

iZotope Ozone 4

New enhancements to a well-liked mastering effects suite

by Devon Brent

Talk about a long wait for an upgrade! Ozone 4 took over five years to come to fruition since Ozone 3's release in November 2003. As iZotope's webpage suggests, "Your mix isn't finished until you put it through Ozone." As a regular user of Ozone 2 and 3 since 2003, I found

this to be a true statement for the last five years. Let's look at what Ozone 4 brings to the table this time around.

What is Ozone 4?

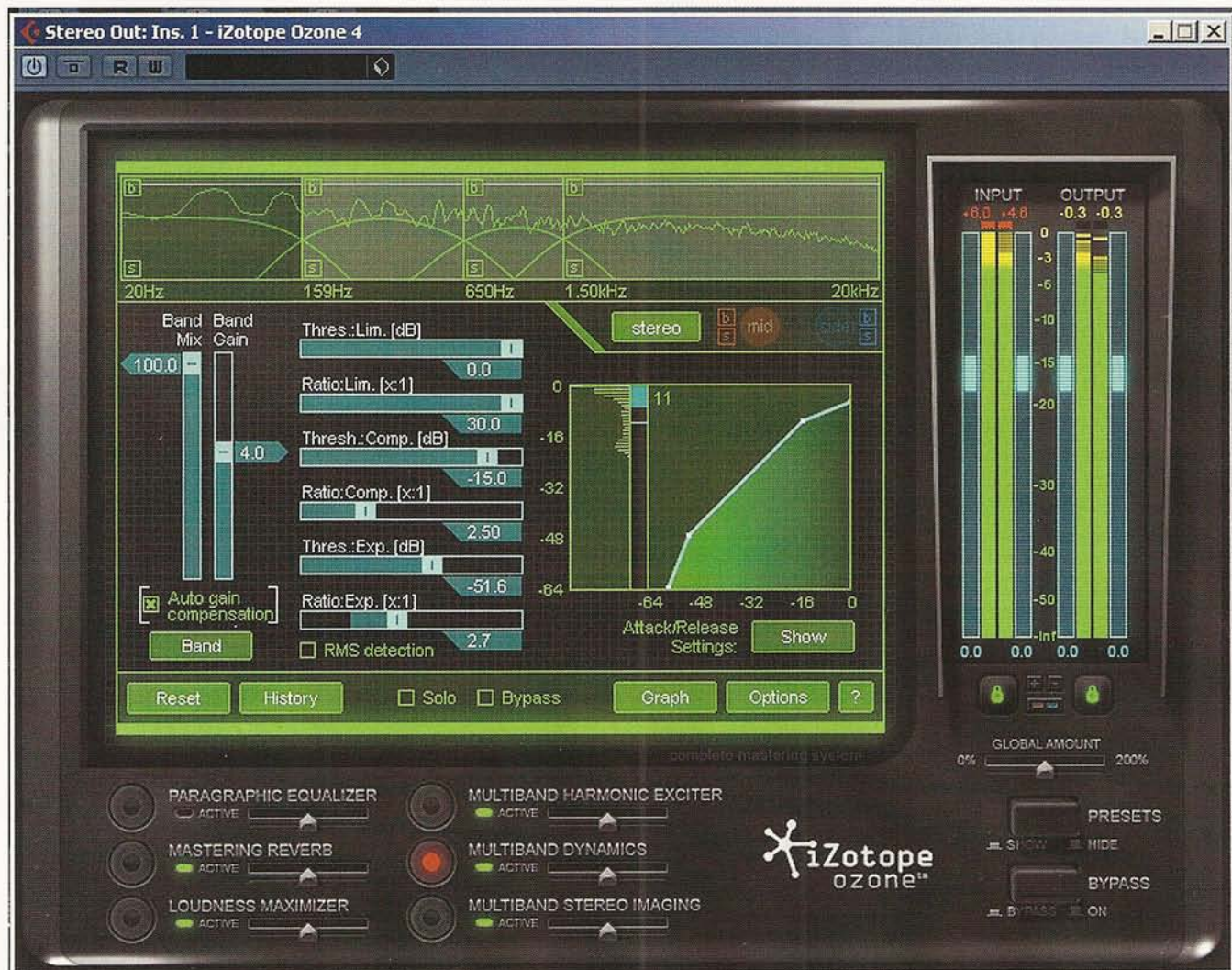
Ozone 4 (O4) is a collection of seven independent 'mastering' effects plug-ins, all accessible via one GUI interface; Paragraphic EQ, Mastering Reverb, Loudness Maximizer, Dither, Multiband Harmonic Exciter, Multiband Dynamics, and Multiband Stereo Imaging. Each plug-in's interface is chosen and activated along the bottom with its controls appearing in the top half of the plug-in. This general workflow theme has been preserved throughout all versions of Ozone, and has worked very well for me.

