LAB 12

Owner's Manual

melto2

Remote Controlled, Fully Adjustable Phono Preamplifier

www.lab12.gr

v1.0

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IT IS YOURS!

Thank you for purchasing Lab12 melto2. Before setting up your new melto2, we encourage you to read this manual thoroughly and get familiar with its features.

Keep in mind that melto2 is totally handcrafted with perfectly matched parts of the finest selections.

Melto2 is a truly audiophile phono preamplifier with plenty of choices and settings that give you the opportunity to receive the absolutely best from your turntable/cartridge system. We have chosen a full tube design with no solid state parts in the signal way and we have managed to precisely handle this very sensitive cartridge signal to offer a truly musical result. Melto2 is designed to perfectly match with any of the Lab12 amplifiers or preamplifiers.

The information contained in this manual is subject to change without notice. The most current version of this manual is available on our official website at http://www.lab12.gr

Unpacking

Melto2 should be removed from its box with care. Remove all the foam protective pieces of the box before you unpack melto2. Unpack melto2 with your hands on both sides of the device. Unpack the Remote Control and insert the batteries in correct position.

Warnings

No user serviceable parts are included inside. Do not unscrew the cover; high voltages remain after disconnecting from mains. In case your device requires any kind of service or upgrade, please ship or take your equipment directly to Lab12 or to one of our authorized dealers or other qualified personnel.

Always use same type of fuse for replacement.

Installation & Placement

Melto2 should be placed on a solid flat surface. You should avoid placing it near a heat source as this could compromise the performance and reliability. You should never place another component directly on top of this device. Make sure that your melto2 has an adequate flow of air around it. Melto2 could be warm in some points; this is normal and within parts' specifications. Take care of the front panel's glass blasting anodized finishing using a soft dry cloth. No need to use any sprays or polishes. Never use cleaners containing abrasives, as this will damage the surface.
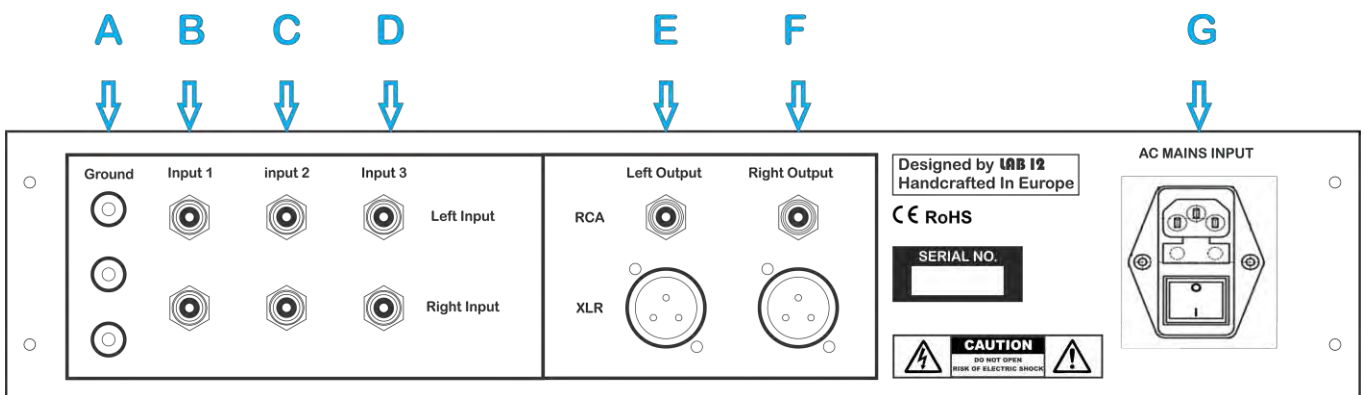
Front Panel

