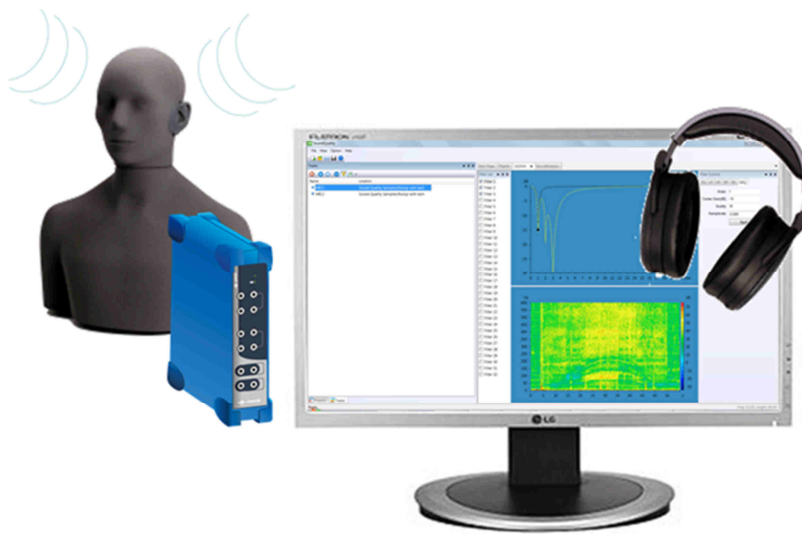


Sound Quality

The Psychoacoustics & Sound Design Software



Introduction

Nowadays, with the evolution of comfort requirements and quality products demand, the feeling resulting from a product sound has become a key issue.

The OROS Sound Quality module is designed for sound evaluation and sound. This OROS software module is the ideal tool for psychoacoustic metrics determination and filtered playback.

Industries

- > Automotive & Railways
- > Electronic Appliances
- > Aeronautics

Machines

- > Vehicle cabin noise
- > Train & Aircraft cabins
- > White Goods
- > Fans & HVAC
- > Motors

Applications

- > Psychoacoustic metrics for objective evaluation
- > Interactive replay & filtering functions for subjective evaluation
- > Sound design
- > Prototype benchmarking



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Main Features

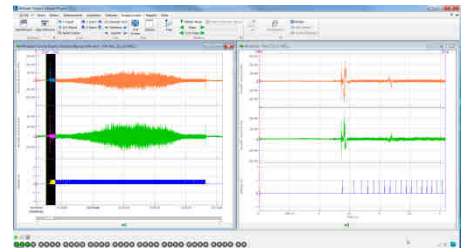
- > Accurate and standardized psychoacoustic metrics determination
- > Loudness according to Zwicker ISO 532B, Sharpness
- > Tonality indicators: Tone to Noise, Prominence Ratio
- > Modulated sound metrics: Fluctuation Strength, Roughness
- > Articulation index
- > Sound filtering and sound design capabilities
- > Interactive filtering: Frequency & Order based
- > Playlist management for fast & easy comparison
- > Embedded platform data management: direct compatibility with the OROS range



Description

A common data platform

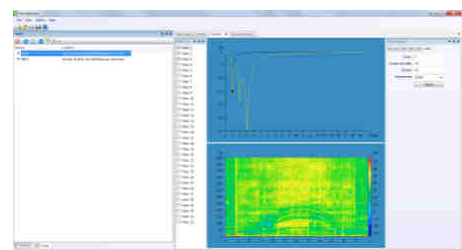
Signals can be recorded easily through the standard recording module on NVGate, the OROS Noise & Vibration software platform. The Sound Quality module operates directly on these time signals. Calculated results are also saved directly in the global data management. No need to import or export files, making data management extremely efficient. Consequently the user benefits from all data management tools provided by the software platform: sorting, filtering, and reporting.



Signal recording

Psychoacoustic metrics determination

Based on OROS instruments recorded time signals, the main psychoacoustic metrics can be determined: Loudness related indicators (Zwicker ISO 532B loudness, sharpness), tonality parameters (Prominence ratio, Tone to noise), Modulation related parameters (Fluctuation strength, Roughness), Articulation index.

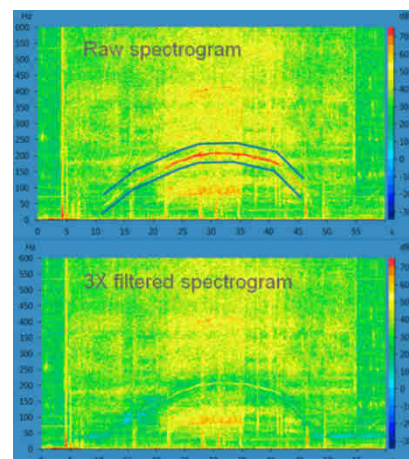


Filter design

Color-Spectrogram & filtered playback

Playback and listening of signals is achieved by displaying instantaneously the filtered color spectrogram of the signal. This makes the listening extremely visual letting the user combine the feeling of frequency content and time evolution.

The filters can be combination of frequency domain filters (Narrow band, Low pass, High pass, Band pass, or Band stop) or Order domain filters. The filtered signals can be listened through an interactive playlist. These playlists can be saved to provide an efficient process of comparison. The example picture on the side shows the effect of filtering order 3 which can be clearly felt during the playback.



Listening to filtered and unfiltered signals

A Powerful and Flexible Range for Your Needs

OROS Sound Quality 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 Sound Quality 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.

Specifications

Feature	Description
Loudness	According to ISO 532B, scalar and scalar profiles
Sharpness	Scalar Profiles
Modulated sound metrics	Fluctuation strength (scalar profiles), Roughness (scalar profiles)
Tonality	Prominence Ratio (Scalar), Tone to Noise ratio (Scalar)
Articulation index	Scalar Profiles
Display	<ul style="list-style-type: none"> • 2D filtered color spectrogram versus frequency, time • 2D RPM versus time profile • Zoom & scaling (frequency, time, amplitude color scaling)
Filters	<ul style="list-style-type: none"> • Graphical and numerical design of IIR filters: combination of up to 20 individual filters • Frequency and order equalization, Low/High/Band pass, Band stop • Display of transfer functions • Magnitude, phase, group delay for individual filters and filters combinations

Ordering Information

Reference	Description
ORNVS-SQ	Sound Quality module including psychoacoustics parameters calculation and filtered playback
ORNVS-SQ-PSY	Psycho-acoustics parameters calculation module
ORNVS-SQ-FIL	Filtered playback module
OR34-SQ-2	OR34 - 2ch. Sound Quality pack

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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