SC-30 INTEGRATING SOUND LEVEL METER
REAL TIME FREQUENCY ANALYZER

- **Type 1 integrating sound level meter according to EN 60651:94 / A1:97 / A2:01 and EN 60804:01 standards.**
- **Octave band spectrum analyser 31,5 Hz–16 kHz. IEC 61260:1995.**
- **Graphic screen and membrane keyboard for easy use.**
- **Measures all parameters at the same time with frequency weightings A, C and Z (*see table*).**
- **Measurement range: 23 – 140 dB.**
- **One single scale (no scale changes).**
- **Measurement results may be stored in the memory.**
- **Includes software for real time retrieval of all the measured and recorded data and their transmission to a PC.**
- **Detachable preamplifier for use of the extension cable (CNR-012) and the outdoor kit (TK-1000).**

The **SC-30** is a class 1 easy to use integrating averaging sound level meter that allows you to make sound measurements quickly, conveniently and easily. It has a single scale, so there is no need to make any previous scale adjustments.

The **SC-30** simultaneously measures all the functions for both function modes (sound level meter or spectrum analyser) with A, C and Z frequency weightings (frequency weighting equal to 0 dB from 10 Hz to 20 kHz).

The **SC-30**'s graphic screen provides graphical and numerical representation of the measured functions. The graphic display is very practical when it comes to evaluating the evolution through time of a sound event or analysing its spectral contents. The screen is illuminated, allowing the user to work in insufficient light conditions.

The data measured and recorded by the **SC-30** may be transferred to a personal computer so that they are available in electronic format.

The AC output allows you to obtain the signal directly from the preamplifier and make a calibrated recording of it on D.A.T. You may then subsequently analyse it both quantatively (sound measurement, impulse or tone analyses) or qualitatively (the detection of specific events such as shouts, etc.).

The preamplifier is detachable. It may therefore be uncoupled and moved away from the **SC-30** by means of an extension cable (CNR-012). An outdoor kit (TK-1000) is also available for measurement in the open air.

The **SC-30** may be used as either a sound level meter or a spectrum analyser.

SOUND LEVEL METER MODE

numerical

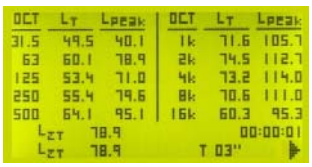
graphical

statisical

The sound level meter mode is ideal for measuring overall sound pressure levels. The **SC-30** simultaneously measures all the functions with all the frequency weightings and calculates statistical data as maximum and minimum values and percentiles.

The spectrum analyser mode allows you simultaneously and in real time to measure the sound pressure levels and the peak level for octave bands, centred on the frequencies 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000 and 16000 Hz (without frequency weighting) and the global values with all frequency weightings.

ANALYSER MODE



numerical

graphical

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Sound level meter mode functions * all functions are measured simultaneously

Function	Freq. Wei.	Nomenclature	Maximum value	Minimum value
Sound pressure level with fast time weighting (FAST)	A C Z	L_{AF} L_{CF} L_{ZF}	L_{Afmax} L_{Cfmax} L_{ZFmax}	L_{Afmin} L_{Cfmin} L_{Zfmin}
Sound pressure level with slow time weighting (SLOW)	A C Z	L_{AS} L_{CS} L_{ZS}	L_{ASmax} L_{CSmax} L_{Zsmax}	L_{ASmin} L_{CSmin} L_{Zsmin}
Sound pressure level with impulse time weighting (IMPULSE)	A C Z	L_{AI} L_{CI} L_{ZI}	L_{AImax} L_{Cimax} L_{ZImax}	L_{AImin} L_{Cimin} L_{ZImin}
Equivalent continuous sound pressure level with integration time T	A C Z	L_{AT} L_{CT} L_{ZT}	L_{ATmax} L_{CTmax} L_{Ztmax}	L_{ATmin} L_{CTmin} L_{ZTmin}
Equivalent continuous sound pressure level of the entire measurement	A C Z	L_{At} L_{Ct} L_{Zt}	-	-
Sound exposure level S.E.L.	A C Z	L_{AE} L_{CE} L_{ZE}	-	-
Peak sound pressure level	A C Z	L_{Apeak} L_{Cpeak} L_{Zpeak}	-	-
Measurement and integration time	-	t T	-	-
Percentiles 1%5%10%50%90%95%99%	-	L_1 L_5 L_{10} L_{50} L_{90} L_{95} L_{99}	-	-

