KROTOS

CONCEPT 2

MANUAL

Contents

1. Concept Manual

‘Concept’ is a new software synthesiser from Krotos

Concept takes a fresh approach to modulation for soft synths, and introduces three exciting new modulator sources; XY Capture, Audio Input and Tweak It. These are combined with classic modulation sources such as LFOs and Envelopes to create a new and exciting workflow. The plugin aims to be engaging and quick to produce satisfying results, no matter what you experience of synthesis. Like all Krotos products, it also aims to be a performative audio product, focusing on live performance, shaping and interaction. We have focused on making it clear what is happening in the plugin, so modulation information is not hidden or buried in sub-menus or tabs.

The plugin is a VSTi/AUi/AAX instrument and is supported on the following DAWs:

- Ableton Live
- Logic Pro X
- Pro Tools
- Studio One
- FL Studio
- Nuendo
- Cubase
- Reaper

If you have any issues or questions, please contact support@krotosaudio.com

VST is a registered trademark of Steinberg Media Technologies GmbH

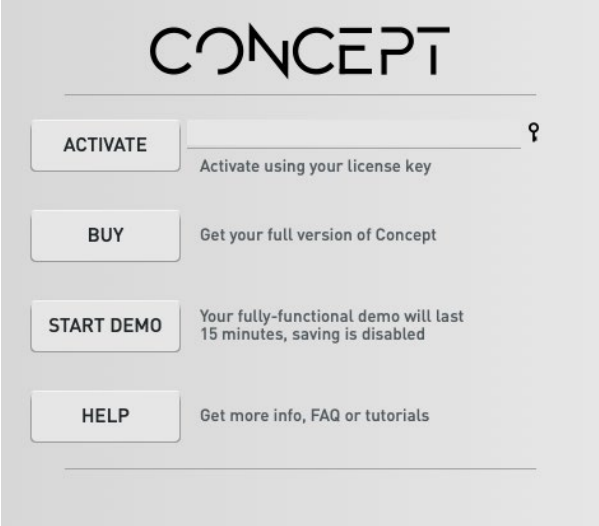
2. Adding the plugin to your session

Once you have run the installer, you should find the plugin in your host's plugin list. The installer will automatically take care of placing the relevant plugins in the correct location. However, you can choose custom locations for VST and VST3 for Windows if you prefer to use a custom plugin folder. Please make sure your DAW is setup to scan for this folder, and you may need to rescan your plugin folder to get started, if Concept does not appear immediately.

The plugin will appear in your plugin list as 'Concept'.

3. Copy Protection

The plugin uses Krotos' own system for copy protection. When you open the plugin for the first time, you will see this screen. From here you can choose how you would like to move forward, either starting a demo, activating using a license key, or getting more information by clicking on 'Help' or 'Buy'.



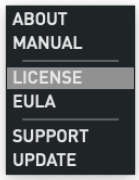
4. Activating the plugin

You only need your license key to activate a full license for the software, which would have been emailed to you when you completed your purchase. Enter this in the space to the right of the 'Activate' button, and then hit this button. There will be a slight pause, then the plugin will be ready to use.

To start a demo, simply choose the 'Start Demo' option from the screen that appears when you open the plugin. This will start your 15 minute, fully-functional demo. During this period, saving is disabled, and after 15 minutes you will no longer be able to generate sound using the plugin. You will see 'Demo' appear in the top bar of the plugin during this 15

minute period. When your demo period is up, you can delete the plugin and add it again to start a new 15 minute period.

If at any time you want to check your license key, or deactivate the plugin, you can do so using the Menu from the top bar of the plugin



To deactivate, click on the 'Deactivate' button in this window. This is helpful if you have run out of activations and need to activate on a new machine. Choose 'Yes' in the confirmation window to confirm the deactivation.

5. Getting Started with Concept

There are many aspects of Concept which will be familiar to users of common software or hardware synths. It also uses many concepts similar to classic subtractive synthesisers, but some others which are new.

The signal flow is as follows:
Oscillator > Filter > FX > Amplitude Envelope > Output

Modulation can be used to affect any parameter at any point in this signal chain, and shaped using Concept modulation system at the centre of the plugin.

To start, simply locate Concept in the plugin list of your DAW and add it to an instrument track. Concept is a VSTi plugin and needs to be placed on an instrument track.

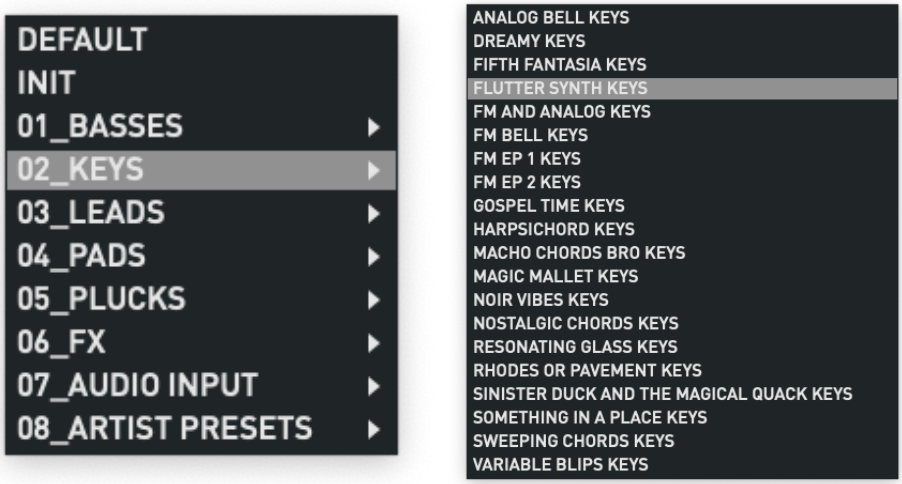
Once the plugin has loaded successfully, use the in-built keyboard to audition a sound, or send in midi using your DAW's timeline or any midi hardware you may have available.

NOTE – Concept does not support midi assign from within the plugin at this stage. To control any parameters within the plugin, you will need to access and assign them using your DAW's midi system. E.g in Live, hit 'Configure' on the plugin in the audio plugins section, and move a control in the Concept UI. This will be exposed to Live's midi and automation system, and can be assigned to any midi controller using CTRL-M (on Windows) and CMD-M on OS X.

6. Presets

To get started, we recommend you choose a preset. Simply click on the preset name at the top of the plugin window (which will display ‘Default’) or select ‘Load’, and choose a preset from the ‘Factory Presets’ sub menu. Use the left and right arrows to scroll through presets, and use ‘Save’ and ‘Save As’ to save presets.

Clicking on the name of a preset will produce a dropdown menu showing the different preset categories in Concept. Hovering over any of these categories (e.g. Basses, Keys etc) will open another slide containing the names of presets. Click any of one these to choose that preset.



7. Dark Mode

Concept includes two ‘modes’ for the main UI; Light Mode (Default) and Dark Mode. This allows the plugin to be used with a white colour scheme or dark colour scheme.

These can be switched using the switch in the top bar of the plugin.

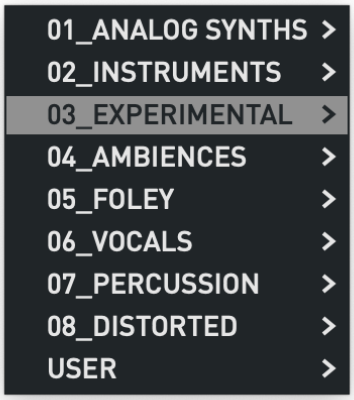
One you have switched to ‘Dark’ mode, your choice will be recalled every time you use the plugin.

8. Oscillators

Concept uses two oscillators to generate a signal. Each oscillator can have a different settings and can be toggled between Granular or classic Oscillator modes using the switch on the left side of the UI. Each oscillator can be muted by using the I/O (on/off) switch on the bottom-left of the oscillator section.

Granular mode uses granular synthesis to produce a signal, taking small sections of an audio file imported into the oscillator and manipulating them in various ways.

When in Granular mode (‘GRN’ on the mode switch), a more complex set of controls will be displayed. A waveform is also displayed in the main oscillator UI. A white indicator is shown over the waveform to show the starting point of any grains generated when a note is pressed.



By default, an audio file will be loaded into the oscillator when you switch to granular mode. Use the dropdown menu to browse the factory collection of sounds (Concept comes pre-loaded with hundreds of samples straight of out the box, in various categories and sub-categories to help inspire your own settings). You can also drag and drop any file from your computer or DAW into this wavefom area to import it into the oscillator (or use the ‘Import’ button). Any of your own files that are imported will be added to the ‘User’ subfolder, accessible from the drop down menu of the oscillator. This makes it easy to navigate through your favourite or recent sounds.
Use the < and > arrows on the drop down menu to browse through any available audio files

When a note is pressed, the oscillator with re-pitch the grains generated from this audio file to match this note, as closely as possible. Since it is not possible to know the root note of any audio imported into the oscillator (and it is also possible to use non-pitched content for creative purposes) you may find that at times the sound produced may not exactly match the note you have played. To help you adjust this, most of the factory files include their root note in the name of the file, displayed in the drop-down menu. This is the pitch of the file when C3 is played into the plugin. You can then use this information to help re-pitch the oscillator if needed, using the detune (in the ‘grains’ tab) and octave controls (in the ‘extras’ tab).

There are 3 tabs of controls for use in Granular mode. Under ‘Grains’, the most common controls for granular synthesis are accessible. ‘**Start**’ defines the start point in the file from which grains are generated. When adjusted, the white indicator point will move over the top of the waveform display. You can also click and drag on the waveform to adjust the start position of the grains.

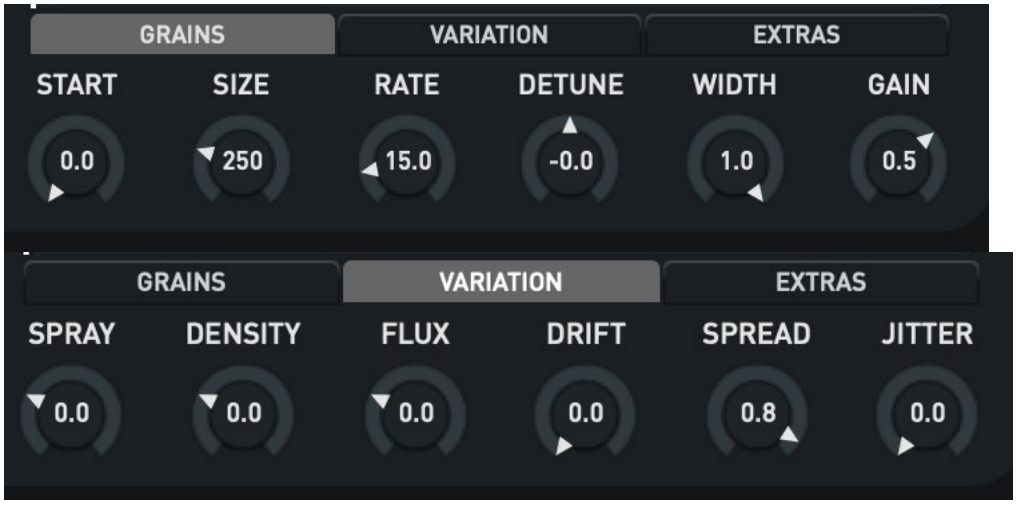
‘**Size**’ sets the size of grains generated. This can range from 1ms to 1000ms (1 second), to produce a large range of results. ‘**Rate**’ controls the rate at which grains are generated when a note is played (in hz). Higher rates will produce more grains, and a denser sound, lower rates will produce fewer grains, and a more fragmented sound. ‘Size’ and ‘Rate’ are often related; if you are looking to get a particular sound, we recommend exploring the relationship between the two.

