



SITRAL Klangfilter W295 Equalizer

Years ago, Dan was in a studio working on a rock record. There was a pair of grey, dingy-looking EQs in the rack. The assistant engineer didn't really know much about them, other than that they were old and German. Dan put them across a heavy guitar submix and started twisting knobs.

"These things were capable of doing things to the mids of guitars that were insane. You could do tons of boost and it stayed sounding sweet. You could crank up the bass and things got huge down there. You could push more signal into them and they added a warm purr to everything. I remember thinking to myself, 'These are the best EQs I've ever heard. How do I get some?'

Turns out getting some wasn't easy. They're incredibly rare—built for a limited time in the 1960s and 70s, and whoever has them doesn't sell them. And if you find them, they're over the top expensive.

So Dan decided to make his own. And here ya go! Enjoy!

The SITRAL Klangfilter W295 is a collection of three vintage solid-state equalizers from the 1960s.

The W295 has a high and low shelf and a boost only midrange peaking EQ.

The W295A has the same high and low shelving but the midrange is a tilt EQ.

The W295b also has the high and low shelving, but the midrange is a boost and cut peaking EQ.

The bottom end is tight, the highs are glossy, the midrange is incredibly smooth and gorgeous. The originals featured stepped controls. Ours have that as well as continuous sweep, and a bunch of other features that make them more useful to you in your studio.

There are all sorts of vintage EQs out there. None of them sound like the SITRAL Klangfilter W295, and our W295 is the most accurate and versatile. It sounds like the real thing, saturates like the real thing, and has those additional tweaks you've come to expect from Korneff Audio.

Speaking of the real thing



The real thing were hardware equalizers designed and built by Siemens & Halske AG in 1960. They were for the German broadcast market. In fact, they were developed to fundamentally upgrade the German broadcast industry.

SITRAL equipment was among the earliest audio equipment that was fully solid-state—SITRAL stands for **Sil**izium-**TR**Ansistor-**L**eiterplattentechnik, which translates to Silicon Transistor Circuit Board Technology. Look at you! Speaking German!

The previous generation of broadcast equipment, like the V72 mic preamp, was tube-based. The SITRAL line included EQs, compressors and limiters, filters, mic preamps, even entire consoles.

The W295 was an active, inductor-based EQ that's transformer balanced, accomplishing its magic using **discrete transistor op-amp gain blocks** rather than monolithic integrated circuits, which is the technology that followed it. It was a blend of classic passive EQ concepts with what was state-of-the-art solid-state amplification at that time. SITRAL equipment was revolutionary.

This gear was ridiculously overbuilt. Gold-plated switches. MIL-spec components. Internally balanced. The resulting products were constructed like tanks, sounded fabulous and were reliable as heck. They were also ridiculously expensive. In 1966 a single W295 module went for around \$1050. By contrast, a 1966 Volkswagen Beetle cost around \$1300. A full SITRAL console could cost as much as a house.

The SITRAL sound was low noise and distortion, with a tight bottom end, smooth highs and a forward midrange, and overall a beautiful musicality.

In the 1970s, solid-state technology advanced, becoming smaller and less expensive. SITRAL consoles were broken up and parted out. Many W295s wound up in mastering studios, as the extreme high quality and tight manufacturing tolerances meant there was very little difference between any two channels. If you're going to run your entire mix through something, it might as well be the best thing possible.

SITRAL equipment set an incredibly high audio quality bar, and British studios and manufacturers, like EMI, Trident and Neve, recognized this. Manufacturers had to figure out a way to step up, and borrowing concepts pioneered by Siemens was one way to do it. As an example, SITRAL introduced a diode-bridge compressor, the **U273**—the first transistorized compressor in history—in 1960. Neve introduced its own 2254 diode-bridge compressor in 1969. Coincidence?

How does one make a precision model of a 295?

Korneff Audio does it by dissecting the entire circuit and figuring out the mathematical equations that are the result of the various components—resistors, capacitors, inductors,



transformers, transistors—all interacting with each other. This is actually how analog gear works.

In a piece of analog equipment, the signal is moving at just under the speed of light. It is essentially everywhere in the circuit simultaneously. This means that if you change a setting, like the amount of gain on a low shelf EQ, it affects EVERYTHING in the entire circuit, from the input to the output—all the individual components soldered to the circuit board, even the speaker plugged into it. The math all over the circuit changes all at once.

If you want to digitally model that change of gain on a low shelf EQ, the cheesy way to do it is increase the amount of gain on that EQ “block” and that’s it. The way we do it is to figure out the effect that change has on everything in the circuit and model that. Dan figures out all the math for the entire circuit, tests it, and programs the plug-in to do that analog math.

In essence, what happens in our plug-ins is that the processing simultaneously solves equations for all the subsections of the circuit at whatever the sample rate is. So, if you’re at 48kHz, that math is happening 48.000 times a second.

The result is that our plug-ins “breathe” and respond like an actual analog piece of hardware, with all the subtle coloration caused by the interaction of all the different components of the entire circuit.

How does the plug-in sound?

It sounds like the hardware. You can bounce a Deutschmark off the bottom-end; it's so tight. Crank up the lows and it gets HUGE. The highs are sweet and airy. If you roll them off, the result isn't dull so much as it is less bright.

The original units were designed for speech—these things were in radio stations, after all—and this shows in the way the 295 handles the midrange or Präsenz region. These EQs are beautifully smooth, even in harsh frequency regions like 2.5 to 8kHz. To our ears, there's no midrange EQ that sounds as good as that on the SITRAL W295.

Our plug-in also replicates the saturation and coloration of the original units, and gives you precise control over that. You can make your W295 as clean as it was designed to be or as nasty as you need it.

But even at its nastiest, the W295 sounds gorgeous.





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SPECIFICATIONS

Minimum System Requirements

Quad Core i5 Processor

4GB of RAM

Mac OS X 10.14 or Later

Windows 7 & Above

Linux minimum: Ubuntu 18.04 LTS or equivalent (x86-64)

Linux recommended: Ubuntu 20.04 LTS or later, Debian 11+, Fedora 36+, or any modern distribution using glibc ≥ 2.28

Supported Plug-in Formats

Intel Mac 64bit: VST3, AU, AAX

Windows 64bit: VST3, AAX





PREFACE TO THE MANUAL

In the past, our manuals have had a Quick Start section to get you going. This one doesn't: it's a three-band EQ so it is a very familiar thing to you. It IS the best EQ you've ever heard, and we mean that seriously, but conceptually, you know what this is.

However, for as simple as it is, it is also quirky, and because we (well, mainly Dan) can't help ourselves, there are all sorts of tweakable tidbits of joy all over the place. Those things do need explaining. So, this manual starts on the front panel, goes to the back panel, explaining things and offering usage tips and tricks along the way.

The Usage Ideas section is less about specific tricks and more about an overall gestalt (Ooo! German word! Kinda means "an overall way of thinking." Kinda.). Ideas on how to approach the plug-in, some technical factors to consider. A bit of a lesson but a gentle one.

Really, the only thing you need to know is this thing sounds amazing and you should use it all over the place. It is that good.

W295 EQUALIZERS



The SITRAL KLangfiler W295 is a collection of three different 3-band EQs. Each EQ has a High and Low Shelf, and a midrange EQ of some type. We'll cover all of this fun starting now.

High and Low Shelving EQs



All three W295 variants have the same high and low shelving EQs. These are vintage Baxendall EQ curves, precisely matching the musical characteristics of the original hardware units. The highs are very smooth and airy. The lows are big yet tight. The W295 overall sounds musical yet under control.

High Shelf and Low Shelf gain are self-explanatory. Turn clockwise to increase gain in 3dB steps, counterclockwise to attenuate gain.

High Shelf has two frequencies—the original 15kHz and our addition, a 20kHz “air band” setting. Regardless of the frequency you pick, this EQ sounds marvelous on the high end. Totally schweet.

Low Shelf also has two frequencies, 40Hz and 100Hz. Use 50 when you want to feel it—perfect for kicks and really low bass parts. The 100Hz setting makes things huge down there very quickly.



Gain on the hardware unit was stepped. Click **CONTROLS** to switch between STEPPED and VARIABLE operation. For the Shelves, GAIN will be sweepable, while FREQUENCY remains a choice of two per band. On the midrange EQs, both GAIN and FREQUENCY will adjust continuously across their full ranges.



Need more gain, or more precision to the gain controls? Use the **RANGE** knob—it allows you to multiply or divide the amount of gain by up to a total gain of +/- 15dB. The purpose of range is more about fine control than massive amounts of gain, letting you fine tune either stepped or swept setting.

Range knob use idea: set your gains and frequencies to get a sound you like, even if it is too much or over the top. Use the RANGE to fine tune the gain settings in the mix without having to touch your individual gain knobs, maintaining the balance between the three bands. This is very handy. Setting RANGE to a low multiplier also helps make the SITRAL more subtle for mastering applications.

