

# Castle 'SONUS' GA116B and GA216B Pocket Sound Meters



The Castle SONUS range of pocket sized sound level meters bring simplicity and power to the worlds of Noise at Work and Environmental sound monitoring. From a basic sound pressure meter to full data-logging, combined sound and dosimeter, the range of systems covers a wide diversity of applications.

The entry level of the Castle Pocket Range of Sound Level Meters is the SONUS B(GA116B & GA216B), a feature packed, pocket instrument that is fully compliant with IEC 61672-1:2002. This meter gives simultaneous sound pressure (Lp) and peak (Cpeak) measurement for a multitude of tasks including Fire Alarm Testing and 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.

Mobility of instrumentation is essential for effective noise measurement. As the name indicates, the Castle SONUS 'Pocket Meters' pack all the necessary features into pocket sized proportions

The data-logging versions have a USB connection and are compatible with the Castle dBdataPRO software, where data can be presented in the desired format and copied and pasted into other applications, so you don't have to change the way you have always completed your reports.

There are a number of system packages available to suit many applications from simple tasks such as alarm monitoring, to a fully weatherproof system for long-term environmental monitoring, there are also dedicated packages for Noise at Work requirements.

## POCKET POWER

### 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 GA116B 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 Cpeak
- Lmax - maximum Lp hold (rms.)
- Cpeak - maximum peak level
- Elapsed time (running time hrs, min, sec)
- 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 GA116B casing is extremely tough and durable, made from a substantial thickness of ABS, crack resistant plastic, the GA116B 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



# SONUS B (GA116B & GA216B) SPECIFICATION

Range of Pocket sized Sound Level Meters and combined Personal Sound Exposure Meters

## DESCRIPTION

GA116B Type 1, Sound Level Meter  
GA216B Type 2, Sound Level Meter

## APPLICABLE STANDARDS

IEC 61672-1:2002 (Integrating, Sound Exposure and 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 <38 dB(C) rms.

## FREQUENCY WEIGHTING

'A' and 'C' to IEC 61672-1:2002 and IEC 60651:1979+A1+A2

## FREQUENCY RANGE

20 Hz - 8 kHz (including microphone)  
1 Hz - 20 kHz (electrical characteristics)

## TIME WEIGHTING

Slow and Fast

## INSTRUMENT RESPONSE

Simultaneous rms. and Peak

## MEASUREMENT PARAMETERS

Lp (Sound Pressure Level), Lmax (maximum Level), Cpeak (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  
Controller: 8MHz, micro-controller

## POWER REQUIREMENTS

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

## SIZE AND WEIGHT

Dimensions: 60mm (width) x 35mm (depth excluding pocket clip) x 135mm (height without microphone) or 210mm (height with microphone)  
Weight: 220gms (including battery)

## MANUALS

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

## ACCESSORIES

**GA601** Single Level Calibrator:  
**KA010** Kit Case for GA116B, 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

## SONUS PRODUCT RANGE

### Sound Meters

	Class 1	Class 2
Basic— sound pressure level	GA116B	GA216B
Integrating—(Leq)	GA116I	GA216I
Data-logging	GA116L	GA216L

### Dosemeters

Basic Dedicated Dosemeter	GA257B
Data-logging Dosemeter	GA257L



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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Please note - Product designs and specifications are subject to change without notice. The user is responsible for determining the suitability of this product.