Plug-in Reference
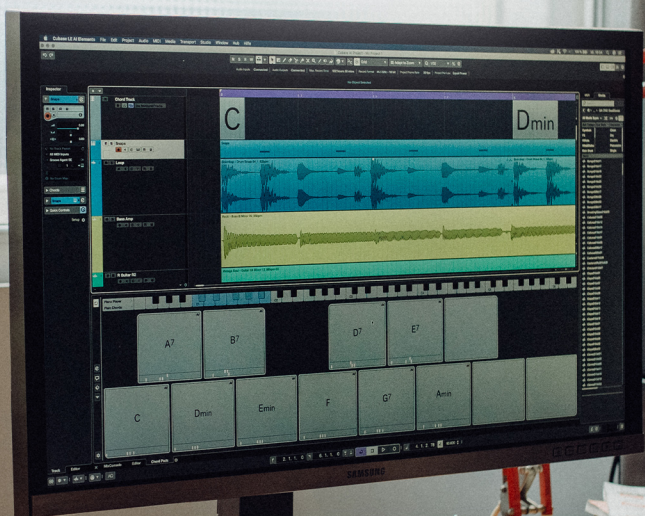
CUBASE LE 11

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Cubase LE_11.0.0_en-US_2020-11-11

Table of Contents

Included Effect Plug-ins

The included plug-in effects are arranged according to their categories.

Delay Plug-ins

MonoDelay

This is a mono delay effect. The delay line uses 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.

Distortion Plug-ins

AmpSimulator

AmpSimulator is a distortion effect that emulates the sound of various types of guitar amp and speaker cabinet combinations. A wide selection of amp and cabinet models is available.

Select Amplifier Model

This pop-up menu allows you to select an amplifier model. You can bypass this section by selecting **No Amp**.

Drive

Controls the amount of amp overdrive.

Bass

Tone control for the low frequencies.

Mid

Tone control for the mid frequencies.

Treble

Tone control for the high frequencies.

Presence

Boosts or dampens the higher frequencies.

Volume

Controls the overall output level.

Select Cabinet Model

This pop-up menu allows you to select a speaker cabinet model. You can bypass this section by selecting **No Speaker**.

Damping Low/High

These tone controls allow you to shape the sound of the selected speaker cabinet.

BitCrusher

If you are into lo-fi sound, **BitCrusher** is the effect for you. It offers the possibility of decimating and truncating the input audio signal by bit reduction, to get a noisy, distorted sound. For

example, you can make a 24-bit audio signal sound like an 8 or 4-bit signal, or even render it completely garbled and unrecognizable.

Mode

> Allows you to select one of the four operating modes. In each mode, the effect sounds differently. Modes **I** and **III** are nastier and noisier, while modes **II** and **IV** are more subtle.

Mix

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

Sample Divider

> Sets the amount by which the audio samples are decimated. At the highest setting, nearly all of the information describing the original audio signal is eliminated, turning the signal into unrecognizable noise.

Depth (0 to 24 bits)

> Defines the bit resolution. A setting of 24 gives the highest audio quality, while a setting of 1 creates mostly noise.

Output

> Sets the output level.

DaTube

DaTube emulates the characteristic warm, lush sound of a tube amplifier.

Mix

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

Drive

Sets the pre-gain of the amplifier. Use high values if you want an overdriven sound just on the verge of distortion.

Output

Sets the output level.

Distortion

Distortion adds crunch to your tracks.

Boost

Increases the distortion amount.

Oversampling

Activates/Deactivates oversampling. Oversampling results in less artifacts for higher distortion.

NOTE

If this parameter is activated, the effect requires more processing power.

Mix

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

Tone

Changes the tonal characteristic of the output signal.

Feedback

Feeds part of the output signal back to the effect input. Higher settings increase the distortion effect.

Spatial

Changes the distortion characteristics of the left and right channels, thus creating a stereo effect.

Output

Sets the output level.

