

# LAB 12

Owner's Manual

## **melto1**

Tube MC/MM Phono Preamplifier

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

v1.3

# 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

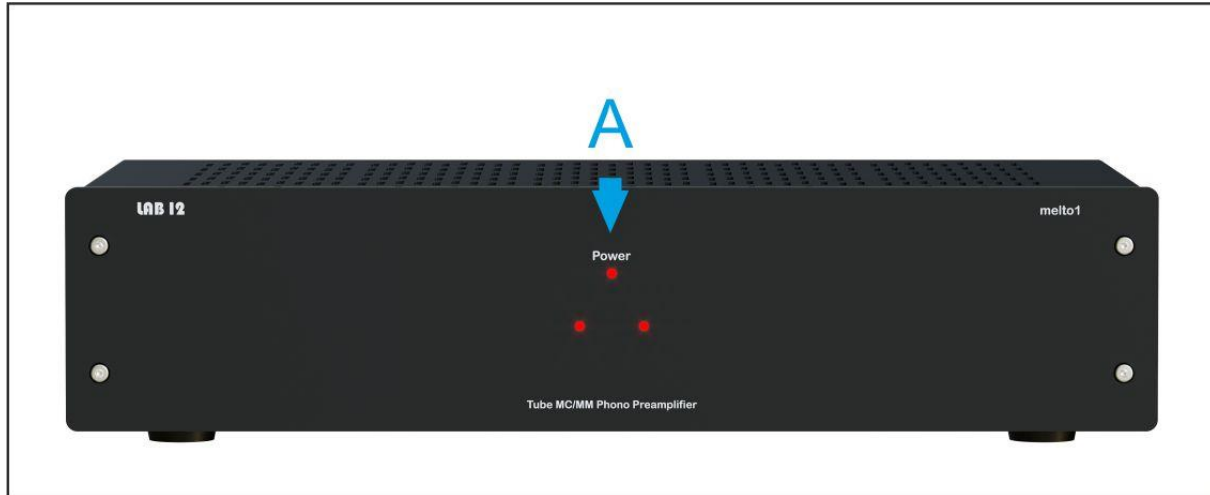
No user serviceable parts are included inside. Do not unscrew the cover; high voltages remain after disconnecting from mains. In case your device requires any kind of service or upgrade, please ship or take your equipment directly to Lab12 or to one of our authorized dealers or other qualified personnel.

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	100pF	← OFF	1	← OFF
			← OFF	2	ON →
			← OFF	3	← OFF
			← OFF	4	ON →
	200pF	200pF	← OFF	1	← OFF
			← OFF	2	ON →
			← OFF	3	ON →
			← OFF	4	← OFF
	300pF	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	100pF	← OFF	1	← OFF	
		← OFF	2	ON →	
		← OFF	3	← OFF	
		ON →	4	ON →	
200pF	200pF	← OFF	1	← OFF	
		← OFF	2	ON →	
		← OFF	3	ON →	
		ON →	4	← OFF	
300pF	300pF	← OFF	1	← OFF	
		← OFF	2	ON →	
		← OFF	3	ON →	
		ON →	4	ON →	



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

## 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 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!**

## Features

- MM/MC cartridge type
- Full Tube Design
- Full adjustable settings: Cartridge type, Impedance, Capacitance
- Toroidal power transformer
- No feedback design
- SRSG® implementation
- Fine symmetry® implementation
- 5mm Aluminum face panel
- Five Years Guarantee

## 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

Lab12 products are designed and manufactured to the highest standards and deliver high- quality performance, ease of use and ease of installation. We are confident that you will enjoy many years of good service from your product.

In the unlikely event of a failure of the product, we will arrange for your product to be serviced, free of charge, provided that the product was used in accordance with the instructions in the owner's manual.

Lab12 could modify the design or specifications of any product without obligation to purchasers of previously manufactured products.

**This Warranty is provided for the benefit of the first and original purchaser of the covered product and is not transferable to a subsequent purchaser.**

**Vacuum tubes are warranted for the original 90-day period only.**

**This warranty does not affect your statutory rights. EU rules 1999/44/EK.**

**This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state.**

\*Το ακόλουθο κείμενο Εγγύησης περιέχει τις Συνθήκες της Πανευρωπαϊκής Εγγύησης και τις οποίες ο κατασκευαστής LAB12 SMPC εγγυάται προς τον τελικό καταναλωτή. Οι όροι της παρούσας εγγύησης είναι πλήρως εναρμονισμένοι με τις διατάξεις της Οδηγίας 1999/44/EK, έτσι όπως αυτή ενσωματώθηκε στην ελληνική έννομη τάξη και δε θίγουν σε καμία περίπτωση τα δικαιώματα που παρέχονται στον καταναλωτή βάσει του εφαρμοστέου δικαίου.

