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# CASELLA

# *dBadge2*

## **dBadge2** Personal Noise Exposure Meter

Ideal for making noise exposure measurements, the dBadge2 is a shoulder worn dose meter that measures all workplace noise parameters simultaneously.

[www.casellasolutions.com](http://www.casellasolutions.com)



# dBadge2

## Key Features

- Airwave software to check monitoring remotely
- Multiple 'simulated' dosimeters
- Full colour display
- Motion Sensing
- 1 second time history profiling
- Pause function
- Measures all noise dose parameters simultaneously



Intelligent display shows remaining hours of battery life and memory capacity

## Applications

- Complete shift exposure measurements
- Task based measurements
- Measurements in accordance with CFR 1910.95 (USA), ISO9612:2009, L108 Controlling Noise at Work.
- Selection of hearing protection



3 way chargers can be linked together and also act as a download station



Use Airwave software on a mobile device to remotely monitor multiple dosimeters, without disturbing the wearer.



Start, stop and monitor the dosimeter remotely via an iOS or Android device.

(Airwave is available free in the Apple App Store and Google Play Store)

## Simultaneous Measurements

The dBadge2 has a 'multiple simulated dosimeter' capability to display noise exposure results according to differing regional or international protocols. Regardless of what you have displayed, the dBadge2 always measures all parameters together.

- Simultaneous measurement and storage of all noise dose parameters
- Helps ensure the wrong parameters cannot be measured
- Choose how many parameters to display

## Simple Operation

With it's two button operation, the dBadge2 couldn't be easier to use. After switching the dBadge2 on, apply the acoustic calibrator and press one button to perform calibration. Then hold both keys down to start a measurement, it couldn't be simpler!

- Lockable keys and display
- Automatic detection of acoustic calibrator
- Colour coded display
- Easy to mount on employees' shoulder

## Intrinsically Safe

For use in flammable atmospheres, intrinsically safe models are available for potentially explosive areas such as in the oil and gas, petrochemical and mining industries.

Ex ia IIC T4 Ga

Ex ia IIIC T135°C Da

EX ia I Ma

Tamb: -20°C to +45°C

## Advanced Features

Different models of dBadge2 are available with advanced functions depending on your requirements.

- Audio notes at the start of a run to record measurement details
- Audio recording of level triggered events to identify anomalous noise
- Octave band analysis for the selection of hearing protection
- Motion sensing to assist in measurement validation

## Downloading Data & Reporting...



A data Download Utility is freely available to simply download data to Excel, with automatic graphing of time history data. For more sophisticated data analysis and reporting Casella Insight is free with measurement kits. Please refer to Casella Insight Data Sheet for more detail.



## Technical Specification

Standards:	ANSI S1.25:1991 R2007, IEC 61252 Ed 1.1 (2002-3)
Linear Operating Range:	55.0-140.3 dB (A) RMS
Peak Measurement Range:	90.0-143.3dB (C or Z weighted),
Sound Exposure Range:	0.0- 6,100.0 Pa2Hours
Frequency Weightings:	A, C and Z, Type 2
Time Weightings:	Fast, Slow and Impulse
Exchange Rate:	Q=3 or Q=5dB exchange rates
Threshold and Criterion:	70-90dB in 1dB steps
Operating Temperature Range:	0°C to +40°C (for <math>\pm 0.5\text{dB}</math> error limit) -10°C to +50°C (for <math>\pm 0.8\text{dB}</math> error limit)
Ambient Pressure Range:	<math>\pm 0.5\text{dB}</math> over 85 - 112kPa,
Humidity Range:	<math>\pm 0.5\text{dB}</math> over 30% - 90% (non-condensing),
Storage Temperature Range:	-10°C to +50°C,
Battery:	Internal NiMH, 800mAH
Run Time:	Typically 35 hours using Broadband Mode Typically 15 hours using Octave mode
Charge Time:	<math>< 6</math> Hours from fully discharged
Maximum Run Duration:	24 hours
Maximum number of Runs:	100
Storage Capacity:	Internal USD Flash memory - 300 hours of run data (including 1 second profile data) and up to 90 minutes of event audio recording.
PC Interface:	USB 2.0 Full speed 12Mbps via Docking Station.
Dimensions:	85L x 54W x 55H mm
Weight:	117g
Environmental I.P. Rating:	IP65 (with permeable air vent)

## Ordering Information

<b>dBadge2</b>	dBadge2 Personal Noise Dosimeter
<b>dBadge2Plus</b>	dBadge2 Plus Personal Noise Dosimeter with Audio Recording
<b>dBadge2Pro</b>	dBadge2 Pro Personal Noise Dosimeter with Audio Recording and Real-time Octave Band frequency analysis

All dBadge2 units come complete with a Field Guide and Calibration Certificate. Operation manuals are available to download. For Intrinsically Safe models add 'IS' to the end of the part number e.g. dBadge2PlusIS.



## Instrument Kits

Instrument Kits are available in a kit case that holds up to 10 dBadge2 units. Kits also include the CEL-120/2 Acoustic Calibrator, docking station, USB download cable and Insight Data Management Software.

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Casella reserves the right to amend the specification without notice

## Stored Data Sets

The dBadge2 simultaneously records and computes all noise data for every measurement run. The comprehensive set of data containing all of the below parameters is available to view and analyse within the Casella Insight PC application or using the download utility. The Dosimeter Set-ups D1, D2 and D3 define which parameters are displayed on the instrument itself but all values are automatically stored in the memory of the dBadge2 for download.

$L_{Ave}$	TWA (8hr)	Projected TWA 8hr
Dose%	Proj Dose %	
$L_{Aeq}$	$L_{CEQ}$	$L_{AIEQ}$
$L_{EPd} / LEX, 8h$	Proj $L_{EPd}/LEX, 8h$	
$L_{APk} + Time$	$L_{CPk} + Time$	$L_{Zpk} + Time$
Pa2Hrs	Pa2Secs	
ISO Dose% (using ISO Criterion level)		
ISO Proj Dose% (using ISO Criterion level)		
Projected Exposure Points (using ISO Criterion level)		
Exposure Points (using ISO Criterion level)		
Exceedance time ( $L_{AS} >$ Exceedance level)		
HML (LC-LA)		
$L_{Cpk} >135$ (count)	$L_{Cpk} >137$ (count)	$L_{Cpk} >140$ (count)
$L_{AFmx} + Time$	$L_{AFmin} + Time$	
$L_{ASmx} + Time$	$L_{ASmin} + Time$	
$L_{AImx} + Time$	$L_{Aimin} + Time$	
$L_{AE}$	Cumulative Motion Index (expressed as % motion detected during a measurement run).	

## Model Selection

	<b>dBadge2</b>	<b>dBadge2 Plus</b>	<b>dBadge2 PRO</b>
H-M-L (C-A)	●	●	●
Programmable delay timer	●	●	●
Fixed run timer	●	●	●
Pause function	●	●	●
Wireless*	●	●	●
Time history	●	●	●
Audio recording		●	●
Octave band			●

\*Bluetooth 'Smart' Wireless may be disabled in any version using the USB utility App

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