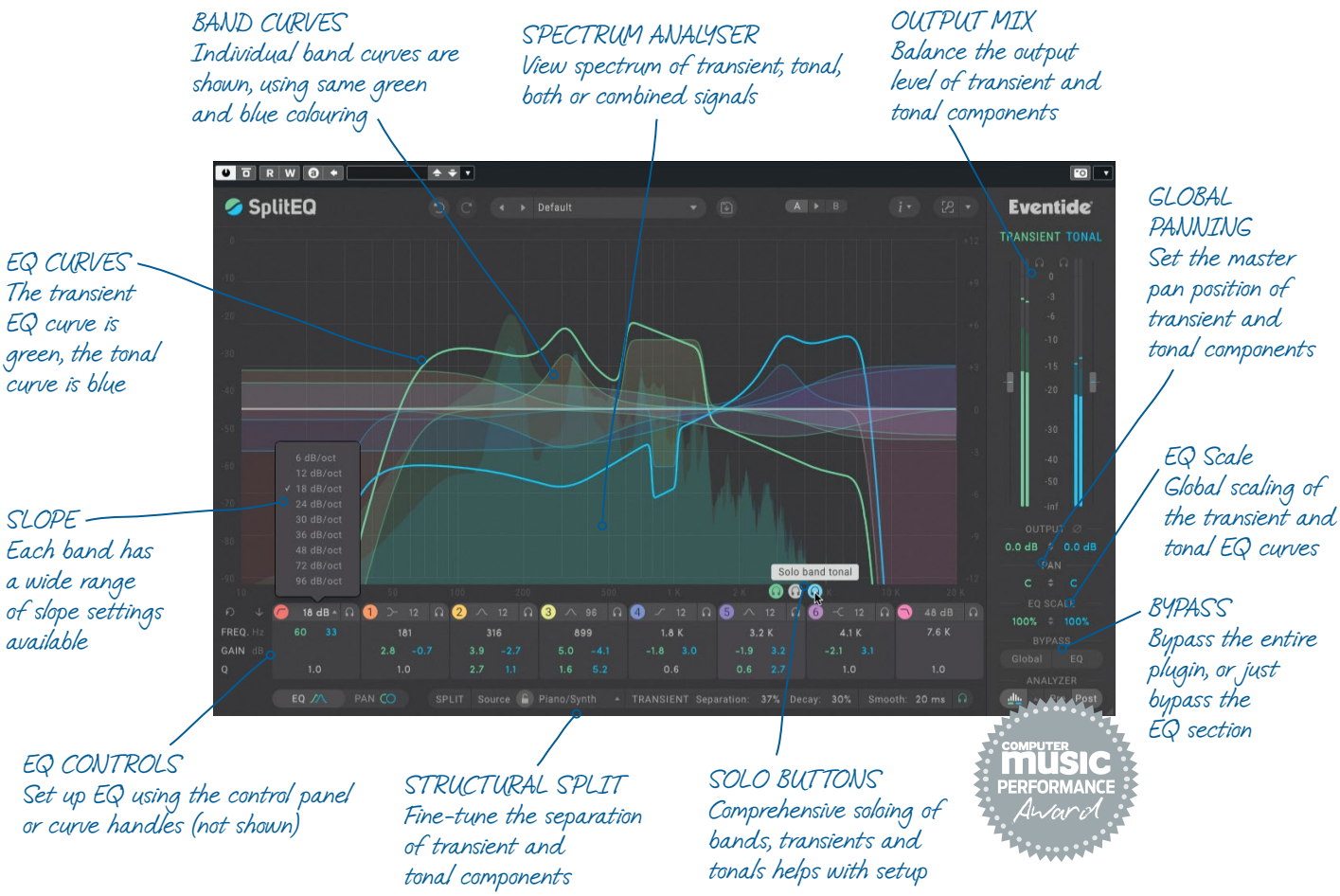


Eventide SplitEQ

$179 PC MAC

Agonising over whether to give that snare a 1kHz boost for snappiness, or a 1kHz cut to take away the boxiness? Why not do both?

