It doesn’t happen too often that you play a brand new analog synthesizer for the first time and everything is perfect, just the way it should be. But this was the case with the PERfourMER MKII.

Quite a few modern synthesizers try to con us. They make a musician’s life more difficult than necessary, because …

Possibility no. 1: The synthesizer contains presets of medium quality … average sounds (some good, some really bad) making it difficult to realistically evaluate sound potential. You simply can’t tell what that synthesizer really sounds like …

Possibility no. 2: You’re faced with mediocre hardware. With wobbly and fiddly knobs. With buttons and switches placed way too close to each other (like sardines in a can). With insufficient control elements that significantly reduce the joy you could be having with the instrument.

Possibility no. 3: The synthesizer lacks certain important features. Maybe MIDI is missing (if CV/Gate is installed) or CV/Gate is missing (if MIDI is installed). A modern studio containing both analog and digital components needs both communications busses!

These are just a few of the reasons why a complete and well-designed instrument such as the four-channel Vermona PERfourMER synthesizer should not be taken for granted.

Interestingly enough, it’s rarely the sound which gives cause for criticism. Analog circuits simply sound good (the real reason for the renaissance of analog synthesizers).

Ye Olde Rule says: “Good sound alone is not enough”. And so it’s the rare, the very rare case when it’s love at first sight between the instrument and the musician.

Vermona PERfourMER MKII analog synthesizer.

That’s the secret of the congenial relationship between the PERfourMER and myself. The very first notes I played brought back memories of the Roland Jupiter-4 (without chorus): that dry, classic Roland analog sound of the vintage years.

Appetizing, in a word.

There’s the wonderful pulse wave and each of the 4 voices sounds somewhat different. It’s possible to create this vivacity on purpose with the PERfourMER – with just a few adjustments – in contrast to the Jupiter-4, where this can be an unintended side effect.

And then there’s that unison-mode, which stands for rich sonority. There are no superflous functions on the PERfourMER. In short time you’ll be best friends and – this is the hammer – you’ll be knee deep in the creative process from the very beginning.

It goes without saying that the PERfourMER MKII is first and foremost an independent instrument, whereby the filter resonance has its own special character.

Oberheim Four Voice meets Vermona Quad Analog Synthesizer.

Just for comparisons, and as a sort of reference, consider this: I would call the PERfourMER a combination

of a Roland Jupiter-4 and Oberheim 4-Voice. The first association pertains of course to sound, the second to technical matters. 4 SEMs à la Oberheim and 4 parallel synthesizers à la PERfourMER MKII are simply one and the same concept, especially since the crucial Play Modes are present in both cases.

The sum of all the small things

Excuse us if we repeat ourselves, but good sound *alone* is not enough. The PERfourMER MKII will wow you at a lot of different levels.

Let’s start with the outside. Solid casing, good knobs (not a single knob wobbles), a pleasant, subtle resistence to the touch, large sockets, clear labelling.

MIDI, Mains In and a proper power switch.

Another point to be kept in mind is the power supply. This can be a tiresome subject as we recently mentioned in the course of one of our rare criticisms of the John Bowen Solaris. The PERfourMER has found an ideal solution, in an old-fashioned sort of way. The PSU is built-in. All you need is a regular 3-pole power cable. Just turning the instrument on has a reliable, comfy feel.

There’s MIDI (of course), and an option for CV/Gate. Whether you use the Alesis Andromeda as a master keyboard (as in our test) or the analog drum sequencer TAMA TSQ1000 with 4 triggertracks (as in our test): the PERfourMER is very cooperative and easily controllable.

Also, control elements are well dimensioned and well spaced (fat fingers are no problem here). And then, the four parallel synthesizers are intelligently arranged, with a few additional small technical goodies located on the side.

Optional extra: CV/Gate inputs.

~~White~~ Hot noise – a question of character?

This absolutely noble concept (yielding an equally noble analog sound) goes hand in hand with a special „specialty“: we have to put up with a little static in the audio path. It’s not bad and let’s not lose our perspective here. Think back to the golden days of analog technique. A significant aspect of the Jupiter-4 sound (not to be eliminated), for example, was noise, partly thanks to the Roland stereo chorus.

Korgs PS-3100 is a little “noisy” and Rolands Jupiter-8 has a permanent buzz in the audio signal. And yet, no one would think to criticize these instruments for having a bad sound.

I thus gladly accept the subtle „hot noise“ of the PERfourMER MKII as a characteristic of its very characteristic sound. After all, we are talking about an analog instrument …!

