

PSP ProZilla



Operation Manual

www.PSPaudioware.com

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Table of Contents

PSP ProZilla.....	5
Overview.....	5
Installation	6
Authorization	6
Support.....	6
PSP AutoComp.....	7
Overview.....	7
Controls.....	7
PSP EasyLimit.....	8
Overview.....	8
Controls.....	8
PSP MasterQ.....	9
Overview.....	9
Controls.....	9
Operations.....	11
PSP MixPressor	12
Overview.....	12
Controls.....	12
PSP MixSaturator	14
Overview.....	14
Controls.....	14
PSP MS.....	16
Overview.....	16
Controls.....	16
PSP StereoController	17
Overview.....	17
Controls.....	17
PSP StereoEnhancer	19
Overview.....	19
Controls.....	19
PSP VintageWarmer.....	21
Overview.....	21
Controls.....	21

PSP ProZilla

Overview

PSP ProZilla is a set of PSP plug-ins dedicated for the ultimate hardware plug-in player – Plugzilla. All PSP plug-ins are utilizing 64 bits floating point computations and other techniques to provide excellent processing quality. PSP ProZilla plug-in contents:

PSP AutoComp

The PSP AutoComp provides the sound and detail of classic analog and opto-electronic compressors. AutoComp features very straightforward operation while at the same time being capable of a wide range of compression settings.

PSP EasyLimit

The PSP EasyLimit offers very simple and high quality brick wall limiting. The algorithm is based on the PSP VintageWarmer's single band mode with the added feature of automatic release time adjustment.

PSP MasterQ

The PSP MasterQ is a high quality, 64-bit processing capable parametric equalizer with seven kinds of filters designed to operate at sampling up to 192kHz. All the filter types feature an adjustable frequency and Q factor over a wide range.

PSP MixPressor

The PSP MixPressor is an advanced compressor designed for the final processing of whole mixes or single tracks. Combining the advantages of digital signal processing with algorithms which emulate the operation of analog circuits, it enables the user to obtain a sound quality typical of compressors with valve and opto-electronic circuits without any unwanted noise or distortion.

PSP MixSaturator

The PSP MixSaturator is a specialized processor designed to produce a saturated sound typical of analog devices such as tape recorders and valve (tube) circuits. It allows users to add overall program saturation algorithm with separate low and high frequency processing to their audio.

PSP MS

The PSP MS is a simple and effective Mid-Side codec with channel swapping and gain setting options.

PSP StereoController

The PSP StereoController plug-in offers the ability to correct phase reversed signals and to swap stereo channels. It can also be used for introducing subtle changes to the stereo image.

PSP StereoEnhancer

The PSP StereoEnhancer allows users many ways to process a stereo signal. Users can use the PSP StereoEnhancer to convert a mono signal into a stereo signal, extend the stereo field of a stereo signal, and dynamically enhance the stereo signal.

PSP VintageWarmer

The PSP VintageWarmer is a high-quality single- or multi-band compressor/limiter. It functions both as an excellent compressor/limiter, and as a way to add analog warmth to a track or mix. The ProZilla version of the PSP VintageWarmer has one extra feature over the native version—a Limiter/Compressor switch. In the Limiter setting VintageWarmer works in its standard mode while in Compressor mode longer release times optimized for compression are used.

Installation

PSP ProZilla is a dedicated set of plug-ins, which is capable of running only on Manifold Labs Plugzilla plug-in player. Any attempt to run ProZilla plug-ins on any other VST host can crash your application. To install PSP ProZilla, please follow the instructions in the Plugzilla manual.

Authorization

PSP ProZilla supports Plugzilla's unique authorization system and evaluation period. After the installation you may run the PSP ProZilla plug-ins 25 times in their full-featured evaluation mode. Once all of the evaluation launches have been exhausted, the plug-ins revert to bypass mode, at which time they will cease to affect the audio.

