



ON THE DVD

WHAT IS IT?

A versatile, three-octave synth that specializes in vocoding, complete with microphone

CONTACT

Who: Korg
Tel: +44 (0)1908 857101
Web: korg3.co.uk

HIGHLIGHTS

- 1 Loads of synth algorithms and dirty waveshaping
- 2 Three Kaoss Pads'-worth of effects
- 3 Gooseneck microphone

Korg R3 | £499

Cross the Radias with the MicroKorg and what do you get? *Marc '01'* gets his lips round Korg's hybrid vocoder-synth

Around two years ago, just when it looked like hardware synths were a dying breed, Korg bucked the trend and scored a major hit through their diminutive MicroKorg. It wasn't big, it wasn't too clever but it was a *bundle* of instant fun that had just enough going for it to charm its way into everyone's live set-up.

The R3 is designed on similar principles but ups the game considerably. For starters the synth engine is identical to the top-line Radias model and that equates to a massive range of sounds from classic to experimental.

The three-octave keyboard gives it a bit more room for the players, naturally they're full-sized keys and there's enough space to play solos and

hold down chord beds – perfect for exploring the power of its 16-band vocoder. Depending on where your interests lie, the vocoder could be a major reason to get this. Bearing in mind that the excellent Radias synth engine is supplying an endless flow of carrier waves, add the convenience of the built-in goose neck microphone and it all makes for a very useful bit of kit for stage, and a sonically excellent choice for the studio.

Another of the Radias engine's highlights is the way it combines sample recording with the vocoder in the process dubbed 'Formant Motion'. This allows the user to record (or load via the editor) a sound or voice into the R3, which is used as the modulator waveform for the vocoder. It's a cute little process, and surprising

Microphone

Following in the footsteps of the VC-10 vocoder, this gooseneck mic is included as standard

Rotary selector

This dial jumps through menu pages a lot faster than arrow keys ever could

Back-lit buttons

Choose presets and edit parameters with the back-lit rubber keys: gentle on the fingers and easy on the peepers

that no-one had thought of it before the Radias. This works much like using a sample as one of the oscillators, so the sample re-starts each time a key is played. Recording is a simple, one-touch process; up to 7.5 seconds can be captured for each motion and 16 sets of recordings can be stored on the machine.

Loading waveforms via the editor is a very viable option and opens up the opportunity to experiment with all kinds of fresh material so it's not just vocals that get the robot treatment.

The editor also comes in handy for sending recordings back to the computer where they can be trimmed, cropped and generally mashed to perfection before transporting them back to the R3 for more mischief.

All hands on deck

Looking at the layout, it's not exactly cramped with knobs and buttons. The left hand side has the pitch and modulation wheels, as well as the controls for adjusting the levels for the mic and the audio inputs on the rear.

The larger dial in the centre is used for selecting the patch categories, while the back-lit buttons select individual patches. The total number

16 bands in a box

The R3's 16-band vocoder is more than up to the job for emulating some of the most classic moments in music. When you listen back to things like *Autobahn* by Kraftwerk,

aside from the simplicity of the phasing saw wave, you can't help but wish that they'd have used the vocoder on all their vocals, because – let's face it – their singing is krap.

Half of the eight vocoder presets are set out to emulate the all-time faves such as Laurie Anderson's *O Superman*, ELO's *Sweet Talkin' Woman* and of course, the Cylons. The other half are dedicated to showing how far vocoding has come since its golden age, while the bank of formant presets extend them further still.

It's easy to grit things up and give a vintage edge with the wave-shaper, while the effects section means that new and futuristic vocoder sounds are just a tweak away.



of presets clocks in at 128, which frankly is a bit skimpy for this century but at least the software editor can help (see the box on page 83).

The five dials on the right are used for most of the programming jobs; one to scroll through the pages and four for editing the associated parameters. Each one has an LCD screen above it –

aka a 'scribble pad' – which displays its current assignment and an LED halo to show its value. It doesn't take long to get accustomed to editing in this way, and I was pleasantly surprised by how fast it was to get around. Aside from the fixed editing controls, four favourite parameters can be assigned to the dials at the top

HARDWARE SPEC

Keyboard:
37 full-size keys, velocity sensitive

Programs:
Two timbres maximum (when using layer, split, or multi)
Eight-voice polyphony (maximum)
128 programs (16 banks x 8 programs)
16 formant motion data sets (7.5 second x 16)

Inputs:
Audio input 1 (with mic/line switch) rear panel quarter-inch phone jack (unbalanced)
Audio input 1 (mic) front panel xlr jack (balanced)
Audio input two quarter-inch phone jack (unbalanced)

Outputs:
l/mono, r quarter-inch phone jacks (unbalanced)
phones quarter-inch phone stereo jack
foot switch assignable [sw], assignable [pedal]

MIDI: In, Out, Thru

USB: Type B

Dimensions
610 x 270 x 76mm

Weight
2.8kg



Dial settings

We like lights, and the LED ring shows the parameters value off nicely

Displays

The LCD displays show the current parameter being edited. There's just enough space to display names without resorting to cryptic abbreviations

Three octave keyboard

The 37 full-size keys make it a top choice for players...

