



Master Sessions

ENSEMBLE DRUMS

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1 Welcome to MASTER SESSIONS: ENSEMBLE DRUMS!

Thank you for purchasing MASTER SESSIONS: ENSEMBLE DRUMS, the first in a new line of pristine virtual instruments!

With 7 unique ensembles in 30+ presets and 300+ tempo-synced loops organized into straight and triplet grooves, MASTER SESSIONS: ENSEMBLE DRUMS is soon to become your library of choice for earth-shaking low percussion. The included loops are provided in menu and single loop presets, allowing you to easily mix and match stems seamlessly to create complex percussion beds.

As the newest addition to Heavyocity's award-winning virtual instruments - DAMAGE, THE AEON COLLECTION, DM-307: Modern Groove Designer, and the EVOLVE Series - MASTER SESSIONS: ENSEMBLE DRUMS answers the call of pro composers looking for a massive, production-ready sound.

The included content is complemented by an advanced yet highly intuitive user interface featuring the Stage (Kits and Collection only), advanced Trigger FX™ and Heavyocity's signature Punish™ knob. With Loop Mutator™ technology (Loops and Collection only) users can sequence, re-compose and manipulate loops in new and exciting ways.

1.1 System Requirements

MASTER SESSIONS: ENSEMBLE DRUMS requires a full version of Native Instruments KONTAKT 5 (version 5.3.1.37 or later).

MASTER SESSIONS: ENSEMBLE DRUMS will only function in KONTAKT PLAYER for 10 minutes in Demo Mode.

1.2 Instrument Types

MASTER SESSIONS: ENSEMBLE DRUMS provides you with 3 different instrument types.

- **Kits** – multi sampled drums featuring a 3 channel mixer.
- **Loop Suites** – a collection of tempo-synced loops, each one triggered by a different key.
- **Single Loops** – a single loop, sliced and spread over the keyboard.

1.3 Loading Instruments

MASTER SESSIONS: ENSEMBLE DRUMS is not installed like a KONTAKT PLAYER library, and so will not appear in KONTAKT's Library Tab.

The instruments can be easily loaded in a number of ways:

- Via the **Load...** entry in KONTAKT's **Files** menu.
- Locating the files in your system browser, and then dragging the file into KONTAKT's rack.

When an instrument is loaded it is also possible to browse through the other instruments in the same folder by clicking on the left and right arrows located in the instrument header.

More information on saving and loading instruments can be found in the *Kontakt 5 Application Reference* document that was installed with KONTAKT 5.

2 Key Mappings

In all instruments, the Trigger FX and Amp Sequencer Key-Switches are located on the same keys:

- F6 to A6 – The Trigger FX
- Bb6 to C7 – The Amp Sequencer

Kits

The key mapping of the Kit instruments depends on the specifically loaded instrument. However the virtual keyboard in KONTAKT is color-coded to help show where each drum is mapped.

Loop Suites

The key mapping of the Loop Suites are generally laid out so that the lower drum loops are located to the left of the key-range, and the higher sounds are found on the right.

The Breakout instruments are arranged so that all of the same notes in the different octaves are stems of the same loop, so playing all of the D notes in the different octaves will reproduce the respective loop found in the Loop Suite.

Single Loops

In the Single Loop instruments, A0 triggers playback of the whole loop, and the notes from C1 onwards are a mapping of the individual slices.

Changes made to the parameters of the individual slices will be included in the loop playback.

3 Common Features

The following are features that can be found in all the included instrument types.

3.1 Trigger FX

The Trigger FX are effects that are triggered with MIDI Keys F6-A6. They allow you to temporarily alter or completely mangle a sound quickly and with ease.

There are five Trigger FX available:

- 1 **Distortion** (F6) - similar to the distortion in the Master Effects section.
- 2 **LoFi** (F#6) - a digital quality reduction effect. The results can range from retro and gritty, to extreme decimation.
- 3 **Filter** (G6) - a choice of low pass or high pass filters to alter the timbre of the instrument.
- 4 **Panner** (G#6) - modulates the stereo field to move the sound between speakers.
- 5 **Delay** (A6) - a delay/echo effect.

3.1.1 Main Controls

To access the Trigger FX page, click on the **T-FX** tab at the top of the interface.



1 The Main Control Page of the Trigger FX

With the Trigger FX page now open, you will see five columns (one for each of the effects) with a similar arrangement of controls. The following controls have the same function, regardless of the effect:

- **On/Off Switch** - this is located to the right of the effect's name. It can be used to toggle the effect on or off, if you do not wish to use MIDI keys to trigger the effect.
- **Seq.** - toggles the modulation sequences on or off.
- **Advanced** - opens the advanced controls for the effect.

