

# nord stage 3

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## USER MANUAL

Nord Stage 3

*English*

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**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.

**ATTENTION:** POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE.

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**AVIS:** POUR EVITER LES RISQUES D'INCIDENTE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU L'HUMIDITET.



The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated voltage within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

*Le symbole éclair avec le point de flèche à l'intérieur d'un triangle équilatéral est utilisé pour alerter l'utilisateur de la présence à l'intérieur du coffret de "voltage dangereux" non isolé d'ampleur suffisante pour constituer un risque d'électrocution.*



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

*Le point d'exclamation à l'intérieur d'un triangle équilatéral est employé pour alerter l'utilisateur de la présence d'instructions importantes pour le fonctionnement et l'entretien (service) dans le livret d'instructions accompagnant l'appareil.*

Instructions pertaining to a risk of fire, electric shock or injury to persons.

## IMPORTANT SAFETY INSTRUCTIONS

### SAVE THESE INSTRUCTIONS

**Warning** - When using electric products, basic precautions should always be followed, including the following:

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



### Additional Safety Information

No naked flame sources, such as lighted candles, should be placed on the apparatus;

Do not use the apparatus in tropical climates.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

The mains plug is used as the disconnect device and shall remain readily operable.

Il convient de ne pas placer sur l'appareil de sources de flammes nues, telles que des bougies allumées;

L'appareil n'est pas destiné à être utilisé sous un climat tropical.

L'appareil ne doit pas être exposé à des égouttements d'eau ou des éclaboussures et de plus qu'aucun objet rempli de liquide tel que des vases ne doit être placé sur l'appareil.

Lorsque la prise du réseau d'alimentation est utilisée comme dispositif de déconnexion, ce dispositif doit demeurer aisément accessible.

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# 1 INTRODUCTION

## THANK YOU!

Thank you for choosing the Nord Stage 3!

Continuing our vision of the ultimate instrument for the performing musician, our new flagship instrument features our latest award-winning technologies including the Nord Lead A1 Synth engine with sample playback, the acclaimed Nord C2D Organ engine, a greatly enhanced Piano section and extensive hands-on effects – all in one exceptional performance keyboard.

## FEATURES

The Nord Stage 3 has the following main features:

- Organ section with faithful reproductions of three classic organ models, B3, Vox and Farf (Farfisa), as found in our acclaimed C2D combo organ. There are also two Pipe organ models, each with its own distinct character.
- Digital LED drawbars on the 88 and 76 key models, physical drawbars on the 73 key model.
- Piano section with acoustic *Grand* and *Upright* pianos, tine and reed based *Electric* pianos, *Digital* piano sounds, *Clavinet* and *Harpichord* sounds and a *Layer* category with rich sounding piano combinations. The memory capacity for the Piano section in the Stage 3 is 2 gigabytes.
- Synth section based on the Lead A1 synthesizer with dedicated OLED display, Sample playback, Classic – analog style – waveforms, digital waves, formants and massive “superwaves”.
- Comprehensive Effects section.
- Seamless transitions: Sustaining notes will not be cut off when changing programs.
- An Extern section for controlling external MIDI instruments.
- Powerful Morph features for changing multiple parameters using physical controls.
- Four keyboard zones, with user adjustable split widths allowing sounds to smoothly cross-fade over split points.
- There are three Nord Stage 3 models: Nord Stage 3 88 with a fully weighted hammer action keybed (A-C), Nord Stage 3 HP76 with a lightweight hammer action keybed (E-G), Nord Stage 3 Compact with a 73-note semi weighted “waterfall” keybed (E-E) with physical drawbars.
- Two independent panels each provide two complete instances of the Stage 3 sound engines and effects. This allows for all kinds of layers and splits as well as “dual manual” B3 organ playing – among other things.

## NORD ONLINE

On the website [nordkeyboards.com](http://nordkeyboards.com) you will find:

- » Information about the Nord Stage 3 and other Nord instruments
- » Latest Operating Systems for download
- » Free software: Nord Sound Manager, Nord Sample Editor and drivers
- » Nord Piano Library sounds for free download
- » Nord Sample Library sounds for free download
- » Nord World: Nord related news stories and videos
- » User Manuals for download
- » Tutorials can be found at [nordkeyboards.com/tutorials](http://nordkeyboards.com/tutorials)

Follow Nord Keyboards on Facebook, Instagram, Twitter and YouTube. Feel free to tag your content with our official hashtag #iseenord.

## ABOUT THE USER MANUAL

The manual is arranged mainly as a reference manual. In many cases you'll also get tips on how to practically use the different features in a musical context.

## READING THE MANUAL IN PDF FORMAT

This manual is available as a digital PDF file. It can be downloaded, free of charge, from the Nord Stage 3 section on our website.

## RESTORING THE FACTORY PRESETS

The factory programs, Synth presets, samples and pianos are available as individual Nord Sound Manager backup files for download from our website. There is also a complete backup of the entire instrument and its factory content, in case it needs to be restored to its original state at some point.

## OS UPGRADES

The latest OS (Operating System) version for the Nord Stage 3 is always available for download from our website. There is also an Update History page on the website, which specifies what has been updated with each new version. Please visit our website from time to time, to make sure you have the latest version in your unit.

## FREE SOUNDS

Since the Nord Stage 3 is designed as an open system, each and every piano and sample in the Nord Stage 3 can be replaced. This is done using the *Nord Sound Manager* application which is available as

a free download from our website.

The Nord Stage 3 is compatible with the continuously expanding Nord Piano Library and the Nord Sample Library. When new sounds become available, these can be download for free from the Sound Libraries section of our website.

## DISCLAIMER

Any trademarks and brand names mentioned in this manual are the property of their respective owners and are not affiliated or associated with Clavia. These trademarks and brand names are only mentioned to describe certain sound qualities reproduced by the Nord Stage 3.

# 2 OVERVIEW



The Nord Stage 3 is designed to be a highly flexible, musically expressive and easy-to-use instrument. Let's have a look at some of its key features:

## ORGAN SECTION

The dedicated Organ section uses our latest B3 tonewheel Organ model, as found in the acclaimed Nord C2D Combo Organ.

The B3 model is based on the analysis of the signals generated by each of the 91 spinning discs inside several original instruments, and painstaking work on understanding exactly how all the original components interact with each other. The virtual circuitry reacts not only to the settings on the panel but also during the real time performance. The Stage 3 will faithfully reproduce the important foldback and energy robbing characteristics; the latter will produce the gentle compression effect that makes those lovely smears absolutely wonderful. The 3 tonewheel modes allow for switching from a clean, factory spec'd instrument to a worn and battered workhorse.

We have also created carefully modelled emulations of two of the most famous transistor organs from the 1960's; the *Vox Continental* and the *Farf* (Farfisa) Compact. Alongside the organ's themselves, the Nord Stage 3 features a rotary speaker simulation derived from the Nord C2D. Incorporating the acoustic variations that occur as a physical rotating spreads the sound around in a room, they bring the Stage 3's organs to life with remarkable realism. In terms of control, the 88 and 76 key model utilize our tried-and-true digital LED drawbars, whereas the 73 key Compact model is equipped with physical drawbars.

Finally, there are two distinct *Pipe* Organ models including a "Principal" Pipe model with two variations, delivering a wide range of versatile pipe/church organ sounds.

This section is described in detail in the Organ chapter, beginning on page 17.

## PIANO SECTION

The Nord Stage 3 Piano section, with its 2 GB of internal memory, delivers a stunning range of piano and keyboard sounds. Piano sounds are divided into six different types including both classic Grand, Upright and Electric pianos as well as Digital piano and preconfigured Layer sounds.

### NORD PIANO LIBRARY

The Nord Stage 3 benefits from the sounds found in the ever-growing Nord Piano Library. We spend a lot of time and effort on expanding the palette of available sounds, ranging from state-of-the-art concert grand pianos to characterful uprights, historical instruments, electric pianos and more.

New sounds are regularly made available free of charge on the [www.nordkeyboards.com](http://www.nordkeyboards.com) website.

## STRING RESONANCE

String resonance is a physical phenomenon which occurs inside every acoustic piano when strings, or parts of strings, resonate at their fundamental or harmonic frequencies as other strings are being played. When String Resonance is turned on, played notes will affect each other to reproduce the acoustic interactions that occur inside an acoustic grand or upright piano.

## NORD TRIPLE PEDAL

The Nord Stage 3 is compatible with the Nord Triple Pedal which unlocks additional functionality within the Piano section.

The right pedal is the sustain pedal. When operated, all notes being played will sustain until the pedal is released again. It also adds dynamic control of the mechanical "pedal noise" during operation and enables dynamic "half-pedaling" techniques.

The left pedal is the soft pedal, also known as the Una Corda. When applied, all notes will be slightly lower in volume and have a softer, more subdued, tone quality.

In the middle is the Sostenuto pedal. Notes that are held when the pedal is pressed down will “have their dampers raised” and keep sustaining, while subsequent notes will not be sustained.

## PEDAL NOISE

When the sustain pedal is operated on an acoustic grand or upright piano, many different sounds are produced by the mechanical components of that instrument’s pedal mechanism. Your Nord Stage 3 reproduces many of these natural sounds. When the sustain pedal is pressed down, lifting the dampers from the strings, a beautiful sizzle can be heard.

When the pedal is released, the dampers are returned to the strings, which creates a different, muted type of sound.

## PIANO AND CLAV EQ

A quick method for altering the character of the current piano sound is to use the Piano and Clav EQ settings. The Clav settings are designed to emulate those of the original instrument, while the Piano settings are designed specifically with piano players in mind - instantly making a sound softer, brighter or more mid-focused, depending on what the song calls for.

This section is further described in the Piano chapter, beginning on page 21.

## PROGRAM SECTION

A *program* on the Nord Stage 3 contains settings for all sound engines and effects. The center area of the instrument - the Program section - is where programs are navigated and stored, and various performance features and settings menus are accessed. Importantly, this is also where the two Panel buttons are located, used for switching between the two independent panels available within each program.

This section is described in detail in the Program chapter, beginning on page 25.

## SYNTH SECTION

The Nord Stage 3’s powerful synthesizer engine is based on the acclaimed Nord Lead A1. In addition to *Classic* waveforms and digital *Waves* and *F-Waves* (formants), the Stage 3 Synth can be used for all sorts of *Sample* based sounds. It also features a *S-Wave* (superwave) category suitable for those massive, multi-oscillator, sounds that can not be created by other means. The large number of *oscillator configurations* allows for a multitude of single or dual oscillator setups, wave-shaping, frequency modulation and more. An OLED display dedicated to the Synth section provides a clear overview of its current setup.

The Nord Sample Library gives Stage 3 owners access to a huge free library of world-class sounds, including the famous vintage Mellotron and Chamberlin samples. User-created samples can also be loaded into the instrument, opening up a whole new creative world of sound.

In addition to the versatile 12 and 24 dB low-pass filters and the 12 dB

high- and band-pass filters, the Stage 3 provides an emulated transistor low pass filter and a powerful combined low-pass/high-pass filter.

With both Amp and Modulation envelopes, an LFO and Unison control, the Stage 3’s synth capabilities are powerful, and provide virtually limitless possibilities in terms of stunning on-stage sounds.

There’s an in-depth description of this section in the Synth chapter, beginning on page 31.

## EXTERN SECTION

The Nord Stage 3 delivers powerful capabilities as a MIDI controller, especially when using the dedicated Extern section. Extern can be turned on and off and assigned to keyboard zones just like the internal sound engines, but specializes in controlling external gear - computers, synth modules etc. - over MIDI.

This section is described in detail in the Extern chapter, beginning on page 41.

## EFFECTS SECTION

A wide array of classic effects are at your fingertips, within the comprehensive Effects section:

The *Effects 1 and 2* units provide all essential modulation effects such as Tremolo, Chorus and Phaser, modeled after legendary stomp boxes and effects units. The *Delay* effect can go anywhere from solidly vintage to modern and atmospheric sounding - with its Analog mode and dedicated feedback filters.

Classic amplifier simulations, a versatile EQ and powerful, resonant filters are available in the *Amp Sim/EQ* section, and a punchy *Compressor* with an extra tight “fast mode” helps keeping your performance in control. Finally, the lush *Reverb* - independently available per panel - provides an array of small and large room simulations for instant atmosphere.

 *Many of the effect parameters can be morph controlled – that is addressed by the modulation wheel, control pedal or after touch – which opens up for all kinds of creative, real-time interaction.*

This section – *and the Rotary Speaker* – is described in detail in the Effects chapter, beginning on page 43.

# 3 GETTING STARTED

Let's spend a few minutes getting acquainted with the most fundamental features of the Nord Stage 3! In this chapter the most common scenarios and tasks will be described in a step-wise fashion, hopefully serving as a good starting point for further editing and more advanced set-ups as well.

## HOOKING IT UP

- ① Connect the Nord Stage 3 power cord to the unit and a mains power supply, connect the sustain pedal and a set of headphones or a sound system.
- ② Make sure to turn on the Nord Stage 3 first, before the sound system. Please be careful with the output volume.

For more information on all the connections on the Stage 3, have a look in the Connections section on page 57.

## PROGRAMS

The *Program* area is located at the center of the panel and has an OLED display in the middle. Complete settings of every parameter on the panel are stored in the program memory of the Nord Stage 3, with enough room for 400 programs.

Programs are organized into 8 banks, labeled A-H. All programs can be edited and replaced as you wish.



- ❗ A complete set of the factory programs is available on the [www.nordkeyboards.com](http://www.nordkeyboards.com) web site. This means that the program memory can always be restored to its original state.

## SELECT A PROGRAM

- ① Programs are selected by pressing any of the five **PROGRAM** buttons, located below the display. The **PAGE** ◀ / ▶ buttons are used to navigate program *pages* – a page being a group of 5 programs. A Program bank on the Nord Stage 3 can contain up to 50 programs divided into 10 program pages.
  - 💡 Some of the factory programs are labeled with *MW* or *AT*. This indicates that the Mod Wheel or Aftertouch has an active part in the sound and invites you to use these performance features.
- ② Programs can also be navigated by simply turning the **PROGRAM** dial.

## PANEL CONTROLS

### DIALS AND KNOBS



The *dials* on the Nord Stage 3 are knobs without any fixed start and stop positions, used for navigating parameters and settings in a step-wise fashion. The **PROGRAM** dial is one such example. In this manual, dials are sometimes also referred to as *encoders*.



**LEVEL** dials are surrounded by LED indicators. These provide a visual indication of the current value for the associated parameter.



Potentiometer-type *knobs* are used for many parameters on the Nord Stage 3. When a program is loaded the physical positions of these knobs will in most cases not correspond to the actual parameter values. As soon as a knob is turned however, its associated parameter value will “snap” to the knob’s position.



Knobs that can serve as a Morph destination are equipped with green Morph LEDs. These are located at the bottom left of the knob, and will light up if a Morph is targeting that parameter. Read more about Morphs on page 25.

☛ Hold the **MONITOR** button – found in the Program section – and turn a knob to view the stored setting of a parameter in the display without changing it.

### BUTTONS



*Selector* buttons are used to select one setting in an array. They have a set of round or triangular LEDs to indicate its current setting. Press the button several times to cycle through the possible options.



**ON/OFF** buttons are used for activating a function or a group of functions such as effects and have a LED close to them to indicate the on/off status and sometimes also the source or zone.

❗ The On/Off buttons of the Effects shown here also have a selector functionality. Press once to turn the Effect on, and press immediately again to select the “next” source.

### THE SHIFT BUTTON



Many panel controls on the Nord Stage 3 have a *secondary* function, which is printed immediately below it. These additional functions are accessed by pressing and holding **SHIFT** while operating the control.

The Shift button is also used to **EXIT** a menu or to cancel an ongoing Store operation.

## LIST VIEW

Any dial that has **LIST** written below it - such as the Program dial - can be used to access a useful list view.

① Press **SHIFT** and turn the **PROGRAM** dial to enter a list view of all the Programs.



② Browse to any program, using the **PROGRAM** dial. All 8 program banks can be accessed when in List mode.

③ Press **SHIFT** again to **EXIT** the List view.

☛ *List views for the Piano, Synth Preset and Waveform dials function in just the same way.*

## EDIT A PROGRAM

Editing a program is as easy as turning a knob or pressing a button, to change an existing setting. Let’s give it a quick try:

① Dial up Bank A, Program 1 (a piano based program) for this exercise.

The controls for the Piano instrument are located immediately to the left of the Program area on the panel. Notice that the Piano section of the Program area display shows the name of the selected piano sound, and that the six-way **PIANO SELECT** indicator is set to Grand.

### SELECT A NEW PIANO SOUND

② Turn the **PIANO SELECT** dial to browse the piano sounds. Sounds are organized according to their type (for instance Grand and Upright). The Piano Select LED indicator will show the *type* of the currently selected sound.

③ Try selecting a piano sound from the **LIST** view, accessed by pressing **SHIFT** and turning the **PIANO SELECT** dial. Use Shift again to **EXIT** the list view.

Note that changing any parameter on the Nord Stage 3 panel causes an “E” to appear next to the current program number in the display. This indicates that the program has been *edited* but not yet saved into memory. If a new program is selected prior to performing a Store operation any edits will be lost and the program will have its original settings the next time it is loaded.

## TURN OFF MEMORY PROTECTION

When the Nord Stage 3 is shipped from factory its memory is protected to prevent accidental overwriting of original programs. Memory protection can be turned off by toggling a setting located in the System menu.

- ① Hold **SHIFT** and press the **SYSTEM** (Program 1) button below the display.
  - ② Memory Protect is the first setting of the *System* menu. If the display shows a different setting, use the Page ◀ button to navigate to the Memory Protect setting.
  - ③ Change this setting to *Off* by turning the **PROGRAM** dial.
  - ④ Press **EXIT** (Shift button) to exit the *System* menu.
- ❗ *This setting, like all other System settings, will be permanently stored until it is changed again.*

Read more about menu settings, starting at “System Menu” on page 52.

## STORE A PROGRAM

- ① Press the **STORE** button to the left of the display once, to begin the process of storing the current program.
- ② The **STORE** LED will begin to flash and the display will ask you for the location to where you want to store the program.



- ③ If you want to store the edited version to the current location, replacing the original, simply press **STORE** again. If not, use the dial and/or **PAGE** ◀ / ▶ buttons to select a different location.
- 💡 *The program in the selected location becomes active on the keyboard, allowing it to be auditioned before it is replaced by the program being stored.*
- ④ When you have found a suitable location for your program, press **STORE** again to confirm the store operation.
- ❗ *Press Shift/Exit once to abort an ongoing Store process if you change your mind.*

Read more about Store and how to *name* a program in the Program chapter, on page 28.

## LIVE MODE

The five **LIVE** programs differ from other programs in that all edits made to them are instantly stored - without the need for a manual Store operation.

- ① Press **LIVE MODE** and use the five **PROGRAM** buttons to navigate the five Live programs.
- ② Make an edit, such as activating one of the effects sections, to one of the programs.

- ③ Select a different Live program and then return to the one that was edited. Note that the edit was automatically stored.

If Live Mode is active and you decide to store the settings permanently as a program in one of the Program banks, you can do so using the standard Store methods (see above).

You can also store programs into any of the five Live Mode memory locations, in which case the program settings will replace that current Live Mode memory setting.

Press the Live Mode button again to exit Live Mode and return to the Program banks.

## ACTIVATE AN EFFECT

- ① Activate the reverb by pressing the Reverb **ON** button.
  - ② Adjust the **DRY / WET** balance with the knob above the reverb selector.
  - ③ Activate the delay effect by pressing the Delay **ON/OFF** button once.
  - ④ The LEDs above the button indicate which sound engine is routed to the effect. Press **SHIFT** and the Delay **SOURCE** button until the **PIANO** LED is lit, if it is not already.
- 💡 *Double-clicking the On Off / Source button is a shortcut for quickly changing the source for any effects section.*
- ⑤ Try the **RATE**, **FEEDBACK**, **FILTER** and **MIX** controls, to alter the character and intensity of the Delay effect.

## THE TWO PANELS



The Panel A and Panel B buttons give instant access to *two complete instances* of the features on the physical panel. There can be one complete Organ/Piano/Synth/Extern/Effects setup on Panel A, and another complete setup on Panel B.

This allows for easy back-and-forth switching between two different sounds, or for complex programs with up to two organ settings, two different pianos and two different synthesizers. The two panels can be combined either as layers or as split keyboard arrangements. Let's set up a split and then expand it with an additional layer combination.

## CREATE A SPLIT

- ① Make sure that only Panel A is active and that only the Piano section is turned on.
  - ② To activate Split mode, press the **SPLIT ON/SET** button, located in the top row above the Program area display.
  - ③ To adjust the *position* of the Split point(s), press and hold the **SPLIT ON/SET** button, located in the top row above the Program area display.
- ❗ *The “▼” symbol associated with this button indicates that one of its functions - **SET** - is accessed by keeping the button pressed down.*
- ④ There are two settings for each split point; *position* and *width*. If the display says “Split Width Middle” press the Program 4 button,

corresponding to the ◀ symbol in the display, to instead show the Split Position settings. Set the *Middle* split point to C4 using the dial.

- 5 Make sure that the other two split points (*Low* and *High*) are set to “Off”, accessed by pressing the Program 1 and 3 buttons respectively.

The keyboard is now divided into two zones, the split point being indicated with a green LED above the keyboard. The **M** LED above the **SPLIT ON/SET** button will also be lit, indicating both that Split is turned on, and that only the Mid split point is active.

## ASSIGN THE PIANO TO THE UPPER ZONE

- 6 Hold **SHIFT** and press the Piano **KB ZONE SELECT** button repeatedly until only LED's **3** and **4** are lit.

This assigns the Piano to the upper zone of the keyboard. Feel free to use the **OCTAVE SHIFT** buttons in the Piano section for accessing a different range of the piano sound.

## SET THE SYNTH TO THE LOWER ZONE

- 7 Turn **ON** the Synth section. Hold **SHIFT** and press Synth **KB ZONE SELECT** until only LED's **1** and **2** are lit. This will activate the synth and assign it to the lower half of the keyboard.
- *By using all three split points, Low, Mid and High, it is possible to divide the keyboard into a total of four distinct zones, all of which can have any or all of the six sound engines and two Extern sections assigned to it.*

---

## LOAD A SYNTH PRESET

- 1 Turn the **SYNTH PRESET** dial and select any of the Synth presets from the 8 User preset banks - perhaps a Bass Synth sound. Note that the location and name of the preset is displayed at the bottom of the *Program* area display. The Synth display will at all times show the currently active oscillator settings.



All the synthesizer parameters on the panel can be adjusted, even when using a preset as a starting point. An in-depth description of these parameters can be found in the Synth reference chapter, starting at page 31.

💡 *To view a parameter setting without changing it, hold the Monitor button and turn the parameter's knob.*

## CREATE A LAYER

Let's add a third sound to the Synth/Piano split we just created.

- 1 Activate Panel B by pressing the **PANEL B** button, giving access to a second set of sound engines and effects.
- 2 Make sure that only the Synth section is active: Press **SHIFT + PROG INIT** and select *Synth* from the display by pressing Program button 4.

