

## INTEGRATING SOUND LEVEL METER



## HIGHLIGHTS:

- Acoustic normative IEC61672, IEC 61260, IEC61094-4

## HD-2010-UC-1

Art. no. 700060

integrating sound level meter

## General:

HD-2010-UC-1 is an integrating portable sound level meter performing statistical analysis. The instrument has been designed combining maximum low cost and simplicity of use. Attention has been paid to the possibility of adjusting the instrument and adding options at any time to the HD-2010-UC-1 so to extend its applications. The user can upgrade the firmware directly by means of the Noise Studio programme supplied with the instrument. HD-2010-UC-1 is equipped with a backlit graphic display.

## Application:

- Assessment of the environmental noise level
- Optional "advanced data logging"
- Optional capture and analysis of sound events
- Statistical analysis with the calculation of 3 percentile level and optional full statistical analysis
- Noise monitoring ("Advanced data logger" option required)
- Identification of impulsive noises
- Measurements in workplaces (Analysis of the noise and vibrations exposure)
- Selection of personal protective equipment (SNR and HML methods)
- Production quality control
- Measurement of machine noise, sound power measurements
- Vehicles noise emission

With HD-2010-UC-1 sound level meter it is possible to measure the sound pressure level by programming 3 parameters with the possibility of freely selecting the frequency weightings and the time constants. The measured sound levels can be recorded in the large non-volatile memory in order to be transferred to a PC using the supplied Noise Studio software package.

The class 1 HD-2010-UC-1 sound level meter with the "Advanced Data Logger" option is suitable for performing noise monitoring and acoustic mapping and, also assessments of the acoustic climate with capture and analysis of sound events function. When measuring traffic noise in the proximity of airports, railways and roads, the sound level meter can be used as a multi-parameter sound recorder, combining statistical analyzer features. Remote electrical calibrations and diagnostic tests can be executed by using its remote control capabilities.

## Specifications:

<b>½" Microphone:</b>	UC52 free field, pre-polarized, condenser type
<b>Dynamic range:</b>	30 dBA ... 143 dB peak
<b>Linearity range:</b>	80 dB
<b>Acoustic Parameters:</b>	Spl, L <sub>eq</sub> , L <sub>eq</sub> L, SEL, L <sub>EP,d</sub> , L <sub>max</sub> , L <sub>min</sub> , L <sub>pk</sub> , Dose, L <sub>n</sub>
<b>Frequency weightings:</b>	simultaneous A, C, Z (only C and Z for L <sub>pk</sub> )
<b>Time weightings:</b>	simultaneous FAST, SLOW, IMPULSE
<b>Integration:</b>	from 1 s ... 99 h with erasing function (Back-Erase)
<b>Statistical Analysis:</b>	It displays up to 3 percentile levels, from L <sub>1</sub> to L <sub>99</sub> Probability distribution and percentile level calculation from L <sub>1</sub> to L <sub>99</sub> • Parameter: L <sub>1</sub> , L <sub>50</sub> , L <sub>99</sub> weighted A, C or Z (only C or Z for L <sub>pk</sub> ) • Sampling frequency: 8 samples/s • Classification: Classes of 0.5 dB
<b>Display:</b>	Graphic LCD backlit display 128 x 64 • 3 parameters in numeric format
<b>Memory:</b>	• 4 MB internal, memory for more than 500 records
<b>Input/Output:</b>	• RS232 serial and USB interfaces • AC output (LINE) • DC output

## PC Programs:

Noise Studio (provided with the instrument): PC interface for data download, set up and instrument management. Licensed software modules to be enabled by hardware key.  
• NS4 "Monitor" module. PC based real time acquisition. Synchronized audio recording. Remote monitoring and data capture. Remote connection also via Modem. The program allows programming of measurements and calibrations with timer and performs events audio recording with programmable triggers levels.

## Operating conditions:

• Working temperature -10 ... +50 °C, 25 ... 90 % RH, (without condensation), 65 ... 108 kPa. Protection rating: IP64

## Power supply:

• 4 alkaline or rechargeable NiMH type AA batteries or external 9 ... 12V dc 300 mA

## Dimensions:

445 x 100 x 50 mm equipped with preamplifier (H x W x D)

## Scope of supply:

Class 1 sound level meter HD-2010-UC-1, HD2010PNE2 preamplifier, UC52/1 free field prepolarized microphone, windscreen, USB connection cable. Noise Studio PC software, carrying case and paper instruction manual. Supplied with DAKS individual calibration Certification, according to IEC 61672.

## NECESSARY ACCESSORY:

## HD-2020

Art. no. 700062

Class 1 sound level calibrator according to IEC 60942:2003 (Page 97)

## Accessories:

## HD 2110-USB

Art. no. 700038

serial connection cable, for PC connection: USB 2.0 type A

## SWD-10

Art. no. 700039

Plug in power supply for devices of the HD-handhelds, 12V DC 1.0 A

## CPA/10

Art. no. 700061

Microphone extension cable 10 m

## HD 40.1

Art. no. 700056

Portable thermal printer with SWD-10 power supply and 5 paper rolls

## HD 2110-RS

Art. no. 700057

serial connection cable, printer connection: 9-pin Sub-D jack

## RCT

Art. no. 475423

spare paper, 4 rolls thermopaper, 57 mm width



Noise Studio: NS4 "Monitor" module; PC based noise acquisition with synchronized audio recording (for later playback).

## Noise Studio NS4

Art. no. 475424

NS4 Monitor module (demo version incl. in HD2010 scope of supply)

## General:

This software module allows to control the sound level meter with PC in remote location. The main features are:

- Real time display of acquired data, in graphical and tabular form
- Possibility to remotely connect to the sound level meter via modem
- Acquisition of sound level data directly into the mass memory of the PC (monitor function)
- Management of diagnostic and calibration functions
- Automatic acquisition and monitoring programme
- Possibility to log synchronized audio along with the sound level meter measurements, by using the easy trigger function

## IMPORTANT INFORMATION:

Device supply with calibration certificate. Customer must be specified when ordering.