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## Waldorf nw1 Eurorack Wavetable Module | €345

Waldorf enter the Eurorack fray. Will their talking wavetable VCO Microwave our Euroracks?

**T**he nw1 sees German synth pioneers Waldorf join in the recent Eurorack boom with something decidedly digital and unusual. The nw1 is a sampling wavetable module with several tricks up its sleeve. When we saw it briefly at NAMM, it was an exciting thing to behold and hear, with its 2001-esque panel and a wonderfully crispy, gritty, old-sampler tone. But the nw1's ace was its spectral morphing capability, letting us transform the spectral domain of any playing back sound in real time, hugely broadening the sounds it could create. Now, it's out...

The nw1 has three major modes. The first is ROM wavetables, with 80 wavetables in memory, taking up 5MB and covering a great range of sounds, including classic wavetables from Waldorf's Microwave synth. Some wavetables are more like

full-blown (micro) recordings: the gong of a bell or the murmurous chanting of a choir. They all loop, at a speed determined by adjusting the bi-directional (and freezable) Travel control.

Despite 'only' 80 wavetables, there really is a broad range of sounds available – as a wavetable VCO it's an excellent source of sizzly timbres, ambience, textures and ballsy tones. It's very 'soundtracky', completely beyond the scope of any analogue VCO. We can CV control three timbral parameters at once, plus time and pitch. And again we have this additional spectral dimension, sweeping the timbre, scintillating or Barry White-ing any sound playing back, without affecting speed, and re-pitching without affecting time. In terms of the other timbral controls, Brilliance is like a sort of 'grain size',

full clockwise things sound smooth, becoming gritty and chopped anti-clockwise, and like a high-pass filter in the last 'three hours' of Travel. Noisy is like a warbly, gritty 'random' pitch wavering. It'd keep someone busy for a long time exploring just the 80 built-in wavetables and the spectral dimensions they could visit – check out the samples.

But you can also sample into it. This is its second mode: we have ten User wavetable slots (and 2.5MB space) to record our own sounds directly into the module's memory (retained after power cycling). We can do this at three quality settings and take advantage of a built-in compressor to squeeze the maximum resolution out of our audio going in. This all works well enough, but you'll definitely be reading the manual first.

Thirdly, it can talk. As in, it has a

speech synthesizer mode and can speak looped text phrases we write and transmit to it from our computer, via USB cable (not included). We can transform its speaking voice with all of the same timbral controls we discovered in the wavetable modes. At least in theory...

Trouble is, despite the nw1 being in stores when it was sent for review, the software to administer this text to speech (and transmit samples to and from the module and more, via USB) wasn't released or finished. Most concerningly, some of the CV inputs had calibration errors – for example, if you clicked CV In 1 to Tune, without anything connected the pitch would drop a semi-tone. If you clicked it to Brilliance, or Travel, the range of that control would be adversely affected – so you had to choose which one you wanted to affect the least.

This is a known issue according to the manual, the fault of 'temperature changes', and we simply need to use the software editor to re-calibrate the module. The software that wasn't released. This is the same software the manual describes how to update the firmware with, despite it not existing. We used third-party software to update it, which it also suggests but gives no instructions for. We emailed Waldorf support to find out when this software would be released, and after a certain amount of convoluted communication and a longer wait than we would have liked, received a response. We got sent a Windows beta (the Mac version was not functioning at all), which fixed the calibration errors at first, but was certainly a beta and not ready for us to review.

We hope the software is working, polished, and actually available for both PC and Mac (with full documentation) by the time you read this. We also hope you take a computer with you wherever you take your nw1, and you do own the requisite USB cable, as you might well need to calibrate its CV inputs before a gig. Despite it not travelling an inch, we needed to recalibrate the nw1 more than once during review.

In terms of build quality, it's a mixed bag. It's one of the heaviest modules we've ever held; the faceplate feels like the bullet-proof wall of a bank. But the knobs feel wobbly, and are smooth metal, so are slippery rather than reassuringly solid and grippy – plus Position was at a



slightly wonky angle and made a clicking sound when turned, as did Keytrack, though they seemed to work correctly. That big red Wavetable knob sure looks cool, but its proximity to the Pitch and Brilliance knobs makes it awkward to turn.

Finally, and stunningly, while putting a steady audio rate signal into 'CV In 1', adjusting with the in-built gain control, beyond a certain point, sudden bursts of extremely distorted stuttering noise started blasting from the output, in tandem with the screen freaking out, flickering and dimming. A minute later the nw1 crashed, becoming unresponsive. We turned it off and on again, repeated, and sure enough, a certain range of audio frequency modulation causes the screen to dim, and blasts of full-volume distorted noise to explode from the output. Play around enough in that state, it stops working.

It was both disappointing and extremely frustrating that the nw1 was released without critical supporting software and complete documentation being available, and clearly major, deal-breaker-grade bugs still present.

We cannot assure you that the nw1 does everything Waldorf claim it does, reliably. By the time you read this, it hopefully will. But if one discounts the text-to-speech and computer wavetable management element entirely, forgives calibration errors solvable only with unreleased software, a questionable support response via their official support system, and the presence of a show-stopping bug, we are left with a rough-around-the-edges but still interesting sounding wavetable VCO, with gritty low-fi character, and unique spectral morphing power. There's still lots to explore, plus we have the ability to record and mangle our own tones too. But there's no way we'd ever take it out live.