‘**Detune**’ adjusts the tuning of the oscillator, offsetting it from the incoming note. This is expressed in semitones; -1.5 would be -1.5 semitones from the note currently being played. This can be combined with the ‘Octave’ control to offset the oscillator.

'Width' controls the stereo width of the grains generated. If you are using a stereo file and want to maintain full stereo width, set this to 1.0. You can reduce the width of a stereo file to mono by setting it to 0.

'**Gain**' controls the output level of the oscillator. The larger the grains produced, and the higher the rate of generation, the louder the output of the oscillator will become. You may need to reduce the gain to prevent the plugin from overloading into the red (although that may not be such a bad thing at times!).

More advanced controls can be accessed through the other tabs in the UI. The 'Variation' tab contains controls for adding randomisation to the core controls in the 'Grains' tab. These are positioned to line up with the corresponding controls across tabs



For example, '**Spray**' controls the amount of randomisation of start position per grain, centered around the indicator marker on the waveform display. Higher rates of spray will produce grains starting further away from the main start point (both before and after it). This is very useful for producing more 'realistic' sounding settings, or sounds which vary constantly.

'**Density**' controls the amount of randomisation applied to the size of each grain. '**Flux**' applies randomisation to the rate at which grains are generated. '**Drift**' adds variation to the pitch of each grain, and '**Spread**' sets the amount of panning randomisation per grain. '**Jitter**' controls the amount of randomisation applied to the gain of each grain.

The '**Extras**' tab contains additional controls for shaping the sound of the oscillator. '**Shape**' controls the shape of each grain. At 0, each grain will have a smoother, 'sine-like' shape, and at 1 each grain will have a sharper 'square-like' shape.

Generating many large grains will also have an impact on CPU use. You may find that different presets and settings may start to eat up CPU in your DAW, particularly using two granular oscillators! To Manage this, you can use the '**Grain Max'** parameter to limit and reduce the number of grains produced.

'**Octave**' offsets the pitch of the oscillator by a octave, upwards or downwards by up to 3 octaves. '**Pan**' controls the left/right position of the oscillator (pre-FX). Ticking the **FM toggle** will activate the FM circuit on the oscillator (is an independent sine wave oscillator), which can be set using the **FM Ratio** and **FM Amount** controls.

When in classic Oscillator mode ('OSC' on the mode switch) the two **dropdown menus** can be used to select waveshapes for the oscillator. You can then blend between these shapes for more advanced waveshaping and to create more advanced sounds using the **Blend** control. '**Gain'** will set the level of each oscillator, and '**Freq'** will set the pitch offset (from minus one octave to plus one octave from the incoming pitch). '**Pan'**, '**Octave'** and '**Detune**' behave as in the granular oscillator.

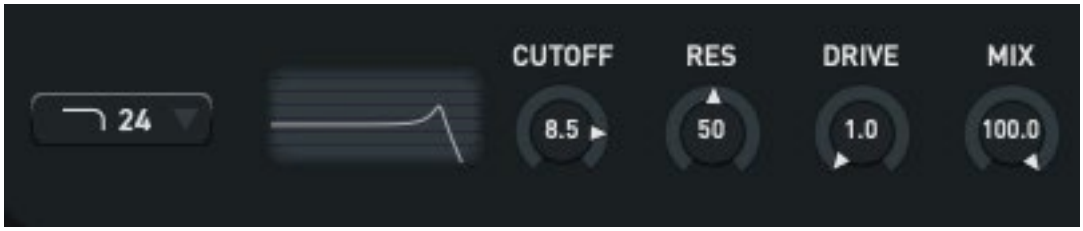
Ticking the **FM toggle** will activate the FM circuit on the oscillator (is an independent sine wave oscillator), which can be set using the **FM Ratio** and **FM Amount** controls.

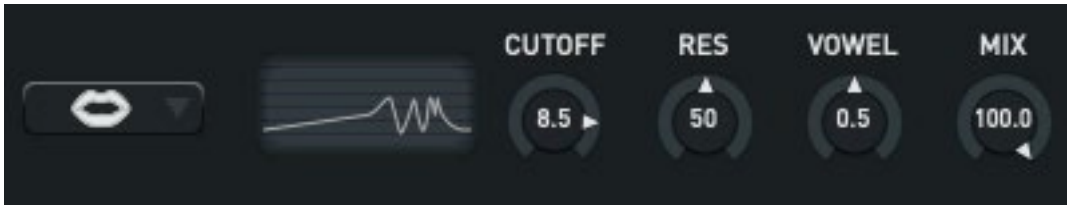
9. Filter

Concept includes a range of filters, to shape the output of the oscillators. You can choose from classic resonant ladder-style high pass, low pass and bandpass filters (available in 12 or 24db versions, offering steeper or more gentle response above or below the cutoff frequency) and a Formant filter (which simulates the human voice with different 'vowel' shapes).

To hear the effect of the filter most clearly, select a harmonically rich source in the oscillator/s (such as a sawtooth or noise) and use the **Cutoff** control to adjust the frequency at which the filter will remove frequencies from the signal. Use the **dropdown** to switch between low-pass and hi-pass filter modes. Use the **Res** control to affect the resonance of the filter. This filter design also includes a pre-filter **Drive** control, which can be used to fatten up the sound, adding more harmonic distortion. This can use used subtly or extremely depending on taste! All the controls can be easily modulated with the mod system to create more advanced and creative results. When using the Formant filter, Drive will not be available, and will be replaced with **Vowel.**

The **filter display** will update as you change the cutoff and resonance settings, allowing you to quickly see the status of the filter. Use the **Mix** control to control the mix of the filtered and original oscillator signal. This can use useful for creative results, or if you are interested in using an alternate, external filter or set of FX.

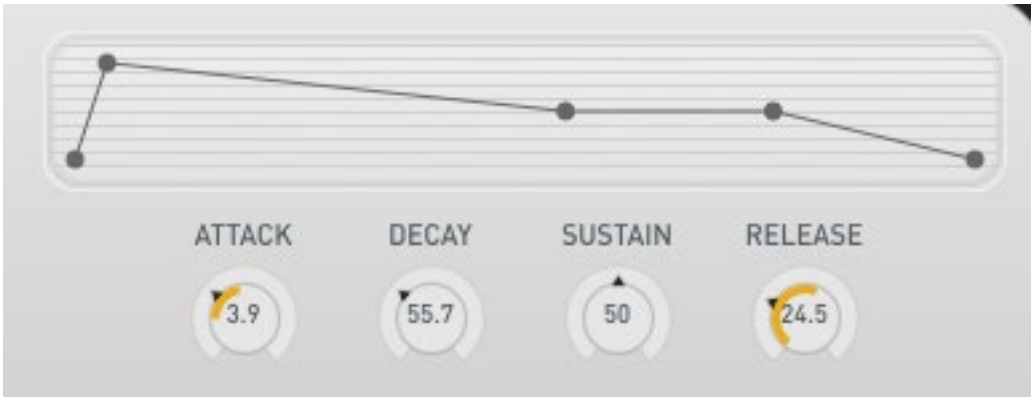




Please note that Concept only has one filter available in the filter section. If you would like to have multiple filters in series (or in parallel, using the blend options made possible by the Mix controls), you can add up to three more filters in the FX section.

10. Amplitude Envelope

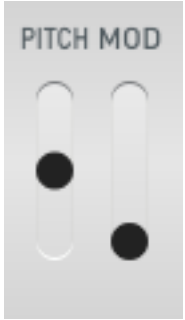
Concept includes a classic ADSR envelope to shape the output of the synth. This can be controlled with the individual dials for Attack, Decay, Sustain and Release. Like most parameters, these can all be assigned to the modulation system for more creative control.



The envelope can be adjusted from the labelled dials underneath the envelope display, and the envelope shape will automatically adjust to display the changes.

11. Master Section

At the bottom-right of the plugin you will find the master section. This contains controls for number of voices (when using polyphony), glide (or 'portamento' time between each new note) and the master gain output.



Pitch and mod wheels can be found on the bottom-left hand side of the plugin. These can be used with or without a MIDI keyboard to subtly bend the pitch of notes, or apply modulation whilst playing the keyboard. Click and drag these sliders to use then. The pitch wheel will jump back to the half-way point as soon as you release it, exactly like a pitch wheel on a hardware keyboard. Some presets will have parameters assigned to the mod wheel by default, some will not. To add

parameters to the mod wheel, see ‘Mod Wheel’ section in the Modulation System below.

NOTE – To type in a value to any of Concept’s controls, for more precise adjustment, ALT-CLICK on any control and then type the value you would like to set the control to

12. MIDI Learn

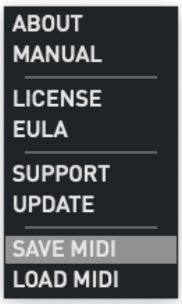
MIDI learn allows you to assign a MIDI CC from a MIDI controller to a parameter inside the plugin. This is ideal for performance or improved workflow, and allows you to use MIDI to control the plugin in DAWs without easy MIDI support.

To assign a parameter, simply right-click on any parameter with a name in the plugin. If MIDI learn is available for this parameter, the right-click menu will appear.

Clicking ‘MIDI Learn’ will ‘Arm’ this parameter and will start the plugin listening for any incoming MIDI CC. Make sure the track in your DAW containing Concept is setup to receive MIDI, and turn a control on your MIDI controller. This should map the control to this parameter in Concept. If you change you mind and want to remap, repeat this procedure.

You can map as many parameters as you like to parameters in Concept.

These MIDI mappings will also be saved across presets and session, so you can explore different sounds and approaches without needing to remap.



If you find yourself using a particular controller or setup regularly, you can store and recall it using the Menu in the top bar of the plugin. Once you have stored a selection of mappings, click on ‘Menu’ and ‘Save MIDI’. If you want to recall this configuration another time, simply select ‘Load MIDI’ from this Menu.

