



**NATIVE INSTRUMENTS**  
SOFTWARE SYNTHESIS

# KOMPAKT

**Sony ACID Pro edition**

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# Welcome to Kompakt

KOMPAKT brings together Native Instruments' experience in software synthesis, sampling, and signal processing, then it adds a creative twist that turns lines of code into not just another computer program, but a musical instrument.

KOMPAKT offers flexibility and compatibility unlike any other software sampler. KOMPAKT can import sound file formats from , AKAI S-1000/S-3000, EXS, HALion, SF2, LM4, Gigasampler and of course, AIFF, WAV and SDII files with resolutions from 8 to 32 bits are supported as well.

You haven't seen anything quite like KOMPAKT. Its virtual rack lets you construct your own sampling environment. Here you have the possibility to load eight different instruments into a multi, each with individual parameters for perfect tweaking. Prefer to use samples? Drag and drop them to the keyboard to create a custom sample map. With KOMPAKT you create your perfect setup.

For the most creative sound design possibilities, KOMPAKT combines the best elements of synthesizers (filters, different types of envelopes etc.) but it doesn't leave you confused with hidden menus to control these parameters. Everything is there, easy to see, easy to control. It even looks cool, with an interface that is both aesthetically pleasing and straightforward. Extensive use of graphics help make applying modulation sources easy, and the intuitive interface doesn't get in the way of making music.

One last comment: It is important to read any Read Me files. The mad scientists at Native Instruments were adding features even as this manual was going off to the translators.

We hope you enjoy KOMPAKT as much as we do - and if you make some cool music with KOMPAKT, we'd love to hear it. Now go boot up your computer, and have a great time!

- Your Native Instruments Team

# Product Authorization

Part of the KOMPAKT installation is a **Product Authorization** which has to be fulfilled in order to make permanent use of the software. We recommend that you take notice of this chapter first, then proceed with the software installation as described in the following chapters and finally return to this chapter.

## What is the Product Authorization?

The **Product Authorization** includes a full registration. After having completed the authorization, you can make use of all online services related to the registered product. On the Native Instruments website you can read online tutorials, get technical support, participate in the NI forums and download updates.

KOMPAKT requires the **Product Authorization** in order to use the software permanently. You can run KOMPAKT for 30 days without any limitations. As long as the software runs unauthorized a message at every program start reminds you that the authorization has not been completed yet and indicates how many more days the software is running without an authorization.

The **Product Authorization** is performed by a small application called **Registration Tool**. The **Registration Tool** generates a so called **System ID** which serves as request code for receiving an **Authorization Key**. The **System ID** is based on some hardware components of your computer system, the operating system version and the serial number you have entered at the KOMPAKT installation.

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Note: Exchanging your audio card, MIDI interface or external equipment will not start the request for a new **Authorization Key**. Only exchanging a basic hardware component in your computer or installing a new operating system might produce a new **Product Authorization** request. In this case the **Registration Tool** will reflect the change by displaying a new **System ID** and you have to repeat the **Product Authorization**.

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The **System ID** has to be sent to Native Instruments in order to receive the **Authorization Key** which allows the permanent use of KOMPACT. Since the **Product Authorization** is part of the license agreement KOMPACT will stop launching after 30 days if it was not authorized until then. Of course, it is also possible to complete the **Product Authorization** after 30 days. In this case the software will launch again as soon as the **Product Authorization** has been completed.

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Note: The data transfer at the online Product Authorization is done via a secure connection using 128 bit encryption. Native Instruments keeps your personal data like email and postal address in confidence. No data will be passed to a third party.

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## Conducting the Product Authorization

Native Instruments has set a high value on making the authorization procedure as easy and comfortable as possible. In the following sections we describe three methods of conducting the **Product Authorization**. We recommend **Method A** and **Method B** since these result in the easiest and fastest way of receiving the **Authorization Key**.

### Method A: Kompakt computer has direct access to the internet

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Important: This method requires a valid email address to complete the **Product Authorization**, since the registration code will be sent to you by email.

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- **Windows:** Start the **Registration Tool** from the KOMPACT Sony ACID Pro edition library installation folder.
- A click on the **Register Now** button opens the Native Instruments registration webpage. Therefore your standard Internet Browser will be opened and an internet connection will be established according to your system settings. Your **System ID** will be automatically transmitted to the registration form.

- The first registration page asks for a valid email address. If the email address you enter is already known by the registration system, the next page will ask you for the password which you got from an earlier product registration. If the email address is new to the system, a new registration process will begin. Please follow the instructions on the registration website to complete the registration.
- Within one hour you will receive an email from the Native Instruments registration system containing the **Authorization key**. The **Authorization key** is available in the email body and additionally as text attachment. This email also contains the password which is required for using the online services.
- Start the **Registration Tool** again and either copy the **Authorization Key** from the email and press the **Paste from Clipboard** button in the Registration Tool or use the **Open File** button in the Registration Tool to open the email attachment which you previously have saved to hard disk.
- Click on the **Complete** button.

Now the KOMPACT **Product Authorization** has been completed. The authorization message at every KOMPACT start has disappeared and you can use the software permanently:

## Method B: Internet Connection on another computer

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Important: This method requires a valid email address to complete the **Product Authorization**, since the **Authorization Key** will be sent to you by email.

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- **Windows:** Start the **Registration Tool** from the start menu (**Native Instruments Kompakt** ⇒ **Kompakt Registration Tool**) or from the KOMPACT installation folder (default path: **C:\Program Files\Native Instruments\Kompakt\**).
- A click on the **Save Registration File** button opens a **Save** dialog for saving a HTML file. Save the HTML file to any storage medium.
- Transfer the HTML file to another computer where you have internet access (via floppy disk, CDR etc.).

- Open the HTML file in your internet browser.
- The HTML page contains a link for the registration page on the Native Instruments website. When you click on this link an internet connection will be established according to your system settings.
- The first registration page asks for a valid email address. If the email address you enter is already known by the registration system, the next page will ask you for the password which you got from an earlier product registration. If the email address is new to the system, a new registration process will begin. Please follow the instructions on the registration page to complete the registration.
- Within one hour you will receive an email from the Native Instruments registration system containing the **Authorization key**. The **Authorization key** is available in the email body and additionally as text attachment. This email also contains the password which is required for using the online services.
- Transfer the text attachment to the computer where you have installed KOMPACT.
- Start the Registration Tool again and use the **Open File** button in the Registration Tool to open the email attachment which you previously have saved to hard disk.
- Click on the **Complete** button.

Now the KOMPACT **Product Authorization** has been completed. The authorization message at every KOMPACT start has disappeared and you can use the software permanently:

### Method C: No Internet Connection available

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Important: Following this method you will have to fill in a form which you send to Native Instruments. You will receive the **Authorization Key** either by email (recommended), by postal mail or by fax. If you do not provide Native Instruments with a valid email address in the form, be prepared to type in the Authorization Key manually (about 60 digits).

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If you do not have access to the internet or if you do not have a working email address, the **Product Authorization** can also be done via postal mail or fax. Although Native Instruments goes after a fast handling of your authorization requests, it is generally recommended that you prefer **Method A** or **Method B** for shortest return times and most comfortable operation. Please note the following instructions to fulfill the **Product Authorization**:

- **Windows:** Start the **Registration Tool** from the Windows start menu (**Native Instruments Kompakt** ⇒ **Kompakt Registration Tool**) or from the KOMPACT installation folder (default path: **C:\Program Files\Native Instruments\Kompakt\**).
- A click on the **Fill Out Form** button opens a local HTML file in the operating system's standard browser or another program which you have defined as standard application for opening HTML files.
- The HTML file contains all information Native Instruments requires for completing the **Product Authorization** and registration. Please fill in the required data and print it out, or write a letter containing the data.

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If you write a letter please attend to a legible handwriting to avoid mistakes at the Native Instruments registration team. Not legible email or postal addresses can cause problems with the **Authorization Key** delivery.

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- Send the form to Native Instruments using one of the following contact addresses:

### **Native Instruments GmbH**

Registration

Schlesische Straße 28

10997 Berlin

Germany

Fax: +49 30 61103535

## Native Instruments USA

5631 A Hollywood Boulevard

Los Angeles

CA 90028

USA

Fax: +1-323-372-3676

- You will receive the **Authorization Key** via email (recommended), fax or mail.
- Start the Registration Tool again and either copy the **Authorization Key** from the email and press the **Paste from Clipboard** button in the Registration Tool or use the **Open File** button in the Registration Tool to open the email attachment which you previously have saved to hard disk. If you have received the Authorization Key by mail or fax, type it in manually.
- Click on the **Complete** button.

Now the KOMPACT **Product Authorization** has been completed. The authorization message at every KOMPACT start has disappeared and you can use the software permanently:

## Registration support

If you run into problems during the **Product Authorization** the Native Instruments registration support team will be happy to help you. In this case write an email to:

**register@native-instruments.com**

Please describe the occurred problem as accurate as possible and provide the registration support team with the necessary details to solve the problem.

# Installation under Windows

## System Requirements and Recommendations

To use the KOMPAKT Sony ACID Pro edition software, you need a computer with the following minimum specifications:

### Hardware

- Pentium/Celeron/Athlon/Duron processor with 500 MHz. Processors with low floating-point processing performance are expressly **not** recommended.
- 256 MB RAM
- 50 MB free space on your hard disk for the installation, 2.5 GB for the library.
- A sound card compatible with Windows 98/ME/2000/XP.
- A MIDI interface for connecting a MIDI keyboard, another MIDI controller or an external sequencer. The MIDI interface integrated in many sound cards can also be used.

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The audio engine in KOMPAKT has been designed to make optimum use of the available computing power in the CPU. The powerful FPU's integrated in modern CPUs are best suited to carrying out the complex computations of real-time synthesis. We recommend the following high-performance processors for using KOMPAKT: Pentium III with 1,2 MHz or faster, Pentium 4, Celeron with 1200MHz or faster, Athlon, Athlon XP or Duron with 1,2GHz or faster. We also recommend that you use a large amount of RAM (256 MB or more) that is optimally matched to the architecture of your processor.

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### Software

- Windows XP

## Software Installation

### VST Plug-in Installation

- Insert the Installation DVD into the DVD drive.
- Use the Windows Explorer to view the contents of the DVD. To start, double-click the **Kompakt Sony ACID Pro Setup.exe** file.
- When the choice is given by the installer, select **VST Plug-in** from the list of components to install.

# Kompakt Sony ACID Pro edition as Plug-in

## VST 2.0 Plug-in

For more information on the VST 2.0 format, refer to the user guide provided with your VST host program.

## Kompakt Architecture

The most basic element used by a sampler is, of course, the sample itself. This is a chunk of digitized audio that is loaded into RAM or streamed directly from a hard drive. Kompakt allows you to define a variety of parameters for a sample in order to turn it into a musical instrument.

A sample loaded into Kompakt can be defined as an Instrument. Up to eight Instruments can be grouped together into a Multi (short for Multi-Instrument). Each Instrument can be assigned a key range, or zone, which represents the position and stretching of a sample across the keyboard.

Kompakt's hierarchical structure allows you to create complex sounds, or to gather together associated samples for live performance. One or more Instruments associated together into a Multi can be edited and effected as a whole using the Group Edit capabilities. Since each Instrument in a Multi can have its own MIDI channel, you can easily group together a series of sounds to use in a live set. You can also create a layered performance from a group of Instruments with overlapping key ranges and global modulation.

Each Instrument has its own filter, amp, envelopes, LFOs, effects, and finally, a master filter.



Kompakt's interface is divided into five areas: the Multi, Instrument, Modulation, and Effects sections, and the keyboard. The Modulation and Effects areas as well as the keyboard can be folded up when not in use.

## The Browser

The Browser is where you locate your samples, multis and instruments that can be loaded into KOMPACT.

The Sony ACID Pro edition is not able to load instruments created with the full versions of Kontakt or Kompakt. The KOMPACT Sony ACID Pro edition is restricted to instruments built especially for KOMPACT Sony ACID Pro edition but it can import the mentioned 3<sup>rd</sup> party instruments formats (AKAI etc.) and save these as KOMPACT Sony ACID Pro edition compatible patches.



The upper Browser pane is a directory of your computer, including all hard drives, CD-ROM drives, etc. For example, to find files on hard drive C, click on the (+) sign next to the C: icon. A list of all folders on this drive shows up below it.

If these folders contain sub-folders, then the folders also have (+) signs. Click on these to open the folders. Once opened, the (+) sign changes to a (-). Click on this to close the folder; the sub-folders will disappear.

When you click on a folder itself (rather than a + or - sign), any files that KOMPAKT recognizes will show up in the lower pane. (Note that you can specify what file types you want to see with the Show menu (described later) just above the browser.)

To place samples from multiple folders into the lower pane, Shift-click on the folders, and all samples contained in these folders appear in the lower pane.

To drag multiple files from the lower pane into KOMPAKT, you have two options:

- Shift-click to select non-contiguous samples
- Click-drag a rectangle around multiple samples.

## Import

When importing the formats AKAI, Gigasampler and SoundFont2 it is important to notice that they appear as two folders, one containing the presets/programs and the other containing the samples.

## Drag and drop from browser into Kompakt

Simply drag samples from the browser window into the virtual keyboard, or drag Instruments or Multis into their respective rack.

Please take note of KOMPAKT's special feature for dragging samples to the virtual keyboard. KOMPAKT is designed for ease of use. So when you drag a sample to the keyboard, the placement of the mouse cursor is very important. When you drop an audio

sample on the top part of a key, the sample will be mapped to a one octave range. Dropping a sample on the bottom of a particular key will map that sample to that specified key only. Likewise, dropping the sample in the middle portion of a key will yield a mapping range larger than one key, but shorter than the full keyboard range.

## Auditioning Samples from the Browser

The control strip at the bottom of the Browser lets you audition samples prior to loading.

- To control the Sample playback level, use the left volume control slider.
- To automatically play a Sample as soon as you click on it, enable the **Auto** button.
- To replay a Sample in Auto mode, or play a selected Sample when not in Auto mode, click on the Speaker icon.

## Viewing Selected File Types in the Browser

If you have a large sample collection, sometimes it's convenient to restrict the Browser to showing only certain file types. To do this:

- Click on the **Tools** button.
- If a diamond is to the left of the file type name, it will be displayed. If there's a blank space, it will be hidden. Clicking on the diamond or blank space toggles between the two options. Choose from WAV, AIFF, SND II etc.

## Refreshing the Browser

If you have deleted, moved, or added samples and/or folders in the file browser of your OS after opening KOMPAKT, you will need to refresh the Browser to reflect these changes. You also need to refresh when using Akai CDs. To do this:

- Click on **Tools**

- Click on **Refresh**

## The Multi Instrument Section

The Multi-Instrument section (or Multi for short) is where you perform most global Instrument management functions, like opening and saving Instruments and Multi Instruments, setting preferences, etc.



### *Multi Instrument Section*

The top field, to the right of the **Save** button, is where you can load the Instruments and Multis that come with Kompakt. You can enter a name by double-clicking in this field and typing in the new name. To edit a name, drag over the text to be edited and type in your changes.

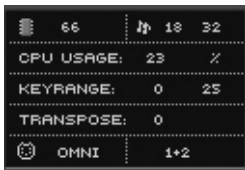
To load a Multi Instrument, click the upside-down triangle in the top field and select a Multi from the drop-down menu. The Instruments that make up the Multi will load into a virtual rack, which can hold up to eight Instruments. To load an Instrument, click and hold on the upside-down triangle in one of the Instrument fields below the Multi text field and select an Instrument from the drop-down menu. It will be added to the Instrument rack.

To save a Multi Instrument, type your chosen name for it into the Multi text field and click the **Save** button.

To edit the settings of an Instrument in a Multi, click on that Instrument's name in the list. Kompakt's settings will change to reflect that particular Instrument.

- **M:** Clicking Mute mutes the Instrument, but allows other Instruments to play.
- **S:** Clicking Solo mutes all other Instruments so that only the soloed Instrument or Instruments play.

To the left of the Instrument list, you will find the information area. This arrangement of text fields gives you information about each Instrument and lets you make changes to some Instrument settings.



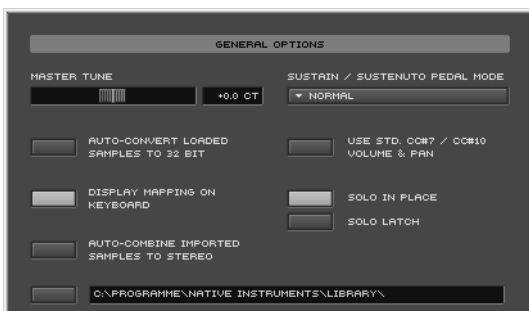
- **Sample size:** On the top, left of the information area the size of the current sample is displayed.. This is easily identified by the RAM chip icon.
- **Polyphony:** The top right corner displays the instruments polyphony. The left digit displays the number of notes being played at any given time, while the right digit shows the maximum number of notes available. Click and drag the right field the increase or decrease the maximum number of notes.
- **CPU usage:** Shows current processor activity in percent.
- **Keyrange:** Set the key range of the currently selected Instrument by clicking and dragging up or down in the Keyrange field. Each sample's key range is represented by an area of green shading on the on-screen keyboard. Use this with multiple instruments to create keyboard splits. For example, a bass Instrument could cover the lower two octaves of your keyboard and a synth the rest.
- **Transpose:** Shift the key of the current Instrument by dragging up or down.
- **MIDI channel:** Lets you change the MIDI channel that each instrument responds to. To change the MIDI channel, click and hold on this field to access the drop-down menu.

- **Output:** Makes it possible to route each Instrument to it's own output if your sound card supports multiple outs. Click and hold on this field to access the Output drop-down menu.

# Options Menu

The Multi area also allows you to set preferences for Kompakt. Click on the Options button to select **General** or **DFD** (Direct From Disk) preferences. The DFD extension is only available on the Native Instruments website. Follow the Update link in the **About** window in order to download the DFD extension from the Native Instruments homepage.

## General Options



*General Options window*

In the General Options window, you can set the overall Kompakt preferences.

- **Master Tune:** Adjust the overall tuning of Kompakt in cents.
- **Sustain/Sustenuto Pedal mode:** Use this to set the behavior of any foot-pedals that you wish to route into Kompakt via MIDI.
- **Auto-Convert Loaded Samples to 32-bit:** Enable this to convert all loaded samples to high-resolution 32-bit format.
- **Display Mapping on Keyboard:** Enable this to show the key-mapping of each Instrument via colored keys.
- **Use Std. CC#7/CC#10 Volume & Pan:** Sets Kompakt to recognize the standard MIDI assignments for volume and pan controllers.

- **Solo in Place:** When chosen, solo in place enables single instrument soloing only. For example, while having instrument 1 soloed, you click to solo instrument 2. With solo in place you would un-solo instrument 1 in favor of soloing instrument 2.
- **Solo latch:** Opposite function of solo in place. This function allows you to solo multiple instruments at the same time, simply by clicking on those you wish to solo.

## DFD (Direct From Disk)



*DFD window*

DFD, or Direct From Disk, is Kompakt's method of streaming samples directly from the computer hard drive, avoiding the problem of large samples taking up precious RAM.

- **DFD Active:** Activates DFD. Otherwise, samples are stored in RAM.
- **Buffer Size:** Although samples are read from the drive in DFD mode, a small portion of the beginning of each sample is stored in a RAM buffer to ensure that all samples trigger precisely. This slider allows you to optimize the buffer size.
- **Mem. Per Voice:** A display of how much buffer RAM is devoted to each sampler voice.
- **Reserved Voices:** Sets the number of sampler voices protected by the buffer.
- **Mem. Total:** Displays the total amount of RAM consumed by the voice buffer.
- **Apply:** Makes changes made in this window immediately active.

# Group Edit



## *Group Edit options*

When the **Group Edit** button is selected, a number of options for global editing of group settings are activated. The **Group Amp** window in the Instrument area opens, as well.

- **Edit All:** When activated, applies any edits you make to all groups within the instrument.
- **Group drop-down menu:** Allows you to select individual instrument groups for editing.

# Group Amp



## *Group Amp window*

The overall volume, pan, and tuning for each group can be adjusted with the Group Amp controls. Each of the three settings has an **LFO** amount knob for the associated LFOs. There is also a **Vel** knob to route velocity value to a groups volume.

## The Instrument Section



*The Instrument window*

The Instrument section is where you can make changes to the individual Instruments of a Multi. You can name an Instrument by double-clicking in this field and typing in the new name. To edit a name, drag over the text to be edited and type in your changes. To save an Instrument, simply click on the **Save** button to the left of the Instrument name field. The new instrument will be saved in your instrument directory.

### Sampler







- **Microtuning:** You can alter the tuning structure of Kompakt by selecting from the Microtuning drop-down menu. Click and hold the Microtuning button to access the menu.
- **Velocity Curve:** You can customize the way each Instrument responds to keyboard velocity by using the Velocity Curve control.
- **Glide:** Determines the amount of polyphonic pitch slide from note to note.

### Filter

A filter shapes the frequency content of signals that pass through it. Kompakt includes a multi-mode filter. Engage it by clicking the header bar labeled Filter. There are six different filter types to help you shape your Instrument.

- **Cutoff:** Controls the cutoff frequency, or the frequency above which signals are attenuated, of the selected filter type.
- **Reso:** Sets the amount of filter resonance, or emphasis of frequencies at or just below the cutoff frequency.
- **Env:** Determines the amount of cutoff modulation by the Filter Envelope.
- **Key:** Adjusts key tracking for the filter cutoff frequency. High Key values cause the filter to sound brighter (to open more, basically) higher up the keyboard, while sounding duller (closing more) towards the bottom. This can mimic the effects of string tension on a piano (higher at the "top" of the keyboard, lower at the "bottom"), for example. When Key is set to zero, the filter frequency is unchanged by keyboard position.
- **Vel:** Controls how much effect velocity has on filter cutoff.
- **LFO:** Controls the amount of cutoff modulation by the Filter LFO.

Select the type of filter by clicking one of the buttons listed below.

- : Activates a 1-pole, or 6 dB per octave, low pass filter. Low pass filters reduce high frequencies while allowing low frequency signals to pass through.
- : Activates a 2-pole, or 12 dB per octave, low pass filter.
- : Activates a 4-pole, or 24 dB per octave, low pass filter.
- : Activates a high pass filter. A high pass filter leaves high frequencies in places, but attenuates below the cutoff point.
- : Activates a band-reject, or notch filter. A notch filter cuts a narrow range of the frequency spectrum without affecting frequencies above or below the notch.
- : Activates a band pass filter. A band pass filter boosts a specific frequency band, and cuts frequencies above and below the band pass range.

## Instrument Amp

The Instrument Amp controls the mixing parameters for each Instrument. This can come in handy when putting together a Multi with overlapping layers. You can position each Instrument layer precisely where you want it in the mix.

- **Volume:** Sets the Instrument's output level. Since Kompakt sums together all voices at the output, playing many loud voices at once could result in clipping. Be careful when you set each Instrument's Volume in order to avoid distortion (unless that's the kind of thing you are into).
- **Pan:** Allows you to position the Instrument's location within the stereo sound field. For fine adjustments, hold down the Shift key while dragging with the mouse.
- **Tun:** This control changes the Instrument's master tuning in semitones, up to +/- 12 semitones, or one octave. To enable fine-tuning in cents (1/100th of a semitone), holding down the Shift key while dragging with the mouse.
- **Meters:** These show the Instrument's signal output level. If the red clipping indicators light up, reduce the overall level to avoid distortion.

# The Modulation Section



## *The Modulation section*

Kompakt includes three envelopes and three LFOs to help you shape and add movement to your sounds. The Envelope and LFO headers act as both on/off switches and switch the view to the selected modulator.

## Envelopes

Envelopes create a modulation curve over time for parameter control. Kompakt's envelopes are of the ADSR (attack, decay, sustain, release) variety, which is the most commonly found synthesizer envelope. The Kompakt envelopes include a Hold stage, creating an AHDSR envelope. A slight amount of hold time coupled with a fast attack is the secret of punchy synthesizer sounds, like basses and percussion sounds. Two of Kompakt's envelopes are "hard-wired" to their parameters, though the Free Envelope can be assigned to one of a variety of parameters. When an envelope is activated, the header will "light up" a bright green color. The currently selected envelope is a brighter green than those envelopes that are active but not selected.

## Volume Envelope

To engage and access the Volume envelope, click on the Volume Envelope header in the Modulation section. When properly selected it will turn bright green, you can then edit the parameters.

- **Attack:** Sets the time required for the envelope to go from 0 dB to its maximum level.
- **Hold:** Sets the amount of time that the envelope stays at its maximum level.

- **Decay:** Sets the time required for the envelope to drop from the maximum level, set by the attack and Hold controls, to the Sustain level.
- **Sustain:** Sets the level that will be maintained as long as the MIDI note triggering the envelope is held.
- **Release:** When the MIDI note is released, the Sustain parameter sets the time that the envelope decays back down to 0 from the sustain level.
- **Retrigger:** Allows you to re-trigger the envelope every time you play a key or send a MIDI note (i.e., the envelope starts from the same point each time it's triggered). If disabled, any key you play while another is down will not retrigger the envelope.
- **CRV:** Sets the amount and polarity of the curve of the envelope's Attack stage. You can use this to create sounds where the attack stage swoops in gradually (low CRV value), or where it starts more immediately with a steeper curve (high CRV value).

## Filter Envelope

The Filter Envelope offers the same controls as the Volume Envelope described above, but when engaged, affects filter cutoff frequency.

## Free Envelope



*The Free Envelope activated*

The Free envelope operates just like the Volume and Filter envelopes, but its modulation signal output can be sent to a choice of destinations, rather than being "hardwired". The drop-down menu under the Retrigger switch lets you pick the modulation destina-




tion. You can use the Free Envelope to modulate **Pan, Tune, Filter Resonance**, and **LFO 1-4 amount** and **speed**. The **Amount** slider at the far right sets the amount of modulation by the envelope sent to the destination.

## LFOs



*The LFO section (focused on the Filter LFO).*

An LFO (or Low Frequency Oscillator) creates continuous modulation signals at sub-audio speeds. Vibrato and tremelo are examples of LFO signals that effect pitch and volume, respectively. There are four LFOs available in Kompakt, allowing you to create complex modulation schemes. Each LFO is "hardwired" to its modulation target. You can activate an LFO by clicking on its header. The currently selected LFO will glow a bright green, while engaged but not currently selected LFOs will glow a dimmer green.

- **Freq:** Sets the LFO speed in Hertz. If the Sync switch (described below) is engaged, the LFO frequency is displayed in clock divisions (1/4, 1/8, 1/16, etc.).
- **Key:** Determines whether, and how much, the LFO tracks the current note pitch. You can use this to force LFO frequency to change to match playing position on the keyboard (i.e., faster speeds with higher notes, slower speeds with low notes).
- : Engages the sine LFO waveshape.
- : Engages the saw LFO waveshape.
- : Engages the square LFO waveshape.