Noise in the audio path increases corresponding to adjustments in the filter resonance settings. Well, actually, to be exact, the overall volume increases. This behaviour is a little weird, which is why I contacted Vermona and asked them for an explanation. Thomas Haller kindly answered immediately.

„That’s correct. The amount of audio level increases corresponding to higher resonance settings. This is due to our special filter design. In most cases, there’s a loss in volume when filter resonance is raised. By modifying the filter design, we have compensated for eventual volume loss. Filter output level increases in direct relation to resonance settings.“ (Vermona)

So, let’s forget about the „hot noise“. The bottom line is: this is not important. We absolutely recommend the Vermona. Its sound is a delight. Here’s a good place to „take a hear“ of the 45 minutes of PERfourMER

MKII audiofiles attached to this review. Press „Play“.

Now back to business.

Discrete analog!

The PERfourMER MKII is completely „discrete analog“ (with one exception: the LFOs). It contains …

4 VCOs

- waveforms: sine, triangle, pulse, saw, noise and EXT.
- octave ranges 4-8-16-32, further HI and LO (which turn the oscillator into a wide-range LFO).
- fine tune
- glide
- EG modulation (+/-) … for those typical electronic drum sounds.
- LFO modulation and pulse width modulation

VCO compartment with important extra features to the left.

The pulse wave is extremely beautiful. It reminds me of the Jupiter-4 and other early Roland synthesizers. But it’s even more than that! PERfourMER’s pulse width modulation allows for unbelievably “fat” sounds, since there’s a separate LFO for each of the 4 oscillators. PWM can also be effected by the modulation wheel of your master keyboard (independently switchable for each synthesizer channel, of course).

PWM by LFO is especially interesting. The sound is capable of fading completely (0% pulse width). One of the best PERfourMER patches is a 4-VCO pulse tone with independent LFO modulation. Each of the oscillators fades in and out, depending on the channel’s LFO speed and PWM degree. PWM by modulation wheel, on the other hand, is less dramatic. It doesn’t seem to reach all the way to 0% pulse width, which is a bit a shame …

The frequency settings LO and HI are worth mentioning. (In this case, the term OCTAVE is of course not correct). Both settings disconnect the VCO from keyboard voltage and turn it into a free audio generator, the frequency of which is adjustable by the TUNE knob. Frequency ranges from sub-audio all the way up. LO is primarily responsible for sub-audio-frequencies and can be used as an LFO.

Synchronization

With 4 VCOs, oscillator-synchronization is an important aspect which Vermona has kept in mind. Each VCO can be synchronized to the preceding oscillator: VCO 2 to 1, VCO 3 to 2, VCO 4 to 3. Good stuff. Synchronization at its finest.

Crossmodulation

The same principle applies to crossmodulation. Each oscillator can influence the next. The crossmod-knob is one of those little goodies so conveniently placed at the left side of the front panel.

VCO Out / EXT In

Those looking for a „naked“ VCO sound will be glad to hear that there is a VCO OUT socket with every synth channel. This has to be of interest to owners of modular systems, since they can run the pure VCO material from the PERfourMER through other modules (such as multimode filters, etc.). A small, but weighty detail.

VCO-Out / EXT-In jack. The PERfourMER is a 4-channel filter bank, too.

On the other hand, you're able to feed an external audio signal into each PERfourMER channel. Which means this instrument is a fourfold filter bank. Not a bad deal.

4 VCFs

The 24dB low pass filter is of elite quality and just as we like it: snappy sounds resulting from strong self oscillation at high filter resonance.

Filter modulation is possible via the envelope (+/-), the LFO or aftertouch (MIDI). Keyboard-tracking is fixed at 0/50/100%.

Filter FM

As with the „cross"-crossmodulation between VCOs, each filter can be influenced by its preceding oscillator. The epitome of filter FM. It goes without saying that metallic and other experimental sounds can be easily created.

Compact VCF- and LFO-area.

LFO

- waveforms: saw, pulse, sine and S/H
- frequency range from 0,05 to 250 Hz

Small is beautiful. The LFO alone has practically everything you need. Those of you who miss a voltage control feature will find this an option with the VCO in LO (or HI) mode.

LFO synchronization and phase

Let's not forget these two LFO features. The *low frequency oscillator* serves as a modulation source for VCO and VCF, as we have said. A superficial glance at the panel might lead to the false conclusion that the 4 LFOs can *not* interact with each other and that only positive modulation is possible. But that's wrong …

The synchronization switch is the one extra on the left panel that we haven't spoken about yet. LFO 2, for example, can be linked in parallel to LFO 1. The latter remains responsible for the combined speed, while LFO 2 phase is adjustable (from 0 to 180°).