O4 has too many features to describe fully in this space. I highly

encourage you to read up on iZotope's website and guide to truly appreciate the full scope of what O4 has to offer. On that note, let's take a closer look at the individual components...

All things being EQUAL

The eq is a one-to-eight node/band adjustable paragraphic equalizer. Each node can be a high- or lowpass or cut filter, or a "bell" with adjustable Q. Any or all of the bands can be used at once in any configuration. Ozone 3's "analog" processing/colorization mode is still here, but O4 adds Mid-Side processing (more on that in a bit). EQ Matching, which is basically playing any song through the eq to capture the eq curve and saving out the results to apply to other material, is also available.





In use, Ozone's eq has always been a very smooth and satisfying experience. O4 feels more transparent than 'bold and colorful' even with the new "analog" mode to my ears. I've never been a fan of EQ Matching in Ozone (or any plug-in for that matter) as a 'one-stop solution to make one track sound like another'. However, it can be a great learning tool to provide the visual feedback for the frequency bands in use and at what levels.

Master Reverb, I presume?

O4 offers two 64-bit reverb algorithms: plate and room. The reverb holds the bare basics of parameters with independent wet/dry levels, pre-delay, room damping and size. High- and low-cut for the reverb is provided visually via the display at the top and adjusted by sliding the frequency 'bars' within the graph. Finally, the new Mid-Side processing allows the 'edges' of the stereo field to be processed by the reverb separately than the audio that's in the 'center' of the stereo field.

Reverb is one of those effects that a developer gets oh so right or oh so wrong. Both the plate and the room

reverb algorithms fall squarely into the 'oh so right' category. Lush and beautiful, this reverb delivers a quality experience.

I was particularly pleased with the new Mid-Side processing to add a new dimension of depth to the mix. I could easily leave tracks I'd typically want dry in the center, like the kick drum and bass 'instrument' alone, but add a bit of sparkle to the instruments within the more extremes of the stereo field. Awesome!

Reverb is still one of those mastering tools that should be used very sparingly, and it holds true for O4 as well. But when you do want to add space to your mix, this reverb delivers with class.

Upsizing the loudness

O4's IRC (short for Intelligent Release Control) Loudness Maximizer is also pretty lean on tweakable features but fat on sonic results. Mode selection provides four different modes for the limiter; Intelligent, the new Intelligent II, Brickwall, and Soft. Both the Intelligent and Intelligent II modes provide different automatic audio limiting features that are characterized by their names—

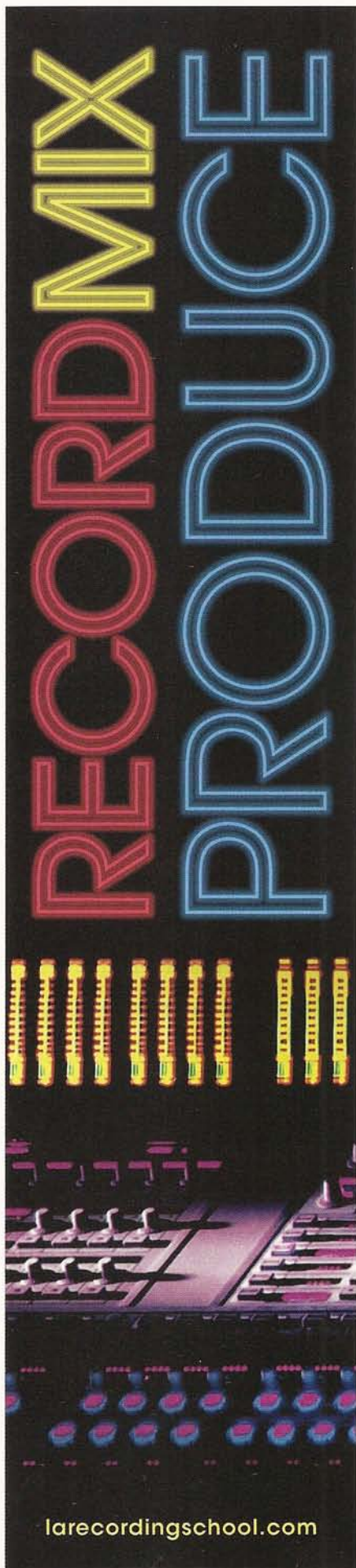
smooth, fast and loud, transparent, etc. Above the mode selection, there are sliders for Threshold for when the maximizer starts to kick in, as well as Margin, which sets the theoretical 'ceiling' of output. Between those two sliders is a histogram showing how much the maximizer is working at what levels.

