Castle Sonus Model L Pocket Meter
Sonus GA116L Sound Level & Noise Exposure Meter
Sonus GA216L Sound Level Meter

The Castle Sonus range of pocket sized sound level meters bring simplicity and power to the world of Noise at Work and Environmental sound monitoring. From basic non-logging sound level meters to combined sound and dose meters with time and date stamped data logging capability.

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 solutions, there are also dedicated packages for Noise at Work requirements.

The flagship model of the Pocket Sonus Meter range is the class one Sonus GA116L which is a full data logging, integrating sound and noise exposure meter (dose meter) which has been designed for both Noise at Work assessments and Environmental Sound monitoring.

Simply unplug the sound meter pre-amplifier and plug in the dose meter cable which is available as an optional accessory to convert to a fully functional dose meter.

Setup couldn't be easier, simply select Noise at Work or Environmental from the available user modes to automatically have the correct parameters selected then press the Record key to start logging.

The meter features dual measurement, so two versions of most parameters can be measured simultaneously. This feature means you only need to measure once and for Noise at Work assessments you'll have the correct parameters recorded to determine suitable hearing protection using the HML method, a function available in dBdataPro software.

Connectivity is via high speed USB and the meter ships with free noise analysis software dBdataPro-Lite and download cable.

The class two Sonus GA216L has the same features as the Sonus GA116L but has a fixed pre-amplifier.

POCKET POWER

All measured values can be saved to the internal flash memory of the Sonus GA116L or GA216L for subsequent output. The results can be viewed on the instruments own display or downloaded to the included dBdataPro noise analysis PC software via a high speed USB connection.

Using the instruments could not be simpler. The simple user interface can easily be scrolled and selected to immediately display the information you need. The keypad also has a dedicated dB Range key, simply press and then select your required range.

The instruments also have 3 operating modes, select one and the instrument sets itself to the required settings. Its never been easier !!

The measured noise is computed and stored as a series of pre-chosen time intervals. The GA116L and GA216L instruments will store up to approximately 2100 intervals in either one or multiple recordings.

Each instrument is supplied with a comprehensive printed user manual and a getting started sheet.

- Measures Lp, Leq, Lmax, LE, Pa^2h, Lep'd, Dose, Dose Per Hour, L10, L90, L(user)
- Measures parameters simultaneously including LAeq and either LZeq or LCeq
- Under range and Overload indicators
- Hearing Protection using the HML method
- User selectable Exchange rate, Threshold and Criterion level.
- User Modes: Noise at Work, Environmental or ALL
- A, C or Z frequency weighting selection
- A, C or Z Peak Measurements
- 'Slow', 'Fast' and 'Impulse' time weighting selection
- Save results to internal flash memory
- Download data to a PC via a USB connection
- Noise Analysis Software included with the meter
- Small and light weight, fits into small shirt or jacket pocket and also supplied with a strong pocket clip.
- Lockable Key pad through options
- Single battery operation of typically 12 hours

ISO 9001 REGISTERED COMPANY
UKAS QUALITY MANAGEMENT 015
INVESTOR IN PEOPLE UK

Sonus Model L (GA116L & GA216L) Specification

Instrument Standards:

GA116L

IEC 61672-1 : 2002 Class 1 Group X
IEC 61252 : 1993

GA216L

IEC 61672-1 : 2002 Class 2 Group X

Level Ranges: GA116L

Range	Display Range	Linear Range	Peak Range
30 - 100 dB	29 - 103 dB	30 - 100 dB	40 - 103 dB
50 - 120 dB	49 - 123 dB	50 - 120 dB	60 - 123 dB
70 - 140 dB	69 - 143 dB	70 - 140 dB	80 - 143 dB

Level Ranges: GA216L

Range	Display Range	Linear Range	Peak Range
35 - 100 dB	34 - 103 dB	35 - 100 dB	40 - 103 dB
50 - 120 dB	49 - 123 dB	50 - 120 dB	60 - 123 dB
70 - 140 dB	69 - 143 dB	70 - 140 dB	80 - 143 dB