Grungelizer

Grungelizer adds noise and static to your recordings – like listening to a radio with bad reception, or a worn and scratched vinyl record.

Noise

Sets the amount of added static noise.

Crackle

Adds crackle to create that old vinyl record sound. The speed switch sets the virtual speed of the record in RPM (revolutions per minute).

Distort

Adds distortion.

EQ

Cuts the low frequencies, and creates a hollow, lo-fi sound.

AC

Emulates a constant, low AC hum. The frequency switch sets the virtual frequency of the AC current (50 or 60 Hz), and thus the pitch of the AC hum.

Mix

Sets the amount of overall effect.

Dynamics Plug-ins

MIDI Gate

This plug-in gates audio signals. The gate is triggered by MIDI notes.

Gating, in its fundamental form, silences audio signals below a set threshold. If a signal rises above the set level, the gate opens to let the signal through. Signals below the set level are silenced. **MIDI Gate**, however, is not triggered by threshold levels, but MIDI notes. Therefore, it needs both audio and MIDI data to function.

Attack (0 to 500 ms)

Sets the time after which the gate opens when it is triggered.

Hold

Determines how long the gate remains open after a note-on or note-off message. The **Hold Mode** settings are taken into account.

Release (0 to 3000 ms)

Sets the time after which the gate closes after the set **Hold** time.

Note To Attack

Determines to which extent the velocity values of the MIDI notes affect the attack time. The higher the value, the more the attack time increases with high note velocities. Negative values result in shorter attack times with high velocities. If you do not want to use this parameter, set it to 0.

Note To Release

Determines to which extent the velocity values of the MIDI notes affect the release time. The higher the value, the more the release time increases. If you do not want to use this parameter, set it to 0.

Velocity To VCA

Controls to which extent the velocity values of the MIDI notes determine the output volume. At a value of **127**, the volume is controlled entirely by the velocity values, and at a value of **0**, the velocities have no effect on the volume.

Hold Mode

Sets the **Hold Mode**.

- In **Note On** mode, the gate only remains open for the time set with the **Hold** and **Release** parameters, regardless of the length of the MIDI note that triggered the gate.

● In **Note Off** mode, the gate remains open for as long as the MIDI note plays. The **Hold** and **Release** parameters are applied once a note-off signal has been received.

Setting Up MIDI Gate

To use **MIDI Gate** for your audio, you need an audio track and a MIDI track.

PROCEDURE

1. Select the audio track to which you want to apply **MIDI Gate**.
   This can be recorded or realtime audio material from any audio track.
2. Select **MIDI Gate** as an insert effect for the audio track.
3. Select a MIDI track to control the **MIDI Gate** effect.
   You can either play notes on a connected MIDI keyboard or use recorded MIDI notes.
4. Open the **Output Routing** pop-up menu for the MIDI track and select **MIDI Gate**.

Applying MIDI Gate

PREREQUISITE
Set up the plug-in properly.

How to apply **MIDI Gate** depends on whether you are using realtime or recorded MIDI. We assume for the purposes of this manual that you are using recorded audio and play the MIDI in realtime.

PROCEDURE

1. If you use realtime MIDI to trigger the plug-in, make sure the MIDI track is selected.
2. Start playback.
3. If you use realtime MIDI, play a few notes on your keyboard.

RESULT
The MIDI notes trigger the Gate. The plug-in gates the audio signals.

RELATED LINKS
Setting Up MIDI Gate on page 10

VSTDynamics

VSTDynamics is an advanced dynamics processor. It combines three separate effects: **Gate**, **Compressor**, and **Limiter**, covering a variety of dynamic processing functions.

The window is divided into three sections containing controls and meters for each effect. Activate the individual effects using the **Gate**, **Compressor**, and **Limiter** buttons. You can select between three different routing options using the **Module Configurator** button.

Gate

Gating, or noise gating, is a method of dynamic processing that silences audio signals below a set threshold. As soon as the signal level exceeds the threshold, the gate opens to let the signal through. The gate trigger input can also be filtered using an internal side-chain signal.

