

spctrl • eq

by
TONSTURM **gs**DSP

Owners Manual

SPCTRL EQ v.1.0.2 owners manual
Document Version v.1.0

Minimum System Requirements:

- Mac OS X 10.13 (64-bit), 4 GB Ram, Intel® Core™ i5 and Silicon Macs
- Windows 7 (64-bit), 4 GB Ram, Intel® Core™ i5
- ILOK Version 2 or higher

Credits:

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1. INSTALLATION

After downloading simply unpack the ZIP archive, then launch the installer. It will guide you through the process. Files will be copied into the common VST2.4, VST 3, AU or Pro Tools plug-in folders on your computer. Your host should recognize the plug-in automatically with the next restart and you will be asked to register SPCTRL EQ with your iLok account.

1.1. MAC OS X

On Mac OS X you will find the standard plug-in folders in the system library folders. The paths are as follows:

Audio Units (AU): /Library/Audio/Plug-Ins/Components

VST: /Library/Audio/Plug-Ins/VST and /Library/Audio/Plug-Ins/VST3

AAX: /Library/Application Support/Avid/Audio/Plug-Ins

1.2. WINDOWS

On Windows you will find the standard plug-in folders in the system library folders. The paths are as follows:

VST: C:\Program Files\VSTPlugins

AAX: C:\Program Files\Common Files\Avid\Audio\Plug-Ins

If your host does not recognize the plug-in, you might need to manually copy it to the host specific plug-in path.

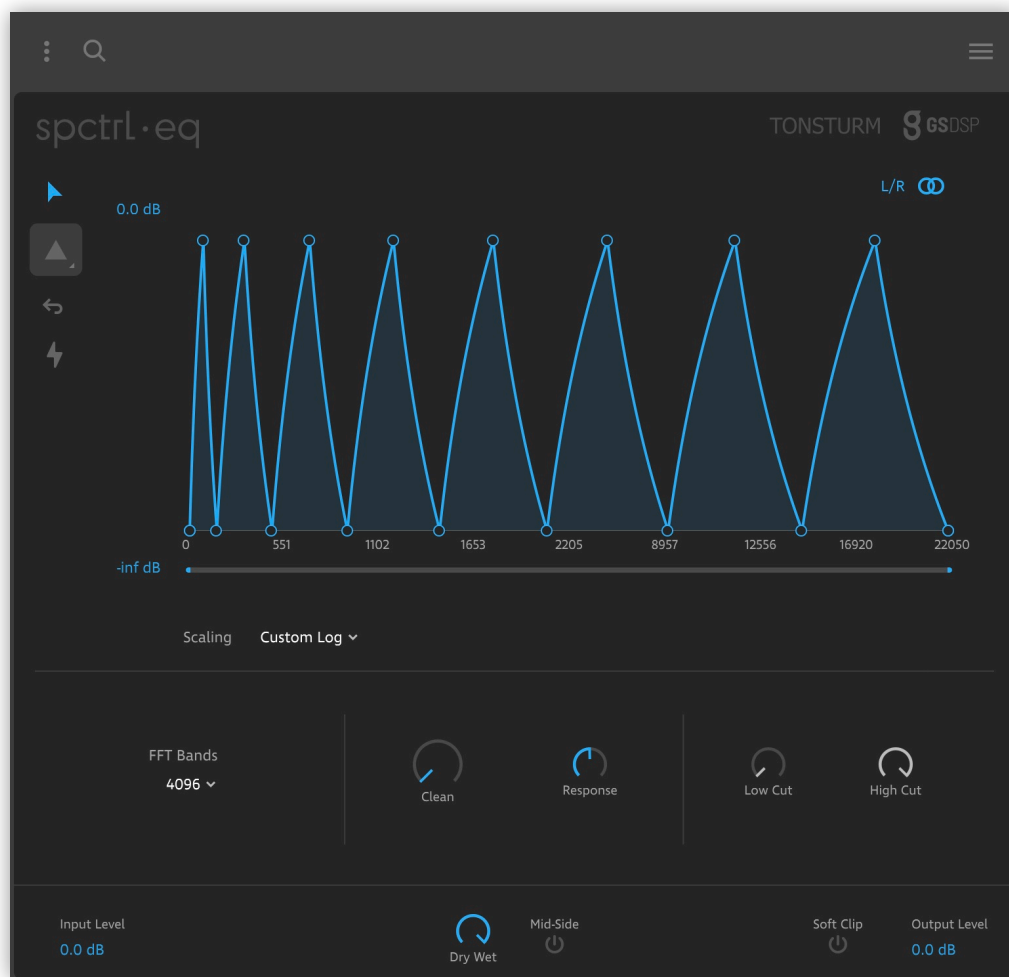
1.3. iLOK Registration

Authorization Wizard: The authorization wizard will open if the plugin is not yet authorized when you insert the plugin, or when it is scanned by your host application. You need to have an iLok account in order to use SPCTRL EQ. Setting up an iLok account is free and easy. You will find all information on www.ilok.com. Choose whether to activate to your Computer or to an iLok 2 or later. Please note that first generation iLoks are not supported.

Please download the iLok Manager at www.ilok.com. After your purchase from TONSTURM, you receive an email from us containing the download link for the installer plus an iLok activation code: (i.e XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XX)

Choose ACTIVATE. You will then be presented with the activation window, where you may enter your code. You should then copy paste the entire code into the entry form. Select your activation location: your computer or your iLok.

2. What is SPCTRL EQ



SPCTRL EQ is specifically designed with Sound Designers and Composers in mind. It allows you to sculpt and shape up to 4096 individual frequency bands in a unique and powerful way. The Heart of SPCTRL Eq is its highly flexible Curve Editor that gives you excellent control over the spectrum of any sound.

Combined with TONSTURMs state of the art modulation system, SPCTRL EQ is capable of twisting any sound upside down and get bits out of it, that you never imagined were in there. For more in depth knowledge follow the manual or check our online tutorials and get the most out of SPCTRL EQ!

Tutorials:

<https://www.youtube.com/user/TonsturmChannel>

3. EXPLAINING THE UI ELEMENTS

3.1.The Top Header



1.) Settings Menu:

- Tooltips: If active, resting your cursor on a parameter will show you a description (if there is one)
- Size: Increases or decreases the size of the plugin window from 100% up to 125%. Depending on your screen resolution.
- Check for Updates: The Plug In will search for updates.
- Save: Saves the current patch at the designated folder and overwrites the currently selected patch.
- Save As: Saves the patch at the designated folder and does NOT overwrite the initial Patch

2.) Open Preset Window

3.) Opens/closes The Modulation Section

3.2. The Preset Window

In the Preset Window you are able to browse Factory and User presets by clicking on the tabs in the Category bar. The presets are divided into Sub Categories for your convenience. The right column displays the actual Presets of the selected folder or sub folder.

