

## Behringer UB502

# Behringer EURORACK UB502 5-Input 2-Bus Mixer User Manual

Model: UB502

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## 1. INTRODUCTION

The Behringer EURORACK UB502 is an ultra-low noise, 5-input, 2-bus mixer designed for various audio applications. It features a compact design with high-quality components to ensure transparent audio performance. This manual provides essential information for setting up, operating, and maintaining your mixer.

### Key Features:

- Ultra-low noise design for highest possible headroom and ultra-transparent audio.
- State-of-the-art, IMP "Invisible" Mic Preamp with 130 dB dynamic range for 24-bit, 192 kHz sampling rate inputs.
- Effective, extremely musical 2-band EQ and clip LED on mono channel.
- 5 balanced high-headroom line inputs.
- Main mix outputs plus separate headphone and 2-track output.

## 2. SETUP

Proper setup ensures optimal performance and longevity of your UB502 mixer. Follow these steps to connect your device.

### 2.1 Power Connection

Connect the provided power supply to the 'AC POWER IN' port on the rear panel of the mixer. Ensure the power supply is securely connected before plugging it into a power outlet. The mixer does not feature a separate power switch; it powers on automatically when connected to the power supply.



**Figure 1:** Rear panel of the UB502 mixer. The 'AC POWER IN' port is located on the left side, designed for the Behringer power supply only. The serial number and date code are also visible.

## 2.2 Input Connections

The UB502 offers various input options for different audio sources:

- **Microphone Input (MIC):** Connect a microphone using an XLR cable to the 'MIC' input. This input features an IMP "Invisible" Mic Preamp.
- **Line Inputs (LINE IN):** Connect line-level devices such as instruments or playback devices using 1/4" TRS or TS cables to the 'LINE IN' jacks. Channels 2/3 and 4/5 are stereo paired.
- **2-Track Input (2-TR IN):** Use RCA cables to connect a stereo playback device (e.g., CD player, tape deck) to the '2-TR IN' ports.

## 2.3 Output Connections

The mixer provides several output options:

- **Main Mix Output (MAIN OUT):** Connect your main speakers or amplifier using 1/4" TRS or TS cables to the 'MAIN OUT' jacks (L/R).
- **Headphone Output (PHONES):** Connect headphones to the 1/4" TRS 'PHONES' jack for monitoring.
- **2-Track Output (2-TR OUT):** Use RCA cables to connect a recording device to the '2-TR OUT' ports.



Figure 2: Detailed view of the UB502's top panel. This image highlights the MIC, LINE IN, MAIN OUT, PHONES, and 2-TRACK IN/OUT connections, along with individual channel controls for Gain, EQ, Pan, and Level.

### 3. OPERATING THE MIXER

Understanding the controls is key to effectively using your UB502 mixer.

### 3.1 Channel Controls

Each input channel (Mic/Line 1, Line 2/3, Line 4/5) features dedicated controls:

- **GAIN:** Adjusts the input sensitivity for the connected device. Use this to achieve a healthy signal level without clipping.
- **EQ (Equalizer):** The mono channel (Mic/Line 1) has a 2-band EQ (HIGH and LOW) to shape the tone of the input signal.
- **PAN/BAL:** The PAN control (mono channel) adjusts the signal's position in the stereo field (left to right). The BAL (balance) control (stereo channels) adjusts the relative level of the left and right signals.
- **LEVEL:** Controls the overall output level of the individual channel to the main mix.
- **CLIP LED:** Illuminates when the input signal is too high, indicating potential distortion. Reduce the GAIN if this LED lights up frequently.

### 3.2 Main Section Controls

The main section manages the overall output and monitoring:

- **MAIN MIX:** Controls the overall volume of the main stereo output.
- **PHONES:** Adjusts the volume for the headphone output.
- **2-TR TO MIX:** Routes the 2-Track input signal to the main mix.
- **2-TR TO PHONES:** Routes the 2-Track input signal to the headphone output for monitoring.
- **LEVEL METERS:** LED indicators display the output level of the main mix, helping to prevent clipping.



**Figure 3:** Angled view of the UB502 mixer's control surface. This perspective shows the arrangement of the Gain, EQ, Pan/Bal, and Level knobs for each channel, as well as the main mix and headphone controls.

## 4. MAINTENANCE

To ensure the longevity and optimal performance of your Behringer EURORACK UB502 mixer, follow these maintenance guidelines:

- **Cleaning:** Regularly wipe the mixer's surface with a soft, dry cloth. Avoid using abrasive cleaners, solvents, or waxes, as these can damage the finish and controls.
- **Dust Protection:** Keep the mixer covered when not in use to prevent dust accumulation, which can affect faders and potentiometers.
- **Environmental Conditions:** Operate and store the mixer in a dry environment, away from extreme temperatures, direct sunlight, and high humidity.
- **Cable Management:** Ensure all cables are neatly organized and not under tension to prevent damage to the connectors and the mixer's ports.

## 5. TROUBLESHOOTING

If you encounter issues with your UB502 mixer, refer to the following common problems and solutions:

- **No Sound Output:**
  - Check all power connections and ensure the mixer is receiving power.
  - Verify that all input and output cables are securely connected.
  - Ensure channel LEVEL and MAIN MIX controls are turned up.
  - Check the volume levels on connected amplifiers or active speakers.
  - If using headphones, ensure the PHONES control is adjusted.
- **Distorted Sound:**
  - Reduce the GAIN control for the affected channel if the CLIP LED is frequently lighting up.
  - Ensure the input source is not sending an excessively hot signal.
  - Check for damaged cables or faulty connectors.
- **Hum or Noise:**
  - Ensure all connections are balanced (XLR or TRS) where possible to minimize interference.
  - Check for ground loops by ensuring all equipment is plugged into the same power strip or outlet.
  - Keep audio cables away from power cables.

## 6. SPECIFICATIONS

Feature	Specification
Brand	Behringer

Feature	Specification
Model Number	UB502
Item Weight	2.54 pounds (1.15 kg)
Product Dimensions	6.97 x 5.28 x 1.85 inches (17.7 x 13.4 x 4.7 cm)
Number of Channels	5
Connectivity Technology	USB
Power Source	Battery Powered (Note: Product description states 'Battery Powered', but typical mixers of this type use an AC adapter. Please refer to product packaging for definitive power requirements.)
Date First Available	October 2, 2001

## 7. WARRANTY AND SUPPORT

Behringer products are designed for reliability and performance. For detailed warranty information and technical support, please refer to the official Behringer website or contact their customer service directly. Keep your purchase receipt as proof of purchase for any warranty claims.

For further assistance, visit the [Behringer Store on Amazon](#) or their official website.