

3D Intensity Camera Acoustic Compass



The CAE Acoustic Compass is a 3D sound intensity probe that is able to measure from low frequencies to high frequencies in 3D. The output of the analysis is a spectrum with amplitude and direction of incidence for each frequency line. The Noise Inspector software shows the direction and the intensity on the 3D display.

Intensity measurement systems have a very high dynamic range as there is no algorithm and no beam pattern limiting this range.

Features

- Online analysis
- Localization in small spaces
- Ultramobile
- Easy to use - like a compass
- 3D intensity measurement
- Usage from 40 Hz to 4 kHz

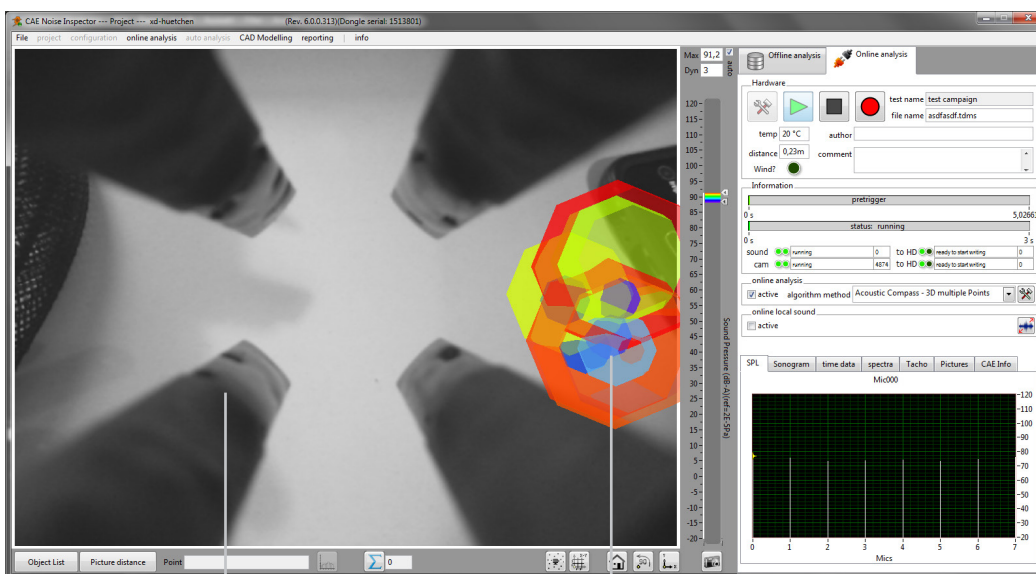
Application

- Noise leakage detection
- Machinery acoustic
- Cabin acoustics
- Automotive (interieur)
- For stationary and quasistationary noise sources

Acoustic Compass

Array Size	40 mm x 40 mm
Array Material	Composite Material
Weight (excl. Tripod)	0.5 kg
Intensity Probes	28
Sample Rate	48 kHz
Mic. Frequency Range	10 Hz to 24 kHz
Operating Range	< 33 dB to 120 dB
Analysis Dynamic Range	up to 30 dB
Source distance	0.01 m to ∞
Resolution	24-Bit
Interface	Ethernet
Operating Temperature	-40 °C to +60 °C
Operating Humidity	Non Condensing

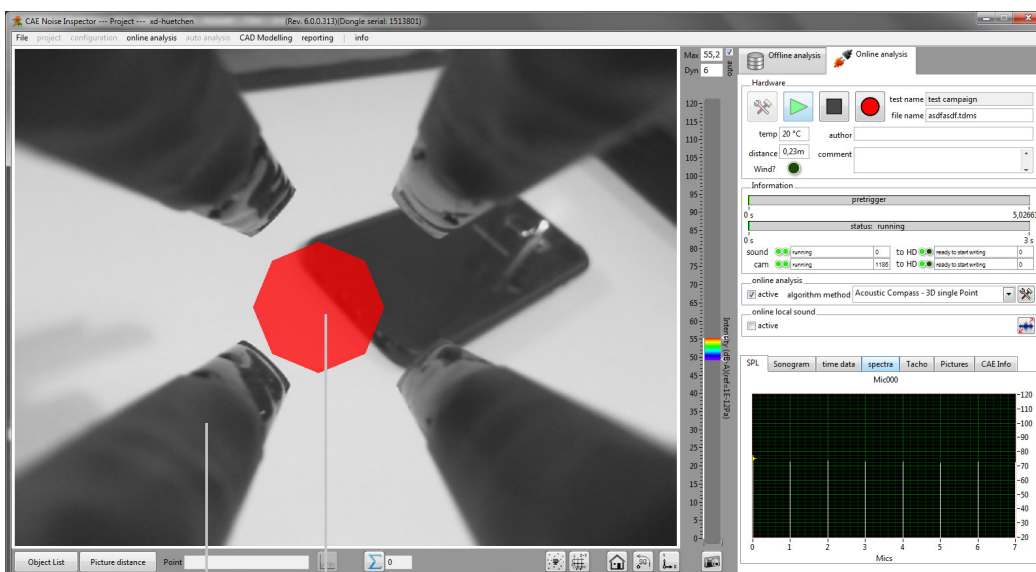
Noise source is to the right direction of the probe (3D multiple point)



8 microphones result in 28 intensity probes

Localized sound source (3D multiple points)
Each point represents one frequency line, direction and amplitude (color)

Noise source (cell phone) is in front of the probe (3D single point)



8 microphones

Localized sound source (3D single point represents average direction from 3D multiple points method)