



EL JUAN LIMITER

user manual EJL 1.0

KORNEFF
the other side of sound

El Jun Limiter 1.0

The Future Meets the Past and Blows It to Pieces

Welcome to the user manual for the El Juan Limiter. This powerful audio tool brings a wealth of features designed to maximize loudness, shape audio tones and provide creative control over your audio loudness. Drawing inspiration from a pioneering audio plugin that left an indelible mark on the industry, the El Juan Limiter pays homage to an iconic plugin by incorporating a range of new features and enhancements. With its expanded options for stereo processing, versatile release settings, waveshapers, customizable tone shaping curves, oversampling and dithering capabilities, the El Juan Limiter offers a new take on the original concept while providing a platform for "limitless" creativity.

Whether you're an expert at mastering, a mix engineer ready to give your tracks that last bit of shine, or a producer shaping your sounds, the El Juan Limiter is here for you to dive into some cool new audio adventures. Packed with awesome features, it works with your creative touch to take your sound to the next level.

We hope this user manual guides you in harnessing the full potential of your new toy. We've even thrown in some handy tips and tricks to help you unleash your audio wizardry. May it inspire you to push boundaries while you shape sound with precision. Let the journey begin!





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SPECIFICATIONS

Minimum System Requirements

Quad Core i5 Processor

4GB of RAM

Mac OS X 10.14 or Later

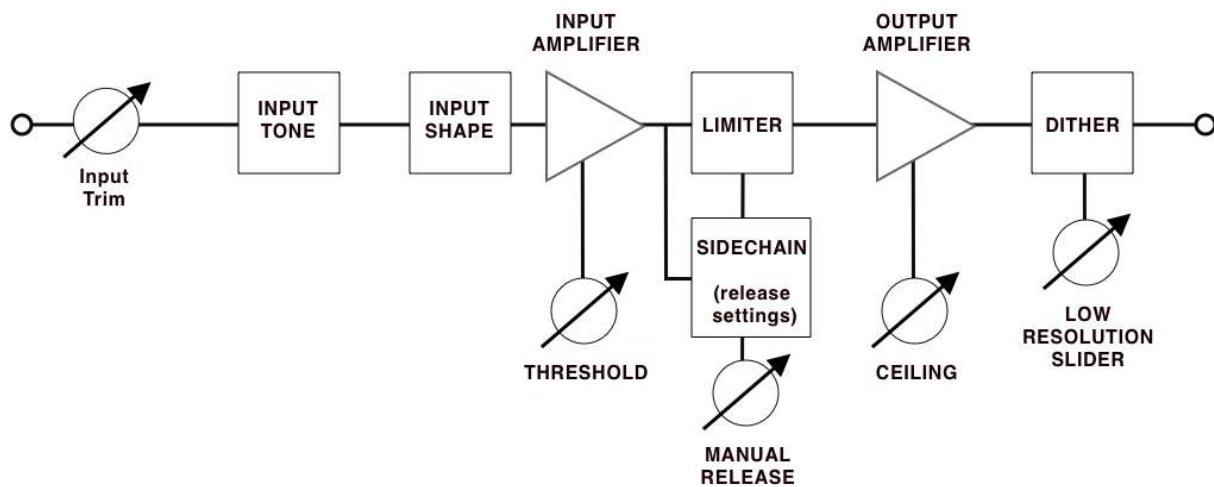
Windows 7 & Above

Supported Plugin Formats

Intel Mac 64bit: VST3, AU, AAX

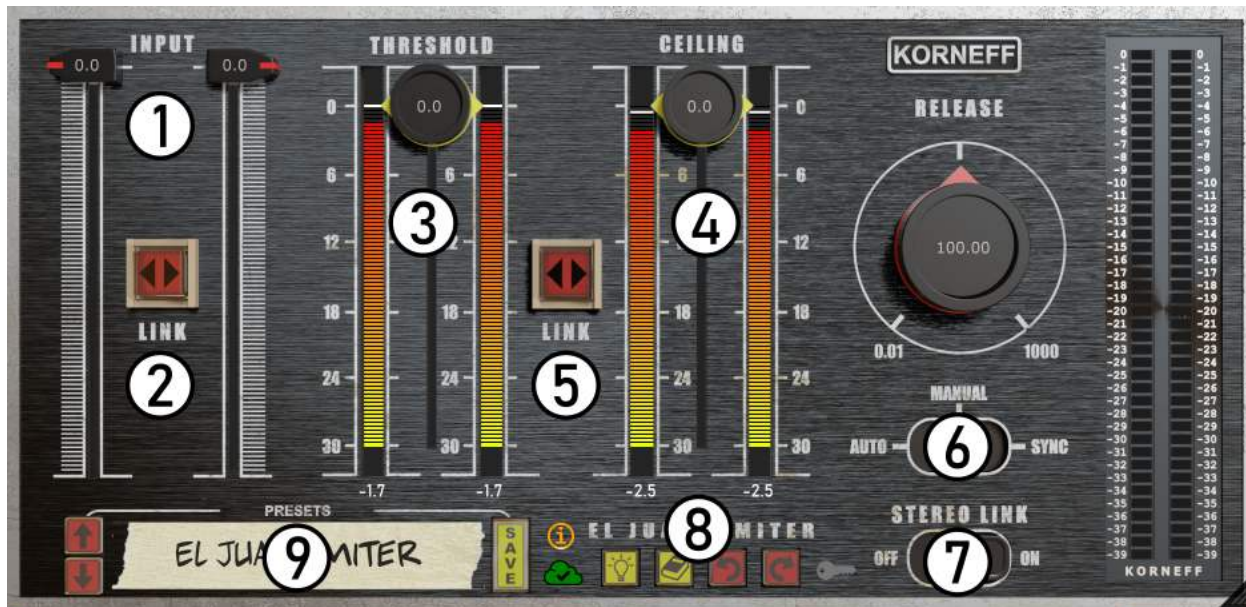