As well as these controls, all of the effects have two parameters that you can edit. These alter the sound of the effect in some way:

- **Distortion**
 - **Drive** - controls the overdrive amount.
 - **Damp** - controls a lowpass filter that can be used to soften the harsh overtones produced by the distortion.
- **LoFi**
 - **Bits** - controls the bit-depth of the output. A lower bit-depth means more digital distortion.
 - **S. Rate** - controls the sample rate of the output. Lowering the sample rate will produce aliasing - a digital artefact that is usually undesired, but can also be used creatively.
- **Filter**
 - **Cutoff** - controls the cutoff frequency of the filter.
 - **Reso.** - controls the resonant peak at the cutoff frequency.
- **Panner**
 - **Width** - controls the stereo width (how far a sound can be positioned in the panoramic field).
 - **Pan** - controls the stereo position of the sound.
- **Delay**
 - **Feedback** - controls how much of the delayed signal is fed back into the effect's input. In other words, this controls the strength of the repeating echoes.
 - **Width.** - controls the frequency (rate) of the LFO.

3.1.2 Advanced Controls

Every effect in the Trigger FX has the same advanced control layout.

- ▶ The advanced page for a specific effect is accessed by clicking on the **ADVANCED** button at the bottom of the effect's column.



2 The Advanced Controls for the LoFi Trigger FX

With the advanced page now open, you will see the effect control column has moved to the far left position, with the advanced controls filling the rest of the page.

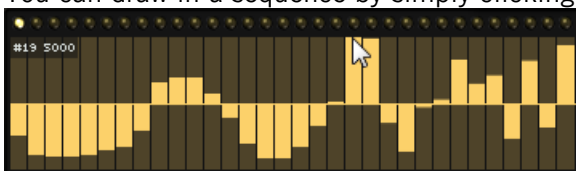
You can navigate between effects by using the arrow buttons to the bottom left of the page.

- ▶ To return to the main Trigger FX page, click on the **BACK** button between the navigation arrows to the bottom left.

Step Sequencers

Each of the main parameter controls is linked to a step sequencer.

- ▶ You can draw in a sequence by simply clicking and dragging with the mouse.



The master rate for both of the sequences is controlled by the **Seq. Rate** knob located between the two step sequencers.

There are three edit buttons linked to each sequencer:

- **RANDOM** – randomizes the values in the step sequencer table.
- **C** (copy) – copies the values in the step sequencer table.
- **P** (paste) – if a sequence has been copied, clicking this button will paste the copied sequence into the sequencer table.

The additional controls are the same for each of the sequences, but control them individually.



3 The Sequencer Controls

- **Range** - sets the modulation amount applied from the sequence to the parameter, i.e. the intensity of the modulation.
- **Smooth** - sets the smoothing amount between steps. When set all the way to the left, no smoothing will occur, and when set all the way to the right, smoothing will happen constantly so no stepping will be heard.
- **STEPS** - sets the number of steps for the sequence. You can select 16 or 32 steps.
- **PATTERN** - loads a preset pattern into the sequence. These are:
 - 1 - Sine wave
 - 2 - Ramp down
 - 3 - Ramp up
 - 4 - Square

Trigger FX that utilize the Step Sequencers work best when the input key is quantized to a beat.

Effect Envelope



4 The Effect Envelope Controls

Between the step sequencers you will also find the effect envelope. This is a simple Attack/Decay envelope that sets the fade in and fade out times for the effect when it is triggered. The controls are:

- **Attack** - sets the fade in time for the effect, i.e. the amount of time it takes for the effect to go from neutral to full effect after the effect is triggered.
- **Decay** - sets the fade out time for the effect, i.e. the amount of time it takes for the effect to go from full to neutral after the effect is deactivated.

Effect Specific Controls

The **Filter** and **Delay** effects both have specific controls that are accessed on their Advanced Pages. They are both switches that are located at the bottom of the main parameter control column.

- **Filter: FILTER TYPE** - this switches the filter between lowpass (**LO**) and Highpass (**HI**) filter types.
- **Delay: Time** - selects the delay time.

3.2 Amp Sequencer

The Amp Sequencer is a quick and easy way of applying amplitude modulation to your sound. The effect can be used like a step sequencer, a rhythmic gate, or a stutter effect.

Triggering the Amp Sequencer

The Amp Sequencer can be triggered from your MIDI keyboard on keys Bb6-C7, with the notes setting different Sequencer rates:

- **Bb6** - the sequencer plays back at the rate defined by the **Rate** knob.
- **B6** - the sequencer plays back at double speed.
- **C7** - the sequencer plays back at quadruple speed.

Amp Sequencer Controls



5 The Amp Sequencer Controls

The controls for the Amp Sequencer are located at the bottom of either the Stage or Loop Mutator Page.

In the center of the Amp Sequencer Controls is the Amp Sequencer Pattern.

► You can draw in a pattern by clicking and dragging on this area with your mouse.

To the right is the Amp Sequencer **Rate** knob. This sets the main playback rate of the Amp Sequencer.

To the left are the playback buttons. These buttons mimic the MIDI Keytriggers:

- Activating one of the buttons will start the amp sequencer.
- The Amp Sequencer will play back at a rate dependent on which button is pressed. The playback rate is equal to the value on the button multiplied by the rate set by the **Rate** knob.

