

Lightning Boy Audio

“The Lightning Boy II”

Users Guide

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PART A. Getting Started

Thank you for your purchase! Lightning Boy Audio is proudly made by hand in the United States of America with the finest quality components the world has to offer. Included is your 5-year warranty card, which you should fill out and mail back to Lightning Boy Audio ASAP. Make a copy for yourself if you like. Now, let's begin!

Step 1: Plug it in. Simple enough, right? Yes. One important note, though. The pedal requires a 12V AC power adapter. That is not to be confused with a DC adapter. There is a difference. A 12V DC adapter will not work. The Lightning Boy II requires 12V AC @ 200mA and connects with a standard 5.5mm OD X 2.1mm ID barrel jack. After you're connected to a power supply you will notice the orange neon light emitted from within the side vent. It generally takes a moment to power on after the pedal is plugged in. This is normal.

*Note: If the light does not turn on (usually under 30 seconds) there is a problem with the pedal. The neon light is from a voltage regulator tube in the pedal. The VR tube should never need replacement. Its job is to help keep the 100v B+ power stable inside the pedal. The light will only turn on when full voltage is obtained. If the light does not turn on, it means there's a problem with the onboard B+ power supply.

Step 2: Is your guitar connected and turned up? Is your amp on and turned up loud? Turn up the volume on the Lightning Boy II to about 10:00. Engage the Lightning Boy II by depressing the foot switch. Now, strum a big chord and let it ring. That's a song. It's called, Awesome. You wrote it. Nice work!

PART B. Electron Tubes/Thermionic Valves/Vacuum Tubes

Section 1: Tube types. There are many names and many types, but most of us simply know them as tubes, or if you're in Europe or Australia, valves. The Lightning Boy II has been carefully designed to perform well with a variety of vacuum tubes. The most gain will come from a 12AX7, the cleanest sound from a 12AU7, a 12AT7 is near the middle, but closer in gain to a 12AX7. The 12AT7 has a different sounding breakup (distortion character). I find it to sound like a faster or maybe fizzier breakup as compared to the 12AX7. In this pedal, the 12AU7 will probably only breakup with very high output pickups. However, the Lightning Boy II is capable of massive amounts of boost. That is to say, even with a 12AU7 you can push your amp into heavy distortion. In the future I'll test more tube types in the pedal, but for now this covers a pretty wide range of tones. These tubes are all available for purchase in NOS form at www.lightningboyaudio.com.

Section 2: Changing Tubes. This is not recommended. Why? Because the tube is inside of the pedal and there is high voltage present even when the pedal is not plugged in. The internal power capacitors require several days to dissipate their stored voltage after being powered up. A shock from the pedal won't kill you since its low amperage DC, but it will feel like a bad day. So, for your own safety, don't go snarfing around inside the pedal. If you want to risk it, don't touch anything other than the vacuum tube. Grab the base of the

tube with your fingers and gently rock back and forth while pulling back on it. Work it out on an angle so as the nipple of the tube is worked up and out of the case. Obviously, be careful. Don't do this with a tube that's still hot, as this can potentially shorten its life. Inserting a different vacuum tube is done in the reverse order. Be super careful to line up the pins with the socket. It only goes one way. Bent tube pins are not a good thing. We will be putting together a demonstration video in the future to show how to change tubes in this pedal two different ways. To stay up to date on that and other developments, please subscribe to our youtube channel at <https://www.youtube.com/user/galleryacoustics>

PART C: Sidecar Modules

The Lightning Boy II was designed to be expandable with our second generation Sidecar Modules. The Sidecar Module concept was first introduced by Lightning Boy Audio in 2012. The 2nd Gen modules connect to The Lightning Boy II via 8.5" long 1/8" TRS cable. Future modules will be released to expand the functionality of The Lightning Boy II, but upon release day (Feb 13th, 2017) the only module available is the CH2. The CH2 is a two-channel expansion for The Lightning Boy II. The CH2 has a pair of controls for gain and treble with a stomp switch to select between two channels. This module is active, using the vacuum tube onboard The Lightning Boy II as its op-amp. By connecting the CH2, there will be a very slight drop in volume and total gain, but also a 2dB drop in the noise floor. The treble control will vary in its range of boost depending on where the gain knob is set. The treble boost function is interactive with the gain control, although the treble cut is dependent. This is because the treble boost needs an op-amp to function and it shares the same op-amp as the gain control. There is, after all only one op-amp in the Lightning Boy II. It's the vacuum tube. The higher the gain setting, the more treble is present, but also the less boost is available from the treble knob. The lower the gain setting, the wider the range of boost for the treble control. Turning the treble knob counter clockwise will reduce the treble boost to a certain point. At that point it becomes a treble cut. The treble cut is a passive EQ control and is completely independent from the treble boost and gain circuits. No treble cut will be taking place with the treble knob set to 50% or greater. I'm sure this description of how the EQ and gain functions work may be a bit confusing. It's an odd little box, but it sure does sound nice! Turn the knobs till it sounds right. Finally, there are LED lights onboard the CH2 to indicate which channel you are on. These lights will only be on if a 9v DC adapter (or multi-pedal supply) is connected to the CH2. The CH2 will work without an adapter, but you'll need that adapter if you want the LED's to do their visual job.

PART D: Power supply options

12V AC @ 200mA. AC, not DC. Some multi-pedal power supplies will work with this pedal, such as the Voodoo Lab Pedal Power AC and the T-Rex Fuel Tank Chameleon Power Supply. There are also a multitude of wall wart 12V AC adapters that provide the minimum current of 200mA that this pedal needs. On our website we have two options, including our own international power supply. The LBA PSU works on 110-240V AC input at 50-60Hz and outputs a nice clean 12.6v AC at 800mA. In fact, the LBA PSU will give your pedal 4dB less noise than the Triad Magnetics wall wart adapter we're offering for sale on our site. If you purchased the LBA PSU, you will need to supply your own IEC power cable. Also, be certain the voltage selector switch on the side of the LBA PSU is set to the correct voltage for your country.

For more information, friendly up with Lightning Boy Audio on social media and at www.lightningboyaudio.com. Thanks and Enjoy!