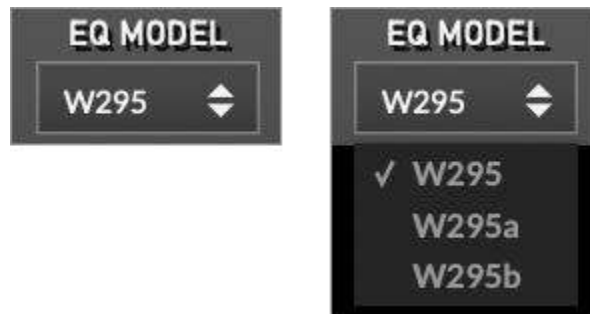


The two channels can be linked or unlinked by using the **LINKING** control. When linked, changes made to either channel affect both channels. When UNLINKED, the two channels are adjustable independently of each other. This applies to all from panel equalization controls, including gain, frequency selection, range, etc...

Midrange EQ



Our plug-in models all three variants of the W295, each of which have a different midrange EQ band option.



Use the **EQ MODEL** switch to select the W295 with the midrange most appropriate to your application.

W295 - The Original SITRAL Boost Only Midrange EQ



The original W295 had a boost only midrange or “Präsenz” band. This is a dead giveaway of the unit’s original design purpose: equalization for broadcast voices. The midrange curve has a wide bandwidth at low gain settings, narrowing a bit as gain increases.

This model is a wonderful choice for lead instruments—vocals, guitars, horns—when you know you’re going to be wailing on that midrange and need it smooth as silk.

The **FREQUENCY SELECTOR** gives you a choice of five frequencies (700Hz, 1k, 1.5k, 2.5k and 3.5k). The **GAIN** Selector gives you 2dB options up to 8dB of boost. Use the RANGE control when you need more gain or precision.

Click on CONTROLS and set it to VARIABLE to make GAIN and FREQUENCY selections fully sweepable.

W295b - Boost and Cut Midrange Equalization



Very similar to the W295 is the W295b, which provides additional, slightly different frequencies (700Hz, 1k, 1.5k, 2.3k, 3.5k and 5.6k) and adds the ability to cut as well as boost. The W295 and the W295b sound very similar, although there are subtle, audible differences as the circuits of each are slightly different. Remember that analog equipment reacts to itself, so a change of components in one area of a circuit changes aspects of the entire circuit. We've modeled these differences.

Use the W295b for corrective EQ—its midrange frequencies extend higher than the original W295, making it useful for controlling harsh frequencies in the 4-6kHz range (cymbals, sibilance, etc.). The added flexibility of the W295 makes it especially useful in sound design applications.

Need a great vocal sound? W295b to fix resonance or sibilance issues with the voice, into a compressor like our Pawn Shop Comp, followed by another W295 instantiation for final sweetening.

The original units had stepped gain and frequency controls. Ya know why? Because Siemens wanted accuracy and repeatability, so each different setting required a specific set of resistors, capacitors and inductors wired together to get the desired response. Another reason why these things were so expensive.

But, as mentioned earlier, you can switch the controls to VARIABLE using the CONTROLS switch. Click it, and dial in 2.3 dB at 1276 Hz all you want. Or keep it stepped and accept the sound of the unit as it was meant to be and give up some control to the universe.

Remember that RANGE control if you need more gain.

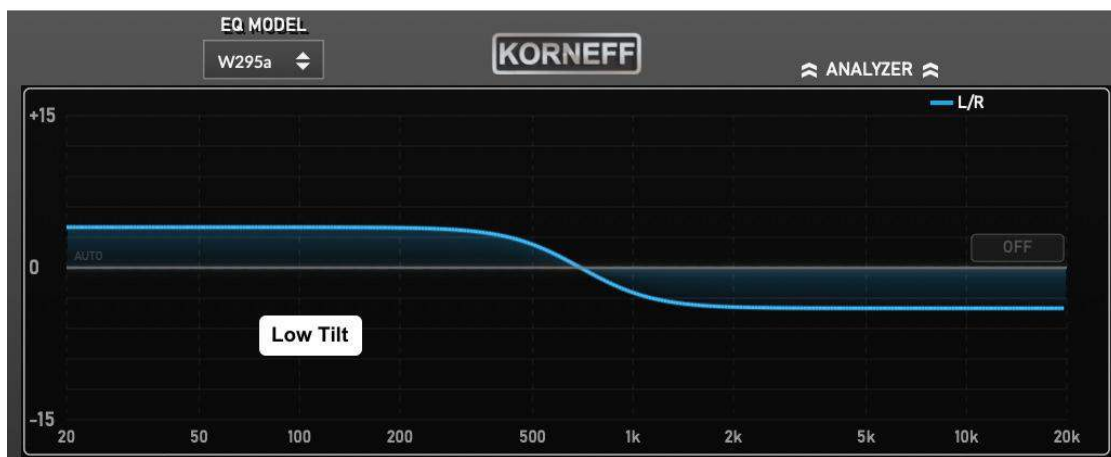
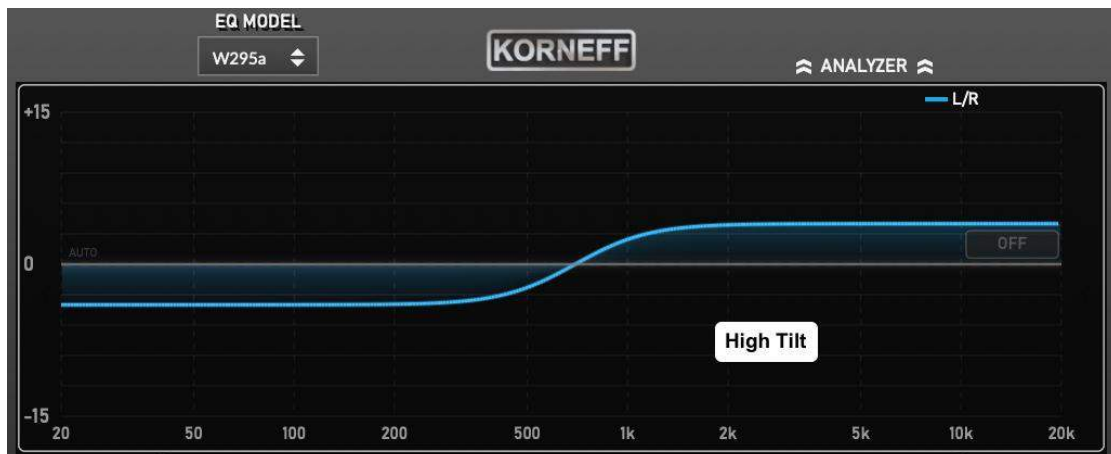
W295a - A Tilt EQ



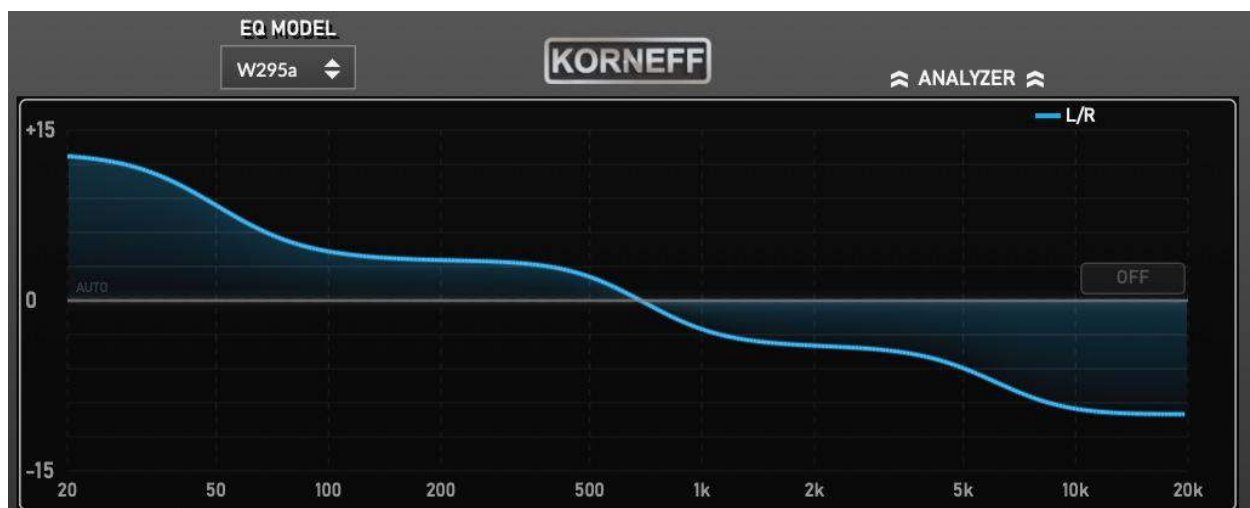
This model swaps out the midrange EQ for a Tilt EQ. Tilt EQs do not get enough love. Prepare to fall in love.

