HUM Audio Devices

LAAL

Plugin Manual

Contents [hide]

Welcome to HUM Audio Devices LAAL

The experts at HUM Audio Devices have teamed up with the Brainworx crew to make

their acclaimed Look Ahead Analog Limiter – LAAL for short – available as a plugin for the digital audio environment. The HUM Audio Devices LAAL mastering limiter is absolutely exceptional in many ways. An innovative idea of detection and limiting process allows to achieve a new standard in analog and now also digital mastering. One of the strongest advantages of its design is a fully analog (0.2 ms) delay line to obtain the “Look Ahead” ability. Thanks to it the detection circuit can react to even the fastest peaks. HUM Audio Devices LAAL is extremely effective in this task, allowing you to reach great RMS levels when required, but with minimal side effects and without compromising sound quality. Your tracks will also preserve low-end energy and punch in a wide gain attenuation range. HUM Audio Devices LAAL does its best on each limiting task you will potentially have in your everyday work. No matter if it’s audiophile acoustic music where you need just a subtle touch or if you need to do heavier brick-wall limiting in modern music genres. You can always use your HUM Audio Devices LAAL limiter with confidence.

ⓘ Download and install your plugin using our Installation Manager: https://www.pluginalliance.com/en/installation-manager.html

Thank you for choosing HUM Audio Devices LAAL. We hope you enjoy it!

Key features

The following list gives you an overview of HUM Audio Devices LAAL’s key features:

- Modeled exactly after the original HUM Audio Devices design, schematics and hardware in very close cooperation with HUM Audio Devices.
- Highest quality audio transformers
- Analog look ahead circuit (0.2 ms analog delay line)
- Variable stereo width function
- Dynamic transient function
- Variable release time (stepped, from 2ms to 100ms)
- Precise metering (0.2 dB steps)

- Precise input/output setting (0.2dB steps)
- Stereo link for detection
- Very high headroom → very low distortion
- Plugin-only features:
- TX-Drive, variable transformer headroom
- Parameter link
- Stereo and m/s processing
- I/O, correlation and balance-metering

HUM Audio Devices LAAL Overview

HUM Audio Devices LAAL consists of the following areas and main controls:

1. **Top toolbar:** Additional global controls relevant to the plugin's processing. For more information, refer to Top toolbar.
2. **Limiter Section:** Main controls for fast setups and great results. For more information, refer to Limiter section.
3. **Center Section:** The global settings of the hardware unit. For more information, refer to Center section.
4. **Plugin-Only Section:** Additional Brainworx tools for higher detail and tweaking. For more information, refer to Plugin-only section.
5. **Bottom toolbar**: Preferences, license information, and documentation. For more information, refer to Bottom toolbar.

Limiter section

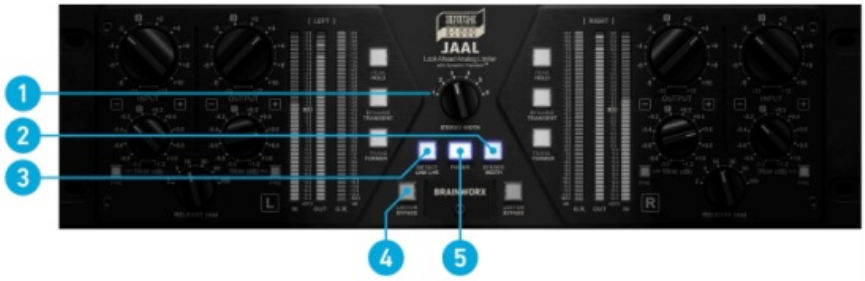
The analog limiter section of the HUM Audio Devices LAAL with its streamlined set of controls for fast setups.
This section consists of the following controls:

1. Input Levels: When the input level signal exceeds -5dBfs, you will observe an increase of gain reduction on the G.R. (gain reduction) meters.
   a. Input [Gain]: Rotary switches for input level. INPUT switches have steps of +/-2dB.
   b. [Input] Trim: Allows to set the levels with an accuracy of up to +/-0.2dB.
   c. Fine [Input Trim]: Deactivated by default, if activated the steps of the input's TRIM parameter are switched off.
2. Release: Six release times to choose from.
3. Output Levels: Output gain and trim level to set the limiters' overall make-up gain for each channel.
   a. Output [Gain]: Rotary switches for output level. OUTPUT switches have steps of +/-2dB.
   b. [Output] Trim: Allows to set the levels with an accuracy of up to +/-0.2dB.
   c. Fine [Output Trim]: Deactivated by default, if activated the steps of the output's TRIM parameter are switched off.
4. Dynamic Transient: An extraordinary and absolutely unique feature of our limiter. This function is responsible for regenerating transients proportionally to the limiting level. It plays a major role in preserving space and details in your sound as you intend.
5. Transformer: Activates the inter-stage high-end audio transformers. Adds subtle warmth & body.
6. Peak Hold: Activates the Peak Hold function of the meters.
7. G.R. [meter]: The gain-reduction meters are very precisely calibrated, have a resolution of up to 0.2dB and show gain reduction between 0 and -12.5 (MAX) dB.
8. OUT [level meter]: The 42-element led input-meters are very precisely calibrated, have a resolution of up to 0.2dB and a range from 0 to -22 dB.
9. IN [level meter]: The 42-element led input-meters are very precisely calibrated, have a resolution of up to 0.2dB and a range from 0 to -22 dB.

Center section

Global settings such as stereo width are located in the center of the hardware unit.

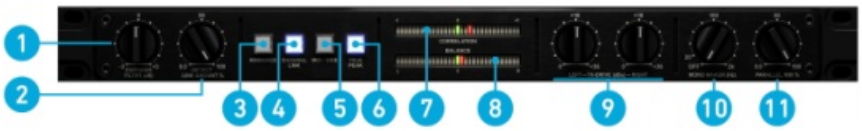
This section consists of the following controls:



1. Stereo Width [Amount]: Six rotary switch positions for six different levels of stereo image widening. The circuit works differently and in a more musical way compared to similar processors. You will perceive a nice increase in the spaciousness of your tracks, but you won't lose low-end energy in the center of the stereo image, and it's also fully mono compatible.
2. Stereo Width [On/Off]: The Stereo Width function is on with this button activated.
3. Detect Link L+R: Activates stereo/channel linking of the limiter detection circuit.
4. Limiter Bypass: Bypasses limiting circuits, but you can still use gain settings, stereo width and the audio transformers.
5. Hardware Power: Bypasses the whole limiter by physically connecting LAAL's inputs and outputs.

Plugin-only section

Increase the functionality of the hardware limiter with additional Brainworx tools.
This section consists of the following controls:

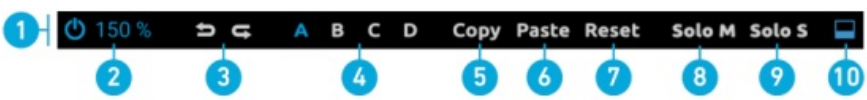


1. **Emphasis Filter:** A soft shelving filter in the detection path to shape the signal's density below 1.000 Hz.
2. **Detect Link Amount:** In addition to the hardware's detection link switch, the plugin allows to seamlessly blend the detection link between on (100%) and off (0%) with this knob.
3. **Ambience:** The Ambience control sends the difference between the dry and the compressed signal to the output. This allows to clearly identify the applied limiting.

4. **Channel Link:** Switches linking of parameters on or off. When off, the plugin operates in an independent two-channel (dual-mono) configuration. When switching on Channel Link, differences between pairs of parameters are preserved until the controls are adjusted.
5. **Mid / Side [processing]:** Toggles between dual mono and mid/side processing. When M/S is set active, the left channel processes the mid/sum-signal, the right channel processes the side/ difference-signal of the passing audio. Channel labels dynamically switch to their configured state.
6. **True Peak:** Switched off by default, the internal peak detection does not integrate inter-samplepeaks to reproduce the exact behaviour of the original hardware. Once activated, the internal peak detection does integrate inter-sample-peaks to protect the end-user's physical device from digital clipping.
7. **Correlation Meter:** Displays the correlation / stereo-compatibility of the processed audio.
8. **Balance Meter:** Displays the center-weighting of the stereo-signal.
9. TX **Drive:** This is the „Headroom" parameter for the transformer model only. The value is the 0dBFS reference level if the actual unit was connected in an AD/DA converter loop. Raising this value results in more harmonic distortion in low/low-mid frequencies, and lowering it results in less harmonic distortion.
10. **Mono Maker:** Sweepable from 20 to 2000 Hz, this parameter folds the processed sound to mono below the selected frequency.
11. **Parallel Mix:** Blends between the limited and unlimited signal.

