

# SPECTRASONICS OMNISPHERE



This virtual instrument lifts the plug-in synth concept onto a whole new plane.

**Text:** Brad Watts

▶ Eric Persing is without doubt one of the world's most eminent sound designers. Since 1984 he's been the chief sound designer for the Roland Corporation, responsible for preset sounds in seminal Roland synths such as the MKS80 and JX8P, the S-series samplers and, later, the D50 and JD-800. He's the guy who brought the patch 'Soundtrack' to pretty much every Roland synth released with a digital oscillator and memories.

These days he still holds a position with Roland as a consultant, polishing patches done by the international sound design team before patch lists are finalised. In short, the man is a sound designing monster, so much so that in 1994 he commenced his own sample CD business, Spectrasonics. One of the earlier Spectrasonics titles, *Distorted Reality*, is touted as being the highest selling sample CD in the history of the medium – not that charts are kept of such sales. Since then Spectrasonics has released a further 25 brilliant sample collections, with more recent libraries being compiled and integrated into virtual instrument plug-ins. Titles such as *Stylus*, *Atmosphere* and *Trilogy* have become staples for countless musicians the world over.

So adding to this already popular stable of sample playback instruments is the eagerly awaited Omnisphere. This impressive instrument replaces the pad-centric *Atmosphere*, and owners of the now defunct *Atmosphere* will be granted a hefty discount to upgrade. Further discounts are available to owners of all three older instruments (*Atmosphere*, *Stylus RMX* and *Trilogy*). Straight off the shelf, Omnisphere will set you back \$699, which isn't exactly cheap, but when you have even a fleeting listen to some of the patches you'll realise where the money is going. There's enough raw material and inspiration – 42GB in fact – to keep you busy for the next 50 or so soundtracks, advertisements or musical excursions. That's approximately 10 times the size of the library used for *Atmosphere*.

Behind this huge library is Spectrasonics' proprietary playback file streaming and synthesis system, STEAM. In the past, Spectrasonics has relied upon the licensed 'UVI' engine (RAM-based only). According to Spectrasonics, instruments built with the STEAM Engine not only include a variety of sample playback and synthesis capabilities, but can also readily respond to changes in operating systems and other developments in the host computer platforms. For example, should 64-bit operating

systems take over, the company's programmers can make amendments to the software quickly.

## THE INSTALLISPHERE

But first things first, a word on the installation of Omnisphere. With 42GB of data to load onto your hard drive, new owners will have to make certain they've got time to devote to the installation procedure. Installing on my MacBook took the best part of *five hours*. The installation isn't difficult, however, and Spectrasonics provides movie files that outline the procedure for extra clarity. These movies pay plenty of attention to installation of the library files to a hard drive *other* than your main system drive – an advisable approach for such a massive library. For both PPC and Intel Macs, the minimum system requirements are at least a 2GHz processor and 2GB of RAM, where Omnisphere will run as an AU, VST or RTAS plug-in in OSX 10.4.9 and above. Windows machines meanwhile require at least a 3GHz processor, Microsoft XP SP2 or Vista, and here Omnisphere conforms to VST and RTAS plug-in standards. You'll also require a dual layer compatible DVD reader to read the six dual-layer DVDs.

I didn't have any hiccups whatsoever installing on the MacBook using OSX 10.5.5. Authorisation is simple enough and uses an online challenge and response method – there's also means for authorising machines that aren't handcuffed to the internet. Spectrasonics is quite particular about its licensing stipulations, but allows the use of the samples in any performed or broadcast work, as long as it's a composition by the licensee of the software. Equally as forgiving is the clearance to install Omnisphere on both your desktop and laptop machine, just so long as you are the licensee using both computers. What isn't allowed, however, is the leasing of the software – so if you're a studio owner you can't lease it to clients for use in their mixes. So, with those legalities out of the way, let's dive into some of the features of Omnisphere. I say 'some' as Omnisphere is an extremely powerful set of synthesis tools and it'd take many more than the pages set aside for this review to cover them all. Thankfully Spectrasonics is in the business of harnessing such power, and the instrument is astoundingly easy to use.

## VISUALISE THIS

When you first open Omnisphere you're faced with the Omnisphere Visualizer. This is merely a visual effect and one that is in some ways superfluous, but would perhaps come in handy for brightening up your 'live' laptop performances. The Visualizer provides a moving display of Omnisphere's audio as either an oscilloscope or a spectrum analyser, offering a few controls over the image such as decay rate and display colour. It's cute, but not something I'd like wasting precious processing cycles on – one would assume keeping the plug-in window closed would negate the Visualizer's processing drain.

## FEELING LUCKY?

So let's have a look at the Omnisphere multi hierarchy. The actual synthesis engine is brimming with possibilities, so take a breath and I'll outline the basic structure of a multi. Here goes: Initially there's the overall part edit area where you can set two basis waveforms for each part, along with overall filter and resonance controls. Panning, tuning temperament, octave placement, velocity curve options, bend range and on/off buttons for legato, glide and the arpeggiator are all accessed from this main or 'common' edit page. Each part then combines two layers that can use either sampled waveforms as oscillators, or synth-style oscillators generated by the STEAM engine. Using the 'Harmonia' mode, for example, more synthesis oscillators can be called into play. Each of the two layers can use up to six LFO and six ADSR envelopes as modulation sources. Then there are 38 different filters for each layer with various permutations as to the filter topology. Each part can also run its own arpeggiator pattern and run up to 12 effects processors. Remember these attributes apply to a single 'part' of an Omnisphere multi or sound – and a multi

Just one of eight parts possible within a Multi.

