

Tantra 2

Rhythmic Multi-Effect Plug-In



User Manual

DS Audio, 2021

Welcome to Tantra!

Thank you for choosing Tantra! The main idea behind Tantra is as simple as effective: whenever you would like to add some rhythmic pattern to any kind of sound, no matter if they flat or dry, a lifeless basic synth sound or deep evolving pad, if you would like to just reshape your already created complex arpeggiated sequence and make it sparkle in few clicks, let Tantra do the job! With 8 powerful multi-stage sequencers you can create rhythmic modulations for various modules like filter, distortion, delay, lo-fi, glitch, etc. Each module provides many parameters to ensure you have everything to make your sounds moving and shining. Two layers of available effects allows you to make independent sub-patterns in your rhythms. Master reverb and equalizer/exciter at the output form your final sound mix. And finally many presets will guide you through the various possibilities of shaping your sounds.

We believe you will have lots of fun with Tantra!

Table of Contents

Installation	4
System requirements	4
Installation	4
Activation	4
User Interface	5
Working with knobs	6
MIDI Learn	7
Locking parameters	7
Working with value fields	8
Working with buttons, switches and selectors	8
The Top Bar	9
The Layer Effects Section	11
Common elements	12
Filter	13
Distortion	14
Delay	15
Lo-Fi	16
Flanger	17
Glitch	18
The Modulator section	19
Drag and Drop	19
Modulator settings	20
Curve mode	21
Steps mode	23
The Master Section	24
Equalizer	24
Reverb	25
Master output	25
The Modulation Matrix	26
Credits	27
Updates, Support and Contact	28

Installation

System requirements

In order to use Tantra you need a system with at least the following specifications:

- Modern powerful processor with SSE3 support
- Windows 7 (or higher) or Mac OS X 10.9.X (or later)
- VST 2.4 or VST 3.X or AAX or AU compatible host software

Installation

1. Download please the latest version of Tantra at the Plugin Alliance website:
https://www.plugin-alliance.com/downloads/ds_tantra
2. Run the installer and follow the instructions

Activation

Tantra is distributed by Plugin Alliance and must be activated in your Plugin Alliance account. You can create and login into your account at <https://www.plugin-alliance.com>. In order to activate Tantra please check Plugin Alliance Activation Manual, which you can download at the following page: <https://www.plugin-alliance.com/activation>

User Interface

The user interface of Tantra is divided into four sections:



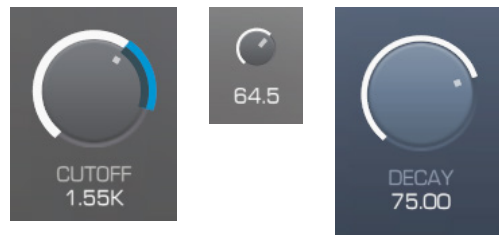
1. The Top Bar
2. The Layer Effects section
3. The Modulator section
4. The Master section combined with the Modulation Matrix section

Each section provides a group of parameters that are used to control the sound processing in Tantra via a common set of GUI elements:

- Knobs
- Value fields
- Buttons, switches and selectors

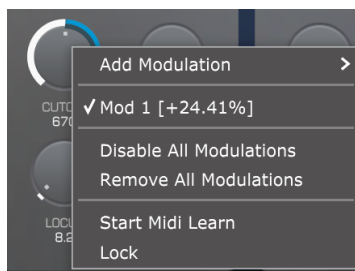
Working with knobs

The most common GUI control in Tantra is the knob. Although the appearance of knobs may vary, they are all controlled in the same way.



- To change the value of a parameter, left-click on the knob, hold down the mouse button and drag up or down in vertical direction
- The same results are achieved while dragging the mouse left or right in horizontal direction
- For finer control of a parameter hold the ALT key while dragging the mouse
- To reset a parameter to its default value double-click on the knob

Tantra offers a special convenient way to do modulation assigning and editing. This way can be successfully used instead of interacting with the Modulation Matrix in many cases. To assign a modulation to a parameter right-click on the knob and select the desired modulation source from the “Add Modulation” submenu of the popup menu.



When at least one modulation source is assigned to the parameter you can edit the modulation depth with the knob. To do that right-click on the knob, hold down the mouse button and drag up or down (left or right) in vertical (horizontal) direction. Alternatively, you can hold CMD (Mac) or CTRL (Win) key, left-click on the knob, hold down the mouse button and drag to adjust the modulation depth. The colored arc displays the modulation depth while dragging the mouse.