4 The Kit Interface

4.1 Navigation

The controls are spread across 4 pages, each dealing with different aspects of the instrument:

- 1 **MAIN** - contains the main controls for the most commonly used parts of the instrument, like the volume envelopes, master effects and mixer.
 - 2 **T-FX** - gives you access to the parameters of the Trigger FX.
 - 3 **EQUALIZER** - contains a collection of equalizer options for the instrument.
 - 4 **STAGE** – a virtual stage for quickly placing the drums in the mix.
- You can navigate through the pages by clicking on their respective tabs.

The main 3 tabs are located to the top right of the interface. The 4th tab can be found to the lower right.

4.2 Main Page



6 The Main Page of a Kit Instrument

The main page is where you will find the main sound and performance controls. This page contains 4 main areas:

- **Master Effects** - here you have access to 4 master effects that are applied to the whole instrument.
- **Central Section** - this contains 3 subpages, accessed by tabs:
 - **Twist** - an animated, tone-altering effect.
 - **Mix** – a 3 channel mixer.
 - **Punish** - for damaging your audio.
- **Amplitude Envelopes** - you have access to volume envelopes for all channels.
- **Performance** - pitch bend and velocity controls can be found here.

4.2.1 Master Effects

Every instrument has 4 master effects, located to the left side of the Main page. Each effect has 4 parameter controls and an on/off switch.

The controls for each effect are displayed when you click on the effect name, or when the effect is activated.

The on/off button is located beside the effect name. The effect is active when the button is glowing.

The following is a list of the available effects and their parameters:

Delay



7 Delay Effect Controls

A delay effect produces a version of the signal that is delayed in time. When mixed with the original signal, this can produce an echo effect. Additional echoes can be created by feeding the delay output back into the effect input.

The delay effect is accessed by clicking on the **DEL.** tab. The available controls are:

- **Time** - the time between the original signal and the delayed signal (i.e. the time between echoes).
- **Feedbk** (feedback) - controls how much of the delayed signal is fed back into the effect's input. In other words, this controls the strength of the repeating echoes.
- **Width** - controls the stereo width of the echoes.
- **Amt** (amount) - controls the output level of the delayed signal.

Modulation



8 Modulation Effect Controls

The modulation effect is a mix of chorus and phaser effects. It can be used to thicken the sound and give a sense of movement to the instrument timbre.

The modulation effect is accessed by clicking on the **MOD.** tab. The available controls are:

- **Rate** - controls the rate of modulation (or movement) in the effect.
- **Depth** - controls the intensity of the modulation.
- **Morph** - blends between the phaser and chorus effects - with the knob set all the way to the left, you will hear the phaser only; and with the knob set to the right you will hear only the chorus; any setting in between will be a combination of the two effects.
- **Amt** (amount) - controls the output level of the modulated signal.

Reverb



9 Reverb Effect Controls

A reverb effect is an artificial space simulator. The reverb effect used in this library is based on a technique called convolution, in which an impulse response of a real (or not) space is used to produce a faithful emulation. An impulse response can be thought of as an acoustic fingerprint, and are capable of producing the most realistic reverb effects, or crazy sounds.

The reverb effect is accessed by clicking on the **REV.** tab. The available controls are:

- **Impulse Response Menu** - you can use the drop down menu to select one of the 32 provided impulse responses.
- **Pre Del** (Pre-Delay) - controls the amount of delay before the reverb signal, adding time between the input signal and the reverb signal.
- **Size** - sets the pitch shift amount of the impulse response, this changes the perceived size of the space.
- **Mix** - controls the dry/wet mix of the clean (dry) signal and the reverb (wet) signal.

Distortion



10 Distortion Effect Controls

The distortion effect emulates the sound of an overdriven analogue circuit. This makes the sound "heavier" by adding overtones and compressing the dynamics.

The distortion effect is accessed by clicking on the **DIST.** tab. The available controls are:

- **Drive** - controls the amount the signal is overdriven, i.e. the distortion amount.
- **Tone** - controls the tone of the output. Lowering the value of this control will lower the amount of high frequencies present in the output signal.
- **Bass** - controls the level of the bass frequencies.
- **Treb** (treble) - controls the level of the high (treble) frequencies.

4.2.2 Twist and Punish FX

The central area in the Main Page is divided into three tabs; the first and last tabs contain the **TWIST** and **PUNISH** effects – macro effects that can quickly and sometimes drastically alter the sound of the loaded instrument.

- ▶ You can navigate to these effects by clicking on the respective tab.

Twist



11 Twist Controls

The twist effect is an animated, tone-altering effect that *twists* the audio. You can use it as a stationary effect to quickly alter the tone of the instrument, or you can use the animation controls to give the tone movement. The controls available are:

- **Twist** - this is the large knob in the center. It is used to control the amount of animation that is applied to the tone.
- **Tone** - sets the central tone.
- **Rate** - controls the rate of the tone animation.
- **On** - toggles the effect on or off.

Punish



12 Punish Controls

The Punish effect is a combination of compression and saturation controlled from a single knob. Turn the knob to punish the sound.

The effect can be toggled on or off using the **On** button.

