SoundEar®3

MANUAL – UK

MODEL	300
MODEL	310
MODEL	320
MODEL	310XL

32.5

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SoundEar®3

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SoundEar A/S
www.soundear.com

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CONGRATULATIONS ON YOUR NEW

SoundEar®3 – device

We are pleased that you selected one of our products to help you create a better auditory environment for yourself and others. SoundEar®3 is designed so that you can easily set it up and start using it right away.

This instruction manual provides information on how to fully take advantage of your product.
For a complete understanding of the features and possibilities of the SoundEar®3, we advise you to carefully read this manual before use.

Please find all our latest updates on our website: soundear.com/downloads

For tutorials with video instruction, please check out our
SoundEar® YouTube channel for additional information regarding our SoundEar® products.
If you have any questions or comments, please contact us at:
soundear@soundear.com

We hope you enjoy using the SoundEar®3.

Yours sincerely,
SoundEar A/S

SoundEar®3 300	SoundEar®3 320	SoundEar®3 310	SoundEar®3 310XL

WHAT IS SOUNDEAR®3

SoundEar®3 is a visual-based product, designed to provide the user with a comprehensive overview of the noise conditions in their surroundings. SoundEar®3 visualizes noise and alerts you when the noise is becoming too loud. It is an ideal tool to help monitor and map your noise environment.

SoundEar®3:
- Has a measuring range from 30 dB to 120 dB.
- Able to turn off the visual warning signal at night, so it doesn't disturb patients sleeping in hospitals.
- Integrated log that saves LAeq 1 minute measurements for up to 600 days.
- View multiple units in real time with the SoundEar® software by adding a wireless USB dongle or micro PC.
- Easy transfer of log data into the SoundEar® software via USB for a complete overview of your noise environment.
- All measurements are saved in Csv format and can be opened in Excel.

**Please check the box content, depending on the box 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

OPTIMAL PLACEMENT OF THE SOUNDEAR®3 DEVICE

- On a visible spot on the wall.
- At 1.8 metres above floor level.
- On the opposite side of the room from the door.
- Not in a corner.
- Not close to any sound-absorbing materials.
- Not close to noisy instruments.

Area: 40 m2
Diameter: 10-11 m.

Height: 1,8 m. above ground
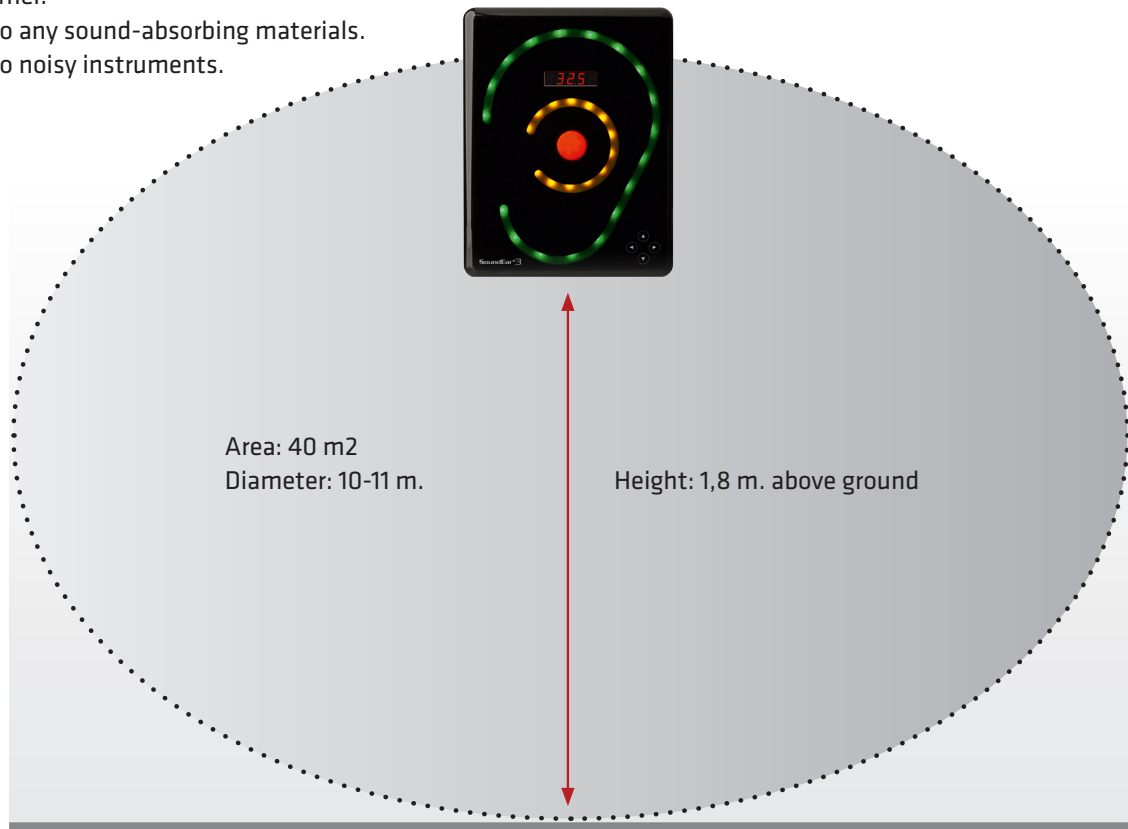
HOW TO MOUNT YOUR SOUNDEAR®3 ON THE WALL

When selecting a location for your SoundEar®3, please make sure to follow the instructions below:
1. Make sure not to cover the microphone on the bottom of the device.
2. Avoid placing SoundEar®3 close to sound-absorbing materials.
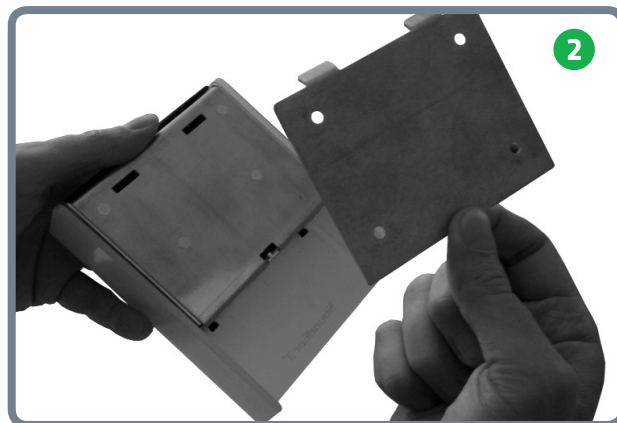
DIRECTLY ON THE WALL
Model 300, 310 and XL
Check for an available plug socket nearby. Fasten a screw (diameter 8-9mm) and check whether the cabinet is attached securely. If you are using a VESA wall mounting bracket, please consult the included user manual.
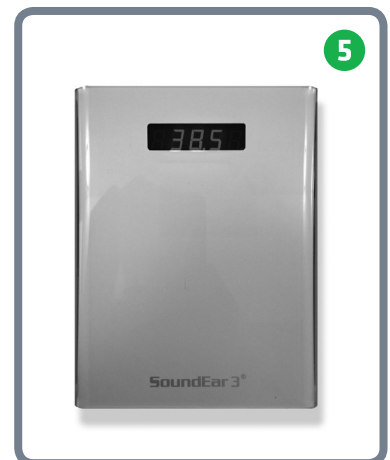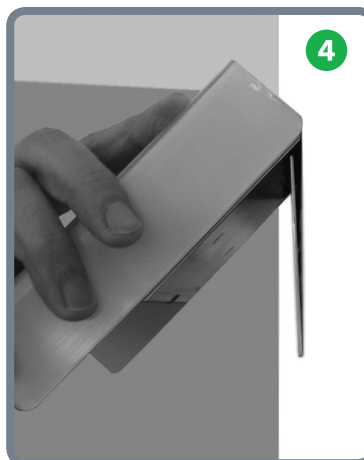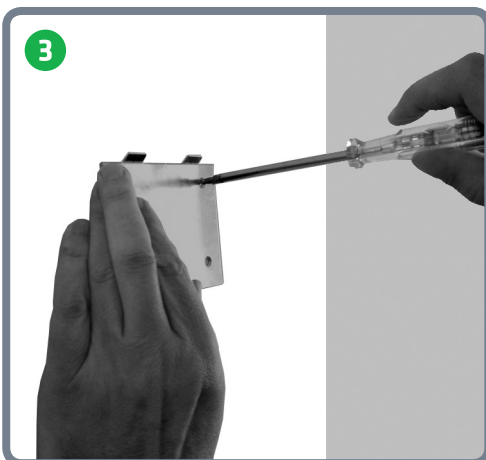
Model 300, 310 and XL
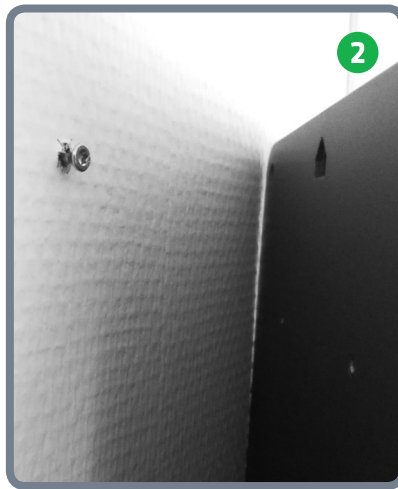
Model 320

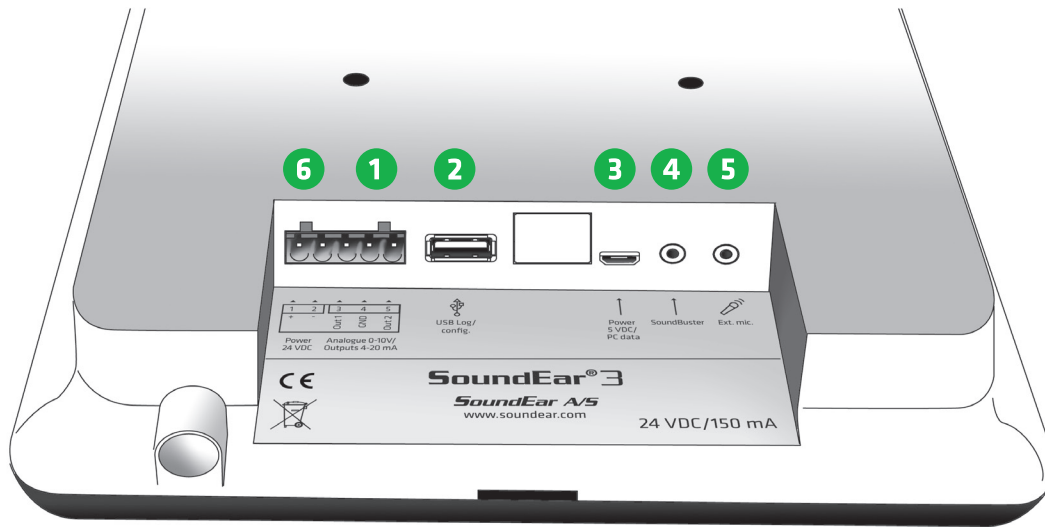1. Loosen the screw to remove the wall mounting bracket.

Fasten the wall mounting bracket on the wall with 4 screws. Hang SoundEar®3-320 onto the wall mounting bracket and fasten it with the screw.

BASIC FEATURES OF THE SOUNDEAR®3

PORTS ON THE DEVICE

MODEL 300, 310 AND XL
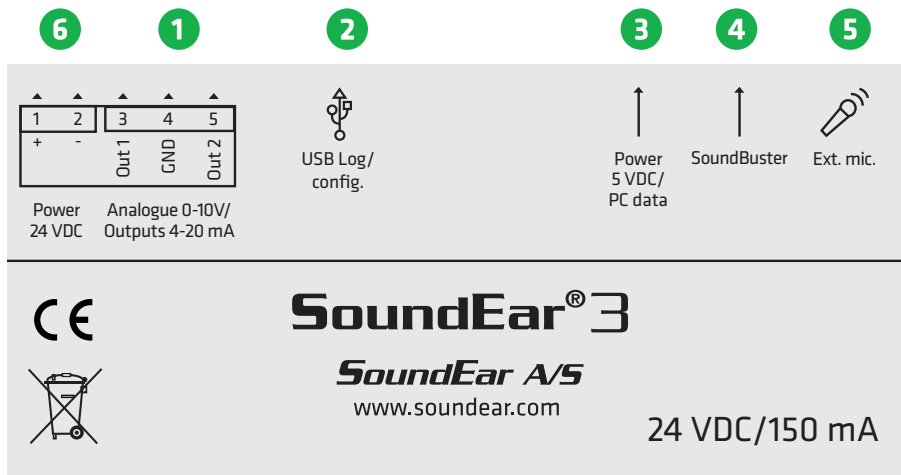
1. Analogue output. Connect your external system here, if you have one.
2. USB port. Insert the SoundEar USB drive here to download measurements or the USB dongle for wireless connectivity.
3. Power supply. Insert power supply here.
4. SoundBuster. Connect your SoundBuster here, if you have one.
5. External mic. Insert your microphone here.
6. Connect your device to power.

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 the SoundEar® USB drive here to download measurements or the USB dongle for wireless connectivity.
5. Analog output. Connect your external system here, if you have one.
6. Connect your device to power.

USING THE TOUCH DISPLAY

Located on the front of SoundEar®3 (models 320 and 320 X excepted), 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 (LAeq 1sec.), 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, go to "Display Settings" in the software.

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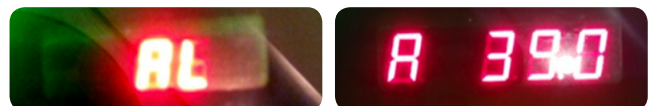
With the horizontal arrow heads, select the "AL" function.
Place a finger on one of the vertical arrow heads to set the alarm level. Hold your finger down, until the desired alarm level is reached.

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.

IMPORTANT: Changing the alarm level on the touch display will overwrite any specific settings you've made in "Light Settings" within 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 mini display is turned off.

If you are using SoundEar®3 as a single user device (without any wireless connection), please skip this next section below about wireless connectivity and continue reading the manual.

SOUNDEAR®3 WITH WIRELESS CONNECTION

If you are using your SoundEar®3 with wireless connectivity, please click on the following links to download wireless instruction manuals:

SOUNDEAR MICRO PC MANUAL

If you are using SoundEar®3 with Wi-Fi connection, click here.

WIRELESS DONGLE MANUAL

If you are using SoundEar®3 with USB amber dongles, click here.

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SOUNDEAR®3 SOFTWARE – SINGLE USER

INSTALL THE SOFTWARE

The SoundEar® USB key includes the software installer.

Please find the software on the included USB key.

Insert the USB key in your computer, open the USB and click on the installation file.
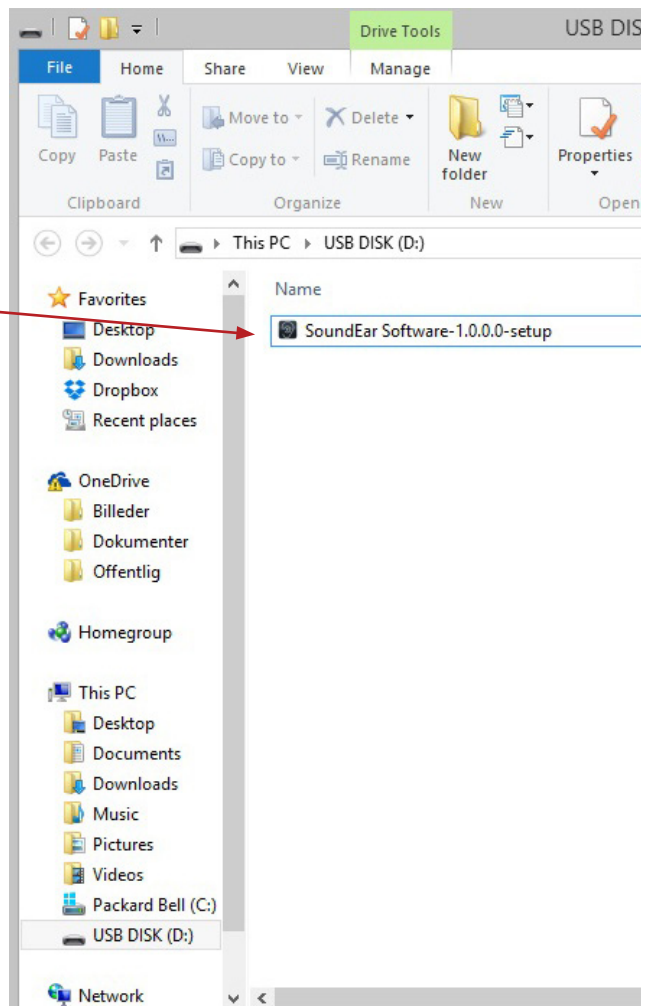
Select your preferred language to use during the software installation and click "OK".
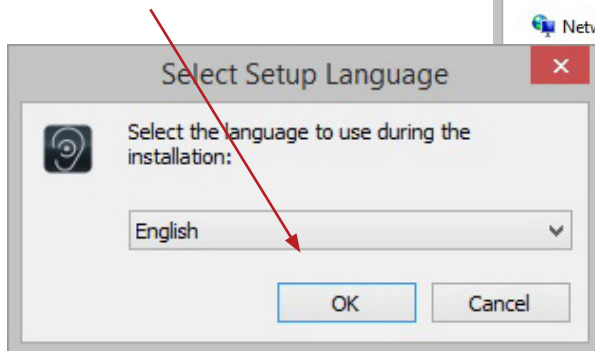
Follow the on-screen installation instructions.

When the installation is complete, click "Close".
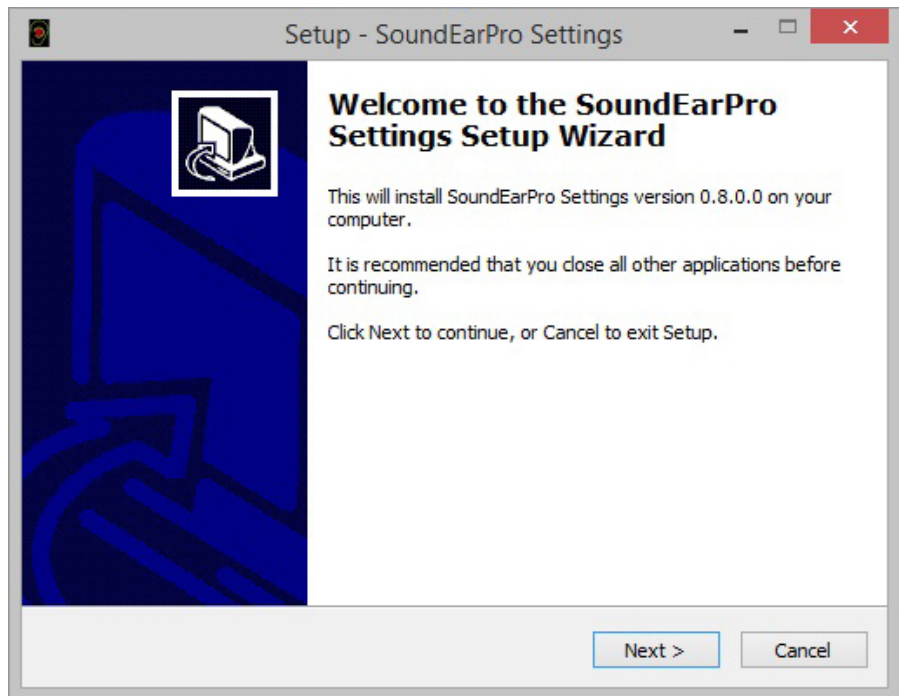
SOFTWARE UPDATE

Please make sure that you have installed the latest version of the SoundEar®Software.