Windows 64bit: VST3, AAX

SIMPLIFIED BLOCK DIAGRAM



FRONT PANEL

FRONT PANEL CONTROLS



1 Input Trim

This is used to adjust the input level or gain of the audio signal entering the limiter. It enables you to set the input level at an appropriate value to ensure the limiter operates optimally. Increasing the input level may drive the limiter harder, affecting how it responds to peaks in the audio.

2 Input Trim Link

The LINK button temporarily latches together the left and right faders of the stereo input such that they move in concert with each other. To simultaneously adjust both faders, click on the LINK button and drag the mouse up or down (keeping the button clicked) to adjust the levels. This same process is used for all LINK controls

3 Threshold

The **THRESHOLD** control serves as an amplifier, introducing additional signal into the Limiter, which maintains a constant threshold point at 0dB. This drives the input signal into the limiting process, subsequently amplifying the output signal. Slide **THRESHOLD** down to increase the amount of limiting and increase the output gain of the EJJL



4 Ceiling

CEILING sets the maximum output peak level of the Limiter. It ensures that no part of the audio signal exceeds this specified level, preventing clipping or distortion in the final output. It's basically a fancy way to say "Output Level".

5 Threshold / Ceiling Link

The **LINK** button temporarily links the Threshold and Ceiling faders. Since the **THRESHOLD** control introduces additional gain to the Input, it's typical to offset this gain boost by reducing the output signal at the same time. To simultaneously adjust both faders, press on the **LINK** button and drag the cursor up or down.

