



Bute Limiter 2 User Manual

Bute Limiter 2 is an ultra-transparent true peak brickwall limiter featuring a novel limiting algorithm and advanced auto release. Bute Limiter 2 is part of Signum Audio's range of mastering tools called Bute. The range of Bute tools includes Bute Loudness Analyser, Bute Limiter 2, and Bute Loudness Normaliser as well as the integrated Bute Loudness Suite. Bute Limiter 2 comes as plugins for all major DAWs in VST/VST3, AU and AAX format for MacOS and Windows.

Installing the Plugin

Mac OS x

Minimum Requirements

Mac OSx 10.9

OpenGL 2.0

ProTools Ultimate (for AAX)

Run the installer as provided.

The installer will run you through the following sections:

License: Read through the license agreement and accept it if you agree with the license.

Destination Select: Choose your destination, this should be a location in your system folder

Installation Type: Choose which plugin formats you need. If you are using Pro Tools make sure you have AAX selected.

Installation: You will be asked for your password as the installer needs to install the plugins in your system folder.

Windows

Requirements

Windows 7 or above

ProTools Ultimate (for AAX)

You might get asked to confirm to run the installer depending on your security settings. In this case a message saying 'Windows Protected your PC' will show up, please click on 'Run anyway'.

The installer will then run you through the following screens



License Agreement: Read through the license agreement and accept it if you agree with the license.

Select Components: You can choose between full installation or custom installation which allows you to select which plugins you want to install.

Plugin First Use

After installation, you should find your plugin appear in the *Plugin* section of your favorite DAW.

In most DAWs, VST and AU hosts you should find our plug-in under **Signum Audio > Bute Limiter 2**.

Pro Tools users will find it under the *Dynamics section*.

Stereo, Mono and Surround

If you purchased the Stereo version you will be able to use the plugin in mono or stereo mode. If you purchased the Surround version you will be able to use it for all multichannel configurations including Atmos. You can add the plugin on any track but you most likely want to insert it as the last plugin on the master (Master Fader Track), this will mean that you will be limiting the final output of your audio.

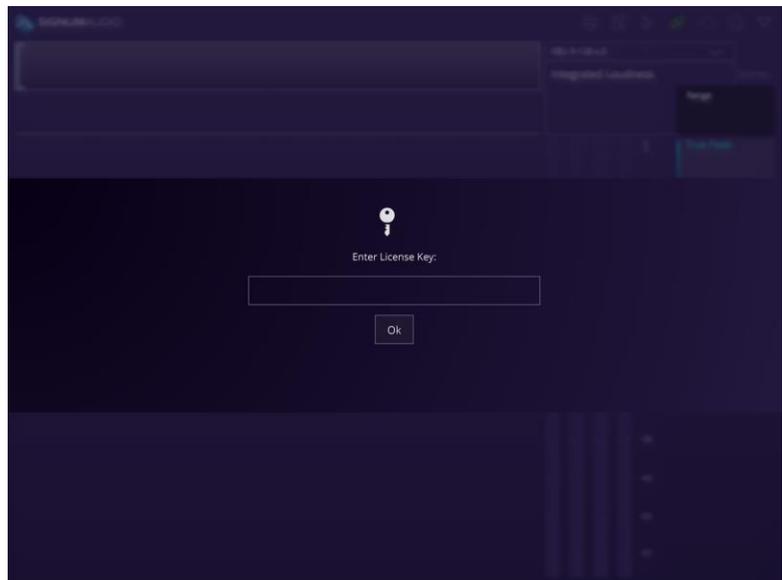
License Keys

On the first run you will be asked for your **license key**. You should have received this by email, or else you can find it under [license keys in your user account on www.signumaudio.com](#).

Enter the license key as it has been sent to you (case sensitive) without any spaces.

Please make sure you are connected to the internet.

If you are experiencing issues to get your copy licensed, please contact us by sending an email to support@signumaudio.com

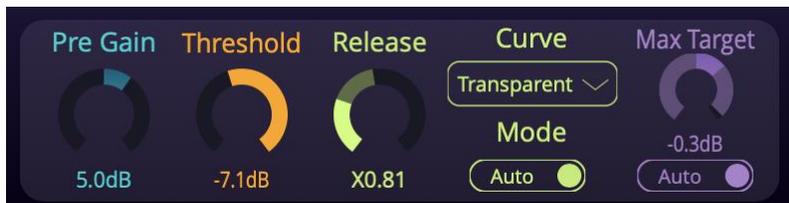




Functionality

Automatable Parameters

Bute Limiter 2 has a control panel where you can control Pre gain, Threshold, Release (including Release Time, Curve and Mode) and Manual or Auto Post Gain. All parameters are fully automatable in your DAW.



Pregain

Pre Gain is the amount of gain applied on the audio input before limiting. With the Pre Gain you can push the limiter in a similar way as you would use a maximiser without changing the threshold.

Threshold

The threshold can be changed either by moving the slider besides the metering bars or by moving the dial in the control panel.

