Wire Grind

Abracompabra

User Manual

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Overview

Abracompabra is a VST3 effects plugin for Windows systems. It is a compressor and expander with both upwards and downwards processing capabilities

Features

Upwards and Downwards Compression

Downwards compression is the de facto and most well-known compression type. However, there is another type of compression called upwards compression. This type up compression increases the level of sounds that are below the threshold. It increases the ambiance (the reverberation or the resonance) and produces a drastically different effect. Try the free demo version, it you are unfamiliar with upwards compression.

Expansion Too

Both upwards and downwards compression ratios are extended below 1 to allow for expansion.

Mid/Side Processing

The mid and side channel format is an alternative to better-known stereo format. In a compressor, mid/side processing can have a very significant effect on how the stereo sound field is ultimately rendered.

12 Channel Mode Combinations

Nearly all other compressor have two, or at most, four channel modes. With Abracompabra, there are four trigger channel modes (**linked**, **independent**, **mid**, or **side**) and three output channel modes (**independent**, **mid**, or **side**). Use them in any of 12 combinations to produce a unique effect.

Anti-Aliasing

Compressors can introduce aliasing. Abracompabra will prevent it by oversampling at a rate that’s 8x or 16x that of standard audio (44.1kHz or 48kHz).

Other Featuers

- look-ahead
- side-chain
- integrated dynamic limiter
- strong trigger signal filtering
- soft knee

Demo Version Limitations

There are two differences between the demo versions the full versions:

- The demo version is unable to save settings.

- The demo version periodically ads a tone of chirp sound to the output.

Installation

This program comes with a set up application that will guide you through the process. You will likely need to unzip or extract the download package before running. With some computer setups, you will also need to close any running audio applications.

Uninstall

The program can be removed using Windows' add/remove utility.

System Requirements

Operating System

Windows versions 7 through 11.

Supported Host Programs

A program supporting 64-bit VST3 effects plugins is required.

Internet Access (recommended)

Access to the world wide web is required during installation. If the plugin is being installed on an offline computer, a small amount of data will need to be copied from one computer to the other.

Specifications

Supported Sample Rates

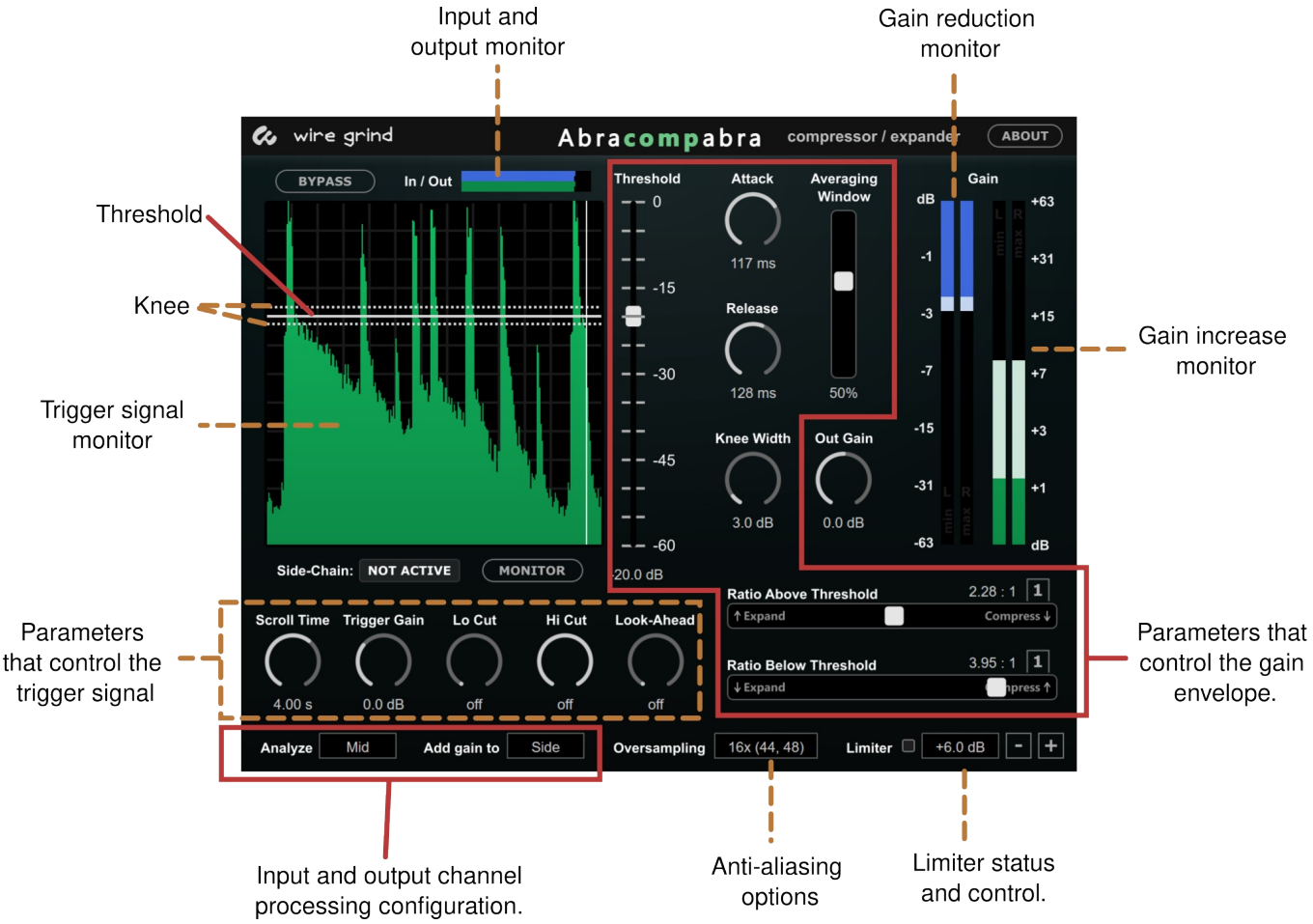
All features are supported for the following sample rates: 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192.0kHz.

