.
- Ultra-low latency of less than 5 milliseconds for real-time audio control.
- Built-in limiter circuit to prevent distortion at high input levels.
- UHF band phase-locked PLL technology for improved performance, anti-frequency dropout, and anti-crosstalk.
- Frequency range of 550 MHz-580 Mhz with 16 switchable frequencies.
- Dynamic expansion circuit for enhanced signal-to-noise ratio.
- Clear LCD display panel and low battery indicator on receivers.
- Robust and durable metal casing.
- Wireless range of up to 300 feet (250 FT-350 FT normal range).

2. Setup Guide

2.1 Unpacking and Package Contents

Carefully unpack all components and verify that you have received the following items:

- 1 x Transmitter Unit
- 8 x Bodypack Receivers (with earphones)
- 2 x Antennas
- 2 x Audio Cable Lines
- 1 x Power Adapter
- 1 x User Manual (this document)
- Ear Cushions

2.2 Component Identification

Familiarize yourself with the main components of your wireless in-ear monitoring system.

Figure 2.2.1: Overview of the LMBGM AR2090 system, showing the main transmitter unit and multiple bodypack receivers with earphones.

2.3 Connections

Connect the transmitter unit to your audio source and power supply. Ensure all connections are secure.

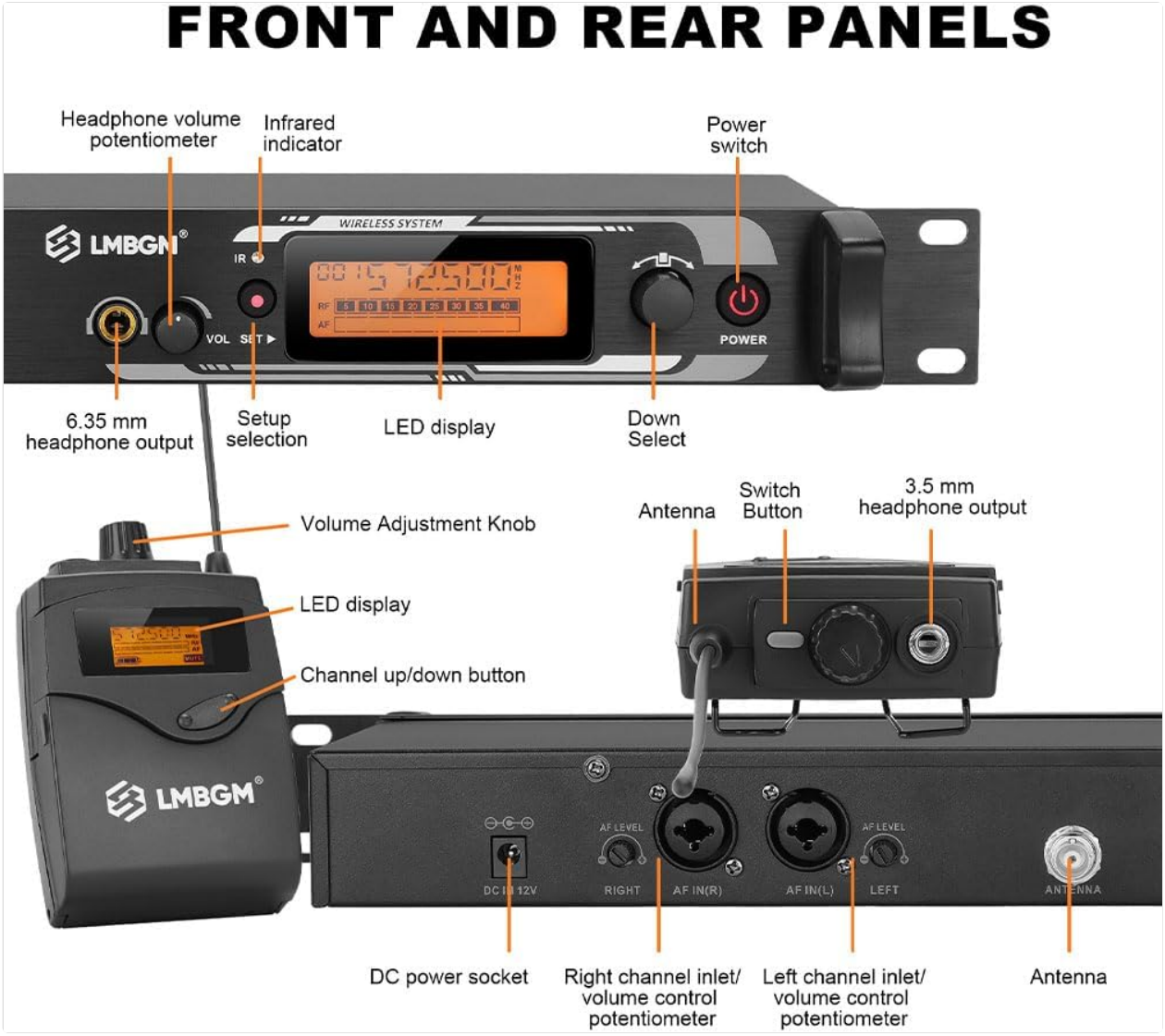

Figure 2.3.1: Detailed view of the front panel controls (headphone output, volume, setup, LED display, power switch) and rear panel connections (DC power, AF input, antenna) of the transmitter, along with the bodypack receiver's volume and channel controls.

2.4 Initial Power-On and Frequency Pairing

Follow these steps to power on the system and pair the bodypack receivers with the transmitter:

1. Connect the power adapter to the transmitter and plug it into an electrical outlet.
2. Install two AA batteries (user-supplied) into each bodypack receiver.
