pulsar nøva

Six new generation sound level meters that are out of this world!

pulsar Instruments Plc

Industrial, Occupational and Environmental noise measurement products.

+44 (0)1723 339715
www.pulsarinstruments.com

The Pulsar Nova Range

A range of six new generation sound level meters to suit every application & budget

- Compliant with IEC 61672-1:2013
- Data logging and audio notes
- High performance
- Simple to use
- Designed and manufactured in the UK
- Rugged metal case
- Large anti-glare display
- High definition colour TFT display
- Greater than 30 hour battery life
- 8GB removable memory card
- Dynamic range of 20dB(A) to 140dB(A) & 143dB(C)
- Simultaneous measurement of all key parameters
- Unique calibration prompt
- Standard and advanced data viewing modes
- Optional features to cover every requirement & budget

nøva®

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Overview

The Nova range of high performance sound level meters successfully combines advanced technology noise measurement methods with ease of use and durability.

We have listened to our customers for 45 years. We know that you all have different requirements and what you need today may change in the future. We also understand that purchasing noise measurement equipment is a huge investment.

The Nova range consists of six powerful sound level meters. These differ from other sound level meters, as they offer the user the unique opportunity to add features either immediately or at a later date so that the instrument will always be suitable for their requirements.

Standard Measurement Kits

Instruments are usually supplied as part of a noise measurement kit which contains everything required to take noise measurements.

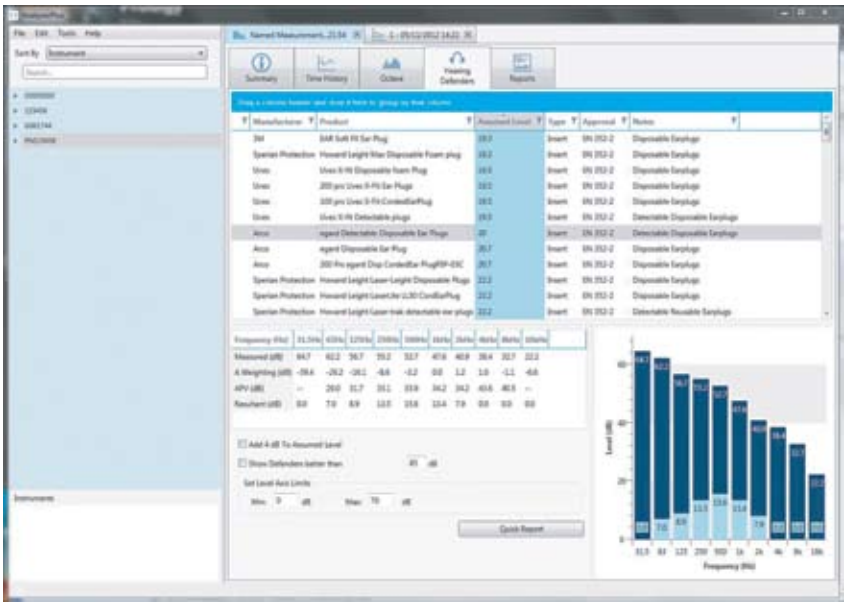
The Nova kit contains:

Nova sound level meter, acoustic calibrator, windshield, batteries, hard kit case, 7 year warranty, calibration certificates, the Pulsar AnalyzerPlus software and download cable.

Both Class 1 and Class 2 instruments have a removable preamplifier which enables the instruments to be used with microphone extension cables

Software

AnalyzerPlus allows the user to download their measurement data onto a PC or laptop for analysis and to create a variety of reports.



Example of a generated report with the Nova software AnalyzerPlus of the hearing defenders' tab for PPE equipment specification using octave band measurements which includes a large database of hearing protection equipment and reporting functions. NB. The Pulsar Nova 'AnalyzerPlus' software package is supplied with all instruments and is used to configure your sound level meter. For customers with the data logging option, Pulsar's outstanding Nova AnalyzerPlus software allows the user to download their measurement data onto a PC or laptop for analysis and to create a variety of reports.