> Founded half a century ago as an offshoot of Sound Exchange studios in New York, Eventide are probably best known for their long-running Harmonizer product line. Although still in the business of hardware, the company has kept up with modern, in-the-box trends too, with a range of plugins featuring recreations of classic Eventide hardware, alongside entirely new creations such as Physion. This was the first airing of the company's Structural Effects technology, in which transient and tonal components of a signal are separated and processed independently. This same tech is at the heart of Eventide's latest plugin release, the potent and fascinating SplitEQ.

Split personality

On the surface, SplitEQ is a fairly straightforward equaliser, with six multi-mode EQ bands bracketed by high-pass and low-pass filter bands. The regular bands offer a choice of peak, notch, band-pass, high shelving, low shelving, and tilt shelving modes, while all eight bands can have their cutoff slope adjusted from a gentle 6dB/octave all the way up to a near brick-wall 96dB/octave.

As a basic EQ recipe this is all very familiar, and indeed SplitEQ works very well in this role: its tilt shelving and flexible slopes go beyond what most EQs have to offer, and the Q characteristics of the main bands sweeps from a delectably wide, smooth and gentle curve all the way to an intensely focused and steep spike. But this is not just a conventional equaliser. Like its stablemate Physion, SplitEQ decomposes the incoming signal into transient and tonal components, and processes each individually. This opens up a whole new dimension in the art of EQing – it also creates a whole new layer of sound tweaking to get lost in.

> "It opens up a whole new dimension in EQing, with a new layer of sound tweaking"

The decomposition happens in the Structural Split module, the first stage in SplitEQ. A selection box listing different types of source – full mix, guitar, snare drum, etc – is used to set the transient detection algorithm's coarse parameters, which can then be fine-tuned with the separation, decay and smooth controls so it fully matches the audio you wish to process. Helpful here is the ability to solo the transient or tonal components so you can hear the results of the split, and you can also lock the settings so they are unaffected by loading different presets into the plugin.

"In mastering, it allows tonal problems to be fixed that would have required the whole mix to be redone"

Once separated, the decomposed signals are fed into the EQ itself. Here, the type, slope and frequency of each band applies to both transient and tonal components, but the gain and Q values can be adjusted independently for each component. Although this sounds fiddly it's sensibly presented, with the EQ settings adjustable via a conventional settings panel, or by dragging handles on the plugin's EQ graph/visualisation. Transient values/handles are green, tonal values/handles are blue, and global controls, that affect both components at the same time, are grey. Each band can also be solo'd, as can each component within the band, so it's easy to hear exactly what's going on.

Image editing

When running on stereo tracks, SplitEQ can also manipulate a signal's stereo image, with each band switchable between pan mode and mid/side mode. The former allows a band's transient and tonal components to be given different pan positions; the latter allows the mid/side balance of each component to be adjusted. Outside of some very specific correction tasks, and perhaps special effects, it's hard to envisage many situations where the pan mode would be useful, but the mid/side mode is capable of some really nice tricks, such as making a part sound super-wide whilst simultaneously making it sound centralised and focused.

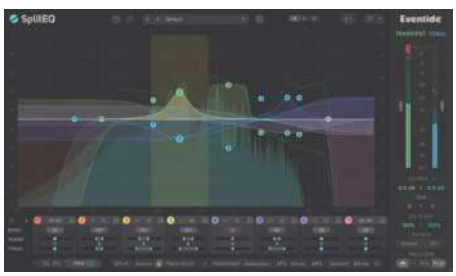
Once through all the EQ and panning, the two signal components are mixed back together. A pair of faders allows the balance of this mix to be controlled, and each component can be panned independently too, although, again, the ability to position transient and tonal components independently is of limited use. The mixer section also allows the overall EQ curve of each component to be scaled, which helps with fine-tuning the processor's results.

Double vision

As with most modern equalisers, SplitEQ includes a visual readout that shows its EQ curves overlaying a spectrum analysis of the signal. The curve of each component within each band is shown, as are overall curves for each component. The real-time spectrum analysis can operate pre- or post-processing, and offers a number of different views: overall signal, individual components, or both components overlaying each other. Whilst this level of detail is welcome, making sense of a readout that can show 16 individual band curves, two overall EQ curves and two independent spectrum analyses is not for the faint-hearted!