The following parameters are available:

Input meter

Shows the level of the input signal.

Attack (0.1 to 100 ms)

Determines how fast the compressor responds to signals above the set threshold. If the attack time is long, more of the early part of the signal passes through unprocessed.

Threshold

Determines the level at which the gate is activated. Signal levels above the set threshold trigger the gate to open, and signal levels below the set threshold close the gate.

State LED

Indicates whether the gate is open (LED lights up in green), closed (LED lights up in red), or in an intermediate state (LED lights up in yellow).

Release (10 to 1000 ms or Auto mode)

Sets the time after which the gate closes after the set **Hold** time. If **Auto Release** is activated, the plug-in automatically finds the best release setting for the audio material.

Hold (0 to 2000 ms)

Determines how long the gate remains open after the signal drops below the threshold level.

Range

Adjusts the attenuation of the gate when it is shut. If **Range** is set to minus infinite ![-∞], the gate is completely shut. The higher the value, the higher the level of the signal that passes through the shut gate.

Side-Chain

Activates the internal side-chain filter. The input signal can then be shaped according to the filter parameters. Internal side-chaining is useful for tailoring how the gate operates.

Filter Type (Low-Pass/Band-Pass/High-Pass)

If **Side-Chain** is activated, these buttons allow you to set the filter type to low-pass, band-pass, or high-pass.

Center

If **Side-Chain** is activated, this sets the center frequency of the filter.

Q-Factor

If **Side-Chain** is activated, this sets the resonance or width of the filter.

Monitor

Allows you to monitor the filtered signal.

Compressor

Compressor reduces the dynamic range of the audio, making softer sounds louder or louder sounds softer, or both. It features a separate display that graphically illustrates the compressor curve shaped according to your settings.

Input meter

Shows the level of the input signal.

Graphical display

Visualizes the settings for **Threshold** and **Ratio** and allows you to adjust them by dragging the handles.

Gain Reduction meter

Shows the amount of gain reduction.

Threshold (-60 to 0 dB)

Determines the level where the compressor kicks in. Only signal levels above the set threshold are processed.

Ratio

Sets the amount of gain reduction applied to signals above the set threshold. A ratio of 3:1 means that for every 3 dB the input level increases, the output level increases by 1 dB.

Make-Up (0 to 24 dB or Auto mode)

Compensates for output gain loss caused by compression. If **Auto Make-Up Gain** is activated, the output is automatically adjusted for gain loss.

Attack (0.1 to 100 ms)

Determines how fast the compressor responds to signals above the set threshold. If the attack time is long, more of the early part of the signal (attack) passes through unprocessed.

Release (10 to 1000 ms or Auto mode)

Sets the time after which the gain returns to its original level when the signal drops below the threshold. If **Auto Release** is activated, the plug-in automatically finds the best release setting for the audio material.

Limiter

A limiter ensures that the output level never exceeds a set threshold to avoid clipping in effects following in the chain. Conventional limiters usually require a very accurate setup of the attack and release parameters to prevent the output level from going beyond the set threshold level. **Limiter** adjusts and optimizes these parameters automatically according to the audio material.

Input meter

Shows the level of the input signal.

Gain Reduction meter

Shows the amount of gain reduction.

Soft Clip

If this button is activated, the signal is limited when the signal level exceeds -6 dB. At the same time, harmonics are generated, adding a warm, tube-like characteristic to the audio material.

Output

Sets the maximum output level.

Release (10 to 1000 ms or Auto mode)

Sets the time after which the gain returns to its original level. If **Auto Release** is activated, the plug-in automatically finds the best release setting for the audio material.

Output section

Output meter

Shows the level of the output signal.