6 Release

The Release Options section provides three release modes:

- **AUTO:** In Auto mode, the release time is automatically adjusted based on the input signal characteristics, ensuring a dynamic response to changing audio dynamics. It will impart a sound reminiscent of the bus compressor on a certain English recording console that's name rhymes with "Less Less Smell." The AUTO-RELEASE diagram is, well... really showing nothing, although it eventually will contain usable information. We suppose you could have some of the more stupid members of the band stare at it when you don't want to hear their BS about how they want their instrument mixed. It is mesmerizing. Sort of.
- **MANUAL:** Manual mode allows for the direct adjustment of the release time using the RELEASE TIME control, offering precise control over the limiter's behavior.
- **SYNC:** Sync mode synchronizes the release time to the tempo of your project, ensuring that the limiter operates in time with the music. Use the Sync option to ensure precise timing and alignment with your project's tempo. Once the **SYNC** is switched it, you can adjust the subdivisions of the beat to better tailor the release of the EJL to the feel of the music.

7 Stereo Link/Unlink

The **STEREO LINK** button allows you to choose between stereo or dual mono operation. When enabled (linked, **ON**), both channels will be processed together. When disabled (unlinked, **OFF**), each channel reacts to the signal independently of the other. Thus, a louder signal on the left channel will drive the left channel harder than the right channel, which might result in a shifting of the stereo field. Usually, you'll leave this **ON**, but **OFF** could be fun.

8 TOOL TIPS/USER MANUAL

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/REDO



UNDO, to the left, reverses all the damage mankind has done to the planet. **REDO**, to the right, restores all the damage mankind has done to the planet, starting with the latest control you tweaked on the EJJ. There are unlimited levels of Undo, so feel free to go back to Junior High and ask her out.

INFO

Click this to see the version number of the plug-in, a list of who did what to make it happen, tips for how to behave around naked people, etc.

UPDATE NOTIFIER: We'll let you know when there is a new version available. (More on this later)

LICENSE MANAGER: Activate or deactivate your plug-in here. (More on this later)

9 Presets

The El Juan Limiter plugin comes with a collection of presets that can serve as starting points for your audio processing. These presets are designed to showcase the capabilities of the plugin and provide you with different sonic possibilities. Feel free to explore and experiment with the presets, and don't hesitate to customize them according to your needs.

