SoundEar®3

MANUAL – UK

MODEL 300

MODEL 310

MODEL 320

32.5

38.5

SoundEar 3⁺

SoundEar®3

680

SoundEar A/S
www.soundear.com

TABLE OF CONTENTS

CONGRATULATIONS ON YOUR NEW

SoundEar®3

We are pleased that you selected one of our products to help you create a better auditory environment for yourself and others. This instruction manual provides information on how to fully take advantage of your product.

For a complete understanding of the features and possibilities of SoundEar®3, we advise you to read this manual carefully before you start using your SoundEar®3.

Please find the latest updates for software and the manual on our web site www.soundear.com/downloads

If you have any questions or comments please contact us at: soundear@soundear.com

Yours sincerely,
SoundEar A/S

SE300   SE320   SE310

BOX CONTENT

....
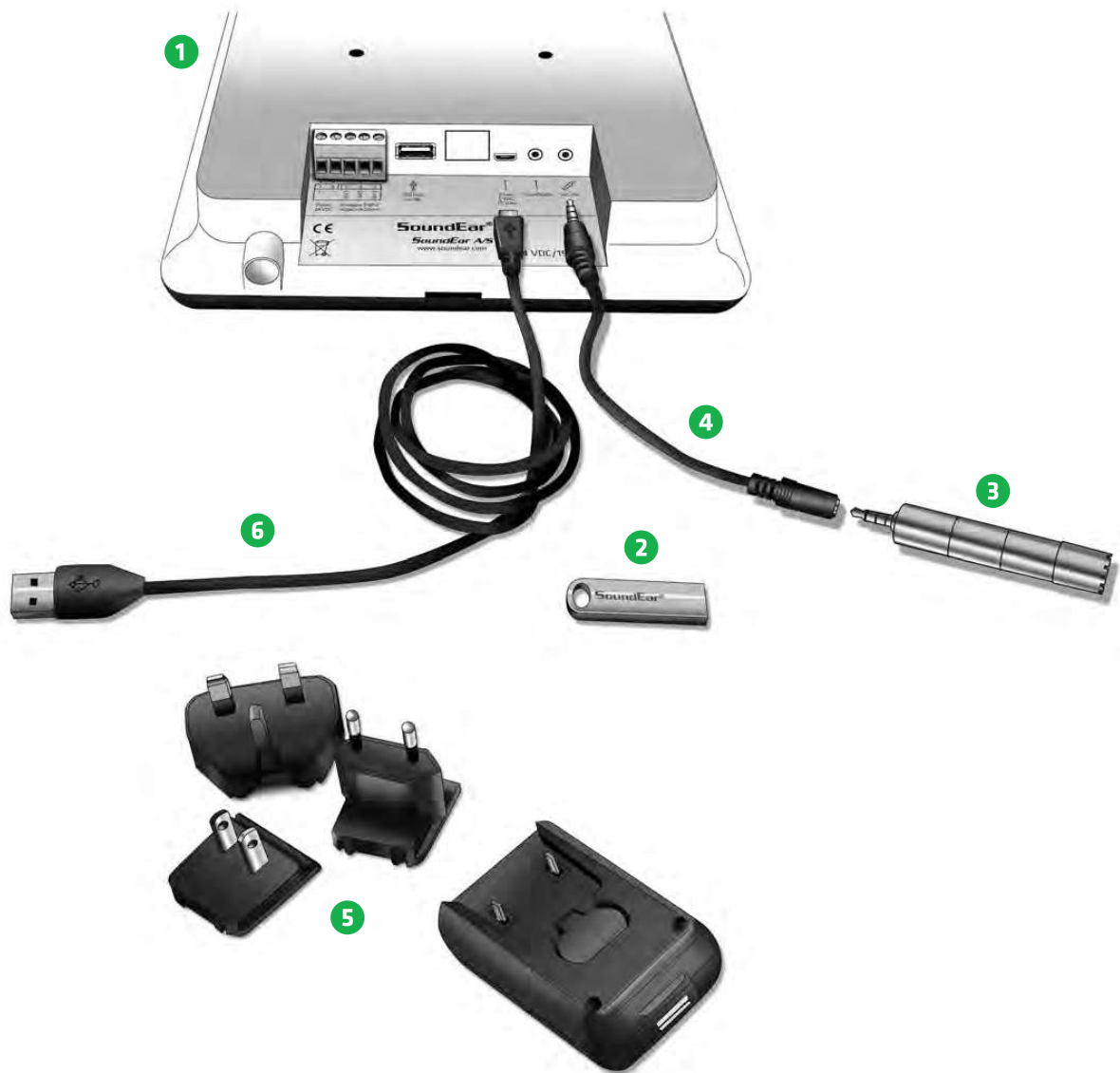
Check package contents depending on the package purchased.

1. SoundEar®3
2. USB key with software
3. External microphone
4. Four pole extension cables for calibration
5. Power adaptor with EU, US and UK plug
6. USB adaptor cable

When choosing a location for your SoundEar®3, please make sure to follow the instructions below:
1. Make sure not to cover the microphone at the bottom of the device.
2. Avoid placing SoundEar®3 close to sound absorbing materials.

DIRECTLY ON THE WALL:

Model 300 or 310

Check if there is an available plug socket nearby. Fasten a screw (diameter 8-9mm.) to the wall 150-200 cm above the floor. Check if the cabinet is attached securely. If you are using a Vesa wall mount, please consult the included user manual.

Model 320

Loosen the screw to remove the wall mount.
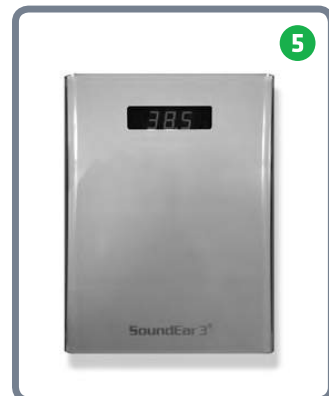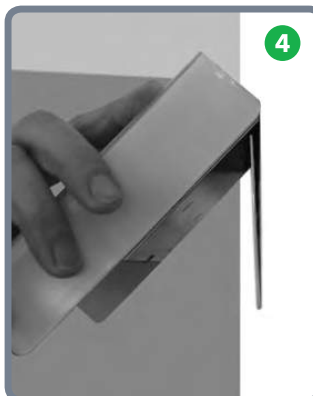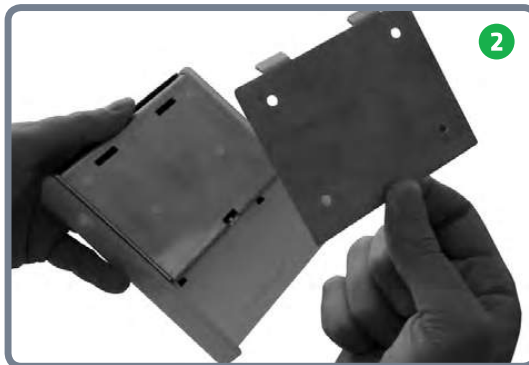
Fasten the wall mount to the wall with 4 screws. Hang SoundEar®3-320 onto the wall mount and fasten it with the screw.

SET TIME

SoundEar®3 has a built-in time and date function that will set automatically when you connect the device to your PC.

FORMATTING THE USB KEY

The USB key included is formatted in the format called "FAT32".

If you wish to use an alternative USB key with a larger memory, it is important that it has the same format. Please follow the steps below to format your USB key.

NOTE! Remember to export any files you may have on your USB key before formatting, as the formatting will override all existing files.

1. Connect the USB key to your PC.
2. Right-click on the USB drive.
3. Select "Format" from the drop-down menu.
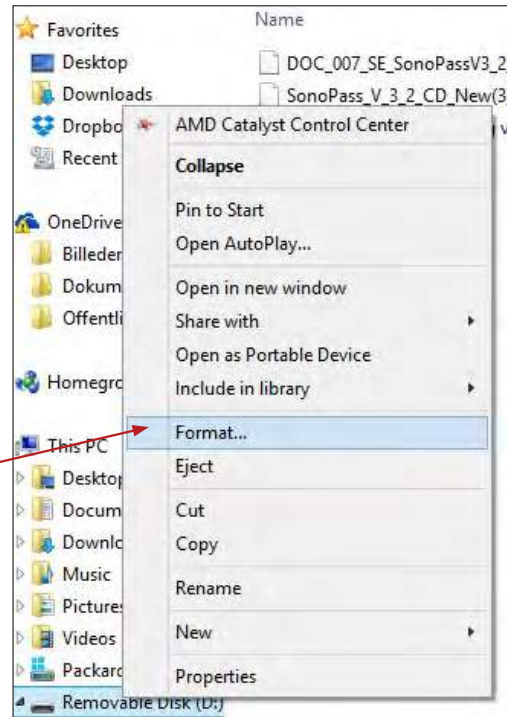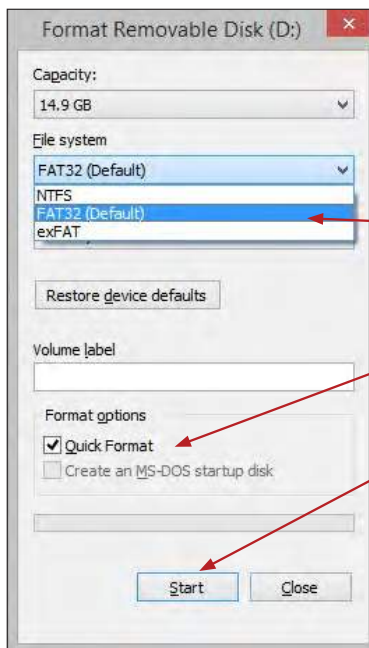
4. Select "Fat 32" under File System.

5. Check the box "Quick Format".

6. Click "Start".

7. The USB key is now ready for use.

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USING THE TOUCH DISPLAY

Located on the front of SoundEar®3 you will find a touch display from which you can control the device manually.

The functions of the touch display include setting alarm levels, time, current noise level (LAeq1s), and on/off function for the mini display.

Use the horizontal arrow heads to navigate between the different options.

Use the vertical arrow heads to set the alarm level.

PLEASE NOTE! To lock the touch display, please go to "Display Settings" in the software.
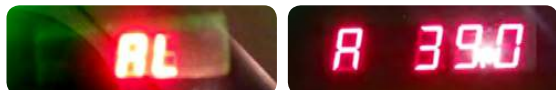
TOUCH DISPLAY OPTIONS

Clock – See the time in the mini display
The time settings will sync automatically when you connect SoundEar®3 to your PC for the first time.

AL – Set alarm level
Set the visual alarm level.

With the horizontal arrow heads select the "AL" function. Place a finger on either of the vertical arrow heads to set the alarm level. Hold your finger down until the desired alarm level is reached.

Example: If the alarm is set to 80 dB, the red light will be lit when the noise level reaches 80 dB. As a standard setting, the yellow light will be lit 5 dB before the alarm level is reached, in this case at 75 dB.

PLEASE NOTE! Changing the alarm level on the touch display will override any special settings made in "Light Settings" in the software.

LAeq1s – Shows the current noise level as an
A weighted average over the last second.

OFF – Turn off the mini display.
When turned off, a small red light will be lit to indicate that the device is turned on.

WHAT NOISE LIMITS TO CHOOSE

Setting the right noise limit on your SoundEa®3 device is an important step. This means the difference between the SoundEar flashing red all the time, or not at all. We recommend that you start out with an estimated noise limit, and make sure to re-evaluate after a week or two.

Here are our recommendations on noise levels for different auditive environments:

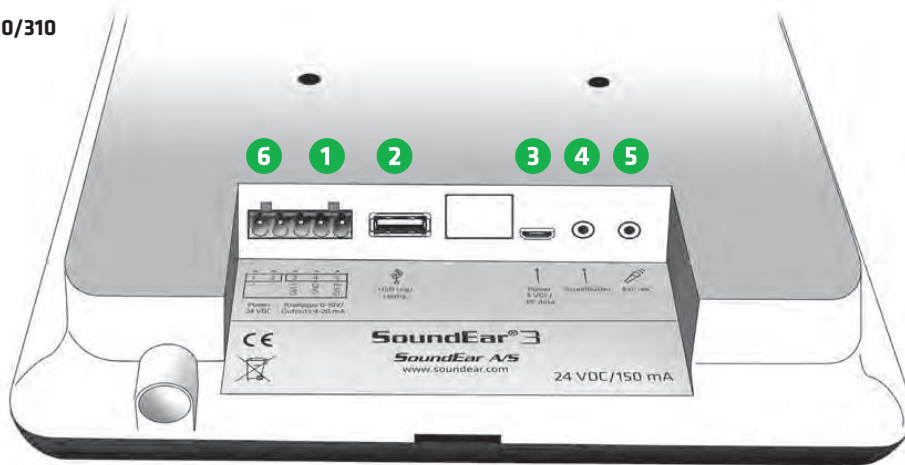| Auditive Environment	Noise limit in dB
Exam - No disruptive noise - Intense concentration	35 - 45 dB
Operating rooms, Neonatal Departments	35 - 45 dB
Educational, schools	50 - 60 dB
Open-plan offices, call centers	55 - 65 dB
Industry without noisy machines Storage, assembly and laboratory work	60 - 70 dB
Day care	70 - 80 dB
Factories with noisy machines	75 - 85 dB
Concerts etc., rehearsal rooms, music schools (shorter stays)	92 - 105 dB

You may also find inspiration to setting the right noise limits at soundear.com/blog

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HOW TO USE YOUR SOUNDEAR 3 DEVICE

Find out how to get started using your SoundEar®3 device here. If you prefer a video instruction of the SoundEar®3 device, look **at the presentational video on YouTube**.