INTERNAL SPEC

Synth engine
two oscillators + noise generator

Oscillator 1 wave: eight types (sawtooth, pulse, triangle, sine, formant, noise, dwgs, audio in), modulation: waveform, cross, unison, vpm

Oscillator 2: four types (sawtooth, square, triangle, sine), modulation: ring, sync, ring+sync

Vocoder: 16-channel vocoder, adjustable level and pan for each channel,

Formant shift function, formant motion function, formant hold function

Effects per timbre: 2-band eq, insert effect (per timbre),

Program: master effect

Arpeggiator six types: up, down, alt1/2, random, trigger, individual step on/off function

Programs 128 programs (16 banks x 8 programs),

Gooseneck microphone, ac adapter (dc 12 v), editor on cd-rom



The supplied editor program lets you get at all the parameters the slick front panel leaves out

level, so that when a patch is loaded they're ready and waiting. This makes a lot of sense; since a sound's character is all about the interaction of certain parameters, I couldn't imagine creating a patch without using this feature and I suppose this is where

having more dials would be much more preferable. If they were placed in the centre of the unit, it would make access a lot easier for left- or right-handed users to tweak, instead of reaching over to the far right every time. The R3 is two-part multi-timbral.

These can be used jointly in one patch or separately where each timbre can be addressed by its own MIDI channel.

A timbre uses two oscillators to form the sound, and Korg have loaded it up with a feast of tasty algorithms to feed our gourmet appetites. If you're

not already familiar with what the Radias can do, then check this lot out as it's much more than a virtual analogue wannabe. Starting

“Four parameters can be assigned to the dials at the top level, so when a patch is loaded they're ready”



Arpeggiator

The arpeggiator can be latched on, leaving both hands free for tweaking

off with the simple pleasures of subtractive synthesis, we get a full compliment of essential analogue waveforms. Pulse-width modulation is available on the Square wave, but bizarrely this feature disappears when Unison mode is engaged. What are they saying with this? You can only have a fat detuned square if it's

symmetrical? Following on, the Formant oscillator is an excellent choice for abstract vocal tones, and it can be modulated between three selectable vowel positions for Delay Lama-style singing.

The DWGS mode contains 48 sampled waveforms which cover the digital spectrum. These can come in

handy for organ, electric pianos, attack portions on acoustic emulations and so on, but can also be twisted into more deviant activities in the wrong hands.

Your next choice is Cross modulation. This dials up some hot and crunchy analogue FM interplay between the two oscillators – something I never get bored of, so full marks for that one.

Lastly, VPM (Variable Phase Modulation) is Korg's simple but effective method for achieving basic DX style overtones. It uses its own sine wave generator and produces credible digital tones including crystal-clear vibes and tight, weighty basses with considerable grunt.

The good and great

The top three things the R3 brings to the sound modulating table...



> The vocoder is a huge step up from that found on the MicroKorg. The 16 bands give it more detail and definition while the Formant Shift parameter can transform mundane voices into extra-terrestrial life forms.

> **Wave-shaping is one of the R3's secret weapons. If any patch sounds a bit too clean or digital then its time to grunge it up with one of the 12 on offer. It's not just dirt though: if your sound needs a bit of punch or thickness, the sub oscillators will be more than happy to oblige.**



> The R3's onboard effects are so inspiring that it would be a crime if we couldn't share them around the studio. Any signal (mono or stereo) can be sent to the R3's arsenal of internal effects for sonic annihilation.

Episode two

Oscillator Two is a different story. It only offers straight up analogue style waveforms, but makes up for it by dishing out ring modulation and sync by the bucket load.

Flexibility is the name of the game for the filter section, with two sections and a full choice of routes to follow. Filter one boasts a powerful multi-mode array of low, high, band and thru. A mix control is used to smoothly blend between the types, so it's possible to continually sweep between them or blend adjacent types together for interesting effects.

The second filter might not have the blend option but it does have the rather special Comb filter – orthodox sound designers tend to use it for plucked string effects. If you unleash its full power and combine it with one of the many excellent wave-shaping FX, it'll smack you in the face with metallic fury – pure joy for the noise



USB port

Connect the R3 to your computer and take advantage of the software librarian for editing and storing an unlimited amount of patches. The USB also doubles as a MIDI port for sequencing data

