

## Quick Start Guide

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Using Bluetooth® and  
dBActive

### About this quick start guide

- The instructions in this user manual refer to the operation of Cirrus Research plc Optimus+ sound level meters with version 5.0 or higher of the firmware
- Where the terms 'Optimus+' or 'Optimus' are used, it refers to all variants within the Optimus+ range of instruments, including the Optimus+ Yellow (CR:150 series), Optimus+ Red (CR:160 series), Optimus+ Green (CR:170 series) and Optimus+ Purple (CR:190 series)
- The dBActive mobile application must be downloaded from either Google Play (Android devices) or the App Store (iOS devices) in order for the functions outlined in this quick start guide to be utilised
- Full technical details for the Optimus+ range of instruments can be found on the Cirrus Research website at [www.cirrusresearch.co.uk/library/datasheets/](http://www.cirrusresearch.co.uk/library/datasheets/)
- For full operational instructions, please consult the instrument handbook that was supplied with your Optimus+

**Please note:** the screenshots that have been used for the purposes of demonstrating the operation of Bluetooth and the dBActive smartphone application on the Optimus+ have been taken from a mobile device that runs the iOS mobile operating system. Screens and menus may appear differently for devices running the Android operating system.

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## Updates

In the interests of continuous product improvement, Cirrus Research plc reserves the right to make changes to product specifications without notice.

To learn about the latest updates that have been implemented into this product and to download the most current version of this user manual, visit our website at [www.cirrusresearch.co.uk](http://www.cirrusresearch.co.uk)

Version 1 Q1 2019

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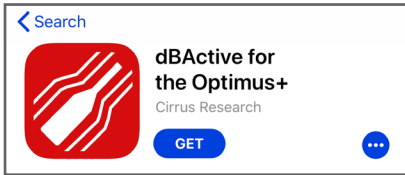
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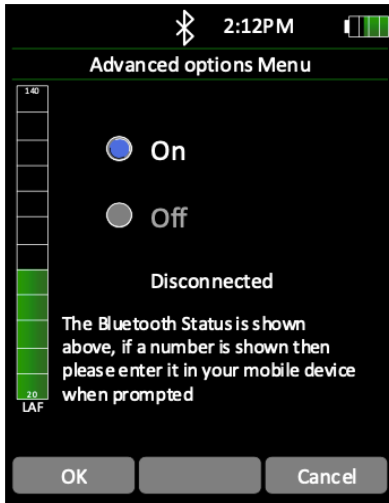
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## 1 Downloading dBActive and connecting to your Optimus+

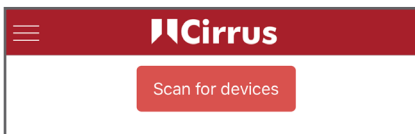


Search for dBActive on either the App Store (iOS devices) or Google Play (Android devices).

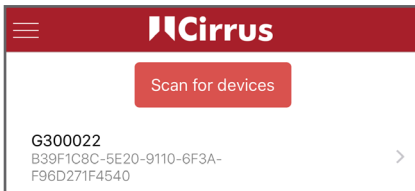
Download the app to your device.



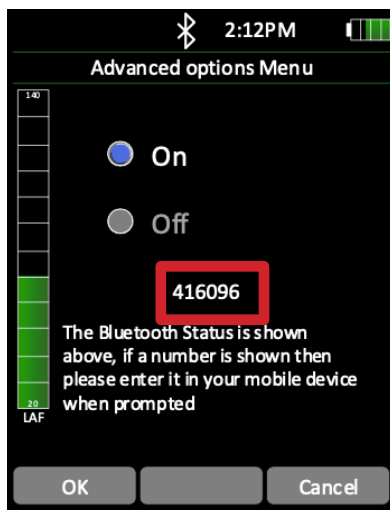
Enable Bluetooth on your Optimus+ instrument. This can be found by navigating to the 'Advanced Options' menu.



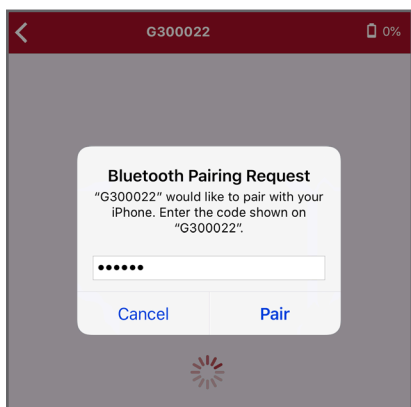
Open dBActive on your device. Press 'Scan for devices'.



