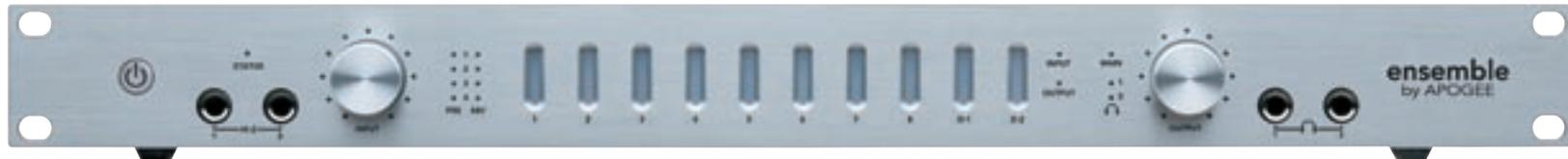# Apogee Ensemble

The multichannel audio interface must balance the importance of convertor quality, preamp quality, I-O numbers and DAW integration against cost. JON THORNTON says this box boasts a collection of functions from a company that has been previously best known for predominantly one thing.

FOR ANY COMPANY designing or manufacturing audio peripherals for DAWs, the current Holy Grail must surely be to make the ultimate multichannel audio interface. It's a path that many have trodden, some more successfully than others, but along the way most efforts to date have been dogged by the 'C' word — compromise.

It's understandable really — there is a price point that the consumer will stand, so what is most important? The quality of the convertors? Should it have microphone preamplifiers or not, and if so how good can they be? How many inputs and outputs should it have? How much monitoring flexibility? And how about ease of use and integration with popular DAWs? Enter Apogee, who until this point has been largely comfortable staying in the domain of doing one of these things (convertors) very well.

The Ensemble (UK£1195 + VAT) sums itself up by name alone — it's Apogee's attempt to try and do all of the above with as little compromise as possible. A multichannel audio interface using FireWire 400 to communicate with the host computer, it is currently available for use with Macs only. This goes some way to explaining the styling, which takes some obvious cues from the current Mac G5 and Mac Pro ranges with its aluminium finish and use of pure white LEDs.

OK — let me get this off my chest straight way — this unit is scarily bright when you turn it on and the plethora of blue and ultra-bright white LEDS go through their start-up routine. It might look cool at first, but it does get almost distracting after a while.

That said, let's look at what you get starting with the rear panel. Four microphone level inputs are provided, the first two with balanced analogue insert points on separate TRS jacks (post gain but pre A-D conversion). Microphone inputs 3 and 4 have a TRS jack connector next to them for high impedance sources — plugging anything in overrides the XLR connector. Two additional high impedance inputs on the front panel actually do the same thing to the first two microphone inputs — useful if the unit is racked and you need a quick DI. In fact referring to these first four inputs as microphone level is a little misleading, as they can easily be switched in software to operate at balanced line level as well. Another four balanced analogue inputs (line level only) appear on individual TRS jacks, as do the system's eight analogue outputs.

Digital I-O is catered for by a stereo SPDIF I-O and an optical I-O on Toslink connector, which can carry SPDIF, ADAT or SMUX format digital I-O — the last of these sacrificing channel count for higher sample rates. Word clock in and out on BNC with switchable

termination completes the back panel line-up; not bad for a 1U and all inputs and outputs are simultaneously and separately available.

The front panel is comparatively minimalist. The two additional high impedance inputs mentioned earlier are topped by a tiny status LED that shows valid clock source and FireWire communication. A large rotary encoder, surrounded by pin-point white LED tallies, is used to provide gain control for the eight analogue inputs. Pressing the encoder cycles through the inputs, indicated by a set of eight LEDs, while turning it sets the gain level. A set of small blue and red LED bargraphs show signal level on the analogue inputs or outputs, while two further bargraphs show signal present on any channel of the SPDIF or Toslink digital interfaces. Another rotary encoder sets output levels and can control the main outputs of the device or either of the two headphone outputs that appear on the front panel.

