Diva is NKS-ready

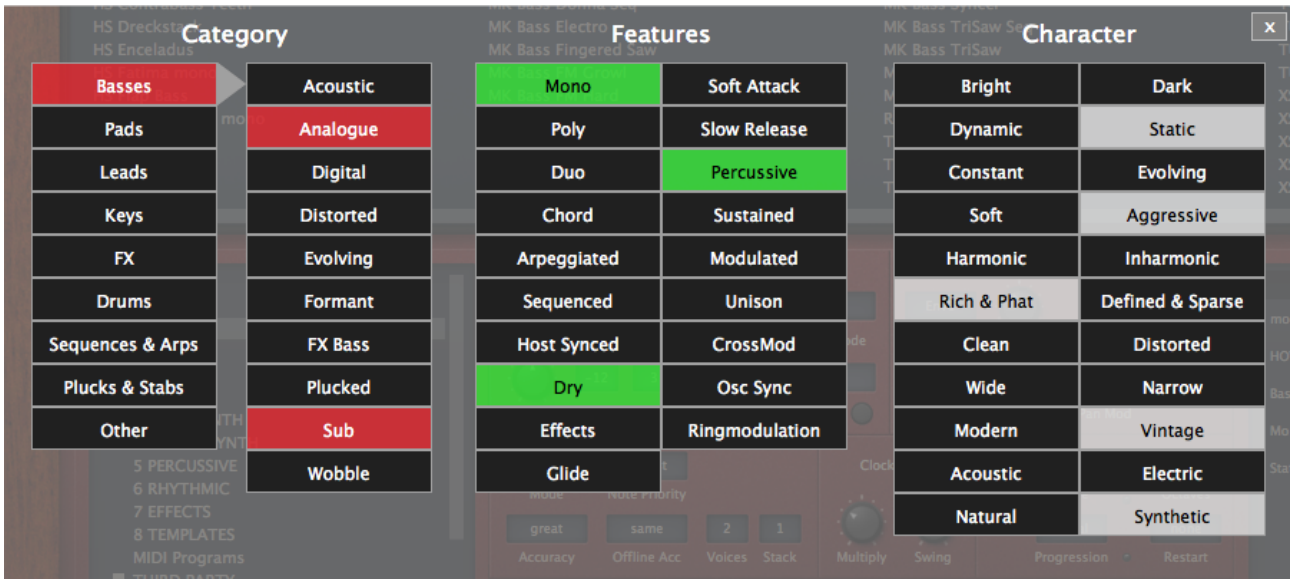
As of version 1.4.1, Diva supports the NKS extensions for integration with Native Instruments' Komplete Kontrol software and Maschine environments. The integration comprises the following aspects:

- Diva's Factory presets are installed as pre-tagged .nksf files
- Diva can load and save .nksf files directly
- Presets can be tagged (recommended before saving as .nksf)
- Presets can be batch-converted
- A 10-page assignment for Kontrol Series performance controllers is automatically generated and saved with each .nksf preset, mapping to a selection of active parameters
- a "secret" switch enables the Lightguide colour to follow Diva's LED colour

Note: You will find an **NKS Troubleshooting guide** towards the end of this document.

Preset Tags

Diva's browser and preset management currently don't include search-by-tag functions. However, tags can be set: simply right-click on Diva's [**save**] button and select *tag this patch*.



Tag Types

- Category / Subcategory
- Feature
- Character

The main **Category** describes a preset by analogy to musical instrument types as well as classic synthesizer sound genres. Each main category accesses a list of suitable subcategories. Assigning a categorie and subcategories is straightforward: Select a main Category and choose one or more of the subcategories – as a rule of thumb between one and four subcategories per preset.

Note: The categories we chose for Diva aren't the same as the "Types" tags found in Komplete Kontrol or Maschine, as we decided to keep our categories rather synthesizer-specific. However, whenever presets are converted to NKS, Diva automatically maps her own categories to closely corresponding Types available in Komplete Kontrol.

The **Feature** tags describe the preset structurally. For example, here you will find *mono*, *poly* and *duophonic* mode tags as well as a classification according to the shape of the volume envelope. Optionally, Diva can analyse the preset and automatically generate a set of Feature tags (see below). Note: Some Feature tags will also map automatically to NKS "Modes".

The **Character** tags comprise pairs of opposites – you can choose one from each row, but never both. While looking for suitable words we favoured those that avoided subjective controversy. For instance, deciding whether a preset is *bright* or *dark* is more likely to match people's perceptions than *cold* or *warm*.

What to do with tags

Presets can be tagged in Diva, and these will appear in the *patch information* field on the bottom right of Diva's browser. Otherwise – apart from the obvious use for NKS – there really isn't much more to it than information about the currently loaded preset.

