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› Beyerdynamic MM-1 Omnidirectional Condenser Measurement Microphone User Manual

beyerdynamic MM 1

Beyerdynamic MM-1 Omnidirectional Condenser Measurement Microphone User Manual

Model: MM 1

INTRODUCTION

The Beyerdynamic MM-1 is an omnidirectional condenser measurement microphone designed for precise acoustic measurements. It provides accurate data for analyzing listening environments, speaker frequency response, and Sound Pressure Level (SPL). Its design ensures minimal acoustic interference for reliable results.

WHAT'S IN THE BOX

Verify that all components are present in the packaging:

- Beyerdynamic MM-1 Omnidirectional Condenser Measurement Microphone
- Microphone Clamp (MA-CL 21)
- Microphone Case



SETUP

Follow these steps to set up your Beyerdynamic MM-1 microphone:

1. **Mounting the Microphone:** Attach the MM-1 microphone to the provided microphone clamp (MA-CL 21). Secure the clamp onto a standard microphone stand.
2. **Connecting to Audio Interface:** Connect the microphone to an audio interface or mixer using a standard XLR cable. The MM-1 requires phantom power (typically +48V) from your audio interface or mixer to operate. Ensure phantom power is enabled on the input channel you are using.
3. **Positioning:** For accurate measurements, position the microphone at the desired measurement point within your acoustic environment. Ensure it is stable and free from vibrations.



Figure 2: The MM-1 microphone connected via XLR cable, ready for use.

OPERATING INSTRUCTIONS

The Beyerdynamic MM-1 is designed for use with a spectrum analyzer or measurement software to evaluate acoustic properties.

- **Measurement Software:** Connect your audio interface to a computer running acoustic measurement software (e.g., Room EQ Wizard, Smaart, etc.).
- **Calibration:** For the most accurate results, it is recommended to calibrate your MM-1 microphone with your measurement system. Refer to your measurement software's documentation for calibration procedures. The MM-1 is diffuse field-calibrated with a linear frequency response at 90°.
- **Performing Measurements:** Follow the instructions of your chosen measurement software to generate test signals and capture the microphone's response. The MM-1's omnidirectional polar pattern captures sound equally from all directions, making it ideal for room acoustic analysis.
- **Applications:**
 - Frequency response analysis of loudspeakers and rooms.
 - Sound Pressure Level (SPL) measurements.
 - General acoustic analysis for studio setup or live sound environments.

MAINTENANCE

Proper care will ensure the longevity and performance of your MM-1 microphone:

- **Cleaning:** Use a soft, dry cloth to clean the microphone body. Do not use liquid cleaners or solvents, as they may damage the microphone's sensitive components.
- **Storage:** When not in use, store the microphone in its provided case to protect it from dust, moisture, and physical damage.
- **Handling:** Avoid dropping or subjecting the microphone to strong impacts, as this can affect its calibration and performance.
- **Environmental Conditions:** Keep the microphone away from extreme temperatures, high humidity, and direct sunlight.



Figure 3: Store the MM-1 microphone in its protective case when not in use.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No sound output	<ul style="list-style-type: none"> No phantom power Faulty XLR cable Incorrect input selection on interface/mixer 	<ul style="list-style-type: none"> Ensure +48V phantom power is enabled. Test with a different XLR cable. Verify the correct input channel is selected and gain is adjusted.
Low or distorted sound	<ul style="list-style-type: none"> Incorrect gain staging Damaged microphone capsule 	<ul style="list-style-type: none"> Adjust input gain on your audio interface/mixer. Contact Beyerdynamic support if distortion persists after checking gain.
Inaccurate measurements	<ul style="list-style-type: none"> Microphone not calibrated Improper microphone placement Environmental noise interference 	<ul style="list-style-type: none"> Perform software calibration. Ensure correct placement as per measurement best practices. Minimize background noise during measurements.

SPECIFICATIONS

Feature	Detail
Model Name	MM 1
Brand	beyerdynamic
Polar Pattern	Omnidirectional
Connectivity Technology	XLR
Connector Type	XLR
Frequency Range	50 Hz - 16 kHz
Audio Sensitivity	38 Decibels
Impedance	2200 Ohms
Signal-to-Noise Ratio	74 dB
Audible Noise	1.5 Decibels
Power Source	Corded Electric (requires phantom power)
Included Components	Microphone
Color	Black
Item Weight	1 Pounds
Item Dimensions (L x W x H)	9.45 x 6.5 x 3.35 inches
Enclosure Material	Plastic
Manufacturer Part Number	730289

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official Beyerdynamic website or contact their customer service directly. Keep your proof of purchase for warranty claims.

Official Beyerdynamic Website: www.beyerdynamic.com

