

Limited-S

Dynamic Sibilance Controller

Audio effect plugin by Raising Jake Studios

Limited-S plugin is a unique, frequency selective compressor designed to control excessive high frequencies such as vocal sibilance, excessive drum cymbal levels, etc., in mono and stereo tracks.

What makes Limited-S unique is that it does not use traditional level detector Attack and Decay controls. Instead, Limited-S uses a latency-compensated FIR level detector that is extremely fast and transparent on nearly all material and does not require “fiddling” with attack and decay settings.

Limited-S offers two different modes for the internal crossover: a Linkwitz-Riley (analog style) mode with selectable 12 or 24dB/octave slopes and a “transient perfect” Linear Phase mode which preserves signal phase and amplitudes at all frequencies.

Limited-S does not attempt to “track” the audio signal looking for what it THINKS is excess sibilance. De-Essers of that type often suffer from lipping side effects on initial transients while under-controlling tails. Limited-S, instead, uses a fixed threshold that only catches the most offensive high-level sibilance at an absolute level. **Limited-S is, therefore, best used POST compression and EQ.**

The Limited-S is a stereo/mono plugin that automatically detects and switches to mono mode when used on mono tracks for reduced CPU load.

Limited-S is a 64-bit VST2, VST3 and AAX plugin for Windows and “Universal Binary” VST2, VST3, AU and AXX plugin for Mac OS 10.11 or higher on Intel and Apple Silicon.

INSTALLATION INSTRUCTIONS

Installing the Limited-S plugin is simply a matter of copying and pasting the appropriate files from the Limited-S purchased download to the proper folders on your computer.

All RJ Studios plugin files are double zipped. The top-level zip file (download) contains two sub-files for Mac(“dmg”) and PC (“.zip”) versions that are independently zipped. This was necessary to preserve the Pace iLok signatures for the AAX plugins for the respective OS systems. Please unzip the Mac or PC sub-files before copying the desired plugin to your folders

FOR PC (“x64 PC zip” folder)

To install the VST3 plugin: make sure your DAW is closed then copy the “LimitedS.vst3” file from the download file and save it to your VST3 plugin folder (typically C:\Program Files\Common Files\VST3). Restart your DAW and scan the plugins folder from your DAW’s plugin manager.

To install the VST2 plugin: make sure your DAW is closed then copy the “LimitedS.dll” file from the download file and save it to your VST2 plugin folder (typically C:\Program Files\Steinberg\VSTPlugins). Restart your DAW and scan the plugins folder from your DAW’s plugin

manager.

To install the aaxplugin for Pro Tools: make sure your DAW is closed then copy the "LimitedS.aaxplugin" file from the download file and save it to your Avid plugin folder (typically C:\Program Files\Common Files\Avid\Audio\Plug-Ins). The plugin will be automatically scanned/added the next time Pro Tools is opened.

FOR MAC ("dmg" folder)

To install the VST2, VST3 and/or AU plugins, make sure your DAW is closed then copy the "LimitedS.vst" and/or "LimitedS.vst3" and/or "LimitedS.component" folders from the download file and save them the VST and/or VST3 and/or "Component" folders on your Mac under /Library/Audio/Plugins.

NOTE: On Mac OS 10.13 and later a reboot is sometimes required before AU plugins will show up in your DAW(s) – and is typically required for Logic Pro X.

To install the AAX plugin for Pro Tools: make sure your DAW is closed then copy the "LimitedS.aaxplugin" file from download file and save it to your Avid plugin folder (typically /user/Library/Application Support/Avid/Audio/Plug-Ins). The plugin will be automatically scanned/added the next time Pro Tools is opened.