💡 *The Prog Init function is used for quickly initializing the current panel in a manner which suits the type of program which should be created, and will disable all sections and reset all parameters that should not be used.*

- 3 Use the **SYNTH PRESET** dial to select a sound which should be layered upon the previously set up split.

## ACTIVATE BOTH PANELS

- 4 Press both the **PANEL A** and **PANEL B** buttons simultaneously to create a layer with the

sounds from both panels. Panel A now contains the Synth/Piano split while the Panel B Synth sound is layered on top.

The flashing panel LED (A or B) indicates which panel is currently focused for editing on the panel. Press the other Panel button to shift this focus to the other panel.

#### SET UP A SPLIT CROSS-FADE (SPLIT WIDTH)

As a final step, let's adjust the split point so that the split Synth and Piano sounds will transition gradually between one another:

- 5 Again, press and hold the **SPLIT ON/SET** button, located in the top row above the Program area display.
- 6 Press the Program 4 button, corresponding to the ▶ symbol in the display. The Split *width* for each split point can now be adjusted.
- 7 Select the *Mid* split point and set it to "Lrg" by turning the dial. Let go of the **SPLIT ON/SET** button.



Playing across the Split point now will "cross-fade" between the lower and the upper sound.

💡 *The Extern section can also be part of a split or layer scenario, e.g. if an external unit should be controlled from just one zone on the keyboard. Note that the Split width setting will not apply to the Extern section.*

To turn off a panel combination, hold down the Panel button you wish to keep and then press the other Panel button.

## MORPHS



The modulation *wheel*, a connected *control pedal* or the keyboard *aftertouch* can be used to alter one or several parameters while playing. This is achieved by using *morphs*. In short, this is done by selecting a *source* (the physical controller) a *destination* parameter and the parameter *range* included in the morph.

- 1 We will now morph the *drawbars* with the *wheel*, so start by making sure that the Organ section is turned *On*.
- 2 Make sure that the B3 model is active and "pull out" the first three drawbars on the left (Sub, Sub3 and Fund) by pressing the corresponding lower drawbar buttons, or by actually pulling the drawbars if using the Nord Stage 3 Compact model.
- 3 Press and hold the **WHEEL** button in the Morph Assign group, above the Program area dial.
- 4 Pull out the four right-most drawbars all the way. The indicators will show single LEDs to indicate how much the Morph will affect the parameter.
- 5 Let go of the Morph **WHEEL** button. Play a few notes or chords, while moving the modulation wheel.

As the wheel moves, the drawbars are pulled out and the sound changes accordingly.

💡 *One Morph source (Wheel, Control Pedal or Aftertouch) can control several parameters at once.*

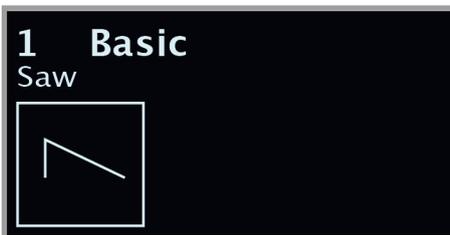
💡 *A Morph source can increase one parameter's value while decreasing the value of another at the same time. This makes it possible, for example, to crossfade between instruments.*

Read more about the Morph functionality on page 25.

## THE SYNTHESIZER

Let's have a look at some of the features of the Stage 3 Synthesizer, beginning with how to set up a sound using Classic, "analog" waveforms.

- ① Make sure the Synth section is active, by pressing the Synth **ON** button, or by using **PROG INIT** (Shift + Live Mode) and selecting *Synth* from the display.
- ② In order to start off from a "blank slate", let's *initialize* the synthesizer to its default settings by pressing **SOUND INIT** (Shift + Unison) and then **Init** using the display soft button.
- ③ Make sure the Waveform selector under the display is set to **CLASSIC**. Turn the **OSC1/WAVEFORM** dial until the *sawtooth* waveform is selected.
- ④ Note that the right half of the display is currently empty. We are now using a Basic, *single oscillator*, configuration which means that the **OSC CTRL** knob has *no impact on the sound*. Let's choose a different configuration:



- ⑤ Press **SHIFT** and turn the **CONFIG** dial to browse the different configurations. Select the *Mix Square* configuration and let go of the **SHIFT** button.



- ⑥ There are now two oscillators available, one set to *sawtooth* and one set to *square* wave. Turn the **OSC CTRL** knob to mix the sound of the two oscillators.
- ⑦ Turn the **OSC2/PITCH** dial (same as the Config dial - but without Shift) of the Oscillator section and select a different pitch for the *square* wave, indicated in semitone steps on the display. This way the sound of the first oscillator (the *sawtooth* sound in this case) can be combined with a sound of a different pitch, from one octave below ("*sub*", used in the example below) to several octaves above.



As a final step, let's turn to the Filter section for some adjustments:

- ⑧ Turn the Filter **FREQ** knob counter-clockwise, and notice how the sound is gradually subdued. Repeat this with all **FILTER TYPE** settings, paying attention to how they each have a different effect on how the sound is shaped.
- ❗ Read more about the Filter Types, and other settings in the Filter section, beginning on page 35.

## LOADING AND ADJUSTING A SAMPLE PRESET

Now let's instead set up a string pad sound based on a sample, loaded from the Sample Preset bank.

💡 *Apart from being selectable with the Osc1/Waveform dial, samples are available as Read-Only presets within the Synth Preset banks. When loaded from such a preset, some of the Synth settings – such as Amp Envelope and Velocity – are automatically set to values which suit that particular sample. All parameters can still be adjusted manually as needed.*

- ① Activate the Synth Preset List view by pressing **SHIFT** and turning the **SYNTH PRESET** dial.
- ② Press the **Samp** soft button (Program 3 button) to isolate the Sample presets. Pressing down on the **Cat** soft button provides a list of categories. Select an item from the list to show only the presets within that particular category. When the Cat soft button is focused, the **PAGE** ◀ / ▶ buttons can be used to quickly jump between different categories.



- ③ Select an appropriate Ensemble Strings sample by turning the **SYNTH PRESET** dial (or the Program dial).
  - ④ Play a few notes. To make a pad out of the sound we will want to do a few tweaks. Let's turn to the **AMP ENV** (*Amplifier Envelope*) section:
  - ⑤ While playing, adjust the Amp Env **RELEASE** control until a suitably long tail is heard when *releasing* a note, perhaps at a value of around 5.0.
  - ⑥ Similarly, use the **ATTACK** control to create a softer and more gradual onset of the notes you play. Again, a value of around 5.0 may be suitable.
  - ⑦ To finalize the string pad, adjust the **FILTER FREQ** to give the sound a softer character. A value of around 6.0 could be a good starting point.
- ❗ *Since we are basing this example on a preset, you may want to set the **VEL/MOD ENV** knob to 0 (12 o'clock) when trying out point 8 above, to reset any preset velocity behavior.*

There are several ways to further enhance this basic string pad sound, for instance by adding modulation or by using effects. Read more about modulation options on page 32 and about effects, beginning on page 43.

Additional samples can be added to the Nord Stage 3 by using the Nord Sound Manager software.

💡 *You can store a tweaked synthesizer sound as a preset, by pressing Shift and the Store Synth button.*

## THE ARPEGGIATOR

As a final exercise, let's create a sound using the Synth section and its arpeggiator.

- 1 Make sure that only the Synth section is turned on and perform a **SOUND INIT** (Shift + Unison). Set the Amp Env **ATTACK** time to 0, the **DECAY** to around 3, select a sawtooth waveform and open up the filter a little bit. This will produce a percussive sound.
- 2 Press **ARP RUN**, play a chord on the keyboard and turn the Arpeggiator Rate knob. This will play the notes that are held down, one after the other in a repeating fashion.



- 3 Press **SHIFT** and the Arpeggiator *selector* button to select a different direction.  
When no direction LED is lit, the direction is Up, from the lowest key and up to the highest and then it starts over again. The other directions are **DN** (down), **UP/DN** (up and down) and **RD** (random).
- 4 Press the *selector* button repeatedly to select a range.  
When none of the range-LEDs are lit, the range is exactly the keys that are held down. A setting of **2 OCT** extends the range by transposing the arpeggio one octave up and plays this octave after the initial octave, **3 OCT** adds yet another octave and **4 OCT** gives a range of four octaves.
- 5 Press the **KB HOLD** button to keep the arpeggio going without the need for pressing the keys.

## MASTER CLOCK

Now that we have an arpeggio going, let's try the Master Clock feature to synchronize the arpeggio and to bring in an effect as well.

- 1 Hold **SHIFT** and turn the Arpeggiator **RATE** knob to lock the arpeggio to the Master Clock, the **MST CLK** LED lights up.
- 2 Press down on the Mst Clk **TAP/SET** button in the Program area to dial in a tempo with the **PROGRAM** Dial. You could also press **CLOCK** (Shift + Tap/Set) to view and adjust Master Clock settings without having to keep the button pressed down. The display will indicate the BPM. Set this to 130 BPM for this exercise. Release the button to exit, or press **EXIT** (Shift) if in "Clock" mode.

Tap four times on the Mst Clk button to set the tempo on the fly.



- 3 Turn the Arpeggio **RATE** knob to select the meter subdivision (or note values) that the arpeggio should play. The setting is shown in the Program area display as the knob is being turned. Notice how 1/4 is half the "speed" of 1/8. A "T" after a numerical value indicates triplets. Set the subdivision to 1/8.
- 4 Turn on the **DELAY** effect and make sure that the source is set to Synth by pressing the **SOURCE** button repeatedly until the Synth LED lights up.  
If you carefully adjust the delay time, you could match it to fit the rhythm of the arpeggio, but there is another way. Let's synchronize the delay to the same clock as the arpeggio.
- 5 Hold **SHIFT** and turn the Delay **TEMPO** knob to activate Master Clock for the Delay. The **MST CLK** LED lights up.



- 6 Turn the Delay **TEMPO** knob and again refer to the Program area display to monitor the setting.
- 7 Try 1/16, which will be half the note value or twice the "speed" of the arpeggio. Turn up the Amount knob up to but not beyond 12 o'clock to hear the delay taps together with the arpeggiated notes.

The arpeggio, the LFO on the synth, the Delay and the Effect 1 rate can be synchronized to the Master Clock in this fashion.

What's more, the Master Clock operates on both panels simultaneously so you can control arpeggios, LFOs and effects on both Panel A and B.

Some of the units have division settings that are larger than 1/1 that allows for sweeps that are longer than one bar. And you can of course synchronize some functions, while leaving others free-running if you like.

# 4 ORGAN



Compact model

The Nord Stage 3 features five organ models, all digitally modeled; a tonewheel/B3 organ, two transistor organs (Vox and Farfisa) and two Pipe Organ models, including a “Principal Pipe” section. Different organ models can be selected for Panel A and Panel B, allowing splits and layers using different organ types to be realized.

**i** *The Rotary effect – although conveniently located next to the Organ section – is covered in the Effects chapter, see page 46.*

## ON/OFF, LEVEL AND ZONE SELECT

The Organ section is turned On or Off by pressing its **ON/OFF** button. The *morphable* **LEVEL** encoder controls the sound output level of the Organ.

Press **ZONE SELECT** (On/Off) with **SHIFT**, to assign the Organ to any of the active keyboard zones. The green **KB ZONE** LEDs indicate which of the zones the Organ section is assigned to. Read more about Split setups and keyboard zones on page 26.

## OCTAVE SHIFT

Use **OCTAVE SHIFT** to transpose the Organ section up or down by octaves (+/- 12 semitones). When assigned to the entire keyboard it can be transposed one octave up or down. When assigned to a smaller zone the available transpose values will vary, but always provide access to the entire range of the Organ.

## PSTICK AND SUSTPED

**PSTICK** (Shift + Octave Shift left/down button) turns on pitch stick func-

tionality for the Organ, in which case the Organ sound can be bent 2 semitones up and down, using the pitch stick.

**SUSTPED** (Shift + Octave Shift right/up button) activates any attached sustain pedal for the Organ section. Read more on how to configure an attached pedal in the Menus chapter, on page 52.

## DRAWBARS AND BUTTONS

The drawbars on the Nord Stage 3 88 and 76 key versions are represented by buttons and LED chain graphs. The 73 key Compact version uses “real” mechanical drawbars.

The digital drawbars behave similarly to their mechanical counterparts. On the *B3*, *Vox*, *Pipe* and *Sine* models you “pull out” and “push in” the drawbars using the drawbar buttons. With the *Farf* model, drawbar buttons act as rocker switches, toggling each register on or off.

The buttons are special in the way that they auto-increment/decrement the drawbar value when they are held down. If you hold a drawbar button the corresponding drawbar setting will continue to increment or decrement (within its range) until you release the button.

**💡** *The drawbars can be Morph controlled, if you want to make dramatic changes with for example the Wheel or a control pedal.*

While holding a drawbar button, you can press its “sibling” button to momentarily auto-increment/decrement in the opposite direction.

**i** *The Program section display also shows the current drawbar settings for the Organ section - especially useful on the Compact model where there are no drawbar LEDs.*

## SELECTING AN ORGAN MODEL



Use the **ORGAN MODEL** selector button to select your preferred Organ model. The Pipe1 and Pipe2 settings are indicated by the upper and lower LED pairs being lit respectively.

## THE B3 MODEL

The B3 model is based on a digital model of the classic electro-mechanical tonewheel organ. This simulation utilizes innovative and advanced methods to capture every nuance of the original sound. Here are some examples:

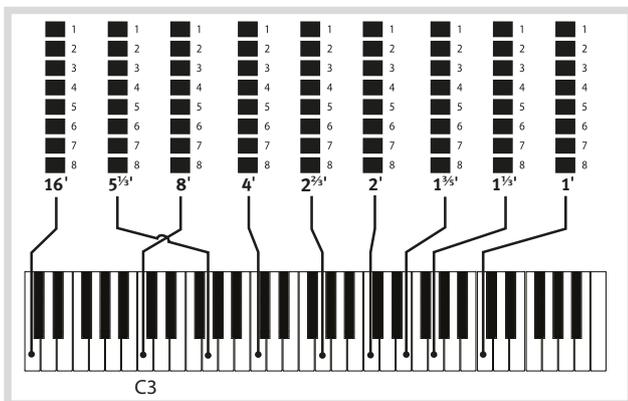
- An extremely accurate digital model of the original chorus and vibrato scanner.
- Modeling of the individual random contact bounces for each harmonic.
- Modeling of the unique frequency characteristics of the built-in pre-amplifier, which forms the “body” of the sound.
- Simulation of the energy robbing on the tone wheels that results in the typical “compressed” sound.
- Authentic tuning of the tonewheels according to the original design.
- Extremely fast keyboard response.
- Full polyphony.

## B3 DRAWBARS

The harmonic intervals for the tonewheel organ are printed on the panel below the drawbars.

For basic drawbar operation, please refer to “Drawbars and Buttons” on the previous page. Each drawbar represents a partial with a fixed harmonic interval in relationship with the played note.

The illustration below shows the pitch interval among the nine drawbars when the key of C3 is played. Note that the 5 1/2' drawbar actually is a 5th *above* the fundamental harmonic (8') but in most situations is perceived as sounding below it.



## VIBRATO & CHORUS

The original vibrato and chorus scanner in a tonewheel organ consists of a modulated delay line in combination with a rotating scanner. For the Vibrato effect, phase shift is applied to the signal. For the Chorus effect, the phase-modulated signal is added to the original signal.



Three different types of choruses (C1 - C3) and three different types of vibratos (V1 - V3) are available. Select one of these types by pressing the Vibrato/Chorus selector button. The effect can be activated/deactivated for both panels individually by pressing the Vibrato/Chorus button for the Panel A and Panel B “manuals”.

## PERCUSSION

Press the **PERCUSSION ON** button to add an extra attack to the B3 sound by having a single envelope generator controlling either the 2nd or 3rd harmonic.

The envelope “opens up” for a short moment in the beginning of the sound when you press the key(s). The percussion is a single-triggered non-legato effect. By “single-triggered” we mean that the percussion is only present when you hit the keys when no other note is sounding. In other words, if you play a note or a chord and then add more notes without releasing the previously pressed keys, there will be no percussion effect in the new notes. You have to release all keys to be able to play new notes with the percussion effect.



The **VOLUME SOFT** button toggles between Normal and Soft percussion level. The **DECAY FAST** button toggles between Slow and Fast decay times.

The **HARMONIC THIRD** button toggles between using the 2nd or 3rd partial as the source for the percussion effect.

**i** *The Percussion effect is only available for the B3 organ model.*

## KEY CLICK CONTROL

The key click produced by the random contact bounces is an important audio artifact in the original B3 instrument. This quickly became a desirable effect amongst musicians. The click level can be adjusted in the Sound menu, read more about this on page 53.

**💡** *Do not forget to try out the three tonewheel modes that are also available in the Sound menu. These will dramatically change the sound of the B3 model from a squeaky clean unit to a battered, old workhorse.*

## THE VOX MODEL

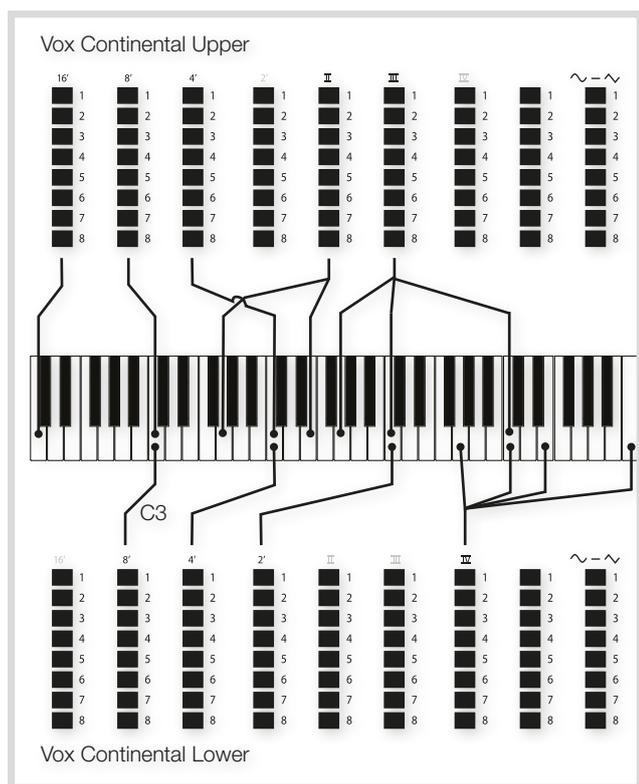
The original Vox™ organ is probably the most famous of all the transistor based combo organs that emerged in the early 60's. Transistor technology made it possible to manufacture compact and portable organ instruments. Compared to the mighty sound of tonewheel based organs, transistor organs generally sounded reedier and weaker, but this one had a distinctive sound character which together with the portability and cool design (inverse colored keyboard and chrome “Z-frame” stand) made the instrument massively popular at the time. The sound is timeless and recreated faithfully by the Nord Stage 3.

### VOX DRAWBARS

The labels used for the Vox drawbars are printed on the row directly above the drawbar LEDs.

For basic drawbar operation, please refer to “Drawbars and buttons” on page 17.

The seven drawbars to the left control the level of each partial. Each partial has a fixed harmonic interval relating to the played note. The illustration below shows the pitch interval of the drawbars when the key of C3 is played. The intervals vary for the upper and lower manual on the original instrument, but are identical on the Nord Stage 3.



The rightmost drawbar controls the mix between a filtered signal sounding soft and dark, and an unfiltered signal sounding bright and intense.

### VIBRATO

There are several types of vibrato and choruses available for the Vox model, which is activated using the **ON** button in the Vibrato section. The **V3** setting is the one that is modeled after the original instrument.

The VX model's Vibrato setting is common for both the Panel A and Panel B Organ sections, although it can be turned on and off independently.

## THE FARF MODEL

The typical “buzzy” sound of this vintage instrument is one of the most distinct and easily recognizable organ sounds ever created; yet it is actually possible to get quite a wide range of sounds out of the instrument. Note that the voices aren't supposed to replicate the instruments they are named after, but rather to describe the basic tonal characteristic of the voice: Flute = soft, Oboe = reedy, Trumpet = brassy etc.

### FARF REGISTERS

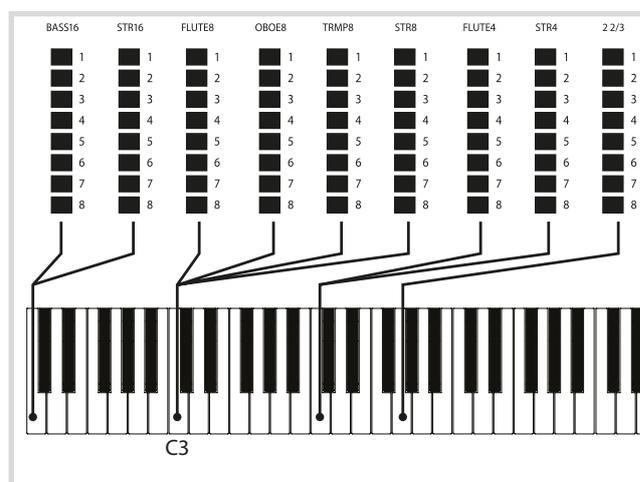
The labels used for the **FARF** drawbars/registers are printed on the upper row, above the drawbar LEDs or drawbars.

The drawbars act as on/off switches, or “register selectors” when the Farf model is selected. Instead of drawbars, the original instrument used rocker switches for selecting instrument voices (in reality different filter settings) in various footage (octave) ranges. Drawbar LEDs 5-8 are lit up for an activated voice, and drawbar LEDs 1-4 are lit up for a deactivated voice. On the Nord Stage 3 Compact model, pulling the drawbars more than half way out will activate the register.

As usual, the Program section display will show current drawbar settings for the Organ section. The table below shows the original register name.

Drawbar	Voice	Panel Name
1	Bass 16	BASS16
2	Strings 16	STR16
3	Flute 8	FLUTE8
4	Oboe 8	OBOE8
5	Trumpet 8	TRMP8
6	Strings 8	STR8
7	Flute 4	FLUTE4
8	Strings 4	STR4
9	A bright voice, an octave and a fifth above the fundamental	2 2/3

The illustration below shows the pitch interval between each voice when the key of C3 is played. Though some voices have the same pitch, they differ in tonal character.



## VIBRATO

The original instrument has two basic vibrato modes; “Light” and “Heavy”, with different rates for each mode. There are several types of vibrato and choruses available for the Farf model on the Nord Stage 3, which are activated using the **ON** button in the Vibrato section.

The **V1**, **V2** and the **V3** settings are the ones that are modeled after the original instrument’s. Note that the Farf vibrato is common for both panels.

## PIPE ORGAN

### PIPE 1

The **PIPE1** organ model is not designed to imitate any existing instrument, but rather as a useful and appealing “all-purpose” organ, which works equally well with or without Rotary speaker. In some ways its sound is similar to that of the B3 organ – but without any of its electro-mechanical behaviors and artifacts.

### PIPE 2

The **PIPE2** organ model faithfully recreates a *principal* pipe section - the sets of metal pipes, or ranks, that commonly make up the backbone of a pipe or church organ. While other ranks may attempt to recreate the sounds of other instruments (flutes, trumpets, strings etc.) the principal sound is non-imitative and unique to the pipe organ.