CONNECTING YOUR SOUNDEAR®3 – 300/310 AND 320

Model 300/310

1. Analog output. Connect your external system here, if you have one
2. USB port. Insert SoundEar USB drive here to download measurements or USB dongle for wireless connectivity
3. Power supply. Insert power supply here
4. SoundBuster. Connect your SoundBuster here, if you have one
5. External mic. Insert your microphone here
6. Connect your device to power

CONNECTING YOUR SOUNDEAR®3 – 300/310 AND 320

Model 320
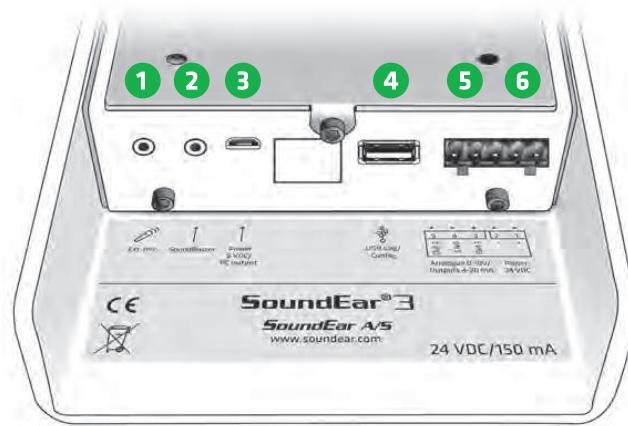
1. External mic. Insert your microphone here
2. SoundBuster. Connect your SoundBuster here, if you have one
3. Power supply. Insert power supply here
4. USB port. Insert SoundEar USB drive here to download measurements or USB dongle for wireless connectivity
5. Analog output. Connect your external system here, if you have one
6. Connect your device to power

HOW TO USE THE SOUNDEAR SOFTWARE

This chapter helps you get acquainted with the software

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SOUNDEAR SOFTWARE INSTALLATION

Please find the software on the included USB key

....
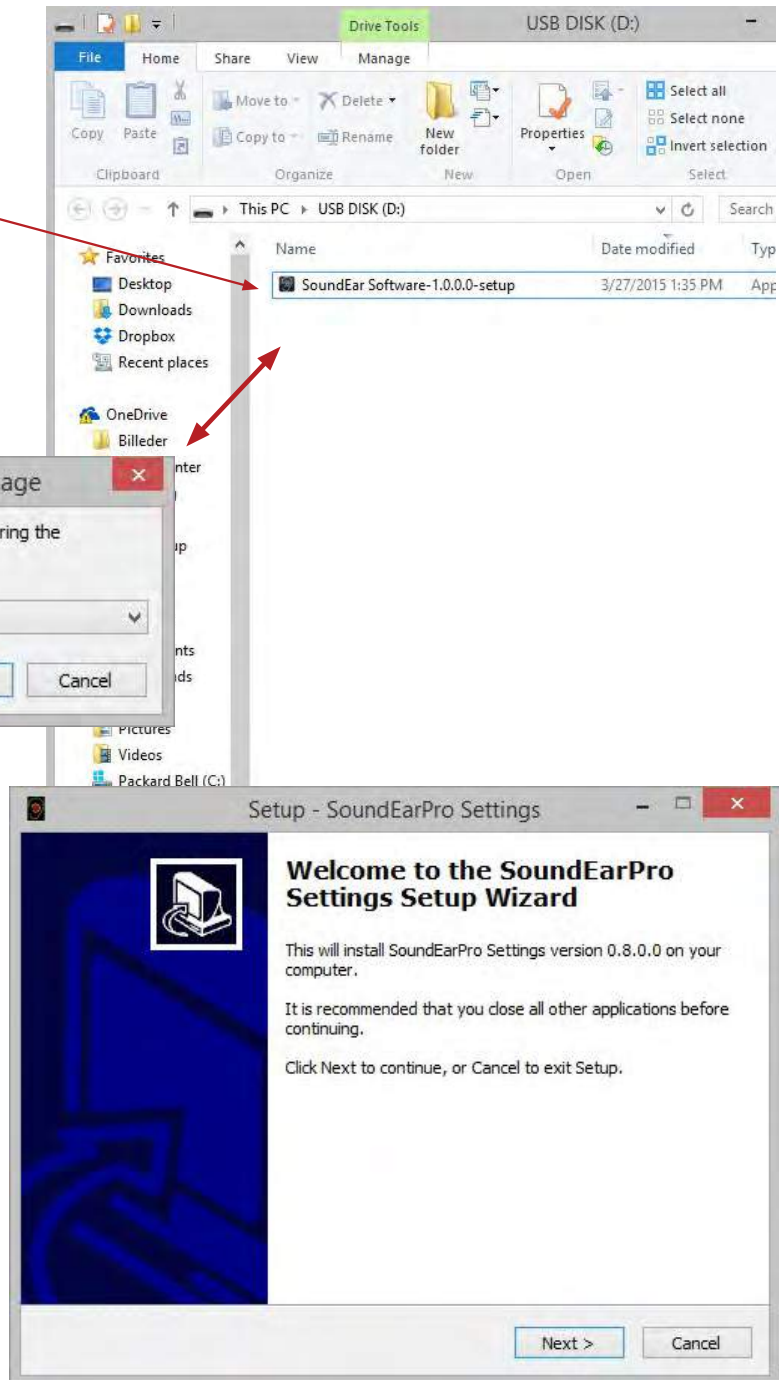
Insert the USB key in your PC's USB port.

Double-click on the SoundEar®3 installation programme to begin the software installation.

Select language to be used for the software installation.
Click OK.

Follow the instructions and complete the installation.

....

OPENING THE SOUNDEAR SOFTWARE

You will be met by two different popup windows first time you open the software depending on if you have your device connected to your laptop or not.

IF THE DEVICE IS NOT CONNECTED

The SoundEar software will as standard run with the skin for the SoundEar®3 – 300 but you can choose a different skin depending on which device you are using.
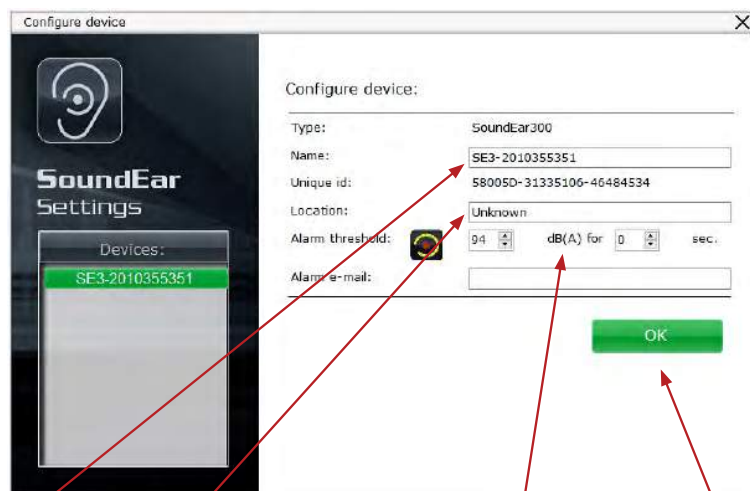
NOTE! Check the box "Run as standard" before choosing which skin you want to use if you want the software to run with your selection as your standard skin.
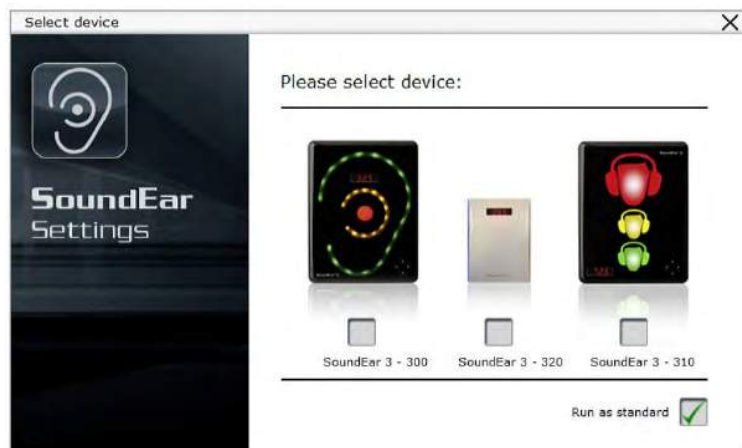
IF THE DEVICE IS CONNECTED

If your device is not configured, this welcome screen will appear. Here you can:

1.
Name the device. If not configured, the software will store the measurements using the devices unique ID.

2.
Location.

3.
Set a threshold for when you want to receive an alarm email.

4.
Click "OK" to save your configuration.
Click "X" in the upper right corner to close this window.

NOTE! These settings can also be done in the menu "Define settings" in the software.

In the menu **'Presets'** there are several different preset noise limits to choose from. Use any of these if they correspond to your expected noise level.

1. Select the preset noise-limit that meets your noise expectations.

2. Press "Configure"
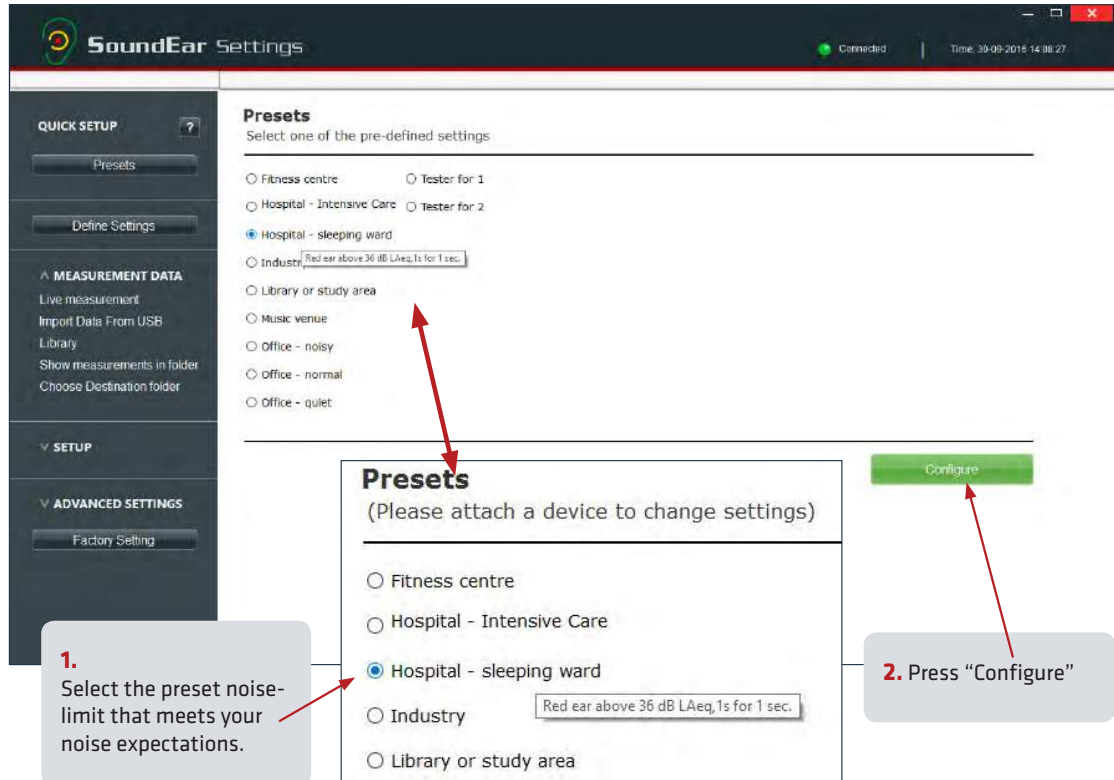
NOTE! If you hold the cursor over the different presets you can see the light settings and reaction time for the pre-set.

In this example, we are choosing "Hospital – sleeping ward" which has visual red ear alarm when the noise exceeds 36 dB Laeq1s for more than 1 sec.

PRESETTING
The persets only relates to the red alarm signal. The yellow alarm indicator is activated 5 dB prior to the red alarm while the green part of the ear is always lit.

Location	Visual Alarm	Reaction time
Fitness center	Red ear above 85 dB LAeq 1s	1,5 sec
Hospital - Intensive care	Red ear above 45 dB LAeq 1s	1 sec
Hospital - Sleeping ward	Red Ear above 36 dB LAeq 1s	1 sec
Industry	Red ear above 85 dB LAeq 1s	1 sec
Library or study area	Red ear above 55 dB LAeq 1s	1 sec
Music venue	Red ear above 90 dB LAeq 1 s	2 sec
Office - Noisy	Red ear above 70 dB LAeq 1s	2 sec
Office - Normal	Red ear above 65 dB LAeq 1s	2 sec
Office - Quiet	Red ear above 60 dB LAeq 1s	2 sec

DEFINE SETTINGS – SOUNDEAR®3
If the presets do not match your expected noise level, you can use 'Define Settings' to make your own settings.

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LIGHT DAY (300 – 310)

1. Use the slider to set the limit for the green, yellow and red ear. For now, we will set the yellow ear to 60 dB and red to 75 dB.