You can assign more than one modulation source to the knob. To select the desired modulation source for editing the modulation depth right-click on the knob and select an appropriate menu item “Mod N [+XX%]” from the popup menu. To delete/disable all modulations assigned to the parameter right-click on the knob and select “Remove/Disable All modulations” menu item from the popup menu.

MIDI Learn

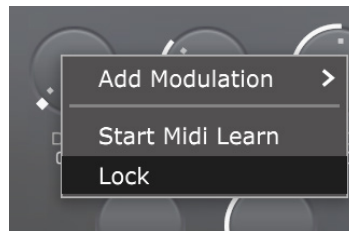
Many of Tantra's GUI controls support MIDI Learn.

- Right-click on the knob and choose "Start Midi Learn" from the popup menu
- Move the desired MIDI control on your controller. Tantra will automatically detect the MIDI control and assign it to the knob
- Choose "Clear MidiCC" from the popup menu if you want to remove the learned MIDI control

You can save all MIDI control assignments into a MIDI Map. How to work with the MIDI Map presets will be explained later.

Locking parameters

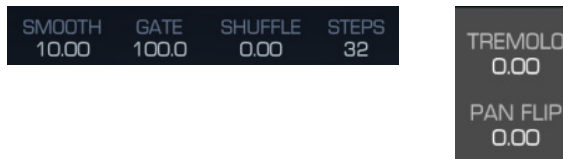
Tantra offers a possibility to prevent specific parameters from changes when you switch presets. This can be useful, for example, to lock the Volume parameter at a certain value while switching through presets. In order to lock a parameter select "Lock" command from the control's context menu:



Uncheck the "Lock" menu item to unlock the parameter. You could use the "Unlock All Parameters" command available in the Main Menu, to release all locks at once.

Working with value fields

Many parameters in Tantra can be controlled via their value fields.



The value fields display text information about the associated parameter. You can perform the following actions on the value fields:

- To set the desired value right-click on the value field and select an appropriate menu item from the popup menu. Note that not all value fields have a popup menu. To change the value leftclick on the value field, hold the mouse button and drag up or down in vertical direction
- To reset a parameter to its default value double-click on the value field

Working with buttons, switches and selectors

Working with buttons, switches and selectors in Tantra is straightforward:

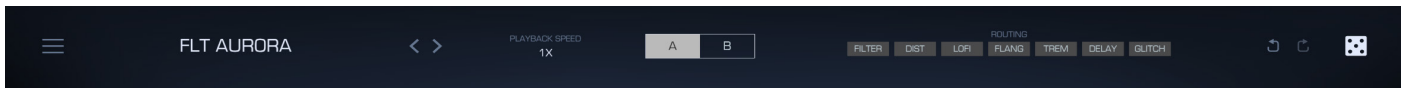


- Simply click on the button to perform an action
- The first click on the switch enables a function. The second click disables the same function
- A selector is a mutually exclusive group of switches. Enabling one disables all others in the group

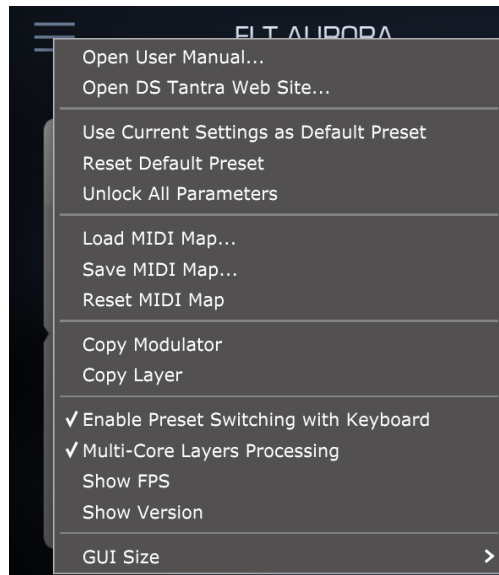
To find information on how to work with the specialized controls such as Modulator editor refer to the appropriate topic in this manual.