However, the current tagging system sets the foundation for an enhanced preset browser. While we don't want to get too specific about features and release dates, we will be working on a tag-based browsing option built right into all our software. This is one of the most frequently requested improvements, and the tagging tool is the first milestone on our roadmap.

Tagging workflow

If you wish to tag your Diva presets for use in the NKS environment or to be ready when we add a tag driven preset management, follow this simple workflow:

- open Diva's preset bowser
- load the preset you wish to tag
- right-click the save button and select *tag this patch* from the context menu
- tag away!
- cmd-click (Mac) or alt-click (Win) the [**save**] button to overwrite the preset without dialog
- repeat, or click the arrow buttons for the next preset

While we have no indication that data could be lost, it's always advisable to make a backup copy of your own presets first!

Auto-tagging Features

A hidden preference can be used to enable automatic creation of Feature tags. Once enabled, Diva will automatically set tags such as mono/poly/duo, arpeggiated or soft attack. To do this, locate your Diva preferences file:

Mac: *Macintosh HD/Users/You/Library/Application Support/com.u-he.Diva.preferences.txt*
Win: *...\Vstplugins\Diva.data\Support\com.u-he.Diva.preferences.txt*

Open it in any standard text editor and locate the following line:

V_PROPERTY name='Preference' id='0' value='AudioPrefs:Auto Tag Features:never'

Edit the last bit (Auto Tag Features:never') to one of the following:

Auto Tag Features:on load' (automatically tags Features when a preset is loaded)
Auto Tag Features:if empty' (only tags them if there weren't any tags set)

We recommend option 2 so that the feature choices won't be automatically overwritten whenever you revisit your tags.

While the automatic tagging is intelligent enough to make correct choices for many presets, the perceived sound may differ: for instance if an arpeggio is tagged *poly* although notes sound too short to overlap. In such cases you can of course manually alter the Features.

So why tag?

Firstly, it shouldn't be long until our internal preset management includes search-by-tag functions!

Secondly, neither Komplete Kontrol nor Maschine will display presets that don't include a Category tag. While it's possible to save untagged presets as .nksf, these won't appear in the most appropriate browser view of the NKS host: By default, Diva tags all otherwise untagged presets with the NKS "Synth Misc" category, without any further specification.

If you are a vendor of preset banks for u-he products, we highly recommend that you tag your presets, and – if possible – make updated preset banks available to your existing user base. We expect tag-based preset browsing to be adopted fairly quickly, after which users will be more likely to buy preset banks if they come pre-tagged.

> **IMPORTANT**: In Komplete Kontrol or Maschine browsers, all untagged presets will only appear in **Synth Misc**!

Saving NKS preset files

When you right-click the [**save**] button which also opens the tagging tool, the menu also gives you a choice of preset formats. *Native* stands for the basic plug-in format (not "Native Instruments" as one might assume), where we currently support .fxp for VST2 and .aupreset for Audio Units (our AAX and VST3 plug-ins save .fxp files). Next is our standard cross-platform *h2p* format, which is text-based and editable in any standard text editor. The *h2p extended* option is similar but larger, as it includes readable text information. Lastly, *nksf* enables saving for NKS.

While the options *native*, *h2p* and *h2p extended* cause Diva to save presets into the currently selected preset directory, *nksf* saves directly into the preset location used for Komplete Kontrol or Maschine – *nksf* files do not appear in Diva's preset browser. To make them visible in Komplete Kontrol, open its preferences and rescan the preset locations.

Batch converting presets

First, set the desired target format: Right-click the save button and chose e.g. *nksf*

If you have tagged a lot of presets, you can select them in Diva's preset browser. Use cmd-click (Mac) or alt-click (Win) to select several presets at once.

Now right-click any selected preset and choose "convert to nksf". Voila, a message appears telling you how many presets got converted and how to update the Komplete Kontrol database.

> You can now batch convert *h2p* presets to VST2 or AU format!

Controller Mapping for NKS

When you save a preset to NKS, it will always automatically be set up with 10 pages of performance controllers for Maschine hardware or Komplete Kontrol S-Series keyboards. Great care has been taken to find mapping of parameters that always have an effect on the current preset. That means, all knobs control parameters that actually do something. Inactive parameters are left out. This is important in Diva because the different module types can have unique parameters that have no effect in other modules.