The Save and Save As Buttons on the top right corner allow you to save the existing patch to your preferred location.

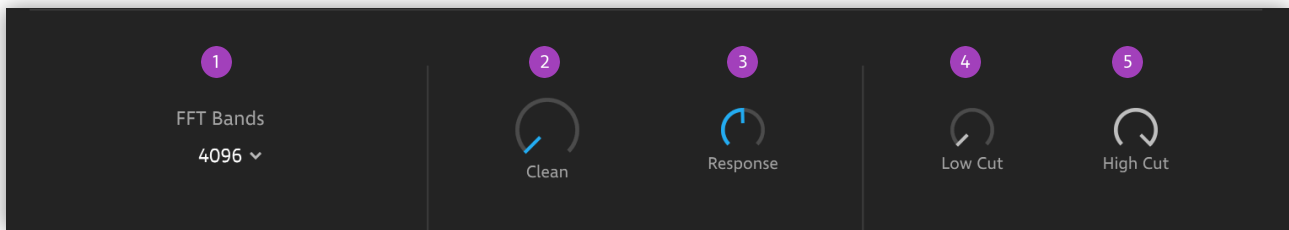
TONSTURM

Presets

SaveSave As

Category	Sub Category	Preset
Factory	01 Default Settings	01 Metallic Moonshine
User	02 Pad & Atmosphere	02 Devil Motion
	03 Drums & Grooves	03 Resonance Rocks
	04 Risers & Drops	04 Cleaning Coconut
	05 Pattern	05 Spectral Sunshine
	06 Sound Design	06 Dub Diamond - Rythm
		07 Evolving Experiments
		08 Phasing People
		09 Catacombs
		10 Stereo Sentinels
		11 Atmospheric Ashes - Rythm
		12 Tranced Tracer - Rythm
		13 Maxed Mutant - Rythm
		14 Hunted Hills - Rythm
		15 Trance This - Rythm
		16 Highfive House - Rythm
		17 Minimal Movement - Rythm
		18 Spore Spikes - Rythm

3.3 DSP Section



1.) FFT Bands: The amount of bands can be set from 128 to 4096. Those bands are fixed and are equally placed across the frequency spectrum. Switching between the band options give you various characteristics and can drastically change the sonic character.

2.) Clean: Acts like a frequency dependent noise gate, removing frequencies if they are lower in volume than others. Fully clockwise usually leaves you with the fundamental frequency for monophonic signals.

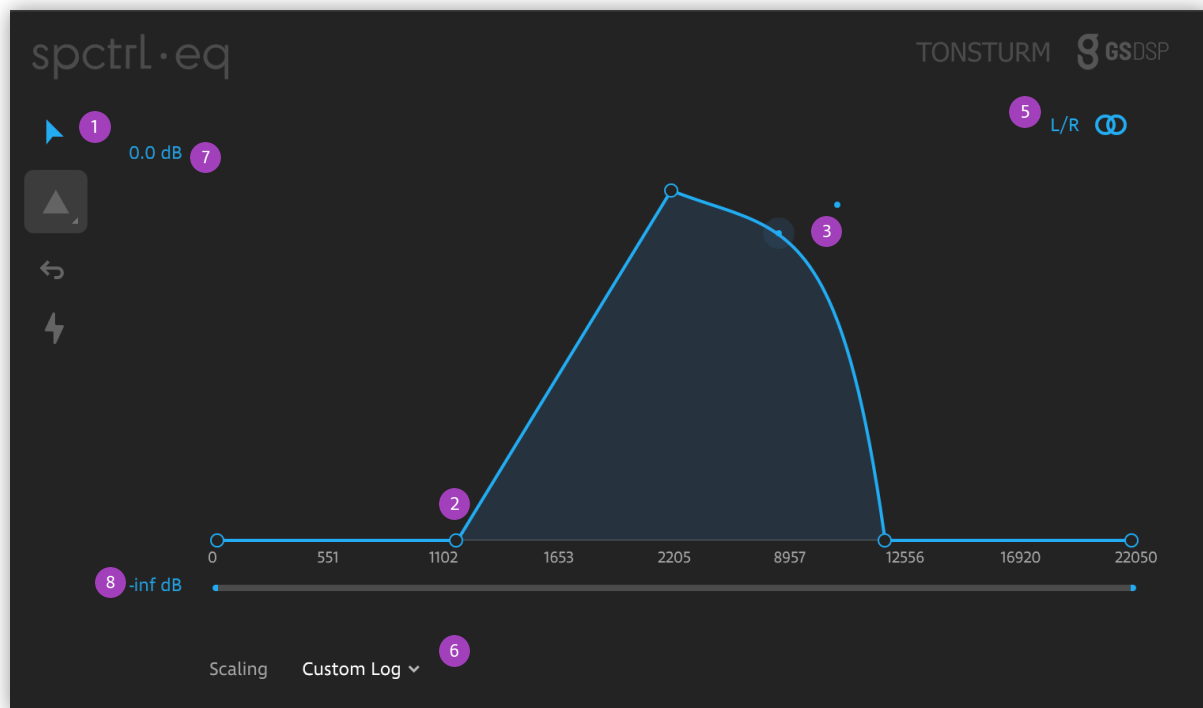
3.) Response: Changes the response time of the cleaning process. Try a slower response if your output sounds bubbly and a fast response if it sounds too smoothed out.

4.) Low Cut: Filters the Output Signal and goes from 20Hz-500Hz.

5.) High Cut: Filters the Output Signal and goes from 20kHz-5kHz

3.4 Vector Edit Mode

This Mode gives you access to the powerful vector curve editor, where you can draw any imaginable eq shape.



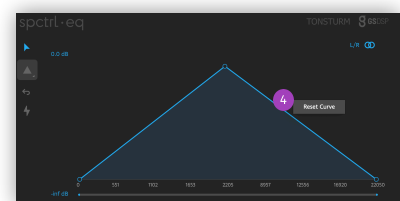
1.) Edit Mode: This Button enables the Edit Mode

2.) Double Click: Double clicking on the vector curve editor will create an anchor point that draws a straight line to its neighbor anchor points.

3.) Clicking between anchor points: Clicking between two anchor points will give you the option to shape the curvature between 2 anchor points. You can create a maximum of 2 curve shaping dots for each anchor point segment.

4.) Right clicking in the Vector Curve editor will give you the option to reset the Curve to its default position.

5.) L/R: This control allows you to draw separate curves for the left and right channel. This is further explained in section „3.8) *Unlinking The Channels.*“



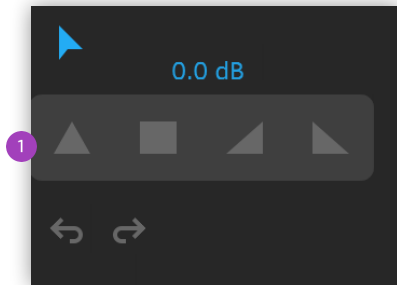
6.) Scaling: There are three scaling options: Linear, Logarithmic and Custom Logarithmic which is a mix between Linear and Logarithmic.

