



Moog Spectravox £599

Is it a vocoder, a filter or an analogue monosynth? As **Si Truss** discovers, Moog's latest is all of these things and more...

CONTACT WHO: Moog **WEB:** moog.com **KEY FEATURES** 10-band filter bank and vocoder, with internal oscillator (triangle/square wave), noise generator, plus resonance and spectral modulation with triangle wave LFO **I/O:** 1/4" TRS headphone or 1/4" TS Instrument output, Combi XLR/TS input, **PATCHBAY:** 19 inputs, 17 outputs



THE PROS & CONS



Fun and creative design, capable of effects that reach well beyond standard vocoder tones

Lots of interesting modulation possibilities, from both the patchbay and individual filters

Pairs well with Moog's other semi-modular synths



Not particularly great for clean or modern vocoder effects

Lack of MIDI is a needless hindrance

Less effective as a standalone instrument than Moog's other semi-modulars



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processor'. I'll get to exactly what that means in a moment, but first, let's address the elephant in the room. Spectravox is the first hardware Moog product released since the company was taken over by InMusic, and the first not to be assembled in the company's North Carolina HQ.

Placing Spectravox next to its sibling products, there's no obvious drop in quality. Significantly though, a small label on the rear of Spectravox notes that it's 'made in Taiwan'. The wood panelling on the ends of the unit is a slightly different tone to that of the DFAM and Subharmonic I have to hand too, although not noticeably worse quality. Ultimately, it's difficult to judge any difference in build in the short amount of time available for a review – the real test will be to see how each unit holds up to heavy use over a period of months or years. First

impressions are positive though. Also, whereas previous instruments came packaged with a full A4-sized manual/patch sheet, Spectravox has just a fold-out quick start guide, although Moog does also throw in a poster and five cardboard overlays for the synth's interface that act as basic patch templates.

So what actually is Spectravox? It's a combination of a filter bank, vocoder and simple monosynth. The main attraction here is the bank of 10 individual filters, which break the audio signal down into discrete frequency bands. That audio can be provided either by the internal oscillator and noise generator, or an external signal patched into the carrier input on the patchbay. Each band has its own level control, along with a CV input to modulate the band's amplitude and a CV output that, in vocoder mode, transforms

Moog's latest rackable semi-modular first appeared back in 2019 as a DIY project built by attendees of the company's Moogfest event. Previous Moogfests had seen instruments including the DFAM and Subharmonic make their public debut in the same way, before going on to re-emerge as fully-fledged, non-DIY products a few months later. At the time, it was fairly

safe to assume that Spectravox would follow in their footsteps.

A lot has happened since 2019 though, including a global pandemic, disrupted supply chains and on a more specific level, Moog's sale to InMusic and the significant downsizing of its US operation. When a mass market Spectravox failed to appear, it looked likely it would end-up as an oddball rarity among the wider history of Moog products.

But now Spectravox is back – in a slightly redesigned form – labelled a 'semi-modular analog spectral

THE ALTERNATIVES



Korg microKorg XL £390

For a more modern, precise and clear vocoder sound, try Korg's digital microKorg range

korg.com



Behringer VC340 £385

Behringer's take on a classic Roland vocoder is a bargain, all-analogue instrument with both a keyboard and a MIDI input

behringer.com



Sherman Filterbank 2 £780

A hardware cult classic, Sherman's analogue filter bank remains much loved by producers

sherman.be

that frequency into a modulation envelope signal based on the Program (aka modulator) analysis.

All 10 filters share a single resonance control. What sets Spectravox apart from most other filter banks is its ability to shift the frequency range of all these filters simultaneously. This can be done manually, using the Spectral Shift control, or modulated via the internal triangle LFO or patchbay input.

The output of all filter bands is then summed and fed into a VCA, controlled by a basic envelope with a decay control. This envelope can be triggered using the patchbay, a front panel button or respond to the Program input.

Spectravox functions in two modes – Filterbank and Vocoder. In the former it works like a simple monosynth, albeit with a filter bank in the middle of its signal patch and the ability to swap the oscillator for an audio input. It's worth noting that as Spectravox lacks a keyboard, sequencer or MIDI input; in order to 'play' it as a synthesiser, you'll need something to patch into the 1v/Oct and Trigger inputs in the patchbay.

Switched to Vocoder mode, the Program input comes into play, acting as the modulator signal in a classic vocoder setup. Note that, likely as a result of its all-analogue design, Spectravox is quite noisy as vocoders go, and doesn't exactly excel at clear, intelligible vocal lines.



PROGRAM INPUT The vocoder's input has a useful jack/XLR combi design. It can be routed directly to the patchbay too

HOLD The Hold function can freeze the current resonance of the Program input, and can be triggered from the patchbay

HISS/BUZZ Switch the upper vocoder frequencies between the noise and carrier inputs, engaging a pleasant hiss

It is wonderfully characterful though, and by adjusting the relative levels of the frequency bands, as well as engaging the resonance and spectral modulation, you can create some lovely odd synthesised tones.

In fact, I'd argue that Spectravox is best when not being treated like a traditional vocoder. The Program input can be fed a variety of sources as well as the human voice, and can do some fascinating things when fed distorted drum beats or resonant acid-like synths. As one would hope,

it pairs particularly well with Moog's own DFAM.

This is a theme for Spectravox as a whole – the more hardware you have to pair with it, the better it becomes. Of all Moog's semi-modulars, this is the one that makes the least sense as a standalone purchase. Yes, it can function as a monosynth or vocoder – although the lack of MIDI feels like a needless hindrance on this front – but it comes to life when integrated into a wider rig and pushed into more unconventional use cases. The good crop of front panel CV offers a wide array of creative options. The ability to use each filter band as a CV envelope follower, routed to modulate other hardware, is a highlight and has the potential to keep you entertained long after the novelty of the 'robot voice' vocoder sound wears off. **FM**

VOCODERS AND FILTERS

In basic terms, vocoders work by modulating one signal – the carrier, traditionally a synthesiser – using the characteristics of another, often a human voice and referred to as the modulator or, in Spectravox's case, the Program input. It does so by breaking this modulator signal down into individual frequency bands, the responses of which are then applied to the carrier audio. In basic terms, these frequency bands are emulating the different resonant frequencies of the human mouth and throat. This concept of resonance can be applied to a multitude of other sounds besides the human voice though, and, as such, vocoders and filter banks can be used to recreate a whole host of different effects, from the percussive tones of acoustic drums to the resonant ring of natural reverb.

FM VERDICT

8.5

There are better vocoders out there, but Spectravox is at its best when integrated into a wider setup and pushed to its creative limits