4.2.3 Mixer



13 The Mixer Controls

Clicking on the **MIX** tab in the central area opens a 3 channel mixer.

Each drum was sampled with 3 microphone positions, and the mixer allows you to blend between these positions for all drums in the nki.

For each channel you have access to:

- **Pan** - controls the position of the channel in the stereo field.
- **Tune** - controls the tuning of the channel (+/- 24 semi-tones).
- **Level** - controls the volume level of the channel.
- **S** (solo) – mutes the other channels (with the exception of channels that also have their solo buttons turned on) so only the soloed channel can be heard.
- **M** (mute) – mutes the output of the channel so it can no longer be heard.
- **Purge** – when this button is turned on, the samples used for the channel will be removed from memory. Use this control only if you plan to not use a channel for a given project. If you just want to deactivate the channel temporarily, use the mute (**M**) button.

4.2.4 Volume Envelopes



14 The Envelope Controls

Each of the 3 channels has its own volume envelope. The controls for a channel's volume envelope are accessed by clicking on the respective tab.

- ▶ You can control a parameter for all of the envelopes at once by holding the [Alt] key while you control the knob.

You can also link the 3 volume envelopes by using the **LINK** button. This will copy the currently selected channel's envelope settings to the other 2 channels and allow you to control them all at once without using the alt key.

There are 4 knobs available for each volume envelope:

- **Attack** - controls the attack (fade in) time.
- **Decay** - controls the time it take for the volume to fade from the maximum value to the sustain value.
- **Sustain** - controls the level at which the envelope will sustain while the key is held.
- **Release** - controls the release (fade out) time of the envelope after the key is released.

Increasing the release time will add to the amount of voices holding over as other notes are playing, this can increase Kontakt's CPU load.

4.2.5 Performance

The Performance section is located at the bottom of the Main Page.



15 The Performance Controls

It contains the following controls:

- **Pitch Bend Up** - controls the range of the pitch bend MIDI control when the value is positive.
- **Pitch Bend Down** - controls the range of the pitch bend MIDI control when the value is negative.
- **Velocity Min** - controls the minimum velocity. Any MIDI notes played with a velocity lower than this will have their velocity set to this value.
- **Velocity Max** - controls the maximum velocity. Any MIDI notes played with a velocity higher than this will have their velocity set to this value.

The arrows to the right of the Velocity and Pitch Bend controls can be used to increase or decrease these values one step at a time.

4.3 Stage

The Stage page can be accessed by clicking on the navigation tab to the bottom right of the interface.



16 The Stage Page

The Stage page is an intuitive way of placing the drum in the recorded space by altering the gain and pan of the three different channels for that drum.

To place a drum using the Stage all you need to do is...

1. Make sure the Stage is active by checking if the **ON/OFF** LED at the bottom of the interface is glowing.
2. If the Stage is not active, you can activate it by clicking on the **ON/OFF** LED.
3. Next, select the drum you wish to position, either by hitting the corresponding MIDI key or by clicking and dragging on the area labeled Key.
4. Finally, place the drum by clicking on one of the positions offered on the 7 by 5 matrix of LED buttons.

You can place all of the drums/keys to the same position at once by holding the alt key while you click on the position LED.

- To clear all the settings of the stage for all keys, click on the **RESET** button and all drums will be placed in the center of the stage.

4.4 Equalizer

An Equalizer (commonly known as an EQ) is an effect designed to control the levels of different parts of a signal's spectrum. The effect can be used in a subtle manner to compensate for imperfections in recordings, or help fit sounds in a mix; or it can be used in an extreme way to creatively alter the timbre of an instrument.

The Equalizer page is where you will find controls that alter the timbre of the instrument.



17 The Equalizer Page

Each instrument contains:

- A per-channel 3-band parametric EQ
- A master EQ based on the analogue modeled SOLID EQ.

4.4.1 Master EQ

The Master EQ is located on the right side of the Equalizer Page.



18 The Master EQ of a Kit Instrument

It is a 4 band EQ with high shelf (**HF**) and low shelf (**LF**) bands, as well as two mid frequency bell-shaped bands (**LMF** and **HMF**).

All four of the bands contain the following controls:

- **Level** - the gain level of the band.
- **Freq** - for the high and low shelves, this controls this starting frequency of the shelf. For the mid-frequency bands this controls the central frequency of the band.

The mid-frequency bands also contain an additional control:

- **Q** - controls the Quality (Q) of the band. This alters the width of the band. A higher Q setting gives a narrower band-width.

4.4.2 Channel EQ

Each channel has its own 3-band parametric EQ, the controls for which are located on the left side of the Equalizer Page.



19 The Sample EQ Controls

- ▶ To access the EQ for a channel, click on the respective tab.

Unlike the Master EQ, all of the bands in the channel EQ are bell-shaped. As such, all three bands have the same controls:

- **Level** - the gain level of the band.
- **Freq** - controls the central frequency of the band.
- **Q** - controls the Quality (Q) of the band. This alters the width of the band. A higher Q setting gives a narrower band-width.