Module Configurator

Changes the signal flow through the three effects. Changing the order of the effects can produce different results, and the available routing configurations allow you to quickly compare what works best for a given situation. Click **Module Configurator** to toggle between the following routing configurations:

- G-C-L (Gate-Compressor-Limiter)
- C-L-G (Compressor-Limiter-Gate)
- C-G-L (Compressor-Gate-Limiter)

EQ Plug-ins

DJ-EQ

DJ-EQ is an easy-to-use 3-band parametric equalizer that resembles the EQs found on typical DJ mixers. This plug-in is designed for quick sound fixes.

Graphical display

Allows you to set the amount of boost or attenuation for the low, mid, or high band by dragging.

- To set the low, mid, and high frequency gain, click and drag the corresponding band handle.
- To fine-adjust the gain, press **Shift** and drag.
- To set a parameter to zero, press **Ctrl/Cmd** and click it.

Low Frequency Gain/Mid Frequency Gain/High Frequency Gain

Set the amount of boost or attenuation for the low, mid, and high band.

Cut Low Frequencies/Cut Mid Frequencies/Cut High Frequencies

Cut the low, mid, and high band.

Output meter

Shows the level of the output signal.

Filter Plug-ins

DualFilter

DualFilter filters out specific frequencies while allowing others to pass through.

Position

Sets the filter cutoff frequency. If you set this to a negative value, **DualFilter** acts as a low-pass filter. Positive values cause **DualFilter** to act as a high-pass filter.

Resonance

Sets the sound characteristic of the filter. With higher values, a ringing sound is heard.

StepFilter

StepFilter is a pattern-controlled multimode filter that can create rhythmic, pulsating filter effects. You can also trigger pattern steps individually via MIDI.

General Operation

StepFilter can produce two simultaneous 16-step patterns for the filter cutoff and resonance parameters, synchronized to the sequencer tempo.

The horizontal axis shows the pattern steps 1 to 16 from left to right, and the vertical axis determines the (relative) filter cutoff frequency and resonance settings. The higher up on the vertical axis a step value is entered, the higher the relative filter cutoff frequency or filter resonance setting.

By starting playback and editing the patterns for the cutoff and resonance parameters, you can hear how your filter patterns affect the sound source connected to **StepFilter**.

If **Sync** is deactivated, **StepFilter** allows you to trigger pattern steps individually via MIDI notes.

Setting Step Values

- To enter a step, click in the pattern grid windows.
- Individual step entries can be dragged up or down the vertical axis, or directly set by clicking in an empty grid box. By click-dragging left or right, consecutive step entries are set at the pointer position.
- Change the value for a step by dragging it up or down.
- Draw in a curve by clicking and dragging in the display.

Selecting New Patterns

- Patterns are saved with the project, and up to 8 different cutoff and resonance patterns can be saved internally. Both the cutoff and resonance settings are saved together in the 8 pattern slots.
- Use the **Pattern** slots to select a new pattern. New patterns are all set to the same step value by default.

StepFilter Parameters

Filter Type

Sets the filter type. A low-pass, a band-pass, and a high-pass filter are available.

Filter Mode

Allows you to choose between two filter modes. **Classic** mode is compatible with previous versions of this plug-in. **Modern** mode provides an additional **Hard Clip** parameter.

Mix

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

Base Cutoff

Sets the base filter cutoff frequency. Values set in the **Cutoff** grid are relative to the **Base Cutoff** value.

Base Resonance

Sets the base filter resonance. Values set in the **Resonance** grid are relative to the **Base Resonance** value.

NOTE

Very high **Base Resonance** settings can produce loud ringing effects at certain frequencies.

Rate

If **Sync** is activated, **Rate** allows you to specify the base note value for synchronizing the pattern playback to the tempo of the host application (1/1 to 1/32, straight, triplet, or dotted).

If **Sync** is deactivated, you can trigger pattern steps individually via MIDI.

Hard Clip

Adds more high frequency harmonics and distortion to the signal. This parameter is only available in **Modern** mode.

Glide

Applies glide between the pattern steps, causing values to change more smoothly.

