NoiseMeters

Optimus Red - Sound Level Meter with NR and NC Calculation



Features

- Meets noise regulations and guidelines
- Real-Time Octave Band Filters
- NR Noise Rating Curves
- NC Noise Criterion Curves
- Single range 20 to 140 dB

Applications

- Air conditioning HVAC noise level checks
- Housing, hotels, schools, offices
- Occupational noise surveys

Overview

This model of Optimus Red sound level meter adds NR and NC calculations and curves to all the other noise measurement parameters. The result is a meter that is ideal for noise at work assessments as well as indoor noise rating for air conditioning units and similar equipment.

Octave Band Filters

The sound level meter is fitted with real-time octave band filters that measure in all bands at the same time. This makes it ideal for Noise Rating and Noise Criterion calculation.

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.

Noise Rating and Noise Criterion

The NR and NC values are calculated using the octave band filter measurements. They provide a single number result that takes into account the frequency content, which can be used when assessing equipment such as air conditioning units.

Noise Rating - NR

Commonly used in Europe, the Noise Rating or NR was developed by ISO for determining the acceptable levels for hearing preservation, speech communication and annoyance factor.

Noise Criterion - NC

The Noise Criterion is commonly used in the US for rating indoor noise from equipment such as air conditioning.

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Specifications

Standards	IEC 61672-1:2013 Class 1 or Class 2 IEC 61672-1:2002 Class 1 or Class 2	Size Weight	283mm x 65mm x 30mm 300gms/10oz
	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	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
Measurement Range	20dB to 140dB RMS single range		AC & DC output via ZL:174 (2 x Phono, 1m)
Noise floor	<18dB(A) Class 1, <21dB(A) Class 2		Multi-pin IO for external power via ZL:171 cable (2.1mm socket)
Frequency	RMS & peak : A, C, & Z measured		Bluetooth BLE compatible with
weightings	simultaneously		Anrdoid and iOS devices
Frequency bands	10 octave bands, 31.5Hz to 16kHz		Material List in a diaba po po tit a fi
Time weightings	Fast, Slow & Impulse measured	Case	Material: high impact ABS-PC with soft
	simultaneously	Tripod mount	1/4" Whitworth socket
Memory	4GB. 32GB factory fit option	Environmental	Temperature: Operating -10°C to
Time history data	10ms, 62.5ms, 125ms, 250ms, 1/2 sec. 1 sec. or 2 sec.		+50°C, storage -20°C to +60°C
VoiceTag	Up to 30 seconds of audio notes with		Humidity: Up to 95% RH non-
	each measurement		condensing
		Electromagnetic	IEC 61672-1:2002, IEC 61672-2:2003,
Integrators	Three simultaneous "virtual" noise meters. Integrator 1 is preset to Q3 for Leq functions. Integrators 2 & 3 can be configured with the following	performance	IEC 61672-1:2013 & IEC 61672-2:2013 Except where modified by EN 61000-6-1:2007 & EN 61000-6-1:2007
Exchange rate	3, 4 or 5 dB	Language Options	English, French, German, Spanish,
Threshold	70dB to 120dB (1 dB steps)		Italian
Time weighting	None or Slow		
Criterion level	70dB to 120dB (1 dB steps)	Display functions	LXY, LXYMax, LXYMin, LXeq,
Criterion time	1 to 12 nours in 1 nour steps		Creak, LZPeak, LCeq-LAeq, LXE
settings	EU, USHA HU & USHA NU, USHA HC & ACGIH, MSHA HC & MSHA EC		dose% est dose%
	Custom		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 L APeak L APeak

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

Octave bands models: overall Leq & Leq time history for each band

Head Office

NoiseMeters Ltd 7 Jayes Park Ockley Surrey RH5 5RR

Telephone **+44 130 677 0855** Fax **+44 845 680 0316**

Email: info@noisemeters.com Support: support@noisemeters.com

Web Sites

Main site: https://noisemeters.asia

Product shortcut: https://noisemeters.asia/p/cr162d/

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