A playback button triggers test sequences for auditioning sounds.

Synthesis or choose from the 42GB of sampled waveforms.

If six LFOs aren't enough for you then maybe start designing your own virtual instruments.



Selection of Multi setups.

Selections of patches that combine two layers of synthesis.

Two layers for every part.

The small magnifying glass icons zoom into more detailed parameters.

There's a wealth of synthesis methodologies available.

can contain up to *eight* of these parts (should your computer have the processing to execute such a patch)! The final multi can then be mixed and effected via a further five effects racks with four processors each. Add all this together and you're looking at some extremely complex sound design possibilities. The only trick I think Spectrasonics has missed is a complete randomise function.

As for the styles of synthesis available, you can choose between (or of course combine) variable wave shaping, granular synthesis, timbre shifting, FM, polyphonic ring modulation, high-resolution streaming sample playback, a (unique to Omnisphere) 'Harmonia' synthesis section, the dual multimode filter structure, 'Chaos Envelopes', a quite sophisticated unison mode, and a very versatile modulation routing system dubbed Flex-Mod... and that really is just scratching the surface. All edit windows are very straightforward and you'll find editing a sound very easy indeed.

Upon first inspection I was a little underwhelmed by the editing options of the Omnisphere synth, that was until I read portions of the manual and realised the interface is littered with small 'zoom' icons. Clicking on one of these will open up a wealth of extended editing parameters for each editing section. This is where I honestly became dazzled with the possibilities of Omnisphere. One such area of bedazzlement was discovering the deeper levels of the envelope editing page.

Undocumented in the reference guide, but darn cool to say the least, is the 'Chaos' button in the envelope editing page. Hitting this will create a randomised envelope shape for whichever of the six envelopes you're editing. (Probably not the best idea for the amplitude or filter envelope, but positively awesome for the four modulation envelopes.) These are simply brilliant, and can be synced to carry out their movements over a note, to continue over notes in a legato fashion, or sync over the entire song length – really neat.

The modulation matrix is equally staggering, with 28 modulation sources and 91 possible destinations, including modulation of effect parameters. Each layer of a program allows up to 24 different modulation settings – bear in mind, however, that going to town on a multi and instigating this many modulation paths will seriously chew up processing power.

### ARPEGGIATE AKIMBO

One trick Spectrasonics missed on the modulation front is using the arpeggiator as a mod-source. That may seem like a foolish statement, until you see what the arpeggiator is capable of. Unlike the typical up and down and multiple octave arpeggiator of yore, Omnisphere's arp section is more like a programmable step

sequencer that adapts to the notes you're playing. Arpeggiations can contain up to 32 steps with overall variance of note length and variance of individual note velocities. Velocity response can also be articulated via a slider between the actual key velocity and the velocities set within the arpeggiator 'sequencer'. Arpeggiations may also have swing added, or be 'trained' to take on the timing of a MIDI file – even to the degree where a MIDI pattern from Spectrasonics' Stylus beats player can be dragged and dropped into the Omnisphere interface to force the arpeggiator to follow Stylus perfectly – another slider will adjust the strength or 'pull' of the MIDI file's affect over the arpeggiator sequence. It's very powerful, and like the rest of Omnisphere's operation, very intuitive. Can we please have this included as a modulation source in the next update Mr Persing? After a bit of a play I got velocity information affecting parameters as a mod source – Spectrasonics assures me note modulation is possible but I'm yet to find the correct routing.

### NOISY

So what's all the noise about? Why has there been such hype around the release of this instrument? Well, quite frankly, the sounds are incredible. With a 42GB library of material to draw upon, including revamps of the original Atmosphere library, you can imagine the wealth of sonic matter at Omnisphere's disposal. Head to the Spectrasonics website to check out some of the absolutely insane lengths the development team went to when creating this library. Believe it or not, some of the samples include the sound of a lightbulb filament arcing up, Tibetan 'singing bowls' sampled with multidirectional and spinning microphones, and just to combine madness with utter pyromania, sampling an upright piano as it's burned with a blowtorch. For some reason – no doubt an equally maniacal brainstorm from the marketing arm of the company – Spectrasonics has named this approach to sound design and collection, "psychoacoustic sampling," which doesn't really make sense. Sure there are some very obscure samples in the library, but it really is just sampling, however esoteric you decide to get with microphone techniques and sound redesign. But I digress. Regardless of the marketing lingo, the sounds are stunning.

No composer should be without Omnisphere for any type of film scoring or TVC soundtrack creation. It's also a must-hear for anyone looking for some of the most over-the-top synthesis possibilities or a crazy set of waveforms to work with. It's really quite an amazing virtual instrument. All it needs is the aforementioned arpeggiator as a modulation source and possibly the ability to import your own sampled waveforms. ■



### NEED TO KNOW

**Price**  
\$699

**Contact**  
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**Pros**  
Fabulously cutting-edge sound library.  
Equally as cutting-edge synthesis options.  
Easy to use.

**Cons**  
Not exactly cheap.

**Summary**  
This virtual instrument is a phenomenon. Like the trio of Stylus, Atmosphere and Trilogy, Omnisphere will become a staple of composers, with enough raw sonic material and synthesis trickery to pique your interest for years to come.