

VA-LAB SOFTWARE OVERVIEW

VA-Lab

VA-Lab is acoustical measurement software developed by BSWA. VA-Lab takes the advantage of computer power and performs all signal analysis within the computer. VA-Lab supports BSWA Data Acquisition Hardware and Microphones. It is an affordable and easy to use acoustic measurement software.

VA-Lab is developed based on the international standards and BSWA experiences in acoustics. These experiences span from environmental, architectural, industrial, and audio acoustical measurements. VA-Lab has module design with the special applications according to ISO standard requirements, such as Sound Power, Sound Insulation, and Impedance Measurements.

The VA-Lab function modules include:

- **BASIC:** FFT based signal analysis for vibration and acoustics
- **ENV:** Sound pressure level and environment noise measurements
- **IMP:** Two and four microphone methods for absorption and TL measurements in Impedance tube according to ISO10534
- **SI:** Sound intensity measurements
- **REV:** Reverberation time measurements according to ISO3382
- **TL:** Sound Insulation measurements for building material according to ISO 140.
- **POWER:** Sound Power Measurements according to ISO3745
- **AUDIO:** Audio testing by using stepped sweeping, frequency response and THD are tested at one time

VA-Lab software works with MC3022, MC3522, MC3242 and NI Compact DAQ hardware. The MPA201 microphone is commonly used with the VA-Lab systems.

Main Features of VA-Lab BASIC:

- **FFT Analysis:** general signal analysis including FFT, CPS, Transfer Function, Coherence, Auto Correction, Cross Correction, Cepstrum, etc. Data can be captured and saved in real-time mode
- **1/n Octave:** general 1/n octave analysis for sound and vibration signals, n=1,3,6,9,12,24
- **Calibration:** user selection of sound or vibration calibration
- **Signal Generator:** sine, square, triangle, sawtooth wave, white noise, pink noise, frequency sweep, multi-tone, tone burst, wavefile, etc.
- **Record:** Wave file or time series signal record and play back