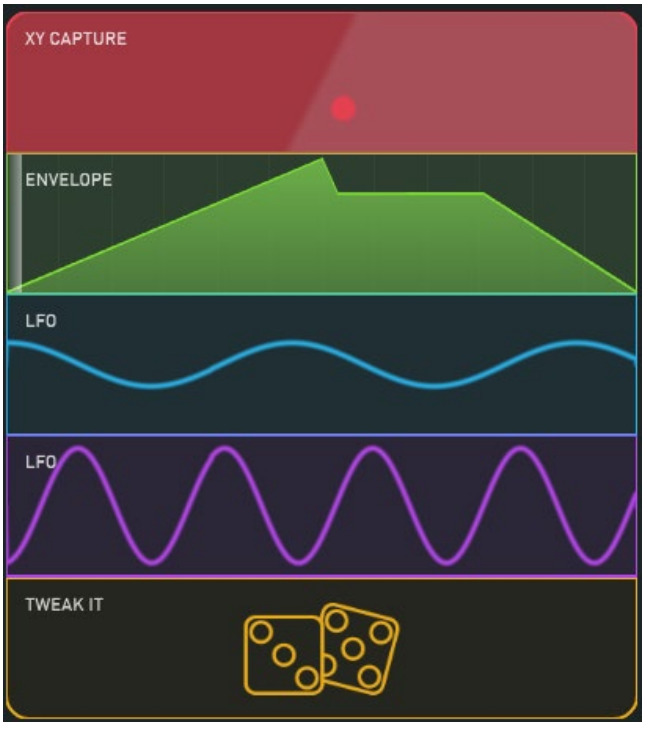
13. Modulation Section

Concept's modulation system is very powerful, but slightly unusual. It is a simplified approach to advanced modulation and also allows for a new approach to performance and creative musical making.

In contains six different types of modulators:

- LFO
- Envelope
- XY Capture
- Tweak It
- Audio Input
- Mod Wheel

In this version, there are four modulator slots, all of which can contain any of the main modulation sources, and Tweak It. When you have accessed a modulator, you can use the dropdown menu to switch between any of these modes. Any parameters that have been assigned to this modulator will stay assigned, even though the modulation source has changed.



By clicking on the different coloured 'headers' of each modulator, you can switch between them. The last modulator you have accessed will remain open, until you click on its 'header', which will return you to the default state, where all modulators are visible.

In 4 of the modulators, you can setup and configure your own modulation system, by choosing from a selection of modulators. Some potential configurations could include:

- 4 LFOs
- 2 LFOs and two envelopes
- 1 audio input, 1 XY capture, 1 LFO, 1 envelope

NOTE - Only one instance of Tweak It can be used in Concept.

13.1. Getting started with Modulation

Simply hover above the name of any parameter in the Concept UI (e.g Filter Drive). The cursor will change from an arrow to show a 'grab hand', indicating you can interact with this parameter in a different way. Simply click and drag this label to one of the coloured the modulation area in the center of the plugin. This will automatically assign this parameter to this modulator and display it in the list area of the modulator. In the main UI, this parameter will now display a triangular 'modulation handle' around the control with the colour of the modulator you have added it to:

A default modulation range will be added to any parameter you want to modulate. Any modulation will be applied within this range. To adjust this range, grab the modulation handle and drag upwards to increase the amount, and downwards to decrease it. If you drag the range past the center point of the modulation, the range will 'crossover' and **invert** the direction of the modulation. This is particularly helpful when using uni-polar modulators such as envelope or audio input.

NOTE – This range can be adjusted from the UI, saved in presets and recalled, but it cannot be automated from your DAW.

Each parameter will be listed in the **modulation parameter** list in the modulator. Each added parameter will have an 'X' appear to remove the parameter from the modulator. An 'amount' slider will also appear on the right, whenever a new parameter is added. This Functions in the same way as the 'modulation handle', when a parameter is added to any modulator. This can be used as a quick method to adjust a range if you are adjusting values for the main modulator.

You can add as many parameters as you like to each modulator. If you find yourself adding a large number of parameters, you may need to scroll down to see certain parameters. Use the scroll wheel on your mouse to move up or down through the list.

All modulation will be centered around the current position of this parameter. E.g. setting the Filter cutoff to 500hz, and selecting an area, assigned to an LFO, will modulate around this positon of 500hz. If the modular is bi-polar (e.g. LFO), the

modulation will then pass the current parameter value in the negative direction.

NOTE – LFO and XY capture are bi-polar modulators, and will modulate above and below the parameter value (e.g. below and above 500hz). Envelope and Audio Input and uni-polar modulators, meaning they will only modulate in one direction, either above from the current parameter value, or below it.

13.2. LFO

This is a classic LFO (Low Frequency Modulator) where a slow moving oscillator is used to generate a frequency, which can be assign to another parameter in Concept. This creates repeating, cyclical modulation of various speeds.

To use the LFO in a modulator, choose ‘LFO’ from the dropdown menu.

Choose an LFO shape from the second dropdown menu. The available shapes are Sine, Triangle, Square, Saw, Reverse Saw and Noise.

Set the Frequency and Amount of the LFO using the frequency and gain controls.

Switch between sync to DAW tempo rate and manual rates using the ‘Sync’ switch.

Use the ‘LFO Mode’ switch to reset the LFO cycle when a new note is triggered (when on) or leave it free to modulate, when off.

13.3. Envelope

This is a classic ADSR envelope which can be used to modulate other parameters. Select ‘ADSR’ from the dropdown menu to select an envelope in a modulator.

This envelope is separate from the main Amplitude Envelope, and can only be used for modulation. The envelope will be triggered by an incoming midi note on trigger. Use the Attack, Decay, Sustain and Release controls to shape the envelope.

13.4. Mod Wheel

The mod wheel modulator allows you to assign any parameter to the mod wheel on your midi keyboard, or from the slider at the bottom-left of the built-in keyboard in the UI. Moving this slider or your mod wheel on your keyboard will immediately affect the parameters assigned. By default, the mod wheel modulator will have a linear response to any input. However, you can draw and edit the curve used for this response, to design more complexes uses of the mod wheel for performance. Click and drag and line in the curve to apply a bend or curve, and double-click to add new points (you can add as many points as you like).

NOTE – You can use multiple modulators to load in a mod wheel modulator! This means you could have multiple separate curves for different sets of parameters, all driven from the same mod wheel input.

13.5. XY Capture

XY Capture is a unique modulation effect exclusive to Concept. Use the dropdown menu to select XY Capture from the list of modulators, and assign a parameter to get started.

This modulator combines an XY pad with a way to ‘capture’ movements or gestures performed with this XY pad, and link the to any parameter in the plugin.

XY Capture allows you to go beyond LFOs, Envelopes or Arpeggiators and intuitively shape the response of any number of parameters, and record very complex, personal and performable movements.

Drag and drop a parameter onto the X area of the XY Capture (e.g. Filter Cutoff) and another to the Y area (e.g. Oscillator Waveshape Blend). Now move the blue ‘puck’ in the XY pad. You will hear the change in these two parameters. Experiment for a few moments, and find a shape or gesture you can perform using the XY pad.

Now click on ‘Capture’, and you will see a new range of parameters become accessible. Choose the duration you would like to record from the dropbox menu.

NOTE – To synchronise the XY Capture modulation to your track, we recommend using options like 1 bar, 2 bars etc. This will ensure the recording and playback of the captured gesture will be locked to that tempo division.

If you are in a mode like ‘ 1 bar’ click on ‘Rec’. This will ‘arm’ the XY Capture, which will start recording when the next bar is reached. Make sure your DAW is playing if you want to capture to a division like 1 bar. When the start of the next bar is reached, recording will start, and the ‘Rec’ button will turn red. Recording will stop automatically after 1 bar has been recorded, and this gesture will be looped.

If you are using ‘Free’ mode, simple click in the XY pad and move to perform your movement, which will automatically start recording at any time. When you release the mouse button, recording will stop, and the gesture will playback, in a loop. You movement will now be recorded, and will start playing back immediately, modulating any parameters which have been assigned. Once your movement has been captured, you can adjust and manipulate it in a number of ways. By default, the movement will play from start to finish, and then repeat from the start, like a loop. By clicking on the ‘direction’ options, you can

change the direction in which the movement plays back, either 'up' (like a normal loop, from start to finish), 'down' (from finish to start, in reverse) or 'pingpong' where it will play from start to finish, then back down, in reverse, from end back to start and continue to loop in this manner.

You can also adjust the '**speed'** at which the movement is played back, when in auto playback mode, using the speed controls.

If you have recorded a gesture in free mode, use the large dial to speed up or slow down the captured movement as it plays back. You can also use the buttons to jump to half or double the current speed, or hit 'normal' to reset to the speed the movement was recorded at. By selecting 'manual' you can move through the movement manually, performing it again in a new way.

If you have recorded a gesture in a sync mode (e.g using 1 bar, 2 bars etc), you can use the 'half 'or 'double' buttons to take the same gesture, but play it back at a different speed. This will automatically squeeze your gesture into a synchronised division of the original capture division. For example, if you had captured a gesture using 1 bar, hitting 'half' will make that gesture last ½ a bar. Hitting 'normal' will return it to 1 bar's duration, while maintaining sync with the tempo. Hitting 'double' will play back the same gesture over 2 bars. You can always half or double a gesture's duration once you have captured it.

<u>This is a very flexible and unique way of capturing intuitive modulation shapes, and manipulating them on the fly to get new and exciting results.</u>

NOTE – If you are changing a synchronised gesture's duration when the DAW is playing, you may have to wait until the next bar for the change in duration to take effect.

If you have recorded a gesture in free mode, the 'range' slider under the XY Pad allows you to select a section of the movement to play back. You can use this control to select either the whole movement, or a section of it, by setting the start and end points, using the range slider's two points.

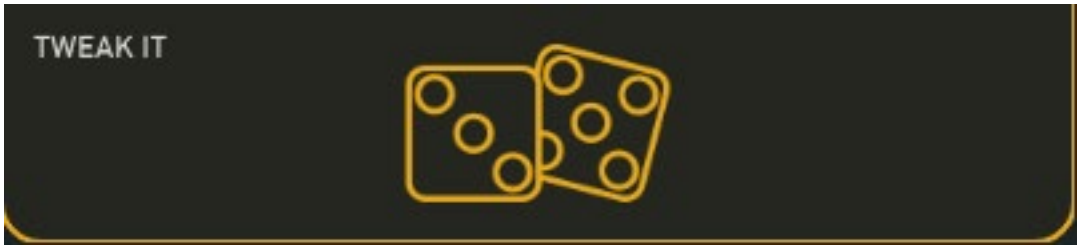
NOTE – If you have recorded a gesture in sync mode, adjusting the range is currently not available.