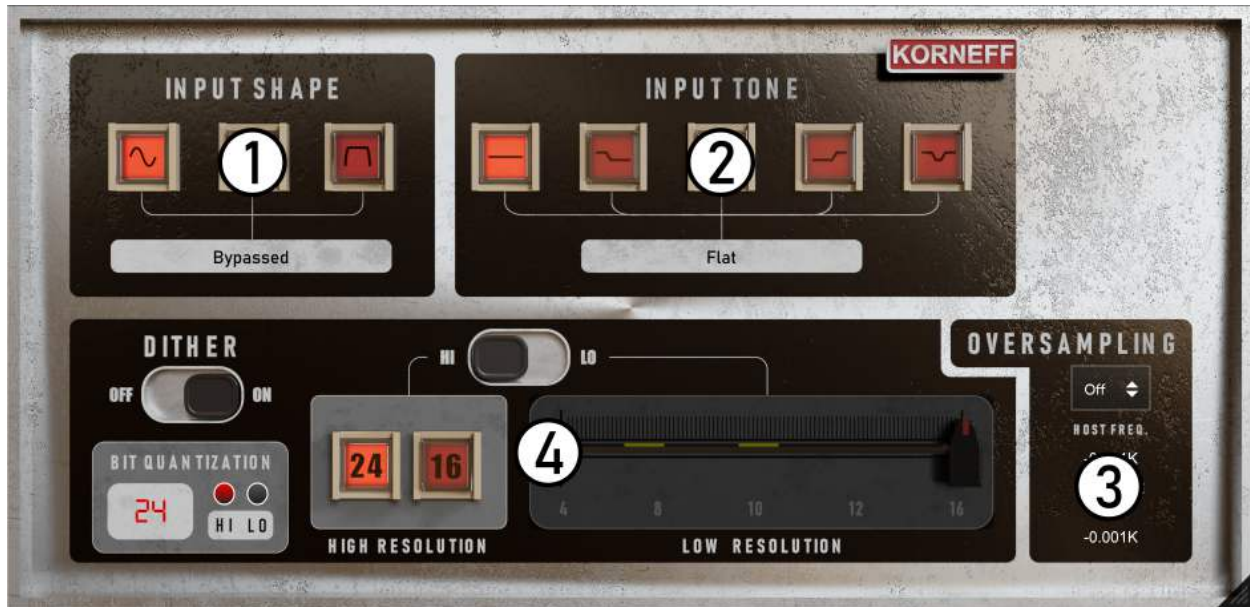
PRESET BROWSER

Click on the piece of tape with the Sharpie text on it at the bottom of the unit to access the preset browser and load and save presets. The **RED ARROWS** to the left of the tape allow you to step through and audition presets. The yellow **SAVE** 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.

The **GAIN REDUCTION METER** provides a clear visual representation of the limiting process, showing reduction up to -40dB.

BACK PANEL



BACK PANEL CONTROLS

1 Input Shape

The Input Section Waveshapers apply calculations to change the harmonic and transient content of the input signal before it enters the limiter section. You can think of it as sort of a compressor before the limiter, but you probably shouldn't as that's completely wrong... but it's a useful analogy. There are two selectable waveshapers:

- **Bypassed:** No waveshaping applied.
- **Punchy:** Increase the perceived loudness and punchiness of your signal before it hits the Limiter.
- **Round:** Adds harmonics to your input signal, resulting in a warmer and more musical sonic content.

2 Input Tone

The Input Tone Shaping Curves enable you to adjust the frequency response of the audio going into the limiter. There are four selectable curves:

- **Flat:** Leaves the frequency response unchanged.
- **Thick:** Enhances low-frequency content for a thicker sound.
- **Presence:** Boosts upper-midrange-frequencies for increased presence.
- **Bright:** Emphasizes high-frequency content for a brighter sound.



- **Hype:** Adds an exciting, exaggerated tonal character to the top and bottom, kinda like the loudness button on the stereo.

3 Oversampling

The Oversampling feature enhances audio quality by upsampling the audio signal before processing. It helps reduce aliasing artifacts and provides a more accurate representation of the audio. Oversampling is selectable between 2X, 4X, 8X and 16X.

4 Dithering

The Dithering options allow you to control the bit depth of the output signal. The more you reduce the bit depth, the lower the output quality of the signal. Think original Super Mario graphics on a Nintendo hand-held vs. DCS played on a high-speed gaming computer. The Dither controls on the EJL let you adjust from high resolution/quality to pretty damn junky with a slider.

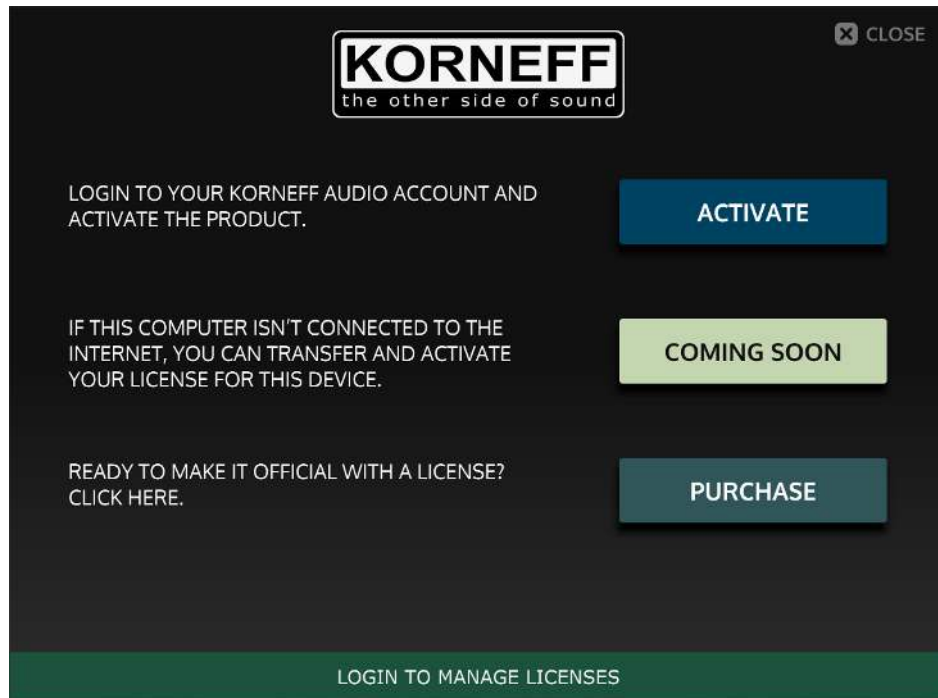
Dithering On/Off switch: Enables or disables the dithering option. This includes a display of the current dither setting.

