



Modal Electronics CRAFTsynth 2.0 £129

Can Modal's latest synth build on the success of its self-assembly predecessor? **Bruce Aisher** takes a listen

CONTACT WHO: Modal Electronics **WEB:** modalelectronics.com **KEY FEATURES** Monophonic wavetable synth, 8 x oscillators in total with two selectable waveforms and mixer stage, Cross modulate waveforms via 16 modifiers, Unison/spread, 3 x envelope generators, 2 x audio rate LFOs, eight-slot modulation matrix, Sequenced arpeggiator, 2-pole resonant filter, delay and distortion, MIDI clock sync for LFOs and Delay **DIMENSIONS:** 150 x 135 x 68mm

THE PROS & CONS



Very powerful wavetable oscillator section with multiple modulation options

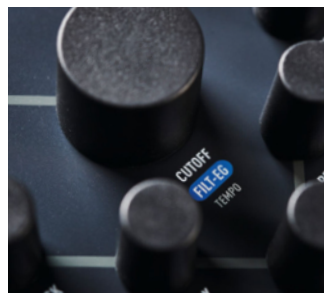
Analogue clock sync
(Korg Volca/Teenage Engineering spec)

Comprehensive software editor



Effects only very basic (and in mono)

Only monophonic (it would be great to play some of these sounds with full polyphony!)



Needless to say, there is big scope for interesting sound design here

Many of Modal Electronics' synthesisers sit behind a numerical naming scheme that gives little away about their origins, intent or architecture. However, more recently, they have been producing a range of boxes that – as well being a great deal more friendly on the pocket than their well-regarded (but distinctly high-end) offerings – employ much more friendly monikers.

So, besides the recent Skulpt, we have the original CRAFTsynth and CRAFTsynth 2.0. In its first incarnation, the CRAFT was provided as a 'no-solder' self-assembly 'kit'. For 2.0, Modal have embraced a full case, expanded sonic spec and wider complement of controls, inputs and outputs. The good news however, is that cost has been kept low at £129.

Overall, this is a small and lightweight package, with a tilted plastic case, and room on the rear for full-size MIDI ports, analogue sync in/out mini-jack line output, headphone

and micro-USB ports. The front panel has 12 rotary encoders which, when combined with the eight 'touch' buttons, provide access to all programming parameters. Power is provided by batteries or USB port, which also carries MIDI data, for use with the free MODALapp.

Unlike their higher-end offerings, CRAFTsynth 2.0 has an all-digital architecture, but employs synthesis techniques from across the sonic spectrum. At the core of the CS 2.0 lies two wavetable oscillators, which can each access eight banks of five morphable wavetables. Oscillator 2 has an additional sine/noise bank. Within each of these banks you can move between the wavetables in 32 increments using the Wave 1 and Wave 2 controls. There is also a Mix control for determining the relative balance of the two, and tuning

controls for offsetting their pitches. It's worth stating at this point that, although the CRAFTsynth 2.0 is monophonic in terms of how many notes can be played at once, the Spread parameter allows you to have eight voices triggered at once. In the first half of its range this generates an ever fatter unison sound. Beyond this, you get a host of multi-note chords. Where things get even more interesting is when delving into the Osc-Mod and Mod-Mode parameters. Osc-Mode determines the oscillator modulator amount, with 16 different modulation types available. Modulation is applied either to Wave 1 alone, or with Wave 2 modulating Wave 1. Although, more common forms of modulation such as Hard Sync, FM, Ring Modulation and Bit Crushing are included, there are many other variants to occupy you –

THE ALTERNATIVES



Modal Electronics CRAFTsynth £89

The simpler (and slightly less sturdy) self-assembly precursor to CRAFTsynth 2.0. Cheap and cheerful but nevertheless, still quite powerful.

modalelectronics.com



Modal Electronics Skulpt £269

At double the price of CRAFTsynth 2.0, the Skulpt virtual analogue adds four-voice polyphony (but with a more limited range of waveform types) and a greater number of physical controls.

modalelectronics.com



Arturia MicroFreak £265

Arturia's hybrid paraphonic synth packs a lot into a relatively small package – with 12 digital oscillators, analogue state variable filter and sequencing.

arturia.com

and describing them all would provide little insight into what they actually sound like. Needless to say, there is big scope for interesting sound design here – particularly when modulating the Osc-Mod parameter itself.

Things return to conventional subtractive synthesis territory with the filter. Here you get a 2-pole (12dB/octave) resonant filter that can be morphed from low-pass, via band-pass to high-pass. It'd have been nice to have something with more bite (especially in its low-pass guise), but this is only a small quibble. The filter has its own four-stage (ADSR) envelope – with dedicated envelope depth control. This sits alongside an Amp Envelope and additional Mod Envelope, which can be freely assigned in the eight-slot modulation section. Two LFOs fit in this line-up, and as with the osc section, it has a few tricks up its sleeve. Each LFO can be assigned to any front parameter by holding down the relevant LFO button. LFOs can be free-running, re-triggered on each note, or used as a single cycle, pseudo-envelope. LFO-2 can also lock to a division of the frequency played, for useful modulations (FM etc) – a nice feature.

The final puzzle piece comes in the form of a simple effects section featuring a wave-shaping overdrive Distortion and basic monophonic Delay. These are nice, though more flexibility would have been great here. The delay, in particular, would have



WAVE 1&2: The core of CRAFT, each osc accesses a series of wavetables with continuously morphable waveshapes

ARPEGGIATOR/SEQUENCER: This hybrid arpeggiator/transposable sequencer gives you the chance to generate musical

sequences that can be triggered by the musical 'keyboard', and then make them conform to custom scales.

benefited from being stereo (with variable offset between left and right channels) – though this is a limitation of the hardware – and with some way of modulating delay time under LFO or envelope control. The built-in arp/sequencer is surprisingly flexible, so it can be programmed as a step sequencer (with rests) by using the basic front panel keyboard.

The CRAFTsynth 2.0 can do conventional VA tones, but goes way

beyond this with the wavetable, morphing and modulation capabilities. The keyboard is fine for trying ideas or triggering a sequence, but little else – though this is no different from Korg's successful Volca range. Although the unison and chord modes provide added harmonic depth, I wanted to hear some of the sounds with true polyphony. This would have increased cost though, and undermined the synth's core appeal. The portable nature of the CS 2.0, while maintaining a decent degree of hands-on control is particularly alluring, while the great software editor allows for much deeper sonic exploration.

The CRAFTsynth 2.0 packs in a lot for the price – and fully deserves to do well. **FM**

MODALapp SOFTWARE EDITOR

Although Modal have tried to make CRAFTsynth 2.0 as accessible as possible, there's no avoiding the fact that it features many more parameters than there are front panel controls. As such, the hardware itself is perhaps best employed for more subtle tweaking than ground-up sound design. Luckily, there is a cross-platform downloadable software editor available via the Modal site that provides access to the full gamut of parameters, and with the useful addition of plentiful textual and graphical feedback. It also gives a very straightforward way to check for, and apply, firmware updates. The editor made such a big difference to the overall experience of using this synth that I'd advise you to make your first CRAFT forays with it connected.

FM VERDICT

9.0

A great little synth with a wide palette. With oscillators and modulation capabilities beyond your average virtual analogue, it's great value