

# nord stage 4

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## USER MANUAL

Nord Stage 4

*English*

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Edition: D



**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.

AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFE.

**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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## INFORMATION ON DISPOSAL FOR USERS



**EN**

This electronic device must be recycled or discarded according to applicable local and national regulations.

The symbol shown, applied to the product or on its packing, indicates that, at end of life, the product is not to be thrown away, or disposed as unsorted municipal waste, but separately collected.

Clavia DMI AB encourages owners of Nord musical instruments to responsibly recycle their equipments when they are no longer needed.

Disposing of this product correctly will prevent potential negative effects on the environment and human health which could arise due to inappropriate waste handling.

## INFORMATIONS SUR L'ÉLIMINATION POUR LES UTILISATEURS



**FR**

Cet appareil électronique doit être recyclé ou jeté selon les lois en vigueur dans votre pays.

Ce symbole appliqué sur le produit ou sur son emballage, indique qu'à la fin de la vie de ce produit, il ne doit pas être jeté avec les déchets ménagers mais qu'il doit être déposé dans un point de collecte.

Clavia DMI AB encourage les possesseurs d'instruments de musique Nord à recycler de façon responsable quand les appareils ne sont plus utilisés.

L'élimination correcte de ce produit permettra d'éviter les effets négatifs potentiels sur l'environnement et la santé humaine qui pourraient résulter d'une manipulation inappropriée des déchets.

## INFORMATIONEN ZUR ENTSORGUNG FÜR BENUTZER



**DE**

Dieses elektronische Gerät muss gemäß den geltenden lokalen und nationalen Vorschriften recycelt oder entsorgt werden.

Das abgebildete Symbol auf dem Produkt oder auf der Verpackung weist darauf hin, dass das Produkt am Ende seiner Lebensdauer nicht weggeworfen oder im Hausmüll entsorgt werden darf, sondern separat gesammelt werden muss.

Clavia DMI AB ermutigt die Besitzer von Nord Musikinstrumenten, ihre Geräte verantwortungsbewusst zu recyceln, wenn sie nicht mehr benötigt werden.

Die ordnungsgemäße Entsorgung dieses Produkts verhindert mögliche negative Auswirkungen auf die Umwelt und die menschliche Gesundheit, die durch eine unsachgemäße Abfallbehandlung entstehen könnten.

## INFORMACIÓN SOBRE LA GESTIÓN DE RESIDUOS PARA LOS USUARIOS



**ES**

Este dispositivo electrónico debe reciclarse o desecharse de acuerdo con la normativa local y nacional aplicable.

El símbolo que se muestra, aplicado al producto o a su embalaje, indica que, al final de su vida útil, el producto no debe tirarse a la basura, ni eliminarse como residuo municipal sin clasificar, sino recogerse por separado.

Clavia DMI AB anima a los propietarios de instrumentos musicales Nord a reciclar responsablemente sus equipos cuando ya no los necesitan.

La eliminación correcta de este producto evitará los posibles efectos negativos sobre el medio ambiente y la salud humana que podrían surgir debido a una manipulación inadecuada de los residuos.

## INFORMAÇÃO SOBRE GESTÃO DE RESÍDUOS PARA OS UTILIZADORES



**PT**

Este dispositivo electrónico deve ser reciclado ou eliminado de acordo com os regulamentos locais e nacionais aplicáveis.

O símbolo mostrado, aplicado ao produto ou à sua embalagem, indica que no fim da sua vida útil o produto não deve ser deitado fora ou eliminado como lixo municipal não separado, mas sim recolhido separadamente.

Clavia DMI AB encoraja os proprietários de instrumentos musicais Nord a reciclar responsávelmente o seu equipamento quando este já não é necessário.

A eliminação correcta deste produto evitará potenciais efeitos negativos sobre o ambiente e a saúde humana que possam surgir devido a um manuseamento inadequado dos resíduos.

## INFORMAZIONI PER GLI UTENTI RELATIVE ALLO SMALTIMENTO



**IT**

Questo dispositivo elettronico deve essere riciclato o smaltito secondo le normative locali e nazionali vigenti.

Il simbolo raffigurato, applicato sul prodotto o sul suo imballaggio, indica che, a fine vita, il prodotto non deve essere gettato o smaltito come rifiuto urbano indifferenziato, ma raccolto separatamente.

Clavia DMI AB incoraggia i proprietari di strumenti musicali Nord a riciclare responsabilmente le loro apparecchiature quando non sono più necessarie.

Lo smaltimento corretto di questo prodotto eviterà potenziali effetti negativi sull'ambiente e sulla salute umana che potrebbero derivare da una gestione inappropriata dei rifiuti.



### INFORMATION ON RECYCLING OF PACKAGING MATERIALS

EN

Outer box and internal cardboard protection should be recycled as paper.  
Internal plastic foam protection and plastic bags should be recycled as plastics.

### INFORMATIONS SUR LE RECYCLAGE DES MATÉRIAUX D'EMBALLAGE

FR

La boîte extérieure et la protection interne en carton doivent être recyclées comme du papier.  
La protection interne en mousse plastique et les sacs en plastique doivent être recyclés en tant que plastiques.

### INFORMATIONEN ZUM RECYCLING VON VERPACKUNGSMATERIALIEN

DE

Der äußere Karton und der innere Kartonschutz sollten als Papier recycelt werden.  
Interner Kunststoffschaumschutz und Plastiktüten sollten als Kunststoffe recycelt werden.

### INFORMACIÓN SOBRE RECICLAJE DE MATERIALES DE EMBALAJE

ES

La caja exterior y la protección interna de cartón deben reciclarse como papel.  
La protección interna de espuma de plástico y las bolsas de plástico deben reciclarse como plásticos.

### INFORMAÇÕES SOBRE A RECICLAGEM DE MATERIAIS DE EMBALAGEM

PT

A caixa externa e a proteção interna de papelão devem ser recicladas como papel.  
A proteção interna de espuma plástica e os sacos plásticos devem ser reciclados como plásticos.

### INFORMAZIONI SUL RICICLAGGIO DEI MATERIALI DI IMBALLAGGIO

IT

La scatola esterna e la protezione interna in cartone devono essere riciclate come carta.  
La protezione interna in schiuma di plastica e i sacchetti di plastica devono essere riciclati come plastica.



**FR**  
Ce produit  
NORD et ses  
cordons se  
recyclent

À DÉPOSER  
EN MAGASIN

À DÉPOSER  
EN DÉCHÈTERIE

OU

Points de collecte sur [www.quefairedemesdechets.fr](http://www.quefairedemesdechets.fr)  
Privilégiez la réparation ou le don de votre appareil !

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# 1 INTRODUCTION

## THANK YOU!

Thank you for choosing the Nord Stage 4!

Representing our vision of the ultimate stage keyboard, our new flagship instrument features award-winning technologies such as the Nord Wave 2 Synth engine with Sample playback, the acclaimed Nord C2D Organ engine, an enhanced Piano section and extensive hands-on Effects – all in one exceptional performance keyboard.

## FEATURES

The Nord Stage 4 has the following main features:

- Organ section with faithful reproductions of three classic organ models: B3 with a dedicated B3 Bass mode, Vox and Farf (Farfisa). There are also two Pipe organ models, each with its own distinct character.
- Physical Organ drawbars with LED graphs.
- Physical volume faders with LED graphs for each Organ, Piano and Synth Layer.
- Piano section with two independent Layers. Acoustic *Grand* and *Upright* pianos, tine and reed based *Electric* pianos, *Clavinet* and *Harpichord* sounds and a *Digital* category including rich sounding piano layers. The *Misc* category provides a selection of expressive mallet sounds such as a Marimba and a Vibraphone.
- Synth section with three independent Layers based on the Nord Wave 2 synthesizer with dedicated OLED display, Sample playback, Analog style waveforms, a variety of FM algorithms, digital Waves and massive Super Waves.
- Comprehensive and independent Effects section for each Piano and Synth Layer and a shared Effects section for both Organ Layers.
- Organ, Piano and Synth Preset banks with a large selection of sounds – including effects – for each section.
- Seamless transitions: Sustaining notes are maintained when changing programs.
- Extern mode in the Synth section for controlling external MIDI instruments.
- Powerful Morph features for changing multiple parameters using physical controls.
- Four keyboard zones with user adjustable split cross-fade allowing sounds to smoothly transition over split points.
- Two Layer Scenes, allowing different Layer configurations within the same Program.
- Extensive pedal functionality including support for the new Nord Triple Pedal 2 and Nord Sustain Pedal 2.
- Nord Stage 4 HA88 and HA73 models with fully weighted *triple sensor* keybeds. Nord Stage 4 Compact with a 73-note semi weighted *triple sensor* “waterfall” keybed (E-E).

## NORD ONLINE

On the **nordkeyboards.com** website you will find:

- » Information about the Nord Stage 4 and other Nord instruments
- » Latest Operating System for download
- » Free software: Nord Sound Manager, Nord Sample Editor 4 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**

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 which can be downloaded from the Nord Stage 4 section on our website.

## FREE SOUNDS

Since the Nord Stage 4 is designed as an open system, each and every piano and sample in the Nord Stage 4 can be replaced with sounds from the continuously expanding Nord Piano Library and the Nord Sample Library. These free sound libraries are found at [www.nordkeyboards.com](http://www.nordkeyboards.com) where you will also find the free Nord Sound Manager application which is used for downloading and organizing content on the Nord Stage 4.

## CUSTOM SAMPLES

Use the Nord Sample Editor 4 for quick and easy creation of custom sample instruments for the Nord Stage 4. Whether creating a fully mapped instrument, a simple FX sound or assigning a sampled song intro to a single key, the Nord Sample Editor 4 opens up many possibilities together with the Nord Stage 4.

The Nord Sample Editor 4 can be downloaded from the Software section at [www.nordkeyboards.com](http://www.nordkeyboards.com).

## RESTORING THE FACTORY PRESETS

The factory programs, 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.

## OS UPGRADES

The latest OS (Operating System) version for the Nord Stage 4 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 check our website from time to time, to make sure you have the latest version in your unit.

## 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 4.

# 2 OVERVIEW



## ORGAN SECTION

The dedicated Organ section, with its two independent Layers, features physical drawbars accompanied by LED graphs for hands-on control and ease of use.

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 in response to your playing. The Stage 4 faithfully reproduces the important foldback and energy robbing characteristics; the latter will produce the gentle compression effect that makes those lovely smears a joy to play. The three tonewheel modes allow for switching from a clean, factory new instrument to a worn and battered workhorse. The B3 Bass mode allows for split or dual keyboard setups with the dedicated bass drawbars for the left hand or pedals.

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 4 features a rotary speaker simulation derived from the Nord C2D. Incorporating the acoustic variations that occur as a physical rotating speaker spreads the sound around in a room, they bring the organ sounds to life with remarkable realism. All Nord Stage 4 models feature physical drawbars coupled with LED graphs.

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 19.

## PIANO SECTION

The Nord Stage 4 Piano section, with its two independent Layers, 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 Clavinet, Harpsichords, Digital pianos and Miscellaneous keyboard sounds.

### NORD PIANO LIBRARY

The Nord Stage 4 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 4 is compatible with the Nord Triple Pedals which unlock 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" 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 4 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 TIMBRE

A quick method for altering the character of the current piano sound is to use the Piano and Clav Timbre 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.

## DYNAMIC COMPRESSION

The Dynamic Compression feature raises the sound level for softer strokes, enabling an even and audible performance at all times, even with very dynamic playing.

This section is further described in the Piano chapter, beginning on page 23.

## PROGRAM SECTION

A *program* on the Nord Stage 4 contains settings for the sound engines of all Layers and their 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. Additionally, this is also where the Organ, Piano and Synth Preset banks are found, allowing for complete presets – including effects! – to be loaded into any Layer or Section of your program.

This section is described in detail in the Program chapter, beginning on page 37.

## SYNTH SECTION

The Synth section contains three independent Layers and is based on the acclaimed Nord Wave 2. In addition to *Analog* style waveforms and digital *Waves* and *FM algorithms*, the Stage 4 Synth can be used for all sorts of *Sample* based sounds. It also features a *Super* (Super Wave) category suitable for those massive, multi-oscillator, sounds that can not be created by other means. The large number of *oscillator types* allows for a multitude of single or dual oscillator setups, waveshaping, frequency modulation and more.

The OLED display dedicated to the Synth Section assists with Filter, Envelope and other Synth settings, and provides excellent overview of Waveform or Sample selection.

The Nord Sample Library 4 gives Stage 4 owners access to a huge free library of world-class sounds, including the famous vintage Mellotron and Chamberlin samples. Custom user 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 4 provides an emulated transistor low pass filter and a powerful combined low-pass/high-pass filter.

The advanced Arpeggiator, with its Poly, Gate and Pattern modes makes possible all kinds of rhythmic programming across multiple Layers.

With dedicated Amp, Filter and Oscillator envelopes, an LFO and Unison control, the Stage 4’s synth capabilities are powerful, and provide virtually limitless possibilities in terms of stunning on-stage sounds.

There is an in-depth description of this section in the Synth chapter, beginning on page 27.

## EXTERNAL MIDI

The Nord Stage 4 delivers powerful capabilities as a MIDI controller, especially when using the Extern mode feature of the Synth Section. Extern can be assigned to keyboard zones just like the internal sound engines, but specializes in controlling external gear – computers, synth modules etc. – over MIDI.

The Extern mode is described in detail in the Extern chapter, beginning on page 45.

## LAYER EFFECTS SECTION

A wide array of classic effects are independently available for each Piano and Synth Layer and for the Organ Section:

The *Mod 1 and 2* units provide all essential modulation effects such as Tremolo, Chorus and Phaser, modeled after legendary stomp boxes and effects units. With a *Variation* setting for each effect the number of available sounds is now greater than ever.

The *Delay* effect can go anywhere from distinctly vintage to modern and atmospheric sounding - with its Analog mode and dedicated feedback Effects with Variations and Filters.

Classic amplifier simulations with Variations, a versatile EQ and powerful, resonant filters are available in the *Amp Sim/EQ* section. The punchy *Compressor* with an extra tight “fast mode” helps keep your performance in control. Finally, the lush *Reverb* – also independently available per Layer – provides an array of room simulations, from the small Booth model to an expansive Cathedral, as well as a Spring reverb. The Reverb Variations, and the characterful Chorale mode for larger room types, provide plenty of room for experimentation.

💡 *Many of the effect parameters can be “morph” controlled, which means they can be addressed by the modulation wheel, pedals or aftertouch. This opens up for all kinds of creative, real-time interaction with both the sound engines and their effects.*

This section – and the *Rotary Speaker* – is described in detail in the Layer Effects chapter, beginning on page 47.

# 3 GETTING STARTED

Let's spend a few minutes getting acquainted with the most fundamental features of the Nord Stage 4. 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 sound creation.

## HOOKING IT UP

- 1 Connect the Nord Stage 4 power cord to the unit and a mains power supply, connect a sustain pedal and a set of headphones or a sound system.
- 2 Make sure to turn on the Nord Stage 4 first, before the sound system. Please be careful with the output volume.

For more information on all the connections on the Stage 4, have a look in the Connections section on page 64.

## 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 4, with room for 512 programs.

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

- i** 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 eight **PROGRAM** buttons, located below the display. The **PAGE** ◀ / ▶ buttons are used to navigate program *pages* – a page being a group of 8 programs. A Program bank on the Nord Stage 4 can contain up to 64 programs divided into 8 program pages.



- 💡** Some of the factory programs are labeled with *Whl* 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 turning the **PROGRAM** dial.

## PANEL CONTROLS

### DIALS AND KNOBS



The *dials* on the Nord Stage 4 are knobs without any fixed start and stop positions, used for navigating parameters and settings in a step-wise fashion. In this manual dials are sometimes also referred to as *encoders*.



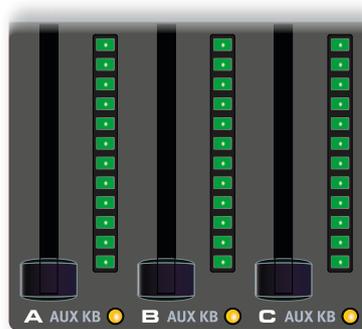
Potentiometer-type *knobs* are used for most parameters on the Nord Stage 4. When a program is loaded the physical positions of these knobs will in most cases not correspond to the actual parameter values. As soon as a knob is turned however, its associated parameter value will “snap” to the knob's position.



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 37.

- 💡** 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.

### FADERS



Layer **A / B / C** faders consist of a physical slider and an LED graph which provides a visual indication of the current volume level of a Layer.

## BUTTONS



Selector buttons are used for selecting a 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** 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.



Synth Function buttons – indicated with a red frame – such as those for all envelopes, utilize the Synth Section display and its three dials for making settings.

## THE SHIFT BUTTON



Many panel controls on the Nord Stage 4 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.

## BUTTON HOLD AND DOUBLE TAP FUNCTIONS



Some buttons, such as that for the Master Clock, can be *held down* in order to access a function or make additional settings, indicated by the text being accompanied by a down arrow ( ▼ ).

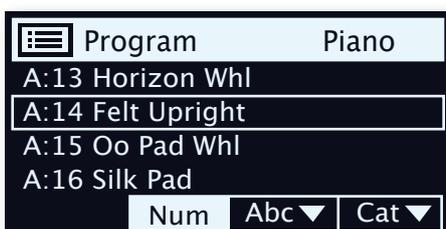


Button texts with double arrows ( ▼ ), such as those for Section Edit and Morph Assign, can be *double tapped* in order to keep the function in its active state, without having to keep the button pressed down manually. This is sometimes referred to as “latch” or “sticky” mode, which can be exited by either pressing again on the button or on Shift/Exit.

## 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 a Program in any of the 8 banks, using the **PROGRAM** dial.
- 3 Press **SHIFT** again to **EXIT** the List view.

📍 List views for the Piano, Preset Library and Waveform dials function in just the same way.

## PROGRAM VIEW MODES

The **PROG VIEW** (Program View) button lets you select between three distinct modes for what is shown in the Program display, providing more or less information as needed or desired.

Press the Prog View button to try out each of the modes:

- 1 The *first* view mode shows only the Bank letter and Program number, as well as the Program name. The lower half of the display is reserved for parameter hints, shown when operating a panel control.
- 2 The *second* view mode shows the same info as the first mode, but adds rows for the Organ, Piano and Synth Sections where information about what is loaded in the *currently focused* Layers is shown.
- 3 The *third* view mode shows information about *all* Layers, with the Program name and location in smaller print at the top of the display.

## 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 Select Program A:21 (a piano based program) for this exercise.

The controls for the Piano Section are located immediately to the left of the Program area on the panel. Depending on Prog View mode (see above) the Program area display shows the name of the selected piano sound, and 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. To switch between sounds of different type (Grand, Upright, Electric Piano etc.) use the **TYPE** button.
- 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 4 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 4 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 Protection is the first setting of the *System* menu. If the display shows a different setting, use the Page ◀ button to navigate to the Memory Protection setting.
- ③ Change this setting to *Off* by turning the **PROGRAM** dial.
- ④ Press **EXIT** (Shift button) to exit the *System* menu.

**i** *This setting, like all other System settings, will be permanently stored until it is changed again.*

Read more about menu settings, starting on page 53.

## 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.



**i** *Some Programs, such as A:21 White Grand in this example, are named after a specific sound in the Piano section. Note that this name does not change if you store the Program with a different Piano selected, but needs to be manually set through a Store As operation, or by using the Nord Sound Manager*

- 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.

**i** *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 27.

## LIVE MODE



The eight **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 **PROGRAM** buttons to navigate the eight 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 eight 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.

**i** *When the Nord Stage 4 is shipped the eight Live Mode Programs are simply copies of the first eight Programs in Bank A of the Program banks.*

## SECTIONS AND LAYERS



A *Section* on the Nord Stage 4 refers to the **ORGAN**, **PIANO** and **SYNTH** areas of the panel respectively, *including* their individual *Layers*. The Organ and Piano Sections contain two *Layers* each, labeled **A** and **B**, while the Synth Section contains three *Layers*; **A**, **B** and **C**.

Entire Sections can be turned On or Off by pressing the Section **ON** button.

### TURNING LAYERS ON AND OFF



Within a Section, *Layers* are turned On by simultaneously pressing the **ON/OFF** buttons for *Layers* that should be active. As an example, to add Piano **B** when Piano **A** is already turned On, press down *both* buttons.

To toggle between two *Layers*, press the non-active *Layer* button.

Pressing the button for an *active Layer* gives it *focus* on the panel, making all parameter controls for that *Layer* available for editing.

*Layers* are turned **OFF** by holding down a *Layer* button for a short moment, as indicated by the “▼” symbol.

## LAYER EFFECTS

The Nord Stage 4 has a dedicated **LAYER EFFECTS** section, with a large selection of different effects that can be applied to sound sources on a per-Layer basis. Both **PIANO** Layers (A and B) and all three **SYNTH** Layers (A, B and C) have their own complete sets of effects. The two **ORGAN** Layers, A and B, share one effects chain.

The Layer Effects Section can be turned on or off, which bypasses all effects, by pressing its **ON** button.



