MASSIVE

GETTING STARTED

Getting Started written by Thomas Loop

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Special thanks to the Beta Test Team, who were invaluable not just in tracking down bugs, but in making this a better product.

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Table Of Content

1 Welcome to MASSIVE!

Thank you for choosing MASSIVE!

1.1 What is MASSIVE?

MASSIVE is a flexible polyphonic synthesizer using dynamic wavetable oscillators, two multi-mode filters with variable routing and a host of modulation sources including step sequencers and easy to use curve editors

MASSIVE combines a unique synthesis engine with unparalleled ease of use. This synthesizer is your solution for punchy bass lines and cutting leads, while at the same time it is also capable of beautifully atmospheric pads and funky rhythmic grooves. No matter if you just want to produce fresh music by using the roundabout 600 production-ready KORE SOUNDS® that come with MASSIVE or if you are an experienced sound designer eager to dive into the depth of sound synthesis—MASSIVE just delivers.

1.2 The MASSIVE Documentation

1.2.1 Special Notes in this Getting Started Guide

This manual uses special notes to provide additional tips and to warn you of things that can go wrong. The icons included in the marginal notes show the nature of the provided information:

!

Whenever this exclamation mark icon appears, you should read the corresponding paragraph carefully and follow the instructions and hints given there (if applicable).

This light bulb icon indicates that a paragraph contains useful extra information. This information may often help you to solve a task more efficiently, but does not necessarily apply to the setup or operating system you are using. However, it should be worth reading for most users.

1.2.2 Other Documentation

What you are holding in your hands right now is the Getting Started Manual that will give you a quick overview of MASSIVE’s main features and functions. For more in-depth information on all topics not covered here, please refer to the MASSIVE Reference Manual that is available as a PDF file in the subfolder “Documentation” of MASSIVE’S installation folder. Alternatively, you can download the Reference Manual from the Update Manager on the Native Instruments Website:

native-instruments.com

1.3 System Requirements

For current information about system requirements and compatibility with current and legacy operating systems, please see our website at:

native-instruments.com

2 Setup

This chapter leads you through the necessary steps for setting up your MASSIVE installation. The first part deals with the stand-alone version of MASSIVE. The second section provides an overview of the available MASSIVE plug-ins.

2.1 Setting up MASSIVE in Stand-alone mode

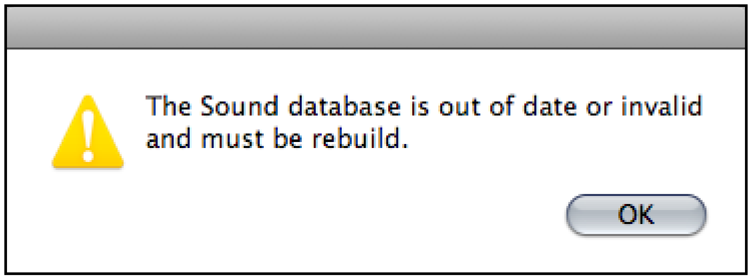
MASSIVE can run as a stand-alone software with its own interface to your sound- and MIDI-hardware. Use this mode if you only want to play MASSIVE via a MIDI keyboard attached to your computer or if you want MASSIVE to receive MIDI data from a piece of software that cannot host any of the available MASSIVE plug-ins.

! If you start MASSIVE for the first time after installation, please make sure that the database building process has finished before you close the software/plug-in again. See the next section for more.

2.1.1 Initial Database Build

The KORE SOUNDS® in MASSIVE are organized in a convenient database making sound retrieval and management a snap. For further information about working with the sound database please read chapter 4.1 "Finding and Loading Sounds".

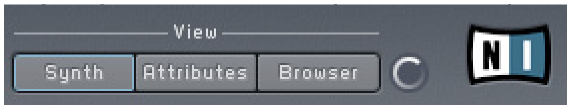
The first time you start MASSIVE (stand-alone or one of the plug-ins) you get a message that MASSIVE's KORE SOUND database has to be created.



The Sound database is out of date or invalid and must be rebuild.

The Mac OS X version of MASSIVE complaining about the missing database.

Depending on the performance level of your computer hardware this can take a few minutes. MASSIVE indicates that it is working on the database with a small rotating ring symbol directly ion Bar of the interface.



The small rotating ring on the Navigation Bar indicates database processing.

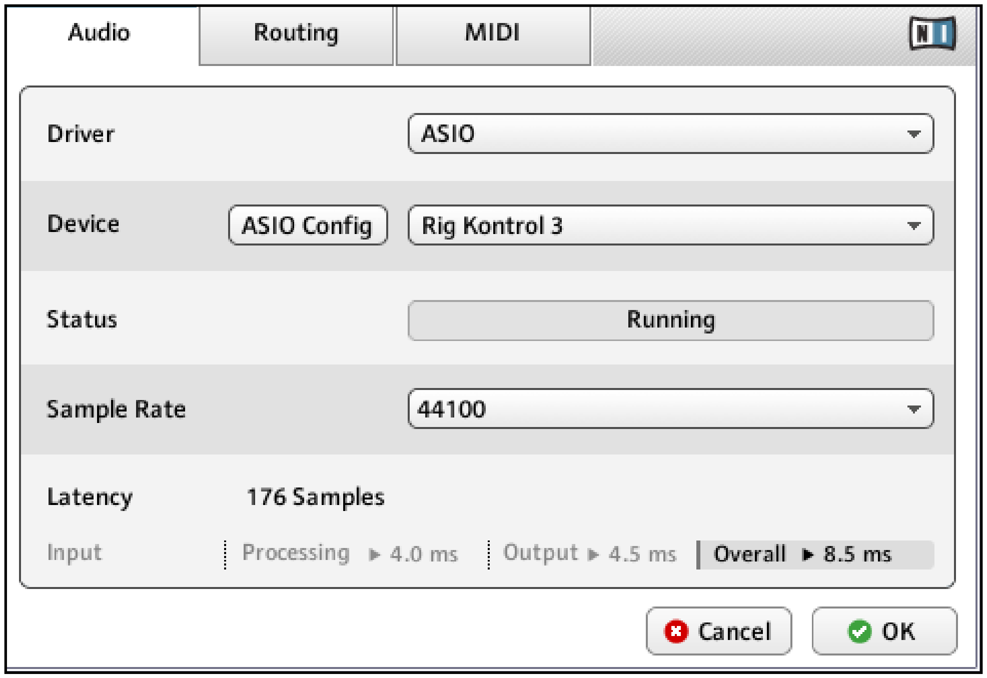
Please make sure that this procedure has come to an end before you close the application or plug-in. When the database creation has been finished, the ring stops to rotate. If you close it before it has finished MASSIVE has to start all over again the next time you start it.

2.1.2 Audio and MIDI Settings

Before you start your work with MASSIVE it is a good idea to configure its audio settings to fit your needs. This only applies to the stand-alone version of MASSIVE as with the MASSIVE plug-ins all things audio and MIDI are handled by the host software.

The Audio Hardware

1. Do the following to set up your audio hardware in MASSIVE:
2. Choose the entry *Audio and MIDI Settings…* from the File menu



Driver: ASIO

Device: Rig Kontrol 3

Status: Running

Sample Rate: 44100

Latency: 176 Samples

Input | Processing ▸ 4.0 ms | Output ▸ 4.5 ms | Overall ▸ 8.5 ms

The Audio Tab of the Audio and MIDI Settings showing a RIG KONTROL 3 as the active audio hardware (Windows version shown).

3. From the Driver menu of the Audio Tab, select *ASIO* on Windows for best results (On a Mac this will be set to *CoreAudio*, your only choice in Mac OS X.).
4. Use the Device menu to select the desired audio interface.
5. We recommend setting the sample rate to 44100 and setting the output latency to about 10 ms. Depending on your hardware this may be done via the Latency Slider on the bottom of the Audio Tab or via the Button ASIO Config that opens the control panel of your audio interface.

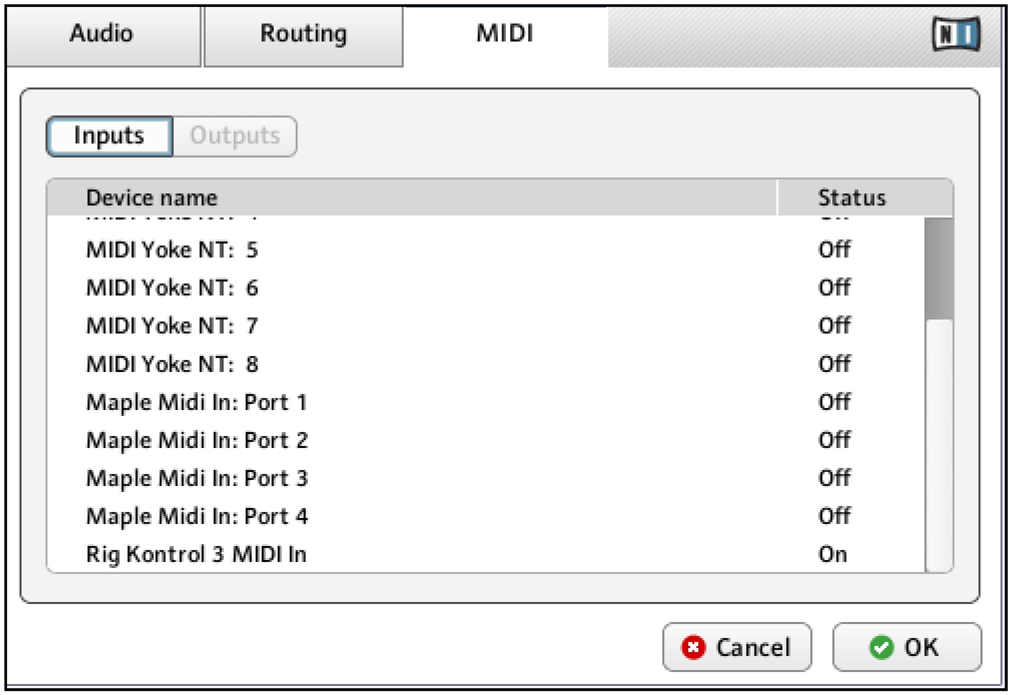
These are recommended settings that should work well on most computer systems; for information on what these settings mean, please refer to chapter 2.2 "About Latencies".