- Standard 24-bit and 16-bit options.
- Variable bit rates, down to 4-bit, to imitate old samplers with reduced bit rates.
- Resolution Control: The **RESOLUTION SLIDER** adjusts the dithering effect, allowing you to simulate a bit-crushing effect. Lower values result in a more pronounced reduction in bit depth and a more aggressive, lo-fi sound.

ACTIVATION

Activation is a crucial step in getting your plugin 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 plugin is always up to date and connected to your account, providing you with the latest features and improvements.

Offline activation: While currently disabled, 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.

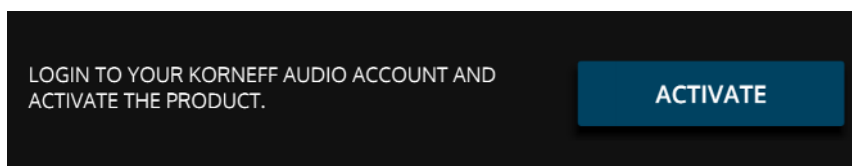
Please note that offline activation is marked as **COMING SOON** and will be available in future updates of the plugin.



Purchase: If you haven't obtained a license yet, you can easily purchase by clicking on the **PURCHASE** button. This will direct you to the Korneff Audio website, where you can make your purchase and receive your license.

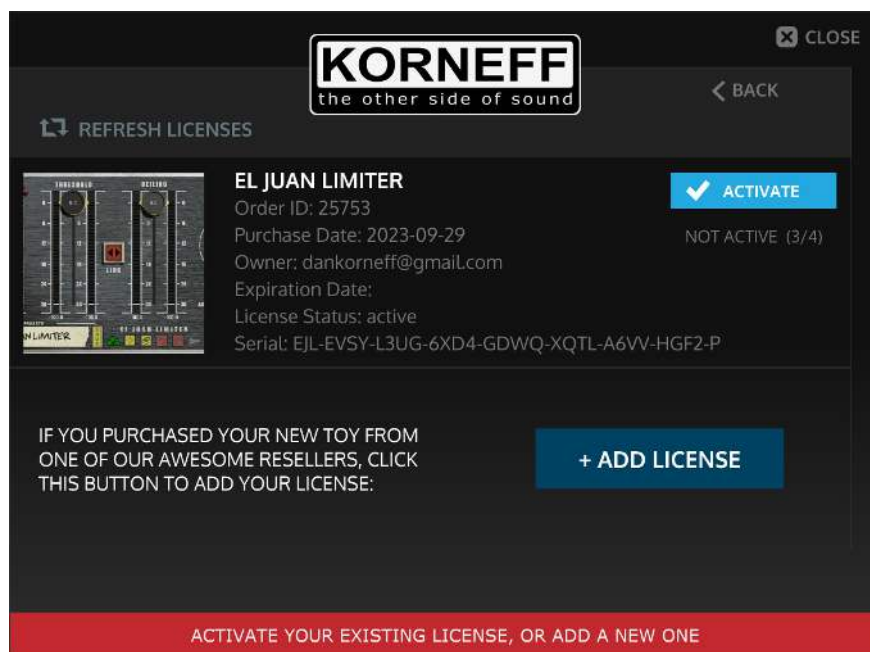
Online Activation

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.



