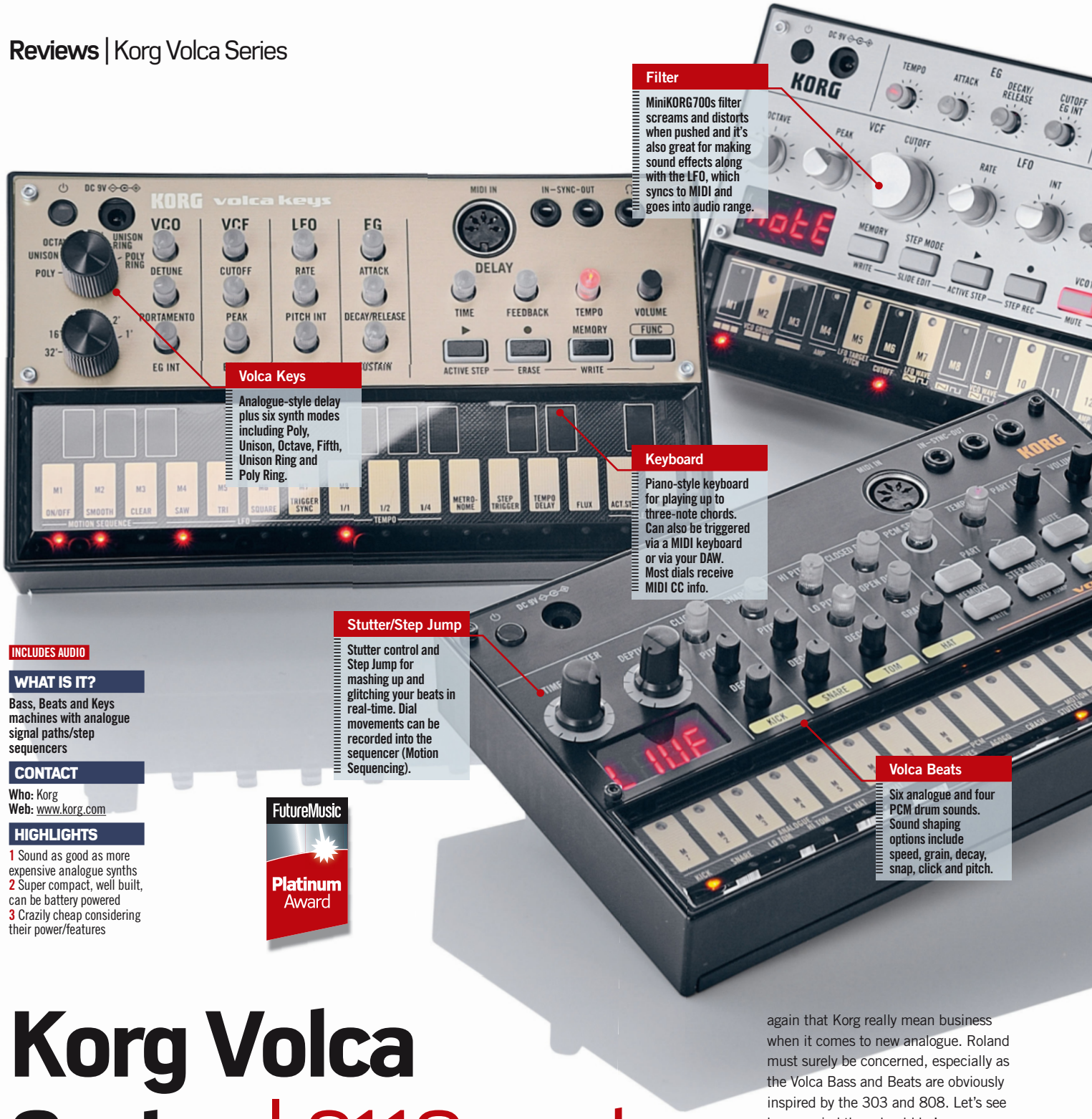

INCLUDES AUDIO

WHAT IS IT?

Bass, Beats and Keys machines with analogue signal paths/step sequencers

CONTACT

Who: Korg
Web: www.korg.com

HIGHLIGHTS

1 Sound as good as more expensive analogue synths
2 Super compact, well built, can be battery powered
3 Crazily cheap considering their power/features

FutureMusic Platinum Award

Korg Volca Series | £119 each

The eagerly awaited Volca range is the talk of the town. ***Dan 'JD73' Goldman*** gets a multiple Korgasm!