Release Time

By default auto release is active which means the optimal release time is calculated dynamically by analysing the audio input. To switch to manual release click the **Mode** toggle button. When release is not in auto mode, you can change the release time via the dial or by typing in a number below.



Auto Release



In auto release mode, the release is calculated depending on multiple properties of the input audio. You can change the **Auto Release Time Reactivity Factor** to configure the auto release for different types of signals. If you like the auto release to act faster you can decrease the value and if you like it to act slower you can increase the value. The Auto Release Time Reactivity Factor can be thought of like a more sophisticated release time setting. For example a value of x4 is appropriate for piano music which usually sounds best with longer release times.

You can see the calculated actual release time in the background of the automatic release time dial.

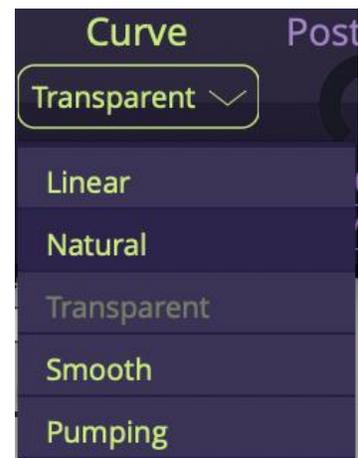
Automating release time in this mode will not affect the audio, as it will be automatically set by the auto release algorithm.

Release curves

You can change the type of the release curve.

There are 5 different curves; Linear, Natural, Transparent, Smooth and Pumping.

Our **Transparent**, **Natural** and **Smooth** release curves have been designed to make gain reduction as un-noticeable as possible. The **Linear** release curve is a standard linear release gain reduction. **Pumping** is a curve that can be used for creative purposes.





Post Gain

The post gain acts after limiting has happened and can be used to increase or decrease the output level of your content.

This is useful if you want to adjust the volume of your output without changing your limiter settings. For example if you like to compare your master with and without limiting without letting differences in volume affect the comparison.

You can use Post Gain in Manual mode where you set the gain in decibels or in auto mode where you set a desired target value.

Max Target

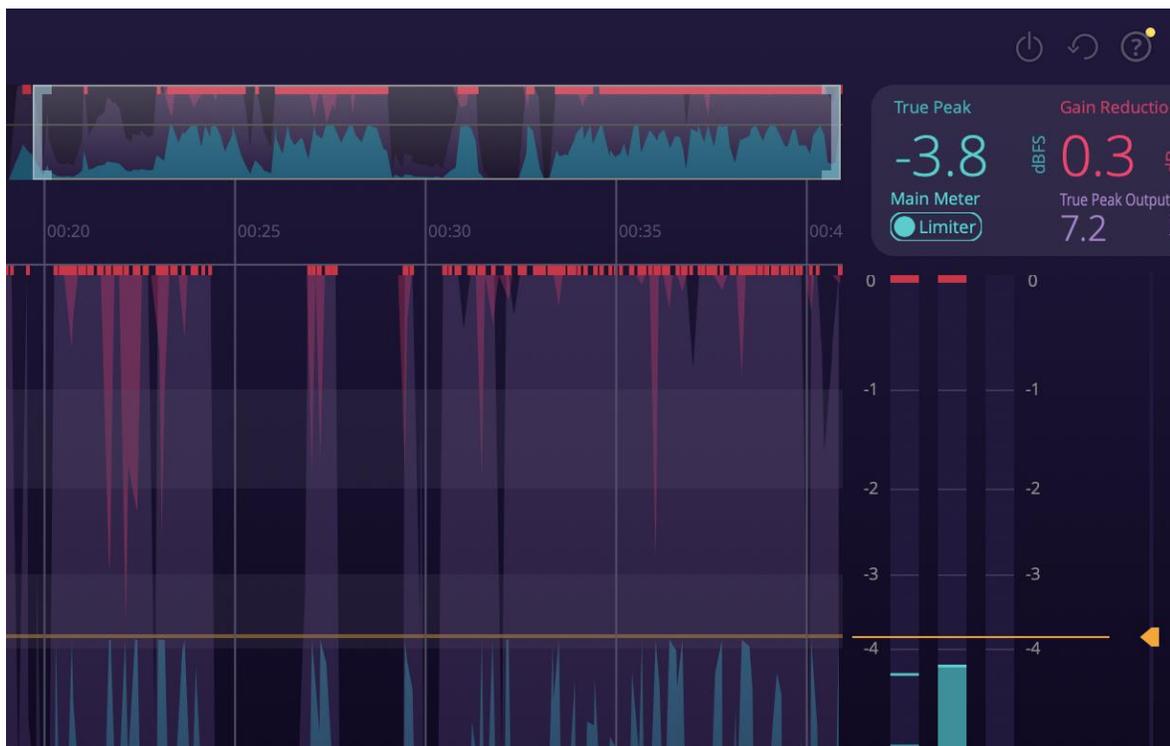
In Post Gain Auto mode you will be able to set a target maximum value. The Post Gain will then be automatically calculated as the difference between the Threshold and the Target and applied at every sample during limiting.

This feature allows you to change the Threshold and never exceed a Max Target.