After loading the PSP ProZilla Pack, the number of launches left per plug-in is displayed in the *Knobs→Install* menu. During or after the evaluation time you may buy the PSP ProZilla via the PSP website at <http://PSPaudioware.com/prozilla.html> During the ordering process you will have to provide the Challenge code displayed in the *Knobs→Install* menu as an "Additional 1" field in the order form. The authorization key will be sent with a confirmation of your order. Please enter the key in the proper field in the *Knobs→Install* and push the Install knob located below the Authorize text. This operation will unlock all PSP ProZilla plug-ins.

Support

If you have any questions about the principles or operation of our plug-ins, please visit our web site www.PSPaudioware.com where you can find the latest product information, free software updates and answers to the most frequently asked questions. You can also contact us by e-mail: support@PSPaudioware.com We will gladly answer all of your questions. As a rule we respond within 24 hours.

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PSP AutoComp

Overview

PSP AutoComp provides the sound of classic compressors. It offers very simple operation and is capable of wide compression settings. These features makes this plug-in a versatile tool for warm track and bus compression.

Features

- ▶▶ Simple operation
- ▶▶ Musical sound in only a minute
- ▶▶ Automatic make-up gain setup
- ▶▶ RMS or Peak level detection
- ▶▶ Automatic attack and release times adjustment

Applications

- ▶▶ Track and bus compression whenever a musical effect without complex setup is required

Controls

On / Bypass

The On/Bypass control turns the processor on and off. When the processor is in bypass mode, all processing routines are bypassed.

Thresh

The Thresh control sets the compression threshold. Please note that the make up level is set up automatically in the AutoComp and the output level may be slightly over or below the 0dBFS according to plug-in's settings and the processed track.

Knee

The Knee control sets the knee range below the threshold level.

GainRed

The GainRed control is a peak gain reduction meter which helps to properly set up the amount of compression.

Peak / RMS

The Peak/RMS control allows you to choose between peak and RMS level detector.

Time

The Time control sets the attack and release time constants. The higher the Time value the longer the attack and release times. The attack and release times are also altered by automatic attack and release control algorithm.

Output

The Output control adjusts the output level of the plug-in.

OutLev

The OutLev control is an output peak level meter.

PSP EasyLimit

Overview

PSP EasyLimit is a brick wall limiter which is very simple in usage and high quality in sound. The algorithm is based on a PSP VintageWarmer's single band mode with the addition of an automatic release time control.

Features

- ▶▶ Simple operation
- ▶▶ Effective and high quality brick wall limiting
- ▶▶ Automatic release time control with manual adjustment
- ▶▶ Hard knee processing for the lowest possible influence on the input signal

Applications

- ▶▶ Track and bus quality brick wall limiting

Controls

On / Bypass

The On/Bypass control turns the processor on and off. When the processor is in the bypass mode, all processing routines are bypassed.

Input

The Input control sets the input level for this plug-in.

Release

The Release control adjusts the release time constant. The higher the Release value the longer the release time. The release time is also altered by automatic release control algorithm.

GainRed

The GainRed control is a peak gain reduction meter which helps to properly setup the amount of compression.

PSP MasterQ

Overview

PSP MasterQ is a high quality parametric equalizer designed to operate at sampling rates ranging from 44.1 to 192kHz. The plug-in contains seven filters: 12 or 24 dB/oct low cut and high cut filters, low shelf and high shelf filters, and low mid, middle and high mid peaking filters—all of them with adjustable frequency and Q factor over a wide range.

Frequency Authentication Technique (FAT) Algorithm

The PSP MasterQ, uses our proprietary Frequency Authentication Technique algorithm. FAT is a double sampling technique which allows for proper filter operation at the highest frequencies. FAT utilizes high order linear filters to prevent phase errors and linear errors from the audio bandwidth caused by double order sampling. This technique results in double sampling without sample rate conversion artifacts.

