

THE BOX II



Owner's manual

Index

This manual has the following sections:

- Safety warnings
- Welcome
- Rear panel description
- Installation and connections
- Setting gain
- Operation
- Troubleshooting

Safety warnings

NEVER OPEN THE EQUIPMENT: There is a risk of electric shock inside. Only qualified personnel should open the device. There are not user serviceable parts inside.

DO NOT EXPOSE THE EQUIPMENT TO MOISTURE OR WATER: Exposing the equipment to moisture or water can lead to a risk of electric shock or fire. If, due to any circumstance, the device gets wet in such way that water could reach the interior, take it to a technician before connecting it again in order to verify it didn't suffered damage which can lead to danger.

DO NOT USE THE EQUIPMENT NEAR WATER: This equipment must not be used near water, bathtubs, wash tubs, swimming pools or any other you can imagine. If the equipment gets wet or water it should lead to a risk of electric shock and/or fire, and get permanently damaged.

DO NOT PLACE THE EQUIPMENT NEAR HEAT SOURCES: Keep a reasonable distance between the equipment and heat sources for it not getting direct heat from heaters, candles, fireplaces, air conditioners or any other appliances which can send out heat, as computers or power amplifiers.

Do not place the equipment blocking ventilation outlets from other equipment.

CLEANING: Disconnect the appliance from mains before cleaning it. Use a clean and dry cloth. Do not use aggressive cleaning chemicals, as glass cleaners, because it could damage painting.

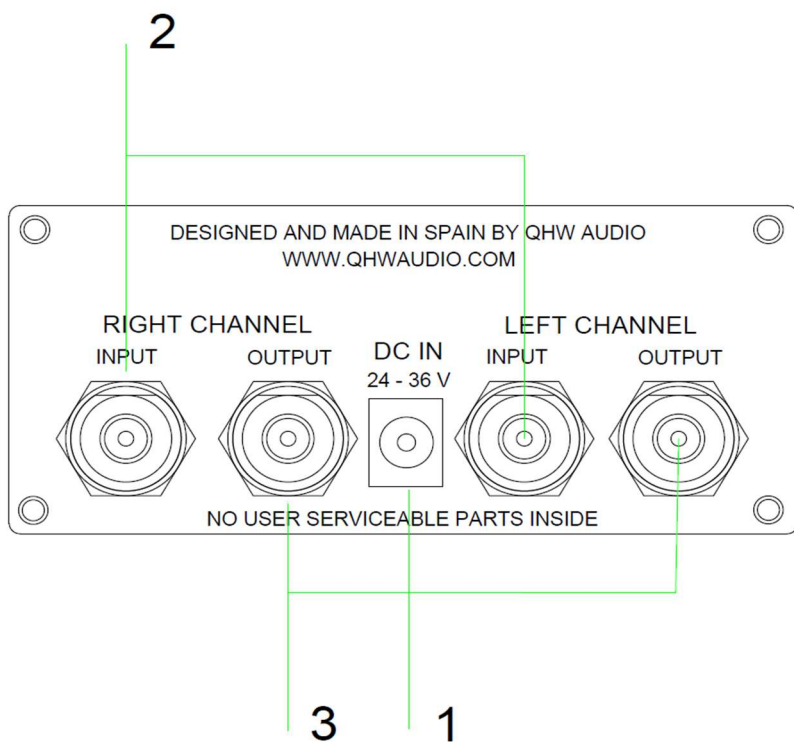


This apparatus meets the requirements found in European Council directives 2006/95/EC, 2004/108/EC, 2009/125/EC y 2002/95/EC.

Thank you

Thank you very much for purchasing a QHW Audio product designed by sound lovers for sound lovers and congratulations for your intelligent decision. This is an electronic instrument designed for accomplish its task with great precision and fidelity for many years. This manual will help you in your new equipment installation and will give you information about its working. Please, read it before using it.

Rear panel description



1. DC power input.
2. Audio RCA inputs.
3. Audio RCA outputs.

Installation and connections

For installing The Box II in your audio equipment you will need two stereo audio wires (or four, if you want to use wires which doesn't come by pairs) with RCA connectors.

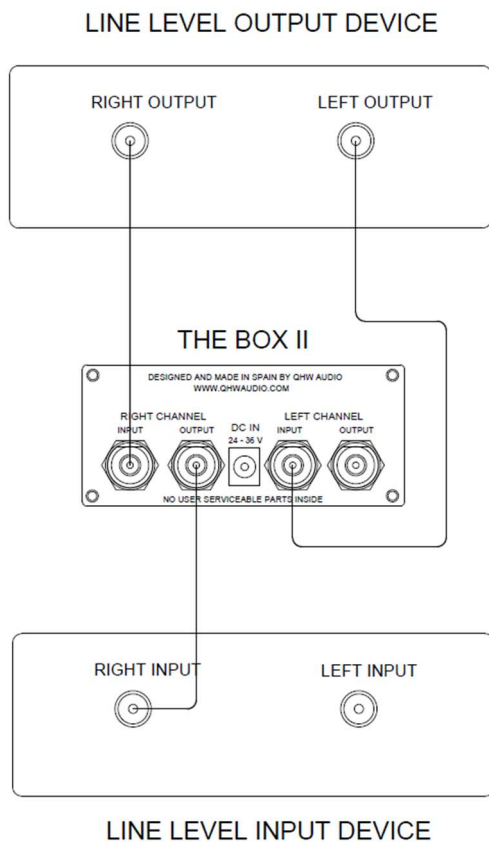
Before making any connection, make sure that The Box II is unplugged from mains and any other equipment taking part in connection is powered off.