7.) Input EQ Gain: This amount controls the gain boost level of the EQ. It goes up to +48db. Note that high values combined with a limiter can create very unique effects. You might also need high volume amounts with lowering the input volume of the plugin.

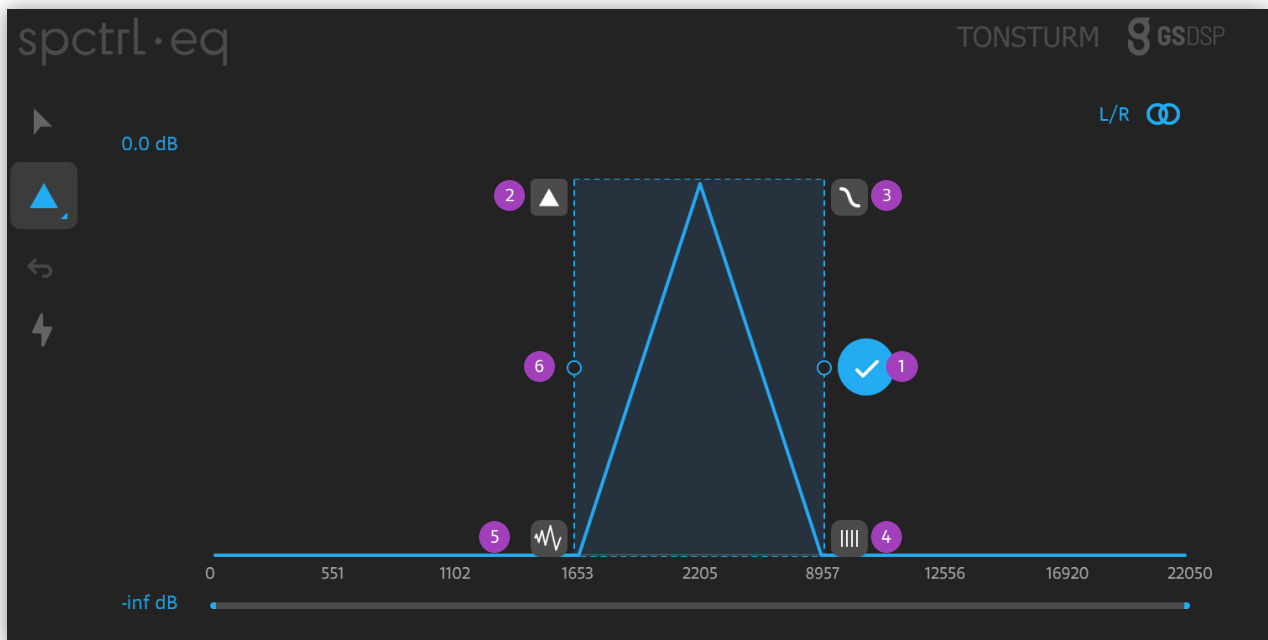
8.) Silence Threshold: Controls the lowest possible volume of the EQ and goes from „-infinity“ up to „-12db“.

3.5) Shape Mode:

TONSTURM developed shape mode to make Vector editing fun again and help you to instantly come up with complex shape patterns.



1.) Hovering over the Shape Icon will give you 4 shape options including: Triangle, Square, Ramp Up and Ramp Down. By clicking any of these four shape options a shape bracket with the chosen shape will appear. It can now be freely positioned across the frequency spectrum.



1.) Check Mark: Will Render the Curve into the Vector Graph.

2.) Shape Icon: Allows you to change the Shape of the Curve. You can choose from 4 different shapes.

3.) Curve bend Icon: Gives you the option to alter the shape curves. Moving the cursor up and down, will alter the shape curve symmetrically. Moving the cursor left and right will shape the curves asymmetrically.

4.) Duplicate Icon: This function allows you to duplicate the current shape. Moving the cursor to the right will add shapes, while moving the cursor to the left will reduce the amount of shapes.

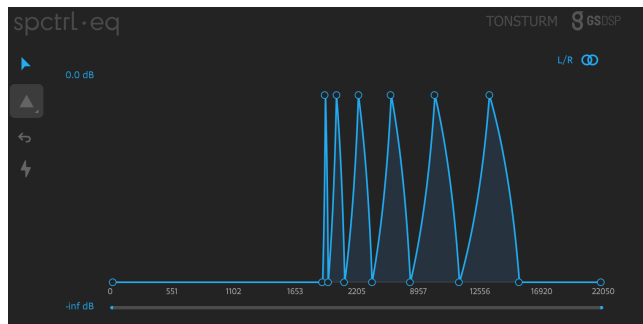
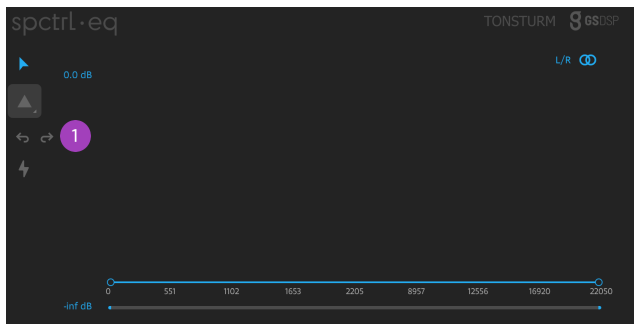
5.) Skew Icon: This mode only works when the duplicate mode has been used and will skew the shape pattern.

6.) These Knobs allow you to widen or narrow the content of the shape bracket over the whole frequency range.