REGISTRATION

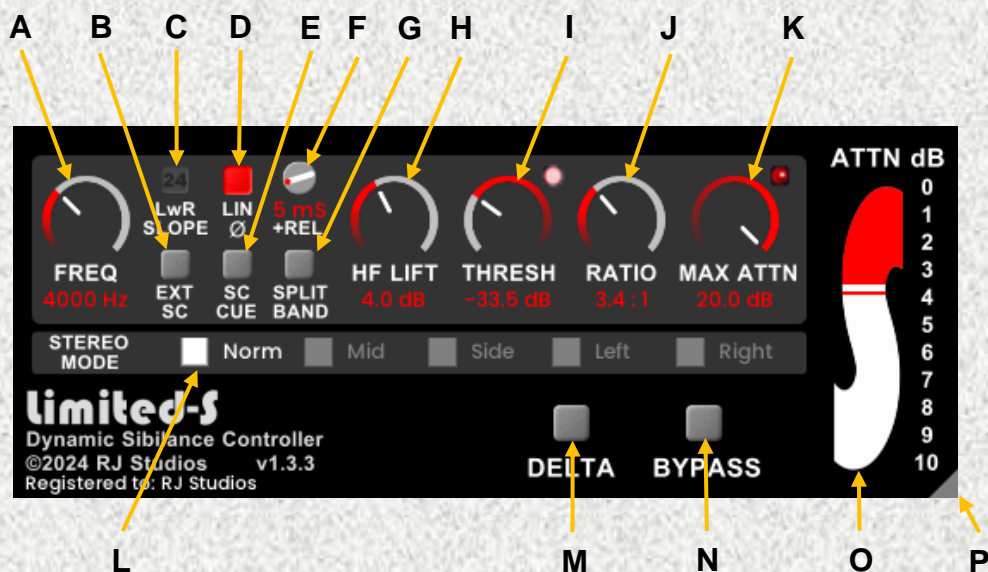
Limited-S will be operating in demo mode when first installed and will operate unrestricted for 14 days. At the end of 14 days the demo will cease output unless a license is purchased. To install your license, click on the registration at the top left corner of the plugin window; copy and right-click paste the registration code from your purchase receipt then press enter on your keyboard.

NOTE: Internet connection is required during registration. If your system is typically isolated from the internet for security or performance reasons you may disconnect after the plugin shows "Registered to: your name".

NOTE: Many DAWs "cache" plugins and may not show the plugin as "Registered to: xxx" until the plugin is removed from a track or bus and re-loaded. Restarting the DAW will also refresh the plugin.

Answers to common registrations issues can be found on our [website FAQ page](#)

Plugin Controls



A – FREQ – sets the crossover frequency for the high frequency compressor.

B – EXT SC – selects an external source as the sidechain input.

C – LwR Slope – selects the crossover slope of the high frequency compressor (12 or 24dB/octave) when in Linkwitz-Riley (analog filter) mode. The 24dB slope is recommended for vocal de-essing as it is more selective. The 12dB slope is better suited for wider band reduction of overly bright drum cymbals, horn sections, etc.

D – LIN Ø – switches from Linkwitz-Riley (analog filter) mode to linear phase mode. Linear phase mode is “transient perfect” and processes the signal with zero phase shift at all frequencies. This mode is recommended for de-essing final mixes where phase shifts and resultant new signal peaks cannot be tolerated.

E – SC CUE – auditions the output of the high pass signal being used to drive the high frequency compressor. When **EXT SC (B)** is engaged this signal will be from the external sidechain source. When used with stereo sources the Cue signal will be obtained from the source as selected by the **Stereo Mode** control (**L**) to audition what the de-esser is “hearing” as the detection signal.

F – + REL – adds a secondary IIR filter to the level detector sidechain which extends the release time of the main FIR filter. Extending the release time can produce a smoother result with some material.

G – SPLIT BAND – selects whether the de-essing compressor ducks only the high frequencies (Split Band mode) or the entire signal. Split Band mode works best on mix program material while full signal mode can sometimes produce more effective de-essing on solo instruments and vocals.

H – HF LIFT – adds gain to the main audio and sidechain signal high frequencies pre-compressor. This control can be thought of as a drive control into the high frequency compressor. When used with stereo signals, gain will be applied to the stereo signal as selected by the **Stereo Mode** selector (**L**).

I – THRESH – sets the absolute threshold level of the high frequency compressor section.

J – RATIO – sets the gain reduction ratio applied in the high frequency compressor. At 1:1 no gain reduction is applied while at 20:1 the compressor clamps down hard.

K – MAX ATTN – sets a limit to the maximum amount of gain reduction that will be applied.

L – STEREO MODE – selects how the plugin affects stereo sources. NORM (default) detects levels and applies gain control equally to both left and right channels. When MID is selected the plugin only affects the “middle” (sum) of the left and right channels. When SIDE is selected gain reduction only affect the “sides” (difference) of the stereo channels. Selecting LEFT or RIGHT only affects the left/right channels. To ensure proper operation when used on mono tracks, please set this control to “NORM” (it will set to NORM automatically in most DAWs).

M – DELTA – allows auditioning the actual sound that the plugin is removing.

N – BYPASS – turns plugin audio processing on/off.

O – Gain Reduction meter – displays the amount of gain reduction being applied to the high frequencies. The amount of gain reduction shown here is the maximum occurring at the highest frequencies. Gain reduction tapers down to zero at frequencies below the **FREQ (A)** setting.

P – GUI Resize handle – click and drag to scale GUI up/down by +/-50%. Double-click to reset to default size.

