



V1.5 Plug-in Reference

VST RACK ELEMENTS

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About VST Rack Elements

- VST Rack Elements is a plug-in host software product for Mac and Windows PCs that processes audio using a diverse range of VST plug-in effects such as delays, maximizers, reverbs and more. This software uses the widely recognized Steinberg audio engine featured in Nuendo and Cubase, offering sound engineers a stable VST plug-in environment with high audio quality.
- VST Rack Elements is bundled with many classic Steinberg VST plug-ins that have been used in Steinberg digital audio workstations. This provides you access to high-quality effects without any need to purchase new VST plug-ins.

Manuals

- **VST Rack Elements V1.5 Installation Guide (PDF)**
Describes how to install VST Rack Elements V1.5.
- **VST Rack Elements V1.5 User's Guide (PDF/HTML)**
Describes all of the items that are required to configure and operate VST Rack Elements V1.5.
- **VST Rack Elements V1.5 Plug-in Reference (this manual)**
Describes the plug-in parameters in detail.

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- This manual provides the latest specifications as of the time of its publication. The latest version is available for download on the Yamaha website.

List of Plug-ins

Steinberg



Steinberg plug-ins can only be used in VST Rack.

Delay	MonoDelay
	StereoDelay
Dynamics	Maximizer
EQ	GEQ-30
Reverb	Roomworks SE
Tools	TestGenerator

Delay Plug-ins

MonoDelay

This is a mono delay effect. The delay line uses either tempo-based or freely specified delay time settings.



LO FILTER

Affects the feedback loop of the effect signal and allows you to roll off low frequencies. The button below the knob activates/deactivates the filter.

HI FILTER

Affects the feedback loop of the effect signal and allows you to roll off high frequencies. The button below the knob activates/deactivates the filter.

DELAY

Sets the delay time in milliseconds.

SYNC

Activates/Deactivates tempo sync.

FEEDBACK

Sets the amount of the signal that is sent back into the delay input. The higher this value, the higher the number of repeats.

MIX

Sets the level balance between the dry signal and the wet signal. If the effect is used as a send effect, set this parameter to the maximum value, as you can control the dry/effect balance with the send level.

StereoDelay

This is a stereo delay effect that includes two independent delay effects. It can either be tempo-based or use freely specified delay time settings.



This plug-in works only on stereo racks.



FEEDBACK

Sets the number of repeats for each delay.

DELAY

Sets the delay time in milliseconds.

SYNC

Activates/Deactivates tempo sync for the corresponding delay.

MIX

Sets the level balance between the dry signal and the wet signal. If the effect is used as a send effect, set this parameter to the maximum value, as you can control the dry/effect balance with the send level.

LO FILTER

Affects the feedback loop of the effect signal and allows you to roll off low frequencies. The button below the knob activates/deactivates the filter.

PAN

Sets the stereo position.

HI FILTER

Affects the feedback loop of the effect signal and allows you to roll off high frequencies. The button below the knob activates/deactivates the filter.

Dynamics Plug-ins

Maximizer

Maximizer raises the loudness of audio material without the risk of clipping. The plug-in provides two modes, [Classic] and [Modern], that offer different algorithms and parameters.



CLASSIC

[Classic] mode provides the classic algorithms from previous versions of this plug-in. This mode is suited for all styles of music.

MODERN

In [Modern] mode, the algorithm allows for more loudness than in [Classic] mode. This mode is particularly suited for music that requires loud volume.

[Modern] mode also provides additional settings to control the release phase:

- [Release] sets the overall release time.
- [Recover] allows for a faster signal recovery at the beginning of the release phase.

OPTIMIZE

Determines the loudness of the signal.

MIX

Sets the level balance between the dry signal and the wet signal.

OUTPUT

Sets the maximum output level.

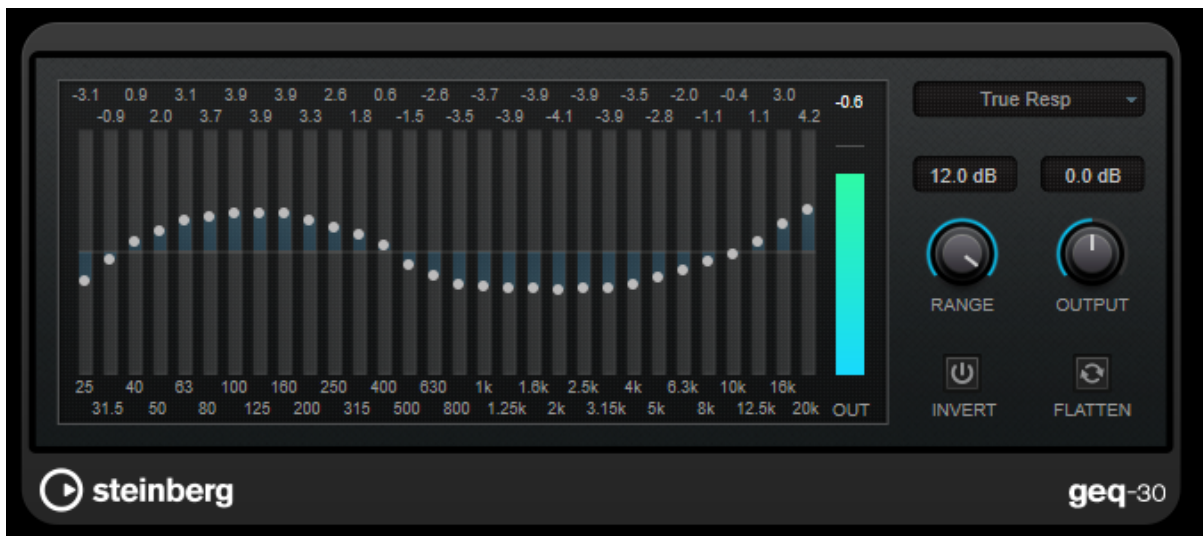
SOFT CLIP

If this button is activated, Maximizer starts limiting or clipping the signal softly. At the same time, harmonics are generated, adding a warm, tube-like characteristic to the audio material.

