

**XTONEBOX**

**60SP**

STEREO TUBE PHONO PREAMPLIFIER

**USER MANUAL**



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# IMPORTANT SAFETY INSTRUCTIONS

Intended to alert the user of the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

Intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

**CAUTION:** Risk of electrical shock — **DO NOT OPEN!**

**CAUTION:** To reduce the risk of electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

**WARNING:** To prevent electrical shock or fire hazard, this unit should not be exposed to rain or moisture, and objects filled with liquids, such as vases, should not be placed on this unit. Before using this unit, read the operating guide for further warnings.

**WARNING:** When using this product or any other electrical products, basic cautions should always be followed, including the following:

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not cover with cloths or blankets for satisfactory ventilation.
8. Do not install near any heat sources.
9. Always use the IEC main power cable from your area, ground lug is needed.
10. To insert or remove the audio valves, the device must always be switched off and disconnected.
11. Although the installed preamplifier-type tubes do not get excessively hot, we recommend not touching or handling them while the equipment is powered on.
12. Unplug this unit during lightning storms or when unused for long periods of time.
13. Always replace the fuse in this unit with the same fuse as indicated on the rear panel.

## AFTER UNPACKING

It will be to your advantage to save all the packing materials, carton, fillers, cushioning, etc. They will prove valuable in preventing damage should it become necessary to transport or ship the 60SP. Be careful that you do not inadvertently throw away or lose the parts packed with the unit.

**Please inspect this unit carefully for any signs of damage incurred in transit.** It has undergone very strict quality control inspections and tests prior to packing, and it left our workshop in Spain unmarred and in perfect operating condition. If the unit was shipped directly to you and you discover damage, notify the transportation company without delay. Only you, the consignee, may institute a claim against the carrier for damage during shipment. However, we will cooperate fully with you in such an event. Save the carton as evidence of damage for their inspection. If you received the unit directly from a XTONEBOX dealer, return it to him for adjustment.

## OVERVIEW



The 60SP is a phono preamp 100% done with audio valves in the audio signal path and is based on the original circuits from the electronic masters of the 60s. Significantly improve vinyl records response. Sound with great detail and dynamics.

When you play your vinyl records through this phono preamplifier, the first thing you notice is an openness in the sound, then a pleasing presence of detail with great dynamics, which finally boils down to an appreciation of your music from a new point of re-discovery.

Easy to use. Just worry about what vinyl record you're going to listen to. The INPUT input of the preamp is designed with standard impedance and capacitance for MM cartridges. Connect your turntable to the Xtonebox 60SP and its OUTPUT output to your usual device, such as your integrated amplifier (AUX), powered speakers or your sound card for ripping. (For MC cartridges, please contact us).

Selected and matched electronic components. Our job when offering a stand-alone phono preamplifier is to provide electronics with the right components matched

in the key parts of the circuit. In addition, each unit is tested with selected tubes during quality control, so that you get the best signal and stereo image right out of the box.

Minimalistic design. Theoretically, the ideal is to connect the signal coming from the cartridge as close as possible to its amplification, as it is a very weak signal prone to losses. What could be better than being able to have the electronics that gives it life on one side of the turntable?

The aluminium chassis offers a clean and pleasing look for both vintage turntables and modern minimalist lines.

## SPECIFICATIONS

- Stereo tube phono preamplifier.
- Class-A preamplification.
- Mainly designed for MM cartridges, MC cartridges available on request.
- Preamp tubes: 2x ECC83 + 1x ECC82.
- 1 RCA stereo input / 1 RCA stereo output.
- Input impedance: 47K $\Omega$  (MM).
- Output impedance: 420 $\Omega$ .
- Gain: 52dB (MM).
- Frequency response: 20 Hz / 20 KHz.
- Passive RIAA equalization curve.
- All-aluminium chassis, excellent dissipation and shielding.
- Internal power supply. Zero background noise.
- Dimensions (H,W,D): 11 x 12 x 32 (cm)
- Weight: 1.2 kg / 2.6 lbs.

## PACKAGE ITEMS

The package includes the following items:

- 60SP Tube Phono Preamplifier
- IEC Cable
- User Manual

# BACK PANEL



**INPUT.** These RCA connectors are the stereo input (R & L) to connect the turntable PHONO signal (MM cartridge) to the 60SP preamp electronic circuit.

**GROUND.** Connect here the independent ground cable from your turntable. This ground post, separate the signal ground from the chassis ground to a better noise performance.

