Gallien Krueger 800RB

Plug-in Manual

Developed by Brainworx in partnership with Gallien Krueger and Distributed by Universal Audio.

Introduction

The 800RB is your go-to bass amp for deep, punchy, in-your-face tones heard on countless records. Known for a clean and transparent body with just enough grit, Gallien Krueger's revolutionary bi-amped design was the first of its kind, currying favor with bands ranging from Red Hot Chili Peppers, to No Doubt and Slipknot. Having separate gain knobs for each 100W and 300W amp allows total control over the character of high– and low-end tone, making it easy to customize just the right amount of bass or bite. A whopping four-band Active EQ plus three Voicing Filters further articulates your tone to deliver anything from huge bottom end to growling attack.

Brainworx are proud to present this exacting emulation of Gallien Krueger's highly sought-after masterpiece. Using advanced modeling techniques, along with Universal Audio's Unison™ preamp technology, the 800RB plugin delivers the tone and body of the original amp in true form, along with several indispensable modifications for the digital world.

Our onboard FX rack features a Noise Gate that can tame pickup hum or buzz, Amp Filters that allow cutting of low-end rumble or high-end hiss, and a Power Soak stage that adds even more drive—letting you play high gain even at low output levels. Also included are 64 pristine Recording Chains. These perfectly captured impulse responses from several boutique cabinets that were recorded through our vintage Neve console via a dizzying array of high end and vintage microphones and coveted

outboard gear. This process results in a plugin that gives you with "record ready" tones instantly.

Each Recording Chain is described in detail using the RC Info button, displaying the cabinets, mics, and processing that was involved when painstakingly sculpting this sound. The 800RB plugin features two of these Recording Chain modules, allowing you to individually tweak the character of each amp, while including useful tools like Phase Invert, Solo, and an Auto mode which switches chains for you in time with your song—so you can keep playing until you find the perfect fit.

In a marriage between hardware modeling know-how and Universal Audio's Unison preamp impedance modeling technology, the 800RB plugin delivers all the tone and feel of the original amp while allowing the performer to play at near-zero latency. It's so precise, you'll swear you are playing through a physical amp.

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Features

- Full range or bi-amped design with adjustable crossover allowing high– and low frequencies to be amplified separately.
- Two separate Master volume controls for both 100W and 300W power amp models.
- Four active EQ bands for precise tonal shaping.
- Three Voicing Filters - Low Cut, Mid Contour, and High Boost - allow further shaping of overall frequency response.
- Additional Master volume control for tailoring overall levels (plugin only feature).
- Two dedicated Recording Chain modules for each power amp - each containing 64 speaker cabinet impulse responses that were captured in the Brainworx studio using the NEVE VXS72 console, stellar outboard gear and world class microphones - including controls for Phase, Solo, Auto Select, and Recording Chain tooltips.
- FX Rack Features Noise Gate, Amp Filtering and internal Power Soak.
- Officially licensed by Gallien Krueger.
- Unison™ Technology for Apollo Interfaces.

The main applications for this plug-in are

1. Recording DI bass into the GK800RB using Apollo's Hi-Z input with Unison technology, then editing and processing them in a DAW.
2. Practicing at home with minimal latency (in Apollo's Console, for example), via your studio speakers, a home stereo system, headphones or a real bass amp and cabinet.
3. Playing live via a real power amp and speaker setup.
4. Playing live, plugged straight into a live console and / or an in-ear system.
5. Re-Amp less than perfect DI bass tracks, previously recorded with other amp simulations.

Setting Up Your Sound

You can use the amp section of this plugin exactly like you would operate the real GK800RB tube amplifier. Plug in your bass (via your Apollo interface in this case), adjust Gain, Tone and Volume... and Rock'n'Roll!

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Helpful Hints

- Don't be afraid to experiment with the EQ on your bass first. Make sure that you have as close to the sound you want from your Bass before adjusting the EQ on your amp.

- Set your playing level first. You may want to push up your volume and boost levels while dropping back the masters. This will give a fatter sound but can add distortion. For the cleanest possible sound, operate the masters near or on „10" (max).

- You may have to experiment with the crossover point and the relative levels of the high and low masters. It is best to adjust them before the EQ. If the crossover confuses you, try switching off of the bi-amp mode and set up your sound in the full range mode first.

- Once your basic levels are set, work with the voicing filters. The Lo Cut is a bass roll-off and is used to control stage rumble at high volume. Mid Cut puts a notch at about 500Hz, giving a mellow round sound. Hi Boost adds edge and definition.

