

Technical Support

Should you have any questions regarding your M50 microphone please contact us:

e-mail: Support@earthworksaudio.com
phone: (603) 654-2433, ext. 119
(9am – 5pm ET)

For warranty and product return/exchange information please refer to the back of the enclosed Calibration Chart.

FIFTEEN-YEAR WARRANTY

All Earthworks products (excluding accessories) carry a fifteen-year limited warranty (parts and labor). If you have any problems with your Earthworks products, please contact our warranty/repair department by email at: returns@earthworksaudio.com or by telephone at (603) 654-6427, Ext. 119.

Electronic Calibration Files

All Earthworks Measurement Microphones purchased after July 1, 2012 will have ECFs available at no charge. Simply register your new measurement microphone within 30 days of purchase on our website.

Once your Measurement microphone has been registered in our database, we will send you your ECF to the valid email address provided in your registration. If you have any questions you can email us at sales@earthworksaudio.com or reach us by phone at 603-654-6427 ext. 114.



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Made in U.S.A.
Printed in U.S.A.



M50

User's Manual

HDM HIGH DEFINITION MICROPHONES™

Description

Earthworks M50 is an omnidirectional (pressure) microphone designed and calibrated for measurement purposes. It is a pre-polarized condenser microphone directly coupled to a wideband, low output impedance preamplifier. The M50 requires a standard 48V phantom power supply. It features an extended linear free-field frequency response from 3Hz to 50kHz (please see the enclosed individual calibration chart), very low handling noise, uniform polar pattern, and high SPL handling capabilities. Its unique circuitry excludes the transconductance of the input FET from the overall gain structure. This means the sensitivity remains very stable when the microphone is subjected to variations in ambient temperature. The M50 meets or exceeds ANSI Type 1 requirements.

Each microphone is delivered with its own calibration chart providing its individually measured open-circuit sensitivity and the frequency response curve. A computer file containing the frequency response data for importing directly into measurement software is available from Earthworks, Inc. upon request at an extra cost. A mounting clip and a calibrator adapter are included with the microphone.

Applications

Earthworks M50 is ideally suited for acoustical measurements that require extended frequency response, including high-end loudspeaker design and quality control, scientific research, measurements of ultrasonic or subsonic transducers, or any application where an extremely accurate free-field measurement microphone is required. The very wide linear minimum-phase response and exceptionally fast well-damped im-

pulse response (Fig. 2) make the M50 the perfect microphone for high resolution time domain measurements.

The M50 is simple to operate. Connect the microphone to a microphone pre-amplifier supplying 48V phantom power using a standard XLR microphone cable. Please allow up to one minute for the microphone to settle. Plugging in the microphone "hot" (phantom power already present at the input) will not damage the microphone, and is actually preferred for faster settling. For optimum results we recommend pointing the M50 toward the sound source.

This microphone has no removable parts.

Calibration

The microphone is calibrated at the factory at 1 kHz (therefore independent of any frequency weighting). The sensitivity in mV/Pa is provided on the calibration chart. If on-site calibration is required, use the enclosed one half inch standard calibration adapter.

Specifications

Frequency response: 3Hz to 50kHz +1/-3dB

Polar Pattern: Omnidirectional

Sensitivity: 30mV/Pa (Typical)

Power Requirements: 48V Phantom, 10mA

Peak Acoustic Input: 142dB SPL

Output: XLR (Fig. 1)

Minimum Load: 600Ω btw. pins 2 & 3

Noise: 22dB, A equivalent

Dimensions L x D: 229x22 mm, (9x.860 in.)

Weight: 225g (.51lb)

 Compliant

Specifications are subject to change without notice.

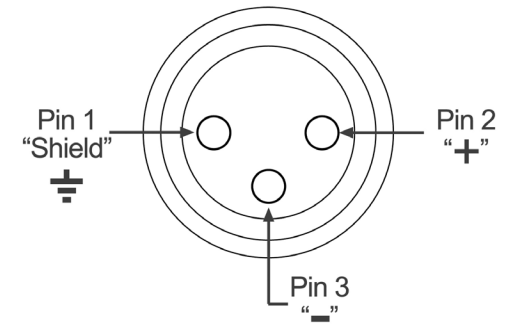


Fig 1. XLR Output Connector Assignment of M50

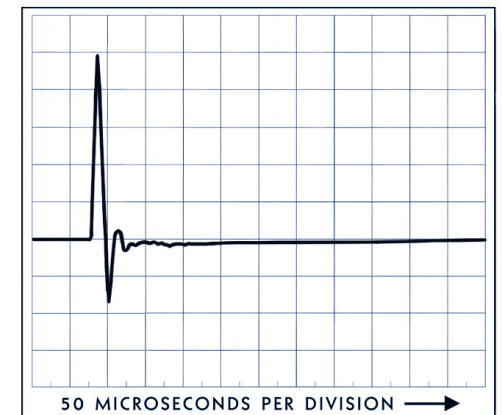


Fig 2. Impulse Response (Typical) of M50

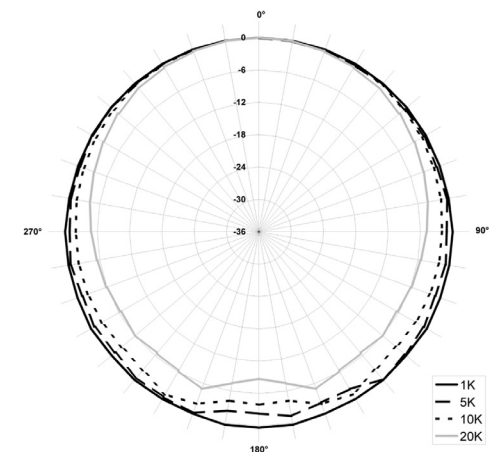


Fig 3. Polar Response (Typical) of M50