

## Optimus Environmental and Noise at Work Meter with Octave Band Filters

### Features

- Audio recording
- VoiceTag notes
- Single measurement range 20 to 140 dB
- Real-time Octave Band Filters
- Weatherproof Outdoor Kit available

### Applications

- Environmental noise surveys
- Noise at work surveys
- Hearing protector assessments
- Mixed industrial and residential areas



### 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 Environmental sound level meter is available as either Type 1 or Type 2 - the most common for environmental noise measurement and more accurate being Type 1. This meter has everything needed for a noise at work assessment too, including octave band filters for detailed analysis and hearing protector selection. For noise at work Type 2 is adequate.



### 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: CK171A Noise Measurement Kit



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

For occupational and factory noise assessments, most regulations state that the lower cost Type 2 meter is adequate.

For measurement of both environmental and occupational noise we recommend the Type 1 option, as it is more than adequate for noise at work but also meets the higher demands of environmental use. The Type 1 microphone also has a lower noise floor, making it more suitable for measuring the typically lower sound levels associated with outdoor measurements.

For these reasons we recommend the **CK171A Noise Measurement Kit**, which includes a Calibrator as required by most regulations.

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### Specifications

|                           |  |                     |  |
|---------------------------|--|---------------------|--|
| Standards                 | IEC 61672-1:2013 Class 1 or Class 2<br>IEC 61672-1:2002 Class 1 or Class 2 Group<br>XIEC<br>IEC 60651:2001 Type 1 I or Type 2 I<br>IEC 60804:2000 Type 1 or Type 2<br>IEC 61252:1993 Personal Sound Exposure Meters<br>ANSI S1.4 -1983 (R2006), ANSI S1.43 - 1997 (R2007)<br>ANSI S1.25:1991<br>Octave Band Filters to IEC 61260 & ANSI S1.11-2004 | Dimensions          | Size: 283mm x 65mm x 30mm<br>Weight: 300gms/10oz   |
| Measurement Range         | 20dB to 140dB RMS Single Range   | Power               | Battery: 4 x AA Alkaline<br>Typically 12 hours with Alkaline AA<br>Typically 20 hours with Lithium AA Non-Rechargeable   |
| Noise Floor               | <18dB(A) Type 1, <21dB(A) Type 2   | Connections         | USB Type B to PC<br>AC & DC Output via ZL:174 (2 x Phono, 1m)  |
| Frequency Weightings      | RMS & Peak : A, C, & Z Measured Simultaneously   |                     | Multi-pin IO for external power via ZL:171 cable (2.1mm socket)<br>External Power: 5v-15v via MultiIO socket via ZL:171 cable (2.1mm socket)   |
| Frequency Bands           | 10 x Octave Bands (31.5Hz to 16kHz, A, B & C variants)   | Case                | Material: High Impact ABS-PC with soft touch back & keypad   |
| Time Weightings           | Fast, Slow & Impulse Measured Simultaneously   | Tripod Mount        | 1/4" Whitworth socket  |
| Memory                    | 8GB with 32GB factory fit option   | Environmental       | Temperature: Operating -10°C to +50°C, Storage -20°C to +60°C  |
| Time History              | 10ms, 62.5ms, 125ms, 250ms, 1/2 sec, 1 sec, 2 sec  | Electromagnetic     | Humidity: Up to 95% RH Non Condensing<br>IEC 61672-1:2002 & IEC 61672-2:2003<br>IEC 61672-1:2013 & IEC 61672-2:2013<br>Except where modified by EN 61000-6-1:2007 & EN 61000-6-1:2007                              |
| VoiceTag Audio            | Up to 30 seconds of audio notes with each measurement  | Language options    | English, French, German, Spanish.  |
| Bluetooth                 | BLE compatible with Android and iOS devices.<br>Mobile applications available from Google Play and the App Store   | Displayed Functions | LXY, LXYMax, LXYMin, LXeq, LCPeak, LApeak, LZPeak, LCeq-LAeq, LXE, LAeq<br>Graph of Short LAeq, LCPeak<br>Integrators 2 & 3: TWA, Dose%, Est Dose%   |
| Audio Recording           | Off, Manual, Threshold Triggered, Advanced Trigger<br>Studio Quality - 96kHz/32bit WAV format<br>High quality - 48kHz/24bit WAV format<br>Standard quality - 16kHz/16bit WAV format<br>Pre-Trigger function  |                     | Real-Time 1:1 Octave Bands (Graphical & Numeric)<br>Measurement Run Time<br>14 Statistical Ln values   |
| Integrator Quick settings | EU, OSHA HC & OSHA NC, OSHA HC & ACGIH, MSHA HC & MSHA EC  | Stored Functions    | LXYMax & Time History of LXYMax<br>LAeq, LCeq, LZeq, LCPeak, LZPeak, LApeak, LAeq<br>Time History of LAeq, LCeq, LZeq, LCPeak, LZPeak, LApeak, LAeq<br>Integrators 2 & 3: Lavg, TWA, %Dose<br>Time History of Lavg |
| Ln Statistical Values     | 14 independent statistical Ln values calculated from 1/16th LAF<br>7 preset to L1.0, L5.0, L10.0, L50.0, L90.0, L95.0 & L99.0  |                     | 1:1 Octave Bands:Overall Leq & Leq Time History for each band<br>Ln Values: 14 independent statistical values<br>Audio recording during measurement  |
| Measurement control       | Manual, 1 min, 5 min, 10 min, 15 min, 30 mins, 1 hour, Lden<br>Automatic Synchronization & Repeat<br>Pause & Back Erase with user selectable duration  |                     | where x=A, C, Z; y= F, S, I  |

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#### Web Sites

Main site:

<https://www.noisemeters.com>

Product shortcut:

<https://www.noisemeters.com/product/cr/optimus/green/cr170a/>

Tech Support:

<https://support.noisemeters.com>