

## Precision integrating sound level meter for noise assessment

# HD2010UC



## Introduction

Noise assessments are easier when one portable instrument covers routine measurements today and can be upgraded for tomorrow's tasks. HD2010UC is an integrating sound level meter for env noise, workplace exposure, machine noise and production quality control, with Class 1 (HD2010UC.kit1) or Class 2 (HD2010UC.kit2) versions according to IEC 61672-1:2013.

Three parameters with freely selectable frequency weightings and time constants, including Leq, SEL, Lmax, Lmin, Lpk, Dose and Ln. Integration times from 1 s to 99 h and the Back-Erase function help manage unwanted events, while statistical analysis displays up to three percentile levels between L1 and L99.

For more demanding campaigns, the HD2010.O2 Advanced Data Logger option adds time history profiles, reports, event capture and full statistics from L1 to L99. RS232 and USB interfaces, Noise Studio software, acoustic or electrical calibration and optional SD-card storage up to 2 GB support efficient field work and later reporting.



### Upgradeable

Options add advanced logging up to 9 broad band parameters, events capture and full L1 to L99 statistics.



### Standards ready

Full compliance with IEC 61672-1:2013 Class 1 or 2 versions.



### Accuracy at Best Value

Professional-grade acoustic measurements with outstanding accuracy and exceptional value for money



### Flexible settings

Measures Leq, SEL, Lmax, Lmin, Lpk, Dose and Ln with A/C/Z weightings.



### PC based management

RS232 and USB support data transfer, full device setup and remote control.



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## Features

### **Class 1 (HD2010UC.kit1) or 2 (HD2010UC.kit2) , precision integrating sound level meter**

HD2010UC conforms to IEC 61672-1 of 2002 and IEC 61672-1 ed. 2.0 of 2013, IEC 60651 and IEC 60804 specifications with class 1 (HD2010UC.kit1) or class 2 (HD2010UC.kit2) tolerances.

It has been designed combining price competitiveness and simplicity of use. Attention has been paid to the possibility of updating the instrument, and the HD2010UC can be integrated, at any time, with other options like "Advanced Data Logger" to extend its application scope. The meter measures programmable acoustic parameters with integration times from 1 s to 99 h.

### **Advanced Data Logging and Storage**

Basic version Internal memory allows storage of more than 500 records; HD2010.O2 "advanced datalogger" option adds 3 x SLM selectable parameters @0.5s, 1 x profile parameter @125ms, 5 x broad-band report parameters @1s to 1h logging period parallel recording. In addition sound event capture, markers, delayed start and full percentile analysis. Optionally, for long term measurements, the 8MB internal flash memory can be extended with HD2010MC SD card reader for storage up to 2 GB (HD2010.O2 required).

### **Statistical analysis**

As a statistical analyzer (option HD2010.O2 "Advanced Data Logger") the HD2010UC samples the sound signal 8 times per second with A-frequency weighting and FAST time constant, and analyzes it statistically in 0.5 dB classes. It is possible to display up to 3 customer selectable percentile levels between L1 and L99. With "Advanced Data Logger" option it is possible to choose whether sampling LFp, Leq or Lpk with A, C or Z weightings (only C and Z for Lpk).

### **Acoustical Parameters**

Acoustic parameters: Spl, Leq, Leql, SEL, LEP,d, Lmax, Lmin, Lpk, Dose, Ln

Frequency weightings Simultaneous: A, C, Z (only C and Z for Lpk)

Time weighting Simultaneous: FAST, SLOW, IMPULSE, Peak

### **Interfaces and outputs**

The instrument provides RS232, USB, AC LINE output, DC output and external power supply input.

### **Calibration functions**

Calibration can be performed with an acoustic calibrator or the built-in reference generator with electric calibration.

### **PC software: Noise Studio**

Noise Studio 1.0 Basic software (included FOC) supports data download, graphical and tabular display, data export, printing, PC setup and firmware updates.

Optional software add-ons are available for dedicated acoustic analysis applications.

NS1 "Workers Protection" (Based on Noise Studio 1.0 platform) for occupational noise assessment

NS-ENS "Environmental Noise Studio" (Based on Noise Studio 2.0 platform) for environmental noise assessment (HD2010.O2 option required)

## **Metrological Performances**

Standards: Class 1 (HD2010UC.kit1) or 2 (HD2010UC.kit2) Group X according to IEC 61672-1:2013

Approval according to IEC 61672-1:2002 (I.N.R.I.M. Approval Certificate No. 07-0124-02)

Class 1 or 2 according to IEC 60651:2001 and IEC 60804:2000

Dynamic range: 30 dBA ÷ 143 dB Peak

Linearity range: 80 dB

Operating conditions: Working temperature -10...50 °C, 25...90% RH (not condensing), 65...108 kPa. Protection degree: IP64