4.4.3 Output

In the center of the Equalizer Page is one final control: the **OUTPUT** knob.



20 The Output Knob

This knob controls the final output level of the instrument, and can be used to compensate for volume peaks created by all of the different effects included in the instrument.

5 The Loop Instrument Interfaces

5.1 Navigation

The controls are spread across 4 pages (5 for the single loops):

- 1 **MAIN** – contains the main controls for the most commonly used parts of the instrument, like the volume envelopes and master effects.
 - 2 **T-FX** – gives you access to the parameters of the Trigger Effects.
 - 3 **EQ/FILTER** – contains a collection of equalizer options for the instrument.
 - 4 **MUTATOR** – an advanced arpeggiator for mutating loops.
 5. **ADV.LOOP** – this page is only available on the Single Loop interface. It contains options for altering the loop playback.
- You can navigate through the pages by clicking on their respective tabs.

5.2 Main Page

The main page is where you will find the main sound and performance controls.



21 The Loop Menu Interface

This page contains 4 main areas:

- **Master Effects** - here you have access to 4 master effects that are applied to the whole instrument. The details of these controls are covered in section 3.2.
- **Central Section** - this contains 3 subpages, accessed by tabs:
 - **Twist** - an animated, tone-altering effect.
 - **Loop** – where you can alter the volume, tuning and pan of each loop/slice.
 - **Punish** - for damaging your audio.
- **Amplitude Envelopes** - you have access to volume envelopes for all loops.
- **Performance** - pitch bend and velocity controls can be found here. Details for these controls can be found in section 3.4.

5.2.1 Master Effects

Every instrument has 4 master effects, located to the left side of the Main page. Each effect has 4 parameter controls and an on/off switch.

- ▶ The controls for each effect are displayed when you click on the effect name, or when the effect is activated.

The on/off button is located beside the effect name. The effect is active when the button is glowing.

The following is a list of the available effects and their parameters:

Delay



22 Delay Effect Controls

A delay effect produces a version of the signal that is delayed in time. When mixed with the original signal, this can produce an echo effect. Additional echoes can be created by feeding the delay output back into the effect input.

The delay effect is accessed by clicking on the **DEL.** tab. The available controls are:

- **Time** - the time between the original signal and the delayed signal (i.e. the time between echoes).
- **Feedbk** (feedback) - controls how much of the delayed signal is fed back into the effect's input. In other words, this controls the strength of the repeating echoes.
- **Width** - controls the stereo width of the echoes.
- **Amt** (amount) - controls the output level of the delayed signal.

Modulation



23 Modulation Effect Controls

The modulation effect is a mix of chorus and phaser effects. It can be used to thicken the sound and give a sense of movement to the instrument timbre.

The modulation effect is accessed by clicking on the **MOD.** tab. The available controls are:

- **Rate** - controls the rate of modulation (or movement) in the effect.
- **Depth** - controls the intensity of the modulation.
- **Morph** - blends between the phaser and chorus effects - with the knob set all the way to the left, you will hear the phaser only; and with the knob set to the right you will hear only the chorus; any setting in between will be a combination of the two effects.
- **Amt** (amount) - controls the output level of the modulated signal.

Reverb



24 Reverb Effect Controls

A reverb effect is an artificial space simulator. The reverb effect used in this library is based on a technique called convolution, in which an impulse response of a real (or not) space is used to produce a faithful emulation. An impulse response can be thought of as an acoustic fingerprint, and are capable of producing the most realistic reverb effects, or crazy sounds.

The reverb effect is accessed by clicking on the **REV.** tab. The available controls are:

- **Impulse Response Menu** - you can use the drop down menu to select one of the 32 provided impulse responses.
- **Pre Del** (Pre-Delay) - controls the amount of delay before the reverb signal, adding time between the input signal and the reverb signal.
- **Size** - sets the pitch shift amount of the impulse response, this changes the perceived size of the space.
- **Mix** - controls the dry/wet mix of the clean (dry) signal and the reverb (wet) signal.

Distortion



25 Distortion Effect Controls

The distortion effect emulates the sound of an overdriven analogue circuit. This makes the sound "heavier" by adding overtones and compressing the dynamics.

The distortion effect is accessed by clicking on the **DIST.** tab. The available controls are:

- **Drive** - controls the amount the signal is overdriven, i.e. the distortion amount.
- **Tone** - controls the tone of the output. Lowering the value of this control will lower the amount of high frequencies present in the output signal.
- **Bass** - controls the level of the bass frequencies.
- **Treb** (treble) - controls the level of the high (treble) frequencies.

5.2.2 Twist and Punish FX

The central area in the Main Page is divided into three tabs; the first and last tabs contain the **TWIST** and **PUNISH** effects – macro effects that can quickly and sometimes drastically alter the sound of the loaded instrument.

- ▶ You can navigate to these effects by clicking on the respective tab.

