



Moog Mavis £339

Rob Redman discovers you can now get West Coast flavours from a traditionally East Coast synth company, while enjoying putting it together himself

CONTACT WHO: Moog **WEB:** moogmusic.com **KEY FEATURES** Built-in keyboard with Glide and KB scaling; Full Range Analog Oscillator with Pulse Width Modulation; Voltage Controlled Filter; Audio Rate LFO and 4-Stage Envelope Generator; Wavefolding and Modular Utilities; Patchable Sample and Hold (S+H) circuit; 24-Point Patch Bay



THE PROS & CONS



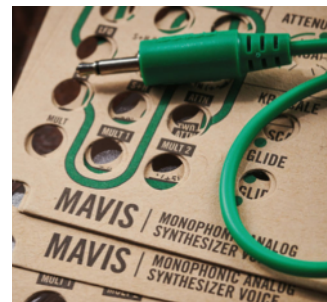
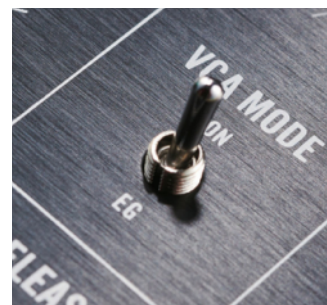
Compact all-in-one
or add it to a
Eurorack rig

Classic Moog tones
with wavefolding

Versatile patching
possibilities



Control knobs may
be too small for
some tastes



Let's start by looking at the physicality of Mavis. An obvious comparison can be drawn with Moog's Werkstatt, in that they both follow very similar design ethos.

Mavis is billed as a DIY analogue synth and, while that is true to an extent, those of you who are less interested, or lack the skills, for hours of soldering need not worry. Mavis does need to be constructed but anybody can do it. The box contains a completed printed circuit board

replete with all components, a case (including a dust cover), front panel, screws and nuts, a light pipe and a tool for tightening the nuts.

Construction takes a few minutes only, with most of that time used for tightening the nuts onto the patch points. It's a simple case of screwing the front panel to the printed circuit board, pushing the light pipe into position to bring the illumination for the LFO rate up to the front panel and that's about it.

Even the control knobs are part of the onboard components. Personally I

would prefer some of these to be a little larger but, unlike the DFAM, there aren't many where total accuracy is needed and the knobs/pots feel sturdy and have a decent feel. I'm sure companies like Think will offer kits for larger knobs, or you can source your own.

A power supply ships with the unit but if you are a Eurorack player, then you'll be pleased to know Mavis is Eurorack compatible and there's a standard power socket underneath.

So, while there is some work to do, don't feel put off but enjoy the

fact that you get to see more than you typically would with other synths and learn a little about what is going on under the lid.

Getting in the Moog

The front panel is typical Moog; clearly laid out and labelled, with all the patch points grouped to the left of the device but facing up like a Mother 32, rather than out to the side like the Werkstatt. This is clearly needed to add Mavis to a modular rig and lifts the feel of Mavis to something more like other Eurorack-compatible

THE ALTERNATIVES



Rare Waves Grendel £515

The Grendel is a two-oscillator synth voice, with shaping tools, filter and on board LFO. It has a good range of patch points but is Eurorack only

rarewaves.net



Dreadbox Nymphes £379

This little standalone synth offers a huge range of features. Various playing modes, six voices, each with two envelopes and a LFO, plus USB and MIDI connectivity

dreadbox-fx.com



Doepfer A-111-5 synth voice £269

Fewer patching possibilities of this voice than Mavis, but offers an intuitive experience and plentiful tone-shaping tools, including frequency modulation and an ADSR envelope generator.

doepfer.de

Moogs. It doesn't feel so much like an affordable kit, as it does a 'proper' instrument. Unlike the Mother-32, the patch points are to the left of the controls. Whether this is better or worse will depend on how you use it and where in a rig it might sit. For standalone use in its case, it makes sense, as it keeps the patch cables out of the way for the more common right-handed players out there. And, speaking of players, it really can act standalone, as it has a small rubber keyboard allowing for some, albeit simple, playing. No need to worry about cramped chords either, as Mavis is monophonic. There's a control for glide and also scale, which proportionately lengthens the keyboard, rather than being an octave selection. This feels like an odd choice but can be used for some creative musical choices.

