

RogaDAQ2

Portable Data Acquisition and Analysis

RogaDAQ2 is a high performance portable Data Acquisition Device. It features two high quality, high speed, simultaneous sampling inputs.

Analog Inputs	
BNC-Inputs	2, for analog signals
Simultaneously sampling ADCs	2
Resolution	24 Bit
Sampling rate	48 kHz max.
Range input	± 10 V max.
Selectable AC- or DC-coupling	
Selectable IEPE sensor	supply (4 mA/28 V)
Self adjusting Anti-Aliasing filter	
Accuracy	better $\pm 0,1$ dB, Dynamic Range > 100 dB, THD < 0,005%, Frequency Response $\pm 0,05$ dB
Channel deviation	< 0,01 dB, < 0,05°
Channel separation	>85 dB
Supported PC Systems	
Win95, Win98, WinME, Win2000, WinXP & Vista	

RogaDAQ2 Sound Card Analyzer & Recorder



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Dear Customer!

Congratulations on the purchase of your RogaDAQ2 SC. This Product has been carefully designed and engineered to provide you with a precise and reliable data acquisition instrument. Please read this instruction manual before using the product, and keep it at hand for reference.

You're ROGA-Instruments-Team

1. Introduction

1.1 System Requirements

PC with compatible OS and one available USB-connector (USB1.0, 1.1 or 2.0)

1.2 Included Parts

Following parts are included:

- 1 RogaDAQ2 USB1.1 2-Channel-DAQ
- 1 USB-cable
- 1 128MB USB-stick (optional)
- 1 carrying case

1.3 Safety Information– read before use!

 **Caution:** The unit is only suitable for low voltage measurements. Under no circumstance should voltages (AC or DC) above 40 Volt peak be connected to any input or output. Please enable the IEPE supply only while an IEPE compatible sensor is connected to that input, as other devices may be destroyed by the IEPE voltage of up to 28V.

The IEPE supply may also cause interference if there is no sensor connected.

2. Getting started

2.1 Connecting hardware

2.1.1 PC connection:

Use the supplied USB-cable to connect the RogaDAQ2 to an available USB port on your PC.

2.1.2 Analog Input

Connect your signal or sensor to the analog inputs (*in 1* and *in 2*) using the supplied BNC cable

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2.2 Installation

Start your PC. Microsoft Windows ME, Windows 2000, Windows XP or above should be installed. These operating systems do not require additional drivers. The RogaDAQ2 will be automatically detected and

installed as *USB-Audio-Device*.

You may now use your RogaDAQ2 with any software supporting Windows PC soundcards.

3. Making Measurements

3.1 Scaling

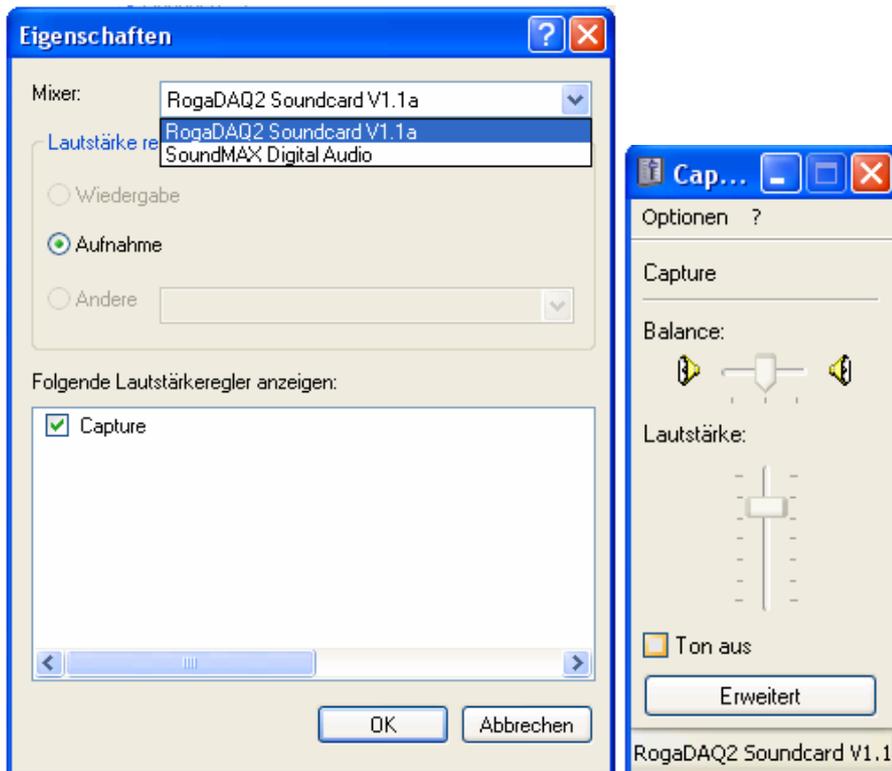
The RogaDAQ2 outputs the analog signals as signed 16bit PCM data with a range of -32.768 to +32.767. The maximum values represent the maximum input range (e.g. +32.767 = 10V, 1V or 0.1V; -32.768 = -10V, -1V or -0.1V). The input range is defined as peak voltage, not rms.