- Having set your levels and filters you are ready to fine tune your tone. This is an involved procedure requiring you to use your ears to tell you what is right. We have broken the sound spectrum into four basic bands and provided active controls for each. Adjustment procedures are iterative and require patience. After you have adjusted the Eq, you may want to fine tune the crossover and master controls.

Unison Technology

The GK800RB plugin was developed with the Apollo series interfaces in mind and made compatible with Unison preamp technology. Of course, the GK800RB will work with any UAD-2 device, but to experience ultra-low latency along with important impedance, gain 'sweet spots', and circuit behaviors of the real amp, you need an Apollo interface. In order to do this, you should insert the GK800RB in the preamp insert position of Apollo's Console application. This will greatly enhance your experience, making the tone and behavior of your sound an exacting replication of a physical bass amp.

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Using the GK800RB in recordings

A good producer's trick is to also use a real Bass Amp (a small combo, for example) for real-time monitoring in the control room during tracking while recording only the DI bass signal. Then use the GK800RB plugin when you play back the recorded tracks together with the rest of your music. You will need to split the dry bass signal so it can be recorded in the computer and routed to the real bass amplifier input at the same time.

To play and record dry DI bass tracks with the lowest latency and the highest quality possible, connect your bass to the Hi-Z Input of the Apollo interface or connect a quality DI Box and Mic Preamp to a line input of your Apollo Series interface.

If you insert the GK800RB plugin in the Console software mixer (to use the plugin with the lowest possible latency) you have to decide whether you want to record processed bass amp sounds (click the Insert Eeffects switch to Rec in the Apollo console) or whether you only want to record the dry DI bass signal, while monitoring the processed amp sound during tracking, of course (click the Insert Effects switch to Mon in the Apollo console).

The advantage of only monitoring the processed sound is that you can alter the settings of your amp and FX completely during mixdown. If you find out later that less or more Gain would sound better for your song you can still make that happen.

The advantage of recording pre-processed bass tracks might be that you will need fewer plugins during mixdown, as your bass tracks will be ready to be mixed. All you can do then is EQ and compress the recorded bass tracks, or add effects, just like you would with traditional bass amp recordings. Once you know 'your sound' you may even save some time by recording processed bass tracks and using them without further tweaking or fiddling around... your band mates or your producer may even appreciate this.

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The Controls of the Amplifier Section

1 Input -10db

When engaged, this reduces the gain of the input stage by 10 dB.

2 Volume

This control adjusts the input level. It is the first gain stage.

3 Lo Cut

When engaged adds a High Pass filter with a Cut Off frequency of 200Hz. Ideal for controlling low-end rumble.

4 Mid Contour

When engaged, this switch adds a notch at about 500Hz, giving a mellow round sound.

5 Hi Boost

Adds a shelving filter to the signal path, boosting frequencies above 1KHz. Adds edge and definition.

6 Treble

This parameter boosts or cuts frequencies around 4KHz, adding or removing edge and definition.

7 Hi Mid

This parameter boosts or cuts frequencies around 1KHz. There is a lot of frequency content in this band. It works on the lower harmonics of your instrument and affects the punch of your sound.

8 Lo Mid

This parameter boosts or cuts frequencies around 250Hz. Basically, this band affects the body of your sound.

9 Bass

This parameter boosts or cuts frequencies around 60Hz. It affects only the bottom end and will be used to account for varying room acoustics.

10 Boost Power

This switch engages the boost section, which applies gain to the post-EQ signal, increasing the overdrive/distortion.

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1 Boost

This parameter adjusts the level of the boost control.

2 Crossover Frequency

Adjust the Crossover Frequency between the 100W and 300W power amplifiers.

3 Bi-amp Power

Engage the bi-amp mode, enabling both the 100W and 300W power amplifiers.

4 100W Master

Master level for the 100W power amplifier.

5 300W Master

Master level for the 300W power amplifier.

6 Master

This is the main master control. Its effect is applied to the combined output of the Low Master and Hi Master. When set to 0 dB, the100W Master and 300W Master behave as they do in the original hardware.

The Controls of the FX Rack

Noise Gate

7 Closed LED

When lit this LED indicates that the Noise Gate is Closed. This means the Threshold setting is higher than the incoming signal and the noise gate dims the output signal of the amplifier by the amount adjusted with the Range control.

8 Noise Gate On / Off

Enable or disable the Noise Gate completely. When switched upward, the Noise Gate is activated.

9 Threshold

The Noise Gate will dim the output signal of the amplifier when the input signal falls below a certain level. This level is called Threshold. Adjust the Threshold so the noise of the overdriven amp will be reduced, but make sure not to set it so high that you lose the sustain on long notes or chords.

