

Korg Monotron

Analogue Ribbon Synth | £59

It's been a while since we've seen an analogue synth from a major Japanese manufacturer. **Greg Scarth** investigates if this tiny box can live up to the hype

ON THE DVD

WHAT IS IT?

Miniature analogue monosynth

CONTACT

Who: Korg UK
Tel: +44 (0)1908 857 100
Web: korg.com

HIGHLIGHTS

- 1 Single oscillator synth with LFO and low-pass filter
- 2 Ribbon controller keyboard
- 3 Auxiliary input for processing external sounds

Since the late 1980s, analogue technology has simply not been on the agenda for the Japanese

hardware giants. Content to let other manufacturers fight for the retro market, Korg have focused instead on developing digital technology with the occasional nod towards their past in the form of analogue modelling synths and software recreations.

Synth fans clamour for modern versions of past favourites, but the results (which include the likes of Korg's MS2000 and Roland's SH-201) have never quite recaptured the magic of the classics. Korg, whose vintage machines continue to rise in value on

the second-hand market, have finally offered a hint that a new analogue range might still be an option.

The Monotron, a bare-bones monosynth, is their first fully analogue product for nearly three decades. As far as we can remember, Korg's last truly analogue synth was 1982's Trident mkII – everything which followed used digitally controlled oscillators. Needless to say, we were pretty keen to see whether Korg still have what it takes to build a classic analogue synth.

Tiny terror

Even though I knew it was going to be small, it's almost impossible not to be surprised by the size of the Monotron.

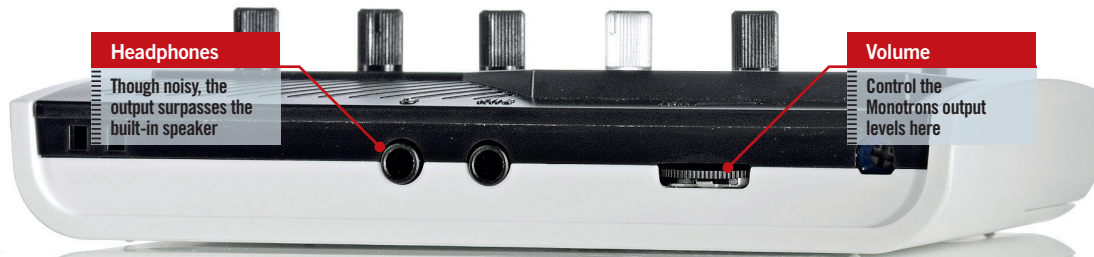
This is truly a palm-sized synth, powered by a supplied pair of AAA batteries and with a minuscule built-in speaker. The Monotron's synth architecture is admittedly very basic, but the limited features mean that it couldn't really be any simpler to play and tweak. The single oscillator, filter and LFO make it easy to get started creating weird and wonderful analogue sounds. The biggest problem when trying to play melodies on the Monotron is the keyboard. You'll need the dexterity of a brain surgeon and tiny fingers if you want to hit perfect notes on the ribbon controller. I'm sure it's possible to develop precision with practice, but trying to play melodies is a lot easier said than done. If you're worried about precise tuning you're looking in the wrong place. I honestly couldn't tell you whether the oscillator's tuning was stable thanks to the imprecision of the ribbon.

The pitch control isn't really intended for fine tuning – it's primarily used for setting the keyboard's range. I found that using a stylus (not supplied) made things a little easier, but even so it's not easy to pick out melodies.