Twist



26 Twist Controls

The twist effect is an animated, tone-altering effect that *twists* the audio. You can use it as a stationary effect to quickly alter the tone of the instrument, or you can use the animation controls to give the tone movement. The controls available are:

- **Twist** - this is the large knob in the center. It is used to control the amount of animation that is applied to the tone.
- **Tone** - sets the central tone.
- **Rate** - controls the rate of the tone animation.
- **On** - toggles the effect on or off.

Punish



27 Punish Controls

The Punish effect is a combination of compression and saturation controlled from a single knob. Turn the knob to punish the sound.

The effect can be toggled on or off using the **On** button.

5.2.3 Loop Controls

The **LOOP** tab displays a waveform, and 3 controls for altering the sounds available in the instrument.



28 The Loop Controls

In the Loop Menu instruments, these controls alter the sound of each loop.

In the Single Loop instruments, these controls alter the sound of each slice in the loop.

For each loop/slice you have access to:

- **Tune** - controls the tuning of the loop/slice (+/- 24 semi-tones).
- **Pan** - controls the position of the loop/slice in the stereo field.
- **Level** - controls the volume level of the loop/slice.

Holding the **Alt** key when using these controls will change that parameter for all of the loops/slices at once.

5.2.4 Volume Envelope



29 The Master Envelope Controls

There are 4 knobs available for the volume envelope:

- **Attack** - controls the attack (fade in) time.
- **Decay** - controls the time it take for the volume to fade from the maximum value to the sustain value.
- **Sustain** - controls the level at which the envelope will sustain while the key is held.
- **Release** - controls the release (fade out) time of the envelope after the key is released.

Increasing the release time will add to the amount of voices holding over as other notes are playing, this can increase Kontakt's CPU load.

5.2.5 Performance

The Performance section is located at the bottom of the Main Page.



30 The Performance Controls

It contains the following controls:

- **Pitch Bend Up** - controls the range of the pitch bend MIDI control when the value is positive.
- **Pitch Bend Down** - controls the range of the pitch bend MIDI control when the value is negative.
- **Velocity Min** - controls the minimum velocity. Any MIDI notes played with a velocity lower than this will have their velocity set to this value.
- **Velocity Max** - controls the maximum velocity. Any MIDI notes played with a velocity higher than this will have their velocity set to this value.
- The play button to the left of the performance area toggles on/off the Mutator.

The arrows to the right of the Velocity and Pitch Bend controls can be used to increase or decrease these values one step at a time.

5.3 The Loop Mutator

This page can be accessed by clicking on the **MUTATOR** button, located to the bottom right of the interface.



31 The Loop Mutator Page

The Loop Mutator is, at its core, based on an advanced arpeggiator. An arpeggiator takes the notes you are holding on the MIDI keyboard and re-arranges them to play patterns. Most arpeggiators run through the held notes in order, from highest to lowest, or vice versa, but more recent arpeggiators have extended options for more complex playback.

This Loop Mutator is more advanced than most, with many unique features that will enable you to create intricate and complex patterns and sequences.

5.3.1 Patterns

The Loop Mutator is based around patterns. A pattern stores most of the main Loop Mutator data, including the rate, pattern length, and the parameter table values. A preset contains 8 patterns, which can be used in two different ways:

- 1 If **Single** is selected, the selected pattern will be the currently active pattern, i.e. the pattern you are viewing is also the one that is being played back.
 - 2 If **Chain** is selected, then the Loop Mutator will cycle through the patterns according to the number and order of patterns that are included in the chain.
- ▶ The pattern playback mode is selected using the switch below the pattern selection buttons.
 - ▶ The length of the pattern chain can be controlled by clicking and dragging on the arrow between the pattern selection buttons and the pattern playback mode switch.

5.3.2 Mode Controls

Apart from the pattern selection buttons and chain controls, there are three controls that are not altered by pattern selection. These are:

- **Playback Mode** - this is the menu to the top right of the Loop Mutator area. From this you can select the order and mode in which the Loop Mutator organizes the played keys. The modes available to you are:
 - **Chord** - all held notes are played together, as a chord.
 - **Pairs** - the held notes will be cycled through as pairs, creating a "broken chord" effect.
 - **Up** - the Loop Mutator will cycle through the notes from the lowest to the highest.
 - **Down** - the Loop Mutator will cycle through the notes from the highest to the lowest.
 - **Circle** - the Loop Mutator will alternate between the **Up** and **Down** modes.
 - **Circle++** - similar to **Circle**, but the highest and lowest notes are played twice when they are reached.
 - **Single** - a monophonic mode. Only the last played note is used, all other notes are ignored.
- **Retrigger** - with this button active, the Loop Mutator pattern will return to the start of the pattern every time a new note is played.
- **+8va** - duplicates all held notes, but transposed an octave higher. So, if you hold a single C key, the Loop Mutator will play a pattern as if you were holding that C key and the C key an octave above it.

If you are using Chord mode, the +8va could increase Kontakt's CPU as it increases the number of voices.

The other mode controls are stored and recalled with the patterns:

- **Seq Steps** - sets the number of steps in the pattern, from 1 to 16.
- **Rate** - sets the rate of playback for the pattern.