**OUTPUT.** These RCA connectors are the stereo output (R & L) to connect the output signal from the 60SP to another device. Please see Output Options, next.

**MAIN POWER.** Please, use the IEC cable with ground lug to power on safety (included). Ready to be plugged into any country's electricity supply, from 100 to 240VAC.

**POWER SWITCH.** Switch to power ON or to power OFF the 60SP. You can read more information below.

# POWER ON

Each time you **POWER ON** this unit please check the following points:

- Audio valves are properly installed.
- Input cable and output cable are properly connected.
- The IEC Cable is properly plugged. IEC with ground terminal is required for safe operation and reduction of background noise.

To turn on this unit, press the POWER button at the back to ON position. The LED at the front, should light up some times, and then it will be permanently illuminated. If the LED don't light, please verify that the IEC Cable are properly plugged.

If the LED power on correctly, wait 30 seconds for the valves to warm up, and the internal voltage is stabilized. At this point your 60SP will be ready to play your favorite music. Enjoy!

If you turn the 60SP ON and then turn it OFF again in an instantaneous time cut, it may generate a small "pop" in the signal. If you turn the 60SP OFF after many minutes this "pop" will be barely noticeable. The longer the 60SP is on, the smoother the 60SP shuts OFF.

This means, that for the usual use of playing several vinyl records, you will never notice any "pop" when switching off the 60SP.

Anyway, if you have a high-powered system, we recommend a shutdown order such as the following examples:

- Power stage off -> preamplifier off -> 60SP power off.
- Integrated amplifier off -> 60SP power off.

# PHONO INPUT

Phono circuit was intended for use with turntables that have a standard **MM (Moving Magnet) phono cartridge** that need a rated input impedance of 47,000 ohm. This circuit amplifies the signal giving it extra gain and RIAA EQ, so you shouldn't plug in any other device in PHONO INPUT. The signal processing made by the phono circuit is only needed in case of using a turntable.

If you have a modern turntable with internal phono preamp with selectable switch PHONO – LINE, put your switch in PHONO mode.

Remember to connect correctly the RCA cable from your turntable doing a perfect connection.



Remember to connect the independent ground cable from your turntable to the GND binding post.

## OUTPUT OPTIONS

There are several good ways to enjoy the sound from the 60SP, here some examples:

- AUX type input of an integrated amplifier.
- AUX type input of powered loudspeakers.
- AUX type input of a preamplifier.
- LINE type input of a recording device.
- LINE type input of an audio interface.

**NOTE:** Never connect the 60SP output to another phono preamp circuit or phono input from a preamplifier or integrated amplifier.

## TROUBLESHOOTING

When you are using the Xtonebox 60SP, various situations may occur that manifest themselves in noises. Being a very high gain circuit with the use of audio valves, it may amplify certain sounds unintentionally. Mostly these noises are not noticeable, but here are some different situations, in case one of them happens to you, understand it and solve it.

"When I put the stylus down I hear random clicks": this is caused by the stylus going into the groove of the vinyl and having micro-scratches and/or dirt on it. This is normal, as it is a physical amplification of the stylus touching the groove.

"When the stylus rests on the vinyl record, I hear a low-freq background noise": this effect is called "rumble" and is mostly produced by idler or belt turntables that transmit the vibration of the engine, different mechanical parts or the pick-up of AC voltage. It is normal, produced by the turntable.

"I hear a constant noise": This can be produced in modern belt type turntables with DC motors powered by external power supplies that usually induce this noise in the turntable, it is not related to the 60SP, but it amplifies it.

"I hear a constant static noise": You must connect or disconnect the independent ground wire to the GND of the 60SP, there are turntables that need to be connected

correctly to their ground to eliminate this noise, others can produce it when connected to the GND, it is not related to the 60SP, but try connecting or disconnecting this wire to know how best to reduce the noise of your turntable.

"I hear a very loud HUM sound": try connecting your RCA cable correctly to the RCA input of the 60SP.

"I hear an intermittent background noise": the 60SP's audio tubes can pick up digitally generated noise from your mobile phone, cordless phone or even a WIFI router if it is very close, in this case, maintain your mobile phone away and try to position the 60SP away from these digital noise emitting sources.

"I hear a background noise of random beeps": the 60SP's audio tubes can pick up noise generated by antennas and mobile signal repeaters. If you have such an antenna near your home, it is possible that the 60SP can pick up this background noise. If you notice this, we recommend placing the 60SP away from windows or areas near the orientation of these antennas.