3. Power on the transmitter and each bodypack receiver.
4. To pair, aim the infrared (IR) window of the transmitter at the IR window of the bodypack receiver. Press the 'SET' button on the bodypack receiver to initiate pairing. The frequency should synchronize automatically.

Figure 2.4.1: Illustration of the infrared frequency pairing process, showing the transmitter's IR window aligning with the bodypack receiver's IR window.

For a visual guide on setup and pairing, please refer to the video below:

Video 2.4.1: This video demonstrates the initial setup, connections, and infrared frequency pairing process for the LMBGM AR2090 Wireless In-Ear Monitor System.

3. Operation

3.1 Basic Controls

The transmitter features volume controls for each channel and a setup selection button. The bodypack receivers have a volume adjustment knob and channel up/down buttons. Refer to Figure 2.3.1 for control locations.

3.2 Channel Selection

The system offers 16 switchable frequencies. Use the channel selection controls on the transmitter and bodypack receivers to select the desired frequency. Ensure the transmitter and receiver are on the same channel for proper operation.

3.3 Battery Installation and Life

Each bodypack receiver operates on two AA batteries. The LCD display on the receiver includes a low battery indicator. Battery life is approximately 4-5 hours, depending on usage and battery type. Replace batteries as needed.

Figure 3.3.1: The bodypack receiver with its battery compartment open, illustrating the use of two AA batteries and indicating a working time of 4-5 hours.

3.4 Real-time Monitoring

The system provides real-time audio monitoring with ultra-low latency, ensuring accurate pitch and rhythm, especially in noisy environments. The in-ear headphones are designed for comfort and a secure fit.