Tilt EQs work like a Seesaw, adding boost to one frequency range while cutting another. So highs go up, lows go down, lows go up, highs go down. It does this with complementary shelving - when you boost the highs, it simultaneously cuts the lows by the same amount (and vice versa). This maintains a constant overall energy while shifting the tonal balance.

So, turning the GAIN 2dB to the right adds a high shelf boost starting at 700 Hz and a low shelf cut starting at 700Hz. Turn the GAIN to the left and you get the reverse—a low boost and a high cut. A picture is worth a thousand words.



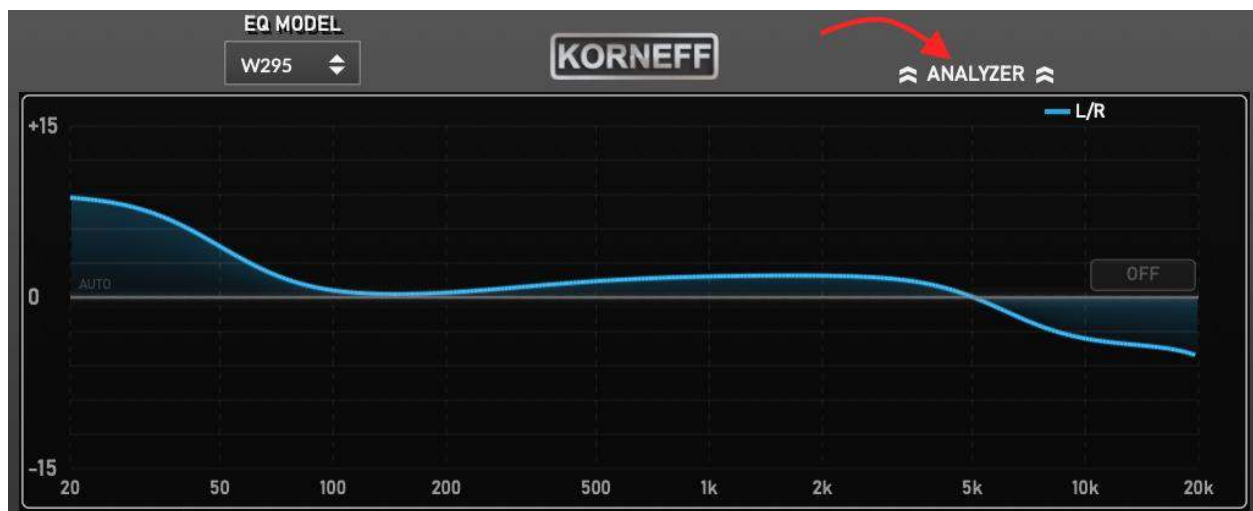
This is amazingly useful. Something too thick in the mix? Tilt it to the right. Too thin? Tilt it to the left. And you still have additional shelving for the highs and lows, which lets you make interesting EQ curves like this:



Try doing that with a 1073 knock-off!

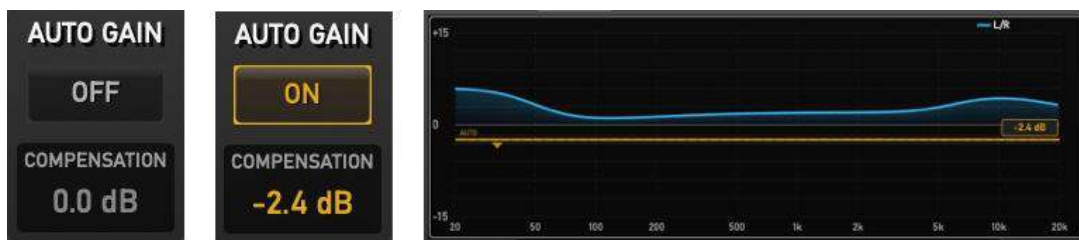
The W295a is a natural fit of use on buses and even in mastering situations. Throwing a bunch of W295a's on all your buses and then going to tilt town is a great way to feel out a mix, spot problematic instrument combinations, even a great way to get a hellacious rough mix quickly.

The RANGE control is especially handy with the W295a. Turn RANGE counterclockwise to dial in very small, subtle EQ moves in a critical mastering situation.



By the way, flip the **ANALYZER** on and off at top right. The real time display is handy and it will help you train your ears. It shows the signal flowing through the SITRAL in real time, as well as your EQ curves and the AUTO GAIN situation.

AUTO GAIN



EQ adjustments are gain adjustments in certain frequency areas, and the more extreme the boosting or cutting, the more the output level of the EQ changes. You can compensate for output gain changes using the OUTPUT TRIM, but it's easier to switch in **AUTO GAIN** and let the plug-in worry about it.



A good use of AUTO GAIN is when you're making A/B changes and don't want your judgement thrown off by differences in volume when you switch between settings.

AUTO GAIN also appears on the Analyser as a gold line.

Please note that analog equipment, and top level digital simulations, have a certain amount of unpredictability when it comes to how much a gain change in an EQ circuit might change the overall volume. It depends on the frequency response of the material feeding in, etc.

AUTO GAIN is a very good guess but it's not perfect. Nor is perfection needed for the feature to be very useful.

TRANSFORMERS and BUFFER AMPS

Click the KORNEFF AUDIO nameplate to find additional controls and options... Our SITRAL is more than an EQ.



Hardware SITRAL W295s had two sets of transformers, one on the input of the unit, and one on the output. The transformers were placed in the circuit path to isolate the various sections of the console to reduce noise and hum, but a side effect of transformers is a gentle saturation. When people describe things as sounding warm, they're often talking about the sound of transformers.



The hardware unit also had a Buffer Amp after the INPUT Transformer but before the equalization circuitry. We've precisely modeled that as well. And of course, we added a bunch of options for your experiments.

The Backpanel options are universal for all three W295 models.

TRANSFORMERS



Use the **TABS** to select which transformers you wish to work with. The controls are the same for both **INPUT** and **OUTPUT TRANSFORMERS**.

ENABLE: switches the transformer modeling in and out of the circuit.

COLOR: Is an impedance adjustment, if you want to get technical. Low settings are very clean and transparent. Mid settings impart a subtle warmth. High settings add saturation and a lot of harmonic enhancement.

SATURATION: Sets the threshold at which transformer core saturation begins. At fully clockwise settings, the signal can reach the upper limits of the available headroom before clipping occurs, resulting in a brighter, more aggressive harmonic character. Turning the

control counter-clockwise lowers the saturation threshold, causing saturation to occur earlier and producing warmer harmonics with reduced high-frequency content.

DRIVE: This increases gain into the transformer emulation while compensating on the output to maintain an overall even level. Turn it clockwise to increase gain and overdrive the transformer for more saturation without any change of apparent volume.



TYPE: The original beta test version of the W295 had a simplified transformer emulation with a single control. It sounded great but was out of keeping with the hardware unit's character—it was way too aggressive. We switched to a more accurate and detailed modeling of the transformers, but some of the beta testers (Luke) missed the gnarly original. So, we added it back.

Choose **Sital** for a very accurate representation of the hardware unit. This is a good setting when mastering or when you're looking for clean warmth.

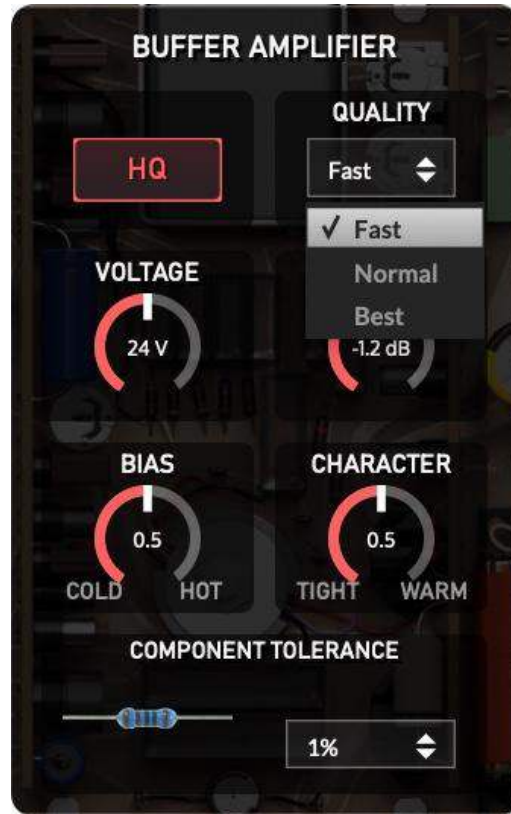
Choose **Korneff** for those times when heads must roll! Smash them drums! Smash that vocal!

Experiment with using the INPUT and OUTPUT transformers individually and together. There are so many sounds to explore in just this one area of the plug-in alone.

A favorite trick is to use the W295 in parallel to the mix bus, with the EQs all set to 0 gain, then set both to Korneff, then crank up the DRIVE controls and mess around til things sound not quite buzzy and awful, and then sneak that up behind the mix. It makes things loud and in your face very quickly.

