

STUDIO DEVIL – VIRTUAL GUITAR AMP USER’S GUIDE

(Version 1.5, October 2011)



THANKS FOR USING STUDIO DEVIL!

Thanks for using Studio Devil Virtual Guitar Amp, the ultimate vacuum tube guitar amplifier modeling plug-in!
We know you're going to love the way you sound with Studio Devil!

TECHNOLOGY

Studio Devil's Virtual Tube Amplification is a breakthrough in vacuum-tube amplifier modeling technology. Our patented tube-modeling process is based on the dynamic characteristics of real 12AX7A vacuum tube preamplifier stages, the building blocks of the world's most coveted tube amplifiers. By accurately mimicking this preamp tube stage, virtually any tube amp can be built through unique configurations and combinations of them. Virtual Guitar Amp represents just a few of the infinite number of virtual amplifiers that can be built with this technology.

When you play through Studio Devil Virtual Guitar Amp, you will notice that it responds just like a real tube amp. The tone is rich, simple, and inspiring. And, the dynamic gain structure reacts to your fingers and picking style, allowing expressive playing, just like the real thing! You'll be amazed at how good your tone sounds playing through StudioDevil's virtual tube amplifiers. Until now, digital never sounded so...analog!

So...enjoy the newly found warmth of digital...enjoy StudioDevil!

INSTALLING YOUR STUDIO DEVIL PLUG-IN

If you purchased Studio Devil as a download then you will first need to open and extract the downloaded .ZIP file (for Windows users) or .DMG file (for Mac OSX users). If you purchased Studio Devil on DVD/CD-ROM, just insert the disc into your CD/DVD drive and open its folder to access the installation files.

After opening your CD/DVD drive folder (or unzipping your download), you will see two installers. For Windows, double-click "Setup.exe" to begin the installation. On Mac systems, double-click the "Mac Installer.mpkg" to begin the installation.

Installation of your Studio Devil plug-in is pretty straightforward. The only key point is that in some cases you will need to know or specify where your Studio Devil plug-in will be installed. Your Studio Devil plug-in is installed into the following default folders...

WINDOWS INSTALLATION FOLDERS:

WINDOWS (VST 32-bit)	C:\Program Files (x86)\VSTPlugins\Studio Devil\Virtual Guitar Amp\
WINDOWS (VST 64-bit)	C:\Program Files\VSTPlugins\Studio Devil\Virtual Guitar Amp\
WINDOWS (RTAS)	C:\Program Files (x86)\Common Files\DigiDesign\DAE\Plug-Ins\

MAC INSTALLATION FOLDERS:

Mac (VST)	/Library/Audio/Plug-Ins/VST/
Mac (Audio Units)	/Library/Audio/Plug-Ins/Components/
Mac (RTAS)	/Library/Application Support/Digidesign/Plug-Ins/
Mac (RTAS Presets)	/Library/Application Support/Digidesign/Plug-In Settings/

In most cases, these folders will automatically be recognized by your host application. But, in some cases, you will need to add the appropriate folder to your host application's list of plug-in folders. Consult your host application's documentation for instructions on how to do this, if necessary.

ACTIVATING YOUR STUDIO DEVIL PLUG-IN

Before you can use your Studio Devil plug-in, you need to activate it by getting a **LICENSE KEY** from our web server. Only YOU are entitled to activate your product. You are entitled to install and activate this software as many times as needed, but you are limited to using it on one machine at a time. If you plan on using this software on multiple machines at the same time, you will need to purchase additional serial numbers. Contact customer support at support@studiodevil.com if you need to request additional license keys or if your activation fails.

The following are step-by-step instructions on how to activate your plug-in and get you up and running quickly:

1. Insert your Studio Devil plug-in into your host application and open it. If you are running the plug-in for the first time, you will see the following screen:



If you do not have a serial number, you may run the demo-mode version of the plug-in by clicking **RUN AS DEMO**. If you choose to purchase a serial number at a later time, you can resume this activation by clicking **ACTIVATE** from demo mode:



2. When you are ready to begin, enter your serial number and click **NEXT**:



Remember to write down and keep your serial number in a safe place! You will need it if you ever wish to re-install your Studio Devil plug-in in the future.