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1. Go to the menu 'Setup' -> 'About SoundEar®3' to see your current software version.
2. Click the "Software update" button to check for newer versions.

3. A pop-up window will be shown on your screen. Click "OK" to proceed with the update.
4. Click "OK" to confirm update.
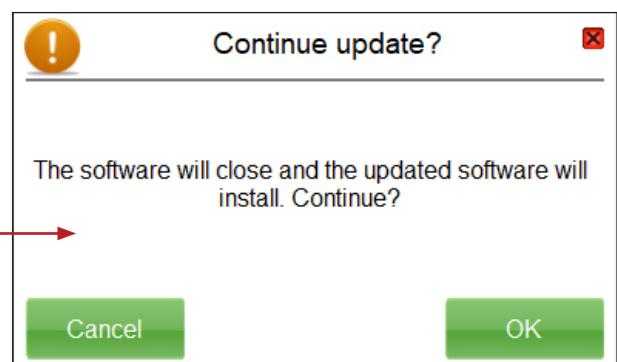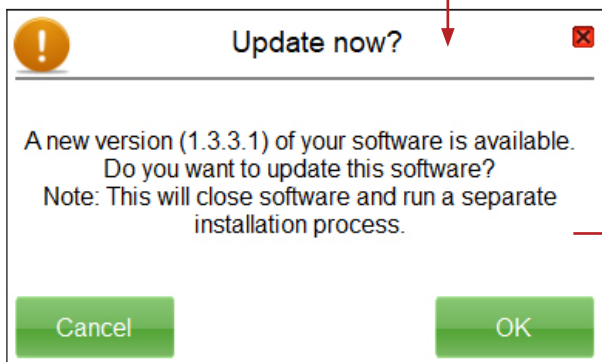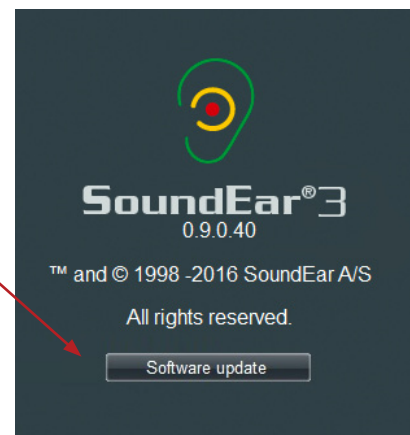
FIRMWARE UPDATES

We strongly advise you to check for the latest version of the firmware on a regular basis.
With your device connected to your PC via USB cable, go to the menu "Setup" and "Device info" and click 'Check for firmware updates'.
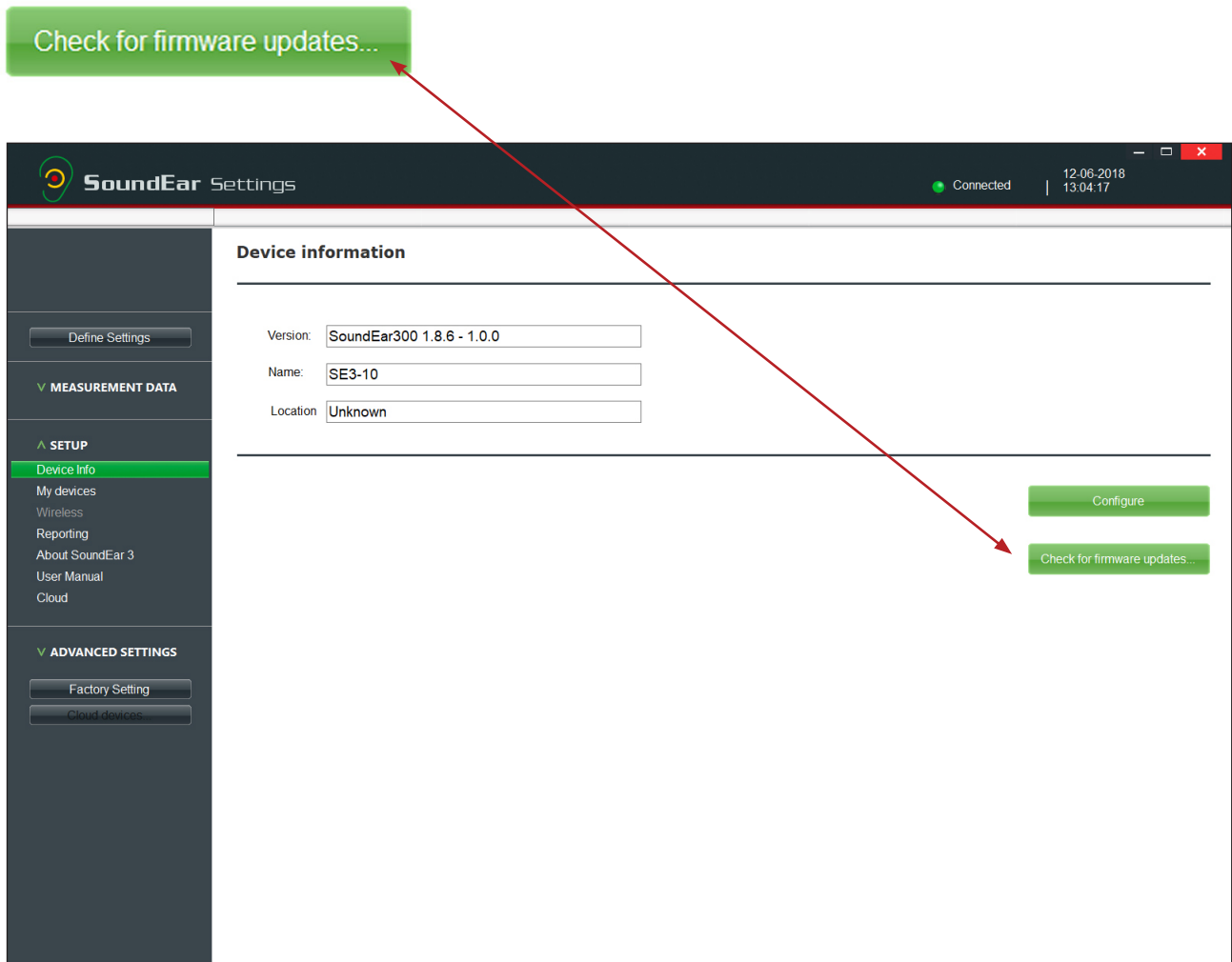
We recommend doing this each time you conduct a software update.

IMPORTANT: After conducting a firmware update, you need to perform a factory reset of your device.

Click on **'Factory Setting'** and follow the onscreen instructions.

NOTE: The factory reset will delete all files on the internal log. It is important that you transfer all the files from the internal log by USB to your measurement library before proceeding.

DEVICE CONFIGURATION

CONNECTING THE DEVICE

Before connecting the device to your computer, open the SoundEar®3 software and you are ready to start the configuration.

Insert the micro USB port into the SoundEar®3 and the USB A port on your computer.

CONNECTING THE DEVICE

A pop-up window will appear onscreen after your device is connected.
Please select the laptop icon to configure your device for single use.
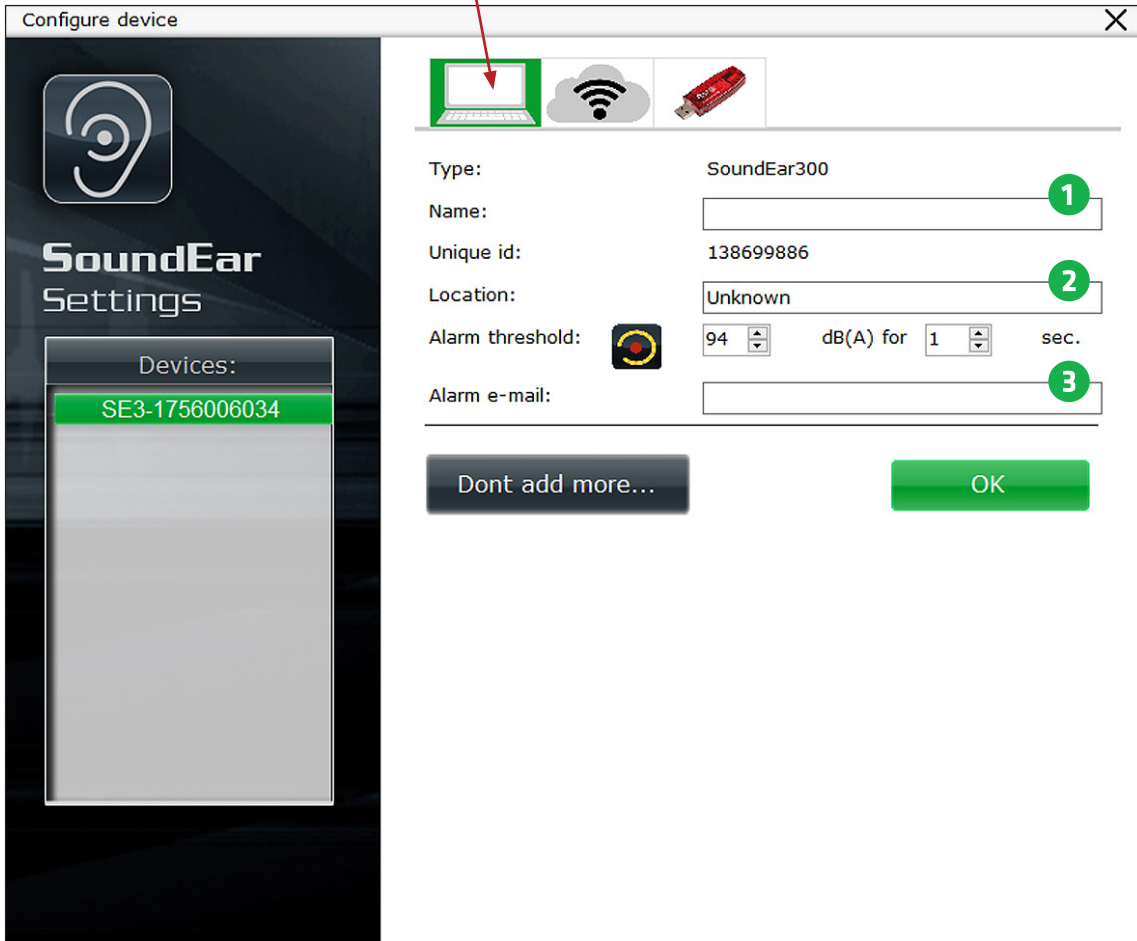
Here you can:
1. Name the device. If not configured, the software will store the measurements using the device's unique ID.
2. Location.
3. Set a threshold for when you want to receive an alarm email.

NOTE: These settings can also be set in the menu "Define settings" within the software.

Click "OK" to save your configuration.

SET TIME
Set the time and date on your SoundEar® 3.

Upon first connection of the device, we recommend setting the time and date in the internal clock.

Open the SoundEar® software and double-click on the time display, located in the upper right-hand corner of the screen.

NOTE: Your device must be connected to the computer via USB for you to set the time on your device.

After double-clicking on the time bar, a loading icon should appear at the top center of the screen with the text: "Setting time on the device" and your time and date settings should be updated.
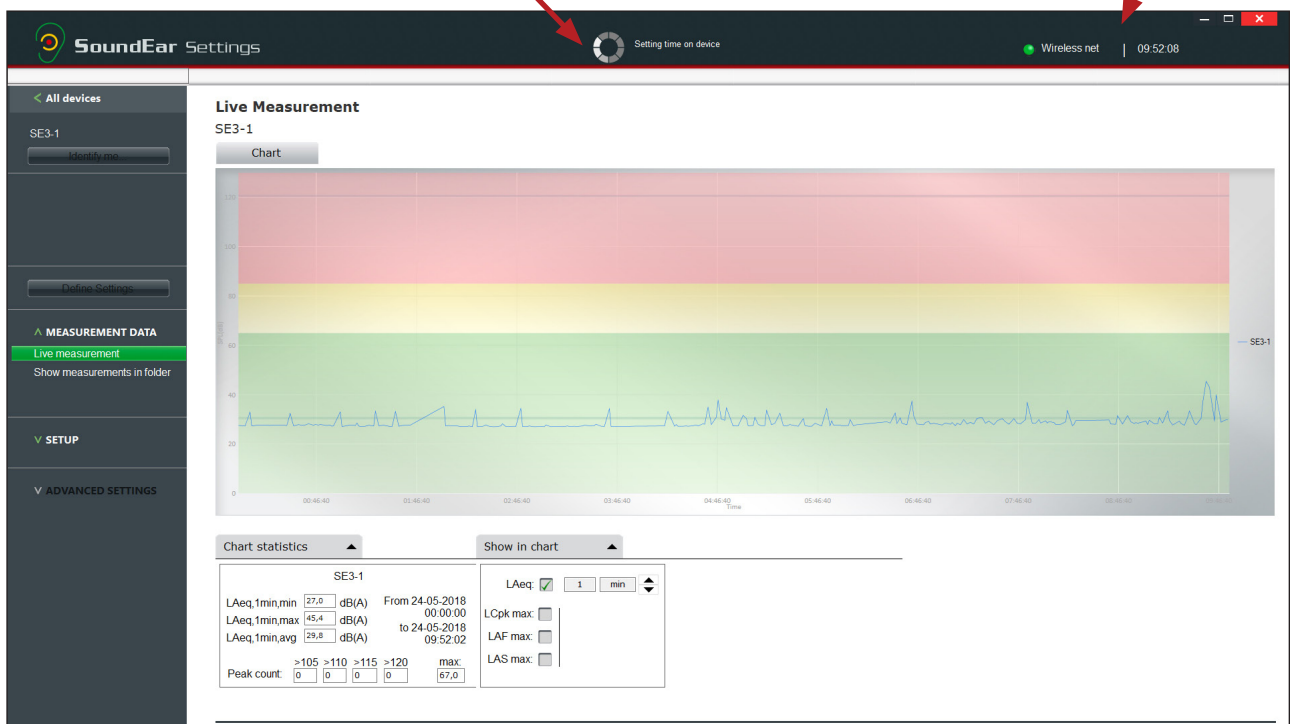
DEFINE SETTINGS

You can use 'Define Settings' to create your own specific settings.

LIGHT DAY – 300, 310 AND XL

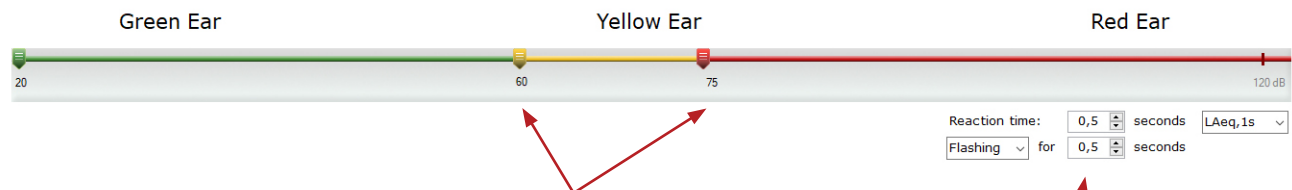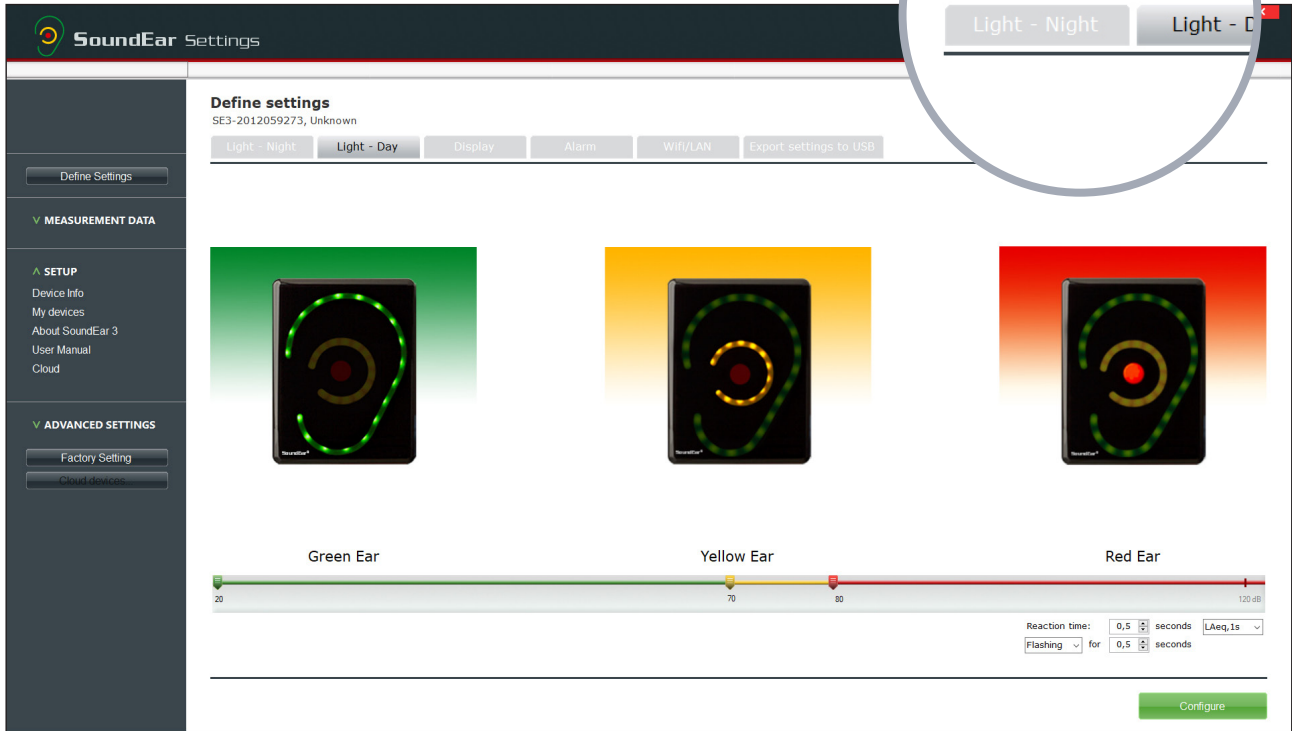1. Use the slider to set the limit for the green, yellow and red ear. For now, we will set the "yellow ear" to 60 dB and red to 75 dB.

2. Select how long the noise level should be exceeded before the red ear turns on. Here, we have selected 3 sec.

3. As a standard, the visual alarm is measured in LAeq1s. If needed, you can also select LAF max, LAS max or LC peak. Here, we will select LAeq 1s.