Activating **VIBRATO/CHORUS** for the Pipe2 model will switch to a variation of the principal pipe organ, which is tuned with less precision. This produces chorus-like effects, slight dissonances and arguably more realism when combining registers.

### PIPE 1&2 REGISTERS

The pipe lengths available for both Pipe models correspond to those of the B3 model, ranging from 16 feet to 1 foot.

## ORGAN PRESET I & II



Two organ presets/settings can be stored within each panel, for each organ model. This provides a quick way of changing between two organ sound variations, without having to change programs or panels.

Change between Presets I & II by pressing the **PRESET II** button. A preset stores the drawbar settings and the Vibrato/Percussion (on/off) settings.

### DRAWBAR LIVE (COMPACT MODEL)



The Nord Stage 3 *Compact* model has an additional Drawbar Live setting. With this setting active the Organ will use the current positions of the physical drawbars. The setting can be stored with a program, meaning that the actual drawbar positions instantly will be used as the program is loaded.

## SWELL PEDAL

Swell is a characteristic organ feature, controlled from a continuous pedal. Swell is not only a volume control - for the B3 it also changes the character of the sound in a special way. To use Swell control on the Nord Stage 3, simply plug in a standard expression pedal to the Organ Swell input on the rear panel (see page 57) and configure the pedal on the System Menu (see page 52).

An expression pedal connected to the Organ Swell input will control Swell for all organ models.

If you have only one expression pedal, it can be used both as a generic Control Pedal to control the Morph, and as a Swell Pedal - when attached to the Control Pedal jack. This is also set up in the System Menu.

## ROTARY SPEAKER

The Rotary Speaker controls are logically placed next to the Organ section. Its settings are described in detail in the Effects chapter on page 46.

# 5 PIANO



## ON/OFF, LEVEL AND ZONE SELECT

The Piano section is turned On or Off by pressing its **ON/OFF** button. The *morphable* **LEVEL** encoder controls the sound output level of the Piano.

Press **ZONE SELECT** (On/Off) with **SHIFT**, to assign the Piano to any of the active keyboard zones. The green **KB ZONE** LEDs indicate which of the zones the Piano section is assigned to. Read more about Split setups and keyboard zones on page 26.

## OCTAVE SHIFT

Use **OCTAVE SHIFT** to transpose the Piano section up or down by octaves (+/- 12 semitones). When assigned to the entire keyboard it can be transposed one octave up or down. When assigned to a smaller zone the available transpose values will vary, but always provide access to the entire range of the Piano.

## PSTICK AND SUSTPED

**PSTICK** (Shift + Octave Shift left/down button) turns on pitch stick functionality for the Piano, in which case the Piano sound can be bent 2 semitones up and down, using the pitch stick.

**SUSTPED** (Shift + Octave Shift right/up button) activates any attached sustain pedal for the Piano section. Read more on how to configure an attached pedal in the Menus chapter, on page 53.

## ABOUT THE PIANO SOUNDS

The Pianos in the Nord Stage 3 are organized into six *types*. Each type can contain several instrument *models*. New piano sounds can be downloaded from the [www.nordkeyboards.com](http://www.nordkeyboards.com) website and added to the Nord Stage 3 by using the Nord Sound Manager.

Right out of the box, the Nord Stage 3 features a fine collection of carefully selected acoustic and electric pianos, digital piano sounds and piano layers. A lot of effort was made to ensure a nuanced response and sound, matching the original models as closely as possible. Each piano has been sampled with a vast amount of velocity levels, which is one reason why they all sound and feel so authentic.

The available memory size for piano sounds is 2 Gigabytes.

**i** *When you download piano instruments with the Nord Sound Manager, these will always automatically be placed into their corresponding type.*

A program “knows” which piano to use by referencing to the type and the model number. If a program references a piano that isn’t currently downloaded onto the Nord Stage 3, the type LED will flash, and the display will read “Piano not found”. If this happens, you can either navigate to another instrument Model in the selected (or any other) type and select to use this piano instead, or use the Nord Sound Manager application to download the missing instrument into the empty Model location.

## ABOUT PIANO SIZE

Nord Piano Library sounds come in up to four different sizes. Below is an overview of how they differ in functionality:

	Sml	Med	Lrg	XL
Stereo sampled	✓	✓	✓	✓
Detailed velocity mapping	✓	✓	✓	✓
String resonance for middle range		✓		
String resonance for entire range			✓	✓
Fully mapped keyboard				✓

*Small* (Sml) piano files use the least amount of space in the piano memory as they do not contain any pedal-down String Resonance samples at all.

The *Medium* (Med) versions include pedal-down String Resonance samples for the important middle region of the range.

The *Large* (Lrg) versions have the pedal-down String Resonance samples all across the keyboard.

Many pianos are also available in an *Extra Large* (XL) version. These are “fully mapped” across the keyboard, meaning that each key on the Nord now matches its exact equivalent on the original instrument. This naturally imposes a substantial increase in size.

## PIANO SELECT

### TYPE AND MODEL

Use the **PIANO SELECT** dial to choose which piano sound you want to use. These are the six types into which all piano sounds are placed:

TYPE	DESCRIPTION
Grand	Acoustic and electric grand pianos
Upright	Upright pianos
Electric	Electric Pianos (tine and reed based)
Clav/Hps	Clavinets and Harpsichords
Digital	Digital piano sounds
Layer	Layered piano sounds

**i** *Pianos can not be moved from one type to another.*



The triangular Piano Select LEDs indicate the *type* of the currently selected piano model. The *name* of the selected model is shown in the bottom area of the Program area display, indicated by a keyboard icon.

## ABOUT THE CLAVINET

On the original Clavinet D6, different pick-up combinations were selected by pressing a number of rocker switches. This functionality is faithfully simulated by the Nord Stage 3, which means that all original Clavinet D6 pickup selections are available.

### PICK-UP TYPE DESCRIPTION

*Clav Model A:* Only the “neck” pick-up; a warmer, less bright sound.

*Clav Model B:* Only the “bridge” pick-up; a bright sound.

*Clav Model C:* Both pick-ups on and in phase; a very full sound.

*Clav Model D:* Both pick-ups 180 degrees out of phase; the fundamental is almost cancelled out and the sound becomes thin.

## LIST VIEW

Pressing **SHIFT** and turning the **PIANO SELECT** dial activates the **LIST** view for piano sounds.

The Piano list top row displays the current *type* name (“Grand” in this case), the number of models of that type (9), and the index of the currently selected model (4).



*The list itself shows the currently selected model, indicated by a rectangle, as well as the preceding and following models.*

## KBD TOUCH



Pianos from the Nord Piano Library typically have a very wide dynamic range, and their dynamic response can be adjusted according to what fits your personal style or the context of your performance.

The default **KBD TOUCH** setting (all LEDs being off) facilitates playing softly yet expressively. With each increment of the Kbd Touch setting (**1**, **2** and **3**) less effort is required to play loudly.

## PIANO INFO

Pressing **SHIFT** + **PIANO INFO** will display some additional info about the currently selected model, such as its version number and its exact size.

## STRING RES / SOFT RELEASE / PEDAL NOISE

### SOFT RELEASE



Activating **SOFT RELEASE** will add a slightly longer and less pronounced release to the piano sound. This is equivalent to what happens when you adjust the damper tension in an acoustic or an electromechanical instrument. The added release is individual for every note and responds dynamically to the force with which you play.

- ❗ *Some Piano types, such as Clavinets and Harpsichords do not support the Soft Release feature. In these cases the button will be disabled.*

## STRING RESONANCE

String Resonance refers to the acoustic phenomenon that occurs when strings, or parts of strings, resonate at their fundamental or harmonic frequencies when other strings are played.

When **STRING RES** is turned on, all notes you play will affect each other to reproduce the wonderful acoustics that occurs inside an acoustic grand or upright piano.

You will also hear all the strings resonate if you press the sustain pedal and play some notes.

- ❗ *If a piano is selected that isn't compatible with the String Resonance feature, this function will be disabled. This applies to e.g. the small (Sm) versions of the grand pianos and up-rights, or the electric pianos.*

## PEDAL NOISE

**PEDAL NOISE**, (Shift + Soft Release/String Res) is available if the *Nord Triple Pedal* is connected to the Nord Stage 3 (see below). When activated, the mechanical noise that occurs with the sustain pedal on an acoustic or electric piano will be recreated. The Nord Triple Pedal is dynamic, its noise level being controlled by the force used when the sustain pedal is operated.

- ❗ *If a piano is selected that is not compatible with the Pedal Noise feature, this function will be disabled.*

---

## NORD TRIPLE PEDAL

The Nord Stage 3 is compatible with the Nord Triple Pedal, an optional accessory which is comprised of three pedals in one unit. This pedal unlocks additional features and sounds within the Piano section of the Nord Stage 3.

- ❗ *If using the Nord Triple Pedal, make sure the Sustain Pedal type is set to either Auto or Triple in the System menu. See page 53 for details.*

## SUSTAIN AND HALF PEDALING

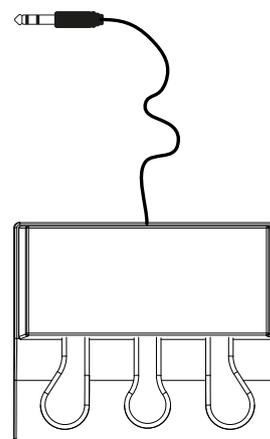
The right pedal is the sustain. On the Nord Triple Pedal this can be used with half pedaling techniques, achieved by pressing the pedal half way down. In this case the (virtual) dampers are only half-raised, for a partially dampened sound.

## SOSTENUTO

The middle Nord Triple Pedal is the *sostenuto* pedal. By using this, selected notes can be sustained, while other notes remain unaffected. Only the notes that are already held down when the pedal is operated will sustain. Subsequent notes, played while keeping the pedal down, will not be sustained.

## SOFT PEDAL

The left pedal on the Nord Triple Pedal is the *soft pedal*, also known as the *Una Corda*. When it is pressed down, all played notes will be slightly lower in volume and also have a slightly more subdued tone quality.



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## PIANO/CLAV EQ

### PIANO EQ SETTINGS



Using the **PIANO** EQ section is a smart method for instantly altering the frequency content and character of the currently selected piano sound - while keeping the Amp Sim/EQ effects unit free for other tasks.

The **SOFT** setting will filter out much of the high frequency range, and emphasize parts of the low, resulting in a subdued and mellow sound.

The **MID** mode de-emphasizes both high and low frequency ranges, making for a focused and cutting sound with a prominent mid-range.

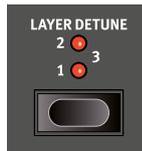
The **BRIGHT** mode emphasizes the high frequency range, producing a bright, brilliant sound which is also useful for bringing out the “ping” in electric pianos.

### CLAV EQ SETTINGS

An original Clavinet is equipped with 4 additional rocker switches, which control the onboard EQ. Most of these settings combinations are available on the Nord Stage 3. Use the **PIANO/CLAV** button to select your preferred combination of the filter settings.

---

## LAYER DETUNE



If the Piano sections for Panel A and B are both active in a layer configuration, the **LAYER DETUNE** feature can be used to detune the two piano sounds. There are three different degrees of detune, **1**, **2** and **3**, ranging from a subtle chorus-like effect to more extreme detuning.

**i** *Layer Detune will only affect the piano sounds on Panel A and B – not other active sound engines.*

# 6 PROGRAM



The **PROGRAM** section provides access to performance functions such as recalling and storing programs, access to the Song and Live modes, keyboard split functionality and more. This is also where menus containing *System*, *Sound*, *MIDI* and *Extern* settings are found. The menus and their settings are covered in a separate chapter, starting on page 52.

The Program area features are all described in this chapter, beginning with the top row.

## MORPH ASSIGN



The *Morph* is a very powerful tool, which allows for controlling several parameters at once using one control “source”. A foot pedal can be used to control the level balance between a piano and a synth sound, the wheel

to perform drawbar changes in a B3 sound, and increase the rate of a selected effect by keyboard aftertouch – all at the same time.

The three **MORPH ASSIGN** buttons, **WHEEL**, **A TOUCH**, **CTRLPED**, represent the three available Morph Sources: the modulation *wheel*, keyboard *aftertouch*, and *control pedal*.

A Morph is set up by holding down one of the Morph Assign buttons, while at the same time moving a parameter control (for example a knob or a drawbar) from the point where the morph should *start* to the point where it should *end*. It is a good practice to have the parameter control set to the desired start position *before* pressing down the morph assign

button. The display will show the start and stop values, as the morph is being set up.

Several parameters can be adjusted while pressing down a Morph Assign button, and additional morph destinations can be added after a morph has been set up as well.

💡 *Double-clicking a Morph Assign button activates morph assign latch mode, which allows for setting up morphs without keeping the Morph Assign button pressed down. Press **EXIT** to leave the morph assign latch mode.*

## MORPH DESTINATIONS

The following parameters are available as Morph destinations:

Organ	Piano	Synth	Effects
Level	Level	Level	Effect 1 Rate
Drawbars		LFO Rate	Effect 1 Amt
Rotary speed		Osc Ctrl	Effect 2 Amt
		LFO Amount	Delay Tempo
		Filter Freq	Delay Feedback
		Resonance	Delay Mix
		Arp Rate	EQ Mid / Filter Freq
			Drive
			Reverb Dry/Wet

## MORPH INDICATORS

All morphable parameters are equipped with some means to indicate that a morph has been assigned to it, or that a morph is being performed. These are the three different types of indications used:

### LED ENCODERS



The **LEVEL** controls of the Organ, Piano and Synth sections feature a rotary LED encoder. These provide a clear indication of the morph start and end points as the morph is set up, and allows the control to display its current value at all times as a morph is being performed.

### MORPH LEDS



Most morphable parameters are equipped with a "morph LED" which will be lit with a green light after a morph source has been assigned to the parameter.

### DRAWBAR LEDS

If a drawbar has been selected as a morph destination, the drawbar LEDs will adjust accordingly as a morph is being performed (except on the Nord Stage 3 *Compact* model, which uses physical drawbars instead of drawbar LEDs).

### CLEARING A MORPH

Hold **SHIFT** and press a **MORPH ASSIGN** button to clear all Morphs for this source within the focused panel. To clear a particular assignment, hold the Morph Assign button and operate the control to remove the "gap" between the programmed setting and the Morph setting.

## MST CLK

The Master Clock allows you to synchronize the Arpeggiator, the Synth LFO, the Delay and Effects 1 Rate in the Nord Stage 3. Not only can these be made to run in sync with each other; different subdivisions can be set for all synced components, allowing for some great rhythmic effects.

Tap the **MST CLK** button a minimum of four times to set a tempo, expressed in BPM (beats per minute). Keep tapping the button to further refine the tempo setting if needed.

Press **CLOCK** (Shift + Mst Clk) to bring up the Master Clock tempo and settings page. Use the **PROGRAM** dial to set the tempo. Press **EXIT** (Shift) when finished. The set tempo will be stored with the program, as long as a Store operation is performed.

**i** Pressing down on the **MST CLK** button opens the Master Clock tempo page while the button is pressed down, as indicated by the "▼" symbol.

When the Master Clock tempo is set, you can select a subdivision of that tempo for the various functions that can be synchronized to the Master Clock. Any changes you make to the Master Clock tempo will be followed by all the functions in the Stage 3 that are synchronized to it.

The subdivisions are described in greater detail in the sections covering each syncable function, the Synth LFO and arpeggiator, Effect 1 and Delay.

## EXTERNAL SYNC

The Master Clock on the Stage 3 can be controlled by incoming MIDI clock messages. This is an automatic behavior: As soon as the Stage 3 receives MIDI clock on the MIDI input or the USB MIDI input, the Master Clock will be synchronized to the incoming external clock.

When the Master Clock is locked to an incoming clock, "external" will be shown in the display if **MST CLK** is pressed, together with the incoming tempo in BPM.

### (KBS) KEYBOARD SYNC

On the Master Clock tempo/settings page, Keyboard Sync behavior can be selected by pressing the **KBS** soft button.

**Off:** When set to *Off* the Master Clock will *never* be reset by playing the keyboard.

**On:** When set to *On* the Master Clock will always be reset after lifting all keys and then playing the keyboard again.

**Soft:** When set to *Soft* the Master Clock will only be reset if waiting longer than one quarter note (in relation to the current tempo) to play the keyboard, after all keys have been lifted.

## TRANPOSE ON/SET



The Nord Stage 3 can be transposed in semitone steps on a per-program basis, with a range of +6/-6 semitones. Hold the Transpose button and set the transposition by turning the Value Dial. Press the Transpose button again to de-activate a transposition.

Transpose settings are saved and recalled as part of a program, and always affect both panels of a program.

**💡** To set up a transpose that affects **all** programs, use the *Global Transpose parameter* in the System Menu.

### PANIC

Hold **SHIFT** and press the Transpose button to execute an internal "All Notes Off" message and reset of some of the performance parameters. This can for instance be used if notes get stuck during a MIDI or live performance, or if all sound should quickly be eliminated for some other reason.

## SPLIT



The Nord Stage 3 keyboard can be split in up to four keyboard zones; 1, 2, 3 and 4, separated by the three available *split points*, Low (**L**), Mid (**M**) and High (**H**). Any sound engine (Organ, Piano or Synth) can then be assigned to any or all of these zones.

A single press on the Split **ON/SET** button will simply turn the split function on or off. Pressing down on the button, as indicated by the "▼" symbol, will open up the Keyboard Split *position* page in the display.

Pressing **SHIFT** and **SPLIT SELECT** will toggle between the different L, M and H split point combinations.

## KEYBOARD SPLIT SETTINGS

After a split has been activated, use the **ZONE SELECT** buttons (accessed with **SHIFT**) beneath each instrument's (or the Extern's) Value Dial to assign an instrument to one or more zones. The four Zone LEDs beneath the instrument's Level Rotary will indicate the assignment.

### CHOOSING A SPLIT POSITION

The Keyboard Split position page allows for assigning each of the three split points a keyboard split position, or for deactivating a split point by setting it to *Off*. There are 10 keyboard split positions to choose from, ranging from *F2* to *C7*. To adjust a split point, give it focus by pressing its corresponding soft button (*Low*, *Mid* or *High*), corresponding to the three first **PROGRAM** buttons, and turn the dial.

LEDs are provided above the keyboard, indicating which split positions are active at all times.

### SPLIT WIDTH SETTINGS

Normally the transition between two keyboard zones is "straight", in that there is no overlap between the sounds selected for each zone. By adjusting the *Split Width* setting for a split point, the sounds can instead be mixed or "cross-faded" across the split point, producing a smoother transition between the sounds.

To adjust Split Width, keep the **ON/SET** button held down and press the **soft button**, corresponding to the **PROGRAM 4** button. This will bring up Keyboard Split *width* page, where the width or "cross-fade" range of each split point can be set.



Select the split point to adjust by pressing its soft button (*Low*, *Mid* or *High*) and turn the dial to change its setting.

**Off:** With the *Off* setting there will be no cross-fade between sounds at the split point.

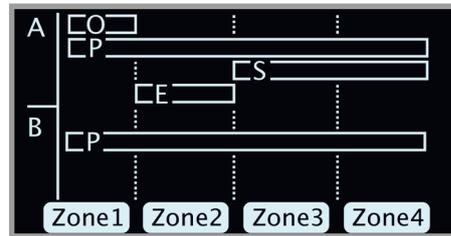
**Sml:** The *Sml* setting represents a width of 12 semitones, meaning that the sound *below* the split point will reach 6 notes *above* it, after which it will be completely faded out. Sounds *above* the split point will similarly reach 6 notes *below* it.

**Lrg:** The *Lrg* setting provides a width of 24 semitones, 12 below the split point and 12 above it.

**i** Both panels use the same KB Zone configuration. Instrument assignments are individual for each panel.

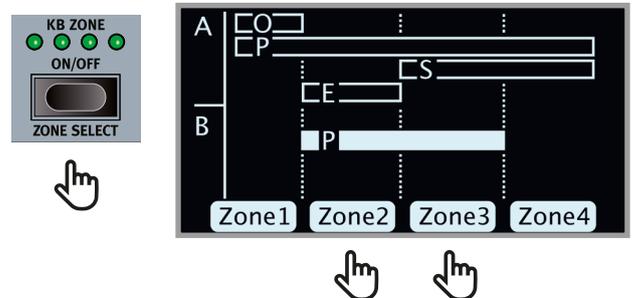
## KEYBOARD ZONES EDITOR

The **KB ZONES** editor allows for a clear overview and easy set-up of keyboard zones and how sound engines are assigned to them. A set-up using the Organ (**O**), Piano (**P**), Synth (**S**) and Extern (**E**) sections on Panel A, and the Piano section of Panel B may look like the example below. The position and length of each bar indicates which keyboard zone(s) that section has been assigned to.



To adjust which zones a sound engine (or the Extern section) is assigned to, the **ON/OFF** buttons for each section and the *Zone* soft buttons are used in combination. As an example here is how to set up the Piano in Panel B so that it covers zones 2 and 3:

- 1 Make sure the Piano section on Panel B is turned on.
- 2 Press **SHIFT + KB ZONES** (Program 5 button) to open the editor window.
- 3 The display will indicate which zones the Piano sound is currently assigned to. Unless a KB Split has been set up previously, this will most likely be all four zones (the entire keyboard).
- 4 Press and hold the Piano **ON/OFF** button on Panel B and then press the *Zone 2* and *Zone 3* soft buttons (Program 2 and 3 buttons). The Piano sound will now be assigned to Zone 2 and 3. Using our previous example, this is what that will look like:



**💡** You could also turn the Program dial, while holding down the Piano On/Off button. This will scroll through all the possible Zone combinations.

Depending on the Zone combination selected, the necessary Split points will be assigned automatically. Their exact position and width needs to be set from the **SPLIT SET** page however (see the previous section).

Setting up the Organ, Synth and Extern sections is done in the same way.

## STORE



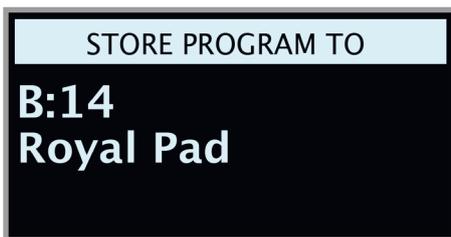
The **STORE** button is used for storing an edited program or song to a location in the program banks. Storing a program or song will overwrite the existing data in the selected memory location. For how to store *Synth Presets*, see page 34.

- ❗ *When the Nord Stage 3 is shipped from factory its memory is protected, to avoid accidental overwriting of programs. To be able to store Programs, The Memory Protect parameter needs to be set to "Off" in the System menu. Read more on how to do this on page 52. The Memory Protect function does not affect the Live Mode memories or operations performed through the Nord Sound Manager.*

## STORING AND NAMING A PROGRAM OR SONG

To store a program or Song without changing its name, proceed as follows:

- 1 Press the **STORE** button once. The Store button will start blinking, and the display will show the name of the program or Song, and its location.



- 2 To select a different store location use the dial and/or **PAGE** ◀ / ▶ buttons. A program can also be stored to one of the five Live program locations. This is done by pressing the **LIVE MODE** button and then selecting the desired Live program button. The program at the selected store location can always be auditioned by playing the keyboard.