3. Your Studio Devil plug-in will now display your **INSTALL CODE**:



Write down this code or copy it to the clipboard by clicking **COPY**. You will need it for the next step. When you are ready, click **NEXT**.

4. Your Studio Devil plug-in will now display instructions on how to bring your **INSTALL CODE** to our web server for product activation:



5. Launch your web browser and go to <http://www.studiodevil.com/activate> to display our product activation web page. Enter or **PASTE** the **INSTALL CODE** you just obtained into the space provided and click **GET LICENSE KEY**.
6. The Studio Devil web server will now respond with your **LICENSE KEY**. Write down or **COPY** your **LICENSE KEY**. You will need it for the next step.
7. Return to your Studio Devil plug-in and click **NEXT**:



8. Your Studio Devil plug-in will now ask you to enter the **LICENSE KEY** you just obtained from our web server:



Enter or **PASTE** your **LICENSE KEY** in the space provided. When you are finished, click **NEXT**.

9. That's it! Your Studio Devil plug-in is now activated!



Click **NEXT** to begin using Studio Devil!

If you ever need to contact customer support, you will need your serial number and license key. You can always get these by clicking **ABOUT** on the front panel of your licensed Studio Devil plug-in. This brings up the "About" screen that displays your serial number and license key:



License keys change every time you install your Studio Devil plug-in onto a different computer, or when you re-install your Studio Devil plug-in onto the same computer after a fresh operating system installation. In these cases, you will have to re-activate your Studio Devil plug-in as described above.

You are entitled to unlimited activations per purchase. But, you may only use this software on one machine at a time. If you need to run this software on multiple machines, you may contact Studio Devil to purchase more licenses.

CONTROLS

The controls of StudioDevil's Virtual Guitar Amp are pretty easy to understand. We designed them to be intuitive, simple, and able to give you the tone you want quickly. If you've used a guitar amplifier before, then you already know how to operate them. But just in case, here's a description of the controls, what they do, and how to use them to sculpt your tone:

AMP SWITCHES



The **STYLE** switch, **CHANNEL** switch, and **BOOST** switch all work together to select the type of amplifier you're looking for. Here's how they work:

STYLE SWITCH: The "style" switch allows you to select a range of amps that all sound like that particular style. There are 3 settings to choose from:

- **CLASSIC:** This setting selects amplifiers that sound like vintage, lower-gain amps. These will typically be lower gain amps with a mid-rangy sound and crunchy tones. This is a good place to start for clean and "older" distortion sounds.
- **BRITISH:** This setting selects amp styles based on Marshall and other British amps. These feature scooped out mids, higher gain, and a brighter sound. They're perfect for blues, rock, and leads.
- **MODERN:** Like the name implies, this setting selects newer amp styles. These modern amps feature higher gain, thicker sound, and more aggressive tone.

CHANNEL SWITCH: The "channel" switch works just like "channel-switching" on real amps. It allows you to completely reconfigure the amp modeling gain structure and tube arrangement to change the amount of distortion or gain and tone. There are 3 settings to choose from:

- **CLEAN:** Clean tones are just that...clean with little or no distortion. Perfect for jazz, blues, or anytime you want a soft, clear tone.
- **CRUNCH:** This channel brings up the gain and delivers nice amounts of distortion. This is a great channel for rhythm tones and bluesy leads. The tone is open and the gain is not too high which allows expressive dynamics. This is the setting used most often.
- **LEAD:** The lead channel takes the gain "over the top" producing really high sustain and a feather-like touch that really makes your solos fly! This channel is essential for solos and heavy rhythm tones.

BOOST SWITCH: Turning this switch on has the effect of increasing the overall gain. It's not just a gain booster though! In some cases, it adds an extra tube gain stage; in others it even completely changes the amp model. But the overall effect is the same: when you find an amp that sounds great but just needs a little bit more gain...where can you go from there? It's one louder. Flipping the BOOST switch on gets you there.