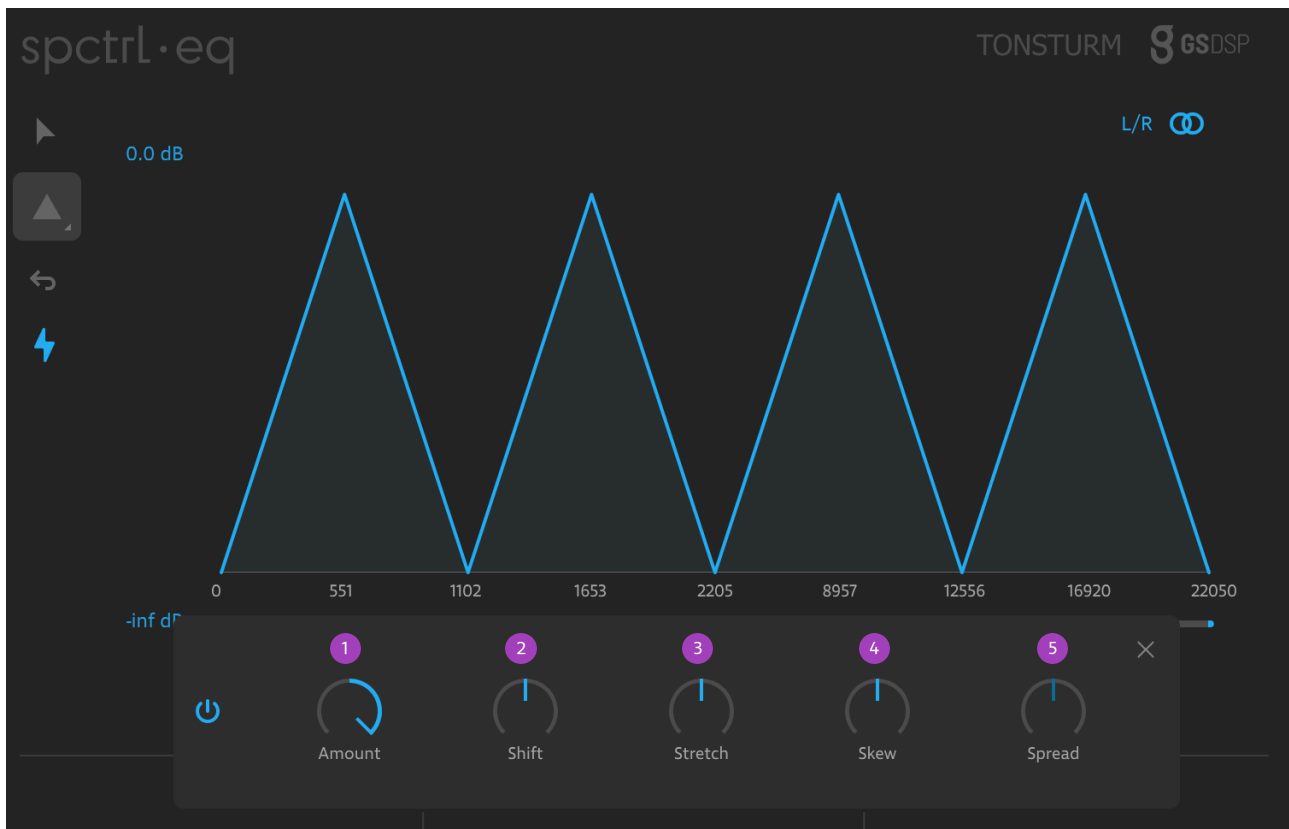
Note that the Shape you create in the Shape Mode can be further edited in the Vector Curve Editor!

3.6) Undo/Redo:

1.) In this mode you can Undo and Redo 20 steps of the Edit Mode. Use the left arrow for Undo and the right for Redo.



3.7) Transform Mode

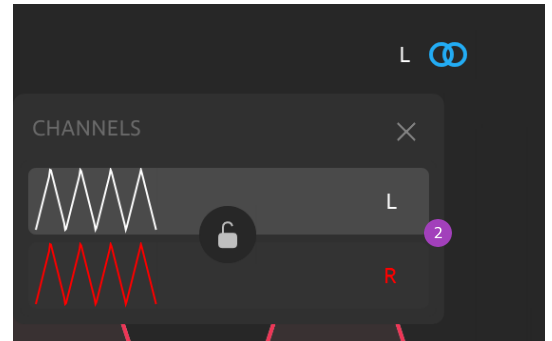
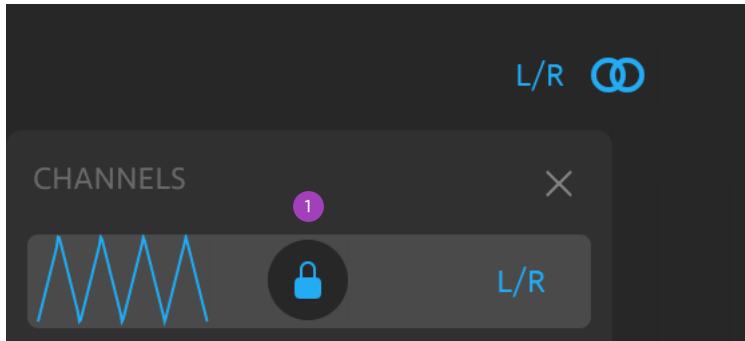


This Mode is very similar to the shape mode but in this case it allows real time modulation to totally go wild on your sounds frequency spectrum.

- 1.) Amount: This control can interpolate the EQ, which results in very different sonic characters.
- 2.) Shift: Works similar to a phase offset and moves the curve left or right.
- 3.) Stretch: This control widens or narrows the curve and will reduce or add more shapes.
- 4.) Skew: Bends the curve to the left or right.
- 5.) Spread.: This controls is only enabled when the left and right channel are unlinked and will phase offset the curves of the individual channels.

3.8) Unlinking Channels

As mentioned earlier Spctr! Eq allows you to create your custom shapes individually for the left and right channels.



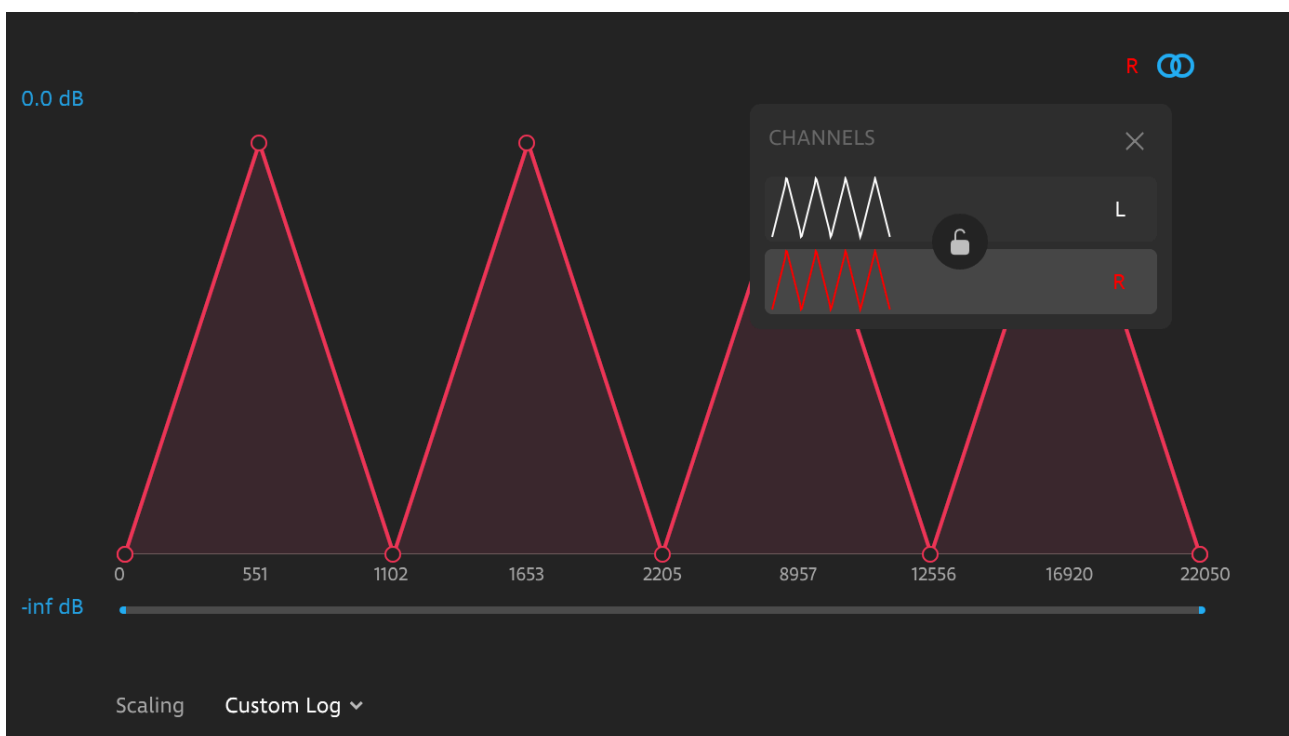
1.) Lock Symbol: Clicking on this symbol will split the left and right channel.