The **ORGAN**, **PIANO** and **SYNTH** buttons in the **FX FOCUS** area are used for selecting which Section or Layer has focus for effects editing.

The effects for each Section can either be used individually per Layer, or be grouped together by pressing **SECTION** (Shift+Organ/Piano/Synth). In Section mode, all Layers *share the same settings* for all effects. The settings for the Layer *which has focus* will be applied to all Layers, when entering Section mode.

When exiting Section mode, by again pressing Section (Shift+Organ/Piano/Synth), all Layers within that Section will have the same effect settings until these are adjusted manually.

With **FOLLOW FOCUS** active, the FX Focus *automatically follows* the focus of Layer buttons in the Organ, Piano and Synth sections, as they are pressed.

The current effect focus is indicated both by a yellow **FX FOCUS** LED next to each Section's On button, as well as by the LEDs in the FX Focus area.

### ACTIVATE AN EFFECT

With Program A:21 still selected, try out these steps to add effects to the clean Piano sound:

- 1 Make sure that Piano **A** has focus in the FX Focus area. If not, press the FX Focus **PIANO** button so that it does.
- 2 Activate the reverb by pressing the Reverb **ON** button.
- 3 Adjust the **DRY / WET** balance with the knob in the Reverb area.
- 4 Turn on the Delay effect by pressing its **ON/OFF** button once.
- 5 Try the **RATE**, **FEEDBACK**, **FILTER**, **EFFECTS** and **DRY WET** controls, to alter the character and intensity of the Delay effect.

## LOAD A PRESET



The Nord Stage 4 **PRESET LIBRARY** comes with a large number of Preset sounds for the Organ, Piano and Synth sections, making it quick and easy to load ready-to-use sounds, including effects, into existing Programs. With Program A:21 still selected, let's try adding a Synth sound from the Preset Library:

- 1 Press the **SYNTH** button of the Preset Library section. This

automatically turns the Synth section On and opens the Preset browse screen.

- 2 Use the dial to find a suitable sound to layer with the Piano sound, perhaps a Synth Pad sound. Use the faders for the active Layers to adjust the sound levels appropriately.

💡 *Presets can be browsed by Category if desired. This is done by entering List View (Shift+dial), pressing the Cat soft button and selecting the desired Category from the List.*

- 3 Once you have found your desired sound, press the Preset Library Synth button again, or Shift/Exit, to confirm and exit the Preset browse screen.

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 on page 27.

### LOAD A SINGLE LAYER PRESET

Apart from loading Presets for the entire Section, as in the previous example, you can also load Presets for *single Layers*. This is useful whenever you want to keep sounds in other Layers within that Section intact, for example when blending new sounds with existing Layers, or for having access to a number of different sounds within the same Program – using Layer faders or Layer Scene functionality (see further down) to switch between them.

Let's add a Single Layer Preset to Piano B, for layering with the grand piano sound:

- 1 Press the Piano **A** and **B** buttons simultaneously to turn both Layers On and make sure that Layer B has focus, indicated by the blinking LED.
- 2 Press **SHIFT + PIANO** in the **PRESET LIBRARY** area to open the **SINGLE LAYER** screen.
- 3 Turn the Program dial to select a Layer Preset for Piano B, perhaps an electric piano sound. Use the Piano A and B faders to adjust the balance of the two sounds.
- 4 Once you have found a suitable sound, press the Preset Library Piano button to return.

### CREATE A SPLIT

Apart from layering sounds, like in the previous example, it is also possible to assign sounds to different zones of the keyboard, by using the **SPLIT** functionality. Continuing on the Piano and Synth combination from the previous example, let's split these sounds instead.

- 1 Press once on the **SPLIT ON/SET** button, located in the top row above the Program area display. This activates a single split point in the middle of the keyboard, at "C4".
- 2 To adjust the *position* of the Split point, press and hold the **SPLIT ON/SET** button.
- 3 There are two settings for each split point; *Note* and *xFade*. Make sure the *Note* row is selected by pressing the Program 1 button, corresponding to the ▼/▲ symbol in the display until the cursor is on the lower row. Set the desired *Mid* split point using the dial.
- 4 Make sure that the other two split points (*Low* and *High*) are set to "Off".

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

- 5 Press Piano A **KB ZONE** ◀ / ▶ (Shift+Octave Shift Up/Down) so that only the two rightmost LEDs are lit.

This assigns Piano A 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.

### ASSIGN THE SYNTH SOUND TO THE LOWER ZONE

Press the Synth A **KB ZONE** ◀ / ▶ (Shift+Octave Shift Up/Down) so that only the two leftmost LEDs are lit. Note that if you have loaded or created a Synth sound using multiple Layers you can double-tap on Section Edit before editing KB Zone, which lets you set the KB Zone for all Synth Layers at once.

- 1 *By using all three split points, Low, Mid and High, it is possible to divide the keyboard into a total of four distinct zones to which any Layer can be freely assigned.*

### ADD AN ORGAN LAYER

Let's add an Organ sound to the Synth/Piano split we just created.

- 6 Turn on the Organ Section by pressing its **ON** button
- 7 Try out the loaded Organ sound and adjust it as desired, or load an Organ Preset by pressing the Preset Library Organ button and selecting a Preset like in the previous Synth example.

- 💡 *While adjusting the sound of a Layer it can be monitored on its own by pressing the **SOLO** button in the Program area and pressing the button for that Layer to give it focus. Solo is exited by pressing Solo again, or with Shift/Exit.*

You should now have a sound which consists of the Organ assigned to the entire keyboard, layered with a Synth sound at the left side of the Split point and a Piano sound on the right side.

## LAYER SCENE II



The Layer Scene functionality allows for creating two independent Layer configurations where individual Layers or Sections can be turned On or Off as desired in each. Using our existing Organ, Piano and Synth combination, let's instead create a setup where we can switch

between Organ and the Piano and Synth combination:

- 1 Make sure that the Layer Scene II LED is unlit, meaning that we are on Layer Scene I, and turn the Piano and Synth Sections off. You should now have just the Organ sound, assigned to the entire keyboard.
- 2 Press Layer Scene II and turn the Piano and Synth sections On. Also make sure that the Organ section is turned Off.
- 3 Use the Layer Scene II button to toggle between the two Layer configurations.

The Layer Scene II configuration is stored as part of a Program, and is useful in scenarios where one wants to toggle between two distinct layer

configurations while staying within the same Program.

- 💡 *An attached pedal, either the Foot Switch or the middle or left pedal of a Nord Triple Pedal can be used for switching between Layer Scene I and II. Read more about this on page 42.*

## 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. Again, we start out with the piano based Program at A:21.

- 1 We will now create a layered sound and morph the *Piano B Level* with the *Wheel*, so start by making sure that the Piano Section is turned On.
- 2 Press both Piano **A** and **B** buttons simultaneously to activate both Layers.
- 3 Focus Piano B by pressing the **B** button and use the Piano Type and Model controls to select a sound from the **ELECTRIC** category. You should now have a grand piano sound layered with an electric piano sound.
- 4 Drag the Piano B fader all the way down to hear only the grand piano sound in Layer A.
- 5 Press and hold the **WHEEL** button in the Morph Assign group, above the Program area dial.
- 6 With the **WHEEL** button pressed, push the Piano **B** fader all the way up again.
- 7 Let go of the Morph **WHEEL** button. Play a few notes or chords, while moving the modulation wheel.

As the wheel moves, the Piano B level increases 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.

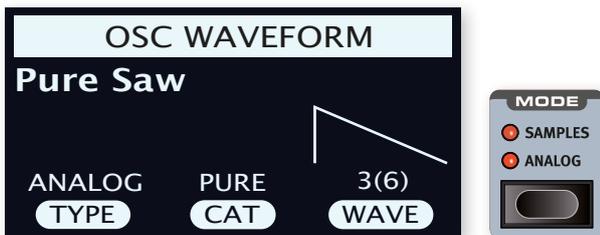
## THE SYNTHESIZER

The Nord Stage 4 **SYNTH** Section features three complete and independent synthesizers – Layers **A**, **B** and **C** – which can be used as single sound sources or as building blocks for more complex, layered, sounds.

💡 The **PRESET LIBRARY** (see previous page) contains a large number of ready-to-play sounds that can be used as is, or be further tweaked using the Synth and Layer Effects controls.

Let's have a look at some of the basic features of the Stage 4 synthesizer, beginning with how to set up a sound using “analog” waveforms.

- 1 Make sure the Synth section is active, by pressing the Synth Section **ON** button, and that only Layer **A** is active. Layers are turned Off by pressing down on the corresponding button for a short moment.
- 2 In order to start off from a “blank slate”, let's *initialize* the synthesizer to its default settings by pressing **SOUND INIT** (Shift+Waveform).
- 3 Turn off any active effects for the Synth section.
- 4 Make sure the Synth Section is in **ANALOG** Mode, using the **MODE** selector. Use the three dials under the display and set **TYPE** to Analog, **CAT** (Category) to Pure and **WAVE** to Sawtooth.



- 5 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 Category:
- 6 Turn the **CAT** dial to and select the *Multi* category. The **WAVE** dial can be used to select different combinations of multiple sawtooth waves. Let's stick with Multi Saw x2 which consists of two oscillators an octave apart.
- 7 Turn the **OSC CTRL** knob to alter the *Detune* parameter for the two oscillators, shown in the display, resulting in a more or less detuned and lively sound.



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

- 1 Make sure the Filter is turned **ON** and turn the Filter **ENV AMT** (Envelope Amount) to zero for now.
- 2 Press the Filter **TYPE** button. In the display, use the leftmost **TYPE** dial to try out the different kinds of filters.
- 3 Turn the Filter **FREQ** knob in each direction, and notice how the sound gets gradually darker or brighter, depending on which Type of filter is being used. Repeat this with all **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 38.

## LOADING AND ADJUSTING A SAMPLE

Now let's instead set up a string pad sound based on a sample:

- 1 Switch to Layer **B** of the Synth Section, and initialize it using the Sound Init function (Shift+Waveform).
- 2 Press the **MODE** button and select **SAMPLES**.

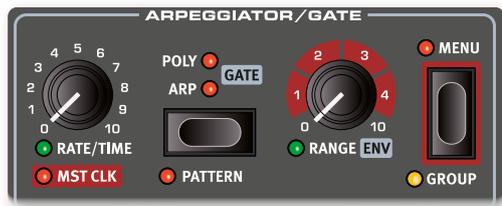


- 3 Use the **CAT** dial under the display to select the *Strings Ensemble* category. Use the **SAMPLE** dial to select a sound of your choice.
  - 4 Play a few notes. To make a pad out of the sound we will want to do a few tweaks. Press the **AMP ENVELOPE** button, opening up the amplifier envelope controls in the display.
  - 5 While playing, adjust the **RELEASE** control (third dial under the display) until a suitably long tail is heard when *releasing* a note, perhaps at a value of around 1 second.
  - 6 Similarly, use the **ATTACK** dial to create a softer and more gradual onset of the notes you play. A value around 500 ms may be suitable.
  - 7 To finalize the string pad, turn the Filter **ON**, press Filter **TYPE** and check that one of the **LP** (low-pass) options is selected, and adjust the Filter **FREQ** to give the sound a softer character. A value of around 2 kHz could be a good starting point.
- 💡 You may want to set *Env Amt* to zero for the Filter, or instead adjust the Filter **ENVELOPE**, which determines the contour of the Filter over time.
- 8 To try out the pad sound with a different sample, press and hold the **WAVEFORM** button and turn the **SAMPLE** dial. A normal turn of the Sample dial would turn off the Filter section and set the Amp Envelope to preset values for the selected sample.

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 34 and about effects, beginning on page 45.

💡 Additional samples can be added to the Nord Stage 4 by using the Nord Sound Manager software.

## THE ARPEGGIATOR/GATE



As a final exercise, let's create a sound using the Synth section and its **ARPEGGIATOR/GATE**.

- 1 Make sure that only the Synth Section is turned on and perform a **SOUND INIT** (Shift+Waveform). Set the Amp Envelope **ATTACK** time to 0, the **DECAY** to around 500 ms, 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 the Arpeggiator/Gate **MENU** button in order to make some additional settings:

Turn the **DIRECTION** dial and try out the different settings. With the default **UP** setting notes are played from the lowest key and up to the highest and then it starts over again. The other directions are **DOWN** (down), **UP/DOWN** and **RANDOM**.

With **ZIG ZAG** (the second dial) activated, played notes will jump by two steps and then back one, in a given direction.



- 1 *Pages 2-5 of the Arpeggiator/Gate menu concern the Pattern mode, their settings only having effect when Pattern (Shift+Arp/Gate Mode) is enabled.*

*The top row of the Arpeggiator/Gate menu indicates the current Waveform or Sample selection ("Multi Saw x 2" in the example).*

- 4 Now let's alter the range of the played arpeggio by turning the **RANGE/ENV** knob. The range can be adjusted up to 4 octaves in steps of 1/3 of an octave.

- 5 Press the **KB HOLD** button to keep the arpeggio going without the need for pressing the keys.

*Feel free to also try out the **POLY** (Polyphonic) and **GATE** modes while the arpeggiator is going. In Polyphonic mode, inversions of the held chord are played back repeatedly, while the Gate mode turns the sound off and on in a rhythmic fashion. Note that in Gate mode you will want to set the Amp and Filter Envelope Decay to longer values, since played notes are not repeated as with the Arp and Poly modes.*

## 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.



Press down on the Mst Clk **TAP/SET** button in the Program area to dial in a tempo with the **PROGRAM** Dial. The display will indicate the BPM. Set this to 130 BPM for this exercise. Press **SHIFT/EXIT** to exit.

*Alternatively, tap a minimum of four times on the Mst Clk button to set the tempo on the fly.*

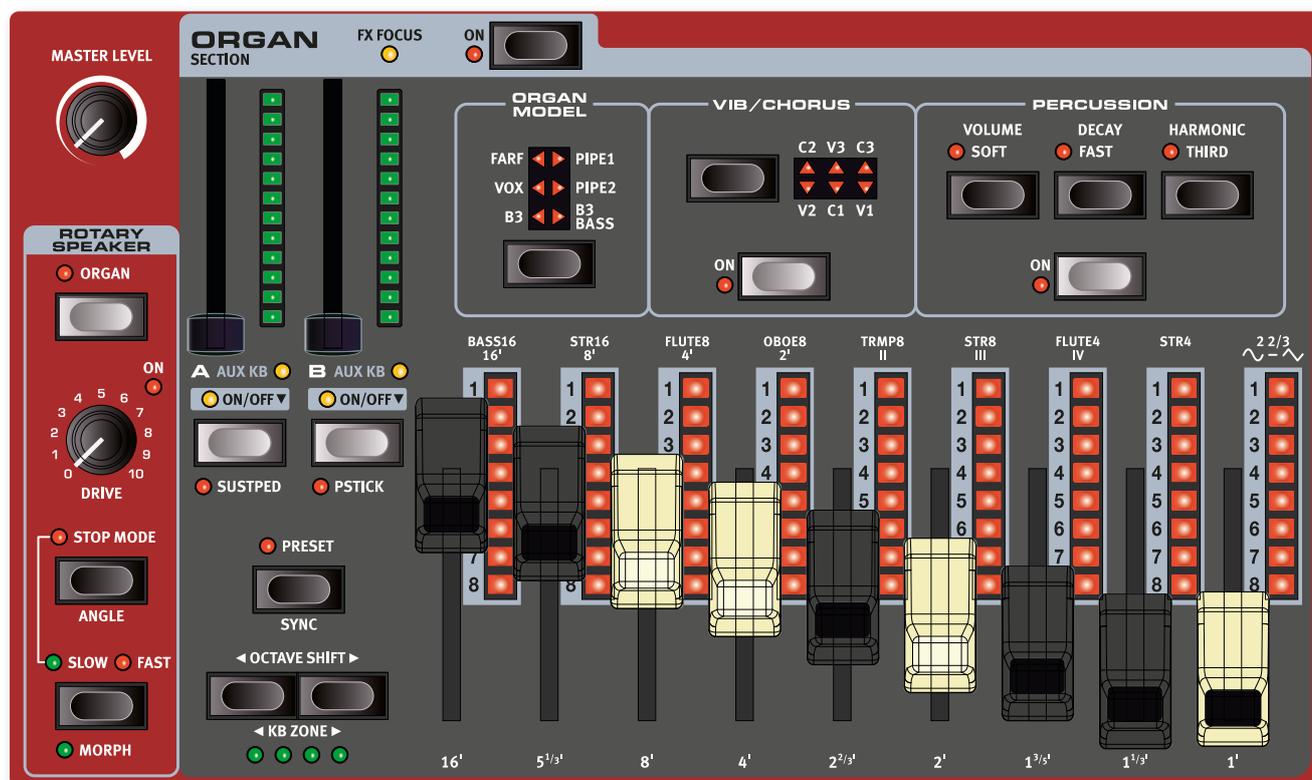
- 2 Turn the Arpeggio **RATE** knob to select the meter subdivision (or note values) that the arpeggio should play. The setting is shown in the Program area display as the knob is being turned. Notice how 1/4 is half the "speed" of 1/8. A "T" after a numerical value indicates triplets. Set the subdivision to 1/8.
- 3 Turn on the **DELAY** effect for the active Synth Layer. If you carefully adjust the delay **TEMPO**, 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:
- 4 Hold **SHIFT** and turn the Delay **TEMPO** knob to activate Master Clock for the Delay. The **MST CLK** LED lights up.
- 5 Turn the Delay **TEMPO** knob and again refer to the Program area display to monitor the setting.
- 6 Try 1/16, which will be half the note value or twice the "speed" of the arpeggio. Turn up the **DRY WET** 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 Mod 1 rate can be synchronized to the Master Clock in this fashion.

What's more, the Master Clock operates on all Layers simultaneously so you can control arpeggios and LFOs on all Synth Layers, and Effects for the Organ and Piano Sections as well.

Some of the Mst Clk equipped functions 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 SECTION



## ABOUT THE ORGAN SECTION

The Nord Stage 4 features six organ models, all digitally modeled; a tonewheel/B3 organ with a separate B3 Bass mode, two transistor organs (Vox and Farfisa) and two Pipe Organ models.

**i** The Rotary Speaker effect, which is often combined with the Organ, is covered in the Effects chapter, see page 47.

### ON/OFF AND LEVEL

The Organ Section is turned On or Off by pressing its **ON** button. The *morphable* level faders control the output level of each Organ Layer.

### LAYER BUTTONS AND FX FOCUS

There are two Organ Layers; **A** and **B**. Turning a second Layer On is done by pressing both Layer buttons simultaneously. Turning a Layer Off is done by holding its button down for a short period of time.

To toggle from one Layer to the other, press the non-active Layer button. With both Layers active, the focused Layer is indicated by a blinking LED above the Layer button.

If **FOLLOW FOCUS** is active in the **LAYER EFFECTS** section, pressing a Layer button also focuses the Organ Section effects for editing, indicated by the **FX FOCUS** LED at the top of the Organ section.

**i** Note that Both Organ Layers share the same effects chain, unlike the Piano and Synth Layers which each has its own set of effects.

### OCTAVE SHIFT AND KB ZONE

Use **OCTAVE SHIFT**  $\leftarrow / \rightarrow$  to transpose the selected Organ Layer 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 full range of the Organ.

Press **KB ZONE**  $\leftarrow / \rightarrow$  (Shift+Octave Down/Up), to assign the selected Organ Layer to any of the active keyboard zones. The green LEDs indicate which of the zones a Layer is assigned to. Read more about Split set-ups and keyboard zones on page 38.

### SUSTPED AND PSTICK

**SUSTPED** (Shift + Layer A On/Off) activates any attached sustain pedal for the selected Organ Layer. Read more on how to configure an attached pedal in the Menu chapter, on page 58.

**PSTICK** (Shift + Layer B On/Off) turns on pitch stick functionality for the selected Layer, in which case the Organ sound can be bent 2 semitones up and down, using the pitch stick.

### SELECTING AN ORGAN MODEL

Use the **ORGAN MODEL** selector button to select an Organ Model to use. Note that different models can be used for Layers A and B, enabling various layered Organ sounds or a B3 manual combined with the B3 Bass drawbars as a split or with one Layer played over MIDI.

## ORGAN PRESETS

The Nord Stage 4 comes with a large selection of complete and ready-to-use Organ Presets, including effects. These are browsed and loaded using the **ORGAN** button in the **PRESET LIBRARY** area, of the central Program section. User-created sounds can be stored to the Preset Library as well, for quick and easy recall from within any Program.

Read more about the Preset Library on page 40.

## DRAWBARS AND LED GRAPHS

The mechanical drawbars are accompanied by LED graphs. When a program is loaded the LED graphs show the stored settings for the drawbars, referred to as the Preset.

If the Preset is turned Off, the Organ is in Drawbar Live mode for that Layer, meaning that the physical positions of the drawbars are used, in which case the LEDs are unlit. Read more about Preset and Drawbar Live further down.

