

Fig. 3. Polar Response (Typical) of M30BX, 1dB/div.

Technical Support

Should you have any questions regarding your M30BX microphone please contact us:

e-mail: Support@EarthworksAudio.com
 phone: 1-603-654-6427 (9a.m. – 5p.m. ET)

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



Earthworks, Inc.
 37 Wilton Rd.
 Milford, NH 03055 USA
 Phone: 1-603-654-6427
 Fax: 1-603-654-6107
www.EarthworksAudio.com



Made in U.S.A.



M30BX Measurement Microphone Owner's Manual



Description

Earthworks M30BX is an omnidirectional (pressure) microphone designed and calibrated for measurement purposes. It is a prepolarized condenser microphone directly coupled to a wideband, low output impedance preamplifier. The M30BX requires a single type P28L (Lithium) or 4LR44 or equivalent 6V battery as a power source. It features a linear free-field frequency response from 9Hz to 30kHz (please see the enclosed individual calibration chart), very low handling noise and a uniform polar pattern. 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 M30BX meets or exceeds ANSI Type 1 and applicable IEC 61094 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, a calibrator adapter, an XLR to RCA adapter, and a battery are included with the microphone.

Applications

Earthworks M30BX is ideally suited for on-location acoustical 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™, are recommending M30BX microphones. The wide linear minimum-phase response and fast well-damped impulse response (Fig. 2) 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 lower, larger part of the microphone (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.

For optimum results we recommend pointing the M30BX toward the sound source.

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 1/2" adapter.

Specifications

Frequency response: 9Hz to 30kHz +1/-3dB
Polar Pattern: Omnidirectional
Sensitivity: 50mV/Pa (Typical)
Power Requirements: 6V Battery Type P28 (2CR-1/3N, 4LR44 or eq.)
Peak Acoustic Input: 130dB SPL
(old battery may reduce this spec.)
Output: XLR (Fig. 1)
Output Impedance: 100Ω, balanced

(50Ω ea. pin 2 & 3)
Minimum Load: 600Ω btw. pins 2 & 3
Noise: 22dB, A equivalent
Dimensions L x D: 220 x 23 mm (8.65 x .910 in.)
Weight: 180g (.41lb)
CE Compliant

Specifications are subject to change without notice.

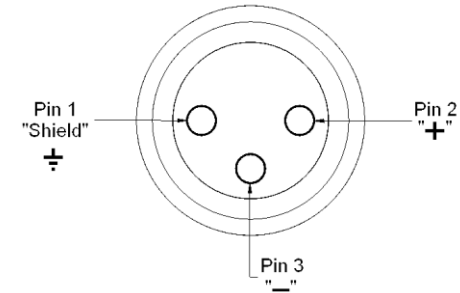


Fig. 1. XLR Output Connector Assignment of M30BX

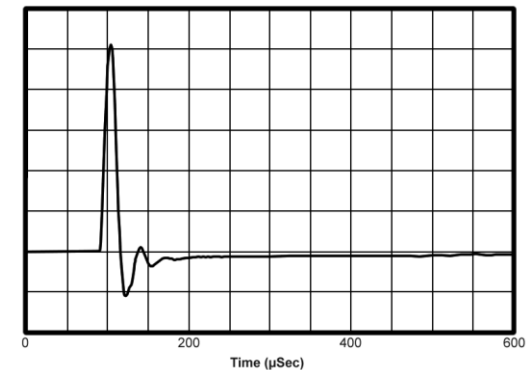


Fig. 2. Impulse Response (Typical) of M30BX