2.) Lets you choose between the channels. White will always display the left and red the right channel!

3.) Right clicking on either of the channel tabs will present you a copy / paste function to copy and paste between the channels.

Now you are able to edit the curves for both channels!

Enjoy!



4.) Modulation Section

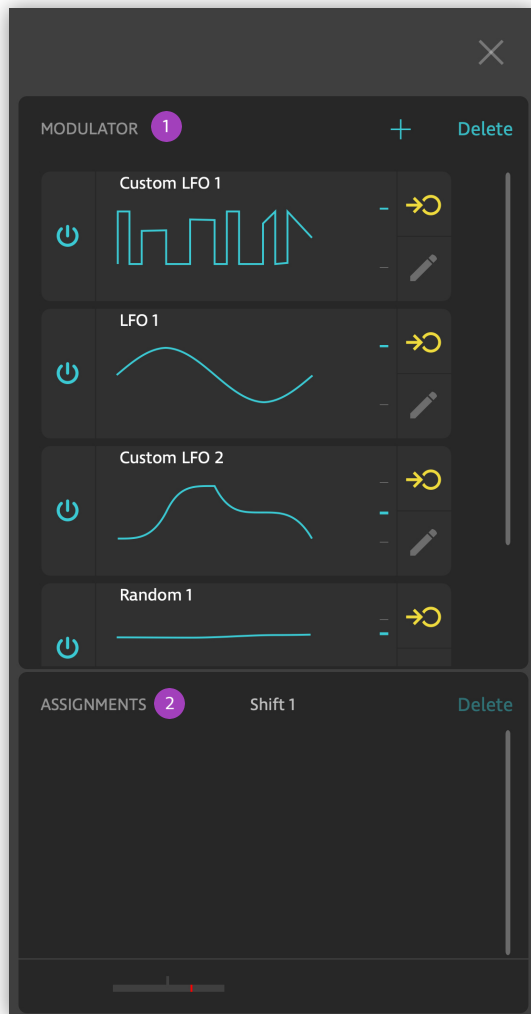


In this Section we want to explain our flagship TONSTURM modulation system which serves you precise and powerful modulation control over all Plug-In parameters. Previously known from FRQ Shift.

Choose from various modulators like LFO, Custom LFO, Random LFO and Envelope Follower to create unique Effects. We know how important a quick and easy workflow is to keep the creativity alive and that's why we designed the Assignment Panel. This Panel gives you quick access to all key features of the modulator and its destinations.

Let's dive in deeper!

4.1) The Modulation Section



1.) TheModulator Overview List:

The right section of SPCTRL EQ displays the modulation section, which currently provides 4 different types of modulation sources: LFO, Custom LFO, Random, Envelope Follower. Added modulators can be conveniently browsed and selected from here.

2.) Assignment Panel:

The Assignment Panel has 2 different main modes and always

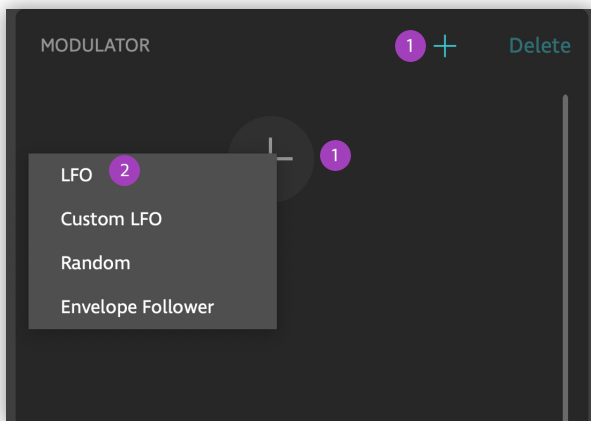
Modulator view:

By selecting any Modulator an overview of all parameter destinations for this specific Modulator will be displayed and you can make final adjustments from here or the destination parameter of course. This mode comes in handy if you want to change the modulation rate of the feedback Delay without searching for the knob again or simply get an overview of the list of parameters this modulator is assigned to.

Parameter view:

By selecting a parameter you see a list of all modulators that are assigned to the selected parameter. If you have multiple modulators on the Shift 1 and you want to change the Modulation of the Random modulator from unipolar to bipolar you are able to do this from the Assignment Panel or from the parameter it self of course.

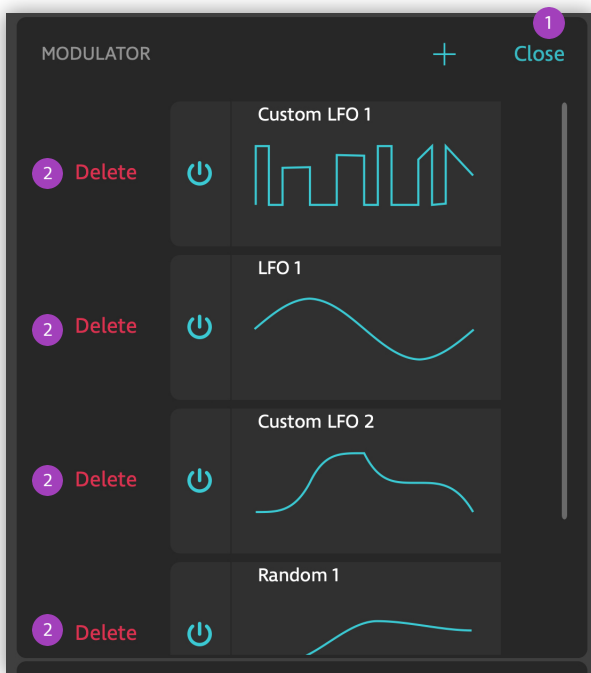
4.2) Loading a Modulator



1.) Load: Opens the modulator selection list.

