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SONASCREEN

Acoustic Camera

# Connections, Interface, Device Features





N0.	Connections, Interface, Device Features
1	LEDs (flashlight function)
2	Camera for capturing optical signals
3	Microphones for detecting acoustic signals
4	Tripod adapter plate connection
5	Power cable connection
6	Touch Display
7	Headphone jack (jack 3.5 mm)
8	Ethernet interface (socket RJ45)
9	USB interface (USB socket type A)

# **Status Indicators and Device Buttons**



No.	Component	Description/Function
1	Battery level LEDs	Display the current battery level of the device
2	Status LED SONASCREEN	<ul><li>Shows the current device status:</li><li>Flashing: Device is starting</li><li>Green: Device is turned on</li></ul>
3	Power button	<ul><li>Short press: Check battery level</li><li>Long press: Turn device on or off</li></ul>
4	Function	Can be assigned predefined functions in the settings of the software.

# Screens

### Start



No.	Component	Description/Function
1	Measurement	Opens the measurement screen.
2	Configuration	Opens the configuration screen.
3	Support info and update	Opens a screen with the manufacturer contact information and an option to update the device software.
4	Switch off	Shuts down the device software and turns off the device.
5	Profile	Opens the user profile management screen.
6	Leak detection	Opens the Measurement screen with predefined functions for measuring leaks.
7	Open Saved Measurement	<ul><li>List for selecting saved measurements</li><li>Button to open the selected measurement</li></ul>

### Measurement



No.	Туре	Description/Function
1	Acoustic image	Shows the camera image with visualized sound signals. Allows switching between mean and peak hold images for long-term measurements.
2	Measurement settings	Contains tools for preparing and analyzing measurements.
3	Spectrum	Shows the following spectra according to the selected position (Y-section) in the spectrogram, depending on the setting: Red: global I Green: averaged I Yellow: Peak-Hold I Blue: local Allows you to scale the Y-axis (frequency).
4	Amplitude scale	Shows the assignment of the level values to a color (color ranges in the spectrogram).

No.	Туре	Description/Function
5	Spectrogram	<ul> <li>Displays the intensity of the ultrasonic signal in spectra over time.</li> <li>Allows you to scale the x-axis (timeline) and y-axis, as well as the amplitude scale.</li> </ul>
6	Control	Contains tools for controlling measurements.

# Control and measurement settings

Measurements can be managed with the control tools. With the tools of the measurement settings, new measurements can be prepared or recorded and stored measurements can be analyzed.



N0.	Component	Description/Function
1	Start measurement	Starts the recording of a measurement. Additionally, the measuring range of the recording can be selected (audible sound: up to 24 KHz and ultrasound up to 100 kHz).
2	Screenshot	Takes a screenshot of the entire screen.
3	Insert marker	Inserts a marker in the timeline of the spectrogram.
4	Open measurement	Opens a screen to open a saved measurement.
5	Save measurement	Opens a screen to save a recorded measurement.
6	LED lights	Turns the LED lights on or off on the device.
7	Replay measurement	Starts playing back a recorded or open measurement from its current position in the Timeline.
8	Close screen	Exits the current screen and switches to the start screen
9	Distance	Opens a field for setting the distance to the sound source with input field or slider.
10	Frequency filters	Opens a field to set the frequency range.
11	Marker navigation	Opens a field with functions for navigating between markers set in measurements.
12	Audio output	Opens a field with features to enable/disable and filter audio output.
13	Duration	Opens a field to select the measurement duration.
14	Timeline Navigation	Opens a field for navigating the timeline of the spectrogram.

# Perform Measurement

### Start measurement

Measurements started in the Record Measurement recording method can be used for various applications. All control functions and measurement settings are available for these measurements.

1. Open the Measurement screen.



- $\rightarrow$  If the "Start measurement" icon is activated, the device is ready to record.
- 2. Tap and hold the "Start measurement" icon.
  - $\rightarrow$  A menu opens with recording modes for the following measuring ranges:

= up to 24kHz = up to 100kHz

- 3. Tap the desired recording mode.
  - $\rightarrow$  The measurement is started with the measurement range of the selected recording mode.
  - $\rightarrow$  The acoustic image, spectrogram and spectrum are displayed.

### Stop measurement

When recording a measurement, the measurement data is temporarily stored in the device over the period of the specified measurement duration. The cached time period is displayed in the spectrogram.

This allows the measurement data to be checked and/or analyzed directly during or after a recording has been completed.

1. Tap on the "Stop measurement" icon.



#### Save measurement

The measurement data cached after completing a measurement can be stored in a measurement data file in the device. Each saved measurement data file can be reopened at any time. This enables the subsequent testing and/or analysis of the measurement data.

1. Tap on the "Save measurement" icon.



## Perform Leak Measurement

#### Start measurement

Measurements that are started in the recording method "Record leak measurement" are used to locate and document compressed air leaks.

Due to the measurement data required for this, various controls and measurement settings are predefined at the factory and cannot be changed.

1. Open the Leak Measurement screen.



- → If the "Start measurement" icon is activated, the device is ready to record.
- 2. Tap on the "Start measurement" icon.
  - $\rightarrow$  The measurement is started.
  - $\rightarrow$  The acoustic image, spectrogram and spectrum are displayed.

#### Save measurement for report

Reports can be created from measurement data from leak measurements with the PC software "LeakReport". Regardless of the measurement time specified in the device, leak measurements are stored with a measurement duration of one second.

1. Tap on the "Save for report" icon.



## Transfer measurements to a USB storage device

The measurements stored in the SONASCREEN can be transferred to a PC via a USB storage device for further evaluation and/or processing.

- 1. Connect a USB storage device to the SONASCREEN.
- 2. Open the Configuration screen.



3. Tap on the "Data Management" icon



- 4. Select measurements in the left column.
- 5. Tap the "Copy" icon





## Create a report

A report can be created from measurement data from leak measurements and on a PC with the software "LeakReport". The XSLX and PDF file formats are available for output.



- 1. Choose the directory with the desired measurements.
- 2. Set up and start the analysis.
- 3. View and evaluate the analysis result.
- 4. Check the measurement data of the individual measurements and adjust them if necessary.
- 5. Create the report.

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