If that rather extensive list of functions seems somewhat at odds with the number of controls available, it's because much of the control and set-up of Ensemble is performed in software. Installation of this software (called Maestro, and also capable of controlling other Apogee hardware) is straightforward, and Ensemble will work happily with any audio application that supports Core Audio — no drivers required. In fact, it works rather better with one particular application — Logic Pro — as most of the control options needed for Ensemble are available as a window within Logic itself. This is neat and certainly saves on screen real estate, but the Maestro software is easier to use and navigate in my view, and adds some additional functionality.

Two control panel tabs cover the main settings, which include clock source, digital I-O format for the Toslink connections, and whether the front panel meters are showing input or output. Radio buttons set nominal operating levels for the analogue inputs and outputs (+4 or -10 for the line level inputs and outputs, and an additional microphone level option for the first four analogue inputs). In addition, Apogee's Soft-Limit process can be applied to any of the analogue inputs. The company's patented UV22HR dithering process can also be applied to any stereo audio path (input or output) selected in a pull-down menu. The second tab here allows gain levels to be set for the four mic preamplifiers, together with phantom power selection and polarity reverse for each. In truth it's easier to use the front panel encoder to set gain, although both work inter-dependently. A neat feature is the ability to group together any combination of the four controls so that gain levels can be ganged, even allowing for offsets between grouped controls to be set first.

A mixing and routing page brings up a straightforward grid for inputs and outputs, which allows any physical input to be assigned to the appropriate input designation of the DAW being used, and vice versa for outputs. Input sources can also be directly routed to physical outputs, bypassing the DAW host completely. And a final panel allows any stereo signal source to be assigned to each of the headphone outputs, and allows the format for the main system output to be defined. This can be set to 'None', which means that the eight analogue outputs are simply individual outputs unaffected by the master level control, or to stereo, 5.1 or 7.1, which uses the first two, six or all eight analogue outputs, and enables the overall level of whatever is routed to them to be raised or lowered with the encoder.

This reference to system output also warrants an explanation of the Ensemble's final trump card — the inclusion of an onboard, software-controlled digital mixer that is optimised for low latency. This enables all of the unit's hardware inputs to be mixed together with a pair of outputs from the DAW, before heading to the system's selected main outputs. This certainly helps in combating latency issues when setting up cue mixes for tracking.

It's clear that Apogee has come up with a very flexible and versatile unit — I actually found it hard to think of a feature or function that wasn't available — and if I did think of something I inevitably found that on further investigation it actually had been implemented. But has this flexibility resulted in the dreaded 'C' word? No.

Starting with the convertor quality, the Ensemble is up there with anything in its price range and some dedicated boxes that cost considerably more. Auditioned against Digidesign 888/24 convertors and those on a RADAR 24 and they sounded as detailed and solid as the RADAR, which is saying something. It was a similar story with the mic preamplifiers. Fully expecting it to bug out at this hurdle, recording tests with an acoustic guitar and various recording paths revealed a good amount of headroom and lots of transient detail and mid-range definition. It wasn't quite as good as an external (9098) preamp feeding the Ensemble's line inputs, but a world away from the microphone inputs on a Digi002, and in fact from the 9098 preamp feeding the 002's line input.

Some tiny issues remain. The mixer software is somewhat idiosyncratic in the way it works — it effectively inserts itself between the DAW and the system outputs, but presents itself in a slightly different manner. And a colleague detected a random clicking sound on one of the headphone outputs from time to time when using it but I was never able to replicate this — admittedly on a different CPU. You could also argue that maximum flexibility would be afforded by having all eight analogue inputs capable of being operated at line or mic level.

But these are all relatively minor issues and the reality is that Apogee seems to have got closer than anyone to date to the Quest of a multichannel interface that really can be all things to all men — almost without compromise. ◼

PROS	Highly flexible and versatile routing; good range of I-O options; tight integration with Logic Pro; high quality convertors and mic preamplifiers.
CONS	Mac only; a little bright to look at after a long studio day….
EXTRAS	Apogee has announced a Stand-Alone Mode for Ensemble and with the release of new firmware, users can now operate Ensemble without a FireWire connection to a Mac allowing it to perform as a high-end convertor and mic pre, independent of the computer. Low latency and routing settings need only be configured in Maestro once and Ensemble remembers the settings and all front panel settings, such as mic preamp gain and output levels, are fully functional while in Stand-Alone Mode.