Output

Sets the output level.

RELATED LINKS
Creating Variations for StepFilter Patterns on page 17
Controlling StepFilter via MIDI on page 17

Creating Variations for StepFilter Patterns

You can copy a pattern of the **StepFilter** to another pattern slot. This is useful for creating variations on a pattern of this plug-in.

PROCEDURE

1. Select the pattern that you want to copy.
2. Click the **Copy** button.
3. Select another pattern slot.
4. Click the **Paste** button.

RESULT

The pattern is copied to the new slot and can now be edited to create variations.

Controlling StepFilter via MIDI

StepFilter allows you to trigger steps individually via MIDI notes.

PREREQUISITE

●   Your project contains a MIDI track that is routed to the MIDI input of a track that uses **StepFilter** as an insert plug-in.

●   In **StepFilter**, **Sync** is deactivated.

PROCEDURE

●   Do one of the following:

    ●   Use the note C0 to increase the step number by one.
   ●   Use the notes from C1 to D#2 to trigger the steps 1 to 16 directly.

Modulation Plug-ins

AutoPan

This auto-pan effect provides several parameters to modulate the left/right stereo position. You can use presets or create individual curves for the modulation waveform. **AutoPan** also allows for chopping effects by linking the modulation of left and right channel.

> NOTE
>
> The panning effect of this plug-in works only on stereo tracks.
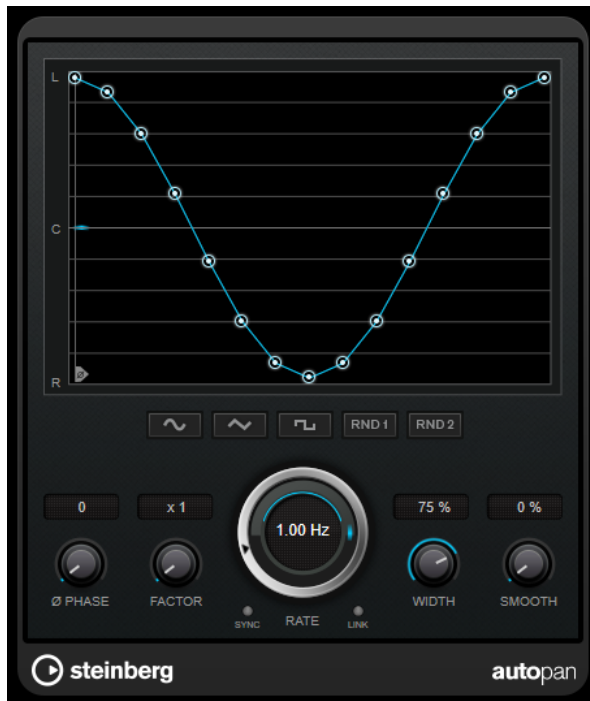
Waveform display

Shows the shape of the modulation waveform and allows you to manually adjust it. To draw an individual curve, click a node and move the mouse. To draw a straight line, `Shift`-click a node and move the mouse.

Waveform preset buttons

Allow you to select presets for the modulation waveform.

- **Sine** creates a smooth sweep.
- **Triangle** creates a ramp, that is, a linear movement from full right to full left and back.
- **Square** creates an instant jump to full right, then to full left, and then back to center.
- **Random One Shot** creates a random curve. Click this button again to create a new random curve.
- **Random Continuous** automatically creates a new random curve after each period.

Phase

Sets the offset for the starting point of the curve. If multiple **AutoPan** plug-ins are used on different tracks, for example, different offset settings for each track allow for a more organic overall sound.

Factor

If **Sync** is activated, this parameter multiplies the sync rate by the selected factor. This allows you to create very slow movements in panorama.

Rate

Sets the auto-pan speed and shows the movement within the panorama. If **Sync** is deactivated, the speed is set in Hertz. If **Sync** is activated, you can set the speed in tempo values.

Sync

Activates/Deactivates tempo sync.