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

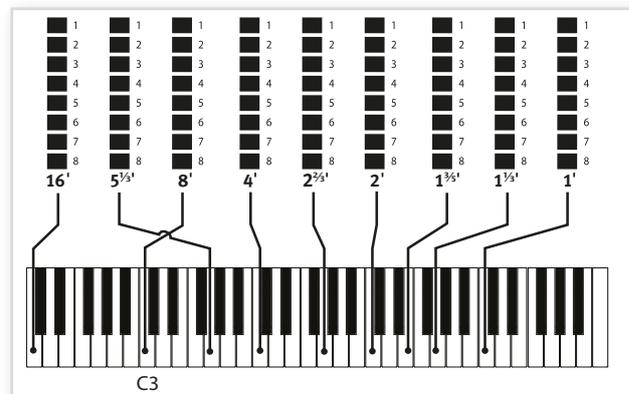
## THE B3 MODEL

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 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. 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  $5\frac{1}{2}'$  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 each Layer individually by pressing the Vibrato/Chorus button for the Layer A and Layer 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 at 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 57.

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

## THE VOX MODEL

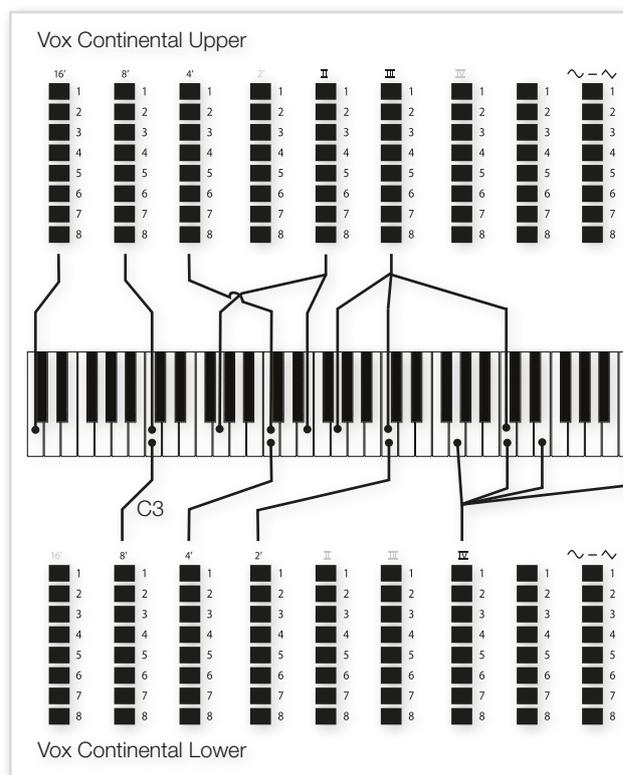
The original Vox™ organ is probably the most famous of all the transistor based combo organs that emerged in the early 60's. Transistor technology made it possible to manufacture compact and portable organ instruments. Compared to the mighty sound of tonewheel based organs, transistor organs generally sounded reedier and weaker, but this one had a distinctive sound character which together with the portability made the instrument massively popular at the time.

## 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 20. 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 4.

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 and On/Off state is shared by Layer A and Layer B.

## 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

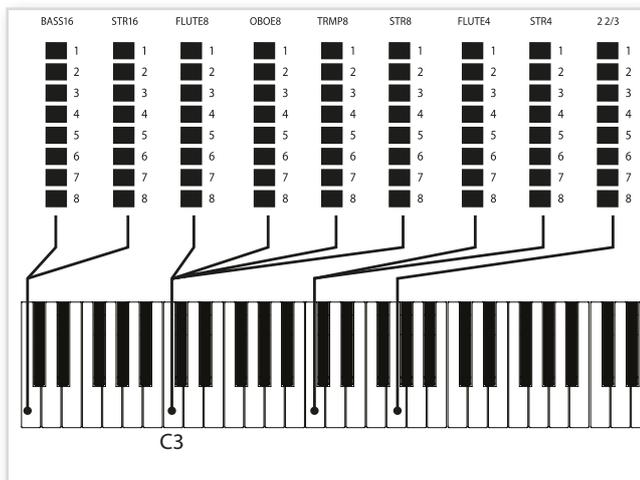
The labels used for the **FARF** drawbars/registers are printed on the upper row, above the drawbar LEDs or drawbars.

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. Pulling a drawbar more than half way out will activate that register.

Depending on Prog View mode (see page 41), 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 4, 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 Layers.

## PIPE ORGAN

### PIPE 1

The **PIPE1** organ model does not emulate an existing instrument, but provides a useful “all-purpose” organ, working 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 electromechanical 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.

## PIPE VIBRATO/CHORUS

Activating **VIBRATO/CHORUS** for the Pipe organs switches to a model which is tuned with less precision. This produces chorus-like effects, slight dissonances and adds 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.

## B3 BASS

The **B3 BASS** model provides the two traditional B3 Bass 16’ and 8’ drawbars. Apart from using them on their own they could be used on the left side of a keyboard split, or be controlled from an external keyboard or pedal keys over MIDI, using the Aux KB feature.

Read more about splits on page 38 and about Aux KB on page 42.

## PRESET AND DRAWBAR LIVE



By default the **PRESET** is turned On, meaning that the values stored in the Program are used for the drawbars, Percussion, and Chorus/Vibrato On/Off. When the Preset is turned Off the Organ is in “Drawbar Live” mode, using the actual positions of the physical drawbars. In Drawbar Live mode the drawbar LEDs are all unlit. Programs are always loaded in Preset mode.

## SYNC

Press **SYNC** (Shift+Preset) or press-hold **PRESET** to synchronize the Preset settings with the physical positions of the drawbars.

## 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 4, simply plug in a standard expression pedal to the Organ Swell input on the rear panel and configure the pedal in the Pedal Menu (see page 58).

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

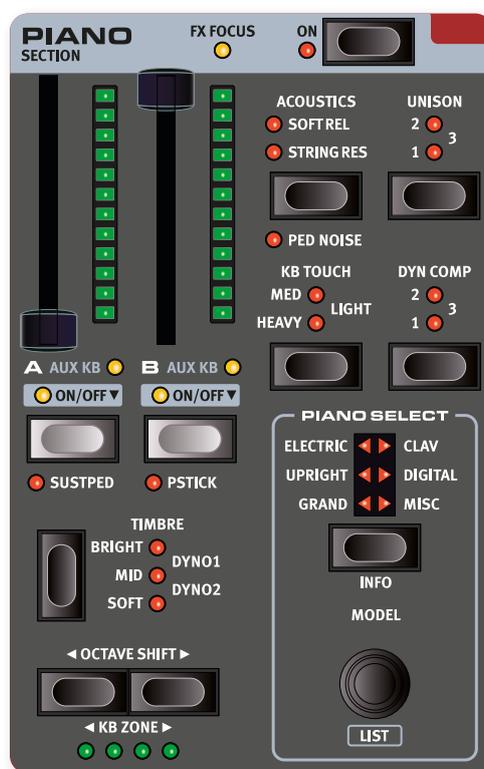
**I** Like on the original instrument, the Swell pedal does not lower the volume all the way to zero when in B3 or B3 Bass mode. For other Organ models the Swell pedal takes the volume all the way down.

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

## ROTARY SPEAKER

The Rotary Speaker settings are described in detail in the Effects chapter on page 52.

# 5 PIANO SECTION



## ON/OFF AND LEVEL

The Piano **SECTION** is turned On or Off by pressing its **ON** button. The morphable faders control the output level of each Piano Layer.

## LAYER BUTTONS AND FX FOCUS

There are two Piano Layers; **A** and **B**. Turning a second Layer On is done by pressing both Layer buttons simultaneously. Turning a Layer Off is done by holding its button down for a short period of time.

To toggle from one Layer to the other, press the non-active Layer button. With both Layers active, the focused Layer is indicated by a blinking LED above the Layer button.

If **FOLLOW FOCUS** is active in the **LAYER EFFECTS** section, pressing a Layer button also focuses that Layer's effects for editing, indicated by the **FX FOCUS** LED at the top of the Piano Section.

## OCTAVE SHIFT AND KB ZONE

Use **OCTAVE SHIFT** ◀ / ▶ to transpose the selected Piano Layer 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.

Press **KB ZONE** ◀ / ▶ (Shift+Octave Down/Up), to assign the focused Piano Layer to any of the active keyboard zones. The green LEDs

indicate which of the zones a Layer is assigned to. Read more about Split set-ups and keyboard zones on page 38.

## SUSTPED AND PSTICK

**SUSTPED** (Shift + Layer A) activates any attached sustain pedal for the Piano section. Read more on how to configure attached pedals in the Menus chapter, on page 58

**PSTICK** (Shift + Layer B) 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.

## ABOUT THE PIANO SOUNDS

The Pianos in the Nord Stage 4 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 4 by using the Nord Sound Manager.

The Nord Stage 4 has 2 GB of memory for Piano sounds and provides an extensive collection of carefully selected pianos of all types, right out of the box. Much 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.

- When you download piano sounds with the Nord Sound Manager, these are automatically placed into their corresponding Type.

If a Program references a piano that is not currently downloaded onto the Nord Stage 4, the type LED will flash, and the display will read "Piano not found". If this happens, you can either navigate to another instrument Model of 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.

## 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
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 matches its exact equivalent on the original instrument. This naturally results in a significant increase in size.

## PIANO PRESETS

The Nord Stage 4 comes with a large selection of complete and ready-to-use Piano Presets, including effects. These are browsed and loaded using the **PIANO** button in the **PRESET LIBRARY** area of the Program section. User created sounds can be stored to the Preset Library as well, for quick and easy recall regardless of which Program is loaded.

Read more about the Preset Library on page 40.

## PIANO SELECT

### TYPE AND MODEL

Use the **TYPE** button for selecting the desired type, or category, of piano sound. 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	Clavinet and Harpsichords
Digital	Digital and Layer piano sounds
Misc	Miscellaneous sounds

Use the **PIANO SELECT** dial to choose a piano sound within the selected Type. The Piano Select LEDs indicate the *Type* of the currently selected piano model. Depending on Prog View mode (see page 41), which governs what info is shown in the display, the *name* of the selected model may also be shown in the Program area display.



### 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 4, 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.

- The Clavinet also has its unique set of Piano Timbre settings, corresponding to EQ options of the original instrument. Read more on this on page 26.

## 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 (3).



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

## PIANO INFO

Pressing **PIANO INFO** (Shift + Piano Select) displays some additional info about the currently selected model, such as its version number and its exact size.

## KB 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 preferences or the context of your performance.

The **HEAVY** setting represents a heavy piano action, which facilitates playing softly yet expressively. With each increment of the Touch setting (**MEDIUM** and **LIGHT**) less effort is required to play loudly.

## DYNAMIC COMPRESSION

**DYN COMP** (Dynamic Compression) reduces the dynamic range of a piano sound by raising its minimum sound level. Choose between the **1**, **2** and **3** settings, where 3 provides the most compression. This feature is useful for maintaining an audible performance and even sound level, even when playing very softly or dynamically. The dynamic range in terms of *timbre* remains intact.

ⓘ Unlike the Compressor (Comp) effect in the Effects section, which affects the attack and contour of the sound (often desired traits when using compression as an effect) the Dyn Comp feature does not alter the character of the selected piano.

The Dyn Comp feature is compatible with version 6 piano sounds only. The version of a selected piano sound can be checked by pressing **PIANO INFO** (Shift + Piano Select button).

## ACOUSTICS

### SOFT RELEASE



Activating **SOFT RELEASE** will add a slightly longer and less pronounced release to acoustic piano sounds, equivalent to what happens when you adjust the damper tension on an acoustic instrument. The added release is individual for every note and responds dynamically to the force with which you play. Electric Piano sounds instead have their release sound dampened significantly.

ⓘ Some Piano types, such as Clavichords and Harpsichords do not support the Soft Release feature. In these cases the function will be disabled.

### STRING RESONANCE

The **STRING RES** (String Resonance) feature is made up of two distinct components:

- 1 The dedicated *Pedal Down samples*, activated when pressing the sustain pedal, included in the Med, Lrg and XL sizes of Grand and Upright piano sounds. These were sampled with the sustain pedal pressed down, capturing the natural ambience and acoustics of the original instrument.
- 2 The simulated “sympathetic” String Resonance which occurs when strings of held notes are caused to vibrate at their fundamental or harmonic frequencies as other notes are being played.

The amount of “sympathetic” String Resonance can be adjusted in the Sound Menu, see page 57.

ⓘ If a piano is selected that isn’t compatible with the String Resonance feature, this function is disabled. This applies to e.g. the small (Sm) versions of the grand pianos and uprights and the electric pianos.

### PED NOISE (PEDAL NOISE)

**PED NOISE**, (Shift + Soft Release/String Res) is available if a *Nord Triple Pedal* or a *Nord Single Pedal 2* is connected to the Nord Stage 4 (see below). When activated, the mechanical noise that occurs with the sustain pedal on an acoustic or electric piano will be recreated. The Pedal Noise responds dynamically to the force used when the sustain pedal is operated.

The level of the Pedal Noise can be adjusted in the Sound Menu, see page 57.

ⓘ If the selected piano is not compatible with the Pedal Noise feature, this function is disabled.

## NORD TRIPLE PEDAL

The Nord Stage 4 is compatible with the Nord Triple Pedal 1 (Nord TP-1) and the Nord Triple Pedal 2 (Nord TP-2), the latter of which is attached to a dedicated jack labeled **TRIPLE PEDAL**.

🔗 *The Nord Triple Pedal (Nord TP-1) is attached to the **SUSTAIN PEDAL** jack.*

The Nord Triple Pedals are comprised of three pedals in one unit and unlock additional features both within the Piano section of the Nord Stage 4 as well as a number of highly useful options that are not specifically related to Piano playing. Settings for these options are found in the Pedal menu, see page 58 for more details.

The Nord TP-2 requires no additional settings when attached to its dedicated jack. For pedals attached to the Sustain Pedal jack, make sure that the Sustain Pedal Type setting in the Pedal menu is set to the specific type or model that is being used.

❗ *If both the Nord TP-1 and TP-2 are attached to the Nord Stage 4, the left and middle pedal of the TP-1 unit will be non-functional, as indicated by the “Sustain Only” text in the Pedals menu.*

## SUSTAIN AND HALF PEDALING

The right pedal always functions as sustain pedal. With the Nord Triple Pedals as well as the Nord Sustain Pedal 2 (Nord SP-2) 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 pedal of the Nord Triple Pedals is by default the *Sostenuto* pedal. Using this, selected notes can be sustained while other notes remain unaffected. Notes that are already held down when the pedal is operated will sustain while subsequent notes, played while the pedal down is, will not be sustained.

🔗 *There are a number of optional functions for the middle pedal, see page 59 for further details.*

## SOFT PEDAL

The left pedal on the Nord Triple Pedals is by default 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.

🔗 *There are a number of optional functions for the left pedal, see page 59 for further details.*

## TIMBRE



Use the Piano **TIMBRE** settings to quickly alter the frequency response and character of the selected piano sound.

### ACOUSTIC PIANO TIMBRE SETTINGS

The **SOFT** setting gives the sound a subdued and intimate quality by dampening high frequency content and emphasizing the low end

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 very bright and brilliant sound.

### ELECTRIC PIANO TIMBRE SETTINGS

When an Electric Piano is selected, the Timbre settings are tailored specifically to suit these sounds.

The **SOFT** setting reduces the treble and bell sound, while retaining a focused and punchy sound.

The **MID** setting boosts the upper mid-range, adding “presence” and cut to the sound.

The **BRIGHT** setting boosts the upper mid-range and adds brilliance/treble, giving both presence and clarity to the selected piano sound.

The **DYNO 1** and **DYNO 2** settings are both based on sounds produced by a custom preamp and EQ, which was a common addition to tube based electric pianos in the 70's and early 80's. Both settings greatly enhance the inherent “bell” sound of the electric piano sound. The Dyno 2 setting also boosts the bass register, resulting in a distinctly “mid scooped” sound.

## CLAV SETTINGS

An original Clavinet is equipped with 4 rocker switches which control the onboard EQ. Most of the combinations produced by these switches are available on the Nord Stage 4.

*Available settings are: Soft, Treble, Soft+Treble, Brilliant, Soft+Brilliant, Treble+Brilliant, Soft+Treble+Brilliant.*

## UNISON



The **UNISON** feature uses transposed voices from neighbouring keys to create a stereo Unison effect. This can be used for stereo widening of mono sources such as electric pianos or for adding width and chorus-like shimmer to acoustic pianos. At the highest setting larger degrees of detune is applied. There are three different degrees of Unison, **1**, **2** and **3**, ranging from a subtle stereo effect to more obvious detuning.

# 6 SYNTH SECTION



## ABOUT THE SYNTH SECTION

Each of the three Layers in the Nord Stage 4 Synth Section provides a wide array of both classic analog waveforms and rich digital waves, as well as FM algorithms and samples.

Using the Unison modes and/or the Multi or Super analog waveforms, sounds utilizing a large number of oscillators can be used – without any loss of polyphony.

The dedicated Synth display and its three dials are used both for browsing Waveforms and Samples, as well as for making Envelope, Filter or other Synth settings. Functions that utilize the display for its settings are indicated with a red frame around the corresponding button.

With the Synth Section set to Extern mode, the display and its dials are used for controlling Program and Parameter changes on external gear. Read more about the Extern mode on page 45.

### ON/OFF AND LEVEL

The Synth section is turned On or Off by pressing its **ON** button. The morphable faders control the sound output level of each Synth Layer.

## LAYER BUTTONS AND FX FOCUS

There are three independent Synth Layers; **A**, **B** and **C**. Turning a Layer on is done by pressing all Layer buttons that are already active simultaneously with the one that should be turned On. Turning a Layer Off is done by holding its button down for a short period of time.

To toggle from one Layer to the other, press a non-active Layer button. With multiple Layers active, the focused Layer is indicated by a blinking LED above the Layer button.

If **FOLLOW FOCUS** is active in the **LAYER EFFECTS** section, pressing a Layer button also focuses that Layer's effects for editing. The **FX FOCUS** LED at the top of the Synth Section indicates that its effects are focused for editing.

## OCTAVE SHIFT AND KB ZONE

Use **OCTAVE SHIFT**  $\blacktriangleleft / \blacktriangleright$  to transpose the selected Layer 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 Synth.

Press **KB ZONE**  $\blacktriangleleft / \blacktriangleright$  (Shift+Octave Shift Down/Up) to assign a Layer to any of the active keyboard zones. The green **KB ZONE** LEDs indicate which of the zones the Layer is assigned to. Read more about Split set-ups and keyboard zones on page 38.

## SUSTPED AND PSTICK

**SUSTPED** (Shift+Layer A) activates an attached sustain pedal for the Synth section. Read more on how to configure pedals in the Menus chapter, on page 58.

**PSTICK/RNG** (Pitch Stick/Range, Shift+Layer B) turns on pitch stick functionality for the selected Layer. The bend range for the Pitch Stick can be set in semitone steps by pressing down the button and selecting a value from the displayed list.

## SYNTH SECTION MODES



The Nord Stage 4 Synth Section can be used in three distinct *modes*: **SAMPLES**, **ANALOG** or **EXTERN**. The Extern functionality (Shift+Mode) allows for advanced MIDI control of external units and is described in its own chapter, starting on page 45. Read more about the Samples and Analog modes respectively, further down.

## SYNTH PRESETS

The Nord Stage 4 comes with a large selection of multi- and single-Layer Synth Presets, including Effects. These are browsed and loaded using the **SYNTH** button in the **PRESET LIBRARY** area, of the central Program section.

Presets can of course be further tweaked manually and be stored as part of a Program. Modified or user created sounds can also be stored to the Preset Library, for quick and easy recall from within any Program.

Read more about the Preset Library on page 40.

## SAMPLES

The Nord Stage 4 comes with a large selection of samples from the Nord Sample Library 4, covering a wide range of categories.

There is 1 GB of memory for samples, and additional samples can be downloaded from [www.nordkeyboards.com](http://www.nordkeyboards.com). Custom samples can also be created and downloaded to the Nord Stage 4 using the Nord Sample Editor 4 software. Read more about this on page 63.

Browsing and selecting samples is done by pressing **WAVEFORM** and then using the **CAT** and **SAMPLE** dials, under the Synth display.



Pressing **SHIFT** and turning the Cat or Sample dial enters the **LIST** view mode, providing excellent overview of the Sample Library.

The **INFO** dial toggles the screen to show information about the sample, such as its size and version, in place of the category name.

## SAMPLE PRESETS

Samples from the Nord Sample Library 4 come with a set of preset values for certain Synth parameters, in order to make them instantly playable. These include Amp Envelope and Velocity settings, which are normally set to values defined in the Sample itself when loaded. Furthermore, the Filter is turned Off and active LFO settings are deactivated.

To load samples *without* their preset settings – keeping all Synth parameters unchanged – hold down the Waveform button while turning the Sample dial, as indicated by the **KEEP EDITS ▼** label.

### NATURAL, NO DYN, FAST ATK

Some further options for Sample customization can be found by entering the **PITCH/SMP** menu and using the third dial:

- **Natural**. The Sample uses the built-in dynamic behaviour defined by the Sample Preset. This can include velocity controlled filter response and other dynamic mechanisms that are not directly accessible from the Nord Stage 4 panel.
- **No Dyn** (No Dynamics). The built-in dynamic behaviours described above are deactivated.
- **Fast Atk** (Fast Attack). An alternate starting point is used for the Sample, normally bypassing most or all of the natural sample attack phase.

