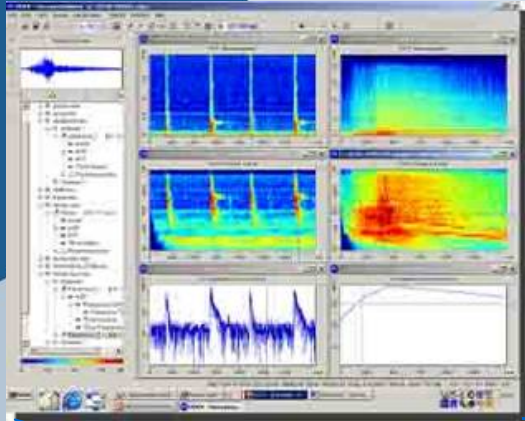


Get to the noisiness of your product



- Accurate and standardized psychoacoustics measurements (IEC, DIN EN, ANSI, ECMA ...),
- Binaural Recording and Playback with equalization
- Sound Quality Metrics
- Advanced Filtering capabilities
- RPM and order analysis
- Time-frequency edition and signal re-synthesis

### 01dB Platforms and Systems for Sound Quality



Professional PC Audio board



NetdB – 4 to 20 channels portable unit



BMH Binaural Headset



Cortex Mannequin with NetdB acquisition system

**Applications:**  
Sound Quality control in vehicles

Transient Analysis

Noisiness evaluation

Noise control simulation

Sound quality diagnosis

Environmental Noise study and Monitoring

Psychoacoustics, Loudness and related topics

**dBsonic** is an advanced sound analysis software to record and edit time signal, calculate levels, third-octaves, FFT, psychoacoustics parameters, modulation analysis, wavelets, rpm functions, order analysis, ASP, contours, tracks, performing resynthesis, editor, filter, etc.

dBsonic comes from the long experience with the CORTEX Acoustic Workstation started in 1989, as the first commercial measurement system with real-time loudness analysis worldwide.

**Some key features are:**

Time domain: up to 1 spectrum per sample (= 20µs at 48kHz sampling frequency)

Frequency domain: FFT up to 65536 points, ASP up to 1000 filter bands

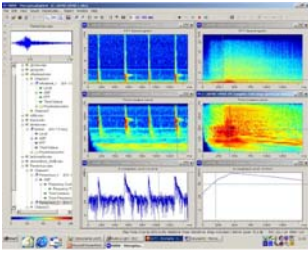
Level meter class 1 (EN 61672, Third-octave: class 0 (EN 61260)

Tonality: E-DIN, ANSI, ECMA, Loudness: ISO532B and DIN 45631 auditory spectrogram (ASP) and spectral editor with resynthesis, extraction of contours and tracks

**dBsonic** support 24 bits sound card or a NetdB front end as a complete analysis system. A suitable Binaural Recording Headset and Cortex Head are available as well as Playback Headphones or other transducers to complete the system.

**dBsonic** works as stand alone or within dBFA Suite, and is also tight to dBJury for Jury testing

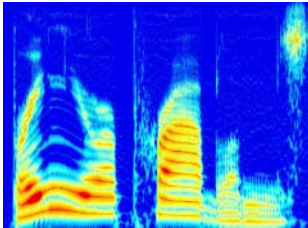
## dBsonic Functionalities description



### Sound Analysis

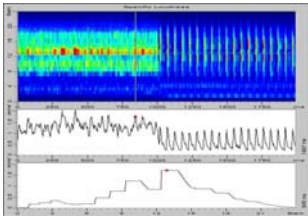
Includes all the fundamental tools for sound analysis

- Sound signal recording and playback
- SPL, Third-octave and FFT analysis
- Basic editing and filtering functions
- Tonality analysis
- Project management



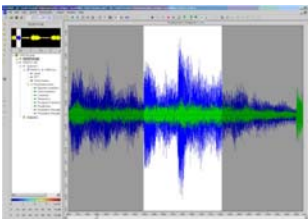
### PerceptualXplorer

Advanced editing of Time and Frequency components "ms by ms" or "Hz by Hz" and re-synthesized for verification and control purposes. The acoustic contribution of the individual components of a sound is not a secret any more. Includes: Auditory spectrogram (ASP), Spectral editor, Time- and Frequency contours, Tracks, Resynthesis.



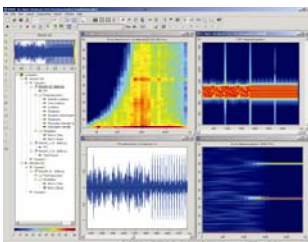
### Psychoacoustics Analysis

Audible differences between sound signals that you could not measure in the past can now be expressed in numbers, displayed as spectra and compared exactly by means of psychoacoustic measurement methods. PSY provides the "classical" psychoacoustic metrics loudness, sharpness, roughness, fluctuation strength, tonality in proven CORTEX quality.



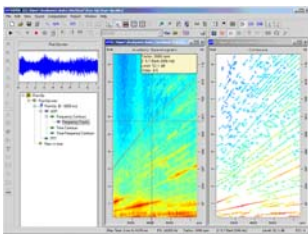
### Sound Editor and Filter

Editor: cut, copy, paste, delete, trim, fade-in/fade-out, change level, hearing-based play back, sample rate converter, import/export of sound files  
Filter Explorer: graphical and numerical design of real-time and offline filters, up to 20 individual filters. Each filter can be designed as equalizer-, highpass-, lowpass-, bandpass-, bandstop (butterworth or chebychev characteristic). Display of transfer function (magnitude, phase, group delay for individual and for filter set) and influence on a reference spectrum.



