



# SETUP MANUAL

**Installation  
Interfaces**

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Users Guide written by NATIVE INSTRUMENTS

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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# INSTALLATION

# Welcome to NATIVE INSTRUMENTS

We would like to thank you for purchasing NATIVE INSTRUMENTS SOFTWARE. Whether this is your first, fifth, or tenth product; it is because of customers like you that we can continue making great sounding, ground breaking software. Countless awards and accolades have demonstrated the outstanding quality of NATIVE INSTRUMENTS SOFTWARE, making it the ultimate choice for musicians worldwide.

NATIVE INSTRUMENTS products outfit you with a diverse range of sonic tools (- a wide range of synths, samplers, and effects -) that will dramatically enhance and expand any creative environment. They are so comprehensive that you'll be able to explore any musical avenue, in every studio or stage, be it hobby based or professional.

Speak Native!

-Your NATIVE INSTRUMENTS Team

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**Note:** The individual product manuals are included additionally as PDF files in the appropriate installation folders. The PDFs contain bookmarks and can also be navigated by clicking on the desired page numbers in the table of contents and index (if available). The PDF files can be viewed using the free available Adobe Reader ([www.adobe.com](http://www.adobe.com)).

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# Installation under Windows XP

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**Note:** The audio engine in NATIVE INSTRUMENTS SOFTWARE has been designed to make optimum use of the available computing power in the CPU. In order to maximize your experience, we recommend you use a modern computer.

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## Software Installation

- Insert the NATIVE INSTRUMENTS SOFTWARE CD/DVD into the optical drive.
- Use the Windows Explorer to view the contents of the disk.
- Start the installation by double-clicking <Product Name> Setup.exe.
- The setup program will suggest C:\Program Files\Native Instruments\<Product Name> as the path for the destination folder. You may also choose another folder.

## Installed Folders, Files, and Links

The setup program creates a new folder called <Product Name>\ in the installation directory (Program Files\Native Instruments). This folder contains the files required to operate the software. If you do not choose a different program path during the installation, links to the Product and a ReadMe file are added to the Start menu under Programs/Native Instruments.

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**Important:** Do not move the installation folder to another location!

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## VST, DXi, RTAS plug-in installation

- Insert the Installation CD/DVD into the optical drive.
- Use the Windows Explorer to view the contents of the CD/DVD. To start, double-click the <Product Name> Setup.exe file.
- When the choice is given by the installer, tick the correct plug-in from the list of components to install.

For VST, you can choose to automatically search for the VST plug-in folder or manually select the VST plug-in folder of your choice. Please select the option that best suits your installation requirements.

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**Note:** If you decide to install the VST-Plug-ins at a later date, simply copy the “<Product Name> VST.dll” file from the VST folder of the installation folder into the VST plug-ins folders of the host program.

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If the VST plug-in files are not visible in the Windows Explorer, select the Show All Files option. This option is located in the Explorer menu View -> Folder Options... on the View tab below Hidden Files. Optionally, you can set up your programs so that they all use the same VST plug-ins folder.

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# Installation under Mac OS X

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**Note:** The audio engine in NATIVE INSTRUMENTS SOFTWARE has been designed to make optimum use of the available computing power in the CPU. In order to maximize your experience, we recommend you use a modern computer should one be available.

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## Software Installation

- Insert the Installation CD/DVD into the CD/DVD drive of your computer.
- Double-click the installation program Install <Product Name> to start it.
- The start screen appears first. After clicking Continue and confirming the license agreement, a dialog opens where you can select the installation location and the destination folder.

The installation program suggests a path for the NATIVE INSTRUMENTS SOFTWARE folder; if you do not select a different destination, the <Product Name> folder is created on the Macintosh HD in the folder “Applications”.

## Installation Type

### Easy Install

The easy install method installs all package contents. This includes, but is not limited to, the stand-alone, plug-in versions, documentation and sample library (if there is one). In most cases you will want to use the easy install method.

### Custom Install

You also have the option to perform a custom installation of your software. This is practical in two situations:

- You want to (re)install just one or more items without installing everything again. Therefore, you check only the necessary items.
- You know that you do not need certain items to be installed. Therefore, you leave the unnecessary items unchecked.
- Launch the <Product Name> Installer from the CD/DVD
- Select the Custom installation type from the installer’s drop-down menu.
- Check the plug-in(s) you wish to install from the list of components.



# INTERFACES

# NATIVE INSTRUMENTS SOFTWARE as Standalone

Soundcards, which include software routines called drivers, allow NATIVE INSTRUMENTS SOFTWARE (and other programs you have installed, if present) to communicate with your computer’s audio hardware. This section describes how to use various audio interfaces with NATIVE INSTRUMENTS SOFTWARE.

There are two main ways to implement NATIVE INSTRUMENTS Products:

As a “stand-alone” device that requires no host software. The application’s audio and MIDI connections interact directly with your computer’s audio/MIDI hardware interface.

As a plug-in that works in conjunction with a “host” program, such as sequencing or hard disk recording software. In this case, the host program interacts directly with the computer’s hardware interface. NATIVE INSTRUMENTS SOFTWARE connects to the host program via “virtual patch cords.” The audio outputs appear as signals in the host’s mixer, and the host passes MIDI data to the software.

We’ll describe each mode in detail, but first let’s look at the various interface drivers and plug-in formats used by different operating systems and programs.

NATIVE INSTRUMENTS SOFTWARE works in stand-alone mode with ASIO, MME, DirectSound, and Core Audio drivers. The software/computer combination acts as an instrument, similar to a hardware digital synthesizer. The table shows you which drivers are available under which Operating System:

Driver	Windows	MacOS X
ASIO 2.0	•	•
DirectSound	•	
MME	•	
Core Audio		•

## Driver Details

The Drivers described below represent different ways NATIVE INSTRUMENTS SOFTWARE can communicate with your soundcard. Available drivers depend on your computer, the sound card you’re using, and your computer platform. Choose the fastest driver protocol supported by your soundcard, which will likely be ASIO with Windows, or Core Audio for Mac. For Windows, you can also use DirectSound and Multimedia (also called MME), but expect a significant delay (called latency) between the time you play a note and the time you hear it.

