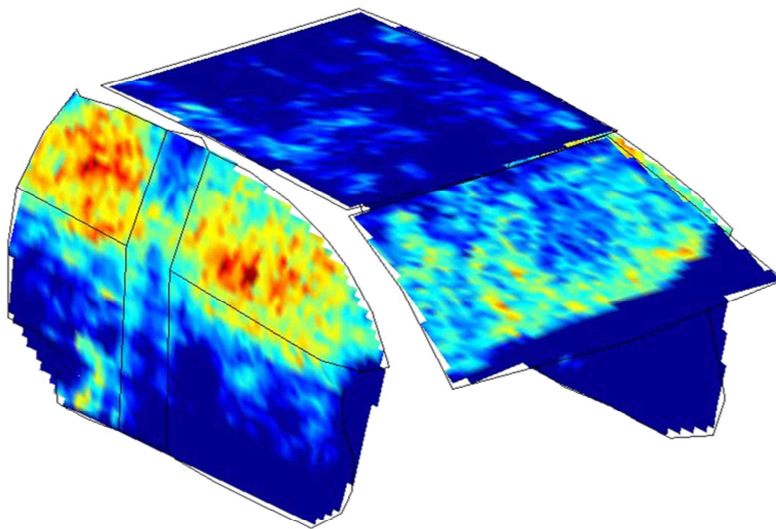


Acoustical Holography

dBVision Air for OROS Teamwork Instruments



Introduction

With more than 30 years' experience in Automotive, Aviation, and Industrial applications, dBVision presents a precise, flexible **Acoustical Imaging** system with light, mobile, non-expensive equipment. By applying **Near-field Acoustical Holography**, finding out the acoustical hot spots, it is an efficient tool of the customer for acoustic signature management.

Industries

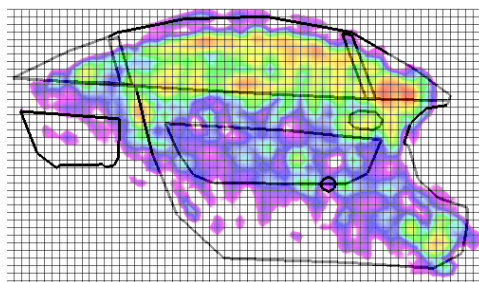
- > Automotive
- > Marine
- > Manufacturing
- > Aerospace

Machines

- > Vehicle cabin
- > Tire noise
- > Mirror noise
- > Wind Tunnel
- > Door leakage
- > Helicopter cabin noise

Applications

- > Cabin noise source localization
- > Engine noise localization
- > Component noise localization
- > Sound power determination



Main features

- > Best accuracy in noise source localization
- > Most operational process for capturing the real measurement situation (RELAX technology)
- > Source quantification through immediate radiated power evaluation (global & partial)

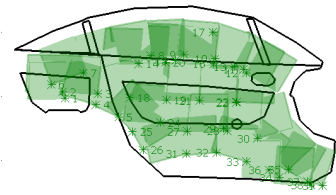


Description

Data Acquisition

The scope and functions of the data acquisition subsystem are to:

- > Acquire data from the array and reference sensors
- > Provide real-time indications of data quality
- > Store the processed data for subsequent detailed NAH analysis



OROS 3-Series are the best choice:

- > 32-ch per unit, Teamwork cascade more than 1000 channels
- > Maximum sample frequency 102.4 kHz
- > Accurate phase difference $\pm 0.02^\circ$ @20kHz



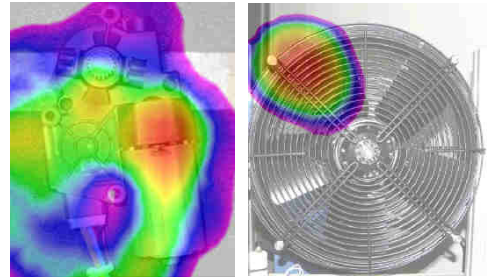
dBVision, the OROS Holography Solution

dBVISION performs all the computational work involved in the NAH ranging activities and is especially dedicated to:

- > Configuring the acquisition system, monitoring real-time signal and storing pre-processed data
 - test definition, data management, acquisition setting and measurements monitoring
 - array setup and management
 - support various sensor
- > Performing basic and advanced data processing and analysis functions
 - **HOLOGRAPHY**
The method applied consists in reconstructing the vibrational components related to the source field from acoustic measurements, in using a back-propagation technique
 - **POWER, Source Ranking, Screen Effect & TL**
Partial power computations and Source ranking according to selected zones (patch definition)
Radiated power computation outside the patch
Computation of acoustic transparency and insertion loss indices
 - **INTENSITY**
Complementary mapping module of acoustic intensity still based on pressure measurements in the near-field
 - **EARVISION & EARPREDICT**
3D representation of component contribution to the acoustic level inside a vehicle CABIN
Noise level predictions at arbitrary location inside an enclosure



- **RELAX**
Automatic projection of measurement data onto regular grids from arbitrary antenna locations
- > Displaying results (spectra, colormaps, etc)
 - **Calculator tool for spectra and acoustic maps**
 - Spectra display in linear, logarithmic and octave formats
 - Color graphic display for pressure map
 - **Report generation to word and data export Matlab®**



A Powerful and Flexible Range for Your Needs

OROS Holography software module can run on or analyze results from all Teamwork instruments providing flexible choices of the hardware platform size. The Teamwork technology enables to cascade or distribute the analyzers to measure up to 1000 channels. Instruments, conditioners and software licenses are exchangeable and flexible. Data are also easy to share thanks to the native technology. Based on the same platform, same technology and same software, the OROS instruments are portable, rugged and real-time.

- > OR38: 8, 16, 24, 32 channels
- > OR36: 4, 8, 12, 16 channels
- > Mobi-Pack: 4, 8, 12, 16 channels
- > OR35 : 6, 10 channels
- > OR34 : 2, 4 channels



OROS Holography software module belongs to the comprehensive OROS product line. Other software modules such as Sound Power, Sound Intensity, Modal, Multi-channel Sound Level Meter, 1/n Octave are provided on the same instrument platform.

Ordering Information

Reference	Description
ORNVS-dBV-BA-A	Acoustic Holography in Air with Planar array and Intensity module option
ORNVS-dBV-RK	Power, Ranking of noise sources
ORNVS-dBV-SC	Screening effects
ORNVS-dBV-CAL	Calculator tool for spectra and acoustic maps
ORNVS-dBV-RP	Report, data export to Word
ORNVS-dBV-MT	Matlab, data export to Matlab
ORNVS-dBV-A-RL	Relax antenna arbitrary positioning
ORNVS-dBV-A-EV	Earvision
ORNVS-dBV-A-EP	Earpredict
ORNVS-dBV-A-TL	Transmission loss

OROS, Leadership through Innovation

About Us

30-years in business, OROS' designs and manufacturing have been renowned for providing the best in noise and vibration analyzers as well as in specific application solutions.

Our Philosophy

Reliability and efficiency are our ambition everyday. We know you require the same for your measurement instruments: comprehensive solutions providing performance and assurance, designed to fit the challenges of your demanding world.

Our Emphasis

Continuously paying attention to your needs, OROS collaborates with a network of proven scientific affiliates to offer the latest of the technology, always based on innovation.

Worldwide Presence

OROS products are marketed in more than 35 countries, through our authorized network of representatives, offices and accredited maintenance centers.

Want to know more?

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