

The Castle GA113 Combined Integrating Sound Level Meter and Dosemeter – Technical Data-sheet

Simplicity of use combined with maximum functionality were key objectives for the development of the Castle GA113. This is a combination 2 in 1 instrument being an Integrating Sound Level Meter and a Personal Dosemeter. Castle Group are acknowledged experts in noise and vibration measurement with over 30 years experience. When you buy from Castle you buy with confidence.



vibration



noise

Pocket Power

A feature packed instrument that is fully compliant with IEC 61672-1:2002 Class 1, IEC 60651:1979 Type 1, IEC 60804:2001 Type 1 and IEC61252:1993. This meter gives simultaneous Leq (rms. average) personal exposure (Lex/LEP'd) and peak measurement for assessments to the Noise at Work Regulations 1989. It has a high-specification, Class 1 measurement microphone and is cased in tough, crack resistant ABS plastic.

Feature-Packed

Designed for **Industrial Safety Officers** and **Safety Managers** for compliance with the Health and Safety at Work Act; Noise at Work regulation 1989. The Castle GA113 provide all the necessary information you need for completing Noise at Work risk assessments.



- Integrated equivalent level (Leq) measurement
- Personal Sound Exposure Level (Lex) (was Lep'd)
 - Optional dosimeter plug-in microphone
- Sound Pressure (Lp) to 0.1 dB resolution
- 'A' and 'C' frequency weighting (toggle)
- 'Slow' and 'Fast' Time weighting (toggle)
- Simultaneous measurement of Lp, Lmax, and Pmax
- Lmax - maximum Lp hold (rms.)
- Pmax - maximum peak level
- Pascal Squared Hours (Pa²h)
- Elapsed time (running time hrs, min, sec)
- Single Event Sound Exposure Level (LE - was SEL)
- Overload and Under-range indication
- Battery condition (Life approx. 12 hours)

A Tough Case for all Weathers...

The physical design and construction of the Castle GA113 casing is extremely tough and durable, made from a substantial thickness of ABS, crack resistant plastic, the GA113 will stand up to almost any industrial environment.

Simplicity and Power...

Using the meter could not be simpler. The simple operating system uses logical keys to immediately display the information you need. The power of this little wonder means that it can measure simultaneous 'A' weighted Leq, exposure as well as monitoring the Peak levels. By simply plugging in a different microphone, this meter becomes a personal sound dosimeter.

Future-Proof...

The built in software for this meter is designed to suit future upgrading for feature enhancements, legislative changes or instrument upgrades. Details are mailed to customers as soon as they become available. With the Castle Pocket meters, you will always be in step with the law and market requirements.



INVESTOR IN PEOPLE



Castle
advanced sound solutions



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Specification

DESCRIPTION

GA113 Class 1, Integrating Sound Level Meter

APPLICABLE STANDARDS

IEC 61672-1:2002 (Integrating, Sound

Exposure and Sound Level Meters)

IEC 60651:2001 (Sound Level Meters)

IEC 60804:2000 (Integrating Function)

MICROPHONE AND PREAMPLIFIER

Type 7146A Pre-Polarised ½" (13.2 mm)

Free-Field, Electret Condenser Microphone:

20Hz – 20KHz ± 2dB

–32 dB ± 3 dB re 1V/Pa

Custom pre-amplifier design

Typical actuator to free-field correction factor (based on 500Hz=0) is shown below

DISPLAY

Back-lit LCD panel (8x1 Characters)

Alpha-Numeric display for measured results

LEVEL RANGE

Measuring Range:

35-140

Linear operating range (IEC61672-1):

65dB

3 Measurement Ranges (IEC61672-1):

35-100

55-120 - Reference Range

75-140

NOISE FLOOR

Typical 'A' Weighting <32 dB(A) rms.

'C' Weighting <38 dB(C) rms.

FREQUENCY WEIGHTING

'A' and 'C' to IEC 61672-1:2002 and IEC 60651:2001,

FREQUENCY RANGE

12.5 Hz - 20 kHz (including microphone)

1 Hz - 20 kHz (electrical characteristics)

TIME WEIGHTING

Slow and Fast

INSTRUMENT RESPONSE

Simultaneous rms. and Peak

MEASUREMENT PARAMETERS

L_p (Sound Pressure Level), L_{eq} (Equivalent Sound Level), L_{max} (maximum Level), P_{max} (Max. Peak Level), L_{ex} (Sound Exposure Level), L_{AE} (Single Event Sound Exposure Level)

Other Displays: Elapsed time, Overload, Battery Life

CALIBRATION

Software controlled 91.0 to 120.0 dB (1kHz) in 0.1 dB steps

PROCESSING

A to D Converter: 12-bit, 352Hz sampling

Controller: 8MHz, micro-controller

OUTPUT

AC Output = 16.4mVrms at 94dB

(un-weighted and not affected by range)

DC Output = 40mV/dB

(weighted and ranged)

POWER REQUIREMENTS

Batteries: 1 x 6LR61 (size PP3), Life: >12 hours (alkaline batteries, continuous operation).

SIZE AND WEIGHT

Dimensions: 60mm (width) x 30mm (depth excluding pocket clip) x 135mm (height without microphone) or 210mm (height with microphone)

Weight: 200gms (without battery)

MANUALS

Multi-language manuals*: French, German, Spanish and Italian.

ACCESSORIES

GA607 Dual Level Calibrator:

KA010 Kit Case for GA113, GA607 and Accessories

Note: Items marked * will be available as upgrades in the near future.

In the interest of continued developments, Castle reserve the right to change the product specifications without notice