Korg's Monotron series/ Monotribe have really helped put analogue back into the hands of those on smaller budgets and as a result of their popularity, Korg are now moving firmly forward with more new analogue-based products. Many have lusted after a new TB303, TR808 and MS20 for years, yet none of the big companies seemingly had the desire to go there – that was until Korg broke the mould and released the MS20 Mini at under half the price of the original! Jump to April 2013 and Korg's Volca range previewed at MusikMesse showing once again that Korg really mean business when it comes to new analogue. Roland must surely be concerned, especially as the Volca Bass and Beats are obviously inspired by the 303 and 808. Let's see how worried they should be!

Best of both worlds

Volca Beats, Bass and Keys are designed in Japan and built in Vietnam and each has a 'full analogue signal path'. However, as Korg explained to me, the "control signals are generated digitally" whilst the "CPU's have a 10-bit DAC giving incredible near-analogue resolution". I can happily attest this to be the case, though the filter in the Keys does step slightly when swept at high resonance settings.

Essentially, these are hybrid units; analogue sound engines with digital control so dial tweaks and note info can be recorded into the sequencers/ accessed over MIDI. Several parameters

Volca Bass

Features three VCOs and a three-track sequencer with step editing. Excels at mono bass/leads and VCO grouping enables poly-chords to be played via one finger!

Volca Beats

Based on 'common analogue vintage circuits' (and sounding similar to a Roland TR606), the Beats has six analogue and four PCM sounds.

The kick can be clicky or deep, the hats cut nicely and the snare has a woody tone that can be further bolstered by layering a PCM clap, or increasing 'snap'. Active Step mode is great for odd time signatures/variations whilst Step Jump is fantastic for live fills (hold your finger on any step to loop). Stutter can also make fills and rolls, gated FX, delays/reverb and bit-crushing/pitch shifting and can be applied globally/individually then 'motion sequenced'. Muting (press mute+sound) and changing part volume is simple, whilst the PCM sounds have a speed control that can radically alter tone.

The only things lacking are a filter and swing.

on the front of each Volca have a MIDI CC and can be addressed via a MIDI controller. For example, you can control filter cutoff (though not resonance) and delay time on the Keys, the hi-hat 'grain', 'stutter' and tom decay on the Beats and gate/slide time and VCO pitches on the Bass, (though unfortunately not filter cutoff or resonance which I presume is to keep the filter sweeps smooth).

The sequencer on each Volca is limited to 16 steps, though you can make longer sequences by using them as sound modules/sequencing from your DAW. Real-time recording is possible on all three (all steps are auto-quantised except for 'flux' mode on the Keys) but only the Beats and Bass have fully editable step record. All Volcas can store eight sequences and although there's no sequence chaining, sequence loading from memory is instant.

Each Volca is housed in a translucent plastic case (you can see the inner workings/LEDs flashing) with a metal front panel and they're approximately the size of a VHS cassette, making them perfect for 'go anywhere' production. They can be battery powered or by a wall-wart, though no power supplies are included and currently there's no Korg solution to power three together, so factor this into your budget.

On the outside

The dials are lifted from the Monotron, with pretty much a dial per function. Build quality is a big step up – everything feels tight/sturdy and ready for some serious abuse! You'll notice that some dials are translucent and some solid. As a rule (some exceptions) the solid dials' movements can't be sequenced, whereas the translucent dials can be sequenced and are backlit red plus flash to denote which parameters are active or recorded in a 'motion sequence' (motion sequencing captures dial movements into the sequencer on the Keys and Beats). The tempo dials flash in time with the internal/MIDI-clocked tempo and each key/sequence step has its own LED too. These let you know what's happening at a glance within complex sequences. Happily, the LFOs (Bass and Keys) sync to master tempo/beat divisions/MIDI and can be re-triggered by note-on information, except for the triangle wave in the Volca Bass.

Connectivity on the Volcas is limited to a shared stereo mini-jack for headphones/main out, though the audio signal itself is mono and you'll need adaptors to interface with ¼-inch jack-based studio gear. There's also a din MIDI input for triggering from an external MIDI device/clock (such as a DAW or controller) and there's Sync in/out which uses 5-volt audio pulses to sync one Volca to another (cables provided). Apparently there's no limit on how many Volcas you can chain this way for clock sync but without a third party MIDI out mod, there's no way to build a monster polysynth (using three Volca Keys for example) as sync doesn't transmit note-on/off info.