Melto2 front panel

On the front panel you will see the OLED display, the Navigation rotary knob and the Operation rotary knob.
The left rotary/push knob (A) is there for navigation into device's menu structure.
The OLED display (B) is located in the middle of front panel. There, you can see all the interface menu details.
With the right rotary knob (**C**) you can manually mute the output of melto2, to easily change a vinyl record or clean your cartridge needle without having to turn off the phono preamplifier or change your volume setting.
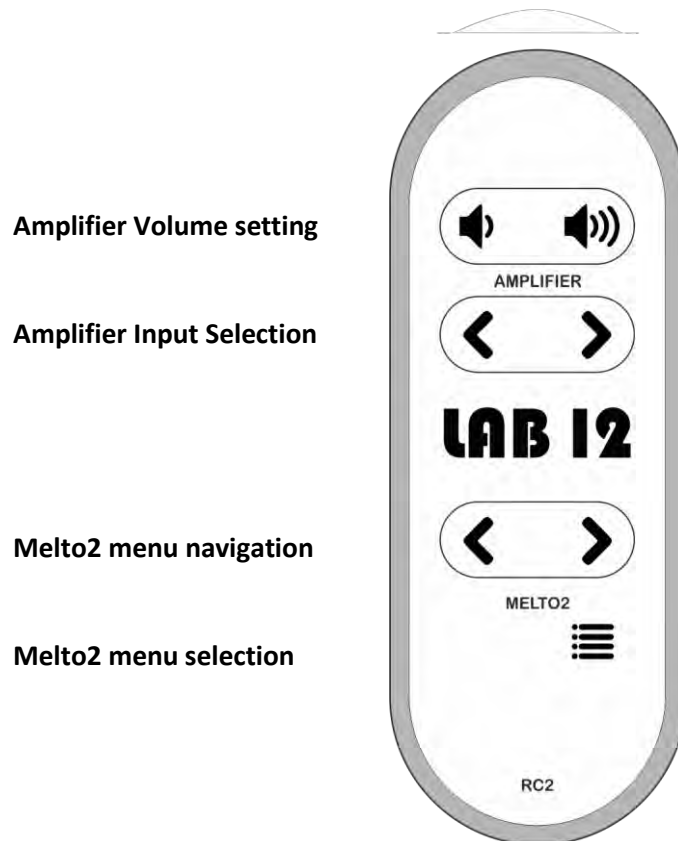
Rear Panel Connections

Melto2 rear panel

On the rear panel you will find three inputs, two outputs, the main power input and the main power switch.
From left to right you will find three (one for each input) grounding points **(A)** to connect the ground cable of your turntable or tonearm. Right after, there are three stereo RCA sockets inputs **(B, C, D).** Just after, you will find two pair of RCA and XLR outputs, for left channel **(E)** and for right channel **(F).**
On the right side of the rear panel, the main power inlet and the power switch **(G)** are located. In same position, Mains safety fuse is located, right bellow mains in socket.

Remote Control

The remote control that comes with the device allows the melto2's usage from a distance, since all menu functions can be set in real-time from the listening position. This is a particularly useful feature, that leads to a quite straightforward cartridge matching procedure. You can change and set all possible combination of settings while you are listening to music, without need to volume down.

Amplifier Volume setting

Amplifier Input Selection

Melto2 menu navigation

Melto2 menu selection

At the top section of the remote control you can find 4 buttons for the main functions of your Lab12 Integrated Amplifier/Preamplifier. You can set the volume level from the top pair of buttons and input selection from the second pair of buttons right below.

At the lower section there are 3 buttons, 2 for navigation and 1 menu selection button of melto2's functions. Use the Left - Right arrow **(<   >)** to navigate through menu structure and menu selection button to select the desirable choice.

Main connections

Melto2 offers three inputs (1, 2 or 3) for connection of an equal number of cartridge/tonearm combinations. Multiple turntables are supported as well as multiple tonearms on the same turntable. Only low capacitance shielded cables are recommended.

Using either the single-ended (RCA) or (XLR) outputs, connect melto2 to a line level input of your integrated amplifier or preamplifier.

Connect the turntable and/or tonearm ground wire to either of the three available ground terminals on the rear panel of melto2.