The MIDI Hardware

For using MASSIVE with a MIDI keyboard you have to choose the right MIDI interface so that the MIDI data reaches MASSIVE.

To do this:

1. Open the Audio and MIDI Settings from the File Menu.
2. Switch to the MIDI Tab



Device name	Status
MIDI Yoke NT: 5	Off
MIDI Yoke NT: 6	Off
MIDI Yoke NT: 7	Off
MIDI Yoke NT: 8	Off
Maple Midi In: Port 1	Off
Maple Midi In: Port 2	Off
Maple Midi In: Port 3	Off
Maple Midi In: Port 4	Off
Rig Kontrol 3 MIDI In	On

The MIDI Tab of the Audio and MIDI Settings showing an active RIG KONTROL 3 MIDI interface (Windows version shown).

3. On the MIDI Tab, check that the MIDI interface or device you are using is turned on. If you see your interface listed but it is off, click on the "*off*" label to turn it on.
4. Now you should be able to play MASSIVE via your MIDI keyboard.

If you don't have a MIDI controller available, you can still play MIDI notes by using the computer's keyboard. We have assigned the four rows of alphanumeric keys in a similar pattern to that of a piano keyboard. For example, the bottom row of keys on your computer keyboard (from Z on the left to / on the right) is assigned to the white keys of the piano keyboard, with the Z key being assigned to C. The row of keys above that (from S to ;) covers the corresponding black keys, with S assigned to C#. The two rows of keys above are assigned in a similar pattern, but one octave higher.

2.2 About Latencies

The data produced by audio software like MASSIVE has to be handed over to the driver of the currently used audio hardware which in turn passes it to the digital to analog converters that produce an analog signal to be heard via your speakers. This procedure takes time. The resulting delay is called latency.

The high performance level of current computer hardware combined with advances in driver technologies has reduced the required time to a few milliseconds. Still, there is a trade-off to be made, as an extremely low latency taxes the computer resources more than a lax setting with a longer delay between sound production in the software and sound reproduction via the speakers.

The nature of the driver used is also an important factor in this game.

Use low-latency drivers

Whenever possible you should use low-latency drivers while working with MASSIVE. MASSIVE works with two types of low-latency drivers:

- ASIO drivers
- Core Audio (only on computer running Mac OS X)

These two technologies ensure an efficient data transfer between Software and audio hardware and should provide a latency that is bearable for live play, if not unnoticeable.

2.3 MASSIVE as a Plug-in

MASSIVE does not only come as a stand-alone application but also in a variety of plug-in formats for use in hosts like Native Instruments KORE, Steinberg Cubase/Nuendo, Ableton Live, MOTU Digital Performer, Apple Logic or Digidesign Pro Tools.

The synthesis functionality of the MASSIVE plug-ins is identical to the stand-alone version. However, the plug-ins lack the options for settings up audio and MIDI hardware as this is handled by the host the plug-in is working in.

Plug-in Formats and Hosts

Depending on the operating system running on your computer you have the choice between the following plug-in formats:

- VSTi (Mac OS X and Windows)
- Audio Unit (Mac OS X only)
- RTAS (Mac OS X and Windows for the use in Digidesign Pro Tools)

Please refer to the documentation of your host software for details about the required plug-in format and how to open and use the MASSIVE plug-in.

3 MASSIVE Overview

This chapter provides a brief overview of MASSIVE'S user Interface.

This document is about setting you up for your first steps in MASSIVE so we will not be able to dive into all the functionality offered by this synthesizer. Please read the main manual for an in-depth discussion of all features to be found in MASSIVE.

3.1 Some Interface conventions

One of the assets of MASSIVE is its user interface. Its clear structure and innovative modulation controls lead to an elegant workflow.

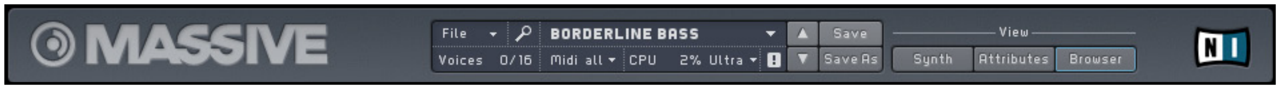
Sliders, knobs and number boxes

Faders, knobs and number boxes are used to control most of MASSIVE's major functions. In general these work the same way as the controls you may be used to in other audio software: simply click with the mouse and drag up and down (while holding down the mouse button) to alter the value.

These commands and control options are available throughout MASSIVE:

- Hold the keyboard's shift key while changing the value with the left mouse button to make finer adjustments to a control.
- You can also use the mouse wheel to change the value of a control; if you hold down the shift key while using the mouse wheel, the value will change in coarser steps.
- Double-click with the left mouse button to reset the value to its default.

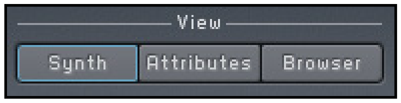
3.2 The Navigation Bar



The Navigation Bar is always visible and provides information about the currently uses KORE SOUND, the number of voices used and the CPU load. Here you also find some menus to save sounds and manipulate MASSIVE's Options and the View Buttons (see below).

The Views

You get around on MASSIVE's user interface by using the View Buttons.



Use the View Buttons to switch around the interface.

As you can see, the parts of the user interface are:

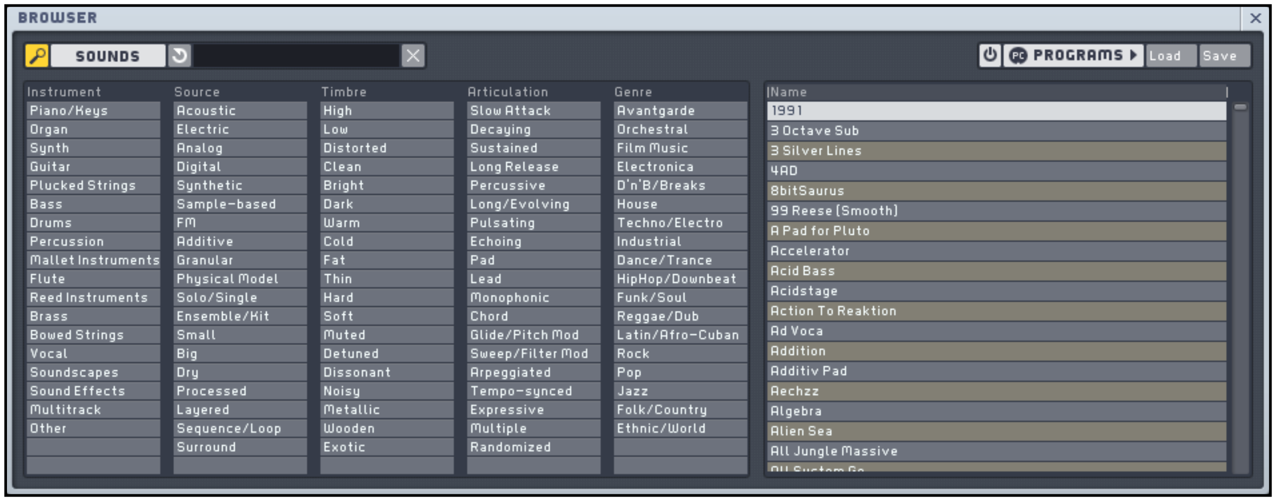
- Synth View: Here you find the sound design interface with all parameters of the synthesis engine.
- Attibutes View: This is the interface for tagging your sound creations with a comprehensive set of Attributes for subsequent retrieval via the Browser.
- Browser View: Your one-stop solution for organizing, finding and loading KORE SOUNDs in MASSIVE.
- We will start our quick tour around the interface with the Browser, as it is needed to access the factory content.

3.3 The Browser View

MASSIVE offers a large sound library of KORE SOUNDS so that you can start to make music immediately. The sounds are organized in a powerful database and tagged with a number of categorized Attributes that facilitate the search and retrieval of sounds to a new degree.

As the name implies, the KORE SOUNDS integrate seamlessly into Native Instrument KORE as well as being the native sound format for MASSIVE.

Click on the Browser Button and you see the Browser filling up the lower part of the interface:



Instrument	Source	Timbre	Articulation	Genre
Piano/Keys	Acoustic	High	Slow Attack	Avantgarde
Organ	Electric	Low	Decaying	Orchestral
Synth	Analog	Distorted	Sustained	Film Music
Guitar	Digital	Clean	Long Release	Electronica
Plucked Strings	Synthetic	Bright	Percussive	D'n'B/Breaks
Bass	Sample-based	Dark	Long/Evolving	House
Drums	FM	Warm	Pulsating	Techno/Electro
Percussion	Additive	Cold	Echoing	Industrial
Mallet Instruments	Granular	Fat	Pad	Dance/Trance
Flute	Physical Model	Thin	Lead	HipHop/Downbeat
Reed Instruments	Solo/Single	Hard	Monophonic	Funk/Soul
Brass	Ensemble/Kit	Soft	Chord	Reggae/Dub
Bowed Strings	Small	Muted	Glide/Pitch Mod	Latin/Afro-Cuban
Vocal	Big	Detuned	Sweep/Filter Mod	Rock
Soundscapes	Dry	Dissonant	Arpeggiated	Pop
Sound Effects	Processed	Noisy	Tempo-synced	Jazz
Multitrack	Layered	Metallic	Expressive	Folk/Country
Other	Sequence/Loop	Wooden	Multiple	Ethnic/World
	Surround	Exotic	Randomized	

Name
1991
3 Octave Sub
3 Silver Lines
4AD
8bitSaurus
99 Reese (Smooth)
A Pad for Pluto
Accelerator
Acid Bass
Acidstage
Action To Reaktion
Ad Voca
Addition
Additiv Pad
Aechzz
Algebra
Alien Sea
All Jungle Massive

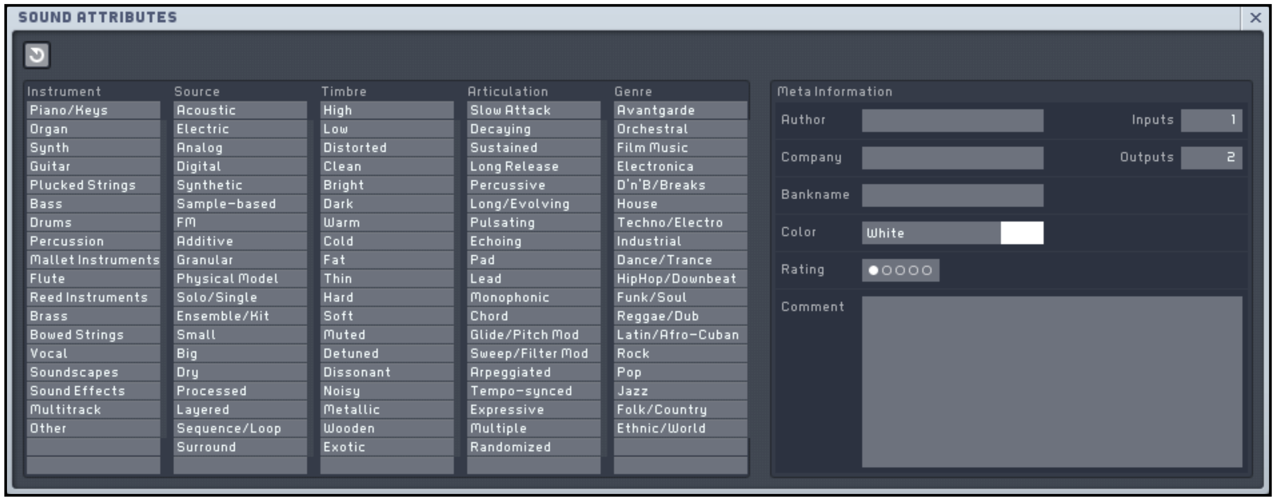
MASSIVE's Browser ready for sound retrieval.