Top toolbar

Additional global controls related to plugin settings and processing are available in the top toolbar.



1. **Power:** Bypasses the processor when disengaged.
2. **UI Size:** Sets the size of the plugin's user interface.
3. ↩ ↪: Undo and redo changes made to controls up to 32 steps.
4. **Bank** A B C D: Each preset allows you to switch between four banks (A, B, C, D) of

controls.

5. **Copy:** Copy the active settings to memory.
6. **Paste:** Paste the copied settings to the active bank.
7. **Reset**: Reset the current bank.
8. **Solo M:** Isolates to audit the mid (sum) signal being processed by the plugin.
9. **Solo S:** Isolates to audit the side (difference) signal processed by the plugin.
10. **View Mode:** Toggles between different view modes, with smaller UI views containing fewer controls. This allows you to hide settings that you're not using.

    Clicking the company logo or the plugin name will open a splash screen containing team credits and the UI default setting.

Bottom toolbar

Preferences, license information, and documentation are available in the bottom toolbar.

1. **Plugin Alliance Logo:** If your computer is online, clicking the Plugin Alliance logo will take you to the Plugin Alliance website via your web browser.
2. **License Info:** The toolbar displays information about the type of license you're running. Trial licenses are displayed along with the number of days until expiration; there is no note for full licenses, as these are unlimited.
3. **Dollar Icon**: If you are using a demo/trial version of a Brainworx product, you can click this icon to open a browser that redirects you to the respective product page in the Plugin Alliance store. Here, you can purchase a product without searching for it on the Plugin Alliance website.
4. **Key Icon**: Clicking on the key icon brings up the activation dialog, allowing you to manually reauthorize a device in the event of a license upgrade or addition. You can also use this feature to activate additional computers or USB flash drives.
5. **Help Icon**: Clicking the help icon opens a context menu that links to the product manual PDF and other helpful links, such as checking for product updates online. You must have a PDF reader installed on your computer to read the manual.

   • Open Manual… with your operation system's preferred PDF reader. You must have a PDF reader installed on your computer to read the manual.

• Product Info… will take you to the product page of HUM Audio Devices LAAL if your computer is online.
• Download Updates… leads you to the product page's Downloads-Section.
• Legal Info… opens a pop-up window declaring legal usage of third party technology.
• Plugin Alliance Website… will take you to the Plugin Alliance website via your web browser.
• Usage Data Tracking… will open a pop-up window to activate or deactivate Usage Data Tracking.

Additional information

Modifier keys

You can use the following keyboard commands to control HUM Audio Devices LAAL.

Function	AU	VST / VST3	AAX
Fine Control	[shift]	[shift]	• Mac: [command] • Win: [Ctrl]
Jump between default and last setting	[option]	• Mac: [command] • Win: [Ctrl]	• Mac: [option] • Win: [Alt]

Usage data tracking

Help us improve your experience.

Plugin Alliance by Native Instruments is using data tracking to improve the user experience and usability of our products. Data tracking can be deactivated at any time in the help menu. This data is collected according to our Privacy Policy.

Online resources

HUM Audio Devices homepage: https://www.hum-audio.com/

System requirements & supported platforms: https://www.plugin-alliance.com/en/systemrequirements.html

Details about your product: https://www.plugin-alliance.com/en/products/hum_audio_devices_laal.html

Installation, activation, authorisation and FAQ: https://www.plugin-

alliance.com/en/support.html

Credits

Concept: Krzysztof Tonn, Krzysztof Rudnicki

Programming and Algorithms: Jan Stickelbruck

UI-Design: Goran Lizdek

Product Management: Christoph Tkocz, Albert Gabriel

Documents / Resources

	Native Instruments LAAL HUM Audio Devices [pdf] User Manual LAAL HUM Audio Devices, LAAL, HUM Audio Devices, Audio Devices, D evices

References

- User Manual

Native Instruments

Audio Devices, devices, HUM Audio Devices, LAAL, LAAL HUM Audio Devices, Native Instruments

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