This aside, I tested syncing the sequencer of each Volca to Logic's (and my DSI Tempest's) MIDI clock and

> They're approximately the size of a VHS cassette, making them perfect for 'go anywhere' production

SPECS: BEATS

Multi-touch trigger keyboard/step keys
Analogue synthesis (Kick, Snare, Hi Tom, Lo Tom, Closed Hi Hat/Open Hi Hat)
PCM synthesis (Clap, Claves, Agogo, Crash)
Kick: Click, Pitch, Decay, Part Level
Snare: Snappy, Pitch, Decay, Part Level
Tom: Hi Pitch, Lo Pitch, Decay, Part Level
Hi Hat: Closed Decay, Open Decay, Grain, Part Level
PCM: Speed, Part Level

Sequencer
Parts: 10, **Steps:** 16, **Patterns:** 8

Connections
Audio Output/Headphones: stereo mini-jack

Sync
Sync In (1/8" monaural mini-jack, Maximum input level: 20V)
Sync Out (1/8" monaural mini-jack, Maximum output level: 5V)

MIDI: In

Dimensions
193 x 115 x 45mm

Weight (excluding batteries)
372g

SPECS: BASS

Multi-touch Keyboard/ step keys
Analogue synthesis with 3-note poly
3VCO, 1VCF, 1VCA, 1LFO, 1EG
VCO Waves: Saw, Square
VCF: Cutoff, Peak, EG Intensity
VCF Type: Low Pass Filter, 12 dB/oct
VCA: EG on/of, Sustain on/off
LFO: Rate, Intensity, Target (Amp, Pitch, Cutoff), Wave (Triangle, Square)
EG: Attack, Decay/Release, Sustain

Sequencer: Parts: 3, **Steps:** 16, **Patterns:** 8

Connections
Audio Output/Headphones: stereo mini-jack

Sync
Sync In (1/8" monaural mini-jack, Maximum input level: 20V)
Sync Out (1/8" monaural mini-jack, Maximum output level: 5V)
MIDI: In

Dimensions
193 x 115 x 46mm

Weight (excluding batteries)
370g

everything worked flawlessly. Also, when you slave one Volca to MIDI clock, you can then clock all other connected Volcas to this master using sync cables and this works great, though if you use one Volca as the master and connect other Volcas, when you press play on the master, be aware the sequencers won't start on the others until you press play on each respective unit.

Modding possibilities

Like the Monotron and Monotribe, the Volcas can be modded and expanded, though this does void your warranty. People are already modding them for MIDI out and CV control, plus you can add individual audio outs for drum sounds on the Beats. However, they're trickier to work on than the Monotron/ Tribe so be careful with that soldering iron! Handily, Korg have again labelled up the key PCB solder points (MIDI out, kick out etc) underlining how in touch they are with their user base.

It's essential (if you use an IOS device) to check out Korg's free SyncKontrol App. Connect a sync cable from the headphone out on your IOS device to the Sync In on your master Volca and you can start/stop the sequencer(s), set tempo or add swing. This last point is important, as there's surprisingly no swing parameter on any of the Volcas, though you can get pseudo-swing with careful use of the stutter controls on the Beats. Also, SyncKontrol's swing is pretty jerky at higher percentages (though it's great for making twisted/broken beats) so I hope an improved app or a 'swing mod' might appear!

Performance notes

Inputting notes and beats into the sequencers on the Volcas is done via

Volca Bass

Volca Bass features three VCOs, (detuneable with saw/square waves) and is reminiscent of a TB303 but it's more flexible and cheaper!

The three-track sequencer can record up to three unison bass/ lead lines, one-finger chord stacks built from three mono parts (no three-finger chords like the Keys) though it misses the Keys' metronome. There are oscillator groups for controlling one, two or all oscillators at once and the MiniKORG700s filter overdrives musically/screams.

Though the 12db/octave filter lacks the super-solid lows of my Moog Minitaur, it still delivers great synth bass. TB303-style slides are possible (and editable) and gate/velocity are accessible via MIDI, though there's no 'accent' feature. The single envelope is punchy and works surprisingly well and once again, sequences can be varied using Active Step mode.

16-step sequencer

Each Volca features a 16-step sequencer, coupled to a ribbon keyboard for programming note data/functions. Use the Sync feature to chain Volcas together without needing MIDI.

the 'multi-touch' keyboards (or via MIDI) and they're surprisingly easy to play accurately in the main (way easier than the Monotron/Tribe). However, to get the best out of a performance/sequence (and particularly when playing chords on the Keys) I advise connecting an external MIDI keyboard. The Keys and Bass (though not the Beats) respond to velocity over MIDI and all the Volcas react reliably to MIDI note input. Each unit can also have its own MIDI channel but there's no multi-timbrality on any Volca.

The Beats and Bass share the same keyboard layout (horizontal) and the Keys has a piano-style layout, though I really wish the Bass had a piano layout too, as it's hard to work out which note is which! Also, in conjunction with the Func button, the keys double as function buttons to access secondary functions and this system works well and is easy to learn. The balance between functionality, ease of use and playability is great on all three Volcas and it's amazing how much has been crammed in for the money.