The Maximizer has been the most used (or is that abused?) plug-in in my own Ozone toolbox. Switching to Intelligent (and now Intelligent II) mode and setting a Margin of -0.3 dB for output has time and time again given me quality results. Ozone will brickwall my mix to -0.3dB for the whole song, and has almost always avoided noticeable pumping of the audio. It's not perfect, but it's done a better job than any other limiter I've tried to date.

Best of all, Ozone leaves my sharp bass transients with the same 'oomph' and punch intact. This still even happens when Cubase's internal 32-bit mix engine shows I'm overshooting the 0 dBFS maximum by as much as 6 dB sometimes. Amazing.

Dither come hither

O4 proffers three separate dithering algorithms: Type I, Type II and



iZotope's proprietary MBIT+. Noise shaping and dither amount controls give the ability to shape the dither noise and bit rate (24, 16 and 8 bit) sets the target bit rate for the output.

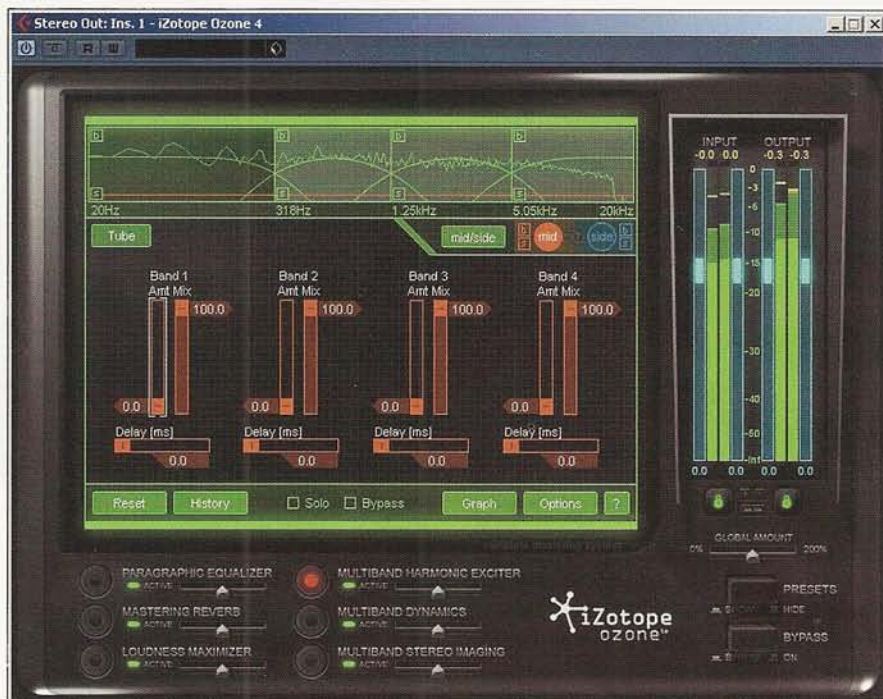
With dithering, there simply is no "one dither to rule them all." Dithering is one of those processes that you play with on a song-by-song basis. Different audio material will dither down better to one algorithm than another, so it's best to experiment on a song-by-song basis and use your ears. Needless to say, the results were as good as I expected from Ozone, regardless of the algorithm.

and leave the middle completely dry with the Mid-Side mode.

Dynamically dynamic

O4's Multiband Dynamic processor (once again with Mid-Side processing) offers four bands of compression, limiting, gating and expansion. Each band provides controls for threshold limit, compression, and expansion with ratio control, along with band level mix and make-up gain. Automatic gain compensation can also be selected.

O4's multiband dynamic processing is the most extensive feature of the



Excited by harmonics

O4 provides a 4-band harmonic exciter with four characteristic modes: Tape, Tube, Retro, and a new mode called Warm that emphasizes even harmonics with a different character than Tube mode. Each band comes with Amount, a Mix slider, Mid-Side processing (again!), and a very small delay effect to help tighten up the sound.