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1 Range

The output level of your amplifier will be reduced or muted when the input signal falls below the Threshold setting. You may dim the output level only by a few decibels (dB), or completely mute the output when the gate is engaged by setting the Range to its maximum.

Amp Filters

2 Tight Filter

With the Tight Filter, you can cut low frequencies of either the DI guitar signal (Pre) or the processed amp output (Post).

- **Pre:** If your pickups produce an unintentional rumbling bass sound you can filter the low end before the DI sound even hits the amplifier.
- **Post:** If you want to cut some of the low end of your amplifier setting (maybe even only temporary) you can use this studio quality High Pass filter to reduce the bass.
- **Off:** When set to Off the Tight Filter is in bypass mode.

3 Smooth Filter

With the Smooth Filter, you can cut High frequencies of either the DI guitar signal (Pre) or the processed amp output (Post).

- **Pre:** If your pickups catch a lot of hiss or noise you can filter the high end before the DI sound even hits the amplifier.
- **Post:** If you want to cut some of the high end of your amplifier setting (maybe even only temporary) you can use this studio quality Low Pass filter.
- **Off**: When set to Off the Smooth Filter is in bypass mode.

Trim

4 Input Gain

If you want to drive the input of the GK preamp harder or softer you may adjust the Input Gain to your liking. Some single coil pickups from older or vintage guitars may deliver low level output that can be compensated with the Input Gain. The opposite goes for a lot of heavy metal style humbuckers. If you have recorded the DI signal too hot or if you are using other plugins before entering the GK amp plug-in you may want to dim the input signal. With most standard bass guitars, you can and should leave this setting at 0.

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❶ Power Soak

In the real world, power soaks are being used to reduce the volume of a power amp. This way you can crank up a (tube) power amp to drive it until it starts clipping, and still record at a volume which will protect your hearing and keep the neighbors friendly. A clipping tube power amp adds distortion and harmonics to the signal. A fully cranked up tube amp tamed in volume with a power soak will sound different than the same amp with the master volume turned down. We have modeled the behavior of the GK power amp, so you may experiment with different settings of the Master Volume of the amp and the internal Power Soak. We recommend a setting of roughly -10dB for most scenarios.

Recordig Chains

Brainworx Advanced IR Technology

Simply select a speaker and a complete studio setup by browsing through the Recording Chains pull-down menu. In the past two decades Brainworx owner Dirk Ulrich has produced and recorded with members of DREAM THEATER, TOTO, MICHAEL JACKSON, and with many more famous and infamous acts. The

Brainworx Studio in Germany (www.brainworx- studio.de) is equipped with one of only nine NEVE VXS 72 consoles ever made, and it also hosts some of the best outboard EQs and mic pre-amps available. Using this impressive setup Dirk has produced a huge variety of customized 'Recording Chains' for the GK800RB amplifier, which you can apply to your Plugin amp settings. Imagine a selection of 64 perfectly mic'd and EQ-ed cabinets that you can select and use instantly with a single mouse click! We carefully placed up to 12 microphones on each cabinet used. These mics were then fed to individual channels on the vintage Neve VXS console. This configuration gave us fine control over the mix of the various microphones used and the ability to apply Neve filters and EQs. The final mix was routed to Pro Tools for recording. An innovative new approach was also used to capture various pre-amps and EQ chains. A parallel chain was created that was split to three different hardware preamps and EQs. These parallel chains were also routed to their own discrete channels on the Neve VXS console and then sent to Pro Tools for capture. This routing allowed us to record each chain individually or blend them for interesting combinations

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The external gear we used:

1. Chain: The legendary German Telefunken V76 Preamp connected to the Massenburg GML 8200 EQ
2. Chain: AMEK 9098 channel strip
3. Chain: SSL 4000 E Series with Black EQ

Many amp simulations give you some captured impulses of a selection of cabinets and microphones, then they leave it up to you to EQ and further process these incomplete setups by mixing different microphone setups, adjusting phase and EQ, and so on. But this really is not an easy job; it takes years of experience to get it right.

Now all you have to do is select the Recording Chain that sounds best for your amp channel and setting, adjust the Tone Stack and Gain and you're good to go. Recallable, reliable, flexible and fast.

And if for any reason you should not like any of the Recording Chains the Plugin offers, you may use the very last setting (labeled No Recording Chain) and use your own mic'd cabinet or external IR software. This setting will also give you the sound of a tube amp wired straight into a console, which also may be a nice effects sound.

1 Horn On/Off

The Gallien Krueger 2x10 speaker cabinet included a GK-Paragon horn which contributed that classic attack tone. We've created a separate impulse response for the horn and added this on/off switch so the sound of the horn can not only be added to the impulse responses of the 2x10 cabinet, but any of the provided cabinets whether the original had the horn or not.

