

# Castle dBAir Sound Meter

## Castle to it's Core

### The Concept—New from Tip to Toe

Measuring sound doesn't need to be complex, and it isn't with the Castle dBAir System. Simplifying the process from measurement to analysis, the Castle dBAir Sound meter is the first of its kind to send the your measurement data to your noise management portal, The Castle Cloud, through your Wi-Fi network. This enables you to have global access on just about any device, with cable free and immediate Wi-Fi Data-Transfer.

And for those still a little uncomfortable with Cloud Software, simply plug the dBAir into your PC using the included USB cable and download the CSV file to view in any spreadsheet programme.

#### Castle dBAir

Small, powerful and simple to use, the dBAir was designed with the qualities to provide the best user experience possible. Simply switch on and start measuring, the dBAir takes care of everything else for you — including the transfer of data and the installation of software!

#### Couldn't be Simpler!

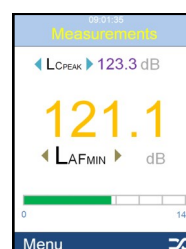
With a large colour screen and the support of The Castle Cloud software, the dBAir requires virtually no set-up so you can simply power it on and start recording.

All your measurements are available on-screen, as well as an exposure calculator so you can see who is being exposed to dangerous levels of sound even before you go back to your office.

#### Connectivity—Data from your hand to the cloud

Get the most of your measurements and never worry about data issues again, with vast on-board memory and data back-up in the Castle Cloud; storing, sharing and exporting data has never been easier to manage.

Data is saved in a universal format, meaning you can export reports, compare previous data, combine exposures for employees and so much more in **both** the Castle Cloud Software and in a standard spreadsheet programmes. Simply copy the CSV file from the dBAir onto your PC to open in a spreadsheet programme.



09/01/2015  
Hearing Protection  
0/254

Name	-4dB	APL dB
Amigo		33.2
Bellfit Foam		33.4
Earplugs		43.2
Benefit Foam		44.5
Earplugs		46.6
Caboflex		57.7
Caps		57.9
Classic		58.3
Classic Corded		58.7

Home

## The Castle dBAir — 3 Models

### Miniaturised Power!

Never worry about data storage again with the dBAir's 16GB memory.

Results can be viewed on the screen or sent to the Castle Cloud Software, which enables you to access your data anywhere in the world. Data is then readily available to be downloaded for analysis on a laptop, PC or tablet.

Each instrument is supplied with a comprehensive user manual in electronic format and a laminated getting started sheet.

### The dBAir Range

There are 3 models in the dBAir range; the dBAir Safety, the dBAir Environment and the dBAir Safety & Environment. Each instrument is dedicated to specific applications, providing distinct benefits of powerful measurement capabilities, large storage, flexible timers and hassle free data analysis.

Every dBAir, no matter which model, makes full use of their large colour display to ensure the simplest of user interfaces and clearest presentation of results, no matter the application.

### dBAir Safety

- Dedicated Occupational Safety Mode
- User 'Templates' for Personal Preference
- Hearing Protection Database
- Voice Note Recording
- Optional 1/1 Octave Band Analysis

### dBAir Environment

- Dedicated Application Specific Measurement Templates
- Statistics
- Optional 1/3 Octave Band Analysis

### dBAir Safety & Environment

- All of the above

### What's supplied with a dBAir System?

- Your chosen dBAir Sound Meter and Windshield
- Acoustic Calibrator (Class 1 or Class 2)
- Castle Cloud Software License and USB Cable
- Protective Carry Case for dBAir and Accessories
- Heavy Duty Tripod (where required)



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# dBair (GA141) Specification

## dBair Models

dBair Safety Class 1 (GA141S)  
dBair Safety Class 2 (GA241S)  
dBair Safety Octave (1/1) Class 1 (GA141SO)  
dBair Safety Octave (1/1) Class 2 (GA241SO)  
dBair Environment Class 1 (GA141E)  
dBair Environment Octave (1/3) Class 1 (GA141EO)  
dBair Safety & Environment Class 1 (GA141SE)  
dBair Safety & Environment Octave (1/1,1/3) Class 1 (GA141SEO)

## dBair Systems

dBair Safety Managers System  
dBair Safety Managers Octave System  
dBair Environment Assessment System  
dBair Environment Assessment Octave System  
dBair Safety & Environment Assessment System  
dBair Safety & Environment Assessment Octave System

09:01:35 Measurements Table	
Measurement 1	Measurement 2
UR	OL
LAFSPL 120.9	LCFSPL 120.9
LAEQ 120.9	LCEQ 120.9
LAPeak 120.9	LCPeak 120.9
LAFMIN 120.9	LCFMIN 120.9
LAFMAX 120.9	LCFMAX 120.9
LAE 120.9	
Menu	

09:01:35 Exposure	
Exposure Time 1 Hour	UR
LEP <sub>d</sub> 120.9	
DOSE 120.9	
Measurement Time	
LEP <sub>d</sub> 120.9	
DOSE 120.9	
8 Hours	
LEP <sub>d</sub> 120.9	
DOSE 120.9	
Menu	

## Applicable Standards

IEC 61672-1:2013  
IEC 61260-1:2014 (Where Octave Bands Fitted)  
IEC 61252:1993 amendment 1:2000 (Where Exposure Fitted)

