RHYTHMIC TEXTURES

HEAVYOCITY
RAW INSPIRATION®

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1 Welcome to NP02: RHYTHMIC TEXTURES!

Introducing the second installment in our NOVO Packs line: NP02: RHYTHMIC TEXTURES, a new small-ensemble strings virtual instrument.

There's a subtle and certain magic that occurs when the right mics and the right preamps, in the right room, capture bow meeting string in just the right way. Heavyocity's goal when developing NP02: RHYTHMIC TEXTURES was to capture that magic.

Focused on creating rhythmic elements and articulations played together in intimate chamber string ensembles, NP02: RHYTHMIC TEXTURES is the moving, expressive counterpart to our first NOVO Pack, NP01: INTIMATE TEXTURES. From cellos layering sul pont tremolos over swells, to violin staccatos played over col legno tapping, NP02: RHYTHMIC TEXTURES delivers truly unique ensemble patterns and rhythms, production-ready for your score, or ripe for sound design in the award-winning NOVO engine.

1.1 System Requirements

NP02: RHYTHMIC TEXTURES requires Native Instruments KONTAKT 5 or KONTAKT 5 PLAYER (version 5.7 or later).

1.2 Instrument Types

NP02: RHYTHMIC TEXTURES provides you with 2 different instrument types.

- **Traditional Textures** – these instruments are for realistic performance of orchestral string sections.
- **Texture Designer** – this instrument is for deep sound design.

2 The Traditional Instruments

NP02: RHYTHMIC TEXTURES includes 6 traditional instruments:

- I Violins - Detache Textures
- I Violins - Sustained Textures
- II Violas - Detache Textures
- II Violas - Sustained Textures
- III Celli - Detache Textures
- III Celli - Sustained Textures

Each of these instruments is a deeply sampled reproduction of a section of a string ensemble. These instruments were designed to create realistic performances, with the sonic flexibility to match the sound to your project.

2.1 Interface and Navigation

All Traditional instruments share the same interface layout and navigation.

The interface of the Violin Textures instrument

Each section will be looked at in detail in the following chapters. While there may be minor differences between instruments (mainly in the available articulations), all of them do share the same framework.

At the top are the articulation controls which will be explored in the following chapter.

The main central area is dedicated to the dynamics controls.

To the far edges of the Dynamics controls are six buttons that change what is displayed in the lower half of the instrument interface.

2.2 Articulations and Keyswitches

Each traditional instrument contains a number of different articulations (or playing styles). The number and types of articulations depends on the instrument.

It is possible to switch articulations from the interface or via MIDI key-switches.

► To select an articulation via the interface, click on its name.
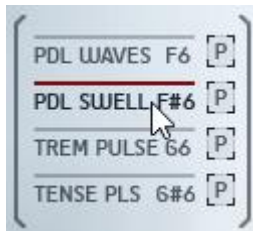
There are two key-switch ranges, one high and one low. These ranges are functional duplicates and are included to give you flexibility in how you want to perform.

- The low key range starts on C-1 (MIDI note 12)
- The high key range starts on F6 (MIDI note 101)

When you select an articulation via either method, the interface will update to show the controls for the selected articulation. Most articulations do not have any controls, but others will have some. These controls will be explaining in the following sub sections.

2.2.1 Purging Articulations

If you are not using an articulation in a project, you can remove it from memory (a process known as purging) so that it is not using RAM unnecessarily.

► To purge an articulation, click on the P icon beside its name.
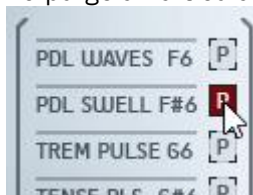
When an articulation is purged, you will be unable to play that articulation until it is reloaded.

► To reload an articulation, click the P icon again.

2.3 Dynamics Controls

The main central area on the interface is dedicated to the Dynamics controls.

The Dynamics Controls

The dynamics settings are stored with each articulation; however, the main Dynamics Knob will retain its setting regardless of articulation selection.

There are two main dynamics modes, which are defined by the VELOCITY switch.

The Velocity Switch

- When active, the MIDI velocity will set the dynamic layer used and the central knob will control the volume.
- When inactive, the MIDI velocity will have no effect, and the central knob will control the dynamic layer.

For sustained articulations, deactivating velocity is the recommended setting, as the dynamics knob gives you real-time control over dynamic layers, even on sustained notes. This allows for a more realistic performance.

The Dynamics Knob is connected to the modwheel (MIDI CC1), so you can use your MIDI controller to easily control the dynamics or volume of the instrument.

Setting Ranges

It is possible to set minimum and maximum ranges for both velocity and the Dynamics Knob.

The velocity range can be set via the sliders to the left of the dynamics knob, and the range of the Dynamics Knob is set via the sliders to the right.

► Click and drag the top arrow to set the maximum value.

► Click and drag the bottom arrow to set the minimum value.

2.4 Mixer

Every instrument and articulation was sampled with three microphone positions; as such the interface provides a mixer to allow you to mix these microphone sources. A forth **FULL** channel is also provided; this is a pre-mixed combination of the other three channels.

► If the Mixer is not already visible, you can access it by clicking on the **MIX** button to the right of the interface.
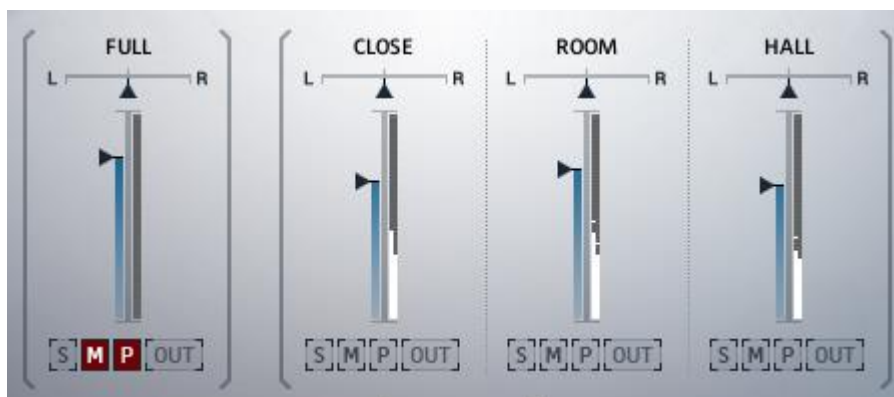
The Mixer

Each channel in the Mixer has the same controls:

- **PAN** – the horizontal slider at the top of the channel sets the stereo position of the channel.
- **VOLUME** – the main vertical slider sets the output volume of the channel.
- **SOLO** – the S button solos the channel, muting all others so that you can only hear the selected channel.
- **MUTE** – the M button mutes the channel, so that it cannot be heard.
- **PURGE** – purges (unloads) the selected channel from memory. Use this only if you do not plan to use the selected channel in your project. Click this button again to reload the channel.
- **OUTPUT ROUTING** – from the OUT menu you can select an alternate output for the channel (depending on your KONTAKT setup, this can allow you to route to multiple outputs in your DAW or soundcard). Note that setting the output to anything other than the Main setting will cause the channel to bypass the Delay and Reverb effects.

2.5 Performance

► If the Performance Page is not already visible, you can access it by clicking on the **PERF** button to the right of the interface.

The Performance Page has two sub-sections:

- **GATE** – a volume modulation sequence.
- **ARP** – a rhythmic broken-chord generator.

► Click on the respective tab to select a sub-section for viewing.