Measurement Channels:
Two

Parameters:
Lp, Leq, Lmax, APeak, Cpeak, Zpeak, LE, Pa^2h, Lep'd, Noise Dose, Noise Dose Per Hour, L_{10}, L_{90}, L_n (user selectable), Measurement Run Time, Overload, Interval Duration

Linear Operating range:
70 dB

Frequency Weighting:
'A', 'C' and 'Z'
Combinations of 'A', 'A'&'C' simultaneous or 'A'&'Z' simultaneous available for Lp, Leq and Lmax

Time Weighting:
'Slow', 'Fast' and 'Impulse'

Percentiles:
L_{10}, L_{90} and either L_1 , L_5 , L_{50} , L_{95} , L_{99}

Exchange rate:
3dB, 4dB or 5dB

Criterion Level:
75dB, 80dB, 85dB or 90dB

Threshold Level:
-5dB, -10dB or OFF

Memory:
2100 Data Intervals Maximum in one or multiple recordings

Quick Setup Modes:
Noise at Work, Environmental, All (User Control)

Microphone (Type Free Field):

GA116L

Sound Meter Operation:
ACO 7146A pre-polarized ½" condenser microphone, 25mV/Pa

Dose Meter Operation: OPTIONAL
ACO 7052 pre-polarized ½" condenser microphone, 25mV/Pa

GA216L

Sound Meter Operation:
ACO 7052 pre-polarized ½" condenser microphone, 25mV/Pa

Microphone Preamplifier:

GA116L

Sound Meter Operation: Low Noise, Removable Preamplifier
Dose Meter Operation: Removable Preamplifier (OPTIONAL)

GA216L

Sound Meter Operation, Fixed Preamplifier

Noise Floor:
GA116L: <18.5dB(A) , <18.6dBC , <20.5dB(Z)
GA216L: <25.1dB(A) , <34.0dBC , <36.8dB(Z)

Display:
Alphanumeric LCD with Contrast Control, digit size 7mm x 5mm

Batteries:
1 x PP3 (9V) - Typically 12 hours continuous use

External Power:
12v - 18v via Multi Purpose I/O Socket

Connections:
9 Pin Multi Purpose I/O Socket for: -
USB (Cable Supplied), AC Output, External Power

Environmental:
Temperature Operating Range: -10 to + 50ºC
Humidity: Up to 90% RH Non Condensing

Electromagnetic Compatibility:
IEC 61672-1 : 2002

Case:
High Impact ABS plastic with membrane keypad

ORDERING INFORMATION

GA116L	-	Sonus Sound Level Meter Class 1
GA216L	-	Sonus Sound Level Meter Class 2
GA607	-	Dual Level Calibrator Class 1
KA010	-	Attaché Kit Case
PC007	-	dBdataPro software
MK579DP1B	-	Dose meter microphone
KA020	-	Weatherproof System Case
ZL2094-03	-	Weatherproof cable
MW402	-	Weatherproof microphone housing

System shows the GA216L Sound Meter and the GA257L Dose meter

Keeping you measuring...

Castle GROUP

Measuring the impact of your business on the world is an ever more important task. Whether this is the effect of business activities on employees, machinery or the environment, you need to know precisely where you are as the consequences of not knowing can lead to huge inefficiencies and avoidable costs.

Castle have spent over 40 years making sure we understand what you need to measure, how to measure it and what to do about the results—just ask the experts!

www.castlegroup.co.uk

If you go to our main website, you will find a huge resource of information and knowledge to help you understand the issues you face.

- Safety and health of employees
- Impact on the environment
- Machinery condition and maintenance

You will also find access to a range of useful resources to help you tackle these issues **www.castlegroup.co.uk**

- Noise and Vibration Measurement Equipment
- Audiometers, Otoscopes and Booths
- Air-Sampling Pumps, Calibrators and Consumables
- Gas-Detection and Personal Monitors
- Emissions and Air Quality
- Light, Temperature & Humidity
- Airflow and pressure
- EMF testing equipment
- Electrical testing including PAT
- Chemical testing for water quality
- Borescopes & Microscopes
- Weighing scales
- Thermal Imaging
- Coating thickness and hardness

www.castleshop.co.uk

Measuring requires access to equipment and instrumentation and finding this instrumentation can be a challenge. That is why we have set up the Castleshop.co.uk. This online shop contains thousands of products in a huge number of fields of measurement.