In LFO sync mode the speed knob acts as phase knob.

In position „0" the two LFOs have the same phase. Turning the phase knob to 180° inverts LFO 2 so that it runs contrary to LFO 1. Beautiful. Intermediate positions (in which one LFO lags a bit behind the other, etc.) also yield interesting results.

Since there are 4 LFOs at your disposal in addition to the 4 VCOs/LFOs in LO/HI range, it is obvious that the PERfourMER MKII isn't just capable of little niceties, but is good for very surprising effects. The individual synthesizer channels of the PERfourMER are capable of communicating with and reacting to each other. Indeed, the instrument totes high experimental potential.

Last but not least, the LFOs can be synced to MIDI clock.

All EDIT parameters may be activated independently for each synthesizer channel.

Envelopes

Each part of the PERfourMER has its own ADSR envelope. The attached audiofiles give plenty of evidence that the instrument can be snappy. But I also find the optionally long attack- and release-times attractive. In LEGATO mode, the envelopes only trigger when a new key is hit. This function, too, is individually adjustable for all 4 synthesizers …

VCAs

Each VCA is either regulated by the above-mentioned envelope, by an organ-type EG (100% sustain), or by a HOLD function („ON“).

In addition, VCA modulation can be effected via velocity. As with all else, this function can be individually activated for each of the 4 synthesizers. Besides the alloted VOLUME knob, each channel can be set anyware from LEFT to RIGHT with the panorama knob.

Envelope and VCA with panorama knob.

Play Modes

Now we get to the heart of the subject. As in the Oberheim 4-Voice, here too the voice-assign modes are of great musical significance. They distinguish the PERfourMER MKII concept from all other synthesizers on the present market.

The play modes in detail:

- **M1:** monophonic, unison. Massive 4 VCO / 4 VCF / 4 VCA / 4 EG / 4 LFO sounds. Inspiring.
- **M2:** monophonic, sequential. Each incoming MIDI note alternates between the four synthesizer channels. This brings back memories of the Korg Mono/Poly arpeggiator.
- **D1:** duophonic, alternating. Synthesizer 1/2 and 3/4 are connected (two synthesizers, each with 2 VCOs, 2 LFOs, 2 VCFs. 2 VCA und 2 EG). Each incoming MIDI note alternates between the 1st and 2nd synthesizer.
- **D2:** duophonic, 2-voiced. Enables simple polyphonic playing with both synthesizers playing simultaneously.
- **P1:** polyphonic, 4-voiced. Extremely attractive: 4 independent voices, that means 4 independent timbres sound polyphonically. Here the PERfourMER „remembers“ the timbre (sound channel) of once-played notes.
- **P2:** polyphonic, 4-voiced. But contrary to P1 the sound channels are not habitually linked to incoming MIDI notes. The PERfourMER simply plays the next „free“ sound channel.

Perfo(u)rmance – MIDI, CV/Gate, beatings at your fingertips

It took a couple of weeks for me to realize how clever the PERfourMER MKII concept really is. It’s possible to assign an individual MIDI channel to each synthesizer. Those laborious CV/Gate modifications of the past (just think of the Oberheim 4-Voice) are redundant here, since you now get these same control options via MIDI. (Which doesn’t mean that CV/Gate is useless. We’ll get back to that later.)

I’d like to take a little detour and explicitly praise the Manikin Schrittmacher sequencer. It’s a perfect partner for the PERfourMER MKII …

The PERfourMER is an unbelievable creative tool – especially in combination with a powerful MIDI step sequencer.

4 independent note- and aftertouch-tracks enable you to control each of the 4 synthesizers separately with individual patterns and filter modulations for each channel.

But the *optional* analog control via CV/Gate has a charm all its own. Some of the attached samples are created by using the analog trigger-sequencer TAMA TSQ1000. It has 6 triggertracks (whereby, needless to say, I could only employ 4 with the PERfourMER). These automatically set the „drum beats“ of the Vermona in motion.

Purists tend to revert to CV/Gate because of the „human feel“ (beautiful groove) native to analog sequencers.

Vermona PERfourMER and Alesis Andromeda.

A specialty of the PERfourMER MKII is that you can activate pitchbend control for each synthesizer channel individually. It’s really easy, for example, to utilize synthesizer 1 and 2 as a „potent“ lead voice, simultaneously controlling just the second synth via pitch bender. Beatings at your fingertips, that’s exactly what you get. Minimal pitchbend movements have a huge effect on the sound, it’s really ingenious.