**ASIO** (Audio Streaming Input Output): This cross-platform plug-in protocol was developed by Steinberg. It is highly recommended for its low latency, multi-channel audio card support, and high performance.

**DirectSound:** Developed by Microsoft, this is a component of DirectX 5.0 or higher for Windows. How well DirectX works well depends on your sound card. If you adjust the interface for an acceptable amount of latency, you may hear glitches and clicks in the audio output that can only be fixed if you increase latency.

**MME** (Multi Media Extension): This is the standard Windows audio driver. Most sound cards support this interface and work with it quite well. However, MME is even less suitable than DirectSound for real-time applications due to its comparatively high latency.

**Core Audio:** This driver for MacOS X is integrated tightly into the operating system, and works with external soundcards, as well as the Mac's integrated audio output (known as built-in). Nowadays, many soundcards support Core Audio out of the box. They are simply "plug and play". Others, however, may require an additional driver to be installed. Please check your soundcard's documentation for further information.

## Audio and MIDI Settings

With stand-alone operation NATIVE INSTRUMENTS SOFTWARE communicates directly with your soundcard. It's therefore necessary to specify Audio and MIDI settings, as well as the preferred driver protocol. For the plug-in format this is not an issue since the host application interfaces with the soundcard.

Setup for Mac and Windows machines is essentially identical, except where indicated. Note that if you change your soundcard, you will almost certainly need to re-adjust these settings.

Call up the Audio and MIDI Settings dialog from the File menu, just above Exit.

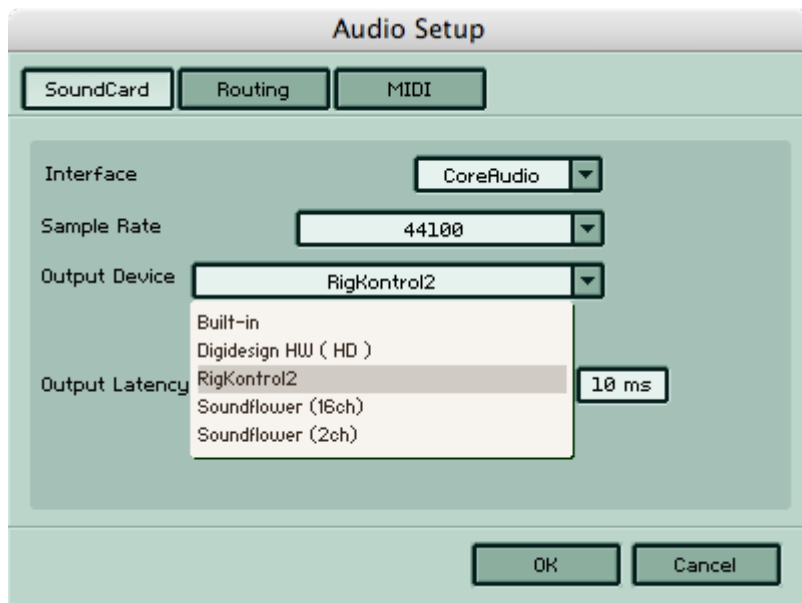
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Depending on the product, this dialog may be located under another menu. Please check the Setup, System, or File > Setup menus, should you not be able to find the Audio and MIDI Settings.

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You'll see three tabs for Soundcard, Routing (audio input/output patching, and MIDI).

## Soundcard (Audio Interface)



**Interface:** Choose the fastest driver protocol supported by your soundcard, which will be ASIO or Core Audio. For Windows, you can also use DirectSound and Multimedia (also called MME), but expect a significant delay between the time you play a note and the time you hear it.

---

**Windows only:** Avoid using any drivers listed as “emulated,” as they provide poorer performance than other drivers. For example, although DirectSound drivers generally outperform MME drivers, MME drivers will outperform emulated DirectSound drivers.

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**Sample rate:** The drop-down menu will display compatible sample rates for your audio interface. 44.1kHz is the same sample rate used for CDs, and is the most “universal” choice. However, some audio interfaces offer 48kHz and 96kHz (NATIVE INSTRUMENTS SOFTWARE accepts up to 96kHz sample rates). These higher rates stress your computer more, but offer somewhat better high frequency response. If you are using NATIVE INSTRUMENTS SOFTWARE standalone, choose whichever rate you prefer. When used as a plug-in with a host program (e.g., Cubase, Digital Performer, Logic, Sonar, etc.), the host will determine the sample rate.

**Output Device:** Use ASIO written specifically for your audio interface (not “ASIO DirectX” or “ASIO Multimedia,” unless no other choices are available), or for the Mac, Core Audio.

**Output Latency:** This field displays the output latency. For some drivers you can adjust the latency individually using a fader. If a fader is not present , then you need to open the ASIO Configuration by pressing the ASIO Config button in the Soundcard tab and adjust the latency using the buffer size setting in the control panel of your audio card. Higher buffer size result in higher latency and vice versa.



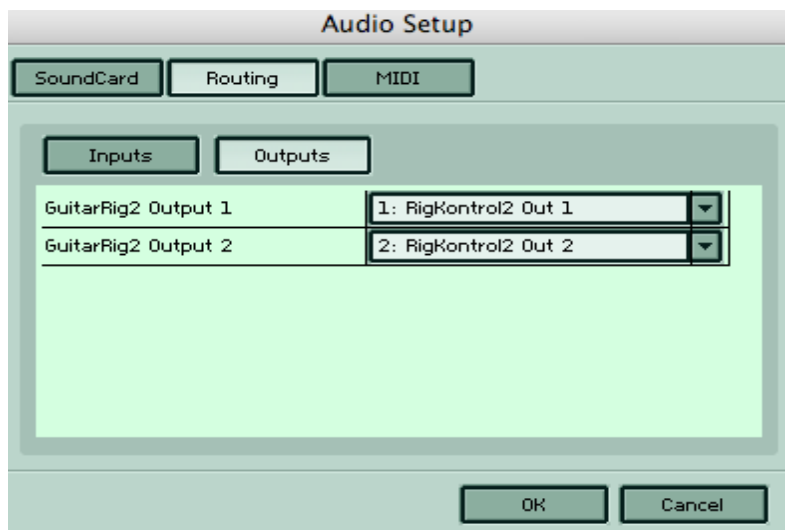
The Soundcard tab settings as seen on Windows XP.