 Not all software applications detect the supported sampling rates properly. Please make sure to only use the supported sampling rates as outlined in the specifications section.

3.3 Sensorsupply

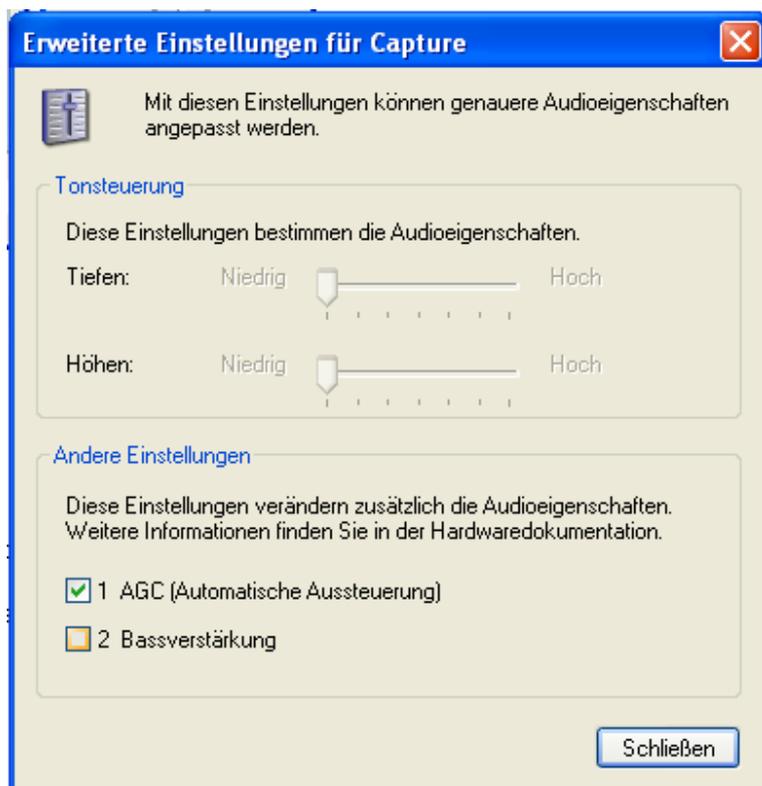
The **AC/DC** on/off function can be used to enable or disable the high pass filter for the channels, by using the "Mute On/Off" check box at the Windows soundcard properties.

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The **IEPE on/off** function can be used to enable or disable the IEPE 24V/4mA constant current supply for direct connection of ICP* compatible sensors, by using the "AGC or Bassboost On/Off" check box at the Windows soundcard properties.



4. Care and Maintenance

This equipment does not require scheduled or preventive maintenance. If you handle it with care, it will be a reliable tool.

Should your RogaDAQ2 require cleaning, use a damp cloth or mild cleaning fluid. Take care not to get any fluid in or around the connectors.

If your RogaDAQ2 requires manufacturer inspection and calibration, please contact your vendor.

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5. Troubleshooting:

In case you experience problems with your RogaDAQ2:

- Check that it is correctly recognized and installed by Windows. A **USB- Audio device** should be found under **Audio, Video and Game controller** in the *device manager*.

Select **RogaDAQ2 SC** as **default device** under **Properties of Sound and Audio devices**

- Some application software requires manual selection of the recording and playback device. Please refer to the manual or help function of your application software.

If you continue to experience problems, please contact your vendor.

6. Specifications (typical, fs=48kHz, f=1kHz,-3dBFS unless otherwise noted)

Analog Inputs

Impedance	: 1 Mega ohm, single ended BNC
IEPE/ICP* sensor supply	: 24V/4mA
Input ranges	: +- 10V (other ranges on request)
Resolution	: 24bit Sigma Delta ADC
Frequency Response	: DC-20kHz +/-0.15dB
Sample rates	: 4kHz, 6kHz, 8kHz, 12kHz, 16kHz, 24kHz, 32kHz, 48kHz & (64 kHz, 96 kHz one channel Ultra Sonic version)
Overall accuracy	: better 1%
Gain error	: less than 0.1%
THD	: less than 0.01%
Dynamic range	: 96dBA
Channel separation	: better 90dB
SFDR	: -115dB
Aliasing rejection	: better 90dB (to 0.4x fs)

Miscellaneous

PC-interface	: USB1.1 compatible
Power supply	: USB powered: 5V, 480mA
Temperature range	: +0°C to +50°C
Dimensions	: 150mm*82mm*32mm
Weight	: approx. 150g

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If you have any further questions, please contact:

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