

User's Manual



**Hand made, 50 watts,
Tube Guitar Amplifier**

Models:

**AD 5200 Single
AD 5200 Twin**

**AD 5201 Single
AD 5201 Twin**

**AD 5202 Single
AD 5202 Twin**

Congratulations on purchasing a tube guitar amplifier head and joining Laboga Family. Thank you for your trust. The Alligator belongs to the world's top tube constructions. It is designed with 35-years of experience in creating and servicing top quality equipment. Wide correction possibilities of the amplifier will enable each individual to find their own sound and will ensure long hours of creative entertainment. We hope the amplifier will satisfy all of your needs.

Enjoy playing!

Adom Laboga

IMPORTANT!

Before using the amplifier for the first time, read the instructions concerning safety measures carefully – they are on page 5 and 6. Keep these instructions for the future.

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AMPLIFIER SPECIFICATION

The Alligator series amplifiers are handmade and of full-tube design. From the very beginning it has been made and tested by musicians who are best aware of the guitarist's needs. These amplifiers are for guitarists that play "classical" types of music from jazz, blues, hard rock, to even heavy metal.

The power stage is based on four EL84 tubes which give it an output power of 50 W. Not only are these tubes reliable mechanically but also are characterized by creating a warm, "singing" tube tone. The Preamp is on two 12AX7 tubes. One of the things that distinguish the EL84 tube is that you only need half of 12AX7 for the inverter, while with EL34 or 6L6 you need to use all of it. Despite of the preamp having only two tubes, the amplifier is capable of creating a wide spectrum of tones. The master section of the amplifier has been designed so that when playing at low volume, the tone quality is maintained. This section is also equipped with a spring reverb.

The amplifier has two channels: clean and distorted. On the clean channel exists the possibility of obtaining a "crunch" sound and the distorted channel offers possibilities from crunch to even a high gain sound. Additionally, the distorted channel offers the possibility of having two independent gains (potentiometer Gain 1 and Gain 2) controlled by a footswitch. For example, the player may set Gain 1 for less distortion than Gain 2, which with the help of a footswitch, allows for an easy transition between the two during a solo. This channel offers a wide variety of tones from classic rock and roll to hard rock, hardcore, even metal.

Combo versions: AD5201 Single and AD5201 Twin have one and AD5202 Single and AD5202 Twin have 2 Celestion Vintage 30 speakers which are connected to the amplifier with a thick speaker cable with a jack plug. The player may disconnect the internal speaker and connect an external cabinet even of a different impedance because the amplifier has outlets of 4 Ohms, 8 Ohms, and 16 Ohms impedance.

AMPLIFIER FEATURES

- power: 50W,
- tubes used: 4 × EL84, 2 × 12AX7,
- two channels: clean and distorted,
- volume control: clean channel, gain and volume controls – distorted channel,
- two separately controlled with a footswitch *Gain1* and *Gain2*,
- separate tone control for both channels with separate switches for *EQ mod* (type Twin),
- the same tone control for both channels sharing the switch for *EQ Mod* (type Single),
- footswitch: changes channels and switches between *Gain 1* and *Gain 2*,
- channel switching on relays,
- separate *Bright* switches for both channels,
- series effects loop with „true bypass” controlled by a footswitch (not included),
- Direct Out line level output with speaker simulation,
- speaker outputs: 4 Ω, 8 Ω, 16 Ω.

WHAT IS IN THE SET

- Footswitch Channel / Gain.
- Cable connecting footswitch and amplifier (“stereo”)
- Power supply cable.
- Owner’s manual.
- Warranty.

SAFETY PRECAUTIONS



ATTENTION: To reduce the risk of electrical shock, do not remove the back cover of the amplifier. Inside parts can be repaired only by qualified service personnel.

WARNING: To prevent the risk of electrical shock do not expose this appliance to moisture, rain or any liquid.



This symbol is intended to alert the user to the presence of dangerous voltage and constitutes a risk of electrical shock.



This symbol alerts the user to the presence of important operating and maintenance instructions.



Be cautious while transporting the cabinet.

ATTENTION !!!

- Amplifier produces high volume levels. Staying in places of high volume levels could cause permanent hearing loss.
- To avoid electrical shock never open the amplifier's cover. In case of failure, refer servicing to qualified personnel.
- Always use the highest quality signal cables (we recommend Laboga cable "Way of sound") and volume signal cables. Using improper speaker cables could cause damage to the amplifier.
- Do not use the amplifier in humid and dusty places.
- Do not operate the amplifier through the unearthed socket.
- Leave the amplifier and bias settings to qualified personnel.
- Tubes could get heated intensively, do not touch it or it could cause burning.
- Do not leave the apparatus in the vicinity of children.
- Unplug the amplifier before tube change, unplug the cord and wait for the tubes to cool down.
- Before changing the fuse, switch the amplifier off and unplug the cord. Also, make sure you use the fuse of the proper power.

