

# LAB 12

## Owner's Manual

### **mighty**

*Class A Single Ended Power Amplifier*

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

manual v1.4

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### IT IS YOURS!

Thank you for selecting **Lab12 mighty**, a really audiophile Class A power amplifier. Every component on it is designed to provide smooth and untreated sound. Mighty is a full tube amplifier with 6n1p NOS Russian driver tubes and EL34 Russian on power stage. Mighty can cooperate gratefully with any preamplifier on the market and it is the perfect match for Lab12 true or hpa. Mighty has the ability to nail you down on your couch and make you listen all your music collection again. All the power you need for a normal range pair of speakers is here, but the most remarkable point is that you will receive a fluid, wide and addictive consonant sound with any choice of music style. All components are carefully chosen after hours of listening and testing, while paying great attention to every detail affecting the outcome. As every Lab12 device, mighty has an ultra-solid construction with glass blasting anodized finishing and retro analogue V/U meters.

Do not forget that your mighty is totally handcrafted with perfectly matched parts of the finest selections. In order to reach the optimal performance, your mighty needs at least 150 hours of listening. In this time all components go from “burn in” period to stable.

Before setting up your new mighty, we encourage you to thoroughly read this manual to properly acquaint yourself with its features. We love music and audio devices; we have built your new device with emotion and personal treatment.

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

Mighty should be removed from its box with care. Remove all the foam protective pieces of the box before you unpack mighty. Unpack mighty 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.

Always use same type of fuse for replacement.

### Features

- EL34, 6550, KT88 compatible (EL34 from factory)
- Triode / Ultra Linear selector switch
- No feedback design
- SRSG® implementation
- Fine symmetry® implementation
- Analog retro Nissei VU meters
- 5mm Aluminum face panel
- Five Years Guarantee

### Installation & Placement

Mighty should be placed on a solid flat surface. You should avoid placing it near a heat source as this could compromise the mighty performance and reliability.

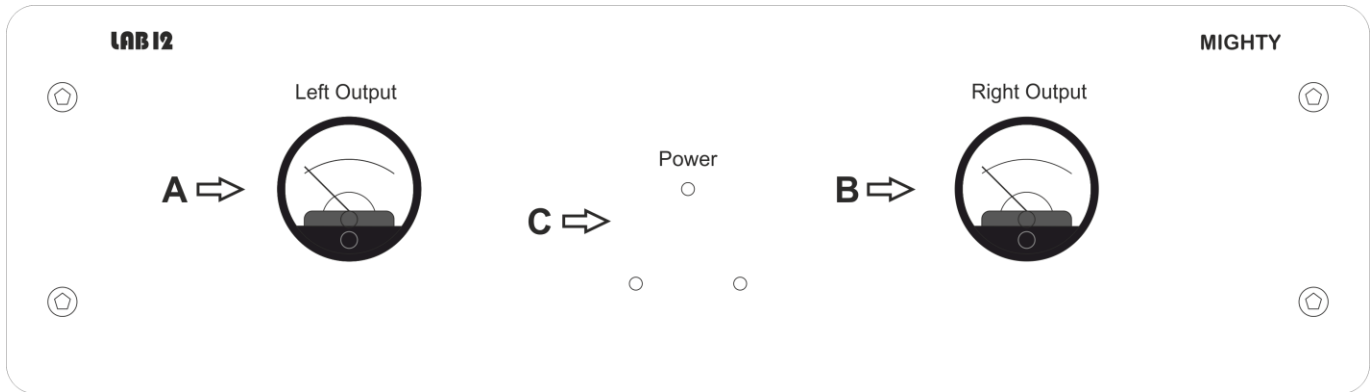
Insert the tubes carefully in each position. All tubes are marked with position number was placed during calibration and burn in of mighty.

Due to high power tubes' design, mighty chassis could be hot so you should never place another hot component directly near this device. **Make sure the device has enough space to ventilate.**

**Tubes will be hot, this is normal. Be careful not to touch the tubes during the operation to avoid any injuries.**

Take care of the finest glass blasting anodized finish of front panel with a soft cloth. No need to use any sprays or polishes. Never use cleaners containing abrasives, as this will damage the surface.