Most Infinite Impulse Response (IIR) filters typically used in EQs tend to focus on phase and linear digital signal errors in the higher octaves. Our FAT algorithm adds an octave above the Nyquist frequency (the Nyquist frequency is measured by sample rate / 2) and shifts phase and linear errors to that frequency region. This frequency region is then truncated just before the output section of the plug-in, meaning the phase and linear errors are removed from the signal. In other words, FAT gives sonic results approaching that of an analog equalizer sampled rather than a typical digital set of filters.

LIM-SAT

In addition to its powerful equalizer filters, the PSP MasterQ also offers you a selection of limiting and “soft-clipping” algorithms to help you shape your signal and keep it from digitally peaking. One of the LIM-SAT algorithms, VintLim, is based on the limiter from the PSP VintageWarmer’s single band mode. It provides the most transparent limiting algorithm, but at the price of slightly increased internal latency and CPU usage. LimSoft and LimHard are limiting algorithms with the same attack as in DynHard algorithm, but the Release time is much greater which usually results in a softer feel and sound. DynSoft and DynHard offer a dynamic saturation—these modes work like a limiter with material containing levels considerably below 0dBFS, and tightens the attack and release times when the level of the material is close to or exceeds 0dBFS for a more immediate response. SatSoft and SatHard are saturation algorithms from other PSP dynamics plug-ins.

The VintLim algorithm is designed to provide good results whenever artifact free processing is desired. Lim and Dyn algorithms are best for drums and percussive instruments while Sat algorithms are good whenever a pinch of distortion is required.

Controls

On / Bypass

The On/Bypass control turns the processor on and off. When the processor is in the bypass mode, all processing routines are bypassed.

ResetAll

The ResetAll control sets the Range control and all filters’ settings to their default values however it doesn’t change status of individual filters.

Left / Right

You can use these controls to turn on or off processing for the left and right channel independently. This allows you to process only one channel while keeping the second channel synchronized.

FAT

This control activates the Frequency Authentication Technique – a high quality double sampling technology which results in more accurate and transparent high frequency filtrations. This algorithm produces a slight internal latency of 128 samples. In general, you will always want the FAT algorithm engaged, however you might need to turn the FAT off if you must have the lowest possible latency, or need to conserve CPU computation power.

Range

The RANGE control acts as sort of a boost or cut for the entire EQ. It sets the multiplier assigned to all Gain controls of the individual filters. It allows you to increase, lessen or even invert amplitude characteristics of all filters except low cut and high cut.

You can dial in settings from –150% to 150% giving you an extra 50% of filters’ boost or attenuation. The default value is 100%, which does not alter the gain settings of the filters at all.

LimSat

This control allows you to switch between the different limiting and soft clipping algorithms available to you. You can also choose to turn off these algorithms completely.

Output

The Output control sets the output signal level of the EQ before it enters the limiting-saturation section.

Filters Activation Controls: LowCut, LowShelf, LowMid, Mid, HighMid, HighShelf, HighCut

Each of PSP MasterQ’s filters can be turned on or off individually via its Filter Activation.

Freq

This control sets a cut-off or center frequency of individual filter. The range of each filter’s Freq control depends on the chosen filter. Each Freq control has a different default setting based on its range (see Operations for details).

Q

The “Q factor” knob sets the width for a filter. The lower the Q, the wider the range of filter (which results in a softer slope to the EQ curve). Higher Q values result in the filter affecting a narrow frequency range (which looks more like a notch or resonance than a curve on the EQ graph) The default value for each filter was set to match the purpose for that given filter (see Operations for details).

Gain

This control sets the gain/attenuation for a filter. Its range is –24 dB to +24dB with increased resolution closer to 0dB. Note that the high and low cut filters do not have Gain controls.

FltType

Both the low cut and high cut filters have a 12db/oct or 24dB/oct settings for this control which allows to set the general slope for these filters and fine tune it with a Q control.

