



# SenDV

## Stationary Sound Visualization & Analysis

**SenSound's powerful software tools allow you to diagnose noise sources faster and more accurately.**

Using new and patented acoustic holography techniques, SenSound tools allow you to make acoustics measurements and visualize acoustic pressure, intensity and particle velocity in three dimensions.

With our suite of tools, you can:

- Pinpoint noise sources for interior or exterior sound fields,
- Link source images to order tracking or changes over time,
- Determine the vibration modes responsible for sound radiation, and
- Identify the contribution of different noise sources to the overall noise level.

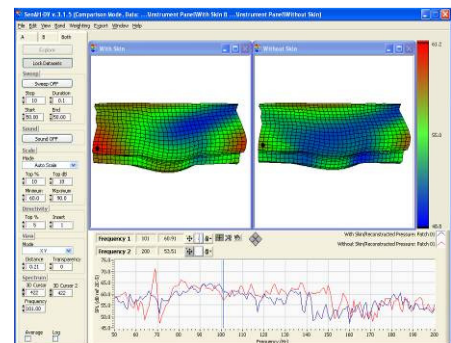
The bottom line is that SenSound tools give you a competitive advantage by delivering the insight into noise necessary to reduce engineering, warranty and quality control costs, design and build quieter products faster, and demonstrate that your products meet customer specifications in an objective, credible and easy to understand manner.

SenDV is the suite's data visualization module for stationary data. Using data you have acquired with SenDC and processed with SenHELs-STA, SenDV provides two types of displays to help you visualize your data—a 3D Graph to show spatial distribution of acoustic quantities and a Spectrum Graph to show the frequency content at any point in space.

### 3D GRAPH

SenDV plots the magnitudes of acoustic parameters, including acoustic pressure, intensity, and velocity in 3D as shown (right). It displays the magnitudes in color to allow you to quickly visualize the spatial distribution of the parameter.

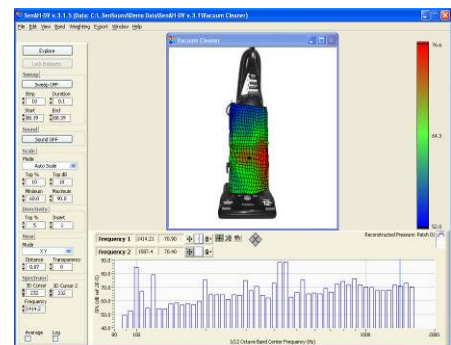
SenDV gives you complete control over how you visualize your data. You can, for example, allow the program to automatically set the scales, manually set the scale to a fixed value, or to show only hot spots. In addition, you can simultaneously display the spatial distributions of two sets of data to easily compare the noise profiles of a test object before and after a design change.



### SPECTRUM GRAPH

SenDV's Spectrum Graph plots the magnitude of acoustic pressure, intensity, or particle velocity vs. frequency. The Spectrum Graph will display acoustic pressure on one of four scales: dB, dBA, dBB, or dBC. You can allow the program to set the range automatically or set it manually.

The Spectrum Graph is interactive with the 3D Graph. You can manually select any frequency with a cursor in the Spectrum Graph or sweep the frequency through a selected range. The 3D Graph will then display the spatial distribution for that particular frequency. You can also play a tone at the chosen frequency to help you identify a noise source or perform a psycho-acoustic analysis.

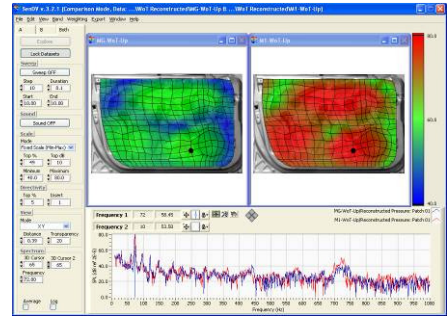


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## MORE POWERFUL FEATURES

In order to help you visualize spatial distributions in relation to a test object, you can include an image, a wire mesh, or surface mesh of the test object in the 3D Graph. You can rotate and view this image, along with the spatial distribution, from any perspective. You can also control the transparency of the plots to more easily see the spatial distributions in relationship to the test object. You can save plots on either the 3D Graph or Spectrum Graph in .bmp format so that you may include them in written reports.



## SPECIFICATIONS

### 3D Graph Controls

- Pan, rotate, and zoom
- Scale. There are four scale options: Auto Scale, Auto Scale (Top %), Fixed Scale, and Auto Scale (Top dB).

### Spectrum Graph Controls

- Frequency bands: Narrow, Octave, 1/3-, 1/6-, 1/12-, 1/24-octave, and user-defined
- Scale: log or linear
- Sweep. When on, sweeps through a specified frequency range.

### System Requirements

- IBM PC or equivalent with a Pentium 2GHz or higher processor
- Windows 98 or higher
- XGA 1024x768 resolution (we suggest using a higher resolution monitor for better graphic interfaces)
- 512 MB of RAM (1-2 GB suggested; higher the memory, better the performance)
- 200 MB of free disk space for installation. (More disk space is required for data storage depending on the use and data management practices.)
- CD-ROM drive
- Mouse or other pointing device

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