All the approaches are similar to automation in your DAW, only more flexible, as you can adjust the direction, speed and section of the movement you have recorded, and use this movement to affect any parameter in the plugin. If you were to record this movement to an automation lane, you would not have this flexibility.

For example, you could use the same movement to affect the rapid modulation of a lead part, and then slow or change its' range or direction to transform a pad!

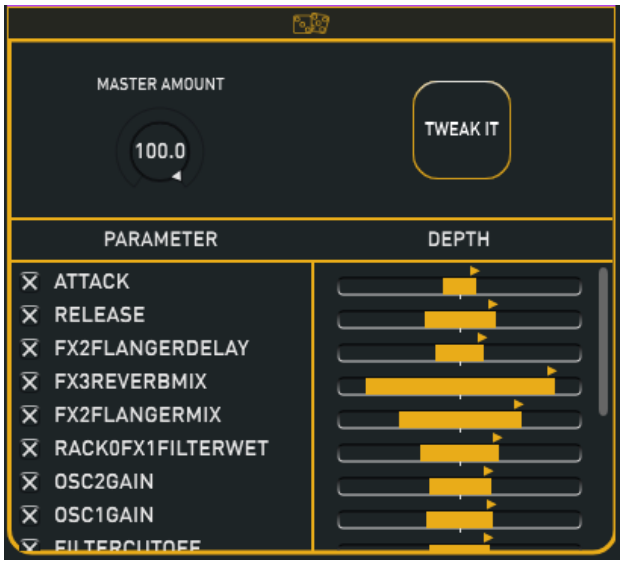
13.6. Tweak It

Tweak It is a 'controlled randomisation system' for Concept. This allows you to add variation to your settings within certain ranges, for certain parameters. Rather than completely randomise a patch, you can choose to randomise parts of it, by certain amounts, to throw in some surprises or shake up a preset or patch you already like. All Concept Factory Presets are set up to use Tweak It by default. You can use this system to create quick variations of Factory Presets to produce something more personal or different, or use it to spice up any of your own designs, or as a way to finding new inspiration.



To get started, select 'Tweak It' in the tab at the top of the modulation system. Drag and drop a parameter to the drop area. To create a tweak, simply click on the dice icon. This will shift the assigned parameters to new positions, within the range chosen for that parameter (or set of parameters) inside the Tweak It modulator.

To adjust the settings for parameters assigned to Tweak It, click on to either side of the dice icon. This will open up the main interface. Here you can see all the parameters assigned to the system, and their ranges. For each parameter assigned, you can adjust the range. This means that with one click, you can automatically create controlled variation for each parameter, in a slightly different way.



The 'Master Amount %' is a master controller for the whole system. By using this, you can reduce or increase the overall change applied to all parameters assigned to the Tweak It system, without having to adjust the individual ranges. This allows you to quickly change the response of the system from a single control, and individual parameter ranges are taken into account within this % range.

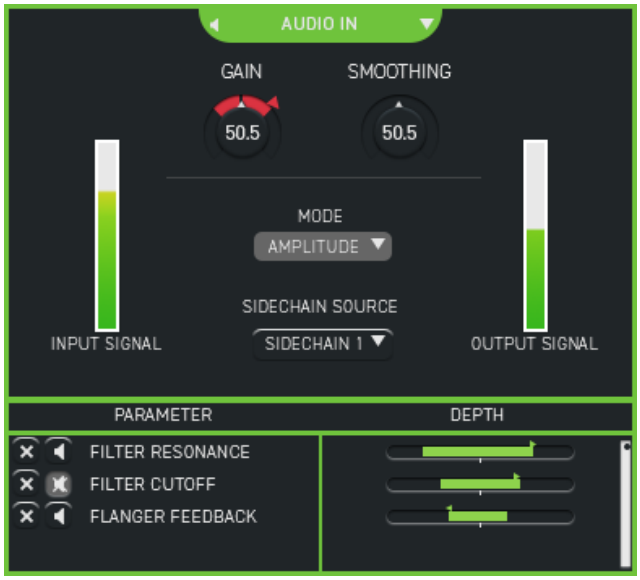
Once you are happy with the parameters and ranges set in the Tweak It, press the '**Trigger**' button to create some variation.

NOTE – Tweak It will not break any other modulation, but plays well together, because it only adjusts the value of a parameter, not its modulation range. Because modulation in

Concept occurs around a central parameter value, changing this value allows other modulation to continue unaffected.

13.7. Audio Input

Concept allows you to feed multiple audio signals into the plugin, and use these as modulation sources. You can choose between amplitude or pitch analysis, and assign this to any parameter to modulate it.



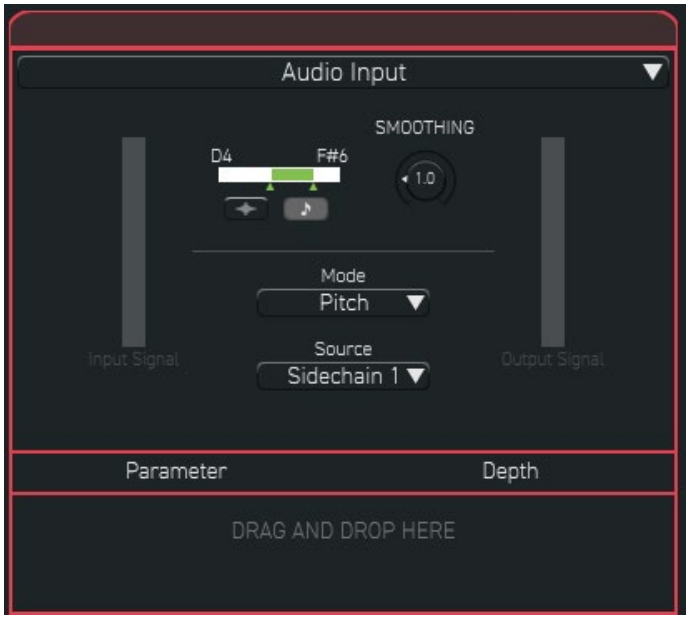
To get started, choose 'Audio Input' from the dropdown menu in any of the modulators. Add a parameter to the audio input by dragging and dropping it into the drop area. Now connect an source track from your DAW into the Concept plugin.

If you just want to send one audio signal into the plugin, for use in one audio input, use the setup explained below.

In Ableton Live, open the sidechain menu by clicking on the 'down arrow' button in the top of the plugin window in Live's bottom panel. Now select the track which you would like to use as the audio source from the dropdown menu. Make sure you have audio on this track, or you have armed the live mic input. Set the gain and mix values as you like, and play some audio on this track. In Concept, set the 'Source' to Sidechain 1. You should now see the meters displaying signal in the Audio Input, and the assigned parameter should now modulate based on the amplitude (or volume) of the incoming audio signal. For example, if you feed a beat into the audio input, and assign to the Filter Cutoff, you should hear the 'shape' and rhythm of this beat applied to the filter cutoff frequency.

You can adjust the 'pre-gain' of this signal, and the 'smoothing' inside of Concept's audio input. This will allow you to smooth or adjust the level of the incoming signal before it is analysed.

The meter on the left will show the level of the incoming audio signal, which is helpful to check that audio has been set up correctly. The meter on the right will show the level of the signal sent to any parameters assigned to this modulator, after pre-gain and smoothing have been applied.

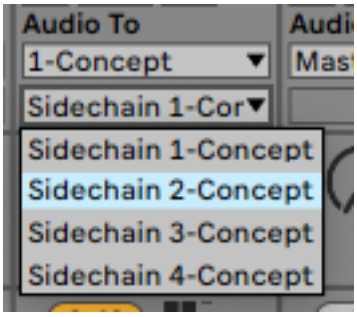


You can also change the 'mode' of the Audio Input by using the dropdown menu on the left. It will display 'Amplitude' by default, but can also be changed to 'Pitch'. This will follow the pitch of the incoming audio and apply it to any parameter assigned to this modulator. Use this mode to track the pitch of any incoming audio (e.g a bassline, lead or vocal part) and use it to modulate any other parameter. You can set a range for the modulation using the pitch range slider. We recommend you set this to the range of pitches you are using. E.g if your bassline is C4, B4, B7, set the range to C4 > B7. You may find that adjusting these ranges to a slightly larger range will give better results, and we recommend experimenting with these ranges! You can also switch the pitch range display from Frequency to Notes, which may be more useful for some material rather than others.

You can use the 'Source' menu to select difference sources to feed into the Audio Input modulator. This is useful if you are feeding multiple tracks of audio from your DAW into Concept, which the plugin allows you to do.

Using this technique, you can easily use your kick, snare or hats to modulate different elements of your basses or leads.

To route a different audio signal for your DAW to another instance of the audio input, follow the instructions below.



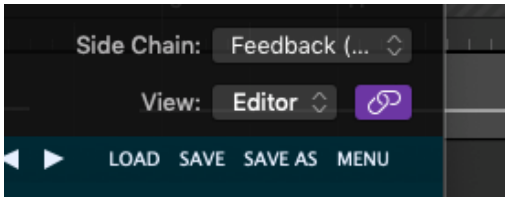
In Ableton Live, add audio to another track. In the routing options, under 'Audio To' select 'Concept' from the dropdown, rather than 'Master' or 'Group'. In the second dropdown, select 'Sidechain 1-Concept'. In a second modulator, add Concept's Audio Input, and using the second dropdown, on the right, select 'Sidechain 2'. Your audio should now be be sent into this instance of the audio input, and you will be able to use two different audio signals, being sent form your DAW to two different modulators in the plugin.

NOTE – Depending on your DAW, the setup and function of this feature will be different or limited. See below for more details.

NOTE – Although you can feed audio into Concept, this is only used as a modulation source, and cannot be used as a traditional audio input, or fed into the filter or FX at this time.

In Logic Pro X, add audio to another track. In Concept, activate the sidechain in the top-right hand corner of the plugin, and select the name of the track you wish to control the audio input modulator, and click the 'chain' icon, which will change to a purple colour (see below).

Add an Audio Input modulator in Concept, and select 'Sidechain 1' in the dropdown on the right of the modulator. You should now see signal coming into the modulator.



If you do not see the 'chain' icon in your plugin window, you will need to activate it using Logic's preferences. To do this, go to preferences > advanced tools > and check 'show advanced tools'.

NOTE – Due to limitations in Logic's sidechain system, you can only route a signal sidechain track to a VSTi. In Logic you can only use one audio input modulator in one instance of Concept.

In Reaper, add audio to another track. Click and drag the 'route' button in the audio track to the track containing Concept.