Operations

Filter Frequencies

The frequency range of each filter has been specifically tailored to be as useful and dynamic as possible for its given range. You'll notice that most of the filters in the PSP MasterQ actually have a far wider range than most other EQ plug-ins give their filters. This is to give you the maximum flexibility in adjusting each filter. The frequency ranges and default values for each filter, from left to right across the PSP MasterQ interface, is as follows:

Low Cut Filter:	10 Hz — 20 kHz <i>10Hz by default</i>
Low Shelving Filter:	20 Hz — 2 kHz <i>100Hz by default</i>
Low Parametric Filter:	16 Hz — 16 kHz <i>250Hz by default</i>
Mid Parametric Filter:	20 Hz — 20 kHz <i>1kHz by default</i>
High Parametric Filter:	24 Hz — 24 kHz <i>4kHz by default</i>
High Shelving Filter:	300 Hz — 30 kHz <i>10kHz by default</i>
High Cut Filter:	10 Hz — 30 kHz <i>30kHz by default</i>

Adjusting the Q

While there are no hard and fast rules as to how to set the Q factor for each filter, there are a few general rules that can help you get the most out of the PSP MasterQ.

The Low shelf and High shelf Q factors within the range of 0.35 to 0.71 result in a smooth shelf curve. Values as low as 0.35 give the smoothest possible curve while values greater than 0.71 add a peak above and below the set frequency.

The Low cut and High cut Q factors in the range of 0.35 to 0.71 result in a typical low cut and high cut curve without any resonance gain. A value of 0.71 value creates a curve of 12dB/oct or 24db/oct depending on if you have engaged 24db/oct switch. Lower values decrease the steepness of the curve down to 6dB/oct (for 12dB/oct filter's mode). Values greater than 0.71 raise the resonance.

The Q ranges and default values for each filter, from left to right across the PSP MasterQ interface, are as follows:

Low Cut Filter:	0.35 — 1.41 <i>0.71 by default</i>
Low Shelving Filter:	0.35 — 1.41 <i>0.5 by default</i>
Low Parametric Filter:	0.05 — 20 <i>0.41 by default</i>
Mid Parametric Filter:	0.05 — 20 <i>0.26 by default</i>
High Parametric Filter:	0.05 — 20 <i>0.41 by default</i>
High Shelving Filter:	0.35 — 1.41 <i>0.5 by default</i>
High Cut Filter:	0.35 — 1.41 <i>0.71 by default</i>

PSP MixPressor

Overview

PSP MixPressor is an advanced compressor designed for the final processing of whole mixes or single tracks. Combining the advantages of digital signal processing with algorithms which emulate the operation of analog circuits, it enables the user to obtain a sound quality typical of compressors with valve and opto-electronic circuits without any unwanted noise or distortion.

Features

- ▶▶ Compressor with 'soft-knee' characteristics
- ▶▶ Peak or rms level detection
- ▶▶ Automatic and manual timings for attack and release
- ▶▶ Filter in the side-chain circuit
- ▶▶ Limiter-saturator
- ▶▶ Mixing of input signal with processed one in the desired proportions
- ▶▶ Set of factory presets

Applications

- ▶▶ 'Soft' compression of whole mixes during mastering
- ▶▶ Compression of vocals and solo instruments
- ▶▶ Compression of percussion instruments
- ▶▶ Compression of unrestricted types of tracks or groups during mixing
- ▶▶ Soft knee limiting

Controls

On / Bypass

Turns the processing in the plug-in on and off. It does not affect the "input" control.

Input

Regulates the input signal level. It is active independent of the "On/Bypass" control.

Mix

Regulates the input to processed signal ratio. It allows precision setting of the processing depth of all plug-in's algorithms.

Output

Sets the output signal level. It is active only when the plug-in is in the On mode.

Compress

Sets the depth of compression.

Knee

Regulates the bend of the compression curve.

Delay

Activates the internal delay which reduces the signal peaks during the attack phase.

Peak / RMS

In the RMS mode the signal level detector works similar to opto-electronic circuits, giving a more smooth compression. In the Peak mode a level detector provides more immediate response which works well for tracks containing a considerable amount of transients like drums and percussion.

