Native Instruments - Komplete Kontrol Accessibility

A Guide to Musical Creation for Visually Impaired Musicians

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A Guide to Musical Creation for Visually Impaired Musicians

How does a blind or partially sighted person go about composing and creating music? Where do they begin? What will they need? At Native Instruments, we would like to address the requirements and workflow for a musician with the following needs:

"As a blind musician, I want a studio solution for creating, recording and arranging my ideas."

At Native Instruments we believe that musical creation should be available to everyone, and we have been actively working on and developing Accessibility since 2016. Through the use of our Komplete Kontrol keyboard and Komplete software instruments, we have devised a workflow that allows visually impaired musicians to effectively create and record their ideas. This document serves as a guide for those wishing to begin the process of musical creation using products by Native Instruments.

Generally speaking, a visually impaired musician will benefit greatly from the following:

- **Komplete Kontrol S-Series keyboards** – Our award winning, premium MIDI controller keyboard. Used with a computer via a USB connection, these are highly integrated with the DAWs Logic Pro X, Cubase 8.5 / 9 and Ableton Live, and Komplete Kontrol software provides an integrated connection into our virtual instruments. Komplete Kontrol S-Series keyboards feature 8 capacitive knobs, an array of advanced host and instrument control functions, and support voice-over accessibility to assist visually impaired users. These are available in four sizes – 25 key, 49 key, 61 key and the flagship 88 key which features a fully weighted Fatar keybed. They can be purchased through any of our dealers, or the Native Instruments website:

https://www.native-instruments.com/en/products/komplete/keyboards/

- **Virtual instruments (plug-ins) by Native Instruments and NKS partners** – these allow users to capture their sounds without the need for live musicians. Native Instruments plug-ins are developed in-house, whereas NKS plug-ins are built by our external partners. All NI and NKS plug-ins are highly integrated with Komplete Kontrol keyboards and its software companion, so that users have advanced control over Preset Browsing, Parameter Editing and using the Scale and Arpeggiator engines. Komplete 11 / Komplete Ultimate are great starting points, available through our details or the Native Instruments website:

https://www.native-instruments.com/en/products/komplete/bundles/

NKS plug-ins (e.g. those by Arturia, Heavyocity, Spitfire, U-he etc.) are available through the website's of the manufacturers.

Native Access is our one-stop hub for easy product installation, registration, and updates. Whilst not currently accessible, it is free for anyone with a registered Native Instruments account and is a must-have application for management of all Native Instruments software. It can be downloaded at:

https://www.native-instruments.com/en/specials/native-access/

- **Digital Audio Workstation (DAW)** – software for hosting plug-ins, recording and arranging ideas, and music production in general. We recommend Logic Pro X (Mac only application – available on the App Store) due to its advanced integration with Komplete Kontrol, and compatibility with Apple's screenreader. Cubase by Steinberg (available on both Mac and Windows) is also highly integrated with Komplete Kontrol, but is not accessible. Reaper by Cockos, Pro Tools by Avid and Sonar by Cakewalk are all accessible, but are not integrated with Komplete Kontrol. Whilst they are all still highly usable, there is one difference concerning track navigation which is explained in the Project Setup section.

Following the purchase of a Komplete Kontrol S-Series keyboard and virtual instruments from the Native Instruments website, users are now ready to begin the installation process. As Native Access is not currently accessible, the initial installation phase will require the support of a sighted helper. However, the music recording process is fully accessible with the use of the keyboard and one of the aforementioned DAWs. Below are step-by-step instructions of what an example workflow may look like to a user, from purchasing the best gear, to the initial setup phase (required only once), to the steps involved with everyday recording.

1.   Purchases and Installation

1. We recommend that blind or partially sighted musicians purchase one of our Komplete Kontrol S-Series keyboards, either from the Native Instruments Website or from one of our retailers.

   Once this has been delivered, the keyboard must be registered either through Native Access or the hardware registration website:

https://www.native-instruments.com/en/hardware-registration/kontrol/

2. This step involves reading a printed serial number included within the Komplete Kontrol S-Series keyboard's box, so will require the assistance of someone with sight.

   Native Instruments plug-ins are available to purchase from the (accessible) Native Instruments website. Following purchase, they are automatically added to the user's account and can be downloaded through Native Instruments. This stage will also require the support of someone sighted. When installing plug-ins, please also ensure that Komplete Kontrol is installed through Native Access.

2.   System Setup

The stages listed below are accessible using a Komplete Kontrol S-Series keyboard and a screen reader application, but it may be helpful to have a sighted person present. These steps form the initial setup of Komplete Kontrol and a host, so only need to be performed once:

1. Launch Komplete Komplete application. This scans the plug-ins that have been purchased.

2. Press the top left and top right buttons on the keyboard simultaneously. This turns on the keyboard's voiceover Accessibility function. All commands triggered from the keyboard (e.g. Navigation, Browsing, changing Parameter values etc.) will be announced by the computer's speech engine.