At other sample rates, the oversampling feature will be non-functional. Additionally, non-listed sample rates have not been tested. If in doubt, please try the free demo version.

Plug-in Format

VST3, 64-bit

Software Interface At A Glance



Software Interface Details

1

This sets the ratio to exactly 1:1.

Attack

The speed at which the gain will adjust when the trigger signal is above the threshold.

Add gain to (Channel Configuration)

The channel configuration to which the gain is added.

> **Unlinked**: Gain is added to the regular input channels.
>
> **Mid**: The input is converted to mid-side configuration, and gain is added to the mid.
>
> **Side**: The input is converted to mid-side configuration, and gain is added to the side.

Analyze (Channel Configuration)

The channel processing mode determines how the level of the trigger signal is computed.

Linked: A single gain value is computed using the maximum of all channels.

Unlinked: A gain value is computed for each channel independently.

Mid: The trigger signal is converted to mid-side configuration, and a gain value is computed using the mid.

Side: The trigger signal is converted to mid-side configuration, and a gain value is computed using the side.

Averaging Window

Sets the size of the time-window that's used for averaging the trigger signal. Lower percentages will produce a more volatile gain envelope. Higher percentages will make the gain envelope more resistant to sudden bursts in the trigger signal.

Bypass

When bypass is active, the input audio is passed directly to the output for monitoring. The scope and the gain meters will continue to operate as normal. To completely stop the plugin, check if your DAW host program has an option to disable plugins.

Gain Monitors (Meters)

There are two pairs of gain meters. The left most pair shows gain reduction, and the right most pair shows gain increase.

Often gain reduction will be shown at the same time and gain increase. This occurs because values fluctuate in between screen refreshes.

Hi Cut

Sets an upper roll-off frequency for filtering the trigger signal.

Knee Width

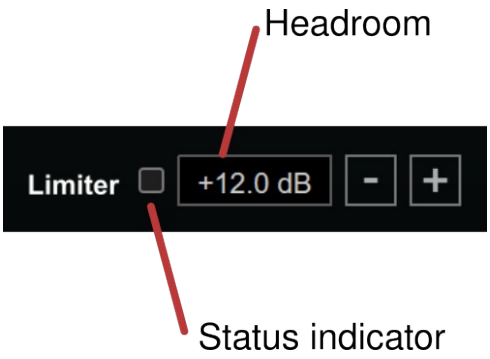
Sets how rapidly Abracompabra will transition between the upper and lower ratios. Higher knee widths make the transition more-gradual or more-rounded so to speak.

In/Out

This displays the levels of the input and output signals. If you are using an external side-chain, the input will differ from what is displayed on the scope.

Limiter

Volume is increased whenever there is either upward compression or upward expansion. To prevent undesirable volume increases, Abracompabra has a dynamic limiter. Without limiting (or with high values for the **Headroom** parameter), there will be sudden large and difficult-to-predict volume increases.



Limiter Status: The status indicator flashes blue when ever the gain has been limited.

Limiter Headroom: Sets the headroom.

Abracompabra allows the maximum output level to increase up to an amount that's equal to the input's maximum level + the headroom. In more mathematical terms, that is

$$\text{max\_allowed\_output} = \text{max\_input} + \text{headroom}$$

Levels above max_allowed_output will be prevented by the limiter. The input is continuously evaluated to determine its level. Abracompabra may remember the max input level for several seconds.

Lo Cut

Sets a lower roll-off frequency for filtering the trigger signal.

Look-Ahead

This parameter will cause the effect to "look into the future" to detect level changes. This information is then used to apply an envelope to the present.

Monitor

When engaged, the control signal becomes the output. In normal operation, the output is the processed input signal. When side-chaining, the output is the auxiliary input.

Out Gain

The amount of gain applied to the output signal.

Oversampling

This parameter sets the strength of the plugin anti-aliasing algorithm.

Ratio Above Threshold

The compression ratio above the threshold. This is downwards compression, and it is the most common type. Ratios less than 1 produce upwards expansion.

Ratio Below Threshold

The compression ratio below the threshold. This is upwards compression. Ratios less than 1 produce downwards expansion.

Release

The speed at which the gain will adjust when the trigger signal is below the threshold.

Scope

This feature visualizes the levels of the trigger signal after being filtering, look-ahead, and mid-side processing has been applied. The scope shows the highest and lowest signal levels over time. Sometimes the scope may appear to only show single signal level. This happens under the following circumstances: The highest and lower signals are the same level, the signal is mono, the scope is displaying either a “mid” or “side” signal.

The solid horizontal line show the threshold while the dotted lines show the upper and lower edges of the knee.

Scroll Time

This parameter sets how fast the scope scrolls.

Side-Chain

Shows the status of the the side-chain. It the side-chain is being used, the box to the right turns red and reads “active.” When not in use, the box will be gray and read “not active.” Side-chaining turns on automatically whenever your DAW is configured to use it.

When speaking about side-chains, the terms “internal” and “external” are often used. These two terms are synonymous with “not active” and “active,” respectively.

Threshold

When the control signal level is above the threshold, the gate opens. When the control signal level is below the threshold, the gate closes.

Trigger Gain

This parameters adjusts the gain of the trigger signal. While it will impact envelope detection, it will not alter the level of the output.