Dave Smith Mopho Keys Synth | £550

The tiny Mopho wowed us all with its sound but cried out for an improved interface. *Greg Scarth* spends much quality time with its new big brother

WHAT IS IT?

Analogue mono synth from the legendary DSI

CONTACT

Who: Dave Smith Instruments
Tel: +1 (707) 963-7006
Web: davesmith instruments.com

HIGHLIGHTS

1 Same great synthesis engine as Mopho module
2 Improved programming interface
3 Excellent two-and-a-half-octave keyboard

Since its release less than two years ago, the desktop module version of the Mopho has built a huge following. When we reviewed it back in December 2008 we loved the sound but had reservations about the programming interface and the slow rotary encoders, so we're happy to see the arrival of the new Mopho Keyboard that aims to address some of these issues. Unlike the tiny module, the keyboard version takes up significant desk space, but the benefits more than make up for it.

Essentially, the Mopho Keyboard follows the same design as the module, but in addition to the obvious 32-note keyboard with pitch bend and mod wheels, the most notable upgrade is the move to a much more intuitive programming interface. Could this neat little mono synth really be the 21st century equivalent of the legendary SCI Pro-One?

Layout

From the moment you pull it out of its protective wrapping, the Mopho Keyboard oozes quality. Housed in a tough steel enclosure, the overall package is relatively small but reassuringly weighty. The striking paint job won't be to everyone's taste but it's in keeping with the Mopho module and works nicely with the wooden side panels. The two-and-a-half octave keyboard is also nicely built, adding to the sense that DSI take a great deal of care over fit, finish and quality control.

Internally, the Mopho Keys is essentially the same as the desktop version with the exception of a few minor improvements. The overall synthesis topology is identical, with two oscillators (each with its own sub-oscillator), a noise source and a switchable 2- or 4-pole Curtis low-pass filter that self-oscillates when the resonance is cranked up in 24dB/octave mode. There are a few minor upgrades, which we'll look at later, but the sound is otherwise just as tough and powerful as the desktop module.

Hands on

Whereas the Mopho module relies on dedicated knobs for pitch, cutoff, resonance, attack and release plus four

assignable rotaries for programming, the Mopho Keyboard's interface is much more user friendly. The DSI designers have taken customer feedback on board and used pots rather than encoders wherever possible, so the majority of knobs (all of those with line markers) are attached to pots with a 330-degree sweep. The Mopho features revised software for encoder behaviour, speeding up the response of the few rotaries left on the front panel. As a result, all encoders are nicely responsive, sensitive and smooth, with no jumping or glitchiness.

Thankfully, the encoders display none of the erratic encoder behaviour

Mopho Lite?

The compact dimensions of the Mopho Keyboard got me thinking about the budget synth market. With a street price somewhere around £250, the original module is one of the biggest bargains around but the keyboard version's significantly higher RRP might put off a few potential buyers. The Mopho's keyboard is top quality and the retail price is fully justified –

it's a lot cheaper than plenty of other synths that don't even come close to it in terms of sound or features. Even so, part of me can't help but wonder whether there's a market for a cheaper, more basic version with a slightly lower spec keyboard grafted on.

A Mopho Keys Lite would appeal to a huge entry-level market in the

same way that the Mopho module offers top quality analogue synthesis at a bargain price. I'd take a slightly stripped-down version of the Mopho Keyboard over budget synths like the microKorg and Akai MiniAK any day.

If DSI could produce a Mopho with unweighted keys and no aftertouch for an RRP somewhere around £400 I think they'd make a killing.

SPECS

32-note (F to C) semi-weighted keyboard with velocity and aftertouch

Modulation and pitch bend wheels

Two oscillators (sawtooth, triangle, saw/triangle and variable pulse width square waves, with hard sync)

Curtis low-pass filter (switchable 2- or 4-pole) with audio rate modulation, self-oscillating in 4-pole mode

Analogue VCAs

Three envelope generators (ADSR plus delay)

Two sub-octave generators (one octave down and two octaves down)

Feedback loop with programmable level and gain

White noise generator

4 LFOs

Gated 16 x 4 step sequencer

Arpeggiator

1/4" unbalanced audio input

1/4" unbalanced outputs

Sustain pedal input

Expression pedal/control voltage input

1/4" stereo headphone output

MIDI In, Out/Thru, and Poly Chain

USB socket

Dimensions:
470 x 280 x 90mm
Weight:
4.25kg

"The Keyboard's rubberised knobs are more comfortable than the module's rounded counterparts"

which blighted early examples of the Prophet 08. DSI claim that the Prophet 08 encoder problem was primarily caused by oxidisation of the contacts, and all DSI products now use different components. Ergonomically, the Mopho Keyboard's knurled, rubberised knobs are much more comfortable than the original Mopho module's smooth, rounded counterparts.

