Moog

Minimoog Voyager XL

MusicTech Excellence

Moog celebrates its 40th anniversary by releasing this updated version of a classic. **Mike Willox** takes a voyage of discovery.

Minimoog Voyager XL
Manufacturer **Moog**
Price **£4,079**
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Key Features
- 3 oscillators
- CV patch panel
- Ribbon controller
- Touch pad
- Dual filters
- Secondary LFO
- Oak cabinet

The original Minimoog is arguably the best-sounding analogue synth ever made. It's not far off a decade ago since Moog Music re-released the Minimoog in the shape of the Voyager, a faithful representation of the old beast that has become so sought-after by collectors and musicians that these days one in good nick can go for up to £5,000.

The Voyager brought digital control, CV inputs, a wealth of new synthesis features and a new, multi-axis panel controller (that enabled you to send four different channels of controller data to 32 of the Voyager's destinations for the X,Y and A axes and 14 for the Gate trigger) called the Touch Surface. The Voyager was everything that the Minimoog was – and more.

So, given the enormous success of the Moog lineage, how does the Rolls-Royce of synth manufacturers go about celebrating its 40th birthday? Well, obviously, it does it by going large... and the Minimoog Voyager XL is certainly all of that.

Supersize me

The Voyager XL is essentially, as the name implies, a supersized Voyager: it uses the same analogue board, digital board and I/O configuration as the Voyager, but with knobs on. The key to this is in the inclusion of a CV patchbay at the top-left of the control panel; this addition extends the required casing, which in turn facilitates the inclusion of a 61-note, touch-sensitive keyboard with aftertouch (the standard Voyager keyboard was only 44-note).

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In addition to all of that there's a ribbon controller that harks back to the days of the Polymoog and a secondary LFO that can be clocked from MIDI. There's even an extra BNC 12V lamp socket so you can illuminate your XL in stereo to fully appreciate the £4,079 you've just forked out (sadly, these lamps are not supplied with the XL). Yes, that's a lot of money to spend on a keyboard but, having played around with it for a couple of weeks, we would (if there was enough in the petty cash).

The XL is built to the same high standard as ever, with a solid oak cabinet containing the keyboard, pitch and modulation wheels and ribbon controller, and a hinged control surface containing the guts of the beast, which explains why it's so heavy at 22.2kg.

With the business end of the Moog's modular capabilities sited on the control panel, the rear panel now just provides a left and right audio out, an audio in and an effects loop to process your signal after the mixer and before going to the filters (or introduce a ring modulator, for example).

All of these are on 1/4-inch jacks, while there's also MIDI in, out and thru. We were a tad puzzled by the lack of a USB port, but given that the XL shares the same I/O setup as its elder sibling, which was developed before the real integration of USB over MIDI, this is a niggly, rather churlish observation.

All subtractive synthesis paths start with a sound source, and the XL's three

Striking good looks and great sound: the Voyager XL has it all, whatever you want to do with it.

envelope, velocity, pressure or a variety of options in the Edit menu.

So far so good, then... We have a conventional analogue synthesizer of fantastic quality that defines subtractive synthesis in a way that most other manufacturers must be in awe of.

We're not done yet, though...

CV Patch Panel

The CV Patch Panel is the gateway not only to being able to interrupt and re-route the conventional flow of synthesis, but also to integrating the Voyager XL into much larger modular systems. The top half of the panel is divided into control voltage outs and ins for the main features of the synth, and three four-way 'Mults' (multiples). The Mult section acts as a kind of breakout box for routing a single output to multiple destinations, enabling you to, say, route the LFO to the oscillators, filter and VCA all at the same time.

The ribbon controller is routed from underneath the Mults panel and isn't hardwired, so you'll need to patch it to use it. It can send either a CV or a gate trigger signal depending on which output you use.

The bottom of the Patch Panel houses the Control Voltage Processor section. This contains attenuators, a four-input mixer and a Lag processor, which is used to slow down rapidly changing CV signals. The secondary LFO (which has six waveform options) completes the line-up, with options for clocking from MIDI or CV.

Add to all of this the XL's comprehensive MIDI functionality, which sends MIDI CC messages from all of the controls on the front panel (making it one of the coolest-looking MIDI controllers you could ever ask for) and you have an instrument that is unique in either the digital or analogue worlds.

The verdict

Remember: the XL is a monophonic synth that doesn't have a sequencer, ring modulator, arpeggiator, FX buss, vocoder or any of the other things that, these days, come as standard with a £500 digital synth that probably doubles as a soundcard as well. So the XL won't be for you if you're looking for everything in one box that hooks up to your DAW by telepathy. Instead, it's a very special synth that's beautifully made and looks absolutely amazing. Turning any of the knobs on the control surface is a pleasure in itself, just because they feel so solid.

The Patch Panel is the way to integrate the XL with the myriad true analogue systems and devices out there, built by people who are passionate about analogue synthesis and build quality; once you get your head around the modular potential of the XL you can lose yourself in the modular world for a long time.

Its real beauty, though, is to be found in the sound it creates. It is, without doubt, the best-sounding synth we've ever heard: the fullness and detail that the three oscillators produce is incredible, while the dual filters add space and movement to the Voyager XL's sound and bring instant credibility to any track you use it on.