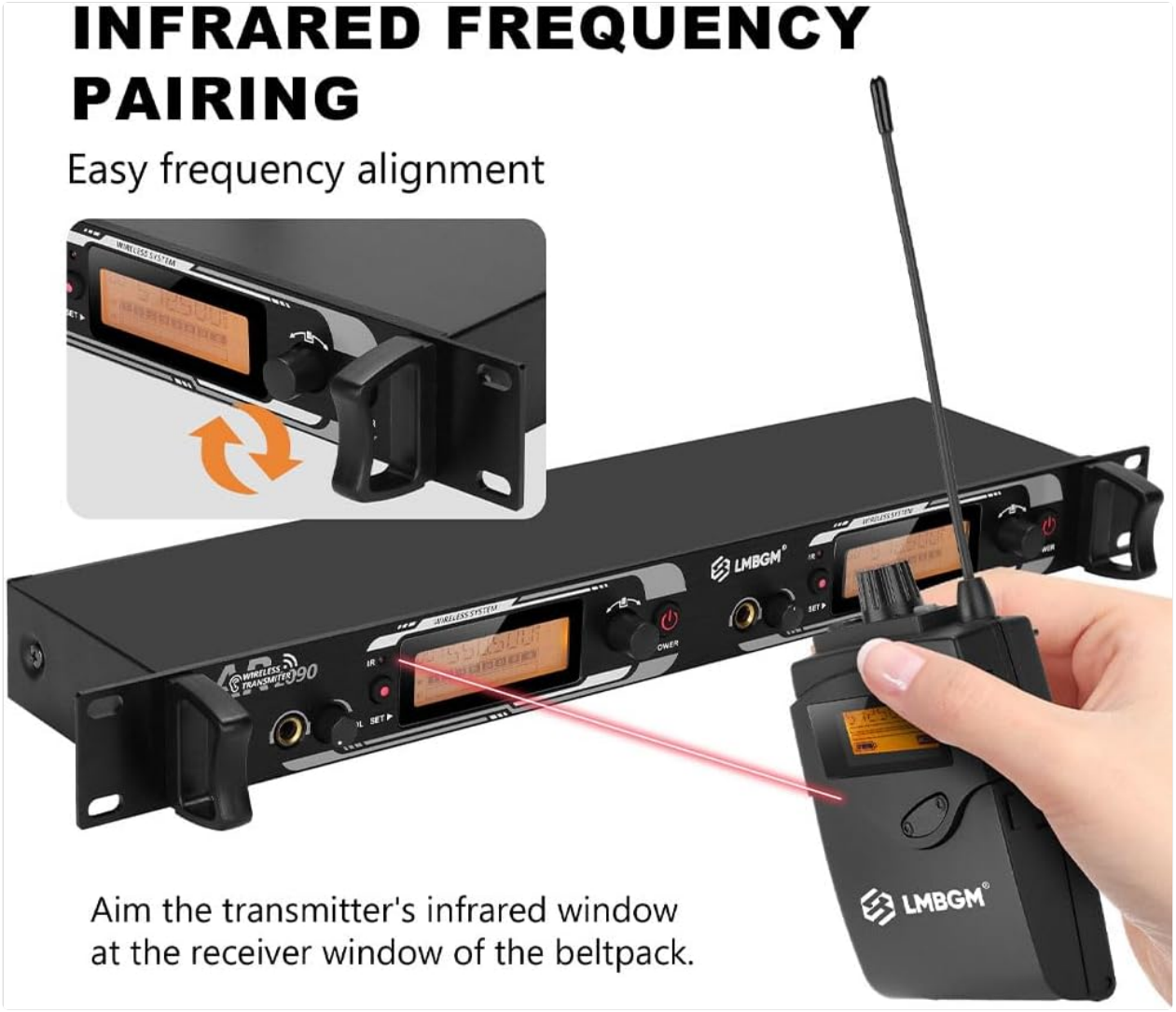

Figure 3.4.1: Two individuals, likely musicians or audio engineers, utilizing the in-ear monitoring system for real-time audio feedback in a studio setting.

Figure 3.4.2: A close-up of the comfortable in-ear headphones designed to fit the ear's contour, alongside the bodypack receiver highlighting features like adjustable frequency, precise volume control, crosstalk prevention, and rugged construction.