- ❗ *To cancel an ongoing Store operation, press **EXIT**.*

- 3 When a suitable location has been selected, press **STORE** again to confirm the operation.

### STORE AS

- 1 To store *and name* your program or Song, press **STORE AS** (Shift + Store).
- 2 Hold down the **ABC** soft button to bring up a row of alphanumeric characters and use the dial to select a character for the current position. Letting go of the **ABC** button moves the cursor to the next position. The dial or **PAGE** ◀ / ▶ buttons can be used to move the cursor freely. The **Ins** soft button is used for inserting a blank space at the current position and the **Del** soft button is used for deleting the currently selected character.



- 3 To assign your program a category, which may be useful for retrieving it later on, press down on the **Cat** soft button and select any of the 20 categories from the list.
- 4 Pressing **STORE** will now bring up the *Store Program/Song To* screen. Use the dial and/or **PAGE** ◀ / ▶ and Program buttons to select a location.
- 5 When a suitable location has been found, press **STORE** again.

- 💡 *Naming programs and songs can also be done with the Nord Sound Manager.*

## SONG MODE



The Nord Stage 3 features a dedicated *Song Mode* which is used for referencing groups of programs, according to how they are used within a live set list or similar. Program references are referred to as *song parts*, and a group of 5 song parts is referred to as a *song*. There are a total of 8 banks of 50 songs each.

- ⚠ *It is important to note that songs do **not** contain copies of the programs and their data. This means that if a program is edited and stored, all songs referencing it will make use of the edited program.*

When **SONG MODE** is pressed, the last active song will be selected and the Song Mode LED will light up. The display will show the location and name of the Song, along with the currently focused program within the Song.

Navigating parts within a song is as easy as pressing one of the **SONG PARTS** 1-5 buttons. Songs are changed either by pressing the **PAGE** ◀ / ▶ buttons or by turning the **PROGRAM** dial.

- 💡 *Song parts can also be changed by using an attached Program Up/Dn pedal.*

### SONG EDIT

To select which programs should be part of a song, activate **SONG EDIT** (Shift + Song Mode), indicated both in the display and by the Song Mode LED and current Program LED blinking.

To then change which program is referenced from a song part, simply press the corresponding **SONG PARTS** button, and turn the dial. To return from Song Edit mode, press **EXIT**.

- ⚠ *Any changes made in Song Edit mode need to be stored through a Store operation to take effect.*

### STORING A SONG

Storing and naming a Song is done in exactly the same way as storing and naming programs, see the previous Store section for details.

### STORING EDITED PROGRAMS

Program edits that have been made when in Song Mode will *not* be stored when a song is stored, as the song only contains references to program locations. To store an edited program, first *exit* Song Mode by pressing **SONG MODE** - which brings up the edited program at its program bank location - and then perform a Store operation normally.

## PANEL BUTTONS A & B



There are two independent *panels* available for each program: Panel A and Panel B. Each panel provides a complete setup of the Organ, Piano, Synth, Extern and Effects sections. The two panels can be used as a vehicle for quickly switching between two different sounds, or for creating layers utilizing the sound engines of both panels.

To activate both panels press the **PANEL A** and **PANEL B** buttons simultaneously. There are now six sound engines and two instances of each effects unit available for use within one program.

With both panels active, one of the panel button LEDs will flash, indicating which panel is focused for editing. To switch edit focus press the corresponding panel button. To disable one panel, and return to a single panel setup, hold the button of the panel that should be kept and press the other one.

## MONITOR/COPY PANEL/PASTE



To display what a parameter on the panel is set to, without changing it, hold down the **MONITOR** button and turn the associated parameter knob.

Pressing **COPY PANEL** and the **PANEL A** or **B** button will copy all settings on that panel. These can then be pasted to the other panel within the current program, or to a panel in a different program. To paste the settings, press **PASTE** (Shift + Monitor/Copy Panel) and the button for the panel the settings should be pasted into.

## MONO OUT

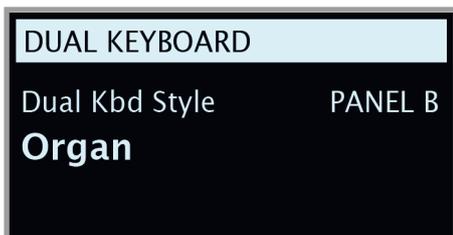


Enable **MONO OUT** (Shift + Panel A button) to set the outputs of the Stage 3 sound sources and effects to *mono*. This is a global setting which will affect *all* programs until it is deactivated or the Nord Stage 3 is turned off.

## DUAL KB

The **DUAL KB** feature allows for playing and controlling one of the Panel B sound engines from an external keyboard connected to the MIDI input of the Nord Stage 3. This can be handy in live situations where a secondary keyboard can be used as a controller for certain parts of the Nord Stage 3, on a per-program basis.

By default Dual KB will be set to *Organ*, meaning that a connected MIDI keyboard sending on the Dual KB channel will control the Panel B Organ section. To change this to *Piano* or *Synth*, press down on **DUAL KB** (Shift + Panel B) and select Piano or Synth using the dial.



- When a sound engine (*Organ*, *Piano* or *Synth*) is in Dual KB mode its KB Zone LEDs will all be unlit - indicating that it is not controlled from the internal keyboard, and that it is unaffected by any active split points.

In Dual KB mode the Nord Stage 3 keyboard still controls all sound engines on both Panel A and B, *except* for the one that has been selected for external control. The Nord Stage 3 pitch stick, pedals and Morph controls will not have any impact on the sound engine that is in Dual KB mode.

All parameter controls for Panel B are still accessible from the Nord Stage 3. This means that Organ drawbars, Synth settings etc. can be adjusted from the Nord Stage 3 even if the sound is being played from the external keyboard.

The Dual KB setting is stored with a Program, along with all other panel settings.

- The MIDI Channel for the Dual KB feature is set in the MIDI Menu on the Nord Stage 3. Read more on this on page 54.

## SHIFT / EXIT BUTTON



Many buttons - and some knobs - have a *secondary* function which is accessed by holding **SHIFT** and pressing the button or turning the knob. Shift activated functions are always printed *below* the corresponding control. For example, holding Shift and pressing the Program 3 button will open up the MIDI Menu.

The Shift button is also used to **EXIT** menus, or for cancelling Store operations.

## LIVE MODE

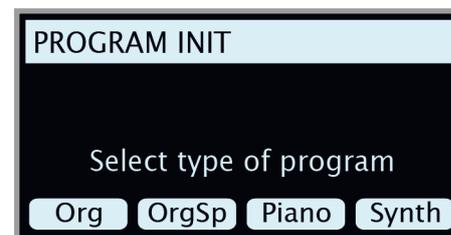
The Nord Stage 3 has five easy-to-access Live program locations, differing from other programs in that any edits to them are *automatically stored*. When exiting a Live Program or powering off the machine all edits are saved, without the need for a manual Store operation. To select a Live Program, press **LIVE MODE** and then any of the 1-5 buttons in the Program area.



If a Live location is selected and you wish to store the settings permanently to a program bank location, you can do so using the standard methods. A regular program can also be stored into a Live program location, in which case its settings will replace the current Live memory settings.

## PROG INIT

The **PROG INIT** (Shift + Live Mode button) functions can be used to quickly initialize the active panel to one of four basic set-ups, which serve as good starting points when creating new programs:



**Org** (Organ): Activates the Organ section, and sets Source to Organ for all effects. Other sound engines and the other panel are deactivated.

**OrgSp** (Organ Split): Activates the Organ section on both panels and sets Source to Organ for all effects. KB Split is turned on, with Organ A to the left and Organ B to the right of the split point. All other sound engines are deactivated.

**Piano**: Activates the Piano section and sets Source to Piano for all effects. All other sound engines, as well as the other panel, are deactivated.

**Synth**: Activates the Synth section and sets Source to Synth for all effects. Other sound engines and the other panel are turned off.

## PROGRAM BUTTONS

The five **PROGRAM** buttons give you immediate access to a range of five programs within the current program bank. The same buttons are used to select **SONG PARTS**, and as *soft buttons* when operating menu settings. Read more about Song Parts and the Song Mode on page 28, and about soft button functionality on page 52.



### WHAT IS A PROGRAM?

A *program* stores and contains all settings made on Panel A and Panel B, except for Master Level and Mono Output settings. The latter will always be reset when the instrument is restarted. To understand the internal architecture of the Nord Stage 3, keep the following in mind:

- For each panel, settings for all three sound engines, all effects, and the Extern section are independent.
- A program stores the settings for both Panel A and B. It contains independent settings for six sound engines, eight effects, and two Extern setups.
- A program also stores all settings from the Extern menu, except the Extern A & B MIDI channels and the Send on Load setting (read more on this in the Extern Menu chapter on page 55), and the output routings for each panel (read more on this on page 52).
- Splits, layers (Keyboard Zones) and Morph assignments are also part of a Program.

### SYSTEM, SOUND, MIDI, EXTERN, KB ZONES

The **PROGRAM** 1-5 buttons are also used to enter the four menus, and the KB Zones editor if used in conjunction with the **SHIFT** button. Menu settings are described in the Menu chapter beginning on page 52 and the KB Zones editor is described on page 27.

## PROGRAM DIAL



The **PROGRAM** dial to the right of the Display is used to select programs and songs, to set menu parameter values and to enter characters in program names. Pressing **SHIFT** while turning the dial activates the **LIST** function, which will display all programs or songs in a list.

## MIDI LED INDICATOR



The **MIDI** LED, located above the top right corner of the display, blinks as incoming MIDI messages are received by the MIDI In port, or through the USB connector.

- Short flashes indicates any kind of incoming MIDI data, longer flashes indicates MIDI data that the Stage 3 actually uses.

## PAGE BUTTONS



Program *pages* are navigated by pressing the **PAGE** ◀ / ▶ buttons. Each bank holds 20 pages, with 5 programs in each page. These buttons can also be used for switching *songs* when in Song Mode, for jumping *categories* when browsing Synth presets in category mode, and for navigating *menu settings* within the System, Sound, MIDI and Extern menus.

### PROG LEVEL



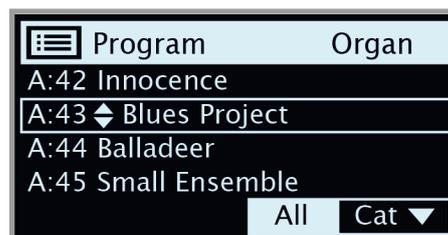
The Program Level function provides a nice shortcut for quickly adjusting the volume level of an entire program. This can be handy when preparing programs for a live performance, or for turning down the overall volume without touching the Master Level control. Pressing **PROG LEVEL** (Shift + Page ◀) and turning the **PROGRAM** dial adjusts the levels of *all* sound engines, across both panels, by an equal amount.

### ORGANIZE

The order in which programs, songs, synth presets, samples and piano sounds are stored in their respective banks can be rearranged when in List view, using the **ORGANIZE** function. This function behaves the same regardless of the content being organized, but note that piano sounds cannot be moved outside their respective Piano Type bank.

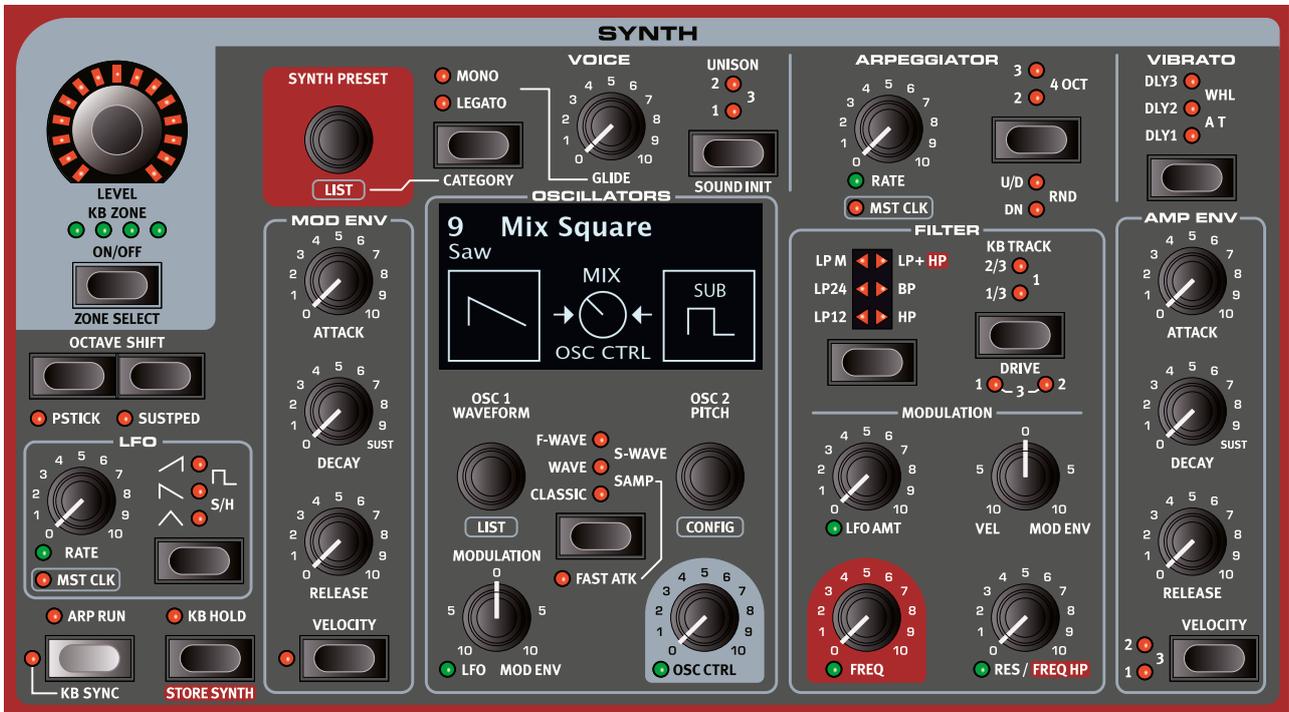
As an example, here is how *programs* can be organized within the program banks:

- 1 Press **SHIFT** and turn the **PROGRAM** dial to enter the **LIST** view for programs.
- 2 Use the dial to select the program which should be moved to a different location.
- 3 Press and hold **ORGANIZE** (Shift + Page ▶). Two arrows indicate that the currently selected program can be moved up or down the list.



- 4 Use the **PROGRAM** dial to select a new location for the selected program. Let go of **ORGANIZE** to complete the operation. Note that programs located between the old and the new location are repositioned automatically.
- *Song Parts will still point to the correct program even if the program is moved to a different location.*

# 7 SYNTH



## ABOUT THE SYNTH SECTION

The Synth section of the Nord Stage 3 is designed to be a versatile and easy-to-use stage synthesizer - but most of all it is aimed at providing great, inspiring synthesizer sounds regardless of how it is being used.

The primarily subtractive synthesis design features faithful models of analog style “Classic” waveforms but is also capable of FM (frequency modulation), Wavetable synthesis, as well as using samples as an oscillator sound source. The Nord Stage 3 comes with a large selection of samples right out of the box, and new samples can be sourced from the Nord Sample Library. To further the possibilities, the Nord Sample Editor application can be used to create custom samples from any sound source.

In subtractive synthesis, you start with a bright waveform with lots of overtones, and then shape the color of the sound with a filter that subdues parts of the harmonic content. By modulating the filter cut-off frequency while the note is playing, dynamic timbres are created.

The Nord Stage 3 synthesizer also provides many other means to generate dynamic and rich sounds, made possible by the large selection of oscillator configurations. These enable pulse width modulation, oscillator sync, noise generation, and a variety of waveform mix set-ups. There are two envelopes and one LFO for real time sound shaping.

Using both panels, two different sounds can be played simultaneously, layered or in splits. The Synth sections of both panels can be layered to create complex and evolving sounds.

## ON/OFF, LEVEL AND ZONE SELECT



The Synth section is turned On or Off by pressing its **ON/OFF** button. The *morphable* **LEVEL** encoder controls the sound output level of the Synth section.

Press **ZONE SELECT** (On/Off) with **SHIFT**, to assign the Synth to any of the active keyboard zones. The green **KB ZONE** LEDs indicate which of the zones the Synth section is assigned to. Read more about Split set-ups and keyboard zones on page 26.

## OCTAVE SHIFT

Use **OCTAVE SHIFT** to transpose the Synth section up or down by octaves (+/- 12 semitones). When assigned to the entire keyboard it can be transposed one octave up or down. When assigned to a smaller zone the available transpose values will vary, but always provide access to the entire range of the synthesizer.

## PSTICK AND SUSTPED

**PSTICK** (Shift + Octave Shift left/down button) turns on pitch stick functionality for the synth, in which case the Synth sound can be bent 2 semitones up and down, using the pitch stick.

**SUSTPED** (Shift + Octave Shift right/up button) activates any attached

sustain pedal for the Synth section. Read more on how to configure an attached pedal in the Menus chapter, on page 53.

## OSCILLATORS

The Nord Stage 3 synthesizer engine features smart oscillator configurations utilizing one or two oscillators. Start with an oscillator waveform from the Classic, Wave, F-Wave, S-Wave or Samp (Samples) categories, select an oscillator configuration and use the Osc 2/Pitch dial and Osc Ctrl knob to adjust the exact effects of the configuration.

The sonic potential is further enhanced by the fact that the oscillator section actually contains a number of extra oscillators for each voice, which are brought in by activating Unison (see page 39). You can add several virtual oscillators per voice, without losing polyphony. This allows for some really thick sounds.

### OSC CTRL

Oscillator Control, **OSC CTRL**, is used to alter the sound in different ways depending on the currently selected oscillator configuration. The Osc Ctrl parameter can be modulated by the Mod Envelope or the LFO, and *morph controlled*, allowing real-time use of the wheel, aftertouch or pedal for controlling the sound. The amount of the Osc Ctrl parameter is always visible in the Synth section display as it is being adjusted.

### MODULATION

The two-way **MODULATION** control governs the amount of modulation applied to the Osc Ctrl parameter. Turn the knob counter-clockwise from the 12 o'clock zero position for LFO modulation or clockwise to instead use the Mod Envelope.

### SELECTOR BUTTON



These are the five oscillator types, selectable by using the Oscillator selector button:

- **CLASSIC** (analog style) waveforms
- **WAVE** (wavetables)
- **F-WAVE** (formant waves)
- **S-WAVE** (super-waves)
- **SAMP** (samples).

The **OSC1/WAVEFORM** dial is used for choosing the specific waveform or sample to be used. Use the **LIST** command (Shift + Osc1/Waveform dial) to display a *list view* of the waveforms, wavetables or samples in your current selection.

The **FAST ATK** mode gives *samples* a faster attack. Read more about how this works on page 33.

## CLASSIC WAVEFORMS

There are four “basic” Classic waveforms: Sine, Triangle, Sawtooth and Square. Apart from these there are four additional waveforms: Pulse 33, Pulse 10, ESaw and ESquare. The table below shows all waveforms and how they behave when using the *Shape* Oscillator Configuration.

		Shape Mode		
		Osc Ctrl = 0	Osc Ctrl = 5	Osc Ctrl = 10
<b>Sine</b>				
<b>Triangle</b>				
<b>Saw</b>				
<b>Square</b>				
<b>Pulse 33</b>				
<b>Pulse 10</b>				
<b>ESaw</b>				
<b>ESquare</b>				

### SINE

The *sine* wave has a very pure sound with no overtones, or harmonics. It is useful for many kinds of softer sounds, and could be considered the “default” waveform when creating classic FM sounds, using the Freq Mod oscillator configurations.

### TRIANGLE

The *triangle* waveform has only odd numbered - and not very strong - harmonics, giving it a more vibrant character than the sine wave while still being much softer than the sawtooth wave.

### SAWTOOTH

The *sawtooth* wave contains *all* harmonics and is the richest of the available waveforms. It is suitable for all sorts of sounds.

### SQUARE, PULSE 33, PULSE 10

A *square* wave is the same as a *pulse* wave at 50% width, *Pulse 33* represents a 33% width and *Pulse 10* a 10% width. At 50% width the waveform can be described as having a somewhat “hollow” character, containing only odd numbered harmonics (3, 5, 7 etc.). At narrower widths the sound will become increasingly thin and nasal. Using the *Shape* configuration, the Square wave can be narrowed down to 10%. Pulse 33 and Pulse 10 waveforms can be widened up to 50%, with Osc Ctrl at its max value.

**i** *The fact that there are three Square/Pulse widths to choose from enables using other oscillator configurations than Shape - while retaining a desired pulse width.*

### ESAW

The *ESaw*, or “extended saw”, waveform is similar to a sawtooth wave in its harmonic content. It has, however, a more pronounced and “brassy” mid-range. Using the Shape parameter the ESaw wave can be seamlessly morphed to and from a sine wave, which by using modulation opens up for sounds that move between harsher and softer characters.

## ESQUARE

The *ESquare*, or “extended square”, waveform differs from a square wave in that it is brighter and more rich in overtones. The Shape parameter will alter the waveform to and from a sine wave.

## WAVE

The **WAVE** category contains digital waveforms covering a wide range of tonal characteristics. The waveforms have been carefully designed and selected to provide rich and interesting timbres with great variety, for those exquisite sounds that cannot be reached with the other algorithms. Advanced wavetable synthesis techniques have been used to reproduce the waveforms perfectly over the whole keyboard range.

A number of waveforms are distilled from various acoustic instruments while some are combinations of several overlapping spectra. Yet others are extremely bright, with a fundamental that is softer than the many harmonics. Using these waveforms with the different oscillator configurations and filter settings, an endless variety of timbres are possible.

## F-WAVE

Sounds within the **F-WAVE** (“Formant Waves”) category in general exhibit high energy resonant peaks at various frequency bands within the audio spectrum, giving them a vocal and highly resonant character. Some of the waveforms correspond to specific vowels, and some can be more broadly described as being resonant within a certain spectral range.

## S-WAVE

The Nord Stage 3 synthesizer provides a number of “super-waves”, grouped within the **S-WAVE** category. These waveforms are created with a large number of oscillators, and in general exhibit a very rich and full sound.

- Some oscillator configurations; Pitch, Shape, Sync, Detune and Dual/Triple FM, are not available when using S-Wave as source for the oscillator.

## SAMPLES

The **SAMPLE** option uses samples from the Nord Sample Library as an oscillator waveform and process it with the other components of the subtractive synthesizer architecture. This provides the synthesizer with a tremendous flexibility. What’s more, custom samples can be created using the Nord Sample Editor application, and loaded into the Nord Stage 3.

The Nord Sample Editor software is available as a free download from [www.nordkeyboards.com](http://www.nordkeyboards.com).

- Some oscillator configurations; Pitch, Shape, Sync, Detune and Dual/Triple FM, are not available when using samples.

Samples are selected with the **OSC1/WAVEFORM** dial, or by loading a Sample Preset from the Synth Presets banks.

The sample memory in the Stage 3 can hold up to 480 Megabytes of sample files in the Nord Sample Library format, can be replaced as needed. The sample memory is loaded with a wide selection of sounds when the Nord Stage 3 leaves the Nord factory, and there are many more samples to be found on the [www.nordkeyboards.com](http://www.nordkeyboards.com) website.

