



## M8x Vinyl

High-End Fully Balanced and Discrete Phono Preamp

### M8x Vinyl In Brief

#### Phono-Preamp

- Fully balanced and discrete design
- 3-part gain stage with Class A circuitry
- Split-passive RIAA, DECCA & COLUMBIA equalisation
- Two-step subsonic filter (Switchable: OFF – Mild – Standard)
- MM (40dB) & MC (60dB) capable with +3/6/9dB option
- Separate output and input stages - connect multiple inputs and outputs simultaneously
- Super Silent Power Transformer
- Discrete input power filtering and DC blocking circuitry

#### In & Output

- 2x RCA inputs
- 2x balanced XLR input
- 1x RCA output
- 1x balanced XLR output

#### Features

- Uncompromisingly rigid mechanical construction
- Front/side/top panels from extruded aluminium profile
- No display enables excellent shielding against outer electromagnetic fields and timeless looks
- Full aluminium buttons and control wheels
- Load settings stored for each input



## General Description

The M8x Vinyl is the new flagship phono preamplifier in the acclaimed Musical Fidelity M-range. Compared to its smaller brother, the M6x Vinyl, the M8 goes a step further in almost all aspects.

What is new?

- **Fully balanced & fully discrete:** The M6x Vinyl was already fully discrete, but not fully balanced. In the M8x Vinyl, each channel's + and - signal get their own amplifier stage. This means there are more than twice as many discrete components that make up the phono stage and the PCB is almost 3x the size as before!
- **Improved gain stage design:** the gain stage now consists of 3 stages, which are able to provide more gain than before and operate at lower noise and distortion!
- **More gain options:** 40, 43, 46, 49, 60, 63, 66, 69dB
- **New discrete input power filtering and DC blocking circuitry:** Like the phono stage, also the power PCB is now 3x as big. It provides clean power to the fully balanced phono stage that is now twice as demanding!

- The **Super Silent Power Transformer** is now **encapsulated** to further protect the very sensitive phono stage from external electro-magnetical radiation.
- **DECCA & COLUMBIA** in addition to the standard RIAA EQ
- **Dual split-passive EQ stage**
- **Two-step subsonic filter**
- **More inputs** and **more load settings** for ultra-precise cartridge tuning.

With beautifully designed and executed massive full-aluminium casework, the M8x Vinyl has the iconic M8 heroic build quality. Using the same size potentiometers, it achieves an esthetically mighty look, and is a perfect match to the acclaimed M8 amplifier series.

In Musical Fidelity tradition, it's designed in such a way to ensure you cannot overload the input stage or encounter any practical limitations in the output driving capacity. Its purpose is singular, to be a conduit for music. It exists to faithfully convey the artist's intent, their emotions, the passion directly to your ears and heart.

## Technical Talk

Compared to its M6 counterpart, the M8x Vinyl now features fully balanced audio circuitry on the inside.

This means there are twice as many discrete components on the inside, as each channel's + and - signals get their own phono stage consisting of three gain stages powered by fully Class A discrete transistor circuitry.

The EQ stage doesn't cut any corners either. Completely passive and in two separate stages (split-passive) - this is more costly to design and implement but ensures the most

accurate representation of the ideal EQ curve. Split passive equalization allows for better impedance matching and lower deviation from the ideal EQ.

In addition to the standard RIAA curve, we have implemented the two less common DECCA and COLUMBIA curves as well. The clean PCB layout and purpose driven design guarantee lowest possible noise and distortion with low output impedance.

RCA and XLR outputs both have their own individual stages allowing you to use them simultaneously.