On the upper left edge you see the Search Field of the Browser. Below it you find the Attributes divided into five categories and to the right you have the Search Results List presenting the contents of MASSIVE's KORE SOUND database.

3.4 The Attributes View

After creating your own KORE SOUNDS with MASSIVE you will want to save your work. This is the moment to take a few seconds of time and tag it with a few Attributes.

This is done on the Attributes View.



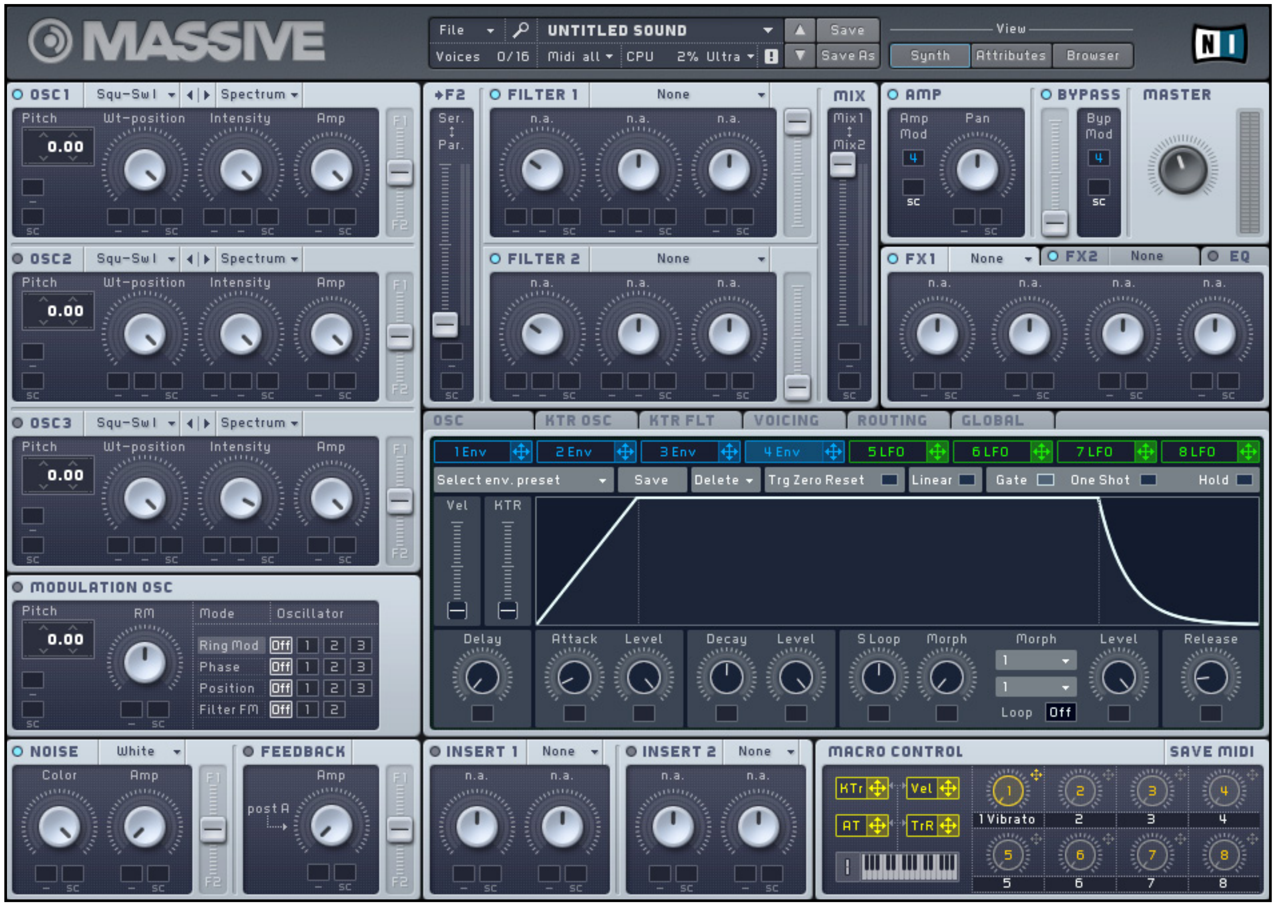
Inputs 1
Outputs 2
Color White
Rating ●○○○○

This will make the future retrieval of the Sound a lot easier as the sound will integrate well with the search workflow described in section 4.1 “Finding and Loading Sounds”.

3.5 The Synth View

All sound design work in MASSIVE takes place on the Synth View. Switch it on by clicking on the Synth Button in the Navigation Bar.

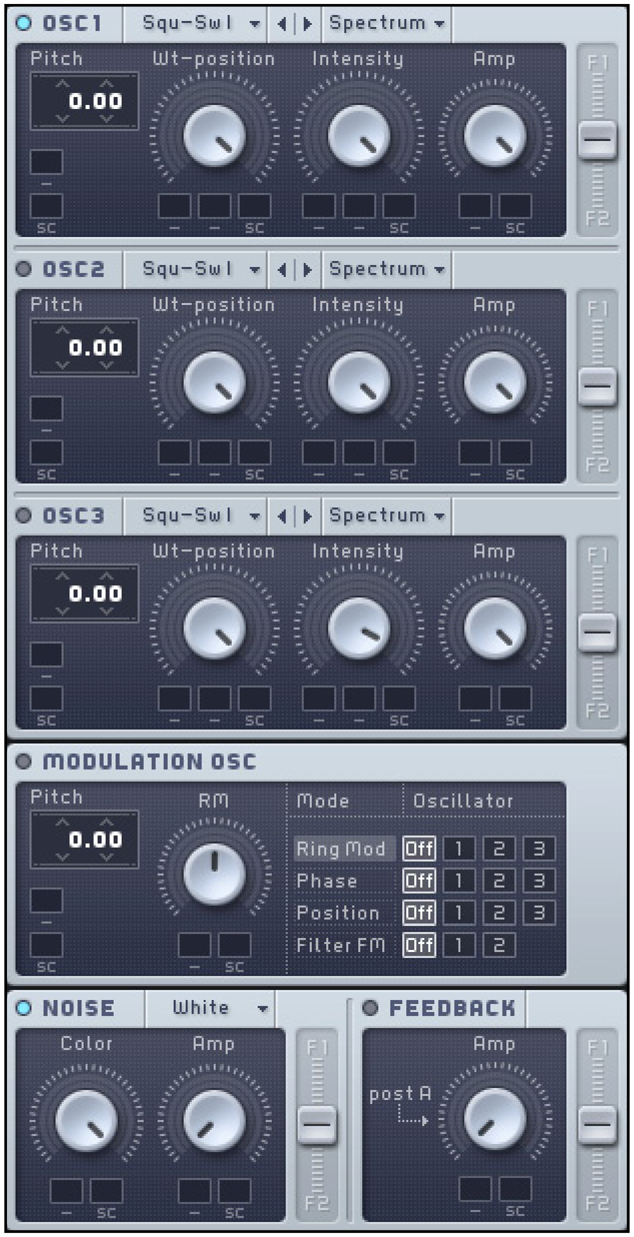
Now you see MASSIVE's sound design environment in its full glory:



MASSIVE's user interface in Synth View.

3.5.1 Oscillator Section

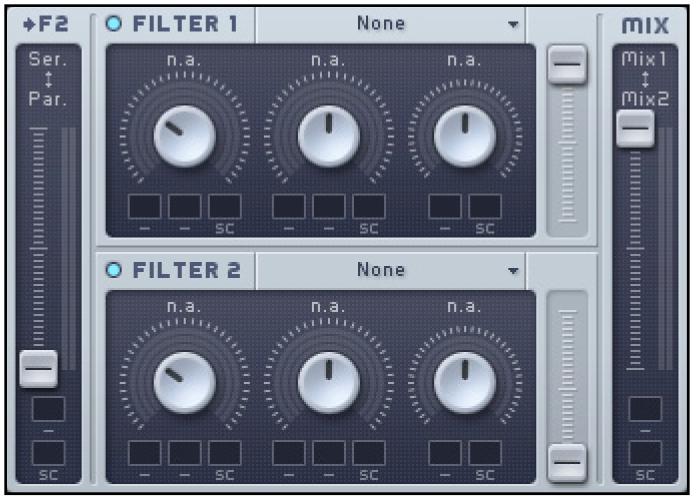
On the left you see the Oscillator Section. It includes three Wavetable Oscillators, a Modulation Oscillator that can be used to modulate any or all of these wavetable oscillators, a Noise Generator, and a Feedback Section.



The Oscillator section is MASSIVE’s sound source.