Adjust latency for the fastest possible setting that gives consistent audio performance. The CPU may not be able to keep up with fast settings, resulting in possible crackles or pops in the audio. Slower settings will give more consistent audio performance, but the amount of delay may be musically unsatisfying.

Experiment with the latency setting until you find the best compromise between consistent audio performance and fast response. A quick way to adjust latency is as follows:

- Select any instrument and play it while moving the Latency slider.
- Move the Latency slider to the left until you start to hear clicks in the audio output.
- Now move the slider to the right until the clicks disappear. This is the optimum setting.

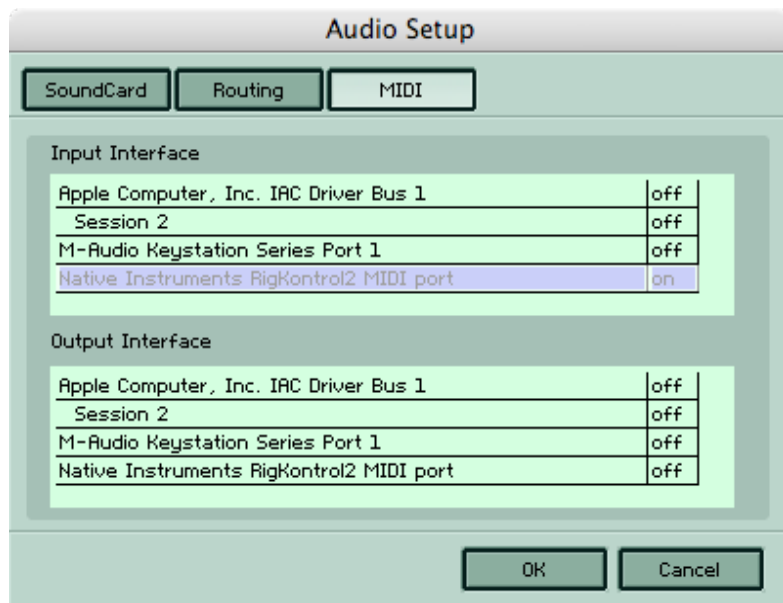
## Routing



Input routing will be shown for products which support audio input. Please note that some products, such as the sampling line, do not support audio input at the time of writing this manual.

If your sound card offers multiple outputs, you can choose which ones to connect. Click on Outputs to select the outputs from drop-down menus.

## MIDI



If your MIDI interface offers multiple ins and outs, you can choose which one connects to NATIVE INSTRUMENTS SOFTWARE. When you click on the MIDI tab you'll see a list of MIDI I/O. Initially, each one will be **Off**. This field is a toggle – click on **Off** to turn an input or output On, click on **On** to turn an input or output **Off**.

If you enable more than one input, they will be merged.



# NATIVE INSTRUMENTS SOFTWARE as Plug-in

Used as a plug-in, NATIVE INSTRUMENTS SOFTWARE is not a stand-alone program, but rather a program “module” that can be integrated into a Host, such as a sequencer. Plug-in mode allows you to integrate NATIVE INSTRUMENTS SOFTWARE seamlessly with the sequencer. Furthermore, it has many other uses as a plug-in:

- MIDI sequencing of NATIVE INSTRUMENTS SOFTWARE and audio mix-down of the MIDI tracks within a single program
- Comfortable automation of NATIVE INSTRUMENTS SOFTWARE parameters in the sequencer
- Further processing of NATIVE INSTRUMENTS SOFTWARE signals using additional plug-ins
- Sample-accurate timing with MIDI controllers
- Restoring of all plug-in settings when the host document (such as a song file of the sequencer) is loaded
- Integration with other instruments into a “virtual studio”

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NATIVE INSTRUMENTS SOFTWARE key commands may not work in all sequencers. This is due to the fact that the hosts sometimes capture keys for themselves and do not pass them on to the plug-in. Please check your host documentation for more information.

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This table provides you with an overview of which plug-in interfaces are supported by which host programs:

Plug-in Interface	Host-Program	Windows	Mac
VST	Cubase, Nuendo	•	•
DXi	Sonar	•	
Audio Units	Logic, DP		•
RTAS	Pro Tools	•	•

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**Note:** Some hosts include “wrappers” that allow running NATIVE INSTRUMENTS SOFTWARE with a choice of plug-in protocols. Try each one, as one may offer better performance than another.

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## Plug-In Details

**VST** (Virtual Studio Technology): Like ASIO, this cross-platform plug-in technology was developed by Steinberg. It is the most common plug-in format, and many programs are optimized to work with VST plug-ins.

**DXi** (DirectX Instrument): Based on Microsoft DirectX technology, this plug-in interface for software synthesizers and instruments is designed for low latency and high performance on the Windows platform. Cakewalk Sonar and Image Line FL Studio are the most well-known hosts that support DXi.

**RTAS** (Real Time Audio Suite): This interface protocol from Digidesign allows using plug-ins with Pro Tools (or other Digidesign-compatible software). Unlike traditional TDM effects that depend on using Digidesign hardware, RTAS plug-ins are “native”. This means the host processor performs all computations needed for the plug-in.

**AU** (Audio Units): This plug-in format is exclusively for the Mac OS X platform, and is tied in closely with the operating system.

# Using NATIVE INSTRUMENTS SOFTWARE as Instrument or FX Plug-in

When used as a plug-in, the host program has already set up its audio and MIDI connections, and NATIVE INSTRUMENTS SOFTWARE simply “plugs in” to these.

Plug-ins come in two forms, virtual instruments and audio effects (FX). Most NATIVE INSTRUMENTS products will be used as virtual instruments. This means that the instructions in the following section can be used to get started with NATIVE INSTRUMENTS SOFTWARE and your host. However, some of the products can also be used as effects. When available, the plug-in name ends with “FX”, such that FM7 for example is called FM7fx.dll, FM7 FX.vst .