So how do they sound? In a word – great! You have to keep reminding yourself that these cost just £119 each! Whilst the tiny speaker on each Volca kicks out a surprising punch you realise how serious the Volcas sound once they're plugged into your studio monitors or a big system. The raw tones are up there sonically with synths/machines costing a lot more.

> You realise how serious they sound once they're plugged into your studio monitors or a big system

The one downside here is that the Volcas have quite low-level outputs (particularly the Beats) and you often need to jack your mixer gains to get them loud enough. This tends to magnify background noise in the circuitry, so you need to be careful with your gain staging.

This aside, the lows on the Beats are beefy, the highs on the Keys are upfront/raw and sizzly and the Bass squeals but can do cleaner/smooth too. There's also a lot of crossover between the Keys and Bass – the Bass can do one finger poly-chord stacks and the Keys can also do chunky bass!

All things considered, Korg have done themselves proud and they've set a new benchmark for sound/features at this price point. I can even see the Volcas eating into the sales of more expensive synths.

Three of a kind

Each Volca has something unique to offer sonically/feature-wise. The sequencers feel tight and they are perfect for one-man shows, for introducing kids to the fun of production (my daughter went crazy for them!), for live instrumentalists/vocalists wanting backing machines/analogue sound modules and for producers that are tight on space but want quality analogue drums, bass and keys without breaking the bank.

I dig them all equally, though the Keys really packs a lot in and it's very versatile. The modding possibilities are a real bonus and Korg also mentioned to me that they're prototyping a combined case/stand to hold all three. Of course at this meagre price there are compromises including no standard MIDI out, no combined/included PSU(s), no audio in, no swing, no way to copy tracks, no pattern chain and no way on the Volca Bass to automate filter cutoff/resonance (though Cutoff EG Init works). Regardless, I'm really digging Korg's direction right now and I hope it inspires the other big manufacturers to step their games up and get back in touch with what their customers want. These are deservedly going to sell by the boatload and I can only imagine excitedly what Korg have in store around the corner. FM

Volca Keys

Volca Keys uses saw/square waves and excels at upfront three-note chords, dirty lead/bass lines, ring modulated sounds and detuned unisons. It also features octave/fifth mono modes, a versatile tempo-syncable analogue-style delay that does reverbs/bit-crushing (from the Monotron Delay) freeform unquantised flux recording and 1/1, ½ and ¼ tempo modes.

The sound is less raw than the Bass (though still drives when pushed) and it can produce killer basses too. Once again, it uses the MiniKORG700s filter (voiced differently to the Bass) and there's a single ADSR envelope.

The biggest downside is that when sequencing chords, you can't edit the individual notes in the chord as the sequencer only has one track and as there's no step edit – on the fly erasing is your only option if you mess up.

FutureMusic VERDICT

BUILD
VALUE
EASE OF USE
VERSATILITY
RESULTS

The Volcas are revolutionary at this price point. Everyone should own all three!

SPECS: KEYS

Multi-touch Keyboard
Analogue synthesis with 3-note poly
3VCO, 1VCF, 1VCA, 1LFO, 1EG
VCO: Octave, Ring Modulation, Detune, Portamento, EG Intensity
VCO Waves: Sawtooth, Square
VCF: Cutoff, Peak, EG Intensity
VCF Type: Low Pass Filter, 12 dB/oct
LFO: Rate, Pitch Int, Cutoff Int, Wave (Sawtooth, Triangle, Square)
EG: Attack, Decay/Release, Sustain

Effects
Delay: Time, Feedback, Tempo Sync

Sequencer
Parts: 1, **Steps:** 16, **Patterns:** 8

Dimensions
193 x 115 x 46mm

Weight (excluding batteries)
377g

ALTERNATIVES

SymetriColour Step Sister
£82
Battery powered dirty analogue synth kit designed in Boston, UK. Has a sequencer with up to ten steps, CV/gate outs, mono/stereo outs and a lowpass filter with A/R envelope.
www.etsy.com/shop/SymetriColour

Korg Monotribe
£129
The precursor to the Volca range and still sounds great. Features a small ribbon keyboard, LFO, MS20 filter, a single VCO synth, analogue drums, Active Step and Flux modes.
www.korg.co.uk

MFB 522e
280 euros
16-step analogue drum machine with nine sounds. Has plenty of tone shaping possibilities, plus clock sync and shuffle (swing). It can also hold 72 patterns and eight songs.
www.mfberlin.de