The Top Bar

The Top Bar provides control over different aspects of Tantra behavior



Click the **Settings** button to access global setting and utility functions of Tantra:



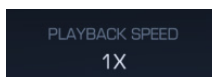
- **Open User Manual.** Shows this user guide
- **Open DS Tantra Web Site.** Shows Tantra home page in your browser
- **Use Current Settings as Default Preset.** Allows you to mark the current patch as a template that is loaded when loading the default preset from the Preset Browser
- **Reset Default Preset.** Allows you to set the factory default settings as a default template
- **Unlock All Parameters.** Unlocks all parameters that might be locked via parameter's context menu
- **Load MidiCC map.** Loads a previously stored MIDI Map from the disk
- **Save MidiCC map.** Saves the current MIDI Map to the disk
- **Reset MidiCC map.** Loads an empty default MIDI Map
- **Copy/Paste Layer/Modulator.** Use the command to copy/paste state of the Layer Effects modules or the Modulator
- **Enable Preset Switching with Keyboard.** If enabled allows to switch through the available presets with keyboard Up (Right) or Down (Left) keys
- **Multi-Core Layers Processing.** Enables parallel computation in order to reduce CPU usage
- **Show FPS / Show Version.** Displays Frames Per Seconds counter and version information on GUI
- **GUI Size.** Tantra GUI is designed to provide multiple sizes optimal for different screen resolutions. Try different GUI modes to find the one, which better fits you screen

The **Preset Browser** allows to manage presets available for use in Tantra and includes the following elements:

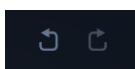


- The text area displays the current preset name. Click on the text area to select a patch from a popup menu, which displays all presets available for use as well as commands that allow to save/load/reset/reveal presets
- Two navigation arrows can be used to step through the patches in the forward or backward direction

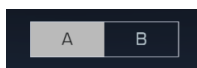
Use the **Playback Speed** control to slow down or speed up tempo of sounds produced by Tantra:



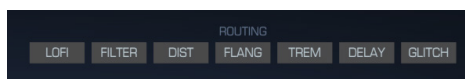
The **Undo** and **Redo** buttons allows you to roll backwards or forwards any changes you made while adjusting any parameter of Tantra. Note please, that even preset changes and randomization results support undo/redo.



Use the **Layer Selector** to switch between effect layer A and B. To learn more about layer effects check the appropriate topic in this manual.



You can adjust processing order of the effects within a layer with the **Routing** control. Click the module, hold the mouse button and drag in horizontal direction to define the position of the module in the processing order:



Refer please to the The Layer Effects Section in this manual to find more information on the effects. For explanation of the Tremolo “**TREM**” module check please the Modulator settings topic.

Click the **Randomize** button to randomly change parameters and modulations of all effects of the currently selected layer. Right-click on the button to reset the selected layer to it's default state.

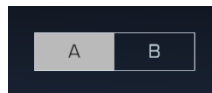


The Layer Effects Section

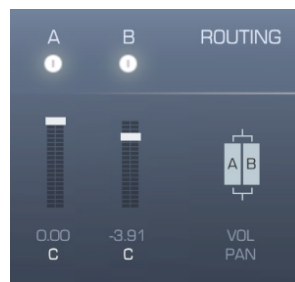


The Layer Effects section is the main audio processing part, which process audio and in response to the applied modulations form rhythmic pulsations in your sounds.

Tantra provides 2 groups of 6 high quality processing effects. The groups are called Layer A and B. You can switch between Layers by using the **Layer selector**, located in the Top Bar section:



The Master Section contains several layer controls:



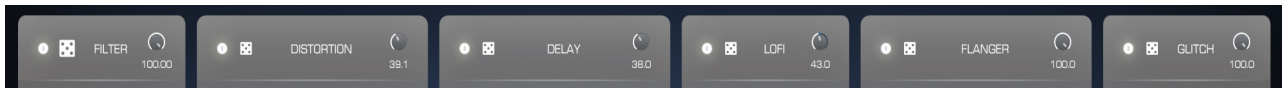
Layer A and B are organized as two independent stereo channels. Each layer has output **Level**, **Pan** and **Bypass** controls, that allow you to adjust position and volume of layers in the output mix.

With the **Routing** switch you can choose one of two available processing modes:

- Serial configuration, where the output of Layer A is connected to the input of Layer B
- Parallel configuration, when you would like to process input audio by two independent channels and mix their output

Please note, in Serial mode, the output of Layer A is additionally sent to the output of the section. In Serial mode Level A and Pan A control the amount and position in the mix of the output of Layer A that is sent to the section output. If the power switch of the Layer A is turned off then Layer A still provides the input signal for the Layer B, but the output of Layer A is not sent to the section output.