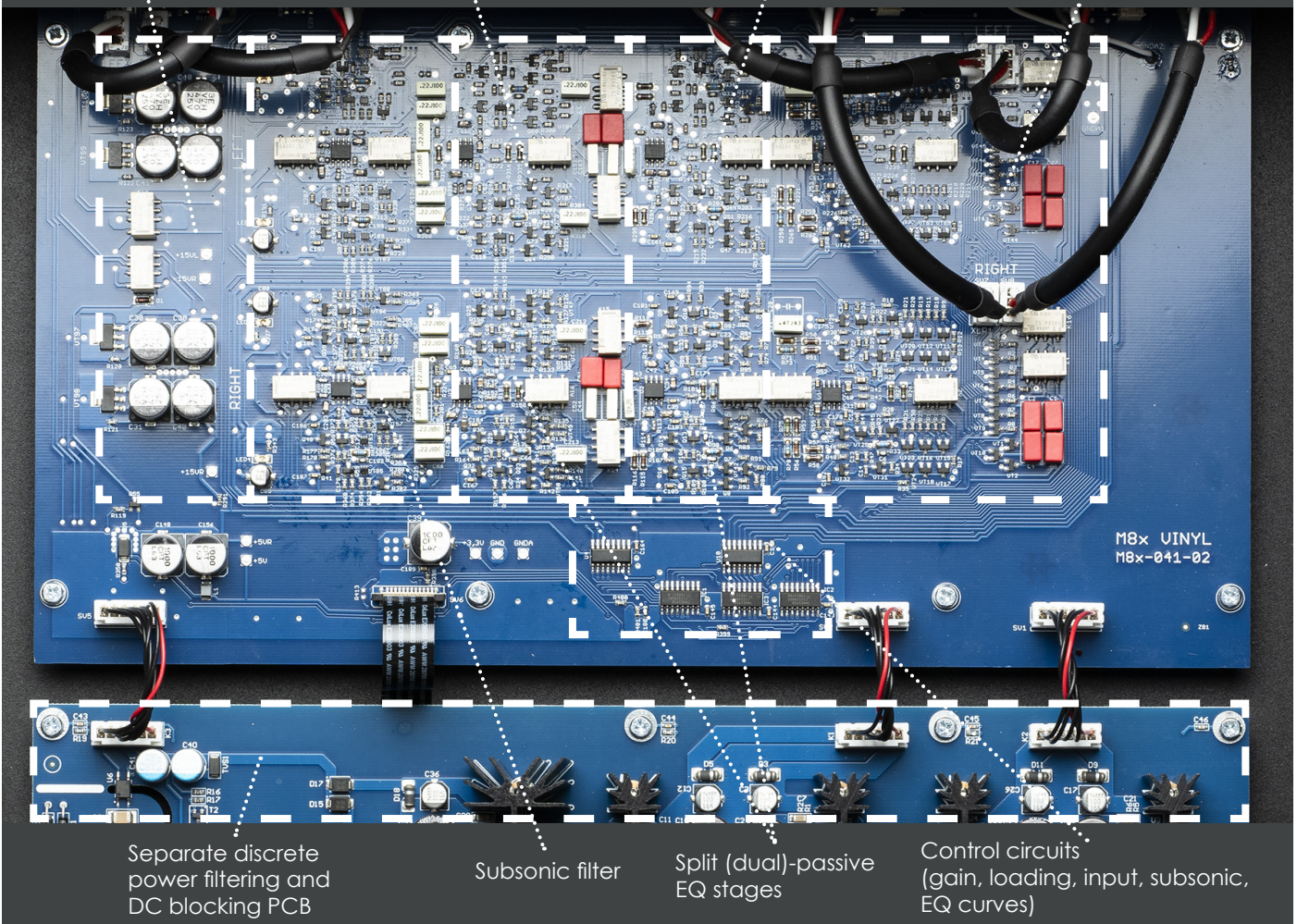
Fully balanced 3-part phono stage (gain + EQ)

Separate low-noise PSU and discrete operational amplifiers with transistors

3rd stage: balanced correction amplifier with 20 or 26dB gain

2nd stage: balanced correction amplifier with 20 or 23dB gain

1st stage: low noise balanced input amplifier, frequency independent with 20 or 40dB gain