AMP MODELS

For those of you that like to know what amps are under the hood of Studio Devil, the following is a list of the amplifiers that Virtual Guitar Amp is designed to mimic:

STYLE SWITCH	CHANNEL SWITCH	BOOST SWITCH	AMP MODEL
Classic	Clean	Off	1. Fender Twin
		On	2. Fender Twin with Bright Boost
	Crunch	Off	3. Vox AC30
		On	4. Vox AC30 with Cathode Cap Gain Mod
	Lead	Off	5. Peavey Classic 30 (normal)
		On	6. Peavey Classic 30 (added lead stage)
British	Clean	Off	7. Marshall JTM45 Clean Channel
		On	8. Marshall Bluesbreaker
	Crunch	Off	9. Marshall JCM800 (stock)
		On	10. Marshall JCM800 (extra tube & bright cap mod)
	Lead	Off	11. Laney VH-100R (normal)
		On	12. Laney VH-100R (lead)
Modern	Clean	Off	13. Matchless Chieftain
		On	14. Matchless Chieftain (extra tube mod)
	Crunch	Off	15. Mesa Boogie Dual Rectifier
		On	16. Soldano SLO
	Lead	Off	17. Marshall JMP-1 Rack Preamp
		On	18. Marshall JMP-1 Rack Preamp with Scoop Boost

AMP KNOBS



The amp control knobs help you tweak your sound until it's just right. Here's a bit about what they do and how to adjust your sound:

GAIN: This knob controls the amount of guitar signal that's fed into the amplifier. Turning this control up (to the right) means more gain, more distortion, more clipping, more compression, and more sustain. Turning the gain knob down (to the left) results in a cleaner tone, less distortion, but more dynamic responsiveness. In some amp models, this knob also mimics the effects of gain knob capacitors, which controls a bit of the high-frequency distortion. But, whichever amp model you choose, remember that Studio Devil acts just like a real tube head...you can also use your guitar's volume knob to achieve similar results. Experiment with both your guitar's volume knob and the gain control to see what works best with your playing style!

TONE CONTROLS: (BASS, MIDS, TREB, PRES) These tone settings control the bass, mid, treble, and presence frequencies between the preamp and power amp stages. Although these knobs control the settings of the "tone-stack", a circuit in tube amps that sets the tone of the guitar, you can think of these controls as a simple four-band EQ. In actuality, each amp model has a different tone "circuit" and you will find that these tone controls react differently when you change the setting of the STYLE and CHANNEL switches. But it's all about tone...experiment until you find what works best for your sound!

DRIVE CONTROL: You can look at this control as the ‘Master Volume’ of the amp. It sets the amount of power amp soft clipping that occurs at the very end of the signal processing chain. This has the effect of compressing the sound and increasing the apparent loudness of the amp. Turn this knob to the left for a sound more like a preamp recorded direct, or turn it to the right for more of that “miked up” power amp sound.

CABINET SWITCH



Without a guitar speaker cabinet, guitar distortion would sound thin and harsh. The “cabinet” switch allows you to select a basic cabinet modeling filter to get the effect of hooking your amp up to a real guitar cabinet. There are 3 settings to choose from:

- **STACK:** This setting emulates a miked-up 4x12 cabinet. It has lots of bass and a metallic, flangy tone characteristic of the big stacks we all love. This is the best setting for thick, loud tones.
- **COMBO:** This position is for a sound more like the smaller practice and stage amps featuring open-back, single 1x12 configurations. This sound is thinner, more mid-rangy, and “boxier” than the STACK setting, but it makes for great crunchy tones and helps solos cut through the mix.
- **DIRECT BOX:** This setting acts like a speaker simulator **BYPASS**. It allows you to shut off the Studio Devil cabinet to use your own speaker-modeling plug-ins and impulse modelers. There are a lot of really great speaker modeling plug-ins out there, and we want you to be able to use them to get your sound with Studio Devil! So if you chain our plug-in with other power-amp or cabinet modeling plug-ins, make sure you set this switch to the DIRECT BOX setting. That way, you won’t get the clashing effects of two speaker cabinets running together!

NOISE GATE



Let’s face it. You can’t have a great amp with tons of sweet-sounding gain without dealing with some kind of noise. Even the world’s best tube amps have some hiss, buzz, and hum. Well, not surprisingly, since Studio Devil accurately mimics these amps, it also suffers from the same noise problems. You can try to keep this down to a minimum by using professional pickups and high-quality sound interfaces, but even the best equipment won’t eliminate noise entirely. It’s just a part of tube amplifier life.

