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MADE OF MUSIC.



USER`S MANUAL

LUNA MINI

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TABLE OF CONTENTS

1 Technical data — 2

2 Safety tips — 3

3 Introduction — 3

4 Installation of the device — 3

- Unpacking — 3
- Content of package — 3
- Vacuum tubes installation — 4
- Where to place the amplifier — 4
- Description of the elements — 4

5 Interconnections — 5

- Speaker connections — 5
- Source connections — 5
- Power cord connections — 5

6 First power-up and getting started — 6

- Buring-in process — 6
- Vacuum tubes replacement — 6

7 Power tubes protectin system — 6

8 Extension board — 6

9 Extension board installation - 7

10 Trouble-shooting guide - 7

1 TECHNICAL DATA

Model: Luna Mini
Type: vacuum tube stereo integrated amplifier
Class: A
Tubes: 2x EL34 + 2x 12AX7
Inputs: 3x RCA + 1x sub out
Options included: sub-out, IR remote control, tube cage
Equipment card slot extension: 1x
Suitable speaker impedance: 4-8 Ω
Nominal output power: 10 W
Total harmonic distortion (1 kHz at full power): <2,5%
Signal bandwidth: 16 Hz – 130 kHz
Signal to noise ratio: -84 dB
Damping factor: >10 Input impedance: 50 kΩ Sensitivity: 0,7 V Power consumption: 100 W Net weight : 15 kg Dimensions: 285 x 417 (with spk terminals & knobs) x 220 mm (with tube cage)

2 SAFETY TIPS

⚠ In order to obtain the highest possible sound reproduction quality and for the sake of your own safety, please kindly refer to the following.

- Never turn on the amplifeir without installed tubes and without hooked-up spekers.
- Never place the Fezz Luna amplifier near heat sources, such as radiators, heaters or direct sunlight. Ensure adequate ventilation and airflow
- We also warn against exposure of the amplifier to conditions such as very low temperatures and/or high humidity.
- During normal operation, the vacuum tubes radiate significant amounts of heat - there is a risk of burns.
- The amplifier should be plugged directly into a wall socket. If you must use an extension cord, please make sure that it has load parameters sufficient to ensure proper handling of current delivery to the device.
- When cleaning, always disconnect the amplifier from the power source. Use a dry, soft cloth. Do not use water or cleaning agents.
- If your amplifier starts to misbehave or to work incorrectly, if it's temperature gets too high or you start feeling smoke - immediately disconnect the device from the mains.

- Due to the risk of exposure to high voltages – please do not open the lid of the amplifier.
ATTENTION: This warning remains in force also in a situation where the device is already disconnected from the wall outlet.
- Always replace fuses in accordance with the original, intended specification.
- Do not make repairs on your own, or adjustments beyond those as described in this manual. Execution of any unauthorized repairs or modifications of the device result in a loss of warranty.

3 INTRODUCTION

The Luna Mini is a refined single-ended, Class-A integrated tube amplifier, created for those who seek the purest expression of music. Powered by two EL34 output tubes and 12AX7 driver tubes, it delivers 12 watts per channel with remarkable musicality. Single-ended design of Luna Mini, ensures a naturally open and fluid presentation, with rich and an engaging midrange that brings vocals and instruments to life. The Luna Mini combines warmth and intimacy with excellent resolution and tonal balance, making every listening session deeply emotional experience. Compact in size but uncompromising in performance, the Luna Mini embodies the essence of tube amplification in it`s most authentic form.

4 INSTALLATION

UNPACKING

Please kindly check if the packaging of the amplifier has not been damaged during transit. If you find any damages, please immediately contact your dealer. Remove the amplifier and accessories from the packaging. Make sure that the content is not damaged.

⚠ Do not connect the device to the power supply if it has visible signs of damage.

PACKAGE CONTENT

The package should contain:
- Fezz Luna Mini vacuum tube amplifier
- vacuum tube of type EL34 - 2 pcs.
- vacuum tube of type 12AX7 - 2 pcs.
- power cord
- remote
- tube cage
- user's manual
- cotton gloves

⚠ If any of the above items are missing in your package, contact your dealer immediately.

