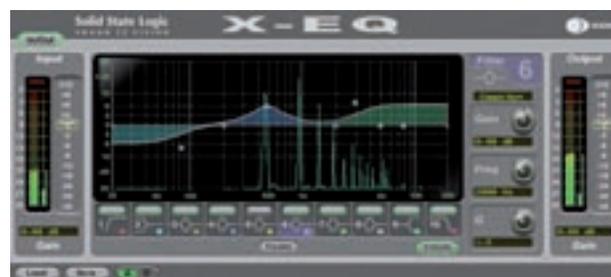


# SSL Duende

Does this unassuming 19-inch rack unit really pack in all the mixing and processing power of a 32-channel SSL? **GEORGE SHILLING** cracks his knuckles and puts it to the test...



**D**UENDE IS A Spanish word, apparently meaning 'a mysterious power that all may feel and no philosophy can explain.' But I'm going to try anyway! SSL's Duende (UK£850.21 + VAT) comes as a 1U rackmount box that houses a board with 40-bit floating point DSP processing engine chips. Despite the manual talking of squeezing the processing into a 1U rack, there is mostly air inside: Duende could easily have fitted into a rather smaller package, but the smart 19-inch format means that most studios can screw it into the bottom of a rack and impress clients. The box is very light, and apart from the DC connector, the rear simply provides a pair of FireWire 400 connectors (which normally make the PSU redundant). Accompanying the unit in the elegantly packaged box is software that installs the accompanying plug-ins onto your computer. These come in Audio Units and VST formats as standard, and the latter are wrapped into RTAS versions using a second installer. Included with the unit are the Channel Strip and Bus Compressor plug-ins: optional add-ons currently comprise Drumstrip and X-EQ, which only demo for a short time unless purchased.



section will be familiar to SSL console users; it's excellent and is switchable Pre-EQ (there is a useful signal flow display at the bottom). Both the Compressor and Expander/Gate work just like the original desk sections, with similar LED indications of gain reduction. It's all thoroughly convincing; more 'digital' sounding than a

4000E/G, but powerful and super-sounding processing for any kind of music. The Bus Compressor is another familiar-looking design, with a lineage going back to the famous Quad Compressor of the 4000-series desks. For sure, there are subtler compressors available, and it may be mainly down to the fact that these were built into desks that they became such a popular tool. But for whatever reason, the SSL Bus Compressor is a familiar and enjoyable sound across a mix. With a mono version also provided, you can try this across anything. The Auto Mode sounds particularly good for drums. Auto is the safest mode for the mix bus, otherwise things can get a bit rubbery or start pumping. Initially I wasn't sure that this sounded quite as instantly gratifying as one built into a big analogue desk, and the enormous meter's needle looked rather flickery, but set up carefully it did the business, gluing the mix together as promised and adding a bit of excitement. All the familiar controls are present: however, the designers missed the trick of Waves' version, which has the AutoFade function bolted on.

Other section of System Preferences. There is nothing to control here, but the page that appears displays DSP slot usage (there are eight slots across four chips), along with driver and firmware versions, and a serial number. One Duende allows you to use 32 mono or 16 stereo plug-ins at up to 48kHz — the four different plug-ins each use one of the 32 memory slots available. Numbers are halved for 88.2/96kHz operation. As with other wrapped/powered plug-ins, these still seem to use some of the host computer's horsepower, although Duende is slightly less taxing than the UAD-1 PCI card, for example.

with the latter's Analogue emulation disabled. Nevertheless, it has a very powerful analogue feel to it, just slightly smoother and sweeter than using an analogue SSL.

Installation is straightforward and quick. I suffered stuttering audio problems that SSL initially ascribed to buffer problems, and a reinstallation seemed to fix it. But when the problem returned, two reinstallations failed to cure it, and it turned out that chaining the box after a DVD writer on the FireWire bus was causing bandwidth choking. There was little indication in the manual that Duende needed to be first or have its own dedicated FireWire bus; perhaps this should have been obvious.

There is an obvious difference between the E and G modes, as expected. The technical differences are well documented: suffice it to say that the G is glassier while the E is more rock 'n' roll. The Dynamics

Drumstrip is the first available add-on plug-in for Duende. It comprises an interesting combination of five processor blocks, each with individual bypass. The processing order can easily be changed at will using the display at the bottom. Adjacent Peak and RMS metering is provided for both input and output, and there is also an unusual 'Dynamic History Meter' that displays the dynamic range covered over the



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last second or so. A Gate provides separate Open and Close thresholds, and Attack can be set super-fast. It works really well, with no nasty clicking, but lacks sidechain EQ or external keying.