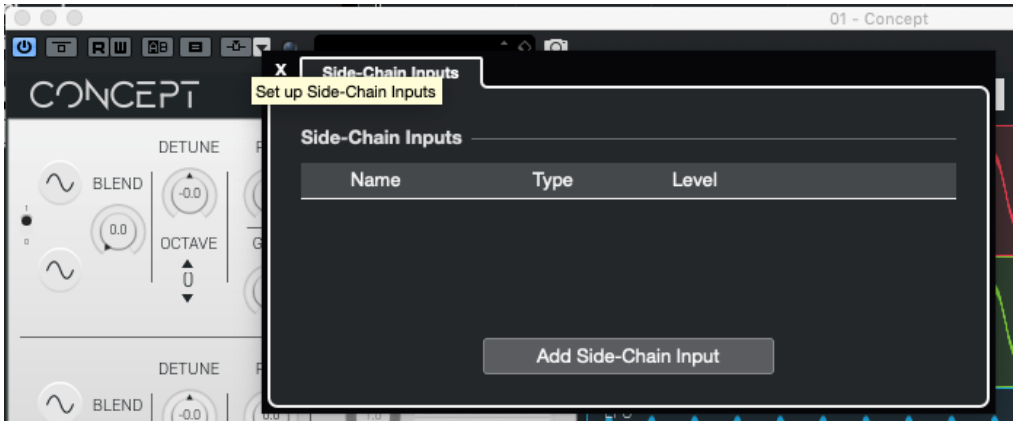
Set the audio channels to ¾ for the destination track (As above) and set to 'Pre-FX' (as above). This will also you to send the audio from your track into Concept without you hearing this audio in your session. To test the output, turn down the fader on your audio track, so the audio signal only is sent to Concept, and not to the master. Add an Audio Input modulator in Concept, and select 'Sidechain 1' in the dropdown on the right of the modulator. You should now see signal coming into the modulator.

In Pro Tools, add audio to an audio track. Send the output of this track to a bus 1-2. In the input section of the instrument track containing the Concept plugin, choose the bus you have routed to (it should be set to Bus 1-2)

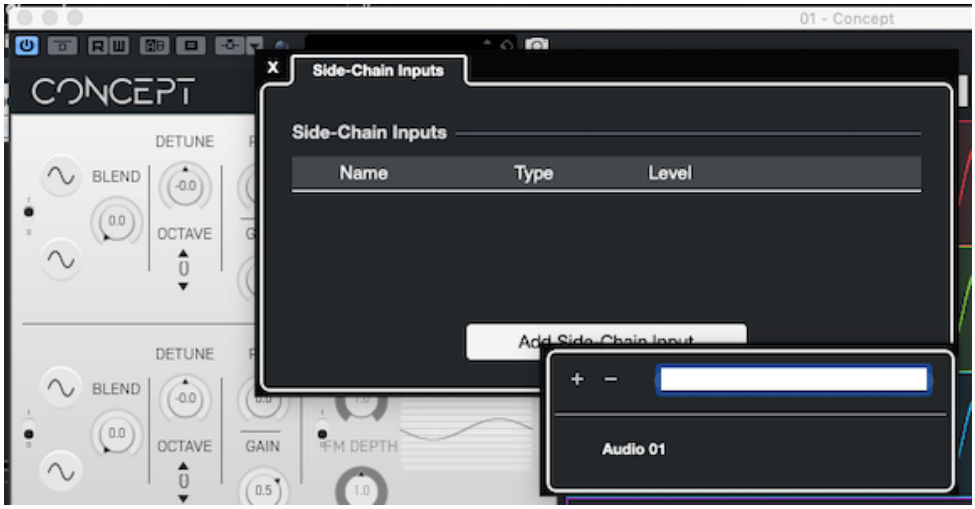
Add an Audio Input modulator in Concept, and select 'Sidechain 1' in the dropdown on the right of the modulator. You should now see signal coming into the modulator.

In Cubase and Nuendo, create an Audio Track and add some audio to use as a modulation source. Create an instrument track with Concept VST (AU plugins in Cubase and Nuendo cannot use this feature).

Click the dropdown next to the side chain button (arrow down). Click Add Side-Chain Input.

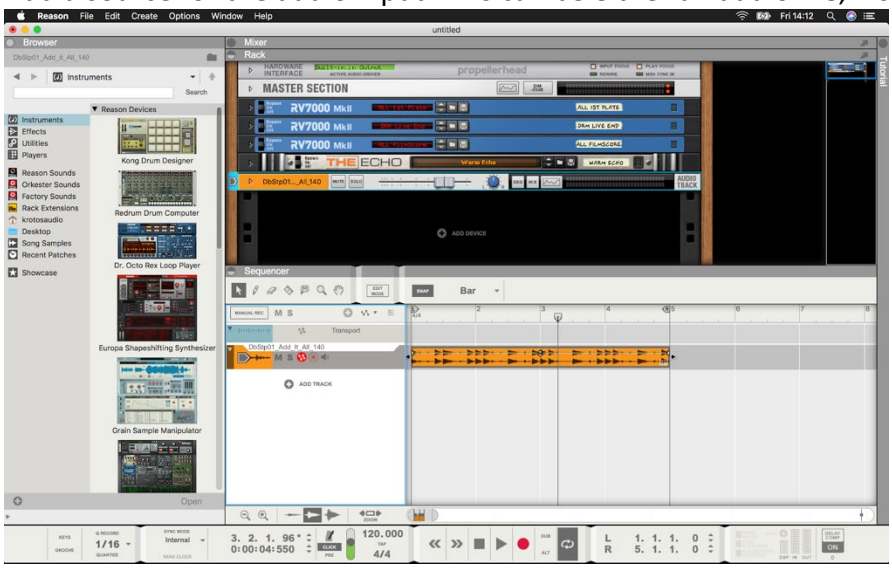


Select Audio Track, then Enable Side-chain by clicking the toggle. Select Sidechain2 in the Audio Input Mod (sidechain 1 will not receive audio by default)

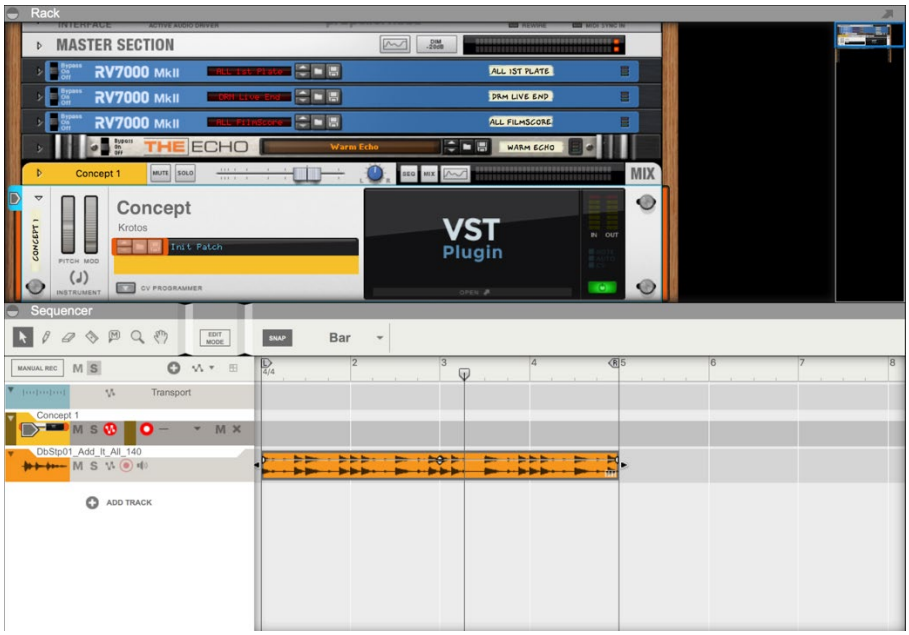


In Reason 10 or above

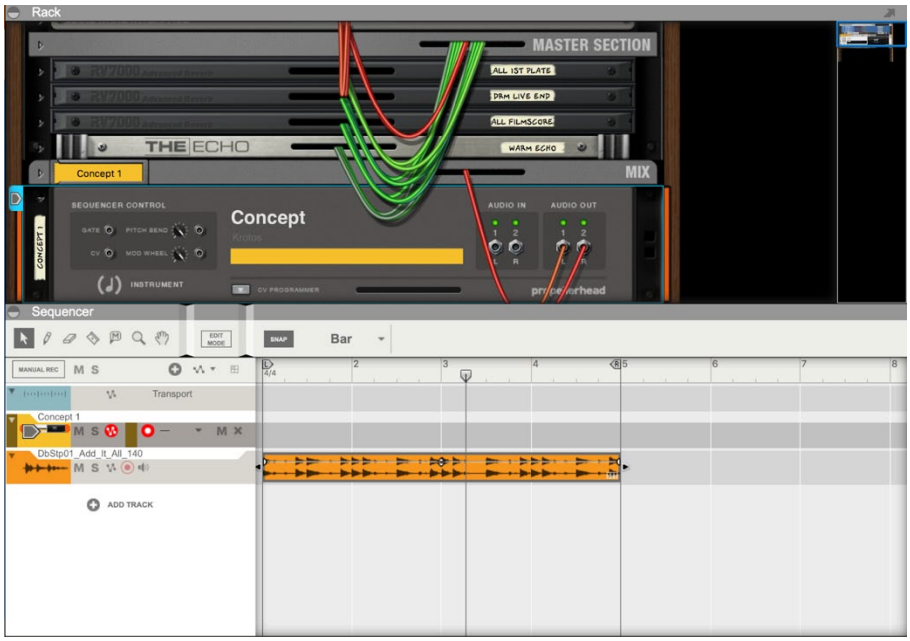
Add a source for the audio input: This can be either an audio file, instrument or live input.



Now add the Concept plugin



Press Tab to access the back of the Rack.



Expand the routing section on the source. Do this by clicking the arrow next to the instrument/track name (on the left)

Click and hold the mouse while hovering above either PARALLEL or DIRECT OUT

This depends on whether you want to keep the original signal or not. Parallel will not affect the track while direct out will route the audio straight to Concept, therefore you will not be able to hear it.

Connect the desired source track to the AUDIO IN L (1)
Concept accepts one mono connection in Reason. Please make sure you've connected the source to the LEFT audio input.

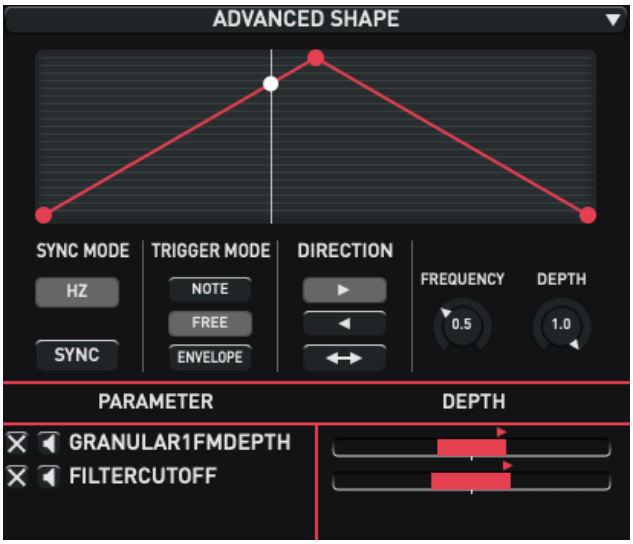
Open up the Concept UI and see if the Audio Input modulation is receiving audio.
Make sure you are using the audio input modulator in the middle section and the playback of the source is on. You should be able to see the animation of the amplitude of the source signal. If you can see it, the audio input is ready to go!