The instructions in the following section are based on the most recent Sequencer versions available at the time of writing this manual. If something remains unclear, or appears to be incorrect for your sequencer version, please refer to your Host’s documentation for more information.

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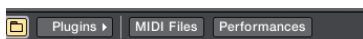
The Host screenshots use Kontakt 2 as instrument and Guitar Rig 2 as effect for illustrative purposes only. The same steps may be employed for other NATIVE INSTRUMENTS plug-ins where applicable.

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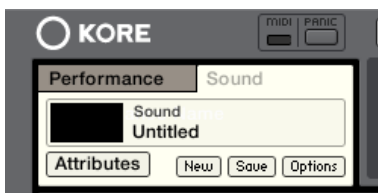
## Kore by NATIVE INSTRUMENTS

### NATIVE INSTRUMENTS SOFTWARE Instruments in Kore

- Launch Kore
- Locate the Browser. If it is not visible, open it and select the Plug-ins tab.



- Note the View tabs labeled Instruments and Effects. Choose your instrument / effect from the list and drag it to the rack (empty space above the browser).
- This will create a new Sound layer which includes the selected instrument. Click on the Sound layer tab to open the interface for editing, e.g. add more instruments or send effects, assign controls, and thus begin designing your Sound layer.



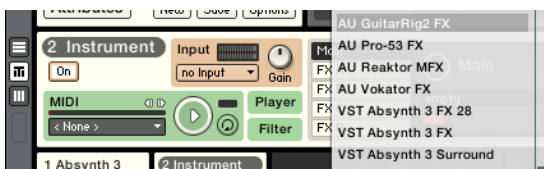
- The plug-in now appears in the instrument slot and is ready to use. The instrument mixer channel will allow you to mix, pan, and process the software's output.
- If the Instrument interface is not already open, press the E button in the assignment panel to call up the NATIVE INSTRUMENTS SOFTWARE interface. Here you can control and edit all the features and functions that the product has to offer.

After loading an Instrument, you should be able to trigger it via MIDI using a keyboard controller. NATIVE INSTRUMENTS SOFTWARE's sound will generate through Kore and directly to your sound card. If the plug-in does not receive MIDI or generate audio, then make sure to check the following areas:

- Open the Setup menu>Audio MIDI settings dialog. Select the MIDI tab and make sure your MIDI device shows up and is ON.
- Check the channel's MIDI filter settings. Make sure that the MIDI channel is set to receive on the channel which your keyboard sends.

## NATIVE INSTRUMENTS SOFTWARE FX in Kore

- Locate the Sound layer which contains your instrument.
- The Insert slot location depends on the layout view, but the insert slots can be recognized as see below. Right click in a slot to see the list of available FX.

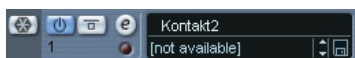


# VST Plug-in

## Cubase / Nuendo by Steinberg

### NATIVE INSTRUMENTS SOFTWARE Instruments in Cubase/ Nuendo

- Launch Cubase, go to the Devices menu option and select the VST Instruments menu option or press F11 on your keyboard.
- A window showing the instrument rack appears. Click on an empty slot and choose <Product Name> from the available list of instrument plug-ins.



- The plug-in will now appear in your list and automatically be turned on. It will also create a set of audio channels in your VST mixer that will be used for mix down within your project. This will allow you to mix, pan, and process NATIVE INSTRUMENTS SOFTWARE's output just like any other existing audio track in your Cubase song.
- Click on the Edit (e) button to call up the NATIVE INSTRUMENTS SOFTWARE interface. Here you can control and edit all the features and functions that NATIVE INSTRUMENTS SOFTWARE has to offer.
- Now go to the "Project" page and add a MIDI track (if you do not have one already created).



- In the Inspector, go to the Output parameter section for this MIDI Track and click on the field. This will show a list of available MIDI out ports to assign to this MIDI track. Choose <Product Name> from the list.

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**Note:** If a product does not appear in the list of available VST instruments, then you may need to enable it manually via the Devices/plugin information window. If the product does not show up there, then it may not be installed correctly. Please refer to the previous section on installing the plug-in for both Windows and Mac platforms for more assistance on setting this up.

---

After having loaded an Instrument from the library you should be able to trigger it via MIDI using a keyboard controller. NATIVE INSTRUMENTS SOFTWARE's sound will generate through the VST mixer and directly to your sound card. If the plug-in does not receive MIDI or generate audio, then make sure to check the following areas:.

- The MIDI channel of your MIDI track must correspond to the receive channel of the loaded instrument.
- Make sure that you have properly configured your sound card for use with Cubase.

(please refer to your Cubase manual for more information)

### **NATIVE INSTRUMENTS SOFTWARE FX in Cubase/ Nuendo**

- Launch Cubase, and create an new Audio Track.
- In the Inspector, expand the Inserts view. Click on an empty insert slot and choose <Product Name> from the list.
- The plug-in will now appear as an insert effect and the audio signal will pass through NATIVE INSTRUMENTS SOFTWARE before being output.
- Click on the Edit (e) button to call up the NATIVE INSTRUMENTS SOFTWARE interface. Here you can control and edit all the features and functions that NATIVE INSTRUMENTS SOFTWARE has to offer.

# Audio Units Plug-in

## Logic Pro / Express by Apple

### NATIVE INSTRUMENTS SOFTWARE Instruments in Logic

- Launch Logic and create an audio instrument track or set an existing audio or MIDI track to an audio instrument track by clicking on the track name, holding down the mouse button and choose Audio -> Audio Instrument -> Inst 1.



- Double click the audio instrument track to open the environment window. Logic scrolls automatically to the first instrument bus in the Logic mixer.
- Choose the NATIVE INSTRUMENTS SOFTWARE Audio Unit plug-in in the appropriate insert slot of the instrument track, either in the arrange or mixer window. To do so, click onto the insert slot, hold down the mouse button and choose Stereo -> Audio Units -> Native Instruments -> <Product Name>. (Some products are also available as a mono or multi-channel inserts.)



