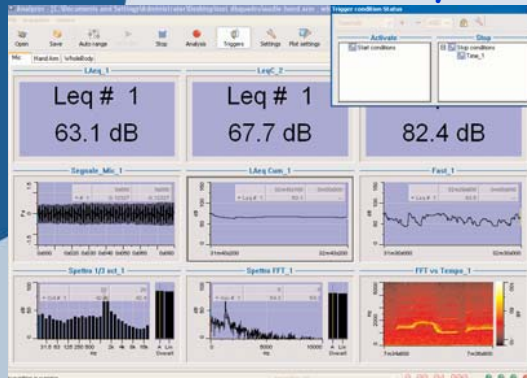


dBFA-suite: your Multiple Application for Sound & Vibration jobs

### Real Time Analysis

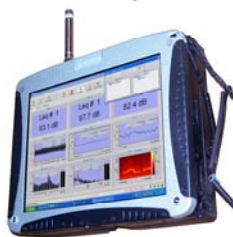


- Sound and Vibration Level Meter
- Parallel process as Real Time Analyzer and Digital Recorder
- Applications oriented processing tools
- Data Import/Export capabilities
- TCP/IP commands on open Software platform for custom development

### 01dB Platforms and Systems for Sound and Vibration



**NetdB – 4 to 20 channels portable unit**



**dBQuadro – 4 channels Embedded**



**dB4 – 4 channels portable unit**

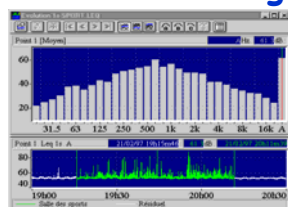


**Solo Sound Level Meter and Real Time Analyzer**

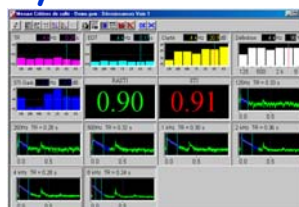
### Key features

- Simultaneous acquisition of “unlimited” number of channels (platform dependent), support for IEPE inputs, AC or DC coupling, Polarization voltage, etc.
- Simultaneous real-time multi-analysis as: Averaged and multi-spectra with FFT and 1/1 down to 1/48 octave, cross-spectra, etc.
- Advanced software package for: Frequency Response Functions, Order analysis, Transient & Impact Testing analysis
- Post-processing embedding of dedicated 01dB software for Environmental Noise, Building Acoustic, Modal Analysis, Sound Quality
- Customizable using TCP-IP commands set and enhanced path management
- Portable operation. No external power supply needed for 01dB platforms
- Tachometer support with Sampling rate over 52kHz.
- Programmable triggers: software, TTL, analog threshold.
- Set of application oriented post-processing functions with analysis scripts
- Transducers Database management: Sensors, calibrators, calibration history,...
- Data Import/Export: ASCII, UFF58, Wave, nCODE, Matlab™(data exchange), MeScope, mp3, SDF, ASAM/ODS, SONY, TEAC (Digital format)
- Automatic reporting capabilities (MS Office™) from real-time and post-processing modules

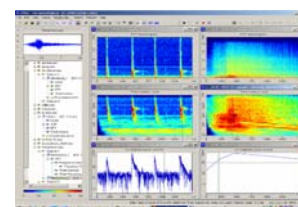
### Post Processing Analysis



**Environmental Noise and Vibration**



**Building Acoustic**



**Sound Quality**

### Applications:

Automotive, Railway,  
Aeronautics, Space,  
Mechanics, Materials,  
Household appliances,  
Electro-acoustics,  
Information technology,  
Telecommunications,

# dBFA suite Function Specifications

## Supported Hardware Platforms

01dB: Solo; Symphonie; Harmonie; NetdB-DAQ;  
Others: NI USB-9233, PXI & PCI; VXI E1432A, ...

## Signal

Recording, Playback, Decimation; Resampling; HP, LP, BP, Stop-band, Notch Filters; Denoising...

## Overall levels

Leq with frequency weightings; Lp with time (Fast, Slow) and frequency weightings (A, B, C); Acceleration; Velocity; Displacement with Human vibrations weightings...

