

Focusrite Liquid Mix

It's hard to believe that it's been nearly three years since Focusrite first married the audio alchemy that is Sintefex's dynamic convolution process with its own experience of designing and manufacturing high-end analogue outboard. **JON THORNTON** reports on V2.0 of Liquid Mix.



THE ORIGINAL LIQUID Channel has graced many an equipment rack by virtue of its highly accurate emulations of classic preamplifiers and compressors. It's not at all surprising then that the core technology has filtered down to a much more affordable price-point, and the introduction of Liquid Mix about a year ago was the first indication of this. Now about to be released in version 2.0 form, Liquid Mix has had the benefit of 12 months or so of shakedown time, plus the addition of several new features from existing users' wish-lists.

For those unfamiliar with the unit, it's best to start off with what it isn't, namely it's not a cut down Liquid Channel. Although it uses the same dynamic convolution processing, it does not offer the preamp capabilities of its bigger and more expensive sibling. Instead, as the name implies, it concentrates on mix processing rather than tracking duties, offering emulations of 40 classic compressors and 20 EQ units. These emulations can be accessed by any compatible

DAW as plug-ins (VST, AU and VST in RTAS wrappers means that no one is left out in the cold), with the not inconsiderable DSP overhead taken care of by the unit itself. The basic unit can support compression and EQ on up to 32 channels, and connection to the host CPU is by a single FireWire cable.

This approach to a sort of 'annexed' DSP by serial interface is something that we've seen quite a bit of recently — witness SSL's Duende and the Waves Audio Processing Accelerators. Where Liquid Mix differs is that rather than simply hosting the DSP in an anonymous looking box, it also doubles as a physical control surface for the plug-ins.

Installation is straightforward from a DVD, which installs a small application named Liquid Mix Manager, the various plug-in flavours and, of course, the data for the emulations themselves. Liquid Mix now runs happily on both Mac and PC, and for the purposes of this review I installed and ran it on both Intel and PPC Macs, using Logic 7, Pro Tools 7 (TDM),

Garageband 3 and Cubase LE. I should point out here that the version of the software I was running was a late beta of the Version 2.0 release, with some known issues that should be ironed out before general release (*They have been and V2.0 is now downloadable. Ed*). The hardware unit needs to be connected before installation of the software, and on all of the Macs I used seemed happy to draw its power from the FireWire bus, although an AC adaptor is also included.

Once installed, a Liquid Mix instance is selected on your DAW track of choice — only mono or stereo instances are available as options — which then brings up the plug-in window. In this window you then select which compressor and/or EQ emulations you wish to load for that particular plug-in instance from pull-down menus. As with the Liquid Channel these emulations are somewhat cryptically named, one presumes for copyright reasons, although a handy couple of pages in the user manual list the actual devices that each of the emulations is based on. You do start to remember them soon enough, but without the list you'd be hard pushed to realise that 'Primitive: US Classic Tube 2' is actually a Manley VariMu. Level metering is comprehensive, both in the plug-in window and duplicated on the hardware, with input level, gain reduction, a mid-point meter (level post compressor and gain-makeup but pre EQ section), and a post EQ output level meter provided. An input trim control allows the signal hitting the plug-in to be boosted or attenuated by 20dB, and an output level control gives the same degree of attenuation or boost post the EQ. This is important as some of the emulations can sound markedly different when run hotter or colder in terms of signal level, and I found that getting the gain structure set up appropriately was easier to do on the Liquid Mix than on the Liquid Channel. The processing order can, incidentally, be flipped to make the compressor post EQ if desired. In this case the mid point meter shows level post the EQ output level, and the main output level is post the gain make-up control.

The usual controls appear for the compressor section, although the labelling and step values reflect the settings and values available on the original units they are emulating. The aforementioned VariMu emulation, for example, gives the five release settings that you would find on the original unit, and the Teletronix LA-2A emulation simply gives threshold, compress or limit and gain make-up. If this proves a little too limiting (!) then selecting 'Free' makes the full range of values for all parameters available.

A new feature added in V2 is the ability to assign an EQ in the compressor's sidechain — the choice here is either a low shelf, a band-pass filter with variable Q, or a high pass filter — all of which are straightforward digital implementations rather than convoluted jobs. Hitting the sidechain monitor brings up these options while allowing you to monitor their effect.

Moving on to the EQ section, and the same applies with regard to loading the desired emulation — 20 emulations of desirable devices ranging from E and G series SSL desk EQs, to Pultecs, Manleys and other esoterica. The EQ section has seven possible bands for each Liquid Mix instance, each with a potential gain, frequency, Q and shape switch, which might select a peaking or shelving response for example. Clearly not all of the emulations will require all seven bands, or indeed all of the parameters that are available on each band, so loading an emulation only fills in the bands and activates the parameters that are required. There is no equivalent to the 'free' function that exists on the compressor section — you get exactly what was on offer on the original unit. What you do get,

however, is the ability to construct hybrid EQ sections by loading as many bands as you want from any of the available emulations up to the maximum of seven bands per instance. So it's quite feasible to build your own dream EQ channel: the filters from an ISA 115; the low and high mids from an E-Series; the HF shelf from a Manley Massive Passive, for example.