2.5.1 The Gate

The Gate modulates the output volume of the instrument over time to create rhythmic effects.
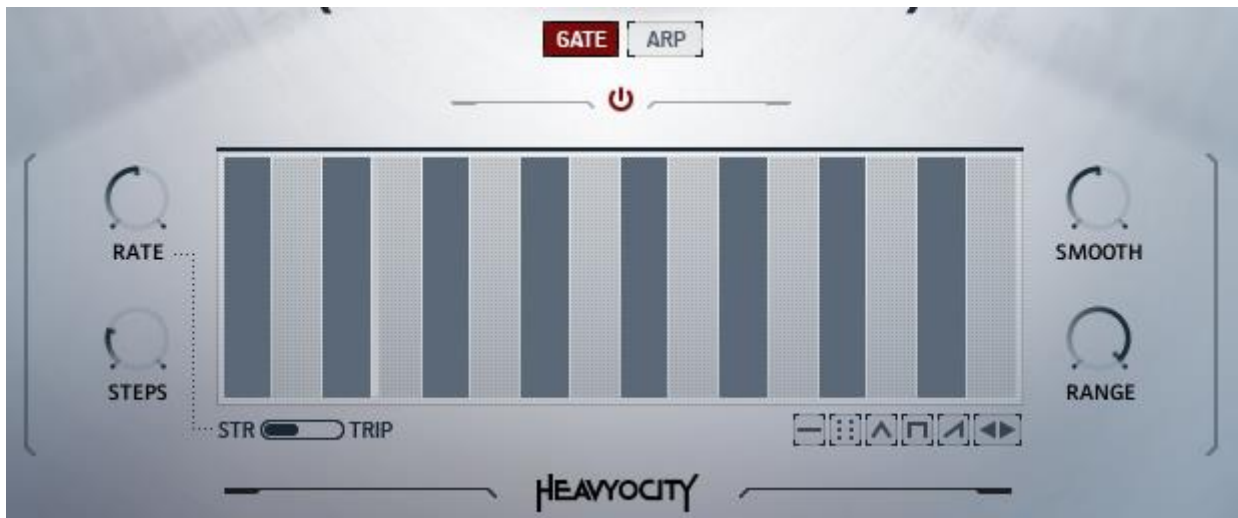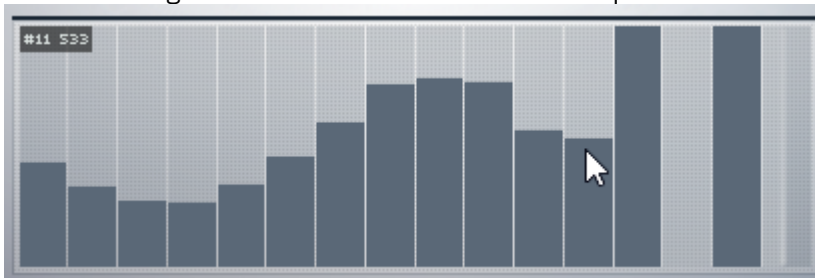

The Gate Controls

At the top of the Gate sub-section is an on/off switch which can toggle the effect on or off.

Below that is the main sequence pattern table.

► Click and drag on the table to create a volume sequence.

To the left and right of the main sequence table are the four playback parameters:

- **RATE** – sets the rate at which the sequence will play back. This control can be set to either straight (STR) or triplet (TRIP) modes by using the switch below the main sequence table.
- **STEPS** – sets the number of steps in the sequence.
- **SMOOTH** – sets the amount of smoothing between steps; in other words: how long it takes to change from one volume setting to another.
- **RANGE** – sets the range of the Gate effect. At 0% the Gate will have no influence on the output volume. At 100% the Gate will be able to set the volume to any settings from silence to full.

Below the main sequence table are a handful of quick preset controls that will auto-fill the sequence table with patterns. From left to right they are:

- **Reset** - sets the value of all steps in the pattern to their default value.
- **Random** - randomizes the values of all steps in the pattern.
- **Triangle** - select a number and the gate pattern will automatically be populated with a triangle shaped wave with that many cycles.
- **Comb** - creates a comb pattern in which the width of each tooth is that of the selected number.
- **Ramp** - select a number and direction and the gate pattern will automatically be populated with a ramp shaped wave with that many cycles
- **Nudge Left** - moves the whole pattern one step to the left.
- **Nudge Right** - moves the whole pattern one step to the right.

2.5.2 The Arpeggiator

An Arpeggiator takes a chord, breaks it down to its individual notes, and then plays those back in a rhythmic pattern.

The Arpeggiator Controls

The Arpeggiator included with the Traditional instruments is simple and easy-to-use with only four controls:

- **ON/OFF** – the switch at the top of the sub-section turns the Arpeggiator on or off.
- **RATE** – sets the rate at which notes will be generated.
- **MODE** – defines the order in which notes will be played:
  - Up – notes will be played from lowest to highest
  - Down – notes will be played from highest to lowest
  - Up/Down – notes will first be played from low to high, then high to low in a cycle
  - Down/Up – notes will first be played from high to low, then low to high in a cycle
  - Pairs Up – similar to Up, but notes are played two at a time
  - Pairs Down – similar to Down, but notes are played two at a time
  - Chord – all notes are played at once, as a chord
  - Random – notes are selected at random from the notes in the held chord
- **GATE** – defines the length of the notes generated by the arpeggiator

The Arpeggiator generally works best when using short articulations like Spiccato. When using it with long articulations, it will often sound best at low rates with a long gate setting.

2.6 Space

The Space Page contains two effects: a Delay and a Reverb. Both can be used to create and control the space the strings are playing within.

► If the Space Page is not already visible, you can access it by clicking on the **SPACE** button to the right of the interface.
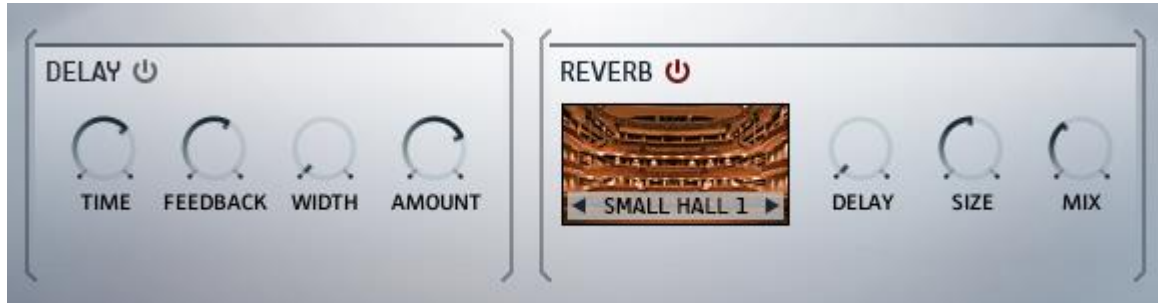
The Space Page

The Delay

A delay effect creates a duplicate of the input signal which is delayed in time; when mixed with the original signal this produces an echo. The delayed output can then be fed back into the input to create repeated echoes.

The Delay effect has five controls:

- **ON/OFF** – the button to the right of the DELAY label toggles the effect on or off.
- **TIME** – sets the time between the input signal and the delayed signal.
- **FEEDBACK** – controls how much of the effect output is fed back into the effect input. In other words: this controls the number of repeating echoes.
- **WIDTH** – controls how much the echoes will ping-pong from the left channel to the right channel.
- **AMOUNT** – controls the volume of the delay signal.

The Reverb

Reverb effects simulate acoustic spaces. The reverb in the Traditional instruments is a convolution reverb, which uses impulse responses (a kind of sonic fingerprint) of real acoustic spaces to produce a natural sounding reverb.

- The menu on the left of the REVERB section can be used to select an impulse response.
- The arrows to the left and right of the menu can be used to cycle through them.

Impulse responses are fairly fixed in their character, but there are a few parameters you can control:

- **DELAY** – sets the delay time between the input signal and the processed signal.
- **SIZE** – changes the size (and thus also length) of the reverb.
- **MIX** – controls the dry/wet mix; i.e. crossfades between the input signal and the reverb signal.

2.7 Envelopes

Each articulation in the Traditional instruments has its own ADSR volume envelope. Having an envelope per articulation gives you the ability to, for example, give the tremolo articulation a slow attack, but give the spiccatos a fast attack.

Certain articulations have sampled release sections, and you have the option of using these samples, or using the volume envelope for the release.

► If the Envelope Page is not already visible, you can access it by clicking on the **ENV** button to the left of the interface.

The Envelope Page

At the top of the Envelope page is a readout showing you the currently selected articulation. This will help you avoid editing the wrong articulation by mistake.

Below the articulation readout is a plot of the current ADSR curve.

Below that are the main Envelope controls:

- **ATTACK** – sets the attack (fade-in) time.
- **DECAY** – sets the decay time, i.e. the time it takes for the volume to drop from maximum to the sustain level.
- **SUSTAIN** – sets the sustain level.
- **RELEASE** – sets the release (fade-out) time, i.e. the time it takes for the envelope to drop to silence after you release a note (this control only has an effect if the Release Mode is set to ENVELOPE).
- **RELEASE MODE** – when set to SAMPLE the instrument will use recorded release samples for a more realistic sound; when set to ENVELOPE the instrument will use the volume envelope to fade out the sound. Note that this option is not available for all articulations, so for some it will be deactivated.

Holding the [Alt] key while using an ADSR control will copy that setting to all articulations.

2.8 EQ

An Equalizer (or EQ) allows you to control the timbre of a sound by giving you control over the volume level of ranges (or bands) of frequencies.

For maximum sonic flexibility, not only does each channel have its own EQ, but each articulation has its own EQ settings too. This means that you can set the EQ settings per articulation and per channel.

But don't worry, there are ways to link and control multiple EQs at once, making workflow as easy or as deep as you need it to be.