As with much of Ozone 4, it's easy to get carried away with 'too much of a good thing'. The Harmonic Exciter is no different. What I do love about the exciter is the ability to excite anywhere from one to four separate audio frequency bands. Only want the top end of the cymbals and tambourine to have a bit of sparkle and leave the rest of the track alone? Not a problem with O4. It's now also possible to apply the exciter to just the extremes of the stereo field

suite. If you have a full mix of where you're "stuck with what you got," the level of control can go a long ways. Ideally, I'd prefer to fix it in the mix... I think most of us would. But sometimes we don't have that option, and what O4 does with an extensive range of controls over four frequency bands, it does excellently. The new Automatic Gain Control feature in O4 I felt did surprisingly well—on one bass-heavy mix I tried it on, it tightened the low end and removed the "boominess." Impressive, considering I just 'flicked a switch'.

Enhance your image

O4's Stereo Imaging offers four independent, adjustable frequency bands that can widen or collapse the stereo field. A delay line on each band is also provided to allow the perceived location of the sound to be moved within the stereo field.

If I ever use stereo imaging, it's usually just a pinch on the mid-high to high frequency end. What I've liked so much about Ozone's multi-band implementation is the fact that I can touch four different frequency ranges to various degrees. Want to just apply widening to the hi-hats, but leave the bass alone? No problem. The phase meter helps tremendously to give a visual representation of how much you're widening or smashing your stereo field with the plug-in.

The presets

O4 has made some nice improvements to the presets. With over 140 professionally designed presets, there are plenty of musical styles and instruments that gave a good foundation to work from. Also included this time around are MacroFaders that allow one slider to be linked to multiple controls to add bass, sparkle, ambience, and other wonderfully colorful terms that only have meaning to audio people.

Are the presets so good that one could select a preset and be done? It certainly didn't work for me on dense audio mixes.... in fact, none of the presets I tried gave me the 'perfect' mix on a multitude of complete mixes. But I expected that. What they *did* give me was a lot of excellent suggestions for eq and compression settings. I still prefer to start from scratch with everything cleared and 'roll my own'. However, on content-light mixes like a piano solo, quite a few of the presets gave a very nice and polished result.

The presets also gave me a good idea how much CPU Ozone can use. I could easily see 30% CPU on my AMD 3800+ X2 dual core machine. Still, the "intent" of a mastering plug-in is that it's run when the mix is done, the tracks are rendered, and I'm working on the final sweetening. From that perspective, the high CPU usage should be inconsequential on almost any system.

The GUI

For some, a plug-in's GUI is a make or break for a sale. As for me, I really enjoy the new GUI for O4... except for the new raised lettering for the subsections, which I found hard to read.

Take note, if the screen shots look dark, don't worry... the latest version of the plug-in (4.0.3, shipped after testing was complete) allows gamma level adjustments to make most of the interface brighter.

The thing I enjoy most about Ozone 4, aside from the sound quality, is the mixing experience; it's a very visual as well as an aural experience. Watching the phase meter when adjusting the stereo width; having the eq hold for five seconds instead of in real time so I can see average level instead of peaks; showing the meters with the multi-band plug-in to narrow down what frequencies I want to affect... are all just awesome. Some plug-ins might *possibly* have slightly better audio quality, but O4 provides the best overall experience I've yet had with a mastering type plug-in.

The guides

Just because you have the tools doesn't mean you know how to use them, and iZotope realizes that. The gearheads at iZotope have been kind enough to provide a very well written 64-page mastering guide and a 35-page dithering guide. These have been freely available for anyone, customer or not, to download from the website since 2004. Both give a lot of great information and instruction on the subject at hand. Even if you're not interested in Ozone, I'd still highly recommend reading the guides.

Conclusion

Ozone 4 is one sweet suite of audio sweeteners. I cannot imagine not having this plug-in at the end of my effects chain, or somewhere within my project. With a plethora of nice feature enhancements and extensions to the previous version, Ozone 4 is a worthwhile upgrade and an awesome new tool chest for someone who has been without the iZotope polish.

Be sure to check out the demo, read the Ozone 4 web page in depth, and if nothing else, read the excellent and freely available mastering and dithering guides. Ozone 4 is highly recommended by this author. ☺

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