

# 2-CHANNEL AUDIO ANALYZER

## BSWA VA-Audio2

**VA-Audio2** represents the cost effective 2-channels solution for all your needs In Audio Measurement and Analysis.

### Features

A complete set of product oriented modules for measurements and analysis of audio components

- Stepped sweep, continuous sweep, multi-tone, and user-defined stimulus
- Standard measurements for SPL, THD, and high order THD
- Two channel comparison method for frequency response, sensitivity and THD
- Automatic limit calculation
- General two channel analyzer functions
- Supports hardware from National Instruments and soundcard

### Applications

Microphones, Loudspeakers, Receivers, Earphones, Headphones and other analog audio components.

### Technical Specifications

VA-Audio2 supports the following hardware from BSWA:

- **MC3022:** 2 channel ICCP inputs, 2channel outputs, USB powered. Recommended for field uses
- **MC3522:** 2 channel ICCP inputs, 2channel outputs, USB powered, built-in power amplifier to drive loudspeakers (needs 220V AC power for amplifier) Recommended for impedance tube; and audio analysis
- **National Instruments NI 4461:** Recommended for precision calibration

VA-Audio2 provides complete solutions, no optional software is required.



### Manual Signal Generator

- Sine
- Pink and White Noise with user-defined frequency range
- Wav file with RMS and Peak level calibration
- Equalization using calibration measurements or any user-defined curve

### Spectrum Analyzer

- FFT
- Selectable averaging time (Linear & Exponential)
- A, B, C weightings
- Pure tone frequency and amplitude extraction
- Save to memory of current spectrum

### Real-Time Analyzer

- 1/1, 1/3, 1/6, 1/12, 1/24 octave analysis
- Average, Maximum, Minimum level with overload and real time indicators
- A, B, C weighting filters
- Linear and Exponential averaging time

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## BSWA VA-Audio2

### Calibration

- Measure Input and Output sensitivities for transducers, amplifiers, and signal conditioning devices
- Calibration with external, absolute source including acoustic, vibration, or voltage.
- Complex Equalization of input and output devices (e.g. microphones and amplifiers).

### Stimulus

- Sine (stepped – any linear or logarithmic resolution, and log sweep)
- Multi-tone with linear or logarithmic spacing
- Noise (pink & white with user-defined bandpass range)
- Arbitrary (any WAV file)
- Equalization

### Analysis

#### Frequency:

- FFT & DFT (any size)
- Auto-spectrum & Cross-spectrum
- Frequency and phase response including harmonics

### Distortion:

- THD and high order distortion (upto 30 orders) for Rub & Buzz analysis
- THD + Noise

### Recall

- Automatically recall data or results
- Comparison of results in single graph.

### Limits

- Pass/Fail
- Absolute
- Floating (x & y directions)
- Aligned to a pre-defined value (e.g. 0 dB at 1 kHz)

### Printing

- Automatically print display layout to default printer or HTML
- Data export to TXT files.



VA-Audio2 used in Headphone Measurements



Microphone Frequency Response using VA-Audio2