3.5.2 Filter Section

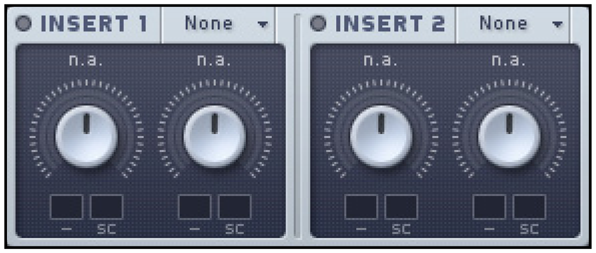
To the right of the first two oscillators we have the two multimode Filters with their Routing Faders and the Mix Control:



MASSIVE’s filter section.

3.5.3 Insert Effects

The Insert Effects sit on the lower part of MASSIVE’s user interface:

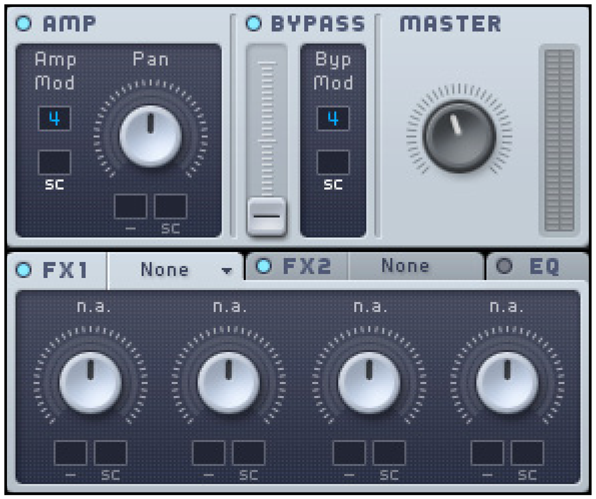


The Insert Effects on the lower part of the interface.

These can be moved around in the signal flow (see main manual for more on this). Please have a look at the reference manual for a detailed description of all available Insert Effects algorithms.

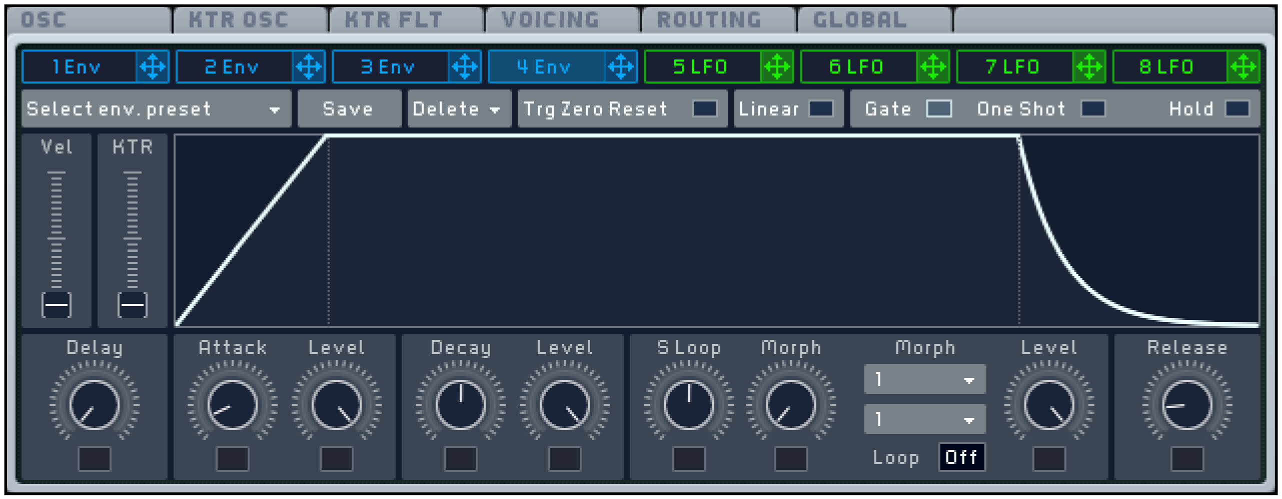
3.5.4 Output Sections

The Output Sections on the top right part of the interface has a few sub-sections: two Master Effects, an Equalizer, Amplifier Section, Bypass Section and the Master Volume.



Please have a look at the reference manual for a detailed description of all available Master Effects algorithms.

3.5.5 The Center Window



The Center Window serves as a display for editing a variety of other parameters that do not need to be accessed so frequently, as well as in-depth editing of your modulation sources.

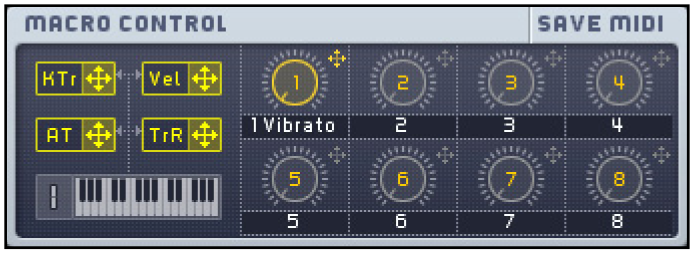
The Center Window display can be switched between eight Modulation Sources and six pages of General Settings. You can choose which page of controls to access by clicking one of the two rows of labeled tabs across the top of the Center Window. Please read chapter 4.8.1 “General Pages” in the reference manual for details.

The eight Modulation Sources are grouped into envelopes (slots 1-4) and assignable pages (slots 5-8) that allow you to choose between the LFO, Performer, and Stepper modulation sources. If you have chosen one of these assignable slots, you can choose one of these types by using the popup menu in the upper-right corner of the modulation source page. For an in-depth discussion of the Modulation Sources please have a look at chapter 4.8.2 “Modulation Pages” in the reference manual.

3.5.6 Macro Controls

The Macro Controls are found in the lower right corner of MASSIVE's panel when you are in the Synth View. They help unify your interaction with all of the other controls in MASSIVE, particularly when you are trying to make music instead of just creating and programming new sounds. Like the modulation sources of the Center Window (the envelopes, LFOs, Stepper and Performer),

each Macro Control knob provides a Modulation Handle. With this handle the Macro Controls can be assigned to any parameter of MASSIVE as a modulation source, i.e. any changes to the value of the Macro Control are then mapped onto the modulated parameter. You can utilize their MIDI Learn functionality to assign them to a knob or fader of your MIDI controller (right-click on a Macro Knob to get a menu).



At the left, there are four small yellow controllers available which can be assigned to modulation destinations in MASSIVE. Each of these routes modulation data triggered by an external MIDI keyboard or MIDI sequence to the modulation target.

- KTr (Keytracking): Generates a modulation signal depending on the pitch of the played MIDI note.
- TrR (Trigger Random): Each played MIDI note trigger generates a new random value at the output of the TrR modulation source.
- AT (Aftertouch): The modulation source provides the aftertouch value of your MIDI messages. Note that few MIDI keyboards send aftertouch information.
- Vel (Velocity): This modulation source relays velocity data from your MIDI keyboard or other MIDI controller.

4 Basic Operation

With setup and interface basics covered, let’s dive into the fun part: Using MASSIVE to make some noise!

This chapter is divided into two main sections. The first one deals about the basics of finding, loading and playing KORE SOUNDS from the MASSIVE sound library. You will get acquainted with the powerful Browser View and learn about using Attributes to find the desired sounds.

The second part circles around your first endeavors into the realm of MASSIVE sound design and you will learn the basics about MASSIVE’s amazing sound sculpting features.

4.1 Finding and Loading Sounds

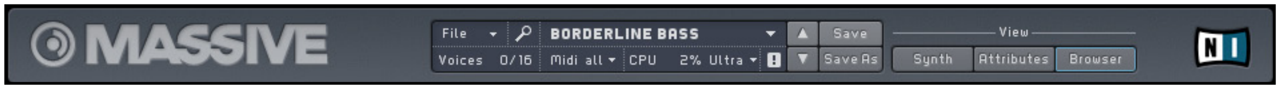
Here you will get a kick-start into quickly finding and loading KORE SOUNDS via MASSIVE’s browser.

4.1.1 Using the Browser

MASSIVE offers a large sound library of KORE SOUNDS so that you can start to make music immediately. The sounds are organized in a powerful database and tagged with a number of categorized Attributes that facilitates the search and retrieval of sounds to a new degree.

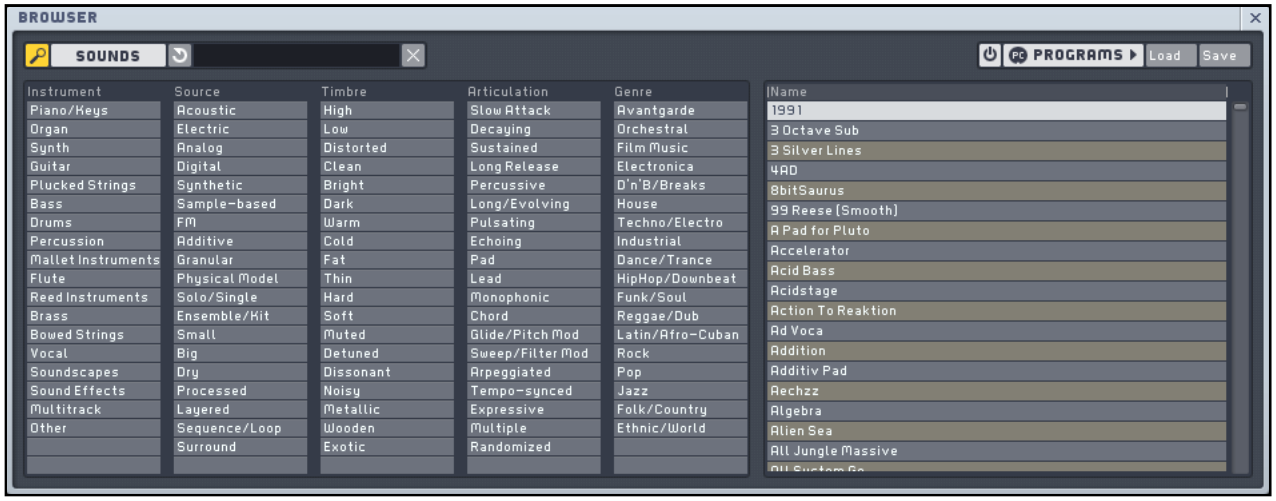
As the name implies, the KORE SOUNDS integrate seamlessly into Native Instrument KORE as well as being the native sound format for MASSIVE.

In MASSIVE you use the Browser View to load sounds. The View is switched on via the Browser Button on the right part of the Navigation Bar.