If you've got the money and the time to get to know the Minimoog Voyager XL inside out, then in our opinion you couldn't spend either in a better way. This is the ultimate analogue synth available today. **MTF**

The Voyager XL is, without a doubt, the best-sounding synth we've ever heard... it is the ultimate analogue synth

The patch panel means that the Voyager XL is ideally placed to sit at the heart of an extended modular system, which can be made up of whatever esoteric devices you wish to plug into it.

MTF Verdict

WHY BUY

+ Incredible-sounding synth
+ Superb build quality
+ Stunning looks
+ Limitless modular potential

WALK ON BY

- You may need a second mortgage

A superb sounding – and looking – synth that can be either the core of a highly complex modular system or just the ultimate, earth-shattering stage synth.

★★★★★★★★★★

Method Spot

The VCOs, filters and VCAs on early analogue synths were all modular: they were separate components that were connected together by patch cables using control voltages, hence CV. As synth makers strove to reduce the size of their products to make them portable, compromises had to be made as to what functionality these new all-in-one synths had. With modular systems, there are infinite routing and modulation options that are just not possible on modern synths – or at least they weren't, until the XL arrived.

oscillators provide some improvements compared to the original Minimoog.

All three oscillators offer a continuous sweep from triangle to sawtooth to square and then to pulse waveforms. Oscillator 1 is the master in terms of global tuning – hence oscillators 2 and 3 retaining their fine-tuning controls.

Rocker switches

Underneath the oscillator knobs lie four red rocker switches: '1–2 Sync' synchronises oscillator 2 to oscillator 1 (the effect of oscillator sync is always more profound when oscillator 2's octave setting is higher than that of 1's); '3–1 FM' enables the frequency modulation of oscillator 1 by oscillator 3 (which is really useful for creating sounds that evoke classic FM synths); '3 KB Cont' disables the control of oscillator 3 from the keyboard, which frees up oscillator 3 for modulation duties; '3 Freq' switches oscillator 3 between producing the same frequency range as oscillator 2 and producing a sub-audio source or acting as an extra LFO. All of the oscillators' pitches can be tweaked by up to two semitones via the Fine Tune knob, which sits under the LFO panel.

The Mixer panel is a chip off the old Minimoog block, with the three oscillators, noise generator (unlike the original Minimoog, which offered a choice of pink or white noise, the Voyager range supplies a single noise source which is somewhere between the two) and external audio input all having their own on/off rocker switches and level control pots.

There's a red LED that indicates when you're starting to overdrive the signal into the mixer. When fully illuminated, this indicates that you're getting that rich, overdriven sound that the Moogs are famous for.

The external input can accept instrument to line levels, making it a very versatile tool; we had our Fender Jazzmaster (in Seafoam Green, of course!) sounding amazing after it had travelled through the Voyager XL's filters and LFO, with an extra portion of noise thrown into the mix.

Double trouble

The filter section of the XL is another massive improvement over the original Moog. The two modes available – via the red rocker switch that's situated underneath the Filter panel – act either as a dual low-pass filter (with one being routed to the left audio output and the other to the right) or as a high-pass/low-pass filter.

By using the Spacing knob in Dual Low-pass mode it's possible to alter the difference between the cut-off frequencies of the two filters. This can produce some interesting stereo effects when the Spacing pot's turned up, although the option to access these separately from the patch panel could have created some truly insane stereo effects, with the filters being modulated by separate LFOs at different rates.

High-pass/Low-pass mode does exactly what it says, effectively acting as a band-pass filter. This really changes the character of the synthesizer's sound and is capable of producing much harsher and stringent sounds that are quite unlike the sound we generally associate with Moogs. Both filters in this mode are routed to both audio outputs for that in-your-face mono sound.

The Envelope section is the standard four-stage Filter and Volume fare, with an Amount to Filter control to keep things bright as you travel up the keyboard. The red rocker switch at the bottom enables the Envelopes to be triggered by a gate signal from a MIDI note on the keyboard or from the gate sources that are available either in Edit mode or via an external input.

Modulation matrix

The Voyager series boasts two Modulation Busses which are at the heart of the potential of the Voyager XL and the key to all interesting subtractive synthesis. Both busses are identical, with the first serving the mod wheel and the second the Pedal/On, being controlled from the Mod 1 input on the Patch panel. Modulation sources can be LFO triangle or square wave, osc 3, sample-and-hold, noise or any of the Edit menu options. Destinations are pitch, oscillator 2 or 3, filter, waveform or LFO, with programmable destinations being, again, available in the Edit menu. All of this can be shaped by either the filter →

Measuring Up

It is possible to create most of the functionality of the XL (£4,079) by buying a Voyager Performer (£2,920) with a VX-351 (£249) and a CP-251 (£312), which would enable most of the patching options that come with the XL (except that the XL's secondary LFO is MIDI-sync'able with extra waveshapes, clock inputs and so on). You'd still need to source a CV ribbon controller and an extra octave on the keyboard from somewhere, though!

The Voyager XL's three oscillators provide some improvements compared to the original Minimoog

A solid oak casing and a 61-note keyboard make the Voyager XL a hefty, 22.2kg