

nord lead 2

virtual analog

First shown in early 1995, the Nord Lead virtual analog synthesizer took the keyboard world by storm. It has since become a classic and a new standard of the industry. The warm analog sound coupled with today's technology moved the Nord Lead up to a leading position on the synthesizer scene. All around the world musicians praise the simplicity, the smart design and the music power of the Nord Lead "Virtual analog" concept.



**A GREAT MUSICAL INSTRUMENT
IMPROVING A GREAT CONCEPT**



With the Nord Lead 2, a great concept is being improved upon in many new ways.

The Nord Lead 2 is actually 4 synthesizers in one. It has 4 multi-timbral channels, each with its own fully assignable output. This is an essential feature for musicians who need to access sounds independently for further processing and mixing.

Nord Lead 2 comes with an "impressive" 16-voice architecture, a highly beneficial feature when creating layered sounds, "power pads", awesome leads and booming basses. 16 notes are also very useful in an instrument containing 4 independent MIDI channels.

The keyboard can be split into two sections.

Also, since the Nord Lead 2 has the ability to use up to four patches simultaneously, each side of a split can contain one or two patches, creating "split/layers" for even more exciting sonic possibilities!



Finally, to expand the Nord Lead 2's live performance abilities, a second pedal input has been added. One pedal is available for sustain and the other for expression.

Specifications Rack Model

19" space, 4 units high. Features identical with Nord Lead 2 except Pitch Stick, keyboard and modulation wheel.
Dimensions: 435 (W) x 210 (D) x 105 (H) mm.

WHAT'S NEW IN NORD LEAD 2

FILTER SECTION

The filter section in the Nord has been appreciated for its warmth of sound character and "unique" filter types. Another exciting new addition to the filter section is the distortion button. Try it! It will do fun things along with your filters, adding even more excitement to your patches.

OSCILLATOR

A sine wave is added to the already powerful oscillator section. From all of the classic features of the analog concept Nord Lead 2 now adds an old favorite editing parameter: ring modulation as well as a wealth of new digital waveform possibilities created by using the "synchable noise" feature. In the Nord Lead 2 you are able to sync noise and OSC 1 to create sounds unlike any you've heard before.

FILTER KEYBOARD TRACKING

The Filter keyboard tracking choices have been added to in the new Nord Lead 2. Now you can choose between 1/3, 2/3, full or off.

LFO1

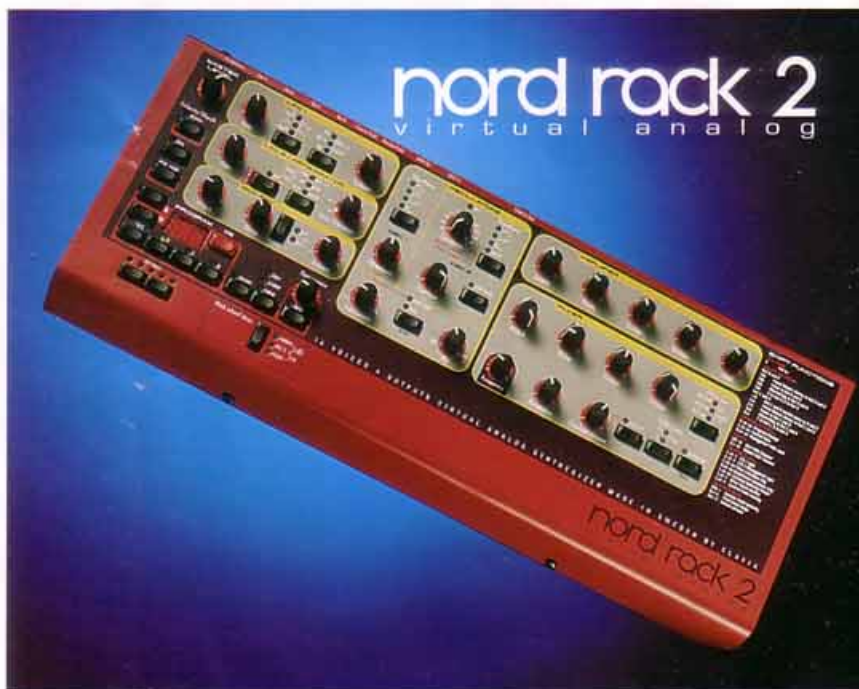
We're not through yet. In the modulation area several new features have been added. The LFO 1 section receives two more waveform choices, "soft" random and square waveform plus one more destination.