Connect outputs from equipment sourcing signal to The Box II input to the input terminals [number 2 in description drawing] in the device rear panel and paying attention to channels LEFT and RIGHT order.

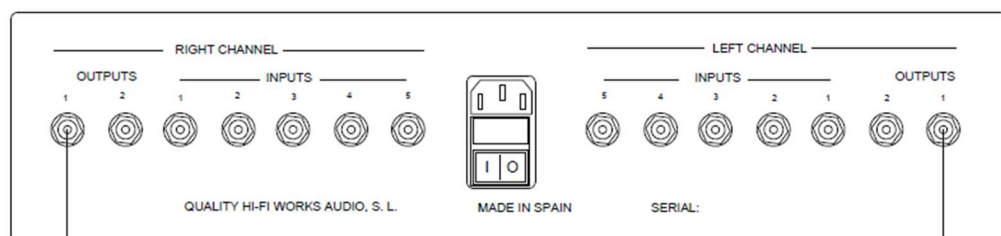
Connect outputs from The Box II [number 3 in description drawing] in device rear panel, to the inputs of the equipment which The Box is sending

its signal to, paying attention to channels LEFT and RIGHT order.

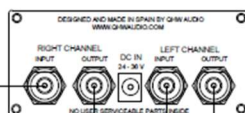
Following drawings show a generic connection schema and some examples for setting up The Box II in your system:



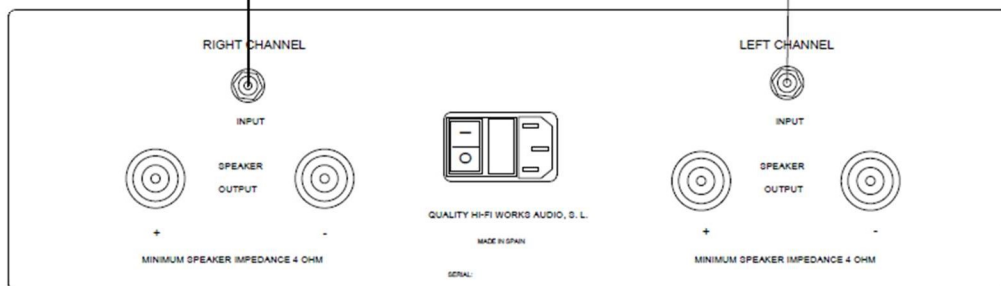
PREAMPLIFIER



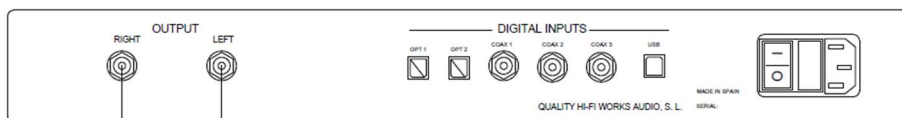
THE BOX II



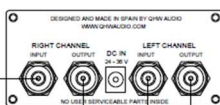
POWER AMPLIFIER



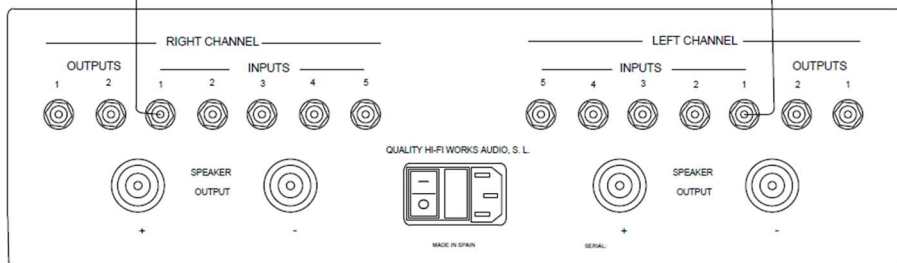
SOURCE



THE BOX II



AMPLIFIER



The Box II comes with an external DC power supply with can handle an input from 100 V to 240 V AC from 50 to 60 HZ and gives an output of 36 V of DC with a maximum of 1 A of current. QHW Audio only warranties its specifications when you are using the supplied power supply. The DC input is connected internally in the way that positive goes to center pin and negative to sleeve.