!! Keep this instruction for the future use !!

TECHNICAL HINTS, PROPER USAGE

- avoid using the amplifier in humid and dusty places
- do not put it in an unstable place
- do not install the apparatus near any heat sources
- do not use the amplifier before connecting it to the correct cabinet
- after switching on, wait about 30-60 seconds until tubes get heated
- switch the amplifier off before any cable change
- in order to ensure proper air circulation, do not block any of the ventilation openings
- never put any liquid containers near the amplifier
- in case of any objects or liquid access inside the amplifier, urgently switch the apparatus off and unplug the power supply cord
- protect the amplifier from any strikes
- before transporting, wait about 10 minutes for the tubes to cool down
- always use a dry or slightly wet cloth to wipe all dust. Never use solvents to clean
- use additional devices and accessories according to producer's recommendations
- during storms or when left unused for a long period of time, power supply cord should be unplugged from the outlet



Crossed-out wheeled bin symbol implies that in EU countries, after use, product must be discarded separately in a special, adjusted place. It concerns both the apparatus itself as well as other accessories bearing this symbol. Do not discard such products together with unsorted communal wastes.



In EU countries there are special systems of collecting used electrical products. Transporting used, electrical products in certain, adjusted places, prevents their being harmful to the environment and people's health.

„LABOGA” Adam Laboga

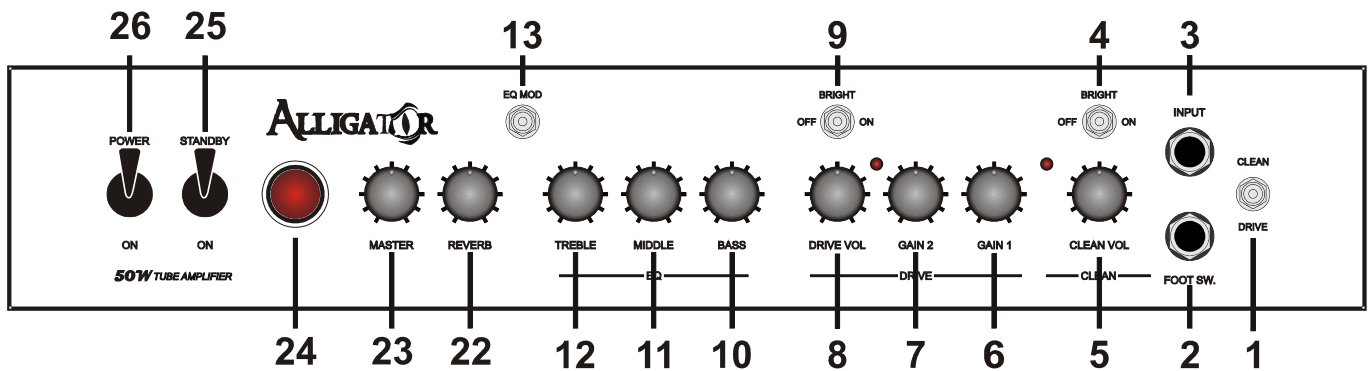
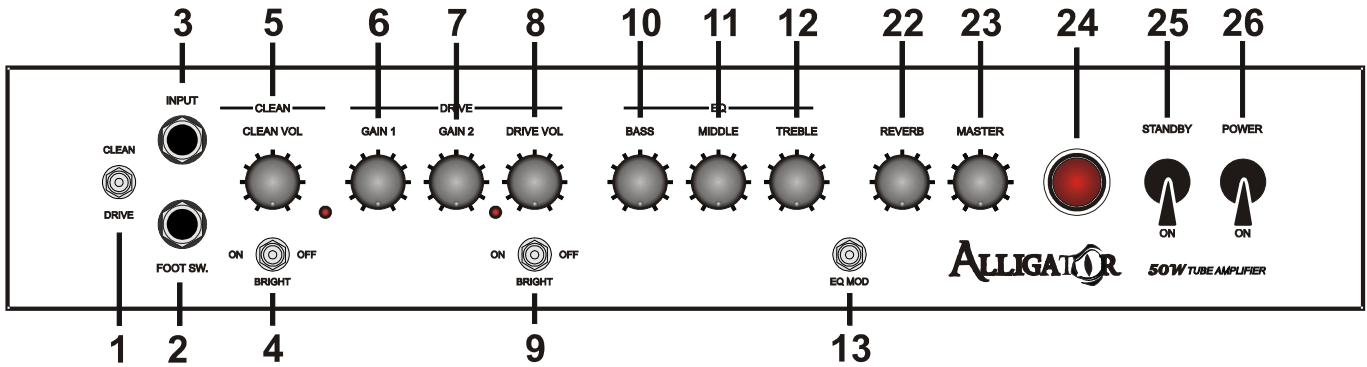
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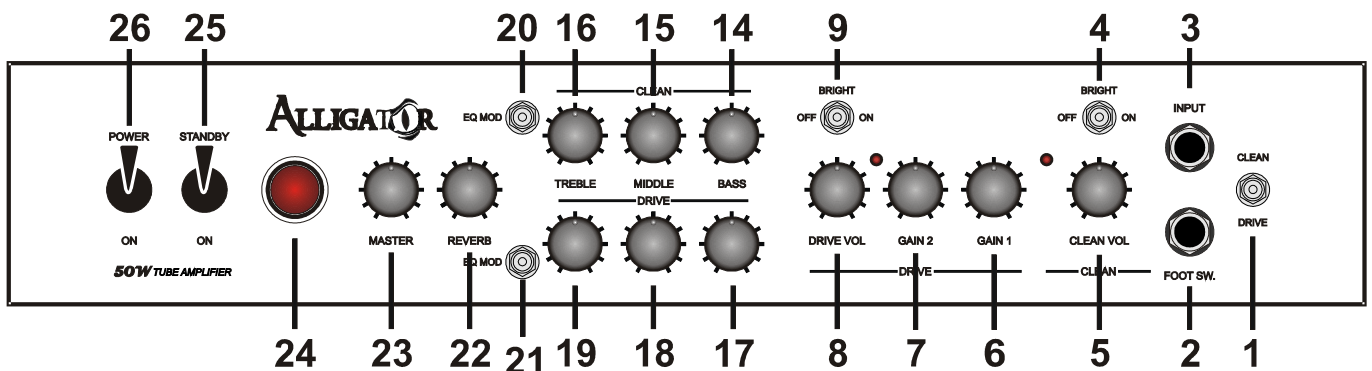
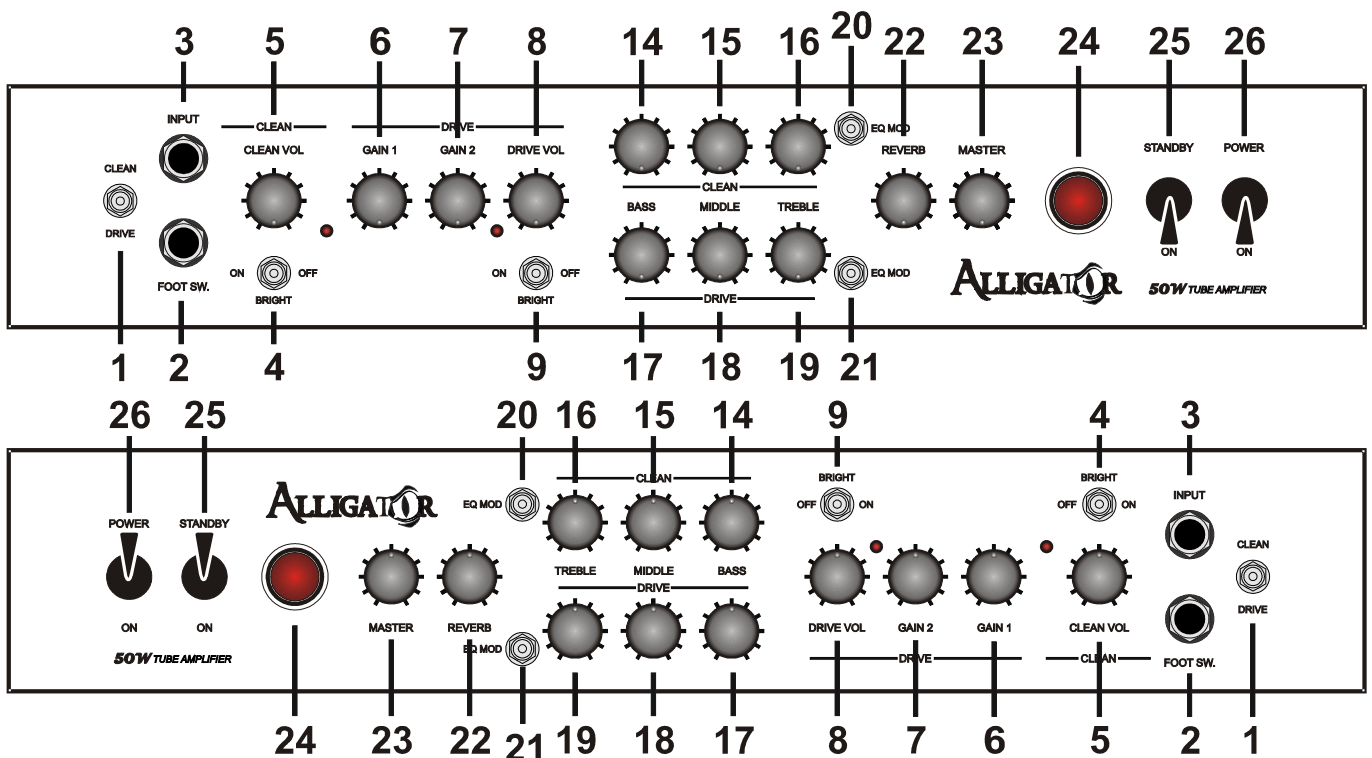
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FRONT PANEL