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 **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.

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.

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ADD YOUR THIRD-PARTY LICENSE

WELCOME! IF YOU'VE PURCHASED OUR PRODUCT FROM AN AUTHORIZED RESELLER, YOU CAN EASILY ADD YOUR LICENSE HERE. SIMPLY ENTER YOUR LICENSE KEY BELOW, AND WE'LL TAKE CARE OF THE REST. IF YOU HAVE ANY QUESTIONS OR NEED ASSISTANCE, OUR HELP RESOURCES ARE JUST A CLICK AWAY.

Enter your License Key above.

SUBMIT

ADD A NEW LICENSE TO YOUR ACCOUNT

- 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



RED - 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.

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 will appear if Auto-Update is off and it's been a month since you last checked for updates. This panel reminds 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.

YELLOW - Update Available

When there's a new update waiting for your software, this status lights. 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.

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.

OLIVE - 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.

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.

RED GLOBE with TILTED DEATH STAR - 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. Also, the Empire might be waiting to destroy your planet.

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.



USAGE IDEAS

The El Juan Limiter is more powerful and versatile than it looks. It doesn't appear to have a lot of controls on it, yet those simple controls yield a plethora of possibilities..

Traditionally, plugins like the EJJ have been used mainly on the stereo bus or on submix busses—the drums, the vocals, etc. The El Juan can of course do these sorts of tasks well, but it also is at home on individual tracks. Let's look at some more traditional applications first.

Loudness Maximization

The El Juan can go across your two bus and maximize the volume of your tracks. Set the **CEILING** to the desired level—usually this is a little bit under 0, and drop **THRESHOLD** to show a few dB of gain reduction. We usually set **RELEASE** to **MANUAL** because sounding like the buss compressor on a famous English recording console whose name rhymes with "Kiss Kiss Tell" is a good thing. Of course, try **MANUAL** and **SYNC** as well because experimentation is always a good thing. If you lower **CEILING** too much you can get distortion—you might want that depending on the application and the sound you're going for, but typically on the mix bus, compressors like the EJJ are there for making things louder rather than adding color.

There are back panel shaping controls that you can use as well, if your overall mix is lacking. We will cover some ideas for the back panel controls later in this section.

Mastering and Finalizing Recordings

The EJJ is a useful plugin for mastering applications. A slight bit of gain reduction accompanied with a loudness increase can add cohesiveness to the tracks across an album. Generally, you'll keep the **STEREO LINK** on, but for recordings with a noticeable L-R gain difference, unlinking stereo might be a better bet. **OVERSAMPLING** can be adjusted to get a cleaner, high fidelity sound. You can also experiment with various resolutions to add a bit of grunge to your tracks.

You'll probably be doing your mastering along with an equalizer. You can put the eq either before or after the El Juan in the signal chain, depending on the sound you're going for.

When the eq is before the El Juan, you change the frequency response feeding into the El Juan and this will change the way the limiter action "hits" the mix. Mastering engineers typically like to "push-in" the signal by applying a bit of boost to the lows and highs of the equalizer, which in turn affects the response of the limiter following it. Note that this is somewhat built-in on the El Juan with the **INPUT TONE** controls on the back panel.



When the eq is after the limiter, the mix is already smoothed out and the eq provides more of a final polish. Typically with the E JL, we'll use its built-in back panel features to change the way the limiter action works, and throw on an eq after it for a final correction.

Creative Applications

We're starting to get into the functions of input waveshaping and input eq'ing on the El Juan Limiter, and this is where the E JL leaves its predecessors behind.

Input waveshaping, as mentioned above, changes the way the limiter reacts by altering transients and adding harmonic content. The input waveshapers, along with the INPUT TONE options, allow a lot of creative adjusting of your tracks.

Use the PUNCHY waveshaper and the THICK input tone shaping curve to add weight and impact to drums and bass instruments. Experiment with the SMOOTH waveshaper and the PRESENCE curve to achieve a smooth and forward vocal sound. The oversampling feature can add extra clarity and detail to individual tracks or elements within your mix.