Once all audio wires are connected, connect the DC power supply, putting firmly the connector in the rear panel DC input connector of The Box II [number 1 in description drawing].

*Make sure that mains cable of
DC power supply is disconnected
from mains outlet before
connecting DC power supply to
The Box II.*

Now connect the mains cable to the mains outlet using an outlet that provides a safety earth connection.

The power supply supplied by QHW Audio uses safety earth and must be connected to an outlet which provides it.

If cable included with The Box II does not fit your region plug, you will need one complying with IEC60320 C14 in The Box II external power supply end.

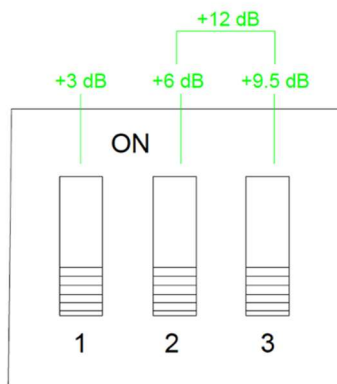
Setting gain

The Box II features a configurable by user gain. This gain can be set to 0.8, 3, 6, 9.5 or 12 dB to suit your needs and tastes. Configuration is done by setting the microswitches accessible from the bottom of unit. Each switch has two positions, OFF and ON. To change each switch you can gently use a little screwdriver or your finger tip. Pay attention that configuration is the same in both channels.

Gain goes as described in table:

SW1	SW2	SW3	GAIN
OFF	OFF	OFF	0.8 dB
ON	OFF	OFF	3 dB
OFF	ON	OFF	6 dB
OFF	OFF	ON	9.5 dB
OFF	ON	ON	12 dB

Rest of positions are not officially supported, nevertheless The Box II will sound and work without any problem with values of gain between or above the listed ones.



You can set gain with The Box II powered on or off. If volume is too high or The Box II is connected to a very sensitive power amplifier, small noises can be heard when switching gain at no signal and if there is a signal present while doing it, take in consideration increasing gain will result in louder sound at your speakers. Therefore, be careful with results.

Operation

During operation, LED light in frontal panel will be on. This light is not direct and comes from interior of enclosure, so depending on angle you are viewing it from you will see it brighter or dimmer. This has been made this way to avoid LED to disturb you when in darkness in your Home Theatre watching a movie, in example.

When The Box II powers up you can hear a small noise, especially if it is connected to a very sensitive power amplifier. This is normal behavior, The Box II does not have muting relays or

transistors at its outputs because a precise DC servo keeps starting up “thumps” under control.

It is not needed you power off The Box, its consumption is low, lower than 9 watts and is protected against overcurrent and overvoltage from mains. Keeping it always on or to power it on and off each time you use your system is your own decision.

As any electronic appliance, it is recommended to unplug it if you are going to spend a long time out from your home, like, for example, for holidays or if there is an electrical storm.

Troubleshooting

Frontal LED does not light.

- Check DC power cable is firmly set.
- Check mains cable of external DC power supply is firmly set into supply.
- Check, plugging another device, that the mains outlet has current.

Sound is distorted, especially when the level rises.

- Check all audio cables are firmly put in their terminals.
- Try another cable, it may be some damage not visible in an apparently right cable, create distortion and strange noises.
- Lower the input level (source level) to The Box II because it, due to gain, it was doing and excess of signal level (clipping) in the device connected to its output.
- Try to connect your system without The Box II for discarding trouble source is in another equipment.

A loud or annoying hum is heard.

- Check all audio cables are firmly put in their terminals.
- Try another cable, it may be some damage not visible in an apparently right cable, create distortion and strange noises.
- If possible, try to use another mains outlet to see if noise disappears.
- Unplug and disconnect from audio chain all equipment except those essential to see if noise source is a device not working in that moment.
- Try to connect your system without The Box II for discarding trouble source is in another equipment.

Never disconnect earth connection from supplied power supply as solution for hum. That can be a safety risk for persons.

Technical specifications

Input impedance: 50 KOhm

Output impedance: 10 Ohm

Maximum output level: 9.5 V RMS

Residual noise: < 1 uV RMS (input terminated with 47 Ohm)

Signal to noise ratio (referred to 1 V RMS): 126 dB or better

EIN: < -123 dBu (input terminated with 47 Ohm, +6 dB gain)

Total Harmonic Distortion at 1 KHz, 20 Hz – 20

KHz passband: < 0.0006 % (at any gain, up to 4 V RMS of output on 10 KOhm load)

Intermodulation Distortion (19 KHz, 20 KHz): < 0.0006 % (at any gain, up to 4 V RMS of output on 10 KOhm load)

Frequency response: 20 Hz – 20 KHz better than ± 0.1 dB

Power supply: output 36 V DC 1A, input 100 – 240 V AC 50 – 60 Hz

Dimensions (L x W x H): 155 x 109 x 45 mm



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Specifications subject to change without prior notice.