Once your instrument has been discovered, press on its name to connect to it.



Before your Optimus+ can connect to your mobile device, you will be asked to input a code that will be displayed on the Bluetooth menu screen.



Enter the code from your Optimus+ into your mobile device and press 'Pair'.

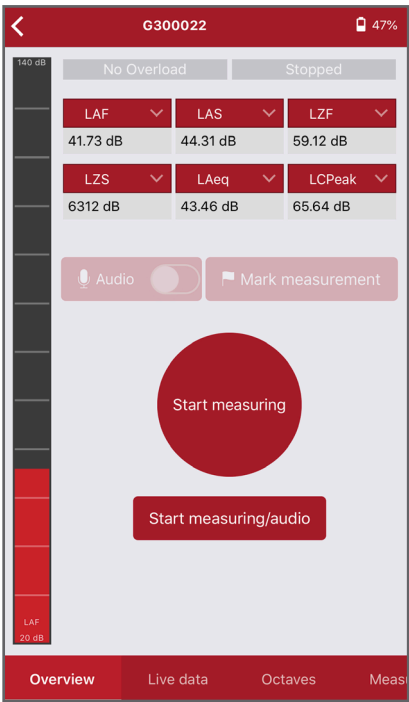
Your Optimus+ will now be paired with your mobile device. You will see the default home screen on the dBActive app, which displays live noise measurement information. From this screen, you will be able to navigate around the app, which will be described in the coming pages.

## 2 Using your Optimus+ with your mobile device through dBActive

### 2.1 Viewing live data

One of the key features of dBActive is the ability to view live noise data remotely. This information can be viewed in a number of different ways, which are outlined below:

#### 2.1.1 Using the overview screen

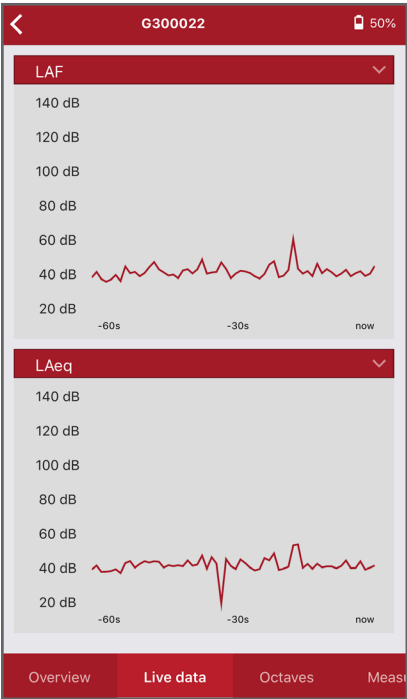


This screen is the default home screen for dBActive and displays live noise data for a number of parameters, each of which can be changed. Press the arrow on the value you wish to change. A menu will appear allowing you to select the value you wish to see (see image below).

Select One	
Back	
LAF	✓
LCF	
LZF	
LAS	
LCS	
LZS	
LAI	
LCI	
LZI	
LAeq	
LCeq	
LZeq	
LAPeak	
LCPeak	
LZPeak	

**Please note:** some noise parameters are unavailable on certain variants of the Optimus+.

2.1.2 Using the live data screen



This screen displays live noise data for any two chosen parameters (which can be changed by pressing the arrows on the chosen parameter).

The graphs refresh every second and provide a visual representation of the noise levels where your Optimus+ is measuring.