2. Choose how long the noise level should be exceeded before the red ear turns on. Here we have chosen 2 sec.

3. Choose whether the red ear should flash or just be lit, and for how long.

4. As a standard, the visual alarm is measured in LAeq1s. If needed you can also chose LAF max, LAS max or LC peak*. Here, we will choose LAeq 1s.
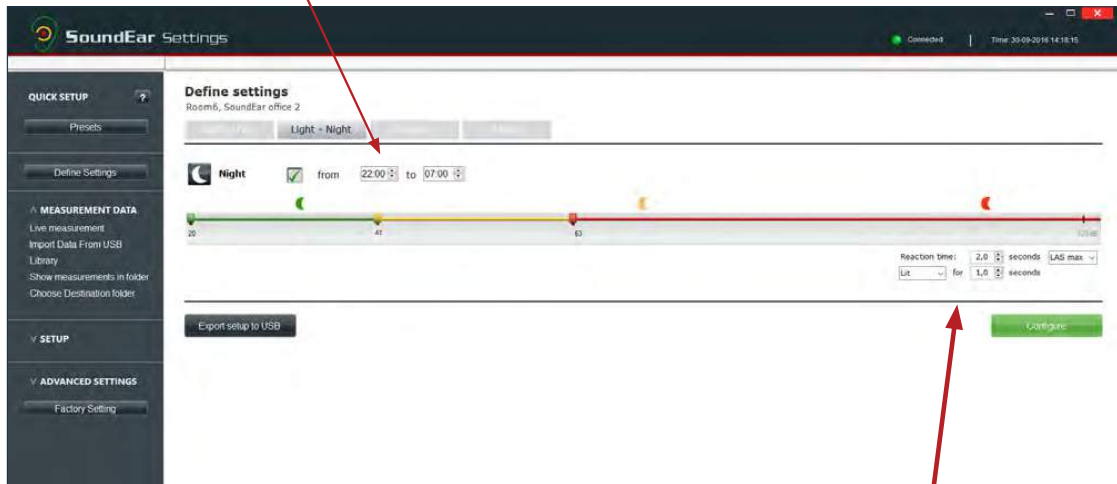
5. Press configure.
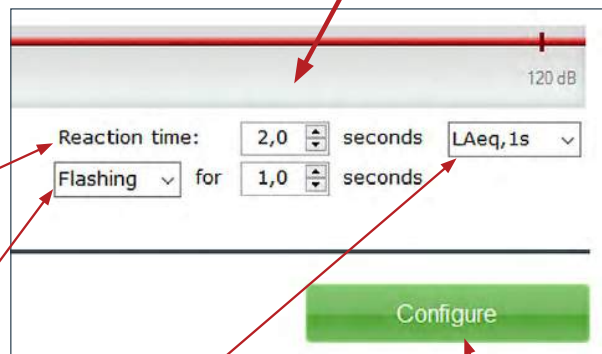
LIGHT NIGHT (300 – 310)
If needed, you can have an alternate setting during the night.

1. Check the 'Night' box and set the time period for your night settings. In this example, it is set to start at 22:00 in the evening and end at 07:00 in the morning.


2. Set the limits for green, yellow and red ear using the slider. In this example, we will set them all to 60 dB. This allows you to turn off the light emanating from the device, preventing it from disturbing people while they sleep.

3. Choose how long the noise level should be exceeded before the red ear turns on. Here, the whole ear will light up if the noise exceeds 60 dB for more than two seconds.
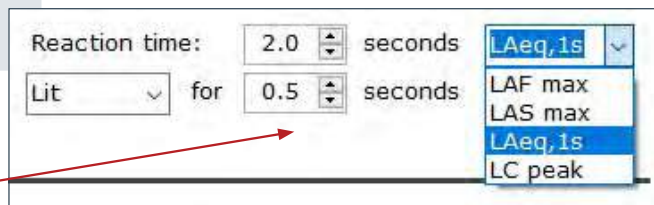
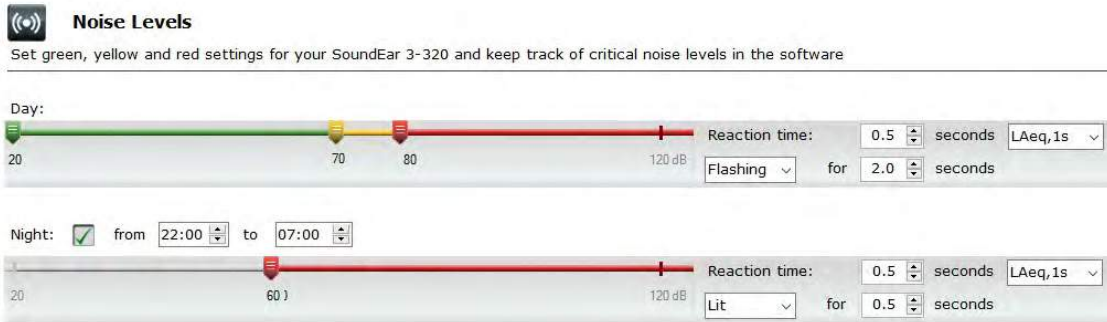**4.** You can also choose if you want the red alarm to be lit or flashing and for how long.
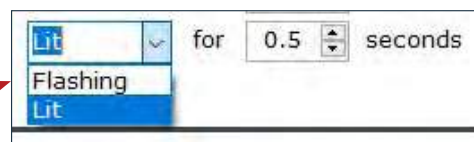
5. Press configure.

DEFINE SETTINGS – SOUNDEAR®3

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NOISE LEVELS (320)

Even though the 320 does not have a visual alarm you can still set the background in live measurements to make it easy for you to see when the noise level has been exceeded.
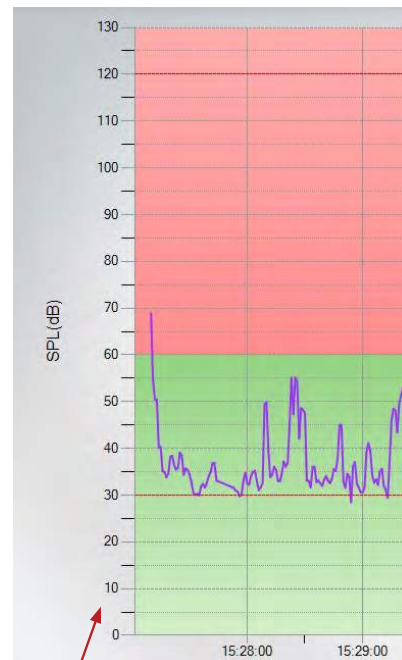
Set green, yellow and red settings.

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When looking at the live measurements, your screen background will show your settings.

Red:
80 – 120 dB

Yellow: 70 – 80 dB

Green:
20 – 70 dB

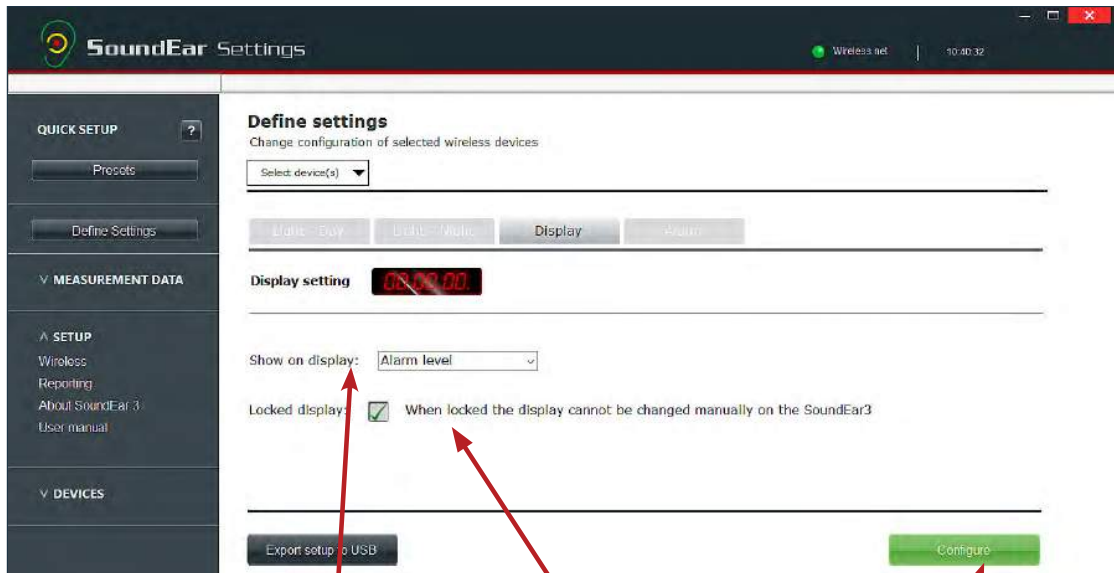If you want an alternate night setting, check the box 'Night' and create your settings.

After 22:00 your screen will now show your night settings:
• Green: 20 – 60 dB
• Red: 60 – 120 dB

....

DISPLAY (300 – 310 – 320)
Choose what to show in the mini display for your SoundEar®3

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3. When you have made your settings, press 'Configure'.

1. Choose in the dropdown, whether you want the display to show the time, the current noise level in LAeq 1 second, or the alarm level for the red ear. You can also choose to turn the mini display off.

2. If you do not want anyone to be able to change these settings manually on the device, check the 'Locked Display' box.

DEFINE SETTINGS – SOUNDEAR®3

....

ALARM (300 – 310 – 320)
How to get email notifications about critical noise levels – using the 'Alarm' setting:
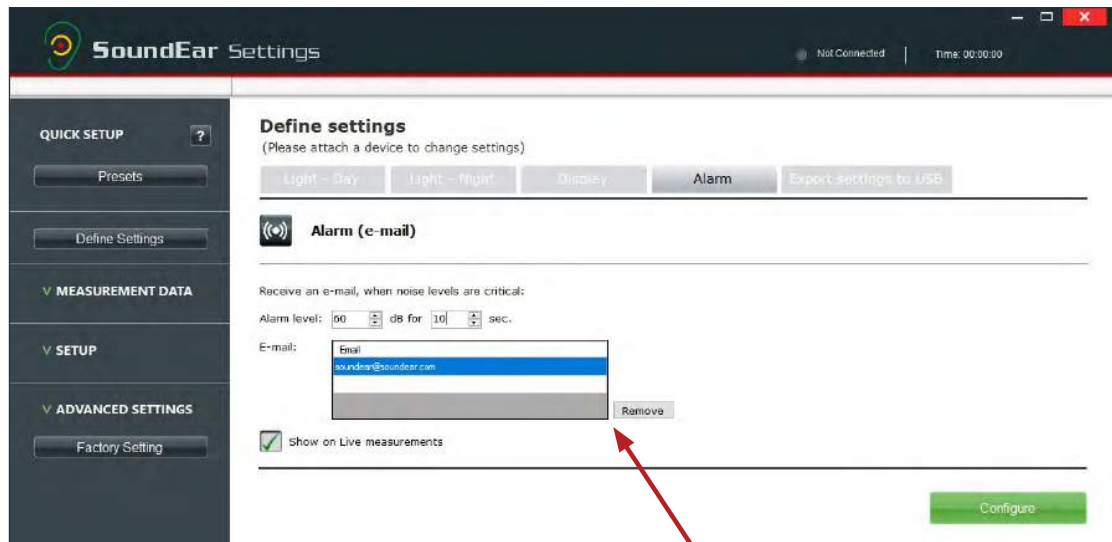
1. Select the noise limit and duration at which the system will send an email notification. In this case, 60 dB for more than 10 seconds.

2. Choose which email addresses you want the notifications sent to.

3. Check the 'Show on live measurements' box, if you want the alarm level to show in the 'Live Measurement' view for your device.
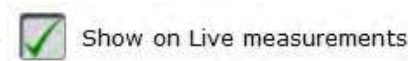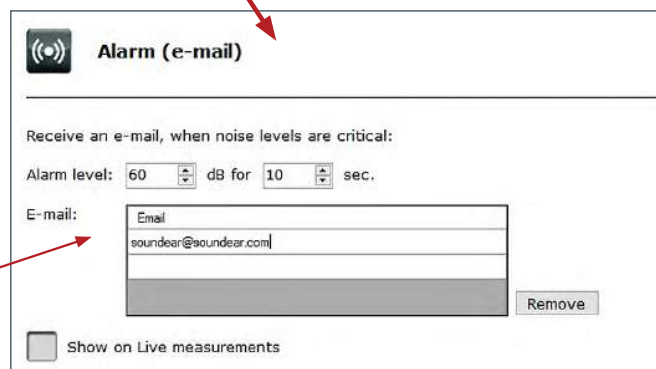
4. When you have created your settings, press 'Configure'.

NOTE! You can only send alarm notifications if your device is connected to a laptop with the software running.

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ALARM (300 – 310 – 320)
Show the alarm level in the **'Live Measurement'** view for your device.

EXPORT SETTINGS TO USB (300, 310, 320)
You can choose to configure your SoundEar®3 device manually by exporting your settings to a USB drive.
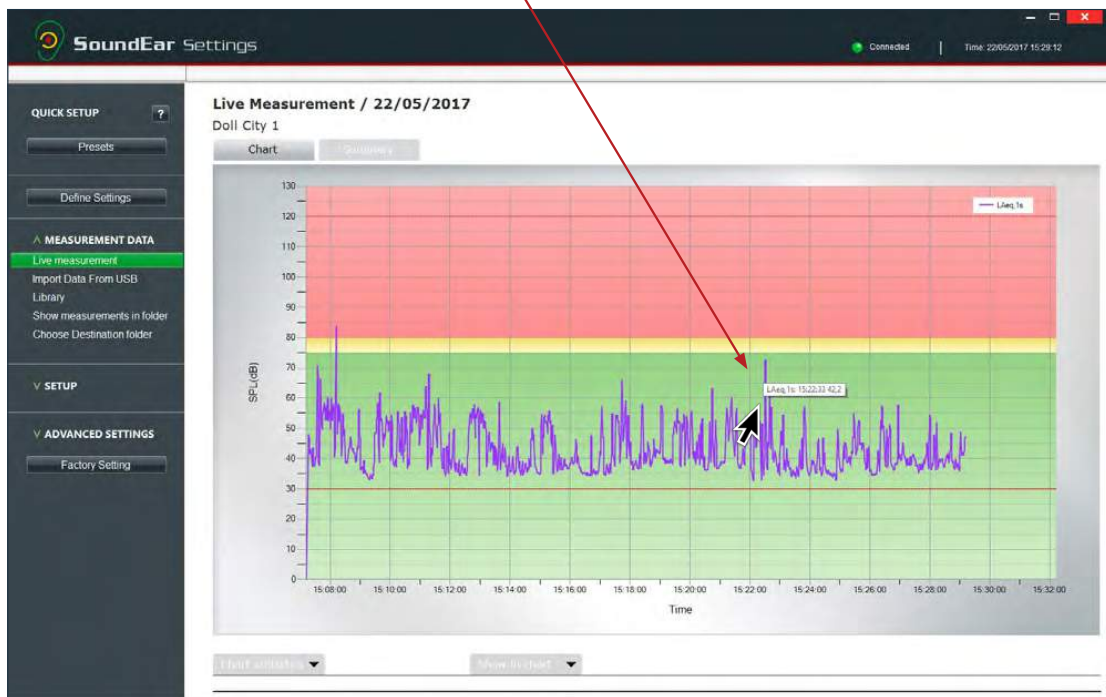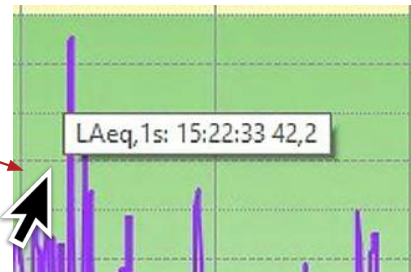
1. Go through each of the tabs in 'Define Settings' and create your settings without pressing configure.
2. Return to the tab 'Export settings to USB' and press the button 'Export setup to USB'.

