



SenHELs-STA Stationary Sound Field Reconstruction

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.

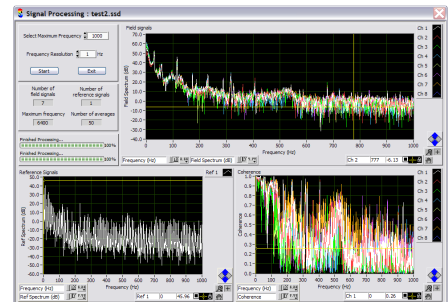
The bottom line is that SenSound tools give you a competitive advantage by delivering the insight into noise necessary to reduce engineering, warranty and quality control costs, design and build quieter products faster, and demonstrate that your products meet customer specifications in an objective,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

SenHELs-STA accurately reconstructs stationary sound fields utilizing data acquired by SenDC. It reconstructs a time averaged 3D acoustic field, including pressure, velocity and intensity, in frequency domain. SenHELs-STA allows you to reconstruct acoustic fields on large surface areas using multiple smaller measurement patches.

SIGNAL PROCESSING

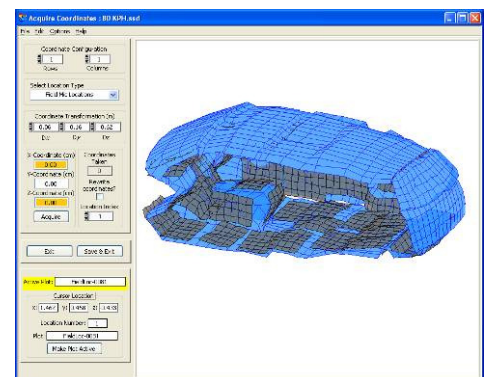
SenHELs-STA's signal processing module takes the data acquired by SenDC and converts them to the frequency domain. SenHELs-STA separates the measured data with respect to each reference and computes their coherence with respect to the reference signals. Then, it displays the array and reference microphone spectra, along with the coherence of the data from each array microphone to the data gathered from the reference microphones.

A unique feature of SenHELs-STA is that you can process previously acquired data as benchmark data or field-measurement data. You can then use this benchmark data to validate your test procedure.



PATCH STITCHING

Another unique feature of SenHELs-STA is its ability to combine multiple datasets, often called "patches," and combine them into a larger dataset. Using this feature, you can take a series of measurements of a noise using a small microphone array and then combine them so that it appears as if the measurements were made with a large microphone array. Once combined, you can create 3D views of sound over uniform and large reconstruction surfaces around the source.



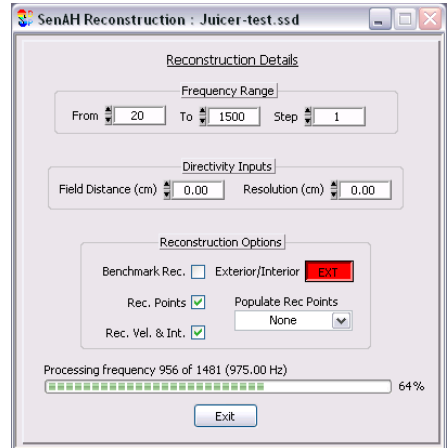
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RECONSTRUCTION

Finally, SenHELs-STA reconstructs the frequency domain data, allowing you to view acoustic parameters in 3D. You can select the start frequency, end frequency, and frequency step to use in the reconstruction, as well as the data sets used for the reconstruction. Once selected, SenHELs-STA computes reconstruction results at user-selected locations at each frequency. There are many reconstruction options, including:

- Reconstruction of the acoustic directivity pattern from a test object
- Reconstruction in either interior or exterior regions, and
- Reconstruction at benchmark locations for test validation



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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