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JBL ST 450 TRIO

JBL ST 450 TRIO Super Tweeter Instruction Manual

Model: ST 450 TRIO

1. INTRODUCTION

The JBL ST 450 TRIO Super Tweeter is designed for high-frequency sound reproduction with efficiency and low distortion. This component is suitable for various audio applications, including PA systems, automotive mini trios, and general sound reinforcement systems. Its phenolic diaphragm ensures a clear high-frequency timbre, while the aluminum ring magnetic assembly provides definition and efficiency across its operational range.

2. SAFETY INFORMATION

Please read all safety instructions before installing and operating this product. Failure to follow these instructions may result in injury or damage to the product or other equipment.

- **Electrical Safety:** Ensure all power connections are made correctly and securely. Disconnect power before making any connections or disconnections. Incorrect wiring can cause electrical shock or damage to your audio system.
- **Hearing Protection:** Prolonged exposure to high sound pressure levels can cause permanent hearing damage. Use caution when adjusting volume levels.
- **Installation:** Always mount the tweeter securely to prevent it from becoming a projectile in case of sudden stops or accidents. Consult a professional installer if you are unsure about any aspect of the installation process.
- **Ventilation:** Ensure adequate ventilation around the tweeter to prevent overheating, especially during extended use at high power levels.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x JBL ST 450 TRIO Super Tweeter
- Technical Brochure
- Warranty Leaflet
- Bearing (as included component)

4. SETUP AND INSTALLATION

Proper installation is crucial for optimal performance and safety. If you are not confident in your ability to install this product, seek assistance from a qualified professional.

4.1 Mounting

The ST 450 TRIO is designed for flush mount installation. Choose a mounting location that provides adequate space for the tweeter and its wiring, and ensures it is securely fastened to a stable surface. Avoid locations where the tweeter could be exposed to excessive moisture or direct sunlight.



Image 1: Side view of the JBL ST 450 TRIO Super Tweeter, illustrating its flush mount design and connection terminals.

4.2 Wiring

The tweeter has a rated impedance of 8 Ohms. Connect the tweeter to an appropriate amplifier output, ensuring that the amplifier can handle an 8-Ohm load. Pay close attention to polarity (+ and -) to ensure

correct phase alignment with other speakers in your system. Incorrect polarity can lead to reduced sound quality.



Image 2: Angled view of the JBL ST 450 TRIO Super Tweeter, highlighting the robust magnet structure and clearly marked connection points for wiring.

It is recommended to use a high-pass filter to protect the tweeter from low frequencies, which can cause damage. Refer to your amplifier or crossover unit's manual for proper filter settings. The system frequency response for this tweeter is 4000 to 20000 Hz.

5. OPERATING INSTRUCTIONS

Once installed and wired correctly, the JBL ST 450 TRIO Super Tweeter is ready for operation.

- **Power Handling:** The tweeter has an RMS Power of 300W and a Peak Power of 600W. Ensure that the amplifier's output power does not exceed these limits to prevent damage.
- **Volume Control:** Start with a low volume level and gradually increase it to your desired listening level. Avoid operating the system at excessively high volumes for extended periods.
- **Sound Adjustment:** Use your audio system's equalizer or tone controls to fine-tune the high-frequency output to your preference. Remember that the tweeter is designed to reproduce high frequencies, so excessive boosting of treble may lead to harsh sound or potential damage.

6. MAINTENANCE

The JBL ST 450 TRIO Super Tweeter requires minimal maintenance to ensure long-lasting performance.

- **Cleaning:** Use a soft, dry cloth to gently wipe the surface of the tweeter. Do not use abrasive cleaners, solvents, or excessive moisture, as these can damage the finish or internal components.
- **Inspection:** Periodically check the wiring connections to ensure they remain secure. Inspect the tweeter for any signs of physical damage.

7. TROUBLESHOOTING

If you experience issues with your JBL ST 450 TRIO Super Tweeter, refer to the following common problems and solutions:

- **No Sound:**
 - Check all wiring connections from the amplifier to the tweeter for proper contact and polarity.
 - Ensure the amplifier is powered on and functioning correctly.
 - Verify that the audio source is playing and the volume is turned up.
- **Distorted Sound:**
 - Reduce the volume level. Distortion often occurs when the amplifier or tweeter is overdriven.
 - Check for proper high-pass filter settings to prevent low frequencies from reaching the tweeter.
 - Inspect the tweeter for any physical damage to the diaphragm.
- **Intermittent Sound:**
 - Check for loose wiring connections at both the tweeter and the amplifier.
 - Ensure there are no shorts in the wiring.

If these steps do not resolve the issue, contact customer support or a qualified service technician.

8. SPECIFICATIONS



Image 3: Top view of the JBL ST 450 TRIO Super Tweeter, displaying the brand and model details.

Feature	Specification
Model Name	ST 450 TRIO
Speaker Type	Tweeter
Rated Impedance	8 Ohms
Magnet Weight	470 g
Magnetic Assembly Weight	1,200 g
Speaker Weight	1,700 g
Peak Power	600 W MAX
RMS Power	300W
System Frequency Response	4000 to 20000 Hz
Speaker Size	102 Millimeters

Feature	Specification
Product Dimensions	1"D x 1"W x 1"H
Item Weight	1.2 Pounds
Manufacturer	JBL/SELENIUM

9. WARRANTY AND SUPPORT

This JBL product comes with a limited warranty. Please refer to the included Warranty Leaflet for detailed terms and conditions regarding coverage, duration, and claims procedures.

For technical support, service, or further inquiries, please visit the official JBL website or contact their customer service department. Keep your purchase receipt as proof of purchase for warranty claims.

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