VACUUM TUBES INSTALLATION

Place the amplifier on a stable surface. Carefully remove the vacuum tubes from their packaging and install them in the appropriate sockets, as show below, and adhering to the numbering scheme as identified on the packaging.

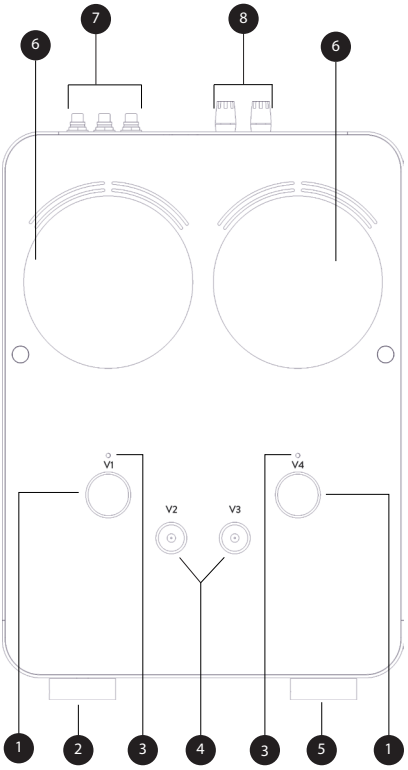
⚠ The pins in the base of each of the vacuum tubes are “coded”, and this has the result that the insertion of the vacuum tube into the socket is possible only in one correct and appropriate orientation. If, whilst inserting the vacuum tube you will sense resistance, and you can not push the tube into the socket, please check the orientation of its pins, rotate the tube to the correct position and try again.

WHERE TO PLACE YOUR AMPLIFIER

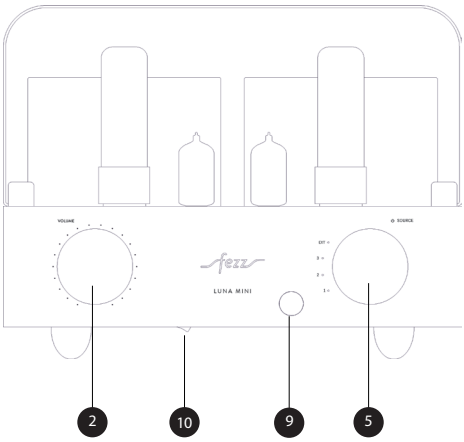
Due to the presence of high temperatures during normal operation of the vacuum tubes, the location that you have decided to place your amplifier should ensure ample ventilation, a free flow of air. Please maintain at least 10 cm clearance between the housing of the amplifier, together with the vacuum tubes, and other devices or elements of the interior.
The sound quality may be degraded as a result of vibrations. Therefore we recommended to place the amplifier on a flat and stable surface.

⚠ Never place the amplifier near the source of heat.

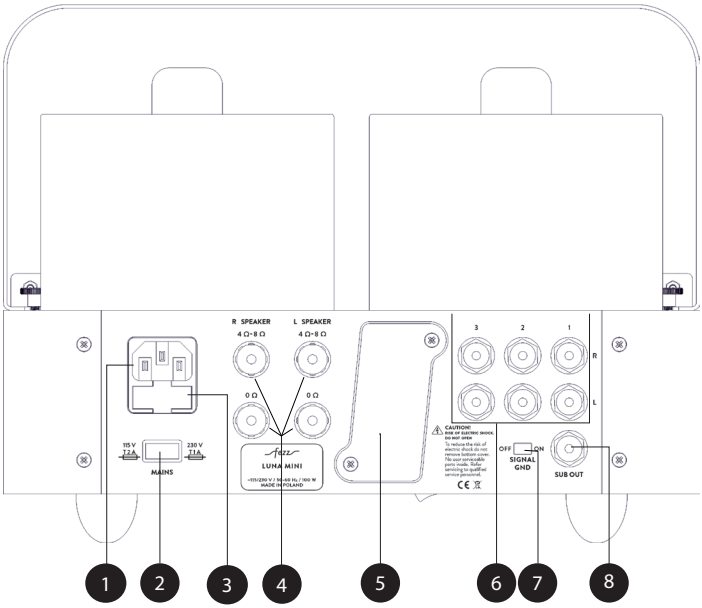
DESCRIPTION OF THE AMPLIFIER



1 EL34 power tube socket
2 Volume control potentiometer
3 Power tube fail led indicator
4 12AX7 driver tube socket
5 Volume control potentiometer / ON / standby switch
6 Output transformers housing
7 RCA audio signal inputs
8 Speakers output terminals
9 IR remote receiver window
10 Mains switch



