

Incredibly Detailed Software

Bias Amp is one of the most accurate, versatile and deep modelling platforms currently available. Below is a summary of the controls and their functions.

- **Control Panel:**
 - **Gain:** Overall input level to the preamp. Master gain and distortion control for the preamp section.
 - **Presence:** Boosts or cuts upper frequencies in the power amp module.
 - **Bass, Middle, Treble:** Replicates exact gain and frequency response of the selected tone stack topology, including classic passive tone stack and analog parametric tone stack. Depending on the tone stack circuit topology, some of the original tone stacks do not have all of the tone controls, whilst some may have more. A three-knob tone control system will always be shown for consistency, whilst fine tuning can be done in the tone stack module in BIAS mode.
 - **Master:** Determines the input level, overall distortion and the dynamic characteristics of the power amp module.
- **Preamp:**
 - **Three-Band Pre Filters:** Custom-designed filters positioned before the distortion tube stages. Able to boost or cut bass, mid and high frequencies before the guitar signal goes into the tube simulation stages.
 - **Tube Type:** Tubes play a hugely important role in shaping distortion characteristics of an amplifier. Experimenting with different tube type combinations helps to create the sound you want.
 - **Bright/Normal Switch:** Utilizes the simple bright cap circuit found of many amplifiers. Effect may be subtle or pronounced dependant on the overall amp design.
 - **Gain Knob:** Sets the amount of preamp input gain and controls the overall preamp distortion.
 - **Distortion:** An extra control that adjusts the amount of distortion in the selected tube stages. Allows fine tuning of the break-up point to match various amp designs.
 - **Tube Stages:** The number of tube stages provides a straightforward yet effective way to instantly manage the overall gain amount. The more tube stages, the more cascading gain stages, and the more gain.
 - **High-Cut Frequency:** Captures the essential *Miller effect** and uses one simple knob to adjust the amp's bandwidth. The higher the knob setting, the less extended the high-frequency response will be in the preamp's tube stages.
 - **Low-Cut Frequency:** Cathode capacitance adjusts the bandwidth of lower frequencies. Higher the knob is set, the less extended the bass response will be in the preamp's tube stages.
 - **Bias Adjust:** Lowering the bias adjust control will provide a cleaner tone, while higher settings will provide a warmer tone.
 - **Three-Band Post Filters:** Custom designed filters positioned after the distortion tube stages. Can boost or cut the bass, mid and high frequencies are the tube-simulation stages.

*Miller effect** - Accounts for the increase in the equivalent input capacitance of an inverting voltage amplifier due to amplification of the effect of capacitance between the input and output terminals.
- **Tone Stack:**
 - **Tone Stack Topology:** With each tone stacking being individually designed to shape the tone of its amplifier, experimenting by changing and adjusting the tone stack can fulfil a huge array of different sonic applications. These tone stacks are; *American Clean, American 5153, American Tweed, Tweed Bassman, British Top Boost, British Crunch, British Modern, German Fireball, American Treadplate, Bass GK, Bass American, Bass British, Bass Blueline, Bass Equalizer, Acoustic Equalizer, Studio Equalizer.*
 - **Tone Stack Controls:** The tone stack controls will appear differently depending on the tone stack topology you select.
- **Poweramp:**
 - **Power Supply Section:** This section models the power supply sag effect.
 - **Rectifier (Solid State vs Tube):** A tube rectifier has internal resistance. The more current that travels through a tube rectifier, the more the voltage drops. When the voltage drops, the power of the amplifier also drops. This results in an amp with less headroom, but one that provides flattering compression. A solid-state rectifier has no internal resistance whatsoever. It has a very consistent, fixed voltage drop that occurs both at zero and full current. When an amplifier needs power at low frequencies, there will be no limit to the

current that travels through the rectifier. This results in an amp with more headroom for a punchier, more in-your-face sound.

- **Rectifier Tube Type:** Different types of rectifier tubes provide different levels of AC to DC conversion. Certain tubes will produce more sag when pushed hard which is desirable for certain sounds, while others will provide results from the opposite end of the spectrum and produce many of the most-loved characteristics of tube rectification.
- **Input Knob:** Adjusts the input gain within a +/-12dB range. Combined with the compression knob, the input knob controls when the amplifier will start to sag.
- **Ratio:** Sets the amount of compression.
- **Attack:** Sets how quickly the power supply sag will kick in in response to the guitar signal.
- **Release:** Sets how quickly the power supply sag will return to its normal condition.
- **Compression:** Sets the threshold at which the power supply sag will kick in.
- **Reduction Meter:** Virtual analog meter displays the current amount of compression (in dB).
- **Output:** Adjusts the output level within a +/-12dB range. Allows for compensation of loudness increasing/decreasing due to the power supply sag effect.
- **Transformer:** This module models the response of different types of transformers.
 - **American Style:** Produces the leanest bottom end and spotlights the upper midrange.
 - **British Style:** Slightly fuller low-midrange band and enhanced highs compared to the American style transformer. Perfect balance of presence and warmth.
 - **Fat Style:** Custom designed transformer that extends both the bass and high frequency responses whilst broadening the midrange band for excellent saturation and a full sound.
- **Cab & Mic:**
 - **Cabinet Model:** Select your desired cabinet model from the drop down menu.
 - **Mic Model:** Select your desired microphone from the drop down menu.
 - **Mic X/Y Position:** Simulated the microphone's position relative to the speaker. You can drag the mic left, right, up or down.
 - **Mic X/Z Position:** Simulates the distance of the mic from the speaker.
 - **Level:** Controls the output level of the cab module. Adjusts the amp's overall level.
- **Eight Band EQ:**
 - **Frequency & Gain:** Drag the EQ point left or right to adjust the centre frequency of the peaking filter. Drag it up to increase the gain of the filter, and down to decrease.
 - **Q:** Changes the bandwidth of the filter from 0.1 up to 18.0.