2.) Select a modulator of your choice and it will be loaded into the modulator overview browser ready to be assigned to any parameter.

4.3) Deleting a Modulator



1.) Delete/Close: Opens or closes the delete bar.

2.) Red Delete: Finally deletes the Modulator next to the Delete Button

4.4) The Modulator tiles



1: Mutes / Unmutes the Modulator

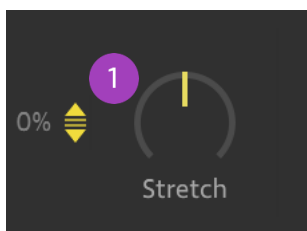
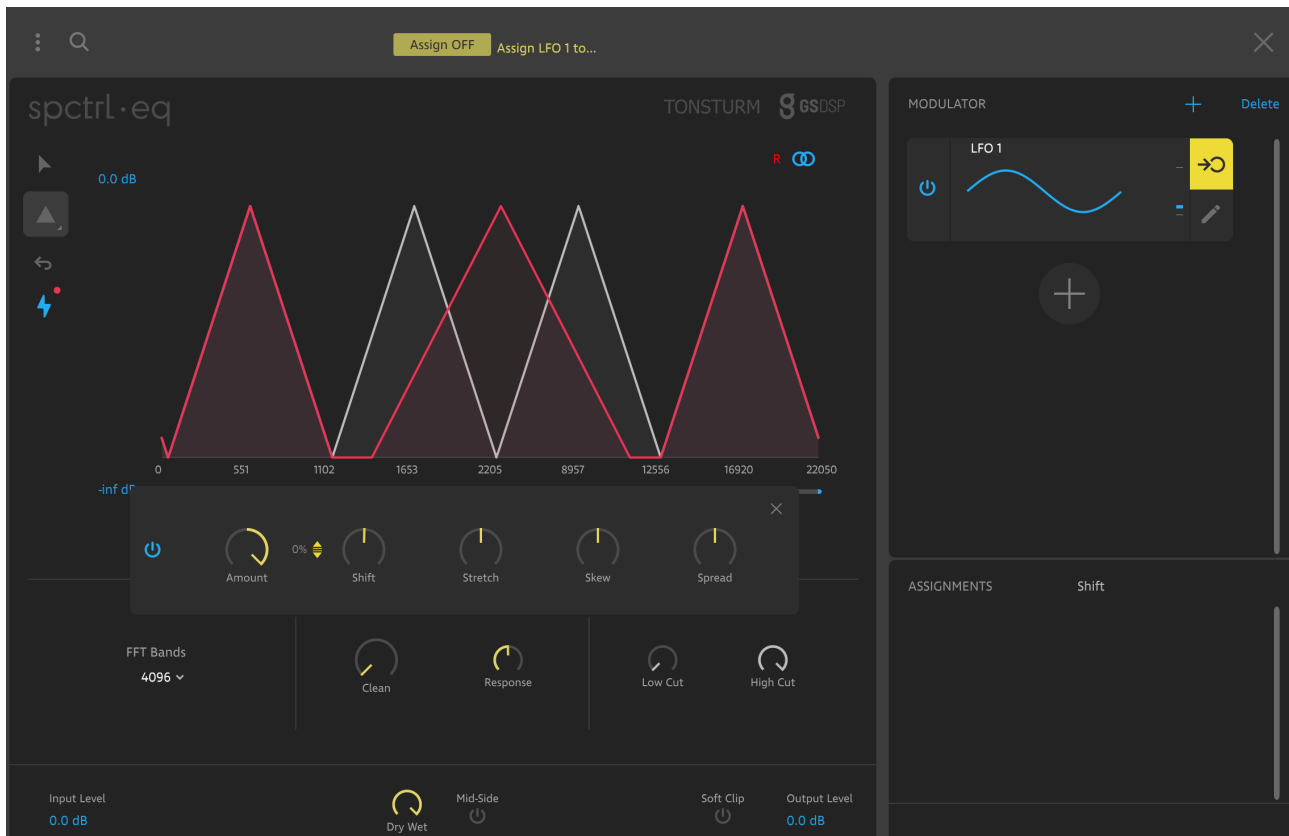
2: Overview of the current modulation amount at the modulators output

3: Enables / Disables the Assignment Mode.

4: Opens the edit window of the modulator

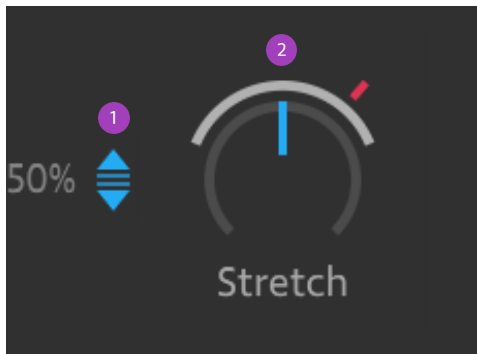
5. Assign Mode

Now that the Assign Mode is enabled you can choose any Parameter that has turned yellow as a destination for your modulator. This also includes parameters of the modulator itself and other modulation modules. For example you can modulate the frequency of your LFO with the signal of a random modulator. If you want to get into more extrem and out of your mind sounds, thats the route to go!



1.) The arrows beside the Parameter can be dialed up and down to increase the the range in which the Parameter is being modulated.

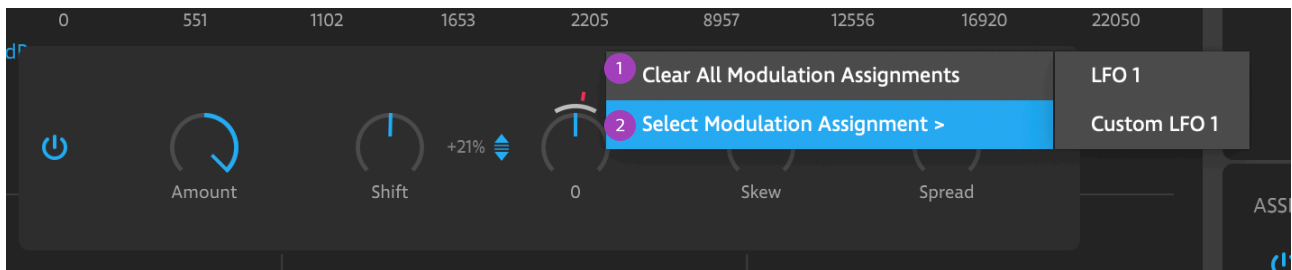
5.1) Knob after being assigned to a modulator:



1.) Blue Arrows: The percentage value displays how much modulation is applied.