Single version:



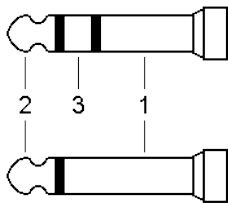
Twin version:



1. Channel selection

Switch to change channels of the amplifier. It works only when Jack is unplugged from the Footswitch socket. In position "up" the clean channel is on, whereas, in position "down" the distorted channel is on.

2. Footswitch



Socket to connect a footswitch, with controlled *Channel* switching and *Gain* selecting. TRS Jack socket (T – tip: 1, R – ring: 2, S – sleeve: 3),

where tip changes channels, ring - changes masters, sleeve is ground. It uses "stereo" cable, which can be also replaced by "mono" cable, however then, the *Gain* switch will not be active and, in the amplifier, only potentiometer *Gain 2* will be active.

3. Input

Input jack socket to connect to the guitar.

4. Bright

High frequency boost for the clean channel.

5. Clean Volume

Volume of the clean channel.

HINT: At a low setting of this potentiometer, you get a clean sound. When you boost the clean potentiometer, you get sound that is more saturated until some crunch is achieved. When you turn the *Master* down and boost the *Clean*, you obtain more crunch. So you can get crunch on both channels, which, at the same time, differ in character and dynamics.

6. Gain 1

Gain control for the distorted channel.

HINT: With a little value you can obtain crunch effect or overdrive. By adding gain, distortion is added until reading high gain. For guitars with Humbucker pick-ups and high output signal, it is possible, that turning the knob to the right, does not cause more distortion. It only gives more noise of the amplifier. It is designed that way, because each guitar has a different output signal level, and the value of gain was set up that way, that in the case of guitars with less signal, it is also possible to get more distortion.

7. Gain 2.

Second gain control for the distorted channel which is only available when the footswitch is used.

This is a duplicate of *Gain 1*. They both can be set independently and selected with the use of a footswitch.

HINT: This potentiometer can be used to boost distortion, e.g. while soloing. To achieve such effect, set *Gain 2* knob in such a way that after switching from *Gain 1*, the more distortion is heard.

8. Drive Volume

Distorted channel volume. Proportions between clean and distorted channel can be set by this potentiometer.

9. Bright

High frequency boost for distorted channel. Apart from high frequency boost, the switch also changes distortion character. It is possible that using certain controls of equalizer or gain, high frequency boost will be less noticeable.

Only for the Single version

10. Bass

Adjusts the low-frequency tone for both channels.

11. Middle

Adjusts the middle-frequency tone for both channels.

12. Treble

Adjusts the high-frequency tone for both channels.

HINT: Set all the potentiometers in a 12.00 o'clock position, then adjust them individually to get the best sound. Remember, that the frequencies of each controller are related to each other, the change of one influences the others.

13. EQ Mod

Shift of equalizer's band for both channels.

HINT: Provides various EQ frequencies for both positions of the switch. It results in a shift of frequencies of the Middle filter and a change in low tones. In both settings of the *EQ Mod*, you get an entirely different sound of the amplifier and various EQ functions. The most radical change of sound may be obtained especially in a less *Middle* knob setting.