"When I play my music too loud, I hear an uncontrolled bass sound": This is mostly caused by low frequency feedback between the sound from the speaker and the pickup from the turntable cartridge acting as a microphone. You should reposition your elements to reduce this feedback, better isolate the speakers or the turntable, lower the bass tone or use a low-pass filter of your amplifier can help to control this problem. It is unrelated to the 60SP, but unintentionally helps to amplify this acoustic problem.

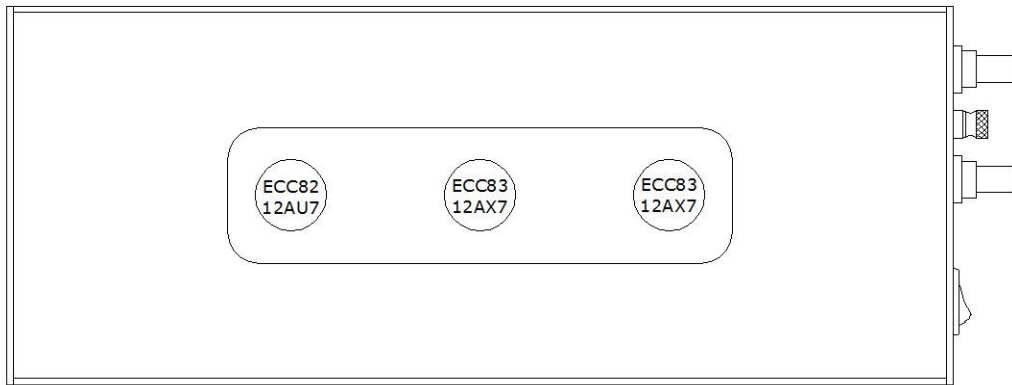
## AUDIO VALVES INSTALLATION

The 60SP tube phono preamplifier is delivered with the audio valves already installed. These audio valves were selected during the electronic test to provide an excellent stereo image.

The electronic design from this preamplifier uses 1X ECC82/12AU7 and 2X ECC83/12AX7. There is a label on the bottom as a reminder. The standard version uses the brands Tung-sol and JJ-Electronics for being high grade manufacture quality and electronic stability.

The position of each valve is shown below, looking at the 60SP from the top:

## AUDIO VALVES POSITION



TOP VIEW

These audio valves generally have a service life of 10 years without any problems. However, since you may want to replace them in the future, we have included this guide to make it easier for you.

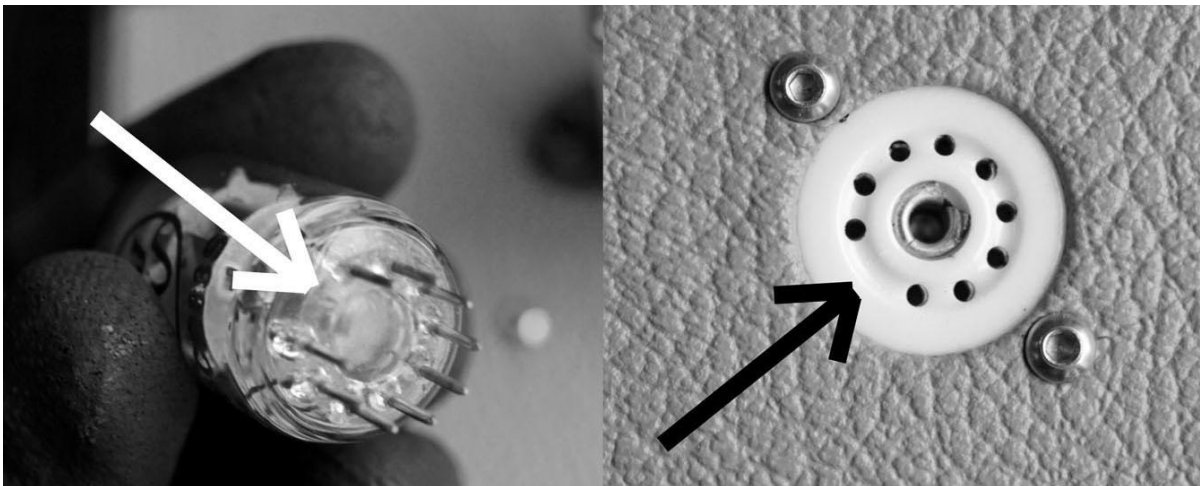
**REMEMBER:** Replace with the same type and model in the correct position.