## Statistics

Min; Max; Peak; Peak to Peak; Average; RMS; RMS band; Standard deviation; Skew; Kurtosis. Averaged and vs. time, ...

## FFT Analysis

Up to 12800 lines; Overlap from 0 to 75%; Hanning, Hamming, Flat-top, Rectangular... ; Zoom up to 256; Multispectrum vs. time and rpm with user-defined analysis step; Averaged spectrum with linear, exponential, hold max; Auto and Cross spectrum; H1, H2, 1/H1, 1/H2, Coherence; Auto- and Cross-correlation, ...

## 1/N octave Analysis

From 1/1 to 1/48 octave; digital filtering according EN61260 class 0;

Multispectrum vs. time and rpm with user-defined analysis step;

Averaged spectrum with linear, exponential, hold max, ...

## Tacho

Real time conversion to rpm profile with trigger, hysteresis, hold-off; Average; Pulses per revolution; Conversion factor; Min and Max limits, ...

## Order Analysis and Order Tacking

Both FFT and Resampling techniques available; Order resolution down to 0.01; Rpm resolution down to 1 rpm; Fast and accurate

## Time Frequency

FFT; 1/N octave; Wigner-Ville; Wavelets; Capon; Auto-regressive

## Sound Intensity

Simultaneous Li and Lp measurements; Sound power According to ISO 9614 part 1 & 2; Sound Mapping

## Human Vibrations

All frequency weightings according to ISO8041, ISO 2631 1&2, ISO-5349 and BS6841 for Whole Body and Hand / Arm Vibrations; VDV, eVDV (estimated), MTVV and 3 axis overall vibration values calculations (performed with individual or axis combination with different weightings); VDV time history with variable time integration and cumulative or noncumulative Time

## Structural Analysis

Real-time and off-line transient analysis on impulses, shocks, sparks, gun shots; Impact testing analysis (structural analysis); Real-time vibration signals recording and frequency analysis (hammer testing); Management of the acquisition geometry (excitation and response location on the tested, structure); Trigger capabilities (channel, positive or negative delay, AND/OR conditions, ...); Customized signal windowing and filtering; Auto and cross-functions (cross-spectra, FRF's, coherence); Export capability (UFF58, Me'Scope,...) for modal analysis processing

## Rotating Machines

Tachometric acquisition and real time RPM profile calculation; Order analysis for rotating machinery, rotation run-ups and coast downs; Order extraction, cycle defaults, order filtering; Order tracking; Real-time or offline mode providing overall levels of rotation speed orders (Automatic speed profiles processing based on accurate dating of rotation speeds); 2D and 3D FFT and Orders spectrograms for sound and vibration signals

## Display & Cursors

2D; 3D; Spectrogram and Waterfall; Graphical zoom

Single; Double; Harmonics; Sidebands; Max; MultiMax

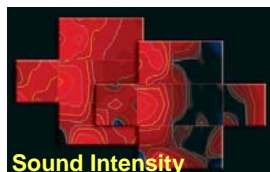
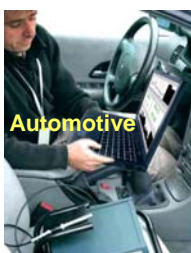
## RT Automation & Report

Optimize your test time; Customize your tests; Chain and/or repeat different acquisition and real-time analysis with time conditions (hour, delay,...) and user confirmation between each

Generate your own report automatically in Word™ after your real-time analysis or from dBFA post-processing; Fully customizable

## Additional 01dB Software applications

dBFA Suite is fully compaticle and chainable to specific 01dB applications as: dBENV (dBTrait) dor ENvironmaental Nosie and Vibration measurements and Analysis, dBBAti for Building Acoustic, dBSONic for Sound Quality, dBPower for Acosutic Power determination.,



# 01dB

## 01dB-Metravib

200, Chemin des Ormeaux  
F-69578 Limonest Cedex  
Tel. +33 (0)4 7252 4800  
Fax +33 (0)4 7252 4747

environment@01db-metravib.com  
www.01db.com