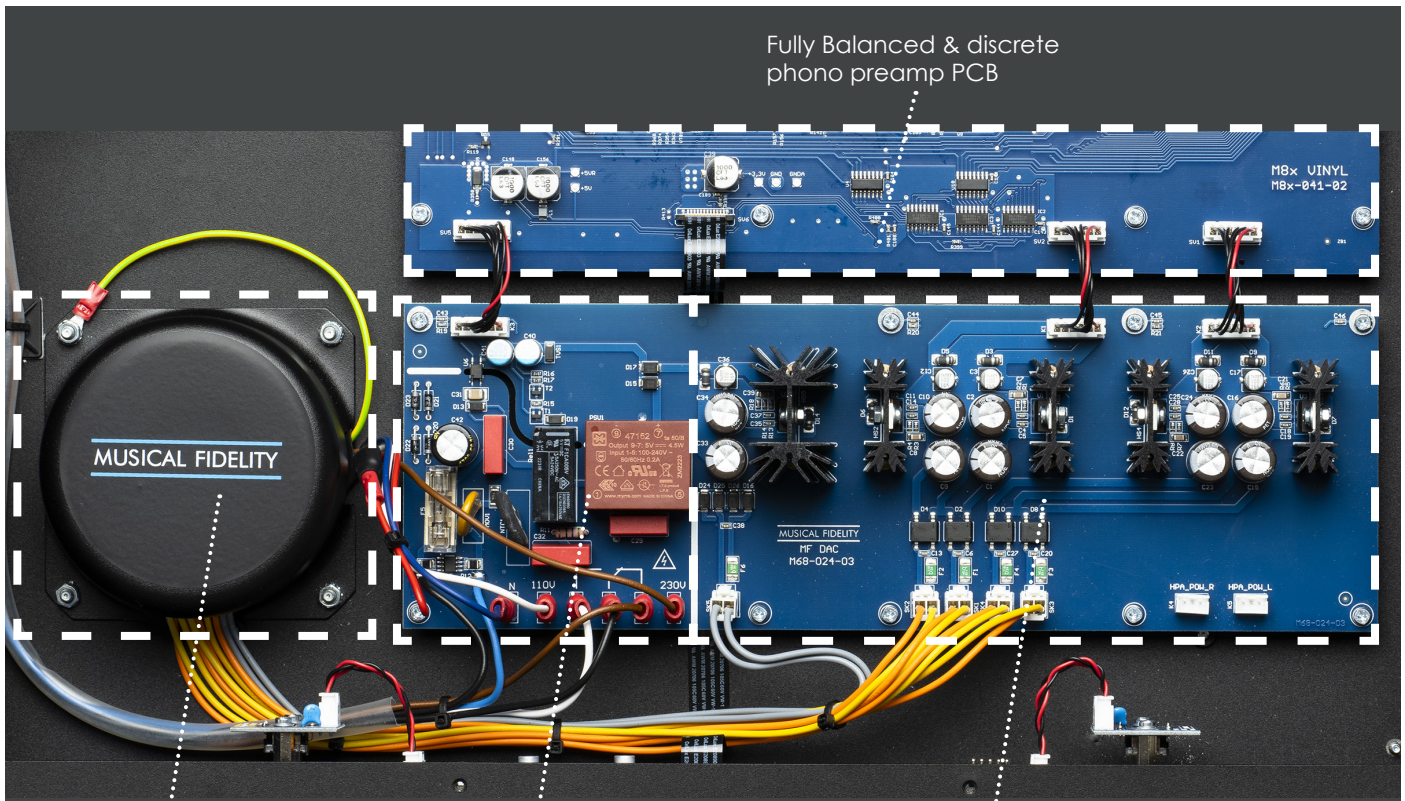


Separate discrete power filtering and DC blocking PCB

Subsonic filter

Split (dual)-passive EQ stages

Control circuits (gain, loading, input, subsonic, EQ curves)



Fully Balanced & discrete phono preamp PCB

Encapsulated Super Silent Power Transformer

Standby Power PCB

Separate discrete power filtering and DC blocking PCB

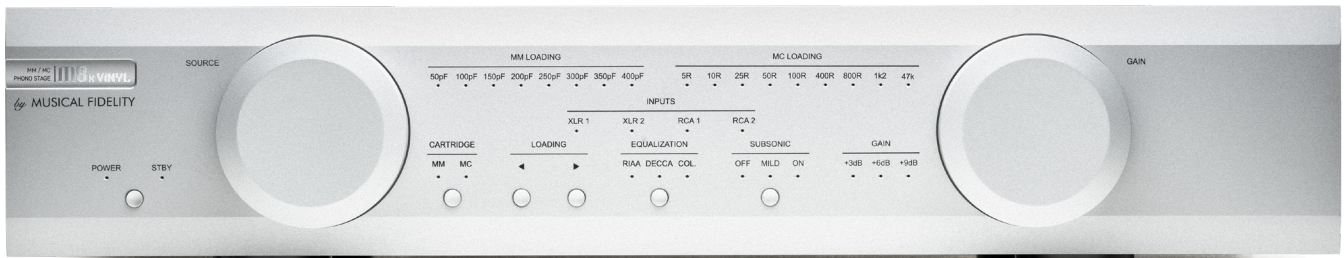
## Discrete Power

The M8x Vinyl displays our continued development of our Super Silent Power Transformers.

Industrial grade power sockets with EMI filter and DC blocker stop interferences and eliminate transformer hum. The encapsulated toroidal transformer is purpose designed for delicate phono signals with low core saturation and extremely low electromagnetic radiation.

Each discrete amp stage has a DC servo ensuring optimal DC mode. The preamplifier is powered by two high-quality symmetrical low-noise power supplies, one for each channel - all passively filtered and regulated.

If we are working with the few hundreds of microvolts from a phono cartridge, everything is playing its role; every decibel of signal to noise ratio is crucially important.



## Fully Balanced

A fully balanced design principle, as used in the M8x Vinyl, consists of a hot and a cold (also called + and -) signal. Both the + and - signal chains effectively carry the same musical information. A true balanced amplifier can now extract the final musical information out the +/- signals and subtract, remove, all noise that could potentially be added along the transmission.