NOTE - This feature is currently not supported in Studio One or FL Studio.

13.8 Advanced Shape

Advanced Shape can be used as a custom LFO generator, or a way to produce more complex envelopes beyond what an ADSR is capable of

To use the Advanced Shape in a modulator, choose ‘Advanced Shape’ from the dropdown menu. The graph will default to a triangular shape, but can be easily adjusted to whatever shape you can think of! Double click to add a point on the graph, or click-drag on a line or curve to adjust its shape.



Set the Frequency and Amount of the Advanced Shape using the frequency and depth controls.

Switch between sync to DAW tempo rate and manual rates using the ‘Sync’ mode controls; either ‘Sync’ or ‘Hz’.

Use the direction controls to control which direction the shape is read; forwards, backwards or loop.

To use Advanced Shape as an envelope, choose ’Envelope’. This will mean that the shape is only triggered when a new midi note is played. The shape will then last as long as the frequency or note values (when in ‘sync’ mode) displayed on the right, e.g. 1/16, or read at 0.5hz etc

14. FX Rack

Concept contains a range of effects which can be applied. To add an effect, pick one from the dropdown menu in any FX slot. This effect will be activated automatically and its contents will be shown in the UI.

To deactivate an effect, click on the ‘power’ button for that slot on the left-hand side of the slot, moving the switch selector from ‘1’ to ‘0’.

Each slot contains a range of effects to choose from:

- EQ
- Saturation
- Compressor
- Limiter
- Flanger/Chorus
- Transient Shaper
- Ring Modulator
- Convolution Reverb

Each of the effects can be added once per FX rack slot. You can add another instances of the same effect to different slots to create more unusual or experimental FX setups. For example, you could add three Flanger/Choruses, one in slot 1, 2 or 3!

To reorder the FX loaded into the FX rack, click and drag the double-headed arrow in the bottom left-hand corner of each rack. Each FX rack can be moved vertically in the rack to reorder, and can be done seamlessly whilst still playing.

Any of these eight effects can be added to the output of Concept by adding them in any of the four available slots. FX are also fully automatable.

Most effects here will be familiar to experienced audio plugin users. If you are new to audio effects, the best way to understand the effects is read the instructions below and then experiment!

Convolution Reverb

Once added, click on the **Load IRs** button to navigate to an impulse response. When selected, this will be loaded into the effect.

You can use the dropdown to select from any of the IRs which are included in this version of the plugin. Some of these simulate spaces, and others are more experimental, producing more unusual effects.

Use the **Mix** control to blend the effect with the dry signal. Use the **Level** control to balance the gain of the effect, once processing has been applied. A **Predelay** can be added with the control, delaying the reverb by a certain amount before processing. The impulse can be manipulated with the **decay** control, which will reduce the late reflections of the signal processed with the impulse response.

Filter

The filter FX provides a second ladder-style filter to be used in the FX rack. This allows you to use up to four filters in series in Concept. The controls here are the same as the main filter.

Limiter

The limiter can be used to stop any signal passing the threshold. It is similar to the compressor, only with a much higher ratio by default, and acting as a ‘brick-wall’. Use the **Thresh** control to set the threshold for the effect to start acting. Set the response of the limiter using the **Attack** and **Release** controls.

Saturation

Saturation excites and distorts the synth signal depending on how hard it is ‘driven’. This emulates the effect found in hardware and tape and can be used to add more depth and character to your sound, or distort it beyond recognition! Use the **Drive** control to set how hard you push the saturation. Lower values will produce subtle effects, increasing the loudness and adding richness to the sound by adding harmonics. Higher values will distort. There are a number of different emulated styles of saturation to choose from the dropdown menu, all with different characteristics and feel. Use the **Mix** control to blend between the clean and saturated signals, and use the **Gain** control to adjust the output level. We’ve also included a **low and high cut** to shape the sound further, removing either low or high frequencies from the saturated output.

Shaper

Shaper is a 'Transient Shaper' processor, which allows you to add another level of dynamics to your designs. You can increase the **Attack** or **Release** of any signal, including anything processed by another effect. Use the **Gain** to control the output level from the shaper, after attack and release have been adjusted.

Flanger/Chorus

Concept contains a hybrid Flanger/Chorus. This can achieve classic Flanger effects (very short modulated delays), classic Chorus effects (longer modulated delays, usually used to thicken up a sound and add stereo movement) and anything else in-between. Because you can modulate any parameter without clicks, you can produce interesting and retro-style sounds quickly and easily. The dropdown menu allows you to choose how the pitch of each voice will vary over time. The shapes are the sine, triangle, square, saw and reverse saw. Use the **Depth** control to adjust the pitch variation of each voice from the input pitch. The **Rate** (in Herz) can be set the frequency at which the pitch of each voice oscillates. **Delay time** (in ms) sets the time the delays will be spread over. Set it to lower values for a flanger-style effect, and medium to high values for chorus-style effects. **Feedback** changes the amount of resonance added into the effect. The **Mix** controls can be used to blend between the clean input and processed signal. The **Voices** control adds or removes voices from the effect, producing a tighter sound on lower values, and a wider, richer sound on higher values.

NOTE - Remember you can add up to 3 instances of any effect in Concept, so if you'd like to use 3 Flangers in series for some serious whacky results, you can!

Ring Modulator

This is a classic ring modulator, that multiplies the incoming signal with an internal oscillator. An excellent option for robotic sounds or spicing up an audio signal.
You can use the '**Depth**' dial to set the amount of modulation to the incoming signal.
Use the '**Rate**' dial to set the frequency of the oscillator. The **LFO** is hard-wired to modulate the '**Rate**' or frequency of the oscillator. **LFO Rate** controls the speed of the LFO (from 0.01 hz to 100 hz). This can be used for very subtle, gradual changes to intense amplitude modulation effects. **Amount** controls the amount of the LFO applied to the oscillator rate/frequency. Choose a low value for a subtle modulation, and increase the amount for wilder, crazier results.

Delay

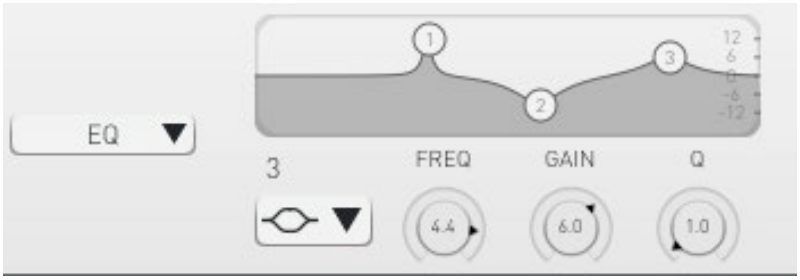
Concept's Delay allows you to add a classic delay effect to the FX rack, repeating any signal which passes through it over a certain time, with an amount of feedback, controlling the quantity of any repeating signal. Set this feedback level using the **Feedback** control, and use the **Mix** control to blend between the clean and delayed signals. Use the **Sync** button to select the mode of the delay; either Free, using delay times in milliseconds, or Sync, using delay times based on divisions of the host DAW's tempo (e.g. 1 bar , 1/4, 1/16 etc). The **Time Left** and **Time Right** controls which switch their values depending on which mode has been selected. Use the **Link** button to set the same delay time for both left and right channels.

Compressor

The compressor is a classic, peak-detection system design to control the dynamics of audio signals. You can use this to stop your synth designs from becoming too loud if they cross a certain threshold, by a certain ratio. Use the **Attack** and **Release** controls to change how fast the compressor reacts to audio signals which cross the **Threshold**. Makeup **Gain** can be applied after the compression has been applied, and a mix of clean, uncompressed signal and compressed signal mixed using the **Dry/Wet** control. The vertical gain reduction meter on the right hand side will show when compression is being applied. The compressor also contains an Autogain circuit, which automatically compensates for the overall reduction in volume which may occur when compressing signals. Use the **Autogain** button to select this mode. We have also included a brick-wall limiter in the compressor, which prevents any signal exceeding 0 db, after compression, if the **Limiter** button is selected.

EQ

This is a parametric EQ, with up to 5 bands. Adding a new band can be done by double-clicking on any area of the EQ, and a band can be removed by right-clicking. Clicking on the number above any band will access the values for that particular band on the panel on the left hand-side of the EQ. Here you will see the values for **Frequency**, **Gain** and **Q** of that particular band. If you are modulating an EQ band, we recommend muting the modulation for this parameter from either the central modulation system panel, or from the right-click menu, so you can select the EQ band. Selecting an EQ band whilst it is modulating may be difficult unless it is moving very slowly.



Moving values in the bottom panel will be reflected in the display, and vice-versa. The type of filter for each band can be changed using the dropdown menu underneath the display. You can select from high and low pass, bandpass, notch and low and high shelf. All parameters are automatable.

15. FAQ

What is Concept?

Concept is a new synthesiser from Krotos, focusing on simplified workflow. It is a VSTi/AUi/AAX instrument and takes a fresh approach to modulation for soft synths, introducing three exciting new modulator sources; XY Capture, Audio Input and Tweak It. These are combined with classic modulation sources such as LFOs and Envelopes to create a new and exciting workflow. The plugin aims to be engaging and quick to produce satisfying results, no matter what you experience of synthesis. Like all Krotos products, it also aims to be a performative audio product, focusing on live performance, shaping and interaction. We have focused on making it clear what is happening in the plugin, so modulation information is not hidden or buried in sub-menus or tabs.

The plugin is and is supported on the following DAWs:

- Ableton Live
- Logic Pro X
- Pro Tools
- Studio One
- FL Studio (Windows Only)
- Nuendo
- Cubase
- Reaper

Can I get a demo?

Yes! Concept can be run as a fully-functional demo for 15 minutes, with no noise or interruptions. After this time the demo will stop, and no audio can be produced by the plugin. Saving presets, or saving your settings in your session is also disabled during the demo. Simply remove and add the plugin to your track again to restart this period. You can keep the demo on your computer for as long as you like, to get using the plugin. It will not expire after 10 days, like some other Krotos plugins.

Do I need an iLok?

No! Concept is the first plugin from Krotos to use our own copy protection system. You simply activate the license from within the plugin using your license key, and can even deactivate your license and pick it up on a different machine.