4. Then select whether the red ear should flash or just be lit, and for how long.

5. Click "Configure" to save your settings.
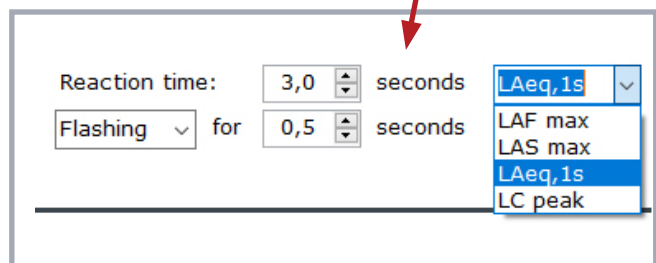
▶ How to make light settings for SoundEar3

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LIGHT NIGHT – 300, 310 AND XL
If needed, you can create an alternate setting during night.
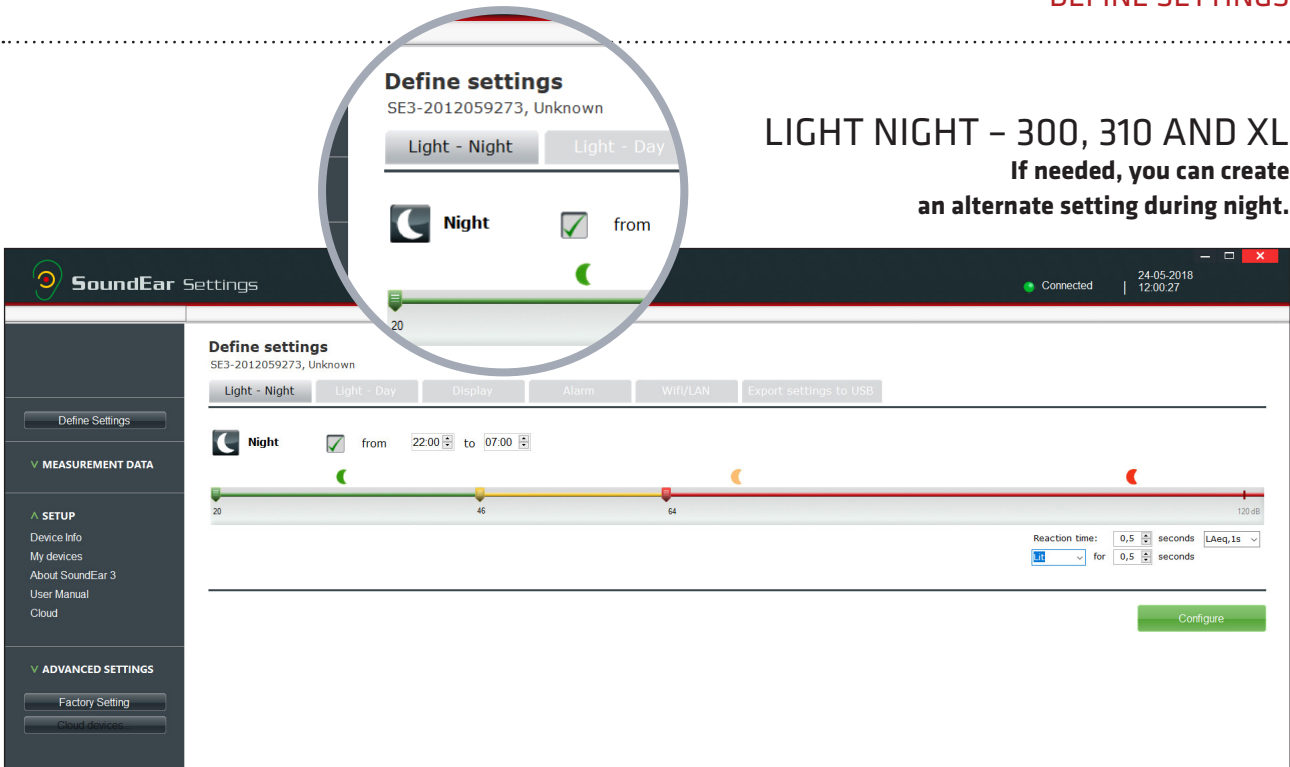
1. Check the 'Night' box and set the time period for your night settings. In this example, it is set to start at 22:00 in the evening and end at 07:00 in the morning.
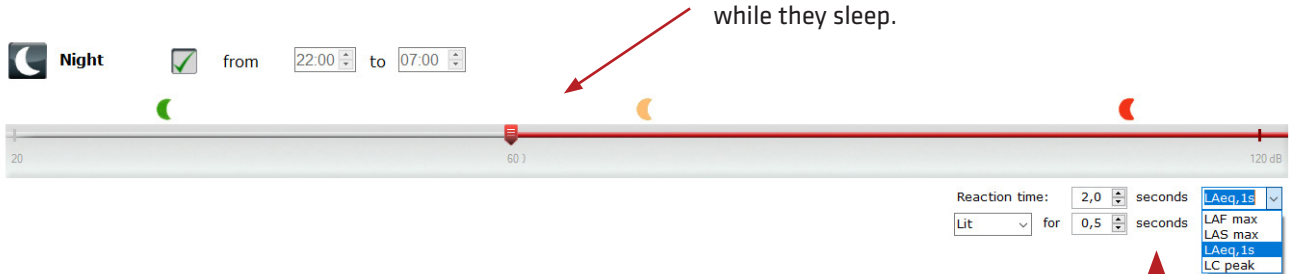
2. Set the limits for green, yellow and red ear using the slider. In this example, we will set them all to 60 dB. This allows you to turn off the light emanating from the device, preventing it from disturbing people while they sleep.

3. Select 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 select whether you want the red alarm to be lit or flashing and for how long.
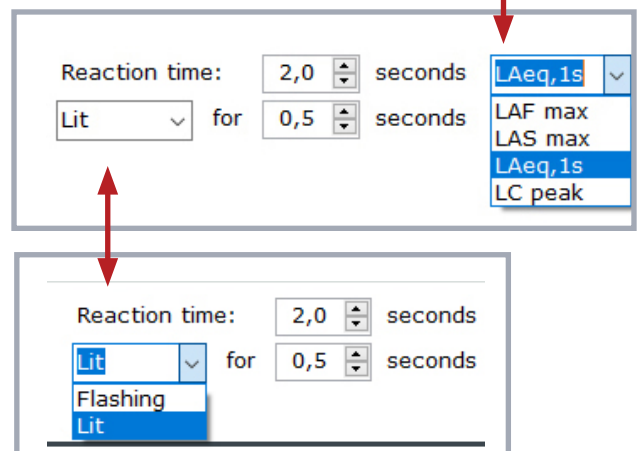
5. When you have created your settings, click "Configure".

NOISE LEVEL 320

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

NOISE LEVEL 320

Now, go to "Live Measurements" and your screen background will show your settings.
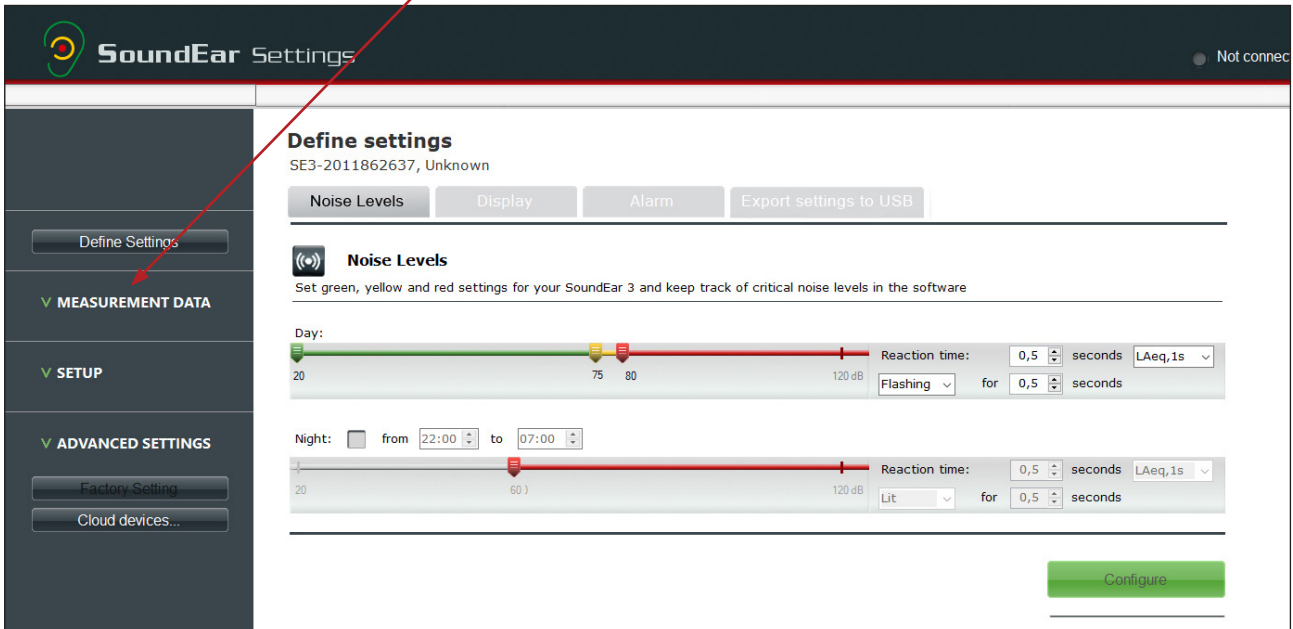
Red:
80 – 120 dB

Yellow: 70 – 80 dB

Green:
20 – 70 dB
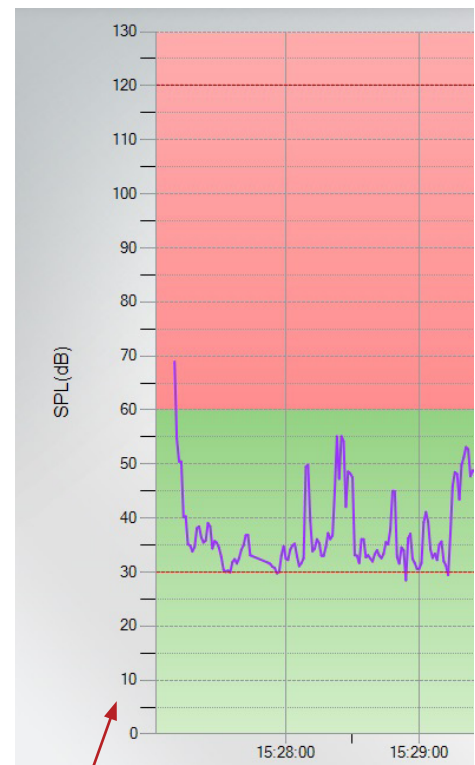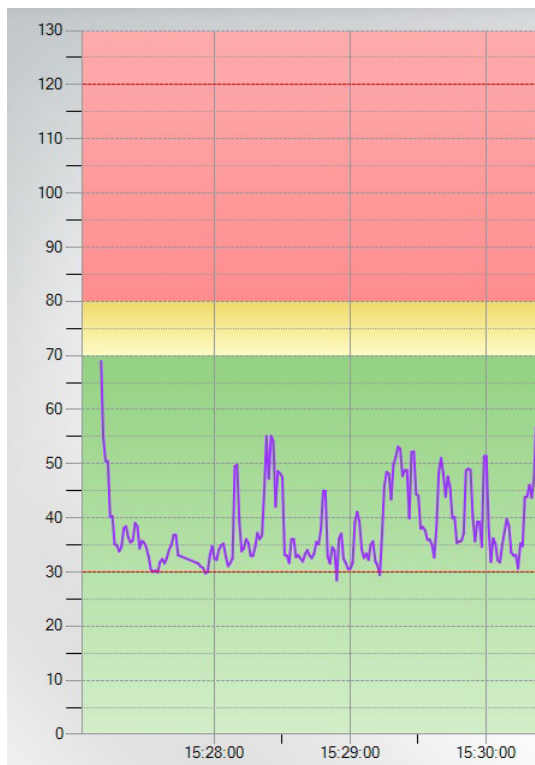
If you want an alternate night setting, check the box 'Night' and create your settings.

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

MINI DISPLAY

Select what should be shown in the mini display of your SoundEar®3.
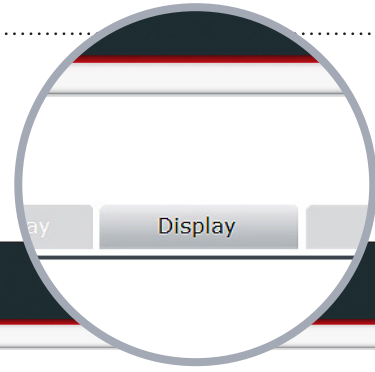
1. Select in the drop-down menu, whether you want the display to show the time, the current noise level in LAeq 1 second, or the alarm level for the red ear. You can also choose to turn the mini display off.

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

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

ALARM

How to get e-mail notifications about critical noise levels – using the 'Alarm' setting:
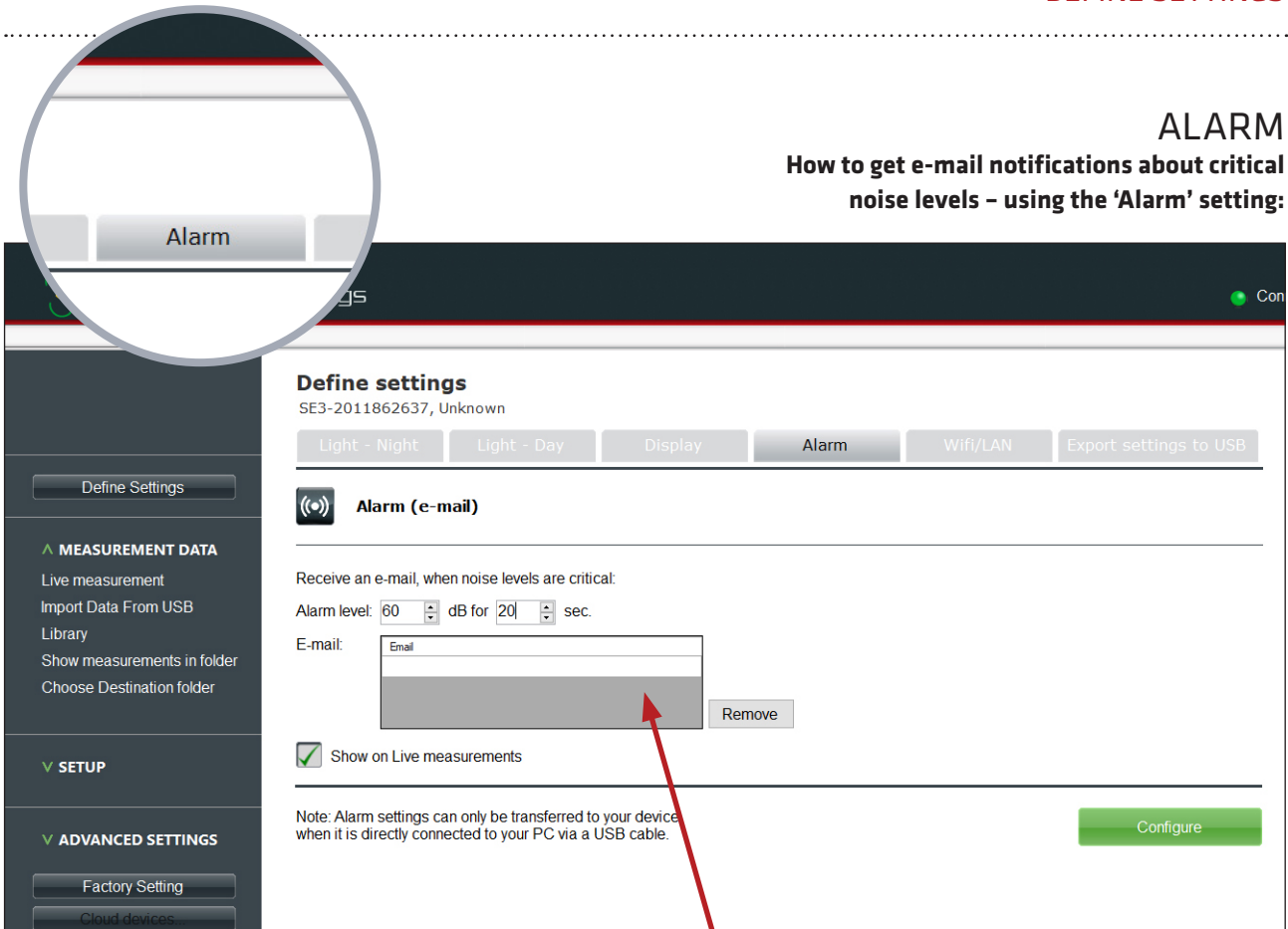
1. Go to the tab 'Alarm' and select the noise limit and duration at which the system will send an e-mail notification. In this case, 60 dB for more than 20 seconds.

2. Select which e-mail address you want the notifications sent to.
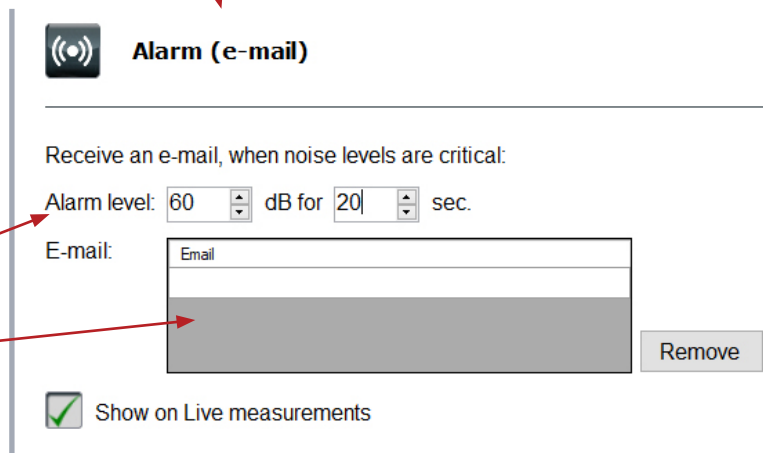
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ALARM

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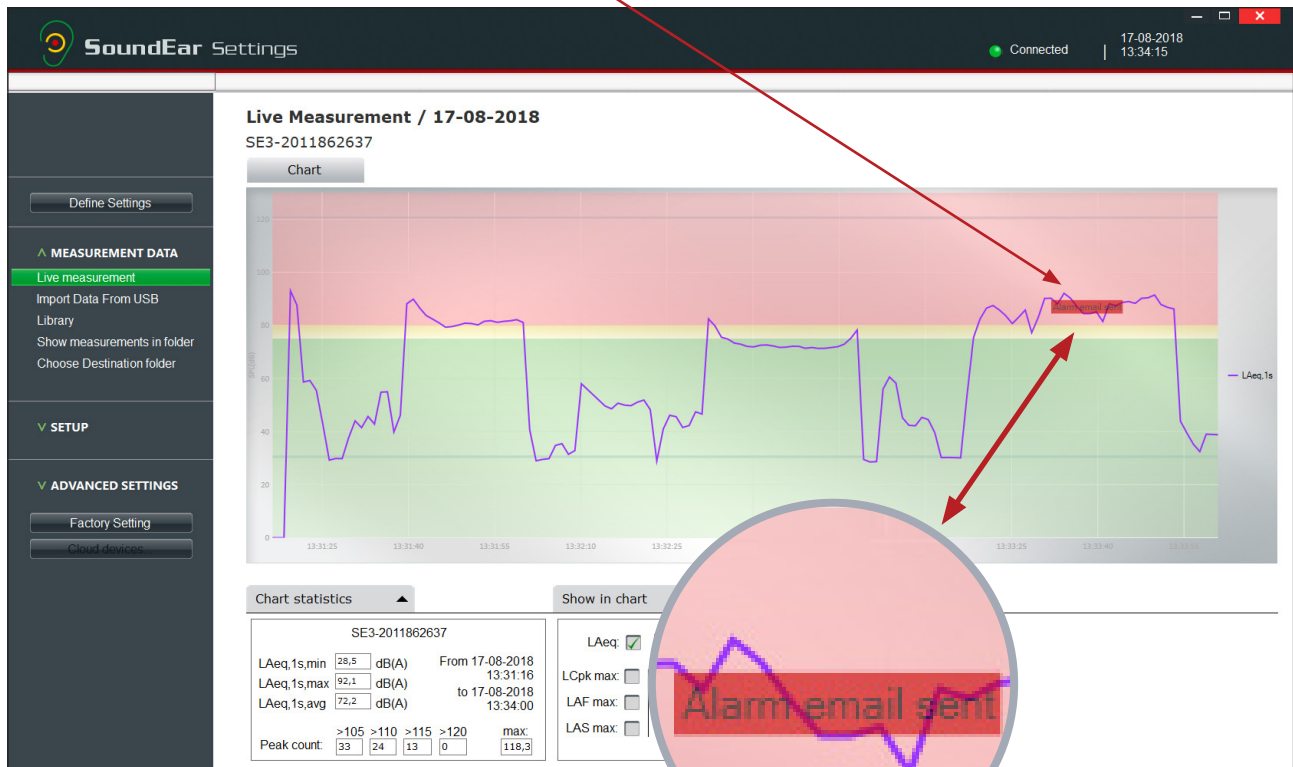
4. When you have created your settings, click 'Configure'.