- The plug-in now appears in the instrument slot and is ready to use. The instrument mixer channel will allow you to mix, pan, and process the software's output just like any other existing audio track in Logic.
- If the NATIVE INSTRUMENTS SOFTWARE interface is not already open, double click on the mixer's insert slot to call up the NATIVE INSTRUMENTS SOFTWARE interface. Here you can control and edit all the features and functions that the product has to offer.

After loading an Instrument, you should be able to trigger it via MIDI using a keyboard controller. NATIVE INSTRUMENTS SOFTWARE's sound will generate through the mixer and directly to your sound card. If the plug-in does not receive MIDI or generate audio, then make sure to check the following two areas:

- Make sure the Instrument track is selected / record enabled in the Arrange window.
- The MIDI channel of your MIDI track must correspond to the receive channel of the loaded instrument.
- Make sure that you have properly configured your soundcard for use with Logic.

(please refer to your Logic manual for more information).

## NATIVE INSTRUMENTS SOFTWARE FX in Logic

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**Note:** Please note that audio insert effects in Logic cannot receive MIDI. If you wish to use NI plug-ins, such as GUITAR RIG or VOKATOR, as FX and control them via MIDI, you must instantiate the NI plug-in in an Audio Instrument track. You then have to assign the Audio Track to the Audio Instrument's side-chain input. For more information, please refer to the Logic manual.

---

- Launch Logic and create an Audio track
- Choose the <Product Name> Audio Unit FX plug-in in the appropriate insert slot, either for an audio or instrument track. To do this, click on the insert slot, hold down the mouse button and choose Stereo -> Audio Units -> Native Instruments -> <Product Name> FX. If the audio track is mono, then only mono or mono>stereo compatible effects will be available.

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**Note:** If <Product Name> does not appear in the list of available AU instruments inside Logic, then you may need to rescan your plug-ins using the AU Manager from within Logic 7. If the product does not show up there, then it is not installed correctly. Please refer to the previous section on installing the plug-in for the Mac platform for more assistance on setting this up.

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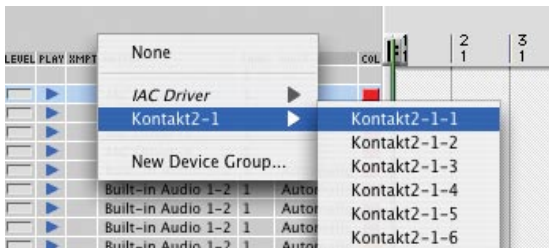
# Digital Performer by MOTU

## NATIVE INSTRUMENTS SOFTWARE Instruments in Digital Performer

- Launch Digital Performer and create an instrument track by selecting Project -> Add Track -> Instrument Track -> <Product Name>.



- Create a MIDI track by selecting Project -> Add Track -> MIDI Track. In Digital Performer's track overview window (or in the sequence editor window) assign the output of this MIDI track to "<Product Name>-1" and a MIDI channel.
- The plug-in is now ready to use. The mixer of Digital Performer will allow you to mix, pan, and process NATIVE INSTRUMENTS SOFTWARE's output just like any other existing audio track.



- To play NATIVE INSTRUMENTS SOFTWARE with your keyboard, record enable the MIDI track which you have routed to <Product Name> and make sure MIDI Patch Through is enabled in the Studio menu of Digital Performer.
- Double click on the <Product Name> slot in Digital Performers mixing board to call up the NATIVE INSTRUMENTS SOFTWARE interface. Here you can control and edit all the features and functions that NATIVE INSTRUMENTS SOFTWARE has to offer.

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**Note:** If the product does not appear in the list of available Audio Unit plug-ins inside your Audio Units host application, then it is not installed correctly. Please refer to the previous section on installing the plug-in for Mac platforms for more assistance on setting this up.

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After having loaded an Instrument, you should be able to trigger it via MIDI using a keyboard controller. NATIVE INSTRUMENTS SOFTWARE's sound will generate through Digital Performers mixer and directly to your sound card. If the plug-in does not receive MIDI or generate audio, then make sure to check the following areas:

- Make sure MIDI Patch Through is enabled in the Studio menu of Digital Performer.
- The MIDI channel of your MIDI track must correspond to the receive channel of the loaded instrument.
- Make sure that the instruments track output is correctly set.
- Make sure that you have properly configured your sound card for use with Digital Performer.

### **NATIVE INSTRUMENTS SOFTWARE FX in Digital Performer**

- Launch Digital Performer
- Open the mixer view (Shift+M)
- Click the first available insert slot on an Audio Track.
- Choose <Product Name> from the list
- The plug-in is now ready to use. The mixer of Digital Performer will allow you to mix, pan, and process NATIVE INSTRUMENTS SOFTWARE's output just like any other existing audio track.
- Double click on the <Product Name> slot in Digital Performer's mixing board to call up the NATIVE INSTRUMENTS SOFTWARE interface. Here you can control and edit all the features and functions that NATIVE INSTRUMENTS SOFTWARE has to offer.

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**Note:** To control an audio effect in Digital Performer via MIDI, you must assign a MIDI track's output to the effect plug-in.

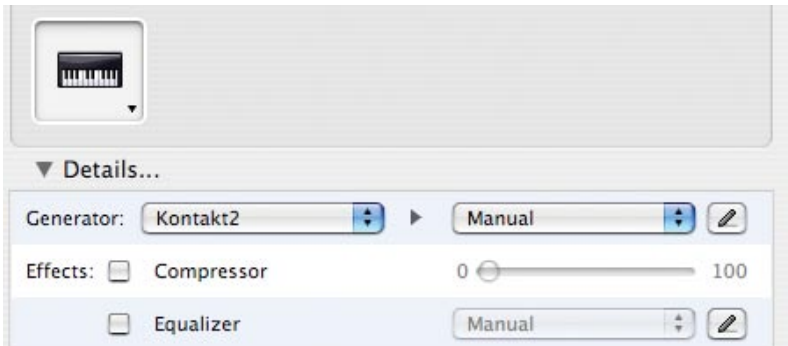
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(please refer to your Digital Performer manual for more information).

# Garage Band by Apple

## NATIVE INSTRUMENTS SOFTWARE Instruments Garage Band

- Launch Garage Band
- Press the “+” button to create a new “Software Instrument” Track. From here you can choose the icon you wish to use.
- Double-click the instrument track icon or press the “I” icon to get the Track Info.
- From the Info window expand the Details triangle underneath the Instrument icon to expose the track settings.
- From the Generator drop-down menu, choose <Product Name> from among Audio Unit plug-ins.



- Clicking on the pencil icon next to the “Manual” drop-down menu will open the NATIVE INSTRUMENTS SOFTWARE interface for editing.
- NATIVE INSTRUMENTS SOFTWARE can now be played using an external MIDI keyboard.

## NATIVE INSTRUMENTS SOFTWARE FX in Garage Band

- Launch Garage Band
- Press the “+” button to create a new “Real Instrument” Track. From here you can choose the type (guitar naturally) and the icon you wish to use.
- Double-click the instrument track icon or press the “I” icon to get the Track Info.
- From the Info window expand the Details triangle underneath the Instrument icon to expose the track settings.

From the empty drop-down menu, choose <Product Name> FX from among Audio Unit FX plug-ins.

- Clicking on the pencil icon next to the “Manual” drop-down menu will open the NATIVE INSTRUMENTS SOFTWARE interface for editing.
- NATIVE INSTRUMENTS SOFTWARE is now an effect plug-in for your audio track. Any input or output on this audio track will pass through NATIVE INSTRUMENTS SOFTWARE first. The input signal is only auditioned through NATIVE INSTRUMENTS SOFTWARE, so you don’t have to worry about recording the NATIVE INSTRUMENTS SOFTWARE sound. You are free to move through the presets and add/delete components as you wish.

## DXi 2 plug-in

DXi is a Microsoft DirectX technology based plug-in format

### Sonar by Cakewalk

#### NATIVE INSTRUMENTS SOFTWARE Instruments in Sonar

- Launch Sonar
- In the synth rack choose <Product Name> DXi 2.



Loading the DXi 2 plug-in in the synth rack

- Route a MIDI track to the DXi 2-Plug-in by selecting <Product Name> in the Out drop down list.



Assign a MIDI track to the NATIVE INSTRUMENTS SOFTWARE -DXi-Plug-in  
After having loaded an Instrument from the library you should be able to trigger it via MIDI using a keyboard controller. NATIVE INSTRUMENTS SOFTWARE's sound will generate through Sonar's mixer and directly to your sound card. If the plug-in does not receive MIDI or generate audio, then make sure to check the following two areas:

- Make sure MIDI Patch Through is enabled in the Studio menu of Sonar.
- The MIDI channel of your MIDI track must correspond to the receive channel of the loaded instrument.
- Make sure that the instruments track output is correctly set.
- Make sure that you have properly configured your sound card for use with Sonar.

(please refer to your Sonar manual for more information).

## **NATIVE INSTRUMENTS SOFTWARE FX in Sonar**

- Launch Sonar
- In an audio track choose <Product Name> as DXi plug-in in the FX field by right clicking on it and selecting <Product Name>.

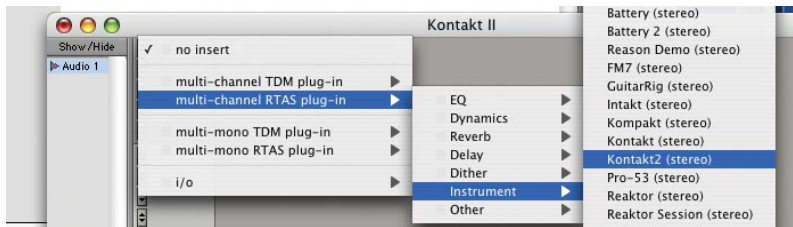
## **RTAS plug-in**

The RTAS format is an interface protocol for Mac OS and Windows that allows you to use plug-ins with Pro Tools independently from additional TDM hardware, while nonetheless offering the widest range of features. In this case, the host processor alone performs all of the computations for the plug-in.

## **Pro Tools by Digidesign**

### **NI RTAS Instruments with Pro Tools**

- Launch Pro Tools
- Create a new Instrument track: File -> New Track
- Locate the channel mixer Window -> Mix
- The dark grey box at the topmost section of the Instrument channel is the RTAS insert section. Click on the first empty slot to show all available RTAS plug-ins.
- Choose <Product Name> from the multi-channel RTAS plug-in > Instrument menu



- To open the plug-in interface for editing, click once on the insert slot.

After having loaded an Instrument, you should be able to trigger it via MIDI using a keyboard controller. NATIVE INSTRUMENTS SOFTWARE's sound will generate through the mixer and directly to your sound card. If the plug-in does not receive MIDI or generate audio, then make sure to check the following areas:

- A physical input may need to be assigned to the instrument track.
- The Instrument track fader (Mix window) may be down.
- The instrument track is not selected in the Edit window.

(Please refer to your Pro Tools manual for more information on how to record the output of the NATIVE INSTRUMENTS SOFTWARE).

## **NI RTAS FX in Pro Tools**

- Launch Pro Tools
- Create a new Audio / Aux track File -> New Track
- Locate the channel mixer Windows -> Show mix
- The dark grey box at the topmost section of the Audio channel is the RTAS insert section.
- Click on the first empty slot to show all available RTAS plug-ins. Choose the desired product, multi-channel or multi-mono (mono audio tracks), from the Instruments list

# Troubleshooting

We can comfortably say that if something doesn't seem to work correctly, there must be a logical reason for it. NATIVE INSTRUMENTS SOFTWARE is tested on a variety of computers and configurations to ensure proper function. Having said that, there remain an infinite number of possible setups and within them any number of compatibility issues, software conflicts, hardware problems and so on.

