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› Neumann TLM 103-MT Large Diaphragm Cardioid Microphone User Manual

Sennheiser Pro Audio TLM 103 MT

Neumann TLM 103-MT Large Diaphragm Cardioid Microphone User Manual

Model: TLM 103 MT

Brand: Sennheiser Pro Audio

1. INTRODUCTION

The Neumann TLM 103 is a large-diaphragm condenser microphone designed for professional studio applications. It features a cardioid polar pattern and is known for its clear, direct, and refined sound, making it suitable for vocals, solo instruments, and various recording tasks. The microphone incorporates a transformerless circuit, contributing to its low self-noise and high output level.





Figure 1.1: The Neumann TLM 103-MT microphone, showcasing its robust design and classic appearance.

2. SAFETY INFORMATION

- Always handle the microphone with care to prevent damage to the capsule and internal components.
- Ensure that the audio interface or mixing console provides +48V phantom power, which is required for the microphone's operation.
- Avoid exposing the microphone to extreme temperatures, high humidity, or direct moisture.
- Do not attempt to disassemble or repair the microphone yourself. Refer to qualified service personnel for any maintenance beyond routine cleaning.
- Keep the microphone away from strong magnetic fields, which can affect its performance.

3. PACKAGE CONTENTS

Verify that all items are present in the packaging:

- Neumann TLM 103 MT Cardioid Studio Condenser Microphone
- SG 103 Swivel Mount
- Wooden Jeweler's Box (for storage)
- Neumann 1 Year Warranty Information



Figure 3.1: The Neumann TLM 103-MT microphone and its included SG 103 swivel mount, neatly stored within the provided wooden jeweler's box. This box ensures safe transport and storage of the microphone.

4. SETUP

1. Mounting the Microphone:

Attach the SG 103 swivel mount to a standard microphone stand. Securely fasten the Neumann TLM 103-MT microphone into the swivel mount. Ensure the microphone is firmly seated to prevent accidental drops.





Figure 4.1: The Neumann TLM 103-MT microphone securely attached to a microphone stand using its swivel mount, with an XLR cable connected to its base.

2. Connecting to Audio Equipment:

Connect a balanced XLR cable to the microphone's XLR output connector. Connect the other end of the XLR cable to an input on your audio interface, mixing console, or preamplifier. Ensure the input channel is capable of supplying +48V phantom power.

3. Activating Phantom Power:

Before turning on the microphone, ensure that +48V phantom power is enabled on the connected audio equipment's input channel. The TLM 103-MT requires phantom power to operate.

5. OPERATING

1. Microphone Placement:

The TLM 103-MT is a cardioid microphone, meaning it is most sensitive to sounds coming from the front and rejects sounds from the rear. Position the microphone with its front (where the Neumann logo is visible) facing the sound source. Experiment with distance and angle to achieve the desired sound. For vocals, a pop filter is highly recommended to minimize plosive sounds.



Figure 5.1: Proper microphone technique for vocal recording, showing a user speaking into the Neumann TLM 103-MT with a pop filter to reduce plosives.

2. Gain Staging:

Adjust the input gain on your audio interface or mixer to achieve a healthy signal level without clipping. The TLM 103-MT has a high output, so less gain may be required compared to other microphones.

3. Monitoring:

Monitor your audio through headphones or studio monitors to ensure optimal sound quality and to identify any issues during recording.

6. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to wipe the microphone body. Do not use liquid cleaners or solvents, as they can damage the finish or internal components.
- **Storage:** When not in use, store the microphone in its original wooden box or a protective case to shield it from dust, moisture, and physical impact.
- **Environmental Conditions:** Avoid storing or operating the microphone in environments with high humidity, extreme temperatures, or excessive dust.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No sound output	No phantom power (+48V) Faulty XLR cable Incorrect input selection on audio equipment	Ensure +48V phantom power is enabled. Test with a different XLR cable. Verify the correct input channel is selected and active.
Low or distorted sound	Incorrect gain setting Microphone too far from source Damaged capsule	Adjust input gain on your audio equipment. Move microphone closer to the sound source. If distortion persists, contact Neumann service.
Excessive background noise	Unsuitable acoustic environment Ground loop hum	Record in a treated room or quieter environment. Check cable connections and power sources for ground loop issues.

8. SPECIFICATIONS

Model Name	TLM 103 MT
Polar Pattern	Cardioid
Frequency Range	20 Hz - 20 kHz
Audio Sensitivity	138 dB
Impedance	50 Ohm
Signal-to-Noise Ratio	87 dB
Noise Level	7 dB
Power Source	+48V Phantom Power Required
Connector Type	XLR
Material	Aluminum
Dimensions (L x W x H)	11.42 x 9.65 x 4.06 inches
Item Weight	2.98 pounds (1352 Grams)
Manufacturer	Sennheiser
Country of Origin	Germany

9. WARRANTY AND SUPPORT

The Neumann TLM 103-MT microphone comes with a **Neumann 1 Year Warranty**. For warranty claims, technical support, or service inquiries, please contact Sennheiser Pro Audio customer support or visit their official website. Retain your proof of purchase for warranty validation.

For the most up-to-date support information, please refer to the official Sennheiser Pro Audio website or the documentation included with your product.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question