The Navigation Bar of MASSIVE’s interface with the Browser Button on the right.

Click on the Browser Button and you see the Browser filling up the lower part of the interface:



MASSIVE's Browser ready for sound retrieval.

On the upper left edge you see the Search Field of the Browser. Below it you find the Attributes divided into five categories and to the right you have the Search Results List presenting the contents of MASSIVE's KORE SOUND database.

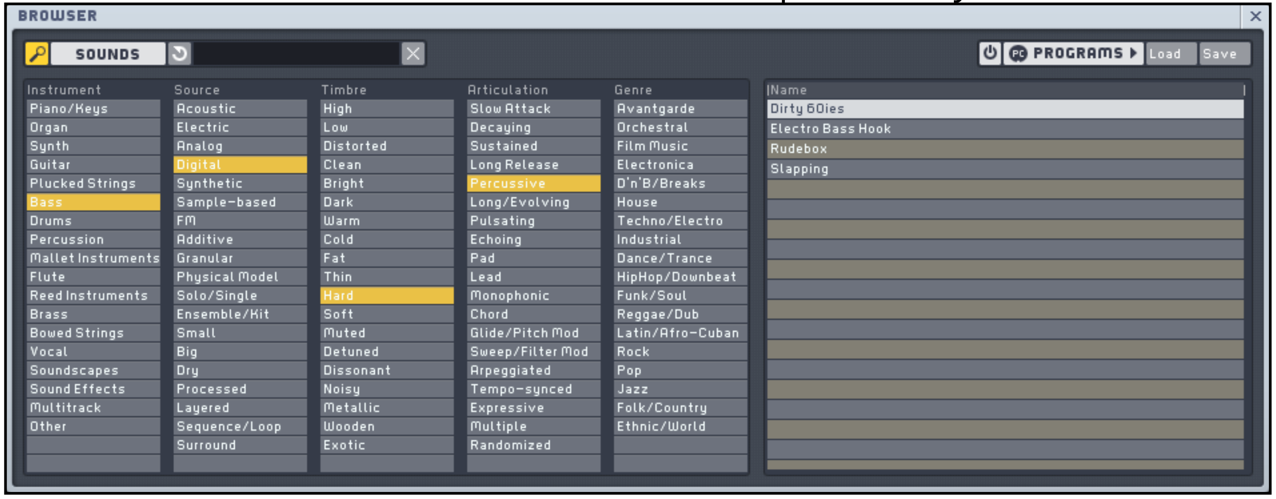
If you just want to scan through the complete contents of the database, use the scroll bar of the Search Results List to browse the KORE SOUNDS. Load a sound with a double-click on its name.

4.1.2 Combining Attributes

But there is a more elegant way of getting the sounds you want: the Attributes.

Let us say you are looking for a mean, digital bass for a track you are working on:

1. In the *Instruments* category, click on *Bass.*
2. In the *Source* Category, *Digital* seems appropriate, so select this.
3. Under *Timbre*, choose *Hard.*
4. As you want the sound to bite you choose *Percussive* under *Articulation.* The *Genre* column can be left untouched in our example. Now you see the following picture:

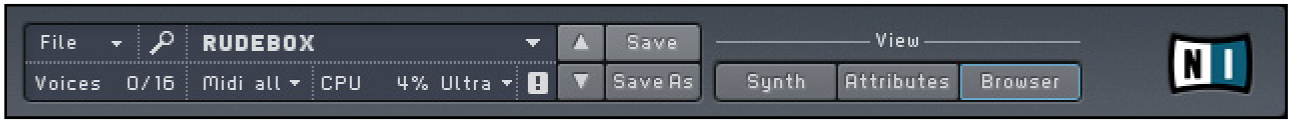


Instrument	Source	Timbre	Articulation	Genre	Name
Piano/Keys	Acoustic	High	Slow Attack	Avantgarde	Dirty 60ies
Organ	Electric	Low	Decaying	Orchestral	Electro Bass Hook
Synth	Analog	Distorted	Sustained	Film Music	Rudebox
Guitar	Digital	Clean	Long Release	Electronica	Slapping
Plucked Strings	Synthetic	Bright	Percussive	D'n'B/Breaks	
Bass	Sample-based	Dark	Long/Evolving	House	
Drums	FM	Warm	Pulsating	Techno/Electro	
Percussion	Additive	Cold	Echoing	Industrial	
Mallet Instruments	Granular	Fat	Pad	Dance/Trance	
Flute	Physical Model	Thin	Lead	HipHop/Downbeat	
Reed Instruments	Solo/Single	Hard	Monophonic	Funk/Soul	
Brass	Ensemble/Kit	Soft	Chord	Reggae/Dub	
Bowed Strings	Small	Muted	Glide/Pitch Mod	Latin/Afro-Cuban	
Vocal	Big	Detuned	Sweep/Filter Mod	Rock	
Soundscapes	Dry	Dissonant	Arpeggiated	Pop	
Sound Effects	Processed	Noisy	Tempo-synced	Jazz	
Multitrack	Layered	Metallic	Expressive	Folk/Country	
Other	Sequence/Loop	Wooden	Multiple	Ethnic/World	
	Surround	Exotic	Randomized		

Your Search Results in the Browser.

With each selected Attribute the list of KORE SOUNDS displayed in the Search Results List gets smaller, as fewer sounds match the combination of selected Attributes.

5. Now double-click one of the entries on the Search Results List, and the corresponding KORE SOUND is ready to be played.
6. The loaded KORE SOUND appears in the Preset Selector of the Navigation Bar.



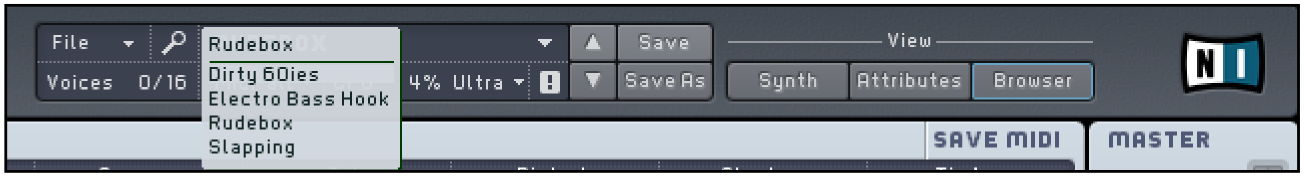
RUDEBOX

Voices 0/16

CPU 4% Ultra

The KORE SOUND *Rudebox* has been loaded.

7. The Search Results List is always mirrored in the Preset Selector menu. Click on it and you get a drop-down list.



The Search Results appear in the Preset Selector menu.

The two small up and down arrows at the menu's right allow you to step through the list without opening the popup menu.

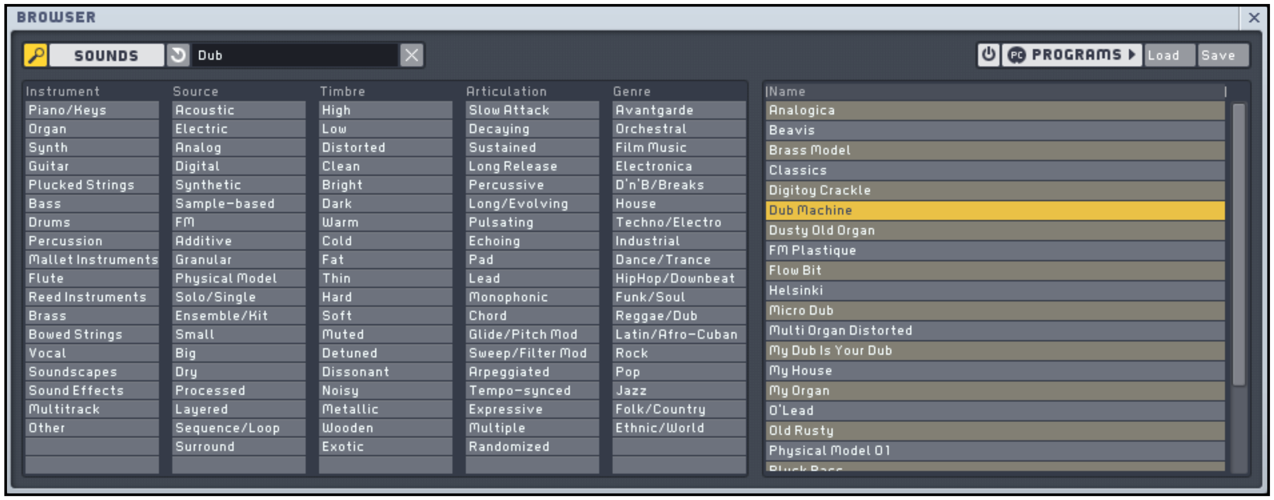
Now you know how to find and load KORE SOUNDS in MASSIVE. Have fun with the great selection of sounds that comes with MASSIVE.

For a more in-depth discussion of the Browser's functionality, please read the reference manual that came with your installation of MASSIVE.

4.1.3 Searching Sounds

Sometimes you want to quickly find a KORE SOUND you have used before. You only know a part of its name and do not want to go through the Attributes to find it. This is easily done via the Search functionality of the Browser.

Just type a part of its name into the Search Field and you get a list of KORE SOUNDS matching your search. As an example we will search for a KORE SOUND that has the term "Dub" in its name or Meta information (see chapter 4.4.1 for more on Meta Information):



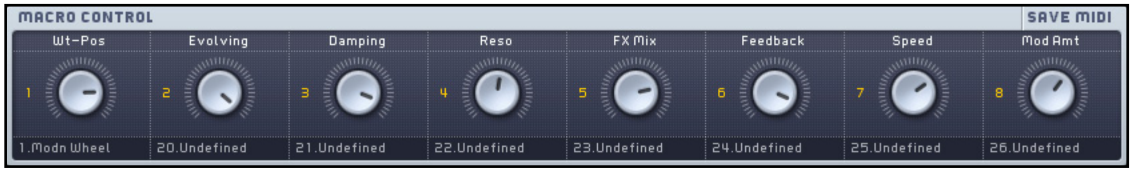
Searching for Dub.

Browse the Search Results List and you will quickly find the sound you were looking for.

4.2 Tweak the Sound

MASSIVE's KORE SOUNDS are no static presets. Many of them are very malleable without having to touch the actual synthesis parameters. This easy control often rivals the possibilities of other synthesizers. This functionality is implemented via the Macro Controls.

