

# LAB 12

Owner's Manual

## **melto1**

Tube MC/MM Phono Preamplifier

[www.lab12.gr](http://www.lab12.gr)

v1.2

# LAB 12

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## **IT IS YOURS!**

Thank you for purchasing Lab12 melto1. Before setting up your new melto1, we encourage you to read this manual thoroughly and get familiar with its features.

Melto1 is a truly audiophile phono preamplifier with plenty of setting combinations giving you the opportunity to receive the absolutely best from your turntable/cartridge system. We have managed to precisely handle this very sensitive cartridge signal to offer a truly musical result.

It is based on a non-compromise design that can fully get you into the real analog world. Ready to work with any cartridge out in the market and exploit all the benefits. Full tube MM / EQ stage with an extremely low noise solid state MC step-up stage. 3D well-balanced sound stage with rich, wide frequency response giving you a pure, musical, realistic sound.

Keep in mind that melto1 is totally handcrafted with perfectly matched parts of the finest selections. It is designed to perfectly match with any of the Lab12 amplifiers or preamplifiers. In order to reach the optimal performance your melto1 needs at least 150 hours of listening. In this time all components go from “burn in” period to stable.

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

Melto1 should be removed from its box with care. Remove all the foam protective pieces of the box before you unpack melto1. Unpack melto1 with your hands on both sides of the device.

## Warnings

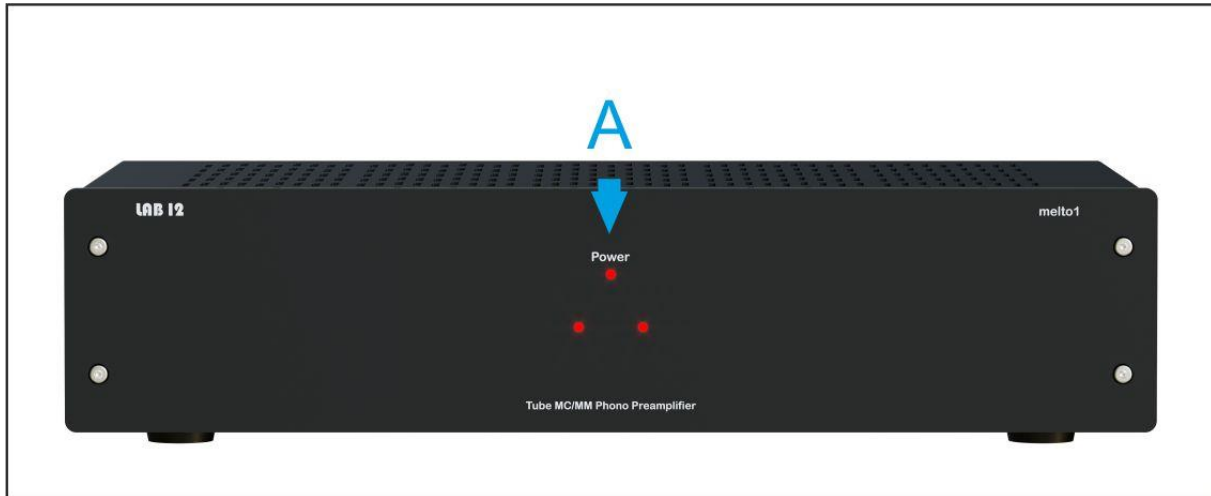
No user serviceable parts are included inside. Do not unscrew the cover; high voltages remain after disconnecting from mains. In case your device requires any kind of service or upgrade, please ship or take your equipment directly to Lab12 or to one of our authorized dealers or other qualified personnel.

Always use same type of fuse for replacement.

## Installation & Placement

Melto1 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 melto1 has an adequate flow of air around it. Melto1 could be warm in some points; this is normal and within parts' specifications. Take care of the front panel's refined 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.

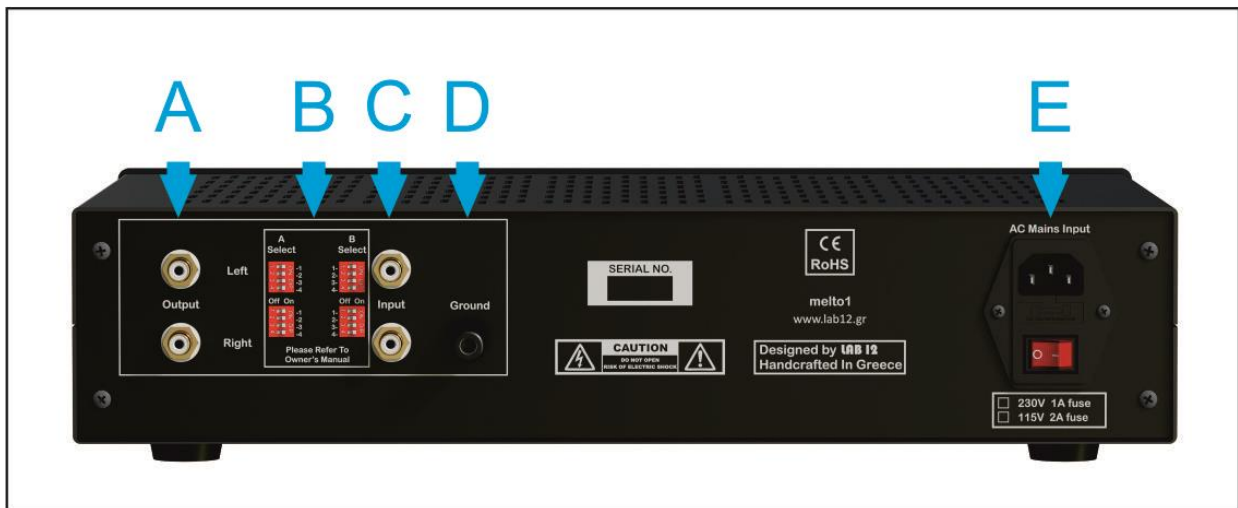
## Front Panel



Melto1 front panel

In the front panel you will find 3 operation indicative LEDs **(A)**.