## ANALOG

In Analog mode the Synth Section gives access to a wide array of both Classic analog waveforms and rich Wavetables, as well as a number of different FM algorithms. There is also a selection of Miscellaneous waveforms covering various types of Noise and a Bell algorithm.

### OSC CTRL

Oscillator Control, **OSC CTRL**, is used to alter the sound in various ways depending on the currently selected waveform. The Osc Ctrl parameter can be modulated by the Oscillator Envelope or the LFO, and *morph controlled*, allowing real-time use of the wheel, aftertouch or pedal for controlling the sound.

### WAVEFORM SELECTION

In Analog mode pressing the Waveform Select button presents a number of Types, selected with the left **Type** dial:

**Analog**: Analog style waveforms ranging from basic single oscillator configurations to common dual and multi oscillator setups, as well as Noise and other miscellaneous waveforms.

**FM-H (FM Harmonic)**: A collection of algorithms using FM (Frequency Modulation) synthesis. In **FM-H** mode the relationship between the modulator and the carrier is *harmonic*, making this mode suitable for more tonal and traditional sounds.

**FM-I (FM Inharmonic)**: Provides the same algorithms as the FM-H mode, but with a mostly *inharmonic* relationship between the modulator and the carrier, suitable for more dissonant and experimental timbres.

**Wave**: Complex, digital waveforms covering a wide range of tonal characteristics.

The middle **Category** dial is used for choosing a category within the specified oscillator Type and the right **Waveform** dial selects the specific waveform to be used. Use the **LIST** command (Shift+Waveform dial) to display a *list view* of the waveforms or samples in your current selection.

## ANALOG

### PURE

The **Pure** category contains a selection of waveforms which are not affected by the Osc Ctrl parameter:

<b>Sine</b>	
<b>Triangle</b>	
<b>Saw</b>	
<b>Square</b>	
<b>Pulse 33</b>	
<b>Pulse 10</b>	

### SHAPE

The **Shape** category contains waveforms where the Osc Ctrl parameter determines the shape.

		Osc Ctrl = 0	Osc Ctrl = 5	Osc Ctrl = 10
<b>Triangle</b>				
<b>Saw</b>				
<b>Square</b>				
<b>Half Sine</b>				
<b>Parabolic</b>				

💡 *The Square waveform can be transformed from a square (50% pulse) to a very narrow pulse wave, making it suitable for Pulse Width Modulation (PWM) sounds, using the LFO or Oscillator Envelope to modulate the Osc Ctrl parameter.*

### SHAPE SINE

Waveforms in the **Shape Sine** category can all be gradually transformed from a pure sine wave to the selected waveform, using the Osc Ctrl knob.

		Osc Ctrl = 0	Osc Ctrl = 5	Osc Ctrl = 10
<b>Pulse</b>				
<b>Saw</b>				
<b>Square</b>				
<b>Squeeze</b>				
<b>Fold</b>				
<b>ESaw</b>				
<b>ESquare</b>				

### MULTI

The **Multi** category contains a selection of multi-oscillator waveforms. In all instances, the **OSC CTRL** parameter determines the amount of *Detune* between the oscillators.

**Dual Saw:** Two sawtooth waveforms tuned an octave apart.

**Dual Saw 5th:** Two sawtooth waveforms where one is tuned a fifth above the other.

**Dual Saw 5th+:** Two sawtooth waveforms where one is tuned an octave and a fifth above the other.

**Triple Saw:** Three sawtooth waveforms, each separated by an octave.

**Triple Saw 5th+:** Two sawtooth waveforms where one is tuned an octave and a fifth above the other, with an added sub octave sawtooth waveform below the fundamental.

### SUPER

**Super Saw, Super Square, Super Bright, Super Organ:** A large number of simultaneously sounding oscillators, producing a very rich and full sound. The number of oscillators and the stereo width is increased in Unison mode.

### 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 one of the Morph sources, or by the Oscillator Envelope. This generates a signal with continuously varied harmonic content.

The “Chop” waveforms in this category apply a sawtooth or square “window” to the synced waveforms which gives a unique and comparatively soft, vocal quality to the produced sound.

<b>Sine</b>	
<b>Triangle</b>	
<b>Saw</b>	
<b>Square</b>	
<b>Pulse 33</b>	
<b>Pulse 10</b>	
<b>Chop Saw</b>	
<b>Chop Saw 2</b>	
<b>Chop Square</b>	

## BELL

Amplitude modulation is used to create a complex bell-like waveform.

**OSC CTRL** controls the pitch of the modulator, and thereby the harmonic content and character of the waveform.

## NOISE

There are three types of noise generators available:

**White:** Full-band noise, i.e. a random signal with equal spectral density at all frequencies.

**Pink:** A noise signal where the spectral density decreases with higher frequency, making it “softer” than the White Noise option.

**Red:** A noise signal with more energy in the low frequencies, and more dampened high frequencies than the Pink Noise option.

## WAVE

These waveforms have been carefully designed and selected to provide rich and interesting timbres with great variety, for those sounds that cannot be reached with the other oscillator types. Advanced synthesis techniques have been used to reproduce these waveforms perfectly over the whole keyboard range.

The **OSC CTRL** parameter has no effect on the Wave waveforms.

The available categories contain digital waveforms covering a wide range of tonal characteristics. Some of the waveforms are distilled from acoustic instruments while some are combinations of several overlapping spectra. Others are extremely bright, with a fundamental that is softer than the many harmonics.

## FM

The basic principle behind *frequency modulation* (FM) synthesis is that one sine oscillator (the modulator) modulates the frequency of another (the carrier). The carrier can in turn modulate the frequency of yet another oscillator, etc. 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 FM

categories of the Nord Stage 4 provide algorithms with 2, 3 and 4 operators (in reality 8 operators when using the Unison settings).

The **OSC CTRL** parameter controls the amount of frequency modulation for all FM categories.

## HARMONIC

For the **Harmonic** categories the **Partial** parameter determines the relationship between the modulator and the carrier, expressed as a *multiple* of the root frequency.

With these algorithms the modulator and carrier retain a harmonic relationship regardless of setting, making these categories suited for tonal FM sounds.

Available partials range from 0.5 to 24.

**FM Harmonic A:** 2-OP algorithm at ratio P:1.

**FM Harmonic B:** 3-OP algorithm at ratios P:1:1. The modulation amount is greater at the first modulation stage than at the second.

**FM Harmonic C:** 3-OP algorithm at ratios P:3:1.

**FM Harmonic D:** 3-OP algorithm at ratios P:1:1. The modulation amount is greater at the second modulation stage than at the first.

**FM Harmonic E:** 4-OP algorithm where one pair at ratio P:1 is mixed with another pair at ratio 1:1. Especially suited for bell and electric piano type sounds.

## INHARMONIC

For the **Inharmonic** categories the **Pitch** parameter determines the relationship between the modulator and the carrier in *semitones*.

With most Pitch selections the modulator and carrier are at an inharmonic relationship, making these algorithms suited for less tonal, more experimental FM sounds.

Available pitches range from -12 to 48.

**FM Inharmonic A:** 2-OP algorithm at ratio P:1.

**FM Inharmonic B:** 3-OP algorithm at ratio P:1:1. The modulation amount is greater at the first modulation stage than at the second.

**FM Inharmonic C:** 3-OP algorithm at ratio P:3:1.

**FM Inharmonic D:** 3-OP algorithm at ratio P:1:1. The modulation amount is greater at the second modulation stage than at the first.

**FM Inharmonic E:** 4-OP algorithm with one pair at ratio P:1 and one pair at ratio 1:1.

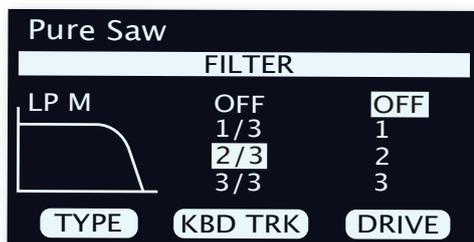
## FILTER SECTION

The **FILTER** is a crucial component in shaping the timbre of the sound and can also be modulated by the Filter Envelope as well as the LFO.

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, for which the Res knob controls the HP filter cut-off frequency. More on that further down.

## FILTER TYPE

Filter Type, along with Filter Keyboard Tracking and Filter Drive is selected using the Synth display. Press the Filter **TYPE** button and use the three dials under the display to set these parameters as desired.

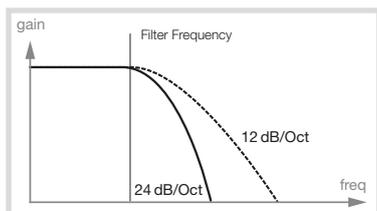


### LP 24 & LP 12

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

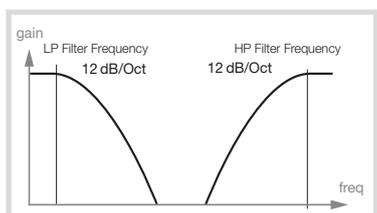
### LP M

The **LPM** 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.

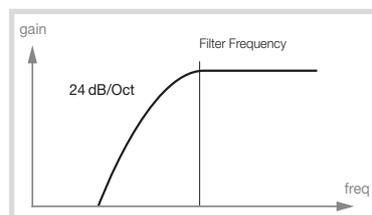
### LP+HP

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.



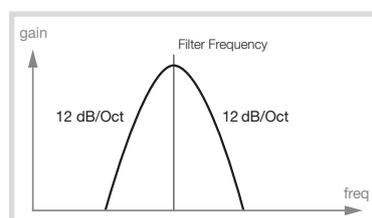
This combination is useful for tonal shaping of any source, allowing for cutting the range *between* the two cut-off frequencies or for enhancing a particular range with overlapping filter ranges.

### HIGH PASS - HP



If **HP** (high-pass) is used, frequencies below the Filter Frequency setting will be attenuated, frequencies above the cutoff are not 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 to 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.

## KEYBOARD TRACKING

The Keyboard Track (KBD Track) parameter is also set from the Filter Type display, using the middle dial.

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 **KBD TRACK**.

### KB TRACK SETTINGS

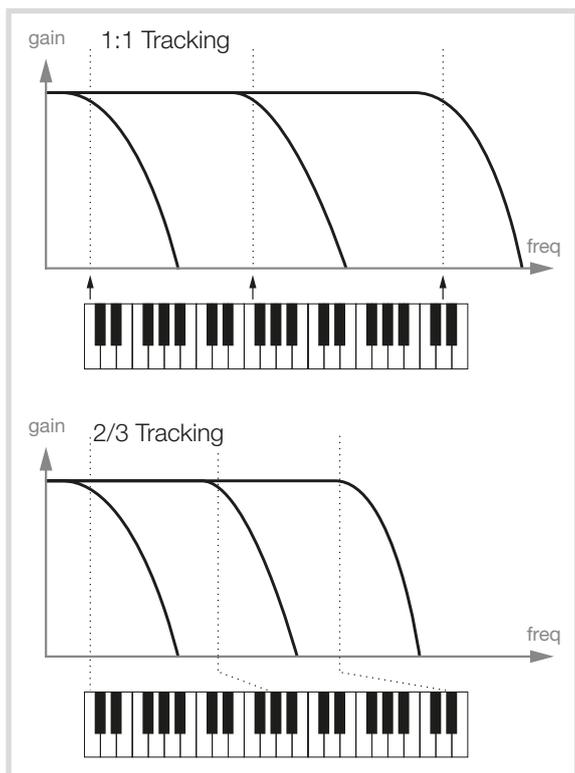
**Off**: The filter frequency cut-off point is not altered by the note played.

**1/3**: The cut-off frequency tracks 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 tracks 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 tracks the keyboard at a 1:1 ratio.

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



### FILTER DRIVE

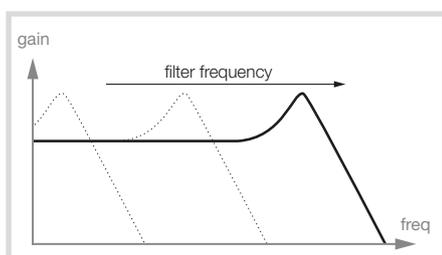
Activating **DRIVE** adds distortion to the Filter stage. The **1, 2** and **3** settings represent low, medium and high amounts of drive respectively.

*Using Drive with high Filter Resonance settings can yield interesting and fun results.*

### 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 indicate 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.

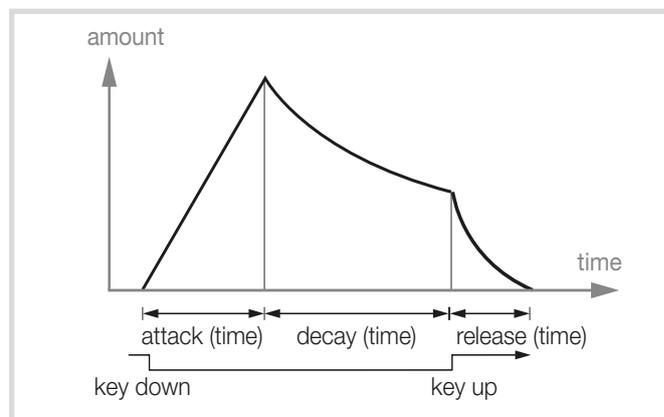
### ENV AMT (ENVELOPE AMOUNT)



The **ENV AMT** knob governs the amount of modulation to the filter frequency by the filter envelope, which determines how the filter frequency is altered over time. Read more about the Filter Envelope further down.

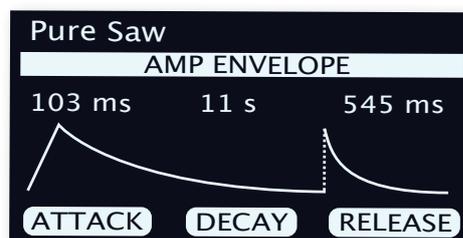
## THE ENVELOPES

The envelopes are used for shaping 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.



The Nord Stage 4 Synth has three different envelopes, each of which is accessed by pressing the **ENVELOPE** button in the **OSCILLATORS**, **FILTER** and **AMP** areas respectively. Read more about each envelope further down.

All envelopes are visualized by the Synth display, and the three dials below it are used for setting the Attack, Decay and Release times respectively.



## ATTACK, DECAY AND RELEASE TIMES

All envelopes have their own settings for Attack, Decay and Release times, and the principles for how they work is the same in all instances:

### ATTACK

Attack sets the time it takes for the envelope to reach maximum level after a key has been pressed. Turning the **ATTACK** dial clockwise increases the 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** dial 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 determines how long it takes for the envelope to reach its minimum value and is set with the **RELEASE** knob.

## OSCILLATOR ENVELOPE



The Oscillator **ENVELOPE** is by default applied to the *Osc Ctrl* parameter, but can also be set to alter the *pitch* of the oscillator, by activating **ENV TO PITCH** (Shift+Pitch).

When used for modulating *Osc Ctrl*, it can perform a wide variety of time-based alterations, depending on which Waveform is selected.

### VELOCITY

With **VELOCITY** (Shift+Envelope) turned on, the amplitude of the Oscillator Envelope is controlled by the velocity with which the keys are played. Play harder and the envelope will modulate the destination parameter more.

### ENV AMT (ENVELOPE AMOUNT)



The morphable **ENV AMT** (Envelope Amount) parameter determines the amount of modulation applied to the **OSC CTRL** (or to the *pitch*, when Env To Pitch is active) parameter by the Oscillator envelope.

The Env Amt knob is bi-polar, meaning that its zero position is at 12 o'clock. When turned clockwise the modulation is *added* to the Osc Ctrl or pitch parameter value. When turned counter-clockwise the modulation applied by each phase of the envelope is inverted.

## FILTER ENVELOPE



The Filter **ENVELOPE** is used for modulating the Filter cut-off Frequency (**FREQ**) over time. The amount of modulation is determined by the Env Amt control.

## VELOCITY

Turn **VELOCITY** (Shift + Envelope) on to have the amplitude of the Filter Envelope respond to the velocity with which the keys are played. Play harder and the envelope will modulate the cutoff frequency more.

## AMP ENVELOPE



The final stage of the Synth signal chain consists of an amplifier (**AMP**) for controlling the volume. By modulating this 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.

### VELOCITY

With **VELOCITY** (Shift+Envelope) 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 4 oscillator or the *Filter frequency*. The rate of the LFO is set with the morphable **RATE/TIME** knob.

The morphable **MOD AMT** knob controls the amplitude of the LFO modulation, which can be assigned to one of these destinations:

**OSC CTRL:** Depending on which Waveform Type is selected, this will have different effects. If using a Shape or Shape Sine configuration, for instance, the Shape parameter will be cyclically modulated by LFO.

**PITCH:** Targeting the Pitch with the LFO can create anything from subtle Vibrato effects, using the triangle waveform, to more extreme Pitch effects when using other waveforms and larger modulation amounts.

**FILTER:** Modulates the cut-off frequency of the selected Filter.

The LFO can be turned Off, while keeping its Amount setting intact, by setting the destination such that none of its LEDs are lit.

### MST CLK

Press Shift and turn the **RATE/TIME** dial clockwise to sync the rate of the LFO to the *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 WAVEFORM

Press LFO **WAVEFORM** to select which waveform should be generated by the LFO, using the corresponding dial under the Synth display:

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 down modulations.
	<b>Sawtooth 2</b> Use for ramp up 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.

Press **SECTION** (Shift+Waveform) to apply the current LFO settings to all Synth Layers and synchronize the phase and control of all LFO's.

## VOICE



The Nord Stage 4 synthesizer has a number of different voice modes, selectable in the **VOICE** area. There are options for monophonic or polyphonic playing, as well as three different Unison modes.

### MONO AND LEGATO

In both **MONO** and **LEGATO** mode only one note is played at a time, just like on a traditional monophonic synthesizer. The main difference between the two modes is in how the modulation and amplifier envelopes act when one is *playing legato*, i.e. with overlapping key presses:

In Mono mode both envelopes restart from the point in the attack phase where the level is equal to the previous note, if the decay or release phase has been entered. In Legato mode the envelopes do not move to the attack phase once the decay point has been reached, as long as one is playing legato.

Another difference is that in Legato mode, glide is active only when you *play legato*. I.e. a new key needs to be pressed *before* the previous key is released to get the glide effect.

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

### LO AND HI PRIORITY MODES

With the **LO** note priority setting active, notes above the lowest key being held or sustained will not be played at all. This can be used for playing layered chords, while keeping a monophonic bass sound at the bottom end of the range.

Inversely, with note priority set to **HI**, active notes below the highest key currently being held or sustained will not produce sound. This can be used for playing a monophonic melody using the top note of a layered chord.

**i** The Lo and Hi settings are only applicable to the Mono and Legato Voice modes, and have no effect on polyphonic playing.

### 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 modes 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 Nord Stage 4 Oscillator has a number of extra oscillators which can be added to the base sound for those fat, classic synthesizer sounds. Note that using Unison does not reduce the polyphony. A **UNISON** setting of **1** equals a classic dual oscillator de-tuning effect with only subtle stereo width, while the **2** and **3** settings add even more oscillators and further widens the stereo image.

### UNISON AND SAMPLES

In Samples mode, the Unison function is specifically tailored to provide a realistic and ensemble-like sound, achieved by combining multiple slightly detuned and stereo panned copies of neighbouring samples.

## ARPEGGIATOR/GATE



The **ARPEGGIATOR/GATE** is turned on by pressing the **ARP RUN** button. Activating **SECTION** (Shift + Menu) allows all Layers to share the same settings.

There are three available modes for the Arpeggiator/Gate section on the Nord Stage 4:

### ARP (ARPEGGIATOR)

In Arp (Arpeggiator) mode, held notes are played back consecutively, outlining the played chord.

### POLY (POLYPHONIC ARPEGGIATOR)

In Poly (Polyphonic) mode, notes are played back repeatedly, together. At larger Range settings inversions of the held chord are played in order according to the Direction setting.

### GATE (RHYTHMIC GATE)

When set to Gate, the sound level of sustained notes is gated rhythmically according to the Rate setting, and the selected pattern if Pattern is turned on. The intensity or “hardness” of the gate is determined by the **ENV** (Envelope) parameter.

### PATTERN

All three Arpeggiator/Gate modes can use the **PATTERN** setting (Shift + Arpeggiator mode). With Pattern On, the notes of the arpeggio or steps of the gate conform to the rhythm defined by the selected pattern.

Apart from the available set of preset patterns, custom patterns of varying length can be created. Patterns can be used both with Arpeggio and Poly Arpeggio as well as with the Gate mode.

Patterns are selected or defined in the Arpeggiator **MENU**. Read more about patterns and all other Menu functions further down.

### RANGE / ENV

The range which an arpeggio spans is determined by the **RANGE** knob. At the 0 setting the arpeggio only uses the actual notes played on the keyboard. In Poly mode this translates to the played note or chord being retriggered and repeated as is. Apart from the values of even octaves, ranging from 1-4, values between each octave can be used as well for arpeggios ranging for example 2 octaves and a fifth.