The Transient Shaper is similar to the SPL Transient Designer hardware box. No-one seems to have made a plug-in quite as good as that hardware, but SSL has made a brave attempt here. An unusual innovation is the Audition mode, which enables the Amount to be set to catch the peaks required. There's a Speed knob to set the transient decay, and a Gain control to send the required amount of signal to the detector. It does sound really good, adding some nice crunch in 'Inv' mode (to soften the transients and add body) but despite all these extra knobs, and as with Sonnox's fiddly Transient Modulator, the range seems not quite as extensive as that of the SPL, although there's usually plenty enough here to work with.

Separate HF and LF Enhancers are provided, along the lines of Aphex Aural Exciter and Big Bottom processing. These are extremely powerful and surprisingly good, bringing some bottom end to signals that start out with virtually none, and adding strong HF to dull signals, or just a little extra sparkle as required. These use Drive and Amount knobs, plus a Frequency knob for the HF, and a Turnover frequency knob for the LF processor that acts downwards from the selected frequency. Also included is the simple but fabulous Listen Mic Compressor which was available as a VST as the LMC-1, but now features a Wet/Dry knob and an EQ In button. It sounds wonderful across a drum bus — for a subtler effect you can blend with the wet/dry knob, or crank it for the full-on Phil Collins. The EQ In/Out allows a choice of full-range audio or the slightly telephony character of the listen mic circuit.

X-EQ is the second add-on plug-in, a ten-band EQ with a comprehensive selection of variable filter types and bell shapes, developed in collaboration with DSP software house Algorithmix. Its graphic appearance is similar to PSP Neon, but X-EQ lacks the linear phase processing of that particular plug-in, taking a more conventional approach, albeit with some of its own unusual and unique features. With this plug-in SSL has introduced a proprietary file management system for presets. Confusingly, therefore, there are three ways to load and save presets in Pro Tools: using the Pro Tools settings bar at the top, using the VST bar at the bottom, or the SSL Load and Save just above that. However, the SSL system ensures cross-platform compatibility.

This is the only Duende plug-in to come with a library of settings, which SSL claims are based on settings used by 'top mixing engineers'. This is perhaps slightly silly, as surely you adjust EQ by using your ears or even meters, rather than by dialling up presets. As with most good plug-in EQs there is a graph with draggable nodes for each band, along with mouse-controlled adjusters and direct numerical entry of values. However, the graph dragging was less than smooth on my system, making small adjustments tricky. There are High and Low Pass filters with 6-48dB/octave slopes (in 6dB steps) and five different filter types including Butterworth, Gaussian and Bessel. 20dB boost and cut is available for the High and Low Shelf bands, which use the Q control to set overshoot/undershoot.

No less than nine different bell curves are available for the six parametric bands in Serial mode, with various different constant and proportional Q, symmetrical and asymmetrical settings. Parallel mode works like a traditional passive EQ and the sonic

signature is noticeably different, remarkably clean and thoroughly enjoyable, particularly for mastering applications. Helpfully, A and B settings slots allow quick comparisons, while an FFT Spectrum Analyser can be superimposed on the display, enabling easy spotting of problem frequencies. Linear EQ aside, this really has to be just about the most comprehensive EQ plug-in available, and it would surely take months or years to really get to know the sonic implications of all the different curves and modes.

With all the plug-ins there was a problem with the Pro Tools auto delay compensation: when I hit the host's Bypass, everything went audibly out of whack. There is a Bypass within each plug-in, which works fine as long as you know to use it, but it's a nuisance having to either open the window to bypass, or make the plug-in inactive. There was no such problem with Logic's PDC, and SSL says this will be addressed. But apart from such teething troubles, the Duende provides a great source of mix processing. Channel Strip and Bus Compressor provide excellent bread-and-butter SSL processing, while Drumstrip and X-EQ both push into unique territory. It's all very good, and I suspect there is more to come. ■

**PROS** Traditional and modern SSL processing; extra processing horsepower.

**CONS** Uses some host CPU power; A-DC problem in bypass; too much latency to track with; unnecessarily large box.

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