Vintage Sound Emulation

Older synths and samplers had low bit rates. The resulting sound was distinctive. The El Juan has dithering options and resolution control that allow you to emulate those sounds on individual tracks or across a bus or an entire mix.

Start by switching on **DITHER** and **LO** and then lowering the bit depth using the **LOW-RESOLUTION** slider. The lower you go, the more artifacts you'll generate. This can be particularly useful when working in genres such as lo-fi hip-hop, retro-inspired productions, or to add a touch of nostalgia to your tracks.

Sub Mix Applications

The El Juan Limiter is useful as a means of not only controlling the loudness of a submix, but adding character and mojo to various parts of the mix.

Drums

Use the El Juan Limiter to add punch and impact to drum tracks. A little gain reduction can smooth volume variations out and add bit of transient enhancement.

Setting the **RELEASE** to **SYNC** can tighten up a loose drum performance by causing the E JL to cycle in time with the mix.

Experiment with different input tone shaping curves to shape the tone of individual drum elements. For example, use **PUNCHY** along with **THICK** to add weight to the entire kit or just to the kick. The **HYPE** setting is also good across an entire kit, adding, well, hype to it (it's like switching in the Loudness button on your stereo). We also like using **HYPE** on snares and badly recorded toms.



A really fun application of the E JL is to use it on drums in parallel. Mult (there's an old studio word) the drums into two separate mixes and put the El Juan across one of them. Crush the hell out of things with the E JL, press buttons, get some distortion, etc., then sneak that mix down under the unprocessed mix until your ear likes it. Remember, you can automate the level of the "crush tracks" to get different feels during your mix.

Vocals

Use the El Juan Limiter as the final stage in the vocal processing chain during mixing or mastering. Apply transparent gain reduction to control the dynamic range and ensure consistent levels.

Experiment with different release options to find the right balance between smoothness and maintaining the natural dynamics of the vocal performance.

Use the input tone shaping curves to enhance the presence and clarity of the vocals. Try the **SMOOTH** waveshaper and the **PRESENCE** input tone shaping curve for a smooth and forward vocal sound.

Try out using the El Juan as a final link in your vocal chain. For instance, start off your processing using the Korneff Audio **PAWN SHOP COMP** to get a controlled, warm vocal sound, and then use the E JL after that to control the "sit" of the vocal in the mix by adjusting the **THRESHOLD** control. The combination of Pawn Shop color and El Juan smoothness make for a gorgeous vocal sound.

Bass

The **RELEASE** is going to be the make-or-break control on the E JL when you're working on bass. You're probably going to be using the **MANUAL** setting mainly, and you'll have to adjust it depending on how much gain reduction you've got happening. Typically for bass, a short release can cause all sorts of weirdness as the limiter starts riding the peaks and valleys of the waveform itself rather than the bass' envelope. Start with perhaps 400ms and adjust from there. The faster the part, the faster you'll need to set the release.

Experiment with different **INPUT TONE** and **INPUT SHAPING** settings to change the way the limiter reacts to the input. Be careful about soloing the bass and doing adjustments. It's easy to get a great bass sound that is simply awful in the full mix. By all means play with waveshaping and things, but keep drums and other low-end parts in mind and in-ear when you work on bass. REMEMBER THE CONTEXT! Better yet, don't ever solo the bass when you're working on it.

Another idea: put all the rhythm tracks into one submix bus—so drums, percussion, bass, etc., and then use the E JL across that. You want to maintain the cohesiveness of these tracks, and limiting them all together will glue them together a bit.



If you have a bassline that needs to cut through the mix, use the El Juan Limiter in parallel processing to maintain the dynamics while adding overall loudness. Remember, you can use the back panel on the E JL to add some low-fi noise and mojo to the compressed track and then sneak that up into the mix.