NOTE: The software needs to be running to generate an alarm e-mail.

EXPORT LIGHT SETTINGS TO DEVICE VIA USB

If your unit is already installed, you have the option to change and transfer your light settings and the settings for the mini display manually to your device by exporting your settings to a USB stick.
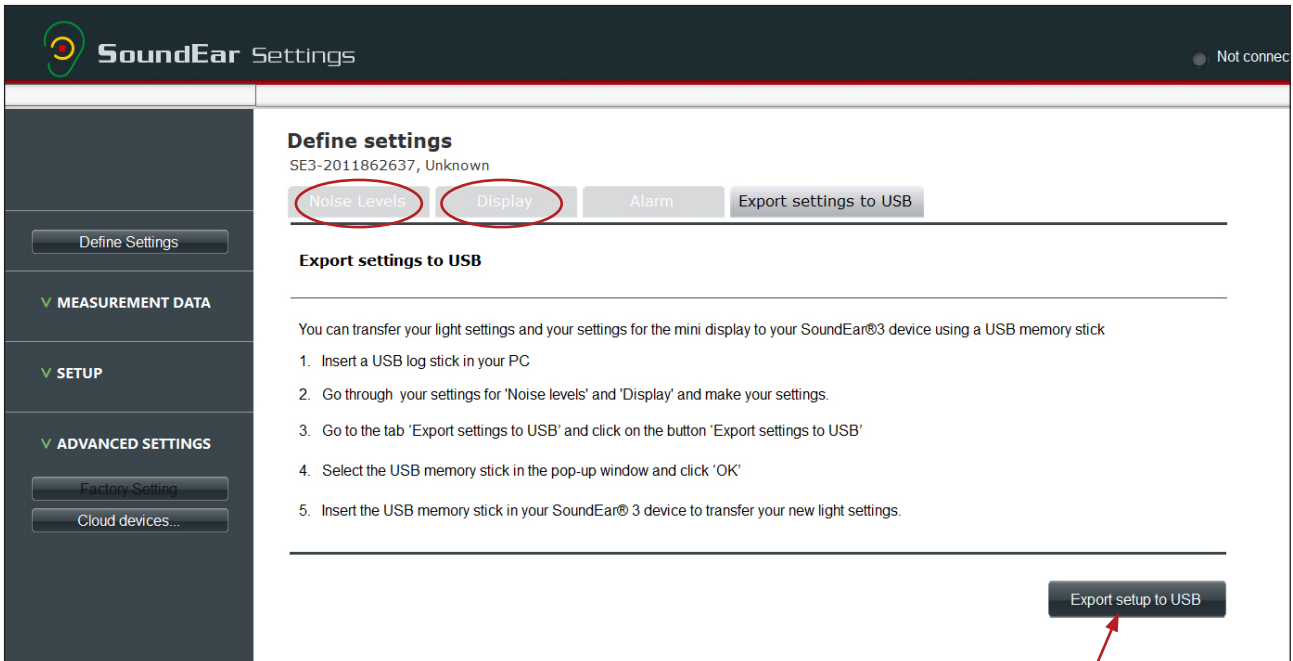
1. Go to 'Define settings' and go through the tabs 'Noise levels' and 'Display' to create your settings *without clicking "Configure".*

2. Return to the tab 'Export settings to USB' and click on 'Export setup to USB'. Make sure you have a formatted USB stick connected to your PC.
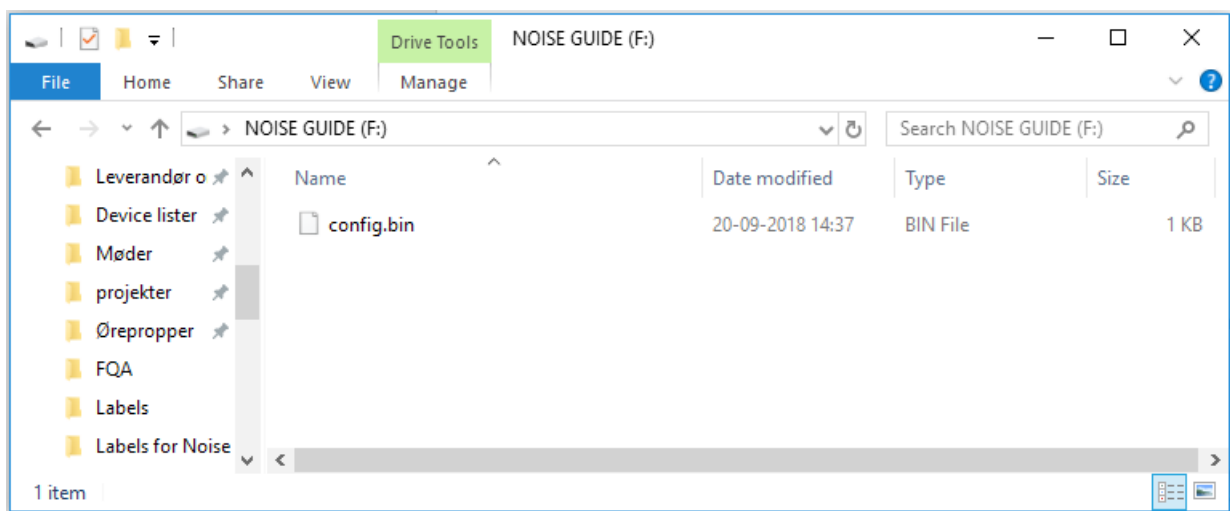
3. Insert the USB stick in the SoundEar®3. Your new light settings are now being transferred to from the USB stick to your device.

NOTE! Alarm settings and wireless settings can only be transferred to your device when directly connected to your PC via a USB cable.

WHAT NOISE LIMITS TO CHOOSE

Setting the right noise limit on your SoundEar®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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FORMATTING THE USB KEY

The USB key included is formatted in the format called "FAT 32". 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.

IMPORTANT: Please remember to export any files you may have on your USB key before formatting, as the formatting will overwrite all existing files on your USB key.

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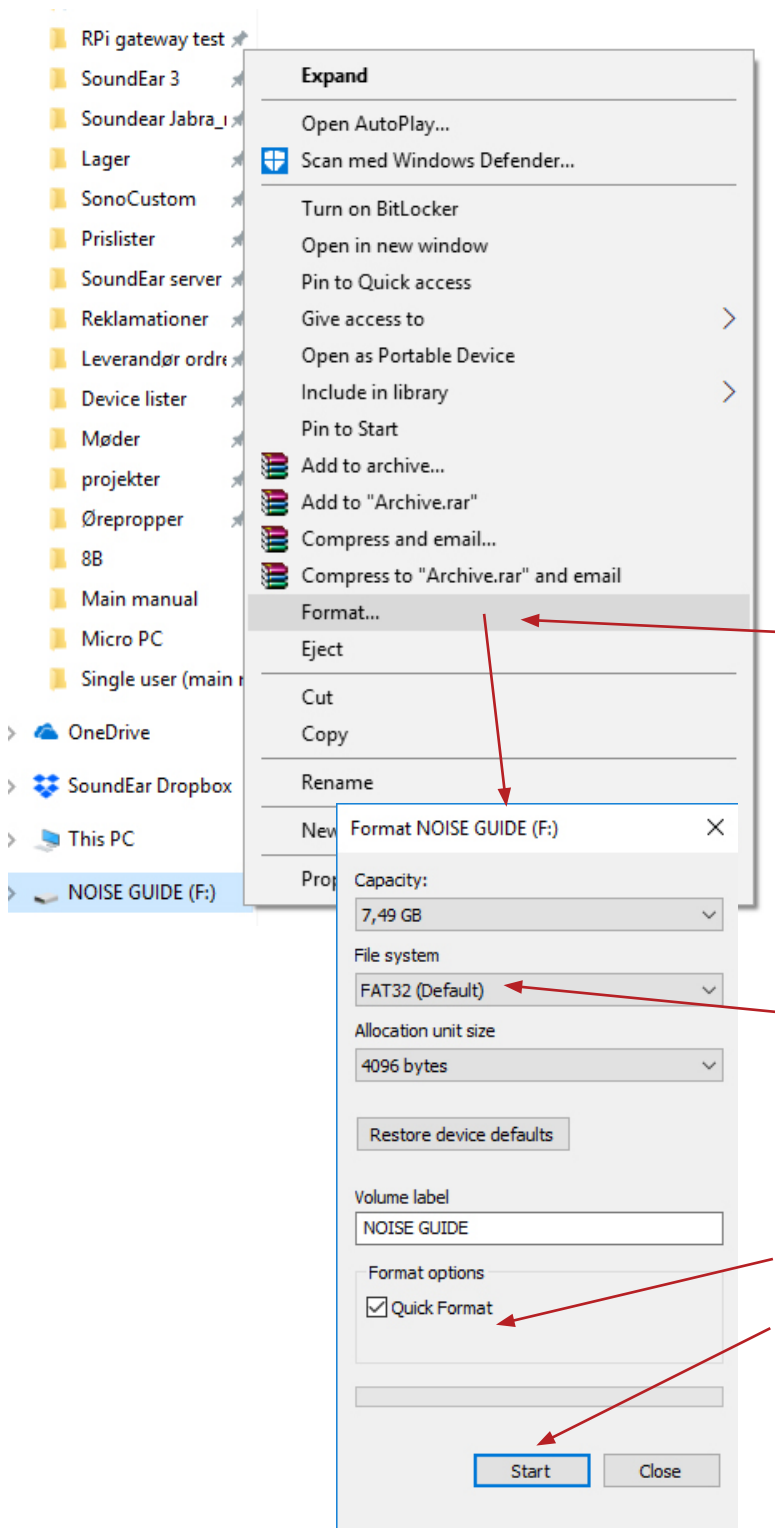
4. Select "Fat 32" under File System.

5 Check the box "Quick Format".

6 Click "Start".

7. The USB key is now ready for use.

EXPORT LOG FILES FROM THE INTERNAL MEMORY

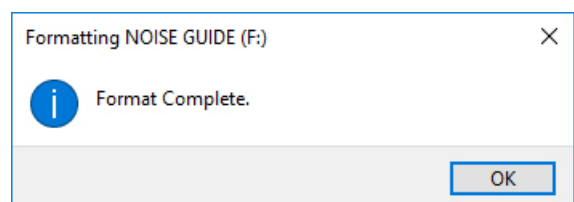**The internal log can store LAeq 1minute measurements for up to 600 days. These measurements can be extracted from the device to the SoundEar software via USB.**

1. Connect the USB key to your SoundEar®3 device. The words "USB" followed by "Copy" will appear in the mini display. Counting from 0 to 100, the mini display will show the progress of the export to USB. This process can take from a few seconds up to one minute, depending on the size of the internal log file.
2. When the mini display shows "100", the export is complete.
3. You can export measurements from several SoundEar®3 devices before you transfer them to the software.

▶ SoundEar®3 transfer data from the internal log

IMPORT MEASUREMENT DATA FROM THE USB KEY TO THE SOFTWARE

1. Insert the USB key in the computer and open the SoundEar® software.

2. Click on the menu "Measurement Data" in the left side menu and select "Import Data from USB". If a USB stick is connected, the software will automatically open this folder.

3. All measurements in the internal log are stored as '.ear' files. Select the '.ear' files for the devices you want to import.

The software converts the '.ear' files into '.csv' files and saves the data in the library section. All measurements imported from the internal memory will be stored in the folder 'Internal' and have the ending 'internal' when you view them in the library.
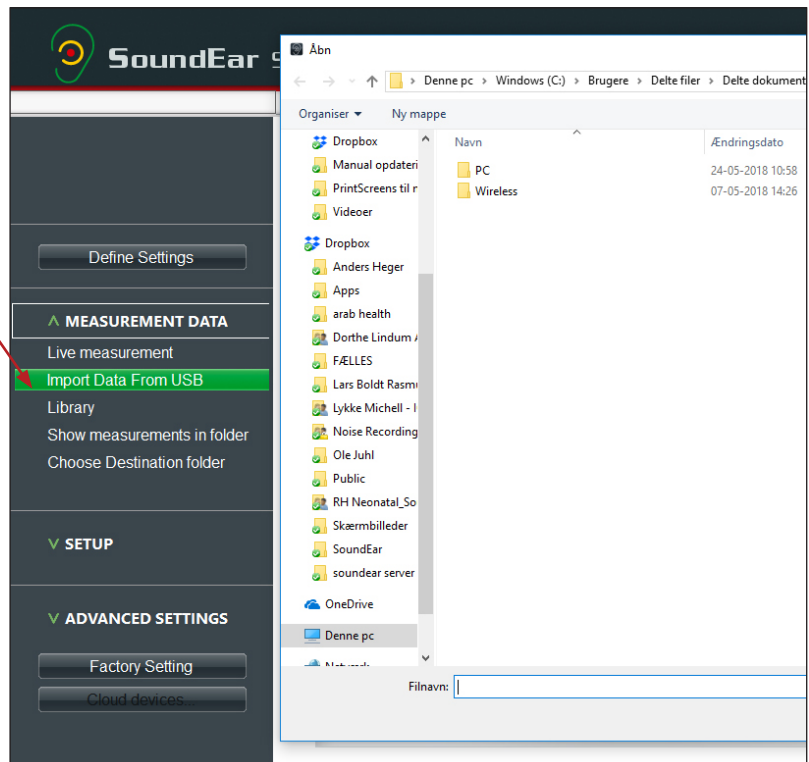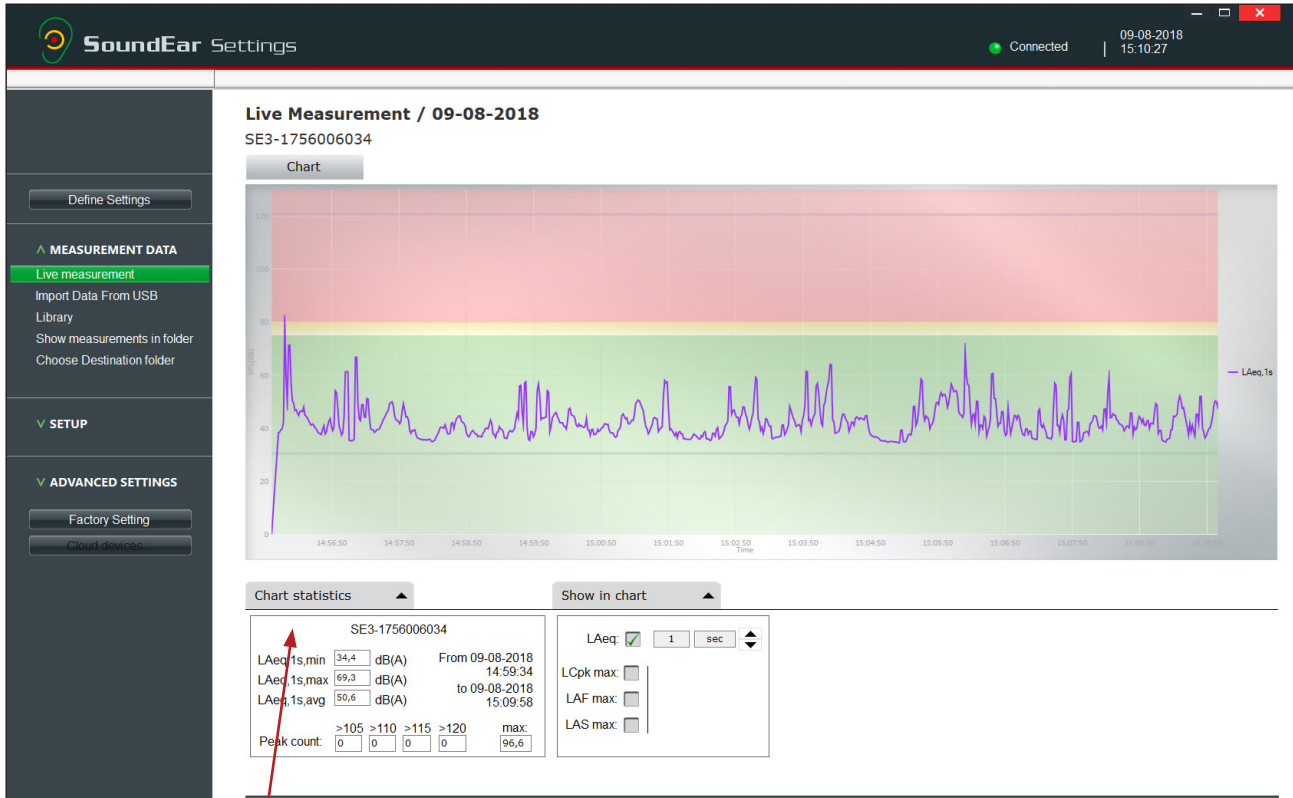
MEASUREMENT DATA

In the menu 'Measurement Data', you will find all features relating to viewing the data – both live measurements and from the measurement library.

LIVE MEASUREMENTS

If your SoundEar®3 device is connected, you will be able to view what is being measured live. Move the cursor over the graph to view measurement and time.
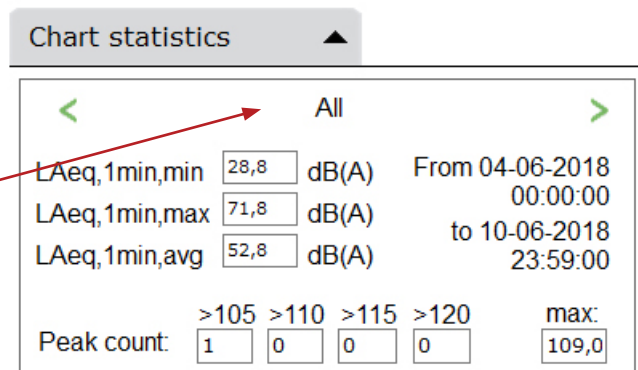
CHART STATISTICS

The tab 'Chart statistics' gives you an overview of min., max. and average noise levels, as well as peak levels for your device(s).