The pages are always laid out as follows:

1. Performance: 8 knobs with filter settings, modulation and (optionally) FX parameters if FX are enabled. If the modulation envelope is not assigned to the filter, the performance page will show selected parameters of the volume envelope.
2. Oscillator: Basic oscillator control, depending on which type is selected
3. Mixer & HP: Control for the VCO mixer and highpass filter. In some models there are additional modulation sources available on this page
4. Lowpass filter: More in-depth control of the lowpass filter than on the performance page
5. Envelope1: The volume envelope
6. Envelope2: The modulation envelope
7. LFO1
8. LFO2
9. FX 1: Either Chorus, Delay, Phaser, Reverb or Rotary
10. FX 2: like FX1 but for the second slot

Note: We refrained from assigning parameters that require special cases not yet catered for by the NKS standard. For instance oscillator tunings which, once assigned to a performance controller, cannot be adjusted to integer values even with [SHIFT] held down. Don't despair - we're working on it!

Enable Automatic Controller Mapping

If you use Diva's built-in preset browser or if you wish to tweak a preset beyond its current set of modules, you might want to update the current controller assignment. That's most likely the case when you switch oscillator models and wish to have parameters assigned that work best for the new model. It may also be the case if e.g. a filter cutoff modulation labelled "Env2" is set to be modulated by Velocity instead, which you would like to appear on the NKS control surface.

For such cases we added a hidden preference that enables remapping the performance controllers in realtime whenever certain base parameters change. Like automatic Feature tagging explained above, locate your Diva preferences file and open it in any standard text editor:

Mac: Macintosh HD/Users/You/Library/Application Support/com.u-he.Diva.preferences.txt

Win: ..\Vstplugins\Diva.data\Support\com.u-he.Diva.preferences.txt

Locate this line:

V_PROPERTY name='Preference' id='0' value='AudioPrefs:NKS Auto Map:NO'

...and change NO to YES

Now whenever you change the model of VCO section, HPF, Lowpass Filter or either envelope in Diva's UI, all controller mappings will update in the NKS host software, along with changed modulation names and correct display of FX section modules. Here's an example workflow:

- on Performance Page 10, switch the Chorus off
- in Diva's UI, switch the oscillator model over to some other type, then back to how it was
- the Performance Page 1 will replace the (inactive) Chorus Mix by an active parameter

Note that we deliberately restricted this behaviour to these few essential model parameters because the Komplete Kontrol S-Series keyboard will jump back to Page 1 when the assignment is updated. It would be confusing if the update took place e.g. while flipping through modulation source parameters on the control itself.

Caution: Some NKS hosts let you choose your own performance controls mapping. Of course you can take advantage of this – but you should definitely switch off the automatic controller mapping! Otherwise you will lose your own assignments when you switch between oscillator models (for example). We hope that we can provide a way to keep both – custom as well as automated performance layouts – in a future update.

Need more?

We envision the performance controls provided by Komplete Kontrol S-Series and Maschine hardware to be used for live performance rather than for sound design. Mapping all possible parameters would have meant 30-plus pages – which we decided would be a tad overwhelming! But who are we to judge?

If you have any suggestions and “use cases” for more pages, or just a different layout, please let us know. We’ll be happy to extend the mapping in future, and we might even add different modes for automatic mapping if necessary.

NKS Troubleshooting

Here are some possible issues and corresponding fixes for the NKS support of our plug-ins:

Diva doesn't show up in Komplete Kontrol or Maschine

Make sure you have Komplete Kontrol Software V1.5+ or Maschine V2.4 – these are the minimum versions required to use u-he NKS plug-ins.

On Windows, make sure that Komplete Kontrol knows the Vstplugins folder into which Diva is installed. Open Komplete Kontrol preferences, go to *Locations* and add your Vstplugins directory. Then hit Rescan and check whether Diva has appeared.

There are various other reasons for Diva not showing up in Komplete Kontrol. Perhaps the preset folder is empty? The NKS preset folder locations:

MAC: Macintosh HD/Library/Application Support/u-he/Diva/NKS/Diva/
WIN: ..\Vstplugins\Diva.data\NKS\Diva\

If you find no presets (.nksf files) in these directories, reinstall Diva with the correct VST path and the NKS-option checked.

Another possible reason could be that the XML-File is missing:

MAC: Macintosh HD/Library/Application Support/Native Instruments/Service Center/u-he-DIva.xml
WIN: C:\Program Files\Common Files\Native Instruments\Service Center\u-he-Diva.xml

A re-install with the NKS-option checked should also remedy this situation.

Komplete Kontrol or Maschine can't load Diva ("Could not load plug-in")

The most likely reason is that Diva either isn't installed as a VST or isn't installed in the correct path. Komplete Kontrol searches for Diva in the default VST path. This is fixed in MacOSX, and can be set during installation in MS Windows:

MAC: Macintosh HD/Library/Audio/Plug-Ins/VST/u-he/
WIN: <User VST Folder>/

...where <User VST Folder> is the installation path for the VST plug-in used during installation. If Diva's VST plug-in is not in one of these paths, run the installer again, set the correct path and remember to check "VST" as an installation option.