#### SPECS

Power: 150mA, Width: 32HP, Depth: 25mm

#### CONTACT

Who: Waldorf GmbH

Web: <http://www.waldorf-music.info>

#### VERDICT

Important unfinished software means missing features. Some physical deficiencies, worrying lack of support, and a major bug. Yet despite all that, it's still sonically inspiring!

6/10

## Make Noise Strike Back

Get yourself some budget Buchla with Make Noise's new two-channel low-pass gate, the LxD

Not that we didn't know they love vactrols (they literally sell an 'I Heart Vactrols' t-shirt), but Make Noise have announced and shipped a new slimline two-channel vactrol-based VCA, called the LxD (Low Strike Duo). This is the second dedicated vactrol VCA in their line-up, being an alternative to the bigger Optomix. It may not look terribly exciting, but the LxD is a module that could bring a flavour of the much-coveted 'woody' sound of West-Coast Buchla synths (like the 200e or Music Easel, both pricey machines) to nearly anyone's Eurorack and anyone's budget, at only 4HP wide, and costing less than £90.

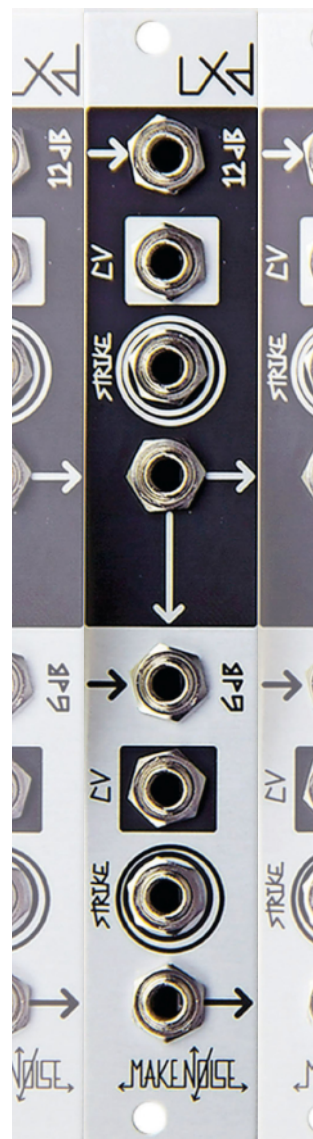
In Make Noise's own words: "The LxD is a dual-response, two channel, direct-coupled [as in, we can process CV with it!], low-pass gate. It is, in essence, a VCFA (Voltage Controlled Filter Amplifier). CH 1 offers a 12dB/Octave response that is mildly-resonant, while CH 2 offers a 6dB/Octave that is non-resonant. The OUTPUT of CH 1 is normalised to the INPUT of CH 2.

This normalisation puts the two channels in series, which is similar to the VCF into VCA arrangement made popular by many monosynths of the '70s."

The LxD bears some DNA in common with Make Noise's popular Optomix, crammed into a smaller space – it uses the same vactrols, though with a different circuit design. Like the Optomix, its hallmark is a change in frequency response depending on how 'open' the VCA is, giving a smoother, darker tone when more closed and a brighter one when more open. Also like the Optomix, each channel features a 'strike' input, so a short 'clicky' gate inputted causes a plucked 'bong' response, similar to an exponential envelope generator acting on a 'normal' VCA, but without the actual need for an envelope generator.

So it's effectively a synth 'back end' that would give any system a Buchla-esque tone, at just 4HP wide. Price is around \$110/£89.

[www.makenoisemusic.com](http://www.makenoisemusic.com)



## Dreadbox go Modular

Athens-based hand-made semi-modular analogue synth and effects makers Dreadbox just announced an entire ready-made range of Eurorack modules and systems. These consist of seven modules and four pre-configured systems, which are housed in their own rather cool looking angled 122HP desktop case featuring built-in utilities.

The modules form a complete range with several modules having multiple functions. This includes

the Alpha two voice 'paraphonic' MIDI to CV, which also acts as dual ADSR and more, Theta which combines LFO, S&H, clock and noise, and more. Primary systems include a two VCO subtractive complement of modules with MIDI > CV, with Y-systems or G-systems adding in with the Ypsilon filter or Gamma voice also.

Module prices range from 229 to 399 euros. Shipping in early December. [www.dreadbox-fx.com](http://www.dreadbox-fx.com)



## Erica Synths MIDI to Trigger

Erica Synths have announced a new MIDI to Trigger utility. Ideal for folks looking to build Eurorack percussion systems sequenced by existing hardware, this eight-channel 6HP module converts inputted MIDI notes to 10ms analogue triggers. Emphasis is on convenience, with one-button assignment mode allowing users to remap all eight outs in a split second. With a long press of the assign button, channel 8 becomes a dedicated MIDI clock. This would let someone trigger and clock a modular percussion rig live from any MIDI source or convert the top eight drum pad channels (MIDI Out only) on an Arturia Beatstep Pro, into the 'missing' eight analogue pulses. Simple but useful. [www.ericasynths.lv](http://www.ericasynths.lv)