► If the EQ Page is not already visible, you can access it by clicking on the **EQ** button to the left of the interface.
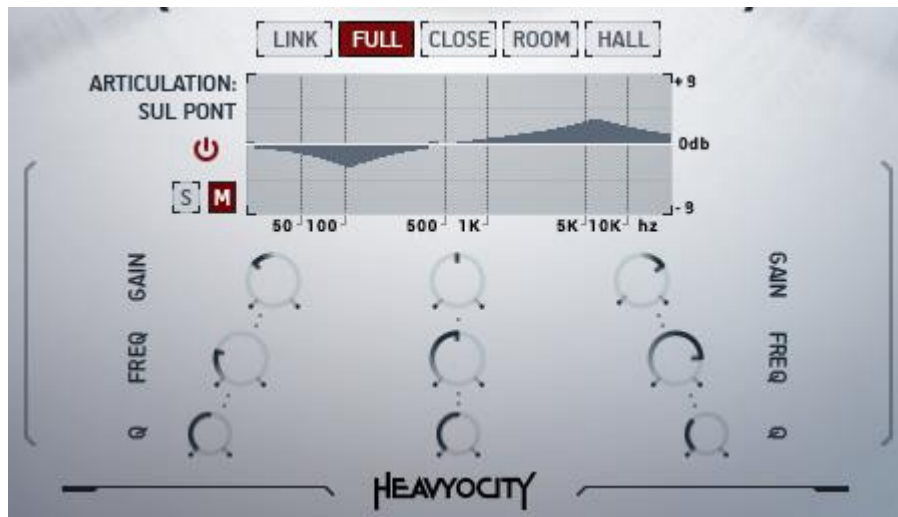
The EQ Page

At the top of the EQ Page are 4 navigation buttons for the 4 channels, as well as a **LINK** button.

► Clicking on a channel button will display the EQ settings for that channel.

► Clicking on the **LINK** button will link all of the channel EQs allowing you to control them as one. The settings of the current channel will be copied to the other channels, but if you unlink the channels they will return to their original settings.

Below the channel and LINK buttons there is a readout showing you the currently selected articulation. This will help you avoid editing the wrong articulation by mistake.

Beside that is a graph showing you the frequency curve of the currently selected EQ.

Each EQ has the following main controls located to the left of the frequency curve:

- **ON/OFF** – the power switch toggles the EQ on or off.
- **SOLO** – the button with the S icon mirrors the solo button from the Mixer Page (see section 2.4 Mixer for more)
- **MUTE** – the button with the M icon mirrors the mute button from the Mixer Page (see section 2.4 Mixer for more)

The EQ has three identical bands, each with the same three controls:

- **GAIN**– sets the gain for the band.
- **FREQ**– sets the central frequency of the band.
- **Q** – sets the width of the band.

Holding the [Alt] key while using an EQ control will copy that setting to all articulations.

2.9 Filter

Like the EQ, a filter is used to control the timbre of a sound, but in a much more drastic way. As such, filters are generally used as a creative effect.

As with the EQ, there is a filter per channel and per articulation.

► If the Filter Page is not already visible, you can access it by clicking on the **FILTER** button to the left of the interface.
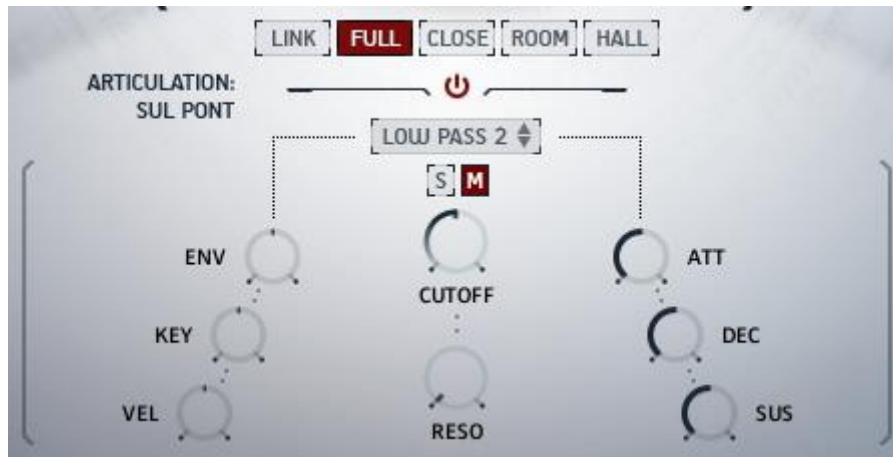
The Filter Page

At the top of the Filter Page are 4 navigation buttons for the 4 channels, as well as a **LINK** button.

► Clicking on a channel button will display the filter settings for that channel.

► Clicking on the **LINK** button will link all of the channel filters allowing you to control them as one. The settings of the current channel will be copied to the other channels, but if you unlink the channels they will return to their original settings.

Below the channel and LINK buttons there is a readout showing you the currently selected articulation. This will help you avoid editing the wrong articulation by mistake.

The filter has the following main controls:

- **ON/OFF** – the power switch at the top of the Filter page turns the currently selected filter on or off.
- **FILTER TYPE** – the menu below the power switch is where you can select a filter type.
- **SOLO** – the button with the S icon mirrors the solo button from the Mixer Page
- **MUTE** – the button with the M icon mirrors the mute button from the Mixer Page (see section 2.4 Mixer for more)
- **CUTOFF** – controls the cutoff frequency of the filter.
- **RESONANCE** – controls the resonant peak at the cutoff frequency.

To the left of the Filter page are controls that allow you to define the filter modulation:

- **ENV** – *Envelope Amount* : sets the how much the filter envelope will modulate the filter cutoff.
- **KEY** – *Key-Tracking* : sets how much the filter cutoff will track (i.e. follow) the key pitch.
- **VEL** – *Velocity Sensitivity* : sets how much the filter cutoff will be modulated by the key velocity.

To the right of the Filter page are the Filter Envelope controls:

- **ATT** – sets the attack time (fade-in time) of the filter envelope.
- **DEC** – sets the decay time (fade-out time) of the filter envelope.
- **SUS** – sets the sustain level of the filter envelope (i.e. the level at which the envelope will rest after the attack and decay phases).

Holding the [Alt] key while using a filter control will copy that setting to all articulations.

3 The Rhythmic Texture Designer

Where the Traditional instruments focus on realistic performance and a natural sound, the Rhythmic Texture Designer focuses on sound design and sonic creativity.

At the core of the Rhythmic Texture Designer is the Macro system. The instrument has many sound design options, and the Macro system allows you to simplify all of these parameters into a handful of controls, which can then be modulated or controlled in real-time.

3.1 Navigation and Anatomy

The Main Interface for the Rhythmic Texture Designer

The main Rhythmic Texture Designer interface has three main sections:

- At the top left and right are the main navigation buttons, a number of which open completely new pages of controls.

- In between the navigation buttons is the main mixer.

- In the middle of the instrument are the Macro controls and navigation.

- The lower part of the interface is where the controls for the Macro sections and the Master FX are displayed.

3.2 Master FX

When you first open the Rhythmic Texture Designer, the Master FX are the first feature on display.

► If the Master FX are not displayed, you can view them by clicking on the **MASTER FX** navigation button to the top right of the interface.

The Master FX

The Rhythmic Texture Designer has seven master effects, all of which are applied to the final output of the instrument.

To the far left and right of the Master FX controls are the Punish and Twist effects.

In the center are the various other effects. The controls of each are accessed by clicking on the respective tab. The on/off switches for the effects can be found below these tabs.

Punish

Of course no Heavyocity product would be complete without the trademark Punish Knob. In the Rhythmic Texture Designer, the Punish Knob is located to the far left of the Master FX controls.

The Punish Knob

The Punish Knob is a single knob effect that uses a combination of compression and saturation to distress your sound. Simply turn the knob to punish the sound!

The power switch below the Punish Knob turns the effect on or off.

Twist

The Twist effect is another mainstay of Heavyocity's arsenal; it is located to the far right of the Master FX controls.

The Twist Controls

At its core, the Twist effect is a modulated EQ, but the result is something between a phaser and a formant filter.

The Twist effect has three main controls:

- **TWIST** – controls the modulation intensity, or twist amount.
- **TONE** – sets the central tone of the effect.
- **RATE** – controls the modulation rate, this is automatically synched with your host tempo.

The power switch below the Twist Knob turns the effect on or off.

Filter

The master filter has three controls.

The Master Filter

These are (from left to right):

- **CUTOFF** / **TALK** – controls the cutoff frequency of the filter. If a FORMANT type filter is selected, then this controls the vowel.
- **TYPE** – use this menu to select the type of filter.
- **RES** / **SHARP** – sets the level of the resonant peak at the cutoff frequency. If a FORMANT type filter is selected, then this controls the sharpness of the formant.

Distortion

The master distortion has three controls.