2.1.3 Using the octaves screen

The screenshot displays the 'Octaves' screen of the Optimus app. At the top, a red header bar contains a back arrow, the device ID 'G300022', and a battery icon at 50%. Below the header, the title 'Octave Band Leq.1s' is displayed. The main content area is a table showing the sound level in dB for various octave bands. The table has two columns and five rows of data. The values are as follows:

31.5Hz	63Hz
<b>53.87 dB</b>	<b>45.70 dB</b>
125Hz	250Hz
<b>47.07 dB</b>	<b>48.36 dB</b>
500Hz	1kHz
<b>49.21 dB</b>	<b>51.78 dB</b>
2kHz	4kHz
<b>45.01 dB</b>	<b>44.40 dB</b>
8kHz	16kHz
<b>44.62 dB</b>	<b>39.18 dB</b>

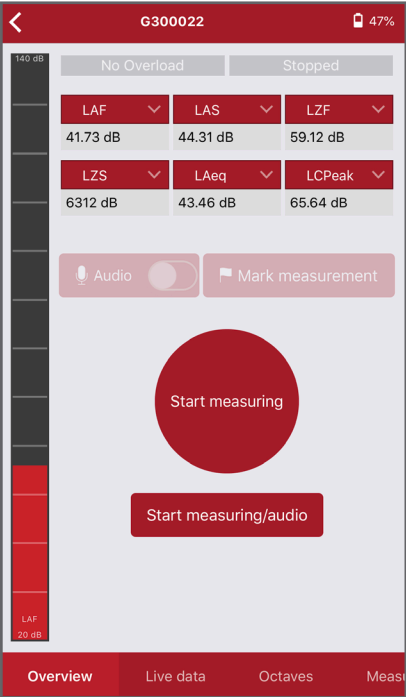
This screen displays live data for 1:1 octave bands.



## 2.2 Starting and stopping a measurement

As well as being able to view live noise data, dBActive allows you to start and stop noise measurements remotely, meaning that your Optimus+ can be used in potentially hazardous and/or difficult-to-access areas.

### 2.2.1 Starting and stopping a measurement



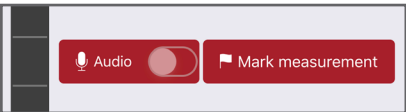
From the overview screen, choose either 'Start measuring' or 'Start measuring/audio' to begin a measurement. If you choose 'Start measuring/audio', the measurement will include an audio recording of the noise. If you choose 'Start measuring', audio will not be recorded.

**Please note:** audio recording can be switched on/off manually during a measurement using the option above the start button. Audio recording is only available on certain variants of the Optimus+.

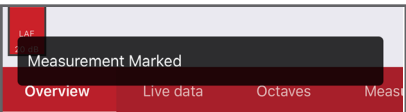
When a measurement is in process, the red start button changes to a green stop button. Press this to end your measurement.



### 2.2.2 Marking a measurement



If you need to highlight a specific event during a measurement for when you come to review your data in the NoiseTools analysis software (supplied with your Optimus+), press 'Mark measurement' when a measurement is in process.

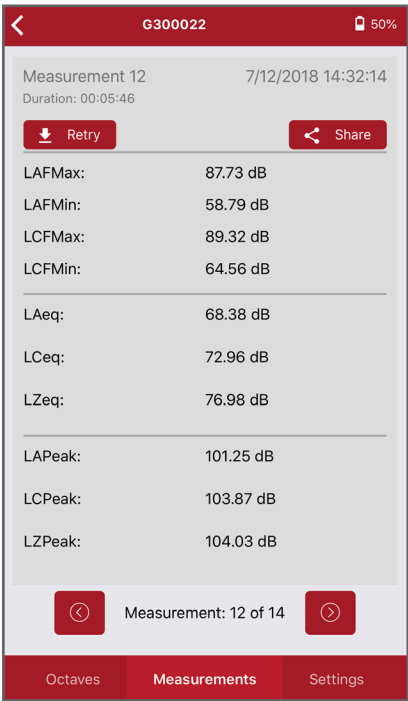


A confirmation box will appear at the bottom of the screen to let you know that the measurement has been marked.

### 2.3 Reviewing measurement data

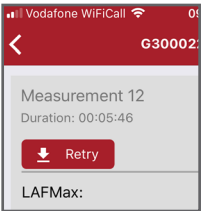
The 'Measurements' screen allows you to review previous measurement data for the connected instrument. This includes both measurements that have been made on dBActive and those that have been made natively on your Optimus+.

#### 2.3.1 Reviewing measurements



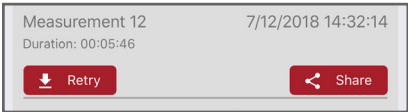
This screen displays the data for all main noise parameters. You can cycle through measurements by using the arrows at the bottom of the screen.