But not to worry! You can use the built-in noise gate to tame that annoying hiss and get the quiet guitar tracks you're after! Here's a description of the noise gate's controls and how to use them:

- **THRESHOLD:** This knob sets the level where the noise gate "kicks in" and it acts like a bouncer at a club. It only lets signals bigger than the threshold through, and stops anything lower. This is how you use it: Turn the knob all the way counter-clockwise to turn off the noise gate (this lets all signals through, loud and soft). Then, during a quiet passage of your track (or while your guitar is plugged in and on but not playing anything), turn the knob slowly to the right (clockwise) until you hear the hiss/noise fade away. If you hear some more noise later, turn the knob up a little more (to the right), or if your guitar begins to cut off or sound choppy, turn it down a bit (to the left). Be careful not to turn the THRESHOLD up too much or the gate won't let anything through...even your guitar! Well, that was easy, wasn't it?
- **ON/OFF SWITCH:** If you have another noise gate plug-in that you like better, and want to save some processing power by turning off the Studio Devil noise gate, flip this switch to the OFF position.

Well, that's it for the controls of Studio Devil's Virtual Guitar Amp...pretty straightforward and simple. But the main thing to remember is this is all about tone and getting a great sound. Experiment with the controls until you find what you like. And take your time to listen and play a while through your changes. You will find that Studio Devil reacts just like real amps, small changes in your settings add up to a very different feel and texture of your sound. Keep tweaking until it's just right!

STANDALONE - STUDIO DEVIL LIVE

Until now, if you just wanted to play around with Amp Modeler Pro, even if you weren't doing any recording, you had to launch your favorite recording host and use Studio Devil as a plug-in. Well, not anymore.

Introducing Studio Devil LIVE, an application that lets you run your Studio Devil plug-in in standalone mode...meaning all you have to do is launch it, and you are up and running. No more host. No more complicated setup.

Ready to play Studio Devil LIVE? Here's how to get started:

INSTALLING STUDIO DEVIL LIVE

Installing and running Studio Devil LIVE for your plug-in is easy. Here's what to do:

FOR WINDOWS USERS: Studio Devil LIVE is already installed when you run the Setup.exe that is included with your plug-in download. This installer installs both the Studio Devil LIVE application as well as your VST and RTAS plug-ins. The Studio Devil plug-in installer creates a Start Menu folder in Start Menu->Programs->Studio Devil that lets you launch the Studio Devil LIVE application for your plug-in. The installer also gives you an option to put a shortcut for this application on your Desktop. After installation, simply click on either of these shortcuts to launch Studio Devil LIVE.

If you lose these shortcuts, you can find the Studio Devil LIVE application for your plug-in here:

../Program Files (x86)/StudioDevil/StudioDevilPlug-InName/StudioDevilPlug-InName.exe

FOR MAC USERS: After opening the DMG file that comes with your Studio Devil download, you will see two files: An installer package (for installing your AudioUnits, VST, and ProTools plug-ins), and a Studio Devil LIVE application (which is for running Studio Devil LIVE). To install Studio Devil LIVE, simply drag the Studio Devil LIVE application to your Applications folder, or drag it to your Desktop, or wherever you want. Then, when you want to launch Studio Devil LIVE, simply double click on this application and you are up and rockin'!

LAUNCHING STUDIO DEVIL LIVE

Before launching Studio Devil Live LIVE, make sure your preferred sound interface is plugged in and powered on. Studio Devil LIVE will look for your audio devices on launch, and give you a list of them to choose to use as your input and outputs. Make sure the device you intend to use with your guitar and speakers or headphones is ready and has the proper drivers installed. If not, then your device will not be available for use with Studio Devil LIVE.



Now, to get started, simply click on the Studio Devil LIVE application. On PC, this will be installed in your Start Menu under Program Files->Studio Devil. On Mac, you will have probably dragged it either onto your Desktop or into your Applications folder. Either way, look for where you placed it, and double-click on it...your LIVE AMP is moments away!