Common elements



Each layer effect has a header area, which contains several common elements. With the **Mix** control you can adjust balance between Wet and Dry signals in the output of the effect module, while the **Bypass** switch allows you to turn the effect on or off.

Click the **Randomize** to randomly change parameters and modulations assigned to the effect. Right-click on the Randomizer button to reset the effect and modulations to the default state.

Filter

Tantra provides a high-quality, analog-modelled multi-mode filter section with basic and advanced types of filters



There are 3 serially connected filters available for processing. The Multi-mode filter allows you to choose one of the 18 modes with the **Filter Type** control:

- **Clean / Dark LP/BP/HP.** New filter models in version 2.x, Analog-modelled, zero delay feedback filter with 12 and 42 dB slope
- **Legacy LP/BP/HP 12 and 24 dB.** Filter models from Tantra version 1.x. Analog-modelled filters, with high-quality internal saturation stage and 12 or 24 dB slope
- **Phaser 4p and 8P.** 4 and 8 pole phase filter. The filter passes all frequencies through the output, but alters their phases. The filter can be used for designing phasing effects
- **RingMod.** Ring modulator, multiplies the input together with a sine wave. Useful for creating metallic sounds as well as weird or unusual tones
- **PitchShift.** Frequency shifter, which allows you to alter the pitch of the incoming signal. Useful for making pitch-slide effects
- **OctaveBand.** Bandpass filter with an one octave passband width. Useful for making voice and robotic kind of sounds
- **Vowel.** Special filter type intended for producing vocoder-like effects. The filter emphasizes frequencies around the points, called formants

The **Cutoff** and **Resonance** controls allows you to adjust the filter's frequency and resonance respectively. The output of the Multi-mode filter is processed by a serial chain of additional **Low Cut** and **Hi Cut** additional filters. These two filters can be used for designing creative open-close kind of effects independent of the main filter.

Distortion

The module offers a high quality multi-stage circuit-modelled distortion



The **Drive** knob controls the amount of amplification of the incoming signal before it enters the distortion stages.

Before transforming audio at the main distortion stage it is preprocessed in a special **Fuzz** stage, which provides a model of a classic analog fuzz pedal. With the Fuzz control you can adjust the amount of pre-distortion, which results in altering the high frequency contents.

After the Fuzz section signal enters the main distortion stage. The **Dist Type** selector allows you to choose one of four different distortion simulation modes, which used for processing in the main stage.

You can use the **Mono** knob to narrow the output stereo image. When the knob is turned fully to the right the output signal has identical left and right channels.

The output of the distortion stage is processed by the **Tone** section, which actually consist of a specialized filter chain intended for the simulation of tonal changes inside analog comb amplifiers Use the Tone control to alter the color of the output sound.

Finally, the **Output** control allows to adjust the output volume of the signal.

Delay

The Delay is the most commonly used effect for adding dimension into sounds. Producing rhythmic decaying echoes is another major utility of the module



With the **Speed L** and **R** control you can adjust the delay time for the left and right channel respectively.

The **Sync** switch defines whether the delay time calibrated in tempo-synced intervals (ON) or in milliseconds (OFF).

The **Ping-Pong** switch activates/deactivates special connectors in the internal circuit in order to achieve a classic ping-pong delay effect.

A part of the output signal is sent back to the input of the Delay effect. The **Feedback** knob controls the amount of the output that is sent back. The **LP** and **BP** controls allow to adjust the cutoff frequency of the Lowpass filter and the amount of Bandpass processing applied to the feedback signal respectively. Bandpass processing is useful for creating more natural echo effects.

Use the **IN** button to determine whether the input signal should be sent to the delay's input. Can be useful to bypass the delay effect while preserving decaying echoes at the output.

Lo-Fi

The most common use of the Lo-Fi effect is to destruct the incoming audio signal. Sounds processed by the Lo-Fi effect get a harsh, digital and dirty character



The **Bit** knob allows you to control the amount of sound degradation by reducing the bit depth of the signal.

The Lo-Fi module also includes a decimator stage, which destroys your sounds by resampling the signal at a lower sampling rate. With the **Rate** control you can adjust the decimation factor.

You can use the **Noise** knob to adjust the amount of an additional digital noise that is mixed with the output signal.

And finally you the **Tone** control allows you to change the color of the output sound. Algorithms behind the Tone control simulate the spectral loss in the telephone lines.