## CATEGORIES AND SAMPLE PRESETS

Within the Synth Preset banks all samples are automatically displayed as

individual presets. Loading a sample from the Sample preset bank will automatically set up a number of the Synth section parameters to values suitable for that particular sample. Read more about this, and about Synth Presets in general on page 34.

## FAST ATTACK



With **FAST ATK** turned on, sample playback will begin at a fixed, alternative starting point, bypassing most of the original attack portion of the sample. As an example, this can be used to remove the “build-up” phase of a slow strings sound.

## OSCILLATOR CONFIGURATIONS

The Nord Stage 3 Synth section features a broad selection of useful *oscillator configurations*, giving quick access to all common (and some uncommon) set-ups using one or two oscillators - referred to as “single” and “dual” configurations below.

To select a configuration turn **CONFIG** dial (Shift + Osc2/Pitch). For any configuration that has a pitch selection option for Oscillator 2 - for example all the waveform mix configurations - the **OSC2/PITCH** dial is used to select the specific pitch, in semitone intervals.

Your pitch selection will be retained when browsing configurations using the Config dial.

**OSC CTRL** is used with all configurations except Basic to adjust either amount or mix, depending on selection.

## SINGLE OSCILLATOR CONFIGURATIONS

None of the single oscillator setups have any **OSC2/PITCH** settings, since there is only one oscillator.

### BASIC

The first configuration simply consists of one oscillator, corresponding to the selected waveform, wavetable or sample. In this case the **OSC CTRL** dial will have no effect at all.

### PITCH

With the *Pitch* configuration **OSC CTRL** provides control of the pitch of the oscillator. The range is 0.00 to 24 semitones.

- S-Wave waveforms and Samples have no Pitch configuration.

### SHAPE

The *Shape* configuration has different effects depending on the selected waveform. The Waveform table in the previous section illustrate how *Classic* waveforms are affected by the shape parameter. Wave and F-Wave waveforms are modified using a spectral shaping process.

- S-Wave waveforms and Samples have no Shape configuration.

## DUAL OSCILLATOR CONFIGURATIONS

Dual oscillator configurations include both those where one oscillator is used to *modulate* the other, i.e. Sync and FM, and those where two generated sounds are mixed together.

The second oscillator, referred to as *Oscillator 2*, is shown in the right half of the display.

## SYNC

“Oscillator Synchronization” involves using the signal from one oscillator to *restart* another oscillator. When sync is applied, the basic pitch of Oscillator 1 is locked to that of Oscillator 2 (the “sync” oscillator). As the relative pitch of the synchronized oscillator is varied, this will be perceived as a dramatic change in timbre.

With Oscillator Sync, it can be useful to have the Osc Ctrl amount modulated from any of the Morph assign sources, or by the Modulation Envelope. This will generate a signal with continuously varied harmonic content.

The Sync configuration has no **OSC2/PITCH** settings.

❗ *S-Wave waveforms and Samples have no Sync configuration*

## DETUNE

With the *Detune* configuration Oscillator 2 provides a copy of Oscillator 1, which can be both coarsely tuned in semi tone intervals and fine tuned in small increments.

**OSC2/PITCH** adjusts the pitch of Oscillator 2 in semi tones, and **OSC CTRL** is used for fine tuning within a range of four semitones.

❗ *S-Wave waveforms and Samples have no Detune configuration.*

## MIX SINE, TRIANGLE, SAW AND SQUARE

With the *Sine*, *Triangle*, *Saw* and *Square* Mix configurations Oscillator 2 provides one of these four basic waveforms. Oscillator 2 can be mixed with Oscillator 1 using **OSC CTRL**.

**OSC2/PITCH** controls the pitch of Oscillator 2 in semitone steps, ranging from 0 to 48.

## MIX BELL

A special “bell oscillator” can be mixed with Oscillator 1, using the *Mix Bell* oscillator configuration. Amplitude modulation is used to create a complex bell-like waveform in Oscillator 2. **OSC CTRL** controls the pitch of the Oscillator 2 modulator, and thereby its harmonic content and character.

## MIX NOISE

The *Mix Noise* oscillator configuration provides a white noise generator, which can be *mixed* with the main oscillator using **OSC CTRL**.

The Mix Noise configuration has no **OSC2/PITCH** settings.

## MIX NOISE 2

The *Mix Noise 2* oscillator configuration provides a band-passed and resonant, pitched noise, which can be *mixed* with the main oscillator using **OSC CTRL**.

**OSC2/PITCH** controls the pitch of the noise in semitone steps, ranging from 0 to 48.

## DUAL FM

The basic principle behind *frequency modulation* (FM) synthesis is that one oscillator (the modulator) modulates the frequency of another (the carrier). The resulting waveform is far more rich in harmonics than the original Sine waveform, and drastic changes in tonal character are provided by altering the amount of modulation.

Traditionally, FM oscillators are referred to as *operators*, and the Dual FM configuration represents a 2-operator FM setup.

The number of harmonics, and their intensity, increase proportionally to the FM amount, controlled by **OSC CTRL**. As usual, this parameter can be modulated by the Modulation Envelope or the LFO, and it can be Morph controlled by any combination of wheel, aftertouch and pedal.

**OSC2/PITCH** controls the pitch of Oscillator 2 (the “modulator”) in semitone steps, ranging from 0 to 48.

❗ *S-Wave waveforms and Samples have no Dual FM configuration.*

## TRIPLE FM

The Triple FM configuration represents a 3-operator setup, where Oscillator 2 is a modulator pair. The amount of modulation applied by the modulator pair is controlled by **OSC CTRL**.

**OSC2/PITCH** controls the pitch of the modulator pair in semitone steps, ranging from 0 to 48.

❗ *S-Wave waveforms and Samples have no Triple FM configuration.*

## RING MOD

With the Ring Mod (Ring Modulation) configuration, Oscillator 1 will be *multiplied* with a sine wave from Oscillator 2. This multiplication results in additional tones appearing, the pitches of which depend on the pitch relationship between Oscillator 1 and Oscillator 2.

**OSC2/PITCH** controls the pitch of Oscillator 2, and accordingly the character of the resulting signal.

**OSC CTRL** sets the mix of Oscillator 1 and the modulated signal.

# SYNTH PRESETS

When a Nord Stage 3 program is stored its Synth settings are of course stored together with all other panel settings, but it is also possible to select and store Synth sounds *separately* from programs. This way a library of your favorite synth sounds can be built, easily accessible from any program when needed. The Nord Stage 3 comes with a large selection of useful Synth Presets right from the start.

## SELECTING SYNTH PRESETS

There are 8 banks of 50 user presets each. Two of these banks are empty when shipped from the factory. Turn the **SYNTH PRESET** dial in order to browse and audition presets. The Program section display will show the location and name of the currently selected preset. The Synth section display shows the Oscillator and Oscillator Configuration settings for the currently selected preset.

## LIST VIEW

Turn the **SYNTH PRESET** dial while pressing **SHIFT** to enter **LIST** view. The category of the currently selected preset is displayed in the top right corner while the list itself shows the location and name of the selected preset.



**User:** Pressing the User soft button displays a list of the 8x50 preset locations that can be stored to by the user.

**Samp:** Sample presets are generated *automatically* based on the sample content in your Nord Stage 3. These presets are “read-only” in that their locations can not be stored to by the user. It is still possible, however, to store an edited sample preset to the User banks.

When loading a sample from a preset, Filter and Amp Envelope parameters are automatically set to values appropriate for that particular sample. Of course, these parameters can still be adjusted manually as needed.

**i** *The purpose of the sample preset bank is to provide instantly playable sounds, regardless of sample type. Compare this to loading samples using the Osc1/Waveform dial, in which case the current Filter and Amp Env settings are used for any loaded sample. Most often these parameters will need adjusting for the sound to become dynamic and “playable”.*

**Cat:** Pressing down on the Cat soft button displays a list of all available categories. Use the dial to select a category and then browse only those presets. As long as the Cat soft button is focused, the **PAGE** ◀ / ▶ buttons can be used for jumping to the previous or next category without opening the category list.

## STORING SYNTH PRESETS

The current settings of the Synth section can easily be stored as a Synth Preset, to a location within any of the 8 Synth Preset banks:

- 1 Press **STORE SYNTH** (Shift + KB Hold) once. If your edited Synth Preset was based on an existing preset the dialog will suggest its location as store destination. If not, the display will ask you to select a location for the Synth Preset manually. Use the **PROGRAM** dial to select an appropriate location.
- 2 To name and assign a category to your preset, press **STORE AS** (Shift + Store) If the preset should not be named, instead skip to step 5.
- 3 Hold down the **Abc** soft button to bring up a row of alphanumeric characters and use the dial to select a character for the current position. Let go of the **Abc** button to move the cursor to the next position. The dial or **PAGE** ◀ / ▶ buttons can be used to move the cursor forward or back as needed. The **Ins** soft button is used for inserting a blank space at the current position and the **Del** soft button is used for deleting the currently selected character.
- 4 Press down on the **Cat** soft button and turn the **PROGRAM** dial to select a category and assign it to the preset.
- 5 To select a different store location use the **PROGRAM** dial and/or **PAGE** ◀ / ▶ buttons. The current preset at the selected store location can always be auditioned by playing the keyboard.
- 6 To cancel an ongoing Store operation, press **EXIT**.
- 7 When a suitable location has been selected, press **STORE** to complete the operation.

**💡** *Naming and categorizing Synth Presets can also be done with the Nord Sound Manager.*

## FILTER SECTION



The **FILTER** is an important component in shaping the overall timbre of the sound and can also be modulated by a number of sources. The Nord Stage 3 features a selection of both classic and innovative synthesizer filters.

Most filters share the same parameters: **FREQ** (Frequency) controls the cut-off frequency and **RES** (Resonance) controls the filter resonance. The one exception to this is the combined LP/HP filter, in which case the Res knob controls the HP filter cut-off frequency. More on that further down!

### FILTER SELECTOR BUTTON

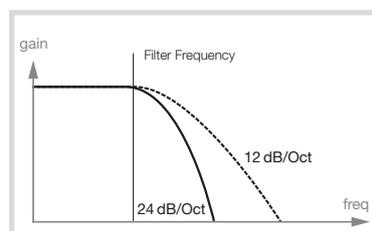
Press repeatedly on the Filter selector button to select the desired filter type. The available filter types are:

#### LP 24 & LP 12

Frequencies above the Filter Frequency setting will be attenuated, frequencies below will not be affected.

The **LP12** setting provides a 12 dB/octave low-pass filter, which retains more harmonics than the **LP24** setting. A 12 dB filter is also known as a 2-pole filter.

The **LP24** setting, with an attenuation slope of 24 dB/octave, is a more classic “synth filter”. It cuts out frequencies rather drastically, with a slope of 24 dB per octave. A 24 dB filter is also known as a 4-pole filter.



Both LP Filters can use the resonance control to emphasize frequencies around the filter frequency (cut-off frequency), making the sound thinner.

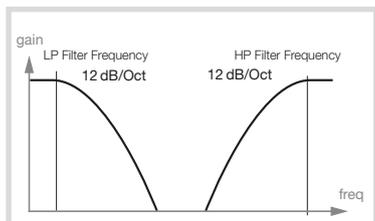
#### LP M

The low-pass **M** filter setting provides an emulation of the original transistor filter from the famous Mini. This groundbreaking and much loved filter design was created and patented in the 1960’s by Dr Robert A. Moog.

The M filter is a four pole, 24 dB/octave, resonating low-pass filter. The character of the filter resonance is one detail that makes it stand out, leaving more of the low end of the signal than on a traditional 24 dB/octave low pass filter.

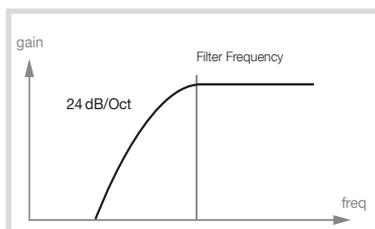
### LP/HP

The combined low-pass/high-pass filter (**LP/HP**) consists of a 12 dB low-pass and a 12 dB high-pass filter *in parallel*. The Filter Freq knob controls the cut-off frequency of the LP filter and the Resonance knob controls the cut-off frequency for the HP filter.



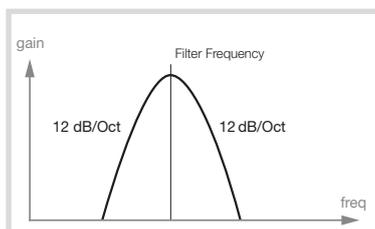
This combination is highly useful for extensive tonal shaping of any source, allowing for cutting the range *between* the two cut-off frequencies or for enhancing a particular range with overlapping filter ranges.

### HIGH PASS - HP



If **HP** (high-pass) is used, frequencies below the Filter Frequency setting will be attenuated, frequencies above the cutoff will not be affected. In practice, this means that the sound will become increasingly thinner as the Filter Frequency is increased.

### BAND PASS - BP

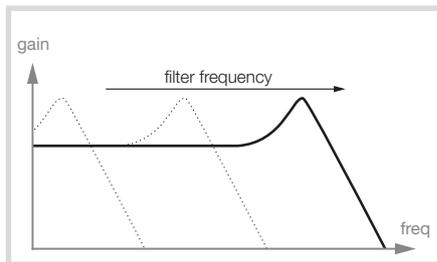


The **BP** (band-pass) filter allows frequencies close the Filter Frequency setting to pass, while frequencies above and below the cutoff are attenuated. This can for instance be used for producing narrow, nasal or very "controlled" sounds - its exact character depending on filter frequency and resonance settings.

### FILTER FREQUENCY



The *morphable* filter **FREQ** knob is used for setting the *cut-off frequency* point - that is where in the frequency range the filter begins to process frequencies. The actual result of this processing depends on the type of filter used.



The Image above illustrates three different Filter Frequency settings using a low pass filter. The area to the left, up to the downward slope indicates the frequencies that passes through the filter. The area to the right of the slope are those frequencies that are reduced. Move the slope to the left and the sound gets duller. The "humps" at the top indicates a resonance setting.

### FILTER RESONANCE



The *morphable* Resonance (**RES**) parameter is used to further adjust the characteristics of the filter. Increasing the Resonance will emphasize frequencies around the cutoff frequency, making the sound thinner.

Further raising the Resonance will make the sound resonant to a point where the filter starts to self-oscillate and produce a ringing pitch. Exactly where in the frequency spectrum this "ringing" occurs, depends on the Frequency value.

When the **LP/HP** filter setting is used the **RES** knob instead controls the high-pass cut-off frequency, as indicated by the **FREQ HP** text.

### KB TRACK



The reason for controlling *keyboard track* is related to basic acoustics. If the pitch of a waveform is raised, the harmonics naturally raise in frequency as well. If the cutoff frequency is constant, the sound will be perceived as getting "muddier" the higher up the keyboard you play. To avoid this effect, use **KB TRACK**.

### KB TRACK SETTINGS

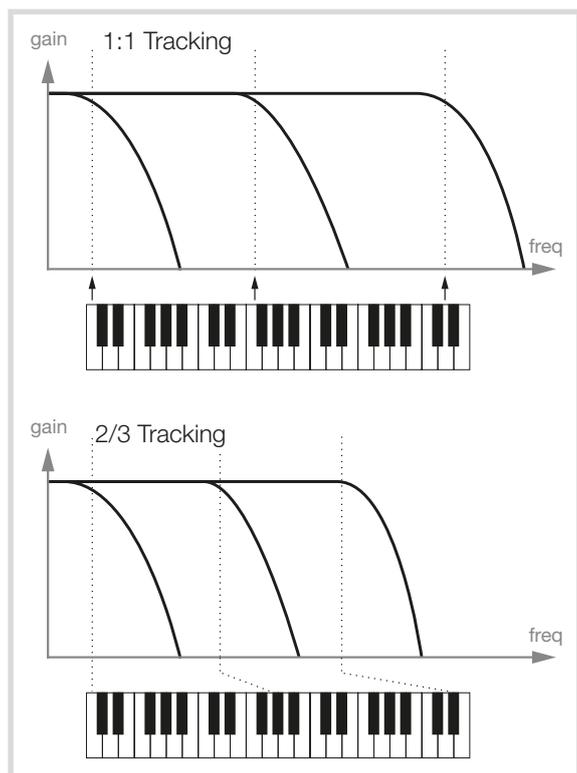
**Off** (no LEDs being lit): The filter frequency cut-off point is not altered by the note played.

**1/3**: The cut-off frequency will track the keyboard in a 1:3 relationship. Play one octave higher and the cutoff frequency will move by 1/3 of an octave.

**2/3**: The cut-off frequency will track the keyboard in a 2:3 relationship, play one octave higher and the cutoff frequency will move by 2/3 of an octave.

**1**: The cut-off frequency will track the keyboard in a 1:1 relationship.

The diagrams below illustrate the relationship between keyboard position and cut-off frequency at the 1:1 and 2/3 settings:



## DRIVE



Activating **DRIVE** (Shift + KB Track) adds distortion to the Filter stage. The **1**, **2** and **3** settings represent low, medium and high amounts of drive respectively.

Using Drive with high Filter Resonance settings will often produce fun and/or interesting results.

## LFO AMT



The filter frequency can be controlled by the low frequency oscillator, the LFO. The *morphable* **LFO AMT** knob sets the amount of modulation. The exact effect of the LFO Amt parameter depends on how the LFO section is set up, see page 38.

## VEL / MOD ENV

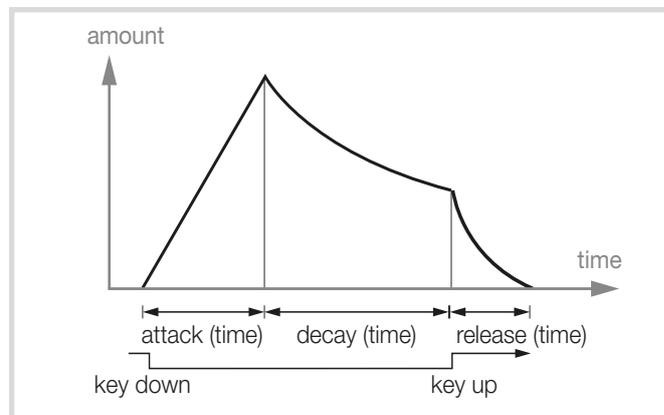


The *two-way* **VEL / MOD ENV** knob governs the amount of modulation to the filter frequency either by keyboard velocity *or* by the modulation envelope. At the center, "12 o'clock", position no Velocity or Mod Env modulation is applied to the filter.

Turning the knob *counter*-clockwise from the 12 o'clock zero setting gives an increasing amount of velocity control. Turning the knob clockwise from 12 o'clock, the modulation envelope will modulate the frequency with an increasing amount.

## THE ENVELOPES

The envelopes are used to "shape the sound" *over time*, from when you first play a key, to after it has been released. The diagram below illustrates the role of each parameter - attack, decay and release - throughout the course of the total envelope time, for both the Modulation and Amplifier envelopes.



## MOD ENVELOPE



The Modulation Envelope (**MOD ENV**) is a three-stage envelope which can be applied to the *Osc Ctrl* parameter and/or to the *Filter cut-off frequency*.

Used for modulating *Osc Ctrl*, it can perform a wide variety of time-based alterations, depending on which oscillator configuration is used.

With the filter it is used to modulate the tone color over the duration of a note, for instance creating a bright attack by modulating the filter at the start of the note.

### ATTACK

Attack sets the time it should take for the envelope to reach maximum level after you have pressed a key. Turn the **ATTACK** knob clockwise to increase Attack time.

### DECAY

When the attack phase is over, and the key is still held down, the envelope amount begins dropping down to zero again. Use the **DECAY** knob to set the time this should take. If the Decay time is set to maximum, the envelope will be in *Sustain* mode, meaning that it stays on a constant value, until the key is released.

### RELEASE

When the key is released, the envelope enters the release stage. The release time is set with the **RELEASE** knob.

### VELOCITY

When the Mod Env **VELOCITY** LED is lit, the amplitude of the Modulation Envelope is controlled by the velocity with which the keys are played. Play harder and the envelope will modulate the parameter(s) more.

## AMP ENVELOPE

The final stage of a synth signal chain usually consists of an amplifier to control the volume. By modulating the amplifier with an envelope, the sound is given its basic “shape” over time. In fact, the “volume shape” is one of the most important factors to how we identify the sound. By setting up a proper volume envelope you can make a sound “soft”, “hard”, “plucked” “static” etc.



### ATTACK

The **ATTACK** knob is used to adjust how long it takes for the sound to go from zero to full amplitude after a key has been pressed. With long Attack settings the sound will gradually “fade in”.

### DECAY

When the attack phase is over, the envelope drops back to zero level. Use the **DECAY** knob to set the time this should take. If the Decay time is set to full, the envelope will stay in its maximum level until the key is released.

### RELEASE

When the key is released, the envelope enters the release stage. The release time is set with the **RELEASE** knob.

### VELOCITY

With Amp Env **VELOCITY** active, the output level of the Synth will be controlled by the velocity with which the keyboard is played. There are four settings (including Velocity *off* - no LEDs being lit) giving an increasing amount of Velocity sensitivity.

## LFO



The **LFO** or *Low Frequency Oscillator* produces cyclic waveforms – and can do so at very low frequencies. An LFO is generally not used for generating *audible* frequencies. Instead the output from the LFO is used for modulating other functions, such as the *Osc Ctrl* parameter of the Nord Stage 3 oscillator or the *filter frequency*. The rate of the LFO is set with the *morphable* **RATE** knob.

To modulate Osc Ctrl – for instance in order to produce a vibrato effect using the Pitch or Detune oscillator configurations – use the two-way **LFO / MOD ENV** knob in the Oscillator section turned to a setting *before* 12 o’clock. To modulate the filter frequency, simply turn the **LFO AMT** knob.

### MST CLK

Press Shift and turn the **RATE** dial to sync the rate of the LFO to the Nord Stage 3 *master clock*.

When the LFO is synchronized to the Master Clock, the Rate knob will be used to set the arpeggio’s subdivision of the tempo of the Master Clock. The Subdivisions are described in meter:  $\frac{1}{2}$  equals half notes at the clock tempo,  $\frac{1}{4}$  equals quarter notes,  $\frac{1}{8}$  are eighth notes etc. Read more about this feature on page 26.

### LFO WAVEFORMS

The LFO waveform *selector button* determines the waveform that is generated by the LFO:

Waveform	Description
	<b>Triangle</b> Suitable for natural vibrato effects and also used for classic pulse width modulation.
	<b>Sawtooth 1</b> Use for ramp type modulations.
	<b>Sawtooth 2</b> Use for ramp type modulations.
	<b>Square</b> Use for abrupt modulation changes, suitable for trills, distinct tremolos, etc.
<b>S/H</b>	<b>Sample &amp; Hold</b> Creates a smooth random modulation.

## VOICE SECTION



The Nord Stage 3 synthesizer has a number of different voice modes, selectable in the **VOICE** section. There are several options for monophonic and polyphonic playing, as well as three different Unison modes.

### MONO VOICE MODE

In **MONO** mode only one note is played at a time, just like on a traditional monophonic synthesizer. Also, every time a note is played the envelopes are re-triggered, which gives all notes the same characteristics in terms of modulation and filter behavior.

### LEGATO VOICE MODE

In **LEGATO** mode only one note can be played at a time, just like with the Mono mode. However, each new note will replace the previous one at its current Envelope stage, as long as the previous key was not released before the new one was played.