2.) Modulation Range: Gives a more visual feedback of the exact modulation range.

5.3) Right Click Menu



1.) Clears all modulation assignments with one click.

2.) Select any of the assigned modulation sources to be displayed on the current parameter control.

6 Modulator Modules

6.1 LFO



1.) Frequency: Controls how fast the output of the LFO varies over time. Can be set to Hz and BPM Mode.

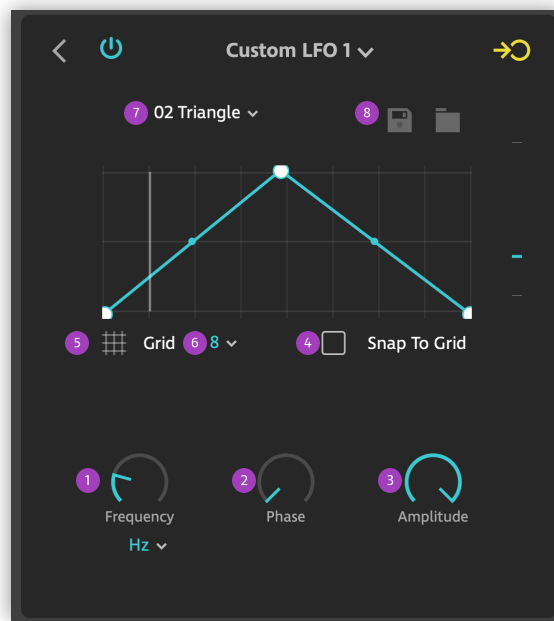
2.) Phase: Offsets the starting point of the modulation.

3.) Amplitude: Controls the overall modulation amount of the LFO for all destinations.

4.) The shape of the LFO output is controlled with the Faders. The Y/Left slider adjusts the basic shape of the signal, morphing it smoothly through four standard shapes: a sine wave, a triangle wave, and a square wave.

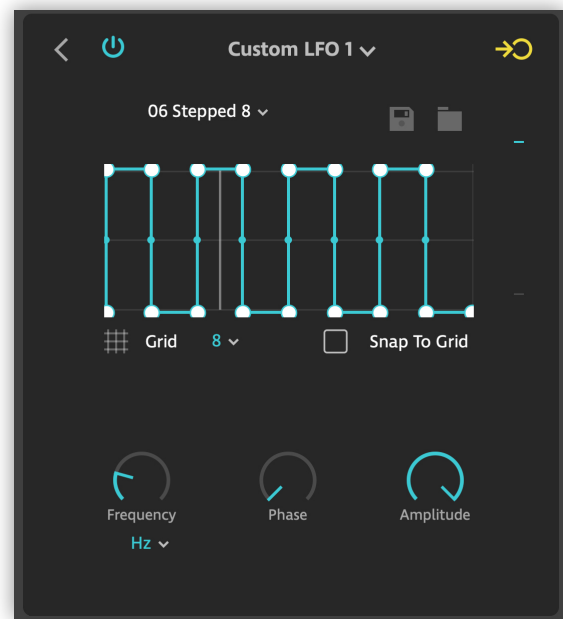
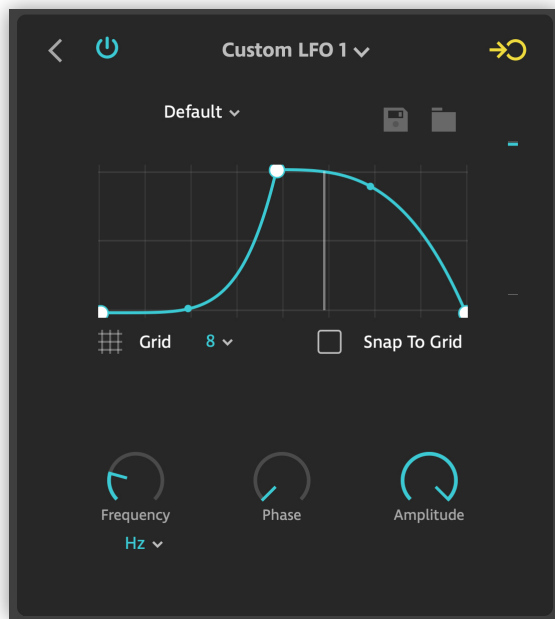
5.) The X/Right Slider adjusts the horizontal symmetry of the wave, and has a different effect depending on the wave's initial shape. For example, if the X/Left Fader is set to produce a triangle wave, the Y/Right Fader varies the wave from a downward-sloping ramp to a rising ramp. If the X/Left Fader is set to a square wave, the Y/Right Fader varies the duty cycle of the wave.

6.2 Custom LFO



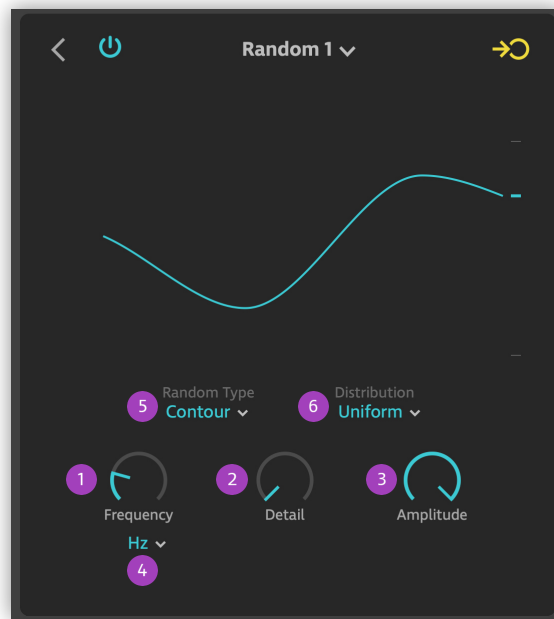
- 1.) Frequency: Controls how fast the output of the LFO varies over time. Can be set to Hz and BPM Mode
- 2.) Phase: Offsets the starting point of the modulation.
- 3.) Amplitude: Controls the overall modulation amount of the LFO for all destinations.
- 4.) Snap To Grid: Enables the Grid mode and lets the path points snap to the grid.
- 5.) Grid: Enables the visualization of the Grid.
- 6.) Grid Size: Sets the grid size of the LFO graph. You will see the visual grid background of the LFO graph change while adjusting this number.
- 7.) Drop Down Menu: This pop-up menu gives you quick access to a few factory presets for custom LFO shapes as starting point. You also get quick access to your own preset shapes from your user folder.
- 8.) Disk Symbol. Click here to save your custom LFO shapes.

6.2.1 How to create your own Custom LFO Shapes



- To add more modulation points simply double click in the grid. By clicking and dragging you can move the points to your preferred location.
- To delete modulation points, right click on the point you want to delete
- If you want to smooth out your created LFO shape you can click the small dot between the Modulation points and bend the line between the modulation dots.