When launching Studio Devil Live for the first time, the application will prompt you to select your input and output devices (see AUDIO CONFIGURATION below). Simply choose the input and outputs you want to use and click OK. If your preferred devices do not appear in the selection boxes, EXIT the application and make sure the correct device is plugged in, powered on, and has the proper device drivers installed.

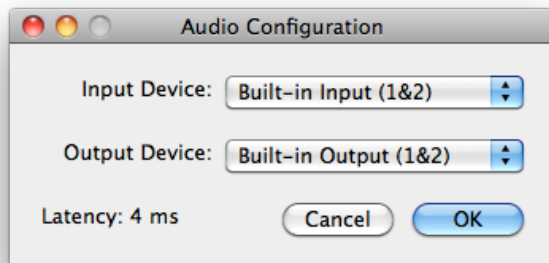
Once you click OK, Studio Devil LIVE will then begin streaming your real-time, low-latency amp modeling through the devices you choose, automatically using 44100Hz sampling and the lowest available latency for the interface you select. Studio Devil LIVE remembers the settings you choose so that each time you come back to launch Studio Devil LIVE AMP, you don't have to reselect anything. After the first initial setup, rockin' with Studio Devil is then only a double-click away!

AUDIO CONFIGURATION

Studio Devil LIVE remembers your selection of audio input and output devices so that you don't always have to set them up each and every time you launch the application. But, there may be times when you want to change your selections, such as when you buy a new interface, use someone else's hardware, or maybe you just want to try a different driver type. To pull up the dialog box that permits you change your audio setup, click on the AUDIO CONFIGURATION option found under the CONFIGURATION menu. (On Windows systems, use the AUDIO CONFIGURATION option under the SETUP menu.)



Also, keep in mind that if you launch Studio Devil LIVE and it fails to find your previously selected input and output devices (such as if you forgot to plug it in, or you just don't have it anymore), or when you run Studio Devil LIVE for the first time, then you will be automatically taken to this AUDIO CONFIGURATION menu.



Either way, once the AUDIO CONFIGURATION dialog box appears, you will be given the options to choose your INPUT and OUTPUT devices. On Windows systems, you will also be asked to choose your DRIVER type.

Choose your devices from the pull-down select boxes. As you make changes to your selections, Studio Devil LIVE tries to determine the actual latency of your current selection. When available, it will display the latency in milliseconds. If this fails, then it will try to display the performance as "Good", "Fair", "Poor", or "Unknown" depending on the results of the internal tests. Try to choose an interface and driver combination that results in the lowest latency, or at

least display's "Good" in the dialog box. On Mac systems, this is usually not a problem. On Windows systems, you will most likely want to use ASIO drivers, since they usually provide the lowest latency. If your sound interface does not have ASIO drivers, search the Internet for ASIO4ALL, a universal ASIO driver that may help.

When you have made your selections, click the OK button to save your changes. Now the next time you launch Studio Devil LIVE, it will look for these new devices by default.

Now, just plug in your favorite axe, and get playing with Studio Devil LIVE!

HOW TO USE THIS PLUG-IN (and a bit about re-amping)

Sure, amp modeling plug-ins replace the time-consuming process of trying many guitar amps and speaker combination until you get the right sound. But what happens if later in the mix you find that the "right" sound isn't quite so right after all

and wish that you could change the amp settings or speaker cabinet. This is called re-amping and is where the real power of amp plug-ins shines. Let see how it works...

In the old days, some guys had a pretty neat idea. Instead of plugging a guitar into an amp, they plugged it directly into the recording console. That way, the guitar's pickup was recorded directly to tape. Then, when playing back the recording, they could patch the "pickup" track into any amplifier during mixdown, and get sounds just like if the same guitar was playing through it. By doing this, the engineers had full control of the guitar sound. They could decide the type of amp and cabinet, the amount of gain and distortion, even the cabinets and mic placement DURING the mix. Before this, if you recorded a guitar with a lot of distortion, and later wanted to remove it, you had no choice but to re-record the track. But what happened if the track was a take of a lifetime and was ruined by a thin amp setting...oh well. Well, that was some of the motivation for creating re-amping, which, stated again, is simply to record the guitar's pickup directly, and then pump that direct signal into real amps during mixdown.

