

# LAB 12

Handcrafted High-End Audio

## Owner's Manual

### HPA

*Handcrafted Tube Headphone Amplifier/Preamplifier  
with Usb Dac*

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

Owner's manual v1.5

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### **IT IS YOURS!**

Thank you for selecting the LAB12 HPA, a really audiophile Headphone amplifier with preamplifier output and a USB DAC. Every component on it is designed to provide smooth and untreated sound. It is a full tube amplifier with 6n1p Russian tubes. HPA offers two analog inputs and one direct USB input, so you can potentially connect almost any device. Just connect your laptop and your headphones and enjoy your music collection without compromising the audiophile sound you always loved. You can also use it as an audiophile preamplifier, to connect your power amp of your system. All components are carefully chosen after hours of listening and testing, while paying great attention to every detail affecting the final outcome. As every lab12 device, HPA has an ultra solid construction with handcrafted finishing, luxury automotive metal paint and retro analogue V/U meter.

Do not forget that your HPA is totally handcrafted with perfectly matched parts of the finest selections. You have to know that to reach the optimal performance your HPA need at least 200 hours of listening. In this time all components go from “burn in” period to stable.

Before setting up your new HPA, we encourage you to read this manual thoroughly to properly acquaint yourself with its features. We love music and audio devices, we build 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>

### Features

- OTL tube headphone amplifier
- 3x 6N1P tubes (matched output pair)
- Blue Velvet ALPS Potentiometer
- Handcrafted audio grade transformers
- Special Audio Grade parts in every stage
- Five separate regulated Power Supplies
- SRSG<sup>®</sup> implementation
- Gold plated Teflon rca connectors
- Gold plated tube sockets
- Analog retro nissei VU meter
- 5mm Aluminum face panel with luxury painting
- 2 analog, RCA line inputs
- 1 analog RCA line Preamp output
- 1 USB input
- Coaxial output (from USB input)
- 5mm Aluminum face panel with luxury painting
- Five Years Guarantee

### Installation & Placement

The **LAB12 HPA** should be placed on a solid flat surface.

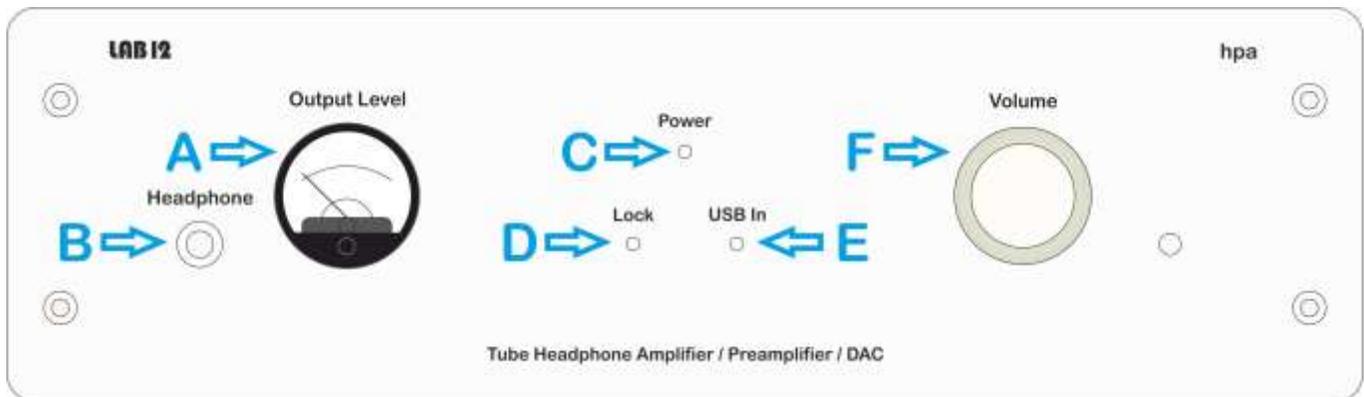
You should avoid placing it near a heat source as this could compromise the HPA performance and reliability. Due to tubes design, HPA chassis could be hot so you should never place another component directly on top of this device. **Make sure the device has enough space to ventilate.**

Take care of the finest luxury finish of front panel with a soft cloth.

## LAB12 HPA Handcrafted Tube Headphone Amplifier/Preamplifier with Usb Dac

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### Front Panel



HPA Front panel

At the front panel you will see three indication LEDs a VU meter, Volume control and the headphone output.

The center LED (C) indicates that the device is powered on.

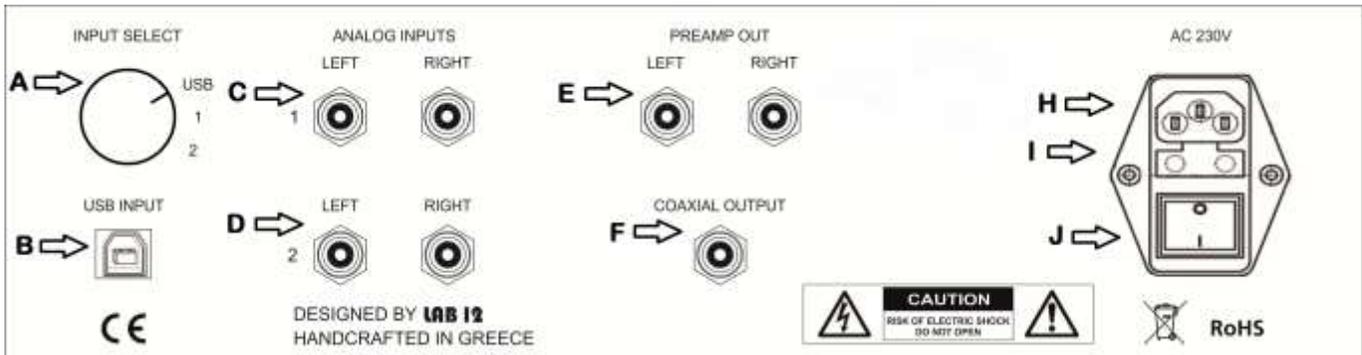
The LED (E) and (D) indicates that the USB input is connected and active.

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

To the right of 3 LEDs you see the Volume control (F). You can adjust the Volume to the Headphone and Preamplifier output.

Finally to the left end you see a 6,3mm jack output (B) to connect your headphones.

## Rear Panel



HPA Rear panel

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

On the left side is the selector knob (A). You can select thru a USB and two analog inputs.

Bellow the selector knob you can see the USB (type B) input (B). USB can receive audio signals up to 48Khz/16bit.

On the right of selector and USB input you will find the two analog RCA inputs named 1 and 2 (C and D).

In the middle of rear panel you will also find the preamplifier out with a pair of single-ended RCA analog audio output connectors (E).

Bellow the preamplifier output it is a coaxial output (F). You can receive the USB digital signal to connect to another DAC.

To the right side you will find an **IEC AC input (H)**. Bellow IEC input is located the main fuse holder (I) and the **Power switch (J)**.

### 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 Volts AC (50Hz). (Every **HPA** is tuned and calibrated using the **LAB12 Knack Power Cable**)

### Connect your headphones

We suggest to connect your Headphones 20 seconds after you turn on the HPA. Connect a pair of headphones with impedance of 32 ohm to 600 ohm to 6,3mm output socket (**B**). Do not forget to lower the Volume before connecting your headphones.

### Connect to your Power Amplifier

Connect the preamplifier analog output (**E**) to an analog line level input to your Power Amplifier. Make sure about the correct channel connections. We suggest to use a good quality interconnect cable pair. Note that preamplifier output is deactivated when headphones are connected to device.

### Connect an analog output Source

Make sure that your Source has an analog line level output. Connect an analog interconnect cable from the source output to one of analog inputs of **HPA**. Select input number with the selector switch in the left side of rear panel of your **HPA**. We suggest to use a good quality interconnect cable pair.

### Connect a PC

Connect your PC with a USB (type A to Type B) cable (**Always use a high quality audio grade USB cable to achieve ideal performance**). You only have to select the USB dac output to your playback devices of your pc (maximum 48 KHz/16bit). Select the USB input with the selector switch on your **HPA**. If everything is ok led (**E**) and (**D**) will turn on.

### Note

The coaxial spdif output and the USB led (**E**) and (**D**) are active even the HPA is turned off so you can use it only for USB to Coaxial spdif converter

### For the safety of your equipment

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

**! To avoid damaging your speakers you have to turn on the HPA some seconds before turning on your power amplifier and turn it off some seconds after turning off your power amplifier.**

## **Specifications**

- Power: 230/240 Vac 50Hz (1A fused)
- Power consumption: 70 VA
- Input impedance: 50K ohm
- Output impedance: 32-600 ohm
- Frequency response: 5 Hz to 100K Hz (-3dB)
- Available colors: Etna Black, Pearl White, Custom color
- Dimension (WxHxD): 32x11x29 cm
- Weight: 6 Kg

## **Warranty**

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