Make-up

Sets the amount of restored level after compression; modes: automatic restoration of the levels and manual regulation.

SCL (side chain listening)

Activates the monitoring of the side chain signal.

SCFreq

Sets the frequency of the side chain filter.

SCQ

Sets the quality factor of the filter - the higher the Q factor, the steeper the slopes of the filter.

Attack

The Attack time; modes: fast automatic, slow automatic and manual regulation.

Hold

Sets the time for which the level is held between the attack and release phases.

Release

Sets the Release time; modes: fast automatic, slow automatic and manual regulation.

Thru / Lim / Sat

Switches the output algorithm between thru mode, a warm-limiter function and a limiter-saturator function. The limiter operates at an output level of 0dBFS.

PSP MixSaturator

Overview

PSP MixSaturator is a specialised processor whose aim is to produce a saturated sound typical of analog devices such as tape recorders and valve circuits. In the interests of ensuring a wide range of sound possibilities and high sound quality, three algorithms have been used in this plug-in:

- Analog Saturation Simulation algorithm, which enables the user to choose one of the seven curves of non-linearity characteristic of valve devices, analog tape and digital clipping,
- Low Frequency Processing algorithm, whose aim is to add warmth to the sound within the bass frequency range, through adding harmonics and increasing the bass level in a recording,
- High Frequency Processing algorithm, which gives the user the option of simulating tape saturation within the treble frequency range, without increasing the level of distortion and aliasing.

Features

- ▶▶ Simulation of the saturation characteristic of valve devices and tape recorders
- ▶▶ Wide range of possible sounds
- ▶▶ Special algorithms to shape the sound of low and high frequencies
- ▶▶ Mixing of input signal with processed one in the desired proportions
- ▶▶ Set of factory presets

Applications

- ▶▶ Enriching of sound with harmonics and increasing the mean level while recording, mixing and mastering
- ▶▶ Processing of mixes and single tracks

The analog saturation simulation algorithm

Every signal should have the same value on exiting the algorithm (0dBFS) after initial processing with bass and treble frequency algorithms and before employing the "drive" parameter. This is why, in most cases, if high values for the processing parameters of bass frequencies have not been set, the output signal should not exceed the maximum level. If the changes caused by the work of the bass algorithm are significant enough that there is a need to change the output level, the "output" control should be used.

Controls

On / Bypass

Turns the processing of the plug-in on and off. It does not affect the "input" control.

Input

Regulates the input signal level. It is active independent of the "On/Bypass" control.

Mix

Regulates the input to processed signal ratio. It allows precision setting of the processing depth of all the plug-in's algorithms.

Output

Sets the output signal level. It is active only when the plug-in is in the On mode.

Drive

The Drive control of the main analog saturation simulation algorithm. The operation of this control depends on the selected Algorithm.

Algorithm: None, Valve 1, Valve 2, Valve3, Tape1, Tape2, Tape3, Clip

The Algorithm control is for choosing the shape of the nonlinearity curve of the analog saturation simulation algorithm. There are six available characteristics for analog devices, as well as a curve typical for digital clipping.

LowOn / LowOff

Turns on and off the dedicated processing of low frequencies. It activates controls of low frequency section.

HiOn / HiOff

Turns on and off the dedicated processing of high frequencies. It activates controls of high frequency section.

LowFreq

Sets the low frequency cross over point.

LowHarm

Regulates the low content with its warm harmonics.

LowAdj

Adjusts the low frequencies level.

HiFreq

Sets the high frequency cross over point.

HiComp

Regulates the depth of compression of high frequencies.

HiAdj

Adjusts the high frequency level.

PSP MS

Overview

PSP MS is a XY to MS and MS to XY codec. Its simple set of parameters provides accurate control for MS encoding and decoding tasks.

Controls

On/Bypass

The On/Bypass control turns the processor on and off. When the processor is in the bypass mode, all processing routines are bypassed.

