ADDITIONAL PARAMETERS
Each SEM has a dedicated LFO and additional third oscillator

VELOCITY AND AFTERTOUCH
Easily add velocity dynamics and aftertouch to multiple parameters

REAR VIEW
Use the small icon to reveal additional parameters for each SEM

LEVEL AND PAN
Set these for each individual SEM

SEMs
Edit the core oscillator settings for each of the eight synth expander modules

ZOOM
Use this button for a focused view of the front and rear of a single selected SEM

GLOBAL EDIT
Choose from Group or Offset modes to assist with editing multiple SEMs

MIDI SEQUENCER
Click this icon to open the sequencer view

PLAYBACK MODE
Choose whether each new note starts on the same SEM or moves to the next SEM

PRESETS
Load the default preset or open the browser to access 600 factory presets

SEQUENCER
Activate the sequencer with its main on/off switch

GForce Software
OB-E £149.99 MAC

We love a good vintage synth emulation, but does this latest offering from GForce honour an Oberheim synth classic? OB one way to find out

> Back in the day and before polysynths became a thing, Oberheim upscaled their SEM (Synthesizer Expander Module) monosynth into a number of multi module designs. The most ambitious (EVS-1) used eight SEMs and was better known as the 8-Voice. This delivered 8-note polyphony where each voice was basically a different synth and could therefore create rich polytonal sounds. But things moved on and Oberheim developed a synth (the OB-X) that achieved polyphony in a more efficient fashion. Thankfully software developer (and proud 8-Voice owner) GForce has finally got round to emulating this complex synth – no mean feat – and OB-E is now available for Mac OS X (AU, VST, AAX, standalone).

Nitty Gritty
OB-E is arranged with all eight SEMs and their outputs and pans simultaneously visible. SEMs are also grouped for the Split keyboard mode – Lower (SEMs 1 to 4) and Upper (SEMs 5 to 8). The bottom section of the window includes the preset browser, global controls such as playback mode, Portamento, Vibrato and global editing

"GForce has finally got round to emulating this complex synth – no mean feat"

options. On the lower right is a 49-key keyboard and the corner icon switches this to show the MIDI Sequencer and Stereo Delay. SEMs also have more parameters on a Rear Panel view and can be flipped individually or collectively. A Zoom option places one SEM – front and rear views – across the whole SEM section. There are no further hidden panels, which is great, but the interface is quite busy. Thankfully, the window can be accurately resized to work best with your screen resolution.

Sound Generation
Each SEM has two main oscillators (VCO1 and 2) with either sawtooth or pulse (with adjustable pulse width) and two ADS envelopes. A third oscillator (VCO3) adds sawtooth, sine or square wave shapes and can be used for audio (as a sub oscillator for example) or as another syncable

OB-E's two sequencer modes combine hardware feel with software features

"What we're really interested in is how those eight SEMs work together"

LFO using either its wave shape or pink noise. Meanwhile the main syncable LFO (LFO1) has six shapes (including noise) and adjustable onset delay. VCOs 1 and 2 can choose from three hardwired modulators (envelope, LFO1 and VCO3) and these can modulate either pitch or pulse width (if used). Each SEM also has dedicated controls to assign velocity to up to 11 parameters and aftertouch to up to five parameters. For ease of use, target controls are colour coded and it's good to see plenty of aftertouch assignments in the presets.

The 12dB/octave filter is based on both GForce's 8-Voice filter and a modern reissue SEM. In addition to cutoff, resonance and modulation (ENV2, VCO3 and LFO1) you have a knob to adjust smoothly between low-pass, notch and high-pass. A further switch selects a dedicated band-pass mode. At the bottom you balance the VCO levels into the filter.

Massive

Conjuring some rich fuzziness from one of OB-E's SEMs is pretty easy. But what we're really interested in is how those eight SEMs work together. To GForce's credit, OB-E is still very much led by the original 8-note polyphony limit, but you have a variety of ways to use it. First up, successive notes can either Reset or move through (Continuous) the SEMs, and this ties in with the chosen playback mode (Mono, Poly or Legato). So, in Poly mode with Cont selected each time you play a three-note chord it shifts three SEMs along. Unison mode, much like the original 8-Voice unison, plays all SEMs together and on OB-E, one MIDI note puts 24 oscillators at your disposal, so you can build massive chords across the eight SEMs. Finally, Split mode adds an adjustable key split with four SEMs per split.

The massive sonic potential could require quite a bit of knob twiddling, but thankfully you have many efficiencies including SEM-specific copy, paste, solo, mute, save and load as well as global editing (Group and Offset). All this makes OB-E easy to program.

Combine the SEM zoom and the global edit options to make editing all 8 SEMs quick and clear

Double Feature

OB-E's MIDI Sequencer is inspired by Oberheim's original add-on eight-step sequencer module (MS-1) and to be true to the original, OB-E's SEM 8 Output mode uses the eighth SEM for your sequence, leaving the remaining SEMs to play live. However, far more interesting is All mode, which, if used in conjunction with the Cont playback setting, activates all eight SEMs in order, one-SEM-per-sequence step.

Whichever Output mode you use, each sequence step has a dedicated Gate and Velocity setting, and there are five overall sequence styles (Modes) including a chord option. There are a few ways to input sequence notes, including manually and via MIDI. You can also control the sequence starting pitch using a DAW MIDI part or drag the MIDI for the sequence from OB-E back into your DAW. Further overall sequence options include Swing, Rate, Octave, number of Steps, Start step and Start SEM. Finally, the Rhythm knob selects one of 14 presets (these affect the Velocity and Swing settings). So still very much a programmable analogue-style sequencer, but one designed to showcase the eight-SEM design. If we have one gripe, it's simply that you can't zoom the sequencer window.

OB-E has dedicated Mono and Poly starter patches, but for a quick fix head straight for the 600 categorised factory presets. The Alpha Patches showcase 30 of the best presets and beyond this, basic folders (Bass and Effects) give way to type-driven categories (Mono, Poly Pad, Sequence Poly, Unison Chord and so on). Among these, OB-E delivers characterful basses, great mono leads and honest, straight-up pads. However, we are fundamentally drawn to the big track-filling patches, as these are what set OB-E apart from other synths. From the Unison folders, many patches deliver harmonically rich sounds from the Holdsworth-like Epiphany with Inversion 01 to the portamento beauty of Ice Cold From Alex 01. For sheer fatness, Unison Sync is hard to beat and there are also some great splits (Triumphant Unison Split).

GForce have always developed software versions of the synths they like and, in that respect, OB-E is no exception. However, the 8-Voice is itself a truly exceptional synth and OB-E a particularly good emulation that not only does justice to the original sound but also enhances it in ways that are both useful and sympathetic to the original. We would love to see a PC version, but it's full marks from us nonetheless. **cm**

Alternatively

Arturia SEM V2
€149
Arturia's SEM-inspired synth includes an 8-voice programmer to help emulate the multi voice sound

Brainworx bx_oberhausen
cm271 / 8/10 / $249
TMT modelling, 32-note polyphony and a powerful unison mode deliver great sonic flexibility

Verdict

For	Faithful emulation
	All eight SEMs on one screen
	Sounds amazing particularly in Unison
	Enhanced yet retro-style sequencer
	Resizable window/SEM zoom options
	Excellent set of 600 factory presets

Against	No PC version as yet

An impressive emulation: sounds awesome and enhances the original design with fantastic features and efficiencies

10/10