



Audiophile true balanced phono stage for MM + MC cartridges
Uncolored Natural Sound • Precise Room Projection • Great Dynamics • Hörvergnügen!
RIAA Equalization with Neumann time constant for extended highs • current amplifier for MCs

Features

- Outstanding price/quality ratio
- Excellent sound (independent of price class) through innovative design
- Ultra fast amplifier lets crackle noise become less discernable
- True balanced circuitry in complete signal path
- LEF Single-Ended Class-A: load-effect-free amplifier, no transistor switching, no over-all feedback
- No OP-Amp ICs (integrated circuits) in analog path
- Fully discrete amplifier stages (single transistors) all amp parameters according to own specifications
- RIAA equalization with Neumann constant (50kHz): resulting in extended and transparent top range
- Current amplification for MCs: "automatic" adjustment of optimal values like impedance etc.
- Flexible adjustable RCA input for MMs und MCs: gain, load capacity, impedance
- Ground lift for a hum-free signal
- Inputs: unbalanced RCA (Cinch) for MMs und MCs
balanced XLR for MC cartridges (RCA/XLR-adaptors available)
- Outputs: balanced XLR
unbalanced RCA (Cinch)
- Ultra clean switching power supply: no transformer hum
- Top quality aluminium case. Color: silver or black
- 19" aluminium rack-mounts available

Specifications

Input Sensitivity at 1Vrms out-XLR:

RCA Input sensitivity: 2,4 - 12 mVrms/1 kHz
RCA Input sensitivity: + 6dB: 1,2 - 6 mVrms/1 kHz
RCA Input sensitivity: +20dB: 0,4 - 2 mVrms/1 kHz

RCA Input Impedance: 47 kOhm, switchable to:
1 kOhm and 100 Ohm

RCA Input Capacity: 47pF internal, switchable to:
+ 47pF, +100pF, +220pF, +470pF
The values add up to each other, summing up to max. 884pF

RCA Gain Factor: maximum ca. 68dB

XLR Balanced Current Amplification Input:

The amplification at the XLR input is generally higher than at the RCA input, but varies depending on the output voltage and impedance of the Moving Coil cartridge. Providing 55-75dB gain, this input is suitable for all High-Output and Low-Output-MCs down to 0.15mV noise free and no stepup transformer needed.

RIAA Equalization with Neumann Constant: +/- 0,25dB

Front Control Input GAIN: per channel +14dB

Subsonic Filter: -9dB/10 Hz, -18 dB/5 Hz, -48 dB/2 Hz

THD + Noise:

1V out-XLR: 0.009% at min., 0.04% at max. MM-RCA-In
1V out-XLR: 0.019% at min., 0.09% at max. MC-RCA-In

Signal-to-Noise Ratio (S/N) IHF-A measured:

1V-Out-XLR-MM-RCA-In:
76dB Flat, 84dB A at min., 63dB Flat, 71dB A bei max.*
1V-Out-XLR-MC-RCA-In:
69dB Flat, 78dB A at min., 57dB Flat, 65dB A bei max.*

Power Supply: 100V-240V **Power Consumption:** 5 W

Dimensions: (B / H / T) ca. 435 x 59 x 290 mm
Weight: ca. 2,8 kg

Technical features and design may be altered for the benefit of improvements without prior notice. No responsibility is taken for the correctness of this information.



Rückansicht

Why balanced processing?

There are two purely balanced mass/ground-free signal sources. First, microphones, and this explains the historical origin of symmetrical signal transmission in the professional audio world. Second, turntable cartridges. Isn't it amazing that phono amps with balanced circuits are so hard to find? Here, just like with microphones, one deals with very low voltages/currents, which allow the advantages of balanced signal processing to be fully realized.

During balanced processing two opposite-phased signals are transmitted. The amplifier generates the difference between the signals. And since signal disturbances are usually in phase along both lines, they are effectively canceled out. In addition, this achieves a 6dB higher output voltage.