XY->MS / MS->XY

This controls allows you to choose between MS encoding and decoding. The main difference is that during encoding levels have to be attenuated by 6dB to provide the same level after decoding.

MS->MS / MS->SM or XY->XY / XY->YX

This control encoded or decoded channels in normal or swapped order.

Gain

Gain control sets the level on the output of the plug-in.

PSP StereoController

Overview

PSP StereoController is used for correcting stereophonic imperfections and errors. This plug-in enables the correction of phase reversed signals and the swapping of stereo channels. It can also be used for introducing subtle changes to the stereo image. The PSP StereoController is particularly useful for mastering tracks made under poor monitoring conditions or to fix problems in simple two microphone recordings.

PSP StereoController contains a set of controls for operating the plug-in, as well as correlation and channel balance meters.

Features

- ▶▶ Independent control of the differential signal content
- ▶▶ Traditional channel balance control
- ▶▶ Channel delay
- ▶▶ Correlation and channel balance meters
- ▶▶ Does not distort the tonal balance nor alter mono compatibility

Applications

- ▶▶ Correcting stereo errors while mastering and re-mastering stereo tracks
- ▶▶ Changing the stability of the left and right channels without changing the center signal
- ▶▶ Adjusting the positioning of the centre signals without changing the spatial balance
- ▶▶ Reversing phases and swapping of channels

Controls

On / Bypass

The On/Bypass control turns the processor on and off. When the processor is in the bypass mode, all processing routines are bypassed.

L R / R L

This control allows you to swap channels if necessary. The channel swap is located at the plug-in's input.

Gain

The Gain control changes the signal level within a $-∞$ / + 12dB range. When placed in the central position the gain of the processor is 0 dB.

Limiter

The Limiter control turns the output brick wall limiter to on or off mode.

L R / -L R / L -R / -L -R

This control sets a phase of L and R channels at the processor's input.

Delay

The Delay control sets a delay on one of channels in the range of 0 to 1ms with .01ms a sample precision.

Width

The Width control is used for correcting the content of signals responsible for the spatiality of the recording. When set to 0% the input signal becomes mono. Setting it to 100% allows the signal to pass through the plug-in unaffected. When placed to 200% the content of the differential signal is increased by 6dB.

-1 +1

This is a left and right channel correlation meter. In other words, it shows the relationship between the mean and differential components of the output signal.

When the On / Bypass control is in Bypass mode, the meter displays the value of the unprocessed signal. When the On / Bypass control is in On position the meter indicates the correlation on the plug-in's output. The best stereo effects are achieved when the meter deflects slightly to the right (towards + 1) of center. A deflection to the left of center (towards -1) indicates the dominance of the differential signal over the mono signal, which can result in phase abnormalities and unnatural spatial effects.

Balance

The channel balance control is used for correcting differences in level between the left and right channels. When placed in the central position no change is made to the levels of the left and right channels. When the control is placed in the extreme left position there is a complete suppression of the right channel and a 6 dB amplification of the left channel. When the it is set to the extreme right position the effect is reversed.

Sides

This differential signal balance control is used for changing the positioning of the side signal in the stereo field. Using this control, it is possible to change the proportions of the L and R channels without changing the position of the centrally panned signals. When the control is placed in the central position no change is made to the position of the side signal. When it is set to the extreme left position the side signal is transferred completely to the left side. When the control is set to the extreme right position the side signal is transferred completely to the right side.

Center

The central signal panorama adjustment control is used to change the position of the centrally panned signal without altering levels of the extreme left and right signals. Its function is completely contrary to the functioning of the Sides control (see above).

L R

The L R channel balance meter displays the relationship between the left and right channel signals. If the On / Bypass control is set to Bypass, the meter indicates the value of the unprocessed input signal. When the On / Bypass control is set to On the meter shows the output channel balance.