Flanger

The Flanger is a common classic effect produced by mixing the input signal and some number of its delayed copies. The Flanger widens your sounds and colorizes them



The effect can operate in Flanger and Phaser mode. Use the **Flanger** control to switch between the modes.

Use the **Delay** control to adjust the delay time between the input signal and its delayed copies. In the Phaser mode, the Delay controls center frequency.

The **Feedback** knob allows you to define the amount of output signal that is sent back to the input. The **Width** knob defines the width of the produced stereo image.

The **Tone** knob can be used to colorize the output signal by engaging internal filters in the feedback loop.

The **Speed** and **Sync** controls adjust the speed of an internal LFO that is used to modulate the delay time, while the **Depth** knob defines the modulation depth.

Glitch

Glitch is the most creative and unpredictable effect in Tantra. With the Glitch module you can create modern kinds of effects known as «Stutter» or «Buffer effects»



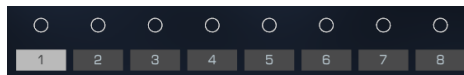
The principle behind the Glitch effect can be described as replaying short sections of the incoming audio. The length of the section is defined by the **Buffer Size** parameter. The value of the **Scale** parameter determines how many times the recorded section will be repeated. The recorded section can be reversed by activating the **Reverse** switch. Smoothing window can be applied to the section in order to make the sound less harsh when the **Smooth** switch is turned on. With the **Stretch** control you can slow down the playback rate of the sections.

The Glitch module can record buffer sections only once and then play them back infinitely, which sounds like sound freezing. The Glitch works that way in Freeze mode of the **Mode Selector**. On the other hand, in Run mode the Glitch module re-records the buffer each time all sections have been played back. In that case you can achieve dynamic or «running» stutter effects.

The Modulator section

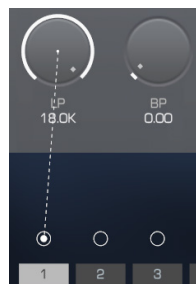


The Modulator section is the heart of Tantra. Modulators generate modulation signals that define the rhythmic pattern applied to the output sound. Tantra provides 8 Modulators, which generate complex 32-step envelopes with adjustable shape and different operating modes. The Modulators presented in the GUI as 8 tabs in the Modulator section. Use the tab switch to access the settings of each of the 8 Modulators:



Drag and Drop

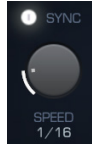
Tantra offers an easy way to assign and edit modulations. Hold the mouse button down on a switch with a circle icon and drag onto any desired parameter to assign a modulation:



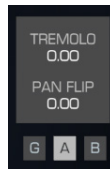
Modulator settings

All of the 8 Modulators have the same settings.

Use the **Speed** control to define the actual time period for each of the 32 steps used for envelope generation. The value field below the Speed knob provides a popup menu which can be useful for quick selection of a setting. The **Sync** switch defines whether the generated envelopes are temposynced (ON) or free-running (OFF).



Each Modulator has two built-in modules, Tremolo and Pan Flip. The Tremolo modulates the output volume by the generated envelope, while the Pan Flip modulates the output panning. These modules can be used for creating tremolo/trance-gate and auto-panning effects respectively. The **Tremolo** and **Pan Flip** controls define the amount of modulation applied. Modulations from different modulators are summed. This allows you to create complex tremolo and pan flip effects. There also is a Tremolo and Pan Flip **Destination** control:



The control requires some additional explanations. As you will see in the Layer Effects section, each layer provides serial chain of 6 effects, which process the incoming audio. The Tremolo and Pan Flip modules can be treated as a 7th layer effect, which can be inserted into different positions of the processing path depending on the Destination control setting. When «**G**» («Global») setting is selected, the Tremolo and Pan Flip modules are inserted at the output of the Layer Mixer, after summing the audio output of both layers. The «**G**» setting is useful to process the output of both layers with the same Tremolo and Pan Flip. In this mode, the position of the “**TREM**” module of the Routing control located in the Top Bar section does not affect the processing path order.

The Tremolo and Pan Flip modules can be inserted into the serial chain of the Layer as well. You can use «**A**» and «**B**» setting to insert the modules into the Layer A and B respectively. In both cases, the position of the “**TREM**” module of the Routing control defines the actual position of the modules in the serial processing chain of each layer.