5 INTERCONNECTIONS



1 IEC power supply cord socket
2 Voltage selector
3 Socket for the main fuse
4 Speakers output terminals
5 Extension board socket
6 Source signal inputs
7 Signal ground loop switch
8 Subwoofer output

The figure above shows the rear panel view of the amplifier, together with a description of the inputs and outputs allowing for connection of the other elements of your audio system.

⚠ To avoid electrostatic shock to the components of the amplifier, please touch a grounded conductive surface before making any connections .Any and all connections must be made whilst the device is disconnected from the mains power supply. Before making any such connections, make sure that the amplifier is switched off.

Follow the instructions below to connect your sound system correctly.

STEP 1 SPEAKERS CONNECTIONS

Check the impedance of the speaker set. Connect the speaker cable to the appropriate terminals on the rear panel of the amplifier. Pay atention to the proper connection.

⚠ NEVER TURN ON THE AMPLIFIER WITHOUT CONNECTED SPEAKERS

STEP 2 AUDIO SIGNAL SOURCES CONNECTIONS

Connect the signal source to the amplifier inputs IN1, IN2 or IN3. In order to achieve the highest sound quality, use only high-quality RCA cables.
Pay attention to the proper connection and distinction of the right (R) and the left (L) channels.

⚠ To connect a turntable, you will need to use an external phono MM/MC preamplifier or turnatble with a built-in preamplifier.

STEP 3 POWER CORD CONNECTION

Make sure that the amplifier is switched off. Connect the power cord to the IEC socket on the rear panel of the amplifier. The amplifier is designed to operate at rated switchable voltage of ~115 V or ~230 V 50-60Hz. Please check parameters of your mains network, if needed switch to right voltage using switch at the back . Please ensure that you have installed suitable fuse for desired voltage. Connecting the device to a mains network with incorrect parameters can lead to damage that is not covered by manufacturers warranty.

6 FIRST POWER-UP AND GETTING

Make sure that all of your wiring is connected in accordance with the information as provided above. We recommend to turn the amplifier ON last in the „audio chain".
Set the volume control to minimum. Turn on the mains power of the amplifier using mains switch at the front - buttom (index 10 page 4) Press the source selector right handed knob, to turn the amplifier ON. Fezz logo will light up red. Luna Mini is equipped in a 2-minute pre-heating cycle, which ensure optimal operating conditions and extended tube lifespan. After this time Fezz logo will turn white from red colour. The operation of the amplifier narrows down to adjusting the volume via VOLUME potentiometer and selecting an audio signal source via rotation of the SOURCE knob.

BURING-IN PROCESS

Any tube amplifier requires an initial pre-heating (or„burn-in") period, in order so that it achieves its full sonic potential. This is due to the presence of residual polarization of dielectric elements and due to a necessary stabilization of working parameters of the vacuum tubes. The stabilization of the electrical parameters of the system occurs in a natural process whilst playing music through your audio system.
A preliminary degree of pre-heating of the amplifier is reached after about 10 hours of music playback. Full sonic capabilities shall stabilize and unfold within a time-span ranging from 40 to 60 hours of music reproduction at a moderate volume levels.
In the initial period of operation of the amplifier it is advisable to avoid short-term
operation periods of the amplifier. Once activated, it should remain operational for a period of minimum 30 minutes.