If you have selected more than one device, it will show the average noise levels for all the devices combined.
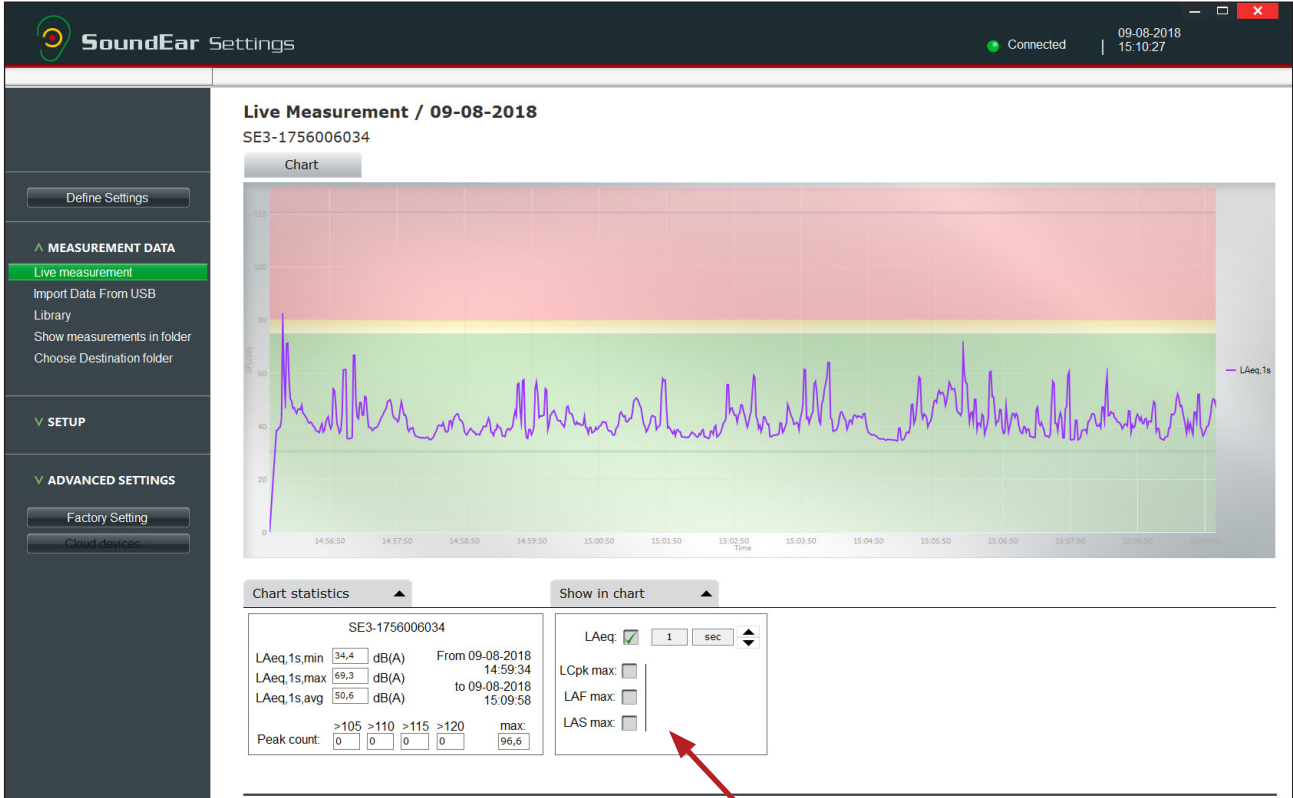

By clicking the green arrow, you can go back and forth and see the statistics for each device.

The peak count shows how many peaks there have been within the measured time.
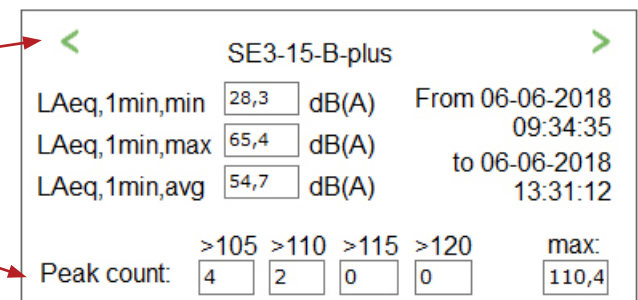
>105 dB(C) - 34
106 – 110 dB(C) – 14
111 – 115 dB(C) – 6
116 – 120 dB(C) – 0

SHOW IN CHART

You can choose to have your noise levels shown as:

- LAeq 1 sec. (shows the average A weighted noise level over a 1 second period).
- LAeq 1 min. (shows the average A weighted noise level over a 1 minute period).
- LAeq 15 min. (shows the average A weighted noise level over a 15 minute period).
- LAeq 60 min. (shows the average A weighted noise level over a 60 minute period).

- 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).

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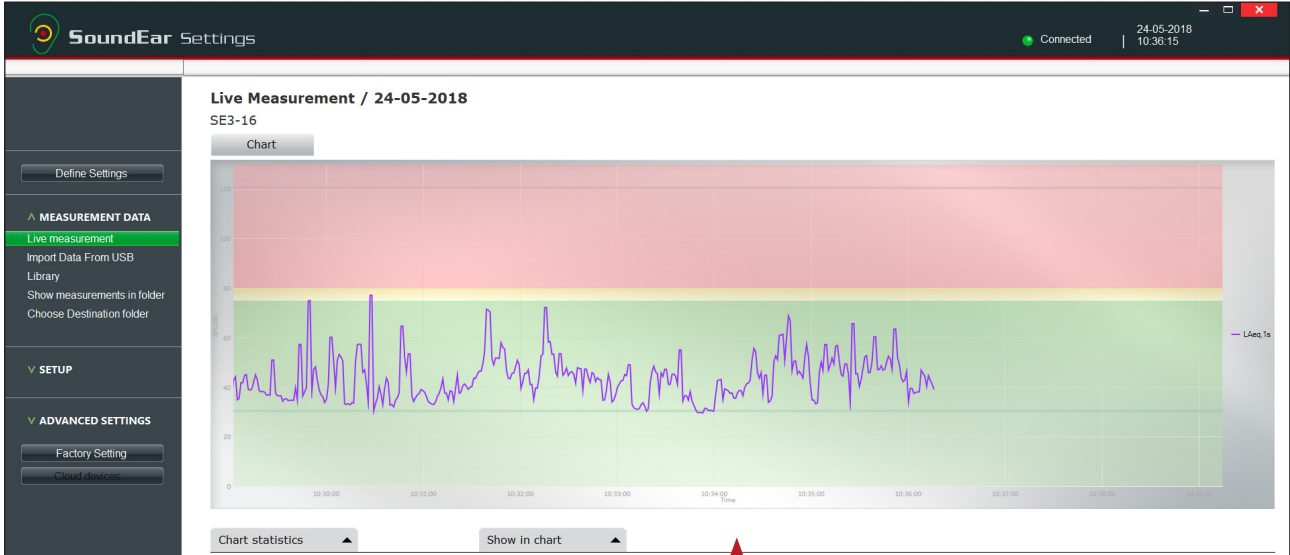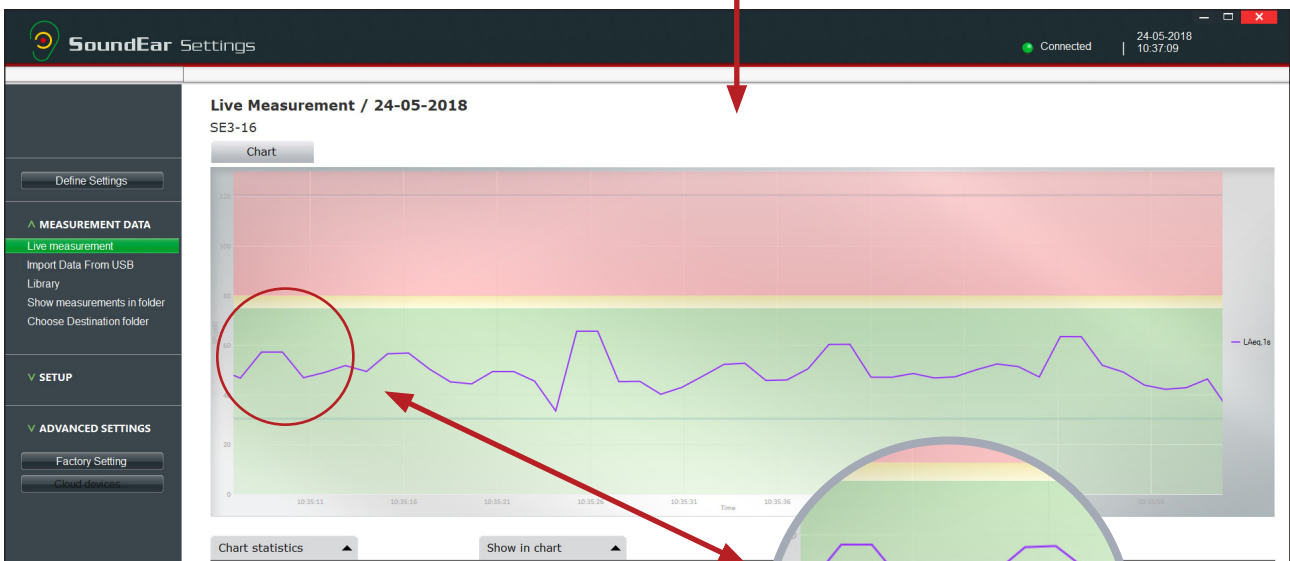## ZOOM FUNCTION

When data is shown on the graph, it is possible to zoom in on a specific period in order to have a closer look at noise levels.


Current measurements.

1. Move your mouse cursor anywhere on the graph.

2. With a mouse controller, simply move the mouse scroll wheel back and forth to zoom in and out.

3. If you are using a touchpad, place two fingers on the touchpad and move your fingers up and down the touch-pad to zoom in and out.

DEVICE INFO

If your SoundEar®3 device is connected to your computer,
you can find information regarding the unit under 'Device Info'.
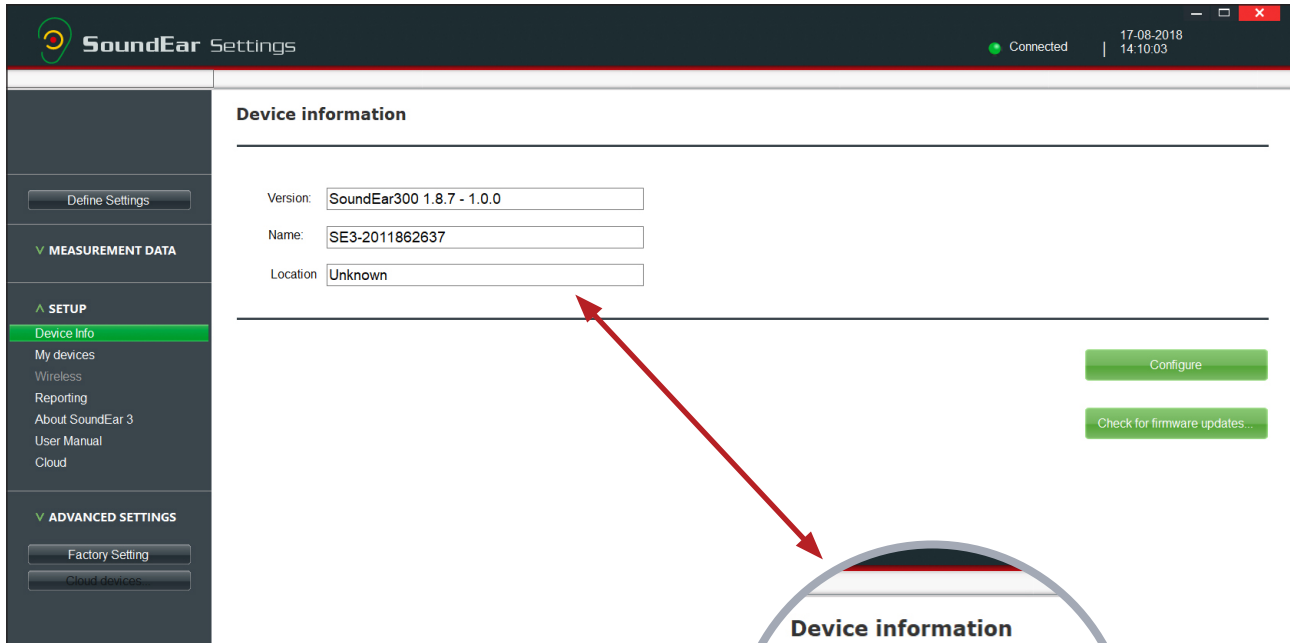
1. **Version:** Shows which firmware version you have on your device.

2. **Name:** You can name your device here. The name is used for naming your measurements in the measurements folder. If you have chosen not to name your device, your measurements will be saved using the unique ID of your SoundEar®3 device.

3. **Location:** name a location for your SoundEar®3 device.

When you are done, click 'Configure' to save your settings.

REPORTING

SETTING UP A NOISE REPORT
The SoundEar® software can deliver a noise report based on LAeq 1min measurements on a daily or weekly basis via e-mail. Go to 'Set-up' in the left side menu and click 'Reporting'.

NOTE! You can only receive a report if your device is directly connected to your computer or if you have connection to your devices via micro PC or wireless dongle.

1. Click the green plus to add a new report.

REPORT NAME

1. **Report name**
   Start by naming your report. This name will be used for the PDF you will receive as an email along with the date.

2. **Show in report**
   Choose what you want included in the report by checking the boxes.

DEVICE AVERAGE

Device average gives you an overview of what has been measured for the chosen devices in the chosen time period.

Noise Report

Date: 02-10-2018

Location:	test report
Report period:	13:00 2. oktober 2018 - 23:59 3. oktober 2018
Noise limits:	■ 0-60 dB ■ 60-90 dB ■ above 90 ■ no measurements

Device averages

Lowest noise level:	Device RV4 at 02-10-2018 16:22:00, 31,4
Highest noise level:	Device RV5 at 03-10-2018 13:59:00, 88,7
Critical noise levels:	0 times at device RV5 0 times at device RV4 'Critical noise level' indicates that noise levels have reached your noise limit, and (if enabled) an alarm message hase been sent.

Page 1

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AN EXAMPLE.

CHART

Chart will show you what has been measured for the chosen devices in one chart.

Noise Report
Date: 02-10-2018

Location:	Soundear report 03-10-2018 13:42:30
Report period:	13:00 2. oktober 2018 - 23:59 2. oktober 2018
Noise limits:	■ 0-60 dB ■ 60-90 dB ■ above 90 ■ no measurements

Chart

HOURS

Hours shows you the average measured for each hour in the chosen time period.

Hours

Page 3
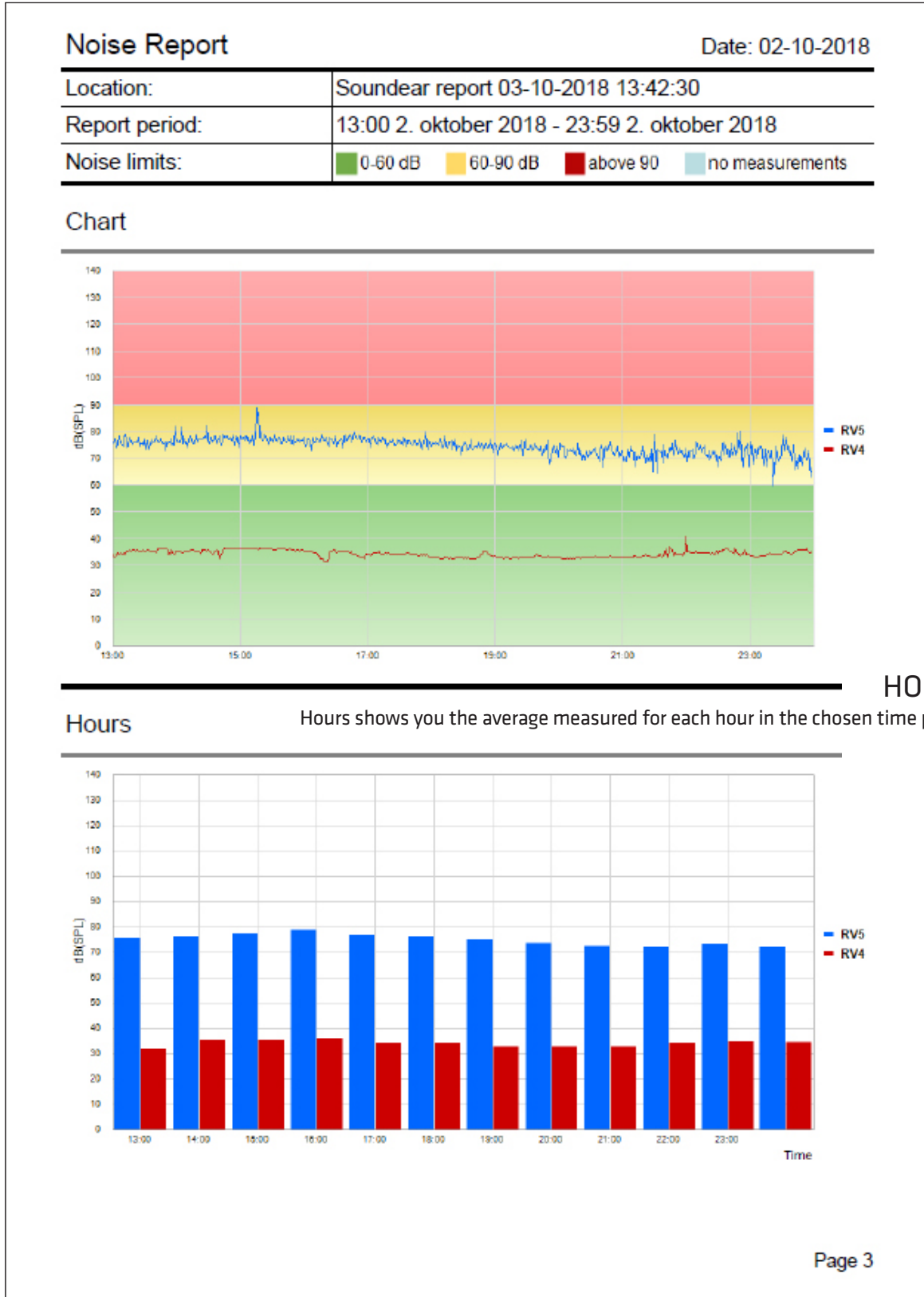
DAY

If you choose to include multiple days in the report, 'Day' will give the average daily noise level for each of the chosen devices.
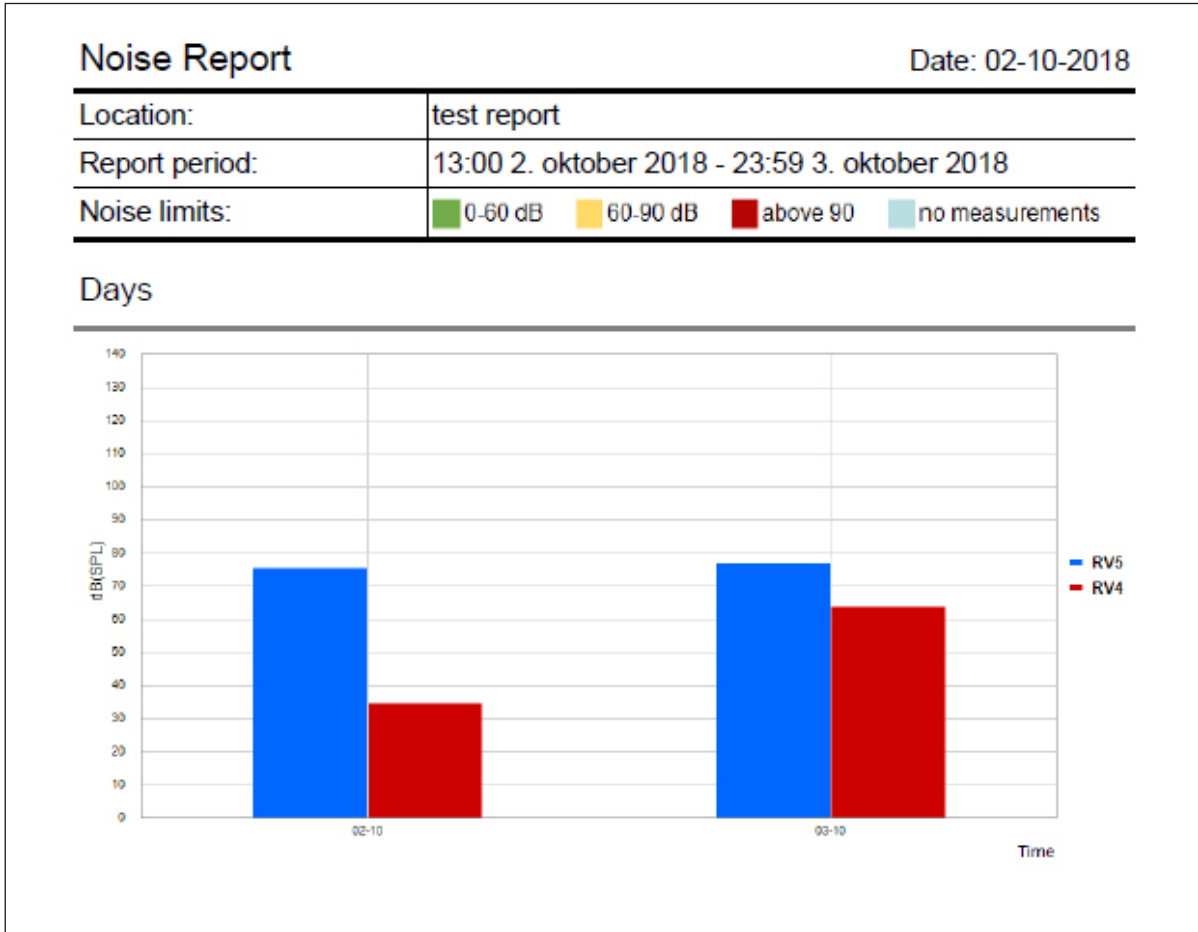
SEND REPORT
You can choose between a daily report or a weekly report.