When the **GATE** is active this knob controls the envelope (**ENV**) of the Gate. At the zero position the envelope is very soft, producing a smooth amplitude modulation. At the maximum position the envelope is very “hard”, in effect turning the sound on and off in accordance with the Gate tempo and pattern.

## ARPEGGIATOR MENU

The Arpeggiator **MENU** has five pages, the first of which is used for common Arpeggiator settings while the following four pages are all related to the Pattern functionality.



The middle and right dials are used for making settings on each page and the left dial is used for navigating between pages.

### 1 – DIRECTION AND ZIG ZAG

By default the **Direction** of the arpeggio is set to **Up**. The other directions are **Down**, **Up/Down** and **Random**. This parameter has no effect when using the Gate.

With **Zig Zag** activated, played notes will jump by two steps and then back one, in a given direction.

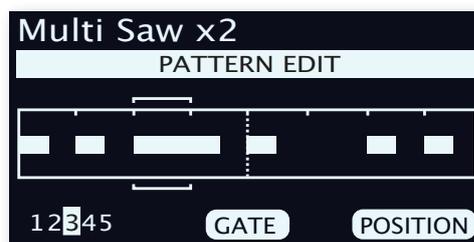
### 2 – PATTERN PRESETS AND LENGTH

There are a number of preset patterns, selectable with the **Preset** dial, designed to provide both simple and complex rhythms in both mono and stereo modes. These patterns can be used as is, or selected and then customised using the following Menu pages.

The **Length** dial sets the number of steps in the pattern, from 2 to 16.

### 3 – PATTERN EDIT

The **Position** dial is used to move the cursor back and forth in the pattern. At a given position the **Gate** dial can be used for inserting or deleting steps, or altering the length of a selected step.



### 4 – PATTERN ACCENT

The **Position** dial is used to move back and forth in the pattern. The **Accent** dial adds an *accent* to the selected step, indicated by a triangle above the grid.

**i** Note that in Arp or Poly mode, a parameter affecting velocity sensitivity, such as Amp or Filter Velocity, needs to be active for the accent to have any effect.

### 5 – PATTERN PAN

Use the **Position** dial to move back and forth in the pattern. The **Pan** dial is used for moving the selected step between Left, Center and Right in the stereo panorama.

## ARPEGGIATOR RATE/TIME



The **RATE/TIME** knob sets the rate, which is displayed as quarter note beats per minute (BPM) in the display.

**i** Note that the arpeggiator plays 1/8 notes in the given tempo, which also equals one step of a pattern.

## ARPEGGIATOR MASTER CLOCK

Press **SHIFT** and turn the Arpeggiator **RATE/TIME** knob clockwise to sync the Arpeggiator or Gate with the Master Clock. When synchronized to the Master Clock, the Rate/Time knob is used for setting 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 38.

## KB HOLD



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

By default KB Hold affects *all* Layers of the Synth Section. If a Layer should not be included in the KB Hold functionality, press **EXCLUDE** (Shift+KB Hold) for that Layer.

**💡** When KB Hold is turned On, its LED remains lit even if the Synth Section has been turned Off. This is useful when switching between Layer Scenes where the Synth is Off for one of them, or in other instances where held notes persist after the Synth Section has been turned Off.

## VIBRATO



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

There are five methods for controlling the Synth Vibrato available from the Selector button in the Vibrato section:

- When set to **ON** the Vibrato will be applied as soon as a note is played.
- In **DLY** (Delay) mode the vibrato is introduced a short amount of time after a note is played. The Vibrato amount for the Delay modes is set in the Vibrato Menu, along with the rate for *all* Vibrato modes. Read more further down.
- When **WHL** is selected, the vibrato amount is controlled with the Modulation Wheel.
- If *Aftertouch* – **A.T.** – is selected, vibrato is controlled by pressing down held notes on the keyboard.
- In **PED** (Pedal) mode the Vibrato is controlled by a foot switch or the left or middle pedal of a Nord Triple Pedal, as defined in the **PEDAL** menu. Read more on page 58.

## VIBRATO MENU

The Vibrato **MENU** provides settings for **Rate**, **Amount** and **Dly Time** (Delay Time), using the three dials below the Synth display. The Rate parameter can be set to values between 2.0 and 8.0 Hz while Amount ranges from 0 to 10.



The Delay Time parameter has four options: 0.2, 0.7, 1.2 or 2.0 seconds. Note that this parameter is only relevant if the **DLY** mode is selected on the panel.

## VIBRATO AND SAMPLES

Samples from the Nord Sample Library 4 come with predefined settings which determine the exact nature of the Vibrato.

In general the Vibrato for a sample is designed to sound as realistic and natural as possible, for any given instrument type. This means that Vibrato Rate will be set to a preset value when a Sample is loaded with its preset settings, and that the Vibrato Amount will provide access to different ranges and have different effect depending on the settings for that specific sample.

## KB SYNC

In **KB SYNC** mode (Shift+Arp Run), the arpeggiator or gate will be reset any time a new note is played after all keys have been lifted. With keyboard sync off, any new notes played while the arpeggio or gate is running will conform to the "grid" of the current tempo setting.

When **MST CLK** is active, this KB Sync parameter determines whether the Master Clock is reset. This affects all parameters synced to the Master Clock in the entire program – for instance the LFO or Delay. Read more about the Master Clock and its KB Sync options on page 38.

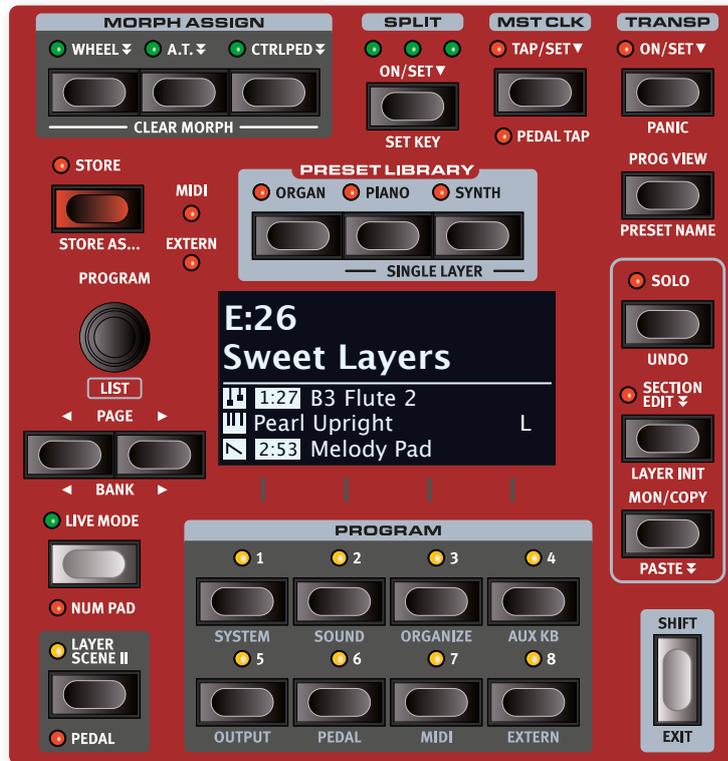
**💡** Note that you can choose which layer or layers should reset the Master Clock when played, by setting the KB Sync parameter for each Layer accordingly. For instance, an arpeggio sound on the left side of a split could reset the clock when played, while a lead sound on the right side of the split does not.

## SOUND INIT

Pressing **SOUND INIT** (Shift+Waveform) allows for initializing all synthesizer parameters *except* for the Synth Mode and selected waveform/sample, useful for starting from a "clean slate" when programming sounds. This operation includes sample preset values, which are reset to their defaults.

**i** The Sound Init operation can be undone by pressing **UNDO**.

# 7 PROGRAM



The central **PROGRAM** area provides access to performance functions such as loading and storing Programs, access to the Live Mode, Layer Scene, Keyboard Split functionality and more.

The Program area is also home to the **PRESET LIBRARY**, from where complete sounds for each Section or individual Layers can be loaded into a Program. User sounds can also be stored to the Preset Library. Read more about the Preset Library on page 40.

This is also where the various menus for making System, Sound, MIDI and other important settings are found. All menus and their settings are covered in a separate chapter, starting on page 56. The Organize and Aux KB functions are described further on in this chapter.

## WHAT IS A PROGRAM?

A *Program* stores and contains all settings made on the panel except for the Master Level and temporary editing modes such as Solo and Section Edit. The Program also includes Splits, Layer Scene, Keyboard Zones and Morph configurations. Presets loaded into a Program from the Preset Library (see below) are also stored as part of the Program.

A program also contains all settings from the Aux KB and Extern menus.

*Programs and other content can be accessed and organized from a computer using the Nord Sound Manager application, see page 62 for more information.*

## MORPH ASSIGN



The *Morph* is a very powerful tool, which allows for controlling multiple parameters at once using one control “source”.

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

*The Wheel morph can be mirrored by an expression pedal attached to the ORGAN SWELL jack. See page 58 for details on how to set this up.*

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 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 set up.

Multiple parameters can be adjusted while pressing down a Morph Assign button, and additional morph destinations can be added after a morph has been assigned.

The following parameters are available as Morph destinations:

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

- 📍 *Double-tapping a Morph Assign button activates morph assign latch mode, allowing for assigning morphs without keeping that button pressed down. Press **EXIT** to leave latch mode.*
- 📍 *Morphs can be copied from one control source to another, see page 42.*

## MORPH INDICATORS

All morphable parameters are equipped with some means of showing 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 FADERS

The level controls of the Organ, Piano and Synth Layers feature a physical fader and an LED graph. These provide a clear indication of the morph start and end points as the morph is set up, and allow 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.

- 📍 *Note that morphs are not applicable in Drawbar Live mode.*

### CLEARING A MORPH

Hold **SHIFT** and press a **MORPH ASSIGN** button to **CLEAR** all Morphs for this source – for all Layers. To clear a particular assignment, hold the Morph Assign button and operate the control to remove the “gap” between the stored setting and the Morph setting.

## SPLIT



The Nord Stage 4 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 of the Split **ON/SET** button will turn the split function on or off. Pressing and holding the button, as indicated by the “▼” symbol, will open the Keyboard Split screen in the display.

Pressing **SHIFT** and **SET KEY** shifts the position of the currently selected split point.

## KEYBOARD SPLIT SETTINGS

After a split has been activated, use the **KB ZONE** controls (accessed with **SHIFT**) below each sections Octave Shift buttons to assign a Layer to one or more zones. The four Zone LEDs indicate which zone(s) each Layer is assigned to.

### CHOOSING A SPLIT POSITION

The Keyboard Split page – accessed by holding down the Split **SET** ▼ button – allows for assigning each of the three split points to a keyboard position, or for deactivating a split point by pressing its corresponding soft button. There are 11 possible keyboard split positions, ranging from C2 to C7. To adjust a split point, make sure the Note row is focused by using the ▼/▲ soft button (**PROGRAM 1** button) and then select the split point by pressing its corresponding soft button (*Low, Mid or High*), corresponding to the **PROGRAM 2-4** buttons, and turn the dial.

The LEDs located between the keyboard and the panel controls indicate which split positions are active at all times.

### SPLIT XFADE SETTINGS

Normally the transition between two keyboard zones is immediate, with no overlap between the sounds selected for each zone. By adjusting the *xFade* setting for a split point, the sounds can instead be “cross-faded” across the split point, giving a smoother transition between the sounds.

To adjust Split *xFade*, make sure the *xFade* row is focused by pressing the ▼/▲ soft button (**PROGRAM 1** button).



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

When set to – the corresponding split point is turned off.

With the **1** setting no cross-fade is applied.

The **±6** setting represents a width of 6 semitones on each side of the split point, 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.

The **±12** setting provides a width of 12 semitones below the split point and 12 above it.

## MST CLK

The Master Clock lets you synchronize the Arpeggiator/Gate, the Synth LFO, the Delay and Mod 1 Rate in the Nord Stage 4. 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 **TAP/SET** 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 down on the **TAP/SET** button as indicated by the “▼” symbol, 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.

When the Master Clock tempo is set, you can select a subdivision of that tempo for each function that is synchronized to the Master Clock. Changes that are made to the Master Clock tempo will be followed by all functions that are synchronized to it.

## EXTERNAL SYNC

The Master Clock on the Stage 4 can be controlled by incoming MIDI clock messages. This is an automatic behavior: As soon as the Stage 4 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 Clock is not reset by playing the keyboard.

**On:** When set to *On* the Clock is 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.

## PEDAL TAP

Press Shift+Mst Clk to enable the **PEDAL TAP** function. When active, an attached pedal can be used for adjusting the master clock tempo by pressing it repeatedly. Refer to the Pedal Menu section on page 58 for pedal options and how to set this up.

## TRANSPOSE ON/SET



The Nord Stage 4 can be transposed in semitone steps on a per-program basis, with a range of +6/-6 semitones. Hold the **TRANSPOSE** (Transpose) button and set the transposition by turning the Value Dial. Press the button again to de-activate a transposition.

Transpose settings are saved and recalled as part of a program, and always affect all Layers of a program.

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

## PANIC

Press **PANIC** (Shift+Transp) 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.

## STORE



The **STORE** button is used for storing an edited program or preset to a location in the program or preset banks. Storing a program or preset will overwrite the existing data in the selected memory location.

❗ When the Nord Stage 4 is shipped from factory its memory is protected, in order 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 56. The Memory Protect function does not affect the eight Live Mode programs or operations performed through the Nord Sound Manager.

## STORING A PROGRAM

To store a program or preset 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* and its location.



② To select a store location use the dial and/or **PAGE/BANK** ◀ / ▶ buttons.

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

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

💡 A program can also be stored to one of the eight Live program locations. This is done by pressing the **LIVE MODE** button after having pressed Store, and then selecting the desired Live program button. The program at the selected store location can always be auditioned by playing the keyboard.

## STORE AS

- 1 To store *and name* your program, 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 one of the categories from the list.
- 4 Pressing **STORE** will now bring up the *Store Program 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 can also be done with the Nord Sound Manager.*

## PROGRAM DIAL



The **PROGRAM** dial to the left of the display is used for selecting Programs and Presets, for setting menu parameter values and for entering characters in program names. Pressing **SHIFT** while turning the dial activates the **LIST** view, which will display all programs or presets in a list:

## LIST OPTIONS

The Program list can be navigated either *numerically* by pressing **Num**, *alphanumerically* with **Abc** selected or by *category* when set to **Cat**.

### NUMERIC

In numeric mode programs are displayed by their order in the Program banks. The dial and the **PAGE** buttons can be used for navigating the list.

### ABC

In Abc (alphanumeric) mode programs are instead ordered by name. By pressing down on the Abc soft button, as indicated by the "▼" symbol, a specific letter or number can be jumped to by selecting it with the dial.

### CATEGORY

In Category mode, programs are sorted by their category. By pressing down on the Cat soft button, as indicated by the "▼" symbol, an alphabetically sorted list of categories is displayed. The dial can be used for selecting the desired category.

📍 *In Cat sort mode, the Page buttons can be used for quickly jumping to the first program in the next category. Pressing Shift while turning the dial is another way to jump to the next category.*

## PAGE BUTTONS



Program *pages* are navigated by pressing the **PAGE** ◀ / ▶ buttons. Each Bank holds 8 pages, with 8 Programs on each page. These buttons can also be used for switching between *categories* when browsing Programs, Presets or Pianos in category mode, and for navigating *menu settings* within the various menus.

Press **BANK** ◀ / ▶ (Shift + Page buttons) to switch between program banks.

## MIDI AND EXTERN INDICATORS



The **MIDI** LED, located above the top left corner of the display, blinks as incoming MIDI messages are received by the MIDI In port or through USB. Short blinks represent any incoming MIDI messages whereas longer blinks represent MIDI that is actually being used by the Nord Stage 4.

The **EXTERN** LED blinks when MIDI is going out on any of the three Extern MIDI channels. MIDI that is sent through the Send On Load function, when a Program is loaded, is represented by a very long blink of the LED. Read more about Extern and Send On Load in the Extern chapter, beginning on page 45.

## PRESET LIBRARY

The Nord Stage 4 comes with extensive Preset banks for the Organ, Piano and Synth sections which lets you load complete sounds, including their effect configurations, into an existing Program. Custom sounds can also be stored to the Preset banks, allowing for quick recall of individual sounds when setting up a Program.



## BROWSING AND LOADING PRESETS

For the Piano and Synth sections there are two distinct methods for loading Presets; for an *entire Section* or for a *single Layer*, which keeps other Layers in that Section intact.

The first method is intended for when no other sounds are required for a Section, allowing for use of Presets made up of multiple Layers. The second method is useful when combining multiple sounds for use in a split setup or if using the faders or Layer Scene functionality to switch between different sounds within the same Program.

📌 *Organ presets are always loaded for the entire Organ Section, since the Organ A and B layers share the same effects chain.*

## LOADING PRESETS FOR A SECTION

To browse and load Presets for a *Section* press the **ORGAN**, **PIANO** or **SYNTH** buttons in the **PRESET LIBRARY** area. Upon entering the Preset screen the focused Preset is coupled with an "E" to indicate that it has not yet been loaded. When turning the dial the Layers contained in the selected Preset are loaded for the corresponding Layers of the Synth Section and the "E" disappears.

The **PAGE/BANK** buttons can also be used for quick navigation of the

banks. In List view mode Presets can be browsed alphanumerically by pressing the **Abc** soft button or by Category by pressing **Cat**. Holding down the Abc or Cat soft button lets you select the desired character or category from a list using the dial.

Once the desired Preset has been found, press Shift/Exit or the corresponding Preset Library button to leave the Preset screen. Pressing **Cancel** instead reverts to the sound that was loaded prior to entering the Preset Library.

## LOADING SINGLE LAYER PRESETS

Loading Presets for *individual Layers* is done by focusing the Piano or Synth Layer (A, B or C) for which a Preset should be loaded and then pressing **SINGLE LAYER** (Shift + Piano/Synth Preset Library).

The Preset which is selected when the Preset view is entered is not loaded into the focused Layer until the dial is turned. Once the dial is operated, the Preset sound is actually loaded and can be monitored. When the appropriate Preset has been found you can either select a different Layer to load a Preset into, or press Shift/Exit or the corresponding Preset Library button to leave the Preset screen. Pressing **Cancel** reverts to the sound that was loaded prior to entering the Preset Library.

## STORING PRESETS TO THE PRESET LIBRARY

To Store a Section configuration, including all its Layers and Effects, as a Preset, follow these steps:

- 1 Press **STORE** – which will show the “Store Program To” screen as usual.
  - 2 Now press the the **ORGAN**, **PIANO** or **SYNTH** Preset Library button to instead enter the “Store Preset To” screen.
  - 3 To select a store location use the dial and/or **PAGE/BANK** ◀ / ▶ buttons.
- i** To cancel an ongoing Store operation, press **EXIT**.
- 4 When a suitable location has been selected, press **STORE** again to confirm the operation.

💡 It is also possible to Store Presets by first pressing the corresponding Preset Library button and **then** Store.

## STORE AS

To Store and *name* your preset, press **STORE AS** (Shift+Store) and then the Preset Library button of your choice. Naming and categorizing a Preset is done the same way as for a Program, see “Storing a Program”, beginning on the previous page.

Note that the Store procedures are the same regardless of if storing a single- or a multi-Layer Preset.

## PROG VIEW

The Program View (**PROG VIEW**) button switches between three distinct view modes for the display. The first view mode shows only the Program name and number, with the lower half of the display reserved for showing parameter hints as panel controls are changed.

The second view mode shows the Program name and number in smaller print and utilizes the lower half of the display to show the current selection for each focused Layer.

**i** The lower half of the display will show parameter hints as panel controls are adjusted in this view mode too, temporarily hiding the Piano and Sample Synth Layer information.

The third, “full”, view mode shows the Program name and number in small print as well as the complete configuration including all Sections and Layers.

## PRESET NAME

When a Preset is loaded for any of the Sections or individual Layers, its location and name will be shown in the display, according to the selected Prog View mode. To bypass this, and instead see the sound source (which could be an Organ model, a Piano, a Waveform or a Sample depending on the Preset) press **PRESET NAME** (Shift+Prog View). The Preset Name state is reset when a Program is loaded.

## SOLO



When **SOLO** is active *only one* Layer is heard at a time, which is useful for monitoring and adjusting individual elements when tweaking a Program. Use the Layer buttons of each Section for selecting which Layer should be heard.

In Solo mode, muted Layers are indicated with a single LED while the entire LED graph for the currently focused Layer is blinking.

Exit Solo mode by pressing Shift/Exit or the Solo button.

**i** The state of the Solo function is not stored as part of a Program.

## UNDO

Certain operations on the Nord Stage 4 can be undone by using the **UNDO** function (Shift+Solo). These include the following:

- Loading Presets
- Operating the Section function for the LFO, Filter or Arpeggiator in the Synth
- Operating the Section function for Organ, Piano or Synth in the FX Focus area
- Turning Global mode On or Off for Effects
- Clearing Morphs
- Program changes

When Undo is pressed, the display will show which operation is possible to undo. Press the **UNDO** soft button to go through with the operation, or Shift/Exit to cancel.

## SECTION EDIT



While **SECTION EDIT** ▼ is pressed, edits done to a parameter are performed on *all Layers of that Section*. This is especially useful for synchronizing Synth parameters across Layers, or for setting up just some of the effects the same for a whole Section.