You find the Macro Controls on top of the Browser and Attribute Views and in the lower right corner of the Synth View.



The Macro Controls of the KORE SOUND "Cosy Cose" in the Attribute/Browser View.

The functions presented on the eight knobs of the Macro Controls vary from sound to sound, as they are programmed by the sound designer. So just take your time, experiment a bit and you will be rewarded with a wide palette of sound variations.

If you are using MASSIVE as a plug-in Native Instruments KORE with its KORE-Controller, the Macro Controls are automatically mapped to the knobs of the Controller and you can tweak away while you play.

If you have a generic MIDI controller connected to your computer, you can easily map the controllers of your hardware to the knobs of the software. Please have a look at the reference manual for MASSIVE for more details on this.

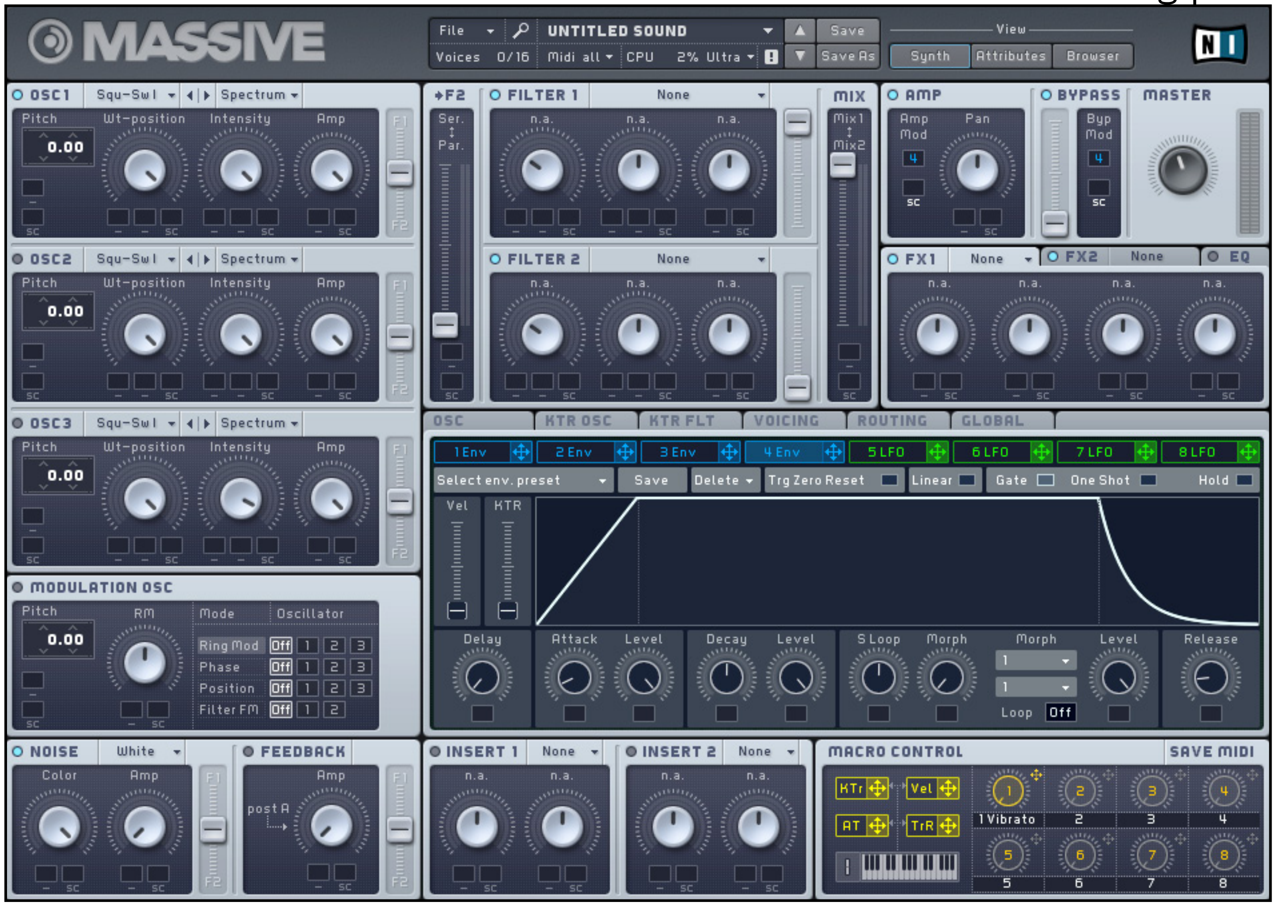
4.3 Create Your Own Sound

MASSIVE is a sound designer's dream come true. Powerful synthesis features are combined with a very accessible and quick user interface making the creation of new sounds a breeze. It doesn't matter if you are a novice or a seasoned sound wizard – MASSIVE just delivers.

This section contains a brief overview of MASSIVE's synthesis engine by introducing the various elements along the signal flow while developing a simple synth-bass sound from scratch. The sound will be of the aggressive type with lots of low end and a snappy attack.

The first step in creating your sound is to open a new default KORE SOUND from MASSIVE'S File menu in the Navigation Bar (NOT from the File menu of the standalone software).

1. Switch into Synth View with a click on the Synth Button.
2. Click on the File menu and choose *New Sound*. You see the following picture:



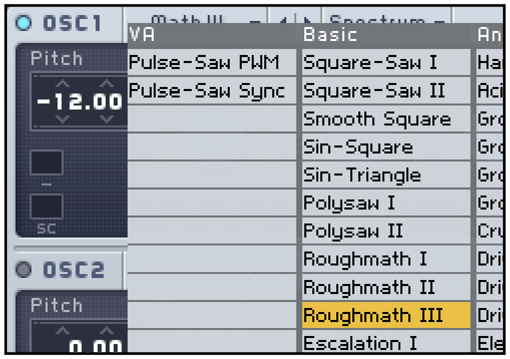
This is the default init-sound of MASSIVE.

Now you have a generic sawtooth waveform as a blank slate to start with the bass sound.

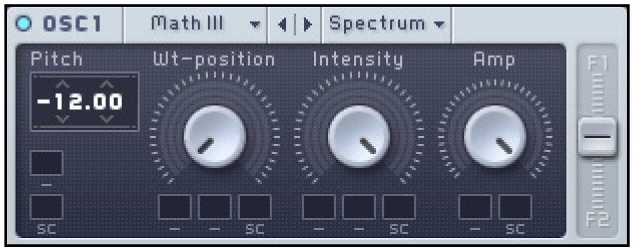
4.3.1 The Oscillators

The basis of any synthesizer sound is the oscillator, so that is exactly where we start our journey. Direct your focus to Oscillator 1 and read on.

1. The core of our bass sound is a wavetable called *Roughmath III*. It has a rough and grainy sound that should be perfect for our bass sound. Choose it from the second column (Basic) of the Wavetable menu of Oscillator 1. Note that RoughMath III gets abbreviated to Math III when you close the menu.

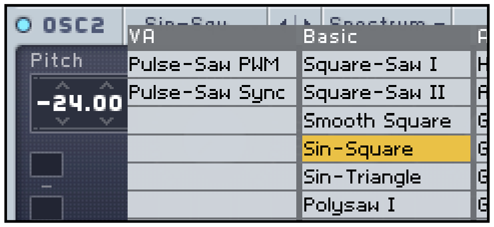


2. As basses play low, set the Pitch to -12 semitones by clicking the number box and dragging the mouse downwards. Your Oscillator should look like this:

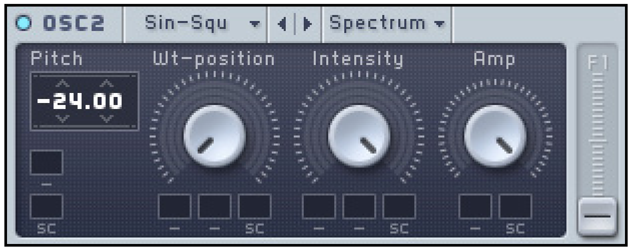


3. Note that the Routing Fader to the right is set in the middle between Filter 1 (F1) and Filter 2 (F2), so that the signal of Oscillator 1 is going into both Filters. We want it to be filtered by Filter1 and at the same time we want the raw sound to run through Filter 2 unchanged. More about this later.
4. Play some notes and turn the knob WT-position to sweep through the wavetable. Leave the knob Wt-position fully turned counterclockwise.
5. Switch on Oscillator 2 by clicking on its Mute Switch (the small circle left of its name). Oscillator 2 will act as a sub-oscillator adding more low-end to the sound.

6. Choose the wavetable *Sin-Square* in the column *Basic* of the Wavetable Menu of Oscillator 2.



7. This wavtable interpolates between a sine wave and a square wave. Pull the knob Wt-position completely counterclockwise to get a sine wave and dial in a Pitch value of -24 semitones. This is an octave below the frequency of Oscillator 1.



8. Drag the Routing Fader of Oscillator 2 completely down to route its signal into Filter 2, only (see picture above).

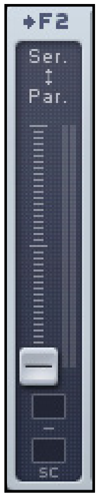
Now you have laid out the basis for our bass sound. Two oscillators with the first one providing lots of harmonics to filter and make the sound interesting and the second one adding low frequencies.

Note that the signal of Oscillator 1 is routed into both filters with equal volume. Later on we will use the second filter as a bypass stage so the raw sound of Oscillator 1 can still be heard.

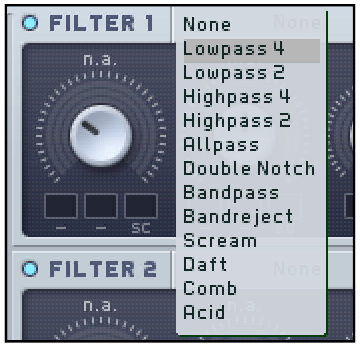
4.3.2 The Filters

Filters are at the heart of subtractive synthesis. They attenuate the frequencies below or above a cutoff frequency which can be controlled and modulated. There are other filter types that work differently, but for our tutorial we will only use a straightforward low pass filter. Have a look at the reference manual for details about the available filter types.