Send report:
- ◉ Every day
- ○ Every week

at `09:00`

Measurements from: `08:00`

to: `16:00`

Send report to:

Email address
soundear@soundear.com

DAILY REPORT
- Mark check box 'Every day'
- Choose time you want to receive the report
- Chose time periode to include in the report
- Type in email address(es) to receive the report

WEEKLY REPORT
- Mark check box 'Every week'
- Choose time you want to receive the report
- Chose time periode to include in the report, in this case Monday to Friday from 08:00 – 16:00
- Type in email address(es) to receive the report

Send report:
- ○ Every day
- ◉ Every week

at `Monday` `09:00`

Measurements from: `Monday` `08:00`

to: `Friday` `16:00`

Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday

Send report to: Email sound

DEVICES IN REPORT
Check the boxes for the devices you want to include in the report.

NOISE LIMITS IN REPORT

Drag the markers to set the noise levels you want shown in the report.
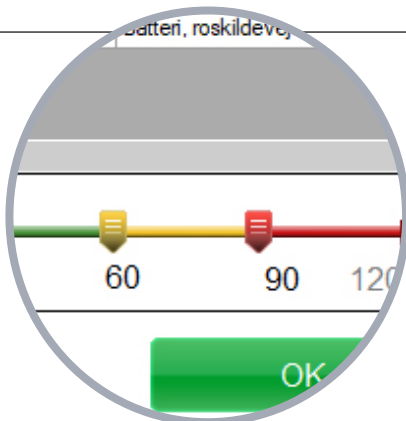
The set noise levels will be used on all devices chosen for the report.

When you are done with your settings, click 'OK' to save and activate the report.

The report is shown in the left column. You can see an overview of your settings in the right column. Click 'Preview' to see a sample of the report. If you want to edit your report, click on the button 'Edit'
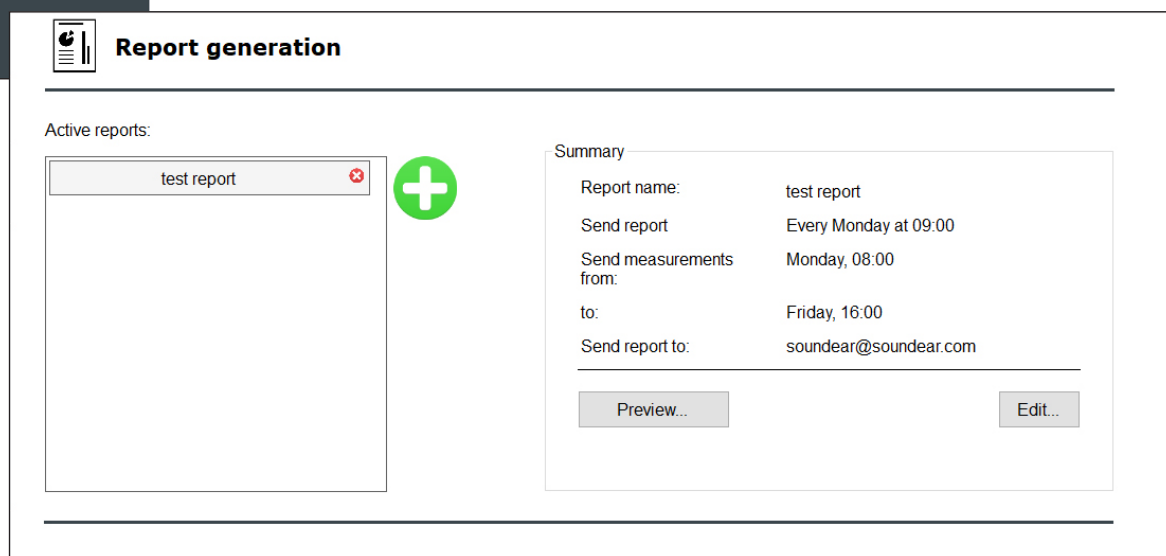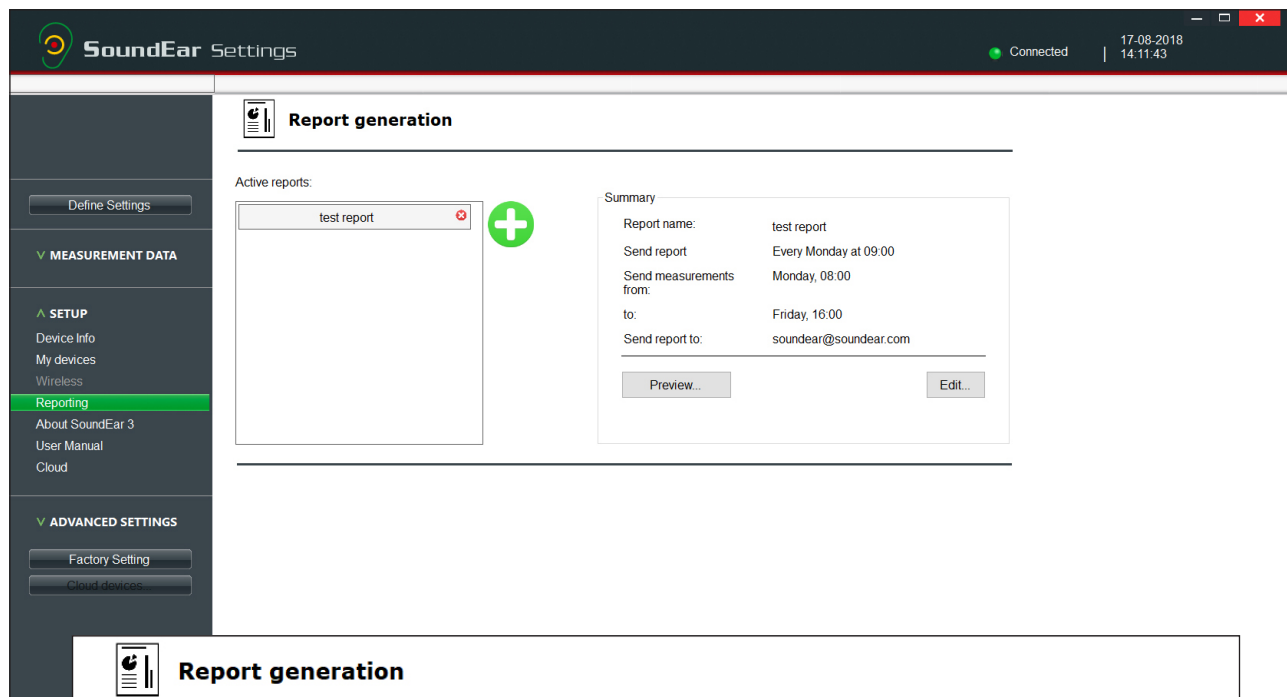
If you want to remove a report, click on the red mark next to the report name. Click 'OK' in the pop-up window to remove the report.

LIBRARY

....

Here, you can find and compare the measurements collected.

NAVIGATING THE LIBRARY
Open 'Library', located in the 'Measurement Data' menu.

....
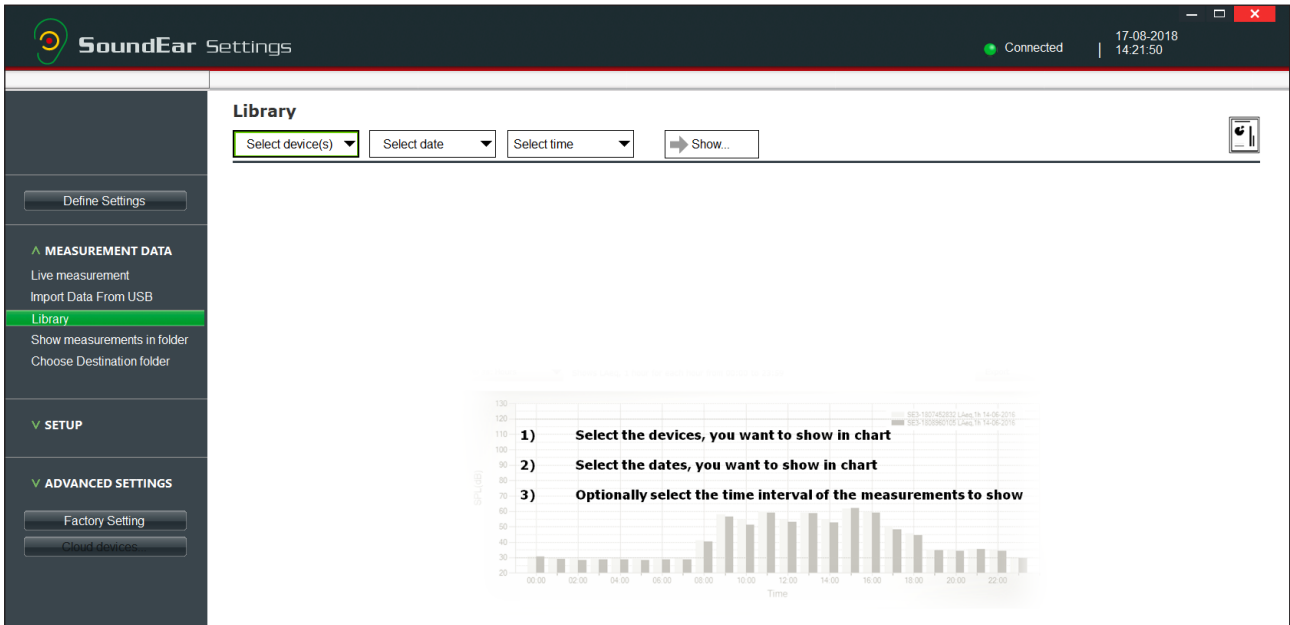
SHOW MEASUREMENTS

....

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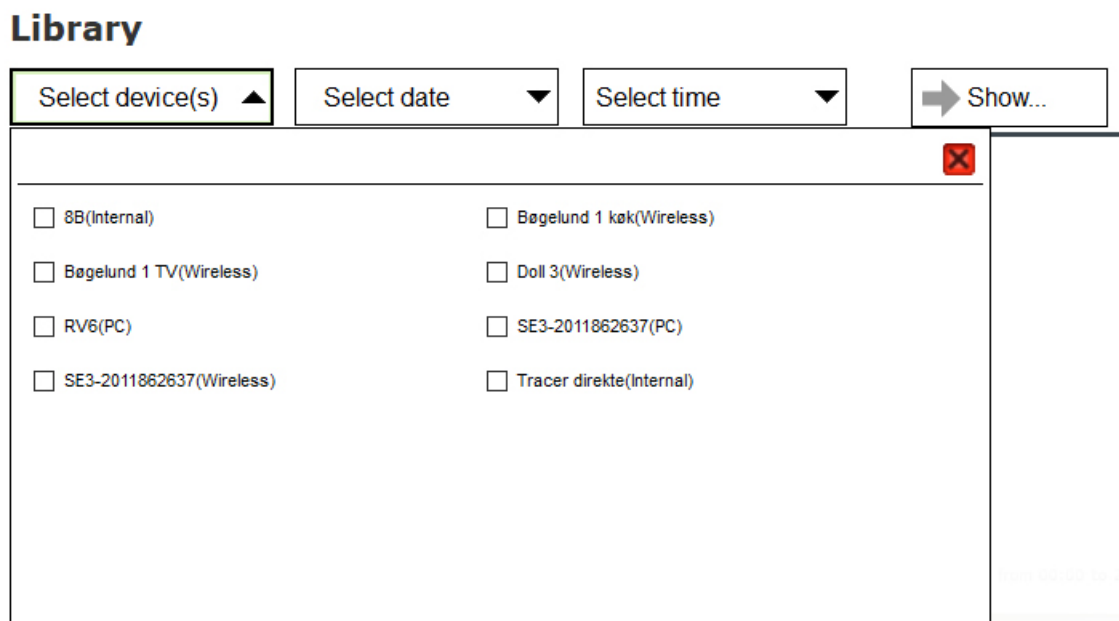
SHOW MEASUREMENTS

2. 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 wil turn into a darker shade of green.

3. If needed, select what time interval you want to look at, by designating the hours and minutes in the drop-down menu.

4. Click 'Show' to view your measurements.
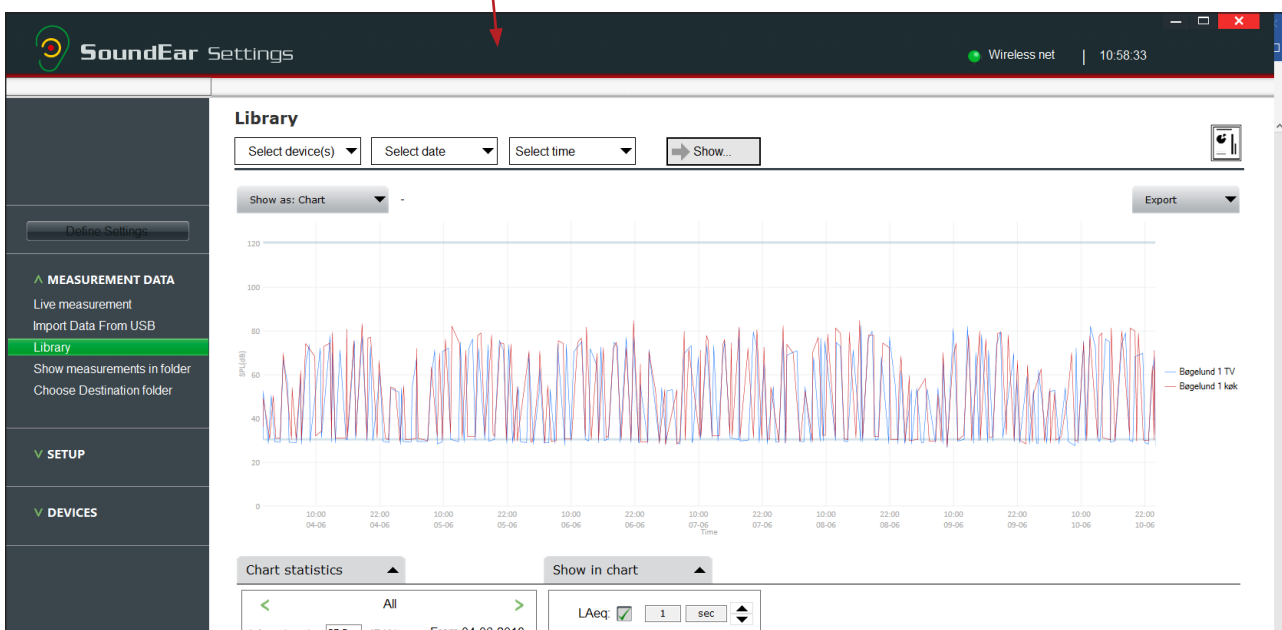
SHOW IN CHART
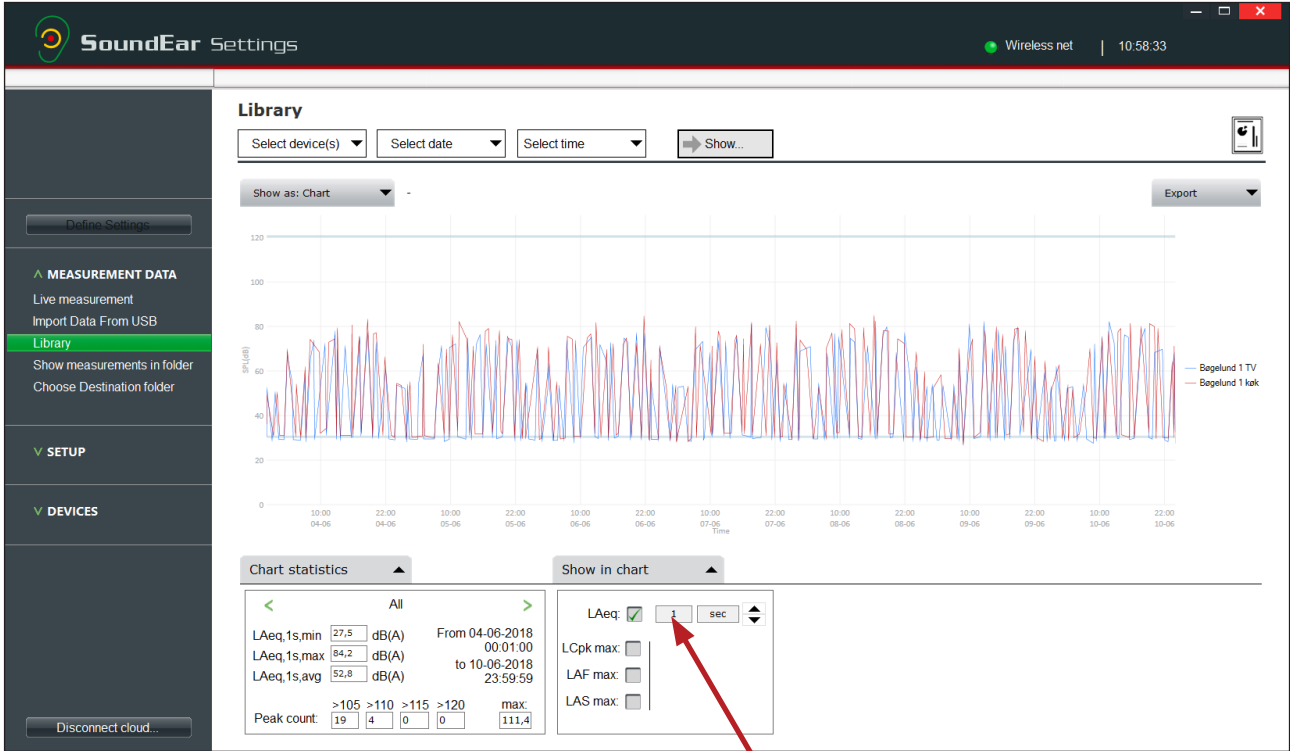
As standard, the graph will show LAeq 1min measurements.
   Use the arrows to choose between:
-   LAeq 1 sec.
-   LAeq 1 min.
-   LAeq 15 min.
-   LAeq 60 min.

You can also choose to have your measurements shown as
   LCpk max., LAF max. or LAS max.

