

adrenaline rush

KS4. KS5. The new Liquid Analog Sound synthesizers from Novation are simply the best sounding, best value, coolest looking and downright easiest to use synths in their class.

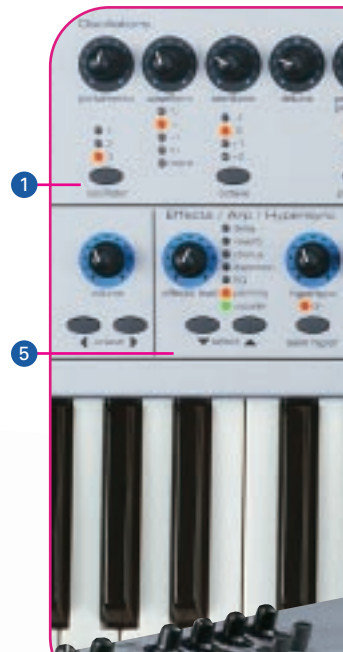
Awesome Sonic Performance

Being the pure pleasure seeker that you are, you'll appreciate that both these instruments feature Novation's chilled and unique Liquid Analog Sound. Phatt? Oh yes. Gut wrenching bass? And then some.

Three powerful oscillators combine with waveform 'doubling' and clever single cycle wave replay for mega phatt sounds with no loss of polyphony, while FM algorithms take care of the metallic and percussive sounds.

Want more? - You've got it, as these superb synths are also capable of producing classy electric pianos, organs, basses and leads, plus, you can use an external audio source as an oscillator waveform or route it through the mixer, filter and envelope sections.

Cool.



The sync meister

- # Takes the hassle out of applying the large number of MIDI clock / tempo synchronized effects and synthesizer parameters needed to 'sync to the beat'
- # Apply musical 'templates' of effects and synth parameters to your sound for mind-bending, tempo-locked auto-motion syncs and grooves
- # Expand your creativity and achieve performances which will leave your public breathless

KS4 • KS5

polyphonic synth



1 - Analog Modelled Oscillators with Single Cycle Wave Replay

As well as providing all the classic waveforms, each of the three powerful oscillators may be set to replay a looped single cycle waveform. Sixteen distinct single cycles are available containing complex audio information that is simply not available from the standard classic waveforms. - Floor-shaking sub bass through to shimmering percussive bites are a snap. The oscillators, which may be set to Unison or Sync'd operation, also feature a doubling facility which provides twin waveforms with no loss of polyphony. And for those percussive and metallic timbres, there's even an FM mode plus a comprehensive array of noise sources. External audio can be input and used as an Oscillator source waveform or processed through the Mixer, Filter and Envelope sections.

2 - Modulated Mixer

As well as being able to adjust the static levels of the oscillator outputs, the new mixer section introduces volume modulation which permits dynamic blends of the outputs of the oscillator sound sources - significantly increasing the spectrum of available timbres.

3 - Warm multi mode Liquid Filter

Delivering the rich liquid sound of an analog filter. Selectable low-pass, band and high pass modes at 12 or 24dB slopes with resonance and overdrive make it easy to recreate anything from a distorted TB303 to tightly rounded bass patch.

When it's pumpin the last thing you need is a user interface that gets in the way. Slows you down. Turns you off.

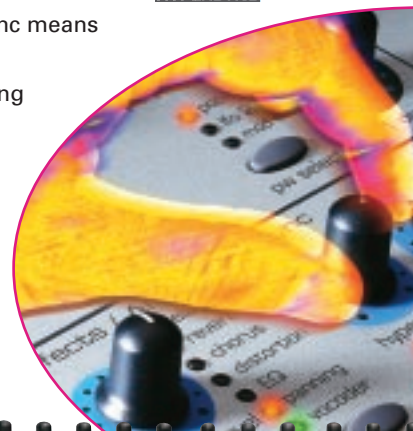
No fear of any of that here. 33 knobs and sliders get you immediate access to where the action is, plus the large, blue and silver 2 x 20 character backlit LCD screen accepts full descriptions for program and parameter naming. That's right - no more cryptic messages. Recall a named factory preset, tweak, pull it, bend it to get 'your sound' and instantly save it in any of the 400 program or 100 performance locations.