BUFFER AMPLIFIER

Select AMPLIFIER using the back panel tab.



The Buffer Amplifier is an additional source of color and character, and of course, experimentation and evil tweekery...

VOLTAGE: Running the voltage below 24V starves the buffer amplifier transistors a bit, reducing headroom and adding saturation. Settings above 24V make the amplifier cleaner. Try higher voltage settings with transient rich material if you're looking to get a very clean, present sound. Lowering voltage increases saturation and distortion.

BIAS: Transistors requiring biasing for clean, linear operation. Changing bias is like using lower or higher octane gas—the car keeps running but the performance gets unpredictable and weird. COLD settings underbias the circuit, causing more clipping. WARM settings soften the saturation of the Buffer Amplifier.

CHARACTER: This simulated the effects of different capacitor values on the response of the circuit. TIGHT settings make things brighter with heightened transient activity. WARM settings add a subtle low end emphasis and smear transients a slight amount.

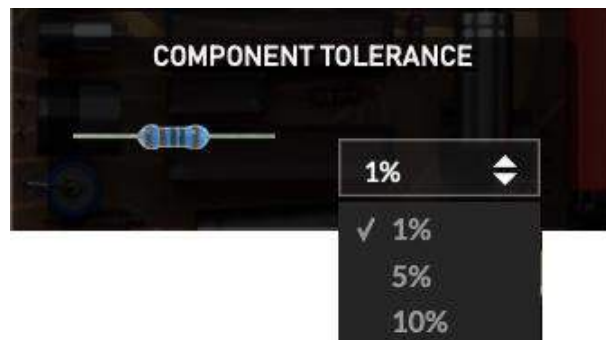
OUTPUT: Well, you might as well overdrive the EQ circuit and see what sort of trouble you can cause. Crank this up to do exactly that.

QUALITY: Modeling the SITRAL W295 was a balancing act between sound quality and realism vs. computer processing power and latency. Our modeling techniques allow us to give you an emulation that is incredibly lifelike and “analog,” but it will require processing power, potentially causing latency and glitching issues. We leave it to you to find the balance between what you want to hear and overheating your computer. Kidding! It won’t do that, but if you don’t have the processing power needed, the performance of your DAW could get very strange.

There are three settings. FAST places the least load on the processor while still providing good quality and realism. NORMAL is more of a load on the processor but the tradeoff is even more analog-like sound. BEST sounds wonderful, but it will tax the processor.

Whichever setting you choose, we recommend that you don’t exceed 2x oversampling as it will cause all but the fastest systems to glitch.

COMPONENT TOLERANCE



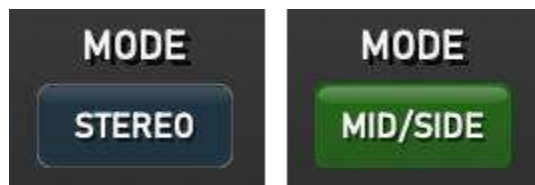
Original hardware SITRAL modules were built to very high standards so that each unit sounded identical to another. However, components wear, and after years of use, two channels might sound very different. That could be a good thing—it might increase left right differentiation and separation. It could also be a bad thing. In a critical mastering application, do you really want one side of the recording to sound very different from the other?

COMPONENT TOLERANCE lets you decide these pressing questions for yourself. 1% means the channels match precisely. 10% means they’re audibly different. Depending on what you’re working on, tolerance might never be an issue, but there are times when you

want to unglue things a little bit more and COMPONENT TOLERANCE allows you to do exactly that.

ADDITIONAL AUDIO CONTROLS

MODE: STEREO and MS Switching



STEREO sets the output of the SITRAL W295 to traditional L-R Stereo, the left channel controlling the left, the right controlling the right if the two channels are set to UNLINKED.

MS processes the output for Middle Side Stereo, which uses phase differences to create a stereo field. The Left channel controls M (MIDDLE), the Right controls S (SIDE). Think of the M as a Mono signal panned down the middle and the S as a Stereo Width control. Pull S down and the output gets tight and mono; pull M down and the signal gets very unstable and phasey sounding.

MS EQing is handy for when you want to heavily process bass signals. Since low end isn't very directional (in other words, it tends to always sound like it's coming out of the center of your speaker set-up), EQing it in MS means the M channel can be boosted for a lot of bass, and the S channels can be cut to minimize low end build up and keep the width of your mix clean. Vice versa also applies: if you want to create a very wide sense of stereo, use W295a and TILT the S signal towards bright and shelf off the bottom and top of the M.

HIGH and LOW PASS Filters



We have thoughtfully included **High-Pass** and **Low-Pass** filters on the output stage of our SITRAL W295. Other plug-in developers don't thoughtfully do this, which is a pity for you because pass filters are handy dandy for getting rid of things you don't want.

The high-pass filter rolls off the low end with a 12dB per octave slope. The cutoff frequency can be set from 20Hz to 400Hz. Don't know what a cutoff frequency is? I shan't tell you!

The Low-Pass filter rolls off the highs with a 12dB per octave slope and the cutoff frequency is adjustable from 2-kHz down to 1kHz. What is a cutoff frequency?

Sigh.... because you asked nicely: the cutoff frequency is the spot where the downward slope of the EQ curve drops -3dB from nominal level. This is similar to the turnover frequency for a shelving EQ, which is the frequency at which the EQ curve is either 3dB above or below nominal level. Things to learn. Aren't you glad you read this part of the manual?

The Filters are on the output of the SITRAL . They follow the linking protocol of the LINKING button, and when set to MS MODE, the left hand module controls the M (Middle) channel, the right hand module manages the S (Sides) channel.

The Pass Filters are good for extreme EQ special effects, like making things telephone-ish or lo-fi, but we like them as a means of cleaning up the bottom end. Adding a lot of Low Shelf and then turning up DRIVE on the transformers can pump a lot of harmonics through the SITRAL, which can result in a very detailed, rich midrange with entirely too much low end. Use the filter to get rid of some of that hugeness without affecting the harmonics that are filling out the mids.

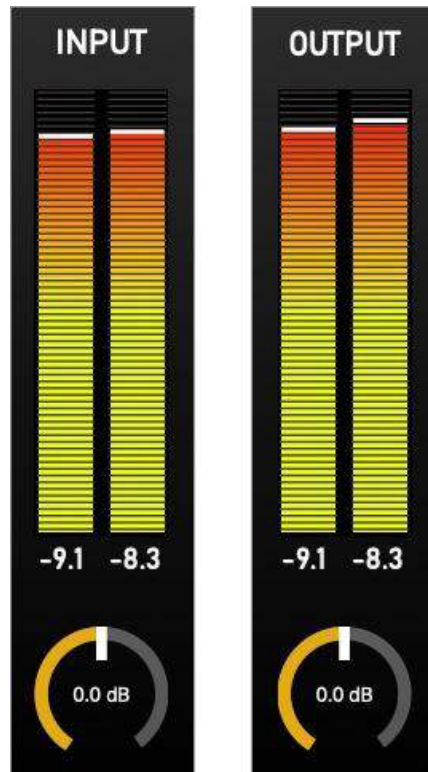
HQ and ENABLE



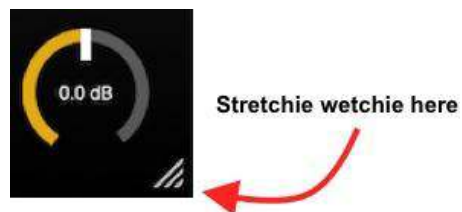
Hang in there—the torture is almost over. **HQ** enables or disables the BUFFER AMPLIFIER.

The **ENABLED** button is an automatable **BYPASS**. Have fun switching the W295 out and hearing how much everything sucks without it. And when you switch it back in, be amazed at how much better not only your mix sounds, but how much more richly beautiful the quality of your life is.

Input and Output Meters and Trims

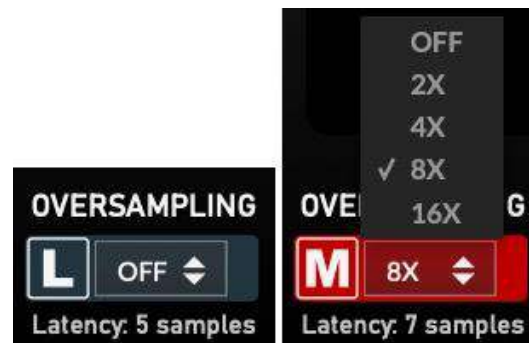


Those bright LED-style ladder meters to either side of the plug-in show you the **INPUT** and **OUTPUT** levels feeding into and out of the plug-in. The meters show dB Full Scale, so the top of the meter is 0dBFS. You can adjust these levels using the INPUT and OUTPUT TRIM beneath each meter. Between the meters and the knob is a digital readout of the peak level.



The triangle at the lower right corner adjusts the width of the plug-in on the screen. Click and hold, move your mouse to the size you need, and release the mouse button.