Link

If this button is activated, the left and right channel are modulated simultaneously. This results in a chopping effect instead of auto-panning.

In this mode, **Width** sets the intensity of the volume modulation.

Width

Sets the amount of deflection to the left and right side of the stereo panorama. If **Link** is activated, this parameter sets the intensity of the volume modulation.

Smooth

Allows you to smooth the transition between individual steps of the panorama curve.

Chopper

Chopper allows you to create a tremolo with or without an additional panning effect.

Waveform buttons

Allow you to select the modulation waveform.

Depth

Sets the intensity of the effect. This can also be set by clicking and dragging in the graphical display.

Sync

Activates/Deactivates tempo sync.

Speed

If tempo sync is activated, this is where you specify the base note value for tempo-syncing the effect (1/1 to 1/32, straight, triplet, or dotted).

If tempo sync is deactivated, the tremolo speed can be set freely with the **Speed** knob.

Mono

If this option is activated, **Chopper** acts as a tremolo effect only. If this option is deactivated, the modulation waveforms of the left and the right channel are phase-shifted, creating an additional panning effect.

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.

Chorus

This plug-in is a single-stage chorus effect. It doubles the audio that is sent into it with a slightly detuned version.

Delay

Affects the frequency range of the modulation sweep by adjusting the initial delay time.

Width

Sets the depth of the chorus effect. Higher settings produce a more pronounced effect.

Spatial

Sets the stereo width of the effect. Turn clockwise for a wider stereo effect.

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.

Rate

If **Tempo Sync** is activated, **Rate** allows you to specify the base note value for synchronizing the modulation sweep to the tempo of the host application (1/1 to 1/32, straight, triplet, or dotted).

If **Tempo Sync** is deactivated, the sweep rate can be set freely with the **Rate** dial.

Sync

Activates/Deactivates tempo sync.

Waveform Shape

Allows you to select the modulation waveform, altering the character of the chorus sweep. A sine and a triangle waveform are available.

Lo Filter/Hi Filter

Allow you to roll off low and high frequencies of the effect signal.

Flanger

This is a classic flanger effect with added stereo enhancement.

Delay

Affects the frequency range of the modulation sweep by adjusting the initial delay time.

Feedback

Determines the character of the flanger effect. Higher settings produce a more metallic-sounding sweep.

Mode

Allows you to toggle between **LFO** and **Manual** mode.

In **LFO** mode, you can define the sweep rate or sync it to the project tempo. In **Manual** mode, you can change the sweep manually.

Rate

If **Tempo Sync** is activated, **Rate** allows you to specify the base note value for synchronizing the flanger sweep to the tempo of the host application (1/1 to 1/32, straight, triplet, or dotted).

If **Tempo Sync** is deactivated, the sweep rate can be set freely with the **Rate** dial.

Sync

Activates/Deactivates tempo sync.

Spatial

Sets the stereo width of the effect. Turn clockwise for a wider stereo effect.

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 Range/Hi Range

Set the frequency boundaries for the flanger sweep.

Waveform Shape

Allows you to select the modulation waveform, altering the character of the flanger sweep. A sine and a triangle waveform are available.

Lo Filter/Hi Filter

Allow you to roll off low and high frequencies of the effect signal.

Metalizer

Metalizer feeds the audio signal through a variable frequency filter, with tempo sync or time modulation and feedback control.

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.

On/Off

Activates/Deactivates filter modulation. If it is deactivated, **Metalizer** works as a static filter.

Speed

If tempo sync is activated, this is where you specify the base note value for synchronizing the effect to the tempo of the host application (1/1 to 1/32, straight, triplet, or dotted).

If tempo sync is deactivated, the modulation speed can be set freely with the **Speed** knob.

Sync

Activates/Deactivates tempo sync.

Mono

Switches the output to mono.

Feedback

Determines the character of the metal effect. Higher settings produce a more metallic sound.

