CESVA
acoustic instruments

DC112d/DC112

Dosimeter / Dosimeter analyser

Applications

- **Evaluation of workers' exposure to noise at work simultaneously with testing of PPE (Personal Protective Equipment)**
- **Ideal for workers with a high degree of movement in the workplace, or no fixed workplace.**

User-Friendly

- **Simultaneous measurement of all parameters, including evaluation of hearing protectors.**
- **Single measurement scale.**
- **Keypad lock using a combination of keys.**
- **Projected information display during the measurement.**
- **Graphic screen: numerical and graphic display of functions measured.**

Characteristics

- **The model DC112d can be converted into a DC112, for which it is necessary to acquire the module EF112 either at the time of purchasing the instrument, or subsequently.**
- **Dosimeter conforms to standards EN 61252, EN 60804 and DIRECTIVE 2003/10/CE.**
- **Real time frequency analysis in octave bands (63 Hz to 8 kHz). (Only DC112).**
- **Record of the sensitivity adjustments**
- **Projection of parameters; evaluation of exposure to noise for measurement times shorter than the exposure time.**
- **Software: Cesva Capture Studio and Capture Studio Editor.**
- **Great storage capacity; saves the time history of the measurement.**
- **Download port and power supply through USB port.**
- **Lapel microphone adaptable to helmets and earplugs.**
- **Light and robust.**

The **DC112d/DC112** is a high performance dosimeter, the ideal instrument for measuring noise according to Directive 2003/10/CE, which adapts to technical progress the regulation on the health and safety requirements regarding the exposure of workers to the risks arising from noise The two models; DC112d and DC112 have exactly the same characteristics as dosimeters but only the **DC112** is also a real time spectrum analyser in octave bands.

The **DC112d/DC112** enables you to measure simultaneously all the parameters needed to assess the levels of noise to which workers are exposed with and without hearing protectors (SNR, HML and Octaves). The **DC112** , besides measuring the equivalent level with A and C frequency weightings [L_{At}, L_{Ct}] (SNR and HML method) like the **DC112d**, simultaneously carries out a real time frequency analysis in octave bands, from 63 Hz to 8 kHz (octave method) with the option of applying A weighting, or not, to the analysis.

The **DC112d/DC112** measures simultaneously the equivalent level with A and C frequency weightings [L_{At}, L_{Ct}], daily noise exposure level [$L_{EX,8h}$] (ISO 1999), Noise exposure in Pa^2h [E] and noise dose [DOSE] with respect to a programmable Criterion Level [L_C], and, of course, also the Peak Level with C frequency weighting [L_{Cpeak}] (ISO 1999).

Moreover, it allows you to carry out the measurement during a time shorter than the exposition time, because it shows on the screen all parameters projected to the expected exposure time (programmable projection time [t_p]).

The **DC112d/DC112** stores in its memory the record (time and date) of the sensitivity modifications. Moreover, the it allows the measurement to be stopped, turned off and afterwards restarted with the same measurement.

The large memory of the **DC112d/DC112** allows you to store the time history of the parameters measured (time periods longer than a week), and afterwards recalculate them for any desired time interval.

The **DC112d/DC112** enables you to assess and measure exposure to noise and also brings you all the data needed to inform and train workers with regard to the significance and potential risks arising from the results of the measurement and assessment.

Moreover, It helps you to design and run a reduction programme and to choose the most suitable hearing protectors.

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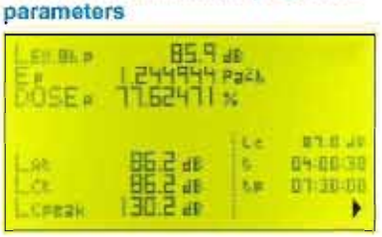
DC112d/DC112

Functions available

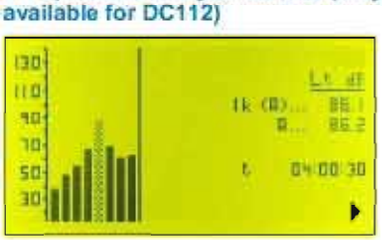
Numerical screen

Numerical screen with projected parameters



Graphic screen (time history)

1/1 spectrum analyser screen (only available for DC112)



Nom	Description of functions of numerical screen
$L_{EX,8h}$	Equivalent daily level normalized to 8 hours, with A frequency weighting.
E	Sound exposure in $Pa^2 \cdot h$.
DOSE	Noise dose with reference to criterion level (programmable).
L_{At}	Equivalent continuous sound pressure level of the whole measurement with A frequency weighting.
L_{Ct}	Equivalent continuous sound pressure level of the whole measurement with C frequency weighting.
L_{Cpeak}	Peak sound pressure level with C frequency weighting.
L_C	Criterion level (programmable).
t	Measurement time.
Nom	**Description of functions of numerical screen with projected parameters**
$L_{EX,8h\,P}$	Projected equivalent daily level, with A frequency weighting.
E_P	Projected sound exposure in $Pa^2 \cdot h$.
$DOSE_P$	Projected noise dose with reference to criterion level.
t_p	Projection time, predicted time of exposure to noise (programmable).

Nom	Description of functions of numerical screen for 1/1 spectrum analyser
L_{t_f}	Equivalent continuous sound pressure level with or without A frequency weighting for octave band f. (See graph at bottom of page).
L_{At}	Equivalent continuous sound pressure level of the whole measurement with A frequency weighting.