The rest of the panel looks fairly standard at first glance, with labelling that groups controls according to task, from utilities and VCO, to VCF,

LFO, VCA and a single envelope generator. More on that in a bit.

Moog swings

The single VCO is very typically Moog-sounding. It has both saw and pulse wave shapes, with a knob for variably defining the shape, followed by a pulse width control. There are controls for VCO mod mix, pitch mod and pulse width mod amount, so without touching any other areas of the synth, a core tone can be dialled in with ease and it sounds great. Of course a single VCO will have limitations but for the price you do get a genuine Moog sound.

That said, a lot of what many people love about Moogs comes from the interplay between the different sections, especially the filter. It would be easy to dismiss Mavis as being built to a price and, while that is probably true, you do get a proper sounding Moog 24dB low-pass ladder filter, with resonance. Again there is a mod mix and mod amount control. Pairing this with the envelope generator lends itself perfectly to everything from slow swells to juicy acid basslines. The filter does suffer from the volume dropoff when increasing the resonance but it can be forgiven for that, considering that's

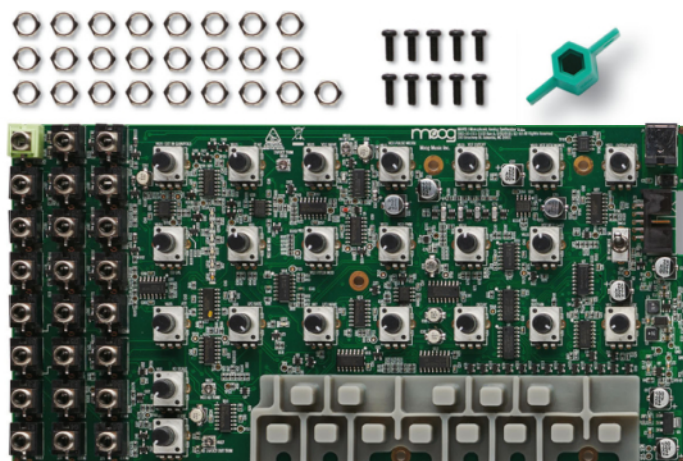
The utilities section and patch bay are what really makes Mavis a thing of joy

EAST MEETS WEST

In general, Moogs are commonly referred to as East Coast synths, where the sounds are shaped subtractively – tones manipulated by removing parts of the waveform using filters. The Mavis introduces, for the first time, West Coast-flavoured synthesis. West Coast tools, commonly attributed to Don Buchla, are more about additive shaping of a waveform, introducing harmonic content by using frequency modulation and wave folding. That may sound like two approaches to the same end result but they can sound very different, as West Coast synths often sound softer and smoother, whereas a typical East Coast patch has a harder tone. There's more to the differences than just this however, with West Coast

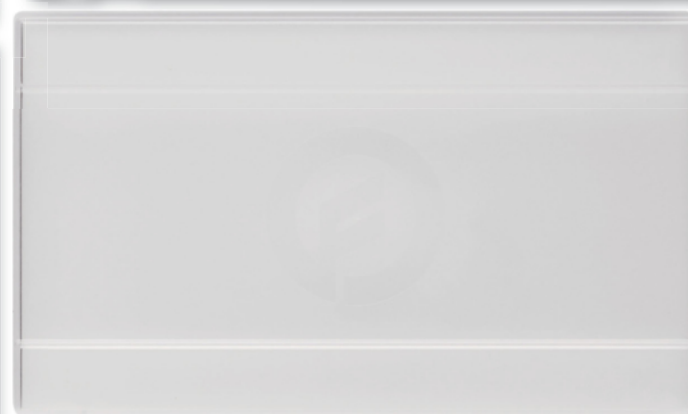
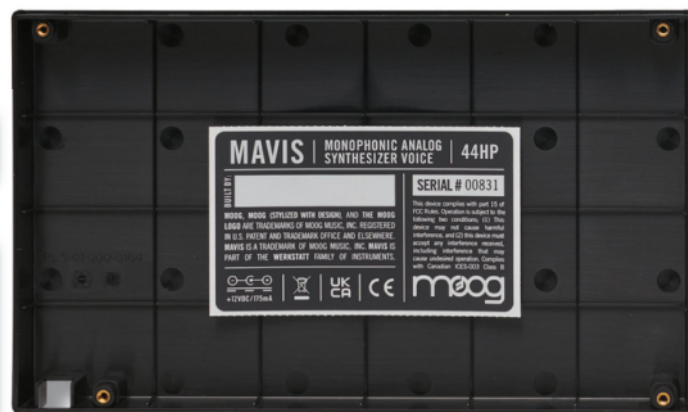