Sharpness

Sets the character of the filter effect. The higher the value, the narrower the affected frequency area, which produces a sharper sound and a more pronounced effect.

Tone

Sets the feedback frequency. The effect of this is more noticeable with high **Feedback** settings.

Output

Sets the output level.

Phaser

Phaser produces the well-known swooshing phasing effect with additional stereo enhancement.

Feedback

Determines the character of the phaser effect. Higher settings produce a more pronounced effect.

Width

Sets the intensity of the modulation effect between higher and lower frequencies.

Mode

Allows you to toggle between **LFO** and **Manual** mode.

In **LFO** mode, you can define the sweep rate or sync it to the project tempo. In **Manual** mode, you can change the sweep manually.

Rate

If **Tempo Sync** is activated, **Rate** allows you to specify the base note value for tempo-syncing the phaser sweep (1/1 to 1/32, straight, triplet, or dotted).

If **Tempo Sync** is deactivated, the sweep rate can be set freely with the **Rate** dial.

Sync

Activates/Deactivates tempo sync.

Spatial

If you are using multi-channel audio, the **Spatial** parameter creates a 3-dimensional impression by delaying modulation in each channel.

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/Hi Filter

Allow you to roll off low and high frequencies of the effect signal.

RingModulator

RingModulator can produce complex, bell-like enharmonic sounds.

Ring modulators work by multiplying two audio signals. The ring-modulated output contains added frequencies generated by the sum of, and the difference between, the frequencies of the two signals.

RingModulator has a built-in oscillator that is multiplied with the input signal to produce the effect.

Oscillator

Waveform buttons

Allow you to select the oscillator waveform: square, sine, saw, or triangle.

LFO Amount

Controls how much the LFO affects the oscillator frequency.

Env. Amount

Controls how much the oscillator frequency is affected by the envelope that is triggered by the input signal. Left of center, a loud input signal decreases the oscillator pitch, whereas right of center the oscillator pitch increases if it is fed a loud input.

Frequency

Sets the oscillator frequency ± 2 octaves within the selected range.

Roll-Off

Attenuates high frequencies in the oscillator waveform to soften the overall sound. This is best used with harmonically rich waveforms, for example, square or saw.

Range

Determines the frequency range of the oscillator in Hz.

LFO

Waveform buttons

Allow you to select the LFO waveform: square, sine, saw, or triangle.

Speed

Sets the LFO speed.

Env. Amount

Controls how much the input signal level – via the envelope generator – affects the LFO speed. With negative values, a loud input signal slows down the LFO, whereas positive values speed it up at loud input signals.

Invert

Inverts the LFO waveform for the right channel of the oscillator, which produces a wider stereo effect for the modulation.

Envelope Generator

The envelope generator parameters control how the input signal is converted to envelope data, which can then be used to control oscillator pitch and LFO speed.

Attack

Controls how fast the envelope output level rises in response to a rising input signal.

Decay

Controls how fast the envelope output level falls in response to a falling input signal.

Lock R>L

If this button is activated, the L and R input signals are merged, and produce the same envelope output level for both oscillator channels. If the button is deactivated, each channel has its own envelope that affects the two channels of the oscillator independently.

Level Settings

Mix

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

Output

Sets the output level.

Tranceformer

Tranceformer is a ring modulator effect that modulates incoming audio by an internal, variable frequency oscillator, producing new harmonics. You can use a second oscillator to modulate the frequency of the first oscillator, in sync with the song tempo if needed.

Mix

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

Waveform buttons

Allow you to select a pitch modulation waveform.

Waveform display

Allows you to modify the **Pitch** and **Depth** parameters simultaneously by dragging.

Pitch

Sets the frequency of the modulating oscillator.

Activate/Deactivate Pitch Modulation

Activates/Deactivates the modulation of the pitch parameter.

Speed

If tempo sync is activated, this is where you specify the base note value for synchronizing the effect to the tempo of the host application (1/1 to 1/32, straight, triplet, or dotted).