Only for the Twin version

14. Bass

Adjusts the low-frequency tone for the clean channel.

15. Middle

Adjusts the middle-frequency tone for the clean channel.

16. Treble

Adjusts the high-frequency tone for the clean channel.

HINT: Set all the potentiometers in a 12.00 o'clock position, then adjust them individually to get the best sound. Remember, that the frequencies of each controller are related to each other, the change of one influences the others.

17. Bass

Adjusts the low-frequency tone for the distorted channel.

18. Middle

Adjusts the middle-frequency tone for the distorted channel.

19. Treble

Adjusts the high-frequency tone for distorted channel.

HINT: Set all the potentiometers in a 12.00 o'clock position, then adjust them individually to get the best sound. Remember, that the frequencies of each controller are related to each other, the change of one influences the others.

20. EQ Mod

Shift of equalizer's band for the clean channel.

21. EQ Mod

Shift of equalizer's band for the distorted channel.

HINT: Provides various EQ frequencies for both positions of the switch. It results in a shift of frequencies of the Middle filter and a change in low tones. In both settings of the *EQ Mod*, you get an entirely different sound of the amplifier and various EQ functions.

22. Reverb

Control of the spring reverb effect level.

23. Master Volume

Master volume control.

HINT: Besides controlling the volume, it influences saturation of the clean channel. Therefore, when turned down to a lower level, a crunch sound can be obtained on the clean channel.

24. Lampka sygnalizacyjna

When glowing, the amplifier is on.

HINT: There is a 12V bulb under the cover, which can be unscrewed without taking the chassis out. If the light needs to be replaced, turn the amplifier off, unscrew the metal nut, gently push the bulb in and turn left at the same time until the bulb comes free from the holder.

25. Stand By

In position "up" the amplifier is ready to work. Changing it to positions "ON"

sends anode voltage to the tubes – in these positions the amplifier plays.

HINT: You should keep the switch in the "up" position if there are long breaks between playing. You should also wait about 1 min. between switching the *Standby* to the "up" position and turning the amplifier off.

26. Power

This switch turns the amplifier on and off. The amplifier is off when the switch is in position "up" – then the lamp - 24 is not illuminated.

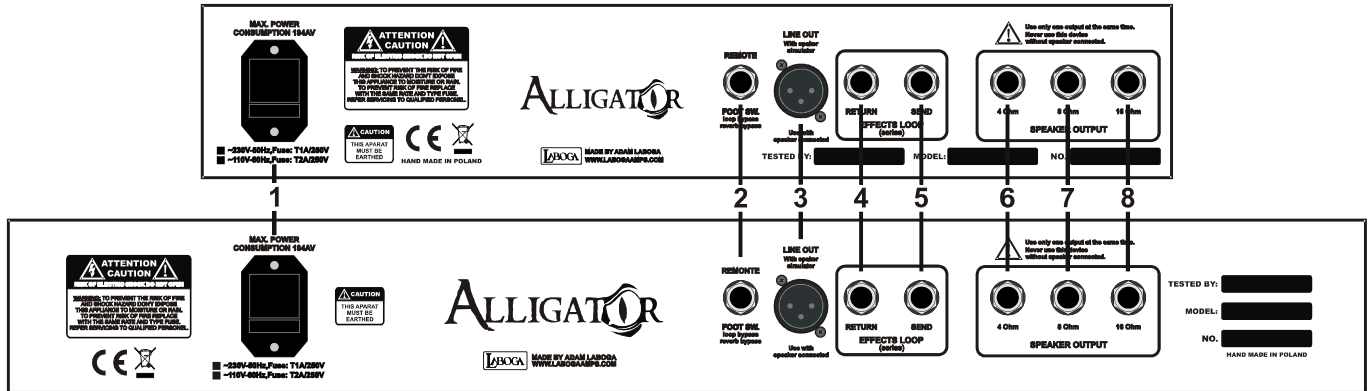
The amplifier is on when the switch is in position "ON" – the switch is illuminated in red. In this position the amplifier does not play, but tubes are hot, and you can change channels.

HINT: Before turning the amplifier on, always make sure that the *Standby* switch is in position "up" – it will extend the life span of the tubes. The amplifier should be turned on in the following way: first, turn on the *Power* switch and wait about 1 minute. Next, you can turn the *Standby* on.