But a great sound and easy to use nature are only the start as the KS4 and KS5, with typical Novation flair and genius, have other real cute tricks under the hood.

Hypersync™ to the Beat

Taking a starring role is Hypersync.

Another unique Novation technology, Hypersync means no more individually selecting and adjusting multiple parameters to create MIDI clock / tempo synchronized effects.



SS thesizers



4 Pulse and Sync to the Beat

Two advanced LFOs feature Sample & Hold, Tri, Saw and Square waveforms with Speed and Delay parameters. - Use them in 'one-shot' mode as additional envelopes for even more sound shaping power. As well as the traditional waveforms, KS4 / KS5 offer complex of rhythmic waveforms which, when combined with Hypersync allow for pulsating rhythmic modulation of volume, filtering and pitch.

Arpeggiate Four Times Over

In addition to the usual modes, each of the 4 arpeggiators can also independently use any of the 16 inbuilt rhythmic patterns. - A single key triggers a wall of sound. All 4 arpeggiators and both LFOs can be individually sync'd to MIDI Clock in different time signatures.

5 Integrated Effects on EACH part

The KS4 / KS5 provide 6 simultaneous effects for each part making a whopping 24 in total. Effects include a crunching distortion, a sync'd stereo chorus and phaser for depth, swirl and spatial effects, a huge reverb, a panner which can be sync'd to LFOs for dynamic control of the stereo image and a delay engine for remarkable time-synchronized repeats.

Vocoder and External Audio Input

The 16 band Vocoder makes it easy to add fashionable Robot and Talky effects. The external audio input allows an audio signal to be substituted for an oscillator waveform or to be auto-processed by the internal filter and envelope generators without trigger signals.

Just grab and turn the powerful Hypersync edit control to apply templates (either factory stored or user created), of musically inspiring synchronisation and effects settings. Within minutes, you'll be using Hypersync to create complex audio motion effects that are perfectly locked to the tempo of your composition. It sounds great. It's time saving. It works.

Simultaneous Effects and More

You want more?

How about 24 simultaneous effects with a distortion that will make your ears bleed? A flexible reverb and a synchronized stereo chorus with incredible depth, are just a few of the effects available.

Add to this the four stellar arpeggiators, which can be combined with the two LFO's to create jaw-dropping audio motion effects, a funky 16-band Vocoder for robot and talky effects, handy drum maps plus the superb semi-weighted with

aftertouch keyboards, and you've got two of the the slickest, highest quality synths available today.

6 Powerful & Recordable Control

Loads of knobs, buttons and sliders make for instant sound shaping. Call up one of the superb 200 factory preset patches, tweak it to get your sound and save it instantly in any of the 400 Program locations. All the knobs transmit MIDI controllers for easy recording of any movements in real-time on a sequencer.





MAIN FEATURES

- # Semi-weighted with aftertouch keyboard
 - 49 note (KS4)
 - 61 note (KS5)
- # Superb Liquid Analog sound based on enhanced K-Station engine
- # Unique HYPERSYNC editing for instant sync and effects settings
- # 4 part multi-timbral with 4 individual outs
- # 16 Voice Polyphony
- # 16 band Vocoder and 4 Arpeggiators
- # All 33 Knobs, sliders & buttons transmit MIDI for instant control
- # Audio Input for processing of External Signals
- # 400 memories (200 pre-programmed) & 100 performance memories (50 pre-programmed)
- # 6 high quality simultaneous FX on each part: Reverb, Chorus, Phaser Delay, Panning & Distortion, EQ Filter
- # Sustain and Expression pedal inputs

Visionary Excellence

Awesome sounds, incredible flexibility, increased heart rate, frequent adrenaline rushes. - Two 'boards featuring 4 part multi-timbrality, 16-voice polyphony, 4 individual outs. And that's just the start.