You can try out the XLR-CI input without cable modification! For this purpose an RCA/XLR adaptor is available. Please note: **The XLR-CI input can also be used in combination with the unbalanced RCA output.**

Balanced current amplifier input for MCs

The XLR-CI input of the AQVOX PHONO2CI evaluates the current that is generated by the MC system, and not the relatively low voltage parameter. While the voltage differences between low-output and high-output MCs are considerable, current differences are pretty small. And so, at the XLR input a high-output MC only offers little more output level than a low-output MC. The current input (XLR-CI) accommodates the moving coil system a lot better than the voltage input (RCA) does. The balanced XLR-CI input has still more advantages: Through the principle of current amplification the normally necessary impedance adjustment for the respective MC system is not required. Thus a fast cartridge change is possible without much effort. In addition, the any resonance in the high frequency range of some MCs is suppressed. This way, resonating phono cartridges, which sound a little too bright, are electrically damped in a lossless manner, sounding more natural as the result.

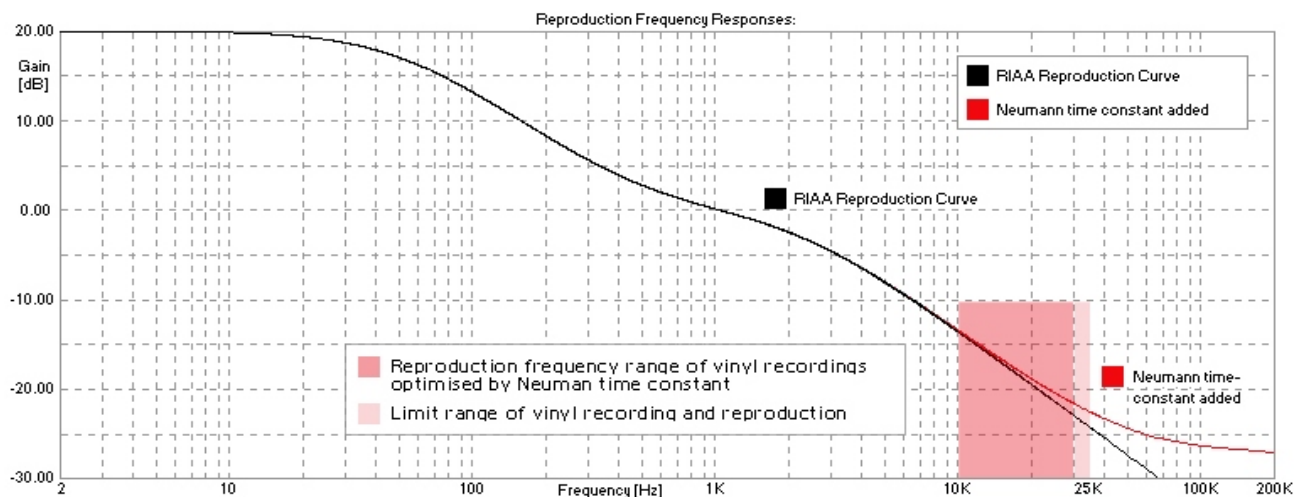
LEF Single-Ended Class-A

A special technique (LEF) prevents the transistor from passing through its voltage and current characteristics and working out of linearity, at both the XLR-CI and at the unbalanced RCA inputs. In addition, according to the Single-Ended Class-A principle, there is no audible transistor switching. Thus, because overall negative feedback is avoided, distortions are eliminated at the "ground level".

What is the benefit of the RIAA equalization with the Neumann constant?

The AQVOX PHONO2CI equalizes the phono signal according to RIAA+Neumann. In order to increase the lifespan of expensive cutting heads of record cutting machines and optimize the highest range of the frequency response, decades ago Neumann integrated this additional time constant (roll-off 50kHz) into the RIAA curve. Manufacturers of almost all cutting machines were working with upper limits of 30 to 60kHz. Therefore the 50kHz-constant is also beneficial to vinyl that was not being cut on Neumann machines. Specialists agree that since the 60s approximately 95% of all "mother" discs in Europe were cut on Neumann cutting lathes. For the USA this estimate is around 50% (including labels such as Motown). Today Neumann machines are found in all European disc-cutting rooms. The notion of the Neumann curve came about after the RIAA; before there were different equalization curves depending on country and manufacturer (Westrex, Scully, Ortofon, etc.). So the RIAA with the Neumann constant became an unwritten de-facto standard. In order to come to the original as close as possible, vinyl records should be equalized and played back as they were manufactured. The Neumann constant greatly contributes to the entire sound spectrum with a more accurate phase, transparency and naturalness.

More information at www.aqvox.com



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