often seen as the home of things like low-pass gates, that aid in equipping patches with a more percussive sound. However, these days the lines are forever blurred. The huge rise in Eurorack modular has meant musicians have an almost limitless range of modules to express themselves and it is common to find people who have rigs that combine elements of East and West Coast but it'll be a long time before those labels start to disappear.



PACK IT IN: Mavis packs a lot into its fairly diminutive form, including an extensive patch bay and a playable keyboard

RACK IT: As well as coming with a case and dust cover, Mavis is Eurorack compatible, making it easy to incorporate into any workflow



LOOK CLOSER: The patch bay includes features that may not be obvious looking at the main controls, like the useful sample & hold and mixer

FEELS GOOD: While the knobs are small they feel good and dialling in settings is easy

a part of the classic Moog setup.

The envelope generator is of the ADSR variety and ranges from snappy to long lasting. You won't find features like looping or latching here but again, I think that can be forgiven at this price point and there's a lot you can do with an ADSR envelope alone. A second would have been nice but at 44hp, space is at a premium and other features included here definitely earn their keep.

A single LFO is included, with an LED showing the rate, which goes into the audio range. The LFO is variable from triangle to square, running slow enough for subtle evolving modulations.

This leaves us with the utilities section and patch bay, which is what really makes Mavis a thing of joy, with some features that have never made their way onto a Moog before.

First up is an analogue wavefolder, a new arrival on a Moog, which adds some West Coast flavours to the mix, by introducing new harmonic content, as opposed to the traditional subtractive only methods. It's a single

tiny knob but it can be used to really change and intensify the output of this wonderful little synth. It takes a little experimentation to get predictable results with wavefolding at first, but once you get your head round it, it makes for some extra possibilities that have a lot of value.

Bay watch

Under the Wavefolder knob (labelled FOLD) is the One control. I'm not sure of the name but this is essentially a way of setting the level of the mixer, which is all done via the patch bay. This mixer works with audio and CV, so some interesting uses can be found here. Having a mixer on such a small, affordable synth is a great feature and just adds to the sonic toolkit on offer.

At the bottom of the stack is an attenuator control, again linked to the patchbay, and this little tool is vital for controlling a lot of what can be done with Mavis, setting limits to parts of a patch. It's nicely freed up for creative use too, as many of the other controls have their own.

Then there is the patch bay itself. You'd be forgiven for thinking that the patch bay might be the least exciting part of a synth but there is a lot more going on with Mavis. Yes you can access things like pitch, LFO rate, filter cutoff and even gates and the VCA from here but, as mentioned earlier, there are some extra patch points that help Mavis really shine.

There's the mixer section where you can mix one signal to another (using the One control to set how much is mixed, along with its output). This has endless uses alone but there's also a two-way mult on board, so this, or any other signal, can be split and sent elsewhere as well.

If that wasn't enough, Mavis also features sample & hold, via the patch bay, making it easy to generate random voltages for use in other parts of the synth. The obvious choice, and one Moog suggest themselves, is to use this as a quasi-sequencer tool but because of its nature as a patch bay tool it can be fed into anything, from stepped volume changes to varying the filter cutoff, or wavefolding.

Learning Mavis is simple too. As with most semi-modular Moogs, it ships with a number of patch cards, showing settings for both front panel control positions and patching.

A nice touch is the labelling that suggests which controls to adjust while playing to vary the output. These cover a lot of ground and will also help the newcomer to get a handle on the basic operation of the synth, as well as demonstrating a wide range of tones. **FM**

FM VERDICT

9.2

Mavis can't be faulted at this price. A wide range of tones, well built and adds new options to the classic Moog sounds. A real winner