

Optimus Green - Environmental Noise Meter with Tonal Noise Detection



(c) NoiseMeters

Features

- Audio recording
- VoiceTag notes
- Single measurement range 20 to 140 dB
- Real-time 1/3 octave band filters
- Tonal noise detection to ISO 1996-2:2007
- Weatherproof Outdoor Kit available

Applications

- Environmental Noise Surveys
- Mixed industrial and residential areas
- Noise ordinance and community noise assessments
- Tonal noise assessment

Measure All, Miss Nothing

The Optimus range of meters measure all parameters at the same time, so there is no need to spend time figuring out if you have the meter set up correctly before starting a measurement.

The Optimus Green sound level meter is available as either Class 1 or Class 2 - the most common for environmental noise measurement and more accurate being Class 1. This version of the meter is fitted with the automatic tone detection module for analysis of tonal noise. See the **Tonal Noise** tab for more information.



Outdoor Kit Option

If the meter is to be left unattended in poor weather conditions then the optional Outdoor Kit should be used to offer protection against the elements.

The Outdoor Kit also includes a large rechargeable battery pack for at least seven days of monitoring.

Our Recommendation



Most environmental noise surveys demand the use of a Class 1 Sound Level Meter that can make repeating measurements, such as the 5 minute LAeq and L90 (background noise).

For environmental noise measurement with tonal noise detection we recommend order code **CK171C**. Most regulations demand the use of a suitable Calibrator, which is included with this kit.

Nothing Tonal?

If you don't need to assess the tonal content of spectrum of the noise then please see the standard Optimus Green Sound Level Meter, which has all the environmental parameters but no additional filters.

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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 XIEC 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 1/1 and 1/3 Octave Band Filters to IEC 61260 & ANSI S1.11-2004 | Dimensions | Size: 283mm x 65mm x 30mm Weight: 300gms/10oz |
| Measurement Range Noise Floor Frequency Weightings | 20dB to 140dB RMS Single Range <18dB(A) Class 1, <21dB(A) Class 2 RMS & Peak : A, C, & Z Measured Simultaneously | Power | Battery: 4 x AA Alkaline Typically 12 hours with Alkaline AA Typically 20 hours with Lithium AA Non-Rechargeable |
| Frequency Bands | 10 x Octave Bands (31.5Hz to 16kHz) 36 x 1/3 Octave Bands (6.3Hz to 20kHz) | Connections | 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) External Power: 5v-15v via MultiIO socket via ZL:171 cable (2.1mm socket) |
| Time Weightings | Fast, Slow & Impulse Measured Simultaneously | Case | Material: High Impact ABS-PC with soft touch back & keypad 1/4" Whitworth socket |
| Memory Time History | 4GB with 32GB factory fit option 10ms, 62.5ms, 125ms, 250ms, 1/2 sec, 1 sec, 2 sec | Tripod Mount | |
| VoiceTag Audio | Up to 30 seconds of audio notes with each measurement | Environmental | Temperature: Operating -10°C to +50°C, Storage -20°C to +60°C Humidity: Up to 95% RH Non Condensing |
| Bluetooth | BLE compatible with Android and iOS devices. Mobile applications available from Google Play and the App Store | Electromagnetic | 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 |
| Audio Recording | Off, Manual, Threshold Triggered, Advanced Trigger Studio Quality - 96kHz/32bit WAV format High quality - 48kHz/24bit WAV format Standard quality - 16kHz/16bit WAV format Pre-Trigger function | Language options | English, French, German, Spanish. |
| Integrator Quick settings Ln Statistical Values | EU, OSHA HC & OSHA NC, OSHA HC & ACGIH, MSHA HC & MSHA EC 14 independent statistical Ln values calculated from 1/16th LAF 7 preset to L1.0, L5.0, L10.0, L50.0, L90.0, L95.0 & L99.0 | Displayed Functions | LXY, LXYMax, LXYMin, LXeq, LCPeak, LAPeak, LZPeak, LCEq-LAeq, LXE, LAleq Graph of Short LAeq, LCPeak Integrators 2 & 3: TWA, Dose%, Est Dose% |
| Measurement control | Manual, 1 min, 5 min, 10 min, 15 min, 30 mins, 1 hour, Lden Automatic Synchronisation & Repeat Pause & Back Erase with user selectable duration | Stored Functions | Real-Time 1:1 Octave Bands (Graphical & Numeric) Real-Time 1:3 Octave Bands (Graphical & Numeric) Tonal noise detection in 1/3 octave bands Leq LF (20Hz to 200Hz) Measurement Run Time 14 Statistical Ln values LXYMax & Time History of LXYMax LAeq, LCEq, LZeq, LCPeak, LZPeak, LAPeak, LAleq Time History of LAeq, LCEq, LZeq, LCPeak, LZPeak, LAPeak, LAleq Integrators 2 & 3: Lavg, TWA, %Dose Time History of Lavg 1/1 and 1/3 Octave Bands: Overall Leq & Leq Time History for each band Tonal noise detection in 1/3 octave bands Ln Values: 14 independent statistical values Audio recording during measurement |

where x=A,C,Z; y=F,S,I

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Product shortcut:

<https://www.noisemeters.asia/product/cr/optimus/green/cr170c/>

Tech Support:

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