Spectrum analyser functions * all functions are measured simultaneously

Function	Freq. Wei.	Nom	TOTAL	31,5	63	125	250	500	1 k	2 k	4 k	8 k	16 k
Equivalent continuous sound pressure level with integration time T	-	L_T	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak sound pressure level	-	L_{peak}	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Equivalent continuous sound pressure level with integratio time T	A	L_{AT}	✓	-	-	-	-	-	-	-	-	-	-
	C	L_{CT}	✓	-	-	-	-	-	-	-	-	-	-
	Z	L_{ZT}	✓	-	-	-	-	-	-	-	-	-	-

Technical specifications

STANDARDS AND SPECIFICATIONS
Complies with the following standards:
- EN 60651:94 (A1:94/A2:01) type 1
- EN 60804:00 type 1
- IEC 1260:95
- CE mark.

MEASUREMENT RANGE
L_F, L_S, L_I, L_E y L_{eq}
Limits: 0 – 137 dB
Upper 3, 5 and 10 crest factor limits: 130, 126 and 120 dB
L_{Cpk}
Limits: 0 – 140 dB

ELECTRICAL NOISE
Electrical noise
Freq. Wei. A & C: 14.5 & 22.0 dB (typical)
Elec. noise + thermic μphone C-130
Freq. Wei. A & C: 19.0 & 23.0 dB (typ.)
Elec. noise + thermic μphone C-250
Freq. Wei. A & C: 19.3 & 23.3 dB (typ.)

FREQUENCY WEIGHTING
Complies with the EN 60651 type 1 standard
Weightings A, C and Z

DIMENSIONS and WEIGHT
341 x 82 x 20 mm
With battery 627 g without 573 g

AC OUTPUT
Frequency weighting: linear
Sensitivity to 137 dB and 1 kHz (Gain = 0dB): 7.6 Vrms (typical)
Upper limit: 9.5 Vrms (typical)
Output impedance: 100 Ω
Gain: 40 ± 0.2 dB

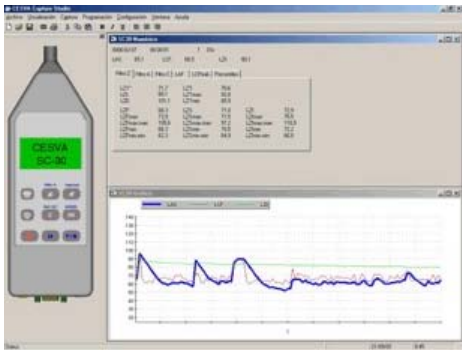
MICROPHONE
Model: CESVA C-130
½ " condenser microphone
Polarization: 200 V
Nominal capacity: 22.5 pF
Nominal sensitivity: 16 mV/Pa in reference conditions.
Model: CESVA C-250
½ " condenser microphone
Polarization: 0 V (prepolarized)
Nominal capacity: 17.0 pF
Nominal sensitivity: 46.4 mV/Pa in reference conditions.

TIME WEIGHTING
L_F, L_S, L_I according to class 1 tolerances

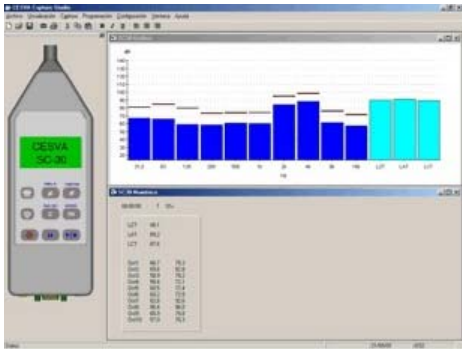
PARAMETERS
See table | Resolution: 0.1 dB

OCTAVE FILTERS
Type 1 according to IEC 1260:95
Nominal octave bands central freq.: 31.5, 63, 125, 250, 500, 1000, 2000, 4000, 8000 Hz

Software



Data retrieval, sound level meter mode



Data retrieval, spectrum analyser mode

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The characteristics, technical specifications and accessories may vary without prior notice.