You do not need an iLok account, or a physical iLok dongle to use the plugin.

Can I put my license on my iLok?

No. Because Concept does not use iLok for copy protection, you cannot use an iLok to store or transport your license.

What kind of sounds can I make with Concept?

Pretty much anything you can imagine! Concept includes hundreds of factory presets to give you an idea of what types of sounds it is capable of, including various Basses, Leads, Pads, Plucks and FX. Although the Concept workflow has been focused and simplified, there is no end to the sonic explorations you can go on using the plugin. Everything of window rattling subs, screaming leads to sound designed SFX for films and games can be created.

What is Tweak it?

Tweak it is Concept's unique customisation system. It allows you to quickly create variations of factory presets, or your own designs, without losing the initial character of the preset. By adding a parameter to the Tweak it system, you allow the parameter to be updated within a certain range every time a Tweak is triggered. You can add any number of parameters, so you could tweak one, or hundreds of parameters inside the plugin on a single Tweak. You can tweak almost everything in the plugin, including oscillators, filters, FX, Modulators etc all using the drag and drop. Each parameter assigned to Tweak it can have a different range. This means that some parameters will move more or less when a Tweak is triggered, allowing you to stay closer to the original values of some parameters, and go totally wild with others. Tweak goes way beyond a typical 'random patch' feature and allows you to reshape and spice up anything quickly and easily to get inspiration or a new angle on a factory preset, to your taste.

What is XY Capture?

XY Capture is a unique modulation effect combining an XY pad with a way to 'capture' movements performed with this XY pad, and use this movement to control any parameter in the plugin. XY Capture allows you to go beyond LFOs, Envelopes or Arpeggiators and intuitively shape the response of any number of parameters, and record very complex, personal and performable movements. Once a movement is captured, you can edit it, sync it to tempo, adjust the speed or direction and much more. You can also use up to four XY captures in your presets. Check out some of our factory presets to see how this can be used in your own projects.

What is Audio Input?

Audio Input is Concept's quick and easy pitch and amplitude follower. This allows you to feed multiple audio signals into the plugin (depending on your DAW), and use these as modulation sources. You can choose between amplitude or pitch analysis, and assign this to any parameter to modulate it.

Instantly shake up your bass patches or pads by feeding in a kick, hat or melody into it, to gel your tracks in a whole host of new ways!

Why can't I use Audio Input in Studio One or FL Studio?

Audio Input is an unusual and exciting feature to be added to a VST instrument. To do this, we need to work with the structure of each DAW to allow you to route audio from your session into Concept. Unfortunately Studio One and FL Studio do not allow routing of audio into instrument-type plugins (but they do to effects-style plugins like Compressors). We will be working with Focusrite and Imageline to try to support this feature in the future.

16. End User License

This licence agreement ("**Licence**") is a legal agreement between you ("**Licensee**" or "**you**") and Krotos Ltd a company incorporated in Scotland (with company number SC458616) whose registered office is situated at Citypoint, 65 Haymarket Terrace, Edinburgh, EH12 5HD. ("**Licensor, us**" or "**we**") for the Concept software ("**Software**"); and documents relating to the Software ("**Documents**").

We licence use of the Software and Documents to you on the basis of this Licence. We do not sell the Software or Documents to you. We remain the owners of the Software and Documents at all times.

Mac Operating System Requirements: this software requires a Mac Intel computer with a minimum of 2.4 GHz Intel Dual Core Processor, 4 GB of RAM and the operating system OS X 10.9, or later.

Windows Operating System Requirements: this software requires a computer with a minimum of 2.4 GHz Intel Dual Core Processor, 4 GB of RAM, and the operating system Windows 7 (64-bit) or above.
An internet connection is required at the time of activation.

IMPORTANT NOTICE TO ALL USERS:
BY TICKING THE BOX INDICATING THAT YOU ACCEPT THESE TERMS YOU AGREE TO THE TERMS OF THIS LICENCE WHICH WILL BIND YOU. THE TERMS OF THIS LICENCE INCLUDE, IN PARTICULAR, LIMITATIONS ON LIABILITY IN CONDITION5 AND CONDITION 6.
IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENCE, WE WILL NOT LICENSE THE SOFTWARE AND DOCUMENTS TO YOU AND YOU MUST DISCONTINUE THE ORDERING OR DOWNLOADING PROCESS NOW. IN THIS CASE YOU MAY NOT DOWNLOAD OR ORDER THE SOFTWARE.

IMPORTANT NOTICE TO CONSUMERS:
AS A CONSUMER, YOU HAVE THE RIGHT TO WITHDRAW FROM YOUR TRANSACTION WITHOUT CHARGE AND WITHOUT ANY REASON BEFORE DOWNLOADING THE SOFTWARE/DOCUMENTS.
HOWEVER, YOU WILL LOSE THE RIGHT TO CANCEL THE TRANSACTION ONCE YOU BEGIN TO DOWNLOAD THE SOFTWARE OR DOCUMENTS.
THIS DOES NOT AFFECT YOUR CONSUMER RIGHTS FOR DEFECTIVE DOWNLOADED SOFTWARE OR DOCUMENTS.

You should print a copy of this Licence for future reference.

1 **Grant and scope of licence**

1.1 In consideration of payment by you of the agreed licence fee and you agreeing to abide by the terms of this Licence, we hereby grant to you a non-exclusive, non-transferable licence to use the Software and the Documents on the terms of this Licence.

1. 1.2 You may:

1.2.1 download, install and use the Software for your personal purposes (if you are a consumer) or your internal business purposes (if you are a business) only:
1.2.1.1 on one CPU if the Licence is a single-user licence or the Software is for single use; or
1.2.1.2 if the Licence is a multi-user or network licence, by the number of concurrent users agreed in writing between you and us;

2. 1.2.2 provided you comply with the provisions in condition 2, make up to two (2) copies of the Software for back-up purposes only;
3. 1.2.3 receive and use any free supplementary software code or update of the Software incorporating "patches" and corrections of errors as may be provided by us at our sole discretion from time to time; and
4. 1.2.4 use any Documents in support of the use permitted under condition 1.2 and make up to two (2) copies of the Documents as are reasonably necessary for their lawful use.

2 **Restrictions**

2.1 Except as expressly set out in this Licence or as permitted by any local law, you undertake:

1. 2.1.1 not to copy the Software or Documents except where such copying is incidental to normal use of the Software, or where it is necessary for the purpose of back-up or operational security;
2. 2.1.2 not to sell, rent, lease, sub-license, loan, translate, merge, adapt, vary or modify the Software or Documents or attempt to do any of the foregoing acts;
3. 2.1.3 not to make alterations to, or modifications of, the whole or any part of the Software, nor permit the Software or any part of it to be combined with, or become incorporated in, any other programs;
4. 2.1.4 not to disassemble, decompile, reverse-engineer or create derivative works based on the whole or any part of the Software nor attempt to do any such thing except to the extent that (by virtue of section 296A of the Copyright, Designs and Patents Act 1988) such actions cannot be prohibited because they are essential for the purpose of achieving inter-operability of the Software with another software program, and provided that the information obtained by you during such activities:
    1. 2.1.4.1 is used only for the purpose of achieving inter-operability of the Software with another software program; and
    2. 2.1.4.2 is not unnecessarily disclosed or communicated without our prior written consent to any third party; and
    3. 2.1.4.3 is not used to create any software which is substantially similar to the Software;
5. 2.1.5 to keep all copies of the Software secure and to maintain accurate and up-to-date records of the number and locations of all copies of the Software;
6. 2.1.6 where you are acting as a business, to supervise and control use of the Software and ensure that the Software is used by your employees and representatives in accordance with the terms of this Licence;
7. 2.1.7 to include our copyright notice on all entire and partial copies you make of the Software on any medium; and

8. 2.1.8 not to provide, distribute or otherwise make available the Software in whole or in part (including but not limited to individual sound effects or samples, program listings, object and source program listings, object code and source code), in any form to any person without prior written consent from us; and
9. 2.1.9 not to use the Software via any communications network or by means of remote access, save where you are acting as a business to and providing your employees and representatives with access to the Software, provided always that you ensure that they comply with the foregoing terms of this condition 2.1.

3 **Intellectual property rights**

1. 3.1 You acknowledge that all intellectual property rights in the Software and the Documents anywhere in the world are owned by or licensed to us, that rights in the Software are licensed (not sold) to you, and that you have no rights in, or to, the Software or the Documents other than the right to use them in accordance with the terms of this Licence.
2. 3.2 You acknowledge that you have no right to have access to the Software in source code form or in unlocked coding or with comments.
3. 3.3 The integrity of this Software is protected by technical protection measures ("**TPM**") so that the intellectual property rights, including copyright, in the Software are not misappropriated. You must not attempt in any way to remove or circumvent any such TPM, nor apply or manufacture for sale or hire, import, distribute, sell or let for hire, offer or expose for sale or hire, advertise for sale or hire or have in your possession for private or commercial purposes any means the sole intended purpose of which is to facilitate the unauthorised removal or circumvention of such TPM.

4 **Limited warranty**

1. 4.1 We warrant that:
    1. 4.1.1 the Software will, when properly used and on an operating system for which it was designed, perform substantially in accordance with the functions described in the Documents; and
    2. 4.1.2 that the Documents correctly describe the operation of the Software in all material respects,

for a period of 90 days from the date of installation of the Software ("**Warranty Period**").

2. 4.2 If, within the Warranty Period, you notify us in writing of any defect or fault in the Software as a result of which it fails to perform substantially in accordance with the Documents, we will, at our sole option, either repair or replace the Software, provided that you make available all the information that may be necessary to help us to remedy the defect or fault, including sufficient information to enable us to recreate the defect or fault.
3. 4.3 The warranties set out in condition 4.1 do not apply:

4.3.1 if the defect or fault in the Software results from you having amended the Software; and

4.3.2 if the defect or fault in the Software results from you having used the Software in contravention of the terms of this Licence.

4.4 If you are a consumer, the warranties set out in condition 4.1 are in addition to your legal rights in relation to Software that is faulty or not as described. Advice about your legal rights is available from your local Citizens' Advice Bureau or Trading Standards office.