5.3.3 Parameter Controls

The body of the Loop Mutator section is a parameter table. These tables work like a step sequencer, altering the parameter at each step according to the settings of the table. There are three parameters available, which are selected by using the tabs below the table:

- **VELOCITY** - the note velocity, i.e. how hard the note is played.
 - **LENGTH** - the note length. This also controls the step mode: if the slider is all the way down, the step is deactivated and the Loop Mutator will not play a note at that step; if the slider is all the way up, the step will tie over to the next step, merging the lengths of the two steps.

Length is effected by each channel's release duration found on the main page, the shorter the release, the more dramatic the Length parameter's effect.
 - **LOOP / SLICE** - controls the note transposition of the step, changing the loop for that step.
- Clicking on a tab will display the relative table for that parameter.

The table values are stored and recalled inside the patterns automatically.

Holding the Alt (Option) key while moving a slider will move all the other sliders for that parameter by the same amount. This will work in conjunction with Kontakt's default key modifiers (Ctrl for control reset and Shift for fine tuning).

There is also a menu available for editing the parameter controls quickly. This menu is located below the sliders and to the right. When you click on it you will notice the menu entries are divided into two sections.

- **Single Parameter** - selecting an edit function in this section will only affect the parameter that is currently selected and on display.
- **All Parameters** - selecting an edit function from this section will affect all parameters.

Note that, regardless of setting, the edit function is only applied to the parameters in the currently selected pattern.

The edit functions available to you are:

- **Copy** - stores the settings of the current pattern into temporary memory.
- **Paste** - recalls the settings of the copied pattern into the current pattern.
- **Reset** - sets the parameter(s) in the current pattern to their default value.
- **Random** - sets the parameter(s) in the current pattern to a random value.

5.3.4 Presets

Since the Loop Mutator is a lot more advanced than most arpeggiators, presets are provided for you to quickly get started. You can also save up to 25 of your own presets to recall later.

The preset controls are located to the top of the arpeggiator section. They are:

- **Preset Select Menu** - click on the arrow to select and load a preset from the menu.
- **Navigation Arrows** - you can use the arrows beside the Preset Select Menu to browse through the presets sequentially.
- **Save** - stores the current arpeggiator settings as a preset (see the section below for more details on how this works)
- **Delete** - deletes the currently selected preset.

Note: it is not possible to delete the factory presets.

Saving and deleting presets

When you have created an arpeggiator setting you like, you can name it and save it for use in other instruments. If you do not save your arp preset, the NKI or the preset in a multi, the Arp changes will be lost if you navigate to a new preset.

1. To name the preset, click on the text area of the Preset Select Menu.
 2. This will select the text for editing, so you can begin typing.
 3. Once the name is entered, press the return or enter key on your keyboard.
 4. Click on the **Save** button.
- The settings will now be saved in a preset and appended to the Preset Select Menu.

To delete a preset from the menu...

1. Select it from the Preset Select Menu.
2. Click on the **Delete** button.

There are 25 available slots to save patterns. If you have reached the maximum number of slots, a warning will show in the bottom left corner of the Kontakt window. If this occurs, you will need to delete an existing preset in order to save a new one.

5.4 EQ & Filter

The EQ & Filter page is where you will find controls that alter the timbre of the instrument.



32 The Loop Menu Filter & EQ Page

Each instrument contains:

- A per-loop 3-band parametric EQ (Loop Menu Instruments only)
- A master EQ based on the analogue modeled SOLID EQ.
- A per-loop filter with five different filter types and a variety of modulation options.

5.4.1 Master EQ

The Master EQ is located on the left side of the EQ/Filter Page.



33 The Master EQ of a Kit Instrument

► In the Loop Suites, the Master EQ controls are accessed by clicking on the **MASTER** tab.

It is a 4 band EQ with high shelf (**HF**) and low shelf (**LF**) bands, as well as two mid frequency bell-shaped bands (**LMF** and **HMF**).

All four of the bands contain the following controls:

- **Level** - the gain level of the band.
- **Freq** - for the high and low shelves, this controls this starting frequency of the shelf. For the mid-frequency bands this controls the central frequency of the band.

The mid-frequency bands also contain an additional control:

- **Q** - controls the Quality (Q) of the band. This alters the width of the band. A higher Q setting gives a narrower band-width.

5.4.2 Loop EQ

The Loop EQ is a per-loop EQ that is available in the Loop Suite instruments.

Each loop has its own 3-band parametric EQ. To access the EQ for a loop, click on the **LOOP** tab.



34 The Loop EQ Controls

The note of the loop that is being edited is displayed in the note readout between the **LOOP** and **MASTER** tabs. You can change the selection by either:

1. clicking and dragging on the readout
2. or by pressing the MIDI key you wish to edit.

Unlike the Master EQ, all of the bands in the Loop EQ are bell-shaped. As such, all three bands have the same controls:

- **Level** - the gain level of the band.
- **Freq** - controls the central frequency of the band.
- **Q** - controls the Quality (Q) of the band. This alters the width of the band. A higher Q setting gives a narrower band-width.

