# CR:272

## NoiseMeters.com

Your online supplier for
Sound Level Meters

# Digital Integrating **Sound Level Meter**


* Type 2 to IEC 60651, IEC 60804 and ANSI S1.4
* The ideal instrument for noise at work surveys
* Simultaneous measurement of all three action levels
* Slim line construction and simplified controls ensure ease of operation
* Robust metal case to ensure durability and minimise electrical interference

## Introduction

Noise at work regulations are in place to protect both the employee from noise induced deafness and the employer from liability claims. They require that surveys are carried out and records kept.

The parameters of risk are often defined by three action levels. The first and second are in terms of the $L_{EP,d}$ value that is derived from the integrated averaged ($L_{eq,t}$) frequency weighted (dB(A)) sound level and are designed to protect against the effects of continued exposure to noise. Very high noise levels present a completely different risk, as they can cause sudden traumatic damage, and to control the risk a “peak” action level has also been specified. This is defined in terms of the absolute maximum ($L_{peak}$) of the sound pressure wave with ‘C’ frequency weighting.

There are therefore two clearly separate assessments that need to be made as part of an industrial noise survey, the $L_{eq,t}$ in dB(A) and the $L_{peak}$ in dB(C). The CR:272 is designed specifically for these measurements and will perform the tasks simultaneously.

# CR:272

## Applications

The CR:272 meets the needs of the professional and is easy to use in practical measurement situations. It is housed in a durable, yet compact, metal case to ensure there are no problems with electro magnetic fields and that it will withstand the general industrial environment. Initial measurements are made in the conventional sound level mode. Having identified a potential problems the “reset all” button is pressed to start a new average measurement. When making the “peak” measurements it is prudent to note a number of consecutive values to ensure that the result taken is representative. In this respect conventional peak hold functions are misleading if a subsequent peak is lower than the preceding one. To overcome this problem the CR:272 has a separate “reset display” function that will allow one of the measured values to be reset without affecting the others. Whilst the $L_{eq,t}$ is accumulating therefore a number of individual $L_{peak}$ values may be taken and the varying sound level observed to study the noise output of the machine as it moves through its process cycle. The results for all three action levels are then noted. As a further refinement the provision of both A and C frequency weightings enables the CR:272 to provide data for hearing protector issue using the HML method.

## Ordering Information

The instrument is normally provided as a complete kit under the part number CK:272 that comprises:

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|---|---|
| CR:272 | Integrating impulse sound level meter |
| CR:513A | Acoustic calibrator |
| UA:237 | Windshield |
| CK:250 | Case and misc. accessories. |

Alternatively the instrument alone may be ordered under the part number CR:272 in which case the protective pouch part number CP:62 is recommended.

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The CR:272 has all the features of a full specification sound level meter. Its wide range allows levels as low as 32 dB(A) to be measured giving further applications in the area of environmental noise disturbance. An output socket providing both AC and DC signals allows direct connection to tape recorders and data loggers in order to provide calibrated results to be stored for later analysis.

## Specification

| | |
|---|---|
| Standardisation | Type 2 to IEC 60651, IEC 60804 and ANSI S1.4 |
| Functions | Momentary sound level (SPL), maximum sound level ($L_{max}$), equivalent continuous sound level ($L_{eq,t}$) and true peak level ($L_{peak}$). SPL/$L_{max}$, $L_{eq,t}$ and $L_{peak}$ all measured simultaneously. |
| Measurement range | 32 to 140 dB(A) and 50 to 140 dB(C) for SPL, $L_{max}$ and $L_{eq,t}$<br>60 to 140 dB(C) for $L_{peak}$ |
| Time weightings | S (Slow), F (Fast) and I (Impulse). |
| Frequency weightings | A and C for SPL and $L_{eq,t}$. |
| Amplitude weightings | True energy integration without time weighting (Q=3). |
| Display | 3½ digit LCD with overload, under range, battery low and hold flags. |
| Operating temperature | -10 to +50°C |
| Outputs | AC 2.2 volts RMS for FSD. DC 25mV/dB in one continuous span from 32 to 140 dB. |
| Power requirements | 2 x 6LR61 batteries will give approximately 40 hours operation |
| Physical | Dimensions 230 x 75 x 25 mm, 9.05 x 2.7 x 1” |


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