

Measurement Microphones: 10 Under \$1,000

By George Petersen

Today's room measurement tools are easier to use than ever — even built into digital consoles and smart phones, making what was once drudgery into a convenient, straightforward operation. While the software may be built into or included in your tools at hand (or readily available software packages), all you may need is a USB preamp/interface, a laptop and/or an iPad and you're ready to go. Well, almost, as an uncolored omnidirectional microphone with a flat frequency response is a must for serious analysis work. With that in mind, we checked out a few affordable offerings and found a wide selection to suit any application or budget.



EMX 7150 Measurement Mic

This 1/4" measurement microphone features a very accurate frequency response combined with the ability to measure sound pressure levels of up to 146 dB. It operates at standard 12 to 52 VDC phantom power available on most professional computer interfaces and mic preamplifiers. Powered from just 12 Volts (5 mA), the power-saving EMX-7150 is ideal for use with wireless transmitters, yet still provides a wide 135 dB SPL range. The EMX-7150's mechanically robust design (with its stainless steel body and state of the art, watertight Neutrik XLR connector) is well-suited for harsh environments, such as open-air sound reinforcement measurements. Each microphone comes with individual calibration data as proof of its superb performance.



FEATURES

Frequency Range: 10 Hz to 20k Hz
Sensitivity: > 6mV/Pa typ.
Dynamic Range: ~30 to >140 dB SPL
Max SPL: 146 dB typ. (@ 3% distortion with 48V of phantom power)
Acoustic Port Diameter: 1/4"
Dimensions: 0.75" diameter; 6" length
Weight: 3 ounces
Extras: Calibration chart and calibration data files included; IEC 61672 Class 1 frequency response (Note: not a Class 1 microphone)

TYPICAL APPLICATIONS

- Sound Power and Soundfield Analysis
- Industrial Acoustics
- Room Acoustics Analysis
- Sound Reinforcement
- Real Time Analyzing

For more information, contact www.isemcon.com or 1-877-309-1002

AudioControl CM-10

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz (±3 dB)
Max SPL: 136 dB
Sensitivity: Not stated
Self-Noise: Not stated
Powering: 12 VDC phantom
Termination: XLR-M
Notes: Calibrated internal preamp
Street Price: \$145



audiocontrol.com

Audix TM1PLUS

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz (±2 dB)
Max SPL: 130 dB
Sensitivity: 6 mV/Pa
Self-Noise: 28 dBA
Powering: 24-48 VDC phantom
Termination: XLR-M
Notes: Includes calibration data
Street Price: \$399



audixusa.com

beyerdynamic MM1

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz
Max SPL: 122 dB
Sensitivity: 15 mV/Pa
Self-Noise: 26 dBA
Powering: 12 - 48 VDC phantom
Termination: XLR-M
Notes: Includes measured frequency response curve
Street Price: \$199



north-america.beyerdynamic.com

Earthworks M23

Pattern: Omnidirectional
Response: 9 Hz - 23 kHz (+1/-3 dB)
Max SPL: 142 dB
Sensitivity: 34 mV/Pa
Self-Noise: 20 dBA
Powering: 48 VDC phantom
Termination: XLR-M
Notes: Includes printed frequency response chart
Street Price: \$499



earthworksaudio.com

Josephson C550H

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz (±2 dB)
Max SPL: 135 dB
Sensitivity: 10 mV/Pa
Self-Noise: 30 dBA
Powering: 15 - 48 VDC phantom
Termination: XLR-M
Notes: Individually calibrated C555H also avail.
Street Price: \$440



josephson.com

MicW M416

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz (±3 dB)
Max SPL: 130 dB
Sensitivity: 30 mV/Pa
Self-Noise: 30 dBA
Powering: 48 VDC phantom
Termination: XLR-M
Notes: 1/4" capsule
Street Price: \$239



mic-w.com

NTI Audio M4261

Pattern: Omnidirectional
Response: 5 Hz - 20 kHz
Max SPL: 142 dB
Sensitivity: 16 mV/Pa
Self-Noise: 27 dBA
Powering: 48 VDC phantom
Termination: XLR-M
Notes: 1/4" capsule
Street Price: \$510



nti-audio.com

PreSonus PRM1

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz
Max SPL: 132 dB
Sensitivity: 14 mV/Pa
Self-Noise: 26 dBA
Powering: 9 - 52 VDC phantom
Termination: XLR-M
Notes: Recommended for use with PreSonus StudioLive mixers
Street Price: \$99



presonus.com

Studio Six Digital iTestMic 2

Pattern: Omnidirectional
Response: 20 Hz - 20 kHz (±3 dB)
Max SPL: Switchable 26-96 and 48-120 dBA
Sensitivity: n/a
Self-Noise: Not stated
Powering: Via iOS device
Termination: Apple iOS Lightning port
Notes: Designed to interface with iPad/iPhones
Street Price: \$229



studiosixdigital.com