LAB 12

Handcrafted High-End Audio

Owner's Manual

SUONO

25W Class A Single Ended Power Amplifier

www.lab12.gr

manual v1.4

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IT IS YOURS!

Thank you for selecting the LAB12 SUONO, an audiophile Class A power amplifier. Every component on it is designed to provide smooth and untreated sound. It is a full tube amplifier with 6n2p NOS Russian driver tubes and KT150 on power stage. Suono can cooperate gratefully with any preamplifier on the market and it is the perfect match for our Pre1. Suono has the ability to nail you down on your couch and make you listen all your music collection again. Full power for your 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 final outcome. As every Lab12 device, Suono has an ultra-solid construction with handcrafted finishing, luxury automotive metal paint and retro analogue V/U meters.

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

Before setting up your new Suono, 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

Features

- KT150 matched tubes
- Manual Bias Adjustment
- Triode / ultra linear selector switch
- Handcrafted custom audio grade transformers
- No feedback design
- High power transformer
- Special audio grade matched parts in every stage
- SRSG® implementation
- Fine symmetry® implementation
- Gold plated teflon rca connectors
- Gold plated tube sockets
- Analog retro nissei VU meters
- 5mm aluminum face panel with luxury painting
- Five years guarantee

Installation & Placement

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

You should avoid placing it near a heat source as this could compromise the Suono's performance and reliability.

Carefully put the tubes in dedicated sockets. Make sure that tubes are perfectly snapped into sockets. See bellow page.

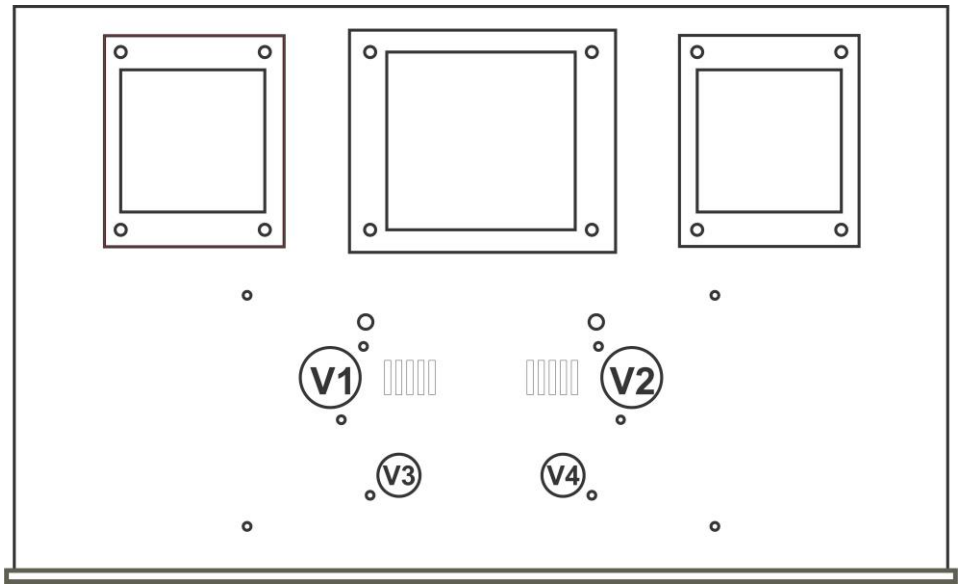
Due to high power tubes' design, Suono chassis could be hot so you should never place another hot component directly near this device**. Make sure the device has enough space to ventilate.**

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 luxury finish of front panel with a soft cloth.