EQing is often a compromise between controlling specific timbral artefacts whilst avoiding having an overall negative impact on the sound being processed. What SplitEQ brings to the table is a new way to sidestep many of those compromises. Its unique capabilities really come into their own in mastering, allowing tonal problems to be fixed that would otherwise require the whole mix to be redone.

Such depth can be a double-edged sword. It makes for a processor that is far less intuitive than a conventional EQ, and one that may prove a handful for those who lack a well-developed technical understanding of audio equalisation. But on the other hand SplitEQ is a revelation – easily amongst the most versatile and capable EQs out there, and worth every penny of its very reasonable asking price. **cm**



Here Pan mode is enabled and you can see the band curve edit handles

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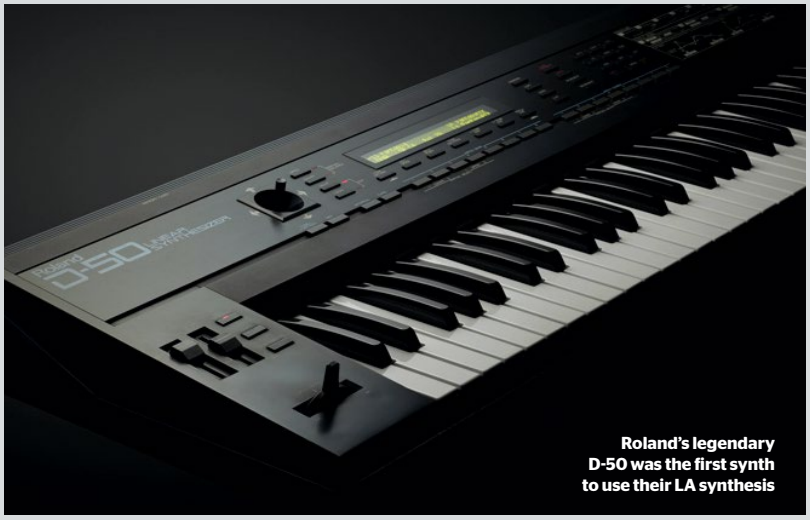

Roland's legendary D-50 was the first synth to use their LA synthesis

Decomposing

Most musical sounds consist of a transient element – that is, the initial onset and attack of a note played on an instrument – and a tonal element that follows the transient. It has long been known that the majority of the individual character of an instrument – the complex, changing waveform that makes a piano sound like a piano, or a guitar sound like a guitar – is contained in the transient. The tonal, sustained, element is usually much less complex, typically consisting of a regular, repeating waveform. This difference between transient and tonal is ably demonstrated by Roland's Linear Arithmetic synthesis system, first seen on the legendary D-50. LA was astonishing at the time it was released, creating fairly convincing instrument emulations by combining very short samples of an instrument's transient with conventional repeating waveforms to mimic the sustained, tonal component.

Given that this fundamental difference between transient and tonal is well understood, it is surprising how few plugins take advantage of it. But as is ably shown by Steinberg's Backbone, and by Eventide's Physion and now SplitEQ, treating transient and tonal as separate entities can open up a whole new dimension of sonic possibilities.

Alternatively

FabFilter Pro-Q 3
cm266 » 10/10 » £134
Version 3 added dynamics and mid/side processing to this EQ's already near-perfect 24-band recipe

DMGAudio EQuilibrium
cm192 » 10/10 » £174.99
Allows you to mix-and-match classic vintage EQ and filter circuits into the perfect EQ for any job

Verdict

For
- Astonishingly flexible and capable
- Easy to configure ideal transient detection
- Comprehensive soloing options
- Detailed spectrum analysis
- Particularly powerful as a mastering EQ

Against
- Graphic display can get busy
- Less intuitive than a conventional EQ

By separating transient and tonal components, SplitEQ gives the user a depth of control few other EQs can match

9/10