Thus the actual number of the modules in the serial chains of the Layer A and B depends on the value of the Destination control. The serial chains contain the additional Tremolo and Pan Flip modules when «**A**» or «**B**» setting is selected. However the Tremolo and Pan Flip modules are removed from the serial chains when «**G**» mode is active.

There is the **Preset Browser** control, which allows you to manage predefined and custom presets for the Modulator and provides the same functionality and GUI elements as the Main Preset Browser in the Main Display section:



Next to the Preset Browser there is a **Randomizer** button. Click the Randomizer button to create a random pattern for the selected modulator's mode. Right-click the Randomizer button to reset pattern to its default state.

Modulators in Tantra can operate in two different modes. The **Mode** selector below the modulator allows you to switch between modes:



- **STEPS.** In this mode the modulator produces a series of steps with an adjustable level
- **CURVE.** In this mode the generated modulation signal is a set of variable-slope curves

Curve mode



In **Curve** mode you can define up to 64 nodes, which are connected by curves with adjustable slope. In order to create your custom modulation shape you can:

- Right-click on the editor to add a node
- Left-click on the node, hold the mouse button down and drag to define the node's position
- Right-click on the node to delete it. Note that the first and the last node can't be deleted
- You can delete several nodes with a single click. Right-click on the node, hold the mouse button down and drag over the other nodes you want to delete
- Click on the desired line between two nodes and drag up or down to change the slope. Note that you don't need to click exactly on the curve. To reset the slope and make the line straight double-click on it

In Curve mode you have the following controls available:



The **Smooth** control allows you to control the sharpness of the generated envelope. The more the control is turned to the right the less «clicky» the sound is. You can adjust overall slope of your shape with the **Tension** knob. The **Shuffle** knob controls the swing amount applied. The swing effect is produced by pulling every second step of the curve forward in time.

In Curve mode you can use one of two available edit modes, depending on the state of the **Lock** switch:

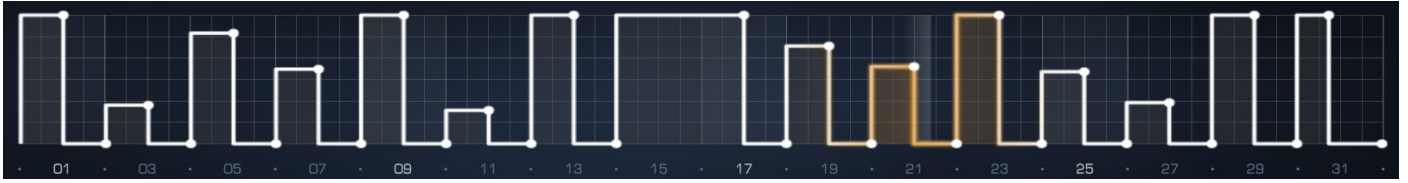
- In **SLIDE** mode, if you change the node's position, then all nodes to the right of the selected one change their positions as well.
- In **LOCK** mode you can move the node only within the distance between neighboring nodes.

You can use three available commands to quickly alter the shape of the modulation curve.



- With the **Invert** button you can flip the shape of your curve
- The two buttons with **Left** and **Right** arrow icons allow to shift the curve left and right respectively

Steps mode



The Steps mode allows you to create modulations composed from series of steps with adjustable levels and width.

- Left-click on the node, hold the mouse button and drag in horizontal direction to define width of the step and in vertical direction to define step's level.
- Right-click on the background between two nodes to reset level of the step
- Left-click on the background and drag the mouse in both directions to consecutively define levels for multiple steps

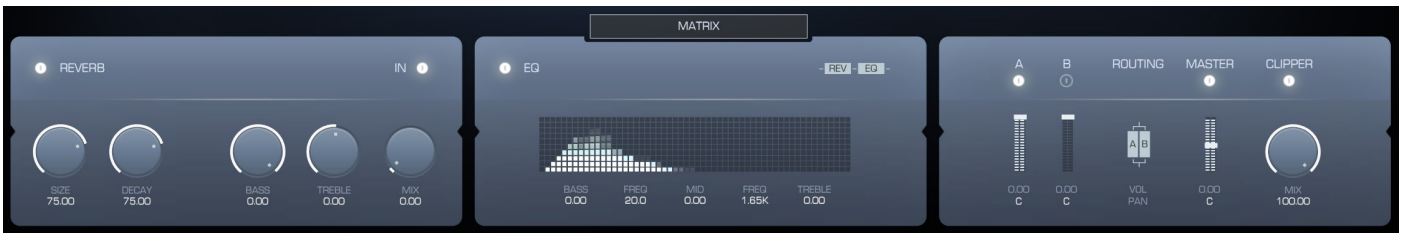
In the Steps mode available controls are a bit different than in the Curve mode:

