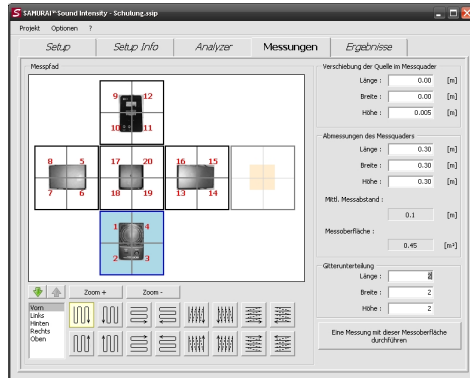


SAMURAI option: SOUND INTENSITY 2

(Sound power determination of noise sources from sound intensity measurements according to DIN EN ISO 9614)



Field of Application:

Sound power measurements in reverberation chambers or under free-field conditions are often infeasible for reasons of cost or due to the location of the sound source. However, measurement of the sound power by intensity methods offers an alternative. The ISO 9614 standard defines two such methods, which allow satisfactory results to be obtained even under less favorable acoustic conditions (e.g. extraneous noise).

Description:

This option requires the SAMURAI option SOUND INTENSITY 1, which provides the intensity spectra. The SOUND INTENSITY 2 option allows sound power determination of noise sources from sound intensity measurements according to ISO 9614 Part 1 (Measurement at discrete points) and Part 2 (Measurement by scanning). A clearly laid-out graphical program interface guides the user through the whole measurement procedure (configuring the measurement system, splitting into measurement segments, performing the individual measurements etc.), incorporating the field indicators (quality criteria) according to the norm. The results can be displayed as a color mapping superimposed on a digital photograph of the sound source.

Technical Data

Accuracy	IEC 61043 Class 1
Standards implemented	DIN EN ISO 9614 Parts 1 and 2
Sensors	Intensity probes with microphone pair
Measurement range	80 Hz to 6.3 kHz
Features	<ul style="list-style-type: none"> • Measurement at discrete points or by scanning • Freely selectable segmentation and measurement sequence • Field checking • Steady-state checking • Sound pressure, intensity and power spectra • Spectra for sound power of the entire surface as well as partial sound pressure of the individual surfaces • Calculation of the F1, F2, F3 and F4 field indicators as well as checking of the criteria according to ISO 9614 • Color mapping of sound pressure, intensity and power spectra over all partial surfaces

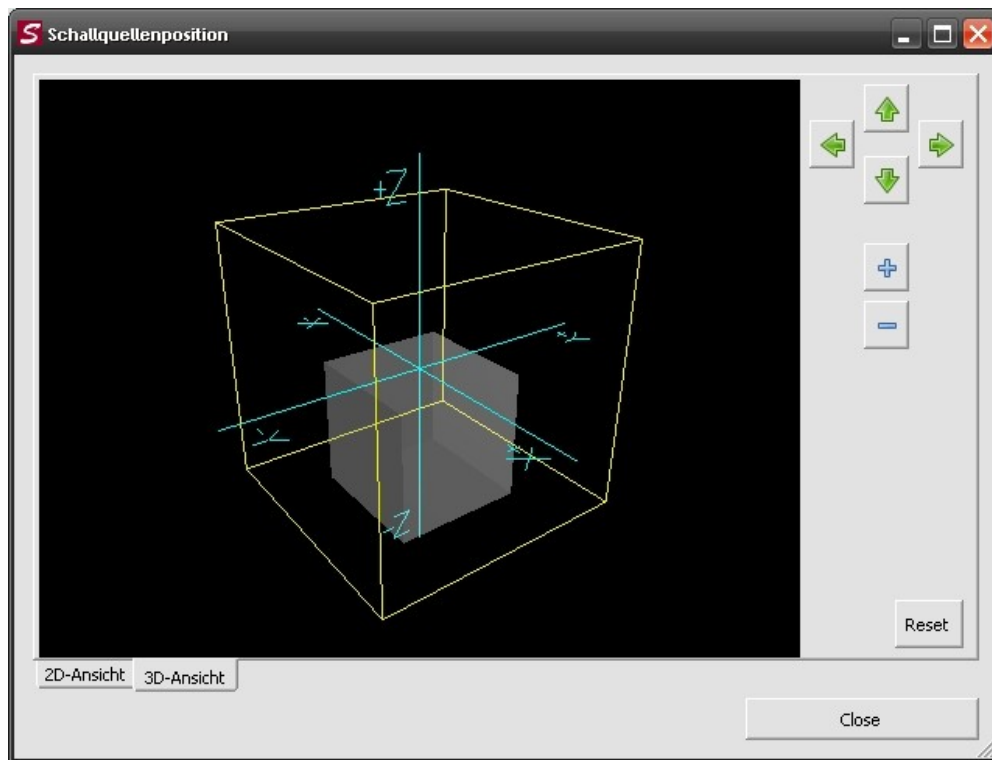


Figure 1: 3D Representation



Figure 2: Allocation of the measurement area onto digital photographs of the whole sound source

