M30BX

Battery Powered
Measurement Microphone

User's Guide

Electronic Calibration Files
Register your new measurement microphone within 30 days of purchase on our website at **earthworksaudio.com/register.**

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.

Warranty
All Earthworks microphones carry a limited warranty (parts and labor).

Product Registration
To help you get the most out of your Earthworks purchase, please take a moment and register your product with us online at **earthworksaudio.com/register**.

Service & Repair
If you have any problems with your Earthworks products, please contact our Service & Repair Department.

Email: returns@earthworksaudio.com
Telephone: (603) 654-2433, ext. 119

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MADE IN USA

earthworksaudio.com

Earthworks®
HIGH DEFINITION MICROPHONES™

Description

The Earthworks M30BX 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 M30BX requires a single type P28L (Lithium) or equivalent 6V battery as a power source. It features a linear free-field frequency response from 9 Hz to 30kHz (please see the enclosed individual calibration chart). It has low handling noise and a uniform polar pattern. Its unique circuitry excludes the transconductance of the input FET from the overall gain structure. The sensitivity remains very stable when the microphone is subjected to variations in ambient temperature. The M30BX 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 registering your new microphone. A mounting clip, a calibrator adapter, an XLR to RCA adapter, and a battery are included with the microphone.

Applications

The Earthworks M30BX is ideally suited for on-location acoustic measurements including loudspeaker design and quality control, sound system setup and troubleshooting, room acoustics, or any application where an accurate free-field measurement microphone is required and portability is important or a power source is not readily available. Many test systems manufacturers, such as DRA Labs (MLSSA™), Smaart™ and DEQX™, recommend M30BX microphones. The wide linear minimum-phase response and fast, well-damped impulse response make M30BX an excellent microphone for loudspeaker design, especially for time domain measurements.

The M30BX is simple to operate. Make sure the battery (included) is properly installed in the microphone. To open the battery compartment hold the microphone by the upper body and unscrew the battery cover sleeve (this cover is not removable). The battery is only switched on when an XLR connector is plugged into the microphone. The M30BX will not operate from phantom power.

The M30BX will drive either balanced or unbalanced inputs. An XLR to RCA adapter is enclosed for driving unbalanced inputs of sound cards directly. Please note that the best S/N ratio is achieved using a balanced interface.

Calibration

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

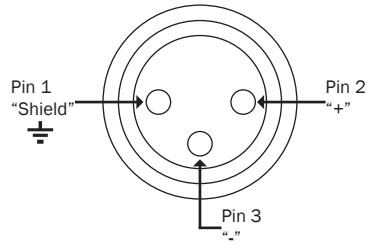
NOTE: Earthworks recommends re-calibration every five (5) years.

M30BX Open Battery Compartment

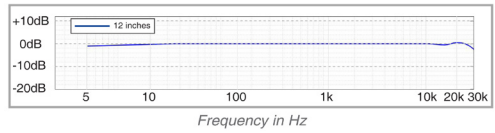
Specifications

Frequency response: 9Hz to 30kHz +1/-3dB
Polar Pattern: Omnidirectional
Sensitivity: 3mV/Pa (Typical)
Power Requirements: 6V Battery Type P28
(2CR-1/N, 4LR44 or eq.)
Peak Acoustic Input: 140dB SPL
Output: XLR-3
Minimum Load: 600Ω between pins 2 & 3
Noise: 20dB, A equivalent
Dimensions L x D: 220 x 23 mm (8.65 x .910 in.)
Weight: 180g (.4lb)

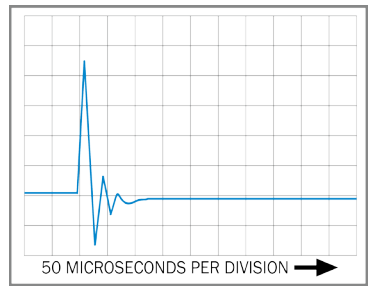
Specifications are subject to change without notice.



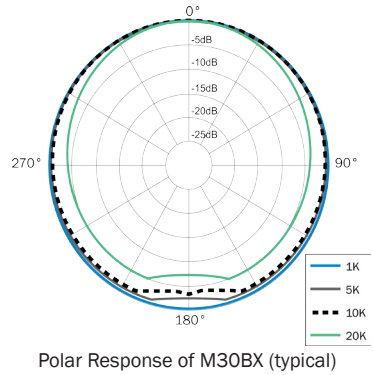
XLR Output Connector Assignment of M30BX



Frequency Response of M30BX (typical)



Impulse Response of M30BX (typical)



Polar Response of M30BX (typical)