NoiseMeters
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Optimus Industrial - Octave Band Sound Level Meter

Features

- Meets noise regulations and guidelines
- Real-Time Octave Band Filters
- Voice tag recording
- Bluetooth and mobile app
- Noise Rating (NR) and Noise Criterion (NC)
- Single range 20 to 140 dB

Applications

- Occupational noise surveys
- Hearing protector selection
- Noise exposure and dose % calculations
- Detailed occupational noise assessments
- Air conditioning - HVAC - noise level checks

Overview

The Optimus Industrial sound level meter is for measuring sound levels in factories and other work environments in line with the occupational noise regulations.

Octave Band Filters

This version of the Optimus is fitted with real-time octave band filters. The nature of "real-time" filters is that the meter measures in all bands at the same time - parallel filters.

Octave bands gives a description of the frequency content of the noise measured. The most common use is for selecting the correct hearing protectors, ensuring that they attenuate the sound levels at the frequencies of interest.

The NoiseTools software, which is included with this meter, has a calculator that takes the octave band measurement and calculates the assumed level at the ear when using different hearing protectors.

Buying the Right Meter

Most occupational noise regulations state that you should use at least a Class 2 Integrating Sound Level Meter that provides you with measurements of LAeq and LPeak. The meter should be verified by a suitably equipped laboratory when new and every year or two years. You also need a Calibrator to check the meter's function before making measurements.

Our Recommendation

For a full occupational noise assessment with detailed hearing protector selection, especially for areas with very high noise levels, we recommend the **CK162C** Octave Band Measurement Kit. This includes a suitable calibrator, carrying case and software.

If you only need to carry out a basic occupational noise survey, still in line with the regulations, then see the standard Optimus Industrial sound level meter.

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Specifications

Standards	IEC 61672-1:2013 Class 1 or Class 2 IEC 61672-1:2002 Class 1 or Class 2 Group X IEC 60651:2001 Type 1 I or Type 2 I IEC 60804:2000 Type 1 or Type 2 IEC 61252:1993 personal sound exposure meters ANSI S1.4 -1983 (R2006), ANSI S1.43 - 1997 (R2007), ANSI S1.25:1991 IEC 61260:1996 & ANSI S1.11-2004 DIN 45657:2005-03
Measurement Range	20dB to 140dB RMS single range
Noise floor	<18dB(A) Class 1, <21dB(A) Class 2
Frequency weightings	RMS & peak : A, C, & Z measured simultaneously
Frequency bands	10 octave bands, 31.5Hz to 16kHz
Time weightings	Fast, Slow & Impulse measured simultaneously
Memory	8GB, 32GB factory fit option
Time history data rates	10ms, 62.5ms, 125ms, 250ms, 1/2 sec, 1 sec or 2 sec
VoiceTag	Up to 30 seconds of audio notes with each measurement
Integrators	Three simultaneous “virtual” noise meters. Integrator 1 is preset to Q3 for Leq functions. Integrators 2 & 3 can be configured with the following
Exchange rate	3, 4 or 5 dB
Threshold	70dB to 120dB (1 dB steps)
Time weighting	None or Slow
Criterion level	70dB to 120dB (1 dB steps)
Criterion time	1 to 12 hours in 1 hour steps
Integrator quick settings	EU, OSHA HC & OSHA NC, OSHA HC & ACGIH, MSHA HC & MSHA EC, Custom

Size	283mm x 65mm x 30mm
Weight	300gms/10oz
Power	4 x AA alkaline Typically 12 hours with alkaline AA Typically 20 hours with lithium AA non-rechargeable External power: 5v-15v via MultiIO socket via ZL:171 cable (2.1mm socket)
Outputs	USB Type B to PC AC & DC output via ZL:174 (2 x Phono, 1m) Multi-pin IO for external power via ZL:171 cable (2.1mm socket) Bluetooth BLE compatible with Anrdoid and iOS devices
Case	Material: high impact ABS-PC with soft touch back and keypad
Tripod mount	1/4" Whitworth socket
Environmental	Temperature: Operating -10°C to +50°C, storage -20°C to +60°C Humidity: Up to 95% RH non-condensing
Electromagnetic performance	IEC 61672-1:2002, IEC 61672-2:2003, IEC 61672-1:2013 & IEC 61672-2:2013 Except where modified by EN 61000-6-1:2007 & EN 61000-6-1:2007
Language Options	English, French, German, Spanish, Italian
Display functions	LXY, LXYMax, LXYMin, LXeq, LCPeak, LZPeak, LCeq-LAeq, LXE Graph of short LAeq, LCPeak, TWA, dose%, est dose% Measurement run time Real-time octave band filters
Stored functions	LXYMax & time history of LXYMax LAeq, LCeq, LZeq, LCPeak, LZPeak, LAPeak, Lavg, TWA. %dose Time history of LAeq, LCeq, LZeq, LCPeak, LZPeak, LAPeak, LAIeq, Lavg Octave bands models: overall Leq & Leq time history for each band where x=A ,C ,Z; y= F, S, I

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Web Sites

Main site:
https://www.noisemeters.co.uk

Product shortcut:
https://www.noisemeters.co.uk/p/cr162c/

Tech Support:
https://support.noisemeters.com