The Section Edit button can be double-tapped, as indicated by the double arrows, to enter “sticky” mode which allows for using Section Edit without keeping the button pressed down. Press Section Edit again, or Shift/Exit, to exit sticky mode.

## LAYER INIT



The **LAYER INIT** (Shift+Section Edit) functions can be used to quickly initialize the entire Program or individual Layers:

**All:** Initializes the entire Program so that only Piano A is active, with no effects turned on.

**Organ AB:** Initializes both Organ Layers to a B3 sound, with Layer A turned On. All Organ effects are reset and turned Off, except for the Rotary Speaker which is On.

**Piano A/B:** Initializes the focused Layer, as indicated by the soft button label, to the default Piano sound and parameters. All effects for the focused Layer are turned Off and reset to default values. Note that if the Piano effects were in Section mode, they will be per Layer after this operation.

**Synth A/B/C:** Initializes the focused Layer, as indicated by the soft button label, to the default Synth Waveform and resets Synth parameters. All effects for the focused Layer are turned Off and reset to default values. If any Synth parameters or effects were in Section mode, they will be per Layer after this operation.

## LAYER SCENE II



The Layer Scene functionality allows for creating two independent Layer configurations where individual Layers or Sections can be turned On or Off as desired in each. This lets you instantly and seamlessly switch between different sound combinations *within the same Program*, without having to press multiple Layer or Section buttons.

Each Layer can be active in one or both of the Scenes, such that Layer Scene I for instance could be a single piano sound and Layer Scene II the *same* piano layered with a second piano and any number of Synth or Organ Layers. Note that the *contents* of each Layer is always the same in both Layer Scenes.

## SETTING UP LAYER SCENES

Pressing the **LAYER SCENE II** button switches from Layer Scene I to II or vice versa. Each Layer Scene is configured by turning Sections and Layers On or Off as desired for each Scene respectively. Again, note that any specific Layer uses the same sound and settings for both Scenes, and that the Layer Scene configuration only determines whether the Layer or Section is turned On or Off.

## LAYER SCENES AND PRESETS

There are a couple of things to keep in mind when loading Organ, Piano or Synth Presets, in relation to the Layer Scenes:

- When loading a Preset for an entire Section (i.e. when not using Layer Preset) that Section will be turned *off* in the non-active Layer Scene.
- When loading a Single Layer Preset using the Single Layer function, the On/Off state for the loaded Layer is not altered for the non-active Layer Scene.

## MONITOR / COPY / PASTE



To display what a parameter on the panel is set to, without changing it, hold down the **MON/COPY** (Monitor/Copy) button and turn the associated parameter knob.

The **COPY** function can be used for copying Layers, Effects, Programs and Morphs:

- 1 Make a copy by holding down the **MON/COPY** button in combination with one of the options below:
  - To copy a *Layer*, press any Layer **A**, **B** or **C** buttons
  - To copy an *Effect*, press any Effect **ON** button
  - To copy a *Morph*, press the **WHEEL**, **A.T.** or **CTRLPED** buttons
  - To copy a *Program*, press one of the **PROGRAM 1-8** buttons.
- 2 To *paste* the copied settings, hold down **PASTE** (Shift + Mon/Copy) and the button corresponding to the *Layer*, *Effect*, *Morph* or *Program/Live Program* the settings should be pasted into. Layers, Effects and Morphs can either be pasted within the program they were copied from, or into another program.

When pasting a Layer to another Layer in the same Program it is possible to instead Swap the two Layers: With **PASTE** (Shift+Mon/Copy) pressed down, use the soft buttons or lift and press Mon/Copy repeatedly to toggle between **Paste** and **Swap** modes.



## AUX KB

The **AUX KB** (Auxilliary Keyboard) feature allows for playing and controlling any Layer or combination of Layers from an external keyboard connected to the MIDI input of the Nord Stage 4. This can be handy in live situations where a secondary keyboard can be used as a controller for parts of the Nord Stage 4, on a per-program basis.

### AUX KB SETTINGS

To use the Aux KB functionality in a Program, set the **Aux KB Enable** setting to *On*, on the first page of the **AUX KB** menu (Shift + Program 4).

Page 2 of the Aux KB menu lets you assign which Layers should be part of the Aux KB configuration and be played by incoming MIDI rather than by the internal keyboard. Focus the Organ, Piano or Synth sections, using the 1-3 soft buttons, and use the dial to select the appropriate Layers for each section.

When a Layer is in Aux KB mode its Aux KB LED, below the Layer fader, is lit to indicate that it is not controlled by the internal keyboard.

The Aux KB setting is stored with a Program.

**i** The MIDI Channel for the Aux KB feature is set in the MIDI Menu on the Nord Stage 4. Read more on this on page 59.

### ABOUT PEDALS AND OTHER DEVICES IN AUX KB MODE

The Nord Stage 4 pitch stick, and sustain pedal will affect the selected sound engine *according to how the respective panel controls are set*. If **SUSTPED** and **PSTICK** are turned *off* on the panel, these are only controlled by incoming MIDI on the Aux KB channel.

**i** A Swell pedal connected to the Nord Stage 4 also affects an externally played Organ in Aux KB mode.

## SHIFT / EXIT BUTTONS



Many buttons, as well as a few of the 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 7 button will open up the MIDI Menu.

There are two Shift buttons on the Nord Stage 4 with the same functionality; one located at the bottom right of the Program area and one conveniently placed on the left side of the Layer Effects Section.

Shift is also used as an **EXIT** function for menus, and for cancelling Store operations.

## LIVE MODE



The Nord Stage 4 has eight easy-to-access Live program locations, differing from other programs in that any edits to them are *automatically stored*. When leaving 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 1-8 buttons in the Program area.

The selected Live program can be stored to a program bank location, using the standard Store methods (see previous page for details). Conversely, a regular program can also be stored to a Live program location if desired. Pressing Shift+Live Mode activates the Numeric Pad (**NUM PAD**) navigation mode, read more about this below.

## PROGRAM BUTTONS

The eight **PROGRAM** buttons give you immediate access to a range of eight programs – corresponding to a Page – within the current program Bank. Program buttons 1-4 (the top row) are also used as *soft buttons* when operating menu settings. Read more about soft button functionality on page 53.



### NUM PAD (NUMERIC PAD)

There are two distinct options for how programs and banks are navigated: The default “page based” mode and the *Numeric Pad* mode, activated by pressing **NUM PAD** (Shift+Live Mode).

In Numeric Pad mode the Program 1-8 buttons are used for entering any program number (11-88) within the current bank, rather than directly switching between the 8 programs on a page.

As an example, to select program 12 within the current bank, first press Program button 1 (to select page 1) and then Program button 2 (to select program 2 within that page). Here are some additional points:

- The **PAGE/BANK** buttons and the Program dial work the same regardless of mode.
- **LIVE MODE** programs are always directly selected using the 1-8 Program buttons.



In this example, the Program 1 button has been pressed. The dash (-) indicates that another digit can be entered, to select program A:11-18.

## MENUS

The **PROGRAM** 1-8 buttons are also used for accessing the menus or the Organize mode, when used in conjunction with the **SHIFT** button. Menu settings are described in the Menu chapter beginning on page 56. Organize is described in the following section.

## ORGANIZE

The order of Programs and Presets can be rearranged using the *Swap* and *Move* **ORGANIZE** functions.

Here is an example of how to use the two Organize functions for reordering content in the Program banks (organizing presets works in just the same way):

### ENTER THE ORGANIZE VIEW

- 1 Press **ORGANIZE** (Shift+Program 3 button) to enter the Organize view.



### SWAP TWO PROGRAMS

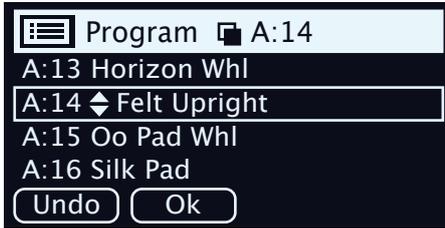
A Swap operation interchanges the positions of two programs:

- 2 Use the dial to select the program location which should be swapped with another and press **Swap**.
- 3 Use the dial to select the destination and press **Ok** to complete the Swap operation. Pressing **Undo** will instead cancel the operation.



## MOVE A PROGRAM

- ④ Use the dial to select a program which should be moved to another location and press **Move**
- ⑤ Select the *destination* location for the operation, using the dial and press **Ok**. Pressing **Undo** will instead cancel the operation.



⚠ *Note that programs between the source and destination locations are shifted one step up or down, changing which programs are part of each page within the range involved.*

**i** *Content can also be organized using the Nord Sound Manager.*

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## PROGRAM LEVELS

The *Program Levels* function provides a useful shortcut for adjusting the total 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. The Program Levels function is found on the first page of the **SOUND** menu (Shift+Program 2 button) and turning the Program dial adjusts the levels of *all* Layers, for all Sections, by an equal amount.



# 8 EXTERN

## EXTERN MODE



Advanced control of external MIDI instruments is an integrated feature of the Nord Stage 4. By using the **EXTERN** Mode of the Synth Section, all essential external MIDI functions are made available for control from the Synth display, dials and other controls.

A Layer set to Extern behaves much like a Layer set to Samples or Analog, in that it is turned on or off and assigned to a keyboard zone in the same way. Pitch Stick and Sustain Pedal assignments are also set up as usual.

MIDI channel settings for each Extern Layer are found in the **MIDI** menu while settings for Program Change, Continuous Controllers (CC) and other MIDI functionality is accessed via the **EXTERN** menu (read more on page 56). These settings can also be used for sending MIDI messages such as Program Change automatically to external units when programs are changed locally.

**i** Extern MIDI Channel settings are shared for all Programs on the Nord Stage 4, while all settings in the Extern menu are stored per Program.

## SETTING UP

- 1 Connect a MIDI cable from the Nord Stage 4 MIDI Out to the MIDI In on the external device, which could be a rack synth unit, a computer interface or some other unit with a MIDI In port.
- 2 Hold **SHIFT** and press **MIDI** (Program 7 button) to access the MIDI menu.
- 3 Use the **PAGE** ◀ / ▶ buttons to access the “Channel Extern A/B/C” page.



- 4 Use the Program 1-3 soft buttons for selecting the appropriate Extern Layer; ExtA, ExtB or ExtC.
- 5 Use the **PROGRAM** Dial to select the transmitting MIDI channel (1-16) which should be used. Press **EXIT** (Shift) to leave the menu.
- 6 Set the external instrument to *receive* on the MIDI channel defined in the previous step.

## USING THE EXTERN SECTION

### ACTIVATING

Make sure the Synth Section is turned **ON**. Select the Layer (A, B or C) which should be set to control external units, and press **EXTERN** (Shift+Synth Mode).

### OCTAVE SHIFT



MIDI sent from a Layer set to Extern can be octave shifted up or down, which is done by transposing sent MIDI Notes according to the number of octaves up or down that has been set.

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.

### KEYBOARD ZONES

Keyboard zones can be used for split and layered setups just like for internal sounds. As an example, if an Extern Layer is assigned to only play in zones 1 and 2, the external instrument will only respond to notes played in these zones.

**i** See the section about Split functionality on page 38 for information on how to set up and use keyboard zones.

There can be up to three Extern Layers – if all Synth Layers are set to Extern – but note that Layers set to Extern cannot be used for internal Synth sounds.

### NON-KEYBOARD EXTERN SETUP

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

### PITCH STICK AND SUSTAIN PEDAL MESSAGES

Hold **SHIFT** and press **SUSTPED/PSTICK** for the focused Extern Layer to determine whether sustain pedal and/or pitch bend messages should be sent via the Extern MIDI channel, as indicated by the **SUSTPED** and **PSTICK** LEDs.

## EXTERN PARAMETERS



The most frequently used Extern parameters are controlled from the Synth display, using its three dials:

### MIDI CC

The two **CC VAL** controls makes it possible to transmit MIDI Control Change messages for controlling parameters of your choice on the external instrument. The *left* and *middle* Synth display dials control the *values* of the sent CC messages.

First, the controller numbers to transmit needs to be defined within the Extern Menu:

- 1 Enter the **EXTERN** menu (Shift+Program 8).
- 2 Use the **PAGE** ◀ / ▶ buttons to select the Extern Settings “CC Number 1/2” menu page.
- 3 Use the **Num1** and **Num2** soft buttons respectively to select the first and second CC number respectively.
- 4 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.
- 5 To determine the initial values for each CC number when the program is loaded, use the **CCVAL** dials under the Synth display and select an appropriate value.
- 6 Press **EXIT** (Shift) to leave the menu.

The external instrument or unit may have to be manually set to receive MIDI CC messages for this to work as expected.

### PROGRAM

The **PROGRAM** dial allows for selecting programs in the external instrument, by sending Program Change messages. Note that the external instrument may also have to be set to *receive* MIDI Program Change messages.

⚠ *The Stage 4 itself can transmit MIDI Program Change when you select a Program. If this occurs on the same MIDI channel, it can lead to unwanted results on the external units. Make sure that the Global MIDI channel is not the same as the Extern MIDI channel.*

*Settings related to Program Change on the Global MIDI channel are found in the MIDI menu, see page 59..*

If the external instrument organizes programs in Banks, there is an option to send Bank Select messages, which can be defined in the Extern Menu page, see page 56.

### SEND ON LOAD

Often, it will be desirable to send certain MIDI data instantly when a program is loaded on the Nord Stage 4. This allows for an external unit to switch program, or reset a CC value in sync with program changes on the Nord Stage 4. There are individual *On* or *Off* settings for Program Change (PC), Volume (Vol) and the user defined CC messages (UsrCC) accessible through the Send On Load page within the Extern menu.

### VOLUME

In Extern mode the Layer fader will send MIDI Volume CC7 messages (0-127). This allows for controlling the volume level of the external device. The external unit must be set to receive MIDI CC messages for this to work as expected.

### ARPEGGIATOR

The Synth Section **ARPEGGIATOR** can also be used in Extern Mode. All the Arpeggiator controls, including Pattern, can be used for generating outgoing MIDI, but note that the Gate setting has no effect in Extern mode.

### EXTERN SECTION AND MIDI SOFT THRU

When an external device transmits MIDI notes to the Stage 4 and the Extern section is active, incoming MIDI notes can be re-routed to the MIDI Output of the Stage 4, on the active Extern MIDI channels.

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 4 for the Synth A, B or C MIDI channels, or the Global MIDI channel setting.

💡 *The MIDI menu setting for Soft Thru must in these cases be set to “On”.*

### OTHER EXTERN MENU SETTINGS

There are additional menu settings for the Extern Mode, that have not been covered in this chapter. Refer to the Menu chapter, on page 56, for further information on those.

# 9 LAYER EFFECTS



## OVERVIEW

Each Layer on the Nord Stage 4 has its own complete set of effects, apart from the two Organ Layers (A and B) which share the same effects chain. This means there are six instances of each effects unit for every Program, each of which can have its own settings.

The Rotary Speaker, placed at the far left of the panel is different from other effects in that it comes in one single instance per Program. Any Layer can be routed to the Rotary Speaker, but its speed and drive settings are common for all sounds passing through it.

All effects can be turned On or Off at once by pressing Layer Effects **ON**.

## FX FOCUS (EFFECTS FOCUS)

### FOLLOW FOCUS

The **FOLLOW FOCUS** setting determines whether the focus for the Layer Effects section *automatically follows* the focus of Layer buttons in the Organ, Piano and Synth sections, as they are pressed on the panel.

With Follow Focus turned Off, focusing the effects for a particular Layer or Section for editing is done manually, by pressing the **ORGAN**, **PIANO** or **SYNTH** button.

The current FX Focus is indicated both by the yellow **FX FOCUS** LED next to each Section's On button, as well as by LEDs in the FX Focus section.

## SECTION MODE

The effects for the Piano and Synth sections can either be independent per Layer or set to be shared for all its Layers. Pressing **SECTION** (Shift+Piano/Synth FX Focus) toggles between these two modes. In Section mode all LEDs for that Section are lit. In Layer mode, only the LED for the currently focused Layer is lit.

When entering Section mode, the settings for the currently focused Layers are applied to all Layers of that Section. When exiting Section mode all Layers will share the same settings until modified manually.

## ACTIVATING EFFECTS AND GLOBAL MODE

To enable an effect, press its **ON** button. The Delay, Compressor and Reverb effects can be set to **GLOBAL** mode, which applies the effect to all Layers of all Sections. This is done by pressing Shift+On for that effect. When turning Global mode off all Layers will share the same settings for that effect, until modified manually.

## EFFECT TYPE SELECTION WHEN AN EFFECT IS OFF

When an Effect is 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.

## MOD 1

The **MOD 1** unit offers six different types of modulation effects and its selector button is used to switch between them. For each effect there is a **VARIATION** or **PED** (Pedal) function, activated by pressing Shift+Selector button.



### 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.

The **VARIATION** for the A-Pan effect is a harder pan waveform shape, reminiscent of a classic electric piano “vibrato” character.

### TREM (TREMOLLO)

**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.

The **VARIATION** for the Tremolo switches to a square wave shape, which gives a harder and more distinct volume modulation. Useful for gate-like sounds or as a “slicer” effect at high amounts.

### 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 4 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.

The **VARIATION** mode provides a *stereo* version of the Ring Modulation effect.

### A-WAH

**A-WAH** (Auto-Wah) is a close relative to the Wah-Wah effect described below. The A-Wah uses the signal’s amplitude (envelope follower) to control the filter sweep range, making the effect velocity sensitive. The sensitivity and range of the effect is controlled with the **SENS** (Rate) knob and the wet/dry mix with the Amount knob.

The **VARIATION** of the A-Wah works in the same way, but is based on a different model which produces a distinctly different character.

## WAH

The **WAH** (Wah-Wah) modulation effect is a type of resonant lowpass filter that can be swept across the frequency range. During the sweep, the filter’s characteristics also changes.

In the default non-pedal mode the **RATE** knob controls the rate of an LFO, which provides a cyclic version of the classic Wah effect. This can be used for emulating up-down pedal playing, slow filter sweeps and much more.

The dry/wet mix of the effect is controlled with the **AMOUNT** knob.

In **PED** mode the Wah-Wah can be controlled by an expression pedal attached to the Ctrl Ped jack. With no expression pedal connected the Rate knob controls the static position of the filter. When a pedal is connected the filter position is instead controlled by the pedal.

**i** *When set to **PED**, the Rate (frequency) of the effect can still be morphed, either for setting up a custom range for the pedal sweep or for control from other sources. Read more on how to set up a Morph on page 25.*

## PUMP

The **PUMP** effect provides a type of amplitude modulation which is otherwise achieved through the use of a compressor effect, often triggered by an external control signal through its side-chain input. The result is a quick “duck” in level, followed by a slower recovery phase.

In the default, non-pedal mode the **RATE** dial controls the rate of the LFO.

**💡** *A common application for the Pump effect would be to synchronize it to the Master Clock (read more below) and set the rate to quarter notes (1/4).*

In **PED** mode the Pump effect can be controlled from a foot pedal, and “played” manually, for instance in sync with a kick drum.

The used pedal could be either the left or middle pedal of a Nord Triple Pedal, or any pedal attached to the Foot Switch jack. Settings related to this are found in the Pedal menu section, on page 59.

## MASTER CLOCK

With the A-Pan, Trem, LFO-Wah or Pump effect selected, turning the **RATE** dial clockwise synchronizes the Mod 1 Rate with the Master Clock. In **MST CLK** mode, the Rate is presented as subdivisions of the Master Clock tempo.

## MOD 2

**MOD 2** provides a selection of both classic and innovative modulation effects, each with a **VARIATION**, which is activated by pressing Shift + the Selector button. Each effect has its rate controlled by the **RATE** knob, and its amount by the likewise morphable **AMOUNT** knob.



### PHASER

The **PHASER** effect produces a characteristic “sweep” effect, commonly used with electric piano sounds.

The standard Phaser setting is based on the classic Small Stone effect, and has zero feedback at the minimum amount setting. The Amount knob increases the feedback and “color” of the effect.

The Phaser **VARIATION** is an emulation of the classic Bi-Phase effect, with zero feedback at the minimum Amount.

### FLANGER

The **FLANGER** produces a dramatic comb filter effect, giving the sound a “swooshy” and resonant quality. At zero amount the effect provides a set of static resonant peaks.

The **VARIATION** is a *mono* version of the Flanger effect.

### 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.

The **VARIATION** is a *mono* version of the Vibe effect.

### CHORUS

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. With Amount settings above 50% an additional delay line is gradually introduced, for a more complex sound.

The **VARIATION** of the Chorus effect is based on a vintage effects pedal which can go from a lush stereo widening effect to a distinctive vibrato character at higher Rate and Amount settings.

### ENSEMBLE

The **ENS** (Ensemble) effect is modeled after a vintage Eminent organ effect. The very characteristic sound comes from feeding the audio into three separate, modulated delay lines, that are cross-connected with each other.

In **VARIATION** mode the Ensemble effect is in *mono*.

