

# Model 30

## Real Time Analyser & Sound Level Meter

- Real Time 1:1 Octave Band Analysis
- Wide Single Measurement Range of 23dB(A) to 137dB(A)
- Outdoor measurement kits available to convert the Model 30 sound level meter into a self contained environmental monitor
- Large memory for environmental noise data storage
- Outstanding Software Package included as standard
- Simultaneous measurement of all Parameters, Frequency Weightings and Time Weightings
- Compliant to IEC 61672-1:2002 Class 1 and Class 2 respectively
- User friendly
- Large, backlit graphic screen and membrane keypad for easy use
- Live analysis when linked to a computer using supplied software
- Class 1 or Class 2 Integrating Sound Level Meter with Class 1 precision accuracy or Class 2 for general use
- Optional Reverberation Time Measurement Module
- Detachable pre-amplifier for use with an extension cable and outdoor kit



## Overview



The Model 30 and Model 30-2 are high performance, yet user friendly, integrating Sound Level Meters and Real Time Frequency Analysers.

Both models meet or exceed the latest standards for compliance with worldwide Regulations and Guidelines, making them ideal for most applications.

Taking measurements is as simple as pressing the 'record' and then 'stop' buttons. The wide single dynamic span of over 110dB ensures that you never make invalid measurements that 'Overload' or 'Under range'.

The Model 30 instruments simultaneously measures parameters with all Frequency and Time Weightings, this gives users the confidence to know they will always have the correct data for subsequent analysis.

Real Time Analysis allows users to measure all 10 individual 1:1 Octave Bands at the same time. This is very practical for reliable, accurate and rapid capture of variable noise levels to optimise the accurate prescription of hearing protection in industrial environments.

# Model 30



For environmental noise, the large memory, programmable auto repeat function and statistical LN values, combined with the optional range of Outdoor Kits, ensure the instrument is ideal for use as either a short-term or longer-term semi-permanent environmental monitor.

Noise measurements themselves are only the beginning, our outstanding and focused software packages allow users to quickly analyse and transform their data into informative report formats that save you time and effort. The Pulsar Analyser and Capture Studio software packages are supplied as standard.

## Applications

Model 30 is the ideal instrument for the measurement of Industrial noise and will simultaneously measure the Leq, Lpeak and Lmax sound levels over a wide measurement range. The Analyser software can automatically optimise the instrument configuration for European Regulations.

- Precision sound level measurements
- Environmental noise measurements
- Frequency analysis of Industrial and Environmental noise
- Longer term outdoor noise measurements with optional weatherproof kits
- Real time NC curve calculations
- Impulsive noise measurement
- Optional reverberation time measurement in 1:1 Octave Bands



## Measurements

Model 30 Sound Level Meters simultaneously measure all functions and frequency weightings, as well as additional parameters depending upon the configuration of the instrument.

For example, the instrument can be configured to store the Leq, displayed as LT, in dB(A), dB(C) and dB(Z) with the Maximum and Minimum values stored in all three frequency weightings as well as all three Time Weightings. Peak Sound Pressure will also be stored.

In 1:1 Octave Band Mode, the Model 30 will store the Leq (LT) in each Octave Band, the overall Leq level in dB(A), dB(C) and dB(Z) as well as the overall Peak Sound Pressure Level as well as in each 1:1 Octave Band.

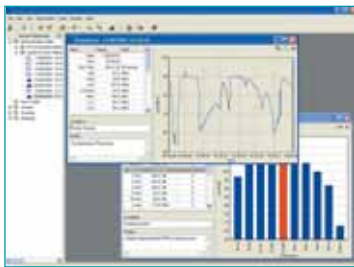
Model 30 Sound Level Meters can be upgraded with additional functions such as Reverberation Time Calculation which meets ISO 3382:1997, ISO 354:1985 and ISO 140:1998. This makes the Model 30 ideal for use in building regulation measurement systems.

## Data Storage

Users can choose how many parameters are stored in the memory of the instrument, which then determines the maximum time the instrument can measure before the memory is full.

Functions F1, F2 and F3 can be defined by the user to suit the measurement situation and can be chosen from any of the available measurement parameters.

Please refer to the measurement information on the back of this datasheet for a complete list of all measurements available.



### Model 30 Data Storage Sound Level Meter Mode

Type of Recording	Storage Capacity
All functions each second	1 hour 30 minutes
F1, F2 and F3 each second	36 hours 21 minutes
F1 each second	84 hours 50 minutes
LT (Leq) and Ln's	1 Sec Logging = 12 hours of data 1 Min Logging = 1 month of data 1 Hour Logging = 5 years of data

### 1:1 Octave Band Mode, LT (Leq) & Lpeak in each band

1 Sec Logging = 5 hours 25 mins of data
1 Min Logging = 13 days 13 hours of data
1 Hour Logging = 2 years 3 months of data
F1 each second 8 months 14 days

## Software

Pulsar Model 30 instruments are supplied with Analyser software that allows stored measurements to be downloaded to a PC for reporting and further analysis.