LFO2 ARPEGGIATOR

The arpeggiator has been redesigned. An arpeggiator hold button has been added.

MOD ENV

Pulse width has been added to the destinations in the modulation envelope section.



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AMPLIFIER, GAIN

Attack, decay sustain and release. That's what you need to shape a nice envelope. The Nord tracks smoothly without any stepping effects or digital glitches. Programmable volume.

OSC 1

Offers triangle, saw, sine and pulse waveforms. The pulse-width is adjustable.

OSC 2

Offers triangle, saw and pulse, with adjustable width, waveforms. The pitch can be set 5 octaves below to 5 octaves above OSC 1 pitch. The oscillator can also be set to act as a noise source with a noise color controller.

SYNC

Synching the OSC 1 to OSC 2 makes it possible to do e.g. vocal effects. Synching OSC 1 to noise allows you to create new "metallic" like sounds.

FM AMOUNT

Combine the best of two worlds, the analog with the digital, in one synthesizer! Nord Lead offers "Linear-deep FM". Warm analog sounds can easily be combined with or changed to FM type of sounds.

RING MODULATION

And old favorite editing parameter has been added.

PULSE WIDTH

Nord Lead offers a true pulse-width modulation. Perfect for soft string pads.

MIX

Blend the two oscillators according to your taste.

LFO 1

Modulate the pitch on OSC 1 and 2 or only OSC 2 with a triangle, sawtooth, random, square or soft random waveforms. Use the same waveforms to modulate the filter. One extraordinary feature of the Nord Lead is its ability to perform true "pulse-width modulation". Nord Lead is the first digital keyboard on the market that offers true modulation of the pulse-width. A must for your string pads.

LFO 2 / ARPEGGIATOR

Play those exciting arpeggiator licks again. Or use this section to modulate the amplifier or the pitch. With the new hold function you can run four separate arpeggiators simultaneously.

MOD ENV

This is a special feature. It's an extra AD envelope to control the pitch of OSC 2, to produce e.g. typical vocal sounds, or to let FM to modulate the sound. It's assignable to pulse width, FM and OSC 2 pitch. You can also use it to produce click and noise effects.

VELOCITY PROG.

This is one of the most exciting editing parameters for the Nord Lead. Any parameter, controlled by a knob, can be velocity dependent. For example, let a soft string pad become a funky clavinet sound through keyboard dynamics.

THE MANUAL BUTTON

When you push this button, you can edit a new sound from scratch.

PROGRAM

The Nord Lead comes with 99 sounds and 100 performances. The Nord Lead 2 with an inserted PCMCIA RAM card can hold an additional 297 sounds, 100 performances and 30 drum kits.

PERFORMANCE SECTION

Play 4 different synthesizers simultaneously! It's possible with the Nord Lead. As you can see you have four sound slots; A, B, C and D. Play them separately or layer them together. You can use the morph function to blend all 4 slots with each other to create astonishing basses, leads and pads.

UNISON

Press this button to "widen and expand" the sound. Unison mono fattens the sound even more. The unison "detune" effect is also adjustable.

POLY, LEGATO, MONO

Playing modes.

PORTAMENTO

Adjust the portamento rate with the knob. In auto, portamento works only with legato playing.

OCTAVE SHIFT

Selects the basic octave for each sound.

PITCH STICK

Designed to change the pitch continuously without any dead spots. It gives you complete control of the pitch and allows you to make true and natural vibrato. The effect increases exponentially as you move it further from the centre.

MODULATION WHEEL

Traditional type of modulation controller. Route to LFO 1 for vibratos, OSC 2 pitch for bend effects, FM amount, filter frequency and to control wheel morphing.

FILTER

Attack, decay, sustain and release. The envelope acts fast and smoothly without any stepping effect or digital glitches.

FILTER TYPE

Nord offers 5 different filters. Besides the two most common types, low pass 12 dB and low pass 24 dB there are also high pass, band pass and notch with 12 dB low pass filter. Distortion.

FREQUENCY

Change the timbre of the sound with total sound control. No stepping effects or glitch problems.

RESONANCE

Let the filter ring!

ENVELOPE AMOUNT

Sets the filter contour to your sounds.