NAVIGATING THE SOFTWARE

VIEW MEASUREMENTS AND TIME
Hold the cursor over the graph to view measurement and time.

ZOOM FUNCTION

When data is shown on the graph, it is possible to zoom in on a specific area.
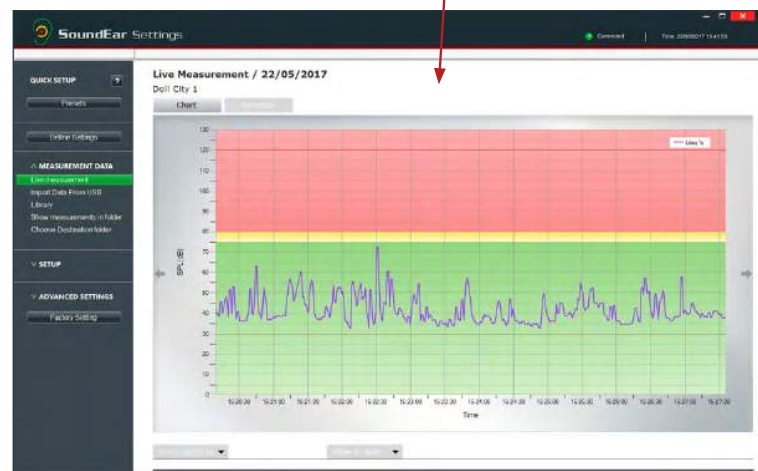
1. Current measurement.

2.
- Position your cursor anywhere on the graph.
- Left-click and use the cursor to pull the box, pulling towards the right.
- Release the cursor when the wanted area is selected.
- View the magnified area.

3. Selected area.

**HOW TO EXIT
THE ZOOM FUNCTION:**

1. Position your cursor anywhere on the graph.

2. Left-click and use the cursor to pull the box, pulling towards the left until the box is visible again.

MEASUREMENT DATA

In the drop-down menu for **'Measurement Data'** you will find the settings that have do to with how you view the data, both live measurements and from the measurement library.

LIVE MEASUREMENT

If your SoundEar®3 device is connected to your PC you will be able to view what is being measured live in the tab 'Chart'.

Chart Statistic   **Show in chart**

CHART

The background shows the light settings for the visual alarm if you have a SoundEar®3 300 or 310.

If you have a SoundEar®3 320 it will show your settings so you can see when the noise level has been exceeded.

As standard, the graph will show LAeq, 1s

CHART STATISTICS, PEAK COUNT

Below the graph you have the tab **'Chart Statistics'**. This gives you an overview of what has been measured and the number of peaks. Click the arrow to open the tab.

The box 'LAeq, total' shows the average LAeq of what has been measured. You can get more info if you hold the cursor over the box

The peak count shows how many peaks there have been within the measured time period. The total number of peaks is fourteen.
>105 dB(C) - 14
106 – 110 dB(C) – 2
111 – 115 dB(C) – 2
116 – 120 dB(C) – 5
120 dB(C)< - 5

The peak max shows the highest measured dB(C) peak value.

When you are done, click the arrow to minimize the tab.

SHOW IN CHART

Click on the tab **'Show in chart'** if you want to change the value of the graph. You can grab the cursor and change the view from LAeq 1s to either LAeq1/4h m or LAeq1h.

You can also choose between:
- LCpk max (shows the highest measured C peak value within a second).
- LAF max (LAF is an A-weighted fast measurement. Fast means that it measures 8 times a second, LAF max is the highest measured fast value within a second).
- LAS max (LAS is an A-weighted slow measurement. Slow means that it measures 1 time a second, LAS max is the highest measured slow value within a second).
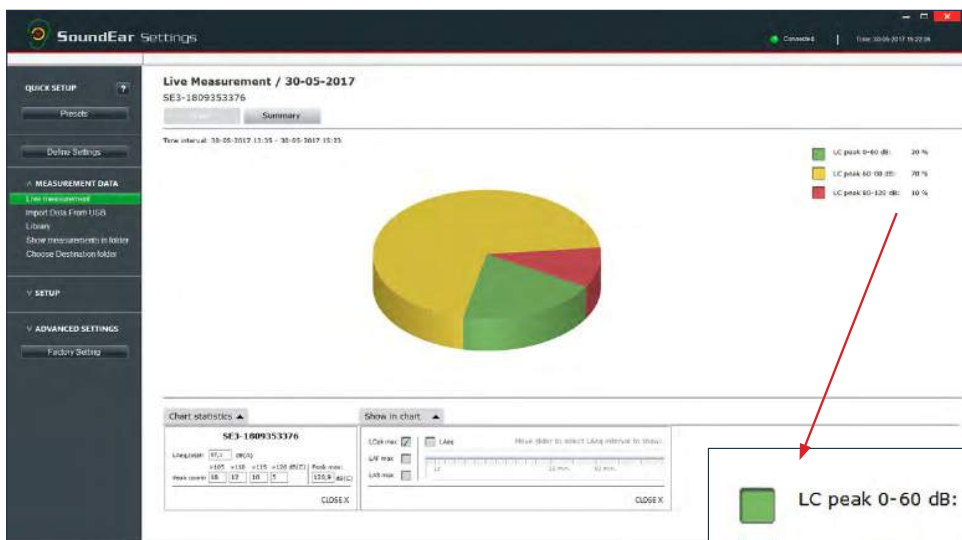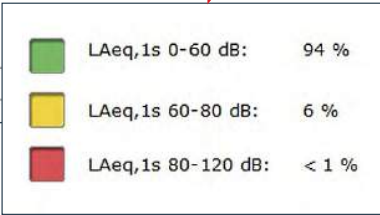
LIVE MEASUREMENT

SUMMARY

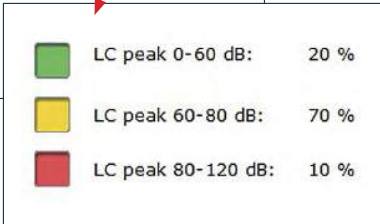In the tab **'Summary'** you will see an overview of what has been measured as a pie chart.
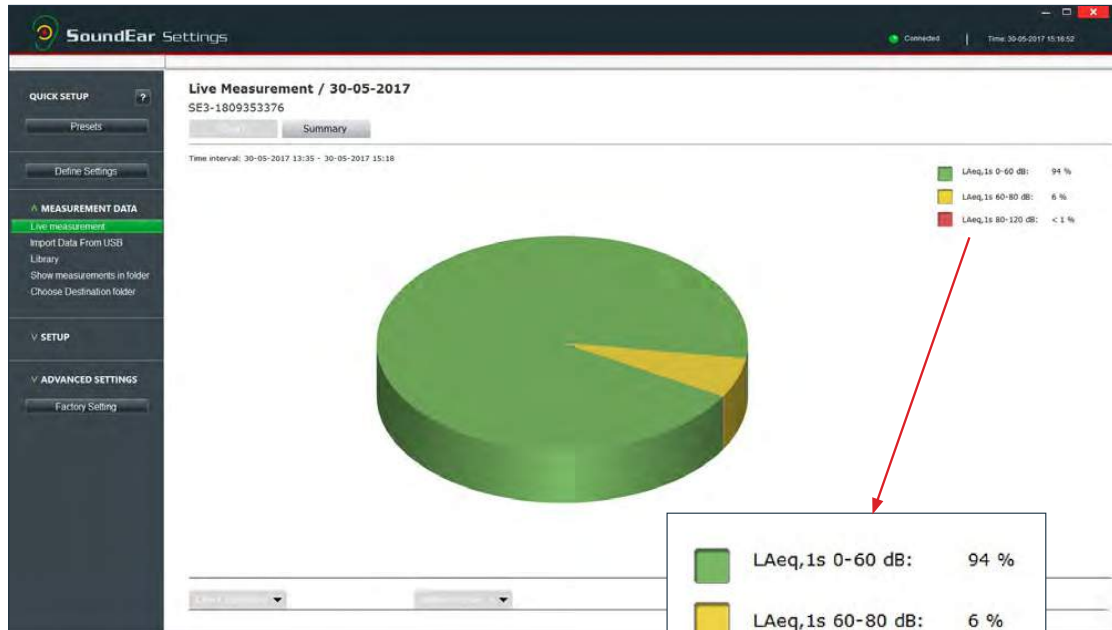
The values of the pie chart are determined by your light settings. You can change the values by changing the light settings in **'Define settings'**.
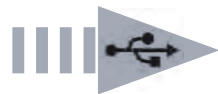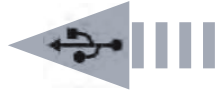

You can also see the summary by clicking on the tab 'Show in chart'. For example, LC Peak.

IMPORT DATA FROM USB

You can extract data from the internal log. The internal log can store your log files for up to 600 days before they are overwritten.


1. Connect the USB key to your SoundEer®3. The words" USB" followed by "Copy" will appear in the mini display. The import will now begin. Counting from 0-100 the mini displays shows the progress of the export to USB. When the mini display shows "100" the export is complete.
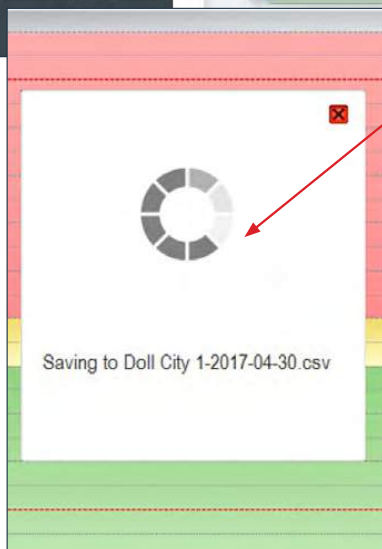
2. Remove the USB key from the SoundEar®3 and insert into your PC.

3. Open the software and click "Import from USB".
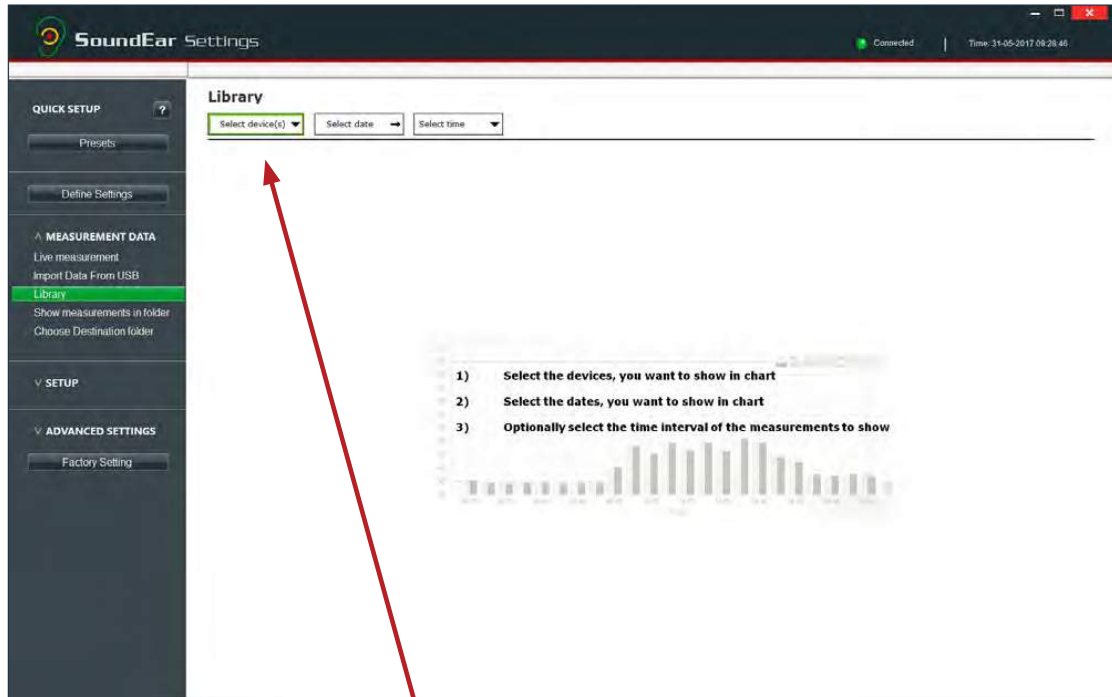
4. Select the file you want to import.
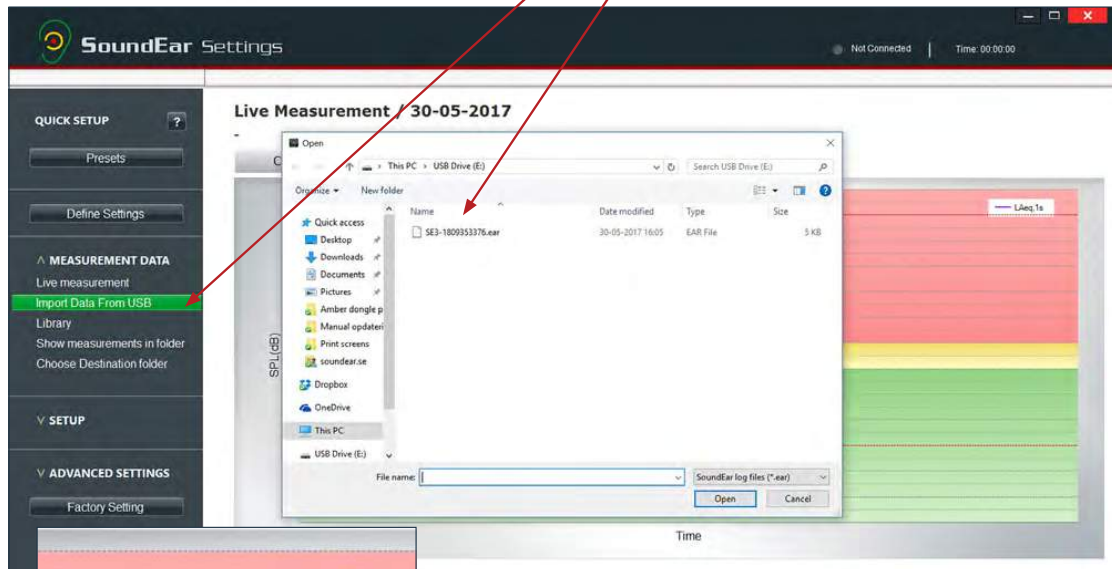
5. The software now converts the ear-file to a CSV-file and saves it in the internal library.