VACUUM TUBES REPLACEMENT

Your amplifier is equipped with automatic bias module. It's necessary to use vacuum tubes that have previously been pre-selected and paired up in quads or pairs.
1) Disconnect the amplifier from the mains socket, the power supply network.
2) Remove the currently installed tubes from their respective sockets. Plug in the new replacement vacuum tubes in these sockets.

7 POWER TUBES PROTECTION SYSTEM

Every power tube has its own circuit protection system. When power tube will fail, safety fuse light will switch on (red light signalisation index 3 page 4) and prevents any further damage of the amplifier. Faulty tube is singalised by red led light. If the indicator light turns on, please switch off the amplifier using the main power switch located on the bottom of the unit. (index 10 page 4) Check if the tubes are installed correctly. Then power on the amplifier again. If the red indicator light still remains on, this means the tube is defective and must be replaced with a new one.

8 EXTENSION BOARD

This amplifier is equipped with a dedicated slot for optional extension boards (sell separately, allowing you to expand its functionality. The following boards are available as additional accessories:
MM Phono – for connecting a turntable with a moving magnet cartridge.
Bluetooth – for wireless music streaming from compatible devices.
DAC – for high-quality playback of digital audio sources.
By installing an extension board, you can tailor the amplifier to your individual needs and preferred way of listening.

9 EXTENSION BOARD INSTALLATION

Switch off the amplifier using the mains switch located at the bottom of the unit. Disconnect the power cable from the mains. With a screwdriver, gently remove the extension board cover (index 5, page 5) on the back of the amplifier. Locate the ribbon cable inside the slot it is atached to the lid and connect it to the male socket of the extension board. Insert the extension board into the slot.
Secure the board to the amplifier enclosure with the screws using a screwdriver. Turn on the amplifier.

WARNING! Due to the presence of high voltage, disconnect the amplifier from the power supply before installing the card.

10 TROUBLE-SHOOTING GUIDE

If your amplifier does not work as it is supposed to, it is fairly easy to diagnose and remedy some of the common malfunctions, by following procedures as outlined in this following.

THE PROBLEM	PROBABLE REASON	SOLUTION
After turning the power switch to the ON position, the amplifier does not switch on.	A blown fuse	Please exchange to faulty fuse to a new one with correct current value, within the fuse holder as depicted with index 3 on page 5 of this user's manual.
	An improper connection of the mains cable	Please check if the plugs of the mains cable are properly inserted into the electrical mains socket and to the socket as depicted with index 1 on page 5 of this user's manual.
The sound produced by the amplifier is distorted. A hum or pops have appeared and are coming from one of the channels.	An improper placement of the vacuum tubes in the sockets	Switch off the amplifier. Wait until the vacuum tubes cool down. Check for proper placement of vacuum tubes in their sockets. If necessary – correct their orientation.
	One of the driver tubes (12ax7) has lost its nominal working parameters	Switch off the amplifier. Wait until the vacuum tubes cool down. Exchange the positions of the driver tubes between channels. Turn on the amplifier. If the disturbing sounds have moved to the other channel, inform Your local Fezz Audio dealer about tube which need to be replaced.
	One of the Power tubes (EL34) has lost its nominal working parameters	Switch off the amplifier. Wait until the vacuum tubes cool down. Exchange the positions of the power tubes between channels. Turn on the amplifier. If the disturbing sounds have moved to the other channel, inform your local Fezz Audio dealer about tube which need to be replaced.
One of the power tube fails. It can cause auto fuse failure.	Tube failure	Turn of the mains of the amplifier. Wait 3 minutes, than power the amplifier. If red led light still goeas up please change the power tube for new one.
After connection of the preamplifier hum from both speakers appeared.	Signal ground loop.	Switch GND signal ground switch as adepicted with index 7 page 5.

If you have verified the aforementioned situations, and your problem still persists, please contact your local Fezz Audio dealer.

Manufacturer information:
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Kolonia Koplany 1E
16-061 Juchnowiec Kościelny
owner of Fezz brand
www.fezzaudio.com
MADE IN POLAND

- For indoor use only.
- Keep away from water and extreme heat.
- Allow sufficient ventilation to prevent overheating.
- Handle vacuum tubes with care; they become extremely hot during operation.