Unique to these babies is HYPERSYNC™ a predictably stellar Novation technology for instant audio motion syncs & effects.

Love that? Then get this: Liquid analog sound, doubling oscillators, 16-band vocoder and powerful FM routing.

Lots of knobs. Loads of buttons.

They're cool, they're phatt and totally irresistible.



! Flexible, flexible, traditional - whatever you want it to be.
 Atmospheric dance. Hedonistic trance. The KS4 / KS5 are not only über synths for today's Drum 'n' Bass, Hip Hop musicians. They're also adept at creating surreal electric pianos, characterful organs and screaming leads.



Specifications

Architecture

Voices	16
Modes	Program (Mono Timbral) Performance (Four Part multi timbral)
Part Edit	Note range / Fine/semi-tone detune / On-Off / Output select / MIDI channel
Audio Input	1 x 20 Bit A/D
Audio Outputs	4 x 24 Bit D/A

Oscillators 1, 2 and 3

Waveforms	Square / Saw / Variable Pulse / Tri / Sine / Double Saw / Double Tri / Double Sine / 16 Complex Cycle Waveforms
Noise Sources	White / Crack / Metal 1 / Metal 2
Octave Range	Shift -1 / 0 / +1 / +2
Mod Env Depth	-64 to +63
LFO1 Depth	-64 to +63
PWM Source	Mod Env / Manual / LFO2
Ring Mod	1 * 2
FM	2 * 3
2 * 3 FM Level	0 - 127
2 * 3 FM Mod Level	0 - 127
FM Env Attack Rate	250uS-20 Seconds
FM Env Decay Rate	1mS-20 Seconds
Comprehensive Aftertouch, Breath and Pitch / Mod Wheel control of both static pitch and modulation of pitch	

Mixer

Osc 1 Static Level	0 - 127
Osc 1 Mod Level / Lfo1	-64 to +63
Osc 2 Static Level	0 - 127
Osc 2 Mod Level / Lfo2	-64 to +63
Osc 3 Static Level	0 - 127
Osc 3 Mod Level / AD Env	-64 to +63
Noise Static Level	0 - 127
Noise Mod Level / Lfo1	-64 to +63
FM Static Level	0 - 127
FM Mod Level / AD Env	-64 to +63
Ext Input Static Level	0 - 127
Ext Input Mod Level / AD Env	-64 to +63

Filter

Frequency	5Hz-24kHz
Slope	12dB / 24dB
Modes	Low Pass High Pass Band Pass
Resonance	0-Self Oscillation (24dB mode)
Mod Env Depth	-64 to +63
LFO 2 Depth	-64 to +63
Cut Off	0 - 127
Keyboard Tracking	0 - 127
Velocity	0 - 127
Overdrive	0 - 127
Q normalise	0 - 127
Comprehensive Aftertouch, Breath and Pitch / Mod Wheel control of both static filter freq and modulation of filter freq	

Amplifier & Modulation Envelopes

Velocity	-64 to +63
Attack	250uS-20 Seconds
Decay	1mS-20 Seconds
Sustain	0 - 127
Release	1mS - 20 Seconds
Delay (Mod Env)	1mS-20 Seconds

LFO1 - LFO2

Modes	Cyclic / One-shot
Waveforms	Sine / Tri / Saw / Squ / Sample & Hold / Sample & Hold / Quantize / Random 12 Intricate Wavetables
Speed	0 Hz - 1Khz
Delay Fade In	0 - 5 Seconds
LFO Sync	Internal - MIDI Clock

Arpeggiator

Arpeggiators	4 Independent
Controls	Speed / Range / Gate Time MIDI Clock / Sync / Keysync
Modes	Up / Down / Rand / Chord
Patterns	16 Rhythmic

Interfacing

MIDI Sockets	In / Out / Thru
Audio Input	Line Level 1 x Mono 1/4" Jack
Audio Outputs	Line Level 1 x Mono 1/4" Jack
Pedals	Sustain / Expression 1/4" Jack