Thus, too, with the sync-sounds. As soon as the slave synthesizer (the second one) is controlled via pitchbend, you can manually create that famous sync-effect. As with the good old Moog Prodigy.

As you can see, I got to know the PERfourMER MKII with all its inherent possibilities “slice by slice”. Every little feature promissed an immediate, useful and – musical ! – gain. And it was these little details that actually made it „love at first sight“.

I almost forgot the manual trigger button (TRIG) for the envelope (there are 4 of them). You won’t be using this much in live performance, but I sense clear advantages for every-day life in the studio. Need some proof? For a quick sound check just trigger the instrument manually. No setting up complicated connections via MIDI or CV/Gate.

By the way, the PLAY MODES are connected to the TRIG buttons. So in M1 mode, any manual trigger starts all four envelopes, whereas in P1 mode any trigger button lets the sound jump from one synthesizer channel to the next.

The rotary SELECT switch is also used for calling up the (factory and non-editable) sequences.

“Sequences”

By the way, the TRIG buttons also start the 16 internal sequences. These are pre-set. To be exact, there are 4 single tones and 12 sequences:

- 1: VCOs in the 1. octave
- 2: VCOs in the 2. octave
- 3: VCOs in the 3. octave
- 4: VCOs in the 4. octave
- 5 to 16: 12 factory sequences, to be played as they are

We don’t want to forget the built-in tuning fork, the „A = 440 Hz test tone“ switch.

Little list of wishes (five things)

- First, a further reduction of the (admittedly barely audible) „hot noise“. You may not even hear it.
- Second, I’d swap the velocity and aftertouch allocations: VEL for VCF and AFT for VCA.
- Third, automatic (voltage) control of pan.
- Fourth, CV sockets for VCF control.
- Fifth, the simplest of the lot: the use of coloured knobs for programming comfort. This would enhance the very clear arrangement of the front panel. Red knobs, for instance, for the VCFs (filter frequencies) and VCOs (waveforms). This could somewhat reduce the effectiveness of the already elegant colour design (anthracite – beige – brown).

Front panel covered with knobs and switches.

The essence

The PERfourMER MKII is convincing: I like its authentic analog sound and its splendid performance. And I can especially recommend its superb hardware, its almost-perfect layout, and well, actually, the whole PERfourMER MKII. (Not exactly a catchy name, that, what with the „Mark II“ suffix and all)

Every little aspect is significant. There’s a musical solution for each problem. Contrary LFO-sweeps (via differing phase settings), independent MIDI channels for the 4 voices, analog control via CV/Gate (together with modular systems, analog step- and trigger-sequencers), etc. Practically inexhaustible sound possibilities: basses, sync- and lead-sounds, effects, all kinds of noises, drum sounds. This and more.

LFO synchronization (left side) is a very useful feature.

This instrument is a discrete-analog synth for the creative and demanding musician, especially for those who are inspired by the existence of four independent synthesizers in one casing. For those, too, who cherish attractive beating possibilities, who consider fine nuances between the single sounds to be the nature of music (whereby electronic instruments actually are a step closer to the reality of acoustic instruments). For those who have dedicated themselves to sound research.

The 45 minutes of audiofile supplements are meant to round off this review. The samples were taken almost exclusively from the PERfourMER MKII, complemented by a couple of mix-soundfiles where the Alesis Andromeda and Elkas Synthex come into play.

A discrete quad analog synthesizer made in Germany …

As control units we used the Andromeda as a master keyboard along with the following step sequencers: TAMA TSQ1000, Manikin Schrittmacher and the Elka Synthex sequencer. Enjoy your listening.

1. DEMO
2. Mix 1
3. Mix 2
4. Mix 3
5. Mix 4
6. Mix 5

7. Bass 1
8. Bass 2
9. Bass 3
10. Bass 4
11. Sync Sound 1
12. Sync Sound 2
13. Brass Sound
14. PWM 1
15. PWM 2
16. Analog Sequence 1
17. Analog Sequence 2
18. Analog Sequence 3
19. Lead Sound
20. LFO 1
21. LFO 2
22. FX
23. Filter Resonance 1
24. Filter Resonance 2
25. Filter Resonance 3
26. Brass Sound 2

Vermona PERfourMER MKII

Polyphonic Analog Synthesizer
4 individual parts / voices

Prices (01/2023):
PERfourMER MKII (MIDI): approx. 1,600 Euros
PERfourMER MKII (MIDI and CV/Gate): approx. 1,440 Euros

Website Manufacturer:
www.vermona.com

Link:
Vermona Mono Lancet / Kick Lancet Test Report
Vermona ’14 Analogsynthesizer Test Report
Vermona Interview