SMOOTH	GATE	SHUFFLE	STEPS
10.00	100.0	0.00	32

The **Smooth** and **Shuffle** controls work in the same way as in the Curve mode. The **Gate** control allows you to fill each generated step with silence. Width of all steps is shortened by Gate amount, while start position of each step preserved. You can change the number of steps generated between 32 to 2 with the **Steps** control.

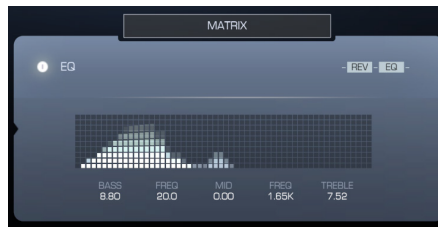
The Master Section

The final processing stage of Tantra is the Master Section. The output signal from the Layer Effects is passed through the Equalizer, Reverb and Master Output in order to form the final output mix.



Equalizer

The three-band Equalizer in the Master Section can be used to adjust the frequencies of the sound, before it hits the output:



Use the **Bass**, **Mid** and **Treble** knobs to control the boost of low, middle and high frequency content respectively. The knobs are bipolar. The boost is zero when the knob is in the center position. The **Freq** controls define the center frequency of the Bass and Mid filters.

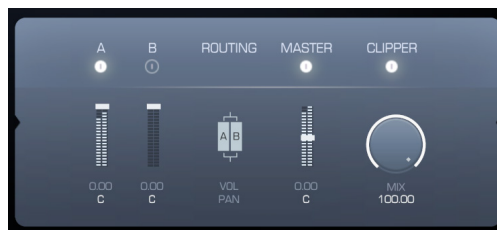
Reverb

The Reverb effect is used to add a dimension to your sounds. Additionally, when sound is processed by trance-gate kind of effects it can lose its depth. In such cases the Reverb is useful to restore the ambient space.



With the **Size** control you can adjust the size of the simulated virtual room. Use the **Decay** to define the feedback amount for the reverb delays. The **Mix** control adjusts the balance between Wet and Dry signal. The **Bass** and **Treble** knobs control the boost amount performed by the low pass and high pass filter inserted into the feedback path. These filters are used to simulate the dampening of high and low frequencies in natural acoustic spaces. Use the **IN** button to determine whether the input signal should be sent to the reverb's input. Can be useful to bypass the effect while preserving decaying space at the output.

Master output



The **Vol** sliders and **Pan** text fields control the level and the stereo position of the output sound respectively. The **Mix** knob adjusts the balance between Wet and Dry signal in the mix. In order to prevent output clipping the Master output provides a clipper. Turn off the **Clipper** if you don't need it. Use the **Master** switch to turn off/on audio processing in Tantra. When Tantra is bypassed the unprocessed sound is heard. **Routing** control has been explained in the The Layer Effects Section.

The Modulation Matrix

There are 24 modulation slots to maintain all modulation assignments in Tantra. You can use the Modulation Matrix page to manage all the assignments. In order to access the Modulation Matrix click the **Matrix** button:



Click the Matrix button again to close the Modulation Matrix page and return to the Master Section.



Each slot in the Matrix is used to define the link between Modulation Source and Modulation Target. Click the **Source** or **Destination** text field to access the menu, where you can select available modulation sources and destinations respectively. Use the **Depth** control to adjust the modulation depth. Click the **Bypass** switch to enable or disable the matrix slot.

At the top left corner of the Matrix there is a **Filter** switch:



If the Filter is activated, the Matrix will show only those modulation slots that are linked to the currently selected modulator only. It can be useful to manage modulations of all parameters controlled by a certain modulator.

Credits

Concept, programming, sound design

Dmitry Sches

Graphic design

Dmitry Sches and VOGER Design

<http://vogerdesign.com>

<https://www.facebook.com/vogerdesign>

Updates, Support and Contact

If you have any questions, need help or want to check for updates please visit our web site at <http://www.dmitryshes.com>

Feel free to use the contact form on the website, we are always happy to support you.