The Capture Studio software facilitates the Graphical 'Live Display' of up to three parameters if the Model 30 is connected to your PC. Post-processing allows detailed 3-Dimensional Frequency Analysis Modelling to be performed using downloaded measurement data.

This software is compatible with Windows 9x/Me/2000/NT/XP and Vista.

## Measurement Kits

Instruments can be supplied as a complete measurement kit to ensure you have all of the accessories necessary to perform your noise survey. The Noise Measurement kits include Sound Level Meter, Acoustic Calibrator, Windshield, Hard Attache Case, Wrist Strap, Carry Pouch, Software, Operating Manuals, Certificates of Calibration, Download Cable and Batteries. Ordering codes are shown on the back of this datasheet.



## Outdoor Measurement Kits

To allow the Model 30 Sound Level Meters to be used outdoors, two weatherproof measurement kits are available. The standard WK1 kit uses the microphone, preamplifier and cable from the Sound Level Meter to make a simple, lightweight system suitable for overnight and occasional use.

For longer term measurements, the WK2 kit uses a complete integral outdoor microphone assembly, which has a superior degree of weather protection for the microphone capsule.

Please contact Pulsar Instruments Plc or your local distributor for further details.

## Specifications

Class1 Model 30  
Class 2 Model 30-2

### Applicable Standards

Type 1 EN 60651:1994, EN 60804:2000, EN 61260:1995,  
IEC 61672-1:2002 Class 1  
ANSI S1.4:1983, ANSI S1.43:1997, ANSI S1.11:1986  
Type 2 EN 60651:1994 EN 60804:2000, EN 61260:1995,  
IEC 61672-1:2002 Class 2  
ANSI S1.4:1983, ANSI S1.43:1997, ANSI S1.11:1986

### Microphone

Class 1 MK:224 Class+ Electret Prepolarised Condenser  
Class 2 MK:216 Class+ Electret Prepolarised Condenser

### Measurement Range

22dB(A) to 137dB(A), 23dB(C) to 137dB(C), 27dB(Z) to  
137dB(Z), Peak to 140dB(C)

### Noise Floor (Typical)

17dB(A), 17dB(C), 22dB(Z)

### Frequency Weightings

dB(A), dB(C) and dB(Z) to IEC 60651 Type 1

### Time Weightings

F, S & I to Class 1 Tolerances

## Measurements

Models 30 and 30-2

- Broadband Mode - all functions are measured simultaneously
- Sound Level  $L_{XY}$ , Maximum Sound Level  $L_{Xy\max}$ , Minimum Sound Level  $L_{Xy\min}$
- Equivalent Continuous Sound Pressure Level with Integration Time  $T_{LXT}$
- Equivalent Continuous Sound Pressure Level of the entire measurement  $L_{xt}$
- Sound Exposure Level  $L_{XE}$
- Peak Sound Pressure Level  $L_{Xpeak}$
- Measurement & Integration Time  $t$  &  $T$
- Percentiles  $L_1, L_5, L_{10}, L_{50}, L_{90}, L_{95}, L_{99}$   
where  $X=dB(A), dB(C) \text{ \& } dB(Z)$  and  $Y=F, S \text{ \& } I$
- 1:1 Octave Band Mode - all functions are measured simultaneously
- Equivalent continuous sound pressure level with integration time  $T_{LT}$  in each 1:1 Octave Band

- Peak Sound Pressure Level  $L_{peak}$  in each 1:1 Octave Band
- Overall Equivalent continuous sound pressure level with integration time  $T_{LXT}$  where  $X=dB(A), dB(C) \text{ \& } dB(Z)$

### Memory

64Mb (All versions)

### Display

Backlit Graphical LCD

### Dimensions

341mm x 82mm x 19mm

### Weight

627g with batteries

### Batteries

1 x PP3 (6LF22)

### Battery Life

Sound Level Meter Mode 8 Hours  
1:1 Octave Band Mode 6 Hours

## Environmental

Operating Temperature -10°C to +50°C  
Storage Temperature -20°C to +60°C  
Humidity 30 to 90% RH

### External Connections

Model 30 & 30-2 RS232 Output with USB adaptor  
supplied as standard, External Power

### Software

Download & Analysis software supplied as standard with  
all instruments

## Ordering Codes

Sound Level Meter	Measurement Kit
Model 30	Model 30K
Model 30-2	Model 30-2K

Measurements kits include the Sound Level Meter, Model 105 or Model 106 Acoustic Calibrator, WS91 Windshield, K2 Attache Case, CP2 Carrying Pouch, Wrist Strap, Software, Download Cable, Batteries, Operating Manuals and Certificates of Calibration.

Your Pulsar Distributor



Pulsar Instruments Plc  
The Evron Centre, John Street, Filey  
North Yorkshire YO14 9DW  
United Kingdom

Tel: +44 (0) 1723 518011  
Fax: +44 (0) 1723 518043  
Email: sales@pulsarinstruments.com  
Web: www.pulsarinstruments.com