

# pulsar n<sup>o</sup>va<sup>®</sup>

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 518011  
[www.pulsarinstruments.com](http://www.pulsarinstruments.com)



# 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
- Colour coding for measurement status

### 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 FS & 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

4GB 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 Measurement Parameters

#### Model 41 & Model 42:

Lxy, Lxy Max, Lxy Min

Time, date & duration of measurement

Extra measurement and stored functions available.

### Standard Measurement Parameters

#### Model 43 & Model 44:

Lxy, Lxy Max, Lxy Min

Lxq, LCPeak, LZPeak, LAPeak LCeq-LAeq, LxE, LAeq

Graph of Short LAeq, LCPeak

Time, date & duration of measurement

Extra measurement and stored functions available.

### Standard Measurement Parameters

#### Model 45 & Model 46:

Lxy, Lxy Max, Lxy Min

Lxq, 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, LAeq

Time History of LAeq, LCeq, LZeq, LCPeak, LZPeak, LAPeak, LAeq

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.

## Useful Information

### Input & Output Cables

PSR101 - Nova 1m Mini-B to Type A USB Cable

PSR171 - Nova power input cable, 2.1mm Power Jack, 2m

PSR174 - Nova AC & DC Output, 18 way to 2 x Phono, 1m

PSR176 - Nova 12v Battery pack cable 2m to tinned ends with inline fuse

PSR177 - Nova AC output cable, 3.5mm Mono to 3.5mm Stereo Jack, 2m

PSR185 - Nova AC output cable, 18 way to Phono, 1m

PSR190 - Nova power input cable, 2.1mm Power Jack & mains power supply

### Software

AnalyzerPlus Download, Configuration & Analysis software supplied as standard.

Compatible with Microsoft Windows XP, Vista, 7 (32bit & 64bit) & 8 (32bit & 64bit)

### Ordering Codes

Sound Level Meter and Measurement Kit

Model 41: PSR-41

Model 41 Kit: PSR-41K

Model 42: PSR-42

Model 42 Kit: PSR-42K

Model 43: PSR-43

Model 43 Kit: PSR-43K

Model 44: PSR-44

Model 44 Kit: PSR-44K

Model 45: PSR-45

Model 45 Kit: PSR-45K

Model 46: PSR-46

Model 46 Kit: PSR-46K

### Measurement Kits

Instruments can be supplied as a complete measurement kit to ensure that you have all the accessories necessary to perform your noise survey.

The Nova noise measurement kit contains: Sound Level Meter, Acoustic Calibrator, Windshield, Kit case, Wrist Strap, AnalyzerPlus Software, USB Download Cable, Batteries, Operating Manuals, Calibration Certificates & 7 year Warranty.

### Options Ordering Codes

#### - Model 41 & Model 42

PSR0110 - Data Logging

PSR0111 - Manual audio record & Data Logging

PSR0112 - Audio Note & Data Logging

PSR0113 - Repeat Timer & Data Logging

PSR012 - Single Timer

PSR013 - Leq/Peak & C-A

PSR014 - Pause / Back erase

PSR015 - TWA/ dose

PSR016 - Ln Values

PSR017 - Real Time 1:1 octave band filters

### Options Ordering Codes

#### - Model 43 & Model 44

PSR0110 - Data Logging

PSR0111 - Manual audio record & Data Logging

PSR0112 - Audio Note & Data Logging

PSR0113 - Repeat Timer & Data Logging

PSR012 - Single Timer

PSR015 - TWA/dose

PSR016 - Ln Values

PSR017 - Real Time 1:1 octave band filters

Notes: All specifications, features and values are subject to change.

Your Pulsar Distributor:

