

LAB 12

Owner's Manual

hpa

OTL Tube Headphone Amplifier/Preamplifier
with USB DAC

www.lab12.gr

v1.10

LAB 12

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IT IS YOURS!

Thank you for selecting Lab12 hpa, a real 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 3x 6n1p NOS dual triode vacuum 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 analogue 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 outcome. As every Lab12 device, hpa has an ultra solid construction with glass blasting anodized finishing and retro analogue V/U meter.

Do not forget that your hpa is totally handcrafted with perfectly matched parts of the finest selections. In order to reach the optimal performance your hpa needs at least 150 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 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

Hpa should be removed from its box with care. Remove all the foam protective pieces of the box before you unpack hpa. Unpack the device 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 the same type of fuse for replacement.

Features

- OTL tube headphone amplifier stage
- Blue Velvet ALPS Potentiometer
- Five separate regulated Power Supplies
- SRSG® implementation
- Analog retro nissei VU meter
- 5mm Aluminum face panel
- Five Years Guarantee

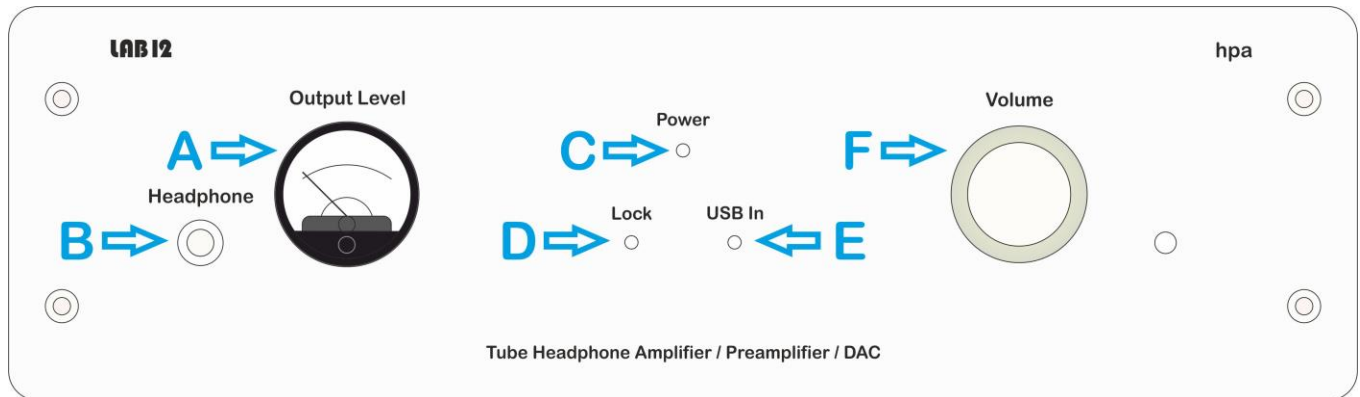
Installation & Placement

Lab12 Hpa 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 **hpa** has an adequate flow of air around it. **Hpa** 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



HPA Front panel

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

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

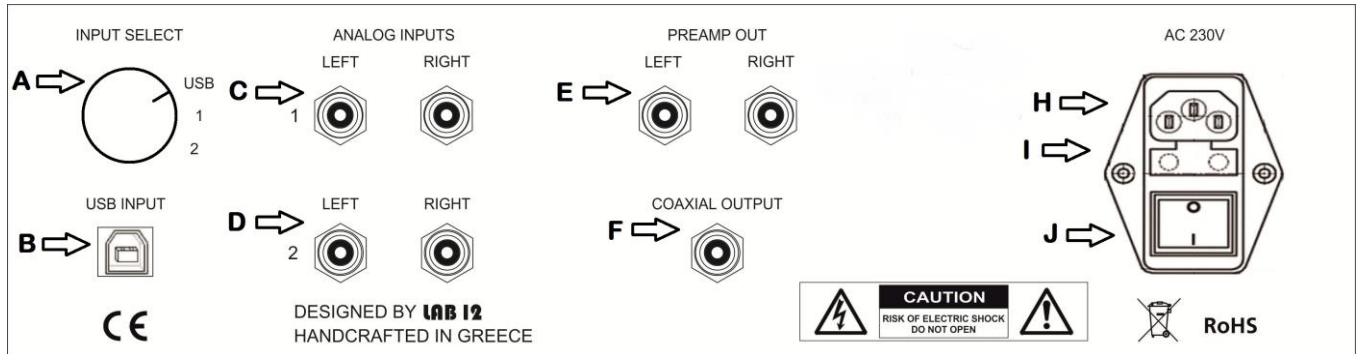
The LEDs **(E)** and **(D)** indicate that the USB input is connected and active.

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

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

Finally, to the left end you will see a 6.3 mm jack output **(B)** to connect your headphones.

Rear Panel



HPA Rear panel

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

On the left side you will find the Input selector knob **(A)**. You can select between a USB and two analog inputs (1, 2).

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

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

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

Below the preamplifier output you will find a coaxial output **(F)**. You can receive the USB input digital signal as SPDIF digital signal to connect another DAC.

On the right side of the rear panel, you will find an **IEC AC input (H)**. Below IEC input the main fuse holder **(I)** and the Power switch **(J)** are located.

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 **hpa** is tuned and calibrated using the **Lab12 Knack mk2 Power Cable**. We strongly suggest using this cable).

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 using a good quality interconnect cable pair. Note that preamplifier output is deactivated when headphones are connected to the 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 using 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 LEDs (**E**) and (**D**) will turn on.

Connect your headphones

We suggest connecting your Headphones 20 seconds after you turn on hpa. Connect a pair of headphones with impedance of 32 ohm to 600 ohm to the 6.3 mm output socket (**B**). Do not forget to lower the Volume before connecting your headphones.

Note

The coaxial spdif output and the USB LEDs (**E**) and (**D**) are active even if 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 your equipment is turned off before any connection.**
- ! To avoid damaging your speakers you must turn on hpa some seconds before turning on your power amplifier and turn it off some seconds after turning off your power amplifier.**

Specifications

- Power: 230VAC 50Hz (115VAC 60Hz)
- Power consumption: 60 VA max
- Frequency response: 5 Hz to 100K Hz (-3dB)
- Input impedance: 50K ohm
- Recommended headphones impedance: 64-600 ohm
- Tube complement: 3x 6n1p dual triode
- Inputs: 2x line stereo (RCA connectors), 1x USB
- Preamp output: 1x line stereo
- Headphone output: 1x 6.3mm jack
- Available Colours: Matt Black, Frozen Silver
- Dimension (WxHxD): 32x11x29 cm
- Weight: 6 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 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 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

www.lab12.gr

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

Notes:

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