Below you will find some tips in regards to troubleshooting common problems with NATIVE INSTRUMENTS SOFTWARE. This list is by no means exhaustive. For more product specific issues please consult the product handbook, the NATIVE INSTRUMENTS Support Knowledge Base, or NATIVE INSTRUMENTS Technical Support.

## Standalone

### **NATIVE INSTRUMENTS SOFTWARE won't start (or crashes upon start):**

- Check the systems requirements for the NATIVE INSTRUMENTS SOFTWARE which you want to use. The minimum requirements are the very least you can get by with, and are often not enough for larger projects. If your project calls for more instruments, more plug-in instances, etc. updating your RAM configuration may save you a lot of trouble.
- Make sure you have the most recent NATIVE INSTRUMENTS SOFTWARE version.
- Make sure that you have not clicked on an outdated application alias / shortcut.
- Try to restart your computer. Disconnect any audio interfaces and computer peripherals like printers, scanners and the like.

### **My soundcard / MIDI device is not recognized:**

- Quit all open applications
- Disconnect and reconnect the device. Try another USB / Firewire port if one is available. Connect the device directly to the computer and not via a USB / Firewire hub.
- Open Audio MIDI Setup (Mac OS X) and see if the device shows up there. Test the MIDI setup for MIDI received.

- Update any soundcard / MIDI drivers from the manufacturer's website.
- Deinstall and reinstall your soundcard / MIDI drivers.

### **I don't hear any sound:**

Without being too product specific, there are usually two reasons for this problem. It is either MIDI or soundcard / routing related.

- Make sure that the NATIVE INSTRUMENTS SOFTWARE MIDI channel is set to receive from your MIDI device properly. They must be on the same MIDI channel. If in doubt, set the NATIVE INSTRUMENTS SOFTWARE to OMNI.
- Output routing is incorrectly setup. Open the NATIVE INSTRUMENTS SOFTWARE Audio MIDI Setup / Routing tab and set the outputs to correspond to your soundcard's monitor (Main) outputs.
- Incorrect soundcard selected. Open the Audio MIDI Setup dialog and choose the correct output device.

### **The sound is distorted, playback drops out:**

- Your latency settings are too low. Low soundcard buffers (low latency settings) strain your CPU more, so it may be helpful to increase the buffer size via your ASIO control panel; or in a host, the soundcard setup. For standalone, open the Audio MIDI Setup dialog and move the output latency to the right until you don't hear any more distortion or playback is normal.
- Your CPU may be overloading. Most products have a CPU meter to give you a quick look at what processing power is being used. If things here look normal, then your computer may have another process which is using resources needed for real-time audio processing. (PC) Check the Task Manager (ctrl-alt-delete) or (Mac) Activitz Monitor (ApplicationsUtilities) and quit any processes which are using valuable CPU. Usually it is a good idea to deactivate Virus scan software when working with audio.

### **I hear a noticeable latency:**

- The output latency is too high. Open the Audio MIDI Setup dialog and move the output latency slider to the left.

**For PC users:** Please note that some soundcards may not be able to achieve a comfortable latency. If this is the case you may want to try the generic ASIO4ALL driver.



## Plug-in

### My plug-in does not show up:

Before checking the following options, please make sure that the latest product updates are installed.

- **Cubase / Nuendo:** From the Devices menu, open the “plug-in information” dialog. Make sure that the installed plug-in can be seen. Click the checkbox next to the plug-in name to activate it. Restart Cubase or Nuendo to have the changes take effect.
- **Logic:** Make sure that the plug-in was installed. Check the local plug-ins folder (Macintosh HD/Library/Audio/Plug-ins/Components) for installed items.

Start the Logic AU Manager from the Logic Menu/Preferences.

Rescan individual plug-ins or reset and rescan all plug-ins.

Even after scanning, you may need to activate a plug-in by clicking the checkbox next to it.

- **Digital Performer:** Rescanning all the plug-ins usually helps. To force Digital Performer to rescan all plug-ins, you should delete the preference file AudioUnit **info cache** from the folder:  
Macintosh HD/Users/~/Library/Preferences/Digital Performer

### The plug-in makes no sound:

Try the software's virtual keyboard (if applicable) to see if the problem is MIDI related. Also set the plug-in MIDI channel to OMNI (when applicable).

**Cubase / Nuendo:** MIDI track output not assigned to plug-in.

**Logic:** Instrument Track not record enabled

**Digital Performer:**

MIDI track Output not assigned to plug-in.

MIDI Track is not record enabled.

**MIDI Patch Through** not active from the Setup menu.

**Pro Tools:** Physical Input not assigned to Instrument track

## Error Messages

**Application Install Error:** If you receive this error, then something has gone wrong with the software installation. Your only choice at this point is to reinstall the software. Before doing so, back up any important files.

**PC:** use the add/remove programs software in the Windows control panel to remove the software and all components. In case the program does not show up please use the uninstaller (UNWISE.EXE) located in the application folder (i.e. C:\Program Files\NATIVE INSTRUMENTS\Program name\ )

**Mac:** Delete the Application folder and any preference (plist) files before reinstalling. Plist files are located in

- MAC HD/Library/Preferences
- ~ /Library/Preferences (where ~ is your home folder)

**Error Creating Folder / Access Denied:** If you receive this error upon installation of any product on Mac, then it is likely there is a permission problem. The solution is beyond the scope of this guide, but the following link may help:

[http://www.nativeinstruments.de/index.php?id=niosxtut\\_us](http://www.nativeinstruments.de/index.php?id=niosxtut_us)

## More About Latency

As with any digital device (including hardware signal processors) that convert audio to data and back again, a computer adds a certain amount of delay (“latency”) when processing audio signals. Fortunately, with today’s computers and low-latency sound card drivers, this delay can be so small that you can’t hear it (e.g., under 3 milliseconds, which is about the same delay caused by moving your head one meter further away from a speaker). However, typical computers are generally not set up for low latency; attempting to play in real time through NATIVE INSTRUMENTS SOFTWARE will probably be unsatisfying because of the delay.