The Master Distortion

These are (from left to right):

- **DRIVE** / **BITS** – controls the overdrive amount or bit depth, depending on the TYPE selection.
- **TYPE** – select from the 3 available distortion modes:
  - STOMP – a stompbox style distortion.
  - AMP – a guitar amplifier style distortion.
  - LOFI – a digital degredation effect.
- **TONE** / **S.R.** – controls the distortion tone or sample rate, depending on the TYPE selection.

Chorus

The chorus effect uses modulated delays to thicken the sound.
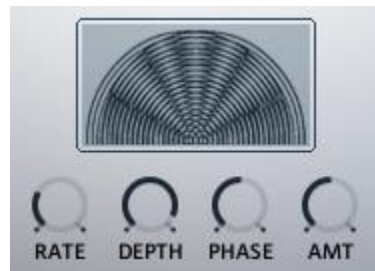
The Master Chorus

The master chorus has four controls:

- **RATE** – sets the rate of the chorus modulation.
- **DEPTH** – controls the depth of the chorus modulation.
- **PHASE** – controls the difference in modulation phase between the left and right channels; in other words: the stereo width of the effect.
- **AMT** – controls the intensity of the effect.

Delay

The Master Delay

The master delay has four controls:

- **TIME** - sets the time between the input signal and the delayed signal.
- **FEEDBK** - controls how much of the effect output is fed back into the effect input. In other words: this controls the number of repeating echoes.
- **WIDTH** - controls how much the echoes will ping-pong from the left channel to the right channel.
- **AMT** - controls the volume of the delay signal.

Reverb

The master reverb is a convolution reverb.

The Master Reverb

► The impulse response for the reverb is selected via the menu. Click on the reverb name to display this menu.

You can use the arrow buttons on either side of the menu to cycle through the impulse responses.

The additional reverb parameters are:

- **DELAY** – sets the delay time between the input signal and the processed signal.
- **SIZE** – changes the size (and thus also length) of the reverb.
- **MIX** – controls the dry/wet mix; i.e. crossfades between the input signal and the reverb signal.

3.3 Mixer

The Rhythmic Texture Designer uses three channels. The channels can be mixed together using the mixer at the top of the interface.

The Mixer

Each channel has the same controls:

- **VOL** – controls the output volume of the channel.
- **PAN** – controls the stereo position of the channel.
- **TUNE** – sets the transposition amount for the channel.
- **SOLO** – the S button mutes all other channels so that only the soloed channel can be heard.
- **MUTE** – the M button mutes the channel so that it cannot be heard.
- **PURGE** – the P button purges (unloads) the selected channel from memory. Use this only if you do not plan to use the selected channel in your project. Click this button again to reload the channel.
- **OUTPUT ROUTING** – from the OUT menu you can select an alternate output for the channel (depending on your KONTAKT setup, this can allow you to route to multiple outputs in your DAW or soundcard). Note that setting the output to anything other than the Main setting will cause the channel to bypass the Master Effects.

The VOL and PAN parameters for each channel can be modulated using the Macro system. For more information on this see chapter 3.4 Macro Control.

Sound and Bank Selection

The label of each channel is also the access point to the sound/bank selection. Clicking on the channel name opens the Source Browser, which is described in 3.6 Source Browser.

3.4 Macro Control

The Macro Control system is a very power tool for controlling the Rhythmic Texture Designer.

The Main Macro Controls

The central Macro Knob moves the six Macro Sliders, each of which controls the parameters of their category. The range and direction can be individually defined for each slider.

The Macro Knob can also be modulated to create an evolving sound. The details of the macro modulation can be found in chapter 3.5 Macro Modulation.

There are six Macro pages, each of which is triplicated for each channel, giving a total of 18 sub-pages of controls. The Macro system gives you easy access to this depth of control, but you also have the ability to dig into the instrument and define the Macro settings yourself.

Each Snapshot provided with the NP02: RHYTHMIC TEXTURES library will utilize the Macro system in some way. If you load a Snapshot you like, but want to reduce the Macro Knob's control of the Drive effects, then it is a simple case of pulling down the Drive range.

Each of the six Macro categories has four main controls:

- **Display** – clicking on the category name will display the control page for that category in the lower section of the instrument.
- **Power Switch** – the power switch at the end of the slider can toggle Macro control of the category on or off.
- **Range** – clicking and dragging on the outer bracket allows you to define the range of control the Macro Knob has over the category.
- **Invert** – inverts the direction of the slider.

The control pages for the Macro categories will be described in detail in the later sub-sections of the manual.

Assigning Modulation

Any knob that can be controlled by the Macro system is easily identified by a red indicator inside the knob and a pair of arrows to the side of the control.
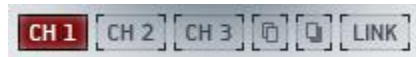

A Macro-Enabled Control

► Click and drag on the arrows to define the Macro control range for the knob.

A dot on the range bar will show the current value of the parameter.

Common Controls

Each Macro Page has three tabs for displaying the controls for each channel.

Channel and Link Buttons

Clicking on the **LINK** button will link all of the channels for that Macro category allowing you to control them as one. The settings of the current channel will be copied to the other channels, but if you unlink the channels they will return to their original settings.

Some categories offer **COPY** and **PASTE** options, so you can copy the settings from one channel to another, without the need to link all three.

3.4.1 Envelope

► Clicking on the **ENV** tab will display the Envelope controls.

The Envelope Page

Each channel has an ADSR envelope as well as additional channel controls that are found on this page. Note that only the ADSR controls can be modulated by the Macro system.

The main Envelope controls are:

- **ATTK** – sets the attack (fade-in) time.
- **DECAY** – sets the decay time, i.e. the time it takes for the volume to drop from maximum to the sustain level.
- **SUS** – sets the sustain level.
- **REL** – sets the release (fade-out) time, i.e. the time it takes for the envelope to drop to silence after you release a note.

The additional channel controls are:

- **SYNC** – when active, this synchronizes the ATTACK time with the host tempo.
- **START** – sets the sample start offset. This setting will be bypassed if the CYCLE sequencer is active for this channel.
- **RND** – sets the randomization amount of the sample start offset. This setting will be bypassed if the CYCLE sequencer is active for this channel.
- **WIDTH** – sets the stereo width of the channel.

3.4.2 EQ

Each channel has a 3-band parametric EQ

► Clicking on the **EQ** tab will display the EQ controls.
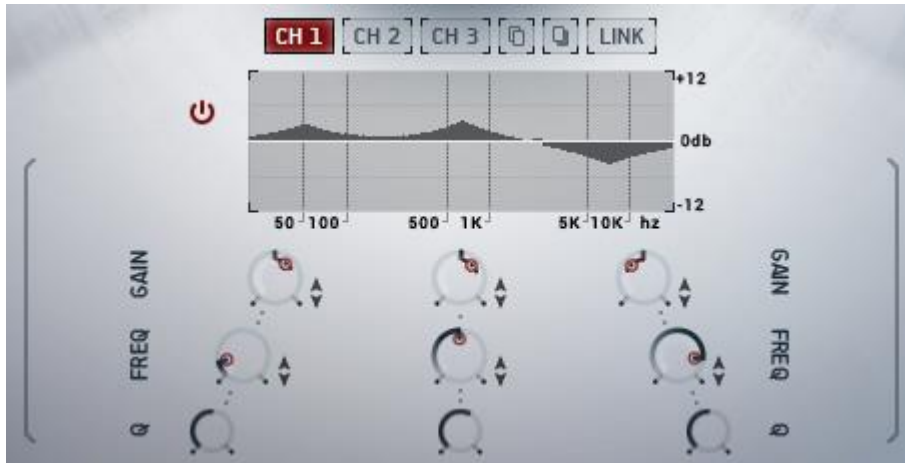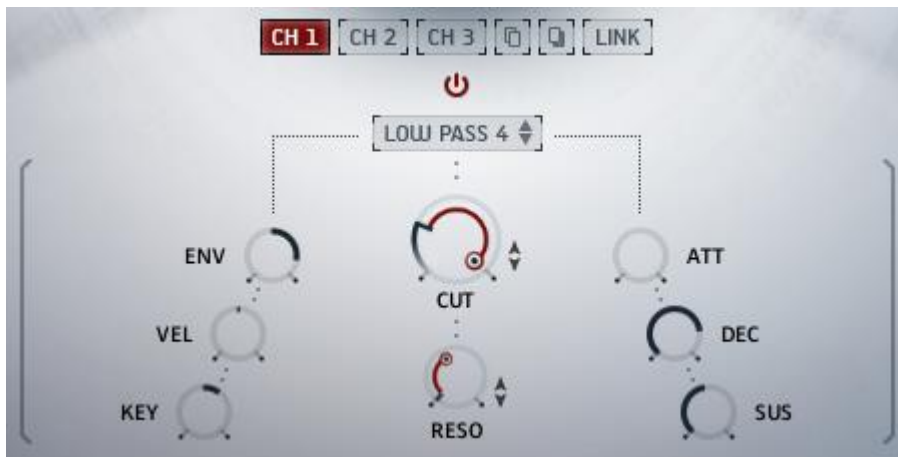

The EQ Page

Each band of the EQ has the same three controls:

- **GAIN**– sets the gain for the band.
- **FREQ**– sets the central frequency of the band.
- **Q** – sets the width of the band.