We took the trouble to look for all this equipment so you don't have to.

Check out www.castleshop.co.uk for access to equipment like this. Having said that, we're always adding products, you it'll probably be there even if it isn't here!

CASTLE **TRAINING** ACADEMY

Training is becoming an ever more important area of consideration to industry **professionals** and the Castle Training Academy is fulfilling the need for more and more companies every year. The Academy now offers **competence** training along with IOSH and CIEH **qualifications**.

All of our courses are available on-site. This means you don't need to spend time off-site and you can have just the course you want, tailored to your needs.

Find a huge range of courses at:

www.castletrainingacademy.com.

CastleRent

There are a number of **reasons** why rental may be the solution for you. You may only have a one-off use, a special contract, a limited budget or a need for supplementary products. In any case, our **flexible booking** system, next day a.m. delivery and open-pricing mean that you can address any of these issues without delay. For long-term contracts, such as construction projects, Castle Rent is also a **tax efficient** way to 'own' equipment. Finally, for peace of mind, what better way is there to try a product before deciding to buy it? We even give you money back if you do purchase!

The Advantages of Castle Rent;

- Easier on cash-flow
- Rent for long- or short-term as you need it
- Let the Tax Man pay for you!
- Try before you buy
- Four weeks for the price of three
- No on-going maintenance costs
- Rent-to-Buy!

www.castle-rent.com

Measurement instrumentation must be **regularly** calibrated to a traceable standard and this is certainly true for most health, Safety and Environmental monitoring equipment. At Castle, our team of **highly trained and experienced** technical staff can service and calibrate almost any type of monitoring equipment from Noise and Vibration

castlecalibration

meters to Thermometers to Scales. The Castle **'Premier Service'** includes menu pricing and a normal turnaround time within 5 days. What is more, we will evaluate any instrument and return it for **FREE** if you do not want to proceed.

Castle premier service and calibration offers...

- Free Evaluation Service
- Clear and Simple Pricing
- UKAS Accreditation Available
- Large range of equipment calibrated
- 4 Levels of calibration available for most equipment
- Annual contract calibrations with up to 20% off

www.castlecalibration.com

Calibration Partnership

For companies with **multiple** pieces of **equipment**, there is also Castle's 'Partnership Calibrations'; an annual scheme to take the hassle out of maintaining equipment certification. Castle will issue calibration **reminders**, collect your equipment if required and return it calibrated as soon as possible. This scheme also affords a **saving** of up to 20% on annual calibration charges.

www.castle-care.com

castleconsultancy

Castle **experts** are waiting to help you. Because we have a **network** of consultants across the country, we are poised to **react** to your requirement. Not only can we normally provide a local service, but we can usually help right away if you need us to!

Whether you are limited for time, in need of further **expertise** or just want some **advice**, we can assist. We have provided a wide range of services to many top companies for projects large and small.

Here are some of the services we can provide, but if it's not here, just ask!

Noise or Vibration risk assessments
Building Acoustics
COSHH compliance
Environmental Impact Assessments
Air Quality Monitoring
Occupational Health Screening programmes
Water Sampling and Quality monitoring
Hydrology surveying
Soil Sampling and Testing
Ecology surveys and monitoring programmes

www.castle-consultancy.com

Who are Castle

For 40 years, Castle has been driving forward with product and service innovation. For a number of the early years, the company focussed on the development of sound and vibration measuring equipment. This was then progressed by adding training courses, rental and consultancy eventually leading to the Castle of today, which is helping many customers deal with a vast range of health, safety and environmental issues in a variety of ways. The future is a very exciting place at Castle and we are working on many new initiatives with our customers firmly in mind!