Connect a high-grade power cable to the IEC input and to your power socket. Make sure that your power socket provides a good ground before connecting the power cable.

Melto2 is calibrated and tested connected with a Lab12 Knack mk2 power cable. We strongly suggest to use this cable.

Notes:

➢ Each one of the three inputs can be individually adjusted for the cartridge type, gain, input load and input capacitance, the type of the de-emphasis applied as well as for stereo or mono mode. Please find further information in ''menu structure'' chapter.

➢ Is absolutely safe to experiment with any settings for your cartridge. There is no way that you can electrically damage your cartridge after a wrong setting. However, we suggest to begin your configuration with values near the cartridge manufacturer recommended.

For the safety of your equipment

⚠ **Make sure that all your equipment is turned off before any connection.**

Menu structure

All available settings are accessible through the device's OLED display. You can switch among 7 different menu screens using the "Navigation" rotary/push knob on the left of the face plate or the remote control. Rotate the knob to navigate through the menu and push it to perform any extra action. See below a brief description of the available menu items.

	Menu item	Brief Description
1	**Input Selection**	It allows you to choose between any of the three melto2's available inputs (1, 2 or 3).
2	**Cartridge Type**	It allows you to choose between MM (Moving Magnet) or MC (Moving Coil) Cartridge Type.
3	**Gain**	For the MC Cartridge Type, it allows you to choose between Low or Hi Gain. For the MM Cartridge Type, the setting is locked to higher value.
4	**Equalizer Curve**	It allows you to choose between RIAA, DECCA or COLUMBIA de-emphasis curves.
5	**Capacitance**	For the MM Cartridge Type, it allows you to choose between Lo, 100pF, 200pF or 300pF input capacitance. For the MC Cartridge Type, the setting is locked to the lower value.
6	**Impedance**	It allows you to choose between a range of 11 different input impedance values for the MM Cartridge Type or the MC Gain Hi or the MC Gain Lo.
7	**Output Mode**	It allows you to choose between Stereo or Mono Output Mode.

Available Settings and actions (1 – 7)

1. Input Selection

You can choose the desirable input between 3 available stereo inputs for the connection of different tonearm/cartridge combinations. Each one of the three inputs can be individually adjusted. Settings are stored even if you power off your device for a long period, on the main processor eeprom. Choose the desirable input turning the rotary knob or push the remote buttons. Input will be engaged 1 second after your selection.

2. Cartridge Type

You can choose between Moving Coil Phono Cartridges (MC) or Moving Magnet Phono Cartridges (MM).

You can choose MM setting for some MC (or other type) high output cartridges as well. The available values for the other settings (input impedance/capacitance) are different regarding the cartridge type setting.

When MC setting is selected, Lundahl Step Up transformers take care of the low level MC signal before the tube and equaliser stages. When MM setting is selected, Lundahl transformers are totally bypassed.

Push the rotary knob while you are in the ''Cartridge type' and choose between two selections turning the rotary knob or push the remote control buttons.
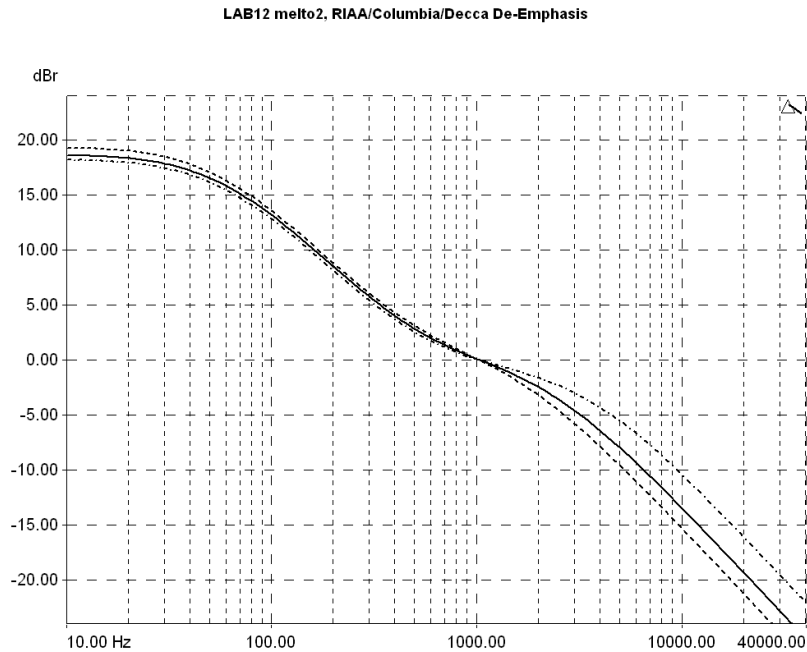
3. Gain