Model 41 (Class 1) & Model 42 (Class 2)

Entry level sound level meter

- IEC 61672-1:2013 compliant sound level meters
- Low cost Class 1 or Class 2 SPL instruments
- OLED display can be seen in all conditions
- Calibration prompt for compliant, accurate measurements
- Simultaneous measurement of all key noise parameters
- Add features now or later so that your meter always suits your budget and needs
- 20dB(A) to 140dB(A) dynamic measurement range

Applications

- Basic noise level assessments
- Emergency service alarm testing
- Sound system installation
- Vehicle noise measurement

Optional features table

	Class 1	*Class 2*	*SPL*	*Simultaneous A, C & Z Frequency Weightings*	*Simultaneous F S & I Time Weightings*	*Leq/Peak (inc C-A & Quick Integrator Settings)*	*Pause & Back Erase*	*Data Logging*	*Manual Audio Record & Data Logging*	*Audio Note & Data Logging*	*Repeat Timer & Data Logging*	*Single Timer*	*TWA/dose*	*Ln Values*	*1:1 Octaves*
Model 41	✔		✔	✔	✔	○	✔	✔	○	✔	○	○	○	○	○
Model 42		✔	✔	✔	✔	○	✔	✔	○	✔	○	○	○	○	○

✔*Standard feature* ○ *Optional add on feature*

Model 43 (Class 1) & Model 44 (Class 2)

The professional's sound level meter

- A simple to use occupational sound level meter
- All of the features of the Model 41 & Model 42 with the addition of:
- Leq, Peak and C-A for the HML method of hearing protection calculation
- Pause & back erase function
- 20dB(A) to 140dB(A) & 143dB(C) dynamic measurement range
- Single Timer and TWA/dose

Applications

- Noise at work
- Occupational & industrial hygiene
- Construction noise measurement
- Machinery noise testing
- Entertainment noise measurement

Optional features table

	Class 1	Class 2	SPL	Simultaneous A, C & Z Frequency Weightings	Simultaneous F S & I Time Weightings	Leq/Peak (inc C-A & Quick Integrator Settings)	Pause & Back Erase	Data Logging	Manual Audio Record & Data Logging	Audio Note & Data Logging	Repeat Timer & Data Logging	Single Timer	TWA/dose	Ln Values	1:1 Octaves
Model 43	✔		✔	✔	✔	✔	✔	✔	○	✔	○	✔	✔	○	○
Model 44		✔	✔	✔	✔	✔	✔	✔	○	✔	○	✔	✔	○	○

✔ Standard feature ○ Optional add on feature

Model 45 (Class 1) & Model 46 (Class 2)

The premium sound level meter

All of the features of the Model 43 & Model 44 with every feature below as standard:

- AnalyzerPlus data-logging software
- Manual audio record
- Audio Note
- Repeat Timer
- Single Timer
- TWA/dose
- Ln Values
- Real time 1:1 octave band filters

Applications

- Noise at work
- Occupational & industrial hygiene
- Environmental noise measurement
- Boundary noise measurement
- Machinery noise testing
- Vehicle noise testing
- Entertainment noise measurement

Features table

	Class 1 (PTB approved)	*Class 2*	*SPL*	*Simultaneous A, C & Z Frequency Weightings*	*Simultaneous F S & I Time Weightings*	*Leq/Peak (inc C-A & Quick Integrator Settings)*	*Pause & Back Erase*	*Data Logging*	*Manual Audio Record & Data Logging*	*Audio Note & Data Logging*	*Repeat Timer & Data Logging*	*Single Timer*	*TWA/dose*	*Ln Values*	*1:1 Octaves*
Model 45	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔
Model 46		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	✔

✔*Standard feature* ○ *Optional add on feature*

General

Accuracy
Class 1 – Model 41, Model 43, Model 45

Class 2 – Model 42, Model 44, Model 46

Applicable Standards
IEC 61672-1:2013 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

1:1 Octave Band Filters to IEC 61260 & ANSI S1.11-2004

Microphone
Class 1 PM1 pre-polarized

Class 2 PM2 pre-polarized

Microphone Preamplifier
PA40 Removable Preamplifier

Measurement Range
20dB -140dB RMS Single Range (143dB peak)

Noise Floor
<18dB(A) Class 1, <21dB(A) Class 2

Time Weightings
'F' (Fast), 'S' (Slow) & 'I' (Impulse) all measured simultaneously

Frequency Weightings
RMS & Peak: A, C, & Z (un-weighted) all measured simultaneously