SHOW AS HOURS, DAYS OR CHART
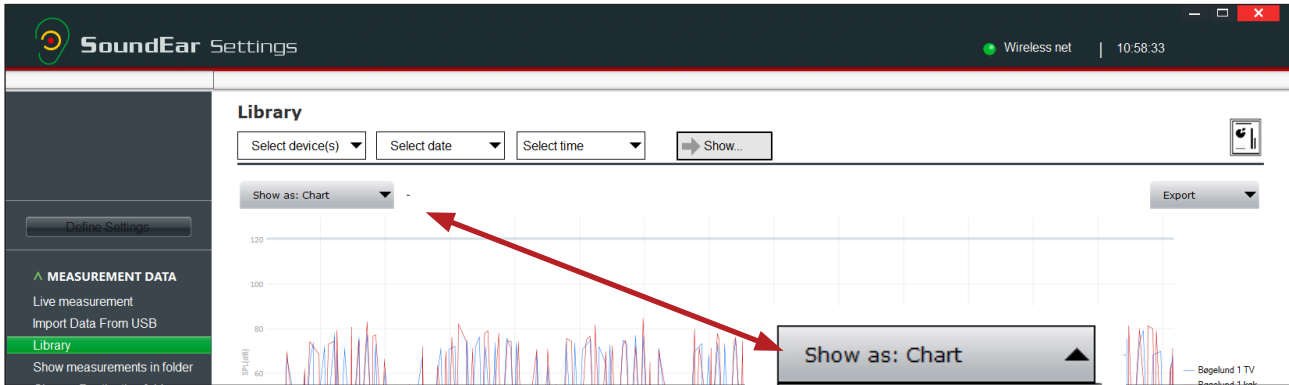
In the 'Show as' drop-down menu, you can get an average view of your measurements, shown as hours, days or chart.

HOURS:

Presents you with a bar chart, representing the average noise level for each hour in your selected period.
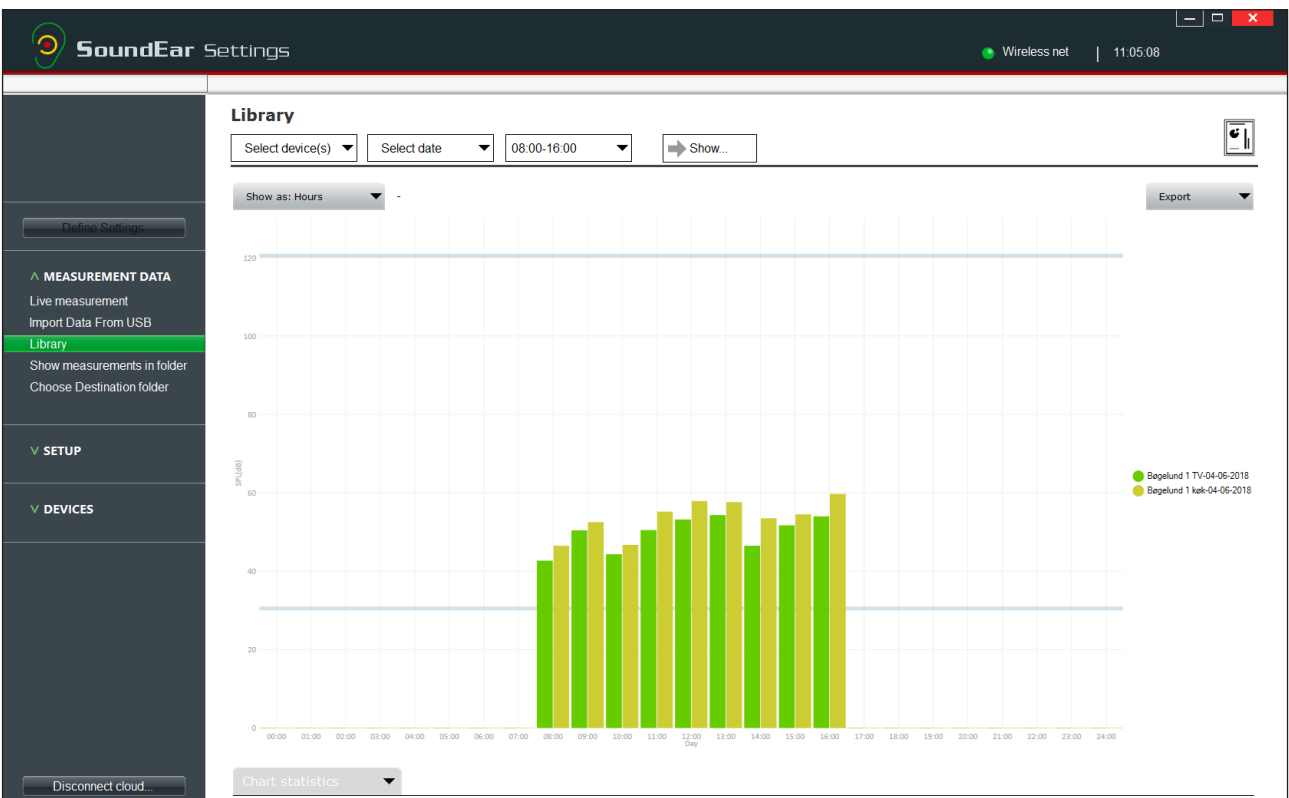
SHOW AS HOURS, DAYS OR CHART

DAYS:

Presents you with a bar chart, representing the average noise level for each day in your selected period.
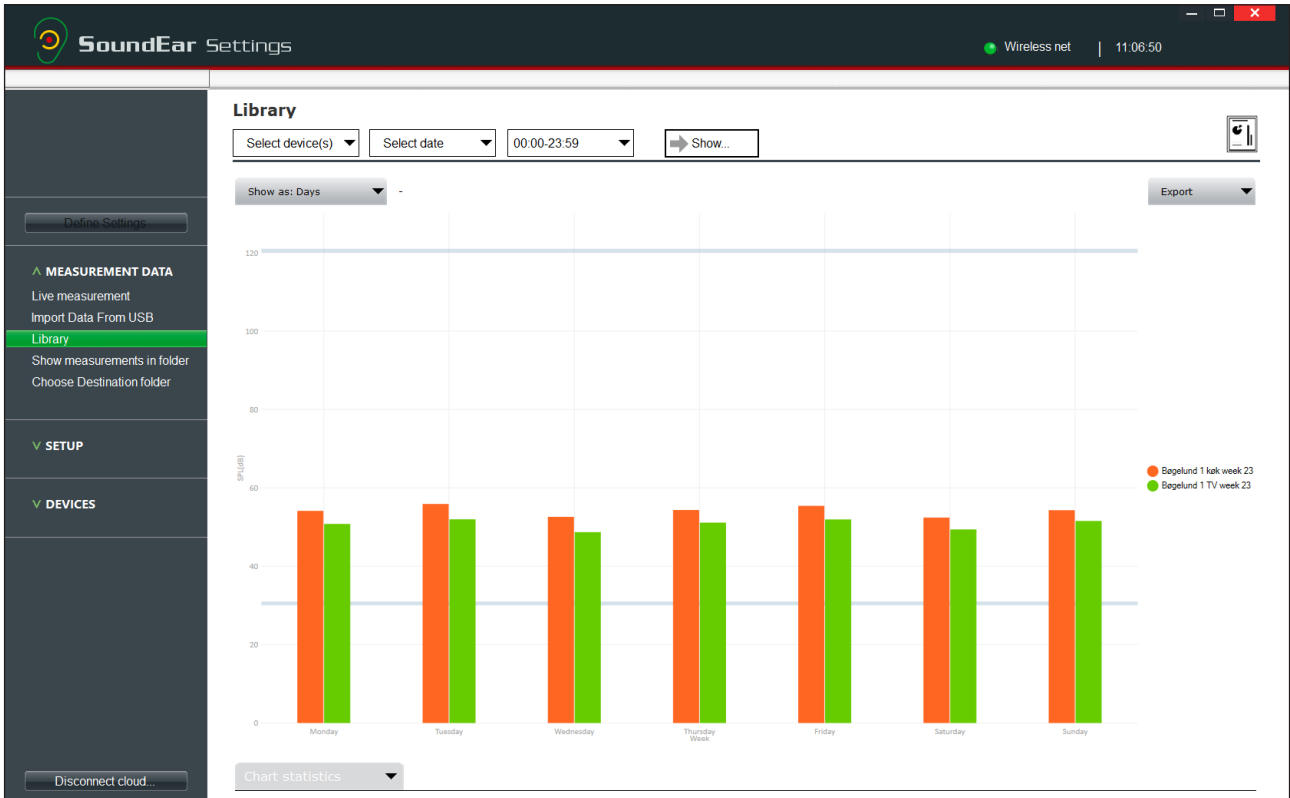
CHART:

Presents you with a continuous chart of the average noise levels in your selected period.
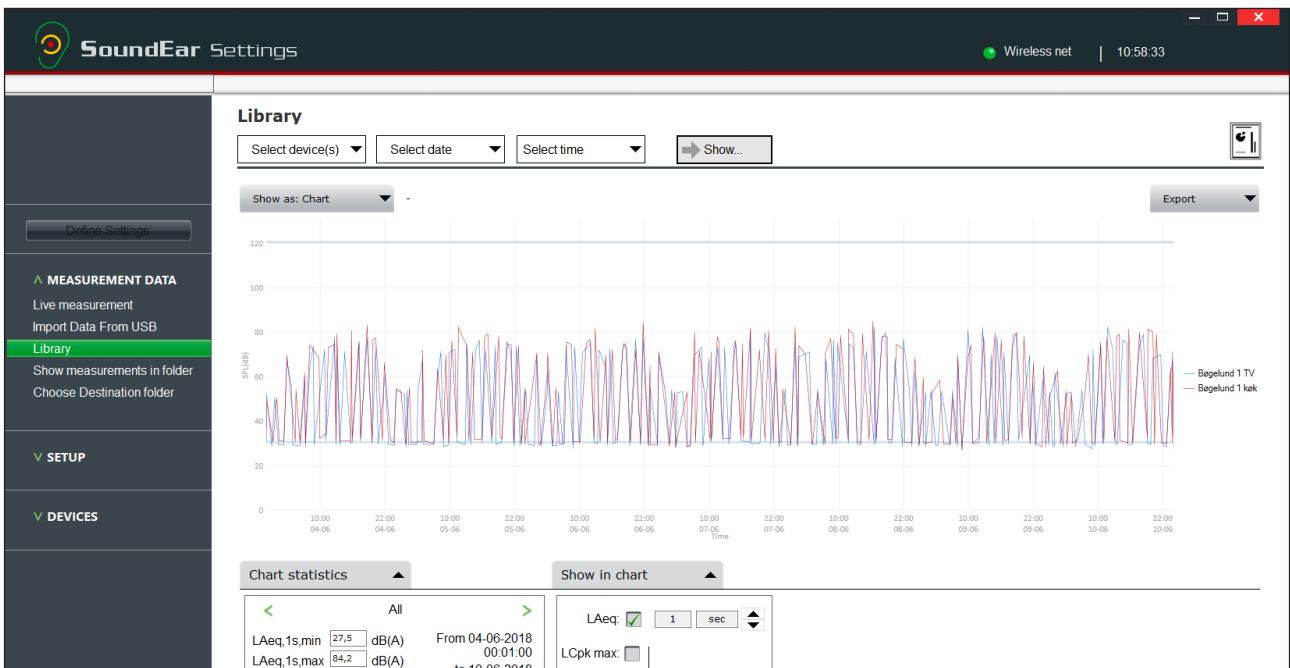
CHART STATISTICS
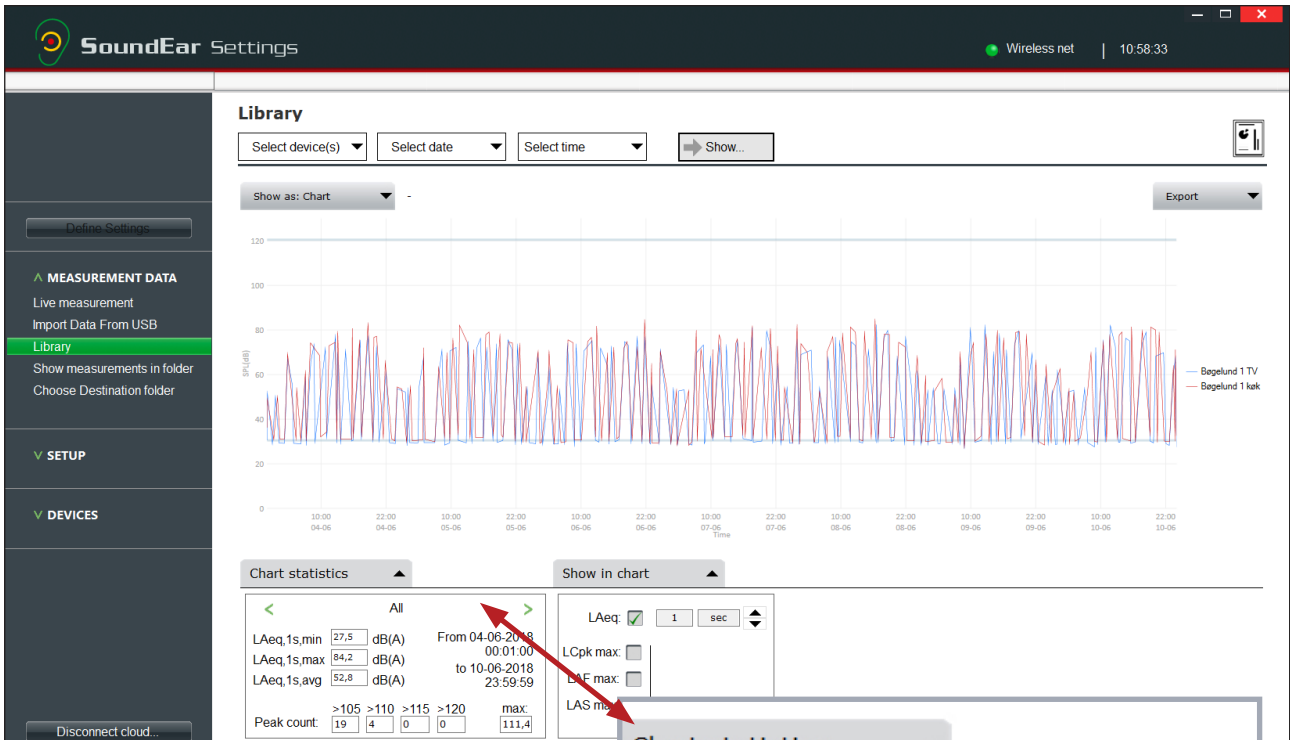
As standard, Chart statistics will show you the average of all your measurements for all selected devices.

Use the green arrows to view the statistics for each device.

The information in chart statistics will be updated, depending on what you select in 'Show in chart'.

EXPORT MEASUREMENTS TO CSV

When exporting to Csv, you can create a Csv file with the precise information you need.
In this example, I am interested in a Csv file with LAeq 1min values for two devices over a period of three days.
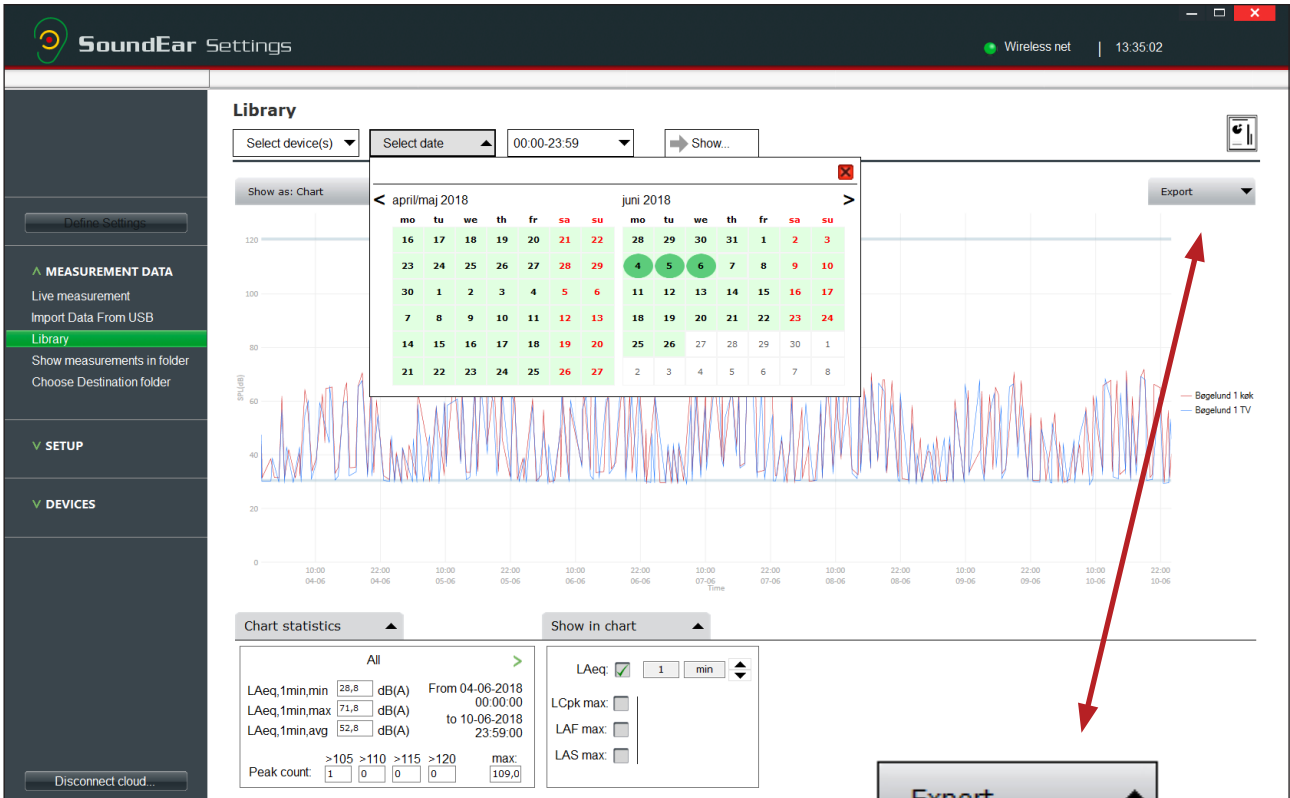
1. Click on the drop-down menu 'Export' and select 'Csv'.
2. Decide where you want to save the file.
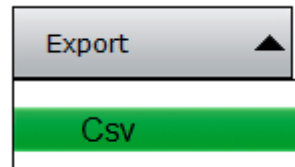
3. A pop-up window will be shown on your screen, displaying the progress of the export.