## Front Panel



**MIGHTY Front panel**

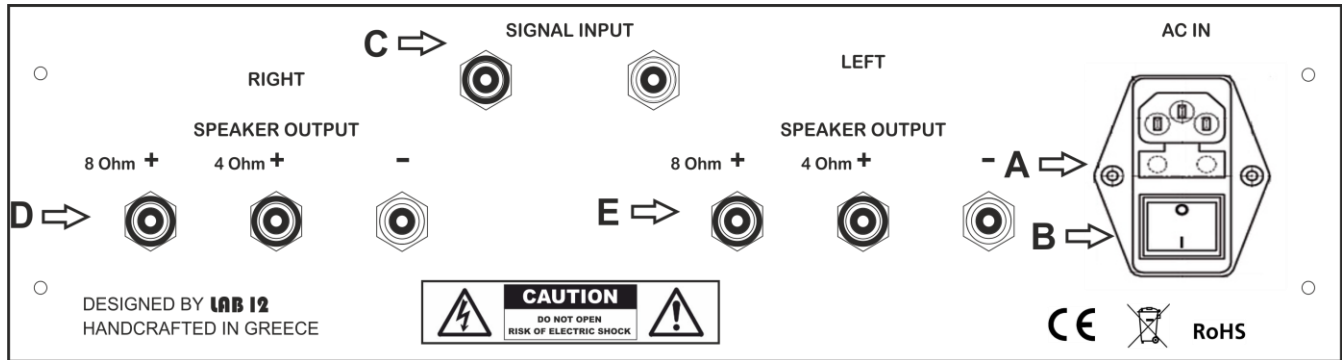
In the front panel you will see three indication LEDs and two VU meters.

The three LEDs (**C**) indicate that the device is powered on.

To the left of the 3 LEDs, you see a retro analog VU meter (**A**). You can accurately monitor the output level of left channel on dB scale.

To the right of the 3 LEDs, you see a retro analog VU meter (**B**). You can accurately monitor the output level of right channel on dB scale.

## Rear Panel



**MIGHTY Rear panel**

In the rear panel you will find the connection inputs and outputs.

To the right side you will find an **IEC AC input**. Below IEC input, the main fuse holder **(A)** and the **Power switch (B)** are located.

A pair of RCA connectors **(C)** is located about in the middle of the back panel. It is the input of signal from your preamplifier.

Below signal input you can find the speaker outputs **(D & E)**. You have the choice of 4 or 8 ohm output for perfect matching with your speaker impedance.

### Main connections

Connect a High-Grade Power cable to the IEC input and to your wall socket. Make sure that your wall socket provides a good ground before connecting the power cable. You must supply 230 to 240 Volt AC/50Hz (115 to 120 AC Volts / 60Hz). (Every **mighty** is tuned and calibrated using the **Lab12 Knack mk2 Power Cable**. We strongly suggest using this cable).

### Connect to your Preamplifier

Connect the preamplifier analog output to the analog line level input of your mighty Power Amplifier. Make sure about the correct channel connections. We suggest using a good quality interconnect cable pair.

### Connect your Speakers

Connect your speakers to the additional output of mighty (connect speakers from 2 to 6 ohm at **4ohm** positive bind, speakers from 6 to 16 ohm at **8ohm** bind). Make sure about the phase and polarity of speakers, always connect "plus" (red) bind of Mighty to "plus" (red) bind of speaker and same with black.

### Notes:

You can choose the operation of mighty between **Triode or Ultra Linear pentode mode**, to tune the sound closest to your taste.

This can be done thru two toggle switches on the back of power tubes. Position both switches towards to transformers for triode mode or towards to tubes for Ultra Linear pentode mode. You can change the operation even when amplifier is turned on with just lowering the volume.

Mighty is fully compatible with the best octal tubes (EL34, 6550, KT88). You can use any of these three types of tubes with no problem.

## **For the safety of your equipment**

- ! Make sure that all your equipment is turned off before any connection.**
- ! To avoid damaging your speakers you have to turn on mighty some seconds after turning on your preamplifier and turn it off some seconds before turning off your preamplifier.**
- ! Never turn on mighty without connected speakers or preamplifier on it. It is possible to damage tubes or even output transformers.**

## **Specifications**

- Power: 230VAC 50Hz (115VAC 60Hz)
- Power consumption: 150 VA max
- Output power: 10 Watt per channel
- Frequency response: 20 Hz-25 KHz (-0.9dB)
- Input impedance: 100K ohm
- Recommended speakers: 4-8 ohm
- Tube complement: 2x 6n1p dual triodes, 2x EL34 Power Pentodes
- Input sensitivity: 600mV triode mode / 400mV Ultra Linear mode
- Inputs: 1x line stereo (RCA connectors)
- Available Colours: Matt Black
- Dimensions (WxHxD): 32x17x29 cm
- Weight: 9Kg

## **Warranty**

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