



Sonnox Oxford Dynamic EQ

NIGEL JOPSON mixes smarter with a new problem-solving EQ.

Let's start this review by considering "metaphors" in audio production. We have a row of faders on-screen in our DAWs which represent volume levels for individual tracks. They might as well be boxes with data values in but, as humans, we prefer faders. The visual representation is a metaphor for an idea of loudness. If we want, we can move the fader by mouse or control surface, but if you look at the data this generates, it's easy to see this is not the most precise way of working. If you have a clear idea of the level changes required, it's more accurate to draw the data smoothly with a cursor, joining keyframe points, and most DAWs offer this alternative. We can see audio graphically represented as a waveform, so we can map our gain data to that. It's also more efficient, because we don't need to do it in real time.

But what about EQ and dynamics? Here, I feel the vintage metaphor is driving the modern flowchart — when really it shouldn't. If I buttoned the EQ in on my Harrison console in 1987, it was maybe because the hi-hat sounded a bit aggressive and splashy when the drummer went to the open setting in the chorus. I didn't really want to EQ every single hi-hat hit, but I had no choice. Why have our DAWs copied this signal flow? Yes we have automation — for a simple EQ change here or there — but if the drummer is on and off closed and open hi-hat every other beat, there's no way to automate a conventional EQ plugin. This is what the Oxford Dynamic EQ is for.

By way of illustration of how the Dynamic EQ operates, here is a problem elegantly solved by the Sonnox. I have a groovy stereo drum loop of a full kit playing a beat, but there are two problems with it: the kick has been over EQed when recorded (big thump), but if I use a conventional plugin to EQ it away, I will lose the cool low-end room ambience from the kick. On the same pre-mixed loop, the hi-hat is far too loud, but if we use a conventional plugin to EQ its aggressive frequencies, the snare will lose all its snap.

The first thing to understand about the Sonnox is that there are TWO EQ devices for each of the five frequency bands. The Offset Gain (a small downward-facing white chevron) determines the resting, or static gain of each equaliser section. If you want, you can use this plug-in entirely as a conventional 5-band EQ, by only using the Offset Gains. The Target Gain (five coloured circles with numbers) determines the gain which the EQ band will attempt to reach dynamically. Looking at the "Low EQ" screenshot, I have set a shelving target at 165Hz of -12dB, which will attenuate the over-EQed recorded kick every time it hits. I have an Offset gain target to boost +5.75dB at exactly the same frequency. I have adjusted the Threshold control so that, when the kick drum hits, the EQ will dynamically attenuate with the fast attack I have set, then release towards the static Offset Gain boost target. The effect will be to attenuate the bass on initial hits, rapidly boosting the bass in the decay period to bring up low end ambience. The "Dynamics" control operates like a wet/dry mix control. All the way to the right is maximum (dynamic EQ only) effect, all the way to the left is off. The Offset gain setting is not affected. Each EQ section has an in/out button, next to which is a headphone-symbol button — this allows solo listening for the particular frequency band.

There is an SC (sidechain) button underneath the band in/out button. When this is activated, a horizontal yellow slider appears above the Attack/Release section (see High EQ screenshot). The original input signal is copied and filtered to focus on a narrow frequency range. This filtered signal is fed into the band's dynamics processor, which controls the EQ gain applied by that band. By default the side chain filter matches the EQ band, using the same type, frequency and Q. However, the sidechain centre frequency can be slid up or down the frequency band, and the Q widened or narrowed by grab-and-dragging the ends of the slider. A very versatile arrangement.

Additionally, the sidechain can be set to external,

allowing a completely different signal to control this band's side chain path. A useful application would be to insert the Sonnox Dynamic EQ on an audio subgroup of guitars and keyboards, and then route the lead vocal to the SC input via your DAW. The vocal presence frequencies could then be automatically "ducked" from the instrument groups every time the vocalist let rip. The result would be to generate a feeling of space within the track dynamically, rather than having to EQ instruments radically to keep them out of the way of the vocal.

Looking at the high mid EQ screenshot, we can see I've done the opposite of the low shelf. There's a static Offset cut of -6.32dB, with a dynamic Target Gain of +6.35 dB, but only on the Side component (the small

"S" symbol next to the number 4 in a circle) of the M/S signal. The box next to the Bell/Shelf selector can be used to select Stereo/Left/Right/Mid/Side to EQ the signal. In my case, I found selecting Side for the dynamic boost had the desired effect of increasing the feeling of power on snare beats, without making it too obvious there was a 12.5dB gain swing occurring on every hit.

I also had a small fixed cut of -5.15dB at 781Hz, on a narrow Q of 7.3, just to take a little "boxiness" out of the overall sound ... and to prove how versatile the Oxford Dynamic EQ is!

The Oxford Dynamic follows the lead of Sonnox's Evolution plug-in, moving away from the fixed audio treatments of the past towards a "smarter" style of audio sculpting. The end result can only be good, as it will encourage production pros to work in a more clever, musically relevant manner with raw audio, rather than brutalising individual sounds to fit in with the desired final mix. The Oxford offers many of the same functions as the Waves F6 Floating-Band Dynamic EQ, but the addition of the Offset, or static, gain function is a masterstroke from Sonnox. It gives a huge amount of extra flexibility, in providing a tuneable fixed target for the dynamic EQ effect to "return" to. Additionally, for £200 you are actually buying an extra conventional Oxford EQ plug-in, as the Offset gain boost or cut can be used independently from the dynamic section. It's a testament to the high quality and usefulness of Sonnox's products that their flagship standard Oxford EQ — whose algorithms can be traced back to the '90s and the Sony OXF-R3 digital console — is still a go-to EQ for many producers today. A new plug-in from Sonnox is always something of an event — the Dynamic EQ is a fantastic tool — and points the way to a smarter audio future. ■

PROS

A smarter way of working with the "Oxford" sound. The provision of Offset Gain is a masterstroke of design.

CONS

Operationally, none. No HDX yet. Sonnox have a "working culture of a defined work/life balance" — their support desk is only operational 9:00 to 17:30 (GMT).

Contact

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