If you're experiencing issues downloading your measurement data or the app is displaying measurements from a previously connected instrument, press 'Retry' to refresh the information displayed.

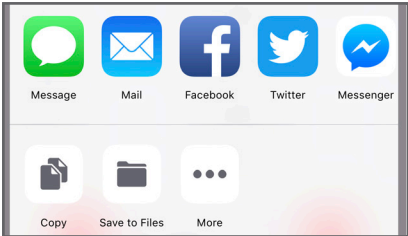


**Please note:** you must ensure that any measurement data you wish to keep is either stored on your Optimus+ or downloaded to a PC using NoiseTools. Measurement data is not permanently stored in dBActive and will be overwritten once a different instrument is connected to the app.

#### 2.2.2 Sharing measurement data



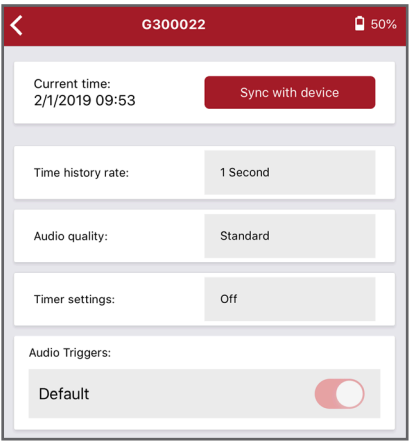
If you want to share measurement data, press the 'Share' button.



A popup box will appear listing the options available. The measurement data will be shared as a text-only list, which you will then be able to edit as you wish.

**Please note:** sharing options will vary depending on the operating system of your device and the third-party applications you have installed.

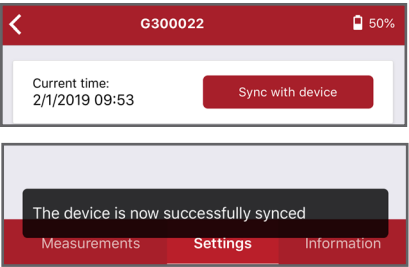
2.4 Changing your instrument's settings



When using your Optimus+ remotely, you can change some of its settings via dBActive on the 'Settings' screen.

From this menu you can change the date/time of your instrument, time history rate, audio quality, and timer settings. You can also turn audio triggers on/off.

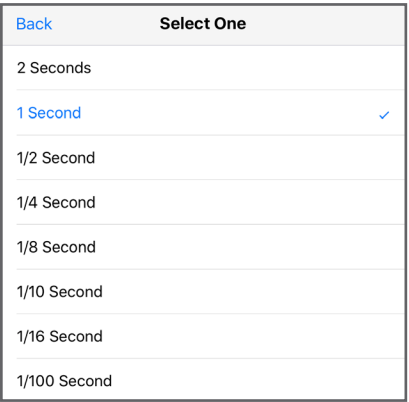
2.4.1 Changing the date and time



Press 'Sync with device' to synchronise your instrument's date/time setting with that of your mobile device.

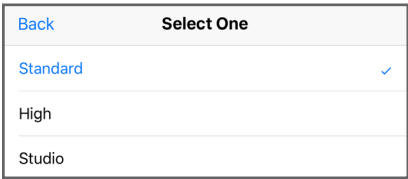
Once complete, a notification will display at the bottom of the screen.

2.4.2 Changing time history rate



Press on the existing option to open a menu, from which you can select a new value.

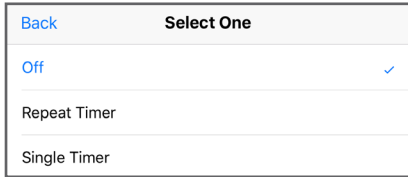
### 2.4.3 Changing audio quality



Press on the existing option to open a menu, from which you can select a new value.

Standard quality (16-bit, 16 kHz)  
High quality (24-bit, 48 kHz)  
Studio quality (32-bit, 96 kHz)

### 2.4.4 Changing timer settings



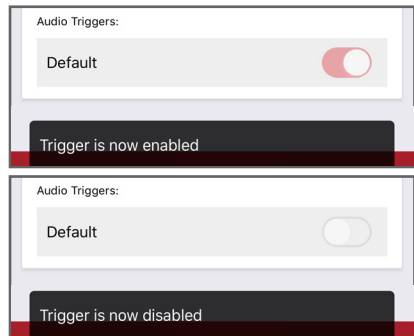
Press on the existing option to open a menu, from which you can select a new value.

