

PeakCompressor version 2.7 shareware

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1. PeakCompressor features

PeakCompressor is an advanced stereo compressor/limiter plugin designed to boost the overall loudness of your music in a very comfortable way. It can be used within VST host applications like Cubase VST, WaveLab, OrionPro, Ableton Live or n-Track. In Cubase for instance you can use PeakCompressor as an insert-effect to control the volume of a single mono track or as a master-effect in order to prepare music for burning on CD.

PeakComp's compression/limiting algorithm reacts to peaks, not to the energy (RMS) of the signal. That's why you hear no pumping or coloration effects. Note that there exists no fader for setting the attack time. This is set to zero preventing high transients from "slipping through". A zero attack time normally would cause distortion. PeakComp solves this problem by using an intelligent look ahead algorithm and adaptive release times.

The dynamic resolution of PeakComp's audio processing is 32 bits. The plugin is suitable for sampling rates up to 96 kHz. Because of its low CPU usage you could use literally dozens of PeakComps simultaneously in your mix.

Hints :

- After activating "Auto Normalize" there may occur huge dynamic jumps while PeakComp is seeking for the highest peak in your audio signal - so take care of your ears !
- In Auto Normalize mode the limiter threshold is linked to the output gain, which simplifies the search for the right setting
- Click on a parameter display for direct numeric input
- Click above or below a fader handle for fader fine tuning
- Click on the string "Threshold" to switch between compressor (white) and limiter (red) threshold display
- Click on the meters to reset VU peak memory
- Use the options available in the context menu
- Note that settings you do using the context menu are global for all PeakCompressors and stored in the Windows registry database
(KEY_CURRENT_USER\Software\SinusPlugIns\PeakCompressor)
- Don't overcompress your mix !

2. PeakCompressor installation

Simply copy the PeakComp2.dll into your Vstplugins directory.

3. PeakCompressor controls

Threshold faders

The small fader on the very left of the user interface is the one and only control for the limiter and adjusts the limiter threshold (-24 to 0 dB). The limiter works completely independent from the compressor unit and has a fixed ratio (∞:1) and an adaptive release time (≥ 10 ms). The other "threshold" fader sets the level, at which the compressor starts working (-36 to -0.5 dB).

Ratio fader

Sets the amount of compression as a ratio (1:1 to 30:1)
The ratio is applied to any audio which exceeds the threshold.

Release fader

Compression release time setting in milliseconds (10 to 999 ms)
The release time is the time taken for the gain to return to normal or no compression respectively.
The release curve is non-linear and its length depends on the level exceeding threshold.
Turn on the small "Auto" switch for automatic release time calculation.

The reduction level display

Shows amount of reduction applied to your audio signal. This meter should normally reach no more than 6dB. The maximum possible compression depends on your audio material.

Soft switch

If activated, the amount of compression increases exponential with the level above threshold. This gives a smooth compression effect. The maximum ratio is applied at 0 dB. I recommend to keep this switch always activated.

Auto Normalize switch

The Auto normalize feature automatically brings peak levels up to the Auto Normalize limit, which can be set in the contextmenu (0 / -0.01 / -0.05 / -0.09 dBFS). You can be sure that there will be absolutely no clipping. This makes normalizing sound files with an off-line editor unnecessary.
The different limits can be useful, if your music application reports clipping for signals, which are near to 0 dB. Furthermore some DA converters can get in trouble with 0 dB peaks.
For mixdown turn this switch off.

Final dither

If activated, the output of PeakCompressor will be dithered and computed (not truncated) to 16 bit CD Resolution. Dithering adds a white noise signal below the 16th bit (lsb) to the 32 bit signal of your audio application. Because of that the portion of the signal below 16 bit modulates the 16th bit and becomes audible. This increases the dynamic range of your resulting 16 bit audio signal to more than 100 dB !

When you use dithering, PeakCompressor must be the very last effect in the chain.
Don't apply any further processing to a 16 bit wave file which has already been dithered.

Bypass

Bypasses the PlugIns signal path in order to compare original and processed signal.

Output fader

Sets the output amplification (0 to 24 dB)

Output level display

The VU meters on the right of the user interface show the exact output levels. Any red indicates that your signal exceeds 0 dB or clips respectively.

WaveDisplay

The WaveDisplay is the central visualisation panel in the middle of the PlugIns user interface. It shows input, compressed and limited signals, each with a different color. In this view you can also find the limiter and compressor thresholds. The small fader on the right of the panel zooms the view vertically and doesn't affect audio. Colors, zoom range and display speed can be changed in the right-click contextmenu.

LookAhead fader

PeakComp uses an intelligent look ahead algorithm to minimize distortion artefacts. The fader controls the look ahead time, which is introduced as a small latency in the signal path. It can be set from 0 ms to 10 ms (max). I recommend to keep this fader always at the maximum position. The latency is automatically compensated, on condition your host application supports that.

RMS Display

Here you can observe the average energy (loudness) of the output signal. The bigger RMS value of left/right channel is displayed. You can use this feature f.e. to compare the loudness of different songs.

4. How to use PeakComp ?

Well, a good starting point is to adjust the WaveDisplay zoom so that the wave fits in the Display. Set the limiter threshold to 0 dB and turn on the Auto Release switch (small button). Now you can adjust compressor threshold and ratio (f.e. -10 dB , 3:1). You should experiment on that. After that you may switch on Auto Normalize and lower the limiter threshold level to about 1 or 2 dB below the highest peaks of the compressed signal. Now switch Auto Normalize off and choose "Create file" or "Export Audio" in your music application.

That's it !

I hope you enjoy using this PlugIn in your music production as well as I do !

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5. Version history

- v2.7 (27.07.2003)
 - now supports latency compensation
 - GUI improvements
- v2.6 (26.05.2003)
 - look ahead algorithm
 - direct numeric input
 - improved limiter precision
 - in Auto Normalize mode the limiter threshold is linked to the output gain
 - sampling rates up to 96 kHz supported
 - another output limit added (-0.05 dBFS)
 - dither level raised
- v2.52 (06.03.2003)
 - now compatible with WinXP
- v2.51 (23.02.2003)
 - AntiDistortion setting wasn't saved correctly (in "max" position) - fixed
- v2.5 (09.01.2003)
 - full parameter automation
 - optimized user interface
 - non-flickering wave display / adjustable display speed
 - improved help window
 - Auto Normalize bug – fixed
 - preset saving bug – fixed
 - window device context bug - fixed
- v2.32 (10.11.2002)
 - preset saving bug - fixed
- v2.2 (23.11.2001)
 - memory optimized
 - OrionPro compatible
- v2.1 (02.01.2001)
 - built-in limiter (compressor and limiter work completely independent)
 - automatic release time calculation (compressor)
 - RMS display
 - more granularity for threshold and ratio
 - peak memory for reduction meter
 - improved Auto Normalize / adjustable limit
 - dither improved
 - AntiDistortion fader
 - custom colors for WaveDisplay
 - adjustable peak hold time and zoom range
- v1.31 (22.10.2000)
 - less CPU-usage
 - peak memory for output VU meters
 - Help function
 - output fader with one hundredth dB precision
 - meters improved - now gentle to your eyes
 - windows device context bug – fixed
 - bugs in wave view – fixed
 - memory bug - fixed
- v1.1 (21.06.2000)
 - first release