MUSICAL FIDELITY

X-Tube

Reimagination of the iconic Musical Fidelity X-profile
Tube Output Buffer Stage

X-Tube In Brief

Tube Output Buffer

- 2x E88CC triode tubes
- Intermediary stage between your audio source or preamp and amplifier
- Adds tube like tonal characters, depth and richness to your line sources
- Better impedance matching - maximum power transfer and minimal signal loss
- Isolates amplification circuitry and load
- Protects your amplifier from reactive loads

In & Outputs

- Inputs: 1x RCA
- Bypass: 1x RCA
- Output: 1x RCA

Features

- Drastically enhances budget digital/streaming/CD sources that use all-in-one chip designs and lack proper output stages
- Ultimate impedance matching if used between preamplifier and amplifier
- Revival of iconic Musical Fidelity X-profile
- Main chassis consists of a one-piece aluminium extrusion for best shielding against electro-magnetical interference
- Beautiful brushed aluminium face-plate
- Direct mains input, no external power supply allows for clean setup

General Information

We are proud to unveil the X-Tube – a revolutionary tube output buffer built with our newly reimagined X-profile aluminum die-cast chassis. This innovative design marks the return of the X-profile configuration, a distinctive element in the revered Musical Fidelity X10D tube output buffer and promises to breathe new life into a wide range of future audio electronics products.

From X10D to X-Tube

The X10D, as designed by Musical Fidelity founder Antony Michaelson, is an acronym - or if you want "a wordplay" - for e**X**-(**10**)ten-(**D**) ded. Extended. The internal circuitry design faithfully follows the original and just like it, the new X-Tube extends your signal chain and is connected between input source and amplifier.

It serves as an intermediary stage and is designed to enhance audio signal quality and add tube-like tonal characteristics to your line sources. Connectivity is simple, featuring 1x RCA input and 1x RCA output as well as an RCA bypass. The old external power supply has been reworked and moved into the chassis itself, allowing for a cleaner setup than before.

Advantages of a Tube Output Buffer and its Impact on Sound

Tube preamplifiers or tube output buffers hold a special place in the hearts of many audiophiles offering a distinct sonic signature that is prized by many audio enthusiasts. The warmer, more natural sound, improved dynamics, and potentially reduced listening fatigue contribute to a unique and engaging listening experience.

The X-Tube in Today's Audio World

What is the place of the X-Tube in today's audio world? We currently observe a surge in a new generation of affordable streaming devices and DACs. Even CD-players receive increased interest as people are holding on to their old collections.

These modern digital audio devices achieve great price points, but do this at the sacrifice of hardware. Software makes up most of their cost and there is no budget assigned to, amongst other things, proper output stages. Instead, cheaper integrated IC solutions are used that don't have the power to properly drive line inputs in many amplifiers.

The X-Tube has a clean, high impedance tube input, meaning it won't put as much strain on the output drive capabilities of connected source devices. Regular line inputs on most amplifiers are usually more demanding and cheap output stages will struggle.

On the output side, the X-Tube's clean, low impedance tube output buffer has plenty of drive and will not struggle with any low or high impedance amplifier input.

The X-Tube is designed to be the reliable core of your system, enhancing modern streamers and keeping pace as digital technology rapidly evolves.

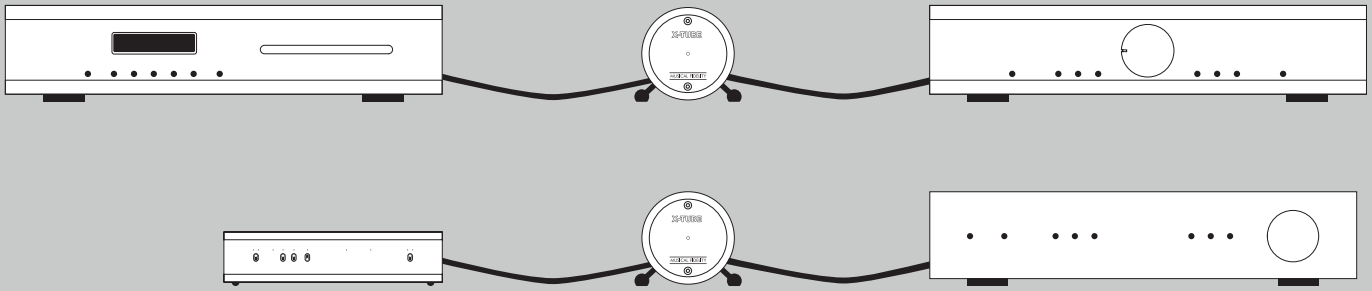
While streamers excel at software and deliver great digital-to-analog conversion with the latest DAC technology, they often fall short when it comes to analogue output potential. And when their analogue drive is lacking, the X-Tube complements them perfectly.

The X-Tube in Action

The X-Tube can be used to enhance a variety of source devices or act as an excellent buffer stage with ideal impedance matching characteristics between separate pre and power amps.

CD Players and DACs

The X-Tube adds tube like tonal characters, depth and richness to your CD or DAC sources.



Streamers

Modern streamers have excellent software and apps, but to reach a certain price point take big hits in their hardware design. Low-quality output stages are often seen in the form of simple IC solutions. These output stages often struggle to properly drive line inputs in many amplifiers. The X-Tube's clean, high impedance tube input is easy to drive even for these types of IC solutions.

Preamps

If you are unsure whether your preamp's and power amp's impedances are matching, the X-Tube can be used as an intermediary buffer stage, providing suitably high input impedance and low output impedance. The X-Tube is the ideal driver for low and high impedance amplifier inputs.