The GAIN and FREQ controls can be modulated with the Macro system.

3.4.3 Filter

► Clicking on the **FILTER** tab will display the filter controls.

The Filter Page

The filter has the following main controls:

- **ON/OFF** – the power switch at the top of the Filter page turns the currently selected filter on or off.
- **FILTER TYPE** – the menu below the power switch is where you can select a filter type.
- **CUT** – controls the cutoff frequency of the filter.
- **RES** – controls the resonant peak at the cutoff frequency.

The CUT and RES controls can be modulated with the Macro system.

To the left of the Filter page are controls that allow you to define the filter modulation:

- **ENV** – *Envelope Amount* : sets the how much the filter envelope will modulate the filter cutoff.
- **KEY** – *Key-Tracking* : sets how much the filter cutoff will track (i.e. follow) the key pitch.
- **VEL** – *Velocity Sensitivity* : sets how much the filter cutoff will be modulated by the key velocity.

To the right of the Filter page are the Filter Envelope controls:

- **ATT** – sets the attack time (fade-in time) of the filter envelope.
- **DEC** – sets the decay time (fade-out time) of the filter envelope.
- **SUS** – sets the sustain level of the filter envelope (i.e. the level at which the envelope will rest after the attack and decay phases).

3.4.4 Drive

► Clicking on the **DRIVE** tab will display the saturation and distortion controls.

The Drive Page

The drive page contains two effects: **SATURATION** and **DISTORTION**.

Saturation

The Saturation effect has three available modes which can be selected using the TYPE switch. The three available saturation types are:

- **TUBE** – a vacuum tube style distortion.
- **TAPE 1** – a clean, modern tape saturation.
- **TAPE 2** – a warmer, vintage tape saturation.

Each of these saturation types is controlled by the same two parameters:

- **DRIVE** – sets the overdrive amount.
- **OUT** – sets the output volume level.

Distortion

The Distortion effect has three available modes which can be selected using the TYPE switch. The three available distortion types are:

- **STOMP** – a stompbox style distortion.
- **AMP** – a guitar amplifier style distortion.
- **LOFI** – a digital degredation effect.

When the distortion is set to STOMP or AMP the available parameters are as follows:

- **DRIVE** – sets the overdrive amount.
- **TONE** – controls the tone (i.e. high frequency level or harshness).
- **BASS** – controls the low frequency level of the input signal.
- **TREBLE** – controls the high frequency level of the input signal.

When the distortion is set to LOFI the available parameters are:

- **BITS** – sets the bit depth of the signal.
- **S.RATE** – sets the sample rate of the signal.
- **NOISE** – controls the level of noise added to the signal.
- **COLOR** – controls the color (tone) of the noise.

3.4.5 Gate

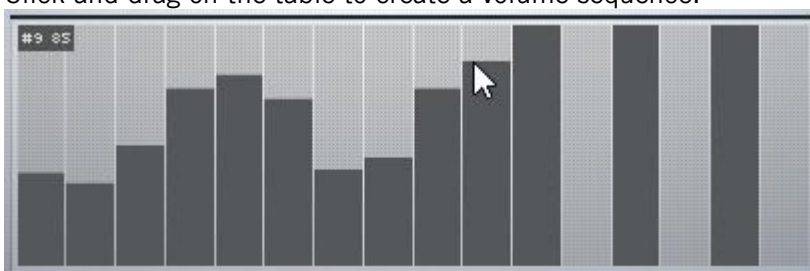► Clicking on the **GATE** tab will display the gate controls.
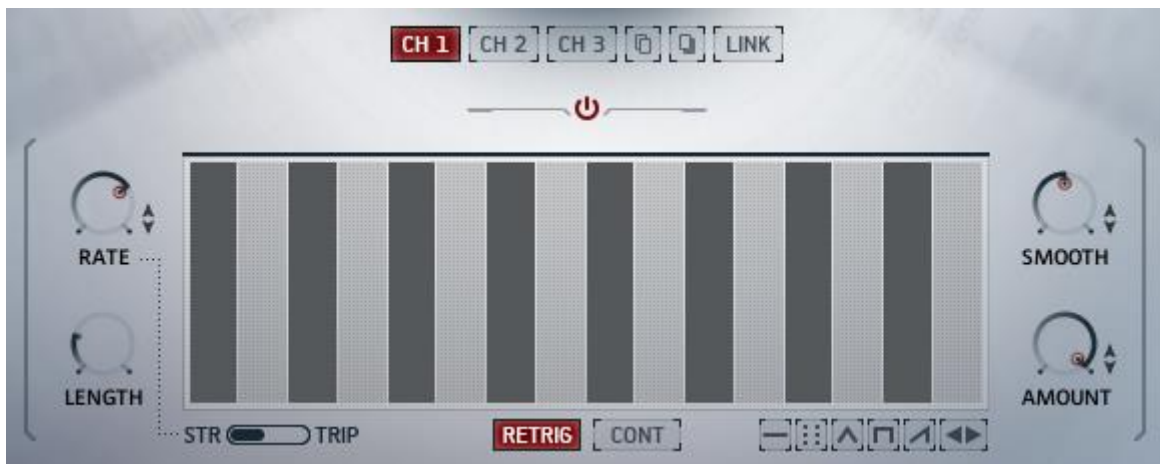
The Gate Page

The Gate modulates the output volume of the instrument over time to create rhythmic effects.

At the top of the Gate sub-section is an on/off switch which can toggle the effect on or off.

Below that is the main sequence pattern table.

► Click and drag on the table to create a volume sequence.

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To the left and right of the main sequence table are the four playback parameters:

- **RATE** – sets the rate at which the sequence will play back. This control can be set to either straight (STR) or triplet (TRIP) modes by using the switch below the main sequence table.
- **STEPS** – sets the number of steps in the sequence.
- **SMOOTH** – sets the amount of smoothing between steps; in other words: how long it takes to change from one volume setting to another.
- **RANGE** – sets the range of the Gate effect. At 0% the Gate will have no influence on the output volume. At 100% the Gate will be able to set the volume to any settings from silence to full.

Below the main sequence table are two controls for defining how the gate should react to MIDI and host inputs:

- **RETRIG** – When active, the sequence will start from the beginning when a new non-legato note is played. When inactive, the sequence position will link to the host song position.
- **CONT** – When active, the sequence will play continuously, when in active, the sequence will stop when no voices are active.

To the right of those controls are a handful of quick preset controls that will auto-fill the sequence table with patterns. From left to right they are:

- **Reset** - sets the value of all steps in the pattern to their default value.
- **Random** - randomizes the values of all steps in the pattern.
- **Triangle** - select a number and the gate pattern will automatically be populated with a triangle shaped wave with that many cycles.
- **Comb** - creates a comb pattern in which the width of each tooth is that of the selected number.
- **Ramp** - select a number and direction and the gate pattern will automatically be populated with a ramp shaped wave with that many cycles
- **Nudge Left** - moves the whole pattern one step to the left.
- **Nudge Right** - moves the whole pattern one step to the right.

3.4.6 Space

► Clicking on the **SPACE** tab will display the delay and reverb controls.

The Space Page

The Space Page contains two effects: **DELAY** and **REVERB**.

Delay

The master delay has four controls:

- **TIME** - sets the time between the input signal and the delayed signal.
- **FBACK** - controls how much of the effect output is fed back into the effect input. In other words: this controls the number of repeating echoes.
- **WIDTH** - controls how much the echoes will ping-pong from the left channel to the right channel.
- **AMOUNT** - controls the volume of the delay signal.

Reverb

The space reverb is an algorithmic reverb with five controls:

- **SIZE** – changes the size (and thus also length) of the reverb.
- **COLOR** – controls the color (tone) of the room.
- **DAMP** – controls the amount of absorption in the room.
- **SPREAD** – controls the stereo width of the effect output.
- **MIX** – controls the dry/wet mix; i.e. crossfades between the input signal and the reverb signal.