Effects

Reverb	Level / Echo Chamber, Small Room, Large Room, Small Hall, Large Hall, Grand hall / Decay / Wheel Level
Chorus - Phaser	Level / Rate / Type / MIDI Clock Sync / Feedback / Mod Depth / Centre / MIDI clock sync initial Position, Wheel Level
Distortion	Drive / Compensation / Wheel Level
Panning	Position / Mod Depth / Speed / MIDI clock Sync, Initial Position
Delay	Depth / Time / Feedback / MIDI Clock Sync / Stereo Width / Ratio / Wheel Level
16 Band Vocoder	On - Off / Sibillance Level / Sibillance Type
EQ / Filter	Depth / Freq / Mod Depth / Mod Speed. MIDI clock sync / MIDI clock sync Initial position

General

Keyboard	49 note (KS4) and 61 note (KS5) with velocity, sensitivity and aftertouch
Wheels	Pitch and Modulation
Power (AC Mains)	85 - 270 V.A.C 250mA
Dimensions (mm)	W=852 H=94 D=300 (KS4) W=1018 H=94 D=300 (KS5)
Weights	KS4 = 7.5kg / KS5 = 9.5kg



Hypersync™ What it can do for you.

With predicable Novation insight and innovation, the unique Hypersync function allows you to 'tempo synchronize' up to 8 parameters associated with any one of the 400 synthesizer programs.

Before Hypersync, creating tempo locked synth and effects parameters would take ages, manually selecting and adjusting settings.

With Hypersync a single rotary control selects templates of pre-selected settings for each parameter.

The master tempo can be controlled either by the KS4 / KS5's internal clock (the front panel tempo control sets the speed), OR by the tempo control on an external sequencer connected via MIDI. The KS4 / KS5 is shipped with 16 handy templates, each one being a collection of musically useful settings for the 8 parameters.

Hypersync™ In operation.

The 8 parameters that may be 'tempo locked' or 'sync'd' fall into 2 categories. 4 are associated with the effects processors and 4 directly affect the synthesizer engine:

Effects	Synth Engine
Chorus / Phaser	LFO 1
Panning	LFO 2
Delay	LFO 1 Delay
EQ / Filter	LFO 2 Delay

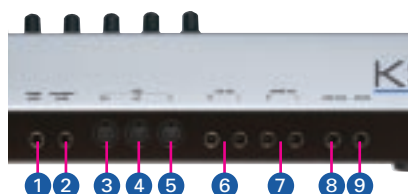
Hypersync templates are recalled by simply turning the rotary control. When you like what you hear, you can save it with the program in any one of the 400 memory locations.

Hypersync™ You're in control.

But Hypersync is more than a factory pre-set über-function as its real usability comes when creating your own Hypersync template. Start with a factory preset or go it alone from scratch - the choice is yours.

Modify a preset and add a little more chorus, change the timing of LFO 1 to 1/4 bar, tweak the delay from 4ths to 8ths - then save.

It's easy, musical and it will open up the creative possibilities of 'tempo synchronized' audio motion effects like never before.



Back panel tour

- 1/4" Jack Sustain Pedal
- 1/4" Jack Expression Pedal
- 5-pin DIN MIDI THRU
- 5-pin DIN MIDI OUT
- 5-pin DIN MIDI IN
- 1/4" Jack Aux Output L/R
- 1/4" Jack Master Output L/R
- 1/4" Jack Audio Input
- 1/4" Jack Stereo Headphones

novation
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The image features two Novation KS4 and KS5 polyphonic synthesizers. The KS4 is in the foreground, angled towards the left, with its brand name 'novation' clearly visible. The KS5 is positioned slightly behind and to the right. Both units are white with black keys and numerous control knobs and buttons. The background is a vibrant blue with abstract, glowing patterns and a bright light source on the left, creating a futuristic and artistic atmosphere.

KS4 • KS5

polyphonic synthesizers