Frequency Bands
10 1:1 Octave Bands: 31.5Hz to 16kHz

Integrators
Three simultaneously measuring "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 5dB

Threshold: 70dB to 120dB (1dB steps)

Time Weighting: None or Slow

Criterion Level: 70dB to 120dB (1dB steps)

Criterion Time: 1 to 12 hours in 1 hour steps

Integrator Quick settings (pre-set) EU, OSHA HC & OSHA NC, OSHA HC & ACGIH, MSHA HC & MSHA EC, Custom 1 & Custom 2

Ln Statistical Values
14 independent statistical Ln values calculated from 1/16th LAF

7 are preset to L1.0, L5.0, L10.0, L50.0, L90.0, L95.0 & L99.0

7 user defined Ln values

Time History Data Rates (Global settings)
10ms, 62.5ms, 125ms, 250ms, 1/2 sec, 1 sec, 2 sec (user selectable)

Language options
English, French, German, Italian, Spanish as standard

NB. Other language options will be available.

Physical

Batteries
6 x AA

Battery life
Typically 30 hours with Alkaline AA

Typically 50 hours with Lithium AA

Rechargeable battery life is dependent upon the battery type and screen brightness

External power
5v-15v via Multipin I/O socket

Weight
440g without batteries

Size
280mm x 80mm x 42mm with preamp and microphone

Connections
USB 2.0 Mini-B to PC

AC output via 3.5mm Stereo jack

AC & DC output via Multipin I/O socket

Tripod Mount
1/4" Whitworth socket

Case
Die cast aluminium with silicon elastomer keypad and soft touch back

Display
High resolution anti-glare OLED display

Ambient light sensor

Illuminated keypad

Supplied Accessories
Windshield, Wrist Strap, USB Download Cable, AnalyzerPlus software, AA Batteries

Conformance, Logging & Storage

Conformance

Environmental
Operating Temperature: -10°C to +50°C

Storage Temperature: -20°C to +60°C

Humidity: Up to 95% RH Non-Condensing

Electromagnetic performance
IEC 61672-1:2013 & IEC 61672-2:2013

Except where modified by EN 61000-6-1:2007 & EN 61000-6-1:2007

Logging and Storage

Memory
8GB removable memory card

Audio Note Recording
A spoken note (up to 30 seconds) attached to measurements

Audio Recording
Manual recording

Quality – 48kHz/32bit WAV format

Measurement Control
The unit can be set to record and store data over fixed times of:

1 min, 5 min, 10 min, 15 min, 30 mins, 1 hour, Lden (Day, Evening, Night)

Automatic Synchronisation & Repeat options

Pause

Back Erase with user selectable duration (via AnalyzerPlus software)

Model Specific Measurement Parameters

Standard Parameters

Model 41 & Model 42:
Lxy, Lxy Max, Lxy Min

Time, date & duration of measurement

Stored Parameters

Model 41 & Model 42:
Lxy, Lxy Max, Lxy Min

Time, date & duration of measurement

Standard Parameters

Model 43 & Model 44:
Lxy, Lxy Max, Lxy Min

Lxeq, LCPeak, LZPeak, LAPeak LCeq-LAeq, LxE, LAleq

Graph of Short LAeq, LCPeak

Time, date & duration of measurement

Stored Parameters

Model 43 & Model 44:
Lxy, Lxy Max, Lxy Min

Time, date & duration of measurement

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

Standard Parameters

Model 45 & Model 46:
Lxy, Lxy Max, LxyMin

Lxeq, LCPeak, LZPeak, LAPeak LCeq-LAeq, LxE, LAeqT

Graph of Short LAeq, LCPeak Measurement Run Time

Integrators 2 & 3: TWA, Dose %, Est Dose %

Real-Time 1:1 Octave Bands (Graphical & Numeric)

14 Statistical Values (Ln)

Stored Parameters

Model 45 & Model 46
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 Octave Bands: Overall Leq & Leq Time History for each band

Ln Values: 14 independent statistical values

Audio recording during measurement

Time, date & duration of measurement

Where x means the three frequency weightings A, C and Z and y means the three time weightings 'S' (Slow), 'F' (Fast) and 'I' (Impulse). All weightings simultaneously measured where appropriate.

Other functions may be calculated by the AnalyzerPlus software.

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