**REMEMBER:** Power off the unit and disconnect it from its power source before manipulating it.

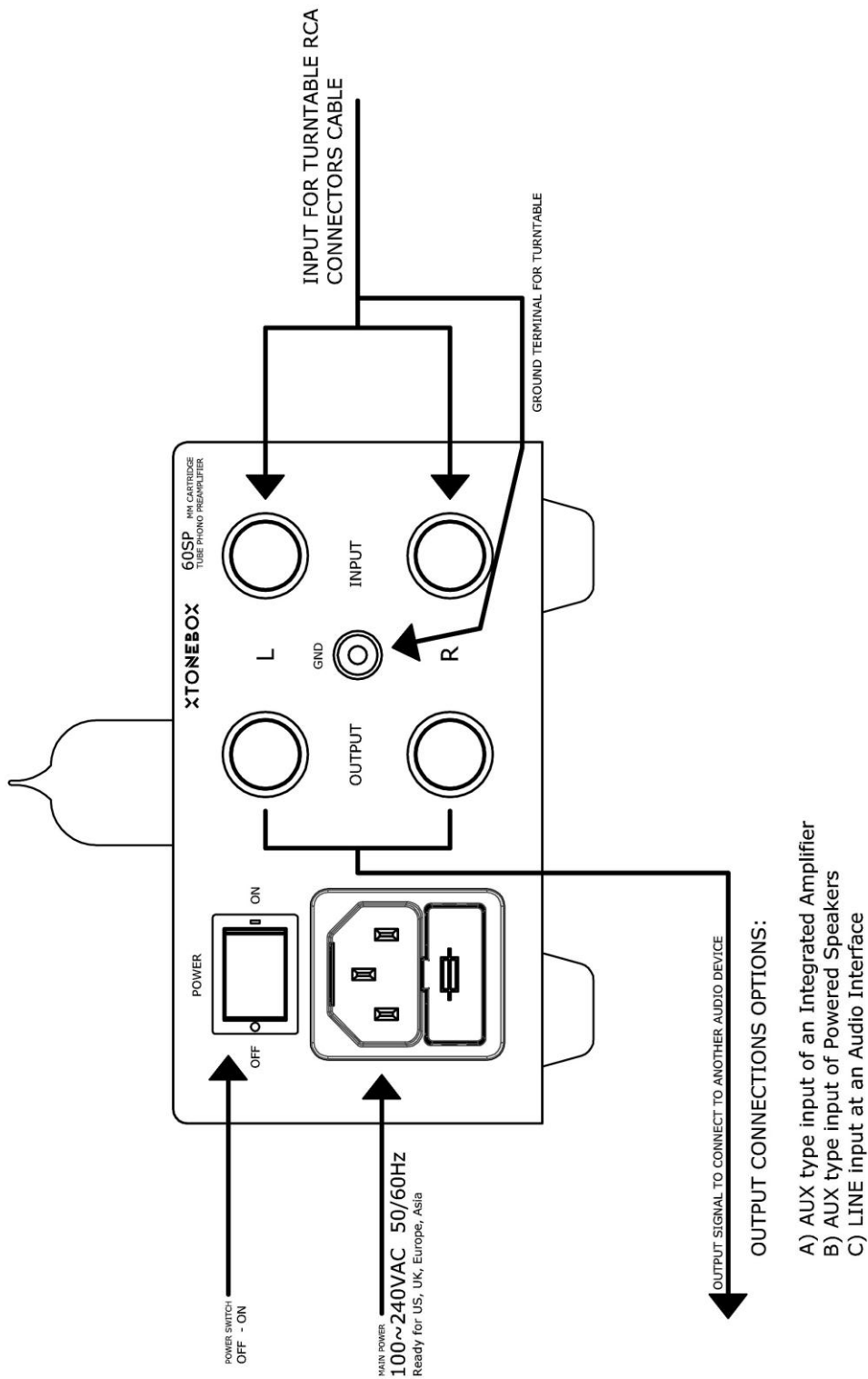
**REMEMBER:** Wait at least 1 minute for the audio valves to get cold before moving the unit.

This type of chassis has an open frame with the audio valves exposed to the outside, which can be inserted and removed whenever you want.

First, hold tightly the cabinet and remove the old valves. Then, for insertion, you must look at the position of the pins relative to its socket. The valves must be securely well inserted.



# QUICK GUIDE



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