A "pseudo-balanced" amplifier will not process the + and - signals independently, but add them together before they are processed. Pseudo-balanced design will not benefit from

the advantages that balanced connections have to offer, like fully balanced amplifiers do. In a true, fully balanced device, the + and - sections of both the left and right channel are treated individually, which doubles the amplifier sections by 2 as a result. You need twice as much space on the circuit board, twice as many electrical components and be twice as careful with planning your circuit board layout. As a result, the M8x Vinyl excels at suppressing unwanted noise, errors and interferences and offers the best signal to noise ratio possible.

## Extreme Cartridge Loading Options

Each of its single-ended RCA or balanced XLR inputs can be individually set for either MM/MC and loading. Each input also then remembers its own settings.

Very large ranges from 40dB (voltage amplification by 100x) up to 69dB (voltage amplification by 3690x) are possible. The gain is cleanly switched using signal relays and you can see the big increase in amplification is why a phono preamp must be incredibly silent (a fully balanced design makes a big difference here) to handle amplification levels this high. Input capacitance and impedance are switched by using JFET transistors.

A costly, yet technically extremely sophisticated implementation, it allows the M8x Vinyl to be matched with any cartridges and perfectly integrated it into the rest of your Hifi system.

By that criteria the M8x Vinyl is perfect. It has no practical audible noise even at the highest levels of amplification. It doesn't really have distortion. You cannot overload its input or output and you can load your cartridge perfectly. It brings the artist's intent, emotions and passion to your ears and heart.

## The Advantage of Discrete Circuits

A discrete circuit is composed of electronic components which are disparate, individual devices, also called discrete components. These can be “passive” components, like resistors, capacitors and inductors, as well as “active” components like transistors. The opposite to this would be an integrated circuit (IC = chip), which can, for example, be used as an operational amplifier (Op-Amp) in the signal chain.

In our industry we employ specialised IC Op-Amps built for audio applications, which allow us to produce very small and efficient electronics, as well as saving the time of design engineers. However, countless hours of listening tests and years of experience have shown

us that even the very best ICs do not tend to be so neutral, natural, dynamic or vivid – all of which are characteristics of the Musical Fidelity “sound”. They are also difficult - if not impossible - to repair. For that reason, we’re re-discovering our passion for traditional, discrete designs.

Where standard phono pre-amplifiers with integrated circuits have a few tens or hundreds of components, discrete designs will employ hundreds or thousands of components by comparison. That makes for an extended design process, but in our opinion results in the best sound for your money.



## Heroic Build Quality

The mechanical construction is uncompromisingly rigid and solid in typical Musical Fidelity tradition. Front, side and top panels are milled from extruded aluminium profiles and are extremely massive. The M8x Vinyl is basically immune against the effects of vibration from the environment.

The same can be said about electromagnetic immunity. The massive aluminium case acts as a Faraday cage. It protects the incredibly sensitive phono stage internals against outer electromagnetic fields.

Not using a big display on the front panel only increases this effect, as the cut out needed for it would drastically complicate things. The deliberate decision against a big display with flashing colours allows you to experience the music and only the music. We are only spending money in areas that go directly into the audio performance.



M8x Vinyl

## SPECIFICATION

### MM

- Gain at XLR outputs: 40dB, 43dB, 46dB, 49dB
- Frequency response:  $\pm 0.2$ dB
- Input sensitivity: 5mV IN for 500mV OUT (at 40dB, 1kHz)
- Input impedance: 47kohm
- Input capacitance: 50-400pF selectable
- THD at 1 kHz:  $< 0.005\%$
- Overload margin: 32dB
- Signal to noise ratio:  $> 102$ dB „A“-wt. at 40dB

### MC

- Gain at XLR outputs: 60dB, 63dB, 66dB, 69dB
- Frequency response:  $\pm 0.2$ dB
- Input sensitivity: 500 $\mu$ V IN for 500mV OUT (at 60dB, 1kHz)
- Input impedance: 5 ohm to 47kohm selectable
- Input capacitance: 400pF fixed
- THD at 1 kHz:  $< 0.008\%$
- Overload margin: 32dB
- Signal to noise ratio:  $> 90$ dB „A“-wt. at 60dB

### Features

- EQ curves: RIAA, DECCA, COLUMBIA
- Subsonic filters: off, mild (IEC), standard (at 20Hz with 18dB/octave)

### In & Outputs

- Inputs: 2x RCA, 2x XLR
- 1x RCA output: unbalanced, left and right 500mV nom, 5V max
- 1x XLR output: balanced, left and right 1V nom, 10V max

### Power requirement

- Mains voltages: 115/230VAC 50/60Hz (factory pre-set); 100VAC 50/60Hz (alternative)
- Consumption: 20 Watts maximum,  $< 0.5$  W in standby (orange LED ON)

### General Information

- Dimensions (WxHxD): 483 x 102 x 381 mm
- Weight: 10.6 kg net / 14 kg in shipping box