## Microphone

### Class 1:

Type 1 Pre-Polarised ½" (13.2 mm) Electret Condenser Microphone -27 dB ± 2 dB re 1V/Pa

### Class 2:

Type 2 Pre-Polarised ½" (13.2 mm) Electret Condenser Microphone -32 dB ± 3 dB re 1V/Pa

## Measurement Ranges

Linear Operating Range: 95dB

	Low	High
Class 1 Measurement Ranges:	20 to 115dB	45 to 140dB
Class 2 Measurement Ranges	25 to 115dB	45 to 140dB

## Noise Floor

Typical 'A' Weighting <15 dB(A) rms  
'C' Weighting <18 dB(C) rms  
'Z' Weighting <18 dB(Z) rms

## Frequency Weightings

Measurement 1: A, C or Z  
Measurement 2: A, C or Z

## Frequency Range

1 Hz - 20 kHz (electrical characteristics)  
Class 1: 12.5 Hz - 20 kHz (including microphone)  
Class 2: 12.5 Hz - 16 kHz (including microphone) (TBD)

## Time Weighting

Measurement 1: Slow, Fast, Impulse  
Measurement 2: Slow, Fast, Impulse

## Display

2.4" Full Colour TFT 240x320 pixels

## Dual Measurements

Simultaneous dual measurement with independent time and frequency weightings.

## Octave Band Analysis

Where fitted 1/1 or 1/3 octave band analysis on measurement 1 only.

## Measurement Parameters

### dBair Safety:

L<sub>SPL</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak, L<sub>EPd</sub>, Exposure Points, Dose, Hearing Protector Calculator

### dBair Safety Octave:

L<sub>SPL</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak, L<sub>EPd</sub>, Exposure Points, Dose, Hearing Protector Calculator

1/1 or 1/3 Octaves:

L<sub>SPL</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak

### dBair Environmental:

L<sub>SPL</sub>, L<sub>E</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak, L<sub>tm3</sub>, L<sub>tm5</sub>, L<sub>day</sub>, L<sub>night</sub>, L<sub>dn</sub>, L<sub>den</sub>, NA, 10 user-definable Ln values (pre-set to: L1, L2, L5, L10, L50, L90, L95, L98, L99) plus LAF\* for Noise act assessment.

### dBair Environmental Octave:

L<sub>SPL</sub>, L<sub>E</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak, L<sub>tm3</sub>, L<sub>tm5</sub>, L<sub>day</sub>, L<sub>night</sub>, L<sub>dn</sub>, L<sub>den</sub>, NA, 10 user-definable Ln values (pre-set to: L1, L2, L5, L10, L50, L90, L95, L98, L99) plus LAF\* for Noise act assessment.

1/1 or 1/3 Octaves:

L<sub>SPL</sub>, L<sub>E</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Ln's, Peak

### dBair Safety & Environmental:

L<sub>SPL</sub>, L<sub>E</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak, L<sub>EPd</sub>, Exposure Points, Dose, Hearing Protector Calculator, L<sub>tm3</sub>, L<sub>tm5</sub>, L<sub>day</sub>, L<sub>night</sub>, L<sub>dn</sub>, L<sub>den</sub>, NA, 10 user-definable Ln values (pre-set to: L1, L2, L5, L10, L50, L90, L95, L98, L99) plus LAF\* for Noise act assessment.

### dBair Safety & Environmental Octave:

L<sub>SPL</sub>, L<sub>E</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Peak, L<sub>EPd</sub>, Exposure Points, Dose, Hearing Protector Calculator, L<sub>tm3</sub>, L<sub>tm5</sub>, L<sub>day</sub>, L<sub>night</sub>, L<sub>dn</sub>, L<sub>den</sub>, NA, 10 user-definable Ln values (pre-set to: L1, L2, L5, L10, L50, L90, L95, L98, L99) plus LAF\* for Noise act assessment.

1/1 or 1/3 Octaves:

L<sub>SPL</sub>, L<sub>E</sub>, L<sub>EQ</sub>, L<sub>MAX</sub>, L<sub>MAX</sub>, Ln's, Peak

## Languages:

English UK, English US, Chinese, French, German, Italian, Portuguese  
Brazilian, Russian, Spanish

## Time History

Short Interval: 10ms to 60m  
Long Interval: 1s to 24h  
Smart Timer, Duration Timer or Interval Timer

## Memory

16GB

## Input / Output Connection

Micro USB Type B

## Power

Batteries: 4 x AA (1.5V)  
Life: Approximately 16 hours continuous operation (screen settings dependent)  
USB Socket

## Size and Weight

Dimensions:  
Including Pre-Amplifier:  
210mm (H) x 70mm (W) x 30mm (D)  
Excluding Pre-Amplifier:  
145mm (H) x 70mm (W) x 30mm (D)  
Weight: 480g approximately (including batteries)

## Available Accessories

GA607 Dual Level Calibrator  
KA017 Kit Case for dBair and Accessories (included)  
KA022 Weatherproof Enclosure  
PSU5 Power Supply  
ZL1093-01 Microphone Extension Cable (1m)  
ZL1061-01 AC Output Cable