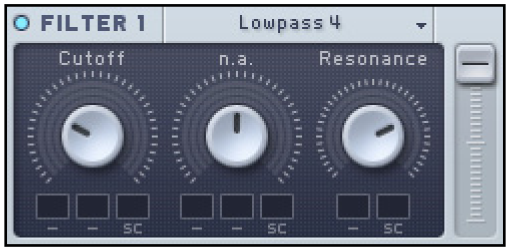
1. We will use a fast resonant low pass filter-sweep to add to the punch of the sound. Also, the sine wave from Oscillator 2 has to pass unfiltered, so we will split the signal path for the oscillators. Drag the Input Fader (labeled F2) of the Filters completely down to get two parallel filters.



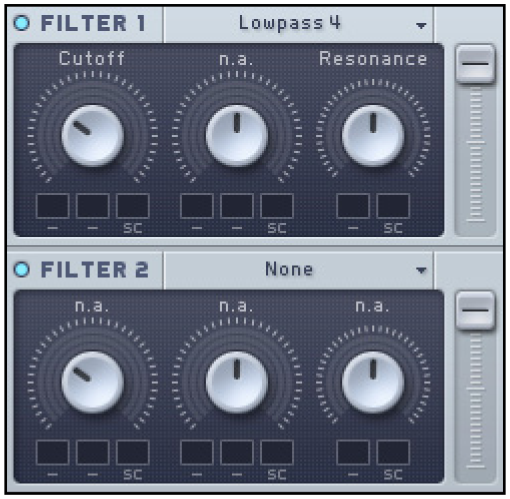
2. Now choose the filter-type Lowpass 4 from the Type menu of Filter 1.



3. Set the Resonance of Filter 1 to a fairly high value, as shown in the picture below. The resonance boosts the volume of the frequencies around the filter cutoff frequency and thereby adds character to the sound. Later in this tutorial we will modulate the cutoff with an envelope generator.

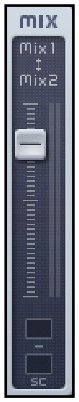


We are going to use Filter 2 as a bypass stage for the sine wave (remember, the signal of Oscillator 2 only goes into Filter 2), so turn its Output Fader all the way up. The Filter Type should stay *None* which equals a bypassed filter. The sine wave of Oscillator one is only to add low frequencies so there is no use in filtering it. Your filters should look like in the following picture:



4. The sound is going to be a mixture of the two filter outputs with Filter 1 modulated by an envelope for the Attack (in combination with the wavetable sweep, see below) and the clean sound of both oscillators going through filter 2 unaltered for the sustain phase of the sound.

Set the Mix Fader of the Filters to a high value as shown below. This fader controls the balance between the two output signals of the filters.

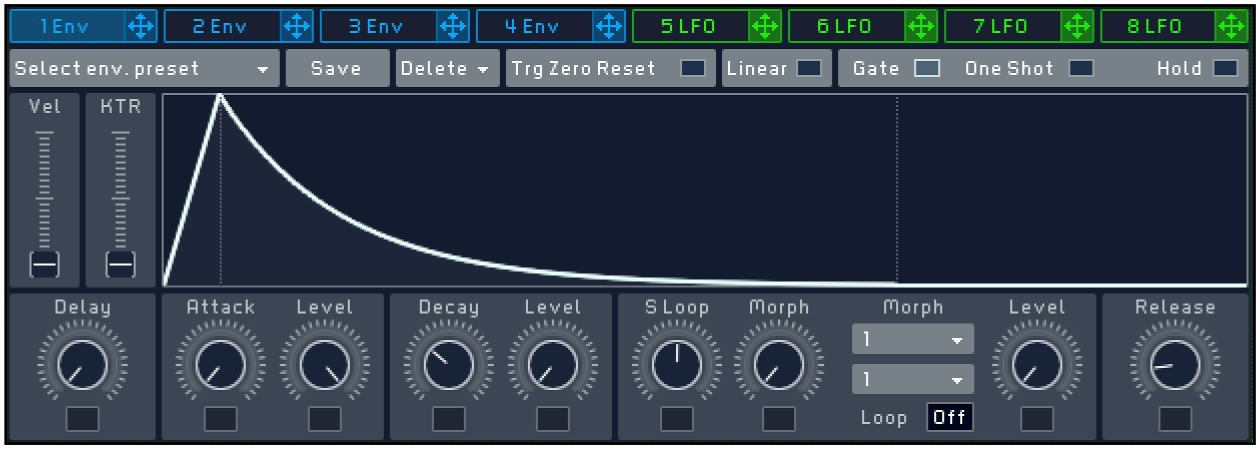


With the filter settings you have set the basis for an additional attack transient while the raw sound of the oscillators still being heard through the bypassed second filter. Especially the unaltered sound of Oscillator 1 is important for the character of our synth-bass.

4.3.3 The Modulation Sources

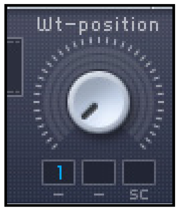
To shape the attack phase of our bass sound we are going to put envelopes with a fast decay time on the wavetable position and the filter cutoff. This leads to a transient attack phase which provides punch to the sound.

1. Switch the Center Window to display Envelope 1 by clicking on *1 Env*. The envelopes are tools to modulate the parameters of MASSIVE over time.
2. Set the Attack knob to zero and the Decay knob to a short value and the Decay Level to zero, as displayed below.

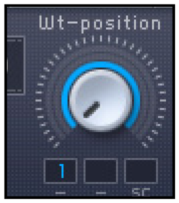


This envelope shape leads to a very quick run-up of the value to the maximum. After the peak is reached it runs down to zero with the time defined by the parameter Decay.

3. Now click on the Modulation Handle of Envelope 1 (the little cross at the right of its tab header), keep the mouse button down and drag it onto the Modulation Slot of the Wt-Position knob of Oscillator 1. Let go of the Mouse button. You see a blue 1 sitting in the slot that means Envelope 1 is the modulation source for the wavetable position:

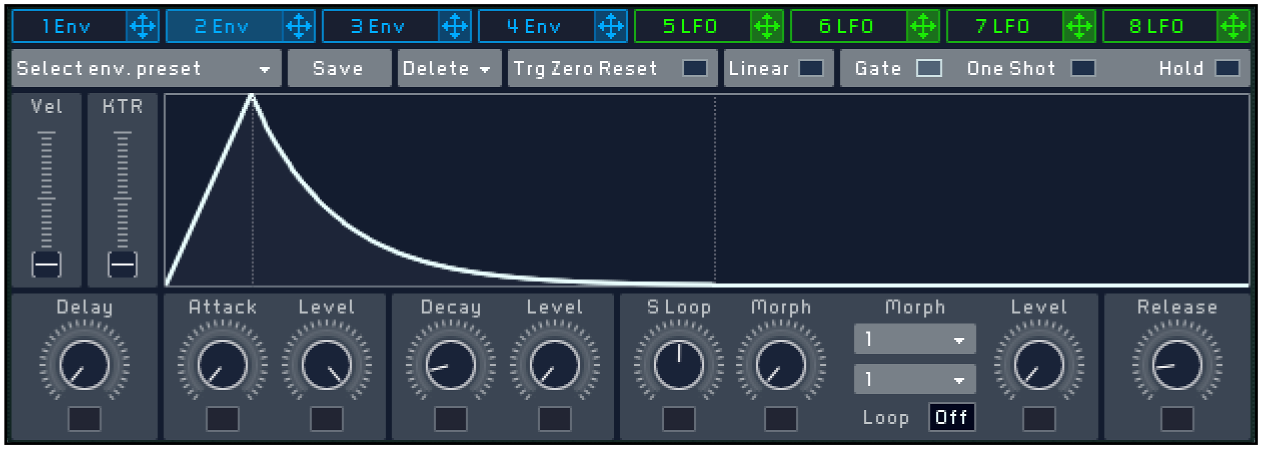


4. Click on the blue 1 and drag the mouse upwards. A ring runs around the knob to depict the positive modulation amount. We want it to sweep the full range of the wavetable.

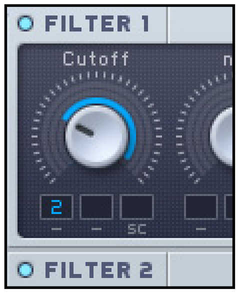


Now the wavetable follows Envelope 1.

5. To add a juicy click to the attack transient of our sound we want the first filter to be modulated by Envelope 2. Switch the Center window to Envelope 2 (by clicking on the tab 2 Env) and set the Attack time to zero, the Decay time to a small value and the Decay Level to zero. The decay should be faster than with the wavetable modulation described above. It should look like this:



6. Now drag the Modulation Handle of Envelope 2 into the Modulation Slot of Filter 1 and drag the mouse up to the maximum modulation amount.

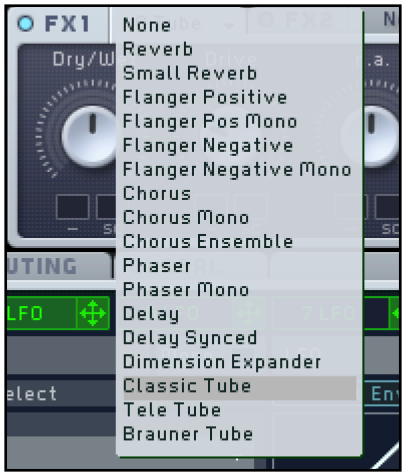


You just connected the outputs of two envelopes to control the Wt-position of Oscillator 1 and the Cutoff of Filter 1, respectively. This will give our bass sound a nice, snappy attack. Play around with the Decay times a bit to get a feel for them.

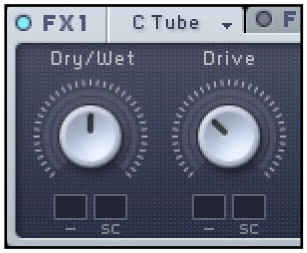
4.3.4 The Effects

The bass sound is not as nasty yet, as it could be. We are going to spice it up with some tube distortion and add a little low end with the EQ.

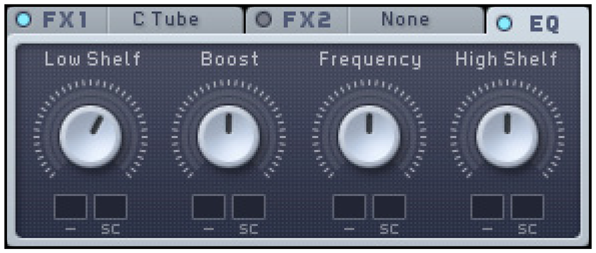
1. Choose the effect *Classic Tube* from the menu of the Master Effect FX 1.