EXPORT MEASUREMENTS TO CSV

4. Open the Csv file to view your measurements.

GENERATE NOISE REPORT
You can generate a noise report of the measurements you have selected in the library
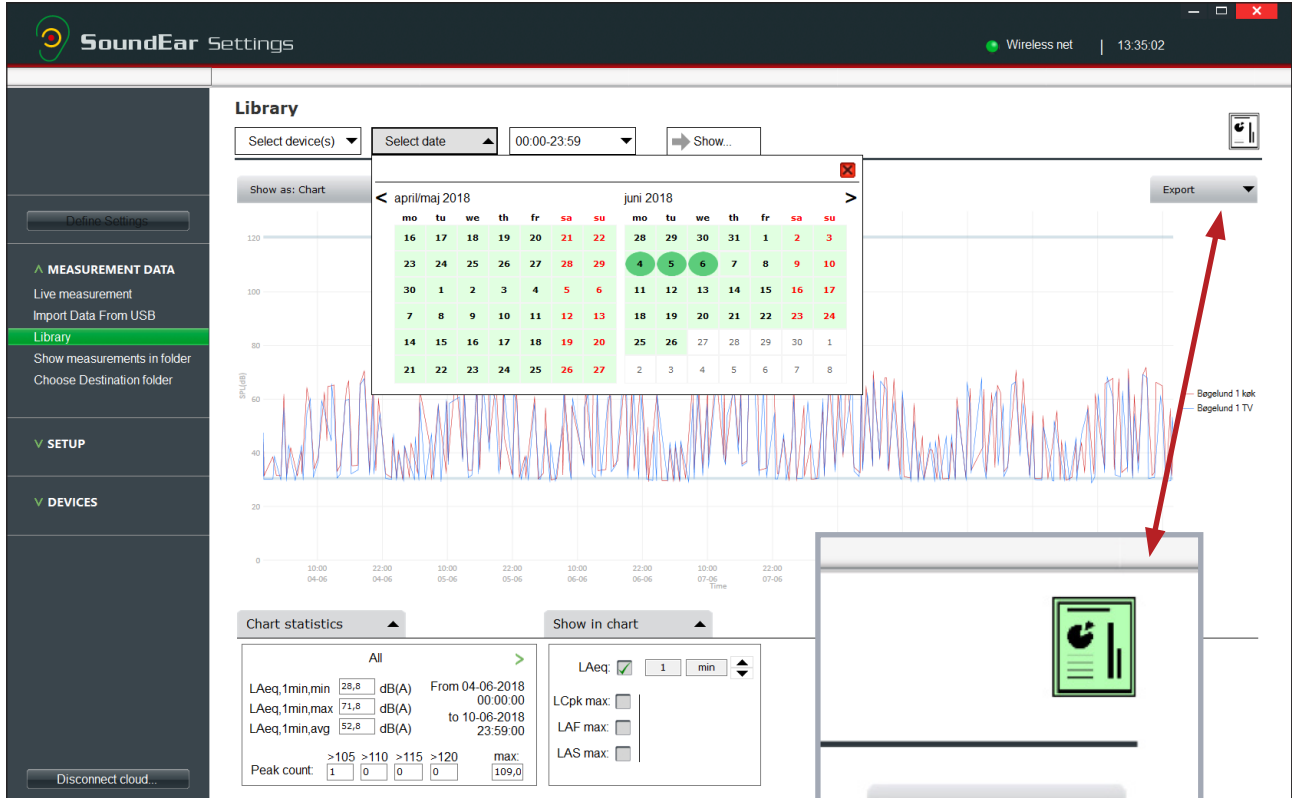
1. Click on the report symbol in the top right corner of the screen.
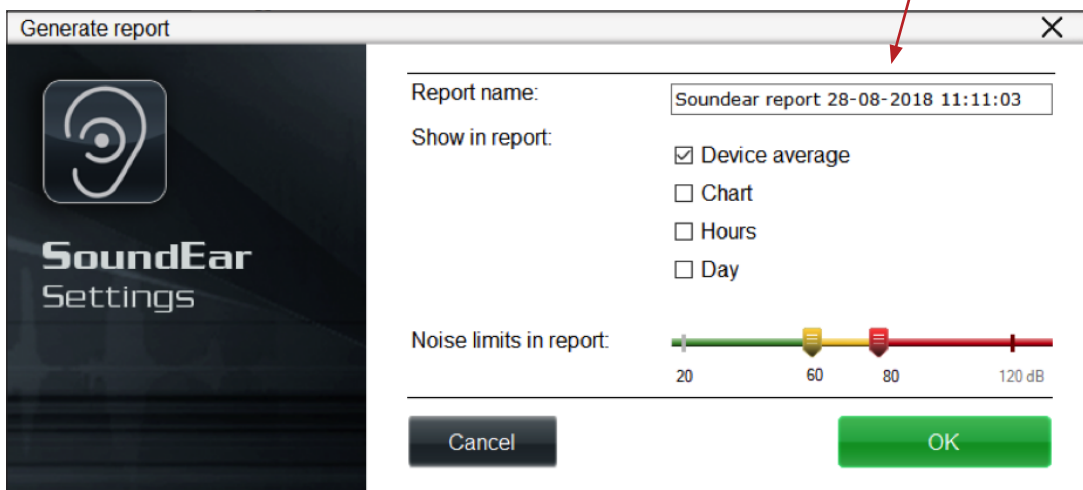
2. Name your report and select what you want included in the report. By default, device average is always included.
3. Set your noise settings for the report by dragging the yellow and red markers.
4. Click 'OK' to view your report as a pdf.

You can read more and see a sample of the noise report in the chapter REPORTING

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 other data analysis software of your choosing. By clicking here, you will be directed to the root folder.

Navn	Ændringsdato	Type	Størrelse
Internal	24-05-2018 13:45	Filmappe	
PC	04-06-2018 12:07	Filmappe	
USB	04-06-2018 11:13	Filmappe	
Wireless	04-06-2018 12:31	Filmappe	

CHOOSE DESTINATION FOLDER
If needed, you can choose which folder your measurements are saved in.
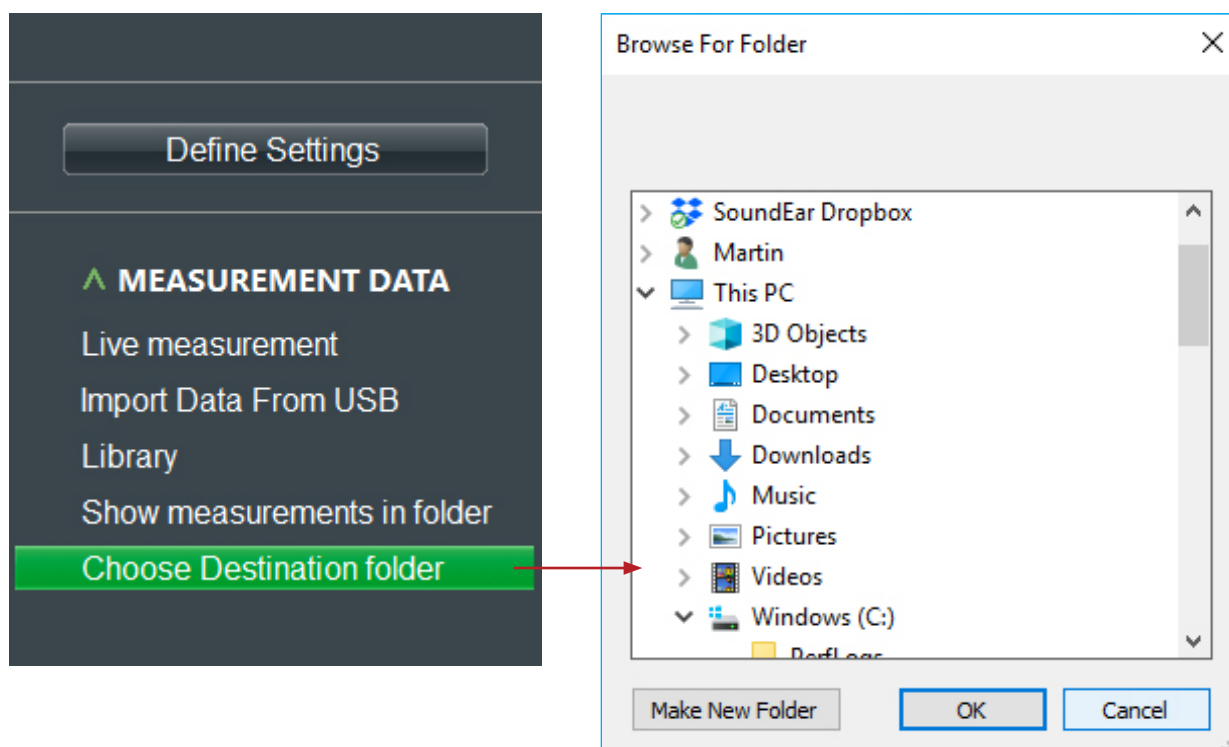
1. Choose where to save your measurements by clicking on 'Choose destination folder' in the menu 'Measurement Data'.

2. Choose your destination folder or create a new folder by clicking on 'Make New Folder'.

ADVANCED SETTINGS

ANALOG OUTPUT

The analog outputs enable you to connect SoundEar®3 to Building Management Systems (BMS) or to communicate with other devices that are compatible with analog outputs.

NOTE! The 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 share a ground connection.

Model 300, 310 and XL
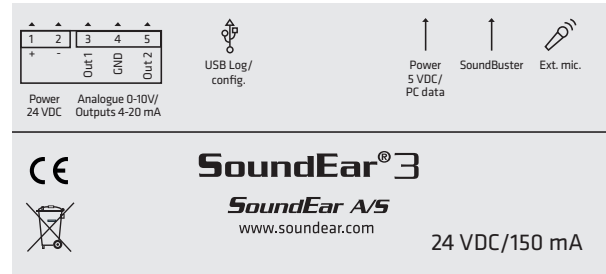
Model 320
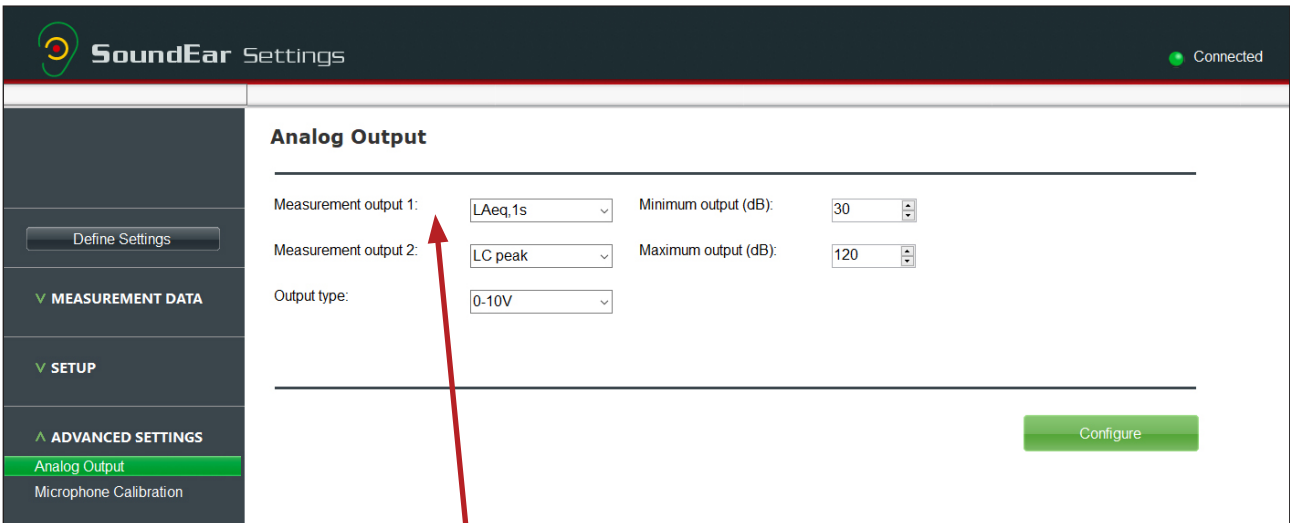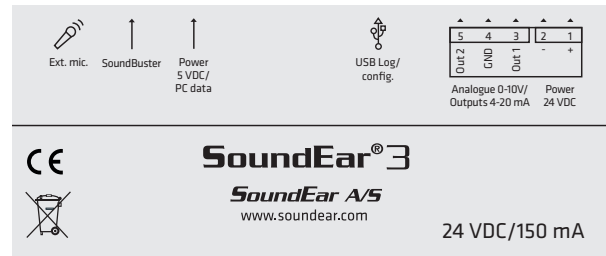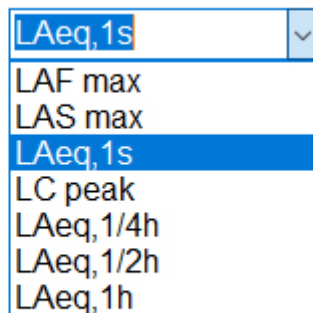
You can record up to two individual measurements simultaneously, one per analog output.

In the drop-down menu, you can choose between seven different values for each output.

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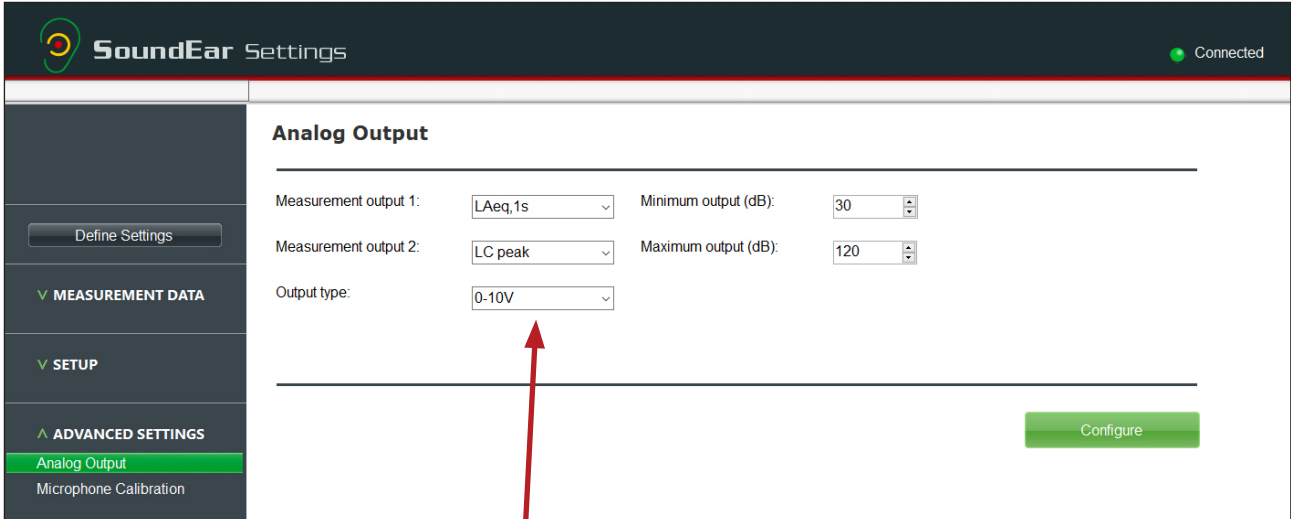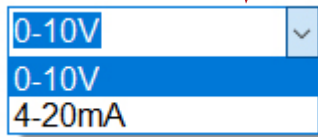
Choose analog output format, either 0-10 V or 4-20 mA.

Set the 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 diameter of 1/2 inch.

NOTE: For proper calibration, we recommend that you only use the included 4-pole extension cable. If calibrating more than one microphone, disconnect the extension cable from the SoundEar®3 and re-insert 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 at least once a year – or as needed.

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 SoundEar3's microphone input.
3. Set the calibrator to 94 dB and connect the microphone.

Wait a few seconds until the noiselevel shown in LAS max is stabile

4. Click "Perform Calibration". Under 'Measurements', you can view what the microphone detects. Depending on when the last calibration was performed, the measurement should be approx. 94 dB.

MICROPHONE CALIBRATION

Calibrating microphone.
Please wait ...

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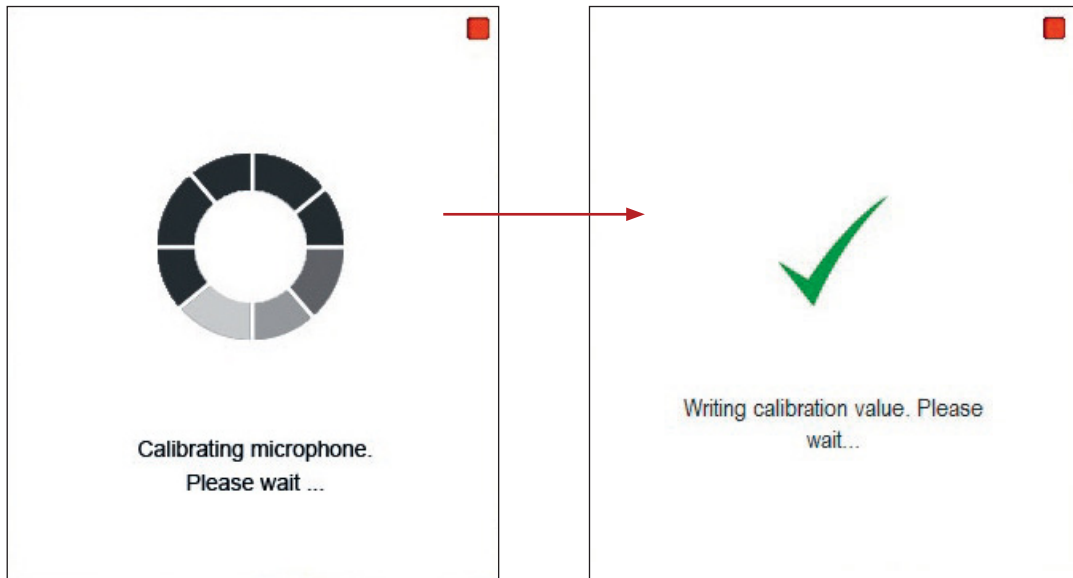
The calibration takes a moment.
A new pop-up window will tell you when the calibration is completed.

When the calibration is complete, connect the microphone to SoundEar®3 and the device is now ready for use.
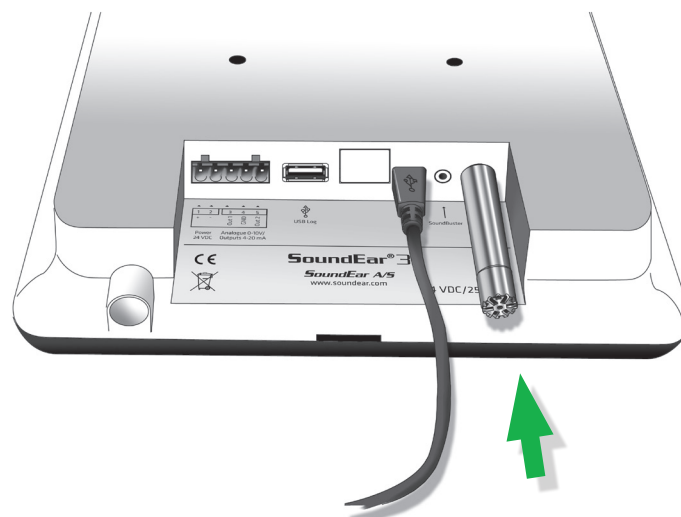
FACTORY SETTINGS

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RESET THE DEVICE TO FACTORY SETTINGS
If you want to reset your device to factory settings, you can do so by connecting the device to your computer via USB cable and clicking the button 'Factory Settings' in the menu.

PLEASE NOTE! This will remove all your previous settings and data from the device and re-install the original settings.

SoundEar®3 factory settings

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
Yellow: 60 dB -120 dB
Red: 60 dB -120 dB
Night settings are not part of the standard settings. To activate, please 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

....

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 partly consists of materials that do not tolerate certain substances used in surface disinfectants.

Disinfection by wiping
• First, remove dirt and grime from the surface using a damp, disposable cloth.
• Then disinfect the surface with alcohol wipes, followed by dry cloth.

Operative system	: Windows 7, Windows 8, Windows 10.
Hard drive	: 100 Mbytes free.
RAM	: 512MB RAM.
USB port	: 1xUSB 2.0 port.
CPU	: 1.5GHz AMD/Intel processor.

We recommend using a screen at least 1366 x 768 in size.

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.
2xOutputs (1 for dB A + 1 for dB C)	: Either 0-10V or 4-20mA outputs.
2xUSB ports	: Micro USB (Power & PC), USB OTG (Log, config).
Display Data	: LAeq 1 second, Alarm settings, Clock, off.
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 model 300 and 310	: Length: 265mm, width: 205mm, height: 46mm.
Weight	: 1.5kg.
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.