For MC cartridges there are 2 levels of gain available, Hi (64 dB) and Low (58 dB). The available values for the other settings (input impedance/capacitance) are different regarding the Gain setting. As a general rule for cartridges with output up to 0.5mV you can choose Hi Gain and for cartridges from 0.5mV to 3.5mV you can choose Low Gain setting. Experimentation is recommended until you find a setting that suits your cartridge level and personal preference.

For MM cartridges, the Gain is locked in the higher setting (38dB).

4. Equalizer Curve

You can choose between 3 available de-emphasis curves: RIAA, Decca and Columbia to adjust the frequency response of melto2 output.

LAB12 melto2, RIAA/Columbia/Decca De-Emphasis

Each record provides the emphasis curve that has been used while it was being produced, but you can try alternative curves in any record without problem.

<u>In a simple description</u>:

Decca offers higher gain on high frequencies and lower in low frequencies compared with RIAA.

Columbia offers lower gain on high frequencies and higher in low frequencies compared with RIAA.

Input Impedance and Capacitance also affect the balance of the frequency response.

5. Capacitance

For the MM cartridges, you can choose the desirable Input Capacitance. Try values near cartridge manufacturer's recommended value to ''flatten'' the response and avoid resonant peaks in higher frequencies. However, the capacitance values are affected from the cartridge's design philosophy, as well as from the connecting cables, so there is no absolutely correct setting. Therefore, experimentation is recommended until you find a setting that suits your set-up and personal preference.

For the MC Cartridges, the setting is locked to the lower value.

6. Impedance

You can choose the desirable Input Impedance for the MM or MC cartridges. Try values near cartridge manufacturer's recommended value to ''flatten'' the response. However, the impedance values are affected from the cartridge's design philosophy, as well as from the gain setting, so there is no absolutely correct setting, and experimentation is recommended until you find a setting that suits your set-up and personal preference. As a general rule the higher value that you load your cartridge, gives you higher response on high frequencies.

7. Output Mode

On this menu you can change from Stereo to Mono Mode to take full advantage of any monophonic record and/or cartridge. On Mono setting, melto2 outputs are ''common'' and exactly same.

User Notes

The melto2 adjustable phono stage is perfectly designed to minimize hum and let the lowest possible noise with maximum signal headroom. You can use any type of turntable or cartridge with this phono stage. Melto2 allows the user to optimize the phono stage to the many different cartridges available. It is important to always ground your tonearm on the grounding sockets of melto2.

Specifications

- Power: 230VAC 50Hz (115VAC 60Hz)
- Power consumption: 100 VA max
- Gain MM: 38dB
- Gain MC: 64dB
- Input impedance: adjustable (50 ohm – 47Kohm)
- Input capacitance: adjustable (0-300pF)
- Available curve: RIAA, DECCA, Columbia
- Tube complement: 2x E88CC dual triode, 2x 6n2p-EV dual triode
- Inputs: 3x line stereo (RCA connectors)
- Outputs: 2x line stereo (1x RCA connectors, 1x XLR connectors)
- Available Colours: Matt Black, Frozen Silver
- Dimensions (WxHxD): 43x11x29 cm
- Weight: 8 Kg

Warranty

This device has 5 years warranty from the day of purchase for all parts.