2. Dial down the Drive value a little bit, as shown in the following picture:



3. Switch over to the Master EQ and give the lower frequencies a little boost by turning the Low Shelf knob clockwise.



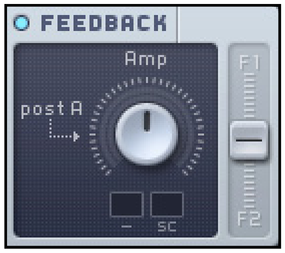
Now our bass is getting up to speed. The Tube effect adds some grit and we boosted the low frequency a bit for more oomph.

4.3.5 Feedback

To get an even better low-end frequency response, we are going to add some feedback to the signal path. To do this:

! Be careful with the Feedback Knob. If you are playing on high volumes feedback can lead to extreme loudness damaging your ears or speakers!

1. Activate the Feedback via its Mute switch. The small circle should light up blue.
2. Dial in the Amp knob to a setting around 12 o'clock. Use your ears while playing to find the sweet spot. Be careful! Feedback can lead to very loud and distorted sounds.



3. Now the signal path is tapped before the Master Effects and the sound is fed back into the two filters (have a look at the Routing tab of the Center window to understand the signal flow).
4. Adjust the Master Volume so that it doesn't hit the red overload display.

Congratulations! You just programmed a nice bass sound.

Go ahead and read the next sections for information about tagging and saving your new KORE SOUND for future use.

4.4 Tagging and Saving Sounds

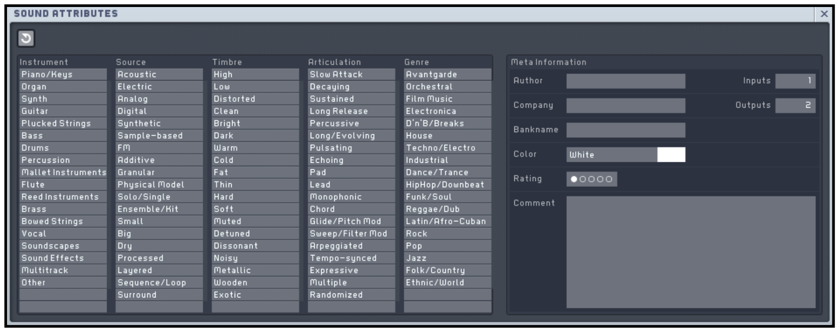
Once you have created your first MASSIVE KORE SOUND, it is of course important to save it so that you can use it again at a later time.

4.4.1 Assigning Attributes

If you are content with your sound design work and are ready to save your new creation just take a few seconds of time to tag it with some Attributes. This will make the future retrieval of the Sound a lot easier as the sound will integrate well with the search workflow described in section 4.1 "Finding and Loading Sounds".

The Assignment of Attributes has its own View in MASSIVE. Tagging your sound involves the following steps:

1. Click on the Attributes button to switch it on. You see the following interface in the lower part of MASSIVE's window, representing an empty palette of Attributes:



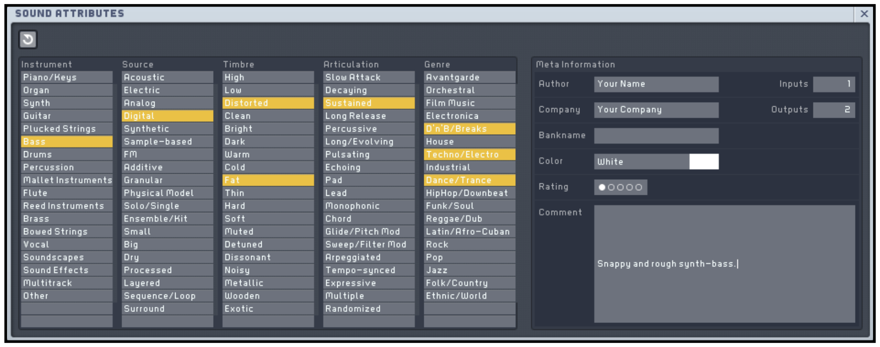
SOUND ATTRIBUTES

Instrument	Source	Timbre	Articulation	Genre
Piano/Keys	Acoustic	High	Slow Attack	Avantgarde
Organ	Electric	Low	Decaying	Orchestral
Synth	Analog	Distorted	Sustained	Film Music
Guitar	Digital	Clean	Long Release	Electronica
Plucked Strings	Synthetic	Bright	Percussive	D'n'B/Breaks
Bass	Sample-based	Dark	Long/Evolving	House
Drums	FM	Warm	Pulsating	Techno/Electro
Percussion	Additive	Cold	Echoing	Industrial
Mallet Instruments	Granular	Fat	Pad	Dance/Trance
Flute	Physical Model	Thin	Lead	HipHop/Downbeat
Reed Instruments	Solo/Single	Hard	Monophonic	Funk/Soul
Brass	Ensemble/Kit	Soft	Chord	Reggae/Dub
Bowed Strings	Small	Muted	Glide/Pitch Mod	Latin/Afro-Cuban
Vocal	Big	Detuned	Sweep/Filter Mod	Rock
Soundscapes	Dry	Dissonant	Arpeggiated	Pop
Sound Effects	Processed	Noisy	Tempo-synced	Jazz
Multitrack	Layered	Metallic	Expressive	Folk/Country
Other	Sequence/Loop	Wooden	Multiple	Ethnic/World
	Surround	Exotic	Randomized	

Meta Information

Author
Company
Bankname
Color: White
Rating: ●○○○○
Comment
Inputs: 1
Outputs: 2

2. Now choose some Attributes that fit your new KORE SOUND by clicking them. They will change their color to yellow, as shown in the following picture:



SOUND ATTRIBUTES

Instrument: Bass
Source: Digital
Timbre: Distorted, Fat
Articulation: Sustained
Genre: D'n'B/Breaks, Techno/Electro, Dance/Trance

Meta Information

Author: Your Name
Company: Your Company
Bankname
Color: White
Rating: ●○○○○
Comment: Snappy and rough synth-bass.
Inputs: 1
Outputs: 2

3. Type in your Name into the Author field of the Meta Information. You can also add a comment. The Comment field will be evaluated when you search for a KORE SOUND.

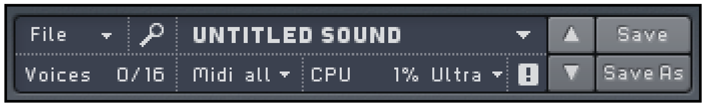
Now your KORE SOUND has all the necessary information to be saved into MASSIVE's sound database. Read the next section and you will learn how to do that.

Please refer to chapter 4.10 "The Browser and Attribute Views" in the MASSIVE reference manual for an in-depth discussion of Categories; Attributes and meta information.

4.4.2 Saving the Sound

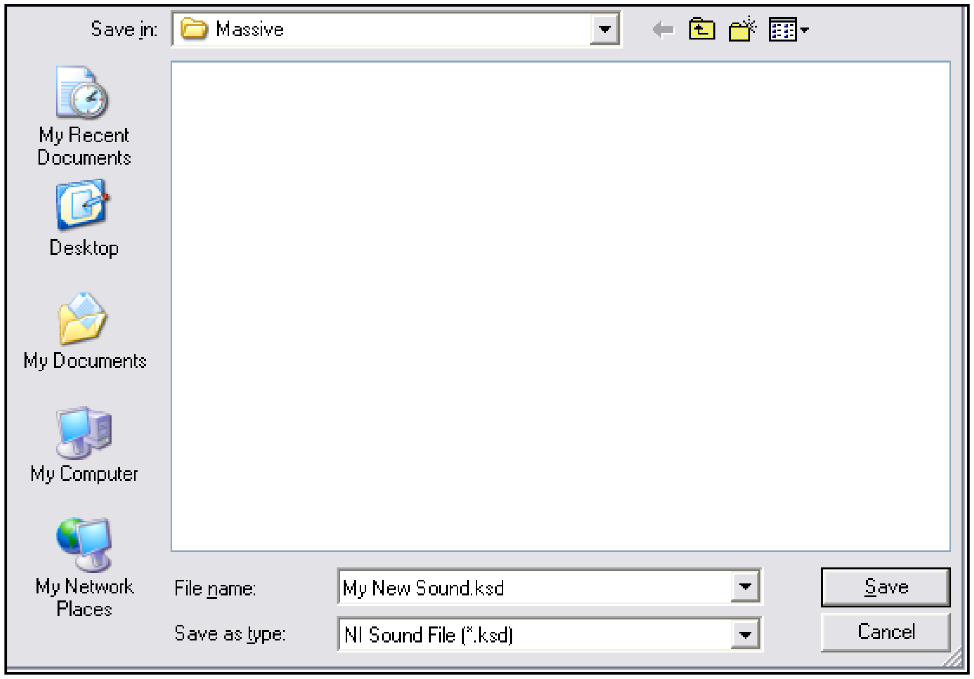
Saving sounds in MASSIVE is straightforward:

1. Click on the Save button in the Navigation Bar.



The Save button in the Navigation Bar of MASSIVE.

2. A file dialog pops up.
3. Type in the desired name for your new KORE SOUND.



Save in: Massive

File name: My New Sound.ksd

Save as type: NI Sound File (*.ksd)

The Save File dialog (Windows XP version shown).

4. Click on [Save] and you are done.

Now your new KORE SOUND is integrated into MASSIVE's database of sounds. You can retrieve it by searching for its name in the Browser.

If a user KORE SOUND was already saved into the database before and you click the Save button in the Navigation Bar, the KORE SOUND will be overwritten with the changes made to it since it was opened. You can use Save As to avoid this.

For more information about KORE SOUNDs including the location of the underlying files on your file system, please refer to the main manual of MASSIVE. It has been installed as a PDF file on your computer.

5 What's next?

With all the basics of MASSIVE now covered you should go on and further explore. If you just want to use MASSIVE's collection of factory KORE SOUNDs have a look at the website of Native Instruments for additional content.

For creating you own sounds you will certainly refer to the reference manual that came as a PDF document with your MASSIVE installation. There you will find everything you need to know to develop fresh sound creations.

Have fun and make lots of music!