

The Castle GA213 Sound Level Meter Technical Data-sheet

Simplicity of use combined with maximum functionality, all in a pocket sized instrument, were key objectives for the development of the Castle GA213 Sound Level Meter

Castle Group are acknowledged experts in noise and vibration measurement with over 30 years experience. When you buy from Castle you buy with confidence.

Pocket Power

A feature packed, pocket instrument that is fully compliant with IEC 61672-1:2002 Class 2 and IEC 60651: 2001 Type 2. This meter gives simultaneous sound pressure (Lp) and peak (Pmax) measurement for a multitude of tasks including initial spot-check assessments to the Noise at Work Regulations 1989. It has a high-specification measurement microphone and is cased in tough, crack resistant ABS plastic.

Feature-Packed

Designed for **Engineers, Industrial Safety Officers** and anyone with a need for competent sound measurements. This meter can assist with compliance to the Health and Safety at Work Act; Noise at Work regulation 1989. The Castle GA213 is a great general purpose sound level meter that will fit in your pocket and be ready whenever you need it.

- 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
- Elapsed time (running time hrs, min, sec)
- Overload and Under-range indication
- Battery condition (Life approx. 14 hours)

A Tough Case for all Weathers...

The physical design and construction of the Castle GA213 casing is extremely tough and durable, made from a substantial thickness of ABS, crack resistant plastic, the GA213 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 levels as well as monitoring the Peak levels. This is a vital feature for many assessment tasks.

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



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Castle
advanced sound solutions



Specification

DESCRIPTION

GA213 Type 2, Sound Level Meter

APPLICABLE STANDARDS

IEC 61672-1:2002 (Integrating, Sound Exposure and Sound Level Meters)

IEC 60651:2001 (Sound Level Meters)

MICROPHONE AND PREAMPLIFIER

Type 2 Pre-Polarised ½" (13.2 mm) Electret Free-Field, Electret Condenser Microphone: 20Hz – 8KHz ± 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

| 20Hz: 0 | 1kHz: 0 |
|-----------|---------------|
| 25Hz: 0 | 1.25kHz: +0.1 |
| 31.5Hz: 0 | 1.6kHz: +0.3 |
| 40Hz: 0 | 2kHz: +0.4 |
| 50Hz: 0 | 2.5kHz: +0.5 |
| 63Hz: 0 | 3.15kHz: +0.8 |
| 80Hz: 0 | 4kHz: +1.2 |
| 500Hz: 0 | 5kHz: +1.6 |
| 630Hz: 0 | 6.3kHz: +2.3 |
| 800Hz: 0 | 8kHz: +3.6 |

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 <36 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 Peak and rms

MEASUREMENT PARAMETERS

Lp (Sound Pressure Level), Lmax (maximum Level), Pmax (Max. Peak 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

POWER REQUIREMENTS

Batteries: 1 x 6LR61 (size PP3), Life: >14 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

GA601 Single Level Calibrator:

KA010 Kit Case for GA213, GA601 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