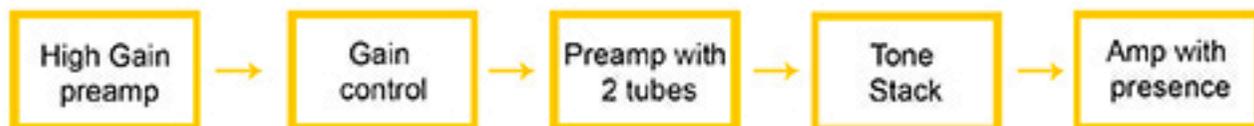


# Guitar Kit

HoRNet Guitar Kit is a guitar amplifier and cabinet simulator, it also includes a microphone simulator to help you get the same sound you would get when recording a guitar amp. What characterizes Guitar Kit is that every one of the three modules is made of physical models. Many guitar amplifier simulators use some sort of convolved impulse response in the signal path, while this allows to correctly emulate specific units, like specific guitar amp or cabinet, it greatly reduces the freedom you have in building your personal rig since every model is a static "picture" of the emulated unit. Guitar Kit on the other hand using physical models can build many types of sounds letting you choose the tubes for each section of the amplifier, the cabinet speaker, cabinet type, microphone type and placement. Each of the three modules of Guitar Kit can be turned on and off separately so you can create different sounds from the typical guitar sound and also use the cabinet or microphone emulation on different sources. Guitar Kit works in real time without any latency and can be used in a live situation thanks to its low CPU usage even with "high quality" mode enabled (high quality oversampled the processing 8x). Let's go into each module's detail.

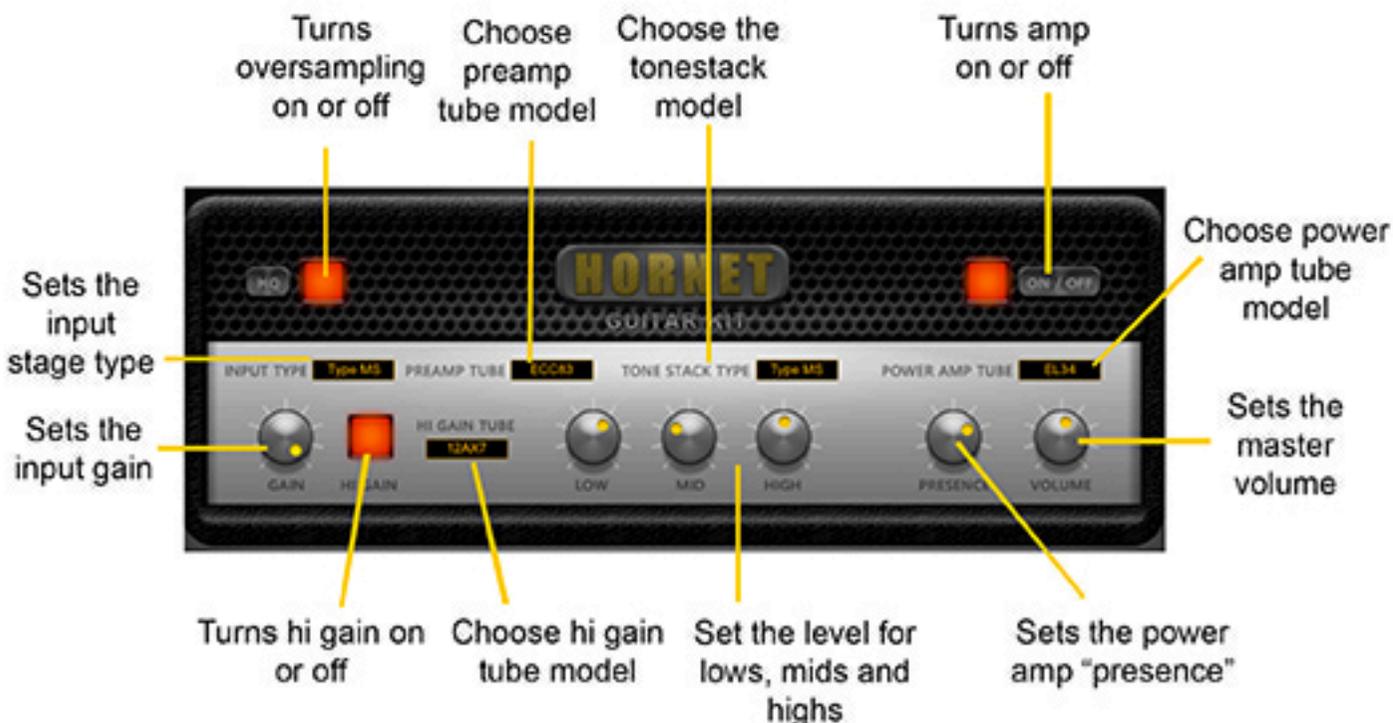
## Amplifier section

The amplifier in Guitar Kit doesn't try to emulate any specific amplifier but instead focuses on tweakability allowing you to choose the particular flavor for each of its stages. The signal in the amp follows these steps:



Both preamp stages allow for tube selection, you can choose between: 12AX7, ECC83, ECC81, 12AY7, 12AT7, 7025. Each tube has slightly different frequency response and distortion characteristics. You can also choose between four different input configurations: "GK" is a custom input circuit we developed, and the other three options are from very famous guitar amplifiers.

The tone stack section gives you three different tone stack types, modeled after the tone control used by three famous amplifier makers, and it can be disabled if you want a raw tube sound of some old blues / rock amplifiers. The final stage is the power amplifier and offers you the selection between 6 different tube models: 6550, EL34, EL84, 6L6, KT88, KT66.



## Cabinet section

The cabinet section emulates the sound of a guitar cabinet, it's completely modeled and not designed after any particular guitar cabinet but instead it follows some kind of "best practices" in cabinet design. It allows you to select the speaker model between a selection of real world speakers, we designed this speaker selection after the most popular ones so that you can get a wide range of sounds. Each speaker has different tonal characteristic and react differently when put in its enclosure, these resonances are modeled both in the open and closed cabinet type.

## Microphone section

This section emulates the sound of the microphone used in front of the cabinet, it offers continuous adjustment of both distance and axis position. Both these controls vastly affect the sound, the closer the microphone to the speaker the greater the proximity effect enhances bass frequencies, while moving the microphone off axis reduces the definition in the highs. Four popular microphones are modeled, two dynamic and two condenser to give you a wide sound selection.