- **Retrigger:** Activates LFO retriggering every time a MIDI note is received (i.e., the LFO starts over from the same point every time you play a key). If disabled, any key you strike while another key is down will not retrigger the LFO.
- **Sync:** Allows you to synchronize the LFO frequency to any incoming MIDI clock signal. You can set the LFO speed to musically useful clock divisions (like 16th note triplets, for example) by using the drop-down menu next to the Freq. Knob.

When the **Filter LFO** is engaged, you will see a drop-down menu below the **Sync** switch. This allows you to specify whether the Filter LFO signal modulates Cutoff or Resonance.

# The Effects Section



## *The Effects section*

Kompakt includes three time-based effects modules and a Master Filter for special effects. Any combination can be engaged simultaneously (as long as your computer has enough processing power). You can activate each effect by clicking on its header. The currently selected effect will glow a bright green; while engaged, but not currently selected effects will glow a dimmer green.

## Reverb



Synthesizes the reflections that occur when sound bounces around in an acoustic space, adding special dimension to a sound.

- **Preset:** Allows you to select from a variety of pre-programmed reverb settings.
- **Size:** Sets the "room" size, which affects how long the reverberation lasts. Higher values model larger rooms.
- **Damp:** The Damping control sets the amount of absorption of high frequencies in the room. In real life, absorption is accomplished with draperies, acoustic panels, bodies, etc.
- The slider at the bottom determines the wet/dry balance. Moving the slider to the right mixes in more reverb than dry signal.

## Chorus



This effect thickens the audio signal by doubling the signal and detuning the copy compared to the original signal. It uses a very short delay to accomplish this. A pair of LFOs detunes each channel of the stereo signal to give the impression of movement.

- **Depth:** The amount of LFO modulation. Higher values give a more pronounced chorusing sound.
- **Speed:** Sets the LFO speed.
- The slider at the bottom sets wet/dry mix.

## Delay



Produces echo effects. Very low delay times produce comb-filter and resonator-like effects. Higher time settings produce a noticeable echo compared to the dry signal.





- **Time:** The interval in milliseconds between hearing the dry signal and the first delay of the echo signal. If the Sync switch is engaged, delay time can be set in musically-useful clock divisions by selecting from the drop-down menu below the Time knob.

- **FDB:** Sets the Feedback amount. This sends a portion of the delayed signal back into the input of the delay line, creating multiple echoes. A value of zero produces only one repeat. Higher Feedback values produce multiple (up to infinite) repeats.
- **Sync:** Allows you to synchronize delay time to any incoming MIDI clock. You can then set delay times in clock divisions.

## Master Filter



When activated, the Master Filter acts as a global filter or EQ, affecting the entire signal up until this point. You can use it emphasize or attenuate frequencies in your sound

- **Preset:** This drop-down menu lets you access a list of EQ presets for altering your sound.
- : Engages a resonant 4-pole low pass filter. You can alter the frequency and resonance by clicking and dragging on the small green dot in the filter display.
- : Engages a resonant high pass filter. Alter the cutoff frequency and resonance by clicking and dragging the dot in the filter display.
- : Engages a resonant band pass filter.
- : Transforms the Master Filter into a three-band parametric equalizer. Each band can be adjusted for cutoff and gain by clicking and dragging its control dot in the filter display. Control-clicking on a dot sets the gain for that band to zero. You can adjust the bandwidth, or cutoff steepness, for each band by clicking and dragging up or down in the Bandw. text field to the right of the filter display.

- **Cutoff:** Lets you set the cutoff frequency for the selected EQ band or filter in Hertz by clicking and dragging up or down in the text field. You can also type in values by double clicking in the field.
- **Gain:** Sets the boost or cut of each EQ band or filter. Adjusts can be made by clicking and dragging or by double-clicking and typing in values.
- **Bandwidth:** In EQ mode, you can adjust the range, or bandwidth, of each selected EQ band by clicking and dragging in this field. You can also type in values by double-clicking on this field and entering numbers from the keyboard.

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