Repeat timer - allows measurements to be stopped and started automatically over a long period of time. The repeat timer is synchronised

to the real-time clock, so if you choose a 30 minute duration, the measurement will begin on the hour and at 30 minutes past. When the measurement ends, a new one will begin and last for the next 30 minute interval.

Single timer - The single timer allows measurements to automatically stop after a pre-defined period of time. If you set the single timer duration to 15 minutes and enable the single timer option, then all measurements will automatically stop after 15 minutes.

### 2.4.5 Turning audio triggers on/off



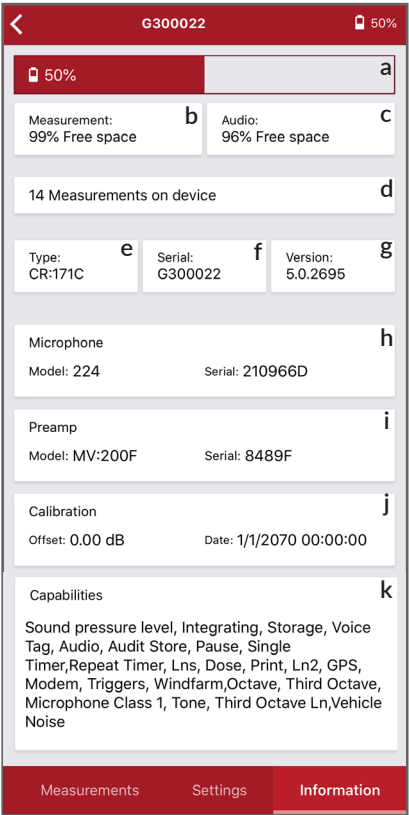
Press on the switch to either turn audio triggers on or off.

An audio trigger will start your instrument recording the audio and noise levels when a certain threshold has been met. This setting can be customised on your Optimus+.

A confirmation message will display after the setting has been selected.

2.5 Viewing information about your instrument

The last screen in dBActive displays information about your Optimus+ instrument.



- a. current battery level
- b. % free space for measurement data
- c. % free space for audio recordings
- d. number of measurements saved on your instrument
- e. your instrument's type
- f. unique serial number for your instrument
- g. firmware version installed on your instrument
- h. microphone information (model and serial number)
- i. preamplifier information (model and serial number)
- j. offset value based on the last calibration of your instrument and the date/time it was last calibrated
- k. full list of capabilities/features of your instrument

# ALSO AVAILABLE IN NOISE MONITORING

doseBadge™  
The original wireless noise dosimeter

## The world's first wireless dosimeter

- Lightweight and robust design
- No controls, dials or screens
- Completely tamperproof
- Monitor individuals' noise exposure
- Analyse data with licence-free NoiseTools software



doseBadge<sup>5</sup>  
The new generation of noise dosimeter

## Simplicity redefined

- Bluetooth® enabled
- Can be operated through a smartphone app
- Includes 1:1 octave band filters
- Custom timers can be used for scheduled measurements
- New discreet design



SoundSign  
THE NOISE ACTIVATED WARNING SIGN

## Creating safer environments

- Noise-activated warning sign
- Alerts employees as to when PPE is required
- Various messages available
- Different languages available
- Custom noise level trigger can be set





## Cirrus hold UKAS calibration accreditation

We can calibrate sound level meters and acoustic calibrators to the latest British standards, as well as octave band filters.

Having your instruments calibrated to UKAS standards means that the data they record is completely accurate, reliable and traceable.

We also offer standard traceable calibration for all types of noise monitoring equipment and vibration meters, from any manufacturer

## TRAINING

### Need more support in using your instruments?

Whether it's product-specific training, noise at work awareness or environmental noise training, Cirrus Research offers a host of courses to help you become more confident when it comes noise.

With locations across the UK and dates throughout the year, our courses are perfect for anyone who's just starting out in noise measurement, or for those seasoned professionals looking to freshen up their knowledge.

For every hour you spend at one of our training courses, you'll earn an hour of CPD.