If Legato is turned on, glide is active only when you *play* legato. You have to press a new key *before* you release the previous key to get the Glide effect.

- ❗ *When none of the Mono and Legato LEDs are lit, the Synth section is in its default polyphonic mode.*

### GLIDE

The **GLIDE** function makes the pitch “glide” from one note to the next when playing (traditionally often referred to as *portamento*) and is available in Legato and Mono mode only. The glide characteristics can be described as “constant rate”, which means that the greater the distance between two subsequent notes, the longer the glide *time*. Turn the Glide knob clockwise to increase the glide *rate*.

### UNISON

The Stage 3 synthesizer oscillator has a number of “hidden”, slightly detuned, oscillators which can be added to the basic sound for those fat, classic synthesizer sounds. Note that using Unison does not reduce the polyphony! A **UNISON** setting of **1**, **2** or **3** equals a classic dual oscillator de-tuning effect with an increasing amount of de-tune between the oscillators.

### SOUND INIT

Pressing **SOUND INIT** (Shift + Unison) presents two options – **Init** and **Auto Name** – selectable from the Program area display.

Selecting **Init** (Program 1 button) will initialize all areas of the synthesizer section except for the oscillator type and its selected waveform, useful for starting from a “clean slate” when programming sounds.

**Auto Name** (Program 3 button) will remove any preset name stored in the program, and instead simply display the name of the selected waveform. If the Synth sound stored in a program was initially based on a preset, but has been edited to a point where the preset name no longer makes sense, this is a quick way to remove the preset reference.

## ARPEGGIATOR



When the **ARPEGGIATOR** is running, held notes will be played back repeatedly, one after the other. Its parameters govern direction, range and speed. The arpeggiator can be used with Up, Down, Up/Down or Random directions in several octave ranges. The tempo of the arpeggiated notes is set by the Rate control or by synchronizing the arpeggio to the Master Clock of the Nord Stage 3.

### ARP RUN AND KEYBOARD SYNC (KBS)



The arpeggio is turned on with the **ARP RUN** button. Note that this is located at the bottom left of the Synth section.

Pressing **KB SYNC** (Shift + Arp Run) activates *keyboard sync*. In this mode, the arpeggiator will be reset any time a new note is played. With keyboard sync *off*, any new notes played while an arpeggio is running will conform to the “grid” of the current tempo setting.

### ARPEGGIATOR DIRECTION

The direction of the arpeggio is set using the Arpeggiator *selector button*. If no LED is lit, the arpeggio will play in the Up fashion. The other directions are Down (**DN**), Up and Down (**U/D**) and Random (**RND**).

### ARPEGGIATOR RANGE

Press **SHIFT** and the arpeggio selector to set the octave range. When no LED is lit, the range is one octave. Press Shift and the selector to reach the settings for **2**, **3**, and **4** octaves.

### ARPEGGIATOR RATE

The **RATE** knob sets the rate which will be displayed as quarter note beats per minute (BPM) in the display.

### ARPEGGIATOR MASTER CLOCK

Press **SHIFT** and turn the Arpeggiator **RATE** knob to sync the arpeggio with the Nord Stage 3 Master Clock. When the Arpeggio is synchronized to the Master Clock, the Rate knob will be used to set the arpeggio's subdivision of the tempo of the Master Clock. The Subdivisions are described in meter: 1/2 equals half notes at the clock tempo, 1/4 equals quarter notes, 1/8 are eighth notes etc. A “T” indicates a meter with triplet feel.

Read more about the Master Clock and how to set its tempo on page 26.

## KB HOLD



In **KB HOLD** (Keyboard Hold) mode, notes will keep playing even if all fingers are lifted from the keys. This is useful both for keeping an arpeggio running without keeping keys pressed down, and for having chords or drones sustained while playing something else using both hands.

## VIBRATO



**VIBRATO** modulates the pitch of the oscillator to produce natural sounding vibrato effects.

There are three basic methods you can use to control Synth Vibrato which is set using the Selector button in the Vibrato section:

If using one of the *Delay* modes, **DLY1**, **DLY2** and **DLY3**, the vibrato is introduced a short amount of time - increasing with each setting - after a note is played. The Vibrato amount for the Delay modes is set in the Sound Menu, as well as the rate for *all* Vibrato modes. Read more about this on page 53.

If *Aftertouch*, **A T**, is selected vibrato is controlled by pressing down held notes on the keyboard.

When **WHL** is selected, the vibrato amount is controlled with the Modulation Wheel.

# 8 EXTERN SECTION

## EXTERN SECTION



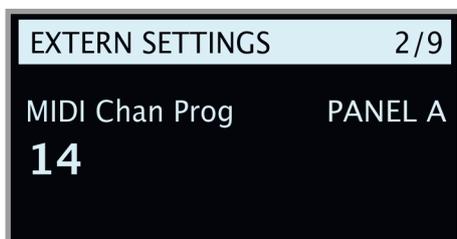
Control of external MIDI instruments is an integrated feature of the Nord Stage 3. By using the Extern section, all essential external MIDI control functions are as accessible and easy to use as the controls for the Nord Stage 3 sound engines.

The Extern section behaves like the internal instruments in several important ways. It is enabled and assigned to a keyboard zone in the same way. It has a multi-purpose **VALUE** encoder, which is used to send MIDI Volume, Program Change and Continuous Controller messages. The associated *parameter button* is used for selecting the parameter(s) to transmit.

Detailed settings for MIDI Channel, Program Change and Continuous Controllers, among other things, are accessed through the Extern Menu (read more about this on page 55). These settings can be part of the Programs, which makes it possible for the Nord Stage 3 to send MIDI messages - such as Program Change - to your external units when programs are changed.

### SETTING UP

- 1 Connect a MIDI cable from the Nord Stage 3 MIDI Out to the MIDI In on the external device, which could be a rack synth unit, a computer or most anything else with a MIDI In port.
- 2 Hold **SHIFT** and press **EXTERN** (Program 4 button) to access the Extern menu.
- 3 Use the **PAGE** ◀ / ▶ buttons to access the “Extern Settings MIDI Chan” page. This page will say “MIDI Chan Prog” or “MIDI Chan Glob” depending on how the first Extern menu page setting is set.



- 4 Use the **PROGRAM** Dial to select the transmitting MIDI channel (1-16) which should be used. The Panel A and B buttons are used for accessing the channel setting for each panel. Press **EXIT** (Shift) to leave the menu.
- 5 Set the external instrument to *receive* on the MIDI channel defined in the previous step.

- On the first page of the Extern menu it is possible to select between Global or per-program MIDI Channel settings. When set to Global, all programs using the Extern sections will use the same MIDI channels for Panel A and Panel B respectively. With the Program setting (which is the default), each program uses the Extern MIDI channels defined for and stored with that Program.

## USING THE EXTERN SECTION

### ACTIVATING

The Extern section is activated in the same way as the Nord Stage 3 sound engines are, by pressing its **ON/OFF** button.

### KEYBOARD ZONES

There are two Extern sections, one for Panel A and one for Panel B. Keyboard zones can be used for creating splits and layers just like for the internal sound engines. As an example, if the Extern section is assigned to only play in zones 1 and 2, the external instrument will only respond to notes played in these zones.

See the section about Split functionality on page 26 for information on how to set up and use keyboard zones.

### NON-KEYBOARD EXTERN SETUP

In addition to the regular keyboard zones, there is an extra option - selected the same way as regular keyboard zones - that doesn't assign the Extern section to the internal keyboard *at all*, signified by all **KB ZONE** LEDs being off for the Extern section. However, all other External features are still active, such as the Pitch Stick and the Parameter knob. This is useful when you want to control external equipment with no need for MIDI *keyboard* messages.

### OCTAVE SHIFT

Press **OCT UP** to shift sent MIDI notes up an octave and **OCT DOWN** (in conjunction with the **SHIFT** button) to shift them down. The shift range depends on the total note range of the external instrument, and the range of the keyboard zone(s) that the external instrument is currently assigned to.

### PITCH STICK / SUSTAIN PEDAL MESSAGES

Hold **SHIFT** and press the parameter button to determine whether the unit should send pitch bend and/or sustain pedal messages via the Extern MIDI channel, as indicated by the **SUSTPED** and **PSTICK** LEDs.

## EXTERN PARAMETERS



Extern parameters are selected by the parameter button, and their value is controlled by the **VALUE** encoder.

💡 *The Value encoder can be Morph controlled - read more on page 25.*

The following parameters can be selected using the parameter button:

### VOLUME

If **VOLUME** is activated, the Value encoder will send MIDI Volume CC7 messages (0-127). This allows for controlling the volume level of the external device. The external unit may have to be set to receive MIDI CC messages for this to work as expected.

### PROGRAM

The **PROGRAM** option allows the Value encoder to send Program Change messages (0-127), allowing you to select programs in the external instrument. This function behaves slightly differently than the other parameters. The Parameter encoder will in this mode send a Program Change message for each individual rotary encoder LED. To access all 127 messages, simply continue to turn the encoder multiple times - it will continue to send messages across the whole range. The external instrument may have to be set to receive MIDI Program Change messages for this to work as expected.

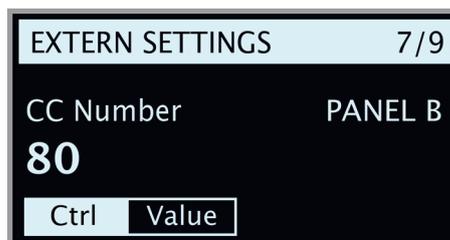
⚠ *The Stage 3 itself can transmit MIDI Program Change when you select a Bank, Page and Program. If this occurs on the same MIDI channel, it can lead to unwanted results on the external units. Make sure that the Panel A and Panel B MIDI channels are not the same as the Extern MIDI channel. The specific setting for the "internal" Stage 3 Program Change in the MIDI Menu can also be turned off.*

If the external instrument organizes programs in Banks, there is an option to send Bank Change messages on the Extern Menu page, see page 55.

## MIDI CC

The **MIDI CC** setting makes it possible to transmit MIDI Control Change messages to control a parameter of your choice on the external instrument. The Value encoder will control the value of the sent CC message. First, the controller number to transmit needs to be defined within the Extern Menu:

- ① Hold **SHIFT** and press the **EXTERN** button to access the Extern menu.
- ② Use the **PAGE** ◀ / ▶ buttons to select the Extern Settings "Ctrl/Value" menu page.



- ③ Use the **PROGRAM** Dial to select a MIDI CC Number (0-119). Refer to the manual for the external unit to see which parameters are assigned to which CC numbers.
- ④ To determine the initial value for the selected MIDI CC parameter when the program is loaded, press the **Value** soft button and select a value using the dial. Press the **Ctrl** soft button to return to setting the MIDI number.
- ⑤ Press **EXIT** (Shift) to leave the menu.

Once again, the external instrument may have to be set to receive MIDI CC messages for this to work as expected.

## SEND ON LOAD

Often it will be desirable to send certain MIDI data instantly when a program is loaded on the Nord Stage 3. This allows for an external unit to switch program, or have a CC value reset synchronized with program changes on the Nord Stage 3. There are individual settings - *On* or *Off* - for Program Change (PC), Volume (Vol) and user defined CC messages (UsrCC) accessible through the Send On Load page within the Extern menu.

## EXTERN SECTION AND MIDI SOFT THRU

When an external device transmits MIDI notes to the Stage 3 and the Extern section is active, incoming MIDI notes can be re-routed to the MIDI Output of the Stage 3, on the MIDI channel that is set for the Extern section.

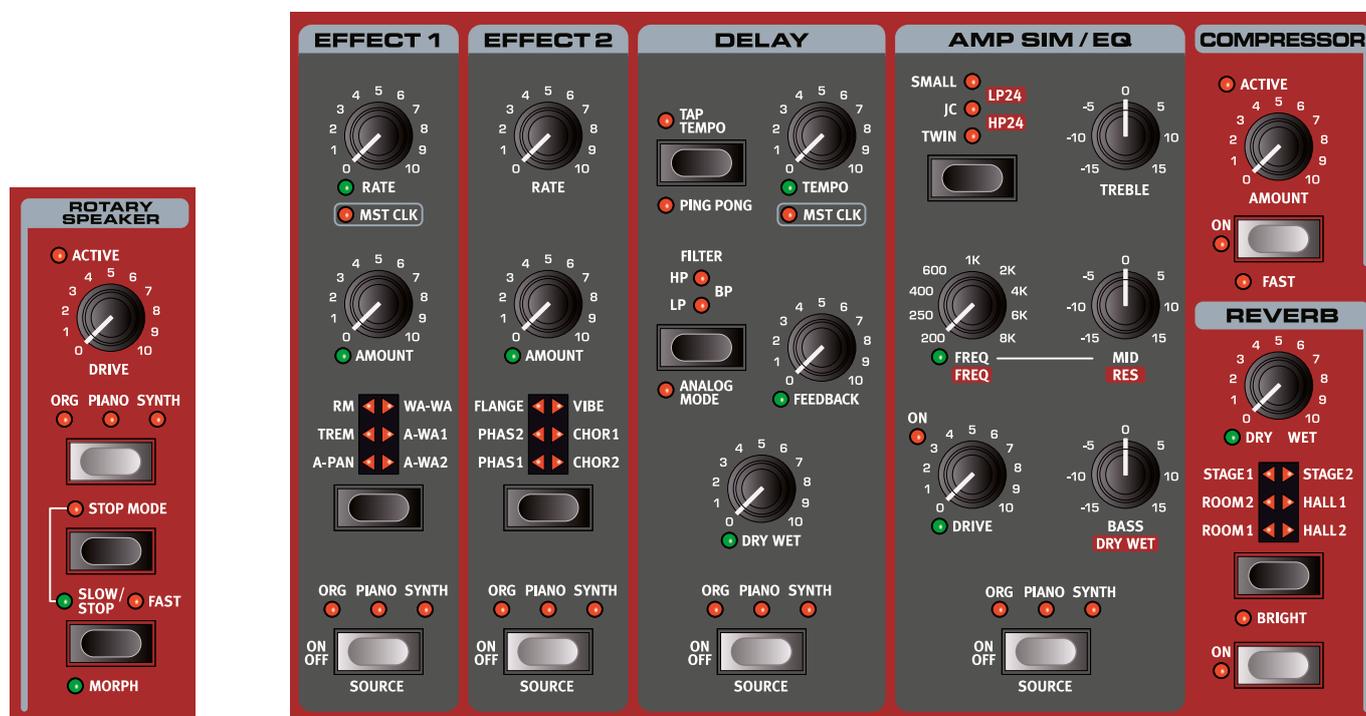
This allows you to control one external device from another external device. The incoming notes must be on the same MIDI channels as set in the Stage 3 for the Dual Kb, the Panel A or Panel B MIDI channel setting or the Global MIDI channel setting.

💡 *The Extern menu setting Soft Thru must in these cases be set to "On".*

## OTHER EXTERN MENU SETTINGS

There are several other menu settings for the Extern section, that have not been covered in this section. Refer to the Menu chapter, on page 55, for further information on those.

# 9 EFFECTS



## OVERVIEW

The effects on the Nord Stage 3 are all available on a per-panel basis. This means there are two instances of each effects unit, which each can have its own settings, for every program. The one exception to this rule are Rotary effect settings: The Rotary can be activated on each panel separately and for different sound engines, but will always use the same speed and drive settings on both panels.

## ACTIVATING AN EFFECT

To enable an effect, press its **ON/OFF** button. The LEDs above the button indicate which sound engine the effect is assigned to. Hold down **SHIFT** and press the **SOURCE** button to change the sound engine assignment.

Sound engine assignments can also be stepped through by *double-clicking* the Source button. This is convenient when you only have one hand free and cannot reach the Shift button.

## EFFECT TYPE SELECTION WHEN AN EFFECT IS OFF

When the Effect 1 and 2 sections are turned off, you can still check which effect type is selected by pressing the corresponding effect selector button once. The selector LED will briefly show the current effect type. If the selector button repeatedly, you change the effect type without turning on the effect.

Effect settings can also be adjusted, even if the actual effect is turned off. The values of the parameters will be shown in the display.

## EFFECT 1

The **EFFECT 1** section offers six different types of modulation effects. Use its Selector button to switch between the available modulation effects.

Turning **MST CLK** (Shift + Rate) synchronizes the Effect 1 Rate with the Master Clock. In Mst Clk mode, the Rate is presented as subdivisions of the Master Clock tempo.

## A-PAN (AUTO PAN)

The **A-PAN** is an automatic panning modulation that smoothly pans the signal between the Left and Right outputs in the stereo panorama.

The rate and the amount of panning are controlled with the **RATE** and **AMOUNT** knobs.

## STATIC PAN CONTROL OVER A SOUND

Manual control over the position of a sound within the stereo panorama can be achieved with the A-Pan effect:

- 1 Enable **EFFECT 1** for the sound engine (Organ, Piano or Synth) you want to pan, and select the A-Pan effect type.
- 2 Set the **RATE** knob to zero. Place the sound anywhere in the stereo panorama with the **AMOUNT** knob - just like with a pan control on a mixing console.



## TREM (TREMOLO)

**TREM** (Tremolo) provides a volume modulation that continuously varies the volume of the output signal. Tremolo is a very common effect to use with electric pianos.

Use the **RATE** and **AMOUNT** knobs to control the Tremolo *rate* and its *depth*. Note that the output volume is at maximum level at zero Amount setting.

## RM (RING MODULATION)

Ring Modulation (**RM**) is a type of modulation where two signals are multiplied with each other, resulting in an in-harmonic “bell like” sound. In the Nord Stage 3 the instrument signal is multiplied with a sine wave.

The pitch of the sine wave is set with the Rate knob and the amount of ring modulation with the Amount knob.

## WA-WA

The **WA-WA** (Wah-Wah) modulation effect gives any sound source a characteristic, “Quack”-like sound. Wah-Wah can be extremely useful on electric pianos and Clavinets. The Wah-Wah modulation is a lowpass type of filter that can be swept across the frequency range. During the sweep, the filter’s characteristics also changes.

The “pedal position” of the Wah is controlled with the Rate knob and the wet/dry mix with the Amount knob.

An expression pedal connected to the Control Pedal Input can be used to control the filter sweep by morphing the Rate. This allows you to control the Wah-Wah effect with the pedal, using the Morph function - see page 25.

## A-WA 1 & 2 (AUTO-WAH)

**A-WA 1-2** (Auto-Wah) are variations of the Wah-Wah effect described above. The A-Wa uses the signal’s amplitude (envelope follower) to control the filter sweep range, making the effect “velocity sensitive”. The range of the Auto-Wah 1 is controlled with the Rate/Tempo knob and the wet/dry mix with the Amount knob.

A-Wa 2 works in the same way, but produces a different character.

## EFFECT 2

**EFFECT 2** provides a selection of modulation effects, including two types of Phaser, a Flanger, two Chorus types and a Vibe effect. Each effect has its rate controlled by the **RATE** knob, and its amount by the morphable **AMOUNT** knob.

## PHASER 1 & 2

The **PHASER** effect produces a characteristic “sweep” effect, commonly used with electric piano sounds. The digital models for the phasers of the Nord Stage 3 are inspired by classic units such as the Bi Phase and the Small Stone.



## FLANGER

The **FLANGER** produces a dramatic comb filter effect, giving the sound a “swooshy” and resonant quality.

## VIBE

The **VIBE** effect draws its inspiration from a classic foot pedal effect and produces a sound with both pitch-bending and phasing qualities. The effect is created through a digital model of a staggered series of phasing filters, unlike the usually aligned filters of a normal phasing effect.

## CHORUS 1 & 2

The versatile **CHORUS** effect gives the impression of “widening”, or with more extreme settings severely detuning, the sound – achieved by blending a number of modulated copies of the audio signal. There are two Chorus types, the second being more bold in character.

## DELAY

The **DELAY** unit produces echo/repeat effects. The Delay time is set with the **TEMPO** knob.

If **MST CLK** (Master Clock) is active, the Tempo will instead be expressed in subdivisions of the tempo set for the Master Clock. Read more about this below.



The **FEEDBACK** knob controls the number of delay repeats, or taps. At the lowest setting only the initial tap is heard, while the highest produces a very long feedback tail.

The **MIX** knob adjusts the balance between the dry signal and the delay repeats.

## PING PONG

Press **PING PONG** (Shift + Tap Tempo) to activate Ping Pong mode. This causes delay repeats to alternate between the left and right channels. If short delay times are used, these repeats will be “asymmetrical” and produce delays that are more like early reflections in reverb units.

## TAP TEMPO

Use **TAP TEMPO** to set a delay time matching the tempo of a song. Simply tap the Tap Tempo button in the tempo you wish the delay to sync to a number of times, and the delay time will be adjusted automatically.

**i** *Tapping will never result in a pitch change of current repeats, even if Analog mode is activated.*

## FILTERS

The filters in the delay **FILTER** section are great tools for shaping the delay sound, especially when large feedback amounts are used. Each consecutive Delay tap is fed through the filter, resulting in a progressively more processed sound.

With the **LP** setting, all delay taps are passed through a *Low Pass* filter which reduces high frequency content in the delay feedback signal.

The **HP** setting provides a *High Pass* filter, removing low frequency content. This can be useful for making long delay tails sound less muddy.

The **BP** setting adds a *Band Pass* filter to the delay signal. This will remove both high and low frequencies, making for a fairly thin and narrow sound.

## ANALOG MODE

There are two different delay modes, the normal (“non-analog”) mode, and the Analog Mode, which is activated by pressing **ANALOG MODE** (Shift + Filter). In Analog Mode the pitch of any sounding repeats is altered if the tempo is changed – much like with a vintage analog delay. What’s more, the exact character of each feedback Filter setting differs slightly from when in “non-analog” mode. In Analog Mode a slight distortion is also introduced into the delay line with each tap – especially noticeable with larger feedback amounts.

## MASTER CLOCK

The Master Clock feature for the Delay section is activated by turning **MST CLK** (Shift + Tempo knob). This way the delay will be synced to the tempo set for the Master Clock, in the Program section. See page 26 for instructions on how this tempo is set.

The Delay tempo will now be expressed in *subdivisions* of the Master Clock tempo, ranging from 1/2 to 1/32 notes. Apart from straight subdivisions/delay taps there are also swing (S), triplet (T) and dotted (D) options to choose from.

## AMP SIM / EQ

The **AMP SIM / EQ** effects unit combines a three-band *equalizer* with sophisticated *amplifier* and speaker cabinet *simulations*. It also includes resonant 24 dB low-pass and high-pass filters, which can be used to great effect with any sound engine. When no Amp Model or filter is selected, the Amp Sim / EQ section provides a neutral EQ and tube style overdrive.

### DRIVE

The *morphable* **DRIVE** provides a tube style overdrive effect or, if an Amp model is selected, controls the amount of overdrive for the particular Amp model selected. If the Drive LED is lit, it indicates that overdrive is active.

### EQ SECTION

This is a 3-band equalizer which features bass, sweep-able midrange and treble controls. The **BASS** frequency is 100 Hz, the **TREBLE** frequency is 4 kHz and the *morphable* **MID** frequency can be set between 200 Hz to 8 kHz, using its **FREQ** knob. The boost/cut range is +/- 15 dB.