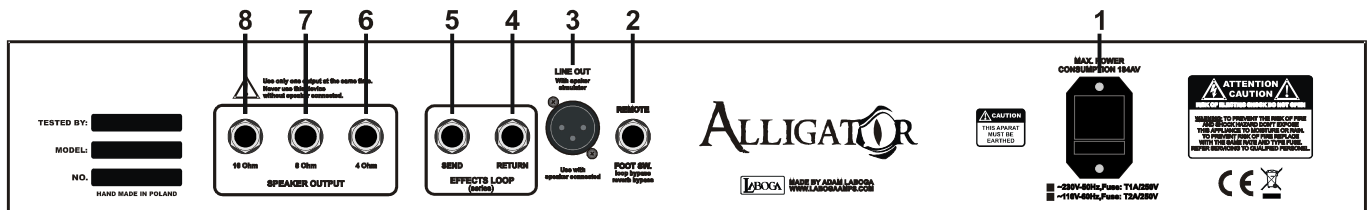
Turning off the amplifier works the other way around. First, turn the *Standby* on, then wait about 1 minute, afterward you can turn the *Power* off.

REAR PANEL

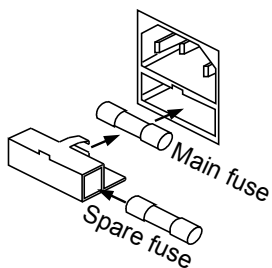
Combo:



Head:



1. Main fuse integrated with power supply socket



Slo Blo fuse T1.25A is in the case, integrated with power supply socket. There is one spare fuse inside.

HINT: Take out the power cord during a storm or when unused for a longer period of time.

HINT: While changing the fuse, make sure the blades of the fuse are properly installed.



ATTENTION! Before you change the fuse, always unplug the amplifier from the power outlet and wait for at least one minute.

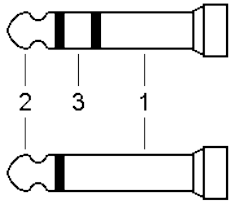


ATTENTION! Always change the fuse for one of the same value.

2. Additional footswitch socket

An additional footswitch (not included) can be connected to this socket. It controls bypass of the **effects loop** and **reverb**. When the effects loop is bypassed, the *Return* socket is not active. But, the *Send* socket is active. (look at hint in point 5).

The proper footswitch effects Loop/Reverb can be bought from any Laboga dealer.



The additional footswitch socket is in TRS form (T – tip: 1; R – ring: 2; S – Sleeve: 3), where the tip activates the bypass of the effects loop, the ring turns the reverb off, and the sleeve is ground.

3. **Balanced line output with guitar speaker's emulation**

Balanced output with 0dBV line level, where the signal is taken from speaker transformer through guitar speaker emulation.

HINT: Output can be used to connect the amplifier directly to a mixer or other devices



ATTENTION! This output can't be used without a speaker or fake load ("dummy load") connected to power output socket.

4. **Effects loop socket – "Return"**

Inserting a plug into this socket brakes internal connection in the amplifier, which bypasses the effects loop.

HINT: This input can also be used as line input, therefore the amplifier serves as a power amp.

5. **Effects loop socket – "Send"**

Output signal socket taken from the preamplifier. Nominal signal output level is 0dBV.

HINT: This output always has signal, even if the loop is not used. Consequently, the outlet can be used to connect a guitar tuner permanently – it does not influence the sound.

6. **Power output socket for a 4 ohm impedance cabinet.**

7. **Power output socket for an 8 ohm impedance cabinet.**

8. **Power output socket for a 16 ohm impedance cabinet.**



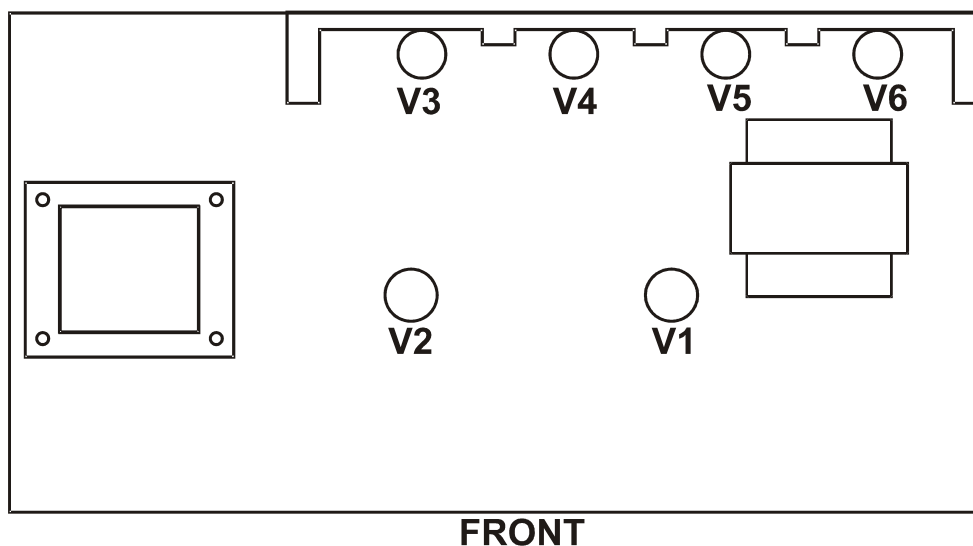
ATTENTION! Do not connect the cabinets with different impedance at the same time.