3.5 Macro Modulation

Not only is the Macro Knob a powerful real-time performance tool, but it can be modulated using the built-in Macro Modulation Sequencer, making it a way to evolve your sound over time.
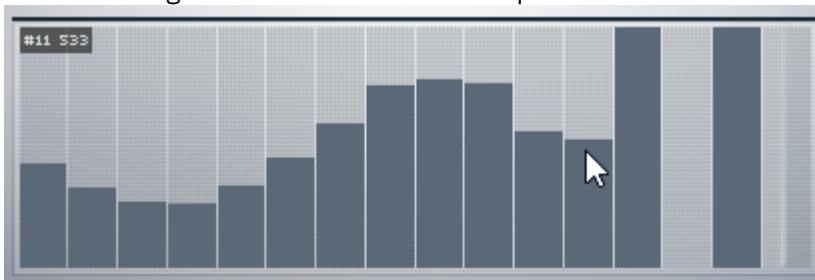
► To view the Macro Modulation controls, click on the **MACRO SEQ** tab at the top right of the interface.

The Macro Modulation Page

At the top of the Macro Modulation page is an on/off switch which can toggle modulation on or off.

Below that is the main sequence pattern table.

► Click and drag on the table to create a sequence.

To the left and right of the main sequence table are the four playback parameters:

- **RATE** – sets the rate at which the sequence will play back. This control can be set to either straight (STR) or triplet (TRIP) modes by using the switch below the main sequence table.
- **STEPS** – sets the number of steps in the sequence.
- **SMOOTH** – sets the amount of smoothing between steps; in other words: how long it takes to change from one value to another.
- **RANGE** – sets the range of modulation. Note that this control is bipolar and can be set to both positive and negative values.

When the Macro Modulation is active and the range is set, the Macro Knob will display the range information and current value with the modulation applied.

The Macro Knob Displaying the Modulation Range in Red and the Current Value

Below the main sequence table are two controls for defining how the gate should react to MIDI and host inputs:

- **RETRIG** – When active, the sequence will start from the beginning when a new non-legato note is played. When inactive, the sequence position will link to the host song position.

- **LOOP MODE** – When 1X is selected, the sequence will play back once and will stop when it reaches the last step; the sequence will then retrigger with the next note. When the infinity setting is selected, the sequence will loop continuously after it is triggered.

To the right of those controls are a handful of quick preset controls that will auto-fill the sequence table with patterns. From left to right they are:

- **Reset** - sets the value of all steps in the pattern to their default value.

- **Random** - randomizes the values of all steps in the pattern.

- **Triangle** - select a number and the pattern will automatically be populated with a triangle shaped wave with that many cycles.

- **Comb** - creates a comb pattern in which the width of each tooth is that of the selected number.

- **Ramp** - select a number and direction and the pattern will automatically be populated with a ramp shaped wave with that many cycles

- **Nudge Left** - moves the whole pattern one step to the left.

- **Nudge Right** - moves the whole pattern one step to the right.

3.6 Source Browser

The Source Browser is where you can select a sample set to be used by a channel.

You can access the Source Browser in two different ways:

- Clicking on a channel label in the mixer area will open the Source Browser for the selected channel.
- Clicking on the **SOURCE** tab will open the Source Browser for the last selected channel.
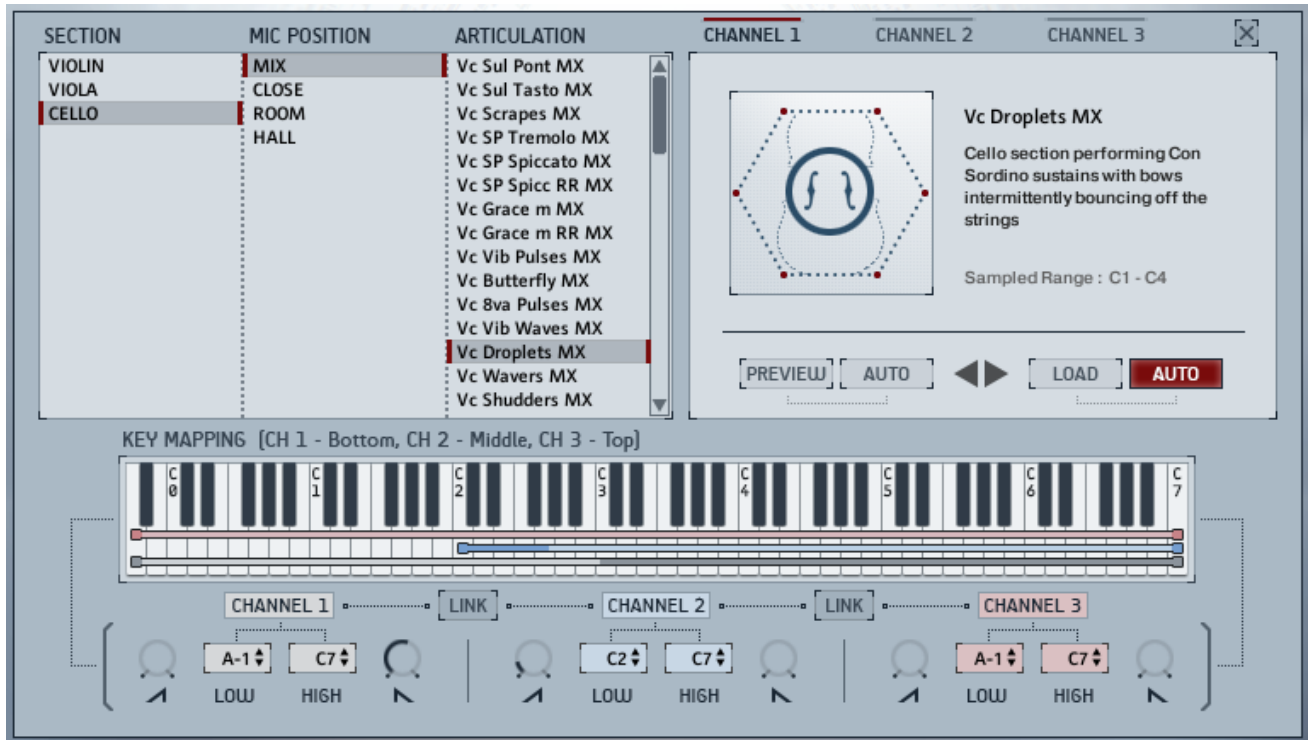
The Source Browser

The top section of the Source Browser is where you can browse, preview and load sample sets, and the lower section is where you can define the key-ranges for the channels.

3.6.1 Browsing and Loading Sounds

You browse through sound sources by category using the table to the left of the Source Browser page.

The Browser Table

The hierarchy starts on the left with the SECTION column, and ends on the right with the ARTICULATION column.

When you select a source from the ARTICULATION column, its details will be displayed in the info box on the right of the page.
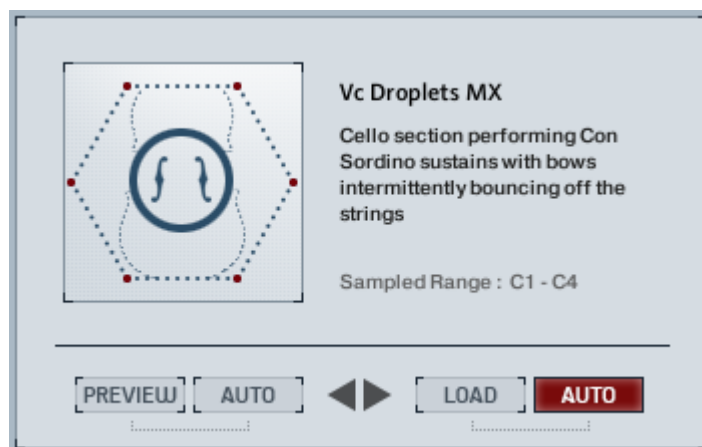

Source Info

In the info box you can see details about the source, including a brief description of the sound and its optimal key-range.

Below the source information are six buttons, which are (from left to right):

- **PREVIEW** – plays a short preview of the selected sound. Note that this preview is not processed by any effects, so the sound may change when loaded into an instrument with a lot of effects active.
- **AUTO** – when active, the preview button will automatically activate any time you select a sound in the browser.
- **PREVIOUS** / **NEXT** – you can use the arrows to browse through sounds in the selected section.
- **LOAD** – click this button to load the selected sound into the selected channel.
- **AUTO** – when active, a sound will automatically load into the selected channel when is it selected in the browser.