ADDITIONAL DSP CONTROLS



OVERSAMPLING allows for correction of digital artifacts caused by Aliasing.

Aliasing occurs when processing, like saturation, compressing, clipping, and wave shaping, generate very high harmonics. These harmonics are beyond the range of human hearing, but as they approach and exceed the sample rate of your project, they can “bounce down” into the audible frequency range, where they sound out of tune and harsh. Adjusting the oversampling up effectively increases the sample rate for the plug-in, eliminating the aliasing. Of course, this takes some additional processing, which uses up memory and can affect latency. If you’re hearing aliasing, adjust the OVERSAMPLING to the lowest setting that fixes the issue.

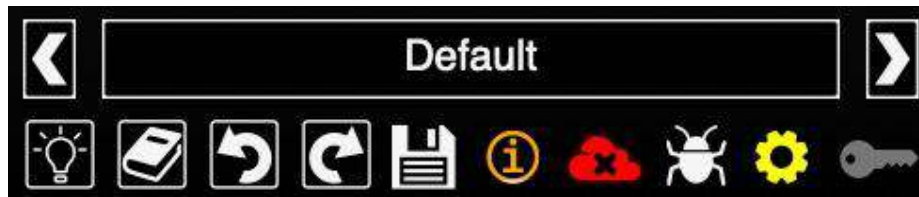
OVERSAMPLING FILTER determines whether the oversampling process operates in Linear-Phase (no phase distortion) or Minimum-Phase (low latency).

L - Linear-Phase Oversampling: This mode preserves phase relationships across the frequency spectrum, making it a better choice for broadband sources, such as a mix bus, mastering, or parallel processing chains where maintaining phase integrity is critical. However, it uses more processor resources and hence introduces more latency, so it's best for mixing rather than tracking or overdubbing.

M - Minimum-Phase Oversampling: This option introduces minimal latency and allows transients to behave in a more musical way, which is often preferred for drums, vocals, and aggressive compression settings where punch and immediacy are desired.

Important note: we said this earlier. If you’re using HQ mode, we don’t recommend using an oversampling setting higher than 2x, unless you want glitching and things of that nature.

UTILITY PANEL



The **UTILITY PANEL** allows you to save and recall presets, futz around with your license situation, and some other stuff. You're not reading this part of the manual anyway, are you?

The **LIGHTBULB** brings up the tool tips, and the **BOOK** opens the user manual, which you are currently reading. Well done! You've mastered the BOOK button and the day is still early! **UNDO**, to the left, undoes the previous setting. **REDO**, to the right, redoes the previous setting... pressing them a lot can be very confusing.

The **DISK** saves the current settings of the plug-in as a Preset.

INFO (letter I in a circle). Click this to see the version number of the plug-in, a list of who did what to make it happen, cooking and household cleaning tips, etc.

UPDATE NOTIFIER (colorful cloud symbol): This indicates whether or not there is an update to your plug-in software. Green means good, and there is more information about this under Activation.

The **BUG** (it looks like a bug) is a link to a place on the Korneff Audio empire where you can report problems with this software. If you don't see the BUG, then it means everything is utterly perfect with our software.

The **GEAR** brings up the Global Settings Panel. There's a section about this coming up next...

Click on the **KEY** symbol to see your license activation options. There's a whole bunch about licensing looming in your immediate future.

Preset Browser

Click on the Preset Name to access the preset browser and load and save presets. The **ARROWS** allow you to step through the presets and audition them. The **DISK** button saves the current setting to the preset library.

The **PRESET BROWSER** has three columns. The column to the far left shows the name of the Bank, the middle column shows the Category, and the third column shows the Preset.



USAGE IDEAS

I don't know what to tell you all about this monster. You can use it on any source or situation—buses, channels, parallel, serial—and it always contributes beauty and something magical.

It is nearly impossible to make a source sound bad with the SITRAL KLangfilter W295. Boost 6kHz by 30dB, and even though it cuts your head off, it's somehow an enjoyable experience. Please! Cut my head off more!

Roll off all the bass. Still sounds good. Wack out the transformers and try to make it sound cheap and lo-fi... and it sounds like beautiful expensive cheap lo-fi.

The W295b is the most "typical" equalizer variation, with a high and low shelf band and a boost/cut midrange peaking EQ. We think of the W295b as a corrective EQ, or a console EQ, because it's general purpose and can do that midrange cutting. It works great for gentle removal of lumpiness in the midrange. It won't get rid of 60Hz hum or a low resonance, but for a helpful contouring, it works like a charm on anything: voices, drums, keyboards, guitars, bass. If you don't know where to start, start with the W295b.

Dan and I both use the original W295 with boost only midrange quite aggressively. There's something about this particular model's midrange and the way it interacts with the shelves that always sounds good. If you need something to nudge forward a bit in the mix, this is the thing to do that. Often we use the W295b for something corrective, then chase that with the original W295 to add the mojo—two W295s in series.

As an example, cut the low shelf on the W295b, the first EQ in the chain, by maybe -4dB at 100Hz. Then, with the second EQ in the chain, boost +6 at 40Hz. You wind up with a dip and damn, it sounds good. And you can play the same games in the mids and top: do a broad cut followed by a more specific boost at a different frequency. Das ist magic.

The W9295a is a tilt EQ. Tilts are very old fashioned, but once you have one, you use it all over the place.

When a client complains, "The drums are too bottomy and dull," and you think, "Well, getting them to sound even this awful took hours because they were recorded by a deaf person while talking on their phone," throw the W295a on the drum bus, and tilt it a tiny bit



towards the highs. Use the RANGE control to make this a very small adjustment. You'll thin out the drums without messing up your original settings, so as the mix progresses and the client changes their mind, you can easily get back to your original sound without doing a recall.

How about this: Put a tilt over the stereo bus and give the client three different mixes: one flat, one tilted high, one tilted low. See what they like best before you drop hours in the wrong direction. Experiment with different tilts on your car stereo tests.

Tilts are handy to have on vocal buses as well—it becomes a piece of cake to give those VOX a bit more snap. Or on a guitar. Endless applications for the W295a tilt EQ.

The saturation options on this plug-in are over the top, and you might be wondering, "Where do I start?"

I think, first you need to decide if you are looking for a touch of warmth and a tiny hint of upper mid clarity, or if you want to really hear some damage. I personally think too many recordings these days have saturation slapped on everything like, "I'm a beginner cook and I just discovered bacon! I use it everywhere! Even on other pork products! Now I'm a chef!" Too many things sound harsh these days: it's all that saturation.

But if damage is what you need, switch both transformers to the Korneff setting and crank up the DRIVE controls and damage you will have. Alleluia! It's raining bacon!

If you're looking for something subtle, start with the INPUT TRANSFORMER, make sure it's set to SITRAL, and nudge the DRIVE up just a smidge. Then get tweaking. Some ideas:

Hearing what COLOR and SATURATION do requires a bit of squinting and really listening. To my ears, COLOR seems to be a more subtle control but at the farther ends of the audio spectrum, while SATURATION seems to do more but in more obvious areas. I tend to set these two opposite each other—COLOR turned clockwise, SATURATION turned counterclockwise—something like that. Both in the same direction can be a bit too much. Experiment and listen, and learn.

The BUFFER AMP... this is where things get very tweaky—this is Dan Korneff's terrain most certainly. If Dan could make a plug-in that lets you automate voltage fluctuations in the



power grid in your neighborhood, there'd be a plug-in available called the KORNEFF GRID DISRUPTOR. The KGD. Hmmm... check back with us on April 1st...

Spend a few minutes experimenting with the Buffer Amp controls and switching it in and out so you can hear what it is doing. It can do a lot. To my ear, it mainly affects clarity in the upper mids and highs, which makes sense: the buffer amp is messing around with the operations of transistors, and that is going to be mostly heard in the highs. Want to screw around with the bass? Go play with the transformers—you'll hear they have a lot more effect on the lows than the buffer amp does.

The BUFFER AMP can't turn the W295 into a fuzz box, but you can get a bit of compression out of it by running the voltage up to around 27 or 28, overbiasing things at around .7 - .8, and then using CHARACTER to emphasize the lows or the highs a bit. You'll get a very gentle compression—like the track takes a step forward to you, and a little bit of saturation because you're overdriving the equalizer circuits which are following it. Again, experiment, listen and learn.

How is all this tweaky insanity possible? It is the way we made this thing. As I wrote in the introduction, analog equipment is very interactive. A signal moves through a piece of analog gear at just under the speed of light. If you adjust an EQ knob, it actually affects the way the input and the output, and everything in between, respond to the signal, if you can believe it. Actually, plugging in different microphones affects how an entire PA system works, if you can believe it. You might not be able to hear it, but it is measurable.