LFO yeah

The simplest way to get interesting patterns out of the Monotron is to use the low frequency oscillator. Like the oscillator, the LFO can only produce an inverted sawtooth wave, which can be used to modulate oscillator pitch or filter cutoff. The LFO re-triggers each time you touch the ribbon, but unfortunately it can't be routed to pitch and cutoff at the same time, and the absence of a VCA means that tremolo





Headphones

Though noisy, the output surpasses the built-in speaker

Volume

Control the Monotrons output levels here

SPECS

Fully analogue ribbon-controlled monosynth
 Single oscillator
 Resonant low-pass filter based on MS-10 and MS-20 design
 LFO assignable to VCO pitch or VCF cutoff
Dimensions:
 120 x 72 x 28mm
Weight:
 0.09Kg

effects are out of the question. Even so, it's highly effective for creating rhythmic filter patterns and cool warbling vibrato sounds. With the LFO speed cranked right up, audio rate modulation of pitch and filter cutoff produces intensely vicious timbres which belie the size of the Monotron.

It might be asking a bit much in this price range, but the ability to sync to a tap tempo input would be a massive improvement to the LFO, allowing you to integrate the LFO pattern with your tracks. Square wave and regular sawtooth shapes would also make the LFO more versatile and in fact, while we're at it, why not add a square wave to the VCO? Perhaps we'll see these features on the inevitable Monotron Pro? The only significant problem with the Monotron's sound is a persistent hiss emanating from the speaker.

The headphone output allows you to plug it into a better monitoring setup and the internal speaker is automatically muted when you insert a jack into the socket but the hiss is also present in this signal. It's a real shame, because the sound is otherwise incredibly good for such a tiny device.

Filter fun

Without doubt, the most exciting element of the Monotron is the filter, said to be "the same highly acclaimed

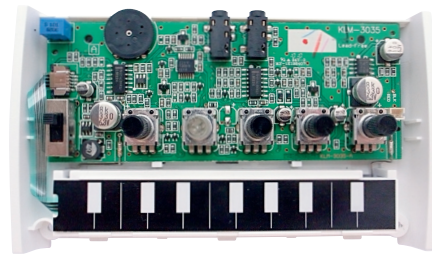
Dissecting the Monotron

As an unashamed geek, I'm not afraid to say that I was almost as excited to see what was lurking on the Monotron's circuit board as I was to hear it in action. Popping the front of the case off, it's immediately apparent that the Monotron is, as promised, fully analogue. From a DIY perspective, it was feared that the circuit

might have been built into a single proprietary chip, which may have been cheaper for Korg to produce but would have made modifications difficult. Thankfully, Korg's decision to build the Monotron from standard surface-mount components and integrated circuits means we can get a better idea of

how it works. The Monotron derives its power supply from a pair of 1.5V AAA cells – the MS uses a ±15V DC supply – so some differences are inevitable, but the VCF circuit appears to be a recreation of the Korg-35 chip using discrete transistors.

Two low power LM324 op amps and a Schmitt trigger chip carry out VCO, LFO and modulation duty, while the output is powered by a Texas Instruments headphone amp chip, making the circuit compact but still ideally suited for mods. It's a clever design and is sure to appeal to DIYers.



whereas later MS-20 models used more widely available op-amps. The Monotron's VCF appears to be based around a recreation of the Korg-35 circuit, and there's no doubt that it captures the spirit of the MS sound.

Lined up alongside my MS-10, it's clear that the two LPFs have a lot in common. Running the Monotron's oscillator through the MS filter and

version. The results to be had from processing external sounds are outstanding, although the lack of an envelope follower or CV control mean that you'll need to grab hold of the knobs to add your own variations. The LFO can still be used to modulate the filter when processing an external source, so it's really not a problem.

Practical usability

When we first saw the Monotron, we were certainly excited to see if it could live up to our expectations. Most importantly,

The ace up the Monotron's sleeve is its ability to process external sounds via the auxiliary input

VCF circuit as the MS-10 and MS-20." The MS synths were famed for their viciously aggressive 12dB/octave low-pass filters, which howled and wailed with ease and could be provoked into self-oscillation by cranking the Peak control.

Korg nerds will tell you that there were a number of slightly different versions of the MS filter – most notably, the earlier (and arguably more desirable) versions were based around a proprietary Korg-35 filter chip,

vice versa, similar sounds are easily achieved with any combination. The Monotron filter might not sound exactly the same, but it certainly captures the spirit of the MS.