Saving to Doll City 1-2017-04-30.csv

Saving to Doll City 1-2017-05-11.csv
100% complete

LIBRARY

In the **library**, you can find and compare all the measurements you have collected via your SoundEar®3 device.

1. Start by selecting the devices you want to look at.

Library

2. Then select the dates you want to look at.

Dates with data available will be highlighted in a light green color. When you select a date, it will turn a darker shade of green.
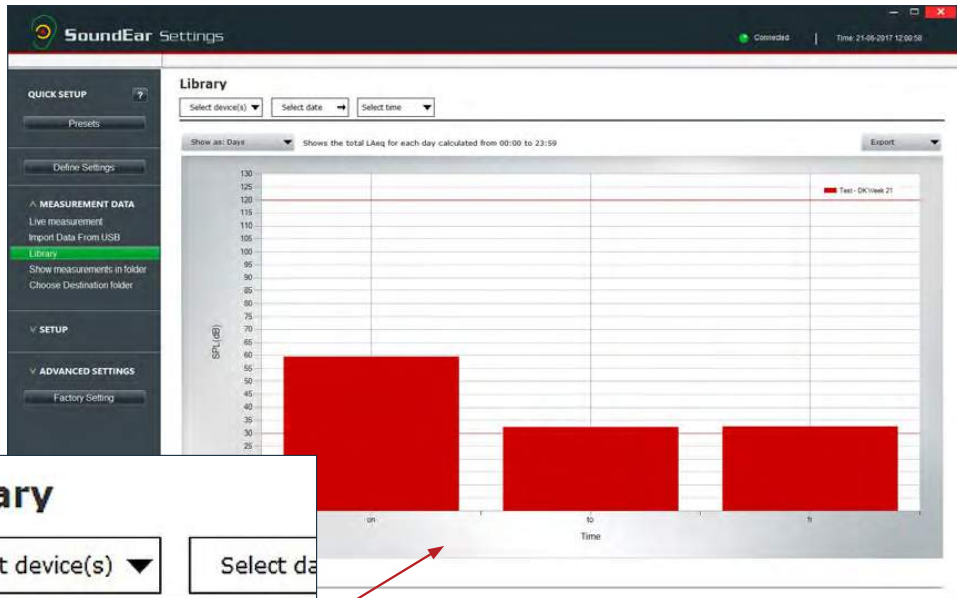

Library

3. Then select what time interval you want to look at by designating the hour and minutes in the drop-down.

Press 'Close' and you will see a bar chart with your data.

By default, you are shown the data as an average for each hour (LAeq, 60 min).

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LIBRARY
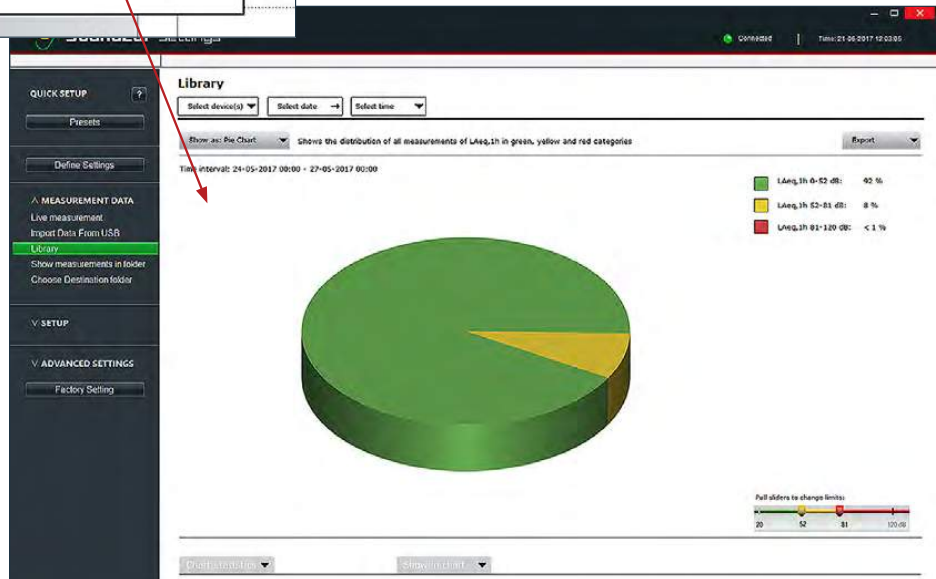

1. You can choose to have your data shown as an average for each day by selecting 'Show as: Days' in the drop-down.

2. Or you can choose to have your data shown as a regular chart or a pie chart in the drop-down.
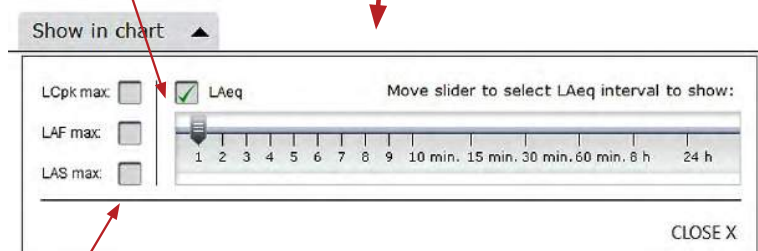
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SHOW IN CHART

As standard the graph will show the average measured over 1 hour (Laeq1h). You can take a closer look at your data by choosing another measurement type in the tab 'Show in chart'.

By dragging the cursor, you can choose to view your data, for example as an average over one minute (LAeq, 1 min) giving you a more detailed look at the noise levels.

Or you can choose to look at other measurement types such as LAF max, LAS max, or LC Peak.

LIBRARY

CHART STATISTICS
View statistics of your noise measurements using the tab 'Chart statistics'

Select the device(s), you want to look at statistics for together with dates and time interval. Click the tab 'Chart statistics' for an overview of min, max and average noise levels, as well as peak levels for your device(s) in the chosen time interval.

If you have chosen more than one device, it will show the measured values for all the devices.

If you have chosen more than one device, it will show the measured values for all the devices.

By clicking the green arrow, you can go back and forth and see the statistics for each device.

EXPORT DATA AS PDF, JPG OR CSV

If you want to save a particular part of your data, you can do so in the **drop-down menu 'Export'** in the upper right corner.

Choose which devices, dates, time period, measurement (Laeq, LCpk max, LAF max, LAS max) and click on the format you wish to export to.
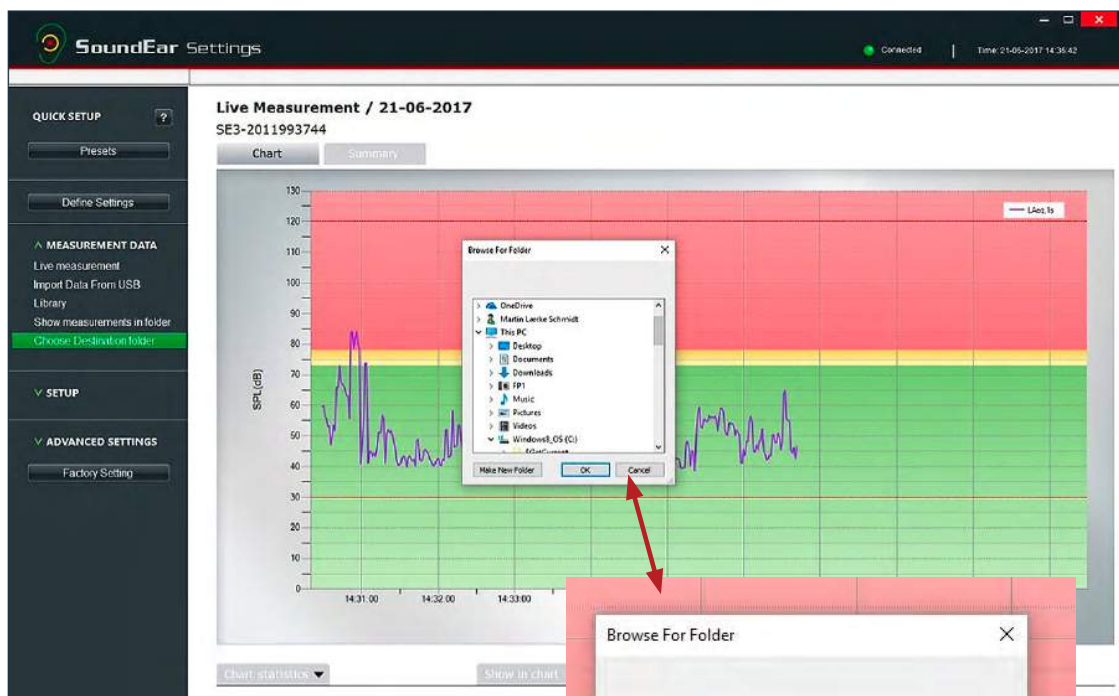
SHOW MEASUREMENTS IN FOLDER
See where your measurements are saved using the menu 'Show measurements in folder.'

Your measurements are automatically saved in a csv format, allowing you to analyze them further in Excel or another data analysis software of your choosing. By clicking here, you will be directed to the root folder where your measurements are saved.

CHOOSE DESTINATION FOLDER
Choose where to save your measurements

If you want to store your noise measurements in a specific folder, you can do so through the 'Choose destination folder' in the menu **'Measurement Data'**.

Choose your destination folder or make a new folder by clicking on 'Make New Folder'.
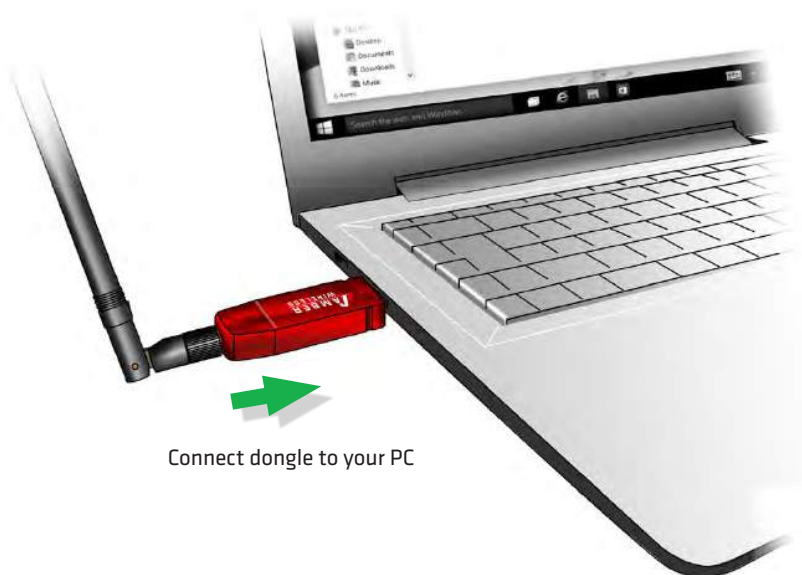
HOW TO USE YOUR WIRELESS SOUNDEAR®3 DEVICE

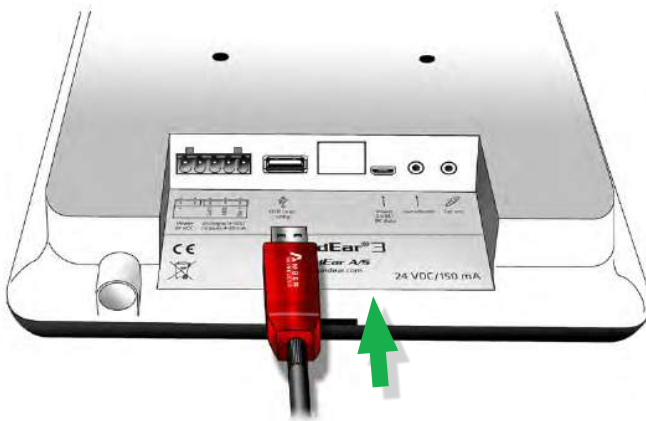To get started, make sure you have all your devices powered up, with the microphones and Wireless dongles plugged in.