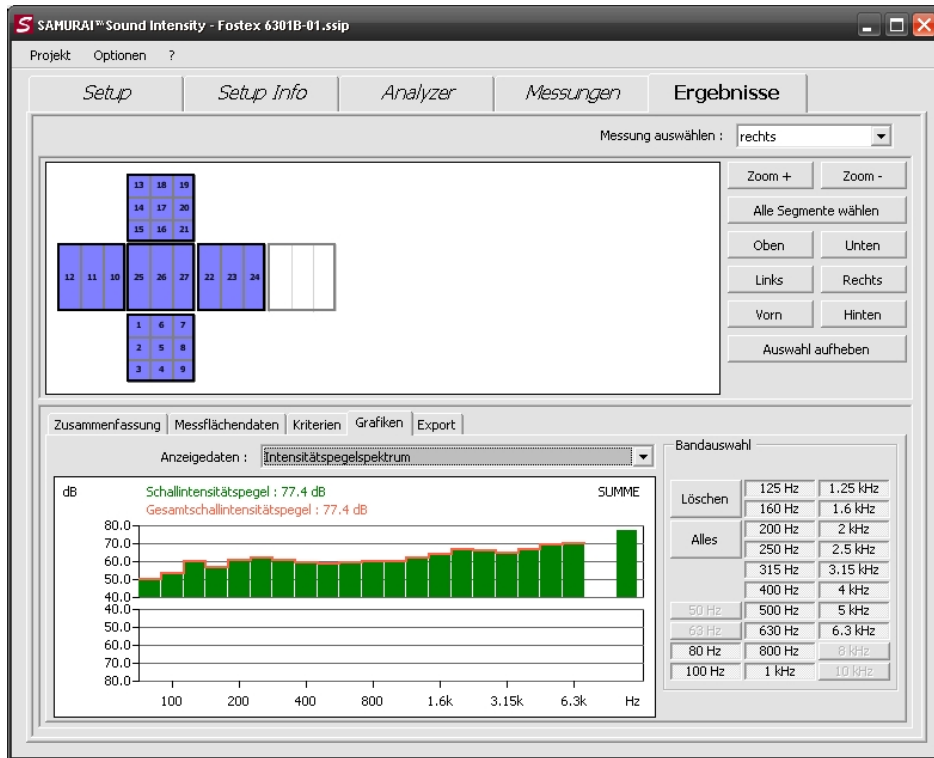


Figure 3: Measurement results

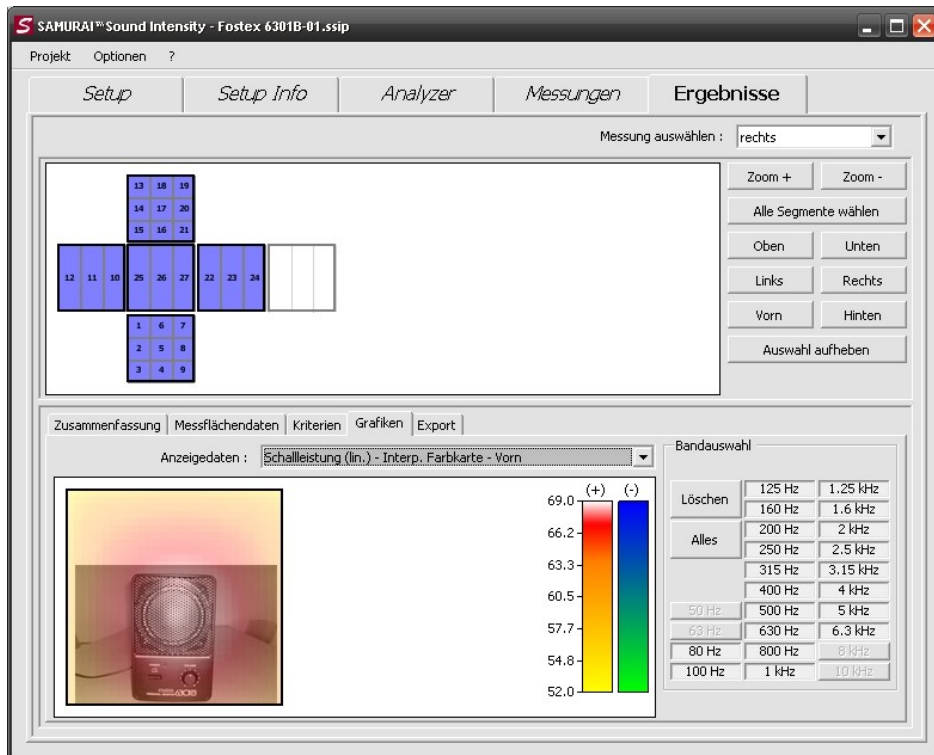


Figure 4: Color mapping