**Lab12 reserves the right to change or modify any of the terms and conditions contained in this Warranty Statement, at any time and in our sole discretion. Any changes or modification will be effective immediately upon posting of the revisions on the Lab12 website, and you waive any right you may have to receive specific notice of such changes or modifications. In the event that there is a difference between this warranty and the provisions in any owner's manuals, warranty leaflets, or packaging cartons, the terms of this warranty, as published on the official Lab12 website, will prevail to the fullest extent allowed by law.**

**For the warranty to be valid:**

1. The Warranty card, which is placed outside the box of the unit, must be filled out by the authorized seller with the Model of the device, Serial Number, Color, Date of Purchase, Customer's Name and Customer's Address, as well as the authorized seller's point sign.
2. A copy of the purchase receipt must also be attached to this card.
3. A photo of the completed Warranty card, along with the purchase receipt, must be sent to [contact@lab12.gr](mailto:contact@lab12.gr) by the end consumer within one month from the date of purchase.

**What is Covered and how long this coverage lasts?**

Only **new** products purchased through an authorized Lab12 dealer, importer or distributor are entitled for warranty coverage. The Warranty is limited to the first original purchaser and is inapplicable for secondhand products. This warranty covers defects in materials and workmanship in this product for 5 years (or a 90-Days Limited Warranty for vacuum tubes) after the date of purchase or no later than 6 years of the date of shipment to the authorized Lab12 dealer or distributor, whichever comes first.

**What is Not Covered**

This limited warranty does not cover any damage, deterioration or malfunction resulting from any alteration, improper or unreasonable use or maintenance, misuse, abuse, accident, neglect, exposure to excess moisture, fire, improper packing, and shipping (such claims must be presented to the carrier), lightning, power surges, or other acts of nature.

This limited warranty does not cover any damage, deterioration or malfunction resulting from the installation or removal of this product from any installation, any unauthorized tampering with this product, any **Tubes Swaps, Repairs or Modifications** attempted by anyone unauthorized by Lab12, or any other cause which does not relate directly to a defect in materials and/or workmanship of this product. This limited warranty does not cover vacuum tubes (after the 90-Day Limited Warranty), cartons, scratches on equipment enclosures, cables or accessories used in conjunction with this product.

**What we will do to correct problem**

During the Warranty Period, we will repair or replace, at no charge, products or parts of a product that proves defective due to defects in materials or workmanship, under normal use and maintenance.

**How To Obtain Service Under This Warranty:**

You are responsible for transporting your product to (as well as from, in the event that Lab12 finds no defect covered by this warranty) either Lab12 or an authorized point and for payment of all shipping charges. Lab12 will pay the return shipping charges (in the event you return the product to Lab12) if the repairs are covered by warranty, provided that, Lab12 reserves the right to choose the mode, the carrier and the timing of such return shipping (if Lab12 finds that there are no defects covered by this warranty, then you shall be responsible for all shipping charges).

Lab12 has authorized distribution in many countries of the world. In each country, the authorized importing retailer or distributor has accepted the responsibility for warranty of products sold by that retailer or distributor. Warranty service should normally be obtained from the importing retailer or distributor from whom you purchased your product. In the unlikely event that the technical service required is not possible to be fulfilled through the importer/distributor, this product must be returned to Lab12 main factory in Greece to fulfill the terms of this Limited Warranty at the purchaser's expense (except purchasers that purchase their product directly from our main facilities in Greece), along with the Warranty card and a copy of the proof of purchase for the product. As mentioned above, the Warranty card must list the date of purchase, the model, color and serial number of the product, the name and address of the purchaser and the authorized dealer/importer/retailer detailed sign. Additionally, you must provide detailed information on the symptoms or difficulties you have observed with the product's performance by completing a technical support form that will be provided to you by the authorized importing retailer, distributor or LAB12.

To obtain warranty service, you can also contact directly Lab12 at [contact@lab12.gr](mailto:contact@lab12.gr) or +30-2102845173, to determine the most appropriate solution for you. All warranty claims must be made in writing accompanied by the Warranty card and a copy of the proof of purchase.

Lab12 Single Member Private Company

[Contact@lab12.gr](mailto:Contact@lab12.gr)

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

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

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