5 **Limitation of liability if you are a business user**

1. 5.1 You acknowledge that the Software has not been developed to meet your individual requirements, and that it is therefore your responsibility to ensure that the facilities and functions of the Software as described in the Documents meet your requirements.
2. 5.2 If you are a business customer, we only supply the Software and Documents for internal use by your business, and you agree not to use the Software or Documents for any re- sale purposes.
3. 5.3 We shall not under any circumstances whatever be liable to you, whether in contract, delict (including negligence), breach of statutory duty, or otherwise, arising under or in connection with the Licence for:
    1. 5.3.1 loss of profits, sales, business, or revenue;
    2. 5.3.2 business interruption;
    3. 5.3.3 loss of anticipated savings;
    4. 5.3.4 loss or corruption of data or information;
    5. 5.3.5 loss of business opportunity, goodwill or reputation; or
    6. 5.3.6 any indirect or consequential loss or damage.
4. 5.4 Other than the losses set out in condition 5.3 (for which we are not liable), our maximum aggregate liability under or in connection with this Licence whether in contract, delict (including negligence) or otherwise, shall in all circumstances be limited to a sum equal to one hundred and twenty-five percent (125%) of the licence fee payable by you for the Software. This maximum cap does not apply to condition 5.5.
5. 5.5 Nothing in this Licence shall limit or exclude our liability for:
    1. 5.5.1 death or personal injury resulting from our negligence;
    2. 5.5.2 fraud or fraudulent misrepresentation; or
    3. 5.5.3 any other liability that cannot be excluded or limited by Scottish law.
6. 5.6 This Licence sets out the full extent of our obligations and liabilities in respect of the supply of the Software and Documents. Except as expressly stated in this Licence, there are no conditions, warranties, representations or other terms, express or implied, that are binding on us. Any condition, warranty, representation or other term concerning the supply of the Software and Documents which might otherwise be implied into, or incorporated in, this Licence whether by statute, common law or otherwise, is excluded

to the fullest extent permitted by law.

6 **Limitation of liability if you are a consumer user**

1. 6.1 You acknowledge that the Software has not been developed to meet your individual requirements, and that it is therefore your responsibility to ensure that the facilities and functions of the Software as described in the Documents meet your requirements.

2. 6.2 If you are a consumer, we only supply the Software and Documents for domestic and private use. You agree not to use the Software and Documents for any commercial, business or re-sale purposes, and we have no liability to you for any loss of profit, loss of business, business interruption, or loss of business opportunity.
3. 6.3 Our maximum aggregate liability under or in connection with this Licence whether in contract, delict (including negligence) or otherwise, shall in all circumstances be limited to a sum equal to one hundred and twenty-five percent (125%) of the licence fee payable by you for the Software. This does not apply to the types of loss set out in condition 6.4.
4. 6.4 Nothing in this Licence shall limit or exclude our liability for:
    1. 6.4.1 death or personal injury resulting from our negligence;
    2. 6.4.2 fraud or fraudulent misrepresentation; or
    3. 6.4.3 any other liability that cannot be excluded or limited by Scottish law.

7 **Termination**

1. 7.1 We may terminate this Licence immediately by written notice to you if you commit a material or persistent breach of this Licence which you fail to remedy (if remediable) within 14 days after the service of written notice requiring you to do so.
2. 7.2 Upon termination for any reason:
    1. 7.2.1 all rights granted to you under this Licence shall cease;
    2. 7.2.2 you must immediately cease all activities authorised by this Licence; and
    3. 7.2.3 you must immediately delete or remove the Software from all computer equipment in your possession, and immediately destroy or return to us (at our option) all copies of the Software and Documents then in your possession, custody or control and, in the case of destruction, certify to us that you have done so.

8 **Communications between us**

1. 8.1 If you are a consumer, if you wish to contact us in writing, or if any condition in this Licence requires you to give us notice in writing, you can send this to us by e-mail to info@krotosaudio.com. We will confirm receipt of this by contacting you in writing, normally by e-mail.
2. 8.2 If we have to contact you or give you notice in writing, we will do so by e-mail or by pre-paid post to the address you provide to us in your order for the Software.
3. 8.3 If you are a business customer, please note that any notice given by you to us, or by us to you, will be deemed received and properly served immediately when posted on our website, 24 hours after an e-mail is sent, or three days after the date of posting of any letter. In proving the service of any notice, it will be sufficient to prove, in the case of a letter, that such letter was properly addressed, stamped and placed in the post and, in the case of an e-mail, that such e-mail was sent to the specified e-mail address of the addressee.

9 **Events outside our control**

1. 9.1 We will not be liable or responsible for any failure to perform, or delay in performance of, any of our obligations under this Licence that is caused by an Event Outside Our Control. An Event Outside Our Control is defined below in condition 9.2.
2. 9.2 An "**Event Outside Our Control**" means any act or event beyond our reasonable control, including without limitation failure of public or private telecommunications networks.
3. 9.3 If an Event Outside Our Control takes place that affects the performance of our obligations under this Licence:
    1. 9.3.1 our obligations under this Licence will be suspended and the time for performance of our obligations will be extended for the duration of the Event Outside Our Control; and
    2. 9.3.2 we will use our reasonable endeavours to find a solution by which our obligations under this Licence may be performed despite the Event Outside Our Control.

10 **Other important terms**

1. 10.1 We may transfer our rights and obligations under this Licence to another organisation,

but this will not affect your rights or our obligations under this Licence.

2. 10.2 You may only transfer your rights or your obligations under this Licence to another person if we agree in writing in advance of any such transfer.
3. 10.3 If you are a business customer, this Licence and any document expressly referred to in it constitutes the entire agreement between you and us. You acknowledge that you have not relied on any statement, promise or representation made or given by or on behalf of us which is not set out in this Licence or any document expressly referred to in it.
4. 10.4 If we fail to insist that you perform any of your obligations under this Licence, or if we do not enforce our rights against you, or if we delay in doing so, that will not mean that we have waived our rights against you and will not mean that you do not have to comply with those obligations. If we do waive a default by you, we will only do so in writing, and that will not mean that we will automatically waive any later default by you.
5. 10.5 Each of the conditions of this Licence operates separately. If any court or competent authority decides that any of them are unlawful or unenforceable, the remaining conditions will remain in full force and effect.
6. 10.6 If you are a consumer, please note that this Licence, its subject matter and its formation, are governed by Scottish law. You and we both agree that the courts of Scotland will have non-exclusive jurisdiction. However, if you are a resident of Northern Ireland you may also bring proceedings in Northern Ireland, and if you are resident of England, you may also bring proceedings in England.
   10.7 If you are a business customer, this Licence, its subject matter and its formation (and any non-contractual disputes or claims) are governed by Scottish law. We both agree to the exclusive jurisdiction of the courts of Scotland.

11 OTHER LICENSES
11.1 This product uses the Intel IPP library, under terms of the Intel Simplified Software License
11.1.1 Copyright (c) 2018 Intel Corporation.
11.1.2 Use and Redistribution. You may use and redistribute the software (the “Software”), without modification, provided the following conditions are met:
11.1.3 * Redistributions must reproduce the above copyright notice and the following terms of use in the Software and in the documentation and/or other materials provided with the distribution.
11.1.4 * Neither the name of Intel nor the names of its suppliers may be used to endorse or promote products derived from this Software without specific prior written permission.
11.1.5 * No reverse engineering, decompilation, or disassembly of this Software is permitted.
11.1.6 Limited patent license. Intel grants you a world-wide, royalty-free, non-exclusive license under patents it now or hereafter owns or controls to make, have made, use, import, offer to sell and sell (“Utilize”) this Software, but solely to the extent that any such patent is necessary to Utilize the Software alone. The patent license shall not apply to any combinations which include this software. No hardware per se is licensed hereunder.
11.1.7 Third party and other Intel programs. “Third Party Programs” are the files listed in the “third-party-programs.txt” text file that is included with the Software and may include Intel programs under separate license terms. Third Party Programs, even if included with the distribution of the Materials, are governed by separate license terms and those license terms solely govern your use of those programs.
11.1.8 DISCLAIMER. THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT ARE DISCLAIMED. THIS SOFTWARE IS NOT INTENDED FOR USE IN SYSTEMS OR APPLICATIONS WHERE FAILURE OF THE SOFTWARE MAY CAUSE PERSONAL INJURY OR DEATH AND YOU AGREE THAT YOU ARE FULLY RESPONSIBLE FOR ANY CLAIMS, COSTS, DAMAGES, EXPENSES, AND ATTORNEYS’ FEES ARISING OUT OF ANY SUCH USE, EVEN IF ANY CLAIM ALLEGES THAT INTEL WAS NEGLIGENT REGARDING THE DESIGN OR MANUFACTURE OF THE MATERIALS. LIMITATION OF LIABILITY. IN NO EVENT WILL INTEL BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. YOU AGREE TO INDEMNIFY AND HOLD INTEL HARMLESS AGAINST ANY CLAIMS AND EXPENSES RESULTING FROM YOUR USE OR UNAUTHORIZED USE OF THE SOFTWARE.
11.1.9 No support. Intel may make changes to the Software, at any time without notice, and is not obligated to support, update or provide training for the Software.
11.1.10 Termination. Intel may terminate your right to use the Software in the event of your breach of this Agreement and you fail to cure the breach within a reasonable period of time.
11.1.11 Feedback. Should you provide Intel with comments, modifications, corrections, enhancements or other input (“Feedback”) related to the Software Intel will be free to use,

disclose, reproduce, license or otherwise distribute or exploit the Feedback in its sole discretion without any obligations or restrictions of any kind, including without limitation, intellectual property rights or licensing obligations.
11.1.12 Compliance with laws. You agree to comply with all relevant laws and regulations governing your use, transfer, import or export (or prohibition thereof) of the Software.
11.1.13 Governing law. All disputes will be governed by the laws of the United States of America and the State of Delaware without reference to conflict of law principles and subject to the exclusive jurisdiction of the state or federal courts sitting in the State of Delaware, and each party agrees that it submits to the personal jurisdiction and venue of those courts and waives any objections. The United Nations Convention on Contracts for the International Sale of Goods (1980) is specifically excluded and will not apply to the Software.

11.2 This product includes the RCH::Oscillators Library, including code written by Rob Clifton-Harvey. This code is written by Rob Clifton-Harvey under the MIT License (MIT).
11.2.1 Copyright (c) 2019 Rob Clifton-Harvey
11.2.2 Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:
11.2.3 The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.
11.2.4 THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

11.3 This product includes a Formant Filter from SquinkyLabs. This code is written by SquinkyLabs under the MIT License (MIT).

11.3.1 Copyright (c) 2018 squinkylabs

11.3.2 Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

11.3.3 The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

11.3.4 THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR

IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

11.4 This product includes code from 'Wavetable Oscillator', created by Nigel Redmon, EarLevel Engineering: earlevel.com, and is distributed with the following notice:

11.4.1 Copyright 2012 Nigel Redmon

11.4.2 This source code is provided as is, without warranty.

11.4.3 You may copy and distribute verbatim copies of this document.

11.4.4 You may modify and use this source code to create binary code for your own purposes, free or commercial.

11.5 This product uses FFTConvolver by HiFi-LoFi under an MIT license, provided with the following terms

11.5.1 Copyright (c) 2017 HiFi-LoFi

11.5.2 Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

11.5.3 The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

11.5.4 THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.