## SPIN

Like the Rotary Speaker, the **SPIN** effect emulates the sound of a rotating speaker, but with a more neutral character and without the separate rotor and horn components. This effect is useful for giving any sound source a sense of motion, and changes in Rate are performed in a ramping fashion where the speed of the effect is gradually changed.

In **VARIATION** mode the movement of the Spin effect is shifted from mostly affecting the treble range to instead affect lower frequencies.

## DELAY

The **DELAY** unit produces echo/repeat effects. The Delay time is set with the **TEMPO** knob. The Delay can be set to **GLOBAL** mode (Shift + On) which applies it to all Layers of all three Sections.



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 **DRY WET** knob adjusts the balance between the dry signal and the delay repeats.

### PING PONG

Press **PING PONG** (Shift + Filter) 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.

## EFFECTS

Use the selector button to select one of the effects available for the Delay feedback loop. These effects do not affect the sound of the Dry signal, but only the sound fed into the delay, becoming increasingly

intense with each delay tap. For each effect there is a **VARIATION**, activated by pressing Shift+Selector button.

The **ENS** (Ensemble), **VIBE** and **CHOR** (Chorus) effects, including their variations, are based on their counterparts in the **MOD 2** effects unit.

The stereo **FLAM** effect produces a ping pong delay with offset left and right channels. This is useful at short delay times for room effects, or for more complex sounds at longer delay times. The variation doubles the time shift between the channels from 20 to 40 ms.

The **SPACE** effect introduces reverb-like diffusion, increasing in intensity with each tap. In standard mode the effect signal is mixed with the dry sound at 50%. In variation mode the effect signal is 100% wet.

## 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 filtered 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 reduce both high and low frequencies, making for a thin and narrow sound.

## ANALOG MODE

There are two different delay modes, the normal (“non-analog”) mode, and the **ANALOG** (Shift + Tap/Set). 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) clockwise. 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. 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 selected Amp model. The Drive LED indicates that the overdrive is active.

### EQ SECTION

A three band equalizer with Bass, sweepable Mid 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.

### AMP MODEL

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

⚠ *The Twin and JC amplifier models provide a significant boost to the treble range of the source sound, especially in non-variation modes. Depending on the sound source it may be necessary to counteract this with the EQ or other means of adjusting the source timbre.*

Amp Model	Description
<b>TWIN</b>	A simulation of a classic tube amplifier and speaker cabinet. The <b>VARIATION</b> changes the frequency response of the amplifier to a version with less treble boost and a different mid-range character.
<b>JC</b>	A simulation of a Jazz Chorus speaker cabinet, powered by a tube amp. The <b>VARIATION</b> reduces the treble and changes the mid-range response of the amplifier.
<b>SMALL</b>	A simulation of a Wurlitzer 200A internal speaker, powered by a tube amp. The <b>VARIATION</b> represents an even smaller amp and speaker model.

## TO ROTARY

The **TO ROTARY** setting sends the focused Layer to the Rotary Speaker effect, which has its controls placed at the far left of the panel (see further down).

Other effects can still be used as usual, but note that the Rotary Speaker is the last effect unit in the effects chain, so any other effects that are applied to the Layer will be placed *before* the Rotary Speaker.

## LP 24 FILTER

The **LP24** filter is a resonant 24 dB per octave *low-pass* filter. 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 LP24 filter can be used as an alternative pedal Wah effect, by morphing its Cutoff frequency with an attached Control Pedal and adjusting the Resonance to taste.*

## HP 24 FILTER

The **HP24** filter is a resonant 24 dB per octave *high-pass* filter. 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 Bass and Treble equalizer bands, as well as the Drive effect are available for both the HP24 and the LP24 effect settings.*

## COMPRESSOR



The **COMPRESSOR** effect reduces the dynamic range of the sound, making low levels louder and high sound levels 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.

The Compressor can be set to **GLOBAL** mode (Shift + On) which applies it to all Layers of all

three Sections.

## FAST MODE

The **FAST** mode (Shift + Amount knob) 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 six-way selector.

Reverb Types on the left side of the selector all have a **VARIATION**, described further down. Types on the right side can all be set to **CHORALE**,

which increases the pitch modulation in the Reverb signal, for a more lively sound. Variation/Chorale is activated with Shift+Selector button.

The Reverb can be set to **GLOBAL** mode (Shift+On) which applies it to all Layers of all three Sections.

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

💡 *The Dry/Wet control goes all the way to a fully wet setting at its max position, a sound which can be very effective both for morph effects, or when blending Layers.*

## REVERB TYPES

Type	Description
<b>SPRING</b>	The Spring setting reproduces the sound of a traditional spring reverb tank, a common feature on tonewheel organs, in guitar amplifiers and in many other kinds of equipment. The <b>VARIATION</b> provides a different character and increases the length of the spring for a longer Reverb time.
<b>BOOTH</b>	Booth represents a small room with very short decay time. <b>VARIATION</b> increases the <i>pre-delay</i> time, which delays the wet signal in relation to the dry sound. This can be used to better preserve articulation, even with higher Amount settings.
<b>ROOM</b>	In Room mode the Reverb has the character of a room with a relatively short decay time. Here too, the <b>VARIATION</b> adds a longer pre-delay time.
<b>STAGE</b>	The Stage Reverb has a medium length decay time and a natural sounding room ambience. <b>CHORALE</b> mode increases the pitch modulation of the reverb for a more lively sound.
<b>HALL</b>	The Hall setting has the response and character of a spacious hall, with a long decay. <b>CHORALE</b> mode increases the pitch modulation of the reverb for a more lively sound.
<b>CATH</b>	The Cathedral is a very large and immersive reverb, with a very long decay time. <b>CHORALE</b> mode increases the pitch modulation for a more lively sound.

The **BRIGHT** or **DARK** mode can be used for all Types to alter the frequency response of the Reverb. Set to Bright, low frequencies are slightly dampened and more high frequency content is preserved in the Reverb signal. The Dark mode instead dampens high frequencies.

## 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 most common use case for the Rotary Speaker would be to combine it with an Organ sound, which is achieved by pressing **ORGAN** in the Rotary Speaker section.
- To use the Rotary Speaker with sounds from the Piano and/or Synth sections, activate **TO ROTARY** in the Amp/EQ effects unit for the Layer that should be sent to the Rotary Speaker.
- Switch between fast and slow rotor speeds by pressing the **SLOW/STOP-FAST** button.
- To stop the rotors, press the **STOP MODE** button and set the speed to **SLOW/STOP**.
- To have the speaker sound exactly the same every time Stop Mode is active, select **ANGLE** by pressing Shift+Stop Mode and choose one of the positions from the list. This way the rotor and horn will always stop at the same positions. With the default **Free** setting, the Stop Mode sound will vary depending on the angles at which the horn and rotor have stopped.
- The rotor and horn acceleration rates, i.e. the time it takes to go from slow to fast and vice versa, can be adjusted in the Sound menu, read more on page 55.
- The Rotary speed can be continuously controlled with a Morph source, making it possible to set the rotary at speeds other than just fast, slow or stopped. Set this up by holding down any of the Morph Assign buttons and pressing the Rotary speed button. An active morph is indicated by the **MORPH** LED being lit.



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 4 *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 59.

**i** *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

On any Layer that is routed to the Rotary Speaker the Reverb, like all other effects, is applied *before* the Rotary Speaker.

## 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 55.

# 10 MIDI

## USING MIDI

The Nord Stage 4 is designed to be as flexible as possible in regard to its MIDI capabilities. It can be used as a master keyboard to control other hardware units or software sound sources, or have Layers in the Organ, Piano and Synth section be individually controlled by outboard gear such as a computer or sequencer. It is also possible to control only parts of the Nord Stage 4 from a separate keyboard, on a per-program basis. If you like, you can even do all these things at the same time.

The MIDI functionality of the Nord Stage 4 can be divided into four main areas: Global, Layer (Organ/Piano/Synth A/B/C), Aux 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*. All MIDI channels are defined in the MIDI menu, see page 56.

The Global channel is used both for sending and receiving MIDI while the Extern channels only *send*, and the Layer and Aux KB channels 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 Aux KB configuration which is done from the Aux KB menu.

Nord Stage 4	MIDI IN	MIDI OUT
Global	✓	✓
Layer	✓	
Aux KB	✓	
Extern		✓

## GLOBAL CHANNEL

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 4 – much like playing its own keyboard – and it can be used to transmit keyboard, pedal and panel actions.

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.

**i** *Global MIDI can be turned Off in the MIDI menu. This disables both transmission and reception of MIDI on the Global channel.*

## LAYER CHANNELS

The per-Layer Organ, Piano and Synth MIDI channels only *receive* MIDI, allowing for control of individual Layers from an external device. Settings for each Organ, Piano and Synth Layer are found in the Nord Stage 4 MIDI Menu.

## EXTERN

The Extern Mode, which can be selected for any Layer in the Synth 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 43, for full documentation on how to work with the Extern section.

## CONTROLLING EXTERNAL GEAR FROM THE NORD STAGE 4

It is useful to think of a Layer set to Extern Mode as a regular Synth Layer, in terms of assigning keyboard zones, enabling pitch stick and sustain pedal etc.

It is also possible to store “initial values” of things such as Program Change, Bank Select, or Volume, for an Extern Layer. MIDI CC value changes and external program changes are directly controllable from the Synth Section display and its dials. Extern settings are stored on a per-program basis, except for the Extern MIDI channels which are shared by all programs.

- ① Select a Nord Stage 4 program where external sounds should be integrated.
- ② Activate Extern Mode for a Synth Layer and set its MIDI Channel as well as the one for the external device, for example a rack synth module, to the same channel. On the Nord Stage 4 this is done in the **MIDI** menu (Shift+Program button 7).
- ⚠ *Make sure that the Extern channel is not the same channel as the Nord Stage 4 Global channel.*
- ③ Assign the Extern Layer to the desired keyboard zone(s).
- ④ Play within the zone defined for the Extern Layer on the Nord Stage 4 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 **OCTAVE UP/DOWN**, **SUST PED** and **PTSTICK** as appropriate.
- ⑥ Turn the **PROGRAM** dial – the rightmost dial under the Synth display – 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 To adjust the volume of the external MIDI device, operate the level fader for the Extern Layer which will transmit MIDI CC#7 (MIDI Volume) messages according to its position.
- ⑧ If desired, Store the program on the Nord Stage 4.

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 4 whenever this program is selected. Two additional continuous controller messages can be defined in the Extern menu, if needed. Simply set the CC numbers and the desired values and they will be transmitted along with everything else.

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

**i** *If the on-panel Transpose feature is used, the MIDI output from Extern Layers will also be transposed.*

## CONTROLLING THE NORD STAGE 4 USING MIDI

There are several options available if you wish to use a second keyboard or other MIDI device to control the Nord Stage 4. Let's have a look at the *Aux KB* feature first.

### AUX KB (AUXILLIARY KEYBOARD)

With this function it is possible to use an external keyboard for playing any combination of Layers on the Nord Stage 4. Aux KB settings are stored per program which makes it an ideal feature for live usage.

A more complete overview of Aux KB is found in the Program chapter, on page 28 but here is a basic example of how to set it up, in this case just controlling Layer B of the *Organ* section:

- ① Connect an external MIDI keyboard to the MIDI In jack of the Nord Stage 4.
- ② Open the **AUX KB** menu by pressing Shift+Program 4.
- ③ On the first page of the Aux KB menu, set "Aux KB Enable" to "On", by turning the Program dial.
- ④ Go to the second page with the **PAGE** up button. Press the **ORG** (Organ) soft button and set it to **-B**, using the dial.
- ⑤ Set the Aux KB MIDI channel to that of the transmitting MIDI device, from the Nord Stage 4 MIDI menu. The default setting is MIDI channel 16.
- ⑥ Make sure Layer B of the Organ is active on the Nord Stage 4. All other Sections and Layers are controlled as usual from the Nord Stage 4.

**⚠** *If the Stage 4 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.*

### LAYER MIDI CONTROL

A second option for controlling parts of the Stage 4 from an external device would be to use its per-Layer MIDI capabilities, allowing for addressing any Layer on a different MIDI channel. All Layers can still be controlled "locally" from the Nord Stage 4 keyboard if desired.

To set this up, assign MIDI channel numbers to each of Organ, Piano and Synth Layers within the **MIDI** menu (Shift+Program 7 button).

## GLOBAL MIDI

The third option for controlling the Nord Stage 4 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 4 Global MIDI channel, playing the external unit will be very similar to playing the Nord Stage 4 from its own keyboard.

**i** *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 4 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 4 and one or more Extern Layers are active, incoming MIDI notes can be re-routed to the MIDI Output of the Stage 4, on one or more of the Extern MIDI channels. This requires the "Thru" setting on the Extern page of the MIDI menu to be set to *On*, and allows you to control one external device from another external device.

Incoming MIDI on a Synth Layer channel (A, B or C) is re-routed to the corresponding Extern channel, whereas incoming MIDI on the Global channel is re-routed to *all* active Extern channels. The KB Zone assignment of each Extern Layer also affects the range for which incoming MIDI is re-routed to each channel.

## RECORDING A STAGE 4 PERFORMANCE TO A MIDI SEQUENCER

Here is how to record a Stage 4 performance just as you would play it from the unit - with all the pedal actions, morphs and other actions 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 4
- ③ Select the Program on the Nord Stage 4 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.

**i** *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 60.*

## MESSAGES

The following MIDI messages can be transmitted and received by the Nord Stage 4:

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

From the MIDI Menu (see page 56), it can be determined whether the Nord Stage 4 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).
- A Nord Triple Pedal 2 connected to the Triple Pedal jack also transmits Sustain Pedal information as Controller 64.
- 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 60.

### KEYBOARD VELOCITY

The Nord Stage 4 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 4 keyboard can transmit Aftertouch messages (sometimes referred to as channel pressure). This is done by applying more pressure on a key while it is held 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 Synth, Piano and Organ Preset Library banks identified by which Bank *MSB* number is being used. Changing Programs and Presets respectively on the Nord Stage 4 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.

The implementation is designed such that one MIDI LSB bank addresses as many Nord Stage 4 banks as possible, given the number of programs within each bank.

	Program	Synth	Piano	Organ
Bank MSB (CC#0)	0	1	2	3
Bank LSB (CC#32)	0-3	0-3	0	0
Program Change	0-127	0-127	0-127	0-127

An incoming message addressing a Preset will select that Preset for the targeted Section but will not activate the Section, if it is currently turned off.

- ❗ *A Program Change message that reaches the Nord Stage 4 unaccompanied by Bank Select messages will take effect in the currently selected Program bank.*

In the MIDI Menu, you can select if the Nord Stage 4 should send and/or receive program Change messages on the Global channel. See page 60 for further details.

- 💡 *If you want to transmit program change messages to external units without altering the state of the Nord Stage 4, use the Program Change feature of the Extern Mode.*

## LOCAL CONTROL ON/OFF

Local Control Off can be used to “disconnect” the keyboard and the panel on the Nord Stage 4 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 56.

## PANIC



If you experience hanging notes when using the Nord Stage 4 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

The menus, accessed in the central Program area as secondary (Shift) functions to each Program button, provide a wide range of settings related to all aspects of the Nord Stage 4 functionality. Settings that are made in the menus will take immediate effect, and will be stored until they are changed again.

**i** The MIDI Local On/Off setting is an exception and always reverts to Local On every time the Nord Stage 4 is powered up.

Most settings are *global*, meaning that they apply regardless of which program is currently loaded, while others – such as per-Layer Output Routing settings and Extern and Aux KB menu settings – are stored per Program.

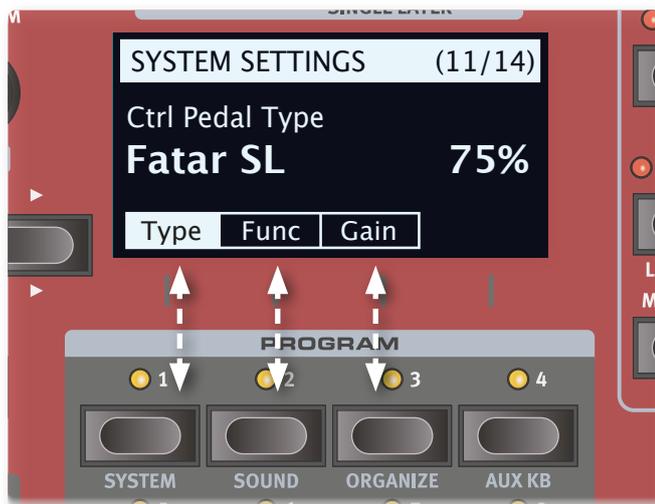
Enter a menu by holding **SHIFT** and pressing the corresponding Program 1 to 8 button. Menus are navigated with the **PAGE** ◀ and ▶ buttons and settings are changed with the **PROGRAM** dial.

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

**i** The Organize function is described in the Program chapter, on page 43.

## 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 the top row of 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 menu pages. 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 4 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 4 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 4 in finer increments.

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

### 4 - VERSION AND MODEL INFO

The Version and model info menu page shows the full version number of the currently installed OS (Operating System) and, when turning the Program dial, the hardware (HW) version of the instrument.

Use the Program dial to switch between Version and HW info

## SOUND MENU

Hold **SHIFT** and press **SOUND** (Program 2) to access the Sound menu. Use the **PAGE** ◀ and ▶ buttons to navigate between pages. 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 - PROGRAM LEVELS

Adjusts the total output level of the currently loaded Program by adjusting all of its Layer levels. Note that the Program needs to be stored for the adjustment to stick.

Range: -80 - 0 dB

## 2 - 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 4.

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

## 3 - 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)*

## 4 - ORGAN KEYBOARD TRIGGER POINT

This setting changes how the Organ is triggered by the keyboard. With "High" selected the sound is triggered before the key is fully depressed, which is more similar to how a real B3 and other organ models work.

*Range: High (Default), Low*

## 5 - 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*

## 6 - B3 ORGAN CLICK LEVEL

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

*Range: Normal (default), High*

## 7 - ROTARY SPEAKER TYPE

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, 122 Close (Default)*

## 8 - ROTARY ROTOR SPEED

This determines the speed of the rotary speaker woofer rotor.

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

## 9 - ROTARY ROTOR ACCELERATION

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

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

## 10 - ROTARY HORN SPEED

This determines the speed of the rotary speaker treble horn.

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

## 11 - ROTARY HORN ACC (ACCELERATION)

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

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

## AUX KB

Hold **SHIFT** and press **AUX KB** (Program 4) to access the Aux KB (Auxilliary Keyboard) menu. Use the **PAGE** ◀ and ▶ buttons to navigate menu pages. 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.

**i** Remember to Store the selected Program for Aux KB settings to be retained.

**i** The Aux KB MIDI Channel is set in the MIDI menu, see further down.

### 1 - AUX KBD ENABLE

This setting determines whether the Aux KB functionality is enabled for the currently selected Program. Configurations made on the second page of this menu require Aux KBD Enable to be set to "On", in order to have any effect.

*Range: Off (default), On*

### 2 - AUX KBD ORGAN / PIANO / SYNTH

Use the Org, Pno and Syn soft buttons and turn the Program dial to adjust the configuration for Layers in each Section respectively. As an example: To control Layer B of the Organ from the auxilliary keyboard, set Org to "-B". Layers that are not part of the Aux KB configuration are represented with a dash ("-").

*Range Org: -- (default), A-, -B, AB*

*Range Pno: -- (default), A-, -B, AB*

*Range Syn: --- (default), A--, -B-, --C, AB-, A-C, -BC, ABC*

### 3 - KEYBOARD VELOCITY

This setting determines the velocity scaling of incoming MIDI Notes on the Aux KB channel. Depending on if the auxilliary keyboard has a non- or fully weighted action, and depending on the manufacturer it may be necessary to adjust this setting in order to achieve appropriate control when playing sounds on the NS4.

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

## OUTPUT MENU

Hold **SHIFT** and press **OUTPUT** (Program 5) to access the Aux KB (Auxilliary Keyboard) menu. Use the **PAGE** ◀ and ▶ buttons to navigate menu pages. 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 - OUTPUT BUS CHANNELS

Output routing for the Nord Stage 4 is managed through a *Bus* system. There is one *Main* Bus and three *Sub* Busses, labeled I, II and III. By default, all Sections and Layers are assigned to the Main bus, which by default is routed to outputs 1+2.

Any Bus, including the Main Bus, can be set to a range of values using the 1+2 and 3+4 stereo pairs, or to a single output for mono

applications. Any Layer can then be routed to any Bus as needed.

## MONO OUTPUT

In certain scenarios it may be necessary or desired to output all sound coming from the Nord Stage 4 in mono, rather than stereo. To achieve this, make a setting for the Bus being used which uses just a single output channel (1, 2, 3 or 4). When using just one output, piano sounds are optimized for mono and stereo effects are adapted for mono use.

## RANGE

*Range Main: 1-2 (default), 3-4, 1, 2, 3, 4, 12+34.*

*Range Sub I: 1-2, 3-4 (default), 1, 2, 3, 4, 12+34.*

*Range Sub II: 1-2, 3-4, 1, 2, 3 (default), 4, 12+34.*

*Range Sub III: 1-2, 3-4, 1, 2, 3, 4 (default), 12+34.*

💡 *The 12+34 setting can be useful for sending a copy of all outgoing sound as a monitor feed.*

## 2 - ORGAN/ROTARY OUTPUT BUS

This setting determines which output bus is used by both Organ Layers and the Rotary Speaker respectively. Use the soft buttons for focusing each setting.