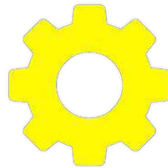
Most plug-ins are built by using discrete blocks of code, kind of like LEGO blocks. LEGO blocks can overall look exactly like something, but if you change the color of one block, it doesn't affect the color of other blocks, or how well they all stick together. A plug-in built from chunks of discrete code can sound very good, but each chunk isn't in communication with other chunks. Turning down the output doesn't affect the input.

Our plug-ins are more like trees. If you do something to the leaves of a tree, the roots react, the bark reacts. We model the analog components and the overall design of the plug-in is that everything reacts to everything else. SO, when you mess around with the Buffer Amp it changes the math in the EQ circuits, as one might expect, but it also affects the Input Transformer, because everything changes everything else.

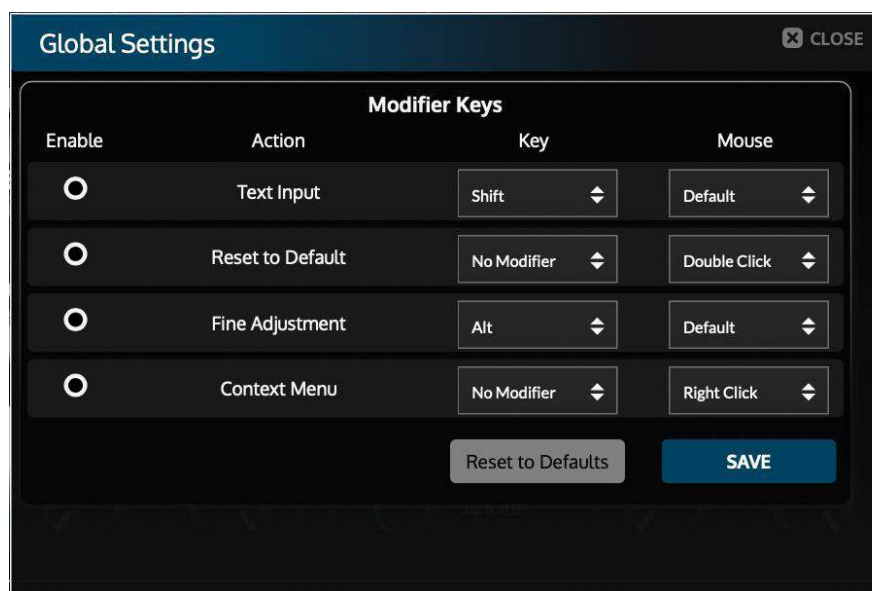
It does require more processing, although the SITRAL KLangfilter W295 isn't a pig of a plug-in in most applications because we've spent the last year refining the code. We think you'll hear the difference.

Actually, we know you'll hear the difference.

GLOBAL SETTINGS



The Global Settings Panel allows you to personalize how you interact with the plug-in's controls by customizing key and mouse modifiers for specific actions. This flexibility enhances your workflow and ensures that the plug-in behaves according to your preferences.



Accessing the Global Settings Panel

To open the Global Settings Panel:



1. Locate the Settings Icon in the application's interface. It typically appears as a gear or wrench icon.
2. Click on the Settings Icon.
3. The Global Settings Panel will appear, overlaying the main application window.

Modifier Keys Section

The Modifier Keys section is the main area where you can adjust settings related to key and mouse modifiers for various actions.

The Modifier Keys section is divided into several columns:

- Enable: Toggle whether an action is active or disabled.
- Action: The specific function you can customize (e.g., Text Input, Reset to Default).
- Key: Select the keyboard modifier key for the action.
- Mouse: Select the mouse action modifier for the action.

Customizing Modifier Keys and Mouse Actions

You can tailor the behavior of the application by adjusting the key and mouse modifiers for each action.

Enable/Disable Actions

- Enable Checkbox: Located in the Enable column next to each action.
- Enabled (Checked): The action is active and will respond to your specified modifiers.
- Disabled (Unchecked): The action is inactive and will not respond, regardless of modifiers.

Selecting Key Modifiers

1. In the Key column, click on the dropdown menu corresponding to the action you wish to customize.
2. Choose from the following key modifiers:
 - Shift



- Alt
- Ctrl
- Cmd
- No Modifier

Selecting Mouse Modifiers

1. In the Mouse column, click on the dropdown menu for the desired action.
2. Select from the following mouse modifiers:
 - Right Click
 - Double Click
 - Default (Single Click or Drag, depending on the action)

Actions You Can Customize

- Text Input: Allows direct text entry for controls.
- Reset to Default: Resets a control to its default value.
- Fine Adjustment: Enables precise adjustments of control values.
- Context Menu: Opens a context-specific menu with additional options.

Resetting to Default Settings

If you wish to revert all your customizations back to the application's default settings:

1. Click the Reset to Defaults button located at the bottom of the Modifier Keys section.
2. A confirmation message will appear: "Key modifiers reset to default. Click 'Save' to apply changes."
3. Note: You must click Save to apply the default settings.

Saving Your Settings

After making changes:



1. Click the Save button at the bottom of the Modifier Keys section.
4. A message will confirm: "Settings saved successfully! Changes applied on next launch."
5. Important: The new settings will take effect the next time you launch the application.

Important Notes

Applying Changes: Remember that changes to modifier keys and mouse actions will be applied the next time you launch the application.

Duplicate Modifiers: The application will alert you if you assign the same key and mouse modifier combination to multiple actions. Ensure each action has a unique combination to avoid conflicts.

Modifier Combinations: Some combinations may not be valid depending on your operating system or keyboard layout.

Troubleshooting

- **Settings Not Applying:**
 - Ensure you have clicked the Save button after making changes.
 - Restart the application to apply the new settings.
- **Failed to Load Settings:**
 - An error message may indicate issues with the settings file.
 - Try resetting to default settings and saving again.
- **Duplicate Combination Warning:**
 - If you receive a warning about duplicate combinations, adjust the key or mouse modifiers to create unique combinations for each action.

By customizing your modifier keys and mouse actions, you can optimize your interaction with the application to suit your workflow. If you have any further questions or need assistance, please refer to the application's support resources.

LICENSING ACTIVATION

Activation is a crucial step in getting your plug-in up and running. In this section, we'll guide you through the activation process, explaining the available options and how to use them.

Activation Options



Upon launching the plug-in, you'll be presented with a set of activation options. Here's a breakdown of the available choices:

Online activation: Allows you to connect to your Korneff Audio account and activate the product seamlessly. This method ensures that your plug-in is always up to date and connected to your account, providing you with the latest features and improvements.

Offline activation: While currently disabled, it will soon allow you to transfer and activate your license on a device that isn't connected to the internet. This feature is ideal for situations where internet access is limited or unavailable.

Please note that offline activation is marked as "Coming Soon" and will be available in future updates of the plug-in.

Buy Now: Clicking this button will take you to the Korneff Audio website, where you can purchase a license for the software. Once the purchase is complete, you will receive your license key via email.

Support: Clicking this button will take you to the Korneff Audio Support page, where you can submit a support request. Fill in the required details and our support team will get back to you as soon as possible.

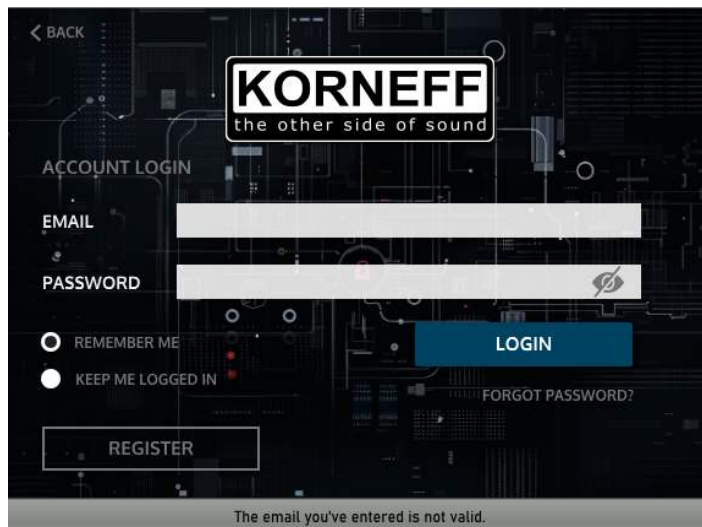
FAQ: Clicking this button will direct you to our FAQ page.