### LP 24 FILTER

The **LP24** filter is a resonant 24 dB per octave *low-pass* filter which can be applied to any of the three sound engines; Organ, Piano or Synth. Use the *morphable* **FREQ** knob to adjust the cutoff frequency of the filter, and the **RES** knob to set the amount of resonance around the cutoff point. The **DRY WET** control is used for setting the balance between unfiltered and filtered sound.

### HP 24 FILTER

The **HP24** filter is a resonant 24 dB per octave *high-pass* filter which can be applied to any of the three sound engines; Organ, Piano or Synth. The *morphable* **FREQ** knob adjusts the cutoff frequency of the filter, and the **RES** knob controls the amount of resonance around the cutoff point. The **DRY WET** control is used for setting the balance between unfiltered and filtered sound.



## AMP MODEL

The three different amplifier/speaker simulations are selected with the Selector button in the Amp Model section:

Amp Model	Description
<b>JC</b>	A simulation of a Roland Jazz Chorus speaker cabinet, powered by a tube amp.
<b>SMALL</b>	A simulation of a Wurlitzer 200A internal speaker, powered by a tube amp.
<b>TWIN</b>	A simulation of a Fender Twin tube amplifier and speaker cabinet.

## COMPRESSOR

The **COMPRESSOR** effect reduces the dynamic range of the sound, making low level sound louder and high level sound more quiet. This produces a tight, punchy sound and makes the overall level easier to control in a live mix situation. The Compressor is activated with its **ON** button. The **AMOUNT** knob controls the amount of compression applied.

### FAST MODE

The **FAST** mode (Shift + On) makes the Compressor recover quicker after being triggered. With high Compressor Amount this will create a “pumping” and more obviously compressed sound.



## REVERB

The **REVERB** unit simulates the natural sound reflections in various acoustic environments. There are six reverb types of various lengths and densities, indicated by the LEDs in the selector.

The **HALL** reverbs have the response and character of a spacious hall, with a long decay. The **STAGE** reverbs have a medium decay time while the **ROOM** reverbs are more of an ambience with a short decay time.

With the **BRIGHT** switch active, more high frequency content will be preserved in the Reverb signal.

The *morphable* **DRY/WET** control sets the balance between the unprocessed and the processed signal.

- ❗ If using the Rotary effect, a “copy” of the Reverb will be routed into the Rotary speaker, and applied to the sound source(s) using the Rotary effect. Read more about this in the following Rotary Speaker section.

## ROTARY SPEAKER

The Rotary Speaker effect accurately reproduces the sound of the rotating horn and bass rotor, as well as the characteristics of the built-in amplifier of the original rotary construction.

- The Rotary effect is activated or de-activated for a selected instrument in the same way as other effects, by pressing the **ORG PIANO SYNTH** source button. Different sources can be selected for Panel A and Panel B, and the effect can be individually activated per panel.
- Switch between fast and slow rotor speeds by pressing the **SLOW/STOP** button.
- To stop the rotors, press the **STOP MODE** button to activate the Stop Mode and then the Slow/Stop button (this does not deactivate the Rotary Speaker - it only stops the rotors). When the Slow/Stop button is pressed again the rotors will accelerate to the Fast speed setting. This functionality mimics the behavior of an early, one speed rotary speaker.
- The rotor acceleration rate, the time it takes to go from slow to fast and vice versa, can be adjusted on the Sound menu, read more on page 53.



- The Rotary speed can be continuously controlled with a Morph source, in which case the **MORPH** LED will be lit. This makes it possible to set the rotary at speeds other than just fast, slow and stopped.

The **DRIVE** knob controls the amount of overdrive. This simulates the pre-amplifier overdrive of the original rotary speakers.

A sustain pedal or a foot switch that is connected to the Rotor pedal input can control the rotor speed. On the Nord Stage 3 *Compact* model, the optional Nord Half Moon Switch can be used for switching Rotary speed in an even more traditional fashion. Read more about rotor control on page 53.

- ❗ *The Rotary Drive parameter is dependent on the processed instrument's Level setting. If the instrument being processed by the Rotary is set to a very low level, the amount of available drive will be significantly reduced. Again, this is very much like how it works with the "real articles" - when you increase the organ level, e.g. by using a swell pedal, the amount of distortion from the Rotary effect increases.*

## ROTARY SPEAKER AND REVERB

If Reverb is active on a panel where the Rotary Speaker effect is turned on, a "copy" of that Reverb will be applied to the audio going *into* the Rotary. In other words, Reverb is applied *before* the Rotary Speaker, for any sound engine assigned to it.

- ⚠ *If the Rotary Speaker is active on both panels, its Reverb is controlled from Panel A.*

## ROTARY MENU SETTINGS

There are several parameters in the Sound Menu that allow for detailed adjustments of the behaviour and sound of the Rotary Speaker. Read more about on this on page 53.

# 10 MIDI

## USING MIDI

The Nord Stage 3 is designed to be as flexible as possible when it comes to its MIDI capabilities. It can be used as a master keyboard to control other hardware units or software sound sources, or as two independent panels to be played/controlled by outboard gear such as a sequencer. It is also possible to control only parts of the Nord Stage 3 from a separate keyboard. If you like, you can even do all these things at the same time.

The MIDI functionality of the Nord Stage 3 can be divided into four main areas: Global, Panel, Dual KB and Extern. Each of these are independently assignable to any MIDI channel. MIDI functions can also be disabled by setting the related channel setting to *Off*. MIDI channels are defined in the MIDI and Extern menus, see page 52.

Global and Extern are used to transmit MIDI data to other units, while Panel and Dual KB modes only *receive* MIDI data. Most settings relating to MIDI functions are made in the MIDI Menu, except for the Extern settings that are made in the Extern Menu and Dual KB configuration which is done from the Dual KB panel control.

Nord Stage 3	MIDI IN	MIDI OUT
Global	✓	✓
Panel A/B	✓	
Dual KB	✓	
Extern		✓

### GLOBAL

The Global MIDI channel is used for transmitting and receiving MIDI information at the same time. It allows for external control over every aspect of the Nord Stage 3 - much like playing its own keyboard - and it can be used to transmit keyboard, pedal and panel actions.

Any MIDI data entering the Nord Stage 3 on the Global MIDI channel will reach the sound engines that are active within the active program. If the program includes layers and/or splits, those will be acknowledged by incoming MIDI as well.

Global transmits both keyboard and panel generated MIDI data. For example, if a knob in the Synth section is turned or the modulation wheel, aftertouch, connected pedals or pitch stick are used, these will generate MIDI data that is transmitted on the Global channel.

- ❗ *Global MIDI can be turned Off in the MIDI menu. This will disable both transmission and reception of MIDI from the Global component.*

### PANEL A/B

The Panel MIDI channels only *receive* MIDI, allowing for control of an entire Panel and its active sound engines from an external device. Panel

A and Panel B can be assigned individual MIDI channels in the Nord Stage 3 MIDI Menu.

## EXTERN

The Extern section is primarily designed for integration of external MIDI units into a live performance. Below is a practical example of how this could be set up. Refer to the Extern chapter, beginning on page 41, for full documentation on how to work with the Extern section.

### CONTROLLING EXTERNAL GEAR FROM THE NORD STAGE 3

It is useful to think of the Extern A/B sections simply as another pair of onboard sound engines - just like the Organ, Piano and Synth sections. Assigning keyboard zones and layers, enabling pitch stick and sustain pedal response etc. are all done in the same manner as with other sections.

It is also possible to store "initial values" of things such as Program Change, Bank Select, or Volume, for the Extern A/B panels. Additionally, the Extern section provides an encoder, assignable to the MIDI CC# of your choice. Most settings can be stored either on a global or per-program basis.

- 1 Select a Nord Stage 3 program where external sounds should be integrated.
- 2 Set the Extern A section and the external device, for example a rack synth module, to the same MIDI channel. On the Nord Stage 3 this is done in the Extern menu, accessed through **EXTERN** (Shift + Program button 4).
- ⚠ *Make sure that the Extern channel is not the same channel as the Nord Stage 3 Global channel. If it is, set Global to another channel.*
- 3 Activate the Extern Section and assign it to the desired keyboard zone(s).
- 4 Play within the zone defined for Extern A on the Nord Stage 3 and you should hear your external device.
- ❗ *There may be settings on the external MIDI unit, affecting how it reacts to incoming MIDI data. Refer to its documentation if needed.*
- 5 Set **OCT UP/DOWN**, **SUST PED** and **PSSTICK** as appropriate.
- 6 Press the Extern parameter button repeatedly until the **PROGRAM** LED is lit. Turn the Extern encoder until the desired program is selected on the external device. If Bank Select data is needed for accessing the program, these data will need to be manually entered into the Extern Menu.
- 7 Press the Extern Parameter Select repeatedly until the **VOLUME** LED is lit. Turn the Extern encoder knob to adjust the volume of the external MIDI (which is achieved by transmitting MIDI CC#7).
- 8 Store the program on the Nord Stage 3.

By activating *Send On Load* in the Extern Menu all stored data (program change, bank select, MIDI CC and volume) will automatically be sent from the Nord Stage 3 whenever this program is selected. An additional continuous controller message can be defined in the Extern menu, if needed. Simply set the CC number and the desired value and it will be transmitted along with everything else.

For yet another degree of integrated control, the Extern encoder can be controlled by the mod wheel, aftertouch or a control pedal, by setting up a Morph.

Just like other panel sections, the A/B Extern panels are completely independent from one another and can be programmed to do different things on the same or different zones at the same time.

- ❗ *If the on-panel Transpose feature is used, the MIDI output from the Extern section will be transposed.*

## CONTROLLING THE NORD STAGE 3 USING MIDI

There are several options available if you wish to use a second keyboard or other MIDI device to control the Nord Stage 3. Let's have a look at the *Dual KB* feature first.

### DUAL KB

With this function it is possible to use an external keyboard to control one of the Panel B sound engines, which in turn will *not* be controlled from the Nord Stage 3 keyboard. These settings are stored per program which makes it an ideal feature for live usage.

A more complete overview of Dual KB is found in the Program chapter, on page 29 but here is a basic example of how to set it up:

- ① Press down on **DUAL KB** (Shift + Panel B button) and select which Panel B sound engine to control from the external keyboard. Letting go of the buttons will leave Dual KB turned on.
- ② Connect an external MIDI keyboard to the MIDI In jack of the Nord Stage 3.
- ③ Set the Dual KB MIDI channel to that of the transmitting MIDI device, from the Nord Stage 3 MIDI menu. The default setting is MIDI channel 16.
- ④ Activate the selected sound engine on Panel B of the Nord Stage 3. All other sound engines within both Panel A and B are controlled as usual from the Nord Stage 3.

- ⚠ *If the Stage 3 is transposed using the Panel Transpose, the incoming MIDI on the Dual KB channel will also be transposed – regardless of how the “Transpose MIDI at” setting is configured in the MIDI menu.*

### PANEL MIDI CONTROL

A second option for controlling parts of the Stage 3 from a external device would be to use its Panel MIDI capabilities, allowing for addressing each panel (A and B) on different MIDI channels. Both Panels can still be controlled “locally” from the Nord Stage 3 keyboard if desired.

To set this up, assign Panel A and B one MIDI channel each within the MIDI menu, accessed by pressing **MIDI** (Shift + Program 3 button).

## GLOBAL MIDI

The third option for controlling the Nord Stage 3 via MIDI is by using the Global MIDI functionality. If the transmitting MIDI channel of an external device is the same as the Nord Stage 3 Global MIDI channel, playing the external unit will be very similar to playing the Nord Stage 3 from its own keyboard.

- ❗ *Global MIDI can be turned Off in the MIDI menu. This will disable both transmission and reception of MIDI from the Global component.*

## EXTERNAL SYNC

The Master Clock of the Stage 3 can be controlled by incoming MIDI clock messages. This is an automatic behavior: As soon as MIDI clock is received on the MIDI In or USB MIDI input, the Rate setting for the Master Clock will be synchronized to the incoming external clock.

When the Master Clock is locked to an incoming clock, “external” will be displayed on the Master Clock page (accessed by pressing down on the **MST CLK** button) along with the incoming tempo in BPM.

## EXTERN SECTION AND MIDI RE-ROUTING

When an external device transmits MIDI notes to the Stage 3 and the Extern section is active, incoming MIDI notes can be re-routed to the MIDI Output of the Stage 3, on the MIDI channel that is set for the Extern section. This allows you to control one external device from another external device. The incoming notes have to be on the same MIDI channels as set in the Stage 3 for the Dual KB, the Panel A or Panel B MIDI channel setting or the Global MIDI channel setting. The Extern menu Soft Thru setting must also be *On*.

## RECORDING A STAGE 3 PERFORMANCE TO A MIDI SEQUENCER

Here is how to record a Stage 3 performance just as you would play it from the unit - with all the pedal actions, morphing and other things to a DAW or MIDI sequencer. This is best achieved by using the Global MIDI channel.

- ① Set the DAW or sequencer track to route back incoming MIDI on the Global Channel.
- ② Set Local in the MIDI menu to *Off* on the Nord Stage 3
- ③ Select the Program on the Nord Stage 3 that you wish to use.
- ④ Start the recording on the sequencer.

The MIDI output on the Global channel will not care about any splits; it will produce MIDI note numbers from the entire Stage keyboard.

- ❗ *If any Transpose value is applied, either by the on-panel Transpose function or the Global Transpose setting in the System menu, its effect on MIDI depends on the “Transpose MIDI at” setting in the MIDI menu. This setting is further described on page 54.*

## MESSAGES

The following MIDI messages can be transmitted and received by the Nord Stage 3:

### NOTE ON/OFF

- Note On and Note Off messages are transmitted and received.

## PITCH BEND

- Pitch Bend messages are transmitted and received.

## CONTROLLERS

From the MIDI Menu (see page 54), it can be determined whether the Nord Stage 3 should transmit and/or receive Control Change messages.

- If a Control/Expression pedal is connected to the Organ Swell Input, this is transmitted and received as Controller 4.
- If a Control/Expression pedal is connected to the Control Pedal Input, this is transmitted and received as Controller 11 (Expression).
- If a sustain pedal is connected to the Sustain Pedal Input, this is transmitted and received as Controller 64 (Sustain Pedal).
- Almost all other controls (knobs and buttons) on the front panel are also transmitted and received as Control Change messages. This can be used for recording front panel actions into a MIDI sequencer. For a full list of which parameters correspond to which Controller number, refer to page 58.

## KEYBOARD VELOCITY

The Nord Stage 3 can transmit and receive Keyboard Velocity messages. Organ sounds will always be played back at nominal level regardless of incoming MIDI Velocity data. Release velocity is transmitted, but ignored on MIDI In.

## AFTERTOUCH

The Nord Stage 3 keyboard can transmit Aftertouch messages (sometimes referred to as channel pressure). This is done by applying more pressure on a key while it is down, which generates a signal that can be used to control parameters.

## PROGRAM CHANGE OPERATIONS

Program Change messages are used both for the Program and Song banks, as well as for Synth Presets, and are identified by which Bank MSB number is being used. Changing Programs, Songs and Synth Presets respectively on the Nord Stage 3 will send Program Change messages according to the table below – as long as Program Change is set to be sent in the MIDI menu that is.

	Program	Song	Synth Preset
Bank MSB	0	1	2
Bank LSB	0-7	0-7	0-7
Program Change	0-49	0-49	0-49

A received Program Change message addressing a Program or Song respectively will focus Program or Song mode on the Nord Stage 3 accordingly. A message addressing a Synth Preset will select that Synth Preset for the Synth section but will not activate the Synth section, if it is currently turned off.

- ❗ *A Program Change message that reaches the Nord Stage 3 unaccompanied by Bank Select messages will take effect in the currently selected Program or Song bank.*

In the MIDI Menu, you can select if the Nord Stage 3 should send and/or receive program Change messages on the Global channel. See page 54 for further details.

- 💡 *If you want to transmit program change messages to external units without altering the state of the Nord Stage 3, use the Program Change feature of the Extern section.*

## LIVE MODE

Live Mode can not be activated or deactivated by Program Change. However, one can enter or exit Live Mode by sending a CC# 2 message of 127 (Live on) or 0 (Live off).

- 💡 *Song Mode can optionally be addressed in the same fashion, using CC# 3 instead.*

## CHANGING SONG PARTS OR LIVE PROGRAMS

Apart from changing songs remotely – using a Program Change message – one may wish to also select a particular Song Part. This is achieved by sending a CC# 5 message of a value corresponding to the desired Song Part – each represented by a specific range between 0-127. Incidentally, changing Live Programs is done in the exact same way:

Song Part / Live Program	CC# 5 Value
1	0-25
2	26-51
3	52-76
4	77-102
5	103-127

## LOCAL ON/OFF

Local Off can be used to “disconnect” the keyboard and the panel on the Nord Stage 3 from its sound engines. Turn Local Off if you experience “double-triggered” notes when you play; both from the keyboard internally and via the MIDI “loop”. Local On/Off is set in the MIDI menu, which is described on page 54.

## PANIC



If you experience hanging notes when using the Nord Stage 3 in a MIDI setup, or if all current sound should be terminated for some other reason, use the **PANIC** (Shift + Transpose) function. This will execute an internal “All Notes Off” message, and reset incoming CC messages.

# 11 MENUS

Any settings that are made in the *System, Sound, MIDI or Extern* menus will take immediate effect, and will be stored until they are changed again.

- ❗ *The MIDI Local On/Off setting is an exception and always reverts to Local On every time the Nord Stage 3 is powered up.*

Most settings are *global*, meaning that they apply regardless of which program is currently loaded. Some settings - such as those for Output Routing - can be made on a per-program basis or globally, while others - such as most settings for the Extern section - are *always* stored with each program.

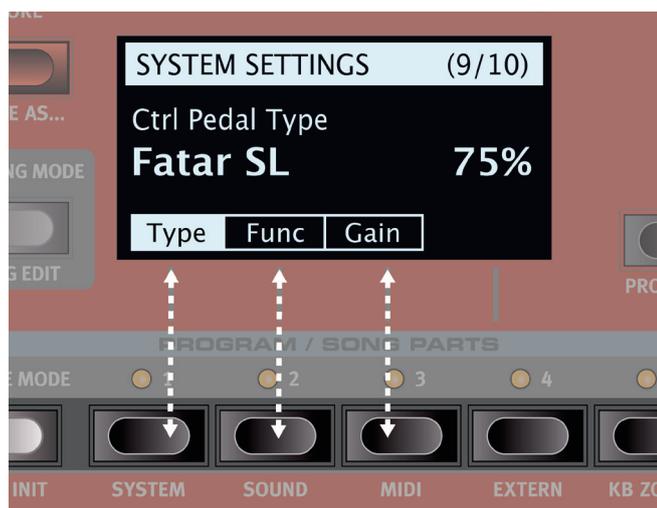
- 💡 *Per-program values stored for settings that can be either global or per-program are always preserved when switching to and from global mode.*

Enter a menu by holding **SHIFT** and pressing the **SYSTEM, SOUND, MIDI** or **EXTERN** button (Program buttons 1 to 4). Menus are navigated with the **PAGE** ◀ and ▶ buttons and settings are changed with the **PROGRAM** dial.

Exit the menus by pressing **EXIT** (Shift).

## SOFT BUTTONS

One menu page may contain several related settings, in which case “soft buttons” - shown at the bottom of the display and controlled with the Program 1-4 buttons - are used for focusing a particular setting.



Menu “soft buttons” correspond to Program buttons 1-4. This particular menu page only contains three soft buttons.

## SYSTEM MENU

Hold **SHIFT** and press **SYSTEM** (Program 1 button) to access the System menu settings. Use the **PAGE** ◀ and ▶ buttons to navigate between the various menu items on the System menu. The **PROGRAM** dial is used to change settings and the Panel buttons for switching between A and B. Soft buttons are used to access additional settings where applicable. When done, press **EXIT** (Shift) to leave the menu.

### 1 - MEMORY PROTECT

The memory protection setting will be *On* when a Nord Stage 3 leaves the factory, to prevent accidental overwriting of programs or Synth presets. Setting this to *Off* enables all Store operations. Menu settings and the five Live programs are not affected by this setting.

*Range: On (default), Off*

### 2 - GLOBAL TRANSPOSE

This setting allows for transposing the entire Nord Stage 3 in semitone steps. This setting will be *added* to any on-panel transpose value stored with a program.

*Range: +/- 6 semitones (default value is “none”)*

### 3 - FINE TUNE

Fine Tune can be used to fine tune the pitch of the Nord Stage 3 in finer increments.

*Range: +/- 50 Cents (+/- half a semitone). Default value is “0”*

### 4 - SEAMLESS PROG CHANGE

This setting determines how seamless sound transitions are handled when changing programs. When set to *On*, sustaining notes and effects tails will always be preserved when changing programs. With the *Off* setting, all ongoing sound is always terminated when changing programs.

*Range: Off, On (Default)*

### 5 - OUTPUT ROUTING MODE

Output routing for the Nord Stage 3 can be controlled in two different ways: In *Program* mode, output routings are stored with each individual program. When *Global* is selected, output routings are the same for all programs, overriding the routings stored with each program.

*Range: Global (Default), Program*

- ⚠ *In Program mode a manual Store operation is needed in order for changes to Output Routing settings to be saved.*

### 6 - OUTPUT PANEL A/B

Output Routing settings below are made independently for each panel. Use the Panel A and B buttons respectively for switching between them.

## MAIN

This allows for setting which stereo output pair(s) or mono output to use for each panel.

*Range: Stereo 1-2 (Default), 3-4, 3, 4, 1-4*

⚠ *Sounds using the Rotary effect are always routed to outputs 1-2, regardless of Output Routing settings.*

## SUB

Within each panel one sound engine (Organ, Piano or Synth) can be routed independently of the Main output for that panel. This can be useful for routing electric piano sounds to a guitar amplifier or organ sounds to an external rotary speaker – or for any other scenario where sounds of different types should be handled on separate outputs.

The physical output for the selected sound engine is set by the Dest (Destination) setting – see below.

*Range: Off (Default), Org, Pno, Syn*

## DEST

The Dest (Destination) setting determines to which output(s) the sound engine selected for the Sub setting is routed.

*Range: 1-2, 3-4, 3, 4"*

⚠ *Note that the Reverb and Compressor effects are only present on the Main outputs selected for a panel.*

## 7 - SUSTAIN PEDAL

### TYPE

This allows you to select the type of pedal connected to the **SUSTAIN PEDAL** jack, in case the functionality of the pedal is reversed (when the pedal is up, sustain is on and vice versa). The Auto setting can automatically determine the pedal type.

*Range: Open, Closed, Triple (Nord Triple Pedal), Auto (Default)*

### FUNC (FUNCTION)

If you have only one pedal connected at the Sustain Pedal input and you want to use it as both a Sustain Pedal and a Rotor Speed Pedal, this setting provides you with three alternatives - Sustain only, Sustain + Rotor Hold (fast rotor speed only when the pedal is *down*) and Sustain + Rotor Toggle (toggles between fast and slow with each pedal press).