ATTENTION! Before turning the amplifier on, make sure the cabinet is connected to the appropriate power output socket.

CHANGE OF TUBES IN THE AMPLIFIER

Positions of tubes in the amplifier:



	MODEL	FUNCTION
V1	12AX7	first preamp tube
V2	12AX7	second preamp tube
V3 ÷ V6	EL84	power tubes

Hints concerning tubes.

Leave tube change and bias setting for qualified personnel. Tubes could get heated intensively. If you touch them, you can get burnt. That is why, before you change tubes, turn amplifier off, take the plug out and wait for them to cool down.

Before you change tubes, pay attention if their "feet" are straight because the feet have to be positioned in a certain way.

The first sign informing that tubes should be changed is worse sound of the amplifier. The sound gets flat and the dynamics are worse. There are certain signs that imply tubes should be changed: red outer metal cover, which is normally gray; flashes inside the tube, or other unusual signs.

Use only new tubes. Power tubes should all be changed at the same time for a quartet of EL84 tubes. It is a pentode, which is characterized by having a longer life span and is more mechanically reliable than EL34 for example. A quartet of power tubes, like any other tubes, can be purchased in a Laboga service.

It is recommended to use V1 and V2 with low noise and/or "low microphonics". Because the amplifier has high sensitivity, hums may appear when all the knobs are set "to the right" position and the amplifier is on the distorted channel.

HOW TO USE THE AMPLIFIER IN ORDER TO PROLONG TUBES' LIFE-SPAN

- 1). The amplifier should always be switched on in the following way: first turn *Power* on and wait for 1 minute. Then, you can turn the *Standby*. Switching the amplifier off is the other way around – first turn *Standby* off, then wait 1 minute, then you can turn power off.
- 2). Always use a matched quartet of power tubes, from Laboga or renowned producers.
- 3). Before transporting the amplifier, wait for the amplifier, especially for the tubes, to cool down.
- 4). When you don't use the amplifier, it is advisable to regulate *Standby* to position "0"
- 5). An excessive amount of dust on the tubes may decrease heat distribution of the tubes, which could shorten tubes' life-span. Use an original Laboga cover or hard case to prevent damage and dust.

TECHNICAL DATA

INPUTS:

- Guitar input sensitivity: -10 dBV
- Maximum signal level: +4 dBV
- Input impedance: 1 M Ω

OUTPUTS:

- Power output impedance:
 - 4 Ω output impedance
 - 8 Ω output impedance
 - 16 Ω output impedance
- Output power: 50 W
- Balanced line signal level output: -3 dBV

EFFECTS LOOP:

- Effects Loop *Send* output level: 0 dBV
- Effects Loop *Send* output impedance: 100 Ω
- Effects Loop *Return* output level: 0 dBV
- Effects Loop *Return* output impedance: 470 k Ω

TUBES:

- Preamp section: two 12AX7
- Power section: four EL84M

POWER SUPPLY:

- 230V AC / 50Hz – mains fuse: SloBlo T1,25A/250V
 - 110V AC / 60Hz – mains fuse: SloBlo T2,5A/250V
- Maximum power consumption: 184 VA

CASE:

Alligator AD5200

- Dimensions: 670 x 275 x 250
- Weight: 21 kg

Alligator AD5201

- Dimensions: 490 x 270 x 450
- Weight: 29 kg

Alligator AD5202

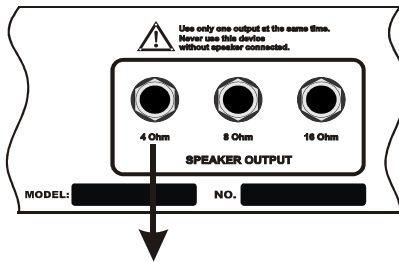
- Dimensions: 670 x 278 x 515
- Weight: 37 kg

