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BY PAUL VNUK JR.

New Jersey's Eventide Incorporated is one of the world's premier digital effects companies. Eventide introduced the 1745 Digital Delay Line in 1971, the H910 (possibly the world's first true multi-effects unit including both pitch shifting and delay) in 1975, and the H3000 in 1986—a ubiquitous studio workhorse throughout the next three decades. Today the company is home to the juggernaut that is the H8000FW, arguably the highest end multi-effects device money can buy.

All this history hopefully gives our readers the impression that Eventide understands a thing or two about digital delay! In this review, we're taking a look and listen to the company's latest delay innovation, which is also their first entry into the world of 500 Series modules.

DDL-500

The DDL-500 is a single-slot 500 Series box that will be at home in any compliant API-style 500 Series enclosure. For this review I tried it in API's own 8-Slot Lunchbox (reviewed in

In default mode the unit offers delay times of 0.11 ms up to 10 seconds. Pressing the Dly Mult button doubles this time to a maximum of 20 seconds, while changing the unit's sample rate to 96 kHz. Holding down said button and turning the encoder increases the multiplier from 2x up to 16x at 12 kHz. You can do the math for all of the in-between sample rates, but know that with each step down the sound degrades and noise is introduced into the signal. Keeping the multiplier between 2x and 5x (20 to 50 seconds) offered little noticeable signal degradation, but beyond that the changes become more and more apparent. Not that it's not usable or even cool, but it gets into lo-fi sound design territory pretty quick!

The DDL-500's delay controls are a curious mixture of old and new. There are the usual suspects of Delay Time, Feedback and Mix, as well as buttons for Feedback Invert and Infinity Repeat, which infinitely loops whatever is currently in the delay signal buffer. There is also a Kill

Eventide DDL-500

The Eventide delay magic—now in 500 Series format

our December 2014 Gift guide), as well as the stalwart Radial Workhorse (reviewed in October 2011), both without issues.

The unit's black brushed aluminum faceplate is jampacked with knobs, encoders, and buttons galore. All of the unit's pots are smooth as silk and all of the latching and momentary buttons are nicely backlit. At the top of the unit is an old school red LED display similar to those found on the earliest Eventide boxes, along with a pair of LED lights for signal and peak indication.

Digital and analog in one box

Eventide's tagline for the DDL-500 is "A Digital Delay Line with an Analog Soul". While all of the delay functions happen in glorious 24-bit/192 kHz digital, the rest of the DDL-500 signal path is pure analog, including the ability to drive the unit into soft saturation prior to the delay chain.

The unit offers 24 dBu input level at an 18 k Ω impedance and an output level of 24 dBu at a 50 Ω impedance. There are controls for Input and Output as well as a +20 dB input boost. There is also a post-delay 12 dB/octave lowpass filter, with sweepable corner frequency from 400 Hz to 20 kHz, that helps add a touch of pillowy vintage rounding to the sound.

As mentioned, all digital processing happens at 24/192. However, the unit has a trick to lengthen delay times while simultaneously reducing the unit's sample rate to a lo-fi 12 kHz. Note this is 12 kHz, not 12 bits—the sample rate changes, but the resolution remains 24-bit at all times. This is done with the Delay Multiplier (Dly Mult) button, which (as it says on the label) multiplies the delay signal by a chosen multiplier.

switch that keeps any delay signal in the feedback path active, but stops incoming signal from entering the delay lines. Both this and the Infinity Repeat are a lot of fun in dub styles and remixes.

Back to the Delay Time: this function is handled by a stepped multi-function semi-rotary encoder. It operates in seconds or milliseconds. Pressing in and turning said knob offers a fast coarse control of this parameter.

You can also set the DDL-500 to beats per minute (BPM) complete with a tap tempo button. You can even select note divisions from Quarter notes all the way to Whole Note Triplets. Both BPM and straight time settings can be done with great precision.

Those two little jacks

At the bottom of front panel are a pair of 1/4" TRS inputs. The first one is an insert, which makes use of a standard Y-Cable (Tip-Send / Ring-Return). Just like on a microphone pre-amp or channel strip, you can add in external processing. This insert is post delay, but pre LPF and feedback.

The second TRS input is a multi-function Remote jack. Using the rotary encoder and alternative button presses enters into System Mode, where you can select what functions this jack will perform and what kind of pedal or input you will use. Some examples would be: a momentary footswitch for tap tempo; a variable VCA-style pedal (like a keyboard volume pedal) which can sweep delay times and delay glide; or an external control voltage signal. CV input lets you connect an external LFO to modulate delay times and sweeps, or you can use a MIDI-to-CV converter to sync the DDL-500 with tempos from your DAW, drum machine, or keyboard.

In use

The big question is, "Can't one do everything the DDL-500 does with a DAW plug-in... *including* those made by Eventide?" The answer is, "Yes... sort of."

Yes, there are hundreds of delay plug-ins but the DDL-500 offers many advantages, first and foremost of which is its utterly amazing sound. The DDL-500 is ultra-clean and pristine, giving an exact 1:1 copy of your source if you wish, but the analog signal path offers a similar intangible "analog air" quality like you get when comparing vintage hardware to equivalent software models.

The second advantage is realtime use. This is a delay that encourages creativity and play like you would with a synth or guitar pedal—manipulating delay times, capturing on-the-fly loops and samples, and more. I used it recently in a live electronica session with live drums and a Moog Voyager synth; it was fun and intuitive to add manipulated delays, warped giddiness, and pull up looped phrases. For my ambient friends, the DDL-500 will do old school, long delay, feedback-controlled looping! Besides that, you'd be hard pressed to find a plug-in delay that offers this amount of maximum delay time, lo-fi or otherwise.

Note that this is a very modern-sounding digital delay with a fast broad throw. Grabbing the delay time knob and manipulating the delay in real time for syrupy, melted effects is great fun, but it's quite dissimilar to older vintage units by DigiTech, Lexicon, and others, where the delay can be manipulated slowly and delicately. On the DDL-500 it's more fast and furious—the sound jumps and wobbles and bubbles... but, interestingly enough, you never get the nasty zipper effect of an overstressed delay line!

Also note that unlike most older rack-mount delays, the DDL-500 lacks its own modulation section. However, as described above, it's easy to add an external LFO from an CV-equipped synth or effects processor.

Conclusions

The only sobering downside to this box is the price. At \$900 street, this is not a cheap stompbox that you can pick up for spare change; it is a serious studio tool made by one of the world's greatest effects companies.

Having said that, the DDL-500 is a fantastic performance-based piece that can add a great special spice to any standard studio setup. You could also take it with you in a lunchbox enclosure for live use. It sounds great and does things that few hardware or software delays on the market do any more, all with a sound that is second to none. ➤

Price: \$899

More from: Eventide, www.eventide.com