5.4.3 Filter

A filter is also used to alter the timbre of a sound, but in more extreme ways than an equalizer. As such, modulation options are offered to increase the sonic possibilities.

The Filter controls are located to the right of the EQ & Filter page.



35 The Filter Controls

Main Controls

You can select one of five filter modes using the following buttons:

- **LP** - a 4-pole Lowpass. This removes all of the frequencies above the cutoff frequency.
 - **HP** - a 4-pole Highpass. This removes all of the frequencies below the cutoff frequency.
 - **BP** - a 4-pole Bandpass. This removes all of the frequencies except for those in a narrow band around the cutoff frequency.
 - **Vowel** - the vowel filter uses a simple double-peak system to mimic an unspecified vowel sound.
 - **Form.** - a formant filter. This is a more advanced alternative to the vowel filter and more accurately models the frequency response of the human vocal tract as it forms different vowels.
- If all of the selector buttons are inactive, the filter is deactivated.

Below the selector buttons are the filter parameter controls:

- **Freq** - controls the cutoff frequency of the filter. This means different things to the different filter modes.
- **Reso** - For the LP, HP, and BP filter modes, this controls the resonant peak at the cutoff frequency. For the Vowel and Formant filters, this controls the intensity (or sharpness) of the filter.

Modulation Controls

The first section of the modulation controls are for the filter envelope:

- **A** - controls the attack time (or fade in time) of the envelope.
- **D** - controls the decay time of the envelope - the time it takes for the envelope value to reach the sustain level after the attack phase is finished.
- **S** - controls the sustain level of the envelope - the level at which the envelope will sustain after the decay phase, and while the MIDI note is held.
- **R** - controls the release time of the envelope - the time it takes for the envelope value to return to zero after the MIDI note is released.

The lower section controls the modulation amounts:

- **Env.Amt.** - sets the amount of modulation applied from the envelope to the filter cutoff.
- **Key-Track** - sets the MIDI key tracking of the filter cutoff, i.e. how much the cutoff frequency will follow the notes played.
- **Velocity** - sets the amount of modulation applied from the MIDI keyboard velocity to the filter cutoff.

Filter LFO

The central area of the EQ & Filter page is the Filter LFO section. An LFO is a Low Frequency Oscillator, used to modulate parameters. The Filter LFO is connected to the cutoff parameter of all of the filters.



36 The Filter LFO Controls

The top two controls affect the rate of the LFO:

- **Rate** - is the main LFO rate control.
- **Sync** - when this button is active, the LFO rate will sync to the host tempo in 32nd note subdivisions; when it is inactive, the LFO rate is set freely in hertz.

Below the rate controls is the global LFO **Amount** knob. This controls how much the LFO modulates the cutoff frequencies of the filters.

Below the **Amount** knob are the LFO shape selectors. There are four shapes to choose from:

- Square
- Triangle
- Ramp Up (Sawtooth)
- Random

If none of the LFO shape selectors are active, then the Filter LFO is deactivated entirely.

5.4.4 Output

In the center of the Equalizer Page is one final control: the **OUTPUT** knob.



37 The Output Knob

This knob controls the final output level of the instrument, and can be used to compensate for volume peaks created by all of the different effects included in the instrument.

5.5 Advanced Loop Edit Page

The Single Loop instruments feature an additional page that offers deeper editing of the loop.

The Advanced Loop Edit page is accessed by clicking on the **ADV.LOOP** tab to the bottom right, under the **MUTATOR** tab.



38 The Advanced Loop Edit Page

A large waveform display gives you a clearer overview of the loop.

The larger display also offers a slice highlight, so you can see where in the loop you are currently editing.

Below the waveform are the additional loop controls:

- **MIDI To Host** – use this icon to drag and drop a MIDI version of the loop into your DAW or Host.
- **Random** – this drop-down menu allows you to randomize the Tune, Pan or Level parameters for all slices of the loop. You can also randomize all parameters at once by selecting **All** in the menu.
- **Tune, Pan, and Level** – these controls function in exactly the same way as their counterparts on the Main Page, controlling the relative parameter of the selected slice.
- **Reset** – this drop-down menu functions like the **Random** menu, except it resets any parameter of the loop to its default value.
- **2X Playback** – this button slows the playback rate of the loop when it is triggered from the playback key (C1) to make it twice as long.

5.5.1 Using the MIDI to Host feature

The MIDI to Host feature is very useful when using a Single Loop instrument in your DAW. It allows you to re-arrange the loop as you wish so that it fits your track perfectly.

► Click and Drag from the anchor icon to import the MIDI into your host.

Once the MIDI is in your host, you need to make sure the MIDI track is routed back into the instrument. Otherwise it will be unable to trigger the loop slices.

With this done, the track should playback the loop when you start playback of your host project.

If everything is working as expected, you can enter the MIDI track and re-arrange the notes to re-arrange the slices of the loop.

In some cases it is better to use MIDI in this way, rather than using the Playback key. For example, if you are automating the tempo of your track.

6 Credits

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