TROUBLESHOOTING

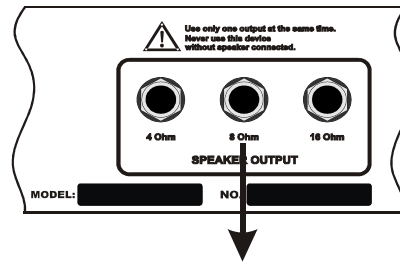
SYMPTOM	RECOMMENDED INTERVENTION
The amplifier doesn't play, LED diodes aren't lit, control light isn't lit.	Check if the main fuse isn't blown or if the power supply cord isn't broken (use another). If it still doesn't help, contact Laboga service personnel or any Laboga retailer.
There is smoke coming out of the amplifier.	Immediately unplug the amplifier from the mains outlet and contact authorized Laboga service personnel or any Laboga retailer. Don't repair it yourself.
The amplifier doesn't play, but LED diodes are lit.	<p>Check if guitar cable is connected and if guitar cabinet works properly. Then, check if guitar's volume potentiometer, Master or other potentiometers having influence on amplifier's volume, aren't mute.</p> <p>If the above mentioned hints fail, unplug the amplifier from main outlet, wait at least 1 minute and check if anode fuse isn't blown. If the fuse is blown, change it for a new one, turn the amplifier on again and observe the tubes for any unusual signs. If, after you the change it, it blows again, contact authorized Laboga service or any Laboga retailer.</p> <p>If the fuse wasn't blown, put guitar cable to the Return socket at the back of the amplifier and check if you can hear the guitar:</p> <ul style="list-style-type: none"> • If you do, check if any of preamp tubes aren't broken by swapping them. If there is still no result, contact authorized Laboga service or any Laboga retailer. • If you can't hear the guitar, contact authorized Laboga service or any Laboga retailer.
Clean channel works, but the distorted channel is mute.	Check if Lead Gain or Lead Volume isn't mute. If not, unplug the amplifier from the mains electric supply, wait for the tubes to cool down, unscrew rear grate and change V2. If there are no results, contact authorized Laboga service or any Laboga retailer.
The amplifier makes hum even after turning <i>Master</i> down.	Check if the outer metal cover in any of the power tubes is glowing red (it is usually grey). If yes, immediately turn the amplifier off and contact authorized Laboga service or any Laboga retailer.

While playing there are weird sounds – crackle, or the sounds vanish completely	Check if the power cable is inserted properly and if it isn't falling out of the socket. Additionally, check the quality of the speaker's cable – if it isn't damaged and if the cable has the proper diameter.
The amplifier gives uncontrollable weird, loud sounds even if guitar is unplugged.	<p>Observe if it happens on both channels (this information can be crucial while consulting the service department). Unplug the guitar and switch to the distorted channel – watch if sounds cease when you mute <i>Lead Gain</i>:</p> <ul style="list-style-type: none"> • If yes, unplug the amplifier from the main power supply, wait for the tubes to cool down, unscrew the rear grate and change V1 for any other tube. If the problem disappears, keep such tube configuration. • If sounds don't fade, turn the <i>Lead Volume</i> down and check if sounds disappear. If yes, unplug the amplifier from the mains electric power, wait for the tubes to cool down, unscrew the rear grate and change V2 for V3 or V4. If it doesn't, turn the <i>Master</i> down. It could happen that sounds won't stop even after turning the <i>Master</i> down - then contact authorized Laboga service and tell about your observations
Footswitch won't change channels	<p>Unplug the cable from the <i>Footswitch</i> and try to change channels;</p> <ul style="list-style-type: none"> • If channels can be changed, then plug in another footswitch cable to the amplifier. It should be a "stereo" cable. You can also plug in a "mono" cable, but the <i>Master</i> in the footswitch will not be active and only <i>Master 2</i> will work. <p>If that doesn't help, contact authorized Laboga service or any Laboga retailer.</p>

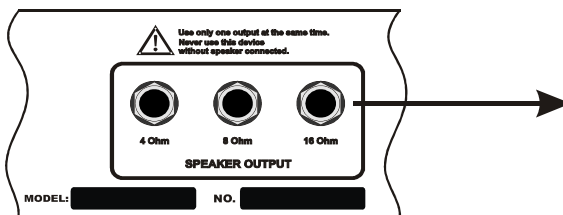
WIRING AMPLIFIER TO SPEAKER CABINETS



4 ohm cabinet



8 ohm cabinet



16 ohm cabinet

