



## The best Phonostage for your MC cartridges !

The Most Audiophile and Innovative True-Balanced Phonopre for MM + MC Pickups  
Uncolored Natural Sound • Precise Room Projection • Great Dynamics • Precise Bass  
RIAA Equalization with Neumann Time Constant for Natural Highs • Current Amplifier for MCs

### Features

- Outstanding price/quality ratio
- Excellent sound (independent of price class) through innovative technology
- Automatic impedance termination for MC's
- True balanced circuitry in complete signal path
- Single-Ended Advanced Class-A: no transistor switching, no over-all feedback, no crossover distortion
- No OP-Amp ICs (integrated circuits) in audio path
- Fully discrete amplifier stages (single transistors) all amp parameters according to audio specifications
- Passive RIAA with Neumann constant (50kHz roll-off): for extended, natural and phase-correct top range
- Current amplification for MC's
- 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, and unbalanced RCA (Cinch) independent from input, both outputs are active
- Ultra clean power supply: no transformer hum
- Top quality extruded-aluminium case. In 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 as at the RCA input, but varies depending on the output voltage and impedance of the Moving Coil cartridge. Providing 55-76dB gain, this input is suitable for all High-Output and Low-Output-MCs down to 0.10mV noise free. No step-up transformer required.

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

**Front Control Input GAIN:** variable 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:** 10W

**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. Balanced signal/processing means 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.

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

**EXTRA - Balanced current amplifier input for MCs**

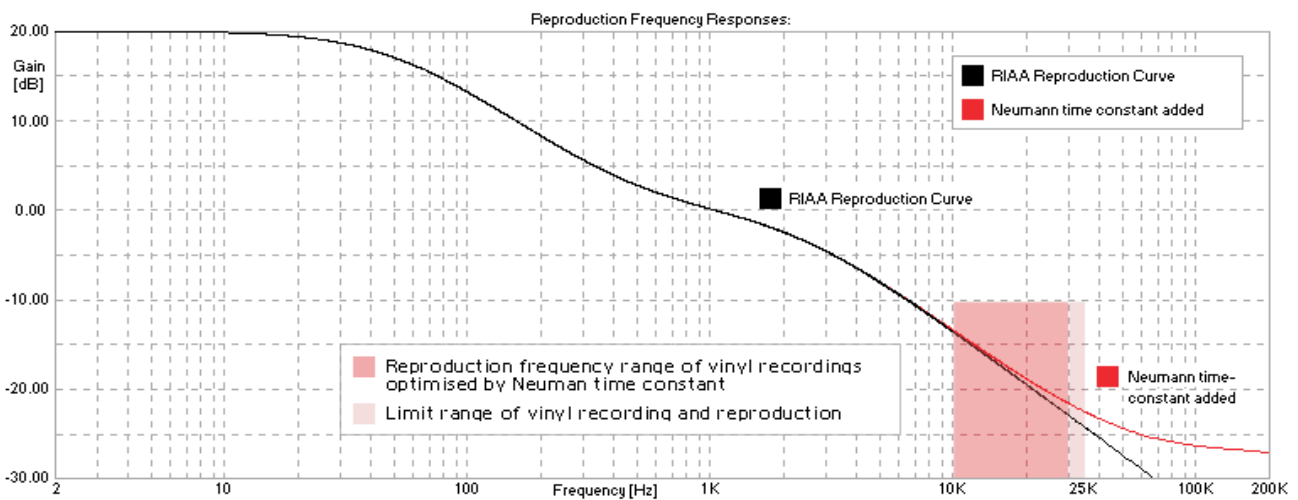
The XLR input of the AQVOX PHONO2CI evaluates the current generated by the MC system, not the relatively low voltage. A MC is a current-generator, while a MM is a voltage-generator. The current input (XLR-) matches the moving coil system far better than the voltage input (RCA) ever can. The balanced XLR input has still more advantages: Through the principle of current amplification the normally necessary MC impedance matching is not required the MC itself is the termination. For easy cartridge changing or matching for records cutted with hot or lower level - always get the optimum pre-gain. In addition, any resonance in the high frequency range of some MCs is suppressed. This way, resonating phono cartridges, which sound a little too bright, are damped in a lossless manner, sounding more natural as the result.

**Single-Ended Advanced Class-A**

Running the amp circuit in Class-A prevents the transistor from passing through its voltage and current characteristics and working out of linearity. That prevents the sound from cross over distortions. In addition the topology is in Single-Ended and the audiophile crown of our amp-circuit is that it requires no overall negative-feedback but only little local/feedback. Because the typical Class-A 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 limiters 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.



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