Online Activation



Online activation allows you to easily activate your product by connecting to your Korneff Audio account. Follow these steps to complete the online activation process:

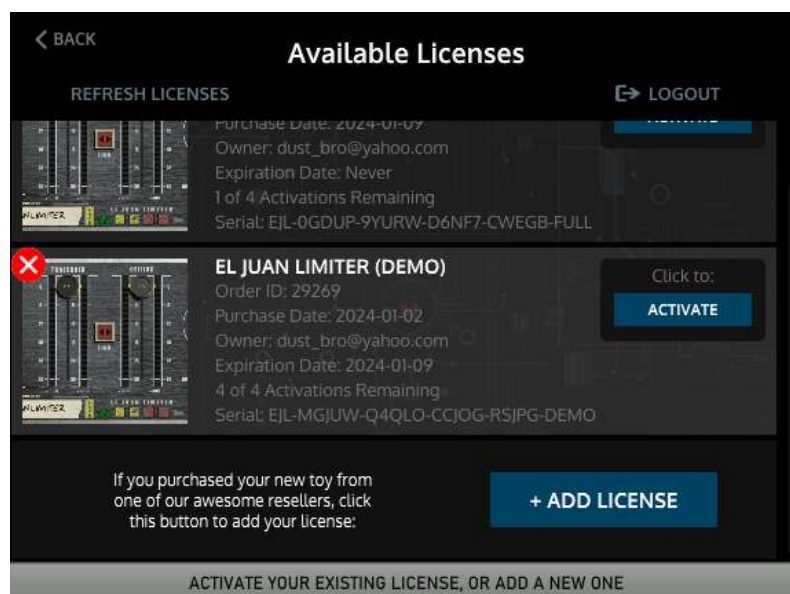
Select Activate: Start by selecting the ACTIVATE option from the activation options panel.



Log In to Your Account: You will be prompted to sign in to your Korneff Audio account if you haven't already. Enter your email and password associated with your account.

Keep Me Logged In: This will bypass the sign-in screen and automatically log you in with your saved credentials.

Activate Your License: Once you're logged in, you'll see a list of your licenses associated with your account.

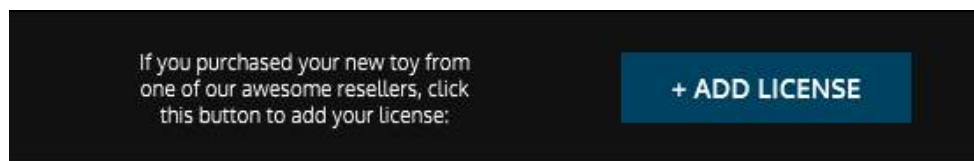


Locate the license you want to activate in the list, then click on the blue ACTIVATE button next to the license you wish to activate. This will initiate the activation process for that specific license.



Add License: If you purchased your product from a third-party reseller, you may need to click on ADD LICENSE to import the license to your Korneff Audio account.

Add License



Once you log in to your account, you can access the Add License panel by selecting the **ADD LICENSE** option from the License panel. This panel is specifically designed for users who have purchased their Korneff Audio product from an authorized reseller.

In the Add License panel, you will find a text input field where you will enter your license key. This key is provided to you by the third-party reseller from whom you purchased the product. Copy and Paste the entire code, including dashes.

Once you've entered your license key, click on the SUBMIT button. This action will send your license key for validation.

The system will validate the license key to ensure it's authentic and associated with a legitimate Korneff Audio product. If the validation is successful, you will receive a confirmation message indicating that your license has been added to your account.

After successfully adding your license, you will be automatically redirected back to the main license panel. Here, you will see your newly added license in the list, ready for activation.

Offline Activation

This option is currently under development and will be added soon.

UPDATE NOTIFICATIONS



The Update Notifier is a tool designed to keep you informed about the status of your software updates. This section outlines the different statuses and panels associated with the update notifier.

Auto-Update Off (Expired): This status indicates that either you've manually turned off the auto-update feature or haven't checked for updates in the last 30 days. When you see this status, it's a gentle reminder to consider enabling auto-updates. Keeping your software up to date ensures you have access to the latest features and improvements.

Update Available: When there's a new update waiting for your software, this status lights up. Clicking on this icon will reveal a panel packed with information about the available update, including its version number, release date, update type, and a detailed description. Plus, you'll find a handy button that takes you straight to the downloads section of your account, making the update process a breeze.

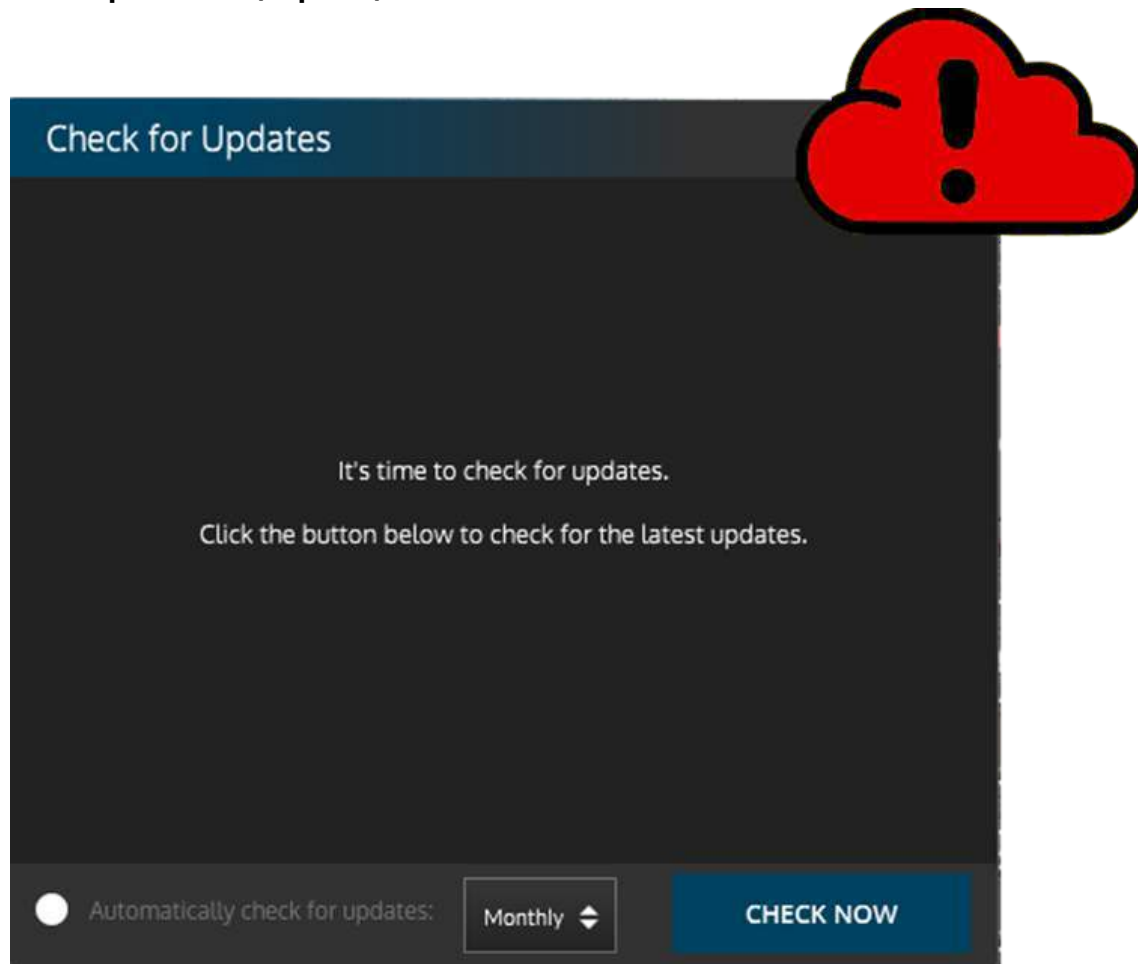
Up to Date: When everything's ship shape and your software is already running the latest version, this status puts your mind at ease. It's a reassuring pat on the back, confirming that you're already on the cutting edge of what your software has to offer.

No Internet Connection: If you find yourself in a digital desert with no internet connection available, this will appear. This status is a friendly way of saying, "Hey, we can't check for updates right now because the internet is out of reach." It's a temporary reminder that you may want to reconnect to the web when it's convenient to ensure you don't miss out on any future updates.