If tempo sync is deactivated, the modulation speed can be set freely with the **Speed** knob.

Sync

Activates/Deactivates tempo sync.

Depth

Sets the intensity of the pitch modulation.

Mono

Switches the output to mono.

Output

Sets the output level.

Tremolo

Tremolo produces amplitude modulation.

Rate

If **Tempo Sync** is activated, **Rate** allows you to specify the base note value for tempo-syncing the effect (1/1 to 1/32, straight, triplet, or dotted).

If **Tempo Sync** is deactivated, the modulation speed can be set freely with the **Rate** dial.

Sync

Activates/Deactivates tempo sync.

Depth

Governs the depth of the amplitude modulation.

Spatial

> Adds a stereo effect to the modulation.

Output

> Sets the output level.

Vibrato

Vibrato creates pitch modulation.

Depth

> Sets the intensity of the pitch modulation.

Rate

> If **Tempo Sync** is activated, **Rate** allows you to specify the base note value for tempo-syncing the effect (1/1 to 1/32, straight, triplet, or dotted).
>
> If **Tempo Sync** is deactivated, the modulation speed can be set freely with the **Rate** dial.

Sync

> Activates/Deactivates tempo sync.

Spatial

> Adds a stereo effect to the modulation.

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. When using **RoomWorks SE** inserted in an FX channel, you most likely want to set this to 100 %.

Tools Plug-ins

Tuner

This is a guitar tuner.

To tune your instrument, connect it to an audio input, select **Tuner** as an insert effect, and activate **Monitor** for the corresponding track. Click **Mute** if you want to mute the output while tuning your instrument.

NOTE

Make sure that you deactivate any other effect that alters the pitch, such as a chorus or vibrato.

Tuner offers two different viewing modes, analog view and digital view.

● To toggle between analog view and digital view, click the **Toggle between Analog View and Digital View** ⊞ button.

Analog View

The graphical display indicates the currently played pitch as a note. The two arrows indicate any pitch deviation. The deviation is also shown in the upper area of the display. If the played note is flat of the pitch, the pitch indicator is located to the left. If the played note is sharp, the pitch indicator is located to the right.

Cent

Shows the deviation in pitch. A negative value indicates that the pitch is flat. A positive value indicates that the pitch is sharp.

Frequency

Shows the frequency of the played note.

Base

Shows the frequency of the base note A. Its default value is 440 Hz. You can adjust **Base** by ± 15 Hz.

Octave

Shows the octave of the played note.

Mute

Mutes/Unmutes the output signal.

Digital View

This view provides two tuner modes: **Strobe** and **Classic**.

In **Strobe** mode, a colored moving strobe indicates any pitch deviation. If the played note is flat, the strobe moves from right to left. If the played note is sharp, the strobe moves from left to right. The higher the deviation in pitch, the faster the strobe moves. If you play the correct pitch, the strobe stops moving and turns gray.

In **Classic** mode, an indicator shows any pitch deviation. If the played note is flat, the indicator is located left of the middle. If the played note is sharp, the indicator is located right of the middle. If you play the correct pitch, the indicator is located in the middle and turns gray.

Note

Shows the currently played pitch.

Cent

Shows the deviation in pitch. A negative value indicates that the pitch is flat. A positive value indicates that the pitch is sharp.

Base

Shows the frequency of the base note A. Its default value is 440 Hz. You can adjust **Base** by ± 15 Hz.

Octave

Shows the octave of the played note.

Frequency

Shows the frequency of the played note.

Mute

Mutes/Unmutes the output signal.

Strobe/Classic

Allows you to toggle the display between **Strobe** and **Classic** mode.

Included VST Instruments

This chapter contains descriptions of the included VST instruments and their parameters.

Groove Agent SE

This VST instrument is described in detail in the separate document **Groove Agent SE**.

HALion Sonic SE

This VST instrument is described in detail in the separate document **HALion Sonic SE**.

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