Amber wireless USB dongle

Connect dongle to the USB port on your device
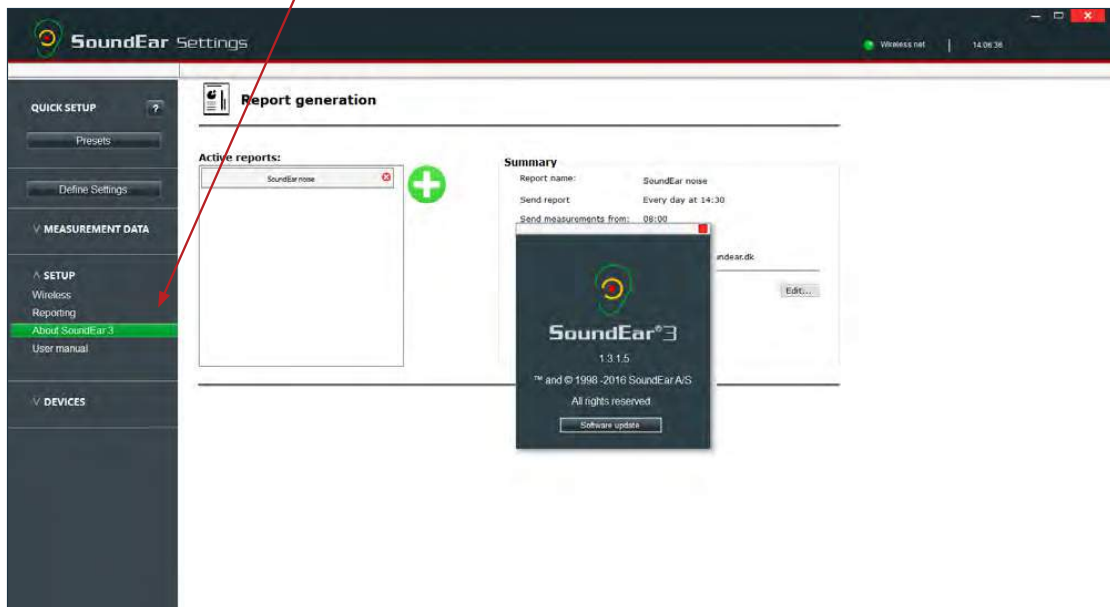
Connect dongle to your PC

Install the software from the SoundEar USB key on your computer. Leave the USB key in your computer. Now plug in a Wireless USB dongle into a USB port on your computer.

Start your SoundEar software and select what type of SoundEar 3 device you are using.

Go to the menu **'Setup' -> 'About SoundEar 3'** to update the software to the latest version.

SETTING UP THE WIRELESS SYSTEM

IF THE SYSTEM IS CONFIGURED FOR YOU BEFOREHAND
You may have chosen to have the system set up for you beforehand.

1. Go to the menu **'Setup' -> 'Wireless'**

2. Choose 'Import device list' – the device list is located on your SoundEar USB key.
The software now imports the devices to the software.

When it is done, check that all devices are delivering data by going to the menu **'Measurement data' -> 'Live measurement'**. When the device is delivering data, it will switch from a gray bar to a green/yellow/red bar, showing current noise levels.
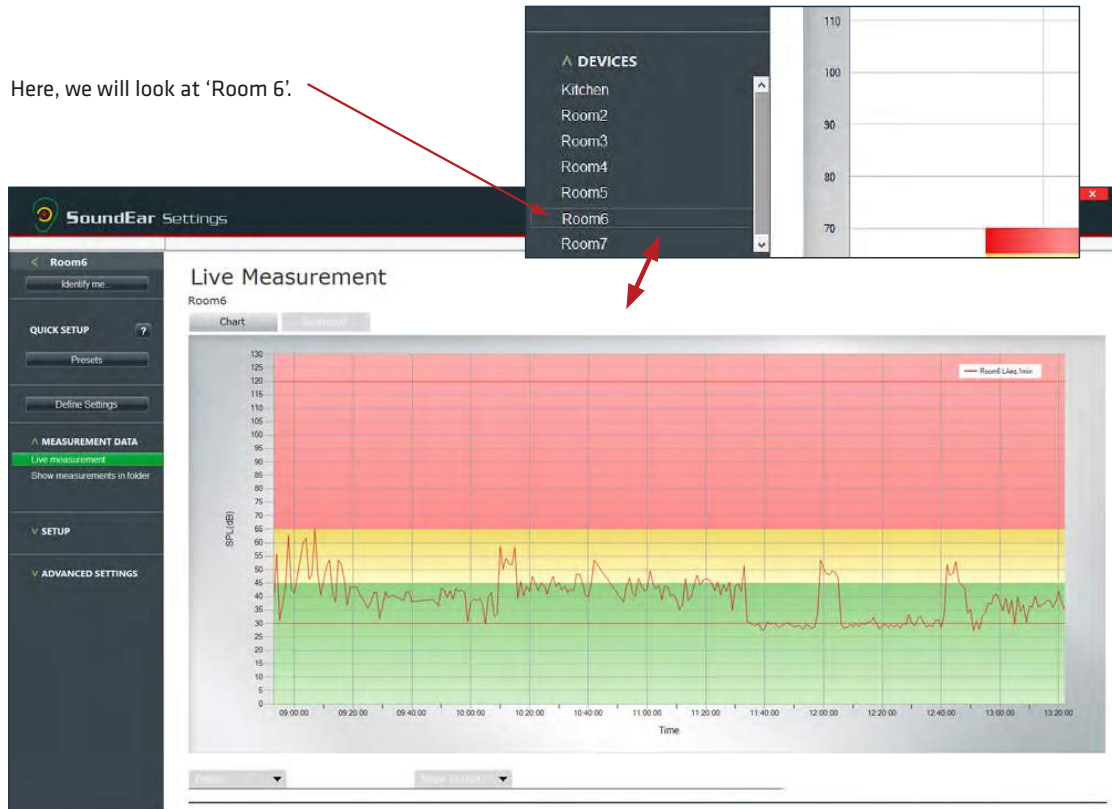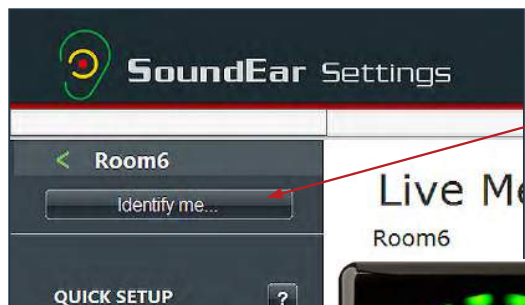
If you need to figure out which device has which name, you can click each device in the menu **'Devices'**, one by one.

SETTING UP THE WIRELESS SYSTEM
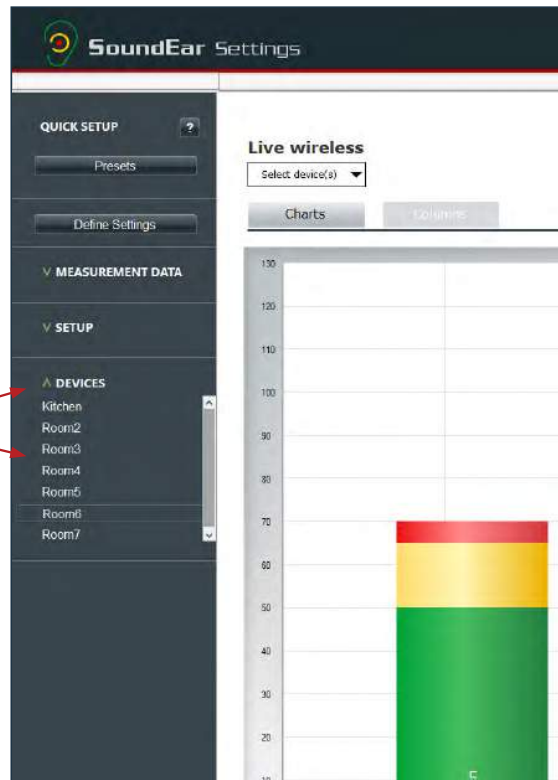
Here, we will look at 'Room 6'.

When you click on a device, the button **'Identify me'** appears.

If you click the button, the corresponding device will start blinking with its ID number in the display.
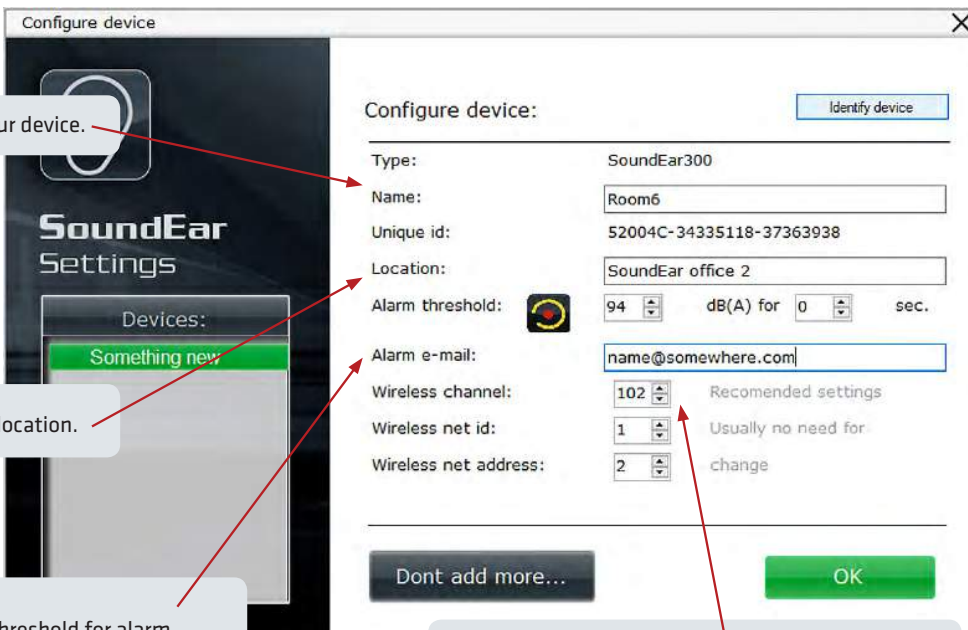
• To return to the full list of devices and select another device, click the green arrow in the top left corner.

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CONFIGURING THE WIRELESS SETUP YOURSELF

When you plug in the wireless dongle to your computer, your devices will begin to report themselves in your software automatically with a configuration wizard.

1. Name your device.

2. Give it a location.

3. Set the threshold for alarm email notifications and choose which email address to send notifications to.

4. As standard, the system will use the wireless channel 102. If you have more than one system running, you need to designate the device to the wireless channel were you want the measurements.

You can choose to skip the alarm settings for now, and make the settings in the software afterwards. But it is a good idea to name your device with something meaningful at this point, so that you know which device goes where.

When you have configured your device, press 'OK' and the device is ready to send noise measurements wirelessly to your computer.

To identify which device you are currently configuring, press the 'Identify me' button in the upper right corner. The device will start blinking with its Id number in the display.

Go to the menu **'Measurement data' -> 'Live Measurement'** to make sure all your devices are displayed with colored bar. This means that they are delivering data to your system.

A gray bar indicates that the device is configured and registered in the system, but is not delivering data. Give it a few minutes to deliver the first set of data. If this does not work, you may have a weak signal, and should consider using a repeater for the signal, or you can try to move the device and computer closer to each other.

SETTING UP THE WIRELESS SYSTEM

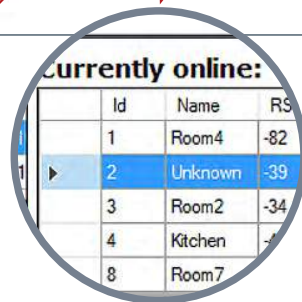**IF ALL YOUR DEVICES ARE NOT APPEARING IN THE LIVE MEASUREMENT VIEW**
Go to the menu **'Setup' -> 'Wireless'**.
Here you see a list of devices that are connected and a list of devices that are registered on the network.

If you have any devices named 'Unknown' in the list to the right, remove it by clicking the device in the list and pressing the 'Remove' button.

Now you can search for new devices. Press the button in the top right corner 'Listen for new devices' to search for devices not yet found and configured.

After doing this, you should get a new configuration wizard for any devices not found the first time. Configure them with name and light settings.
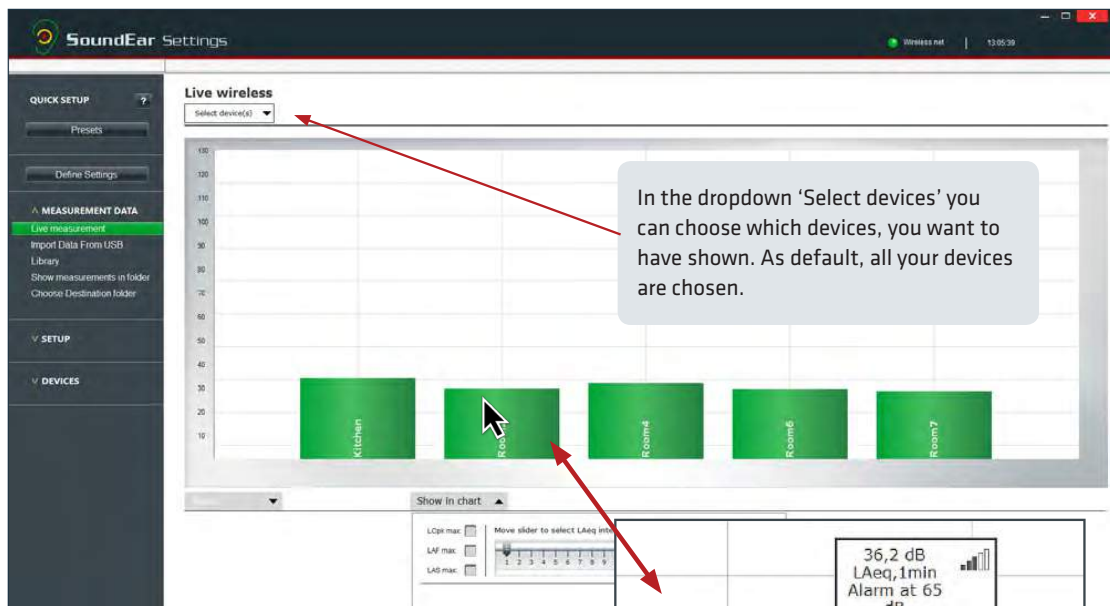
You may need to press the 'Stop listening' button and repeat the 'Listen for new devices' process if you have more than one device that needs to be identified.

