JBL Libra_500

JBL Libra_500 Mixer Amplifier User Manual

Model: Libra_500

Introduction   Safety Information   Package Contents   Product
Components   Setup   Operation   Maintenance   Troubleshooting   Specifications   Warranty & Support

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of your JBL Libra_500 Mixer Amplifier. Please read this manual thoroughly before using the product to ensure optimal performance and safety.

1.1 Key Features

- Portable design, suitable for various PA applications.
- Desktop design for either lying flat or keeping upright the unit on a suitable surface.
- Extendable with its preamp/line output for larger applications.
- Overload and low voltage protection for enhanced durability.
- AC and DC Power Supply options for versatile use.

Figure 1.1: Front view of the JBL Libra_500 Mixer Amplifier. This image displays the compact and robust design of the amplifier, suitable for various professional audio setups.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent electric shock, fire, or damage to the unit.

- Do not expose this appliance to rain or moisture.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from the appliance.
- Only use attachments/accessories specified by the manufacturer.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package. If any items are missing or damaged, contact your dealer immediately.

- JBL Libra_500 Mixer Amplifier Unit
- AC Power Cord
- User Manual (this document)
- Warranty Card (if applicable)

4. PRODUCT COMPONENTS AND CONTROLS

The JBL Libra_500 Mixer Amplifier features a straightforward interface for ease of use in various PA applications. While

specific diagrams are not provided, understanding the general layout of mixer amplifiers will be beneficial.

4.1 Front Panel Controls

- **Power Switch:** Turns the unit on or off.
- **Master Volume Control:** Adjusts the overall output level.
- **Input Level Controls:** Individual controls for each input channel (if present).
- **Tone Controls (Bass):** Adjusts the low-frequency response (± 10 dB at 100 Hz).
- **Indicators:** Power, signal, and protection status indicators.

4.2 Rear Panel Connections

- **AC Power Input:** Connects the supplied AC power cord (240V 50/60 Hz).
- **DC Power Input:** Connects to a 36V DC power source for alternative power.
- **Speaker Outputs:** Barrier strip connections for 4Ω/8Ω and 70V/100V speaker systems. Use 2 x (≥ 16 AWG) cables.
- **Audio Inputs:** Various input jacks for microphones, line-level devices, etc.
- **Preamp/Line Output:** For extending the system to larger applications or connecting to external power amplifiers.

5. SETUP INSTRUCTIONS

Follow these steps to set up your JBL Libra_500 Mixer Amplifier.

5.1 Placement

- Place the amplifier on a stable, flat surface. Ensure adequate ventilation around the unit.
- Avoid placing the unit near heat sources or in direct sunlight.

5.2 Connecting Speakers

1. Ensure the amplifier is powered off and unplugged.
2. Connect your speakers to the appropriate barrier strip terminals on the rear panel.
3. For low impedance speakers, connect to the 4Ω or 8Ω terminals, matching the speaker impedance.
4. For 70V/100V constant voltage systems, connect to the 70V or 100V terminals.
5. Use speaker cables of at least 16 AWG for optimal performance and safety.
6. Ensure correct polarity (+ to + and - to -) for all speaker connections.

5.3 Connecting Audio Sources

1. With the amplifier still off, connect your audio sources (e.g., microphones, CD players, media players) to the input jacks on the rear panel.
2. Ensure all connections are secure.

5.4 Power Connection

1. **AC Power:** Connect the supplied AC power cord to the AC power input on the rear panel, then plug it into a suitable 240V 50/60 Hz wall outlet.
2. **DC Power:** Alternatively, for DC operation, connect a 36V DC power source to the DC power input terminals. Ensure correct polarity.

6. OPERATING INSTRUCTIONS

Once the amplifier is set up, follow these steps for operation.

6.1 Powering On/Off

1. Before powering on, ensure all volume controls are set to their minimum position.
2. Press the Power Switch on the front panel to turn the unit on. The power indicator should illuminate.
3. To power off, set all volume controls to minimum, then press the Power Switch.

6.2 Adjusting Volume

1. Start playing audio from your source.
2. Gradually increase the individual input level control for the active source.
3. Slowly raise the Master Volume control to achieve the desired overall output level.
4. Monitor the signal indicators to avoid clipping or distortion.

6.3 Using Tone Controls

- The Bass tone control allows you to adjust the low-frequency response of the audio.
- Turn the Bass knob clockwise to boost low frequencies (up to +10 dB at 100 Hz).
- Turn the Bass knob counter-clockwise to cut low frequencies (down to -10 dB at 100 Hz).
- Adjust to suit your preference and the acoustics of the environment.

7. MAINTENANCE

Proper maintenance ensures the longevity and reliable operation of your amplifier.

- **Cleaning:** Disconnect power before cleaning. Use a soft, dry cloth to wipe the exterior. Do not use liquid cleaners or aerosols.
- **Ventilation:** Regularly check that ventilation openings are clear of dust and debris to prevent overheating.
- **Storage:** If storing the unit for an extended period, ensure it is powered off, unplugged, and stored in a cool, dry place away from direct sunlight.

8. TROUBLESHOOTING

If you encounter issues, refer to the following common problems and solutions before contacting service personnel.

Problem	Possible Cause	Solution
No power	Power cord not connected; Power outlet faulty; Power switch off	Check power cord connection; Try a different outlet; Ensure power switch is ON
No sound output	Volume controls too low; Speaker connections incorrect; Audio source not playing; Input selected incorrectly	Increase Master and Input volume; Verify speaker wiring and impedance; Check audio source; Select correct input channel
Distorted sound	Input level too high; Speaker impedance mismatch; Faulty cables	Reduce input level; Verify speaker impedance matches amplifier output; Check/replace cables
Unit overheats	Blocked ventilation; Excessive load	Ensure ventilation openings are clear; Reduce output level or speaker load

9. SPECIFICATIONS

Detailed technical specifications for the JBL Libra_500 Mixer Amplifier.

Model Number	Libra_500
Rated Power (AC, 1kHz, 4Ω, THD 10%)	500 W
DC Power Supply Output Power	≥ 50% rated power
Power Supply (AC)	240V 50/60 Hz
Power Supply (DC)	36 V
Frequency Response	50-15,000 Hz ± 3dB
Signal to Noise Ratio	≥ 70 dB
Tone Controls (Bass)	± 10 dB at 100 Hz
Output Regulation	≤ 3 dB, no load to full load at 1kHz
Speaker Output Connections	4Ω/8Ω & 70V/100V (Barrier Strip, with touch proof cover)
Recommended Speaker Cable	2 x (≥ 16 AWG) Cables
Product Dimensions (LxWxH)	46.8 x 41 x 46.8 cm
Item Weight	22.1 kg
Color	Black
Manufacturer	JBL

10. WARRANTY AND SUPPORT

JBL products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official JBL website.
For technical support, service, or replacement parts, please contact your authorized JBL dealer or visit the JBL support portal online. Ensure you have your product model number (Libra_500) and purchase information available when seeking support.
Manufacturer: JBL