The real ace up the Monotron's sleeve is its ability to process external sounds via the auxiliary input. MS filter clones cost at least twice as much as the Monotron, so it's by far the cheapest option if you want a taste of that analogue filter magic. The good news is it's definitely not a poor man's

we desperately wanted the filter to sound good and for it to be a faithful recreation of the classic MS filter sound. The Monotron delivers on that front, and at this price point there really can't be too many complaints about the sound. The bigger question is whether the diminutive form factor and imprecise ribbon keyboard make it possible to use the Monotron for serious music-making rather than just as a fun toy. The lack of precise pitch control means the Monotron lends

itself better to sounds that don't need to be pitch-perfect, and I suspect its most obvious use in the studio will be for special effects. Filter sweeps, glides and rhythmic LFO modulation tend to

white noise takes on some great textures with the addition of LFO filter cutoff modulation and manual manipulation of the cutoff and peak knobs, while audio rate LFO

Conclusion

There's no ignoring the fact that the Monotron has a number of weaknesses. It's fiddly, there's no external control, the output's noisy and it's difficult to play in tune.

But despite those issues, I still like it a lot and I think the benefits more than outweigh the minor flaws.

Once you look

past the limitations and remind yourself that this is a true analogue synth for a bargain price, the Monotron is a real winner. It's certainly not perfect, but it's an inspiring piece of equipment to have kicking around the studio and it sounds good enough to use it on a track.

When it comes down to it, the Monotron a toy rather than a synth, but I really wouldn't be surprised if the Monotron made it onto quite a few records in the near future. If this really is the first sign that Korg are going to return to building analogue synths then I say, bring it on. **FM**

Filter sweeps, glides and rhythmic LFO modulation tend to produce the best results from the Monotron

produce the best results from the Monotron and I also got some nice effects by feeding various sources into the auxiliary input and manipulating them. The currently trendy filtered

modulation of the filter is particularly good fun.

It's certainly a useful tool to have around, although I doubt I'll end up trying to use the keyboard very much.

ALTERNATIVES

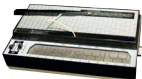


Gakken SX-150

£46

We loved Gakken's self-assembly mini synth when we reviewed it last year. Now available in the UK through Juno.

juno.co.uk



Dübrex Stylophone S1

£17

The Stylophone is even more of a toy than the Monotron but it's great fun. As used by electronic music legends Kraftwerk, Orbital, David Bowie and, er, Rolf Harris.

dubreg.co.uk



Korg MS-20

£1,000+

If you're looking for the classic Korg monosynth sound you can't beat the Monotron's spiritual successor. Second-hand prices hover around £1,000.

ebay.co.uk

DIY Potential

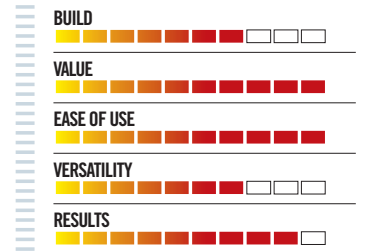
Since the announcement of the Monotron, the internet DIY community has gone into overdrive with speculation about the possibilities for upgrades, modifications and additions to make the tiny box more powerful and more useable. What if it could be hacked to accept CV or MIDI control inputs? What if it could be re-built in modular format? With so much of the power of my beloved Korg MS-10 already in it's tiny case the potential appears to be huge. At the time of writing, the Monotron hasn't yet hit the shelves in Europe or the USA,



but Japanese owners are already achieving some great results from modifying the circuit, with that all-important CV/gate control apparently fairly easy to

implement. By the look of what's coming out of Japan, you can expect to see plenty more modified Monotrons in the pages of *Future Music* over the next few months.

FutureMusic VERDICT



Forget about it's weaknesses. At such a low price it's impossible to resist its many charms.