Observe the system in operation in the following video:

Video 3.4.2: This video showcases the LMBGM AR2090 UHF Wireless In-Ear Monitor System in various operational scenarios, highlighting its features and performance.

3.5 Application Scenarios

The AR2090 system is suitable for a variety of professional audio environments.

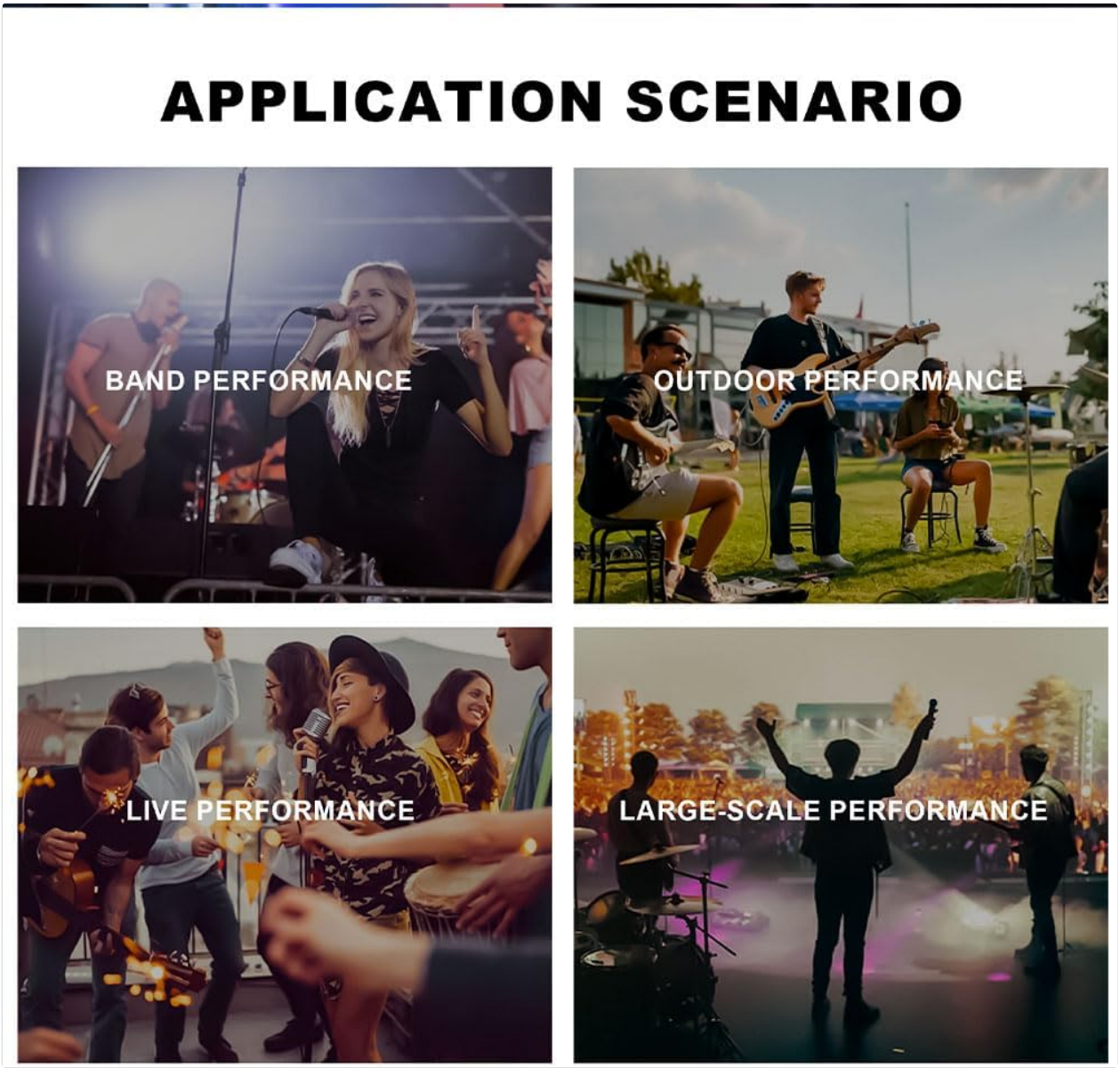

Figure 3.5.1: Images depicting the LMBGM AR2090 system being used in different settings such as band performances, outdoor events, live shows, and large-scale productions.