3.6.2 Key Mapping

The Key Mapping controls are located at the bottom of both the Source Browser Page and the Options Page. These controls allow you to define the playable key range of each channel, as well as fades for the lower and higher sections of the ranges.
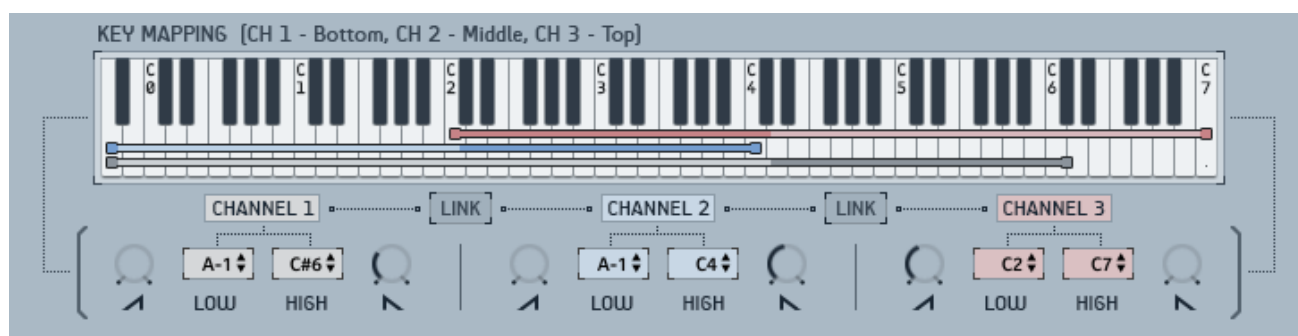
The Key Mapping Controls

Each channel has the same four controls:

- You set the lowest playable note using the **LOW** setting.
- You set the highest playable note using the **HIGH** setting.
- The knobs located beside each of these settings can be used to set the fade amount for the respective part of the key range.

When you use any of these controls, the key display will update to reflect any changes you make. The key display also highlights notes as you play them, so you can quickly see where the note you are playing relates to the defined key ranges.

Channels can also be linked by using the **LINK** buttons.

Clicking on a **LINK** button will not automatically override the settings of a channel, but when you click on a parameter in either of the linked channels, that channels settings will be copied to the other channel.

Note that it is possible to link all three channels by activating both of the **LINK** buttons.

3.7 Options
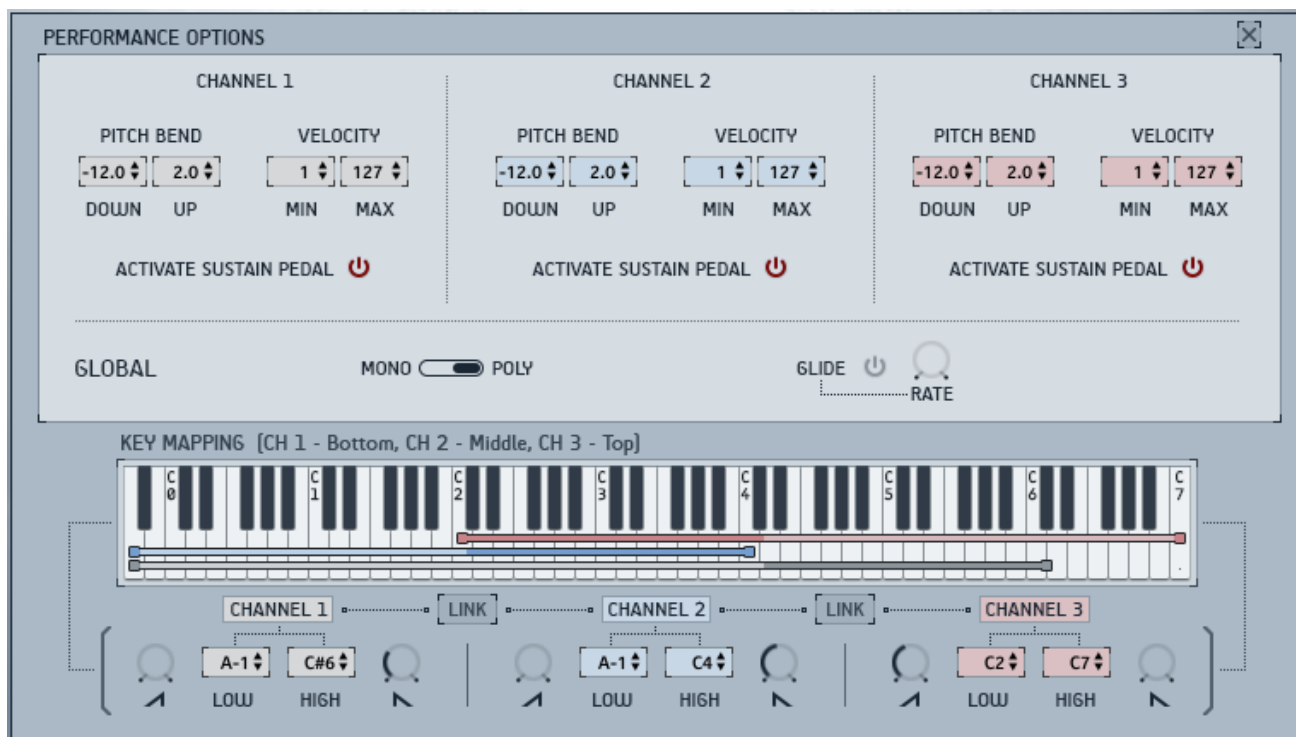
The Options Page

Each channel has a set of options that influence how it reacts to MIDI, these are:

- **PITCH BEND** – these two controls allow you to define the range of pitch bend for both the DOWN and UP directions.

- **VELOCITY** – these two controls can be used to limit the velocity range of the channel, any velocities played lower than the MIN value will be set to that value, and any played higher than the MAX value will be set to that value.

- **ACTIVATE SUSTAIN PEDAL** – when active the channel will use the sustain pedal (MIDI CC64) to sustain notes; when inactive the channel will ignore the sustain pedal and will only respond to note on and off messages.

The lower part of the Options Page contains a duplicate of the KEY MAPPING controls from the Source Browser (more information about these controls can be found in section 3.6.2 Key Mapping)

The Options Page also has the following GLOBAL controls:

- **MONO** / **POLY** – this switch is used to define the voice mode for the instrument. When MONO is selected the instrument will only play one note at a time, when POLY is selected the instrument is able to play multiple notes at once.

- **GLIDE** – toggles pitch glide on or off. When on, notes will glide over time from the previous note to the new note.

- **RATE** – defines the time it takes to glide from one note to another.

3.8 Cycle

Cycle is a powerful tool that combines a rhythmic sequencer with an arpeggiator and granular capabilities.

Cycle is unique in that it is processed before the volume envelope, so you rhythms and stutters will fade in and out with each key press.

As with most of the features in the Rhythmic Texture Designer, each channel has its own Cycle settings, which means that one channel can be arpeggiating, while another plays a counter-rhythm.

► Clicking on the **CYCLE** button to the top right of the interface will open the Cycle Page.

The Cycle Page

You can view the settings for each channel by clicking on the tabs above the waveform display.

Beside the channel tabs are the **COPY** and **PASTE** options, which copy all of the settings from one channel and allow you to paste those settings into another channel.

To the right of the copy and paste buttons is the **LINK** button. Clicking on the **LINK** button will link all of the channels allowing you to control them as one. The settings of the current channel will be copied to the other channels, but if you unlink the channels they will return to their original settings.

3.8.1 Main Cycle Controls

Above the waveform and to the left is the on/off switch. This will toggle the cycle functionality on or off for the selected channel(s).

To the right of the channel tabs and LINK button are two controls that influence how the cycle playback operates for the selected channel(s):

- **RETRIGGER** – when active, the Cycle playback position will reset when a new non-legato note is played. When off, the Cycle playback will sync to the host song position.
- **ARP** – from this menu you can select the arpeggiator mode:
  - Off – the arpeggiator will be inactive; all held notes will play at once
  - Up – held notes will cycle from lowest to highest
  - Down – held notes will cycle from highest to lowest
  - Cycle – the notes of the chord will be played from lowest to highest, and then reverse direction when the last note is played.
  - Cycle+ – like cycle, but when the last note is reached it is played twice.
  - Random – held notes are played back one at a time in a random order.

Below the waveform are six knobs that define the playback of the current pattern.

The Main Cycle Parameters

- **START** – Sets the sample start offset for the current pattern.
- **RAND** – Defines the sample start randomization for the current pattern.

Note: The START and RAND controls both override the START and RAND parameters on the Envelope Page.

- **RATE** – Sets the playback rate for the current pattern.
- **STEPS** – Sets the number of steps in the current pattern.
- **ATT** – Sets the attack (fade-in) time of the samples played by the Cycle sequencer.
- **REL** – Sets the release (fade-out) time of the samples played by the Cycle sequencer.

Each of these knobs has a lock button assigned to it. Clicking this button will lock the value of the parameter so that it will not change when switching between patterns.

Below the six parameter knobs is an area for tying steps. This feature is only active if the number of steps is 16 or less.

The Tie Buttons

► Clicking on a tie button will link that step to the next step.

