sevenbel
EFFECTIVE SOUND IMAGING

WE MAKE SOUND VISIBLE

Spot acoustic issues quickly and reliably.

EFFECTIVE
SOUND IMAGING

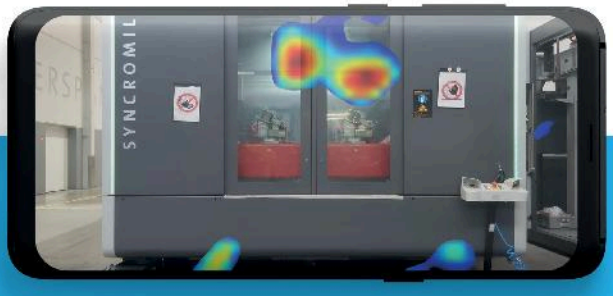
As a product developer, manufacturing engineer, maintainace technician or consulting engineer you are used to working effectively and target-oriented. Stop losing time to a lenghty search for possible sources of acoustic problems of your products or processes. Use Seven Bel's sound scanners and make disturbing sound sources visible. Reliably, fast and simple.

1 **Results in 5 minutes**
No other measurement system delivers acoustic images that fast and efficiently. You can set up the measurement system in less than 5 minutes, conduct the measurement of your use case and immediately receive dependable results for further analysis.

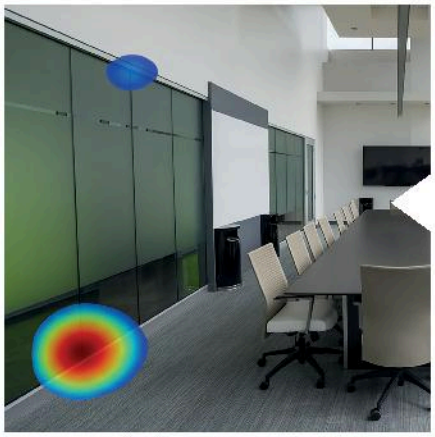
2 **Anytime – anywhere**
Due to the ultra-compact and light construction you are entirely independent in terms of location. Seven Bel's high performance measurement system works with an Android mobile phone and cloud infrastructure in the background. Notebooks, power supply units or recorders that are usually required are no longer necessesary.

3 **Extraordinary image quality**
Distributed microphones based on state-of-the-art semiconductor technology scan the acoustic field on an area of a disc and produce acoustic images with superior image quality and a high level of information. This faciliates the correct interpretation of the measured data for the user and leads to solutions that can be implemented quickly.

4 **Intuitive handling**
Benefit from a massively simplified workflow to measure and analyse your sound events. Share your results with your colleagues, partners or clients in the form of automatically generated reports.



State-of-the-art machine tools exhibit a wide variety of complex sound events during the machining process. Engineers working in product development trust in the visualisation of sound radiation in order to take quick and effective measures to comply with noise limits.



ROOM ACOUSTICS

Detection of acoustic leaks on doors, windows and other architectural elements. Acoustic images provide assistance to acoustic experts in identifiying structural weaknesses and making effective structural alterations.

AUTOMOTIVE

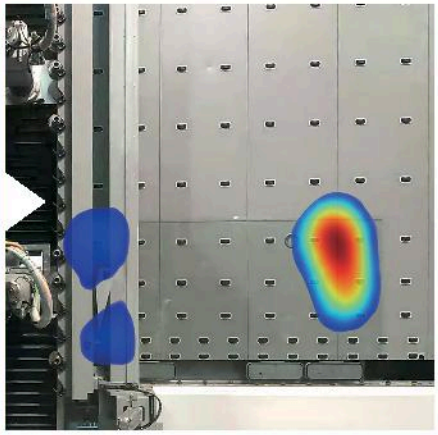
Detetction of surfaces with dominant sound radiation from engine/transmission components for reconciliation of simuation models.

APPLICANCES

As part of quality assurance, out-of-spec products are eliminated from the assembly line. Acoustic images help to isolate the origin of unwanted sound and facilitate targeted measures.

MACHINERY

Complex machining processes, in many cases, cause complex sound events. Acoustic images support engineers in understanding the local sound radiation during a machining process, and thus allow them to build optimised machine housings.



Further applications are in the fields of maintenance, quality assurance and environmental noise. We want to know about your individual application. Contact us for further information or request our acoustic consulting service.

SPECIFICATIONS

	SEVEN BEL P50	SEVEN BEL P132
SENSOR		
Diameter of scan area	50 cm	132 cm
Weight (exkl. sensor mount and tripod)	350 g	700 g
Rotation frequency (min/typ/max)	0,2 / 2 / 5 revolutions/second	0,2 / 1 / 2 revolutions/second
Number of microphones	5	5
Battery life (fully charged)	7 hours	7 hours
ACOUSTIC IMAGE		
Frequency range	700 Hz - 16 kHz	250 Hz - 16 kHz
Spatial resolution at 5 kHz (3 dB dynamic range)	6,7 °	2,6 °
Dynamic range	> 13 dB	> 13 dB
Computed images per revolution	up to 10	up to 10
Measuring distance	0,5 m - infinity	0,5 m - infinity
MICROPHONE		
Sample frequency	32 kHz	32 kHz
Resolution	24 bit	24 bit
Frequency range	50 Hz - 20 kHz	50 Hz - 20 kHz
Sensitivity tolerance	+/- 1 dB	+/- 1 dB
Maximum measurable sound pressure level	117 dB	117 dB
Absolute maximum sound pressure level	160 dB	160 dB

ANALYSIS

Audio

- Real time display of time signal, sound pressure level in dB(A), frequency spectrum and spectrogram
- Stream/Pause mode
- Selection of time/frequency intervals and audio playback of the filtered signal

Acoustic image/video

- Selection of frequency band
- Playback of filtered audio
- Single frame or time averaged frames
- Video playback

Data management

- Automated pdf report generation of single acoustic image or timed averaged images including meta data (time, location, notes, etc.), time signal, spectrum and spectrogram
- Export and import of measurements in zip format via installed file sharing apps (e.g. Google Drive)

ENVIRONMENTAL CONDITIONS		
Operating temperature	-10 °C - 60 °C	-10 °C - 60 °C
Relative humidity	45 % - 85 %	45 % - 85 %
MOBILE DEVICE		
Maximum display width	Android OS version 7.0 or higher	Android OS version 7.0 or higher
Operating system	90 mm	90 mm

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