4. Maintenance

Proper maintenance ensures the longevity and optimal performance of your LMBGM AR2090 system.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the transmitter and bodypack receivers. Do not use liquid cleaners or solvents.
- **Storage:** When not in use, store the system in a cool, dry place away from direct sunlight and extreme temperatures. Remove batteries from bodypack receivers if storing for extended periods.
- **Cable Care:** Avoid sharp bends or kinks in the audio cables and antenna cables to prevent damage.
- **Earphones:** Clean earphones regularly with a mild disinfectant wipe. Replace ear cushions as needed for hygiene and comfort.

5. Troubleshooting

If you encounter issues with your LMBGM AR2090 system, refer to the following table for common problems and solutions.

Problem	Possible Cause	Solution
No audio from earphones	• Bodypack receiver not powered on. • Low or dead batteries in bodypack. • Transmitter not powered on. • Incorrect frequency selected. • Earphones not properly connected or faulty. • Audio source not connected or muted.	• Ensure bodypack receiver is powered on. • Replace batteries in bodypack. • Ensure transmitter is powered on. • Verify transmitter and receiver are on the same frequency. • Check earphone connection; try different earphones. • Verify audio source is active and connected to the transmitter.
Intermittent audio or static	• Interference from other wireless devices. • Receiver too far from transmitter. • Obstructions between transmitter and receiver. • Low battery in bodypack.	• Change to a different frequency channel. • Reduce distance between transmitter and receiver. • Ensure clear line of sight; avoid metal objects. • Replace batteries in bodypack.
Cannot pair receiver with transmitter	• IR windows not aligned. • Interference during pairing.	• Ensure direct alignment of IR windows. • Try pairing in an area with less electronic interference. • Ensure both devices are powered on.
Low volume	• Volume knob on bodypack or transmitter set too low. • Low input level from audio source.	• Adjust volume knobs on both bodypack and transmitter. • Increase output level from your audio source.

6. Technical Specifications

Detailed specifications for the LMBGM AR2090 Wireless In-Ear Monitoring System:

Feature	Specification
Model Name	AR2090
Brand	LMBGM
Connectivity Technology	Wireless (RF)

Feature	Specification
Wireless Communication Technology	RF
Noise Control	Active Noise Cancellation
Frequency Response	50Hz - 20KHz (System), 15 KHz (Headphones)
Sensitivity	78 dB
Impedance	16 Ohms
Headphones Jack	6.35 mm Jack (Transmitter), 3.5 mm Jack (Bodypack)
Control Type	Volume Control
Material	Metal (Chassis)
Color	Black
Item Weight	6.38 pounds
Package Dimensions	21.46 x 12.8 x 3.74 inches
Wireless Range	Up to 300 feet (250 FT-350 FT normal range)
Preset Channels	16 Groups Of Channels Are Set Separately
Transmit Output Power	100Mw
Audio Input	Xlr And 6.5mm Composite Socket
Headphone Output	6.5 Stereo Socket, Volume Can Be Adjusted
Current Consumption	Dc12V/250Ma
Antenna Input Base	Tnc Socket

Figure 6.1.1: Visual representation of the product dimensions and key technical parameters for the LMBGM AR2090 transmitter and bodypack receiver.

7. Warranty and Support

LMBGM products are designed for reliability and performance. For warranty information, please refer to the documentation included with your purchase or contact LMBGM customer support directly. If you require technical assistance or have questions not covered in this manual, please visit the official LMBGM website or contact their customer service department.