Below the tie buttons are the modulation tables. There are three tables, each linked to a specific parameter: **START**, **VELOCITY**, and **PAN**. The tables are accessed by using the tabs below the table.
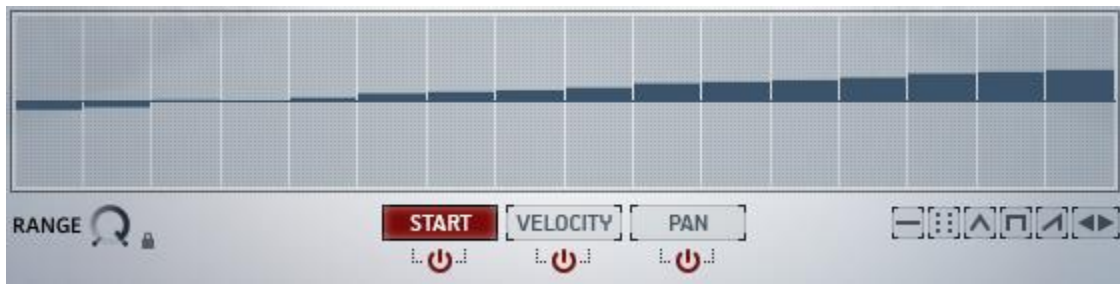
The Cycle Modulation Table

Each modulation table can be turned on or off using the power switches below the tabs.

► Click and drag on the table to create a sequence.
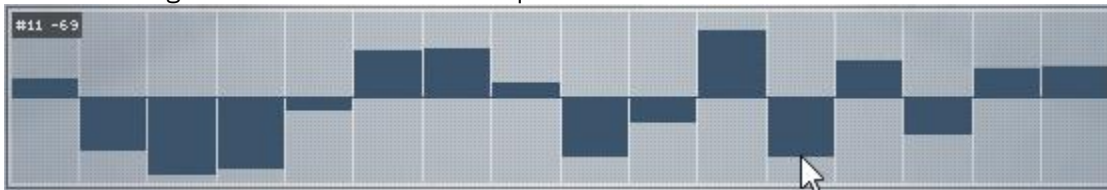
The range of the modulation is set using the **RANGE** control. Note that this setting is saved and recalled with patterns, unless its lock button is engaged.

Below the table and to the right are a handful of quick preset controls that will auto-fill the sequence table with patterns. From left to right they are:

- **Reset** - sets the value of all steps in the pattern to their default value.
- **Random** - randomizes the values of all steps in the pattern.
- **Triangle** - select a number and the pattern will automatically be populated with a triangle shaped wave with that many cycles.
- **Comb** - creates a comb pattern in which the width of each tooth is that of the selected number.
- **Ramp** - select a number and direction and the pattern will automatically be populated with a ramp shaped wave with that many cycles
- **Nudge Left** - moves the whole pattern one step to the left.
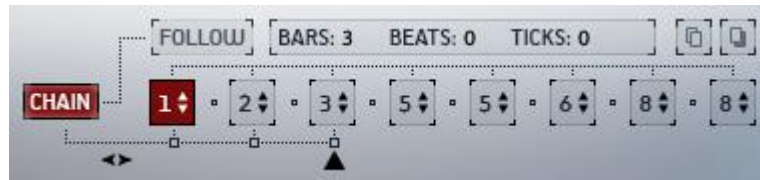- **Nudge Right** - moves the whole pattern one step to the right.

3.8.2 Patterns and the Pattern Chainer

Each channel can have up to 8 Cycle patterns.

► You can select a pattern to view by clicking on any of the buttons in the **PATTERN SELECT** area.

It is possible to chain patterns together to create a longer sequence.

The Pattern Chainer

► Clicking on the **CHAIN** button will toggle the Pattern Chainer on or off.

► The number of patterns in the chain is set by clicking and dragging on the arrow below the pattern boxes to the right of the CHAIN button.
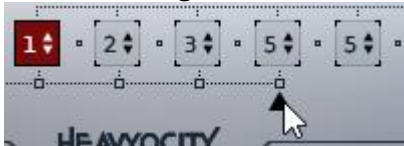
► Each pattern box can contain a different pattern. Click and drag on the box to a select a pattern for that point in the chain.

The currently playing pattern will be highlighted in red.

The overall length of the pattern is displayed in the readout above the pattern boxes.

To the right of this readout are **COPY** and **PASTE** button that allow you to copy a pattern and paste it into another pattern slot. This is a useful tool for making variations on a single pattern.

To the left of the length readout is the **FOLLOW** button; when this is active, the currently playing pattern will automatically be displayed for editing.

When the **CHAIN** option is inactive, the currently displayed pattern will be the pattern used for playback.
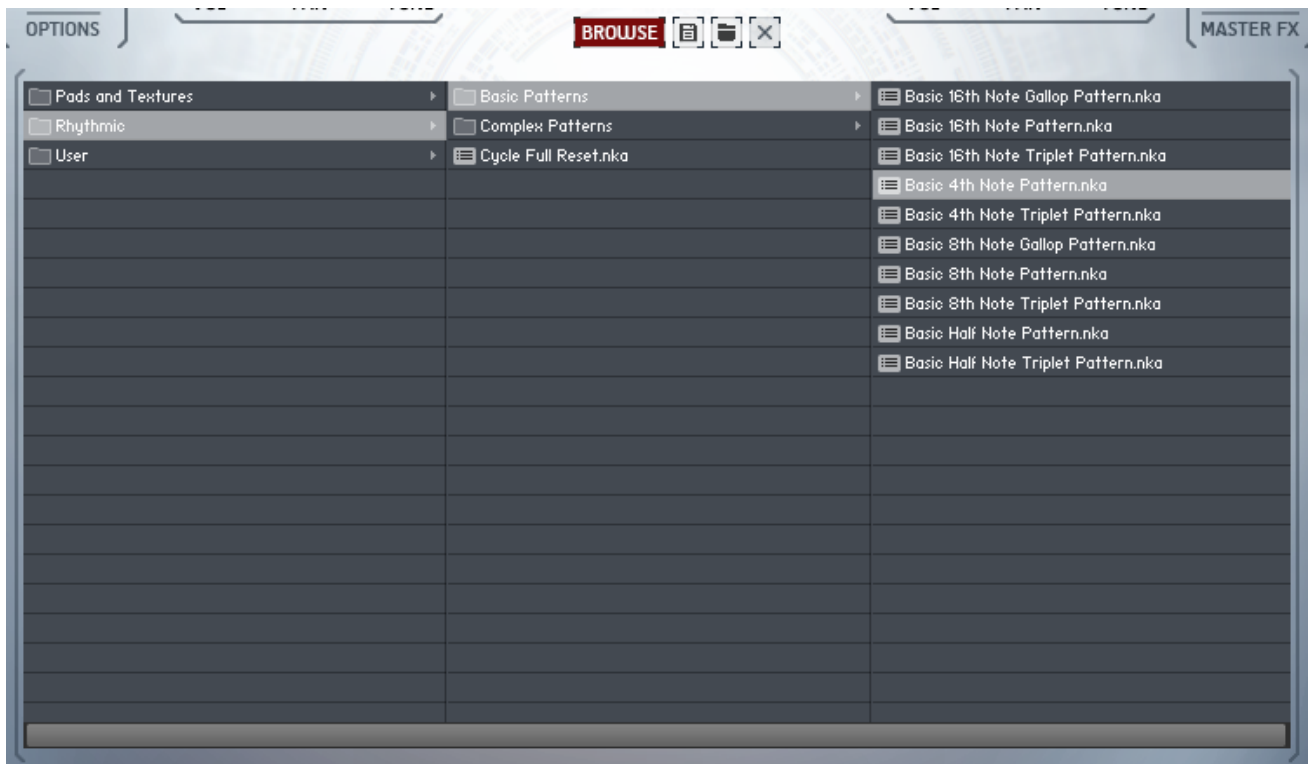
3.8.3 Cycle Presets

The Cycle Page has options for saving and loading Cycle Presets. All of these controls are located at the top of the Cycle Page.

Loading Presets

There are two ways to load a Cycle preset.

- Via the Browser
- Via the Load button

To load a preset via the browser, first you must click on the **BROWSE** button; this will open the Cycle Browser Page.

The Cycle Preset Browser

Use the table to browse through presets. When you find something you want to load, double-click on it.

You can exit the Cycle browser without loading anything by either clicking on the **BROWSE** button again, or by clicking on the **X** button.

► To load a preset without using the browser, click on the button with the folder icon; this will open a dialogue window from which you can browse your file system for valid .nka files.

Saving Presets

When you have created a Cycle sequence that you like and want to save to use with other String Designer presets, you can export the settings of the Cycle Page as an nka file.

► To save a Cycle preset, click on the button with the floppy disk icon.

This will open a system dialogue window, from which you can define the location and name of the nka file before saving it.

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4 Credits

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