*Range: Sustain (Default), Sus+Rotor Hold, Sus+Rotor Toggle*

## 8 - ROTOR PEDAL

### TYPE

This allows you to change the type/polarity of a switch pedal connected to control **ROTOR PEDAL** input, in case the functionality of a connected pedal is reversed. On the Nord Stage 3 *Compact* model, this can also be set to *Half Moon Switch*. The Auto setting can automatically determine the pedal type.

*Range: Open, Closed, Half Moon Switch (only on Compact model), Auto (Default)*

### FUNC (FUNCTION)

This allows for changing the functionality of a switch pedal connected to the **ROTOR PEDAL** input on the Nord Stage 3. Rotor Hold means that the Rotor Speed is *fast* for as long as the pedal is down and reverts back to *slow* when the pedal is released. Rotor Toggle means that the fast/slow rotor speed is switched with each pedal depression, like an on/off switch pedal.

*Range: Rotor Hold (default), Rotor Toggle*

## 9 - PROG PEDAL

### TYPE

This setting is used for setting the polarity of a momentary two-button pedal attached to the **PROG PEDAL** jack. When operated the two buttons will change to the next program up or down in the program bank, respectively. If the buttons of the pedal should have their functionality reversed - the “up” button changing to “down” and vice versa - this setting will come in handy.

*Range: Open, Closed, Auto (default)*

## 10 - CTRL PEDAL

### TYPE

The Nord Stage 3 accepts many of the most commonly available control pedals through its **CONTROL PEDAL** input. Select a setting here that matches the pedal being used.

💡 *If you operate a connected pedal while this option is active, a percentage will be displayed from 0 to 100 to indicate the range of the connected pedal. This can be used to find a suitable setting for a pedal that isn't explicitly supported.*

*Range: Roland EV7 (default), Yamaha FC-7, Korg, Fatar (and Studiologic)*

### FUNC (FUNCTION)

This setting determines the functionality of a pedal that is attached to the Control Pedal input. The two settings are *Control* (use this to use the pedal with the Morph functionality) and *Ctrl + Swell* (combines Morph control and Organ Swell).

*Range: Control (Default), Ctrl + Swell*

### GAIN

This setting allows for adding some gain to the output of the pedal. This can be useful if an attached pedal does not reach its maximum level or setting.

*Range: 1 - 10*

## 11 - SWELL PEDAL

### TYPE

This setting configures a pedal attached to the **ORGAN SWELL** jack. See “Ctrl Pedal Type” above for details.

*Range: Roland EV7 (default), Yamaha FC-7, Korg, Fatar (and Studiologic)*

### FUNC (FUNCTION)

This setting configure the Swell Pedal destination. Set this to Swell if you want this pedal to act as a Swell pedal for the organ, or to Volume if it should control the volume of all the Nord Stage 3 sound engines.

*Range: Swell (Default), Volume*

### GAIN

This setting allows you to add some gain to the output of the pedal. This can be used if an attached pedal does not reach the maximum level or setting.

*Range: 1 - 10*

## SOUND MENU

Hold **SHIFT** and press **SOUND** (Program 2) to access the Sound menu. Use the **PAGE** ◀ and ▶ buttons to navigate between the various menu items on the Sound menu. The **PROGRAM** dial is used to change settings, and soft buttons to access additional settings (as described above), where applicable. Press **EXIT** (Shift) to leave the menu.

### 1 - PIANO PEDAL NOISE LEVEL

Sets the level of the Pedal Noise that can be turned on for selected pianos, if a Nord Triple Pedal is connected to the Stage 3.

*Range: +/- 6 dB (0 dB default)*

### 2 - PIANO STRING RES LEVEL

Sets the level of the String Resonance feature that can be turned on for selected pianos (acoustic Med, Lrg and XL sizes).

*Range: +/- 6 dB (0 dB default)*

### 3 - B3 ORGAN TONEWHEEL MODE

Sets the level of tonewheel crosstalk and cable leakage artifacts of the B3 organ model.

*Range: Clean, Vintage 1 (default), Vintage 2*

### 4 - B3 ORGAN CLICK LEVEL

This sets the level of the Key Click for the B3 organ model.

*Range: Low, Normal (default), High*

### 5 - B3 ORGAN KEYBOARD TRIGGER POINT

This setting allows you to change how the Nord Stage 3 keyboard triggers the B3 sound. When "High" is selected, it will be triggered before the key is fully depressed, which is more similar to how a real B3 functions.

*Range: High, Low (Default)*

### 6 - SYNTH VIBRATO

#### RATE

This setting determines the rate of the Synth Vibrato.

*Range: 4.00 - 8.00 Hz (Default 6.00 Hz)*

#### AMNT (AMOUNT)

This determines the amount of Synth Vibrato when one of the vibrato *delay* modes are used.

*Range: 0-50 cent (Default value is 25 cent)*

### 7 - ROTARY SPEAKER

There are two available settings for the 122 Rotary speaker. For the 122 setting the microphones are placed traditionally – a bit away from the speaker. With 122 Close selected the microphones are placed closer to the cabinet.

*Range: 122 (Default), 122 Close*

### 8 - ROTARY ROTOR

#### SPD (SPEED)

This determines the speed of the rotary speaker woofer rotor.

*Range: Low, Normal (default), High*

#### ACC (ACCELERATION)

This determines the acceleration and retardation time of the rotary speaker woofer rotor.

*Range: Low, Normal (default), High*

### 9 - ROTARY HORN

#### SPD (SPEED)

This determines the speed of the rotary speaker treble horn.

*Range: Low, Normal (default), High*

#### ACC (ACCELERATION)

This determines the acceleration and retardation time of the rotary speaker treble horn.

*Range: Low, Normal (default), High*

## MIDI MENU

Hold **SHIFT** and press **MIDI** (Program 3) to access the MIDI menu settings. Use the **PAGE** ◀ and ▶ buttons to navigate between the various menu items on the MIDI menu. The **PROGRAM** Dial is used to change settings, the Panel buttons for switching between A and B. Soft buttons are used to access additional settings where applicable. When you are done, press Exit (Shift) to exit the menu.

### 1 - LOCAL CONTROL

MIDI Local control determines if the Nord Stage 3 keyboard and front panel controls should control internal instruments and programs or only transmit MIDI. Local On is the normal “play mode”. In Local Off mode, front panel and keyboard actions are transmitted via MIDI only.

*Range: On (Default), Off*

- ❗ *Local always defaults back to “On” every time the Nord Stage 3 is powered on.*

### 2 - CHANNEL

#### GLOBAL

This sets the transmitting and receiving MIDI channel for the Global Channel. The Global Channel transmits all keyboard, pedal and panel actions as MIDI signals. It can also be used as a receiving channel with full control of the entire Stage 3.

*Range: 1-16, Off (Default 1)*

#### PANEL A/B

This sets the *receiving* MIDI channel for Panel A/B.

*Range: 1-16, Off (Default Off, Panel A and B)*

#### DUAL KB

This sets the MIDI channel for receiving MIDI from an external keyboard when using Dual KB mode - see page 29.

*Range: 1-16, Off (Default 16)*

### 3 - CONTROL/PROGRAM CHANGE MODE

#### CC (CONTROL CHANGE)

This allows you to set if you want your Nord Stage 3 to transmit and/or receive MIDI Controller Messages or not on the Global channel.

*Range: Off, Send, Receive, Send & Receive (Default)*

#### PC (PROGRAM CHANGE)

This setting determines whether your Nord Stage 3 transmits and/or receives MIDI program Change Messages, on the Global channel.

- ❗ *This applies to the “internal” Programs in the Stage 3, not the program change messages that the Extern section can be set to transmit.*

*Range: Off, Send, Receive, Send & Receive (Default)*

### 4 - TRANSPOSE MIDI AT

When set to *In*, any active transpose value (global and/or set per program) will *not* be applied to the outgoing MIDI stream, but only to incoming MIDI data. If set to *Out*, any active transpose value will affect sent MIDI notes but not incoming ones.

*Range: In (Default), Out*

## EXTERN MENU

Hold **SHIFT** and press **EXTERN** (Program 4) to access the Extern menu, where settings and functions relating to the Extern section are found. Use the **PAGE** ◀ and ▶ buttons to navigate between menu pages, and on-screen soft buttons to reach different settings within one page. The **PROGRAM** dial is used to change settings. When done, press **EXIT** (Shift) to exit the menu.

- ❗ *Most items on the Extern menu have separate entries for Panel A and B.*
- ❗ *Most settings from the Extern menu are saved with a Program. The only exception is the “Extern MIDI A/B Channel”, if Extern MIDI Channel Mode is set to Global.*

### 1 - MIDI CHANNEL MODE

The Extern MIDI channels can be either be set *globally*, or independently for each *program*. In *Global* mode the Extern MIDI A & B channels will be the same for all programs. If *Program* is selected, the Extern MIDI A & B channel settings will be saved with each Nord Stage 3 program.

*Range: Global, Program (default)*

### 2 - MIDI PANEL A/B CHANNEL (PROG OR GLOB)

This sets the Extern section’s transmitting MIDI channels. The setting will say Prog (Program) or Glob (Global) depending on which has been selected on page 1 of the Extern menu.

*Range: 1-16 (14 default for Panel A, 15 is default for Panel B)*

### 3 - KEYB VELOCITY PANEL A/B

This setting determines the velocity curve for the keyboard when sending data on the Extern MIDI channels for each panel. The *Soft* setting will make it easier to generate high velocity values, whereas the *Hard* setting will make it harder.

*Range: Soft, Mid (Default), Hard*

### 4 - DEVICE MIDI PANEL A/B

For each panel it can be determined whether to send data generated by the modulation wheel, control (expression) pedal, aftertouch and swell pedal. If any of these should not generate MIDI data, turn its setting to *Off*.

*Range for Wheel, A.T, Expr and Swell is: On (Default), Off*

### 5 - SEND ON LOAD

This setting toggles if any settings for the Program Change (PC), Volume (Vol) or user defined MIDI CC (UsrCC) messages in the Extern section should be automatically transmitted when a program is selected, or not.

*Range for PC, Vol and UsrCC is: Off (Default), On*

### 6 - PROGRAM CHANGE SETTINGS PANEL A/B

A “complete” Program Change message consists of three parts: A Bank Select MSB value, a Bank Select LSB value and a Program Change value.

- ❗ *The Nord Stage 3 can send the Program Change message automatically, when a program is loaded, if the PC “Send On Load” setting is set to “On”.*

## BANK MSB

The Bank Select MSB ("Most Significant Byte") Control Change message may be necessary to define if addressing a unit with a large number of internal banks. According to the MIDI standard it is defined as CC# 0, and uses one byte of data for a total of 128 bank values.

*Range: 0-127, Off (Default Off)*

## BANK LSB

The Bank Select LSB ("Least Significant Byte") Control Change message - defined as CC# 32 - uses one byte of data to address a total of 128 banks.

*Range: 0-127, Off (Default Off)*

## PROGRAM NUMBER

The actual Program Change message consists of one byte of data for a total of 128 program values.

*Range: 0-127, Off (Default Off)*

## 7 - CONTROL CHANGE SETTINGS A/B

### CTRL (CONTROL)

The Control Change number should be defined according to the parameter on the external unit which should be addressed. Refer to the documentation of the external unit to see which CC numbers apply for which parameters.

*Range: 0-119, Off (Default Off)*

### VALUE

Define this value according to the initial value which should be sent when using the CC Send On Load feature.

*Range: 0-127, Off (Default Off)*

## 8 - VOLUME VALUE A/B

The Extern section can send MIDI Volume (CC#7) messages, allowing you to control the level of an external device. The value defined in this setting determines the initial value sent when using the Volume Send On Load feature.

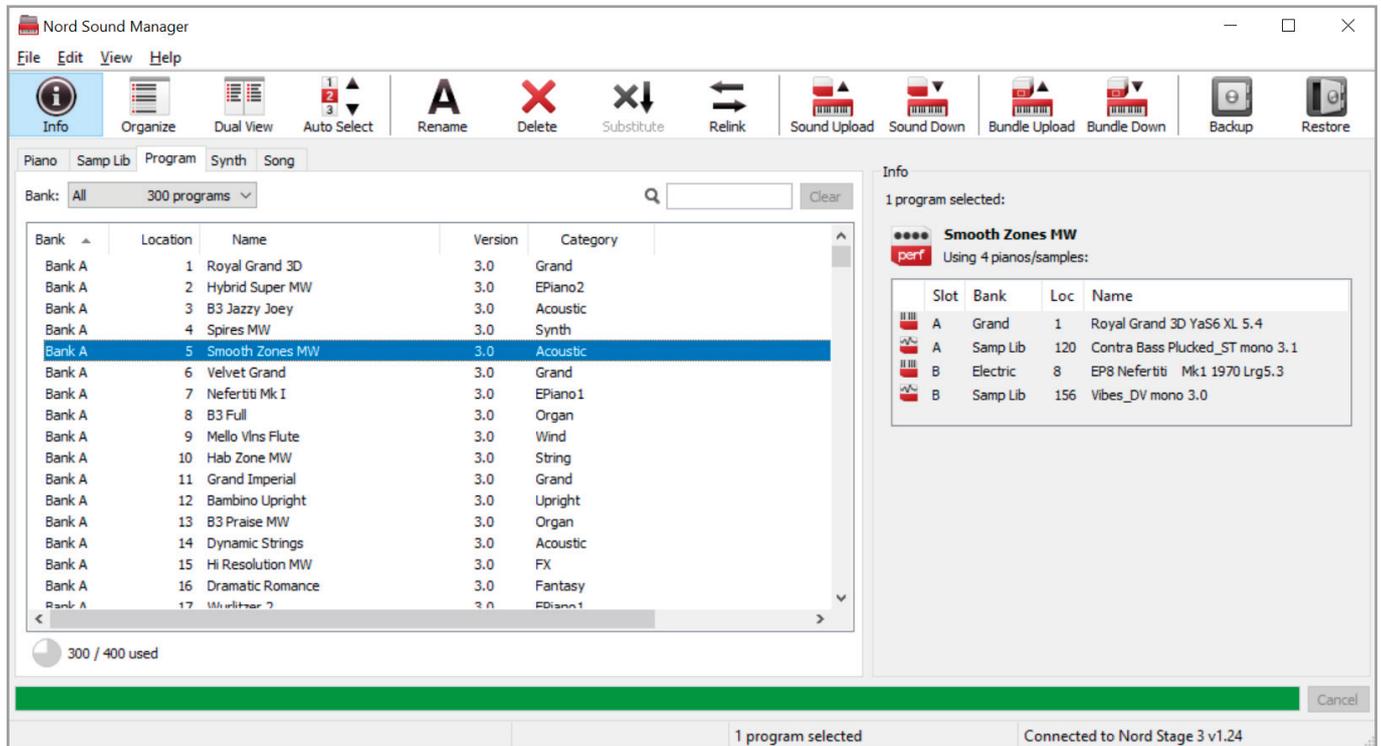
*Range: 0-127 (Default 0)*

## 9 - GLOBAL SOFT THRU

Incoming MIDI that matches the Global or Panel A/B channels can be re-routed, going out on the Extern channel if the Extern section is active on the current Program. This setting determines if this re-routing should apply or not.

*Range: Off (Default), On*

# 12 NORD SOUND MANAGER



## ABOUT NORD SOUND MANAGER

Nord Sound Manager is an essential application for any Nord Stage 3 owner, which allows for accessing, altering and backing up content within the various memory areas on the Nord Stage 3. These are some of the common tasks performed through the Nord Sound Manager:

- Organizing and naming Programs, Synth presets and Songs
- Downloading new Piano sounds to the Piano partition
- Downloading new Samples to the Sample partition
- Uploading Programs from the Nord Stage 3 to a computer
- Uploading *bundles* containing programs *and* their associated piano and sample files
- Performing backups of the entire instrument
- Restoring the entire instrument to a previous state

The Nord Sound Manager *and the user manual* for the application can be found at the [www.nordkeyboards.com](http://www.nordkeyboards.com) website, in the *Software* area.

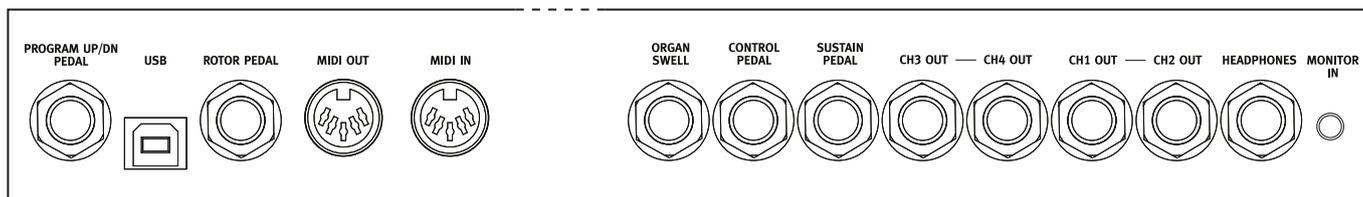
## SYSTEM REQUIREMENTS

Mac OS X 10.6 or later

Windows XP, Windows Vista, Windows 7, Windows 8 and Windows 10.

Nord USB Driver version v3.0 or later required for Windows.

# APPENDIX: CONNECTIONS



## AUDIO CONNECTIONS

General guide on audio connections: Before turning on your amplifier, make all audio connections. Always turn on the amplifier last, and when shutting down, always turn off your amplifier or active speakers first.

⚠ *Using your Nord Stage 3 at high volumes can damage your hearing.*

### HEADPHONES

1/4 inch stereo headphone jack. Audio is always output through the Headphones output, regardless of Output Routing settings.

### CH 1&2, CH 3&4 OUT

1/4 inch unbalanced line level outputs for amplifier or recording equipment. The Nord Stage 3 is a stereo instrument with separate signal paths for left and right audio channels.

When shipped, the Nord Stage 3 is configured to output audio through the Ch 1&2 outputs. Refer to the System Menu section on page 52 for details on how to utilise the Ch 3&4 outputs, in stereo or mono configurations.

### MONITOR IN

1/8 inch jack for connecting devices such as smartphones, tablets or computers to the Nord Stage 3. This is useful for playing and rehearsing to pre-recorded music or a metronome, or to use an additional sound source on stage. The Monitor In signal is routed to the Headphones and Ch 1&2 outputs.

⚠ *The Nord Stage 3 Master Level control does not affect the level of the Monitor In signal.*

## MIDI CONNECTIONS

### MIDI IN

The 5 pin MIDI In connection is used for receiving MIDI data sent from external devices such as controller keyboards, sequencers or computers.

### MIDI OUT

The 5 pin MIDI Out connection will send MIDI data to devices such as external sound modules or computers.

## USB CONNECTION

The USB port is used for connecting the Nord Stage 3 to a computer. The connection can be used for transferring MIDI, for OS updates and for connecting to applications such as the Nord Sound Manager or Nord Sample Editor. These applications, and the latest OS version can always be found for download at [www.nordkeyboards.com](http://www.nordkeyboards.com).

ⓘ *MIDI over USB and standard 5 pin MIDI connectors are both active at the same time. There is no need to choose between the two options in a menu or similar.*

## PEDAL CONNECTIONS

### SUSTAIN PEDAL

1/4 inch connector for all common types of sustain pedals, including the Nord Triple Pedal. Sustain pedal polarity can be detected automatically or set manually in the System menu, see page 52.

💡 *Read more about the functionality of the Nord Triple Pedal on page 23.*

### CONTROL PEDAL

1/4 inch connector for an expression pedal of continuous type, used for controlling morphs and/or volume. Most of the common expression pedal makes and models are supported, and can be selected in the System menu.

### ORGAN SWELL

1/4 inch connector for an expression pedal of continuous type, used as a swell pedal with the Organ section. Most of the common expression pedal makes and models are supported, and can be selected in the System menu.

### PROGRAM UP/DN PEDAL

1/4 inch connector for a two-button, momentary pedal, used for switching programs up and down, or song parts when in Song Mode. The polarity of the pedal can be set in the System menu.

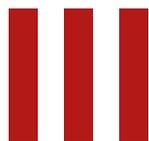


# APPENDIX: MIDI CONTROLLER LIST

Nord Stage 3 Parameter	MIDI CC #
<i>Bank Select MSB</i>	0
<i>Bank Select LSB</i>	32
Sustain	64
Sostenuto	66
Soft Pedal	67
Ctrl Pedal (Expression)	11
Live Mode	2
Song Mode	3
Song Part	5
Panel Enable	6
Panel Focus	8
Organ Enable	9
Organ Octave Shift	12
Organ Level	13
Organ Model	14
Organ Preset	15
Organ Drawbar 1	16
Organ Drawbar 2	17
Organ Drawbar 3	18
Organ Drawbar 4	19
Organ Drawbar 5	20
Organ Drawbar 6	21
Organ Drawbar 7	22
Organ Drawbar 8	23
Organ Drawbar 9	24
Organ Percussion Enable	25
Organ Vibrato Type	26
Organ Vibrato Enable	27
Organ Percussion Harmonic	28
Organ Percussion Speed	29
Organ Percussion Level	30
Piano Enable	33
Piano Level	34
Piano Octave Shift	35
Piano Type	36

Nord Stage 3 Parameter	MIDI CC #
Piano Model	37
Piano Variation	38
Piano Layer Detune	39
Piano EQ	40
Synth Enable	42
Synth Level	43
Synth Octave Shift	44
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Synth Voice Mode	49
Synth Unison	50
Synth Vibrato Mode	51
Synth Mod Envelope Attack	52
Synth Mod Envelope Decay	53
Synth Mod Envelope Velocity	54
Synth Osc Pitch	55
Synth Osc Ctrl	56
Synth Mod Envelope Release	57
Synth Osc Modulation	58
Synth Filter Freq	59
Synth Filter Resonance	60
Synth Filter Drive	61
Synth Filter LFO Amount	62
Synth Filter KBD Track	63
Synth Filter Type	65
Synth Amp Envelope Attack	68
Synth Amp Envelope Decay	69
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Effect 2 Rate	90
Effect 2 Enable	91
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Delay Amount	93
Delay Rate	94
Delay Feedback	95
Delay Mode	96
Delay Enable	97
Delay Ping-pong	98
Delay Filter Type	99
Amp/EQ Type	100
Amp/EQ Drive	101
Amp/EQ Bass	102
Amp/EQ Mid	103
Amp/EQ Treble	104
Amp/EQ Enable	105
Amp/EQ Source	106
Amp/EQ Mid Frequency	107
Rotary Speed	108
Rotary Source	109
Rotary Drive	110
Rotary Enable	111
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Reverb Amount	113
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# FCC Information (U.S.A.)

## 1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!

This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Clavia may void your authority, granted by the FCC, to use the product.

**2. IMPORTANT:** When connecting this product to accessories and/ or another product use only high quality shielded cables. Cable/s supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

**3. Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment is found to be the source of interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.

This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

## NOTICE

This Class B - digital apparatus complies with Canadian ICES-003.

## AVIS

Cet appareil numérique de la classe B - est conforme à la norme NMB-003 du Canada.

## DECLARATION OF CONFORMITY Compliance Information Statement

**Model Name:** Nord Stage 3 88, Nord Stage 3 HP76, Nord Stage 3 Compact

**Type of Equipment:** Digital Organ and piano

**Responsible Party:** Clavia DMI AB

**Address:** P.O. BOX 4214. SE-102 65 Stockholm Sweden

**Telephone:** +46-8-442 73 60