Any computer-based audio system has some delay between the audio input and output. As a result, if you’re playing a MIDI keyboard through NATIVE INSTRUMENTS SOFTWARE, you may hear an annoying delay between the time you hit a key and hear a sound. Even the most powerful computer can only do a certain number of calculations per second; generating and processing sounds demands a lot from a computer, so it’s important to minimize any computer-based delays.

Fortunately, three main factors make delays virtually insignificant, assuming you have a suitable computer setup (see System Requirements).

- Today’s multi-GigaHertz computers are so fast they dramatically reduce latency.
- Many sound cards and audio interfaces include drivers optimized for low latency.
- NATIVE INSTRUMENTS SOFTWARE has been optimized to function as efficiently as possible.

### Use Low-Latency Drivers

Drivers are pieces of code that handle communications between your computer and audio interface, whether built into a computer or attached via USB or FireWire. The more efficiently they transfer data between audio interface and computer, the lower the latency.

NATIVE INSTRUMENTS SOFTWARE works with two low-latency driver types:

- ASIO (Advanced Streaming Input Output). This cross-platform protocol was originally developed by Steinberg.
- Core Audio (Mac only). This low-latency protocol was created by Apple for the Macintosh, starting with OS X.

If your audio interface does not support one of these protocols, you will likely hear an audible delay if you play through NATIVE INSTRUMENTS SOFTWARE in real time. Although NATIVE INSTRUMENTS SOFTWARE can work with the DirectSound and MME drivers common in Windows machines, you will probably not have a satisfying playing experience.

## **How Low Can You Go?**

1.5 ms of latency approaches the theoretical minimum, because it will always take some time to convert a keyboard press into MIDI data, then convert NI's Software digital audio out to analog. However, note that ultra-low latency settings (or higher sampling rates) make your computer work harder, which may limit the polyphony or number of effects you can add while still retaining glitch-free audio. So, here are some tips on living with latency.

## **About Samples and Buffers**

Audio cannot be handled continuously by a computer, but has to wait its turn while other operations are being carried out. As a result, sound cards create a "buffer," which can hold a certain number of samples, where data can be stored and released as needed to create a smooth flow of data. An analogy would be if you had a hose that didn't deliver water continuously, but in bursts. So, you use a holding tank to store the water coming in from the hose, and have a valve in the tank that releases a steady amount of water in a smooth, continuous flow.

If the tank (buffer) is large, then you can store more water in case the hose goes dry for a bit. But it will take longer to fill the bucket, which is equivalent to latency. A smaller tank takes less time to fill, but the hose had better deliver water on a pretty continuous basis.

All ASIO audio interfaces and sound cards include a control panel where you can adjust latency. This may be given as the number of samples per buffer, as shown in the Rig Kontrol 2 control panel, accessible from the **ASIO config** button in the software Audio MIDI Setup window.

Most sound card control panels let you choose a particular number of samples/buffer. The output latency display in the software then shows the resulting latency. For example, if a 512 sample/buffer has been selected, an output latency of just under 12 ms at 44.1 kHz will be set. Setting this to 128 samples/buffer will reduce the latency, but may stress out your computer more.

Some control panels, as shown above, simply show the latency that results from choosing a particular setting in milliseconds rather than showing samples/buffer.

## **Warning: Different Types Of ASIO**

It's extremely important to use the ASIO driver written for the card you're using. There are also "generic" ASIO drivers, typically called (for Windows) "ASIO DirectX Full Duplex Driver" or "ASIO Multimedia Driver." They will usually be found in a drop-down menu in the host program where you choose the desired ASIO driver. If you're not sure which one to use, try them all, and choose the one with the lowest latency. There should be an obvious, dramatic difference when you use the correct ASIO driver.

## **Tips On Minimizing Latency**

- Set latency to the highest comfortable value. 256 samples/buffer is very responsive yet gives your computer some "breathing room."
- 512 samples may also be acceptable; anything more will create too much delay. If you can't get reliable audio with 512 samples, it's time for a better computer!
- If your ASIO Control Panel shows latency in milliseconds, you'll find that anything over 10 ms or so gives an audible delay. 5 ms is a good compromise between speed and minimum stress to your computer.
- Download your sound card's latest drivers from the manufacturer's web site. This can make a huge difference in performance.
- If you are recording in a host application and using software synthesizers, use your program's "freeze" function (if available) to disconnect some synths from the CPU. Or, render a soft synth's output as a hard disk audio track (then remove the soft synth), as audio tracks are less taxing on the computer. Hint: If you retain the MIDI track driving the soft synth, which places virtually no stress on your CPU, you can always edit the part later by re-inserting the soft synth.
- Sometimes there are two latency adjustments: A Control Panel for the sound card sets a minimum amount of latency, and the host can increase from this value if needed. Or, the host may "lock" to the control panel setting.

# Getting Help

If you can't find out the reason for a problem, NATIVE INSTRUMENTS provides extensive help to registered users. The relevant links are available in the NI SERVICE CENTER.

## Knowledge Base / Readme / Online Support

Open the NI SERVICE CENTER to find a series of links directly leading you to the NATIVE INSTRUMENTS Online Knowledge Base and to the Online Support frontend.

The frontend will ask you for all information about your hardware and software environment, to better facilitate the information to our support team. The entries you make are cookie'd, so they should be automatically reproduced when you enter a second support request.

In your communication with the support team, keep in mind that you should offer as much information as possible about your hardware, your operating system and the version of the software you are running, to give the possibility to help you. In your description, you should mention:

- how to reproduce the problem
- what have you already done to try to fix the problem
- a description of your setup, including all hardware
- the brand and specs of your computer

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**Important:** Always consult the Readme file of a new software version. It contains important information and all last minute changes, that weren't available when printing this manual.

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## Forum

In the NATIVE INSTRUMENTS User Forum you can discuss problems directly with other users and with experts from NI, moderating the forum.

## Updates

Whenever you encounter problems, you should also check if you have installed the latest update. The version number of your software is displayed on the first page of the About dialog of an NATIVE INSTRUMENTS SOFTWARE or in the NI SERVICE CENTER. Updates are released regularly to fix known problems and to constantly improve the software.