With the arrow (←) selected for the Rotary Speaker, its output bus will follow that of the Organ.

### ABOUT THE ROTARY SPEAKER AUTO SETTING

When set to “Auto” the Rotary Speaker will correspond to the Organ, Piano A/B or Synth A/B/C output settings – in that order of priority.

If the Organ is using the Rotary Speaker effect, the Rotary output will always correspond to that of the Organ. However, if a Piano Layer uses the Rotary and the Organ does not, the Rotary Speaker will instead follow the output settings of that Piano Layer.

## RANGE

*Range Organ: Main (default), Sub I, Sub II, Sub III*

*Range Rotary: Main, Sub I, Sub II, Sub III, ←, Auto (default)*

## 3 - PIANO OUTPUT BUS

Determines the output bus for the Piano A and B Layer respectively. Use the soft buttons for focusing each Layer.

With the arrow (←) selected for Piano B, its output bus corresponds to that of Piano A.

*Range A: Main (default), Sub I, Sub II, Sub III*

*Range B: Main, Sub I, Sub II, Sub III, ← (default)*

## 4 - SYNTH OUTPUT BUS

Determines the output bus for the Synth A, B and C Layer respectively. Use the soft buttons for focusing each Layer.

With the arrow (←) selected for Synth B or C, its output bus corresponds to the Layer at the left.

*Range A: Main (default), Sub I, Sub II, Sub III*

*Range B, C: Main, Sub I, Sub II, Sub III, ← (default)*

# PEDAL MENU

Hold **SHIFT** and press **PEDAL** (Program 6) to access the Pedal menu. Use the **PAGE** ◀ and ▶ buttons to navigate between pages. 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 - CONTROL PEDAL

### TYPE

The Nord Stage 4 accepts many commonly available expression pedals through its **CONTROL PEDAL** input. Choose a setting that matches the pedal being used.

*Range: Roland EV7 (default), Yamaha FC7, Korg, Fatar (and Studiologic)*

💡 *If a connected pedal is operated while this menu page is open, a percentage is displayed which can be used to determine the range of the connected pedal. This can be helpful when finding a suitable setting for a pedal that is not explicitly supported.*

### FUNC (FUNCTION)

This setting determines the functionality of a pedal that is attached to the Control Pedal input. The two settings are Control (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*

## 2 - 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 4 sound engines. When set to Wheel Morph, the Swell Pedal mirrors the Morph functionality of the Modulation Wheel.

*Range: Swell (Default), Volume, Wheel Morph*

### 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*

### 3 - SUSTAIN PEDAL

#### TYPE

This setting needs to correspond to the type of pedal connected to the **SUSTAIN PEDAL** jack for the sustain functions to work correctly.

Depending on the selected Type, one or three vertical bars (corresponding to a single and a triple pedal respectively) are shown in the display, which will fill up as pedals are pressed down – indicating that a pedal has been properly connected.

The Open and Nord SP-1 (“Closed”) settings correspond to basic, on-off type, pedals whereas the Nord SP-2 pedal is of a continuous type which, like the Triple Pedals, is compatible with the Pedal Noise and half damping features. The Nord TP-1 setting corresponds to the legacy Nord Triple Pedal 1. The Nord Triple Pedal 2 is attached to a dedicated 5-pin jack and is not affected by settings made in this menu.

*Range: Open, Nord SP-1 (Nord Sustain Pedal 1), Nord SP-2 (Nord Sustain Pedal 2, default), Nord TP-1 (Nord Triple Pedal 1)*

#### FUNC (FUNCTION)

If desired the Sustain Pedal can also alter the speed of the Rotary Speaker effect while the pedal is held, by setting its Function to Sus+Rotor Hold.

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

### 4 - TRIPLE PEDAL FUNCTION

A connected Triple Pedal, whether its a Nord Triple Pedal 1 connected to the Sustain Pedal jack or a Nord Triple Pedal 2 connected to the Triple Pedal jack, can be set up in a variety of ways for controlling a number of different features. The Right pedal always controls Sustain (or optionally Sustain+Rotor Hold), while the Left and Middle pedals can each control a larger selection of parameters.

#### ABOUT THE “USER ASSIGNED” SETTING

When set to “User Assigned” the Left or Middle pedal is used for these functions, as active on the Nord Stage 4 panel:

- Mst Clk Pedal Tempo Tap
- Layer Scene II Pedal
- Synth Vibrato Pedal
- Pump effect in Ped mode

#### RANGE

*Range Left: Una Corda (Default), User Assigned, Layer Scene II, Pump, Mst Clk Tap, Synth Vibrato, Program Up, Program Down, Rotor Hold, Rotor Toggle*

*Range Middle: Sostenuto (Default), User Assigned, Layer Scene II, Pump, Mst Clk Tap, Synth Vibrato, Program Up, Program Down, Rotor Hold, Rotor Toggle*

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

### 5 - 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 4 *Compact* model, this can also be set to *Half Moon Switch*.

*Range: Open (Default), Nord SP-1 (“Closed”), Half Moon Switch (only on Compact model)*

#### FUNC (FUNCTION)

This allows for changing the functionality of a switch pedal connected to the **ROTOR PEDAL** input on the Nord Stage 4. With Rotor Toggle the fast/slow rotor speed is switched with each press on the pedal, like an on/off switch pedal. With Rotor Hold the Rotor Speed is *fast* for as long as the pedal is down and reverts back to *slow* when the pedal is released.

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

### 6 - FOOT SWITCH

#### TYPE

The Foot Switch jack on the Nord Stage 4 accepts a variety of different pedals, with either one or two buttons/switches. Set the Type parameter according to the connected model.

If you are unsure of the polarity of the pedal, simply check whether the chosen functionality works as expected, if not select the other polarity (Open or Closed).

*Range: Single Open, Single Closed, Dual Open, Dual Closed*

#### FUNC 1

The Func 1 parameter determines the function of an attached single pedal, or the first switch of a dual pedal.

*Range: User Assigned, Layer Scene II, Pump, Mst Clk Tap, Synth Vibrato, Program Up, Program Down, Rotor Hold, Rotor Toggle*

#### FUNC 2

The Func 2 parameter determines the function of the second switch of a dual pedal and has no effect when a single pedal is connected.

*Range: User Assigned, Layer Scene II, Pump, Mst Clk Tap, Synth Vibrato, Program Up, Program Down, Rotor Hold, Rotor Toggle*

## MIDI MENU

Hold **SHIFT** and press **MIDI** (Program 7) to access the MIDI menu settings. Use the **PAGE** ◀ and ▶ buttons to navigate between pages. The **PROGRAM** Dial is used to change settings and 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 4 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*

**i** *Local always defaults back to “On” every time the Nord Stage 4 is powered on.*

## 2 - CHANNEL GLOBAL / AUX KB

### 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 4.

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

### AUX KB

This sets the MIDI channel for receiving MIDI from an external keyboard when using Aux KB mode - see page 28.

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

## 3 - CHANNEL ORGAN

Use this setting to determine the MIDI channel for controlling the two Organ Layers via *incoming* MIDI. Use the soft buttons to switch between settings for Organ A and B respectively.

With the arrow (←) selected for Organ B, its MIDI channel corresponds to that of Organ A.

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

*Range B: 1-16, Off, ← (Default Off)*

## 4 - CHANNEL PIANO

Use this setting to determine the MIDI channel for controlling the two Piano Layers via *incoming* MIDI. Use the soft buttons to switch between settings for Piano A and B respectively.

With the arrow (←) selected for Piano B, its MIDI channel corresponds to that of Piano A.

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

*Range B: 1-16, Off, ← (Default Off)*

## 5 - CHANNEL SYNTH

Use this setting to determine the MIDI channel for controlling the three Synth Layers via *incoming* MIDI. Use the soft buttons to switch between settings for Synth A, B and C respectively.

With the arrow (←) selected for Synth B or C, its MIDI channel corresponds to the Layer at the left

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

*Range B: 1-16, Off, ← (Default Off)*

*Range C: 1-16, Off, ← (Default Off)*

## 6 - CHANNEL EXTERN

This sets the transmitting MIDI channel for Synth Layers A, B and C set to Extern Mode. Use the soft buttons to switch between settings for Extern A, B and C respectively. Note that this is a global setting which affects the Extern MIDI channels regardless of selected Program.

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

## THRU

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

*Range: Off (Default), On*

**i** *The Device and Pedal MIDI settings (pages 4 and 5 in the Extern menu) also apply to re-routed MIDI on the Extern channel.*

## 7 - CONTROL / PROG CHANGE / DEVICE MODE

### CC (CONTROL CHANGE)

This allows you to set if you want your Nord Stage 4 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 4 transmits and/or receives MIDI program Change Messages, on the Global channel.

**i** *This applies to the “internal” Programs in the Stage 4, not the program change messages that the Extern section can be set to transmit.*

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

### DEV (DEVICE)

This allows you to set if you want your Nord Stage 4 to transmit and/or receive *Device* MIDI Messages or not on the Global channel. Devices refer to physical physical controllers that generate and send MIDI but are excluded from the Control Change filtering. These are:

- Pitch Bend
- Modulation Wheel
- Aftertouch
- Sustain Pedal
- Control Pedal
- Swell Pedal
- Volume (Swell set to Volume)

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

### PC EXT (PROGRAM CHANGE EXTENDED)

This setting determines whether Program Change and Bank Select messages are sent and/or received for the Preset Library banks.

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

## 8 - 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 8) 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 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.

**i** Most items on the Extern menu have separate entries for Synth Layer A, B and C. Use the Synth Layer A, B and C buttons to switch between them.

**i** Most settings from the Extern menu are saved with a Program. The only exception is the “Extern MIDI A/B Channel” when Extern MIDI Channel Mode is set to Global.

### 1 - KEYB VELOCITY A/B/C

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*

### 2 - DEVICE MIDI A/B/C

For each Extern Layer it can be determined whether to send data generated by the modulation wheel, aftertouch and pitch stick. If any of these should not generate MIDI data, turn its setting to *Off*.

*Range for Wheel, AT is: On (Default), Off*

🔗 *PStick MIDI is turned On or Off using the **PSTICK** control (Shift+Layer B) in the Synth/Extern Section.*

### 3 - PEDAL MIDI PANEL A/B/C

For each Extern Layer it can be determined whether to send data generated by the control (expression), swell, volume and sustain pedals. If any of these should not generate MIDI data, turn its setting to *Off*. Note that the volume parameter refers to volume *pedal* data. This setting does not affect the Volume option in the Extern panel section.

*Range for Ctrl, Swell and Vol is: On (Default), Off*

🔗 *Sustain Pedal MIDI is turned On or Off using the **SUSTPED** control (Shift+Layer A) in the Synth/Extern Section.*

**i** *Volume pedal data is only sent if the swell pedal is set to function as volume pedal, in the System menu. Note that both swell and volume data may be sent if the control pedal is set to function as both control and swell pedal, and the swell pedal is set to work as volume pedal.*

### 4 - BANK SELECT SETTINGS A/B/C

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 *Program Change* value is set in the Synth display, using the rightmost dial and is stored with the Program.

**i** *The Nord Stage 4 can send the Bank Select/Program Change message automatically, when a program is loaded, if the “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)*

### 5 - CONTROL CHANGE NUMBERS A/B/C

Two separate Control Change (CC) numbers can be defined for each Extern Layer. Their *values* are controlled and stored from the Synth display, using the left and middle dials. Use the **Num1** and **Num2** soft buttons for focusing each setting and the Synth Layer A, B and C buttons for switching between Extern Layers.

Each 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.

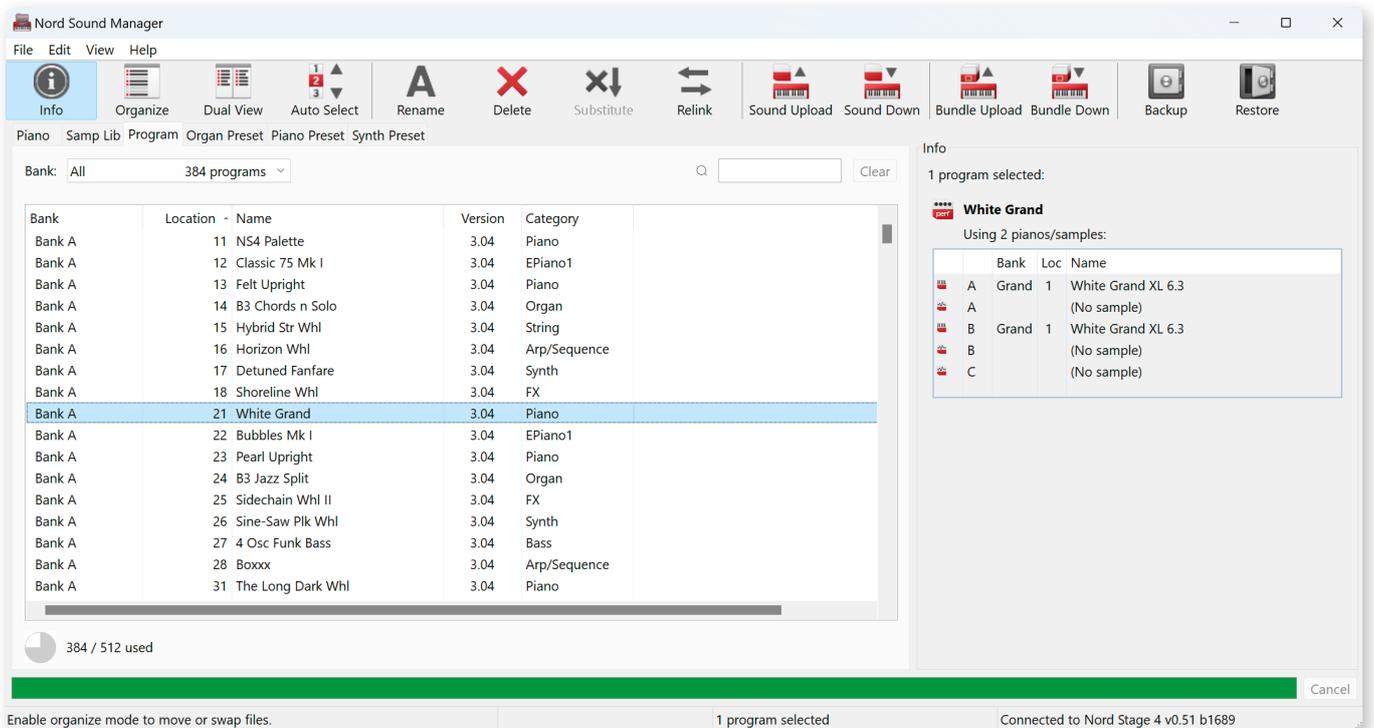
*Range: 0-119, Off (Default Off)*

### 6 - SEND ON LOAD

This setting toggles if any settings for the Program Change (PC), Volume (Vol) or user defined MIDI CC (UsrCC) messages in Extern mode should be automatically transmitted when a program is selected, 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 4 owner, which allows for accessing, altering and backing up content within the various memory areas on the Nord Stage 4. These are some of the common tasks performed through the Nord Sound Manager:

- Organizing and naming Programs and Presets
- Downloading new Piano sounds to the Piano partition
- Downloading new Samples to the Sample partition
- Downloading Presets to the Organ, Piano and Synth Preset partitions
- Uploading Programs or Presets from the Nord Stage 4 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 10.10 or later

Windows 7-11

Nord USB Driver version v3.0 or later required for Windows. This is normally installed automatically through Windows Update, but can also be downloaded from [www.nordkeyboards.com](http://www.nordkeyboards.com).

# 13 NORD SAMPLE EDITOR 4



## ABOUT NORD SAMPLE EDITOR 4

The Nord Sample Editor 4 is a tool for creating custom sample instruments, playable on your Nord Stage 4. Simply press record or drop audio files (.wav or .aiff) on the desired keys, set Start, Stop and Loop points in the waveform editor and your custom sample is ready to be transferred to your connected Nord Stage 4!

Whether creating a fully mapped instrument, a simple FX sound or assigning a sampled song intro to a single key, the Nord Sample Editor 4 opens up many possibilities together with the Nord Stage 4. Here are some of the key features:

- Intuitive user interface
- Built-in recording functionality
- Drag and drop single or multiple samples
- Automatic and manual import options
- Edit multiple zones at once
- Support for silent zones

The Nord Sample Editor 4 can be downloaded from the *Software* section at [www.nordkeyboards.com](http://www.nordkeyboards.com).

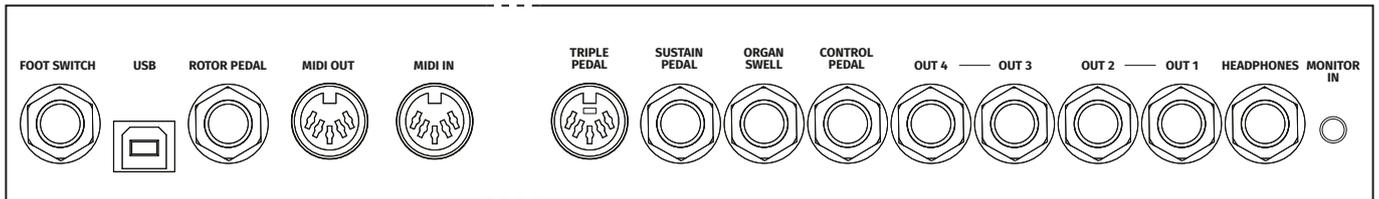
## SYSTEM REQUIREMENTS

Mac OS X 10.10 or later

Windows 7-11.

Nord USB Driver version v3.0 or later required for Windows. This is normally installed automatically through Windows Update, but can also be downloaded from [www.nordkeyboards.com](http://www.nordkeyboards.com).

# 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 the Nord Stage 4 at high volumes can damage your hearing.*

### HEADPHONES

1/4 inch stereo headphone jack, which outputs any audio routed to CH 1&2.

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

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

When shipped, the Nord Stage 4 is configured to output audio through the 1&2 outputs. Refer to the Output Menu section on page 57 for details on how to utilise the 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 4. 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 Out 1&2.

⚠ *The Nord Stage 4 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 4 to a computer. The connection can be used for MIDI communication, for OS updates and for connecting to applications such as the Nord Sound Manager or Nord Sample Editor 4. 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 always active simultaneously.*

## PEDAL CONNECTIONS

### TRIPLE PEDAL

The 5 pin **TRIPLE PEDAL** input jack is only compatible with the Nord Triple Pedal 2 (TP-2) unit. The three pedals can be used exclusively for Piano related functionality and Sustain, or for controlling a number of other functions. See the Pedal menu on page 58 for further details.

📖 *Read about Nord Triple Pedal Piano functions on page 26*

### SUSTAIN PEDAL

1/4 inch connector for all common types of sustain pedals, including the Nord Sustain Pedal 1 and 2, and the Nord Triple Pedal 1 (TP-1). Sustain pedal type and polarity is set manually in the Pedal menu.

### CONTROL PEDAL

1/4 inch connector for a continuous expression pedal, used for controlling morphs and/or Organ swell. Most of the common expression pedal models are supported, and can be selected in the Pedal menu.

### ORGAN SWELL

1/4 inch connector for an expression pedal used either as swell pedal with the Organ section, for global Volume control or to mirror the Wheel Morph functionality. Most of the common expression pedal makes and models are supported, and can be selected in the Pedal menu.

### FOOT SWITCH

1/4 inch connector for a one or two button, momentary pedal. The Foot Switch can be assigned to a variety of functions, such as changing Programs, switching between Layer Scenes or controlling certain effects. See the Pedal menu for details on how to set this up.

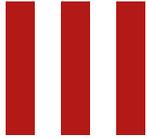


# APPENDIX: MIDI CONTROLLER LIST

Nord Stage 4 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
Organ Octave Shift	12
Organ Model	14
Organ Preset	15
Organ Drawbar 1	16
Organ Drawbar 2	17
Organ Drawbar 3	18
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Organ Vibrato Enable	27
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Organ Percussion Level	30
Piano Octave Shift	35
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Piano Model	37
Piano Variation	38
Piano Timbre	40
Synth Octave Shift	44
Synth Glide Rate	48
Synth Voice Mode	49
Synth Vibrato Mode	51
Synth Mod Envelope Attack	52
Synth Mod Envelope Decay	53

Nord Stage 4 Parameter	MIDI CC #
Synth Osc Ctrl	56
Synth Mod Envelope Release	57
Synth Filter Freq	59
Synth Filter Resonance	60
Synth Filter Drive	61
Synth Filter KBD Track	63
Synth Filter Type	65
Synth Amp Envelope Attack	68
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Mod 2 Rate	90
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Delay Tempo	94
Delay Feedback	95
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Amp/EQ Bass	102
Amp/EQ Mid	103
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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 4 88, Nord Stage 4 73, Nord Stage 4 Compact

**Type of Equipment:** Digital Organ and piano

**Responsible Party:** Clavia DMI AB

**Address:** P.O. BOX 4214. SE-102 65 Stockholm Sweden

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