And it's fabulous, and EQ fetishists the world over will rejoice assuming, that is, that it sounds any good, which it does. The underlying Liquid technology is well proven and managed to win over the most hardened cynics with the Liquid Channel. You do have to remember though, that its application to EQ is something new; EQ on the Liquid Channel was a completely 'traditional' digital implementation. There is an astonishing sonic variety on offer here in both the EQ and compressors. A quick comparison with some of the emulations and the real things (BSS DPR402, TLA C1, 1073) showed a thoroughly convincing degree of similarity right down to the DPR402's tendency to readily track around the waveform of low frequencies with quick release settings, with the accompanying nastiness. One thing I did notice was that many of the emulations were very sensitive to signal level, and there's very little margin when deliberately running things hot before the sound abruptly switches from gentle harmonic distortion to something that sounds grainy and horrible. It's not a deal breaker, but something that requires care.

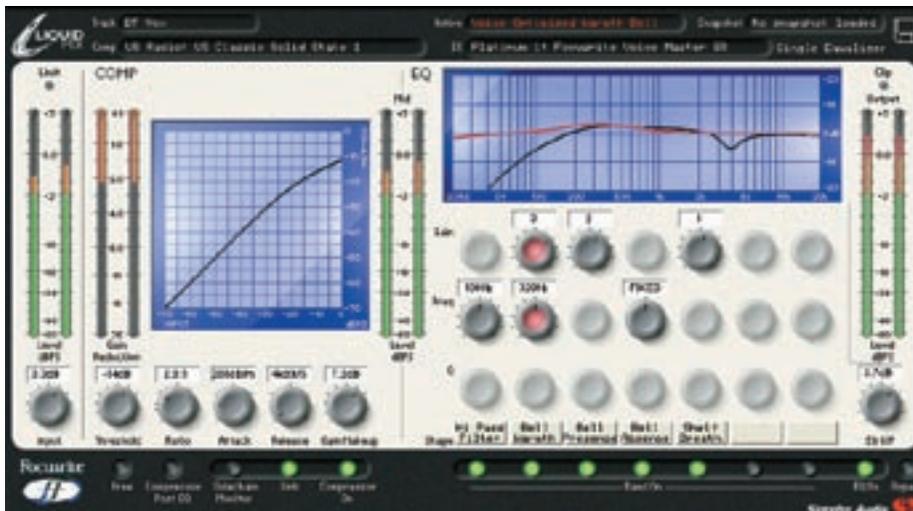
So far, I haven't touched on the hardware user interface at all and this is indicative of the slightly schizophrenic nature of the unit when you first use it. I suspect that most people dive into this unit at first and simply navigate around the plug-in windows on screen. However, the hardware box allows you to perform any function (and I mean any function) on a given instance of Liquid Mix, aided

and this new feature in V2 means that switching between screen and hardware is a lot more seamless.

A knob per function for the compressor side makes operation straightforward, although the EQ setting is more clunky as you have to select the appropriate band before you can adjust frequency, gain, etc. The main drawback of using the controller surface is that the resolution of the encoders is not as fine as that of the plug-in window parameters — they seem to step in increments of around 1dB for gain, and correspondingly large jumps in frequency or time constants. Of course, with some emulations this isn't a problem as they have stepped values anyway but with others you need to go back to the plug-in window for real fine-tuning.

Latency is an issue, of course, although auto delay compensation worked well in TDM Pro Tools systems and Logic. But simply strapping a Liquid Mix instance across all tracks by default would solve the issue in Pro Tools LE systems and as an indication of the value for money here Liquid Mix does handle 32 simultaneous instances of EQ and compression with little or no CPU overhead. However, there is a caveat. Although emulations are provided at sample rates up to 192kHz, running Liquid Mix at anything higher than 48kHz eats into this channel count at an alarming rate. Run at 88.2 or 96kHz and you're down to 8 simultaneous channels; anything higher than that and you're left with only two channels. An optional DSP expansion card is available that ups the channel count to 16 channels at 88.2/96kHz or 8 channels at 176.4/192kHz but disappointingly this doesn't increase the channel count beyond 32 channels at lower sample rates.

Liquid Mix performs well and offers an awful lot of bang for the buck (UK £424+VAT). Users of entirely host-based DAWs would benefit hugely from its DSP capacity at lower sample rates. While at first I just wondered why Focusrite didn't just do away with the hardware user interface and package it as a 'black box', the control surface did grow on me, and after a while became quite liberating when working in the box. For what's on offer it provides astonishing value — the immediate suspicion is that corners have been cut somewhere, particularly when you compare its price point to the Liquid Channel. But when you take into account that it doesn't have (or need) the mass of analogue interfacing permutations of its big brother, or the requirements for ultra-low latency, these reservations start to fade. And when you listen to it, they are gone for good. ■



by 11 rotary encoders, 14 illuminated pushbuttons, 4 LED bargraph meters and a small back-lit LCD screen. I have to admit that at first this just annoyed me, as I found myself faced with a number of plug-in windows on the Mac screen and no instinctive knowledge of which instance I would be adjusting with the hardware and that meant that jumping between screen and hardware was so confusing I just ignored it.

After a while though, and by discovering some additional features, I grew a lot more comfortable with this. A big help is the ability to give a name to a particular plug-in instance in its window. Once this is done, it is reflected on the display of the hardware box. You can then scroll through a list of active instances from the hardware itself to focus on (much easier when it lists things as Bass, Kick, Vox, etc.) and the instance name you are working on is always present on the display. The second feature that helps

is the inclusion of an option to set the hardware to follow the currently active (last clicked on) plug-in window on the DAW



PROS 32 channels of compression and EQ with no CPU overhead; should support nearly all major DAW systems; emulation quality excellent; physical control surface all part of the package; additional emulations can be downloaded as they become available.

CONS Physical control surface takes a little getting used to; expansion card needed for any serious work above 48kHz.

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