6.3) Random



1.) Random:Frequency: Controls the update rate of the random generator. The easiest way to examine this is setting Detail to 0 and watch the resulting curve

2.) Detail: Defines the amount of detail in the generated random function. Low detail settings result in a smooth curve, increasing detail adds more and more tiny fluctuations.

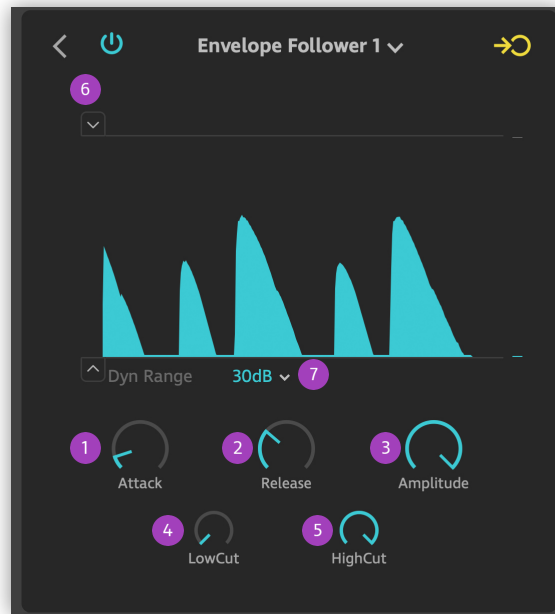
3.) Amplitude: Controls the overall modulation amount of the Random modulator for all Destinations.

4.) BPM Switch: Enabling this will make the time value snap to tempo-based units (divisions 1/4 note, 1/8th note, etc).

5.) Random Type: Changes the Modulation Mode from Contour to Sample & Hold.

6.)RandomDistribution: Changes the distribution of the random generator. (Uniform/Normal)

6.4 Envelope Follower



- 1.) Attack: Adjusts the attack time of the envelope in milliseconds.
- 2.) Release: Adjusts the release time of the envelope in milliseconds.
- 3.) Amplitude: Controls the overall modulation amount of the envelope follower for all destinations.
- 4.) Low Cut: Applies a low cut filter on the input signal.
- 5.) High Cut: Applies a high cut filter on the input signal.
- 6.) Range Handles: Fine tune the range of the envelope output.
- 7.) Dynamic range: Adjust the maximum dynamic range that will be used.

7.)Assigne Panel

7.1) Modulator View

The Modulator View is active when selecting any modulator. This gives you an overview for all parameter destinations of a selected modulator and instant access to all key modulation settings from one place.

Please Note: When you are in Assign Mode of a Modulator the Modulator View is locked to the Modulator View for that specific modulator as long Assign mode is activated.



1.) Mute / Unmute: Enables or disables the modulation for the specific parameter destination.

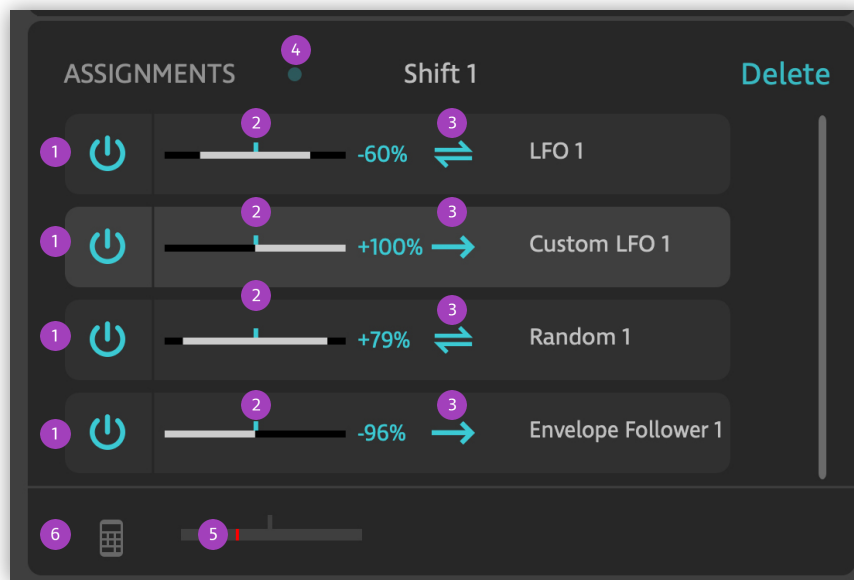
2.) Modulation Range: Increase or decrease the amount of the modulation

3.) Bipolar / Unipolar: Changes the modulation from positive - negative to only positive or negative

7.2) Parameter View

To open the Parameter View click a parameter that ideally has one or more modulators assigned to it. The Parameter Assignment view gives you an overview of all modulators that have been assigned and that modulate this specific parameter. This is again gives you instant access to all key modulation settings from one place.

Please Note: The Parameter View does not get displayed as long as the modulation Assign Mode is enabled.



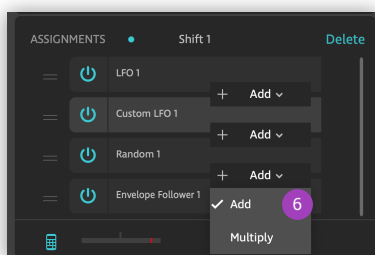
1.) Mute / Unmute: Enables or disables the modulation for the specific parameters destination.

2.) Modulation Range: Increase or decrease the Range of the Modulation

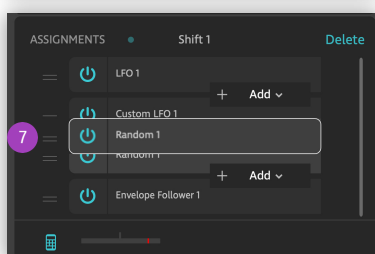
3.) Bipolar/Unipolar: Changes the Modulation from Positive - Negative to only Positive or Negative

4.) Blue Dot: Gives a visual feedback of the modulation speed for the currently selected modulator assignment tab.

5.) The red pointer indicates the final modulation signal after the calculation of all modulation sources. This is equal to the indicator on the selected parameter.



6.) Calculator Icon: By clicking the calculator icon you enable the multiplier/add mode for the modulator assignment tabs. In this mode you can choose whether the different modulation sources should be added or multiplied.



7.) Here you can grab and reorder the modulation assignments to allow a specific order for the calculation of the final modulation Signal.

Host Automation:

If you want to use host automation to control a parameter you inside a modulator, you can do so by right clicking on the parameter. This opens the Automation Panel where you can Assign the parameter to a host automation slot of your choice. If you open the automation editor of your host, the chosen parameter will now appear in the list. All other parameters that are not part of the modulation system are already part of the host automation list with their appropriate label.

