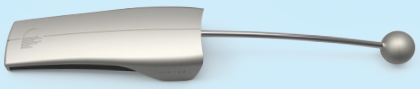
Sonocat

Introduction

Sonocat is a new generation of acoustic measurement technology. Sonocat utilizes the revolutionary Soundinsight-Sensor to measure the sound absorption properties of surfaces and materials without the need for an artificial sound source. This cutting-edge technology also measures 3D sound intensity, 3D particle velocity, 3D impedance, sound power and sound pressure in real time. Sonocat allows you to measure sound properties easily and accurately in situ, all with the convenience of a hand-held device. Get Sonocat today and bring your acoustic measurements to the next level!

The Sonocat and Sonocat software a complete solution to the acoustic measurement and post processing procedure. This significantly simplifies the way of doing acoustic measurements. The device directly outputs digital audio signals. No data acquisition system is required. A single USB cable between your laptop and the Sonocat suffices to capture all relevant quantities.



Sonocat Features

- In-situ sound absorption
- 3D sound intensity
- Emitted intensity / reflected intensity
- Sound power
- Sound pressure
- 3D particle velocity
- 3D impedance

Specifications

- Sampling rate: 48 kHz
- Operating frequency range:
- Absorption: 50 Hz - 8.000 Hz
- Intensity: 50 Hz - 10.000 Hz
- Sound pressure: 20 Hz - 20.000 Hz
- Dynamic range: 29 - 116 dB (A)
- Operating system requirements: Windows
- Hardware requirements: Dual core processor, >2 GHz 4 GB RAM

Case contents

- Sonocat
- USB cable
- USB stick with software
- Calibration specification
- User manual

This photograph is for illustration purposes and may be subject to change

Hardware

The Sonocat measures sound with 8 digital MEMS microphones, which are distributed inside an aluminium sphere. Using a spherical configuration is beneficial, as the interaction of a spherical object in an acoustic field has an appealing mathematical treatment, which allows to account for the presence of the Sonocat sphere in the sound field. The raw data collected from the microphones is processed by a digital signal processor, which is enclosed inside Sonocat. The processed data is sent over the USB line to a computer, which runs the Sonocat software.

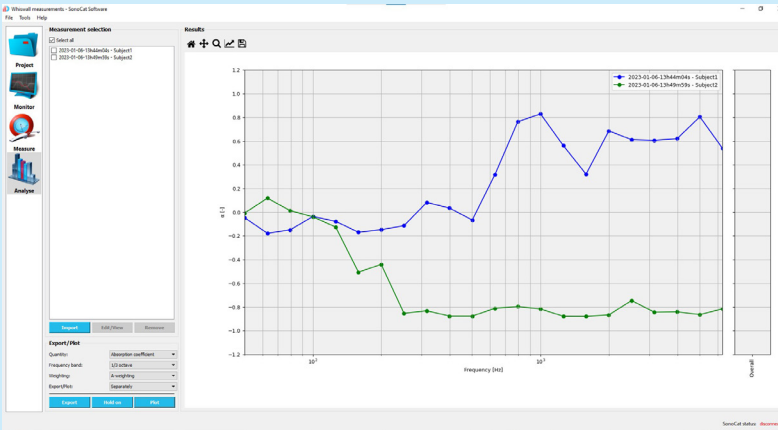
Measuring with Sonocat

The operator can do two types of measurements, depending on the quantity of interest.
The Sonocat can either be used as a stationary measurement system by connecting the Sonocat to the included tripod stand. Or, Sonocat is used as a handheld measurement device. In the latter case the operator makes “scanning” movements with Sonocat to obtain area-averaged results.

- Plug & play
- Portable, hand-held device
- All-in-one measurement solution

Calibration

Soundinsight has developed its own in-house calibration instrument and procedure to allow calibration of all microphones inside the sphere. Sonocat devices are delivered calibrated.



- Real time sound field monitoring
- Project-oriented GUI
- Intuitive workflow
- Compressed storage of raw data
- Easy comparison of measurement results
- Generation of publication-quality figures
- Waveform generator included

Software

The Sonocat software is a software package which provides an all-in-one solution to measure with Sonocat, as well as to do the post-processing of the measurement results. The Sonocat software can be used to monitor the sound field in, real time, but also precise measurementsasurements can be done with full control of the sampling time, FFT windows, overlap percentage, etc.

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