PSP StereoEnhancer

Overview

PSP StereoEnhancer is used for producing and improving the spaciousness of mono and stereo signals. The plug-in does this through the use differential signal adjustment and comb filtering combined with dynamic processing to increase the perceived spatial effects. Various operation modes allow you to choose the most effective settings for the processed sound.

Apart from a set of controls for setting the processing algorithm's parameters, PSP StereoEnhancer contains a stereo correlation meter for observing the relationship between the mean and side signal components.

Features

- ▶▶ Wide range of possible sounds (from subtle to extreme)
- ▶▶ Stereo correlation meter

Applications

- ▶▶ Enhancing monophonic and stereophonic tracks while recording, mixing, mastering and re-mastering

Controls

On / Bypass

The On/Bypass control turns the processor on and off. When the processor is in the bypass mode, all processing routines are bypassed.

Stereo1 / Stereo2 / Stereo3 / Mono

This control sets the processing mode. A Stereo1 mode does not use comb filtering and produces the most natural effect whenever only slight spatial tuning is needed. Stereo2 and Stereo3 modes are a good choice whenever more drastic artificial spatiality is desired, while the Mono mode best suits monophonic input signals.

Phase

The Phase control is used for reversing the phase of the comb filtered signal content. Changing this control from Normal to Reversed changes the way the spatial effect is enhanced in modes Stereo2, Stereo3 and Mono.

Limiter

The Limiter control turns the output brick wall limiter to on or off mode.

Input

The Input control is used for changing the signal level within a $-∞$ / + 12dB range. When placed in the central position the gain of the processor is 0 dB.

Depth

The Depth control sets the amount of processed signal present in the plug-in's output. Setting the control to 0% allows no processed signal to be heard. When the control is set to 200% a maximum processing is applied. In most cases setting the control around the central 100% position is a good starting point for further experimentation.

Dynamic

This control sets the depth of processing in response to signal transients. The setting of 0% means no transient influence, the 50% setting and around gives a typical processing while the 100% setting gives a very transient dependent spatial enhancement.

Enhance

The Enhance control is an indicator showing the amount of spatial enhancement as a combination of Depth and Dynamic settings and the transient signal content as well.

BaseFreq

The comb-filter base frequency control is used for setting the resonant frequency of the comb filter. The comb filter resonates at all frequencies which are multiples of the base frequency. The control has a minimum setting at 20Hz. When placed in this position, a delay of 50ms is produced which causes the stereo output to be heard as two distinctly separate sounds. Applying a low base frequency leads to resonance in the whole audio band, which in turn, widens the stereo image. Setting the control to extremely high values causes a reduction in the spaciousness of the sound. The best effects are achieved by setting the control at its medium values.

Emphasis

The Emphasis control allows you to use a soft slope high pass filter in the processing chain. Setting the Emphasis to values greater than 0% reduces the influence of spatial enhancement on low frequencies however may change the tonal balance of a processed track.

-1 +1

This is a left and right channel correlation meter. In other words, it shows the relationship between the mean and differential components of the output signal.

When the On / Bypass control is in Bypass mode, the meter displays the value of the unprocessed signal. When the On / Bypass control is in On position the meter indicates the correlation on the plug-in's output. The best stereo effects are achieved when the meter deflects slightly to the right (towards + 1) of center. A deflection to the left of center (towards -1) indicates the dominance of the differential signal over the mono signal, which can result in phase abnormalities and unnatural spatial effects.

PSP VintageWarmer

Overview

PSP VintageWarmer is a high-quality single- or multi-band compressor/limiter. The plug-in processor is highly flexible and can be used for both single and multi-band compression, as well as brick-wall limiting. This makes it an essential tool for mixing and mastering engineers. Careful attention has been paid to PSP VintageWarmer's overload characteristics with the processor being capable of generating saturation effects typical of analog tape recorders.