Technical Talk

The X-Tube configuration utilizes two E88CC (also known as 6922) triode tubes arranged in a unique, non-traditional way. Both valves process the entire signal in a single-ended manner. Single-ended designs can exhibit faster transient response, meaning they can handle rapid changes in volume within the audio signal with minimal distortion. Tube output stages provide a multitude of other technical advantages:

Impedance Matching

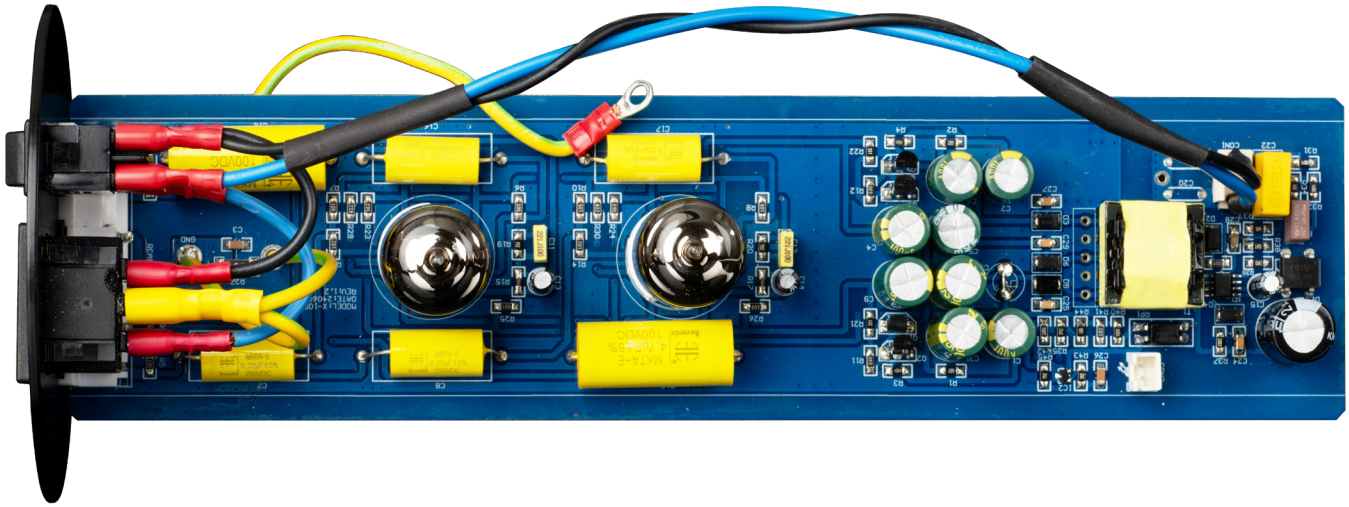
Tubes naturally exhibit a higher input impedance than solid-state devices. This characteristic allows tube output buffers to provide better impedance matching, ensuring maximum power transfer and minimizing signal loss.

Isolation and Protection

Tube output buffers can provide a level of isolation between the amplification circuitry and the load, protecting the amplifier from reactive loads and minimizing the potential for instability or oscillation.

Tonal Character

Tube output buffers can introduce a nuanced amount of harmonic flavor that adds depth and richness to the audio signal.



The Allure of Tubes

The Musical Fidelity X-Tube offers an avenue for audio enthusiasts to introduce tube characteristics and tonal enrichment into their audio systems. Its tube circuitry is a valuable tool for enhancing sound quality and adding musicality to the listening experience. Whether used in a high-end audio setup or as a significant upgrade to budget systems, the X-Tube provides users with the opportunity to explore the distinctive qualities of tubes in their audio reproduction.

Warmer, More Engaging Sound

One of the most sought-after characteristics of tube amplifiers is their tendency to produce a "warmer" sound compared to solid-state designs. This warmth can be attributed to the way tubes handle even-order harmonics. Unlike solid-state components that introduce more harsh-sounding odd-order harmonics, tubes tend to emphasize even-order harmonics, which are generally perceived as more pleasant to the human ear. This results in a smoother, more natural soundscape that some listeners find more engaging.

Improved Dynamics and Transient Response

Tubes, especially the X-Tube's triode design with two tubes processing a single ended signal, can exhibit faster transient response, meaning they can handle rapid changes in volume within the audio signal with minimal distortion. This translates to a more lifelike and dynamic listening experience.

Reduced Listening Fatigue

The smoother sound characteristic of tube output buffers, combined with the emphasis on even-order harmonics, can lead to a less fatiguing listening experience. Solid-state amplifiers or preamplifiers, particularly those with bright tonal characteristics, might cause listening fatigue for extended periods.

Enhanced "Air" and "Space"

Tube output buffers are often attributed with creating a more spacious and airy soundstage. This perception can be due to the nuanced harmonic flavor introduced by the tubes, which may add a sense of depth and ambience to the music.

X-Tube

SPECIFICATION

Tube Buffer
- Tubes: 2x 6922/E88CC triode tubes
- Frequency Response: 20Hz to 80kHz + 0, - 0.3dB
- THD: < 0.003% 10Hz to 20kHz
- SNR: > 96dB unweighted ref. full output
- Crosstalk: > 95dB, 20Hz to 20kHz
- Gain: 1dB
- Input impedance: 470k Ohms
- Output impedance: < 33 Ohms

In & Outputs
- Inputs: 1x RCA
- Bypass: 1x RCA
- Output: 1x RCA

Power requirement
- Mains input: AC 100-230V 50/60Hz IEC C14 socket
- Consumption: <0.25 Watts in Standby

General Information
- Dimensions (WxHxD): 108 x 105 x 274 mm
- Weight: 2,29 kg net / 2,58 kg in shipping box