2 Phase Inv.

This feature will invert the signal of the Recording Chain, reducing potential phase issues that may occur. Try using this control if you feel your signal lacks weight or focus

3 RC Info

The RC Info feature showing you exactly what kind of setup was used to produce the Recording Chain you selected.

4 Solo

This feature allows you to independently isolate and audition the 100W and 300W Recording Chains.

1 + / - Switches (Plus / Minus)

Browse through the Recording Chains by either using the pull-down menu of the Recording Chain text box (see above) or just click through the settings using the '+' and '-' symbols.

1 Auto & Bar selection

If you are trying to find the best sounding Recording Chain for your song it can be a hassle to have to play a few chords, grab the mouse to select the next Recording Chain, play a few notes again, grabbing the mouse again, etc.

For this reason, the GK800RB offers you Auto mode: Just select a pattern (1 Bar, 2 Bars or 4 Bars) and the plug-in will activate the available Recording Chains automation, following the actual tempo setting of your DAW. You can now play uninterrupted and simply listen to the sound of the various Recording Chains as the plug-in switches through all of them every single bar, every two bars or every four bars, depending on your setting.

As soon as you hear the speaker setup you like best just stop Auto mode by clicking the Auto button again and manually select the desired Recording Chain. Afterwards just fine-tweak the Tone Section and Gain and there you are.

Cabinets we used for the Recording Chains

- Gallien-Krueger 115SBX-II 400W - 1x15" GK-Paragon 15B400A-8 Woofer / GK Paragon GK 5H50-8 Tweeter
- Gallien-Krueger 210SBX 200W - 2x10" GK-Paragon GK 10B100-16 Woofer / GK-Paragon 5H50-8 Tweeter
- Ampeg SVT 15E 200W - 1x15" Custom Designed Speaker
- Ampeg Heritage B-15N cabinet - 1x15" Custom Eminence Speaker
- Ampeg SVT-410 HLF 500W 4x10 Custom Designed Speakers
- Ampeg SVT 810E 800W - 8x10 Eminence Speakers
- Marshall 1960TV Lead 100W - 4x12" Celestion Greenback G12M-25

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Top Toolbar

❶ Undo / Redo

You can undo and redo changes you made to the controls of the GK800RB plugin at any time. The Undo / Redo will work for as many as 32 steps. This makes experimenting and tweaking knobs easy. If you don´t like what you did... just undo it.

❷ Settings (A/B/C/D)

The GK800RB amp plugin offers four internal settings (A/B/C/D) which will be stored with every preset. So, one preset can contain up to four amp and effects settings.

You may use similar amp settings with more or less bass, different Recording Chain settings, etc., to quickly switch between different sounds. The Settings can be automated in your DAW.

❸ Copy / Paste

To set up variations of similar sounds you don´t have to dial in all the parameters several times. Let´s say you like your setting A and want to use the same sound, just without Horn, as Setting B:

• Simply press Copy while you are in Setting A.
• Switch to Setting B by pressing 'B' in the Settings section.
• Press Paste, now Setting B is identical to Setting A.
• Bypass the Horn. Done.

Now you can switch between A & B and play the same sound with or without Horn.

❹ FX Rack

Toggle between FX Rack and Standard view.

❺ About

Information about the development of the plugin.

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Factory Presets

We have made a lot of presets for the GK800RB plugin, many of them have been made to work perfectly with your bass. These presets are only intended to give you an easy start and to demo some of the tones you can get out of the plugin.

Creating Your Own Sounds & Presets

When you start to create your own sounds the most important elements to adjust are the Tone Section and the Recording Chain Section.

- Set the controls of the Tone Stack to the center position ('12-o-clock').
- Play through as many Recording Chains as you like and pick the one that sounds closest to what you are looking for before altering the knobs.
- Once you found the Recording Chain you like best for your sound, start tweaking the Tone Stack, Crossover and The Master Volume to fine tune your amp settings.
- Add Horn or activate the Filters, the Noise Gate, etc. for variations of your sounds.
- Have fun!

Experiment, be creative. We are confident that the different tone selections of the amp and the huge selection of Recording Chains will offer you many possible combinations that will sound great on a big variety of musical styles and genres.

Combine the GK800RB amp with other plugins (dynamics, effects, room simulation), and you will be able to create countless world-class production-ready guitar sounds in the box. Enjoy.
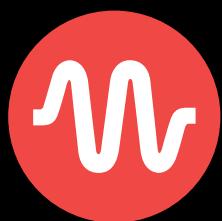
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