Clicking on the Update Notifier icon

No matter which status the icon displays, clicking on it will trigger a corresponding update panel. These panels provide you with actionable information and options, allowing you to make informed decisions about your software updates. Let's dive into the details of each panel. What fun:

Auto-Update Off (Expired)



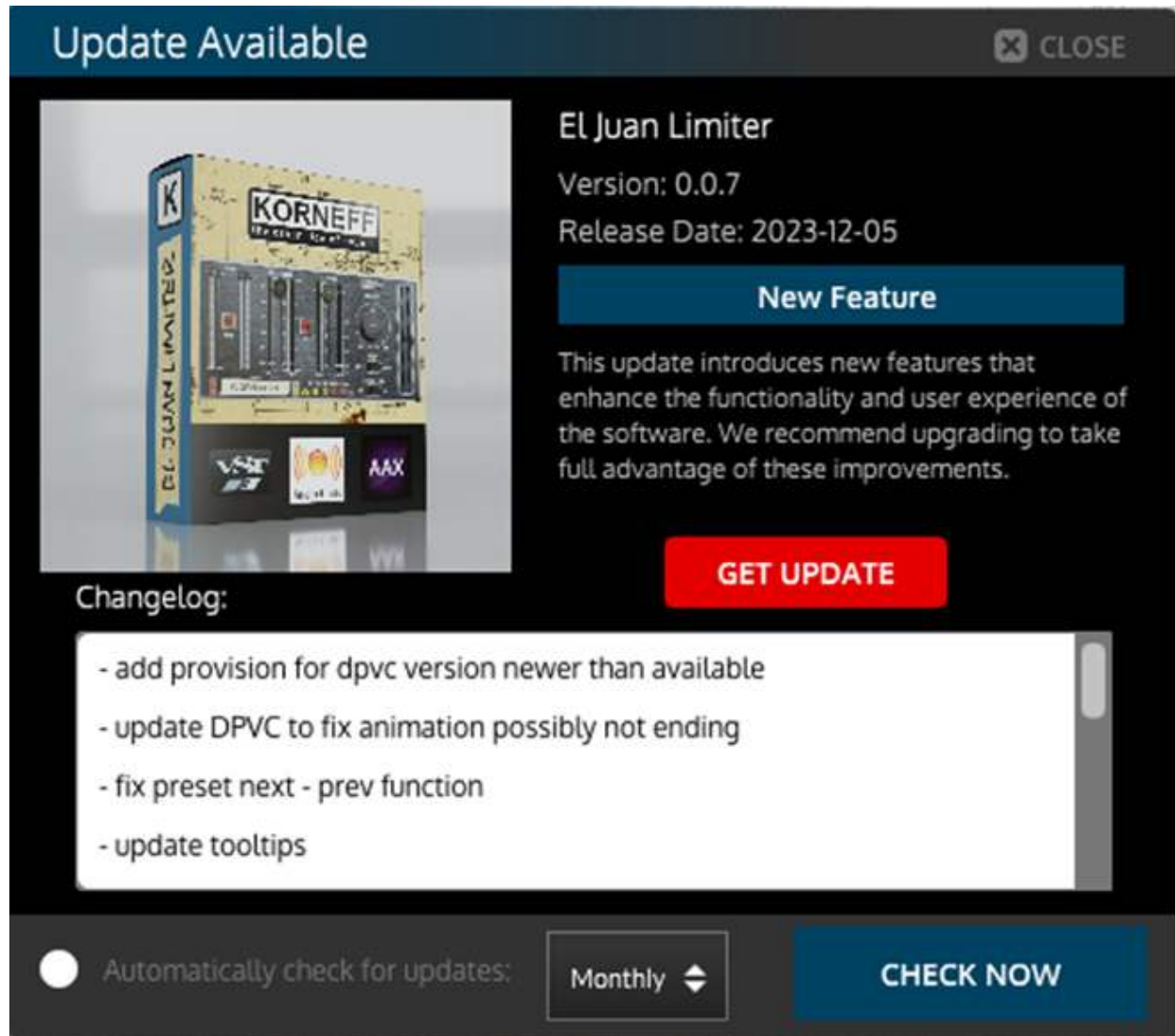
When you encounter the **Auto-Update Off (Expired)** panel, it's essentially your software's gentle nudge to consider enabling auto-updates. This status appears for two main reasons:

Auto-Update Turned Off: You might have manually turned off the auto-update feature, which means your software won't automatically fetch update information.

30 Days Since Last Update Check: If Auto-Update is off and it's been a month since you last checked for updates, this panel will remind you to stay current. Staying up to date ensures your software remains robust, secure, and packed with the latest enhancements.

Consider enabling auto-updates to streamline the update process and keep your software at its best.

Update Available



The Update Available panel signals exciting news – there's a new update ready and waiting for your software. This panel provides comprehensive information about the available update, making it easy for you to decide whether to proceed with the update. Here's what you'll find:

Project Name: The name of your software project, ensuring you know exactly which application is receiving the update.

Version Number: The specific version number of the update, indicating how significant the changes are.

Release Date: When the update was released, so you can gauge its freshness.

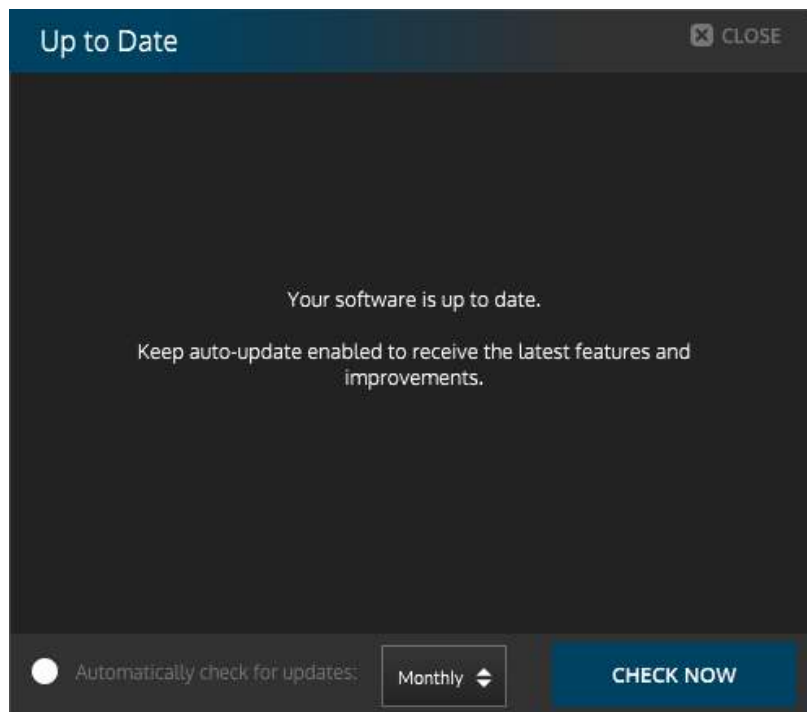
Update Type: This section highlights the type of update. Is it a minor bug fix, a major feature enhancement, or something in between? This detail helps you understand the nature of the update.

Update Description: A detailed description of what the update entails. This can include new features, bug fixes, and other improvements. It's your roadmap to what's changing.

GET UPDATE Button: A convenient button that, when clicked, takes you directly to the downloads section of your account. This means you can initiate the update process right away.

The Update Available panel equips you with all the information you need to make an informed decision about updating your software. Whether it's new features, bug fixes, or security enhancements, you'll know exactly what you're getting.

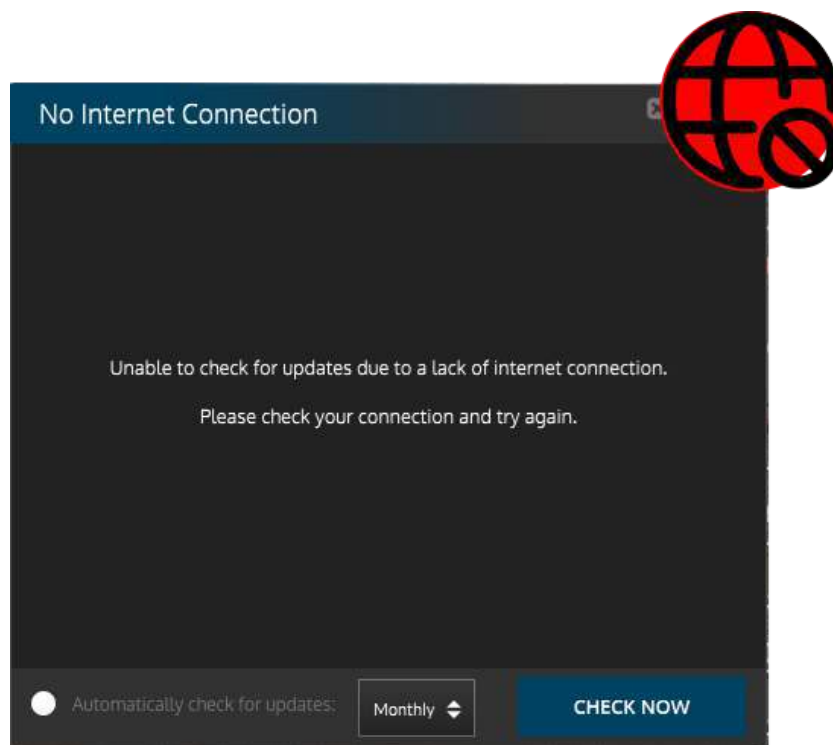
Up to Date



The Up to Date panel is your digital seal of approval, confirming that your software is already running the latest version available. When you see this status, it means you're in sync with the latest developments, features, and improvements. There's no immediate action required because you're already enjoying the best your software has to offer.

It's always a good feeling to know that your software is up to date and optimized for peak performance, and it's the least we can do to comfort you, given the mess that is this modern world and the inevitable rise of SkyNet and the extermination of the human race.

No Internet Connection



The No Internet Connection panel steps in when there's a temporary hiccup in your internet connection. This status politely informs you that, at the moment, it's unable to check for updates due to the lack of an internet connection.

While this status may appear momentarily, it serves as a reminder to ensure your device is connected to the internet. Once you're back online, the Update Notifier will resume its role, keeping you informed about your software's status.