The interface doesn't quite offer a single function per knob, so you're inevitably going to need to refer to the LCD screen while programming, but it's a huge step up from the original Mopho module. Very few parameters require you to use the dreaded shift key, and global settings such as MIDI options and clocking are handled nicely by a dedicated menu. The new programming interface is what the Mopho deserved all along, and I'd love to see DSI release a Mopho 2 with a full knobby interface.

It's clear after just a few minutes playing that DSI also haven't cut any corners with the keyboard on the Mopho. The semi-weighted keys feel nicely solid and respond superbly, while

velocity and aftertouch curves are easily adjusted in the global parameters menu. The pitch bend and modulation wheels are positioned on the main panel, above the keyboard rather than to the left.

I find this layout a little awkward, having to reach over the keys to get to the wheels, but it does mean that the case can be even more compact, and the overall look reminds me of the tiny Moog Rogue.

More new features

Although the synth architecture is very similar to that of the original module, the Mopho Keys has a few more little tricks up its sleeve. The most exciting new feature for me is that the programmable audio feedback control from the Tetra has been included, meaning that you can easily mix the output signal back into the filter.

Things get a little hairy at the top end of the range, so it's generally best to exercise a little restraint until you're ready to create some truly vicious, face-melting sounds, but it's a great option to have at your disposal.

Elsewhere, you'll find a handful of upgrades to the arpeggiator and sequencer, most notably the addition of

new arp modes (including multiple octaves) and the ability to adjust the slew rate of individual steps in the sequencer. The Push It! button for auditioning sounds is made slightly redundant by the keyboard, but with shift pressed it now serves as a tap tempo button for the internal clock. This is a great addition, but for me it's the wrong way round – I'd much prefer tap tempo to be the primary function.

Intriguingly, the Mopho can also be hooked up to other Dave Smith synths via the poly chain socket in order to increase polyphony. Unfortunately, I didn't have another DSI synth on hand to try it out but the same feature seems to work well with the Tetra and Prophet 08 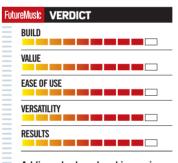so in theory this should be a real bonus for owners of multiple DSI products. The combination of Mopho Keyboard and Tetra, in particular, promises to create a monstrous five-voice beast. With the Mopho as the master and the Tetra as the slave, editing parameters on the Mopho's front-panel will automatically adjust their equivalents on the Tetra.

Final thoughts

At an RRP of £550, the Mopho Keys is positioned between the Mopho module and the Mono Evolver Keyboard, nicely filling a gap in DSI's monophonic range. The improvements to the programming interface and addition of the excellent keyboard really allow you to get the best out of the Mopho's fantastic synth architecture. There's no doubt that the Mopho desktop module sounds great but, for me, it's hampered by the menu-based programming system.

Since its announcement, many of us were hoping the Mopho Keyboard would be a modern version of the Sequential Circuits Pro-One. Comparisons are inevitable, but the Mopho Keyboard isn't a Pro-One. For a start it has patch memory, more flexible modulation routing, sub-oscillators, MIDI as standard and modern reliability. More importantly, the Mopho can create sounds the Pro-One could never achieve. Ultimately there's no need to look to the past for comparisons. The Mopho Keyboard is a classic in its own right. If you're thinking of buying a Mopho module, I'd strongly advise you to keep saving until you can afford the Keyboard version. **FM**

Pro-One II

Designed by Dave Smith, the Sequential Circuits Pro-One is a legendary mono synth which will inevitably be used as a reference point for the Mopho Keyboard thanks to the fact that the module bears the legend 'Pro-One II' on its printed circuit board. First sold in 1981, the Pro-One was a dual oscillator mono synth with classic Curtis CEM-3320 filters, three-octave keyboard and onboard sequencer. Later models included basic MIDI capabilities. Prices are hard to pin down due to their relative scarcity in the UK, but you can expect to pay at least £700 for one.

The Pro-One can produce some of the most powerful bass sounds of any compact synth, but its limitations in comparison to modern hardware make it a very different proposition to the Mopho Keyboard. Although they might seem similar on the surface (and much is made of the fact that the Mopho uses modern descendents of Curtis filter chips), the Mopho hides a wealth of MIDI options, not to mention patch storage and other luxuries we're used to.

While they have their similarities, I doubt many potential buyers will actually be making a direct choice between the Mopho and the Pro-One. The Mopho Keyboard stays true to the spirit of the Pro-One but brings the dual-oscillator mono synth right up to date.

> "Editing parameters on the Mopho's front-panel will automatically adjust their equivalents on the Tetra"

FutureMusic VERDICT

BUILD

VALUE

EASE OF USE

VERSATILITY

RESULTS

Adding a keyboard and improving the interface takes the Mopho to the next level.