EQ Plug-ins

GEQ-30

These are graphic equalizers. GEQ-30 has 30 available frequency bands.



Each band can be attenuated or boosted by up to 12 dB, allowing for fine control of the frequency response. In addition, there are several preset modes available that can add color to the sound of GEQ-30. You can draw response curves in the main display by clicking and dragging with the mouse. You have to click one of the sliders before you drag across the display. At the bottom of the window, the individual frequency bands are shown in Hz. At the top of the display, the amount of attenuation/boost is shown in dB.

RANGE

Allows you to adjust how much a set curve cuts or boosts the signal.

OUTPUT

Sets the overall gain of the equalizer.

INVERT

Inverts the current response curve.

FLATTEN

Resets all the frequency bands to 0 dB.

EQ Modes

The Mode pop-up menu in the upper right corner allows you to select an EQ mode, which add color or character to the equalized output in various ways.

True Response

Applies serial filters with an accurate frequency response.

Digital Standard

In this mode, the resonance of the last band depends on the sample rate.

Classic

Applies a classic parallel filter structure where the response does not follow the set gain values accurately.

VariableQ

Applies parallel filters where the resonance depends on the amount of gain.

ConstQ asym

Applies parallel filters where the resonance is raised when boosting the gain and vice versa.

ConstQ sym

Applies parallel filters where the resonance of the first and last bands depends on the sample rate.

Resonant

Applies serial filters where a gain increase of one band lowers the gain in adjacent bands.

Reverb Plug-ins

Roomworks SE

RoomWorks SE is a smaller version of the RoomWorks plug-in. RoomWorks SE delivers high quality reverberation, but has fewer parameters and is less CPU demanding than the full version.



PRE-DELAY

Determines how much time passes before the reverb is applied. This allows you to simulate larger rooms by increasing the time it takes for the first reflections to reach the listener.

REVERB TIME

Allows you to set the reverb time in seconds.

DIFFUSION

Affects the character of the reverb tail. Higher values lead to more diffusion and a smoother sound, while lower values lead to a clearer sound.

LOW LEVEL

Affects the decay time of the low frequencies. Normal room reverb decays quicker in the high- and low-frequency range than in the mid-range. Lowering the level percentage causes low frequencies to decay quicker. Values above 100 % cause low frequencies to decay more slowly than the mid-range frequencies.

HIGH LEVEL

Affects the decay time of the high frequencies. Normal room reverb decays quicker in the high- and low-frequency range than in the mid-range. Lowering the level percentage causes high frequencies to decay quicker. Values above 100 % cause high frequencies to decay more slowly than the mid-range frequencies.

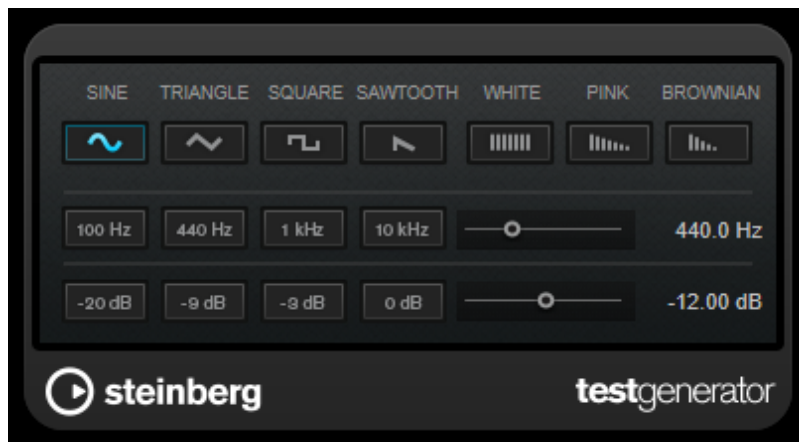
MIX

Sets the level balance between the dry signal and the wet signal.

Tools Plug-ins

Test Generator

This utility plug-in allows you to generate an audio signal.



The resulting file can then be used for a number of purposes:

- Testing the specifications of audio equipment
- Measurements of various kinds, such as calibrating tape recorders
- Testing signal processing methods
- Educational purposes

The TestGenerator is based on a waveform generator that can generate a number of basic waveforms such as sine and saw as well as various types of noise. Furthermore, you can set the frequency and amplitude of the generated signal.

Waveform and Noise Section

Allows you to set the basis for the signal generated by the waveform generator. You can choose between four basic waveforms (sine, triangle, square, and sawtooth) and three types of noise (white, pink, and brownian).

Frequency Section

Allows you to set the frequency of the generated signal. You can set the frequency either in Hz or as a note value. If you enter a note value, the frequency is automatically changed to Hz. For example, a note value of A3 sets the frequency to 440 Hz. When you enter a note value, you can also enter a cent offset. For example, enter "A5 -23" or "C4 +49."



Make sure that you enter a space between the note value and the cent offset. Only in this case, the cent offsets are taken into account.

Gain Section

Allows you to set the amplitude of the signal. The higher the value, the stronger the signal. You can select one of the preset values, or use the slider to set a value between OFF and 0 dB.

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