## Rear Panel Connections



Melto1 rear panel

In the rear panel you will find the output **(A)** and input **(C)** RCA pairs. The Ground point is located right after **(D)**. On the right side of the rear panel, the main power inlet and the power switch **(E)** are located. In same position, Mains safety fuse is located, right below mains in socket. On the left side of the rear panel- on the connections area-, you will also find the input's settings dip switches **(B)**. On pages 7 - 9, you will find detailed information about the available settings and the positioning of the dip switches to correspond to the desirable input setting.

## Main connections

You can connect any MC or MM cartridge in melto1 input. Only low capacitance shielded cables are recommended.

Connect the turntable and/or tonearm ground wire to ground terminal on the rear panel of melto1.

Use the single-ended (RCA) output to connect melto1 to a line level input of your integrated amplifier or preamplifier.

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.

Melto1 is calibrated and tested connected with a Lab12 Knack mk2 power cable. We strongly suggest using this cable.

### Notes:

- 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 beginning your configuration with values near the cartridge manufacturer recommended.

## Available Input settings

### 1. Set up Instructions

All input settings are accessible from the back panel's dip switches. You will find 2 groups (**A Select & B Select**) of 4 switches (1, 2, 3 & 4) for each channel (left and right).

- ❖ (**A select**) group adjusts the input impedance of corresponding channel.
- ❖ (**B select**) group adjusts the Cartridge type (dip 1 & 2) and input capacitance (dip 3 & 4) for corresponding channel.

Bellow you will find two tables that present in detail all the available input combinations/settings for MM cartridge type or MC cartridge type and how you must set the dip switches to correspond to the desirable setting.

### **IMPORTANT NOTE:**

- ❖ **You must always set the exact same values for both channels, left and right.**
- ❖ **Power off your device before making any settings.**

			A		B	
			Select		Select	
MM cartridge.	100 Kohm	Low Cap.	← OFF	1	← OFF	
			← OFF	2	ON →	
			← OFF	3	← OFF	
			← OFF	4	← OFF	
	100pF	← OFF	1	← OFF		
		← OFF	2	ON →		
		← OFF	3	← OFF		
		← OFF	4	ON →		
200pF	← OFF	1	← OFF			
	← OFF	2	ON →			
	← OFF	3	ON →			
	← OFF	4	← OFF			
300pF	← OFF	1	← OFF			
	← OFF	2	ON →			
	← OFF	3	ON →			
	← OFF	4	ON →			
50 Kohm	Low Cap.	← OFF	1	← OFF		
		← OFF	2	ON →		
		← OFF	3	← OFF		
		ON →	4	← OFF		
100pF	← OFF	1	← OFF			
	← OFF	2	ON →			
	← OFF	3	← OFF			
	ON →	4	ON →			
200pF	← OFF	1	← OFF			
	← OFF	2	ON →			
	← OFF	3	ON →			
	ON →	4	← OFF			
300pF	← OFF	1	← OFF			
	← OFF	2	ON →			
	← OFF	3	ON →			
	ON →	4	ON →			



		A Select				B Select				
MC cartridge.	Hi Imp.	← OFF	1	ON →	← OFF	2	← OFF	3	← OFF	4
	390 ohm	← OFF	1	ON →	← OFF	2	← OFF	3	← OFF	4
	130 ohm	← OFF	1	ON →	← OFF	2	← OFF	3	← OFF	4
	100 ohm	← OFF	1	ON →	← OFF	2	← OFF	3	← OFF	4
	47 ohm	ON →	1	← OFF	← OFF	2	← OFF	3	← OFF	4
	42 ohm	ON →	1	← OFF	← OFF	2	← OFF	3	← OFF	4
	34 ohm	ON →	1	ON →	← OFF	2	← OFF	3	← OFF	4
	32 ohm	ON →	1	ON →	← OFF	2	← OFF	3	← OFF	4

## 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.

When MC setting is selected, a low noise solid state stage take care of the low level MC signal before the tube and equaliser stages. When MM setting is selected this stage is totally bypassed.

## 3. 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 always suggested to be at the lower value.

## 4. 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, 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.

## User Notes

Melto1 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. Melto1 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 melto1.

## For the safety of your equipment



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

## Specifications

- Power: 230VAC 50Hz (115VAC 60Hz)
- Power consumption: 80 VA max
- Gain MM: 41dB
- Gain MC: 66 dB
- Input impedance: adjustable (32 ohm – 100Kohm)
- Input capacitance: adjustable (0-300pF)
- De-emphasis curve: RIAA
- Tube complement: 2x 6N1P dual triode, 2x 6n2p-EV dual triode
- Input: line stereo (RCA connectors)
- Output: line stereo (RCA connectors)
- Available Colours: Matt Black
- Dimensions (WxHxD): 43x11x29 cm
- Weight: 6.5 Kg

## Warranty

This device has 5 years warranty for all parts (or 90-Day Limited Warranty for vacuum tubes) from the day of purchase.

We wish you to enjoy your new device exactly as we enjoyed it when we built it for you!

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