Well, now you can do the same thing with virtual guitar amps. Just connect your guitar's output jack (which is the pickup output) directly to your sound interface's instrument (Hi-Z) input. Then, add StudioDevil's Virtual Guitar Amp to the track's playback effects. Now you should be set to record the guitar's pickup directly to the hard drive, while listening to StudioDevil on playback...with all the freedom of changing sounds whenever you like. And, with a low-latency sound interface, you can even hear the amp model during your recording take, without committing the sound of the amp to disk!

Recording new guitar tracks is not the only use for Studio Devil's Virtual Guitar Amp. You can even use it to modify existing tracks. But keep this in mind: StudioDevil VGA is an emulation of a guitar amplifier. This means it has been designed to work best with guitar tracks that have been recorded direct, meaning just the guitar plugged straight into your sound interface. This doesn't mean it won't produce good effects on other guitar tracks, especially tracks that were recorded clean, but you might be disappointed if you try to use it on tracks that have already been recorded with another tube amp (just like you'd probably be disappointed if you plugged the output of one tube amp into the input of another). We don't want to discourage experimentation, but we have a good idea of what works here...direct guitar works best. Also, few singers plug mics into Marshall half-stacks, but hey...you never know! The best part is you can always undo whatever you try with the click of the mouse!

SETUP TIPS

Here are a few tips about setting up your Studio Devil plug-in for the best sound...

HI-Z INPUT: Always use a good quality sound card/interface with a Hi-Z input. The Hi-Z input allows you to connect a guitar directly with a ¼" guitar cord without degrading the guitar's output signal. If you don't already have a sound interface with a Hi-Z (or "Instrument") input, invest in one...you'll need it!

SETTING A GOOD LEVEL: The idea here is to get the highest possible input signal without clipping your sound interface. This insures that you get all the nice tube-like distortion from the Studio Devil, and none of the nasty digital clips from your sound interface. At first, turn all the volume and tone knobs on your guitar all the way up for the strongest signal. You may even want to switch to the "Neck" pickup which typically has a higher output as well, but this isn't necessary. Then, once you're setup and plugged in, start strumming the guitar a little harder than you think you'll be playing normally. While strumming hard, adjust the input trim control on your sound interface so that you get the highest signal possible without any clips. Once it starts to clip, back off the sound interfaces input level just a touch. If you still get too many clips, turn the input level down on your interface a little bit more, but don't turn the level down too much, or you won't get the best sound out of the amp modeler. This is the same basic technique for recording any other traditional tracks, but some extra care is needed here, where the distortion and tone from Studio Devil's dynamic amp modeling shouldn't be clouded by harsh digital clips or lost by poor utilization of the dynamic range of the sound interface.

LATENCY: Try to use a sound interface that has a low-latency drivers and hardware. This way you can record though Studio Devil Virtual Guitar Amp in real-time! Studio Devil VGA has been designed to keep the processing demand on the CPU as low as possible, to allow even slower hosts to run the amp model in real-time...but if your driver is slow, you'll still hear a lag. Try ASIO drivers, too...they're sometimes faster!

REVERB & DELAY: We decided not to throw in a couple of no-frills reverbs and delays, since your host should come with some of the best ones out there anyway...plus, we figured why re-invent the wheel when we can spend our time inventing something better: great tone with digital vacuum tubes! But, you'll find that adding a little touch of your favorite ambiance reverb or guitar solo delay is really going to fatten up your tone...try it!

There's not much else too it...except to pick up your favorite axe and start laying down the best directly recorded guitars tracks of your life! Remember, when you sound good...we all sound good!

SPECIFICATIONS

- Compatible with VST, Audio Units, and RTAS audio hosts (Mac/PC).
- 4x Up-Sampling Multi-Rate Processing Engine
- 64-bit Internal Floating-Point Precision
- 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, and 192kHz sampling rate support.

VISIT US

Remember...we're dedicated to getting the best digital guitar tone. If you dig the tone you're getting from Studio Devil VGA, be sure to check our website often. We have a lot of great stuff in the works, and want you to find out about it as soon as possible...

www.studiodevil.com

(visit often!)