Guitars

The El Juan can add sustain to guitar parts. Similar to the bass, the **RELEASE** is going to be a key control to watch. Again, **MANUAL** will be a good bet and you'll be setting the release faster or slower depending on the speed and number of notes in the part. Too long of a release will take some of the brightness and energy out of the track, while too short can result in pumping, which typically sounds like ass.

Loose, badly played guitar parts can be tightened up by setting the **RELEASE** to **SYNC** and having the ELJ ride things based on the track's tempo. Adjust **THRESHOLD** down until the track feels tighter. If the guitar parts are really all over the place, you can use a wooden stick to hit the guitar players.

Experiment with different input tone shaping curves to enhance the desired characteristics of the guitar. For example, use the **BRIGHT** input tone curve to add presence and sparkle to clean guitar parts.

If you have a guitar solo that needs to stand out, consider using the El Juan Limiter to increase the sustain and overall level while maintaining a natural sound.

Keyboards/Synths

Apply the El Juan Limiter to keyboard or synth tracks to add overall loudness and control the dynamic range. Adjust the **THRESHOLD** for the desired amount of compression. You'll have to set **RELEASE** depending on the part. The basic rule is longer for slow parts, faster for fast parts, and **AUTO** when you don't really care and just want to get this damn mix over with.

Use the input tone shaping curves to shape the tone of the keyboards or synths. Try different curves such as **THICK** for a heavier sound or **PRESENCE** for a more forward and prominent tone.

Experiment with the dithering options and the resolution control to add vintage or lo-fi character to keyboard or synth parts. Lower the bit depth and apply subtle dithering to simulate the sound of classic hardware or old samplers.

TIPS and TIDBITS

Work in Context

Try to work on tracks in context. By this we mean don't spend a bunch of time perfecting the keyboard sounds in solo on a recording that has vocals. Instruments that share frequency space will conflict with each other, and you as the mixer have to decide what's important. So adding **PRESENCE** to a synth pad might mask out the vocal track, and then when you add cymbals and hi-hat in your mix might suddenly be very hard on your ears. WORK IN CONTEXT.

Glue

Glue Glue Glue. People always say things like "The compressor glues the mix together."

What the hell is glue? No one ever seems to have a definition for it.

Glue is basically when one instrument or frequency range in the mix hits the limiter or compressor such that it (the limiter) is "riding" on that instrument and imposing the rhythm or dynamics of that instrument across the entire mix. This is why you need a good drummer: because typically the limiter gets its cues from transients and the kick and snare tend to dominate in a mix.

Any limiter will tend to glue loose tracks together, and it is dependent on the release very often. If tracks are loose, try **AUTO**, which is typically a very "gluey" setting, or **SYNC**. Since sync is slaved to the tempo of the track, it can't help but tighten up the entire mix.

Now, if your tracks are really loose, there's a good chance you're using your DAW as a tape recorder and you don't really have a specific time locked into it. Good for you! This is the way everyone did it during the golden age and we love you! However, if the playing isn't decently together on the recording, you will run into some problems that all the glue in the world won't solve.

Please don't for a moment assume we at Korneff Audio demand that all playing must be poodle butt in a snowstorm tight. We love loose records. But there's "Led Zeppelin Song Remains the Same" loose and "my brother and his drunk friends jamming in the basement" loose. These are two different things.

Remember that distortion generates high overtones and adds brightness. You can think of it as a subtle eq. A little touch can go a long way. Ditto for some of the options for dithering and lowered bit rates.



In 1993 or 94, I bought my first plugin. It was the predecessor to the EL Juan and it was fabulous. Suddenly I was "mastering" recordings in my living room. I was making the absolute loudest, most vicious metal albums around. I worked on hip-hop, synth-pop, jazz—everything. It was a game changer and it was so much damn fun!

We hope our El Juan Limiter is fun for you to use and a game-changer for your recordings. That is, after all, its heritage.

We've had a blast of an adventure making it for you, and we'd like to thank all our public beta testers for being on the adventure with us! More to come!