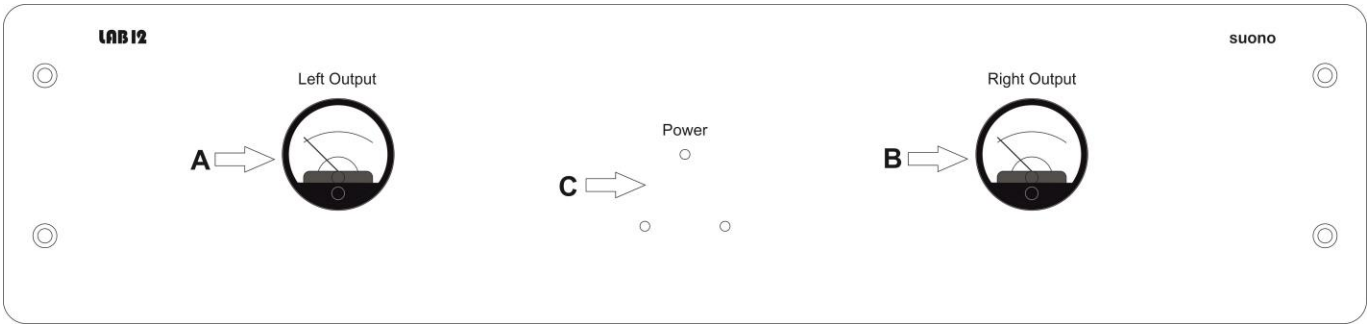
Suono Tubes Positions

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



All in box tubes are perfectly matched during calibration to achieve a perfect balanced operation.

Front Panel



SUONO Front panel

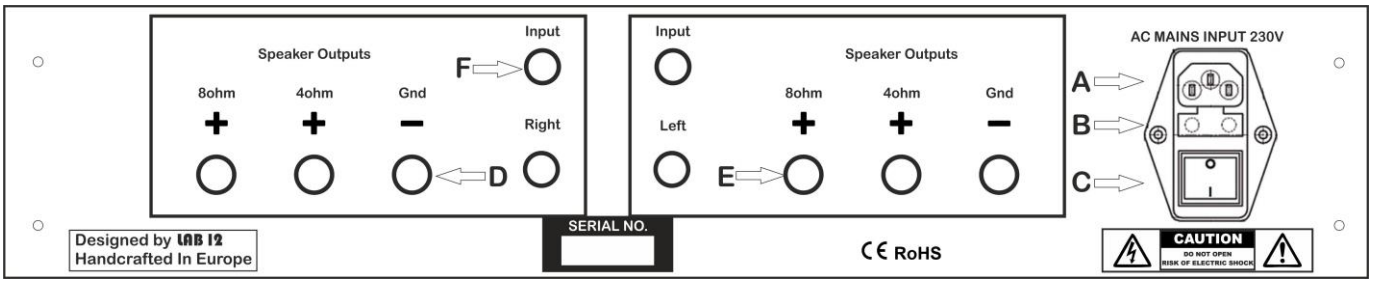
At front panel you will see three indication LEDs and two VU meters.

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

To the left of 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 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



SUONO Rear panel

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

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

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

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

Connect to your Preamplifier

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

Connect your Speakers

Connect your speakers to the additional output of Suono (connect speakers from 2 to 4 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 Suono to ‘’plus’’ (red) bind of speaker and same with black.

Notes:

You can choose the operation of Suono 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.
Always do this selection with your amplifier turned off.

Suono is fully compatible with the best octal tubes (6550, KT88, KT120). You can use any of these three types of tubes with no problem. **Please always set correct bias after any tube change, always use matched pairs of tubes (contact lab12).**

Bias Setting

Bias board is located inside of the amplifier. You have to unscrew the amplifier to reach this board. You will also need a DC voltage meter to make adjustments. Please contact with a qualified person or your local dealer if you are not sure about this procedure.
After changing tubes always turn the two bias trimmers’ clockwise (cold bias) with a 3mm screwdriver, before turning on the amplifier. Wrong bias will destroy your tubes and possibly your amplifier. Always adjust tubes current immediately after turning on. Repeat bias procedure at least 3 times the first 5 hours of using.

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 SUONO some seconds after turning on your preamplifier and turn it off some seconds before turning off your preamplifier.

! Never turn on SUONO without connected speakers or preamplifier on it. It is possible to damage tubes or even output transformers.

Specifications

- Power: 230/240V AC 50Hz
- Power consumption: 400 VA max
- Output power: 25 watt per channel (KT 150)
- Frequency response: 20Hz-20KHz (-0.8dB)
- Input impedance: 100K ohms
- Output impedance: 4, 8 ohm
- Tube complement: 2x 6n2p dual triode, 2x KT-150 Power Pentode
- Inputs: 1x line stereo (RCA connectors)
- Available colors: Matt Black, Pearl White, Custom color
- Dimensions (WxHxD): 43x19x29 cm
- Weight: 18Kg

Warranty

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