VELOCITY, KBD TRACK

Control the filter envelope by velocity. Thanks to Nord Lead's velocity sensitive and fast keyboard, get used to doing percussive and expressive licks. The filter frequency follows the keyboard range.

SOUND GENERATION

"Virtual Analog Synthesis". Clavia has analyzed analog synthesizer design in detail and implemented the research in several digital models. Nord Lead employs mathematical simulations of the electrical signal generated by analog oscillators, instead of using waveform tables. This makes it possible, for example, to sweep the pitch smoothly over a very wide range and allow for true pulse width modulation. Also, the character of the Nord Lead filter exhibits a typical analog behaviour when swept with high Q-value.

VOICES

16 voices. 4 part multi-timbral.

SPECIAL FEATURES

Velocity morphing: each function, controlled by a knob, can be controlled to response of velocity. Wheel morphing: each function, controlled by a knob, can also be controlled by the modulation wheel / pedal to continuously fade between two sets of values.

PERFORMANCE CONTROLLERS

4 octave velocity sensitive keyboard with octave shift buttons (5 oct.). Keyboard split, two sections. Modulation wheel, the "Pitch Stick" (featuring no dead zone at zero crossing), 1 pedal input for sustain and 1 for expression pedal. Patent pending for the "Pitch Stick".

USER INTERFACE

3 digit display, 26 knobs and 27 buttons for program editing.

OSCILLATOR SECTION



OSC 1 generating sine, triangle, sawtooth or pulse with adjustable width, waveforms. OSC 2 generating triangle, sawtooth or pulse (with adjustable width) waveforms and can also generate noise with a color control. OSC 2 can be hard "sync'd" to OSC 1.

Linear deep frequency modulation of OSC 1 from OSC 2.

A wide range of new waveforms with a strong formant character is achieved with the new synchable noise, where noise can be synched to OSC 1.

FILTER SECTION



12 dB "2 pole" low pass, 24 dB "4 pole" low pass, band pass or high pass and notch with 12dB low pass. Cut off, resonance, envelope amount, envelope amount controlled by velocity; ADSR envelope. Filter keyboard tracking can be set to full, half or off. Filter distortion.

AMPLIFIER SECTION

ADSR envelope, gain control.



MODULATION SECTION



LFO 1 generating triangle, saw, pulse, LF filtered noise and random staircase routed to OSC 1+2, OSC 2, filter, pulse-width and FM amount. LFO 2 produces a triangle waveform, routed to OSC 1 and 2 or amplifier. It also

controls the rate for the arpeggiator. Arpeggiator: Range: 1 - 4 octave. Modes: up, down, up/down, random. Hold function. Echo can be set between 1 to 8 repeats. Modulation envelope (attack, decay) for OSC 2 pitch, FM amount and pulse width.

PERFORMANCE SECTION

Play mode: Poly, legato, mono, unison mono, unison poly. Manual mode. Four program slots for layering possibilities. Portamento/auto portamento.

PERCUSSION KITS

10 analog drum kits. Each percussion kit consists of 8 independent sounds, configured in 8 zones across the keyboard.

MEMORY

40 user-programs, 59 factory programs, 10 drum kits and 100 factory performances. An additional 297 (99 x 3) user-programs and 100 user-performance programs plus 30 percussion kits can be saved on a PCMCIA 64 (or more) kilobyte battery backed RAM card.

AUDIO OUT

4 outputs. Each slot has its own output. Modes: stereo, mono and multi-timbral mode. Headphones out. High resolution low noise 18 bit DAC.

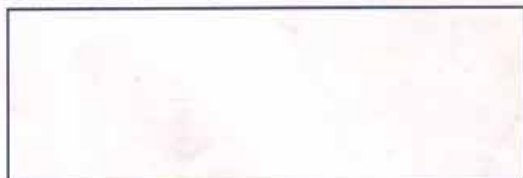
MIDI FEATURES

All control knobs and switches for program editing send and receive control change messages. System exclusive bulk dumps. One program or all programs. MIDI clock synchronizing LFO 1 and LFO 2/arpeggiator. Triggering of the filter and amplifier envelopes and velocity control from separate programmable MIDI channel and note numbers.

DIMENSIONS

865(W) 265(D) 105(H) mm. Weight 6.7 kg. 34.0"(W) 10.4"(D) 4.1"(H). Weight: 14.7 lbs.

Specifications are subject to change without notice.



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