Overshoot Reporting

By pushing the limiter output with PostGain you might introduce True Peak Overshoots (values above 0dbTP) which may result in a distorted output. Bute Limiter 2 reports overshoots both in the Vertical Meter and the History with Red Indications at the top.





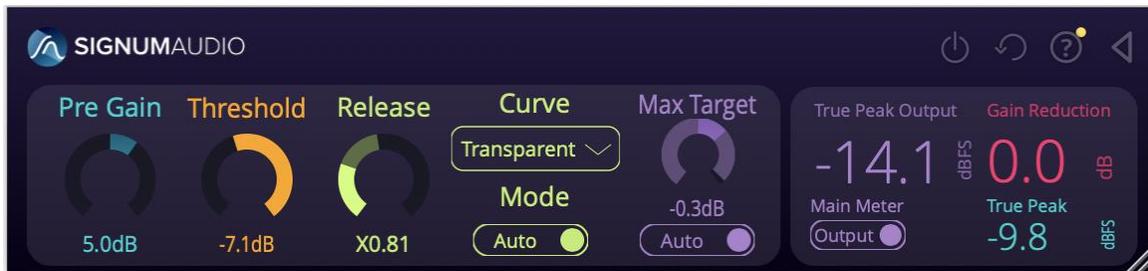
Plugin Window

Plugin Window Overview



Collapsed / Expanded View

When the collapse icon  in the menu bar is clicked, the plugin window will resize and rearrange to a compact layout.



This mode shows the Pre Gain, Threshold, Release, Curve Settings and Post Gain settings. It also shows the True Peak Output, True Peak Limiter Output and Gain Reduction as readings.



Resizable UI

When the view is expanded, you can resize the window at your own liking by dragging the bottom right corner.



Metering

At the top of the metering section you can find readings for True Peak, True Peak Output and Gain Reduction.

True Peak displays the true peak output of the limiter. It uses an upsampled signal to mimic analog output.

True Peak Output displays the actual output of the plugin, which is the limiter output with applied Post Gain.

Gain Reduction displays the current gain reduction applied to the incoming audio.

Adjustable Vertical Scale

Bute allows you to adjust the vertical scale by simply grabbing the scale and dragging it up or down. This will affect the display of the meter bars as well as the history view. Depending on how you adjust the vertical scale, you will see more detail in different parts of the dynamic spectrum. The threshold is shown as a line over the meter bars.





History View

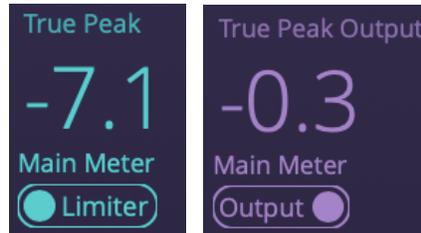
The history section can be found on the left side of the window when the plugin is expanded. In this section you can see the history of the True Peak, True Peak Output, and Gain Reduction readings. In the limiter view it also contains the history of the Threshold. The colours of the graphs correspond to the colours of the meter bars and the numerical readouts at the top right.



The preview section on the top shows the whole history. You can move and zoom through the history by moving and resizing the window in it.

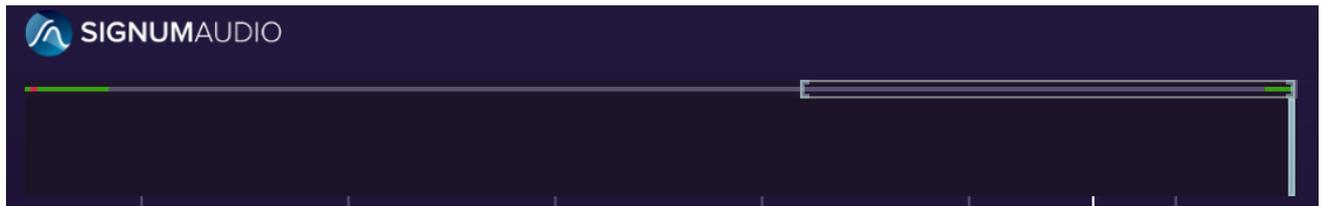


You can select which graph is being highlighted - the TruePeak limiter output or the actual output of the plugin - by using the switch under the main reading in the top right. This will also change what your metering bar is showing.



A floating information box appears when hovering over the history section. The information box contains the exact reading at a particular time, True Peak, True Peak Output and Gain Reduction.

If your session is longer than 30 minutes, the history overview will be further separated using a topmost full overview. This allows for very long sessions or sessions that start at 10:00:00 as sometimes done in broadcasting. Re-metering and DAW sync will still be available.



Menu

The menu is always visible on the top right corner of the plugin window.



- **Bypass:** Sets the limiter in bypass mode
- **Reset:** Resets all history graphs
- **Info:** Shows license key and information about limiter. You will also find the download link to the latest version if you run an older version of the limiter. There will be a yellow indication on the button if a new update is available.
- **Collapse / expand:** Collapses or expands the display. The collapsed display allows you to use the limiter without using much space on your screen.



Known Issues

Surround Version Doesn't work with Ableton 9.

Please report any other issues to support@signumaudio.com