Once you have all your devices configured, you are ready to use your SoundEar®3 – Wireless system.

Live Measurement is where you have the complete overview of all your devices and their current noise levels. The data is updated once every minute.

Each bar represents one of your devices. You see the current noise level as an average over the past minute (LAeq, 1 min).

In the dropdown 'Select devices' you can choose which devices, you want to have shown. As default, all your devices are chosen.

You can also view how strong the signal to your device is, as well as if an alarm has been set, by holding the cursor over the bar.

36,2 dB
LAeq,1min
Alarm at 65
dB
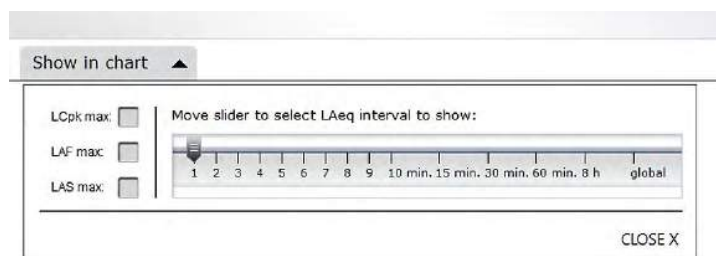
By default, you are shown noise levels as an average over the past 1 minute (LAeq, 1 min). If you wish to see another measurement type, expand the 'Show in chart' tab at the bottom of the screen. Here you can set a specific LAeq in the slider, for instance LAeq, 60 min, if you want your live measurements to display the average noise level over the past hour, or you can choose between:

- LCpk max (The highest C weighted peak value measured within the period)
- LAS max (The highest A weighted value measured within the period. Slow measurement)
- LAF max (The highest A weighted value measured within the period. Fast measurement)

LIVE MEASUREMENTS
– MONITOR THE CURRENT NOISE LEVEL FOR YOUR DEVICES
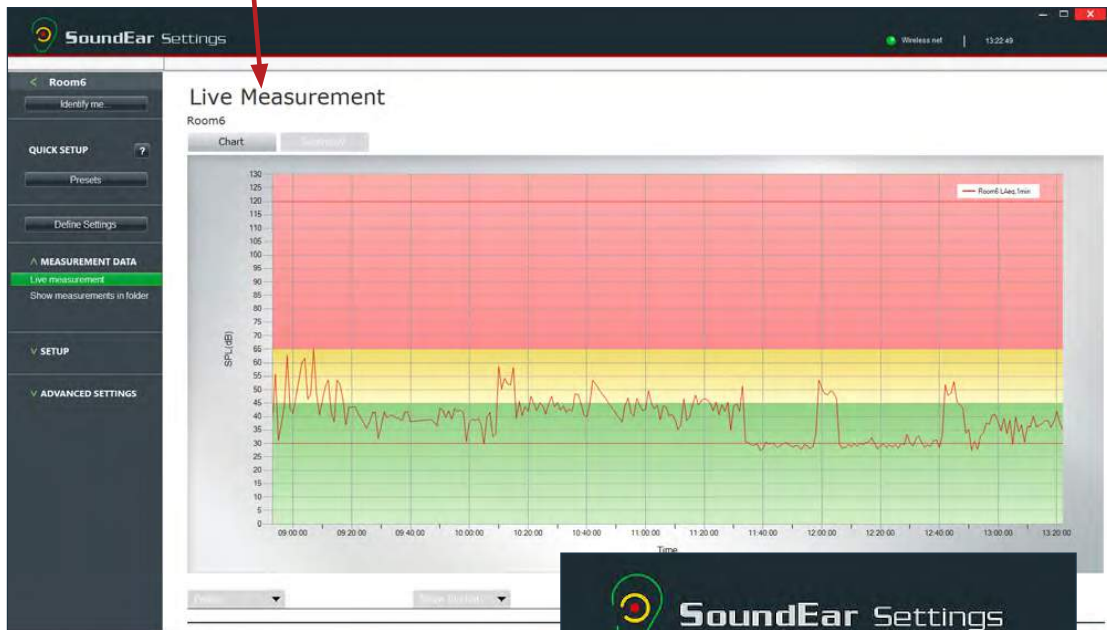
LOOK AT MEASUREMENTS FOR A SINGLE DEVICE OR CHANGE SETTINGS FOR A SINGLE DEVICE
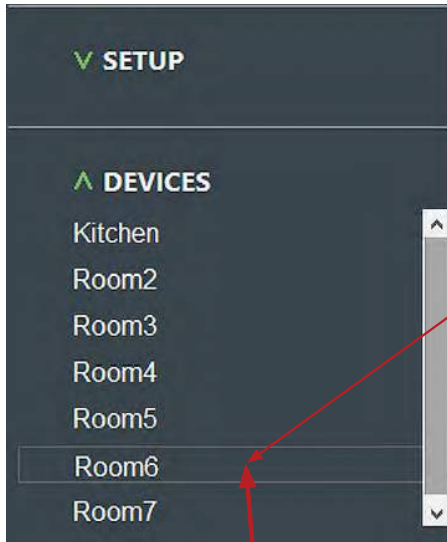
If you want to have a closer look at the live measurement for a single device, you can either double-click the device in your 'Live Measurement' screen, or you can go to the menu **'Devices'** and click the device you want to look at.

This is also where you can change the settings for this particular device, if you wish to have other light settings or email alarm levels for one particular device.

You can return to the full overview by clicking the green arrow in the top left corner.

When using the wireless system, you can set up your SoundEar software to deliver a noise report on a daily or weekly basis via e-mail.

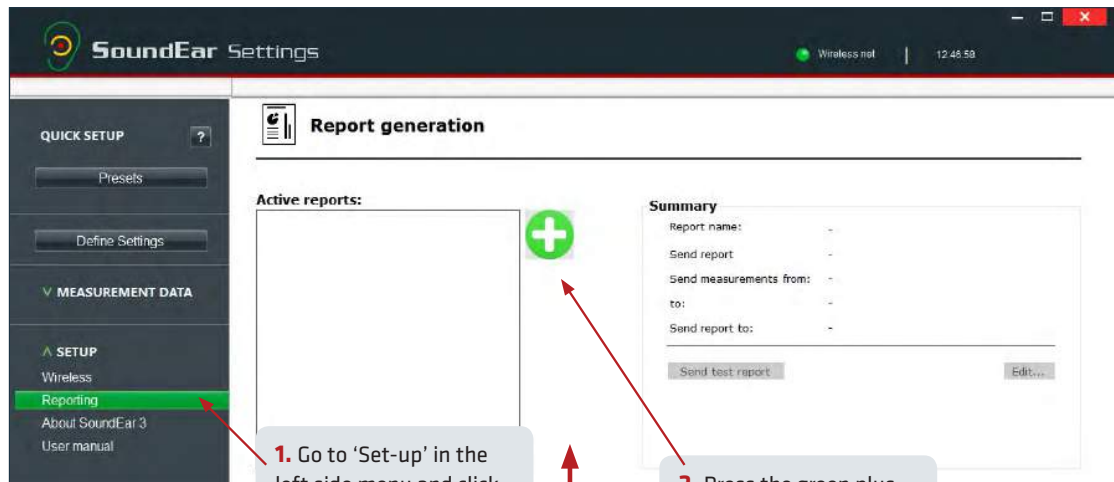**1.** Go to 'Set-up' in the left side menu and click 'Reporting'.

2. Press the green plus to add a new report
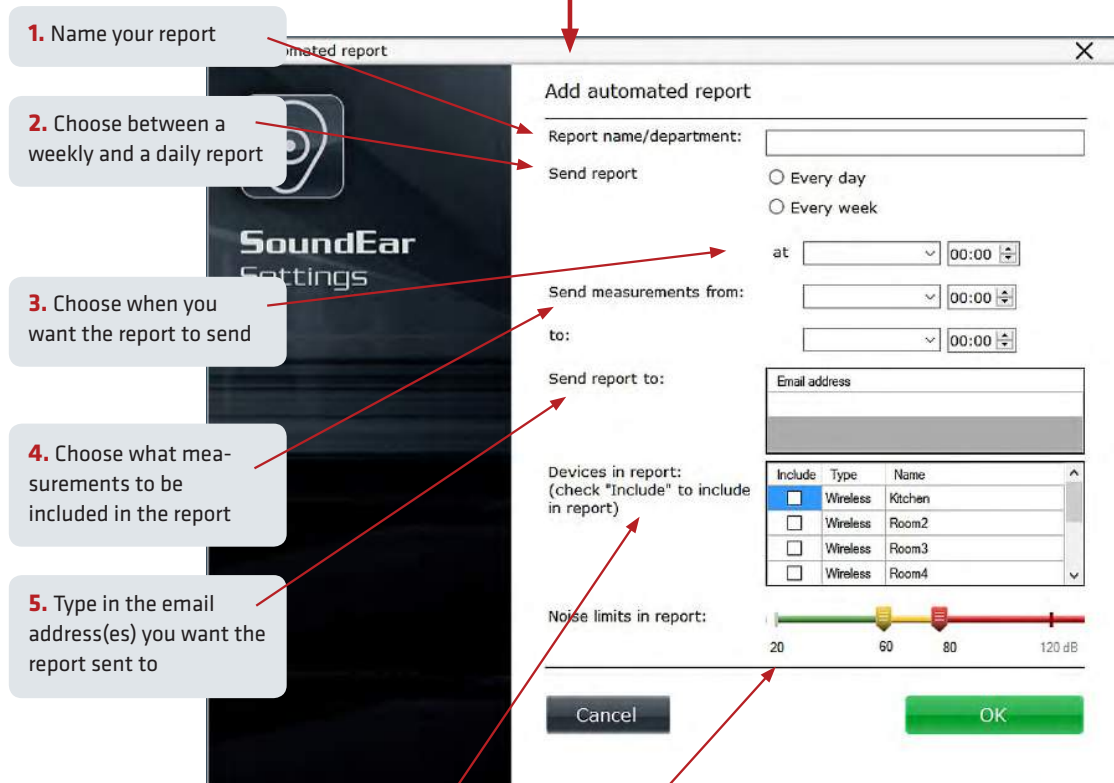
1. Name your report

2. Choose between a weekly and a daily report

3. Choose when you want the report to send

4. Choose what measurements to be included in the report

5. Type in the email address(es) you want the report sent to

6. Choose which devices to include in the report

7. Set the noise limits for your report

Press OK
Now you have set up an automated report.

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SETTING UP AN AUTOMATED NOISE REPORT

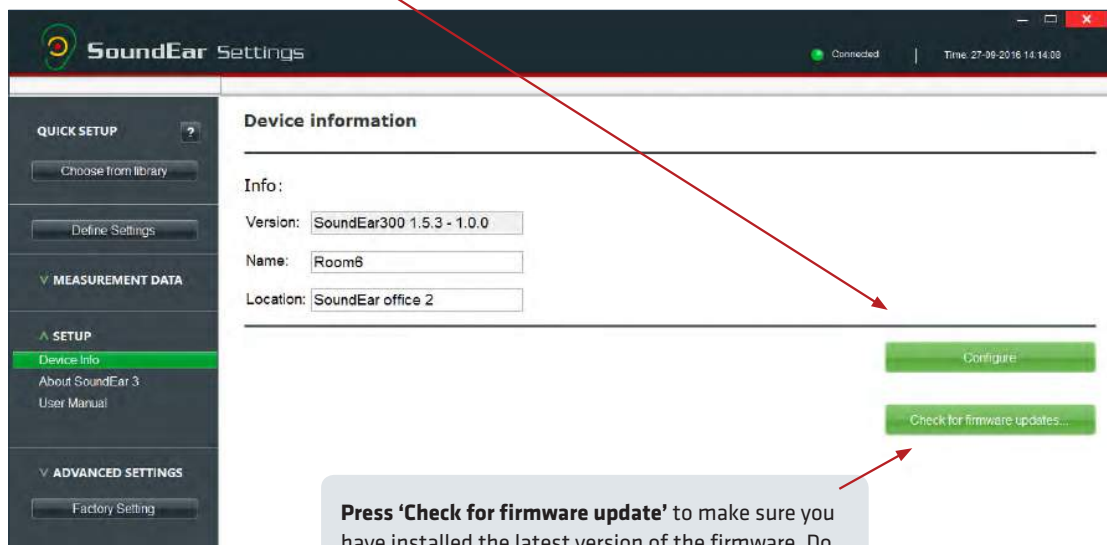To see what the report will look like, you can send a test report:

Here is one example of an auto-generated noise report.

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DEVICE INFO

If your SoundEar®3 device is connected to your laptop you can find information regarding the unit in **'Device Info'**.