Features

- ▶▶ High quality signal processing algorithms
- ▶▶ Single or multi-band signal processing
- ▶▶ Limiting and Compression modes
- ▶▶ Shelf filters for bass and treble frequencies in single-band processing mode
- ▶▶ Control of low and high frequency signal components in multi-band processing mode
- ▶▶ Library of presets

Applications

- ▶▶ Optimizing the 'density' and average signal levels of recordings during mixing or mastering
- ▶▶ Shaping the dynamics of recordings during mixing
- ▶▶ Adding warmth to individual tracks or complete mixes
- ▶▶ Adding analog tape-style compression to individual tracks or complete mixes

Controls

On / Bypass

The On/Bypass control turns the processor on and off. When the processor is in bypass mode, all processing routines are bypassed.

SinglBnd / MultiBnd

The Single Band / Multi Band control selects VintageWarmer's processing mode. In "Single Band" mode, the processor functions across the full frequency range allowing tape simulation effects with shelving equalization. In the "Multi Band" mode, the processor acts as a three-band, soft-knee limiter with pre-limiter level adjustment and hard limiting for the combined output.

Linked / Unlinked

The Linked / Unlinked control links or unlinks VintageWarmer's two channels. When linked, each channel is using a common level detection while in the unlinked mode two channels perform independently although still have identical settings.

Limit / Compress

This control allows you to choose between standard PSP VintageWarmer's limiting mode and a compression mode in which release times are long enough for typical track or bus compression.

Drive

The Drive control sets the input level for the processor. It can range from -24dB to +24dB. It is active when the plug-in is 'On'. The default value is 0dB.

Knee

The Knee control sets the knee range of the limiter. The 0% setting indicates that the knee is “bent” at 0dB, (“hard knee”) which is suitable for limiting. Mid range settings can be used to create analog tape-style effects. The 100% setting provides a wide-range soft knee for deep compression. The default value is 50%.

Speed

The Speed **control** sets the compressor’s attack and release times. The name refers to tape speed. A setting of 0 refers to a very slow tape speed or a slow limiter/compressor setting, while a setting of 100 refers to the highest available tape speed or a fast limiter/compressor setting. The default value is 50%.

Release

The Release **control** is a multiplier control that sets the release time relative to the Speed setting. It ranges from x0.25 to x4 in the Limit mode and from x4 to x64 in the Compress mode. The default value in the Limit mode is “x1” while in the Compress mode is “x16”.

LowFreq

When VintageWarmer is in ‘Single Band’ mode, the LowFreq control sets the low shelving equalization frequency. In ‘Multi Band’ mode, the control sets the crossover frequency for the low band. The default value is 100Hz.

LowGain

The LowGain control sets the low shelving or the low-band pre-limiter gain. The default value is 0dB.

HighFreq

When VintageWarmer is in ‘Single Band’ mode, the HighFreq control sets the high-shelving equalization frequency. In ‘Multi Band’ mode, the control sets the crossover frequency for the high band. The default value is 4kHz.

HighGain

The HighGain control sets the high shelving or the high-band pre-limiter gain. The default value is 0dB.

Mix

The Mix control allows the input signal and compressed signal to be mixed in any proportion. If the Mix control is set at 0%, signals pass through the PSP VintageWarmer unaltered. The default value is 100%.

Output

The Output control sets the final output signal level. This is the last operation in the signal chain. The default value is 0dB.

GainRed

This control is a peak gain reduction meter which allows viewing the overall gain reduction in the VintageWarmer excluding the influence of Drive and Output settings and the Mix control.

OutLev

This control is an output peak level meter.

LowSat, MidSat, HighSat

The Low, Mid and High Saturation controls set the saturation levels for each of the three frequency bands when PSP VintageWarmer is in a multi-band processing mode. They set the maximum level for each frequency band. The default value is 0dB for each of those controls.

LowRel, MidRel, HighRel

The LowRel, MidRel and HighRel controls set the release multiplier for each of the three frequency bands when PSP VintageWarmer is in multi-band processing mode. Together with the Release control, these controls set the release time for each frequency band. Note that Release and band release parameters are multiplied. The default value is x1 for each of them.