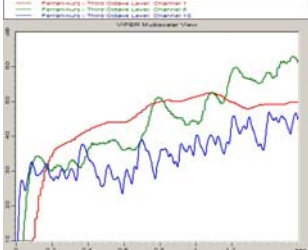
### Extended Frequency Analysis

Modulation Analysis with display of modulation depth or level of the envelope versus time and versus modulation frequency for one frequency band or averaged over a time section for several frequency bands (with octave, third-octave-, Bark-, ERB- or freely selectable filter bandwidth)



### RPM Module

RPM depending display for all analysis results (FFT, third-octave, ASP, tracks), simultaneous display of frequency versus time/rpm or order versus rpm with order cursor (scaled lin, log or in Bark). Multi-RPM display for fast and effective comparison of orders from different recordings. Automatic recognition of a tacho signal in the LSB (16th Bit) of a recording. Postprocessing for tacho signal (smoothing, adjustment of prescaler ...).



### Documentation

Fast and easy documentation of selectable metrics by means of multiscalar- and multispectra display. Workspace report and Report Wizard.

## dB Sonic Graphical User Interface

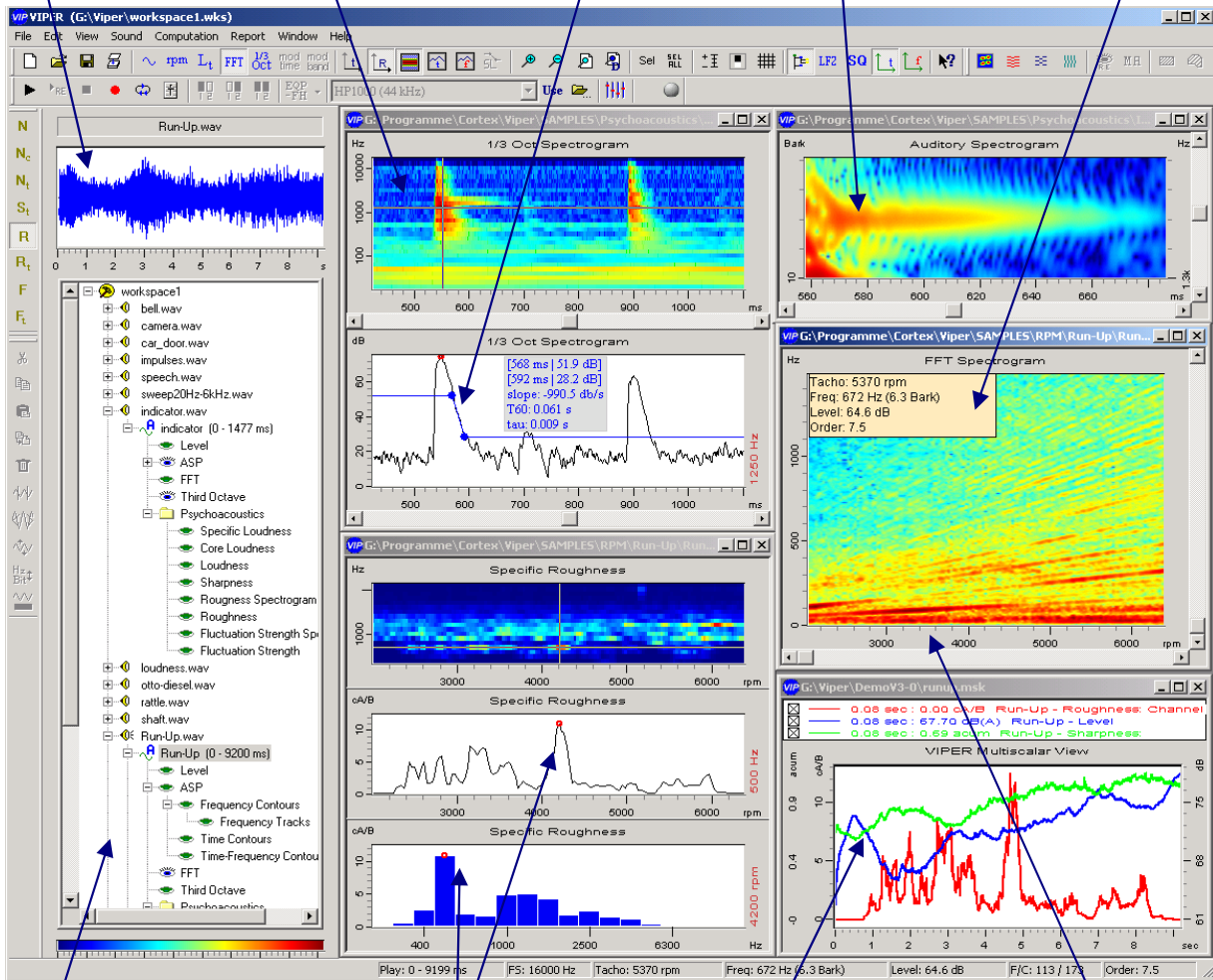
Overview display for the total signal

Combined main and inter third-octave bands

Slope Viewer for exact evaluation of curve decay

High time and frequency resolution

Quick Info shows numerical information for the cursor position



Intuitive overview and control is provided by the workspace with its subdivision into projects, channels, analyses

A linked spectrum / slice display is available for all kinds of analysis

Multiscalar display, here showing time histories of roughness, A-level and sharpness.

Time and/or frequency axis for all kinds of measurements

## Example for Sound Quality using TNR and PR according to ECMA74