3. Press the top left button on the keyboard twice to enter Training Mode. This stops the keyboard from sending commands to the computer, but announces the function of every button. This is a useful tool for learning the layout of the keyboard and its various functions.

4. Launch Logic Pro X. When prompted, the user should confirm that they would like to allow Komplete Kontrol S-Series to connect to Logic Pro X.

Users of Pro Tools, Sonar and Reaper should consult the following guide for configuring their keyboard:

https://support.native-instruments.com/hc/en-us/articles/210280325-Important-Notes-about-KOMPLETE-KONTROL-Host-Integration

The user is now ready to create a project in their DAW and begin the process of creating music. The next two sections detail the functions that can be reached using the keyboard, and how this fits into the recording workflow using a DAW.

3.   Komplete Kontrol Keyboard Shortcuts

Below is a list of shortcuts from Komplete Kontrol S-Series keyboards and their corresponding software commands in Logic Pro X:

- PLAY / STOP / REC – Start Transport / Stop Transport / Begin Recording

- LOOP – Toggle Cycle On / Off

- FFW / RWD – Fast Forward / Rewind

- Main Rotary Encoder – Move the playhead in one bar increments

- SHIFT + Left Arrow – Undo

- SHIFT + Right Arrow – Redo

- LOOP + Main Encoder – Move the Cycle by its own length

- SHIFT + STOP – Toggle Metronome On / Off

- SHIFT + REC – Toggle Count-in On / Off

- Up Arrow – Previous Track

- Down Arrow – Next Track

As detailed in the setup article, Sonar and Reaper do not support Undo, Redo, Metronome and Count-in toggle, moving the Cycle or track navigation from Komplete Kontrol S-Series keyboards. Pro Tools does not support controlling Transport from the keyboard, so these actions must be selected from software rather than from the keyboard. As these hosts have not been fully integrated with Komplete Kontrol, to switch track a user will have to manually select the track in their host, press the INSTANCE button on their keyboard and select the instance of Komplete Kontrol they wish to connect to. This is still accessible from the hardware, but is more time consuming than using Logic.

4. Workflow

Here are some example steps that outline what a workflow could look like for a musician using the described setup with Logic Pro X:

1. Launch Logic Pro X and create an empty project. When prompted, create (e.g.) four software instrument tracks that contain Komplete Kontrol as the loaded plug-in. Please note that this step must be completed from the computer, but following this all interactions are possible from the keyboard.

2. When the project has been created, the last / bottom track will initially be selected. Press the Up arrow repeatedly to navigate to the top / first track.

3. Press the BROWSE button on the keyboard to launch the Preset Browser, and use the 8 capacitive knobs to browse the thousands of available presets using product, type and descriptive tag based filtering.

4. Play with the loaded instrument and use the 8 capacitive knobs to tweak parameters to find a desired sound. If necessary, use the browser to change preset.

5. When happy with the loaded sound and ready to record, turn on the Metronome, Count-in and Cycle as desired, and press REC to begin recording. Use the Undo and Redo keyboard commands if necessary.

6. Use the Up and Down arrows to navigate to the next track, and repeat steps 3-5 to record another part into the same looped section.

The above steps show how a visually impaired musician can intuitively build up a four bar loop whilst remaining at their keyboard, and not having to turn to their computer. Once they are happy with their first section, they can begin working on the next section by using the Move Cycle keyboard command. All interactions will be read out by the user's computer, so they will never get lost within their own project. It will only be necessary to turn to software for occasional / advanced functions like track creation and deletion, Quantisation, adjusting Cycle Length and Project Tempo.

5. Community Forum Sign-Up

Should further support or general questions about product use arise, the Native Instruments forum is a great place where users can ask and answer questions. The sign-up process is as follows:

1. Open Web Browser and navigate to:

    https://www.native-instruments.com/forum/login/

2. Navigate to the Radio Buttons. Option 2: "Yes, my password is" is selected by default. Change this to Option 1: "No Create Account Now".

3. Navigate to the Sign Up button and press RETURN.

4. Enter details in the Sign Up form. Note that the radio buttons label may not be read - it refers to Gender and can be left as unspecified.

5. Check the "I'm not a robot" checkbox.

6. Check the "I agree to the terms and rules" checkbox.

7. Navigate to Sign Up and press RETURN.

8. The following message is displayed: "Thanks for registering. Your registration must now be approved by an administrator. You will receive an email when a decision has been taken." Once the email has been received you can log in to the forum https://www.native-instruments.com/forum/login/ using these details.

Please note that the Date of Birth and Verification questions may not be read out my Screen Reader applications, so require the assistance of someone with sight. This also applies to the final checkboxes on Windows.

6.   Summary

At Native Instruments we are constantly promoting Accessibility awareness, and are actively researching different methods of making the process of creating music available to those with visual impairments. We hope that this document will help in their journey towards musical creation.