Nom	Parameters stored in memory. Time history.
L_{AT}	Equivalent continuous sound pressure level with A frequency weighting.
L_{CT}	Equivalent continuous sound pressure level with C frequency weighting.
L_{T_f}	Equivalent continuous sound pressure level with or without A frequency weighting for octave band f.
L_{Cpeak}	Peak sound pressure level with C frequency weighting.

63	125	250	500	1k	2k	4k	8k

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Certificates and standards

Complies with the following standards::

- UNE-EN 61252:1998/A1:2003; EN 61252:1995/A1:2001; IEC 61252:2002
- UNE-EN 61260:1997/A1:2002; EN 61260:1995/A1:2001; IEC 61260:1995/A1:2001 (only for DC112)
- EN 61252:1995/A1:2001; EN 61260:1995/A1:2001
- IEC 61252:2002 ; IEC 61260:1995/A1:2001
- DIRECTIVE 2003/10/CE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 February 2003 on the minimum health and safety requirements regarding the exposure of workers to the risks arising from physical agents (noise)
- CE Mark. Complies with the Directive on low voltage 73/23/CEE and Directive CEM 89/336/CEE modified by 93/68/CEE.

Measurement range

• L_T y L_t	140 dB
• L_{peak}	140 dB

Frequency weighting

Complies with standard EN 60651
A and C weightings

Memory

64 Mbytes

Microphone

• Model CESVA P007: Prepolarised condenser microphone with preamplifier incorporated, (lapel microphone with adjustable clip incorporated). Cable length: 1m.

Battery

One 9 V battery type 6LR61.
Typical duration with continuous use: 20 hours

Size and weight

Dimensions:	144x82x23	mm
Weight with battery:	361	g

Accessories supplied

FNS112	Case
SFT030	Cesva Capture Studio Programme
CN1US	USB cable for connection to a PC

One 9 V battery

Optional accessories

CB-5	Sound calibrator
TR-40	Tripod. Maximum height 1,1 m
TR050	Tripod. Maximum height 1,55 m
ML-50	Carrying case (49 x 36 x 14 cm)
ML-10	Carrying case (30 x 38 x 8 cm)

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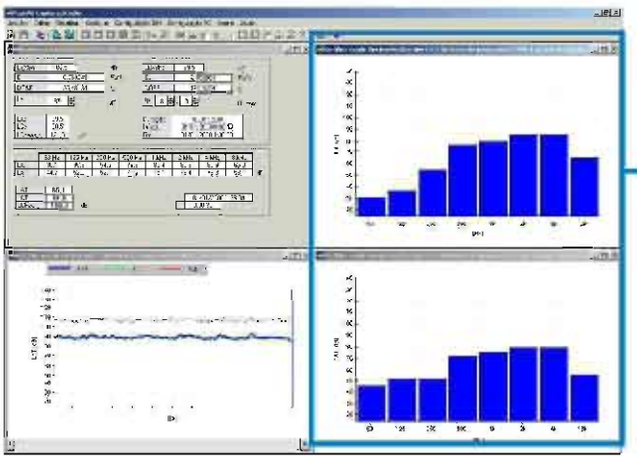
Cesva Capture Studio

With the CESVA Capture Studio software supplied with the **DC112d/DC112,** the following operations can be performed:

- Transmission, in real time, of the data measured by the **DC112d/DC112** to a computer.
- Downloading the registers stored in the memory of the **DC112d/DC112**.
- Display of the measurement registers.
- Export of data and graphics to generate a personalised acoustic report (total compatibility with the Windows® environment).
- Programming the **DC112d/DC112** (time, parameters, etc.) and managing registers (deleting, etc.).

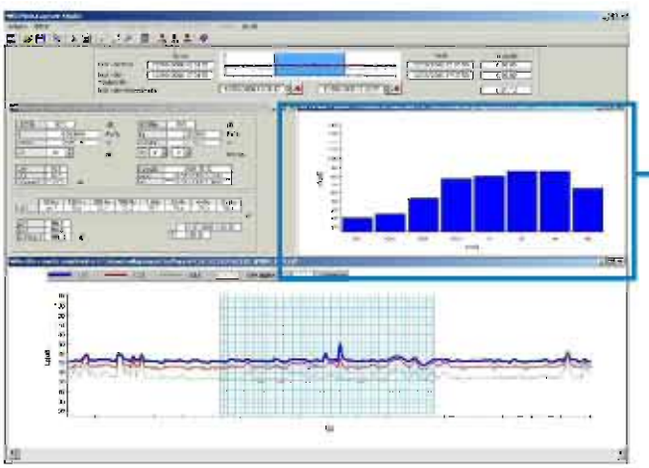


Screen available for **DC112**

Capture Studio Editor

Capture Studio Editor is the software which enables you to edit data acquired by the **DC112d/DC112:**

- Eliminate measurement intervals disturbed by unwanted acoustic agents, or select intervals of particular interest.
- Calculate acoustic parameters (overall, spectral and statistical values) from the new setting.
- Selectively export data to *.txt, *.xls, and *.mdb formats.



Screen available for **DC112**

Both programmes operate in the Windows 9x/Me/2000/NT/XP/VISTA environments.

The characteristics, technical specifications and accessories may be altered without prior notice

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