1. **Version:** Shows which firmware version you have on your device
2. **Name:** The name is used for naming your measurements in the measurements folder. As standard, the name will be the unique ID of your SoundEar®3 device, but you can choose your own name
3. **Location:** name a location for your SoundEar®3 device.
4. When you are done, **press 'Configure'** to save your settings.

Press **'Check for firmware update'** to make sure you have installed the latest version of the firmware. Do this each time you make a software update.

Important: After making a firmware update, you need to make a factory reset of your device. Click on **'Factory Setting'** and follow the instructions on your screen.
The factory reset will delete all files on the internal log, so it is important that you transfer all the files from the internal log by USB to your measurement library before proceeding.
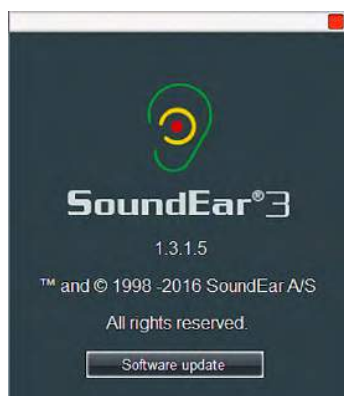
ABOUT SOUNDEAR®3
View what version of the SoundEar®3 software is installed on your PC.

Click "Software update" to update to the latest version. You will be linked to our web site where you can access the latest versions.

USER MANUAL
From here, you can download the latest version of the online user manual. Alternatively, you can find it on our website at www.soundear.com/downloads

ADVANCED SETTINGS

ANALOG OUTPUT

The analog outputs enable you to connect SoundEar®3 to Building Management Systems (BMS) or communicate with other devices that are compatible with analog outputs.
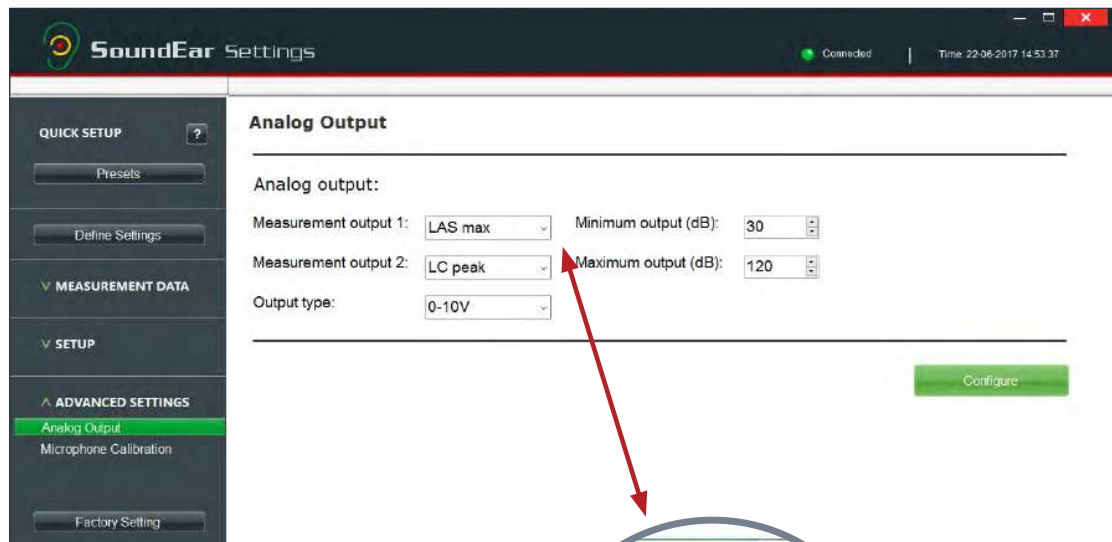
NOTE! SoundEar®3 must be provided with 24VDC through the screw terminal for the analog outputs to function. Please find an overview and description of the various outputs on the back of the device.

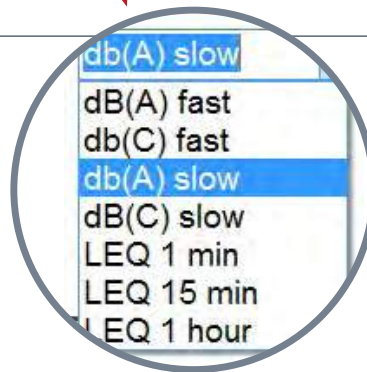**NOTE! The two analog outputs have common ground connection.**

SE 300 and 310
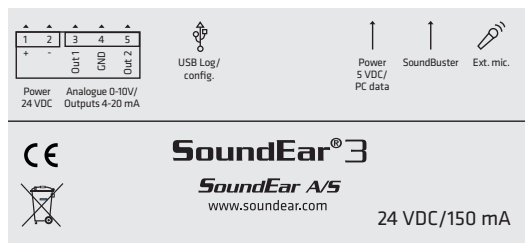
SE 320

You can record up to two individual measurements simultaneously, one per analog output.
In the drop-down menu, you can choose between seven different values for each output.

Choose analog output format, either 0-10 V or 4-20 mA.

Set dynamic area, e.g. 30-120 dB.

Save your settings by clicking "Configure" in the bottom right corner.
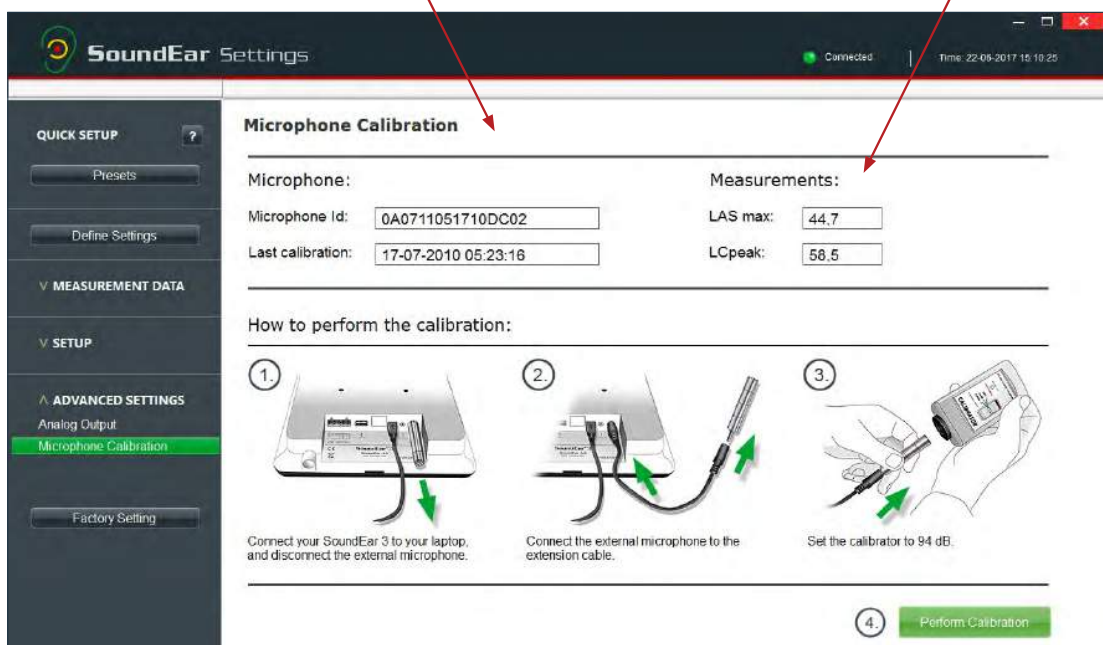
MICROPHONE CALIBRATION

To calibrate the SoundEar®3 microphone, you will need a calibrator. You can use any standard calibrators on the market with a microphone input of 1/2 inch.

NOTE! For proper calibration, only use the included 4-pole extension cable. If calibrating more than one microphone, disconnect the extension cable from the SoundEar®3 and reinsert it between each calibration.

The specific microphone ID and last date of calibration is displayed in the upper left corner of the microphone. We recommend that the microphone is calibrated once a year, or as needed.

Under "Measurements" you can view what the microphone detects. Depending on time since last calibration, the measurement should be approx. 94 dB.

1. Connect SoundEar®3 to your PC with a mini USB cable and remove the external microphone.

2

Connect the microphone to the 4-pole extension cable and insert the cable into SoundEa®3's microphone input.

3

Set the calibrator to 94 dB and connect the microphone.

4 Click "Perform Calibration" in the bottom right corner.

The calibration takes a moment.
A new pop-up window will tell you when the calibration is completed.

Calibrating microphone.
Please wait ...

Writing calibration value. Please wait...
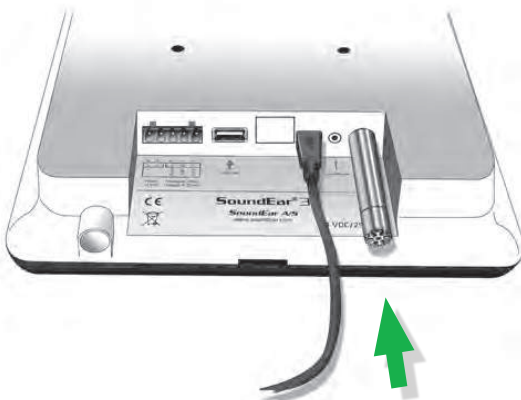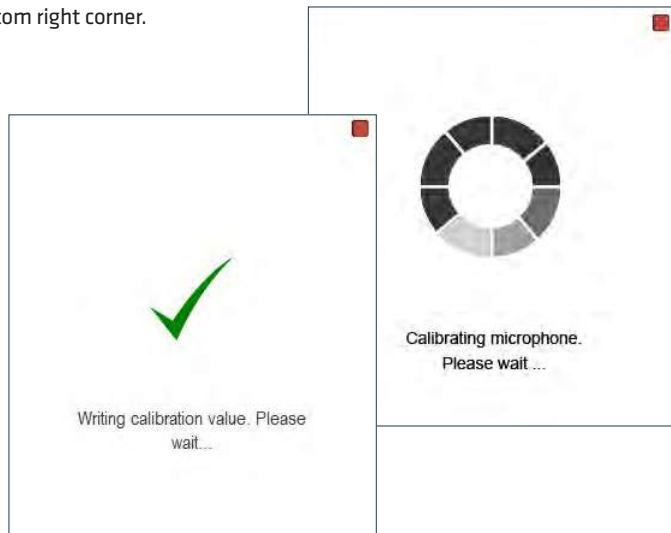
When the calibration is complete, connect the microphone to SoundEar®3. The device is now ready to use.

FACTORY SETTINGS

To reset SoundEar®3 to factory settings, please use the settings below:

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Light settings

Green:	30 dB - 120 dB
Yellow:	75 dB - 120 dB
Red:	80 dB - 120 dB

All measurements are shown as dB (A) Slow.

Night Settings

Green:	60 dB - 120 dB
Yellow:	60 dB - 120 dB
Red:	60 dB - 120 dB

Night settings are not part of the standard settings. To activate, check the "Night Settings" box.

Advanced settings

Output 1:	dB(A) slow
Output 2:	dB (C) Fast
Output Type:	0-10 V
Min output:	30 dB
Max output:	120 dB

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MAINTENANCE

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To ensure correct and precise performance of SoundEar®3, repairs and service should be carried out by a trained technician. After any repairs or service, a functionality check must be performed before using SoundEar®3 again.

DISINFECTION / CLEANING

SoundEar®3 consists partly of materials that cannot tolerate certain substances used in surface disinfectants.

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Disinfection by wiping

*   Firstly, remove dirt and grime from the surface using a damp disposable cloth.
*   Then disinfect the surface with alcohol wipes, followed by dry cloth.

TECHNICAL SPECIFICATIONS

RECOMMENDED OPERATIVE SYSTEM AND HARDWARE

Operative system   : Windows 8, Windows 10
Harddisk   : 100 Mbytes free
RAM   : 512MB RAM
USB port   : 1 x USB 2.0 port
CPU   : 1.5GHz AMD/Intel processor

We recommend using a screen measuring minimum 1366x768.

SE 300   SE 310   SE 320

SOUNDEAR®3

Frequency Range:	20 Hz – 20kHz
Measuring Level Range:	30 dB – 120 dB
Accuracy:	+/- 0.5 dB
Frequency Weighting:	dB(A) and dB(C) filters
Time Weighting:	Slow (1S) & Fast (125mS)
Dynamic Range RMS:	90dB and Peak detection
Light managing:	Full configurability through SoundEar software, including night setting
Alarm settings:	30-120 dB
Alarm trigger display:	1 sec – 5 min
2 x Outputs (1 for dB A + 1 for dB C):	Either 0-10V or 4-20mA outputs
2 x USB ports:	Micro USB (Power & PC), USB OTG (Log, config)
Display Data:	dB(A) Slow, Leq(A)15, Alarm settings, Temp, Clock
Power Supply:	5VDC (micro USB) / 24VDC (screw terminal),
Current consumption:	max 2.5W.
Microphone:	20 Hz – 20 KHz
Mass Storage (Internal memory):	16MB (128MBit) 600 days log time
Real Time Clock:	High-precision type with battery backup (CR2032).

Mechanical Features

Cabinet:	Shockproof acrylic
Measurements (SE 300, SE 310:	Length: 265 mm, width: 205 mm, height: 46 mm Weight: 1.5 kg
Measurements SE 320:	Length: 150mm, width: 120mm, height: 45mm, weight: 0.450 kg.

Standards:	IEC61672-2-2002. Type 2, ANSI S1,4 Type 260601-1: Medical electrical equipment - Part 1: General requirements for basic safety and essential performance. 60601-1-2: Medical electrical equipment - Part 1-2: General requirements for basic safety and essential performance

SoundEar A/S
www.soundear.com

UK: The crossed-out wheeled bin means that within the European Union the product must be taken to separate collection at the product end of its life. This applies not only to your device but also to any enhancements marked with this symbol. Do not dispose of these products as unsorted municipal waste.