DATA SHEET

*core*OUT-A2
(Code 7750)
Analog output board

Front panel of *lab*CORE with two *core*OUT-A2 boards

Overview

*core*OUT-A2 is an extension board for *lab*CORE. Equipped with coreOUT-A2, labCORE becomes a high-performance audio analyzer. It provides two high-precision and low-noise analog output channels. Each output has an XLR and a BNC connection and provides either a balanced or an unbalanced signal.

Flexible settings for output level and impedance enable coreOUT-A2 to transmit and process every analog audio signal at the highest quality.

*lab*CORE provides slots for two coreOUT-A2 boards.

Description

*core*OUT-A2 extends *lab*CORE with two high-precision low-noise analog outputs. It has a typical residual THD+N of -114 dB, which makes it the ideal choice for high-performance audio analyzing. The light and compact design of *lab*CORE as well as its versatility and quiet operation underline the benefit of *core*OUT-A2.

Each output has two connections, a male XLR and a female BNC socket. Besides the unbalanced output signal, it is also possible to set the BNC output signal as floating balanced. LEDs on the front panel of *lab*CORE indicate the currently active socket and its output level.

Each output provides an output level up to 18 dB. The output level range is adjustable to four different maximum levels between -10 dB and +18 dB to optimize the operation range for arbitrary measurement scenarios. For the same purpose, the output impedance is adjustable to the measurement scenario, offering 10 Ω, 50 Ω or 600 Ω.

The on-board D/A converter transforms the signal to the analog domain. Discrete on-board circuitry then processes the signal with highest possible precision before it is directed to the desired output connection.

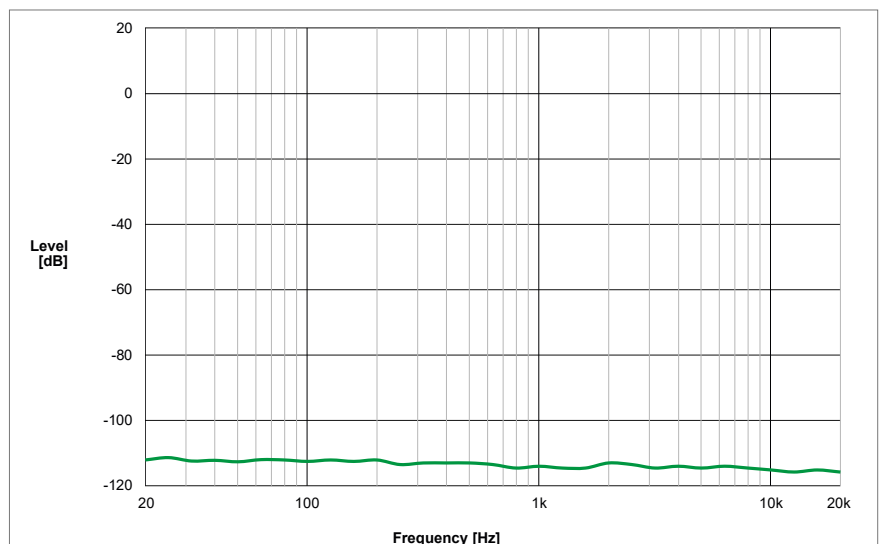*core*OUT-A2 is applicable for impedance measurements of connected devices.

*lab*CORE has two slots at the front panel for *core*OUT-A2 boards.

Applications

- High-performance audio analyzing of various broadband output signals such as speech, music or noise.
- Impedance measurements
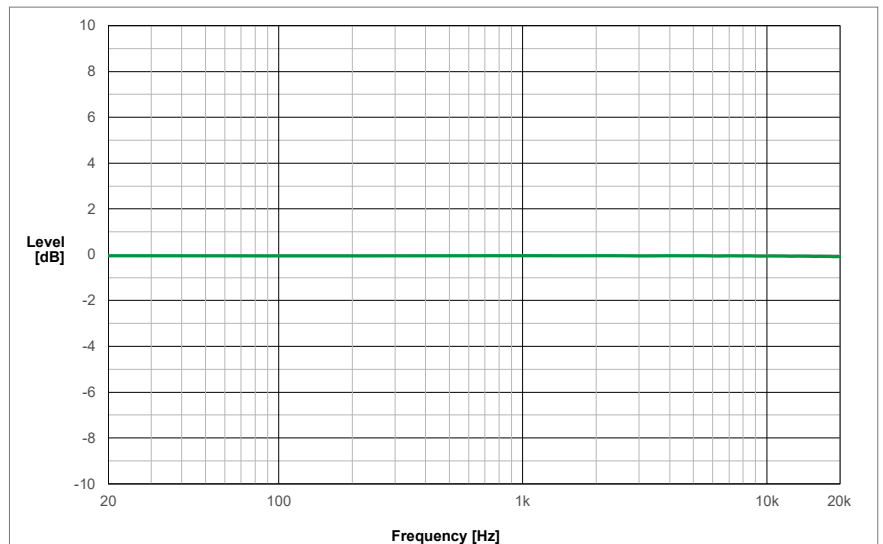
Frequency response

Total harmonic distortion plus noise (THD+N)

Key Features

- Two high-precision low-noise analog outputs
- XLR or BNC socket for each output
- BNC transmits unbalanced signal or floating signal
- Output gain between -10 dB and +18 dB
- Adjustable output impedance
- D/A conversion and signal post-conditioning on one board for highest possible signal quality

General Requirements

Hardware

- **labCORE (Code 7700)**, Modular multi-channel hardware platform
- **coreBUS (Code 7710)**, labCORE I/O Bus mainboard

Software

At least one of the listed software applications is required.

- **ACQUA (Code 6810)**, ACQUA Standard: Basic Analysis Software, full-license Version
- **RC-labCORE (Code 6984)**, Remote configuration software for labCORE

Delivery Items

- **coreOUT-A2 (Code 7750)**, Analog output board
  - **Initial equipping:** HEAD acoustics installs coreOUT-A2 to labCORE during production
  - **Retrofitting:** Send in labCORE to HEAD acoustics for installation

Technical Data coreOUT-A2	
Channels	2
Connection	BNC (unbalanced or floating) XLR (balanced)
Output range	-14.5 V ... +14.5 V
Output impedance	10 Ω (± 0.1 %), 50 Ω (± 0.1 %), 600 Ω (± 0.1 %)
Output range settings	-10 dBV, 0 dBV, +10 dBV, +18 dBV
Level accuracy	±0.1 dB (1 kHz)
Flatness	±0.02 dB (48 kHz sampling, 20 Hz – 20 kHz), ±0.10 dB (96 kHz sampling, 20 Hz – 40 kHz) ±0.18 dB (192 kHz sampling, 20 Hz – 80 kHz)
S/N	> 118 dB (1.0 V_{RMS}, 20 Hz – 20 kHz)
THD+N	< -114 dB (1.0 V_{RMS}, 1 kHz)
Crosstalk	< -130 dB
Digital resolution	32 Bit
Sampling rates	48 kHz, 96 kHz, 192 kHz
Typical power consumption	5.5 watts