ROTARY CONTROL MODIFIERS

- 1) Hold down the Ctrl key while dragging or scrolling any rotary control for fine resolution
- 2) Hold down the Alt (Win)/Option(Mac) key and then click on any rotary control to reset that control to its default value
- 3) Double-click on any rotary control to type in a control value.

PLUGIN PRESETS

Limited-S comes with a basic assortment of built-in presets to get you started. These presets are provided as suggested starting points and will typically need to be adjusted for each situation (especially the Threshold control). These presets will appear in all versions of the plugin on both Mac and PC however not all DAWs support hard-coded presets for VST3 plugins. If you are using the VST3 version in your DAW and do not see the preset list it means your DAW does not support hard-coded VST3 presets. In that case, please use the VST2 version.

HOW TO USE LIMITED-S

It is recommended that Limited-S be used as an “insert” for full effect on buses and tracks.

NOTE: Limited-S is an absolute threshold type de-esser that captures only the loudest, most obtrusive sibilance – the threshold does not attempt to follow the audio and apply what it “thinks” is excessive sibilance for the moment. Limited-S is, therefore, best used POST compression and EQ where dynamics are minimized but before any final limiter(s).

Basic De-Essing

Limited-S can be used on vocal tracks for basic de-essing by starting with the default settings and adjusting the controls to taste. Engage the **SC CUE** control (**E**) to audition the high frequencies being monitored and controlled by Limited-S. Adjust the **FREQ** control (**A**) and **LwR SLOPE** control (**C**) to select the frequency range containing the most amount of sibilance while minimizing the amount of signal you do not want affected. Switch to **Linear Phase mode** (**D**) for even more selectivity and to eliminate phase shifts in the final output signal. Brightness can be added to the source track – while still controlling excess sibilance - by raising the **HF LIFT** control (**H**) which adds boost pre-compressor. Set the **THRESH** control (**I**) to the point above which you want high frequencies to be reduced. Then adjust the **RATIO** control (**J**) for the desired amount of gain reduction (compression ratio). The **MAX ATTN** control (**K**) can be used to limit the maximum amount of gain reduction which can sometimes help produce a more natural sound.

De-Essing Vocals in a Stereo Mix (Master)

Limited-S can be used to reduce excess sibilance in a full stereo mix (master) by setting the **STEREO MODE** control (**L**) to “MID” and then setting the remaining controls per “Basic De-Essing” above. **Linear Phase mode** (**D**) is recommended for final mixes to protect transient detail and avoid any phase shift artifacts. MID mode will reduce excessive highs in the center of the stereo field – where lead vocals typically reside - while leaving the edges (“sides”) untouched. Likewise, the “SIDE” stereo mode can be used to reduce sibilance in wide-panned vocals, drum cymbals, etc., without affecting the stereo center. The **MAX ATTN** control (**K**) can be set as desired to apply some de-essing to the vocals and then “get out of the way” for larger, desired signals like cymbal crashes, etc.

Ducking Effect (using sidechain input)

It is sometimes helpful to dynamically reduce the high frequency levels in one track in a mix (drum cymbals, for example) to allow vocal sibilance or clarity on another track to stand out. To obtain this effect insert Limited-S on the drum cymbal track(s) or bus and engage Limited-S’s **EXT SC** control (**B**). Create a send from the vocal track to the Limited-S plugin on the drum track. The send level should typically be set to 0db. Use the **SC CUE** control (**E**) to audition the signal from the vocal track that will be applied to duck the drum cymbal track(s) while adjusting the **FREQ** control (**A**) and **LwR SLOPE** (**C**) or **Linear Phase** control (**D**) for the desired amount of “grab”. Then disengage the **Cue** control and adjust the **THRESH**, **RATIO** and **MAX ATTN** controls for desired ducking results.

LICENSE INFO

By installing this software you agree to use it at your own risk. We do our best to thoroughly test our plugins before release but it is simply impossible to test every conceivable situation. We cannot be held responsible for any damages caused as a result of use of this product. If a problem arises please contact us with a description of the problem and as much information as you can provide (DAW, DAW version, OS and version, error messages, etc.).

Distribution:

You are not permitted to distribute the software without the developer's permission. **You may register a copy on one laptop and one PC but "sharing" with others and duplication is prohibited.** Paying for the software you use helps developers like us stay in business!

Updates: You are entitled to free updates until the next major version number. **Please retain your purchase download link and registration key.** The developer makes no guarantee that this product will be maintained indefinitely.

Moving to another computer:

To move your plugin to another computer you can "De-Register" the plugin using our De-Register app that can be download anytime from our [FAQ webpage](#).

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